SM ROCHA, LLC
TRAFFIC AND TRANSPORTATION CONSULTANTS

April 9, 2024

Brian Zurek
Double Tree Ventures
4148 N Arcadia Drive
Phoenix, AZ 85018

RE: Owl Place Commercial / Traffic Impact Study Addendum
El Paso County, Colorado

Dear Brian,

SM ROCHA, LLC is pleased to provide traffic information for the development entitled Owl Place Commercial. This development is located at the northwest corner of the intersection of Meridian Road with Eastonville Road in El Paso County, Colorado.

This traffic impact study addendum has been updated to address County review comments regarding auxiliary lane criteria, access spacing and sight distance, and roadway improvements pursuant to the latest site plan.

The intent of this analysis is to present updated traffic impact analyses for short-term and long-term build-out scenarios pursuant to the latest proposed site plan, land uses, and access locations. This analysis is provided as an addendum to the previously approved Owl Place Commercial Traffic Impact Study[1].

The following is a summary of analysis results.

Site Description and Access

Land for the development is currently occupied by a single-family dwelling unit and is surrounded by a mix of residential, commercial, and open space land uses. The proposed development is understood to entail the new construction of two fast-food restaurants with drive-throughs totaling approximately 5,500 square feet, one quick lubrication vehicle shop approximately 2,500 square feet in size, and one 2,800 square foot gas station convenience store supporting 12 vehicle fueling positions.

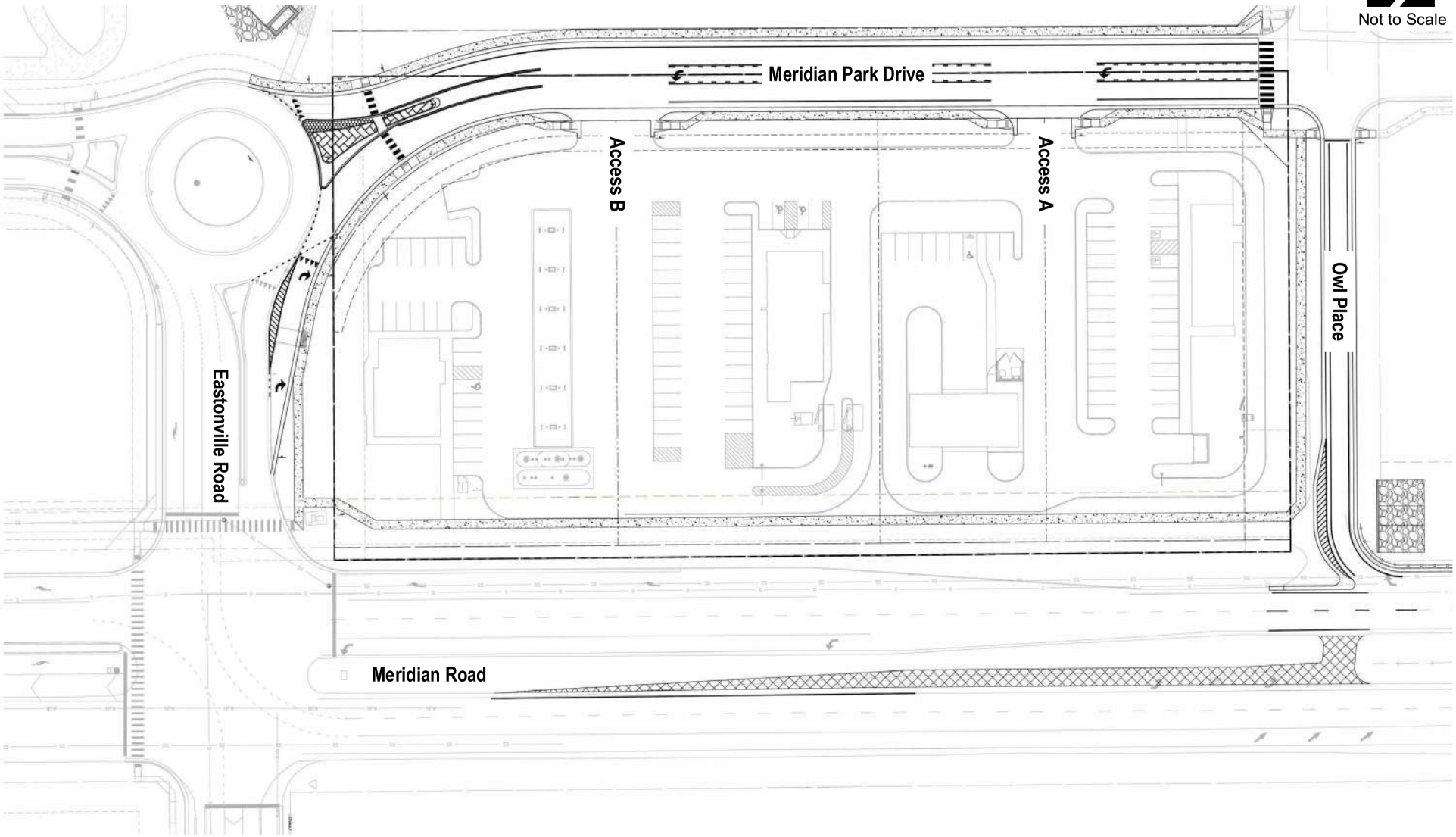
[1] Owl Place Commercial Traffic Impact Study, SM Rocha LLC, April 2023.

Proposed access to the development is provided at the following locations: two full-movement accesses onto the planned extension of Meridian Park Drive (referred to as Access A and Access B). Access B is located approximately 200 feet north of the roundabout intersection of Eastonville Road and Merdian Park Drive, and approximately 270 feet south of Access A, measured from centerline to centerline. Access A is approximately 200 feet south of the westbound centerline of the intersection of Owl Place and Meridian Park Drive.

A conceptual sight distance exhibit, illustrating an approximate intersection sight distances triangle for site access, is included for reference in Attachment A. This two-dimensional exhibit does not consider potential landscaping or utility obstructions and is provided for illustrative purposes only.

General site and access locations are shown on Figure 1. A conceptual site plan, as prepared by Drexel, Barrell & Co., is shown on Figure 2. This plan is provided for illustrative purposes only.


North
Not to Scale
Bent Grass Meadows Drive
Meridian Road
Owl Place
Development Site
Eastonville Road
Falcon Market Place
E Woodmen Road


North
Not to Scale
Meridian Park Drive
Access B
Access A
Owl Place
Eastonville Road
Meridian Road

Future Surface Transportation Network

As analyzed within the previously approved Owl Place Commercial Traffic Impact Study a brief description of the expected classification of future Meridian Park Drive is provided below:

> Meridian Park Drive is a north-south roadway have two through lanes (one lane in each direction) with shared turn lanes within the study area. Meridian Park Drive is unclassified in the El Paso County 2016 Major Transportation Corridors Plan Update (MTCP)[2],. However, per Standard Drawing 2-10 of County's Engineering Criteria Manual (ECM)[3] and the roadway's estimated ROW width, Meridian Park Drive is assumed to be classified as a local roadway and provides a posted speed limit of 25 MPH. This assumption is also consistent with previously performed analyses for adjacent development areas. It is however noted that as future connection to Falcon Market Place occurs, Meridian Park Drive may also be classified as a non-residential collector depending on actual future daily volumes and ongoing area development.

Vehicle 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 previously approved and proposed land uses in order to estimate the average daily traffic (ADT) and peak hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from point of origin to point of destination.

Table 1 presents average trip generation rates for previously approved land uses and the proposed development areas. Use of average trip generation rates presents a conservative analysis. ITE land use codes 934 (Fast-Food Restaurant with Drive-Through Window), 937(Coffee/Donut Shop with Drive-Through Window), 941 (Quick Lubrication Vehicle Shop), 945 (Convenience Store/Gas Station), and 948 (Automated Car Wash) were used for analysis because of their best fit to the previously approved and proposed land uses.

[2] El Paso County 2016 Major Transportation Corridors Plan Update, Felsburg Holt & Ullevig, December 2016.
[3] El Paso County Engineering Criteria Manual, El Paso County, July 2023.

Table 1 – Trip Generation Rates

ITE CODE	LAND USE	UNIT	TRIP GENERATION RATES						
			24	AM PEAK HOUR			PM PEAK HOUR		
			HOUR	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
934	Fast-Food Restaurant w/DTW	KSF	467.48	22.75	21.86	44.61	17.18	15.85	33.03
937	Coffe/Donut Shop w/DTW	KSF	533.57	43.80	42.08	85.88	19.50	19.50	38.99
941	Quick Lubrication Vehicle Shop	KSF	69.57	4.35	1.45	5.80	3.65	5.05	8.70
945	Convenience Store/Gas Station	KSF	700.43	28.26	28.26	56.52	27.26	27.26	54.52
948	Automated Car Wash	CWT	775.00	*	*	*	38.75	38.75	77.50

Key: KSF = Thousand Square Feet Gross Floor Area. CWT = Car Wash Tunnel.
* = ITE does not report significant AM peak hour generation due to the nature of the buisness (ie. Operating hours typically open after AM peak)
Note: All data and calculations above are subject to being rounded to nearest value.

Table 2 summarizes the projected ADT and peak hour traffic volumes likely generated by the land use area proposed and provides comparison to traffic volume estimates for the previously approved land uses.

Table 2 – Trip Generation Summary

ITE CODE	LAND USE	SIZE	TOTAL TRIPS GENERATED						
			24	AM PEAK HOUR			PM PEAK HOUR		
			HOUR	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
Site Development - Previously Approved									
934	Fast-Food Restaurant w/DTW	3.4 KSF	1,599	78	75	153	59	54	113
937	Coffe/Donut Shop w/DTW	2.0 KSF	1,067	88	84	172	39	39	78
945	Convenience Store/Gas Station	5.3 KSF	3,712	150	150	300	144	144	289
948	Automated Car Wash	1.0 CWT	775	*	*	*	39	39	78
	Previously Approved Total:		*7,153*	*315*	*309*	*624*	*281*	*276*	*557*
Site Development - Proposed									
934	Fast-Food Restaurant w/DTW	5.5 KSF	2,562	125	120	244	87	87	174
941	Quick Lubrication Vehicle Shop	2.5 KSF	174	11	4	15	13	13	25
945	Convenience Store/Gas Station	2.8 KSF	1,982	80	80	160	77	77	154
	Proposed Total:		*4,718*	*216*	*203*	*419*	*177*	*177*	*353*
	Difference Total:		***-2,435***	***-100***	***-105***	***-205***	***-104***	***-100***	***-204***

Key: KSF = Thousand Square Feet Gross Floor Area. CWT = Car Wash Tunnel.
* = ITE does not report significant AM peak hour generation due to the nature of the buisness (ie. Operating hours typically open after AM peak)
Note: All data and calculations above are subject to being rounded to nearest value.

As Table 2 shows, the proposed development area has the potential to generate approximately 4,718 daily trips with 586 of those occurring during the morning peak hour and 528 during the afternoon peak hour. Table 2 further shows how proposed development traffic volumes do not exceed those approved in the Owl Place Commercial Traffic Impact Study.

Adjustments to Trip Generation Rates

A development of this type is likely to attract pass-by trips from the adjacent roadway system. ITE defines a pass-by trip as an intermediate stop on the way from an origin to a primary trip destination without a route diversion. Due to this behavior, pass-by trips are not considered as "new" traffic generated by the development since the trips are already present on the roadway network enroute to their primary destination.

Pass-by trips are especially to fast-food restaurant, coffee/donutshop, and gas station land uses given the convenience provided by these businesses on the way to another primary destination such as a place of work or home. As example, published ITE Pass-by and diverted link trip data indicates an average trip generation reduction rate of 49 percent during the AM peak traffic hour and 50 percent during the PM peak traffic hour as typical to fast-food restaurants with drive-through window.

Table 3 illustrates projected ADT, AM Peak Hour, and PM Peak Hour traffic volumes likely generated by the previously approved development and proposed development upon build-out with reductions applied due to pass-by trips. Average daily (24-Hour) pass-by trip percentages were estimated as the average between the AM and PM peak hour rates indicated by ITE.

Table 3 – Trip Generation Summary with Pass-By Trip Reductions

ITE CODE	LAND USE	SIZE	TOTAL NEW TRIPS GENERATED						
			24 HOUR	AM PEAK HOUR			PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
Site Development - Previously Approved									
		Pass-By Trip Reduction:	*50%*	*49%*	*49%*	*49%*	*50%*	*50%*	*50%*
934	Fast-Food Restaurant w/DTW	3.4 KSF	807	40	38	78	29	27	56
		Pass-By Trip Reduction:	*60%*	*60%*	*60%*	*60%*	*60%*	*60%*	*60%*
937	Coffe/Donut Shop w/DTW	2.0 KSF	427	35	34	69	16	16	31
		Pass-By Trip Reduction:	*59%*	*62%*	*62%*	*62%*	*56%*	*56%*	*56%*
945	Convenience Store/Gas Station	5.3 KSF	1,522	57	57	114	64	64	127
		Pass-By Trip Reduction:	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
948	Automated Car Wash	1.0 CWT	775	*	*	*	39	39	78
		Previously Approved Total:	*3,531*	*132*	*129*	*260*	*147*	*145*	*292*
Site Development - Proposed									
		Pass-By Trip Reduction:	*50%*	*49%*	*49%*	*49%*	*50%*	*50%*	*50%*
934	Fast-Food Restaurant w/DTW	5.5 KSF	1,294	64	61	125	47	43	91
		Pass-By Trip Reduction:	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
941	Quick Lubrication Vehicle Shop	2.5 KSF	174	11	4	15	9	13	22
		Pass-By Trip Reduction:	*59%*	*62%*	*62%*	*62%*	*56%*	*56%*	*56%*
945	Convenience Store/Gas Station	2.8 KSF	813	30	30	61	34	34	68
		Proposed Total:	*2,280*	*105*	*95*	*200*	*90*	*90*	*180*
		Difference Total:	***-1,251***	***-27***	***-34***	***-60***	***-57***	***-55***	***-112***

Key: KSF = Thousand Square Feet Gross Floor Area. CWT = Car Wash Tunnel.
* = ITE does not report significant AM peak hour generation due to the nature of the buisness (ie. Operating hours typically open after AM peak)
Note: All data and calculations above are subject to being rounded to nearest value.

Upon build-out and with consideration for pass-by trip reductions, Table 3 illustrates that the proposed development has the potential to generate approximately 2,280 daily trips with 200 of those occurring during the morning peak hour and 180 during the afternoon peak hour. Furthermore, Table 3 continues to show how the proposed development does not exceed estimates originally anticipated in the previously approved traffic study.

Trip Distribution & Assignment

The overall directional distribution was previously established by the corresponding traffic impact study. However, due to the proposed changes in anticipated land uses, distribution and assignment of site-generated traffic has been updated. These updated trip distribution patterns to site-generated traffic provide the overall site-generated trips at study intersections upon build-out for Years 2024 and Year 2040, which are shown on Figure 3 and 4, respectively.

It is to be noted that the overall site-generated trip assignments shown on Figures 3 and 4 represent the combination of both primary trip generation and pass-by trips. Due to the application of pass-by trips, some negative site-generated trips are shown at the study intersections. These negative trips are the result of redistributing existing through volumes along Meridian Road to site-generated ingress volumes.

Owl Place – Interim Right-In Only Access

Pursuant to planned roadway improvements, as identified in the previously approved traffic impact study, it is anticipated that Meridian Road will be widened to six through lanes, and with completion of Falcon Market Place, the intersection of Owl Place and Meridian Road will be closed. However, until these improvements occur an interim condition may allow for continued use of the intersection as a restricted right-in only access as shown on Figure 2. Therefore, Year 2024 total traffic conditions analyze the access as a right-in only upon site development build-out. It is noted that this configuration can utilize the existing southbound right turn lane that begins at Bent Grass Meadows Drive until such time that roadway widening is required.

Total Traffic Analysis Results Upon Development Build-Out

Total traffic is the traffic projected to be on area roadways with consideration of the proposed development. Total traffic includes background traffic projections for Years 2024 and 2040 as established within the Owl Place Commercial Traffic Impact Study, Figure 5 and 6, with consideration of the updated site-generated traffic.

Projected Year 2024 total traffic volumes and intersection geometry are shown in Figure 5 and Figure 6, respectively.

Figures 7 and 8 show the projected total traffic volumes and intersection geometry for Year 2040, respectively.

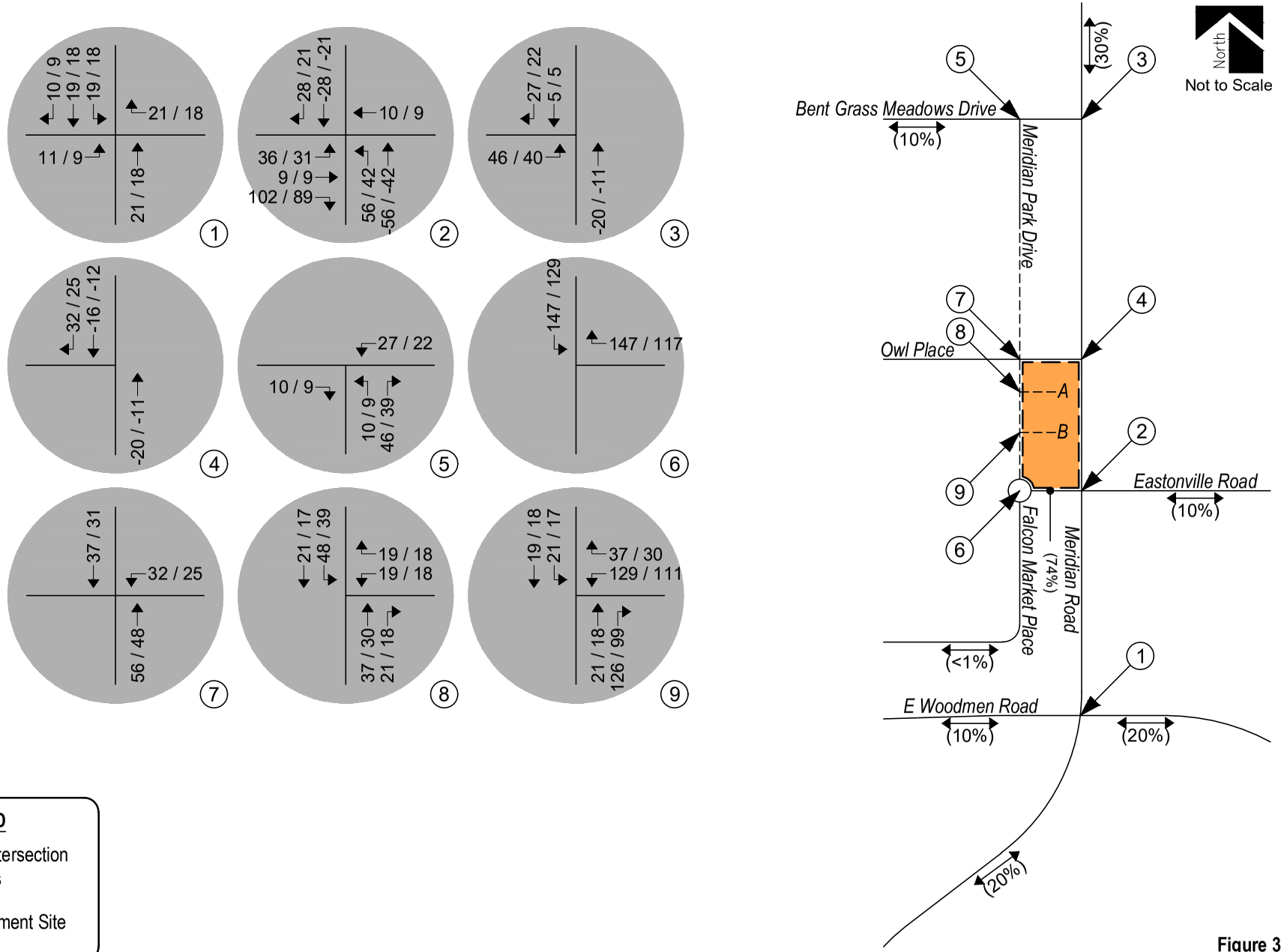


Figure 3
SITE DEVELOPMENT DISTRIBUTION - YEAR 2024
(%) : Overall
SITE-GENERATED
AM / PM Peak Hour

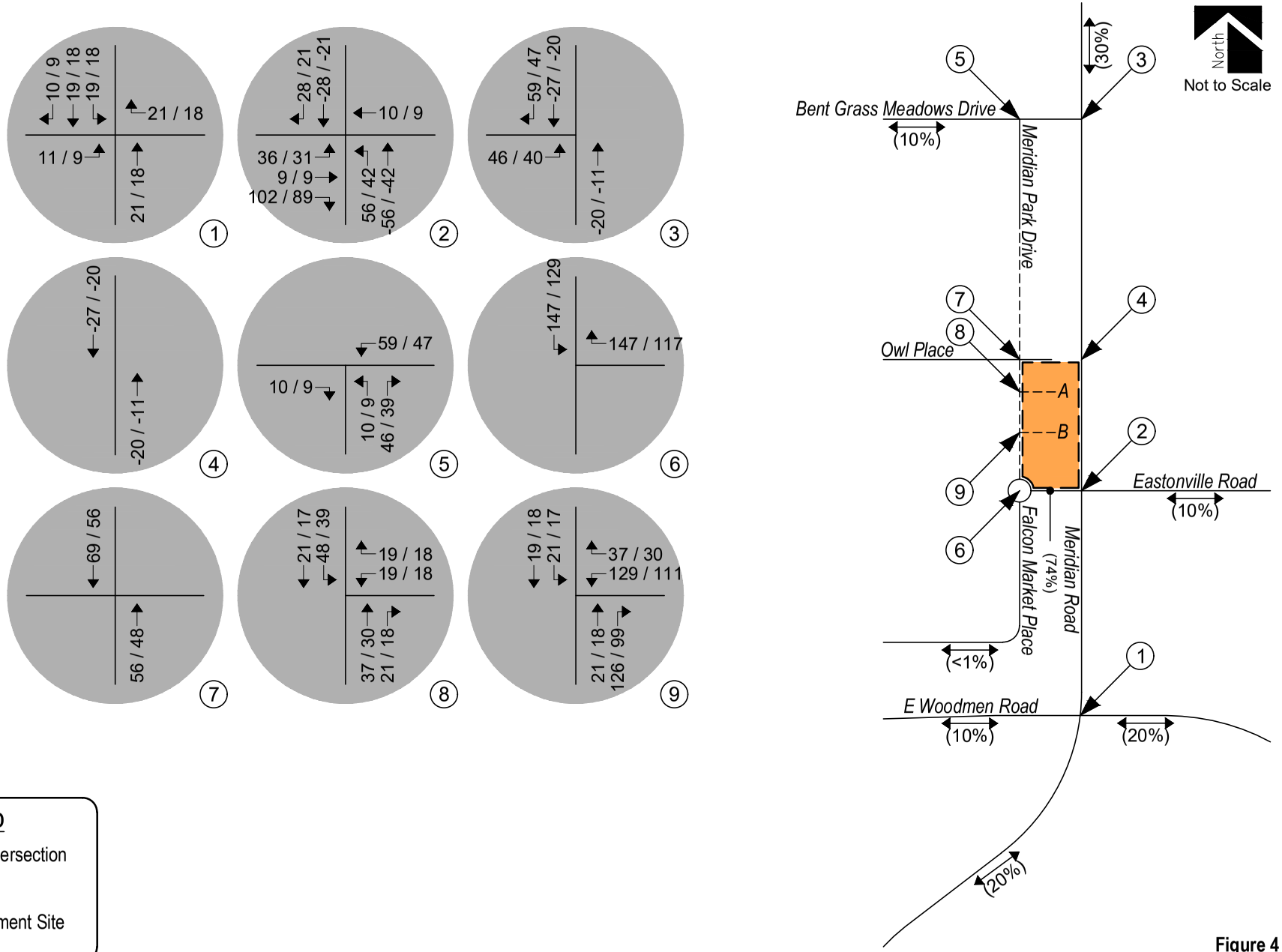
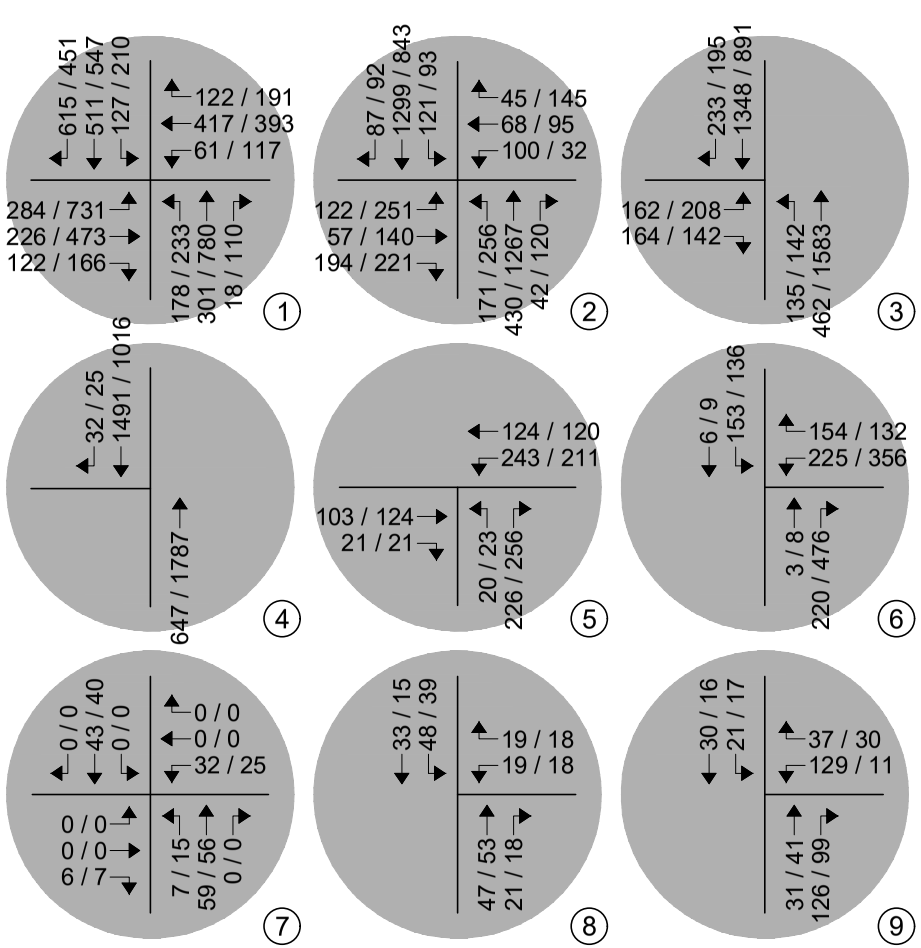
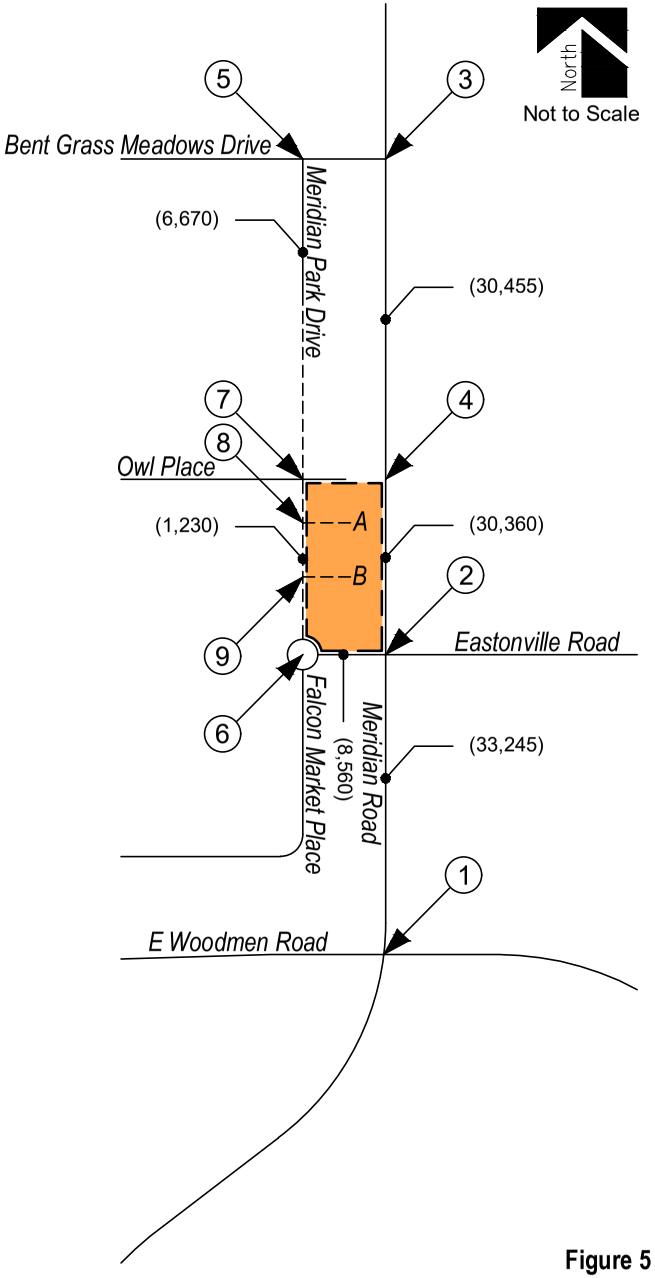


Figure 4
SITE DEVELOPMENT DISTRIBUTION - YEAR 2040
(%) : Overall
SITE-GENERATED
AM / PM Peak Hour





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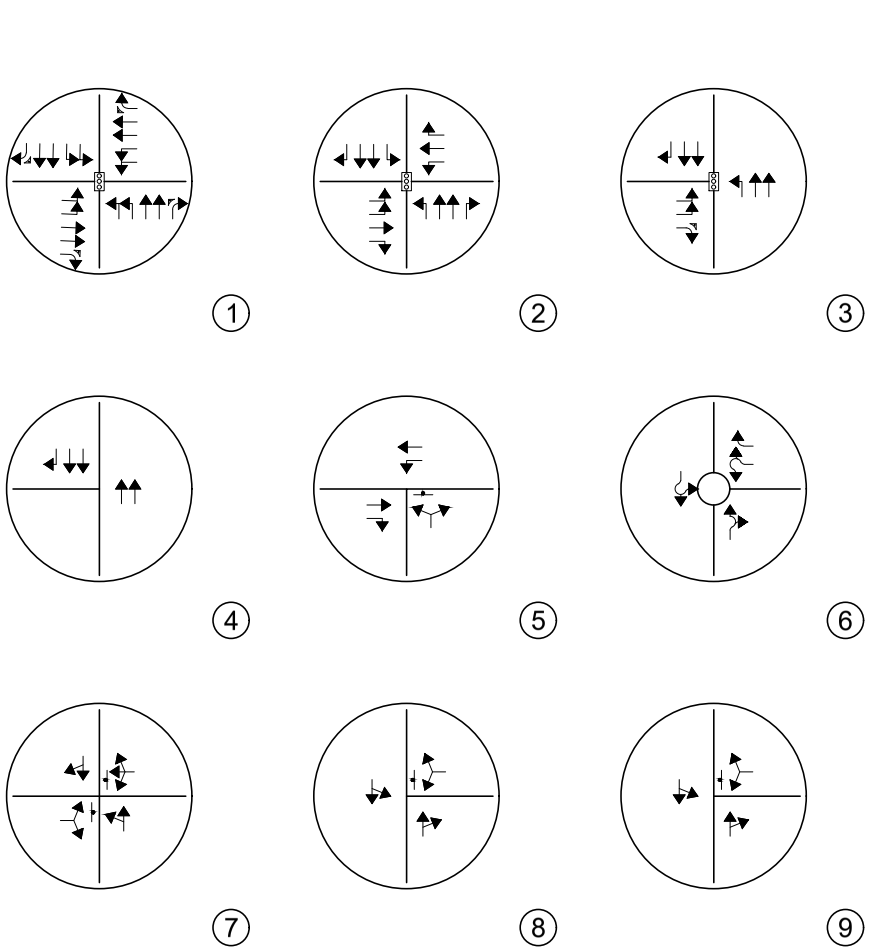
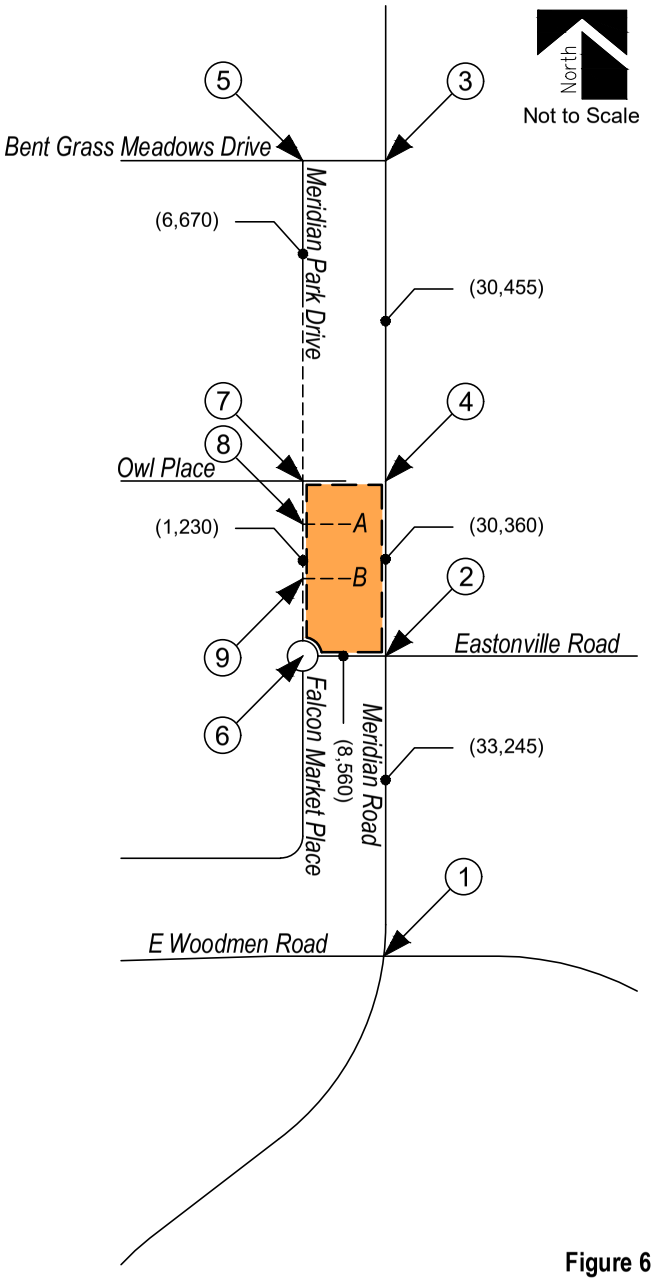
Study Intersection Volumes

Development Site

Figure 5
TOTAL TRAFFIC - YEAR 2024
Volumes
AM / PM Peak Hour
(ADT) : Average Daily Traffic



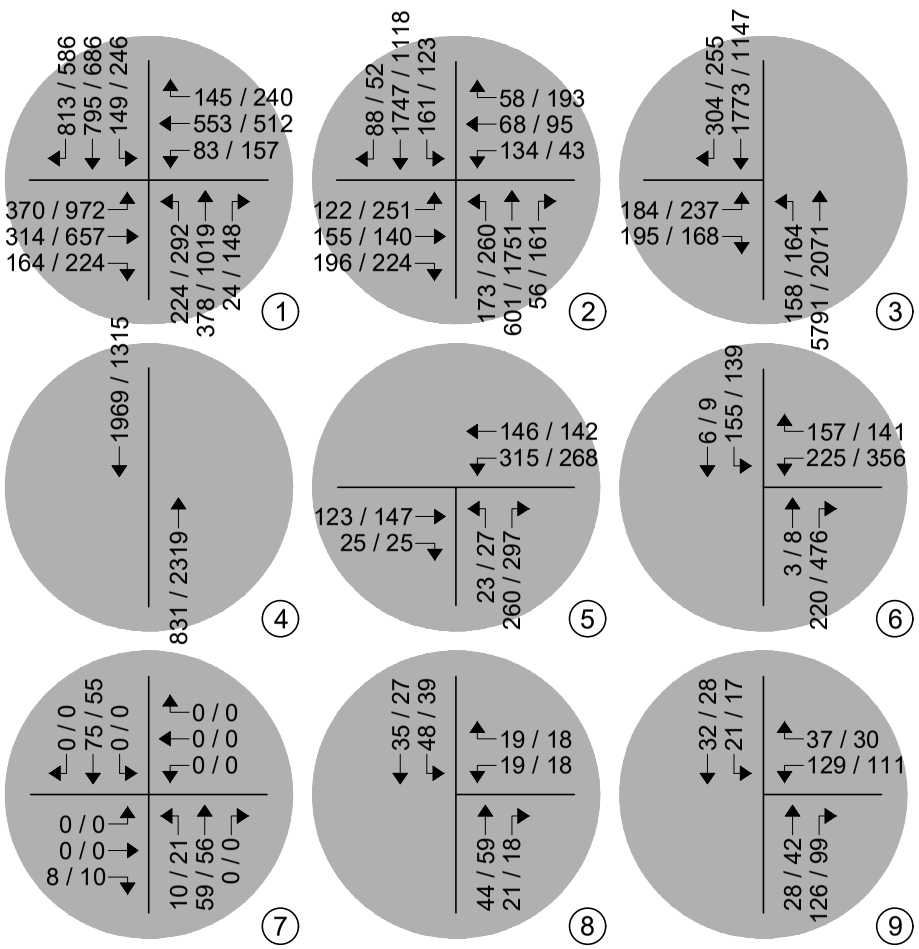


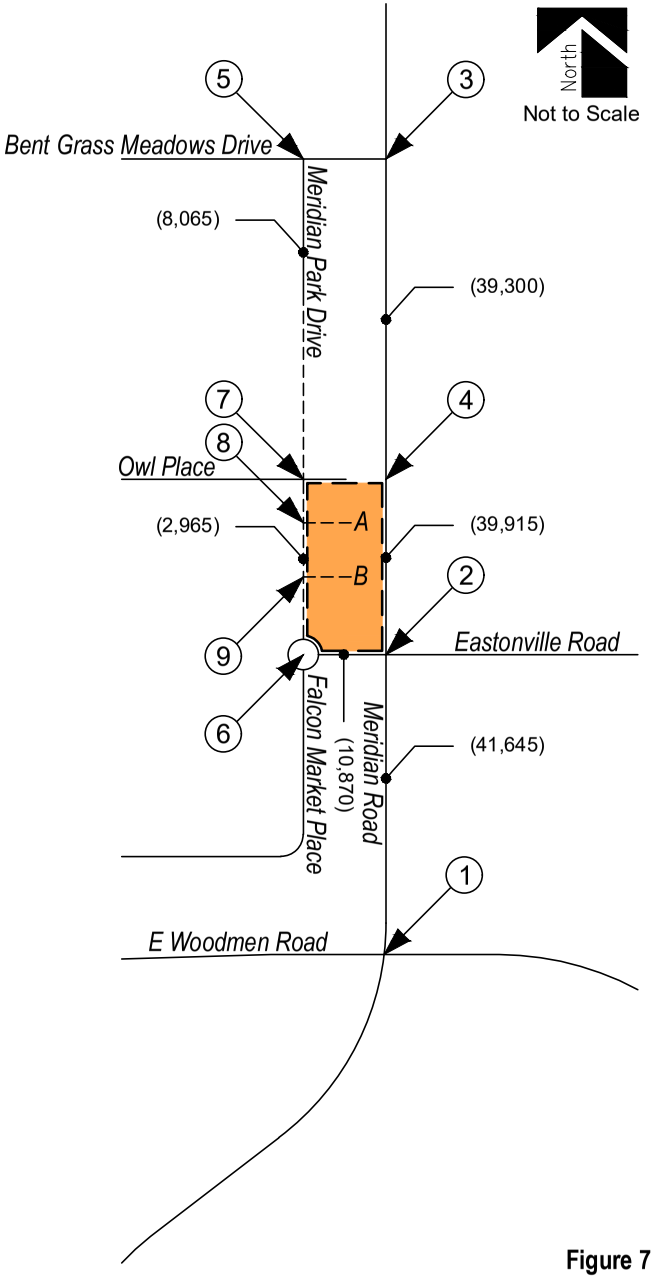
LEGEND

Study Intersection
Lane Geometry

Development Site

Figure 6
TOTAL TRAFFIC - YEAR 2024
Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic



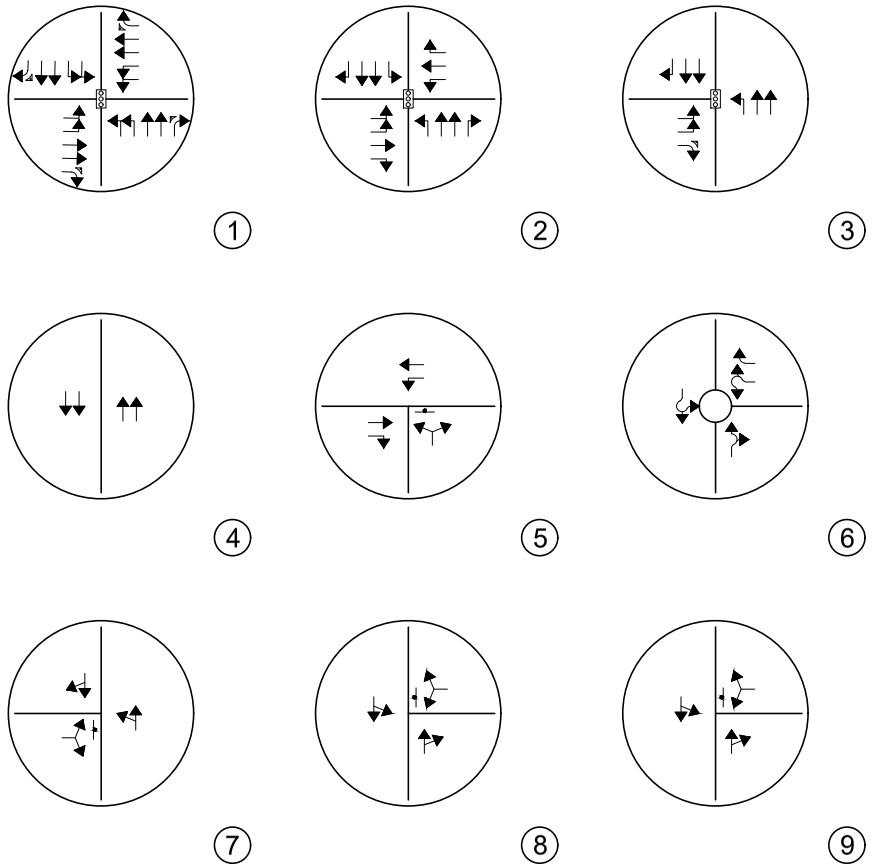


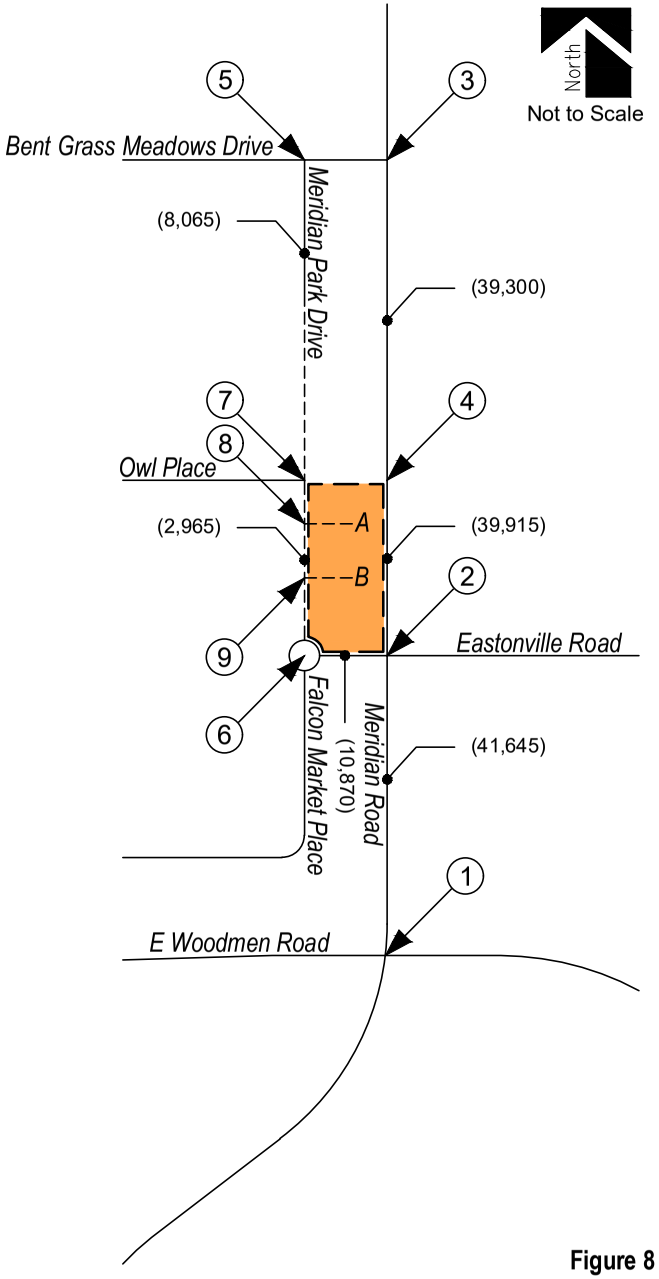
LEGEND

Study Intersection Volumes

Development Site

Figure 7
TOTAL TRAFFIC - YEAR 2040
Volumes
AM / PM Peak Hour
(ADT) : Average Daily Traffic





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Study Intersection
Lane Geometry

Development Site

Figure 8
TOTAL TRAFFIC - YEAR 2040
Intersection Geometry
AM / PM Peak Hour
(ADT) : Average Daily Traffic

Development Impacts & Peak Hour Intersection Levels of Service

The analyses and procedures described in this study were performed in accordance with the latest Highway Capacity Manual (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.

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 2025 and 2040 total traffic level of service analysis results are summarized in Table 4 and 5, respectively. Intersection capacity worksheets are provided in Attachment B.

Table 4 – Intersection Capacity Analysis Summary – Total Traffic – Year 2024

INTERSECTION LANE GROUPS	LEVEL OF SERVICE AM PEAK HOUR	 PM PEAK HOUR
Meridian Road / E Woodmen Road (Signalized)	C (32.2)	D (46.3)
Meridian Road / Eastonville Road (Signalized)	C (28.4)	C (24.8)
Meridian Road / Bent Grass Meadows Drive (Signalized)	B (16.6)	A (9.4)
Bent Grass Meadows Drive / Meridian Park Drive (Stop-Controlled)		
Westbound Left	A	A
Northbound Left and Right	B	B
Eastonville Road / Falcon Market Place / Meridian Park Drive (Roundabout)		
Eastbound Left	A	A
Eastbound Right	A	A
Northbound Through and Right	A	A
Southbound Left and Through	A	A
Owl Place / Meridian Park Drive (Stop-Controlled)		
Eastbound Left and Right	A	A
Westbound Left, Through and Right	A	A
Northbound Left and Through	A	A
Southbound Through and Right	A	A
Access A / Meridian Park Drive (Stop-Controlled)		
Westbound Left and Right	A	A
Southbound Left and Through	A	A
Access B / Meridian Park Drive (Stop-Controlled)		
Westbound Left and Right	B	B
Southbound Left and Through	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
Stop-Controlled Intersection: Level of Service
Roundabout Intersection: Level of Service

Table 5 – Intersection Capacity Analysis Summary – Total Traffic – Year 2040

INTERSECTION LANE GROUPS	LEVEL OF SERVICE AM PEAK HOUR	 PM PEAK HOUR
Meridian Road / E Woodmen Road (Signalized)	D (35.8)	E (78.2)
Meridian Road / Eastonville Road (Signalized)	D (43.3)	C (27.9)
Meridian Road / Bent Grass Meadows Drive (Signalized)	C (23.6)	B (13.6)
Bent Grass Meadows Drive / Meridian Park Drive (Stop-Controlled)		
Westbound Left	A	A
Northbound Left and Right	B	B
Eastonville Road / Falcon Market Place / Meridian Park Drive (Roundabout)		
Eastbound Left	A	A
Eastbound Right	A	A
Northbound Through and Right	A	A
Southbound Left and Through	A	A
Owl Place / Meridian Park Drive (Stop-Controlled)		
Eastbound Left and Right	A	A
Northbound Left and Through	A	A
Southbound Right and Through	A	A
Access A / Meridian Park Drive (Stop-Controlled)		
Westbound Left and Right	A	A
Southbound Left and Through	A	A
Access B / Meridian Park Drive (Stop-Controlled)		
Westbound Left and Right	B	B
Southbound Left and Through	A	A

Key: Signalized Intersection: Level of Service (Control Delay in sec/veh)
Stop-Controlled Intersection: Level of Service
Roundabout Intersection: Level of Service

Total Traffic Analysis Results Upon Development Build-Out

Table 4 illustrates how, by Year and upon Development build-out, the signalized intersection of Meridian Road with E Woodmen Road shows an overall LOS D operation during the morning peak traffic hour and LOS E operation during the afternoon peak traffic hour. Operations of Meridian Road with E Woodmen Road are comparable to or better than those previously stated in the Owl Place Commercial Traffic Impact Study. All improvement recommendations made in the previous traffic impact study remain valid.

The signalized intersection of Meridian Road with Eastonville Road is projected to have morning peak traffic hour operations at LOS D during and LOS C during the afternoon peak traffic hour.

The signalized intersection of Meridian Road with Bent Grass Meadows Drive is projected to have morning and afternoon peak traffic hour operations at LOS C and B, respectively.

The stop-controlled intersection of Bent Grass Meadows Drive with Meridian Park Drive is projected to have turning movement operations at LOS B or better for both the morning and afternoon peak traffic hour.

The roundabout intersection of Eastonville Road with Meridian Park Drive and Falcon Market Place is projected to have turning movement operations at LOS A for both the morning and afternoon peak traffic hours.

The stop-controlled intersection of Owl Place with Meridian Park Drive is projected to have turning movement operations at LOS A for both the morning and afternoon peak traffic hours.

The stop-controlled intersections of site access A and B with Meridian Park Drive are projected to have turning movement operations at LOS B or better for both the morning and afternoon peak traffic hours.

Compared to analysis results originally presented within the Owl Place Commercial TIS, it is concluded that the LOS results stated above are generally better than, or comparable to, those previously presented. As such, all roadway improvements and intersection improvements identified in the previous Owl Place Commercial Traffic Impact Study remain valid.

Additional design detail, pursuant to the latest site plan as prepared by Drexel, Barrell & Co., for the Eastonville Road and Meridian Park Drive roundabout is provided for reference in Attachment C.

Queue Length Analysis

Queue lengths for the study intersections were previously assessed in the approved Owl Place Commercial Traffic Impact Study. This analysis provided queue length estimates using Year 2040 total traffic conditions. Queue analysis results yields estimates for 95th percentile queue lengths, which have only a five percent probability of being exceeded during the analysis time period. Projected queue lengths were updated using the latest trip generation estimates provided in Tables 2 and 3, with results being summarized in Table 6.

Table 6 – Queue Length Analysis

Intersection	Turn Movement		Existing Turn Lane Length (feet)	AM Peak Hour 95th Percentile Queue Length (feet)	PM Peak Hour 95th Percentile Queue Length (feet)	Recommended Turn Lane Length (feet)
Signalized Intersections						
Meridian Road / E Woodmen Road	EB	L	720' x2	228'	646'	720' x2
		T	-	152'	326'	-
		R	635'	0'	0'	635'
	WB	L	440' x2	63'	103'	440' x2
		T	-	327'	387'	-
		R	210'	0'	89'	210'
	NB	L	420' x2	150'	212'	420' x2
		T	-	176'	636'	-
		R	330'	0'	0'	330'
	SB	L	460' x2	71'	207'	460' x2
		T	-	260'	386'	-
		R	575'	0'	0'	575'
Meridian Road / Eastonville Road	EB	L	100' x2	75'	152'	100' x2
		T	-	300'	238'	-
		R	100'	122'	68'	100'
	WB	L	100'	198'	66'	100'
		T	-	108'	144'	-
		R	100'	0'	39'	100'
	NB	L	100'	178'	102'	100'
		T	-	173'	216'	-
		R	400'	11'	1'	400'
	SB	L	375'	19'	174'	375'
		T	-	994'	600'	-
		R	400'	0'	0'	400'
Meridian Road / Bent Grass Meadows Drive	EB	L	160' X2	117'	144'	160' X2
		R	-	119'	68'	-
	NB	L	700'	176'	10'	700'
		T	-	175'	881'	-
	SB	T	-	777'	376'	-
		R	330'	36'	35'	330'
Stop-Controlled Intersections						
Bent Grass Meadows Drive / Meridian Park Drive	EB	T	-	0'	0'	-
		R	-	0'	0'	-
	WB	L	-	23'	20'	-
		T	-	0'	0'	-
	NB	L,R	-	53'	68'	-
Merdian Park Drive / Owl Place	EB	L,R	-	0'	0'	-
	NB	L,T	-	0'	0'	-
	SB	T,R	-	0'	0'	-
Meridian Park Drive / Access A	WB	L,R	-	3'	3'	-
	NB	T,R	-	0'	0'	-
	SB	L,T	-	3'	3'	-
Meridian Park Drive / Access B	WB	L,R	-	20'	18'	-
	NB	T,R	-	0'	0'	-
	SB	L,T	-	0'	0'	-
Roundabout Intersections						
Meridian Park Drive / Eastonville Road / Falcon Market Place	WB	L,R	-	25'	25'	-
		R	-	0'	0'	-
	NB	T,R	-	25'	50'	-
	SB	L,T	-	25'	25'	-

Note: Turn Lane Length does not include taper length.
Key: x2 = Dual Turn Lanes.

As Table 6 shows, updated queue analysis results remain comparable to, or better than those presented in the original Owl Place Commercial Traffic Impact Study. All previous assumptions and recommendations for potential roadway or intersection improvements remain valid.

Auxiliary Lane Analysis

An auxiliary lane analysis was done in the previously approved Owl Place Commercial Traffic Impact Study. An updated analysis was performed and provides similar results to those presented in the traffic study. As such all previous assumptions and recommendations for potential roadway or intersection improvements remain valid. These recommendations are as follows.

Auxiliary lanes for site development accesses are to be based on the County's Engineering Criteria Manual (ECM).

Considering development build-out, an evaluation of auxiliary lane requirements, pursuant to Section 2.3.7(D), of the County's ECM, reveals that exclusive left-turn and right-turn deceleration lanes are required at all study intersections along Meridian Road due to its roadway classification and corresponding CDOT State Highway Access Code (SHAC) designation. It is anticipated that auxiliary lanes at internal site accesses will include left-turn deceleration lanes along Meridian Park Drive due to the high left-turn ingress volumes. This may be accomplished through the use of a center two-way-left-turn-lane (TWLTL) and is consistent with the existing Falcon Market Place cross-section south of Eastonville Road.

Based on current access spacing, the proposed TWLTL provides approximately 106 feet of storage capacity for southbound left turns at Access A, and approximately 213 feet of storage capacity for southbound left turns at Access B. Pursuant to standard deceleration lane requirements as identified in the County's ECM, Table 2-26, left-turn deceleration lanes along Meridian Park Drive are recommended to provide at least 195 feet of total length, assuming a design speed of 25 MPH. This length includes an 80-foot bay taper and 115 feet of storage length. Based on the identified lengths provided by the proposed TWLTL, it is concluded that the capacity provided for Access B meets this requirement, whereas the capacity provided at Access A is less than the recommended length. However, it should be noted that in order to provide additional capacity at Access A it would be necessary to relocate the access further south thereby resulting in a reduction to access spacing. Such a reduction in spacing is considered likely to result in negative impacts to site circulation and is not recommended. Given the relatively low volume of opposing northbound through volumes on Meridian Park Drive as identified in Figure 7, and the lack of any significant queueing as shown in Table 6, it is believed that the capacity proposed by the TWLTL is adequate and does not present any negative impacts to roadway operations. Therefore, a deviation of 9 feet from the recommended storage capacity of 115 feet can be supported.

Additionally, right-turn deceleration lanes may also be necessary at site accesses along Meridian Park Drive pursuant to expected volumes and the future roadway classification. However, it is noted that provision of right-turn deceleration lanes is not consistent with the existing southern portion of Falcon Market Place and may not be feasible dependent on final access spacing and distance from the roundabout intersection at Falcon Market Place and Eastonville Road. Furthermore, operational assessment of site accesses without right-turn deceleration lanes as summarized in Table 5 indicates that a lack of right-turn deceleration lanes is not expected to result in any negative impacts with access levels of service being LOS B or better during peak hours. Table 6 also indicates that no significant vehicle queues are expected at site accesses. It is therefore concluded that right-turn deceleration lanes along Meridian Park Drive are not necessary to achieve acceptable roadway operations.

Pursuant to the posted speed limit along Meridian Road and a corresponding design speed as identified in the County's ECM, turn lane lengths along Meridian Road are expected to consist of a total length of 530 feet including a transition taper of 240 feet. An examination of existing auxiliary lanes provided indicates that no new modifications are needed, and all turn lanes on Meridian Road currently meet or exceed the ECM recommended length. Additionally, as site design is further developed, it is anticipated that applicable ROW dedication will be needed to accommodate relocation of existing auxiliary lanes along Meridian Road upon future planned widening to six through lanes.

Sight Distance Analysis

An assessment of sight distance was performed pursuant to Section 2.4, of the County's ECM, for proposed site accesses along Meridian Park Drive. Table 2-35 of the ECM further indicates that entering sight distance for access along a two-lane public roadway with posted speed limit of 25 MPH is identified as 325 feet.

In review of the current site plan, as shown in Attachment A, it is noted that there is some overlap of sight distance areas between the two accesses proposed. However, no other significant obstructions or hindrances to sight distance are identified. In is noted that pursuant to County criteria, access spacing should provide sufficient separation to accommodate the necessary sight distance areas. However, with consideration for the proximity of the roundabout intersection at Eastonville Road and the stop-controlled intersection at Owl Place along Meridian Park Drive, it is likely that additional access separation cannot be reasonably achieved without presenting significant impacts to the adjacent intersections. Furthermore, restriction or removal of access is not recommended as this is likely to negatively impact site circulation, emergency vehicle access, and access operations. With all other operational goals achieved pursuant to the performed analysis, it is believed that the access as proposed may be accommodated without any significant operational or safety concerns. It is understood that access locations may be subject to change upon further site plan development, and final access locations may require additional County approvals. A deviation request for reduced access spacing is anticipated to be coordinated with County Staff as may be required.

Recommended Improvements

Table 7 illustrates the recommended roadway and intersection control improvements associated with the proposed development and adjacent area.

Table 7 – Recommended Improvements Summary

IMPROVEMENT	TYPE	TIMING	RESPONSIBILITY
Conversion of Owl Place access intersection to Right-In only or Closure	Access	Upon completion of Falcon Market Place Extension	Applicant and/or Adjacent Development
Extension of Falcon Market Place north to Owl Place	Roadway Segment	With Final Plat Application(s)	Applicant
Extension of Meridian Park Drive south to Owl Place	Roadway Segment	With Final Plat Application(s)	Adjacent Development
Restriping of northbound left turn lane to support dual left turn at Eastonville Road[1]	Auxiliary Lane	When Warranted	Whoever warrants the need; i.e. County, City, or Developer
Construct southbound left turn lanes for site accesses along Meridian Park Drive	Auxiliary Lane	With Final Plat Application(s)	Applicant
Widen Meridian Road to six-lane cross-section	Roadway Segment	By 2060 based on Briargate Parkway CPP	Master planned
Widen E Woodmen Road to six-lane cross-section	Roadway Segment	Based on Expressway Classification per 2040 MTCP	Whoever warrants the need; i.e. County, City, or Developer
Construct an westbound right turn bypass at the roundabout onEastonVille	Auxiliary Lane	With Final Plat Application(s)	Applicant

[1] = It is to be noted that provision of dual left turn lanes will require two corresponding receiving lanes on Eastonville Road.

As Table 7 shows, these recommended improvements remain similar to those presented in the original Owl Place Commercial Traffic Impact Study. It is noted that a deviation request pursuant to County criteria for the non-standard cross-section of Meridian Park Drive is to be coordinated with County Staff as required.

Road Impact Fees

This site is subject to the El Paso County Road Impact Fee Program (Resolution 19-471), as amended and falls within the category of General Commercial. Pursuant to the latest proposed site plan and land use densities as previously described, it is anticipated that 10,810 square feet of on-site building area may be considered for determination of applicable fees. Based on this square footage, a resulting impact fee of $64,469 is estimated. Obligation for payment will be selected at the final land use approval stage, which is understood to be concurrent with the site plan application.

Conclusion

This analysis assessed traffic generation for the Owl Place Commercial development, provided a traffic volume comparison to previous land use assumptions approved for the development site, and considered potential impacts to the adjacent roadway network.

It is our professional opinion that the proposed site-generated traffic is expected to create no negative impact upon consideration for, and application of, all applicable roadway and intersection improvements identified in the approved TIS. All conclusions and recommendations presented in the previous site traffic study remain valid.

We trust that our findings will assist in the planning and approval of the Owl Place Commercial development. Please contact us should further assistance be needed.

Sincerely,

SM ROCHA, LLC
Traffic and Transportation Consultants

Stephen Simon, EIT
Traffic Engineer

Fred Lantz, PE
Traffic Engineer

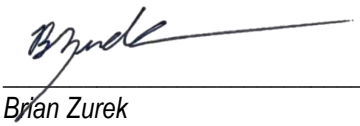
Traffic Engineer's Statement

The attached traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.

Fred Lantz, P.E. #23410 Date: 04/09/2024

Developer's Statement

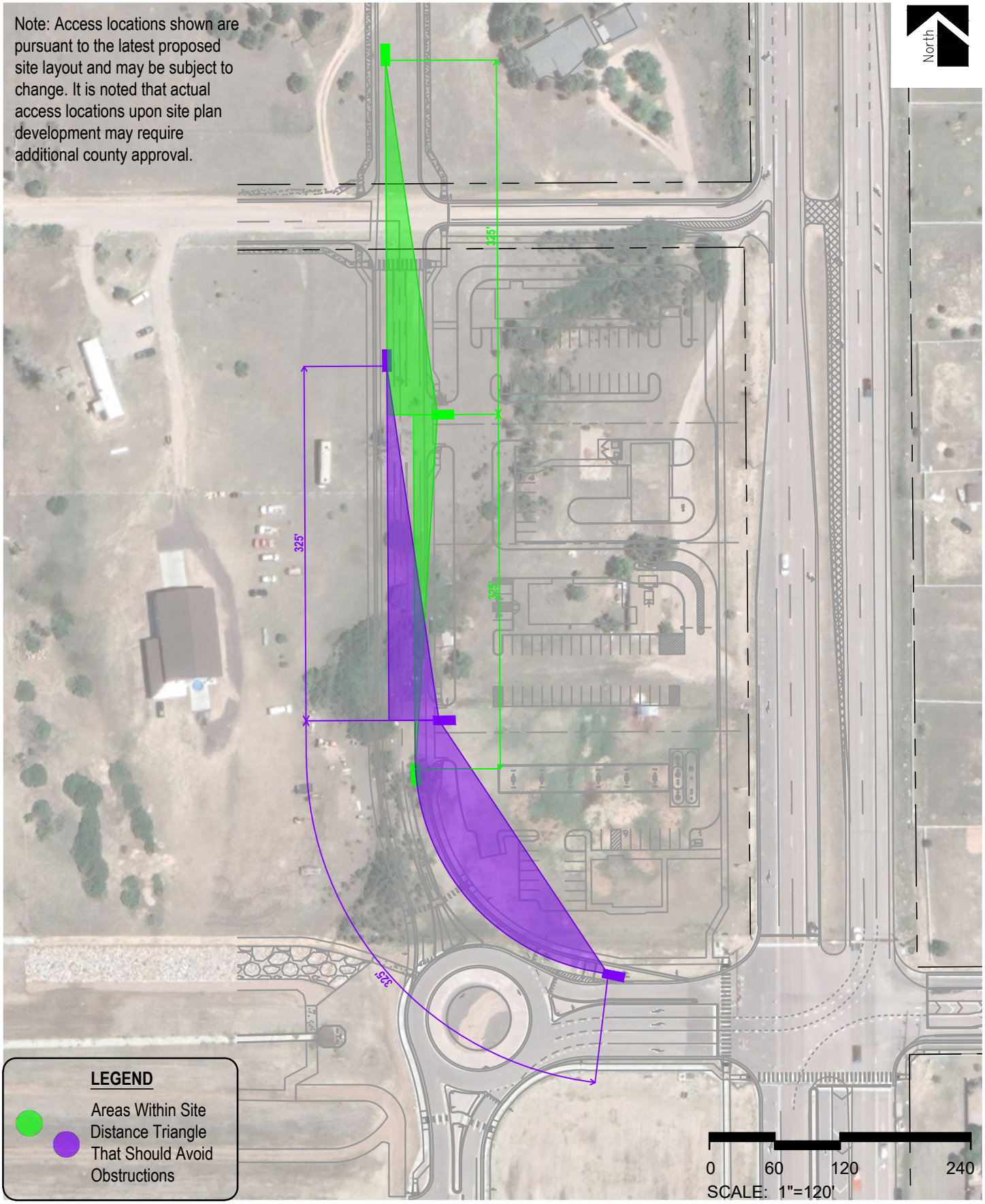
I, the Developer, have read and will comply with all commitments made on my behalf within this report.



Brian Zurek Date: 04/09/2024
CD Meridian & Owl X, LLC
1776 N Scottsdale Rd.
PO Box 220
Scottsdale, AZ 85257-2115

ATTACHMENT A

Sight Distance Exhibit


Note: Access locations shown are pursuant to the latest proposed site layout and may be subject to change. It is noted that actual access locations upon site plan development may require additional county approval.
North
325'
325'
325'
325'
LEGEND
Areas Within Site Distance Triangle That Should Avoid Obstructions
0
60
120
240
SCALE: 1"=120'

ATTACHMENT B

Capacity Worksheets

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	284	226	122	61	417	122	178	301	18	127	611	615
Future Volume (vph)	284	226	122	61	417	122	178	301	18	127	611	615
Satd. Flow (prot)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Satd. Flow (RTOR)			245			182			245			668
Lane Group Flow (vph)	309	246	133	66	453	133	193	327	20	138	664	668
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			Free
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	12.5	22.0		12.5	22.0	22.0	13.5	22.0		13.5	22.0	
Total Split (s)	27.0	36.0		24.0	33.0	33.0	18.0	42.0		18.0	42.0	
Total Split (%)	22.5%	30.0%		20.0%	27.5%	27.5%	15.0%	35.0%		15.0%	35.0%	
Yellow Time (s)	4.0	5.0		4.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	3.5	2.0		3.5	2.0	2.0	3.5	2.0		3.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.5	7.0		7.5	7.0	7.0	8.5	7.0		8.5	7.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	15.9	31.5	120.0	7.7	20.7	20.7	11.0	44.0	120.0	9.5	42.5	120.0
Actuated g/C Ratio	0.13	0.26	1.00	0.06	0.17	0.17	0.09	0.37	1.00	0.08	0.35	1.00
v/c Ratio	0.68	0.27	0.08	0.30	0.74	0.31	0.61	0.25	0.01	0.51	0.53	0.42
Control Delay	57.3	35.8	0.1	56.6	54.8	3.8	61.4	28.9	0.0	64.3	33.0	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.3	35.8	0.1	56.6	54.8	3.8	61.4	28.9	0.0	64.3	33.0	0.5
LOS	E	D	A	E	D	A	E	C	A	E	C	A
Approach Delay		38.6			44.5			39.4			21.2	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	119	82	0	25	177	0	74	93	0	58	153	0
Queue Length 95th (ft)	161	110	0	48	223	19	#124	145	0	m76	231	0
Internal Link Dist (ft)		1105			882			544			1159	
Turn Bay Length (ft)	720			440			420			460		460
Base Capacity (vph)	557	947	1583	472	766	485	317	1297	1583	285	1252	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.26	0.08	0.14	0.59	0.27	0.61	0.25	0.01	0.48	0.53	0.42

Intersection Summary

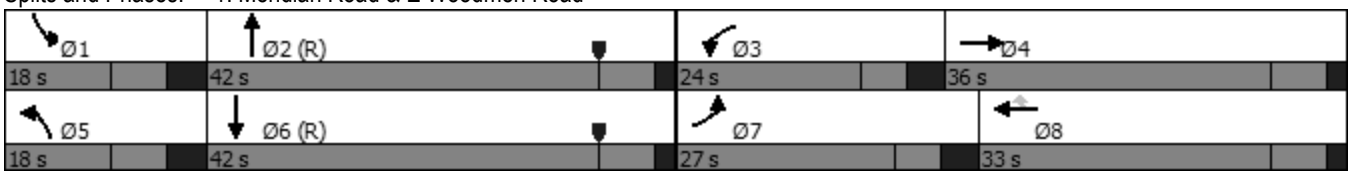
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 32.2	Intersection LOS: C
Intersection Capacity Utilization 67.6%	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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Meridian Road & E Woodmen Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	57	194	100	68	45	171	430	42	121	1299	87
Future Volume (vph)	122	57	194	100	68	45	171	430	42	121	1299	87
Satd. Flow (prot)	3433	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.566			0.717			0.067			0.484		
Satd. Flow (perm)	2045	1863	1583	1336	1863	1583	125	3539	1583	902	3539	1583
Satd. Flow (RTOR)			186			186			177			177
Lane Group Flow (vph)	133	62	211	109	74	49	186	467	46	132	1412	95
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	12.5	14.5	14.5	12.5	14.5	14.5	12.5	22.5	22.5	13.5	22.5	22.5
Total Split (s)	18.0	20.0	20.0	18.0	20.0	20.0	18.0	67.0	67.0	15.0	64.0	64.0
Total Split (%)	15.0%	16.7%	16.7%	15.0%	16.7%	16.7%	15.0%	55.8%	55.8%	12.5%	53.3%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5	5.5	5.0	5.5	5.5
All-Red Time (s)	3.5	2.5	2.5	3.5	2.5	2.5	3.5	2.0	2.0	3.5	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	6.5	6.5	7.5	6.5	6.5	7.5	7.5	7.5	8.5	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	19.7	10.0	10.0	18.1	10.7	10.7	74.3	62.4	62.4	66.0	59.3	59.3
Actuated g/C Ratio	0.16	0.08	0.08	0.15	0.09	0.09	0.62	0.52	0.52	0.55	0.49	0.49
v/c Ratio	0.28	0.40	0.70	0.46	0.45	0.16	0.78	0.25	0.05	0.24	0.81	0.11
Control Delay	39.0	59.1	23.3	45.7	60.0	1.1	57.8	23.1	1.6	4.8	27.6	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	59.1	23.3	45.7	60.0	1.1	57.8	23.1	1.6	4.8	27.6	2.0
LOS	D	E	C	D	E	A	E	C	A	A	C	A
Approach Delay		33.9			40.8			30.9			24.3	
Approach LOS		C			D			C			C	
Queue Length 50th (ft)	43	47	19	71	55	0	111	100	1	19	601	6
Queue Length 95th (ft)	68	90	96	118	103	0	#230	132	m8	m19	665	m14
Internal Link Dist (ft)		324			570			1159			643	
Turn Bay Length (ft)	100		100	100		100	100		400	375		400
Base Capacity (vph)	497	209	343	247	209	343	243	1840	908	551	1747	871
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.30	0.62	0.44	0.35	0.14	0.77	0.25	0.05	0.24	0.81	0.11

Intersection Summary

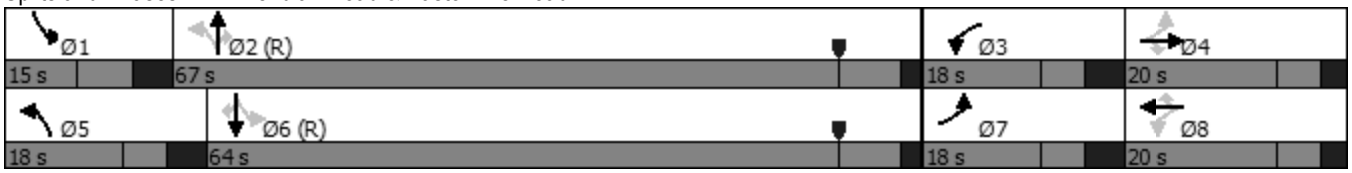
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 45 (38%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

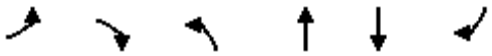
Maximum v/c Ratio: 0.81

Intersection Signal Delay: 28.4	Intersection LOS: C
Intersection Capacity Utilization 75.5%	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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Meridian Road & Eastonville Road





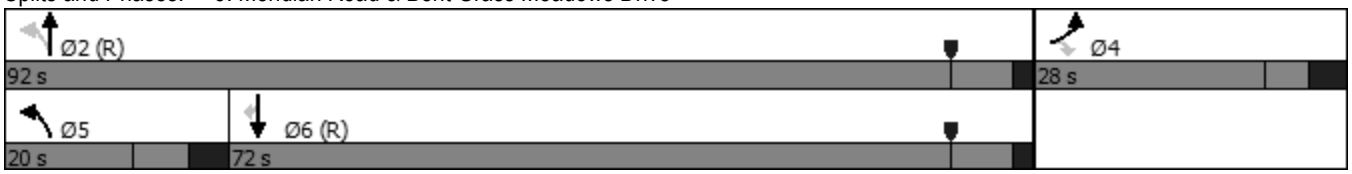
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	162	164	135	442	1348	233
Future Volume (vph)	162	164	135	442	1348	233
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.106			
Satd. Flow (perm)	3433	1583	197	3539	3539	1583
Satd. Flow (RTOR)		178				253
Lane Group Flow (vph)	176	178	147	480	1465	253
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	5.0	15.0	15.0	15.0
Minimum Split (s)	15.5	15.5	13.5	22.5	22.5	22.5
Total Split (s)	28.0	28.0	20.0	92.0	72.0	72.0
Total Split (%)	23.3%	23.3%	16.7%	76.7%	60.0%	60.0%
Yellow Time (s)	4.0	4.0	5.0	5.5	5.5	5.5
All-Red Time (s)	3.5	3.5	3.5	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	8.5	7.5	7.5	7.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	11.5	11.5	92.5	93.5	75.5	75.5
Actuated g/C Ratio	0.10	0.10	0.77	0.78	0.63	0.63
v/c Ratio	0.54	0.57	0.53	0.17	0.66	0.23
Control Delay	57.4	14.7	16.7	9.2	16.8	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	14.7	16.7	9.2	16.8	2.0
LOS	E	B	B	A	B	A
Approach Delay	35.9			11.0	14.6	
Approach LOS	D			B	B	
Queue Length 50th (ft)	68	0	51	115	341	0
Queue Length 95th (ft)	102	66	75	111	517	36
Internal Link Dist (ft)	323			1273	472	
Turn Bay Length (ft)	160		700			330
Base Capacity (vph)	586	418	310	2757	2227	1089
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.43	0.47	0.17	0.66	0.23

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 5 (4%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 16.6	Intersection LOS: B
Intersection Capacity Utilization 71.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: Meridian Road & Bent Grass Meadows Drive



Intersection	
Int Delay, s/veh	6.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	103	21	243	124	20	226
Future Vol, veh/h	103	21	243	124	20	226
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	195	-	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	112	23	264	135	22	246

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	135	0	775	112
Stage 1	-	-	-	-	112	-
Stage 2	-	-	-	-	663	-
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	-	-	1449	-	366	941
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	512	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1449	-	299	941
Mov Cap-2 Maneuver	-	-	-	-	299	-
Stage 1	-	-	-	-	913	-
Stage 2	-	-	-	-	419	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.3	11.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	801	-	-	1449	-
HCM Lane V/C Ratio	0.334	-	-	0.182	-
HCM Control Delay (s)	11.7	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.5	-	-	0.7	-

Intersection	
Intersection Delay, s/veh	4.5
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	412	242	173
Demand Flow Rate, veh/h	420	247	176
Vehicles Circulating, veh/h	3	169	250
Vehicles Exiting, veh/h	413	257	3
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.0	5.1	4.9
Approach LOS	A	A	A

Lane	Left	Bypass	Left	Left
Designated Moves	L	R	TR	LT
Assumed Moves	L	R	TR	LT
RT Channelized		Yield		
Lane Util	1.000		1.000	1.000
Follow-Up Headway, s	2.609		2.609	2.609
Critical Headway, s	4.976	170	4.976	4.976
Entry Flow, veh/h	250	1376	247	176
Cap Entry Lane, veh/h	1376	0.980	1161	1069
Entry HV Adj Factor	0.980	167	0.980	0.982
Flow Entry, veh/h	245	1349	242	173
Cap Entry, veh/h	1348	0.124	1138	1050
V/C Ratio	0.182	3.7	0.213	0.165
Control Delay, s/veh	4.2	A	5.1	4.9
LOS	A	0	A	A
95th %tile Queue, veh	1		1	1

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	6	32	0	0	7	59	0	0	43	0
Future Vol, veh/h	0	0	6	32	0	0	7	59	0	0	43	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	7	35	0	0	8	64	0	0	47	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	127	-	47	131	127	64	47	0	-	-	-	0
Stage 1	47	-	-	80	80	-	-	-	-	-	-	-
Stage 2	80	-	-	51	47	-	-	-	-	-	-	-
Critical Hdwy	7.12	-	6.22	7.12	6.52	6.22	4.12	-	-	-	-	-
Critical Hdwy Stg 1	6.12	-	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	-	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	-	3.318	3.518	4.018	3.318	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	846	0	1022	841	764	1000	1560	-	0	0	-	-
Stage 1	967	0	-	929	828	-	-	-	0	0	-	-
Stage 2	929	0	-	962	856	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	843	-	1022	833	760	1000	1560	-	-	-	-	-
Mov Cap-2 Maneuver	843	-	-	833	760	-	-	-	-	-	-	-
Stage 1	962	-	-	924	824	-	-	-	-	-	-	-
Stage 2	924	-	-	956	856	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.5	9.5	0.8	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	WBLn1	SBT	SBR
Capacity (veh/h)	1560	-	-	1022	833	-	-
HCM Lane V/C Ratio	0.005	-	-	0.006	0.042	-	-
HCM Control Delay (s)	7.3	0	0	8.5	9.5	-	-
HCM Lane LOS	A	A	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	-	-

Intersection	
Int Delay, s/veh	3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	19	47	21	48	33
Future Vol, veh/h	19	19	47	21	48	33
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	21	51	23	52	36

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	203	63	0	0	74	0
Stage 1	63	-	-	-	-	-
Stage 2	140	-	-	-	-	-
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	786	1002	-	-	1526	-
Stage 1	960	-	-	-	-	-
Stage 2	887	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	758	1002	-	-	1526	-
Mov Cap-2 Maneuver	758	-	-	-	-	-
Stage 1	960	-	-	-	-	-
Stage 2	856	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	4.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	863	1526	-
HCM Lane V/C Ratio	-	-	0.048	0.034	-
HCM Control Delay (s)	-	-	9.4	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

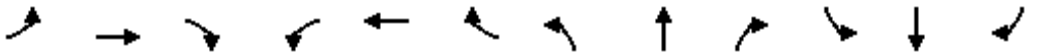
Intersection	
Int Delay, s/veh	5.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	129	37	31	126	21	30
Future Vol, veh/h	129	37	31	126	21	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	140	40	34	137	23	33

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	182	103	0	0	171	0
Stage 1	103	-	-	-	-	-
Stage 2	79	-	-	-	-	-
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	807	952	-	-	1406	-
Stage 1	921	-	-	-	-	-
Stage 2	944	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	793	952	-	-	1406	-
Mov Cap-2 Maneuver	793	-	-	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	928	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	3.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	824	1406	-
HCM Lane V/C Ratio	-	-	0.219	0.016	-
HCM Control Delay (s)	-	-	10.6	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.8	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	731	473	166	117	393	191	233	780	110	210	547	451
Future Volume (vph)	731	473	166	117	393	191	233	780	110	210	547	451
Satd. Flow (prot)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Satd. Flow (RTOR)			314			250			314			490
Lane Group Flow (vph)	795	514	180	127	427	208	253	848	120	228	595	490
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			Free
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	12.5	22.0		12.5	22.0	22.0	13.5	22.0		13.5	22.0	
Total Split (s)	38.0	37.0		26.0	25.0	25.0	18.0	39.0		18.0	39.0	
Total Split (%)	31.7%	30.8%		21.7%	20.8%	20.8%	15.0%	32.5%		15.0%	32.5%	
Yellow Time (s)	4.0	5.0		4.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	3.5	2.0		3.5	2.0	2.0	3.5	2.0		3.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.5	7.0		7.5	7.0	7.0	8.5	7.0		8.5	7.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	29.9	37.5	120.0	9.8	17.4	17.4	10.0	33.0	120.0	9.7	32.7	120.0
Actuated g/C Ratio	0.25	0.31	1.00	0.08	0.14	0.14	0.08	0.28	1.00	0.08	0.27	1.00
v/c Ratio	0.93	0.47	0.11	0.45	0.83	0.47	0.88	0.87	0.08	0.83	0.62	0.31
Control Delay	62.2	34.9	0.1	57.4	64.6	6.1	85.3	52.7	0.1	68.5	60.2	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.2	34.9	0.1	57.4	64.6	6.1	85.3	52.7	0.1	68.5	60.2	0.5
LOS	E	C	A	E	E	A	F	D	A	E	E	A
Approach Delay		45.3			47.4			54.3			39.4	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	309	165	0	48	170	0	102	334	0	94	249	0
Queue Length 95th (ft)	#421	225	0	79	#243	37	#182	#447	0	#161	313	0
Internal Link Dist (ft)		1105			882			544			1159	
Turn Bay Length (ft)	720			440			420			460		460
Base Capacity (vph)	872	1105	1583	529	530	449	286	974	1583	276	963	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.47	0.11	0.24	0.81	0.46	0.88	0.87	0.08	0.83	0.62	0.31

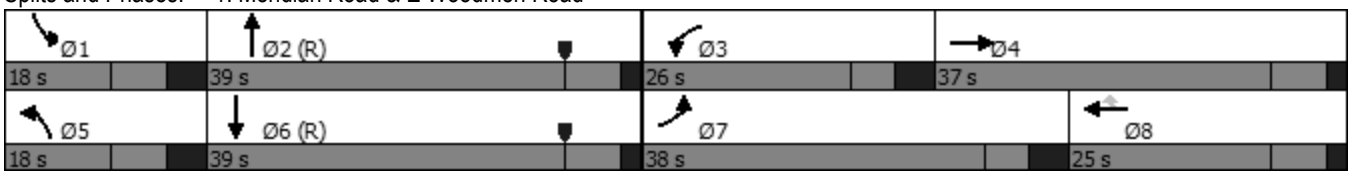
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 37 (31%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 46.3	Intersection LOS: D
Intersection Capacity Utilization 85.5%	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: 1: Meridian Road & E Woodmen Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	251	140	221	32	95	145	256	1267	120	93	843	92
Future Volume (vph)	251	140	221	32	95	145	256	1267	120	93	843	92
Satd. Flow (prot)	3433	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.506			0.660			0.187			0.079		
Satd. Flow (perm)	1829	1863	1583	1229	1863	1583	348	3539	1583	147	3539	1583
Satd. Flow (RTOR)			240			186			177			177
Lane Group Flow (vph)	273	152	240	35	103	158	278	1377	130	101	916	100
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	12.5	14.5	14.5	12.5	14.5	14.5	12.5	22.5	22.5	13.5	22.5	22.5
Total Split (s)	18.0	22.0	22.0	18.0	22.0	22.0	25.0	62.0	62.0	18.0	55.0	55.0
Total Split (%)	15.0%	18.3%	18.3%	15.0%	18.3%	18.3%	20.8%	51.7%	51.7%	15.0%	45.8%	45.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5	5.5	5.0	5.5	5.5
All-Red Time (s)	3.5	2.5	2.5	3.5	2.5	2.5	3.5	2.0	2.0	3.5	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	6.5	6.5	7.5	6.5	6.5	7.5	7.5	7.5	8.5	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	25.9	20.6	20.6	18.4	12.1	12.1	73.2	59.2	59.2	61.7	54.5	54.5
Actuated g/C Ratio	0.22	0.17	0.17	0.15	0.10	0.10	0.61	0.49	0.49	0.51	0.45	0.45
v/c Ratio	0.51	0.48	0.51	0.16	0.55	0.48	0.74	0.79	0.15	0.54	0.57	0.12
Control Delay	40.7	52.1	10.0	35.9	62.1	9.2	26.5	10.0	0.7	28.4	43.8	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.7	52.1	10.0	35.9	62.1	9.2	26.5	10.0	0.7	28.4	43.8	9.7
LOS	D	D	B	D	E	A	C	B	A	C	D	A
Approach Delay		32.3			30.7			11.9			39.3	
Approach LOS		C			C			B			D	
Queue Length 50th (ft)	90	114	0	21	77	0	62	303	2	51	386	12
Queue Length 95th (ft)	124	184	75	47	132	41	m80	m375	m6	92	461	45
Internal Link Dist (ft)		333			570			1159			643	
Turn Bay Length (ft)	100		100	100		100	100		400	375		400
Base Capacity (vph)	535	321	471	268	240	366	427	1746	870	206	1606	815
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.47	0.51	0.13	0.43	0.43	0.65	0.79	0.15	0.49	0.57	0.12

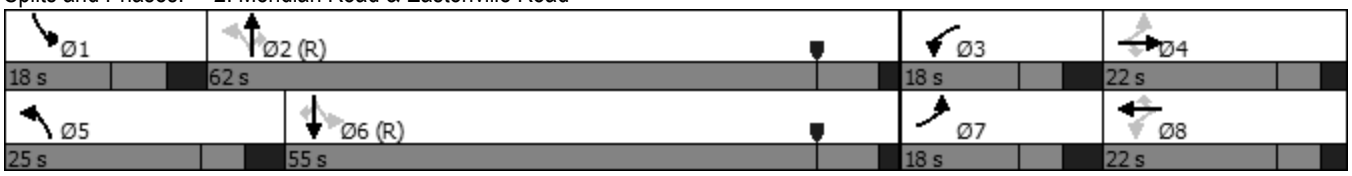
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 89 (74%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

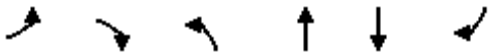
Maximum v/c Ratio: 0.79

Intersection Signal Delay: 24.8	Intersection LOS: C
Intersection Capacity Utilization 78.4%	ICU Level of Service D
Analysis Period (min) 15	

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

Splits and Phases: 2: Meridian Road & Eastonville Road





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	208	142	142	1583	891	195
Future Volume (vph)	208	142	142	1583	891	195
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.229			
Satd. Flow (perm)	3433	1583	427	3539	3539	1583
Satd. Flow (RTOR)		154				212
Lane Group Flow (vph)	226	154	154	1721	968	212
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	5.0	15.0	15.0	15.0
Minimum Split (s)	15.5	15.5	13.5	22.5	22.5	22.5
Total Split (s)	27.0	27.0	20.0	93.0	73.0	73.0
Total Split (%)	22.5%	22.5%	16.7%	77.5%	60.8%	60.8%
Yellow Time (s)	4.0	4.0	5.0	5.5	5.5	5.5
All-Red Time (s)	3.5	3.5	3.5	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	8.5	7.5	7.5	7.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	13.2	13.2	90.8	91.8	74.9	74.9
Actuated g/C Ratio	0.11	0.11	0.76	0.76	0.62	0.62
v/c Ratio	0.60	0.50	0.37	0.64	0.44	0.20
Control Delay	57.3	13.1	2.7	2.2	12.9	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.3	13.1	2.7	2.2	12.9	1.9
LOS	E	B	A	A	B	A
Approach Delay	39.4			2.3	11.0	
Approach LOS	D			A	B	
Queue Length 50th (ft)	87	0	5	26	190	0
Queue Length 95th (ft)	124	61	m7	34	270	32
Internal Link Dist (ft)	333			1273	472	
Turn Bay Length (ft)	160		700			330
Base Capacity (vph)	557	386	451	2707	2210	1068
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.40	0.34	0.64	0.44	0.20

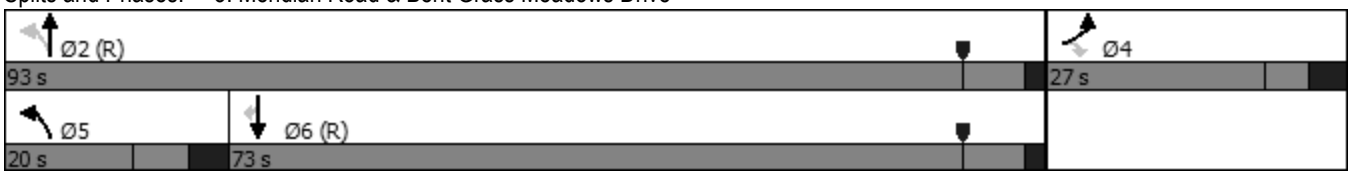
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 27 (23%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 9.4	Intersection LOS: A
Intersection Capacity Utilization 62.9%	ICU Level of Service B
Analysis Period (min) 15	

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

Splits and Phases: 3: Meridian Road & Bent Grass Meadows Drive



Intersection	
Int Delay, s/veh	6.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	124	21	211	120	23	256
Future Vol, veh/h	124	21	211	120	23	256
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	195	-	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	135	23	229	130	25	278

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	158	0	723	135
Stage 1	-	-	-	-	135	-
Stage 2	-	-	-	-	588	-
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	-	-	1422	-	393	914
Stage 1	-	-	-	-	891	-
Stage 2	-	-	-	-	555	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1422	-	330	914
Mov Cap-2 Maneuver	-	-	-	-	330	-
Stage 1	-	-	-	-	891	-
Stage 2	-	-	-	-	466	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.1	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	798	-	-	1422	-
HCM Lane V/C Ratio	0.38	-	-	0.161	-
HCM Control Delay (s)	12.3	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	1.8	-	-	0.6	-

Intersection	
Intersection Delay, s/veh	6.3
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	530	526	158
Demand Flow Rate, veh/h	541	536	161
Vehicles Circulating, veh/h	9	151	395
Vehicles Exiting, veh/h	678	405	9
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.8	7.9	5.7
Approach LOS	A	A	A

Lane	Left	Bypass	Left	Left
Designated Moves	L	R	TR	LT
Assumed Moves	L	R	TR	LT
RT Channelized		Yield		
Lane Util	1.000		1.000	1.000
Follow-Up Headway, s	2.609		2.609	2.609
Critical Headway, s	4.976	146	4.976	4.976
Entry Flow, veh/h	395	1367	536	161
Cap Entry Lane, veh/h	1367	0.980	1183	922
Entry HV Adj Factor	0.980	143	0.981	0.980
Flow Entry, veh/h	387	1340	526	158
Cap Entry, veh/h	1340	0.107	1160	904
V/C Ratio	0.289	3.5	0.453	0.175
Control Delay, s/veh	5.2	A	7.9	5.7
LOS	A	0	A	A
95th %tile Queue, veh	1		2	1

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	7	25	0	0	15	56	0	0	40	0
Future Vol, veh/h	0	0	7	25	0	0	15	56	0	0	40	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	8	27	0	0	16	61	0	0	43	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	136	-	43	140	136	61	43	0	-	-	-	0
Stage 1	43	-	-	93	93	-	-	-	-	-	-	-
Stage 2	93	-	-	47	43	-	-	-	-	-	-	-
Critical Hdwy	7.12	-	6.22	7.12	6.52	6.22	4.12	-	-	-	-	-
Critical Hdwy Stg 1	6.12	-	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	-	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	-	3.318	3.518	4.018	3.318	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	835	0	1027	830	755	1004	1566	-	0	0	-	-
Stage 1	971	0	-	914	818	-	-	-	0	0	-	-
Stage 2	914	0	-	967	859	-	-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	828	-	1027	817	747	1004	1566	-	-	-	-	-
Mov Cap-2 Maneuver	828	-	-	817	747	-	-	-	-	-	-	-
Stage 1	960	-	-	904	809	-	-	-	-	-	-	-
Stage 2	904	-	-	960	859	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.5	9.6	1.5	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	WBLn1	SBT	SBR
Capacity (veh/h)	1566	-	-	1027	817	-	-
HCM Lane V/C Ratio	0.01	-	-	0.007	0.033	-	-
HCM Control Delay (s)	7.3	0	0	8.5	9.6	-	-
HCM Lane LOS	A	A	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	18	53	18	39	15
Future Vol, veh/h	18	18	53	18	39	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	20	20	58	20	42	16

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	168	68	0	0	78	0
Stage 1	68	-	-	-	-	-
Stage 2	100	-	-	-	-	-
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	822	995	-	-	1520	-
Stage 1	955	-	-	-	-	-
Stage 2	924	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	799	995	-	-	1520	-
Mov Cap-2 Maneuver	799	-	-	-	-	-
Stage 1	955	-	-	-	-	-
Stage 2	898	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	5.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	886	1520	-
HCM Lane V/C Ratio	-	-	0.044	0.028	-
HCM Control Delay (s)	-	-	9.3	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	4.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	111	30	41	99	17	16
Future Vol, veh/h	111	30	41	99	17	16
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	121	33	45	108	18	17

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	152	99	0	0	153	0
Stage 1	99	-	-	-	-	-
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	840	957	-	-	1428	-
Stage 1	925	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	829	957	-	-	1428	-
Mov Cap-2 Maneuver	829	-	-	-	-	-
Stage 1	925	-	-	-	-	-
Stage 2	957	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.1	0	3.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	853	1428	-
HCM Lane V/C Ratio	-	-	0.18	0.013	-
HCM Control Delay (s)	-	-	10.1	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	370	314	164	83	553	145	224	378	24	149	795	813
Future Volume (vph)	370	314	164	83	553	145	224	378	24	149	795	813
Satd. Flow (prot)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Satd. Flow (RTOR)			314			250			314			635
Lane Group Flow (vph)	402	341	178	90	601	158	243	411	26	162	864	884
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			Free
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	12.5	22.0		12.5	22.0	22.0	13.5	22.0		13.5	22.0	
Total Split (s)	25.0	41.5		14.5	31.0	31.0	20.0	44.5		19.5	44.0	
Total Split (%)	20.8%	34.6%		12.1%	25.8%	25.8%	16.7%	37.1%		16.3%	36.7%	
Yellow Time (s)	4.0	5.0		4.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	3.5	2.0		3.5	2.0	2.0	3.5	2.0		3.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.5	7.0		7.5	7.0	7.0	8.5	7.0		8.5	7.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	16.9	33.3	120.0	6.8	23.2	23.2	11.3	39.8	120.0	10.1	38.6	120.0
Actuated g/C Ratio	0.14	0.28	1.00	0.06	0.19	0.19	0.09	0.33	1.00	0.08	0.32	1.00
v/c Ratio	0.83	0.35	0.11	0.46	0.88	0.31	0.75	0.35	0.02	0.56	0.76	0.56
Control Delay	65.5	35.5	0.1	62.7	62.3	1.6	68.2	32.1	0.0	64.8	37.6	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.5	35.5	0.1	62.7	62.3	1.6	68.2	32.1	0.0	64.8	37.6	1.7
LOS	E	D	A	E	E	A	E	C	A	E	D	A
Approach Delay		41.8			51.0			43.7			23.3	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	157	110	0	35	238	0	95	130	0	69	255	0
Queue Length 95th (ft)	#228	152	0	63	#327	0	#150	176	0	m71	m260	m0
Internal Link Dist (ft)		1105			882			544			1159	
Turn Bay Length (ft)	720			440			420			460		460
Base Capacity (vph)	500	1017	1583	200	707	516	330	1172	1583	314	1137	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.34	0.11	0.45	0.85	0.31	0.74	0.35	0.02	0.52	0.76	0.56

Intersection Summary

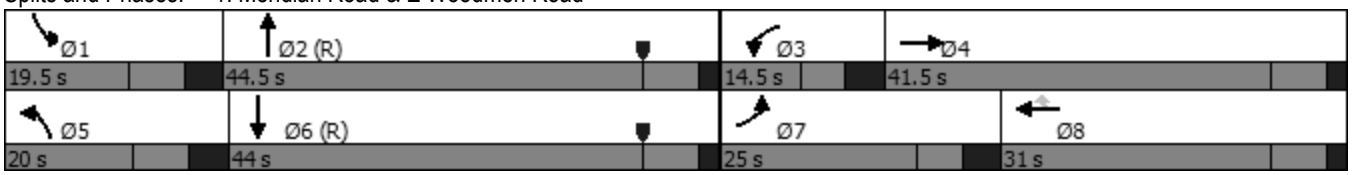
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 30 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 35.8	Intersection LOS: D
Intersection Capacity Utilization 79.2%	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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Meridian Road & E Woodmen Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	155	196	134	68	58	173	601	56	161	1747	88
Future Volume (vph)	122	155	196	134	68	58	173	601	56	161	1747	88
Satd. Flow (prot)	3433	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.504			0.541			0.061			0.388		
Satd. Flow (perm)	1821	1863	1583	1008	1863	1583	114	3539	1583	723	3539	1583
Satd. Flow (RTOR)			186			186			177			177
Lane Group Flow (vph)	133	168	213	146	74	63	188	653	61	175	1899	96
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	12.5	14.5	14.5	12.5	14.5	14.5	12.5	22.5	22.5	13.5	22.5	22.5
Total Split (s)	12.5	15.6	15.6	12.6	15.7	15.7	22.3	74.2	74.2	17.6	69.5	69.5
Total Split (%)	10.4%	13.0%	13.0%	10.5%	13.1%	13.1%	18.6%	61.8%	61.8%	14.7%	57.9%	57.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5	5.5	5.0	5.5	5.5
All-Red Time (s)	3.5	2.5	2.5	3.5	2.5	2.5	3.5	2.0	2.0	3.5	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	6.5	6.5	7.5	6.5	6.5	7.5	7.5	7.5	8.5	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	14.6	9.1	9.1	11.7	9.0	9.0	79.6	67.2	67.2	72.0	64.4	64.4
Actuated g/C Ratio	0.12	0.08	0.08	0.10	0.08	0.08	0.66	0.56	0.56	0.60	0.54	0.54
v/c Ratio	0.40	1.19	0.73	1.12	0.54	0.22	0.76	0.33	0.06	0.34	1.00	0.10
Control Delay	47.5	183.6	26.6	160.5	68.0	1.7	50.6	21.0	2.3	3.9	37.9	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.5	183.6	26.6	160.5	68.0	1.7	50.6	21.0	2.3	3.9	37.9	0.7
LOS	D	F	C	F	E	A	D	C	A	A	D	A
Approach Delay		83.4			101.0			25.9			33.5	
Approach LOS		F			F			C			C	
Queue Length 50th (ft)	46	~157	20	~105	56	0	119	141	3	15	~843	0
Queue Length 95th (ft)	75	#300	#122	#198	108	0	m178	173	m11	m19	#994	m0
Internal Link Dist (ft)		323			570			1159			643	
Turn Bay Length (ft)	100		100	100		100	100		400	375		400
Base Capacity (vph)	330	141	291	130	142	293	282	1982	964	516	1899	931
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	1.19	0.73	1.12	0.52	0.22	0.67	0.33	0.06	0.34	1.00	0.10

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 45 (38%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 130
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.19

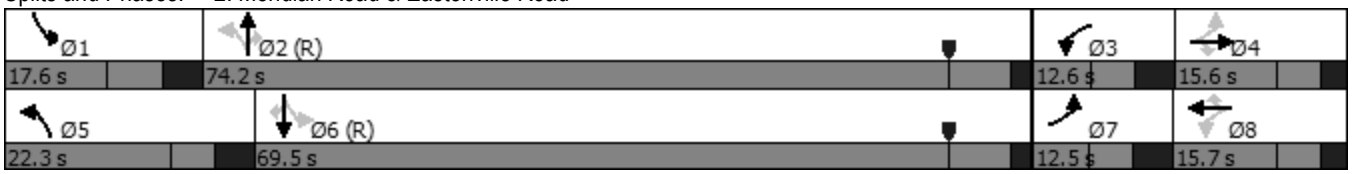
Intersection Signal Delay: 43.3	Intersection LOS: D
Intersection Capacity Utilization 96.8%	ICU Level of Service F
Analysis Period (min) 15	

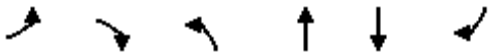
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Meridian Road & Eastonville Road





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	184	195	158	579	1773	304
Future Volume (vph)	184	195	158	579	1773	304
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.048			
Satd. Flow (perm)	3433	1583	89	3539	3539	1583
Satd. Flow (RTOR)		164				330
Lane Group Flow (vph)	200	212	172	629	1927	330
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	5.0	15.0	15.0	15.0
Minimum Split (s)	15.5	15.5	13.5	22.5	22.5	22.5
Total Split (s)	19.9	19.9	20.2	100.1	79.9	79.9
Total Split (%)	16.6%	16.6%	16.8%	83.4%	66.6%	66.6%
Yellow Time (s)	4.0	4.0	5.0	5.5	5.5	5.5
All-Red Time (s)	3.5	3.5	3.5	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	8.5	7.5	7.5	7.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	11.4	11.4	92.6	93.6	74.5	74.5
Actuated g/C Ratio	0.10	0.10	0.77	0.78	0.62	0.62
v/c Ratio	0.62	0.71	0.80	0.23	0.88	0.30
Control Delay	60.6	28.0	44.0	10.8	25.4	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.6	28.0	44.0	10.8	25.4	1.8
LOS	E	C	D	B	C	A
Approach Delay	43.9			18.0	21.9	
Approach LOS	D			B	C	
Queue Length 50th (ft)	77	35	60	123	644	0
Queue Length 95th (ft)	117	119	#176	175	777	36
Internal Link Dist (ft)	323			1273	472	
Turn Bay Length (ft)	160		700			330
Base Capacity (vph)	354	310	232	2760	2198	1108
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.68	0.74	0.23	0.88	0.30

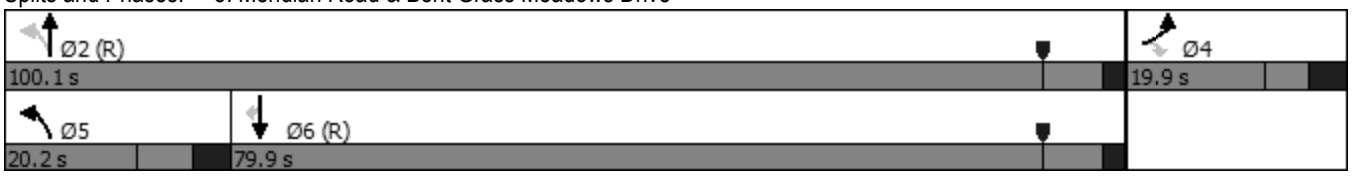
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 5 (4%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 23.6	Intersection LOS: C
Intersection Capacity Utilization 84.0%	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: Meridian Road & Bent Grass Meadows Drive



Intersection	
Int Delay, s/veh	7.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	123	25	315	146	23	260
Future Vol, veh/h	123	25	315	146	23	260
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	195	-	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	134	27	342	159	25	283

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	161	0	977	134
Stage 1	-	-	-	-	134	-
Stage 2	-	-	-	-	843	-
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	-	-	1418	-	278	915
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	422	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1418	-	211	915
Mov Cap-2 Maneuver	-	-	-	-	211	-
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	320	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.7	13.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	720	-	-	1418	-
HCM Lane V/C Ratio	0.427	-	-	0.241	-
HCM Control Delay (s)	13.7	-	-	8.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	2.1	-	-	0.9	-

Intersection	
Intersection Delay, s/veh	4.5
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	416	242	175
Demand Flow Rate, veh/h	424	247	178
Vehicles Circulating, veh/h	3	171	250
Vehicles Exiting, veh/h	415	257	3
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.0	5.1	4.9
Approach LOS	A	A	A

Lane	Left	Bypass	Left	Left
Designated Moves	L	R	TR	LT
Assumed Moves	L	R	TR	LT
RT Channelized		Yield		
Lane Util	1.000		1.000	1.000
Follow-Up Headway, s	2.609		2.609	2.609
Critical Headway, s	4.976	174	4.976	4.976
Entry Flow, veh/h	250	1376	247	178
Cap Entry Lane, veh/h	1376	0.980	1159	1069
Entry HV Adj Factor	0.980	171	0.980	0.982
Flow Entry, veh/h	245	1349	242	175
Cap Entry, veh/h	1348	0.127	1135	1050
V/C Ratio	0.182	3.7	0.213	0.166
Control Delay, s/veh	4.2	A	5.1	4.9
LOS	A	0	A	A
95th %tile Queue, veh	1		1	1

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	8	10	59	75	0
Future Vol, veh/h	0	8	10	59	75	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	9	11	64	82	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	168	82	82	0	-	0
Stage 1	82	-	-	-	-	-
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	822	978	1515	-	-	-
Stage 1	941	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	815	978	1515	-	-	-
Mov Cap-2 Maneuver	815	-	-	-	-	-
Stage 1	933	-	-	-	-	-
Stage 2	937	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	1.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1515	-	978	-	-
HCM Lane V/C Ratio	0.007	-	0.009	-	-
HCM Control Delay (s)	7.4	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	19	44	21	48	35
Future Vol, veh/h	19	19	44	21	48	35
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	21	48	23	52	38

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	202	60	0	0	71	0
Stage 1	60	-	-	-	-	-
Stage 2	142	-	-	-	-	-
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	787	1005	-	-	1529	-
Stage 1	963	-	-	-	-	-
Stage 2	885	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	759	1005	-	-	1529	-
Mov Cap-2 Maneuver	759	-	-	-	-	-
Stage 1	963	-	-	-	-	-
Stage 2	854	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	4.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	865	1529	-
HCM Lane V/C Ratio	-	-	0.048	0.034	-
HCM Control Delay (s)	-	-	9.4	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	5.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	129	37	28	126	21	32
Future Vol, veh/h	129	37	28	126	21	32
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	140	40	30	137	23	35

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	180	99	0	0	167	0
Stage 1	99	-	-	-	-	-
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	810	957	-	-	1411	-
Stage 1	925	-	-	-	-	-
Stage 2	942	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	796	957	-	-	1411	-
Mov Cap-2 Maneuver	796	-	-	-	-	-
Stage 1	925	-	-	-	-	-
Stage 2	926	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	827	1411	-
HCM Lane V/C Ratio	-	-	0.218	0.016	-
HCM Control Delay (s)	-	-	10.6	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.8	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	972	657	224	157	512	240	292	1019	148	246	686	586
Future Volume (vph)	972	657	224	157	512	240	292	1019	148	246	686	586
Satd. Flow (prot)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Satd. Flow (RTOR)			314			250			314			637
Lane Group Flow (vph)	1057	714	243	171	557	261	317	1108	161	267	746	637
Turn Type	Prot	NA	Free	Prot	NA	Perm	Prot	NA	Free	Prot	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			8			Free			Free
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	5.0	15.0		5.0	15.0	
Minimum Split (s)	12.5	22.0		12.5	22.0	22.0	13.5	22.0		13.5	22.0	
Total Split (s)	38.0	42.5		18.5	23.0	23.0	20.6	42.0		17.0	38.4	
Total Split (%)	31.7%	35.4%		15.4%	19.2%	19.2%	17.2%	35.0%		14.2%	32.0%	
Yellow Time (s)	4.0	5.0		4.0	5.0	5.0	5.0	5.0		5.0	5.0	
All-Red Time (s)	3.5	2.0		3.5	2.0	2.0	3.5	2.0		3.5	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.5	7.0		7.5	7.0	7.0	8.5	7.0		8.5	7.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)	30.5	36.3	120.0	10.2	16.0	16.0	12.1	35.0	120.0	8.5	31.4	120.0
Actuated g/C Ratio	0.25	0.30	1.00	0.08	0.13	0.13	0.10	0.29	1.00	0.07	0.26	1.00
v/c Ratio	1.21	0.67	0.15	0.59	1.18	0.61	0.92	1.07	0.10	1.10	0.81	0.40
Control Delay	145.2	40.5	0.2	61.2	147.1	13.6	84.9	90.8	0.1	122.1	66.0	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	145.2	40.5	0.2	61.2	147.1	13.6	84.9	90.8	0.1	122.1	66.0	0.8
LOS	F	D	A	E	F	B	F	F	A	F	E	A
Approach Delay		90.6			97.0			80.4			49.9	
Approach LOS		F			F			F			D	
Queue Length 50th (ft)	~515	256	0	66	~272	8	127	~502	0	~121	319	0
Queue Length 95th (ft)	#646	326	0	103	#387	89	#212	#636	0	m#207	386	0
Internal Link Dist (ft)		1105			882			544			1159	
Turn Bay Length (ft)	720			440			420			460		460
Base Capacity (vph)	872	1069	1583	314	471	427	346	1032	1583	243	926	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.21	0.67	0.15	0.54	1.18	0.61	0.92	1.07	0.10	1.10	0.81	0.40

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 37 (31%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 150
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.21

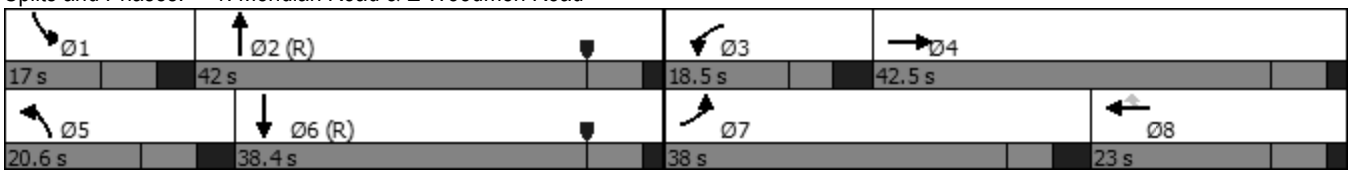
Intersection Signal Delay: 78.2	Intersection LOS: E
Intersection Capacity Utilization 101.7%	ICU Level of Service G
Analysis Period (min) 15	

~ 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.

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

Splits and Phases: 1: Meridian Road & E Woodmen Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	251	140	224	43	95	193	260	1751	161	123	1118	52
Future Volume (vph)	251	140	224	43	95	193	260	1751	161	123	1118	52
Satd. Flow (prot)	3433	1863	1583	1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.610			0.559			0.097			0.073		
Satd. Flow (perm)	2204	1863	1583	1041	1863	1583	181	3539	1583	136	3539	1583
Satd. Flow (RTOR)			255			255			177			245
Lane Group Flow (vph)	273	152	243	47	103	210	283	1903	175	134	1215	57
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	5.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	12.5	14.5	14.5	12.5	14.5	14.5	12.5	22.5	22.5	13.5	22.5	22.5
Total Split (s)	13.0	18.0	18.0	12.5	17.5	17.5	33.2	74.5	74.5	15.0	56.3	56.3
Total Split (%)	10.8%	15.0%	15.0%	10.4%	14.6%	14.6%	27.7%	62.1%	62.1%	12.5%	46.9%	46.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.5	5.5	5.0	5.5	5.5
All-Red Time (s)	3.5	2.5	2.5	3.5	2.5	2.5	3.5	2.0	2.0	3.5	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	6.5	6.5	7.5	6.5	6.5	7.5	7.5	7.5	8.5	7.5	7.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	16.8	13.4	13.4	14.4	10.4	10.4	81.5	67.3	67.3	61.9	56.0	56.0
Actuated g/C Ratio	0.14	0.11	0.11	0.12	0.09	0.09	0.68	0.56	0.56	0.52	0.47	0.47
v/c Ratio	0.75	0.73	0.60	0.30	0.64	0.57	0.75	0.96	0.18	0.82	0.74	0.07
Control Delay	59.5	73.5	12.1	46.3	71.2	9.0	37.1	9.0	0.1	54.4	47.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.5	73.5	12.1	46.3	71.2	9.0	37.1	9.0	0.1	54.4	47.1	0.1
LOS	E	E	B	D	E	A	D	A	A	D	D	A
Approach Delay		45.5			31.7			11.7			45.9	
Approach LOS		D			C			B			D	
Queue Length 50th (ft)	96	118	0	31	78	0	126	333	1	64	521	0
Queue Length 95th (ft)	#152	#238	68	66	#144	39	m102	m216	m1	#174	600	m0
Internal Link Dist (ft)		323			570			1159			643	
Turn Bay Length (ft)	100		100	100		100	100		400	375		400
Base Capacity (vph)	365	208	403	155	170	376	464	1983	965	163	1652	869
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.73	0.60	0.30	0.61	0.56	0.61	0.96	0.18	0.82	0.74	0.07

Intersection Summary

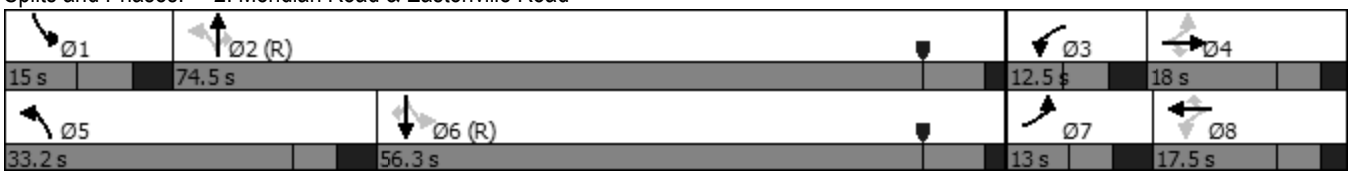
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 89 (74%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated

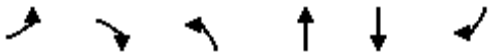
Maximum v/c Ratio: 0.96

Intersection Signal Delay: 27.9	Intersection LOS: C
Intersection Capacity Utilization 93.4%	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.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Meridian Road & Eastonville Road





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	237	168	164	2071	1147	255
Future Volume (vph)	237	168	164	2071	1147	255
Satd. Flow (prot)	3433	1583	1770	3539	3539	1583
Flt Permitted	0.950		0.150			
Satd. Flow (perm)	3433	1583	279	3539	3539	1583
Satd. Flow (RTOR)		183				277
Lane Group Flow (vph)	258	183	178	2251	1247	277
Turn Type	Prot	Perm	pm+pt	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	5.0	15.0	15.0	15.0
Minimum Split (s)	15.5	15.5	13.5	22.5	22.5	22.5
Total Split (s)	22.0	22.0	21.6	98.0	76.4	76.4
Total Split (%)	18.3%	18.3%	18.0%	81.7%	63.7%	63.7%
Yellow Time (s)	4.0	4.0	5.0	5.5	5.5	5.5
All-Red Time (s)	3.5	3.5	3.5	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	8.5	7.5	7.5	7.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	13.3	13.3	90.7	91.7	74.2	74.2
Actuated g/C Ratio	0.11	0.11	0.76	0.76	0.62	0.62
v/c Ratio	0.68	0.54	0.55	0.83	0.57	0.26
Control Delay	60.7	13.3	7.5	9.3	15.2	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.7	13.3	7.5	9.3	15.2	1.9
LOS	E	B	A	A	B	A
Approach Delay	41.0			9.2	12.8	
Approach LOS	D			A	B	
Queue Length 50th (ft)	99	0	9	850	285	0
Queue Length 95th (ft)	144	68	m10	m881	376	35
Internal Link Dist (ft)	323			1273	472	
Turn Bay Length (ft)	160		700			330
Base Capacity (vph)	414	352	373	2704	2187	1084
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.52	0.48	0.83	0.57	0.26

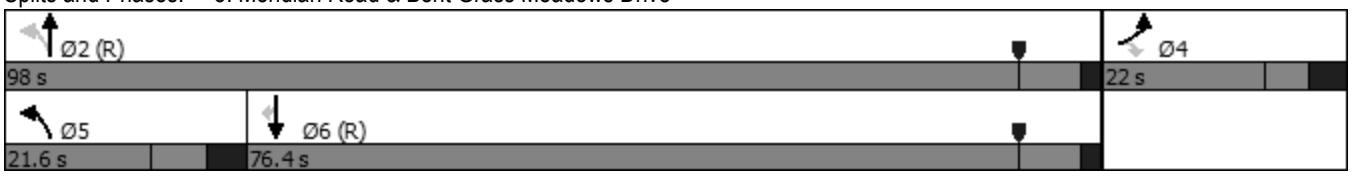
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 27 (23%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 13.6	Intersection LOS: B
Intersection Capacity Utilization 76.5%	ICU Level of Service D
Analysis Period (min) 15	

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

Splits and Phases: 3: Meridian Road & Bent Grass Meadows Drive



Intersection	
Int Delay, s/veh	7.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	147	25	268	142	27	297
Future Vol, veh/h	147	25	268	142	27	297
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	195	-	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	160	27	291	154	29	323

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	187	0	896	160
Stage 1	-	-	-	-	160	-
Stage 2	-	-	-	-	736	-
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	-	-	1387	-	311	885
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	474	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1387	-	246	885
Mov Cap-2 Maneuver	-	-	-	-	246	-
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	374	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.4	14.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	728	-	-	1387	-
HCM Lane V/C Ratio	0.484	-	-	0.21	-
HCM Control Delay (s)	14.5	-	-	8.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	2.7	-	-	0.8	-

Intersection	
Intersection Delay, s/veh	6.3
Intersection LOS	A

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	540	526	161
Demand Flow Rate, veh/h	551	536	164
Vehicles Circulating, veh/h	9	154	395
Vehicles Exiting, veh/h	681	405	9
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.8	8.0	5.7
Approach LOS	A	A	A

Lane	Left	Bypass	Left	Left
Designated Moves	L	R	TR	LT
Assumed Moves	L	R	TR	LT
RT Channelized		Yield		
Lane Util	1.000		1.000	1.000
Follow-Up Headway, s	2.609		2.609	2.609
Critical Headway, s	4.976	156	4.976	4.976
Entry Flow, veh/h	395	1367	536	164
Cap Entry Lane, veh/h	1367	0.980	1179	922
Entry HV Adj Factor	0.980	153	0.981	0.981
Flow Entry, veh/h	387	1340	526	161
Cap Entry, veh/h	1340	0.114	1157	904
V/C Ratio	0.289	3.6	0.455	0.178
Control Delay, s/veh	5.2	A	8.0	5.7
LOS	A	0	A	A
95th %tile Queue, veh	1		2	1

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	21	56	55	0
Future Vol, veh/h	0	10	21	56	55	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	23	61	60	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	167	60	60	0	-	0
Stage 1	60	-	-	-	-	-
Stage 2	107	-	-	-	-	-
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	823	1005	1544	-	-	-
Stage 1	963	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	811	1005	1544	-	-	-
Mov Cap-2 Maneuver	811	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	917	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1544	-	1005	-	-
HCM Lane V/C Ratio	0.015	-	0.011	-	-
HCM Control Delay (s)	7.4	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	18	54	18	39	27
Future Vol, veh/h	18	18	54	18	39	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	20	59	20	42	29

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	182	69	0	0	79	0
Stage 1	69	-	-	-	-	-
Stage 2	113	-	-	-	-	-
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	807	994	-	-	1519	-
Stage 1	954	-	-	-	-	-
Stage 2	912	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	784	994	-	-	1519	-
Mov Cap-2 Maneuver	784	-	-	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	886	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	4.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	877	1519	-
HCM Lane V/C Ratio	-	-	0.045	0.028	-
HCM Control Delay (s)	-	-	9.3	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	111	30	42	99	17	28
Future Vol, veh/h	111	30	42	99	17	28
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	121	33	46	108	18	30

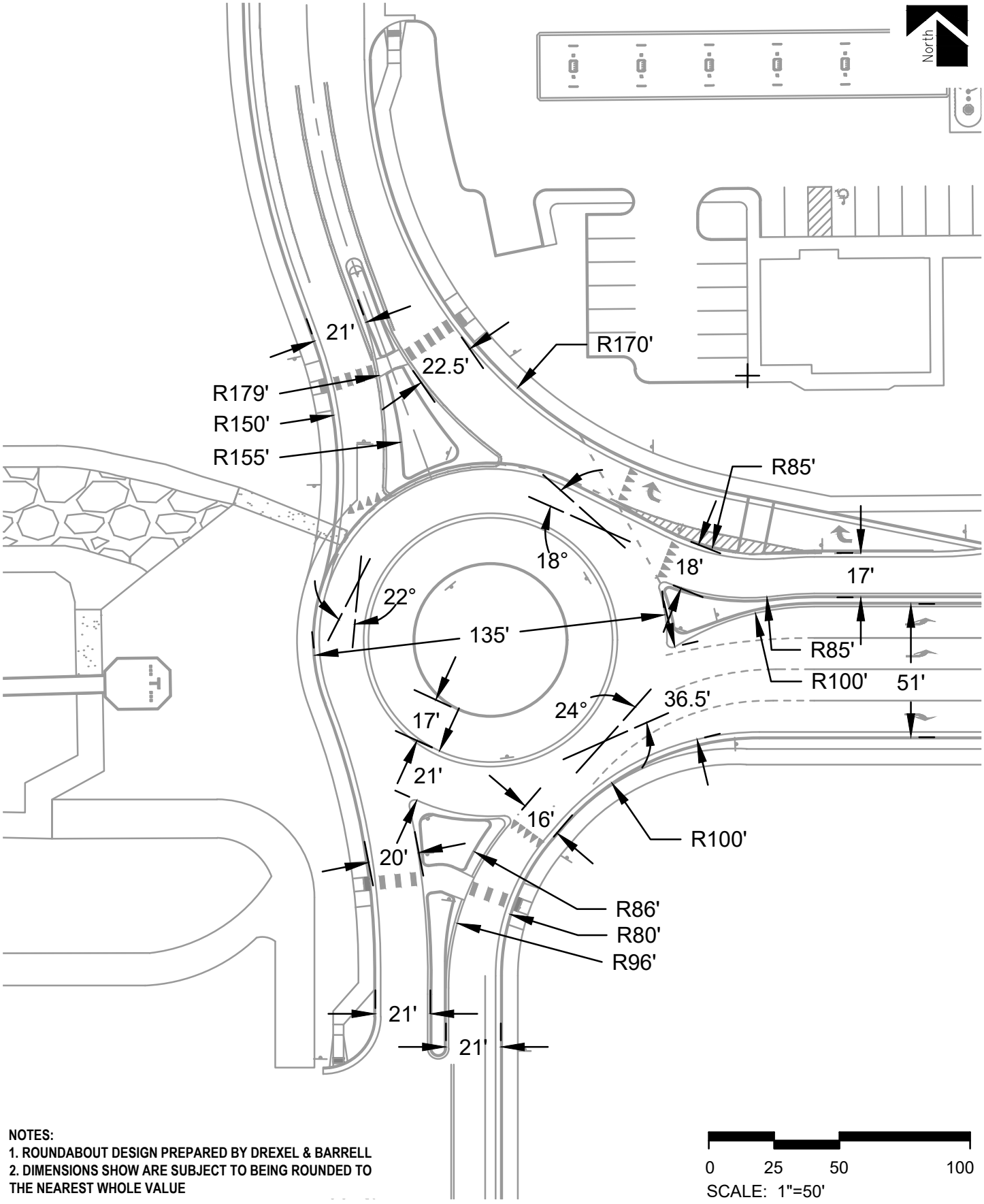
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	166	100	0	0	154	0
Stage 1	100	-	-	-	-	-
Stage 2	66	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	824	956	-	-	1426	-
Stage 1	924	-	-	-	-	-
Stage 2	957	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	813	956	-	-	1426	-
Mov Cap-2 Maneuver	813	-	-	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	945	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	2.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	840	1426	-
HCM Lane V/C Ratio	-	-	0.182	0.013	-
HCM Control Delay (s)	-	-	10.2	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0	-

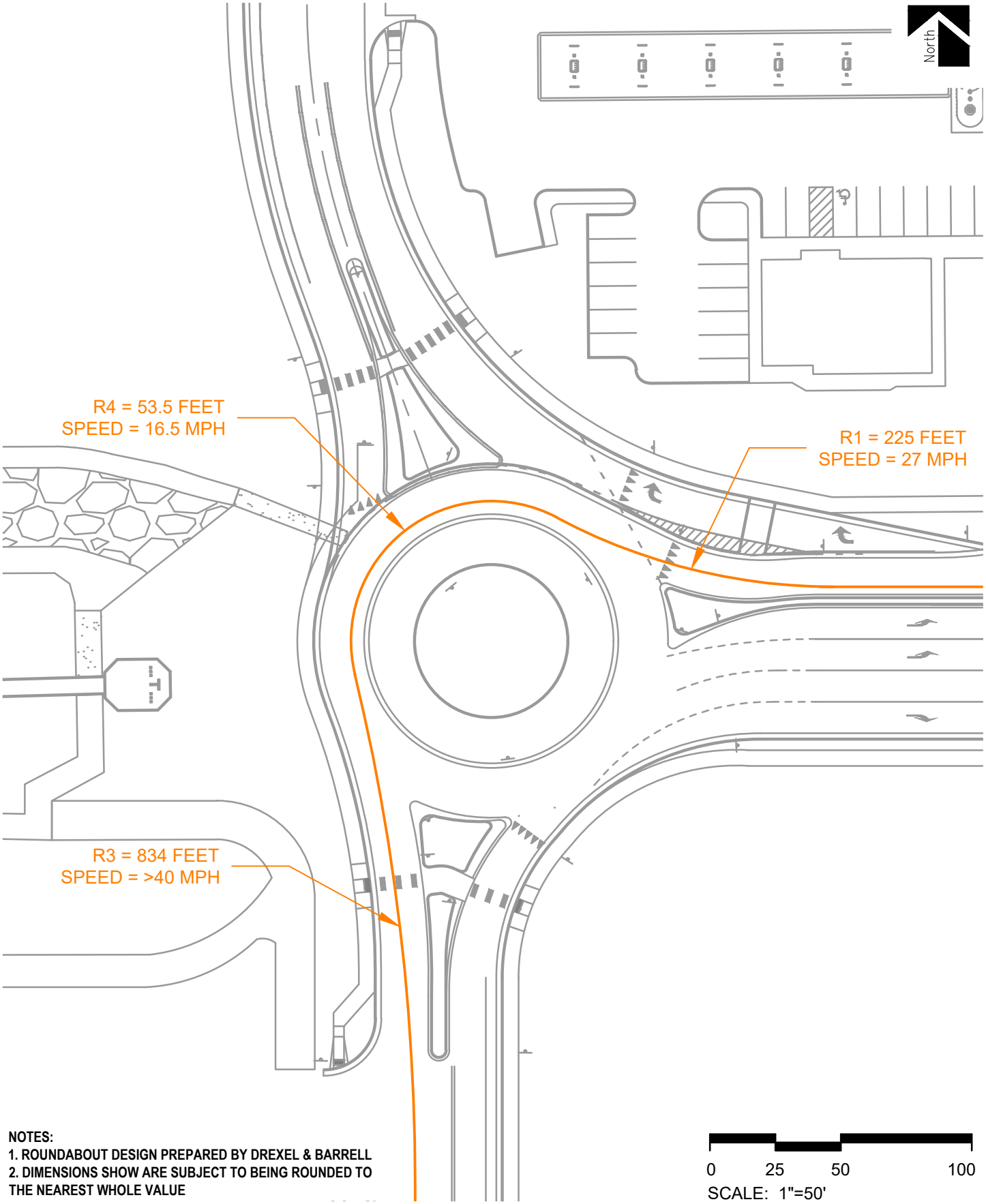
ATTACHMENT C

Roundabout Exhibits



NOTES:
1. ROUNDABOUT DESIGN PREPARED BY DREXEL & BARRELL
2. DIMENSIONS SHOW ARE SUBJECT TO BEING ROUNDED TO THE NEAREST WHOLE VALUE

0 25 50 100
SCALE: 1"=50'



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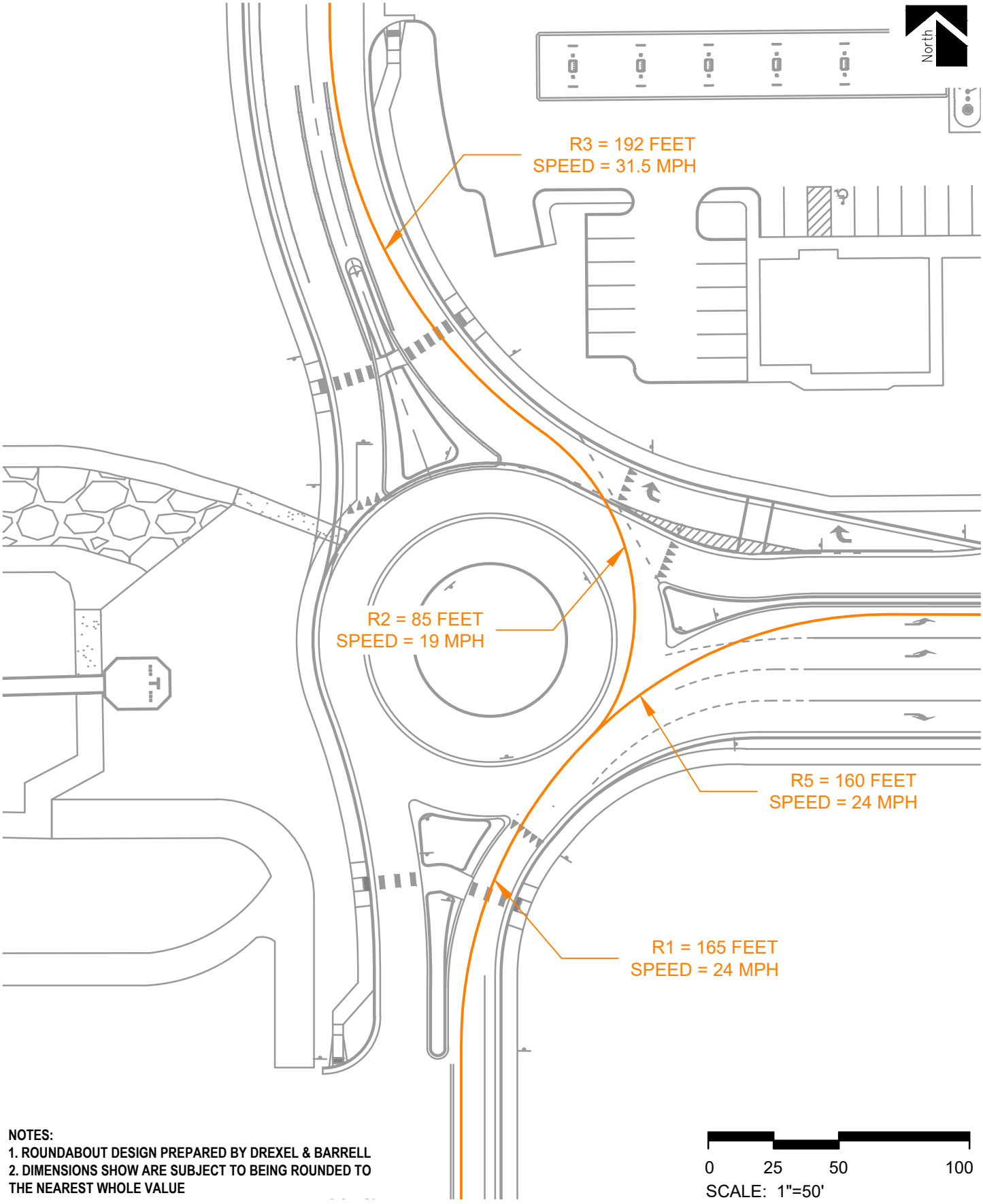
0 25 50 100
SCALE: 1"=50'



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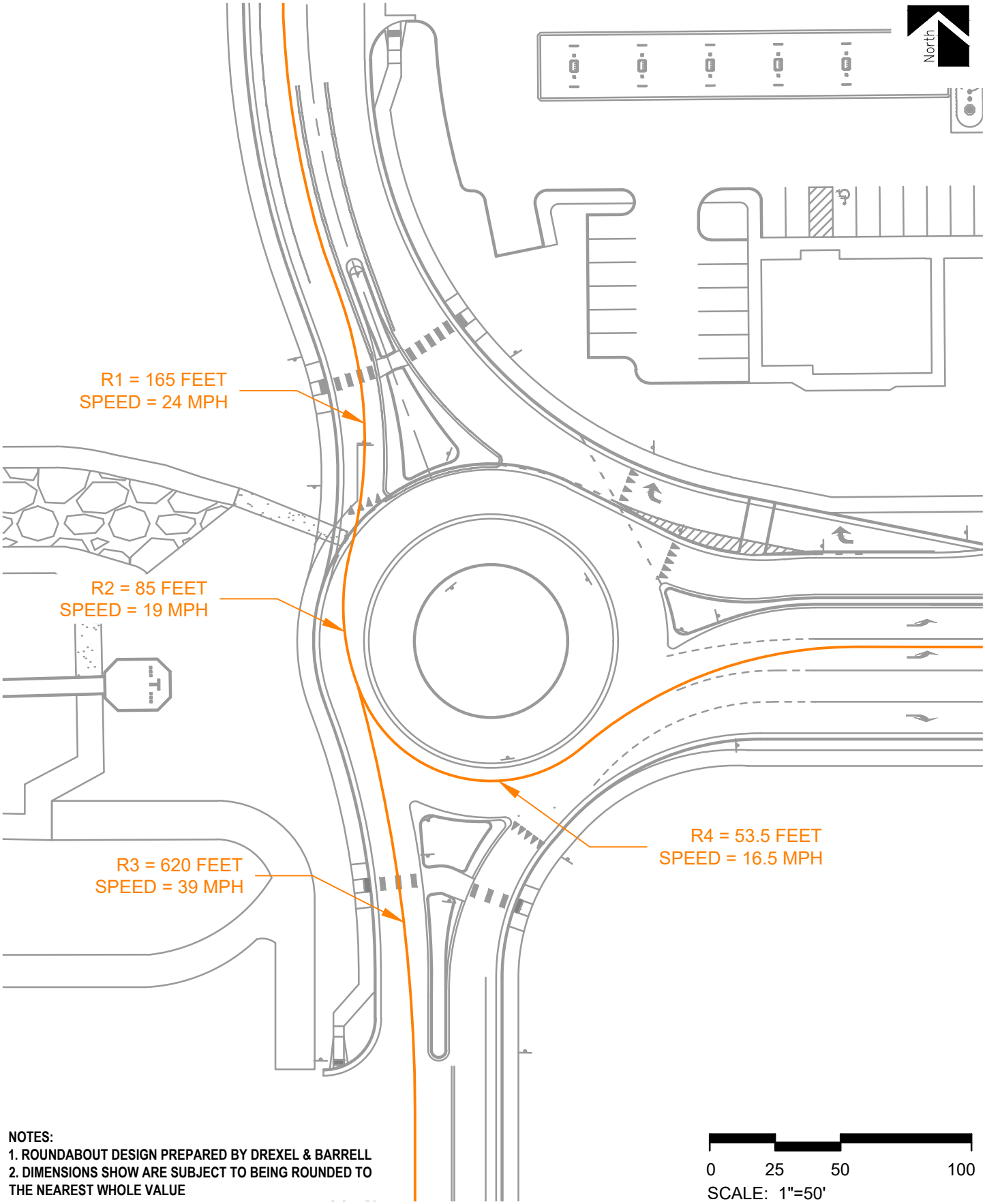
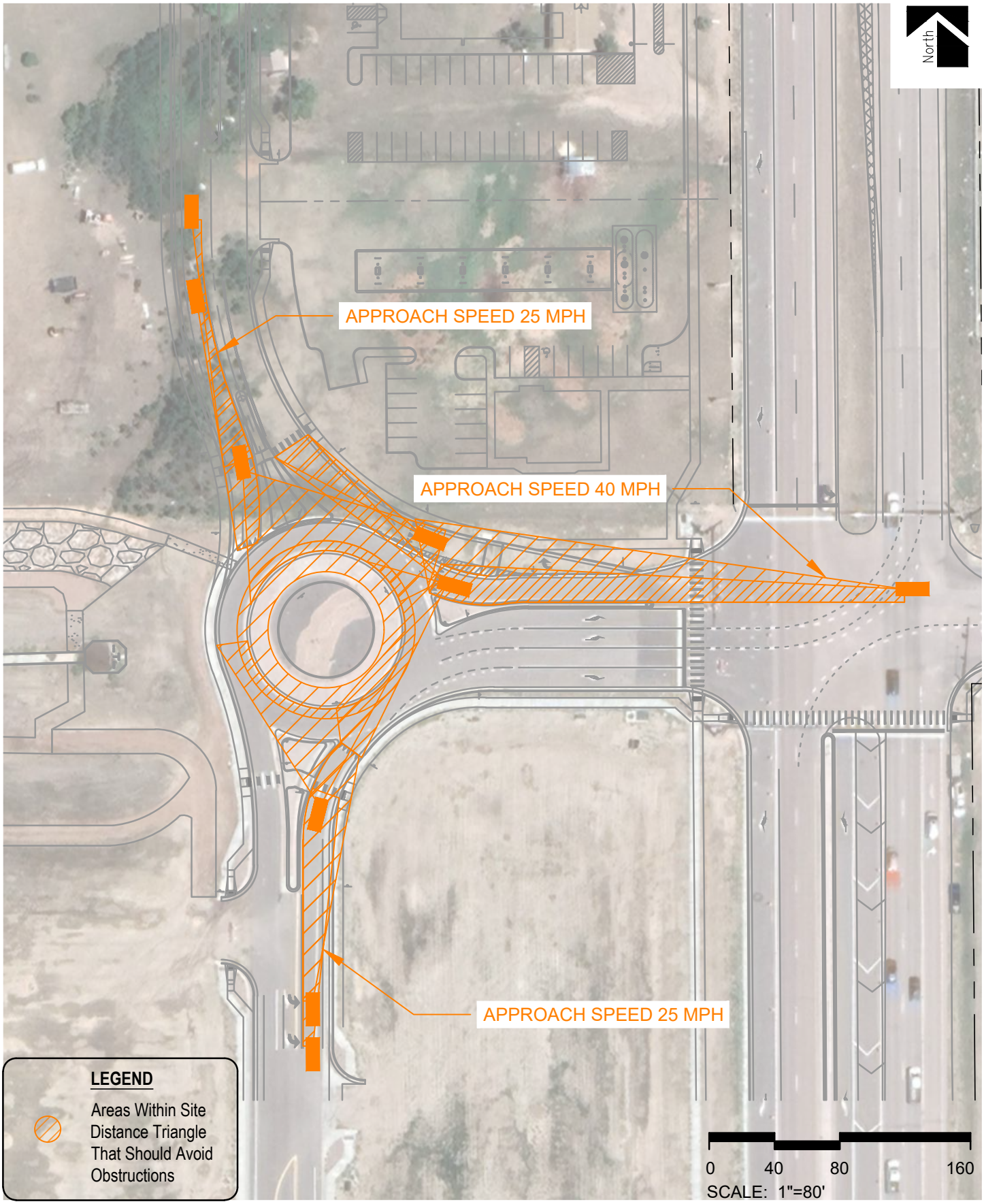
1. ROUNDABOUT DESIGN PREPARED BY DREXEL & BARRELL
2. DIMENSIONS SHOW ARE SUBJECT TO BEING ROUNDED TO THE NEAREST WHOLE VALUE

0 25 50 100
SCALE: 1"=50'



NOTES:
1. ROUNDABOUT DESIGN PREPARED BY DREXEL & BARRELL
2. DIMENSIONS SHOW ARE SUBJECT TO BEING ROUNDED TO THE NEAREST WHOLE VALUE

0 25 50 100
SCALE: 1"=50'


North
APPROACH SPEED 25 MPH
APPROACH SPEED 40 MPH
APPROACH SPEED 25 MPH
LEGEND
Areas Within Site Distance Triangle That Should Avoid Obstructions
0
40
80
160
SCALE: 1"=80'