



June 30, 2025

Ms. Amie Ackerman
PEA Group, Inc.
1849 Pond Run
Auburn Hills, Michigan 48326

**Re: DRP Racer Trust Davison Road Conceptual Industrial Park Development
 Preliminary Traffic Impact Review
 City of Burton, Michigan
 200-12970-25003**

Dear Ms. Ackerman:

Tetra Tech (Tt) has completed our preliminary traffic impact review related to the DRP Racer Trust site located on the south side of Davison Road, east of N. Center Road, in the City of Burton, Genesee County, Michigan. This preliminary review was performed for a conceptual industrial park development that would be feasible on the site, but an actual proposed development with known size and use is not known (or proposed) at this time. According to your office, the conceptual plan for the site is a 975,000 sq. ft. industrial park facility with two access points to Davison Road, one via the existing Donegal Street and the other opposite Covert Road.

This preliminary traffic impact review for the conceptual site design has been performed in accordance with accepted practice within the State of Michigan. Neither the Genesee County Road Commission (GCRC) nor the City of Burton were consulted on their requirements for a traffic evaluation of the site, and if/when a development is proposed for the site, they should be consulted for input on the final traffic evaluation requirements. Furthermore, the recommendations contained in this report should also be considered preliminary and not all-encompassing for the site, with additional roadway/off-site or site improvements possibly being required depending on the final size, configuration, development schedule, and use for the site.

Traffic Counts

Traffic counts were collected during the weekday AM (7:00 – 9:00 a.m.) and PM (4:00 – 6:00 p.m.) peak periods on Wednesday, June 11, 2025, at the intersections of:

- Davison Road and N. Center Road,
- Davison Road and Donegal Street, and
- Davison Road and Covert Road.

The existing traffic counts are shown in Figure 2 attached to this letter.

Background Traffic Scenario

Based on previous guidance provided by the Michigan Department of Transportation (MDOT), a 0.5% annual growth rate was used in forecasting background increases in traffic, which are unrelated to your proposed development. At this time (since neither the GCRC or the City of Burton were consulted), it is not known if there are any other proposed developments within the vicinity of your site, so none were assumed for this review. Based on discussions with your office, a build-out year of 2029 was assumed for this analysis. The background traffic volumes are shown in Figure 3 attached to this letter.

Trip Generation

Using the information and methodologies specified in the latest version of *Trip Generation (11th Edition)* published by the Institute of Transportation Engineers (ITE), Tt forecast the weekday AM and PM peak hour trips associated with the conceptual industrial park development. The results of the trip generation forecast for the conceptual development are provided below in Table 1.

Table 1
ITE Trip Generation for Conceptual Industrial Park Development

Land Use	Land Use Code	Size (sq. ft.)	AM Peak Hour			PM Peak Hour			Week Day
			In	Out	Total	In	Out	Total	
Industrial Park (Vehicle)	130	975,000	269	63	332	73	259	332	3,068
Industrial Park (Truck)			18	21	39	15	24	39	556
TOTAL TRIPS:			287	84	371	88	283	371	3,624

Trip Distribution

The existing traffic volumes from the intersection turning movement counts were used to develop a trip distribution model for the AM and PM peak hours for traffic that would be generated by the conceptual development. The existing traffic patterns indicate the following probable trip distribution for the conceptual development:

AM Peak Hour

30% from and 14% to the north (N. Center Rd.)
 4% from and 1% to the north (Covert Rd.)
 23% from and 43% to the south
 30% from and 12% to the east
 13% from and 30% to the west

PM Peak Hour

22% from and 28% to the north (N. Center Rd.)
 4% from and 6% to the north (Covert Rd.)
 38% from and 27% to the south
 18% from and 22% to the east
 18% from and 17% to the west

The potential trip distribution for the site is shown in Figure 4 attached to this letter. The background traffic volumes were combined with the potential site generated traffic volumes to obtain the total future traffic volumes, which are shown in Figure 5 attached to this letter.

Level of Service Analysis

Level of service (LOS) analyses for existing, background, and total future traffic conditions for the AM and PM peak hours were performed for the intersections of:

- Davison Road and N. Center Road,
- Davison Road and Donegal Street, and
- Davison Road and Covert Road.

The two conceptual site driveways onto Davison Road would connect directly into study intersections (Davison Road with Donegal Street and Covert Road), and were included in the analysis of those intersections under total future traffic conditions for the AM and PM peak hours.

According to the most recent edition (7th Edition) of the Highway Capacity Manual, level of service is a qualitative measure describing operational conditions of a traffic stream or intersection. Level of service ranges from A to F, with LOS A being the best. LOS D is generally considered to be acceptable. Tables 2 and 3 present the criteria for defining the various levels of service for unsignalized and signalized intersections, respectively.

Table 2
Level of Service Criteria (Unsignalized Intersection)

Level of Service	Average Stopped Vehicle Delay (seconds)
A	≤10
B	>10 and ≤ 15
C	>15 and ≤ 25
D	>25 and ≤ 35
E	>35 and ≤ 50
F	> 50

Note: LOS “D” is considered acceptable in urban/suburban areas.

Table 3
Level of Service Criteria (Signalized Intersection)

Level of Service	Average Stopped Delay/Vehicle (seconds)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

Note: LOS "D" is considered acceptable in urban/suburban areas.

The results of the level of service analyses are summarized in Tables 4 through 9 for the intersections listed above.

Signalized Intersection of Davison Road and N. Center Road

The results of the level of service analysis for the intersection of Davison Road and N. Center Road intersection indicate that under existing conditions, all approaches to the intersection operate at a LOS D or better during both peak periods, except for the westbound approach during the AM peak hour which operates at a LOS F, and the northbound approach during the PM peak hour which operates at a LOS E. The overall intersection operates at a LOS E during the AM peak hour and at a LOS D during the PM peak hour.

With the addition of background traffic to the intersection, all approaches to the intersection would operate at a LOS D or better during both peak periods, except for the westbound approach during the AM peak hour which would continue to operate at a LOS F, and the northbound approach during the PM peak hour which would continue to operate at a LOS E. The overall intersection would continue to operate at a LOS E during the AM peak hour and at a LOS D during the PM peak hour.

With implementation of the background improvement of optimizing the traffic signal timing during both the AM and PM peak periods (timing improvements would require the installation of pedestrian pushbuttons on all approaches to the intersection), all approaches to the intersection would operate at a LOS D or better during both the AM and PM peak periods. The overall intersection would operate at a LOS D during both peak hours.

With the addition of conceptual site development traffic to the intersection with the background improvements of optimizing the traffic signal timing during both the AM and PM peak periods, all approaches to the intersection would operate at a LOS D or better during both the AM and PM peak hour. The overall intersection would operate at a LOS D during both peak hours.

Table 4
AM Peak Hour
Level of Service Analysis for Davison Road and N. Center Road

Approach	2025 Existing	2029 No Build	2029 No Build Imp.¹	2029 Build²
Eastbound Davison Road	D (42.0)	D (42.0)	D (41.8)	D (41.2)
Westbound Davison Road	F (109.7)	F (116.3)	D (51.3)	D (54.6)
Northbound N. Center Road	C (30.9)	C (31.2)	C (34.3)	D (38.7)
Southbound N. Center Road	C (34.8)	D (35.3)	D (39.8)	D (38.2)
Overall Intersection	E (59.0)	E (61.3)	D (42.6)	D (43.9)

(XX.X) Average seconds of delay per vehicle.

1. Includes optimization of the traffic signal timing during the AM peak period which would require the installation of pushbuttons at the intersection.

2. Build condition assumes No Build improvements.

Table 5
PM Peak Hour
Level of Service Analysis for Davison Road and N. Center Road

Approach	2025 Existing	2029 No Build	2029 No Build Imp.¹	2029 Build²
Eastbound Davison Road	D (39.5)	D (39.3)	D (39.6)	D (39.7)
Westbound Davison Road	D (48.1)	D (48.3)	D (46.7)	D (50.9)
Northbound N. Center Road	E (56.5)	E (59.8)	D (46.9)	D (52.6)
Southbound N. Center Road	C (31.7)	C (32.0)	C (29.9)	C (30.4)
Overall Intersection	D (46.1)	D (47.4)	D (41.9)	D (44.5)

(XX.X) Average seconds of delay per vehicle.

1. Includes optimization of the traffic signal timing during the PM peak period which would require the installation of pushbuttons at the intersection.

2. Build condition assumes No Build improvements.

Signalized Intersection of Davison Road and Donegal Street

The results of the level of service analysis for the intersection of Davison Road and Donegal Street indicate that under existing conditions, all approaches to the intersection operate at a LOS D or better during the AM peak period and at a LOS C or better during the PM peak period. The overall intersection operates at a LOS A during both peak periods.

The intersection would continue to operate in a manner similar to the existing conditions with the addition of background traffic during both the AM and PM peak hours.

With the addition of conceptual site development traffic to the intersection, all approaches to the intersection would operate at a LOS C or better during both peak periods. The overall intersection would operate at a LOS A during the AM peak hour and at a LOS B during the PM peak hour.

The GCRC requirements for right turn deceleration lanes at intersections, which are based on MDOT standards, were preliminarily evaluated for the Davison Road and Donegal Street intersection with the addition of site-generated traffic (guidance is not provided for evaluation of left-turn lanes at signalized intersections). The peak hour volumes on Davison Road at Donegal Street would be 456 vehicles per hour (vph) in the AM and 628 vph in the PM. At Donegal Street, the peak hour right turn volume would be 214 in the AM and 64 in the PM. Based on GCRC standards, a full right turn deceleration lane would be warranted at Donegal Street. The GCRC requirements can be found in the Appendix materials attached to this memo.

Table 6
AM Peak Hour
Level of Service Analysis for Davison Road and Donegal Street

Approach	Existing	Background	Total Future
Eastbound Davison Road	A (1.3)	A (1.3)	A (2.9)
Westbound Davison Road	A (1.4)	A (1.5)	A (3.4)
Northbound Donegal Street	D (36.2)	D (36.2)	C (30.3) ¹
Overall Intersection	A (2.2)	A (2.2)	A (5.9)

(XX.X) Average seconds of delay per vehicle.

1. Improved operation due to increased volume on approach, resulting in longer actuation/duration of Donegal Street approach, resulting in lower average delay of approach.

Table 7
PM Peak Hour
Level of Service Analysis for Davison Road and Donegal Street

Approach	Existing	Background	Total Future
Eastbound Davison Road	A (2.9)	A (3.0)	A (5.7)
Westbound Davison Road	A (3.0)	A (3.0)	A (6.1)
Northbound Donegal Street	C (30.1)	C (30.1)	C (29.9) ¹
Overall Intersection	A (5.9)	A (5.8)	B (12.4)

(XX.X) Average seconds of delay per vehicle.

1. Improved operation due to increased volume on approach, resulting in longer actuation/duration of Donegal Street approach, resulting in lower average delay of approach.

Unsignalized Intersection of Davison Road and Covert Road

The results of the level of service analysis for the intersection of Davison Road and Covert Road indicate that under existing conditions, all approaches to the intersection operate at a LOS B or better during the AM peak hour and at a LOS C or better during the PM peak hour.

The intersection would continue to operate in a manner similar to the existing conditions with the addition of background traffic during both the AM and PM peak hours.

With the addition of site generated traffic to the intersection, all approaches would operate at a LOS C or better during both the AM and PM peak hours.

The GCRC requirements for left turn lanes and right turn deceleration lanes at intersections, which are based on MDOT standards, were preliminarily evaluated for the conceptual east site driveway opposite Covert Road. The peak hour volumes (approaching for right turns and opposing for left turns) on Davison Road at Covert Road\conceptual east site driveway would be 225 vehicles per hour (vph) in the AM and 594 vph in the PM. At the conceptual east site driveway, the peak hour right turn volume would be 18 in the AM and 7 in the PM, and the peak hour left turn volume would be 28 in the AM and 5 in the PM. Based on GCRC standards, only a right turn radius but a left turn lane would be warranted at the conceptual east site driveway. The GCRC requirements can be found in the Appendix materials attached to this memo.

Table 8
AM Peak Hour
Level of Service Analysis for Davison Road and Covert Road

Approach	Existing	Background	Total Future
Eastbound Davison Road	A (0.54)	A (0.54)	A (0.51)
Westbound Davison Road	A (-)	A (-)	A (0.39)
Northbound Site Driveway			C (16.35)
Southbound Covert Road	B (14.36)	B (14.54)	C (20.53)

(XX.X) Average seconds of delay per vehicle.

(-) Approach is unopposed and experiences no delay.

Table 9
PM Peak Hour
Level of Service Analysis for Davison Road and Covert Road

Approach	Existing	Background	Total Future
Eastbound Davison Road	A (1.69)	A (1.72)	A (1.80)
Westbound Davison Road	A (-)	A (-)	A (0.10)
Northbound Site Driveway			C (21.19)
Southbound Covert Road	C (16.08)	C (16.52)	C (22.92)

(XX.X) Average seconds of delay per vehicle.

(-) Approach is unopposed and experiences no delay.

Conclusions and Recommendations

This preliminary review was performed for the DRP Racer Trust site with a conceptual 975,000 sq. ft. industrial park development, assumed fully operational by 2029, located on the south side of Davison Road east of N. Center Road, in the City of Burton, Genesee County. For the purposes of this review, the conceptual site was assumed to have two site access points to Davison Road, one via the existing Donegal Street and the other opposite Covert Road.

The conceptual manufacturing development would be forecast to generate 371 new trips during the AM peak hour (287 inbound and 84 outbound from the site) and 371 new trips during the PM peak hour (88 inbound and 283 outbound from the site).

AM and PM peak hour operational analyses of the following intersections were performed for the Existing, Background, and Total Future conditions.

- Davison Road and N. Center Road,
- Davison Road and Donegal Street, and
- Davison Road and Covert Road.

The two conceptual site driveways onto Davison Road would connect directly into study intersections (Davison Road with Donegal Street and Covert Road), and were included in the analysis of those intersections under total future traffic conditions for the AM and PM peak hours.

For the conceptual 975,000 sq. ft. industrial park development, this preliminary operational review indicated that all approaches to the signalized intersection of Davison Road and N. Center Road currently operate at a LOS D or better during the AM and PM peak hours, except for the westbound approach during the AM peak hour, which operates at a LOS F, and the northbound approach operates at a LOS E during the PM peak hour. The overall intersection operates at a LOS E during the AM peak hour and at a LOS D during the PM peak hour.

The intersection of Davison Road and N. Center Road would continue to operate similar to existing conditions with the addition of background traffic, but by optimizing the traffic signal timing during the AM and PM peak hours (which would require the installation of pushbuttons on all approaches), all approaches would operate at a LOS D or better during both the AM and PM peak hours, and the overall intersection would operate at a LOS D during both peak periods. With the addition of site generated traffic, all approaches would operate at a LOS D or better during both the AM and PM peak hours, and the overall intersection would operate at a LOS D during both peak periods.

The study intersections of Davison Road with Donegal Street and Covert Road currently and would continue to operate at acceptable levels. The two conceptual site driveways would operate at acceptable levels under Total Future conditions as part of the Davison Road intersections with Donegal Street and Covert Road.

A preliminary review of GCRC standards indicated that at the Donegal Street intersection a full right-turn lane would be warranted, and at the east site driveway opposite Covert Road a left turn lane



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would be warranted. While turn lane warrant guidance is not available for signalized intersections, it should be mentioned that a westbound left turn lane at the signalized intersection of Davison Road and Donegal Street may be required as part of site plan approval, and should be accounted for during the site development process.

This preliminary traffic impact review of the DRP Racer Trust site with a conceptual 975,000 sq. ft. industrial park development has been performed in accordance with accepted practice within the State of Michigan. Neither the Genesee County Road Commission (GCRC) nor the City of Burton were consulted on their requirements for a traffic evaluation of the site, and if/when a development is proposed for the site, they should be consulted for input on the final traffic evaluation requirements. Furthermore, the recommendations contained in this report should also be considered preliminary and not all-encompassing for the site, with additional roadway/off-site or site improvements potentially being required depending on the final size, configuration, development schedule, and use for the site.

We trust that this letter fulfills your current transportation needs regarding your site. If you have any questions, please feel free to call our office at (810)-220-2112.

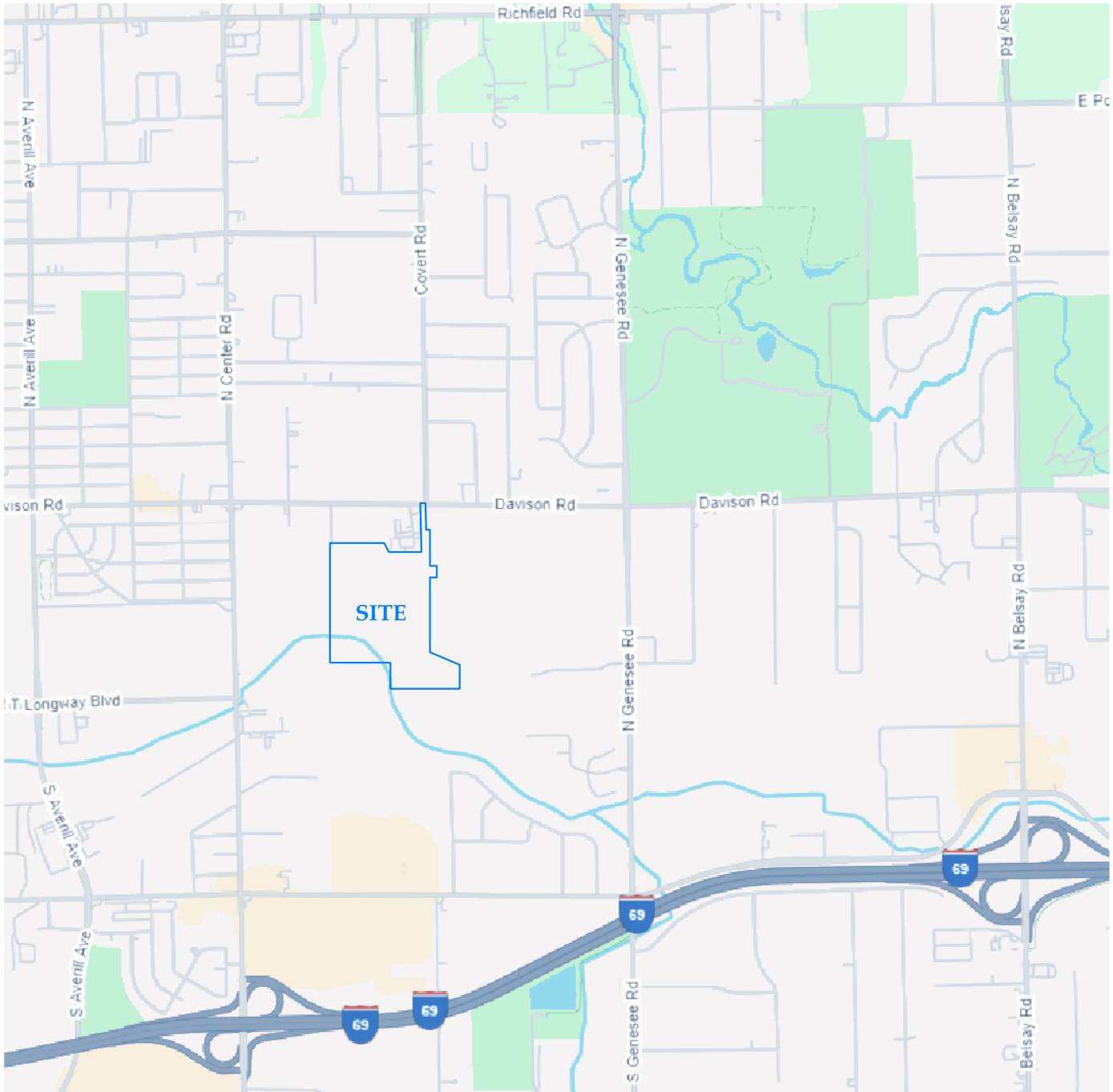
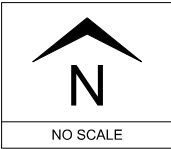
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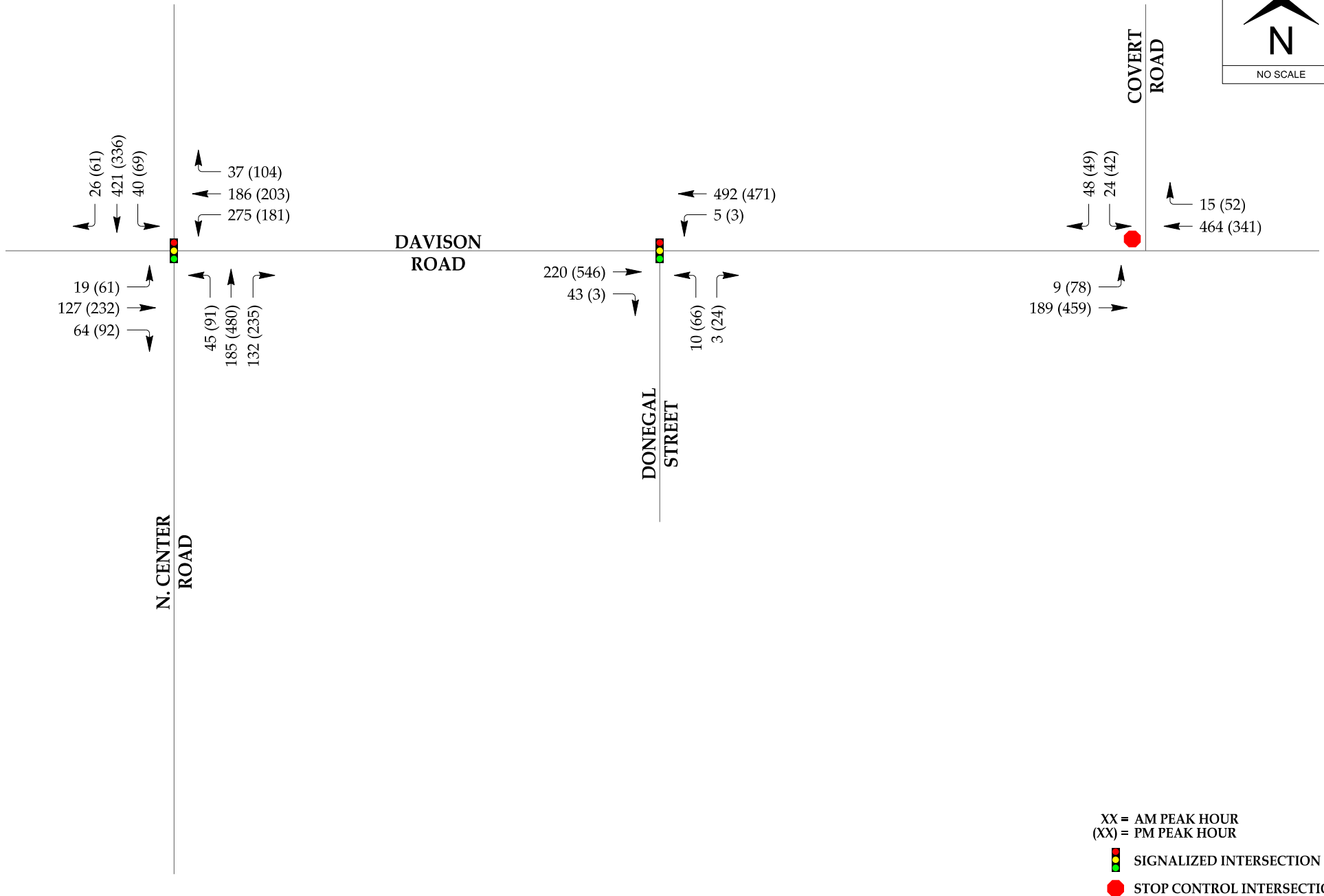
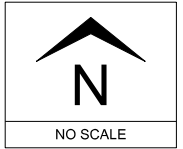
Kyle W. Ramakers, P.E., PTOE
Transportation Engineer

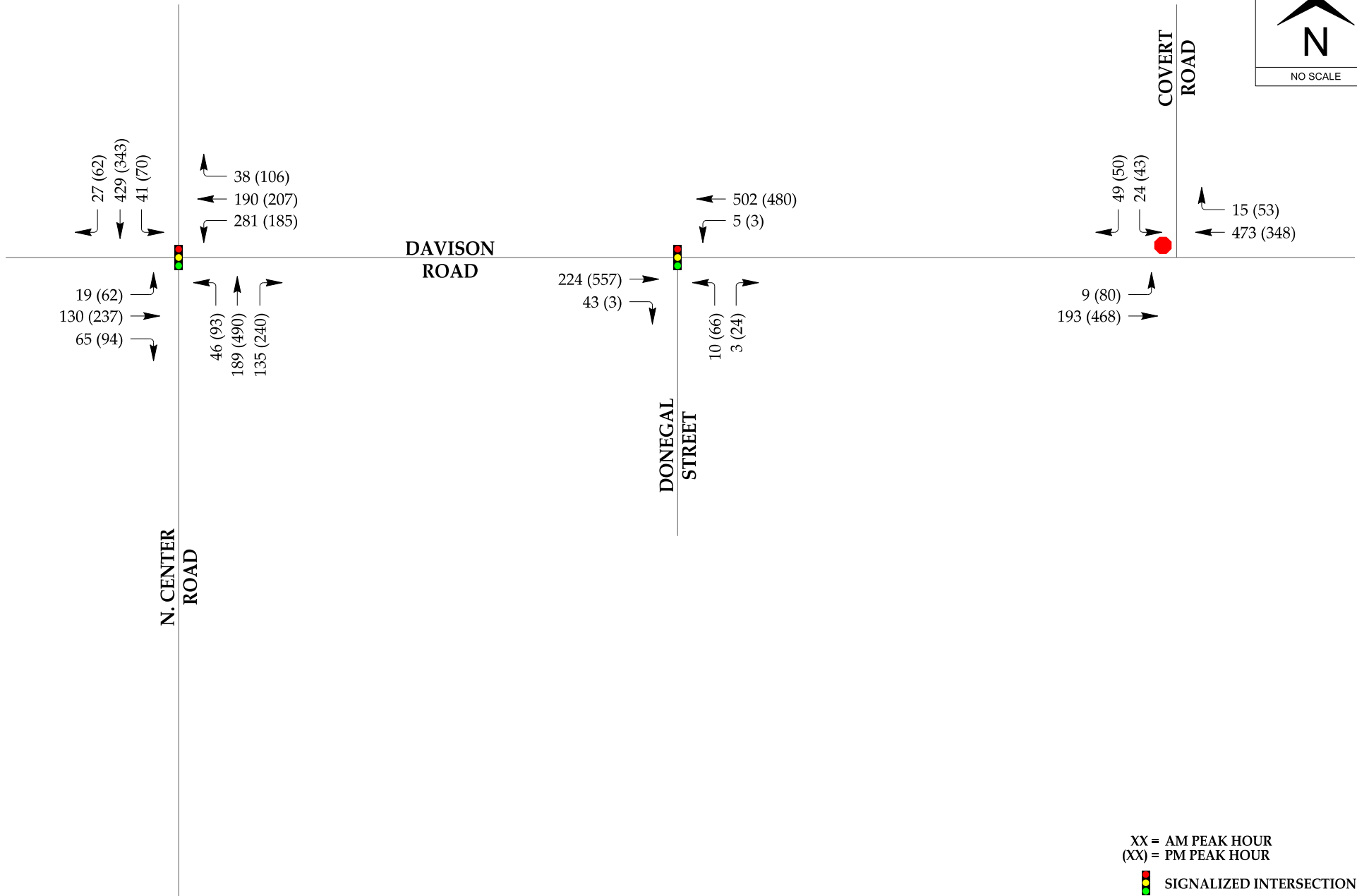
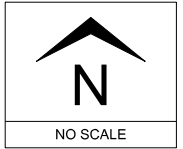
Attachments

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REPORT FIGURES



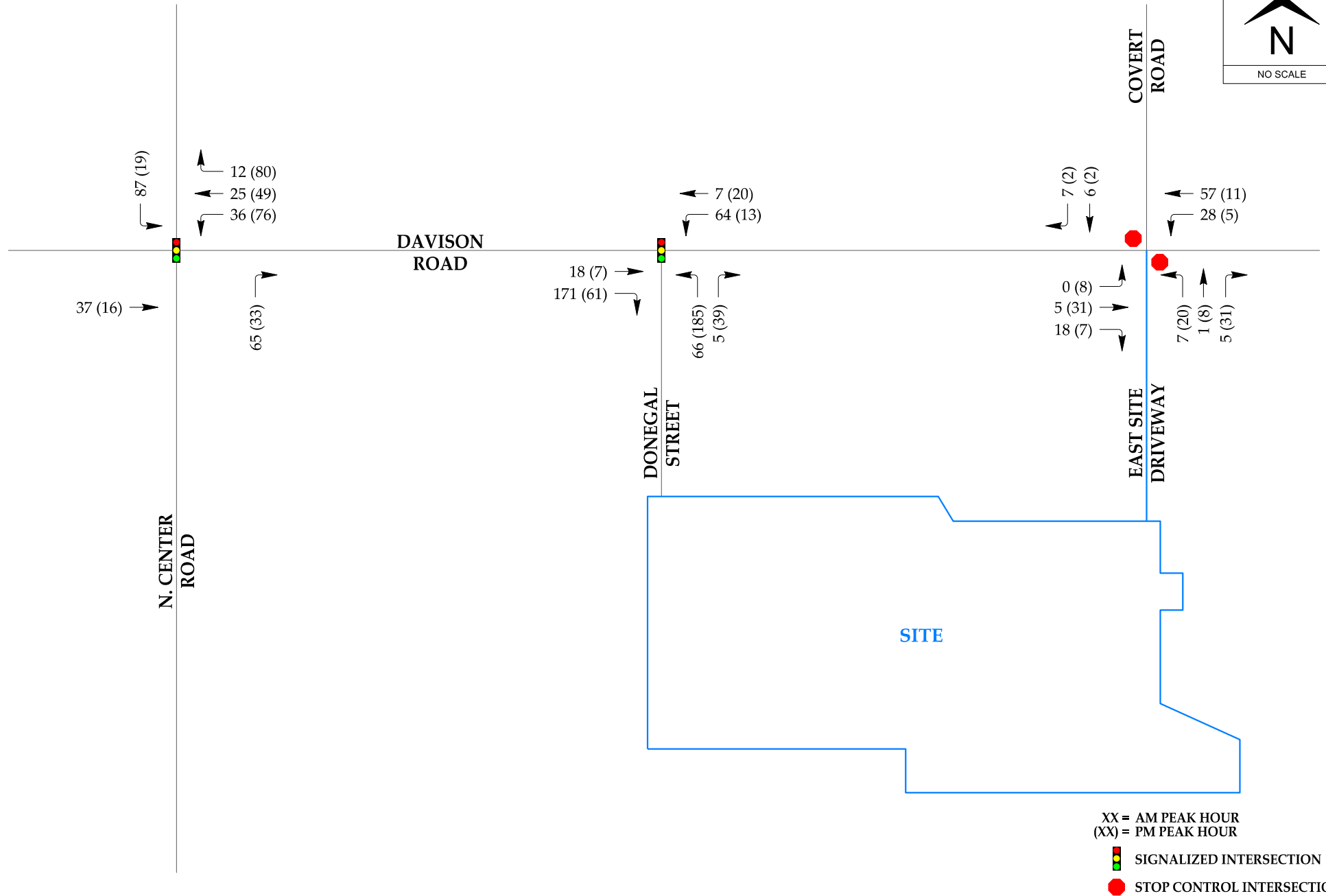
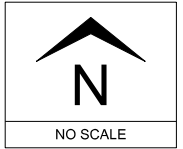


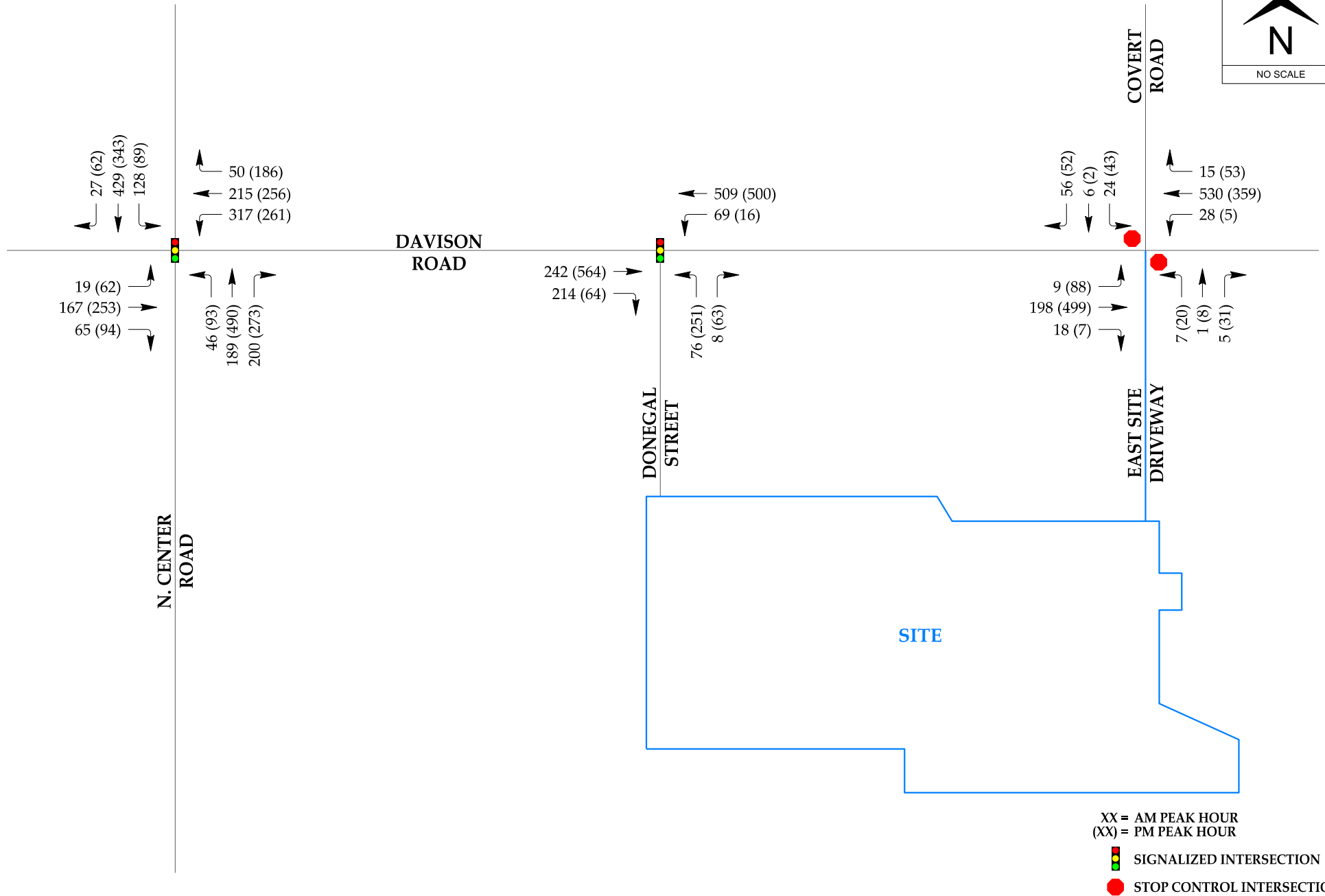
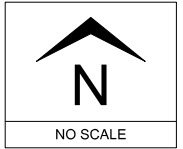


XX = AM PEAK HOUR
 (XX) = PM PEAK HOUR

 SIGNALIZED INTERSECTION

 STOP CONTROL INTERSECTION





**TRAFFIC COUNTS
AND PROJECTIONS**

TRIP GENERATION FORECASTS

Intersection	Time period	Year	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Davison Road & Center Road A.M.	A.M. Peak 03/15/17	2025	PHF	0.77			0.82			0.86			0.82			
			Existing	19	127	64	275	186	37	45	185	132	40	421	26	
		2029	Background	19	130	65	281	190	38	46	189	135	41	429	27	
		Total Background			19	130	65	281	190	38	46	189	135	41	429	27
		Site Generated				37		36	25	12		65	87			
		Total Future			19	167	65	317	215	50	46	189	200	128	429	27
				6%			5%			7%			2%			

Growth Rate: 0.5%

OK Buildout Year: 2029
Count Year: 2025

Intersection	Time period	Year	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Davison Road & Donegal Street A.M.	A.M. Peak 03/15/17	2025	PHF	0.82			0.74			0.65			#DIV/0!			
			Existing	0	220	43	5	492	0	10	0	3	0	0	0	
		2029	Background	0	224	43	5	502	0	10	0	3	0	0	0	
		Total Background			0	224	43	5	502	0	10	0	3	0	0	0
		Site Generated				18	171	64	7		66		5			
		Total Future			0	242	214	69	509	0	76	0	8	0	0	0
				11%			4%			38%			#DIV/0!			

OK

Intersection	Time period	Year	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Davison Road & Covert Road A.M.	A.M. Peak 03/15/17	2025	PHF	0.81			0.70			#DIV/0!			0.78			
			Existing	9	189	0	0	464	15	0	0	0	24	0	48	
		2029	Background	9	193	0	0	473	15	0	0	0	24	0	49	
		Total Background			9	193	0	0	473	15	0	0	0	24	0	49
		Site Generated			0	5	18	28	57		7	1	5		6	7
		Total Future			9	198	18	28	530	15	7	1	5	24	6	56
						12%			4%			#DIV/0!			3%	

OK

Intersection	Time period	Year	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Davison Road & Center Road P.M.	P.M. Peak 03/15/17	2025	PHF	0.82			0.88			0.92			0.94		
			Existing	61	232	92	181	203	104	91	480	235	69	336	61
		2029	Background	62	237	94	185	207	106	93	490	240	70	343	62
		Total Background		62	237	94	185	207	106	93	490	240	70	343	62
		Site Generated			16		76	49	80			33	19		
		Total Future		62	253	94	261	256	186	93	490	273	89	343	62
				0%			3%			2%			2%		

Growth Rate: 0.5%

OK Buildout Year: 2029
Count Year: 2025

Intersection	Time period	Year	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Davison Road & Donegal Street P.M.	P.M. Peak 03/15/17	2025	PHF	0.87			0.76			0.52			#DIV/0!			
			Existing	0	546	3	3	471	0	66	0	24	0	0	0	
		2029	Background	0	557	3	3	480	0	66	0	24	0	0	0	
		Total Background			0	557	3	3	480	0	66	0	24	0	0	0
		Site Generated				7	61	13	20		185		39			
		Total Future			0	564	64	16	500	0	251	0	63	0	0	0
				3%			3%			3%			#DIV/0!			

OK

Intersection	Time period	Year	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Davison Road & Covert Road P.M.	P.M. Peak 03/15/17	2025	PHF	0.91			0.94			#DIV/0!			0.81			
			Existing	78	459	0	0	341	52	0	0	0	42	0	49	
		2029	Background	80	468	0	0	348	53	0	0	0	43	0	50	
		Total Background			80	468	0	0	348	53	0	0	0	43	0	50
		Site Generated			8	31	7	5	11		20	8	31		2	2
		Total Future			88	499	7	5	359	53	20	8	31	43	2	52
				2%			2%			#DIV/0!			3%			

OK

	Land Use		AM Peak Hour			PM Peak Hour			Week	
Land Use	Code	Size	Enter	Exit	Total	Enter	Exit	Total	Day	
Industrial Park-Vehicle	130	975,000	sq. ft.	269	63	332	73	259	332	3068
Industrial Park-Truck				18	21	39	15	24	39	556
Total Trips				287	84	371	88	283	371	3624

Direction	AM Peak Hour					
From North (Center)	487	0.302484	30%	86.813	87	
From North (Covert)	72	0.04472	4%	12.835	13	
From South (Center)	362	0.224845	23%	64.530	65	
From East (Davison)	479	0.297516	30%	85.387	85	
From West (Davison)	210	0.130435	13%	37.435	37	
	1610	1.000	100%	287	287	

PM Peak Hour					
466	0.217655	22%	19.154	19	
91	0.042504	4%	3.740	4	
806	0.37646	38%	33.128	33	
393	0.183559	18%	16.153	16	
385	0.179823	18%	15.824	16	
2141	1.000	100%	88	88	

Direction	AM Peak Hour					
To North (Center)	241	0.137714	14%	11.568	12	
To North (Covert)	24	0.013714	1%	1.152	1	
To South (Center)	760	0.434286	43%	36.480	36	
To East (Davison)	213	0.121714	12%	10.224	10	
To West (Davison)	512	0.292571	30%	24.576	25	
	1750	1.000	100%	84	84	

PM Peak Hour					
645	0.283516	28%	80.235	80	
130	0.057143	6%	16.171	16	
609	0.267692	27%	75.757	76	
501	0.22022	22%	62.322	62	
390	0.171429	17%	48.514	49	
2275	1.000	100%	283	283	

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PHF	0.97
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SIGNAL

WBLane7

NBLane7	NBLane6	NBLane5	NBLane4	NBLane3	NBLane2	NBLane1	SIGNAL
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Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turn	WB RTOR	Total	Hourly Totals
7:00 AM	10	39	34	0		8	90	1	0		3	29	15	0		86	59	7	0		381	1557
7:15 AM	4	51	33	0		11	97	3	0		5	34	14	0		103	43	5	0		403	
7:30 AM	18	45	23	0		11	128	9	0		2	20	20	0		51	44	12	0		383	
7:45 AM	13	50	42	0		10	106	13	0		9	44	15	0		35	40	13	0		390	1557
8:00 AM	22	61	33	0		10	80	14	0		7	36	21	0		50	32	14	0		380	1556
8:15 AM	10	45	39	0		19	118	17	0		15	33	15	0		34	32	10	0		387	1540
8:30 AM	9	54	37	0		10	109	11	0		7	25	15	0		47	42	19	0		385	1542
8:45 AM	12	56	36	0		11	93	10	0		5	28	13	0		36	36	20	0		356	1508
	45	185	132	0	0 PHF: 0.86	40	421	26	0	0 PHF: 0.82	19	127	64	0	0 PHF: 0.77	275	186	37	0	0 PHF: 0.82	1557	

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
7:00 AM	0	1	6	0	1	0	1	3	0	1	2	0	15
7:15 AM	0	0	4	0	3	0	0	2	1	2	2	1	15
7:30 AM	0	1	3	0	2	0	0	2	0	7	2	0	17
7:45 AM	0	1	8	0	4	0	0	3	0	5	2	1	24
8:00 AM	0	3	0	0	1	0	0	3	1	3	1	0	12
8:15 AM	0	4	9	1	3	0	0	0	1	7	3	1	29
8:30 AM	1	4	6	0	3	0	0	1	2	7	5	1	30
8:45 AM	0	3	6	1	2	0	0	1	0	0	1	0	14
	7%			2%			6%			5%			

Time Period	South Leg	North Leg	West Leg	East Leg	Total
7:00 AM	0	1	0	0	1
7:15 AM	0	0	0	0	0
7:30 AM	1	0	2	0	3
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	1	0	0	0	1
8:30 AM	0	1	0	0	1
8:45 AM	2	0	0	0	2

[illegible]

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PHF 0.9

	NBLane7	NBLane6	NBLane5	NBLane4	NBLane3	NBLane2	NBLane1	SIGNAL
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Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turn	WB RTOR	Total	Hourly Totals
4:00 PM	32	133	59	0		16	89	13	0		9	63	23	0		58	87	27	0		609	2145
4:15 PM	22	123	52	0		17	91	14	0		10	48	22	0		43	53	26	0		521	
4:30 PM	23	106	59	0		15	81	14	0		16	46	26	0		57	54	27	0		524	
4:45 PM	20	110	57	0		19	79	14	0		11	60	16	0		32	43	25	0		486	2140
5:00 PM	20	133	65	0		16	93	15	0		16	72	30	0		49	66	22	0		597	2128
5:15 PM	28	131	54	0		19	83	18	0		18	54	20	0		43	40	30	0		538	2145
5:30 PM	20	104	36	0		11	82	18	0		8	65	24	0		39	45	16	0		468	2089
5:45 PM	17	102	44	0		9	82	15	0		15	43	22	0		36	44	15	0		444	2047
	91	480	235	0	0 PHF: 0.92	69	336	61	0	0 PHF: 0.94	61	232	92	0	0 PHF: 0.82	181	203	104	0	0 PHF: 0.88	2145	

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
4:00 PM	0	3	9	1	2	1	0	2	0	3	3	0	24
4:15 PM	0	4	1	0	2	0	0	0	0	0	0	0	7
4:30 PM	1	1	0	0	2	1	0	0	0	7	0	0	12
4:45 PM	0	3	4	0	2	0	0	0	0	0	1	0	10
5:00 PM	0	1	3	2	4	0	0	1	0	4	1	1	17
5:15 PM	1	1	2	0	0	0	0	0	0	1	2	0	7
5:30 PM	0	1	3	0	0	0	0	1	0	2	1	0	8
5:45 PM	0	5	3	0	0	0	1	2	0	3	2	0	16
	2%			2%			0%			3%			

Time Period	South Leg	North Leg	West Leg	East Leg	Total
4:00 PM	0	0	0	0	0
4:15 PM	1	0	1	0	2
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	1	1
5:45 PM	0	0	0	0	0

[illegible]

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PHF	0.82
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SIGNAL

SIGNAL

WBLane7

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turn	WB RTOR	Total	Hourly Totals
7:00 AM	2	0	1	0		0	0	0	0		0	52	14	0		2	165	0	0		236	773
7:15 AM	3	0	1	0		0	0	0	0		0	50	22	0		3	136	0	0		215	
7:30 AM	1	0	0	0		0	0	0	0		0	41	4	0		0	104	0	0		150	
7:45 AM	4	0	1	0		0	0	0	0		0	77	3	0		0	87	0	0		172	773
8:00 AM	0	0	0	0		0	0	0	0		0	79	1	0		1	86	0	0		167	704
8:15 AM	0	0	2	0		0	0	0	0		0	79	3	0		0	72	0	0		156	645
8:30 AM	0	0	1	0		0	0	0	0		0	62	3	0		1	90	0	0		157	652
8:45 AM	1	0	0	0		0	0	0	0		0	57	3	0		0	81	0	0		142	622
	10	0	3	0	0	0	0	0	0	0	0	220	43	0	0	5	492	0	0	0	773	
	PHF: 0.65					PHF: #DIV/0!					PHF: 0.82					PHF: 0.74						

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
7:00 AM	0	0	0	0	0	0	0	7	2	0	4	0	13
7:15 AM	1	0	0	0	0	0	0	6	1	0	4	0	12
7:30 AM	1	0	0	0	0	0	0	1	1	0	6	0	9
7:45 AM	2	0	1	0	0	0	0	10	2	0	5	0	20
8:00 AM	0	0	0	0	0	0	0	3	0	0	4	0	7
8:15 AM	0	0	0	0	0	0	0	8	1	0	10	0	19
8:30 AM	0	0	1	0	0	0	0	6	0	0	11	0	18
8:45 AM	0	0	0	0	0	0	0	6	1	0	1	0	8
	38%			#DIV/0!			11%			4%			

Time Period	South Leg	North Leg	West Leg	East Leg	Total
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0

[illegible]

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PHF 0.78

SIGNAL

SIGNAL

WBLane7

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turn	WB RTOR	Total	Hourly Totals
4:00 PM	35	0	8	0		0	0	0	0		0	155	3	0		2	154	0	0		357	1113
4:15 PM	2	0	2	0		0	0	0	0		0	132	0	0		0	116	0	0		252	
4:30 PM	29	0	14	0		0	0	0	0		0	122	0	0		1	105	0	0		271	
4:45 PM	0	0	0	0		0	0	0	0		0	137	0	0		0	96	0	0		233	1113
5:00 PM	3	0	2	0		0	0	0	0		0	142	2	0		0	114	0	0		263	1019
5:15 PM	1	0	0	0		0	0	0	0		0	129	1	0		0	100	0	0		231	998
5:30 PM	1	0	0	0		0	0	0	0		0	115	0	0		0	91	0	0		207	934
5:45 PM	0	0	0	0		0	0	0	0		0	102	0	0		0	91	0	0		193	894
	66	0	24	0	0	0	0	0	0	0	0	546	3	0	0	3	471	0	0	0	1113	
	PHF: 0.52					PHF: #DIV/0!					PHF: 0.87					PHF: 0.76						

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
4:00 PM	0	0	0	0	0	0	0	7	3	0	5	0	15
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:30 PM	3	0	0	0	0	0	0	1	0	1	5	0	10
4:45 PM	0	0	0	0	0	0	0	3	0	0	1	0	4
5:00 PM	0	0	0	0	0	0	0	5	1	0	3	0	9
5:15 PM	1	0	0	0	0	0	0	3	1	0	2	0	7
5:30 PM	0	0	0	0	0	0	0	5	0	0	4	0	9
5:45 PM	0	0	0	0	0	0	0	4	0	0	4	0	8
	3%			#DIV/0!			3%			3%			

Time Period	South Leg	North Leg	West Leg	East Leg	Total
4:00 PM	0	0	1	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0

[illegible]

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PHF	0.8
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WBLane7

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turn	WB RTOR	Total	Hourly Totals	
7:00 AM	0	0	0	0		0	0	7	0		2	53	0	0		0	168	3	0		233	749	
7:15 AM	0	0	0	0		6	0	14	0		2	46	0	0		0	124	2	0		194		749
7:30 AM	0	0	0	0		6	0	17	0		3	31	0	0		0	88	4	0		149		
7:45 AM	0	0	0	0		12	0	10	0		2	59	0	0		0	84	6	0		173	749	
8:00 AM	0	0	0	0		8	0	18	0		9	69	0	0		0	72	5	0		181		697
8:15 AM	0	0	0	0		11	0	7	0		8	70	0	0		0	67	2	0		165	668	
8:30 AM	0	0	0	0		6	0	16	0		4	50	0	0		0	80	9	0		165	684	
8:45 AM	0	0	0	0		11	0	14	0		3	47	0	0		0	63	5	0		143	654	
	0	0	0	0	0	24	0	48	0	0	9	189	0	0	0	0	464	15	0	0	749		
	PHF: #DIV/0!					PHF: 0.78					PHF: 0.81					PHF: 0.70							

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
7:00 AM	0	0	0	0	0	1	0	8	0	0	4	0	13
7:15 AM	0	0	0	0	0	0	0	5	0	0	5	0	10
7:30 AM	0	0	0	0	0	1	0	1	0	0	4	0	6
7:45 AM	0	0	0	0	0	0	0	9	0	0	4	0	13
8:00 AM	0	0	0	0	0	1	1	3	0	0	2	2	9
8:15 AM	0	0	0	1	0	0	1	8	0	0	11	0	21
8:30 AM	0	0	0	0	0	2	0	7	0	0	12	0	21
8:45 AM	0	0	0	0	0	0	0	7	0	0	2	0	9
	#DIV/0!			3%			12%			4%			

Time Period	South Leg	North Leg	West Leg	East Leg	Total
7:00 AM	0	0	0	0	0
7:15 AM	0	1	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	1	0	0	0	1
8:00 AM	0	1	0	1	2
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0

[illegible]

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PHF	0.92
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NBLa

NBLa

WBLane7

Time Period	NB Left	NB Thru	NB Right	NB U-Turn	NB RTOR	SB Left	SB Thru	SB Right	SB U-Turn	SB RTOR	EB Left	EB Thru	EB Right	EB U-Turn	EB RTOR	WB Left	WB Thru	WB Right	WB U-Turn	WB RTOR	Total	Hourly Totals
4:00 PM	0	0	0	0		7	0	9	0		15	111	0	0		0	110	17	0		269	1021
4:15 PM	0	0	0	0		11	0	12	0		13	95	0	0		0	90	9	0		230	
4:30 PM	0	0	0	0		14	0	14	0		20	110	0	0		0	81	11	0		250	
4:45 PM	0	0	0	0		8	0	10	0		27	99	0	0		0	89	14	0		247	996
5:00 PM	0	0	0	0		11	0	12	0		15	133	0	0		0	91	14	0		276	1003
5:15 PM	0	0	0	0		9	0	13	0		16	117	0	0		0	80	13	0		248	1021
5:30 PM	0	0	0	0		8	0	8	0		11	101	0	0		0	80	5	0		213	984
5:45 PM	0	0	0	0		7	0	16	0		12	89	0	0		0	71	10	0		205	942
	0	0	0	0		42	0	49	0		78	459	0	0		0	341	52	0		1021	
	PHF: #DIV/0!					PHF: 0.81					PHF: 0.91					PHF: 0.94						

Time Period	NB Left	NB Thru	NB Right	SB Left	SB Thru	SB Right	EB Left	EB Thru	EB Right	WB Left	WB Thru	WB Right	Total
4:00 PM	0	0	0	0	0	1	0	7	0	0	3	0	11
4:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
4:30 PM	0	0	0	0	0	1	0	1	0	0	4	0	6
4:45 PM	0	0	0	0	0	0	0	3	0	0	1	0	4
5:00 PM	0	0	0	1	0	1	1	4	0	0	2	0	9
5:15 PM	0	0	0	0	0	0	0	4	0	0	1	0	5
5:30 PM	0	0	0	0	0	1	0	4	0	0	3	0	8
5:45 PM	0	0	0	0	0	0	0	4	0	0	5	0	9
	#DIV/0!			3%			2%			2%			

Time Period	South Leg	North Leg	West Leg	East Leg	Total
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	1	0	0	0	1
5:45 PM	0	0	0	0	0

[illegible]

LEVEL OF SERVICE

OUTPUT REPORTS

HCM 7th Signalized Intersection Summary
1001: N. Center Road & Davison Road

2025 Existing AM
06/23/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	127	64	275	186	37	45	185	132	40	421	26
Future Volume (veh/h)	19	127	64	275	186	37	45	185	132	40	421	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1811	1811	1811	1826	1826	1826	1796	1796	1796	1870	1870	1870
Adj Flow Rate, veh/h	25	165	83	335	227	45	52	215	153	49	513	32
Peak Hour Factor	0.77	0.77	0.77	0.82	0.82	0.82	0.86	0.86	0.86	0.82	0.82	0.82
Percent Heavy Veh, %	6	6	6	5	5	5	7	7	7	2	2	2
Cap, veh/h	266	250	120	276	329	64	665	475	323	742	831	52
Arrive On Green	0.09	0.11	0.11	0.09	0.11	0.11	0.29	0.24	0.24	0.29	0.24	0.24
Sat Flow, veh/h	1725	2254	1082	1739	2895	564	1711	1944	1321	1781	3398	212
Grp Volume(v), veh/h	25	124	124	335	134	138	52	188	180	49	268	277
Grp Sat Flow(s),veh/h/ln	1725	1721	1616	1739	1735	1724	1711	1706	1558	1781	1777	1832
Q Serve(g_s), s	0.0	6.2	6.6	8.0	6.7	6.9	0.0	8.4	8.9	0.0	12.1	12.1
Cycle Q Clear(g_c), s	0.0	6.2	6.6	8.0	6.7	6.9	0.0	8.4	8.9	0.0	12.1	12.1
Prop In Lane	1.00		0.67	1.00		0.33	1.00		0.85	1.00		0.12
Lane Grp Cap(c), veh/h	266	191	180	276	197	196	665	417	381	742	434	448
V/C Ratio(X)	0.09	0.65	0.69	1.21	0.68	0.70	0.08	0.45	0.47	0.07	0.62	0.62
Avail Cap(c_a), veh/h	270	574	539	276	578	575	665	417	381	742	434	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	38.3	38.5	39.0	38.3	38.4	17.4	28.9	29.1	15.1	30.2	30.3
Incr Delay (d2), s/veh	0.2	3.7	4.7	125.2	4.1	4.5	0.0	3.5	4.2	0.0	6.4	6.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.8	2.8	14.9	2.9	3.0	0.6	3.6	3.6	0.6	5.6	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.8	42.0	43.2	164.2	42.4	43.0	17.4	32.3	33.2	15.2	36.7	36.6
LnGrp LOS	D	D	D	F	D	D	B	C	C	B	D	D
Approach Vol, veh/h	273			607			420			594		
Approach Delay, s/veh	42.0			109.7			30.9			34.8		
Approach LOS	D			F			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.0	28.0	14.0	16.0	32.0	28.0	13.8	16.2				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	6.0	22.0	8.0	30.0	6.0	22.0	8.0	30.0				
Max Q Clear Time (g_c+l1), s	2.0	10.9	10.0	8.6	2.0	14.1	2.0	8.9				
Green Ext Time (p_c), s	0.0	1.5	0.0	1.3	0.0	1.8	0.0	1.3				
Intersection Summary												
HCM 7th Control Delay, s/veh	59.0											
HCM 7th LOS	E											

HCM 7th Signalized Intersection Summary
1001: N. Center Road & Davison Road

2029 No Build AM
06/23/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	130	65	281	190	38	46	189	135	41	429	27
Future Volume (veh/h)	19	130	65	281	190	38	46	189	135	41	429	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1811	1811	1811	1826	1826	1826	1796	1796	1796	1870	1870	1870
Adj Flow Rate, veh/h	25	169	84	343	232	46	53	220	157	50	523	33
Peak Hour Factor	0.77	0.77	0.77	0.82	0.82	0.82	0.86	0.86	0.86	0.82	0.82	0.82
Percent Heavy Veh, %	6	6	6	5	5	5	7	7	7	2	2	2
Cap, veh/h	264	254	121	275	335	65	659	474	324	736	830	52
Arrive On Green	0.09	0.11	0.11	0.09	0.12	0.12	0.29	0.24	0.24	0.29	0.24	0.24
Sat Flow, veh/h	1725	2263	1075	1739	2895	564	1711	1940	1324	1781	3395	214
Grp Volume(v), veh/h	25	127	126	343	137	141	53	192	185	50	273	283
Grp Sat Flow(s),veh/h/ln	1725	1721	1618	1739	1735	1724	1711	1706	1558	1781	1777	1832
Q Serve(g_s), s	0.0	6.3	6.8	8.0	6.8	7.1	0.0	8.6	9.1	0.0	12.4	12.4
Cycle Q Clear(g_c), s	0.0	6.3	6.8	8.0	6.8	7.1	0.0	8.6	9.1	0.0	12.4	12.4
Prop In Lane	1.00		0.66	1.00		0.33	1.00		0.85	1.00		0.12
Lane Grp Cap(c), veh/h	264	193	182	275	201	199	659	417	381	736	434	448
V/C Ratio(X)	0.09	0.65	0.70	1.25	0.69	0.71	0.08	0.46	0.49	0.07	0.63	0.63
Avail Cap(c_a), veh/h	269	574	539	275	578	575	659	417	381	736	434	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	38.3	38.5	39.0	38.2	38.3	17.7	29.0	29.1	15.4	30.4	30.4
Incr Delay (d2), s/veh	0.2	3.7	4.7	137.1	4.1	4.5	0.1	3.6	4.4	0.0	6.8	6.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.8	2.9	15.8	3.0	3.1	0.7	3.7	3.7	0.6	5.8	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.9	42.0	43.2	176.1	42.3	42.8	17.7	32.6	33.5	15.4	37.1	37.0
LnGrp LOS	D	D	D	F	D	D	B	C	C	B	D	D
Approach Vol, veh/h	278				621				430		606	
Approach Delay, s/veh	42.0				116.3				31.2		35.3	
Approach LOS	D				F				C		D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.9	28.0	14.0	16.1	31.9	28.0	13.7	16.4				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	6.0	22.0	8.0	30.0	6.0	22.0	8.0	30.0				
Max Q Clear Time (g_c+l1), s	2.0	11.1	10.0	8.8	2.0	14.4	2.0	9.1				
Green Ext Time (p_c), s	0.0	1.5	0.0	1.3	0.0	1.8	0.0	1.3				
Intersection Summary												
HCM 7th Control Delay, s/veh	61.3											
HCM 7th LOS	E											

HCM 7th Signalized Intersection Summary
1001: N. Center Road & Davison Road

2029 No Build AM Imp.
06/24/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	130	65	281	190	38	46	189	135	41	429	27
Future Volume (veh/h)	19	130	65	281	190	38	46	189	135	41	429	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1811	1811	1811	1826	1826	1826	1796	1796	1796	1870	1870	1870
Adj Flow Rate, veh/h	25	169	84	343	232	46	53	220	157	50	523	33
Peak Hour Factor	0.77	0.77	0.77	0.82	0.82	0.82	0.86	0.86	0.86	0.82	0.82	0.82
Percent Heavy Veh, %	6	6	6	5	5	5	7	7	7	2	2	2
Cap, veh/h	365	251	119	377	331	64	576	431	294	647	754	48
Arrive On Green	0.15	0.11	0.11	0.15	0.11	0.11	0.25	0.22	0.22	0.25	0.22	0.22
Sat Flow, veh/h	1725	2263	1075	1739	2895	564	1711	1940	1324	1781	3395	214
Grp Volume(v), veh/h	25	127	126	343	137	141	53	192	185	50	273	283
Grp Sat Flow(s),veh/h/ln	1725	1721	1618	1739	1735	1724	1711	1706	1558	1781	1777	1832
Q Serve(g_s), s	0.0	6.4	6.8	11.1	6.9	7.1	0.0	8.9	9.4	0.0	12.7	12.8
Cycle Q Clear(g_c), s	0.0	6.4	6.8	11.1	6.9	7.1	0.0	8.9	9.4	0.0	12.7	12.8
Prop In Lane	1.00		0.66	1.00		0.33	1.00		0.85	1.00		0.12
Lane Grp Cap(c), veh/h	365	191	180	377	198	197	576	379	346	647	395	407
V/C Ratio(X)	0.07	0.66	0.70	0.91	0.69	0.71	0.09	0.51	0.53	0.08	0.69	0.69
Avail Cap(c_a), veh/h	402	478	449	409	482	479	576	379	346	647	395	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.2	38.4	38.6	35.3	38.3	38.4	21.5	30.7	30.9	18.8	32.2	32.2
Incr Delay (d2), s/veh	0.1	3.9	4.9	22.9	4.3	4.7	0.1	4.8	5.8	0.1	9.6	9.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.8	2.9	9.2	3.0	3.1	0.8	3.9	3.9	0.7	6.2	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.2	42.3	43.5	58.1	42.6	43.2	21.5	35.5	36.7	18.9	41.7	41.6
LnGrp LOS	C	D	D	E	D	D	C	D	D	B	D	D
Approach Vol, veh/h	278		621				430		606			
Approach Delay, s/veh	41.8		51.3				34.3		39.8			
Approach LOS	D		D				C		D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.6	26.0	19.4	16.0	28.6	26.0	19.1	16.3				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	6.0	20.0	15.0	25.0	6.0	20.0	15.0	25.0				
Max Q Clear Time (g_c+l1), s	2.0	11.4	13.1	8.8	2.0	14.8	2.0	9.1				
Green Ext Time (p_c), s	0.0	1.3	0.2	1.2	0.0	1.4	0.0	1.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	42.6											
HCM 7th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												

HCM 7th Signalized Intersection Summary
1001: N. Center Road & Davison Road

2029 Build AM
06/24/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	167	65	317	215	50	46	189	200	128	429	27
Future Volume (veh/h)	19	167	65	317	215	50	46	189	200	128	429	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1811	1811	1811	1826	1826	1826	1796	1796	1796	1870	1870	1870
Adj Flow Rate, veh/h	25	217	84	387	262	61	53	220	233	156	523	33
Peak Hour Factor	0.77	0.77	0.77	0.82	0.82	0.82	0.86	0.86	0.86	0.82	0.82	0.82
Percent Heavy Veh, %	6	6	6	5	5	5	7	7	7	2	2	2
Cap, veh/h	397	309	116	410	363	83	519	379	338	546	754	48
Arrive On Green	0.16	0.13	0.13	0.17	0.13	0.13	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1725	2448	919	1739	2804	641	1711	1706	1522	1781	3395	214
Grp Volume(v), veh/h	25	150	151	387	160	163	53	220	233	156	273	283
Grp Sat Flow(s),veh/h/ln	1725	1721	1646	1739	1735	1710	1711	1706	1522	1781	1777	1832
Q Serve(g_s), s	0.0	7.5	7.9	13.5	8.0	8.2	0.0	10.4	12.7	0.0	12.7	12.8
Cycle Q Clear(g_c), s	0.0	7.5	7.9	13.5	8.0	8.2	0.0	10.4	12.7	0.0	12.7	12.8
Prop In Lane	1.00		0.56	1.00		0.37	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	397	217	208	410	224	221	519	379	338	546	395	407
V/C Ratio(X)	0.06	0.69	0.73	0.94	0.71	0.74	0.10	0.58	0.69	0.29	0.69	0.69
Avail Cap(c_a), veh/h	403	478	457	410	482	475	519	379	338	546	395	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.7	37.7	37.8	34.6	37.6	37.7	23.7	31.3	32.1	25.7	32.2	32.2
Incr Delay (d2), s/veh	0.1	3.9	4.8	30.5	4.2	4.7	0.1	6.3	10.9	0.3	9.6	9.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.3	3.4	10.6	3.5	3.6	0.8	4.7	5.4	2.5	6.2	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.7	41.6	42.6	65.1	41.8	42.4	23.8	37.6	43.1	26.0	41.7	41.6
LnGrp LOS	C	D	D	E	D	D	C	D	D	C	D	D
Approach Vol, veh/h	326				710		506				712	
Approach Delay, s/veh	41.2				54.6		38.7				38.2	
Approach LOS	D				D		D				D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.7	26.0	21.0	17.3	25.7	26.0	20.7	17.6				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	6.0	20.0	15.0	25.0	6.0	20.0	15.0	25.0				
Max Q Clear Time (g_c+I1), s	2.0	14.7	15.5	9.9	2.0	14.8	2.0	10.2				
Green Ext Time (p_c), s	0.1	1.2	0.0	1.4	0.0	1.4	0.0	1.4				
Intersection Summary												
HCM 7th Control Delay, s/veh	43.9											
HCM 7th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												

HCM 7th Signalized Intersection Summary
1001: N. Center Road & Davison Road

2025 Existing PM
06/23/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	232	92	181	203	104	91	480	235	69	336	61
Future Volume (veh/h)	61	232	92	181	203	104	91	480	235	69	336	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	283	112	206	231	118	99	522	255	73	357	65
Peak Hour Factor	0.82	0.82	0.82	0.88	0.88	0.88	0.92	0.92	0.92	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	3	3	3	2	2	2	2	2	2
Cap, veh/h	278	393	152	241	324	160	682	566	276	562	735	133
Arrive On Green	0.09	0.15	0.15	0.07	0.14	0.14	0.26	0.24	0.24	0.26	0.24	0.24
Sat Flow, veh/h	1810	2544	984	1767	2287	1128	1781	2316	1128	1781	3007	542
Grp Volume(v), veh/h	74	199	196	206	176	173	99	400	377	73	209	213
Grp Sat Flow(s),veh/h/ln	1810	1805	1723	1767	1763	1653	1781	1777	1667	1781	1777	1773
Q Serve(g_s), s	0.0	9.4	9.8	4.5	8.6	9.0	0.0	19.8	19.9	0.0	9.1	9.3
Cycle Q Clear(g_c), s	0.0	9.4	9.8	4.5	8.6	9.0	0.0	19.8	19.9	0.0	9.1	9.3
Prop In Lane	1.00		0.57	1.00		0.68	1.00		0.68	1.00		0.31
Lane Grp Cap(c), veh/h	278	279	266	241	250	234	682	434	408	562	434	433
V/C Ratio(X)	0.27	0.71	0.74	0.85	0.71	0.74	0.15	0.92	0.92	0.13	0.48	0.49
Avail Cap(c_a), veh/h	284	602	574	269	588	551	682	434	408	562	434	433
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.5	36.2	36.3	39.3	36.8	37.0	17.9	33.2	33.2	24.3	29.1	29.2
Incr Delay (d2), s/veh	0.5	3.4	4.0	20.8	3.6	4.5	0.1	27.3	29.2	0.1	3.8	3.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.3	4.3	5.6	3.7	3.7	1.3	11.2	10.8	1.1	4.1	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.0	39.6	40.3	60.1	40.5	41.5	18.0	60.5	62.4	24.4	32.9	33.1
LnGrp LOS	D	D	D	E	D	D	B	E	E	C	C	C
Approach Vol, veh/h	469			555			876			495		
Approach Delay, s/veh	39.5			48.1			56.5			31.7		
Approach LOS	D			D			E			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.5	28.0	12.6	19.9	29.5	28.0	13.7	18.7				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	6.0	22.0	8.0	30.0	6.0	22.0	8.0	30.0				
Max Q Clear Time (g_c+l1), s	2.0	21.9	6.5	11.8	2.0	11.3	2.0	11.0				
Green Ext Time (p_c), s	0.0	0.1	0.1	2.1	0.1	1.6	0.1	1.7				
Intersection Summary												
HCM 7th Control Delay, s/veh	46.1											
HCM 7th LOS	D											

HCM 7th Signalized Intersection Summary
1001: N. Center Road & Davison Road

2029 No Build PM
06/23/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	237	94	185	207	106	93	490	240	70	343	62
Future Volume (veh/h)	62	237	94	185	207	106	93	490	240	70	343	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	289	115	210	235	120	101	533	261	74	365	66
Peak Hour Factor	0.82	0.82	0.82	0.88	0.88	0.88	0.92	0.92	0.92	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	3	3	3	2	2	2	2	2	2
Cap, veh/h	285	399	155	245	329	162	669	566	276	548	736	132
Arrive On Green	0.09	0.16	0.16	0.08	0.14	0.14	0.26	0.24	0.24	0.26	0.24	0.24
Sat Flow, veh/h	1810	2540	988	1767	2287	1128	1781	2314	1130	1781	3011	539
Grp Volume(v), veh/h	76	203	201	210	179	176	101	409	385	74	214	217
Grp Sat Flow(s),veh/h/ln	1810	1805	1722	1767	1763	1652	1781	1777	1667	1781	1777	1773
Q Serve(g_s), s	0.0	9.6	10.0	4.8	8.7	9.2	0.0	20.3	20.4	0.0	9.3	9.5
Cycle Q Clear(g_c), s	0.0	9.6	10.0	4.8	8.7	9.2	0.0	20.3	20.4	0.0	9.3	9.5
Prop In Lane	1.00		0.57	1.00		0.68	1.00		0.68	1.00		0.30
Lane Grp Cap(c), veh/h	285	284	271	245	253	237	669	434	407	548	434	433
V/C Ratio(X)	0.27	0.72	0.74	0.86	0.71	0.74	0.15	0.94	0.94	0.14	0.49	0.50
Avail Cap(c_a), veh/h	285	602	574	269	588	551	669	434	407	548	434	433
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	36.0	36.2	39.2	36.7	36.9	18.4	33.4	33.4	24.8	29.2	29.3
Incr Delay (d2), s/veh	0.5	3.4	4.0	21.6	3.6	4.5	0.1	30.8	32.7	0.1	4.0	4.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.4	4.4	5.7	3.8	3.8	1.3	11.8	11.4	1.1	4.2	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.8	39.4	40.1	60.7	40.4	41.4	18.5	64.1	66.1	24.9	33.2	33.4
LnGrp LOS	D	D	D	E	D	D	B	E	E	C	C	C
Approach Vol, veh/h	480			565			895			505		
Approach Delay, s/veh	39.3			48.3			59.8			32.0		
Approach LOS	D			D			E			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	28.0	12.8	20.2	29.0	28.0	14.0	18.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	6.0	22.0	8.0	30.0	6.0	22.0	8.0	30.0				
Max Q Clear Time (g_c+I1), s	2.0	22.4	6.8	12.0	2.0	11.5	2.0	11.2				
Green Ext Time (p_c), s	0.0	0.0	0.1	2.2	0.1	1.7	0.1	1.8				
Intersection Summary												
HCM 7th Control Delay, s/veh	47.4											
HCM 7th LOS	D											

HCM 7th Signalized Intersection Summary
1001: N. Center Road & Davison Road

2029 No Build PM Imp.
06/24/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	237	94	185	207	106	93	490	240	70	343	62
Future Volume (veh/h)	62	237	94	185	207	106	93	490	240	70	343	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	289	115	210	235	120	101	533	261	74	365	66
Peak Hour Factor	0.82	0.82	0.82	0.88	0.88	0.88	0.92	0.92	0.92	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	3	3	3	2	2	2	2	2	2
Cap, veh/h	285	394	153	247	325	160	654	617	301	529	803	144
Arrive On Green	0.09	0.16	0.16	0.08	0.14	0.14	0.23	0.27	0.27	0.23	0.27	0.27
Sat Flow, veh/h	1810	2540	988	1767	2287	1128	1781	2314	1130	1781	3011	539
Grp Volume(v), veh/h	76	203	201	210	179	176	101	409	385	74	214	217
Grp Sat Flow(s),veh/h/ln	1810	1805	1722	1767	1763	1652	1781	1777	1667	1781	1777	1773
Q Serve(g_s), s	0.0	9.7	10.0	4.8	8.7	9.2	0.0	19.7	19.8	0.0	9.0	9.2
Cycle Q Clear(g_c), s	0.0	9.7	10.0	4.8	8.7	9.2	0.0	19.7	19.8	0.0	9.0	9.2
Prop In Lane	1.00		0.57	1.00		0.68	1.00		0.68	1.00		0.30
Lane Grp Cap(c), veh/h	285	280	267	247	250	235	654	474	445	529	474	473
V/C Ratio(X)	0.27	0.73	0.75	0.85	0.72	0.75	0.15	0.86	0.87	0.14	0.45	0.46
Avail Cap(c_a), veh/h	323	521	498	306	509	477	654	474	445	529	474	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	36.2	36.4	39.1	36.9	37.1	18.2	31.4	31.5	25.5	27.5	27.6
Incr Delay (d2), s/veh	0.5	3.6	4.2	16.9	3.8	4.7	0.1	18.4	19.7	0.1	3.1	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.4	4.4	5.4	3.8	3.8	1.3	10.3	9.8	1.2	4.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.7	39.8	40.6	55.9	40.7	41.8	18.3	49.9	51.2	25.6	30.6	30.8
LnGrp LOS	D	D	D	E	D	D	B	D	D	C	C	C
Approach Vol, veh/h	480			565			895			505		
Approach Delay, s/veh	39.6			46.7			46.9			29.9		
Approach LOS	D			D			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.1	30.0	13.0	20.0	27.1	30.0	14.1	18.8				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	6.0	24.0	10.0	26.0	6.0	24.0	10.0	26.0				
Max Q Clear Time (g_c+I1), s	2.0	21.8	6.8	12.0	2.0	11.2	2.0	11.2				
Green Ext Time (p_c), s	0.0	1.0	0.2	1.9	0.1	1.8	0.1	1.6				

Intersection Summary

HCM 7th Control Delay, s/veh 41.9
HCM 7th LOS D

Notes

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

HCM 7th Signalized Intersection Summary
1001: N. Center Road & Davison Road

2029 Build PM
06/24/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	253	94	261	256	186	93	490	273	89	343	62
Future Volume (veh/h)	62	253	94	261	256	186	93	490	273	89	343	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	309	115	297	291	211	101	533	297	95	365	66
Peak Hour Factor	0.82	0.82	0.82	0.88	0.88	0.88	0.92	0.92	0.92	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	3	3	3	2	2	2	2	2	2
Cap, veh/h	243	417	152	319	376	265	584	587	327	448	803	144
Arrive On Green	0.08	0.16	0.16	0.11	0.19	0.19	0.19	0.27	0.27	0.19	0.27	0.27
Sat Flow, veh/h	1810	2590	945	1767	1976	1392	1781	2202	1225	1781	3011	539
Grp Volume(v), veh/h	76	213	211	297	259	243	101	430	400	95	214	217
Grp Sat Flow(s),veh/h/ln	1810	1805	1730	1767	1763	1605	1781	1777	1650	1781	1777	1773
Q Serve(g_s), s	0.0	10.1	10.5	8.7	12.5	13.0	0.0	21.1	21.1	0.0	9.0	9.2
Cycle Q Clear(g_c), s	0.0	10.1	10.5	8.7	12.5	13.0	0.0	21.1	21.1	0.0	9.0	9.2
Prop In Lane	1.00		0.55	1.00		0.87	1.00		0.74	1.00		0.30
Lane Grp Cap(c), veh/h	243	291	278	319	335	305	584	474	440	448	474	473
V/C Ratio(X)	0.31	0.73	0.76	0.93	0.77	0.80	0.17	0.91	0.91	0.21	0.45	0.46
Avail Cap(c_a), veh/h	296	521	500	319	509	464	584	474	440	448	474	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	35.9	36.1	37.3	34.6	34.8	20.7	31.9	31.9	28.9	27.5	27.6
Incr Delay (d2), s/veh	0.7	3.6	4.2	32.9	4.0	5.6	0.1	23.7	25.3	0.2	3.1	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	4.6	4.6	8.6	5.4	5.2	1.4	11.5	10.9	1.6	4.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.5	39.5	40.2	70.2	38.6	40.3	20.8	55.6	57.3	29.1	30.6	30.8
LnGrp LOS	D	D	D	E	D	D	C	E	E	C	C	C
Approach Vol, veh/h	500			799			931			526		
Approach Delay, s/veh	39.7			50.9			52.6			30.4		
Approach LOS	D			D			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.5	30.0	16.0	20.5	23.5	30.0	13.4	23.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	6.0	24.0	10.0	26.0	6.0	24.0	10.0	26.0				
Max Q Clear Time (g_c+I1), s	2.0	23.1	10.7	12.5	2.0	11.2	2.0	15.0				
Green Ext Time (p_c), s	0.1	0.4	0.0	2.0	0.1	1.8	0.1	2.1				

Intersection Summary

HCM 7th Control Delay, s/veh 45.5
HCM 7th LOS D

Notes

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

HCM Signalized Intersection Capacity Analysis
1002: Donegal Street & Davison Road

2025 Existing AM
06/24/2025

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↖↗	
Traffic Volume (vph)	220	43	5	492	10	3
Future Volume (vph)	220	43	5	492	10	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4			5.4	5.4	
Lane Util. Factor	0.95			0.95	0.97	
Frt	0.98			1.00	0.96	
Flt Protected	1.00			1.00	0.96	
Satd. Flow (prot)	3173			3469	2478	
Flt Permitted	1.00			0.95	0.96	
Satd. Flow (perm)	3173			3302	2478	
Peak-hour factor, PHF	0.82	0.82	0.74	1.00	0.65	0.65
Adj. Flow (vph)	268	52	7	492	15	5
RTOR Reduction (vph)	9	0	0	0	5	0
Lane Group Flow (vph)	311	0	0	499	15	0
Heavy Vehicles (%)	11%	11%	4%	4%	38%	38%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	57.6			57.6	1.6	
Effective Green, g (s)	57.6			57.6	1.6	
Actuated g/C Ratio	0.82			0.82	0.02	
Clearance Time (s)	5.4			5.4	5.4	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2610			2717	56	
v/s Ratio Prot	0.10				c0.01	
v/s Ratio Perm				c0.15		
v/c Ratio	0.12			0.18	0.27	
Uniform Delay, d1	1.2			1.3	33.6	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.1			0.1	2.6	
Delay (s)	1.3			1.4	36.2	
Level of Service	A			A	D	
Approach Delay (s/veh)	1.3			1.4	36.2	
Approach LOS	A			A	D	
Intersection Summary						
HCM 2000 Control Delay (s/veh)			2.2		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.19			
Actuated Cycle Length (s)			70.0		Sum of lost time (s)	10.8
Intersection Capacity Utilization			32.8%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
1002: Donegal Street & Davison Road

2029 No Build AM
06/24/2025

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↖↗	
Traffic Volume (vph)	224	43	5	502	10	3
Future Volume (vph)	224	43	5	502	10	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4			5.4	5.4	
Lane Util. Factor	0.95			0.95	0.97	
Frt	0.98			1.00	0.96	
Flt Protected	1.00			1.00	0.96	
Satd. Flow (prot)	3174			3469	2478	
Flt Permitted	1.00			0.95	0.96	
Satd. Flow (perm)	3174			3302	2478	
Peak-hour factor, PHF	0.82	0.82	0.74	1.00	0.65	0.65
Adj. Flow (vph)	273	52	7	502	15	5
RTOR Reduction (vph)	9	0	0	0	5	0
Lane Group Flow (vph)	316	0	0	509	15	0
Heavy Vehicles (%)	11%	11%	4%	4%	38%	38%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	57.6			57.6	1.6	
Effective Green, g (s)	57.6			57.6	1.6	
Actuated g/C Ratio	0.82			0.82	0.02	
Clearance Time (s)	5.4			5.4	5.4	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2611			2717	56	
v/s Ratio Prot	0.10				c0.01	
v/s Ratio Perm				c0.15		
v/c Ratio	0.12			0.19	0.27	
Uniform Delay, d1	1.2			1.3	33.6	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.1			0.2	2.6	
Delay (s)	1.3			1.5	36.2	
Level of Service	A			A	D	
Approach Delay (s/veh)	1.3			1.5	36.2	
Approach LOS	A			A	D	
Intersection Summary						
HCM 2000 Control Delay (s/veh)			2.2		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.19			
Actuated Cycle Length (s)			70.0		Sum of lost time (s)	10.8
Intersection Capacity Utilization			33.1%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
1002: Donegal Street & Davison Road

2029 Build AM
06/24/2025

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑		↑↑	↑↑	
Traffic Volume (vph)	242	214	69	509	76	8
Future Volume (vph)	242	214	69	509	76	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.4		5.4	5.4	
Lane Util. Factor	0.95	1.00		0.95	0.97	
Frt	1.00	0.85		1.00	0.99	
Flt Protected	1.00	1.00		0.99	0.96	
Satd. Flow (prot)	3252	1455		3445	2519	
Flt Permitted	1.00	1.00		0.85	0.96	
Satd. Flow (perm)	3252	1455		2940	2519	
Peak-hour factor, PHF	0.82	0.82	0.74	1.00	0.65	0.65
Adj. Flow (vph)	295	261	93	509	117	12
RTOR Reduction (vph)	0	69	0	0	11	0
Lane Group Flow (vph)	295	192	0	602	118	0
Heavy Vehicles (%)	11%	11%	4%	4%	38%	38%
Turn Type	NA	Perm	Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases		2	6			
Actuated Green, G (s)	51.6	51.6		51.6	7.6	
Effective Green, g (s)	51.6	51.6		51.6	7.6	
Actuated g/C Ratio	0.74	0.74		0.74	0.11	
Clearance Time (s)	5.4	5.4		5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	2397	1072		2167	273	
v/s Ratio Prot	0.09				0.05	
v/s Ratio Perm		0.13		0.20		
v/c Ratio	0.12	0.18		0.28	0.43	
Uniform Delay, d1	2.7	2.8		3.0	29.2	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.4		0.3	1.1	
Delay (s)	2.8	3.2		3.4	30.3	
Level of Service	A	A		A	C	
Approach Delay (s/veh)	2.9			3.4	30.3	
Approach LOS	A			A	C	
Intersection Summary						
HCM 2000 Control Delay (s/veh)			5.9		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.30			
Actuated Cycle Length (s)			70.0		Sum of lost time (s)	10.8
Intersection Capacity Utilization			53.5%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
1002: Donegal Street & Davison Road

2025 Existing PM
06/24/2025

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↖↗	
Traffic Volume (vph)	546	3	3	471	66	24
Future Volume (vph)	546	3	3	471	66	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4			5.4	5.4	
Lane Util. Factor	0.95			0.95	0.97	
Frt	1.00			1.00	0.96	
Flt Protected	1.00			1.00	0.96	
Satd. Flow (prot)	3502			3504	3314	
Flt Permitted	1.00			0.95	0.96	
Satd. Flow (perm)	3502			3338	3314	
Peak-hour factor, PHF	0.87	0.87	0.76	0.76	0.60	0.60
Adj. Flow (vph)	628	3	4	620	110	40
RTOR Reduction (vph)	0	0	0	0	36	0
Lane Group Flow (vph)	631	0	0	624	114	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	52.3			52.3	6.9	
Effective Green, g (s)	52.3			52.3	6.9	
Actuated g/C Ratio	0.75			0.75	0.10	
Clearance Time (s)	5.4			5.4	5.4	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2616			2493	326	
v/s Ratio Prot	0.18				0.03	
v/s Ratio Perm				0.19		
v/c Ratio	0.24			0.25	0.35	
Uniform Delay, d1	2.7			2.8	29.5	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.2			0.2	0.7	
Delay (s)	2.9			3.0	30.1	
Level of Service	A			A	C	
Approach Delay (s/veh)	2.9			3.0	30.1	
Approach LOS	A			A	C	
Intersection Summary						
HCM 2000 Control Delay (s/veh)			5.9		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.26			
Actuated Cycle Length (s)			70.0		Sum of lost time (s)	10.8
Intersection Capacity Utilization			32.3%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
1002: Donegal Street & Davison Road

2029 No Build PM
06/24/2025

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	557	3	3	480	66	24
Future Volume (vph)	557	3	3	480	66	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4			5.4	5.4	
Lane Util. Factor	0.95			0.95	0.97	
Frt	1.00			1.00	0.96	
Flt Protected	1.00			1.00	0.96	
Satd. Flow (prot)	3502			3504	3314	
Flt Permitted	1.00			0.95	0.96	
Satd. Flow (perm)	3502			3338	3314	
Peak-hour factor, PHF	0.87	0.87	0.76	0.76	0.60	0.60
Adj. Flow (vph)	640	3	4	632	110	40
RTOR Reduction (vph)	0	0	0	0	36	0
Lane Group Flow (vph)	643	0	0	636	114	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	52.3			52.3	6.9	
Effective Green, g (s)	52.3			52.3	6.9	
Actuated g/C Ratio	0.75			0.75	0.10	
Clearance Time (s)	5.4			5.4	5.4	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2616			2493	326	
v/s Ratio Prot	0.18				0.03	
v/s Ratio Perm				0.19		
v/c Ratio	0.25			0.26	0.35	
Uniform Delay, d1	2.7			2.8	29.5	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.2			0.2	0.7	
Delay (s)	3.0			3.0	30.1	
Level of Service	A			A	C	
Approach Delay (s/veh)	3.0			3.0	30.1	
Approach LOS	A			A	C	
Intersection Summary						
HCM 2000 Control Delay (s/veh)			5.8		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.27			
Actuated Cycle Length (s)			70.0		Sum of lost time (s)	10.8
Intersection Capacity Utilization			32.3%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
1002: Donegal Street & Davison Road

2029 Build PM
06/23/2025

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑		↑↑	↑↑	
Traffic Volume (vph)	564	64	16	500	251	63
Future Volume (vph)	564	64	16	500	251	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.4		5.4	5.4	
Lane Util. Factor	0.95	1.00		0.95	0.97	
Frt	1.00	0.85		1.00	0.97	
Flt Protected	1.00	1.00		1.00	0.96	
Satd. Flow (prot)	3505	1568		3499	3337	
Flt Permitted	1.00	1.00		0.93	0.96	
Satd. Flow (perm)	3505	1568		3253	3337	
Peak-hour factor, PHF	0.87	0.87	0.76	0.76	0.60	0.60
Adj. Flow (vph)	648	74	21	658	418	105
RTOR Reduction (vph)	0	26	0	0	33	0
Lane Group Flow (vph)	648	48	0	679	490	0
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	NA	Perm	Perm	NA	Prot	
Protected Phases	2			6	8	
Permitted Phases		2	6			
Actuated Green, G (s)	45.0	45.0		45.0	14.2	
Effective Green, g (s)	45.0	45.0		45.0	14.2	
Actuated g/C Ratio	0.64	0.64		0.64	0.20	
Clearance Time (s)	5.4	5.4		5.4	5.4	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	2253	1008		2091	676	
v/s Ratio Prot	0.18				0.15	
v/s Ratio Perm		0.03		0.21		
v/c Ratio	0.29	0.05		0.32	0.72	
Uniform Delay, d1	5.5	4.6		5.6	26.1	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.1		0.4	3.9	
Delay (s)	5.8	4.7		6.1	29.9	
Level of Service	A	A		A	C	
Approach Delay (s/veh)	5.7			6.1	29.9	
Approach LOS	A			A	C	
Intersection Summary						
HCM 2000 Control Delay (s/veh)			12.4		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.42			
Actuated Cycle Length (s)			70.0		Sum of lost time (s)	10.8
Intersection Capacity Utilization			43.5%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔						↔↔	
Traffic Vol, veh/h	9	189	0	0	464	15	0	0	0	24	0	48
Future Vol, veh/h	9	189	0	0	464	15	0	0	0	24	0	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	70	70	70	92	92	92	78	78	78
Heavy Vehicles, %	12	12	12	4	4	4	2	2	2	3	3	3
Mvmt Flow	11	233	0	0	663	21	0	0	0	31	0	62

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	684	0	-	-	-	0	812	929	342
Stage 1	-	-	-	-	-	-	674	674	-
Stage 2	-	-	-	-	-	-	139	256	-
Critical Hdwy	4.34	-	-	-	-	-	6.86	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	5.86	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.86	5.56	-
Follow-up Hdwy	2.32	-	-	-	-	-	3.53	4.03	3.33
Pot Cap-1 Maneuver	841	-	0	0	-	-	315	264	651
Stage 1	-	-	0	0	-	-	465	449	-
Stage 2	-	-	0	0	-	-	870	692	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	841	-	-	-	-	-	310	0	651
Mov Cap-2 Maneuver	-	-	-	-	-	-	310	0	-
Stage 1	-	-	-	-	-	-	459	0	-
Stage 2	-	-	-	-	-	-	870	0	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.54	0	14.36
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	164	-	-	-	476
HCM Lane V/C Ratio	0.013	-	-	-	0.194
HCM Ctrl Dly (s/v)	9.3	0.1	-	-	14.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.7

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↑			↑↔						↔↑	
Traffic Vol, veh/h	9	193	0	0	473	15	0	0	0	24	0	49
Future Vol, veh/h	9	193	0	0	473	15	0	0	0	24	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	70	70	70	92	92	92	78	78	78
Heavy Vehicles, %	12	12	12	4	4	4	2	2	2	3	3	3
Mvmt Flow	11	238	0	0	676	21	0	0	0	31	0	63

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	697	0	-	-	-	0	828	947	349
Stage 1	-	-	-	-	-	-	686	686	-
Stage 2	-	-	-	-	-	-	141	260	-
Critical Hdwy	4.34	-	-	-	-	-	6.86	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	5.86	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.86	5.56	-
Follow-up Hdwy	2.32	-	-	-	-	-	3.53	4.03	3.33
Pot Cap-1 Maneuver	831	-	0	0	-	-	308	258	645
Stage 1	-	-	0	0	-	-	458	443	-
Stage 2	-	-	0	0	-	-	868	689	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	831	-	-	-	-	-	303	0	645
Mov Cap-2 Maneuver	-	-	-	-	-	-	303	0	-
Stage 1	-	-	-	-	-	-	452	0	-
Stage 2	-	-	-	-	-	-	868	0	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.54	0	14.54
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	160	-	-	-	470
HCM Lane V/C Ratio	0.013	-	-	-	0.199
HCM Ctrl Dly (s/v)	9.4	0.1	-	-	14.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.7

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↗	↗↔			↔			↔	
Traffic Vol, veh/h	9	198	18	28	530	15	7	1	5	24	6	56
Future Vol, veh/h	9	198	18	28	530	15	7	1	5	24	6	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	70	70	70	92	92	92	78	78	78
Heavy Vehicles, %	12	12	12	4	4	4	2	2	2	3	3	3
Mvmt Flow	11	244	22	40	757	21	8	1	5	31	8	72

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	779	0	0	267	0	0	740	1136	133	993	1137	389
Stage 1	-	-	-	-	-	-	278	278	-	848	848	-
Stage 2	-	-	-	-	-	-	462	859	-	145	289	-
Critical Hdwy	4.34	-	-	4.18	-	-	7.54	6.54	6.94	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.56	5.56	-
Follow-up Hdwy	2.32	-	-	2.24	-	-	3.52	4.02	3.32	3.53	4.03	3.33
Pot Cap-1 Maneuver	772	-	-	1280	-	-	305	201	891	198	199	607
Stage 1	-	-	-	-	-	-	705	679	-	320	373	-
Stage 2	-	-	-	-	-	-	549	371	-	840	669	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	772	-	-	1280	-	-	246	191	891	187	190	607
Mov Cap-2 Maneuver	-	-	-	-	-	-	246	191	-	187	190	-
Stage 1	-	-	-	-	-	-	694	669	-	310	362	-
Stage 2	-	-	-	-	-	-	459	360	-	821	659	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.51			0.39			16.35			20.53		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	331	129	-	-	1280	-	-	341
HCM Lane V/C Ratio	0.043	0.014	-	-	0.031	-	-	0.323
HCM Ctrl Dly (s/v)	16.4	9.7	0.1	-	7.9	-	-	20.5
HCM Lane LOS	C	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	1.4

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↑			↑↔						↔↑	
Traffic Vol, veh/h	78	459	0	0	341	52	0	0	0	42	0	49
Future Vol, veh/h	78	459	0	0	341	52	0	0	0	42	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	94	94	94	92	92	92	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	3	3	3
Mvmt Flow	86	504	0	0	363	55	0	0	0	52	0	60

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	418	0	-	-	-	0	814	1066	209
Stage 1	-	-	-	-	-	-	390	390	-
Stage 2	-	-	-	-	-	-	424	676	-
Critical Hdwy	4.14	-	-	-	-	-	6.86	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	5.86	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.86	5.56	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.53	4.03	3.33
Pot Cap-1 Maneuver	1137	-	0	0	-	-	314	219	794
Stage 1	-	-	0	0	-	-	650	603	-
Stage 2	-	-	0	0	-	-	625	448	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1137	-	-	-	-	-	286	0	794
Mov Cap-2 Maneuver	-	-	-	-	-	-	286	0	-
Stage 1	-	-	-	-	-	-	593	0	-
Stage 2	-	-	-	-	-	-	625	0	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	1.69	0	16.08
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	523	-	-	-	437
HCM Lane V/C Ratio	0.075	-	-	-	0.257
HCM Ctrl Dly (s/v)	8.4	0.6	-	-	16.1
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	1

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↑			↑↔						↔↑	
Traffic Vol, veh/h	80	468	0	0	348	53	0	0	0	43	0	50
Future Vol, veh/h	80	468	0	0	348	53	0	0	0	43	0	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	94	94	94	92	92	92	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	3	3	3
Mvmt Flow	88	514	0	0	370	56	0	0	0	53	0	62

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	427	0	-	-	-	0	831	1089	213
Stage 1	-	-	-	-	-	-	398	398	-
Stage 2	-	-	-	-	-	-	433	690	-
Critical Hdwy	4.14	-	-	-	-	-	6.86	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	5.86	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.86	5.56	-
Follow-up Hdwy	2.22	-	-	-	-	-	3.53	4.03	3.33
Pot Cap-1 Maneuver	1129	-	0	0	-	-	306	213	789
Stage 1	-	-	0	0	-	-	644	598	-
Stage 2	-	-	0	0	-	-	619	442	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1129	-	-	-	-	-	278	0	789
Mov Cap-2 Maneuver	-	-	-	-	-	-	278	0	-
Stage 1	-	-	-	-	-	-	586	0	-
Stage 2	-	-	-	-	-	-	619	0	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	1.72	0	16.52
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	526	-	-	-	427
HCM Lane V/C Ratio	0.078	-	-	-	0.269
HCM Ctrl Dly (s/v)	8.5	0.6	-	-	16.5
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.1

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↗	↗↔			↔			↔	
Traffic Vol, veh/h	88	499	7	5	359	53	20	8	31	43	2	52
Future Vol, veh/h	88	499	7	5	359	53	20	8	31	43	2	52
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	94	94	94	92	92	92	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	3	3	3
Mvmt Flow	97	548	8	5	382	56	22	9	34	53	2	64

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	438	0	0	556	0	0	948	1195	278	893	1170	219
Stage 1	-	-	-	-	-	-	746	746	-	421	421	-
Stage 2	-	-	-	-	-	-	203	449	-	472	749	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.56	6.56	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.56	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.56	5.56	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.53	4.03	3.33
Pot Cap-1 Maneuver	1118	-	-	1011	-	-	215	185	719	235	190	782
Stage 1	-	-	-	-	-	-	372	419	-	578	585	-
Stage 2	-	-	-	-	-	-	780	571	-	539	415	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1118	-	-	1011	-	-	174	165	719	190	170	782
Mov Cap-2 Maneuver	-	-	-	-	-	-	174	165	-	190	170	-
Stage 1	-	-	-	-	-	-	334	376	-	575	582	-
Stage 2	-	-	-	-	-	-	709	568	-	451	372	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	1.8			0.1			21.19			22.92		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	286	523	-	-	1011	-	-	319
HCM Lane V/C Ratio	0.224	0.087	-	-	0.005	-	-	0.375
HCM Ctrl Dly (s/v)	21.2	8.5	0.6	-	8.6	-	-	22.9
HCM Lane LOS	C	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.8	0.3	-	-	0	-	-	1.7

GENESEE COUNTY

ROAD COMMISSION

DRIVEWAY TURN LANE

TREATMENT WARRANT REVIEWS

TRAFFIC AND SAFETY NOTE 604A

SUBJECT: Traffic Volume Guidelines for Right-Turn Lanes and Tapers

PURPOSE: To Promote a Uniform System of Determining When Right-Turn Lanes or Tapers Should be Constructed

COORDINATING UNIT: Geometric Design Unit

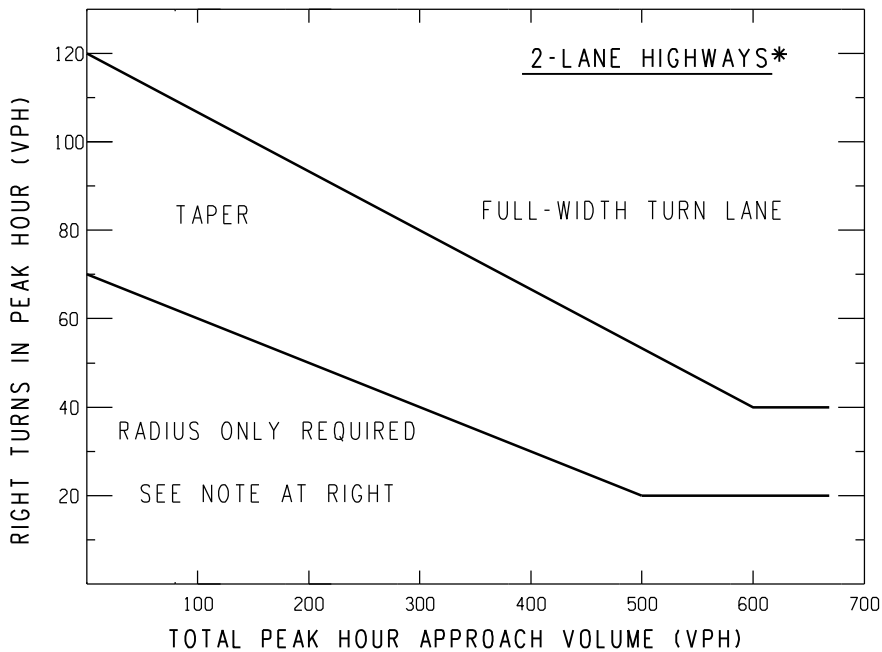
INFORMATION: The addition of right-turn lanes or tapers at intersections should be considered to enhance the traffic movement and improve operations. Exclusive right-turn lanes should be considered. The following traffic volume guidelines have been established and are outlined below.

Guidelines for Right-Turn Lanes and Tapers

The use of right-turn lanes should be considered in the following conditions:

1. At any intersection where a capacity analysis determines a right-turn lane is necessary to meet a desired level of service.
2. At any intersection where the crash experience, existing traffic operations or engineering judgment indicates that a right-turn lane will significantly improve operations.
3. At any unsignalized intersection which satisfies the criteria on the charts on page two.

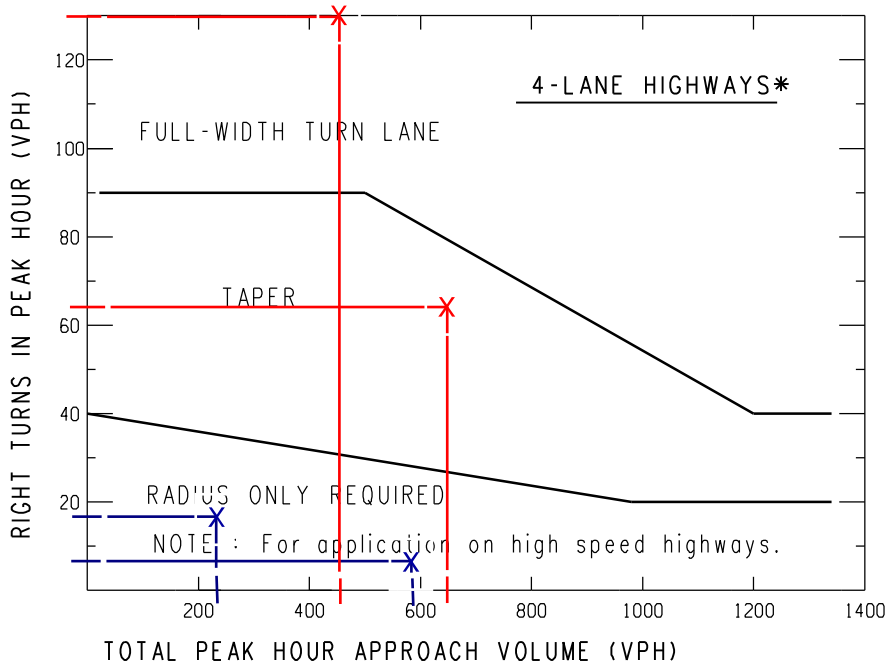
The two charts (from the NCHRP Report #279, Intersection Channelization Design Guide) on page two show the relationship between peak hour approach volumes and peak hour right-turns. When the intersection peak hour approach volume and peak hour right-turns fall below the lower trend line, radius improvements may be required. If the intersection falls between the two trend lines, taper improvements are recommended. For flare and intersection details, see the Geometric Design Guide VII-650 series.



NOTE:

For posted speeds at or under 45 mph, peak hour right turns greater than 40 vph, and total peak hour approach less than 300 vph, adjust right turn volumes.

Adjust peak hour right turns = Peak hour right turns - 20



*If a center left-turn lane exists (i.e. 3 or 5 lane highway), subtract the number of left turns in approach volume from the total approach volume to get an adjusted total approach volume.

Donegal Street Driveway:
Right-Turns: 214 AM, 64 PM
Approach: 456 AM, 628 PM
Full Right-Turn Lane Warranted

East Site Driveway:
Right-Turns 18 AM, 7 PM
Approach: 225 AM, 594 PM
No Treatment Warranted

Sample Problem:

The Design Speed is 55 mph. The Peak Hour Approach Volume is 300 vph. The Number of Right Turns in the Peak Hour is 100 vph. Determine if a right turn lane is recommended.

Solution:

Figure indicates that the intersection of 300 vph and 100 vph is located above the upper trend line; thus, a right-turn lane may be recommended.



TRAFFIC AND SAFETY
NOTE

TRAFFIC VOLUME GUIDELINES
FOR RIGHT-TURN LANES AND TAPERS

DRAWN BY: MTS

08/05/2004

CHECKED BY: JAT

PLAN DATE:

604A

SHEET
2 OF 2

FILE: K:\DGN\ts notes\Note604A tsn.dgn

REV. 08/05/2004

TRAFFIC AND SAFETY NOTE 605A

SUBJECT: Traffic Volume Guidelines for Left-Turn Lanes and Passing Flares at Unsignalized Intersections

PURPOSE: To Promote a Uniform System of Determining When Left-Turn Lanes or Passing Flares Should be Constructed

COORDINATING UNIT: Geometric Design Unit

INFORMATION: The addition of left-turn lanes or passing flares should be considered in order to enhance the movement of traffic through intersections. The MDOT has established such guidelines on page 2.

The charts on page 3, 4, and 5 display the relationship between advancing and opposing volumes with respect to left-turns on two-lane, two-way highways. For each of the three charts, if the intersection of advancing and opposing volumes falls to the right of the curve representing the percentage of left-turns in the advancing volume, a left-turn lane is recommended. If the intersection falls to the left of the curve, a left-turn lane is not recommended. If a left-turn lane is not recommended, see the bottom of page 2 to consider the installation of a passing flare. For flare and intersection design details, see the Geometric Design Guide VII-650 series.

The chart on page 6 displays the relation between the left-turning volumes and opposing volumes on four-lane undivided highways. A left-turn lane normally is not warranted if the intersection opposing and left-turning volume falls in the shaded areas.

Charts are taken from NCHRP Report 279, Intersection Design Guide.

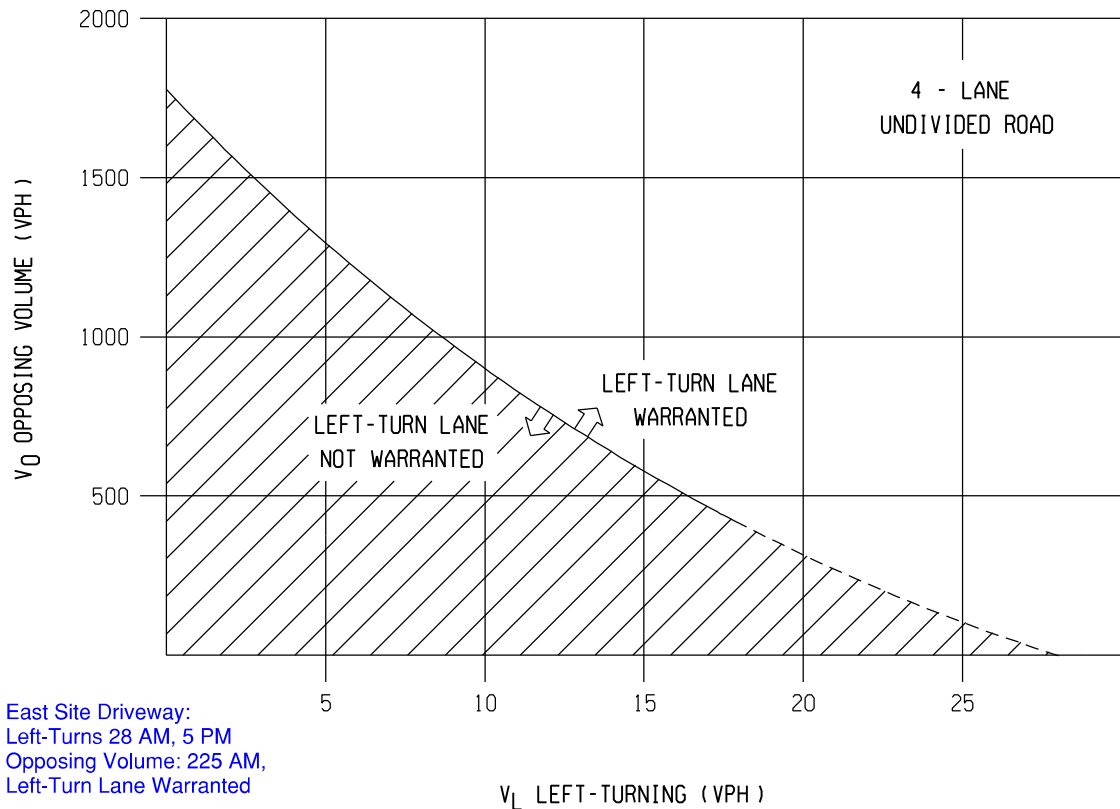
Guidelines for Left-Turn Lanes on Two-Lane, Two-Way Highways And Four-Lane Undivided Highways

The accommodation of left turns is often the critical factor in proper intersection design. Left-turn lanes and passing flares can significantly improve safety and the level of service at an intersection. Exclusive left-turn lanes should be considered under the following conditions:

1. At any unsignalized intersection on a two-lane urban or rural highway which satisfies the criteria on pages 3, 4 or 5.
2. At any unsignalized intersections on a four-lane urban or rural highway which satisfies the criteria on page 6.
3. At any intersection where the crash experience, traffic operations, sight distance restrictions (e.g., intersection beyond a crest vertical curve), or engineering judgment indicates that a left-turn lane will significantly improve operations.

However, if a left-turn lane is not recommended, a passing flare should be considered. Passing flares are discussed in Traffic and Safety Note 603A (7.3) Traffic Volume Guidelines for Driveway Passing Flares.

FOUR-LANE HIGHWAYS



East Site Driveway:
Left-Turns 28 AM, 5 PM
Opposing Volume: 225 AM,
Left-Turn Lane Warranted

It should be noted that the existing left-turns to Covert Street currently warrant a left-turn lane, but one is not present.

NOTE: When $V_O < 400$ vph (dashed line), a Left-Turn Lane is Not Normally Warranted Unless The Advancing Volume (V_A) in The Same Direction as the Left-Turning Traffic Exceeds 400 vph ($V_A > 400$ vph).

MDOT
Michigan Department of Transportation
TRAFFIC AND SAFETY
NOTE

TRAFFIC VOLUME GUIDELINES
FOR LEFT-TURN LANES AT
UNSIGNALIZED INTERSECTIONS

DRAWN BY: MTS

08/05/2004

CHECKED BY: JAT

PLAN DATE:

605A

SHEET
6 OF 6

FILE: K:/DGN/ts notes/Note605A tsn.dgn

REV. 08/05/2004

DRP RACER SITE PLAN

SECTION 2 | PHYSICAL SITE

Site Summary

PROPERTY SUMMARY	
Property Name	Davison Road Industrial Land
Address	Davison and Donegal Roads, Burton, MI
Site Area	56.21 AC
Zoning	M-2 General Industrial
Existing Land Use / Permits	Vacant / Wooded
Site Improvements	None
Purchase Price	Price disclosed with an executed RACER Confidentiality Agreement RACER Trust Buyers Guide
Owner	RACER Trust, LLC
Tax Parcel ID	Parcel ID 59-10-100-031 and 59-10-100-030
Property Taxes	\$5,445 (2023) Genesee County Treasurer's Office
Additional Site images	Aerial Drone Footage
DRP Contact Information	Shannon Selby, VP of Real Estate at DRP vip@detroitregionalpartnership.com (313) 648-1182
County Contact Information	Tyler Rossmmaessler, Flint & Genesee Economic Alliance trossmaessler@flintandgenesee.org (810) 600-1433
Site Contact Information	Steven Black, Transaction and Operations Manager, RACER Trust Sblack@racertrust.org (989) 415-9950

