Traffic Impact Study

Proposed Convenience Store with Fuel Sales
Thirteen Mile Road & Dequindre Road
City of Madison Heights
Oakland County, Michigan

Prepared for:
Skilken Gold

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DISCLAIMER

The opinions, findings, and conclusions expressed in this Traffic Impact Study are those of Stonefield Engineering & Design, LLC and not necessarily those of the Michigan Department of Transportation.

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EXECUTIVE SUMMARY

This Traffic Impact Study was prepared to investigate the potential impacts of the proposed convenience store with fuel sales located at the southwesterly quadrant of the intersection of Thirteen Mile Road and Dequindre Road in the City of Madison Heights, Oakland County, Michigan.

1. The proposed convenience store with fuel sales is located at the southwesterly quadrant of the intersection of Thirteen Mile Road and Dequindre Road in the City of Madison Heights, Oakland County, Michigan. The existing site is occupied by a mixed-use strip retail plaza. Under the proposed development program, the existing structures would be razed and a 6,132-square-foot Sheetz convenience store with eight (8) fueling stations (16 fueling positions) would be constructed on the subject property.

2. Under the proposed development plan, access would be provided via one (1) full-movement driveway along Thirteen Mile Road and one (1) full-movement driveway along Dequindre Road.

3. Counts were conducted during the typical weekday morning and weekday evening time periods to evaluate the existing traffic volumes along the roadway network. The weekday morning peak hour occurred from 7:45 a.m. to 8:45 a.m. and the weekday evening peak hour occurred from 4:30 p.m. to 5:30 p.m.

4. The proposed development is expected to generate 134 new trips during the weekday morning peak hour and 120 new trips during the weekday evening peak hour.

5. In the Build Condition, the signalized intersection of Thirteen Mile Road and Dequindre Road is calculated to operate at overall Level of Service D during the weekday morning and weekday evening peak hours. The turning movements at the site driveway along Thirteen Mile Road are calculated to operate at Level of Service C or better during the weekday morning and weekday evening peak hours. The turning movements at the site driveway along Dequindre Road are calculated to operate at Level of Service E or better during the weekday morning and weekday evening peak hours.

6. Based on the City of Madison Heights Ordinance parking requirements, published ITE parking demand rates, and the local characteristics of the site and surrounding area, the parking supply would be sufficient to support this project.

INTRODUCTION

This Traffic Impact Study was prepared to investigate the potential impacts of the proposed convenience store with fuel sales on the adjacent roadway network. The subject property is located at the southwesterly quadrant of the intersection of Thirteen Mile Road and Dequindre Road in the City of Madison Heights, Oakland County, Michigan. The site location is shown on appended **Figure 1**.

The subject property's Parcel Identification Number (PIN) is designated as 25-12-226-008. The site has approximately 334 feet of frontage along Thirteen Mile Road and approximately 244 feet of frontage along Dequindre Road. The existing site is occupied by a mixed-use strip retail plaza. Access is presently provided via one (1) full-movement driveway along Thirteen Mile Road and one (1) full-movement driveway along Dequindre Road. Under the proposed development program, the existing structures would be razed and a 6,132-square-foot Sheetz convenience store with eight (8) fueling stations (16 fueling positions) would be constructed. Access is proposed to remain via one (1) full-movement driveway along Thirteen Mile Road and one (1) full movement driveway along Dequindre Road.

METHODOLOGY

Stonefield Engineering & Design, LLC has prepared this Traffic Impact Study in accordance with the recommended guidelines and practices outlined by the Institute of Transportation Engineers (ITE) within Transportation Impact Analyses for Site Development. A detailed field investigation was performed to assess the existing conditions of the adjacent roadway network. A data collection effort was completed to identify the existing traffic volumes at the study intersections to serve as a base for the traffic analyses. Capacity analysis, a procedure used to estimate the traffic-carrying ability of roadway facilities over a range of defined operating conditions, was performed using the Highway Capacity Manual, 6th Edition (HCM) and the Synchro 11 Software for all study conditions to assess the roadway operations.

For an unsignalized intersection, Level of Service (LOS) A indicates operations with delay of less than 10 seconds per vehicle, while LOS F describes operations with delay in excess of 50 seconds per vehicle. For a signalized intersection, LOS A indicates operations with delay of less than 10 seconds per vehicle, while LOS F describes operations with delay in excess of 80 seconds per vehicle. The Technical Appendix contains the Highway Capacity Analysis Detail Sheets for the study intersections analyzed in this assessment. The traffic signal timing utilized within the signalized analysis is based on timing directives provided by Macomb County.

2023 EXISTING CONDITION

2023 EXISTING ROADWAY CONDITIONS

The proposed convenience store with fuel sales is located at the southwesterly quadrant of the intersection of Thirteen Mile Road and Dequindre Road in the City of Madison Heights, Oakland County, Michigan. The subject property's Parcel Identification Number (PIN) is designated as 25-12-226-008. The site has approximately 334 feet of frontage along Thirteen Mile Road and approximately 244 feet of frontage along Dequindre Road. Land uses in the area are a mix of commercial, religious, residential, and retail uses.

Thirteen Mile Road is classified as an Urban Principal Arterial roadway with a general east-west orientation, and is under the jurisdiction of the City of Madison Heights. Along the site frontage, the roadway provides two (2) lanes of travel in each direction, separated by a center left-turn lane, with additional lanes provided at key intersections to facilitate turning movements. The roadway has a posted speed limit of 40 mph. Curb and sidewalk are provided along both sides of the roadway, shoulders are not provided, and on-street parking is not permitted. Thirteen Mile Road provides east-west mobility throughout the City of Madison Heights and surrounding municipalities for a mix of commercial, residential, and retail uses along its length.

Dequindre Road is classified as an Urban Principal Arterial roadway with a general north-south orientation, and is under the jurisdiction of Oakland County. Along the site frontage, the roadway provides two (2) lanes of travel in each direction, separated by a center left-turn lane, with additional lanes provided at key intersections to facilitate turning movements. The roadway has a posted speed limit of 45 mph. Curb and sidewalk are provided along both sides of the roadway, shoulders are not provided, and on-street parking is not permitted. Dequindre Road provides north-south mobility throughout the City of Madison Heights and surrounding municipalities for a mix of commercial, religious, residential, and retail uses along its length.

Thirteen Mile Road and Dequindre Road intersect to form a four (4)-leg intersection controlled by a four (4)-phase traffic signal operating on a 180-second background cycle length. The eastbound and westbound approaches of Thirteen Mile Road provide one (1) exclusive left-turn lane, two (2) exclusive through lanes, and one (1) exclusive right-turn lane. The northbound and southbound approaches of Dequindre Road provide one (1) exclusive left-turn lane, two (2) exclusive through lanes, and one (1) right-turn lane. Crosswalks, pedestrian signals, and pedestrian ramps are provided across each of the intersection legs.

2023 EXISTING TRAFFIC VOLUMES

Turning movement counts were collected during the typical weekday morning and weekday evening time periods to evaluate existing traffic conditions and identify the specific hours when traffic activity on the adjacent roadways is at a maximum and could be potentially impacted by the development of the site. Turning

movement counts were collected at the intersection of Thirteen Mile Road and Dequindre Road. Specifically, turning movement counts were conducted on Tuesday, August 22, 2023, from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 7:00 p.m.

The study time periods were chosen as they are representative of the peak periods of both the adjacent roadway network and the proposed development. The traffic volume data was collected and analyzed to identify the design peak hour in accordance with HCM and ITE guidelines. Based on the review of the count data the weekday morning peak hour occurred from 7:45 a.m. to 8:45 a.m. and the weekday evening peak hour occurred from 4:30 p.m. to 5:30 p.m. The Technical Appendix contains a summary of the turning movement count data. The 2023 Existing weekday morning and weekday evening peak hour volumes are summarized on appended **Figure 2**.

2023 EXISTING LOS/CAPACITY ANALYSIS

A Level of Service and Volume/Capacity analysis was conducted for the 2023 Existing Condition during the weekday morning and weekday evening peak hours at the study intersection. Under the existing condition, the signalized intersection of Thirteen Mile Road and Dequindre Road is calculated to operate at overall Level of Service D during the weekday morning and weekday evening peak hours. The eastbound left-turn approach of Thirteen Mile Road is calculated to operate under capacity constraints during the weekday evening peak hour.

2025 NO-BUILD CONDITION

BACKGROUND GROWTH

The 2023 Existing Condition traffic volume data was grown to a future horizon year of 2025, which is a conservative estimate for when the proposed convenience store with fuel sales is expected to be fully constructed. Based on the U.S. Census Bureau population data within the City of Madison Heights between 2010 and 2020, a 0.42% annual population decrease was calculated. To provide a conservative analysis, the existing traffic volumes at the study intersections were increased by 1.00% annually for two (2) years.

OTHER PLANNED DEVELOPMENT PROJECTS

To evaluate the future traffic conditions, it is important to consider the potential site-generated traffic of other projects that could influence the traffic volume at the study intersections. Other planned development projects include those that are either in the entitlement process or have recently been approved for building permits in proximity to the proposed development. Based on research with the City of Madison Heights Planning Commission, there are no planned development projects within the area of the subject site. As such, the application of the background growth rate would be adequate to account for background traffic growth.

2025 NO-BUILD TRAFFIC VOLUMES

The background growth rate was applied to the 2023 Existing Traffic Volumes to calculate the 2025 No-Build Traffic Volumes for the weekday morning and weekday evening peak hours. These volumes are summarized on appended **Figure 3**.

2025 NO-BUILD LOS/CAPACITY ANALYSIS

A Level of Service and Volume/Capacity analysis was also conducted for the 2025 No-Build Condition during the weekday morning and weekday evening peak hours at the study intersection. The signalized intersection of Thirteen Mile Road and Dequindre Road is calculated to operate generally consistent with the findings of the Existing Condition during the weekday morning and weekday evening peak hours. The eastbound left-turn approach of Thirteen Mile Road is calculated to operate under capacity constraints during the weekday evening peak hour.

2025 BUILD CONDITION

The site-generated traffic volume of the proposed convenience store with fuel sales was estimated to identify the potential impacts of the project. For the purpose of this analysis, a complete project "build out" is assumed within two (2) years of the preparation of this study.

TRIP GENERATION

Trip generation projections for the proposed convenience store with fuel sales were prepared utilizing ITE's Trip Generation Manual, 11th Edition. Trip generation rates associated with Land Use 945 "Convenience Store/Gas Station" were cited for the proposed 6,132-square-foot Sheetz convenience store with eight (8) fueling stations (16 fueling positions). Specifically, trip generation rates associated with convenience stores between 16 and 24 fueling positions were used. **Table 1** provides the weekday morning and weekday evening, peak hour trip generation volumes associated with the proposed development.

TABLE 1 – PROPOSED TRIP GENERATION

	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
Land Use	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**
6,132 SF Convenience Store/Gas Station *ITE Land Use 945*	280	280	560	242	242	484

As stated within Chapter 10 of ITE's Trip Generation Handbook, 3rd Edition, there are instances when the total number of trips generated by a site is different from the amount of new traffic added to the street system

by the generator. Convenience stores with fuel sales are specifically located on or adjacent to busy streets to attract motorists already on the roadway. Therefore, the proposed convenience store with fuel sales development would be expected to attract a portion of its trips from the traffic passing the site on the way from an origin to an ultimate destination. These trips do not add new traffic to the adjacent roadway system and are referred to as pass-by trips.

Based upon the published ITE data for Land Use 945 "Convenience Store/Gas Station," 76% of the site-generated traffic during the weekday morning peak hour and 75% during the weekday evening peak hour is comprised of pass-by traffic. **Table 2** shows the additional site generated traffic for the proposed development after applying the appropriate trip reductions to account for pass-by traffic.

TABLE 2 – PROPOSED TRIP GENERATION – NEW & PASS-BY TRIPS

	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
Trip Type	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**
"New" Trips	67	67	134	60	60	120
"Pass-By" Trips	213	213	426	182	182	364
Total	**280**	**280**	**560**	**242**	**242**	**484**

At the site driveways, the calculated number of pass-by trips is shown as a negative number at the through movement as the vehicles are temporarily diverted from the through travel stream into and out of the site access point.

TRIP ASSIGNMENT/DISTRIBUTION

The trips generated by the proposed development were distributed according to the existing travel pattern along the adjacent roadways and the access management plan of the site. The "New" Site-Generated Traffic Volumes are illustrated on **Figure 4** and the "Pass-By" Site-Generated Traffic Volumes expected to access the site are depicted on **Figure 5**.

2025 BUILD TRAFFIC VOLUMES

The site-generated trips were added to the 2025 No-Build Traffic Volumes to calculate the 2025 Build Traffic Volumes and are shown on appended **Figure 6**.

2025 BUILD LOS/CAPACITY ANALYSIS

A Level of Service and Volume/Capacity analysis was also conducted for the 2025 Build Condition during the weekday morning and weekday evening peak hours at the study intersection and proposed site driveways. Appended **Table A1** compare the Existing, No-Build, and Build Conditions Level of Service and delay values.

The signalized intersection of Thirteen Mile Road and Dequindre Road is calculated to operate generally consistent with the findings of the No-Build Condition during the weekday morning and weekday evening peak hours. The eastbound left-turn approach of Thirteen Mile Road is calculated to operate under capacity constraints during the weekday evening peak hour. It is noted that the eastbound left-turn delay would only increase by 2.8 seconds compared to the No-Build Condition during the weekday evening peak hour, a 1.4% increase in the delay. This does not represent a significant increase in delay compared to the No-Build Condition.

The turning movements at the site driveway along Thirteen Mile Road are calculated to operate at Level of Service C or better during the weekday morning and weekday evening peak hours. The turning movements at the site driveway along Dequindre Road are calculated to operate at Level of Service E or better during the weekday morning and weekday evening peak hours.

SITE CIRCULATION/PARKING SUPPLY

A review was conducted of the proposed convenience store with fuel sales using the Concept Plan A prepared by our office, dated August 28, 2023. In completing this review, particular attention was focused on the site access, circulation, and parking supply.

Under the proposed development program, a 6,132-square-foot Sheetz convenience store with eight (8) fueling stations (16 fueling positions) would be constructed on the subject property. The building would be located on the southerly portion of the property and the fueling canopy would be located on the northerly portion of the property. Access is proposed via one (1) full-movement driveway along Thirteen Mile Road and one (1) full-movement driveway along Dequindre Road. Right-angle parking spaces would be located along the easterly, westerly, and northerly sides of the building and along the easterly property line. A trash enclosure would be located at the southwest corner of the site. Two-way vehicular circulation throughout the site would be provided via 30-foot drive aisles.

Regarding the parking requirements for the proposed development, the City of Madison Heights requires one (1) space at each fuel pump for gasoline service stations, (1) parking space per two (2) seats and one (1) parking space per two (2) employees for fast-food restaurant uses, and one (1) parking space per 250 square feet of usable floor area and one (1) parking space per 700 square feet of storage area for retail uses. For the proposed 6,132-square-foot convenience store with 16 fuel pumps, 48 seats, and 8 employees, this equates to 40 required parking spaces and 16 spaces at the fuel pumps. The site would provide 40 total parking spaces, inclusive of two (2) ADA accessible parking spaces, and 16 spaces at the fuel pumps, which meets the parking requirement and would be sufficient to support this project's parking demand. The spaces would be 10 feet wide by 20 feet deep in accordance with the City of Madison Heights Ordinance and industry standards.

The parking supply was evaluated with respect to data published within the ITE's Parking Generation, 5th Edition, for Land Use 960 "Super Convenience Market/Gas Station." The average parking demand rate during the peak weekday period for Land Use 960 "Super Convenience Market/Gas Station" is 8.11 vehicles per 1,000 square feet. For the proposed 6,132-square-foot convenience store, this equates to 50 spaces. As such, the proposed parking supply of 56 spaces would be sufficient to support the parking demand of the site.

CONCLUSIONS

This report was prepared to examine the potential traffic impact of the proposed convenience store with fuel sales. The analysis findings, which have been based on industry-standard guidelines, indicate that the proposed development would not have a significant impact on the traffic operations of the adjacent roadway network. The site-generated trips of the proposed development would consist largely of "pass-by" trips, as opposed to new vehicles on the roadway, due to the land use, location, and the access management plan. The site driveways and on-site layout have been designed to provide for effective access to and from the subject property. Based on the City of Madison Heights Ordinance parking requirements, published ITE parking demand rates, and local characteristics of the site and surrounding area, the parking supply would be sufficient to support this project.

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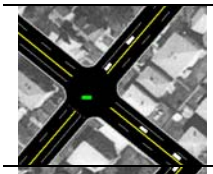
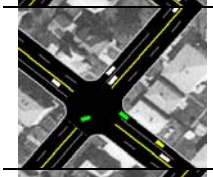
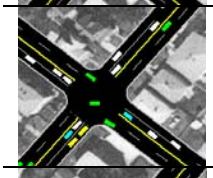
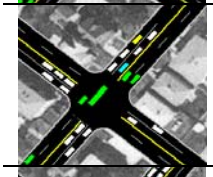
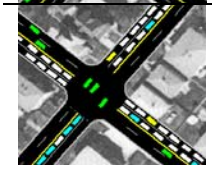
TECHNICAL APPENDIX

LEVEL OF SERVICE/AVERAGE CONTROL DELAY CRITERIA

LEVEL OF SERVICE /AVERAGE CONTROL DELAY CRITERIA

The ability of a roadway to effectively accommodate traffic demand is determined through an assessment of the volume-to-capacity ratio, delay and Level of Service of the lane group and/or intersection. The volume-to-capacity ratio is the ratio of traffic flow rate to capacity for a given transportation facility. As defined within the Highway Capacity Manual, 6th Edition (HCM), intersection delay is the total additional travel time experienced by drivers, passengers, or pedestrians as a result of control measures and interaction with other users of the facility, divided by the volume departing from the corresponding cross section of the facility. Level of service is a qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience.

For an unsignalized intersection, LOS A indicates operations with delay less than 10 seconds per vehicle, while LOS F describes operations with delay in excess of 50 seconds per vehicle. For a signalized intersection, LOS A indicates operations with delay less than 10 seconds per vehicle and LOS F denotes operations with delay in excess of 80 seconds per vehicle.

	Level Of Service (LOS)	Signalized Delay Range (average control delay in sec/veh)	Unsignalized Delay Range (average control delay in sec/veh)
	A	<=10	<=10
	B	>10 and <=20	>10 and <=15
	C	>20 and <=35	>15 and <=25
	D	>35 and <=55	>25 and <=35
	E	>55 and <=80	>35 and <=50
	F	>80	>50

Source: Highway Capacity Manual, 6th Edition

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Table A1: Comparative Level of Service (Delay) Table

City of Madison Heights, Oakland County, New Jersey

X (n) = Level of Service (seconds of delay)

		Weekday Morning Peak Hour			Weekday Evening Peak Hour		
Intersection	**Lane Group**	**2023 Existing Condition**	**2025 No-Build Condition**	**2025 Build Condition**	**2023 Existing Condition**	**2025 No-Build Condition**	**2025 Build Condition**
Thirteen Mile Road (E/W) & Dequindre Road (N/S)	EB Left	E (58.9)	E (59.0)	E (58.6)	F (184.7)	F (194.2)	F (197.0)
	EB Through	E (61.8)	E (61.3)	E (60.9)	E (76.2)	E (76.5)	E (76.8)
	EB Right	D (52.5)	D (51.7)	D (51.0)	D (52.9)	D (52.4)	D (51.8)
	WB Left	E (55.6)	E (55.1)	D (54.5)	E (66.2)	E (67.6)	E (67.7)
	WB Through	E (72.9)	E (72.7)	E (72.5)	E (68.2)	E (68.1)	E (68.2)
	WB Right	E (61.4)	E (60.8)	E (59.9)	D (54.8)	D (54.3)	D (53.8)
	NB Left	C (25.5)	C (27.6)	C (29.1)	D (46.7)	D (53.2)	E (55.9)
	NB Through	C (24.9)	C (25.8)	C (26.5)	C (27.7)	C (28.5)	C (29.1)
	NB Right	B (15.1)	B (15.5)	B (15.9)	B (16.7)	B (17.1)	B (17.4)
	SB Left	B (19.9)	C (20.7)	C (21.3)	C (22.6)	C (23.4)	C (23.9)
	SB Through	C (28.7)	C (29.9)	C (30.7)	C (34.9)	D (36.2)	D (37.0)
	SB Right	B (16.3)	B (16.7)	B (17.2)	C (21.0)	C (21.5)	C (21.9)
	Overall	**D (41.0)**	**D (41.5)**	**D (41.9)**	**D (51.0)**	**D (52.2)**	**D (52.8)**
Thirteen Mile Road (E/W) & Northern Site Driveway (N)	WB Left			A (9.6)			B (11.6)
	NB Left/Right			C (16.5)			C (22.8)
Eastern Site Driveway (E) & Dequindre Road (N/S)	EB Left/Right			E (37.4)			E (46.9)
	NB Left			B (12.8)			C (15.1)

TURNING MOVEMENT COUNT DATA

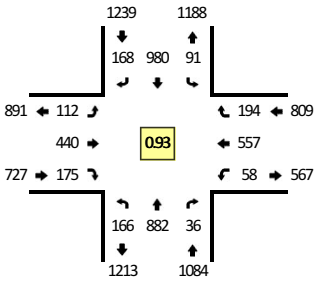
Type of peak hour being reported: Intersection Peak

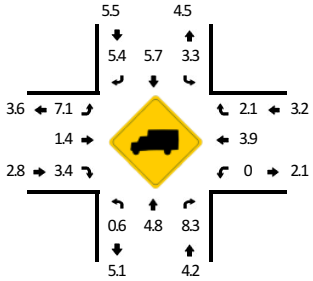
Method for determining peak hour: Total Entering Volume

LOCATION: Dequindre Rd -- E Thirteen Mile Rd
CITY/STATE: Warren, MI

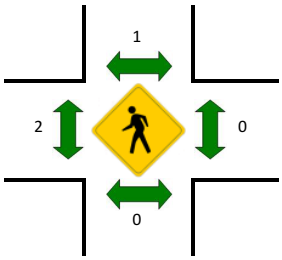
QC JOB #: 16301401
DATE: Tue, Aug 22 2023

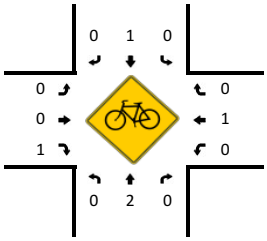
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

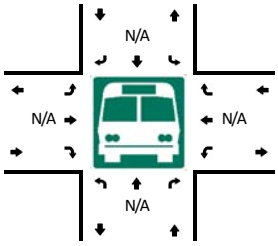


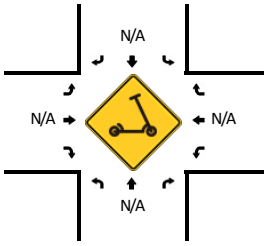


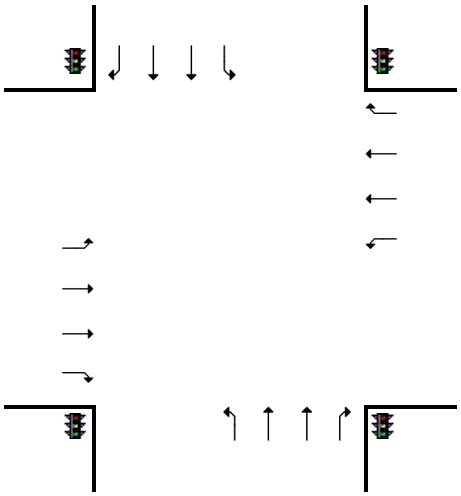
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	Dequindre Rd (Northbound)				Dequindre Rd (Southbound)				E Thirteen Mile Rd (Eastbound)				E Thirteen Mile Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	23	159	7	0	19	164	27	0	21	61	30	0	7	90	27	0	635	
7:15 AM	35	158	11	0	29	199	29	0	26	78	40	0	10	114	36	0	765	
7:30 AM	49	223	9	0	16	208	36	0	29	127	36	0	10	151	43	0	937	
7:45 AM	47	236	9	0	24	245	44	0	25	126	51	0	17	153	62	0	1039	3376
8:00 AM	41	214	9	0	23	234	32	0	20	92	44	0	12	116	35	0	872	3613
8:15 AM	39	190	8	0	13	266	51	0	40	95	45	0	16	150	49	0	962	3810
8:30 AM	39	242	10	0	31	235	41	0	27	127	35	0	13	138	48	0	986	3859
8:45 AM	40	223	6	0	28	244	49	0	19	99	50	0	15	151	47	0	971	3791

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	188	944	36	0	96	980	176	0	100	504	204	0	68	612	248	0	4156
Heavy Trucks	4	44	0		0	52	4		0	8	12		0	32	0		156
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	8	0		0	0	0		0	0	0		0	0	0		8
Scooters																	

Comments:

Report generated on 8/28/2023 12:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

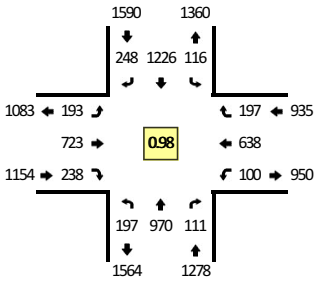
Type of peak hour being reported: Intersection Peak

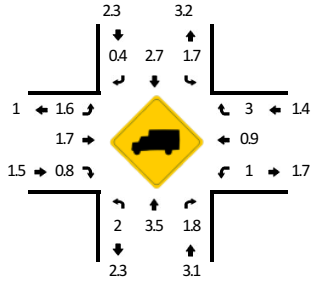
Method for determining peak hour: Total Entering Volume

LOCATION: Dequindre Rd -- E Thirteen Mile Rd
CITY/STATE: Warren, MI

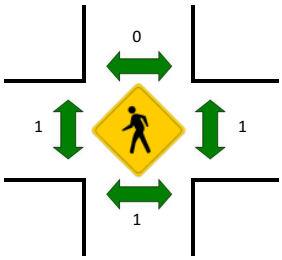
QC JOB #: 16301402
DATE: Tue, Aug 22 2023

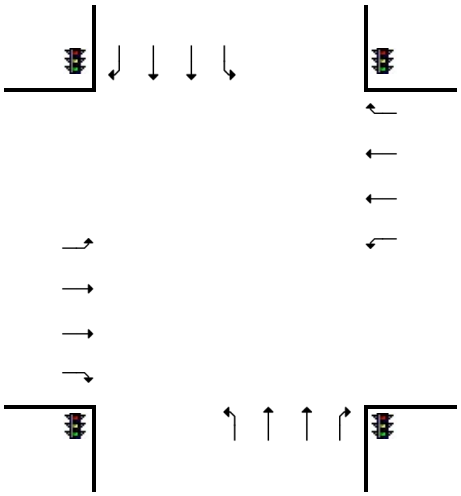
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

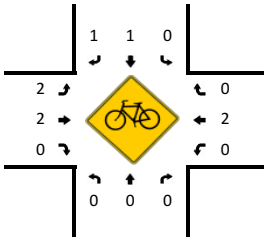


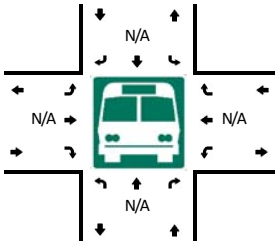


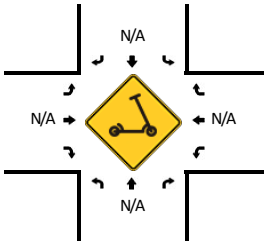
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	Dequindre Rd (Northbound)				Dequindre Rd (Southbound)				E Thirteen Mile Rd (Eastbound)				E Thirteen Mile Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	52	250	17	0	24	278	62	0	43	154	50	0	10	146	50	0	1136	
4:15 PM	52	235	17	0	28	282	50	0	45	152	62	0	17	151	41	0	1132	
4:30 PM	41	276	25	0	29	310	57	0	49	184	67	0	28	152	48	0	1266	
4:45 PM	54	212	22	0	30	316	64	0	36	187	63	0	16	186	50	0	1236	4770
5:00 PM	49	217	42	0	27	312	66	0	56	179	55	0	38	154	48	0	1243	4877
5:15 PM	53	265	22	0	30	288	61	0	52	173	53	0	18	146	51	0	1212	4957
5:30 PM	44	219	19	0	31	293	74	0	43	152	62	0	20	145	35	0	1137	4828
5:45 PM	41	204	33	0	31	315	63	0	48	172	65	0	15	128	36	0	1151	4743
6:00 PM	46	214	31	0	27	277	55	0	48	166	70	0	22	128	46	0	1130	4630
6:15 PM	48	210	24	0	28	229	54	0	51	157	67	0	12	104	35	0	1019	4437
6:30 PM	48	166	17	0	26	265	46	0	48	155	59	0	20	107	42	0	999	4299
6:45 PM	44	166	17	0	29	235	25	0	46	123	57	0	26	94	20	0	882	4030

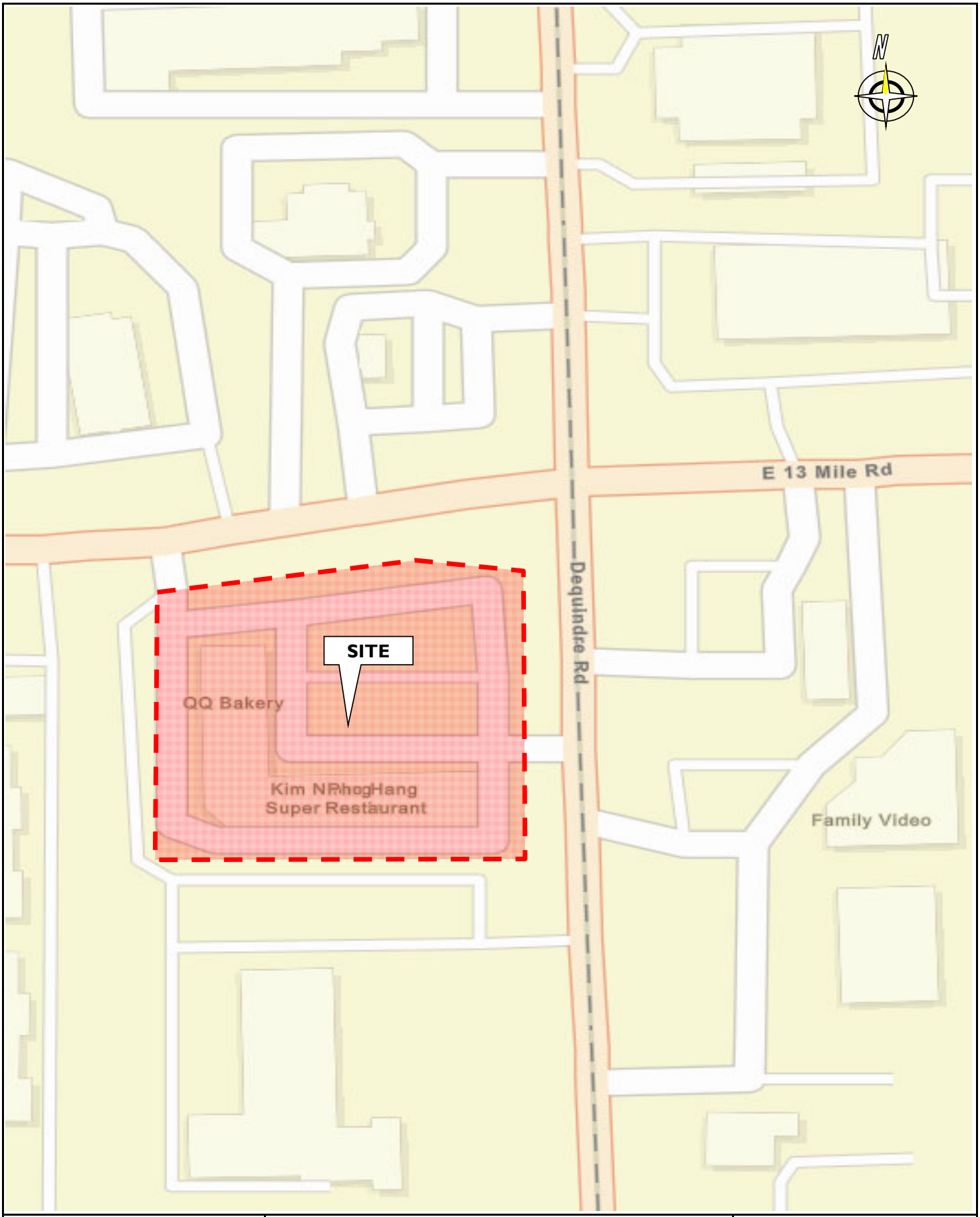
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	164	1104	100	0	116	1240	228	0	196	736	268	0	112	608	192	0	5064
Heavy Trucks	4	36	0		4	28	4		8	12	0		0	12	0		108
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	8	0		8
Scooters																	

Comments:

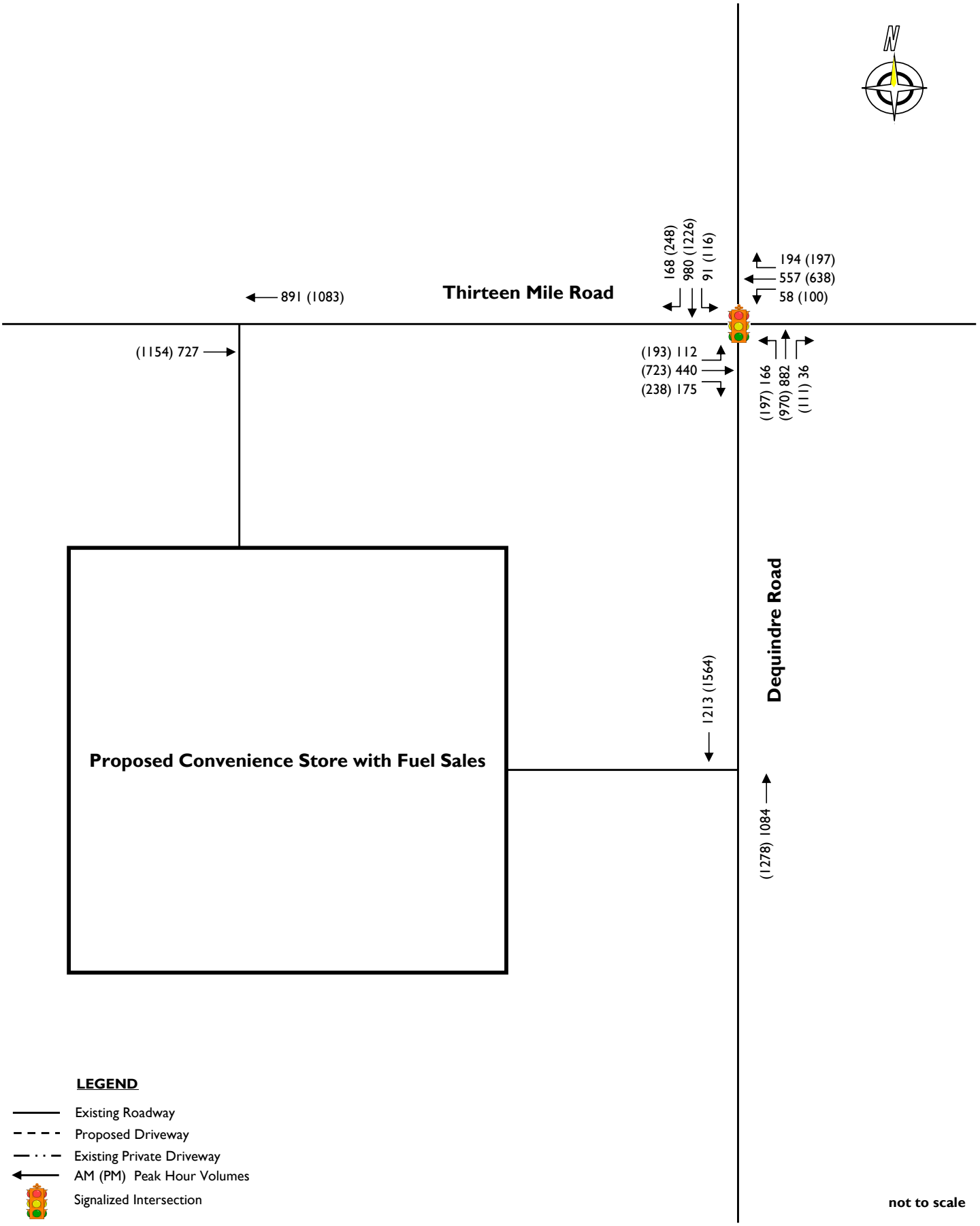
Report generated on 8/28/2023 12:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

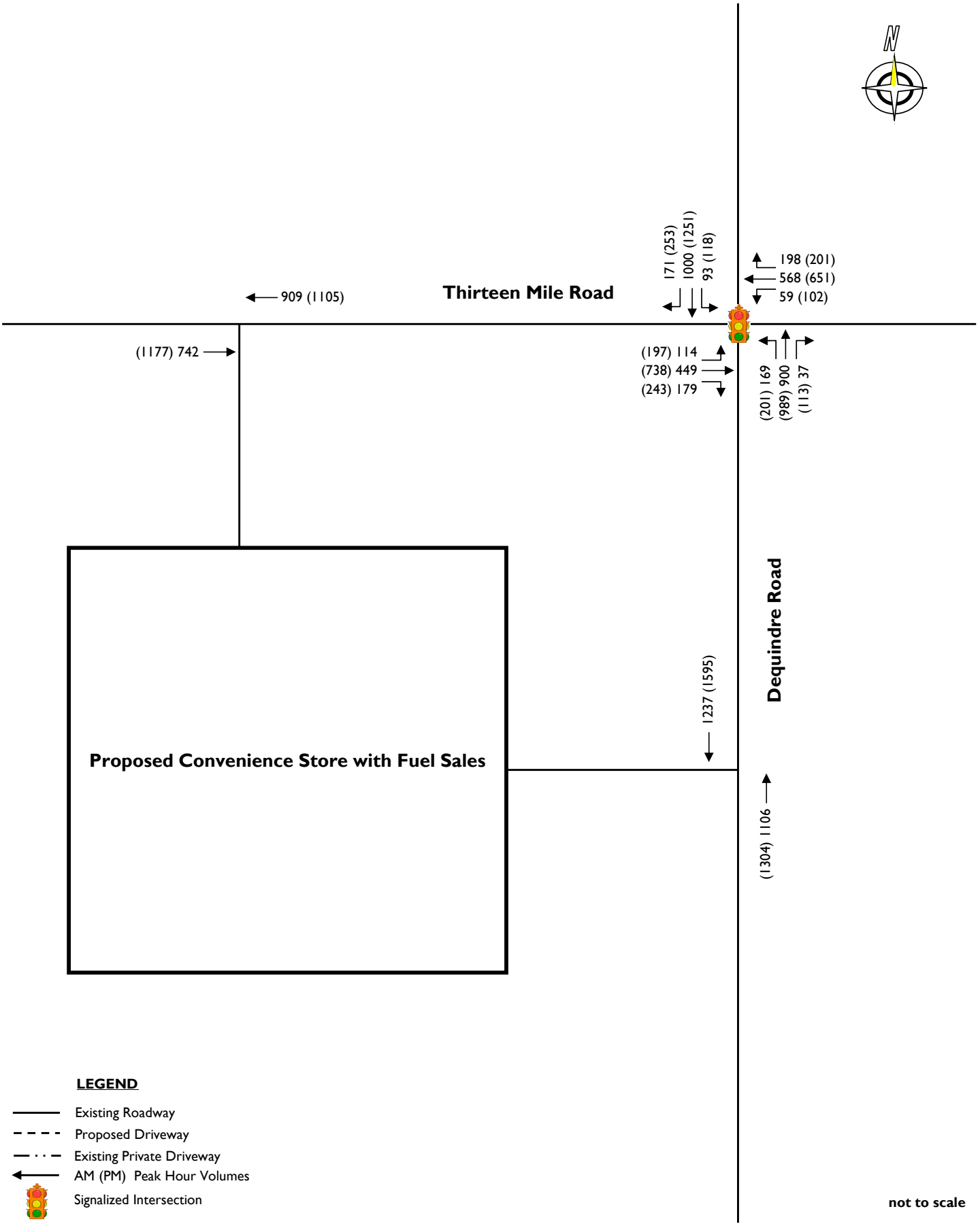
FIGURES



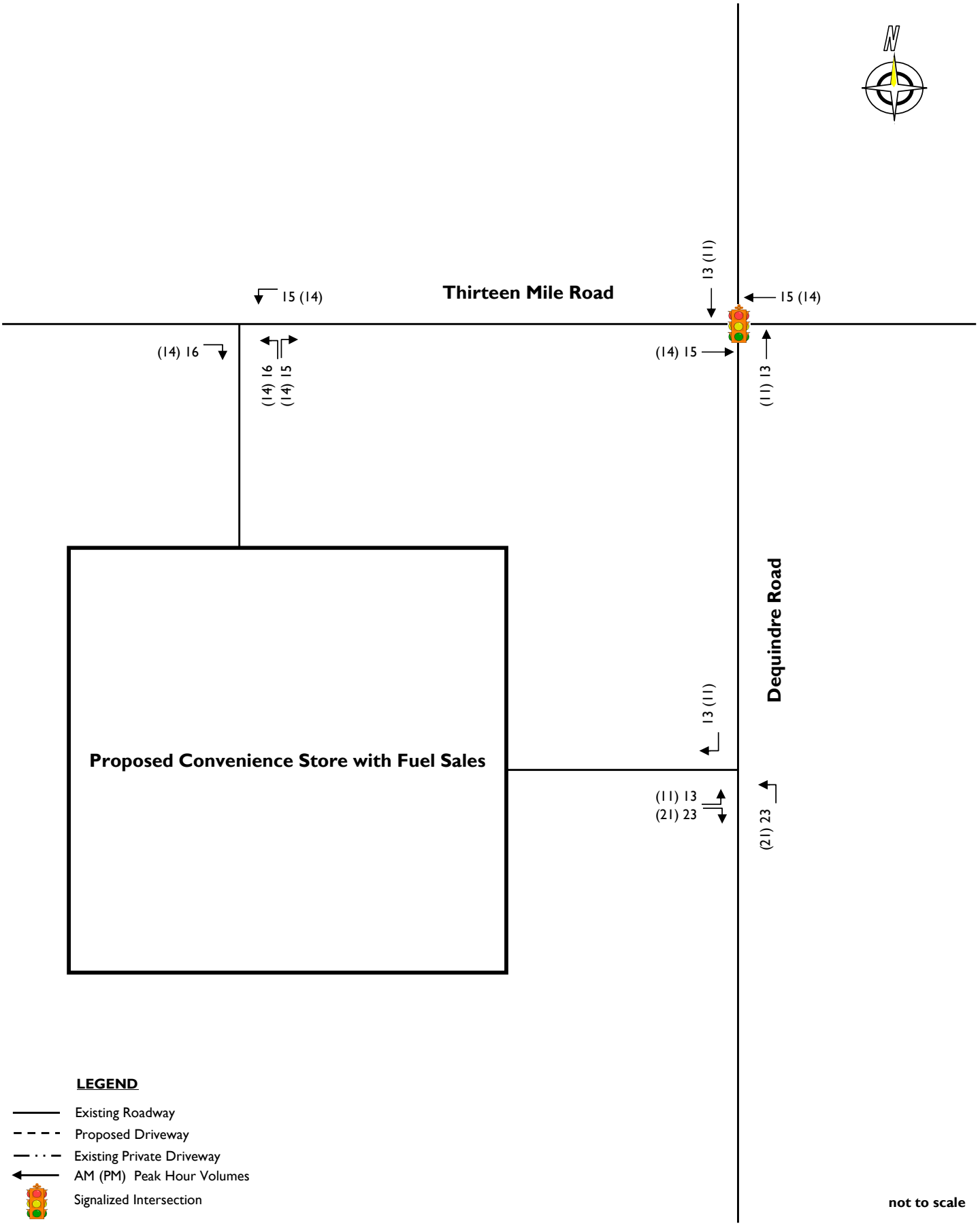
STONEFIELD	Proposed Convenience Store with Fuel Sales 30901 Dequindre Road City of Madison Heights, Oakland County, Michigan Traffic Impact Study	FIGURE 1 Site Location Map



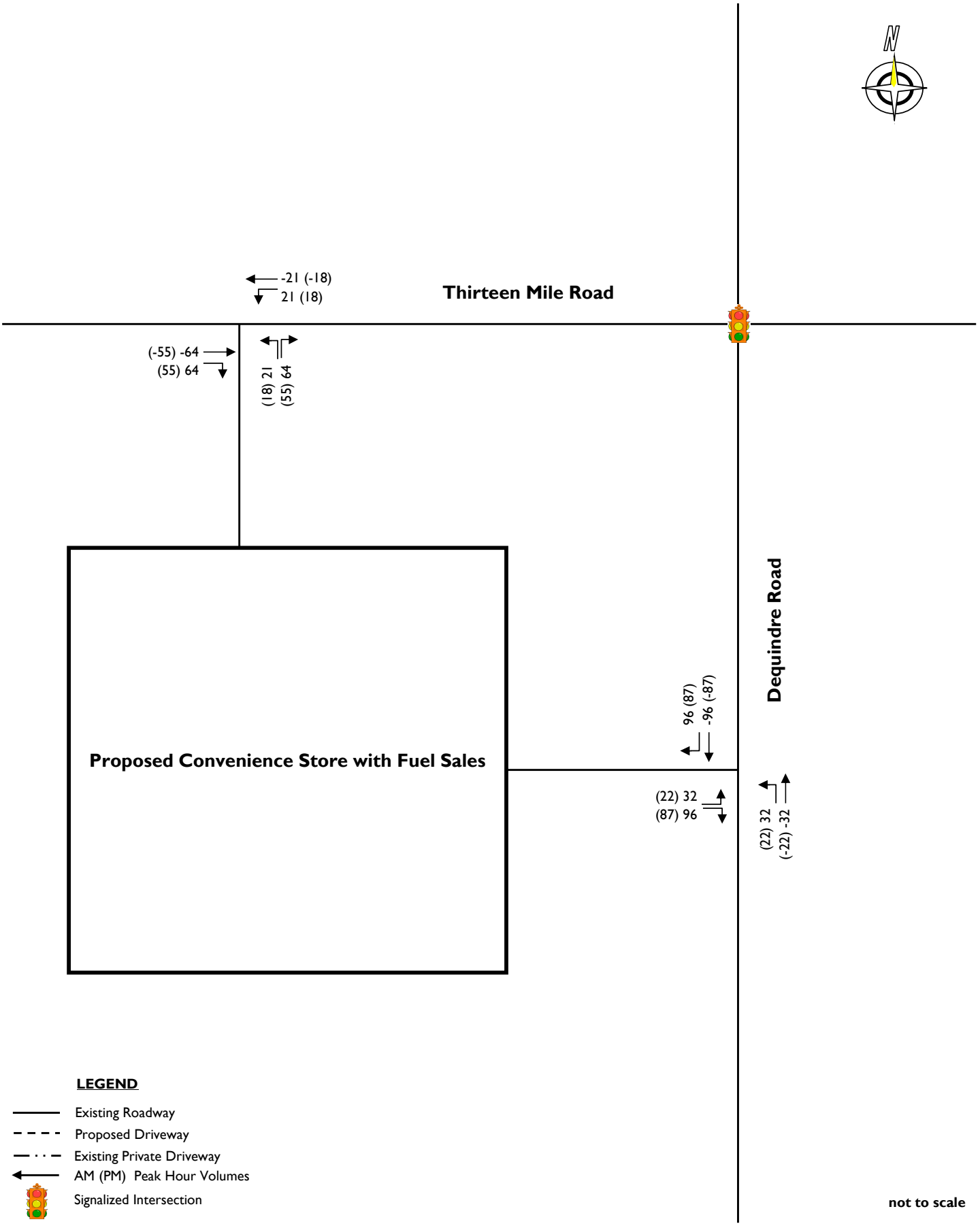
STONEFIELD	**Proposed Convenience Store with Fuel Sales** **30901 Dequindre Road** **City of Madison Heights, Oakland County, Michigan** **Traffic Impact Study**	**FIGURE 2** **2023 Existing Traffic Volumes**



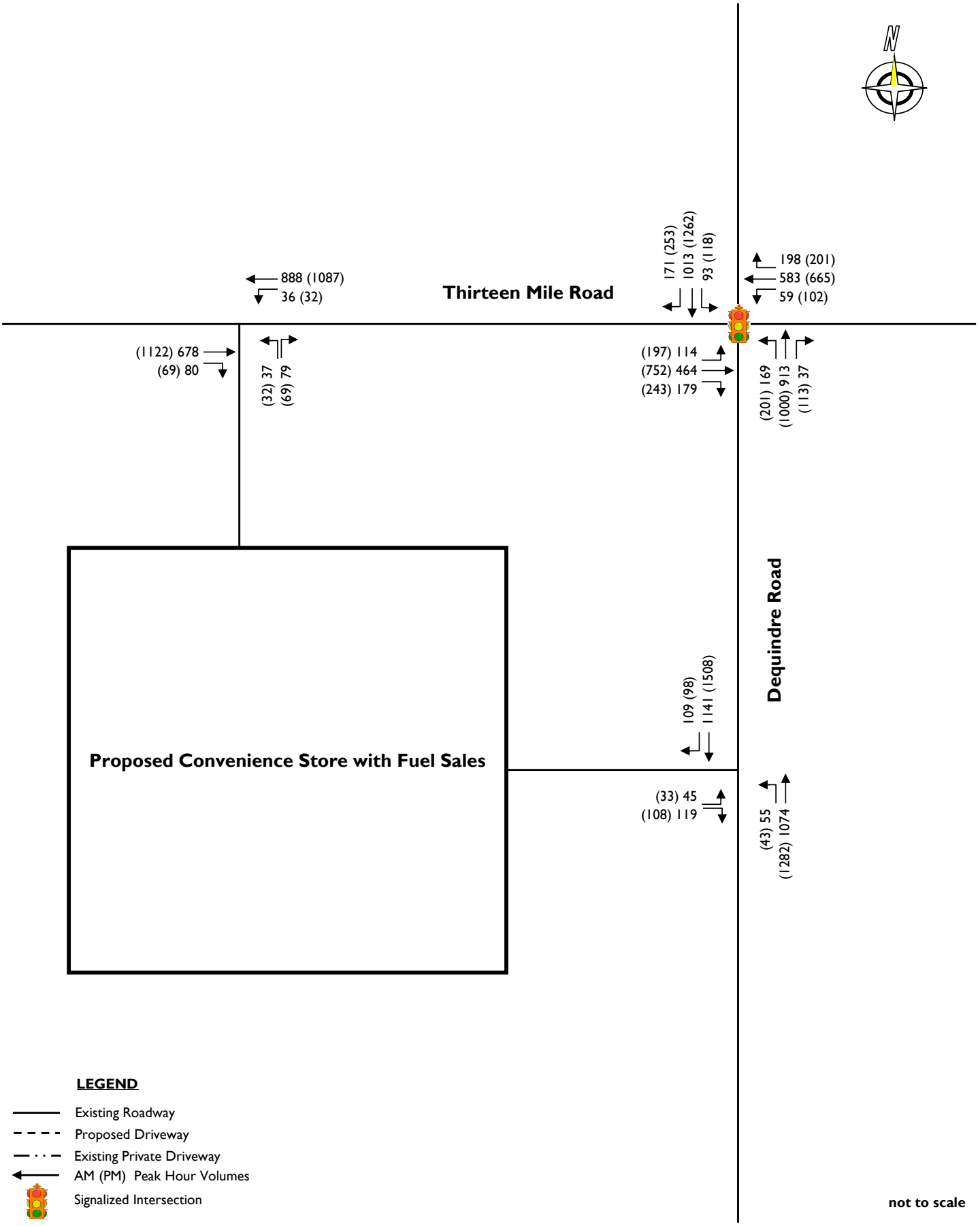
STONEFIELD	**Proposed Convenience Store with Fuel Sales** **30901 Dequindre Road** **City of Madison Heights, Oakland County, Michigan** **Traffic Impact Study**	**FIGURE 3** **2025 No-Build Traffic Volumes**



STONEFIELD	**Proposed Convenience Store with Fuel Sales** **30901 Dequindre Road** **City of Madison Heights, Oakland County, Michigan** **Traffic Impact Study**	**FIGURE 4** **"New" Site-Generated Traffic Volumes**

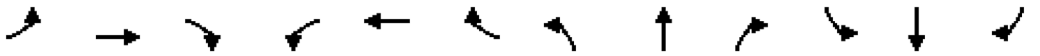


STONEFIELD	**Proposed Convenience Store with Fuel Sales** **30901 Dequindre Road** **City of Madison Heights, Oakland County, Michigan** **Traffic Impact Study**	**FIGURE 5** **"Pass-By" Site-Generated Traffic Volumes**



STONEFIELD	**Proposed Convenience Store with Fuel Sales** **30901 Dequindre Road** **City of Madison Heights, Oakland County, Michigan** **Traffic Impact Study**	**FIGURE 6** **2025 Build Traffic Volumes**

HIGHWAY CAPACITY ANALYSIS DETAIL SHEETS



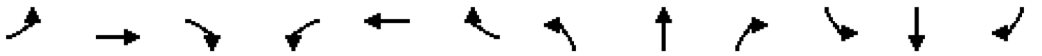
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	440	175	58	557	194	166	882	36	91	980	168
Future Volume (veh/h)	112	440	175	58	557	194	166	882	36	91	980	168
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1856	1900	1841	1870	1885	1826	1781	1856	1811	1826
Adj Flow Rate, veh/h	120	473	188	62	599	209	178	948	39	98	1054	181
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	7	1	3	0	4	2	1	5	8	3	6	5
Cap, veh/h	178	830	453	197	707	378	294	1942	901	327	1858	938
Arrive On Green	0.07	0.23	0.23	0.04	0.20	0.20	0.06	0.56	0.56	0.04	0.54	0.54
Sat Flow, veh/h	1711	3582	1572	1810	3497	1585	1795	3469	1510	1767	3441	1547
Grp Volume(v), veh/h	120	473	188	62	599	209	178	948	39	98	1054	181
Grp Sat Flow(s),veh/h/ln	1711	1791	1572	1810	1749	1585	1795	1735	1510	1767	1721	1547
Q Serve(g_s), s	9.8	21.0	17.4	4.9	29.7	20.8	8.0	29.8	1.9	4.5	36.6	9.4
Cycle Q Clear(g_c), s	9.8	21.0	17.4	4.9	29.7	20.8	8.0	29.8	1.9	4.5	36.6	9.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	178	830	453	197	707	378	294	1942	901	327	1858	938
V/C Ratio(X)	0.68	0.57	0.42	0.31	0.85	0.55	0.61	0.49	0.04	0.30	0.57	0.19
Avail Cap(c_a), veh/h	234	1132	585	310	1106	558	312	1942	901	380	1858	938
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	54.1	61.2	51.8	54.7	69.1	60.1	22.4	24.0	15.0	19.4	27.5	15.8
Incr Delay (d2), s/veh	4.8	0.6	0.6	0.9	3.8	1.3	3.0	0.9	0.1	0.5	1.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	9.6	7.0	2.3	13.6	8.5	3.5	12.3	0.7	1.9	15.1	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.9	61.8	52.5	55.6	72.9	61.4	25.5	24.9	15.1	19.9	28.7	16.3
LnGrp LOS	E	E	D	E	E	E	C	C	B	B	C	B
Approach Vol, veh/h		781			870			1165			1333	
Approach Delay, s/veh		59.1			68.9			24.6			26.4	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.2	103.3	18.0	42.5	12.6	106.8	12.7	47.8
Change Period (Y+Rc), s	* 6.1	* 6.1	6.1	6.1	* 6.1	* 6.1	6.1	6.1
Max Green Setting (Gmax), s	* 12	* 69	17.9	56.9	* 12	* 69	17.9	56.9
Max Q Clear Time (g_c+I1), s	10.0	38.6	11.8	31.7	6.5	31.8	6.9	23.0
Green Ext Time (p_c), s	0.1	8.9	0.1	4.7	0.1	7.4	0.1	3.8

Intersection Summary	
HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



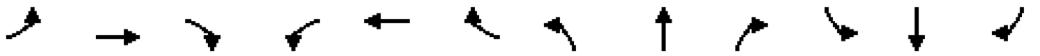
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	723	238	100	638	197	197	970	111	116	1226	248
Future Volume (veh/h)	193	723	238	100	638	197	197	970	111	116	1226	248
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1885	1885	1856	1870	1841	1870	1870	1856	1900
Adj Flow Rate, veh/h	197	738	243	102	651	201	201	990	113	118	1251	253
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	1	1	3	2	4	2	2	3	0
Cap, veh/h	169	831	478	148	837	434	244	1885	933	298	1818	910
Arrive On Green	0.05	0.23	0.23	0.05	0.23	0.23	0.07	0.54	0.54	0.04	0.52	0.52
Sat Flow, veh/h	1781	3554	1598	1795	3582	1572	1781	3497	1585	1781	3526	1610
Grp Volume(v), veh/h	197	738	243	102	651	201	201	990	113	118	1251	253
Grp Sat Flow(s),veh/h/ln	1781	1777	1598	1795	1791	1572	1781	1749	1585	1781	1763	1610
Q Serve(g_s), s	8.9	36.2	22.6	7.8	30.6	19.1	9.6	32.8	5.7	5.6	48.0	14.6
Cycle Q Clear(g_c), s	8.9	36.2	22.6	7.8	30.6	19.1	9.6	32.8	5.7	5.6	48.0	14.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	169	831	478	148	837	434	244	1885	933	298	1818	910
V/C Ratio(X)	1.16	0.89	0.51	0.69	0.78	0.46	0.82	0.53	0.12	0.40	0.69	0.28
Avail Cap(c_a), veh/h	169	946	530	148	953	485	294	1885	933	301	1818	910
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	64.4	66.7	52.1	53.4	64.6	54.1	32.0	26.7	16.4	21.8	32.7	20.2
Incr Delay (d2), s/veh	120.3	9.5	0.8	12.8	3.6	0.8	14.7	1.1	0.3	0.9	2.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	17.4	9.2	4.0	14.3	7.7	5.5	13.8	2.2	2.4	20.6	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	184.7	76.2	52.9	66.2	68.2	54.8	46.7	27.7	16.7	22.6	34.9	21.0
LnGrp LOS	F	E	D	E	E	D	D	C	B	C	C	C
Approach Vol, veh/h		1178			954			1304			1622	
Approach Delay, s/veh		89.6			65.2			29.7			31.8	
Approach LOS		F			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.9	98.9	15.0	48.2	13.7	103.1	15.0	48.2
Change Period (Y+Rc), s	* 6.1	* 6.1	6.1	6.1	* 6.1	* 6.1	6.1	6.1
Max Green Setting (Gmax), s	* 17	* 82	8.9	47.9	* 7.9	* 91	8.9	47.9
Max Q Clear Time (g_c+I1), s	11.6	50.0	10.9	32.6	7.6	34.8	9.8	38.2
Green Ext Time (p_c), s	0.2	11.6	0.0	4.3	0.0	8.6	0.0	3.9

Intersection Summary	
HCM 6th Ctrl Delay	51.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



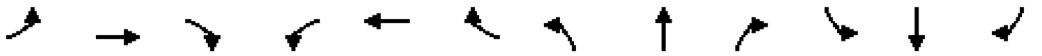
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	449	179	59	568	198	169	900	37	93	1000	171
Future Volume (veh/h)	114	449	179	59	568	198	169	900	37	93	1000	171
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1856	1900	1841	1870	1885	1826	1781	1856	1811	1826
Adj Flow Rate, veh/h	123	483	192	63	611	213	182	968	40	100	1075	184
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	7	1	3	0	4	2	1	5	8	3	6	5
Cap, veh/h	179	846	462	198	720	385	286	1922	893	317	1836	930
Arrive On Green	0.07	0.24	0.24	0.04	0.21	0.21	0.06	0.55	0.55	0.04	0.53	0.53
Sat Flow, veh/h	1711	3582	1572	1810	3497	1585	1795	3469	1510	1767	3441	1547
Grp Volume(v), veh/h	123	483	192	63	611	213	182	968	40	100	1075	184
Grp Sat Flow(s),veh/h/ln	1711	1791	1572	1810	1749	1585	1795	1735	1510	1767	1721	1547
Q Serve(g_s), s	10.0	21.4	17.7	4.9	30.3	21.2	8.3	31.1	2.0	4.6	38.2	9.7
Cycle Q Clear(g_c), s	10.0	21.4	17.7	4.9	30.3	21.2	8.3	31.1	2.0	4.6	38.2	9.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	179	846	462	198	720	385	286	1922	893	317	1836	930
V/C Ratio(X)	0.69	0.57	0.42	0.32	0.85	0.55	0.64	0.50	0.04	0.32	0.59	0.20
Avail Cap(c_a), veh/h	234	1132	588	311	1106	560	302	1922	893	368	1836	930
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	53.6	60.7	51.1	54.2	68.8	59.6	23.6	24.8	15.4	20.1	28.5	16.3
Incr Delay (d2), s/veh	5.4	0.6	0.6	0.9	3.9	1.2	4.1	0.9	0.1	0.6	1.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	9.8	7.1	2.3	13.9	8.6	3.7	12.8	0.7	1.9	15.8	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.0	61.3	51.7	55.1	72.7	60.8	27.6	25.8	15.5	20.7	29.9	16.7
LnGrp LOS	E	E	D	E	E	E	C	C	B	C	C	B
Approach Vol, veh/h		798			887			1190			1359	
Approach Delay, s/veh		58.6			68.6			25.7			27.4	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	102.1	18.2	43.2	12.8	105.8	12.8	48.6
Change Period (Y+Rc), s	* 6.1	* 6.1	6.1	6.1	* 6.1	* 6.1	6.1	6.1
Max Green Setting (Gmax), s	* 12	* 69	17.9	56.9	* 12	* 69	17.9	56.9
Max Q Clear Time (g_c+I1), s	10.3	40.2	12.0	32.3	6.6	33.1	6.9	23.4
Green Ext Time (p_c), s	0.1	9.0	0.1	4.8	0.1	7.6	0.1	3.9

Intersection Summary	
HCM 6th Ctrl Delay	41.5
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



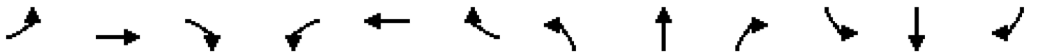
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	738	243	102	651	201	201	989	113	118	1251	253
Future Volume (veh/h)	197	738	243	102	651	201	201	989	113	118	1251	253
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1885	1885	1856	1870	1841	1870	1870	1856	1900
Adj Flow Rate, veh/h	201	753	248	104	664	205	205	1009	115	120	1277	258
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	1	1	3	2	4	2	2	3	0
Cap, veh/h	169	843	486	147	850	441	238	1869	926	290	1800	902
Arrive On Green	0.05	0.24	0.24	0.05	0.24	0.24	0.07	0.53	0.53	0.04	0.51	0.51
Sat Flow, veh/h	1781	3554	1598	1795	3582	1572	1781	3497	1585	1781	3526	1610
Grp Volume(v), veh/h	201	753	248	104	664	205	205	1009	115	120	1277	258
Grp Sat Flow(s),veh/h/ln	1781	1777	1598	1795	1791	1572	1781	1749	1585	1781	1763	1610
Q Serve(g_s), s	8.9	36.9	23.0	7.9	31.2	19.4	9.9	34.0	5.9	5.8	50.0	15.1
Cycle Q Clear(g_c), s	8.9	36.9	23.0	7.9	31.2	19.4	9.9	34.0	5.9	5.8	50.0	15.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	169	843	486	147	850	441	238	1869	926	290	1800	902
V/C Ratio(X)	1.19	0.89	0.51	0.71	0.78	0.46	0.86	0.54	0.12	0.41	0.71	0.29
Avail Cap(c_a), veh/h	169	946	532	147	953	486	286	1869	926	291	1800	902
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	64.0	66.4	51.5	53.2	64.3	53.6	33.6	27.4	16.8	22.4	33.8	20.7
Incr Delay (d2), s/veh	130.2	10.0	0.8	14.4	3.8	0.8	19.7	1.1	0.3	0.9	2.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	17.8	9.3	4.2	14.6	7.8	5.8	14.2	2.2	2.5	21.6	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	194.2	76.5	52.4	67.6	68.1	54.3	53.2	28.5	17.1	23.4	36.2	21.5
LnGrp LOS	F	E	D	E	E	D	D	C	B	C	D	C
Approach Vol, veh/h		1202			973			1329			1655	
Approach Delay, s/veh		91.2			65.1			31.4			33.0	
Approach LOS		F			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.2	98.0	15.0	48.8	13.9	102.3	15.0	48.8
Change Period (Y+Rc), s	* 6.1	* 6.1	6.1	6.1	* 6.1	* 6.1	6.1	6.1
Max Green Setting (Gmax), s	* 17	* 82	8.9	47.9	* 7.9	* 91	8.9	47.9
Max Q Clear Time (g_c+I1), s	11.9	52.0	10.9	33.2	7.8	36.0	9.9	38.9
Green Ext Time (p_c), s	0.2	11.7	0.0	4.3	0.0	8.8	0.0	3.8

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

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	464	179	59	583	198	169	913	37	93	1013	171
Future Volume (veh/h)	114	464	179	59	583	198	169	913	37	93	1013	171
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1856	1900	1841	1870	1885	1826	1781	1856	1811	1826
Adj Flow Rate, veh/h	123	499	192	63	627	213	182	982	40	100	1089	184
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	7	1	3	0	4	2	1	5	8	3	6	5
Cap, veh/h	179	863	470	197	737	393	280	1906	885	309	1819	922
Arrive On Green	0.07	0.24	0.24	0.04	0.21	0.21	0.06	0.55	0.55	0.04	0.53	0.53
Sat Flow, veh/h	1711	3582	1572	1810	3497	1585	1795	3469	1510	1767	3441	1547
Grp Volume(v), veh/h	123	499	192	63	627	213	182	982	40	100	1089	184
Grp Sat Flow(s),veh/h/ln	1711	1791	1572	1810	1749	1585	1795	1735	1510	1767	1721	1547
Q Serve(g_s), s	10.0	22.1	17.6	4.9	31.0	21.0	8.4	32.0	2.0	4.7	39.3	9.8
Cycle Q Clear(g_c), s	10.0	22.1	17.6	4.9	31.0	21.0	8.4	32.0	2.0	4.7	39.3	9.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	179	863	470	197	737	393	280	1906	885	309	1819	922
V/C Ratio(X)	0.69	0.58	0.41	0.32	0.85	0.54	0.65	0.52	0.05	0.32	0.60	0.20
Avail Cap(c_a), veh/h	234	1132	588	310	1106	560	295	1906	885	360	1819	922
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	53.2	60.3	50.4	53.6	68.3	58.8	24.4	25.5	15.8	20.7	29.3	16.7
Incr Delay (d2), s/veh	5.5	0.6	0.6	0.9	4.2	1.2	4.6	1.0	0.1	0.6	1.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	10.1	7.0	2.3	14.2	8.6	3.8	13.3	0.7	2.0	16.3	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.6	60.9	51.0	54.5	72.5	59.9	29.1	26.5	15.9	21.3	30.7	17.2
LnGrp LOS	E	E	D	D	E	E	C	C	B	C	C	B
Approach Vol, veh/h		814			903			1204			1373	
Approach Delay, s/veh		58.2			68.3			26.5			28.2	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.6	101.2	18.2	44.0	12.8	105.0	12.8	49.4
Change Period (Y+Rc), s	* 6.1	* 6.1	6.1	6.1	* 6.1	* 6.1	6.1	6.1
Max Green Setting (Gmax), s	* 12	* 69	17.9	56.9	* 12	* 69	17.9	56.9
Max Q Clear Time (g_c+I1), s	10.4	41.3	12.0	33.0	6.7	34.0	6.9	24.1
Green Ext Time (p_c), s	0.1	9.0	0.1	4.9	0.1	7.7	0.1	4.0

Intersection Summary	
HCM 6th Ctrl Delay	41.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	678	80	36	888	37	79
Future Vol, veh/h	678	80	36	888	37	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	1	0	0	4	0	0
Mvmt Flow	729	86	39	955	40	85

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	815	0	1328	408
Stage 1	-	-	-	-	772	-
Stage 2	-	-	-	-	556	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	821	-	149	598
Stage 1	-	-	-	-	422	-
Stage 2	-	-	-	-	544	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	821	-	142	598
Mov Cap-2 Maneuver	-	-	-	-	276	-
Stage 1	-	-	-	-	422	-
Stage 2	-	-	-	-	518	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	16.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	436	-	-	821	-
HCM Lane V/C Ratio	0.286	-	-	0.047	-
HCM Control Delay (s)	16.5	-	-	9.6	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.2	-	-	0.1	-

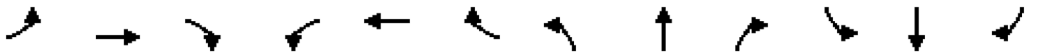
Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	119	55	1074	1141	109
Future Vol, veh/h	45	119	55	1074	1141	109
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	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	5	6	0
Mvmt Flow	48	128	59	1155	1227	117

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1866	672	1344	0	-	0
Stage 1	1286	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Critical Hdwy	6.25	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.65	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	86	403	519	-	-	-
Stage 1	222	-	-	-	-	-
Stage 2	496	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	76	403	519	-	-	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	197	-	-	-	-	-
Stage 2	496	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	37.4	0.6	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	519	-	280	-	-
HCM Lane V/C Ratio	0.114	-	0.63	-	-
HCM Control Delay (s)	12.8	-	37.4	-	-
HCM Lane LOS	B	-	E	-	-
HCM 95th %tile Q(veh)	0.4	-	3.9	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	752	243	102	665	201	201	1000	113	118	1262	253
Future Volume (veh/h)	197	752	243	102	665	201	201	1000	113	118	1262	253
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1885	1885	1856	1870	1841	1870	1870	1856	1900
Adj Flow Rate, veh/h	201	767	248	104	679	205	205	1020	115	120	1288	258
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	1	1	3	2	4	2	2	3	0
Cap, veh/h	168	854	492	146	861	446	235	1857	920	285	1787	896
Arrive On Green	0.05	0.24	0.24	0.05	0.24	0.24	0.07	0.53	0.53	0.04	0.51	0.51
Sat Flow, veh/h	1781	3554	1598	1795	3582	1572	1781	3497	1585	1781	3526	1610
Grp Volume(v), veh/h	201	767	248	104	679	205	205	1020	115	120	1288	258
Grp Sat Flow(s),veh/h/ln	1781	1777	1598	1795	1791	1572	1781	1749	1585	1781	1763	1610
Q Serve(g_s), s	8.9	37.6	22.9	7.9	32.0	19.3	9.9	34.8	5.9	5.8	51.1	15.2
Cycle Q Clear(g_c), s	8.9	37.6	22.9	7.9	32.0	19.3	9.9	34.8	5.9	5.8	51.1	15.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	168	854	492	146	861	446	235	1857	920	285	1787	896
V/C Ratio(X)	1.20	0.90	0.50	0.71	0.79	0.46	0.87	0.55	0.12	0.42	0.72	0.29
Avail Cap(c_a), veh/h	168	946	533	146	953	487	282	1857	920	286	1787	896
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	63.6	66.2	51.0	52.9	64.1	53.1	34.2	27.9	17.1	22.9	34.5	21.1
Incr Delay (d2), s/veh	133.4	10.6	0.8	14.8	4.1	0.7	21.7	1.2	0.3	1.0	2.5	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	18.2	9.3	4.1	15.0	7.7	5.9	14.6	2.3	2.5	22.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	197.0	76.8	51.8	67.7	68.2	53.8	55.9	29.1	17.4	23.9	37.0	21.9
LnGrp LOS	F	E	D	E	E	D	E	C	B	C	D	C
Approach Vol, veh/h		1216			988			1340			1666	
Approach Delay, s/veh		91.6			65.1			32.2			33.7	
Approach LOS		F			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	97.4	15.0	49.4	13.9	101.7	15.0	49.4
Change Period (Y+Rc), s	* 6.1	* 6.1	6.1	6.1	* 6.1	* 6.1	6.1	6.1
Max Green Setting (Gmax), s	* 17	* 82	8.9	47.9	* 7.9	* 91	8.9	47.9
Max Q Clear Time (g_c+I1), s	11.9	53.1	10.9	34.0	7.8	36.8	9.9	39.6
Green Ext Time (p_c), s	0.2	11.7	0.0	4.3	0.0	8.9	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	52.8
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1122	69	32	1087	32	69
Future Vol, veh/h	1122	69	32	1087	32	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	1145	70	33	1109	33	70

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1215	0	1801	608
Stage 1	-	-	-	-	1180	-
Stage 2	-	-	-	-	621	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	581	-	73	444
Stage 1	-	-	-	-	258	-
Stage 2	-	-	-	-	504	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	581	-	69	444
Mov Cap-2 Maneuver	-	-	-	-	181	-
Stage 1	-	-	-	-	258	-
Stage 2	-	-	-	-	475	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	22.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	304	-	-	581	-
HCM Lane V/C Ratio	0.339	-	-	0.056	-
HCM Control Delay (s)	22.8	-	-	11.6	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	1.5	-	-	0.2	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	33	108	43	1282	1508	98
Future Vol, veh/h	33	108	43	1282	1508	98
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	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	4	3	0
Mvmt Flow	34	110	44	1308	1539	100

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2200	820	1639	0	-	0
Stage 1	1589	-	-	-	-	-
Stage 2	611	-	-	-	-	-
Critical Hdwy	6.25	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.65	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	54	322	401	-	-	-
Stage 1	153	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	48	322	401	-	-	-
Mov Cap-2 Maneuver	110	-	-	-	-	-
Stage 1	136	-	-	-	-	-
Stage 2	478	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	46.9	0.5	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	401	-	222	-	-
HCM Lane V/C Ratio	0.109	-	0.648	-	-
HCM Control Delay (s)	15.1	-	46.9	-	-
HCM Lane LOS	C	-	E	-	-
HCM 95th %tile Q(veh)	0.4	-	3.9	-	-

TRAFFIC SIGNAL TIMING DIRECTIVE

Dequindre at 13 Mile

Phase Timing

08/22/2023 1:56:08 PM

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Min Green	3	10	3	10	3	10	3	10	0	0	0	0	0	0	0	0
Veh Ext	1.0	3.0	1.0	3.0	1.0	3.0	1.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Green 1	15	30	15	30	15	30	15	30	0	0	0	0	0	0	0	0
Max Green 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Green 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Ext	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yellow	4.3	4.3	4.0	4.0	4.3	4.3	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clr	1.8	1.8	2.1	2.1	1.8	1.8	2.1	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adv Flash	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bike MG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0
Ped Clr	0	23	0	24	0	23	0	24	0	0	0	0	0	0	0	0
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sol DW	0.0	3.0	0.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Early Wlk	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Wlk	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Added	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce After	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TTReduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Max Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Red Revert	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Neg Ped	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AP Disc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pmt Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pmt Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pmt Ped Clr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Return Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Dequindre at 13 Mile

Coordination Pattern 2

08/22/2023 1:56:08 PM

Cycle	180	Ringgroup 1 - Offset 1	14	Offset 2	0	Offset 3	0
		Ringgroup 2 - Offset 1	0	Offset 2	0	Offset 3	0

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Splits	18	75	24	63	18	75	24	63	0	0	0	0	0	0	0	0
Split Ext	0	30	0	0	0	30	0	0	0	0	0	0	0	0	0	0
Float Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perm Min Green	5	20	5	20	5	20	5	20	0	0	0	0	0	0	0	0
Min Trans Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Trans Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Split 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PA Before	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PA After	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Permissive Mode	Sing Band	Max Mode	Max Inh	Walk Rest	Yield
Ped Permissive	Yield				
Permissive Limit	0	Perm 2 Start	0	Perm 2 End	0
Alt Sequence		TOD Link	0		

Phases/Overlaps	1-8							9-16							
Coord Phases		2			6										
No Extend															
Float Enable															
Veh = Ped Perm															
Walk Rest															
Ped Recall															
Cond Ped Call															
Olap Ped Recall															
Ped Recycle															
Min Recall															
Max Recall															
Cond Serv															
Reservice															
Veh Omit															
Ped Omit															
Olap Omit															
Perm Reserve															
Perm 1 Phases															
Max Inhibit															
FYA Omit															
Adapt Phases															

Trans Mode	Default
Offset Ref	Default
Adaptive Mode	Disabled

Disable Priority	
Progression Phases	
Priority Alt Seq	
Reserve Extend	

Priority Timing-Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Priority Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Dequindre at 13 Mile

Coordination Pattern 2

08/22/2023 1:56:08 PM

Alternate Timing-Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Alt Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt Ped Clr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt Sol DW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alt Min Green	5	20	5	20	5	20	5	20	0	0	0	0	0	0	0	0
Alt Veh Ext	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alt Max Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt Red Clr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alt Early Walk	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alt Delay Walk	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alt CS Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt CS Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Dequindre at 13 Mile

Coordination Pattern 3

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Cycle	180	Ringgroup 1 - Offset 1	52	Offset 2	0	Offset 3	0
		Ringgroup 2 - Offset 1	0	Offset 2	0	Offset 3	0

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Splits	23	88	15	54	14	97	15	54	0	0	0	0	0	0	0	0
Split Ext	0	30	0	0	0	30	0	0	0	0	0	0	0	0	0	0
Float Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perm Min Green	5	20	5	20	8	20	5	20	0	0	0	0	0	0	0	0
Min Trans Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Trans Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Split 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PA Before	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PA After	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Permissive Mode	Sing Band	Max Mode	Max Inh	Walk Rest	Yield
Ped Permissive	Yield				
Permissive Limit	0	Perm 2 Start	0	Perm 2 End	0
Alt Sequence		TOD Link	0		

Phases/Overlaps	1-8							9-16							
Coord Phases		2			6										
No Extend															
Float Enable															
Veh = Ped Perm															
Walk Rest															
Ped Recall															
Cond Ped Call															
Olap Ped Recall															
Ped Recycle															
Min Recall				5											
Max Recall															
Cond Serv															
Reservice															
Veh Omit															
Ped Omit															
Olap Omit															
Perm Reserve															
Perm 1 Phases															
Max Inhibit															
FYA Omit				5											
Adapt Phases															

Trans Mode	Default
Offset Ref	Default
Adaptive Mode	Disabled

Disable Priority	
Progression Phases	
Priority Alt Seq	
Reserve Extend	

Priority Timing-Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Priority Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Dequindre at 13 Mile

Coordination Pattern 3

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Alternate Timing-Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Alt Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt Ped Clr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt Sol DW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alt Min Green	5	20	5	20	8	20	5	20	0	0	0	0	0	0	0	0
Alt Veh Ext	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alt Max Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt Red Clr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alt Early Walk	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alt Delay Walk	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alt CS Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt CS Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Dequindre at 13 Mile

TOD Pattern Events

08/22/2023 1:56:08 PM

	Time	DOW							Holidays								Mode	Pattern	Offset
Event 1	00:00	S	M	T	W	T	F	S									Free	0	0
Event 2	06:00		M	T	W	T	F										Sched	2	1
Event 3	08:00	S						S									Sched	1	1
Event 4	09:00		M	T	W	T	F										Sched	1	1
Event 5	10:00							S									Sched	1	1
Event 6	10:00	S															Sched	1	1
Event 7	13:30		M	T	W	T	F										Sched	3	1
Event 8	19:00	S	M	T	W	T	F	S									Sched	1	1
Event 9	00:00																Sched	0	0
Event 10	00:00																Sched	0	0
Event 11	00:00																Sched	0	0
Event 12	00:00																Sched	0	0
Event 13	00:00																Sched	0	0
Event 14	00:00																Sched	0	0
Event 15	00:00																Sched	0	0
Event 16	00:00																Sched	0	0
Event 17	00:00																Sched	0	0
Event 18	00:00																Sched	0	0
Event 19	00:00																Sched	0	0
Event 20	00:00																Sched	0	0
Event 21	00:00																Sched	0	0
Event 22	00:00																Sched	0	0
Event 23	00:00																Sched	0	0
Event 24	00:00																Sched	0	0
Event 25	00:00																Sched	0	0
Event 26	00:00																Sched	0	0
Event 27	00:00																Sched	0	0
Event 28	00:00																Sched	0	0
Event 29	00:00																Sched	0	0
Event 30	00:00																Sched	0	0
Event 31	00:00																Sched	0	0
Event 32	00:00																Sched	0	0