

TRANSPORTATION MEMORANDUM

For

**Deim Subdivision
El Paso County, Colorado**

January 2025
Revised June 2025

Prepared for:

Connie & Josh Deim
348 Galaxy Drive
Castle Rock, Colorado 80104

Prepared by:



SM ROCHA, LLC
TRAFFIC AND TRANSPORTATION CONSULTANTS

8700 Turnpike Drive, Suite 240
Westminster, Colorado 80031
(303) 458-9798

6 South Tejon Street, Suite 618
Colorado Springs, Colorado 80903
(719) 203-6639

Project Manager:
Brandon Wilson, EIT

Project Engineer:
Megan Bock, EIT

Engineer in Responsible Charge:
Fred Lantz, PE



24-102286

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I. Introduction

Project Overview

This transportation memorandum is provided as a planning document and addresses the capacity, geometric, and control requirements associated with the development entitled Deim Subdivision.

This traffic impact study has been revised to address County review comments made to the January 2025 traffic study regarding consideration for buildout of the adjacent land area, roadway improvement recommendations, and miscellaneous updates throughout.

This proposed residential development consists of a single-family home subdivision. The development is located near the southwest corner of Hodgen Road and Black Forest Road in El Paso County, Colorado.

Study Area Boundaries

The study area to be examined in this analysis encompasses the Hodgen Road intersections with Black Forest Road, Ridgeback Road, Thompson Road, and the existing private access drive west of the site.

Figure 1 illustrates location of the site and study intersections.

Site Description

Land for the development is currently vacant and surrounded by open space and residential land uses.

The proposed development is understood to entail the new construction of a subdivision supporting four single-family home lots. Existing access to the development is shared and provided via the private access drive located approximately 600 feet west of Thompson Road.

For purposes of this study, it is anticipated that development construction would be completed by end of Year 2027.

General site and access locations are shown on Figure 1.

A conceptual sight distance exhibit, illustrating approximate intersection sight distance triangles, is included for reference in Appendix D. This two-dimensional exhibit does not consider the potential for landscaping, utility, nor vertical curve obstructions, and was prepared in accordance to Section 2.3.6, Table 2-21, of the County's Engineering Criteria Manual (ECM)¹, and Section 9.5.3.2 of the American Association of State Highway and Transportation Officials' (AASHTO) A Policy on Geometric Design of Highway and Streets (Green Book)² and is provided for illustrative purposes only.

¹ El Paso County Engineering Criteria Manual, El Paso County, October 2020.

² A Policy on Geometric Design of Highways and Streets (7th Edition), American Association of State Highway and Transportation Officials, 2018.



North

Not to Scale

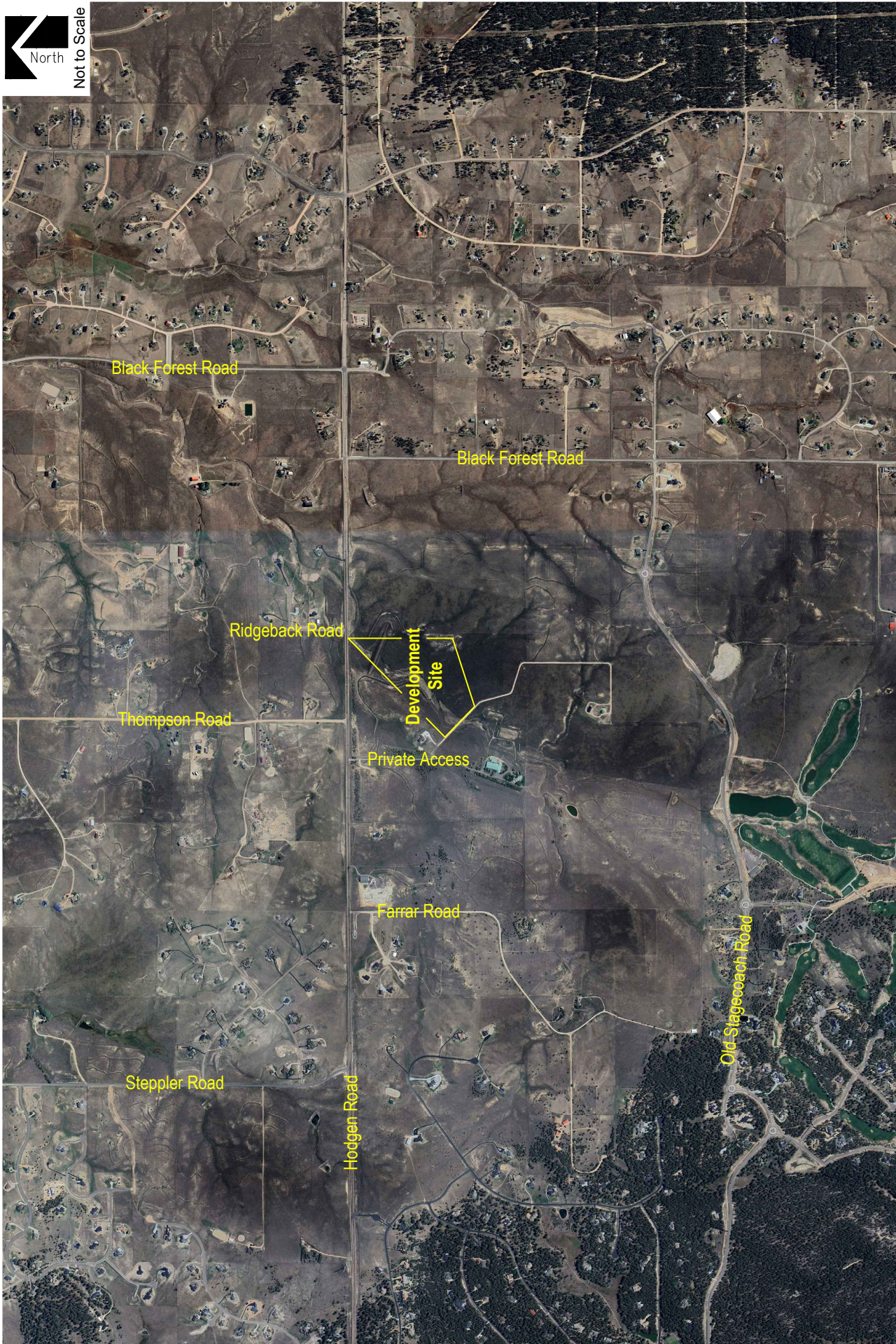


Figure 1
SITE LOCATION



Existing and Committed Surface Transportation Network

Within the study area, Hodgen Road is the primary roadway that will accommodate traffic to and from the proposed development. The secondary roadways include Black Forest Road, Ridgeback Road, Thompson Road, and Private Access Drive. A brief description of each roadway, based on the County's Major Transportation Corridors Plan (MTCP)³ and ECM, is provided below:

Hodgen Road is an east-west rural principal arterial roadway having two through lanes (one lane in each direction) with a combination of shared and exclusive turn lanes at the intersections within the study area. Hodgen Road provides a posted speed limit of 55 MPH.

Black Forest Road is a north-south minor arterial roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersection within the study area. Black Forest Road provides posted speed limits ranging from 40 to 45 MPH.

Thompson Road is a north-south rural local roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersection within the study area. Thompson Road provides a posted speed limit of 30 MPH.

Ridgeback Road is a north-south rural local roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersection within the study area. Ridgeback Road provides a posted speed limit of 25 MPH.

Private Access Drive is a north-south private, non-County maintained roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersection within the study area. Private Access Drive has an assumed posted speed limit of 30 MPH.

All study intersections operate under a stop-controlled condition. A stop-controlled intersection is defined as a roadway intersection where vehicle rights-of-way are controlled by one or more "STOP" signs.

Pursuant to the County's MTCP, Hodgen Road is planned to be widened from two to four through lanes from State Highway 83 to Vollmer Road. The County's MTCP states this as an improvement to occur by Year 2065 but does not mention exactly when this will occur. As such, this improvement was not considered within this analysis.

Within the study area, the Hodgen Road Access Management Plan⁴ explains how recommendations along Hodgen Road include a full-movement intersection at Thompson Road and the realignment of Black Forest Road to eliminate its jog across Hodgen Road. It is noted that no recommendations nor changes are mentioned for the existing Private Access Drive intersection with Hodgen Road.

³ El Paso County Major Transportation Corridors Plan (MTCP), Felsburg Holt & Ullevig, July 2024.

⁴ Hodgen Road Corridor Plan – Access Management Plan, El Paso County, August 2007.

II. Existing Traffic Conditions

Morning (AM) and afternoon (PM) peak hour traffic counts were collected at the Hodgen Road intersections with Ridgeback Road, Thompson Road, and the Private Access Drive west of the site. Counts were collected on Thursday, December 5, 2024, with AM peak hour counts being collected during the period of 7:00 a.m. to 9:00 a.m. and PM peak hour counts being collected during the period of 4:00 p.m. to 6:00 p.m.

Peak hour traffic counts and 24-hour traffic volumes shown for the Hodgen Road intersection with Black Forest Road and along Hodgen Road were obtained from the Flying Horse North Major PUD Amendment traffic study⁵.

Newly collected and referenced counts representing existing traffic volumes and existing intersection geometry are shown on Figure 2. Traffic count data is included for reference in Appendix A.

⁵ Flying Horse North Major PUD Amendment: Master Traffic Impact Study, SM ROCHA, LLC, January 2025.

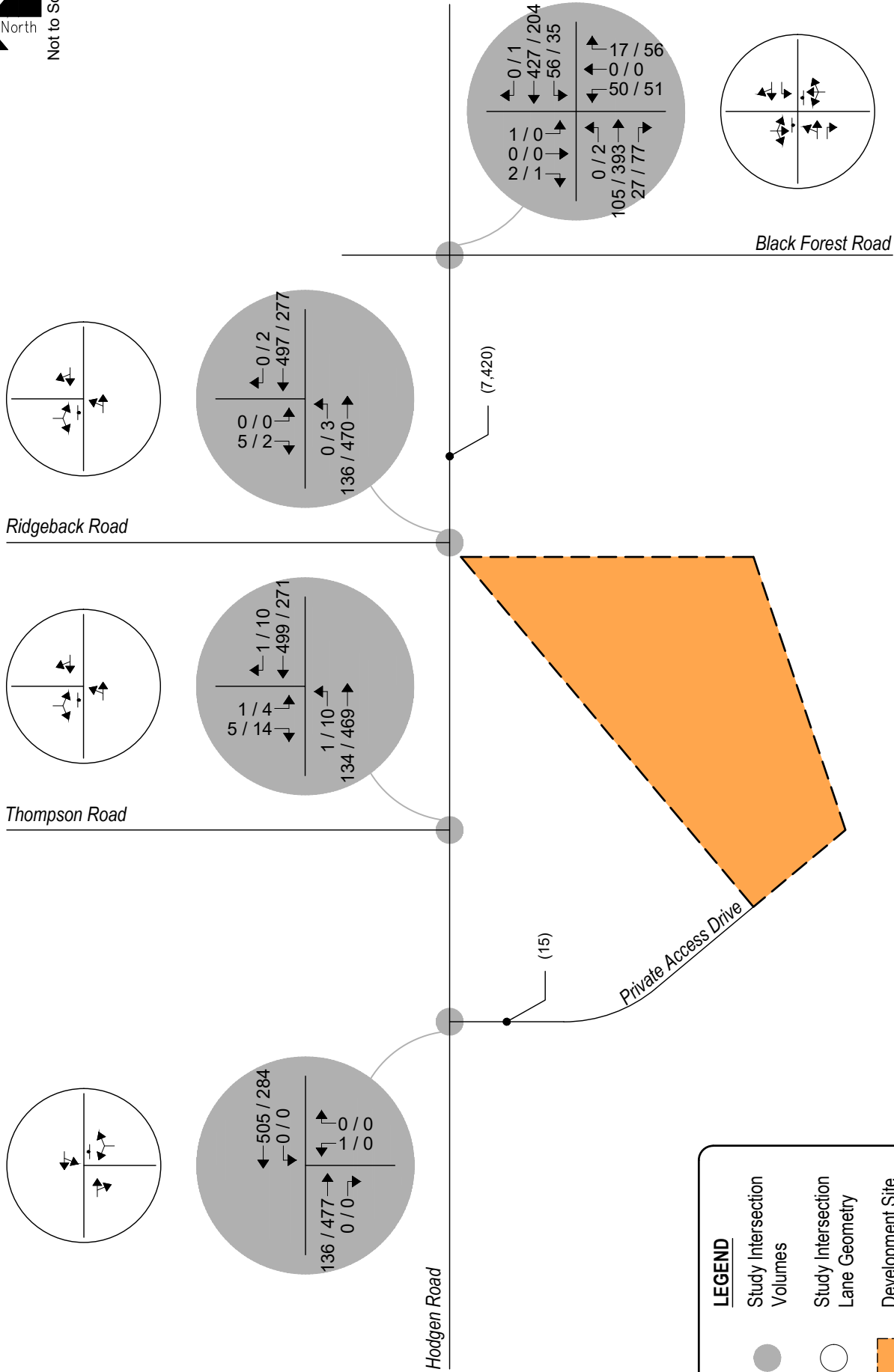


Figure 2
EXISTING TRAFFIC
Volumes & Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic

Peak Hour Intersection Levels of Service – Existing Traffic

The Unsignalized Intersection Analysis technique, as published in the Highway Capacity Manual (HCM), 7th Edition, by the Transportation Research Board and as incorporated into the SYNCHRO computer program, was used to analyze the study intersections for existing and future traffic conditions. This nationally accepted technique allows for the determination of intersection level of service (LOS) based on the congestion and delay of each traffic movement.

Pursuant to Section B.4.1.A of the County's ECM, the design objective for each scenario of this study shall be level of service "D". Level of service is a method of measurement used by transportation professionals to quantify a driver's perception of travel conditions that include travel time, number of stops, and total amount of stopped delay experienced on a roadway network. The HCM categorizes level of service into a range from "A" which indicates little, if any, vehicle delay, to "F" which indicates a level of operation considered unacceptable to most drivers. These levels of service grades with brief descriptions of the operating condition, for unsignalized and signalized intersections, are included for reference in Appendix B and have been used throughout this study.

The level of service analyses results for existing conditions are summarized in Table 1.

Intersection capacity worksheets developed for this study are provided in Appendix C.

Table 1 – Intersection Capacity Analysis Summary – Existing Traffic

INTERSECTION LANE GROUPS	LEVEL OF SERVICE	
	AM PEAK HOUR	PM PEAK HOUR
Hodgen Road / Black Forrest Road (Stop-Controlled)		
Eastbound Left and Through	A	A
Westbound Left	A	A
Northbound Left, Through, and Right	C	C
Southbound Left, Through, and Right	B	A
Hodgen Road / Ridgeback Road (Stop-Controlled)		
Eastbound Left and Through	A	A
Southbound Left and Right	B	A
Hodgen Road / Thompson Road (Stop-Controlled)		
Eastbound Left and Through	A	A
Southbound Left and Right	B	B
Hodgen Road / Private Access (Stop-Controlled)		
Westbound Left and Through	A	A
Northbound Left and Right	B	A

Key: Stop-Controlled Intersection: Level of Service

Existing Traffic Analysis Results

Under existing conditions, operational analysis shows that the stop-controlled intersection of Hodgen Road with Black Forest Road has turn movement operations at or better than LOS C during the morning and afternoon peak traffic hours.

The unsignalized intersection of Hodgen Road with Ridgeback Road has turn movement operations at or better than LOS B during the morning peak traffic hour and LOS A during the afternoon peak traffic hour.

The stop-controlled intersection of Hodgen Road with Thompson Road has turn movement operations at or better than LOS B during the morning and afternoon peak traffic hours.

The stop-controlled intersection of Hodgen Road with Private Access Drive has turn movement operations at or better than LOS B during the morning peak traffic hour and LOS A during the afternoon peak traffic hour.

III. Future Traffic Conditions Without Proposed Development

Background traffic is the traffic projected to be on area roadways without consideration of the proposed development. Background traffic includes traffic generated by development of vacant parcels in the area.

To account for projected increases in background traffic for Year 2027, a compounded annual growth rate was determined using population growth estimates provided by the Pike's Peak Area Council of Governments' (PPACG) 2045 Long Range Transportation Plan⁶, as well as traffic data provided by CDOT's Online Transportation Information System (OTIS) for the adjacent segment of State Highway 83. PPACG's 2045 Long Range Transportation Plan anticipates a 20-year growth rate between one and two percent, while CDOT's OTIS anticipates a 20-year growth rate between two and three percent. Therefore, in order to provide for a conservative analysis, a growth rate of three percent was applied to existing traffic volumes. This annual growth rate is also considered to be consistent with long-term regional growth projections and the level of in-fill development expected within the area.

Background traffic conditions also assumed projected traffic from future adjacent development areas expected to also utilize the existing Private Access Drive. This area is comprised of approximately 330 acres of land zoned as Residential Rural (RR-5), which allows for 5-acre single-family residential developments, pursuant to the County's Land Development Code⁷. It is understood that there are currently no plans to develop this area. Therefore, in order to appropriately estimate future trip generation, the Institute of Transportation Engineers (ITE) land use code 210 (Single-Family Detached Housing) was applied to the vacant area using an assumed density of 66 lots in order to provide conservative trip generation rates. Estimated trip generation for the adjacent land area is provided for reference in Appendix E.

Pursuant to the non-committed area roadway improvements discussed in Section I, Year 2027 background traffic conditions assume no roadway improvements to accommodate regional transportation demands. This assumption provides for a conservative analysis.

Projected background traffic volumes and intersection geometry for Year 2027 are shown on Figure 3.

⁶ Moving Forward 2045: Pikes Peak Area Regional Transportation Plan, Pikes Peak Area Council of Governments, January 2020.

⁷ Land Development Code of El Paso County, Colorado, El Paso County Development, December 2021.



Not to Scale

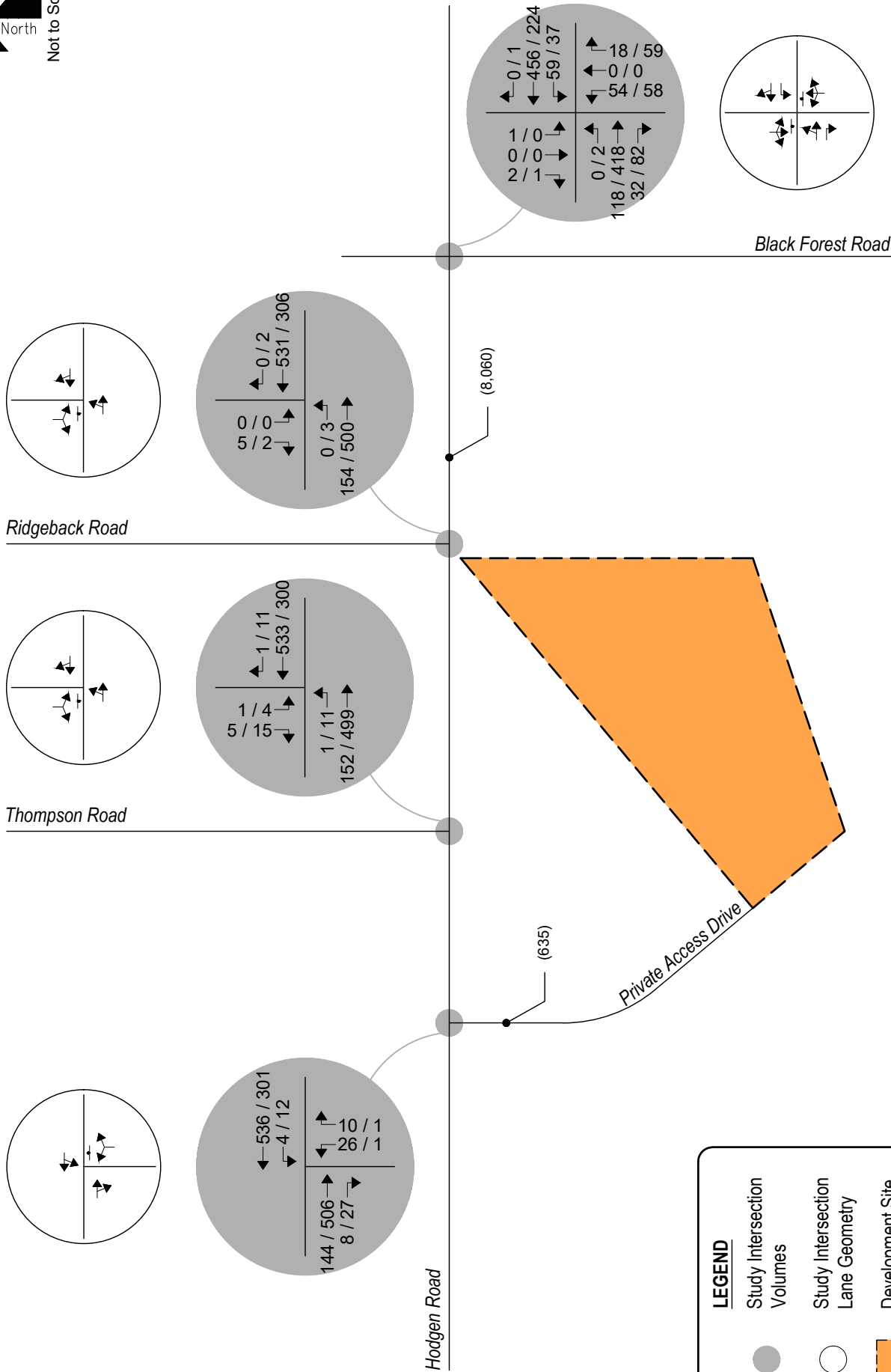


Figure 3
BACKGROUND TRAFFIC - YEAR 2027
Volumes & Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic

Peak Hour Intersection Levels of Service – Background Traffic

As with existing traffic conditions, the operations of study intersections were analyzed under background conditions, without the proposed development, using the SYNCHRO computer program.

Background traffic level of service analysis results for Year 2027 are listed in Table 2.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

Table 2 – Intersection Capacity Analysis Summary – Background Traffic – Year 2027

INTERSECTION LANE GROUPS	LEVEL OF SERVICE	
	AM PEAK HOUR	PM PEAK HOUR
Hodgen Road / Black Forrest Road (Stop-Controlled)		
Eastbound Left and Through	A	A
Westbound Left	A	A
Northbound Left, Through, and Right	C	C
Southbound Left, Through, and Right	B	A
Hodgen Road / Ridgeback Road (Stop-Controlled)		
Eastbound Left and Through	A	A
Southbound Left and Right	B	B
Hodgen Road / Thompson Road (Stop-Controlled)		
Eastbound Left and Through	A	A
Southbound Left and Right	B	B
Hodgen Road / Private Access (Stop-Controlled)		
Westbound Left and Through	A	A
Northbound Left and Right	B	A

Key: Stop-Controlled Intersection: Level of Service

Background Traffic Analysis Results – Year 2027

Year 2027 background traffic analysis indicates that the stop-controlled intersection of Hodgen Road with Black Forest Road has turn movement operations at or better than LOS C during the morning and afternoon peak traffic hours.

The unsignalized intersection of Hodgen Road with Ridgeback Road projects turn movement operations at or better than LOS B during the morning peak traffic hour and LOS A during the afternoon peak traffic hour.

The stop-controlled intersection of Hodgen Road with Thompson Road expects turn movement operations at or better than LOS B during the morning and afternoon peak traffic hours.

The stop-controlled intersection of Hodgen Road with Private Access Drive predicts turn movement operations at or better than LOS B during the morning peak traffic hour and LOS A during the afternoon peak traffic hour.

IV. Proposed Project Traffic

Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 11th Edition, were applied to the proposed land use in order to estimate average daily traffic (ADT), AM Peak Hour, and PM Peak Hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from a point of origin to a point of destination.

The ITE land use code 210 (Single-Family Detached Housing) was used for estimating trip generation because of its conservative rates and best fit to the proposed land use description.

Trip generation rates used in this study are presented in Table 3.

Table 3 – Trip Generation Rates

ITE CODELAND USEUNIT			TRIP GENERATION RATES						
			24 HOUR	AM PEAK HOUR			PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
210	Single-Family Detached Housing	DU	9.43	0.18	0.53	0.70	0.59	0.35	0.94

Key: DU = Dwelling Units.

Note: All data and calculations above are subject to being rounded to nearest value.

Table 4 illustrates projected ADT, AM Peak Hour, and PM Peak Hour traffic volumes likely generated by the proposed development upon build-out.

Table 4 – Trip Generation Summary

ITE CODELAND USESIZE			TOTAL TRIPS GENERATED						
			24 HOUR	AM PEAK HOUR			PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
210	Single-Family Detached Housing	4 DU	38	1	2	3	2	2	4
Total:			38	1	2	3	2	2	4

Key: DU = Dwelling Units.

Note: All data and calculations above are subject to being rounded to nearest value.

Upon build-out, Table 4 illustrates that the proposed development has the potential to generate approximately 38 daily vehicle trips with 3 of those occurring during the morning peak hour and 4 during the afternoon peak hour.

Adjustments to Trip Generation Rates

A development of this type is not likely to attract trips from within area land uses nor pass-by or diverted link trips from the adjacent roadway system, therefore no trip reduction was taken in this analysis.

Trip Distribution

The overall directional distribution of site-generated traffic was determined based on the location of development site within the County, proposed and existing area land uses, allowed turning movements, available roadway network, and in reference to historical traffic count data provided by CDOT's Traffic Count Database System (TCDS)⁸.

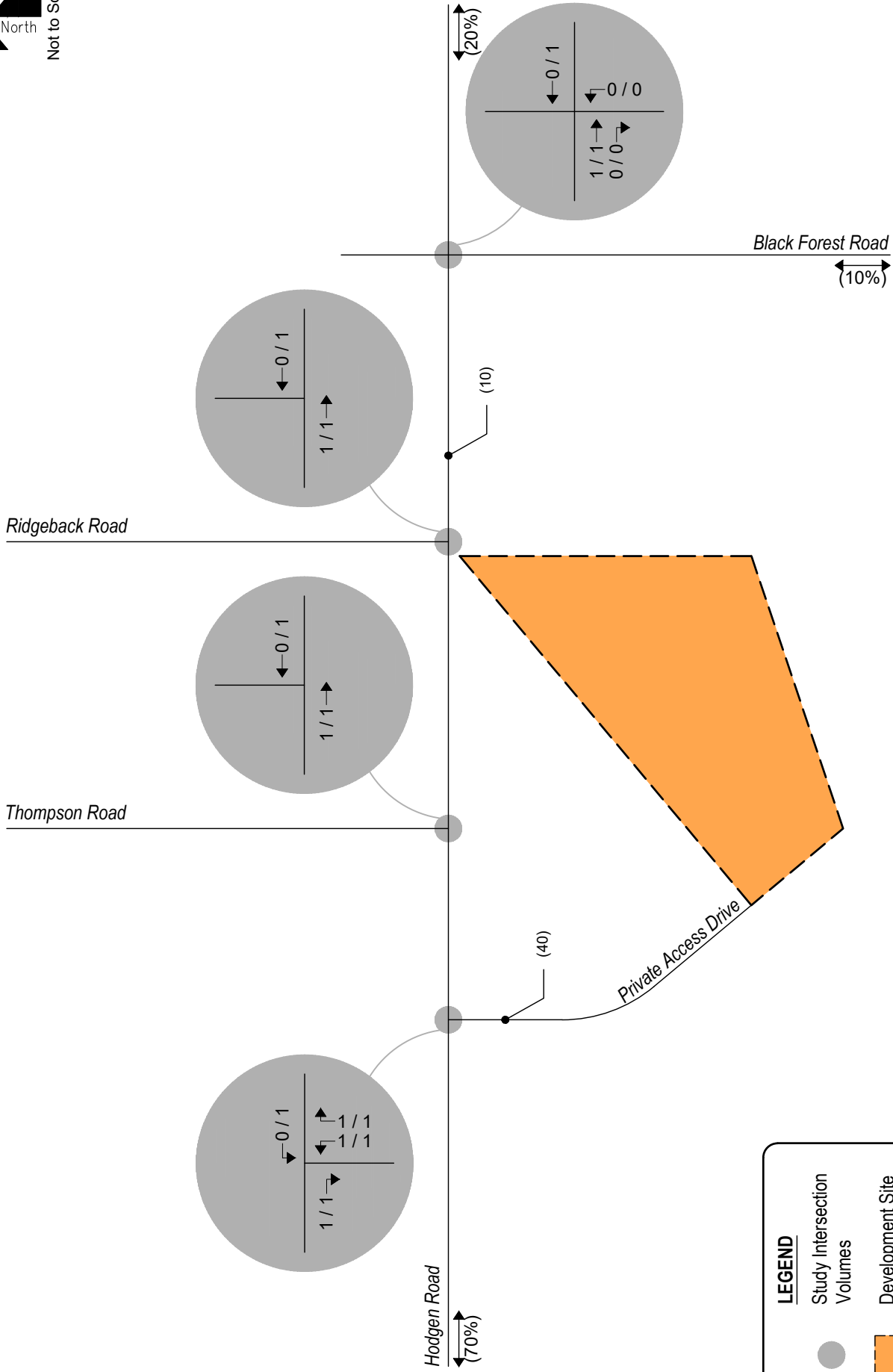
Overall trip distribution patterns for the development are shown on Figure 4.

Trip Assignment

Trip assignment is how generated and distributed vehicle trips are expected to be loaded onto the available roadway network.

Applying trip distribution patterns to site-generated traffic provides the overall site-generated trip assignments shown on Figure 4.

⁸ Transportation Data Management System, MS2, 2025.



LEGEND

- Study Intersection
- Volumes
- Development Site

Figure 4
SITE DEVELOPMENT DISTRIBUTION
(%) : Overall
SITE-GENERATED TRIPS
AM / PM Peak Hour

V. Future Traffic Conditions With Proposed Developments

Total traffic is the traffic projected to be on area roadways with consideration of the proposed development. Total traffic includes background traffic projections for Year 2027 with consideration of site-generated traffic. For analysis purposes, it was assumed that development construction would be completed by end of Year 2027.

Pursuant to area roadway improvement discussions provided in Section III, Year 2027 total traffic conditions assume no roadway improvements to accommodate regional transportation demands. Roadway improvements associated with site development are expected to be limited to site access and frontage as required by the governing agency.

Projected Year 2027 total traffic volumes and intersection geometry are shown in Figure 5.

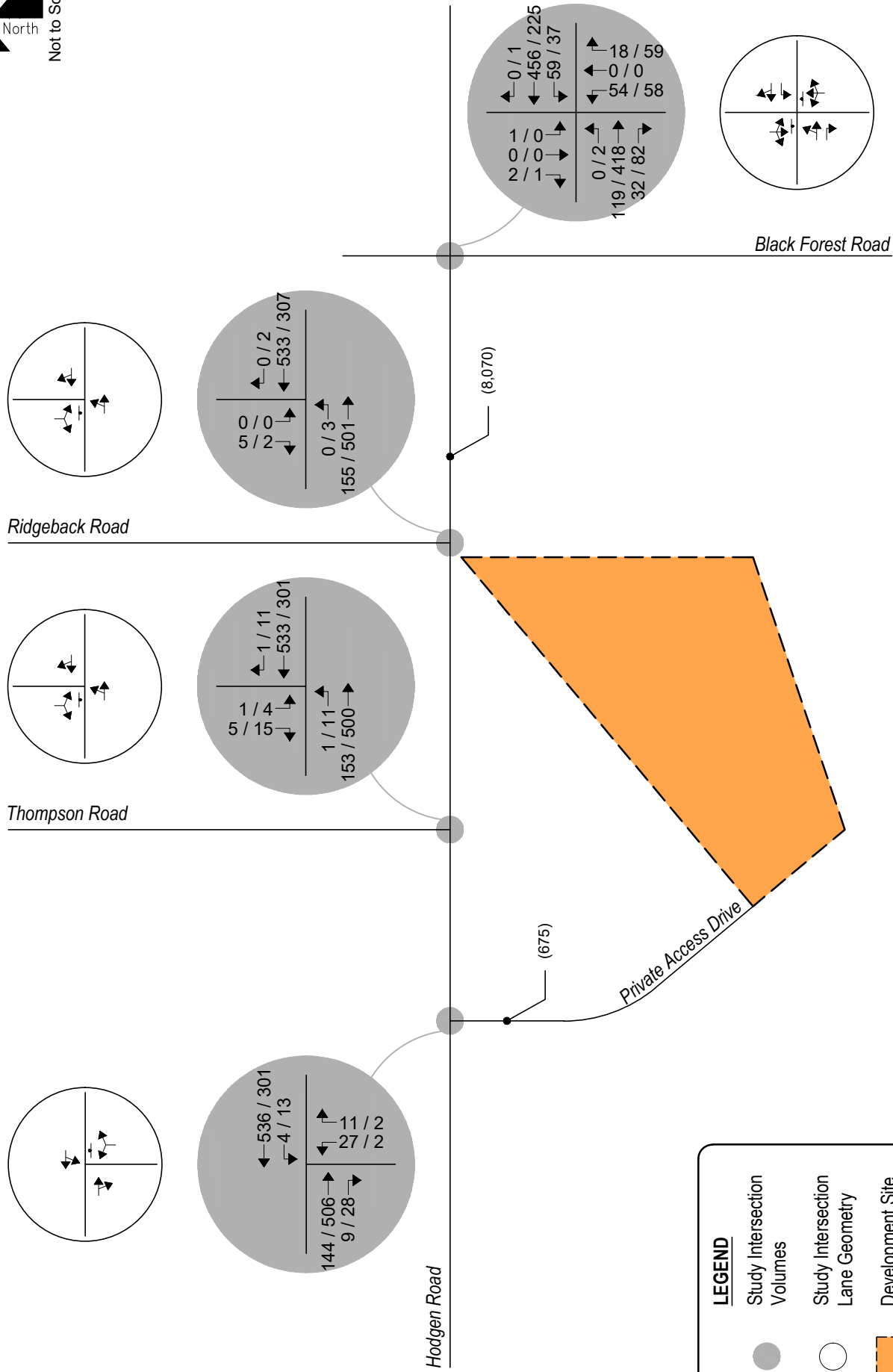


Figure 5
TOTAL TRAFFIC - YEAR 2027
Volumes & Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic

VI. Project Impacts

The analyses and procedures described in this study were performed in accordance with the latest HCM and are based upon the worst-case conditions that occur during a typical weekday upon build-out of site development and analyzed land uses. Therefore, study intersections are likely to operate with traffic conditions better than those described within this study, which represent the peak hours of weekday operations only.

Peak Hour Intersection Levels of Service – Total Traffic

As with background traffic, the operations of the study intersections were analyzed under projected total traffic conditions using the SYNCHRO computer program. Total traffic level of service analysis results for Year 2027 are summarized in Table 5.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

Table 5 – Intersection Capacity Analysis Summary – Total Traffic – Year 2027

INTERSECTION LANE GROUPS	LEVEL OF SERVICE	
	AM PEAK HOUR	PM PEAK HOUR
Hodgen Road / Black Forrest Road (Stop-Controlled)		
Eastbound Left and Through	A	A
Westbound Left	A	A
Northbound Left, Through, and Right	C	C
Southbound Left, Through, and Right	B	A
Hodgen Road / Ridgeback Road (Stop-Controlled)		
Eastbound Left and Through	A	A
Southbound Left and Right	B	B
Hodgen Road / Thompson Road (Stop-Controlled)		
Eastbound Left and Through	A	A
Southbound Left and Right	B	B
Hodgen Road / Private Access (Stop-Controlled)		
Westbound Left and Through	A	A
Northbound Left and Right	B	B

Key: Stop-Controlled Intersection: Level of Service

Total Traffic Analysis Results Upon Development Build-Out

Table 5 illustrates how, by Year 2027 and upon development build-out, the stop-controlled intersection of Hodgen Road with Black Forest Road continues to expect turn movement operations at or better than LOS C during the morning and afternoon peak traffic hours.

The unsignalized intersection of Hodgen Road with Ridgeback Road projects turn movement operations at or better than LOS B during both peak traffic hours.

The stop-controlled intersection of Hodgen Road with Thompson Road predicts turn movement operations at or better than LOS B during both peak traffic hours.

The stop-controlled intersection of Hodgen Road with Private Access projects turn movement operations at or better than LOS B during both peak traffic hours.

Compared to the background traffic analysis, the traffic generated by the proposed development is not expected to significantly change the operations of the study intersections.

Total Traffic Auxiliary Lane Analysis

Auxiliary lanes for the existing site access are to be based on the County's ECM.

Considering development build-out, an evaluation of auxiliary lane requirements, pursuant Section 2.3.7 of the County's ECM, reveals that left and right turn deceleration lanes at the existing Private Access Drive along Hodgen Road are not required since the development's projected peak hour left and right turn ingress volumes do not exceed the County's threshold of 25 and 50 vehicles per hour, respectively.

Queue Length Analysis

Queue lengths for the study intersections were analyzed using Year 2027 total traffic conditions. The analysis yields estimate of 95th percentile queue lengths, which have only a five percent probability of being exceeded during the analysis time period. An average vehicle length of 25 feet was assumed. Queue lengths were modeled and are included with the Synchro worksheets in Appendix C.

Table 6 summarizes the 95th percentile queue results in comparison to the projected storage requirements for turn movements within study area for Year 2027.

Table 6 – Turn Lane Queues and Storage Requirements – Total Traffic – Year 2027

Intersection	Turn Movement		Existing Turn Lane Length (feet)	AM Peak Hour		PM Peak Hour		Recommended Turn Lane Length (feet)
				95th Percentile Queue Length (feet)	Vehicle Equivalent (vehicles)	95th Percentile Queue Length (feet)	Vehicle Equivalent (vehicles)	
Stop-Controlled Intersections								
Hodgen Road / Black Forest Road	EB	L,T	-	0'	0	0'	0	-
		R	260'	0'	0	0'	0	260'
	WB	L	290'	3'	1	3'	1	290'
		T,R	-	0'	0	0'	0	-
	NB	L,T,R	-	20'	1	45'	2	-
	SB	L,T,R	-	0'	0	0'	0	-
Hodgen Road / Ridgeback Road	EB	L,T	-	0'	0	0'	0	-
	WB	T,R	-	0'	0	0'	0	-
	SB	L,R	-	0'	0	0'	0	-
Hodgen Road / Thompson Road	EB	L,T	-	0'	0	0'	0	-
	WB	T,R	-	0'	0	0'	0	-
	SB	L,R	-	0'	0	3'	1	-
Hodgen Road / Private Access	EB	T,R	-	0'	0	0'	0	-
	WB	L,T	-	0'	0	0'	0	-
	NB	L,R	-	8'	1	0'	0	-

Note: Turn Lane Length does not include taper length.

As Table 6 shows, no significant queues at the study intersections were indicated and all turn lane lengths have sufficient storage to accommodate future traffic volumes.

Recommended Improvements

Roadway and intersection improvement recommendations were assessed pursuant to roadway descriptions discussed in Section I, projected peak hour traffic volumes, level of service results, projected 95th percentile queue lengths, and per requirements defined within the County's ECM.

Upon development build-out, total traffic volumes indicate how projected queues are not expected to exceed existing turn lane lengths at the study intersections. Additionally, auxiliary lane analyses show how turn lanes are not warranted at the existing Private Access Drive.

In review of the expected ADT along Private Access Drive as illustrated in Figure 8, Table 2-5 of the County's ECM suggests that Private Access Drive matches the County's Rural Local roadway classification. With the assumption that Private Access Drive must meet County roadway standards, it is recommended that the roadway be improved to meet County standards for a Rural Local roadway, pursuant to Table 2-5 of the ECM.

No additional intersection or roadway improvements to the existing roadway network, except those described above, are recommended at this time.

VII. Conclusion

This transportation memorandum addressed the capacity, geometric, and control requirements associated with the development entitled Deim Subdivision. This proposed residential development consists of a single-family home subdivision. The development is located near the southwest corner of Hodgen Road and Black Forest Road in El Paso County, Colorado.

The study area examined in this analysis encompassed the Hodgen Road intersections with Black Forest Road, Ridgeback Road, Thompson Road, and the existing private access drive west of the site.

Analysis was conducted for critical AM Peak Hour and PM Peak Hour traffic operations for existing traffic conditions, Year 2027 background traffic conditions, and Year 2027 total traffic conditions.

Analysis of existing traffic conditions indicates that the stop-controlled intersections along Hodgen Road have turn movement operations at or better than LOS C during the morning and afternoon peak traffic hours.

Without the proposed development, Year 2027 background operational analysis shows that the study intersections along Hodgen Road continue to project turn movement operations at or better than LOS C during the morning and afternoon peak traffic hours.

Analysis of future traffic conditions indicates that the addition of site-generated traffic is expected to create no negative impact to traffic operations for the existing and surrounding roadway system upon roadway and intersection control improvements assumed within this analysis. With all conservative assumptions defined in this analysis, the study intersections are projected to operate at future levels of service comparable to Year 2027 background traffic conditions. The existing site access has short-term operations at LOS B or better during peak traffic periods and upon build-out.

APPENDIX A

Traffic Count Data



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

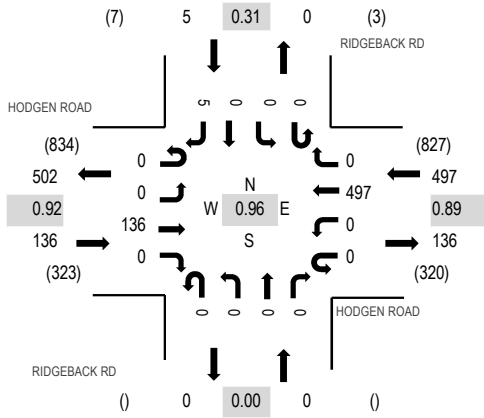
Location: 1 RIDGEBACK RD & HODGEN ROAD AM

Date: Thursday, December 5, 2024

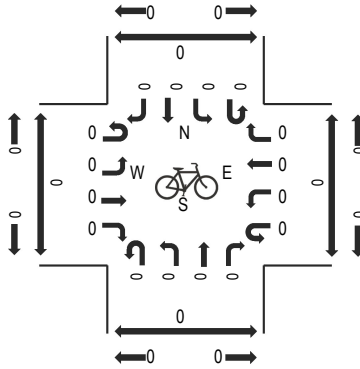
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

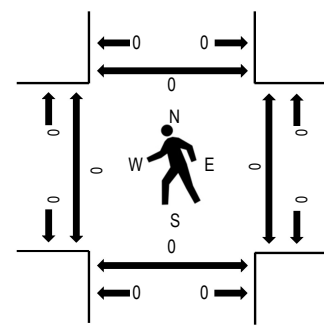
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HODGEN ROAD Eastbound				HODGEN ROAD Westbound				RIDGEBACK RD Northbound				RIDGEBACK RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	32	0	0	0	128	0	0	0	0	0	0	0	0	1	161	638	0	0	0	0
7:15 AM	0	0	24	0	0	0	140	0	0	0	0	0	0	0	0	0	164	600	0	0	0	0
7:30 AM	0	0	29	0	0	0	118	0	0	0	0	0	0	0	0	0	147	575	0	0	0	0
7:45 AM	0	0	51	0	0	0	111	0	0	0	0	0	0	0	0	4	166	564	0	0	0	0
8:00 AM	0	1	39	0	0	0	82	0	0	0	0	0	0	0	0	1	123	519	0	0	0	0
8:15 AM	0	0	49	0	0	0	90	0	0	0	0	0	0	0	0	0	139		0	0	0	0
8:30 AM	0	2	46	0	0	0	88	0	0	0	0	0	0	0	0	0	136		0	0	0	0
8:45 AM	0	0	50	0	0	0	70	0	0	0	0	0	0	0	0	1	121		0	0	0	0
Count Total	0	3	320	0	0	0	827	0	0	0	0	0	0	0	0	7	1,157		0	0	0	0
Peak Hour	0	0	136	0	0	0	497	0	0	0	0	0	0	0	0	5	638		0	0	0	0



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

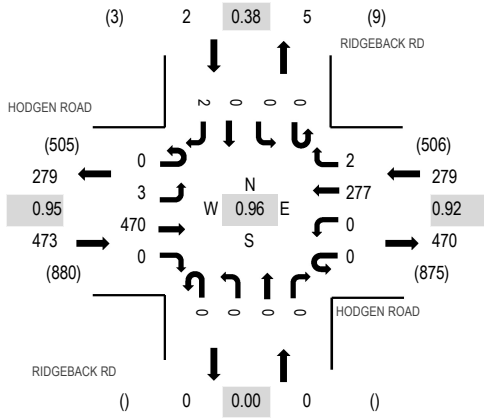
Location: 1 RIDGEBACK RD & HODGEN ROAD PM

Date: Thursday, December 5, 2024

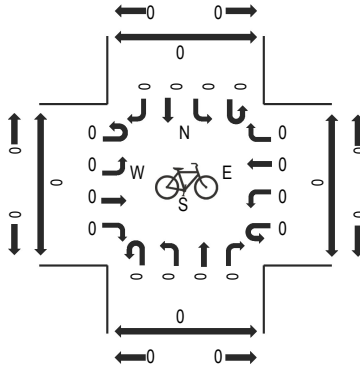
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:15 PM - 04:30 PM

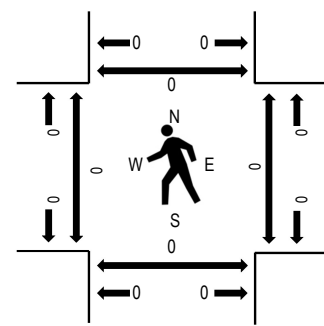
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HODGEN ROAD Eastbound				HODGEN ROAD Westbound				RIDGEBACK RD Northbound				RIDGEBACK RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	118	0	0	0	75	1	0	0	0	0	0	0	0	0	194	754	0	0	0	0
4:15 PM	0	1	124	0	0	0	71	0	0	0	0	0	0	0	0	0	196	729	0	0	0	0
4:30 PM	0	0	120	0	0	0	71	0	0	0	0	0	0	0	0	2	193	682	0	0	0	0
4:45 PM	0	2	108	0	0	0	60	1	0	0	0	0	0	0	0	0	171	657	0	0	0	0
5:00 PM	0	1	111	0	0	0	57	0	0	0	0	0	0	0	0	0	169	635	0	0	0	0
5:15 PM	0	2	84	0	0	0	61	1	0	0	0	0	0	1	0	0	149		0	0	0	0
5:30 PM	0	0	107	0	0	0	61	0	0	0	0	0	0	0	0	0	168		0	0	0	0
5:45 PM	0	0	102	0	0	0	47	0	0	0	0	0	0	0	0	0	149		0	0	0	0
Count Total	0	6	874	0	0	0	503	3	0	0	0	0	0	1	0	2	1,389		0	0	0	0
Peak Hour	0	3	470	0	0	0	277	2	0	0	0	0	0	0	0	2	754		0	0	0	0



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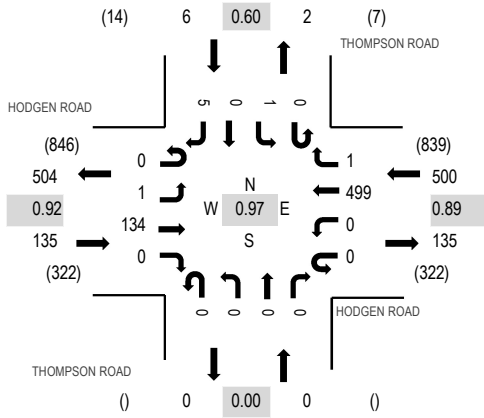
Location: 2 THOMPSON ROAD & HODGEN ROAD AM

Date: Thursday, December 5, 2024

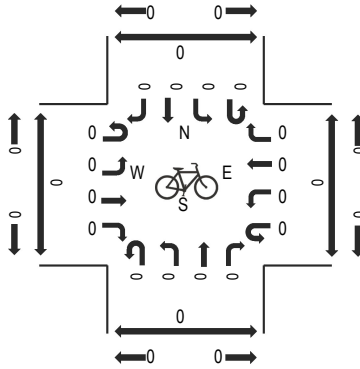
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:15 AM - 07:30 AM

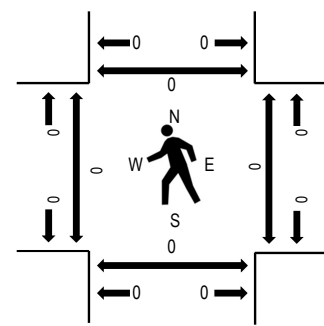
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HODGEN ROAD Eastbound				HODGEN ROAD Westbound				THOMPSON ROAD Northbound				THOMPSON ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	1	32	0	0	0	127	1	0	0	0	0	0	0	0	0	161	641	0	0	0	0
7:15 AM	0	0	23	0	0	0	141	0	0	0	0	0	0	0	0	1	165	610	0	0	0	0
7:30 AM	0	0	28	0	0	0	120	0	0	0	0	0	0	1	0	2	151	585	0	0	0	0
7:45 AM	0	0	51	0	0	0	111	0	0	0	0	0	0	0	0	2	164	573	0	0	0	0
8:00 AM	0	1	40	0	0	0	87	0	0	0	0	0	0	1	0	1	130	534	0	0	0	0
8:15 AM	0	2	45	0	0	0	88	0	0	0	0	0	0	3	0	2	140		0	0	0	0
8:30 AM	0	0	49	0	0	0	90	0	0	0	0	0	0	0	0	0	139		0	0	0	0
8:45 AM	0	1	49	0	0	0	73	1	0	0	0	0	0	0	0	1	125		0	0	0	0
Count Total	0	5	317	0	0	0	837	2	0	0	0	0	0	5	0	9	1,175		0	0	0	0
Peak Hour	0	1	134	0	0	0	499	1	0	0	0	0	0	1	0	5	641		0	0	0	0



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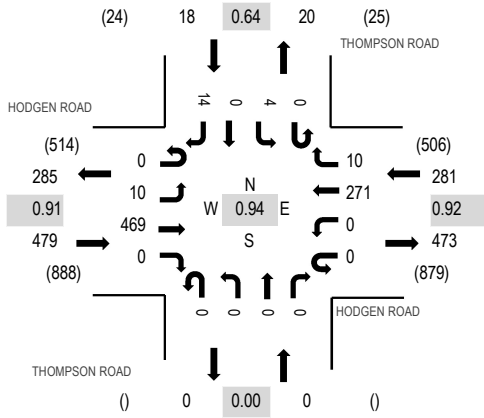
Location: 2 THOMPSON ROAD & HODGEN ROAD PM

Date: Thursday, December 5, 2024

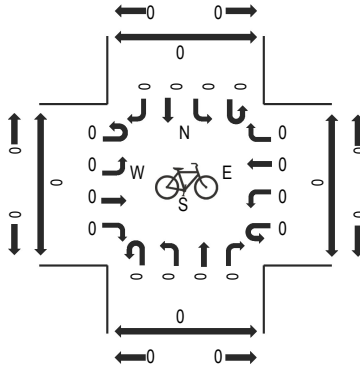
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

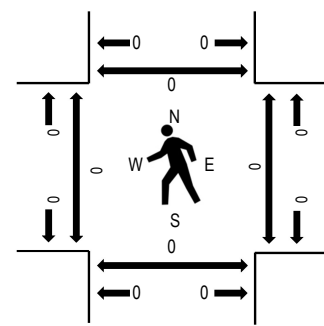
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HODGEN ROAD Eastbound				HODGEN ROAD Westbound				THOMPSON ROAD Northbound				THOMPSON ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	6	119	0	0	0	72	4	0	0	0	0	0	0	0	7	208	778	0	0	0	0
4:15 PM	0	3	128	0	0	0	72	0	0	0	0	0	0	3	0	2	208	743	0	0	0	0
4:30 PM	0	1	111	0	0	0	68	3	0	0	0	0	0	1	0	2	186	685	0	0	0	0
4:45 PM	0	0	111	0	0	0	59	3	0	0	0	0	0	0	0	3	176	667	0	0	0	0
5:00 PM	0	3	111	0	0	0	57	1	0	0	0	0	0	1	0	0	173	640	0	0	0	0
5:15 PM	0	0	86	0	0	0	61	0	0	0	0	0	0	0	0	3	150		0	0	0	0
5:30 PM	0	1	108	0	0	0	59	0	0	0	0	0	0	0	0	0	168		0	0	0	0
5:45 PM	0	0	100	0	0	0	47	0	0	0	0	0	0	0	0	2	149		0	0	0	0
Count Total	0	14	874	0	0	0	495	11	0	0	0	0	0	5	0	19	1,418		0	0	0	0
Peak Hour	0	10	469	0	0	0	271	10	0	0	0	0	0	4	0	14	778		0	0	0	0



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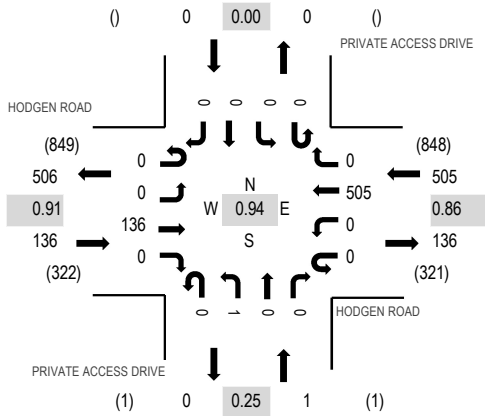
Location: 3 PRIVATE ACCESS DRIVE & HODGEN ROAD AM

Date: Thursday, December 5, 2024

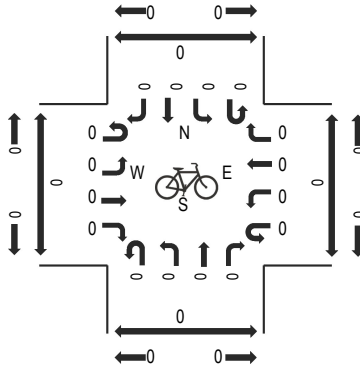
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:15 AM - 07:30 AM

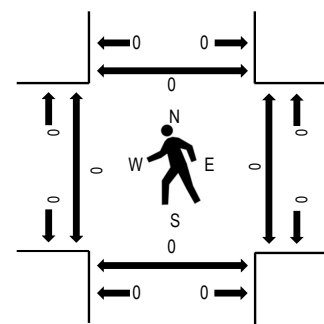
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HODGEN ROAD Eastbound				HODGEN ROAD Westbound				PRIVATE ACCESS DRIVE Northbound				PRIVATE ACCESS DRIVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	33	0	0	0	0	125	0	0	0	0	0	0	0	0	158	642	0	0	0	0
7:15 AM	0	0	24	0	0	0	0	146	0	0	1	0	0	0	0	0	171	614	0	0	0	0
7:30 AM	0	0	29	0	0	0	0	121	0	0	0	0	0	0	0	0	150	578	0	0	0	0
7:45 AM	0	0	50	0	0	0	0	113	0	0	0	0	0	0	0	0	163	565	0	0	0	0
8:00 AM	0	0	41	0	0	0	0	89	0	0	0	0	0	0	0	0	130	529	0	0	0	0
8:15 AM	0	0	45	0	0	0	0	90	0	0	0	0	0	0	0	0	135		0	0	0	0
8:30 AM	0	0	49	0	0	0	0	88	0	0	0	0	0	0	0	0	137		0	0	0	0
8:45 AM	0	0	50	1	0	0	0	76	0	0	0	0	0	0	0	0	127		0	0	0	0
Count Total	0	0	321	1	0	0	0	848	0	0	1	0	0	0	0	0	1,171		0	0	0	0
Peak Hour	0	0	136	0	0	0	0	505	0	0	1	0	0	0	0	0	642		0	0	0	0



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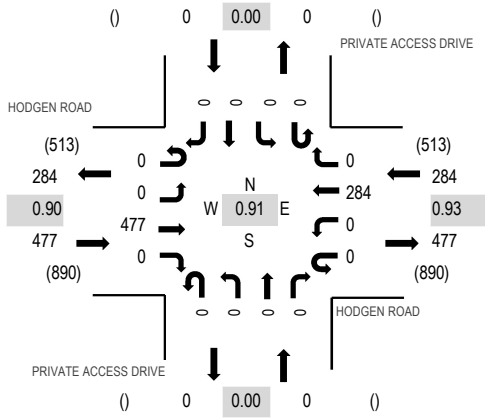
Location: 3 PRIVATE ACCESS DRIVE & HODGEN ROAD PM

Date: Thursday, December 5, 2024

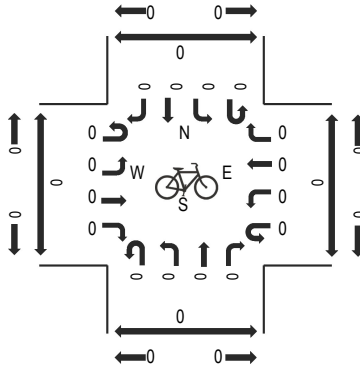
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:15 PM - 04:30 PM

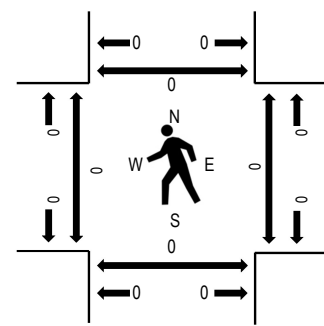
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HODGEN ROAD Eastbound				HODGEN ROAD Westbound				PRIVATE ACCESS DRIVE Northbound				PRIVATE ACCESS DRIVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	125	0	0	0	76	0	0	0	0	0	0	0	0	0	201	761	0	0	0	0
4:15 PM	0	0	132	0	0	0	76	0	0	0	0	0	0	0	0	0	208	732	0	0	0	0
4:30 PM	0	0	110	0	0	0	69	0	0	0	0	0	0	0	0	0	179	674	0	0	0	0
4:45 PM	0	0	110	0	0	0	63	0	0	0	0	0	0	0	0	0	173	662	0	0	0	0
5:00 PM	0	0	115	0	0	0	57	0	0	0	0	0	0	0	0	0	172	642	0	0	0	0
5:15 PM	0	0	86	0	0	0	64	0	0	0	0	0	0	0	0	0	150		0	0	0	0
5:30 PM	0	0	108	0	0	0	59	0	0	0	0	0	0	0	0	0	167		0	0	0	0
5:45 PM	0	0	104	0	0	0	49	0	0	0	0	0	0	0	0	0	153		0	0	0	0
Count Total	0	0	890	0	0	0	513	0	0	0	0	0	0	0	0	0	1,403		0	0	0	0
Peak Hour	0	0	477	0	0	0	284	0	0	0	0	0	0	0	0	0	761		0	0	0	0



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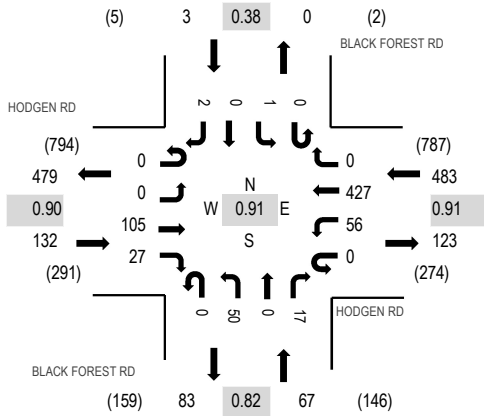
Location: 2 BLACK FOREST RD & HODGEN RD AM

Date: Thursday, December 12, 2024

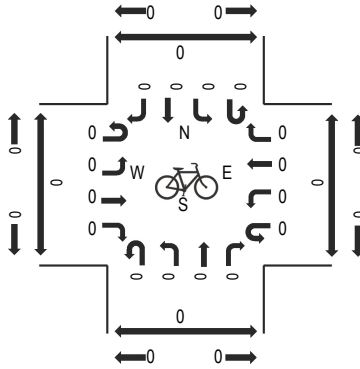
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

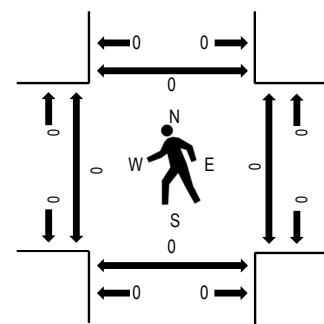
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HODGEN RD Eastbound				HODGEN RD Westbound				BLACK FOREST RD Northbound				BLACK FOREST RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	29	3	0	11	113	0	0	7	0	6	0	0	0	0	169	685	0	0	0	0
7:15 AM	0	0	18	5	0	21	110	0	0	13	0	5	0	0	0	2	174	668	0	0	0	0
7:30 AM	0	0	27	6	0	14	119	0	0	18	0	3	0	1	0	0	188	632	0	0	0	0
7:45 AM	0	0	31	13	0	10	85	0	0	12	0	3	0	0	0	0	154	574	0	0	0	0
8:00 AM	0	0	34	12	0	18	64	0	0	17	0	7	0	0	0	0	152	544	0	0	0	0
8:15 AM	0	0	28	6	0	12	74	0	0	11	0	6	0	0	1	0	138		0	0	0	0
8:30 AM	0	0	33	8	0	7	65	1	0	11	0	5	0	0	0	0	130		0	0	0	0
8:45 AM	0	0	33	5	0	7	55	1	0	18	0	4	0	1	0	0	124		0	0	0	0
Count Total	0	0	233	58	0	100	685	2	0	107	0	39	0	2	1	2	1,229		0	0	0	0
Peak Hour	0	0	105	27	0	56	427	0	0	50	0	17	0	1	0	2	685		0	0	0	0



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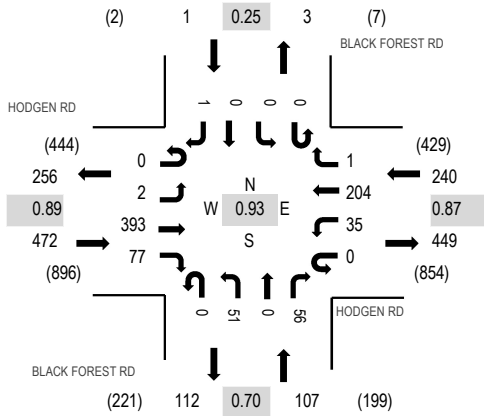
Location: 2 BLACK FOREST RD & HODGEN RD PM

Date: Thursday, December 12, 2024

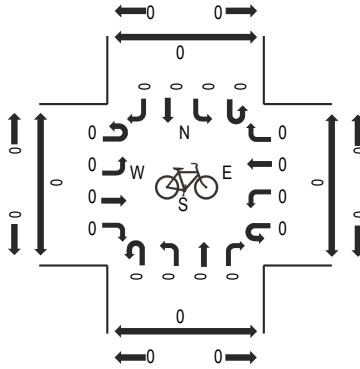
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

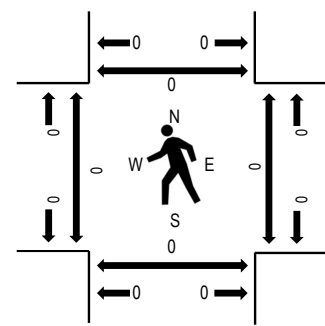
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HODGEN RD Eastbound				HODGEN RD Westbound				BLACK FOREST RD Northbound				BLACK FOREST RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	113	20	0	5	45	0	0	15	0	23	0	0	0	0	221	820	0	0	0	0
4:15 PM	0	0	103	22	0	13	57	1	0	13	0	9	0	0	0	1	219	794	0	0	0	0
4:30 PM	0	0	76	14	0	9	43	0	0	11	0	12	0	0	0	0	165	769	0	0	0	0
4:45 PM	0	2	101	21	0	8	59	0	0	12	0	12	0	0	0	0	215	778	0	0	0	0
5:00 PM	0	0	90	22	0	10	46	0	0	12	0	15	0	0	0	0	195	706	0	0	0	0
5:15 PM	0	0	102	17	0	5	44	0	0	11	0	15	0	0	0	0	194		0	0	0	0
5:30 PM	0	0	87	16	0	10	39	0	0	7	2	13	0	0	0	0	174		0	0	0	0
5:45 PM	0	1	69	20	0	9	25	1	0	3	0	14	0	0	0	1	143		0	0	0	0
Count Total	0	3	741	152	0	69	358	2	0	84	2	113	0	0	0	2	1,526		0	0	0	0
Peak Hour	0	2	393	77	0	35	204	1	0	51	0	56	0	0	0	1	820		0	0	0	0

Start Time	12-Dec-24 Thu	EB	WB	Total
12:00 AM		12	5	17
01:00		9	3	12
02:00		3	3	6
03:00		2	19	21
04:00		9	57	66
05:00		15	159	174
06:00		57	277	334
07:00		132	479	611
08:00		159	315	474
09:00		159	258	417
10:00		168	252	420
11:00		217	210	427
12:00 PM		201	209	410
01:00		186	200	386
02:00		283	218	501
03:00		368	240	608
04:00		472	256	728
05:00		424	188	612
06:00		310	124	434
07:00		194	57	251
08:00		156	66	222
09:00		118	34	152
10:00		74	16	90
11:00		36	9	45
Total		3764	3654	7418
Percent		50.7%	49.3%	
AM Peak	-	11:00	07:00	-
Vol.	-	217	479	-
PM Peak	-	16:00	16:00	-
Vol.	-	472	256	-
Grand Total		3764	3654	7418
Percent		50.7%	49.3%	
ADT		ADT 7,418	AADT 7,418	

APPENDIX B

Level of Service Definitions

The following information is referenced from the Highway Capacity Manual: A Guide for Multimodal Mobility Analysis, 7th Edition, Transportation Research Board, 2022: Chapter 19 – Signalized Intersections.

Motorized Vehicle Level of Service (LOS) for Signalized Intersections

Levels of service are defined to represent reasonable ranges in control delay.

LOS A Describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B Describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

LOS C Describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

LOS D Describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E Describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

LOS F Describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Control Delay (s/veh)	<u>LOS by Volume-to-Capacity Ratio^a</u>	
	<u>v/c ≤ 1.0</u>	<u>v/c > 1.0</u>
≤ 10	A	F
> 10 – 20	B	F
> 20 – 35	C	F
> 35 – 55	D	F
> 55 – 80	E	F
> 80	F	F

Note: ^a For approach-based and intersectionwide assessments, LOS is defined solely by control delay.

The following information is referenced from the Highway Capacity Manual: A Guide for Multimodal Mobility Analysis, 7th Edition, Transportation Research Board, 2022: Chapter 20 – Two-Way Stop-Controlled Intersections, Chapter 21 – All-Way Stop-Controlled Intersections, and Chapter 22 - Roundabouts.

Motorized Vehicle Level of Service (LOS) for Unsignalized & Roundabout Intersections

LOS is a quantitative stratification of performance measure(s) representing quality of service. Quality of service describes how well a transportation facility or service operates from a traveler's perspective. LOS is measured on an A – F scale, with LOS A representing the best operating conditions from a traveler's perspective.

Control Delay (s/veh)	<u>LOS by Volume-to-Capacity Ratio^a</u>	
	$v/c \leq 1.0$	$v/c > 1.0$
0 – 10	A	F
> 10 – 15	B	F
> 15 – 25	C	F
> 25 – 35	D	F
> 35 – 50	E	F
> 50	F	F

Note: The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.

^a For approaches and intersectionwide assessment, LOS is defined solely by control delay.

APPENDIX C

Capacity Worksheets

HCM 7th TWSC
1: Black Forest Road & Hodgen Road

Existing Traffic Conditions
AM Peak Hour

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↗			↕			↕	
Traffic Vol, veh/h	0	105	27	56	427	0	50	0	17	1	0	2
Future Vol, veh/h	0	105	27	56	427	0	50	0	17	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	260	290	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	95	95	95	90	90	90	75	75	75
Heavy Vehicles, %	100	9	4	2	5	100	8	0	10	0	0	0
Mvmt Flow	0	127	33	59	449	0	56	0	19	1	0	3




Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	449	0	0	159	0	0	694	694	127	694	726	449
Stage 1	-	-	-	-	-	-	127	127	-	567	567	-
Stage 2	-	-	-	-	-	-	567	567	-	127	159	-
Critical Hdwy	5.1	-	-	4.12	-	-	7.18	6.5	6.3	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.5	-	6.1	5.5	-
Follow-up Hdwy	3.1	-	-	2.218	-	-	3.572	4	3.39	3.5	4	3.3
Pot Cap-1 Maneuver	741	-	-	1420	-	-	349	369	903	360	353	614
Stage 1	-	-	-	-	-	-	863	795	-	512	510	-
Stage 2	-	-	-	-	-	-	498	510	-	882	770	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	741	-	-	1420	-	-	333	354	903	338	339	614
Mov Cap-2 Maneuver	-	-	-	-	-	-	333	354	-	338	339	-
Stage 1	-	-	-	-	-	-	863	795	-	490	489	-
Stage 2	-	-	-	-	-	-	475	489	-	864	770	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.89	16.15	12.53
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	397	741	-	-	1420	-	-	482
HCM Lane V/C Ratio	0.188	-	-	-	0.042	-	-	0.008
HCM Control Delay (s/veh)	16.2	0	-	-	7.6	-	-	12.5
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	0

HCM 7th TWSC
2: Hodgen Road & Ridgeback Road

Existing Traffic Conditions
AM Peak Hour

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	136	497	0	0	5
Future Vol, veh/h	0	136	497	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	148	540	0	0	5

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	540	0	688
Stage 1	-	-	540
Stage 2	-	-	148
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1028	-	412
Stage 1	-	-	584
Stage 2	-	-	880
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1028	-	412
Mov Cap-2 Maneuver	-	-	412
Stage 1	-	-	584
Stage 2	-	-	880

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	11.71
HCM LOS	B		

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1028	-	-	-	542
HCM Lane V/C Ratio	-	-	-	-	0.01
HCM Control Delay (s/veh)	0	-	-	-	11.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 7th TWSC
3: Hodgen Road & Thompson Road

Existing Traffic Conditions
AM Peak Hour

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	1	134	499	1	1	5
Future Vol, veh/h	1	134	499	1	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	146	542	1	1	5

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	543	0	0 691 543
Stage 1	-	-	- 543 -
Stage 2	-	-	- 148 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1025	-	- 411 540
Stage 1	-	-	- 582 -
Stage 2	-	-	- 880 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1025	-	- 410 540
Mov Cap-2 Maneuver	-	-	- 410 -
Stage 1	-	-	- 582 -
Stage 2	-	-	- 880 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.06	0	12.11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	13	-	-	-	513
HCM Lane V/C Ratio	0.001	-	-	-	0.013
HCM Control Delay (s/veh)	8.5	0	-	-	12.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 7th TWSC
4: Private Access & Hodgen Road

Existing Traffic Conditions
AM Peak Hour

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	136	0	0	505	1	0
Future Vol, veh/h	136	0	0	505	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	148	0	0	549	1	0

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	148	0	697	148
Stage 1	-	-	-	-	148	-
Stage 2	-	-	-	-	549	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1434	-	407	899
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	579	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1434	-	407	899
Mov Cap-2 Maneuver	-	-	-	-	407	-
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	579	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	13.86
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	407	-	-	1434	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s/veh)	13.9	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

HCM 7th TWSC
1: Black Forest Road & Hodgen Road

Existing Traffic Conditions
PM Peak Hour

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↗	↖	↗	↖		↔			↔	
Traffic Vol, veh/h	2	393	77	35	204	1	51	0	56	0	0	1
Future Vol, veh/h	2	393	77	35	204	1	51	0	56	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	260	290	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	95	95	95	90	90	90	75	75	75
Heavy Vehicles, %	100	9	4	2	5	100	8	0	10	0	0	0
Mvmt Flow	2	473	93	37	215	1	57	0	62	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	216	0	0	566	0	0	767	768	473	767	860	215
Stage 1	-	-	-	-	-	-	478	478	-	289	289	-
Stage 2	-	-	-	-	-	-	288	289	-	478	571	-
Critical Hdwy	5.1	-	-	4.12	-	-	7.18	6.5	6.3	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.5	-	6.1	5.5	-
Follow-up Hdwy	3.1	-	-	2.218	-	-	3.572	4	3.39	3.5	4	3.3
Pot Cap-1 Maneuver	937	-	-	1006	-	-	312	334	575	321	296	830
Stage 1	-	-	-	-	-	-	557	559	-	723	677	-
Stage 2	-	-	-	-	-	-	706	676	-	572	508	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	937	-	-	1006	-	-	299	321	575	275	284	830
Mov Cap-2 Maneuver	-	-	-	-	-	-	299	321	-	275	284	-
Stage 1	-	-	-	-	-	-	555	557	-	697	652	-
Stage 2	-	-	-	-	-	-	679	652	-	508	506	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.04			1.27			17.8			9.35		
HCM LOS							C			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	399	9	-	-	1006	-	-	830
HCM Lane V/C Ratio	0.298	0.003	-	-	0.037	-	-	0.002
HCM Control Delay (s/veh)	17.8	8.9	0	-	8.7	-	-	9.3
HCM Lane LOS	C	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	1.2	0	-	-	0.1	-	-	0

HCM 7th TWSC
2: Hodgen Road & Ridgeback Road

Existing Traffic Conditions
PM Peak Hour

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↱		↰	↱
Traffic Vol, veh/h	3	470	277	2	0	2
Future Vol, veh/h	3	470	277	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	511	301	2	0	2





Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	303	0	0 820 302
Stage 1	-	-	- 302 -
Stage 2	-	-	- 517 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1258	-	- 345 737
Stage 1	-	-	- 750 -
Stage 2	-	-	- 598 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1258	-	- 344 737
Mov Cap-2 Maneuver	-	-	- 344 -
Stage 1	-	-	- 747 -
Stage 2	-	-	- 598 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.05	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	11	-	-	-	737
HCM Lane V/C Ratio	0.003	-	-	-	0.003
HCM Control Delay (s/veh)	7.9	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 7th TWSC
3: Hodgen Road & Thompson Road

Existing Traffic Conditions
PM Peak Hour

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	469	271	10	4	14
Future Vol, veh/h	10	469	271	10	4	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	510	295	11	4	15

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	305	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1255	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1255	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.16	0	11.39
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	38	-	-	-	583
HCM Lane V/C Ratio	0.009	-	-	-	0.034
HCM Control Delay (s/veh)	7.9	0	-	-	11.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM 7th TWSC
4: Private Access & Hodgen Road

Existing Traffic Conditions
PM Peak Hour

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	477	0	0	284	0	0
Future Vol, veh/h	477	0	0	284	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	518	0	0	309	0	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	518	0	827
Stage 1	-	-	-	-	518
Stage 2	-	-	-	-	309
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1048	-	341
Stage 1	-	-	-	-	598
Stage 2	-	-	-	-	745
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1048	-	341
Mov Cap-2 Maneuver	-	-	-	-	341
Stage 1	-	-	-	-	598
Stage 2	-	-	-	-	745

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1048	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s/veh)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 7th TWSC
1: Black Forest Road & Hodgen Road

Background Traffic Conditions
AM Peak Hour - Year 2027

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↗			↕			↕	
Traffic Vol, veh/h	0	118	32	59	456	0	54	0	18	1	0	2
Future Vol, veh/h	0	118	32	59	456	0	54	0	18	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	260	290	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	95	95	95	90	90	90	75	75	75
Heavy Vehicles, %	100	9	4	2	5	100	8	0	10	0	0	0
Mvmt Flow	0	142	39	62	480	0	60	0	20	1	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	480	0	0	181	0	0	746	746	142	746	785	480
Stage 1	-	-	-	-	-	-	142	142	-	604	604	-
Stage 2	-	-	-	-	-	-	604	604	-	142	181	-
Critical Hdwy	5.1	-	-	4.12	-	-	7.18	6.5	6.3	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.5	-	6.1	5.5	-
Follow-up Hdwy	3.1	-	-	2.218	-	-	3.572	4	3.39	3.5	4	3.3
Pot Cap-1 Maneuver	718	-	-	1395	-	-	322	344	885	332	327	590
Stage 1	-	-	-	-	-	-	847	783	-	489	491	-
Stage 2	-	-	-	-	-	-	475	491	-	866	754	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	718	-	-	1395	-	-	306	329	885	310	312	590
Mov Cap-2 Maneuver	-	-	-	-	-	-	306	329	-	310	312	-
Stage 1	-	-	-	-	-	-	847	783	-	467	469	-
Stage 2	-	-	-	-	-	-	452	469	-	846	754	-




Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.88	17.56	13.01
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	366	718	-	-	1395	-	-	453
HCM Lane V/C Ratio	0.219	-	-	-	0.045	-	-	0.009
HCM Control Delay (s/veh)	17.6	0	-	-	7.7	-	-	13
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.8	0	-	-	0.1	-	-	0

HCM 7th TWSC

2: Hodgen Road & Ridgeback Road

Background Traffic Conditions
AM Peak Hour - Year 2027

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	154	531	0	0	5
Future Vol, veh/h	0	154	531	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	167	577	0	0	5
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	577	0	-	0	745	577
Stage 1	-	-	-	-	577	-
Stage 2	-	-	-	-	167	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	996	-	-	-	382	516
Stage 1	-	-	-	-	562	-
Stage 2	-	-	-	-	862	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	996	-	-	-	382	516
Mov Cap-2 Maneuver	-	-	-	-	382	-
Stage 1	-	-	-	-	562	-
Stage 2	-	-	-	-	862	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0	0		12.05		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	996	-	-	-	516	
HCM Lane V/C Ratio	-	-	-	-	0.011	
HCM Control Delay (s/veh)	0	-	-	-	12	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0	

HCM 7th TWSC

3: Hodgen Road & Thompson Road

Background Traffic Conditions
AM Peak Hour - Year 2027

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	1	152	533	1	1	5
Future Vol, veh/h	1	152	533	1	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	165	579	1	1	5




Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	580	0	0 747 580
Stage 1	-	-	- 580 -
Stage 2	-	-	- 167 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	994	-	- 380 514
Stage 1	-	-	- 560 -
Stage 2	-	-	- 862 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	994	-	- 380 514
Mov Cap-2 Maneuver	-	-	- 380 -
Stage 1	-	-	- 559 -
Stage 2	-	-	- 862 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.06	0	12.51
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	12	-	-	-	486
HCM Lane V/C Ratio	0.001	-	-	-	0.013
HCM Control Delay (s/veh)	8.6	0	-	-	12.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 7th TWSC
4: Private Access & Hodgen Road

Background Traffic Conditions
AM Peak Hour - Year 2027

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	144	8	4	536	26	10
Future Vol, veh/h	144	8	4	536	26	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	157	9	4	583	28	11
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	165	0	752	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	591	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1413	-	378	884
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	553	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1413	-	376	884
Mov Cap-2 Maneuver	-	-	-	-	376	-
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	551	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		0.06		13.81	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	448	-	-	13	-	
HCM Lane V/C Ratio	0.087	-	-	0.003	-	
HCM Control Delay (s/veh)	13.8	-	-	7.6	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0	-	

HCM 7th TWSC
1: Black Forest Road & Hodgen Road

Background Traffic Conditions
PM Peak Hour - Year 2027

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↗			↕			↕	
Traffic Vol, veh/h	2	418	82	37	224	1	58	0	59	0	0	1
Future Vol, veh/h	2	418	82	37	224	1	58	0	59	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	260	290	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	95	95	95	90	90	90	75	75	75
Heavy Vehicles, %	100	9	4	2	5	100	8	0	10	0	0	0
Mvmt Flow	2	504	99	39	236	1	64	0	66	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	237	0	0	602	0	0	822	823	504	823	921	236
Stage 1	-	-	-	-	-	-	508	508	-	314	314	-
Stage 2	-	-	-	-	-	-	314	315	-	508	607	-
Critical Hdwy	5.1	-	-	4.12	-	-	7.18	6.5	6.3	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.5	-	6.1	5.5	-
Follow-up Hdwy	3.1	-	-	2.218	-	-	3.572	4	3.39	3.5	4	3.3
Pot Cap-1 Maneuver	918	-	-	975	-	-	286	311	552	295	272	808
Stage 1	-	-	-	-	-	-	536	542	-	701	660	-
Stage 2	-	-	-	-	-	-	684	659	-	551	489	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	918	-	-	975	-	-	273	297	552	249	260	808
Mov Cap-2 Maneuver	-	-	-	-	-	-	273	297	-	249	260	-
Stage 1	-	-	-	-	-	-	534	540	-	673	633	-
Stage 2	-	-	-	-	-	-	656	633	-	484	487	-




Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.04			1.25			20.12			9.46		
HCM LOS							C			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	367	9	-	-	975	-	-	808
HCM Lane V/C Ratio	0.355	0.003	-	-	0.04	-	-	0.002
HCM Control Delay (s/veh)	20.1	8.9	0	-	8.8	-	-	9.5
HCM Lane LOS	C	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	1.6	0	-	-	0.1	-	-	0

HCM 7th TWSC

2: Hodgen Road & Ridgeback Road

Background Traffic Conditions
PM Peak Hour - Year 2027

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	500	306	2	0	2
Future Vol, veh/h	3	500	306	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	543	333	2	0	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	335	0	-	0	884	334
Stage 1	-	-	-	-	334	-
Stage 2	-	-	-	-	550	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1225	-	-	-	316	708
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	578	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1225	-	-	-	315	708
Mov Cap-2 Maneuver	-	-	-	-	315	-
Stage 1	-	-	-	-	723	-
Stage 2	-	-	-	-	578	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0.05	0		10.1		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	11	-	-	-	-	708
HCM Lane V/C Ratio	0.003	-	-	-	-	0.003
HCM Control Delay (s/veh)	7.9	0	-	-	-	10.1
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	-	0

HCM 7th TWSC

3: Hodgen Road & Thompson Road

Background Traffic Conditions
PM Peak Hour - Year 2027

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	11	499	300	11	4	15
Future Vol, veh/h	11	499	300	11	4	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	542	326	12	4	16



Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	338	0	0 898 332
Stage 1	-	-	- 332 -
Stage 2	-	-	- 566 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1221	-	- 310 710
Stage 1	-	-	- 727 -
Stage 2	-	-	- 568 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1221	-	- 305 710
Mov Cap-2 Maneuver	-	-	- 305 -
Stage 1	-	-	- 717 -
Stage 2	-	-	- 568 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.17	0	11.74
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	39	-	-	-	555
HCM Lane V/C Ratio	0.01	-	-	-	0.037
HCM Control Delay (s/veh)	8	0	-	-	11.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM 7th TWSC
4: Private Access & Hodgen Road

Background Traffic Conditions
PM Peak Hour - Year 2027

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	506	27	12	301	1	1
Future Vol, veh/h	506	27	12	301	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	550	29	13	327	1	1
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	579	0	918	565
Stage 1	-	-	-	-	565	-
Stage 2	-	-	-	-	353	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	994	-	302	525
Stage 1	-	-	-	-	569	-
Stage 2	-	-	-	-	711	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	994	-	297	525
Mov Cap-2 Maneuver	-	-	-	-	297	-
Stage 1	-	-	-	-	569	-
Stage 2	-	-	-	-	700	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		0.33		14.55	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	379	-	-	69	-	
HCM Lane V/C Ratio	0.006	-	-	0.013	-	
HCM Control Delay (s/veh)	14.6	-	-	8.7	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

HCM 7th TWSC
1: Black Forest Road & Hodgen Road

Total Traffic Conditions
AM Peak Hour - Year 2027

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↗			↕			↕	
Traffic Vol, veh/h	0	119	32	59	456	0	54	0	18	1	0	2
Future Vol, veh/h	0	119	32	59	456	0	54	0	18	1	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	260	290	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	95	95	95	90	90	90	75	75	75
Heavy Vehicles, %	100	9	4	2	5	100	8	0	10	0	0	0
Mvmt Flow	0	143	39	62	480	0	60	0	20	1	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	480	0	0	182	0	0	748	748	143	748	786	480
Stage 1	-	-	-	-	-	-	143	143	-	604	604	-
Stage 2	-	-	-	-	-	-	604	604	-	143	182	-
Critical Hdwy	5.1	-	-	4.12	-	-	7.18	6.5	6.3	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.5	-	6.1	5.5	-
Follow-up Hdwy	3.1	-	-	2.218	-	-	3.572	4	3.39	3.5	4	3.3
Pot Cap-1 Maneuver	718	-	-	1393	-	-	321	344	883	331	326	590
Stage 1	-	-	-	-	-	-	845	782	-	489	491	-
Stage 2	-	-	-	-	-	-	475	491	-	864	753	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	718	-	-	1393	-	-	306	328	883	309	312	590
Mov Cap-2 Maneuver	-	-	-	-	-	-	306	328	-	309	312	-
Stage 1	-	-	-	-	-	-	845	782	-	467	469	-
Stage 2	-	-	-	-	-	-	452	469	-	845	753	-





Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.88	17.59	13.02
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	365	718	-	-	1393	-	-	453
HCM Lane V/C Ratio	0.219	-	-	-	0.045	-	-	0.009
HCM Control Delay (s/veh)	17.6	0	-	-	7.7	-	-	13
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.8	0	-	-	0.1	-	-	0

HCM 7th TWSC

2: Hodgen Road & Ridgeback Road

Total Traffic Conditions
AM Peak Hour - Year 2027

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	155	533	0	0	5
Future Vol, veh/h	0	155	533	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	168	579	0	0	5
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	579	0	-	0	748	579
Stage 1	-	-	-	-	579	-
Stage 2	-	-	-	-	168	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	994	-	-	-	380	515
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	861	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	994	-	-	-	380	515
Mov Cap-2 Maneuver	-	-	-	-	380	-
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	861	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0	0		12.07		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	994	-	-	-	515	
HCM Lane V/C Ratio	-	-	-	-	0.011	
HCM Control Delay (s/veh)	0	-	-	-	12.1	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0	

HCM 7th TWSC

3: Hodgen Road & Thompson Road

Total Traffic Conditions
AM Peak Hour - Year 2027

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	1	153	533	1	1	5
Future Vol, veh/h	1	153	533	1	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	166	579	1	1	5

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	580	0	0 748 580
Stage 1	-	-	- 580 -
Stage 2	-	-	- 168 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	994	-	- 380 514
Stage 1	-	-	- 560 -
Stage 2	-	-	- 861 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	994	-	- 379 514
Mov Cap-2 Maneuver	-	-	- 379 -
Stage 1	-	-	- 559 -
Stage 2	-	-	- 861 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.06	0	12.52
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	12	-	-	-	485
HCM Lane V/C Ratio	0.001	-	-	-	0.013
HCM Control Delay (s/veh)	8.6	0	-	-	12.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 7th TWSC
4: Private Access & Hodgen Road

Total Traffic Conditions
AM Peak Hour - Year 2027

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	144	9	4	536	27	11
Future Vol, veh/h	144	9	4	536	27	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	157	10	4	583	29	12

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	166	0	753
Stage 1	-	-	-	-	161
Stage 2	-	-	-	-	591
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1412	-	378
Stage 1	-	-	-	-	867
Stage 2	-	-	-	-	553
Platoon blocked, %	-	-		-	
Mov Cap-1 Maneuver	-	-	1412	-	376
Mov Cap-2 Maneuver	-	-	-	-	376
Stage 1	-	-	-	-	867
Stage 2	-	-	-	-	551

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.06	13.79
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	451	-	-	13	-
HCM Lane V/C Ratio	0.092	-	-	0.003	-
HCM Control Delay (s/veh)	13.8	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

HCM 7th TWSC
1: Black Forest Road & Hodgen Road

Total Traffic Conditions
PM Peak Hour - Year 2027

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕	↕	↕			↕			↕	
Traffic Vol, veh/h	2	418	82	37	225	1	58	0	59	0	0	1
Future Vol, veh/h	2	418	82	37	225	1	58	0	59	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	260	290	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	95	95	95	90	90	90	75	75	75
Heavy Vehicles, %	100	9	4	2	5	100	8	0	10	0	0	0
Mvmt Flow	2	504	99	39	237	1	64	0	66	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	238	0	0	602	0	0	823	824	504	824	922	237
Stage 1	-	-	-	-	-	-	508	508	-	315	315	-
Stage 2	-	-	-	-	-	-	315	316	-	508	607	-
Critical Hdwy	5.1	-	-	4.12	-	-	7.18	6.5	6.3	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.5	-	6.1	5.5	-
Follow-up Hdwy	3.1	-	-	2.218	-	-	3.572	4	3.39	3.5	4	3.3
Pot Cap-1 Maneuver	917	-	-	975	-	-	286	310	552	294	272	807
Stage 1	-	-	-	-	-	-	536	542	-	700	659	-
Stage 2	-	-	-	-	-	-	684	659	-	551	489	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	917	-	-	975	-	-	273	297	552	248	260	807
Mov Cap-2 Maneuver	-	-	-	-	-	-	273	297	-	248	260	-
Stage 1	-	-	-	-	-	-	534	540	-	672	633	-
Stage 2	-	-	-	-	-	-	655	632	-	484	487	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.04	1.24	20.15	9.47
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	366	9	-	-	975	-	-	807
HCM Lane V/C Ratio	0.355	0.003	-	-	0.04	-	-	0.002
HCM Control Delay (s/veh)	20.1	8.9	0	-	8.8	-	-	9.5
HCM Lane LOS	C	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	1.6	0	-	-	0.1	-	-	0

HCM 7th TWSC
2: Hodgen Road & Ridgeback Road




Total Traffic Conditions
PM Peak Hour - Year 2027

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	3	501	307	2	0	2
Future Vol, veh/h	3	501	307	2	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	545	334	2	0	2
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	336	0	-	0	886	335
Stage 1	-	-	-	-	335	-
Stage 2	-	-	-	-	551	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1223	-	-	-	315	707
Stage 1	-	-	-	-	725	-
Stage 2	-	-	-	-	577	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1223	-	-	-	314	707
Mov Cap-2 Maneuver	-	-	-	-	314	-
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	577	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0.05	0		10.11		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	11	-	-	-	707	
HCM Lane V/C Ratio	0.003	-	-	-	0.003	
HCM Control Delay (s/veh)	8	0	-	-	10.1	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0	

HCM 7th TWSC

3: Hodgen Road & Thompson Road

Total Traffic Conditions
PM Peak Hour - Year 2027

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	500	301	11	4	15
Future Vol, veh/h	11	500	301	11	4	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	543	327	12	4	16

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	339	0	0 901 333
Stage 1	-	-	- 333 -
Stage 2	-	-	- 567 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1220	-	- 309 709
Stage 1	-	-	- 726 -
Stage 2	-	-	- 567 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1220	-	- 304 709
Mov Cap-2 Maneuver	-	-	- 304 -
Stage 1	-	-	- 716 -
Stage 2	-	-	- 567 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.17	0	11.75
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	39	-	-	-	554
HCM Lane V/C Ratio	0.01	-	-	-	0.037
HCM Control Delay (s/veh)	8	0	-	-	11.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

HCM 7th TWSC
4: Private Access & Hodgen Road

Total Traffic Conditions
PM Peak Hour - Year 2027

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	506	28	13	301	2	2
Future Vol, veh/h	506	28	13	301	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	550	30	14	327	2	2

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	580	0	921	565
Stage 1	-	-	-	-	565	-
Stage 2	-	-	-	-	355	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	994	-	300	524
Stage 1	-	-	-	-	569	-
Stage 2	-	-	-	-	709	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	994	-	295	524
Mov Cap-2 Maneuver	-	-	-	-	295	-
Stage 1	-	-	-	-	569	-
Stage 2	-	-	-	-	697	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.36	14.64
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	378	-	-	75	-
HCM Lane V/C Ratio	0.012	-	-	0.014	-
HCM Control Delay (s/veh)	14.6	-	-	8.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

APPENDIX D

Intersection Sight Distance Exhibit



Hodgen Road

665'

665'

Private Access

LEGEND

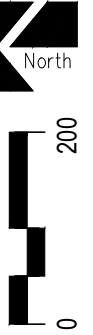
● Areas Within Site Distance Triangle That Should Avoid Obstructions

DEIM SUBDIVISION
Intersection Sight Distance Exhibit



SM ROCHA, LLC
Traffic and Transportation Consultants

June 2025



APPENDIX E

Adjacent Development Trip Generation

ITE CODE LAND USE UNIT			TRIP GENERATION RATES						
			24	AM PEAK HOUR			PM PEAK HOUR		
			HOUR	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
210	Single-Family Detached Housing	DU	9.43	0.18	0.53	0.70	0.59	0.35	0.94

Key: DU = Dwelling Units.

Note: All data and calculations above are subject to being rounded to nearest value.

ITE CODE LAND USE SIZE			TOTAL TRIPS GENERATED						
			24	AM PEAK HOUR			PM PEAK HOUR		
			HOUR	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
210	Single-Family Detached Housing	66 DU	622	12	35	46	39	2	41
<i>Total:</i>			622	12	35	46	39	2	41

Key: DU = Dwelling Units.

Note: All data and calculations above are subject to being rounded to nearest value.