APPENDIX E

Traffic Analysis

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Memorandum

Date: April 25, 2018

To: Mr. Tom Mason, Director, MPO
CC: Ms. Nancy Olson, Project Manager, MPO

From: Thomas D. Cobb, PE, Project Manager

Subject: **Whitney Road Corridor Study (AVI Project No. 3987.16) related to Traffic Impact Study Whitney Ranch completed by Kimley-Horn**

The MPO and City of Cheyenne were in the process of reviewing the final *Traffic Impact Study Whitney Ranch Cheyenne, Wyoming December 21, 2017* (TIS) completed by Kimley-Horn (KM-H). AVI believes that the study has now been accepted by the City of Cheyenne. This detailed traffic impact study prompted discussion during the Whitney Ranch Steering Committee Meetings that scope alterations may be prudent related to Professional Traffic Engineering on the Whitney Road Corridor Study. Consequently, as you were aware, we instructed our sub-consultant Sustainable Traffic Solutions (STS) to hold completion of the Whitney Road traffic analysis until a final determination was made.

Discussions at the time for the traffic impact study were specifically related to 2040 projected traffic volumes for Whitney Road (from Storey Blvd to U.S. 30) and Dell Range Blvd (from VanBuren Avenue to U.S. 30). Consequently, in order to complete our work for the Whitney Road Corridor Study, we respectfully request a formal response from the MPO regarding the following questions:

1. Has the MPO accepted the 2040 projected volumes for traffic and intersections related to the Whitney Road Corridor Study in the final Whitney Ranch *Traffic Impact Study for Whitney Ranch* developed by Kimley-Horn dated December 21, 2017?

2. If accepted, should STS and AVI utilize all the information within the KM-H TIS traffic impact study to complete the Whitney Road Corridor Study (i.e. Projected 2040 projected corridor volumes, Intersection directional volumes, Signal warrant analysis, Level of service analysis)?

   Our recommendation would be to only utilize the 2040 projected land use and background volumes and have our sub-consultant review directional volumes, signal warrant analysis, and level of service of Whitney Road and Dell Range Blvd within our project area to confirm analysis.

The reduction of the traffic scope would then be applied to the Second Open House Public Meeting you have requested of the team.

Highway Safety Intersection Crash History Report

Intersection ID: 14886 | County:LARAMIE | City:CHEYENNE | Years 2014 to 2014

Facility Type: UrXx3 | Area Type:U | Marked Crosswalk at Intersection | Number of Legs:3

Leg	Date	Time	Report#	# Inj	# Killed	Lighting	Junction Relation	First Harmful Event	Manner of Collision	Grid Cell
2014										
WHITNEY RD	03/24/14	1304	04433	0	0	Daylight	03	Motor Vehicle in Transport on Roadway	Rear End (Front to Rear)	Sideswipe Straight North Parking Vehicle North

Highway Safety Intersection Report

WHITNEY RD | CR 129-1@BECKLE RD | CR 212-3

Intersection ID: 14886 County:LARAMIE City:CHEYENNE Years:2014 to 2018

Facility Type:UrXx3 Area Type:U Marked Crosswalk at Intersection Number of Legs:3

Intersection Crash Types Statistics

Grid Cell	Crash Type	Count
K13	Sideswipe Straight North Parking Vehicle North	1

Intersection Crash Summaries

CRITICAL_CRASHES	0
SERIOUS_CRASHES	0
DAMAGE_CRASHES	1
TOTAL_CRASHES	1
PERSONS_INJURED	0
PERSONS_KILLED	0

Collision Diagram

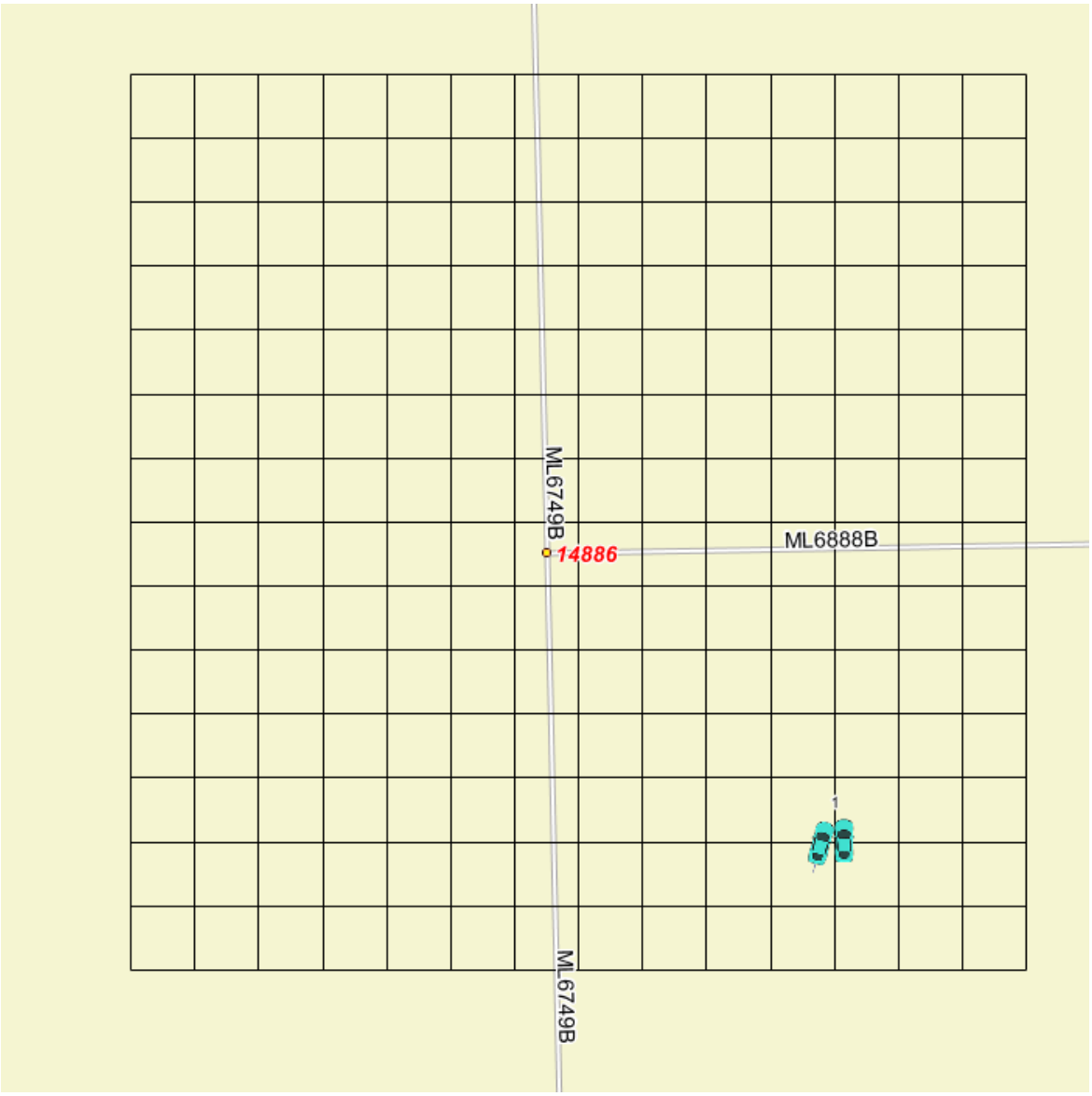
Intersection ID:14886

Intersection Names:WHITNEY RD | CR 129-1@BECKLE RD | CR

Crash types are based on a grid format are are not indicative of crash location

LRS Intersection: ML6749B|ML6888B

Intersection Name: WHITNEY RD | CR 129-1@BECKLE RD | CR 212-3



Severity Diagram

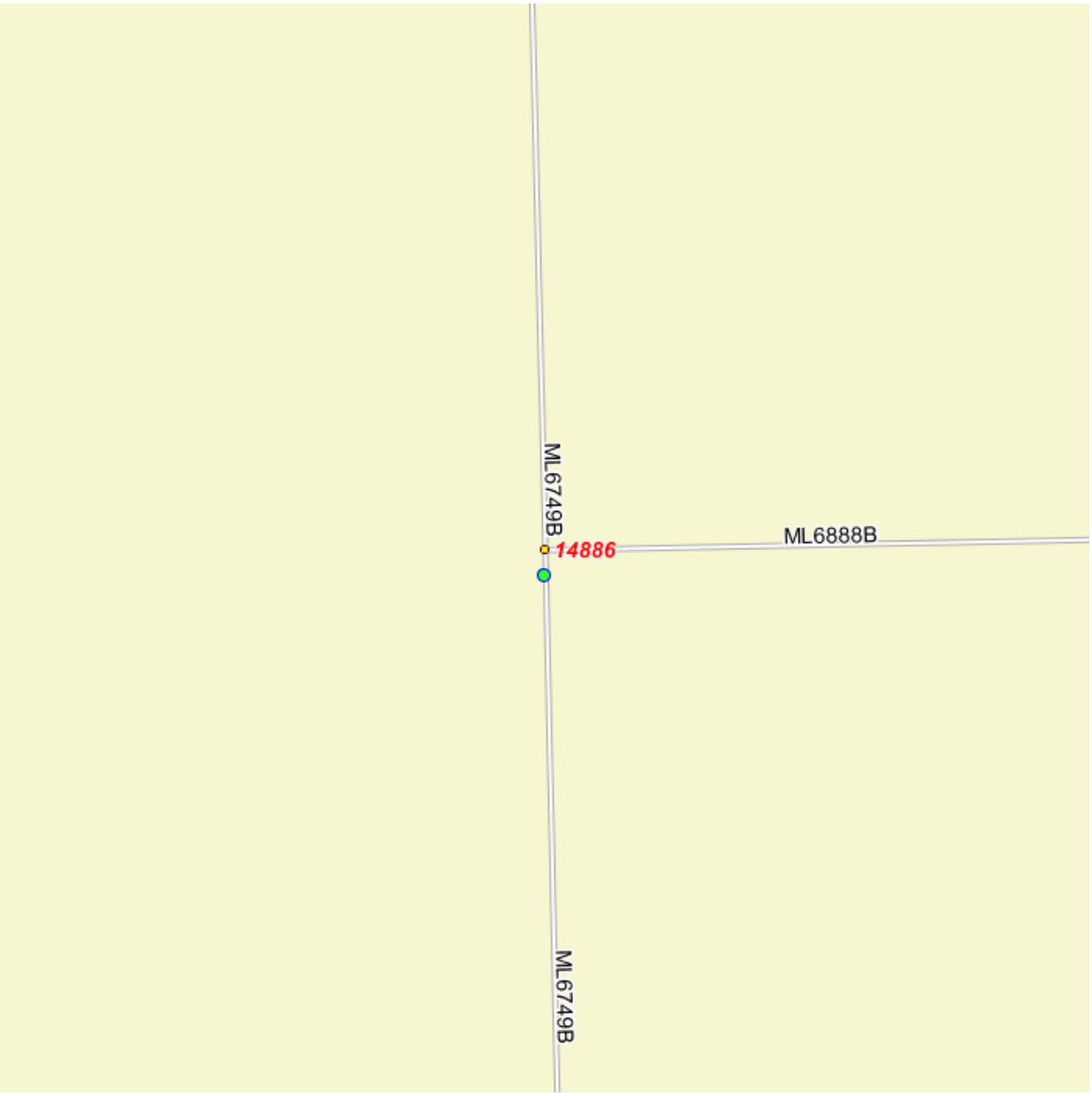
INTERSECTION_ID 14886

INTERSECTION_ROUTES:ML6749B|ML6888B

Locations displayed on Severity Diagram are based on longitude and latitude. Discrepancy between Latitude/Longitude and Route/MP may result in points not appearing on diagram.

LRS Intersection: ML6749B|ML6888B

Intersection Name: WHITNEY RD | CR 129-1@BECKLE RD | CR 212-3



LRS Intersection: ML6749B|ML6888B

Intersection Name: WHITNEY RD | CR 129-1@BECKLE RD | CR 212-3

Highway Safety Intersection Crash History Report

Intersection ID: 13343 County:LARAMIE City:CHEYENNE Years 2014 to 2018

Facility Type: UrXx4 Area Type:U Intersection w/o Marked Crosswalk Number of Legs:4

Leg	Date	Time	Report#	# Inj	# Killed	Lighting	Junction Relation	First Harmful Event	Manner of Collision	Grid Cell
2014										
WHITNEY RD	12/28/14	0848	17590	0	0	Daylight	01	Other Fixed Object	Not a Collision w/2 Vehicles in Transport	Unknown
DELL RANGE BLVD	07/25/14	1658	10018	0	0	Daylight	02	Motor Vehicle in Transport on Roadway	Angle Right (Front to Side, includes Broadside)	Angle Right South Straight West
2016										
WHITNEY RD	08/25/16	0747	10155	0	0	Daylight	02	Motor Vehicle in Transport on Roadway	Angle Right (Front to Side, includes Broadside)	Angle Straight East Left North
DELL RANGE BLVD	08/04/16	1144	10421	1	1	Daylight	02	Motor Vehicle in Transport on Roadway	Angle Right (Front to Side, includes Broadside)	Unknown
DELL RANGE BLVD	10/26/16	1904	12997	2	0	Darkness Lighted	02	Motor Vehicle in Transport on Roadway	Angle Right (Front to Side, includes Broadside)	Angle Straight East Right North
2017										
DELL RANGE BLVD	12/05/17	1301	15129	1	0	Daylight	02	Motor Vehicle in Transport on Roadway	Angle Right (Front to Side, includes Broadside)	Angle Straight West Right North
DELL RANGE BLVD	07/27/17	0840	08859	0	0	Daylight	02	Motor Vehicle in Transport on Roadway	Angle (Front to Side), Opposing Direction	Angle Straight East Straight North
2018										
DELL RANGE BLVD |	10/20/18	2108	12619	2	0	Darkness Lighted	02	Motor Vehicle in Transport on Roadway	Angle Right (Front to Side, includes Broadside)	Angle Right South Straight West

Highway Safety Intersection Report

WHITNEY RD | CR 129-1@DELL RANGE BLVD | CR 211-1

Intersection ID: 13343 County:LARAMIE City:CHEYENNE Years:2014 to 2018

Facility Type:UrXx4 Area Type:U Intersection w/o Marked Crosswalk Number of Legs:4

Intersection Crash Types Statistics

Grid Cell	Crash Type	Count
A1	Unknown	2
D5	Angle Right South Straight West	2
H10	Angle Straight East Left North	1
K8	Angle Straight East Straight North	1
M8	Angle Straight West Right North	1
K10	Angle Straight East Right North	1

Intersection Crash Summaries

CRITICAL_CRASHES	2
SERIOUS_CRASHES	2
DAMAGE_CRASHES	4
TOTAL_CRASHES	8
PERSONS_INJURED	6
PERSONS_KILLED	1

Collision Diagram

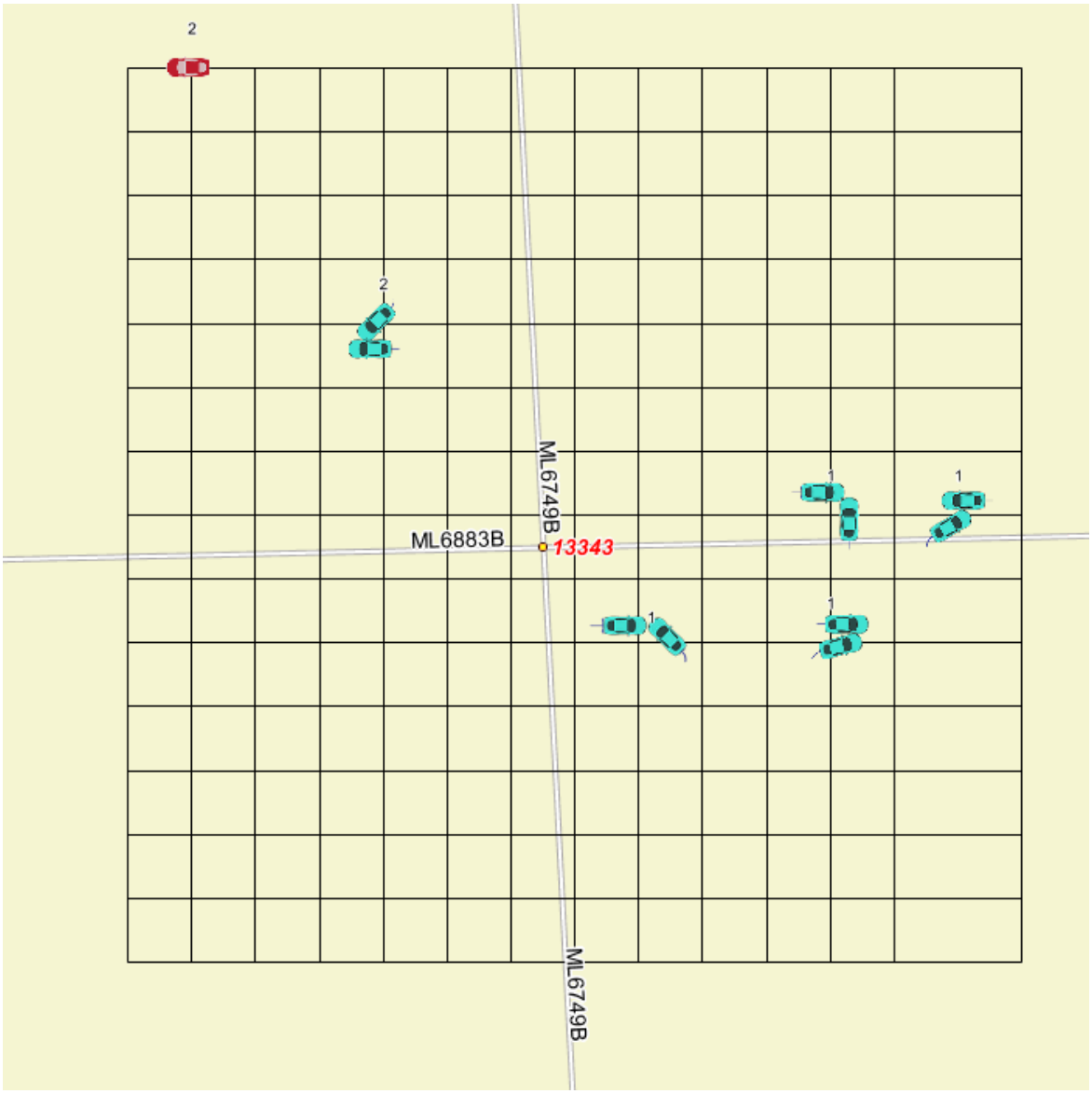
Intersection ID:13343

Intersection Names:WHITNEY RD | CR 129-1@DELL RANGE

Crash types are based on a grid format are are not indicative of crash location

LRS Intersection: ML6749B|ML6883B

Intersection Name: WHITNEY RD | CR 129-1@DELL RANGE BLVD | CR 211-1



Severity Diagram

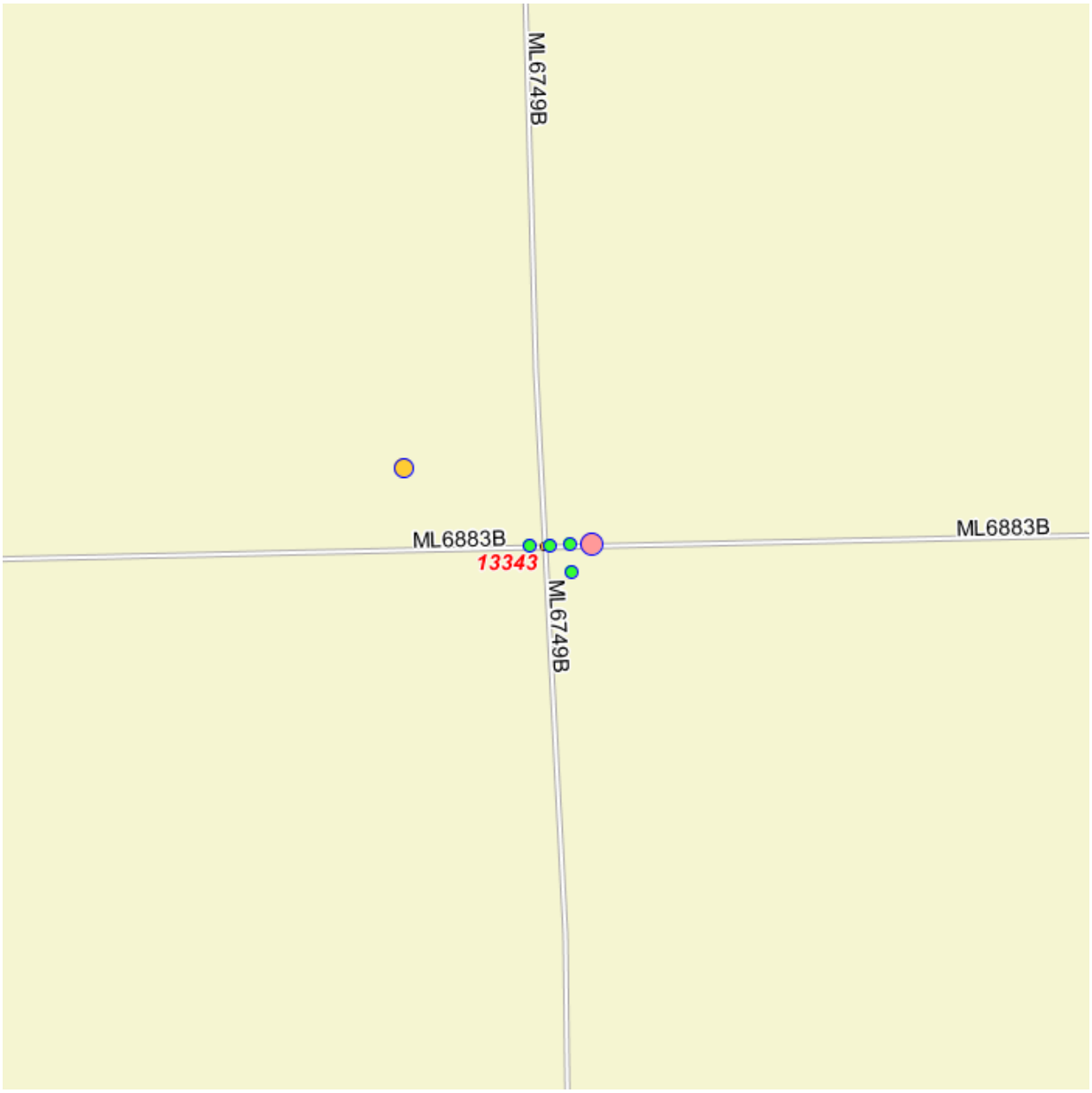
INTERSECTION_ID 13343

INTERSECTION_ROUTES:ML6749B|ML6883B

Locations displayed on Severity Diagram are based on longitude and latitude. Discrepancy between Latitude/Longitude and Route/MP may result in points not appearing on diagram.

LRS Intersection: ML6749B|ML6883B

Intersection Name: WHITNEY RD | CR 129-1@DELL RANGE BLVD | CR 211-1



LRS Intersection: ML6749B|ML6883B

Intersection Name: WHITNEY RD | CR 129-1@DELL RANGE BLVD | CR 211-1

Highway Safety Intersection Crash History Report

Intersection ID: 14459 County:LARAMIE City:CHEYENNE Years 2015 to 2018

Facility Type: UrUn4 Area Type:U Intersection w/o Marked Crosswalk Number of Legs:4

Leg	Date	Time	Report#	# Inj	# Killed	Lighting	Junction Relation	First Harmful Event	Manner of Collision	Grid Cell
2015										
US 30	05/31/15	0113	06266	1	0	Darkness Unlighted	03	Earth Embankment/Berm	Not a Collision w/2 Vehicles in Transport	Unknown
US 30	07/05/15	1110	09117	0	0	Daylight	02	Motor Vehicle in Transport on Roadway	Angle Right (Front to Side, includes Broadside)	Unknown South
WHITNEY RD	02/05/15	0810	01430	0	0	Daylight	03	Traffic Sign Support	Not a Collision w/2 Vehicles in Transport	Unknown
WHITNEY RD	02/03/15	0748	01590	0	0	Daylight	03	Motor Vehicle in Transport on Roadway	Rear End (Front to Rear)	Sideswipe Straight South Parked Vehicle South
WHITNEY RD	11/05/15	0800	13726	0	0	Daylight	03	Motor Vehicle in Transport on Roadway	Rear End (Front to Rear)	Rear End Straight North Straight North
2016										
US 30	03/02/16	1927	03018	1	0	Darkness Unlighted	02	Motor Vehicle in Transport on Roadway	Angle Right (Front to Side, includes Broadside)	Angle Right South Straight West
US 30	01/18/16	1838	00552	0	0	Darkness Lighted	02	Motor Vehicle in Transport on Roadway	Angle Right (Front to Side, includes Broadside)	Angle Straight East Right North
US 30	02/18/16	1552	02196	0	0	Daylight	02	Motor Vehicle in Transport on Roadway	Angle Right (Front to Side, includes Broadside)	Angle Straight West Right North
US 30	12/02/16	1515	16890	0	0	Daylight	02	Raised Median or Curb	Not a Collision w/2 Vehicles in Transport	Unknown
2018										
US 30	10/20/18	1946	12925	2	0	Darkness Lighted	02	Motor Vehicle in Transport on Roadway	Angle Right (Front to Side, includes Broadside)	Angle Straight East Right North
US 30	10/20/18	1012	12338	5	1	Daylight	02	Motor Vehicle in Transport on Roadway	Angle Right (Front to Side, includes Broadside)	Angle Straight East Right North

Highway Safety Intersection Crash History Report

Intersection ID: 14459 County:LARAMIE City:CHEYENNE Years 2015 to 2018

Facility Type: UrUn4 Area Type:U Marked Crosswalk at Intersection Number of Legs:4

Leg	Date	Time	Report#	# Inj	# Killed	Lighting	Junction Relation	First Harmful Event	Manner of Collision	Grid Cell
US 30	07/26/18	0553	08220	0	0	Dawn	02	Motor Vehicle in Transport on Roadway	Angle Right (Front to Side, includes Broadside)	Angle Straight South Right East
US 30	02/23/18	1407	02236	0	0	Daylight	03	Utility Pole/Light Support	Not a Collision w/2 Vehicles in Transport	Unknown
US 30	09/04/18	1649	10771	0	1	Daylight	02	Motor Vehicle in Transport on Roadway	Angle Right (Front to Side, includes Broadside)	Angle Straight East Right North
US 30	02/13/18	0753	01683	5	0	Daylight	02	Motor Vehicle in Transport on Roadway	Angle Right (Front to Side, includes Broadside)	Angle Right South Straight West
US 30	11/03/18	1829	12991	0	0	Darkness Unlighted	02	Motor Vehicle in Transport on Roadway	Angle (Front to Side), Opposing Direction	Angle Straight East Left North
WHITNEY RD	04/14/18	1221	04022	0	0	Daylight	02	Motor Vehicle in Transport on Roadway	Angle Right (Front to Side, includes Broadside)	Angle Right South Straight West

Highway Safety Intersection Report

US 30@WHITNEY RD | CR 129-1

Intersection ID: 14459 County:LARAMIE City:CHEYENNE Years:2014 to 2018

Facility Type:UrUn4 Area Type:U Intersection w/o Marked Crosswalk Number of Legs:4

Intersection Crash Types Statistics

Grid Cell	Crash Type	Count
K10	Angle Straight East Right North	4
A1	Unknown	4
D5	Angle Right South Straight West	3
M8	Angle Straight West Right North	1
D2	Sideswipe Straight South Parked Vehicle South	1
H10	Angle Straight East Left North	1
J13	Rear End Straight North Straight North	1
E11	Angle Straight South Right East	1
A2	Unknown South	1

Intersection Crash Summaries

CRITICAL_CRASHES	2
SERIOUS_CRASHES	4
DAMAGE_CRASHES	11
TOTAL_CRASHES	17
PERSONS_INJURED	14
PERSONS_KILLED	2

Collision Diagram

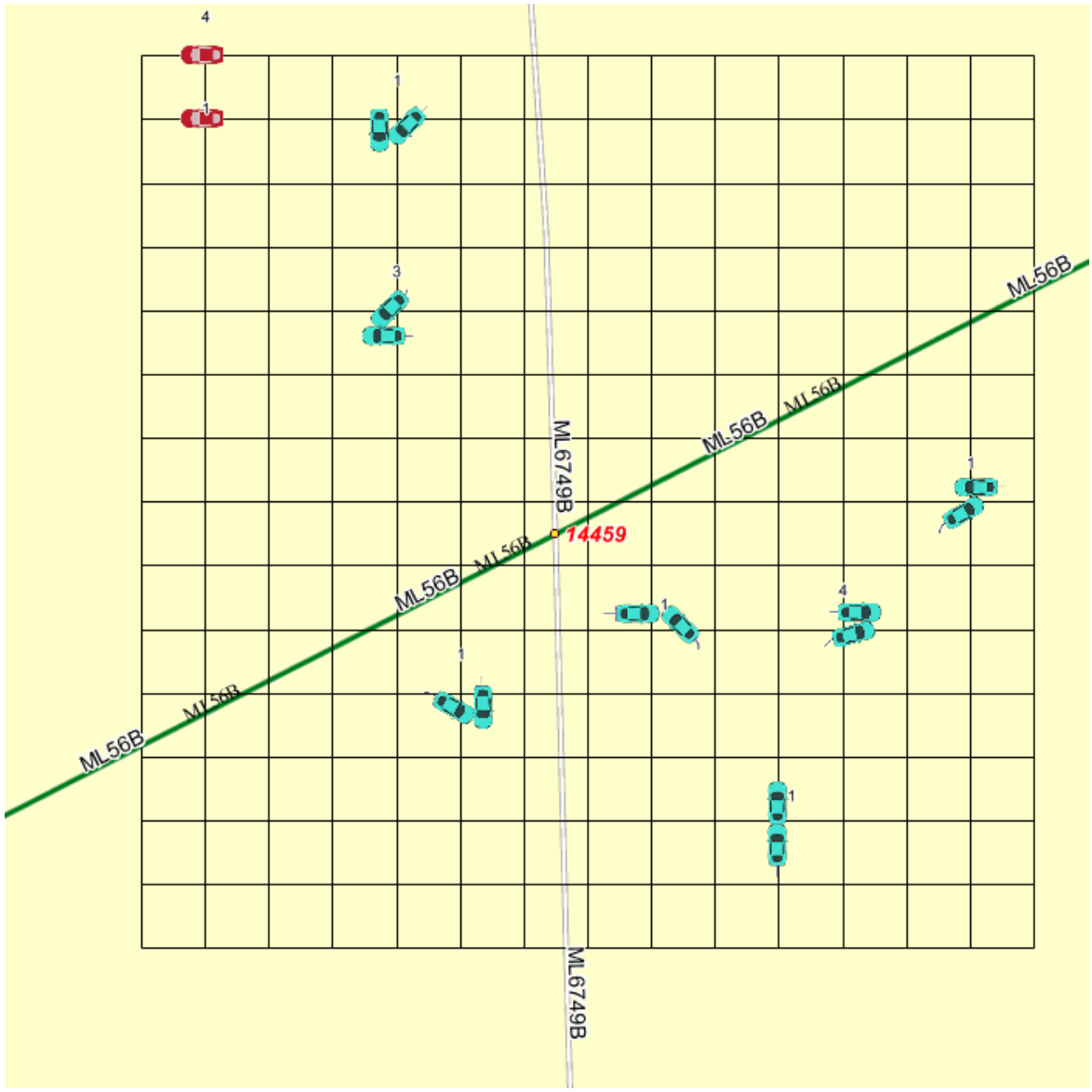
Intersection ID:14459

Intersection Names:US 30@WHITNEY RD | CR 129-1

Crash types are based on a grid format are are not indicative of crash location

LRS Intersection: ML56B|ML6749B

Intersection Name: US 30@WHITNEY RD | CR 129-1



Severity Diagram

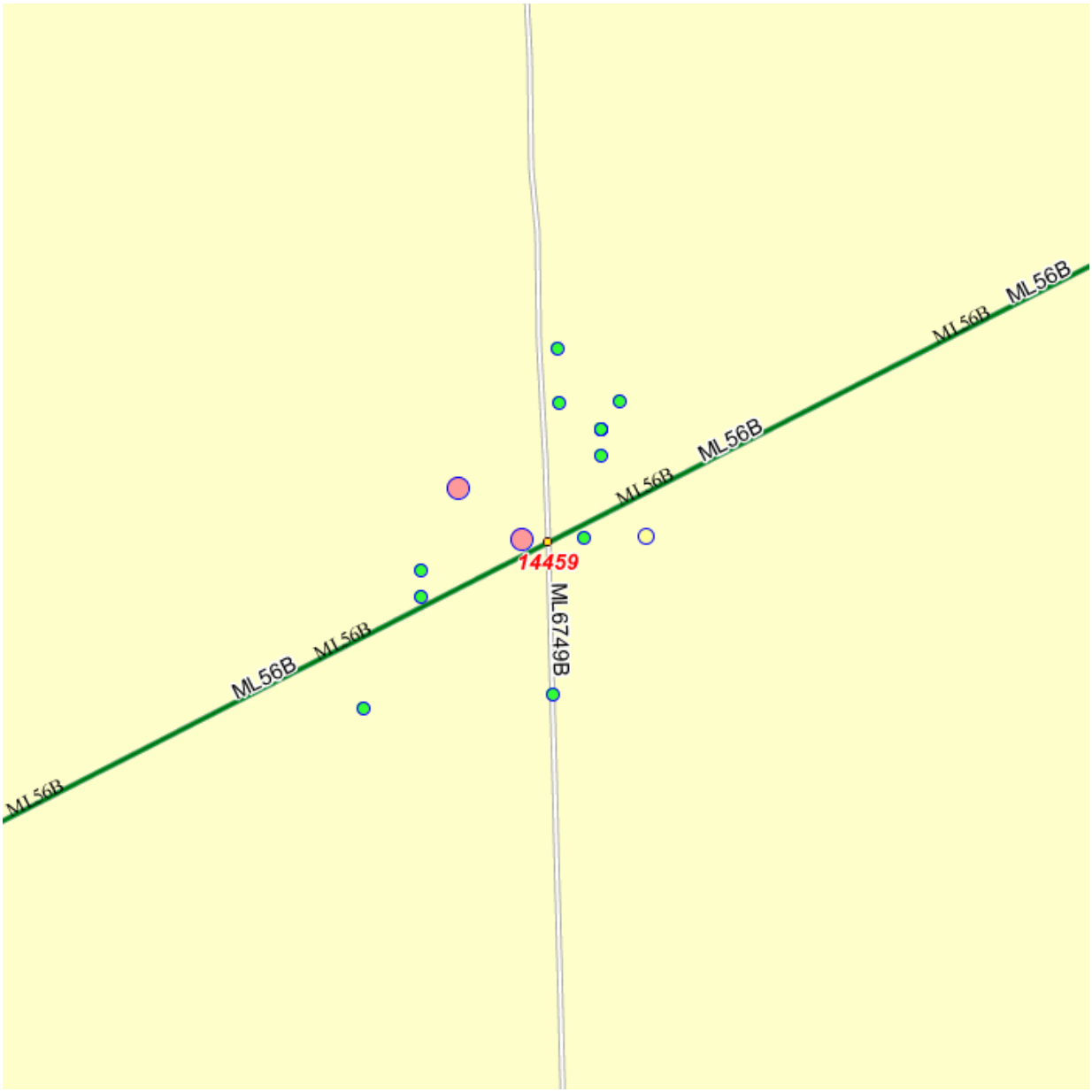
INTERSECTION_ID 14459

INTERSECTION_ROUTES:ML56B|ML6749B

Locations displayed on Severity Diagram are based on longitude and latitude. Discrepancy between Latitude/Longitude and Route/MP may result in points not appearing on diagram.

LRS Intersection: ML56B|ML6749B

Intersection Name: US 30@WHITNEY RD | CR 129-1



LRS Intersection: ML56B|ML6749B

Intersection Name: US 30@WHITNEY RD | CR 129-1

MEMO

Professional Engineer (Civil) THOMAS D. COBB 8287 Date 2/12/19 WYOMING

TO: Mr. Randy Greisbach, PE, WYDOT, District Traffic Engineer

FROM: Thomas D. Cobb, PE

DATE: February 12, 2019

SUBJECT: Whitney Road Corridor Study – Woodhouse Road/ U.S. 30 Service Road to U.S. 30 Proposed Connection

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Purpose and Need

The intersection of U.S. 30 with Whitney Road was a major emphasis during the during the Whitney Road Corridor Study development. AVI, pc, Cheyenne MPO, and Whitney Road Steering Committee identified the following significant observations:

- Approach accesses are very close to the intersection on north and west legs.
- Under jurisdiction of the State of Wyoming Department of Transportation.
- Large vehicle usage at intersections including large semi-trailers, recreation vehicles, mobile homes, and tow trucks for local business support and access.
- Observed unsafe and opposing cross maneuvers from eastbound U.S. 30 Service Road to southbound Whitney Road.
- Intersection is skewed greater than 10° (25.78°)
- Vehicles traveling north on Whitney Road at the intersection of U.S. 30 can experience a "ghosting" problem with traffic on eastbound U.S. 30. The eastbound thru traffic on U.S. 30 can be "ghosted" or shield from view by right turning vehicles traveling eastbound U.S. 30 to southbound Whitney Road while in the auxiliary lane traffic.
- Posted speed on U.S. 30 is 55 mph.
- Posted speed Whitney Road is 30 mph.
- Inadequate storage length available for left turn bay on northbound Whitney Road created by pedestrian refuge island on south leg of intersection.
- Perceived unsafe pedestrian Greenway crossing location on south leg of intersection on Whitney Road.
- Cut-through traffic observed from Saddle Ridge subdivision via Saddle Ridge Trail to U.S. 30 Service Road and Whitney Road during peak hours to avoid the Whitney Intersection.
- Intersection spacing on U.S. 30 between Whitney Road and the U.S. 30 Service Road/ Saddle Ridge Trail is 1936 feet based on GIS aerial photo measurement.

Potential solutions to address the significant observations were developed and provided to the public for review and comment on June 28, 2018. The solution proposed removal of the service road connection into Whitney Road and replacing it with a cul-de-sac turnaround. Multiple written and verbal comments were expressed at the public meeting which indicated that a cul-de-sac would not function for the existing businesses adjacent to the U.S. 30 Service Road. As a result, multiple one-on-one meetings between AVI, pc, Cheyenne Metropolitan Planning Organization (MPO), and local business owners located on the north U.S. 30 Service Road East of Whitney Road were conducted with the purpose to understand concerns and work together to develop potential alternatives to the cul-de-sac option. A summary of the concerns/ constraints and potential alternatives considered is outlined below.

Concerns/ Constraints

- Thirty-seven (37) foot tow trucks haul up to 80' tractor/ trailer combinations and 40' recreational vehicles which require access from U.S. 30 to Whitney Road to the U.S. 30 Service Road.
- Tractor/ trailer combinations up to eighty (80) feet deliver parts, equipment, and inventory to the businesses along the U.S. 30 Service Road.
- Alternative routes are comprised by un-improved narrow gravel roadways which are minimally maintained, and snow removal is not accomplished.
- The alternative route of Woodhouse Road between the U.S. 30 Service road and Hinesley Road contains steep vertical slopes greater than 8% (maximum 11.8%). The average slope is 3.0% and generally slopes from North to South with a total elevation change of 39 feet.
- The alternate route Hinesley Road between Whitney Road and Woodhouse contains steep vertical slopes greater than 8% (maximum 15.1%). The average slope is 3.7% and generally slopes from East to West with a total elevation change of 42 feet.
- A large radii cul-de-sac of 50' using clearzone distance of 22' (i.e. Design Speed 55 mph, 6:1 or flatter foreslopes, >6000 ADT). Maximum vehicle turnaround WB-67 design vehicle.
- Alternate routes would need to be graded, surfaced, and maintained to accommodate large truck access to businesses.

Potential Alternatives to Cul-de-sac

- Develop alternative access point to business via Woodhouse Road/ U.S. 30 Service Road to U.S. 30 (Intersection spacing between Whitney Road and Woodhouse 982', Intersection spacing between Woodhouse and Saddle Ridge Trail/ U.S. 30 Service Road 978'.
- Access control median on Whitney Road to prevent left ingress or egress turning movement U.S. 30 Service Road to Whitney Road.
- Improve or upgrade service condition of alternative routes (i.e. Hinesley Road and/ or Woodhouse Road) to accommodate anticipated vehicles into the businesses.

Trip Generation

Traffic calculations are based on the *Trip Generation, 8th Edition: An ITE Informational Report* area and unit calculations as follows show below and the Cumulative Total Site Plan Trip Generation for the planning area associated with the potential creation of an access point by extending Woodhouse Road south into U.S. 30. The planning area for analysis is bounded by Whitney Road to the west, Dell Range Blvd. to the north and east, and U.S. 30 to the south and east.

Existing Traffic Generation

Employment data from the 2010 Business Employment Data Survey from Plan Cheyenne was utilized along with updates from "one-on-one" interviews conducted with the area businesses, observation, and engineering judgement to develop the 2018 Trip Generation for the planning area. See *Table 1 2010/ 2018 Business Employment Data* and *Figure 1 2010 Existing Land Use*.

Table 1 2010/ 2018 Business Employment Data

Mark	Address	Name	Full	Part
1	4408 Woodhouse	Elite Auto Upholstery	2	0
2	6702 Hinesley Road	Unique Wood Design, LLC	1	1
3	4219 Whitney Road	Mid City Auto	0	1
4	6800 U.S. 30	Alpine Cleaning Dial-a-Maid	6	1
5	6526 U.S. 30	Big Al's Auto and Exhaust	7	0
6	6600 U.S. 30	Pinnacle Cabinet and Millwork	9	1
7	6520 Hinesley Road	Big Al's Towing	16	0
		Sub-totals	41	4
		Totals	45	

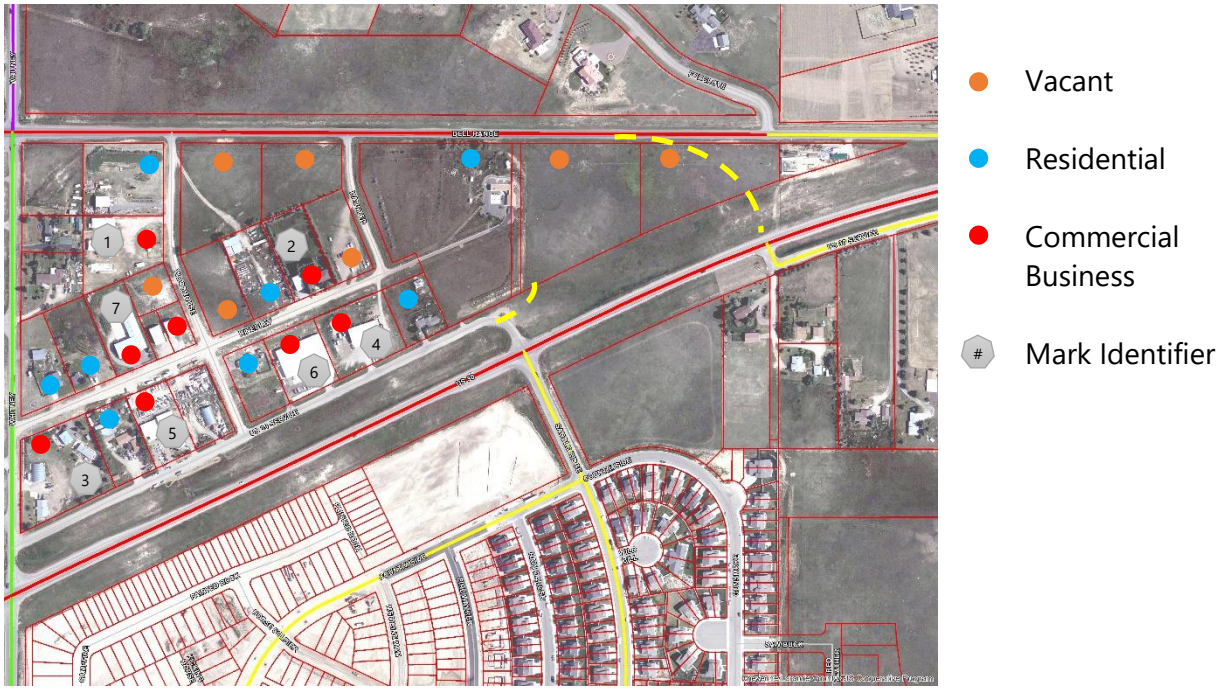


Figure 1 2010 Existing Land Use Foster Tracts

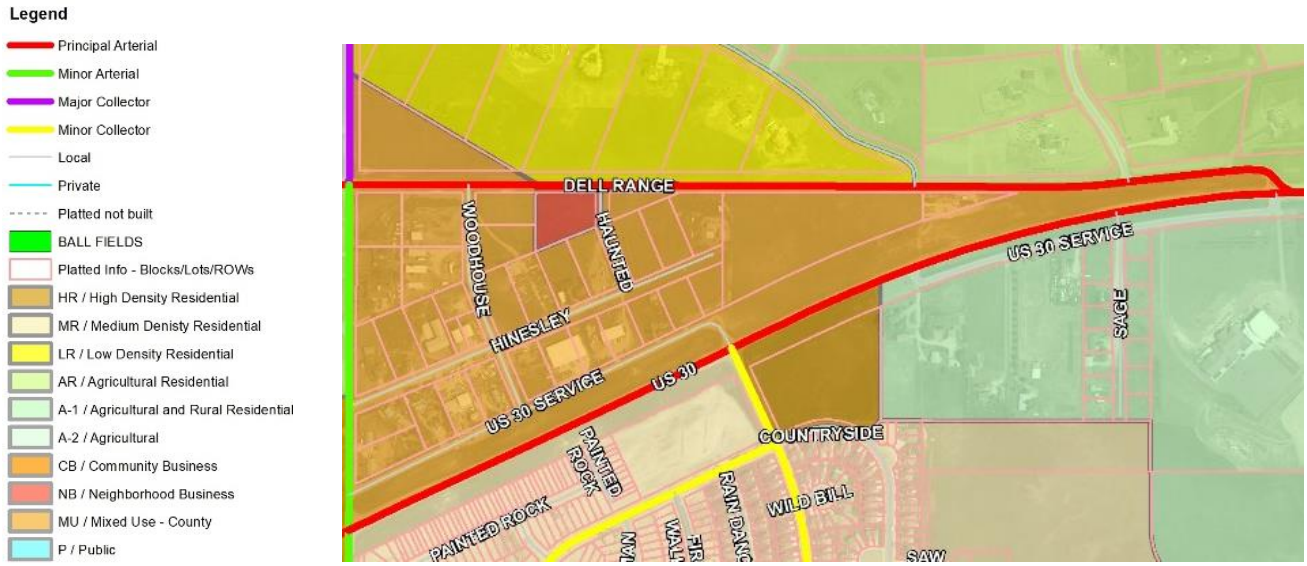


Figure 2 Existing Zoning

The current 34.49 acres of land is being utilized as follows:

Land Use	Percentage (%)	Acres
▪ Vacant Land	38.1%	13.13
▪ Residential	48.7%	16.81 (7 du)
▪ Office Park	3.5%	1.20
▪ Manufacturing	3.4%	1.18
▪ Automotive Care Center	6.3%	2.17
	100%	34.49

Existing Traffic Assumptions

- Residential DU = 7
- Big Al's Automotive and Exhaust (ITE Code 942, Automotive Care Center; 2 bay)
- Elite Upholstery, Mid City Auto (ITE Code 942, Automotive Care Center; 0.5 bay each)
- Big Al's Towing (ITE Code 942, Automotive Care Center; 1 bay)
- Unique Wood Designs and Pinnacle Cabinet & Millwork (ITE Code 140, Manufacturing; 12 total employees)
- Alpine Cleaning Dial-a-maid (ITE Code 770, Business Park; 7 employees)

- Distribution 80% US 30 Service Road, 10% Hinesley Road, 5% Woodhouse, 5% Haunted Road.

Table 2 2019 Trip Generation Foster Tracts

Description/ITE Code	Units	ITE Vehicle Trip Generation Rates (peak hours are for peak hour of adjacent street traffic)							Expected Units	Total Generated Trips			Total Distribution of Trips			
		Weekday	AM	PM	AM In	AM Out	PM In	PM Out		Daily	AM Hour	PM Hour	AM In	AM Out	PM In	PM Out
Business Park 770	Employees	4.04	0.45	0.39	85%	15%	22%	78%	7.0	28	3	3	3	0	1	2
Manufacturing 140	Employees	2.13	0.40	0.36	73%	27%	44%	56%	12.0	26	5	4	4	1	2	2
Single Family Homes 210	DU	9.57	0.75	1.01	25%	75%	63%	37%	7.0	67	5	7	1	4	4	3
Office Park 750	Acres	195.11	25.65	28.28	92%	8%	15%	85%		0	0	0	0	0	0	0
Automobile Care Center 942	Service Bays	12.48	1.52	2.17	68%	32%	NA	NA	4.0	50	6	9	4	2	NA	NA
									Totals	**171**	**19**	**23**	**12**	**8**	**7**	**7**

Existing Average Week Day Trips a day to/from Foster Tracts Area = 171 trips/ day

AM Peak Hour = 19 Trips/ hour

AM Peak Hour (Ingress) = 12 Trips/ hour

AM Peak Hour (Egress) = 8 Trips/ hour

PM Peak Hour = 23 Trips/ hour

PM Peak Hour (Ingress) = 7 Trips/ hour

PM Peak Hour (Egress) = 7 Trips/ hour

U.S. 30 Service Road Peak Hours 2019
AM Peak Hour (Ingress) = 12 Trips/ hour x 0.80 = 10 Trips
PM Peak Hour (Egress) = 7 Trips/ hour x 0.80 = 6 Trips

2040 Future Traffic Generation

2040 projected traffic generation was based on planning judgement, conversations with existing business regarding future expansion, known future business development, and hypothetical potential for the Foster Tracts Area in the next twenty years.

Future Traffic Assumptions

- Residential DU = 6
- Big Al's Automotive and Exhaust (ITE Code 942, Automotive Care Center; 4 bay)
- Elite Upholstery, Mid City Auto (ITE Code 942, Automotive Care Center; 0.5 bay each)
- Big Al's Towing (ITE Code 942, Automotive Care Center; 1 bay)
- Unique Wood Designs and Pinnacle Cabinet & Millwork (ITE Code 140, Manufacturing; 20 total employees)
- Alpine Cleaning Dial-a-maid (ITE Code 770, Business Park; 10 employees)
- New Business Park (ERA) = 3,000 SF Office Bldg.
- Manufacturing (Unknown) = 5 Employees
- Distribution 5% US 30 Service Road, 75% Woodhouse Extension, 10% Hinesley Road, 5% Woodhouse (north), 5% Haunted Road (north).

The proposed 34.49 acres of land is being utilized as follows:

Land Use	Percentage (%)	Acres
Vacant Land	35.2%	12.13
Residential	43.8%	15.01 (6 du)
Office Park	6.0%	2.20
Manufacturing	6.0%	2.06
Automotive Care Center	9.0%	3.09
	100%	34.49

Table 3 2040 Trip Generation Foster Tracts

Description/ITE Code	Units	ITE Vehicle Trip Generation Rates (peak hours are for peak hour of adjacent street traffic)							Expected Units	Total Generated Trips			Total Distribution of Trips			
		Weekday	AM	PM	AM In	AM Out	PM In	PM Out		Daily	AM Hour	PM Hour	AM In	AM Out	PM In	PM Out
Business Park 770	Employees	4.04	0.45	0.39	85%	15%	22%	78%	20.0	81	9	8	8	1	2	6
Manufacturing 140	Employees	2.13	0.40	0.36	73%	27%	44%	56%	20.0	43	8	7	6	2	3	4
Single Family Homes 210	DU	9.57	0.75	1.01	25%	75%	63%	37%	6.0	57	5	6	1	3	4	2
Office Park 750	KSF[2]	11.42	1.71	1.48	89%	11%	14%	86%	3.0	34	5	4	5	1	1	4
Automobile Care Center 942	Service Bays	12.48	1.52	2.17	68%	32%	NA	NA	6.0	75	9	13	6	3	NA	NA
									Totals	**290**	**36**	**39**	**25**	**10**	**9**	**16**

Future Average Week Day Trips a day to/from Foster Tracts Area = 290 trips/ day

AM Peak Hour = 36 Trips/ hour

AM Peak Hour (Ingress) = 25 Trips/ hour

AM Peak Hour (Egress) = 10 Trips/ hour

PM Peak Hour = 39 Trips/ hour

PM Peak Hour (Ingress) = 9 Trips/ hour

PM Peak Hour (Egress) = 16 Trips/ hour

Woodhouse Road at U.S. 30 Peak Hours 2014 Horizon

AM Peak Hour (Ingress) = 25 Trips/ hour x 0.75 = 19 Trips

PM Peak Hour (Egress) = 16 Trips/ hour x 0.75= 12 Trips

Full Buildout/ Redevelopment Traffic Generation

Full buildout/ redevelopment projected traffic generation was based on planning and engineering judgement with the framework for redevelopment based on conversations with existing business regarding future expansion, known future business development, and hypothetical potential for the Foster Tracts Area beyond the design horizon year using the *PlanCheyenne* future land use plan (Laramie County version). The future land use is mixed use commercial. In accordance with the current Laramie County Land Use Regulations, the closest zoning is MU or mixed use. It is intended to encourage rehabilitation and ruse of existing buildings and is a mix of residential an commercial uses.

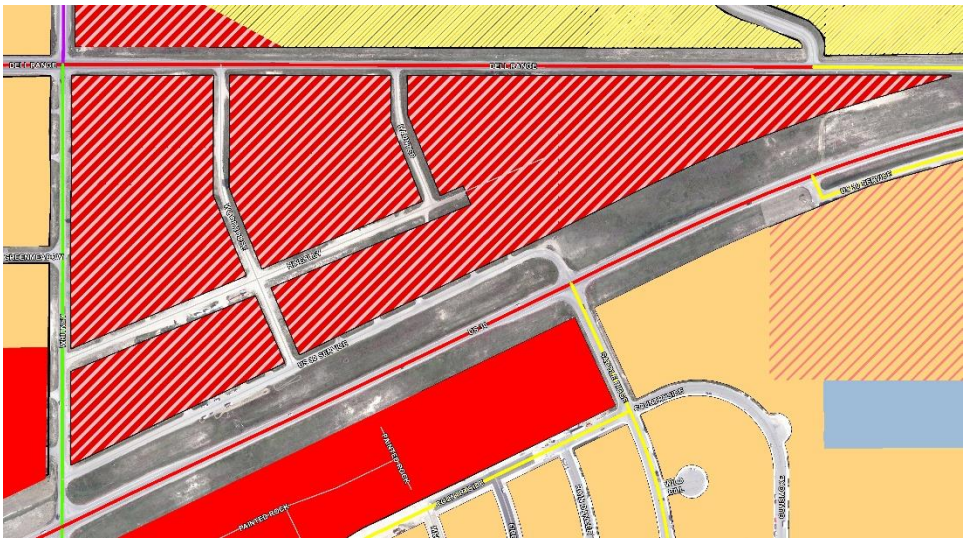


Figure 3Future Land Use PlanCheyenne (Laramie County Version)

Full Buildout Traffic Assumptions

- Distribution 5% US 30 Service Road, 75% Woodhouse Extension, 10% Hinesley Road, 5% Woodhouse (north), 5% Haunted Road (north).

The proposed 34.49 acres of land is being utilized as follows:

Land Use	Units	Expected Units	Acres
Vacant Land	0	0	0.0
Business Park	Employees	20	4.49
Residential (SFH)	DU	5 DU	12.0
Resd. Condo/ Townhomes	DU	8 DU	8.0
Daycare Center	KSF²	2 KSF	2.0
Serv. Stat. w/ Conv. Mkt	FUEL Position	4	3.0
Office Park	KSF²	6	7.0
Manufacturing	Employees	20	2.0
Automotive Care Center	Bays	6	2.0
			39.49

Table 4 Full Buildout Trip Generation Unknown Year

Description/ITE Code	Units	ITE Vehicle Trip Generation Rates (peak hours are for peak hour of adjacent street traffic)							Expected Units	Total Generated Trips			Total Distribution of Trips			
		Weekday	AM	PM	AM In	AM Out	PM In	PM Out		Daily	AM Hour	PM Hour	AM In	AM Out	PM In	PM Out
Business Park 770	Employees	4.04	0.45	0.39	85%	15%	22%	78%	20.0	81	9	8	8	1	2	6
Manufacturing 140	Employees	2.13	0.40	0.36	73%	27%	44%	56%	20.0	43	8	7	6	2	3	4
Single Family Homes 210	DU	9.57	0.75	1.01	25%	75%	63%	37%	5.0	48	4	5	1	3	3	2
Daycare Center 565	KSF^2	74.06	12.18	12.34	53%	47%	47%	53%	2.0	148	24	25	13	11	12	13
Office Park 750	KSF^2	11.42	1.71	1.48	89%	11%	14%	86%	6.0	69	10	9	9	1	1	8
Serv.Station w/ Conven.Mkt 945	Fuel Position	162.78	10.16	13.51	50%	50%	50%	50%	2.0	326	20	27	4	4	6	6
Automobile Care Center 942	Service Bays	12.48	1.52	2.17	68%	32%	NA	NA	6.0	75	9	13	6	3	NA	NA
									Totals	**788**	**85**	**94**	**47**	**26**	**27**	**39**

Full Buildout Average Week Day Trips a day to/from Foster Tracts Area = 788 trips/ day

AM Peak Hour = 85 Trips/ hour

AM Peak Hour (Ingress) = 47 Trips/ hour

AM Peak Hour (Egress) = 26 Trips/ hour

PM Peak Hour = 94 Trips/ hour

PM Peak Hour (Ingress) = 27 Trips/ hour

PM Peak Hour (Egress) = 39 Trips/ hour

Woodhouse Road at U.S. 30 Peak Hours Full Buildout

AM Peak Hour (Ingress) = 47 Trips/ hour x 0.75 = 36 Trips

PM Peak Hour (Egress) = 39 Trips/ hour x 0.75= 30 Trips

Conclusion

The proposed extension of Woodhouse Road with auxiliary lanes for a full movement intersection shows an increase of approximately 9.05%/ year in AM Peak Hour and a 9.52%/ year increase in PM Peak Hour traffic diverted from the Whitney Road to US 30 Service Road connection to the Woodhouse Road extension into U.S. 30 through year 2040. Fully buildout/ rehabilitation from existing 2019 to an unknown horizon year shows an approximate increase in AM Peak Hour from 10 vehicles to 36 vehicles and PM Peak Hour from 6 to 30 vehicles. A summary of the anticipated volumes is shown in *Table 5 Anticipated Traffic Volumes at Intersection of U.S. 30 w/ Woodhouse Road* below.

It appears based on the low anticipated growth of the development in the next twenty years and beyond, that it is operationally feasible to connect Woodhouse Road to U.S. 30 with minimal operational impact to U.S. 30. Some operational difficulties may or may not occur at final buildout depending on future posted speed limits and surrounding signalization, but this will likely occur well beyond the service life of the proposed U.S. 30 improvements.

Table 5 Anticipated Traffic Volumes at Intersection of U.S. 30 w/ Woodhouse Road

Description	**Units**	**2019**	**2040**	**Full Buildout/ Rehabilitation**
AM Peak Hour In	Vehicles	10	19	36
PM Peak Hour Out	Vehicles	6	12	30
Daily Total	Average Daily Traffic (ADT)	129	218	591

Form M-3A (REV 8/2014)

Permit #_____
For WYDOT Use Only

Wyoming Department of Transportation
Access Application

Property Owner (Permittee)		Applicant or Agent (if different from Property Owner)	
Laramie County		Cheyenne MPO	
Business (if applicable)		Business (if applicable)	
Mailing Address: 310 West 19th Street		Mailing Address: 2101 O'Neil Avenue	
City: Cheyenne		City: Cheyenne	
State: Wyoming	Zip Code: 82001	State: Wyoming	Zip Code: 82001
Phone Number: 307.633.4302		Phone Number: 307.638.4385	
E-mail Address: dbumann@laramiecounty.com		E-mail Address: tcobb@cheyennempo.org	

Property Address of Requested Access (if known): Approximately RM/ MP 367.34

Located on Highway: ML 56B

Side of Highway: ☒ N ☐ S ☐ E ☐ W

Approximately 0.64 feet/mile (circle: N S (E) W) from Milepost/Intersection 366.70 End Divided Section

Legal Description

County	Subdivision	Block	Lot	Section	Township	Range
Laramie	Foster Tracts			25	14N	66W

Access requested

☒ New Access ☐ Temporary Access ☐ Change in Access Use ☐ Removal of Access

Check appropriate box if requesting a new access or change in access use.

☒ Major ☐ Commercial ☐ Residential ☐ Field

Does the property owner own or have any interests in the adjacent property? ☒ No ☐ Yes

If yes, please describe:

Are there other existing or dedicated public streets, roads, highways or access easements bordering or within the property?
☐ No ☒ Yes If yes, list them on your plans and indicate the proposed and existing access points

I, the undersigned property owner, request permission to construct an access driveway on Wyoming Department of Transportation right-of-way at the above property, subject to the rules and regulations contained in the " Rules and Regulations, General Section, Chapter 13, Access Facilities, approved by the Transportation Commission of Wyoming and promulgated by authority of W.S. 24-2-105 and W.S. 24-6-101 through W.S. 24-6-111 to administer access facilities on the state highway system".

If an access permit is issued to you, **the applicant agrees to the terms and conditions as stated in the permit**.

Applicant or Agent Signature for Permittee: [signature] Date: 2/14/19

Applications for access permits will be accepted only from an individual(s), partnerships, corporations, or other bodies recognized by law as owning all or the major interest in the property or by a party having an easement through the property abutting the highway right-of-way or proposed highway.

Property Owner Signature: [signature] Date: 2/14/19

Instructions

Form M-3A, Application for permit to Construct Access Driveway must be submitted to your local Wyoming Department of Transportation Maintenance Foreman. He will review and then submit all necessary paperwork to the District Traffic Engineer for processing. The applicant must submit two copies of the M-3A form filled in and signed by the **individual, partnership, corporation, qualified agent, or other body recognized by law as owning all or the major interest in the property abutting the highway right of way or proposed highway.** The planned property ingress or egress must be indicated as one of the following:

- Field (Minor) Access. An entrance to and/or exit from a field or unoccupied property if the access is not used daily throughout the year. Daily use for only a few weeks a year still qualifies as field access.
- Residential Access. An access providing entrance to and/or exit from residential dwelling(s) for exclusive use and benefit of those residing therein.
- Commercial Access. An entrance into and/or exit from any business, commercial development, cultural/institutional complex, public establishment, or any development serving 10 or more family residences.
- Major Access. Any access that generates more than 50 trip ends in any hour of a typical day or is a public street or access.

A business letter shall accompany the application. The letter should have a heading: including name, address, and telephone number of the above owner or owners, estimate of daily traffic, and state what you propose to do, (EX: where you intend to construct the access, when the work will be started, an estimate of completion time).

A drawing or a sketch showing sufficient dimensions **shall** be submitted with the application. Which clearly indicates the character and extent of the proposed work to include all or part the following?

- Proposed access.
- Land description to include the Section, Township, and Range
- The location of all existing or proposed buildings, stands, pumps, retaining walls, and other physical features which affect the access location.
- Property lines, dimensions, and existing accesses.
- All drainage which affects the access location.
- All accesses outside of the property but within 330 feet (urban), 660 feet (rural) of the property line.
- Off street parking locations which may affect access location.
- Radii of proposed accesses.

If Right-of-Way fence is involved, you are required to install brace panels on either side of the access. If you require a cattleguard, it must be located on the private property and installed and maintained by you. If a drainage problem will be created, a minimum of an 18" diameter CMP will be required under the proposed access. The length of the CMP must enable construction of 8:1 side slopes on the approach shoulders.

Note: In order to expedite the processing of your application, the location of the proposed access should be clearly indicated both on your drawing and/or sketch (by Highway Route and distance to a Milepost number) and marked at the actual site with highly visible markings for the field location and inspection.

If you have any questions concerning your access application please feel free to contact the District office.

Whitney Road and East Dell Range Intersection

The Cheyenne Metropolitan Planning Organization (MPO) is currently managing the Whitney Road and East Dell Range/US 30 Corridor Plans. Both Corridor Plans' study areas include the Whitney Road and East Dell Range intersection.

The Whitney Road Corridor Study, initiated at the end of 2017, initially recommended a single lane roundabout as a long-term solution for the intersection. The recommendation was based on a safety assessment, 2016 traffic counts and analysis documented in the City approved Whitney Ranch Traffic Impact Assessment. However, the traffic study did not estimate the redistribution of future traffic with the Christianson Road extension to Interstate 80.

Subsequently, the traffic analysis conducted for the East Dell Range and US 30 Corridor Study, initiated in the Fall of 2018) utilized 2017/18 traffic counts and a traffic analysis which assumed future traffic would be redistributed when Christianson Road was extended south. This more recent traffic analysis suggests the previously recommended intersection at Whitney Road and East Dell Range could accommodate a single lane roundabout as an interim solution. However, at full build-out of the Whitney Ranch development, the single lane roundabout would need additional right-turn lanes for the southbound and eastbound approaches to meet acceptable traffic operations.

The East Dell Range and US 30 Corridor Team was asked to assess a signalized intersection as an alternative to the proposed single lane roundabout. This memorandum summarizes the operational and urban design opportunities and challenges associated with a potential roundabout and an alternative traffic signal for the East Dell Range and Whitney Road intersection.

Operational Assessment

A year 2040 traffic operations assessment was conducted for Whitney Road and East Dell Range intersection. The alternatives evaluated included the current configuration of the intersection; a single lane roundabout; a single lane roundabout with eastbound and southbound additional right-turn slip ramps; and, a signalized intersection with left-turn and a shared through and right-turn travel lane on each approach. The level of service (LOS) and delay analysis is shown below.

Traffic LOS and Delay

2040	Existing Conditions Two-Way Stop Control Delay (LOS)		One Lane Roundabout Delay (LOS)		One Lane Roundabout w/ EB & SB Right Turn Delay (LOS)		Signalized Intersection	
Movement	**AM Delay (LOS)**	**PM Delay (LOS)**	**AM Delay (LOS)**	**PM Delay (LOS)**	**AM Delay (LOS)**	**PM Delay (LOS)**	**AM Delay (LOS)**	**PM Delay (LOS)**
Overall	-	-	19.9 (C)	45.5 (E)	11.9 (B)	31.8(D)	33.7(C)	27.5(C)
NB Approach	>300	>300	-	-	-	-		
EB Approach	8.8 (A)	8.5 (A)	-	-	-	-		
WB Approach	8.0 (A)	9.1 (A)	-	-	-	-		
SB Approach	>300	>300	-	-	-	-		

The analysis shows the signalized intersection and the roundabout with additional right turn lanes meet the minimum traffic operation expectation in both the AM and PM peak hours. The roundabout operates at an LOS D with an overall delay of 31. 8 seconds in the PM peak hour. The signalized intersection operates slightly better with an LOS C with an overall delay of 27. 5 in the PM peak hour.

The 95th percentile queuing analysis for both alternatives shows shorter queue lengths with the signalized intersection. The traffic signal alternative maintains approximately 300' shorter queues in the peak direction when compared to the roundabout.

Vehicle Queuing

Queue Length (95th percentile)	One Lane Roundabout		One Lane Roundabout w/ EB & SB Right Turns		Signalized Intersection	
Movement	**AM (ft)**	**PM (ft)**	**AM (ft)**	**PM (ft)**	**AM (ft)**	**PM Delay (ft)**
NB left	-	-	-	-	#168'	#134'
NB Through	45'	789'	45'	789'	134'	#451'
EB Left	-	-	-	-	28'	m23'
EB Through	98'	897'	46	259'	82'	#599'
EB Right	-	-	10'	18'	-	-
WB Left	-	-	-	-	m21'	m10'
WB Through	180'	175'	180'	175'	#506'	355'
SB Left	-	-	-	-	56'	#107'
SB Through	397'	172'	147'	98'	#452'	318'
SB Right	-	-	15'	7'	-	-

95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

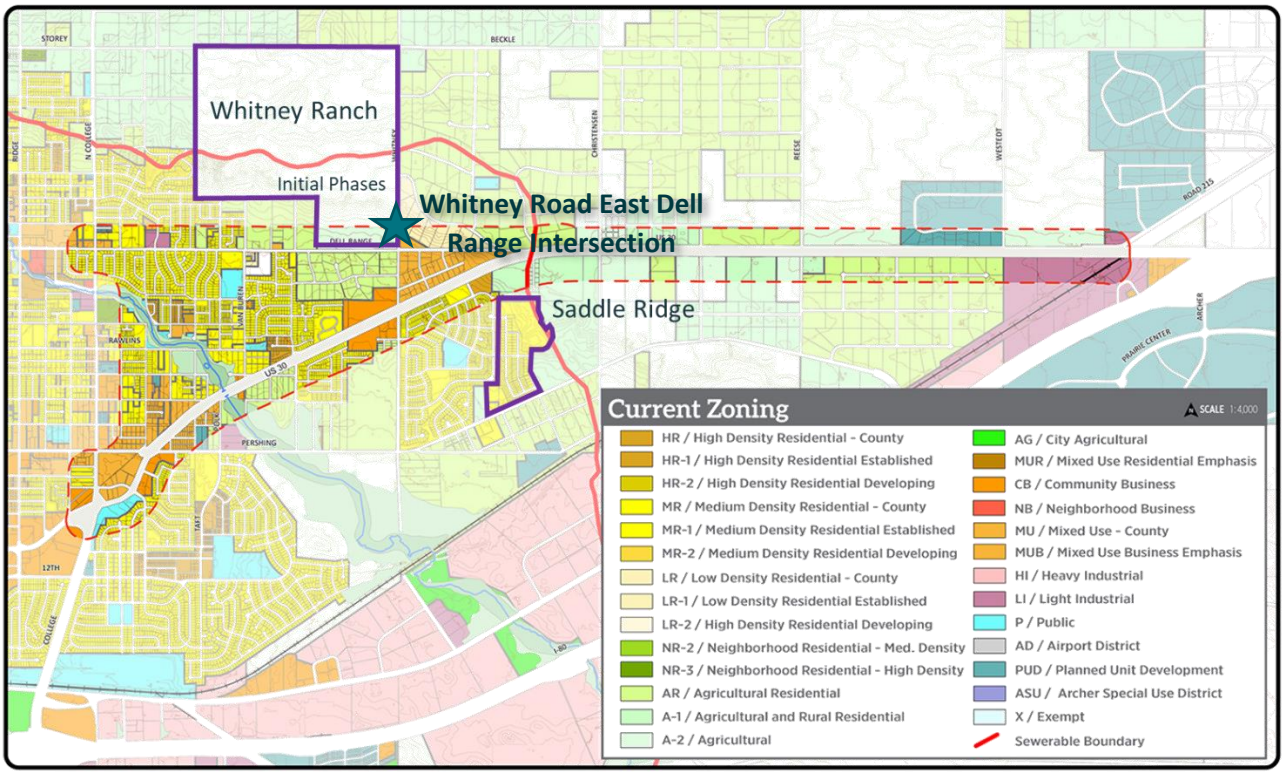
Land Use and Urban Design Assessment

The Whitney Road and East Dell Range intersection is situated within Cheyenne's and Laramie County's high growth corridors. While currently rural in character, the land uses surrounding the intersection are transitioning into a more suburban development pattern. Whitney Ranch and Saddle Ridge are the two largest developments influencing land use and traffic changes occurring in the area.

A zoning and infrastructure assessment of the area shows Whitney Road will function as the City of Cheyenne's eastern boundary for many years. Sewer service expansion in the area is limited east of Whitney Road. Furthermore, most of the properties east of Whitney Road are large lot residential parcels and likely not to redevelop. The Whitney Road and East Dell Range intersection will function as a gateway between the urban and suburban patterns of development within Whitney Ranch, the City of Cheyenne with the more rural development pattern of Laramie County.

Between the two alternatives a roundabout presents a stronger gateway and urban design opportunity for transitioning land uses than a signalized intersection. The roundabout creates a physical transition between the higher travels speeds anticipated in rural areas east Whitney Road and the lower traffic speeds in the more suburban pattern west of Whitney Road. The roundabout balances mobility demands while providing a distinctive place-making opportunity.

Zoning and Sewer Services Map



Opportunities (Pros)

Signalized Intersection

- Maintains LOS B in the AM peak and an LOS C in the PM peak hour
- Maintains shorter vehicle queue lengths
- Provides a safer physical condition than the current intersection condition
- Provides most comfortable pedestrian and bicycle crossing of the intersection
- Lower capital costs when compared to the roundabout

Roundabout

- Maintains LOS B in the AM peak and an acceptable LOS D in the PM peak hour with only a 4 second of additional overall delay when compared to the signalized intersection
- Maintaining lower traffic speeds with fewest conflict points making it the safest alternative
- Presents a long-term aesthetic and urban design gateway opportunity
- Presents a physical traffic calming opportunity transitioning higher rural travel speeds to slower suburban travel speeds
- The roundabout balances mobility demands while providing a distinctive place-making opportunity

Challenges (Cons)

Signalized Intersection

- Higher speeds and more conflict points when compared to the roundabout
- Limited aesthetic and urban design gateway opportunities
- Provides traffic control, not traffic calming in transitioning from higher rural travel speeds to slower suburban travel speeds

Roundabout

- Less comfortable intersection crossing for pedestrians and bicyclists
- Lower traffic LOS and a 4 second higher overall delay when compared to the signalized intersection
- Longer vehicle queues than a signalized intersection
- Higher capital costs than a signalized intersection

Table 1 – Study Area Intersections LOS Results

Intersection	Existing 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	33.7 C	52.2 D
Dell Range Blvd & Van Buren Ave (#2)	STOP	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	-	-
	STOP	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)	STOP	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
	STOP	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)	STOP	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
	STOP	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)	STOP	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	-	-
	STOP	Southbound Approach	14.4 B	13.0 B	>300 F	>300 F	-	-
		Overall (Single Lane)	-	-	-	-	19.9 C	45.5 E
		Overall (Single Lane EB & SB RT)	-	-	-	-	11.9 B	31.8 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	27.3 C	54.6 D
US-30 & E Pershing Blvd (#7)		Overall	18.6 B	20.3 C	32.4 C	72.5 E	30.2 C	44.0 D

Intersection	Existing 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 & Polk Ave (#8)	STOP	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	DNE	DNE
		Westbound Left	8.2 A	10.9 B	9.1 A	17.9 C	DNE	DNE
	STOP	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	-	-
	STOP	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)	STOP	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
	STOP	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)	STOP	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	-	-
	STOP	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)	STOP	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
	STOP	Southbound Approach	12.9 B	14.0 B	14.5 B	16.6 C	10.2 B	9.3 A
US-30 & Dell Range Blvd (#13)	STOP	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	-	-
	STOP	Southbound Approach	14.5 B	18.2 C	26.5 D	177.5 F	-	-

Intersection	Existing 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)
		Overall	-	-	-	-	10.0 A	24.8 C
US-30 & Christensen Rd (#14)	STOP	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	-	-
	STOP	Southbound Approach	15.2 C	11.0 B	53.7 F	33.6 D	-	-
		Overall	-	-	-	-	34.7 C	22.1 C
US-30 & Reese Ave (#15)	STOP	Northbound Approach	13.0 B	15.1 C	23.3 C	26.0 D	23.3 C	26.0 D
		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
	STOP	Southbound Approach	12.0 B	10.9 B	14.9 B	14.6 B	14.9 B	14.6 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
	STOP	Southbound Approach	11.1 B	10.5 B	14.1 B	16.2 C	14.1 B	16.2 C
US-30 & Archer Pkwy (#17)	STOP	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
	STOP	Southbound Approach	13.1 B	11.3 B	14.8 B	14.2 B	14.8 B	14.2 B

DNE = Does Not Exist

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+I1), 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

Notes

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

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

Notes

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

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.

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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

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

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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	932		432	1022	207	469	720	321	353	693	122
Arrive On Green	0.02	0.10	0.00	0.16	0.41	0.41	0.06	0.24	0.24	0.09	0.27	0.27
Sat Flow, veh/h	1500	2993	1335	1500	2479	502	2910	2993	1335	1500	2544	447
Grp Volume(v), veh/h	87	543	0	304	551	547	326	326	163	147	306	308
Grp Sat Flow(s),veh/h/ln	1500	1496	1335	1500	1496	1485	1455	1496	1335	1500	1496	1495
Q Serve(g_s), s	3.5	15.6	0.0	11.7	30.8	30.9	5.5	8.4	9.5	6.5	16.8	17.0
Cycle Q Clear(g_c), s	3.5	15.6	0.0	11.7	30.8	30.9	5.5	8.4	9.5	6.5	16.8	17.0
Prop In Lane	1.00		1.00	1.00		0.34	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	197	932		432	617	612	469	720	321	353	407	407
V/C Ratio(X)	0.44	0.58		0.70	0.89	0.89	0.70	0.45	0.51	0.42	0.75	0.76
Avail Cap(c_a), veh/h	207	932		474	617	612	469	720	321	389	407	407
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	0.44	0.44	0.44	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.3	34.8	0.0	17.4	24.6	24.6	30.2	29.1	29.6	22.4	30.0	30.0
Incr Delay (d2), s/veh	1.5	2.6	0.0	1.9	9.0	9.1	4.4	2.0	5.6	0.8	12.1	12.4
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	1.3	6.5	0.0	4.0	11.8	11.8	1.6	3.1	3.5	2.3	7.2	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.8	37.4	0.0	19.3	33.6	33.7	34.6	31.2	35.2	23.2	42.0	42.4
LnGrp LOS	C	D		B	C	C	C	C	D	C	D	D
Approach Vol, veh/h		630	A		1402			815			761	
Approach Delay, s/veh		35.6			30.5			33.3			38.5	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	26.2	18.5	32.5	10.0	29.0	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	10.5	19.5	16.5	25.5	5.5	24.5	5.5	36.5
Max Q Clear Time (g_c+I1), s	8.5	11.5	13.7	17.6	7.5	19.0	5.5	32.9
Green Ext Time (p_c), s	0.1	1.7	0.3	2.2	0.0	1.8	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C

Notes

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

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	136	293	353	152
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	259	1114		246	834	204	578	682	304	274	467	198
Arrive On Green	0.04	0.12	0.00	0.09	0.35	0.35	0.11	0.23	0.23	0.11	0.23	0.23
Sat Flow, veh/h	1500	2993	1335	1500	2384	582	2910	2993	1335	1500	2048	867
Grp Volume(v), veh/h	283	1000	0	255	516	508	511	565	136	293	256	249
Grp Sat Flow(s),veh/h/ln	1500	1496	1335	1500	1496	1470	1455	1496	1335	1500	1496	1419
Q Serve(g_s), s	10.5	29.6	0.0	8.5	30.8	30.8	9.5	16.2	7.9	9.5	14.4	14.8
Cycle Q Clear(g_c), s	10.5	29.6	0.0	8.5	30.8	30.8	9.5	16.2	7.9	9.5	14.4	14.8
Prop In Lane	1.00		1.00	1.00		0.40	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	259	1114		246	524	515	578	682	304	274	341	323
V/C Ratio(X)	1.09	0.90		1.04	0.99	0.99	0.88	0.83	0.45	1.07	0.75	0.77
Avail Cap(c_a), veh/h	259	1114		246	524	515	578	682	304	274	341	323
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	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	37.8	0.0	24.2	29.0	29.0	29.2	33.1	29.9	30.1	32.4	32.5
Incr Delay (d2), s/veh	82.0	11.1	0.0	27.9	9.0	9.1	15.2	11.2	4.7	73.7	14.2	16.1
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	10.0	13.5	0.0	5.1	11.8	11.7	3.0	6.8	2.9	7.7	6.4	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	108.0	48.9	0.0	52.1	38.0	38.2	44.4	44.3	34.6	103.9	46.6	48.6
LnGrp LOS	F	D		F	D	D	D	D	C	F	D	D
Approach Vol, veh/h		1283	A		1279			1212			798	
Approach Delay, s/veh		61.9			40.9			43.2			68.3	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	25.0	13.0	38.0	14.0	25.0	15.0	36.0
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	9.5	20.5	8.5	33.5	9.5	20.5	10.5	31.5
Max Q Clear Time (g_c+I1), s	11.5	18.2	10.5	31.6	11.5	16.8	12.5	32.8
Green Ext Time (p_c), s	0.0	1.0	0.0	1.2	0.0	1.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	52.2
HCM 6th LOS	D

Notes

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

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

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

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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

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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)	0.83	0.83	0.83	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	0.9	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		13.4			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+I1), 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

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+I1), 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

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 Q(veh)	0.5	0	-	-	0	-	-	-

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

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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

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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

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

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

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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

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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

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

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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

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MOVEMENT SUMMARY

Site: 101 [2040 Total AM]

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	0.635	13.9	LOS B	7.0	180.1	0.76	0.91	1.23	30.9
6	T1	500	3.0	0.635	13.9	LOS B	7.0	180.1	0.76	0.91	1.23	30.9
16	R2	43	3.0	0.635	13.9	LOS B	7.0	180.1	0.76	0.91	1.23	30.1
Approach		571	3.0	0.635	13.9	LOS B	7.0	180.1	0.76	0.91	1.23	30.8
North: Whitney Road												
7	L2	71	3.0	0.888	37.1	LOS E	15.5	396.7	1.00	1.64	2.89	23.4
4	T1	418	3.0	0.888	37.1	LOS E	15.5	396.7	1.00	1.64	2.89	23.4
14	R2	114	3.0	0.888	37.1	LOS E	15.5	396.7	1.00	1.64	2.89	22.9
Approach		603	3.0	0.888	37.1	LOS E	15.5	396.7	1.00	1.64	2.89	23.3
West: Dell Range Boulevard												
5	L2	76	3.0	0.523	12.2	LOS B	3.8	98.0	0.73	0.85	1.05	31.3
2	T1	245	3.0	0.523	12.2	LOS B	3.8	98.0	0.73	0.85	1.05	31.2
12	R2	87	3.0	0.523	12.2	LOS B	3.8	98.0	0.73	0.85	1.05	30.4
Approach		408	3.0	0.523	12.2	LOS B	3.8	98.0	0.73	0.85	1.05	31.1
All Vehicles		1897	3.0	0.888	19.9	LOS C	15.5	396.7	0.80	1.07	1.62	28.2

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.

MOVEMENT SUMMARY

Site: 101 [2040 Total PM]

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	0.719	22.6	LOS C	6.8	174.6	0.86	1.16	1.77	27.6
6	T1	326	3.0	0.719	22.6	LOS C	6.8	174.6	0.86	1.16	1.77	27.6
16	R2	109	3.0	0.719	22.6	LOS C	6.8	174.6	0.86	1.16	1.77	26.9
Approach		451	3.0	0.719	22.6	LOS C	6.8	174.6	0.86	1.16	1.77	27.4
North: Whitney Road												
7	L2	87	3.0	0.647	15.4	LOS C	6.7	172.1	0.80	1.02	1.38	30.0
4	T1	375	3.0	0.647	15.4	LOS C	6.7	172.1	0.80	1.02	1.38	30.0
14	R2	65	3.0	0.647	15.4	LOS C	6.7	172.1	0.80	1.02	1.38	29.2
Approach		527	3.0	0.647	15.4	LOS C	6.7	172.1	0.80	1.02	1.38	29.9
West: Dell Range Boulevard												
5	L2	109	3.0	0.999	53.9	LOS F	35.0	897.3	1.00	2.18	4.12	19.9
2	T1	543	3.0	0.999	53.9	LOS F	35.0	897.3	1.00	2.18	4.12	19.9
12	R2	158	3.0	0.999	53.9	LOS F	35.0	897.3	1.00	2.18	4.12	19.6
Approach		810	3.0	0.999	53.9	LOS F	35.0	897.3	1.00	2.18	4.12	19.8
All Vehicles		2435	3.0	1.049	45.5	LOS E	35.0	897.3	0.93	1.79	3.38	21.4

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 AM w EB/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	0.635	13.9	LOS B	7.0	180.1	0.76	0.91	1.23	30.9
6	T1	500	3.0	0.635	13.9	LOS B	7.0	180.1	0.76	0.91	1.23	30.9
16	R2	43	3.0	0.635	13.9	LOS B	7.0	180.1	0.76	0.91	1.23	30.1
Approach		571	3.0	0.635	13.9	LOS B	7.0	180.1	0.76	0.91	1.23	30.8
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	11.9	LOS B	7.0	180.1	0.69	0.78	1.01	31.3

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/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	0.719	22.6	LOS C	6.8	174.6	0.86	1.16	1.77	27.6
6	T1	326	3.0	0.719	22.6	LOS C	6.8	174.6	0.86	1.16	1.77	27.6
16	R2	109	3.0	0.719	22.6	LOS C	6.8	174.6	0.86	1.16	1.77	26.9
Approach		451	3.0	0.719	22.6	LOS C	6.8	174.6	0.86	1.16	1.77	27.4
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	31.8	LOS D	30.8	789.4	0.83	1.35	2.40	24.6

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	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	8				
Phs Duration (G+Y+Rc), s		41.0		49.0		41.0	8.8	40.2				
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		36.5		44.5		36.5	5.5	34.5				
Max Q Clear Time (g_c+I1), s		38.5		14.9		27.9	4.6	31.2				
Green Ext Time (p_c), s		0.0		2.2		2.3	0.0	1.2				

Intersection Summary												
HCM 6th Ctrl Delay			33.7									
HCM 6th LOS			C									

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	8				
Phs Duration (G+Y+Rc), s		40.0		50.0		40.0	9.8	40.2				
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		35.5		45.5		35.5	5.5	35.5				
Max Q Clear Time (g_c+I1), s		36.5		37.4		27.6	5.7	29.3				
Green Ext Time (p_c), s		0.0		2.9		2.0	0.0	1.4				

Intersection Summary												
HCM 6th Ctrl Delay			27.5									
HCM 6th LOS			C									

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.

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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.

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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.

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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	1	2	3	4	5	6	7	8
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.

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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	271	1070		1037	1219	544	195	1031	600	187	905	404
Arrive On Green	0.05	0.36	0.00	0.10	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	7.4	0.0	10.3	22.4	2.3	5.5	18.3	16.2	0.5	23.8	7.9
Cycle Q Clear(g_c), s	5.5	7.4	0.0	10.3	22.4	2.3	5.5	18.3	16.2	0.5	23.8	7.9
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	271	1070		1037	1219	544	195	1031	600	187	905	404
V/C Ratio(X)	0.52	0.29		0.47	0.67	0.09	0.64	0.63	0.51	0.06	0.84	0.34
Avail Cap(c_a), veh/h	271	1070		1037	1219	544	195	1122	641	250	1122	501
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	22.3	23.0	0.0	16.6	24.2	18.2	26.1	27.5	19.6	24.6	32.6	27.1
Incr Delay (d2), s/veh	1.8	0.7	0.0	0.3	3.0	0.3	7.0	1.0	0.7	0.1	4.9	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	2.2	2.7	0.0	3.4	8.2	0.7	2.3	6.5	5.0	0.2	9.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	23.7	0.0	17.0	27.2	18.6	33.0	28.5	20.3	24.7	37.5	27.6
LnGrp LOS	C	C		B	C	B	C	C	C	C	D	C
Approach Vol, veh/h		451	A		1354			1081			908	
Approach Delay, s/veh		23.8			23.2			26.7			35.8	
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	38.9	15.0	40.2	10.0	34.8	10.0	45.2
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	5.5	37.5	10.5	28.5	5.5	37.5	5.5	33.5
Max Q Clear Time (g_c+I1), s	2.5	20.3	12.3	9.4	7.5	25.8	7.5	24.4
Green Ext Time (p_c), s	0.0	5.3	0.0	1.9	0.0	4.5	0.0	3.9

Intersection Summary	
HCM 6th Ctrl Delay	27.3
HCM 6th LOS	C

Notes

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

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	451	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	303	1063		407	1003	447	196	1032	574	124	972	434
Arrive On Green	0.10	0.36	0.00	0.09	0.34	0.34	0.05	0.34	0.34	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	451	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	10.5	34.0	0.0	8.5	22.7	1.9	5.5	34.5	29.1	1.9	25.1	11.6
Cycle Q Clear(g_c), s	10.5	34.0	0.0	8.5	22.7	1.9	5.5	34.5	29.1	1.9	25.1	11.6
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	303	1063		407	1003	447	196	1032	574	124	972	434
V/C Ratio(X)	0.90	0.97		1.04	0.76	0.08	0.86	1.08	0.79	0.35	0.83	0.45
Avail Cap(c_a), veh/h	303	1063		407	1003	447	196	1032	574	147	1017	454
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	26.1	31.8	0.0	27.0	29.6	22.7	31.8	32.8	24.5	26.4	31.2	26.7
Incr Delay (d2), s/veh	27.3	21.6	0.0	55.5	5.4	0.4	29.2	53.9	7.1	1.6	5.8	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	6.5	15.0	0.0	6.3	8.7	0.7	3.5	19.8	9.9	0.7	9.6	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.4	53.4	0.0	82.6	35.0	23.1	61.0	86.7	31.6	28.0	37.1	27.5
LnGrp LOS	D	D		F	D	C	E	F	C	C	D	C
Approach Vol, veh/h		1305	A		1223			1739			1049	
Approach Delay, s/veh		53.4			51.1			69.9			34.9	
Approach LOS		D			D			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	39.0	13.0	40.0	10.0	37.0	15.0	38.0
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	5.0	34.5	8.5	34.0	5.5	34.0	10.5	32.0
Max Q Clear Time (g_c+I1), s	3.9	36.5	10.5	36.0	7.5	27.1	12.5	24.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	3.5	0.0	3.1

Intersection Summary	
HCM 6th Ctrl Delay	54.6
HCM 6th LOS	D

Notes

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

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									

Notes

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

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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

Notes

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

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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+I1), 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

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

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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

Notes

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

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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	8
Phs Duration (G+Y+Rc), s	55.3	14.0	20.7	10.0	45.3	10.0	24.7
Change Period (Y+Rc), s	4.5	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	22.5
Max Q Clear Time (g_c+I1), s	9.4	11.5	7.3	7.5	27.1	7.5	18.9
Green Ext Time (p_c), s	4.0	0.0	0.8	0.0	6.5	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	30.2
HCM 6th LOS	C

Notes

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

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+I1), 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

Notes

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

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

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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

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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	630	5	0	1500	30	0	0	10	0	0	15
Future Vol, veh/h	0	630	5	0	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	-	-	-	-	-	-	-	-	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	0	685	5	0	1579	32	0	0	11	0	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	345	-	-	806
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	651	0	0	325
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	651	-	-	325
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.6	16.7
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	651	-	-	-	-	325
HCM Lane V/C Ratio	0.017	-	-	-	-	0.05
HCM Control Delay (s)	10.6	-	-	-	-	16.7
HCM Lane LOS	B	-	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.2

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	0	1705	5	0	1015	20	0	0	55	0	0	15
Future Vol, veh/h	0	1705	5	0	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	-	-	-	-	-	-	-	-	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	0	1853	5	0	1068	21	0	0	60	0	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	929	-	-	545
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	269	0	0	482
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	269	-	-	482
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	22.2	12.7
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	269	-	-	-	-	482
HCM Lane V/C Ratio	0.222	-	-	-	-	0.034
HCM Control Delay (s)	22.2	-	-	-	-	12.7
HCM Lane LOS	C	-	-	-	-	B
HCM 95th %tile Q(veh)	0.8	-	-	-	-	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

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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

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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	8				
Phs Duration (G+Y+Rc), s		23.0		67.0		23.0	10.5	56.5				
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.5		62.5		18.5	9.5	48.5				
Max Q Clear Time (g_c+I1), s		20.5		7.7		12.7	5.9	37.6				
Green Ext Time (p_c), s		0.0		3.6		0.5	0.1	7.2				

Intersection Summary												
HCM 6th Ctrl Delay			22.7									
HCM 6th LOS			C									

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+I1), 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

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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

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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	NBLn1	NBLn2	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	NBLn1	NBLn2	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

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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	NBLn1	NBLn2	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

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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	8				
Phs Duration (G+Y+Rc), s		33.0		57.0		33.0	12.0	45.0				
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		28.5		52.5		28.5	7.5	40.5				
Max Q Clear Time (g_c+I1), s		21.2		5.5		18.5	8.0	13.7				
Green Ext Time (p_c), s		1.0		2.0		0.9	0.0	4.3				

Intersection Summary												
HCM 6th Ctrl Delay			20.3									
HCM 6th LOS			C									

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	8				
Phs Duration (G+Y+Rc), s		29.0		61.0		29.0	26.5	34.5				
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		24.5		56.5		24.5	31.5	20.5				
Max Q Clear Time (g_c+I1), s		17.2		11.8		17.6	20.6	7.3				
Green Ext Time (p_c), s		0.7		5.9		0.9	1.4	1.7				

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

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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

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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

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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

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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		22			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+I1), 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

Notes

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

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	A		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+I1), 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

Notes

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

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	NBLn1	NBLn2	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

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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	NBLn1	NBLn2	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

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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	184	884	749	477	723	24	331	290	206	492	213	272
Arrive On Green	0.01	0.19	0.19	0.48	0.48	0.48	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1500	1575	1335	993	1516	50	1158	857	609	1337	629	802
Grp Volume(v), veh/h	38	293	98	141	0	685	283	0	65	22	0	223
Grp Sat Flow(s),veh/h/ln	1500	1575	1335	993	0	1566	1158	0	1465	1337	0	1431
Q Serve(g_s), s	1.1	14.5	5.5	8.9	0.0	36.6	19.5	0.0	2.8	1.0	0.0	11.0
Cycle Q Clear(g_c), s	1.1	14.5	5.5	15.9	0.0	36.6	30.5	0.0	2.8	3.8	0.0	11.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.42	1.00		0.56
Lane Grp Cap(c), veh/h	184	884	749	477	0	747	331	0	497	492	0	485
V/C Ratio(X)	0.21	0.33	0.13	0.30	0.00	0.92	0.85	0.00	0.13	0.04	0.00	0.46
Avail Cap(c_a), veh/h	258	884	749	477	0	747	331	0	497	492	0	485
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.2	22.0	18.3	18.9	0.0	21.9	36.3	0.0	20.6	21.9	0.0	23.3
Incr Delay (d2), s/veh	0.5	0.9	0.3	1.6	0.0	18.0	23.5	0.0	0.5	0.2	0.0	3.1
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	6.3	1.8	2.2	0.0	16.1	8.4	0.0	1.0	0.3	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	22.9	18.7	20.5	0.0	39.8	59.9	0.0	21.1	22.1	0.0	26.4
LnGrp LOS	B	C	B	C	A	D	E	A	C	C	A	C
Approach Vol, veh/h		429			826			348			245	
Approach Delay, s/veh		21.6			36.5			52.6			26.0	
Approach LOS		C			D			D			C	

Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		35.0		55.0		35.0	7.6	47.4				
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5	7.5	38.5				
Max Q Clear Time (g_c+I1), s		32.5		16.5		13.0	3.1	38.6				
Green Ext Time (p_c), s		0.0		2.2		1.3	0.0	0.0				

Intersection Summary												
HCM 6th Ctrl Delay			34.7									
HCM 6th LOS			C									

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	404	1006	853	278	816	25	334	207	173	202	180	196
Arrive On Green	0.04	0.43	0.43	0.54	0.54	0.54	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1500	1575	1335	606	1521	46	1280	792	664	1130	688	752
Grp Volume(v), veh/h	114	630	293	54	0	549	136	0	250	16	0	113
Grp Sat Flow(s),veh/h/ln	1500	1575	1335	606	0	1567	1280	0	1456	1130	0	1440
Q Serve(g_s), s	2.9	28.1	13.2	5.9	0.0	22.5	8.6	0.0	13.8	1.2	0.0	5.7
Cycle Q Clear(g_c), s	2.9	28.1	13.2	24.9	0.0	22.5	14.2	0.0	13.8	14.9	0.0	5.7
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.46	1.00		0.52
Lane Grp Cap(c), veh/h	404	1006	853	278	0	841	334	0	380	202	0	376
V/C Ratio(X)	0.28	0.63	0.34	0.19	0.00	0.65	0.41	0.00	0.66	0.08	0.00	0.30
Avail Cap(c_a), veh/h	434	1006	853	278	0	841	334	0	380	202	0	376
HCM Platoon Ratio	0.67	0.67	0.67	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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.4	17.3	13.1	22.4	0.0	14.9	32.4	0.0	29.7	36.3	0.0	26.7
Incr Delay (d2), s/veh	0.3	2.2	0.8	1.6	0.0	3.9	3.7	0.0	8.6	0.8	0.0	2.0
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	0.9	11.2	4.4	0.9	0.0	8.3	2.9	0.0	5.6	0.4	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.7	19.5	13.9	24.0	0.0	18.8	36.0	0.0	38.3	37.1	0.0	28.7
LnGrp LOS	B	B	B	C	A	B	D	A	D	D	A	C
Approach Vol, veh/h		1037			603			386			129	
Approach Delay, s/veh		17.1			19.3			37.5			29.7	
Approach LOS		B			B			D			C	

Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		28.0		62.0		28.0	9.2	52.8				
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		23.5		57.5		23.5	6.5	46.5				
Max Q Clear Time (g_c+I1), s		16.2		30.1		16.9	4.9	26.9				
Green Ext Time (p_c), s		1.2		5.9		0.3	0.0	4.1				

Intersection Summary												
HCM 6th Ctrl Delay			22.1									
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 Q(veh)	1.1	0.1	-	-	0.1	-	-	1

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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

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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 Q(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	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

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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

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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	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

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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

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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	-

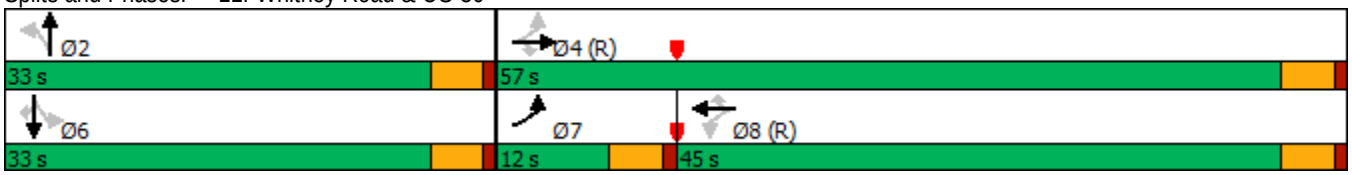
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	2.3	27.8	14.2
HCM LOS			D	B

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	180	235	40	5	525	45	210	110	5	40	410
Future Volume (vph)	180	235	40	5	525	45	210	110	5	40	410
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4			8			2		6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	7	4	4	8	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	12.0	57.0	57.0	45.0	45.0	45.0	33.0	33.0	33.0	33.0	33.0
Total Split (%)	13.3%	63.3%	63.3%	50.0%	50.0%	50.0%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag	Lag					
Lead-Lag Optimize?	Yes			Yes	Yes	Yes					
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max	Max	Max	Max
Act Effct Green (s)	52.5	52.5	52.5	40.5	40.5	40.5	28.5	28.5	28.5	28.5	28.5
Actuated g/C Ratio	0.58	0.58	0.58	0.45	0.45	0.45	0.32	0.32	0.32	0.32	0.32
v/c Ratio	0.50	0.15	0.05	0.01	0.43	0.08	0.63	0.25	0.01	0.09	0.68
Control Delay	14.7	7.0	1.7	10.2	15.5	2.6	35.4	24.2	35.6	36.7	27.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	7.0	1.7	10.2	15.5	2.6	35.4	24.2	35.6	36.7	27.5
LOS	B	A	A	B	B	A	D	C	D	D	C
Approach Delay		9.6			14.4			31.4		28.4	
Approach LOS		A			B			C		C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 19.8	Intersection LOS: B
Intersection Capacity Utilization 72.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: Whitney Road & US-30



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	0.48	0.48	0.48
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	4.0
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	1.1	0.4	0.1	4.0	0.6	4.9	0.0	2.1	0.1	0.6	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	30.7
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			29.5	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		33.0		57.0		33.0	12.0	45.0				
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		28.5		52.5		28.5	7.5	40.5				
Max Q Clear Time (g_c+I1), s		21.2		5.5		18.5	8.0	13.7				
Green Ext Time (p_c), s		1.0		2.0		0.9	0.0	4.3				

Intersection Summary												
HCM 6th Ctrl Delay			20.3									
HCM 6th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	470	630	90	40	235	65	115	95	25	95	370
Future Volume (vph)	470	630	90	40	235	65	115	95	25	95	370
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4			8			2		6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	7	4	4	8	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	36.0	61.0	61.0	25.0	25.0	25.0	29.0	29.0	29.0	29.0	29.0
Total Split (%)	40.0%	67.8%	67.8%	27.8%	27.8%	27.8%	32.2%	32.2%	32.2%	32.2%	32.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag	Lag					
Lead-Lag Optimize?	Yes			Yes	Yes	Yes					
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max	Max	Max	Max
Act Effct Green (s)	56.5	56.5	56.5	28.8	28.8	28.8	24.5	24.5	24.5	24.5	24.5
Actuated g/C Ratio	0.63	0.63	0.63	0.32	0.32	0.32	0.27	0.27	0.27	0.27	0.27
v/c Ratio	0.75	0.36	0.11	0.22	0.25	0.15	0.43	0.28	0.09	0.24	0.61
Control Delay	19.0	8.9	3.9	9.7	6.1	3.5	32.4	26.0	25.5	27.1	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	8.9	3.9	9.7	6.1	3.5	32.4	26.0	25.5	27.1	12.6
LOS	B	A	A	A	A	A	C	C	C	C	B
Approach Delay		12.6			6.0			29.3		16.0	
Approach LOS		B			A			C		B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 14.0	Intersection LOS: B
Intersection Capacity Utilization 64.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: Whitney Road & US-30

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	8				
Phs Duration (G+Y+Rc), s		29.0		61.0		29.0	26.5	34.5				
Change Period (Y+Rc), s		4.5		4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		24.5		56.5		24.5	31.5	20.5				
Max Q Clear Time (g_c+I1), s		17.2		11.8		17.6	20.6	7.3				
Green Ext Time (p_c), s		0.7		5.9		0.9	1.4	1.7				

Intersection Summary												
HCM 6th Ctrl Delay			19.3									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	196	255	43	5	571	49	228	125	5	43	446
v/c Ratio	0.50	0.15	0.05	0.01	0.43	0.08	0.63	0.25	0.01	0.09	0.68
Control Delay	14.7	7.0	1.7	10.2	15.5	2.6	35.4	24.2	35.6	36.7	27.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.7	7.0	1.7	10.2	15.5	2.6	35.4	24.2	35.6	36.7	27.5
Queue Length 50th (ft)	28	19	1	1	145	5	110	51	3	24	140
Queue Length 95th (ft)	53	28	0	m4	204	13	192	96	m4	m34	m193
Internal Link Dist (ft)		1323			1938			1420		1506	
Turn Bay Length (ft)	375		375	375		375	100		150		200
Base Capacity (vph)	391	1738	795	419	1341	640	362	495	335	496	658
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.15	0.05	0.01	0.43	0.08	0.63	0.25	0.01	0.09	0.68

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	511	677	97	43	242	71	125	119	27	103	402
v/c Ratio	0.75	0.36	0.11	0.22	0.25	0.15	0.43	0.28	0.09	0.24	0.61
Control Delay	19.0	8.9	3.9	9.7	6.1	3.5	32.4	26.0	25.5	27.1	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	8.9	3.9	9.7	6.1	3.5	32.4	26.0	25.5	27.1	12.6
Queue Length 50th (ft)	95	57	0	1	4	0	58	49	13	52	90
Queue Length 95th (ft)	m227	m126	m15	55	98	50	112	95	m19	m70	m130
Internal Link Dist (ft)		1323			1938			1420		1506	
Turn Bay Length (ft)	375		375	375		375	100		150		200
Base Capacity (vph)	746	1870	872	197	954	476	294	424	289	427	655
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.36	0.11	0.22	0.25	0.15	0.43	0.28	0.09	0.24	0.61

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

MEMORANDUM

TO: Tom Cobb, PE – AVI, pc.

FROM: Joseph L. Henderson, PE, PTOE

DATE: June 11, 2018

RE: Summary of the Analysis Performed for the Whitney Road Corridor Study

Based on your request, I have performed the traffic engineering analysis for the Whitney Road Corridor Study. The following sections outline the assumptions used in the analysis and the results of the analysis.

Assumptions

- **Saturation Flow Rate.** The saturation flow rate was assumed to be 1,600 passenger cars / hour / lane based on Wyoming motorists' driving habits and data collected for the Yellowstone Road Corridor Traffic Signal Timing Project.
- **Peak Hour Factor.** The peak hour factor for the existing conditions was based on the data collected for the study. For the Year 2040, the peak hour factor was assumed to be 0.92 for all of the approaches at US 30 and Dell Range Boulevard. At Beckle Road, the peak hour factor was assumed to be 0.85 in the Year 2040.
- **Signal Timing.** At US 30, a 90 second cycle length was assumed for both peak hours with a 70/30 split. At Dell Range Boulevard, a 100 second cycle length was assumed with a 60/40 split during the morning peak hour and a 50/50 split during the evening peak hour.

Roadway Classifications

- **Whitney Road.** Minor arterial south of Dell Range Boulevard, Major Collector north of Dell Range Boulevard
- **Dell Range Boulevard.** Principal arterial
- **US 30.** Principal arterial
- The classifications are based on the Cheyenne Urban Boundary and Functional Classification Concurrence Map (Cheyenne MPO. September 29, 2015).

Speed Limits

- Dell Range Boulevard – 45 MPH
- US 30 – 45 MPH

Traffic Count Data

- Peak hour traffic counts collected on April 4, 2017 were utilized to calculate the level of service for the existing conditions.

- Year 2040 peak hour counts were obtained from the Whitney Ranch Traffic Impact Study, Figure 11 (Kimley Horn. December 14, 2017). These counts were used in the analysis of the Year 2040 conditions.

Signal Warrants

- **Dell Range Road.** A traffic signal is not currently warranted but is expected to be warranted by the Year 2019. The peak hour warrant is expected to be satisfied during the evening peak hour assuming a straight-line increase from the existing peak hour volumes to the Year 2040 peak hour volumes.
- **US 30.** A traffic signal is not currently warranted but is expected to be warranted by the Year 2022. The peak hour warrant is expected to be satisfied during the evening peak hour assuming a straight-line increase from the existing peak hour volumes to the Year 2040 peak hour volumes.

Approach Laneage – Based on Year 2040 Volumes

- Figure 1 shows the laneage for each intersection assuming that Dell Range Boulevard is signalized. If Dell Range Boulevard is a roundabout, all of the approaches would have a single lane. At Whitney Road, Dell Range can operate acceptably in Year 2040 with one through lane in each direction.
- The intersection operation is summarized in Table 1.

Storage Lengths

- The storage lengths for the left and right turn lanes are summarized in Tables 2 and 3. Please note that the southbound through queue at Dell Range Boulevard is expected to be longer than the right turn lane.

Roundabout at Dell Range Boulevard

- I think that it's a good option for the following reasons:
    - It could be constructed now as compared to waiting for a signal warrant to be satisfied.
    - It might cost less than the signalized intersection.
    - In the Year 2040, it is expected to operate better than the signalized intersection.

Attachments

c:\users\joetr\documents\projects\active\whitney road\project\word\whitney road traffic study memorandum.docx

Figure 1. Lane Configuration and Traffic Control

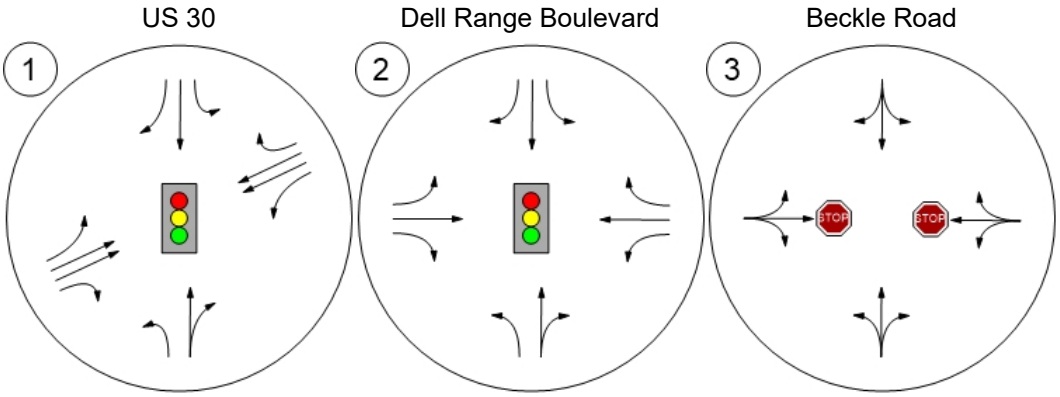


Table 1. Intersection Operational Summary

Signalized Intersection	Existing				Year 2040 - All Movements Stop at the Stop Line				Year 2040 - SBRT at US 30 Does Not Stop			
	Morning		Evening		Morning		Evening		Morning		Evening	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
US 30 / Whitney Road	This intersection is currently stop controlled.				**24.57**	**C**	**19.93**	**B**	**10.04**	**B**	**10.06**	**B**
Northbound Left Turn					25.63	C	29.14	C	42.68	D	43.07	D
Northbound Thru + Right Turn					23.07	C	25.17	C	38.61	D	37.36	D
Southbound Left Turn					25.45	C	28.33	C	41.34	D	41.38	D
Southbound Thru					22.54	C	25.34	C	37.03	D	37.80	D
Southbound Right Turn					53.27	D	47.7	D	0	A	0	A
Eastbound Left Turn					20.52	C	18.15	B	6.41	A	7.35	A
Eastbound Thru					7.39	A	7.64	A	1.97	A	2.84	A
Eastbound Right Turn					6.95	A	6.62	A	1.83	A	2.44	A
Westbound Left Turn					12.92	B	15.45	B	4.9	A	7.1	A
Westbound Thru					14.92	B	10.8	B	5.62	A	5.1	A
Westbound Right Turn					11.38	B	9.82	A	4.27	A	4.61	A
Dell Range Boulevard / Whitney Road	This intersection is currently stop controlled.				**38.46**	**D**	**29.11**	**C**	**38.46**	**D**	**29.11**	**C**
Northbound Left Turn					42.09	D	34.47	C	42.09	D	34.47	C
Northbound Thru + Right Turn					31.62	C	46.04	D	31.62	C	46.04	D
Southbound Left Turn					31.02	C	39.81	D	31.02	C	39.81	D
Southbound Thru					87.75	F	33.31	C	87.75	F	33.31	C
Southbound Right Turn					29.99	C	22.5	C	29.99	C	22.5	C
Eastbound Left Turn					15.84	B	23.28	C	15.84	B	23.28	C
Eastbound Thru					10.55	B	19.51	B	10.55	B	19.51	B
Eastbound Right Turn					9.76	A	15.26	B	9.76	A	15.26	B
Westbound Left Turn					12.24	B	24.28	C	12.24	B	24.28	C
Westbound Thru					12.57	B	17.31	B	12.57	B	17.31	B
Westbound Right Turn					9.58	A	14.51	B	9.58	A	14.51	B

Stop Controlled Intersections	Existing				Year 2040 - All Movements Stop at the Stop Line				Year 2040 Total			
	Morning		Evening		Morning		Evening		Morning		Evening	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
US 30 / Whitney Road					This intersection will be signalized in this scenario.				This intersection will be signalized in this scenario.			
Northbound Left Turn	22.96	C	20.8	C								
Northbound Thru + Right Turn	15.76	C	18.36	C								
Southbound Left Turn + Thru + Right Turn	14.72	B	17.9	C								
Eastbound Left Turn	8.4	A	7.79	A								
Westbound Left Turn	7.53	A	8.19	A								
Dell Range Boulevard / Whitney Road					This intersection will be signalized in this scenario.				This intersection will be signalized in this scenario.			
Northbound Left Turn + Thru + Right Turn	15	B	21.11	C								
Southbound Left Turn + Thru + Right Turn	12.59	B	13.28	B								
Eastbound Left Turn	7.66	A	7.64	A								
Westbound Left Turn	7.42	A	7.91	A								
Beckle Road / Whitney Road												
Northbound Left Turn	---	---	---	---	7.71	A	7.47	A	7.71	A	7.47	A
Southbound Left Turn	7.28	A	7.48	A	7.3	A	7.54	A	7.3	A	7.54	A
Eastbound Left Turn + Thru + Right Turn	---	---	---	---	10.15	B	9.89	A	10.15	B	9.89	A
Westbound Left Turn + Thru + Right Turn	9.55	A	9.19	A	10.79	B	11.06	B	10.79	B	11.06	B

Roundabout	Existing				Year 2040 - All Movements Stop at the Stop Line				Year 2040 Total			
	Morning		Evening		Morning		Evening		Morning		Evening	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Dell Range Boulevard / Whitney Road	This intersection currently stop controlled.				**9.7**	**A**	**16.92**	**C**	**9.7**	**A**	**16.92**	**C**
Northbound Approach					5.88	A	23.27	C	5.88	A	23.27	C
Southbound Approach					14.23	B	11.55	B	14.23	B	11.55	B
Eastbound Approach					7.02	A	16.37	C	7.02	A	16.37	C
Westbound Approach					7.37	A	14.63	B	7.37	A	14.63	B

Table 2. Deceleration Lane Lengths - All Approaches Stop at the Stop Line

Intersection	Movement [1]	Peak Hour Volume		95th Percentile Queue Length (ft)		Storage (ft) [6]	Decel Length (ft)	Taper (ft) [7]	Total (ft)
		AM	PM	AM	PM				
US 30 [2, 3]	Northbound Left Turn	61	41	45	33	50	375	156	425
	Southbound Left Turn	5	23	4	18	50	375	156	425
	Southbound Through	---	---	27	70	---	---	---	---
	Southbound Right Turn	412	368	382	328	382	375	156	757
	Eastbound Left Turn	182	472	78	222	222	435	156	657
	Eastbound Through	---	---	27	93	---	---	---	---
	Eastbound Right Turn	41	89	1	26	50	435	156	485
	Westbound Left Turn	4	40	2	23	50	435	156	485
	Westbound Through	---	---	190	53	---	---	---	---
	Westbound Right Turn	44	5	19	2	50	435	156	485
Dell Range Boulevard [4, 5]	Northbound Left Turn	106	125	85	82	85	375	156	460
	Southbound Left Turn	66	81	48	52	50	275	120	325
	Southbound Through	---	---	515	305	---	---	---	---
	Southbound Right Turn	106	59	83	39	83	275	120	358
	Eastbound Left Turn	15	83	9	65	65	435	156	500
	Eastbound Right Turn	59	146	24	80	80	435	156	515
	Westbound Left Turn	5	4	3	3	50	435	156	485
	Westbound Right Turn	41	99	17	52	50	435	156	485

Notes.

1. A stop condition is assumed on all approaches.

2. US 30 is classified as a principal arterial with a 50 MPH design speed.

3. Whitney Road is classified as a minor arterial north and south of US 30 with a 45 MPH design speed.

4. Dell Range Boulevard is classified as a principal arterial with a 50 MPH design speed.

5. Whitney Road is classified as a minor arterial south of Dell Range Boulevard with a 45 MPH design speed. North of Dell Range Boulevard, Whitney Road is classified as a major collector with a 35 MPH design speed.

6. The storage length is based on the 95th percentile queue length.

7. The taper lengths are based on a 12' wide turn lane. The taper length is included in the deceleration length.

Table 3. Deceleration Lane Lengths - SBRT at US 30 Does Not Stop

Intersection	Movement [1]	Peak Hour Volume		95th Percentile Queue Length (ft)		Storage (ft) [6]	Decel Length (ft)	Taper (ft) [7]	Total (ft)
		AM	PM	AM	PM				
US 30 [2, 3]	Northbound Left Turn	61	41	62	42	62	375	156	437
	Southbound Left Turn	5	23	5	23	50	375	156	425
	Southbound Through	---	---	36	90	---	---	---	---
	Southbound Right Turn	412	368	0	0	0	375	156	375
	Westbound Accel Lane	---	---	---	---	---	760	156	760
	Eastbound Left Turn	182	472	28	104	104	435	156	539
	Eastbound Through	---	---	9	40	---	---	---	---
	Eastbound Right Turn	41	89	1	12	50	435	156	485
	Westbound Left Turn	4	40	1	14	50	435	156	485
	Westbound Through	---	---	95	31	---	---	---	---
	Westbound Right Turn	44	5	10	1	50	435	156	485
Dell Range Boulevard [4, 5]	Northbound Left Turn	106	125	85	82	85	375	156	460
	Southbound Left Turn	66	81	48	52	50	275	120	325
	Southbound Through	---	---	515	305	---	---	---	---
	Southbound Right Turn	106	59	83	39	83	275	120	358
	Eastbound Left Turn	15	83	9	65	65	435	156	500
	Eastbound Right Turn	59	146	24	80	80	435	156	515
	Westbound Left Turn	5	4	3	3	50	435	156	485
	Westbound Right Turn	41	99	17	52	50	435	156	485

Notes.

1. A stop condition is assumed on all approaches.

2. US 30 is classified as a principal arterial with a 50 MPH design speed.

3. Whitney Road is classified as a minor arterial north and south of US 30 with a 45 MPH design speed.

4. Dell Range Boulevard is classified as a principal arterial with a 50 MPH design speed.

5. Whitney Road is classified as a minor arterial south of Dell Range Boulevard with a 45 MPH design speed. North of Dell Range Boulevard, Whitney Road is classified as a major collector with a 35 MPH design speed.

6. The storage length is based on the 95th percentile queue length.

7. The taper lengths are based on a 12' wide turn lane. The taper length is included in the deceleration and acceleration lengths.

Intersection Level Of Service Report
Intersection 2: Dell Range Boulevard

Control Type:	Roundabout	Delay (sec / veh):	14.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour		

Intersection Setup

Name	Whitney Road			Whitney Road			Dell Range Boulevard			Dell Range Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Whitney Road			Whitney Road			Dell Range Boulevard			Dell Range Boulevard		
Base Volume Input [veh/h]	110	170	10	65	385	105	70	225	80	25	460	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	170	10	65	385	105	70	225	80	25	460	40
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000
Total 15-Minute Volume [veh/h]	30	46	2	18	105	26	19	61	20	7	125	10
Total Analysis Volume [veh/h]	120	185	10	71	418	103	76	245	78	27	500	39
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	367			607			485			357		
Exiting Flow Rate [veh/h]	492			282			678			305		
Demand Flow Rate [veh/h]	110	170	9	65	385	95	70	225	72	25	460	36
Adjusted Demand Flow Rate [veh/h]	110	170	9	65	385	95	70	225	72	25	460	36

Lanes

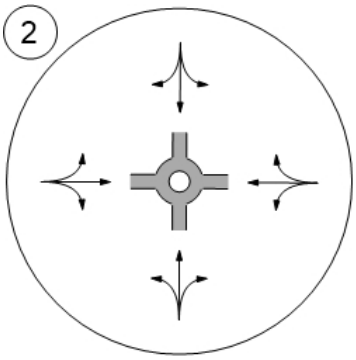
Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	295	556	375	532
Capacity of Entry and Bypass Lanes [veh/h]	949	744	842	959
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	931	729	826	941
X, volume / capacity	0.31	0.75	0.44	0.55

Movement, Approach, & Intersection Results

Lane LOS	A	C	B	B
95th-Percentile Queue Length [veh]	1.35	8.18	2.38	3.67
95th-Percentile Queue Length [ft]	33.66	204.51	59.43	91.65
Approach Delay [s/veh]	7.16	22.91	10.06	11.33
Approach LOS	A	C	B	B
Intersection Delay [s/veh]	14.03			
Intersection LOS	B			

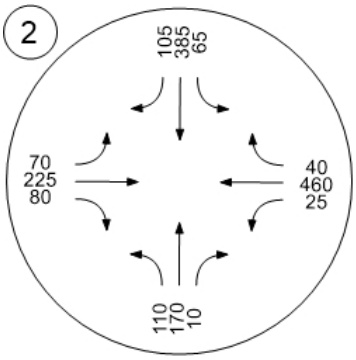
Report Figure 0: Lane Configuration and Traffic Control

Dell Range Boulevard



Report Figure 1f: Traffic Volume - Future Total Volume

Dell Range Boulevard



Intersection Level Of Service Report
Intersection 2: Dell Range Boulevard

Control Type:	Roundabout	Delay (sec / veh):	13.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour		

Intersection Setup

Name	Whitney Road			Whitney Road			Dell Range Boulevard			Dell Range Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	0	0	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Whitney Road			Whitney Road			Dell Range Boulevard			Dell Range Boulevard		
Base Volume Input [veh/h]	110	170	10	65	385	105	70	225	80	25	460	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	170	10	65	385	105	70	225	80	25	460	40
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000
Total 15-Minute Volume [veh/h]	30	46	2	18	105	26	19	61	20	7	125	10
Total Analysis Volume [veh/h]	120	185	10	71	418	103	76	245	78	27	500	39
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	367			607			485			357		
Exiting Flow Rate [veh/h]	492			282			678			305		
Demand Flow Rate [veh/h]	110	170	9	65	385	95	70	225	72	25	460	36
Adjusted Demand Flow Rate [veh/h]	110	170	9	65	385	95	70	225	72	25	460	36

Lanes

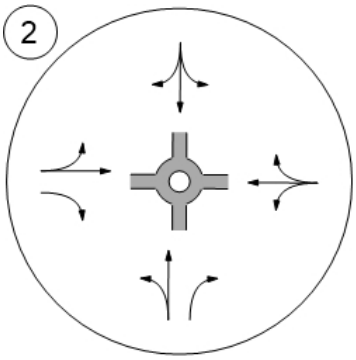
Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1380.00	1420.00	1420.00	1380.00
B (coefficient)	0.00091	0.00091	0.00102	0.00091	0.00091	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	286	10	556	301	74	532
Capacity of Entry and Bypass Lanes [veh/h]	1017	1017	744	914	914	959
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	997	997	729	896	896	941
X, volume / capacity	0.28	0.01	0.75	0.33	0.08	0.55

Movement, Approach, & Intersection Results

Lane LOS	A	A	C	A	A	B
95th-Percentile Queue Length [veh]	1.17	0.03	8.18	1.47	0.26	3.67
95th-Percentile Queue Length [ft]	29.21	0.68	204.51	36.65	6.55	91.65
Approach Delay [s/veh]	6.34		22.91	7.07		11.33
Approach LOS	A		C	A		B
Intersection Delay [s/veh]	13.25					
Intersection LOS	B					

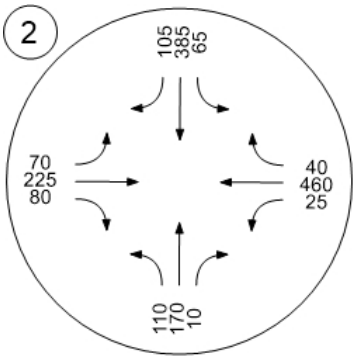
Report Figure 0: Lane Configuration and Traffic Control

Dell Range Boulevard



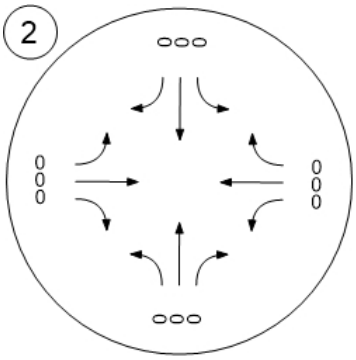
Report Figure 1a: Traffic Volume - Base Volume

Dell Range Boulevard



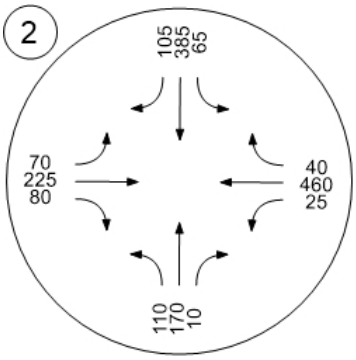
Report Figure 1b: Traffic Volume - In-Process Volume

Dell Range Boulevard



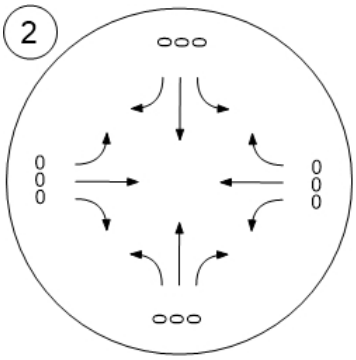
Report Figure 1c: Traffic Volume - Future Background Volume

Dell Range Boulevard



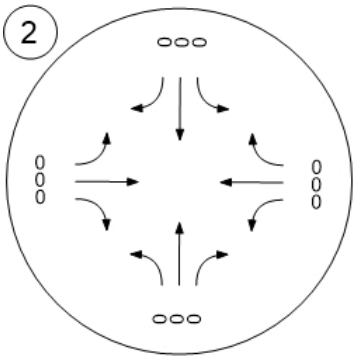
Report Figure 1d: Traffic Volume - Net New Site Trips

Dell Range Boulevard



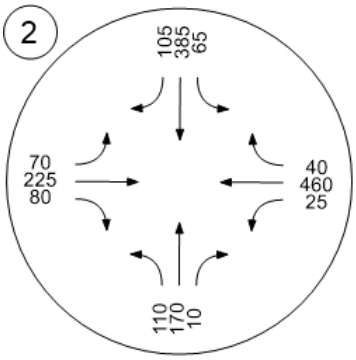
Report Figure 1e: Traffic Volume - Other Volume

Dell Range Boulevard



Report Figure 1f: Traffic Volume - Future Total Volume

Dell Range Boulevard



Intersection Level Of Service Report
Intersection 2: Dell Range Boulevard

Control Type:	Roundabout	Delay (sec / veh):	9.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	1 hour		

Intersection Setup

Name	Whitney Road			Whitney Road			Dell Range Boulevard			Dell Range Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	1	0	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Whitney Road			Whitney Road			Dell Range Boulevard			Dell Range Boulevard		
Base Volume Input [veh/h]	110	170	10	65	385	105	70	225	80	25	460	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	170	10	65	385	105	70	225	80	25	460	40
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000
Total 15-Minute Volume [veh/h]	30	46	2	18	105	26	19	61	20	7	125	10
Total Analysis Volume [veh/h]	120	185	10	71	418	103	76	245	78	27	500	39
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	367			607			485			357		
Exiting Flow Rate [veh/h]	492			282			678			305		
Demand Flow Rate [veh/h]	110	170	9	65	385	95	70	225	72	25	460	36
Adjusted Demand Flow Rate [veh/h]	110	170	9	65	385	95	70	225	72	25	460	36

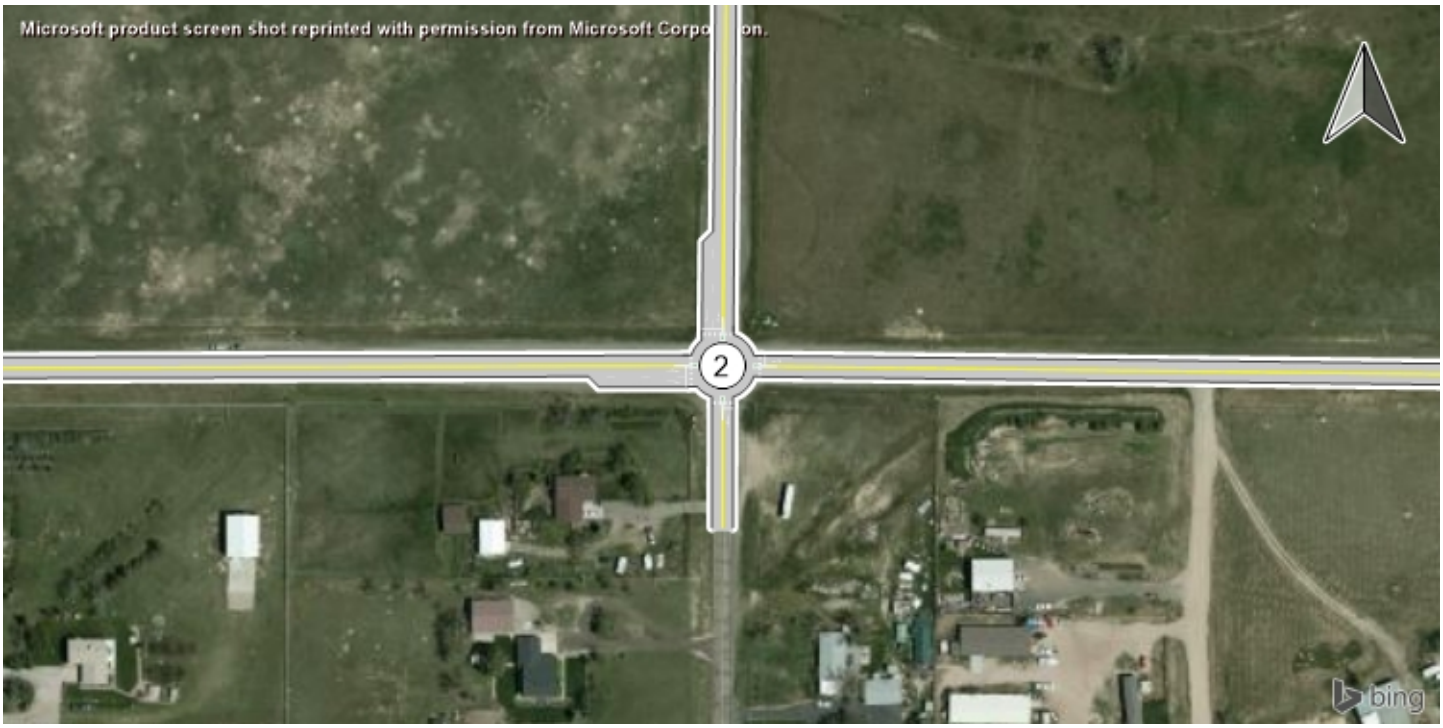
Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1420.00	1420.00	1420.00	1420.00	1380.00
B (coefficient)	0.00102	0.00091	0.00091	0.00091	0.00091	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	295	460	97	301	74	532
Capacity of Entry and Bypass Lanes [veh/h]	949	818	818	914	914	959
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	931	802	802	896	896	941
X, volume / capacity	0.31	0.56	0.12	0.33	0.08	0.55

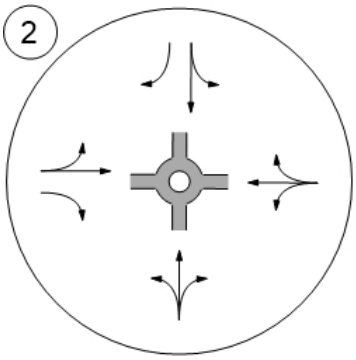
Movement, Approach, & Intersection Results

Lane LOS	A	B	A	A	A	B
95th-Percentile Queue Length [veh]	1.35	3.76	0.40	1.47	0.26	3.67
95th-Percentile Queue Length [ft]	33.66	94.04	10.08	36.65	6.55	91.65
Approach Delay [s/veh]	7.16	11.74		7.07		11.33
Approach LOS	A	B		A		B
Intersection Delay [s/veh]	9.85					
Intersection LOS	A					

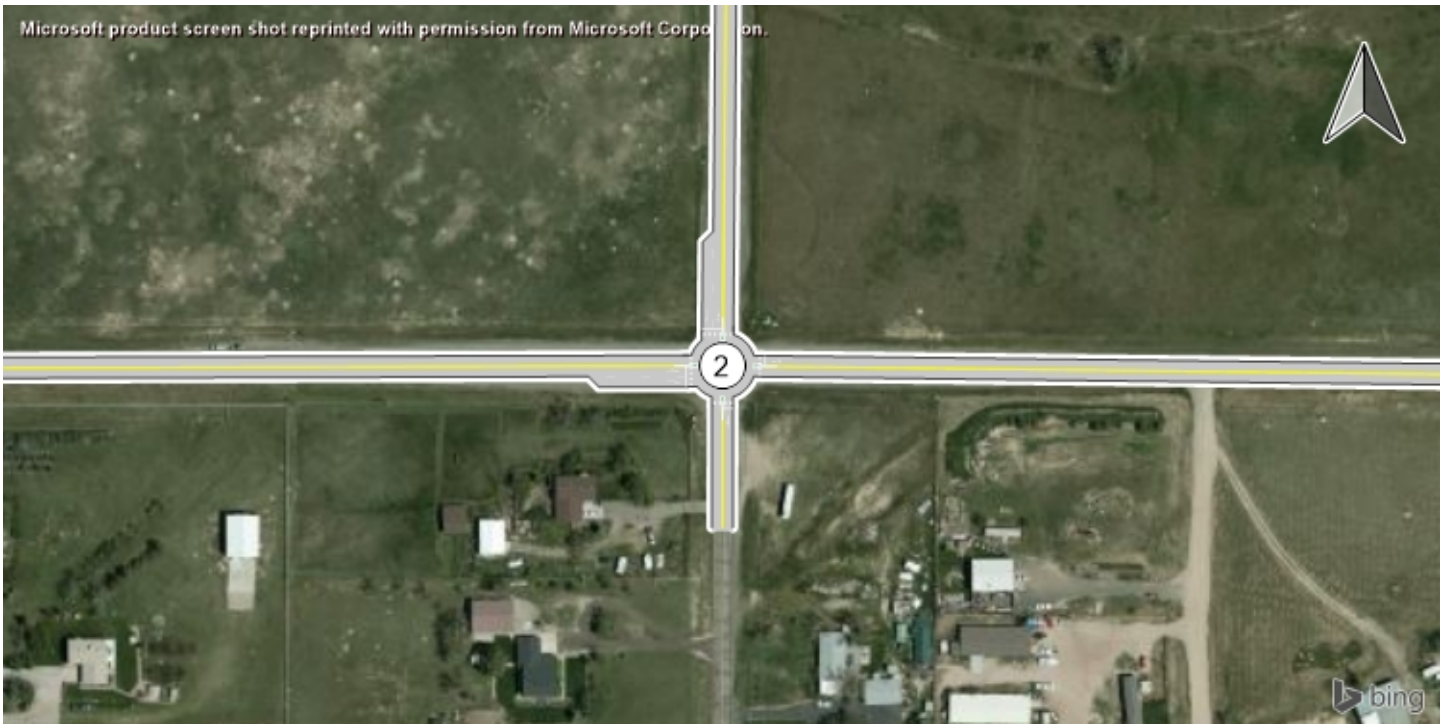
Report Figure 0: Lane Configuration and Traffic Control



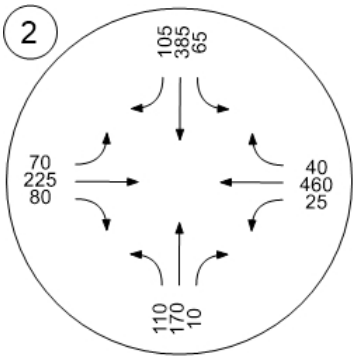
Dell Range Boulevard



Report Figure 1f: Traffic Volume - Future Total Volume



Dell Range Boulevard



Intersection Level Of Service Report
Intersection 2: Dell Range Boulevard

Control Type:	Signalized	Delay (sec / veh):	29.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.565

Intersection Setup

Name	Whitney Road			Whitney Road			Dell Range Boulevard			Dell Range Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Whitney Road			Whitney Road			Dell Range Boulevard			Dell Range Boulevard		
Base Volume Input [veh/h]	110	170	10	65	385	105	70	225	80	25	460	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	170	10	65	385	105	70	225	80	25	460	40
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000
Total 15-Minute Volume [veh/h]	30	46	2	18	105	26	19	61	20	7	125	10
Total Analysis Volume [veh/h]	120	185	10	71	418	103	76	245	78	27	500	39
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	10	30	0	10	30	0	10	60	0	10	60	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	35	0	11	37	0	10	19	0	35	44	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	40.0	40.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	36	28	36	28	28	56	49	49	56	47	47
g / C, Green / Cycle	0.36	0.28	0.36	0.28	0.28	0.56	0.49	0.49	0.56	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.10	0.11	0.05	0.24	0.07	0.07	0.14	0.05	0.02	0.29	0.03
s, saturation flow rate [veh/h]	1147	1561	1289	1575	1339	1037	1575	1339	1208	1575	1339
c, Capacity [veh/h]	207	438	378	435	370	394	772	656	589	744	633
d1, Uniform Delay [s]	39.96	29.23	29.49	34.69	28.21	25.40	15.16	13.73	15.58	19.65	14.30
k, delay calibration	0.11	0.11	0.11	0.19	0.11	0.50	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.12	0.61	0.21	11.28	0.36	0.99	0.21	0.34	0.14	3.89	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.41	0.17	0.89	0.26	0.18	0.29	0.11	0.04	0.62	0.06
d, Delay for Lane Group [s/veh]	42.08	29.85	29.71	45.97	28.57	26.39	15.36	14.07	15.72	23.54	14.47
Lane Group LOS	D	C	C	D	C	C	B	B	B	C	B
Critical Lane Group	Yes	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.88	3.54	1.03	10.14	1.80	0.80	3.00	0.92	0.26	8.44	0.47
50th-Percentile Queue Length [ft/ln]	46.94	88.43	25.68	253.58	44.98	20.05	75.01	22.96	6.56	211.06	11.63
95th-Percentile Queue Length [veh/ln]	3.38	6.37	1.85	15.37	3.24	1.44	5.40	1.65	0.47	13.21	0.84
95th-Percentile Queue Length [ft/ln]	84.49	159.17	46.23	384.16	80.97	36.09	135.01	41.33	11.81	330.19	20.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.08	29.85	29.85	29.71	45.97	28.57	26.39	15.36	14.07	15.72	23.54	14.47
Movement LOS	D	C	C	C	D	C	C	B	B	B	C	B
d_A, Approach Delay [s/veh]	34.50			41.00			17.21			22.54		
Approach LOS	C			D			B			C		
d_I, Intersection Delay [s/veh]	29.25											
Intersection LOS	C											
Intersection V/C	0.565											

Other Modes

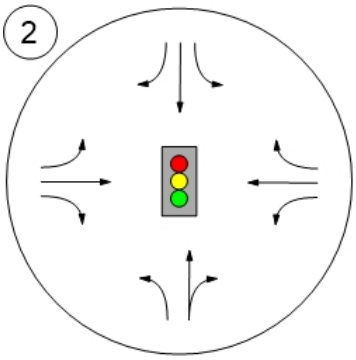
g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	620	660	300	800
d_b, Bicycle Delay [s]	23.81	22.45	36.13	18.00
I_b,int, Bicycle LOS Score for Intersection	2.036	2.459	2.165	2.419
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

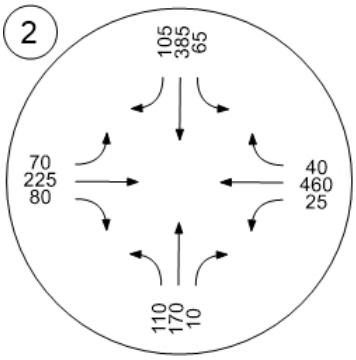
Report Figure 0: Lane Configuration and Traffic Control

Dell Range Boulevard



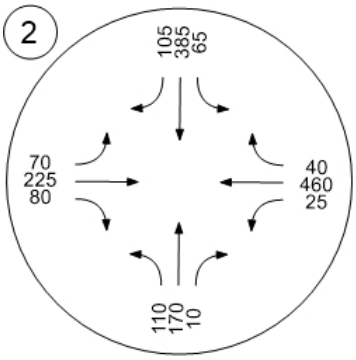
Report Figure 1a: Traffic Volume - Base Volume

Dell Range Boulevard



Report Figure 1f: Traffic Volume - Future Total Volume

Dell Range Boulevard



Intersection Level Of Service Report
Intersection 2: Dell Range Boulevard

Control Type:	Roundabout	Delay (sec / veh):	28.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	1 hour		

Intersection Setup

Name	Whitney Road			Whitney Road			Dell Range Boulevard			Dell Range Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Whitney Road			Whitney Road			Dell Range Boulevard			Dell Range Boulevard		
Base Volume Input [veh/h]	125	460	10	80	345	60	100	500	145	15	300	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	125	460	10	80	345	60	100	500	145	15	300	100
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000
Total 15-Minute Volume [veh/h]	34	125	2	22	94	15	27	136	35	4	82	24
Total Analysis Volume [veh/h]	136	500	10	87	375	59	109	543	142	16	326	98
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	694			449			449			699		
Exiting Flow Rate [veh/h]	501			663			489			601		
Demand Flow Rate [veh/h]	125	460	9	80	345	54	100	500	131	15	300	90
Adjusted Demand Flow Rate [veh/h]	125	460	9	80	345	54	100	500	131	15	300	90

Lanes

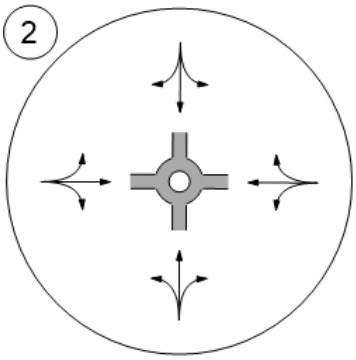
Overwrite Calculated Critical Headway	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1380.00	1380.00	1380.00
B (coefficient)	0.00102	0.00102	0.00102	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	606	489	746	414
Capacity of Entry and Bypass Lanes [veh/h]	681	874	874	677
Pedestrian Impedance	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	667	856	856	664
X, volume / capacity	0.89	0.56	0.85	0.61

Movement, Approach, & Intersection Results

Lane LOS	E	B	D	C
95th-Percentile Queue Length [veh]	16.75	3.74	14.28	4.54
95th-Percentile Queue Length [ft]	418.87	93.44	357.04	113.56
Approach Delay [s/veh]	46.89	12.31	31.12	16.88
Approach LOS	E	B	D	C
Intersection Delay [s/veh]	28.67			
Intersection LOS	D			

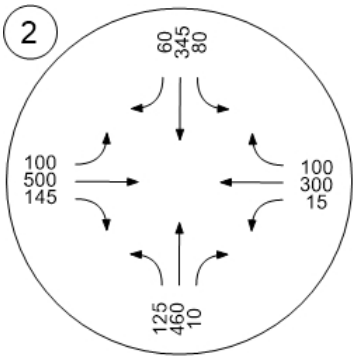
Report Figure 0: Lane Configuration and Traffic Control

Dell Range Boulevard



Report Figure 1f: Traffic Volume - Future Total Volume

Dell Range Boulevard



Intersection Level Of Service Report
Intersection 2: Dell Range Boulevard

Control Type:	Roundabout	Delay (sec / veh):	16.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour		

Intersection Setup

Name	Whitney Road			Whitney Road			Dell Range Boulevard			Dell Range Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	0	0	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Whitney Road			Whitney Road			Dell Range Boulevard			Dell Range Boulevard		
Base Volume Input [veh/h]	125	460	10	80	345	60	100	500	145	15	300	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	125	460	10	80	345	60	100	500	145	15	300	100
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000
Total 15-Minute Volume [veh/h]	34	125	2	22	94	15	27	136	35	4	82	24
Total Analysis Volume [veh/h]	136	500	10	87	375	59	109	543	142	16	326	98
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	694			449			449			699		
Exiting Flow Rate [veh/h]	501			663			489			601		
Demand Flow Rate [veh/h]	125	460	9	80	345	54	100	500	131	15	300	90
Adjusted Demand Flow Rate [veh/h]	125	460	9	80	345	54	100	500	131	15	300	90

Lanes

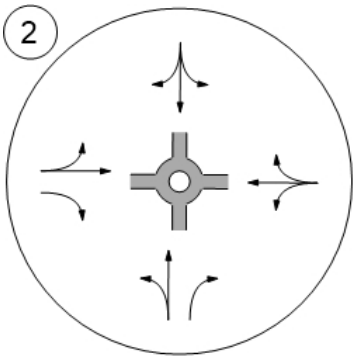
Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1420.00	1420.00	1380.00	1420.00	1420.00	1380.00
B (coefficient)	0.00091	0.00091	0.00102	0.00091	0.00091	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	597	10	489	612	134	414
Capacity of Entry and Bypass Lanes [veh/h]	756	756	874	944	944	677
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	741	741	856	926	926	664
X, volume / capacity	0.79	0.01	0.56	0.65	0.14	0.61

Movement, Approach, & Intersection Results

Lane LOS	D	A	B	B	A	C
95th-Percentile Queue Length [veh]	10.00	0.04	3.74	5.36	0.49	4.54
95th-Percentile Queue Length [ft]	249.90	0.92	93.44	133.89	12.35	113.56
Approach Delay [s/veh]	25.96		12.31	12.62		16.88
Approach LOS	D		B	B		C
Intersection Delay [s/veh]	16.92					
Intersection LOS	C					

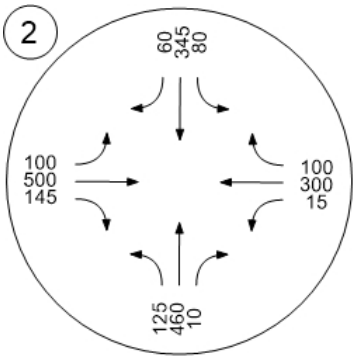
Report Figure 0: Lane Configuration and Traffic Control

Dell Range Boulevard



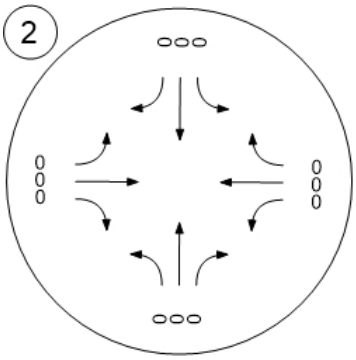
Report Figure 1a: Traffic Volume - Base Volume

Dell Range Boulevard



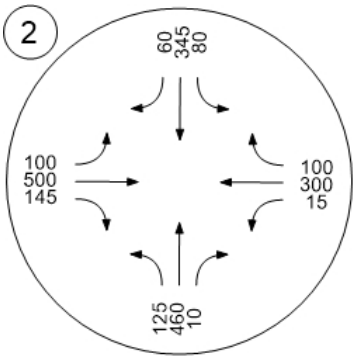
Report Figure 1b: Traffic Volume - In-Process Volume

Dell Range Boulevard



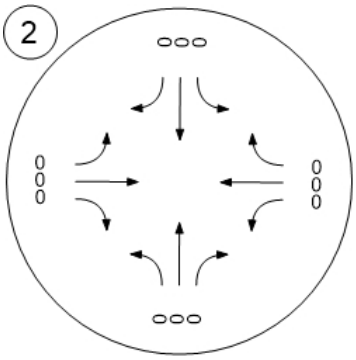
Report Figure 1c: Traffic Volume - Future Background Volume

Dell Range Boulevard



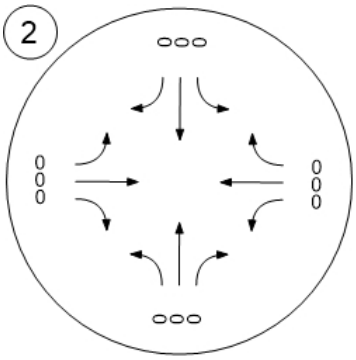
Report Figure 1d: Traffic Volume - Net New Site Trips

Dell Range Boulevard



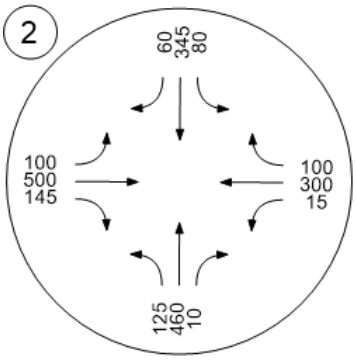
Report Figure 1e: Traffic Volume - Other Volume

Dell Range Boulevard



Report Figure 1f: Traffic Volume - Future Total Volume

Dell Range Boulevard



Intersection Level Of Service Report
Intersection 2: Dell Range Boulevard

Control Type:	Roundabout	Delay (sec / veh):	21.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour		

Intersection Setup

Name	Whitney Road			Whitney Road			Dell Range Boulevard			Dell Range Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	1	0	0	1	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Whitney Road			Whitney Road			Dell Range Boulevard			Dell Range Boulevard		
Base Volume Input [veh/h]	125	460	10	80	345	60	100	500	145	15	300	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	125	460	10	80	345	60	100	500	145	15	300	100
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000
Total 15-Minute Volume [veh/h]	34	125	2	22	94	15	27	136	35	4	82	24
Total Analysis Volume [veh/h]	136	500	10	87	375	59	109	543	142	16	326	98
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Number of Conflicting Circulating Lanes	1			1			1			1		
Circulating Flow Rate [veh/h]	694			449			449			699		
Exiting Flow Rate [veh/h]	501			663			489			601		
Demand Flow Rate [veh/h]	125	460	9	80	345	54	100	500	131	15	300	90
Adjusted Demand Flow Rate [veh/h]	125	460	9	80	345	54	100	500	131	15	300	90

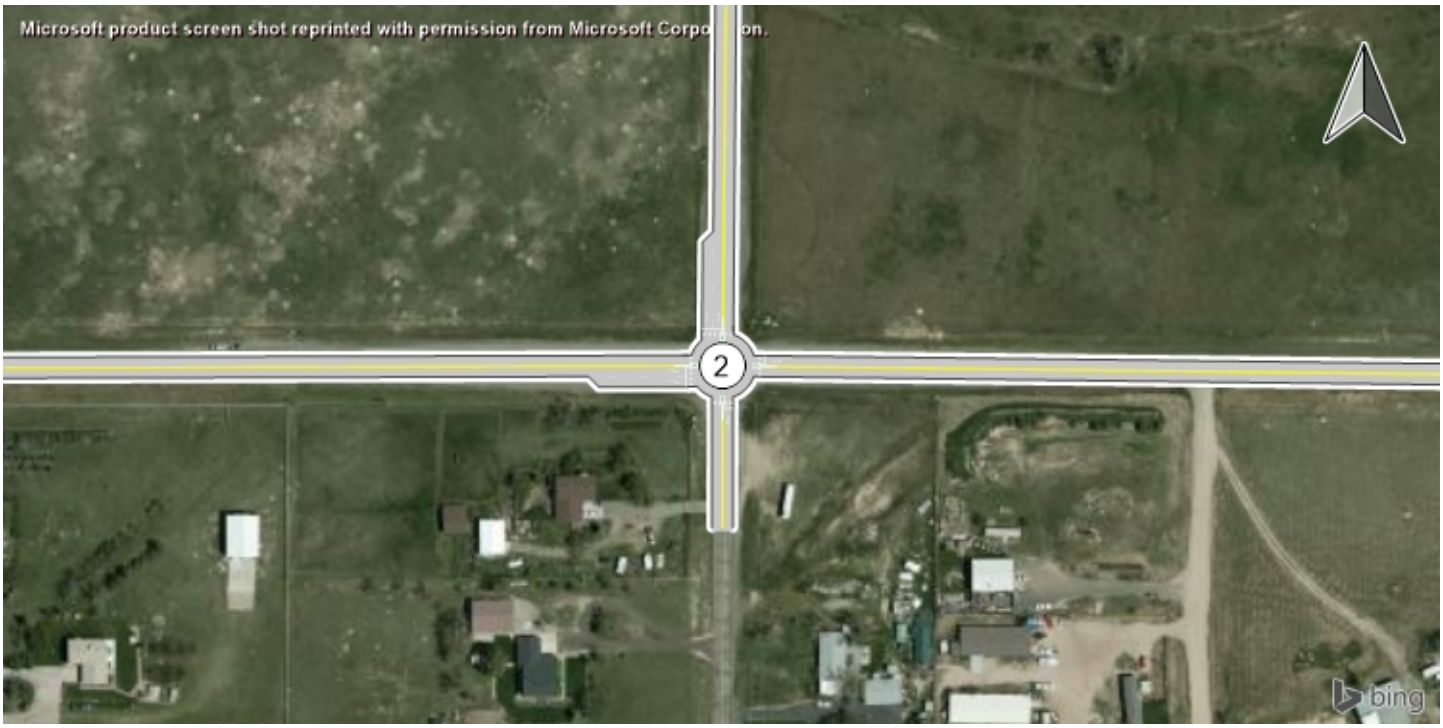
Lanes

Overwrite Calculated Critical Headway	No	No	No	No	No	No
User-Defined Critical Headway [s]	4.00	4.00	4.00	4.00	4.00	4.00
Overwrite Calculated Follow-Up Time	No	No	No	No	No	No
User-Defined Follow-Up Time [s]	3.00	3.00	3.00	3.00	3.00	3.00
A (intercept)	1380.00	1420.00	1420.00	1420.00	1420.00	1380.00
B (coefficient)	0.00102	0.00091	0.00091	0.00091	0.00091	0.00102
HV Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98
Entry Flow Rate [veh/h]	606	434	56	612	134	414
Capacity of Entry and Bypass Lanes [veh/h]	681	944	944	944	944	677
Pedestrian Impedance	1.00	1.00	1.00	1.00	1.00	1.00
Capacity per Entry Lane [veh/h]	667	926	926	926	926	664
X, volume / capacity	0.89	0.46	0.06	0.65	0.14	0.61

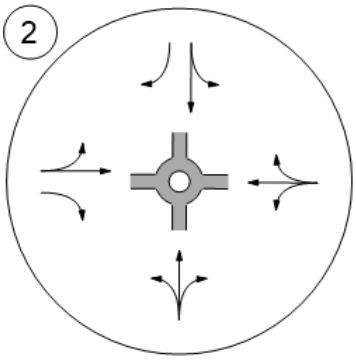
Movement, Approach, & Intersection Results

Lane LOS	E	A	A	B	A	C
95th-Percentile Queue Length [veh]	16.75	2.52	0.19	5.36	0.49	4.54
95th-Percentile Queue Length [ft]	418.87	63.07	4.65	133.89	12.35	113.56
Approach Delay [s/veh]	46.89	8.91		12.62		16.88
Approach LOS	E	A		B		C
Intersection Delay [s/veh]	21.81					
Intersection LOS	C					

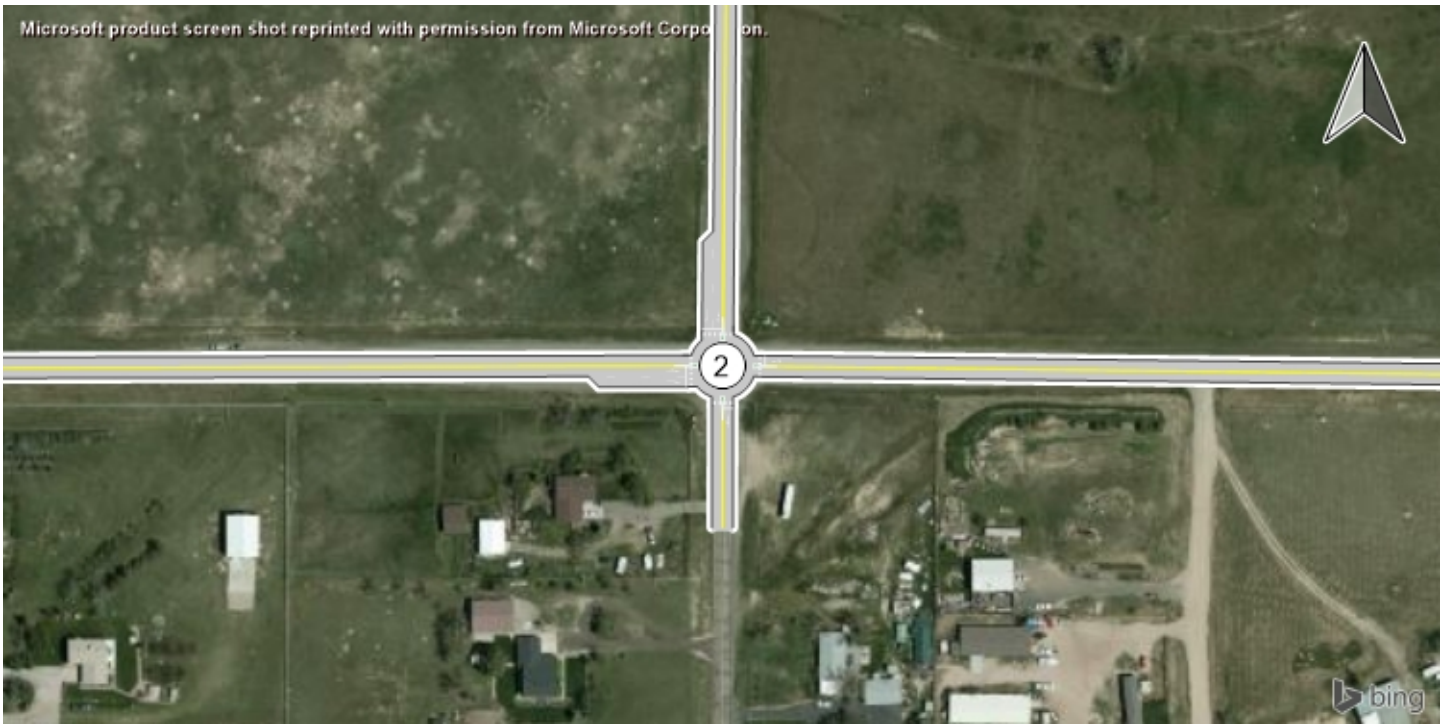
Report Figure 0: Lane Configuration and Traffic Control



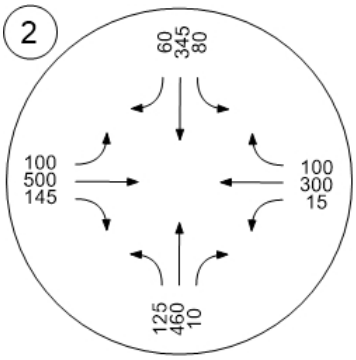
Dell Range Boulevard



Report Figure 1f: Traffic Volume - Future Total Volume



Dell Range Boulevard



Intersection Level Of Service Report
Intersection 2: Dell Range Boulevard

Control Type:	Signalized	Delay (sec / veh):	32.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.623

Intersection Setup

Name	Whitney Road			Whitney Road			Dell Range Boulevard			Dell Range Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Whitney Road			Whitney Road			Dell Range Boulevard			Dell Range Boulevard		
Base Volume Input [veh/h]	125	460	10	80	345	60	100	500	145	15	300	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	125	460	10	80	345	60	100	500	145	15	300	100
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000	1.0000	1.0000	0.9000
Total 15-Minute Volume [veh/h]	34	125	2	22	94	15	27	136	35	4	82	24
Total Analysis Volume [veh/h]	136	500	10	87	375	59	109	543	142	16	326	98
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	10	30	0	10	30	0	10	60	0	10	60	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	21	46	0	10	35	0	12	35	0	9	32	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	40.0	40.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	44	35	44	34	34	48	42	42	48	39	39
g / C, Green / Cycle	0.44	0.35	0.44	0.34	0.34	0.48	0.42	0.42	0.48	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.11	0.30	0.08	0.22	0.04	0.09	0.32	0.10	0.02	0.19	0.07
s, saturation flow rate [veh/h]	1161	1569	1061	1575	1339	1173	1575	1339	995	1575	1339
c, Capacity [veh/h]	334	556	229	537	456	436	667	567	267	620	527
d1, Uniform Delay [s]	33.80	29.72	39.50	27.82	22.64	25.25	24.37	18.43	32.68	22.72	19.72
k, delay calibration	0.11	0.36	0.11	0.50	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.69	12.06	0.92	5.97	0.11	1.23	7.95	0.95	0.40	2.71	0.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.84	0.35	0.64	0.12	0.23	0.75	0.23	0.06	0.48	0.17
d, Delay for Lane Group [s/veh]	34.49	41.78	40.42	33.79	22.76	26.48	32.32	19.39	33.08	25.43	20.42
Lane Group LOS	C	D	D	C	C	C	C	B	C	C	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.80	11.93	1.13	7.70	0.88	1.39	11.09	2.06	0.20	5.64	1.45
50th-Percentile Queue Length [ft/ln]	44.89	298.23	28.27	192.38	22.03	34.64	277.34	51.43	5.12	141.03	36.25
95th-Percentile Queue Length [veh/ln]	3.23	17.59	2.04	12.24	1.59	2.49	16.56	3.70	0.37	9.54	2.61
95th-Percentile Queue Length [ft/ln]	80.80	439.84	50.89	306.11	39.65	62.36	413.90	92.57	9.21	238.41	65.25

Movement, Approach, & Intersection Results

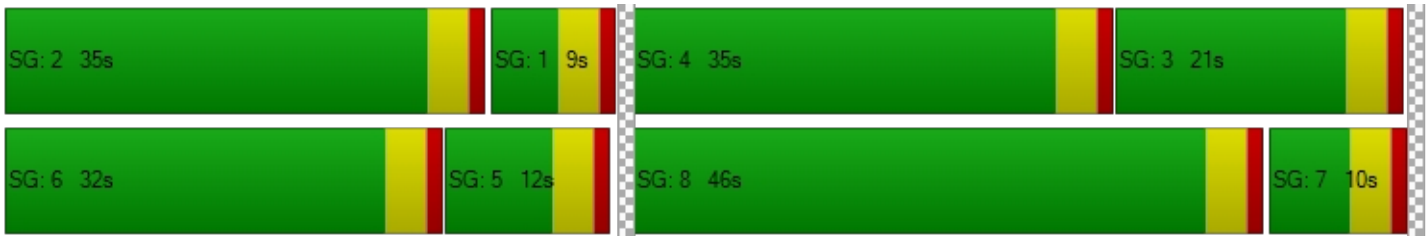
d_M, Delay for Movement [s/veh]	34.49	41.78	41.78	40.42	33.79	22.76	26.48	32.32	19.39	33.08	25.43	20.42
Movement LOS	C	D	D	D	C	C	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	40.25			33.66			29.20			24.60		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	32.29											
Intersection LOS	C											
Intersection V/C	0.623											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	840	620	620	560
d_b, Bicycle Delay [s]	16.82	23.81	23.81	25.92
I_b,int, Bicycle LOS Score for Intersection	2.540	2.350	2.766	2.228
Bicycle LOS	B	B	C	B

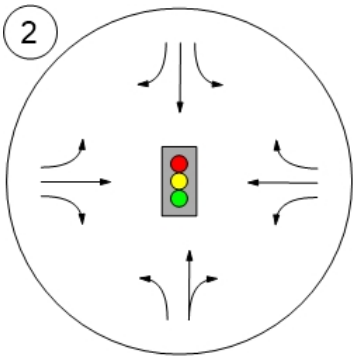
Sequence

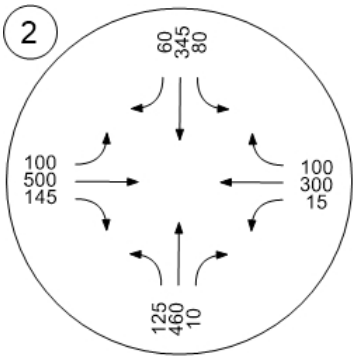
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Report Figure 0: Lane Configuration and Traffic Control

Dell Range Boulevard



Report Figure 1f: Traffic Volume - Future Total Volume

Dell Range Boulevard