



**CITY OF MADISON HEIGHTS  
COUNCIL CHAMBERS - CITY HALL, 300 W. 13 MILE RD.  
PLANNING COMMISSION MEETING AGENDA  
NOVEMBER 21, 2023 AT 5:30 PM**

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**CALL TO ORDER**

**ROLL CALL**

**ADDITIONS/DELETIONS**

**APPROVAL OF MINUTES**

- [1.](#) October 17th, 2023 Meeting Minutes

**PUBLIC HEARING**

- [2.](#) **Rezoning Request No. PRZN 23-02** by Isam Yaldo to rezone one (1) parcel of land located at 1035 W. 12 Mile Road (TM# 44-25-14-127-053) from B-3, General Business, to M-1, Light Industrial District. **The applicant has formally requested to postpone the public hearing and action to a later date, to be determined.**

**MEETING OPEN TO THE PUBLIC: Items not listed on agenda**

**UNFINISHED BUSINESS**

**NEW BUSINESS**

- [3.](#) Pre-Application Discussion [PPD 23-08] - 30901 Dequindre Road - Gas Station and Convenience Store
- [4.](#) Adoption of 2024 Meeting Calendar

**MEMBER UPDATES**

**PLANNER UPDATES**

5. Zoning Ordinance Rewrite Update

**ADJOURNMENT**

NOTICE: Persons with disabilities needing accommodations for effective participation through electronic means in this meeting should contact the City Clerk at (248) 583-0826 or by email: [clerks@madison-heights.org](mailto:clerks@madison-heights.org) at least two working days in advance of the meeting. An attempt will be made to make reasonable accommodations.



**CITY OF MADISON HEIGHTS**  
**PLANNING COMMISSION MEETING MINUTES (DRAFT)**

October 17, 2023  
Council Chambers – City Hall  
300 W. 13 Mile, Madison Heights, MI 48071

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## 1. CALL TO ORDER

Chair Champagne called the meeting of the Madison Heights Planning Commission to order at 5:31 p.m.

## 2. ROLL CALL

Present: Chair Josh Champagne  
Mayor Roslyn Grafstein  
Mayor Pro Tem Mark Bliss  
Commissioner Eric Graettinger  
Commissioner Melissa Kalnasy  
City Manager Melissa Marsh  
Commissioner Grant Sylvester

Also Present: Absent: Commissioner Cliff Oglesby  
City Planner Matt Lonnerstater  
Assistant City Attorney Tim Burns  
Business Services Coordinator Mary Daley

## 3. APPROVAL OF THE MINUTES

Motion by Bliss, seconded by Oglesby to approve the minutes of the regular Planning Commission meeting of July 18, 2023.

Motion carries unanimously.

## 4. PUBLIC HEARING

No public hearing scheduled.

## 5. PUBLIC COMMENT - For items not listed on the agenda

Chair Champagne opened the floor for public comment at 5:34 pm. Seeing none, public comment was closed at 5:34 pm.

## 6. UNFINISHED BUSINESS

### Regulated Uses – Continued Discussion

Regulated Uses - Massage Parlors/Establishments and Pawnshops - Section 10.502[A]

This is a continued discussion from previous meetings. There was a consensus to remove the following uses from the list of Regulated Uses as part of the ongoing comprehensive Zoning Ordinance rewrite and accept the modifications per staff's recommendations as detailed in the packet:

- Pool and Billiard Halls
- Tattoo Parlors
- Used Goods Uses

Pool/billiard halls and used goods uses would be treated as a general business license applicant. Tattoo parlors would be reclassified as personal service establishments and would be required to present a copy of their license from the Oakland County Health Department.

At the July 18th, 2023 meeting, Staff and the Planning Commission continued the discussion on Regulated Uses, focusing on massage parlors and pawnbrokers; this discussion included a review of other municipal regulations in the State. Per the suggestion of the Planning Commission, Planner Lonnerstater reached out to several communities including Troy, Holland, Livonia and Ferndale to inquire if they had any zoning or police issues with massage establishments and/or pawnbrokers. Planner Lonnerstater summarized their responses.

Staff has put together draft ordinance language and text modifications, for discussion purposes only, relating to the Zoning Ordinance, Amusements Ordinance, and Business Regulations and Licenses Ordinance.

### **Massage Parlors and Massage Establishments**

Discussion focused on massage parlors and massage establishments.

Staff recommends removing licensed massage establishments (defined below) from the list of Regulated Uses but keeping unlicensed massage establishments (defined below) as a regulated use. These changes will involve modifications to the Zoning Ordinance and Business Regulations and Licenses Ordinance (Chapter 7 of the general Code of Ordinances).

Planner Lonnerstater led the discussion pertaining to the differences between Licensed massage therapists, Licensed massage therapy facilities, and unlicensed massage therapy facilities. After discussion, the consensus was to Rename Article XII to Massage Therapy Facilities. Keep language and definitions consistent with Zoning Ordinance and update the list of exemptions. Meet with the Business Services Coordinator and City Clerk to discuss updating the business license requirements, including the requirement that up-to-date State license and professional membership documents be provided upon initial business license approval and upon renewal.

### **Pawnbrokers**

Discussion focused on pawnbrokers. For several reasons discussed by Planner Lonnerstater, staff does not recommend changes to the City's current pawnbroker regulations which classify them as a regulated use. There do not appear to be any state-level regulatory agencies that manage pawnshops. Planner Lonnerstater pointed out that some municipalities classify pawnbrokers as "alternative" financial establishments. Attorney Burns remarked that check cashing might be regulated by Federal laws and he will do additional research on this. It may be beneficial to leave pawnshops as a regulated use and

create regulations for alternative financial institutions.

The Chair opened the floor to Madison Heights Police Chief Brent Lemerise to speak on this matter. According to Chief Lemerise, from a public safety standpoint, pawn shops should continue to remain a regulated use. In his opinion, pawnshops ignore plausible deniability and look the other way to avoid responsibility when it comes to crime. He shared some statistics and past experiences with former pawnshops in the City.

Attorney Burns recommends leaving pawnshops as they are and creating an ordinance for alternative financial institutions. Planner Lonnerstater believes the first step should be to define "alternative financial institutions" and identify location requirements. This is something that can be discussed at the next meeting.

## **7. NEW BUSINESS - No new business to report at this time**

## **8. PLANNER UPDATES**

### **A. Zoning Ordinance Rewrite Update**

The final rough draft has been sent to McKenna and Associates. Planner Lonnerstater will eventually bring it to the Planning Commission but first the steering committee will meet to review and discuss it.

### **B. Streetscape Update**

Planner Lonnerstater shared the DDA open house invitation once again pertaining to the 11 Mile Streetscape Plan and encouraged the Planning Commission members to attend. The event will be held at Woodpile BBQ on October 26<sup>th</sup> from 4:30-6:30 pm and is geared towards the business owners specifically in that portion of the DDA.

## **9. MEMBER UPDATES**

No member updates.

## **10. ADJOURNMENT OF MEETING**

Meeting adjourned by the Chair at 6:56 pm.



# MEMORANDUM

Date: November 20<sup>th</sup>, 2023  
To: City of Madison Heights Planning Commission  
Meeting Date: November 21<sup>st</sup>, 2023  
From: Matt Lonnerstater, AICP – City Planner  
Subject: Rezoning Request PRZN 23-02 – 1035 W. 12 Mile Road – B-3 to M-1

## Introduction

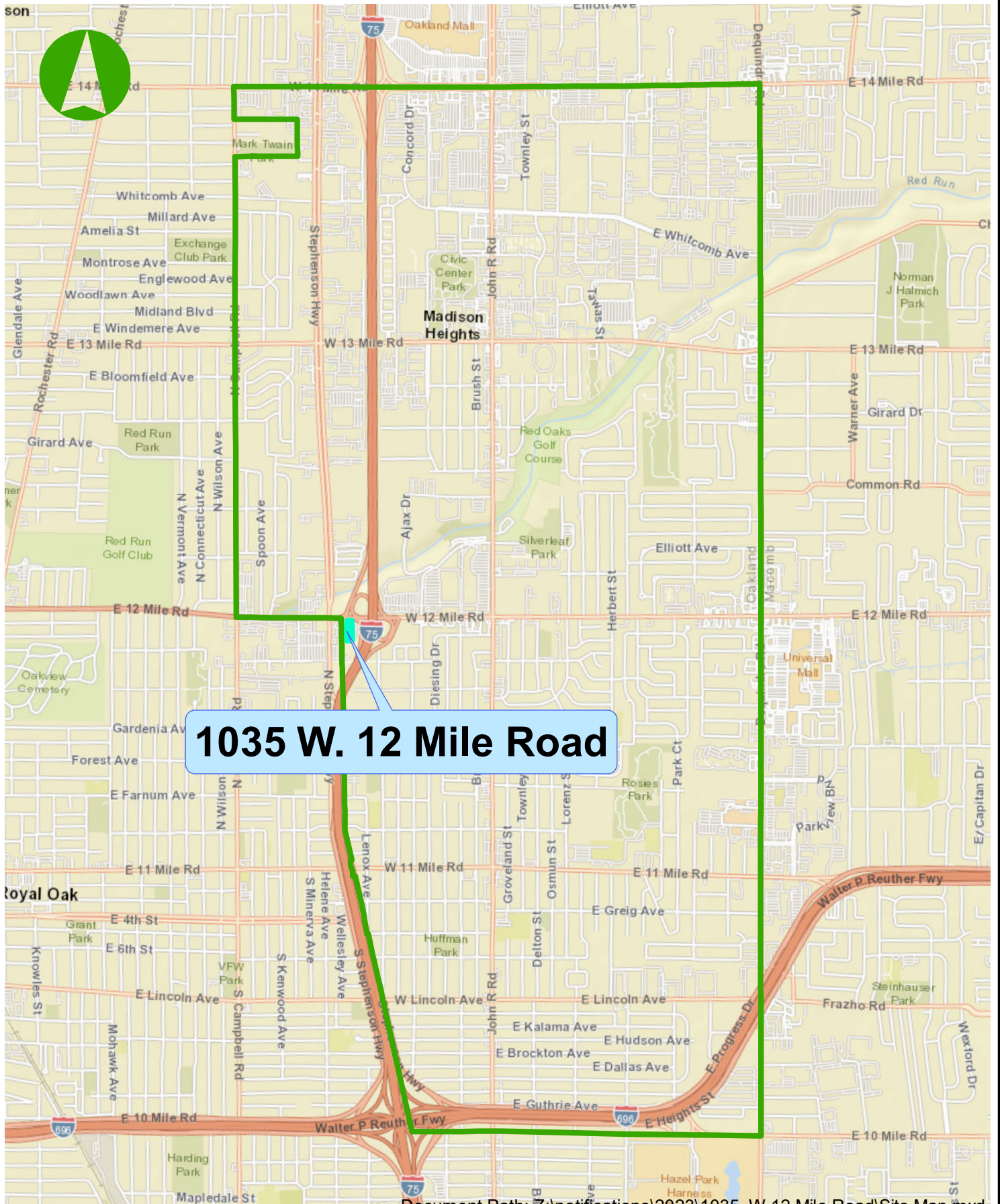
The applicant and property owner, Isam Yaldo, requests to rezone one (1) parcel of land located at 1035 W. 12 Mile Road (TM# 44-25-14-127-053) from B-3, General Business district, to M-1, Light Industrial district. The subject site consists of one (1) parcel which contains a total area of 0.93 acres and is improved with a 6,500 commercial/retail structure and associated parking lot.

Per an email dated October 30<sup>th</sup>, 2023, the applicant has requested to postpone the public hearing and action on the rezoning request to a later date, to be determined.

Based on the applicant's request, staff recommends that the Planning Commission postpone the public hearing and action on rezoning request PRZN 23-02 to a later Planning Commission meeting date, to be determined.

## Template Motion

Move to **POSTPONE** the public hearing and action relating to rezoning request PRZN 23-02, 1035 W. 12 Mile Road, to a later date uncertain, as requested by the applicant per their email dated October 30<sup>th</sup>, 2023.



**1035 W. 12 Mile Road**

# Site Address: 1035 W. 12 Mile Road



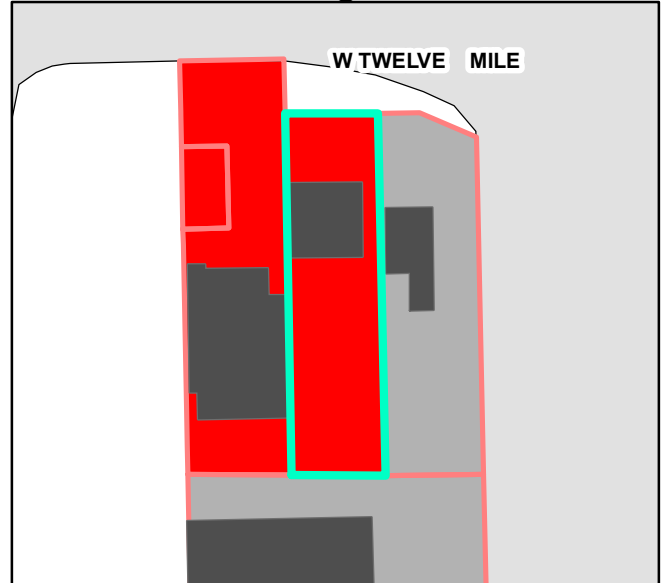
Click for maps

### Aerial



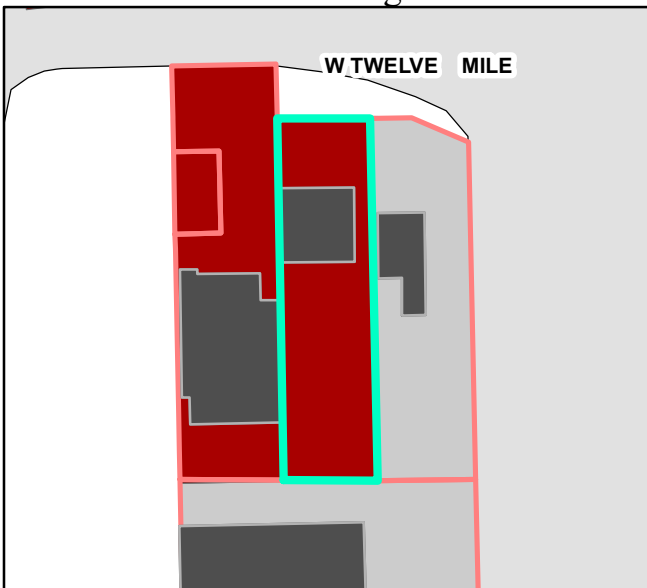
- 1035 W 12 Mile Road
- Parcels

### Existing Land Use



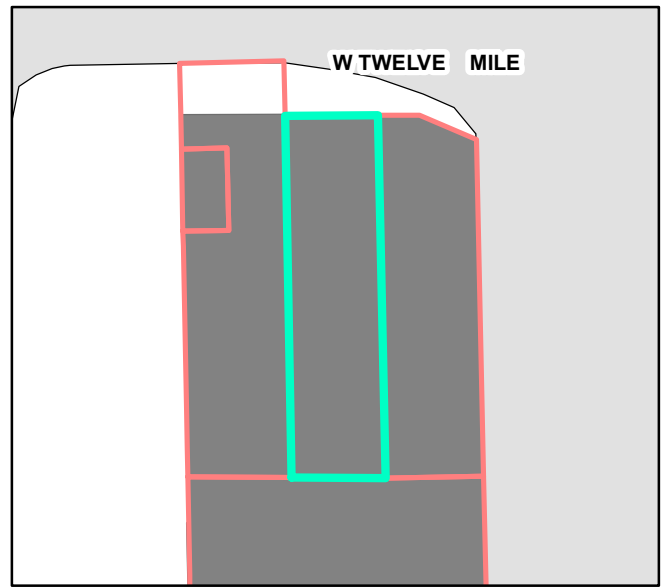
- 1035 W 12 Mile Road
- Commercial
- Buildings
- Industrial
- Parcels

### Zoning



- 1035 W.12 Mile Road
- M-1 Light Industrial
- Buildings
- B-3 General Business
- Parcels

### Future Land Use



- 1035 W.12 Mile Road
- Parcels
- Industrial







COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT  
300 W. THIRTEEN MILE RD.  
MADISON HEIGHTS, MI 48071  
(248) 583-0831

Application to Rezone Land

I (we) the undersigned do hereby respectfully apply and petition the City of Madison Heights to amend the Zoning Ordinance by changing the zoning map as hereinafter requested. As part of this application, the following facts are shown:

1. Request is hereby made that the following property be rezoned from B3 to M1.

2. The property address is (1035, 1037, 1039) W 12 Mile and the parcel is located on the South side of 12 Mile Rd street between Stephan Hwy and Jak R. streets.

3. The legal description of said property is as follows: (attach separately if necessary)  
TIN R11E Sec 14 CR83A-1 Part of NW 1/4 Beg. at Pt on N Sec Line Dist 589-24-00  
W 215 FT Fr N 1/4 Cor, THS 89-24-00 W 102.41 Ft Th S 21.01-00 E 456.70 Ft Th  
N 89-24-00 E 102.47 TH 89-03-00 W 456.70 To Beg Excl 60 Taken for Hwy .93 Acre.

4. The sidwell number for the property is: 44 - 25 - 14 - 127 - 053

5. The owner of said property is:  
Name: 1275 LLC  
Street Address: 31000 NW Hwy # 110  
City, State, Zip: Farmington Hills MI 48334  
Phone: 2485210978 Email: isamyaldoo@aol.com

6. The Applicant is:  
Name: Isam Yaldo  
Street Address: 31000 NW Hwy # 110  
City, State, Zip: Farmington Hills MI 48334  
Phone: 2485210978 Email: isamyaldoo@aol.com

7. The applicant is the:  
 Owner  Legal Representative  Purchaser  Other \_\_\_\_\_

8. Description of proposed use:  
\_\_\_\_\_  
\_\_\_\_\_

9. Attached two (2) copies of the plot plan prepared in compliance with the requirements shown in item number three (3) of the "Procedure for Filing Rezoning Application" and the \$1,500.00 application fee.

Signature of Owner: [Signature]  
Signature of Applicant: [Signature]  
Date: 10-16-2023

Notary's Signature: [Signature]  
Notary's Print Name: Marisa Fatouhi  
Notary Public, State of Michigan, County of: Oakland  
My Commission Expires on: February 27 2030  
Acting in the County of: Oakland

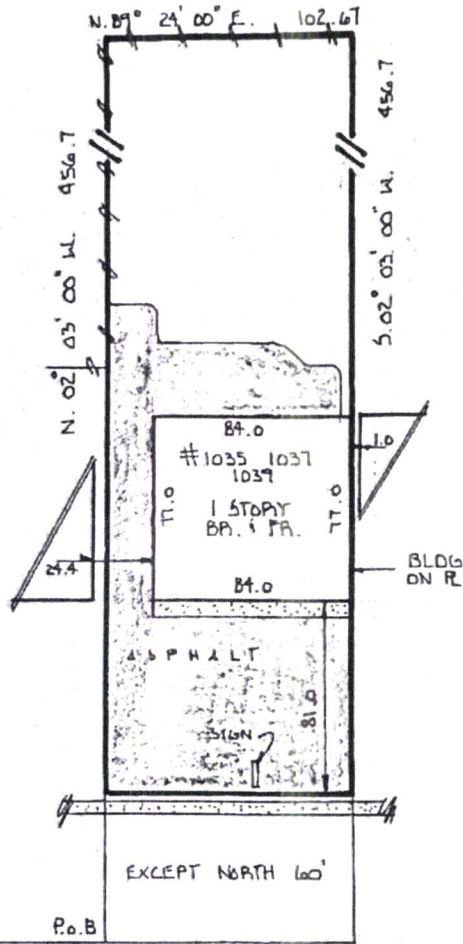
Note: All owners of the property must sign this application and all signatures must be notarized, or legal proof of authority to apply, such as a Power of Attorney, must be attached.

Oakland

McNEELY & LINCOLN ASSOCIATES, INC. 37741 Pembroke, Livonia, MI 48152 (734) 432-9777 Fax (734) 432-9786

Land situated in the City of Madison Heights, County of Oakland in the State of Michigan and described as follows:

Part of the Northwest 1/4 of Section 14, Town 1 North, Range 11 East, beginning at a point on the North section line, distant South 89 degrees 24 minutes 00 seconds West 215.00 feet from the North 1/4 corner; thence South 89 degrees 24 minutes 00 seconds West 102.41 feet; thence South 02 degrees 01 minutes 00 seconds East 456.7 feet; thence North 89 degrees 24 minutes 00 seconds East 102.67 feet; thence North 02 degrees 03 minutes 00 seconds West 456.7 feet to the point of beginning, except the North 60 feet taken for highway.



NORTH 1/4 CORNER SECTION 14 T.1N., R.11E

TWELVE MILE RD. 120 WD. MORTGAGE CERTIFICATE

We hereby certify to Community Choice Credit Union / Transworld Title a mortgage lender, and certify to all Title Insurance Companies for the purpose of a mortgage loan to be made by said lender to

1275, LLC

that we have measured the property herein described that there are located entirely thereon building(s) and improvement(s) and that said building(s) and improvement(s) are within the property lines and that there are no existing encroachments upon the land and property described, except as shown. LEGAL DESCRIPTION PROVIDED BY OTHERS.

\*This mortgage certificate was prepared specifically for IDENTIFICATION PURPOSES for the sole use of the mortgage and Title Insurance Companies disclosed hereon. Nothing herein shall be construed to give any rights or benefits to the present or future land owners or occupants. This certificate is not intended nor represented to be a land boundary or property line survey and is not to be used to establish property lines, easements, public right-of-way, building lines, conformity or non-conformity to State, County or local ordinances and/or codes, etc. No boundary markers were set.

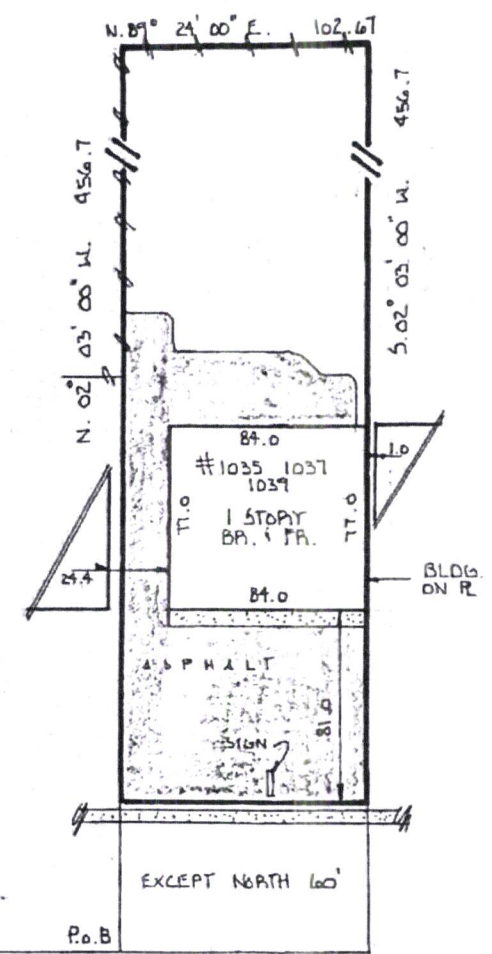
Job No 2-22-5 Scale: 1"=50' Date February 16, 2022 Final

Copyright 2022 by McNeely & Lincoln Associates, Inc. By [Signature]

McNEELY & LINCOLN ASSOCIATES, INC. 37741 Pembroke, Livonia, MI 48152 (734) 432-9777 Fax (734) 432-9786

Land situated in the City of Madison Heights, County of Oakland in the State of Michigan and described as follows:

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1275, LLC

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Job No 2-22-5 Scale: 1"=50' Date February 16, 2022 Final

Copyright 2022 by McNeely & Lincoln Associates, Inc. By [Signature]

## Rezoning Number 23-02

Marcos Michail <mmichail@m3lawfirm.com>

Mon 10/30/2023 1:37 PM

To: Matt Lonnerstater <mattlonnerstater@madison-heights.org>

Matt,

This e-mail shall confirm that the rezoning application detailed is being requested to be heard at later date to be determined. Please confirm

Mark Michail  
1275, LLC

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# MEMORANDUM

Date: November 16<sup>th</sup>, 2023  
 To: City of Madison Heights Planning Commission  
 From: Matt Lonnerstater, AICP – City Planner  
 Subject: Pre-Application Discussion (PPD 23-08) – Proposed Gas Station/C-Store at 30901 Dequindre Road

## BACKGROUND

The applicant is seeking preliminary feedback from city staff and the Planning Commission for a proposed 24-hour gas station and convenience store at 30901 Dequindre Road, located at the southwest corner of E. 13 Mile Road and Dequindre Road. The development features a 6,132 sq. ft. convenience store and a gas canopy with 8 fueling stations (16 total pumps).

The subject property is zoned B-1, Local Business District, and is currently improved with a strip retail center and associated parking lot. The applicant proposes to demolish the strip center to accommodate the development. While convenience stores are permitted by right in the B-1 district as general retail, *gasoline service stations* require Special Approval through City Council. Gasoline service stations are also subject to use-specific standards which are listed at the end of this report. If the applicant formally applies for Special Approval, Planning Commission comments will be forwarded to City Council for their consideration.

**30901 Dequindre Road – Aerial Image**



### LAND USE AND ZONING

The table below denotes existing land uses and zoning designations adjacent to the subject site.

	Zoning Designation	Land Use
<b>Subject Site</b>	B-1, Local Business	Retail Strip Center
<b>North</b>	B-1, Local Business	Restaurant and Gas Station
<b>South</b>	R-2, One-Family Residential	Church
<b>East</b>	C-1, Local Business (City of Warren)	Retail and Gas Station (City of Warren)
<b>West</b>	R-C, Residential Condominium	Residential Condominiums

The subject site is zoned B-1, Local Business. Per the Zoning Ordinance, the intent of the B-1 zoning district is to, *“meet the day-to-day convenience shopping and service needs of persons residing in adjacent residential areas.”*

The corner properties of E. 13 Mile/Dequindre are currently improved with two (2) gas stations, a Recreational Vehicle (RV) dealership, and the strip center on the subject site. Properties along the east side of Dequindre Road are located in the City of Warren.

The Future Land Use (FLU) map contained in the Master Plan designates the subject site as “Commercial.”

### NEXT STEPS

If desired, the applicant may formally apply for Special Approval for the gasoline service station. The Special Approval request and associated concept plan will be forwarded to City Council for a public hearing and action. Planning Commission comments will be forwarded onto City Council for their consideration.

Staff notes that, as proposed, at least one variance will be required through the Zoning Board of Appeals for the gas station; per Section 10.319(2)(c) of the Zoning Ordinance (use-specific standards), gasoline service stations in the B-1 district are only permitted adjacent to non-residential zoning districts. The subject property directly abuts One-Family Residential zoning to the south and west and is in close proximity to Condominium-Residential zoning to the west.

The applicant has provided conceptual site plan, landscaping, building elevations, and a traffic study for Planning Commission consideration.

## USE-SPECIFIC STANDARDS: GASOLINE SERVICE STATIONS (B-1 DISTRICT)

### Sec. 10.319. Uses permissible on special approval.

Under such conditions as the city council, after hearing, finds the use as not being injurious to the B-1 District and environs and not contrary to the spirit and purpose of this Ordinance, the following uses may be permitted:

[...]

- (2) Gasoline service stations and/or motor vehicle light repair facilities and/or motor vehicle maintenance service facilities, subject to the following:
  - (a) One hundred forty feet of street frontage on the lot proposed for the gasoline filling station shall be provided on the principal street serving the station.
  - (b) The lot shall contain not less than 14,000 square feet of lot area.
  - (c) The lot must be located on the edge of the district (where the abutting zoning district on the frontage is nonresidential) so as not to disrupt pedestrian movement within the district.
  - (d) All buildings shall be set back not less than 40 feet from all street right-of-way lines.
  - (e) Gasoline pumps, air and water hose stands and other appurtenances shall be set back not less than 15 feet from all street right-of-way lines.
  - (f) Driveway widths entering the filling station shall have a maximum width of 35 feet. Curb openings for each driveway shall not exceed 50 feet in length.
  - (g) Curb cuts shall be no closer than ten feet to any adjoining property and shall be no closer than 35 feet to any corner of the intersecting street right-of-way lines. Any two driveways shall be separated by an island at least 20 feet long.
  - (h) The angle of intersection of any driveway shall not be less than 60 degrees unless acceleration or deceleration lanes are provided.
  - (i) Curbs in accord with standard city specifications shall be constructed on all streets adjacent to the gasoline filling station site.
  - (j) Sale of alcoholic beverages from a structure wherein gasoline service stations are operated is strictly prohibited except in such structures where there is a masonry firewall between the location selling alcoholic beverages and the gasoline service station and there is a distance of 500 feet between the entrance of each establishment.
  - (k) The owner and/or operator of a gasoline service station and/or motor vehicle maintenance service facility shall not permit disabled vehicles and/or vehicles that are being repaired or waiting to be repaired or serviced to be parked for longer than 72 hours on the premises. Further, such disabled vehicles or vehicles waiting for repair or service shall be parked within an enclosed building. All repair work of any nature shall be done within an enclosed building only.
  - (l) Motor vehicle light repair facilities established and/or uses expanded to include motor vehicle light repairs shall completely screen all motor vehicles waiting for repairs and/or maintenance from view from any direction by an eight-foot poured concrete screen wall. All parcels which do not contain corner lots must maintain the required front yard setback per ordinance. All parcels which contain a corner lot shall contain screened walls which comply with side yard setbacks as well as front yard setbacks. Screen gates must be installed to continue the enclosure of the screened area. Disabled vehicles and/or vehicles that are being repaired or waiting to be repaired or serviced shall not be parked for longer than 72 hours on the premises. Further, all vehicles waiting for repair shall be screened from view. All repair work of any nature shall be done in an enclosed building only.

- (m) All owners and/or operators of gasoline service stations and/or light repair facilities and/or motor vehicle maintenance service facilities that are in existence on the effective date of this Ordinance, shall not permit disabled vehicles and/or vehicles that are being repaired or waiting to be repaired or serviced to be parked for longer than 72 hours on the premises. All repair work of any nature shall be done within an enclosed building only.

[...]







PROJECT NAME:  
**NEW SHEETZ STORE  
STORE #XXX**

**CITY  
STREET**

Address Line 1  
Address Line 2  
City, ST XXXXX

OWNER:  
SHEETZ, INC.

5700 SIXTH AVE.  
ALTOONA, PA 16602

CONSULTANT

PROFESSIONAL

KEYPLAN

ISSUE: **04.03.2023**  
SITE ID NO: #####  
AUTHOR BY:  
REVIEW BY:  
VERSION: 6132L\_v1.4

EXTERIOR  
ELEVATIONS

**A200**

**6132L PROTOTYPE - FY23 v1.4**



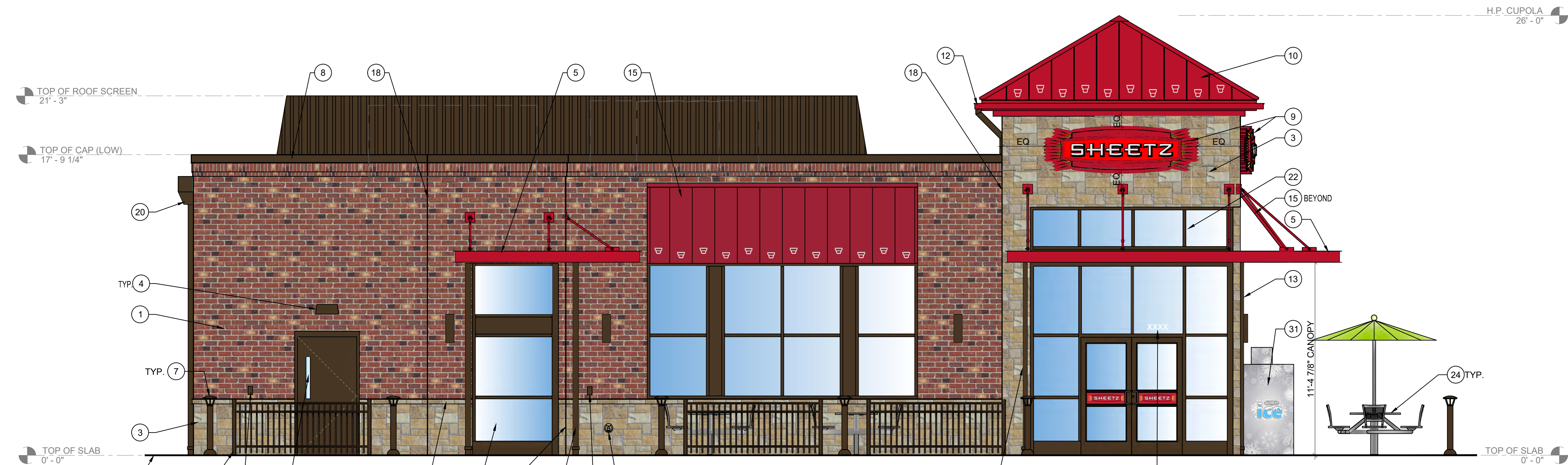
**1 FRONT ELEVATION**  
1/4" = 1'-0"

**TYPICAL EXTERIOR ELEVATION NOTES:**

- ALL LIGHTS SHOWN ABOVE AND/OR BELOW DOORS OR WINDOWS ARE TO BE CENTERED ON THE DOOR OR WINDOW UNLESS NOTED OTHERWISE.
- FIXTURES/EQUIPMENT BETWEEN TWO DOORS OR WINDOWS ARE TO BE CENTERED EQUALLY.
- EXTERIOR SEALANT FOR STONE SHALL COMPLY WITH SECTION 07 9005 JOINT SEALANTS. GENERAL BUILDING FACADE WEATHER SEALANT AND SHALL MATCH THE COLOR OF THE STOREFRONT.

**EXTERIOR ELEVATION KEYNOTES:**

- BRICK VENEER (0/S 680 MOD BY CONTINENTAL BRICK CO.)
- CAST STONE SILL (COLOR = CRAB ORCHARD)
- ANCHORED CAST STONE MASONRY VENEER (COLOR = CRAB ORCHARD)
- EXTERIOR LIGHT FIXTURE, SEE ELEC DWGS
- ARCHITECTURAL CANOPY (COLOR = REGAL RED, PREMIUM TWO-COAT KYNAR FINISH)
- BRICK PAVER WALKWAY
- LIGHTED BOLLARD
- METAL COPING (COLOR = DARK BRONZE)
- WALL MOUNTED BUILDING SIGN, INTERNALLY ILLUMINATED. SEE SHEET A200.
- STANDING SEAM METAL ROOF (COLOR = BRITE RED)
- ROOF EQUIPMENT SCREEN (COLOR = DARK BRONZE)
- GUTTER (COLOR = RED)
- DOWNSPOUT (COLOR = DARK BRONZE)
- DRIVE-THRU WINDOW (IF APPLICABLE)
- METAL STANDING SEAM SHED STYLE AWNING AND FRAME ASSEMBLY (ROOF COLOR = BRITE RED, FRAME COLOR = DARK BRONZE)
- BRICK SOLDIER COURSE (0/S 680 MOD BY CONTINENTAL BRICK CO.)
- BRICK ROWLOCK COURSE (0/S 680 MOD BY CONTINENTAL BRICK CO.)
- CONTROL JOINT SEE MASONRY SPECS FOR COLOR
- STEEL ROOF LADDER AND CRANKY POST (COLOR = DARK BRONZE)
- STANDARD THROUGH WALL SCUPPER W/ CONDUCTOR HEAD & DOWNSPOUT (COLOR = DARK BRONZE)
- OVERFLOW SCUPPER
- ALUMINUM STOREFRONT SYSTEM
- EXTERIOR HOSE BIB
- OUTDOOR FURNITURE
- ELECTRICAL RECEPTACLE (REFER TO ELECTRICAL DRAWINGS)
- ELECTRICAL EQUIPMENT (REFER TO ELECTRICAL DRAWINGS)
- HM DOOR AND FRAME (COLOR = DARK BRONZE)
- EMERGENCY WATER CONNECTION
- SEAMLESS ALUM. PANEL SYSTEM W/ EXPOSED FASTENERS - COLOR: DARK BRONZE
- PROPANE LOCKER
- ICE MERCHANDISER
- RTI FILLPORT
- STEEL BOLLARD (COLOR = DARK BRONZE)
- CO2 FILLPORT
- DECORATIVE ALUMINUM FENCE

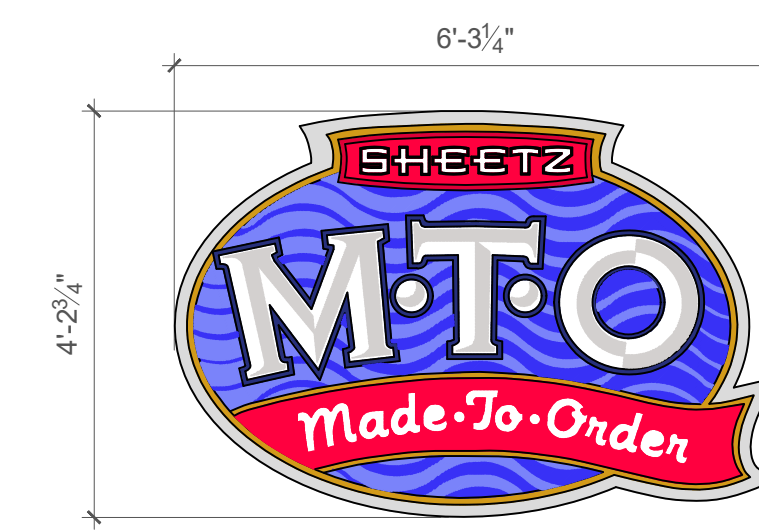


**2 LEFT ELEVATION**  
1/4" = 1'-0"



OUTLINE AREA = 21.65 SQ. FT.  
BOX AREA = 25.94 SQ. FT.  
TYPICAL OF ONE  
TYPICAL OF THREE

**A WALL MOUNTED "SHEETZ" BUILDING SIGN**  
1/2" = 1'-0"



OUTLINE AREA = 20.70 SQ. FT.  
BOX AREA = 26.52 SQ. FT.  
TYPICAL OF ONE  
PROJECTS 11" OFF FACE OF BUILDING

**B WALL MOUNTED "M.T.O." BUILDING SIGN**  
1/2" = 1'-0"

PROJECT NAME:  
**NEW SHEETZ STORE  
STORE #XXX**

**CITY  
STREET**

Address Line 1  
Address Line 2  
City, ST XXXXX

OWNER:  
SHEETZ, INC.

5700 SIXTH AVE.  
ALTOONA, PA 16602

CONSULTANT

PROFESSIONAL

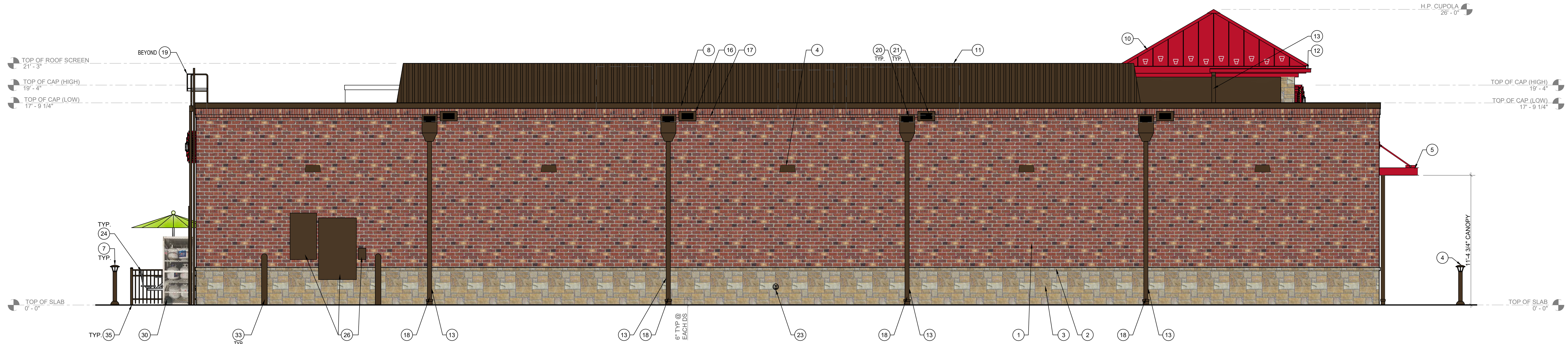
KEYPLAN

ISSUE:	04.03.2023
SITE ID NO:	#####
AUTHOR BY:	
REVIEW BY:	
VERSION:	6132L_v1.4

EXTERIOR  
ELEVATIONS

**A201**

**6132L PROTOTYPE - FY23 v1.4**



**3 REAR ELEVATION**  
1/4" = 1'-0"

**TYPICAL EXTERIOR ELEVATION NOTES:**

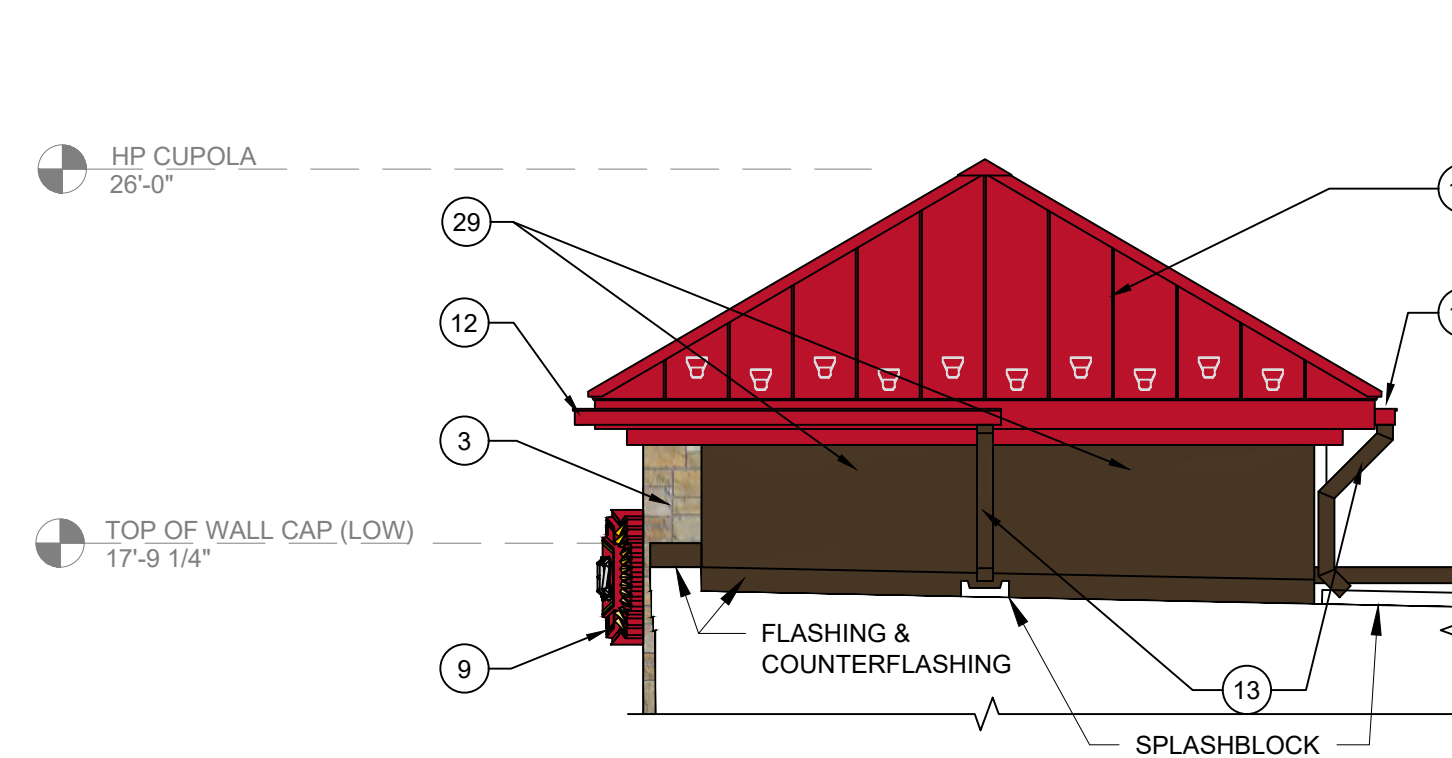
- ALL LIGHTS SHOWN ABOVE AND/OR BELOW DOORS OR WINDOWS ARE TO BE CENTERED ON THE DOOR OR WINDOW UNLESS NOTED OTHERWISE.
- FIXTURES/EQUIPMENT BETWEEN TWO DOORS OR WINDOWS ARE TO BE CENTERED EQUALLY.
- EXTERIOR SEALANT FOR STONE SHALL COMPLY WITH SECTION 07 9005 JOINT SEALANTS; GENERAL BUILDING FACADE WEATHER SEALANT AND SHALL MATCH THE COLOR OF THE STOREFRONT.

**EXTERIOR ELEVATION KEYNOTES:**

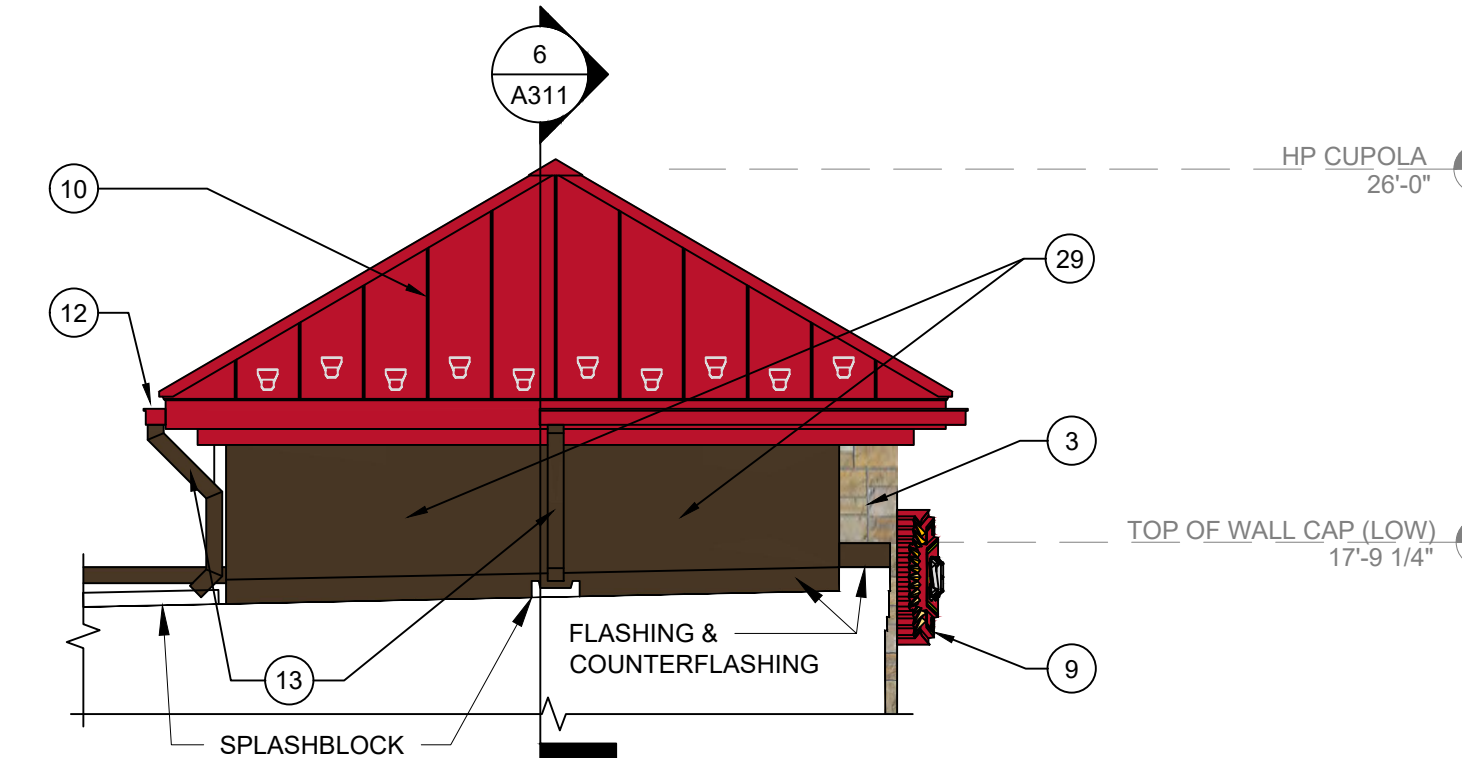
- BRICK VENEER (0/S 680 MOD BY CONTINENTAL BRICK CO.)
- CAST STONE SILL (COLOR = CRAB ORCHARD)
- ANCHORED CAST STONE MASONRY VENEER (COLOR = CRAB ORCHARD)
- EXTERIOR LIGHT FIXTURE, SEE ELEC DWGS
- ARCHITECTURAL CANOPY (COLOR = REGAL RED, PREMIUM TWO-COAT KYNAR FINISH)
- BRICK PAVER WALKWAY
- LIGHTED BOLLARD
- METAL COPING (COLOR = DARK BRONZE)
- WALL MOUNTED BUILDING SIGN, INTERNALLY ILLUMINATED. SEE SHEET A200.
- STANDING SEAM METAL ROOF (COLOR = BRITE RED)
- ROOF EQUIPMENT SCREEN (COLOR = DARK BRONZE)
- GUTTER (COLOR = RED)
- DOWNSPOUT (COLOR = DARK BRONZE)
- DRIVE-THRU WINDOW (IF APPLICABLE)
- METAL STANDING SEAM SHED STYLE AWNING AND FRAME ASSEMBLY (ROOF COLOR = BRITE RED, FRAME COLOR = DARK BRONZE)
- BRICK SOLDIER COURSE (0/S 680 MOD BY CONTINENTAL BRICK CO.)
- BRICK ROWLOCK COURSE (0/S 680 MOD BY CONTINENTAL BRICK CO.)
- CONTROL JOINT SEE MASONRY SPECS FOR COLOR
- STEEL ROOF LADDER AND CRANKY POST (COLOR = DARK BRONZE)
- STANDARD THROUGH WALL SCUPPER W/ CONDUCTOR HEAD & DOWNSPOUT (COLOR = DARK BRONZE)
- OVERFLOW SCUPPER
- ALUMINUM STOREFRONT SYSTEM
- EXTERIOR HOSE BIB
- OUTDOOR FURNITURE
- ELECTRICAL RECEPTACLE (REFER TO ELECTRICAL DRAWINGS)
- ELECTRICAL EQUIPMENT (REFER TO ELECTRICAL DRAWINGS)
- HM DOOR AND FRAME (COLOR = DARK BRONZE)
- EMERGENCY WATER CONNECTION
- SEAMLESS ALUM. PANEL SYSTEM W/ EXPOSED FASTENERS - COLOR: DARK BRONZE
- PROPANE LOCKER
- ICE MERCHANDISER
- RTI FILLPORT
- STEEL BOLLARD (COLOR = DARK BRONZE)
- CO2 FILLPORT
- DECORATIVE ALUMINUM FENCE



**4 RIGHT ELEVATION**  
1/4" = 1'-0"

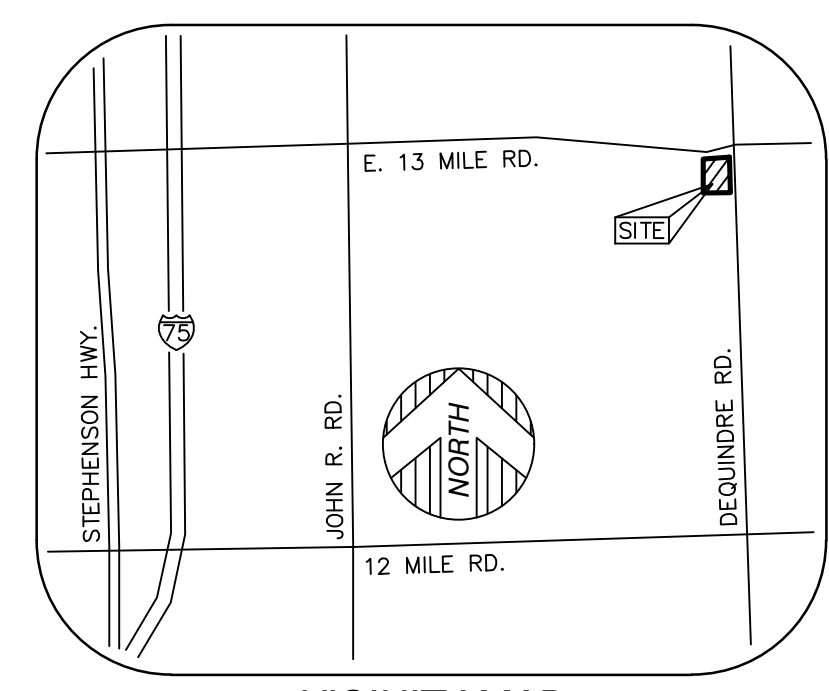


**5 CUPOLA FROM ROOF**  
1/4" = 1'-0"



**6 CUPOLA FROM ROOF**  
1/4" = 1'-0"





VICINITY MAP (NOT TO SCALE)

TITLE REPORT NOTE

ONLY THOSE EXCEPTIONS CONTAINED WITHIN THE CHICAGO TITLE INSURANCE COMPANY, COMMITMENT NO. 631217131N1S, DATED OCTOBER 5, 2023, AND RELISTED BELOW WERE CONSIDERED FOR THIS SURVEY. NO OTHER RECORDS RESEARCH WAS PERFORMED BY THE CERTIFYING SURVEYOR.

3. RIGHT-OF-WAY FOR THE WALKER RELIEF DRAINS INTER-COUNTY DRAINAGE DISTRICT ACTING THROUGH THE INTER-COUNTY DRAINAGE BOARD FOR THE WALKER RELIEF DRAINS AS SET FORTH BELOW: RECORDING NO: LIBER 5365, PAGE 445. (AS SHOWN)

4. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:

GRANTED TO: CONSUMERS POWER COMPANY (NOW KNOWN AS CONSUMERS ENERGY) RECORDING NO: LIBER 7814, PAGE 421. (AS SHOWN)

5. RIGHT-OF-WAY AGREEMENT (FOR INGRESS AND EGRESS) IN FAVOR OF THE CHRISTIAN MISSIONARY ALLIANCE CHURCH ON MADISON HEIGHTS, A MICHIGAN ECCLESIASTICAL CORPORATION, AS SET FORTH BELOW: RECORDING NO: LIBER 7909, PAGE 7. (AS SHOWN)

6. RIGHT(S) OF WAY AND/OR EASEMENT(S) AND RIGHTS AS GRANTED TO CITY OF MADISON HEIGHTS, IN A DOCUMENT: RECORDING NO: LIBER 8077, PAGE 378. (AS SHOWN)

7. ANY IRREGULARITIES, RESERVATIONS, EASEMENTS OR OTHER MATTERS IN THE PROCEEDINGS OCCASIONING THE ABANDONMENT OR VACATION OF THE STREET/ROAD SHOWN BELOW:

NAME: THIRTEEN MILE ROAD RIGHT-OF-WAY RECORDING NO: LIBER 8084, PAGE 642 AND AMENDED BY LIBER 8128, PAGE 520. (AS SHOWN)

LEGEND

- FOUND MONUMENT (AS NOTED)
- FOUND SECTION CORNER (AS NOTED)
- (R&M) RECORD AND MEASURED DIMENSION
- (R) RECORD DIMENSION
- (M) MEASURED DIMENSION
- GROUND ELEVATION
- ⊕ ELECTRIC MANHOLE
- ⊕ ELECTRIC METER
- ⊕ ELECTRIC PANEL
- ⊕ TRANSFORMER
- ⊕ UTILITY POLE
- ⊕ GAS LINE MARKER
- ⊕ GAS METER
- ⊕ LIGHT POLE WITH STREET LAMP
- ⊕ TELEPHONE MANHOLE
- ⊕ CABLE TV RISER
- ⊕ TRAFFIC SIGNAL
- ⊕ TRAFFIC SIGNAL MANHOLE
- ⊕ CLEANOUT
- ⊕ SANITARY MANHOLE
- ⊕ ROUND CATCH BASIN
- ⊕ SQUARE CATCH BASIN
- ⊕ STORM DRAIN MANHOLE
- ⊕ FIRE HYDRANT
- ⊕ WATER GATE MANHOLE
- ⊕ WATER VALVE
- ⊕ UNKNOWN MANHOLE
- ⊕ BOLLARD
- ⊕ LIGHTPOST/LAMP POST
- ⊕ SINGLE POST SIGN
- ⊕ HANDICAP PARKING
- ⊕ DECIDUOUS TREE (AS NOTED)
- PARCEL BOUNDARY LINE (AS ASSESSED & SURVEYED)
- PARCEL BOUNDARY LINE (PER TITLE COMMITMENT)
- ADJOINER PARCEL LINE
- SECTION LINE
- EASEMENT (AS NOTED)
- RIGHT-OF-WAY
- BUILDING
- BUILDING OVERHANG
- CONCRETE CURB
- RAISED CONCRETE
- PARKING
- EDGE OF CONCRETE (CONC.)
- EDGE OF ASPHALT (ASPH.)
- FENCE (AS NOTED)
- WALL (AS NOTED)
- OVERHEAD UTILITY LINE
- COMMUNICATION LINE
- GAS LINE
- SANITARY LINE
- STORM LINE
- WATER LINE
- MINOR CONTOUR LINE
- MAJOR CONTOUR LINE
- BUILDING AREA
- ASPHALT
- CONCRETE

SURVEYOR'S NOTE

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES OTHER THAN THE STRUCTURE INVENTORY SHOWN HEREON.

BASIS OF BEARING

NORTH 82°47'00" WEST, BEING THE NORTH LINE OF SECTION 12, AS DESCRIBED.

BENCHMARK

**SITE BENCHMARK #1**  
ARROW ON HYDRANT, AT EAST SIDE OF PROPERTY.  
ELEVATION = 630.12' (NAVD 88)

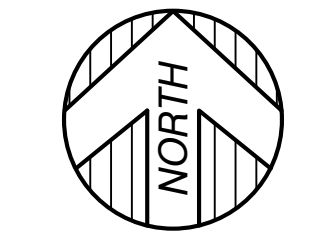
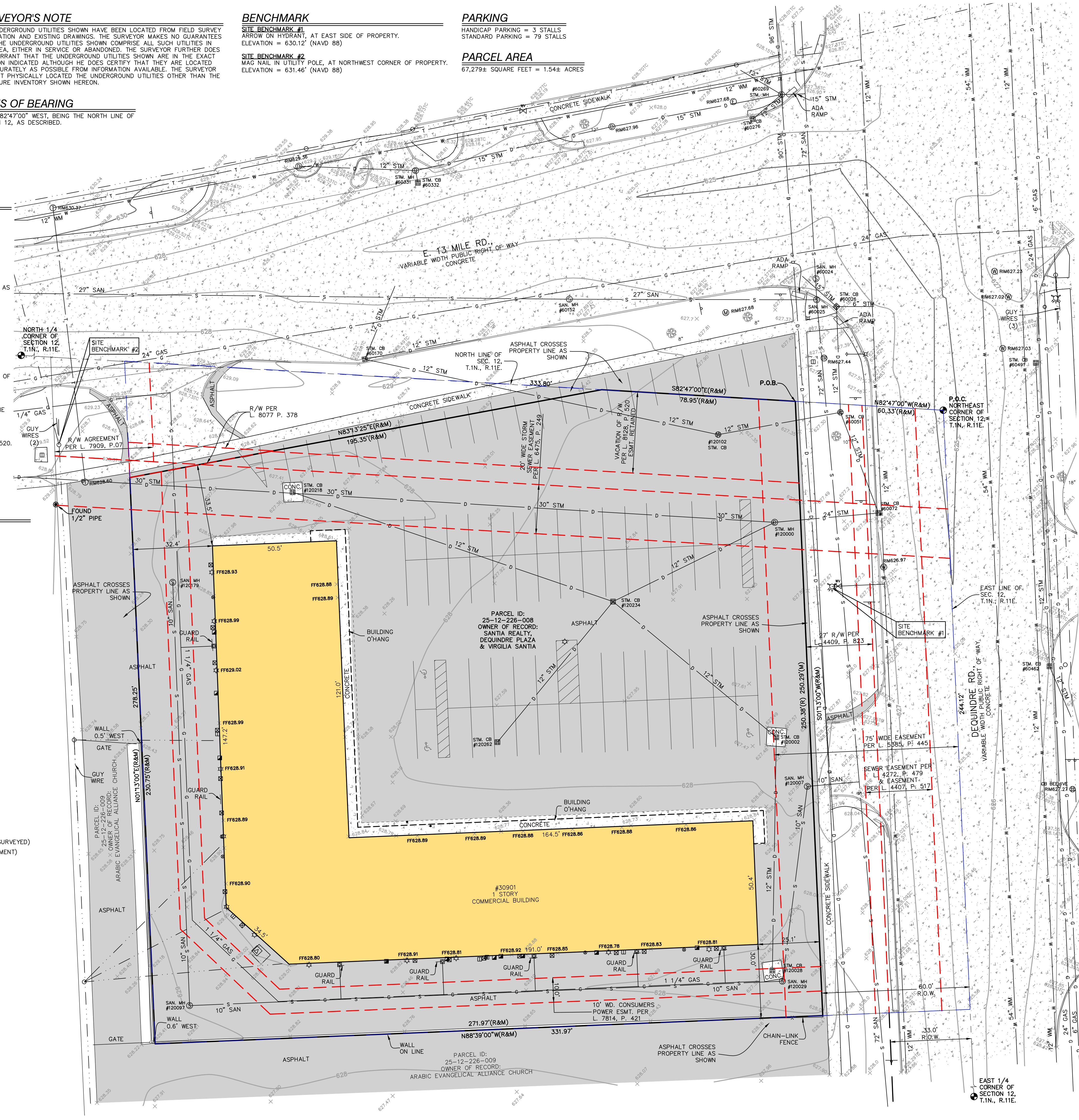
**SITE BENCHMARK #2**  
MAG NAIL IN UTILITY POLE, AT NORTHWEST CORNER OF PROPERTY.  
ELEVATION = 631.46' (NAVD 88)

PARKING

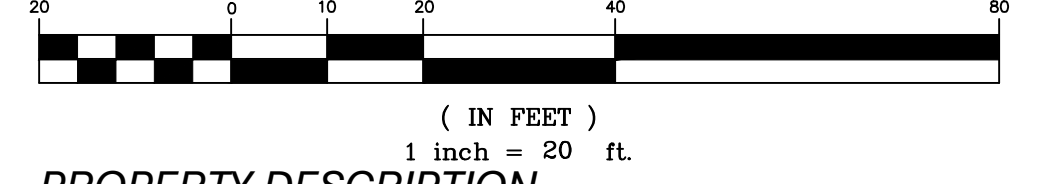
HANDICAP PARKING = 3 STALLS  
STANDARD PARKING = 79 STALLS

PARCEL AREA

67,279± SQUARE FEET = 1.54± ACRES



GRAPHIC SCALE



PROPERTY DESCRIPTION

LAND SITUATED IN THE STATE OF MICHIGAN, COUNTY OF OAKLAND, CITY OF MADISON HEIGHTS.

PART OF THE NORTHEAST 1/4 OF SECTION 12, TOWN 1 NORTH, RANGE 11 EAST, BEGINNING AT THE NORTHEAST SECTION CORNER; THENCE NORTH 82 DEGREES 47 MINUTES WEST 333.80 FEET; THENCE SOUTH 01 DEGREE 13 MINUTES WEST 278.25 FEET; THENCE SOUTH 88 DEGREES 39 MINUTES EAST 331.97 FEET; THENCE NORTH 01 DEGREE 13 MINUTES EAST 244.12 FEET TO THE POINT OF BEGINNING. SUBJECT TO THE RIGHTS OF THE PUBLIC AND OF ANY GOVERNMENTAL UNIT IN ANY PART THEREOF TAKEN, USED OR DEEDED FOR STREET, ROAD OR HIGHWAY PURPOSES.

ASSESSED AS:

PART OF THE NORTHEAST 1/4 OF SECTION 12, TOWN 1 NORTH, RANGE 11 EAST, DESCRIBED AS BEGINNING AT A POINT DISTANT NORTH 82 DEGREES 47'00" WEST 60.33 FEET FROM THE NORTHEAST SECTION CORNER; THENCE SOUTH 01 DEGREE 13'00" WEST 250.38 FEET; THENCE NORTH 88 DEGREES 39'00" WEST 271.97 FEET; THENCE NORTH 01 DEGREE 13'00" EAST 195.35 FEET; THENCE SOUTH 82 DEGREES 47'00" EAST 78.95 FEET TO THE POINT OF BEGINNING.

MANHOLE SCHEDULE

NUM	TYPE	RIM (FT)	SIZE (IN)	DIR	INV	ELEV (FT)
60024	SANITARY MANHOLE	627.24	T/DEBRIS			620.29
60025	SANITARY MANHOLE	627.28	72	S		604.14
		627.28	27	W		604.37
		627.28	72	N		604.48
60026	CATCH BASIN	626.62	15	NW		620.32
		626.62	6	E		624.62
60051	CATCH BASIN	627.22	12	SE		622.42
60072	CATCH BASIN	626.92	24	W		617.82
		626.92	12	N		621.57
		626.92	12	E		621.02
60152	SANITARY MANHOLE	627.52	27	NW		606.52
		627.52	27	SE		606.57
60170	CATCH BASIN	628.02	12	ESE		622.22
		628.02	12	NE		624.12
		628.02	12	E		624.12
60269	STORM MANHOLE	627.42	12	NW		620.22
		627.42	12	SW		622.17
		627.42	15	E		621.22
		627.42	96	N		609.72
		627.42	90	S		609.72
60276	CATCH BASIN	626.89	12	NE		622.49
60331	STORM MANHOLE	627.94	15	NW		623.64
		627.94	15	NE		623.69
		627.94	12	S		623.79
60332	CATCH BASIN	627.87				COULD NOT OPEN
60462	CATCH BASIN	627.02	12	SSE		623.62
		627.02	12	N		623.17
60491	CATCH BASIN	626.66	12	S		620.56
		626.66	6	S		620.56
120000	STORM MANHOLE	627.81	12	SW		618.36
		627.81	24	E		613.96
		627.81	30	W		614.01
120002	CATCH BASIN	627.34	12	S		621.69
120007	SANITARY MANHOLE	627.98	10	E		618.98
120028	CATCH BASIN	627.25	12	N		622.65
120029	SANITARY MANHOLE	627.35	10	W		619.55
120097	SANITARY MANHOLE	628.94	10	N		620.79
		628.94	10	N		620.89
120102	CATCH BASIN	627.15	12	W		620.30
		627.15	12	E		619.45
120179	SANITARY MANHOLE	627.84	10	S		621.59
120218	CATCH BASIN	627.12	12	SE		620.52
120234	CATCH BASIN	627.20	12	SE		620.80
		627.20	12	NW		619.20
		627.20	12	NE		618.90
		627.20	8	S		625.00
120262	CATCH BASIN	627.38	12	NE		621.38

FLOOD NOTE

SUBJECT PARCEL LIES WITHIN:

OTHER AREA (ZONE X): AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN.

AS SHOWN ON FLOOD INSURANCE RATE MAP: MAP NUMBER 26125C0564F, DATED 9/29/2006, PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

SURVEYOR'S CERTIFICATION

TO OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY; NORTHWEST TITLE FAMILY OF COMPANIES, INC.; AND MC DEVELOPMENT HOLDINGS, LLC:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 5, 7A, 8, 9, 11A, AND 11B OF TABLE A, THEREOF. THE FIELD WORK WAS COMPLETED ON 08/08/23.

DATE OF PLAT OR MAP: 08/28/23

DRAFT

ANTHONY T. SYCKO, JR., P.S.  
PROFESSIONAL SURVEYOR  
MICHIGAN LICENSE NO. 47976  
22556 GRATIOT AVE., EASTPOINTE, MI 48021  
TSycko@kemttec-survey.com

Item 3

**KEM-TEC**  
A GROUP OF COMPANIES  
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Grand Blanc, Michigan (800) 694-0001  
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**ALTA / NSPS LAND TITLE SURVEY**  
PREPARED FOR: STONEFIELD ENGINEERING AND DESIGN  
30901 DEQUINDE RD., MADISON HEIGHTS, MICHIGAN  
PART OF SECTION 12, TOWN 1 NORTH, RANGE 11 EAST

DATE	BY	DESCRIPTION
11/01/23	JDM	UPDATED PER TITLE WORK
8/31/23	JDM	REVISED STORM
2	1	REVISION

SCALE: 1" = 20'

1 OF 1 SHEETS

# Traffic Impact Study

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



Prepared for:  
Skilken Gold

Date: September 11, 2023  
SE&D Job Number: DET-230258

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John R. Corak, PE  
Project Manager  
License No. 6201070230



**STONEFIELD**  
607 Shelby St, Suite 200  
Detroit, MI 48226

**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.

**AGENCY REVIEW**

Agency	Date	Comments



**TABLE OF CONTENTS**

**EXECUTIVE SUMMARY..... 1**

**INTRODUCTION..... 2**

**METHODOLOGY..... 2**

**2023 EXISTING CONDITION ..... 3**

    2023 Existing Roadway Conditions ..... 3

    2023 Existing Traffic Volumes..... 3

    2023 Existing LOS/Capacity Analysis..... 4

**2025 NO-BUILD CONDITION ..... 4**

    Background Growth..... 4

    Other Planned Development Projects..... 4

    2025 No-Build Traffic Volumes ..... 5

    2025 No-Build LOS/Capacity Analysis..... 5

**2025 BUILD CONDITION ..... 5**

    Trip Generation..... 5

    Trip Assignment/Distribution..... 6

    2025 Build Traffic Volumes..... 6

    2025 Build LOS/Capacity Analysis ..... 6

**SITE CIRCULATION/PARKING SUPPLY..... 7**

**CONCLUSIONS ..... 8**

**TECHNICAL APPENDIX**

**LEVEL OF SERVICE/AVERAGE CONTROL DELAY CRITERIA**

Table A1: Comparative Level of Service (Delay) Table

**TURNING MOVEMENT COUNT DATA**

Intersection of Thirteen Mile Road & Dequindre Road

**FIGURES**

Figure 1 – Site Location Map

Figure 2 – 2023 Existing Traffic Volumes

Figure 3 – 2025 No-Build Traffic Volumes

Figure 4 – “New” Site-Generated Traffic Volumes

Figure 5 – “Pass-By” Site-Generated Traffic Volumes

Figure 6 – 2025 Build Traffic Volumes

**HIGHWAY CAPACITY ANALYSIS DETAIL SHEETS**

2023 Existing Traffic Conditions

2025 No-Build Traffic Conditions

2025 Build Traffic Conditions

**TRAFFIC SIGNAL TIMING DIRECTIVE**

Intersection of Thirteen Mile Road & Dequindre Road

**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, 6<sup>th</sup> Edition (HCM) and the Synchro II 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, 11<sup>th</sup> 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 I** provides the weekday morning and weekday evening, peak hour trip generation volumes associated with the proposed development.

**TABLE I – PROPOSED TRIP GENERATION**

Land Use	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
	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, 3<sup>rd</sup> 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**

Trip Type	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
“New” Trips	67	67	134	60	60	120
“Pass-By” Trips	213	213	426	182	182	364
<b>Total</b>	<b>280</b>	<b>280</b>	<b>560</b>	<b>242</b>	<b>242</b>	<b>484</b>

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 AI** 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, 5<sup>th</sup> 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.

Z:\Michigan\DET\2023\DET-230258-Skillen Gold-30901 Dequindre Road, Madison Heights, MI\Calculations & Reports\Traffic\Reports\2023-09 Traffic Impact Study\2023-09 Traffic Impact Study.docx

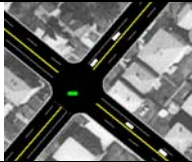
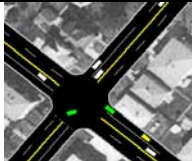




**TECHNICAL APPENDIX**

**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, 6<sup>th</sup> 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, 6<sup>th</sup> Edition

# STONEFIELD

**Table A1: Comparative Level of Service (Delay) Table**  
 City of Madison Heights, Oakland County, New Jersey  
 X (n) = Level of Service (seconds of delay)

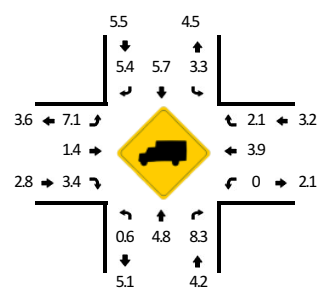
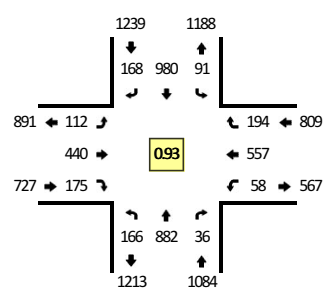
Intersection	Lane Group	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
		2023 Existing Condition	2025 No-Build Condition	2025 Build Condition	2023 Existing Condition	2025 No-Build Condition	2025 Build Condition
Thirteen Mile Road (E/W) & Dequindre Road (N/S)	EB Left	E (58.9)	E (59.0)	E (58.6)	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)
	<b>Overall</b>		<b>D (41.0)</b>	<b>D (41.5)</b>	<b>D (41.9)</b>	<b>D (51.0)</b>	<b>D (52.8)</b>
	Thirteen Mile Road (E/W) & Northern Site Driveway (N)			A (9.6)			B (11.6)
Eastern Site Driveway (E) & Dequindre Road (N/S)			C (16.5)			C (22.8)	
			E (37.4)			E (46.9)	
			B (12.8)			C (15.1)	

**TURNING MOVEMENT COUNT DATA**

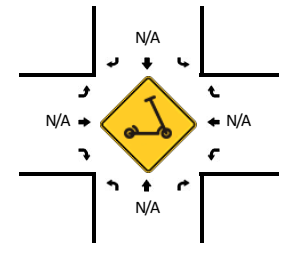
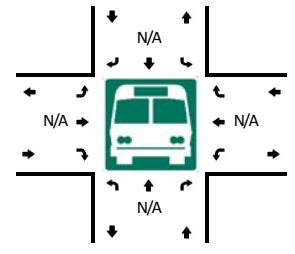
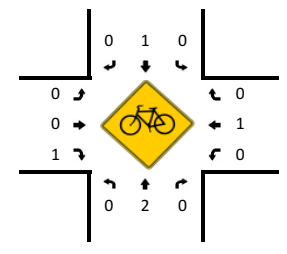
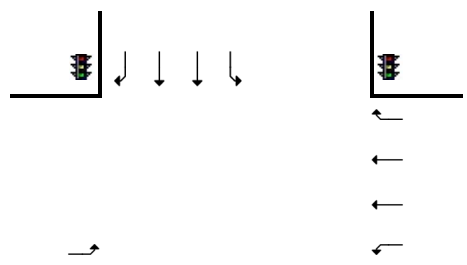
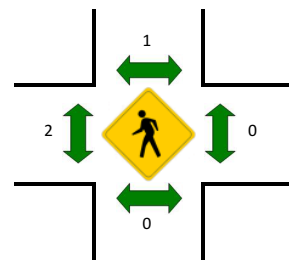
**LOCATION:** Dequindre Rd -- E Thirteen Mile Rd  
**CITY/STATE:** Warren, MI

**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

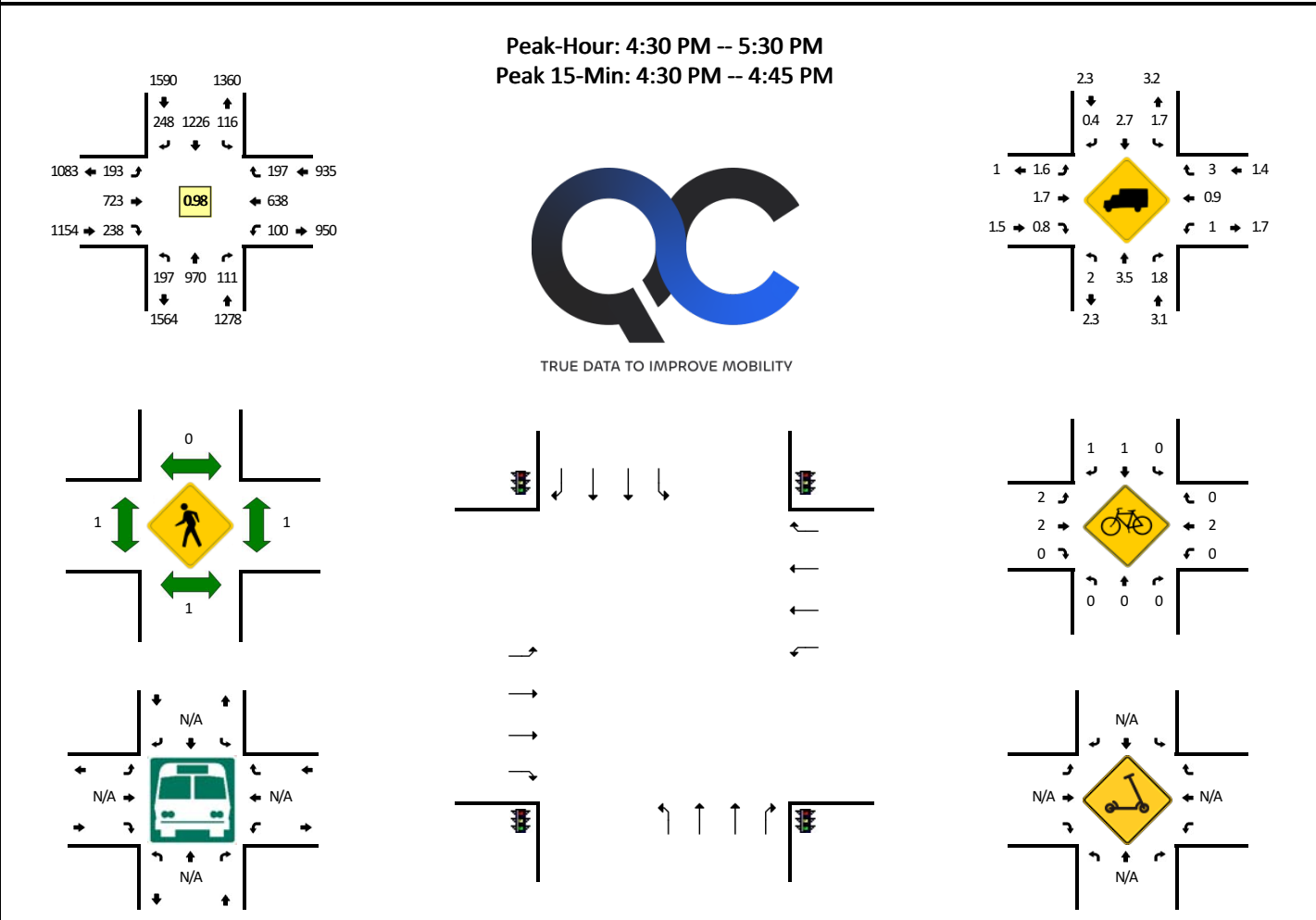


15-Min Count Beginning At	Dequindre Rd (Northbound)				Dequindre Rd (Southbound)				E Thirteen Mile Rd (Eastbound)				E Thirteen Mile Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	23	159	7	0	19	164	27	0	21	61	30	0	7	90	27	0	635	
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	0	52	4	0	0	8	12	0	0	32	0	0	156	
Buses																		
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
Scooters																		

Comments:



**LOCATION:** Dequindre Rd -- E Thirteen Mile Rd **QC JOB #:** 16301402  
**CITY/STATE:** Warren, MI **DATE:** Tue, Aug 22 2023

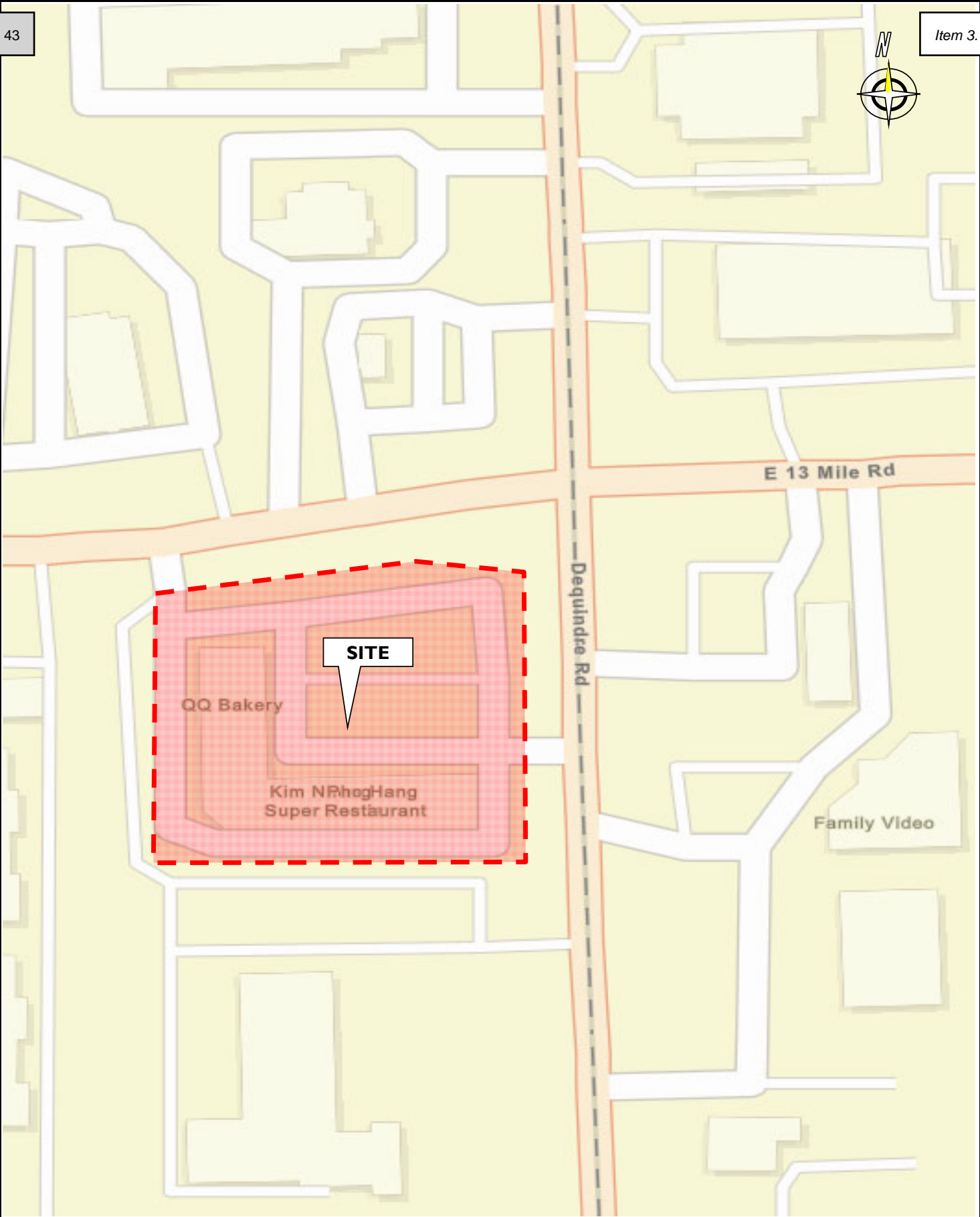


15-Min Count Period Beginning At	Dequindre Rd (Northbound)				Dequindre Rd (Southbound)				E Thirteen Mile Rd (Eastbound)				E Thirteen Mile Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	52	250	17	0	24	278	62	0	43	154	50	0	10	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	0	4	28	4	0	8	12	0	0	0	12	0	0	108
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	8	0		8
Scoters																	

*Comments:*

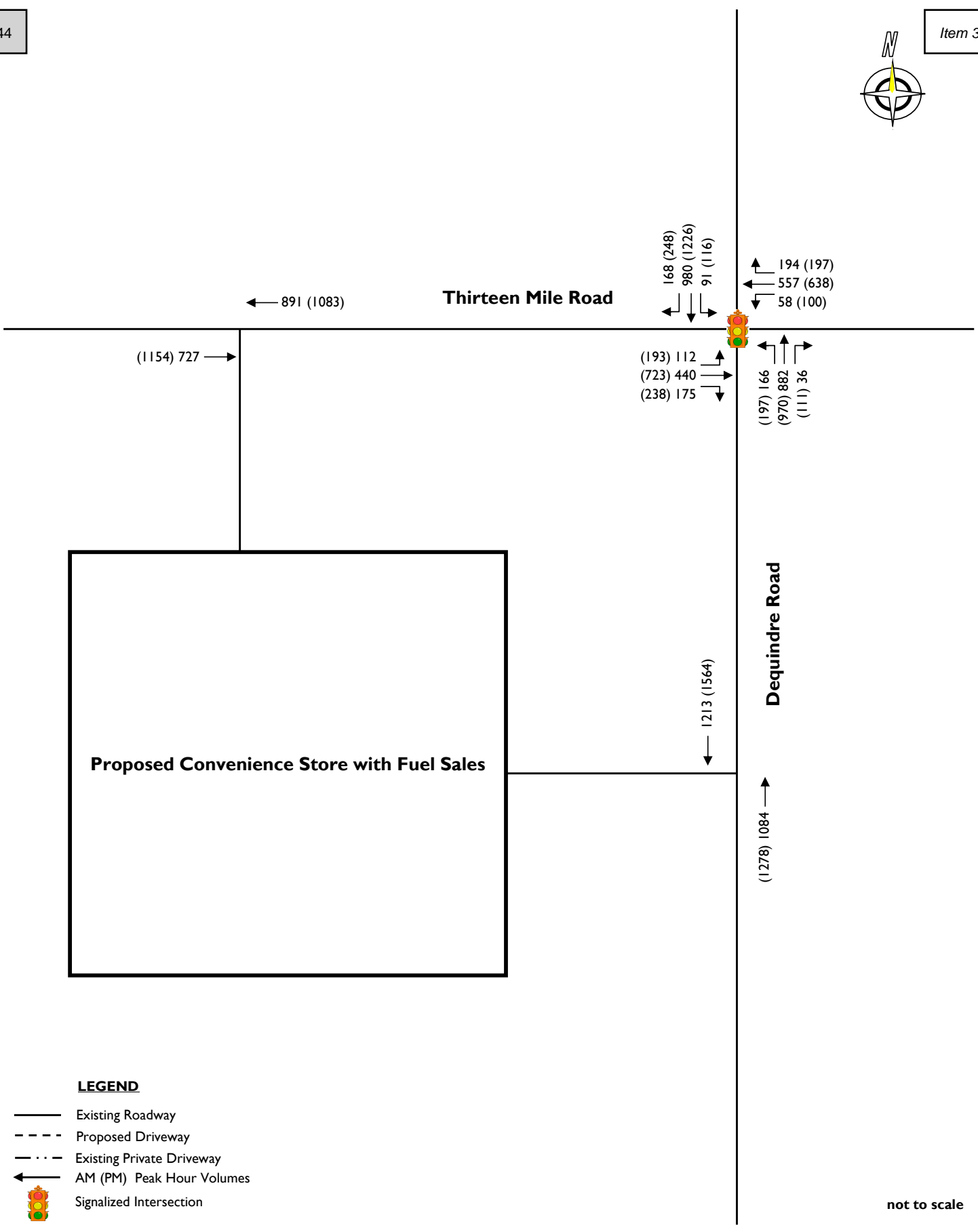
**FIGURES**

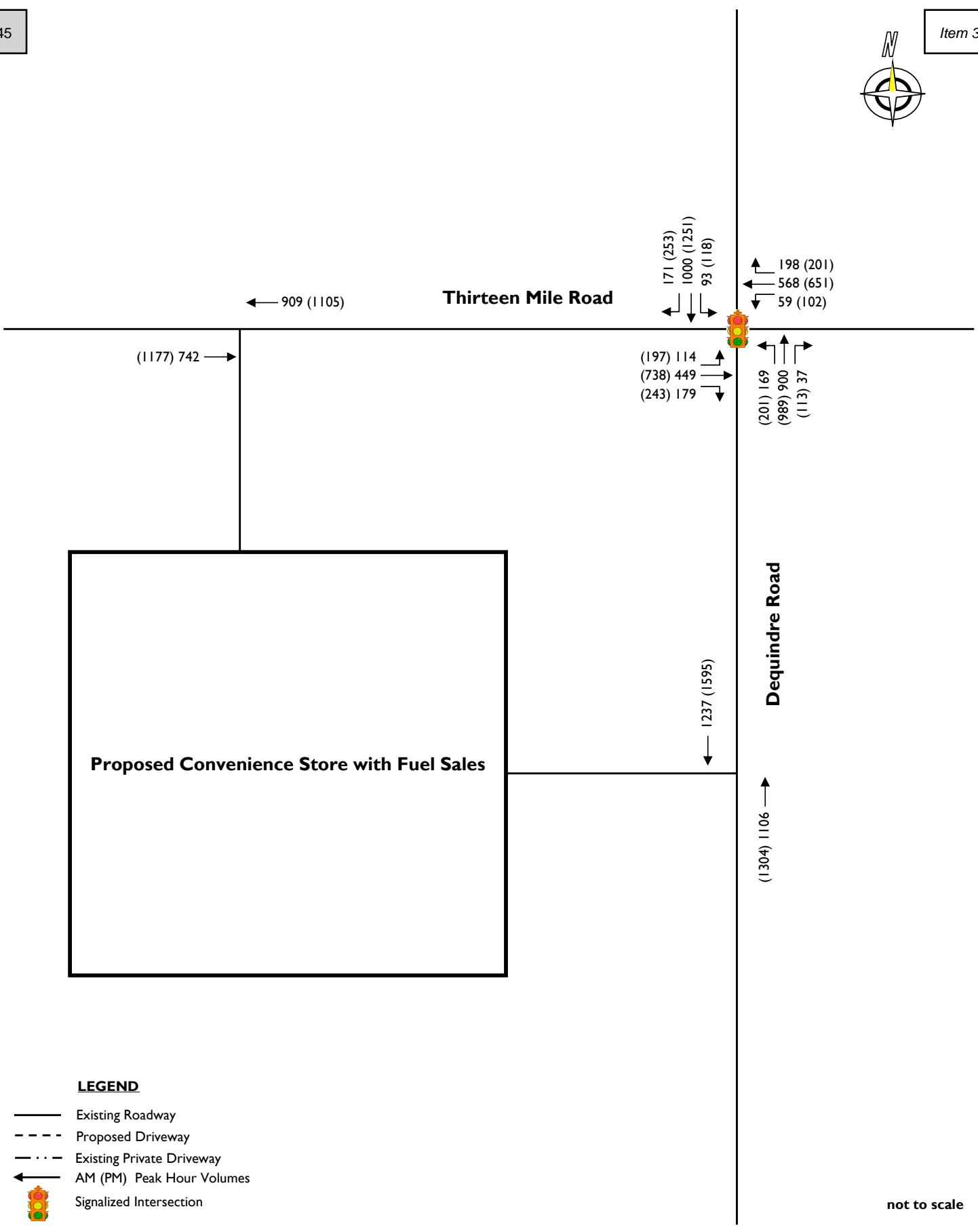


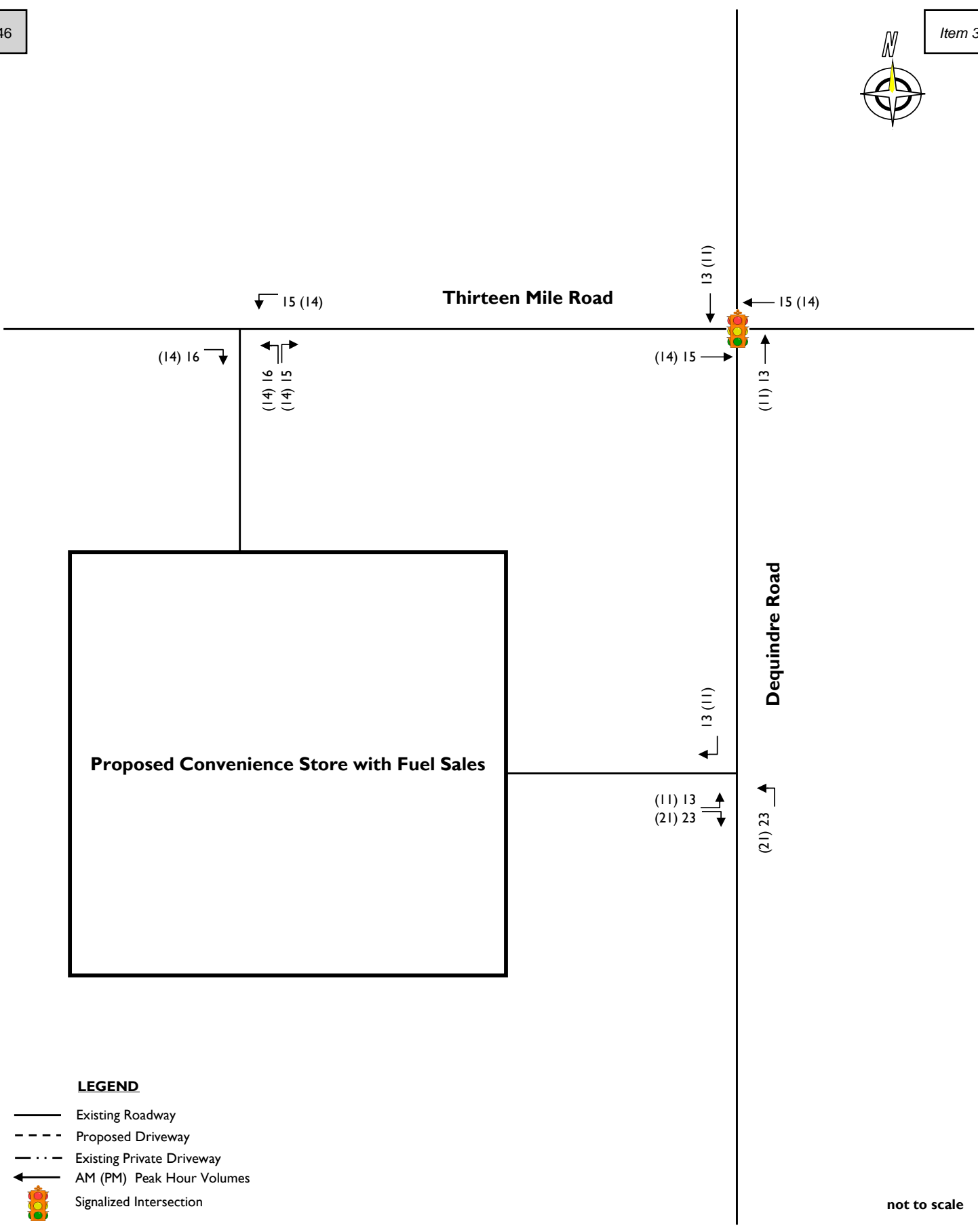
**STONEFIELD**

**Proposed Convenience Store with Fuel Sales**  
**30901 Dequindre Road**  
**City of Madison Heights, Oakland County, Michigan**  
**Traffic Impact Study**

**FIGURE I**  
**Site Location Map**







**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**



← -21 (-18)  
↓ 21 (18)

**Thirteen Mile Road**



(-55) -64 →  
(55) 64 ↓

← (18) 21  
→ (55) 64



**Proposed Convenience Store with Fuel Sales**


← 96 (87)  
↓ -96 (-87)

**Dequindre Road**

(22) 32 →  
(87) 96 ↓

(22) 32 ↑  
(-22) -32 ←

**LEGEND**

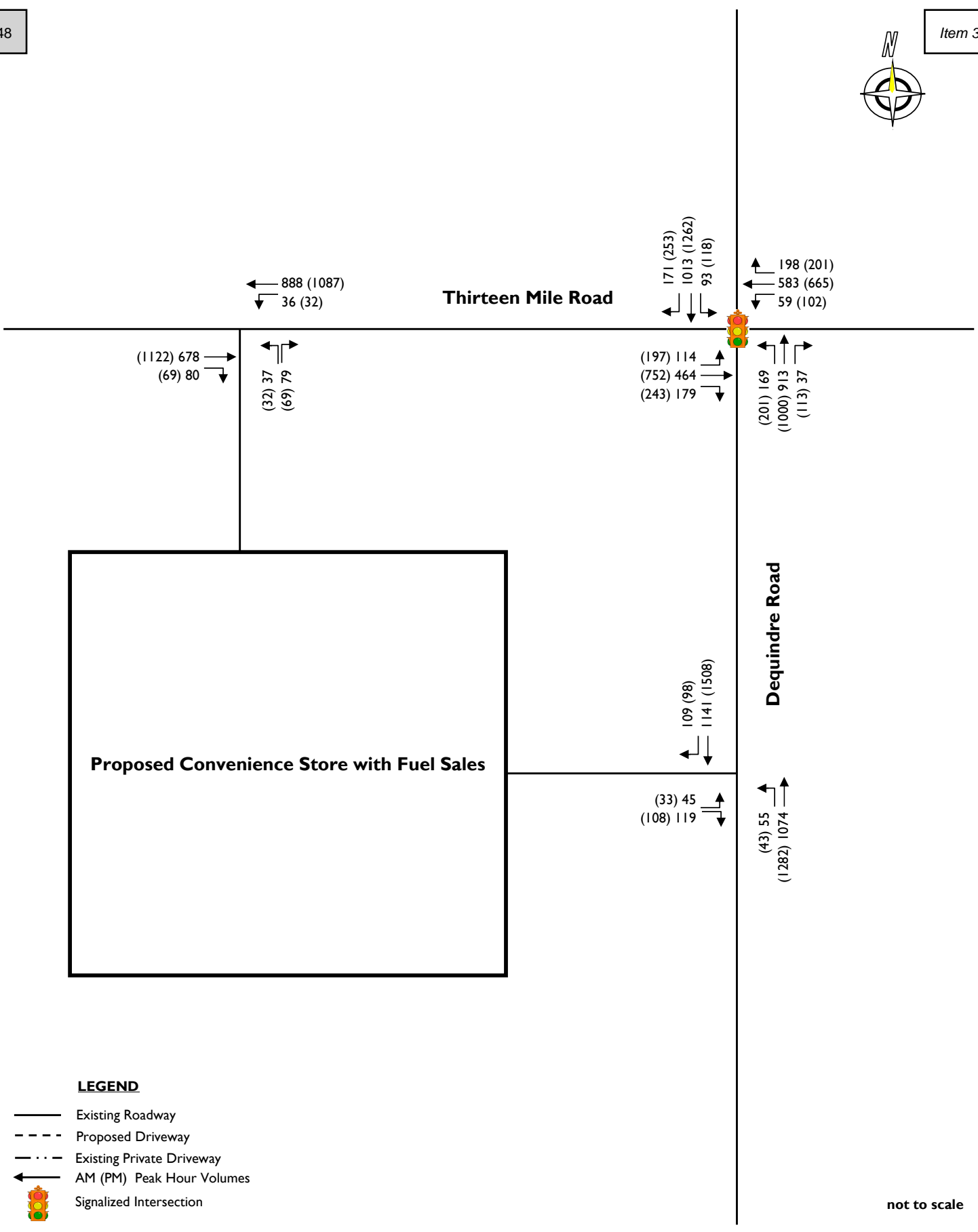
- Existing Roadway
- - - Proposed Driveway
- · - Existing Private Driveway
- ← AM (PM) Peak Hour Volumes
-  Signalized Intersection

not to scale

**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





**HIGHWAY CAPACITY ANALYSIS DETAIL SHEETS**

HCM 6th Signalized Intersection Summary  
1: Dequindre Road & Thirteen Mile Road

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				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			41.0									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary  
1: Dequindre Road & Thirteen Mile Road

2023 Existing Conditions Item 3.  
Weekday Evening Peak Hour

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				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			51.0									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary  
1: Dequindre Road & Thirteen Mile Road

2025 No-Build Condition Item 3.  
Weekday Morning Peak Hour

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				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			41.5									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary  
1: Dequindre Road & Thirteen Mile Road

2025 No-Build Condition Item 3.  
Weekday Evening Peak Hour

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				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			52.2									
HCM 6th LOS			D									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary  
1: Dequindre Road & Thirteen Mile Road

2025 Build Condition Item 3.  
Weekday Morning Peak Hour

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				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			41.9									
HCM 6th LOS			D									
<b>Notes</b>												
* 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	Minor2	Minor3
Conflicting Flow All	0	0	815	0	1328
Stage 1	-	-	-	-	772
Stage 2	-	-	-	-	556
Critical Hdwy	-	-	4.1	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	821	-	149
Stage 1	-	-	-	-	422
Stage 2	-	-	-	-	544
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	821	-	142
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	TT		T	TTT	TT	
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	-	-



HCM 6th Signalized Intersection Summary  
1: Dequindre Road & Thirteen Mile Road

2025 Build Condition Item 3.  
Weekday Evening Peak Hour

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					
<b>Intersection Summary</b>													
HCM 6th Ctrl Delay			52.8										
HCM 6th LOS			D										
<b>Notes</b>													
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.													

HCM 6th TWSC  
2: Northern Site Driveway & Thirteen Mile Road

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	Minor2	Minor3
Conflicting Flow All	0	0	1215	0	1801
Stage 1	-	-	-	-	1180
Stage 2	-	-	-	-	621
Critical Hdwy	-	-	4.1	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	581	-	73
Stage 1	-	-	-	-	258
Stage 2	-	-	-	-	504
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	581	-	69
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	TT		T	TTT	TT	
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  Ringgroup 1 - Offset 1  Offset 2  Offset 3   
 Ringgroup 2 - Offset 1  Offset 2  Offset 3

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  Max Mode  Walk Rest

Ped Permissive

Permissive Limit  Perm 2 Start  Perm 2 End

Alt Sequence   
 TOD Link

Phases/Overlaps	1-8				9-16			
Coord Phases	<input type="text" value="2"/>		<input type="text" value="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   
 Offset Ref   
 Adaptive Mode

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

08/22/2023 1:56:08 PM

Cycle  Ringgroup 1 - Offset 1  Offset 2  Offset 3   
 Ringgroup 2 - Offset 1  Offset 2  Offset 3

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  Max Mode  Walk Rest   
 Ped Permissive   
 Permissive Limit  Perm 2 Start  Perm 2 End   
 Alt Sequence   
 TOD Link

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   
 Offset Ref   
 Adaptive Mode   
 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

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	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

**MADISON HEIGHTS PLANNING COMMISSION  
2024 MEETING SCHEDULE [DRAFT FOR ADOPTION]**

**Third Tuesday of each month at 5:30 p.m. (unless otherwise noted or canceled)**

Council Chambers – 300 W. 13 Mile Road (unless otherwise noted)  
Madison Heights, MI 48071

<b>MEETING DATE</b>	<b>APPLICATION DEADLINE (By close of business)</b>	<b>NOTICES PUBLISHED</b>
<b>January 16<sup>th</sup></b>	December 11 <sup>th</sup> , 2023	December 20 <sup>th</sup> , 2023
<b>February 20<sup>th</sup></b>	January 16 <sup>th</sup>	January 24 <sup>th</sup>
<b>March 19<sup>th</sup></b>	February 12 <sup>th</sup>	February 21 <sup>st</sup>
<b>April 16<sup>th</sup></b>	March 11 <sup>th</sup>	March 20 <sup>th</sup>
<b>May 21<sup>st</sup></b>	April 15 <sup>th</sup>	April 24 <sup>th</sup>
<b>June 18<sup>th</sup></b>	May 13 <sup>th</sup>	May 22 <sup>nd</sup>
<b>July 16<sup>th</sup></b>	June 21 <sup>st</sup>	July 1 <sup>st</sup>
<b>August 20<sup>th</sup></b>	July 22 <sup>nd</sup>	July 31 <sup>st</sup>
<b>September 17<sup>th</sup></b>	August 19 <sup>th</sup>	August 28 <sup>th</sup>
<b>OCTOBER – NO MEETING</b>	--	--
<b>November 19<sup>th</sup></b>	October 21 <sup>st</sup>	October 30 <sup>th</sup>
<b>DECEMBER – NO MEETING</b>	--	--