

APPENDIX B

TRAFFIC ANALYSIS

B

T R A F F I C O P E R A T I O N S A N A L Y S I S

East Dell Range Boulevard & US-30 Corridor Study

Cheyenne, Wyoming

**Prepared for
Cheyenne MPO**

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1.0 INTRODUCTION

1.1 Study Purpose and Need

This East Dell Range Boulevard and US Highway 30 (US-30) Corridor Study Traffic Operations Analysis has been developed for the Cheyenne Metropolitan Planning Organization (MPO), Laramie County, and Wyoming Department of Transportation (WYDOT) with the purpose of identifying intersections expected to require capacity improvements based on future traffic estimates, future roadway connections, and access management changes. The vision for the East Dell Range Boulevard and US 30 corridors is to maintain accessibility and the character of the area, while improving safety and transportation modal options.

The East Dell Range Boulevard and US-30 Corridor Study is a reevaluation and update to the existing 2008 corridor plan. The area surrounding Dell Range Boulevard and US-30 is in the process of transitioning from rural to more suburban, and the related change of both travel patterns and mobility needs requires an update of the existing plan.

1.2 Project Limits and Studied Intersections

The Traffic Operations Analysis scope extends along Dell Range Boulevard from College Drive to US-30 as well as along US-30 from College Drive to Archer Parkway in Cheyenne and Laramie County, Wyoming. The evaluation included the major intersections within these project limits. The following 17 intersections, labeled with intersection numbers 1 through 17 corresponding with the figures, were incorporated into this Traffic Operations Analysis based on input from the Cheyenne MPO:

- | | |
|---|------------------------------------|
| 1. Dell Range Boulevard and College Drive | 10. US-30 and Hayes Avenue |
| 2. Dell Range Blvd. and Van Buren Ave. | 11. US-30 and Whitney Road |
| 3. Dell Range Blvd. and El Camino Dr. | 12. US-30 and Saddle Ridge Trail |
| 4. Dell Range Boulevard and James Drive | 13. US-30 and Dell Range Boulevard |
| 5. Dell Range Blvd. and Whitney Rd. | 14. US-30 and Christensen Road |
| 6. US-30 and College Drive | 15. US-30 and Reese Avenue |
| 7. US-30 and Pershing Boulevard | 16. US-30 and Westedt Road |
| 8. US-30 and Polk Avenue | 17. US-30 and Archer Parkway |
| 9. US-30 and Van Buren Avenue | |

2.0 EXISTING CONDITIONS

2.1 Existing Roadway Network

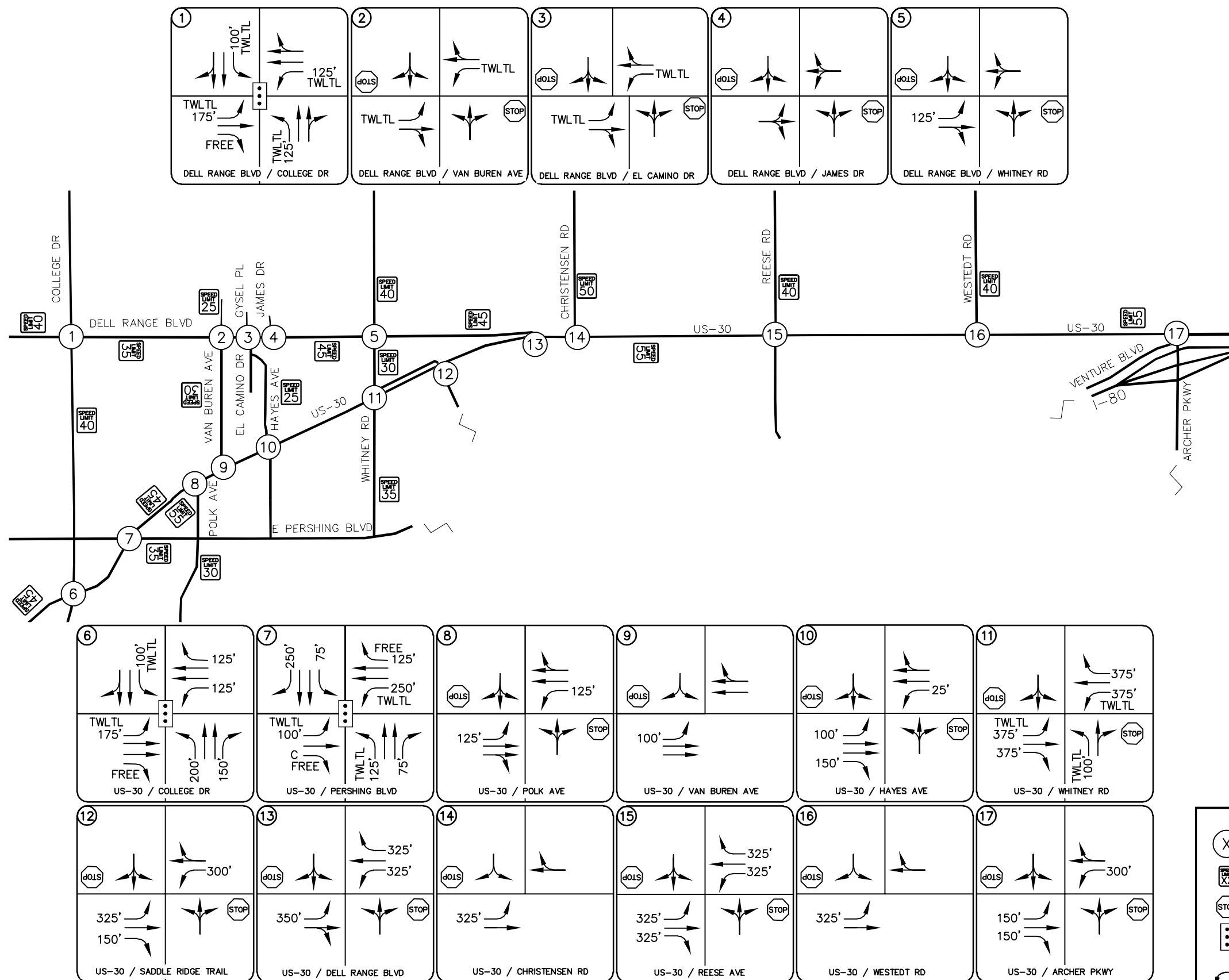
Dell Range Boulevard is an east-west roadway that provides one through lane in each direction with a center two-way left-turn lane from College Drive to James Drive. Further east, Dell Range Boulevard is a two-lane roadway providing one lane in each direction with a double yellow centerline from James Drive to US-30. Dell Range Boulevard has a posted speed limit of 35 miles per hour (mph) between College Drive and James Drive while having a speed limit of 45 mph between James Drive and US-30.

US-30 is an east-west roadway that extends northeast and southwest within the study area. US-30 provides two through lanes in each direction with a center two-way left-turn lane from College Drive to Pershing Boulevard. It has a five-lane section with a wide grass median from Pershing Boulevard to and through Hayes Avenue. US-30 provides one lane in each direction with a center two-way left turn lane from east of Hayes Avenue to Christensen Road. Further east, US-30 is a two-lane roadway east of Christensen Road that widens on approaches to major intersections for left turn lanes. US-30 has a posted speed limit of 45 miles per hour between College Drive and Pershing Boulevard and a speed limit of 55 miles per hour east of Pershing Boulevard throughout the remainder of the project limits.

The existing intersection lane configurations and control for the study area key intersections are shown in **Figure 1**.

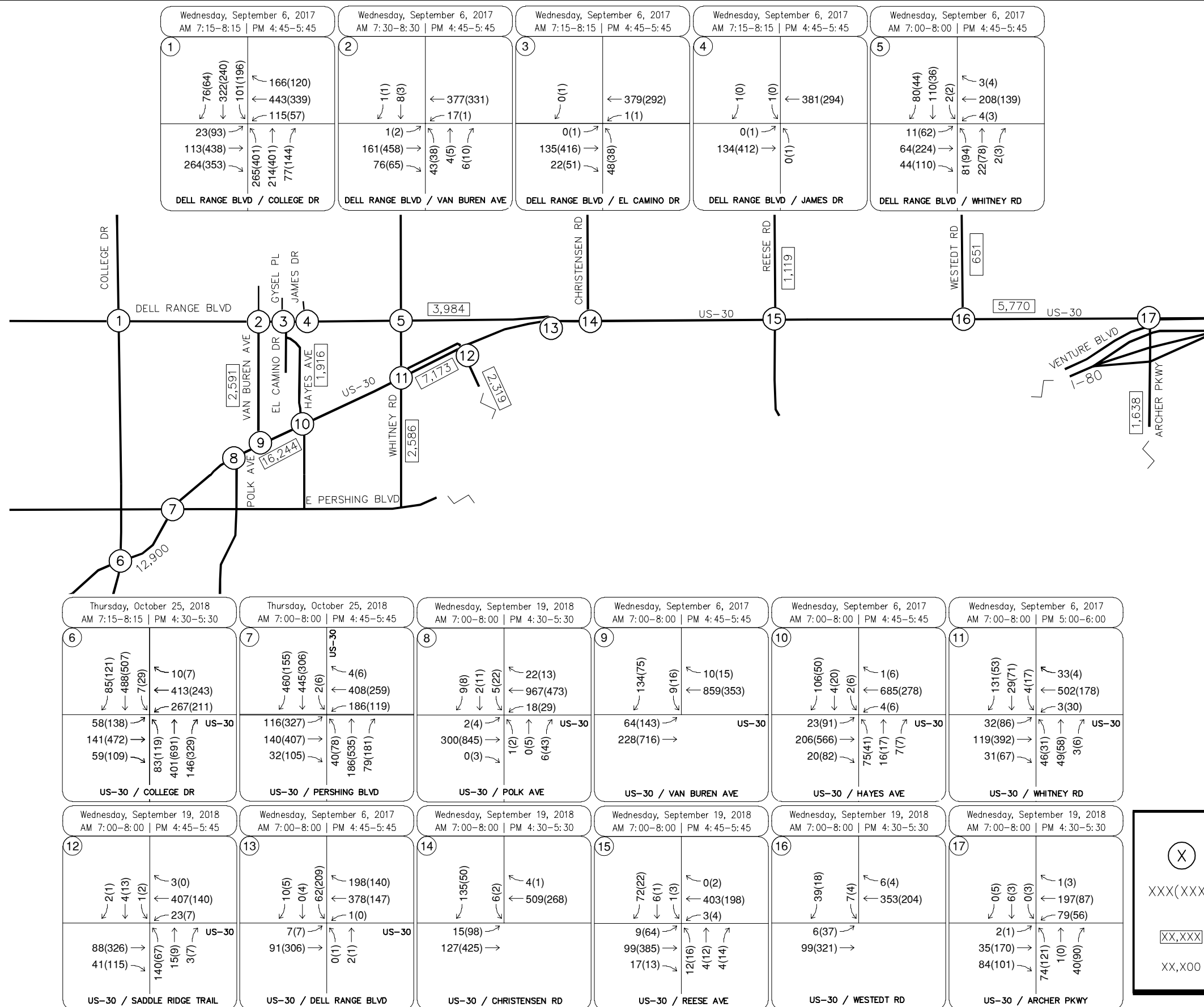
2.2 Existing Traffic Volumes

Existing peak hour turning movement counts were collected at intersection #'s 1-5, 9-11, and 13 on Wednesday, September 6, 2017. Peak hour traffic counts were collected at intersections #'s 8, 12, and 14-17 on Wednesday, September 19, 2018 while counts at intersections 6 and 7 were performed on Thursday, October 25, 2018. The weekday counts were conducted in 15-minute intervals during the morning and afternoon peak hours of adjacent street traffic from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. Existing turning movement counts are shown in **Figure 2**. Directional 24-hour counts, also shown on Figure 2, were collected throughout the project limits on Thursday, September 27, 2018. Existing traffic counts are included in **Attachment A**.



EAST DELL RANGE BOULEVARD & US-30 CORRIDOR STUDY
EXISTING LANE CONFIGURATIONS AND CONTROL

FIGURE 1



EAST DELL RANGE BOULEVARD & US-30 CORRIDOR STUDY
EXISTING TRAFFIC VOLUMES

FIGURE 2

3.0 FUTURE CONDITIONS

3.1 Future 2040 Traffic Volume Projections

The City of Cheyenne Transportation Plan identifies a growth rate assumption of 1.25 percent per year through year 2040. The associated growth assumption is included in **Attachment B**. In addition to an annual traffic growth rate of 1.25 percent, traffic generated from the Whitney Ranch development, and redistribution of existing traffic volumes based on a future extension of Christensen Road from US-30 to the existing interchange ramps at Interstate 80 were utilized to develop 2040 traffic projections at the study area intersections. The resulting future traffic volume projections for 2040 are shown in **Figure 3**. Whitney Ranch is proposed to be located on the northwest corner of the Dell Range Boulevard and Whitney Road intersection and will include approximately 2,200 residential units and supporting retail uses.

3.2 Future Roadway Network

Dell Range Boulevard

Programmed improvements along Dell Range Boulevard include a five-lane roadway section with a raised median from College Drive through Van Buren Avenue. A three-lane roadway section will be provided along Dell Range Boulevard from Van Buren Avenue to US-30 which will include a striped median. As a raised median will be incorporated along US-30 from College Drive to Van Buren Avenue, the following minor streets connecting with Dell Range Boulevard will have access restrictions:

- Crystal Avenue (restricted to right-in/right-out);
- Huron Avenue (restricted to right-in/right-out);
- Glendo Avenue (restricted to three-quarter movements);
- Golden Meadows Lane (restricted to right-in/right-out); and
- Pathfinder Avenue (restricted to right-in/right-out).

Private driveways not specifically identified in this study will also have additional restricted access along Dell Range Boulevard. The associated rerouting of traffic from the proposed access restricted locations along Dell Range Boulevard to full movement intersections as well as the projected traffic growth along Dell Range Boulevard will likely warrant signalization at the Dell Range Boulevard intersections with Van Buren Avenue, Whitney Road, and US-30.

US-30

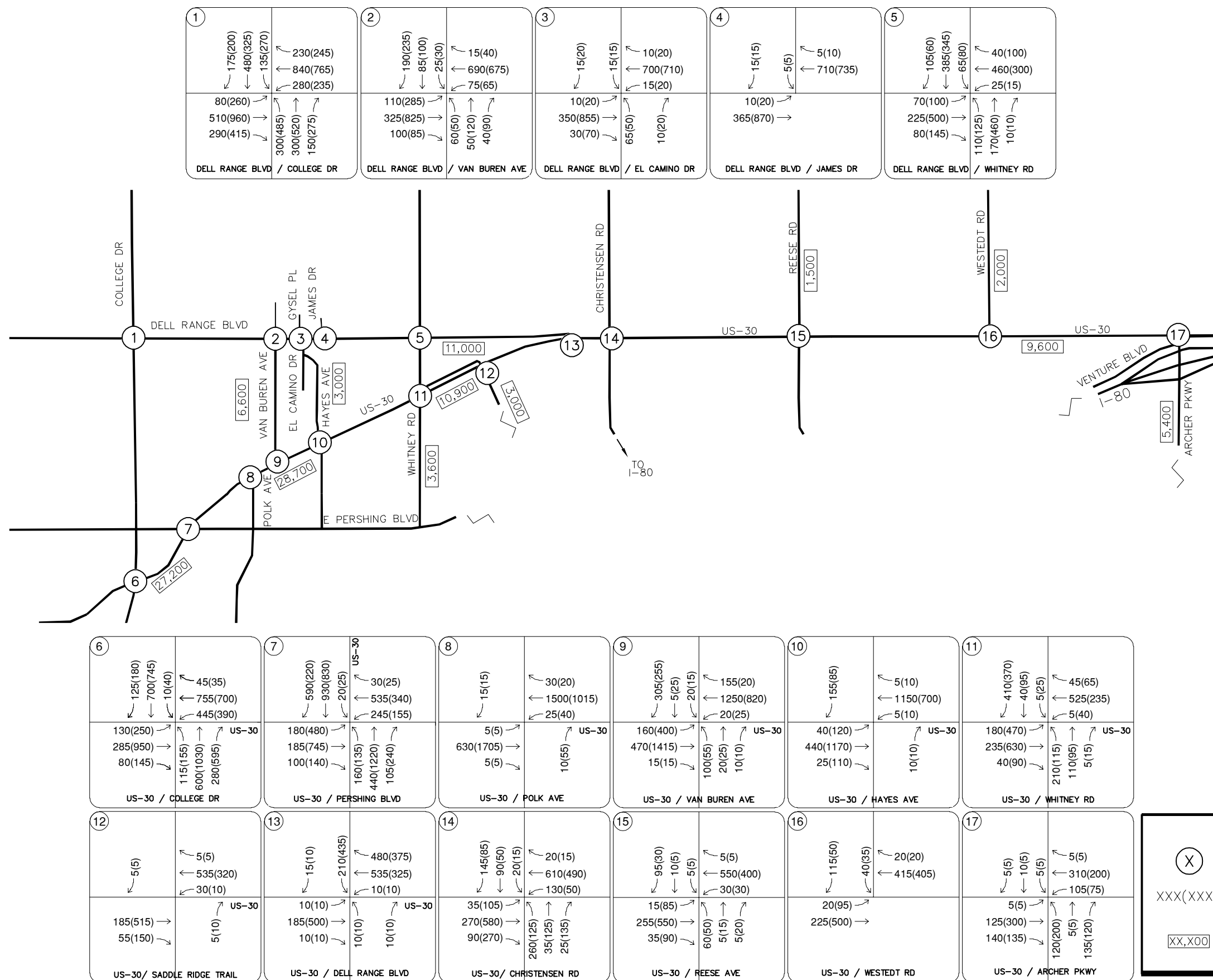
It is understood that WYDOT is planning to improve US-30 to include two through lanes in each direction from the east side of Hayes Avenue to Archer Parkway. A separated raised median is proposed along US-30 from west of College Drive to Christensen Road while a two-way left-turn lane is proposed along US-30 from east of Christensen Road to Archer Parkway. Auxiliary right turn lanes are proposed along US-30 at all major intersections between Christensen Road and Archer Parkway. It is recommended that WYDOT plan to improve US-30 to include a separated median from College Drive to Christensen Road. As a median will be incorporated along US-30, the following minor streets connecting with US-30 will have access restrictions:

- Uintah Road (restricted to right-in/right-out);
- Pierce Avenue (restricted to right-in/right-out);
- Polk Avenue (restricted to three-quarter movements);
- Hayes Avenue (restricted to three-quarter movements);
- Lungsford Drive (restricted to right-in/right-out); and
- Saddleridge Trail (North leg restricted to right-in/right out, south leg restricted to three-quarter movements).

Private driveways not specifically identified in this study will also have additional restricted access along US-30. The restricted access at several intersections should decrease congestion at minor street approaches, improve safety, and reduce vehicle conflicts. The projected traffic growth along US-30 while limiting full movement access locations to major intersections will likely require the US-30 intersections with Van Buren Avenue, Whitney Road, Dell Range Boulevard (mentioned previously), and Christensen Road to be signalized. The signalized locations along Dell Range Boulevard and US-30 will improve safety and operations from the minor street approaches.

The following locations are proposed to provide additional or adjusted access to US-30:

- Van Buren Avenue will include a south leg at US-30 allowing full turning movements;
- The US-30 and Dell Range Boulevard intersection will be relocated approximately 1,700 feet west of the current intersection; and
- Extension of Christensen Road south from US-30 to Interstate 80.



LEGEND

- (X) Study Area Key Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- [XX,X00] Estimated Daily Traffic Volume

EAST DELL RANGE BOULEVARD & US-30 CORRIDOR STUDY
2040 TOTAL TRAFFIC VOLUMES

FIGURE 3

4.0 TRAFFIC OPERATIONS ANALYSIS

4.1 Analysis Methodology

Capacity analyses of intersection traffic operations were performed at the 17 key intersections along Dell Range Boulevard and US-30 to determine potential capacity deficiencies in the existing condition and the 2040 horizon. Analyses for the key intersections were completed using Synchro software, which uses methodologies contained in the *Highway Capacity Manual* (HCM) Sixth Edition. However, Sidra software was utilized for roundabout analysis.

Capacity analyses were performed during the weekday morning and afternoon peak hours for the existing conditions and the 2040 future year horizon. Level of Service (LOS) is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little vehicle delays) to F (long delays and congestion). For intersections and roadways in this study area, standard traffic engineering practice identifies overall LOS D for signalized intersections and LOS E for movements and approaches of unsignalized intersections as the minimum threshold for acceptable operations. **Table 1** shows the definition of level of service for signalized and unsignalized intersections.

Table 1 – Level of Service Definitions

Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50
Highway Capacity Manual, Sixth Edition, Transportation Research Board, 2016.		

Study area intersections were analyzed based on average total delay analysis for signalized and unsignalized intersections. Under the unsignalized analysis, the level of service for a two-way stop-controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service for a two-way stop-controlled intersection is not defined for the intersection as a whole. Level of service for a signalized and four-way stop controlled intersection is defined for each approach and for the intersection.

4.2 Key Intersection Operational Analysis

The existing year analysis is based on the lane geometry and intersection control shown in **Figure 1**. The Synchro Highway Capacity Manual (HCM) methodology reports were used to analyze intersection delay and level of service. Calculations for the level of service at the key intersections are provided in **Attachment C**. The existing signalized intersections within the project limits utilized the observed cycle lengths with existing phasing and timing. **Table 2** provides the level of service operational results of all study area key intersections for the existing and 2040 horizons. Recommended improvements to mitigate potential future inadequate operations were incorporated into the analysis results, which is also provided in **Table 2**.

As shown in the following LOS table, all study area key intersections currently operate acceptably with overall intersections operating at LOS D or better and unsignalized movements of LOS E or better during the morning and afternoon peak hours. With 2040 traffic projections and the existing lane configurations, 10 of the 17 key intersections are expected to experience long delays during the weekday peak hour. Intersection by intersection LOS results and recommended improvements discussion are provided following the LOS results table.

Table 2 – Study Area Intersections LOS Results

Intersection	Control	Movement	Existing		2040 No Improvements		2040 With Improvements	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
			LOS (Delay)	LOS (Delay)	LOS (Delay)	LOS (Delay)	LOS (Delay)	LOS (Delay)
Dell Range Blvd & College Dr (#1)		Overall	28.6 C	36.8 D	94.8 F	186.6 F	38.9 D	54.3 D
Dell Range Blvd & Van Buren Ave (#2)		Northbound Approach	15.5 C	16.9 C	>300 F	>300 F	-	-
		Eastbound Left	8.2 A	8.1 A	9.9 A	11.8 B	-	-
		Westbound Left	8.1 A	8.7 A	8.5 A	10.7 B	-	-
		Southbound Approach	14.1 B	13.8 B	171.5 F	>300 F	-	-
		Overall	-	-	-	-	18.9 B	19.4 B
Dell Range Blvd & El Camino Dr (#3)		Northbound Approach	13.4 B	15.8 C	21.9 C	38.0 E	21.9 C	38.0 E
		Eastbound Left	0.0 A	8.0 A	9.2 A	9.5 A	9.2 A	9.5 A
		Westbound Left	7.6 A	8.5 A	8.2 A	10.4 B	8.2 A	10.4 B
		Southbound Approach	0.0 A	10.3 B	16.8 C	23.3 C	16.8 C	23.3 C
Dell Range Blvd & James Dr (#4)		Northbound Approach	0.0 A	18.2 C	0.0 A	0.0 A	0.0 A	0.0 A
		Eastbound Left	0.0 A	8.1 A	9.2 A	9.5 A	9.2 A	9.5 A
		Westbound Left	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A	0.0 A
		Southbound Approach	12.1 B	0.0 A	17.7 C	30.8 D	15.2 C	18.2 C
Dell Range Blvd & Whitney Rd (#5)		Northbound Approach	18.8 C	23.3 C	>300 F	>300 F	-	-
		Eastbound Left	7.8 A	7.7 A	8.8 A	8.5 A	-	-
		Westbound Left	7.5 A	8.1 A	8.0 A	9.1 A	-	-
		Southbound Approach	14.4 B	13.0 B	>300 F	>300 F	-	-
		Overall (Single Lane EB/WB/SB RT)	-	-	-	-	10.8 B	29.7 D
		Overall	-	-	-	-	33.7 C	27.5 C
US-30 & N College Dr (#6)		Overall	28.4 C	35.3 D	49.8 D	91.4 F	32.2 C	63.7 E

Intersection	Control	Movement	Existing		2040 No Improvements		2040 With Improvements	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
			LOS (Delay)	LOS (Delay)	LOS (Delay)	LOS (Delay)	LOS (Delay)	LOS (Delay)
US-30 & Pershing Blvd (#7)		Overall	18.6 B	20.3 C	32.4 C	72.5 E	30.2 C	44.0 D
US-30 & Polk Ave (#8)		Northbound Approach	10.5 B	15.6 C	22.7 C	36.8 E	10.6 B	22.2 C
		Eastbound Left	10.4 B	8.4 A	14.1 B	10.7 B	14.1 B	10.7 B
		Westbound Left	8.2 A	10.9 B	9.1 A	17.9 C	9.1 A	17.9 C
		Southbound Approach	17.6 C	24.3 C	36.9 E	97.5 F	16.7 C	12.7 B
US-30 & Van Buren Ave (#9)		Eastbound Left	10.8 B	8.7 A	18.8 C	15.8 C	-	-
		Southbound Approach	17.5 C	13.2 B	136.8 F	18.7 C	-	-
		Overall	-	-	-	-	22.7 C	23.8 C
US-30 & Hayes Ave (#10)		Northbound Approach	23.5 C	33.1 D	86.3 F	233.3 F	9.8 A	13.8 B
		Eastbound Left	9.5 A	8.3 A	12.1 B	10.2 B	12.1 B	10.1 B
		Westbound Left	7.9 A	9.3 A	8.4 A	12.6 B	8.4 A	12.6 B
		Southbound Approach	13.4 B	17.3 C	22.3 C	39.7 E	18.9 C	11.9 B
US-30 & Whitney Rd (#11)		Northbound Left	37.0 E	28.3 D	>300 F	>300 F	-	-
		Northbound Through/Right	18.1 C	21.3 C	43.0 E	>300 F	-	-
		Eastbound Left	9.0 A	7.9 A	10.6 B	10.5 A	-	-
		Westbound Left	7.7 A	8.7 A	7.9 A	9.5 A	-	-
		Southbound Approach	20.7 C	35.9 E	181.6 F	>300 F	-	-
		Overall	-	-	-	-	20.3 C	19.3 B
US-30 & Saddle Ridge Trail (#12)		Northbound Approach	18.9 C	14.0 B	30.8 D	20.1 C	8.9 A	10.1 B
		Eastbound Left	0.0 A	0.0 A	8.7 A	8.0 A	DNE	DNE
		Westbound Left	7.5 A	8.5 A	7.8 A	9.1 A	7.8 A	9.2 A
		Southbound Approach	12.9 B	14.0 B	14.5 B	16.6 C	10.2 B	9.3 A

Intersection	Control	Movement	Existing		2040 No Improvements		2040 With Improvements	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
			LOS (Delay)	LOS (Delay)	LOS (Delay)	LOS (Delay)	LOS (Delay)	LOS (Delay)
US-30 & Dell Range Blvd (#13)		Northbound Approach	13.2 B	12.2 B	0.0 A	0.0 A	-	-
		Eastbound Left	8.4 A	7.6 A	8.7 A	8.0 A	-	-
		Westbound Left	7.4 A	0.0 A	0.0 A	0.0 A	-	-
		Southbound Approach	14.5 B	18.2 C	26.5 D	177.5 F	-	-
		Overall	-	-	-	-	10.0 A	24.8 C
US-30 & Christensen Rd (#14)		Northbound Left	- DNE	- DNE	>300 F	245.5 F	-	-
		Northbound Through/Right	- DNE	- DNE	21.0 C	150.0 F	-	-
		Eastbound Left	8.6 A	8.3 A	9.1 A	9.0 A	-	-
		Westbound Left	- DNE	- DNE	8.5 A	10.2 B	-	-
		Southbound Left	- DNE	- DNE	26.6 D	>300 F	-	-
		Southbound Approach	15.2 C	11.0 B	53.7 F	33.6 D	-	-
		Overall	-	-	-	-	23.6 C	20.9 C
US-30 & Reese Ave (#15)		Northbound Approach	13.0 B	15.1 C	23.3 C	26.0 D	16.3 C	22.9 C
		Eastbound Left	8.2 A	7.9 A	8.7 A	8.5 A	8.7 A	8.5 A
		Westbound Left	7.5 A	8.3 A	8.0 A	9.2 A	8.0 A	9.2 A
		Southbound Approach	12.0 B	10.9 B	14.9 B	14.6 B	12.2 B	12.7 B
US-30 & Westedt Rd (#16)		Eastbound Left	8.1 A	7.9 A	8.4 A	8.6 A	8.4 A	8.6 A
		Southbound Approach	11.1 B	10.5 B	14.1 B	16.2 C	12.1 B	13.5 B
US-30 & Archer Pkwy (#17)		Northbound Approach	12.5 B	14.1 B	18.6 C	27.8 D	18.6 C	27.8 D
		Eastbound Left	7.7 A	7.4 A	8.0 A	7.7 A	8.0 A	7.7 A
		Westbound Left	7.7 A	8.1 A	8.1 A	8.6 A	8.1 A	8.6 A
		Southbound Approach	13.1 B	11.3 B	14.8 B	14.2 B	14.8 B	14.2 B

DNE = Does Not Exist

4.2.1 Programmed Improvement Operations

The following intersections are expected to operate acceptably during the peak hours in 2040 with programmed lane configuration (without a change in control) and access management improvements:

- Dell Range Boulevard and El Camino Drive (#3)
- Dell Range Boulevard and James Drive (#4)
- US-30 and Pershing Boulevard (#7)
- US-30 and Polk Avenue (#8, includes new three-quarter access)
- US-30 and Hayes Avenue (#10, includes new three-quarter access)
- US-30 and Whitney Road (#11)
- US-30 and Saddle Ridge Trail (#12, includes restricted access)
- US-30 and Reese Avenue (#15)
- US-30 and Westedt Road (#16)
- US-30 and Archer Parkway (#17)

Of note, the program improvements along Dell Range Boulevard and US-30 were previously discussed in Section 3.2: Future Roadway Network.

4.2.2 Programmed Improvement and Signal Control Operations

Further, the following intersections are expected to warrant signalization and operate acceptably during the peak hours in 2040 with programmed lane configuration improvements and signal control:

- Dell Range Boulevard and Van Buren Avenue (#2)
- Dell Range Boulevard and Whitney Road (#5)
- US-30 and Van Buren Avenue (#9, includes new south leg)
- US-30 and Dell Range Boulevard (#13, includes new alignment)
- US-30 and Christensen Road (#14, includes new south leg)

A four-hour vehicular volume signal warrant is expected to be met at all five of these intersections listed above with future traffic projections for 2040. Signal warrant analysis figures for all five of these intersections is included in **Attachment D**. As such, traffic volumes should be monitored in the future to determine if and when signalization is the appropriate control at

these five intersections. It should be noted that designated left turn lanes are recommended at all approaches of intersections with signal control in the future.

In addition, the eastbound and westbound approaches of the Dell Range Boulevard and Van Buren Avenue (#2) intersection should operate with protected-permitted left turn phasing upon signalization. Likewise, the eastbound approach of the Dell Range Boulevard and Whitney Road (#5) intersection should operate with protected-permitted left turn phasing once signalized. Protected-permitted left turn phasing should be provided at the eastbound, westbound, and northbound approaches of the US-30 and Pershing Boulevard (#7) intersection. Protected-permitted left turn phasing should be provided both eastbound and westbound at the intersection of US-30 and Van Buren Avenue (#11). Lastly, protected-permitted left turn phasing should be included in the eastbound direction of the US-30 and Christensen Road (#14) intersection.

4.3 Intersection by Intersection Improvement Recommendations and Operations

The following provides recommended improvements and level of service operation discussions for the four identified intersections expected to need improvements beyond programmed improvements and signal control.

4.3.1 Dell Range Boulevard and College Drive (#1)

The intersection of Dell Range Boulevard and College Drive currently operates acceptably with LOS C during the morning peak hour and LOS D during the afternoon peak hour. Based on future traffic projections, the intersection of Dell Range Boulevard and College Drive is expected to need additional turn lanes beyond programmed improvements in order to operate acceptably during the peak hours in 2040. The programmed improvement at this intersection will include providing two eastbound through lanes while the additional improvements include providing northbound dual left turn lanes and a designated right turn lane along the northbound and southbound approaches. The northbound approach of this intersection should operate with protected left turn phasing when dual left turn lanes are incorporated. With these improvements, this intersection is expected to operate acceptably with LOS D during the morning and afternoon peak hours in 2040.

4.3.2 Dell Range Boulevard and Whitney Road (#5)

Although the intersection of Dell Range Boulevard and Whitney Road is expected to operate acceptably during the peak hours with programmed improvements and signal control in 2040, this intersection was also evaluated with roundabout control. The roundabout was analyzed with single lane approaches with designated right turn lanes on the eastbound, westbound, and southbound approaches. With this configuration and roundabout control, this intersection is expected to operate acceptably with LOS B during the morning peak hour and LOS D during the afternoon peak hour in 2040. With signal control and designated left turn lanes on all approaches, this intersection is expected to operate acceptably with LOS C during the peak hours in 2040. It should be noted that the eastbound and northbound approaches could experience long vehicle queues under roundabout control if future traffic volumes are realized.

4.3.3 US-30 and College Drive (#6)

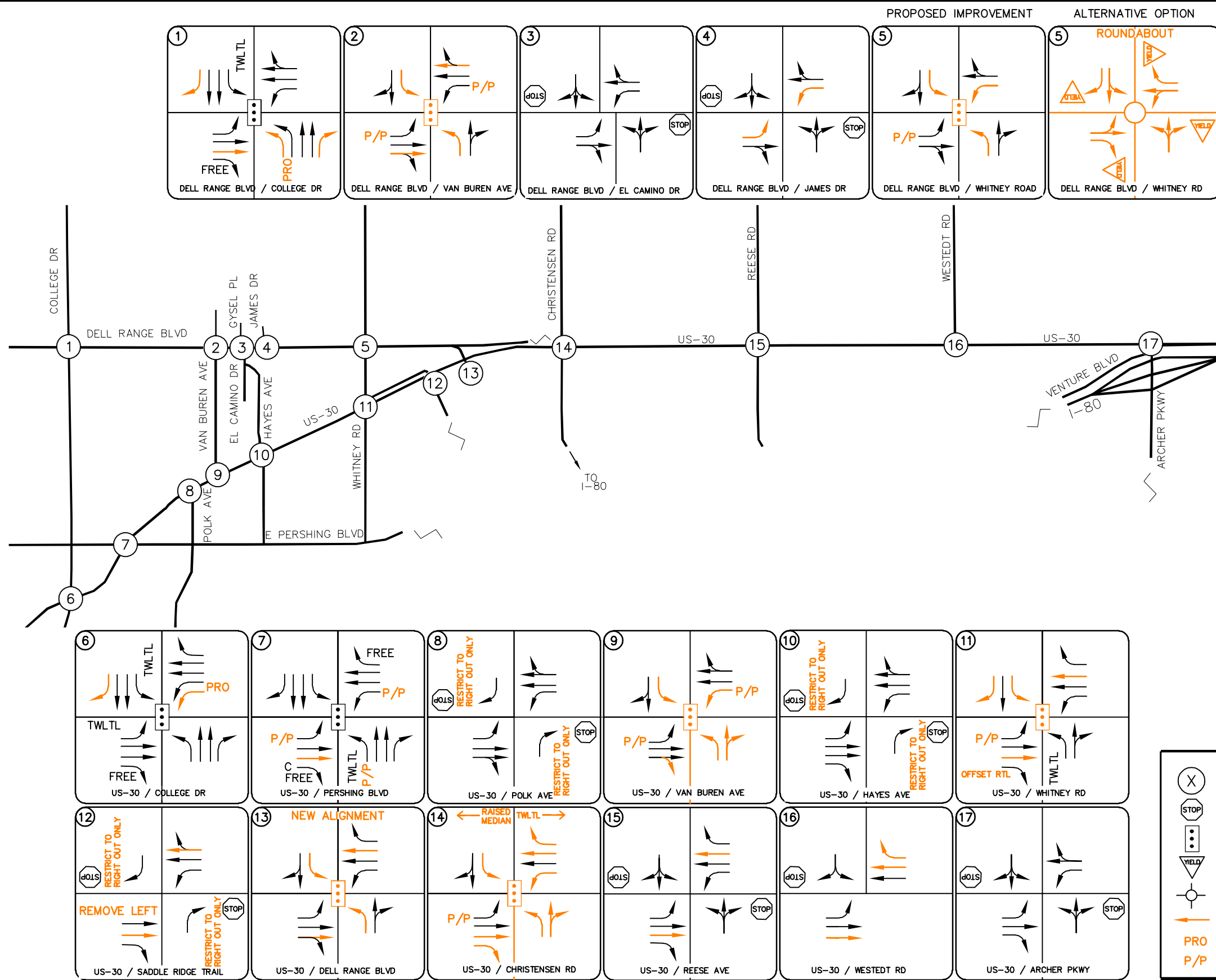
The US-30 and College Drive intersection currently operates acceptably with LOS C during the morning peak hour and LOS D during the afternoon peak hour; however, this intersection is expected to need lane modifications to improve operations during the peak hours in 2040. Westbound dual left turn lanes and a designated southbound right turn lane are recommended at this intersection if future traffic volumes are realized. The westbound approach of this intersection should operate with protected left turn phasing when dual left turn lanes are implemented. The northbound approach should operate with protected overlap right turn phasing. With these improvements, this intersection is expected to operate with LOS C during the morning peak hour and LOS E during the afternoon peak hour in 2040.

4.3.4 US-30 and Whitney Road (#11)

With existing lane configurations and control, all movements currently operate with LOS E or better during the peak hours. The intersection of US-30 and Whitney Road is expected to experience long delays during the peak hours in 2040 under stop control. A southbound right turn lane is recommended at this intersection in addition to providing signal control, two through lanes in the eastbound and westbound directions, and a southbound left turn lane. The eastbound approach of this intersection should operate with protected-permitted left turn phasing when signalization occurs. With these improvements, this intersection is expected to operate acceptably with LOS C during the morning peak hour and LOS B during the afternoon

peak hour in 2040. A four-hour vehicular volume signal warrant is expected to be met at this intersection with 2040 traffic projections. A signal warrant analysis figure for this intersection is included in **Attachment D**. As such, traffic volumes should be monitored in the future to determine if and when signalization is the appropriate control at this intersection. However, interim improvements prior to signalization are understood to include constructing an offset eastbound right turn lane at the intersection of US-30 and Whitney Road to improve sight visibility for northbound movements. Vehicles in the existing eastbound right turn lane are currently blocking the sight lines of the eastbound through lane for vehicles performing movements on the northbound approach. These sight visibility constraints are due to the skewed legs of this intersection not being perpendicular. Signalization should ultimately create a safer intersection.

Based on the results of the operational and signal warrant analysis, the recommended lane configurations and control of the study key intersections is shown in **Figure 4**.



EAST DELL RANGE BOULEVARD & US-30 CORRIDOR STUDY
2040 RECOMMENDED LANE CONFIGURATIONS AND CONTROL

FIGURE 4

ATTACHMENTS

ATTACHMENT A

Intersection Count Sheets



Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and College Dr

File Name : Dell Range and College AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 1

Groups Printed- Automobiles

Start Time	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					College Dr Northbound					College Dr Southbound					Int. Total
	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	
07:00 AM	3	26	54	0	83	25	118	41	0	184	45	44	12	0	101	17	64	26	0	107	475
07:15 AM	5	26	53	0	84	33	122	40	0	195	48	47	36	0	131	21	70	22	0	113	523
07:30 AM	5	28	70	0	103	38	112	48	0	198	59	46	17	0	122	21	88	26	0	135	558
07:45 AM	6	29	72	0	107	31	112	38	0	181	90	76	10	0	176	28	90	16	0	134	598
Total	19	109	249	0	377	127	464	167	0	758	242	213	75	0	530	87	312	90	0	489	2154
08:00 AM	7	30	69	0	106	13	97	40	0	150	68	45	14	0	127	31	74	12	0	117	500
08:15 AM	8	28	63	0	99	13	85	31	0	129	69	55	15	0	139	29	77	10	0	116	483
08:30 AM	10	24	60	0	94	14	78	14	0	106	67	56	11	0	134	16	71	11	0	98	432
08:45 AM	7	26	55	0	88	15	85	26	0	126	82	35	12	0	129	17	51	17	0	85	428
Total	32	108	247	0	387	55	345	111	0	511	286	191	52	0	529	93	273	50	0	416	1843
Grand Total	51	217	496	0	764	182	809	278	0	1269	528	404	127	0	1059	180	585	140	0	905	3997
Apprch %	6.7	28.4	64.9	0		14.3	63.8	21.9	0		49.9	38.1	12	0		19.9	64.6	15.5	0		
Total %	1.3	5.4	12.4	0	19.1	4.6	20.2	7	0	31.7	13.2	10.1	3.2	0	26.5	4.5	14.6	3.5	0	22.6	

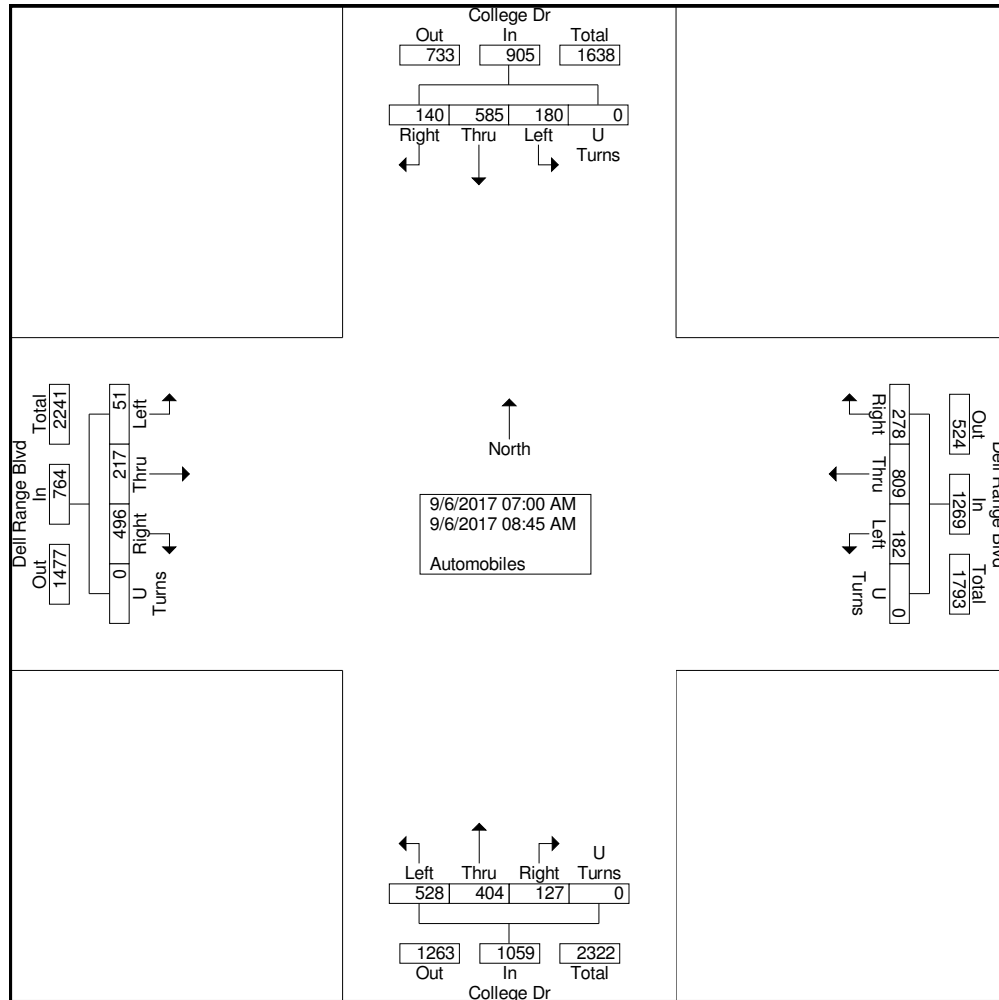


Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and College Dr

File Name : Dell Range and College AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 2



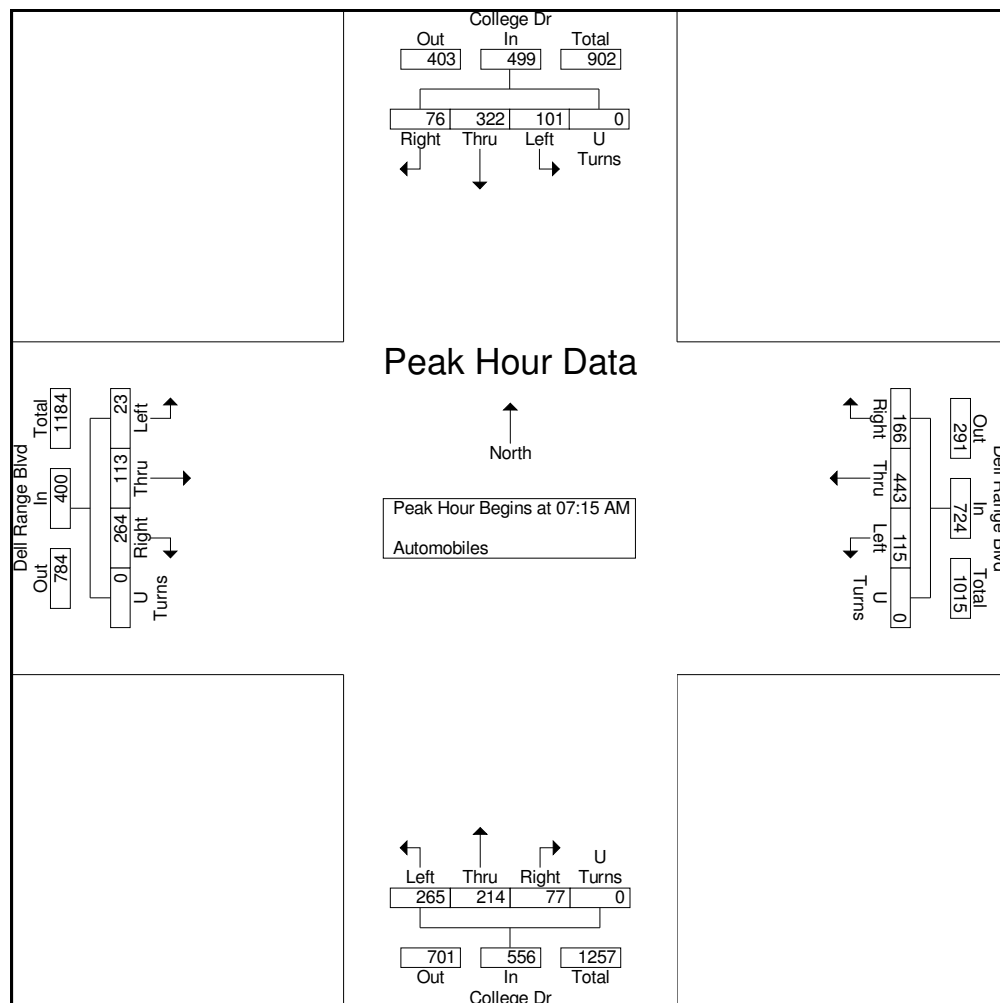


Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and College Dr

File Name : Dell Range and College AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 3

	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					College Dr Northbound					College Dr Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	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	5	26	53	0	84	33	122	40	0	195	48	47	36	0	131	21	70	22	0	113	523
07:30 AM	5	28	70	0	103	38	112	48	0	198	59	46	17	0	122	21	88	26	0	135	558
07:45 AM	6	29	72	0	107	31	112	38	0	181	90	76	10	0	176	28	90	16	0	134	598
08:00 AM	7	30	69	0	106	13	97	40	0	150	68	45	14	0	127	31	74	12	0	117	500
Total Volume	23	113	264	0	400	115	443	166	0	724	265	214	77	0	556	101	322	76	0	499	2179
% App. Total	5.8	28.2	66	0		15.9	61.2	22.9	0		47.7	38.5	13.8	0		20.2	64.5	15.2	0		
PHF	.821	.942	.917	.000	.935	.757	.908	.865	.000	.914	.736	.704	.535	.000	.790	.815	.894	.731	.000	.924	.911





Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and College Dr

File Name : Dell Range and College PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 1

Groups Printed- Automobiles

Start Time	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					College Dr Northbound					College Dr Southbound					Int. Total
	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	
04:00 PM	23	107	93	0	223	38	93	28	0	159	88	75	42	0	205	31	49	12	0	92	679
04:15 PM	17	90	94	0	201	13	64	25	0	102	102	82	33	0	217	42	62	19	0	123	643
04:30 PM	27	98	95	0	220	10	84	24	0	118	77	81	23	0	181	38	72	14	0	124	643
04:45 PM	32	114	81	0	227	13	81	27	0	121	105	82	30	0	217	44	59	18	0	121	686
Total	99	409	363	0	871	74	322	104	0	500	372	320	128	0	820	155	242	63	0	460	2651
05:00 PM	18	101	100	0	219	12	87	29	0	128	101	97	30	0	228	49	59	13	0	121	696
05:15 PM	16	111	85	0	212	14	91	33	0	138	89	125	49	0	263	54	65	14	0	133	746
05:30 PM	27	112	87	0	226	18	80	31	0	129	106	97	35	0	238	49	57	19	0	125	718
05:45 PM	28	106	90	0	224	17	83	25	0	125	78	98	27	0	203	25	52	16	0	93	645
Total	89	430	362	0	881	61	341	118	0	520	374	417	141	0	932	177	233	62	0	472	2805
Grand Total	188	839	725	0	1752	135	663	222	0	1020	746	737	269	0	1752	332	475	125	0	932	5456
Apprch %	10.7	47.9	41.4	0		13.2	65	21.8	0		42.6	42.1	15.4	0		35.6	51	13.4	0		
Total %	3.4	15.4	13.3	0	32.1	2.5	12.2	4.1	0	18.7	13.7	13.5	4.9	0	32.1	6.1	8.7	2.3	0	17.1	

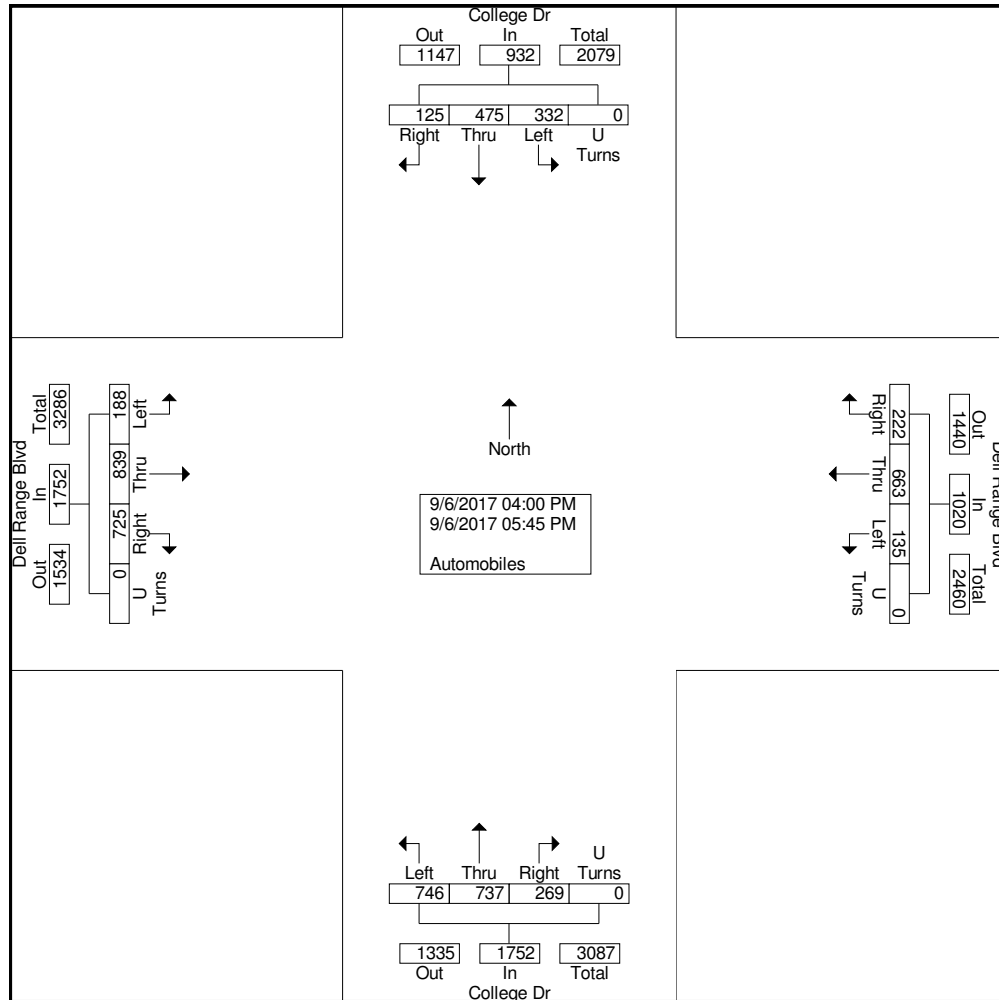


Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and College Dr

File Name : Dell Range and College PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 2



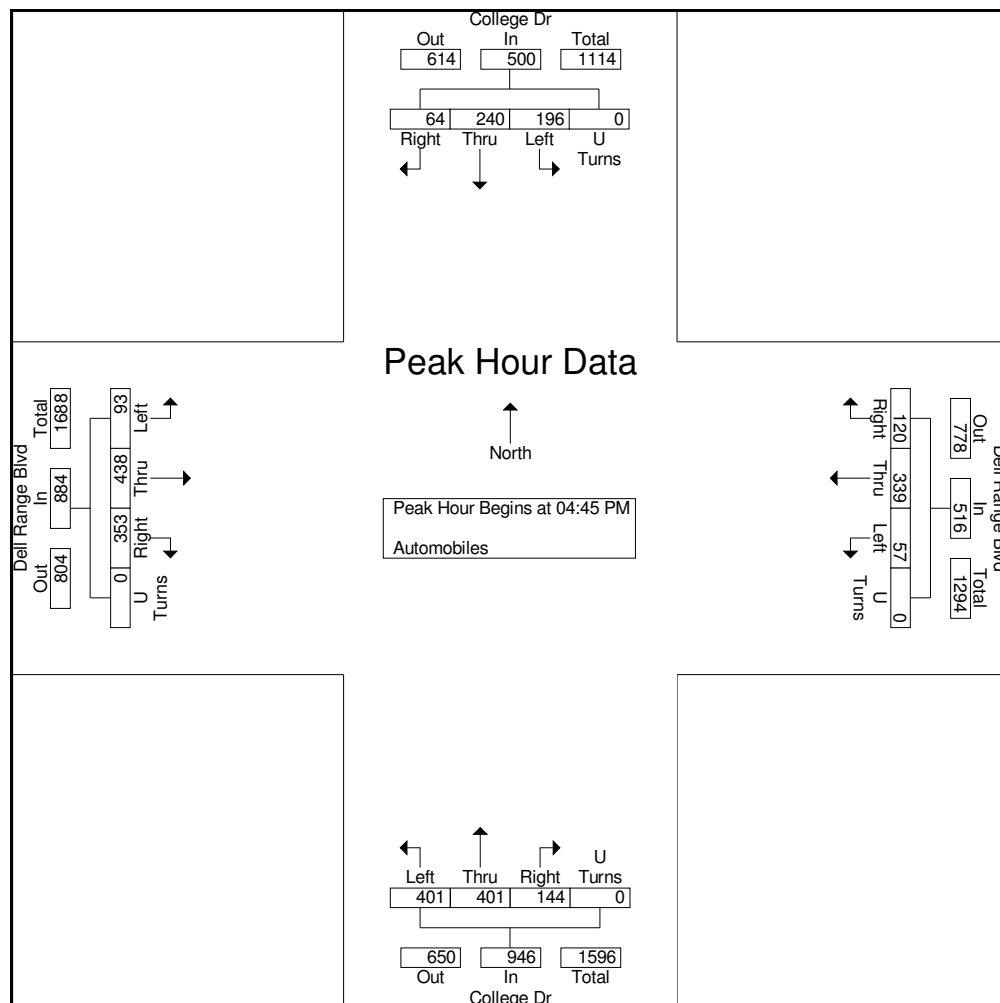


Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and College Dr

File Name : Dell Range and College PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 3

	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					College Dr Northbound					College Dr Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	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	32	114	81	0	227	13	81	27	0	121	105	82	30	0	217	44	59	18	0	121	686
05:00 PM	18	101	100	0	219	12	87	29	0	128	101	97	30	0	228	49	59	13	0	121	696
05:15 PM	16	111	85	0	212	14	91	33	0	138	89	125	49	0	263	54	65	14	0	133	746
05:30 PM	27	112	87	0	226	18	80	31	0	129	106	97	35	0	238	49	57	19	0	125	718
Total Volume	93	438	353	0	884	57	339	120	0	516	401	401	144	0	946	196	240	64	0	500	2846
% App. Total	10.5	49.5	39.9	0		11	65.7	23.3	0		42.4	42.4	15.2	0		39.2	48	12.8	0		
PHF	.727	.961	.883	.000	.974	.792	.931	.909	.000	.935	.946	.802	.735	.000	.899	.907	.923	.842	.000	.940	.954





Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and Van Buren Ave

File Name : Dell Range and Van Buren AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 1

Groups Printed- Automobiles

Start Time	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					Van Buren Ave Northbound					Van Buren Ave Southbound					Int. Total
	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	
07:00 AM	0	22	6	0	28	1	106	0	0	107	9	0	0	0	9	1	1	0	0	2	146
07:15 AM	0	32	12	0	44	5	108	0	0	113	13	0	0	0	13	0	0	0	0	0	170
07:30 AM	0	36	8	0	44	2	99	0	0	101	9	0	0	0	9	0	2	1	0	3	157
07:45 AM	1	48	16	0	65	3	105	0	0	108	11	0	1	0	12	0	1	0	0	1	186
Total	1	138	42	0	181	11	418	0	0	429	42	0	1	0	43	1	4	1	0	6	659
08:00 AM	0	40	13	0	53	4	101	0	0	105	7	0	1	0	8	0	0	0	0	0	166
08:15 AM	0	37	39	0	76	8	72	0	0	80	16	4	4	0	24	0	5	0	0	5	185
08:30 AM	1	31	13	0	45	1	52	0	0	53	23	0	2	0	25	0	0	1	0	1	124
08:45 AM	0	33	3	0	36	0	77	0	0	77	7	0	0	0	7	0	0	1	0	1	121
Total	1	141	68	0	210	13	302	0	0	315	53	4	7	0	64	0	5	2	0	7	596
Grand Total	2	279	110	0	391	24	720	0	0	744	95	4	8	0	107	1	9	3	0	13	1255
Apprch %	0.5	71.4	28.1	0		3.2	96.8	0	0		88.8	3.7	7.5	0		7.7	69.2	23.1	0		
Total %	0.2	22.2	8.8	0	31.2	1.9	57.4	0	0	59.3	7.6	0.3	0.6	0	8.5	0.1	0.7	0.2	0	1	

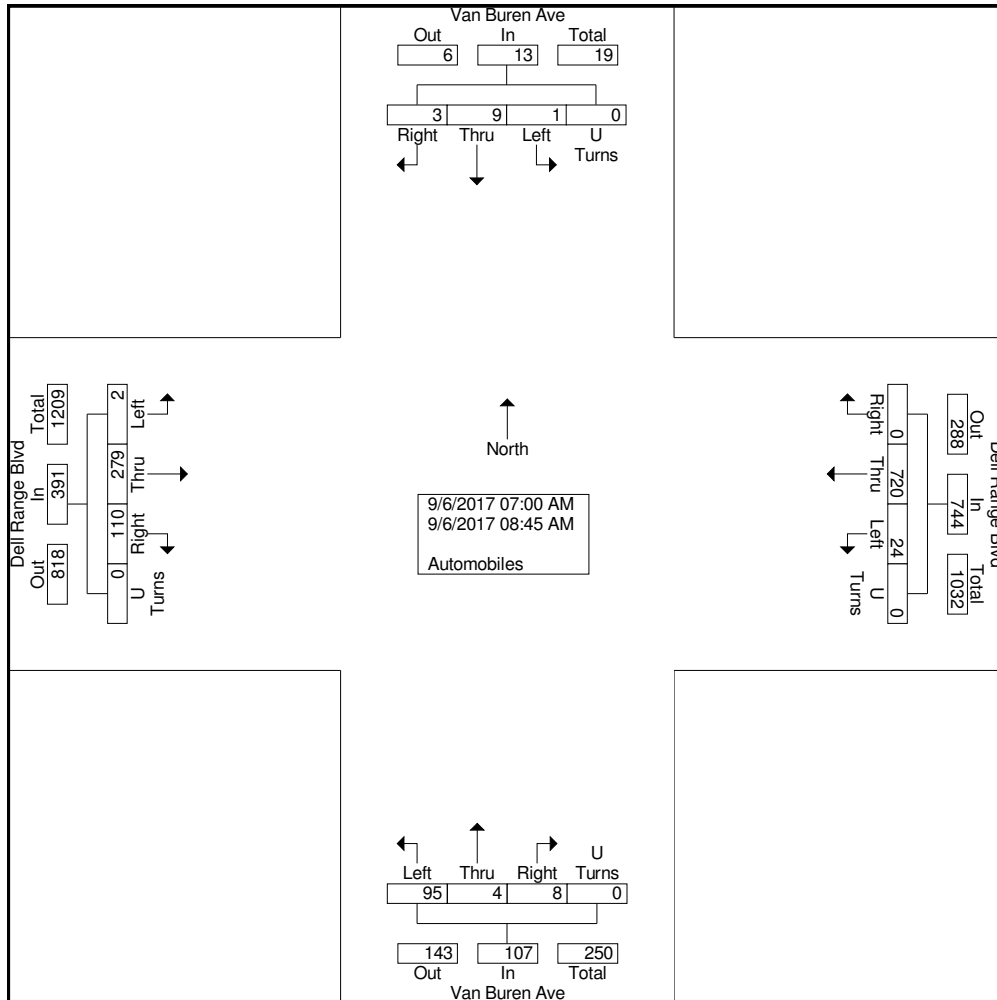


Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and Van Buren Ave

File Name : Dell Range and Van Buren AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 2



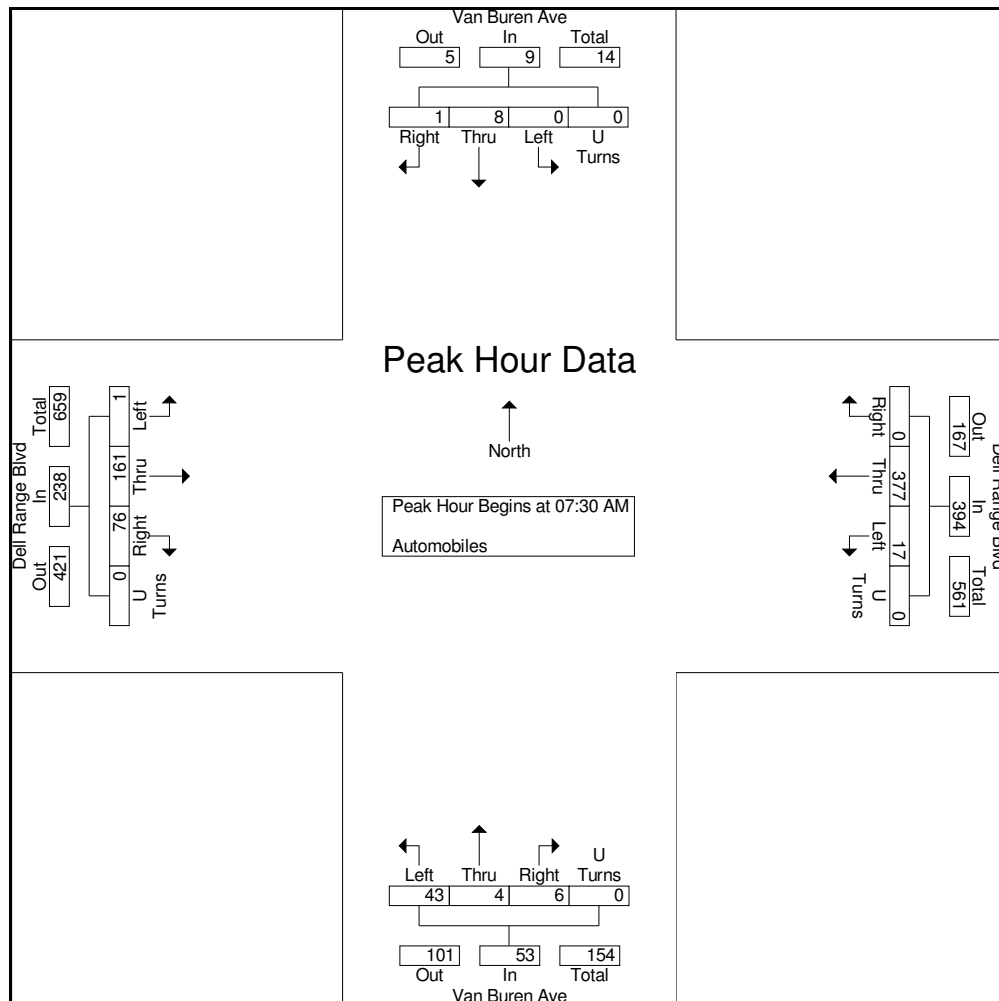


Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and Van Buren Ave

File Name : Dell Range and Van Buren AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 3

	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					Van Buren Ave Northbound					Van Buren Ave Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	36	8	0	44	2	99	0	0	101	9	0	0	0	9	0	2	1	0	3	157
07:45 AM	1	48	16	0	65	3	105	0	0	108	11	0	1	0	12	0	1	0	0	1	186
08:00 AM	0	40	13	0	53	4	101	0	0	105	7	0	1	0	8	0	0	0	0	0	166
08:15 AM	0	37	39	0	76	8	72	0	0	80	16	4	4	0	24	0	5	0	0	5	185
Total Volume	1	161	76	0	238	17	377	0	0	394	43	4	6	0	53	0	8	1	0	9	694
% App. Total	0.4	67.6	31.9	0		4.3	95.7	0	0		81.1	7.5	11.3	0		0	88.9	11.1	0		
PHF	.250	.839	.487	.000	.783	.531	.898	.000	.000	.912	.672	.250	.375	.000	.552	.000	.400	.250	.000	.450	.933





Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and Van Buren Ave

File Name : Dell Range and Van Buren PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 1

Groups Printed- Automobiles

Start Time	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					Van Buren Ave Northbound					Van Buren Ave Southbound					Int. Total
	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	
04:00 PM	1	96	11	0	108	0	62	0	0	62	10	0	2	0	12	0	0	1	0	1	183
04:15 PM	1	102	13	0	116	0	58	1	0	59	9	3	2	0	14	0	0	0	0	0	189
04:30 PM	0	102	15	0	117	0	98	0	0	98	12	0	5	0	17	0	3	0	0	3	235
04:45 PM	0	107	17	0	124	0	66	0	0	66	15	0	6	0	21	0	1	0	0	1	212
Total	2	407	56	0	465	0	284	1	0	285	46	3	15	0	64	0	4	1	0	5	819
05:00 PM	1	114	12	0	127	0	97	0	0	97	7	2	1	0	10	0	0	1	0	1	235
05:15 PM	0	109	17	0	126	0	84	0	0	84	8	2	1	0	11	0	2	0	0	2	223
05:30 PM	1	128	19	0	148	1	84	0	0	85	8	1	2	0	11	0	0	0	0	0	244
05:45 PM	3	97	19	0	119	2	61	0	0	63	13	2	0	0	15	0	2	1	0	3	200
Total	5	448	67	0	520	3	326	0	0	329	36	7	4	0	47	0	4	2	0	6	902
Grand Total	7	855	123	0	985	3	610	1	0	614	82	10	19	0	111	0	8	3	0	11	1721
Apprch %	0.7	86.8	12.5	0		0.5	99.3	0.2	0		73.9	9	17.1	0		0	72.7	27.3	0		
Total %	0.4	49.7	7.1	0	57.2	0.2	35.4	0.1	0	35.7	4.8	0.6	1.1	0	6.4	0	0.5	0.2	0	0.6	

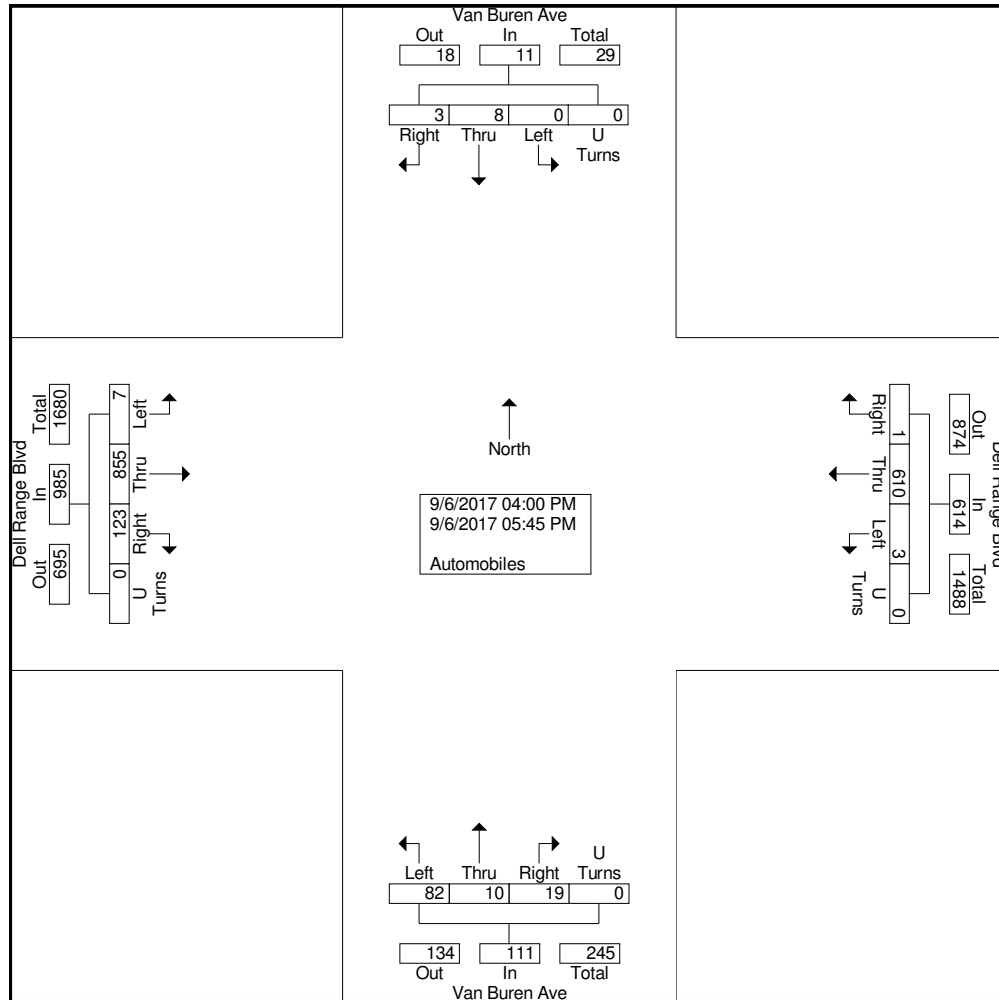


Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and Van Buren Ave

File Name : Dell Range and Van Buren PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 2



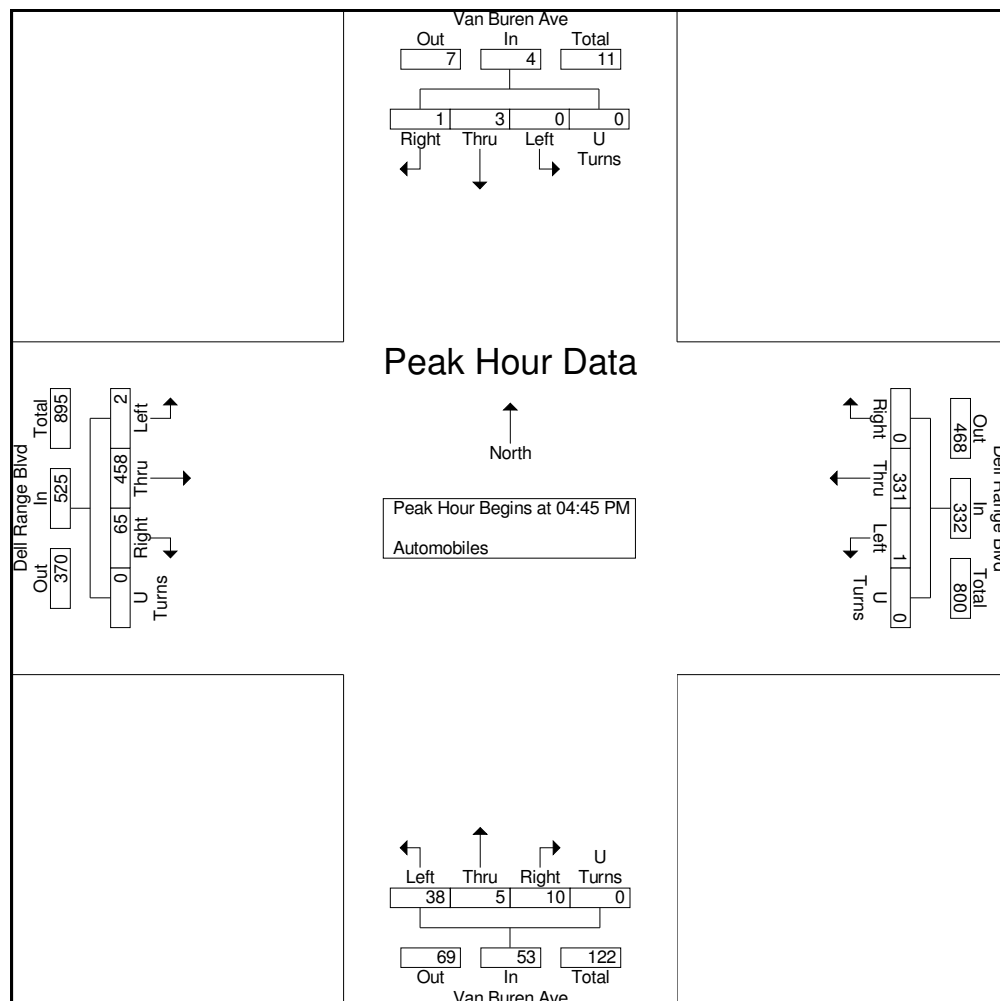


Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and Van Buren Ave

File Name : Dell Range and Van Buren PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 3

	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					Van Buren Ave Northbound					Van Buren Ave Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	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	107	17	0	124	0	66	0	0	66	15	0	6	0	21	0	1	0	0	1	212
05:00 PM	1	114	12	0	127	0	97	0	0	97	7	2	1	0	10	0	0	1	0	1	235
05:15 PM	0	109	17	0	126	0	84	0	0	84	8	2	1	0	11	0	2	0	0	2	223
05:30 PM	1	128	19	0	148	1	84	0	0	85	8	1	2	0	11	0	0	0	0	0	244
Total Volume	2	458	65	0	525	1	331	0	0	332	38	5	10	0	53	0	3	1	0	4	914
% App. Total	0.4	87.2	12.4	0		0.3	99.7	0	0		71.7	9.4	18.9	0		0	75	25	0		
PHF	.500	.895	.855	.000	.887	.250	.853	.000	.000	.856	.633	.625	.417	.000	.631	.000	.375	.250	.000	.500	.936





Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and Gysel Pl/El Camino

File Name : Dell Range and Gysel El Camino AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 1

Groups Printed- Automobiles

	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					El Camino Dr Northbound					Gysel Place Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Int. Total
07:00 AM	0	21	2	0	23	2	89	0	0	91	13	0	1	0	14	0	0	0	0	0	128
07:15 AM	0	24	7	0	31	1	94	0	0	95	19	0	0	0	19	0	0	0	0	0	145
07:30 AM	0	32	4	0	36	0	96	0	0	96	9	0	0	0	9	0	0	0	0	0	141
07:45 AM	0	45	5	0	50	0	91	0	0	91	16	0	0	0	16	0	0	0	0	0	157
Total	0	122	18	0	140	3	370	0	0	373	57	0	1	0	58	0	0	0	0	0	571
08:00 AM	0	34	6	0	40	0	98	0	0	98	4	0	0	0	4	0	0	0	0	0	142
08:15 AM	1	39	2	0	42	0	65	0	0	65	10	0	0	0	10	0	0	1	0	1	118
08:30 AM	0	30	3	0	33	1	47	0	0	48	4	0	1	0	5	1	0	1	0	2	88
08:45 AM	0	30	3	0	33	1	66	0	0	67	12	0	0	0	12	0	0	1	0	1	113
Total	1	133	14	0	148	2	276	0	0	278	30	0	1	0	31	1	0	3	0	4	461
Grand Total	1	255	32	0	288	5	646	0	0	651	87	0	2	0	89	1	0	3	0	4	1032
Apprch %	0.3	88.5	11.1	0		0.8	99.2	0	0		97.8	0	2.2	0		25	0	75	0		
Total %	0.1	24.7	3.1	0	27.9	0.5	62.6	0	0	63.1	8.4	0	0.2	0	8.6	0.1	0	0.3	0	0.4	

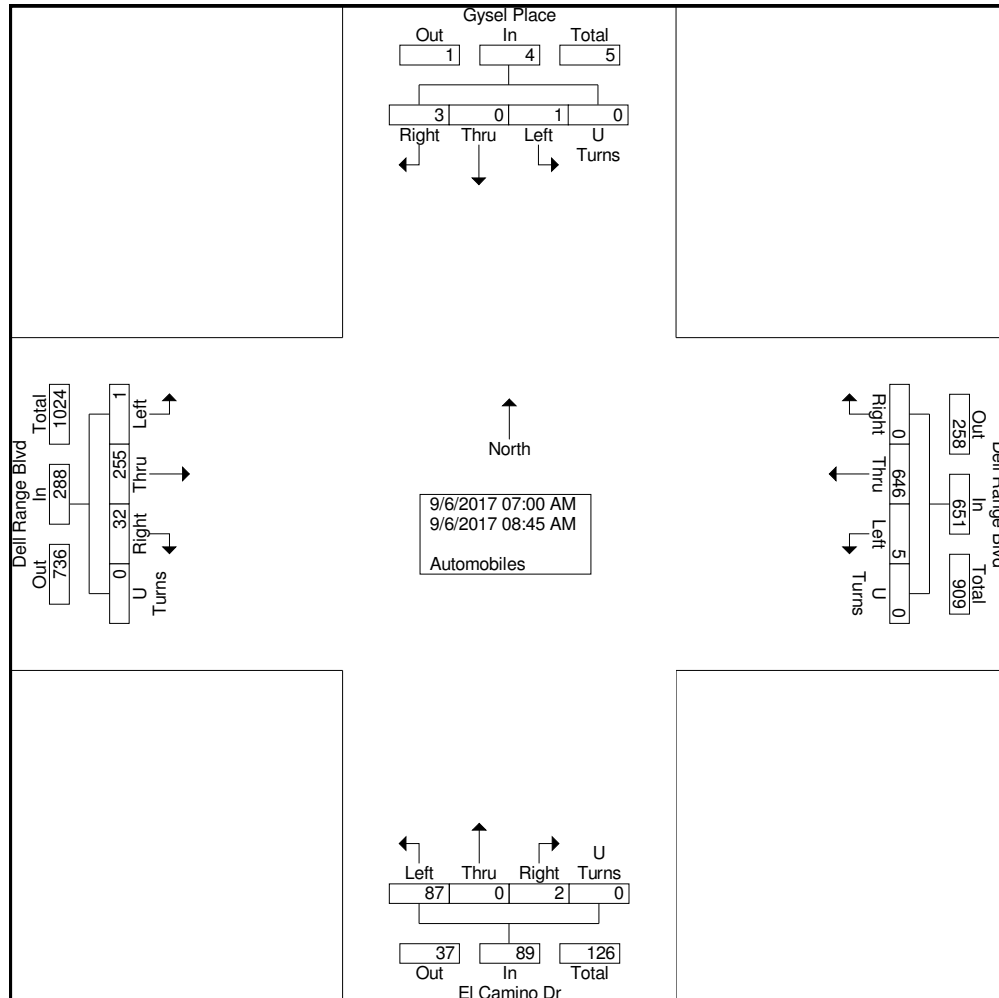


Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and Gysel Pl/El Camino

File Name : Dell Range and Gysel El Camino AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 2





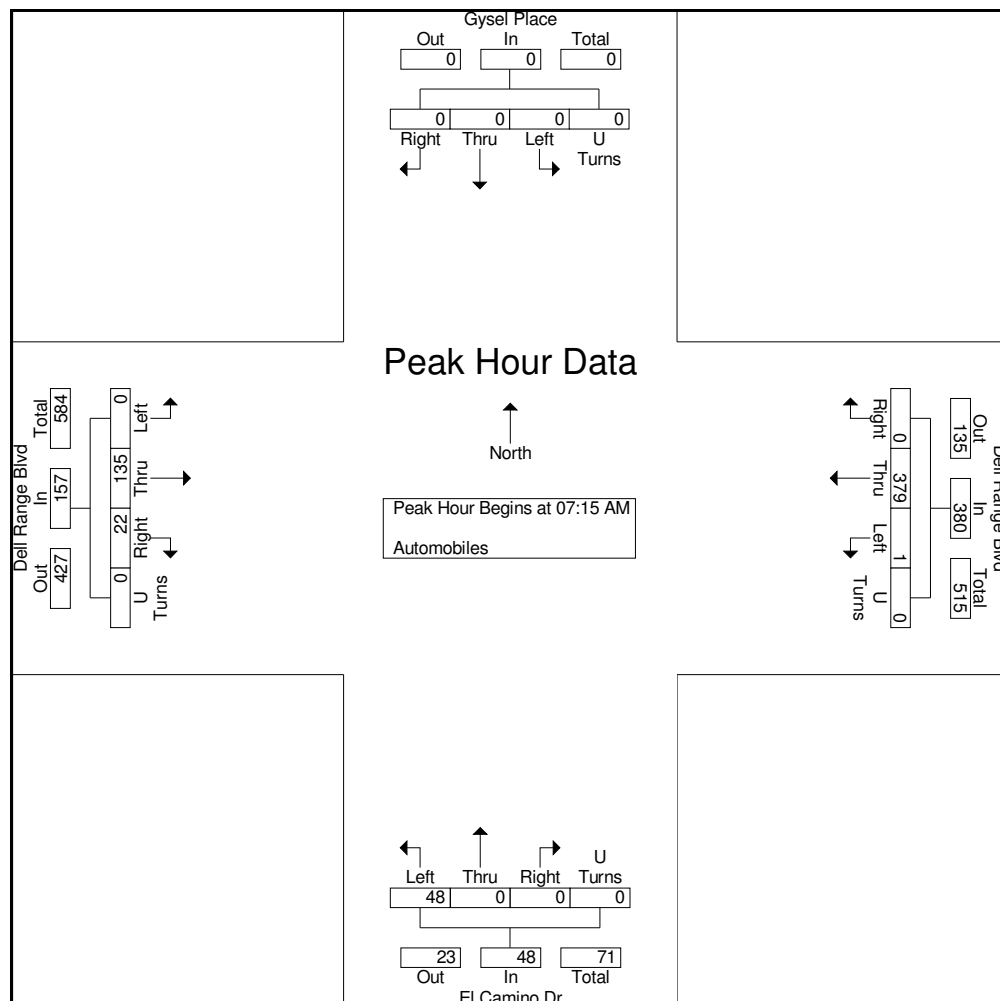
Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and Gysel Pl/El Camino

File Name : Dell Range and Gysel El Camino AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 3

	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					El Camino Dr Northbound					Gysel Place Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	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	24	7	0	31	1	94	0	0	95	19	0	0	0	19	0	0	0	0	0	145
07:30 AM	0	32	4	0	36	0	96	0	0	96	9	0	0	0	9	0	0	0	0	0	141
07:45 AM	0	45	5	0	50	0	91	0	0	91	16	0	0	0	16	0	0	0	0	0	157
08:00 AM	0	34	6	0	40	0	98	0	0	98	4	0	0	0	4	0	0	0	0	0	142
Total Volume	0	135	22	0	157	1	379	0	0	380	48	0	0	0	48	0	0	0	0	0	585
% App. Total	0	86	14	0		0.3	99.7	0	0		100	0	0	0		0	0	0	0		
PHF	.000	.750	.786	.000	.785	.250	.967	.000	.000	.969	.632	.000	.000	.000	.632	.000	.000	.000	.000	.000	.932





Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and Gysel Pl/EI Camino

File Name : Dell Range and Gysel EI Camino PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 1

Groups Printed- Automobiles

	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					EI Camino Dr Northbound					Gysel Place Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Int. Total
04:00 PM	0	89	10	0	99	1	50	0	0	51	7	0	0	0	7	0	0	1	0	1	158
04:15 PM	0	89	13	0	102	1	54	1	0	56	6	0	0	0	6	0	0	0	0	0	164
04:30 PM	2	94	11	0	107	0	73	0	0	73	21	0	1	0	22	2	0	1	0	3	205
04:45 PM	0	98	13	0	111	0	57	0	0	57	7	0	0	0	7	0	0	0	0	0	175
Total	2	370	47	0	419	2	234	1	0	237	41	0	1	0	42	2	0	2	0	4	702
05:00 PM	0	105	14	0	119	0	91	0	0	91	7	0	0	0	7	0	0	0	0	0	217
05:15 PM	0	93	15	0	108	0	73	0	0	73	11	0	0	0	11	0	0	1	0	1	193
05:30 PM	1	120	9	0	130	1	71	0	0	72	13	0	0	0	13	0	0	0	0	0	215
05:45 PM	0	85	12	0	97	0	56	0	0	56	7	0	2	0	9	0	0	0	0	0	162
Total	1	403	50	0	454	1	291	0	0	292	38	0	2	0	40	0	0	1	0	1	787
Grand Total	3	773	97	0	873	3	525	1	0	529	79	0	3	0	82	2	0	3	0	5	1489
Apprch %	0.3	88.5	11.1	0		0.6	99.2	0.2	0		96.3	0	3.7	0		40	0	60	0		
Total %	0.2	51.9	6.5	0	58.6	0.2	35.3	0.1	0	35.5	5.3	0	0.2	0	5.5	0.1	0	0.2	0	0.3	

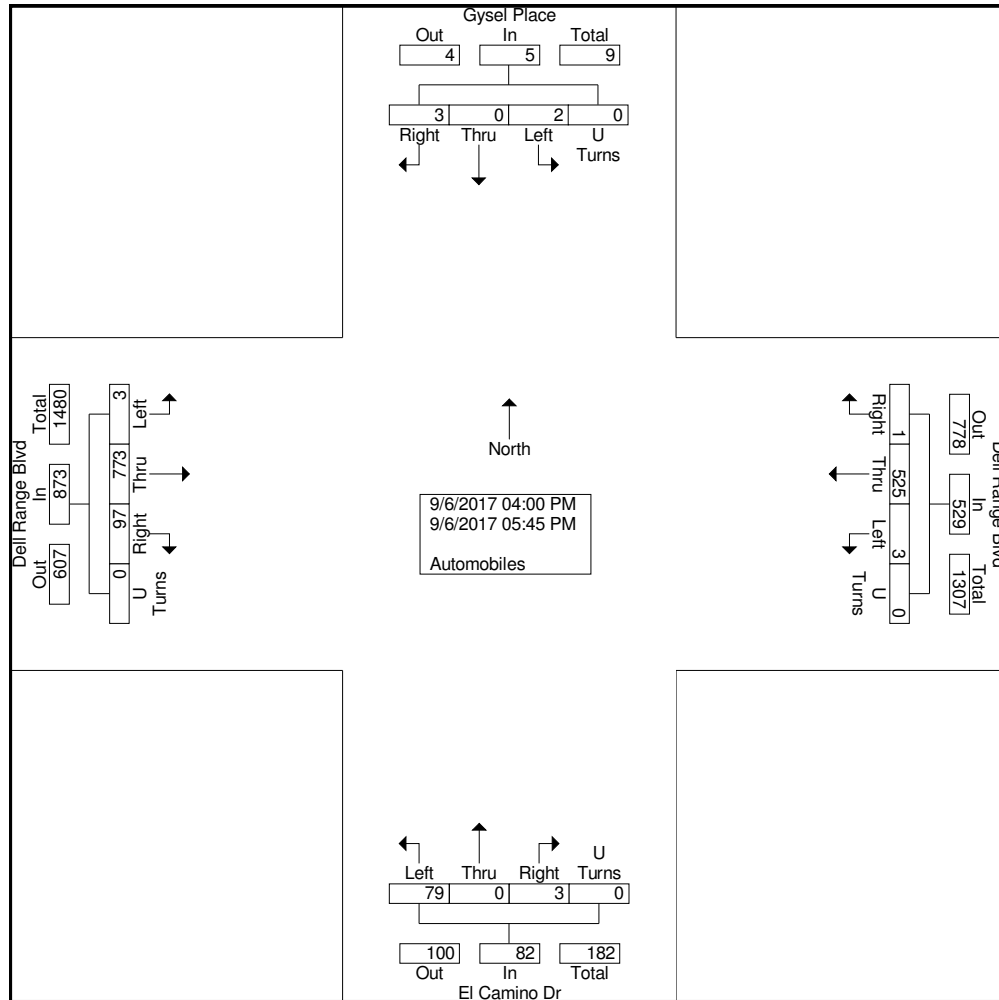


Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and Gysel Pl/El Camino

File Name : Dell Range and Gysel El Camino PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 2





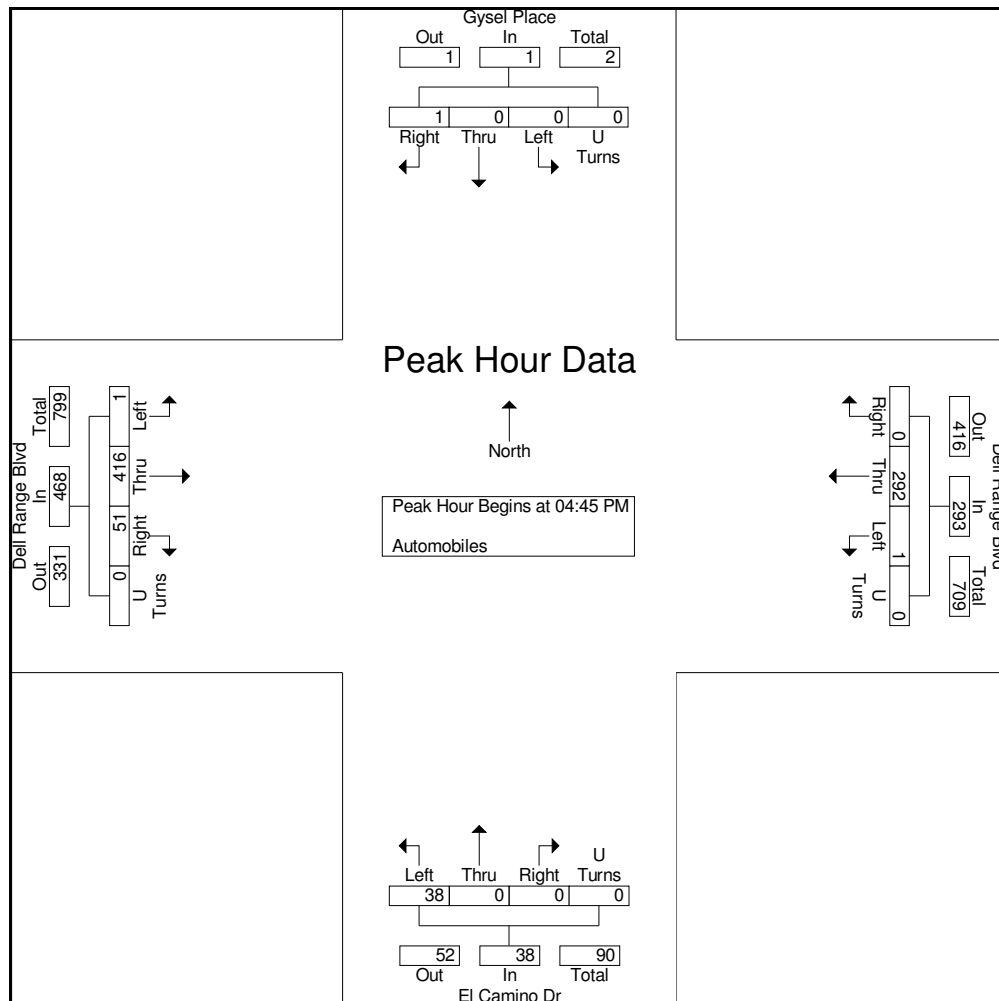
Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and Gysel Pl/EI Camino

File Name : Dell Range and Gysel EI Camino PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 3

	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					EI Camino Dr Northbound					Gysel Place Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	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	98	13	0	111	0	57	0	0	57	7	0	0	0	7	0	0	0	0	0	175
05:00 PM	0	105	14	0	119	0	91	0	0	91	7	0	0	0	7	0	0	0	0	0	217
05:15 PM	0	93	15	0	108	0	73	0	0	73	11	0	0	0	11	0	0	1	0	1	193
05:30 PM	1	120	9	0	130	1	71	0	0	72	13	0	0	0	13	0	0	0	0	0	215
Total Volume	1	416	51	0	468	1	292	0	0	293	38	0	0	0	38	0	0	1	0	1	800
% App. Total	0.2	88.9	10.9	0		0.3	99.7	0	0		100	0	0	0		0	0	100	0		
PHF	.250	.867	.850	.000	.900	.250	.802	.000	.000	.805	.731	.000	.000	.000	.731	.000	.000	.250	.000	.250	.922





Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and James Dr

File Name : Dell Range and James AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 1

Groups Printed- Automobiles

Start Time	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					James Dr Northbound					James Dr Southbound					Int. Total
	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	
07:00 AM	0	24	0	0	24	0	91	0	0	91	0	0	0	0	0	0	0	0	0	0	115
07:15 AM	0	24	0	0	24	0	94	0	0	94	0	0	0	0	0	0	0	0	0	0	118
07:30 AM	0	31	0	0	31	0	98	0	0	98	0	0	0	0	0	0	0	0	0	0	129
07:45 AM	0	47	0	0	47	0	90	0	0	90	0	0	0	0	0	0	0	0	0	0	137
Total	0	126	0	0	126	0	373	0	0	373	0	0	0	0	0	0	0	0	0	0	499
08:00 AM	0	32	0	0	32	0	99	0	0	99	0	0	0	0	0	1	0	1	0	2	133
08:15 AM	1	37	0	0	38	0	64	0	0	64	0	0	0	0	0	0	0	0	0	0	102
08:30 AM	0	34	0	0	34	0	48	0	0	48	0	0	0	0	0	0	0	0	0	0	82
08:45 AM	0	30	0	0	30	0	65	0	0	65	0	0	0	0	0	0	0	0	0	0	95
Total	1	133	0	0	134	0	276	0	0	276	0	0	0	0	0	1	0	1	0	2	412
Grand Total	1	259	0	0	260	0	649	0	0	649	0	0	0	0	0	1	0	1	0	2	911
Apprch %	0.4	99.6	0	0		0	100	0	0		0	0	0	0		50	0	50	0		
Total %	0.1	28.4	0	0	28.5	0	71.2	0	0	71.2	0	0	0	0	0	0.1	0	0.1	0	0.2	

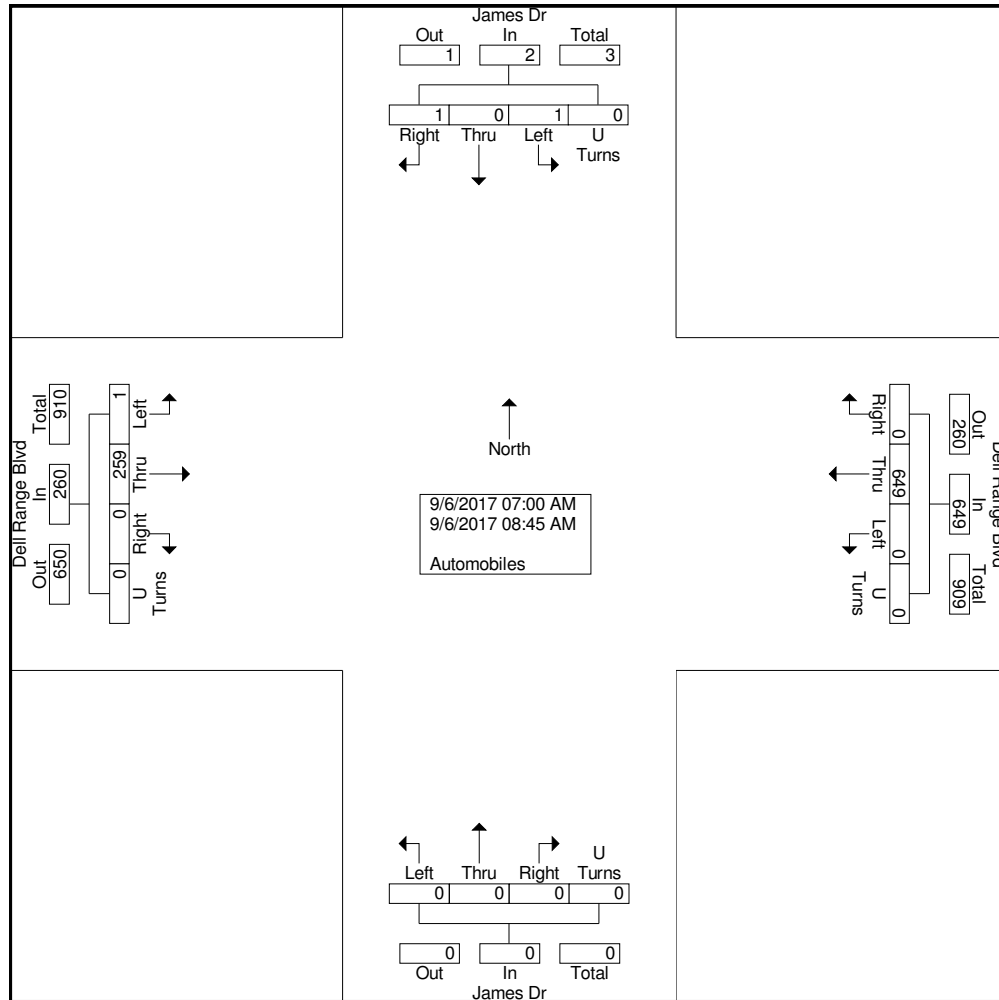


Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and James Dr

File Name : Dell Range and James AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 2





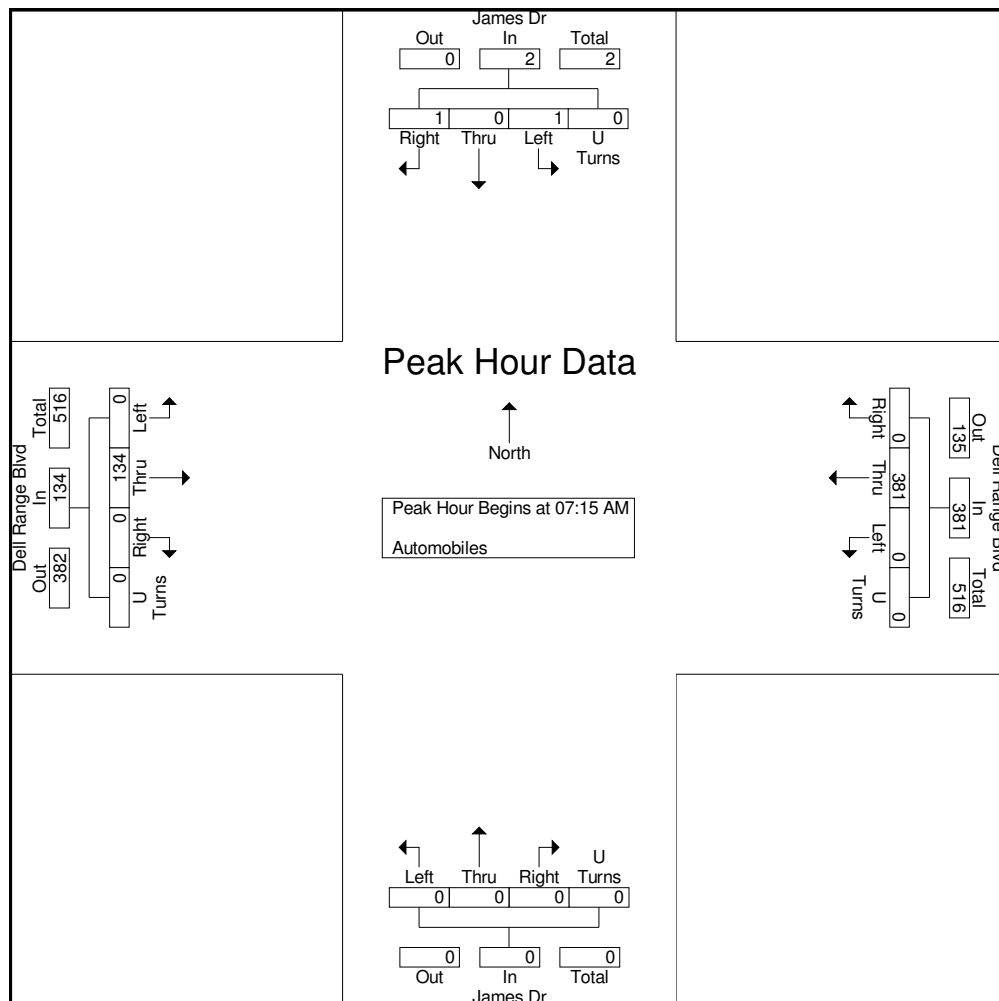
Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and James Dr

File Name : Dell Range and James AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 3

	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					James Dr Northbound					James Dr Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	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	24	0	0	24	0	94	0	0	94	0	0	0	0	0	0	0	0	0	0	118
07:30 AM	0	31	0	0	31	0	98	0	0	98	0	0	0	0	0	0	0	0	0	0	129
07:45 AM	0	47	0	0	47	0	90	0	0	90	0	0	0	0	0	0	0	0	0	0	137
08:00 AM	0	32	0	0	32	0	99	0	0	99	0	0	0	0	0	1	0	1	0	2	133
Total Volume	0	134	0	0	134	0	381	0	0	381	0	0	0	0	0	1	0	1	0	2	517
% App. Total	0	100	0	0		0	100	0	0		0	0	0	0		50	0	50	0		
PHF	.000	.713	.000	.000	.713	.000	.962	.000	.000	.962	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.943





Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and James Dr

File Name : Dell Range and James PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 1

Groups Printed- Automobiles

Start Time	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					James Dr Northbound					James Dr Southbound					Int. Total
	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	
04:00 PM	0	86	0	0	86	0	53	0	0	53	0	0	0	0	0	0	0	0	0	0	139
04:15 PM	0	89	0	0	89	0	54	0	0	54	0	0	0	0	0	0	0	0	0	0	143
04:30 PM	0	93	0	0	93	0	74	0	0	74	0	0	0	0	0	0	0	0	0	0	167
04:45 PM	0	97	0	0	97	0	57	0	0	57	0	0	0	0	0	0	0	0	0	0	154
Total	0	365	0	0	365	0	238	0	0	238	0	0	0	0	0	0	0	0	0	0	603
05:00 PM	0	105	0	0	105	0	98	0	0	98	0	0	0	0	0	0	0	0	0	0	203
05:15 PM	1	95	0	0	96	0	68	0	0	68	0	0	0	0	0	0	0	0	0	0	164
05:30 PM	0	115	0	0	115	0	71	0	0	71	1	0	0	0	1	0	0	0	0	0	187
05:45 PM	0	90	0	0	90	0	54	1	0	55	0	0	0	0	0	0	0	1	0	1	146
Total	1	405	0	0	406	0	291	1	0	292	1	0	0	0	1	0	0	1	0	1	700
Grand Total	1	770	0	0	771	0	529	1	0	530	1	0	0	0	1	0	0	1	0	1	1303
Apprch %	0.1	99.9	0	0		0	99.8	0.2	0		100	0	0	0		0	0	100	0		
Total %	0.1	59.1	0	0	59.2	0	40.6	0.1	0	40.7	0.1	0	0	0	0.1	0	0	0.1	0	0.1	

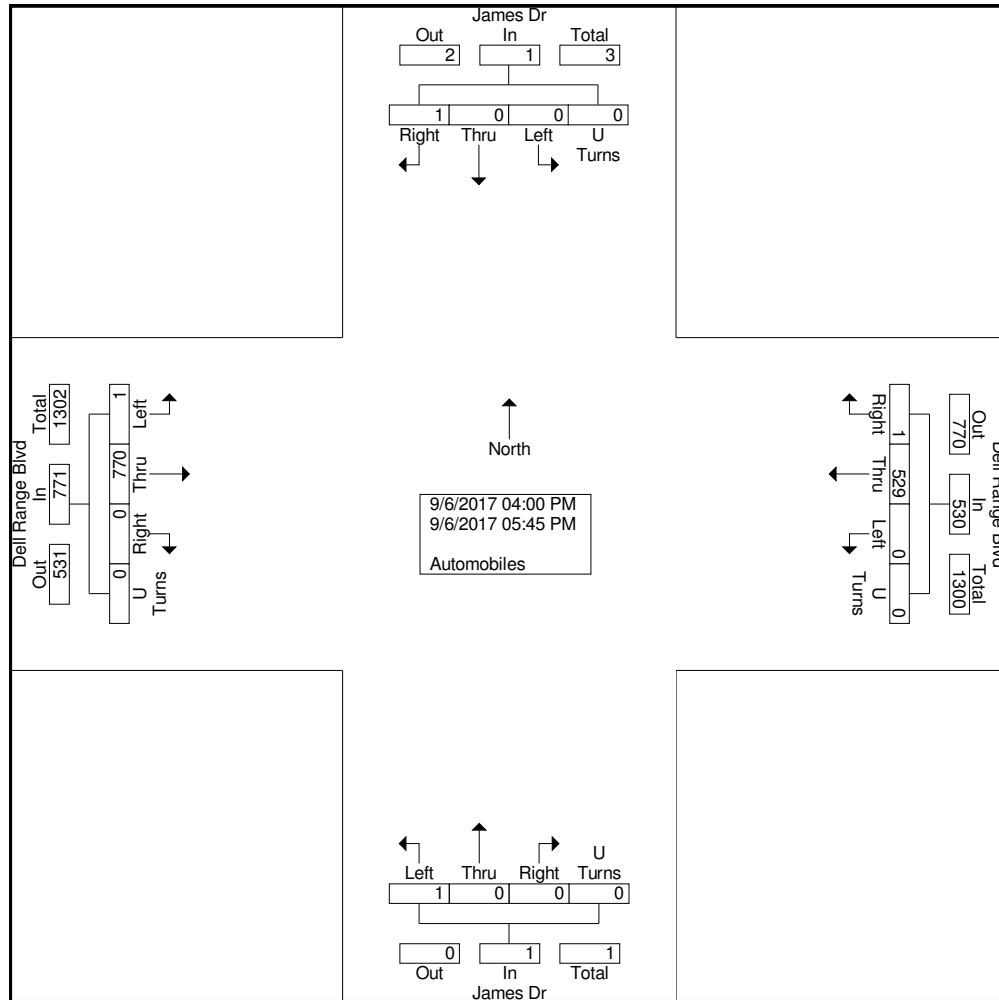


Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and James Dr

File Name : Dell Range and James PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 2





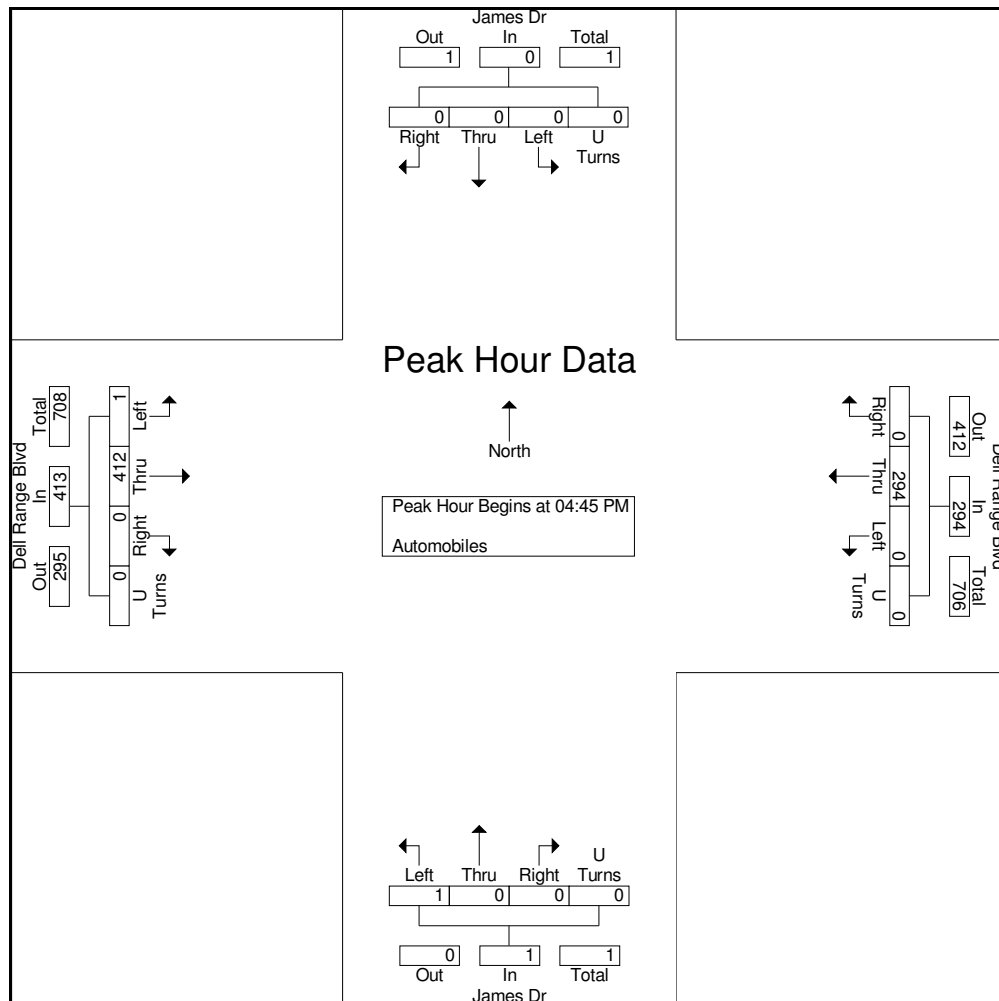
Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and James Dr

File Name : Dell Range and James PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 3

	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					James Dr Northbound					James Dr Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	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	97	0	0	97	0	57	0	0	57	0	0	0	0	0	0	0	0	0	0	154
05:00 PM	0	105	0	0	105	0	98	0	0	98	0	0	0	0	0	0	0	0	0	0	203
05:15 PM	1	95	0	0	96	0	68	0	0	68	0	0	0	0	0	0	0	0	0	0	164
05:30 PM	0	115	0	0	115	0	71	0	0	71	1	0	0	0	1	0	0	0	0	0	187
Total Volume	1	412	0	0	413	0	294	0	0	294	1	0	0	0	1	0	0	0	0	0	708
% App. Total	0.2	99.8	0	0		0	100	0	0		100	0	0	0		0	0	0	0		
PHF	.250	.896	.000	.000	.898	.000	.750	.000	.000	.750	.250	.000	.000	.000	.250	.000	.000	.000	.000	.000	.872





Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and Whitney Rd

File Name : Dell Range and Whitney AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 1

Groups Printed- Automobiles

Start Time	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					Whitney Rd Northbound					Whitney Rd Southbound					Int. Total
	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	
07:00 AM	1	13	9	0	23	1	49	0	0	50	18	5	0	0	23	1	23	25	0	49	145
07:15 AM	2	14	8	0	24	0	51	0	0	51	15	6	0	0	21	1	35	23	0	59	155
07:30 AM	4	17	9	0	30	1	62	0	0	63	20	7	0	0	27	0	33	16	0	49	169
07:45 AM	4	20	18	0	42	2	46	3	0	51	28	4	2	0	34	0	19	16	0	35	162
Total	11	64	44	0	119	4	208	3	0	215	81	22	2	0	105	2	110	80	0	192	631
08:00 AM	3	20	12	0	35	1	48	0	0	49	23	2	1	0	26	0	9	19	0	28	138
08:15 AM	7	17	12	0	36	0	36	1	0	37	18	4	0	0	22	0	12	10	0	22	117
08:30 AM	9	23	2	0	34	1	19	2	0	22	17	6	1	0	24	0	9	10	0	19	99
08:45 AM	5	22	2	0	29	0	43	0	0	43	11	3	0	0	14	0	7	9	0	16	102
Total	24	82	28	0	134	2	146	3	0	151	69	15	2	0	86	0	37	48	0	85	456
Grand Total	35	146	72	0	253	6	354	6	0	366	150	37	4	0	191	2	147	128	0	277	1087
Approch %	13.8	57.7	28.5	0		1.6	96.7	1.6	0		78.5	19.4	2.1	0		0.7	53.1	46.2	0		
Total %	3.2	13.4	6.6	0	23.3	0.6	32.6	0.6	0	33.7	13.8	3.4	0.4	0	17.6	0.2	13.5	11.8	0	25.5	

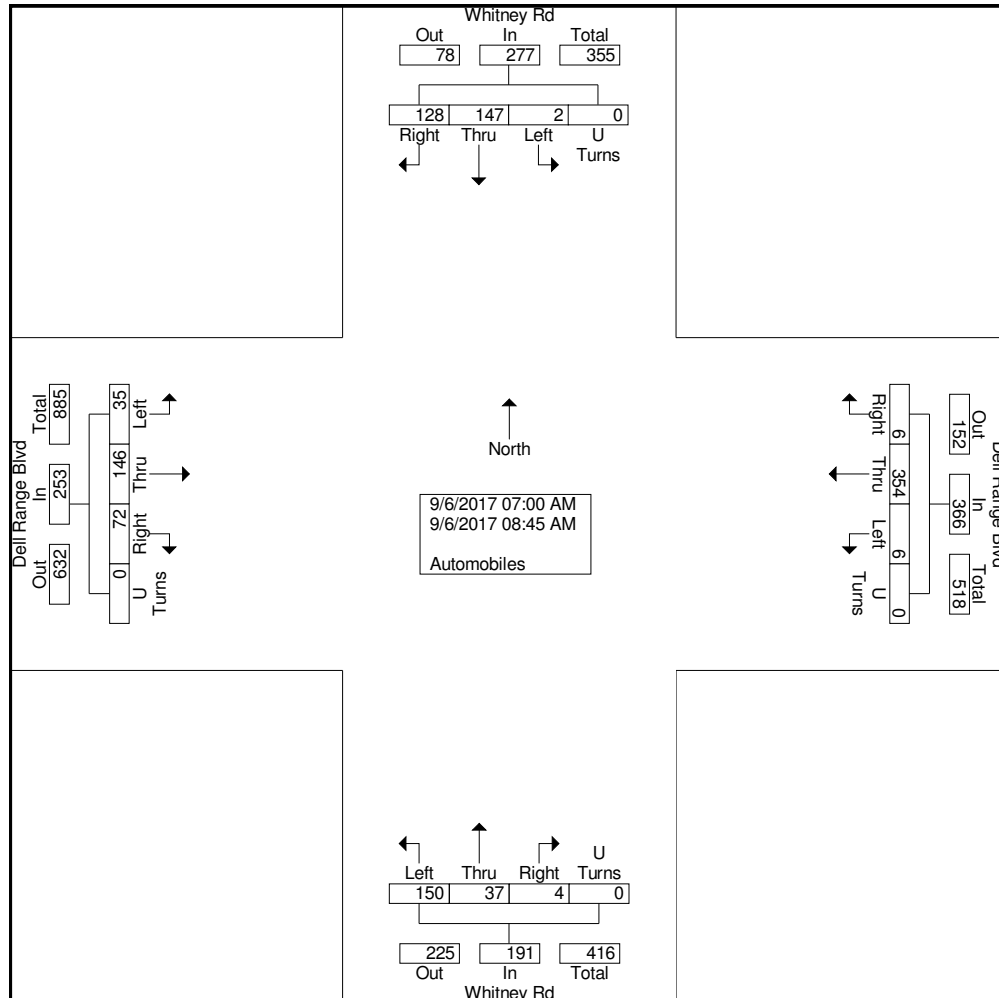


Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and Whitney Rd

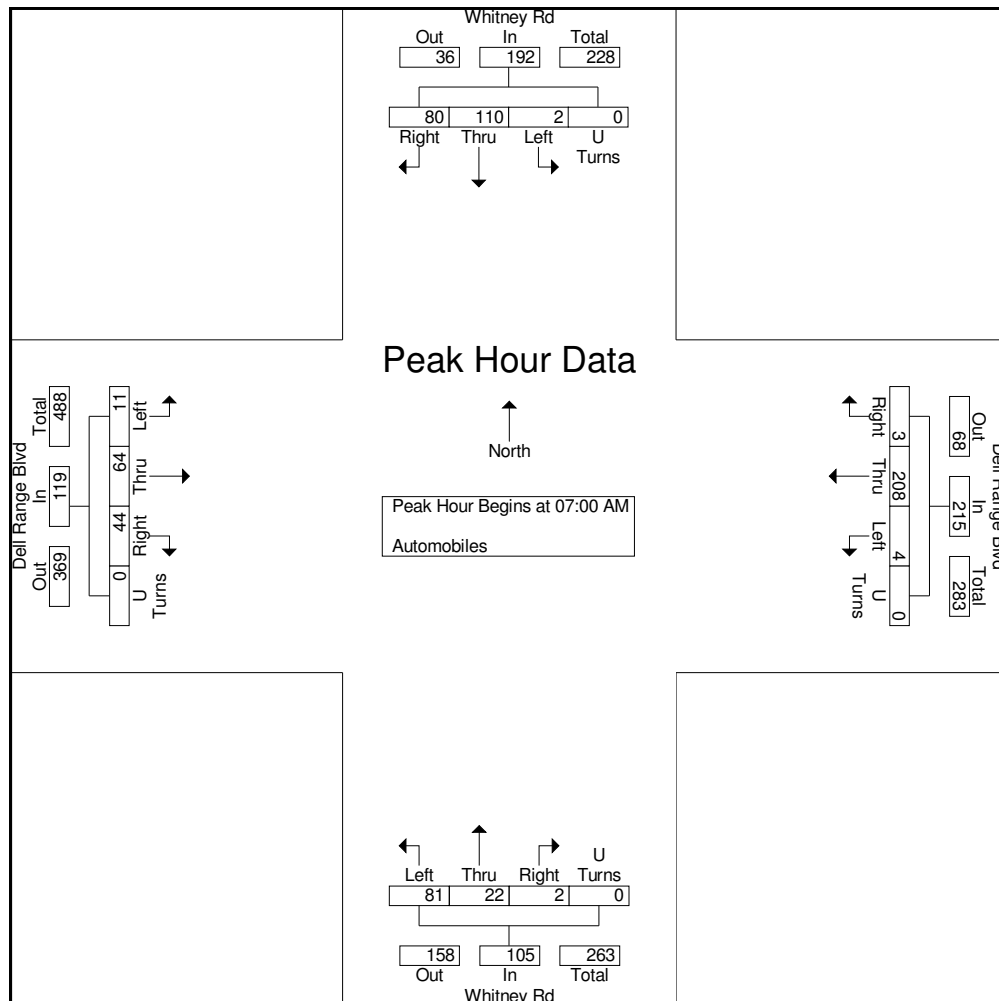
File Name : Dell Range and Whitney AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 2



Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and Whitney Rd

File Name : Dell Range and Whitney AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 3

	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					Whitney Rd Northbound					Whitney Rd Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	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	1	13	9	0	23	1	49	0	0	50	18	5	0	0	23	1	23	25	0	49	145
07:15 AM	2	14	8	0	24	0	51	0	0	51	15	6	0	0	21	1	35	23	0	59	155
07:30 AM	4	17	9	0	30	1	62	0	0	63	20	7	0	0	27	0	33	16	0	49	169
07:45 AM	4	20	18	0	42	2	46	3	0	51	28	4	2	0	34	0	19	16	0	35	162
Total Volume	11	64	44	0	119	4	208	3	0	215	81	22	2	0	105	2	110	80	0	192	631
% App. Total	9.2	53.8	37	0		1.9	96.7	1.4	0		77.1	21	1.9	0		1	57.3	41.7	0		
PHF	.688	.800	.611	.000	.708	.500	.839	.250	.000	.853	.723	.786	.250	.000	.772	.500	.786	.800	.000	.814	.933





Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and Whitney Rd

File Name : Dell Range and Whitney PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 1

Groups Printed- Automobiles

Start Time	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					Whitney Rd Northbound					Whitney Rd Southbound					Int. Total
	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	
04:00 PM	20	46	18	0	84	0	36	0	0	36	11	12	1	0	24	0	7	7	0	14	158
04:15 PM	17	58	15	0	90	1	35	1	0	37	12	15	1	0	28	1	4	10	0	15	170
04:30 PM	15	54	23	0	92	0	49	0	0	49	17	18	0	0	35	0	9	10	0	19	195
04:45 PM	18	56	19	0	93	0	28	1	0	29	14	12	2	0	28	1	12	7	0	20	170
Total	70	214	75	0	359	1	148	2	0	151	54	57	4	0	115	2	32	34	0	68	693
05:00 PM	11	58	35	0	104	1	42	2	0	45	30	22	0	0	52	1	8	15	0	24	225
05:15 PM	17	49	25	0	91	1	30	1	0	32	30	24	0	0	54	0	13	10	0	23	200
05:30 PM	16	61	31	0	108	1	39	0	0	40	20	20	1	0	41	0	3	12	0	15	204
05:45 PM	19	54	20	0	93	2	24	0	0	26	21	13	0	0	34	0	7	7	0	14	167
Total	63	222	111	0	396	5	135	3	0	143	101	79	1	0	181	1	31	44	0	76	796
Grand Total	133	436	186	0	755	6	283	5	0	294	155	136	5	0	296	3	63	78	0	144	1489
Apprch %	17.6	57.7	24.6	0		2	96.3	1.7	0		52.4	45.9	1.7	0		2.1	43.8	54.2	0		
Total %	8.9	29.3	12.5	0	50.7	0.4	19	0.3	0	19.7	10.4	9.1	0.3	0	19.9	0.2	4.2	5.2	0	9.7	

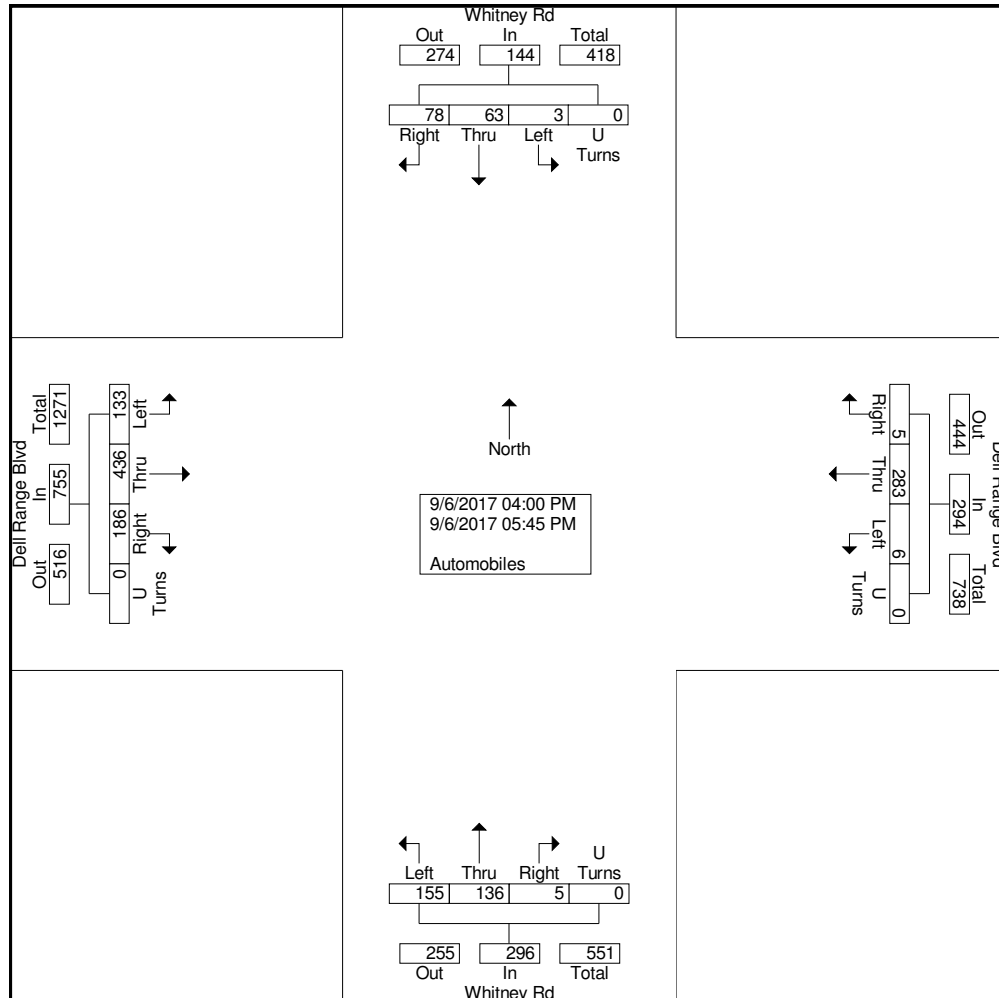


Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and Whitney Rd

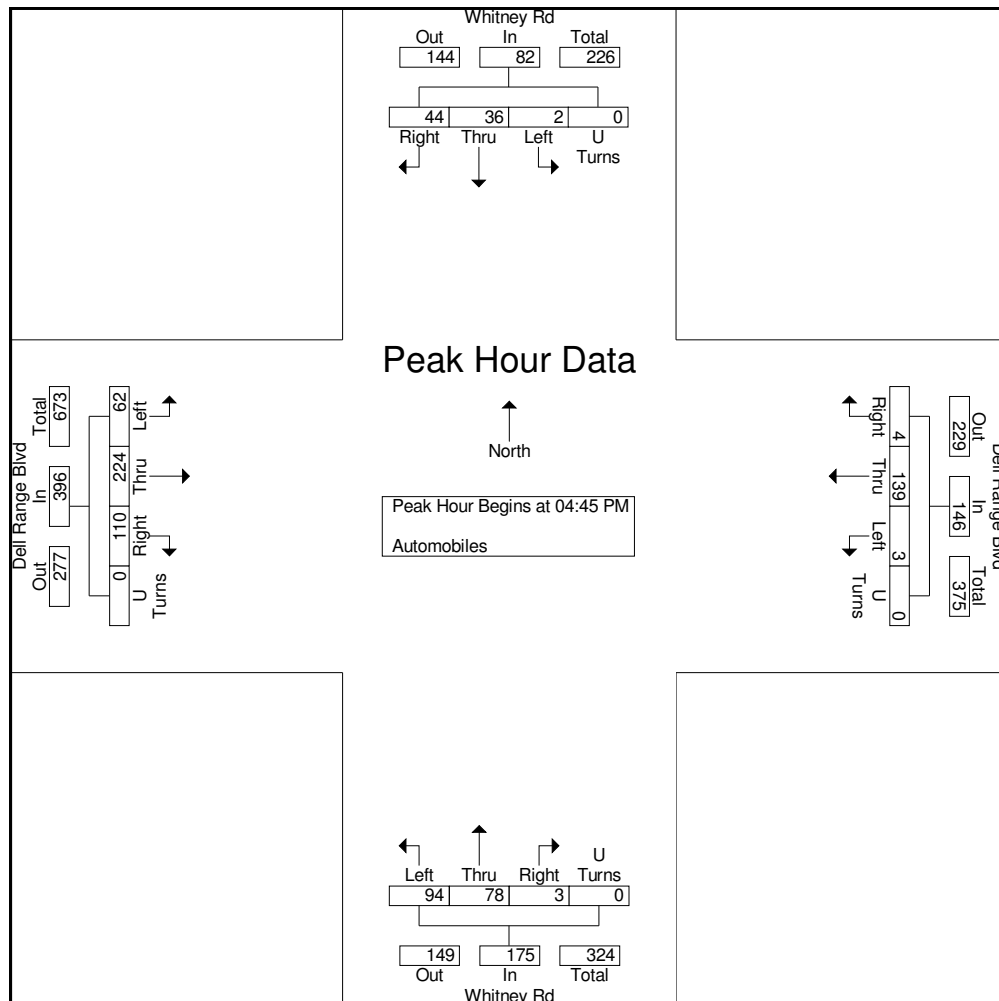
File Name : Dell Range and Whitney PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 2



Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and Whitney Rd

File Name : Dell Range and Whitney PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 3

	Dell Range Blvd Eastbound					Dell Range Blvd Westbound					Whitney Rd Northbound					Whitney Rd Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	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	18	56	19	0	93	0	28	1	0	29	14	12	2	0	28	1	12	7	0	20	170
05:00 PM	11	58	35	0	104	1	42	2	0	45	30	22	0	0	52	1	8	15	0	24	225
05:15 PM	17	49	25	0	91	1	30	1	0	32	30	24	0	0	54	0	13	10	0	23	200
05:30 PM	16	61	31	0	108	1	39	0	0	40	20	20	1	0	41	0	3	12	0	15	204
Total Volume	62	224	110	0	396	3	139	4	0	146	94	78	3	0	175	2	36	44	0	82	799
% App. Total	15.7	56.6	27.8	0		2.1	95.2	2.7	0		53.7	44.6	1.7	0		2.4	43.9	53.7	0		
PHF	.861	.918	.786	.000	.917	.750	.827	.500	.000	.811	.783	.813	.375	.000	.810	.500	.692	.733	.000	.854	.888



Cheyenne, CO
E Dell Range Blvd Corridor Study
AM Peak
US-30 and College Dr

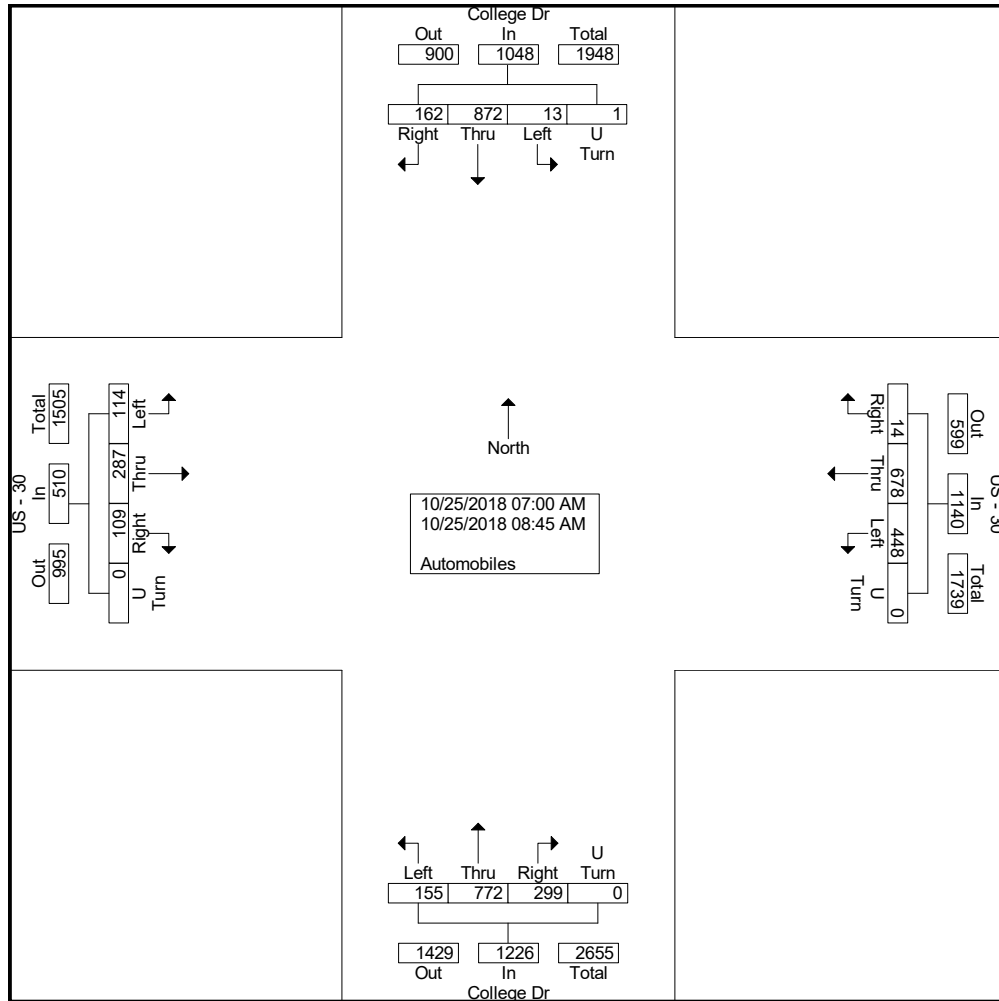
File Name : US 30 and College AM
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Groups Printed- Automobiles

	US - 30 Eastbound					US - 30 Westbound					College Dr Northbound					College Dr Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	6	31	12	0	49	56	85	2	0	143	8	109	34	0	151	1	90	19	0	110	453
07:15 AM	13	32	15	0	60	68	106	2	0	176	16	81	34	0	131	1	108	21	0	130	497
07:30 AM	15	32	15	0	62	66	129	4	0	199	20	103	40	0	163	1	119	23	0	143	567
07:45 AM	14	35	13	0	62	77	102	1	0	180	28	113	40	0	181	4	149	27	0	180	603
Total	48	130	55	0	233	267	422	9	0	698	72	406	148	0	626	7	466	90	0	563	2120
08:00 AM	16	42	16	0	74	56	76	3	0	135	19	104	32	0	155	1	112	14	0	127	491
08:15 AM	17	35	20	0	72	56	76	1	0	133	28	93	48	0	169	1	96	19	0	116	490
08:30 AM	18	39	9	0	66	38	53	1	0	92	21	78	37	0	136	2	98	14	1	115	409
08:45 AM	15	41	9	0	65	31	51	0	0	82	15	91	34	0	140	2	100	25	0	127	414
Total	66	157	54	0	277	181	256	5	0	442	83	366	151	0	600	6	406	72	1	485	1804
Grand Total	114	287	109	0	510	448	678	14	0	1140	155	772	299	0	1226	13	872	162	1	1048	3924
Apprch %	22.4	56.3	21.4	0		39.3	59.5	1.2	0		12.6	63	24.4	0		1.2	83.2	15.5	0.1		
Total %	2.9	7.3	2.8	0	13	11.4	17.3	0.4	0	29.1	4	19.7	7.6	0	31.2	0.3	22.2	4.1	0	26.7	

Cheyenne, CO
E Dell Range Blvd Corridor Study
AM Peak
US-30 and College Dr

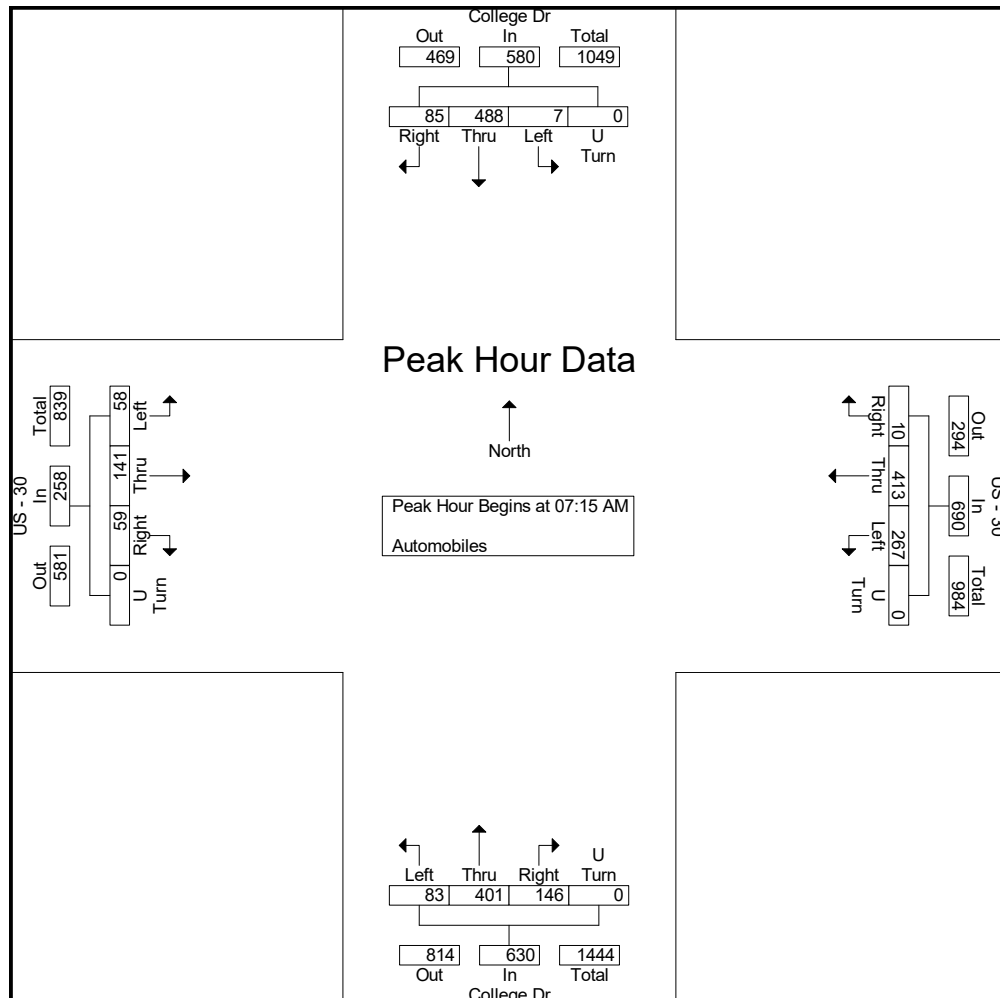
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E Dell Range Blvd Corridor Study
AM Peak
US-30 and College Dr

File Name : US 30 and College AM
Site Code : IPO 392
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	US - 30 Eastbound					US - 30 Westbound					College Dr Northbound					College Dr Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	13	32	15	0	60	68	106	2	0	176	16	81	34	0	131	1	108	21	0	130	497
07:30 AM	15	32	15	0	62	66	129	4	0	199	20	103	40	0	163	1	119	23	0	143	567
07:45 AM	14	35	13	0	62	77	102	1	0	180	28	113	40	0	181	4	149	27	0	180	603
08:00 AM	16	42	16	0	74	56	76	3	0	135	19	104	32	0	155	1	112	14	0	127	491
Total Volume	58	141	59	0	258	267	413	10	0	690	83	401	146	0	630	7	488	85	0	580	2158
% App. Total	22.5	54.7	22.9	0		38.7	59.9	1.4	0		13.2	63.7	23.2	0		1.2	84.1	14.7	0		
PHF	.906	.839	.922	.000	.872	.867	.800	.625	.000	.867	.741	.887	.913	.000	.870	.438	.819	.787	.000	.806	.895



Cheyenne, CO
E Dell Range Blvd Corridor Study
PM Peak
US-30 and College Dr

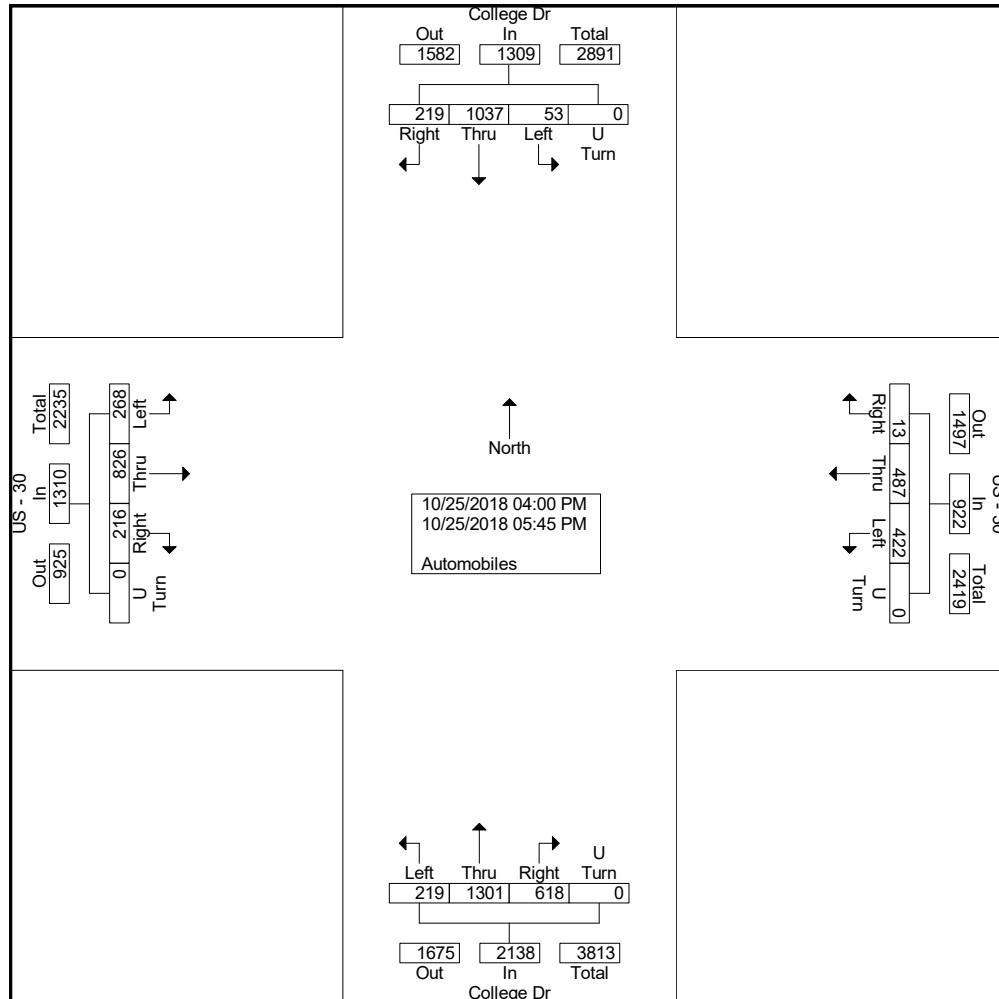
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Groups Printed- Automobiles

	US - 30 Eastbound					US - 30 Westbound					College Dr Northbound					College Dr Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	36	96	30	0	162	55	63	1	0	119	26	176	70	0	272	5	151	25	0	181	734
04:15 PM	30	82	31	0	143	45	58	3	0	106	35	151	80	0	266	8	141	29	0	178	693
04:30 PM	43	107	31	0	181	51	63	2	0	116	32	164	63	0	259	3	112	31	0	146	702
04:45 PM	26	112	21	0	159	51	51	3	0	105	39	169	77	0	285	10	119	28	0	157	706
Total	135	397	113	0	645	202	235	9	0	446	132	660	290	0	1082	26	523	113	0	662	2835
05:00 PM	38	122	37	0	197	56	72	1	0	129	31	187	93	0	311	8	127	30	0	165	802
05:15 PM	31	131	20	0	182	53	57	1	0	111	17	171	96	0	284	8	149	32	0	189	766
05:30 PM	30	94	20	0	144	58	64	0	0	122	22	133	77	0	232	5	126	18	0	149	647
05:45 PM	34	82	26	0	142	53	59	2	0	114	17	150	62	0	229	6	112	26	0	144	629
Total	133	429	103	0	665	220	252	4	0	476	87	641	328	0	1056	27	514	106	0	647	2844
Grand Total	268	826	216	0	1310	422	487	13	0	922	219	1301	618	0	2138	53	1037	219	0	1309	5679
Apprch %	20.5	63.1	16.5	0		45.8	52.8	1.4	0		10.2	60.9	28.9	0		4	79.2	16.7	0		
Total %	4.7	14.5	3.8	0	23.1	7.4	8.6	0.2	0	16.2	3.9	22.9	10.9	0	37.6	0.9	18.3	3.9	0	23	

Cheyenne, CO
E Dell Range Blvd Corridor Study
PM Peak
US-30 and College Dr

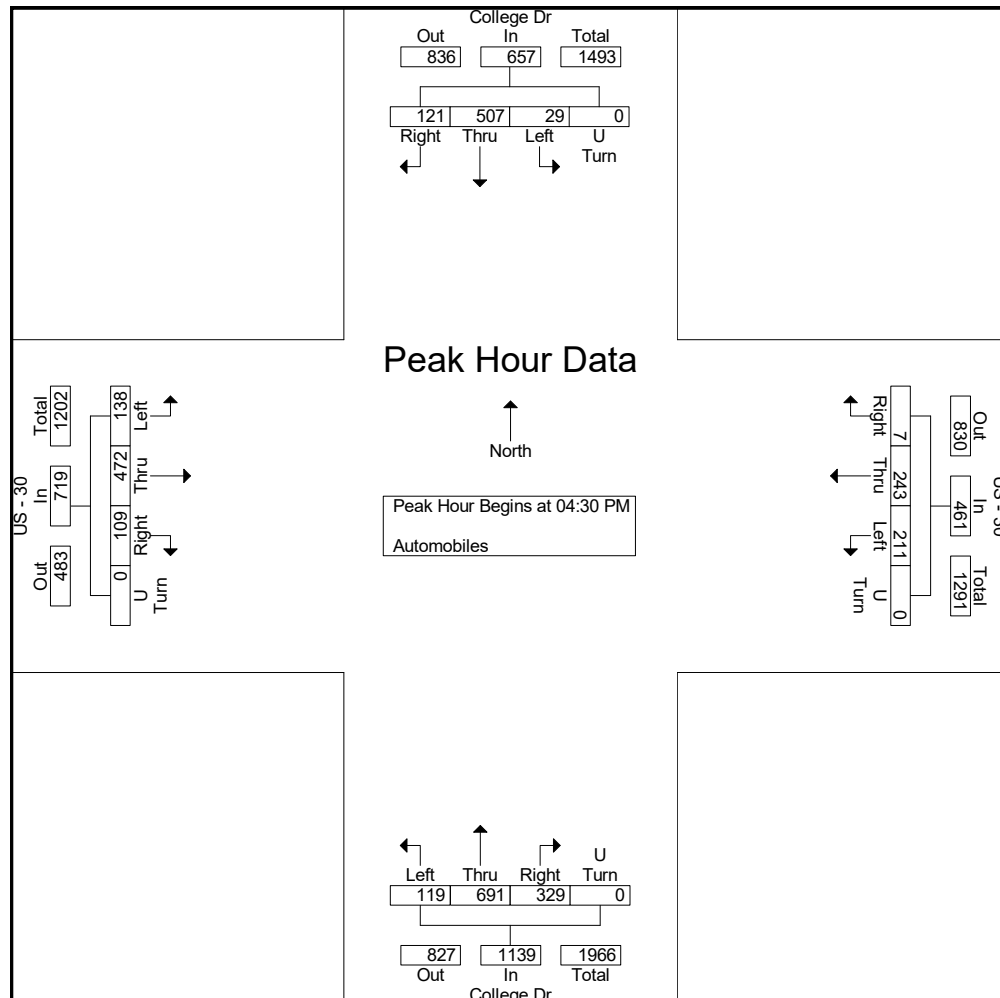
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E Dell Range Blvd Corridor Study
PM Peak
US-30 and College Dr

File Name : US 30 and College PM
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	US - 30 Eastbound					US - 30 Westbound					College Dr Northbound					College Dr Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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 04:30 PM																					
04:30 PM	43	107	31	0	181	51	63	2	0	116	32	164	63	0	259	3	112	31	0	146	702
04:45 PM	26	112	21	0	159	51	51	3	0	105	39	169	77	0	285	10	119	28	0	157	706
05:00 PM	38	122	37	0	197	56	72	1	0	129	31	187	93	0	311	8	127	30	0	165	802
05:15 PM	31	131	20	0	182	53	57	1	0	111	17	171	96	0	284	8	149	32	0	189	766
Total Volume	138	472	109	0	719	211	243	7	0	461	119	691	329	0	1139	29	507	121	0	657	2976
% App. Total	19.2	65.6	15.2	0		45.8	52.7	1.5	0		10.4	60.7	28.9	0		4.4	77.2	18.4	0		
PHF	.802	.901	.736	.000	.912	.942	.844	.583	.000	.893	.763	.924	.857	.000	.916	.725	.851	.945	.000	.869	.928



Cheyenne, CO
E Dell Range Blvd Corridor Study
AM Peak
US-30 and Pershing Blvd

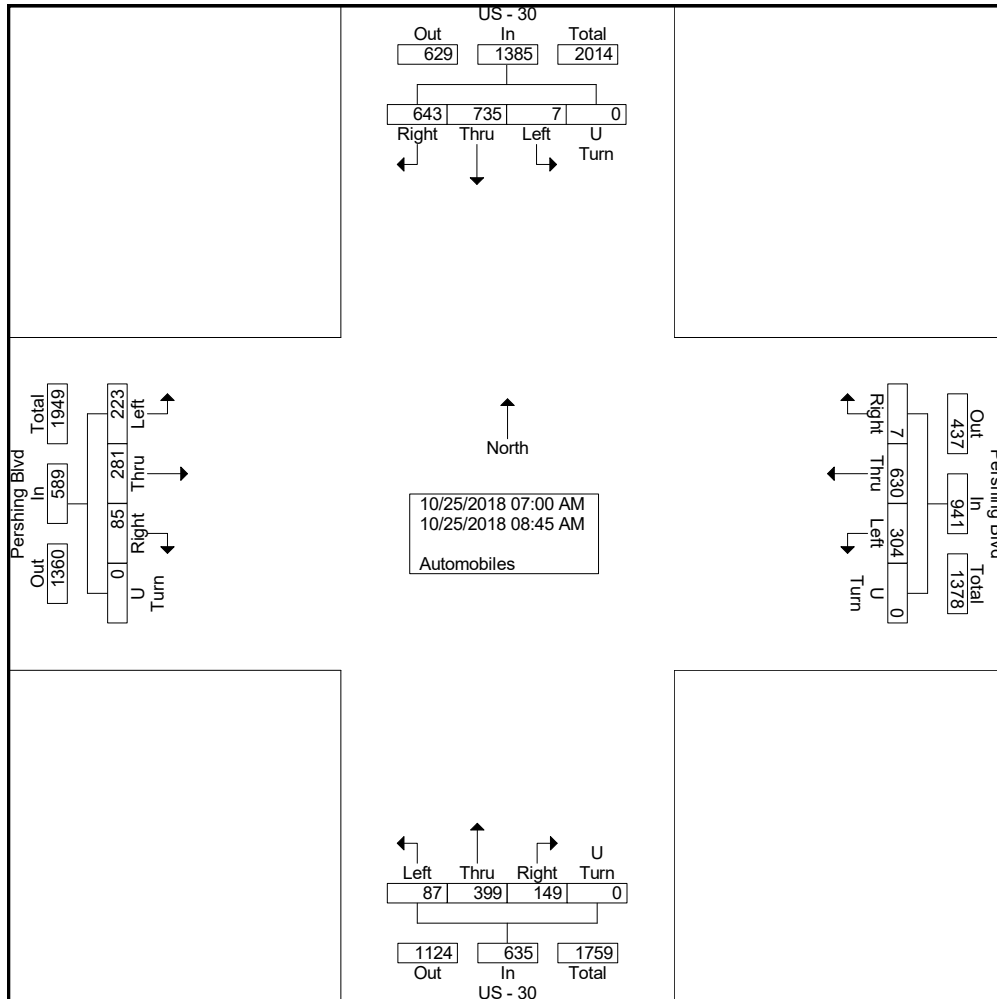
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Groups Printed- Automobiles

	Pershing Blvd Eastbound					Pershing Blvd Westbound					US - 30 Northbound					US - 30 Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	20	23	5	0	48	31	94	1	0	126	12	35	22	0	69	0	98	129	0	227	470
07:15 AM	31	46	8	0	85	56	112	0	0	168	10	50	20	0	80	1	104	133	0	238	571
07:30 AM	37	33	11	0	81	56	100	1	0	157	9	47	19	0	75	1	132	124	0	257	570
07:45 AM	28	38	8	0	74	43	102	2	0	147	9	54	18	0	81	0	111	74	0	185	487
Total	116	140	32	0	288	186	408	4	0	598	40	186	79	0	305	2	445	460	0	907	2098
08:00 AM	26	31	12	0	69	39	53	0	0	92	7	52	15	0	74	1	77	50	0	128	363
08:15 AM	20	32	12	0	64	34	65	1	0	100	11	61	20	0	92	0	91	51	0	142	398
08:30 AM	29	40	9	0	78	25	52	1	0	78	17	55	20	0	92	2	63	44	0	109	357
08:45 AM	32	38	20	0	90	20	52	1	0	73	12	45	15	0	72	2	59	38	0	99	334
Total	107	141	53	0	301	118	222	3	0	343	47	213	70	0	330	5	290	183	0	478	1452
Grand Total	223	281	85	0	589	304	630	7	0	941	87	399	149	0	635	7	735	643	0	1385	3550
Apprch %	37.9	47.7	14.4	0		32.3	67	0.7	0		13.7	62.8	23.5	0		0.5	53.1	46.4	0		
Total %	6.3	7.9	2.4	0	16.6	8.6	17.7	0.2	0	26.5	2.5	11.2	4.2	0	17.9	0.2	20.7	18.1	0	39	

Cheyenne, CO
E Dell Range Blvd Corridor Study
AM Peak
US-30 and Pershing Blvd

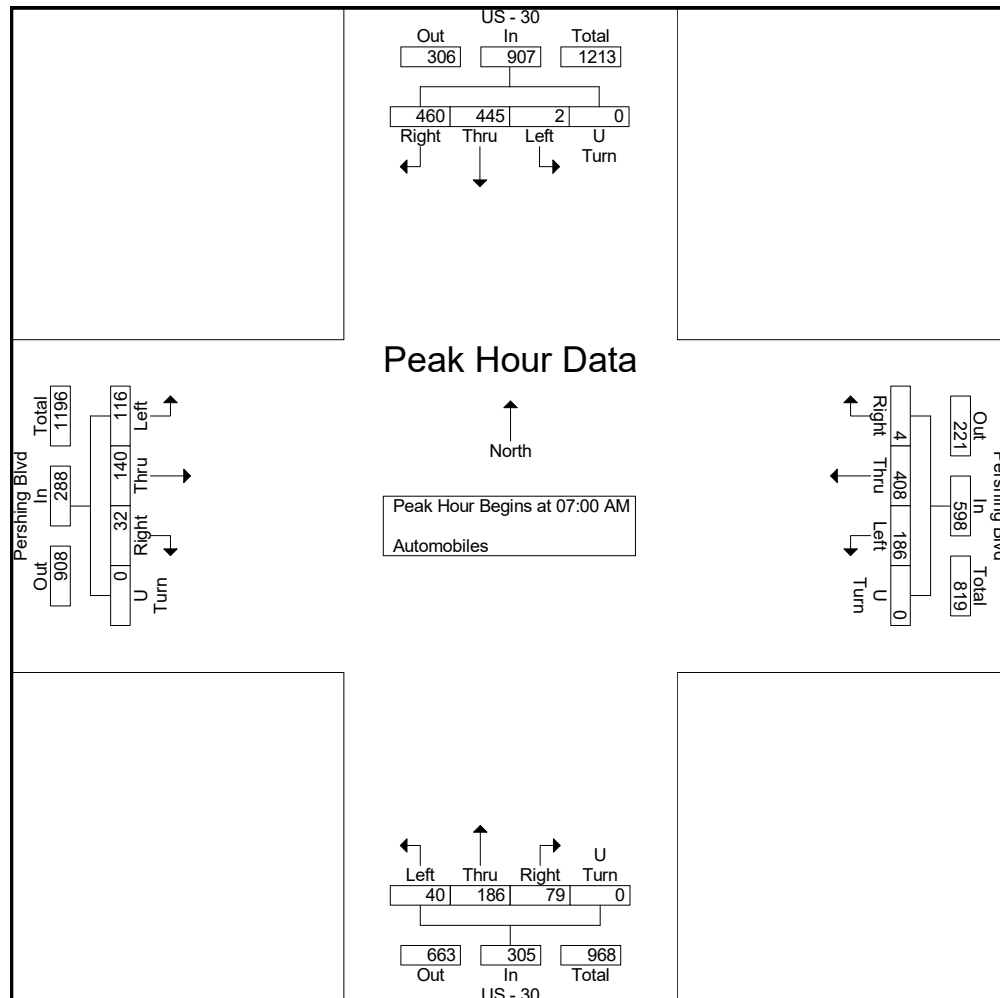
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Cheyenne, CO
E Dell Range Blvd Corridor Study
AM Peak
US-30 and Pershing Blvd

File Name : US 30 and Pershing AM
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	Pershing Blvd Eastbound					Pershing Blvd Westbound					US - 30 Northbound					US - 30 Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	20	23	5	0	48	31	94	1	0	126	12	35	22	0	69	0	98	129	0	227	470
07:15 AM	31	46	8	0	85	56	112	0	0	168	10	50	20	0	80	1	104	133	0	238	571
07:30 AM	37	33	11	0	81	56	100	1	0	157	9	47	19	0	75	1	132	124	0	257	570
07:45 AM	28	38	8	0	74	43	102	2	0	147	9	54	18	0	81	0	111	74	0	185	487
Total Volume	116	140	32	0	288	186	408	4	0	598	40	186	79	0	305	2	445	460	0	907	2098
% App. Total	40.3	48.6	11.1	0		31.1	68.2	0.7	0		13.1	61	25.9	0		0.2	49.1	50.7	0		
PHF	.784	.761	.727	.000	.847	.830	.911	.500	.000	.890	.833	.861	.898	.000	.941	.500	.843	.865	.000	.882	.919



Cheyenne, CO
E Dell Range Blvd Corridor Study
PM Peak
US-30 and Pershing Blvd

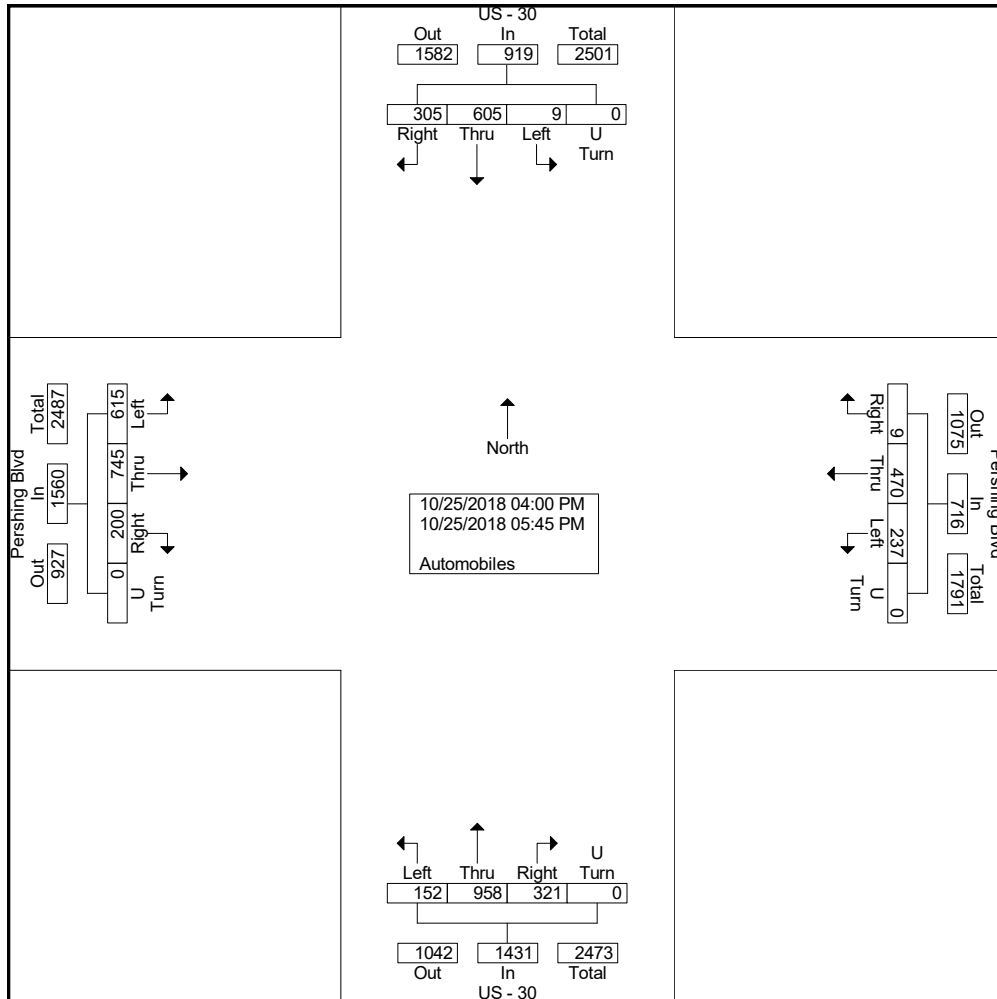
File Name : US 30 and Pershing PM
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Groups Printed- Automobiles

Start Time	Pershing Blvd Eastbound					Pershing Blvd Westbound					US - 30 Northbound					US - 30 Southbound					Int. Total
	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	
04:00 PM	81	80	27	0	188	30	59	0	0	89	16	102	37	0	155	1	76	35	0	112	544
04:15 PM	71	101	27	0	199	31	51	1	0	83	16	115	36	0	167	1	66	38	0	105	554
04:30 PM	69	86	19	0	174	24	47	2	0	73	22	102	31	0	155	1	82	48	0	131	533
04:45 PM	74	104	26	0	204	26	64	0	0	90	18	114	38	0	170	1	66	35	0	102	566
Total	295	371	99	0	765	111	221	3	0	335	72	433	142	0	647	4	290	156	0	450	2197
05:00 PM	76	85	28	0	189	34	74	2	0	110	29	140	47	0	216	2	80	50	0	132	647
05:15 PM	102	109	36	0	247	31	60	4	0	95	26	164	47	0	237	0	80	30	0	110	689
05:30 PM	75	109	15	0	199	28	61	0	0	89	5	117	49	0	171	3	80	40	0	123	582
05:45 PM	67	71	22	0	160	33	54	0	0	87	20	104	36	0	160	0	75	29	0	104	511
Total	320	374	101	0	795	126	249	6	0	381	80	525	179	0	784	5	315	149	0	469	2429
Grand Total	615	745	200	0	1560	237	470	9	0	716	152	958	321	0	1431	9	605	305	0	919	4626
Apprch %	39.4	47.8	12.8	0		33.1	65.6	1.3	0		10.6	66.9	22.4	0		1	65.8	33.2	0		
Total %	13.3	16.1	4.3	0	33.7	5.1	10.2	0.2	0	15.5	3.3	20.7	6.9	0	30.9	0.2	13.1	6.6	0	19.9	

Cheyenne, CO
E Dell Range Blvd Corridor Study
PM Peak
US-30 and Pershing Blvd

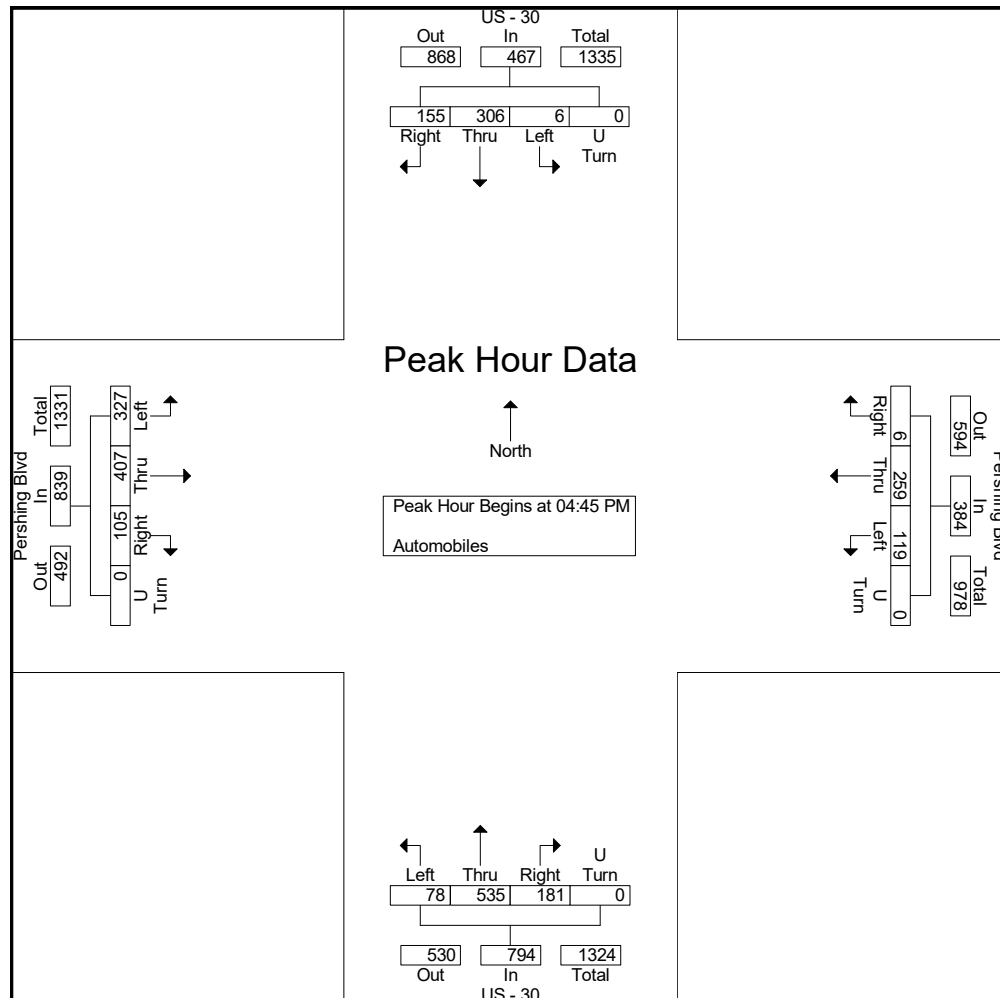
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Site Code : IPO 392
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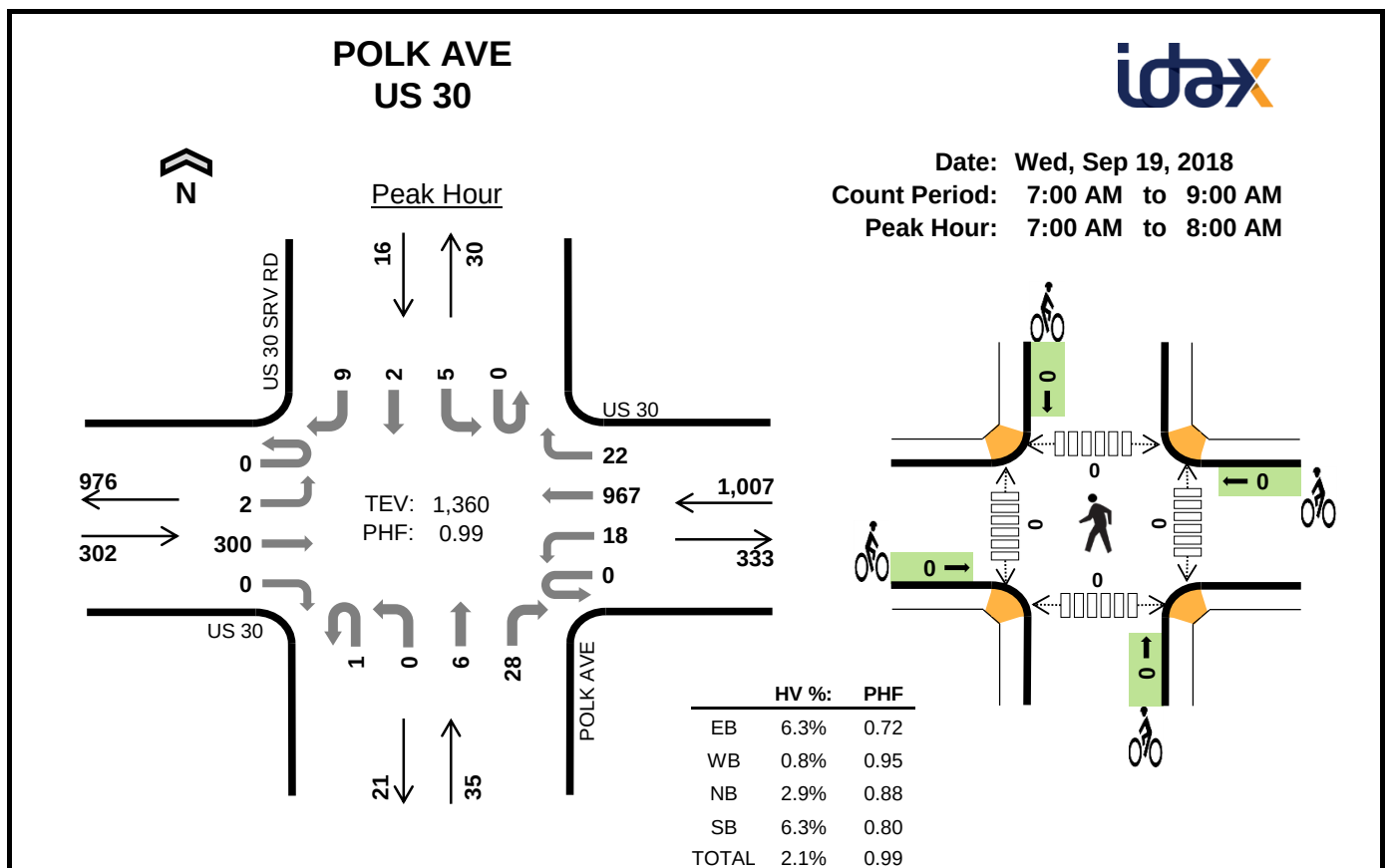


Cheyenne, CO
E Dell Range Blvd Corridor Study
PM Peak
US-30 and Pershing Blvd

File Name : US 30 and Pershing PM
Site Code : IPO 392
Start Date : 10/25/2018
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	Pershing Blvd Eastbound					Pershing Blvd Westbound					US - 30 Northbound					US - 30 Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	74	104	26	0	204	26	64	0	0	90	18	114	38	0	170	1	66	35	0	102	566
05:00 PM	76	85	28	0	189	34	74	2	0	110	29	140	47	0	216	2	80	50	0	132	647
05:15 PM	102	109	36	0	247	31	60	4	0	95	26	164	47	0	237	0	80	30	0	110	689
05:30 PM	75	109	15	0	199	28	61	0	0	89	5	117	49	0	171	3	80	40	0	123	582
Total Volume	327	407	105	0	839	119	259	6	0	384	78	535	181	0	794	6	306	155	0	467	2484
% App. Total	39	48.5	12.5	0		31	67.4	1.6	0		9.8	67.4	22.8	0		1.3	65.5	33.2	0		
PHF	.801	.933	.729	.000	.849	.875	.875	.375	.000	.873	.672	.816	.923	.000	.838	.500	.956	.775	.000	.884	.901



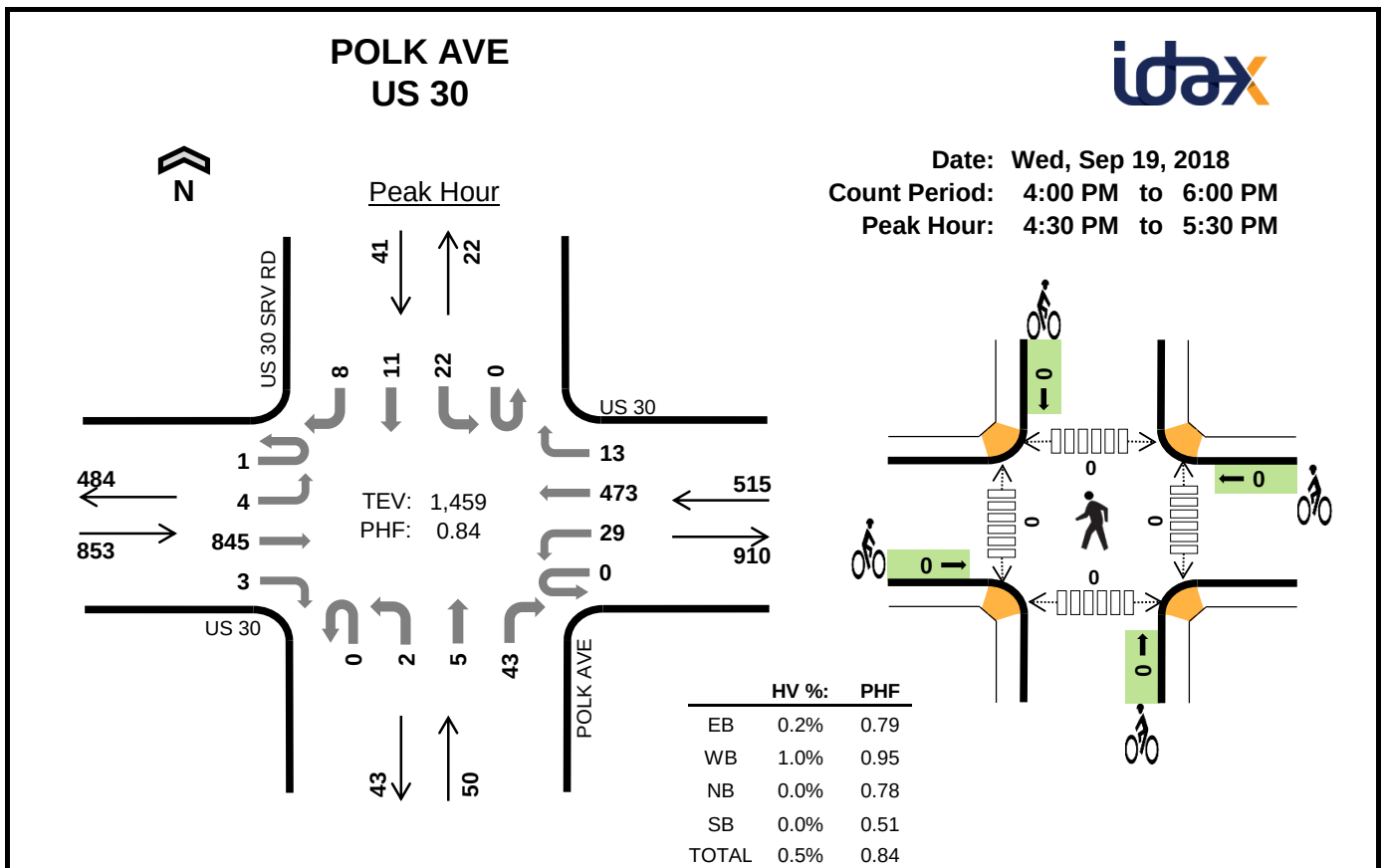


Two-Hour Count Summaries

Interval Start	US 30				US 30				POLK AVE				US 30 SRV RD				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	52	0	0	7	251	5	0	0	3	7	0	1	1	2	330	0
7:15 AM	0	0	73	0	0	5	254	6	0	0	1	4	0	1	0	1	345	0
7:30 AM	0	0	71	0	0	3	246	7	1	0	1	8	0	2	0	3	342	0
7:45 AM	0	1	104	0	0	3	216	4	0	0	1	9	0	1	1	3	343	1,360
8:00 AM	0	0	85	1	0	7	144	4	0	0	1	7	0	2	0	1	252	1,282
8:15 AM	0	0	85	0	0	6	139	3	0	0	1	10	0	0	2	0	246	1,183
8:30 AM	0	2	61	0	0	3	150	3	0	3	1	3	0	4	0	2	232	1,073
8:45 AM	0	0	83	0	0	3	113	2	0	0	0	2	0	3	0	0	206	936
Count Total	0	4	614	1	0	37	1,513	34	1	3	9	50	0	14	4	12	2,296	0
Peak Hour	0	2	300	0	0	18	967	22	1	0	6	28	0	5	2	9	1,360	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	6	3	0	0	9	0	0	0	0	0	0	0	0	0	0
7:15 AM	4	0	0	1	5	0	0	0	0	0	0	0	0	0	0
7:30 AM	3	2	1	0	6	0	0	0	0	0	0	0	0	0	0
7:45 AM	6	3	0	0	9	0	0	0	0	0	0	0	0	0	0
8:00 AM	2	3	1	0	6	0	0	0	0	0	0	0	0	0	0
8:15 AM	3	3	1	0	7	0	0	0	0	0	0	0	0	0	0
8:30 AM	4	4	0	1	9	0	0	0	0	0	0	0	0	0	0
8:45 AM	8	3	0	0	11	0	0	5	0	5	0	0	0	0	0
Count Total	36	21	3	2	62	0	0	5	0	5	0	0	0	0	0
Peak Hour	19	8	1	1	29	0	0	0	0	0	0	0	0	0	0



Two-Hour Count Summaries

Interval Start	US 30 Eastbound				US 30 Westbound				POLK AVE Northbound				US 30 SRV RD Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	159	0	0	6	116	4	0	1	0	5	0	3	1	0	296	0
4:15 PM	0	0	174	0	0	3	108	3	0	0	0	5	0	5	0	2	300	0
4:30 PM	0	1	181	2	0	5	129	1	0	0	1	7	0	3	1	1	332	0
4:45 PM	0	0	188	0	0	8	120	2	0	1	1	13	0	7	4	0	344	1,272
5:00 PM	1	3	206	1	0	1	116	5	0	1	0	10	0	3	1	1	349	1,325
5:15 PM	0	0	270	0	0	15	108	5	0	0	3	13	0	9	5	6	434	1,459
5:30 PM	0	1	203	0	0	8	101	1	0	0	0	11	0	3	0	0	328	1,455
5:45 PM	1	3	177	0	0	5	102	0	0	0	0	3	0	2	1	1	295	1,406
Count Total	2	9	1,558	3	0	51	900	21	0	3	5	67	0	35	13	11	2,678	0
Peak Hour	1	4	845	3	0	29	473	13	0	2	5	43	0	22	11	8	1,459	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	5	1	0	8	0	0	0	0	0	0	0	0	0	0
4:15 PM	5	6	0	0	11	0	0	0	0	0	0	0	0	0	0
4:30 PM	2	2	0	0	4	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	0	1	0	0	0	1	1	0	0	0	0	0
5:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	1	1
Count Total	10	18	1	0	29	0	0	0	1	1	0	0	0	1	1
Peak Hour	2	5	0	0	7	0	0	0	0	0	0	0	0	0	0



Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
US-30 and Van Buren Ave

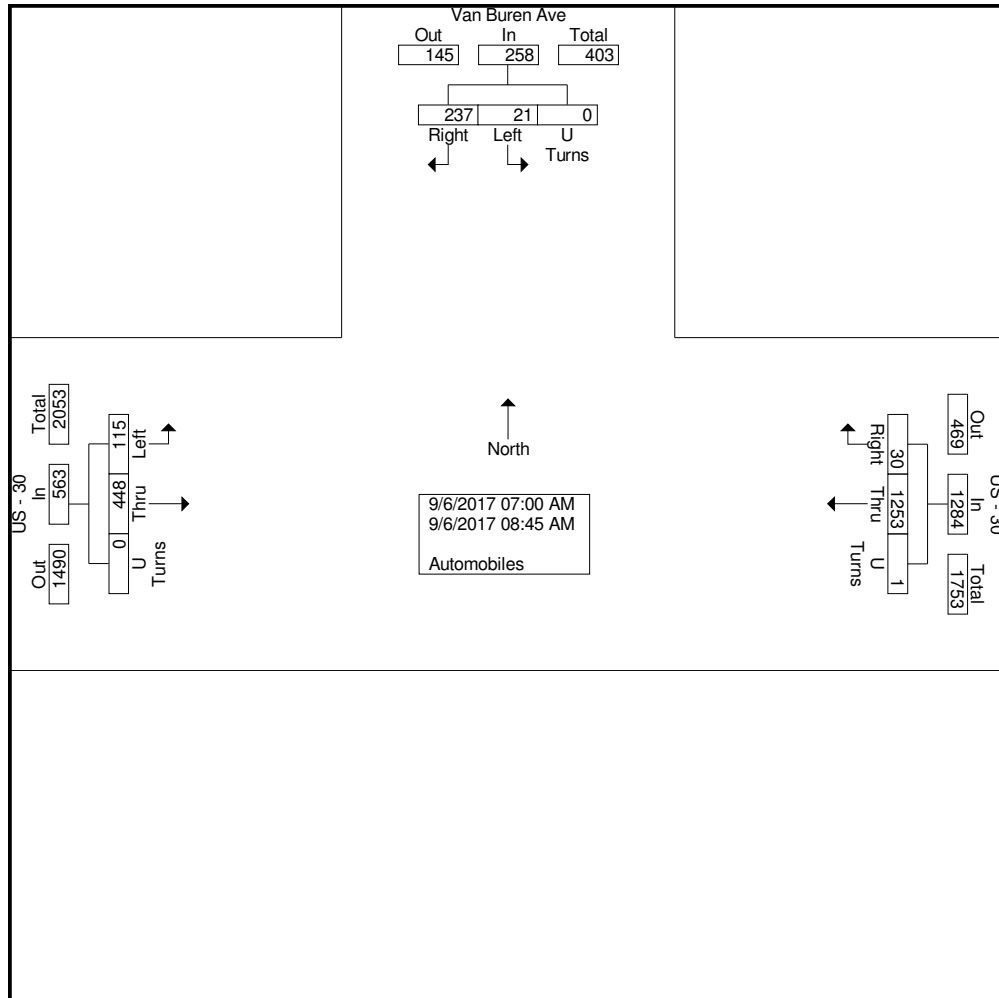
File Name : US-30 and Van Buren AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 1

Groups Printed- Automobiles

Start Time	US - 30 Eastbound				US - 30 Westbound				Van Buren Ave Southbound				Int. Total
	Left	Thru	U Turns	App. Total	Thru	Right	U Turns	App. Total	Left	Right	U Turns	App. Total	
07:00 AM	16	45	0	61	203	4	1	208	3	28	0	31	300
07:15 AM	14	52	0	66	240	2	0	242	4	44	0	48	356
07:30 AM	20	60	0	80	230	3	0	233	2	22	0	24	337
07:45 AM	14	71	0	85	186	1	0	187	0	40	0	40	312
Total	64	228	0	292	859	10	1	870	9	134	0	143	1305
08:00 AM	18	70	0	88	113	7	0	120	4	29	0	33	241
08:15 AM	17	58	0	75	106	6	0	112	6	27	0	33	220
08:30 AM	8	40	0	48	95	3	0	98	1	32	0	33	179
08:45 AM	8	52	0	60	80	4	0	84	1	15	0	16	160
Total	51	220	0	271	394	20	0	414	12	103	0	115	800
Grand Total	115	448	0	563	1253	30	1	1284	21	237	0	258	2105
Apprch %	20.4	79.6	0		97.6	2.3	0.1		8.1	91.9	0		
Total %	5.5	21.3	0	26.7	59.5	1.4	0	61	1	11.3	0	12.3	

Cheyenne, WY
Whitney Ranch
AM Peak
US-30 and Van Buren Ave

File Name : US-30 and Van Buren AM
Site Code : IPO 262
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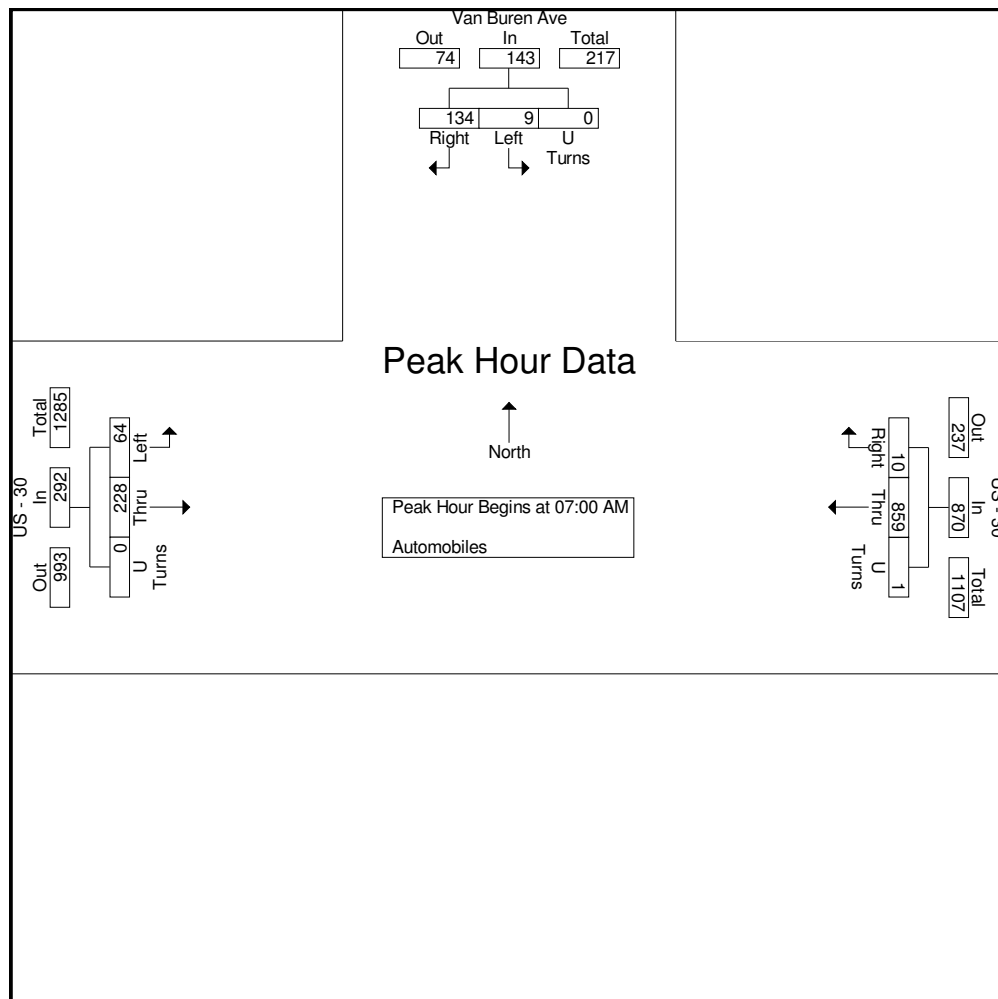


Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
US-30 and Van Buren Ave

File Name : US-30 and Van Buren AM
Site Code : IPO 262
Start Date : 9/6/2017
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	US - 30 Eastbound				US - 30 Westbound				Van Buren Ave Southbound				
Start Time	Left	Thru	U Turns	App. Total	Thru	Right	U Turns	App. Total	Left	Right	U Turns	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	16	45	0	61	203	4	1	208	3	28	0	31	300
07:15 AM	14	52	0	66	240	2	0	242	4	44	0	48	356
07:30 AM	20	60	0	80	230	3	0	233	2	22	0	24	337
07:45 AM	14	71	0	85	186	1	0	187	0	40	0	40	312
Total Volume	64	228	0	292	859	10	1	870	9	134	0	143	1305
% App. Total	21.9	78.1	0		98.7	1.1	0.1		6.3	93.7	0		
PHF	.800	.803	.000	.859	.895	.625	.250	.899	.563	.761	.000	.745	.916





Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
US-30 and Van Buren Ave

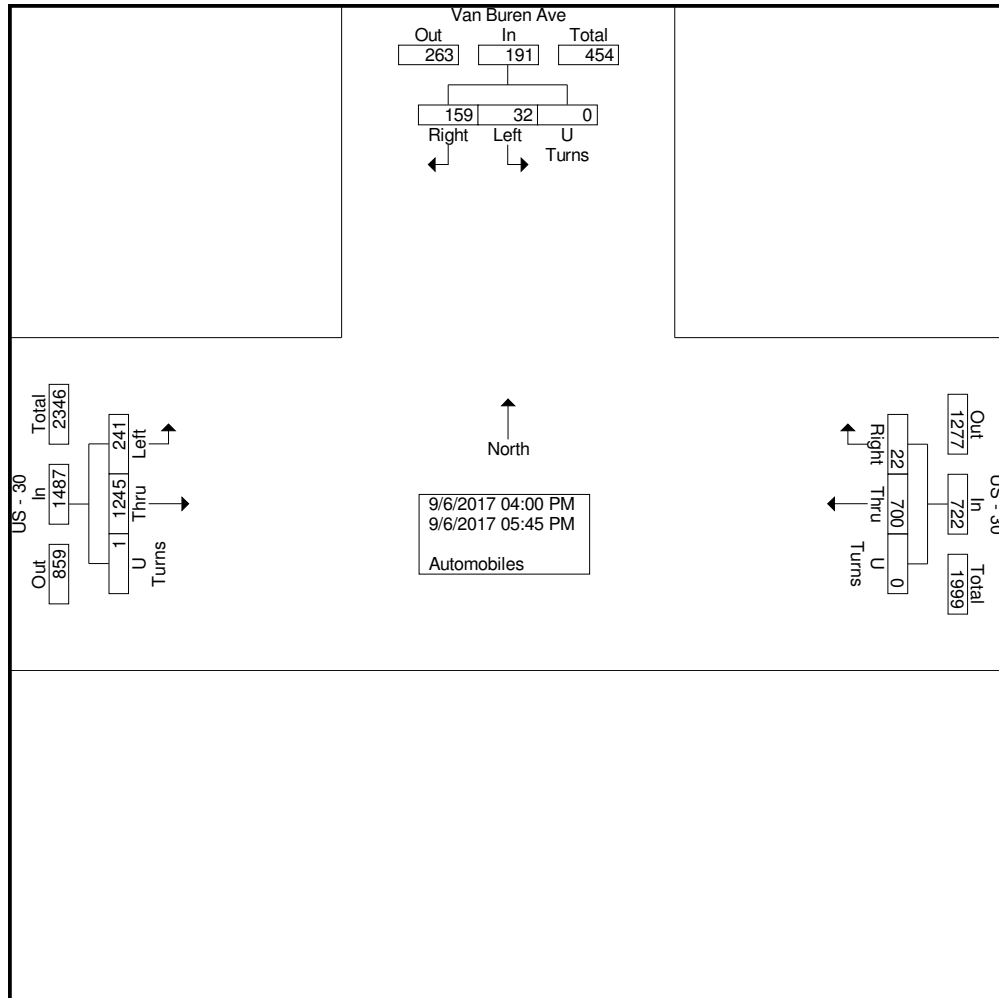
File Name : US-30 and Van Buren PM
Site Code : IPO 262
Start Date : 9/6/2017
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Groups Printed- Automobiles

Start Time	US - 30 Eastbound				US - 30 Westbound				Van Buren Ave Southbound				Int. Total
	Left	Thru	U Turns	App. Total	Thru	Right	U Turns	App. Total	Left	Right	U Turns	App. Total	
04:00 PM	25	132	1	158	67	1	0	68	5	21	0	26	252
04:15 PM	21	141	0	162	82	2	0	84	4	19	0	23	269
04:30 PM	30	125	0	155	94	2	0	96	3	18	0	21	272
04:45 PM	40	146	0	186	86	3	0	89	4	14	0	18	293
Total	116	544	1	661	329	8	0	337	16	72	0	88	1086
05:00 PM	36	186	0	222	95	7	0	102	3	17	0	20	344
05:15 PM	37	211	0	248	99	2	0	101	4	25	0	29	378
05:30 PM	30	173	0	203	73	3	0	76	5	19	0	24	303
05:45 PM	22	131	0	153	104	2	0	106	4	26	0	30	289
Total	125	701	0	826	371	14	0	385	16	87	0	103	1314
Grand Total	241	1245	1	1487	700	22	0	722	32	159	0	191	2400
Apprch %	16.2	83.7	0.1		97	3	0		16.8	83.2	0		
Total %	10	51.9	0	62	29.2	0.9	0	30.1	1.3	6.6	0	8	

Cheyenne, WY
Whitney Ranch
PM Peak
US-30 and Van Buren Ave

File Name : US-30 and Van Buren PM
Site Code : IPO 262
Start Date : 9/6/2017
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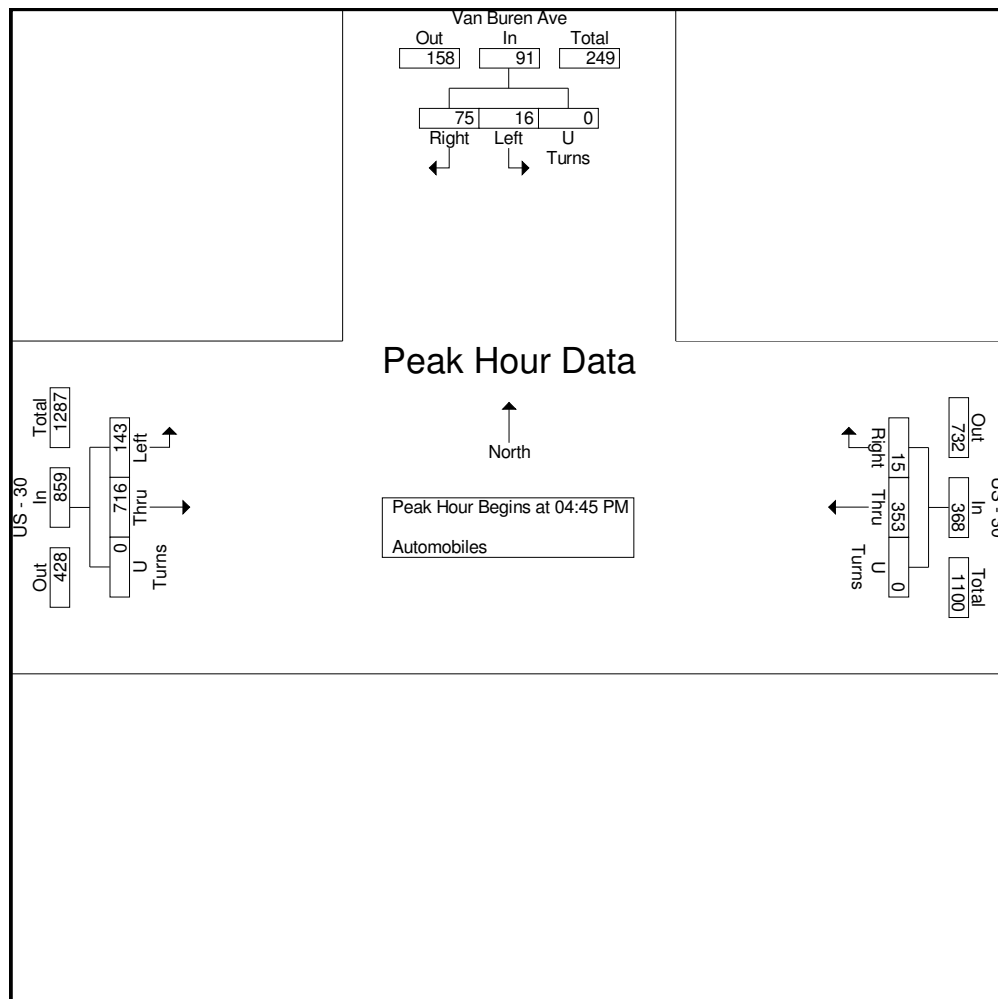


Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
US-30 and Van Buren Ave

File Name : US-30 and Van Buren PM
Site Code : IPO 262
Start Date : 9/6/2017
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	US - 30 Eastbound				US - 30 Westbound				Van Buren Ave Southbound				
Start Time	Left	Thru	U Turns	App. Total	Thru	Right	U Turns	App. Total	Left	Right	U Turns	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	40	146	0	186	86	3	0	89	4	14	0	18	293
05:00 PM	36	186	0	222	95	7	0	102	3	17	0	20	344
05:15 PM	37	211	0	248	99	2	0	101	4	25	0	29	378
05:30 PM	30	173	0	203	73	3	0	76	5	19	0	24	303
Total Volume	143	716	0	859	353	15	0	368	16	75	0	91	1318
% App. Total	16.6	83.4	0		95.9	4.1	0		17.6	82.4	0		
PHF	.894	.848	.000	.866	.891	.536	.000	.902	.800	.750	.000	.784	.872





Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
US-30 and Hayes Ave

File Name : US-30 and Hayes AM
Site Code : IPO 262
Start Date : 9/6/2017
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Groups Printed- Automobiles

Start Time	US - 30 Eastbound					US - 30 Westbound					Hayes Ave Northbound					Hayes Ave Southbound					Int. Total
	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	
07:00 AM	6	38	8	0	52	3	168	1	0	172	27	4	0	0	31	1	1	27	0	29	284
07:15 AM	6	47	3	0	56	0	197	0	0	197	19	6	1	0	26	0	1	27	0	28	307
07:30 AM	8	56	4	0	68	0	177	0	0	177	14	1	4	0	19	1	1	32	0	34	298
07:45 AM	3	65	5	0	73	1	143	0	0	144	15	5	2	0	22	0	1	20	0	21	260
Total	23	206	20	0	249	4	685	1	0	690	75	16	7	0	98	2	4	106	0	112	1149
08:00 AM	7	62	5	0	74	0	94	0	0	94	3	1	2	0	6	2	1	16	0	19	193
08:15 AM	4	46	5	0	55	3	97	2	0	102	6	3	5	0	14	1	0	12	0	13	184
08:30 AM	10	32	5	0	47	0	73	0	0	73	7	1	0	0	8	1	1	15	0	17	145
08:45 AM	6	35	6	1	48	0	60	1	0	61	9	1	1	0	11	0	1	14	0	15	135
Total	27	175	21	1	224	3	324	3	0	330	25	6	8	0	39	4	3	57	0	64	657
Grand Total	50	381	41	1	473	7	1009	4	0	1020	100	22	15	0	137	6	7	163	0	176	1806
Apprch %	10.6	80.5	8.7	0.2		0.7	98.9	0.4	0		73	16.1	10.9	0		3.4	4	92.6	0		
Total %	2.8	21.1	2.3	0.1	26.2	0.4	55.9	0.2	0	56.5	5.5	1.2	0.8	0	7.6	0.3	0.4	9	0	9.7	

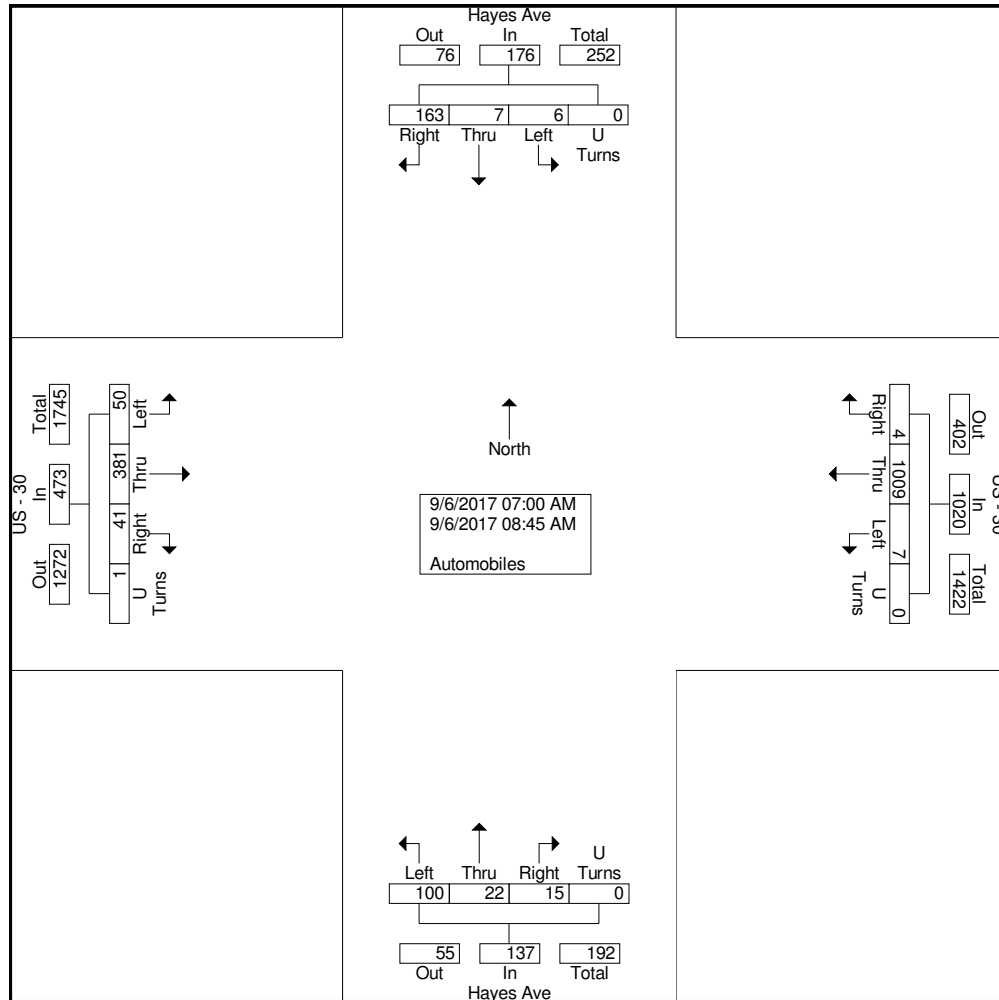


Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
US-30 and Hayes Ave

File Name : US-30 and Hayes AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 2



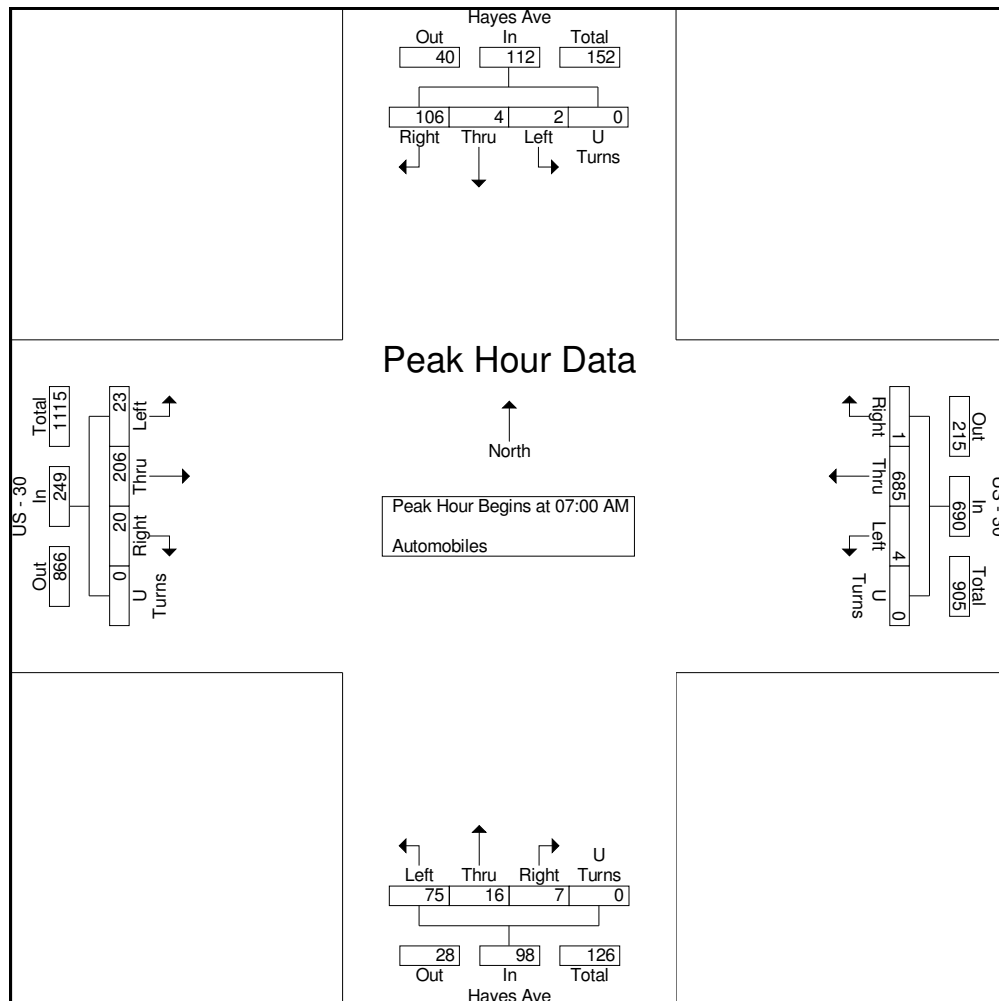


Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
US-30 and Hayes Ave

File Name : US-30 and Hayes AM
Site Code : IPO 262
Start Date : 9/6/2017
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	US - 30 Eastbound					US - 30 Westbound					Hayes Ave Northbound					Hayes Ave Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	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	6	38	8	0	52	3	168	1	0	172	27	4	0	0	31	1	1	27	0	29	284
07:15 AM	6	47	3	0	56	0	197	0	0	197	19	6	1	0	26	0	1	27	0	28	307
07:30 AM	8	56	4	0	68	0	177	0	0	177	14	1	4	0	19	1	1	32	0	34	298
07:45 AM	3	65	5	0	73	1	143	0	0	144	15	5	2	0	22	0	1	20	0	21	260
Total Volume	23	206	20	0	249	4	685	1	0	690	75	16	7	0	98	2	4	106	0	112	1149
% App. Total	9.2	82.7	8	0		0.6	99.3	0.1	0		76.5	16.3	7.1	0		1.8	3.6	94.6	0		
PHF	.719	.792	.625	.000	.853	.333	.869	.250	.000	.876	.694	.667	.438	.000	.790	.500	1.00	.828	.000	.824	.936





Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
US-30 and Hayes Ave

File Name : US-30 and Hayes PM
Site Code : IPO 262
Start Date : 9/6/2017
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Groups Printed- Automobiles

Start Time	US - 30 Eastbound					US - 30 Westbound					Hayes Ave Northbound					Hayes Ave Southbound					Int. Total
	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	
04:00 PM	21	111	10	0	142	0	57	2	0	59	3	2	2	0	7	0	5	5	0	10	218
04:15 PM	24	113	6	0	143	0	78	2	0	80	4	4	0	0	8	1	4	10	0	15	246
04:30 PM	17	96	12	0	125	1	82	2	0	85	4	8	1	0	13	0	3	10	0	13	236
04:45 PM	18	122	19	0	159	1	69	1	0	71	11	2	3	0	16	0	5	15	0	20	266
Total	80	442	47	0	569	2	286	7	0	295	22	16	6	0	44	1	17	40	0	58	966
05:00 PM	25	142	17	0	184	1	79	2	0	82	9	1	1	0	11	1	3	12	0	16	293
05:15 PM	32	163	26	0	221	0	65	1	0	66	15	4	2	0	21	4	5	14	0	23	331
05:30 PM	16	139	20	0	175	4	65	2	0	71	6	10	1	0	17	1	7	9	0	17	280
05:45 PM	13	109	11	0	133	0	77	0	0	77	10	1	7	0	18	2	2	14	0	18	246
Total	86	553	74	0	713	5	286	5	0	296	40	16	11	0	67	8	17	49	0	74	1150
Grand Total	166	995	121	0	1282	7	572	12	0	591	62	32	17	0	111	9	34	89	0	132	2116
Approch %	12.9	77.6	9.4	0		1.2	96.8	2	0		55.9	28.8	15.3	0		6.8	25.8	67.4	0		
Total %	7.8	47	5.7	0	60.6	0.3	27	0.6	0	27.9	2.9	1.5	0.8	0	5.2	0.4	1.6	4.2	0	6.2	

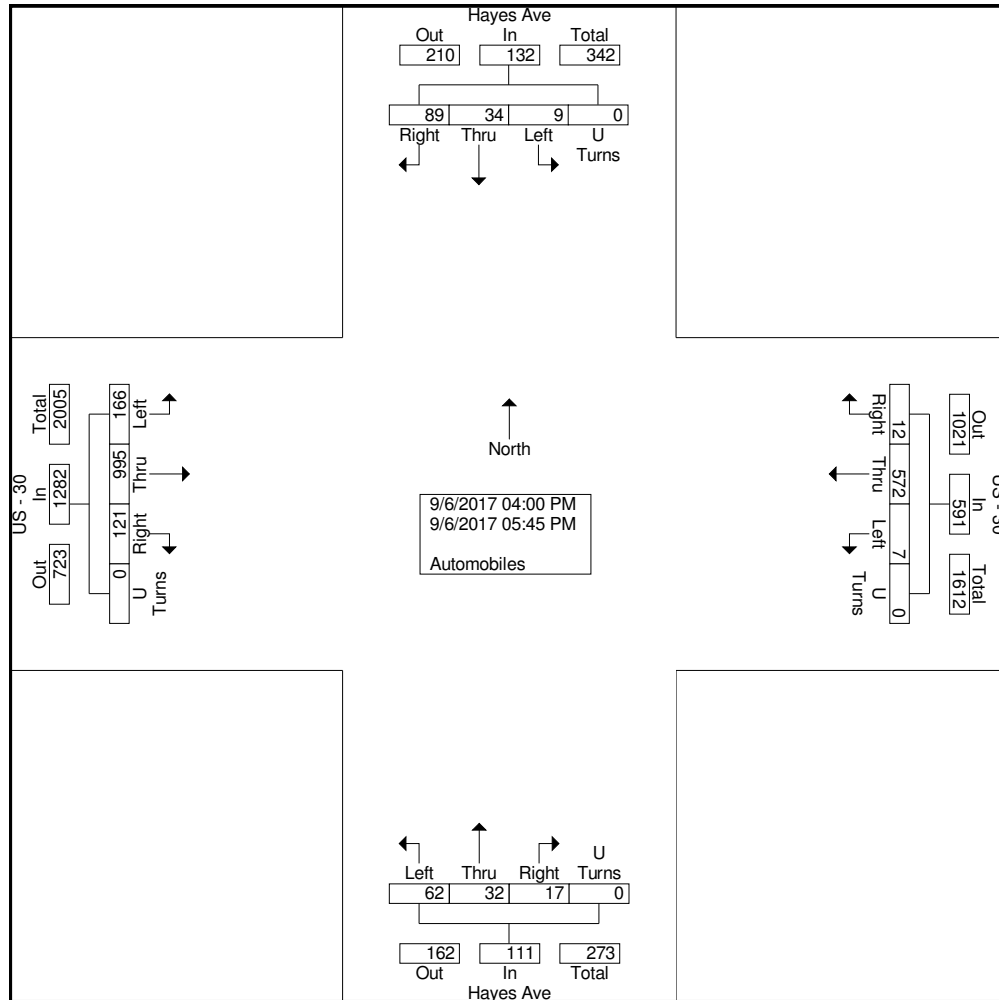


Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
US-30 and Hayes Ave

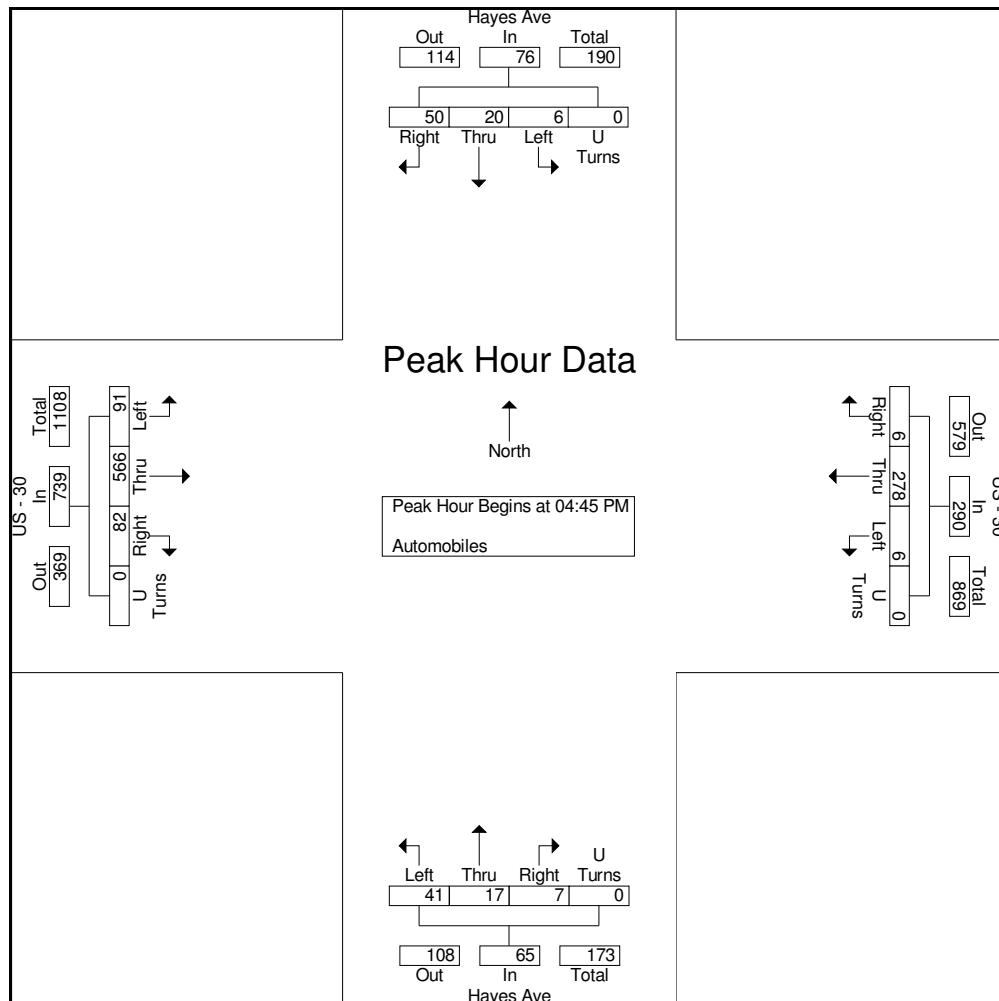
File Name : US-30 and Hayes PM
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Cheyenne, WY
Whitney Ranch
PM Peak
US-30 and Hayes Ave

File Name : US-30 and Hayes PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 3

	US - 30 Eastbound					US - 30 Westbound					Hayes Ave Northbound					Hayes Ave Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	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	18	122	19	0	159	1	69	1	0	71	11	2	3	0	16	0	5	15	0	20	266
05:00 PM	25	142	17	0	184	1	79	2	0	82	9	1	1	0	11	1	3	12	0	16	293
05:15 PM	32	163	26	0	221	0	65	1	0	66	15	4	2	0	21	4	5	14	0	23	331
05:30 PM	16	139	20	0	175	4	65	2	0	71	6	10	1	0	17	1	7	9	0	17	280
Total Volume	91	566	82	0	739	6	278	6	0	290	41	17	7	0	65	6	20	50	0	76	1170
% App. Total	12.3	76.6	11.1	0		2.1	95.9	2.1	0		63.1	26.2	10.8	0		7.9	26.3	65.8	0		
PHF	.711	.868	.788	.000	.836	.375	.880	.750	.000	.884	.683	.425	.583	.000	.774	.375	.714	.833	.000	.826	.884





Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
US-30 and Whitney Rd

File Name : US-30 and Whitney AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 1

Groups Printed- Automobiles

Start Time	US - 30 Eastbound					US - 30 Westbound					Whitney Rd Northbound					Whitney Rd Southbound					Int. Total
	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	
07:00 AM	8	20	6	0	34	0	122	7	0	129	14	12	1	0	27	1	6	25	0	32	222
07:15 AM	5	31	4	0	40	1	148	5	0	154	7	6	1	0	14	0	6	44	0	50	258
07:30 AM	10	24	5	0	39	0	121	7	0	128	10	13	0	0	23	1	5	39	0	45	235
07:45 AM	9	44	16	0	69	2	111	14	0	127	15	18	1	0	34	2	12	23	0	37	267
Total	32	119	31	0	182	3	502	33	0	538	46	49	3	0	98	4	29	131	0	164	982
08:00 AM	7	34	8	0	49	0	55	8	0	63	9	14	3	0	26	2	10	14	0	26	164
08:15 AM	9	41	11	0	61	0	65	7	0	72	10	8	2	0	20	5	7	13	0	25	178
08:30 AM	9	16	1	0	26	1	49	6	0	56	9	10	0	0	19	1	7	21	0	29	130
08:45 AM	5	20	5	0	30	0	42	5	0	47	9	8	0	0	17	1	4	12	0	17	111
Total	30	111	25	0	166	1	211	26	0	238	37	40	5	0	82	9	28	60	0	97	583
Grand Total	62	230	56	0	348	4	713	59	0	776	83	89	8	0	180	13	57	191	0	261	1565
Apprch %	17.8	66.1	16.1	0		0.5	91.9	7.6	0		46.1	49.4	4.4	0		5	21.8	73.2	0		
Total %	4	14.7	3.6	0	22.2	0.3	45.6	3.8	0	49.6	5.3	5.7	0.5	0	11.5	0.8	3.6	12.2	0	16.7	

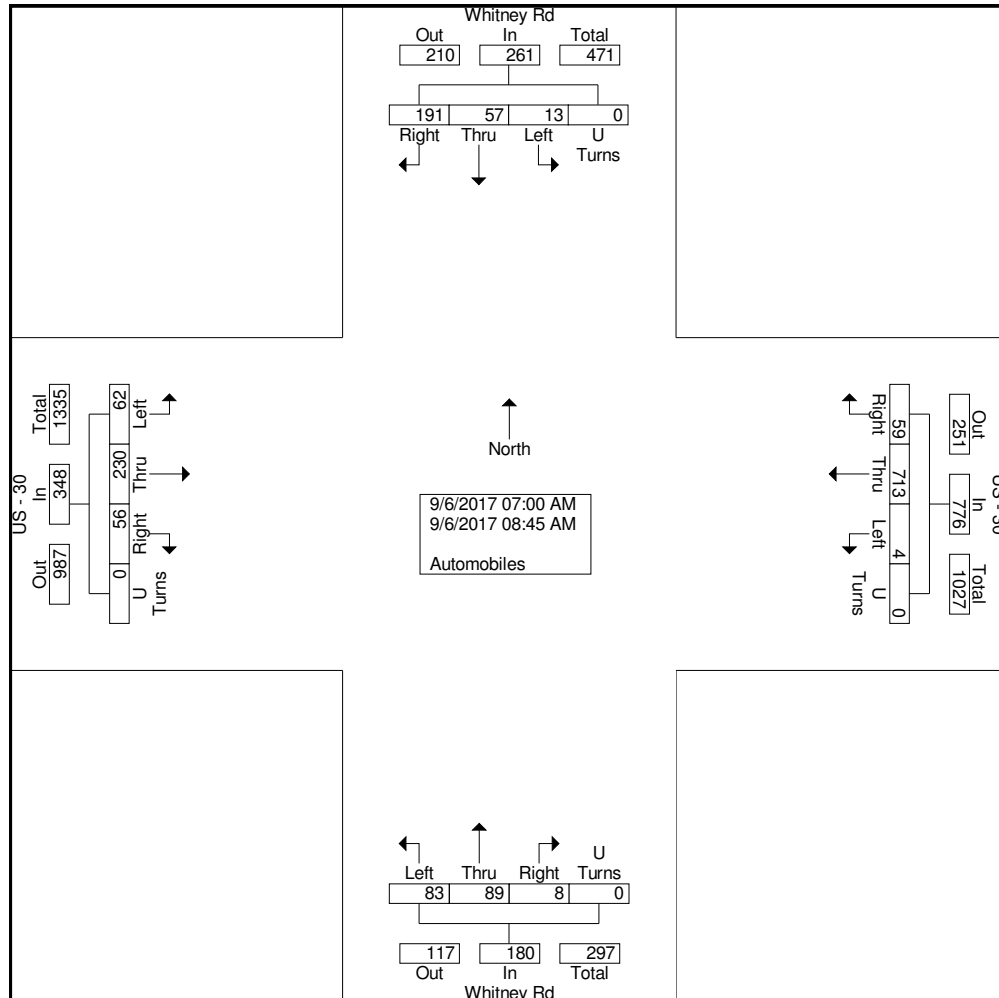


Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
US-30 and Whitney Rd

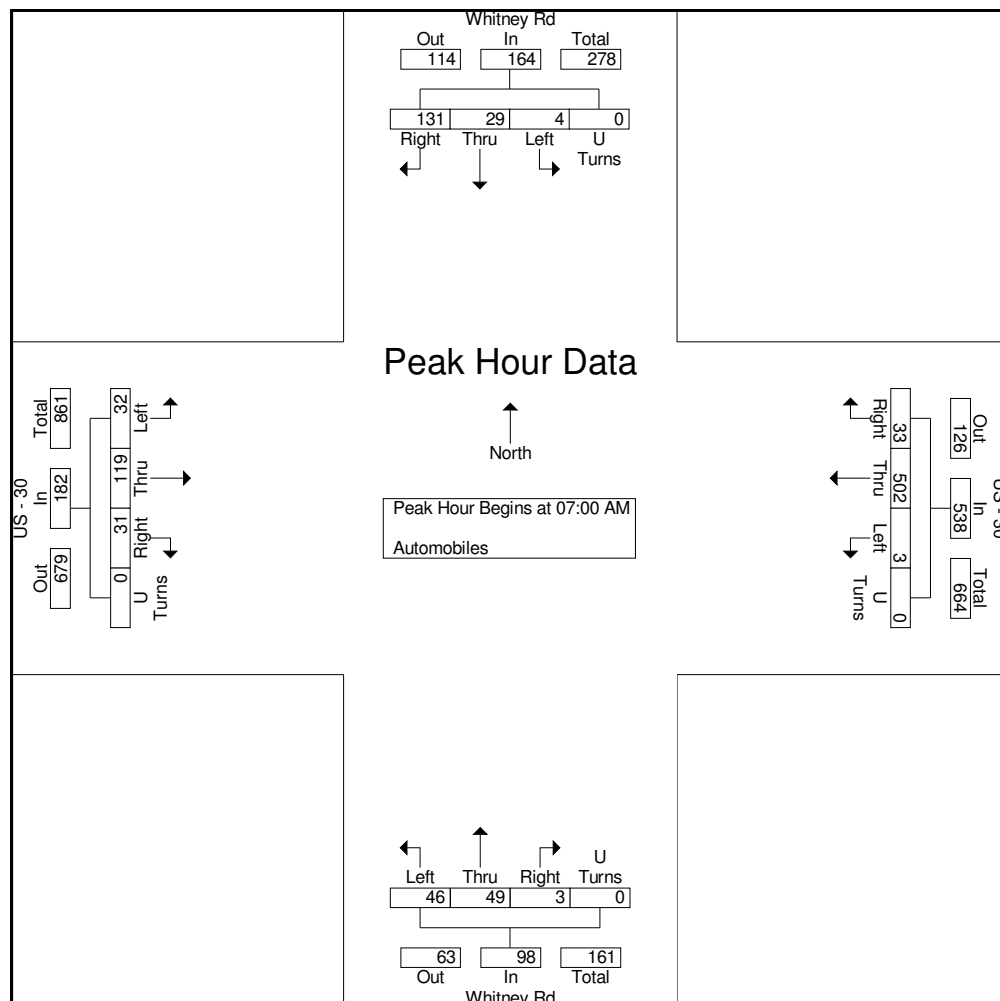
File Name : US-30 and Whitney AM
Site Code : IPO 262
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Cheyenne, WY
Whitney Ranch
AM Peak
US-30 and Whitney Rd

File Name : US-30 and Whitney AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 3

	US - 30 Eastbound					US - 30 Westbound					Whitney Rd Northbound					Whitney Rd Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	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	8	20	6	0	34	0	122	7	0	129	14	12	1	0	27	1	6	25	0	32	222
07:15 AM	5	31	4	0	40	1	148	5	0	154	7	6	1	0	14	0	6	44	0	50	258
07:30 AM	10	24	5	0	39	0	121	7	0	128	10	13	0	0	23	1	5	39	0	45	235
07:45 AM	9	44	16	0	69	2	111	14	0	127	15	18	1	0	34	2	12	23	0	37	267
Total Volume	32	119	31	0	182	3	502	33	0	538	46	49	3	0	98	4	29	131	0	164	982
% App. Total	17.6	65.4	17	0		0.6	93.3	6.1	0		46.9	50	3.1	0		2.4	17.7	79.9	0		
PHF	.800	.676	.484	.000	.659	.375	.848	.589	.000	.873	.767	.681	.750	.000	.721	.500	.604	.744	.000	.820	.919





Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
US-30 and Whitney Rd

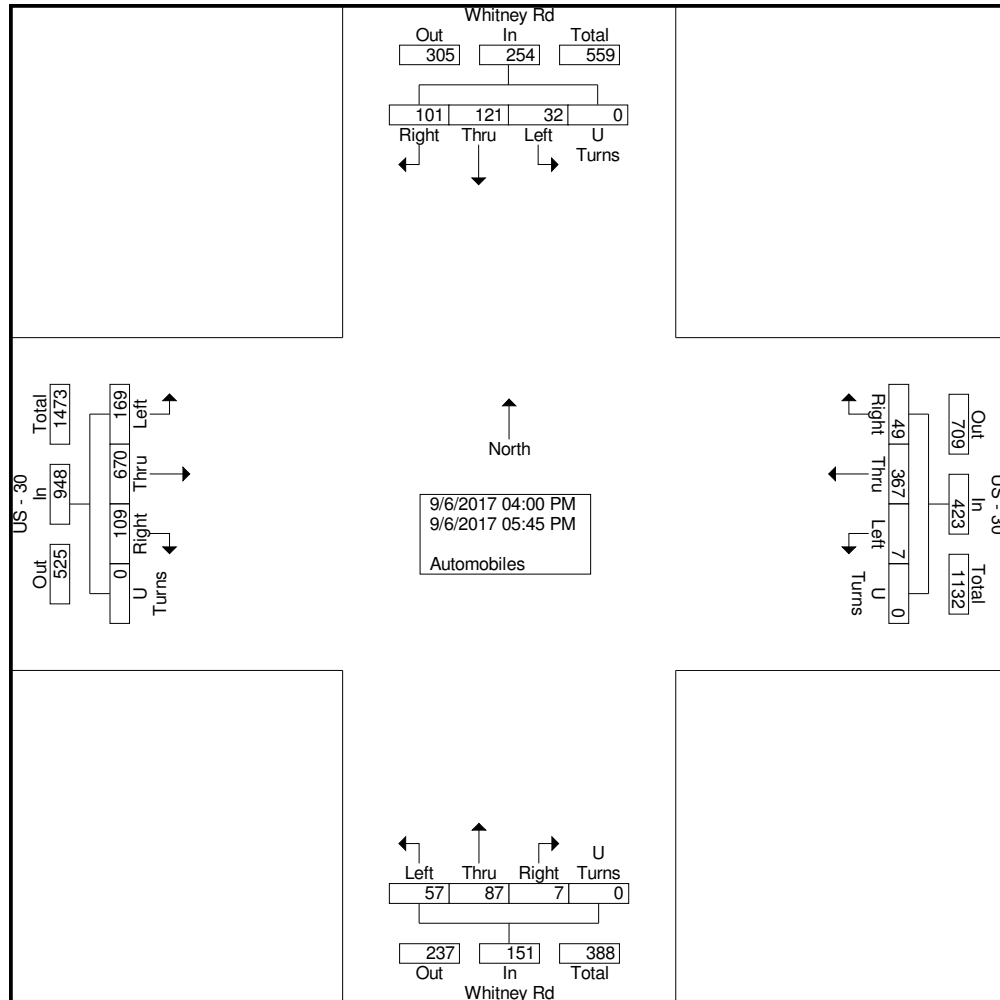
File Name : US-30 and Whitney PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 1

Groups Printed- Automobiles

Start Time	US - 30 Eastbound					US - 30 Westbound					Whitney Rd Northbound					Whitney Rd Southbound					Int. Total
	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	
04:00 PM	15	71	10	0	96	2	39	5	0	46	8	7	0	0	15	3	12	11	0	26	183
04:15 PM	24	68	12	0	104	0	50	3	0	53	6	6	1	0	13	3	11	8	0	22	192
04:30 PM	21	67	8	0	96	1	60	6	0	67	5	5	0	0	10	5	16	10	0	31	204
04:45 PM	23	72	12	0	107	0	40	5	0	45	7	11	0	0	18	4	11	19	0	34	204
Total	83	278	42	0	403	3	189	19	0	211	26	29	1	0	56	15	50	48	0	113	783
05:00 PM	21	106	14	0	141	0	46	11	0	57	5	15	2	0	22	3	24	18	0	45	265
05:15 PM	32	103	18	0	153	3	42	9	0	54	8	13	3	0	24	3	16	15	0	34	265
05:30 PM	18	105	18	0	141	1	44	3	0	48	10	18	0	0	28	7	17	6	0	30	247
05:45 PM	15	78	17	0	110	0	46	7	0	53	8	12	1	0	21	4	14	14	0	32	216
Total	86	392	67	0	545	4	178	30	0	212	31	58	6	0	95	17	71	53	0	141	993
Grand Total	169	670	109	0	948	7	367	49	0	423	57	87	7	0	151	32	121	101	0	254	1776
Apprch %	17.8	70.7	11.5	0		1.7	86.8	11.6	0		37.7	57.6	4.6	0		12.6	47.6	39.8	0		
Total %	9.5	37.7	6.1	0	53.4	0.4	20.7	2.8	0	23.8	3.2	4.9	0.4	0	8.5	1.8	6.8	5.7	0	14.3	

Cheyenne, WY
Whitney Ranch
PM Peak
US-30 and Whitney Rd

File Name : US-30 and Whitney PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 2



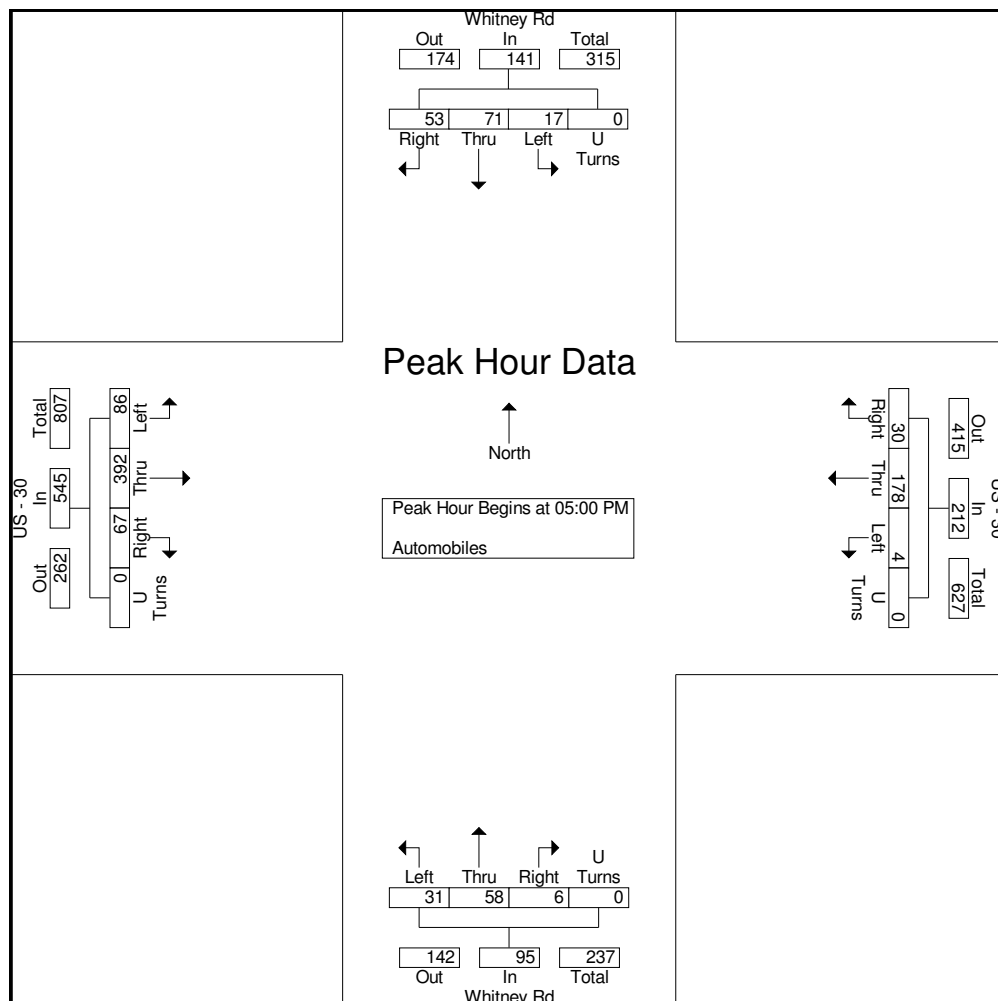


Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
US-30 and Whitney Rd

File Name : US-30 and Whitney PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 3

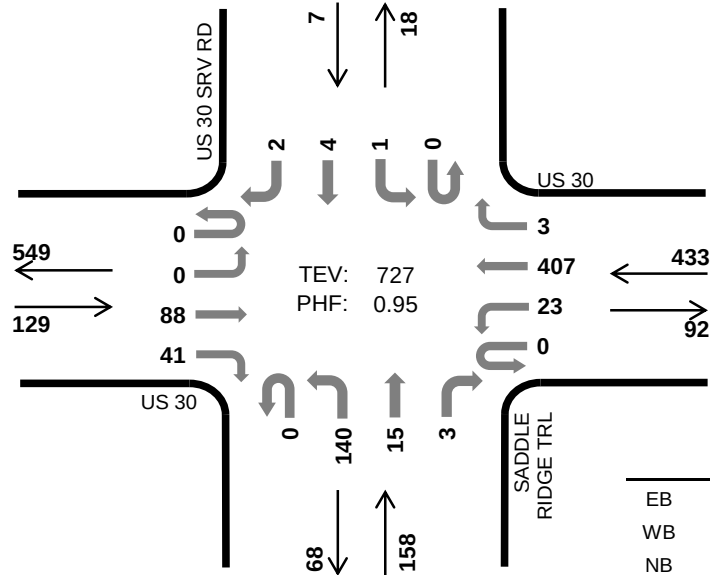
	US - 30 Eastbound					US - 30 Westbound					Whitney Rd Northbound					Whitney Rd Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	21	106	14	0	141	0	46	11	0	57	5	15	2	0	22	3	24	18	0	45	265
05:15 PM	32	103	18	0	153	3	42	9	0	54	8	13	3	0	24	3	16	15	0	34	265
05:30 PM	18	105	18	0	141	1	44	3	0	48	10	18	0	0	28	7	17	6	0	30	247
05:45 PM	15	78	17	0	110	0	46	7	0	53	8	12	1	0	21	4	14	14	0	32	216
Total Volume	86	392	67	0	545	4	178	30	0	212	31	58	6	0	95	17	71	53	0	141	993
% App. Total	15.8	71.9	12.3	0		1.9	84	14.2	0		32.6	61.1	6.3	0		12.1	50.4	37.6	0		
PHF	.672	.925	.931	.000	.891	.333	.967	.682	.000	.930	.775	.806	.500	.000	.848	.607	.740	.736	.000	.783	.937



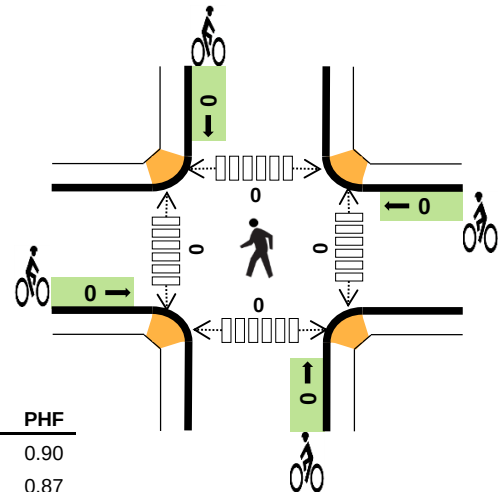
SADDLE RIDGE TRL US 30



Peak Hour



Date: Wed, Sep 19, 2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM



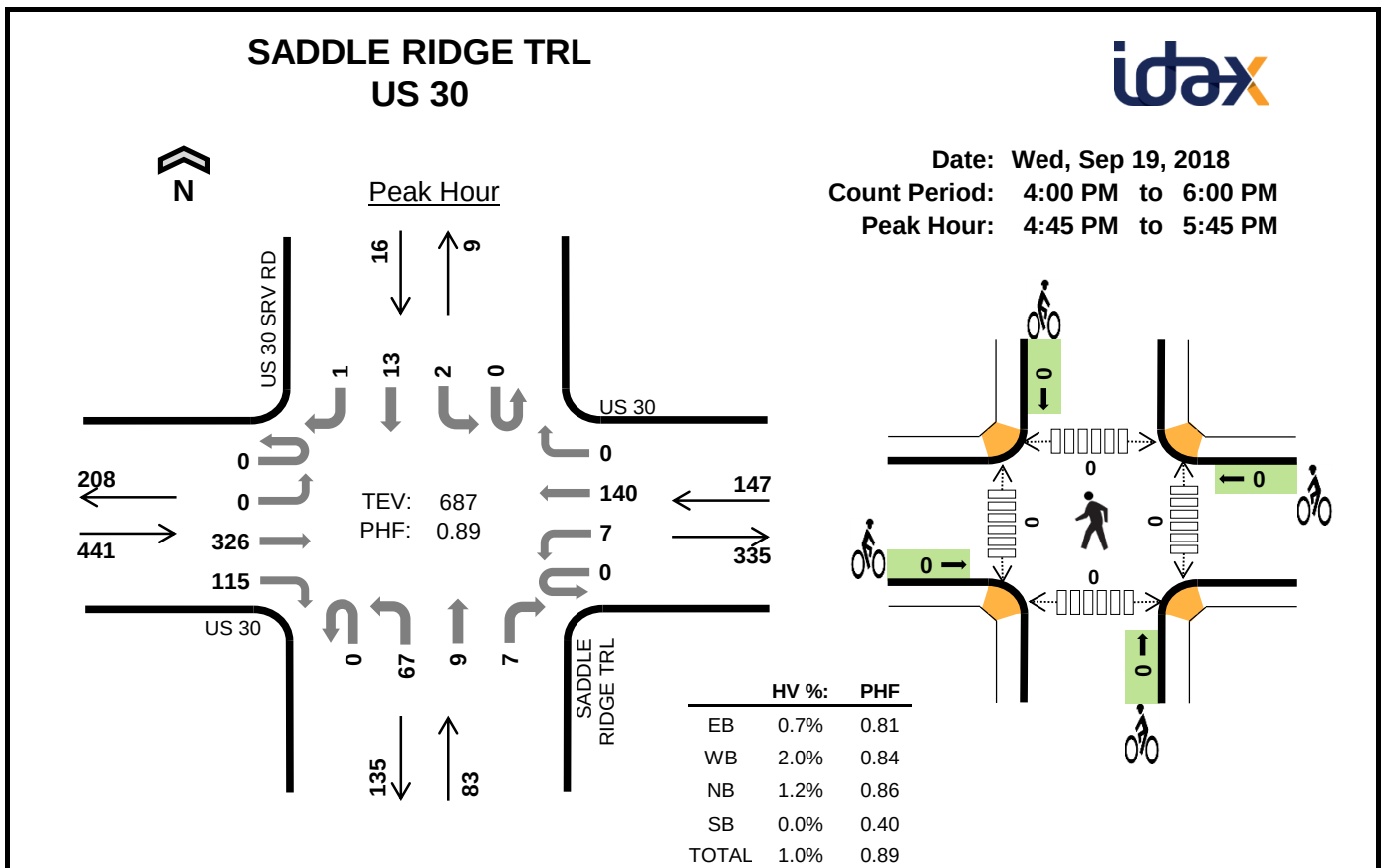
	HV %:	PHF
EB	10.1%	0.90
WB	1.2%	0.87
NB	0.6%	0.84
SB	0.0%	0.35
TOTAL	2.6%	0.95

Two-Hour Count Summaries

Interval Start	US 30 Eastbound				US 30 Westbound				SADDLE RIDGE TRL Northbound				US 30 SRV RD Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	24	4	0	4	118	2	0	33	4	0	0	0	1	0	190	0
7:15 AM	0	0	23	7	0	4	108	1	0	41	4	2	0	0	1	0	191	0
7:30 AM	0	0	20	16	0	4	104	0	0	25	3	1	0	1	2	2	178	0
7:45 AM	0	0	21	14	0	11	77	0	0	41	4	0	0	0	0	0	168	727
8:00 AM	0	0	19	18	0	10	61	0	0	21	0	2	0	0	0	0	131	668
8:15 AM	0	0	26	17	0	12	54	0	0	20	1	8	0	0	1	0	139	616
8:30 AM	0	0	17	6	0	0	46	0	0	22	1	1	0	0	0	0	93	531
8:45 AM	0	1	29	10	0	1	40	0	0	10	0	1	0	0	2	0	94	457
Count Total	0	1	179	92	0	46	608	3	0	213	17	15	0	1	7	2	1,184	0
Peak Hour	0	0	88	41	0	23	407	3	0	140	15	3	0	1	4	2	727	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0
7:15 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
7:30 AM	2	1	1	0	4	0	0	0	0	0	0	0	0	0	0
7:45 AM	3	4	0	0	7	0	0	0	0	0	0	0	0	0	0
8:00 AM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Count Total	17	6	2	0	25	0	0	0	0	0	0	0	0	0	0
Peak Hour	13	5	1	0	19	0	0	0	0	0	0	0	0	0	0



Two-Hour Count Summaries

Interval Start	US 30				US 30				SADDLE RIDGE TRL				US 30 SRV RD				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	63	18	0	6	36	0	0	19	2	4	0	0	6	0	154	0
4:15 PM	0	1	63	24	0	2	50	1	0	15	4	4	0	1	3	0	168	0
4:30 PM	0	0	72	21	0	1	50	0	0	14	4	1	0	0	7	1	171	0
4:45 PM	0	0	70	28	0	1	43	0	0	18	1	2	0	1	3	0	167	660
5:00 PM	0	0	72	20	0	1	31	0	0	17	3	4	0	0	1	0	149	655
5:15 PM	0	0	95	41	0	1	39	0	0	15	2	0	0	0	1	0	194	681
5:30 PM	0	0	89	26	0	4	27	0	0	17	3	1	0	1	8	1	177	687
5:45 PM	0	0	70	29	0	1	39	0	0	14	4	1	0	0	6	2	166	686
Count Total	0	1	594	207	0	17	315	1	0	129	23	17	0	3	35	4	1,346	0
Peak Hour	0	0	326	115	0	7	140	0	0	67	9	7	0	2	13	1	687	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

[illegible]



Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and US-30

File Name : Dell Range and US-30 AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 1

Groups Printed- Automobiles

Start Time	US - 30 Eastbound					US - 30 Westbound					US-30 Service Rd Northbound					Dell Range Blvd Southbound					Int. Total
	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	
07:00 AM	0	19	0	0	19	0	87	51	0	138	0	0	0	0	0	13	0	1	0	14	171
07:15 AM	1	23	0	0	24	0	119	46	0	165	0	0	0	0	0	11	0	3	0	14	203
07:30 AM	0	21	0	0	21	0	101	57	0	158	0	1	0	0	1	18	0	1	0	19	199
07:45 AM	6	28	0	0	34	1	71	44	0	116	0	1	0	0	1	20	0	5	0	25	176
Total	7	91	0	0	98	1	378	198	0	577	0	2	0	0	2	62	0	10	0	72	749
08:00 AM	3	19	2	0	24	0	47	43	0	90	1	1	0	0	2	16	0	1	0	17	133
08:15 AM	1	36	0	0	37	0	56	26	0	82	3	0	1	0	4	12	1	1	0	14	137
08:30 AM	1	14	0	0	15	0	32	19	0	51	1	0	0	0	1	26	0	3	0	29	96
08:45 AM	0	15	1	0	16	1	32	43	0	76	0	0	0	0	0	16	1	0	0	17	109
Total	5	84	3	0	92	1	167	131	0	299	5	1	1	0	7	70	2	5	0	77	475
Grand Total	12	175	3	0	190	2	545	329	0	876	5	3	1	0	9	132	2	15	0	149	1224
Apprch %	6.3	92.1	1.6	0		0.2	62.2	37.6	0		55.6	33.3	11.1	0		88.6	1.3	10.1	0		
Total %	1	14.3	0.2	0	15.5	0.2	44.5	26.9	0	71.6	0.4	0.2	0.1	0	0.7	10.8	0.2	1.2	0	12.2	

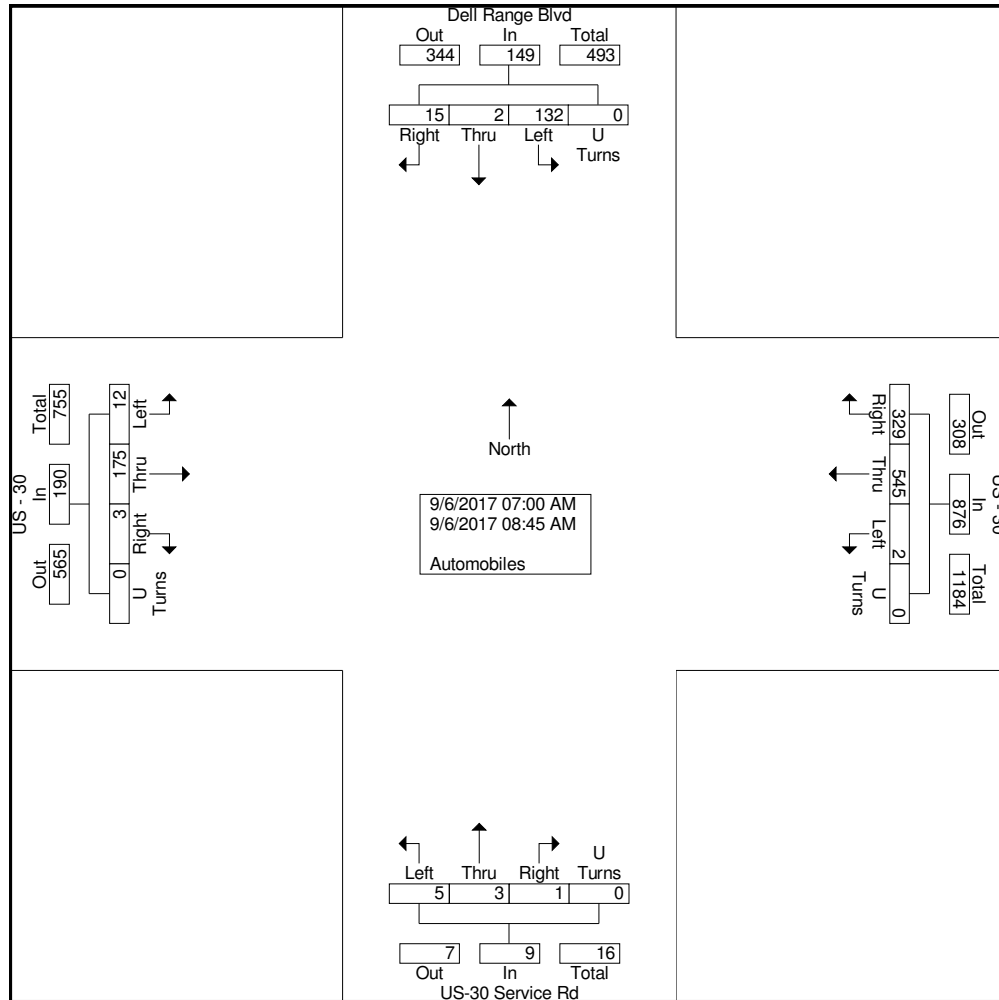


Ridgeview Data
Collection

Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and US-30

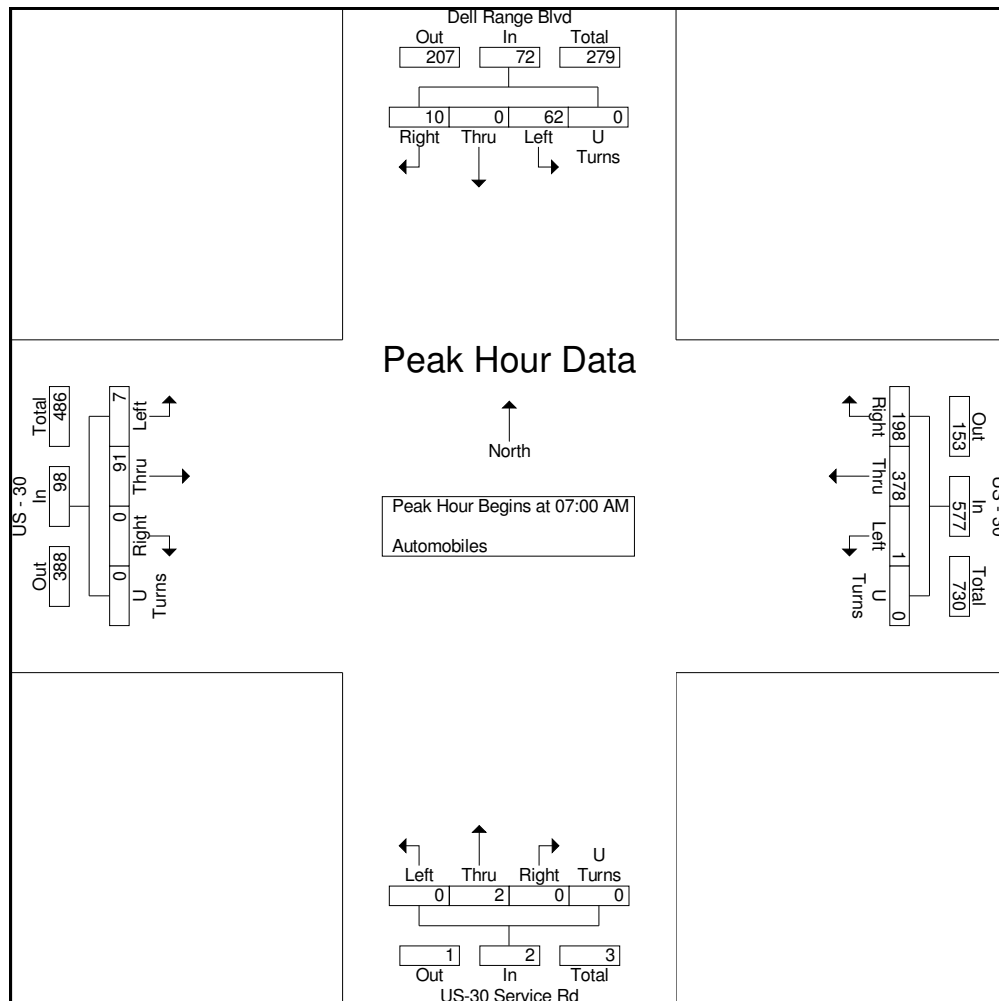
File Name : Dell Range and US-30 AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 2



Cheyenne, WY
Whitney Ranch
AM Peak
Dell Range Blvd and US-30

File Name : Dell Range and US-30 AM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 3

	US - 30 Eastbound					US - 30 Westbound					US-30 Service Rd Northbound					Dell Range Blvd Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	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	19	0	0	19	0	87	51	0	138	0	0	0	0	0	13	0	1	0	14	171
07:15 AM	1	23	0	0	24	0	119	46	0	165	0	0	0	0	0	11	0	3	0	14	203
07:30 AM	0	21	0	0	21	0	101	57	0	158	0	1	0	0	1	18	0	1	0	19	199
07:45 AM	6	28	0	0	34	1	71	44	0	116	0	1	0	0	1	20	0	5	0	25	176
Total Volume	7	91	0	0	98	1	378	198	0	577	0	2	0	0	2	62	0	10	0	72	749
% App. Total	7.1	92.9	0	0		0.2	65.5	34.3	0		0	100	0	0		86.1	0	13.9	0		
PHF	.292	.813	.000	.000	.721	.250	.794	.868	.000	.874	.000	.500	.000	.000	.500	.775	.000	.500	.000	.720	.922





Morrison, CO 80465

Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and US-30

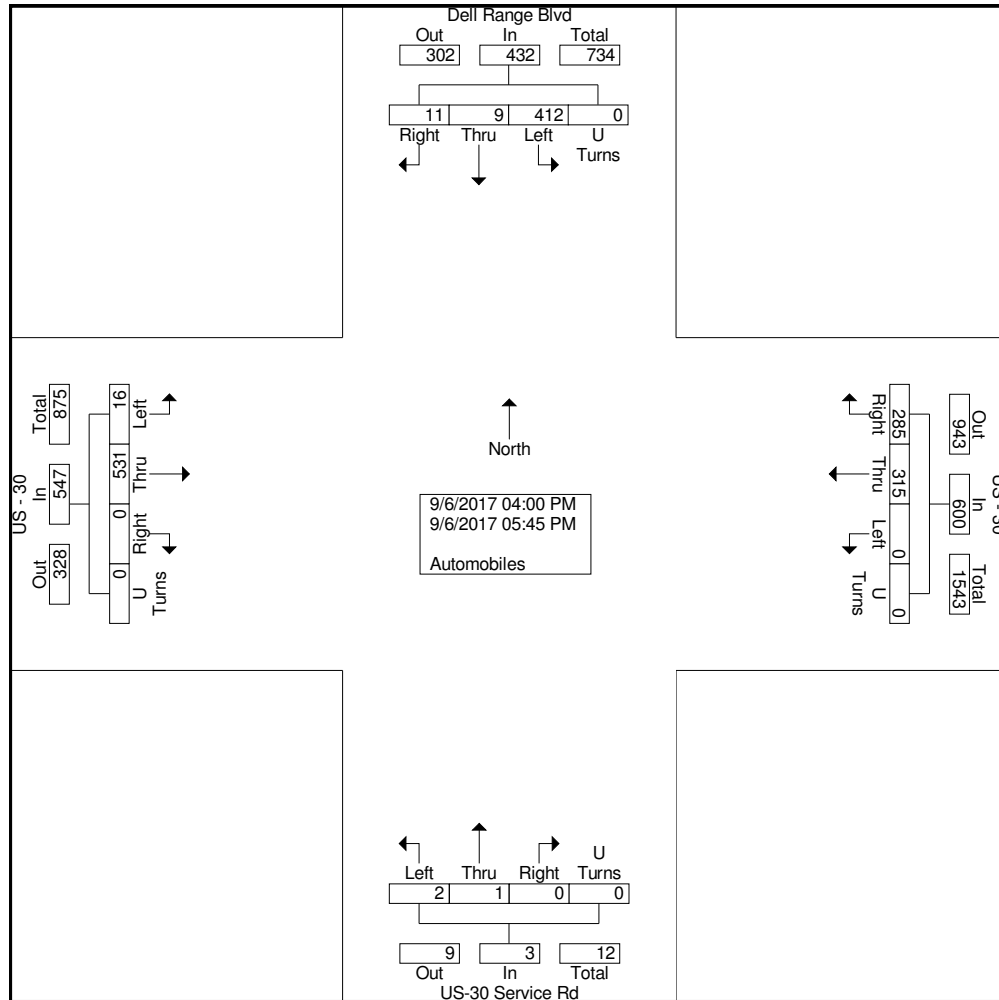
File Name : Dell Range and US-30 PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 1

Groups Printed- Automobiles

Start Time	US - 30 Eastbound					US - 30 Westbound					US-30 Service Rd Northbound					Dell Range Blvd Southbound					Int. Total
	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	
04:00 PM	3	50	0	0	53	0	34	41	0	75	1	0	0	0	1	46	1	3	0	50	179
04:15 PM	1	61	0	0	62	0	48	34	0	82	0	0	0	0	0	57	1	0	0	58	202
04:30 PM	3	62	0	0	65	0	48	48	0	96	0	0	0	0	0	53	0	1	0	54	215
04:45 PM	2	59	0	0	61	0	33	25	0	58	0	0	0	0	0	49	2	1	0	52	171
Total	9	232	0	0	241	0	163	148	0	311	1	0	0	0	1	205	4	5	0	214	767
05:00 PM	1	82	0	0	83	0	35	45	0	80	0	1	0	0	1	53	0	1	0	54	218
05:15 PM	3	79	0	0	82	0	35	33	0	68	0	0	0	0	0	46	2	1	0	49	199
05:30 PM	1	86	0	0	87	0	44	37	0	81	1	0	0	0	1	61	0	2	0	63	232
05:45 PM	2	52	0	0	54	0	38	22	0	60	0	0	0	0	0	47	3	2	0	52	166
Total	7	299	0	0	306	0	152	137	0	289	1	1	0	0	2	207	5	6	0	218	815
Grand Total	16	531	0	0	547	0	315	285	0	600	2	1	0	0	3	412	9	11	0	432	1582
Apprch %	2.9	97.1	0	0		0	52.5	47.5	0		66.7	33.3	0	0		95.4	2.1	2.5	0		
Total %	1	33.6	0	0	34.6	0	19.9	18	0	37.9	0.1	0.1	0	0	0.2	26	0.6	0.7	0	27.3	

Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and US-30

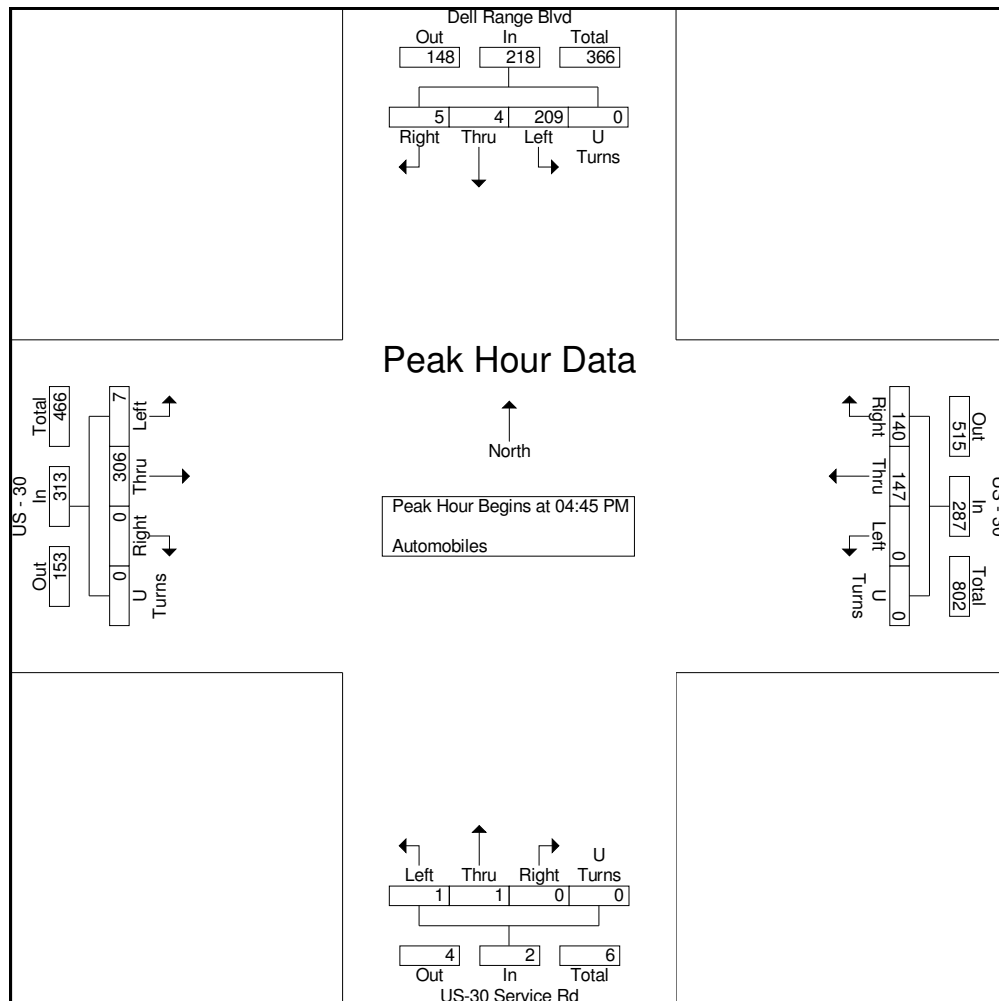
File Name : Dell Range and US-30 PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 2



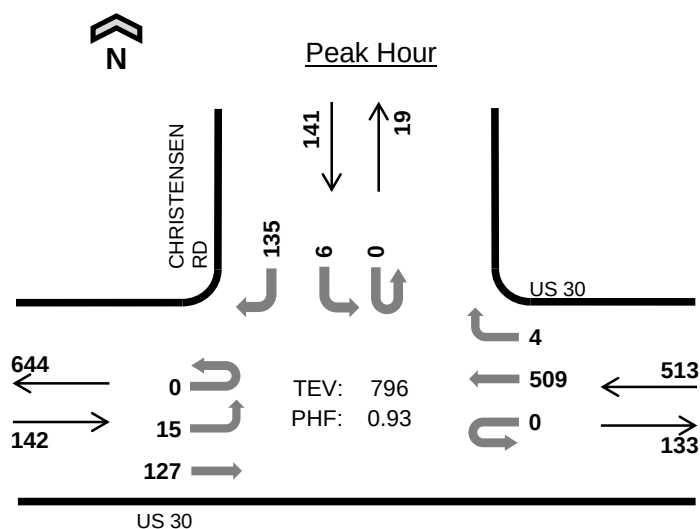
Cheyenne, WY
Whitney Ranch
PM Peak
Dell Range Blvd and US-30

File Name : Dell Range and US-30 PM
Site Code : IPO 262
Start Date : 9/6/2017
Page No : 3

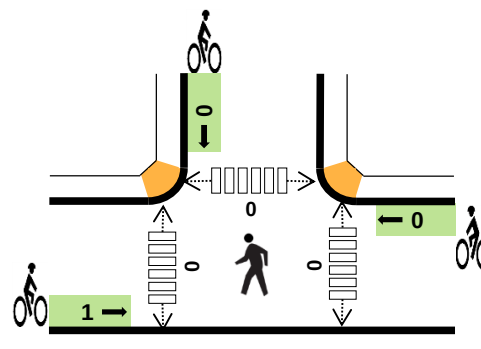
	US - 30 Eastbound					US - 30 Westbound					US-30 Service Rd Northbound					Dell Range Blvd Southbound					
Start Time	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Left	Thru	Right	U Turns	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	2	59	0	0	61	0	33	25	0	58	0	0	0	0	0	49	2	1	0	52	171
05:00 PM	1	82	0	0	83	0	35	45	0	80	0	1	0	0	1	53	0	1	0	54	218
05:15 PM	3	79	0	0	82	0	35	33	0	68	0	0	0	0	0	46	2	1	0	49	199
05:30 PM	1	86	0	0	87	0	44	37	0	81	1	0	0	0	1	61	0	2	0	63	232
Total Volume	7	306	0	0	313	0	147	140	0	287	1	1	0	0	2	209	4	5	0	218	820
% App. Total	2.2	97.8	0	0		0	51.2	48.8	0		50	50	0	0		95.9	1.8	2.3	0		
PHF	.583	.890	.000	.000	.899	.000	.835	.778	.000	.886	.250	.250	.000	.000	.500	.857	.500	.625	.000	.865	.884



CHRISTENSEN RD US 30



Date: Wed, Sep 19, 2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM



	HV %:	PHF
EB	5.6%	0.87
WB	1.4%	0.91
NB	-	-
SB	0.7%	0.82
TOTAL	2.0%	0.93

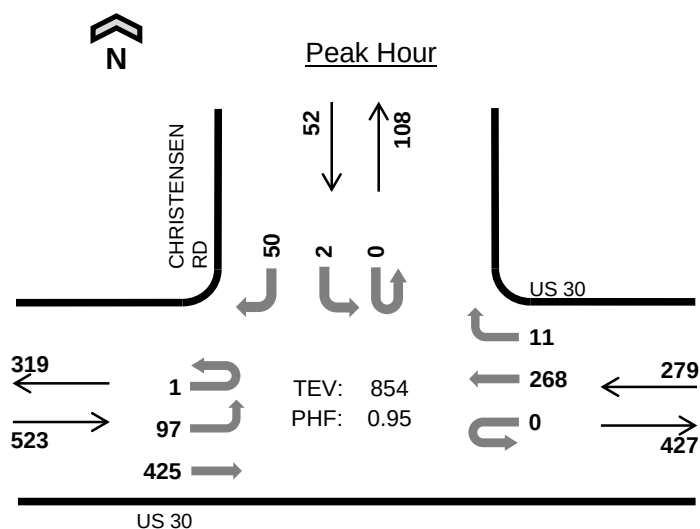
Two-Hour Count Summaries

Interval Start	US 30				US 30				0				CHRISTENSEN RD				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	4	30	0	0	0	140	1	0	0	0	0	0	3	0	36	214	0
7:15 AM	0	3	36	0	0	0	134	0	0	0	0	0	0	0	0	28	201	0
7:30 AM	0	3	25	0	0	0	121	3	0	0	0	0	0	1	0	42	195	0
7:45 AM	0	5	36	0	0	0	114	0	0	0	0	0	0	2	0	29	186	796
8:00 AM	0	8	35	0	0	0	90	0	0	0	0	0	0	1	0	17	151	733
8:15 AM	0	4	42	0	0	0	95	1	0	0	0	0	0	2	0	16	160	692
8:30 AM	0	3	34	0	0	0	72	0	0	0	0	0	0	0	0	8	117	614
8:45 AM	0	8	33	0	0	0	49	3	0	0	0	0	0	1	0	11	105	533
Count Total	0	38	271	0	0	0	815	8	0	0	0	0	0	10	0	187	1,329	0
Peak Hour	0	15	127	0	0	0	509	4	0	0	0	0	0	6	0	135	796	0

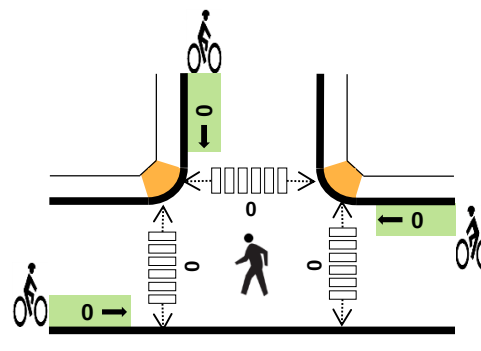
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	6	1	0	0	7	0	0	0	0	0	0	0	0	0	0
7:15 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0
7:45 AM	0	4	0	1	5	0	0	0	0	0	0	0	0	0	0
8:00 AM	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
8:45 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Count Total	11	9	0	2	22	1	0	0	0	1	0	0	0	0	0
Peak Hr	8	7	0	1	16	1	0	0	0	1	0	0	0	0	0

CHRISTENSEN RD US 30



Date: Wed, Sep 19, 2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



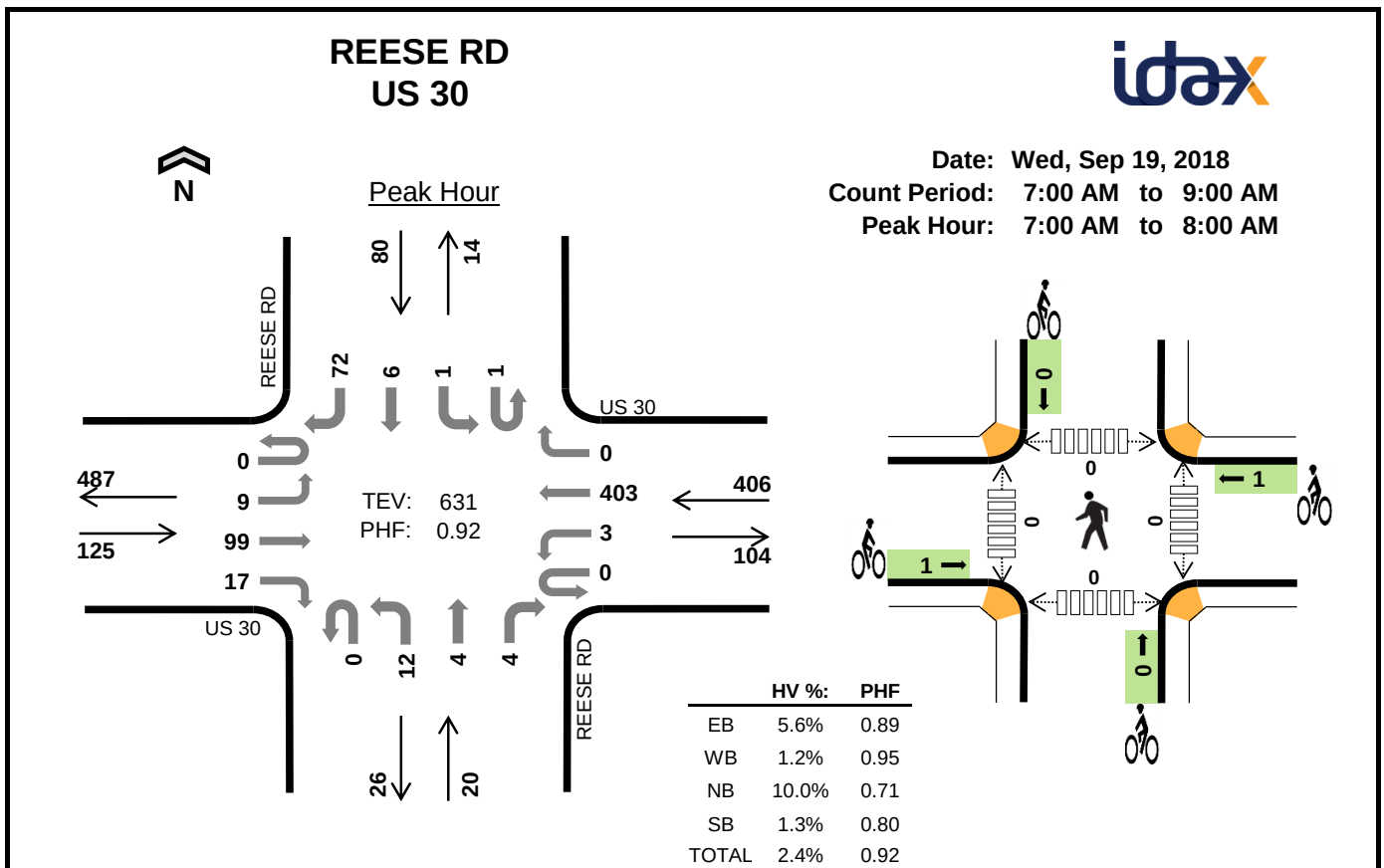
	HV %:	PHF
EB	0.8%	0.82
WB	1.4%	0.79
NB	-	-
SB	1.9%	0.81
TOTAL	1.1%	0.95

Two-Hour Count Summaries

Interval Start	US 30				US 30				0				CHRISTENSEN RD				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	19	100	0	0	0	53	3	0	0	0	0	0	0	0	12	187	0
4:15 PM	0	21	98	0	0	0	75	1	0	0	0	0	0	0	0	7	202	0
4:30 PM	1	27	92	0	0	0	86	2	0	0	0	0	0	0	0	14	222	0
4:45 PM	0	19	93	0	0	0	70	1	0	0	0	0	0	2	0	11	196	807
5:00 PM	0	23	109	0	0	0	67	3	0	0	0	0	0	0	0	9	211	831
5:15 PM	0	28	131	0	0	0	45	5	0	0	0	0	0	0	0	16	225	854
5:30 PM	0	15	138	0	0	0	51	1	0	0	0	0	0	0	0	6	211	843
5:45 PM	0	22	92	0	0	0	52	0	0	0	0	0	0	1	0	9	176	823
Count Total	1	174	853	0	0	0	499	16	0	0	0	0	0	3	0	84	1,630	0
Peak Hour	1	97	425	0	0	0	268	11	0	0	0	0	0	2	0	50	854	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	6	1	0	1	8	0	0	0	0	0	0	0	0	0	0
4:15 PM	2	2	0	1	5	0	0	0	0	0	0	0	0	0	0
4:30 PM	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	2	0	1	4	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	13	7	0	3	23	0	0	0	0	0	0	0	0	0	0
Peak Hr	4	4	0	1	9	0	0	0	0	0	0	0	0	0	0

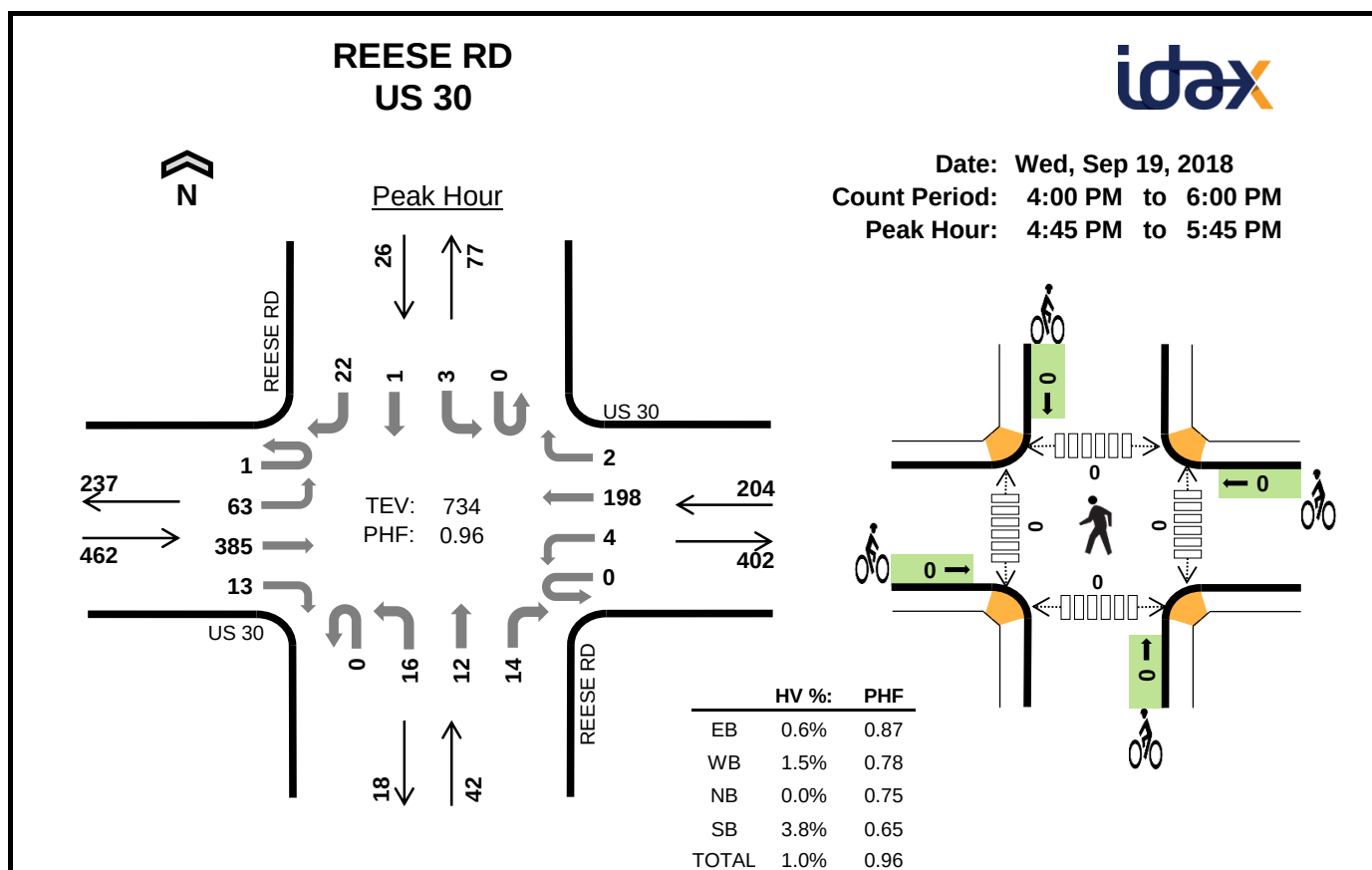


Two-Hour Count Summaries

Interval Start	US 30 Eastbound				US 30 Westbound				REESE RD Northbound				REESE RD Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	2	31	2	0	0	107	0	0	5	0	0	1	0	1	23	172	0
7:15 AM	0	1	26	6	0	0	103	0	0	2	1	1	0	0	1	20	161	0
7:30 AM	0	0	18	7	0	2	99	0	0	4	2	1	0	1	4	12	150	0
7:45 AM	0	6	24	2	0	1	94	0	0	1	1	2	0	0	0	17	148	631
8:00 AM	0	4	25	3	0	1	66	0	0	6	1	0	0	2	1	14	123	582
8:15 AM	0	1	34	2	0	0	82	0	0	4	1	0	0	0	2	10	136	557
8:30 AM	0	4	27	2	0	0	65	0	0	1	0	0	0	0	0	8	107	514
8:45 AM	0	2	33	2	0	0	38	0	0	0	0	1	0	1	1	7	85	451
Count Total	0	20	218	26	0	4	654	0	0	23	6	5	1	4	10	111	1,082	0
Peak Hour	0	9	99	17	0	3	403	0	0	12	4	4	1	1	6	72	631	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	5	0	1	0	6	0	0	0	0	0	0	0	0	0	0
7:15 AM	2	0	1	1	4	0	1	0	0	1	0	0	0	0	0
7:30 AM	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0
7:45 AM	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0
8:00 AM	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
8:45 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Count Total	10	6	2	2	20	1	1	0	0	2	0	0	0	0	0
Peak Hour	7	5	2	1	15	1	1	0	0	2	0	0	0	0	0

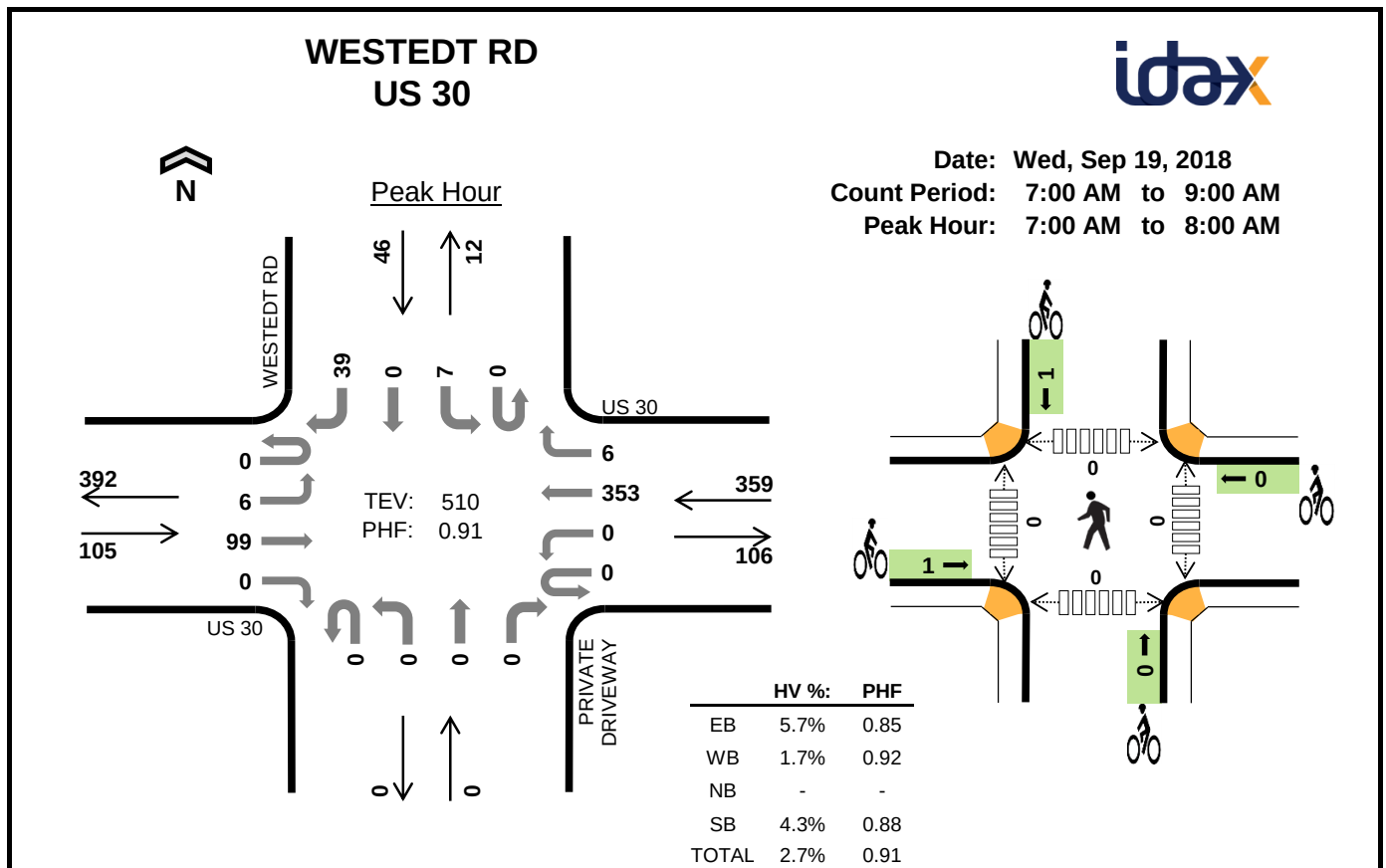


Two-Hour Count Summaries

Interval Start	US 30 Eastbound				US 30 Westbound				REESE RD Northbound				REESE RD Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	10	74	5	1	1	50	2	0	4	1	0	0	1	1	4	154	0
4:15 PM	0	16	87	1	0	0	61	0	0	3	2	4	0	1	0	6	181	0
4:30 PM	0	6	75	1	0	1	61	1	0	17	6	1	0	1	0	9	179	0
4:45 PM	0	13	83	3	0	1	54	0	0	4	1	2	0	0	0	10	171	685
5:00 PM	1	17	85	2	0	3	61	1	0	5	3	6	0	1	0	6	191	722
5:15 PM	0	18	110	5	0	0	38	1	0	4	6	2	0	2	1	3	190	731
5:30 PM	0	15	107	3	0	0	45	0	0	3	2	4	0	0	0	3	182	734
5:45 PM	0	16	76	3	0	0	44	0	0	3	2	1	0	1	1	6	153	716
Count Total	1	111	697	23	1	6	414	5	0	43	23	20	0	7	3	47	1,401	0
Peak Hour	1	63	385	13	0	4	198	2	0	16	12	14	0	3	1	22	734	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	4	1	0	2	7	0	0	0	0	0	0	0	0	0	0
4:15 PM	2	2	0	0	4	0	0	0	0	0	0	0	0	0	0
4:30 PM	2	2	0	1	5	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	1	1	0	1	3	0	0	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	11	8	0	4	23	0	0	0	0	0	0	0	0	0	0
Peak Hour	3	3	0	1	7	0	0	0	0	0	0	0	0	0	0

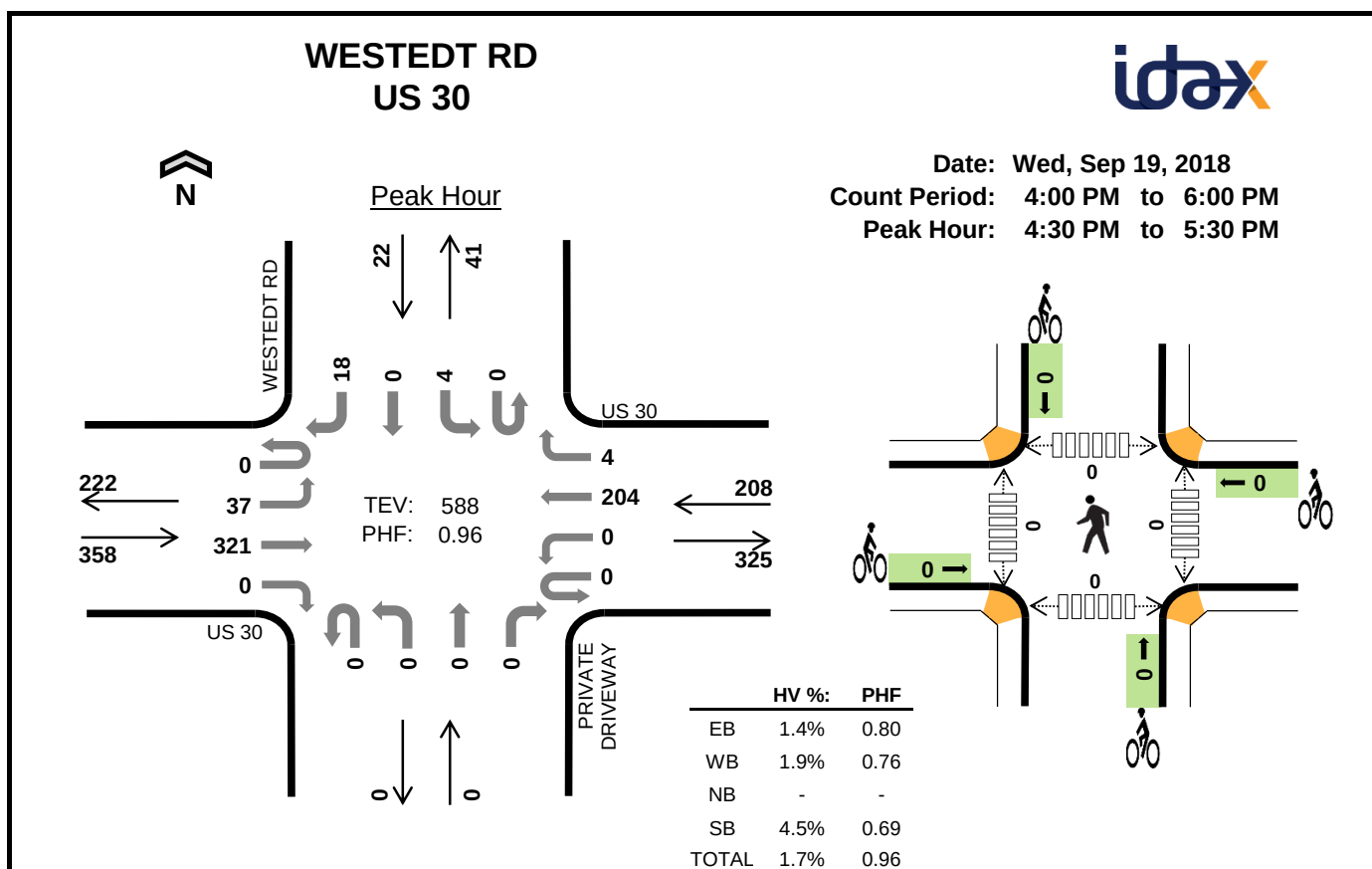


Two-Hour Count Summaries

Interval Start	US 30 Eastbound				US 30 Westbound				PRIVATE DRIVEWAY Northbound				WESTEDT RD Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	30	0	0	0	95	2	0	0	0	0	0	2	0	7	137	0
7:15 AM	0	1	28	0	0	0	97	1	0	0	0	0	0	3	0	10	140	0
7:30 AM	0	1	17	0	0	0	83	3	0	0	0	0	0	0	0	13	117	0
7:45 AM	0	3	24	0	0	0	78	0	0	0	0	0	0	2	0	9	116	510
8:00 AM	0	0	24	0	0	0	61	0	0	0	0	0	0	2	0	6	93	466
8:15 AM	0	2	33	0	0	1	75	0	0	0	0	0	0	0	0	7	118	444
8:30 AM	0	0	26	0	0	0	52	1	0	0	0	0	0	0	0	5	84	411
8:45 AM	0	6	31	0	0	0	37	0	0	0	0	0	0	0	0	0	74	369
Count Total	0	14	213	0	0	1	578	7	0	0	0	0	0	9	0	57	879	0
Peak Hour	0	6	99	0	0	0	353	6	0	0	0	0	0	7	0	39	510	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	4	1	0	0	5	0	0	0	0	0	0	0	0	0	0
7:15 AM	2	0	0	1	3	0	0	0	1	1	0	0	0	0	0
7:30 AM	0	4	0	0	4	1	0	0	0	1	0	0	0	0	0
7:45 AM	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
8:45 AM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0
Count Total	8	8	0	2	18	1	0	0	1	2	0	0	0	0	0
Peak Hour	6	6	0	2	14	1	0	0	1	2	0	0	0	0	0



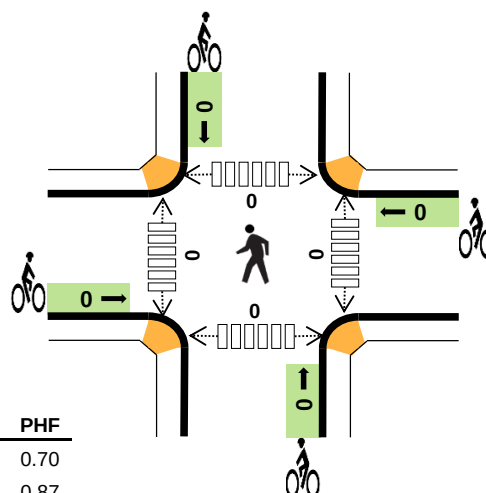
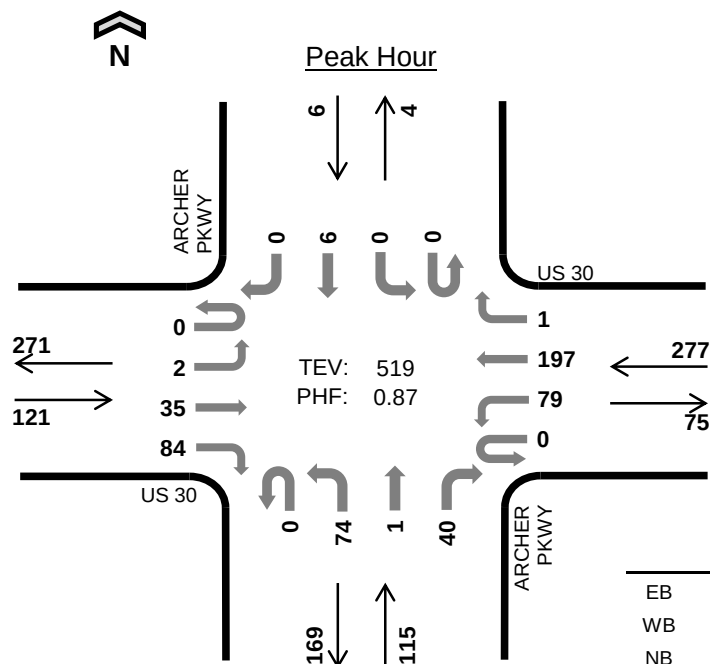
Two-Hour Count Summaries

Interval Start	US 30 Eastbound				US 30 Westbound				PRIVATE DRIVEWAY Northbound				WESTEDT RD Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	7	63	0	0	1	52	1	0	0	0	0	0	1	0	2	127	0
4:15 PM	0	12	79	0	0	0	50	2	0	0	0	0	0	3	0	6	152	0
4:30 PM	0	8	69	0	0	0	66	2	0	0	0	0	0	0	0	5	150	0
4:45 PM	0	8	77	0	0	0	43	1	0	0	0	0	0	1	0	4	134	563
5:00 PM	0	10	74	0	0	0	59	0	0	0	0	0	0	2	0	6	151	587
5:15 PM	0	11	101	0	0	0	36	1	0	0	0	0	0	1	0	3	153	588
5:30 PM	0	2	100	1	0	0	37	3	0	0	0	0	0	0	0	5	148	586
5:45 PM	0	10	67	0	0	0	42	1	0	0	0	0	0	3	0	2	125	577
Count Total	0	68	630	1	0	1	385	11	0	0	0	0	0	11	0	33	1,140	0
Peak Hour	0	37	321	0	0	0	204	4	0	0	0	0	0	4	0	18	588	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0
4:15 PM	2	1	0	1	4	0	0	0	0	0	0	0	0	0	0
4:30 PM	3	2	0	0	5	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	12	5	0	2	19	0	0	0	0	0	0	0	0	0	0
Peak Hour	5	4	0	1	10	0	0	0	0	0	0	0	0	0	0

ARCHER PKWY US 30



	HV %:	PHF
EB	6.6%	0.70
WB	4.7%	0.87
NB	11.3%	0.87
SB	0.0%	0.75
TOTAL	6.6%	0.87

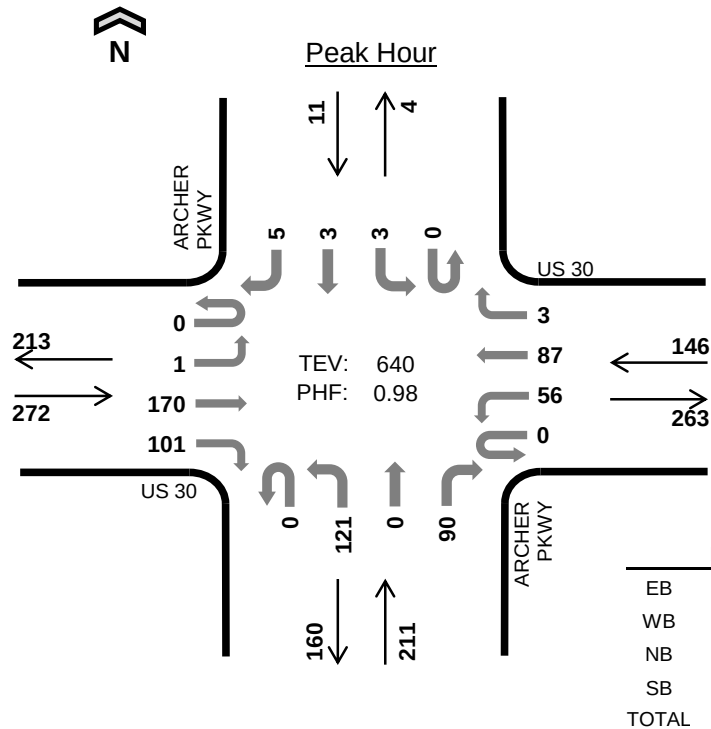
Two-Hour Count Summaries

Interval Start	US 30 Eastbound				US 30 Westbound				ARCHER PKWY Northbound				ARCHER PKWY Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	10	32	0	21	59	0	0	13	1	11	0	0	2	0	150	0
7:15 AM	0	0	9	18	0	19	52	0	0	21	0	8	0	0	2	0	129	0
7:30 AM	0	1	7	20	0	21	45	0	0	17	0	11	0	0	2	0	124	0
7:45 AM	0	0	9	14	0	18	41	1	0	23	0	10	0	0	0	0	116	519
8:00 AM	1	0	7	17	0	7	37	0	0	19	1	8	0	1	0	0	98	467
8:15 AM	0	0	16	13	0	14	32	0	0	18	0	11	0	0	0	0	104	442
8:30 AM	0	0	11	14	0	16	27	0	0	14	0	10	0	0	2	1	95	413
8:45 AM	0	0	10	17	0	8	22	0	0	14	0	8	0	0	0	0	79	376
Count Total	1	2	79	145	0	124	315	1	0	139	2	77	0	1	8	1	895	0
Peak Hour	0	2	35	84	0	79	197	1	0	74	1	40	0	0	6	0	519	0

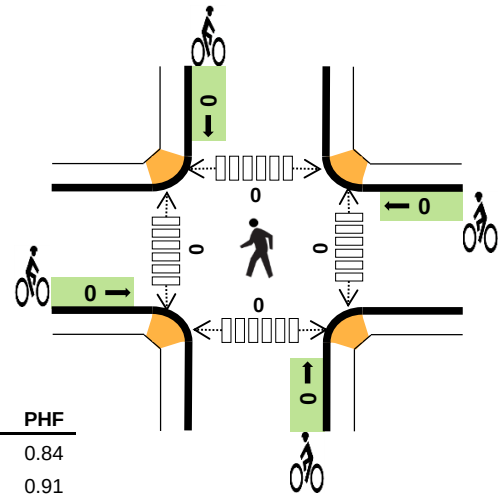
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	2	1	2	0	5	0	0	0	0	0	0	0	0	0	0
7:15 AM	4	1	4	0	9	0	0	0	0	0	0	0	0	0	0
7:30 AM	2	3	2	0	7	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	8	5	0	13	0	0	0	0	0	0	0	0	0	0
8:00 AM	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0
8:15 AM	3	3	0	0	6	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0
8:45 AM	1	1	2	0	4	0	0	0	0	0	0	0	0	0	0
Count Total	13	22	17	0	52	0	0	0	0	0	0	0	0	0	0
Peak Hour	8	13	13	0	34	0	0	0	0	0	0	0	0	0	0

ARCHER PKWY US 30



Date: Wed, Sep 19, 2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



Two-Hour Count Summaries

Interval Start	US 30 Eastbound				US 30 Westbound				ARCHER PKWY Northbound				ARCHER PKWY Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	27	24	0	14	25	0	0	24	0	17	0	0	0	0	131	0
4:15 PM	0	0	38	25	0	4	20	0	0	33	0	15	0	0	0	0	135	0
4:30 PM	0	1	36	24	0	12	23	1	0	41	0	25	0	0	0	0	163	0
4:45 PM	0	0	46	15	0	17	21	2	0	30	0	21	0	1	1	0	154	583
5:00 PM	0	0	41	28	0	12	24	0	0	28	0	21	0	1	2	5	162	614
5:15 PM	0	0	47	34	0	15	19	0	0	22	0	23	0	1	0	0	161	640
5:30 PM	0	0	57	30	0	12	15	0	0	23	0	17	0	0	0	0	154	631
5:45 PM	0	0	33	26	0	8	23	0	0	14	0	20	0	0	0	0	124	601
Count Total	0	1	325	206	0	94	170	3	0	215	0	159	0	3	3	5	1,184	0
Peak Hour	0	1	170	101	0	56	87	3	0	121	0	90	0	3	3	5	640	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	3	1	0	6	0	0	0	0	0	0	0	0	0	0
4:15 PM	2	1	1	0	4	0	0	0	0	0	0	0	0	0	0
4:30 PM	2	4	1	0	7	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	4	1	0	6	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0
5:15 PM	6	1	2	0	9	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	2	0	3	0	0	0	0	0	0	0	0	0	0
5:45 PM	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0
Count Total	14	16	10	0	40	0	0	0	0	0	0	0	0	0	0
Peak Hour	9	10	5	0	24	0	0	0	0	0	0	0	0	0	0

Location: US 30 E/O POLK AVE
 Date Range: 9/27/2018 - 10/3/2018
 Site Code: 11

Time	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	9/27/2018			9/28/2018			9/29/2018			9/30/2018			10/1/2018			10/2/2018			10/3/2018					
	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00 AM	27	23	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	23	50
1:00 AM	26	15	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	15	41
2:00 AM	11	20	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	20	31
3:00 AM	11	46	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	46	57
4:00 AM	17	99	116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	99	116
5:00 AM	63	255	318	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	63	255	318
6:00 AM	163	739	902	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	163	739	902
7:00 AM	334	1,252	1,586	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	334	1,252	1,586
8:00 AM	348	703	1,051	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	348	703	1,051
9:00 AM	300	491	791	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300	491	791
10:00 AM	261	482	743	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	261	482	743
11:00 AM	347	502	849	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	347	502	849
12:00 PM	422	553	975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	422	553	975
1:00 PM	381	558	939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	381	558	939
2:00 PM	413	509	922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	413	509	922
3:00 PM	582	616	1,198	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	582	616	1,198
4:00 PM	741	622	1,363	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	741	622	1,363
5:00 PM	844	629	1,473	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	844	629	1,473
6:00 PM	517	507	1,024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	517	507	1,024
7:00 PM	456	375	831	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	456	375	831
8:00 PM	282	183	465	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	282	183	465
9:00 PM	166	100	266	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	166	100	266
10:00 PM	91	67	158	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	91	67	158
11:00 PM	55	40	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55	40	95
Total	6,858	9,386	16,244	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,858	9,386	16,244
Percent	42%	58%		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42%	58%	

1. Mid-week average includes data between Tuesday and Thursday.

Location: US 30 E/O WHITNEY RD
 Date Range: 9/27/2018 - 10/3/2018
 Site Code: 12

Time	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	9/27/2018			9/28/2018			9/29/2018			9/30/2018			10/1/2018			10/2/2018			10/3/2018					
	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00 AM	12	9	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	9	21
1:00 AM	10	4	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	4	14
2:00 AM	5	6	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	6	11
3:00 AM	4	13	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	13	17
4:00 AM	9	33	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	33	42
5:00 AM	46	91	137	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46	91	137
6:00 AM	88	325	413	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88	325	413
7:00 AM	161	551	712	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	161	551	712
8:00 AM	165	268	433	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	165	268	433
9:00 AM	138	192	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	138	192	330
10:00 AM	120	188	308	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120	188	308
11:00 AM	171	200	371	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	171	200	371
12:00 PM	199	210	409	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	199	210	409
1:00 PM	192	223	415	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	192	223	415
2:00 PM	204	204	408	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	204	204	408
3:00 PM	306	255	561	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	306	255	561
4:00 PM	362	245	607	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	362	245	607
5:00 PM	412	259	671	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	412	259	671
6:00 PM	263	194	457	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	263	194	457
7:00 PM	222	158	380	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	222	158	380
8:00 PM	141	80	221	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	141	80	221
9:00 PM	77	43	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	77	43	120
10:00 PM	46	27	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46	27	73
11:00 PM	25	17	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	17	42
Total	3,378	3,795	7,173	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,378	3,795	7,173
Percent	47%	53%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47%	53%	-

1. Mid-week average includes data between Tuesday and Thursday.

Location: DELL RANGE BLVD W/O US 30
 Date Range: 9/27/2018 - 10/3/2018
 Site Code: 30

Time	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	9/27/2018			9/28/2018			9/29/2018			9/30/2018			10/1/2018			10/2/2018			10/3/2018					
	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00 AM	4	2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	2	6
1:00 AM	3	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	4
2:00 AM	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
3:00 AM	3	3	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	6
4:00 AM	11	17	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	17	28
5:00 AM	42	32	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42	32	74
6:00 AM	51	107	158	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51	107	158
7:00 AM	64	209	273	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64	209	273
8:00 AM	87	143	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	87	143	230
9:00 AM	88	91	179	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88	91	179
10:00 AM	76	130	206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	130	206
11:00 AM	116	144	260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	116	144	260
12:00 PM	134	130	264	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	134	130	264
1:00 PM	106	109	215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	106	109	215
2:00 PM	112	103	215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	112	103	215
3:00 PM	154	125	279	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	154	125	279
4:00 PM	216	148	364	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	216	148	364
5:00 PM	229	178	407	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	229	178	407
6:00 PM	183	108	291	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	183	108	291
7:00 PM	151	71	222	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	151	71	222
8:00 PM	92	55	147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	92	55	147
9:00 PM	59	39	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59	39	98
10:00 PM	18	11	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	11	29
11:00 PM	16	12	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	12	28
Total	2,016	1,968	3,984	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,016	1,968	3,984
Percent	51%	49%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51%	49%	-

1. Mid-week average includes data between Tuesday and Thursday.

Location: HAYES AVE N/O US 30
 Date Range: 9/27/2018 - 10/3/2018
 Site Code: 45

Time	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	9/27/2018			9/28/2018			9/29/2018			9/30/2018			10/1/2018			10/2/2018			10/3/2018					
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	7	5	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	5	12
1:00 AM	2	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	4
2:00 AM	0	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1
3:00 AM	0	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	5	5
4:00 AM	2	11	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	11	13
5:00 AM	5	23	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	23	28
6:00 AM	23	59	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	59	82
7:00 AM	66	103	169	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66	103	169
8:00 AM	49	61	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	61	110
9:00 AM	61	34	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61	34	95
10:00 AM	35	48	83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35	48	83
11:00 AM	45	46	91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45	46	91
12:00 PM	67	54	121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	54	121
1:00 PM	56	61	117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	61	117
2:00 PM	51	53	104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51	53	104
3:00 PM	70	69	139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	69	139
4:00 PM	92	62	154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	92	62	154
5:00 PM	125	71	196	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125	71	196
6:00 PM	78	79	157	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	79	157
7:00 PM	53	42	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	42	95
8:00 PM	38	29	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	29	67
9:00 PM	18	18	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	18	36
10:00 PM	14	10	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	10	24
11:00 PM	9	4	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	4	13
Total	966	950	1,916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	966	950	1,916
Percent	50%	50%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50%	50%	-

1. Mid-week average includes data between Tuesday and Thursday.

Location: RAILROAD RD W/O CARDINAL RD
 Date Range: 9/27/2018 - 10/3/2018
 Site Code: 74

Time	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	9/27/2018			9/28/2018			9/29/2018			9/30/2018			10/1/2018			10/2/2018			10/3/2018					
	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00 AM	3	3	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	6
1:00 AM	2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0	2
2:00 AM	3	2	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	5
3:00 AM	3	6	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	6	9
4:00 AM	2	9	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	9	11
5:00 AM	2	30	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	30	32
6:00 AM	8	88	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	88	96
7:00 AM	21	130	151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	130	151
8:00 AM	25	47	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	47	72
9:00 AM	38	46	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	46	84
10:00 AM	26	40	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	40	66
11:00 AM	37	32	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	32	69
12:00 PM	49	37	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	37	86
1:00 PM	38	27	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	27	65
2:00 PM	33	38	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	38	71
3:00 PM	68	37	105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68	37	105
4:00 PM	95	43	138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	95	43	138
5:00 PM	93	48	141	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	93	48	141
6:00 PM	62	33	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62	33	95
7:00 PM	72	22	94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	72	22	94
8:00 PM	29	22	51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	22	51
9:00 PM	15	10	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	10	25
10:00 PM	9	1	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	1	10
11:00 PM	7	2	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	2	9
Total	740	753	1,493	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	740	753	1,493
Percent	50%	50%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50%	50%	-

1. Mid-week average includes data between Tuesday and Thursday.

Location: US 30 E/O WESTEDT RD
 Date Range: 9/27/2018 - 10/3/2018
 Site Code: 92

Time	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	9/27/2018			9/28/2018			9/29/2018			9/30/2018			10/1/2018			10/2/2018			10/3/2018					
	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total	EB	WB	Total
12:00 AM	6	4	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	4	10
1:00 AM	6	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	2	8
2:00 AM	4	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	8
3:00 AM	4	10	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	10	14
4:00 AM	14	17	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	17	31
5:00 AM	50	67	117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	67	117
6:00 AM	111	213	324	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	111	213	324
7:00 AM	132	371	503	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	132	371	503
8:00 AM	103	209	312	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	103	209	312
9:00 AM	128	141	269	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	128	141	269
10:00 AM	110	201	311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	110	201	311
11:00 AM	151	185	336	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	151	185	336
12:00 PM	168	180	348	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	168	180	348
1:00 PM	155	166	321	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	155	166	321
2:00 PM	172	172	344	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	172	172	344
3:00 PM	226	177	403	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	226	177	403
4:00 PM	298	213	511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	298	213	511
5:00 PM	311	233	544	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	311	233	544
6:00 PM	238	166	404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	238	166	404
7:00 PM	172	109	281	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	172	109	281
8:00 PM	102	76	178	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	102	76	178
9:00 PM	68	31	99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68	31	99
10:00 PM	34	23	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34	23	57
11:00 PM	23	14	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	14	37
Total	2,786	2,984	5,770	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,786	2,984	5,770
Percent	48%	52%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48%	52%	-

1. Mid-week average includes data between Tuesday and Thursday.

Location: VAN BUREN AVE N/O US 30
 Date Range: 9/27/2018 - 10/3/2018
 Site Code: 93

Time	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	9/27/2018			9/28/2018			9/29/2018			9/30/2018			10/1/2018			10/2/2018			10/3/2018					
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	9	6	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	6	15
1:00 AM	9	2	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	2	11
2:00 AM	2	4	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	6
3:00 AM	4	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	8
4:00 AM	2	13	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	13	15
5:00 AM	9	27	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	27	36
6:00 AM	21	77	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	77	98
7:00 AM	67	119	186	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	119	186
8:00 AM	87	120	207	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	87	120	207
9:00 AM	50	50	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	50	100
10:00 AM	44	56	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44	56	100
11:00 AM	56	59	115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	59	115
12:00 PM	83	65	148	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	83	65	148
1:00 PM	73	74	147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	73	74	147
2:00 PM	74	66	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74	66	140
3:00 PM	124	117	241	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	124	117	241
4:00 PM	131	85	216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	131	85	216
5:00 PM	179	122	301	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	179	122	301
6:00 PM	96	86	182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	96	86	182
7:00 PM	90	54	144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	54	144
8:00 PM	39	28	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	28	67
9:00 PM	40	19	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	19	59
10:00 PM	12	13	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	13	25
11:00 PM	12	12	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	12	24
Total	1,313	1,278	2,591	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,313	1,278	2,591
Percent	51%	49%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51%	49%	-

1. Mid-week average includes data between Tuesday and Thursday.

Location: WESTEDT RD N/O US 30
 Date Range: 9/27/2018 - 10/3/2018
 Site Code: 96

Time	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	9/27/2018			9/28/2018			9/29/2018			9/30/2018			10/1/2018			10/2/2018			10/3/2018					
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2
1:00 AM	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
2:00 AM	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
3:00 AM	2	3	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	5
4:00 AM	3	2	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	5
5:00 AM	3	11	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	11	14
6:00 AM	5	35	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	35	40
7:00 AM	11	54	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	54	65
8:00 AM	19	15	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	15	34
9:00 AM	11	21	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	21	32
10:00 AM	24	19	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	19	43
11:00 AM	17	19	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	19	36
12:00 PM	15	21	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	21	36
1:00 PM	21	18	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	18	39
2:00 PM	21	16	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	16	37
3:00 PM	20	18	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	18	38
4:00 PM	26	23	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	23	49
5:00 PM	44	26	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44	26	70
6:00 PM	27	7	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	7	34
7:00 PM	19	12	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	12	31
8:00 PM	15	6	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	6	21
9:00 PM	7	2	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	2	9
10:00 PM	5	2	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	2	7
11:00 PM	3	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	0	3
Total	320	331	651	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320	331	651
Percent	49%	51%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49%	51%	-

1. Mid-week average includes data between Tuesday and Thursday.

Location: WHITNEY RD S/O US 30
 Date Range: 9/27/2018 - 10/3/2018
 Site Code: 102

Time	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	9/27/2018			9/28/2018			9/29/2018			9/30/2018			10/1/2018			10/2/2018			10/3/2018					
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2
1:00 AM	0	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1
2:00 AM	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
3:00 AM	2	3	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	5
4:00 AM	6	4	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	4	10
5:00 AM	26	7	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	7	33
6:00 AM	78	34	112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	34	112
7:00 AM	116	71	187	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	116	71	187
8:00 AM	107	74	181	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	107	74	181
9:00 AM	69	60	129	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69	60	129
10:00 AM	71	61	132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71	61	132
11:00 AM	68	72	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68	72	140
12:00 PM	77	83	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	77	83	160
1:00 PM	68	81	149	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68	81	149
2:00 PM	57	86	143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	57	86	143
3:00 PM	93	123	216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	93	123	216
4:00 PM	88	128	216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88	128	216
5:00 PM	95	151	246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	95	151	246
6:00 PM	77	113	190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	77	113	190
7:00 PM	48	113	161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	113	161
8:00 PM	26	66	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	66	92
9:00 PM	12	33	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	33	45
10:00 PM	8	13	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	13	21
11:00 PM	5	9	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	9	14
Total	1,199	1,387	2,586	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,199	1,387	2,586
Percent	46%	54%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46%	54%	-

1. Mid-week average includes data between Tuesday and Thursday.

Location: SADDLE RIDGE TRAIL S/O US 30
 Date Range: 9/27/2018 - 10/3/2018
 Site Code: 128

Time	Thursday			Friday			Saturday			Sunday			Monday			Tuesday			Wednesday			Mid-Week Average		
	9/27/2018			9/28/2018			9/29/2018			9/30/2018			10/1/2018			10/2/2018			10/3/2018					
	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total	NB	SB	Total
12:00 AM	3	4	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	7
1:00 AM	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	4
2:00 AM	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3
3:00 AM	4	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	1	5
4:00 AM	14	1	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	1	15
5:00 AM	28	7	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	7	35
6:00 AM	93	32	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	93	32	125
7:00 AM	160	74	234	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160	74	234
8:00 AM	118	82	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	118	82	200
9:00 AM	53	47	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	47	100
10:00 AM	53	28	81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	28	81
11:00 AM	48	61	109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	61	109
12:00 PM	62	63	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62	63	125
1:00 PM	66	54	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66	54	120
2:00 PM	62	60	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62	60	122
3:00 PM	117	122	239	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	117	122	239
4:00 PM	86	108	194	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	86	108	194
5:00 PM	79	117	196	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79	117	196
6:00 PM	60	93	153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	93	153
7:00 PM	43	75	118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	75	118
8:00 PM	19	49	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	49	68
9:00 PM	12	21	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	21	33
10:00 PM	8	13	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	13	21
11:00 PM	6	6	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	12
Total	1,196	1,123	2,319	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,196	1,123	2,319
Percent	52%	48%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	52%	48%	-

1. Mid-week average includes data between Tuesday and Thursday.

ATTACHMENT B

City of Cheyenne Transportation Plan Traffic Growth

Shape

INTRODUCTION

The shape section of the *Transportation Plan* outlines a transportation vision for the Cheyenne Area. The Transportation Vision defines the roadway, transit, bicycle, and pedestrian facilities that will be needed to provide Cheyenne Area residents with an adequate, connected, multimodal transportation system.

The *Transportation Plan* is based on information available at the time it was created, including other sections of *PlanCheyenne*. It includes enhancements to reflect the myriad of plans conducted since the Plan was first adopted in 2006. As future plans, documents, and studies are developed, these studies may amend the *Transportation Plan*. It is also anticipated that large tracts of property could develop their own master development plan. As part of the master development plan process, transportation elements of *PlanCheyenne* may be considered for amendment, provided that the transportation elements will continue to meet the principles, policies, and process described in *PlanCheyenne*. Furthermore, priorities presented in this plan may change in the future as development occurs.

PRINCIPLES AND POLICIES

Creation of a robust and effective transportation system in Cheyenne requires a vision of the type of transportation system the area desires. *PlanCheyenne* lays out seven Foundations, one of which speaks directly to transportation. The Cheyenne Area will continue to celebrate and enhance the character, quality, and authenticity of the community by developing a connected and diverse transportation system. To guide this vision, a set of principles and policies was developed. These principles reflect a vision of the character of Cheyenne's future transportation system. The associated policies present a way to implement this vision.

GROWTH IN THE REGION

The first step in the definition of a Transportation Vision is to identify the growth that is expected to take place in and around Cheyenne. Growth forecasts were generated for 2040 and beyond based on the Future Land Use Plan. Once growth has been quantified, future needs can be assessed.

NEEDS ASSESSMENT

After growth forecasts have been developed, the next step in developing a Transportation Vision is to identify needs that will arise as the region grows. These needs include roadway needs, transit needs, and needs for non-motorized transportation. Understanding the needs that the community will face allows planners to propose solutions that will fill these needs.

VISION PLANS – 2040 AND BEYOND

The 2040 Transportation Vision is a fiscally unconstrained plan for the transportation system in the Cheyenne area. This plan provides sufficient capacity to accommodate growth on most roadways and includes new roadways, sidewalks, and bike lanes in developing areas. Recommendations for retrofitting existing roads with sidewalks and bike lanes are also provided. The 2040 Vision Plan is based on a growth assumption of 1.25% per year.

The Buildout Transportation Vision Plan compliments the buildout of the Future Land Use Plan, but is not likely to occur until sometime after 2060. The buildout plan designates roadways and multimodal corridors that should be preserved for future use.



ATTACHMENT C

Intersection Analysis Worksheets

HCM 6th Signalized Intersection Summary

1: College Drive & Dell Range Boulevard

2017-2018 Existing AM.syn
10/18/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	113	264	115	443	166	265	214	77	101	322	76
Future Volume (veh/h)	23	113	264	115	443	166	265	214	77	101	322	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	28	120	0	151	487	193	358	306	143	125	362	104
Peak Hour Factor	0.82	0.94	0.92	0.76	0.91	0.86	0.74	0.70	0.54	0.81	0.89	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	216	428		453	651	256	455	674	308	421	552	157
Arrive On Green	0.01	0.09	0.00	0.07	0.31	0.31	0.18	0.34	0.34	0.08	0.24	0.24
Sat Flow, veh/h	1500	1575	1335	1500	2097	826	1500	1996	912	1500	2301	652
Grp Volume(v), veh/h	28	120	0	151	347	333	358	228	221	125	234	232
Grp Sat Flow(s),veh/h/ln	1500	1575	1335	1500	1496	1426	1500	1496	1411	1500	1496	1458
Q Serve(g_s), s	1.0	5.3	0.0	5.1	15.6	15.8	13.0	8.9	9.2	4.6	10.5	10.8
Cycle Q Clear(g_c), s	1.0	5.3	0.0	5.1	15.6	15.8	13.0	8.9	9.2	4.6	10.5	10.8
Prop In Lane	1.00		1.00	1.00		0.58	1.00		0.65	1.00		0.45
Lane Grp Cap(c), veh/h	216	428		453	465	443	455	506	477	421	359	350
V/C Ratio(X)	0.13	0.28		0.33	0.75	0.75	0.79	0.45	0.46	0.30	0.65	0.66
Avail Cap(c_a), veh/h	272	428		453	465	443	455	506	477	452	359	350
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.2	27.3	0.0	18.4	23.2	23.3	16.9	19.4	19.5	18.8	25.7	25.8
Incr Delay (d2), s/veh	0.3	1.6	0.0	0.4	10.4	11.2	8.9	2.9	3.2	0.4	8.8	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.2	0.0	1.9	6.5	6.4	5.2	3.3	3.3	1.6	4.5	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.5	28.9	0.0	18.9	33.6	34.5	25.8	22.3	22.7	19.2	34.5	35.3
LnGrp LOS	C	C		B	C	C	C	C	C	B	C	D
Approach Vol, veh/h	148		A	831				807				591
Approach Delay, s/veh	27.3			31.3				23.9				31.6
Approach LOS	C			C				C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.7	29.8	9.6	24.9	18.0	22.5	6.7	27.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.7	23.8	5.1	20.4	13.5	18.0	5.0	20.5				
Max Q Clear Time (g_c+l1), s	6.6	11.2	7.1	7.3	15.0	12.8	3.0	17.8				
Green Ext Time (p_c), s	0.0	2.2	0.0	0.4	0.0	1.3	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay	28.6											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

1: College Drive & Dell Range Boulevard

2017-2018 Existing PM.syn

10/18/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	438	353	57	339	120	401	401	144	196	240	64
Future Volume (veh/h)	93	438	353	57	339	120	401	401	144	196	240	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	127	456	0	72	365	132	422	501	197	215	261	76
Peak Hour Factor	0.73	0.96	0.88	0.79	0.93	0.91	0.95	0.80	0.73	0.91	0.92	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	329	483		192	623	222	484	633	248	307	552	157
Arrive On Green	0.02	0.10	0.00	0.05	0.29	0.29	0.16	0.30	0.30	0.10	0.24	0.24
Sat Flow, veh/h	1500	1575	1335	1500	2162	771	1500	2101	822	1500	2298	655
Grp Volume(v), veh/h	127	456	0	72	251	246	422	356	342	215	168	169
Grp Sat Flow(s),veh/h/ln	1500	1575	1335	1500	1496	1436	1500	1496	1427	1500	1496	1457
Q Serve(g_s), s	4.4	21.6	0.0	2.5	10.8	11.0	12.1	16.4	16.5	7.5	7.2	7.5
Cycle Q Clear(g_c), s	4.4	21.6	0.0	2.5	10.8	11.0	12.1	16.4	16.5	7.5	7.2	7.5
Prop In Lane	1.00		1.00	1.00		0.54	1.00		0.58	1.00		0.45
Lane Grp Cap(c), veh/h	329	483		192	431	414	484	451	430	307	359	350
V/C Ratio(X)	0.39	0.94		0.38	0.58	0.59	0.87	0.79	0.80	0.70	0.47	0.48
Avail Cap(c_a), veh/h	329	483		214	431	414	484	451	430	307	359	350
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	33.1	0.0	20.1	22.8	22.9	20.7	24.0	24.1	21.5	24.4	24.5
Incr Delay (d2), s/veh	0.7	28.5	0.0	1.2	5.7	6.2	15.8	13.1	14.1	7.0	4.3	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	12.8	0.0	0.9	4.3	4.3	4.3	7.1	6.9	3.3	2.9	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.4	61.5	0.0	21.3	28.5	29.1	36.5	37.2	38.2	28.4	28.7	29.2
LnGrp LOS	B	E		C	C	C	D	D	D	C	C	C
Approach Vol, veh/h	583		A	569			1120			552		
Approach Delay, s/veh	52.3			27.9			37.2			28.8		
Approach LOS	D			C			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	27.1	8.4	27.5	16.6	22.5	9.8	26.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	22.6	5.0	21.9	12.1	18.0	5.3	21.6				
Max Q Clear Time (g_c+I1), s	9.5	18.5	4.5	23.6	14.1	9.5	6.4	13.0				
Green Ext Time (p_c), s	0.0	1.7	0.0	0.0	0.0	1.2	0.0	2.0				
Intersection Summary												
HCM 6th Ctrl Delay	36.8											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

1: College Drive & Dell Range Boulevard

2040 Total AM.syn

10/30/2018

																														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR																		
Lane Configurations																														
Traffic Volume (veh/h)	80	510	290	280	840	230	300	300	150	135	480	175																		
Future Volume (veh/h)	80	510	290	280	840	230	300	300	150	135	480	175																		
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0																		
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00																		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00																		
Work Zone On Approach	No			No			No			No																				
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575																		
Adj Flow Rate, veh/h	87	543	0	304	913	185	326	326	130	147	522	125																		
Peak Hour Factor	0.92	0.94	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92																		
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2																		
Cap, veh/h	183	399		286	799	162	327	644	252	371	575	137																		
Arrive On Green	0.02	0.08	0.00	0.13	0.32	0.32	0.14	0.31	0.31	0.07	0.24	0.24																		
Sat Flow, veh/h	1500	1575	1335	1500	2479	502	1500	2101	822	1500	2397	571																		
Grp Volume(v), veh/h	87	543	0	304	551	547	326	230	226	147	325	322																		
Grp Sat Flow(s),veh/h/ln	1500	1575	1335	1500	1496	1485	1500	1496	1427	1500	1496	1472																		
Q Serve(g_s), s	3.2	19.0	0.0	9.5	24.2	24.2	10.5	9.5	9.8	5.5	15.8	16.0																		
Cycle Q Clear(g_c), s	3.2	19.0	0.0	9.5	24.2	24.2	10.5	9.5	9.8	5.5	15.8	16.0																		
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.58	1.00		0.39																		
Lane Grp Cap(c), veh/h	183	399		286	482	478	327	459	438	371	359	353																		
V/C Ratio(X)	0.48	1.36		1.06	1.14	1.14	1.00	0.50	0.52	0.40	0.90	0.91																		
Avail Cap(c_a), veh/h	196	399		286	482	478	327	459	438	371	359	353																		
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00																		
Upstream Filter(I)	0.97	0.97	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00																		
Uniform Delay (d), s/veh	22.2	34.4	0.0	20.4	25.4	25.4	21.2	21.3	21.4	19.8	27.7	27.7																		
Incr Delay (d2), s/veh	1.9	177.5	0.0	70.8	86.4	87.0	48.6	3.9	4.3	0.7	28.6	30.0																		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																		
%ile BackOfQ(50%),veh/ln	1.2	27.6	0.0	9.0	19.6	19.5	8.3	3.6	3.6	1.9	8.2	8.3																		
Unsig. Movement Delay, s/veh																														
LnGrp Delay(d),s/veh	24.0	211.9	0.0	91.2	111.8	112.4	69.8	25.2	25.7	20.5	56.3	57.7																		
LnGrp LOS	C	F		F	F	F	E	C	C	C	E	E																		
Approach Vol, veh/h	630		A	1402			782			794																				
Approach Delay, s/veh	185.9			107.6			43.9			50.2																				
Approach LOS	F			F			D			D																				
Timer - Assigned Phs	1	2	3	4	5	6	7	8																						
Phs Duration (G+Y+Rc), s	10.0	27.5	14.0	23.5	15.0	22.5	8.8	28.7																						
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5																						
Max Green Setting (Gmax), s	5.5	23.0	9.5	19.0	10.5	18.0	5.0	23.5																						
Max Q Clear Time (g_c+I1), s	7.5	11.8	11.5	21.0	12.5	18.0	5.2	26.2																						
Green Ext Time (p_c), s	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0																						
Intersection Summary																														
HCM 6th Ctrl Delay	94.8																													
HCM 6th LOS	F																													
Notes																														
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.																														

HCM 6th Signalized Intersection Summary

1: College Drive & Dell Range Boulevard

2040 Total PM.syn
10/30/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	960	415	235	765	245	485	520	275	270	325	200
Future Volume (veh/h)	260	960	415	235	765	245	485	520	275	270	325	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	283	1000	0	255	823	201	511	565	169	293	353	119
Peak Hour Factor	0.92	0.96	0.92	0.92	0.93	0.92	0.95	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	546		196	827	202	328	621	185	229	603	200
Arrive On Green	0.02	0.11	0.00	0.07	0.35	0.35	0.07	0.27	0.27	0.07	0.27	0.27
Sat Flow, veh/h	1500	1575	1335	1500	2384	582	1500	2272	677	1500	2207	733
Grp Volume(v), veh/h	283	1000	0	255	516	508	511	372	362	293	238	234
Grp Sat Flow(s),veh/h/ln	1500	1575	1335	1500	1496	1470	1500	1496	1453	1500	1496	1443
Q Serve(g_s), s	5.0	26.0	0.0	5.0	25.8	25.8	5.5	18.0	18.1	5.5	10.3	10.6
Cycle Q Clear(g_c), s	5.0	26.0	0.0	5.0	25.8	25.8	5.5	18.0	18.1	5.5	10.3	10.6
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.47	1.00		0.51
Lane Grp Cap(c), veh/h	197	546		196	519	510	328	409	397	229	409	394
V/C Ratio(X)	1.43	1.83		1.30	1.00	1.00	1.56	0.91	0.91	1.28	0.58	0.59
Avail Cap(c_a), veh/h	197	546		196	519	510	328	409	397	229	409	394
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	33.2	0.0	23.0	24.4	24.4	27.9	26.3	26.4	26.2	23.5	23.6
Incr Delay (d2), s/veh	221.5	381.1	0.0	167.5	38.5	38.9	265.5	26.5	27.8	155.0	5.9	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.6	68.6	0.0	10.6	14.0	13.8	27.8	9.1	9.0	11.7	4.1	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	245.0	414.3	0.0	190.5	62.9	63.3	293.3	52.9	54.1	181.2	29.5	30.1
LnGrp LOS	F	F		F	E	E	F	D	D	F	C	C
Approach Vol, veh/h	1283		A	1279				1245				765
Approach Delay, s/veh	376.9			88.5				151.9				87.8
Approach LOS	F			F				F				F
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	25.0	9.5	30.5	10.0	25.0	9.5	30.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	20.5	5.0	26.0	5.5	20.5	5.0	26.0				
Max Q Clear Time (g_c+I1), s	7.5	20.1	7.0	28.0	7.5	12.6	7.0	27.8				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.0	0.0	1.8	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			186.6									
HCM 6th LOS			F									
Notes												

HCM 6th Signalized Intersection Summary

2040 Total AM_Improved.syn

1: College Drive & Dell Range Boulevard

05/31/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	510	290	280	840	230	300	300	150	135	480	175
Future Volume (veh/h)	80	510	290	280	840	230	300	300	150	135	480	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	87	543	0	304	913	185	326	326	163	147	522	92
Peak Hour Factor	0.92	0.94	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	939		431	1023	207	372	711	317	355	615	274
Arrive On Green	0.02	0.10	0.00	0.15	0.41	0.41	0.13	0.24	0.24	0.10	0.21	0.21
Sat Flow, veh/h	1500	2993	1335	1500	2479	502	2910	2993	1335	1500	2993	1335
Grp Volume(v), veh/h	87	543	0	304	551	547	326	326	163	147	522	92
Grp Sat Flow(s),veh/h/ln	1500	1496	1335	1500	1496	1485	1455	1496	1335	1500	1496	1335
Q Serve(g_s), s	3.5	15.6	0.0	11.7	30.8	30.9	9.9	8.4	9.5	6.8	15.1	5.3
Cycle Q Clear(g_c), s	3.5	15.6	0.0	11.7	30.8	30.9	9.9	8.4	9.5	6.8	15.1	5.3
Prop In Lane	1.00		1.00	1.00		0.34	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	197	939		431	617	613	372	711	317	355	615	274
V/C Ratio(X)	0.44	0.58		0.71	0.89	0.89	0.88	0.46	0.51	0.41	0.85	0.34
Avail Cap(c_a), veh/h	207	939		443	617	613	372	711	317	369	615	274
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	34.7	0.0	17.4	24.6	24.6	38.6	29.4	29.8	24.5	34.4	30.5
Incr Delay (d2), s/veh	1.5	2.5	0.0	4.2	15.6	15.7	20.3	2.1	5.9	0.8	13.7	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	6.5	0.0	4.3	13.0	12.9	4.5	3.2	3.5	2.4	6.5	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	37.2	0.0	21.6	40.1	40.3	58.9	31.5	35.7	25.3	48.1	33.8
LnGrp LOS	C	D		C	D	D	E	C	D	C	D	C
Approach Vol, veh/h	630		A		1402		815				761	
Approach Delay, s/veh	35.5				36.2		43.3				41.9	
Approach LOS	D				D		D				D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.1	25.9	18.3	32.7	16.0	23.0	9.4	41.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.5	20.5	14.5	27.5	11.5	18.5	5.5	36.5				
Max Q Clear Time (g_c+I1), s	8.8	11.5	13.7	17.6	11.9	17.1	5.5	32.9				
Green Ext Time (p_c), s	0.0	1.8	0.1	2.6	0.0	0.6	0.0	2.3				

Intersection Summary

HCM 6th Ctrl Delay 38.9

HCM 6th LOS D

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

1: College Drive & Dell Range Boulevard

2040 Total PM_Improved.syn

05/31/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	960	415	235	765	245	485	520	275	270	325	200
Future Volume (veh/h)	260	960	415	235	765	245	485	520	275	270	325	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	283	1000	0	255	823	168	511	565	169	293	353	119
Peak Hour Factor	0.92	0.96	0.92	0.92	0.93	0.92	0.95	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	1122		264	928	189	580	673	300	277	421	188
Arrive On Green	0.10	0.38	0.00	0.10	0.38	0.38	0.20	0.22	0.22	0.12	0.14	0.14
Sat Flow, veh/h	1500	2993	1335	1500	2475	505	2910	2993	1335	1500	2993	1335
Grp Volume(v), veh/h	283	1000	0	255	498	493	511	565	169	293	353	119
Grp Sat Flow(s),veh/h/ln	1500	1496	1335	1500	1496	1484	1455	1496	1335	1500	1496	1335
Q Serve(g_s), s	10.5	31.4	0.0	10.5	31.1	31.1	17.1	18.0	11.2	11.5	11.5	8.4
Cycle Q Clear(g_c), s	10.5	31.4	0.0	10.5	31.1	31.1	17.1	18.0	11.2	11.5	11.5	8.4
Prop In Lane	1.00		1.00	1.00		0.34	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	266	1122		264	561	557	580	673	300	277	421	188
V/C Ratio(X)	1.07	0.89		0.97	0.89	0.89	0.88	0.84	0.56	1.06	0.84	0.63
Avail Cap(c_a), veh/h	266	1122		264	561	557	684	673	300	277	421	188
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.00	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	29.3	0.0	23.2	29.3	29.3	38.9	37.0	34.4	37.4	41.8	40.5
Incr Delay (d2), s/veh	72.7	10.5	0.0	39.1	14.8	14.9	11.5	12.0	7.4	70.4	17.7	15.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	12.5	0.0	6.4	13.1	13.0	6.9	7.6	4.2	7.5	5.2	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.9	39.8	0.0	62.3	44.0	44.1	50.4	49.0	41.8	107.8	59.6	55.7
LnGrp LOS	F	D		E	D	D	D	D	D	F	E	E
Approach Vol, veh/h	1283		A	1246			1245			765		
Approach Delay, s/veh	52.4			47.8			48.6			77.4		
Approach LOS	D			D			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	27.0	15.0	42.0	24.4	18.6	15.0	42.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	22.5	10.5	37.5	23.5	10.5	10.5	37.5				
Max Q Clear Time (g_c+I1), s	13.5	20.0	12.5	33.4	19.1	13.5	12.5	33.1				
Green Ext Time (p_c), s	0.0	1.1	0.0	2.4	0.9	0.0	0.0	2.4				
Intersection Summary												
HCM 6th Ctrl Delay	54.3											
HCM 6th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th TWSC
2: Van Buren Avenue & Dell Range Boulevard

2017-2018 Existing AM.syn

10/18/2018

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	161	76	17	377	0	43	4	6	0	8	1
Future Vol, veh/h	1	161	76	17	377	0	43	4	6	0	8	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	84	49	53	90	92	67	25	38	92	40	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	192	155	32	419	0	64	16	16	0	20	4
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	419	0	0	347	0	0	773	761	270	777	838	419
Stage 1	-	-	-	-	-	-	278	278	-	483	483	-
Stage 2	-	-	-	-	-	-	495	483	-	294	355	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1140	-	-	1212	-	-	316	335	769	314	302	634
Stage 1	-	-	-	-	-	-	728	680	-	565	553	-
Stage 2	-	-	-	-	-	-	556	553	-	714	630	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1140	-	-	1212	-	-	295	325	769	292	293	634
Mov Cap-2 Maneuver	-	-	-	-	-	-	402	417	-	407	391	-
Stage 1	-	-	-	-	-	-	725	677	-	563	539	-
Stage 2	-	-	-	-	-	-	518	539	-	680	627	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.6			15.5			14.1		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	439	1140	-	-	1212	-	-	418				
HCM Lane V/C Ratio	0.219	0.004	-	-	0.026	-	-	0.057				
HCM Control Delay (s)	15.5	8.2	-	-	8.1	-	-	14.1				
HCM Lane LOS	C	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	0.8	0	-	-	0.1	-	-	0.2				

HCM 6th TWSC
2: Van Buren Avenue & Dell Range Boulevard

2017-2018 Existing PM.syn
10/18/2018

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	458	65	1	331	0	38	5	10	0	3	1
Future Vol, veh/h	2	458	65	1	331	0	38	5	10	0	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	90	85	25	85	92	63	62	42	92	38	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	509	76	4	389	0	60	8	24	0	8	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	389	0	0	585	0	0	958	952	547	968	990	389
Stage 1	-	-	-	-	-	-	555	555	-	397	397	-
Stage 2	-	-	-	-	-	-	403	397	-	571	593	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1170	-	-	990	-	-	237	259	537	233	246	659
Stage 1	-	-	-	-	-	-	516	513	-	629	603	-
Stage 2	-	-	-	-	-	-	624	603	-	506	493	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1170	-	-	990	-	-	230	257	537	218	244	659
Mov Cap-2 Maneuver	-	-	-	-	-	-	358	367	-	341	355	-
Stage 1	-	-	-	-	-	-	514	511	-	627	601	-
Stage 2	-	-	-	-	-	-	610	601	-	474	492	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			16.9			13.8		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	393	1170	-	-	990	-	-	420
HCM Lane V/C Ratio	0.235	0.003	-	-	0.004	-	-	0.028
HCM Control Delay (s)	16.9	8.1	-	-	8.7	-	-	13.8
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.9	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	30.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	110	325	100	75	690	15	60	50	40	25	85	190
Future Vol, veh/h	110	325	100	75	690	15	60	50	40	25	85	190
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	120	353	109	82	750	16	65	54	43	27	92	207
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	766	0	0	462	0	0	1720	1578	408	1618	1624	758
Stage 1	-	-	-	-	-	-	648	648	-	922	922	-
Stage 2	-	-	-	-	-	-	1072	930	-	696	702	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	847	-	-	1099	-	-	70	109	643	83	102	407
Stage 1	-	-	-	-	-	-	459	466	-	324	349	-
Stage 2	-	-	-	-	-	-	267	346	-	432	440	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	847	-	-	1099	-	-	~ 17	87	643	48	~ 81	407
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ -37	155	-	133	178	-
Stage 1	-	-	-	-	-	-	394	400	-	278	323	-
Stage 2	-	-	-	-	-	-	87	320	-	299	378	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2			0.8						171.5		
HCM LOS							-			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	+	847	-	-	1099	-	-	265				
HCM Lane V/C Ratio	-	0.141	-	-	0.074	-	-	1.231				
HCM Control Delay (s)	-	9.9	-	-	8.5	-	-	171.5				
HCM Lane LOS	-	A	-	-	A	-	-	F				
HCM 95th %tile Q(veh)	-	0.5	-	-	0.2	-	-	15.5				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

HCM 6th TWSC
2: Van Buren Avenue & Dell Range Boulevard

2040 Total PM.syn
10/30/2018

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	285	825	85	65	675	40	50	120	90	30	100	235
Future Vol, veh/h	285	825	85	65	675	40	50	120	90	30	100	235
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	310	897	92	71	734	43	54	130	98	33	109	255
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	777	0	0	989	0	0	2643	2482	943	2575	2507	756
Stage 1	-	-	-	-	-	-	1563	1563	-	898	898	-
Stage 2	-	-	-	-	-	-	1080	919	-	1677	1609	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	839	-	-	699	-	-	~ 15	~ 30	318	~ 17	~ 28	408
Stage 1	-	-	-	-	-	-	140	172	-	334	358	-
Stage 2	-	-	-	-	-	-	264	350	-	120	164	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	839	-	-	699	-	-	-	~ 17	318	-	~ 16	408
Mov Cap-2 Maneuver	-	-	-	-	-	-	125	~ 2	-	~ -98	~ 28	-
Stage 1	-	-	-	-	-	-	88	~ 109	-	211	321	-
Stage 2	-	-	-	-	-	-	59	314	-	-	~ 103	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.8			0.9								
HCM LOS							-			-		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	839	-	-	699	-	-	-				
HCM Lane V/C Ratio	-	0.369	-	-	0.101	-	-	-				
HCM Control Delay (s)	-	11.8	-	-	10.7	-	-	-				
HCM Lane LOS	-	B	-	-	B	-	-	-				
HCM 95th %tile Q(veh)	-	1.7	-	-	0.3	-	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

HCM 6th Signalized Intersection Summary

2: Van Buren Avenue & Dell Range Boulevard

2040 Total AM_Improved.syn

05/31/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	325	100	75	690	15	60	50	40	25	85	190
Future Volume (veh/h)	110	325	100	75	690	15	60	50	40	25	85	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	120	353	109	82	750	16	65	54	43	27	92	142
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	398	1146	349	538	1491	32	258	239	190	397	164	254
Arrive On Green	0.06	0.51	0.51	0.05	0.50	0.50	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1500	2260	688	1500	2996	64	1146	812	647	1298	558	862
Grp Volume(v), veh/h	120	232	230	82	375	391	65	0	97	27	0	234
Grp Sat Flow(s),veh/h/ln	1500	1496	1451	1500	1496	1564	1146	0	1459	1298	0	1420
Q Serve(g_s), s	3.5	8.1	8.4	2.4	15.1	15.1	4.6	0.0	4.5	1.4	0.0	12.5
Cycle Q Clear(g_c), s	3.5	8.1	8.4	2.4	15.1	15.1	17.1	0.0	4.5	6.0	0.0	12.5
Prop In Lane	1.00		0.47	1.00		0.04	1.00		0.44	1.00		0.61
Lane Grp Cap(c), veh/h	398	759	736	538	745	778	258	0	429	397	0	418
V/C Ratio(X)	0.30	0.31	0.31	0.15	0.50	0.50	0.25	0.00	0.23	0.07	0.00	0.56
Avail Cap(c_a), veh/h	403	759	736	557	745	778	258	0	429	397	0	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.80	0.80	0.80	1.00	1.00	1.00	0.68	0.00	0.68	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.2	12.9	13.0	10.1	15.1	15.1	34.0	0.0	24.0	26.3	0.0	26.8
Incr Delay (d2), s/veh	0.3	0.8	0.9	0.1	2.4	2.3	1.6	0.0	0.8	0.3	0.0	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.8	2.8	0.8	5.3	5.6	1.4	0.0	1.6	0.5	0.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.5	13.8	13.9	10.3	17.6	17.5	35.6	0.0	24.8	26.6	0.0	32.2
LnGrp LOS	B	B	B	B	B	B	D	A	C	C	A	C
Approach Vol, veh/h	582			848			162			261		
Approach Delay, s/veh	13.3			16.8			29.2			31.6		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	31.0		8.9	50.1		31.0	9.7	49.3				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	26.5		5.5	44.5		26.5	5.5	44.5				
Max Q Clear Time (g_c+l1), s	19.1		4.4	10.4		14.5	5.5	17.1				
Green Ext Time (p_c), s	0.4		0.0	3.1		1.1	0.0	5.3				
Intersection Summary												
HCM 6th Ctrl Delay	18.9											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

2: Van Buren Avenue & Dell Range Boulevard

2040 Total PM_Improved.syn

02/12/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	285	825	85	65	675	40	50	120	90	30	100	235
Future Volume (veh/h)	285	825	85	65	675	40	50	120	90	30	100	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	310	897	92	71	734	32	54	130	65	33	109	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	488	1548	159	350	1415	62	184	237	118	227	160	183
Arrive On Green	0.13	0.56	0.56	0.05	0.48	0.48	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1500	2740	281	1500	2921	127	1146	991	495	1188	669	768
Grp Volume(v), veh/h	310	490	499	71	376	390	54	0	195	33	0	234
Grp Sat Flow(s),veh/h/ln	1500	1496	1524	1500	1496	1552	1146	0	1486	1188	0	1437
Q Serve(g_s), s	8.6	19.1	19.1	2.1	15.6	15.6	4.0	0.0	10.3	2.3	0.0	13.3
Cycle Q Clear(g_c), s	8.6	19.1	19.1	2.1	15.6	15.6	17.4	0.0	10.3	12.6	0.0	13.3
Prop In Lane	1.00		0.18	1.00		0.08	1.00		0.33	1.00		0.53
Lane Grp Cap(c), veh/h	488	845	861	350	725	752	184	0	355	227	0	343
V/C Ratio(X)	0.63	0.58	0.58	0.20	0.52	0.52	0.29	0.00	0.55	0.15	0.00	0.68
Avail Cap(c_a), veh/h	707	845	861	389	725	752	184	0	355	227	0	343
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.30	0.30	0.30	1.00	1.00	1.00	0.43	0.00	0.43	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.7	12.7	12.7	11.3	16.0	16.0	39.0	0.0	30.0	35.5	0.0	31.1
Incr Delay (d2), s/veh	0.4	0.9	0.9	0.3	2.6	2.5	1.7	0.0	2.6	1.3	0.0	10.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	6.0	6.1	0.7	5.5	5.7	1.2	0.0	3.9	0.7	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	13.5	13.5	11.6	18.6	18.5	40.8	0.0	32.6	36.9	0.0	41.6
LnGrp LOS	B	B	B	B	B	B	D	A	C	D	A	D
Approach Vol, veh/h	1299			837			249			267		
Approach Delay, s/veh	13.0			18.0			34.4			41.0		
Approach LOS	B			B			C			D		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	26.0		8.7	55.3		26.0	15.9	48.1				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	21.5		6.5	48.5		21.5	24.5	30.5				
Max Q Clear Time (g_c+l1), s	19.4		4.1	21.1		15.3	10.6	17.6				
Green Ext Time (p_c), s	0.3		0.0	7.4		0.7	0.8	4.0				
Intersection Summary												
HCM 6th Ctrl Delay	19.4											
HCM 6th LOS	B											

HCM 6th TWSC
3: El Camino Drive/Gysel Place & Dell Range Boulevard

2017-2018 Existing AM.syn

10/18/2018

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	0	135	22	1	379	0	48	0	0	0	0	0
Future Vol, veh/h	0	135	22	1	379	0	48	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	75	79	25	97	92	63	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	180	28	4	391	0	76	0	0	0	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	391	0	0	208	0	0	593	593	194	593	607	391
Stage 1	-	-	-	-	-	-	194	194	-	399	399	-
Stage 2	-	-	-	-	-	-	399	399	-	194	208	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1168	-	-	1363	-	-	417	418	847	417	411	658
Stage 1	-	-	-	-	-	-	808	740	-	627	602	-
Stage 2	-	-	-	-	-	-	627	602	-	808	730	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1168	-	-	1363	-	-	416	417	847	416	410	658
Mov Cap-2 Maneuver	-	-	-	-	-	-	504	487	-	505	483	-
Stage 1	-	-	-	-	-	-	808	740	-	627	600	-
Stage 2	-	-	-	-	-	-	625	600	-	808	730	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.1			13.4			0		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	504	1168	-	-	1363	-	-	-				
HCM Lane V/C Ratio	0.151	-	-	-	0.003	-	-	-				
HCM Control Delay (s)	13.4	0	-	-	7.6	-	-	0				
HCM Lane LOS	B	A	-	-	A	-	-	A				
HCM 95th %tile O(veh)	0.5	0	-	-	0	-	-	-				

HCM 6th TWSC
3: El Camino Drive/Gysel Place & Dell Range Boulevard

2017-2018 Existing PM.syn

10/18/2018

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	416	51	1	292	0	38	0	0	0	0	1
Future Vol, veh/h	1	416	51	1	292	0	38	0	0	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	87	85	25	80	92	73	92	92	92	92	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	478	60	4	365	0	52	0	0	0	0	4
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	365	0	0	538	0	0	891	889	508	889	919	365
Stage 1	-	-	-	-	-	-	516	516	-	373	373	-
Stage 2	-	-	-	-	-	-	375	373	-	516	546	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1194	-	-	1030	-	-	263	282	565	264	271	680
Stage 1	-	-	-	-	-	-	542	534	-	648	618	-
Stage 2	-	-	-	-	-	-	646	618	-	542	518	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1194	-	-	1030	-	-	260	280	565	262	269	680
Mov Cap-2 Maneuver	-	-	-	-	-	-	384	386	-	385	376	-
Stage 1	-	-	-	-	-	-	540	532	-	646	616	-
Stage 2	-	-	-	-	-	-	640	616	-	540	516	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			15.8			10.3		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	384	1194	-	-	1030	-	-	680				
HCM Lane V/C Ratio	0.136	0.003	-	-	0.004	-	-	0.006				
HCM Control Delay (s)	15.8	8	-	-	8.5	-	-	10.3				
HCM Lane LOS	C	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0				

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	350	30	15	700	10	65	0	10	15	0	15
Future Vol, veh/h	10	350	30	15	700	10	65	0	10	15	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	97	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	380	33	16	722	11	71	0	11	16	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	733	0	0	413	0	0	1187	1184	397	1184	1195	728
Stage 1	-	-	-	-	-	-	419	419	-	760	760	-
Stage 2	-	-	-	-	-	-	768	765	-	424	435	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	872	-	-	1146	-	-	165	189	652	166	186	423
Stage 1	-	-	-	-	-	-	612	590	-	398	414	-
Stage 2	-	-	-	-	-	-	394	412	-	608	580	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	872	-	-	1146	-	-	155	184	652	160	181	423
Mov Cap-2 Maneuver	-	-	-	-	-	-	271	294	-	282	294	-
Stage 1	-	-	-	-	-	-	604	582	-	393	408	-
Stage 2	-	-	-	-	-	-	374	406	-	590	572	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			21.9			16.8		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	294	872	-	-	1146	-	-	338
HCM Lane V/C Ratio	0.277	0.012	-	-	0.014	-	-	0.096
HCM Control Delay (s)	21.9	9.2	-	-	8.2	-	-	16.8
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.1	0	-	-	0	-	-	0.3

HCM 6th TWSC
3: El Camino Drive/Gysel Place & Dell Range Boulevard

2040 Total PM.syn
10/30/2018

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	20	855	70	20	710	20	50	0	20	15	0	20
Future Vol, veh/h	20	855	70	20	710	20	50	0	20	15	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	929	76	22	772	22	54	0	22	16	0	22
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	794	0	0	1005	0	0	1849	1849	967	1849	1876	783
Stage 1	-	-	-	-	-	-	1011	1011	-	827	827	-
Stage 2	-	-	-	-	-	-	838	838	-	1022	1049	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	827	-	-	689	-	-	57	74	308	57	72	394
Stage 1	-	-	-	-	-	-	289	317	-	366	386	-
Stage 2	-	-	-	-	-	-	361	382	-	285	304	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	827	-	-	689	-	-	~ 51	70	308	51	68	394
Mov Cap-2 Maneuver	-	-	-	-	-	-	157	181	-	152	174	-
Stage 1	-	-	-	-	-	-	281	308	-	356	374	-
Stage 2	-	-	-	-	-	-	330	370	-	258	296	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.3			38			23.3		
HCM LOS							E			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	183	827	-	-	689	-	-	234				
HCM Lane V/C Ratio	0.416	0.026	-	-	0.032	-	-	0.163				
HCM Control Delay (s)	38	9.5	-	-	10.4	-	-	23.3				
HCM Lane LOS	E	A	-	-	B	-	-	C				
HCM 95th %tile Q(veh)	1.9	0.1	-	-	0.1	-	-	0.6				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

HCM 6th TWSC
3: El Camino Drive/Gysel Place & Dell Range Boulevard

2040 Total AM_Improved.syn

02/11/2019

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	350	30	15	700	10	65	0	10	15	0	15
Future Vol, veh/h	10	350	30	15	700	10	65	0	10	15	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	97	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	380	33	16	722	11	71	0	11	16	0	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	733	0	0	413	0	0	1187	1184	397	1184	1195	728
Stage 1	-	-	-	-	-	-	419	419	-	760	760	-
Stage 2	-	-	-	-	-	-	768	765	-	424	435	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	872	-	-	1146	-	-	165	189	652	166	186	423
Stage 1	-	-	-	-	-	-	612	590	-	398	414	-
Stage 2	-	-	-	-	-	-	394	412	-	608	580	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	872	-	-	1146	-	-	155	184	652	160	181	423
Mov Cap-2 Maneuver	-	-	-	-	-	-	271	294	-	282	294	-
Stage 1	-	-	-	-	-	-	604	582	-	393	408	-
Stage 2	-	-	-	-	-	-	374	406	-	590	572	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			21.9			16.8		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	294	872	-	-	1146	-	-	338				
HCM Lane V/C Ratio	0.277	0.012	-	-	0.014	-	-	0.096				
HCM Control Delay (s)	21.9	9.2	-	-	8.2	-	-	16.8				
HCM Lane LOS	C	A	-	-	A	-	-	C				
HCM 95th %tile Q(veh)	1.1	0	-	-	0	-	-	0.3				

HCM 6th TWSC
3: El Camino Drive/Gysel Place & Dell Range Boulevard

2040 Total PM_Improved.syn

02/11/2019

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	20	855	70	20	710	20	50	0	20	15	0	20
Future Vol, veh/h	20	855	70	20	710	20	50	0	20	15	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	929	76	22	772	22	54	0	22	16	0	22
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	794	0	0	1005	0	0	1849	1849	967	1849	1876	783
Stage 1	-	-	-	-	-	-	1011	1011	-	827	827	-
Stage 2	-	-	-	-	-	-	838	838	-	1022	1049	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	827	-	-	689	-	-	57	74	308	57	72	394
Stage 1	-	-	-	-	-	-	289	317	-	366	386	-
Stage 2	-	-	-	-	-	-	361	382	-	285	304	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	827	-	-	689	-	-	~ 51	70	308	51	68	394
Mov Cap-2 Maneuver	-	-	-	-	-	-	157	181	-	152	174	-
Stage 1	-	-	-	-	-	-	281	308	-	356	374	-
Stage 2	-	-	-	-	-	-	330	370	-	258	296	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.3			38			23.3		
HCM LOS							E			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	183	827	-	-	689	-	-	234				
HCM Lane V/C Ratio	0.416	0.026	-	-	0.032	-	-	0.163				
HCM Control Delay (s)	38	9.5	-	-	10.4	-	-	23.3				
HCM Lane LOS	E	A	-	-	B	-	-	C				
HCM 95th %tile Q(veh)	1.9	0.1	-	-	0.1	-	-	0.6				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

HCM 6th TWSC
4: Dell Range Boulevard & James Drive

2017-2018 Existing AM.syn
10/18/2018

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	134	0	0	381	0	0	0	0	1	0	1
Future Vol, veh/h	0	134	0	0	381	0	0	0	0	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	71	92	92	96	92	92	92	92	25	92	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	189	0	0	397	0	0	0	0	4	0	4
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	397	0	0	189	0	0	588	586	189	586	586	397
Stage 1	-	-	-	-	-	-	189	189	-	397	397	-
Stage 2	-	-	-	-	-	-	399	397	-	189	189	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1162	-	-	1385	-	-	421	422	853	422	422	652
Stage 1	-	-	-	-	-	-	813	744	-	629	603	-
Stage 2	-	-	-	-	-	-	627	603	-	813	744	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1162	-	-	1385	-	-	418	422	853	422	422	652
Mov Cap-2 Maneuver	-	-	-	-	-	-	418	422	-	422	422	-
Stage 1	-	-	-	-	-	-	813	744	-	629	603	-
Stage 2	-	-	-	-	-	-	623	603	-	813	744	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			0			12.1		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	1162	-	-	1385	-	-	512				
HCM Lane V/C Ratio	-	-	-	-	-	-	-	0.016				
HCM Control Delay (s)	0	0	-	-	0	-	-	12.1				
HCM Lane LOS	A	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0				

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	412	0	0	294	0	1	0	0	0	0	0
Future Vol, veh/h	1	412	0	0	294	0	1	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	90	92	92	75	92	25	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	458	0	0	392	0	4	0	0	0	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	392	0	0	458	0	0	858	858	458	858	858	392
Stage 1	-	-	-	-	-	-	466	466	-	392	392	-
Stage 2	-	-	-	-	-	-	392	392	-	466	466	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1167	-	-	1103	-	-	277	294	603	277	294	657
Stage 1	-	-	-	-	-	-	577	562	-	633	606	-
Stage 2	-	-	-	-	-	-	633	606	-	577	562	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1167	-	-	1103	-	-	276	293	603	276	293	657
Mov Cap-2 Maneuver	-	-	-	-	-	-	276	293	-	276	293	-
Stage 1	-	-	-	-	-	-	574	559	-	630	606	-
Stage 2	-	-	-	-	-	-	633	606	-	574	559	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			18.2			0		
HCM LOS							C			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	276	1167	-	-	1103	-	-	-				
HCM Lane V/C Ratio	0.014	0.003	-	-	-	-	-	-				
HCM Control Delay (s)	18.2	8.1	0	-	0	-	-	0				
HCM Lane LOS	C	A	A	-	A	-	-	A				
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	-				

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	365	0	0	710	5	0	0	0	5	0	15
Future Vol, veh/h	10	365	0	0	710	5	0	0	0	5	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	96	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	397	0	0	740	5	0	0	0	5	0	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	745	0	0	397	0	0	1170	1164	397	1162	1162	743
Stage 1	-	-	-	-	-	-	419	419	-	743	743	-
Stage 2	-	-	-	-	-	-	751	745	-	419	419	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	863	-	-	1162	-	-	170	194	652	172	195	415
Stage 1	-	-	-	-	-	-	612	590	-	407	422	-
Stage 2	-	-	-	-	-	-	403	421	-	612	590	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	863	-	-	1162	-	-	161	191	652	170	192	415
Mov Cap-2 Maneuver	-	-	-	-	-	-	161	191	-	170	192	-
Stage 1	-	-	-	-	-	-	602	581	-	400	422	-
Stage 2	-	-	-	-	-	-	387	421	-	602	581	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			0			17.7		
HCM LOS							A			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	863	-	-	1162	-	-	305				
HCM Lane V/C Ratio	-	0.013	-	-	-	-	-	0.071				
HCM Control Delay (s)	0	9.2	0	-	0	-	-	17.7				
HCM Lane LOS	A	A	A	-	A	-	-	C				
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.2				

HCM 6th TWSC
4: Dell Range Boulevard & James Drive

2040 Total PM.syn
10/30/2018

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	20	870	0	0	735	10	0	0	0	5	0	15
Future Vol, veh/h	20	870	0	0	735	10	0	0	0	5	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	946	0	0	799	11	0	0	0	5	0	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	810	0	0	946	0	0	1803	1800	946	1795	1795	805
Stage 1	-	-	-	-	-	-	990	990	-	805	805	-
Stage 2	-	-	-	-	-	-	813	810	-	990	990	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	816	-	-	725	-	-	62	80	317	62	80	382
Stage 1	-	-	-	-	-	-	297	324	-	376	395	-
Stage 2	-	-	-	-	-	-	372	393	-	297	324	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	816	-	-	725	-	-	57	75	317	59	75	382
Mov Cap-2 Maneuver	-	-	-	-	-	-	57	75	-	59	75	-
Stage 1	-	-	-	-	-	-	280	306	-	355	395	-
Stage 2	-	-	-	-	-	-	356	393	-	280	306	-
Approach	EB		WB				NB			SB		
HCM Control Delay, s	0.2		0				0			30.8		
HCM LOS							A			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	816	-	-	725	-	-	161				
HCM Lane V/C Ratio	-	0.027	-	-	-	-	-	0.135				
HCM Control Delay (s)	0	9.5	0	-	0	-	-	30.8				
HCM Lane LOS	A	A	A	-	A	-	-	D				
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.5				

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	365	0	0	710	5	0	0	0	5	0	15
Future Vol, veh/h	10	365	0	0	710	5	0	0	0	5	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	96	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	397	0	0	740	5	0	0	0	5	0	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	745	0	0	397	0	0	1170	1164	397	1162	1162	743
Stage 1	-	-	-	-	-	-	419	419	-	743	743	-
Stage 2	-	-	-	-	-	-	751	745	-	419	419	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	863	-	-	1162	-	-	170	194	652	172	195	415
Stage 1	-	-	-	-	-	-	612	590	-	407	422	-
Stage 2	-	-	-	-	-	-	403	421	-	612	590	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	863	-	-	1162	-	-	162	191	652	170	192	415
Mov Cap-2 Maneuver	-	-	-	-	-	-	280	303	-	293	307	-
Stage 1	-	-	-	-	-	-	604	582	-	402	422	-
Stage 2	-	-	-	-	-	-	387	421	-	604	582	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			0			15.2		
HCM LOS							A			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	863	-	-	1162	-	-	376				
HCM Lane V/C Ratio	-	0.013	-	-	-	-	-	0.058				
HCM Control Delay (s)	0	9.2	-	-	0	-	-	15.2				
HCM Lane LOS	A	A	-	-	A	-	-	C				
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.2				

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	870	0	0	735	10	0	0	0	5	0	15
Future Vol, veh/h	20	870	0	0	735	10	0	0	0	5	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	946	0	0	799	11	0	0	0	5	0	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	810	0	0	946	0	0	1803	1800	946	1795	1795	805
Stage 1	-	-	-	-	-	-	990	990	-	805	805	-
Stage 2	-	-	-	-	-	-	813	810	-	990	990	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	816	-	-	725	-	-	62	80	317	62	80	382
Stage 1	-	-	-	-	-	-	297	324	-	376	395	-
Stage 2	-	-	-	-	-	-	372	393	-	297	324	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	816	-	-	725	-	-	58	78	317	61	78	382
Mov Cap-2 Maneuver	-	-	-	-	-	-	168	191	-	175	195	-
Stage 1	-	-	-	-	-	-	289	315	-	366	395	-
Stage 2	-	-	-	-	-	-	356	393	-	289	315	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			0			18.2		
HCM LOS							A			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	816	-	-	725	-	-	295				
HCM Lane V/C Ratio	-	0.027	-	-	-	-	-	0.074				
HCM Control Delay (s)	0	9.5	-	-	0	-	-	18.2				
HCM Lane LOS	A	A	-	-	A	-	-	C				
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.2				

Intersection												
Int Delay, s/veh	7.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	64	44	4	208	3	81	22	2	2	110	80
Future Vol, veh/h	11	64	44	4	208	3	81	22	2	2	110	80
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	80	61	50	84	25	72	79	25	50	79	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	80	72	8	248	12	113	28	8	4	139	100
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	260	0	0	152	0	0	538	424	116	436	454	254
Stage 1	-	-	-	-	-	-	148	148	-	270	270	-
Stage 2	-	-	-	-	-	-	390	276	-	166	184	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1304	-	-	1429	-	-	454	522	936	531	502	785
Stage 1	-	-	-	-	-	-	855	775	-	736	686	-
Stage 2	-	-	-	-	-	-	634	682	-	836	747	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1304	-	-	1429	-	-	314	512	936	499	492	785
Mov Cap-2 Maneuver	-	-	-	-	-	-	368	553	-	571	545	-
Stage 1	-	-	-	-	-	-	845	766	-	727	681	-
Stage 2	-	-	-	-	-	-	437	677	-	789	738	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.2			18.8			14.4		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	407	1304	-	-	1429	-	-	624				
HCM Lane V/C Ratio	0.364	0.012	-	-	0.006	-	-	0.39				
HCM Control Delay (s)	18.8	7.8	-	-	7.5	0	-	14.4				
HCM Lane LOS	C	A	-	-	A	A	-	B				
HCM 95th %tile Q(veh)	1.6	0	-	-	0	-	-	1.8				

HCM 6th TWSC
5: Whitney Road & Dell Range Boulevard

2017-2018 Existing PM.syn
10/18/2018

Intersection												
Int Delay, s/veh	7.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	62	224	110	3	139	4	94	78	3	2	36	44
Future Vol, veh/h	62	224	110	3	139	4	94	78	3	2	36	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	92	79	75	83	50	78	81	38	50	69	73
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	72	243	139	4	167	8	121	96	8	4	52	60
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	175	0	0	382	0	0	692	640	313	688	705	171
Stage 1	-	-	-	-	-	-	457	457	-	179	179	-
Stage 2	-	-	-	-	-	-	235	183	-	509	526	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1401	-	-	1176	-	-	358	393	727	360	361	873
Stage 1	-	-	-	-	-	-	583	568	-	823	751	-
Stage 2	-	-	-	-	-	-	768	748	-	547	529	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1401	-	-	1176	-	-	289	371	727	284	341	873
Mov Cap-2 Maneuver	-	-	-	-	-	-	392	437	-	356	415	-
Stage 1	-	-	-	-	-	-	553	539	-	781	748	-
Stage 2	-	-	-	-	-	-	662	745	-	422	502	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.2			0.2			23.3			13		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	417	1401	-	-	1176	-	-	565				
HCM Lane V/C Ratio	0.539	0.051	-	-	0.003	-	-	0.206				
HCM Control Delay (s)	23.3	7.7	-	-	8.1	0	-	13				
HCM Lane LOS	C	A	-	-	A	A	-	B				
HCM 95th %tile Q(veh)	3.1	0.2	-	-	0	-	-	0.8				

Intersection												
Int Delay, s/veh	141.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	225	80	25	460	40	110	170	10	65	385	105
Future Vol, veh/h	70	225	80	25	460	40	110	170	10	65	385	105
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	76	245	87	27	500	43	120	185	11	71	418	114
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	543	0	0	332	0	0	1283	1038	289	1115	1060	522
Stage 1	-	-	-	-	-	-	441	441	-	576	576	-
Stage 2	-	-	-	-	-	-	842	597	-	539	484	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1026	-	-	1227	-	-	142	231	750	185	~ 224	555
Stage 1	-	-	-	-	-	-	595	577	-	503	502	-
Stage 2	-	-	-	-	-	-	359	491	-	527	552	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1026	-	-	1227	-	-	-	207	750	86	~ 201	555
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ -37	299	-	199	~ 313	-
Stage 1	-	-	-	-	-	-	551	534	-	466	486	-
Stage 2	-	-	-	-	-	-	~ 38	475	-	314	511	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.6			0.4						\$ 442.7		
HCM LOS							-			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	1026	-	-	1227	-	-	318				
HCM Lane V/C Ratio	-	0.074	-	-	0.022	-	-	1.897				
HCM Control Delay (s)	-	8.8	-	-	8	0		\$ 442.7				
HCM Lane LOS	-	A	-	-	A	A	-	F				
HCM 95th %tile Q(veh)	-	0.2	-	-	0.1	-	-	41.2				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	100	500	145	15	300	100	125	460	10	80	345	60
Future Vol, veh/h	100	500	145	15	300	100	125	460	10	80	345	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	109	543	158	16	326	109	136	500	11	87	375	65
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	435	0	0	701	0	0	1473	1307	622	1509	1332	381
Stage 1	-	-	-	-	-	-	840	840	-	413	413	-
Stage 2	-	-	-	-	-	-	633	467	-	1096	919	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1125	-	-	896	-	-	~ 105	~ 160	487	99	~ 154	666
Stage 1	-	-	-	-	-	-	360	~ 381	-	616	594	-
Stage 2	-	-	-	-	-	-	468	562	-	259	~ 350	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1125	-	-	896	-	-	- ~ 141	487	-	~ 136	666	
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 30	~ 239	-	~ -16	~ 234	-
Stage 1	-	-	-	-	-	-	325	~ 344	-	556	580	-
Stage 2	-	-	-	-	-	-	146	549	-	- ~ 316	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0.3								
HCM LOS							-			-		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	1125	-	-	896	-	-	-				
HCM Lane V/C Ratio	-	0.097	-	-	0.018	-	-	-				
HCM Control Delay (s)	-	8.5	-	-	9.1	0	-	-				
HCM Lane LOS	-	A	-	-	A	A	-	-				
HCM 95th %tile Q(veh)	-	0.3	-	-	0.1	-	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

MOVEMENT SUMMARY

 **Site: 101 [2040 Total AM w EB/WB/SB RTL]**

Dell Range Blvd and Whitney Road
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Whitney Road												
3	L2	120	3.0	0.355	8.0	LOS A	1.8	45.1	0.59	0.53	0.59	32.7
8	T1	185	3.0	0.355	8.0	LOS A	1.8	45.1	0.59	0.53	0.59	32.6
18	R2	11	3.0	0.355	8.0	LOS A	1.8	45.1	0.59	0.53	0.59	31.8
Approach		315	3.0	0.355	8.0	LOS A	1.8	45.1	0.59	0.53	0.59	32.6
East: Dell Range Boulevard												
1	L2	27	3.0	0.546	10.9	LOS B	4.4	113.6	0.66	0.71	0.91	32.2
6	T1	500	3.0	0.546	10.9	LOS B	4.4	113.6	0.66	0.71	0.91	32.2
16	R2	43	3.0	0.045	4.1	LOS A	0.2	4.3	0.43	0.30	0.43	34.4
Approach		571	3.0	0.546	10.3	LOS B	4.4	113.6	0.64	0.68	0.87	32.3
North: Whitney Road												
7	L2	71	3.0	0.650	16.5	LOS C	5.7	146.9	0.80	1.03	1.46	29.7
4	T1	418	3.0	0.650	16.5	LOS C	5.7	146.9	0.80	1.03	1.46	29.6
14	R2	114	3.0	0.152	6.4	LOS A	0.6	14.6	0.57	0.55	0.57	33.2
Approach		603	3.0	0.650	14.6	LOS B	5.7	146.9	0.75	0.94	1.29	30.2
West: Dell Range Boulevard												
5	L2	76	3.0	0.377	8.7	LOS A	1.8	45.9	0.61	0.62	0.65	32.8
2	T1	245	3.0	0.377	8.7	LOS A	1.8	45.9	0.61	0.62	0.65	32.7
12	R2	87	3.0	0.102	5.2	LOS A	0.4	9.8	0.51	0.44	0.51	33.8
Approach		408	3.0	0.377	7.9	LOS A	1.8	45.9	0.59	0.58	0.62	32.9
All Vehicles		1897	3.0	0.650	10.8	LOS B	5.7	146.9	0.66	0.71	0.91	31.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 **Site: 101 [2040 Total PM w EB/WB/SB RTL]**

Dell Range Blvd and Whitney Road
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Whitney Road												
3	L2	136	3.0	1.049	75.6	LOS F	30.8	789.4	1.00	2.37	5.21	16.7
8	T1	500	3.0	1.049	75.6	LOS F	30.8	789.4	1.00	2.37	5.21	16.7
18	R2	11	3.0	1.049	75.6	LOS F	30.8	789.4	1.00	2.37	5.21	16.5
Approach		647	3.0	1.049	75.6	LOS F	30.8	789.4	1.00	2.37	5.21	16.7
East: Dell Range Boulevard												
1	L2	16	3.0	0.489	12.4	LOS B	2.9	73.8	0.72	0.83	1.06	31.6
6	T1	326	3.0	0.489	12.4	LOS B	2.9	73.8	0.72	0.83	1.06	31.5
16	R2	109	3.0	0.155	6.8	LOS A	0.6	14.7	0.59	0.59	0.59	33.0
Approach		451	3.0	0.489	11.0	LOS B	2.9	73.8	0.68	0.77	0.94	31.9
North: Whitney Road												
7	L2	87	3.0	0.522	11.0	LOS B	3.8	97.5	0.68	0.78	0.96	31.8
4	T1	375	3.0	0.522	11.0	LOS B	3.8	97.5	0.68	0.78	0.96	31.8
14	R2	65	3.0	0.074	4.8	LOS A	0.3	7.0	0.48	0.39	0.48	34.0
Approach		527	3.0	0.522	10.3	LOS B	3.8	97.5	0.65	0.73	0.90	32.0
West: Dell Range Boulevard												
5	L2	109	3.0	0.741	18.5	LOS C	10.1	259.2	0.85	1.18	1.73	28.9
2	T1	543	3.0	0.741	18.5	LOS C	10.1	259.2	0.85	1.18	1.73	28.8
12	R2	158	3.0	0.179	5.9	LOS A	0.7	18.2	0.52	0.46	0.52	33.5
Approach		810	3.0	0.741	16.0	LOS C	10.1	259.2	0.78	1.04	1.49	29.6
All Vehicles		2435	3.0	1.049	29.7	LOS D	30.8	789.4	0.79	1.28	2.25	25.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

HCM 6th Signalized Intersection Summary

5: Whitney Road & Dell Range Boulevard

2040 Total AM_Improved.syn

02/11/2019

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	70	225	80	25	460	40	110	170	10	65	385	105	
Future Volume (veh/h)	70	225	80	25	460	40	110	170	10	65	385	105	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	
Adj Flow Rate, veh/h	76	245	87	27	500	43	120	185	11	71	418	81	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	214	549	195	448	568	49	186	597	35	426	520	101	
Arrive On Green	0.05	0.49	0.49	0.40	0.40	0.40	0.13	0.13	0.13	0.41	0.41	0.41	
Sat Flow, veh/h	1500	1110	394	1048	1430	123	899	1472	88	1187	1282	248	
Grp Volume(v), veh/h	76	0	332	27	0	543	120	0	196	71	0	499	
Grp Sat Flow(s),veh/h/ln	1500	0	1504	1048	0	1553	899	0	1559	1187	0	1530	
Q Serve(g_s), s	2.6	0.0	12.9	1.5	0.0	29.2	10.6	0.0	10.2	4.1	0.0	25.9	
Cycle Q Clear(g_c), s	2.6	0.0	12.9	5.7	0.0	29.2	36.5	0.0	10.2	14.3	0.0	25.9	
Prop In Lane	1.00		0.26	1.00		0.08	1.00		0.06	1.00		0.16	
Lane Grp Cap(c), veh/h	214	0	744	448	0	617	186	0	632	426	0	621	
V/C Ratio(X)	0.36	0.00	0.45	0.06	0.00	0.88	0.65	0.00	0.31	0.17	0.00	0.80	
Avail Cap(c_a), veh/h	235	0	744	448	0	617	186	0	632	426	0	621	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.94	0.00	0.94	1.00	0.00	1.00	
Uniform Delay (d), s/veh	19.4	0.0	14.8	19.4	0.0	25.1	52.5	0.0	27.6	24.0	0.0	23.6	
Incr Delay (d2), s/veh	1.0	0.0	1.9	0.3	0.0	16.4	15.1	0.0	1.2	0.8	0.0	10.6	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.9	0.0	4.6	0.4	0.0	13.0	3.7	0.0	4.4	1.2	0.0	10.7	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	20.4	0.0	16.7	19.7	0.0	41.6	67.6	0.0	28.8	24.8	0.0	34.2	
LnGrp LOS	C	A	B	B	A	D	E	A	C	C	A	C	
Approach Vol, veh/h		408			570			316			570		
Approach Delay, s/veh		17.4			40.6			43.5			33.0		
Approach LOS		B			D			D			C		
Timer - Assigned Phs		2			4			6			7		
Phs Duration (G+Y+Rc), s		41.0			49.0			41.0			8.8		
Change Period (Y+Rc), s		4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s		36.5			44.5			36.5			5.5		
Max Q Clear Time (g_c+l1), s		38.5			14.9			27.9			4.6		
Green Ext Time (p_c), s		0.0			2.2			2.3			0.0		
Intersection Summary													
HCM 6th Ctrl Delay			33.7										
HCM 6th LOS			C										

HCM 6th Signalized Intersection Summary
5: Whitney Road & Dell Range Boulevard

2040 Total PM_Improved.syn

02/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	500	145	15	300	100	125	460	10	80	345	60
Future Volume (veh/h)	100	500	145	15	300	100	125	460	10	80	345	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	109	543	131	16	326	82	136	500	11	87	375	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	340	620	150	166	482	121	223	606	13	255	516	89
Arrive On Green	0.06	0.51	0.51	0.40	0.40	0.40	0.79	0.79	0.79	0.39	0.39	0.39
Sat Flow, veh/h	1500	1226	296	764	1215	306	949	1535	34	889	1308	227
Grp Volume(v), veh/h	109	0	674	16	0	408	136	0	511	87	0	440
Grp Sat Flow(s),veh/h/ln	1500	0	1522	764	0	1520	949	0	1569	889	0	1534
Q Serve(g_s), s	3.7	0.0	35.4	1.7	0.0	19.9	12.6	0.0	17.8	7.8	0.0	21.9
Cycle Q Clear(g_c), s	3.7	0.0	35.4	27.3	0.0	19.9	34.5	0.0	17.8	25.6	0.0	21.9
Prop In Lane	1.00		0.19	1.00		0.20	1.00		0.02	1.00		0.15
Lane Grp Cap(c), veh/h	340	0	769	166	0	603	223	0	619	255	0	605
V/C Ratio(X)	0.32	0.00	0.88	0.10	0.00	0.68	0.61	0.00	0.83	0.34	0.00	0.73
Avail Cap(c_a), veh/h	343	0	769	166	0	603	223	0	619	255	0	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.76	0.00	0.76	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.2	0.0	19.7	36.2	0.0	22.4	20.1	0.0	7.6	32.1	0.0	23.1
Incr Delay (d2), s/veh	0.5	0.0	13.3	1.2	0.0	6.0	9.1	0.0	9.4	3.6	0.0	7.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	14.3	0.4	0.0	7.8	2.8	0.0	4.1	1.9	0.0	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.8	0.0	33.1	37.4	0.0	28.4	29.2	0.0	17.0	35.7	0.0	30.6
LnGrp LOS	B	A	C	D	A	C	C	A	B	D	A	C
Approach Vol, veh/h	783			424			647			527		
Approach Delay, s/veh	30.8			28.7			19.6			31.5		
Approach LOS	C			C			B			C		
Timer - Assigned Phs	2			4			6			7		
Phs Duration (G+Y+Rc), s	40.0			50.0			40.0			9.8		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	35.5			45.5			35.5			5.5		
Max Q Clear Time (g_c+l1), s	36.5			37.4			27.6			5.7		
Green Ext Time (p_c), s	0.0			2.9			2.0			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	27.5											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary
6: College Drive & US-30 /US-30

2017-2018 Existing AM.syn

10/30/2018

																		
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR						
Lane Configurations																		
Traffic Volume (veh/h)	58	141	59	267	413	10	83	401	146	7	488	85						
Future Volume (veh/h)	58	141	59	267	413	10	83	401	146	7	488	85						
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0						
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00						
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
Work Zone On Approach	No			No			No			No								
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575						
Adj Flow Rate, veh/h	63	153	0	290	449	11	90	436	159	8	530	92						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92						
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2						
Cap, veh/h	483	1132		691	1370	611	200	863	385	232	609	105						
Arrive On Green	0.04	0.38	0.00	0.12	0.46	0.46	0.06	0.29	0.29	0.01	0.24	0.24						
Sat Flow, veh/h	1500	2993	1335	1500	2993	1335	1500	2993	1335	1500	2551	441						
Grp Volume(v), veh/h	63	153	0	290	449	11	90	436	159	8	310	312						
Grp Sat Flow(s),veh/h/ln	1500	1496	1335	1500	1496	1335	1500	1496	1335	1500	1496	1496						
Q Serve(g_s), s	2.3	3.0	0.0	10.3	8.6	0.4	3.9	10.9	8.7	0.4	17.9	18.1						
Cycle Q Clear(g_c), s	2.3	3.0	0.0	10.3	8.6	0.4	3.9	10.9	8.7	0.4	17.9	18.1						
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.29						
Lane Grp Cap(c), veh/h	483	1132		691	1370	611	200	863	385	232	357	357						
V/C Ratio(X)	0.13	0.14		0.42	0.33	0.02	0.45	0.51	0.41	0.03	0.87	0.87						
Avail Cap(c_a), veh/h	602	1132		691	1370	611	296	863	385	402	401	401						
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
Uniform Delay (d), s/veh	15.7	18.3	0.0	12.8	15.6	13.3	24.6	26.7	25.9	25.8	32.9	32.9						
Incr Delay (d2), s/veh	0.1	0.2	0.0	0.4	0.6	0.1	1.6	0.5	0.7	0.1	16.7	17.4						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.8	1.1	0.0	3.3	2.9	0.1	1.4	3.9	2.8	0.1	8.0	8.1						
Unsig. Movement Delay, s/veh																		
LnGrp Delay(d),s/veh	15.8	18.6	0.0	13.2	16.2	13.4	26.2	27.2	26.6	25.8	49.5	50.3						
LnGrp LOS	B	B		B	B	B	C	C	C	C	D	D						
Approach Vol, veh/h	216		A	750			685			630								
Approach Delay, s/veh	17.8			15.0			26.9			49.6								
Approach LOS	B			B			C			D								
Timer - Assigned Phs	1	2	3	4	5	6	7	8										
Phs Duration (G+Y+Rc), s	5.4	30.4	15.6	38.6	9.9	26.0	8.5	45.7										
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5										
Max Green Setting (Gmax), s	11.1	24.1	11.1	25.7	11.1	24.1	11.1	25.7										
Max Q Clear Time (g_c+I1), s	2.4	12.9	12.3	5.0	5.9	20.1	4.3	10.6										
Green Ext Time (p_c), s	0.0	2.6	0.0	0.8	0.1	1.4	0.1	2.6										
Intersection Summary																		
HCM 6th Ctrl Delay	28.4																	
HCM 6th LOS	C																	
Notes																		
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.																		

HCM 6th Signalized Intersection Summary
6: College Drive & US-30 /US-30

2017-2018 Existing PM.syn

10/30/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	138	472	109	211	243	7	119	691	329	29	507	121
Future Volume (veh/h)	138	472	109	211	243	7	119	691	329	29	507	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	150	513	0	229	264	8	129	751	358	32	551	132
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	561	1037		444	1136	507	225	913	407	163	612	146
Arrive On Green	0.08	0.35	0.00	0.12	0.38	0.38	0.08	0.31	0.31	0.03	0.26	0.26
Sat Flow, veh/h	1500	2993	1335	1500	2993	1335	1500	2993	1335	1500	2396	572
Grp Volume(v), veh/h	150	513	0	229	264	8	129	751	358	32	343	340
Grp Sat Flow(s),veh/h/ln	1500	1496	1335	1500	1496	1335	1500	1496	1335	1500	1496	1472
Q Serve(g_s), s	5.7	12.2	0.0	8.6	5.4	0.3	5.4	21.0	22.9	1.4	20.0	20.1
Cycle Q Clear(g_c), s	5.7	12.2	0.0	8.6	5.4	0.3	5.4	21.0	22.9	1.4	20.0	20.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.39
Lane Grp Cap(c), veh/h	561	1037		444	1136	507	225	913	407	163	382	376
V/C Ratio(X)	0.27	0.49		0.52	0.23	0.02	0.57	0.82	0.88	0.20	0.90	0.90
Avail Cap(c_a), veh/h	619	1037		453	1136	507	289	913	407	302	401	394
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	23.2	0.0	16.1	19.0	17.4	23.5	29.0	29.7	25.1	32.4	32.4
Incr Delay (d2), s/veh	0.3	1.7	0.0	1.0	0.5	0.1	2.3	6.1	19.3	0.6	21.9	23.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	4.4	0.0	2.9	1.9	0.1	2.0	8.0	9.3	0.5	9.3	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.5	24.9	0.0	17.1	19.5	17.5	25.8	35.2	49.0	25.6	54.3	55.5
LnGrp LOS	B	C		B	B	B	C	D	D	C	D	E
Approach Vol, veh/h		663	A		501			1238			715	
Approach Delay, s/veh		23.0			18.4			38.2			53.6	
Approach LOS		C			B			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.3	32.0	15.1	35.7	11.7	27.5	12.1	38.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.1	24.1	11.1	25.7	11.1	24.1	11.1	25.7				
Max Q Clear Time (g_c+I1), s	3.4	24.9	10.6	14.2	7.4	22.1	7.7	7.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.6	0.1	0.9	0.1	1.5				
Intersection Summary												
HCM 6th Ctrl Delay			35.3									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

6: College Drive & US-30 /US-30

2040 Total AM.syn

10/31/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	285	80	445	755	45	115	600	280	10	700	125
Future Volume (veh/h)	130	285	80	445	755	45	115	600	280	10	700	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	141	310	0	484	821	49	125	652	304	11	761	136
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	289	992		537	1117	498	196	993	443	185	679	121
Arrive On Green	0.08	0.33	0.00	0.12	0.37	0.37	0.08	0.33	0.33	0.01	0.27	0.27
Sat Flow, veh/h	1500	2993	1335	1500	2993	1335	1500	2993	1335	1500	2537	453
Grp Volume(v), veh/h	141	310	0	484	821	49	125	652	304	11	449	448
Grp Sat Flow(s),veh/h/ln	1500	1496	1335	1500	1496	1335	1500	1496	1335	1500	1496	1493
Q Serve(g_s), s	5.5	7.0	0.0	11.1	21.3	2.2	5.2	16.8	17.7	0.5	24.1	24.1
Cycle Q Clear(g_c), s	5.5	7.0	0.0	11.1	21.3	2.2	5.2	16.8	17.7	0.5	24.1	24.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	289	992		537	1117	498	196	993	443	185	401	400
V/C Ratio(X)	0.49	0.31		0.90	0.74	0.10	0.64	0.66	0.69	0.06	1.12	1.12
Avail Cap(c_a), veh/h	352	992		537	1117	498	265	993	443	350	401	400
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	22.4	0.0	24.6	24.4	18.4	23.4	25.7	26.0	24.1	33.0	33.0
Incr Delay (d2), s/veh	1.3	0.8	0.0	18.3	4.3	0.4	3.4	1.6	4.4	0.1	81.8	82.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	2.5	0.0	8.2	7.9	0.7	1.9	6.0	6.0	0.2	17.5	17.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.6	23.2	0.0	42.9	28.7	18.8	26.9	27.3	30.4	24.2	114.7	114.9
LnGrp LOS	C	C		D	C	B	C	C	C	C	F	F
Approach Vol, veh/h	451		A	1354			1081			908		
Approach Delay, s/veh	22.4			33.4			28.1			113.7		
Approach LOS	C			C			C			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.7	34.4	15.6	34.3	11.5	28.6	11.9	38.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.1	24.1	11.1	25.7	11.1	24.1	11.1	25.7				
Max Q Clear Time (g_c+I1), s	2.5	19.7	13.1	9.0	7.2	26.1	7.5	23.3				
Green Ext Time (p_c), s	0.0	2.2	0.0	1.8	0.1	0.0	0.1	1.3				

Intersection Summary

HCM 6th Ctrl Delay 49.8

HCM 6th LOS D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

6: College Drive & US-30 /US-30

2040 Total PM.syn
10/31/2018

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (veh/h)	250	950	145	390	700	35	155	1030	595	40	745	180		
Future Volume (veh/h)	250	950	145	390	700	35	155	1030	595	40	745	180		
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No			No			No				
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575		
Adj Flow Rate, veh/h	272	1033	0	424	761	38	168	1120	158	43	810	0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2		
Cap, veh/h	261	888		255	1054	470	229	1047	467	135	941	0		
Arrive On Green	0.06	0.30	0.00	0.12	0.35	0.35	0.07	0.35	0.35	0.04	0.31	0.00		
Sat Flow, veh/h	1500	2993	1335	1500	2993	1335	1500	2993	1335	1500	3071	0		
Grp Volume(v), veh/h	272	1033	0	424	761	38	168	1120	158	43	810	0		
Grp Sat Flow(s),veh/h/ln	1500	1496	1335	1500	1496	1335	1500	1496	1335	1500	1496	0		
Q Serve(g_s), s	5.5	26.7	0.0	10.5	19.9	1.7	6.5	31.5	7.9	1.7	22.9	0.0		
Cycle Q Clear(g_c), s	5.5	26.7	0.0	10.5	19.9	1.7	6.5	31.5	7.9	1.7	22.9	0.0		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.00		
Lane Grp Cap(c), veh/h	261	888		255	1054	470	229	1047	467	135	941	0		
V/C Ratio(X)	1.04	1.16		1.66	0.72	0.08	0.73	1.07	0.34	0.32	0.86	0.00		
Avail Cap(c_a), veh/h	261	888		255	1054	470	229	1047	467	188	1047	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	32.6	31.6	0.0	22.2	25.3	19.4	23.6	29.3	21.6	24.0	29.0	0.0		
Incr Delay (d2), s/veh	67.0	85.8	0.0	315.0	4.3	0.3	11.6	48.3	0.4	1.3	6.9	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	8.3	19.9	0.0	25.8	7.4	0.6	3.0	17.8	2.4	0.6	8.8	0.0		
Unsig. Movement Delay, s/veh														
LnGrp Delay(d),s/veh	99.7	117.5	0.0	337.2	29.6	19.8	35.2	77.6	22.0	25.3	35.9	0.0		
LnGrp LOS	F	F		F	C	B	D	F	C	C	D	A		
Approach Vol, veh/h	1305		A	1223			1446			853				
Approach Delay, s/veh	113.8			135.9			66.6			35.4				
Approach LOS	F			F			E			D				
Timer - Assigned Phs														
Phs Duration (G+Y+Rc), s	7.8	36.0	15.0	31.2	11.0	32.8	10.0	36.2						
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5						
Max Green Setting (Gmax), s	6.5	31.5	10.5	23.5	6.5	31.5	5.5	28.5						
Max Q Clear Time (g_c+I1), s	3.7	33.5	12.5	28.7	8.5	24.9	7.5	21.9						
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	3.0	0.0	2.9						
Intersection Summary														
HCM 6th Ctrl Delay	91.4													
HCM 6th LOS	F													
Notes														
User approved pedestrian interval to be less than phase max green.														
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.														

HCM 6th Signalized Intersection Summary
6: College Drive & US-30 /US-30

2040 Total AM_Improved.syn

05/31/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	285	80	445	755	45	115	600	280	10	700	125
Future Volume (veh/h)	130	285	80	445	755	45	115	600	280	10	700	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	141	310	0	484	821	49	125	652	304	11	761	136
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	277	832		555	1238	552	190	1012	706	182	887	396
Arrive On Green	0.05	0.28	0.00	0.19	0.41	0.41	0.05	0.34	0.34	0.01	0.30	0.30
Sat Flow, veh/h	1500	2993	1335	2910	2993	1335	1500	2993	1335	1500	2993	1335
Grp Volume(v), veh/h	141	310	0	484	821	49	125	652	304	11	761	136
Grp Sat Flow(s),veh/h/ln	1500	1496	1335	1455	1496	1335	1500	1496	1335	1500	1496	1335
Q Serve(g_s), s	5.5	8.3	0.0	16.1	22.2	2.2	5.5	18.4	13.9	0.5	24.0	8.0
Cycle Q Clear(g_c), s	5.5	8.3	0.0	16.1	22.2	2.2	5.5	18.4	13.9	0.5	24.0	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	277	832		555	1238	552	190	1012	706	182	887	396
V/C Ratio(X)	0.51	0.37		0.87	0.66	0.09	0.66	0.64	0.43	0.06	0.86	0.34
Avail Cap(c_a), veh/h	277	832		684	1238	552	190	1032	715	245	1032	460
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.7	29.1	0.0	39.3	23.7	17.8	26.7	28.0	14.4	25.0	33.2	27.6
Incr Delay (d2), s/veh	1.6	1.3	0.0	10.2	2.8	0.3	8.1	1.3	0.4	0.1	6.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.1	0.0	6.5	8.1	0.7	2.4	6.6	4.1	0.2	9.3	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.3	30.4	0.0	49.5	26.5	18.2	34.9	29.3	14.8	25.2	39.7	28.1
LnGrp LOS	C	C		D	C	B	C	C	B	C	D	C
Approach Vol, veh/h		451	A		1354			1081			908	
Approach Delay, s/veh		29.7			34.4			25.9			37.8	
Approach LOS		C			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.8	38.3	23.6	32.3	10.0	34.1	10.0	45.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	34.5	23.5	18.5	5.5	34.5	5.5	36.5				
Max Q Clear Time (g_c+I1), s	2.5	20.4	18.1	10.3	7.5	26.0	7.5	24.2				
Green Ext Time (p_c), s	0.0	4.8	0.9	1.2	0.0	3.6	0.0	4.7				

Intersection Summary

HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
6: College Drive & US-30 /US-30

2040 Total PM_Improved.syn

05/31/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	950	145	390	700	35	155	1030	595	40	745	180
Future Volume (veh/h)	250	950	145	390	700	35	155	1030	595	40	745	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	272	1033	0	424	761	38	168	1120	484	43	810	196
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	322	977		400	1027	458	194	1060	656	108	968	432
Arrive On Green	0.12	0.33	0.00	0.14	0.34	0.34	0.06	0.35	0.35	0.03	0.32	0.32
Sat Flow, veh/h	1500	2993	1335	2910	2993	1335	1500	2993	1335	1500	2993	1335
Grp Volume(v), veh/h	272	1033	0	424	761	38	168	1120	484	43	810	196
Grp Sat Flow(s),veh/h/ln	1500	1496	1335	1455	1496	1335	1500	1496	1335	1500	1496	1335
Q Serve(g_s), s	14.5	39.2	0.0	16.5	26.9	2.3	7.5	42.5	34.7	2.3	30.1	14.0
Cycle Q Clear(g_c), s	14.5	39.2	0.0	16.5	26.9	2.3	7.5	42.5	34.7	2.3	30.1	14.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	322	977		400	1027	458	194	1060	656	108	968	432
V/C Ratio(X)	0.84	1.06		1.06	0.74	0.08	0.86	1.06	0.74	0.40	0.84	0.45
Avail Cap(c_a), veh/h	322	977		400	1027	458	194	1060	656	123	998	445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	40.4	0.0	51.7	34.7	26.6	34.5	38.8	24.3	32.0	37.7	32.2
Incr Delay (d2), s/veh	18.1	45.0	0.0	61.6	4.8	0.4	31.0	43.9	4.4	2.4	6.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	20.3	0.0	9.4	10.4	0.8	3.7	21.7	11.5	0.9	11.7	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.0	85.5	0.0	113.4	39.5	27.0	65.5	82.7	28.7	34.3	43.9	32.9
LnGrp LOS	D	F		F	D	C	E	F	C	C	D	C
Approach Vol, veh/h	1305		A		1223		1772				1049	
Approach Delay, s/veh	77.0				64.7		66.3				41.4	
Approach LOS	E				E		E				D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	47.0	21.0	43.7	12.0	43.3	19.0	45.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	42.5	16.5	38.0	7.5	40.0	14.5	40.0				
Max Q Clear Time (g_c+l1), s	4.3	44.5	18.5	41.2	9.5	32.1	16.5	28.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	3.8	0.0	4.1				

Intersection Summary

HCM 6th Ctrl Delay 63.7

HCM 6th LOS E

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
7: US-30 & Pershing Boulevard

2017-2018 Existing AM.syn

10/30/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	140	32	186	408	4	40	186	79	2	445	460
Future Volume (veh/h)	116	140	32	186	408	4	40	186	79	2	445	460
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	126	152	0	202	443	0	43	202	86	2	484	500
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	239	458		346	871		385	1823	813	714	1823	813
Arrive On Green	0.29	0.29	0.00	0.29	0.29	0.00	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	947	1575	1335	1235	2993	1335	572	2993	1335	1091	2993	1335
Grp Volume(v), veh/h	126	152	0	202	443	0	43	202	86	2	484	500
Grp Sat Flow(s),veh/h/ln	947	1575	1335	1235	1496	1335	572	1496	1335	1091	1496	1335
Q Serve(g_s), s	11.5	6.8	0.0	13.8	11.1	0.0	3.4	2.5	2.4	0.1	6.8	21.1
Cycle Q Clear(g_c), s	22.6	6.8	0.0	20.6	11.1	0.0	10.2	2.5	2.4	2.6	6.8	21.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	239	458		346	871		385	1823	813	714	1823	813
V/C Ratio(X)	0.53	0.33		0.58	0.51		0.11	0.11	0.11	0.00	0.27	0.62
Avail Cap(c_a), veh/h	404	733		562	1393		385	1823	813	714	1823	813
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	25.0	0.0	33.1	26.6	0.0	10.6	7.4	7.4	7.9	8.2	11.0
Incr Delay (d2), s/veh	1.8	0.4	0.0	1.6	0.5	0.0	0.6	0.1	0.3	0.0	0.4	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	2.6	0.0	4.2	3.9	0.0	0.5	0.8	0.7	0.0	2.1	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.8	25.5	0.0	34.7	27.0	0.0	11.2	7.5	7.6	7.9	8.6	14.5
LnGrp LOS	D	C		C	C		B	A	A	A	A	B
Approach Vol, veh/h	278		A	645		A	331				986	
Approach Delay, s/veh	31.0			29.4			8.0				11.6	
Approach LOS	C			C			A				B	
Timer - Assigned Phs	2			4			6				8	
Phs Duration (G+Y+Rc), s	59.3			30.7			59.3				30.7	
Change Period (Y+Rc), s	4.5			4.5			4.5				4.5	
Max Green Setting (Gmax), s	39.1			41.9			39.1				41.9	
Max Q Clear Time (g_c+I1), s	12.2			24.6			23.1				22.6	
Green Ext Time (p_c), s	2.1			1.3			4.9				3.6	
Intersection Summary												
HCM 6th Ctrl Delay	18.6											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

7: US-30 & Pershing Boulevard

2017-2018 Existing PM.syn
10/30/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	327	407	105	119	259	6	78	535	181	6	306	155
Future Volume (veh/h)	327	407	105	119	259	6	78	535	181	6	306	155
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	355	442	0	129	282	0	85	582	197	7	333	168
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	472	658		261	1251		454	1442	643	327	1442	643
Arrive On Green	0.42	0.42	0.00	0.42	0.42	0.00	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	1097	1575	1335	947	2993	1335	897	2993	1335	693	2993	1335
Grp Volume(v), veh/h	355	442	0	129	282	0	85	582	197	7	333	168
Grp Sat Flow(s),veh/h/ln	1097	1575	1335	947	1496	1335	897	1496	1335	693	1496	1335
Q Serve(g_s), s	27.7	20.4	0.0	11.5	5.4	0.0	5.5	11.3	8.1	0.6	5.8	6.7
Cycle Q Clear(g_c), s	33.1	20.4	0.0	31.9	5.4	0.0	11.3	11.3	8.1	11.8	5.8	6.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	472	658		261	1251		454	1442	643	327	1442	643
V/C Ratio(X)	0.75	0.67		0.49	0.23		0.19	0.40	0.31	0.02	0.23	0.26
Avail Cap(c_a), veh/h	524	733		306	1393		454	1442	643	327	1442	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	21.2	0.0	34.1	16.8	0.0	16.9	15.0	14.2	18.8	13.6	13.8
Incr Delay (d2), s/veh	5.4	2.1	0.0	1.4	0.1	0.0	0.9	0.8	1.2	0.1	0.4	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	7.5	0.0	2.7	1.8	0.0	1.2	3.8	2.5	0.1	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.9	23.3	0.0	35.5	16.9	0.0	17.8	15.8	15.4	18.9	14.0	14.8
LnGrp LOS	C	C		D	B		B	B	B	B	B	B
Approach Vol, veh/h	797		A	411		A	864				508	
Approach Delay, s/veh	27.6			22.8			15.9				14.3	
Approach LOS	C			C			B				B	
Timer - Assigned Phs	2			4			6				8	
Phs Duration (G+Y+Rc), s	47.9			42.1			47.9				42.1	
Change Period (Y+Rc), s	4.5			4.5			4.5				4.5	
Max Green Setting (Gmax), s	39.1			41.9			39.1				41.9	
Max Q Clear Time (g_c+I1), s	13.3			35.1			13.8				33.9	
Green Ext Time (p_c), s	5.6			2.5			2.9				1.5	
Intersection Summary												
HCM 6th Ctrl Delay	20.3											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

7: US-30 & Pershing Boulevard

2040 Total AM.syn

10/31/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	185	100	245	535	30	160	440	105	20	930	590
Future Volume (veh/h)	180	185	100	245	535	30	160	440	105	20	930	590
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	196	201	0	266	582	0	174	478	114	22	1011	641
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	299	640		458	1217		151	1476	659	408	1476	659
Arrive On Green	0.41	0.41	0.00	0.41	0.41	0.00	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	833	1575	1335	1181	2993	1335	302	2993	1335	825	2993	1335
Grp Volume(v), veh/h	196	201	0	266	582	0	174	478	114	22	1011	641
Grp Sat Flow(s),veh/h/ln	833	1575	1335	1181	1496	1335	302	1496	1335	825	1496	1335
Q Serve(g_s), s	20.4	7.8	0.0	17.8	12.9	0.0	21.1	8.7	4.3	1.5	23.3	42.1
Cycle Q Clear(g_c), s	33.3	7.8	0.0	25.6	12.9	0.0	44.4	8.7	4.3	10.2	23.3	42.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	299	640		458	1217		151	1476	659	408	1476	659
V/C Ratio(X)	0.65	0.31		0.58	0.48		1.15	0.32	0.17	0.05	0.68	0.97
Avail Cap(c_a), veh/h	348	733		527	1393		151	1476	659	408	1476	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	18.2	0.0	26.9	19.7	0.0	40.0	13.7	12.6	16.8	17.4	22.2
Incr Delay (d2), s/veh	3.5	0.3	0.0	1.2	0.3	0.0	120.1	0.6	0.6	0.3	2.6	29.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	2.8	0.0	5.0	4.4	0.0	8.4	2.9	1.3	0.3	8.0	17.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.4	18.4	0.0	28.1	20.0	0.0	160.1	14.3	13.2	17.1	20.0	51.3
LnGrp LOS	D	B		C	B		F	B	B	B	C	D
Approach Vol, veh/h			397	A			848	A			766	1674
Approach Delay, s/veh			26.8				22.5				47.3	32.0
Approach LOS			C				C				D	C
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	48.9			41.1			48.9			41.1		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	39.1			41.9			39.1			41.9		
Max Q Clear Time (g_c+l1), s	46.4			35.3			44.1			27.6		
Green Ext Time (p_c), s	0.0			1.3			0.0			4.4		
Intersection Summary												
HCM 6th Ctrl Delay			32.4									
HCM 6th LOS			C									
Notes												

HCM 6th Signalized Intersection Summary

7: US-30 & Pershing Boulevard

2040 Total PM.syn
10/31/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	745	140	155	340	25	135	1220	240	25	830	220
Future Volume (veh/h)	480	745	140	155	340	25	135	1220	240	25	830	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	522	810	0	168	370	0	147	1326	261	27	902	239
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	483	744		80	1413		169	1280	571	80	1280	571
Arrive On Green	0.47	0.47	0.00	0.47	0.47	0.00	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	1012	1575	1335	673	2993	1335	493	2993	1335	322	2993	1335
Grp Volume(v), veh/h	522	810	0	168	370	0	147	1326	261	27	902	239
Grp Sat Flow(s),veh/h/ln	1012	1575	1335	673	1496	1335	493	1496	1335	322	1496	1335
Q Serve(g_s), s	35.8	42.5	0.0	0.0	6.7	0.0	16.3	38.5	12.5	0.0	22.2	11.2
Cycle Q Clear(g_c), s	42.5	42.5	0.0	42.5	6.7	0.0	38.5	38.5	12.5	38.5	22.2	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	483	744		80	1413		169	1280	571	80	1280	571
V/C Ratio(X)	1.08	1.09		2.10	0.26		0.87	1.04	0.46	0.34	0.70	0.42
Avail Cap(c_a), veh/h	483	744		80	1413		169	1280	571	80	1280	571
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	23.8	0.0	45.0	14.3	0.0	40.1	25.8	18.3	45.0	21.1	17.9
Incr Delay (d2), s/veh	64.8	59.9	0.0	534.8	0.1	0.0	41.4	34.9	2.6	11.1	3.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.3	26.9	0.0	13.7	2.2	0.0	5.2	19.0	4.1	0.8	7.9	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.8	83.6	0.0	579.8	14.4	0.0	81.5	60.6	20.9	56.1	24.4	20.2
LnGrp LOS	F	F		F	B		F	F	C	E	C	C
Approach Vol, veh/h	1332		A	538		A	1734		1168			
Approach Delay, s/veh	88.0			190.9			56.4		24.2			
Approach LOS	F			F			E		C			
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	43.0			47.0			43.0			47.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	38.5			42.5			38.5			42.5		
Max Q Clear Time (g_c+I1), s	40.5			44.5			40.5			44.5		
Green Ext Time (p_c), s	0.0			0.0			0.0			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	72.5											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary
7: US-30 & Pershing Boulevard

2040 Total AM_Improved.syn

02/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	185	100	245	535	30	160	440	105	20	930	590
Future Volume (veh/h)	180	185	100	245	535	30	160	440	105	20	930	590
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	196	201	0	266	582	0	174	478	114	22	1011	380
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	538		381	671		240	1690	754	454	1358	606
Arrive On Green	0.06	0.18	0.00	0.11	0.22	0.00	0.06	0.56	0.56	0.45	0.45	0.45
Sat Flow, veh/h	1500	2993	1335	1500	2993	1335	1500	2993	1335	825	2993	1335
Grp Volume(v), veh/h	196	201	0	266	582	0	174	478	114	22	1011	380
Grp Sat Flow(s),veh/h/ln	1500	1496	1335	1500	1496	1335	1500	1496	1335	825	1496	1335
Q Serve(g_s), s	5.5	5.3	0.0	9.5	16.9	0.0	5.5	7.4	3.7	1.3	25.1	19.6
Cycle Q Clear(g_c), s	5.5	5.3	0.0	9.5	16.9	0.0	5.5	7.4	3.7	1.3	25.1	19.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	202	538		381	671		240	1690	754	454	1358	606
V/C Ratio(X)	0.97	0.37		0.70	0.87		0.73	0.28	0.15	0.05	0.74	0.63
Avail Cap(c_a), veh/h	202	615		381	748		240	1690	754	454	1358	606
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	32.5	0.0	29.0	33.6	0.0	18.0	10.1	9.3	13.8	20.3	18.8
Incr Delay (d2), s/veh	54.1	0.4	0.0	5.5	9.8	0.0	10.5	0.4	0.4	0.2	3.7	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	1.9	0.0	2.0	6.9	0.0	2.4	2.4	1.1	0.3	8.9	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.0	32.9	0.0	34.5	43.5	0.0	28.5	10.6	9.7	14.0	24.0	23.6
LnGrp LOS	F	C		C	D		C	B	A	B	C	C
Approach Vol, veh/h	397		A		848		A		766		1413	
Approach Delay, s/veh	61.1				40.7				14.5		23.8	
Approach LOS	E				D				B		C	
Timer - Assigned Phs	2		3		4		5		6		7	
Phs Duration (G+Y+Rc), s	55.3		14.0		20.7		10.0		45.3		10.0	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	48.5		9.5		18.5		5.5		38.5		5.5	
Max Q Clear Time (g_c+l1), s	9.4		11.5		7.3		7.5		27.1		7.5	
Green Ext Time (p_c), s	4.0		0.0		0.8		0.0		6.5		0.0	
Intersection Summary												
HCM 6th Ctrl Delay			30.2									
HCM 6th LOS			C									
Notes												

HCM 6th Signalized Intersection Summary

7: US-30 & Pershing Boulevard

2040 Total PM_Improved.syn

02/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	745	140	155	340	25	135	1220	240	25	830	220
Future Volume (veh/h)	480	745	140	155	340	25	135	1220	240	25	830	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	522	810	0	168	370	0	147	1326	261	27	902	239
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	454	929		225	497		206	1399	624	94	1083	483
Arrive On Green	0.22	0.31	0.00	0.07	0.17	0.00	0.06	0.47	0.47	0.36	0.36	0.36
Sat Flow, veh/h	1500	2993	1335	1500	2993	1335	1500	2993	1335	322	2993	1335
Grp Volume(v), veh/h	522	810	0	168	370	0	147	1326	261	27	902	239
Grp Sat Flow(s),veh/h/ln	1500	1496	1335	1500	1496	1335	1500	1496	1335	322	1496	1335
Q Serve(g_s), s	19.5	23.0	0.0	6.5	10.6	0.0	5.0	38.1	11.7	3.9	24.8	12.5
Cycle Q Clear(g_c), s	19.5	23.0	0.0	6.5	10.6	0.0	5.0	38.1	11.7	32.6	24.8	12.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	454	929		225	497		206	1399	624	94	1083	483
V/C Ratio(X)	1.15	0.87		0.75	0.74		0.71	0.95	0.42	0.29	0.83	0.49
Avail Cap(c_a), veh/h	454	1047		225	615		206	1399	624	94	1083	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	29.3	0.0	32.7	35.7	0.0	22.9	22.9	15.9	44.0	26.2	22.3
Incr Delay (d2), s/veh	90.2	7.5	0.0	12.8	3.8	0.0	11.1	14.5	2.1	7.5	7.5	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.1	8.9	0.0	1.8	4.1	0.0	2.4	15.2	3.7	0.8	9.6	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	115.9	36.9	0.0	45.5	39.6	0.0	33.9	37.4	17.9	51.5	33.8	25.9
LnGrp LOS	F	D		D	D		C	D	B	D	C	C
Approach Vol, veh/h	1332		A	538		A	1734		1168			
Approach Delay, s/veh	67.8			41.4			34.2		32.6			
Approach LOS	E			D			C		C			
Timer - Assigned Phs	2		3	4		5	6		7	8		
Phs Duration (G+Y+Rc), s	46.6		11.0	32.4		9.5	37.1		24.0	19.4		
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5		4.5	4.5		
Max Green Setting (Gmax), s	38.5		6.5	31.5		5.0	29.0		19.5	18.5		
Max Q Clear Time (g_c+l1), s	40.1		8.5	25.0		7.0	34.6		21.5	12.6		
Green Ext Time (p_c), s	0.0		0.0	2.9		0.0	0.0		0.0	1.2		
Intersection Summary												
HCM 6th Ctrl Delay	44.0											
HCM 6th LOS	D											

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	300	0	18	967	22	1	0	6	5	2	9
Future Vol, veh/h	2	300	0	18	967	22	1	0	6	5	2	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	95	95	95	88	88	88	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	417	0	19	1018	23	1	0	7	6	3	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1041	0	0	417	0	0	972	1502	209	1283	1491	521
Stage 1	-	-	-	-	-	-	423	423	-	1068	1068	-
Stage 2	-	-	-	-	-	-	549	1079	-	215	423	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	664	-	-	1138	-	-	207	121	797	122	123	500
Stage 1	-	-	-	-	-	-	579	586	-	237	296	-
Stage 2	-	-	-	-	-	-	488	293	-	767	586	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	664	-	-	1138	-	-	197	118	797	119	120	500
Mov Cap-2 Maneuver	-	-	-	-	-	-	322	220	-	198	222	-
Stage 1	-	-	-	-	-	-	576	583	-	236	291	-
Stage 2	-	-	-	-	-	-	465	288	-	757	583	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			10.5			17.6		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	658	664	-	-	1138	-	-	306
HCM Lane V/C Ratio	0.012	0.004	-	-	0.017	-	-	0.065
HCM Control Delay (s)	10.5	10.4	-	-	8.2	-	-	17.6
HCM Lane LOS	B	B	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0	-	-	0.1	-	-	0.2

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	845	3	29	473	13	2	5	43	22	11	8
Future Vol, veh/h	4	845	3	29	473	13	2	5	43	22	11	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	95	95	95	78	78	78	51	51	51
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1070	4	31	498	14	3	6	55	43	22	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	512	0	0	1074	0	0	1404	1656	537	1115	1651	256
Stage 1	-	-	-	-	-	-	1082	1082	-	567	567	-
Stage 2	-	-	-	-	-	-	322	574	-	548	1084	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1050	-	-	645	-	-	99	97	488	163	98	743
Stage 1	-	-	-	-	-	-	232	292	-	476	505	-
Stage 2	-	-	-	-	-	-	664	501	-	488	291	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1050	-	-	645	-	-	85	92	488	135	93	743
Mov Cap-2 Maneuver	-	-	-	-	-	-	181	203	-	256	191	-
Stage 1	-	-	-	-	-	-	231	291	-	474	481	-
Stage 2	-	-	-	-	-	-	591	477	-	421	290	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.6			15.6			24.3		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	404	1050	-	-	645	-	-	266
HCM Lane V/C Ratio	0.159	0.005	-	-	0.047	-	-	0.302
HCM Control Delay (s)	15.6	8.4	-	-	10.9	-	-	24.3
HCM Lane LOS	C	A	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.6	0	-	-	0.1	-	-	1.2

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	630	5	25	1500	30	5	5	10	10	5	15
Future Vol, veh/h	5	630	5	25	1500	30	5	5	10	10	5	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	95	95	95	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	685	5	26	1579	32	5	5	11	11	5	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1611	0	0	690	0	0	1542	2361	345	2002	2347	806
Stage 1	-	-	-	-	-	-	698	698	-	1647	1647	-
Stage 2	-	-	-	-	-	-	844	1663	-	355	700	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	401	-	-	900	-	-	78	35	651	35	36	325
Stage 1	-	-	-	-	-	-	397	440	-	103	155	-
Stage 2	-	-	-	-	-	-	324	152	-	635	440	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	401	-	-	900	-	-	69	34	651	32	35	325
Mov Cap-2 Maneuver	-	-	-	-	-	-	181	109	-	86	113	-
Stage 1	-	-	-	-	-	-	392	435	-	102	151	-
Stage 2	-	-	-	-	-	-	288	148	-	609	435	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			22.7			36.9		
HCM LOS							C			E		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	225	401	-	-	900	-	-	145				
HCM Lane V/C Ratio	0.097	0.014	-	-	0.029	-	-	0.225				
HCM Control Delay (s)	22.7	14.1	-	-	9.1	-	-	36.9				
HCM Lane LOS	C	B	-	-	A	-	-	E				
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.8				

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1705	5	40	1015	20	5	5	55	30	15	15
Future Vol, veh/h	5	1705	5	40	1015	20	5	5	55	30	15	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	95	95	95	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1853	5	42	1068	21	5	5	60	33	16	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1089	0	0	1858	0	0	2492	3039	929	2102	3031	545
Stage 1	-	-	-	-	-	-	1866	1866	-	1163	1163	-
Stage 2	-	-	-	-	-	-	626	1173	-	939	1868	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	636	-	-	322	-	-	15	13	269	~ 30	~ 13	482
Stage 1	-	-	-	-	-	-	75	121	-	207	267	-
Stage 2	-	-	-	-	-	-	439	264	-	284	120	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	636	-	-	322	-	-	10	11	269	~ 20	~ 11	482
Mov Cap-2 Maneuver	-	-	-	-	-	-	58	76	-	93	56	-
Stage 1	-	-	-	-	-	-	74	120	-	205	232	-
Stage 2	-	-	-	-	-	-	343	230	-	209	119	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.7			36.8			97.5		
HCM LOS							E			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	182	636	-	-	322	-	-	97				
HCM Lane V/C Ratio	0.388	0.009	-	-	0.131	-	-	0.672				
HCM Control Delay (s)	36.8	10.7	-	-	17.9	-	-	97.5				
HCM Lane LOS	E	B	-	-	C	-	-	F				
HCM 95th %tile Q(veh)	1.7	0	-	-	0.4	-	-	3.3				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	630	5	25	1500	30	0	0	10	0	0	15
Future Vol, veh/h	5	630	5	25	1500	30	0	0	10	0	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	95	95	95	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	685	5	26	1579	32	0	0	11	0	0	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1611	0	0	690	0	0	-	-	345	-	-	806
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	401	-	-	900	-	-	0	0	651	0	0	325
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	401	-	-	900	-	-	-	-	651	-	-	325
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			10.6			16.7		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	651	401	-	-	900	-	-	325				
HCM Lane V/C Ratio	0.017	0.014	-	-	0.029	-	-	0.05				
HCM Control Delay (s)	10.6	14.1	-	-	9.1	-	-	16.7				
HCM Lane LOS	B	B	-	-	A	-	-	C				
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.2				

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1705	5	40	1015	20	0	0	55	0	0	15
Future Vol, veh/h	5	1705	5	40	1015	20	0	0	55	0	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	95	95	95	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1853	5	42	1068	21	0	0	60	0	0	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1089	0	0	1858	0	0	-	-	929	-	-	545
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	636	-	-	322	-	-	0	0	269	0	0	482
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	636	-	-	322	-	-	-	-	269	-	-	482
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.7			22.2			12.7		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	269	636	-	-	322	-	-	482				
HCM Lane V/C Ratio	0.222	0.009	-	-	0.131	-	-	0.034				
HCM Control Delay (s)	22.2	10.7	-	-	17.9	-	-	12.7				
HCM Lane LOS	C	B	-	-	C	-	-	B				
HCM 95th %tile Q(veh)	0.8	0	-	-	0.4	-	-	0.1				

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	64	228	859	10	9	134
Future Vol, veh/h	64	228	859	10	9	134
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	90	62	56	76
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	285	954	16	16	176
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	970	0	-	0	1265	485
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	303	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	706	-	-	-	161	528
Stage 1	-	-	-	-	331	-
Stage 2	-	-	-	-	723	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	706	-	-	-	143	528
Mov Cap-2 Maneuver	-	-	-	-	236	-
Stage 1	-	-	-	-	294	-
Stage 2	-	-	-	-	723	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.4	0		17.5		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	706	-	-	-	479	
HCM Lane V/C Ratio	0.113	-	-	-	0.402	
HCM Control Delay (s)	10.8	-	-	-	17.5	
HCM Lane LOS	B	-	-	-	C	
HCM 95th %tile Q(veh)	0.4	-	-	-	1.9	

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	143	716	353	15	16	75
Future Vol, veh/h	143	716	353	15	16	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	85	89	54	80	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	161	842	397	28	20	100
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	425	0	-	0	1154	213
Stage 1	-	-	-	-	411	-
Stage 2	-	-	-	-	743	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1131	-	-	-	190	792
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	431	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1131	-	-	-	163	792
Mov Cap-2 Maneuver	-	-	-	-	225	-
Stage 1	-	-	-	-	547	-
Stage 2	-	-	-	-	431	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.4	0		13.2		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1131	-	-	-	558	
HCM Lane V/C Ratio	0.142	-	-	-	0.215	
HCM Control Delay (s)	8.7	-	-	-	13.2	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.5	-	-	-	0.8	

Intersection						
Int Delay, s/veh	19.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	160	470	1250	155	15	305
Future Vol, veh/h	160	470	1250	155	15	305
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	174	511	1359	168	16	332
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1527	0	-	0	2047	764
Stage 1	-	-	-	-	1443	-
Stage 2	-	-	-	-	604	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	432	-	-	-	48	346
Stage 1	-	-	-	-	184	-
Stage 2	-	-	-	-	508	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	432	-	-	-	29	346
Mov Cap-2 Maneuver	-	-	-	-	85	-
Stage 1	-	-	-	-	110	-
Stage 2	-	-	-	-	508	-
Approach	EB	WB		SB		
HCM Control Delay, s	4.8	0		136.8		
HCM LOS				F		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	432	-	-	-	302	
HCM Lane V/C Ratio	0.403	-	-	-	1.152	
HCM Control Delay (s)	18.8	-	-	-	136.8	
HCM Lane LOS	C	-	-	-	F	
HCM 95th %tile Q(veh)	1.9	-	-	-	14.6	

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	380	1415	820	20	5	255
Future Vol, veh/h	380	1415	820	20	5	255
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	413	1538	891	22	5	277
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	913	0	-	0	2497	457
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	1595	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	742	-	-	-	24	551
Stage 1	-	-	-	-	356	-
Stage 2	-	-	-	-	152	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	742	-	-	-	11	551
Mov Cap-2 Maneuver	-	-	-	-	302	-
Stage 1	-	-	-	-	158	-
Stage 2	-	-	-	-	152	-
Approach	EB		WB		SB	
HCM Control Delay, s	3.3		0		18.7	
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	742	-	-	-	542	
HCM Lane V/C Ratio	0.557	-	-	-	0.521	
HCM Control Delay (s)	15.8	-	-	-	18.7	
HCM Lane LOS	C	-	-	-	C	
HCM 95th %tile Q(veh)	3.5	-	-	-	3	

HCM 6th Signalized Intersection Summary
9: US-30 & Van Buren Avenue

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	470	15	20	1250	155	100	20	10	20	5	305
Future Volume (veh/h)	160	470	15	20	1250	155	100	20	10	20	5	305
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	174	511	16	22	1359	103	109	22	11	22	5	169
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	2057	64	586	1629	123	185	204	102	338	8	268
Arrive On Green	0.07	0.69	0.69	0.58	0.58	0.58	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1500	2962	93	876	2820	213	1211	991	495	1376	39	1302
Grp Volume(v), veh/h	174	258	269	22	719	743	109	0	33	22	0	174
Grp Sat Flow(s),veh/h/ln	1500	1496	1558	876	1496	1537	1211	0	1486	1376	0	1341
Q Serve(g_s), s	3.9	5.7	5.7	1.0	35.2	35.6	7.8	0.0	1.6	1.2	0.0	10.7
Cycle Q Clear(g_c), s	3.9	5.7	5.7	1.0	35.2	35.6	18.5	0.0	1.6	2.8	0.0	10.7
Prop In Lane	1.00		0.06	1.00		0.14	1.00		0.33	1.00		0.97
Lane Grp Cap(c), veh/h	246	1039	1082	586	864	888	185	0	305	338	0	276
V/C Ratio(X)	0.71	0.25	0.25	0.04	0.83	0.84	0.59	0.00	0.11	0.07	0.00	0.63
Avail Cap(c_a), veh/h	305	1039	1082	586	864	888	185	0	305	338	0	276
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.83	0.00	0.83
Uniform Delay (d), s/veh	18.7	5.1	5.1	8.2	15.4	15.5	41.2	0.0	29.0	30.2	0.0	32.6
Incr Delay (d2), s/veh	5.5	0.6	0.5	0.1	9.2	9.2	4.8	0.0	0.2	0.3	0.0	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	1.6	1.7	0.2	12.9	13.3	2.6	0.0	0.6	0.4	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.3	5.6	5.6	8.4	24.6	24.8	46.0	0.0	29.2	30.5	0.0	41.5
LnGrp LOS	C	A	A	A	C	C	D	A	C	C	A	D
Approach Vol, veh/h	701			1484			142			196		
Approach Delay, s/veh	10.3			24.5			42.1			40.2		
Approach LOS	B			C			D			D		
Timer - Assigned Phs	2			4			6			7		
Phs Duration (G+Y+Rc), s	23.0			67.0			23.0			10.5		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	18.5			62.5			18.5			9.5		
Max Q Clear Time (g_c+l1), s	20.5			7.7			12.7			5.9		
Green Ext Time (p_c), s	0.0			3.6			0.5			0.1		
Intersection Summary												
HCM 6th Ctrl Delay	22.7											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary
9: US-30 & Van Buren Avenue

2040 Total PM_Improved.syn

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	400	1415	15	25	820	20	55	25	10	15	25	255
Future Volume (veh/h)	400	1415	15	25	820	20	55	25	10	15	25	255
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	435	1538	16	27	891	22	60	27	11	16	27	168
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	488	1873	19	195	1415	35	167	219	89	333	39	241
Arrive On Green	0.17	0.62	0.62	0.03	0.47	0.47	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1500	3034	32	1500	2984	74	1188	1064	433	1370	189	1175
Grp Volume(v), veh/h	435	758	796	27	447	466	60	0	38	16	0	195
Grp Sat Flow(s),veh/h/ln	1500	1496	1569	1500	1496	1562	1188	0	1497	1370	0	1364
Q Serve(g_s), s	12.3	35.4	35.5	0.8	20.1	20.1	4.4	0.0	1.9	0.9	0.0	11.9
Cycle Q Clear(g_c), s	12.3	35.4	35.5	0.8	20.1	20.1	16.4	0.0	1.9	2.7	0.0	11.9
Prop In Lane	1.00		0.02	1.00		0.05	1.00		0.29	1.00		0.86
Lane Grp Cap(c), veh/h	488	923	969	195	709	741	167	0	308	333	0	280
V/C Ratio(X)	0.89	0.82	0.82	0.14	0.63	0.63	0.36	0.00	0.12	0.05	0.00	0.70
Avail Cap(c_a), veh/h	641	923	969	239	709	741	167	0	308	333	0	280
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.60	0.00	0.60
Uniform Delay (d), s/veh	14.2	13.4	13.4	14.5	17.7	17.7	40.7	0.0	29.1	30.3	0.0	33.1
Incr Delay (d2), s/veh	11.9	8.1	7.8	0.3	4.2	4.0	1.3	0.0	0.2	0.2	0.0	8.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	12.4	12.9	0.3	7.4	7.7	1.3	0.0	0.7	0.3	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	21.5	21.2	14.8	21.9	21.8	42.0	0.0	29.3	30.4	0.0	41.4
LnGrp LOS	C	C	C	B	C	C	D	A	C	C	A	D
Approach Vol, veh/h	1989			940			98			211		
Approach Delay, s/veh	22.4			21.7			37.1			40.6		
Approach LOS	C			C			D			D		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	23.0		7.0	60.0		23.0	19.8	47.2				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.5		5.1	52.9		18.5	24.5	33.5				
Max Q Clear Time (g_c+l1), s	18.4		2.8	37.5		13.9	14.3	22.1				
Green Ext Time (p_c), s	0.0		0.0	9.7		0.5	1.1	4.5				
Intersection Summary												
HCM 6th Ctrl Delay	23.8											
HCM 6th LOS	C											

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	206	20	4	685	1	75	16	7	2	4	106
Future Vol, veh/h	23	206	20	4	685	1	75	16	7	2	4	106
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	150	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	79	62	33	87	25	69	67	44	50	100	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	261	32	12	787	4	109	24	16	4	4	128
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	791	0	0	293	0	0	745	1140	131	1020	1170	396
Stage 1	-	-	-	-	-	-	325	325	-	813	813	-
Stage 2	-	-	-	-	-	-	420	815	-	207	357	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	825	-	-	1265	-	-	302	200	894	191	192	603
Stage 1	-	-	-	-	-	-	661	648	-	339	390	-
Stage 2	-	-	-	-	-	-	581	389	-	776	627	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	825	-	-	1265	-	-	227	190	894	169	183	603
Mov Cap-2 Maneuver	-	-	-	-	-	-	326	282	-	265	291	-
Stage 1	-	-	-	-	-	-	635	623	-	326	386	-
Stage 2	-	-	-	-	-	-	449	385	-	705	603	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			0.1			23.5			13.4		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	341	825	-	-	1265	-	-	564				
HCM Lane V/C Ratio	0.435	0.039	-	-	0.01	-	-	0.241				
HCM Control Delay (s)	23.5	9.5	-	-	7.9	-	-	13.4				
HCM Lane LOS	C	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	2.1	0.1	-	-	0	-	-	0.9				

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	91	566	82	6	278	6	41	17	7	6	20	50
Future Vol, veh/h	91	566	82	6	278	6	41	17	7	6	20	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	150	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	87	79	38	88	75	68	42	58	38	71	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	128	651	104	16	316	8	60	40	12	16	28	60
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	324	0	0	755	0	0	1111	1263	326	954	1363	162
Stage 1	-	-	-	-	-	-	907	907	-	352	352	-
Stage 2	-	-	-	-	-	-	204	356	-	602	1011	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1233	-	-	851	-	-	164	168	670	213	147	854
Stage 1	-	-	-	-	-	-	297	353	-	638	630	-
Stage 2	-	-	-	-	-	-	779	628	-	453	315	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1233	-	-	851	-	-	125	148	670	166	129	854
Mov Cap-2 Maneuver	-	-	-	-	-	-	211	238	-	259	215	-
Stage 1	-	-	-	-	-	-	266	316	-	572	618	-
Stage 2	-	-	-	-	-	-	678	616	-	348	282	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.2			0.4			33.1			17.3		
HCM LOS							D			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	238	1233	-	-	851	-	-	397				
HCM Lane V/C Ratio	0.474	0.104	-	-	0.019	-	-	0.262				
HCM Control Delay (s)	33.1	8.3	-	-	9.3	-	-	17.3				
HCM Lane LOS	D	A	-	-	A	-	-	C				
HCM 95th %tile Q(veh)	2.4	0.3	-	-	0.1	-	-	1				

Intersection												
Int Delay, s/veh	7.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	440	25	5	1150	5	100	20	10	5	5	155
Future Vol, veh/h	40	440	25	5	1150	5	100	20	10	5	5	155
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	150	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	100	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	478	27	5	1250	5	109	22	11	5	5	168

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1255	0	0	505	0	0	1202	1829	239	1599	1854	628
Stage 1	-	-	-	-	-	-	564	564	-	1263	1263	-
Stage 2	-	-	-	-	-	-	638	1265	-	336	591	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	550	-	-	1056	-	-	140	76	762	71	73	426
Stage 1	-	-	-	-	-	-	478	507	-	180	239	-
Stage 2	-	-	-	-	-	-	431	239	-	652	493	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	550	-	-	1056	-	-	~ 78	70	762	58	67	426
Mov Cap-2 Maneuver	-	-	-	-	-	-	160	151	-	134	169	-
Stage 1	-	-	-	-	-	-	441	467	-	166	238	-
Stage 2	-	-	-	-	-	-	254	238	-	565	455	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			0			86.3			22.3		
HCM LOS							F			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	169	550	-	-	1056	-	-	384
HCM Lane V/C Ratio	0.836	0.079	-	-	0.005	-	-	0.466
HCM Control Delay (s)	86.3	12.1	-	-	8.4	-	-	22.3
HCM Lane LOS	F	B	-	-	A	-	-	C
HCM 95th %tile Q(veh)	5.8	0.3	-	-	0	-	-	2.4

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

Intersection												
Int Delay, s/veh	11.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	140	1170	110	10	700	10	55	25	10	10	25	85
Future Vol, veh/h	140	1170	110	10	700	10	55	25	10	10	25	85
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	150	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	152	1272	120	11	761	11	60	27	11	11	27	92
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	772	0	0	1392	0	0	1992	2370	636	1743	2485	386
Stage 1	-	-	-	-	-	-	1576	1576	-	789	789	-
Stage 2	-	-	-	-	-	-	416	794	-	954	1696	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	839	-	-	487	-	-	~ 36	34	421	55	29	612
Stage 1	-	-	-	-	-	-	115	168	-	350	400	-
Stage 2	-	-	-	-	-	-	585	398	-	278	147	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	839	-	-	487	-	-	~ 20	~ 27	421	35	~ 23	612
Mov Cap-2 Maneuver	-	-	-	-	-	-	72	91	-	111	85	-
Stage 1	-	-	-	-	-	-	94	138	-	287	391	-
Stage 2	-	-	-	-	-	-	452	389	-	178	120	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			0.2			233.3			39.7		
HCM LOS							F			E		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	85	839	-	-	487	-	-	229				
HCM Lane V/C Ratio	1.151	0.181	-	-	0.022	-	-	0.57				
HCM Control Delay (s)	233.3	10.2	-	-	12.6	-	-	39.7				
HCM Lane LOS	F	B	-	-	B	-	-	E				
HCM 95th %tile Q(veh)	6.9	0.7	-	-	0.1	-	-	3.2				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s				+: Computation Not Defined				*: All major volume in platoon		

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	440	25	5	1150	5	0	0	10	0	0	155
Future Vol, veh/h	40	440	25	5	1150	5	0	0	10	0	0	155
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	150	200	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	100	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	478	27	5	1250	5	0	0	11	0	0	168

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1255	0	0	505	0	0	-	-	239	-	-	628
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	550	-	-	1056	-	-	0	0	762	0	0	426
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	550	-	-	1056	-	-	-	-	762	-	-	426
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0	9.8	18.9
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	762	550	-	-	1056	-	-	426
HCM Lane V/C Ratio	0.014	0.079	-	-	0.005	-	-	0.395
HCM Control Delay (s)	9.8	12.1	-	-	8.4	-	-	18.9
HCM Lane LOS	A	B	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0.3	-	-	0	-	-	1.9

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	120	1170	110	10	700	10	0	0	10	0	0	85
Future Vol, veh/h	120	1170	110	10	700	10	0	0	10	0	0	85
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	200	-	150	200	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	130	1272	120	11	761	11	0	0	11	0	0	92
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	772	0	0	1392	0	0	-	-	636	-	-	386
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	839	-	-	487	-	-	0	0	421	0	0	612
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	839	-	-	487	-	-	-	-	421	-	-	612
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			0.2			13.8			11.9		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	421	839	-	-	487	-	-	612				
HCM Lane V/C Ratio	0.026	0.155	-	-	0.022	-	-	0.151				
HCM Control Delay (s)	13.8	10.1	-	-	12.6	-	-	11.9				
HCM Lane LOS	B	B	-	-	B	-	-	B				
HCM 95th %tile Q(veh)	0.1	0.5	-	-	0.1	-	-	0.5				

Intersection												
Int Delay, s/veh	6.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	119	31	3	502	33	46	49	3	4	29	131
Future Vol, veh/h	32	119	31	3	502	33	46	49	3	4	29	131
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	375	-	375	375	-	375	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	68	48	38	85	59	77	68	75	50	60	74
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	175	65	8	591	56	60	72	4	8	48	177
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	647	0	0	240	0	0	1003	918	175	933	927	591
Stage 1	-	-	-	-	-	-	255	255	-	607	607	-
Stage 2	-	-	-	-	-	-	748	663	-	326	320	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	939	-	-	1327	-	-	221	272	868	246	268	507
Stage 1	-	-	-	-	-	-	749	696	-	483	486	-
Stage 2	-	-	-	-	-	-	404	459	-	687	652	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	939	-	-	1327	-	-	124	259	868	198	255	507
Mov Cap-2 Maneuver	-	-	-	-	-	-	171	340	-	323	360	-
Stage 1	-	-	-	-	-	-	717	666	-	462	483	-
Stage 2	-	-	-	-	-	-	235	456	-	584	624	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			0.1			26.4			20.7		
HCM LOS							D			C		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	171	351	939	-	-	1327	-	-	459			
HCM Lane V/C Ratio	0.349	0.217	0.043	-	-	0.006	-	-	0.508			
HCM Control Delay (s)	37	18.1	9	-	-	7.7	-	-	20.7			
HCM Lane LOS	E	C	A	-	-	A	-	-	C			
HCM 95th %tile Q(veh)	1.5	0.8	0.1	-	-	0	-	-	2.8			

Intersection												
Int Delay, s/veh	9.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	86	392	67	30	178	4	31	58	6	17	71	53
Future Vol, veh/h	86	392	67	30	178	4	31	58	6	17	71	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	375	-	375	375	-	375	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	93	93	33	97	68	78	81	50	61	74	74
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	128	422	72	91	184	6	40	72	12	28	96	72
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	190	0	0	494	0	0	1131	1050	422	1122	1116	184
Stage 1	-	-	-	-	-	-	678	678	-	366	366	-
Stage 2	-	-	-	-	-	-	453	372	-	756	750	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1384	-	-	1070	-	-	181	227	632	183	208	858
Stage 1	-	-	-	-	-	-	442	452	-	653	623	-
Stage 2	-	-	-	-	-	-	586	619	-	400	419	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1384	-	-	1070	-	-	100	189	632	126	173	858
Mov Cap-2 Maneuver	-	-	-	-	-	-	194	279	-	175	240	-
Stage 1	-	-	-	-	-	-	401	410	-	593	570	-
Stage 2	-	-	-	-	-	-	409	566	-	294	380	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.6			2.8			23.6			35.9		
HCM LOS							C			E		
Minor Lane/Major Mvmt	NBLn1NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	194	303	1384	-	-	1070	-	-	304			
HCM Lane V/C Ratio	0.205	0.276	0.093	-	-	0.085	-	-	0.643			
HCM Control Delay (s)	28.3	21.3	7.9	-	-	8.7	-	-	35.9			
HCM Lane LOS	D	C	A	-	-	A	-	-	E			
HCM 95th %tile Q(veh)	0.7	1.1	0.3	-	-	0.3	-	-	4.1			

Intersection												
Int Delay, s/veh	47.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	180	235	40	5	675	45	70	65	5	5	40	410
Future Vol, veh/h	180	235	40	5	675	45	70	65	5	5	40	410
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	375	-	375	375	-	375	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	196	255	43	5	734	49	76	71	5	5	43	446
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	783	0	0	298	0	0	1660	1440	255	1451	1434	734
Stage 1	-	-	-	-	-	-	647	647	-	744	744	-
Stage 2	-	-	-	-	-	-	1013	793	-	707	690	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	835	-	-	1263	-	-	78	133	784	109	134	~ 420
Stage 1	-	-	-	-	-	-	460	467	-	407	421	-
Stage 2	-	-	-	-	-	-	288	400	-	426	446	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	835	-	-	1263	-	-	-	101	784	58	102	~ 420
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ -403	158	-	154	216	-
Stage 1	-	-	-	-	-	-	352	357	-	311	419	-
Stage 2	-	-	-	-	-	-	-	398	-	260	341	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.2			0.1						181.6		
HCM LOS							-			F		
Minor Lane/Major Mvmt	NBLn1NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	- 168		835	-	-	1263	-	-	381			
HCM Lane V/C Ratio	- 0.453		0.234	-	-	0.004	-	-	1.298			
HCM Control Delay (s)	- 43		10.6	-	-	7.9	-	-	181.6			
HCM Lane LOS	- E		B	-	-	A	-	-	F			
HCM 95th %tile Q(veh)	- 2.1		0.9	-	-	0	-	-	22.5			
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	470	630	90	40	310	65	45	75	15	25	95	370
Future Vol, veh/h	470	630	90	40	310	65	45	75	15	25	95	370
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	375	-	375	375	-	375	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	93	93	92	97	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	511	677	97	43	320	71	49	82	16	27	103	402
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	391	0	0	774	0	0	2393	2176	677	2203	2202	320
Stage 1	-	-	-	-	-	-	1699	1699	-	406	406	-
Stage 2	-	-	-	-	-	-	694	477	-	1797	1796	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1168	-	-	842	-	-	~ 23	~ 46	453	32	~ 45	721
Stage 1	-	-	-	-	-	-	117	148	-	622	598	-
Stage 2	-	-	-	-	-	-	433	556	-	102	132	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1168	-	-	842	-	-	-	~ 25	453	-	~ 24	721
Mov Cap-2 Maneuver	-	-	-	-	-	-	74	~ 14	-	~ -43	~ 28	-
Stage 1	-	-	-	-	-	-	66	83	-	350	568	-
Stage 2	-	-	-	-	-	-	149	528	-	~ 1	~ 74	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.2			1								
HCM LOS							-			-		
Minor Lane/Major Mvmt	NBLn1NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	-		17	1168	-	-	842	-	-	-		
HCM Lane V/C Ratio	-		5.754	0.437	-	-	0.052	-	-	-		
HCM Control Delay (s)	\$		2587.6	10.5	-	-	9.5	-	-	-		
HCM Lane LOS	-		F	B	-	-	A	-	-	-		
HCM 95th %tile Q(veh)	-		12.9	2.3	-	-	0.2	-	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

HCM 6th Signalized Intersection Summary

2040 Total AM_Improved.syn

11: Whitney Road & US-30

02/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	235	40	5	525	45	210	110	5	5	40	410
Future Volume (veh/h)	180	235	40	5	525	45	210	110	5	5	40	410
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	196	255	43	5	571	49	228	120	5	5	43	283
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	462	1746	779	567	1347	601	394	475	20	406	499	423
Arrive On Green	0.08	0.58	0.58	0.45	0.45	0.45	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1500	2993	1335	1081	2993	1335	1054	1501	63	1266	1575	1335
Grp Volume(v), veh/h	196	255	43	5	571	49	228	0	125	5	43	283
Grp Sat Flow(s),veh/h/ln	1500	1496	1335	1081	1496	1335	1054	0	1564	1266	1575	1335
Q Serve(g_s), s	6.0	3.5	1.2	0.2	11.7	1.9	17.5	0.0	5.3	0.3	1.7	16.5
Cycle Q Clear(g_c), s	6.0	3.5	1.2	0.2	11.7	1.9	19.2	0.0	5.3	5.6	1.7	16.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	462	1746	779	567	1347	601	394	0	495	406	499	423
V/C Ratio(X)	0.42	0.15	0.06	0.01	0.42	0.08	0.58	0.00	0.25	0.01	0.09	0.67
Avail Cap(c_a), veh/h	462	1746	779	567	1347	601	394	0	495	406	499	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.51	0.51	0.51
Uniform Delay (d), s/veh	11.6	8.5	8.1	13.7	16.8	14.1	28.3	0.0	22.8	24.9	21.6	26.7
Incr Delay (d2), s/veh	0.6	0.2	0.1	0.0	1.0	0.3	6.1	0.0	1.2	0.0	0.2	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.1	0.4	0.1	4.0	0.6	4.9	0.0	2.1	0.1	0.7	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.2	8.7	8.2	13.7	17.8	14.4	34.4	0.0	24.1	24.9	21.8	30.9
LnGrp LOS	B	A	A	B	B	B	C	A	C	C	C	C
Approach Vol, veh/h	494			625			353			331		
Approach Delay, s/veh	10.1			17.5			30.8			29.7		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	2			4			6			7		
Phs Duration (G+Y+Rc), s	33.0			57.0			33.0			12.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	28.5			52.5			28.5			7.5		
Max Q Clear Time (g_c+l1), s	21.2			5.5			18.5			8.0		
Green Ext Time (p_c), s	1.0			2.0			0.9			4.3		
Intersection Summary												
HCM 6th Ctrl Delay	20.3											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

2040 Total PM_Improved.syn

11: Whitney Road & US-30

02/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	470	630	90	40	235	65	115	95	15	25	95	370
Future Volume (veh/h)	470	630	90	40	235	65	115	95	15	25	95	370
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	511	677	97	43	242	71	125	103	16	27	103	239
Peak Hour Factor	0.92	0.93	0.93	0.92	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	739	1879	838	312	999	446	300	362	56	349	429	363
Arrive On Green	0.24	0.63	0.63	0.33	0.33	0.33	0.27	0.27	0.27	0.09	0.09	0.09
Sat Flow, veh/h	1500	2993	1335	696	2993	1335	1039	1331	207	1273	1575	1335
Grp Volume(v), veh/h	511	677	97	43	242	71	125	0	119	27	103	239
Grp Sat Flow(s),veh/h/ln	1500	1496	1335	696	1496	1335	1039	0	1538	1273	1575	1335
Q Serve(g_s), s	18.6	9.8	2.6	3.9	5.3	3.4	9.7	0.0	5.5	1.8	5.5	15.6
Cycle Q Clear(g_c), s	18.6	9.8	2.6	3.9	5.3	3.4	15.2	0.0	5.5	7.3	5.5	15.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	739	1879	838	312	999	446	300	0	419	349	429	363
V/C Ratio(X)	0.69	0.36	0.12	0.14	0.24	0.16	0.42	0.00	0.28	0.08	0.24	0.66
Avail Cap(c_a), veh/h	898	1879	838	312	999	446	300	0	419	349	429	363
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.65	0.65	0.65
Uniform Delay (d), s/veh	11.5	8.1	6.7	21.3	21.7	21.1	31.8	0.0	25.8	35.7	32.3	36.9
Incr Delay (d2), s/veh	1.7	0.5	0.3	0.9	0.6	0.8	4.2	0.0	1.7	0.3	0.9	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	2.9	0.7	0.7	1.9	1.1	2.7	0.0	2.2	0.6	2.2	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	8.6	7.0	22.2	22.3	21.9	36.1	0.0	27.5	36.0	33.2	42.9
LnGrp LOS	B	A	A	C	C	C	D	A	C	D	C	D
Approach Vol, veh/h	1285			356			244			369		
Approach Delay, s/veh	10.3			22.2			31.9			39.6		
Approach LOS	B			C			C			D		
Timer - Assigned Phs	2			4			6			7		
Phs Duration (G+Y+Rc), s	29.0			61.0			29.0			26.5		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	24.5			56.5			24.5			31.5		
Max Q Clear Time (g_c+l1), s	17.2			11.8			17.6			20.6		
Green Ext Time (p_c), s	0.7			5.9			0.9			1.4		
Intersection Summary												
HCM 6th Ctrl Delay	19.3											
HCM 6th LOS	B											

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	88	41	23	407	3	140	15	3	1	4	2
Future Vol, veh/h	0	88	41	23	407	3	140	15	3	1	4	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	325	-	150	300	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	87	87	87	84	84	84	35	35	35
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	98	46	26	468	3	167	18	4	3	11	6
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	471	0	0	144	0	0	628	621	98	654	666	470
Stage 1	-	-	-	-	-	-	98	98	-	522	522	-
Stage 2	-	-	-	-	-	-	530	523	-	132	144	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1091	-	-	1438	-	-	395	403	958	380	380	594
Stage 1	-	-	-	-	-	-	908	814	-	538	531	-
Stage 2	-	-	-	-	-	-	533	530	-	871	778	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1091	-	-	1438	-	-	378	396	958	362	373	594
Mov Cap-2 Maneuver	-	-	-	-	-	-	440	449	-	447	438	-
Stage 1	-	-	-	-	-	-	908	814	-	538	521	-
Stage 2	-	-	-	-	-	-	507	520	-	849	778	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.4			18.9			12.9		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	445	1091	-	-	1438	-	-	475				
HCM Lane V/C Ratio	0.423	-	-	-	0.018	-	-	0.042				
HCM Control Delay (s)	18.9	0	-	-	7.5	-	-	12.9				
HCM Lane LOS	C	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	2.1	0	-	-	0.1	-	-	0.1				

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	326	115	7	140	0	67	9	7	2	13	1
Future Vol, veh/h	0	326	115	7	140	0	67	9	7	2	13	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	325	-	150	300	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	84	84	84	86	86	86	40	40	40
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	402	142	8	167	0	78	10	8	5	33	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	167	0	0	544	0	0	603	585	402	665	727	167
Stage 1	-	-	-	-	-	-	402	402	-	183	183	-
Stage 2	-	-	-	-	-	-	201	183	-	482	544	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1411	-	-	1025	-	-	411	423	648	374	351	877
Stage 1	-	-	-	-	-	-	625	600	-	819	748	-
Stage 2	-	-	-	-	-	-	801	748	-	565	519	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1411	-	-	1025	-	-	383	420	648	361	348	877
Mov Cap-2 Maneuver	-	-	-	-	-	-	484	489	-	447	423	-
Stage 1	-	-	-	-	-	-	625	600	-	819	742	-
Stage 2	-	-	-	-	-	-	758	742	-	548	519	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.4			14			14		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	495	1411	-	-	1025	-	-	440
HCM Lane V/C Ratio	0.195	-	-	-	0.008	-	-	0.091
HCM Control Delay (s)	14	0	-	-	8.5	-	-	14
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0.3

Intersection												
Int Delay, s/veh	6.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	185	55	30	535	5	185	20	5	5	5	5
Future Vol, veh/h	5	185	55	30	535	5	185	20	5	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	325	-	150	300	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	201	60	33	582	5	201	22	5	5	5	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	587	0	0	261	0	0	867	864	201	906	922	585
Stage 1	-	-	-	-	-	-	211	211	-	651	651	-
Stage 2	-	-	-	-	-	-	656	653	-	255	271	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	988	-	-	1303	-	-	273	292	840	257	270	511
Stage 1	-	-	-	-	-	-	791	728	-	457	465	-
Stage 2	-	-	-	-	-	-	454	464	-	749	685	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	988	-	-	1303	-	-	261	283	840	238	262	511
Mov Cap-2 Maneuver	-	-	-	-	-	-	354	368	-	351	356	-
Stage 1	-	-	-	-	-	-	787	724	-	455	453	-
Stage 2	-	-	-	-	-	-	433	452	-	718	682	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.4			30.8			14.5		
HCM LOS							D			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	360	988	-	-	1303	-	-	394
HCM Lane V/C Ratio	0.634	0.006	-	-	0.025	-	-	0.041
HCM Control Delay (s)	30.8	8.7	-	-	7.8	-	-	14.5
HCM Lane LOS	D	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	4.2	0	-	-	0.1	-	-	0.1

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	515	150	10	320	5	90	15	10	5	20	5
Future Vol, veh/h	5	515	150	10	320	5	90	15	10	5	20	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	325	-	150	300	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	560	163	11	348	5	98	16	11	5	22	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	353	0	0	723	0	0	956	945	560	1038	1106	351
Stage 1	-	-	-	-	-	-	570	570	-	373	373	-
Stage 2	-	-	-	-	-	-	386	375	-	665	733	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1206	-	-	879	-	-	238	262	528	209	210	692
Stage 1	-	-	-	-	-	-	506	505	-	648	618	-
Stage 2	-	-	-	-	-	-	637	617	-	449	426	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1206	-	-	879	-	-	221	258	528	195	206	692
Mov Cap-2 Maneuver	-	-	-	-	-	-	349	367	-	312	313	-
Stage 1	-	-	-	-	-	-	504	503	-	645	610	-
Stage 2	-	-	-	-	-	-	602	609	-	424	424	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.3			20.1			16.6		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	362	1206	-	-	879	-	-	344
HCM Lane V/C Ratio	0.345	0.005	-	-	0.012	-	-	0.095
HCM Control Delay (s)	20.1	8	-	-	9.1	-	-	16.6
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.5	0	-	-	0	-	-	0.3

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑	↑↑				↑			↑
Traffic Vol, veh/h	0	185	55	30	535	5	0	0	5	0	0	5
Future Vol, veh/h	0	185	55	30	535	5	0	0	5	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	300	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	201	60	33	582	5	0	0	5	0	0	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	261	0	0	-	-	101	-	-	294
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	1300	-	-	0	0	935	0	0	702
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	1300	-	-	-	-	935	-	-	702
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.4			8.9			10.2		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	935	-	-	1300	-	-	702					
HCM Lane V/C Ratio	0.006	-	-	0.025	-	-	0.008					
HCM Control Delay (s)	8.9	-	-	7.8	-	-	10.2					
HCM Lane LOS	A	-	-	A	-	-	B					
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-	0					

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑				↑			↑
Traffic Vol, veh/h	0	515	150	10	320	5	0	0	10	0	0	5
Future Vol, veh/h	0	515	150	10	320	5	0	0	10	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	300	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	560	163	11	348	5	0	0	11	0	0	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	723	0	0	-	-	280	-	-	177
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	875	-	-	0	0	717	0	0	835
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	875	-	-	-	-	717	-	-	835
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.3			10.1			9.3		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1					
Capacity (veh/h)	717	-	-	875	-	-	835					
HCM Lane V/C Ratio	0.015	-	-	0.012	-	-	0.007					
HCM Control Delay (s)	10.1	-	-	9.2	-	-	9.3					
HCM Lane LOS	B	-	-	A	-	-	A					
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0					

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	91	0	1	378	198	0	2	0	62	0	10
Future Vol, veh/h	7	91	0	1	378	198	0	2	0	62	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	350	-	-	325	-	325	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	29	81	92	25	79	87	92	50	92	78	92	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	112	0	4	478	228	0	4	0	79	0	20
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	478	0	0	112	0	0	656	646	112	648	646	478
Stage 1	-	-	-	-	-	-	160	160	-	486	486	-
Stage 2	-	-	-	-	-	-	496	486	-	162	160	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1084	-	-	1478	-	0	379	390	941	383	390	587
Stage 1	-	-	-	-	-	0	842	766	-	563	551	-
Stage 2	-	-	-	-	-	0	556	551	-	840	766	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	1084	-	-	1478	-	-	359	380	941	373	380	587
Mov Cap-2 Maneuver	-	-	-	-	-	-	433	442	-	456	452	-
Stage 1	-	-	-	-	-	-	823	749	-	551	549	-
Stage 2	-	-	-	-	-	-	536	549	-	817	749	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.5			0.1			13.2			14.5		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	SBLn1					
Capacity (veh/h)	442	1084	-	-	1478	-	477					
HCM Lane V/C Ratio	0.009	0.022	-	-	0.003	-	0.209					
HCM Control Delay (s)	13.2	8.4	-	-	7.4	-	14.5					
HCM Lane LOS	B	A	-	-	A	-	B					
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	0.8					

Intersection												
Int Delay, s/veh	6.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	306	0	0	147	140	1	1	0	209	4	5
Future Vol, veh/h	7	306	0	0	147	140	1	1	0	209	4	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	350	-	-	325	-	325	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	58	89	92	92	83	78	25	25	92	86	50	62
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	344	0	0	177	179	4	4	0	243	8	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	177	0	0	344	0	0	553	545	344	547	545	177
Stage 1	-	-	-	-	-	-	368	368	-	177	177	-
Stage 2	-	-	-	-	-	-	185	177	-	370	368	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1399	-	-	1215	-	0	444	446	699	448	446	866
Stage 1	-	-	-	-	-	0	652	621	-	825	753	-
Stage 2	-	-	-	-	-	0	817	753	-	650	621	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1399	-	-	1215	-	-	432	442	699	442	442	866
Mov Cap-2 Maneuver	-	-	-	-	-	-	517	504	-	522	505	-
Stage 1	-	-	-	-	-	-	646	615	-	818	753	-
Stage 2	-	-	-	-	-	-	801	753	-	640	615	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0			12.2			18.2		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	510	1399	-	-	1215	-	528
HCM Lane V/C Ratio	0.016	0.009	-	-	-	-	0.491
HCM Control Delay (s)	12.2	7.6	-	-	0	-	18.2
HCM Lane LOS	B	A	-	-	A	-	C
HCM 95th %tile Q(veh)	0	0	-	-	0	-	2.7

Intersection												
Int Delay, s/veh	6.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	185	0	0	535	480	0	0	0	210	0	15
Future Vol, veh/h	10	185	0	0	535	480	0	0	0	210	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	350	-	-	325	-	325	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	201	0	0	582	522	0	0	0	228	0	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	582	0	0	201	0	0	813	805	201	805	805	582
Stage 1	-	-	-	-	-	-	223	223	-	582	582	-
Stage 2	-	-	-	-	-	-	590	582	-	223	223	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	992	-	-	1371	-	0	297	316	840	301	316	513
Stage 1	-	-	-	-	-	0	780	719	-	499	499	-
Stage 2	-	-	-	-	-	0	494	499	-	780	719	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	992	-	-	1371	-	-	285	313	840	299	313	513
Mov Cap-2 Maneuver	-	-	-	-	-	-	381	397	-	399	401	-
Stage 1	-	-	-	-	-	-	771	711	-	494	499	-
Stage 2	-	-	-	-	-	-	478	499	-	771	711	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0			0			26.5		
HCM LOS							A			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	SBLn1					
Capacity (veh/h)	-	992	-	-	1371	-	405					
HCM Lane V/C Ratio	-	0.011	-	-	-	-	0.604					
HCM Control Delay (s)	0	8.7	-	-	0	-	26.5					
HCM Lane LOS	A	A	-	-	A	-	D					
HCM 95th %tile Q(veh)	-	0	-	-	0	-	3.8					

Intersection												
Int Delay, s/veh	61.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	500	0	0	325	375	0	0	0	435	0	10
Future Vol, veh/h	10	500	0	0	325	375	0	0	0	435	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	350	-	-	325	-	325	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	543	0	0	353	408	0	0	0	473	0	11
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	353	0	0	543	0	0	924	918	543	918	918	353
Stage 1	-	-	-	-	-	-	565	565	-	353	353	-
Stage 2	-	-	-	-	-	-	359	353	-	565	565	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1206	-	-	1026	-	0	250	272	540	~ 252	272	691
Stage 1	-	-	-	-	-	0	510	508	-	664	631	-
Stage 2	-	-	-	-	-	0	659	631	-	510	508	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	1206	-	-	1026	-	-	244	270	540	~ 250	270	691
Mov Cap-2 Maneuver	-	-	-	-	-	-	366	374	-	~ 372	376	-
Stage 1	-	-	-	-	-	-	505	503	-	658	631	-
Stage 2	-	-	-	-	-	-	649	631	-	505	503	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			0			177.5		
HCM LOS							A			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	SBLn1					
Capacity (veh/h)	-	1206	-	-	1026	-	376					
HCM Lane V/C Ratio	-	0.009	-	-	-	-	1.286					
HCM Control Delay (s)	0	8	-	-	0	-	177.5					
HCM Lane LOS	A	A	-	-	A	-	F					
HCM 95th %tile Q(veh)	-	0	-	-	0	-	21.8					
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

HCM 6th Signalized Intersection Summary

2040 Total AM_Improved.syn

13: Dell Range Boulevard & US-30

02/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	185	10	10	535	480	10	0	10	210	0	15
Future Volume (veh/h)	10	185	10	10	535	480	10	0	10	210	0	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	11	201	11	11	582	0	11	0	11	228	0	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	630	1908	104	823	1978		401	0	319	406	0	319
Arrive On Green	0.66	0.66	0.66	1.00	1.00	0.00	0.24	0.00	0.24	0.24	0.00	0.24
Sat Flow, veh/h	833	2886	157	1170	2993	1335	1397	0	1335	1404	0	1335
Grp Volume(v), veh/h	11	104	108	11	582	0	11	0	11	228	0	16
Grp Sat Flow(s),veh/h/ln	833	1496	1547	1170	1496	1335	1397	0	1335	1404	0	1335
Q Serve(g_s), s	0.4	2.3	2.3	0.0	0.0	0.0	0.6	0.0	0.6	13.4	0.0	0.8
Cycle Q Clear(g_c), s	0.4	2.3	2.3	2.3	0.0	0.0	1.4	0.0	0.6	14.0	0.0	0.8
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	630	989	1023	823	1978		401	0	319	406	0	319
V/C Ratio(X)	0.02	0.10	0.11	0.01	0.29		0.03	0.00	0.03	0.56	0.00	0.05
Avail Cap(c_a), veh/h	630	989	1023	823	1978		401	0	319	406	0	319
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.19	0.19	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.2	5.6	5.6	0.0	0.0	0.0	26.9	0.0	26.3	31.6	0.0	26.4
Incr Delay (d2), s/veh	0.1	0.2	0.2	0.0	0.1	0.0	0.1	0.0	0.2	5.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.7	0.7	0.0	0.0	0.0	0.2	0.0	0.2	5.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.3	5.8	5.8	0.1	0.1	0.0	27.0	0.0	26.5	37.2	0.0	26.7
LnGrp LOS	A	A	A	A	A		C	A	C	D	A	C
Approach Vol, veh/h	223			593			A			244		
Approach Delay, s/veh	5.7			0.1			26.8			36.5		
Approach LOS	A			A			C			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	26.0			64.0			26.0			64.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	21.5			59.5			21.5			59.5		
Max Q Clear Time (g_c+l1), s	3.4			4.3			16.0			4.3		
Green Ext Time (p_c), s	0.0			1.4			0.4			4.7		
Intersection Summary												
HCM 6th Ctrl Delay	10.0											
HCM 6th LOS	A											

HCM 6th Signalized Intersection Summary
13: Dell Range Boulevard & US-30

2040 Total PM_Improved.syn

02/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	500	10	10	325	375	10	0	10	435	0	10
Future Volume (veh/h)	10	500	10	10	325	375	10	0	10	435	0	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	11	543	11	11	353	0	11	0	11	473	0	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	983	20	233	981		878	0	764	878	0	764
Arrive On Green	0.33	0.33	0.33	0.11	0.11	0.00	0.57	0.00	0.57	0.57	0.00	0.57
Sat Flow, veh/h	1028	3000	61	854	2993	1335	1404	0	1335	1404	0	1335
Grp Volume(v), veh/h	11	271	283	11	353	0	11	0	11	473	0	11
Grp Sat Flow(s),veh/h/ln	1028	1496	1564	854	1496	1335	1404	0	1335	1404	0	1335
Q Serve(g_s), s	0.8	13.4	13.4	1.1	9.9	0.0	0.3	0.0	0.3	19.7	0.0	0.3
Cycle Q Clear(g_c), s	10.6	13.4	13.4	14.5	9.9	0.0	0.6	0.0	0.3	20.1	0.0	0.3
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	490	513	233	981		878	0	764	878	0	764
V/C Ratio(X)	0.04	0.55	0.55	0.05	0.36		0.01	0.00	0.01	0.54	0.00	0.01
Avail Cap(c_a), veh/h	304	490	513	233	981		878	0	764	878	0	764
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.74	0.74	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.8	24.8	24.8	39.8	31.4	0.0	8.4	0.0	8.3	12.6	0.0	8.3
Incr Delay (d2), s/veh	0.2	4.4	4.2	0.3	0.8	0.0	0.0	0.0	0.0	2.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	5.2	5.4	0.3	4.0	0.0	0.1	0.0	0.1	6.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	29.2	29.1	40.0	32.1	0.0	8.5	0.0	8.3	15.0	0.0	8.3
LnGrp LOS	C	C	C	D	C		A	A	A	B	A	A
Approach Vol, veh/h	565			364			22			484		
Approach Delay, s/veh	29.1			32.4			8.4			14.8		
Approach LOS	C			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	56.0			34.0			56.0			34.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	51.5			29.5			51.5			29.5		
Max Q Clear Time (g_c+l1), s	2.6			15.4			22.1			16.5		
Green Ext Time (p_c), s	0.1			2.9			1.6			1.9		
Intersection Summary												
HCM 6th Ctrl Delay	24.8											
HCM 6th LOS	C											

Intersection						
Int Delay, s/veh	3.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	127	509	4	6	135
Future Vol, veh/h	15	127	509	4	6	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	325	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	91	91	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	146	559	4	7	165
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	563	0	-	0	741	561
Stage 1	-	-	-	-	561	-
Stage 2	-	-	-	-	180	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1008	-	-	-	384	527
Stage 1	-	-	-	-	571	-
Stage 2	-	-	-	-	851	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1008	-	-	-	377	527
Mov Cap-2 Maneuver	-	-	-	-	464	-
Stage 1	-	-	-	-	561	-
Stage 2	-	-	-	-	851	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		15.2		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1008	-	-	-	524	
HCM Lane V/C Ratio	0.017	-	-	-	0.328	
HCM Control Delay (s)	8.6	-	-	-	15.2	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0.1	-	-	-	1.4	

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	98	425	268	1	2	50
Future Vol, veh/h	98	425	268	1	2	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	325	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	79	79	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	120	518	339	1	2	62
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	340	0	-	0	1098	340
Stage 1	-	-	-	-	340	-
Stage 2	-	-	-	-	758	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1219	-	-	-	235	702
Stage 1	-	-	-	-	721	-
Stage 2	-	-	-	-	463	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1219	-	-	-	212	702
Mov Cap-2 Maneuver	-	-	-	-	286	-
Stage 1	-	-	-	-	650	-
Stage 2	-	-	-	-	463	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.6	0		11		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1219	-	-	-	665	
HCM Lane V/C Ratio	0.098	-	-	-	0.097	
HCM Control Delay (s)	8.3	-	-	-	11	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.3	-	-	-	0.3	

Intersection												
Int Delay, s/veh	304.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	270	90	130	610	20	260	35	25	20	90	145
Future Vol, veh/h	35	270	90	130	610	20	260	35	25	20	90	145
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	325	-	-	150	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	293	98	141	663	22	283	38	27	22	98	158
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	685	0	0	391	0	0	1502	1385	342	1407	1423	674
Stage 1	-	-	-	-	-	-	418	418	-	956	956	-
Stage 2	-	-	-	-	-	-	1084	967	-	451	467	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	908	-	-	1168	-	-	~ 100	143	701	117	136	455
Stage 1	-	-	-	-	-	-	612	591	-	310	336	-
Stage 2	-	-	-	-	-	-	~ 263	333	-	588	562	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	908	-	-	1168	-	-	~ 36	120	701	85	115	455
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 56	204	-	188	205	-
Stage 1	-	-	-	-	-	-	586	566	-	297	295	-
Stage 2	-	-	-	-	-	-	~ 101	293	-	505	538	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			1.5			\$ 1602.3			51.6		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	56 290		908	-	-	1168	-	-	188	310		
HCM Lane V/C Ratio	5.047 0.225		0.042	-	-	0.121	-	-	0.116	0.824		
HCM Control Delay (s)	\$ 1967.2		21	9.1	-	-	8.5	-	-	26.6	53.7	
HCM Lane LOS	F C		A	-	-	A	-	-	D	F		
HCM 95th %tile Q(veh)	31.7 0.8		0.1	-	-	0.4	-	-	0.4	7		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	41.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	105	580	270	50	490	15	125	125	135	15	50	85
Future Vol, veh/h	105	580	270	50	490	15	125	125	135	15	50	85
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	325	-	-	150	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	114	630	293	54	533	16	136	136	147	16	54	92
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	549	0	0	923	0	0	1727	1662	777	1795	1800	541
Stage 1	-	-	-	-	-	-	1005	1005	-	649	649	-
Stage 2	-	-	-	-	-	-	722	657	-	1146	1151	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1021	-	-	740	-	-	~ 70	~ 97	397	62	80	541
Stage 1	-	-	-	-	-	-	291	319	-	458	466	-
Stage 2	-	-	-	-	-	-	418	462	-	242	272	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1021	-	-	740	-	-	~ 36	~ 80	397	~ 12	66	541
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 108	172	-	~ 15	144	-
Stage 1	-	-	-	-	-	-	258	283	-	407	432	-
Stage 2	-	-	-	-	-	-	281	428	-	70	242	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			0.9			181			91		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	108 244		1021	-	-	740	-	-	15	268		
HCM Lane V/C Ratio	1.258 1.158		0.112	-	-	0.073	-	-	1.087	0.548		
HCM Control Delay (s)	245.5 150		9	-	-	10.2	-	-	\$ 607.7	33.6		
HCM Lane LOS	F F		A	-	-	B	-	-	F	D		
HCM 95th %tile Q(veh)	9.1 13		0.4	-	-	0.2	-	-	2.6	3		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

HCM 6th Signalized Intersection Summary
14: US-30 & Christensen Road

2040 Total AM_Improved.syn

05/31/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	270	90	130	610	20	260	35	25	20	90	145
Future Volume (veh/h)	35	270	90	130	610	20	260	35	25	20	90	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	38	293	98	141	663	22	283	38	27	22	98	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	325	1513	675	498	1261	563	407	338	240	570	248	316
Arrive On Green	0.01	0.17	0.17	0.42	0.42	0.42	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1500	2993	1335	993	2993	1335	1158	857	609	1337	629	802
Grp Volume(v), veh/h	38	293	98	141	663	22	283	0	65	22	0	223
Grp Sat Flow(s),veh/h/ln	1500	1496	1335	993	1496	1335	1158	0	1465	1337	0	1431
Q Serve(g_s), s	1.2	7.6	5.6	8.6	14.8	0.9	20.9	0.0	2.5	1.0	0.0	10.1
Cycle Q Clear(g_c), s	1.2	7.6	5.6	8.6	14.8	0.9	30.9	0.0	2.5	3.5	0.0	10.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	1.00		0.56
Lane Grp Cap(c), veh/h	325	1513	675	498	1261	563	407	0	578	570	0	564
V/C Ratio(X)	0.12	0.19	0.15	0.28	0.53	0.04	0.69	0.00	0.11	0.04	0.00	0.40
Avail Cap(c_a), veh/h	366	1513	675	498	1261	563	407	0	578	570	0	564
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.6	21.7	20.9	17.6	19.3	15.3	30.6	0.0	17.3	18.4	0.0	19.5
Incr Delay (d2), s/veh	0.1	0.3	0.4	1.4	1.6	0.1	9.4	0.0	0.4	0.1	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.9	1.9	2.1	5.2	0.3	6.7	0.0	0.9	0.3	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.7	21.9	21.3	19.0	20.9	15.4	40.1	0.0	17.7	18.5	0.0	21.6
LnGrp LOS	B	C	C	B	C	B	D	A	B	B	A	C
Approach Vol, veh/h	429			826			348			245		
Approach Delay, s/veh	21.2			20.4			35.9			21.3		
Approach LOS	C			C			D			C		
Timer - Assigned Phs	2			4			6			7		
Phs Duration (G+Y+Rc), s	40.0			50.0			40.0			7.6		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	35.5			45.5			35.5			5.5		
Max Q Clear Time (g_c+l1), s	32.9			9.6			12.1			3.2		
Green Ext Time (p_c), s	0.4			2.4			1.4			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	23.6											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary
14: US-30 & Christensen Road

2040 Total PM_Improved.syn

05/31/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	580	270	50	490	15	125	125	135	15	50	85
Future Volume (veh/h)	105	580	270	50	490	15	125	125	135	15	50	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575	1575
Adj Flow Rate, veh/h	114	630	293	54	533	16	136	136	114	16	54	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	521	1879	838	352	1572	701	349	216	181	217	187	205
Arrive On Green	0.02	0.21	0.21	0.53	0.53	0.53	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1500	2993	1335	606	2993	1335	1280	792	664	1130	688	752
Grp Volume(v), veh/h	114	630	293	54	533	16	136	0	250	16	0	113
Grp Sat Flow(s),veh/h/ln	1500	1496	1335	606	1496	1335	1280	0	1456	1130	0	1440
Q Serve(g_s), s	2.9	16.1	16.9	4.9	9.3	0.5	8.5	0.0	13.6	1.1	0.0	5.6
Cycle Q Clear(g_c), s	2.9	16.1	16.9	11.8	9.3	0.5	14.0	0.0	13.6	14.7	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.52
Lane Grp Cap(c), veh/h	521	1879	838	352	1572	701	349	0	396	217	0	392
V/C Ratio(X)	0.22	0.34	0.35	0.15	0.34	0.02	0.39	0.00	0.63	0.07	0.00	0.29
Avail Cap(c_a), veh/h	534	1879	838	352	1572	701	349	0	396	217	0	392
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.9	19.7	20.0	15.0	12.3	10.3	31.4	0.0	28.8	35.2	0.0	25.9
Incr Delay (d2), s/veh	0.2	0.4	0.9	0.9	0.6	0.1	3.3	0.0	7.4	0.7	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	6.5	6.2	0.7	3.0	0.2	2.9	0.0	5.4	0.3	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	20.0	20.8	16.0	12.9	10.3	34.7	0.0	36.2	35.9	0.0	27.7
LnGrp LOS	A	C	C	B	B	B	C	A	D	D	A	C
Approach Vol, veh/h	1037			603			386			129		
Approach Delay, s/veh	19.1			13.1			35.7			28.7		
Approach LOS	B			B			D			C		
Timer - Assigned Phs	2			4			6			7		
Phs Duration (G+Y+Rc), s	29.0			61.0			29.0			9.2		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	24.5			56.5			24.5			5.5		
Max Q Clear Time (g_c+l1), s	16.0			18.9			16.7			4.9		
Green Ext Time (p_c), s	1.3			6.3			0.3			4.7		
Intersection Summary												
HCM 6th Ctrl Delay	20.9											
HCM 6th LOS	C											

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	99	17	3	403	0	12	4	4	1	6	72
Future Vol, veh/h	9	99	17	3	403	0	12	4	4	1	6	72
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	325	-	325	325	-	325	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	95	95	95	71	71	71	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	111	19	3	424	0	17	6	6	1	8	90
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	424	0	0	130	0	0	610	561	111	577	580	424
Stage 1	-	-	-	-	-	-	131	131	-	430	430	-
Stage 2	-	-	-	-	-	-	479	430	-	147	150	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1135	-	-	1455	-	-	407	436	942	428	426	630
Stage 1	-	-	-	-	-	-	873	788	-	603	583	-
Stage 2	-	-	-	-	-	-	568	583	-	856	773	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1135	-	-	1455	-	-	342	431	942	418	421	630
Mov Cap-2 Maneuver	-	-	-	-	-	-	406	485	-	496	484	-
Stage 1	-	-	-	-	-	-	865	781	-	598	582	-
Stage 2	-	-	-	-	-	-	480	582	-	837	766	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.1			13			12		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	476	1135	-	-	1455	-	-	614				
HCM Lane V/C Ratio	0.059	0.009	-	-	0.002	-	-	0.161				
HCM Control Delay (s)	13	8.2	-	-	7.5	-	-	12				
HCM Lane LOS	B	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.6				

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	64	385	13	4	198	2	16	12	14	3	1	22
Future Vol, veh/h	64	385	13	4	198	2	16	12	14	3	1	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	325	-	325	325	-	325	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	78	78	78	75	75	75	65	65	65
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	74	443	15	5	254	3	21	16	19	5	2	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	257	0	0	458	0	0	875	858	443	880	870	254
Stage 1	-	-	-	-	-	-	591	591	-	264	264	-
Stage 2	-	-	-	-	-	-	284	267	-	616	606	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1308	-	-	1103	-	-	270	294	615	268	290	785
Stage 1	-	-	-	-	-	-	493	494	-	741	690	-
Stage 2	-	-	-	-	-	-	723	688	-	478	487	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1308	-	-	1103	-	-	245	276	615	240	272	785
Mov Cap-2 Maneuver	-	-	-	-	-	-	349	363	-	336	364	-
Stage 1	-	-	-	-	-	-	465	466	-	699	687	-
Stage 2	-	-	-	-	-	-	687	685	-	422	459	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0.2			15.1			10.9		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	413	1308	-	-	1103	-	-	655
HCM Lane V/C Ratio	0.136	0.056	-	-	0.005	-	-	0.061
HCM Control Delay (s)	15.1	7.9	-	-	8.3	-	-	10.9
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.5	0.2	-	-	0	-	-	0.2

Intersection												
Int Delay, s/veh	3.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	255	35	30	550	5	60	5	5	5	10	95
Future Vol, veh/h	15	255	35	30	550	5	60	5	5	5	10	95
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	325	-	325	325	-	325	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	95	95	95	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	277	38	32	579	5	65	5	5	5	11	103
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	584	0	0	315	0	0	1012	957	277	976	990	579
Stage 1	-	-	-	-	-	-	309	309	-	643	643	-
Stage 2	-	-	-	-	-	-	703	648	-	333	347	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	991	-	-	1245	-	-	218	258	762	230	246	515
Stage 1	-	-	-	-	-	-	701	660	-	462	468	-
Stage 2	-	-	-	-	-	-	428	466	-	681	635	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	991	-	-	1245	-	-	165	247	762	219	236	515
Mov Cap-2 Maneuver	-	-	-	-	-	-	254	344	-	337	340	-
Stage 1	-	-	-	-	-	-	690	649	-	455	456	-
Stage 2	-	-	-	-	-	-	325	454	-	660	625	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.4			23.3			14.9		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	272	991	-	-	1245	-	-	481				
HCM Lane V/C Ratio	0.28	0.016	-	-	0.025	-	-	0.249				
HCM Control Delay (s)	23.3	8.7	-	-	8	-	-	14.9				
HCM Lane LOS	C	A	-	-	A	-	-	B				
HCM 95th %tile O(veh)	1.1	0.1	-	-	0.1	-	-	1				

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	550	90	30	400	5	50	15	20	5	5	30
Future Vol, veh/h	85	550	90	30	400	5	50	15	20	5	5	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	325	-	325	325	-	325	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	92	598	98	33	435	5	54	16	22	5	5	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	440	0	0	696	0	0	1305	1288	598	1351	1381	435
Stage 1	-	-	-	-	-	-	782	782	-	501	501	-
Stage 2	-	-	-	-	-	-	523	506	-	850	880	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1120	-	-	900	-	-	137	164	502	127	144	621
Stage 1	-	-	-	-	-	-	387	405	-	552	543	-
Stage 2	-	-	-	-	-	-	537	540	-	355	365	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1120	-	-	900	-	-	116	145	502	105	127	621
Mov Cap-2 Maneuver	-	-	-	-	-	-	223	247	-	200	227	-
Stage 1	-	-	-	-	-	-	355	372	-	507	523	-
Stage 2	-	-	-	-	-	-	485	520	-	298	335	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			0.6			26			14.6		
HCM LOS							D			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	262	1120	-	-	900	-	-	420
HCM Lane V/C Ratio	0.353	0.082	-	-	0.036	-	-	0.104
HCM Control Delay (s)	26	8.5	-	-	9.2	-	-	14.6
HCM Lane LOS	D	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.5	0.3	-	-	0.1	-	-	0.3

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	255	35	30	550	5	60	5	5	5	10	95
Future Vol, veh/h	15	255	35	30	550	5	60	5	5	5	10	95
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	325	-	325	325	-	325	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	95	95	95	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	277	38	32	579	5	65	5	5	5	11	103
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	584	0	0	315	0	0	668	957	139	816	990	290
Stage 1	-	-	-	-	-	-	309	309	-	643	643	-
Stage 2	-	-	-	-	-	-	359	648	-	173	347	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	987	-	-	1242	-	-	344	256	884	269	245	707
Stage 1	-	-	-	-	-	-	676	658	-	428	467	-
Stage 2	-	-	-	-	-	-	632	464	-	812	633	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	987	-	-	1242	-	-	278	245	884	256	235	707
Mov Cap-2 Maneuver	-	-	-	-	-	-	381	342	-	347	339	-
Stage 1	-	-	-	-	-	-	665	647	-	421	455	-
Stage 2	-	-	-	-	-	-	513	452	-	787	623	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.4			16.3			12.2		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	394	987	-	-	1242	-	-	617				
HCM Lane V/C Ratio	0.193	0.017	-	-	0.025	-	-	0.194				
HCM Control Delay (s)	16.3	8.7	-	-	8	-	-	12.2				
HCM Lane LOS	C	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0.1	-	-	0.7				

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	550	90	30	400	5	50	15	20	5	5	30
Future Vol, veh/h	85	550	90	30	400	5	50	15	20	5	5	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	325	-	325	325	-	325	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	92	598	98	33	435	5	54	16	22	5	5	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	440	0	0	696	0	0	1068	1288	299	992	1381	218
Stage 1	-	-	-	-	-	-	782	782	-	501	501	-
Stage 2	-	-	-	-	-	-	286	506	-	491	880	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1116	-	-	896	-	-	176	163	697	200	143	786
Stage 1	-	-	-	-	-	-	353	403	-	521	541	-
Stage 2	-	-	-	-	-	-	697	538	-	528	363	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1116	-	-	896	-	-	151	144	697	168	126	786
Mov Cap-2 Maneuver	-	-	-	-	-	-	248	246	-	279	225	-
Stage 1	-	-	-	-	-	-	324	370	-	478	521	-
Stage 2	-	-	-	-	-	-	637	518	-	449	333	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			0.6			22.9			12.7		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	292	1116	-	-	896	-	-	511
HCM Lane V/C Ratio	0.316	0.083	-	-	0.036	-	-	0.085
HCM Control Delay (s)	22.9	8.5	-	-	9.2	-	-	12.7
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.3	0.3	-	-	0.1	-	-	0.3

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	99	353	6	7	39
Future Vol, veh/h	6	99	353	6	7	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	325	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	92	92	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	116	384	7	8	44

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	391	0	0 518 388
Stage 1	-	-	- 388 -
Stage 2	-	-	- 130 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1168	-	- 518 660
Stage 1	-	-	- 686 -
Stage 2	-	-	- 896 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1168	-	- 515 660
Mov Cap-2 Maneuver	-	-	- 576 -
Stage 1	-	-	- 682 -
Stage 2	-	-	- 896 -

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1168	-	-	-	646
HCM Lane V/C Ratio	0.006	-	-	-	0.081
HCM Control Delay (s)	8.1	-	-	-	11.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	37	321	204	4	4	18
Future Vol, veh/h	37	321	204	4	4	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	325	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	76	76	69	69
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	401	268	5	6	26
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	273	0	-	0	764	271
Stage 1	-	-	-	-	271	-
Stage 2	-	-	-	-	493	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1290	-	-	-	372	768
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	614	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1290	-	-	-	359	768
Mov Cap-2 Maneuver	-	-	-	-	452	-
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	614	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.8	0		10.5		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1290	-	-	-	681	
HCM Lane V/C Ratio	0.036	-	-	-	0.047	
HCM Control Delay (s)	7.9	-	-	-	10.5	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	225	415	20	40	115
Future Vol, veh/h	20	225	415	20	40	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	325	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	245	451	22	43	125
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	473	0	-	0	751	462
Stage 1	-	-	-	-	462	-
Stage 2	-	-	-	-	289	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1089	-	-	-	378	600
Stage 1	-	-	-	-	634	-
Stage 2	-	-	-	-	760	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1089	-	-	-	370	600
Mov Cap-2 Maneuver	-	-	-	-	474	-
Stage 1	-	-	-	-	621	-
Stage 2	-	-	-	-	760	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.7	0		14.1		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1089	-	-	-	561	
HCM Lane V/C Ratio	0.02	-	-	-	0.3	
HCM Control Delay (s)	8.4	-	-	-	14.1	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	1.3	

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	95	500	405	20	35	50
Future Vol, veh/h	95	500	405	20	35	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	325	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	103	543	440	22	38	54
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	462	0	-	0	1200	451
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	749	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1099	-	-	-	204	608
Stage 1	-	-	-	-	642	-
Stage 2	-	-	-	-	467	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1099	-	-	-	185	608
Mov Cap-2 Maneuver	-	-	-	-	282	-
Stage 1	-	-	-	-	582	-
Stage 2	-	-	-	-	467	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.4	0		16.2		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1099	-	-	-	412	
HCM Lane V/C Ratio	0.094	-	-	-	0.224	
HCM Control Delay (s)	8.6	-	-	-	16.2	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0.3	-	-	-	0.8	

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	225	415	20	40	115
Future Vol, veh/h	20	225	415	20	40	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	325	-	-	150	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	245	451	22	43	125
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	473	0	-	0	618	226
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	167	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1085	-	-	-	421	777
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	845	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1085	-	-	-	413	777
Mov Cap-2 Maneuver	-	-	-	-	493	-
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	845	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.7		0		12.1	
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1085	-	-	-	676	
HCM Lane V/C Ratio	0.02	-	-	-	0.249	
HCM Control Delay (s)	8.4	-	-	-	12.1	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	1	

Intersection

Int Delay, s/veh 1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	95	500	405	20	35	50
Future Vol, veh/h	95	500	405	20	35	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	325	-	-	150	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	103	543	440	22	38	54

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	462	0	0 918 220
Stage 1	-	-	- 440 -
Stage 2	-	-	- 478 -
Critical Hdwy	4.14	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	2.22	-	- 3.52 3.32
Pot Cap-1 Maneuver	1095	-	- 271 784
Stage 1	-	-	- 616 -
Stage 2	-	-	- 590 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1095	-	- 246 784
Mov Cap-2 Maneuver	-	-	- 349 -
Stage 1	-	-	- 558 -
Stage 2	-	-	- 590 -

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	13.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1095	-	-	-	518
HCM Lane V/C Ratio	0.094	-	-	-	0.178
HCM Control Delay (s)	8.6	-	-	-	13.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.6

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	35	84	79	197	1	74	1	40	0	6	0
Future Vol, veh/h	2	35	84	79	197	1	74	1	40	0	6	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	300	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	87	87	87	87	87	87	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	50	120	91	226	1	85	1	46	0	8	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	227	0	0	170	0	0	469	465	50	549	585	227
Stage 1	-	-	-	-	-	-	56	56	-	409	409	-
Stage 2	-	-	-	-	-	-	413	409	-	140	176	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1341	-	-	1407	-	-	505	495	1018	446	423	812
Stage 1	-	-	-	-	-	-	956	848	-	619	596	-
Stage 2	-	-	-	-	-	-	616	596	-	863	753	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1341	-	-	1407	-	-	473	462	1018	403	395	812
Mov Cap-2 Maneuver	-	-	-	-	-	-	502	490	-	486	452	-
Stage 1	-	-	-	-	-	-	954	846	-	618	557	-
Stage 2	-	-	-	-	-	-	568	557	-	821	751	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			2.2			12.5			13.1		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	609	1341	-	-	1407	-	-	452
HCM Lane V/C Ratio	0.217	0.002	-	-	0.065	-	-	0.018
HCM Control Delay (s)	12.5	7.7	-	-	7.7	-	-	13.1
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.8	0	-	-	0.2	-	-	0.1

Intersection												
Int Delay, s/veh	5.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	170	101	56	87	3	121	0	90	3	3	5
Future Vol, veh/h	1	170	101	56	87	3	121	0	90	3	3	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	300	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	91	91	91	80	80	80	34	34	34
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	202	120	62	96	3	151	0	113	9	9	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	99	0	0	322	0	0	438	427	202	543	546	98
Stage 1	-	-	-	-	-	-	204	204	-	222	222	-
Stage 2	-	-	-	-	-	-	234	223	-	321	324	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1494	-	-	1238	-	-	529	520	839	451	445	958
Stage 1	-	-	-	-	-	-	798	733	-	780	720	-
Stage 2	-	-	-	-	-	-	769	719	-	691	650	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1494	-	-	1238	-	-	494	493	839	375	422	958
Mov Cap-2 Maneuver	-	-	-	-	-	-	566	546	-	447	478	-
Stage 1	-	-	-	-	-	-	797	732	-	779	684	-
Stage 2	-	-	-	-	-	-	710	683	-	598	649	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			3.1			14.1			11.3		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	657	1494	-	-	1238	-	-	604
HCM Lane V/C Ratio	0.401	0.001	-	-	0.05	-	-	0.054
HCM Control Delay (s)	14.1	7.4	-	-	8.1	-	-	11.3
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.9	0	-	-	0.2	-	-	0.2

Intersection												
Int Delay, s/veh	6.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	125	140	105	310	5	120	5	135	5	10	5
Future Vol, veh/h	5	125	140	105	310	5	120	5	135	5	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	300	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	136	152	114	337	5	130	5	147	5	11	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	342	0	0	288	0	0	722	716	136	866	866	340
Stage 1	-	-	-	-	-	-	146	146	-	568	568	-
Stage 2	-	-	-	-	-	-	576	570	-	298	298	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1217	-	-	1274	-	-	342	356	913	274	291	702
Stage 1	-	-	-	-	-	-	857	776	-	508	506	-
Stage 2	-	-	-	-	-	-	503	505	-	711	667	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1217	-	-	1274	-	-	308	323	913	211	264	702
Mov Cap-2 Maneuver	-	-	-	-	-	-	378	388	-	320	348	-
Stage 1	-	-	-	-	-	-	854	773	-	506	461	-
Stage 2	-	-	-	-	-	-	444	460	-	590	664	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			2			18.6			14.8		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	544	1217	-	-	1274	-	-	388				
HCM Lane V/C Ratio	0.52	0.004	-	-	0.09	-	-	0.056				
HCM Control Delay (s)	18.6	8	-	-	8.1	-	-	14.8				
HCM Lane LOS	C	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	3	0	-	-	0.3	-	-	0.2				

Intersection												
Int Delay, s/veh	9.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	300	135	75	200	5	200	5	120	5	5	5
Future Vol, veh/h	5	300	135	75	200	5	200	5	120	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	300	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	326	147	82	217	5	217	5	130	5	5	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	222	0	0	473	0	0	725	722	326	861	867	220
Stage 1	-	-	-	-	-	-	336	336	-	384	384	-
Stage 2	-	-	-	-	-	-	389	386	-	477	483	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1347	-	-	1089	-	-	340	353	715	276	291	820
Stage 1	-	-	-	-	-	-	678	642	-	639	611	-
Stage 2	-	-	-	-	-	-	635	610	-	569	553	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1347	-	-	1089	-	-	314	325	715	210	268	820
Mov Cap-2 Maneuver	-	-	-	-	-	-	424	419	-	302	354	-
Stage 1	-	-	-	-	-	-	675	639	-	636	565	-
Stage 2	-	-	-	-	-	-	578	564	-	460	551	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			2.3			27.8			14.2		
HCM LOS							D			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	499	1347	-	-	1089	-	-	408
HCM Lane V/C Ratio	0.708	0.004	-	-	0.075	-	-	0.04
HCM Control Delay (s)	27.8	7.7	-	-	8.6	-	-	14.2
HCM Lane LOS	D	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	5.6	0	-	-	0.2	-	-	0.1

Intersection												
Int Delay, s/veh	6.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	125	140	105	310	5	120	5	135	5	10	5
Future Vol, veh/h	5	125	140	105	310	5	120	5	135	5	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	300	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	136	152	114	337	5	130	5	147	5	11	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	342	0	0	288	0	0	722	716	136	866	866	340
Stage 1	-	-	-	-	-	-	146	146	-	568	568	-
Stage 2	-	-	-	-	-	-	576	570	-	298	298	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1217	-	-	1274	-	-	342	356	913	274	291	702
Stage 1	-	-	-	-	-	-	857	776	-	508	506	-
Stage 2	-	-	-	-	-	-	503	505	-	711	667	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1217	-	-	1274	-	-	308	323	913	211	264	702
Mov Cap-2 Maneuver	-	-	-	-	-	-	378	388	-	320	348	-
Stage 1	-	-	-	-	-	-	854	773	-	506	461	-
Stage 2	-	-	-	-	-	-	444	460	-	590	664	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	2	18.6	14.8
HCM LOS			C	B

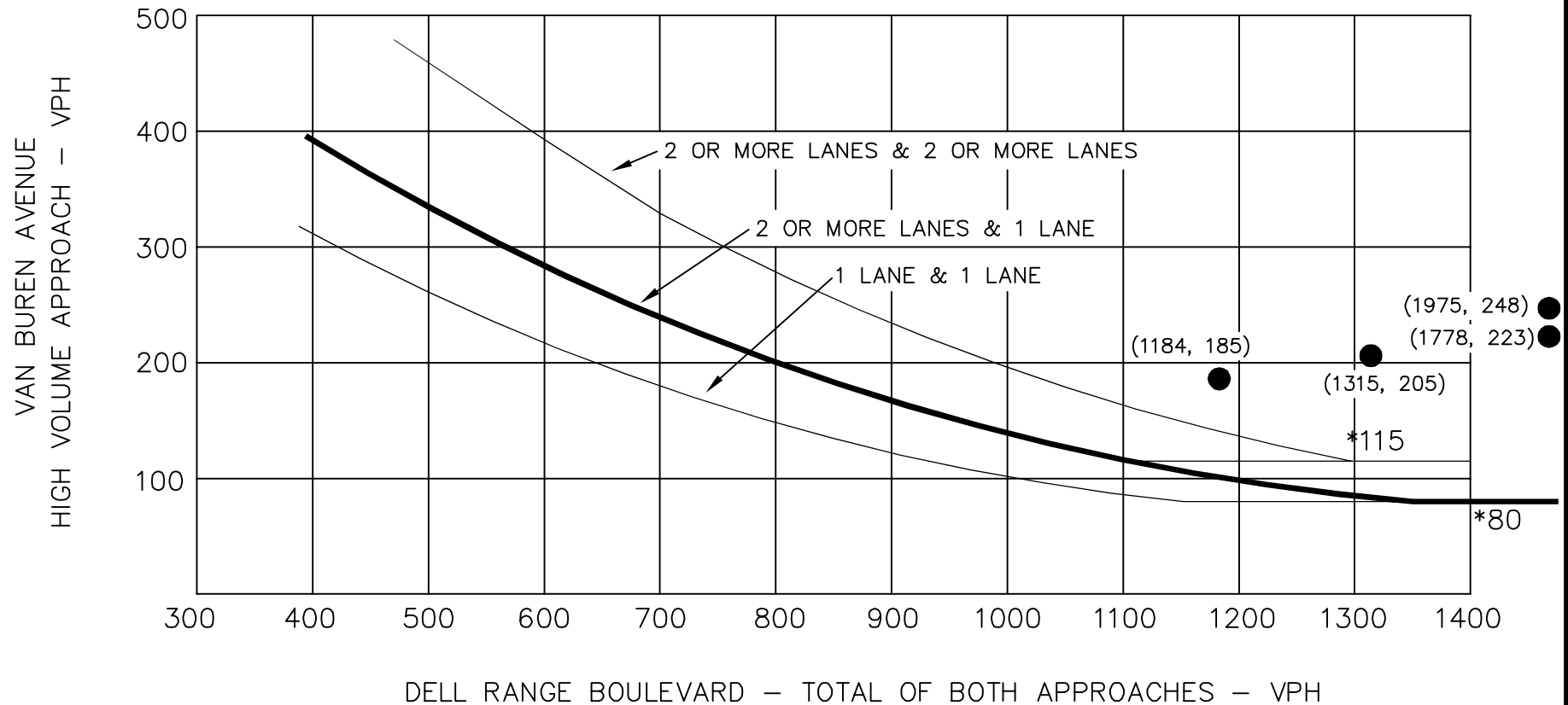
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	544	1217	-	-	1274	-	-	388
HCM Lane V/C Ratio	0.52	0.004	-	-	0.09	-	-	0.056
HCM Control Delay (s)	18.6	8	-	-	8.1	-	-	14.8
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	3	0	-	-	0.3	-	-	0.2

Intersection												
Int Delay, s/veh	9.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	300	135	75	200	5	200	5	120	5	5	5
Future Vol, veh/h	5	300	135	75	200	5	200	5	120	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	150	300	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	326	147	82	217	5	217	5	130	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	222	0	0	473	0	0	725	722	326	861	867	220
Stage 1	-	-	-	-	-	-	336	336	-	384	384	-
Stage 2	-	-	-	-	-	-	389	386	-	477	483	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1347	-	-	1089	-	-	340	353	715	276	291	820
Stage 1	-	-	-	-	-	-	678	642	-	639	611	-
Stage 2	-	-	-	-	-	-	635	610	-	569	553	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1347	-	-	1089	-	-	314	325	715	210	268	820
Mov Cap-2 Maneuver	-	-	-	-	-	-	424	419	-	302	354	-
Stage 1	-	-	-	-	-	-	675	639	-	636	565	-
Stage 2	-	-	-	-	-	-	578	564	-	460	551	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			2.3			27.8			14.2		
HCM LOS							D			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	499	1347	-	-	1089	-	-	408				
HCM Lane V/C Ratio	0.708	0.004	-	-	0.075	-	-	0.04				
HCM Control Delay (s)	27.8	7.7	-	-	8.6	-	-	14.2				
HCM Lane LOS	D	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	5.6	0	-	-	0.2	-	-	0.1				

ATTACHMENT D

Signal Warrant Analysis Figures

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

SIGNAL WARRANT ANALYSIS

DELL RANGE BOULEVARD & VAN BUREN AVENUE

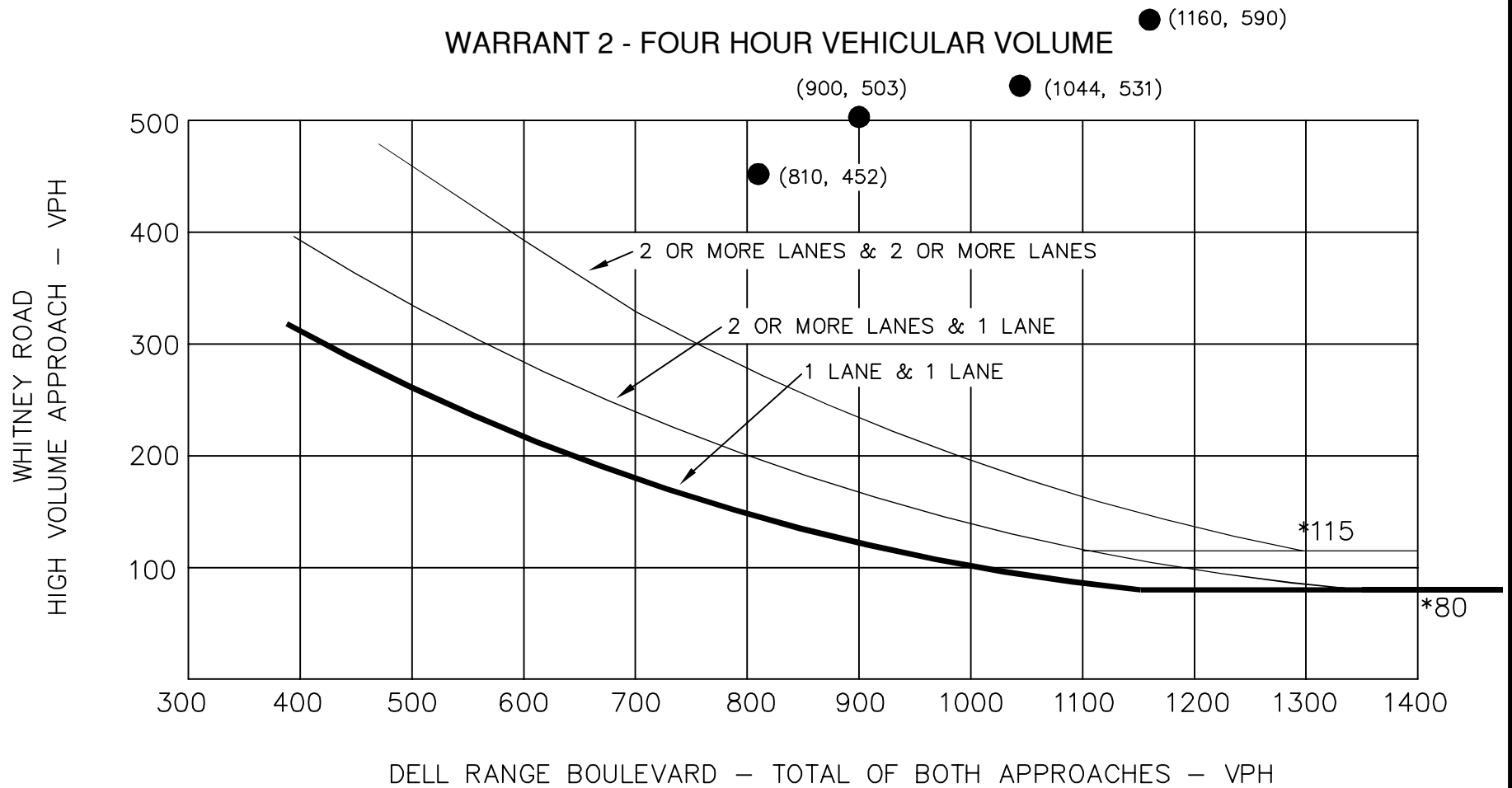
FOUR HOUR VOLUME WARRANT

● 2040 TRAFFIC DATA POINT

Source: Manual of Uniform Traffic Control Devices 2009

FIGURE A1

Kimley»Horn



SIGNAL WARRANT ANALYSIS
DELL RANGE BOULEVARD & WHITNEY ROAD
FOUR HOUR VOLUME WARRANT

* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

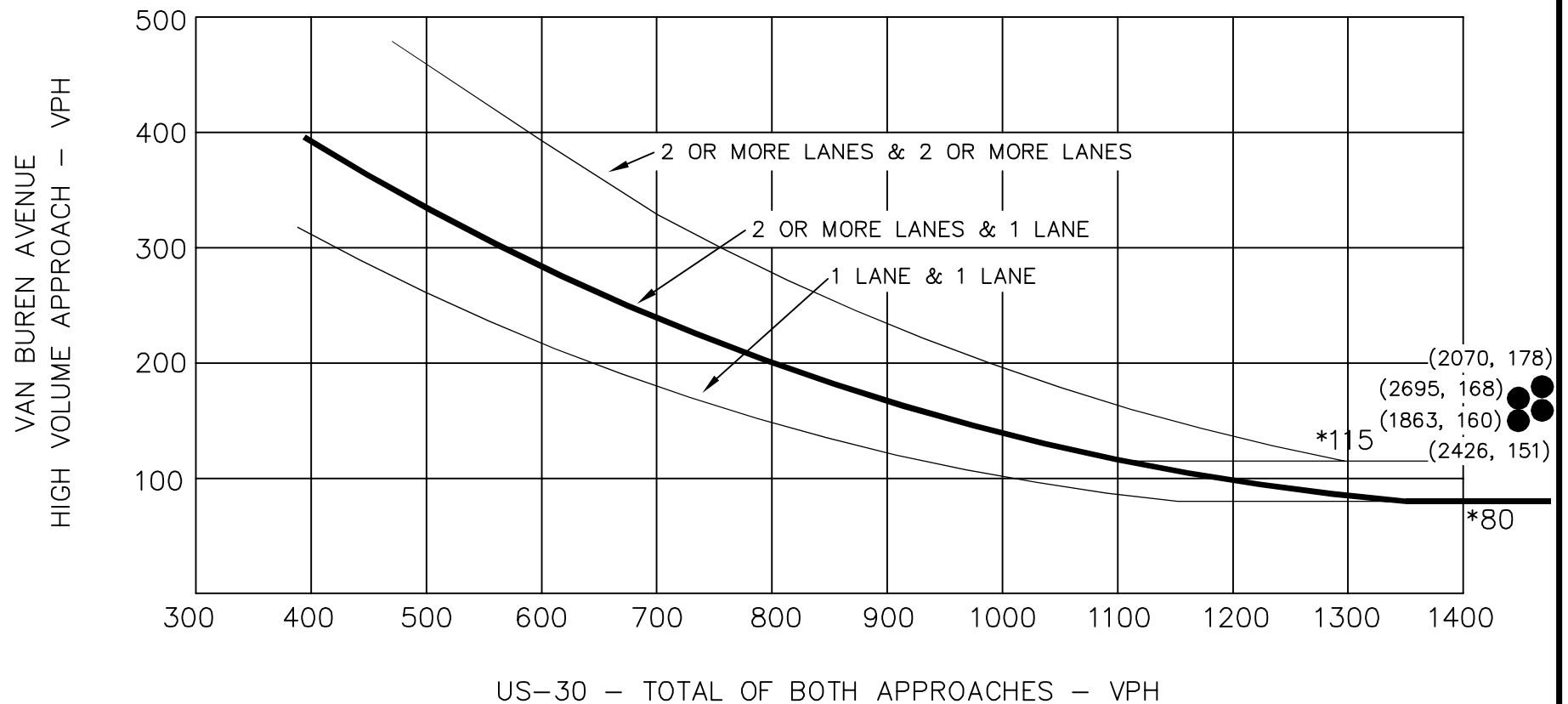
● 2040 TRAFFIC DATA POINT

FIGURE A2

Source: Manual of Uniform Traffic Control Devices 2009

Kimley»Horn

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME



SIGNAL WARRANT ANALYSIS
US-30 & VAN BUREN AVENUE
FOUR HOUR VOLUME WARRANT

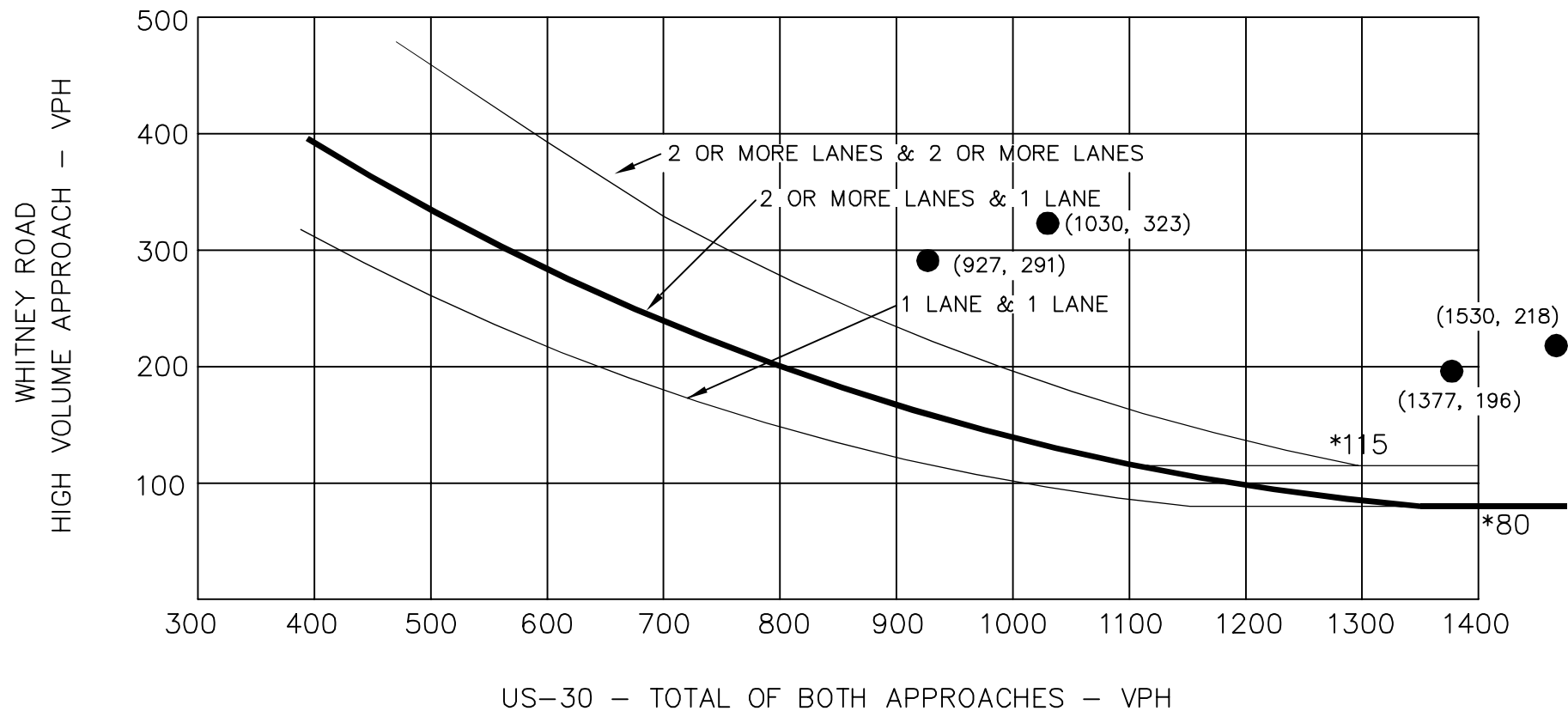
● 2040 TRAFFIC DATA POINT

Source: Manual of Uniform Traffic Control Devices 2009

* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET
APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER
THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

FIGURE A3

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME



SIGNAL WARRANT ANALYSIS
US-30 & WHITNEY ROAD
FOUR HOUR VOLUME WARRANT

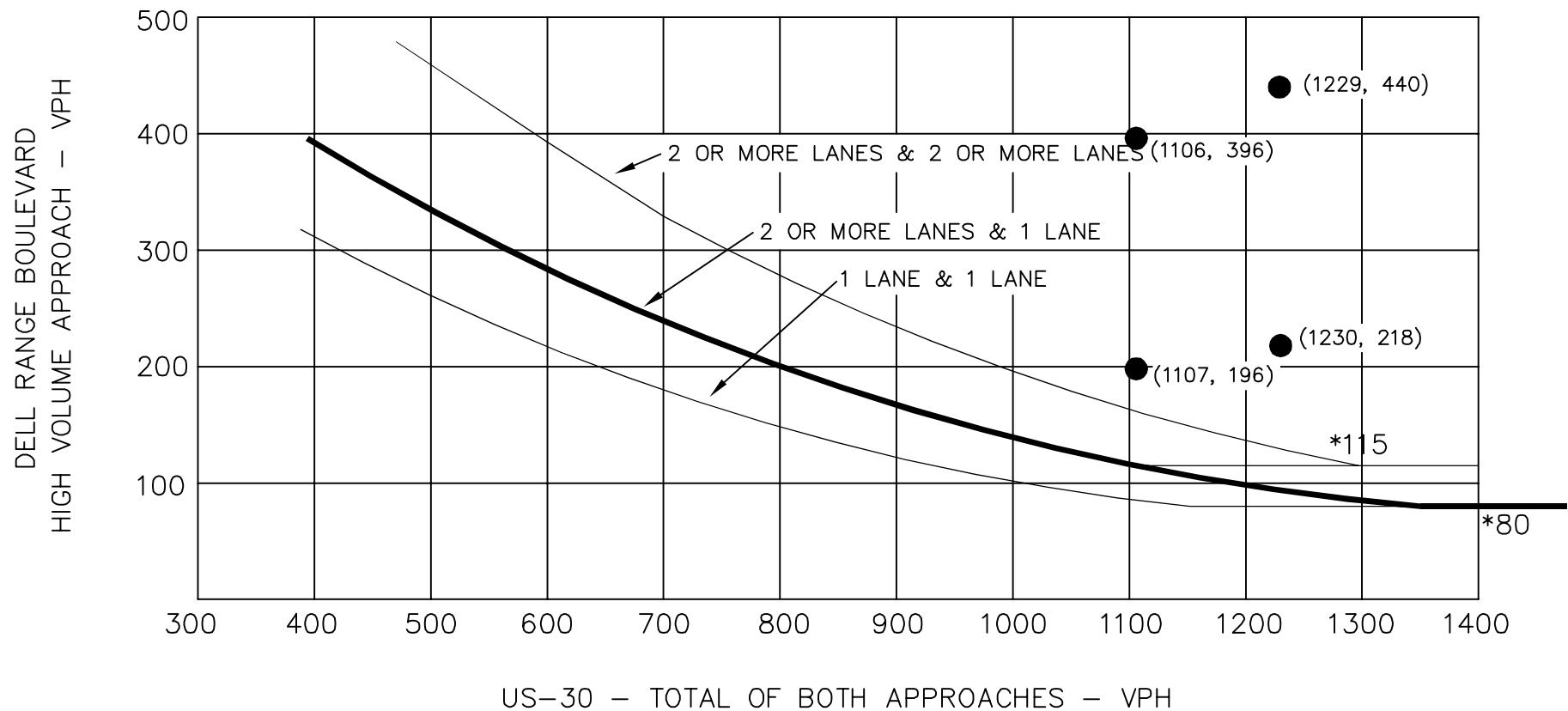
* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

● 2040 TRAFFIC DATA POINT

Source: Manual of Uniform Traffic Control Devices 2009

FIGURE A4

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

SIGNAL WARRANT ANALYSIS
US-30 & DELL RANGE BLVD
FOUR HOUR VOLUME WARRANT

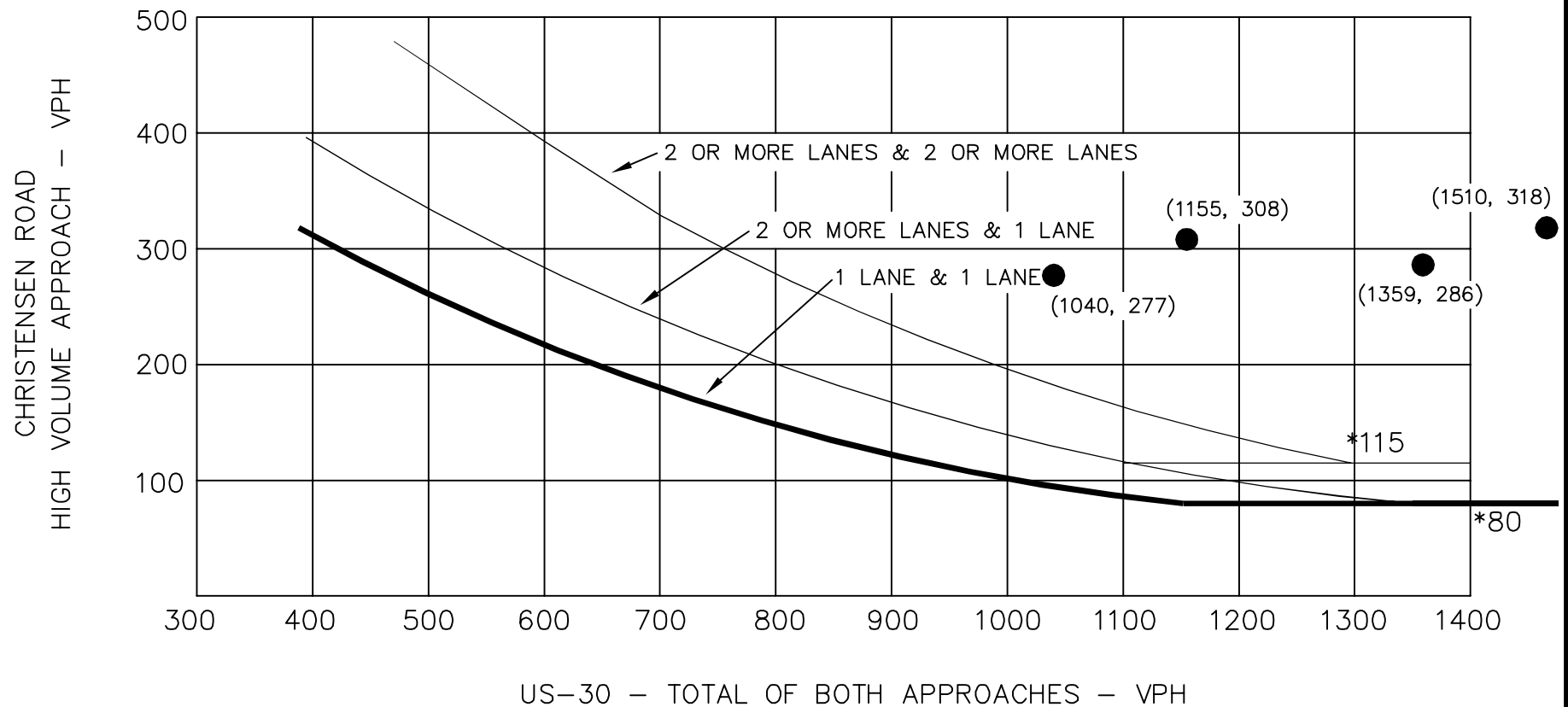
● 2040 TRAFFIC DATA POINT

Source: Manual of Uniform Traffic Control Devices 2009

FIGURE A5

Kimley»Horn

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME



SIGNAL WARRANT ANALYSIS
US-30 & CHRISTENSEN ROAD
FOUR HOUR VOLUME WARRANT

* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET
APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER
THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

● 2040 TRAFFIC DATA POINT

Source: Manual of Uniform Traffic Control Devices 2009

FIGURE A6

Kimley»Horn