



KINETICOR ASP

Transportation Impact Assessment

Michelle Buzas – E.I.T.
Author

Brendan Stevenson – P.Eng., PTOE, PMP
Reviewer

Prepared For: Kinetikor Holdings
Date: July 21, 2025
Our File No: 4306.T01

WATT CALGARY
1300 – 736 6th Ave SW
Calgary, AB T2P 3T7
403-273-9001



EXECUTIVE SUMMARY

WATT Consulting Group (WATT) was retained by Kinetikor Holdings to provide a Transportation Impact Assessment (TIA) in support of the Kinetikor Area Structure Plan (ASP) for Kinetikor's proposed development within Rocky View County. The purpose of this TIA is to assess the impact of the proposed development on the existing transportation network, as well as summarize recommendations to support future traffic growth.

Vision

Located in Rocky View County to the east of the hamlet of Balzac, the Kinetikor ASP covers seven quarter sections north of Highway 566. The first phases of development propose to include three data centre campuses along Range Road 282 between Highway 566 and Township Road 264. Further phases of development may include additional data campuses and a power-generation facility. For the purposes of this TIA, further phases of development were assumed to be of similar land use as the initial phases of development, due to the absence of confirmed plans.

Scope

The scope of this TIA includes the following key tasks:

- Collection of AM (07:00-09:00) and PM (16:00-18:00) peak traffic volumes at key study intersections.
- Collection of traffic forecast data including turning movement volumes from Rocky View County's forecasting model for the 2040 horizon year.
- Estimation of site-generated trips and distribution.
- Capacity and operational analysis for the following horizons:
 - Existing Conditions
 - Opening Day of First Phases, 2031 (Background and Post Development)
 - 2040, 2050, and 2060 Horizons (Background and Post Development)
- Assessment of the following intersections:
 - Township Road 264 / Range Road 281
 - Township Road 264 / Range Road 282
 - Highway 566 / Range Road 281
 - Highway 566 / Range Road 282
 - Future access to sites along Range Road 282
 - Future access to sites alone Range Road 281
- Review of the existing and proposed road network for compliance with applicable standards.



- Evaluation of potential improvements using applicable guidelines and published warrant procedures.
- Preparation of a draft TIA report summarizing methodology, results, and recommendations.

Analysis Approach

This TIA incorporates several unique assumptions and methodologies that reflect the specific context and available information for the study area:

- **Trip Generation:** Estimates were based on site-specific statistics and detailed trip information provided by the client.
- **Future Background Traffic Forecasting:** Given the greenfield nature of the site and surrounding area, 2040+ background traffic volumes were sourced from the County's forecasting model, which reflects broader regional growth assumptions. The details of the model are outside the scope of the assessment.

Results and Recommendations

Capacity analysis was conducted on existing and future intersections which are expected to be influenced by the proposed development. Based on this assessment, the following transportation network improvements were identified as being required for each study horizon to support the proposed development and surrounding regional growth in the post development scenario.

Analysis Results and Recommendations	
2031 Horizon (Phases 1-3 of Buildout)	▪ Upgraded intersection treatments warranted at intersections of Highway 566 / Range Road 282 and Highway 566 / Range Road 281. ▪ Delineation lighting recommended at several intersections.
2040 Horizon (Full Buildout)	▪ Decreased conditions at Highway 566 / Range Road 282 & 281. ▪ Signalization warranted at both intersections; upgraded intersection treatments and delineation lighting recommended. ▪ Road widening not yet required but monitoring is advised.
2050 Horizon	▪ Multiple movements along Highway 566 anticipated to experience high delay and v/c ratios. ▪ Widening of Highway 566 to four lanes may improve operations. ▪ Continued monitoring is recommended.



TABLE OF CONTENTS

1.0	INTRODUCTION	7
1.1	Background.....	7
1.2	Scope	9
2.0	EXISTING CONDITIONS	10
2.1	Intersection Performance Evaluation Criteria.....	10
2.2	Input and Calibration Parameters	11
2.3	Existing Intersection Control and Traffic Volumes	11
2.4	Existing Operating Conditions	13
3.0	PROPOSED DEVELOPMENT	15
3.1	Vision	15
3.2	Trip Generation.....	20
3.3	Trip Distribution.....	20
4.0	OPENING DAY (PHASES 1-3) HORIZON	24
4.1	Opening Day Background	24
4.2	Opening Day Post Development.....	26
5.0	2040 (FULL BUILDOUT) HORIZON.....	30
5.1	2040 Background	30
5.2	2040 Post Development.....	31
5.3	2040 Post Development – Improved.....	34
6.0	2050 HORIZON.....	37
6.1	2050 Background	37
6.2	2050 Post Development.....	38
6.3	2050 Post Development – Improved.....	41
7.0	2060 HORIZON.....	44
7.1	2060 Background	44
7.2	2060 Post Development.....	45
8.0	IMPROVEMENT WARRANTS.....	49
8.1	Collision Assessment.....	49
8.2	Signalization	51
8.3	Illumination.....	52
8.4	Intersection Treatment.....	53
8.5	Roadway Improvements.....	54
9.0	CONCLUSIONS AND RECOMMENDATIONS.....	56
9.1	Conclusion.....	56
9.2	Recommendations.....	57



FIGURES

Figure 1: Site Context.....	7
Figure 2: Greater Transportation Network	8
Figure 3: Existing Laning & Traffic Control.....	12
Figure 4: Existing Traffic Volumes.....	13
Figure 5: Existing Land Use by Quarter Section	16
Figure 6: Site Plan	18
Figure 7: Proposed Phasing Plan	19
Figure 8: Trip Distribution	21
Figure 9: Phases 1-3 Site-Generated Traffic Volumes.....	22
Figure 10: Full Buildout Site-Generated Traffic Volumes	23
Figure 11: Future Base Lane Configuration and Traffic Control.....	24
Figure 12: Phases 1-3 Opening Day Background Traffic Volumes.....	25
Figure 13: Phases 1-3 Opening Day Post Development Traffic Volumes	27
Figure 14: 2040 Background Traffic Volumes	30
Figure 15: 2040 Post Development Traffic Volumes.....	32
Figure 16: 2040 Post Development - Improved Lane Configuration and Traffic Control	35
Figure 17: 2050 Background Traffic Volumes	37
Figure 18: 2050 Post Development Traffic Volumes.....	39
Figure 19: 2050 Post Development - Improved Lane Configuration and Traffic Control	42
Figure 20: 2060 Background Traffic Volumes	44
Figure 21: 2060 Post Development Traffic Volumes.....	46



TABLES

Table 1: Level of Service Criteria	10
Table 2: Rocky View County Capacity Analysis Parameters and Thresholds.....	11
Table 3: Existing Operating Conditions.....	14
Table 4: Trip Generation.....	20
Table 5: Phases 1-3 Opening Day Background Operating Conditions.....	26
Table 6: Phases 1-3 Opening Day Post Development Operating Conditions	28
Table 7: 2040 Background Operating Conditions	31
Table 8: 2040 Post Development Operating Conditions.....	33
Table 9: 2040 Post Development Improved Operating Conditions	36
Table 10: 2050 Background Operating Conditions.....	38
Table 11: 2050 Post Development Operating Conditions	40
Table 12: 2050 Post Development Operating Conditions (Continued)	41
Table 13: 2050 Post Development Improved Operating Conditions.....	43
Table 14: 2060 Background Operating Conditions.....	45
Table 15: 2060 Post Development Operating Conditions	47
Table 16: 2060 Post Development Operating Conditions (Continued)	48
Table 17: Collision Summary	49
Table 18: TAC Illumination Warrant Results.....	52
Table 19: ATEC Intersection Treatment Warrant Results.....	53
Table 20: Roadway Classifications	54

APPENDICES

Appendix A: Synchro Reports

Appendix B: TAC Signalization Warrant Results

Appendix C: TAC Illumination Warrant Results

Appendix D: ATEC Intersection Analysis Spreadsheets



GLOSSARY OF TERMS

GENERAL	
All-Way-Stop Control	AWSC
Average Annual Daily Traffic	AADT
Average Annual Weekday Traffic	AAWT
Equivalent Adult Units	EAU
Institute of Transportation Engineers	ITE
Right-In-Right-Out	RIRO
Right-of-Way	ROW
Traffic Analysis Zone	TAZ
Transportation Association of Canada	TAC
Two-Way-Stop Control	TWSC
Vehicles per day	vpd
Vehicles per hour	vph
ANALYSIS RELATED	
Inbound	IB
Level of Service	LOS
Outbound	OB
Volume to Capacity	v/c
REPORT TYPE	
Area Structure Plan	ASP
Neighborhood Structure Plan	NSP
Transportation Impact Assessment	TIA
Transportation Master Plan	TMP



1.0 INTRODUCTION

1.1 Background

WATT Consulting Group (WATT) was retained by Kinetikor Holdings to complete a Transportation Impact Assessment (TIA) in support of the proposed Kinetikor Area Structure Plan (ASP) within Rocky View County (the County).

The ASP covers seven quarter sections north of Highway 566, east of the hamlet of Balzac. Initial phases of development are proposed to include three data centre campuses along Range Road 282, north of Highway 566 and south of Township 264. Future phases may include additional data centres and a power-generation facility, with all phases assumed to be of similar land use for the purposes of this TIA.

The purpose of this TIA is to assess the impact of the proposed development on the existing transportation network and to identify any improvements needed to accommodate future traffic demand. The analysis considers existing and future horizons and is intended to support land use decisions as the ASP advances. **Figure 1** provides an overview of the site context for the proposed development, followed by the surrounding transportation network illustrated in **Figure 2**.

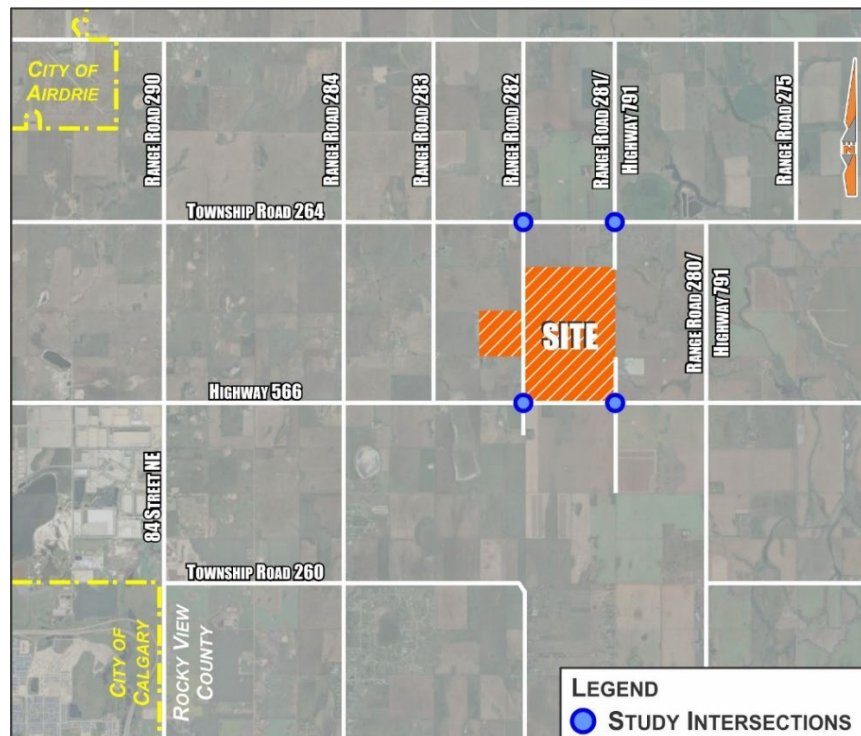


Figure 1: Site Context

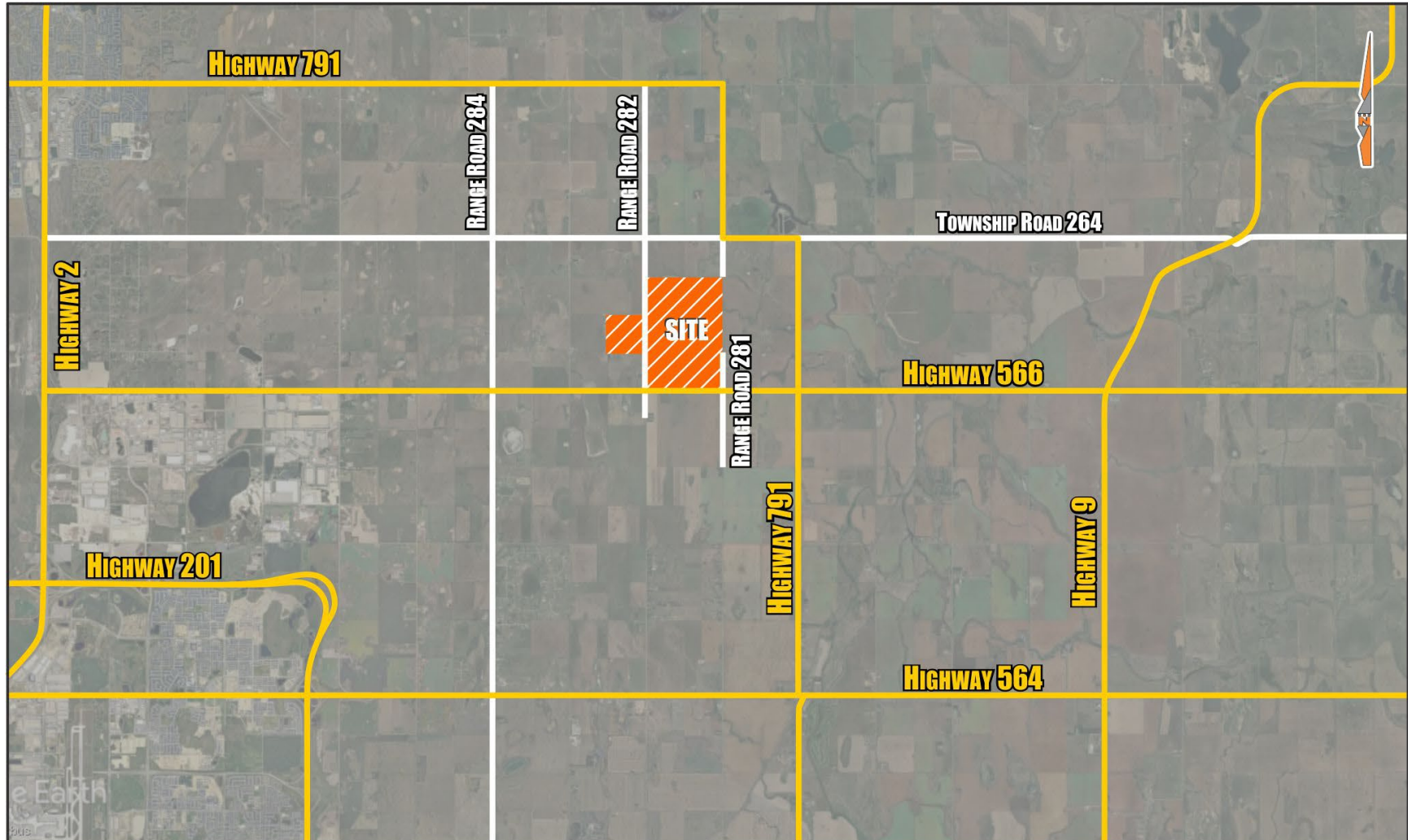


Figure 2: Greater Transportation Network



1.2 Scope

The scope of work for this TIA includes the following key elements:

- Collect traffic volumes for the AM (07:00 – 09:00) and PM (16:00 – 18:00) peak periods for the following intersections:
 - Township Road 264 / Range Road 281
 - Township Road 264 / Range Road 282
 - Highway 566 / Range Road 281
 - Highway 566 / Range Road 282
- Obtain traffic forecast data from the County's forecasting model for the 2040 horizon, including turning movement volumes.
- Estimate trip generation from the proposed site based on the latest site plans and statistics and distribute trips using patterns assumed in the County's forecast model for the future horizon.
- Conduct capacity and operational analyses
 - For the following horizons:
 - Existing Conditions
 - Opening Day 2031 (Background and Post Development)
 - 2040 Horizon (Background and Post Development)
 - 2050 Horizon (Background and Post Development)
 - 2060 Horizon (Background and Post Development)
 - Of the following study intersections for 2040, 2050, and 2060 horizons:
 - Township Road 264 / Range Road 281
 - Township Road 264 / Range Road 282
 - Highway 566 / Range Road 281
 - Highway 566 / Range Road 282
 - Future access to site along Range Road 282
 - Future access to site along Range Road 281
- Review the existing and proposed road network to ensure that applicable standards are met.
- Conduct improvement assessments and warrants following Alberta Transportation and Economic Corridors (ATEC) guidelines including but not limited to safety and collision assessment of the study intersections.
- Prepare and submit a TIA report that includes an executive summary and summarizes the methodology, results, and recommendations to support the proposed development.



2.0 EXISTING CONDITIONS

2.1 Intersection Performance Evaluation Criteria

Intersection capacity analysis for existing and proposed conditions was completed using the Synchro 11 software package, which is based on the Highway Capacity Manual (HCM) evaluation method.

The Level-of-Service (LOS) for unsignalized (stop-controlled and roundabout) intersections is determined by the calculated delay for each critical movement. LOS 'A' represents minimal delay for minor-street traffic movements while LOS 'F' is associated with inadequate gaps for minor-street traffic. The LOS for a signalized intersection includes additional factors such as geometry, traffic, and pedestrian volumes and signal phase/timing. As part of the analysis, the average delay for each lane group was calculated as well as the overall intersection delay, with operating conditions expressed as volume to capacity (v/c) ratios. **Table 1** provides an overview of associated delay per vehicle corresponding with the LOS.

Table 1: Level of Service Criteria

Level Of Service (LOS)	Average Delay for Unsignalized & Roundabout Intersection Movements	Average Delay for Signalized Intersection Movements
A	0-10 seconds per vehicle	0-10 seconds per vehicle
B	> 10-15 seconds per vehicle	>10-20 seconds per vehicle
C	>15-25 seconds per vehicle	>20-35 seconds per vehicle
D	>25-35 seconds per vehicle	>35-55 seconds per vehicle
E	>35-50 seconds per vehicle	>55-80 seconds per vehicle
F	>50 seconds per vehicle	>80 seconds per vehicle



2.2 Input and Calibration Parameters

Key results will include the level-of-service (LOS), vehicular delay, volume-to-capacity (v/c) ratios and the 95th percentile queue lengths. Analysis parameters will conform to the TIA standards and analysis parameters outlined by the County as listed in **Table 2**. In addition to the parameters summarized below, it is important to note that minimum acceptable LOS vary by jurisdiction. The County's TIA Guidelines specify a minimum LOS of E for County roadways, while ATEC's TIA Guidelines apply LOS thresholds based on highway service class. In this case, Highway 566 is classified as Service Class Level 3, which requires a minimum LOS of D.

Table 2: Rocky View County Capacity Analysis Parameters and Thresholds

Input Parameters		Value
Ideal Saturated Flow Rate		1850 vph
Peak Hour Factor	AM Peak Hour	0.94
	PM Peak Hour	0.95
Threshold v/c Ratio		0.90
Minimum LOS	Alberta Level 3 Highways	D
	Rocky View County Roads	E
Maximum Delay	Unsignalized	50 seconds
	Signalized	80 seconds
Leading Detector	Left	8 m
	Through	4 m
Trailing Detector		2 m
Minimum Initial	Main Street	20 seconds
	Side Street	10 seconds
	Turn Arrows	5 seconds

2.3 Existing Intersection Control and Traffic Volumes

The Kinetikor ASP lands are currently accessible via two intersections along Highway 566 with Range Road 282 and Range Road 281, as well as via the intersection of Township Road 264 and Range Road 282. Also included as a study intersection is Township Road 264 and Range Road 281. **Figure 3** illustrates the existing laning and traffic control at these intersections. Due to the existing single stop sign on the southbound approach at the intersection of Township Road 264 and Range Road 281, an opposing northbound stop sign was added to create a two-way stop control for analysis purposes.

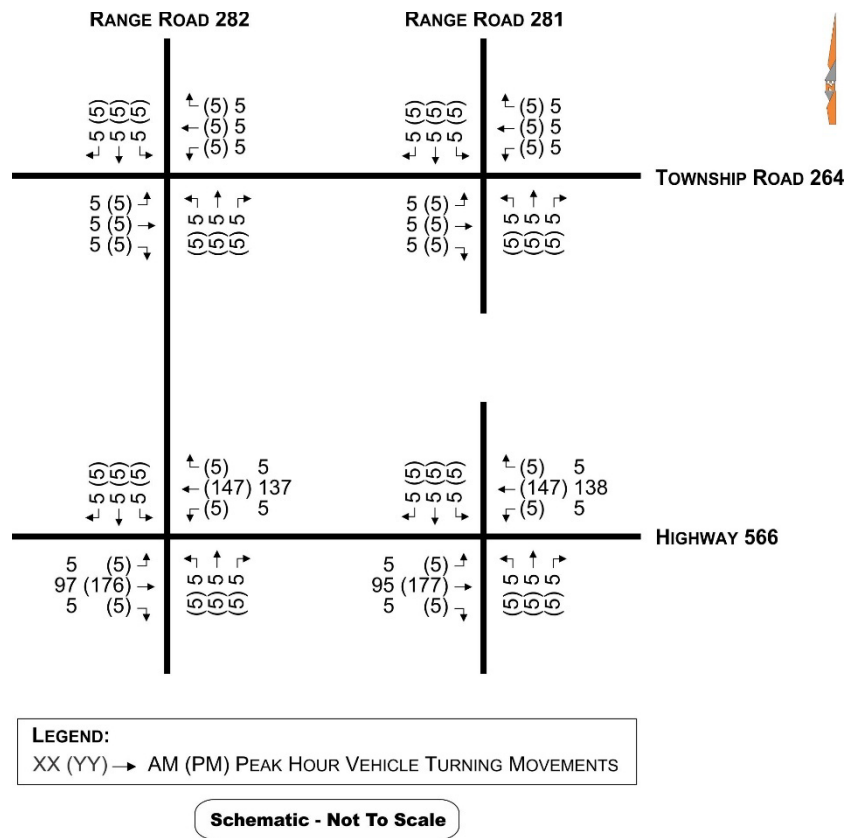


Figure 4: Existing Traffic Volumes

2.4 Existing Operating Conditions

Current operating conditions were assessed observed intersection geometry illustrated in **Figure 3** and turning movement volumes in **Figure 4**. Analysis results are presented in **Table 3**, with complete Synchro reports provided in **Appendix A**.



Table 3: Existing Operating Conditions

INTERSECTION / MOVEMENT			AM PEAK HOUR				PM PEAK HOUR			
			v/c Ratio	LOS	Delay (s)	Queue (m)	v/c Ratio	LOS	Delay (s)	Queue (m)
Township Road 264 / Range Road 282 (Unsignalized)	EB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	WB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	NB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	SB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	Intersection Summary		-	A	6	-	-	A	6	-
Township Road 264 / Rand Road 281 (Unsignalized)	EB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	WB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	NB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	SB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	Intersection Summary		-	A	6	-	-	A	6	-
Highway 566 / Range Road 282 (Unsignalized)	EB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	WB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	NB	Left / Through / Right	0.02	B	10	1	0.03	B	11	1
	SB	Left / Through / Right	0.02	B	10	1	0.03	B	11	1
	Intersection Summary		-	A	1	-	-	A	1	-
Highway 566 / Range Road 281 (Unsignalized)	EB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	WB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	NB	Left / Through / Right	0.02	B	10	1	0.03	B	11	1
	SB	Left / Through / Right	0.02	B	10	1	0.03	B	11	1
	Intersection Summary		-	A	1	-	-	A	1	-

As noted in **Table 3**, all intersections provide acceptable operating conditions under existing geometry and control.



3.0 PROPOSED DEVELOPMENT

3.1 Vision

The proposed development is located within the County, to the east of the Hamlet of Balzac and north of Highway 566. The Kinetikor ASP encompasses seven quarter sections of existing greenfield/agricultural lands, as follows:

- NE-15-26-28-W4 (**Site 1**)
- SW-23-26-28-W4 (**Site 2**)
- SE-23-26-28-W4
- NW-14-26-28-W4 (**Site 3**)
- NE-14-26-28-W4 (**Site 5**)
- SW-14-26-28-W4 (**Site 4**)
- SE-14-26-28-W4 (**Site 6**)

The existing land use with quarter sections labelled is provided in **Figure 5**.

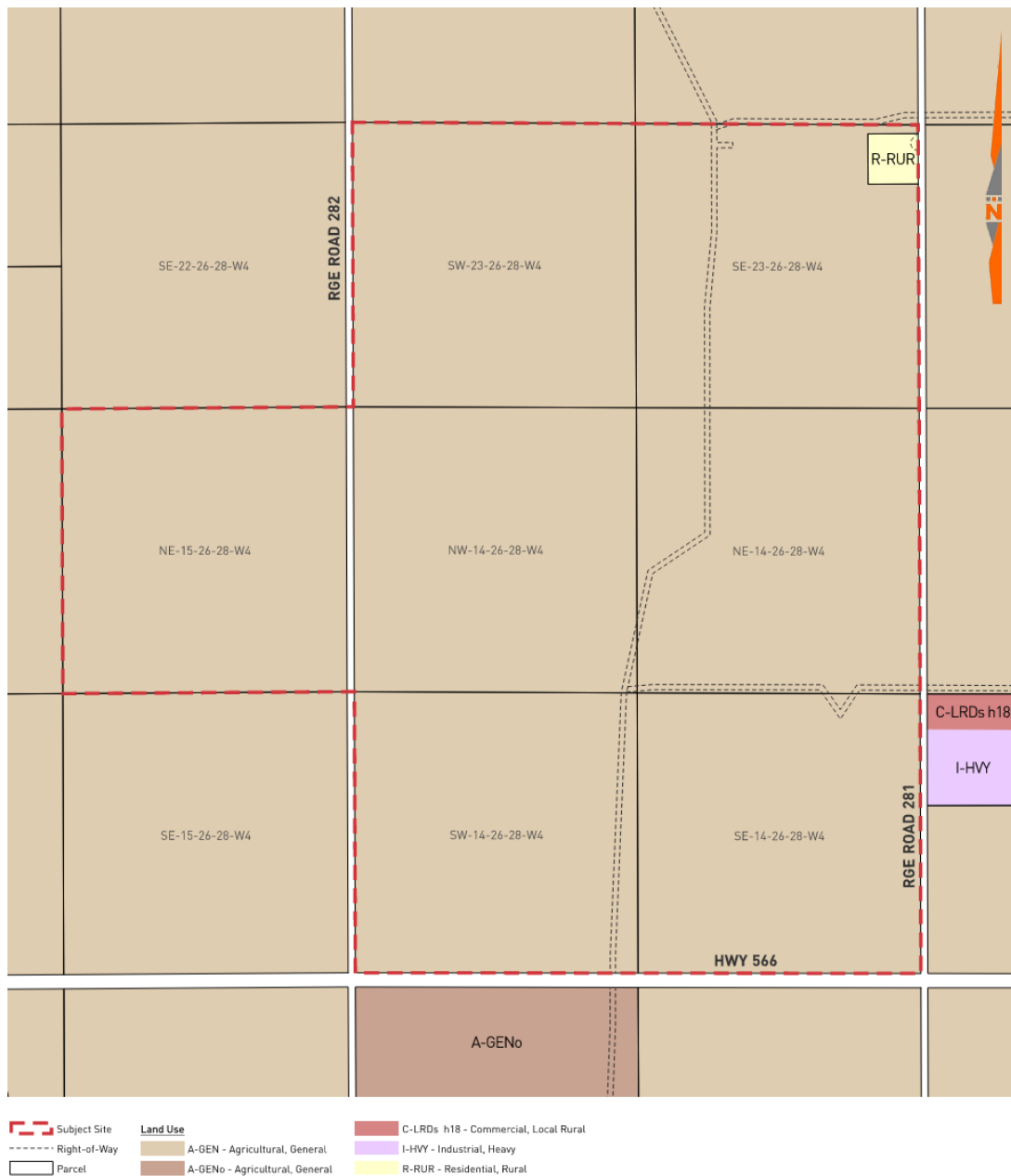


Figure 5: Existing Land Use by Quarter Section

Development is expected to occur in multiple phases over the long term. The initial phases are proposed to include three data centre campuses situated along Range Road 282, north of Highway 566 and south of Township Road 264. Future phases may include additional data centres as well as a power-generation facility. A conceptual site plan is provided in **Figure 6**, followed by the anticipated phasing plan in **Figure 7**. For the



purposes of this assessment, Phase 1 is assumed to correspond with the development of Site 1, Phase 2 with the western portions of Sites 3 and 4, and Phase 3 with Site 2.

In support of this development, the County has adopted a new land use bylaw, Special, Data Centre District (S-DAT), specific to Data Centre Campuses. The purpose of this bylaw is to provide for the development of comprehensive Data Centre Campuses, together with advanced research and technology activities and other complementary uses that support or utilize the services of the primary data centre use.

Although detailed plans and statistics for future development phases are not yet confirmed, it is anticipated that all land uses within the ASP will conform to this forthcoming bylaw. Accordingly, for the purposes of this assessment, all future phases were assumed to reflect the same land use as the initial phases.

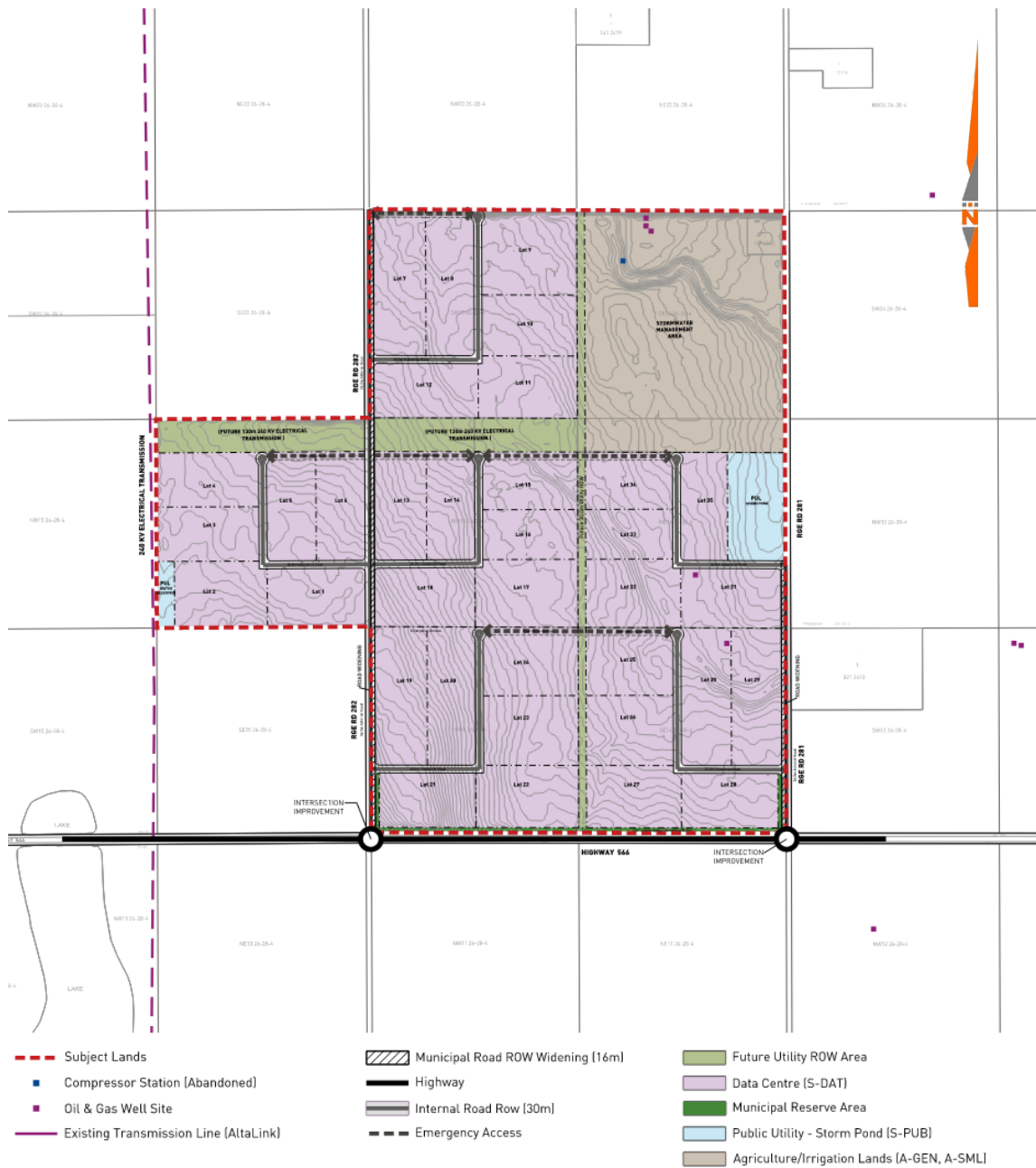


Figure 6: Site Plan

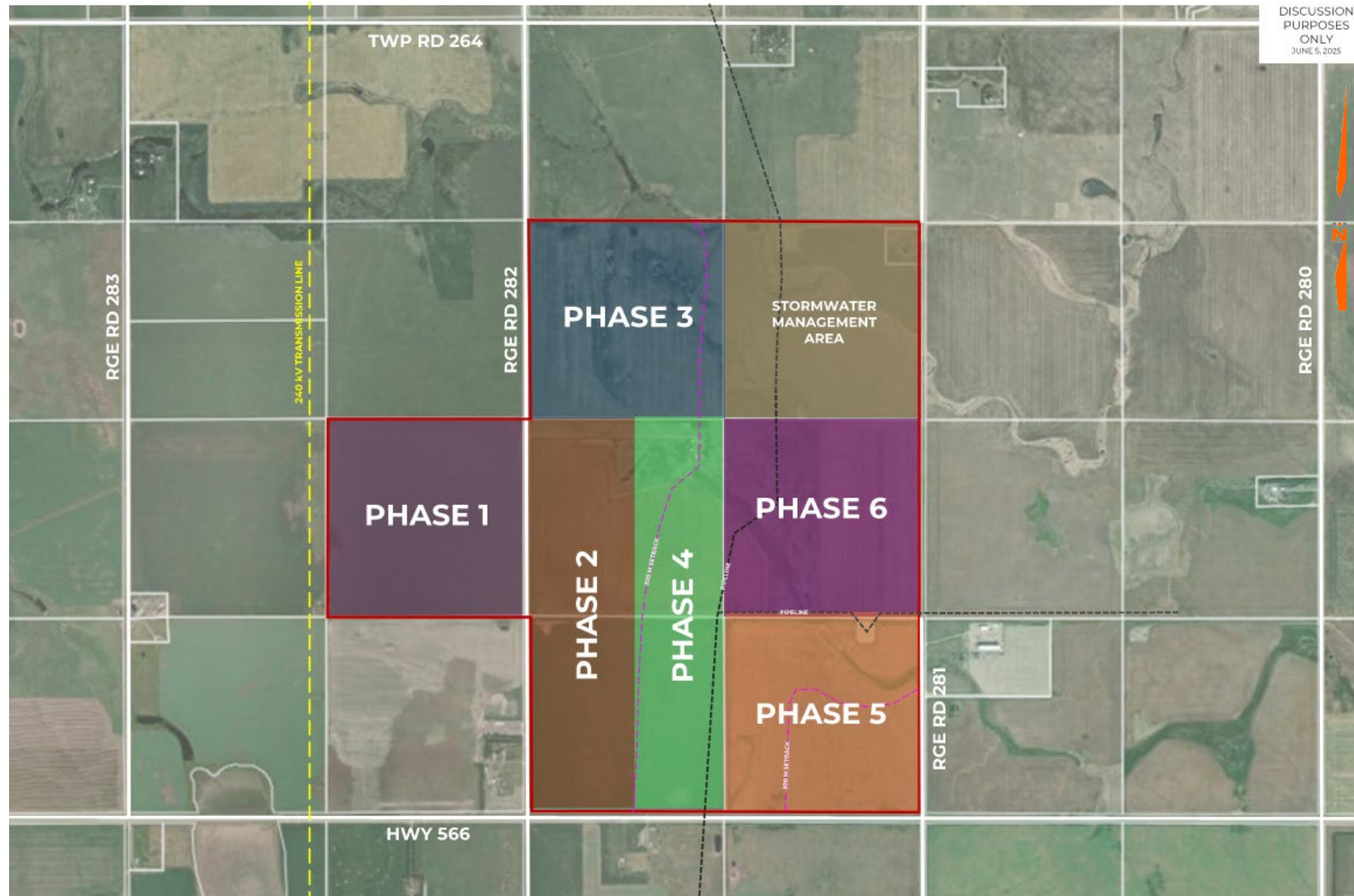


Figure 7: Proposed Phasing Plan



3.2 Trip Generation

Trip generation for the proposed development was calculated based on site-specific statistics and detailed trip data provided by the client. Unlike typical assessments that rely on generalized trip rates from standard reference such as the Institute of Transportation Engineers' (ITE's) Trip Generation Manual, this assessment benefits from direct insight into the nature and volume of trips generated by the site. Total site-generated traffic was assumed to occur within both the AM and PM peak hours only to maintain conservative estimates.

Trip generation estimates summarized in **Table 4** account for both initial and future phases of buildout, modeled using similar land use and intensity, for both the AM and PM peak hours. The breakdown of trip types (day staff, night staff, and deliveries) is repeated for each site. The breakdown and subtotal for Site 1 can be applied to all other sites.

Table 4: Trip Generation

LAND USE	TRIPS GENERATED AM PEAK HOUR			TRIPS GENERATED PM PEAK HOUR		
	TOTAL	IB	OB	TOTAL	IB	OB
Site 1: NE-15-26-28-W4						
Day Staff	200	200	0	200	0	200
Night Staff	50	0	50	50	50	0
Deliveries	25	15	10	25	10	15
Site 1 Sub Total	275	215	60	275	60	215
All 6 Sites	1,650	1,290	360	1,650	360	1,290

3.3 Trip Distribution

Site-generated traffic was assigned to the transportation network using a combination of model-based outputs and observed traffic patterns.

Trips entering and exiting sites to and from the north were distributed based on Select Zone Plots extracted from the County's 2040 forecasting model. These plots provide the directional flow of trips associated with future growth in the surrounding area and offer a representative basis for assigning trips on the local network.



Trips entering and exiting sites to and from the south along Highway 566 were distributed to the east and west using directional patterns observed during traffic counts. This approach aligns trip distribution assumptions with existing driver behaviour along this corridor. This distribution was also validated by the County's 2040 forecasting model.

The resulting trip distribution assumptions are illustrated in **Figure 8**.

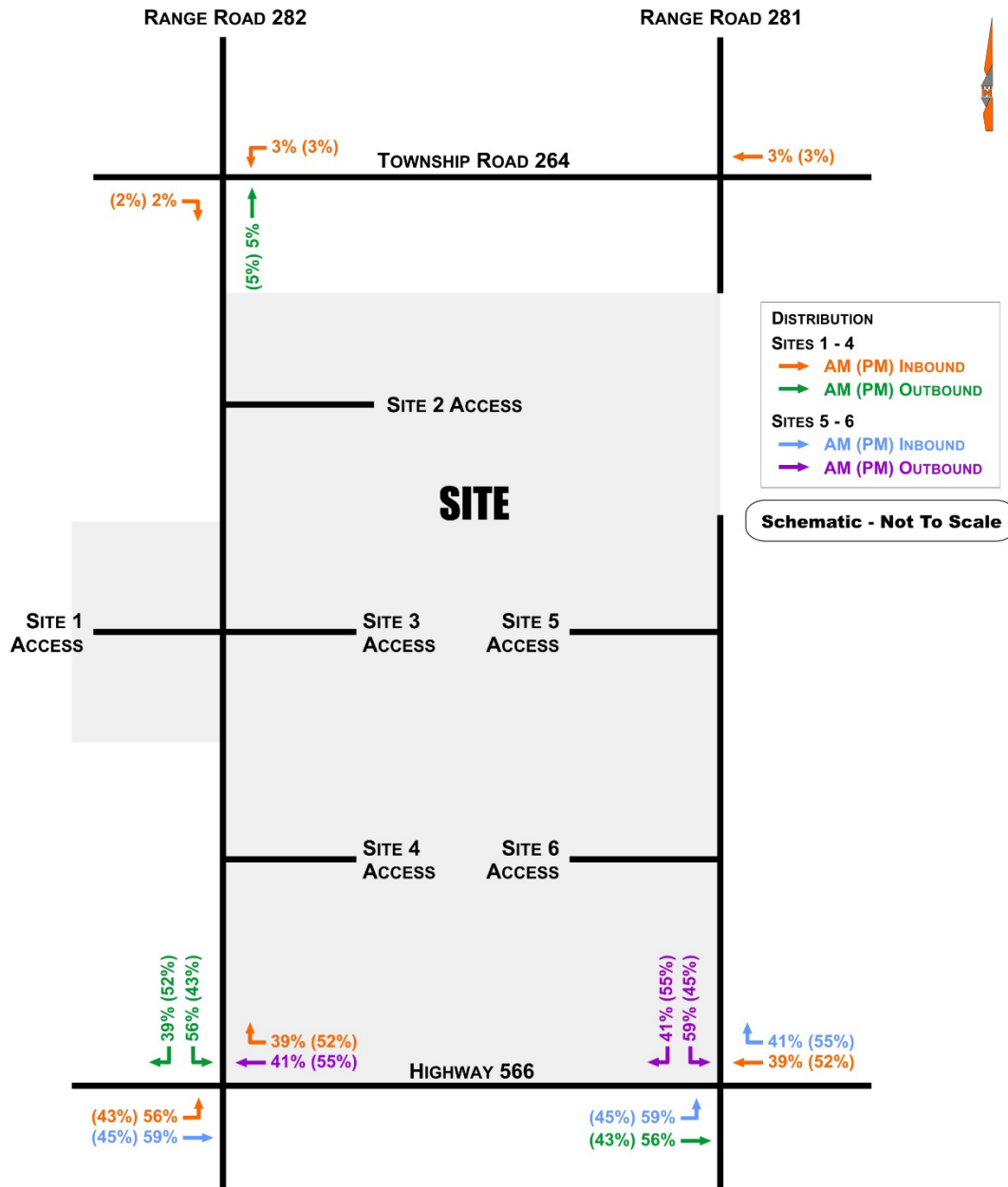


Figure 8: Trip Distribution



Figure 9 and **Figure 10** illustrate the estimated site-generated traffic volumes during the AM and PM peak hours for the development for Phases 1-3 as well as full buildout, respectively. While the overall phasing plan provides a general timeline for development, it does not directly align with the individual site boundaries. Phase 1 is assumed to correspond with the development of Site 1, Phase 2 with the western portions of Sites 3 and 4, and Phase 3 with Site 2.

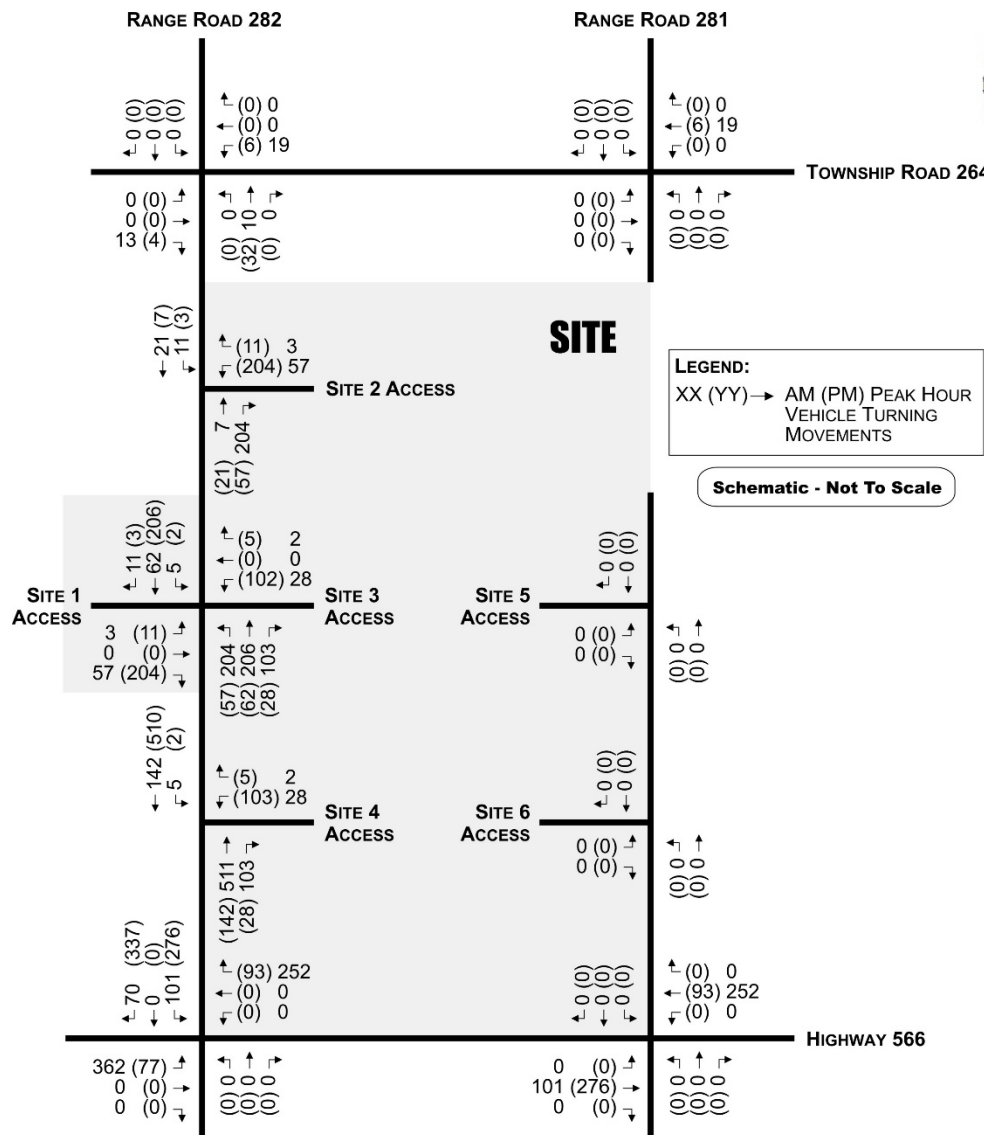


Figure 9: Phases 1-3 Site-Generated Traffic Volumes

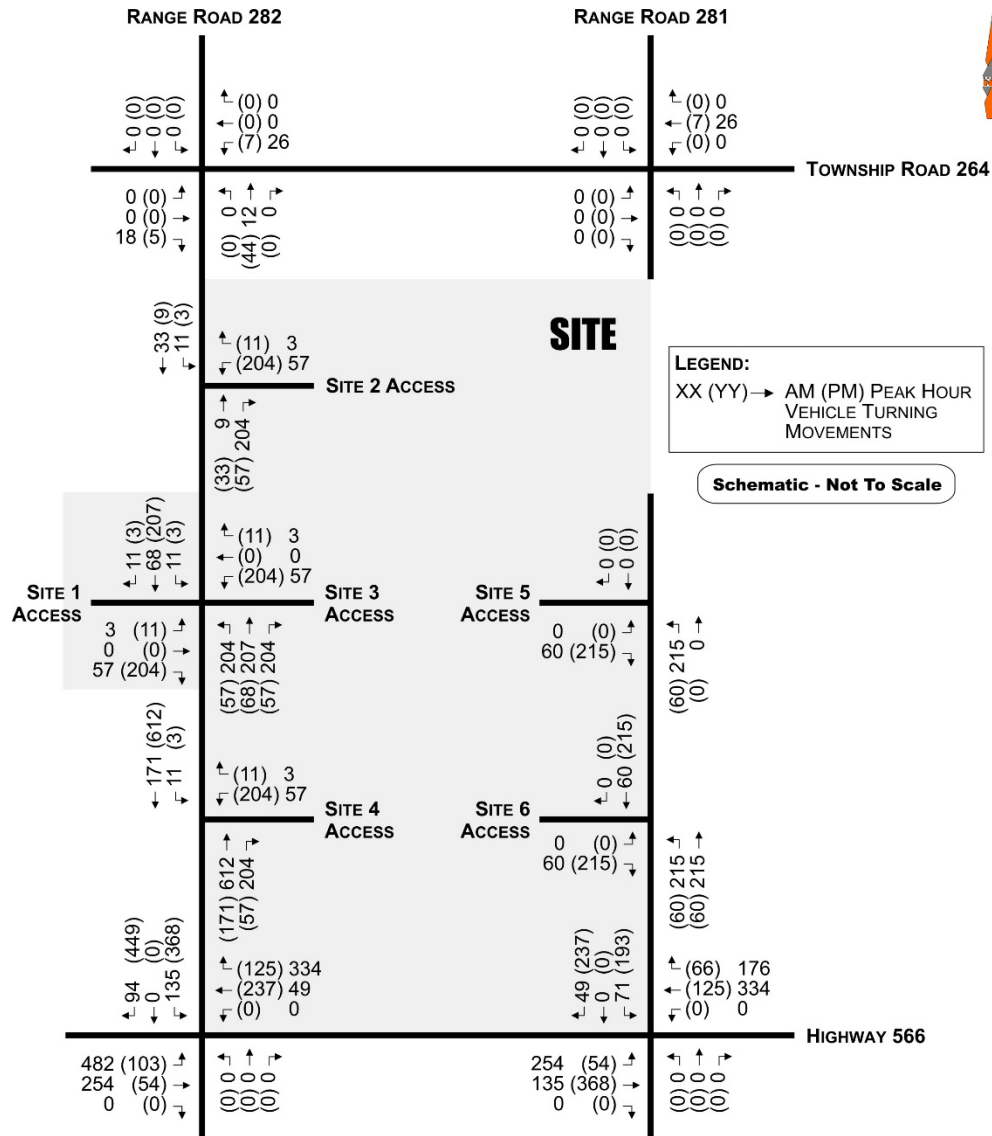


Figure 10: Full Buildout Site-Generated Traffic Volumes



4.0 OPENING DAY (PHASES 1-3) HORIZON

4.1 Opening Day Background

Phases 1-3 of the proposed development are anticipated to be complete by the 2031 horizon year (Opening Day), with background turning movement volumes determined by factoring existing count volumes with an annual, linear growth rate of 2.5% (standard). Assumed geometry and control of the future base study intersections is illustrated in **Figure 11**.

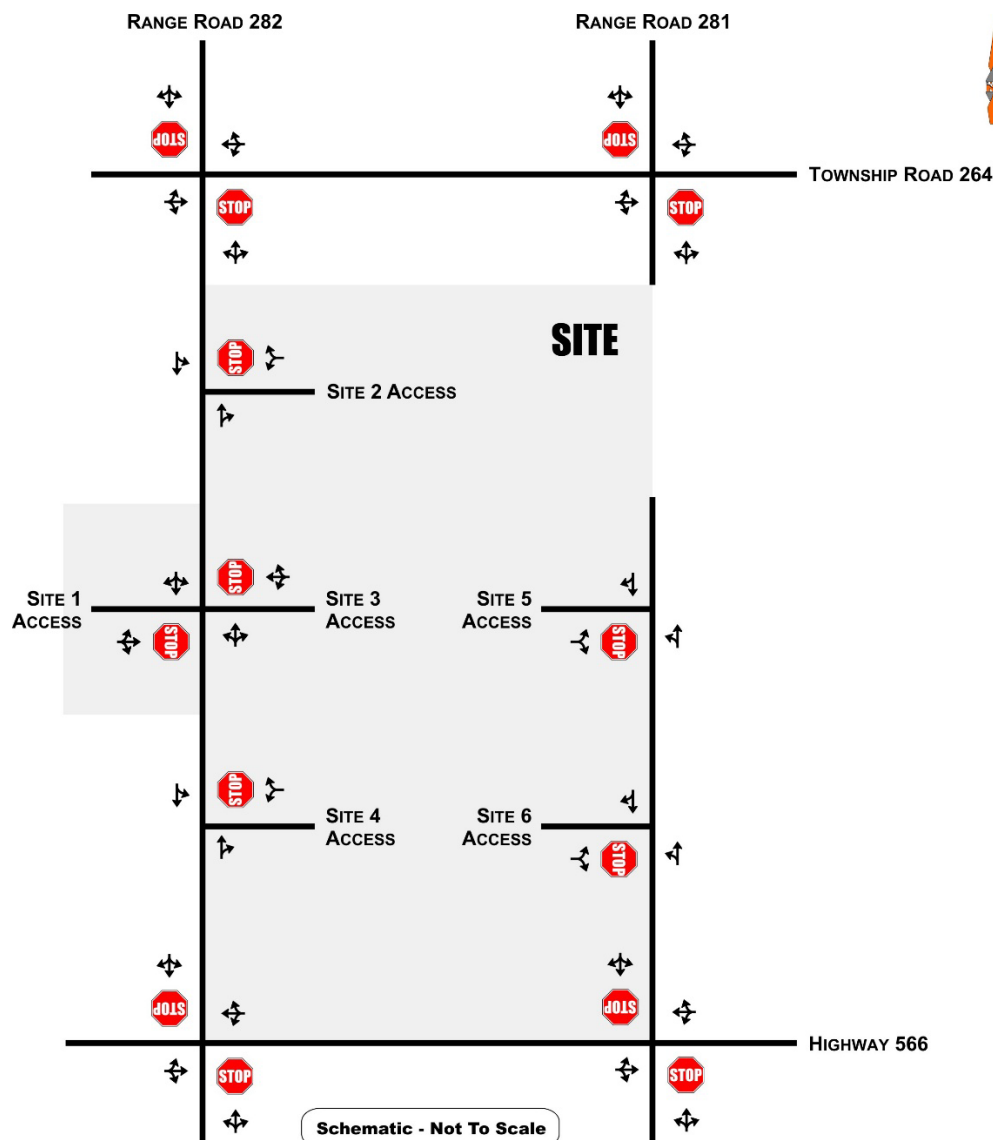


Figure 11: Future Base Lane Configuration and Traffic Control



Resulting traffic volumes for the background horizon are detailed in **Figure 12**.

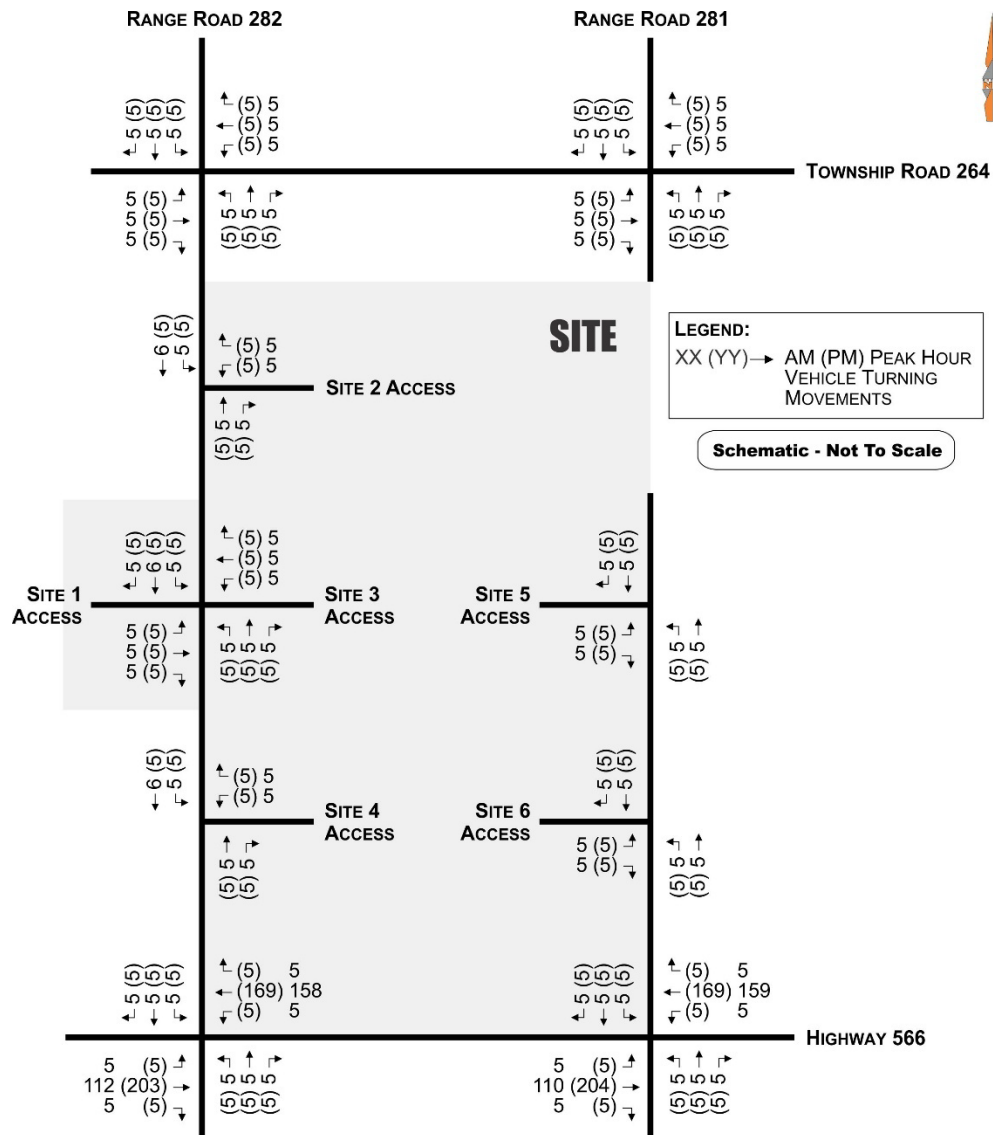


Figure 12: Phases 1-3 Opening Day Background Traffic Volumes

Background operating conditions were assessed using the Synchro software package and background turning movement volumes illustrated in **Figure 12**, as well as geometry and control as illustrated in **Figure 11**. Analysis reflects the existing intersection geometry, with an overview of the resulting operating conditions provided in **Table 5**, and complete Synchro reports in **Appendix A**.



Table 5: Phases 1-3 Opening Day Background Operating Conditions

INTERSECTION / MOVEMENT			AM PEAK HOUR				PM PEAK HOUR			
			v/c Ratio	LOS	Delay (s)	Queue (m)	v/c Ratio	LOS	Delay (s)	Queue (m)
Township Road 264 / Range Road 282 (Unsignalized)	EB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	WB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	NB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	SB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	Intersection Summary		-	A	6	-	-	A	6	-
Township Road 264 / Rand Road 281 (Unsignalized)	EB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	WB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	NB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	SB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	Intersection Summary		-	A	6	-	-	A	6	-
Highway 566 / Range Road 282 (Unsignalized)	EB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	WB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	NB	Left / Through / Right	0.02	B	10	1	0.03	B	11	1
	SB	Left / Through / Right	0.02	B	10	1	0.03	B	11	1
	Intersection Summary		-	A	1	-	-	A	1	-
Highway 566 / Range Road 281 (Unsignalized)	EB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	WB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	NB	Left / Through / Right	0.02	B	10	1	0.03	B	11	1
	SB	Left / Through / Right	0.02	B	10	1	0.03	B	11	1
	Intersection Summary		-	A	1	-	-	A	1	-

As noted in **Table 5**, and similar to existing conditions, all intersections provide acceptable operating conditions under existing geometry and control. No improvements were explored for the Opening Day background horizon.

4.2 Opening Day Post Development

Site-generated traffic was assigned to the surrounding road network based on distribution patterns indicated in **Figure 8**. Post development traffic volumes were determined as the sum of the opening day background traffic (**Figure 12**) and phases 1-3 site-generated traffic (**Figure 9**). Resulting turning movement volume presented in **Figure 13**, accompanied by the resulting intersection operating conditions in **Table 6**.

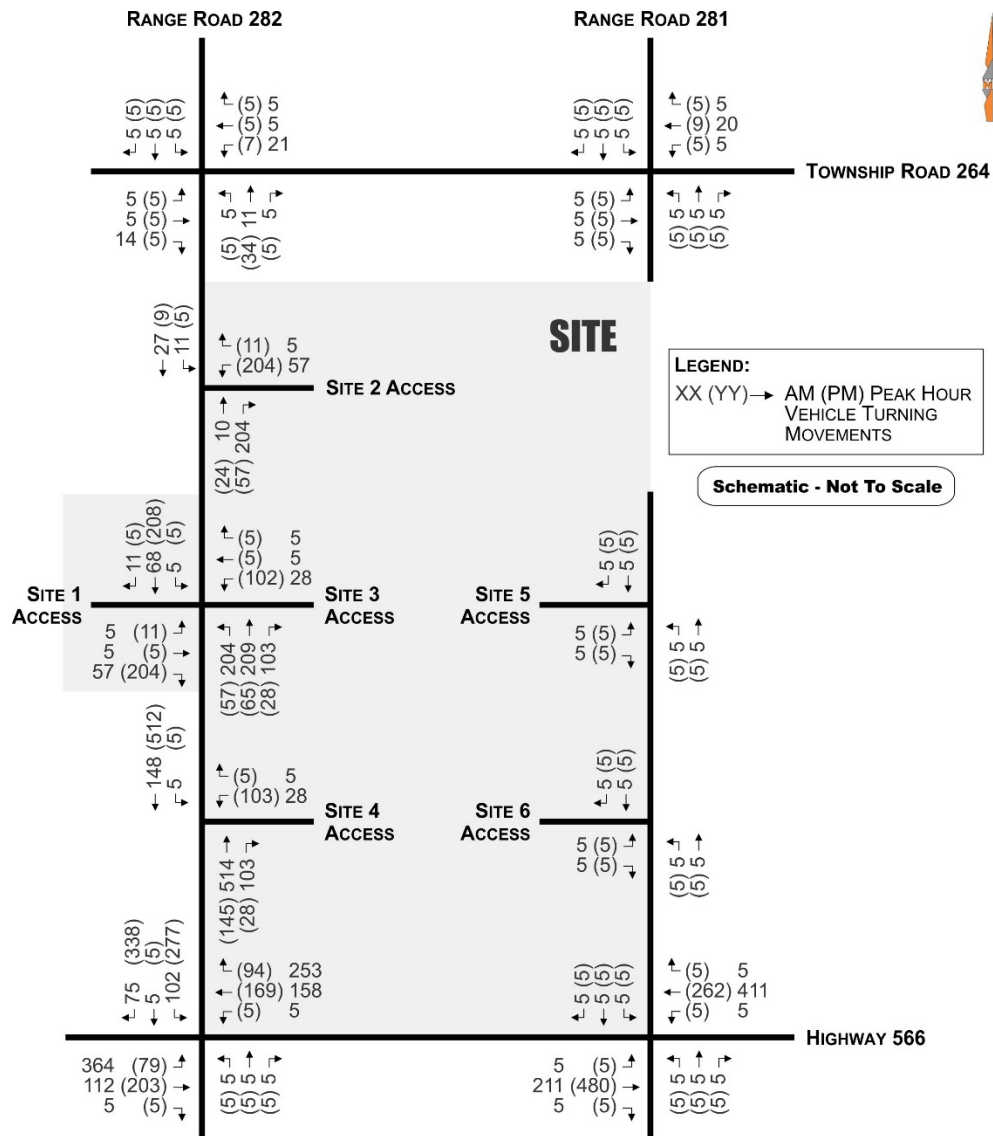


Figure 13: Phases 1-3 Opening Day Post Development Traffic Volumes



Table 6: Phases 1-3 Opening Day Post Development Operating Conditions

INTERSECTION / MOVEMENT			AM PEAK HOUR				PM PEAK HOUR			
			v/c Ratio	LOS	Delay (s)	Queue (m)	v/c Ratio	LOS	Delay (s)	Queue (m)
Township Road 264 / Range Road 282 (Unsignalized)	EB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	WB	Left / Through / Right	0.01	A	5	0	0.01	A	3	0
	NB	Left / Through / Right	0.03	A	9	1	0.05	A	9	1
	SB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	Intersection Summary		-	A	6	-	-	A	7	-
Township Road 264 / Range Road 281 (Unsignalized)	EB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	WB	Left / Through / Right	0.00	A	1	0	0.00	A	2	0
	NB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	SB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	Intersection Summary		-	A	5	-	-	A	5	-
Highway 566 / Range Road 282 (Unsignalized)	EB	Left / Through / Right	0.35	A	8	11	0.07	A	2	1
	WB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	NB	Left / Through / Right	0.12	E	36	3	0.06	C	18	1
	SB	Left / Through / Right	1.18	F	183	74	1.25	F	151	180
	Intersection Summary		-	D	34	-	-	F	80	-
Highway 566 / Range Road 281 (Unsignalized)	EB	Left / Through / Right	0.01	A	0	0	0.00	A	0	0
	WB	Left / Through / Right	0.00	A	0	0	0.01	A	0	0
	NB	Left / Through / Right	0.04	B	14	1	0.04	C	16	1
	SB	Left / Through / Right	0.04	B	14	1	0.04	B	15	1
	Intersection Summary		-	A	1	-	-	A	1	-
Range Road 282 / Site 2 Access (Unsignalized)	WB	Left / Right	0.08	A	10	2	0.24	B	10	7
	NB	Through / Right	0.00	A	0	0	0.00	A	0	0
	SB	Left / Through	0.01	A	2	0	0.00	A	3	0
	Intersection Summary		-	A	2	-	-	A	7	-
Range Road 282 / Site 1 and Site 3 Access (Unsignalized)	EB	Left / Through / Right	0.11	B	11	2	0.30	B	12	8
	WB	Left / Through / Right	0.16	C	22	4	0.36	C	22	11
	NB	Left / Through / Right	0.14	A	3	4	0.05	A	3	1
	SB	Left / Through / Right	0.00	A	1	0	0.00	A	0	0
	Intersection Summary		-	A	5	-	-	A	8	-
Range Road 282 / Site 4 Access (Unsignalized)	WB	Left / Through / Right	0.09	C	15	2	0.28	C	17	8
	NB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	SB	Left / Through / Right	0.01	A	0	0	0.00	A	0	0
	Intersection Summary		-	A	1	-	-	A	2	-
Range Road 281 / Site 5 Access (Unsignalized)	EB	Left / Through / Right	0.01	A	9	0	0.01	A	9	0
	NB	Left / Through / Right	0.00	A	7	0	0.00	A	4	0
	SB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	Intersection Summary		-	A	4	-	-	A	4	-
Range Road 281 / Site 6 Access (Unsignalized)	EB	Left / Through / Right	0.01	A	9	0	0.01	A	9	0
	NB	Left / Through / Right	0.00	A	4	0	0.00	A	4	0
	SB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	Intersection Summary		-	A	4	-	-	A	4	-



As noted in **Table 6**, most study intersections provide acceptable operating conditions under existing geometry and control for Opening Day post development traffic volumes. The intersection of Highway 566 and Range Road 282 experiences decreased operating conditions for northbound and southbound traffic during the AM and/or PM peak hours. Alternative controls were explored, including all-way stop control, which also resulted in poor operations. A roundabout was analyzed using Opening Day and 2060 post-development volumes; this configuration performs well initially but shows decreased conditions at the ultimate horizon.

Signalization was also evaluated using the Transportation Association of Canada's (TAC's) Signalization Warrant Procedure, which found that signalization is not warranted at this time. See **Appendix B** where the warrant resulted in 85 points; below the threshold of 100 points to warrant signalization. As volumes are expected to grow, ongoing monitoring of this intersection is recommended, with improvements implemented as conditions warrant. **Section 8.1** provides further discussion on signalization.



5.0 2040 (FULL BUILDOUT) HORIZON

5.1 2040 Background

A select zone analysis was obtained from the County's forecasting model for the Traffic Analysis Zone (TAZ) associated with the proposed development in the 2040 horizon. The select zone analysis incorporates assumptions on population and land use, providing base turning movement volumes for the AM and PM peak hours of each horizon year. In combination with the select zone plots, turning movement counts were obtained for each study intersection. 2040 background traffic volumes are detailed in **Figure 14**, accompanied by the resulting operating conditions in **Table 7** and detailed reports in **Appendix A**.

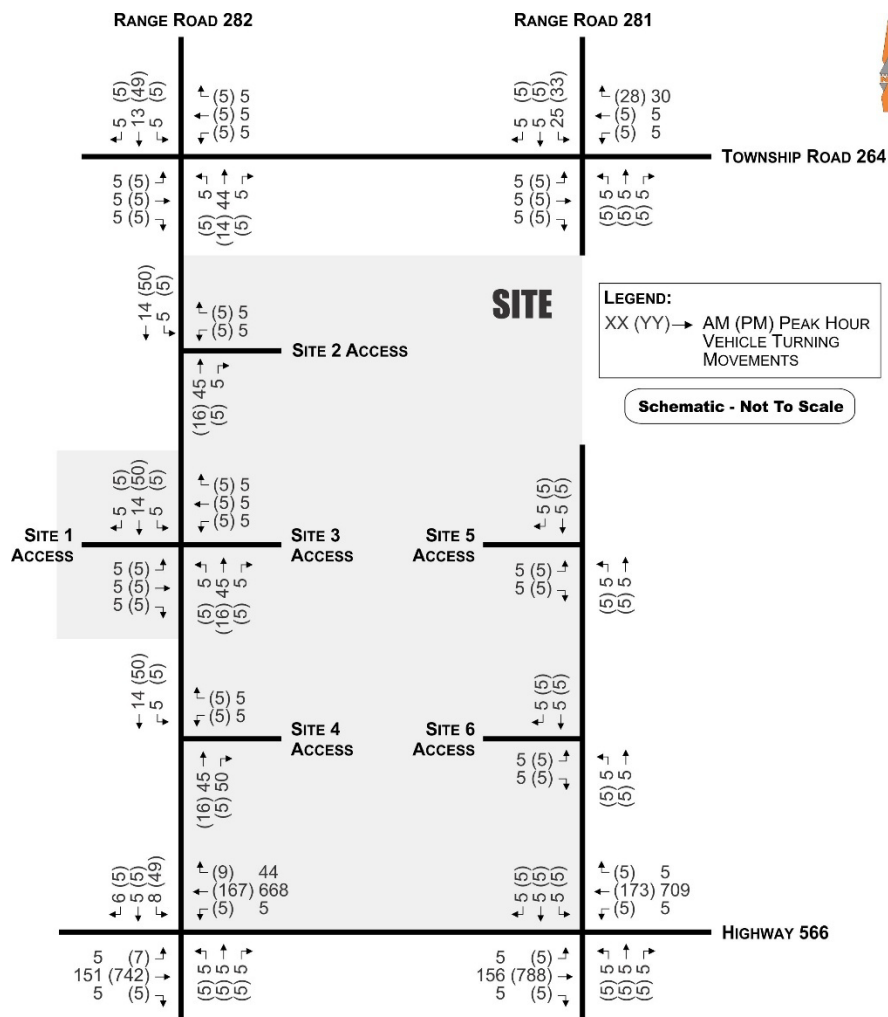


Figure 14: 2040 Background Traffic Volumes



Table 7: 2040 Background Operating Conditions

INTERSECTION / MOVEMENT			AM PEAK HOUR				PM PEAK HOUR			
			v/c Ratio	LOS	Delay (s)	Queue (m)	v/c Ratio	LOS	Delay (s)	Queue (m)
Township Road 264 / Range Road 282 (Unsignalized)	EB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	WB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	NB	Left / Through / Right	0.07	A	9	1	0.03	A	9	1
	SB	Left / Through / Right	0.03	A	9	1	0.07	A	10	1
	Intersection Summary		-	A	7	-	-	A	8	-
Township Road 264 / Range Road 281 (Unsignalized)	EB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	WB	Left / Through / Right	0.00	A	1	0	0.00	A	1	0
	NB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	SB	Left / Through / Right	0.04	A	9	1	0.05	A	9	1
	Intersection Summary		-	A	5	-	-	A	5	-
Highway 566 / Range Road 282 (Unsignalized)	EB	Left / Through / Right	0.01	A	0	0	0.01	A	0	0
	WB	Left / Through / Right	0.00	A	0	0	0.01	A	0	0
	NB	Left / Through / Right	0.05	C	17	1	0.06	C	19	1
	SB	Left / Through / Right	0.07	C	18	1	0.27	D	26	7
	Intersection Summary		-	A	1	-	-	A	2	-
Highway 566 / Range Road 281 (Unsignalized)	EB	Left / Through / Right	0.01	A	0	0	0.00	A	0	0
	WB	Left / Through / Right	0.00	A	0	0	0.01	A	0	0
	NB	Left / Through / Right	0.05	C	17	1	0.06	C	20	1
	SB	Left / Through / Right	0.06	C	19	1	0.06	C	18	1
	Intersection Summary		-	A	1	-	-	A	1	-

As noted in **Table 7**, and similar to previous background conditions, all intersections provide acceptable operating conditions under existing geometry and control. No improvements were explored for the 2040 background horizon.

5.2 2040 Post Development

At the 2040 post development horizon, full buildout of the ASP is assumed to be complete. Post development traffic volumes were determined as the sum of the 2040 background traffic (**Figure 14**) and full buildout site-generated traffic (**Figure 10**), with the resulting post development volumes presented in **Figure 15**. Resulting operating conditions are detailed in **Table 8**, along with Synchro reports provided in **Appendix A**.

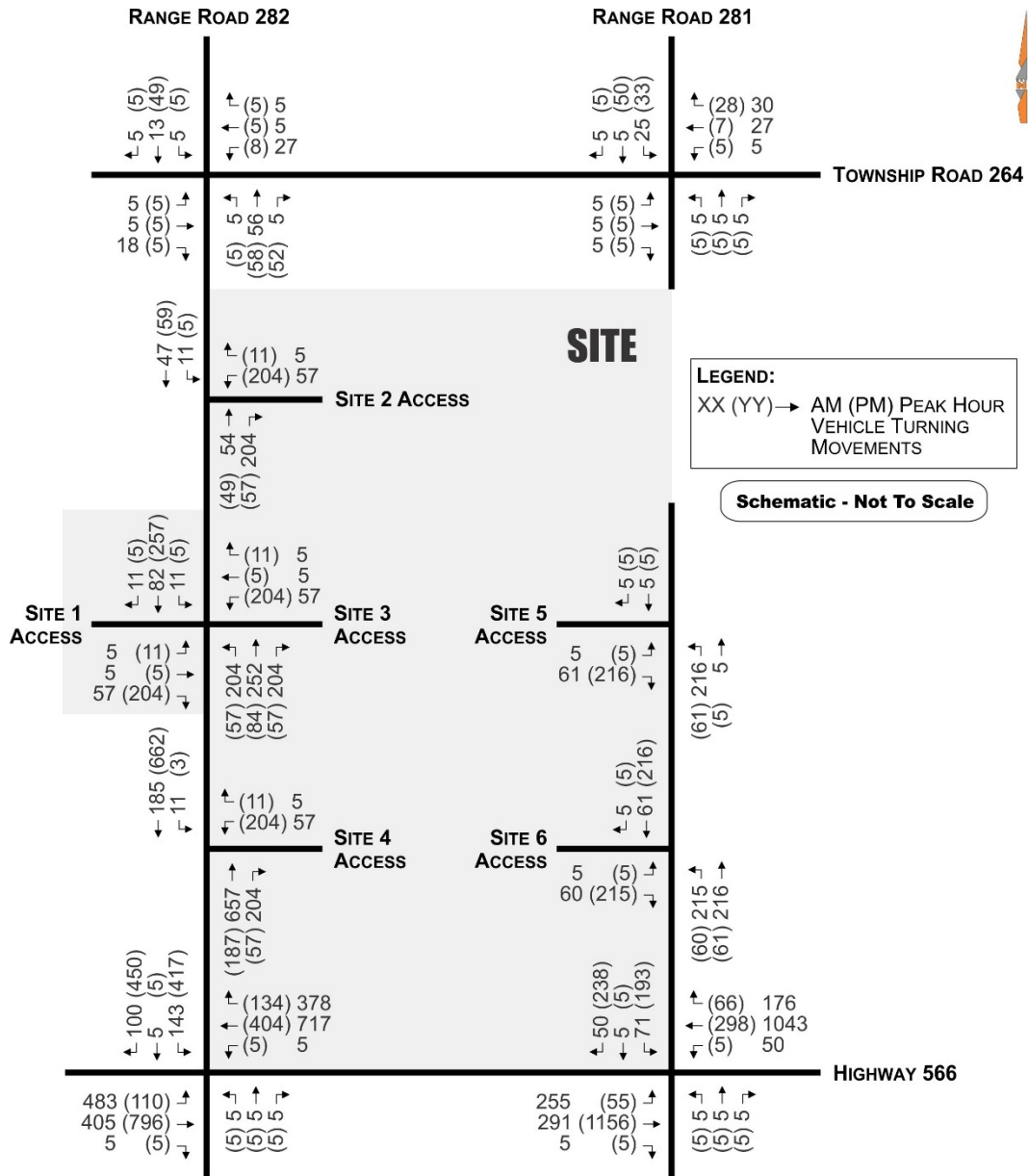


Figure 15: 2040 Post Development Traffic Volumes



Table 8: 2040 Post Development Operating Conditions

INTERSECTION / MOVEMENT			AM PEAK HOUR				PM PEAK HOUR			
			v/c Ratio	LOS	Delay (s)	Queue (m)	v/c Ratio	LOS	Delay (s)	Queue (m)
Township Road 264 / Range Road 282 (Unsignalized)	EB	Left / Through / Right	0.00	A	1	0	0.00	A	2	0
	WB	Left / Through / Right	0.02	A	5	1	0.01	A	3	0
	NB	Left / Through / Right	0.09	A	10	2	0.08	A	10	2
	SB	Left / Through / Right	0.03	A	10	1	0.07	A	10	1
	Intersection Summary		-	A	7	-	-	A	8	-
Township Road 264 / Range Road 281 (Unsignalized)	EB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	WB	Left / Through / Right	0.00	A	1	0	0.00	A	1	0
	NB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	SB	Left / Through / Right	0.04	A	9	1	0.05	A	9	1
	Intersection Summary		-	A	4	-	-	A	5	-
Highway 566 / Range Road 282 (Unsignalized)	EB	Left / Through / Right	0.86	C	20	67	0.12	A	1	3
	WB	Left / Through / Right	0.01	A	8	0	0.01	A	0	0
	NB	Left / Through / Right	Error	F	Error	Error	0.75	F	368	15
	SB	Left / Through / Right	Error	F	Error	Error	7.34	F	2921	718
	Intersection Summary		-	F	Error	-	-	F	1091	-
Highway 566 / Range Road 281 (Unsignalized)	EB	Left / Through / Right	0.51	A	9	20	0.05	A	0	1
	WB	Left / Through / Right	0.00	A	0	0	0.01	A	0	0
	NB	Left / Through / Right	0.76	F	371	15	0.26	F	84	6
	SB	Left / Through / Right	5.16	F	2172	116	3.86	F	1360	323
	Intersection Summary		-	F	194	-	-	F	292	-
Range Road 282 / Site 2 Access (Unsignalized)	WB	Left / Right	0.09	B	10	2	0.27	B	11	8
	NB	Through / Right	0.00	A	0	0	0.00	A	0	0
	SB	Left / Through	0.01	A	2	0	0.00	A	1	0
	Intersection Summary		-	A	2	-	-	A	6	-
Range Road 282 / Site 1 and Site 3 Access (Unsignalized)	EB	Left / Through / Right	0.12	B	12	3	0.32	B	12	10
	WB	Left / Through / Right	0.37	D	34	11	0.83	F	58	48
	NB	Left / Through / Right	0.15	A	2	4	0.05	A	2	1
	SB	Left / Through / Right	0.01	A	1	0	0.00	A	0	0
	Intersection Summary		-	A	5	-	-	C	18	-
Range Road 282 / Site 4 Access (Unsignalized)	WB	Left / Through / Right	0.25	C	23	7	0.75	E	45	39
	NB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	SB	Left / Through / Right	0.02	A	1	0	0.00	A	0	0
	Intersection Summary		-	A	1	-	-	A	9	-
Range Road 281 / Site 5 Access (Unsignalized)	EB	Left / Through / Right	0.07	A	9	1	0.22	A	9	6
	NB	Left / Through / Right	0.14	A	7	4	0.04	A	7	1
	SB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	Intersection Summary		-	A	8	-	-	A	8	-
Range Road 281 / Site 6 Access (Unsignalized)	EB	Left / Through / Right	0.08	A	10	2	0.29	B	11	8
	NB	Left / Through / Right	0.15	A	4	4	0.05	A	4	1
	SB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	Intersection Summary		-	A	4	-	-	A	5	-



As noted in **Table 8**, while most intersections are anticipated to provide acceptable operating conditions under existing geometry and control, several intersections are anticipated to experience decreased operating conditions in the AM and PM peak hours, with a summary of locations which operate above the recommended thresholds provided below.

- **Highway 566 and Range Road 282**
 - Signalization warrant result: 344 points
 - Signalization is recommended at this time (further discussion provided in **Section 8.1**).
 - Additional eastbound and southbound single left turn lanes as well as an additional westbound right turn lane may improve operating conditions.
- **Highway 566 and Range Road 281**
 - Signalization warrant result: 204 points
 - Signalization is recommended at this time (further discussion provided in **Section 8.1**).
 - Additional eastbound and southbound single left turn lanes as well as an additional westbound right turn lane may improve operating conditions.
- **Range Road 282 and Site 1 & Site 3 Access**
 - All-way stop control is recommended.
- **Range Road 282 and Site 4 Access**
 - No improvements explored as v/c ratio is acceptable and delays are seen as relatively low.

See the following section for capacity analysis results upon implementing these improvements and see **Section 8.0** for further discussion on improvements.

5.3 2040 Post Development – Improved

As noted above, several improvements are warranted and therefore are recommended at the 2040 post development horizon. **Figure 16** illustrates the recommended intersection improvements, which may include added approach lanes. A summary of each improved intersection's capacity analysis results is provided in **Table 9**, and Synchro reports provided in **Appendix A**.

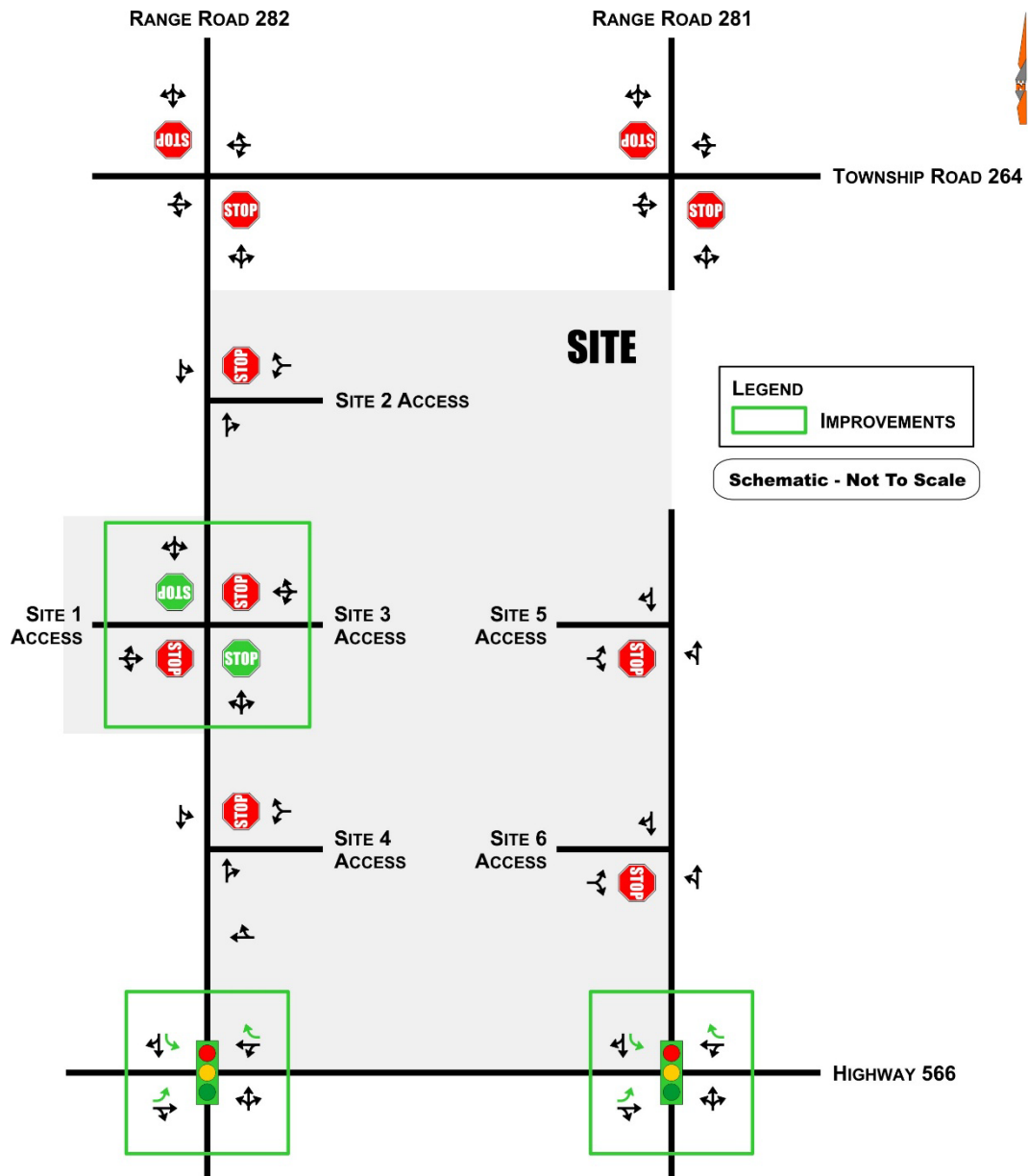


Figure 16: 2040 Post Development - Improved Lane Configuration and Traffic Control



Table 9: 2040 Post Development Improved Operating Conditions

INTERSECTION / MOVEMENT			AM PEAK HOUR				PM PEAK HOUR			
			v/c Ratio	LOS	Delay (s)	Queue (m)	v/c Ratio	LOS	Delay (s)	Queue (m)
Highway 566 / Range Road 282 (Signalized)	EB	Left	0.89	D	51	172	0.32	B	17	25
		Through / Right	0.31	A	5	41	0.89	D	36	267
	WB	Left / Through	0.95	D	55	265	0.58	C	27	109
		Right	0.50	B	14	63	0.20	A	6	14
	NB	Left / Through / Right	0.06	D	35	8	0.02	B	18	6
	SB	Left	0.76	E	74	60	0.83	D	45	144
		Through / Right	0.35	B	13	17	0.57	A	9	45
	Intersection Summary		-	D	37	-	-	C	28	-
Highway 566 / Range Road 281 (Signalized)	EB	Left	0.87	D	38	131	0.08	A	4	6
		Through / Right	0.20	A	3	24	0.94	C	27	249
	WB	Left / Through	0.72	A	8	173	0.27	A	5	26
		Right	0.14	A	1	4	0.06	A	1	3
	NB	Left / Through / Right	0.10	D	47	10	0.05	C	34	9
	SB	Left	0.62	F	86	39	0.76	E	61	98
		Through / Right	0.31	C	22	15	0.51	B	10	25
	Intersection Summary		-	B	14	-	-	C	23	-
Range Road 282 / Site 1 and Site 3 Access (Unsignalized)	EB	Left / Through / Right	0.11	A	9	3	0.34	B	11	11
	WB	Left / Through / Right	0.12	A	10	3	0.38	B	13	13
	NB	Left / Through / Right	0.85	D	26	71	0.33	B	11	10
	SB	Left / Through / Right	0.16	A	9	4	0.44	B	13	15
	Intersection Summary		-	C	22	-	-	B	12	-

As noted in **Table 9**, in the 2040 post development horizon, improvements including signalization at the two study intersections along Highway 566 and all-way stop control at the Range Road 282 / Site 1 & Site 3 Access significantly improve operations. These improvements include additional turn lanes at both intersections with Highway 566; additional eastbound and southbound left turn lanes as well as a westbound right turn lane. However, some movements at the intersections along Highway 566 still exceed recommended thresholds, (see **Section 2.1**) primarily due to traffic turning onto Range Road 282 and Range Road 281 conflicting with high through volumes along Highway 566, as projected in the County's 2040 forecasting model. While a 4-lane widening of Highway 566 would further improve operating conditions at these intersections, it is not recommended at this time, as all movements operate with either acceptable v/c ratios or delays. It is recommended that these intersections be monitored at full buildout, with potential upgrades considered as needed. Further discussion is provided in **Section 8.5**.



6.0 2050 HORIZON

6.1 2050 Background

Background volumes for the 2050 horizon were determined by factoring 2040 forecast volumes (2040 background volumes, **Figure 14**) with a standard annual linear growth rate of 2.5%. Resulting traffic volumes are illustrated in **Figure 17**.

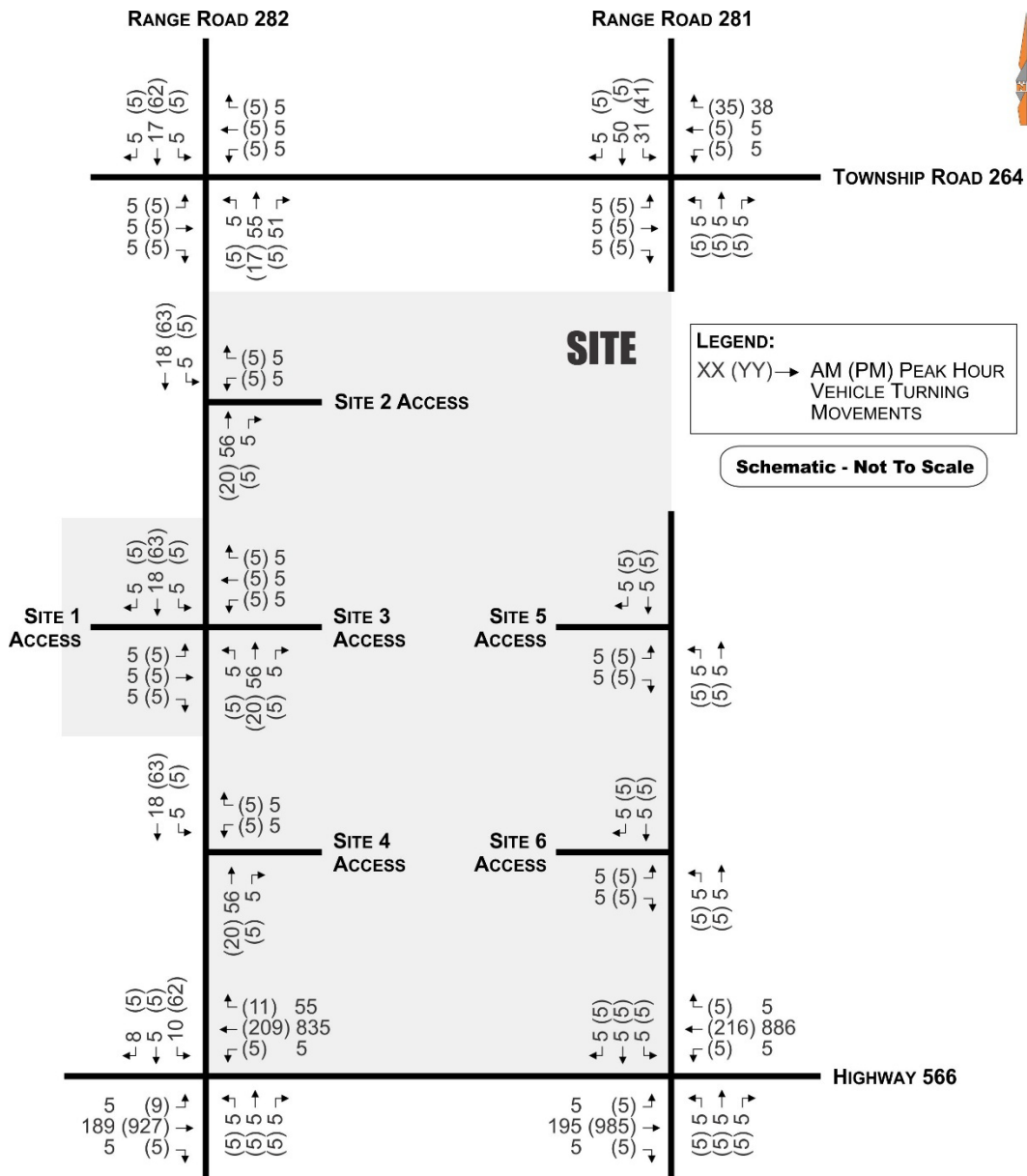


Figure 17: 2050 Background Traffic Volumes



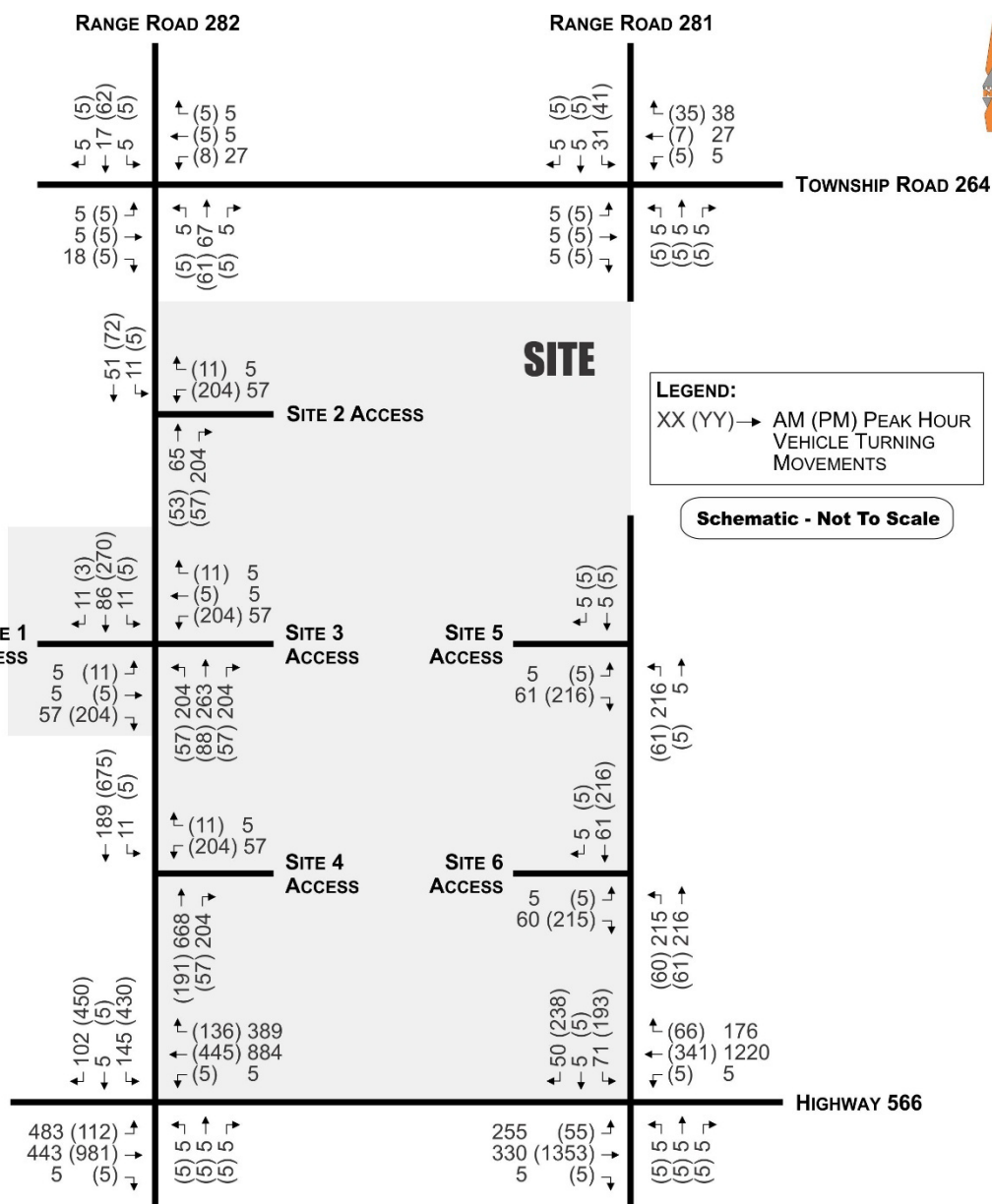
Table 10: 2050 Background Operating Conditions

INTERSECTION / MOVEMENT			AM PEAK HOUR				PM PEAK HOUR			
			v/c Ratio	LOS	Delay (s)	Queue (m)	v/c Ratio	LOS	Delay (s)	Queue (m)
Township Road 264 / Range Road 282 (Unsignalized)	EB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	WB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	NB	Left / Through / Right	0.08	A	10	2	0.03	A	9	1
	SB	Left / Through / Right	0.03	A	9	1	0.09	A	10	2
	Intersection Summary		-	A	8	-	-	A	8	-
Township Road 264 / Range Road 281 (Unsignalized)	EB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	WB	Left / Through / Right	0.00	A	1	0	0.00	A	1	0
	NB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	SB	Left / Through / Right	0.05	A	9	1	0.06	A	9	1
	Intersection Summary		-	A	5	-	-	A	5	-
Highway 566 / Range Road 282 (Signalized)	EB	Left	0.01	A	2	1	0.01	A	3	1
		Through / Right	0.12	A	2	11	0.69	A	9	116
	WB	Left / Through	0.67	B	10	135	0.20	A	7	24
		Right	0.05	A	2	4	0.01	A	0	0
	NB	Left / Through / Right	0.07	C	27	7	0.06	C	22	6
	SB	Left	0.04	C	32	6	0.32	C	32	19
		Through / Right	0.06	C	23	6	0.04	C	20	4
	Intersection Summary		-	A	9	-	-	A	10	-
Highway 566 / Range Road 281 (Signalized)	EB	Left	0.02	A	3	1	0.00	A	2	1
		Through / Right	0.18	A	3	9	0.63	A	6	114
	WB	Left / Through	0.81	B	12	76	0.14	A	2	13
		Right	0.00	A	1	1	0.00	A	1	1
	NB	Left / Through / Right	0.07	B	18	5	0.05	C	23	6
	SB	Left	0.03	B	20	3	0.01	C	27	3
		Through / Right	0.04	B	16	4	0.03	C	22	5
	Intersection Summary		-	B	11	-	-	A	5	-

As noted in **Table 10**, and similar to previous background conditions, all intersections provide acceptable operating conditions under existing geometry and control. No improvements were explored for the 2050 background horizon.

6.2 2050 Post Development

Post development traffic volumes were determined as the sum of the 2050 background traffic (**Figure 17**) and full buildout site-generated traffic (**Figure 10**), with the resulting post development volumes presented in **Figure 18**. Resulting operating conditions are detailed in **Table 11** and **Table 12**, with Synchro reports provided in **Appendix A**.



Kineticor ASP
Transportation Impact Assessment



Table 11: 2050 Post Development Operating Conditions

INTERSECTION / MOVEMENT			AM PEAK HOUR				PM PEAK HOUR			
			v/c Ratio	LOS	Delay (s)	Queue (m)	v/c Ratio	LOS	Delay (s)	Queue (m)
Township Road 264 / Range Road 282 (Unsignalized)	EB	Left / Through / Right	0.00	A	1	0	0.00	A	2	0
	WB	Left / Through / Right	0.02	A	5	1	0.01	A	3	0
	NB	Left / Through / Right	0.10	A	10	2	0.09	A	10	2
	SB	Left / Through / Right	0.04	A	10	1	0.09	A	10	2
	Intersection Summary		-	A	8	-	-	A	8	-
Township Road 264 / Rand Road 281 (Unsignalized)	EB	Left / Through / Right	0.00	A	3	0	0.00	A	2	0
	WB	Left / Through / Right	0.00	A	1	0	0.00	A	1	0
	NB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	SB	Left / Through / Right	0.05	A	9	1	0.06	A	9	1
	Intersection Summary		-	A	4	-	-	A	5	-
Highway 566 / Range Road 282 (Signalized)	EB	Left	1.02	F	91	218	0.30	B	18	28
		Through / Right	0.32	A	4	42	0.98	D	54	417
	WB	Left / Through	0.99	E	63	371	0.69	C	35	160
		Right	0.47	B	15	72	0.17	A	8	19
	NB	Left / Through / Right	0.07	D	44	10	0.03	C	21	7
	SB	Left	0.88	F	106	85	0.92	E	68	177
		Through / Right	0.39	B	15	20	0.61	B	12	59
	Intersection Summary		-	D	51	-	-	D	42	-
Highway 566 / Range Road 281 (Signalized)	EB	Left	1.36	F	210	107	0.08	A	5	8
		Through / Right	0.23	A	3	27	1.01	D	45	535
	WB	Left / Through	0.84	B	13	294	0.37	A	7	48
		Right	0.14	A	1	4	0.06	A	1	4
	NB	Left / Through / Right	0.10	D	47	10	0.06	D	39	9
	SB	Left	0.62	F	86	39	0.88	F	95	99
		Through / Right	0.31	C	22	15	0.54	B	11	26
	Intersection Summary		-	D	37	-	-	D	38	-
Range Road 282 / Site 2 Access (Unsignalized)	WB	Left / Right	0.09	B	10	2	0.28	B	11	8
	NB	Through / Right	0.00	A	0	0	0.00	A	0	0
	SB	Left / Through	0.01	A	1	0	0.00	A	1	0
	Intersection Summary		-	A	2	-	-	A	6	-
Range Road 282 / Site 1 and Site 3 Access (Unsignalized)	EB	Left / Through / Right	0.11	A	9	3	0.34	B	11	11
	WB	Left / Through / Right	0.12	A	10	3	0.38	B	13	13
	NB	Left / Through / Right	0.86	D	28	75	0.34	B	12	11
	SB	Left / Through / Right	0.16	A	9	4	0.46	B	13	17
	Intersection Summary		-	C	23	-	-	B	12	-
Range Road 282 / Site 4 Access (Unsignalized)	WB	Left / Through / Right	0.26	C	24	7	0.77	E	48	41
	NB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	SB	Left / Through / Right	0.02	A	1	0	0.00	A	0	0
	Intersection Summary		-	A	1	-	-	A	9	-
Range Road 281 / Site 5 Access (Unsignalized)	EB	Left / Through / Right	0.07	A	9	1	0.22	A	9	6
	NB	Left / Through / Right	0.14	A	7	4	0.04	A	7	1
	SB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	Intersection Summary		-	A	8	-	-	A	9	-



Table 12: 2050 Post Development Operating Conditions (Continued)

INTERSECTION / MOVEMENT			AM PEAK HOUR				PM PEAK HOUR			
			v/c Ratio	LOS	Delay (s)	Queue (m)	v/c Ratio	LOS	Delay (s)	Queue (m)
Range Road 281 / Site 6 Access (Unsignalized)	EB	Left / Through / Right	0.08	A	10	2	0.29	B	11	8
	NB	Left / Through / Right	0.15	A	4	4	0.05	A	4	1
	SB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	Intersection Summary		-	A	4	-	-	A	5	-

As noted in **Table 11** and **Table 12**, while while most intersections are anticipated to provide acceptable operating conditions under existing geometry and control, several intersections are anticipated to experience decreased operating conditions in the AM and PM peak hours, with a summary of locations which operate above the recommended thresholds provided below.

- Highway 566 and Range Road 282
 - Several movements are anticipated to operate with both high v/c ratios and high delays in the AM and PM peak hours.
 - Road widening is necessary to mitigate decreased operating conditions.
- Highway 566 and Range Road 281
 - Several movements are anticipated to operate with both high v/c ratios and high delays in the AM and PM peak hours.
 - Road widening is necessary to mitigate decreased operating conditions.
- Range Road 282 and Site 4 Access
 - No improvements explored as v/c ratio is acceptable and delays are seen as relatively low.

See the following section for capacity analysis results upon implementing these improvements and see **Section 8.0** for further discussion on improvements.

6.3 2050 Post Development – Improved

To address the decreased conditions anticipated at both study intersections along Highway 566 in the 2050 post development horizon, this scenario analyses a widened cross section of Highway 566 to 4 lanes. This upgrade is primarily driven by turning movements conflicting with high volumes along Highway 566, which contributes to increased delay and capacity constraints. **Figure 19** illustrates the recommended intersection improvements, followed by a summary of the capacity analysis results under this configuration provided in **Table 13**, with further discussion provided in **Section 8.5**.

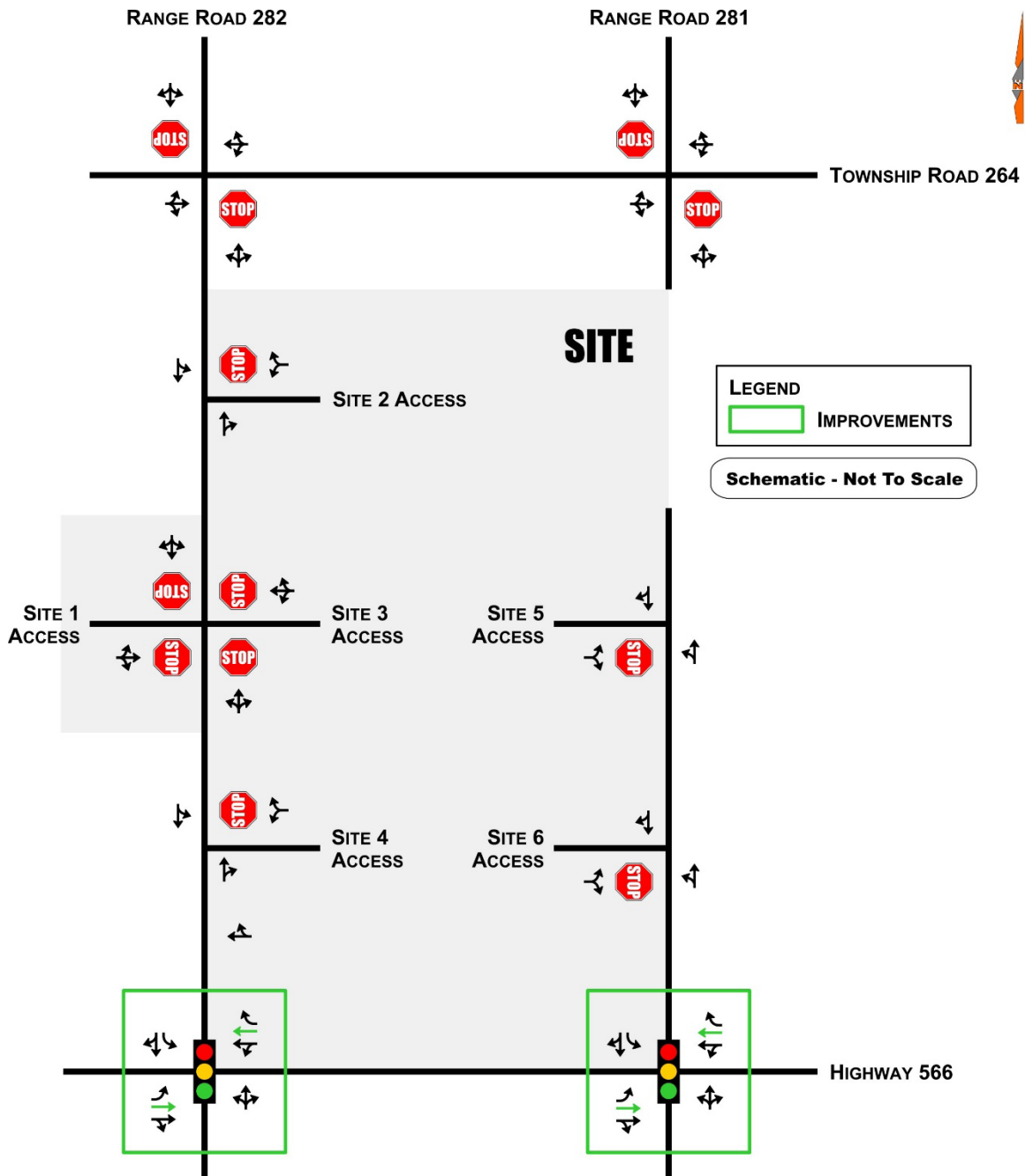


Figure 19: 2050 Post Development - Improved Lane Configuration and Traffic Control



Table 13: 2050 Post Development Improved Operating Conditions

INTERSECTION / MOVEMENT			AM PEAK HOUR				PM PEAK HOUR			
			v/c Ratio	LOS	Delay (s)	Queue (m)	v/c Ratio	LOS	Delay (s)	Queue (m)
Highway 566 / Range Road 282 (Signalized)	EB	Left	0.81	C	31	138	0.32	B	17	25
		Through / Right	0.19	A	4	19	0.65	B	19	106
	WB	Left / Through	0.79	C	32	109	0.44	C	22	51
		Right	0.53	A	7	30	0.24	A	5	13
	NB	Left / Through / Right	0.05	C	29	7	0.02	B	11	4
	SB	Left	0.66	D	52	52	0.81	C	31	100
		Through / Right	0.32	B	11	16	0.58	A	8	40
	Intersection Summary		-	C	23	-	-	B	19	-
Highway 566 / Range Road 281 (Signalized)	EB	Left	0.73	C	26	53	0.10	A	7	8
		Through / Right	0.13	A	3	11	0.71	B	12	97
	WB	Left / Through	0.74	B	16	95	0.27	B	12	25
		Right	0.20	A	2	9	0.10	A	4	6
	NB	Left / Through / Right	0.06	C	21	6	0.04	B	15	5
	SB	Left	0.33	C	30	20	0.57	C	27	45
		Through / Right	0.19	B	11	9	0.43	A	6	16
	Intersection Summary		-	B	14	-	-	B	12	-

As noted in **Table 13**, upon widening Highway 566 to a 4-lane cross section, it is anticipated that both study intersections along Highway 566 will operate under adequate conditions in the 2050 post development horizon. It is noted that the County's forecast model assumes a 4-lane cross-section along Highway 566 by the 2040 horizon year and is therefore expected to be funded by the County's off-site levy program.



7.0 2060 HORIZON

7.1 2060 Background

Background volumes for the 2060 horizon were determined by factoring 2040 forecast volumes (2040 background volumes, **Figure 14**) with a standard annual linear growth rate of 2.5%. Resulting traffic volumes are illustrated in **Figure 20**.

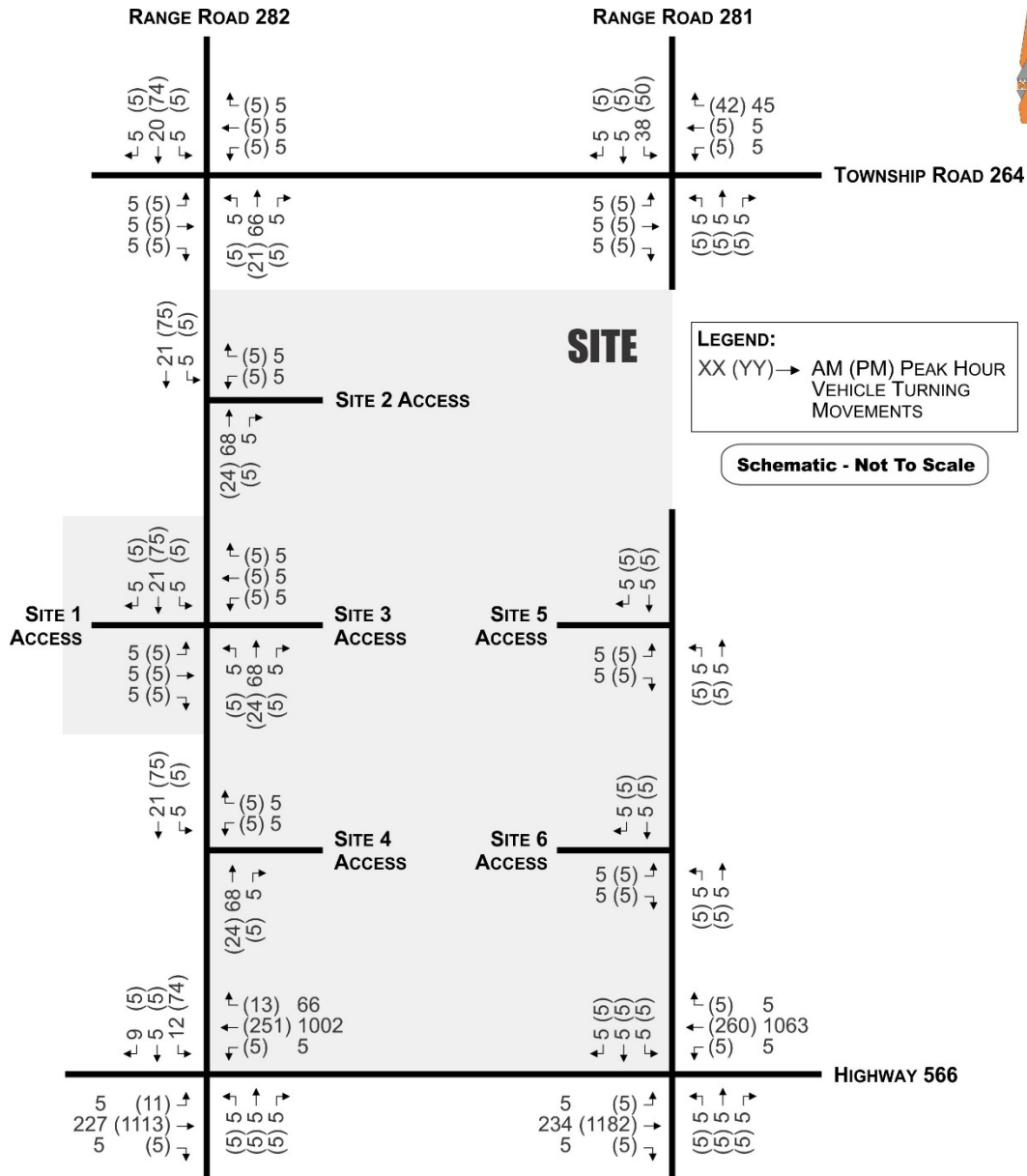




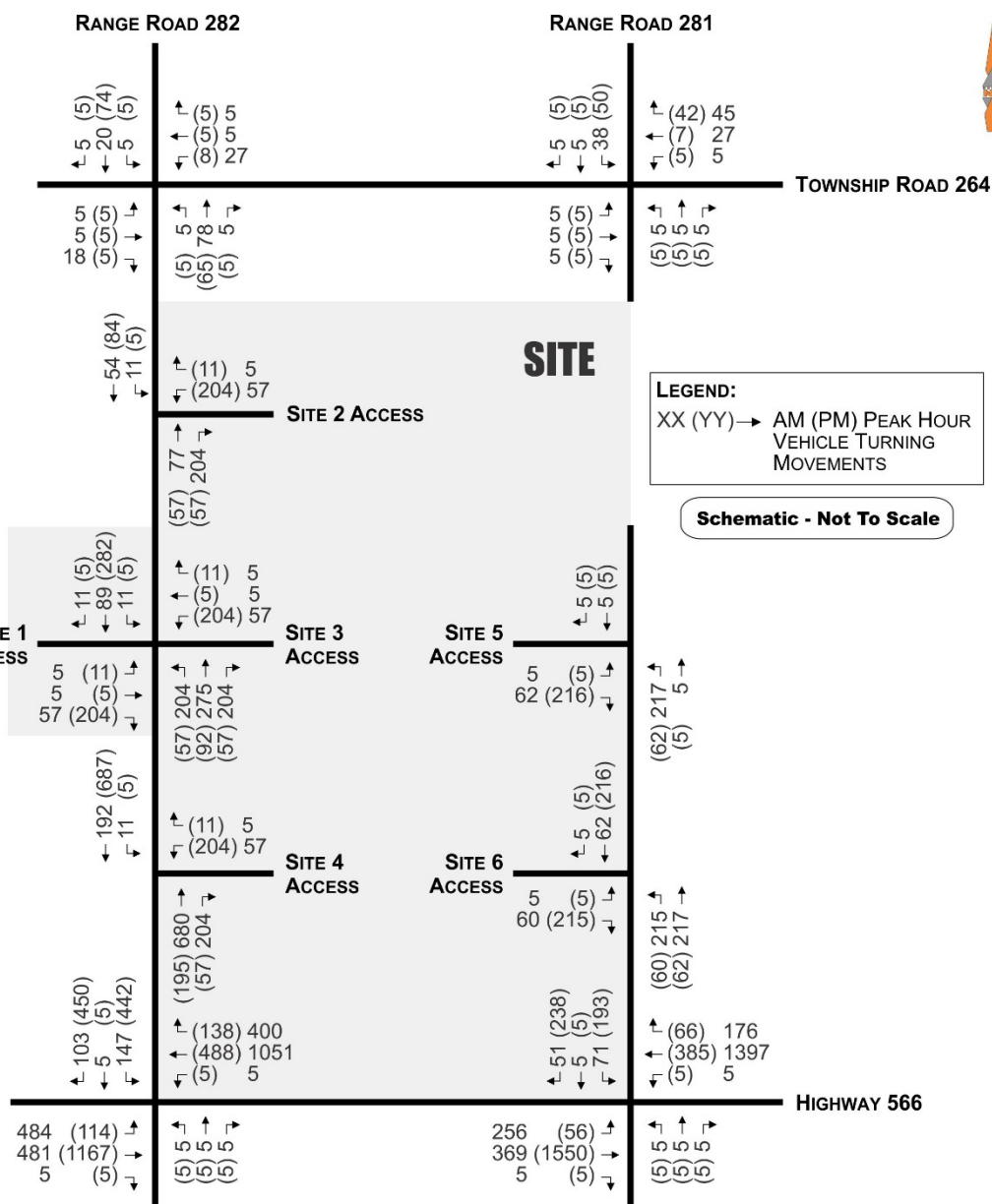
Table 14: 2060 Background Operating Conditions

INTERSECTION / MOVEMENT			AM PEAK HOUR				PM PEAK HOUR			
			v/c Ratio	LOS	Delay (s)	Queue (m)	v/c Ratio	LOS	Delay (s)	Queue (m)
Township Road 264 / Range Road 282 (Unsignalized)	EB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	WB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	NB	Left / Through / Right	0.09	A	10	2	0.04	A	9	1
	SB	Left / Through / Right	0.04	A	9	1	0.10	A	10	2
	Intersection Summary		-	A	8	-	-	A	8	-
Township Road 264 / Range Road 281 (Unsignalized)	EB	Left / Through / Right	0.00	A	2	0	0.00	A	2	0
	WB	Left / Through / Right	0.00	A	1	0	0.00	A	1	0
	NB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	SB	Left / Through / Right	0.06	A	9	1	0.07	A	9	1
	Intersection Summary		-	A	5	-	-	A	5	-
Highway 566 / Range Road 282 (Signalized)	EB	Left	0.01	A	3	1	0.02	A	4	2
		Through / Right	0.08	A	2	7	0.44	A	5	43
	WB	Left / Through	0.60	A	10	59	0.17	A	9	14
		Right	0.08	A	3	5	0.02	A	1	1
	NB	Left / Through / Right	0.04	B	16	5	0.04	B	13	4
	SB	Left	0.03	B	18	5	0.23	B	18	14
		Through / Right	0.04	B	14	5	0.02	B	12	3
	Intersection Summary		-	A	8	-	-	A	6	-
Highway 566 / Range Road 281 (Signalized)	EB	Left	0.01	A	2	1	0.01	A	2	1
		Through / Right	0.08	A	1	7	0.39	A	2	41
	WB	Left / Through	0.59	A	8	64	0.16	A	6	14
		Right	0.01	A	0	0	0.01	A	0	0
	NB	Left / Through / Right	0.03	B	14	5	0.03	B	11	4
	SB	Left	0.01	B	16	3	0.01	B	13	2
		Through / Right	0.02	B	14	4	0.02	B	11	3
	Intersection Summary		-	A	7	-	-	A	3	-

As noted in **Table 14**, and similar to previous background conditions, all intersections provide acceptable operating conditions under existing geometry and control. No improvements were explored for the 2060 background horizon.

7.2 2060 Post Development

Post development traffic volumes were determined as the sum of the 2060 background traffic (**Figure 20**) and full buildout site-generated traffic (**Figure 10**), with the resulting post development volumes presented in **Figure 21**. Resulting operating conditions are detailed in **Table 15** and **Table 16**, with Synchro reports provided in **Appendix A**.



Kineticor ASP
Transportation Impact Assessment



Table 15: 2060 Post Development Operating Conditions

INTERSECTION / MOVEMENT			AM PEAK HOUR				PM PEAK HOUR			
			v/c Ratio	LOS	Delay (s)	Queue (m)	v/c Ratio	LOS	Delay (s)	Queue (m)
Township Road 264 / Range Road 282 (Unsignalized)	EB	Left / Through / Right	0.00	A	1	0	0.00	A	2	0
	WB	Left / Through / Right	0.02	A	5	1	0.01	A	3	0
	NB	Left / Through / Right	0.12	B	10	3	0.09	A	10	2
	SB	Left / Through / Right	0.04	A	10	1	0.10	A	10	2
	Intersection Summary		-	A	8	-	-	A	9	-
Township Road 264 / Rand Road 281 (Unsignalized)	EB	Left / Through / Right	0.00	A	3	0	0.00	A	2	0
	WB	Left / Through / Right	0.00	A	1	0	0.00	A	1	0
	NB	Left / Through / Right	0.02	A	9	1	0.02	A	9	1
	SB	Left / Through / Right	0.06	A	9	1	0.07	A	9	1
	Intersection Summary		-	A	4	-	-	A	5	-
Highway 566 / Range Road 282 (Signalized)	EB	Left	0.86	D	40	140	0.36	B	19	25
		Through / Right	0.20	A	4	21	0.78	C	26	138
	WB	Left / Through	0.88	D	35	131	0.46	C	25	57
		Right	0.53	A	8	37	0.23	A	5	12
	NB	Left / Through / Right	0.05	C	27	7	0.02	B	13	5
	SB	Left	0.68	D	52	48	0.76	C	32	125
		Through / Right	0.32	B	10	15	0.54	A	8	44
	Intersection Summary		-	C	26	-	-	C	22	-
Highway 566 / Range Road 281 (Signalized)	EB	Left	0.63	C	28	77	0.10	A	6	8
		Through / Right	0.14	A	3	14	0.75	B	12	126
	WB	Left / Through	0.83	C	22	155	0.27	B	12	31
		Right	0.20	A	2	9	0.09	A	3	6
	NB	Left / Through / Right	0.06	C	33	8	0.04	C	21	7
	SB	Left	0.39	D	46	30	0.63	D	36	58
		Through / Right	0.22	B	15	13	0.46	A	7	19
	Intersection Summary		-	B	19	-	-	B	13	-
Range Road 282 / Site 2 Access (Unsignalized)	WB	Left / Right	0.09	B	11	2	0.28	B	11	8
	NB	Through / Right	0.00	A	0	0	0.00	A	0	0
	SB	Left / Through	0.01	A	1	0	0.00	A	0	0
	Intersection Summary		-	A	2	-	-	A	6	-
Range Road 282 / Site 1 and Site 3 Access (Unsignalized)	EB	Left / Through / Right	0.11	A	9	3	0.35	B	11	11
	WB	Left / Through / Right	0.12	A	10	3	0.39	B	13	13
	NB	Left / Through / Right	0.88	D	30	80	0.35	B	12	11
	SB	Left / Through / Right	0.17	A	9	4	0.48	B	14	18
	Intersection Summary		-	C	25	-	-	B	13	-
Range Road 282 / Site 4 Access (Unsignalized)	WB	Left / Through / Right	0.26	C	25	7	0.78	F	51	43
	NB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	SB	Left / Through / Right	0.02	A	1	0	0.00	A	0	0
	Intersection Summary		-	A	1	-	-	A	9	-
Range Road 281 / Site 5 Access (Unsignalized)	EB	Left / Through / Right	0.07	A	9	1	0.22	A	9	6
	NB	Left / Through / Right	0.14	A	7	4	0.04	A	7	1
	SB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	Intersection Summary		-	A	8	-	-	A	8	-



Table 16: 2060 Post Development Operating Conditions (Continued)

INTERSECTION / MOVEMENT			AM PEAK HOUR				PM PEAK HOUR			
			v/c Ratio	LOS	Delay (s)	Queue (m)	v/c Ratio	LOS	Delay (s)	Queue (m)
Range Road 281 / Site 6 Access (Unsignalized)	EB	Left / Through / Right	0.08	A	10	2	0.29	B	11	8
	NB	Left / Through / Right	0.15	A	4	4	0.05	A	4	1
	SB	Left / Through / Right	0.00	A	0	0	0.00	A	0	0
	Intersection Summary		-	A	4	-	-	A	5	-

As noted in **Table 15** and **Table 16**, most intersections are anticipated to provide adequate operating conditions in the 2060 post development horizon under assumed geometry. Improvements were not explored at the intersection of Range Road 282 and Site 4 Access due to acceptable v/c ratios.



8.0 IMPROVEMENT WARRANTS

8.1 Collision Assessment

Collision data along was reviewed to assess whether safety-related improvements may be warranted at the intersections of Highway 566 / Range Road 282 and Highway 566 / Range Road 281. A key metric in this assessment is the collision rate per million entering vehicles (MEV), which helps identify a location's relative collision frequency. Improvements may be considered where this rate is high or where collisions are linked to roadway geometry.

While ATEC does not have traffic counting stations directly at the intersections of Highway 566 / Range Road 282 and Highway 566 / Range Road 281, Average Annual Daily Traffic (AADT) volumes were estimated from nearby counting stations at the intersections of Highway 566 / Range Road 284 and Highway 566 / Highway 791. These AADT volumes were then multiplied by 365 to estimate annual entering traffic, then divided by 1,000,000 to calculate MEV per year. Collision data for the applicable corridor was obtained from ATEC between the years 2016 and 2020, which reflects the most recent data available for the intersections.

Collision data is summarized in **Table 17**, with an average collision rate of 1.71 collisions per MEV calculated for the four years.

Table 17: Collision Summary

Year	AADT	MEV	Number of Collisions	Collisions / MEV
2019	2600	0.95	1	1.05
2018	2600	0.95	3	3.16
2017	2200	0.80	1	1.25
2016	2200	0.80	1	1.25
Average		0.88	1.50	1.71

As noted in **Table 17**, the value of collisions / MEV is relatively constant throughout the study years, with the highest number of collisions occurring in 2018. However, all observed collisions are noted to be due to environmental factors rather than the roadway geometry and are all classified as property damage only, as detailed below:

- 1 collision involved vehicle malfunction,
- 2 collisions were animal strikes, and



- 3 collisions were attributed to slippery or slushy road conditions causing drivers to lose control.

While the documented collision data available through ATEC does not identify any safety concerns related to intersection geometry, it is important to highlight concerns identified by residents as part of the public engagement process which indicate inadequate sightlines to the east of Highway 566 / Range Road 282. It is recognized that this location is located at the crest of a hill (see **Figure 22** and **Figure 23**), and the lack of collision data could be due to a lag time between collision occurrence and documentation.



Figure 22: Highway 566 / Range Road 282 Sightlines - Looking East



Figure 23: Highway 566 / Range Road 282 Sightlines - Looking West



Therefore, it is recommended that the location be considered for possible upgrade to a signalized intersection, with advanced warning flashers to improve the safety of the intersection.

8.2 Signalization

Signalization is a potential improvement option considered at unsignalized intersections where decreased operating conditions are observed or anticipated, and where other mitigation measures may be insufficient in restoring acceptable operating conditions. To evaluate the need for signalization, the TAC Signalization Warrant Procedure is applied. This methodology considers factors such as vehicle and pedestrian volumes, and intersection characteristics, to determine if a signal will provide a positive impact. The warrant procedure results in awarding a score to an intersection; a score of 100 or more points indicates that a traffic signal is warranted.

For this assessment, signalization was explored at key intersections along Highway 566, where decreased conditions were identified at various horizons:

- At **Opening Day (Phases 1-3) 2031 Post Development**, decreased conditions were observed at Highway 566 and Range Road 282. The signal warrant analysis at this horizon yielded a score of 85 points, indicating that signalization is not yet warranted.
 - However, due to safety concerns expressed through the public engagement process, an existing sightline concern is noted at this location as illustrated in **Figure 22** and **Figure 23**. Therefore, it is recommended that the intersection be monitored, and a traffic signal with advanced warning flashers be considered for the opening day to improve safety of the intersection.
- At the **2040 Post Development** horizon, which represents full buildout of all proposed development, decreased conditions are anticipated at both Highway 566 / Range Road 282 and Highway 566 / Range Road 281. Signal warrant scores of 344 points and 204 points, respectively, confirm that signalization is warranted at both intersections at this stage.

It is likely that signalization at Highway 566 / Range Road 282 will be warranted sometime between 2031 and 2040. As such, it is recommended that conditions be monitored following the completion of Phases 1–3, with signalization implemented once warranted. Full warrants are provided in **Appendix B**.



8.3 Illumination

Illumination requirements were evaluated using TAC's Illumination of Isolated Rural Intersections (2001) guidelines, which consider geometric, operational, and collision-related factors to determine whether intersection lighting is recommended. The type of lighting warranted depends on which scoring components reach specified thresholds. An overall score of 120 points or more may warrant full illumination, while an operational score of 120 points or more warrants delineation lighting to mark the intersection for approaching vehicles. Full Illumination warrants are provided in **Appendix C**.

Warrant inputs such as geometry, volumes, and collision history were consistent across analysis horizons for each intersection scenario (background or post development). As such, the illumination warrant results are assumed to apply from Opening Day (2031) through to the 2060 horizon. **Table 18** provides a summary of illumination warrant results.

Table 18: TAC Illumination Warrant Results

Intersection	Score by Scenario	
	Background	Post Development
Highway 566 / Range Road 282	109 points Lighting not warranted	169 points Delineation lighting should be considered
Highway 566 / Range Road 281	109 points Lighting not warranted	169 points Delineation lighting should be considered
Range Road 282 / Township Road 264	- Not warranted in post development	56 points Lighting not warranted
Range Road 281 / Township Road 264	- Not warranted in post development	46 points Lighting not warranted
Range Road 282 / Site 2 Access	46 points Lighting not warranted	156 points Delineation lighting should be considered
Range Road 282 / Site 1 & Site 3 Access	46 points Lighting not warranted	156 points Delineation lighting should be considered
Range Road 282 / Site 4 Access	46 points Lighting not warranted	156 points Delineation lighting should be considered
Range Road 281 / Site 5 Access	46 points Lighting not warranted	146 points Delineation lighting should be considered
Range Road 281 / Site 6 Access	46 points Lighting not warranted	166 points Delineation lighting should be considered

At the intersections of Highway 566 / Range Road 282 and Highway 566 / Range Road 281, signalization is warranted at the 2040 post development horizon; intersection illumination is always warranted if the intersection is signalized. Illumination is warranted at this intersection at the 2031 Opening Day post development horizon, before signalization is warranted.



Finally, at intersections where illumination is not warranted under the ultimate 2060 post development scenario, it can be reasonably concluded that lighting is not required prior to that horizon.

8.4 Intersection Treatment

Intersection treatments were evaluated using ATEC's Guidelines for Intersection Treatments (2023). This warrant procedure is used to determine the need for treatments such as auxiliary lanes or upgrades based on turning volumes, through traffic volumes, and posted speed limits. The warrant was applied to intersections located along roadways under ATEC jurisdiction, which include the intersections of Highway 566 / Range Road 282 and Highway 566 / Range Road 281. The analysis focused on the eastbound approach, in accordance with ATEC methodology, given the volume of eastbound left-turning vehicles accessing Range Road 282 and Range Road 281. Both background and post development traffic conditions were assessed to determine when treatments are warranted.

The results are presented in terms of the recommended treatment type (e.g., Type I, II, III, etc.) and the required storage length for the eastbound left-turn lane. These outputs inform the necessary intersection configuration to maintain safe and efficient operations.

Table 19 summarizes the intersection treatment results under applicable traffic scenarios.

Table 19: ATEC Intersection Treatment Warrant Results

Horizon Year	Scenario	Warranted Type + Storage by Intersection	
		Highway 566 / Range Road 282	Highway 566 / Range Road 281
2031	BG	Type II + 0m storage	Type I or II + 0m storage
	PD	Type IV + 0m storage	Type I or II + 0m storage
2040	BG	Type III + 0m storage	Type I or II + 0m storage
	PD	Type IV + 75m storage	Type IV + 75m storage
2050	BG	Type IV + 0m storage	Type I or II + 0m storage
	PD	Type IV + 75m storage	Type IV + 75m storage
2060	BG	Type IV + 0m storage	Type I or II + 0m storage
	PD	Type IV + 75m storage	Type IV + 75m storage



8.5 Roadway Improvements

For roadways under the jurisdiction of Rocky View County, the 2025 Servicing Standards provide roadway classifications and associated design parameters based on forecasted AADT volumes. These classifications help identify the most appropriate roadway type required to accommodate future traffic demand.

In this assessment, AADT estimates were used to identify potential roadway classifications along studied roadways. It is important to note that this analysis is unique in nature due to several factors:

- The study area and surrounding lands are currently greenfield, with limited existing traffic data;
- The analysis relies on forecast volumes from the County's traffic model, which assumes broader future development in the area;
- Trip generation is based on site-specific staff schedules, assuming all employees arrive and depart during peak hours, resulting in conservative AADT estimates.

Despite these conservative assumptions, the resulting AADT volumes provide a reference point for assessing roadway needs. The estimated traffic volumes were reviewed against the County's roadway classification thresholds, and the corresponding recommended roadway types are summarized in **Table 20** and include the following road classes:

- Rural Low Volume (RLV): <50 VPD
- Rural Moderate Volumes (RMV): <500 VPD
- Rural Collector (RC): 501-2,500 VPD
- Rural Arterial (RA): 5,000-12,000 VPD

Table 20: Roadway Classifications

Horizon Year	Scenario	Roadway					
		Range Road 282		Range Road 281		Township Road 264	
		AADT	Classification	AADT	Classification	AADT	Classification
2031	BG	100	RMV	0	RLV	100	RMV
	PD	7,900	RA	0	RLV	300	RMV
2040	BG	700	RC	0	RLV	100	RMV
	PD	11,100	RA	5,500	RA	300	RMV
2050	BG	800	RC	0	RLV	100	RMV
	PD	11,300	RA	5,500	RA	300	RMV
2060	BG	1,000	RC	0	RLV	100	RMV
	PD	11,400	RA	5,500	RA	300	RMV



Based on the County's latest Servicing Standards document, it is noted that the Rural Arterial standard calls for a 4-lane cross-section. However, based on the analysis provided in this TIA, a 2-lane cross-section is expected to be adequate to support the forecast demands.



9.0 CONCLUSIONS AND RECOMMENDATIONS

9.1 Conclusion

This TIA has been developed considering several unique conditions, including the greenfield nature of the site and surrounding lands, use of the County's 2040 forecasting model, and conservative trip generation assumptions based on site-specific operations.

Based on the analysis presented in this report, key conclusions of the study are summarized for each horizon as follows:

Capacity Analysis Results	
Existing Conditions	▪ All study intersections operate acceptably under existing geometry and control.
2031 Opening Day Phases 1-3 Horizon	▪ Background ○ All study intersections operate acceptably under existing geometry and control in the background scenario. ▪ Post Development ○ Decreased conditions at Highway 566 / Range Road 282. ○ Signalization not warranted.
2040 Horizon	▪ Background ○ All study intersections operate acceptably under existing geometry and control in the background scenario. ▪ Post Development ○ Decreased conditions at Highway 566 / Range Road 282, Highway 566 / Range Road 281, and Range Road 282 / Site 1 & Site 3 Access. ○ Signalization warranted at Highway 566 / Range Road 282. Signalization and the addition of an eastbound and a southbound left turn lane as well as a westbound right turn lane may improve operating conditions at this intersection. ○ Signalization warranted at Highway 566 / Range Road 281. Signalization and the addition of an eastbound and a southbound left turn lane as well as a westbound right turn lane may improve operating conditions at this intersection. ○ An all-way stop control is recommended at Range Road 282 / Site 1 & Site 3 Access, which may improve operating conditions.
2050 Horizon	▪ Background ○ All study intersections operate acceptably under existing geometry and control in the background scenario.



	- Post Development - Several movements along Highway 566 exceed acceptable v/c ratios and delay thresholds. - Widening Highway 566 to four lanes may improve performance; monitoring is still advised.
2060 Horizon	With signals and widened Highway 566 assumed, all intersections operate within their thresholds in both the background and post development scenario.

9.2 Recommendations

Signalization	- At 2040 post development, signalization is warranted at both Range Road 282 (344 points) and Range Road 281 (204 points). - Signalization at Range Road 282 should be monitored and implemented when warranted between 2031 and 2040. Based on existing safety concerns noted during engagement, a signal with advanced warning flashers may be considered for opening day to mitigate existing sightline issues along Highway 566 at the Range Road 282 intersection.
Illumination	- No illumination is warranted at any horizon year in the background scenario. - Delineation lighting is recommended in the post development scenario at each horizon year at the following intersections: - Highway 566 / Range Road 282 - Highway 566 / Range Road 281 - Range Road 282 / Site 2 Access - Range Road 282 / Site 1 & Site 3 Access - Range Road 282 / Site 4 Access - Range Road 281 / Site 5 Access - Range Road 281 / Site 6 Access
Intersection Treatment	Based on ATEC guidelines, Type IV treatments with left-turn storage are warranted at Highway 566 / Range Road 282 and Highway 566 / Range Road 281 at the ultimate 2060 post development scenario. Refer to Table 19 for treatments warranted at each horizon year and scenario.
Roadway Improvement	At the ultimate 2060 post development horizon, Range Road 282 and Range Road 281 are estimated to be classified as Rural Arterial roadways whereas Township Road 264 is estimated to be classified as a Rural Moderate Volume roadway. A 2-lane cross-section is recommended for Range Road 282 and Range Road 281, based on forecast operations.



	▪ Highway 566 is recommended to be upgraded to 4-lanes by the 2060 horizon year. It is noted that the County's forecast model assumes a 4-lane cross-section along Highway 566 by the 2040 horizon year and is therefore expected to be funded by the County's off-site levy program. ▪ These results reflect conservative assumptions.
--	---



APPENDIX A: SYNCHRO REPORTS

HCM 6th TWSC
1: Range Road 282 & Township Road 264

1. Existing - AM
07/15/2025

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	5	5	5	5	5	5	5	5	5
Future Vol, veh/h	5	5	5	5	5	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	41	38	8	41	38	8
Stage 1	-	-	-	-	-	-	18	18	-	18	18	-
Stage 2	-	-	-	-	-	-	23	20	-	23	20	-
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	1610	-	-	1610	-	-	963	854	1074	963	854	1074
Stage 1	-	-	-	-	-	-	1001	880	-	1001	880	-
Stage 2	-	-	-	-	-	-	995	879	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	950	849	1074	950	849	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	950	849	-	950	849	-
Stage 1	-	-	-	-	-	-	998	877	-	998	877	-
Stage 2	-	-	-	-	-	-	981	876	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			2.4			8.9			8.9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	949	1610	-	-	1610	-	-	949				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.017				
HCM Control Delay (s)	8.9	7.2	0	-	7.2	0	-	8.9				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

HCM 6th TWSC
2: Range Road 281 & Township Road 264 & Hwy 791

1. Existing - AM

07/15/2025

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	5	5	5	5	5	5	5	5	5
Future Vol, veh/h	5	5	5	5	5	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	41	38	8	41	38	8
Stage 1	-	-	-	-	-	-	18	18	-	18	18	-
Stage 2	-	-	-	-	-	-	23	20	-	23	20	-
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	1610	-	-	1610	-	-	963	854	1074	963	854	1074
Stage 1	-	-	-	-	-	-	1001	880	-	1001	880	-
Stage 2	-	-	-	-	-	-	995	879	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	950	849	1074	950	849	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	950	849	-	950	849	-
Stage 1	-	-	-	-	-	-	998	877	-	998	877	-
Stage 2	-	-	-	-	-	-	981	876	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			2.4			8.9			8.9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	949	1610	-	-	1610	-	-	949				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.017				
HCM Control Delay (s)	8.9	7.2	0	-	7.2	0	-	8.9				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	97	5	5	137	5	5	5	5	5	5	5
Future Vol, veh/h	5	97	5	5	137	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	5	5	5	5	5	5	2	2	2	2	2	2
Mvmt Flow	5	103	5	5	146	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	151	0	0	108	0	0	280	277	106	280	277	149
Stage 1	-	-	-	-	-	-	116	116	-	159	159	-
Stage 2	-	-	-	-	-	-	164	161	-	121	118	-
Critical Hdwy	4.15	-	-	4.15	-	-	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	2.245	-	-	2.245	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1412	-	-	1464	-	-	672	631	948	672	631	898
Stage 1	-	-	-	-	-	-	889	800	-	843	766	-
Stage 2	-	-	-	-	-	-	838	765	-	883	798	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1412	-	-	1464	-	-	660	626	948	660	626	898
Mov Cap-2 Maneuver	-	-	-	-	-	-	660	626	-	660	626	-
Stage 1	-	-	-	-	-	-	885	797	-	840	763	-
Stage 2	-	-	-	-	-	-	824	762	-	869	795	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.3			10.1			10.2		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	720	1412	-	-	1464	-	-	710				
HCM Lane V/C Ratio	0.022	0.004	-	-	0.004	-	-	0.022				
HCM Control Delay (s)	10.1	7.6	0	-	7.5	0	-	10.2				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

HCM 6th TWSC
4: Range Road 281 & Hwy 566

1. Existing - AM
07/15/2025

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	95	5	5	138	5	5	5	5	5	5	5
Future Vol, veh/h	5	95	5	5	138	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	5	5	5	5	5	5	2	2	2	2	2	2
Mvmt Flow	5	101	5	5	147	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	152	0	0	106	0	0	279	276	104	279	276	150
Stage 1	-	-	-	-	-	-	114	114	-	160	160	-
Stage 2	-	-	-	-	-	-	165	162	-	119	116	-
Critical Hdwy	4.15	-	-	4.15	-	-	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	2.245	-	-	2.245	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1411	-	-	1467	-	-	673	632	951	673	632	896
Stage 1	-	-	-	-	-	-	891	801	-	842	766	-
Stage 2	-	-	-	-	-	-	837	764	-	885	800	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1411	-	-	1467	-	-	661	627	951	661	627	896
Mov Cap-2 Maneuver	-	-	-	-	-	-	661	627	-	661	627	-
Stage 1	-	-	-	-	-	-	887	798	-	839	763	-
Stage 2	-	-	-	-	-	-	823	761	-	871	797	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.3			10.1			10.2		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	721	1411	-	-	1467	-	-	710				
HCM Lane V/C Ratio	0.022	0.004	-	-	0.004	-	-	0.022				
HCM Control Delay (s)	10.1	7.6	0	-	7.5	0	-	10.2				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	5	5	5	5	5	5	5	5	5
Future Vol, veh/h	5	5	5	5	5	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	41	38	8	41	38	8
Stage 1	-	-	-	-	-	-	18	18	-	18	18	-
Stage 2	-	-	-	-	-	-	23	20	-	23	20	-
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	1610	-	-	1610	-	-	963	854	1074	963	854	1074
Stage 1	-	-	-	-	-	-	1001	880	-	1001	880	-
Stage 2	-	-	-	-	-	-	995	879	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	950	849	1074	950	849	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	950	849	-	950	849	-
Stage 1	-	-	-	-	-	-	998	877	-	998	877	-
Stage 2	-	-	-	-	-	-	981	876	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			2.4			8.9			8.9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	949	1610	-	-	1610	-	-	949				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.017				
HCM Control Delay (s)	8.9	7.2	0	-	7.2	0	-	8.9				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

HCM 6th TWSC
2: Range Road 281 & Township Road 264 & Hwy 791

1. Existing - PM

07/15/2025

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	5	5	5	5	5	5	5	5	5	5
Future Vol, veh/h	5	5	5	5	5	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	41	38	8	41	38	8
Stage 1	-	-	-	-	-	-	18	18	-	18	18	-
Stage 2	-	-	-	-	-	-	23	20	-	23	20	-
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	1610	-	-	1610	-	-	963	854	1074	963	854	1074
Stage 1	-	-	-	-	-	-	1001	880	-	1001	880	-
Stage 2	-	-	-	-	-	-	995	879	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	950	849	1074	950	849	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	950	849	-	950	849	-
Stage 1	-	-	-	-	-	-	998	877	-	998	877	-
Stage 2	-	-	-	-	-	-	981	876	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			2.4			8.9			8.9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	949	1610	-	-	1610	-	-	949				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.017				
HCM Control Delay (s)	8.9	7.2	0	-	7.2	0	-	8.9				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

HCM 6th TWSC
3: Range Road 282 & Hwy 566

1. Existing - PM
07/15/2025

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	5	176	5	5	147	5	5	5	5	5	5	5
Future Vol, veh/h	5	176	5	5	147	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	5	5	5	5	5	5	2	2	2	2	2	2
Mvmt Flow	5	185	5	5	155	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	160	0	0	190	0	0	371	368	188	371	368	158
Stage 1	-	-	-	-	-	-	198	198	-	168	168	-
Stage 2	-	-	-	-	-	-	173	170	-	203	200	-
Critical Hdwy	4.15	-	-	4.15	-	-	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	2.245	-	-	2.245	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1401	-	-	1366	-	-	586	561	854	586	561	887
Stage 1	-	-	-	-	-	-	804	737	-	834	759	-
Stage 2	-	-	-	-	-	-	829	758	-	799	736	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1401	-	-	1366	-	-	575	557	854	575	557	887
Mov Cap-2 Maneuver	-	-	-	-	-	-	575	557	-	575	557	-
Stage 1	-	-	-	-	-	-	801	734	-	831	756	-
Stage 2	-	-	-	-	-	-	815	755	-	785	733	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			10.8			10.7		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	638	1401	-	-	1366	-	-	644				
HCM Lane V/C Ratio	0.025	0.004	-	-	0.004	-	-	0.025				
HCM Control Delay (s)	10.8	7.6	0	-	7.6	0	-	10.7				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

HCM 6th TWSC
4: Range Road 281 & Hwy 566

1. Existing - PM
07/15/2025

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	5	177	5	5	147	5	5	5	5	5	5	5
Future Vol, veh/h	5	177	5	5	147	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	5	5	5	5	5	5	2	2	2	2	2	2
Mvmt Flow	5	186	5	5	155	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	160	0	0	191	0	0	372	369	189	372	369	158
Stage 1	-	-	-	-	-	-	199	199	-	168	168	-
Stage 2	-	-	-	-	-	-	173	170	-	204	201	-
Critical Hdwy	4.15	-	-	4.15	-	-	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	2.245	-	-	2.245	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1401	-	-	1365	-	-	585	560	853	585	560	887
Stage 1	-	-	-	-	-	-	803	736	-	834	759	-
Stage 2	-	-	-	-	-	-	829	758	-	798	735	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1401	-	-	1365	-	-	574	556	853	574	556	887
Mov Cap-2 Maneuver	-	-	-	-	-	-	574	556	-	574	556	-
Stage 1	-	-	-	-	-	-	800	733	-	831	756	-
Stage 2	-	-	-	-	-	-	815	755	-	784	732	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			10.8			10.7		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	637	1401	-	-	1365	-	-	643				
HCM Lane V/C Ratio	0.025	0.004	-	-	0.004	-	-	0.025				
HCM Control Delay (s)	10.8	7.6	0	-	7.6	0	-	10.7				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	5	5	5	5	5	5	5	5	5
Future Vol, veh/h	5	5	5	5	5	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	41	38	8	41	38	8
Stage 1	-	-	-	-	-	-	18	18	-	18	18	-
Stage 2	-	-	-	-	-	-	23	20	-	23	20	-
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	1610	-	-	1610	-	-	963	854	1074	963	854	1074
Stage 1	-	-	-	-	-	-	1001	880	-	1001	880	-
Stage 2	-	-	-	-	-	-	995	879	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	950	849	1074	950	849	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	950	849	-	950	849	-
Stage 1	-	-	-	-	-	-	998	877	-	998	877	-
Stage 2	-	-	-	-	-	-	981	876	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			2.4			8.9			8.9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	949	1610	-	-	1610	-	-	949				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.017				
HCM Control Delay (s)	8.9	7.2	0	-	7.2	0	-	8.9				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	5	5	5	5	5	5	5	5	5
Future Vol, veh/h	5	5	5	5	5	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	41	38	8	41	38	8
Stage 1	-	-	-	-	-	-	18	18	-	18	18	-
Stage 2	-	-	-	-	-	-	23	20	-	23	20	-
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	1610	-	-	1610	-	-	963	854	1074	963	854	1074
Stage 1	-	-	-	-	-	-	1001	880	-	1001	880	-
Stage 2	-	-	-	-	-	-	995	879	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	950	849	1074	950	849	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	950	849	-	950	849	-
Stage 1	-	-	-	-	-	-	998	877	-	998	877	-
Stage 2	-	-	-	-	-	-	981	876	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			2.4			8.9			8.9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	949	1610	-	-	1610	-	-	949				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.017				
HCM Control Delay (s)	8.9	7.2	0	-	7.2	0	-	8.9				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

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	5	112	5	5	158	5	5	5	5	5	5	5
Future Vol, veh/h	5	112	5	5	158	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	5	5	5	5	5	5	2	2	2	2	2	2
Mvmt Flow	5	119	5	5	168	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	173	0	0	124	0	0	318	315	122	318	315	171
Stage 1	-	-	-	-	-	-	132	132	-	181	181	-
Stage 2	-	-	-	-	-	-	186	183	-	137	134	-
Critical Hdwy	4.15	-	-	4.15	-	-	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	2.245	-	-	2.245	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1386	-	-	1444	-	-	635	601	929	635	601	873
Stage 1	-	-	-	-	-	-	871	787	-	821	750	-
Stage 2	-	-	-	-	-	-	816	748	-	866	785	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1386	-	-	1444	-	-	623	596	929	624	596	873
Mov Cap-2 Maneuver	-	-	-	-	-	-	623	596	-	624	596	-
Stage 1	-	-	-	-	-	-	868	784	-	818	747	-
Stage 2	-	-	-	-	-	-	802	745	-	852	782	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.2			10.4			10.4		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	688	1386	-	-	1444	-	-	678				
HCM Lane V/C Ratio	0.023	0.004	-	-	0.004	-	-	0.024				
HCM Control Delay (s)	10.4	7.6	0	-	7.5	0	-	10.4				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

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	5	110	5	5	159	5	5	5	5	5	5	5
Future Vol, veh/h	5	110	5	5	159	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	5	5	5	5	5	5	2	2	2	2	2	2
Mvmt Flow	5	117	5	5	169	5	5	5	5	5	5	5
Major/Minor	Major1		Major2			Minor1			Minor2			
Conflicting Flow All	174	0	0	122	0	0	317	314	120	317	314	172
Stage 1	-	-	-	-	-	-	130	130	-	182	182	-
Stage 2	-	-	-	-	-	-	187	184	-	135	132	-
Critical Hdwy	4.15	-	-	4.15	-	-	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	2.245	-	-	2.245	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1385	-	-	1447	-	-	636	601	931	636	601	872
Stage 1	-	-	-	-	-	-	874	789	-	820	749	-
Stage 2	-	-	-	-	-	-	815	747	-	868	787	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1385	-	-	1447	-	-	624	596	931	625	596	872
Mov Cap-2 Maneuver	-	-	-	-	-	-	624	596	-	625	596	-
Stage 1	-	-	-	-	-	-	871	786	-	817	746	-
Stage 2	-	-	-	-	-	-	801	744	-	854	784	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	0.3		0.2			10.3			10.4			
HCM LOS						B			B			
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	689	1385	-	-	1447	-	-	678				
HCM Lane V/C Ratio	0.023	0.004	-	-	0.004	-	-	0.024				
HCM Control Delay (s)	10.3	7.6	0	-	7.5	0	-	10.4				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	5	5	5	5	5	5	5	5	5
Future Vol, veh/h	5	5	5	5	5	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	41	38	8	41	38	8
Stage 1	-	-	-	-	-	-	18	18	-	18	18	-
Stage 2	-	-	-	-	-	-	23	20	-	23	20	-
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	1610	-	-	1610	-	-	963	854	1074	963	854	1074
Stage 1	-	-	-	-	-	-	1001	880	-	1001	880	-
Stage 2	-	-	-	-	-	-	995	879	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	950	849	1074	950	849	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	950	849	-	950	849	-
Stage 1	-	-	-	-	-	-	998	877	-	998	877	-
Stage 2	-	-	-	-	-	-	981	876	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			2.4			8.9			8.9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	949	1610	-	-	1610	-	-	949				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.017				
HCM Control Delay (s)	8.9	7.2	0	-	7.2	0	-	8.9				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	5	5	5	5	5	5	5	5	5	5
Future Vol, veh/h	5	5	5	5	5	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	41	38	8	41	38	8
Stage 1	-	-	-	-	-	-	18	18	-	18	18	-
Stage 2	-	-	-	-	-	-	23	20	-	23	20	-
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	1610	-	-	1610	-	-	963	854	1074	963	854	1074
Stage 1	-	-	-	-	-	-	1001	880	-	1001	880	-
Stage 2	-	-	-	-	-	-	995	879	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	950	849	1074	950	849	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	950	849	-	950	849	-
Stage 1	-	-	-	-	-	-	998	877	-	998	877	-
Stage 2	-	-	-	-	-	-	981	876	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			2.4			8.9			8.9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	949	1610	-	-	1610	-	-	949				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.017				
HCM Control Delay (s)	8.9	7.2	0	-	7.2	0	-	8.9				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

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	5	203	5	5	169	5	5	5	5	5	5	5
Future Vol, veh/h	5	203	5	5	169	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	5	5	5	5	5	5	2	2	2	2	2	2
Mvmt Flow	5	214	5	5	178	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	183	0	0	219	0	0	423	420	217	423	420	181
Stage 1	-	-	-	-	-	-	227	227	-	191	191	-
Stage 2	-	-	-	-	-	-	196	193	-	232	229	-
Critical Hdwy	4.15	-	-	4.15	-	-	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	2.245	-	-	2.245	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1374	-	-	1333	-	-	541	525	823	541	525	862
Stage 1	-	-	-	-	-	-	776	716	-	811	742	-
Stage 2	-	-	-	-	-	-	806	741	-	771	715	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1374	-	-	1333	-	-	530	521	823	530	521	862
Mov Cap-2 Maneuver	-	-	-	-	-	-	530	521	-	530	521	-
Stage 1	-	-	-	-	-	-	773	713	-	808	739	-
Stage 2	-	-	-	-	-	-	792	738	-	757	712	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			11.2			11.1		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	597	1374	-	-	1333	-	-	604				
HCM Lane V/C Ratio	0.026	0.004	-	-	0.004	-	-	0.026				
HCM Control Delay (s)	11.2	7.6	0	-	7.7	0	-	11.1				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

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	5	204	5	5	169	5	5	5	5	5	5	5
Future Vol, veh/h	5	204	5	5	169	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	5	5	5	5	5	5	2	2	2	2	2	2
Mvmt Flow	5	215	5	5	178	5	5	5	5	5	5	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	183	0	0	220	0	0	424	421	218	424	421	181
Stage 1	-	-	-	-	-	-	228	228	-	191	191	-
Stage 2	-	-	-	-	-	-	196	193	-	233	230	-
Critical Hdwy	4.15	-	-	4.15	-	-	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	2.245	-	-	2.245	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1374	-	-	1332	-	-	540	524	822	540	524	862
Stage 1	-	-	-	-	-	-	775	715	-	811	742	-
Stage 2	-	-	-	-	-	-	806	741	-	770	714	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1374	-	-	1332	-	-	529	520	822	529	520	862
Mov Cap-2 Maneuver	-	-	-	-	-	-	529	520	-	529	520	-
Stage 1	-	-	-	-	-	-	772	712	-	808	739	-
Stage 2	-	-	-	-	-	-	792	738	-	756	711	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			11.2			11.1		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	596	1374	-	-	1332	-	-	603
HCM Lane V/C Ratio	0.026	0.004	-	-	0.004	-	-	0.026
HCM Control Delay (s)	11.2	7.6	0	-	7.7	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	14	21	5	5	5	11	5	5	5	5
Future Vol, veh/h	5	5	14	21	5	5	5	11	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	15	22	5	5	5	12	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	20	0	0	80	77	13	83	82	8
Stage 1	-	-	-	-	-	-	23	23	-	52	52	-
Stage 2	-	-	-	-	-	-	57	54	-	31	30	-
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	1610	-	-	1596	-	-	908	813	1067	904	808	1074
Stage 1	-	-	-	-	-	-	995	876	-	961	852	-
Stage 2	-	-	-	-	-	-	955	850	-	986	870	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1596	-	-	887	799	1067	878	794	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	887	799	-	878	794	-
Stage 1	-	-	-	-	-	-	992	873	-	958	840	-
Stage 2	-	-	-	-	-	-	931	838	-	965	867	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.5			4.9			9.2			9.1		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	872	1610	-	-	1596	-	-	901				
HCM Lane V/C Ratio	0.026	0.003	-	-	0.014	-	-	0.018				
HCM Control Delay (s)	9.2	7.2	0	-	7.3	0	-	9.1				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	5	5	20	5	5	5	5	5	5	5
Future Vol, veh/h	5	5	5	5	20	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	21	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	26	0	0	10	0	0	57	54	8	57	54	24
Stage 1	-	-	-	-	-	-	18	18	-	34	34	-
Stage 2	-	-	-	-	-	-	39	36	-	23	20	-
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	1588	-	-	1610	-	-	940	837	1074	940	837	1052
Stage 1	-	-	-	-	-	-	1001	880	-	982	867	-
Stage 2	-	-	-	-	-	-	976	865	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1588	-	-	1610	-	-	927	832	1074	927	832	1052
Mov Cap-2 Maneuver	-	-	-	-	-	-	927	832	-	927	832	-
Stage 1	-	-	-	-	-	-	998	877	-	979	864	-
Stage 2	-	-	-	-	-	-	962	862	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			1.2			8.9			8.9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	934	1588	-	-	1610	-	-	928				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.017				
HCM Control Delay (s)	8.9	7.3	0	-	7.2	0	-	8.9				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	34.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	364	112	5	5	158	253	5	5	5	102	5	75
Future Vol, veh/h	364	112	5	5	158	253	5	5	5	102	5	75
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	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	5	5	5	5	5	5	2	2	2	2	2	2
Mvmt Flow	387	119	5	5	168	269	5	5	5	109	5	80
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	437	0	0	124	0	0	1251	1343	122	1214	1211	303
Stage 1	-	-	-	-	-	-	896	896	-	313	313	-
Stage 2	-	-	-	-	-	-	355	447	-	901	898	-
Critical Hdwy	4.15	-	-	4.15	-	-	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	2.245	-	-	2.245	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1107	-	-	1444	-	-	149	152	929	158	182	737
Stage 1	-	-	-	-	-	-	335	359	-	698	657	-
Stage 2	-	-	-	-	-	-	662	573	-	333	358	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1107	-	-	1444	-	-	91	94	929	~ 106	113	737
Mov Cap-2 Maneuver	-	-	-	-	-	-	91	94	-	~ 106	113	-
Stage 1	-	-	-	-	-	-	209	224	-	436	654	-
Stage 2	-	-	-	-	-	-	583	570	-	202	223	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	7.6			0.1			36			183		
HCM LOS							E			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	132	1107	-	-	1444	-	-	164				
HCM Lane V/C Ratio	0.121	0.35	-	-	0.004	-	-	1.181				
HCM Control Delay (s)	36	10	0	-	7.5	0	-	183				
HCM Lane LOS	E	A	A	-	A	A	-	F				
HCM 95th %tile Q(veh)	0.4	1.6	-	-	0	-	-	10.6				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s				+: Computation Not Defined				*: All major volume in platoon		

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	211	5	5	411	5	5	5	5	5	5	5
Future Vol, veh/h	5	211	5	5	411	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	5	5	5	5	5	5	2	2	2	2	2	2
Mvmt Flow	5	224	5	5	437	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	442	0	0	229	0	0	692	689	227	692	689	440
Stage 1	-	-	-	-	-	-	237	237	-	450	450	-
Stage 2	-	-	-	-	-	-	455	452	-	242	239	-
Critical Hdwy	4.15	-	-	4.15	-	-	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	2.245	-	-	2.245	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1102	-	-	1322	-	-	358	369	812	358	369	617
Stage 1	-	-	-	-	-	-	766	709	-	589	572	-
Stage 2	-	-	-	-	-	-	585	570	-	762	708	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1102	-	-	1322	-	-	348	365	812	349	365	617
Mov Cap-2 Maneuver	-	-	-	-	-	-	348	365	-	349	365	-
Stage 1	-	-	-	-	-	-	762	705	-	586	569	-
Stage 2	-	-	-	-	-	-	572	567	-	748	704	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.1			13.5			14		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	438	1102	-	-	1322	-	-	415				
HCM Lane V/C Ratio	0.036	0.005	-	-	0.004	-	-	0.038				
HCM Control Delay (s)	13.5	8.3	0	-	7.7	0	-	14				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Intersection						
Int Delay, s/veh	2.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	57	5	10	204	11	27
Future Vol, veh/h	57	5	10	204	11	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	5	11	217	12	29
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	173	120	0	0	228	0
Stage 1	120	-	-	-	-	-
Stage 2	53	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	817	931	-	-	1340	-
Stage 1	905	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	810	931	-	-	1340	-
Mov Cap-2 Maneuver	810	-	-	-	-	-
Stage 1	905	-	-	-	-	-
Stage 2	961	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.8	0		2.2		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 819		1340	-	
HCM Lane V/C Ratio	-	- 0.081		0.009	-	
HCM Control Delay (s)	-	- 9.8		7.7	0	
HCM Lane LOS	-	- A		A	A	
HCM 95th %tile Q(veh)	-	- 0.3		0	-	

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	57	28	5	5	204	209	103	5	68	11
Future Vol, veh/h	5	5	57	28	5	5	204	209	103	5	68	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	61	30	5	5	217	222	110	5	72	12
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	804	854	78	832	805	277	84	0	0	332	0	0
Stage 1	88	88	-	711	711	-	-	-	-	-	-	-
Stage 2	716	766	-	121	94	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	301	296	983	288	316	762	1513	-	-	1227	-	-
Stage 1	920	822	-	424	436	-	-	-	-	-	-	-
Stage 2	421	412	-	883	817	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	253	242	983	229	258	762	1513	-	-	1227	-	-
Mov Cap-2 Maneuver	253	242	-	229	258	-	-	-	-	-	-	-
Stage 1	755	819	-	348	358	-	-	-	-	-	-	-
Stage 2	338	338	-	820	814	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.9		21.7		3.1		0.5					
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1513	-	-	681	256	1227	-	-				
HCM Lane V/C Ratio	0.143	-	-	0.105	0.158	0.004	-	-				
HCM Control Delay (s)	7.8	0	-	10.9	21.7	7.9	0	-				
HCM Lane LOS	A	A	-	B	C	A	A	-				
HCM 95th %tile Q(veh)	0.5	-	-	0.3	0.6	0	-	-				

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	5	514	103	5	148
Future Vol, veh/h	28	5	514	103	5	148
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	5	547	110	5	157
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	769	602	0	0	657	0
Stage 1	602	-	-	-	-	-
Stage 2	167	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	369	500	-	-	931	-
Stage 1	547	-	-	-	-	-
Stage 2	863	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	367	500	-	-	931	-
Mov Cap-2 Maneuver	367	-	-	-	-	-
Stage 1	547	-	-	-	-	-
Stage 2	858	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	15.4	0		0.3		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 382		931	-	
HCM Lane V/C Ratio	-	- 0.092		0.006	-	
HCM Control Delay (s)	-	- 15.4		8.9	0	
HCM Lane LOS	-	- C		A	A	
HCM 95th %tile Q(veh)	-	- 0.3		0	-	

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	5	5	5	5
Future Vol, veh/h	5	5	5	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	23	8	10	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	15	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	993	1074	1610	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	990	1074	1610	-	-	-
Mov Cap-2 Maneuver	990	-	-	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.5	3.6		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1610	-	1030	-	-	
HCM Lane V/C Ratio	0.003	-	0.01	-	-	
HCM Control Delay (s)	7.2	0	8.5	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	5	5	5	5
Future Vol, veh/h	5	5	5	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	23	8	10	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	15	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	993	1074	1610	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	990	1074	1610	-	-	-
Mov Cap-2 Maneuver	990	-	-	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.5	3.6		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1610	-	1030	-	-	
HCM Lane V/C Ratio	0.003	-	0.01	-	-	
HCM Control Delay (s)	7.2	0	8.5	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection												
Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	5	7	5	5	5	34	5	5	5	5
Future Vol, veh/h	5	5	5	7	5	5	5	34	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	7	5	5	5	36	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	45	42	8	60	42	8
Stage 1	-	-	-	-	-	-	18	18	-	22	22	-
Stage 2	-	-	-	-	-	-	27	24	-	38	20	-
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	1610	-	-	1610	-	-	957	850	1074	936	850	1074
Stage 1	-	-	-	-	-	-	1001	880	-	996	877	-
Stage 2	-	-	-	-	-	-	990	875	-	977	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	943	844	1074	897	844	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	943	844	-	897	844	-
Stage 1	-	-	-	-	-	-	998	877	-	993	873	-
Stage 2	-	-	-	-	-	-	975	872	-	930	876	-
Approach	EB		WB				NB			SB		
HCM Control Delay, s	2.4		3				9.3			8.9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	876	1610	-	-	1610	-	-	929				
HCM Lane V/C Ratio	0.053	0.003	-	-	0.005	-	-	0.017				
HCM Control Delay (s)	9.3	7.2	0	-	7.2	0	-	8.9				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	5	5	9	5	5	5	5	5	5	5
Future Vol, veh/h	5	5	5	5	9	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	9	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	14	0	0	10	0	0	45	42	8	45	42	12
Stage 1	-	-	-	-	-	-	18	18	-	22	22	-
Stage 2	-	-	-	-	-	-	27	24	-	23	20	-
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	1604	-	-	1610	-	-	957	850	1074	957	850	1069
Stage 1	-	-	-	-	-	-	1001	880	-	996	877	-
Stage 2	-	-	-	-	-	-	990	875	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1604	-	-	1610	-	-	944	845	1074	944	845	1069
Mov Cap-2 Maneuver	-	-	-	-	-	-	944	845	-	944	845	-
Stage 1	-	-	-	-	-	-	998	877	-	993	874	-
Stage 2	-	-	-	-	-	-	976	872	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			1.9			8.9			8.9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	945	1604	-	-	1610	-	-	944				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.017				
HCM Control Delay (s)	8.9	7.3	0	-	7.2	0	-	8.9				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	79.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	79	203	5	5	169	94	5	5	5	277	5	338
Future Vol, veh/h	79	203	5	5	169	94	5	5	5	277	5	338
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	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	83	214	5	5	178	99	5	5	5	292	5	356
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	277	0	0	219	0	0	801	670	217	626	623	228
Stage 1	-	-	-	-	-	-	383	383	-	238	238	-
Stage 2	-	-	-	-	-	-	418	287	-	388	385	-
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	1286	-	-	1350	-	-	303	378	823	397	402	811
Stage 1	-	-	-	-	-	-	640	612	-	765	708	-
Stage 2	-	-	-	-	-	-	612	674	-	636	611	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1286	-	-	1350	-	-	158	349	823	367	371	811
Mov Cap-2 Maneuver	-	-	-	-	-	-	158	349	-	367	371	-
Stage 1	-	-	-	-	-	-	593	567	-	708	705	-
Stage 2	-	-	-	-	-	-	340	671	-	580	566	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.2			0.1			18.2			151.2		
HCM LOS							C			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	288	1286	-	-	1350	-	-	523				
HCM Lane V/C Ratio	0.055	0.065	-	-	0.004	-	-	1.248				
HCM Control Delay (s)	18.2	8	0	-	7.7	0	-	151.2				
HCM Lane LOS	C	A	A	-	A	A	-	F				
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0	-	-	25.7				

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	480	5	5	262	5	5	5	5	5	5	5
Future Vol, veh/h	5	480	5	5	262	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	505	5	5	276	5	5	5	5	5	5	5
Major/Minor	Major1		Major2			Minor1			Minor2			
Conflicting Flow All	281	0	0	510	0	0	812	809	508	812	809	279
Stage 1	-	-	-	-	-	-	518	518	-	289	289	-
Stage 2	-	-	-	-	-	-	294	291	-	523	520	-
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	1282	-	-	1055	-	-	298	314	565	298	314	760
Stage 1	-	-	-	-	-	-	541	533	-	719	673	-
Stage 2	-	-	-	-	-	-	714	672	-	537	532	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1282	-	-	1055	-	-	290	311	565	289	311	760
Mov Cap-2 Maneuver	-	-	-	-	-	-	290	311	-	289	311	-
Stage 1	-	-	-	-	-	-	538	530	-	715	669	-
Stage 2	-	-	-	-	-	-	699	668	-	524	529	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	0.1		0.2			15.6			15			
HCM LOS						C			C			
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	356	1282	-	-	1055	-	-	375				
HCM Lane V/C Ratio	0.044	0.004	-	-	0.005	-	-	0.042				
HCM Control Delay (s)	15.6	7.8	0	-	8.4	0	-	15				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Intersection						
Int Delay, s/veh	7.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	204	11	24	57	5	9
Future Vol, veh/h	204	11	24	57	5	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	215	12	25	60	5	9
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	74	55	0	0	85	0
Stage 1	55	-	-	-	-	-
Stage 2	19	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	930	1012	-	-	1512	-
Stage 1	968	-	-	-	-	-
Stage 2	1004	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	927	1012	-	-	1512	-
Mov Cap-2 Maneuver	927	-	-	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.1	0		2.6		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	931	1512	-	
HCM Lane V/C Ratio	-	-	0.243	0.003	-	
HCM Control Delay (s)	-	-	10.1	7.4	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	1	0	-	

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	5	204	102	5	5	57	65	28	5	208	5
Future Vol, veh/h	11	5	204	102	5	5	57	65	28	5	208	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	5	215	107	5	5	60	68	29	5	219	5
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	440	449	222	545	437	83	224	0	0	97	0	0
Stage 1	232	232	-	203	203	-	-	-	-	-	-	-
Stage 2	208	217	-	342	234	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	527	505	818	449	513	976	1345	-	-	1496	-	-
Stage 1	771	713	-	799	733	-	-	-	-	-	-	-
Stage 2	794	723	-	673	711	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	500	479	818	316	487	976	1345	-	-	1496	-	-
Mov Cap-2 Maneuver	500	479	-	316	487	-	-	-	-	-	-	-
Stage 1	735	710	-	761	699	-	-	-	-	-	-	-
Stage 2	747	689	-	491	708	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.5		21.8		3		0.2					
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1345	-	-	781	331	1496	-	-				
HCM Lane V/C Ratio	0.045	-	-	0.297	0.356	0.004	-	-				
HCM Control Delay (s)	7.8	0	-	11.5	21.8	7.4	0	-				
HCM Lane LOS	A	A	-	B	C	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	1.2	1.6	0	-	-				

Intersection						
Int Delay, s/veh	2.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	103	5	145	28	5	512
Future Vol, veh/h	103	5	145	28	5	512
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	108	5	153	29	5	539
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	717	168	0	0	182	0
Stage 1	168	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	396	876	-	-	1393	-
Stage 1	862	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	394	876	-	-	1393	-
Mov Cap-2 Maneuver	394	-	-	-	-	-
Stage 1	862	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	17.4	0		0.1		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	404	1393	-	
HCM Lane V/C Ratio	-	-	0.281	0.004	-	
HCM Control Delay (s)	-	-	17.4	7.6	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	1.1	0	-	

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	5	5	5	5
Future Vol, veh/h	5	5	5	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	23	8	10	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	15	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	993	1074	1610	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	990	1074	1610	-	-	-
Mov Cap-2 Maneuver	990	-	-	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.5	3.6		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1610	-	1030	-	-	
HCM Lane V/C Ratio	0.003	-	0.01	-	-	
HCM Control Delay (s)	7.2	0	8.5	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	5	5	5	5
Future Vol, veh/h	5	5	5	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	23	8	10	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	15	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	993	1074	1610	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	990	1074	1610	-	-	-
Mov Cap-2 Maneuver	990	-	-	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.5	3.6		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1610	-	1030	-	-	
HCM Lane V/C Ratio	0.003	-	0.01	-	-	
HCM Control Delay (s)	7.2	0	8.5	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection												
Int Delay, s/veh	7.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	5	5	5	5	5	44	5	5	13	5
Future Vol, veh/h	5	5	5	5	5	5	5	44	5	5	13	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5	5	47	5	5	14	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	45	38	8	62	38	8
Stage 1	-	-	-	-	-	-	18	18	-	18	18	-
Stage 2	-	-	-	-	-	-	27	20	-	44	20	-
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	1610	-	-	1610	-	-	957	854	1074	933	854	1074
Stage 1	-	-	-	-	-	-	1001	880	-	1001	880	-
Stage 2	-	-	-	-	-	-	990	879	-	970	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	936	849	1074	885	849	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	936	849	-	885	849	-
Stage 1	-	-	-	-	-	-	998	877	-	998	877	-
Stage 2	-	-	-	-	-	-	967	876	-	911	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			2.4			9.4			9.1		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	873	1610	-	-	1610	-	-	898				
HCM Lane V/C Ratio	0.066	0.003	-	-	0.003	-	-	0.027				
HCM Control Delay (s)	9.4	7.2	0	-	7.2	0	-	9.1				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1				

HCM 6th TWSC
2: Range Road 281 & Township Road 264 & Hwy 791

3.1 2040 BG - AM

07/15/2025

Intersection												
Int Delay, s/veh	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	5	5	5	30	5	5	5	25	5	5
Future Vol, veh/h	5	5	5	5	5	30	5	5	5	25	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	32	5	5	5	27	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	37	0	0	10	0	0	54	65	8	54	51	21
Stage 1	-	-	-	-	-	-	18	18	-	31	31	-
Stage 2	-	-	-	-	-	-	36	47	-	23	20	-
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	1574	-	-	1610	-	-	944	826	1074	944	840	1056
Stage 1	-	-	-	-	-	-	1001	880	-	986	869	-
Stage 2	-	-	-	-	-	-	980	856	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1574	-	-	1610	-	-	931	821	1074	931	835	1056
Mov Cap-2 Maneuver	-	-	-	-	-	-	931	821	-	931	835	-
Stage 1	-	-	-	-	-	-	998	877	-	983	866	-
Stage 2	-	-	-	-	-	-	966	853	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			0.9			8.9			9		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	931	1574	-	-	1610	-	-	931				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.04				
HCM Control Delay (s)	8.9	7.3	0	-	7.2	0	-	9				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

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	151	5	5	668	44	5	5	5	8	5	6
Future Vol, veh/h	5	151	5	5	668	44	5	5	5	8	5	6
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	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	161	5	5	711	47	5	5	5	9	5	6
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	758	0	0	166	0	0	924	942	164	924	921	735
Stage 1	-	-	-	-	-	-	174	174	-	745	745	-
Stage 2	-	-	-	-	-	-	750	768	-	179	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	853	-	-	1412	-	-	250	263	881	250	270	420
Stage 1	-	-	-	-	-	-	828	755	-	406	421	-
Stage 2	-	-	-	-	-	-	403	411	-	823	753	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	853	-	-	1412	-	-	240	260	881	243	267	420
Mov Cap-2 Maneuver	-	-	-	-	-	-	240	260	-	243	267	-
Stage 1	-	-	-	-	-	-	823	750	-	404	418	-
Stage 2	-	-	-	-	-	-	389	409	-	807	748	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.1			16.5			18.4		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	328	853	-	-	1412	-	-	288				
HCM Lane V/C Ratio	0.049	0.006	-	-	0.004	-	-	0.07				
HCM Control Delay (s)	16.5	9.2	0	-	7.6	0	-	18.4				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.2				

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	156	5	5	709	5	5	5	5	5	5	5
Future Vol, veh/h	5	156	5	5	709	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	166	5	5	754	5	5	5	5	5	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	759	0	0	171	0	0	951	948	169	951	948	757
Stage 1	-	-	-	-	-	-	179	179	-	767	767	-
Stage 2	-	-	-	-	-	-	772	769	-	184	181	-
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	852	-	-	1406	-	-	240	261	875	240	261	408
Stage 1	-	-	-	-	-	-	823	751	-	395	411	-
Stage 2	-	-	-	-	-	-	392	411	-	818	750	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	852	-	-	1406	-	-	231	258	875	233	258	408
Mov Cap-2 Maneuver	-	-	-	-	-	-	231	258	-	233	258	-
Stage 1	-	-	-	-	-	-	818	746	-	393	409	-
Stage 2	-	-	-	-	-	-	380	409	-	802	746	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.1			16.8			18.5		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	321	852	-	-	1406	-	-	283				
HCM Lane V/C Ratio	0.05	0.006	-	-	0.004	-	-	0.056				
HCM Control Delay (s)	16.8	9.3	0	-	7.6	0	-	18.5				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.2				

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	5	5	5	5	5	5	5	14	5	5	49	5
Future Vol, veh/h	5	5	5	5	5	5	5	14	5	5	49	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5	5	15	5	5	52	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	64	38	8	46	38	8
Stage 1	-	-	-	-	-	-	18	18	-	18	18	-
Stage 2	-	-	-	-	-	-	46	20	-	28	20	-
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	1610	-	-	1610	-	-	930	854	1074	955	854	1074
Stage 1	-	-	-	-	-	-	1001	880	-	1001	880	-
Stage 2	-	-	-	-	-	-	968	879	-	989	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	879	849	1074	933	849	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	879	849	-	933	849	-
Stage 1	-	-	-	-	-	-	998	877	-	998	877	-
Stage 2	-	-	-	-	-	-	904	876	-	965	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			2.4			9.1			9.5		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	894	1610	-	-	1610	-	-	871				
HCM Lane V/C Ratio	0.028	0.003	-	-	0.003	-	-	0.071				
HCM Control Delay (s)	9.1	7.2	0	-	7.2	0	-	9.5				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2				

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	5	5	5	28	5	5	5	33	5	5
Future Vol, veh/h	5	5	5	5	5	28	5	5	5	33	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	29	5	5	5	35	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	34	0	0	10	0	0	53	62	8	53	50	20
Stage 1	-	-	-	-	-	-	18	18	-	30	30	-
Stage 2	-	-	-	-	-	-	35	44	-	23	20	-
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	1578	-	-	1610	-	-	946	829	1074	946	841	1058
Stage 1	-	-	-	-	-	-	1001	880	-	987	870	-
Stage 2	-	-	-	-	-	-	981	858	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1578	-	-	1610	-	-	933	824	1074	933	836	1058
Mov Cap-2 Maneuver	-	-	-	-	-	-	933	824	-	933	836	-
Stage 1	-	-	-	-	-	-	998	877	-	984	867	-
Stage 2	-	-	-	-	-	-	967	855	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			1			8.9			9.1		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	933	1578	-	-	1610	-	-	933				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.049				
HCM Control Delay (s)	8.9	7.3	0	-	7.2	0	-	9.1				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	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	7	742	5	5	167	9	5	5	5	49	5	5
Future Vol, veh/h	7	742	5	5	167	9	5	5	5	49	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	781	5	5	176	9	5	5	5	52	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	185	0	0	786	0	0	994	993	784	994	991	181
Stage 1	-	-	-	-	-	-	798	798	-	191	191	-
Stage 2	-	-	-	-	-	-	196	195	-	803	800	-
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	1390	-	-	833	-	-	224	245	393	224	246	862
Stage 1	-	-	-	-	-	-	380	398	-	811	742	-
Stage 2	-	-	-	-	-	-	806	739	-	377	397	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1390	-	-	833	-	-	216	241	393	215	242	862
Mov Cap-2 Maneuver	-	-	-	-	-	-	216	241	-	215	242	-
Stage 1	-	-	-	-	-	-	377	394	-	804	737	-
Stage 2	-	-	-	-	-	-	790	734	-	364	393	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.3			19.4			26.1		
HCM LOS							C			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	265	1390	-	-	833	-	-	232				
HCM Lane V/C Ratio	0.06	0.005	-	-	0.006	-	-	0.268				
HCM Control Delay (s)	19.4	7.6	0	-	9.3	0	-	26.1				
HCM Lane LOS	C	A	A	-	A	A	-	D				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	1				

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	788	5	5	173	5	5	5	5	5	5	5
Future Vol, veh/h	5	788	5	5	173	5	5	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	829	5	5	182	5	5	5	5	5	5	5
Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	187	0	0	834	0	0	1042	1039	832	1042	1039	185
Stage 1	-	-	-	-	-	-	842	842	-	195	195	-
Stage 2	-	-	-	-	-	-	200	197	-	847	844	-
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	1387	-	-	799	-	-	208	231	369	208	231	857
Stage 1	-	-	-	-	-	-	359	380	-	807	739	-
Stage 2	-	-	-	-	-	-	802	738	-	357	379	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1387	-	-	799	-	-	201	228	369	199	228	857
Mov Cap-2 Maneuver	-	-	-	-	-	-	201	228	-	199	228	-
Stage 1	-	-	-	-	-	-	356	377	-	801	734	-
Stage 2	-	-	-	-	-	-	786	733	-	345	376	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	0		0.3		20.4		18.4					
HCM LOS					C		C					
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	249	1387	-	-	799	-	-	284				
HCM Lane V/C Ratio	0.063	0.004	-	-	0.007	-	-	0.056				
HCM Control Delay (s)	20.4	7.6	0	-	9.5	0	-	18.4				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.2				

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	18	27	5	5	5	56	5	5	13	5
Future Vol, veh/h	5	5	18	27	5	5	5	56	5	5	13	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	19	29	5	5	5	60	5	5	14	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	24	0	0	100	93	15	123	100	8
Stage 1	-	-	-	-	-	-	25	25	-	66	66	-
Stage 2	-	-	-	-	-	-	75	68	-	57	34	-
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	1610	-	-	1591	-	-	881	797	1065	852	790	1074
Stage 1	-	-	-	-	-	-	993	874	-	945	840	-
Stage 2	-	-	-	-	-	-	934	838	-	955	867	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1591	-	-	851	780	1065	786	773	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	851	780	-	786	773	-
Stage 1	-	-	-	-	-	-	990	871	-	942	825	-
Stage 2	-	-	-	-	-	-	897	823	-	883	864	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			5.3			9.9			9.5		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	801	1610	-	-	1591	-	-	826				
HCM Lane V/C Ratio	0.088	0.003	-	-	0.018	-	-	0.03				
HCM Control Delay (s)	9.9	7.2	0	-	7.3	0	-	9.5				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.1				

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	5	5	27	30	5	5	5	25	5	5
Future Vol, veh/h	5	5	5	5	27	30	5	5	5	25	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	29	32	5	5	5	27	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	61	0	0	10	0	0	78	89	8	78	75	45
Stage 1	-	-	-	-	-	-	18	18	-	55	55	-
Stage 2	-	-	-	-	-	-	60	71	-	23	20	-
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	1542	-	-	1610	-	-	911	801	1074	911	815	1025
Stage 1	-	-	-	-	-	-	1001	880	-	957	849	-
Stage 2	-	-	-	-	-	-	951	836	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1542	-	-	1610	-	-	897	796	1074	897	810	1025
Mov Cap-2 Maneuver	-	-	-	-	-	-	897	796	-	897	810	-
Stage 1	-	-	-	-	-	-	998	877	-	954	846	-
Stage 2	-	-	-	-	-	-	937	833	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			0.6			9			9.2		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	908	1542	-	-	1610	-	-	899				
HCM Lane V/C Ratio	0.018	0.003	-	-	0.003	-	-	0.041				
HCM Control Delay (s)	9	7.3	0	-	7.2	0	-	9.2				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

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	483	405	5	5	717	378	5	5	5	143	5	100
Future Vol, veh/h	483	405	5	5	717	378	5	5	5	143	5	100
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	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	514	431	5	5	763	402	5	5	5	152	5	106
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1165	0	0	436	0	0	2492	2637	434	2441	2438	964
Stage 1	-	-	-	-	-	-	1462	1462	-	974	974	-
Stage 2	-	-	-	-	-	-	1030	1175	-	1467	1464	-
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	600	-	-	1124	-	-	20	23	622	~ 22	32	310
Stage 1	-	-	-	-	-	-	160	193	-	303	330	-
Stage 2	-	-	-	-	-	-	282	265	-	159	193	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	600	-	-	1124	-	-	-	0	622	-	0	310
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-	-	0	-
Stage 1	-	-	-	-	-	-	160	0	-	303	325	-
Stage 2	-	-	-	-	-	-	180	261	-	-	0	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	19.8			0								
HCM LOS							-			-		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	600	-	-	1124	-	-	-				
HCM Lane V/C Ratio	-	0.856	-	-	0.005	-	-	-				
HCM Control Delay (s)	-	36.6	0	-	8.2	0	-	-				
HCM Lane LOS	-	E	A	-	A	A	-	-				
HCM 95th %tile Q(veh)	-	9.5	-	-	0	-	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	148.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	255	291	5	5	1043	176	5	5	5	71	5	50
Future Vol, veh/h	255	291	5	5	1043	176	5	5	5	71	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	271	310	5	5	1110	187	5	5	5	76	5	53
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1297	0	0	315	0	0	2098	2162	313	2074	2071	1204
Stage 1	-	-	-	-	-	-	855	855	-	1214	1214	-
Stage 2	-	-	-	-	-	-	1243	1307	-	860	857	-
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	534	-	-	1245	-	-	38	47	727	~ 40	54	224
Stage 1	-	-	-	-	-	-	353	375	-	222	254	-
Stage 2	-	-	-	-	-	-	214	230	-	351	374	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	534	-	-	1245	-	-	12	18	727	~ 16	20	224
Mov Cap-2 Maneuver	-	-	-	-	-	-	12	18	-	~ 16	20	-
Stage 1	-	-	-	-	-	-	136	144	-	85	250	-
Stage 2	-	-	-	-	-	-	157	226	-	129	144	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	8.6			0			\$ 370.5			\$ 2171.8		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	21	534	-	-	1245	-	-	26				
HCM Lane V/C Ratio	0.76	0.508	-	-	0.004	-	-	5.155				
HCM Control Delay (s)	\$ 370.5	18.5	0	-	7.9	0	-	\$ 2171.8				
HCM Lane LOS	F	C	A	-	A	A	-	F				
HCM 95th %tile Q(veh)	2.2	2.9	-	-	0	-	-	16.5				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s				+: Computation Not Defined				*: All major volume in platoon		

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	57	5	54	204	11	47
Future Vol, veh/h	57	5	54	204	11	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	5	57	217	12	50
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	240	166	0	0	274	0
Stage 1	166	-	-	-	-	-
Stage 2	74	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	748	878	-	-	1289	-
Stage 1	863	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	741	878	-	-	1289	-
Mov Cap-2 Maneuver	741	-	-	-	-	-
Stage 1	863	-	-	-	-	-
Stage 2	940	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.3	0		1.5		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 750		1289	-	
HCM Lane V/C Ratio	-	- 0.088		0.009	-	
HCM Control Delay (s)	-	- 10.3		7.8	0	
HCM Lane LOS	-	- B		A	A	
HCM 95th %tile Q(veh)	-	- 0.3		0	-	

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	57	57	5	5	204	252	204	11	82	11
Future Vol, veh/h	5	5	57	57	5	5	204	252	204	11	82	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	61	61	5	5	217	268	217	12	87	12
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	933	1036	93	961	934	377	99	0	0	485	0	0
Stage 1	117	117	-	811	811	-	-	-	-	-	-	-
Stage 2	816	919	-	150	123	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	246	232	964	236	266	670	1494	-	-	1078	-	-
Stage 1	888	799	-	373	393	-	-	-	-	-	-	-
Stage 2	371	350	-	853	794	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	200	182	964	181	209	670	1494	-	-	1078	-	-
Mov Cap-2 Maneuver	200	182	-	181	209	-	-	-	-	-	-	-
Stage 1	705	789	-	296	312	-	-	-	-	-	-	-
Stage 2	287	278	-	784	784	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.8		34.2		2.4		0.9					
HCM LOS	B		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1494	-	-	600	193	1078	-					
HCM Lane V/C Ratio	0.145	-	-	0.119	0.369	0.011	-					
HCM Control Delay (s)	7.8	0	-	11.8	34.2	8.4	0					
HCM Lane LOS	A	A	-	B	D	A	A					
HCM 95th %tile Q(veh)	0.5	-	-	0.4	1.6	0	-					

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	57	5	657	204	11	185
Future Vol, veh/h	57	5	657	204	11	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	5	699	217	12	197
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1029	808	0	0	916	0
Stage 1	808	-	-	-	-	-
Stage 2	221	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	259	381	-	-	745	-
Stage 1	438	-	-	-	-	-
Stage 2	816	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	254	381	-	-	745	-
Mov Cap-2 Maneuver	254	-	-	-	-	-
Stage 1	438	-	-	-	-	-
Stage 2	801	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	23.4	0		0.6		
HCM LOS	C					
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBL	SBT	
Capacity (veh/h)		-	-	261	745	-
HCM Lane V/C Ratio		-	-	0.253	0.016	-
HCM Control Delay (s)		-	-	23.4	9.9	0
HCM Lane LOS		-	-	C	A	A
HCM 95th %tile Q(veh)		-	-	1	0	-

Intersection						
Int Delay, s/veh	7.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	61	216	5	5	5
Future Vol, veh/h	5	61	216	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	65	230	5	5	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	473	8	10	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	465	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	550	1074	1610	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	471	1074	1610	-	-	-
Mov Cap-2 Maneuver	471	-	-	-	-	-
Stage 1	870	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9	7.4		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1610	-	979	-	-	
HCM Lane V/C Ratio	0.143	-	0.072	-	-	
HCM Control Delay (s)	7.6	0	9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.5	-	0.2	-	-	

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	60	215	216	61	5
Future Vol, veh/h	5	60	215	216	61	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	64	229	230	65	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	756	68	70	0	-	0
Stage 1	68	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	376	995	1531	-	-	-
Stage 1	955	-	-	-	-	-
Stage 2	499	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	312	995	1531	-	-	-
Mov Cap-2 Maneuver	312	-	-	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	499	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.6	3.9		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1531	-	852	-	-	
HCM Lane V/C Ratio	0.149	-	0.081	-	-	
HCM Control Delay (s)	7.8	0	9.6	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.5	-	0.3	-	-	

Intersection												
Int Delay, s/veh	8.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	8	5	5	5	58	5	5	49	5
Future Vol, veh/h	5	5	5	8	5	5	5	58	5	5	49	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	8	5	5	5	61	5	5	52	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	70	44	8	75	44	8
Stage 1	-	-	-	-	-	-	18	18	-	24	24	-
Stage 2	-	-	-	-	-	-	52	26	-	51	20	-
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	1610	-	-	1610	-	-	922	848	1074	915	848	1074
Stage 1	-	-	-	-	-	-	1001	880	-	994	875	-
Stage 2	-	-	-	-	-	-	961	874	-	962	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	869	841	1074	855	841	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	869	841	-	855	841	-
Stage 1	-	-	-	-	-	-	998	877	-	991	871	-
Stage 2	-	-	-	-	-	-	895	870	-	888	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			3.2			9.6			9.5		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	857	1610	-	-	1610	-	-	858				
HCM Lane V/C Ratio	0.084	0.003	-	-	0.005	-	-	0.072				
HCM Control Delay (s)	9.6	7.2	0	-	7.2	0	-	9.5				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.2				

HCM 6th TWSC
2: Range Road 281 & Township Road 264 & Hwy 791

3.2 2040 PD - PM

07/15/2025

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	5	7	28	5	5	5	33	5	5
Future Vol, veh/h	5	5	5	5	7	28	5	5	5	33	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	7	29	5	5	5	35	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	36	0	0	10	0	0	55	64	8	55	52	22
Stage 1	-	-	-	-	-	-	18	18	-	32	32	-
Stage 2	-	-	-	-	-	-	37	46	-	23	20	-
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	1575	-	-	1610	-	-	943	827	1074	943	839	1055
Stage 1	-	-	-	-	-	-	1001	880	-	984	868	-
Stage 2	-	-	-	-	-	-	978	857	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1575	-	-	1610	-	-	930	822	1074	930	834	1055
Mov Cap-2 Maneuver	-	-	-	-	-	-	930	822	-	930	834	-
Stage 1	-	-	-	-	-	-	998	877	-	981	865	-
Stage 2	-	-	-	-	-	-	964	854	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			0.9			8.9			9.1		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	931	1575	-	-	1610	-	-	930				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.049				
HCM Control Delay (s)	8.9	7.3	0	-	7.2	0	-	9.1				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2				

Intersection												
Int Delay, s/veh	1090.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	110	796	5	5	404	134	5	5	5	417	5	450
Future Vol, veh/h	110	796	5	5	404	134	5	5	5	417	5	450
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	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	116	838	5	5	425	141	5	5	5	439	5	474
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	566	0	0	843	0	0	1818	1649	841	1584	1581	496
Stage 1	-	-	-	-	-	-	1073	1073	-	506	506	-
Stage 2	-	-	-	-	-	-	745	576	-	1078	1075	-
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	1006	-	-	793	-	-	60	99	365	~ 88	109	574
Stage 1	-	-	-	-	-	-	267	297	-	549	540	-
Stage 2	-	-	-	-	-	-	406	502	-	~ 265	296	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1006	-	-	793	-	-	8	77	365	~ 68	85	574
Mov Cap-2 Maneuver	-	-	-	-	-	-	8	77	-	~ 68	85	-
Stage 1	-	-	-	-	-	-	209	233	-	~ 430	535	-
Stage 2	-	-	-	-	-	-	70	497	-	~ 200	232	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0.1			\$ 367.8			\$ 2921.2		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	21	1006	-	-	793	-	-	125				
HCM Lane V/C Ratio	0.752	0.115	-	-	0.007	-	-	7.343				
HCM Control Delay (s)	\$ 367.8	9	0	-	9.6	0	-	\$ 2921.2				
HCM Lane LOS	F	A	A	-	A	A	-	F				
HCM 95th %tile Q(veh)	2.1	0.4	-	-	0	-	-	102.5				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s				+: Computation Not Defined				*: All major volume in platoon		

Intersection												
Int Delay, s/veh	292.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	55	1156	5	5	298	66	5	5	5	193	5	238
Future Vol, veh/h	55	1156	5	5	298	66	5	5	5	193	5	238
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	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	58	1217	5	5	314	69	5	5	5	203	5	251
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	383	0	0	1222	0	0	1823	1729	1220	1700	1697	349
Stage 1	-	-	-	-	-	-	1336	1336	-	359	359	-
Stage 2	-	-	-	-	-	-	487	393	-	1341	1338	-
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	1175	-	-	570	-	-	60	88	220	~ 73	92	694
Stage 1	-	-	-	-	-	-	189	222	-	659	627	-
Stage 2	-	-	-	-	-	-	562	606	-	~ 188	222	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1175	-	-	570	-	-	32	74	220	~ 59	77	694
Mov Cap-2 Maneuver	-	-	-	-	-	-	32	74	-	~ 59	77	-
Stage 1	-	-	-	-	-	-	160	188	-	558	620	-
Stage 2	-	-	-	-	-	-	352	599	-	~ 151	188	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.2			83.5			\$ 1360.4		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	61	1175	-	-	570	-	-	119				
HCM Lane V/C Ratio	0.259	0.049	-	-	0.009	-	-	3.857				
HCM Control Delay (s)	83.5	8.2	0	-	11.4	0		\$ 1360.4				
HCM Lane LOS	F	A	A	-	B	A	-	F				
HCM 95th %tile Q(veh)	0.9	0.2	-	-	0	-	-	46.2				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection						
Int Delay, s/veh	6.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	204	11	49	57	5	59
Future Vol, veh/h	204	11	49	57	5	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	215	12	52	60	5	62
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	154	82	0	0	112	0
Stage 1	82	-	-	-	-	-
Stage 2	72	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	838	978	-	-	1478	-
Stage 1	941	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	835	978	-	-	1478	-
Mov Cap-2 Maneuver	835	-	-	-	-	-
Stage 1	941	-	-	-	-	-
Stage 2	947	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.8	0		0.6		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	841		1478	-	
HCM Lane V/C Ratio	-	0.269		0.004	-	
HCM Control Delay (s)	-	10.8		7.4	0	
HCM Lane LOS	-	B		A	A	
HCM 95th %tile Q(veh)	-	1.1		0	-	

Intersection												
Int Delay, s/veh	17.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	5	204	204	5	11	57	84	57	5	257	5
Future Vol, veh/h	11	5	204	204	5	11	57	84	57	5	257	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	5	215	215	5	12	60	88	60	5	271	5
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	531	552	274	632	524	118	276	0	0	148	0	0
Stage 1	284	284	-	238	238	-	-	-	-	-	-	-
Stage 2	247	268	-	394	286	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	459	442	765	393	458	934	1287	-	-	1434	-	-
Stage 1	723	676	-	765	708	-	-	-	-	-	-	-
Stage 2	757	687	-	631	675	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	431	418	765	268	433	934	1287	-	-	1434	-	-
Mov Cap-2 Maneuver	431	418	-	268	433	-	-	-	-	-	-	-
Stage 1	686	673	-	726	672	-	-	-	-	-	-	-
Stage 2	704	652	-	449	672	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.3		58.3		2.3		0.1					
HCM LOS	B		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1287	-	-	723	280	1434	-	-				
HCM Lane V/C Ratio	0.047	-	-	0.32	0.827	0.004	-	-				
HCM Control Delay (s)	7.9	0	-	12.3	58.3	7.5	0	-				
HCM Lane LOS	A	A	-	B	F	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	1.4	6.8	0	-	-				

Intersection						
Int Delay, s/veh	8.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	204	11	187	57	5	662
Future Vol, veh/h	204	11	187	57	5	662
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	215	12	197	60	5	697
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	934	227	0	0	257	0
Stage 1	227	-	-	-	-	-
Stage 2	707	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	295	812	-	-	1308	-
Stage 1	811	-	-	-	-	-
Stage 2	489	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	293	812	-	-	1308	-
Mov Cap-2 Maneuver	293	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	486	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	45	0		0.1		
HCM LOS	E					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	303	1308	-	
HCM Lane V/C Ratio	-	-	0.747	0.004	-	
HCM Control Delay (s)	-	-	45	7.8	0	
HCM Lane LOS	-	-	E	A	A	
HCM 95th %tile Q(veh)	-	-	5.6	0	-	

Intersection						
Int Delay, s/veh	8.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	216	61	5	5	5
Future Vol, veh/h	5	216	61	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	227	64	5	5	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	141	8	10	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	133	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	852	1074	1610	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	893	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	818	1074	1610	-	-	-
Mov Cap-2 Maneuver	818	-	-	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	893	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.3	6.8		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1610	-	1066	-	-	
HCM Lane V/C Ratio	0.04	-	0.218	-	-	
HCM Control Delay (s)	7.3	0	9.3	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-	

Intersection						
Int Delay, s/veh	5.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	215	60	61	216	5
Future Vol, veh/h	5	215	60	61	216	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	226	63	64	227	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	420	230	232	0	-	0
Stage 1	230	-	-	-	-	-
Stage 2	190	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	590	809	1336	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	842	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	561	809	1336	-	-	-
Mov Cap-2 Maneuver	561	-	-	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	842	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.3	3.9		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1336	-	801	-	-	
HCM Lane V/C Ratio	0.047	-	0.289	-	-	
HCM Control Delay (s)	7.8	0	11.3	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	1.2	-	-	

Intersection	
Intersection Delay, s/veh	21.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	57	57	5	5	204	252	204	11	82	11
Future Vol, veh/h	5	5	57	57	5	5	204	252	204	11	82	11
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	61	61	5	5	217	268	217	12	87	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	9.9	26.4	9.1
HCM LOS	A	A	D	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	7%	85%	11%
Vol Thru, %	38%	7%	7%	79%
Vol Right, %	31%	85%	7%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	660	67	67	104
LT Vol	204	5	57	11
Through Vol	252	5	5	82
RT Vol	204	57	5	11
Lane Flow Rate	702	71	71	111
Geometry Grp	1	1	1	1
Degree of Util (X)	0.847	0.108	0.12	0.155
Departure Headway (Hd)	4.341	5.468	6.084	5.042
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	829	659	592	704
Service Time	2.394	3.471	4.086	3.129
HCM Lane V/C Ratio	0.847	0.108	0.12	0.158
HCM Control Delay	26.4	9.1	9.9	9.1
HCM Lane LOS	D	A	A	A
HCM 95th-tile Q	10.1	0.4	0.4	0.5

Lanes, Volumes, Timings
3: Range Road 282 & Hwy 566

3.3 2040 PD-I - AM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	483	405	5	5	717	378	5	5	5	143	5	100
Future Volume (vph)	483	405	5	5	717	378	5	5	5	143	5	100
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	50.0		0.0	0.0		50.0	0.0		0.0	50.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850		0.955			0.857	
Flt Protected	0.950							0.984		0.950		
Satd. Flow (prot)	1742	1830	0	0	1834	1559	0	1723	0	1742	1572	0
Flt Permitted	0.070				0.998			0.923		0.748		
Satd. Flow (perm)	128	1830	0	0	1830	1559	0	1616	0	1372	1572	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				200		5			106	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		139.3			712.9			129.6			216.9	
Travel Time (s)		5.0			25.7			5.8			9.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	514	431	5	5	763	402	5	5	5	152	5	106
Shared Lane Traffic (%)												
Lane Group Flow (vph)	514	436	0	0	768	402	0	15	0	152	111	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	24.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	41.0	101.0		60.0	60.0	60.0	26.0	26.0		26.0	26.0	

Lanes, Volumes, Timings
3: Range Road 282 & Hwy 566

3.3 2040 PD-I - AM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	32.3%	79.5%		47.2%	47.2%	47.2%	20.5%	20.5%		20.5%	20.5%	
Maximum Green (s)	36.5	96.5		55.5	55.5	55.5	21.5	21.5		21.5	21.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	92.1	92.1			52.4	52.4		17.3		17.3	17.3	
Actuated g/C Ratio	0.78	0.78			0.44	0.44		0.15		0.15	0.15	
v/c Ratio	0.89	0.31			0.95	0.50		0.06		0.76	0.35	
Control Delay	51.4	4.8			54.6	14.1		35.4		73.9	12.8	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	51.4	4.8			54.6	14.1		35.4		73.9	12.8	
LOS	D	A			D	B		D		E	B	
Approach Delay		30.0			40.7			35.4			48.1	
Approach LOS		C			D			D			D	
Queue Length 50th (m)	103.1	26.4			175.8	32.8		2.1		35.9	1.1	
Queue Length 95th (m)	#172.3	41.4			#265.0	62.6		8.4		#59.8	17.0	
Internal Link Dist (m)		115.3			688.9			105.6			192.9	
Turn Bay Length (m)	50.0					50.0				50.0		
Base Capacity (vph)	603	1498			868	845		301		252	375	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.85	0.29			0.88	0.48		0.05		0.60	0.30	

Intersection Summary

Area Type: Other

Cycle Length: 127

Actuated Cycle Length: 118.5

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 37.3

Intersection LOS: D

Intersection Capacity Utilization 92.6%

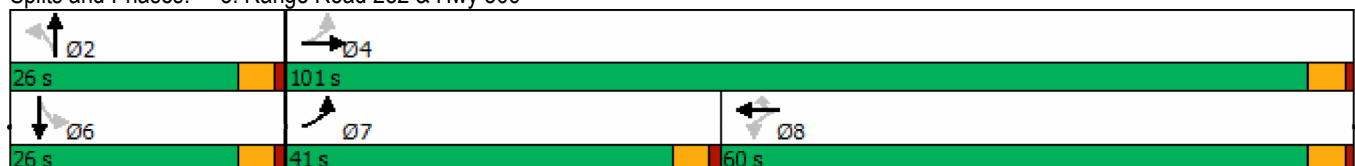
ICU Level of Service F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Range Road 282 & Hwy 566



Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

3.3 2040 PD-I - AM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	255	291	5	5	1043	176	5	5	5	71	5	50
Future Volume (vph)	255	291	5	5	1043	176	5	5	5	71	5	50
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	100.0		0.0	0.0		100.0	0.0		0.0	100.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850		0.955			0.863	
Flt Protected	0.950							0.984		0.950		
Satd. Flow (prot)	1742	1830	0	0	1834	1559	0	1723	0	1742	1583	0
Flt Permitted	0.201				0.999			0.918		0.748		
Satd. Flow (perm)	369	1830	0	0	1832	1559	0	1608	0	1372	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				187		5			53	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		712.9			147.7			117.6			221.9	
Travel Time (s)		25.7			5.3			5.3			10.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	271	310	5	5	1110	187	5	5	5	76	5	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	271	315	0	0	1115	187	0	15	0	76	58	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		4.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		2.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	24.5	24.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	127.5	127.5		127.5	127.5	127.5	22.5	22.5		22.5	22.5	

Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

3.3 2040 PD-I - AM

07/15/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	85.0%	85.0%		85.0%	85.0%	85.0%	15.0%	15.0%		15.0%	15.0%	
Maximum Green (s)	123.0	123.0		123.0	123.0	123.0	18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	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	
Total Lost Time (s)	4.5	4.5			4.5	4.5		4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	
Act Effct Green (s)	123.0	123.0			123.0	123.0		13.0		13.0	13.0	
Actuated g/C Ratio	0.85	0.85			0.85	0.85		0.09		0.09	0.09	
v/c Ratio	0.87	0.20			0.72	0.14		0.10		0.62	0.31	
Control Delay	37.5	2.6			8.0	0.5		46.8		85.5	21.5	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	37.5	2.6			8.0	0.5		46.8		85.5	21.5	
LOS	D	A			A	A		D		F	C	
Approach Delay		18.7			6.9			46.8			57.8	
Approach LOS		B			A			D			E	
Queue Length 50th (m)	35.0	12.9			97.6	0.0		2.7		21.4	1.3	
Queue Length 95th (m)	#131.2	23.5			173.0	3.8		9.8		38.6	14.9	
Internal Link Dist (m)		688.9			123.7			93.6			197.9	
Turn Bay Length (m)	100.0					100.0				100.0		
Base Capacity (vph)	313	1553			1554	1351		203		170	242	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.87	0.20			0.72	0.14		0.07		0.45	0.24	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 145

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 14.0

Intersection LOS: B

Intersection Capacity Utilization 94.7%

ICU Level of Service F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Range Road 281 & Hwy 566



Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	5	204	204	5	11	57	84	57	5	257	5
Future Vol, veh/h	11	5	204	204	5	11	57	84	57	5	257	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	5	215	215	5	12	60	88	60	5	271	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.9	12.5	11.4	12.9
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	5%	93%	2%
Vol Thru, %	42%	2%	2%	96%
Vol Right, %	29%	93%	5%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	198	220	220	267
LT Vol	57	11	204	5
Through Vol	84	5	5	257
RT Vol	57	204	11	5
Lane Flow Rate	208	232	232	281
Geometry Grp	1	1	1	1
Degree of Util (X)	0.325	0.334	0.377	0.436
Departure Headway (Hd)	5.608	5.196	5.854	5.582
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	638	688	611	641
Service Time	3.675	3.263	3.921	3.644
HCM Lane V/C Ratio	0.326	0.337	0.38	0.438
HCM Control Delay	11.4	10.9	12.5	12.9
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.4	1.5	1.8	2.2

Lanes, Volumes, Timings
3: Range Road 282 & Hwy 566

3.3 2040 PD-I - PM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	796	5	5	404	134	5	5	5	417	5	450
Future Volume (vph)	110	796	5	5	404	134	5	5	5	417	5	450
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	50.0		0.0	0.0		50.0	0.0		0.0	50.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.955			0.852	
Flt Protected	0.950				0.999			0.984		0.950		
Satd. Flow (prot)	1742	1832	0	0	1832	1559	0	1723	0	1742	1562	0
Flt Permitted	0.310				0.992			0.901		0.748		
Satd. Flow (perm)	569	1832	0	0	1819	1559	0	1578	0	1372	1562	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						125		5			387	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		139.3			712.9			129.6			216.9	
Travel Time (s)		5.0			25.7			5.8			9.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	116	838	5	5	425	141	5	5	5	439	5	474
Shared Lane Traffic (%)												
Lane Group Flow (vph)	116	843	0	0	430	141	0	15	0	439	479	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	10.1	73.0		62.9	62.9	62.9	57.0	57.0		57.0	57.0	

Lanes, Volumes, Timings
3: Range Road 282 & Hwy 566

3.3 2040 PD-I - PM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	7.8%	56.2%		48.4%	48.4%	48.4%	43.8%	43.8%		43.8%	43.8%	
Maximum Green (s)	5.6	68.5		58.4	58.4	58.4	52.5	52.5		52.5	52.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	53.1	53.1			42.1	42.1		39.7		39.7	39.7	
Actuated g/C Ratio	0.52	0.52			0.41	0.41		0.39		0.39	0.39	
v/c Ratio	0.32	0.89			0.58	0.20		0.02		0.83	0.57	
Control Delay	16.9	36.3			27.2	5.6		18.4		44.9	8.5	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	16.9	36.3			27.2	5.6		18.4		44.9	8.5	
LOS	B	D			C	A		B		D	A	
Approach Delay		33.9			21.9			18.4			25.9	
Approach LOS		C			C			B			C	
Queue Length 50th (m)	12.0	150.1			66.1	1.9		1.3		81.8	12.4	
Queue Length 95th (m)	24.7	#267.4			108.9	14.0		6.0		#143.7	44.6	
Internal Link Dist (m)		115.3			688.9			105.6			192.9	
Turn Bay Length (m)	50.0					50.0				50.0		
Base Capacity (vph)	364	1282			1128	1014		881		764	1041	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.32	0.66			0.38	0.14		0.02		0.57	0.46	

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 102.6

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 28.1

Intersection LOS: C

Intersection Capacity Utilization 107.1%

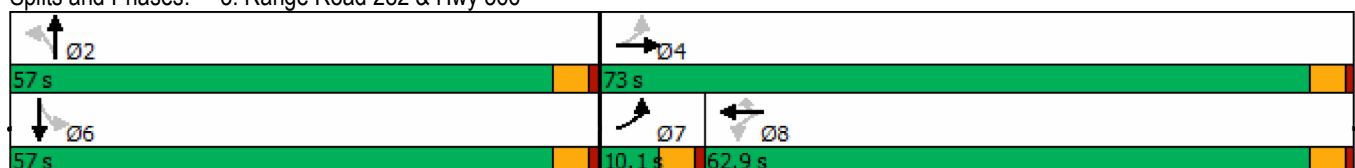
ICU Level of Service G

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Range Road 282 & Hwy 566



Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

3.3 2040 PD-I - PM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	1156	5	5	298	66	5	5	5	193	5	238
Future Volume (vph)	55	1156	5	5	298	66	5	5	5	193	5	238
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	100.0		0.0	0.0		100.0	0.0		0.0	100.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.955			0.853	
Flt Protected	0.950				0.999			0.984		0.950		
Satd. Flow (prot)	1742	1832	0	0	1832	1559	0	1723	0	1742	1564	0
Flt Permitted	0.555				0.913			0.904		0.748		
Satd. Flow (perm)	1018	1832	0	0	1674	1559	0	1583	0	1372	1564	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				69		5			251	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		712.9			147.7			117.6			221.9	
Travel Time (s)		25.7			5.3			5.3			10.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	1217	5	5	314	69	5	5	5	203	5	251
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	1222	0	0	319	69	0	15	0	203	256	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		4.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		2.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	24.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	100.0	100.0		100.0	100.0	100.0	22.5	22.5		22.5	22.5	

Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

3.3 2040 PD-I - PM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	81.6%	81.6%		81.6%	81.6%	81.6%	18.4%	18.4%		18.4%	18.4%	
Maximum Green (s)	95.5	95.5		95.5	95.5	95.5	18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	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	
Total Lost Time (s)	4.5	4.5			4.5	4.5		4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	
Act Effct Green (s)	68.3	68.3			68.3	68.3		18.8		18.8	18.8	
Actuated g/C Ratio	0.71	0.71			0.71	0.71		0.19		0.19	0.19	
v/c Ratio	0.08	0.94			0.27	0.06		0.05		0.76	0.51	
Control Delay	3.9	26.6			5.1	0.9		33.9		61.2	10.1	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	3.9	26.6			5.1	0.9		33.9		61.2	10.1	
LOS	A	C			A	A		C		E	B	
Approach Delay		25.6			4.4			33.9			32.7	
Approach LOS		C			A			C			C	
Queue Length 50th (m)	2.7	162.9			17.5	0.0		1.5		35.9	0.8	
Queue Length 95th (m)	5.6	249.4			25.6	2.8		8.6		#98.2	25.1	
Internal Link Dist (m)		688.9			123.7			93.6			197.9	
Turn Bay Length (m)	100.0					100.0				100.0		
Base Capacity (vph)	940	1692			1546	1445		312		267	506	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.06	0.72			0.21	0.05		0.05		0.76	0.51	

Intersection Summary

Area Type: Other

Cycle Length: 122.5

Actuated Cycle Length: 96.5

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 23.3

Intersection LOS: C

Intersection Capacity Utilization 99.0%

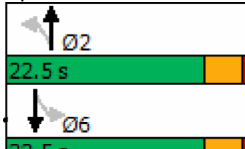
ICU Level of Service F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Range Road 281 & Hwy 566

	
22.5 s	100 s
22.5 s	100 s

Lanes, Volumes, Timings
3: Range Road 282 & Hwy 566

4.1 2050 BG - AM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	189	5	5	835	55	5	5	5	10	5	8
Future Volume (vph)	5	189	5	5	835	55	5	5	5	10	5	8
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	50.0		0.0	0.0		50.0	0.0		0.0	50.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850		0.955			0.904	
Flt Protected	0.950							0.984		0.950		
Satd. Flow (prot)	1742	1827	0	0	1834	1559	0	1723	0	1742	1658	0
Flt Permitted	0.203				0.999			0.883				
Satd. Flow (perm)	372	1827	0	0	1832	1559	0	1546	0	1834	1658	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				55		5			9	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		139.3			712.9			129.6			216.9	
Travel Time (s)		5.0			25.7			5.8			9.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	201	5	5	888	59	5	5	5	11	5	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	206	0	0	893	59	0	15	0	11	14	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	24.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	35.0	95.0		60.0	60.0	60.0	25.0	25.0		25.0	25.0	

Lanes, Volumes, Timings
3: Range Road 282 & Hwy 566

4.1 2050 BG - AM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	29.2%	79.2%		50.0%	50.0%	50.0%	20.8%	20.8%		20.8%	20.8%	
Maximum Green (s)	30.5	90.5		55.5	55.5	55.5	20.5	20.5		20.5	20.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	62.9	65.8			52.6	52.6		10.2		10.2	10.2	
Actuated g/C Ratio	0.87	0.91			0.73	0.73		0.14		0.14	0.14	
v/c Ratio	0.01	0.12			0.67	0.05		0.07		0.04	0.06	
Control Delay	2.0	1.6			10.3	1.9		27.3		32.0	22.6	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	2.0	1.6			10.3	1.9		27.3		32.0	22.6	
LOS	A	A			B	A		C		C	C	
Approach Delay		1.6			9.8			27.3			26.7	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	0.0	0.0			31.2	0.1		1.1		1.2	0.5	
Queue Length 95th (m)	0.7	10.8			135.0	3.8		6.8		6.3	6.0	
Internal Link Dist (m)		115.3			688.9			105.6			192.9	
Turn Bay Length (m)	50.0					50.0				50.0		
Base Capacity (vph)	908	1827			1424	1225		447		526	482	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.01	0.11			0.63	0.05		0.03		0.02	0.03	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 72.5

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 9.0

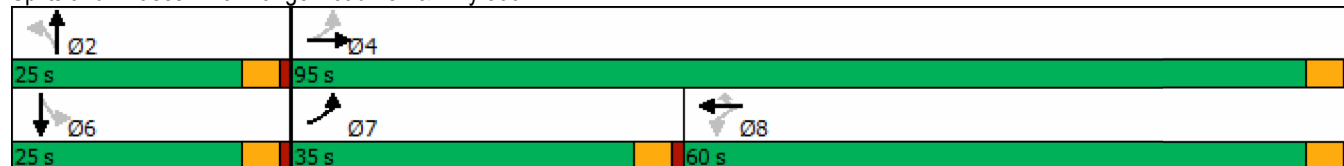
Intersection LOS: A

Intersection Capacity Utilization 65.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3: Range Road 282 & Hwy 566



Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

4.1 2050 BG - AM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	195	5	5	886	5	5	5	5	5	5	5
Future Volume (vph)	5	195	5	5	886	5	5	5	5	5	5	5
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	100.0		0.0	0.0		100.0	0.0		0.0	100.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850		0.955			0.925	
Flt Protected	0.950							0.984		0.950		
Satd. Flow (prot)	1742	1827	0	0	1834	1559	0	1723	0	1742	1696	0
Flt Permitted	0.174				0.999			0.898		0.748		
Satd. Flow (perm)	319	1827	0	0	1832	1559	0	1573	0	1372	1696	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				11		5			5	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		712.9			147.7			117.6			221.9	
Travel Time (s)		25.7			5.3			5.3			10.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	207	5	5	943	5	5	5	5	5	5	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	212	0	0	948	5	0	15	0	5	10	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		4.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		2.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	24.5	24.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	127.0	127.0		127.0	127.0	127.0	23.0	23.0		23.0	23.0	

Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

4.1 2050 BG - AM
07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	84.7%	84.7%		84.7%	84.7%	84.7%	15.3%	15.3%		15.3%	15.3%	
Maximum Green (s)	122.5	122.5		122.5	122.5	122.5	18.5	18.5		18.5	18.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	
Act Effct Green (s)	27.1	27.1			27.1	27.1		6.0		6.0	6.0	
Actuated g/C Ratio	0.64	0.64			0.64	0.64		0.14		0.14	0.14	
v/c Ratio	0.02	0.18			0.81	0.00		0.07		0.03	0.04	
Control Delay	2.8	3.2			12.0	1.0		17.5		20.0	16.3	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	2.8	3.2			12.0	1.0		17.5		20.0	16.3	
LOS	A	A			B	A		B		B	B	
Approach Delay		3.2			11.9			17.5			17.6	
Approach LOS		A			B			B			B	
Queue Length 50th (m)	0.1	4.4			36.3	0.0		0.6		0.3	0.3	
Queue Length 95th (m)	0.8	9.3			75.9	0.5		5.1		3.0	3.9	
Internal Link Dist (m)		688.9			123.7			93.6			197.9	
Turn Bay Length (m)	100.0					100.0				100.0		
Base Capacity (vph)	319	1827			1832	1559		711		618	767	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.02	0.12			0.52	0.00		0.02		0.01	0.01	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 42.3

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 10.5

Intersection LOS: B

Intersection Capacity Utilization 64.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: Range Road 281 & Hwy 566

	
Ø2	Ø4
23 s	127 s
	
Ø6	Ø8
23 s	127 s

Intersection												
Int Delay, s/veh	7.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	5	5	5	5	55	5	5	17	5
Future Vol, veh/h	5	5	5	5	5	5	5	55	5	5	17	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5	5	59	5	5	18	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	47	38	8	68	38	8
Stage 1	-	-	-	-	-	-	18	18	-	18	18	-
Stage 2	-	-	-	-	-	-	29	20	-	50	20	-
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	1610	-	-	1610	-	-	954	854	1074	925	854	1074
Stage 1	-	-	-	-	-	-	1001	880	-	1001	880	-
Stage 2	-	-	-	-	-	-	988	879	-	963	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	929	849	1074	868	849	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	929	849	-	868	849	-
Stage 1	-	-	-	-	-	-	998	877	-	998	877	-
Stage 2	-	-	-	-	-	-	960	876	-	892	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			2.4			9.5			9.2		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	869	1610	-	-	1610	-	-	887				
HCM Lane V/C Ratio	0.08	0.003	-	-	0.003	-	-	0.032				
HCM Control Delay (s)	9.5	7.2	0	-	7.2	0	-	9.2				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	5	5	5	38	5	5	5	31	5	5
Future Vol, veh/h	5	5	5	5	5	38	5	5	5	31	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	40	5	5	5	33	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	45	0	0	10	0	0	58	73	8	58	55	25
Stage 1	-	-	-	-	-	-	18	18	-	35	35	-
Stage 2	-	-	-	-	-	-	40	55	-	23	20	-
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	1563	-	-	1610	-	-	939	817	1074	939	836	1051
Stage 1	-	-	-	-	-	-	1001	880	-	981	866	-
Stage 2	-	-	-	-	-	-	975	849	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1563	-	-	1610	-	-	926	812	1074	926	831	1051
Mov Cap-2 Maneuver	-	-	-	-	-	-	926	812	-	926	831	-
Stage 1	-	-	-	-	-	-	998	877	-	978	863	-
Stage 2	-	-	-	-	-	-	961	846	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			0.8			9			9.1		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	925	1563	-	-	1610	-	-	927				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.047				
HCM Control Delay (s)	9	7.3	0	-	7.2	0	-	9.1				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Lanes, Volumes, Timings
3: Range Road 282 & Hwy 566

4.1 2050 BG - PM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	927	5	5	209	11	5	5	5	62	5	5
Future Volume (vph)	9	927	5	5	209	11	5	5	5	62	5	5
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	50.0		0.0	0.0		50.0	0.0		0.0	50.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.955			0.925	
Flt Protected	0.950				0.999			0.984		0.950		
Satd. Flow (prot)	1742	1832	0	0	1832	1559	0	1723	0	1742	1696	0
Flt Permitted	0.561				0.984			0.917		0.748		
Satd. Flow (perm)	1029	1832	0	0	1805	1559	0	1606	0	1372	1696	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						52		5			5	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		139.3			712.9			129.6			216.9	
Travel Time (s)		5.0			25.7			5.8			9.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	976	5	5	220	12	5	5	5	65	5	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	981	0	0	225	12	0	15	0	65	10	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	10.1	68.0		57.9	57.9	57.9	57.0	57.0		57.0	57.0	

Lanes, Volumes, Timings
3: Range Road 282 & Hwy 566

4.1 2050 BG - PM

07/15/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	8.1%	54.4%		46.3%	46.3%	46.3%	45.6%	45.6%		45.6%	45.6%	
Maximum Green (s)	5.6	63.5		53.4	53.4	53.4	52.5	52.5		52.5	52.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	54.1	55.1			44.1	44.1		10.6		10.6	10.6	
Actuated g/C Ratio	0.77	0.78			0.62	0.62		0.15		0.15	0.15	
v/c Ratio	0.01	0.69			0.20	0.01		0.06		0.32	0.04	
Control Delay	3.0	8.8			7.4	0.0		21.9		31.5	20.3	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	3.0	8.8			7.4	0.0		21.9		31.5	20.3	
LOS	A	A			A	A		C		C	C	
Approach Delay		8.7			7.1			21.9			30.0	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	0.4	58.1			12.5	0.0		1.2		7.8	0.6	
Queue Length 95th (m)	1.3	115.7			24.0	0.0		5.8		18.5	4.3	
Internal Link Dist (m)		115.3			688.9			105.6			192.9	
Turn Bay Length (m)	50.0					50.0				50.0		
Base Capacity (vph)	845	1653			1370	1196		1200		1024	1267	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.01	0.59			0.16	0.01		0.01		0.06	0.01	

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 70.6

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 9.8

Intersection LOS: A

Intersection Capacity Utilization 86.7%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3: Range Road 282 & Hwy 566

57 s		68 s	
57 s		10.1 s	57.9 s

Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

4.1 2050 BG - PM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	985	5	5	216	5	5	5	5	5	5	5
Future Volume (vph)	5	985	5	5	216	5	5	5	5	5	5	5
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	100.0		0.0	0.0		100.0	0.0		0.0	100.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.955			0.925	
Flt Protected	0.950				0.999			0.984		0.950		
Satd. Flow (prot)	1742	1832	0	0	1832	1559	0	1723	0	1742	1696	0
Flt Permitted	0.614				0.985			0.920				
Satd. Flow (perm)	1126	1832	0	0	1806	1559	0	1611	0	1834	1696	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						11		5			5	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		712.9			147.7			117.6			221.9	
Travel Time (s)		25.7			5.3			5.3			10.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	1037	5	5	227	5	5	5	5	5	5	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	1042	0	0	232	5	0	15	0	5	10	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		4.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		2.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	24.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	115.0	115.0		105.5	105.5	105.5	35.0	35.0		35.0	35.0	

Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

4.1 2050 BG - PM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	76.7%	76.7%		70.3%	70.3%	70.3%	23.3%	23.3%		23.3%	23.3%	
Maximum Green (s)	110.5	110.5		101.0	101.0	101.0	30.5	30.5		30.5	30.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	
Act Effect Green (s)	48.5	48.5			48.5	48.5		11.0		11.0	11.0	
Actuated g/C Ratio	0.90	0.90			0.90	0.90		0.20		0.20	0.20	
v/c Ratio	0.00	0.63			0.14	0.00		0.05		0.01	0.03	
Control Delay	2.2	5.6			1.9	1.0		22.7		26.8	21.5	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	2.2	5.6			1.9	1.0		22.7		26.8	21.5	
LOS	A	A			A	A		C		C	C	
Approach Delay		5.6			1.9			22.7			23.3	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	0.0	0.0			0.0	0.0		0.5		0.3	0.3	
Queue Length 95th (m)	0.8	113.7			12.6	0.5		6.2		3.4	4.6	
Internal Link Dist (m)		688.9			123.7			93.6			197.9	
Turn Bay Length (m)	100.0					100.0				100.0		
Base Capacity (vph)	1126	1832			1806	1559		1008		1145	1061	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.00	0.57			0.13	0.00		0.01		0.00	0.01	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 53.9

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 5.3

Intersection LOS: A

Intersection Capacity Utilization 89.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 4: Range Road 281 & Hwy 566



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	5	5	5	5	5	5	5	17	5	5	62	5
Future Vol, veh/h	5	5	5	5	5	5	5	17	5	5	62	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5	5	18	5	5	65	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	71	38	8	47	38	8
Stage 1	-	-	-	-	-	-	18	18	-	18	18	-
Stage 2	-	-	-	-	-	-	53	20	-	29	20	-
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	1610	-	-	1610	-	-	920	854	1074	954	854	1074
Stage 1	-	-	-	-	-	-	1001	880	-	1001	880	-
Stage 2	-	-	-	-	-	-	960	879	-	988	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	857	849	1074	930	849	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	857	849	-	930	849	-
Stage 1	-	-	-	-	-	-	998	877	-	998	877	-
Stage 2	-	-	-	-	-	-	882	876	-	960	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			2.4			9.2			9.6		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	885	1610	-	-	1610	-	-	867				
HCM Lane V/C Ratio	0.032	0.003	-	-	0.003	-	-	0.087				
HCM Control Delay (s)	9.2	7.2	0	-	7.2	0	-	9.6				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3				

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	5	5	35	5	5	5	41	5	5
Future Vol, veh/h	5	5	5	5	5	35	5	5	5	41	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	37	5	5	5	43	5	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	42	0	0	10	0	0	57	70	8	57	54	24
Stage 1	-	-	-	-	-	-	18	18	-	34	34	-
Stage 2	-	-	-	-	-	-	39	52	-	23	20	-
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	1567	-	-	1610	-	-	940	821	1074	940	837	1052
Stage 1	-	-	-	-	-	-	1001	880	-	982	867	-
Stage 2	-	-	-	-	-	-	976	852	-	995	879	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1567	-	-	1610	-	-	927	816	1074	927	832	1052
Mov Cap-2 Maneuver	-	-	-	-	-	-	927	816	-	927	832	-
Stage 1	-	-	-	-	-	-	998	877	-	979	864	-
Stage 2	-	-	-	-	-	-	962	849	-	981	876	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			0.8			9			9.1		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	927	1567	-	-	1610	-	-	927
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.058
HCM Control Delay (s)	9	7.3	0	-	7.2	0	-	9.1
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2

Intersection	
Intersection Delay, s/veh	23.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	57	57	5	5	204	263	204	11	86	11
Future Vol, veh/h	5	5	57	57	5	5	204	263	204	11	86	11
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	61	61	5	5	217	280	217	12	91	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.2	10	28.2	9.1
HCM LOS	A	A	D	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	30%	7%	85%	10%
Vol Thru, %	39%	7%	7%	80%
Vol Right, %	30%	85%	7%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	671	67	67	108
LT Vol	204	5	57	11
Through Vol	263	5	5	86
RT Vol	204	57	5	11
Lane Flow Rate	714	71	71	115
Geometry Grp	1	1	1	1
Degree of Util (X)	0.863	0.109	0.121	0.161
Departure Headway (Hd)	4.35	5.509	6.125	5.059
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	828	654	589	701
Service Time	2.406	3.512	4.128	3.151
HCM Lane V/C Ratio	0.862	0.109	0.121	0.164
HCM Control Delay	28.2	9.2	10	9.1
HCM Lane LOS	D	A	A	A
HCM 95th-tile Q	10.7	0.4	0.4	0.6

Lanes, Volumes, Timings
3: Range Road 282 & Hwy 566

4.2 2050 PD - AM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	483	443	5	5	884	389	5	5	5	145	5	102
Future Volume (vph)	483	443	5	5	884	389	5	5	5	145	5	102
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	50.0		0.0	0.0		50.0	0.0		0.0	50.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850		0.955			0.857	
Flt Protected	0.950							0.984		0.950		
Satd. Flow (prot)	1742	1830	0	0	1834	1559	0	1723	0	1742	1572	0
Flt Permitted	0.049				0.998			0.921		0.748		
Satd. Flow (perm)	90	1830	0	0	1830	1559	0	1613	0	1372	1572	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				165		5			109	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		139.3			712.9			129.6			216.9	
Travel Time (s)		5.0			25.7			5.8			9.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	514	471	5	5	940	414	5	5	5	154	5	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	514	476	0	0	945	414	0	15	0	154	114	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	24.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	43.4	125.4		82.0	82.0	82.0	24.6	24.6		24.6	24.6	

Lanes, Volumes, Timings
3: Range Road 282 & Hwy 566

4.2 2050 PD - AM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	28.9%	83.6%		54.7%	54.7%	54.7%	16.4%	16.4%		16.4%	16.4%	
Maximum Green (s)	38.9	120.9		77.5	77.5	77.5	20.1	20.1		20.1	20.1	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	120.9	120.9			77.5	77.5		19.1		19.1	19.1	
Actuated g/C Ratio	0.81	0.81			0.52	0.52		0.13		0.13	0.13	
v/c Ratio	1.02	0.32			0.99	0.47		0.07		0.88	0.39	
Control Delay	90.6	4.3			63.1	14.9		44.2		105.9	15.0	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	90.6	4.3			63.1	14.9		44.2		105.9	15.0	
LOS	F	A			E	B		D		F	B	
Approach Delay		49.1			48.4			44.2			67.2	
Approach LOS		D			D			D			E	
Queue Length 50th (m)	~147.0	31.3			274.6	44.8		2.6		45.4	1.3	
Queue Length 95th (m)	#217.7	42.1			#370.8	71.6		9.6		#84.5	19.5	
Internal Link Dist (m)		115.3			688.9			105.6			192.9	
Turn Bay Length (m)	50.0					50.0				50.0		
Base Capacity (vph)	504	1485			952	890		221		184	306	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	1.02	0.32			0.99	0.47		0.07		0.84	0.37	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 149

Natural Cycle: 130

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.02

Intersection Signal Delay: 50.5

Intersection LOS: D

Intersection Capacity Utilization 101.7%

ICU Level of Service G

Analysis Period (min) 15

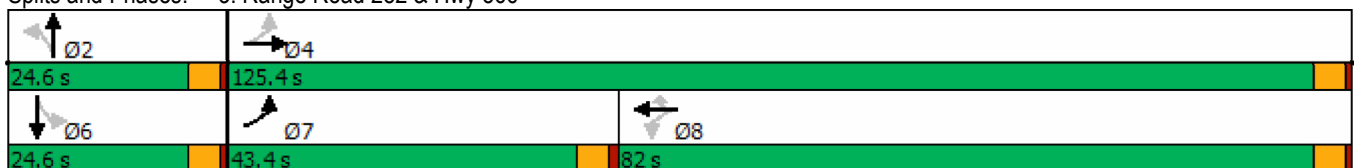
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Range Road 282 & Hwy 566


--

Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

4.2 2050 PD - AM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	255	330	5	5	1220	176	5	5	5	71	5	50
Future Volume (vph)	255	330	5	5	1220	176	5	5	5	71	5	50
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	100.0		0.0	0.0		100.0	0.0		0.0	100.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850		0.955			0.863	
Flt Protected	0.950							0.984		0.950		
Satd. Flow (prot)	1742	1830	0	0	1834	1559	0	1723	0	1742	1583	0
Flt Permitted	0.128				0.999			0.918		0.748		
Satd. Flow (perm)	235	1830	0	0	1832	1559	0	1608	0	1372	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				187		5			53	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		712.9			147.7			117.6			221.9	
Travel Time (s)		25.7			5.3			5.3			10.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	271	351	5	5	1298	187	5	5	5	76	5	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	271	356	0	0	1303	187	0	15	0	76	58	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		4.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		2.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	24.5	24.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	127.5	127.5		127.5	127.5	127.5	22.5	22.5		22.5	22.5	

Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

4.2 2050 PD - AM
07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	85.0%	85.0%		85.0%	85.0%	85.0%	15.0%	15.0%		15.0%	15.0%	
Maximum Green (s)	123.0	123.0		123.0	123.0	123.0	18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	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	
Total Lost Time (s)	4.5	4.5			4.5	4.5		4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	
Act Effct Green (s)	123.0	123.0			123.0	123.0		13.0		13.0	13.0	
Actuated g/C Ratio	0.85	0.85			0.85	0.85		0.09		0.09	0.09	
v/c Ratio	1.36	0.23			0.84	0.14		0.10		0.62	0.31	
Control Delay	210.0	2.7			13.1	0.5		46.8		85.5	21.5	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	210.0	2.7			13.1	0.5		46.8		85.5	21.5	
LOS	F	A			B	A		D		F	C	
Approach Delay		92.3			11.6			46.8			57.8	
Approach LOS		F			B			D			E	
Queue Length 50th (m)	~43.8	15.1			155.0	0.0		2.7		21.4	1.3	
Queue Length 95th (m)	#107.4	26.9			294.3	3.8		9.8		38.6	14.9	
Internal Link Dist (m)		688.9			123.7			93.6			197.9	
Turn Bay Length (m)	100.0					100.0				100.0		
Base Capacity (vph)	199	1553			1554	1351		203		170	242	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	1.36	0.23			0.84	0.14		0.07		0.45	0.24	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 145

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.36

Intersection Signal Delay: 36.9

Intersection LOS: D

Intersection Capacity Utilization 105.7%

ICU Level of Service G

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Range Road 281 & Hwy 566

	
Ø2	Ø4
22.5 s	127.5 s
	
Ø6	Ø8
22.5 s	127.5 s

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	5	5	18	27	5	5	5	67	5	5	17	5
Future Vol, veh/h	5	5	18	27	5	5	5	67	5	5	17	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	19	29	5	5	5	71	5	5	18	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	24	0	0	102	93	15	129	100	8
Stage 1	-	-	-	-	-	-	25	25	-	66	66	-
Stage 2	-	-	-	-	-	-	77	68	-	63	34	-
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	1610	-	-	1591	-	-	879	797	1065	844	790	1074
Stage 1	-	-	-	-	-	-	993	874	-	945	840	-
Stage 2	-	-	-	-	-	-	932	838	-	948	867	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1591	-	-	846	780	1065	769	773	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	846	780	-	769	773	-
Stage 1	-	-	-	-	-	-	990	871	-	942	825	-
Stage 2	-	-	-	-	-	-	891	823	-	863	864	-
Approach	EB		WB				NB		SB			
HCM Control Delay, s	1.3		5.3				10		9.6			
HCM LOS							B		A			
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	798	1610	-	-	1591	-	-	814				
HCM Lane V/C Ratio	0.103	0.003	-	-	0.018	-	-	0.035				
HCM Control Delay (s)	10	7.2	0	-	7.3	0	-	9.6				
HCM Lane LOS	B	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.1				

HCM 6th TWSC
2: Range Road 281 & Township Road 264 & Hwy 791

4.2 2050 PD - AM

07/15/2025

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	5	27	38	5	5	5	31	5	5
Future Vol, veh/h	5	5	5	5	27	38	5	5	5	31	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	29	40	5	5	5	33	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	69	0	0	10	0	0	82	97	8	82	79	49
Stage 1	-	-	-	-	-	-	18	18	-	59	59	-
Stage 2	-	-	-	-	-	-	64	79	-	23	20	-
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	1532	-	-	1610	-	-	905	793	1074	905	811	1020
Stage 1	-	-	-	-	-	-	1001	880	-	953	846	-
Stage 2	-	-	-	-	-	-	947	829	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1532	-	-	1610	-	-	891	788	1074	891	806	1020
Mov Cap-2 Maneuver	-	-	-	-	-	-	891	788	-	891	806	-
Stage 1	-	-	-	-	-	-	998	877	-	950	843	-
Stage 2	-	-	-	-	-	-	933	827	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.5			0.5			9.1			9.2		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	903	1532	-	-	1610	-	-	893				
HCM Lane V/C Ratio	0.018	0.003	-	-	0.003	-	-	0.049				
HCM Control Delay (s)	9.1	7.4	0	-	7.2	0	-	9.2				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2				

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	57	5	65	204	11	51
Future Vol, veh/h	57	5	65	204	11	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	5	69	217	12	54
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	256	178	0	0	286	0
Stage 1	178	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	733	865	-	-	1276	-
Stage 1	853	-	-	-	-	-
Stage 2	945	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	726	865	-	-	1276	-
Mov Cap-2 Maneuver	726	-	-	-	-	-
Stage 1	853	-	-	-	-	-
Stage 2	936	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.4	0		1.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	736	1276	-	
HCM Lane V/C Ratio	-	-	0.09	0.009	-	
HCM Control Delay (s)	-	-	10.4	7.8	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.3	0	-	

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	57	5	668	204	11	189
Future Vol, veh/h	57	5	668	204	11	189
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	5	711	217	12	201
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1045	820	0	0	928	0
Stage 1	820	-	-	-	-	-
Stage 2	225	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	253	375	-	-	737	-
Stage 1	433	-	-	-	-	-
Stage 2	812	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	248	375	-	-	737	-
Mov Cap-2 Maneuver	248	-	-	-	-	-
Stage 1	433	-	-	-	-	-
Stage 2	797	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	24	0		0.5		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	255	737	-	
HCM Lane V/C Ratio	-	-	0.259	0.016	-	
HCM Control Delay (s)	-	-	24	10	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	1	0	-	

Intersection						
Int Delay, s/veh	7.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	61	216	5	5	5
Future Vol, veh/h	5	61	216	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	65	230	5	5	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	473	8	10	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	465	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	550	1074	1610	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	471	1074	1610	-	-	-
Mov Cap-2 Maneuver	471	-	-	-	-	-
Stage 1	870	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9	7.4		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1610	-	979	-	-	
HCM Lane V/C Ratio	0.143	-	0.072	-	-	
HCM Control Delay (s)	7.6	0	9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.5	-	0.2	-	-	

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	60	215	216	61	5
Future Vol, veh/h	5	60	215	216	61	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	64	229	230	65	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	756	68	70	0	-	0
Stage 1	68	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	376	995	1531	-	-	-
Stage 1	955	-	-	-	-	-
Stage 2	499	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	312	995	1531	-	-	-
Mov Cap-2 Maneuver	312	-	-	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	499	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.6	3.9		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1531	-	852	-	-	
HCM Lane V/C Ratio	0.149	-	0.081	-	-	
HCM Control Delay (s)	7.8	0	9.6	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.5	-	0.3	-	-	

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	5	204	204	5	11	57	88	57	5	270	5
Future Vol, veh/h	11	5	204	204	5	11	57	88	57	5	270	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	5	215	215	5	12	60	93	60	5	284	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11	12.6	11.6	13.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	5%	93%	2%
Vol Thru, %	44%	2%	2%	96%
Vol Right, %	28%	93%	5%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	202	220	220	280
LT Vol	57	11	204	5
Through Vol	88	5	5	270
RT Vol	57	204	11	5
Lane Flow Rate	213	232	232	295
Geometry Grp	1	1	1	1
Degree of Util (X)	0.334	0.338	0.381	0.459
Departure Headway (Hd)	5.652	5.261	5.92	5.607
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	632	679	604	640
Service Time	3.723	3.332	3.989	3.672
HCM Lane V/C Ratio	0.337	0.342	0.384	0.461
HCM Control Delay	11.6	11	12.6	13.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.5	1.5	1.8	2.4

Lanes, Volumes, Timings
3: Range Road 282 & Hwy 566

4.2 2050 PD - PM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	981	5	5	446	136	5	5	5	430	5	450
Future Volume (vph)	112	981	5	5	446	136	5	5	5	430	5	450
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	50.0		0.0	0.0		50.0	0.0		0.0	50.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.955			0.852	
Flt Protected	0.950				0.999			0.984		0.950		
Satd. Flow (prot)	1742	1832	0	0	1832	1559	0	1723	0	1742	1562	0
Flt Permitted	0.331				0.735			0.896		0.748		
Satd. Flow (perm)	607	1832	0	0	1348	1559	0	1569	0	1372	1562	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						104		5			355	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		139.3			712.9			129.6			216.9	
Travel Time (s)		5.0			25.7			5.8			9.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	118	1033	5	5	469	143	5	5	5	453	5	474
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	1038	0	0	474	143	0	15	0	453	479	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	9.8	85.0		75.2	75.2	75.2	65.0	65.0		65.0	65.0	

Lanes, Volumes, Timings
3: Range Road 282 & Hwy 566

4.2 2050 PD - PM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	6.5%	56.7%		50.1%	50.1%	50.1%	43.3%	43.3%		43.3%	43.3%	
Maximum Green (s)	5.3	80.5		70.7	70.7	70.7	60.5	60.5		60.5	60.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag		Lag						
Lead-Lag Optimize?	Yes			Yes		Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	80.9	80.9			71.1	71.1		50.3		50.3	50.3	
Actuated g/C Ratio	0.58	0.58			0.51	0.51		0.36		0.36	0.36	
v/c Ratio	0.30	0.98			0.69	0.17		0.03		0.92	0.61	
Control Delay	17.6	54.1			35.0	7.5		21.1		68.1	12.1	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	17.6	54.1			35.0	7.5		21.1		68.1	12.1	
LOS	B	D			D	A		C		E	B	
Approach Delay		50.4			28.7			21.1			39.3	
Approach LOS		D			C			C			D	
Queue Length 50th (m)	15.0	~286.5			101.7	5.6		1.8		119.2	25.1	
Queue Length 95th (m)	27.7	#417.1			159.5	18.5		6.5		#176.6	59.4	
Internal Link Dist (m)		115.3			688.9			105.6			192.9	
Turn Bay Length (m)	50.0					50.0				50.0		
Base Capacity (vph)	393	1057			683	841		682		594	878	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.30	0.98			0.69	0.17		0.02		0.76	0.55	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 140.3

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 41.5

Intersection LOS: D

Intersection Capacity Utilization 120.1%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Range Road 282 & Hwy 566

 Ø2	 Ø4
65 s	85 s
 Ø6	 Ø7
65 s	9.8 s 75.2 s

Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

4.2 2050 PD - PM

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	1353	5	5	341	66	5	5	5	193	5	238
Future Volume (vph)	55	1353	5	5	341	66	5	5	5	193	5	238
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	100.0		0.0	0.0		100.0	0.0		0.0	100.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.955			0.853	
Flt Protected	0.950				0.999			0.984		0.950		
Satd. Flow (prot)	1742	1832	0	0	1832	1559	0	1723	0	1742	1564	0
Flt Permitted	0.525				0.689			0.832		0.748		
Satd. Flow (perm)	963	1832	0	0	1264	1559	0	1457	0	1372	1564	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						69		5			251	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		712.9			147.7			117.6			221.9	
Travel Time (s)		25.7			5.3			5.3			10.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	1424	5	5	359	69	5	5	5	203	5	251
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	1429	0	0	364	69	0	15	0	203	256	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		4.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		2.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	24.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	118.0	118.0		118.0	118.0	118.0	32.0	32.0		32.0	32.0	

Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

4.2 2050 PD - PM
07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	78.7%	78.7%		78.7%	78.7%	78.7%	21.3%	21.3%		21.3%	21.3%	
Maximum Green (s)	113.5	113.5		113.5	113.5	113.5	27.5	27.5		27.5	27.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	
Act Effct Green (s)	113.5	113.5			113.5	113.5		24.8		24.8	24.8	
Actuated g/C Ratio	0.77	0.77			0.77	0.77		0.17		0.17	0.17	
v/c Ratio	0.08	1.01			0.37	0.06		0.06		0.88	0.54	
Control Delay	4.9	45.0			7.0	1.1		39.2		95.0	11.0	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	4.9	45.0			7.0	1.1		39.2		95.0	11.0	
LOS	A	D			A	A		D		F	B	
Approach Delay		43.4			6.1			39.2			48.1	
Approach LOS		D			A			D			D	
Queue Length 50th (m)	4.0	~453.8			32.9	0.0		2.5		58.6	1.2	
Queue Length 95th (m)	7.8	#535.2			47.6	3.5		9.1		#98.8	26.3	
Internal Link Dist (m)		688.9			123.7			93.6			197.9	
Turn Bay Length (m)	100.0					100.0				100.0		
Base Capacity (vph)	742	1412			974	1217		276		256	496	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.08	1.01			0.37	0.06		0.05		0.79	0.52	
Intersection Summary												
Area Type: Other												
Cycle Length: 150												
Actuated Cycle Length: 147.3												
Natural Cycle: 130												
Control Type: Actuated-Uncoordinated												
Maximum v/c Ratio: 1.01												
Intersection Signal Delay: 37.6 Intersection LOS: D												
Intersection Capacity Utilization 109.7% ICU Level of Service H												
Analysis Period (min) 15												
~ Volume exceeds capacity, queue is theoretically infinite.												
Queue shown is maximum after two cycles.												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												

Splits and Phases: 4: Range Road 281 & Hwy 566

	
Ø2	Ø4
32 s	118 s
	
Ø6	Ø8
32 s	118 s

Intersection												
Int Delay, s/veh	8.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	8	5	5	5	61	5	5	62	5
Future Vol, veh/h	5	5	5	8	5	5	5	61	5	5	62	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	8	5	5	5	64	5	5	65	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	77	44	8	76	44	8
Stage 1	-	-	-	-	-	-	18	18	-	24	24	-
Stage 2	-	-	-	-	-	-	59	26	-	52	20	-
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	1610	-	-	1610	-	-	912	848	1074	914	848	1074
Stage 1	-	-	-	-	-	-	1001	880	-	994	875	-
Stage 2	-	-	-	-	-	-	953	874	-	961	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	848	841	1074	851	841	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	848	841	-	851	841	-
Stage 1	-	-	-	-	-	-	998	877	-	991	871	-
Stage 2	-	-	-	-	-	-	873	870	-	884	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			3.2			9.6			9.6		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	855	1610	-	-	1610	-	-	855				
HCM Lane V/C Ratio	0.087	0.003	-	-	0.005	-	-	0.089				
HCM Control Delay (s)	9.6	7.2	0	-	7.2	0	-	9.6				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.3				

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	5	5	7	35	5	5	5	41	5	5
Future Vol, veh/h	5	5	5	5	7	35	5	5	5	41	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	7	37	5	5	5	43	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	44	0	0	10	0	0	59	72	8	59	56	26
Stage 1	-	-	-	-	-	-	18	18	-	36	36	-
Stage 2	-	-	-	-	-	-	41	54	-	23	20	-
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	1564	-	-	1610	-	-	937	818	1074	937	835	1050
Stage 1	-	-	-	-	-	-	1001	880	-	980	865	-
Stage 2	-	-	-	-	-	-	974	850	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1564	-	-	1610	-	-	924	813	1074	924	830	1050
Mov Cap-2 Maneuver	-	-	-	-	-	-	924	813	-	924	830	-
Stage 1	-	-	-	-	-	-	998	877	-	977	862	-
Stage 2	-	-	-	-	-	-	960	847	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			0.8			9			9.1		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	925	1564	-	-	1610	-	-	925				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.058				
HCM Control Delay (s)	9	7.3	0	-	7.2	0	-	9.1				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2				

Intersection						
Int Delay, s/veh	6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	204	11	53	57	5	72
Future Vol, veh/h	204	11	53	57	5	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	215	12	56	60	5	76

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	172	86	0	0	116
Stage 1	86	-	-	-	-
Stage 2	86	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	818	973	-	-	1473
Stage 1	937	-	-	-	-
Stage 2	937	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	815	973	-	-	1473
Mov Cap-2 Maneuver	815	-	-	-	-
Stage 1	937	-	-	-	-
Stage 2	933	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	822	1473
HCM Lane V/C Ratio	-	-	0.275	0.004
HCM Control Delay (s)	-	-	11	7.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.1	0

Intersection						
Int Delay, s/veh	9.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	204	11	191	57	5	675
Future Vol, veh/h	204	11	191	57	5	675
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	215	12	201	60	5	711
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	952	231	0	0	261	0
Stage 1	231	-	-	-	-	-
Stage 2	721	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	288	808	-	-	1303	-
Stage 1	807	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	286	808	-	-	1303	-
Mov Cap-2 Maneuver	286	-	-	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	479	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	47.8	0		0.1		
HCM LOS	E					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 296		1303	-	
HCM Lane V/C Ratio	-	- 0.765		0.004	-	
HCM Control Delay (s)	-	- 47.8		7.8	0	
HCM Lane LOS	-	- E		A	A	
HCM 95th %tile Q(veh)	-	- 5.8		0	-	

Intersection						
Int Delay, s/veh	8.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	216	61	5	5	5
Future Vol, veh/h	5	216	61	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	227	64	5	5	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	141	8	10	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	133	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	852	1074	1610	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	893	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	818	1074	1610	-	-	-
Mov Cap-2 Maneuver	818	-	-	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	893	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.3	6.8		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1610	-	1066	-	-	
HCM Lane V/C Ratio	0.04	-	0.218	-	-	
HCM Control Delay (s)	7.3	0	9.3	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-	

Intersection						
Int Delay, s/veh	5.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	215	60	61	216	5
Future Vol, veh/h	5	215	60	61	216	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	226	63	64	227	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	420	230	232	0	-	0
Stage 1	230	-	-	-	-	-
Stage 2	190	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	590	809	1336	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	842	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	561	809	1336	-	-	-
Mov Cap-2 Maneuver	561	-	-	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	842	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.3	3.9		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1336	-	801	-	-	
HCM Lane V/C Ratio	0.047	-	0.289	-	-	
HCM Control Delay (s)	7.8	0	11.3	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	1.2	-	-	

Lanes, Volumes, Timings
3: Range Road 282 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	483	443	5	5	884	389	5	5	5	145	5	102
Future Volume (vph)	483	443	5	5	884	389	5	5	5	145	5	102
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	50.0		0.0	0.0		50.0	0.0		0.0	50.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850		0.955			0.857	
Flt Protected	0.950							0.984		0.950		
Satd. Flow (prot)	1742	3477	0	0	3484	1559	0	1723	0	1742	1572	0
Flt Permitted	0.125				0.953			0.922		0.748		
Satd. Flow (perm)	229	3477	0	0	3321	1559	0	1615	0	1372	1572	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				352		5			109	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		139.3			712.9			129.6			216.9	
Travel Time (s)		5.0			25.7			5.8			9.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	514	471	5	5	940	414	5	5	5	154	5	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	514	476	0	0	945	414	0	15	0	154	114	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	24.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	35.0	95.0		60.0	60.0	60.0	25.0	25.0		25.0	25.0	

Lanes, Volumes, Timings

3: Range Road 282 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	29.2%	79.2%		50.0%	50.0%	50.0%	20.8%	20.8%		20.8%	20.8%	
Maximum Green (s)	30.5	90.5		55.5	55.5	55.5	20.5	20.5		20.5	20.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	64.3	64.3			31.9	31.9		15.2		15.2	15.2	
Actuated g/C Ratio	0.72	0.72			0.36	0.36		0.17		0.17	0.17	
v/c Ratio	0.81	0.19			0.79	0.53		0.05		0.66	0.32	
Control Delay	31.3	4.2			31.5	6.9		29.2		51.7	11.0	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	31.3	4.2			31.5	6.9		29.2		51.7	11.0	
LOS	C	A			C	A		C		D	B	
Approach Delay		18.3			24.0			29.2			34.4	
Approach LOS		B			C			C			C	
Queue Length 50th (m)	59.8	11.2			78.4	7.3		1.5		25.8	0.7	
Queue Length 95th (m)	#137.8	19.3			108.5	29.8		7.4		52.3	15.7	
Internal Link Dist (m)		115.3			688.9			105.6			192.9	
Turn Bay Length (m)	50.0					50.0				50.0		
Base Capacity (vph)	706	3266			2161	1137		392		329	460	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.73	0.15			0.44	0.36		0.04		0.47	0.25	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 88.9

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 22.9

Intersection LOS: C

Intersection Capacity Utilization 78.9%

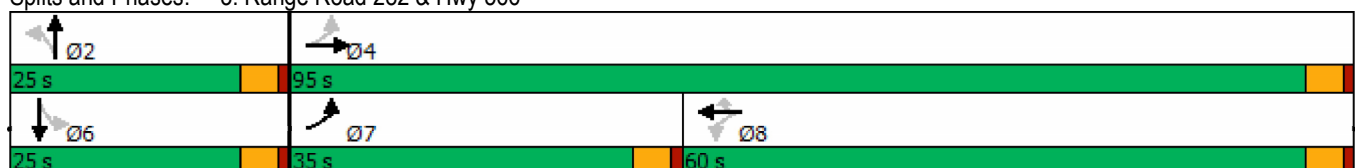
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Range Road 282 & Hwy 566



Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	255	330	5	5	1220	176	5	5	5	71	5	50
Future Volume (vph)	255	330	5	5	1220	176	5	5	5	71	5	50
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	100.0		0.0	0.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850		0.955			0.863	
Flt Protected	0.950							0.984		0.950		
Satd. Flow (prot)	1742	3477	0	0	3484	1559	0	1723	0	1742	1583	0
Flt Permitted	0.107				0.954			0.903		0.748		
Satd. Flow (perm)	196	3477	0	0	3324	1559	0	1581	0	1372	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				187		5			53	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		712.9			147.7			117.6			221.9	
Travel Time (s)		25.7			5.3			5.3			10.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	271	351	5	5	1298	187	5	5	5	76	5	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	271	356	0	0	1303	187	0	15	0	76	58	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	13.7	51.9		38.2	38.2	38.2	38.1	38.1		38.1	38.1	

Lanes, Volumes, Timings

4: Range Road 281 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	15.2%	57.7%		42.4%	42.4%	42.4%	42.3%	42.3%		42.3%	42.3%	
Maximum Green (s)	9.2	47.4		33.7	33.7	33.7	33.6	33.6		33.6	33.6	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	47.9	49.0			34.1	34.1		10.6		10.6	10.6	
Actuated g/C Ratio	0.75	0.77			0.53	0.53		0.17		0.17	0.17	
v/c Ratio	0.73	0.13			0.74	0.20		0.06		0.33	0.19	
Control Delay	25.9	3.1			16.0	2.4		20.6		29.7	10.6	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	25.9	3.1			16.0	2.4		20.6		29.7	10.6	
LOS	C	A			B	A		C		C	B	
Approach Delay		13.0			14.3			20.6			21.4	
Approach LOS		B			B			C			C	
Queue Length 50th (m)	16.0	5.6			63.6	0.0		1.1		8.6	0.5	
Queue Length 95th (m)	#53.1	10.5			95.2	8.6		5.5		19.6	9.1	
Internal Link Dist (m)		688.9			123.7			93.6			197.9	
Turn Bay Length (m)	100.0					100.0						
Base Capacity (vph)	371	2662			1768	917		841		728	864	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.73	0.13			0.74	0.20		0.02		0.10	0.07	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 64

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 14.4

Intersection LOS: B

Intersection Capacity Utilization 72.8%

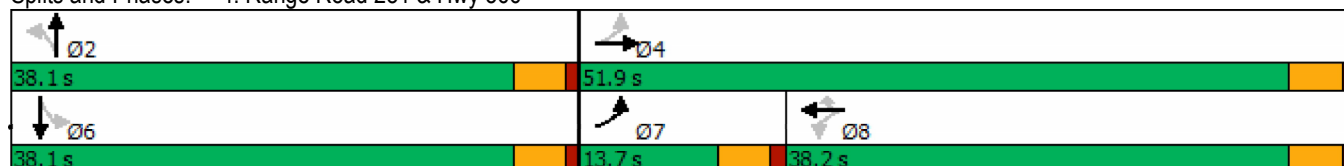
ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Range Road 281 & Hwy 566



Lanes, Volumes, Timings
3: Range Road 282 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	981	5	5	446	136	5	5	5	430	5	450
Future Volume (vph)	112	981	5	5	446	136	5	5	5	430	5	450
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	50.0		0.0	0.0		50.0	0.0		0.0	50.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.955			0.852	
Flt Protected	0.950				0.999			0.984		0.950		
Satd. Flow (prot)	1742	3481	0	0	3481	1559	0	1723	0	1742	1562	0
Flt Permitted	0.349				0.944			0.901		0.748		
Satd. Flow (perm)	640	3481	0	0	3289	1559	0	1578	0	1372	1562	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				143		5			328	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		139.3			712.9			129.6			216.9	
Travel Time (s)		5.0			25.7			5.8			9.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	118	1033	5	5	469	143	5	5	5	453	5	474
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	1038	0	0	474	143	0	15	0	453	479	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	9.5	59.5		50.0	50.0	50.0	52.0	52.0		52.0	52.0	

Lanes, Volumes, Timings

3: Range Road 282 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	8.5%	53.4%		44.8%	44.8%	44.8%	46.6%	46.6%		46.6%	46.6%	
Maximum Green (s)	5.0	55.0		45.5	45.5	45.5	47.5	47.5		47.5	47.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	33.6	33.6			23.7	23.7		29.8		29.8	29.8	
Actuated g/C Ratio	0.46	0.46			0.33	0.33		0.41		0.41	0.41	
v/c Ratio	0.32	0.65			0.44	0.24		0.02		0.81	0.58	
Control Delay	16.7	19.0			22.4	5.4		10.6		31.1	7.9	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	16.7	19.0			22.4	5.4		10.6		31.1	7.9	
LOS	B	B			C	A		B		C	A	
Approach Delay		18.7			18.4			10.6			19.2	
Approach LOS		B			B			B			B	
Queue Length 50th (m)	8.4	51.4			25.1	0.0		0.7		46.4	11.5	
Queue Length 95th (m)	24.5	105.7			51.1	12.5		4.3		99.7	40.0	
Internal Link Dist (m)		115.3			688.9			105.6			192.9	
Turn Bay Length (m)	50.0					50.0				50.0		
Base Capacity (vph)	374	2739			2141	1064		1074		932	1166	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.32	0.38			0.22	0.13		0.01		0.49	0.41	

Intersection Summary

Area Type: Other

Cycle Length: 111.5

Actuated Cycle Length: 72.8

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 18.8

Intersection LOS: B

Intersection Capacity Utilization 87.1%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 3: Range Road 282 & Hwy 566

	
Ø2	Ø4
52 s	59.5 s
	
Ø6	Ø7
52 s	9.5 s
	Ø8
	50 s

Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	1353	5	5	341	66	5	5	5	193	5	238
Future Volume (vph)	55	1353	5	5	341	66	5	5	5	193	5	238
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	100.0		0.0	0.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.955			0.853	
Flt Protected	0.950				0.999			0.984		0.950		
Satd. Flow (prot)	1742	3481	0	0	3481	1559	0	1723	0	1742	1564	0
Flt Permitted	0.452				0.935			0.904		0.748		
Satd. Flow (perm)	829	3481	0	0	3258	1559	0	1583	0	1372	1564	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				69		5			251	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		712.9			147.7			117.6			221.9	
Travel Time (s)		25.7			5.3			5.3			10.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	1424	5	5	359	69	5	5	5	203	5	251
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	1429	0	0	364	69	0	15	0	203	256	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	9.5	70.0		60.5	60.5	60.5	40.0	40.0		40.0	40.0	

Lanes, Volumes, Timings

4: Range Road 281 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	8.6%	63.6%		55.0%	55.0%	55.0%	36.4%	36.4%		36.4%	36.4%	
Maximum Green (s)	5.0	65.5		56.0	56.0	56.0	35.5	35.5		35.5	35.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	34.2	34.2			24.3	24.3		15.3		15.3	15.3	
Actuated g/C Ratio	0.58	0.58			0.41	0.41		0.26		0.26	0.26	
v/c Ratio	0.10	0.71			0.27	0.10		0.04		0.57	0.43	
Control Delay	6.8	11.7			12.4	3.8		15.2		26.7	5.8	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	6.8	11.7			12.4	3.8		15.2		26.7	5.8	
LOS	A	B			B	A		B		C	A	
Approach Delay		11.5			11.0			15.2			15.0	
Approach LOS		B			B			B			B	
Queue Length 50th (m)	2.2	47.2			12.3	0.0		0.7		16.3	0.4	
Queue Length 95th (m)	8.0	96.5			25.2	6.1		5.1		44.7	16.0	
Internal Link Dist (m)		688.9			123.7			93.6			197.9	
Turn Bay Length (m)	100.0					100.0						
Base Capacity (vph)	562	3353			2996	1439		990		857	1071	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.10	0.43			0.12	0.05		0.02		0.24	0.24	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 58.8

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 12.1

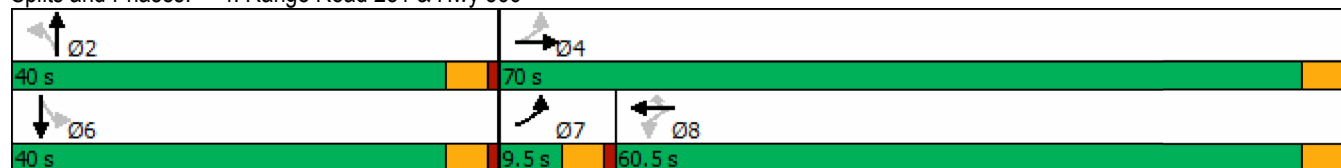
Intersection LOS: B

Intersection Capacity Utilization 74.8%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 4: Range Road 281 & Hwy 566



Lanes, Volumes, Timings
3: Range Road 282 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	227	5	5	1002	66	5	5	5	12	5	9
Future Volume (vph)	5	227	5	5	1002	66	5	5	5	12	5	9
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	50.0		0.0	0.0		50.0	0.0		0.0	50.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997				0.850		0.955			0.900	
Flt Protected	0.950							0.984		0.950		
Satd. Flow (prot)	1742	3474	0	0	3484	1559	0	1723	0	1742	1650	0
Flt Permitted	0.170				0.954			0.883				
Satd. Flow (perm)	312	3474	0	0	3324	1559	0	1546	0	1834	1650	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				65		5			10	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		139.3			712.9			129.6			216.9	
Travel Time (s)		5.0			25.7			5.8			9.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	241	5	5	1066	70	5	5	5	13	5	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	246	0	0	1071	70	0	15	0	13	15	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	32.0	76.0		44.0	44.0	44.0	24.0	24.0		24.0	24.0	

Lanes, Volumes, Timings

3: Range Road 282 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	32.0%	76.0%		44.0%	44.0%	44.0%	24.0%	24.0%		24.0%	24.0%	
Maximum Green (s)	27.5	71.5		39.5	39.5	39.5	19.5	19.5		19.5	19.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	34.0	37.4			23.3	23.3		10.6		10.6	10.6	
Actuated g/C Ratio	0.79	0.87			0.54	0.54		0.25		0.25	0.25	
v/c Ratio	0.01	0.08			0.60	0.08		0.04		0.03	0.04	
Control Delay	3.0	2.2			9.8	3.1		16.1		18.3	13.6	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	3.0	2.2			9.8	3.1		16.1		18.3	13.6	
LOS	A	A			A	A		B		B	B	
Approach Delay		2.2			9.4			16.1			15.8	
Approach LOS		A			A			B			B	
Queue Length 50th (m)	0.0	0.0			14.7	0.2		0.4		0.5	0.3	
Queue Length 95th (m)	0.9	6.5			58.8	5.0		5.1		4.9	4.6	
Internal Link Dist (m)		115.3			688.9			105.6			192.9	
Turn Bay Length (m)	50.0					50.0				50.0		
Base Capacity (vph)	1210	3474			2927	1380		742		877	794	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.00	0.07			0.37	0.05		0.02		0.01	0.02	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 43.2

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 8.3

Intersection LOS: A

Intersection Capacity Utilization 52.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Range Road 282 & Hwy 566



Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	234	5	5	1063	5	5	5	5	5	5	5
Future Volume (vph)	5	234	5	5	1063	5	5	5	5	5	5	5
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	100.0		0.0	0.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997				0.850		0.955			0.925	
Flt Protected	0.950							0.984		0.950		
Satd. Flow (prot)	1742	3474	0	0	3484	1559	0	1723	0	1742	1696	0
Flt Permitted	0.158				0.954							
Satd. Flow (perm)	290	3474	0	0	3324	1559	0	1751	0	1834	1696	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				45		5			5	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		712.9			147.7			117.6			221.9	
Travel Time (s)		25.7			5.3			5.3			10.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	249	5	5	1131	5	5	5	5	5	5	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	254	0	0	1136	5	0	15	0	5	10	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	21.0	111.0		90.0	90.0	90.0	25.0	25.0		34.5	34.5	

Lanes, Volumes, Timings

4: Range Road 281 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	14.4%	76.3%		61.9%	61.9%	61.9%	17.2%	17.2%		23.7%	23.7%	
Maximum Green (s)	16.5	106.5		85.5	85.5	85.5	20.5	20.5		30.0	30.0	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	33.8	37.9			23.3	23.3		10.4		10.4	10.4	
Actuated g/C Ratio	0.83	0.94			0.58	0.58		0.26		0.26	0.26	
v/c Ratio	0.01	0.08			0.59	0.01		0.03		0.01	0.02	
Control Delay	1.8	1.2			8.0	0.0		14.1		16.2	13.6	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	1.8	1.2			8.0	0.0		14.1		16.2	13.6	
LOS	A	A			A	A		B		B	B	
Approach Delay		1.2			8.0			14.1			14.4	
Approach LOS		A			A			B			B	
Queue Length 50th (m)	0.0	0.0			16.2	0.0		0.4		0.3	0.3	
Queue Length 95th (m)	0.9	6.6			64.3	0.0		5.0		2.8	3.8	
Internal Link Dist (m)		688.9			123.7			93.6			197.9	
Turn Bay Length (m)	100.0					100.0						
Base Capacity (vph)	859	3474			3324	1559		1355		1419	1313	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.01	0.07			0.34	0.00		0.01		0.00	0.01	

Intersection Summary

Area Type: Other

Cycle Length: 145.5

Actuated Cycle Length: 40.5

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 6.9

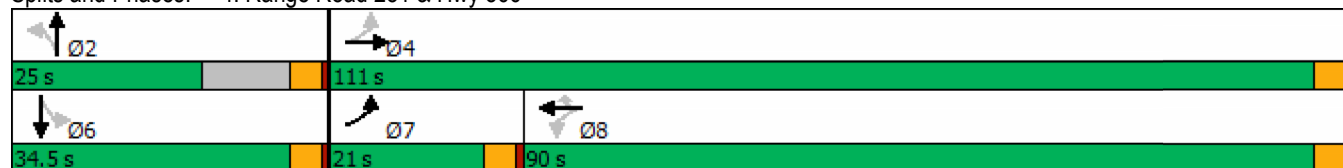
Intersection LOS: A

Intersection Capacity Utilization 52.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 4: Range Road 281 & Hwy 566



HCM 6th TWSC
1: Range Road 282 & Township Road 264

07/15/2025

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	5	5	5	5	5	5	5	66	5	5	20	5
Future Vol, veh/h	5	5	5	5	5	5	5	66	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5	5	70	5	5	21	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	49	38	8	73	38	8
Stage 1	-	-	-	-	-	-	18	18	-	18	18	-
Stage 2	-	-	-	-	-	-	31	20	-	55	20	-
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	1610	-	-	1610	-	-	951	854	1074	918	854	1074
Stage 1	-	-	-	-	-	-	1001	880	-	1001	880	-
Stage 2	-	-	-	-	-	-	986	879	-	957	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	924	849	1074	852	849	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	924	849	-	852	849	-
Stage 1	-	-	-	-	-	-	998	877	-	998	877	-
Stage 2	-	-	-	-	-	-	954	876	-	873	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			2.4			9.6			9.2		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	866	1610	-	-	1610	-	-	880				
HCM Lane V/C Ratio	0.093	0.003	-	-	0.003	-	-	0.036				
HCM Control Delay (s)	9.6	7.2	0	-	7.2	0	-	9.2				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1				

HCM 6th TWSC
2: Range Road 281 & Township Road 264 & Hwy 791

07/15/2025

Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	5	5	5	45	5	5	5	38	5	5
Future Vol, veh/h	5	5	5	5	5	45	5	5	5	38	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	48	5	5	5	40	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	53	0	0	10	0	0	62	81	8	62	59	29
Stage 1	-	-	-	-	-	-	18	18	-	39	39	-
Stage 2	-	-	-	-	-	-	44	63	-	23	20	-
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	1553	-	-	1610	-	-	933	809	1074	933	832	1046
Stage 1	-	-	-	-	-	-	1001	880	-	976	862	-
Stage 2	-	-	-	-	-	-	970	842	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1553	-	-	1610	-	-	920	804	1074	920	827	1046
Mov Cap-2 Maneuver	-	-	-	-	-	-	920	804	-	920	827	-
Stage 1	-	-	-	-	-	-	998	877	-	973	859	-
Stage 2	-	-	-	-	-	-	956	839	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			0.7			9			9.1		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	920	1553	-	-	1610	-	-	921				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.055				
HCM Control Delay (s)	9	7.3	0	-	7.2	0	-	9.1				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2				

Lanes, Volumes, Timings

3: Range Road 282 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	1113	5	5	251	13	5	5	5	74	5	5
Future Volume (vph)	11	1113	5	5	251	13	5	5	5	74	5	5
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	50.0		0.0	0.0		50.0	0.0		0.0	50.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.955			0.925	
Flt Protected	0.950				0.999			0.984		0.950		
Satd. Flow (prot)	1742	3481	0	0	3481	1559	0	1723	0	1742	1696	0
Flt Permitted	0.482				0.935			0.891		0.748		
Satd. Flow (perm)	884	3481	0	0	3258	1559	0	1560	0	1372	1696	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				47		5			5	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		139.3			712.9			129.6			216.9	
Travel Time (s)		5.0			25.7			5.8			9.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	12	1172	5	5	264	14	5	5	5	78	5	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	1177	0	0	269	14	0	15	0	78	10	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	9.5	86.0		76.5	76.5	76.5	54.0	54.0		54.0	54.0	

Lanes, Volumes, Timings

3: Range Road 282 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	6.8%	61.4%		54.6%	54.6%	54.6%	38.6%	38.6%		38.6%	38.6%	
Maximum Green (s)	5.0	81.5		72.0	72.0	72.0	49.5	49.5		49.5	49.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	30.5	32.8			20.7	20.7		10.7		10.7	10.7	
Actuated g/C Ratio	0.71	0.76			0.48	0.48		0.25		0.25	0.25	
v/c Ratio	0.02	0.44			0.17	0.02		0.04		0.23	0.02	
Control Delay	4.2	5.1			8.7	0.8		13.3		17.5	12.4	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	4.2	5.1			8.7	0.8		13.3		17.5	12.4	
LOS	A	A			A	A		B		B	B	
Approach Delay		5.1			8.4			13.3			17.0	
Approach LOS		A			A			B			B	
Queue Length 50th (m)	0.3	25.6			7.3	0.0		0.7		5.7	0.3	
Queue Length 95th (m)	1.8	43.3			14.1	0.6		4.1		14.3	3.1	
Internal Link Dist (m)		115.3			688.9			105.6			192.9	
Turn Bay Length (m)	50.0					50.0				50.0		
Base Capacity (vph)	728	3481			3258	1559		1554		1366	1689	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.02	0.34			0.08	0.01		0.01		0.06	0.01	

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 43.1

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 6.4

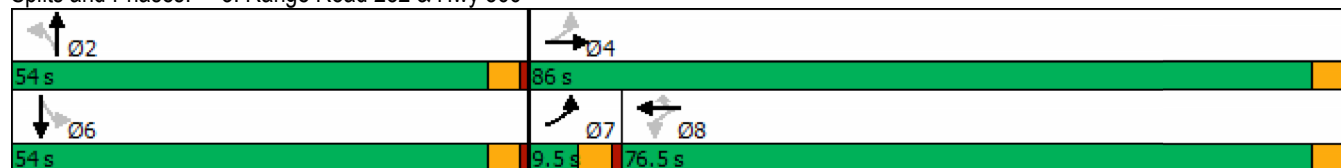
Intersection LOS: A

Intersection Capacity Utilization 68.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3: Range Road 282 & Hwy 566



Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1182	5	5	260	5	5	5	5	5	5	5
Future Volume (vph)	5	1182	5	5	260	5	5	5	5	5	5	5
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	100.0		0.0	0.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.955			0.925	
Flt Protected	0.950				0.999			0.984		0.950		
Satd. Flow (prot)	1742	3481	0	0	3481	1559	0	1723	0	1742	1696	0
Flt Permitted	0.476				0.934							
Satd. Flow (perm)	873	3481	0	0	3254	1559	0	1751	0	1834	1696	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				44		5			5	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		712.9			147.7			117.6			221.9	
Travel Time (s)		25.7			5.3			5.3			10.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	1244	5	5	274	5	5	5	5	5	5	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	1249	0	0	279	5	0	15	0	5	10	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	14.0	110.0		96.0	96.0	96.0	40.0	40.0		40.0	40.0	

Lanes, Volumes, Timings

4: Range Road 281 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	9.3%	73.3%		64.0%	64.0%	64.0%	26.7%	26.7%		26.7%	26.7%	
Maximum Green (s)	9.5	105.5		91.5	91.5	91.5	35.5	35.5		35.5	35.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	30.6	34.5			20.4	20.4		10.2		10.2	10.2	
Actuated g/C Ratio	0.82	0.92			0.55	0.55		0.27		0.27	0.27	
v/c Ratio	0.01	0.39			0.16	0.01		0.03		0.01	0.02	
Control Delay	2.2	2.2			5.8	0.0		11.3		13.0	10.8	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	2.2	2.2			5.8	0.0		11.3		13.0	10.8	
LOS	A	A			A	A		B		B	B	
Approach Delay		2.2			5.7			11.3			11.5	
Approach LOS		A			A			B			B	
Queue Length 50th (m)	0.0	0.0			2.8	0.0		0.4		0.3	0.3	
Queue Length 95th (m)	0.9	41.4			14.0	0.0		4.2		2.3	3.2	
Internal Link Dist (m)		688.9			123.7			93.6			197.9	
Turn Bay Length (m)	100.0					100.0						
Base Capacity (vph)	939	3481			3254	1559		1653		1731	1601	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.01	0.36			0.09	0.00		0.01		0.00	0.01	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 37.4

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.39

Intersection Signal Delay: 3.0

Intersection LOS: A

Intersection Capacity Utilization 70.0%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: Range Road 281 & Hwy 566



HCM 6th TWSC
1: Range Road 282 & Township Road 264

07/15/2025

Intersection												
Int Delay, s/veh	8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	5	5	5	5	5	21	5	5	74	5
Future Vol, veh/h	5	5	5	5	5	5	5	21	5	5	74	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	5	5	22	5	5	78	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	77	38	8	49	38	8
Stage 1	-	-	-	-	-	-	18	18	-	18	18	-
Stage 2	-	-	-	-	-	-	59	20	-	31	20	-
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	1610	-	-	1610	-	-	912	854	1074	951	854	1074
Stage 1	-	-	-	-	-	-	1001	880	-	1001	880	-
Stage 2	-	-	-	-	-	-	953	879	-	986	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	840	849	1074	923	849	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	840	849	-	923	849	-
Stage 1	-	-	-	-	-	-	998	877	-	998	877	-
Stage 2	-	-	-	-	-	-	862	876	-	954	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			2.4			9.3			9.6		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	877	1610	-	-	1610	-	-	864				
HCM Lane V/C Ratio	0.037	0.003	-	-	0.003	-	-	0.102				
HCM Control Delay (s)	9.3	7.2	0	-	7.2	0	-	9.6				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3				

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	5	5	42	5	5	5	50	5	5
Future Vol, veh/h	5	5	5	5	5	42	5	5	5	50	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	5	44	5	5	5	53	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	49	0	0	10	0	0	60	77	8	60	57	27
Stage 1	-	-	-	-	-	-	18	18	-	37	37	-
Stage 2	-	-	-	-	-	-	42	59	-	23	20	-
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	1558	-	-	1610	-	-	936	813	1074	936	834	1048
Stage 1	-	-	-	-	-	-	1001	880	-	978	864	-
Stage 2	-	-	-	-	-	-	972	846	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1558	-	-	1610	-	-	923	808	1074	923	829	1048
Mov Cap-2 Maneuver	-	-	-	-	-	-	923	808	-	923	829	-
Stage 1	-	-	-	-	-	-	998	877	-	975	861	-
Stage 2	-	-	-	-	-	-	958	843	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			0.7			9			9.2		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	922	1558	-	-	1610	-	-	923				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.068				
HCM Control Delay (s)	9	7.3	0	-	7.2	0	-	9.2				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2				

HCM 6th AWSC
6: Range Road 282 & Site 1 Access/Site 3 Access

07/15/2025

Intersection	
Intersection Delay, s/veh	24.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	57	57	5	5	204	275	204	11	89	11
Future Vol, veh/h	5	5	57	57	5	5	204	275	204	11	89	11
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	61	61	5	5	217	293	217	12	95	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.2	10	30.2	9.2
HCM LOS	A	A	D	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	30%	7%	85%	10%
Vol Thru, %	40%	7%	7%	80%
Vol Right, %	30%	85%	7%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	683	67	67	111
LT Vol	204	5	57	11
Through Vol	275	5	5	89
RT Vol	204	57	5	11
Lane Flow Rate	727	71	71	118
Geometry Grp	1	1	1	1
Degree of Util (X)	0.88	0.11	0.122	0.167
Departure Headway (Hd)	4.359	5.552	6.168	5.077
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	828	649	584	698
Service Time	2.418	3.555	4.17	3.173
HCM Lane V/C Ratio	0.878	0.109	0.122	0.169
HCM Control Delay	30.2	9.2	10	9.2
HCM Lane LOS	D	A	A	A
HCM 95th-tile Q	11.4	0.4	0.4	0.6

Lanes, Volumes, Timings

3: Range Road 282 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	484	481	5	5	1051	400	5	5	5	147	5	103
Future Volume (vph)	484	481	5	5	1051	400	5	5	5	147	5	103
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	50.0		0.0	0.0		50.0	0.0		0.0	50.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.955			0.857	
Flt Protected	0.950							0.984		0.950		
Satd. Flow (prot)	1742	3481	0	0	3484	1559	0	1723	0	1742	1572	0
Flt Permitted	0.101				0.953			0.922		0.748		
Satd. Flow (perm)	185	3481	0	0	3321	1559	0	1615	0	1372	1572	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				325		5			110	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		139.3			712.9			129.6			216.9	
Travel Time (s)		5.0			25.7			5.8			9.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	515	512	5	5	1118	426	5	5	5	156	5	110
Shared Lane Traffic (%)												
Lane Group Flow (vph)	515	517	0	0	1123	426	0	15	0	156	115	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	32.0	76.0		44.0	44.0	44.0	24.0	24.0		24.0	24.0	

Lanes, Volumes, Timings

3: Range Road 282 & Hwy 566

07/15/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	32.0%	76.0%		44.0%	44.0%	44.0%	24.0%	24.0%		24.0%	24.0%	
Maximum Green (s)	27.5	71.5		39.5	39.5	39.5	19.5	19.5		19.5	19.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	66.7	66.7			35.1	35.1		15.3		15.3	15.3	
Actuated g/C Ratio	0.73	0.73			0.39	0.39		0.17		0.17	0.17	
v/c Ratio	0.86	0.20			0.88	0.53		0.05		0.68	0.32	
Control Delay	39.6	4.3			35.4	8.2		27.2		52.4	10.4	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	39.6	4.3			35.4	8.2		27.2		52.4	10.4	
LOS	D	A			D	A		C		D	B	
Approach Delay		21.9			27.9			27.2			34.6	
Approach LOS		C			C			C			C	
Queue Length 50th (m)	72.9	12.7			96.2	11.6		1.6		27.7	0.8	
Queue Length 95th (m)	#139.7	20.5			130.8	37.3		7.0		48.4	14.9	
Internal Link Dist (m)		115.3			688.9			105.6			192.9	
Turn Bay Length (m)	50.0					50.0				50.0		
Base Capacity (vph)	612	2775			1462	868		354		298	427	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.84	0.19			0.77	0.49		0.04		0.52	0.27	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 91.1

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 26.4

Intersection LOS: C

Intersection Capacity Utilization 83.8%

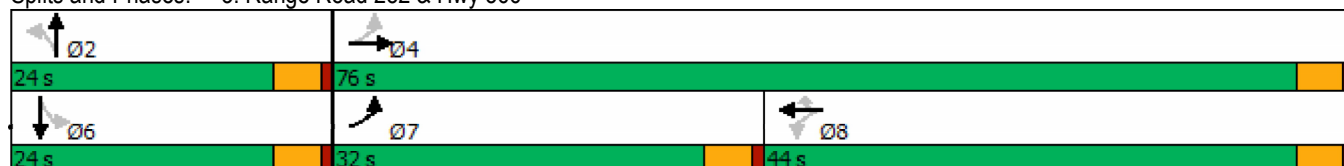
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Range Road 282 & Hwy 566



Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	369	5	5	1397	176	5	5	5	71	5	51
Future Volume (vph)	256	369	5	5	1397	176	5	5	5	71	5	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	100.0		0.0	0.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998				0.850		0.955			0.863	
Flt Protected	0.950							0.984		0.950		
Satd. Flow (prot)	1742	3477	0	0	3484	1559	0	1723	0	1742	1583	0
Flt Permitted	0.077				0.954			0.908		0.748		
Satd. Flow (perm)	141	3477	0	0	3324	1559	0	1590	0	1372	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				187		5			54	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		712.9			147.7			117.6			221.9	
Travel Time (s)		25.7			5.3			5.3			10.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	272	393	5	5	1486	187	5	5	5	76	5	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	272	398	0	0	1491	187	0	15	0	76	59	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	21.5	111.5		90.0	90.0	90.0	34.0	34.0		34.0	34.0	

Lanes, Volumes, Timings

4: Range Road 281 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	14.8%	76.6%		61.9%	61.9%	61.9%	23.4%	23.4%		23.4%	23.4%	
Maximum Green (s)	17.0	107.0		85.5	85.5	85.5	29.5	29.5		29.5	29.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	69.5	70.9			47.2	47.2		12.5		12.5	12.5	
Actuated g/C Ratio	0.80	0.82			0.54	0.54		0.14		0.14	0.14	
v/c Ratio	0.63	0.14			0.83	0.20		0.06		0.39	0.22	
Control Delay	28.3	2.7			21.7	2.2		32.8		45.9	15.1	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	28.3	2.7			21.7	2.2		32.8		45.9	15.1	
LOS	C	A			C	A		C		D	B	
Approach Delay		13.1			19.6			32.8			32.4	
Approach LOS		B			B			C			C	
Queue Length 50th (m)	26.0	6.8			106.1	0.0		1.5		12.1	0.8	
Queue Length 95th (m)	#77.4	13.9			154.5	9.0		8.2		30.2	12.7	
Internal Link Dist (m)		688.9			123.7			93.6			197.9	
Turn Bay Length (m)	100.0					100.0						
Base Capacity (vph)	447	3427			3052	1447		579		497	608	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.61	0.12			0.49	0.13		0.03		0.15	0.10	

Intersection Summary

Area Type: Other

Cycle Length: 145.5

Actuated Cycle Length: 86.9

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 18.6

Intersection LOS: B

Intersection Capacity Utilization 77.8%

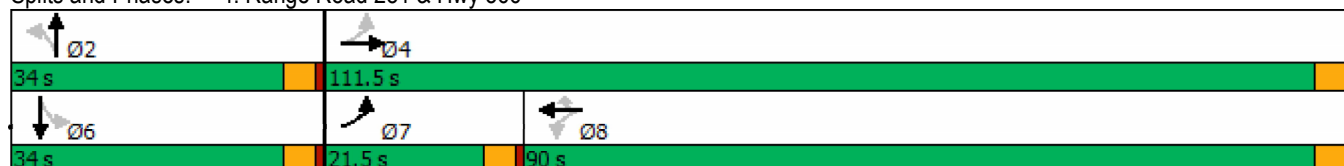
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Range Road 281 & Hwy 566



Intersection												
Int Delay, s/veh	7.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	18	27	5	5	5	78	5	5	20	5
Future Vol, veh/h	5	5	18	27	5	5	5	78	5	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	19	29	5	5	5	83	5	5	21	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	24	0	0	104	93	15	135	100	8
Stage 1	-	-	-	-	-	-	25	25	-	66	66	-
Stage 2	-	-	-	-	-	-	79	68	-	69	34	-
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	1610	-	-	1591	-	-	876	797	1065	836	790	1074
Stage 1	-	-	-	-	-	-	993	874	-	945	840	-
Stage 2	-	-	-	-	-	-	930	838	-	941	867	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1591	-	-	840	780	1065	752	773	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	840	780	-	752	773	-
Stage 1	-	-	-	-	-	-	990	871	-	942	825	-
Stage 2	-	-	-	-	-	-	885	823	-	845	864	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			5.3			10.1			9.6		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	795	1610	-	-	1591	-	-	807				
HCM Lane V/C Ratio	0.118	0.003	-	-	0.018	-	-	0.04				
HCM Control Delay (s)	10.1	7.2	0	-	7.3	0	-	9.6				
HCM Lane LOS	B	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.1				

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	5	5	27	45	5	5	5	38	5	5
Future Vol, veh/h	5	5	5	5	27	45	5	5	5	38	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	29	48	5	5	5	40	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	77	0	0	10	0	0	86	105	8	86	83	53
Stage 1	-	-	-	-	-	-	18	18	-	63	63	-
Stage 2	-	-	-	-	-	-	68	87	-	23	20	-
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	1522	-	-	1610	-	-	900	785	1074	900	807	1014
Stage 1	-	-	-	-	-	-	1001	880	-	948	842	-
Stage 2	-	-	-	-	-	-	942	823	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1522	-	-	1610	-	-	887	780	1074	887	802	1014
Mov Cap-2 Maneuver	-	-	-	-	-	-	887	780	-	887	802	-
Stage 1	-	-	-	-	-	-	998	877	-	945	839	-
Stage 2	-	-	-	-	-	-	928	821	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.5			0.5			9.1			9.3		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	898	1522	-	-	1610	-	-	889				
HCM Lane V/C Ratio	0.018	0.003	-	-	0.003	-	-	0.057				
HCM Control Delay (s)	9.1	7.4	0	-	7.2	0	-	9.3				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2				

HCM 6th TWSC
5: Range Road 282 & Site 2 Access

07/15/2025

Intersection						
Int Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	57	5	77	204	11	54
Future Vol, veh/h	57	5	77	204	11	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	5	82	217	12	57
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	272	191	0	0	299	0
Stage 1	191	-	-	-	-	-
Stage 2	81	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	717	851	-	-	1262	-
Stage 1	841	-	-	-	-	-
Stage 2	942	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	710	851	-	-	1262	-
Mov Cap-2 Maneuver	710	-	-	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.5	0		1.3		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	720	1262	-	
HCM Lane V/C Ratio	-	-	0.092	0.009	-	
HCM Control Delay (s)	-	-	10.5	7.9	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.3	0	-	

HCM 6th TWSC
7: Range Road 282 & Site 4 Access

07/15/2025

Intersection

Int Delay, s/veh 1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	57	5	680	204	11	192
Future Vol, veh/h	57	5	680	204	11	192
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	5	723	217	12	204

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1060	832	0
Stage 1	832	-	-
Stage 2	228	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	248	369	-
Stage 1	427	-	-
Stage 2	810	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	243	369	-
Mov Cap-2 Maneuver	243	-	-
Stage 1	427	-	-
Stage 2	795	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.5	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	250	729
HCM Lane V/C Ratio	-	-	0.264	0.016
HCM Control Delay (s)	-	-	24.5	10
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	1	0

HCM 6th TWSC
8: Range Road 281 & Site 5 Access

07/15/2025

Intersection						
Int Delay, s/veh	7.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	62	217	5	5	5
Future Vol, veh/h	5	62	217	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	66	231	5	5	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	475	8	10	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	467	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	548	1074	1610	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	469	1074	1610	-	-	-
Mov Cap-2 Maneuver	469	-	-	-	-	-
Stage 1	869	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9	7.4		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1610	-	980	-	-	
HCM Lane V/C Ratio	0.143	-	0.073	-	-	
HCM Control Delay (s)	7.6	0	9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.5	-	0.2	-	-	

HCM 6th TWSC
9: Range Road 281 & Site 6 Access

07/15/2025

Intersection

Int Delay, s/veh 4.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	60	215	217	62	5
Future Vol, veh/h	5	60	215	217	62	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	64	229	231	66	5

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	758	69	71
Stage 1	69	-	-
Stage 2	689	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	375	994	1529
Stage 1	954	-	-
Stage 2	498	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	311	994	1529
Mov Cap-2 Maneuver	311	-	-
Stage 1	790	-	-
Stage 2	498	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	3.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1529	-	850	-	-
HCM Lane V/C Ratio	0.15	-	0.081	-	-
HCM Control Delay (s)	7.8	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.5	-	0.3	-	-

HCM 6th AWSC
6: Range Road 282 & Site 1 Access/Site 3 Access

07/15/2025

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	5	204	204	5	11	57	92	57	5	282	5
Future Vol, veh/h	11	5	204	204	5	11	57	92	57	5	282	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	5	215	215	5	12	60	97	60	5	297	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.2	12.8	11.8	13.9
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	5%	93%	2%
Vol Thru, %	45%	2%	2%	97%
Vol Right, %	28%	93%	5%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	206	220	220	292
LT Vol	57	11	204	5
Through Vol	92	5	5	282
RT Vol	57	204	11	5
Lane Flow Rate	217	232	232	307
Geometry Grp	1	1	1	1
Degree of Util (X)	0.343	0.342	0.385	0.481
Departure Headway (Hd)	5.692	5.321	5.98	5.63
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	627	669	597	636
Service Time	3.77	3.399	4.056	3.699
HCM Lane V/C Ratio	0.346	0.347	0.389	0.483
HCM Control Delay	11.8	11.2	12.8	13.9
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.5	1.5	1.8	2.6

Lanes, Volumes, Timings
3: Range Road 282 & Hwy 566

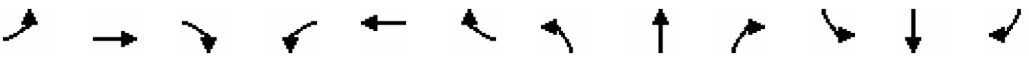
07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	1167	5	5	488	138	5	5	5	442	5	450
Future Volume (vph)	114	1167	5	5	488	138	5	5	5	442	5	450
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	50.0		0.0	0.0		50.0	0.0		0.0	50.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.955			0.852	
Flt Protected	0.950							0.984		0.950		
Satd. Flow (prot)	1742	3481	0	0	3484	1559	0	1723	0	1742	1562	0
Flt Permitted	0.324				0.943			0.906		0.748		
Satd. Flow (perm)	594	3481	0	0	3286	1559	0	1587	0	1372	1562	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						145		5			349	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		139.3			712.9			129.6			216.9	
Travel Time (s)		5.0			25.7			5.8			9.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	1228	5	5	514	145	5	5	5	465	5	474
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	1233	0	0	519	145	0	15	0	465	479	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	9.5	86.0		76.5	76.5	76.5	54.0	54.0		54.0	54.0	

Lanes, Volumes, Timings

3: Range Road 282 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	6.8%	61.4%		54.6%	54.6%	54.6%	38.6%	38.6%		38.6%	38.6%	
Maximum Green (s)	5.0	81.5		72.0	72.0	72.0	49.5	49.5		49.5	49.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	40.9	40.9			31.1	31.1		40.3		40.3	40.3	
Actuated g/C Ratio	0.45	0.45			0.34	0.34		0.45		0.45	0.45	
v/c Ratio	0.36	0.78			0.46	0.23		0.02		0.76	0.54	
Control Delay	19.2	26.0			25.0	4.9		13.0		31.7	7.7	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	19.2	26.0			25.0	4.9		13.0		31.7	7.7	
LOS	B	C			C	A		B		C	A	
Approach Delay		25.4			20.6			13.0			19.5	
Approach LOS		C			C			B			B	
Queue Length 50th (m)	12.1	93.8			36.8	0.0		0.9		65.1	13.1	
Queue Length 95th (m)	25.2	137.7			56.7	12.1		5.0		125.2	44.4	
Internal Link Dist (m)		115.3			688.9			105.6			192.9	
Turn Bay Length (m)	50.0					50.0				50.0		
Base Capacity (vph)	333	3073			2640	1281		897		774	1033	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.36	0.40			0.20	0.11		0.02		0.60	0.46	

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 90.5

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 22.4

Intersection LOS: C

Intersection Capacity Utilization 93.0%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 3: Range Road 282 & Hwy 566

			
54 s		86 s	
			
54 s		9.5 s 76.5 s	

Lanes, Volumes, Timings
4: Range Road 281 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	1550	5	5	385	66	5	5	5	193	5	238
Future Volume (vph)	56	1550	5	5	385	66	5	5	5	193	5	238
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Storage Length (m)	100.0		0.0	0.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	0		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.955			0.853	
Flt Protected	0.950				0.999			0.984		0.950		
Satd. Flow (prot)	1742	3484	0	0	3481	1559	0	1723	0	1742	1564	0
Flt Permitted	0.442				0.934			0.906		0.748		
Satd. Flow (perm)	811	3484	0	0	3254	1559	0	1587	0	1372	1564	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						69		5			251	
Link Speed (k/h)		100			100			80			80	
Link Distance (m)		712.9			147.7			117.6			221.9	
Travel Time (s)		25.7			5.3			5.3			10.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	59	1632	5	5	405	69	5	5	5	203	5	251
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	1637	0	0	410	69	0	15	0	203	256	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.7			3.7			3.7			3.7	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		1.6			1.6			1.6			1.6	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	8.0	4.0		6.1	4.0	4.0	6.1	4.0		8.0	4.0	
Trailing Detector (m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Position(m)	2.0	2.0		0.0	2.0	2.0	0.0	2.0		2.0	2.0	
Detector 1 Size(m)	6.0	2.0		6.1	2.0	2.0	6.1	2.0		6.0	2.0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	20.0		20.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	9.5	24.5		24.5	24.5	24.5	22.5	22.5		22.5	22.5	
Total Split (s)	14.0	110.0		96.0	96.0	96.0	40.0	40.0		40.0	40.0	

Lanes, Volumes, Timings

4: Range Road 281 & Hwy 566

07/15/2025

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	9.3%	73.3%		64.0%	64.0%	64.0%	26.7%	26.7%		26.7%	26.7%	
Maximum Green (s)	9.5	105.5		91.5	91.5	91.5	35.5	35.5		35.5	35.5	
Yellow Time (s)	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	
Lost Time Adjust (s)	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	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	44.5	44.5			32.6	32.6		16.8		16.8	16.8	
Actuated g/C Ratio	0.63	0.63			0.46	0.46		0.24		0.24	0.24	
v/c Ratio	0.10	0.75			0.27	0.09		0.04		0.63	0.46	
Control Delay	6.0	12.1			12.4	3.4		21.4		36.3	7.1	
Queue Delay	0.0	0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay	6.0	12.1			12.4	3.4		21.4		36.3	7.1	
LOS	A	B			B	A		C		D	A	
Approach Delay		11.9			11.1			21.4			20.0	
Approach LOS		B			B			C			C	
Queue Length 50th (m)	2.5	65.9			16.0	0.0		1.0		22.9	0.5	
Queue Length 95th (m)	8.1	126.1			30.8	6.1		6.5		58.3	19.2	
Internal Link Dist (m)		688.9			123.7			93.6			197.9	
Turn Bay Length (m)	100.0					100.0						
Base Capacity (vph)	642	3484			3189	1529		849		732	952	
Starvation Cap Reductn	0	0			0	0		0		0	0	
Spillback Cap Reductn	0	0			0	0		0		0	0	
Storage Cap Reductn	0	0			0	0		0		0	0	
Reduced v/c Ratio	0.09	0.47			0.13	0.05		0.02		0.28	0.27	

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 70.9

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 13.2

Intersection LOS: B

Intersection Capacity Utilization 80.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 4: Range Road 281 & Hwy 566

	
Ø2	Ø4
40 s	110 s
	
Ø6	Ø7
40 s	14 s
	Ø8
	96 s

Intersection												
Int Delay, s/veh	8.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	5	8	5	5	5	65	5	5	74	5
Future Vol, veh/h	5	5	5	8	5	5	5	65	5	5	74	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	8	5	5	5	68	5	5	78	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	10	0	0	83	44	8	78	44	8
Stage 1	-	-	-	-	-	-	18	18	-	24	24	-
Stage 2	-	-	-	-	-	-	65	26	-	54	20	-
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	1610	-	-	1610	-	-	904	848	1074	911	848	1074
Stage 1	-	-	-	-	-	-	1001	880	-	994	875	-
Stage 2	-	-	-	-	-	-	946	874	-	958	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1610	-	-	1610	-	-	831	841	1074	845	841	1074
Mov Cap-2 Maneuver	-	-	-	-	-	-	831	841	-	845	841	-
Stage 1	-	-	-	-	-	-	998	877	-	991	871	-
Stage 2	-	-	-	-	-	-	853	870	-	876	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			3.2			9.7			9.7		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	853	1610	-	-	1610	-	-	852				
HCM Lane V/C Ratio	0.093	0.003	-	-	0.005	-	-	0.104				
HCM Control Delay (s)	9.7	7.2	0	-	7.2	0	-	9.7				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.3				

HCM 6th TWSC
2: Range Road 281 & Township Road 264 & Hwy 791

07/15/2025

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	5	5	5	7	42	5	5	5	50	5	5
Future Vol, veh/h	5	5	5	5	7	42	5	5	5	50	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	5	5	5	7	44	5	5	5	53	5	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	51	0	0	10	0	0	62	79	8	62	59	29
Stage 1	-	-	-	-	-	-	18	18	-	39	39	-
Stage 2	-	-	-	-	-	-	44	61	-	23	20	-
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	1555	-	-	1610	-	-	933	811	1074	933	832	1046
Stage 1	-	-	-	-	-	-	1001	880	-	976	862	-
Stage 2	-	-	-	-	-	-	970	844	-	995	879	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1555	-	-	1610	-	-	920	806	1074	920	827	1046
Mov Cap-2 Maneuver	-	-	-	-	-	-	920	806	-	920	827	-
Stage 1	-	-	-	-	-	-	998	877	-	973	859	-
Stage 2	-	-	-	-	-	-	956	841	-	981	876	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.4			0.7			9			9.2		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	921	1555	-	-	1610	-	-	921				
HCM Lane V/C Ratio	0.017	0.003	-	-	0.003	-	-	0.069				
HCM Control Delay (s)	9	7.3	0	-	7.2	0	-	9.2				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2				

HCM 6th TWSC
5: Range Road 282 & Site 2 Access

07/15/2025

Intersection						
Int Delay, s/veh	5.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	204	11	57	57	5	84
Future Vol, veh/h	204	11	57	57	5	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	215	12	60	60	5	88

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	188	90	0
Stage 1	90	-	-
Stage 2	98	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	801	968	-
Stage 1	934	-	-
Stage 2	926	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	798	968	-
Mov Cap-2 Maneuver	798	-	-
Stage 1	934	-	-
Stage 2	922	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	805	1468
HCM Lane V/C Ratio	-	-	0.281	0.004
HCM Control Delay (s)	-	-	11.2	7.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.2	0

HCM 6th TWSC
7: Range Road 282 & Site 4 Access

07/15/2025

Intersection						
Int Delay, s/veh	9.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	204	11	195	57	5	687
Future Vol, veh/h	204	11	195	57	5	687
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	215	12	205	60	5	723
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	968	235	0	0	265	0
Stage 1	235	-	-	-	-	-
Stage 2	733	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	282	804	-	-	1299	-
Stage 1	804	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	280	804	-	-	1299	-
Mov Cap-2 Maneuver	280	-	-	-	-	-
Stage 1	804	-	-	-	-	-
Stage 2	472	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	50.5	0		0.1		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	290		1299	-	
HCM Lane V/C Ratio	-	0.78		0.004	-	
HCM Control Delay (s)	-	50.5		7.8	0	
HCM Lane LOS	-	F		A	A	
HCM 95th %tile Q(veh)	-	6.1		0	-	

HCM 6th TWSC
8: Range Road 281 & Site 5 Access

07/15/2025

Intersection

Int Delay, s/veh 8.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	216	62	5	5	5
Future Vol, veh/h	5	216	62	5	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	227	65	5	5	5

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	143	8	10
Stage 1	8	-	-
Stage 2	135	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	850	1074	1610
Stage 1	1015	-	-
Stage 2	891	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	816	1074	1610
Mov Cap-2 Maneuver	816	-	-
Stage 1	974	-	-
Stage 2	891	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	6.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1610	-	1066	-	-
HCM Lane V/C Ratio	0.041	-	0.218	-	-
HCM Control Delay (s)	7.3	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

HCM 6th TWSC
9: Range Road 281 & Site 6 Access

07/15/2025

Intersection

Int Delay, s/veh 5.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	215	60	62	216	5
Future Vol, veh/h	5	215	60	62	216	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	226	63	65	227	5

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	421	230	232
Stage 1	230	-	-
Stage 2	191	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	589	809	1336
Stage 1	808	-	-
Stage 2	841	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	560	809	1336
Mov Cap-2 Maneuver	560	-	-
Stage 1	768	-	-
Stage 2	841	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	3.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1336	-	801	-	-
HCM Lane V/C Ratio	0.047	-	0.289	-	-
HCM Control Delay (s)	7.8	0	11.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	1.2	-	-



APPENDIX B: TAC SIGNALIZATION WARRANT RESULTS

ATEC Canadian Matrix Traffic Signal Warrant Analysis

Main Street (name)

Highway 566

Side Street (name)

Range Road 282

Quadrant / Int #

Direction (EW or NS)

EW

Direction (EW or NS)

NS

Comments

2031 PD

for Warrant Calculation Results, please hit 'Page Down'

CHECK SHEET

Road Authority:

ATEC

City:

Rocky View County

Analysis Date:

2025 Jul 08, Tue

Count Date:

2025 Jan 01, Wed

Date Entry Format:

(yyyy-mm-dd)

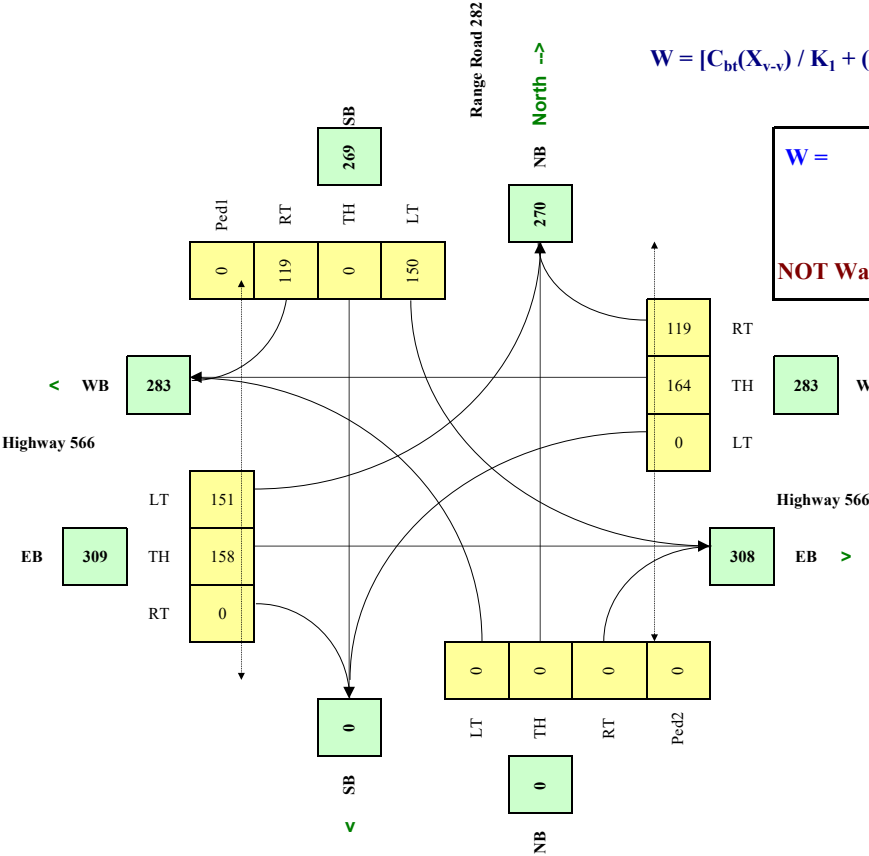
Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	UpStream Signal (m)	# of Thru Lanes
Highway 566	WB				1			1,000	1
Highway 566	EB				1			1,000	1
Range Road 282	NB				1				
Range Road 282	SB				1				
Are the Range Road 282 NB right turns significantly impeded by through movements? (y/n)									n
Are the Range Road 282 SB right turns significantly impeded by through movements? (y/n)									n

Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
Highway 566	EW	100	5.0%	n	0.0
Range Road 282	NS		3.0%	n	

Set Peak Hours													Ped1 NS	Ped2 NS	Ped3 EW	Ped4 EW
Traffic Input	NB			SB			WB			EB			W Side	E Side	N Side	S Side
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT				
7:00 - 8:00	0	0	0	102	0	71	0	158	253	364	112	0				
8:00 - 9:00	0	0	0	102	0	71	0	158	253	364	112	0				
11:00 - 12:00	0	0	0	10	0	10	0	164	10	10	158	0				
12:00 - 13:00	0	0	0	10	0	10	0	164	10	10	158	0				
16:00 - 17:00	0	0	0	338	0	277	0	169	94	79	203	0				
17:00 - 18:00	0	0	0	338	0	277	0	169	94	79	203	0				
Total (6-hour peak)	0	0	0	900	0	716	0	982	714	906	946	0	0	0	0	0
Average (6-hour peak)	0	0	0	150	0	119	0	164	119	151	158	0	0	0	0	0

Demographics		
Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	46,581
Central Business District	(y/n)	n

Average 6-hour Peak Turning Movements



$$W = [C_{bt}(X_{v-v}) / K_1 + (F(X_{v-p}) L) / K_2] \times C_i$$

W =	85	85	0
		Veh	Ped
NOT Warranted			

RESET SHEET

ATEC Canadian Matrix Traffic Signal Warrant Analysis

Main Street (name)

Highway 566

Side Street (name)

Range Road 281

Quadrant / Int #

Direction (EW or NS)

EW

Direction (EW or NS)

NS

Comments

2040 PD

for Warrant Calculation Results, please hit 'Page Down'

CHECK SHEET

Road Authority:

ATEC

City:

Rocky View County

Analysis Date:

2025 Jul 08, Tue

Count Date:

2025 Jan 01, Wed

Date Entry Format:

(yyyy-mm-dd)

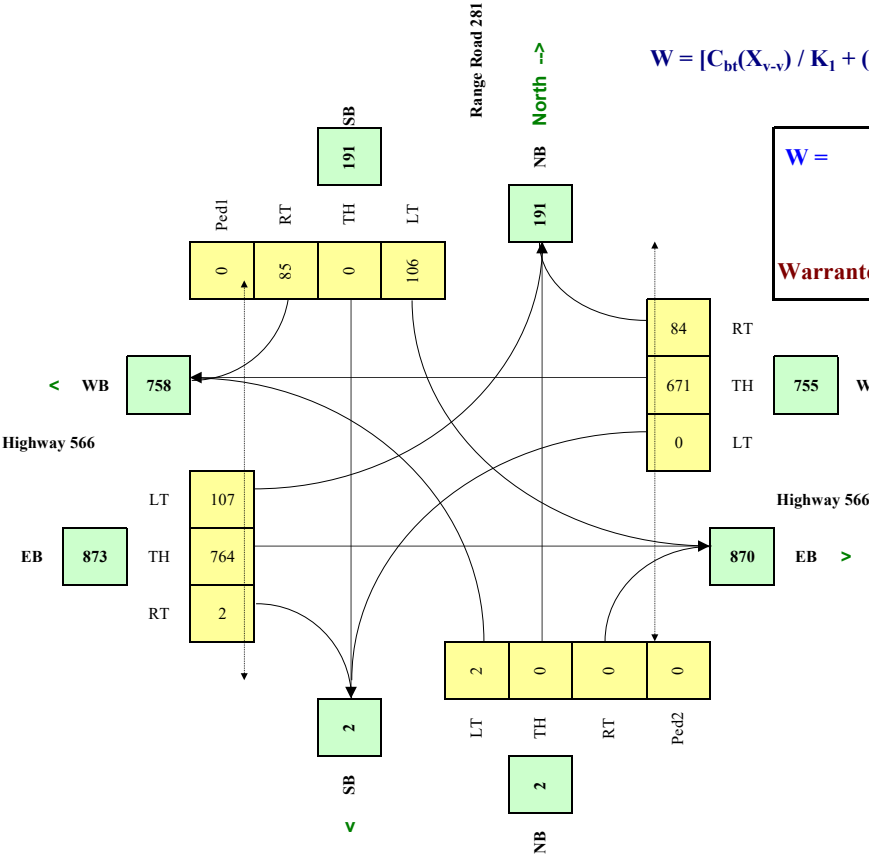
Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	UpStream Signal (m)	# of Thru Lanes
Highway 566	WB				1			1,000	1
Highway 566	EB				1			1,000	1
Range Road 281	NB				1				
Range Road 281	SB				1				
Are the Range Road 281 NB right turns significantly impeded by through movements? (y/n)									n
Are the Range Road 281 SB right turns significantly impeded by through movements? (y/n)									n

Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
Highway 566	EW	100	5.0%	n	0.0
Range Road 281	NS		3.0%	n	

Set Peak Hours	NB			SB			WB			EB			Ped1 NS	Ped2 NS	Ped3 EW	Ped4 EW
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side
7:00 - 8:00	2	0	0	71	0	50	0	1043	176	255	291	2				
8:00 - 9:00	2	0	0	71	0	50	0	1043	176	255	291	2				
11:00 - 12:00	2	0	0	10	0	10	0	671	10	10	764	2				
12:00 - 13:00	2	0	0	10	0	10	0	671	10	10	764	2				
16:00 - 17:00	2	0	0	236	0	195	0	298	66	55	1237	2				
17:00 - 18:00	2	0	0	236	0	195	0	298	66	55	1237	2				
Total (6-hour peak)	12	0	0	634	0	510	0	4,024	504	640	4,584	12	0	0	0	0
Average (6-hour peak)	2	0	0	106	0	85	0	671	84	107	764	2	0	0	0	0

Demographics		
Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	46,581
Central Business District	(y/n)	n

Average 6-hour Peak Turning Movements



$$W = [C_{bt}(X_{v-v}) / K_1 + (F(X_{v-p}) L) / K_2] \times C_i$$

W = 204 204 0

Veh Ped

Warranted

RESET SHEET

ATEC Canadian Matrix Traffic Signal Warrant Analysis

Main Street (name)

Highway 566

Side Street (name)

Range Road 282

Quadrant / Int #

for Warrant Calculation Results, please hit 'Page Down'

Direction (EW or NS)

EW

Direction (EW or NS)

NS

Comments

2040 PD

ROAD AUTHORITY:ATEC

CITY:Rocky View County

ANALYSIS DATE:2025 Jul 08, Tue

COUNT DATE:2025 Jan 01, Wed

DATE ENTRY FORMAT:(yyyy-mm-dd)

Demographics

Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	46,581
Central Business District	(y/n)	n

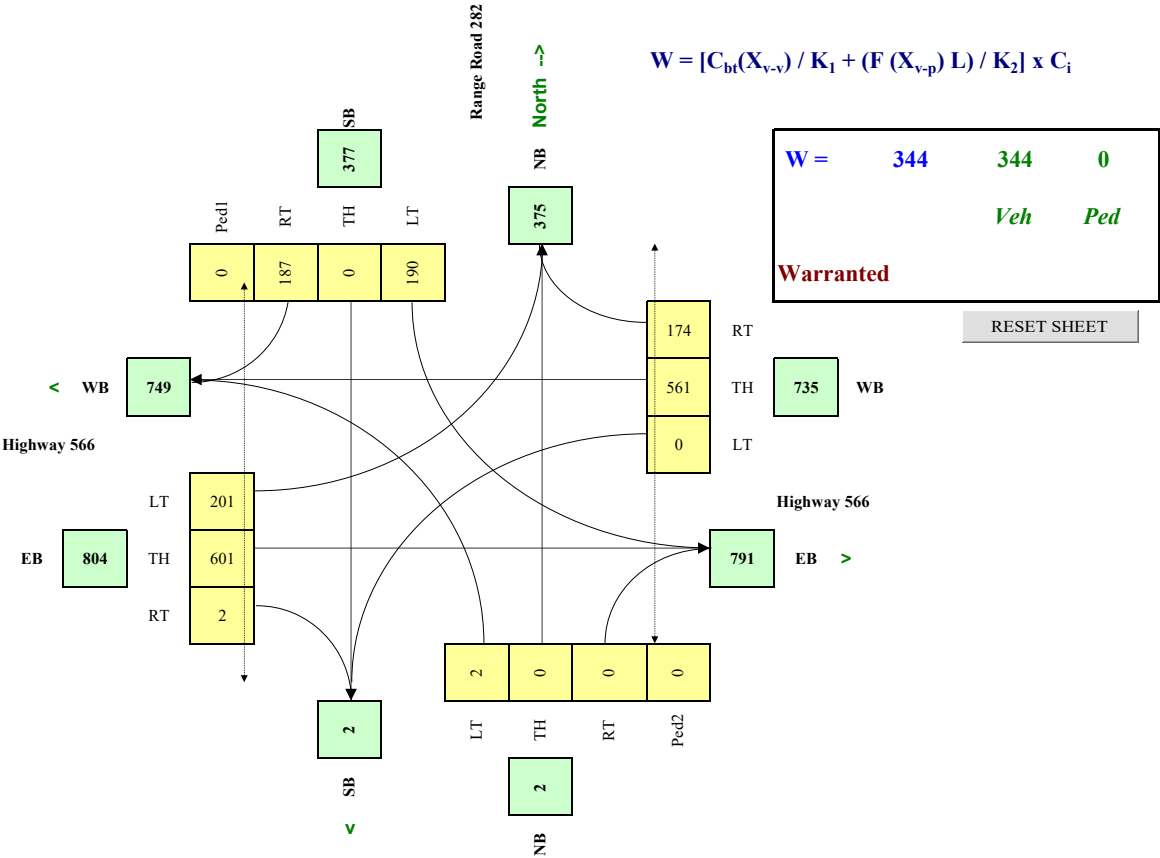
Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	UpStream Signal (m)	# of Thru Lanes
Highway 566	WB				1			1,000	1
Highway 566	EB				1			1,000	1
Range Road 282	NB				1				
Range Road 282	SB				1				
Are the Range Road 282 NB right turns significantly impeded by through movements? (y/n)									n
Are the Range Road 282 SB right turns significantly impeded by through movements? (y/n)									n

Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
Highway 566	EW	100	5.0%	n	0.0
Range Road 282	NS		3.0%	n	

Set Peak Hours													Ped1 NS	Ped2 NS	Ped3 EW	Ped4 EW
Traffic Input	NB			SB			WB			EB			W Side	E Side	N Side	S Side
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT				
7:00 - 8:00	2	0	0	143	0	100	0	717	378	483	405	2				
8:00 - 9:00	2	0	0	143	0	100	0	717	378	483	405	2				
11:00 - 12:00	2	0	0	10	0	10	0	561	10	10	601	2				
12:00 - 13:00	2	0	0	10	0	10	0	561	10	10	601	2				
16:00 - 17:00	2	0	0	417	0	450	0	404	134	110	796	2				
17:00 - 18:00	2	0	0	417	0	450	0	404	134	110	796	2				
Total (6-hour peak)	12	0	0	1,140	0	1,120	0	3,364	1,044	1,206	3,604	12	0	0	0	0
Average (6-hour peak)	2	0	0	190	0	187	0	561	174	201	601	2	0	0	0	0

Average 6-hour Peak Turning Movements

W = [C_{bt}(X_{v-v}) / K₁ + (F (X_{v-p}) L) / K₂] x C_i





APPENDIX C: TAC ILLUMINATION WARRANT RESULTS

ILLUMINATION OF ISOLATED RURAL INTERSECTIONS

Location: Highway 566 / Range Road 281, Horizon: 2060 BG

INTERSECTION CHARACTERISITICS		Date	2025-07-10
Highway 566	Major Road	Other	Spreadsheet created in coordination with the TAC Illumination of Isolated
Range Road 281	Minor Road		Rural Intersection Guide (2001)
2060 BG	Horizon		Add inputs to Blue Boxes.

GEOMETRIC FACTORS		Value	Rating	Weight	Comments	Score
Channelization		None	0			
Channelization Type						
Approach sight distance on most constrained approach		300				
Minimum intersection sight distance (ISD)		300	0	10		0
Posted Speed limit		90 or 100 km/h				
Radius of Horizontal Curve (m)		Tangent	0	5		0
Horizontal Curvature Factor						
Angle of Intersection (10's of Degrees)		90° angle	0	5		0
Downhill Approach Grade (x.x%)		3.1 to 3.9% and meets design guidelines for type and speed of road	1	3	Rounded to nearest tenth of a percent	3
Number of Intersection Legs		4	2	3		6
Geometric Factors Subtotal						9

OPERATIONAL FACTORS		Value	Rating	Weight	Comments	Score
Is the intersection signalized ? (Y/ N)		No			Calculate the Signalization Warrant Factor	
AADT on Major Road (2-way)		>5,000	4	10	Either Use the two AADT inputs OR the Descriptive Signalization	40
AADT on Minor Road (2-way)		<500	0	20	Warrant (Unused values should be set to Zero) Refer to Table	0
OR						
Signalization Warrant		AADT Used	0	30	1(B) for description and rating values for signalization warrant.	0
Night-Time Hourly Pedestrian Volume		No pedestrians	0	10	Refer to Table 1(B), note #2, to account for children and seniors	0
Intersecting Roadway Classification		Primary/rural major, primary/rural minor	1	5		5
Operating Speed or Posted Speed on Major Road (km/h)		90 km/h or more	4	5	Refer to Table 1(B), note #3	20
Operating Speed on Minor Road (km/h)		80 km/h	3	5	Refer to Table 1(B), note #3	15
Operational Factors Subtotal						80

ENVIRONMENTAL FACTORS		Value	Rating	Weight	Comments	Score
Lighted Developments within 150 m radius of intersection		None	0	5		0
Environmental Factor Subtotal						0

COLLISION HISTORY		Value	Rating	Weight	Comments	Score
Average Annual night-time collision frequency due to inadequate lighting (collisions/yr, rounded to nearest whole #)		0 collisions per year	0	15	Enter either the annual frequency (See Table 1(C), note #4)	0
Collision History Subtotal						0

SUMMARY	
Geometric Factors Subtotal	9
Operational Factors Subtotal	80
Environmental Factors Subtotal	0
Collision History Subtotal	0
TOTAL POINTS	89

Lighting Not Warranted

ILLUMINATION OF ISOLATED RURAL INTERSECTIONS

Location: Highway 566 / Range Road 281, Horizon: 2031, 2040, 2050, 2060 PD

INTERSECTION CHARACTERISITICS

Highway 566	Major Road
Range Road 281	Minor Road
2031, 2040, 2050, 2060 PD	Horizon

Date	
Other	Spreadsheet created in coordination with the TAC Illumination of Isolated Rural Intersection Guide (2001)
	Add inputs to Blue Boxes.

GEOMETRIC FACTORS					
	Value	Rating	Weight	Comments	Score
Channelization	None	0			
Channelization Type					
Approach sight distance on most constrained approach	300				
Minimum intersection sight distance (ISD)	300	0	10		0
Posted Speed limit	90 or 100 km/h				
Radius of Horizontal Curve (m)	Tangent	0	5		0
Horizontal Curvature Factor					
Angle of Intersection (10's of Degrees)	90° angle	0	5		0
Downhill Approach Grade (x.x%)	3.1 to 3.9% and meets design guidelines for type and speed of road	1	3	Rounded to nearest tenth of a percent	3
Number of Intersection Legs	4	2	3		6
Geometric Factors Subtotal					9

OPERATIONAL FACTORS					
Is the intersection signalized ? (Y/ N)	No			Calculate the Signalization Warrant Factor	
AADT on Major Road (2-way)	>5,000	4	10	Either Use the two AADT inputs OR the Descriptive Signalization Warrant (Unused values should be set to Zero) Refer to Table	40
AADT on Minor Road (2-way)	>2,000	4	20		80
OR					
Signalization Warrant	AADT Used	0	30	1(B) for description and rating values for signalization warrant.	0
Night-Time Hourly Pedestrian Volume	No pedestrians	0	10	Refer to Table 1(B), note #2, to account for children and seniors	0
Intersecting Roadway Classification	Primary/rural major, primary/rural minor	1	5		5
Operating Speed or Posted Speed on Major Road (km/h)	90 km/h or more	4	5	Refer to Table 1(B), note #3	20
Operating Speed on Minor Road (km/h)	80 km/h	3	5	Refer to Table 1(B), note #3	15
Operational Factors Subtotal					160

ENVIRONMENTAL FACTORS					
Lighted Developments within 150 m radius of intersection	None	0	5		0
Environmental Factor Subtotal					0

COLLISION HISTORY					
Average Annual night-time collision frequency due to inadequate lighting (collisions/yr, rounded to nearest whole #)	0 collisions per year	0	15	Enter either the annual frequency (See Table 1(C), note #4)	0
Collision History Subtotal					0

SUMMARY	
Geometric Factors Subtotal	9
Operational Factors Subtotal	160
Environmental Factors Subtotal	0
Collision History Subtotal	0
TOTAL POINTS	169

#N/A

ation lighting to illuminate pedestrians or cross street traf

ILLUMINATION OF ISOLATED RURAL INTERSECTIONS

Location: Highway 566 / Range Road 282, Horizon: 2060 BG

INTERSECTION CHARACTERISITICS		Date	2025-07-10
Highway 566	Major Road	Other	Spreadsheet created in coordination with the TAC Illumination of Isolated
Range Road 282	Minor Road		Rural Intersection Guide (2001)
2060 BG	Horizon		Add inputs to Blue Boxes.

GEOMETRIC FACTORS					
	Value	Rating	Weight	Comments	Score
Channelization	None	0			
Channelization Type					
Approach sight distance on most constrained approach	300				
Minimum intersection sight distance (ISD)	300	0	10		0
Posted Speed limit	90 or 100 km/h				
Radius of Horizontal Curve (m)	Tangent	0	5		0
Horizontal Curvature Factor					
Angle of Intersection (10's of Degrees)	90° angle	0	5		0
Downhill Approach Grade (x.x%)	3.1 to 3.9% and meets design guidelines for type and speed of road	1	3	Rounded to nearest tenth of a percent	3
Number of Intersection Legs	4	2	3		6
Geometric Factors Subtotal					9

OPERATIONAL FACTORS					
Is the intersection signalized ? (Y/ N)	No			Calculate the Signalization Warrant Factor	
AADT on Major Road (2-way)	>5,000	4	10	Either Use the two AADT inputs OR the Descriptive Signalization	40
AADT on Minor Road (2-way)	500-1,000	1	20	Warrant (Unused values should be set to Zero) Refer to Table	20
OR					
Signalization Warrant	AADT Used	0	30	1(B) for description and rating values for signalization warrant.	0
Night-Time Hourly Pedestrian Volume	No pedestrians	0	10	Refer to Table 1(B), note #2, to account for children and seniors	0
Intersecting Roadway Classification	Primary/rural major, primary/rural minor	1	5		5
Operating Speed or Posted Speed on Major Road (km/h)	90 km/h or more	4	5	Refer to Table 1(B), note #3	20
Operating Speed on Minor Road (km/h)	80 km/h	3	5	Refer to Table 1(B), note #3	15
Operational Factors Subtotal					100

ENVIRONMENTAL FACTORS					
Lighted Developments within 150 m radius of intersection	None	0	5		0
Environmental Factor Subtotal					0

COLLISION HISTORY					
Average Annual night-time collision frequency due to inadequate lighting (collisions/yr, rounded to nearest whole #)	0 collisions per year	0	15	Enter either the annual frequency (See Table 1(C), note #4)	0
Collision History Subtotal					0

SUMMARY	
Geometric Factors Subtotal	9
Operational Factors Subtotal	100
Environmental Factors Subtotal	0
Collision History Subtotal	0
TOTAL POINTS	109

Lighting Not Warranted

ILLUMINATION OF ISOLATED RURAL INTERSECTIONS

Location: Highway 566 / Range Road 282, Horizon: 2031, 2040, 2050, 2060 PD

INTERSECTION CHARACTERISITICS

Highway 566
Range Road 282
2031, 2040, 2050, 2060 PD

Major Road
Minor Road
Horizon

Date
Other

Spreadsheet created in coordination with the TAC Illumination of Isolated Rural Intersection Guide (2001)
Add inputs to Blue Boxes.

GEOMETRIC FACTORS					
	Value	Rating	Weight	Comments	Score
Channelization	None	0			
Channelization Type					
Approach sight distance on most constrained approach	300				
Minimum intersection sight distance (ISD)	300	0	10		0
Posted Speed limit	90 or 100 km/h				
Radius of Horizontal Curve (m)	Tangent	0	5		0
Horizontal Curvature Factor					
Angle of Intersection (10's of Degrees)	90° angle	0	5		0
Downhill Approach Grade (x.x%)	3.1 to 3.9% and meets design guidelines for type and speed of road	1	3	Rounded to nearest tenth of a percent	3
Number of Intersection Legs	4	2	3		6
Geometric Factors Subtotal					9

OPERATIONAL FACTORS					
Is the intersection signalized ? (Y/ N)	No			Calculate the Signalization Warrant Factor	
AADT on Major Road (2-way)	>5,000	4	10	Either Use the two AADT inputs OR the Descriptive Signalization Warrant (Unused values should be set to Zero) Refer to Table	40
AADT on Minor Road (2-way)	>2,000	4	20		80
OR					
Signalization Warrant	AADT Used	0	30	1(B) for description and rating values for signalization warrant.	0
Night-Time Hourly Pedestrian Volume	No pedestrians	0	10	Refer to Table 1(B), note #2, to account for children and seniors	0
Intersecting Roadway Classification	Primary/rural major, primary/rural minor	1	5		5
Operating Speed or Posted Speed on Major Road (km/h)	90 km/h or more	4	5	Refer to Table 1(B), note #3	20
Operating Speed on Minor Road (km/h)	80 km/h	3	5	Refer to Table 1(B), note #3	15
Operational Factors Subtotal					160

ENVIRONMENTAL FACTORS					
Lighted Developments within 150 m radius of intersection	None	0	5		0
Environmental Factor Subtotal					0

COLLISION HISTORY					
Average Annual night-time collision frequency due to inadequate lighting (collisions/yr, rounded to nearest whole #)	0 collisions per year	0	15	Enter either the annual frequency (See Table 1(C), note #4)	0
Collision History Subtotal					0

SUMMARY	
Geometric Factors Subtotal	9
Operational Factors Subtotal	160
Environmental Factors Subtotal	0
Collision History Subtotal	0
TOTAL POINTS	169

#N/A

ation lighting to illuminate pedestrians or cross street traf

ILLUMINATION OF ISOLATED RURAL INTERSECTIONS

Location: Range Road 281 / Site 5 Access, Horizon: 2060 BG

INTERSECTION CHARACTERISITICS

Range Road 281
Site 5 Access
2060 BG

Major Road
Minor Road
Horizon

Date
Other

2025-07-10
Spreadsheet created in coordination with the TAC Illumination of Isolated Rural Intersection Guide (2001)
Add inputs to Blue Boxes.

GEOMETRIC FACTORS					
	Value	Rating	Weight	Comments	Score
Channelization	None	0			
Channelization Type					
Approach sight distance on most constrained approach	300				
Minimum intersection sight distance (ISD)	300	0	10		0
Posted Speed limit	90 or 100 km/h				
Radius of Horizontal Curve (m)	Tangent	0	5		0
Horizontal Curvature Factor					
Angle of Intersection (10's of Degrees)	90° angle	0	5		0
Downhill Approach Grade (x.x%)	<3.0%	0	3	Rounded to nearest tenth of a percent	0
Number of Intersection Legs	4	2	3		6
Geometric Factors Subtotal					6

OPERATIONAL FACTORS					
Is the intersection signalized ? (Y/ N)	No			Calculate the Signalization Warrant Factor	
AADT on Major Road (2-way)	<1,000	0	10	Either Use the two AADT inputs OR the Descriptive Signalization	0
AADT on Minor Road (2-way)	<500	0	20	Warrant (Unused values should be set to Zero) Refer to Table	0
OR					
Signalization Warrant	AADT Used	0	30	1(B) for description and rating values for signalization warrant.	0
Night-Time Hourly Pedestrian Volume	No pedestrians	0	10	Refer to Table 1(B), note #2, to account for children and seniors	0
Intersecting Roadway Classification	Primary/rural major, primary/rural minor	1	5		5
Operating Speed or Posted Speed on Major Road (km/h)	90 km/h or more	4	5	Refer to Table 1(B), note #3	20
Operating Speed on Minor Road (km/h)	80 km/h	3	5	Refer to Table 1(B), note #3	15
Operational Factors Subtotal					40

ENVIRONMENTAL FACTORS					
Lighted Developments within 150 m radius of intersection	None	0	5		0
Environmental Factor Subtotal					0

COLLISION HISTORY					
Average Annual night-time collision frequency due to inadequate lighting (collisions/yr, rounded to nearest whole #)	0 collisions per year	0	15	Enter either the annual frequency (See Table 1(C), note #4)	0
Collision History Subtotal					0

SUMMARY	
Geometric Factors Subtotal	6
Operational Factors Subtotal	40
Environmental Factors Subtotal	0
Collision History Subtotal	0
TOTAL POINTS	46

Lighting Not Warranted

ILLUMINATION OF ISOLATED RURAL INTERSECTIONS

Location: Range Road 281 / Site 5 Access, Horizon: 2031, 2040, 2050, 2060 PD

INTERSECTION CHARACTERISITICS

Range Road 281	Major Road
Site 5 Access	Minor Road
2031, 2040, 2050, 2060 PD	Horizon

Date	2025-07-10
Other	Spreadsheet created in coordination with the TAC Illumination of Isolated Rural Intersection Guide (2001)
	Add inputs to Blue Boxes.

GEOMETRIC FACTORS					
	Value	Rating	Weight	Comments	Score
Channelization	None	0			
Channelization Type					
Approach sight distance on most constrained approach	300				
Minimum intersection sight distance (ISD)	300	0	10		0
Posted Speed limit	90 or 100 km/h				
Radius of Horizontal Curve (m)	Tangent	0	5		0
Horizontal Curvature Factor					
Angle of Intersection (10's of Degrees)	90° angle	0	5		0
Downhill Approach Grade (x.x%)	<3.0%	0	3	Rounded to nearest tenth of a percent	0
Number of Intersection Legs	4	2	3		6
Geometric Factors Subtotal					6

OPERATIONAL FACTORS					
Is the intersection signalized ? (Y/ N)	No			Calculate the Signalization Warrant Factor	
AADT on Major Road (2-way)	2,000-3,000	2	10	Either Use the two AADT inputs OR the Descriptive Signalization	20
AADT on Minor Road (2-way)	>2,000	4	20	Warrant (Unused values should be set to Zero) Refer to Table	80
OR					
Signalization Warrant	AADT Used	0	30	1(B) for description and rating values for signalization warrant.	0
Night-Time Hourly Pedestrian Volume	No pedestrians	0	10	Refer to Table 1(B), note #2, to account for children and seniors	0
Intersecting Roadway Classification	Primary/rural major, primary/rural minor	1	5		5
Operating Speed or Posted Speed on Major Road (km/h)	90 km/h or more	4	5	Refer to Table 1(B), note #3	20
Operating Speed on Minor Road (km/h)	80 km/h	3	5	Refer to Table 1(B), note #3	15
Operational Factors Subtotal					140

ENVIRONMENTAL FACTORS					
Lighted Developments within 150 m radius of intersection	None	0	5		0
Environmental Factor Subtotal					0

COLLISION HISTORY					
Average Annual night-time collision frequency due to inadequate lighting (collisions/yr, rounded to nearest whole #)	0 collisions per year	0	15	Enter either the annual frequency (See Table 1(C), note #4)	0
Collision History Subtotal					0

SUMMARY	
Geometric Factors Subtotal	6
Operational Factors Subtotal	140
Environmental Factors Subtotal	0
Collision History Subtotal	0
TOTAL POINTS	146

#N/A

ation lighting to illuminate pedestrians or cross street traf

ILLUMINATION OF ISOLATED RURAL INTERSECTIONS

Location: Range Road 281 / Site 6 Access, Horizon: 2060 BG

INTERSECTION CHARACTERISITICS			Date	2025-07-10
Range Road 281	Major Road		Other	Spreadsheet created in coordination with the TAC Illumination of Isolated Rural Intersection Guide (2001) Add inputs to Blue Boxes.
Site 6 Access	Minor Road			
2060 BG	Horizon			

GEOMETRIC FACTORS					
	Value	Rating	Weight	Comments	Score
Channelization	None	0			
Channelization Type					
Approach sight distance on most constrained approach	300				
Minimum intersection sight distance (ISD)	300	0	10		0
Posted Speed limit	90 or 100 km/h				
Radius of Horizontal Curve (m)	Tangent	0	5		0
Horizontal Curvature Factor					
Angle of Intersection (10's of Degrees)	90° angle	0	5		0
Downhill Approach Grade (x.x%)	<3.0%	0	3	Rounded to nearest tenth of a percent	0
Number of Intersection Legs	4	2	3		6
Geometric Factors Subtotal					6

OPERATIONAL FACTORS					
Is the intersection signalized ? (Y/ N)	No			Calculate the Signalization Warrant Factor	
AADT on Major Road (2-way)	<1,000	0	10	Either Use the two AADT inputs OR the Descriptive Signalization Warrant (Unused values should be set to Zero) Refer to Table	0
AADT on Minor Road (2-way)	<500	0	20		0
OR					
Signalization Warrant	AADT Used	0	30	1(B) for description and rating values for signalization warrant.	0
Night-Time Hourly Pedestrian Volume	No pedestrians	0	10	Refer to Table 1(B), note #2, to account for children and seniors	0
Intersecting Roadway Classification	Primary/rural major, primary/rural minor	1	5		5
Operating Speed or Posted Speed on Major Road (km/h)	90 km/h or more	4	5	Refer to Table 1(B), note #3	20
Operating Speed on Minor Road (km/h)	80 km/h	3	5	Refer to Table 1(B), note #3	15
Operational Factors Subtotal					40

ENVIRONMENTAL FACTORS					
Lighted Developments within 150 m radius of intersection	None	0	5		0
Environmental Factor Subtotal					0

COLLISION HISTORY					
Average Annual night-time collision frequency due to inadequate lighting (collisions/yr, rounded to nearest whole #)	0 collisions per year	0	15	Enter either the annual frequency (See Table 1(C), note #4)	0
Collision History Subtotal					0

SUMMARY	
Geometric Factors Subtotal	6
Operational Factors Subtotal	40
Environmental Factors Subtotal	0
Collision History Subtotal	0
TOTAL POINTS	46

Lighting Not Warranted

ILLUMINATION OF ISOLATED RURAL INTERSECTIONS

Location: Range Road 281 / Site 6 Access, Horizon: 2031, 2040, 2050, 2060 PD

INTERSECTION CHARACTERISITICS		Date	2025-07-10
Range Road 281	Major Road	Other	Spreadsheet created in coordination with the TAC Illumination of Isolated Rural Intersection Guide (2001) Add inputs to Blue Boxes.
Site 6 Access	Minor Road		
2031, 2040, 2050, 2060 PD	Horizon		

GEOMETRIC FACTORS		Value	Rating	Weight	Comments	Score
Channelization		None	0			
Channelization Type						
Approach sight distance on most constrained approach		300				
Minimum intersection sight distance (ISD)		300	0	10		0
Posted Speed limit		90 or 100 km/h				
Radius of Horizontal Curve (m)		Tangent	0	5		0
Horizontal Curvature Factor						
Angle of Intersection (10's of Degrees)		90° angle	0	5		0
Downhill Approach Grade (x.x%)		<3.0%	0	3	Rounded to nearest tenth of a percent	0
Number of Intersection Legs		4	2	3		6
Geometric Factors Subtotal						6

OPERATIONAL FACTORS		Value	Rating	Weight	Comments	Score
Is the intersection signalized ? (Y/ N)		No			Calculate the Signalization Warrant Factor	
AADT on Major Road (2-way)		>5,000	4	10	Either Use the two AADT inputs OR the Descriptive Signalization Warrant (Unused values should be set to Zero) Refer to Table	40
AADT on Minor Road (2-way)		>2,000	4	20		80
OR						
Signalization Warrant		AADT Used	0	30	1(B) for description and rating values for signalization warrant.	0
Night-Time Hourly Pedestrian Volume		No pedestrians	0	10	Refer to Table 1(B), note #2, to account for children and seniors	0
Intersecting Roadway Classification		Primary/rural major, primary/rural minor	1	5		5
Operating Speed or Posted Speed on Major Road (km/h)		90 km/h or more	4	5	Refer to Table 1(B), note #3	20
Operating Speed on Minor Road (km/h)		80 km/h	3	5	Refer to Table 1(B), note #3	15
Operational Factors Subtotal						160

ENVIRONMENTAL FACTORS		Value	Rating	Weight	Comments	Score
Lighted Developments within 150 m radius of intersection		None	0	5		0
Environmental Factor Subtotal						0

COLLISION HISTORY		Value	Rating	Weight	Comments	Score
Average Annual night-time collision frequency due to inadequate lighting (collisions/yr, rounded to nearest whole #)		0 collisions per year	0	15	Enter either the annual frequency (See Table 1(C), note #4)	0
Collision History Subtotal						0

SUMMARY	
Geometric Factors Subtotal	6
Operational Factors Subtotal	160
Environmental Factors Subtotal	0
Collision History Subtotal	0
TOTAL POINTS	166

#N/A

ation lighting to illuminate pedestrians or cross street traf

ILLUMINATION OF ISOLATED RURAL INTERSECTIONS

Location: Range Road 281 / Township Road 264, Horizon: 2031, 2040, 2050, 2060 PD

INTERSECTION CHARACTERISITICS		Date	2025-07-10
Range Road 281	Major Road	Other	Spreadsheet created in coordination with the TAC Illumination of Isolated Rural Intersection Guide (2001) Add inputs to Blue Boxes.
Township Road 264	Minor Road		
2031, 2040, 2050, 2060 PD	Horizon		

GEOMETRIC FACTORS					
	Value	Rating	Weight	Comments	Score
Channelization	None	0			
Channelization Type					
Approach sight distance on most constrained approach	300				
Minimum intersection sight distance (ISD)	300	0	10		0
Posted Speed limit	90 or 100 km/h				
Radius of Horizontal Curve (m)	Tangent	0	5		0
Horizontal Curvature Factor					
Angle of Intersection (10's of Degrees)	90° angle	0	5		0
Downhill Approach Grade (x.x%)	<3.0%	0	3	Rounded to nearest tenth of a percent	0
Number of Intersection Legs	4	2	3		6
Geometric Factors Subtotal					6

OPERATIONAL FACTORS					
Is the intersection signalized ? (Y/ N)	No			Calculate the Signalization Warrant Factor	
AADT on Major Road (2-way)	<1,000	0	10	Either Use the two AADT inputs OR the Descriptive Signalization	0
AADT on Minor Road (2-way)	<500	0	20	Warrant (Unused values should be set to Zero) Refer to Table	0
OR					
Signalization Warrant	AADT Used	0	30	1(B) for description and rating values for signalization warrant.	0
Night-Time Hourly Pedestrian Volume	No pedestrians	0	10	Refer to Table 1(B), note #2, to account for children and seniors	0
Intersecting Roadway Classification	Primary/rural major, primary/rural minor	1	5		5
Operating Speed or Posted Speed on Major Road (km/h)	90 km/h or more	4	5	Refer to Table 1(B), note #3	20
Operating Speed on Minor Road (km/h)	80 km/h	3	5	Refer to Table 1(B), note #3	15
Operational Factors Subtotal					40

ENVIRONMENTAL FACTORS					
Lighted Developments within 150 m radius of intersection	None	0	5		0
Environmental Factor Subtotal					0

COLLISION HISTORY					
Average Annual night-time collision frequency due to inadequate lighting (collisions/yr, rounded to nearest whole #)	0 collisions per year	0	15	Enter either the annual frequency (See Table 1(C), note #4)	0
Collision History Subtotal					0

SUMMARY	
Geometric Factors Subtotal	6
Operational Factors Subtotal	40
Environmental Factors Subtotal	0
Collision History Subtotal	0
TOTAL POINTS	46

Lighting Not Warranted

ILLUMINATION OF ISOLATED RURAL INTERSECTIONS

Location: Range Road 282 / Site 1 & Site 3 Access or Site 4 Access, Horizon: 2031, 2040, 2050, 2060 PD

INTERSECTION CHARACTERISITICS

Range Road 282
Site 1 & Site 3 Access or Site 4 Access
2031, 2040, 2050, 2060 PD

Major Road
Minor Road
Horizon

Date
Other

2025-07-10
Spreadsheet created in coordination with the TAC Illumination of Isolated Rural Intersection Guide (2001)
Add inputs to Blue Boxes.

GEOMETRIC FACTORS					
	Value	Rating	Weight	Comments	Score
Channelization	None	0			
Channelization Type					
Approach sight distance on most constrained approach	300				
Minimum intersection sight distance (ISD)	300	0	10		0
Posted Speed limit	90 or 100 km/h				
Radius of Horizontal Curve (m)	Tangent	0	5		0
Horizontal Curvature Factor					
Angle of Intersection (10's of Degrees)	90° angle	0	5		0
Downhill Approach Grade (x.x%)	<3.0%	0	3	Rounded to nearest tenth of a percent	0
Number of Intersection Legs	4	2	3		6
Geometric Factors Subtotal					6

OPERATIONAL FACTORS					
Is the intersection signalized ? (Y/ N)	No			Calculate the Signalization Warrant Factor	
AADT on Major Road (2-way)	3,000-5,000	3	10	Either Use the two AADT inputs OR the Descriptive Signalization Warrant (Unused values should be set to Zero) Refer to Table	30
AADT on Minor Road (2-way)	>2,000	4	20		80
OR					
Signalization Warrant	AADT Used	0	30	1(B) for description and rating values for signalization warrant.	0
Night-Time Hourly Pedestrian Volume	No pedestrians	0	10	Refer to Table 1(B), note #2, to account for children and seniors	0
Intersecting Roadway Classification	Primary/rural major, primary/rural minor	1	5		5
Operating Speed or Posted Speed on Major Road (km/h)	90 km/h or more	4	5	Refer to Table 1(B), note #3	20
Operating Speed on Minor Road (km/h)	80 km/h	3	5	Refer to Table 1(B), note #3	15
Operational Factors Subtotal					150

ENVIRONMENTAL FACTORS					
Lighted Developments within 150 m radius of intersection	None	0	5		0
Environmental Factor Subtotal					0

COLLISION HISTORY					
Average Annual night-time collision frequency due to inadequate lighting (collisions/yr, rounded to nearest whole #)	0 collisions per year	0	15	Enter either the annual frequency (See Table 1(C), note #4)	0
Collision History Subtotal					0

SUMMARY	
Geometric Factors Subtotal	6
Operational Factors Subtotal	150
Environmental Factors Subtotal	0
Collision History Subtotal	0
TOTAL POINTS	156

#N/A

ation lighting to illuminate pedestrians or cross street traf

ILLUMINATION OF ISOLATED RURAL INTERSECTIONS

Location: Range Road 282 / Site 2 Access, Horizon: 2031, 2040, 2050, 2060 PD

INTERSECTION CHARACTERISITICS

Range Road 282
Site 2 Access
2031, 2040, 2050, 2060 PD

Major Road
Minor Road
Horizon

Date2025-07-10

OtherSpreadsheet created in coordination with the TAC Illumination of Isolated Rural Intersection Guide (2001)
Add inputs to Blue Boxes.

GEOMETRIC FACTORS					
	Value	Rating	Weight	Comments	Score
Channelization	None	0			
Channelization Type					
Approach sight distance on most constrained approach	300				
Minimum intersection sight distance (ISD)	300	0	10		0
Posted Speed limit	90 or 100 km/h				
Radius of Horizontal Curve (m)	Tangent	0	5		0
Horizontal Curvature Factor					
Angle of Intersection (10's of Degrees)	90° angle	0	5		0
Downhill Approach Grade (x.x%)	<3.0%	0	3	Rounded to nearest tenth of a percent	0
Number of Intersection Legs	4	2	3		6
Geometric Factors Subtotal					6

OPERATIONAL FACTORS					
Is the intersection signalized ? (Y/ N)	No			Calculate the Signalization Warrant Factor	
AADT on Major Road (2-way)	3,000-5,000	3	10	Either Use the two AADT inputs OR the Descriptive Signalization	30
AADT on Minor Road (2-way)	>2,000	4	20	Warrant (Unused values should be set to Zero) Refer to Table	80
OR					
Signalization Warrant	AADT Used	0	30	1(B) for description and rating values for signalization warrant.	0
Night-Time Hourly Pedestrian Volume	No pedestrians	0	10	Refer to Table 1(B), note #2, to account for children and seniors	0
Intersecting Roadway Classification	Primary/rural major, primary/rural minor	1	5		5
Operating Speed or Posted Speed on Major Road (km/h)	90 km/h or more	4	5	Refer to Table 1(B), note #3	20
Operating Speed on Minor Road (km/h)	80 km/h	3	5	Refer to Table 1(B), note #3	15
Operational Factors Subtotal					150

ENVIRONMENTAL FACTORS					
Lighted Developments within 150 m radius of intersection	None	0	5		0
Environmental Factor Subtotal					0

COLLISION HISTORY					
Average Annual night-time collision frequency due to inadequate lighting (collisions/yr, rounded to nearest whole #)	0 collisions per year	0	15	Enter either the annual frequency (See Table 1(C), note #4)	0
Collision History Subtotal					0

SUMMARY	
Geometric Factors Subtotal	6
Operational Factors Subtotal	150
Environmental Factors Subtotal	0
Collision History Subtotal	0
TOTAL POINTS	156

#N/A

ation lighting to illuminate pedestrians or cross street traf

ILLUMINATION OF ISOLATED RURAL INTERSECTIONS

Location: Range Road 282 / Site Accesses, Horizon: 2060 BG

INTERSECTION CHARACTERISITICS		Date	2025-07-10
Range Road 282	Major Road	Other	Spreadsheet created in coordination with the TAC Illumination of Isolated Rural Intersection Guide (2001) Add inputs to Blue Boxes.
Site Accesses	Minor Road		
2060 BG	Horizon		

GEOMETRIC FACTORS					
	Value	Rating	Weight	Comments	Score
Channelization	None	0			
Channelization Type					
Approach sight distance on most constrained approach	300				
Minimum intersection sight distance (ISD)	300	0	10		0
Posted Speed limit	90 or 100 km/h				
Radius of Horizontal Curve (m)	Tangent	0	5		0
Horizontal Curvature Factor					
Angle of Intersection (10's of Degrees)	90° angle	0	5		0
Downhill Approach Grade (x.x%)	<3.0%	0	3	Rounded to nearest tenth of a percent	0
Number of Intersection Legs	4	2	3		6
Geometric Factors Subtotal					6

OPERATIONAL FACTORS					
Is the intersection signalized ? (Y/ N)	No			Calculate the Signalization Warrant Factor	
AADT on Major Road (2-way)	<1,000	0	10	Either Use the two AADT inputs OR the Descriptive Signalization Warrant (Unused values should be set to Zero) Refer to Table	0
AADT on Minor Road (2-way)	<500	0	20		0
OR					
Signalization Warrant	AADT Used	0	30	1(B) for description and rating values for signalization warrant.	0
Night-Time Hourly Pedestrian Volume	No pedestrians	0	10	Refer to Table 1(B), note #2, to account for children and seniors	0
Intersecting Roadway Classification	Primary/rural major, primary/rural minor	1	5		5
Operating Speed or Posted Speed on Major Road (km/h)	90 km/h or more	4	5	Refer to Table 1(B), note #3	20
Operating Speed on Minor Road (km/h)	80 km/h	3	5	Refer to Table 1(B), note #3	15
Operational Factors Subtotal					40

ENVIRONMENTAL FACTORS					
Lighted Developments within 150 m radius of intersection	None	0	5		0
Environmental Factor Subtotal					0

COLLISION HISTORY					
Average Annual night-time collision frequency due to inadequate lighting (collisions/yr, rounded to nearest whole #)	0 collisions per year	0	15	Enter either the annual frequency (See Table 1(C), note #4)	0
Collision History Subtotal					0

SUMMARY	
Geometric Factors Subtotal	6
Operational Factors Subtotal	40
Environmental Factors Subtotal	0
Collision History Subtotal	0
TOTAL POINTS	46

Lighting Not Warranted

ILLUMINATION OF ISOLATED RURAL INTERSECTIONS

Location: Range Road 282 / Township Road 264, Horizon: 2031, 2040, 2050, 2060 PD

INTERSECTION CHARACTERISTICS		Date	2025-07-10
Range Road 282	Major Road	Other	Spreadsheet created in coordination with the TAC Illumination of Isolated Rural Intersection Guide (2001) Add inputs to Blue Boxes.
Township Road 264	Minor Road		
2031, 2040, 2050, 2060 PD	Horizon		

GEOMETRIC FACTORS					
	Value	Rating	Weight	Comments	Score
Channelization	None	0			
Channelization Type					
Approach sight distance on most constrained approach	300				
Minimum intersection sight distance (ISD)	300	0	10		0
Posted Speed limit	90 or 100 km/h				
Radius of Horizontal Curve (m)	Tangent	0	5		0
Horizontal Curvature Factor					
Angle of Intersection (10's of Degrees)	90° angle	0	5		0
Downhill Approach Grade (x.x%)	<3.0%	0	3	Rounded to nearest tenth of a percent	0
Number of Intersection Legs	4	2	3		6
Geometric Factors Subtotal					6

OPERATIONAL FACTORS					
Is the intersection signalized ? (Y/ N)	No			Calculate the Signalization Warrant Factor	
AADT on Major Road (2-way)	1,000-2,000	1	10	Either Use the two AADT inputs OR the Descriptive Signalization Warrant (Unused values should be set to Zero) Refer to Table	10
AADT on Minor Road (2-way)	<500	0	20		0
OR					
Signalization Warrant	AADT Used	0	30	1(B) for description and rating values for signalization warrant.	0
Night-Time Hourly Pedestrian Volume	No pedestrians	0	10	Refer to Table 1(B), note #2, to account for children and seniors	0
Intersecting Roadway Classification	Primary/rural major, primary/rural minor	1	5		5
Operating Speed or Posted Speed on Major Road (km/h)	90 km/h or more	4	5	Refer to Table 1(B), note #3	20
Operating Speed on Minor Road (km/h)	80 km/h	3	5	Refer to Table 1(B), note #3	15
Operational Factors Subtotal					50

ENVIRONMENTAL FACTORS					
Lighted Developments within 150 m radius of intersection	None	0	5		0
Environmental Factor Subtotal					0

COLLISION HISTORY					
Average Annual night-time collision frequency due to inadequate lighting (collisions/yr, rounded to nearest whole #)	0 collisions per year	0	15	Enter either the annual frequency (See Table 1(C), note #4)	0
Collision History Subtotal					0

SUMMARY	
Geometric Factors Subtotal	6
Operational Factors Subtotal	50
Environmental Factors Subtotal	0
Collision History Subtotal	0
TOTAL POINTS	56

Lighting Not Warranted



APPENDIX D: ATEC INTERSECTION ANALYSIS SPREADSHEETS



Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	2,800
Minor (intersecting) Road A.A.D.T	100
Left turn volume (V_{LT}), veh/h:	2
Advancing volume (V_{adv}), veh/h:	114
Opposing volume (V_{opp}), veh/h:	159
Left turn truck volume, trucks/h:	-
Right turn volume (V_{RT}), veh/day:	-

OUTPUT	Value
Percent left-turns in advancing volume:	1.8%
Percent trucks in left turn volume:	0.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	0.0%
Calculated conflicts per hour, veh/h:	0.0

Use Detailed Method

Type II

Additional Storage Not Required	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

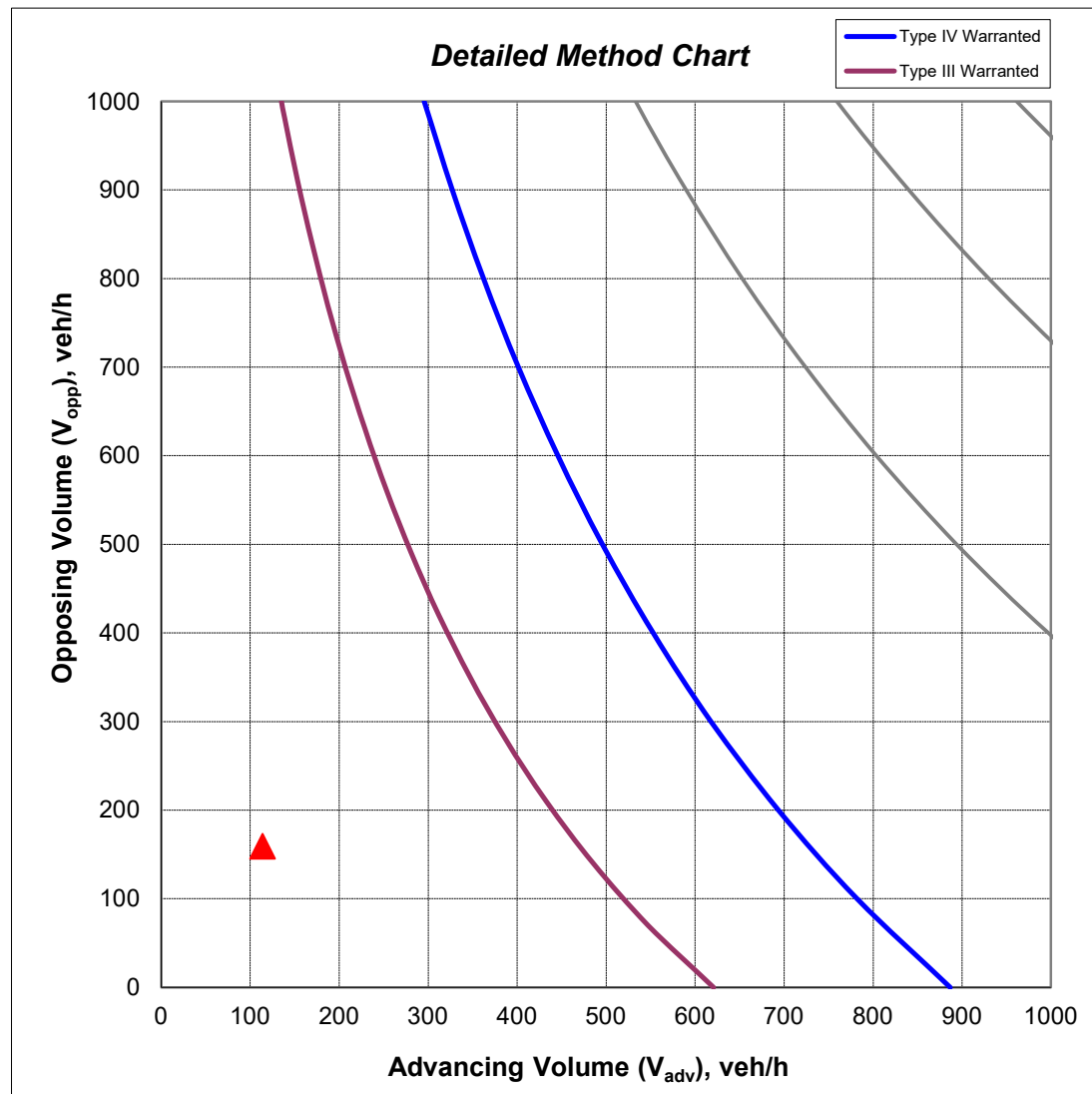
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 282

Direction: EB
Period: AM Peak

Year of Analysis: 2031 BG
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	3,800
Minor (intersecting) Road A.A.D.T	100
Left turn volume (V_{LT}), veh/h:	2
Advancing volume (V_{adv}), veh/h:	205
Opposing volume (V_{opp}), veh/h:	170
Left turn truck volume, trucks/h:	-
Right turn volume (V_{RT}), veh/day:	-

OUTPUT	Value
Percent left-turns in advancing volume:	1.0%
Percent trucks in left turn volume:	0.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	0.0%
Calculated conflicts per hour, veh/h:	0.1

Use Detailed Method

Type II

Additional Storage Not Required	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

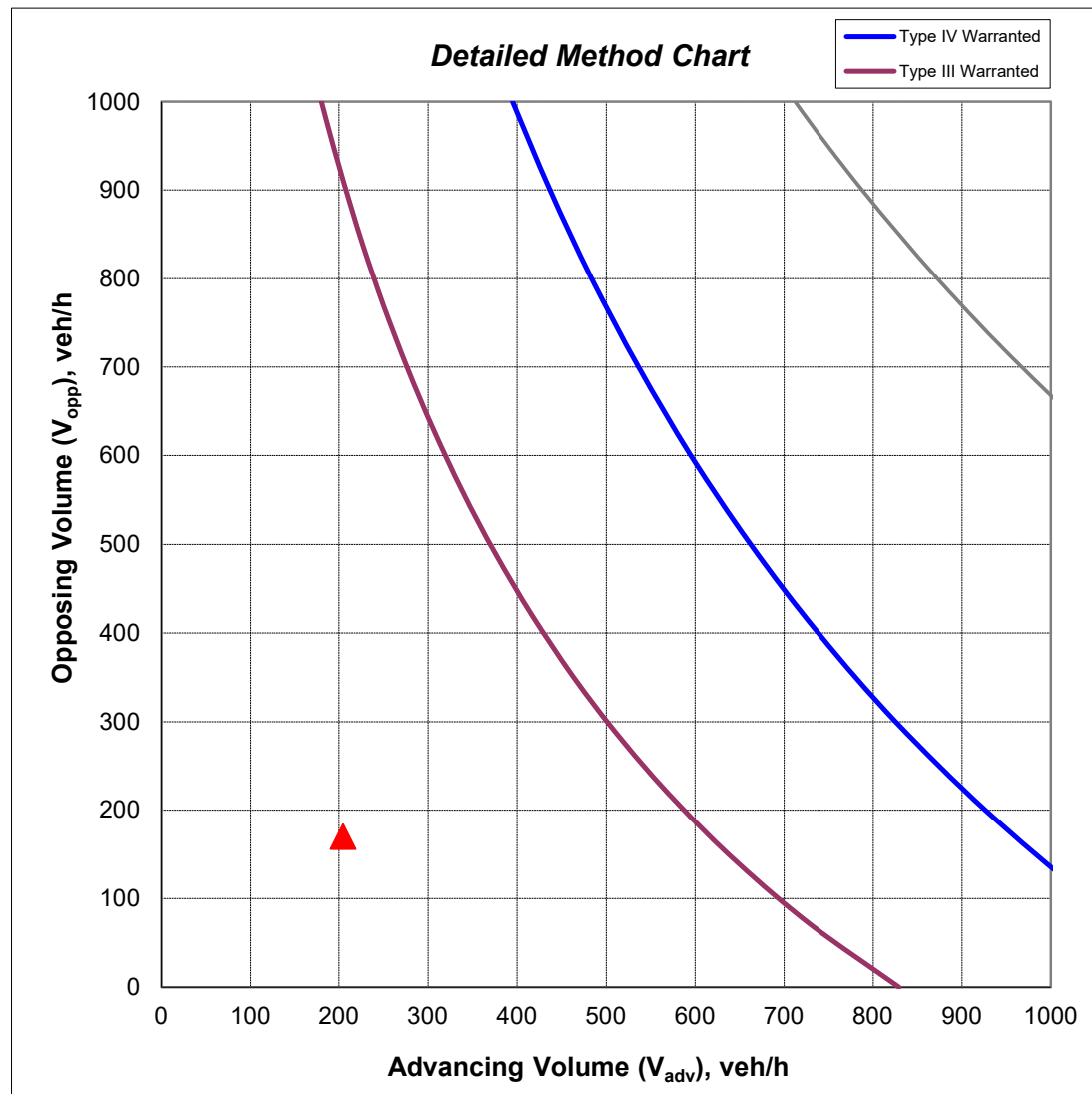
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 282

Direction: EB
Period: PM Peak

Year of Analysis: 2031 BG
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	7,100
Minor (intersecting) Road A.A.D.T	7,900
Left turn volume (V_{LT}), veh/h:	364
Advancing volume (V_{adv}), veh/h:	476
Opposing volume (V_{opp}), veh/h:	411
Left turn truck volume, trucks/h:	18
Right turn volume (V_{RT}), veh/day:	-

OUTPUT	Value
Percent left-turns in advancing volume:	76.5%
Percent trucks in left turn volume:	4.9%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	7.1%
Calculated conflicts per hour, veh/h:	33.8

Review Traffic Control Scheme

Detailed Method Not Required

	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

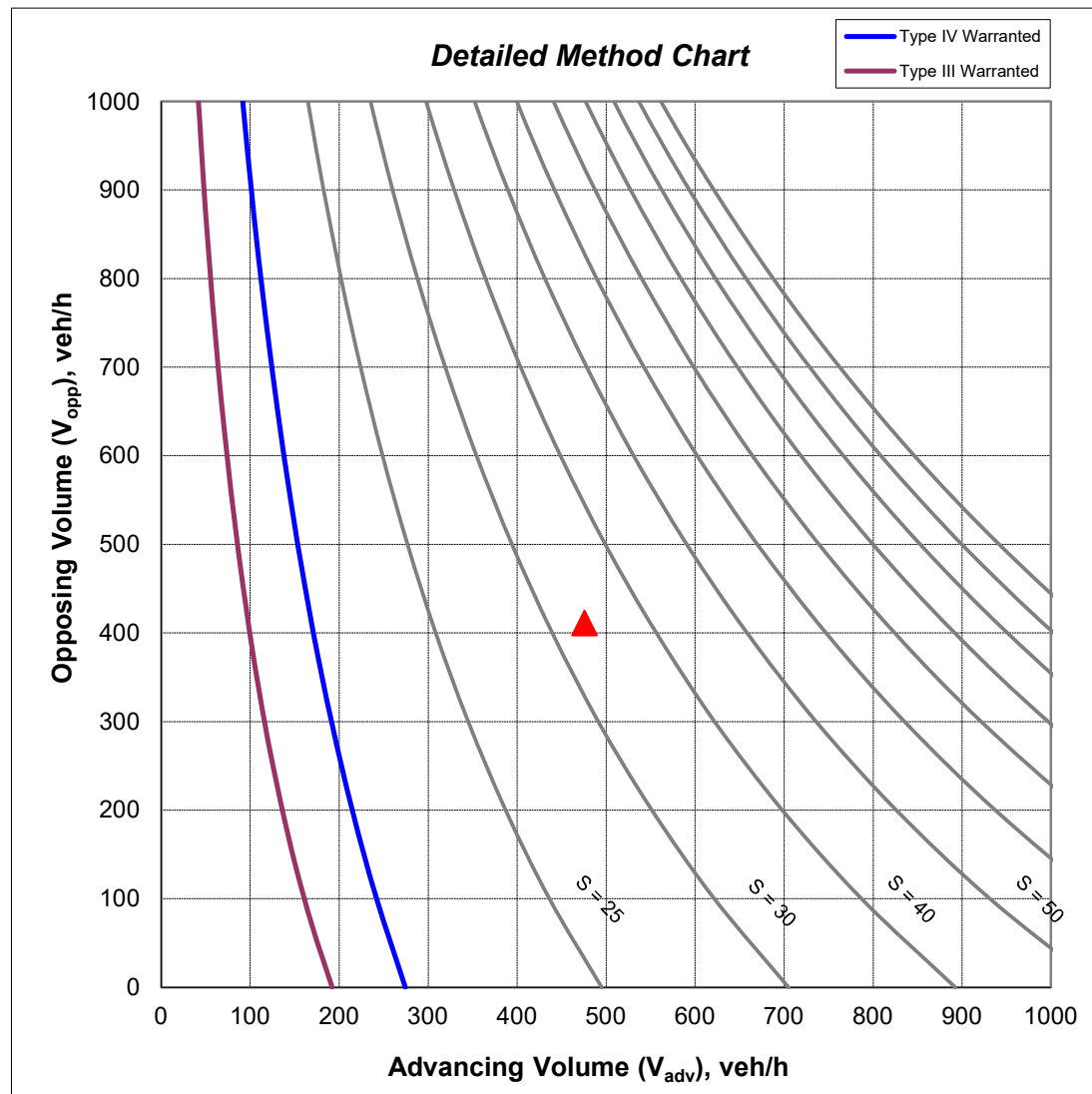
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 282

Direction: EB
Period: AM Peak

Year of Analysis: 2031 PD
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	7,900
Minor (intersecting) Road A.A.D.T	7,900
Left turn volume (V_{LT}), veh/h:	79
Advancing volume (V_{adv}), veh/h:	282
Opposing volume (V_{opp}), veh/h:	263
Left turn truck volume, trucks/h:	4
Right turn volume (V_{RT}), veh/day:	-

OUTPUT	Value
Percent left-turns in advancing volume:	28.0%
Percent trucks in left turn volume:	5.1%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	2.0%
Calculated conflicts per hour, veh/h:	5.6

Use Detailed Method

Type IV

Additional Storage Not Required	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

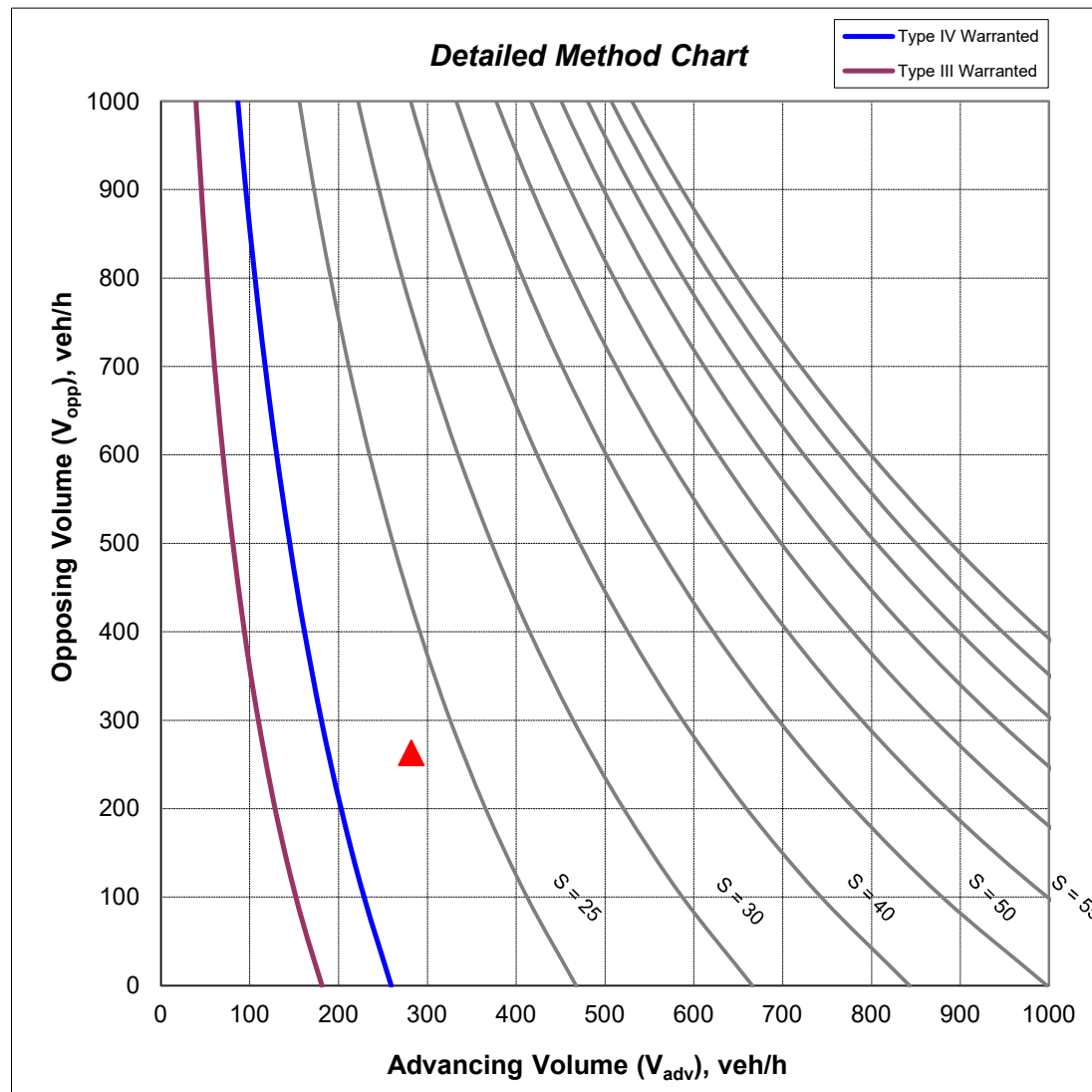
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 282

Direction: EB
Period: PM Peak

Year of Analysis: 2031 PD
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	8,700
Minor (intersecting) Road A.A.D.T	600
Left turn volume (V_{LT}), veh/h:	1
Advancing volume (V_{adv}), veh/h:	154
Opposing volume (V_{opp}), veh/h:	712
Left turn truck volume, trucks/h:	-
Right turn volume (V_{RT}), veh/day:	2

OUTPUT	Value
Percent left-turns in advancing volume:	0.6%
Percent trucks in left turn volume:	0.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	0.1%
Calculated conflicts per hour, veh/h:	0.1

Use Detailed Method

Type II

Additional Storage Not Required	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

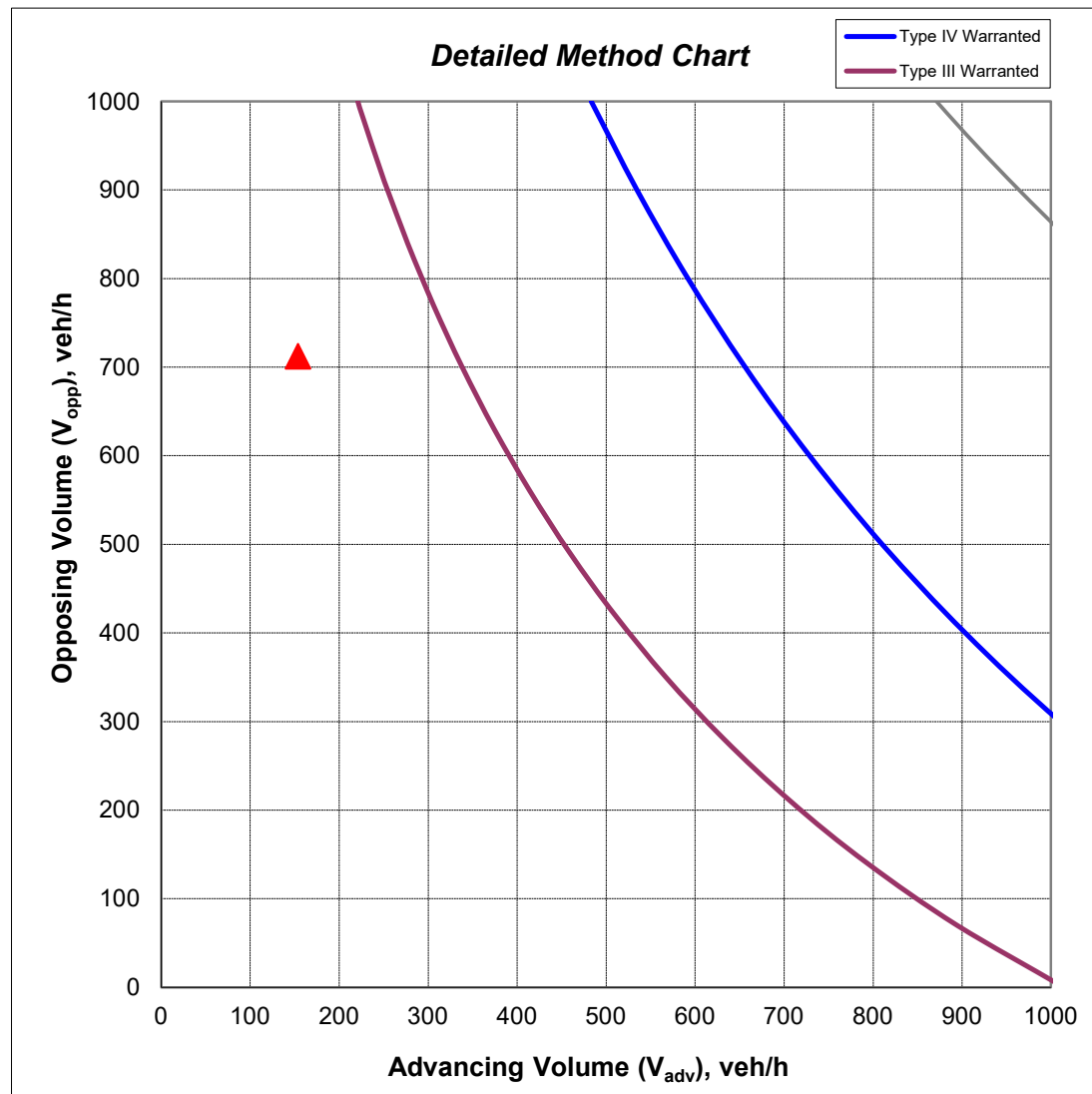
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 282

Direction: EB
Period: AM Peak

Year of Analysis: 2040 BG
Date of Analysis: 11-Jul-2025



Classification: Protected A



Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	9,700
Minor (intersecting) Road A.A.D.T	700
Left turn volume (V_{LT}), veh/h:	7
Advancing volume (V_{adv}), veh/h:	751
Opposing volume (V_{opp}), veh/h:	176
Left turn truck volume, trucks/h:	-
Right turn volume (V_{RT}), veh/day:	2

OUTPUT	Value
Percent left-turns in advancing volume:	0.9%
Percent trucks in left turn volume:	0.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	0.5%
Calculated conflicts per hour, veh/h:	4.0

Use Detailed Method

Type III

Additional Storage Not Required	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

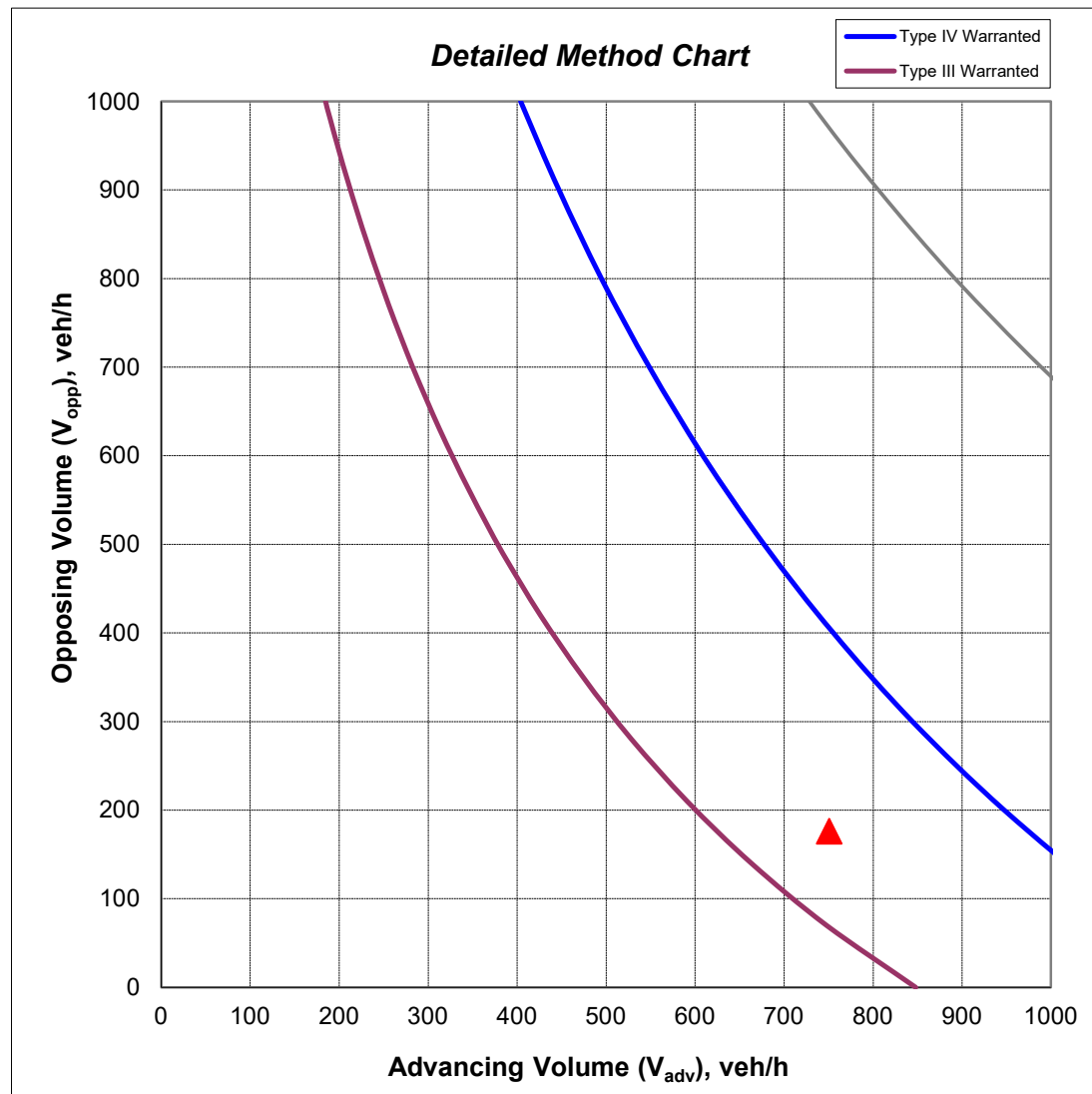
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 282

Direction: EB
Period: PM Peak

Year of Analysis: 2040 BG
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	17,100
Minor (intersecting) Road A.A.D.T	11,000
Left turn volume (V_{LT}), veh/h:	483
Advancing volume (V_{adv}), veh/h:	890
Opposing volume (V_{opp}), veh/h:	1,095
Left turn truck volume, trucks/h:	24
Right turn volume (V_{RT}), veh/day:	2

OUTPUT	Value
Percent left-turns in advancing volume:	54.3%
Percent trucks in left turn volume:	5.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	141.2%
Calculated conflicts per hour, veh/h:	1256.4

Use Detailed Method

Type IV

Additional Storage Required	base storage requirement	95 m
	- standard storage length	20 m
	+ additional truck storage	0 m
	= total additional storage required	75 m

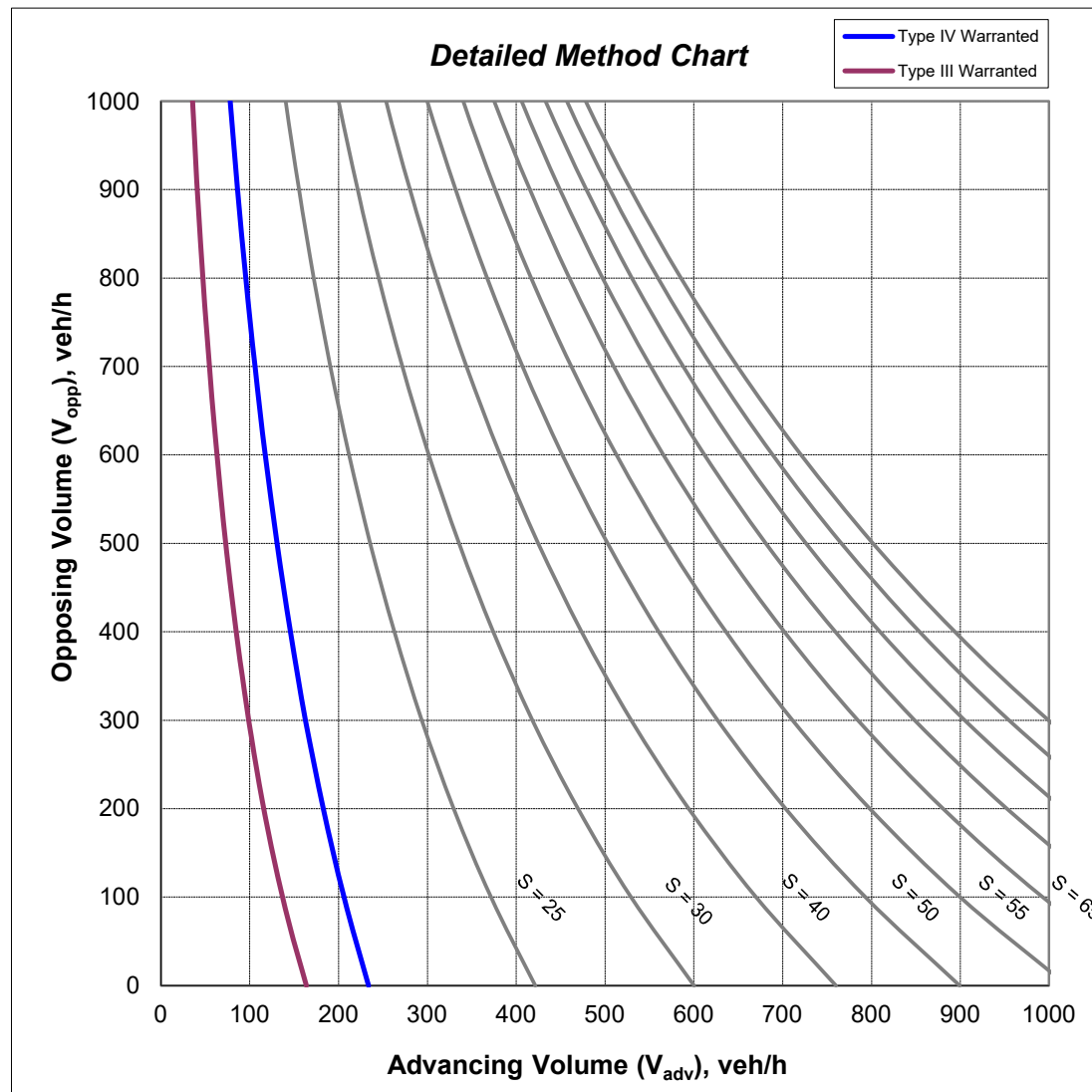
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 282

Direction: EB
Period: AM Peak

Year of Analysis: 2040 PD
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	17,600
Minor (intersecting) Road A.A.D.T	11,100
Left turn volume (V_{LT}), veh/h:	110
Advancing volume (V_{adv}), veh/h:	908
Opposing volume (V_{opp}), veh/h:	538
Left turn truck volume, trucks/h:	6
Right turn volume (V_{RT}), veh/day:	2

OUTPUT	Value
Percent left-turns in advancing volume:	12.1%
Percent trucks in left turn volume:	5.5%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	20.1%
Calculated conflicts per hour, veh/h:	182.5

Use Detailed Method

Type IV

Additional Storage Required	base storage requirement	55 m
	- standard storage length	20 m
	+ additional truck storage	0 m
	= total additional storage required	35 m

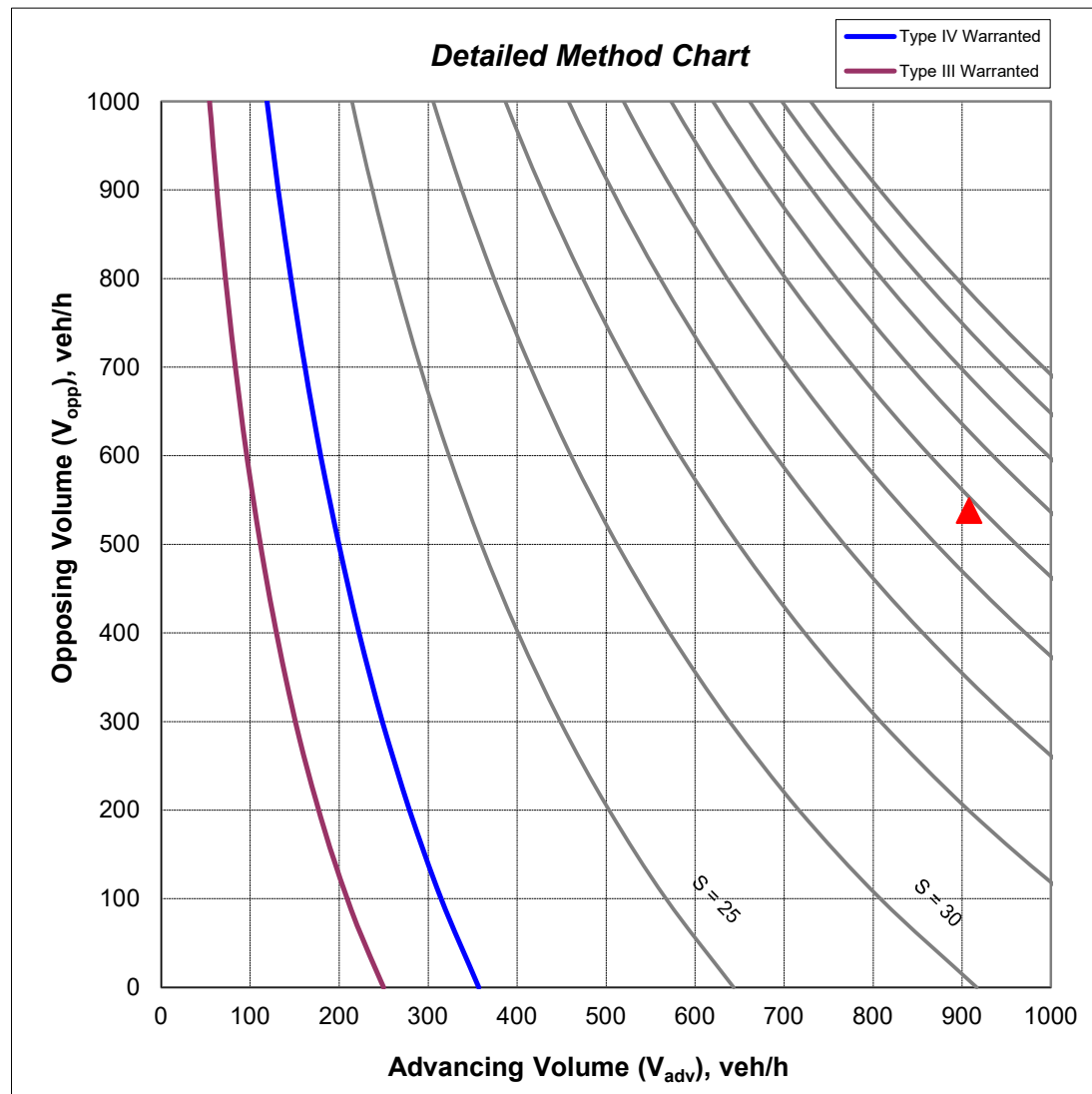
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 282

Direction: EB
Period: PM Peak

Year of Analysis: 2040 PD
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	13,100
Minor (intersecting) Road A.A.D.T	700
Left turn volume (V_{LT}), veh/h:	1
Advancing volume (V_{adv}), veh/h:	193
Opposing volume (V_{opp}), veh/h:	890
Left turn truck volume, trucks/h:	-
Right turn volume (V_{RT}), veh/day:	3

OUTPUT	Value
Percent left-turns in advancing volume:	0.5%
Percent trucks in left turn volume:	0.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	0.1%
Calculated conflicts per hour, veh/h:	0.2

Use Detailed Method

Type II

Additional Storage Not Required	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

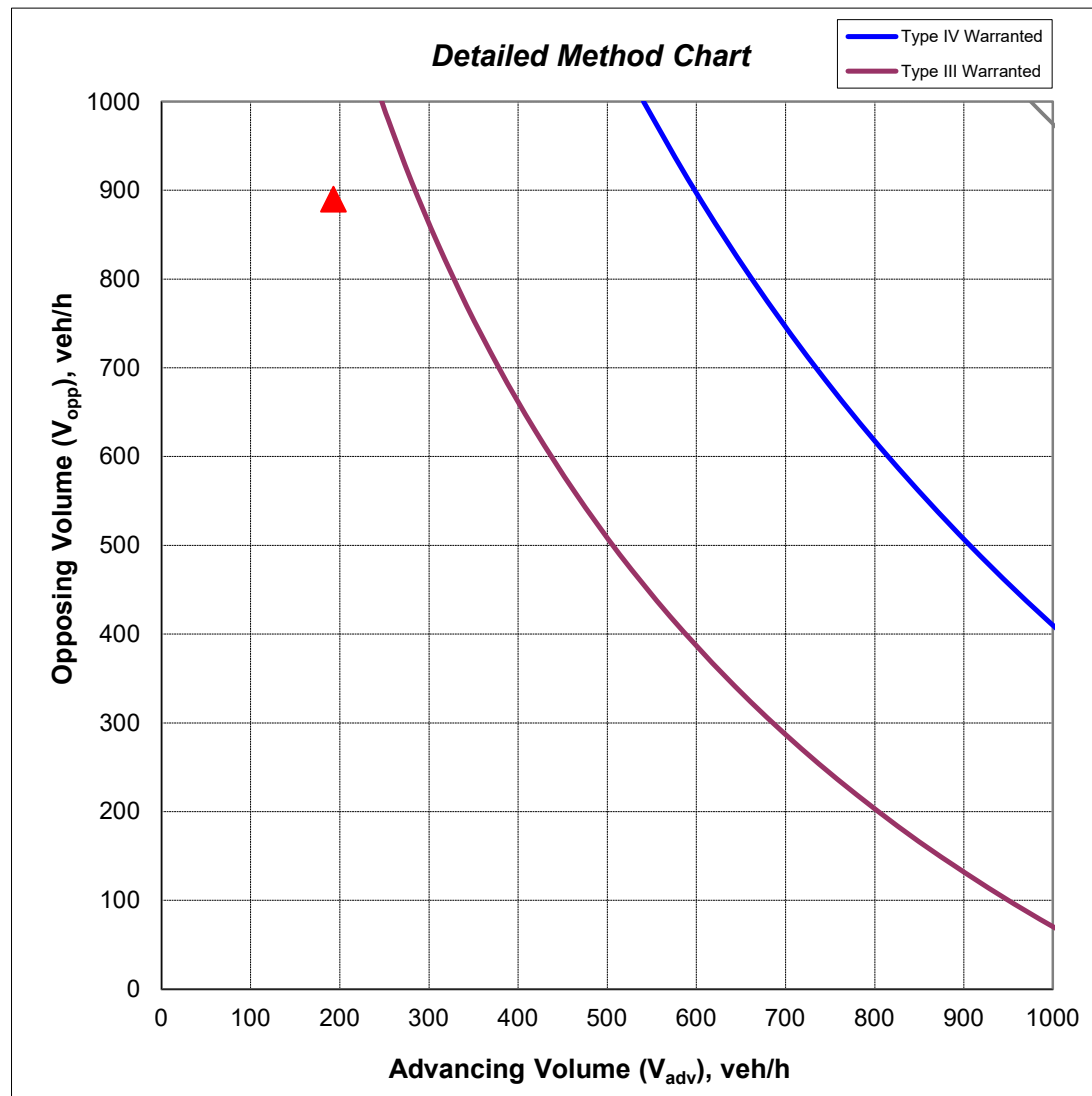
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 282

Direction: EB
Period: AM Peak

Year of Analysis: 2050 BG
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	14,500
Minor (intersecting) Road A.A.D.T	800
Left turn volume (V_{LT}), veh/h:	9
Advancing volume (V_{adv}), veh/h:	939
Opposing volume (V_{opp}), veh/h:	220
Left turn truck volume, trucks/h:	-
Right turn volume (V_{RT}), veh/day:	3

OUTPUT	Value
Percent left-turns in advancing volume:	1.0%
Percent trucks in left turn volume:	0.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	0.9%
Calculated conflicts per hour, veh/h:	8.9

Use Detailed Method

Type IV

Additional Storage Not Required	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

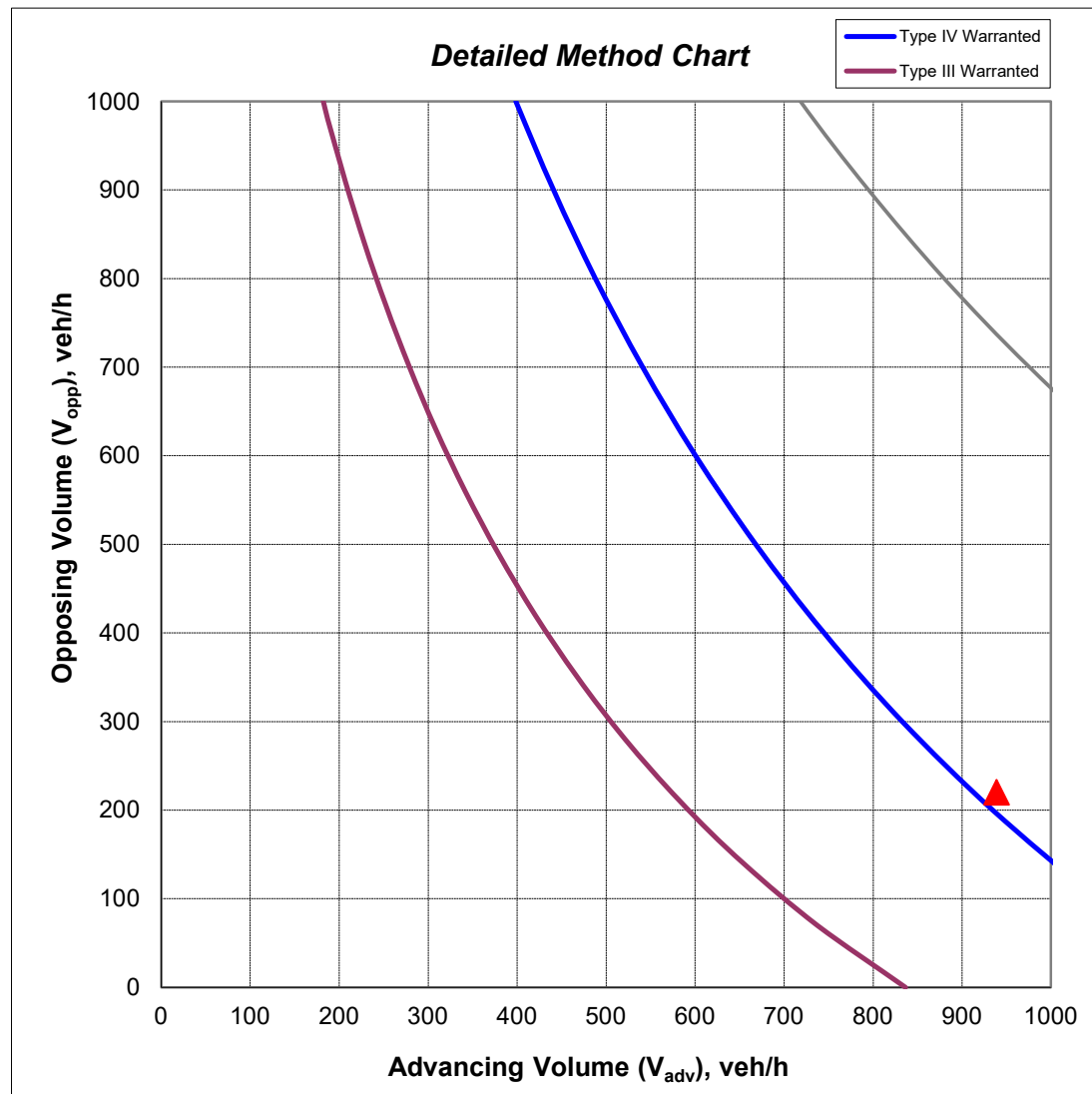
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 282

Direction: EB
Period: PM Peak

Year of Analysis: 2050 BG
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	19,200
Minor (intersecting) Road A.A.D.T	11,200
Left turn volume (V_{LT}), veh/h:	483
Advancing volume (V_{adv}), veh/h:	929
Opposing volume (V_{opp}), veh/h:	1,273
Left turn truck volume, trucks/h:	24
Right turn volume (V_{RT}), veh/day:	3

OUTPUT	Value
Percent left-turns in advancing volume:	52.0%
Percent trucks in left turn volume:	5.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	220.5%
Calculated conflicts per hour, veh/h:	2048.5

Use Detailed Method

Type IV

Additional Storage Required	base storage requirement	95 m
	- standard storage length	20 m
	+ additional truck storage	0 m
	= total additional storage required	75 m

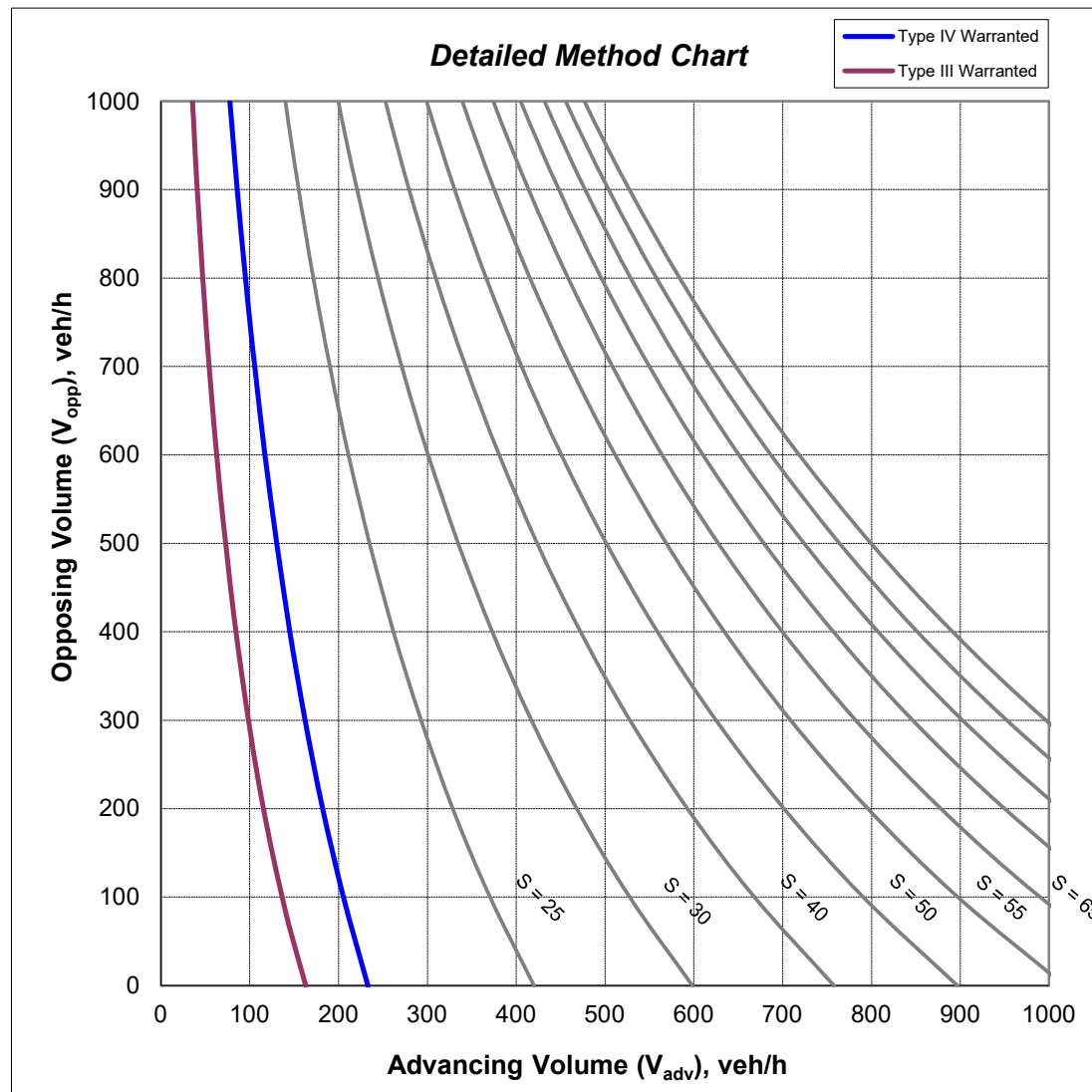
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 282

Direction: EB
Period: AM Peak

Year of Analysis: 2050 PD
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	20,000
Minor (intersecting) Road A.A.D.T	11,300
Left turn volume (V_{LT}), veh/h:	112
Advancing volume (V_{adv}), veh/h:	1,096
Opposing volume (V_{opp}), veh/h:	582
Left turn truck volume, trucks/h:	6
Right turn volume (V_{RT}), veh/day:	3

OUTPUT	Value
Percent left-turns in advancing volume:	10.2%
Percent trucks in left turn volume:	5.4%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	27.7%
Calculated conflicts per hour, veh/h:	303.6

Use Detailed Method

Type IV

Additional Storage Required	base storage requirement	80 m
	- standard storage length	20 m
	+ additional truck storage	0 m
	= total additional storage required	60 m

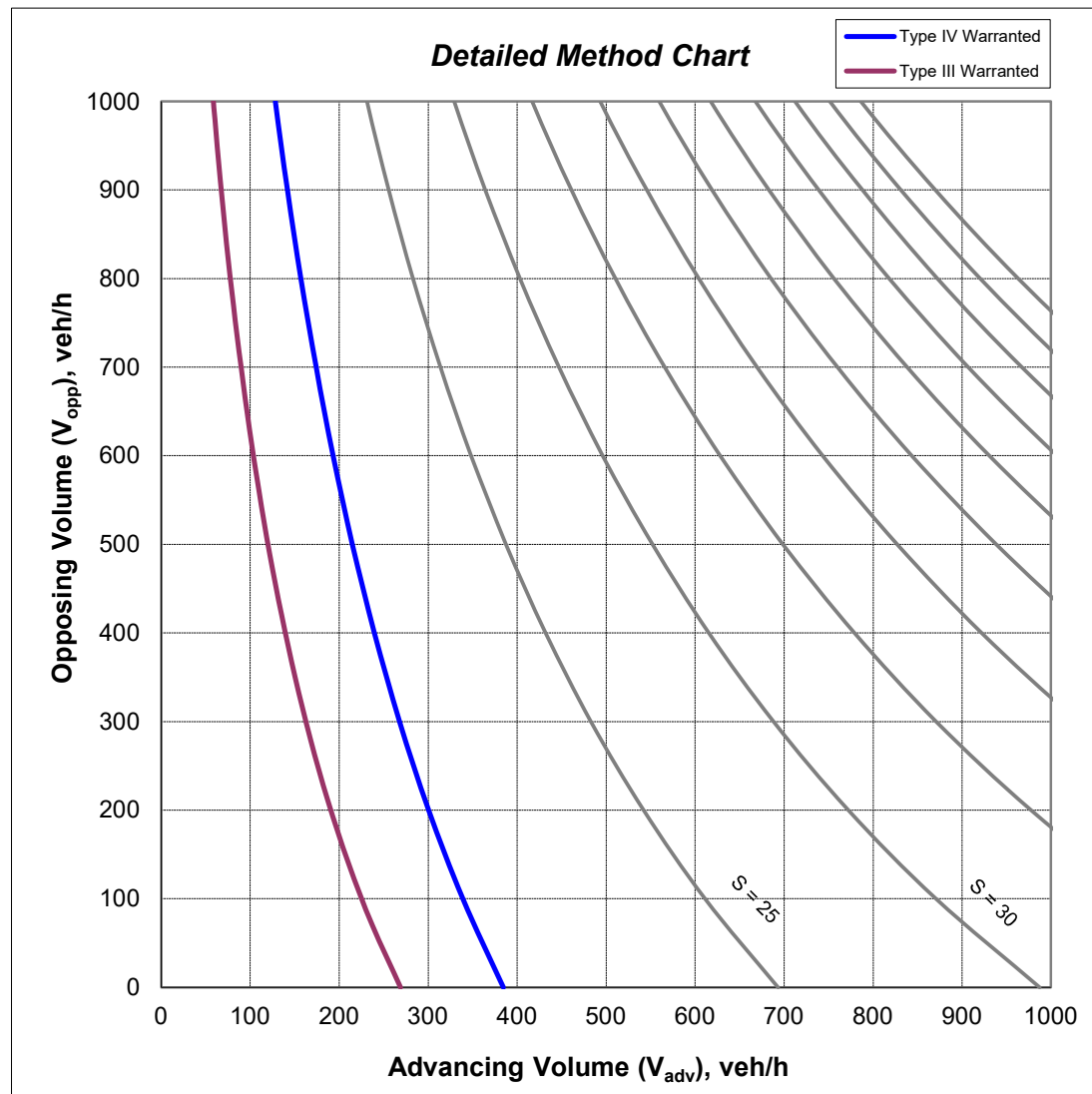
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 282

Direction: EB
Period: PM Peak

Year of Analysis: 2050 PD
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	13,100
Minor (intersecting) Road A.A.D.T	900
Left turn volume (V_{LT}), veh/h:	2
Advancing volume (V_{adv}), veh/h:	232
Opposing volume (V_{opp}), veh/h:	1,068
Left turn truck volume, trucks/h:	-
Right turn volume (V_{RT}), veh/day:	3

OUTPUT	Value
Percent left-turns in advancing volume:	0.9%
Percent trucks in left turn volume:	0.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	0.3%
Calculated conflicts per hour, veh/h:	0.7

Use Detailed Method

Type III

Additional Storage Not Required	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

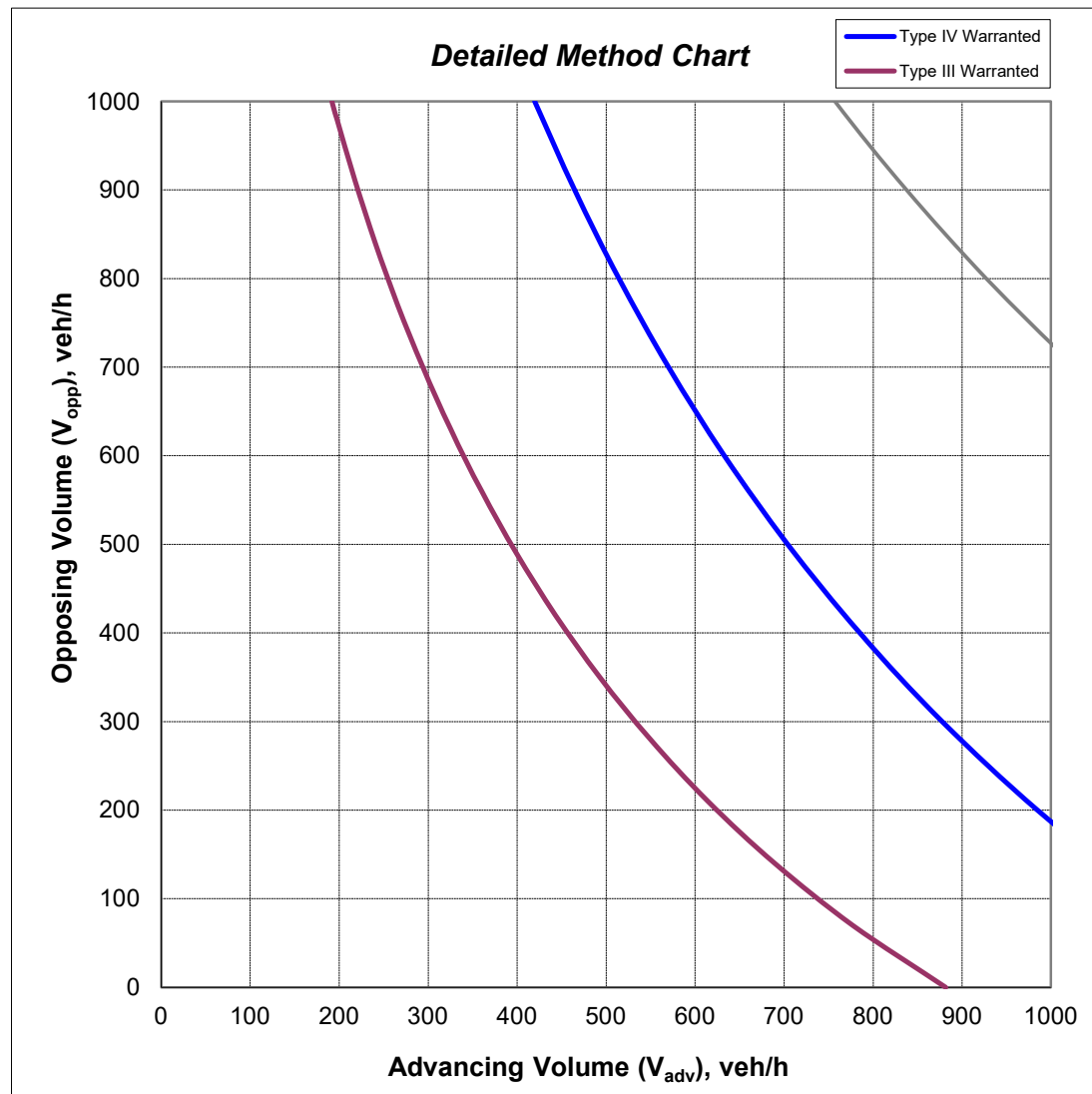
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 282

Direction: EB
Period: AM Peak

Year of Analysis: 2060 BG
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	14,500
Minor (intersecting) Road A.A.D.T	1,000
Left turn volume (V_{LT}), veh/h:	11
Advancing volume (V_{adv}), veh/h:	1,127
Opposing volume (V_{opp}), veh/h:	264
Left turn truck volume, trucks/h:	1
Right turn volume (V_{RT}), veh/day:	3

OUTPUT	Value
Percent left-turns in advancing volume:	1.0%
Percent trucks in left turn volume:	9.1%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	1.5%
Calculated conflicts per hour, veh/h:	17.3

Use Detailed Method

Type IV

Additional Storage Not Required	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

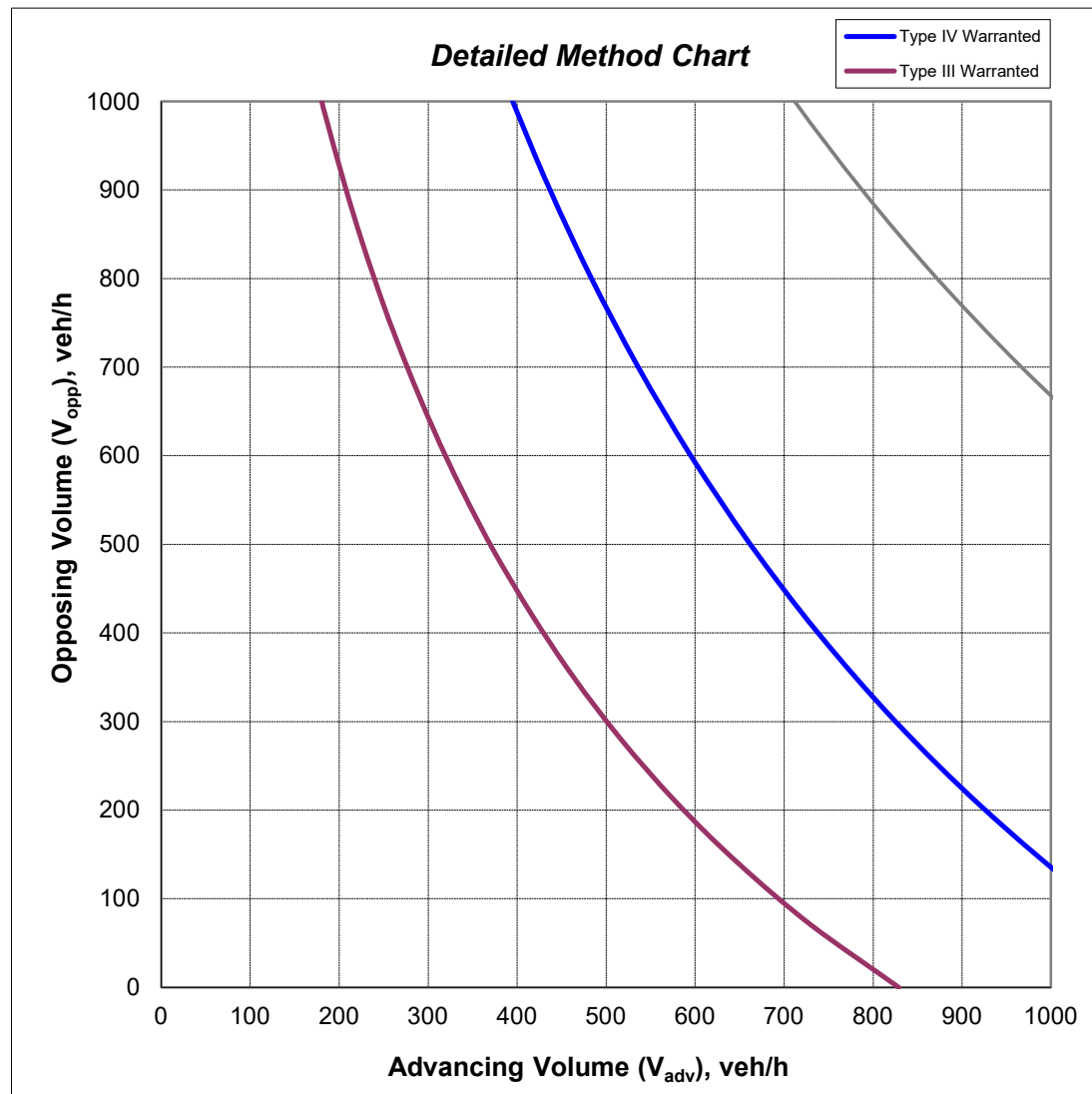
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 282

Direction: EB
Period: PM Peak

Year of Analysis: 2060 BG
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	21,300
Minor (intersecting) Road A.A.D.T	11,300
Left turn volume (V_{LT}), veh/h:	484
Advancing volume (V_{adv}), veh/h:	968
Opposing volume (V_{opp}), veh/h:	1,451
Left turn truck volume, trucks/h:	24
Right turn volume (V_{RT}), veh/day:	3

OUTPUT	Value
Percent left-turns in advancing volume:	50.0%
Percent trucks in left turn volume:	5.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	341.1%
Calculated conflicts per hour, veh/h:	3301.9

Use Detailed Method

Type IV

Additional Storage Required	base storage requirement	95 m
	- standard storage length	20 m
	+ additional truck storage	0 m
	= total additional storage required	75 m

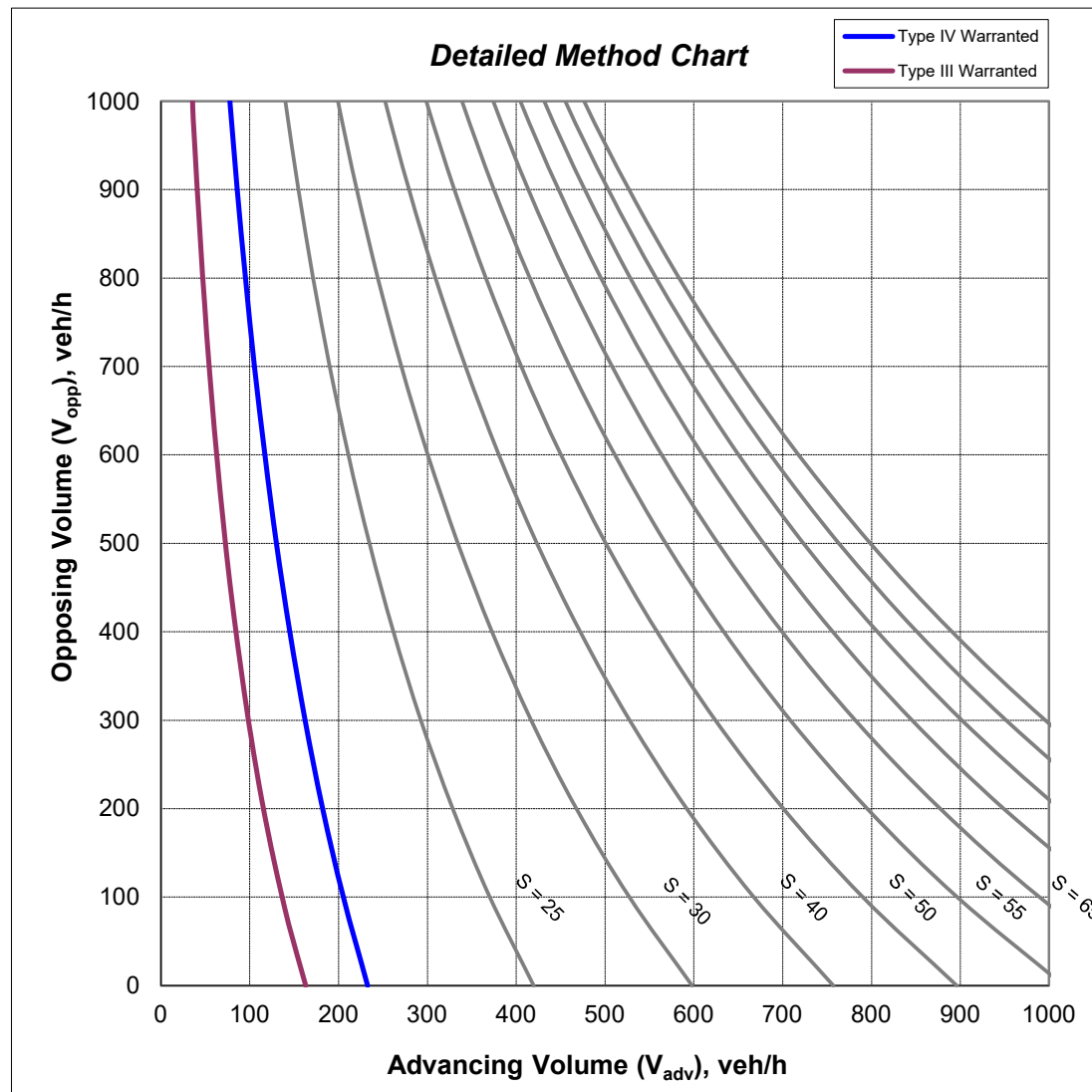
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 282

Direction: EB
Period: AM Peak

Year of Analysis: 2060 PD
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	22,300
Minor (intersecting) Road A.A.D.T	11,400
Left turn volume (V_{LT}), veh/h:	114
Advancing volume (V_{adv}), veh/h:	1,284
Opposing volume (V_{opp}), veh/h:	626
Left turn truck volume, trucks/h:	6
Right turn volume (V_{RT}), veh/day:	3

OUTPUT	Value
Percent left-turns in advancing volume:	8.9%
Percent trucks in left turn volume:	5.3%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	36.8%
Calculated conflicts per hour, veh/h:	472.3

Use Detailed Method

Type IV

Additional Storage Required	base storage requirement	95 m
	- standard storage length	20 m
	+ additional truck storage	0 m
	= total additional storage required	75 m

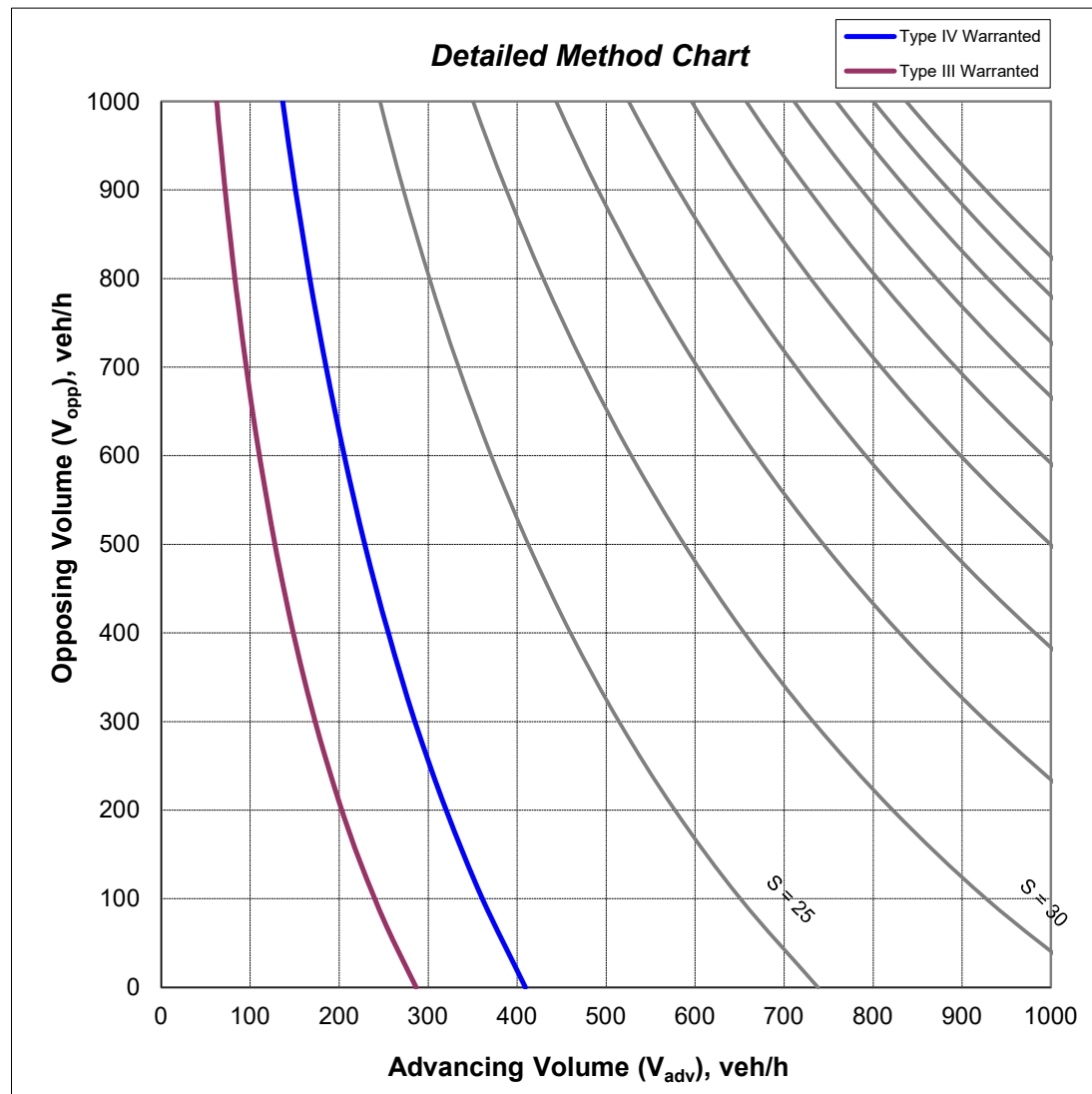
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 282

Direction: EB
Period: PM Peak

Year of Analysis: 2060 PD
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	2,700
Minor (intersecting) Road A.A.D.T	-
Left turn volume (V_{LT}), veh/h:	2
Advancing volume (V_{adv}), veh/h:	113
Opposing volume (V_{opp}), veh/h:	160
Left turn truck volume, trucks/h:	-
Right turn volume (V_{RT}), veh/day:	1

OUTPUT	Value
Percent left-turns in advancing volume:	1.8%
Percent trucks in left turn volume:	0.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	0.0%
Calculated conflicts per hour, veh/h:	0.0

Type I

Detailed Method Not Required

	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

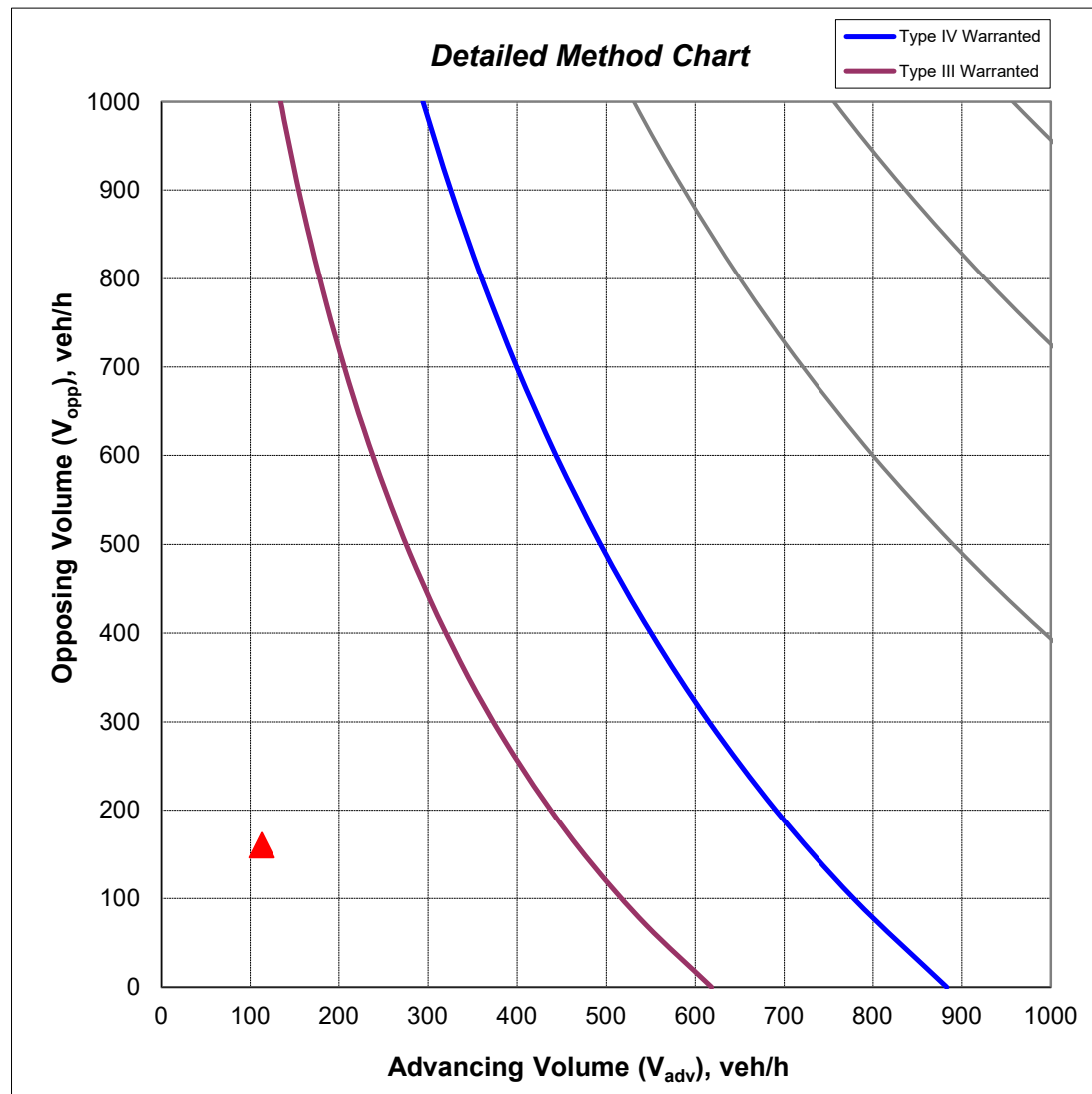
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 281

Direction: EB
Period: AM Peak

Year of Analysis: 2031 BG
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	3,700
Minor (intersecting) Road A.A.D.T	-
Left turn volume (V_{LT}), veh/h:	-
Advancing volume (V_{adv}), veh/h:	204
Opposing volume (V_{opp}), veh/h:	170
Left turn truck volume, trucks/h:	-
Right turn volume (V_{RT}), veh/day:	-

OUTPUT	Value
Percent left-turns in advancing volume:	0.0%
Percent trucks in left turn volume:	#DIV/0!
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	0.0%
Calculated conflicts per hour, veh/h:	0.0

Type I or Type II

Detailed Method Not Required

	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

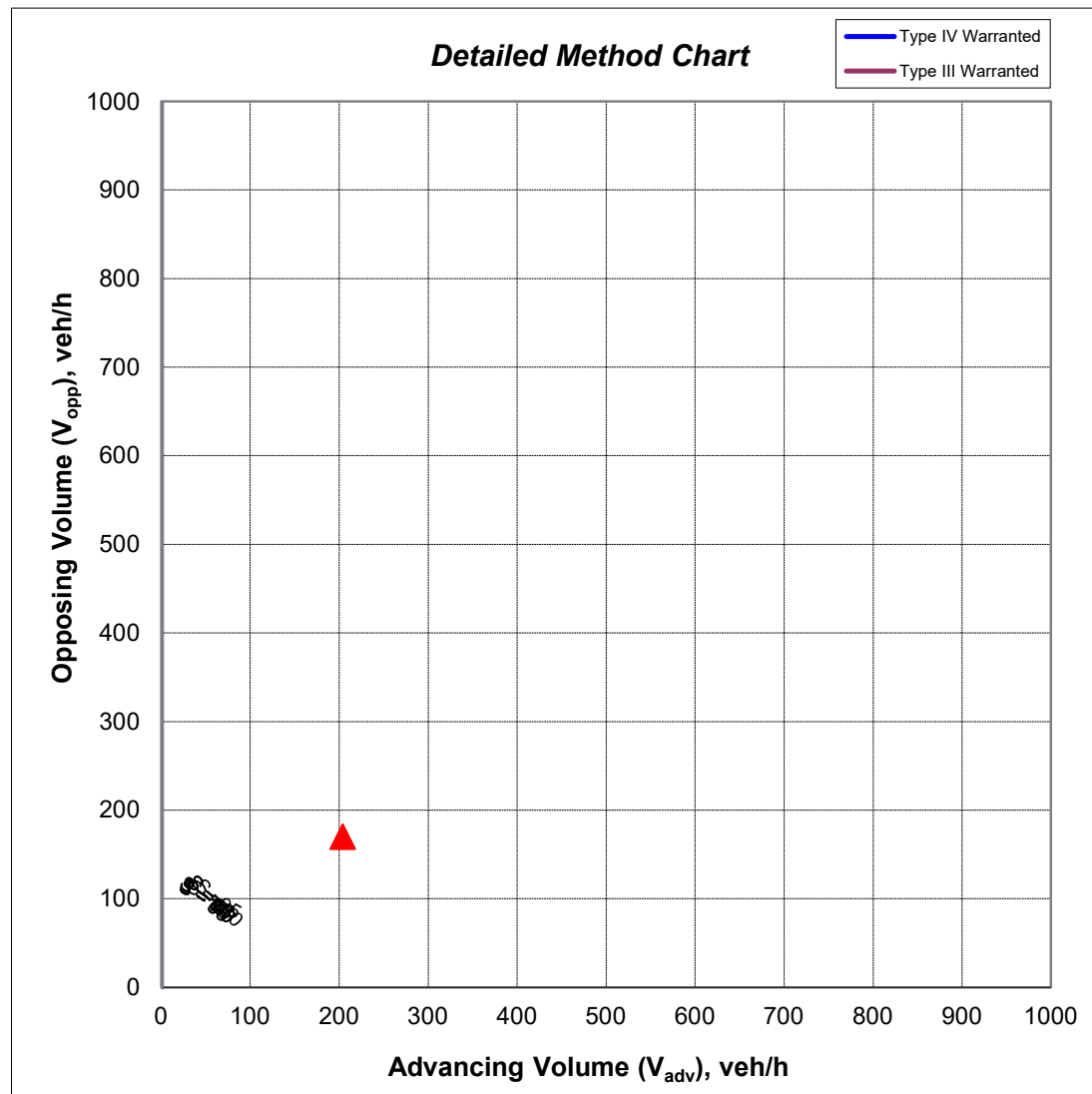
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 281

Direction: EB
Period: PM Peak

Year of Analysis: 2031 BG
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	6,300
Minor (intersecting) Road A.A.D.T	-
Left turn volume (V_{LT}), veh/h:	2
Advancing volume (V_{adv}), veh/h:	214
Opposing volume (V_{opp}), veh/h:	412
Left turn truck volume, trucks/h:	-
Right turn volume (V_{RT}), veh/day:	1

OUTPUT	Value
Percent left-turns in advancing volume:	0.9%
Percent trucks in left turn volume:	0.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	0.1%
Calculated conflicts per hour, veh/h:	0.2

Type I or Type II

Detailed Method Not Required

	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

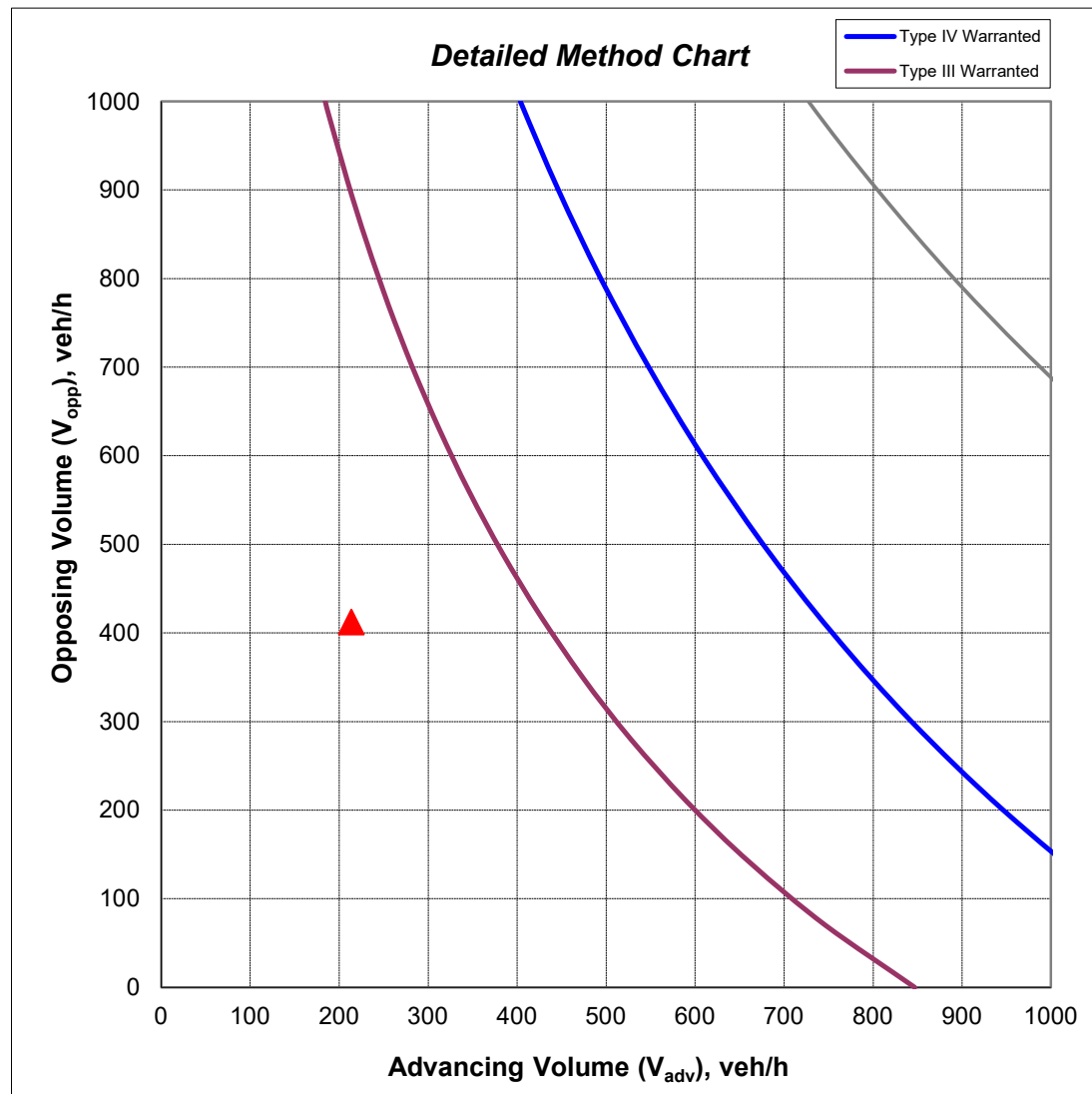
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 281

Direction: EB
Period: AM Peak

Year of Analysis: 2031 PD
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	8,700
Minor (intersecting) Road A.A.D.T	-
Left turn volume (V_{LT}), veh/h:	1
Advancing volume (V_{adv}), veh/h:	159
Opposing volume (V_{opp}), veh/h:	709
Left turn truck volume, trucks/h:	-
Right turn volume (V_{RT}), veh/day:	2

OUTPUT	Value
Percent left-turns in advancing volume:	0.6%
Percent trucks in left turn volume:	0.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	0.1%
Calculated conflicts per hour, veh/h:	0.1

Type I or Type II

Detailed Method Not Required

	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

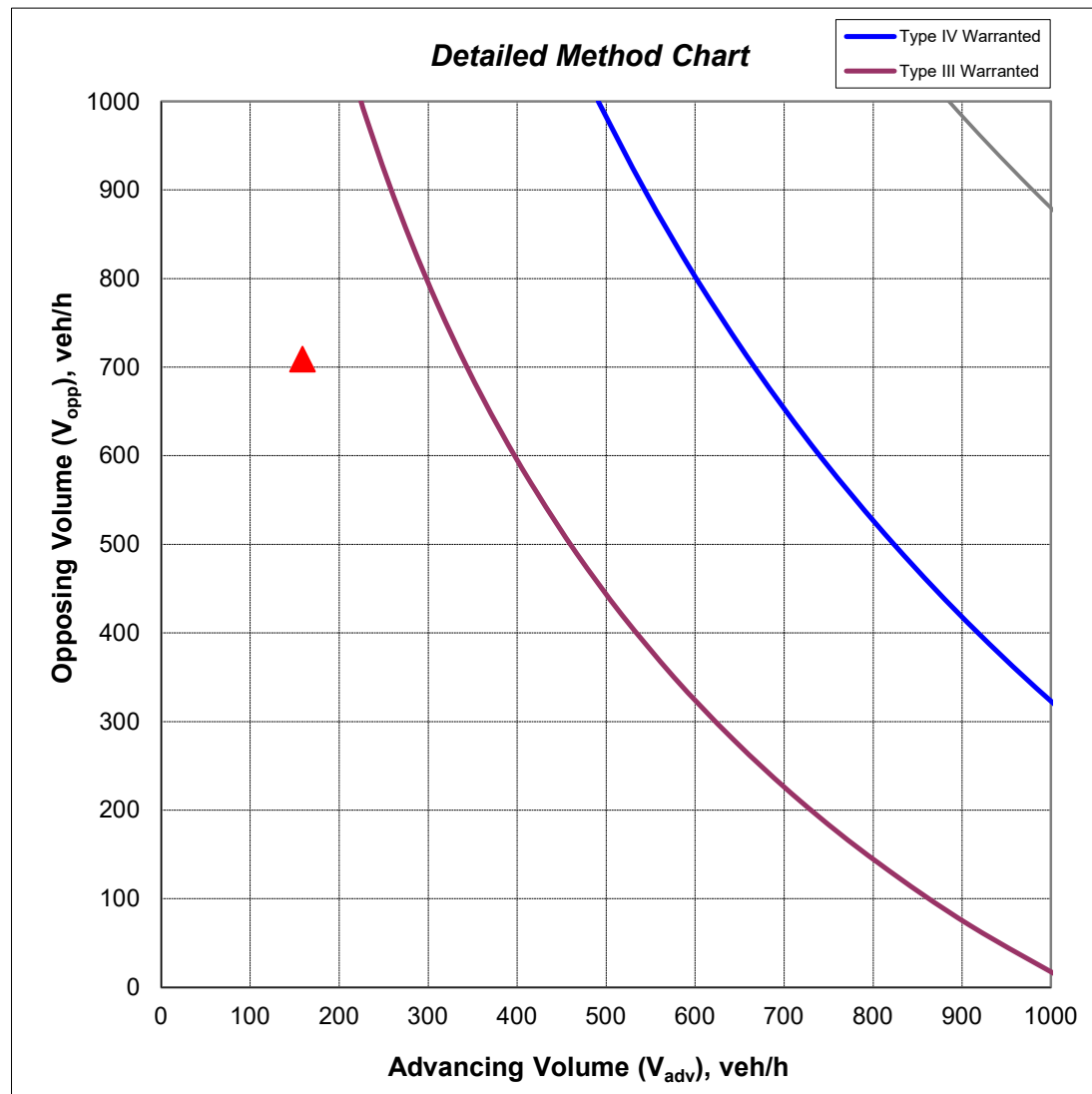
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 281

Direction: EB
Period: AM Peak

Year of Analysis: 2040 BG
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	9,700
Minor (intersecting) Road A.A.D.T	-
Left turn volume (V_{LT}), veh/h:	1
Advancing volume (V_{adv}), veh/h:	791
Opposing volume (V_{opp}), veh/h:	173
Left turn truck volume, trucks/h:	-
Right turn volume (V_{RT}), veh/day:	2

OUTPUT	Value
Percent left-turns in advancing volume:	0.1%
Percent trucks in left turn volume:	0.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	0.1%
Calculated conflicts per hour, veh/h:	0.6

Type I or Type II

Detailed Method Not Required

	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

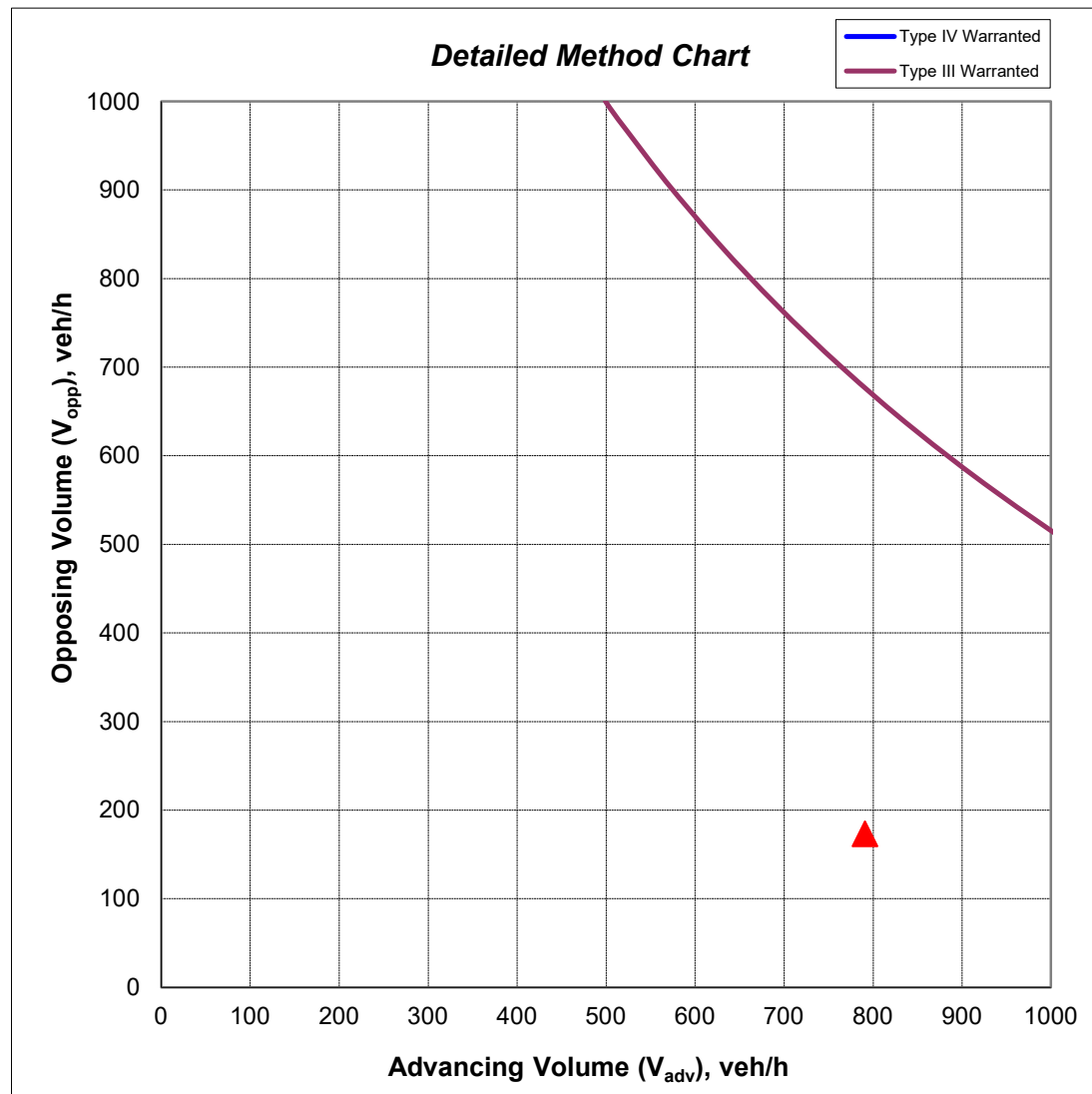
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 281

Direction: EB
Period: PM Peak

Year of Analysis: 2040 BG
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	16,400
Minor (intersecting) Road A.A.D.T	5,500
Left turn volume (V_{LT}), veh/h:	255
Advancing volume (V_{adv}), veh/h:	548
Opposing volume (V_{opp}), veh/h:	1,219
Left turn truck volume, trucks/h:	13
Right turn volume (V_{RT}), veh/day:	2

OUTPUT	Value
Percent left-turns in advancing volume:	46.5%
Percent trucks in left turn volume:	5.1%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	68.7%
Calculated conflicts per hour, veh/h:	376.5

Use Detailed Method

Type IV

Additional Storage Required	base storage requirement	95 m
	- standard storage length	20 m
	+ additional truck storage	0 m
	= total additional storage required	75 m

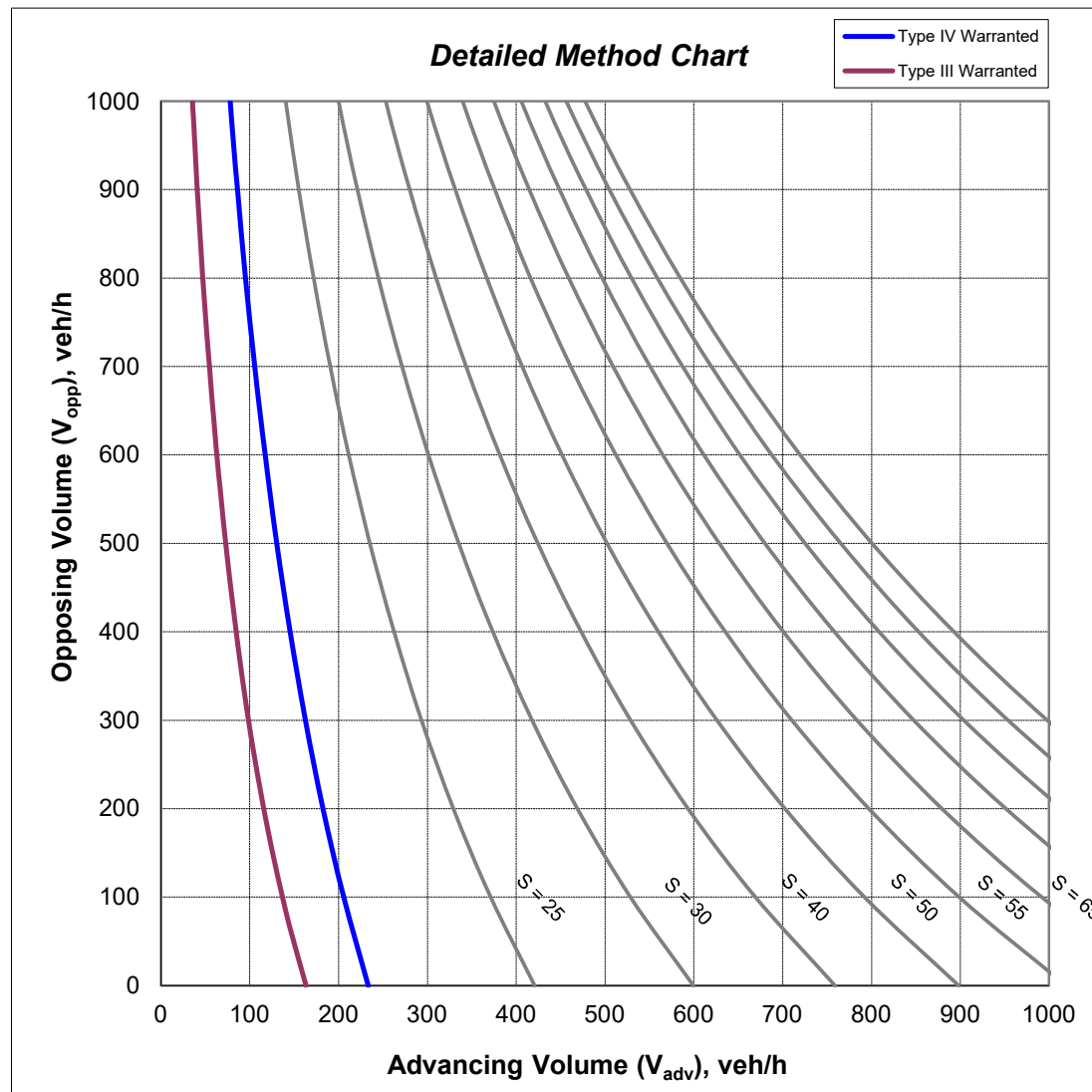
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 281

Direction: EB
Period: AM Peak

Year of Analysis: 2040 PD
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	17,500
Minor (intersecting) Road A.A.D.T	5,500
Left turn volume (V_{LT}), veh/h:	55
Advancing volume (V_{adv}), veh/h:	1,213
Opposing volume (V_{opp}), veh/h:	364
Left turn truck volume, trucks/h:	3
Right turn volume (V_{RT}), veh/day:	2

OUTPUT	Value
Percent left-turns in advancing volume:	4.5%
Percent trucks in left turn volume:	5.5%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	10.0%
Calculated conflicts per hour, veh/h:	121.1

Use Detailed Method

Type IV

Additional Storage Required	<i>base storage requirement</i>	40 m
	<i>- standard storage length</i>	20 m
	<i>+ additional truck storage</i>	0 m
	= total additional storage required	20 m

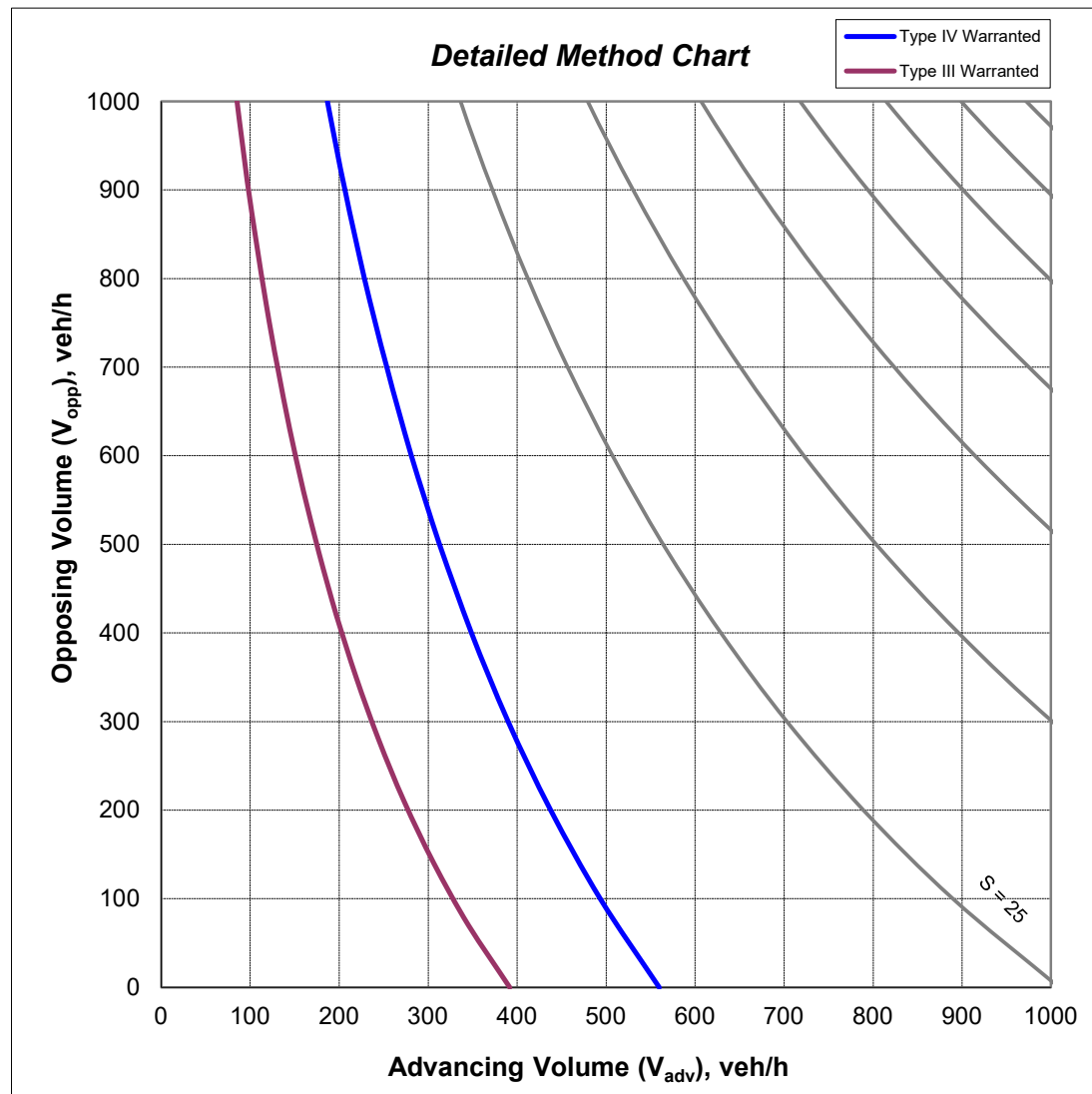
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 281

Direction: EB
Period: PM Peak

Year of Analysis: 2040 PD
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	10,900
Minor (intersecting) Road A.A.D.T	-
Left turn volume (V_{LT}), veh/h:	1
Advancing volume (V_{adv}), veh/h:	199
Opposing volume (V_{opp}), veh/h:	886
Left turn truck volume, trucks/h:	-
Right turn volume (V_{RT}), veh/day:	3

OUTPUT	Value
Percent left-turns in advancing volume:	0.5%
Percent trucks in left turn volume:	0.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	0.1%
Calculated conflicts per hour, veh/h:	0.2

Type I or Type II

Detailed Method Not Required

	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

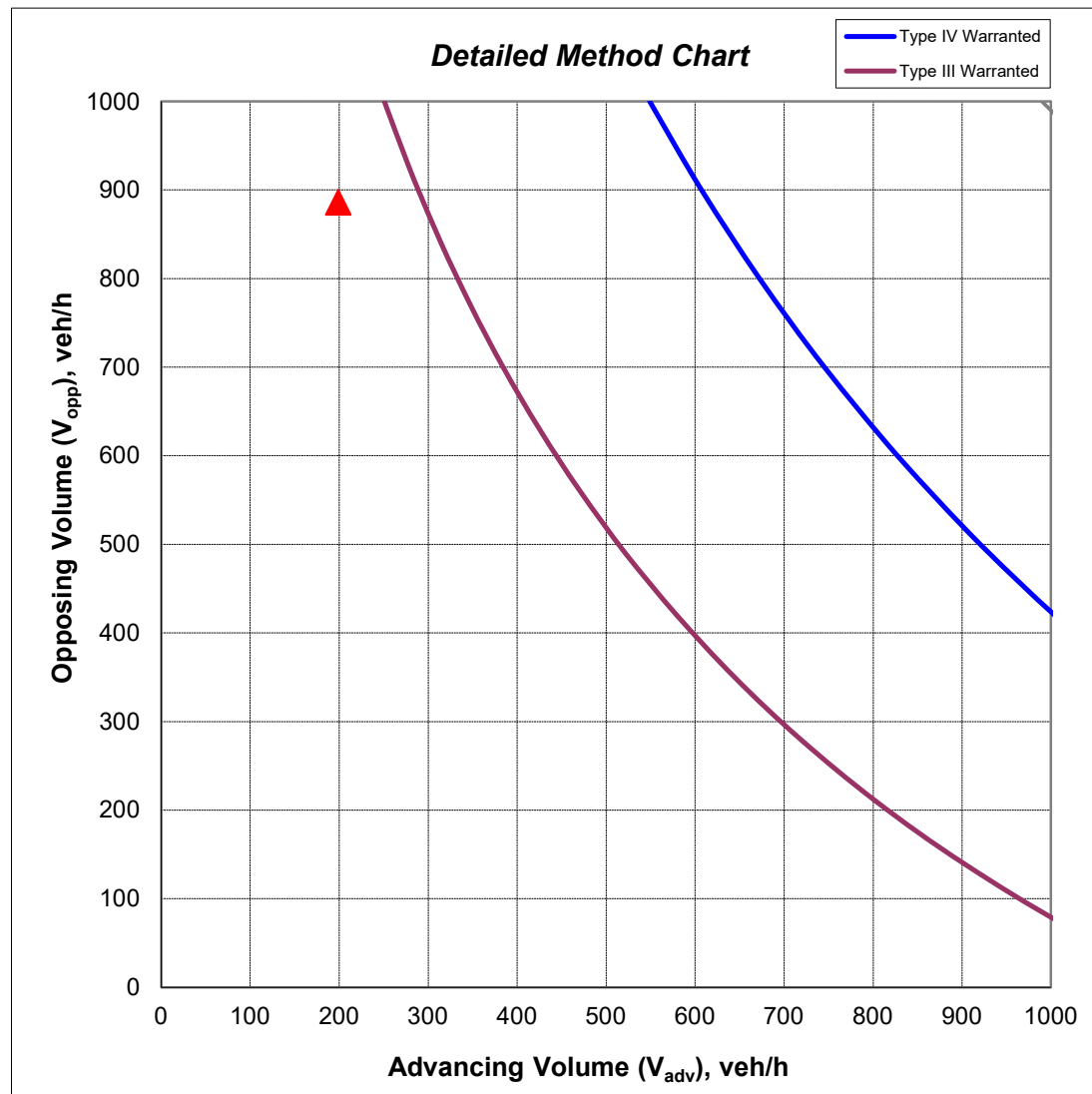
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 281

Direction: EB
Period: AM Peak

Year of Analysis: 2050 BG
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	12,100
Minor (intersecting) Road A.A.D.T	-
Left turn volume (V_{LT}), veh/h:	1
Advancing volume (V_{adv}), veh/h:	989
Opposing volume (V_{opp}), veh/h:	216
Left turn truck volume, trucks/h:	-
Right turn volume (V_{RT}), veh/day:	3

OUTPUT	Value
Percent left-turns in advancing volume:	0.1%
Percent trucks in left turn volume:	0.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	0.1%
Calculated conflicts per hour, veh/h:	1.1

Type I or Type II

Detailed Method Not Required

	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

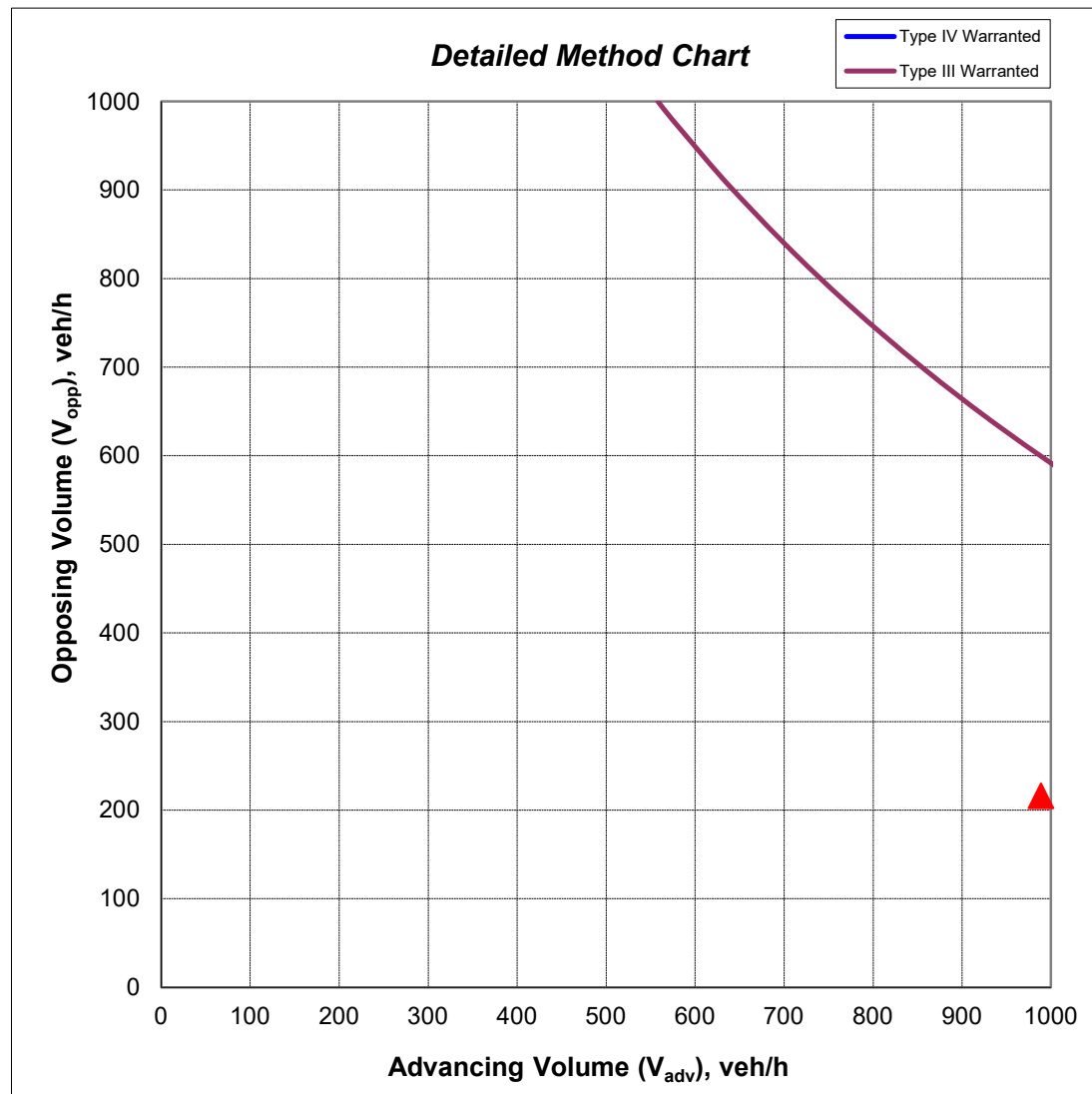
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 281

Direction: EB
Period: PM Peak

Year of Analysis: 2050 BG
Date of Analysis: 11-Jul-2025



Classification: Protected A



Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	18,600
Minor (intersecting) Road A.A.D.T	5,500
Left turn volume (V_{LT}), veh/h:	255
Advancing volume (V_{adv}), veh/h:	588
Opposing volume (V_{opp}), veh/h:	1,396
Left turn truck volume, trucks/h:	13
Right turn volume (V_{RT}), veh/day:	3

OUTPUT	Value
Percent left-turns in advancing volume:	43.4%
Percent trucks in left turn volume:	5.1%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	110.9%
Calculated conflicts per hour, veh/h:	652.1

Use Detailed Method

Type IV

Additional Storage Required	base storage requirement	95 m
	- standard storage length	20 m
	+ additional truck storage	0 m
	= total additional storage required	75 m

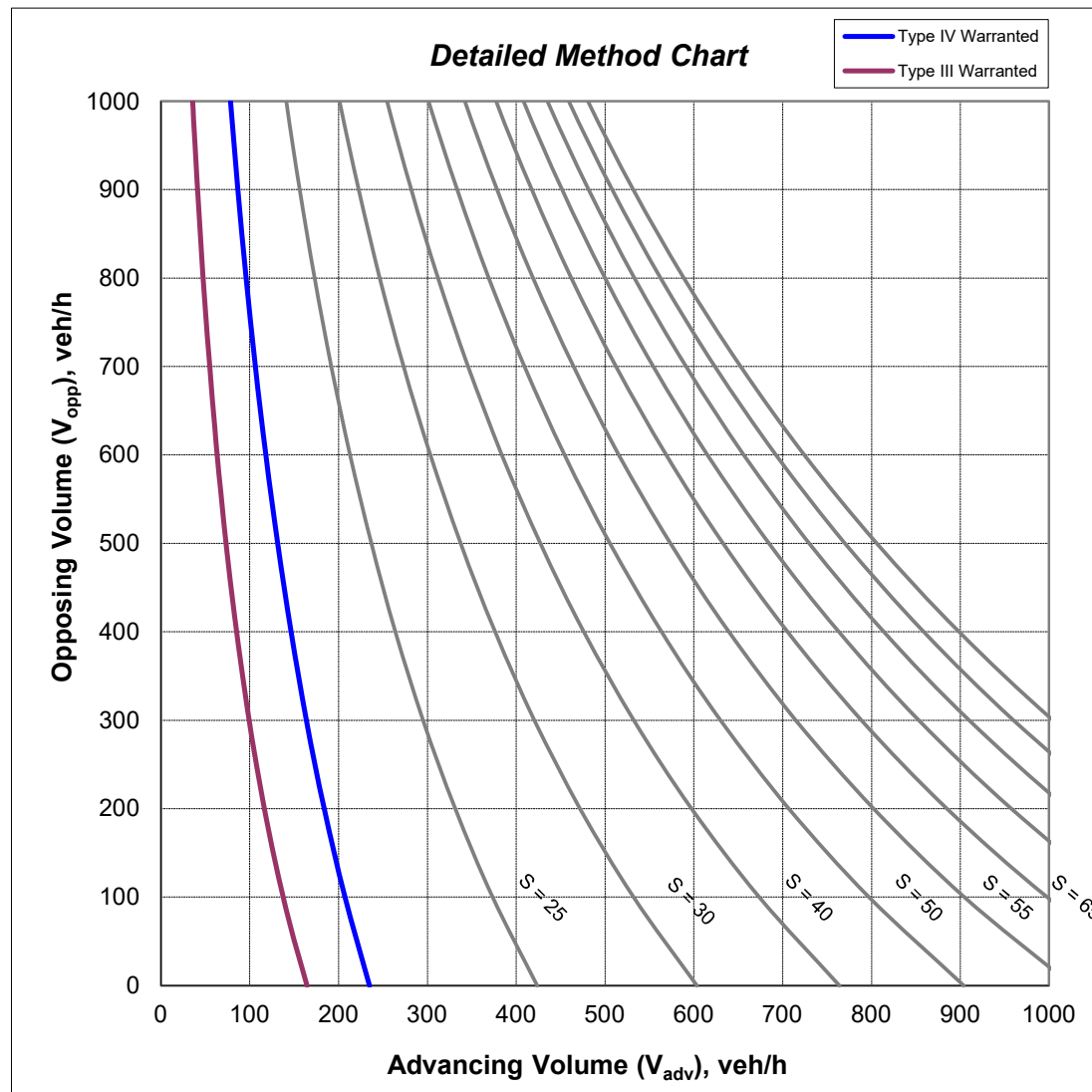
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 281

Direction: EB
Period: AM Peak

Year of Analysis: 2050 PD
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	19,900
Minor (intersecting) Road A.A.D.T	5,500
Left turn volume (V_{LT}), veh/h:	55
Advancing volume (V_{adv}), veh/h:	1,411
Opposing volume (V_{opp}), veh/h:	407
Left turn truck volume, trucks/h:	3
Right turn volume (V_{RT}), veh/day:	3

OUTPUT	Value
Percent left-turns in advancing volume:	3.9%
Percent trucks in left turn volume:	5.5%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	12.9%
Calculated conflicts per hour, veh/h:	181.5

Use Detailed Method

Type IV

Additional Storage Required	base storage requirement	40 m
	- standard storage length	20 m
	+ additional truck storage	0 m
	= total additional storage required	20 m

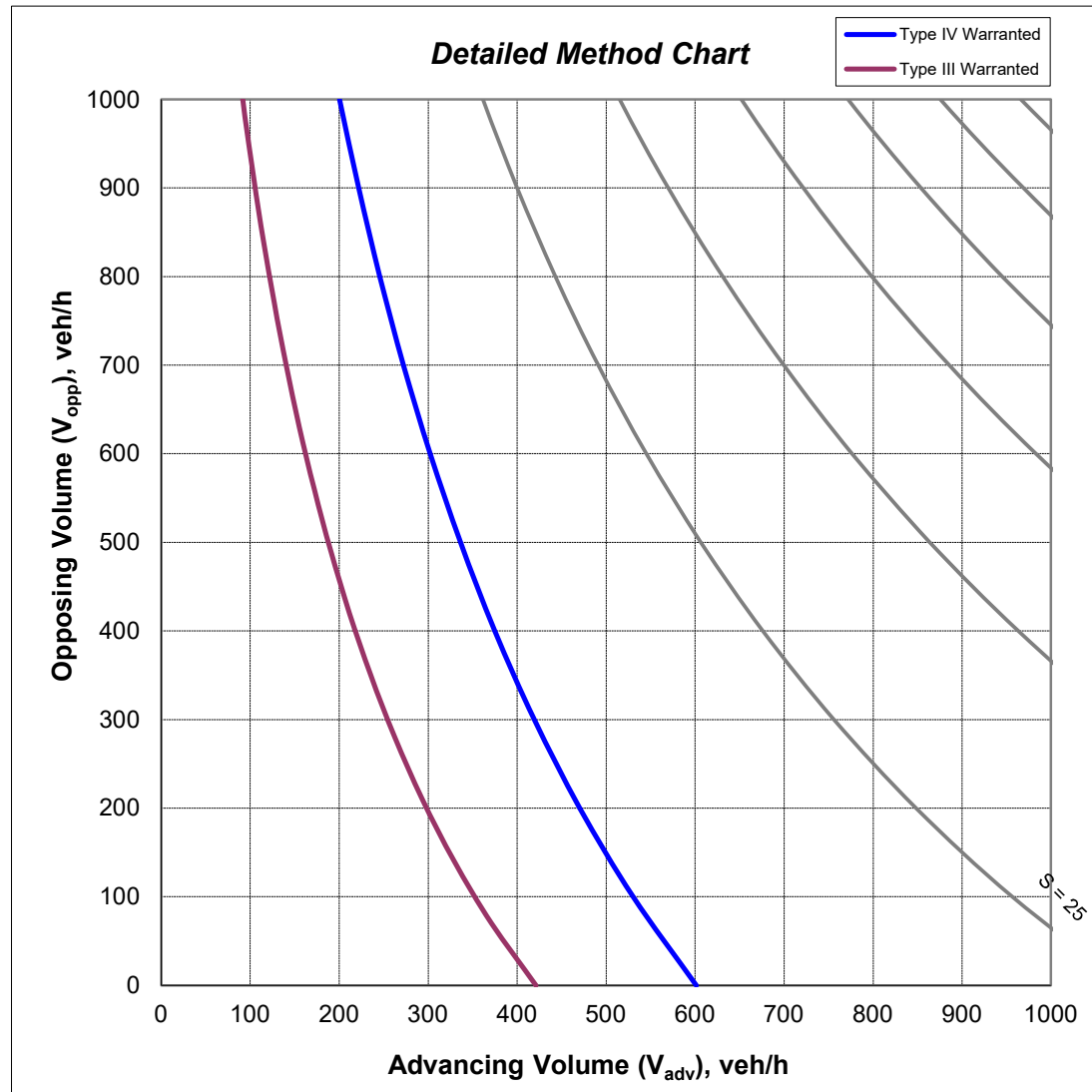
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 281

Direction: EB
Period: PM Peak

Year of Analysis: 2050 PD
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	13,100
Minor (intersecting) Road A.A.D.T	-
Left turn volume (V_{LT}), veh/h:	2
Advancing volume (V_{adv}), veh/h:	239
Opposing volume (V_{opp}), veh/h:	1,063
Left turn truck volume, trucks/h:	-
Right turn volume (V_{RT}), veh/day:	3

OUTPUT	Value
Percent left-turns in advancing volume:	0.8%
Percent trucks in left turn volume:	0.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	0.3%
Calculated conflicts per hour, veh/h:	0.8

Type I or Type II

Detailed Method Not Required

	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

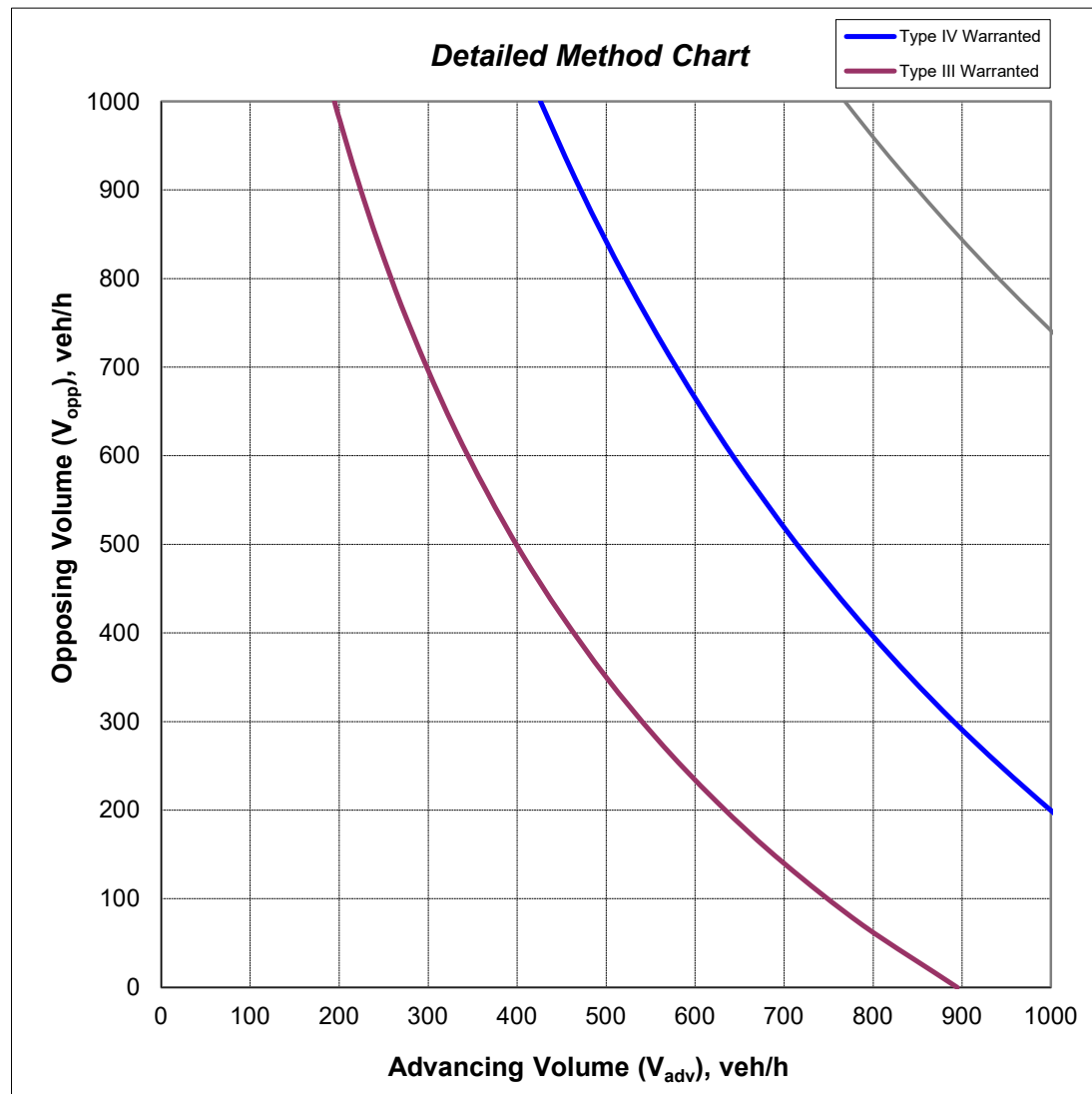
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 281

Direction: EB
Period: AM Peak

Year of Analysis: 2060 BG
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	14,500
Minor (intersecting) Road A.A.D.T	-
Left turn volume (V_{LT}), veh/h:	2
Advancing volume (V_{adv}), veh/h:	1,187
Opposing volume (V_{opp}), veh/h:	260
Left turn truck volume, trucks/h:	-
Right turn volume (V_{RT}), veh/day:	3

OUTPUT	Value
Percent left-turns in advancing volume:	0.2%
Percent trucks in left turn volume:	0.0%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	0.3%
Calculated conflicts per hour, veh/h:	3.5

Type I or Type II

Detailed Method Not Required

	base storage requirement	-
	- standard storage length	-
	+ additional truck storage	-
	= total additional storage required	-

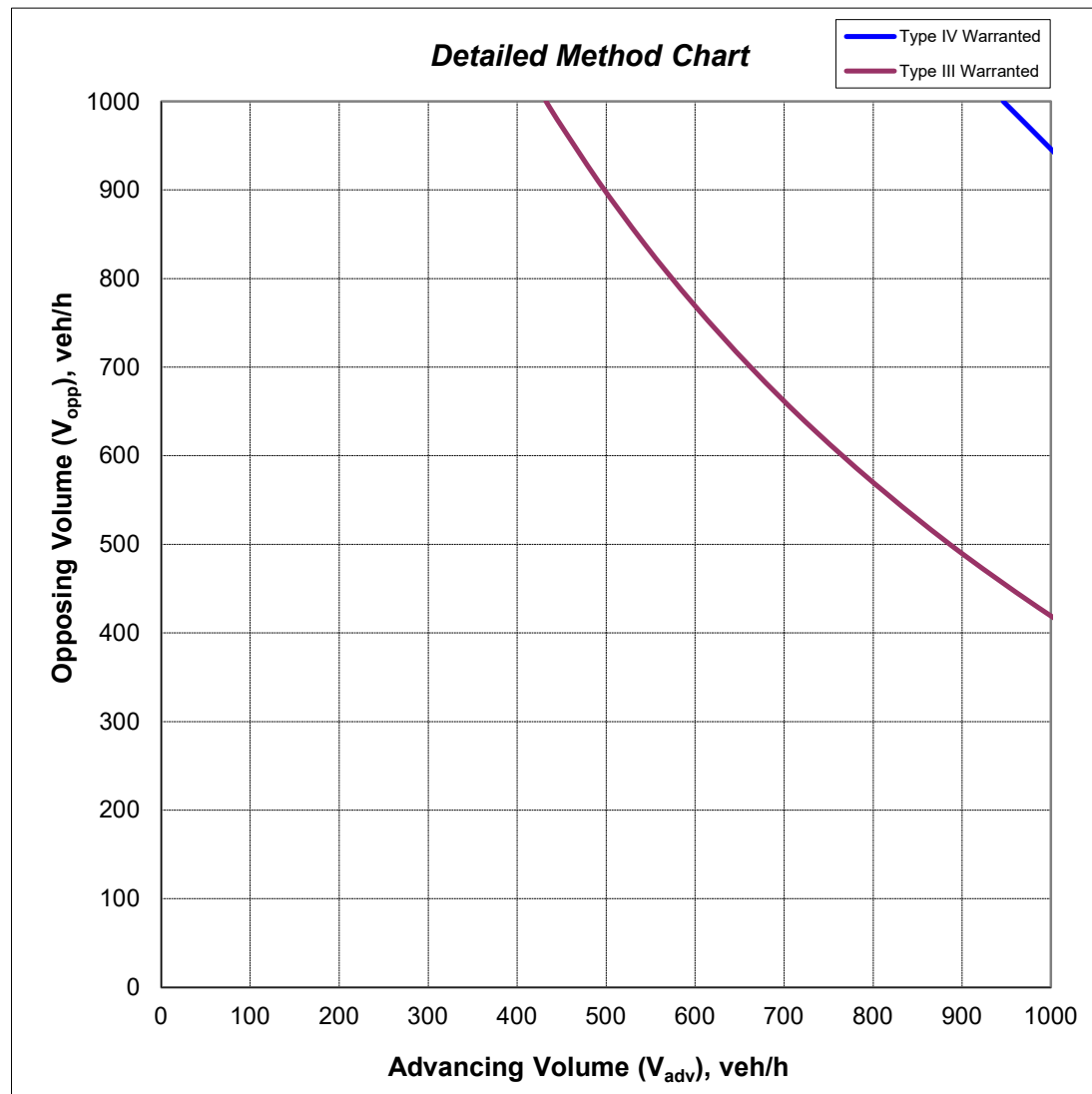
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 281

Direction: EB
Period: PM Peak

Year of Analysis: 2060 BG
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	20,800
Minor (intersecting) Road A.A.D.T	5,500
Left turn volume (V_{LT}), veh/h:	256
Advancing volume (V_{adv}), veh/h:	628
Opposing volume (V_{opp}), veh/h:	1,573
Left turn truck volume, trucks/h:	13
Right turn volume (V_{RT}), veh/day:	3

OUTPUT	Value
Percent left-turns in advancing volume:	40.8%
Percent trucks in left turn volume:	5.1%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	176.5%
Calculated conflicts per hour, veh/h:	1108.1

Use Detailed Method

Type IV

Additional Storage Required	base storage requirement	95 m
	- standard storage length	20 m
	+ additional truck storage	0 m
	= total additional storage required	75 m

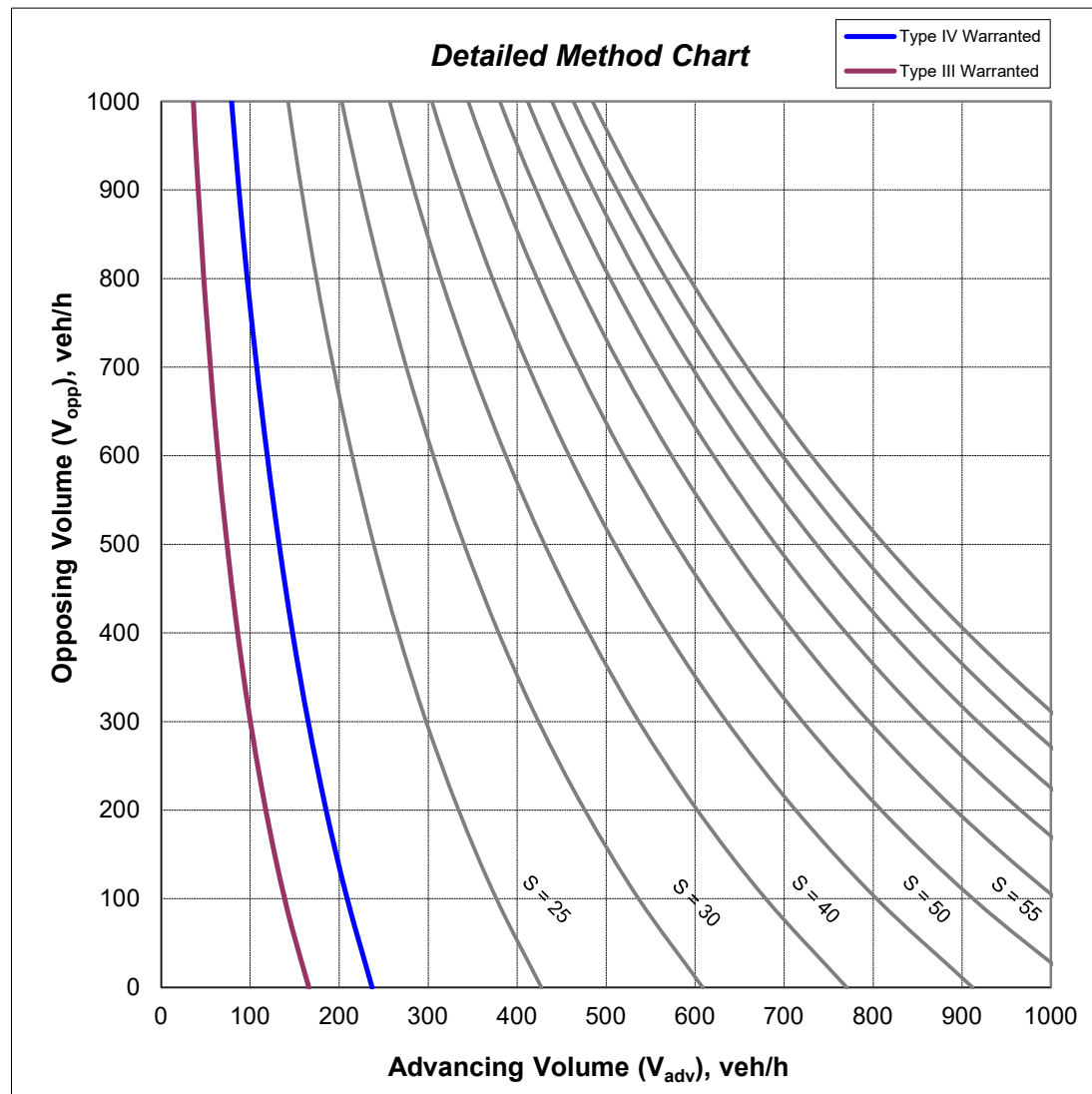
CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 281

Direction: EB
Period: AM Peak

Year of Analysis: 2060 PD
Date of Analysis: 11-Jul-2025





Intersection Analysis Rural Two-Lane Undivided Highways

INPUT	Value
85 th percentile speed, km/h:	100
Main Road A.A.D.T.	22,400
Minor (intersecting) Road A.A.D.T	5,500
Left turn volume (V_{LT}), veh/h:	56
Advancing volume (V_{adv}), veh/h:	1,609
Opposing volume (V_{opp}), veh/h:	451
Left turn truck volume, trucks/h:	3
Right turn volume (V_{RT}), veh/day:	3

OUTPUT	Value
Percent left-turns in advancing volume:	3.5%
Percent trucks in left turn volume:	5.4%
Probability of conflict threshold:	0.89%
Calculated probability of conflicting arrival:	16.5%
Calculated conflicts per hour, veh/h:	265.6

Use Detailed Method

Type IV

Additional Storage Required	base storage requirement	50 m
	- standard storage length	20 m
	+ additional truck storage	0 m
	= total additional storage required	30 m

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway (gap), s:	5.0
Average time to clear, s:	1.9

Main Rd: Highway 566
Minor Rd: Range Road 281

Direction: EB
Period: PM Peak

Year of Analysis: 2060 PD
Date of Analysis: 11-Jul-2025

