



CITY of NOVI CITY COUNCIL

Agenda Item 3
September 26, 2016

SUBJECT: Consideration of tentative approval of the request of McBride Dale Clarion for Speedway at 14 Mile and Haggerty, JSP 16-13, with Zoning Map Amendment 18.714, to rezone property in Section 1, located at the southwest corner of Fourteen Mile Road and Haggerty Road from OST (Planned Office Service Technology) and B-3 (General Business) to B-3 (General Business) subject to a Planned Rezoning Overlay (PRO) Plan Agreement, and corresponding PRO Concept Plan. The property totals 2.03 acres and the applicant is proposing to update and rebuild the whole site.

SUBMITTING DEPARTMENT: Community Development Department - Planning *Baugh*

CITY MANAGER APPROVAL: 

BACKGROUND INFORMATION:

The petitioner is requesting a Zoning Map amendment for a 2.03 acre property at the southwest corner of Fourteen Mile Road and Haggerty Road from OST (Office Service Technology) & B-3 (General Business) to B-3 (General Business) using the City's Planned Rezoning Overlay (PRO) option. The applicant states that the rezoning request is necessary to allow the rebuild of the Speedway gas station and convenience store on a larger site. This will allow the applicant to update and rebuild the whole site.

The PRO option creates a "floating district" with a conceptual plan attached to the rezoning of a parcel. As part of the PRO, the underlying zoning is proposed to be changed (in this case from OST to B-3) and the applicant enters into a PRO agreement with the City, whereby the City and the applicant agree to tentative approval of a conceptual plan for development of the site. Following final approval of the PRO concept plan and PRO agreement, the applicant will submit for Preliminary and Final Site Plan approval under standard site plan review procedures. The PRO runs with the land, so future owners, successors, or assignees are bound by the terms of the agreement, absent modification by the City of Novi. If the development has not begun within two (2) years, the rezoning and PRO concept plan expires and the agreement becomes void.

The applicant has proposed a 4,000 square foot convenience store and 5,400 square foot fuel canopy over 8 double-sided fuel dispensers. Razing the 2,417 square foot existing building and 6 double-sided fuel dispensers. As part of the redevelopment, existing driveways will be shifted away from the intersection and aligned with the driveways across 14 Mile Road and Haggerty Road. Speedway is proposing to dedicate approximately 10 feet of ROW along 14 Mile Road. There will be an above-ground detention basin in the southwest corner of the enlarged property.

The Planning Commission held a public hearing on September 14, 2016. The Planning Commission had a couple questions regarding the feasibility of the fuel truck maneuvering the site for deliveries. Staff has reviewed the full set of concept plans again and found the proposed route and schedule to be satisfactory. The Planning Commission recommended approval of the application to City Council.

Master Plan for Land Use

The Future Land Use Map of the 2010 City of Novi Master Plan for Land Use identifies this property and all adjacent land within the City as office research development technology. The proposal would follow objectives listed in the Master Plan for Land Use including the following:

1. Objective: The City, working with the development community and partners, should continue to foster a favorable business climate. *The proposal would allow an existing business to expand, provide an update to the visual aesthetic at an entryway to the City, and provide an estimated 5 more jobs, \$5 million in sales volume, \$235,000 in sales tax, and \$3.1 million in investment.*
2. Objective: Support and strengthen existing businesses, as it is easier to keep a business in the City than attract a new one to fill a vacant facility. *The proposal would allow an existing business to expand and develop a vacant parcel.*

The rezoning request was presented to the Master Plan and Zoning Committee on August 17, 2016 for discussion. The proposed parcels to be rezoned are designated as OST (Office Service Technology) on the Future Land Use Map. The rezoning is not consistent with the Future Land Use Map and the committee provided some comments regarding the plan.

Ordinance Deviations Requested

Section 7.13.2.D.i.c(2) permits deviations from the strict interpretation of the Zoning Ordinance within a PRO agreement. These deviations must be accompanied by a finding by City Council that "each Zoning Ordinance provision sought to be deviated would, if the deviation were not granted, prohibit an enhancement of the development that would be in the public interest, and that approving the deviation would be consistent with the Master Plan and compatible with the surrounding areas." Such deviations must be considered by City Council, who will make a finding of whether to include those deviations in a proposed PRO agreement. The proposed PRO agreement would be considered by City Council after tentative approval of the proposed concept plan and rezoning.

The concept plan submitted with an application for a rezoning with a PRO is not required to contain the same level of detail as a preliminary site plan. Staff has reviewed the concept plan inasmuch detail as possible to determine what deviations from the Zoning Ordinance are currently shown. In many cases, additional information is required to make a determination if a deviation is required. The applicant may choose to revise the concept plan to better comply with the standards of the Zoning Ordinance, or may proceed with the plan as submitted with the understanding that those deviations would have to be approved by City Council in a proposed PRO agreement. The following are deviations from the Zoning Ordinance and other applicable ordinances requested by the applicant and supplemented by staff and consultant recommendations:

- a. A same side driveway spacing waiver to allow the driveway on 14 Mile Road to be located approximately 121 feet (200 feet required) from the neighboring driveway to the west to align with existing driveway on the north side of 14 Mile Road.
- b. An opposite side driveway spacing waiver to allow the driveway on Haggerty Road to be located approximately 40 feet (200 feet required) from the driveway to the south in order to align with the existing driveway on the east side of Haggerty Road.
- c. Section 9 Façade Waiver for the overage of Asphalt Shingles on the building (maximum 25 percent permitted; proposed 51 percent on east, 35 percent on west, 30 percent on south and north).

- d. Section 9 Façade Waiver for the overage of Flat Metal Panels on the fuel canopy (maximum 50 percent permitted; proposed 71 percent on east and west, 59 percent on south and north), and the underage of Brick (minimum 30 percent; proposed 20% on east and west).
- e. Proposed loading zone is located in the front yard, the ordinance indicates it should be located in the interior side yard of a double frontage lot.
- f. Proposed dumpster is located in the front yard, the ordinance indicates it should be located in the interior side yard of a double frontage lot.

Public Benefit under PRO Ordinance

Section 7.13.2.D.ii states that the City Council must determine that the proposed PRO rezoning would be in the public interest and the public benefits of the proposed PRO rezoning would clearly outweigh the detriments:

1. Install a "Welcome to Novi" sign along the 14 Mile Road property line.
2. Dedicate 10 feet of right-of-way along 14 Mile Road.
3. Redevelop the site with a building and canopy that is architecturally consistent with current zoning regulations.
4. Pedestrian access is improved: (a) Sidewalks will be extended the length of the expanded property and will close gaps in the sidewalk system and (b) sidewalk connections from the convenience store to 14 Mile Road and Haggerty Road are provided.
5. Safety improvements: (a) relocation of driveway away from 14 Mile and Haggerty intersection and to align with opposing driveway and (b) on-site circulation and visibility with new canopy.

The proposed benefits should be weighed against the proposal to determine if they clearly outweigh any detriments of the proposed rezoning. Of the 5 benefits listed, three – architectural improvements, pedestrian access, and safety improvements – would be requirements of any new development on the subject property under the existing zoning. The two others – "Welcome to Novi" sign and right-of-way dedication along 14 Mile Road – would be considered enhancements that would benefit the public that would not be required as part of a development under the existing zoning. However, it should be noted that while it is not required the dedication of right-of-way is typical of developments.

PRO Conditions

The applicant is required to submit a conceptual plan and a list of terms that they are willing to include with the PRO agreement. The applicant has submitted a conceptual plan showing the general layout of the site, the location of the proposed detention pond, and location of the proposed pathways. The only "terms" or "conditions" within the submittal are the design elements illustrated on the conceptual plan and the public benefits outlined in the corresponding letter.

City Council Action

If the City Council is inclined to approve the rezoning request with PRO at this time, the City Council's motion would be to direct the City Attorney to prepare a PRO Agreement to be brought back before the City Council for approval with specified PRO Conditions.

RECOMMENDED ACTION:

Tentative indication that Council may **approve** the request of McBride Dale Clarion for Speedway at 14 Mile & Haggerty, JSP 16-13, with Zoning Map Amendment 18.714, to rezone property in Section 1, located at the southwest corner of Fourteen Mile Road and

Haggerty Road from OST (Office Service Technology) & B-3 (General Business) to B-3 (General Business) subject to the related Planned Rezoning Overlay (PRO) Plan Agreement, and corresponding PRO Concept Plan as reviewed by the Planning Commission on September 14, 2016 and direction to the City Attorney to prepare a proposed PRO Agreement with the following ordinance deviations:

- a. A same side driveway spacing waiver to allow the driveway on 14 Mile Road to be located approximately 121 feet (200 feet required) from the neighboring driveway to the west to align with existing driveway on the north side of 14 Mile Road.
- b. An opposite side driveway spacing waiver to allow the driveway on Haggerty Road to be located approximately 40 feet (200 feet required) from the driveway to the south in order to align with the existing driveway on the east side of Haggerty Road.
- c. Section 9 Façade Waiver for the overage of Asphalt Shingles on the building (maximum 25 percent permitted; proposed 51 percent on east, 35 percent on west, 30 percent on south and north).
- d. Section 9 Façade Waiver for the overage of Flat Metal Panels on the fuel canopy (maximum 50 percent permitted; proposed 71 percent on east and west, 59 percent on south and north), and the underage of Brick (minimum 30 percent; proposed 20 percent on east and west).
- e. Proposed loading zone is located in the front yard, the ordinance indicates it should be located in the interior side yard of a double frontage lot.
- f. Proposed dumpster is located in the front yard, the ordinance indicates it should be located in the interior side yard of a double frontage lot.

If the City Council approves the rezoning, the following conditions shall be requirements of the Planned Rezoning Overlay Agreement:

- a. *Acceptance of applicant's offer of public benefits as proposed:*
 - i. *Installation of a "Welcome to Novi" sign along the 14 Mile Road property line.*
 - ii. *Dedication of 10 feet of ROW along 14 Mile Road to the Road Commission of Oakland County.*
 - iii. *Redevelop the site with a building and canopy that is architecturally consistent with current zoning regulations.*
 - iv. *Pedestrian access is improved: (a) sidewalks will be extended the length of the expanded property and will close gaps in the sidewalk system and (b) sidewalk connections from the convenience store to 14 Mile Road and Haggerty Road are provided.*
 - v. *Safety improvements: (a) relocation of driveway away from 14 Mile and Haggerty intersection and to align with opposing driveway and (b) on-site circulation and visibility with new canopy.*
 - vi. *Preservation of a 10 foot wide wooded buffer along the east property line.*
- b. *Applicant shall provide a Noise Impact Statement with the Preliminary Site Plan submittal.*
- c. *All grades of drive approaches shall not exceed 2-percent within the first 25 feet of the intersection, as demonstrated with the next site plan submittal.*
- d. *All grading, storm sewer, and drainage areas shall meet all applicable City of Novi standards.*
- e. *Applicant complying with the conditions listed in the staff and consultant review letters.*

This motion is made because:

- a. The Master Plan for Land Use objective to foster a favorable business climate is fulfilled by allowing an existing business to expand and provide 5 more jobs, \$235,000 in sales tax, and \$3.1 million in investment.
- b. The Master Plan for Land Use objective to support and strengthen existing businesses is fulfilled by allowing an existing business to expand and develop a vacant parcel.
- c. The concept plan improves existing non-conformities (minimum site size from 0.7 acres to 2.03 acres, location of driveways away from intersection, and upgraded stormwater management).
- d. There is a negligible impact on the utilities due to expected utility demand reduced from 4 residential equivalent units to 3, minimal impact on available water capacity, pressure, and flow, and no apparent impact of the downstream sanitary sewer.
- e. The rebuild and expansion of this site provides an update to the visual aesthetic at an entryway to the City, modern fuel dispensers and convenience store, and replacement of underground storage tanks.

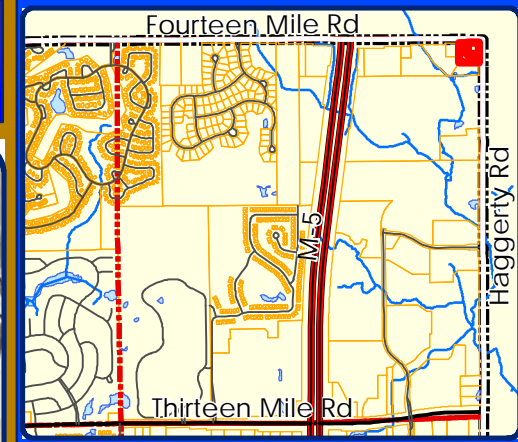
	1	2	Y	N
Mayor Gatt				
Mayor Pro Tem Staudt				
Council Member Burke				
Council Member Casey				

	1	2	Y	N
Council Member Markham				
Council Member Mutch				
Council Member Wrobel				


Maps
Location
Zoning
Future Land Use
Natural Features


JSP16-13: Speedway 14 Mile/Haggerty - PRO

Location



LEGEND


 Sections



City of Novi
Dept. of Community Development
City Hall / Civic Center
45175 W Ten Mile Rd
Novi, MI 48375
cityofnovi.org

Map Author: Kirsten Mellem
Date: 08/02/16
Project: JSP16-13 Speedway 14 Mile/Haggerty - PRO
Version #: 1

0 12.5 25 50 75 Feet
1 inch = 67 feet

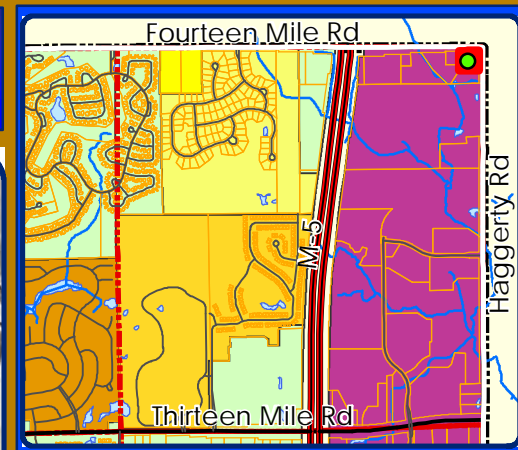
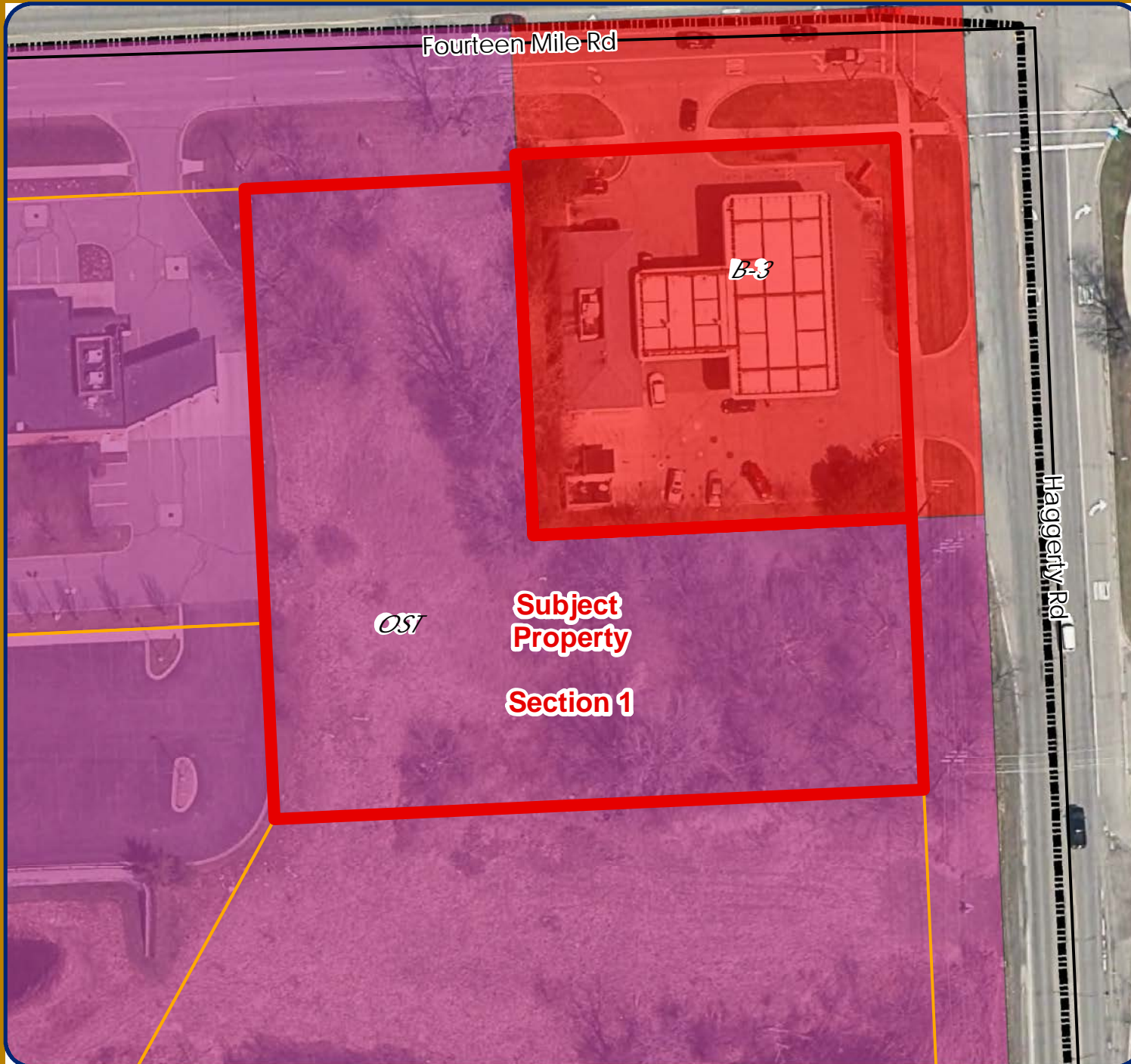


MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.


JSP16-13: Speedway 14 Mile/Haggerty - PRO

Zoning



LEGEND


	Sections
	R-A: Residential Acreage
	R-2: One-Family Residential
	R-4: One-Family Residential District
	RM-1: Low-Density Multiple Family
	MH: Mobile Home District
	B-3: General Business District
	OST: Office Service Technology



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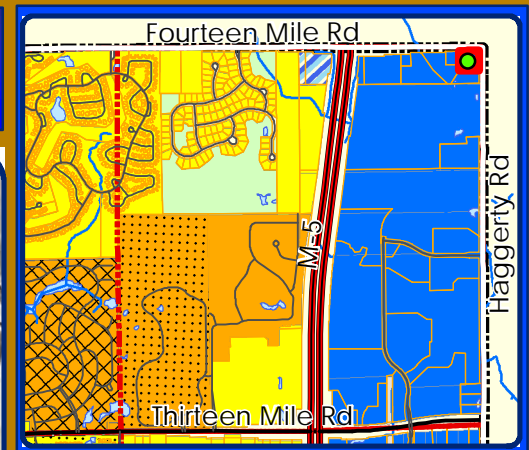


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JSP16-13: Speedway 14 Mile/Haggerty - PRO

Future Land Use




- LEGEND**
- Sections
 - FUTURE LAND USE**
 - Single Family
 - PUD
 - Multiple Family
 - PD1
 - Mobile Home Park
 - Community Office
 - Office RD Tech
 - Private Park
 - Utility

 **City of Novi**
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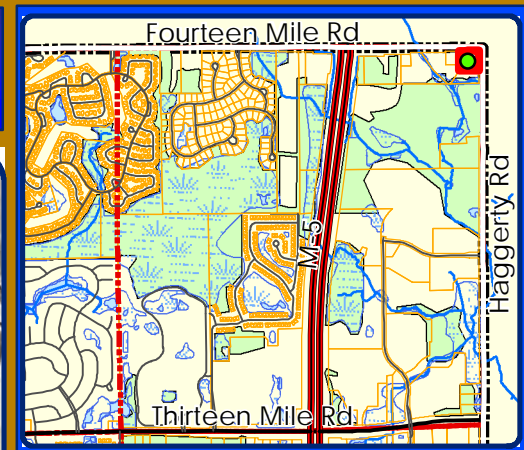


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JSP16-13: Speedway 14 Mile/Haggerty - PRO

Natural Features



LEGEND

- Sections
- WETLANDS
- WOODLANDS

CITY OF NOVI
City of Novi logo
NOVI
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CONCEPT PLAN

(Full plan set available for viewing at the Community Development Department)



LOCATION MAP
NOT TO SCALE

SURVEYOR NOTES

- North and bearing system based upon NAD 83, MICHIGAN SOUTH
Vertical datum based on NAVD 88 and made in conjunction with GPS observation on February 18, 2016.
- This survey does not constitute a title search by the surveyor. All information regarding record easements, and other documents that might affect the quality of title to the parcel shown hereon we obtained through a certified title commitment conducted by Fidelity National Title Group, commitment number 16-110078 & 16-110077 dated January 16, 2016 at 8:00 a.m.
- All underground utilities are shown to the best of our knowledge and are based on locations taken from observed evidence. No certification is made or implied that the utilities shown are correct or that all underground utilities are shown. MissDig Ticket Number #A60500037-00A
- All data sources, documents and records shown hereon are on file in the Oakland County register of deeds.
- All monumentation shown hereon is in good condition unless otherwise noted.
- Access to the subject parcel is available along Haggerty Road and W. 14 Mile Road (public). No roadway improvement plans were disclosed to CESO during the survey.
- Utilities in the form of water, electric, natural gas, telephone, cable, storm sewer, sanitary sewer are all located either on the subject property or within the public right-of-way adjoining said parcel.
- Structures are as shown hereon, no evidence of recent earthwork and recent building construction.
- No evidence that subject property is being used as a sanitary landfill.
- No evidence of wetland delineation areas were evident at the time of the survey.
- This is not a recordable document for transfer of title.
- Parcel is located within "ONE X" (Areas determined to be outside the 0.2% annual chance floodplain) as indicated by the Flood Insurance Rate Map (FIRM) Map Number 26125C0489F, effective date: September 29, 2006 published by the Federal Emergency Management Agency.
- Site Location: LAT 42.526748°, LONG -83.438022°
- The current zoning of the subject parcels are shown below:

Owned Parcel - B-3, General Business	front yard building setback: 30'
	front yard canopy (attached to building) setback: 30'
	side yard building setback: 15'
	side yard canopy setback: (attached to building) setback: 15'
	rear yard building setback: 20'
	rear yard canopy setback: (attached to building) setback: 15'

Second Parcel - OST, Office Service Technology	front yard building setback: 50'
	side yard building setback: 50'
	rear yard building setback: 50'
- There currently exist 15 improved parking spaces & 2 handicap parking spaces on site.

UTILITY COMPANIES

WATER & SEWER City of Novi Public Service 26300 Lee BeGale Drive Novi, MI Department Phone: 248-735-5640	ELECTRIC Detroit Edison
STORM SEWER Oakland County Drain Commission	GAS Consumers Power Co.
	COMMUNICATIONS Ameritech

TITLE COMMITMENT LEGAL DESCRIPTION (owned)

Land situated in the City of Novi, County of Oakland, and State of Michigan, described as:
 Part of the Northeast 1/4 of Section 1, Township 1 North, Range 8 East, City of Novi, County of Oakland, State of Michigan, and being more particularly described as follows:
 Commencing at a point being the Northeast corner of said Section 1
 thence due West on and along the Section line (being also the centerline of 14 Mile Road), a distance of 235.00 feet to a point
 thence South 00 degrees 03 minutes 30 seconds East, a distance of 60.00 feet to a point being the intersection with the Southerly right-of-way line of 14 Mile Road and being the true point of beginning
 thence continuing South 00 degrees 03 minutes 30 seconds East, a distance of 175.00 feet to a point
 thence due East a distance of 175.00 feet to a point being the intersection with the Westerly right-of-way line of Haggerty Road
 thence North 00 degrees 03 minutes 30 seconds West on and along said right-of-way line (being also parallel to and 60 feet Westerly from the centerline of Haggerty Road and the East line of Section 1), a distance of 175.00 feet to a point being the intersection with the Southerly right-of-way line of 14 Mile Road
 thence due West, on and along said right-of-way line, a distance of 175.00 feet to the true point of beginning.

TITLE COMMITMENT LEGAL DESCRIPTION

Land situated in the Township of Novi, County of Oakland and State of Michigan, described as follows:
 Part of the Northeast One-Quarter of Section 1, Township 1 North, Range 8 East, Township of Novi, County of Oakland, State of Michigan, and being more particularly described as follows:
 Commencing at a point being the Northeast corner of said Section 1
 Thence due West on and along the section line (being also the centerline of 14 Mile Road) a distance of 235.00 feet to a point
 Thence South 00 deg. 03' 30" East, a distance of 60.00 feet to a point being the intersection with the Southerly right-of-way line of 14 Mile Road and being the "True Point of Beginning"
 Thence continuing South 00 deg. 03' 30" East a distance of 175.00 feet
 Thence due East a distance of 175.00 feet to a point being the intersection with the Westerly right-of-way line of Haggerty Road
 Thence South 00 deg. 03' 30" East on and along said right-of-way line (being also parallel to and 60 feet Westerly from the centerline of Haggerty Road and the East line of Section 1) a distance of 125.00 feet
 Thence due West a distance of 300.00 feet
 Thence North 00 deg. 03' 30" West a distance of 300.00 feet to a point being the intersection with the Southerly right-of-way line of 14 Mile Road
 Thence due East, on and along said right-of-way, a distance of 125.00 feet to the point of beginning.
 EXCEPT That part which lies Northerly of a line described as: Commencing at the North One-Quarter corner of Section 1, Township 1 North, Range 8 East, City of Novi, Oakland County, Michigan
 Thence North 87 24' 30" East along the North line of said Section 1, a distance of 2,225 feet
 Thence South 02 deg. 35' 30" East, 70.00 feet to the point of beginning of this described line
 Thence North 87 deg. 24' 30" East, 550 feet to a point of ending this described line, as conveyed to Michigan Department of Transportation by Deed recorded in Liber 16024, Page 586.

SCHEDULE B - SECTION II (owned):

- THIS ALTA/ACSM SURVEY IS EXECUTED HEREON PER TITLE COMMITMENT PROVIDED BY FIDELITY NATIONAL TITLE GROUP, FOR THE PROPOSED INSURED SPEEDWAY, LLC.**
- THE POLICY OR POLICIES TO BE ISSUED WILL CONTAIN EXCEPTIONS TO THE FOLLOWING UNLESS THE SAME ARE DISPOSED OF TO THE SATISFACTION OF THE COMPANY:
- COMMITMENT NO.: 16-110078
EFFECTIVE DATE: January 22, 2016 at 8:00 a.m.
- Right of way vested in The Detroit Edison Company by instrument recorded in Liber 3247, Page 56.
- The description of this right-of-way is ambiguous therefore we are unable to determine if it affects the subject parcel.
 - Easement to The Detroit Edison Company recorded in Liber 4378, Page 538.
- The description of this easement is ambiguous therefore we are unable to determine if it affects the subject parcel.
 - Easement to The Buckeye Pipe Line Company recorded in Liber 3902, Page 305. Assignment and Assumption of Rights of Way to Buckeye Pipe Line Company, L.P., a Delaware limited partnership recorded in Liber 9705, Page 177 and in Liber 9705, Page 206.
- This item lies within the right-of-way of Haggerty Road. During initial utility research Buckeye Pipeline stated that they would need to be notified of any work with 25' of line.
 - Easement to Buckeye Pipe Line Company recorded in Liber 4786, Page 8.
- This item lies within the right-of-way of Haggerty Road. During initial utility research Buckeye Pipeline stated that they would need to be notified of any work with 25' of line.
 - Highway Easement in favor of the Michigan Department of Transportation, as recorded in Liber 16658, Page 110.
- This item does affect the subject parcel and is plotted.
 - Underground Easement (Right of Way) No. R-117697-2 in favor of The Detroit Edison Company, a Michigan corporation, as recorded in Liber 18703, Page 301.
- This item does affect the subject parcel and is plotted.
 - Agreement to Supply Water to Speedway Superamerica, LLC by the Charter Township of Commerce and the City of Novi, as recorded in Liber 18726, Page 758.
- This item does affect the subject parcel, no items to plot.
 - Easement for Water Line in favor of the City of Novi, Michigan, as recorded in Liber 10312, Page 94 and re-recorded in Liber 10450, Page 33.
- This item does affect the subject parcel and is plotted.
 - Easement for Sewer Line in favor of the Charter Township of Commerce, Michigan, as recorded in Liber 10897, Page 141.
- This item does affect the subject parcel and is plotted.

SCHEDULE B - SECTION II:

- THIS ALTA/ACSM SURVEY IS EXECUTED HEREON PER TITLE COMMITMENT PROVIDED BY FIDELITY NATIONAL TITLE GROUP, FOR THE PROPOSED INSURED SPEEDWAY, LLC.**
- THE POLICY OR POLICIES TO BE ISSUED WILL CONTAIN EXCEPTIONS TO THE FOLLOWING UNLESS THE SAME ARE DISPOSED OF TO THE SATISFACTION OF THE COMPANY:
- COMMITMENT NO.: 16-110077
EFFECTIVE DATE: January 22, 2016 at 8:00 a.m.
- Easement to the Detroit Edison Company recorded in Liber 3247, Page 56.
- The description of this right-of-way is ambiguous therefore we are unable to determine if it affects the subject parcel.
 - Easement to Buckeye Pipeline Company, as recorded in Liber 4786, Page 8.
- This item lies within the right-of-way of Haggerty Road. During initial utility research Buckeye Pipeline stated that they would need to be notified of any work with 25' of line.

ALTA/ACSM LAND TITLE SURVEY
 SPEEDWAY STORE #2224 - 31275 HAGGERTY ROAD NOVI, MI
 CONTAINING TOTAL ACRES OF LAND
 CITY OF NOVI, OAKLAND COUNTY, STATE OF MICHIGAN AND BEING PART OF
 NORTHEAST QUARTER SECTION 1

DEVELOPER:
SPEEDWAY LLC.
500 SPEEDWAY DR.
ENON, OHIO 45323
1.800.643.1948

OWNER:
SPEEDWAY, L.L.C.
500 SPEEDWAY DR.
ENON, OHIO 45323
1.800.643.1948



SURVEYOR
CESO INC.
8534 YANKEE STREET
DAYTON, OH 45458
PHONE: (937) 435 8584

SURVEYOR'S CERTIFICATION:

TO SPEEDWAY LLC AND FIDELITY NATIONAL TITLE INSURANCE COMPANY ITS SUCCESSORS AND/OR ASSIGNS AS THEIR RESPECTIVE INTEREST MAY APPEAR.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1-5, 8(a), 7(a)(i), 8, 11(b), 13, 14, 16 and 18 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED IN FEBRUARY 2016.

DATE OF PLAT OR MAP: 03/01/2016

SIGNED **PRELIMINARY** DATE _____
 ROBERT MATKO M.P.S. # 54056
 CESO, INC.
 8164 EXECUTIVE COURT, SUITE B
 LANSING, MI 48917

ALTA/ACSM LAND TITLE SURVEY	
SPEEDWAY LLC - STORE #2224	
31275 Haggerty Road Novi, MI	Section 1, T1N, R8E City of Novi, Oakland County
SCALE: na	DATE: February 2016
DESIGN:	JOB NO.: 752141
DRAWN: swc	SHEET NO.: 1 OF 3
CHECKED:	

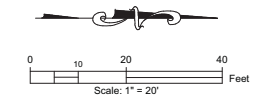
ALTA/ACSM LAND TITLE SURVEY

SPEEDWAY STORE #2224 - 31275 HAGGERTY ROAD NOVI, MI
 CONTAINING TOTAL ACRES OF LAND
 CITY OF NOVI, OAKLAND COUNTY, STATE OF MICHIGAN AND BEING PART OF
 NORTHEAST QUARTER SECTION 1

STRUCTURE SCHEDULE			
#	TYPE	RIM = ELEV	INV SIZE/TYPE/DIRECTION = ELEV
7257	SANITARY MANHOLE	RIM = 963.91	INV 8IN PVC ENE = 946.68
			INV 10IN PVC W = 946.65
			INV 10IN PVC S = 944.09
			INV 10IN PVC W = 943.08
7251	SANITARY MANHOLE	RIM = 963.54	INV 8IN PVC WSW = 946.94
			INV 7IN ??? N = 947.01
8040	STORM MANHOLE	RIM = 964.41	INV 30IN RCP SSE = 958.26
7480	STORM MANHOLE	RIM = 964.03	INV 4IN PVC S = 957.85
7512	CATCH BASIN	RIM = 963.08	INV 30IN RCP NNW = 957.83
			INV 12IN RCP SSE = 958.10
7864	CATCH BASIN	RIM = 964.54	INV 36IN RCP N = 957.93
			INV 36IN RCP S = 958.19
			INV 48IN RCP W = 958.34
			INV 10" RCP SW = 961.14
7736	CATCH BASIN	RIM = 966.21	INV 48IN RCP E = 958.48
7539	SANITARY MANHOLE	RIM = 964.57	INV 10IN RCP S = 963.07
3340	SANITARY MANHOLE	RIM = 965.84	INV 12" ??? N = 958.51
			INV 8IN PVC N = 947.32
3122	CATCH BASIN	RIM = 966.01	INV 8IN HDPE S = 956.76
			INV 8IN PVC E = 955.14
			INV 4IN HDPE S = 963.11
			INV 12IN RCP NW = 962.08
			INV 4IN HDPE NW = 963.11

LEGEND

- | | |
|--------------------------|-----------------------|
| ⊕ Power / Telephone Pole | ⊕ Sign |
| ⊙ Power Pole | ⊙ Bollard |
| ⊙ Signal Pole | ⊙ Stump |
| ⊙ Water Valve | ⊙ Gas Valve |
| ⊙ Hydrant | ⊙ Guy Wire |
| ⊙ Clean Out | ⊙ Electric Meter |
| ⊙ Sanitary Manhole | ⊙ Gas Meter |
| ⊙ Catchbasin | ⊙ Air Conditioner |
| ⊙ Storm Inlet Basin | ⊙ Mail Box |
| ⊙ Telephone Manhole | ⊙ Unknown Valve |
| ⊙ Structure Number | ⊙ Downspout |
| ⊙ Electric Box (access) | ⊙ Traffic Control Box |
| | ⊙ Monitoring Well |



SURVEY LEGEND

- ⊙ - 5/8" Iron Pin Set w/cap CESO, Inc
 - ⊙ - Iron Pin Found & Described
 - ⊙ - Iron Pipe Found & Described
 - ⊙ - Railroad Spike Found
 - ⊙ - Monument Fnd. & Usd.
- Fnd. (F) - Found Obs. (O) - Observed
 Msd. (M) - Measured Rec. (R) - Deed
 Usd. (U) - Used Calc. (C) - Calculated

BASIS OF BEARINGS

The Basis of Bearings for this survey is
 NAD 83, MICHIGAN SOUTH

⊕ BM "A" - Spike in NE side of signal pole at southwest corner of W. 14 Mile Road and Haggerty Road
 Elevation = 965.87'

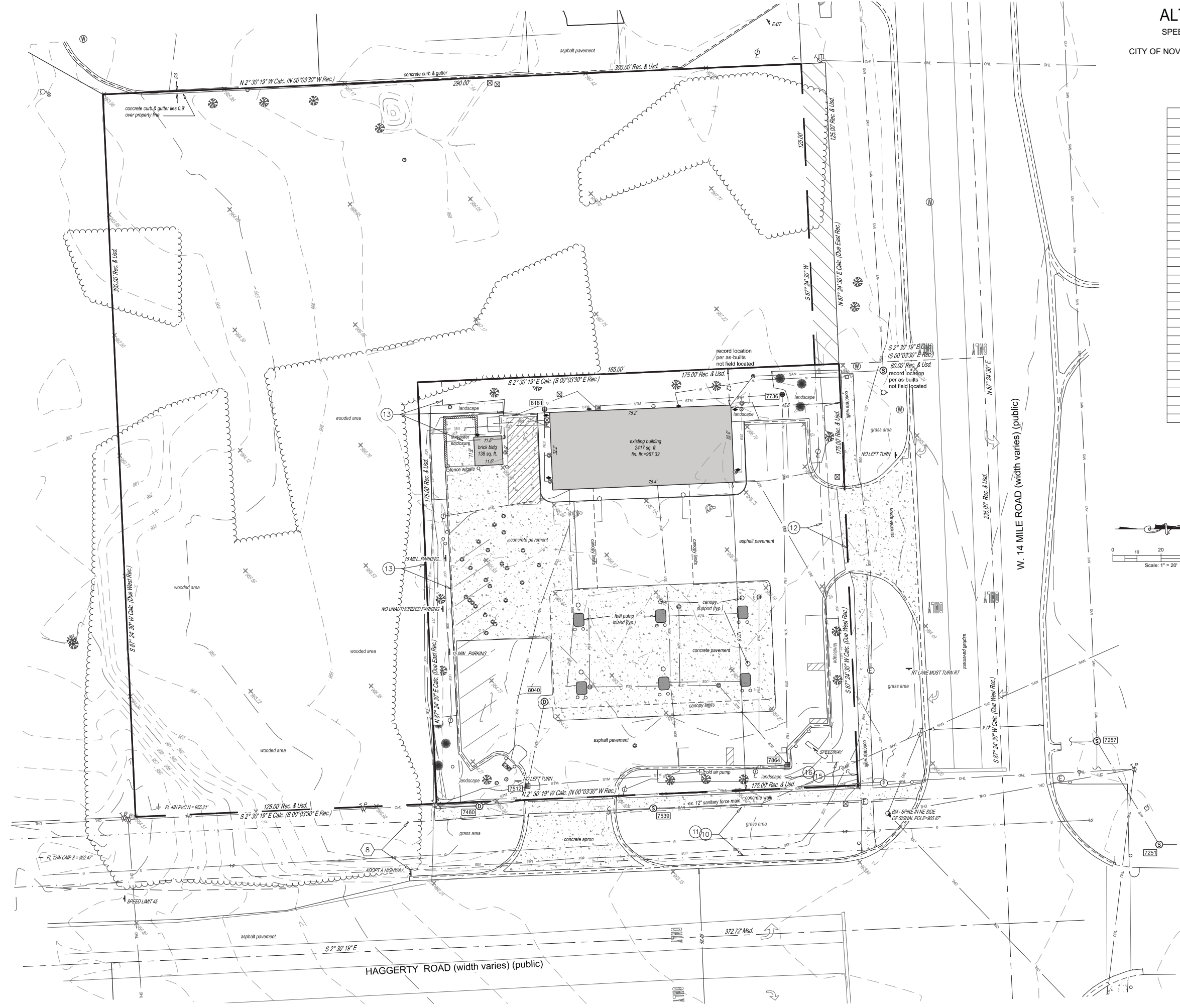
ALTA/ACSM LAND TITLE SURVEY

SPEEDWAY LLC - STORE #224

31275 Haggerty Road, Novi, MI Section 1, T1N, R8E
 City of Novi, Oakland County

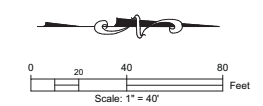
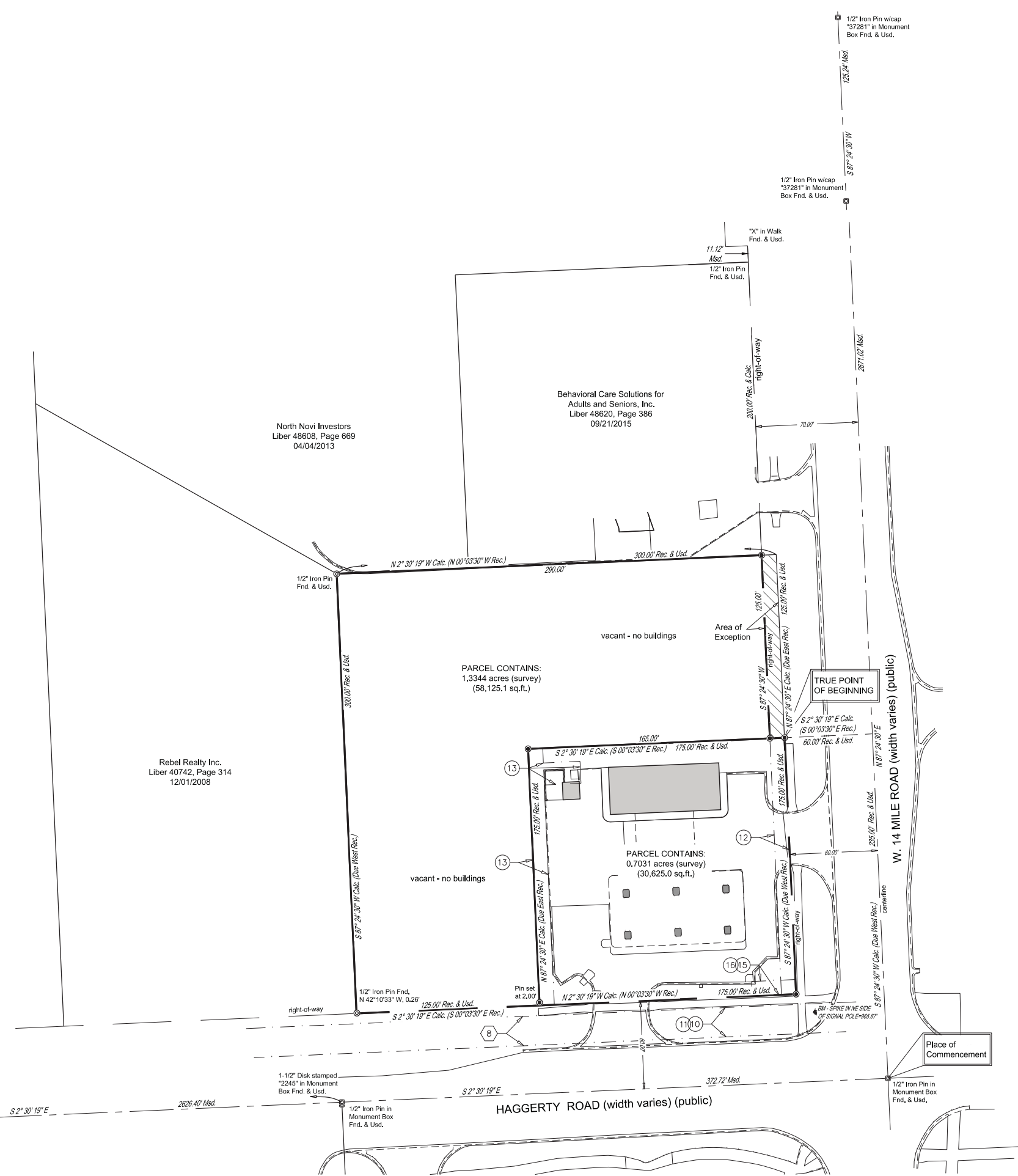
SCALE: 1" = 20' DATE: February 2016

DESIGN:		JOB NO.:
DRAWN:		752141
SWC:		SHEET NO.:
CHECKED:		2 OF 3



ALTA/ACSM LAND TITLE SURVEY

SPEEDWAY STORE #2224 - 31275 HAGGERTY ROAD NOVI, MI
 CONTAINING TOTAL ACRES OF LAND
 CITY OF NOVI, OAKLAND COUNTY, STATE OF MICHIGAN AND BEING PART OF
 NORTHEAST QUARTER SECTION 1



LEGEND

- | | |
|------------------------|---------------------|
| Power / Telephone Pole | Sign |
| Power Pole | Bollard |
| Signal Pole | Stump |
| Water Valve | Gas Valve |
| Hydrant | Guy Wire |
| Clean Out | Electric Meter |
| Sanitary Manhole | Gas Meter |
| Catchbasin | Air Conditioner |
| Storm Inlet Basin | Mail Box |
| Telephone Manhole | Unknown Valve |
| Structure Number | Downspout |
| Electric Box (access) | Traffic Control Box |
| | Monitoring Well |

SURVEY LEGEND

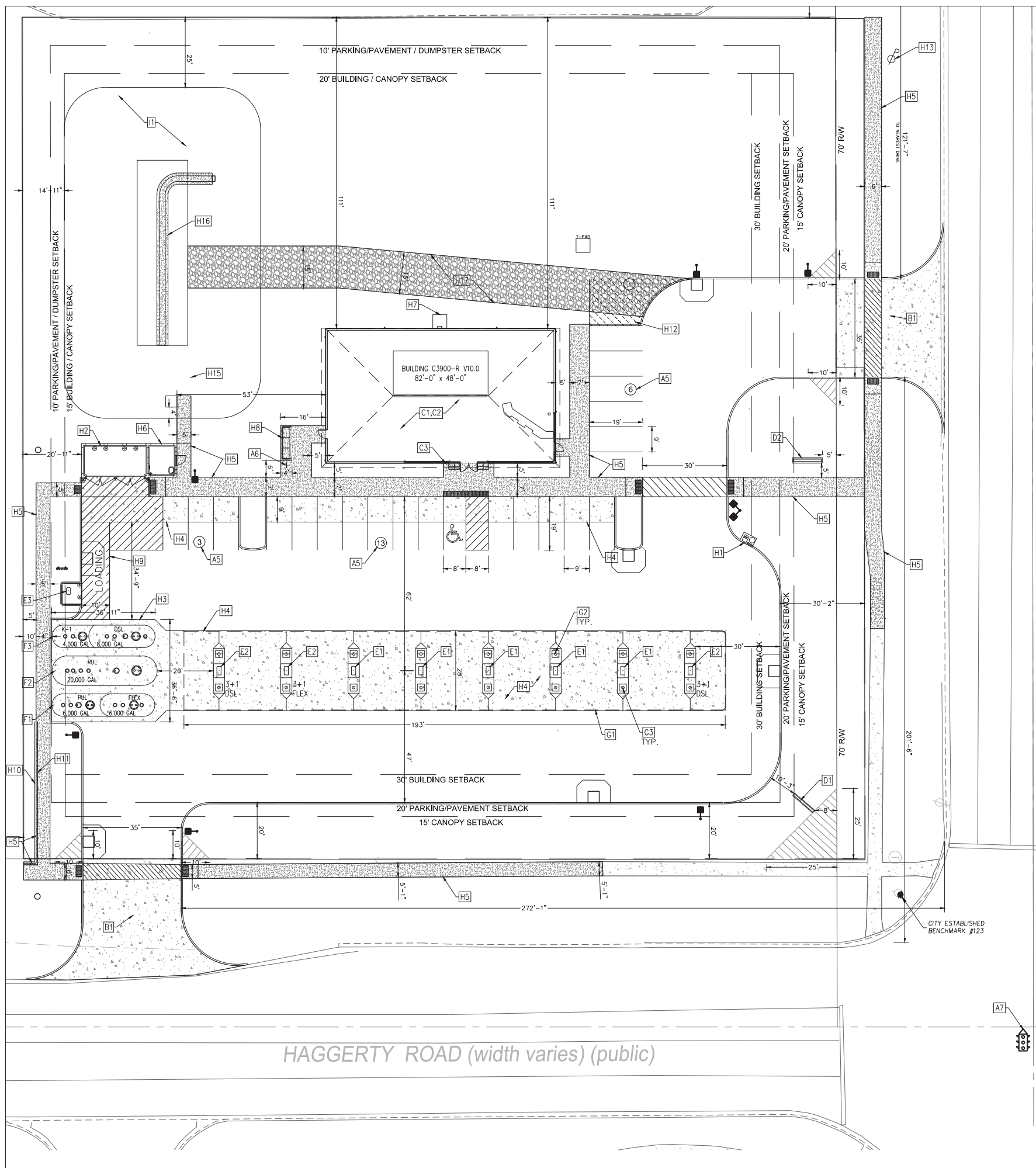
- 5/8" Iron Pin Set w/cap CESO, Inc
 - Iron Pin Found & Described
 - Iron Pipe Found & Described
 - Railroad Spike Found
 - Monument Found & Used.
- Fnd. (F) - Found Obs. (O) - Observed
 Msd. (M) - Measured Rec. (R) - Deed
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BASIS OF BEARINGS

The Basis of Bearings for this survey is
 NAD 83, MICHIGAN SOUTH

BM "A" - Spike in NE side of signal pole at southwest corner of W. 14 Mile Road and Haggerty Road
 Elevation = 965.87'

ALTA/ACSM LAND TITLE SURVEY	
SPEEDWAY LLC - STORE #2224	
31275 Haggerty Road Novi, MI	Section 1, T1N, R8E City of Novi, Oakland County
SCALE: 1" = 40'	DATE: February 2016
DESIGN: DRAWN: CHECKED:	<p style="text-align: center; font-size: small;">CREATION TO COMPLETION www.cesoinc.com</p>
SWC	JOB NO.: 752141 SHEET NO.: 3 OF 3

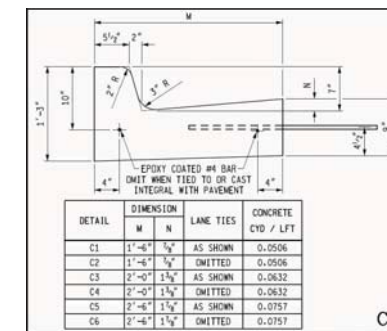


PROPOSED LEGEND

- PROPOSED CURB
- CONCRETE SIDEWALK PER SPEEDWAY STANDARDS
- NORMAL STRENGTH CONCRETE PER SPEEDWAY STANDARDS
- SIGHT TRIANGLE

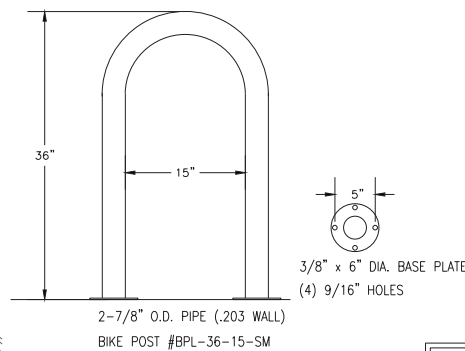
EXISTING LEGEND

- R/W CONCRETE SIDEWALK TO REMAIN



MDOT CURB DETAIL (C4)

N.T.S.



BIKE RACK DETAIL

N.T.S.

A. GENERAL NOTES

- GENERAL SCOPE OF WORK INCLUDES: BUILDING, CANOPY, FUEL TANKS, PIPING, DISPENSERS & PARKING
- TRUCK TURNS HAVE BEEN PERFORMED ON THIS SITE TO CONFIRM LOCATION OF UTILITIES
- FINAL DESIGN OF SITE SUBJECT TO LOCAL AND STATE REGULATIONS
- EXISTING PROPERTY SIZE: 30,625 SQ.FT. / 0.70 AC.
ADDITIONAL PROPERTY SIZE: 58,125 SQ.FT. / 1.33 AC.
TOTAL PROPERTY SIZE: 88,750 SQ.FT. / 2.03 AC.
- PROVIDED PARKING: (1) ADA PARKING SPACES AND (21) STANDARD PARKING SPACES
- BICYCLE PARKING AREA. INSTALL BIKE RACK PER DETAIL ON THIS SHEET.
- THE ADJACENT INTERSECTION IS SIGNALIZED

B. SITE WORK

- PROPOSED DRIVE APPROACH

C. BUILDING

- STANDARD #3900-R V10.0 BUILDING
- KNOX BOX TO BE INSTALLED ON EXTERIOR WALL OF BUILDING
- ADA PARKING SIGN INSTALLED ON BUILDING. SIGN TO MEET STATE AND LOCAL ADA REQUIREMENTS.

D. EXTERIOR APPEARANCE & SIGNAGE

- EXISTING GROUND MOUNT SIGN TO BE REMOVED, REFACED, AND OUTFITTED WITH LED LIGHT FIXTURES
- "WELCOME TO NOVI" COMMUNITY SIGN

E. DISPENSERS

- (5) 3:0 DISPENSERS, SUMPS, AND ISLANDS
- (3) 3:1 DISPENSERS, SUMPS, AND ISLANDS
- (1) KEROSENE DISPENSER, SUMP, AND ISLAND

F. UNDERGROUND STORAGE TANKS

- (1) 12,000 GALLON TANK FOR PREMIUM & ETHANOL FLEX FUEL
- (1) 20,000 GALLON TANK FOR UNLEADED
- (1) 12,000 GALLON TANK FOR DIESEL & KEROSENE

G. CANOPY

- 28' x 193' (8) ISLAND AUTO CANOPY PER CURRENT STANDARDS
- PROVIDE AND INSTALL CODE APPROVED FIRE EXTINGUISHERS WITH PLASTIC BOX HOLDER IN APPROVED LOCATIONS AS REQUIRED BY LOCAL FIRE OFFICIALS. FIRE EXTINGUISHERS SHALL BE LOCATED SUCH THAT AN EXTINGUISHER IS NOT MORE THAN 90 FEET FROM PUMPS OR DISPENSERS AND 75 FEET FROM STORAGE TANK FILL OPENINGS.
- 8" CANOPY COLUMN WRAPS TO MATCH BUILDING MATERIAL

H. YARD

- AIR ISLAND
- TRASH ENCLOSURE. MATERIAL TO MATCH BUILDING
- CONCRETE TANK SLAB
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- BOTTLE RETURN. MATERIAL TO MATCH BUILDING
- 5X5 CONCRETE PAD FOR LADDER
- PROPANE MERCHANDISER ENCLOSURE
- 347.5 SQ. FT. LOADING ZONE (HATCHED AREA) AND 1296 SQ. FT. ON TANK PAD
- RETAINING WALL TO BE DESIGNED BY OTHERS
- HANDRAIL
- SNOW DEPOSIT LOCATION
- UTILITY POLE TO BE INSTALLED
- STONE BRIDGE FOR OUTLET MAINTENANCE
- CONCRETE FLUME
- GRAVEL ACCESS ROUTE (15W)

I. SITE NOTES

- PROPOSED DRY DETENTION
- NO FLASHING LIGHTS PROPOSED, AND ONLY NECESSARY LIGHTING WILL BE USED

SITE DATA

SITE AREA = 2.03 AC
BUILDING AREA = 3,936 SF
IMPERVIOUS COVERAGE OF LOT AREA = 41,259 SF = 46% COVERAGE AREA

ONING

EXISTING PROPERTY - B-3
PROPOSED PROPERTY - OS-T
ENTIRE SITE WILL REQUIRE ONE MAP AMENDMENT TO B-3 / P.R.O.

SETBACKS: BUILDING: 30' FRONT, 15' SIDE, 20' REAR
CANOPY: 15' FRONT, 15' SIDE, 20' REAR
PARKING: 20' FRONT, 10' SIDE, 10' REAR
PAVEMENT: 20' FRONT, 10' SIDE, 10' REAR
DUMPSTER: 10' SIDE

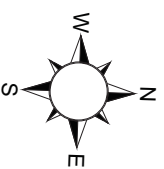
PARKING:

PARKING REQUIREMENT:
2 PER GASOLINE PUMPING ISLAND
20 FOR CONVENIENCE STORE
TOTAL AUTO PARKING REQUIRED: 36 SPACES
PARKING DIMENSIONS = 9' x 19'

PARKING PROVIDED:
21 STANDARD SPACES
1 ADA SPACES
16 DISPENSER SPACES
38 TOTAL SPACES
SPACES AT DISPENSERS COUNT TOWARDS PARKING REQUIREMENTS

NOTE: AS AN AID TO THE CONTRACTOR, VARIOUS UTILITIES AND UNDERGROUND STRUCTURES ARE SHOWN ON THESE PLANS AND PROFILES. ALL INFORMATION CONCERNING ALL UTILITIES SHOWN ON THE PLANS AND PROFILES IS TAKEN FROM FIELD TOPO AND/OR AVAILABLE RECORDS, BUT THE OWNER AND ENGINEER DO NOT GUARANTEE THEIR LOCATION/ELEVATION, OR THAT ADDITIONAL UNDERGROUND STRUCTURES OR UTILITIES MAY NOT BE ENCOUNTERED. IF THE CONTRACTOR DOES ENCOUNTER A PREVIOUSLY UNIDENTIFIED UTILITY AND/OR STRUCTURE, OR DETERMINES THAT ONE OF THE UTILITIES/STRUCTURES SHOWN ON THESE PLANS IS INCORRECTLY LOCATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER FOR DIRECTION ON HOW TO PROCEED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES. NOTIFY 'MISS DIG' AT 1-800-482-7171, 72 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.

MICHIGAN 811



Speedway
Prepared By:
Engineering and Construction Dept.
Enon, OH 45323

NO.	REVISIONS	DATE
1.	REVISED PER CITY COMMENTS RECEIVED 05/13/16	05/13/16
2.	REVISED PER CITY COMMENTS RECEIVED 07/26/16	07/26/16

PLOT PLAN REBUILD
31275 HAGGERTY ROAD
OAKLAND COUNTY
NOVI, MI

STORE OR BLDG NO. 0002224

VERSION OR PROJECT ID 95505

SCALE 0 10 20

1"=20'-0"

DESIGN TEAM DATE

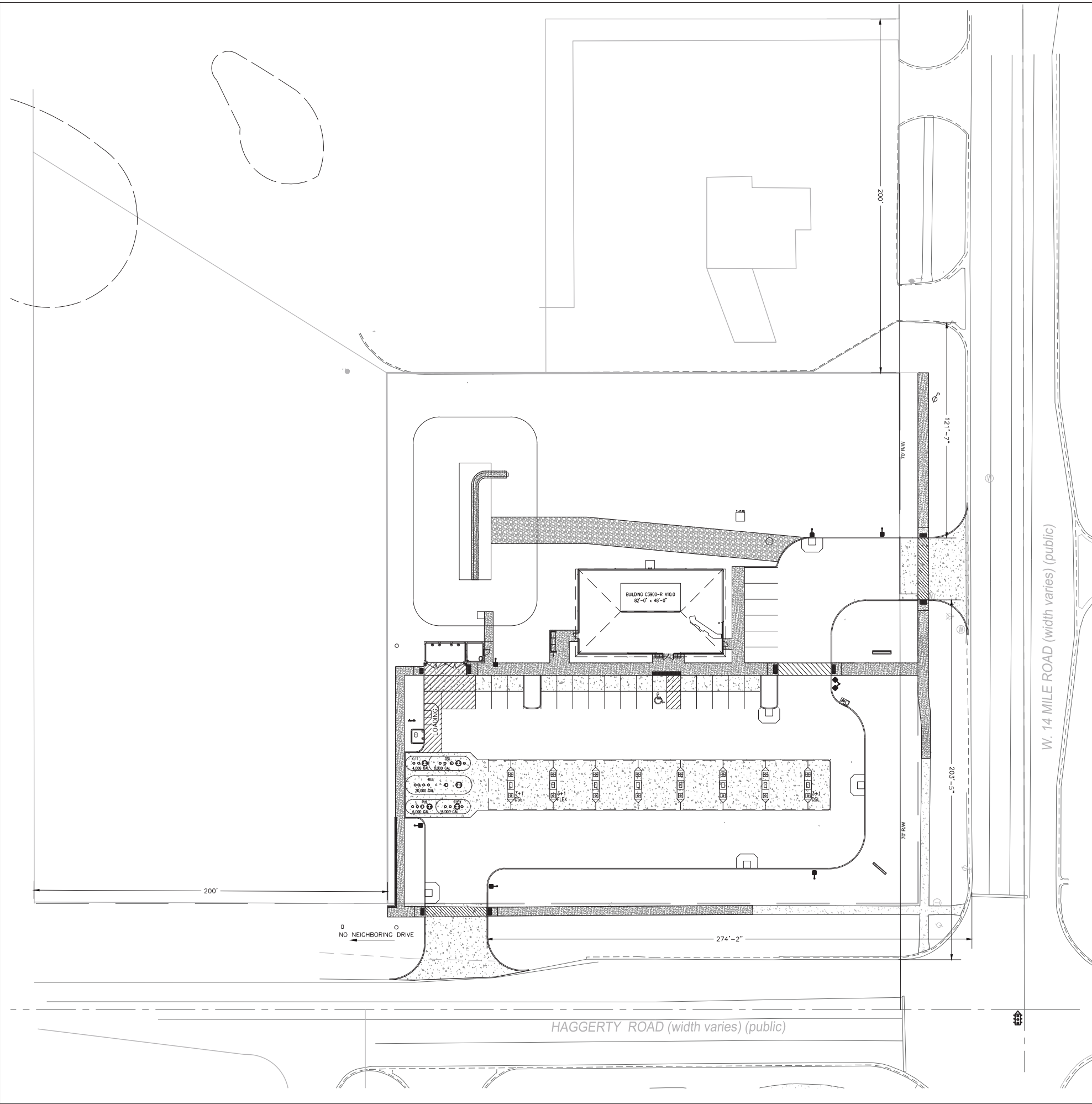
DNDR. R. THORNTON 04/15/16

P.MGR. J. COUCH 04/15/16

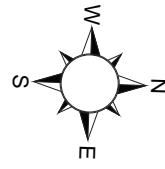
R.VWR. B. BAIRD 04/15/16

DRWG. NO. 2224 - CS

LOCATION: N:\Engineer\Projects\MI\2224 - Nov\ M\Civil\CAD\PAZ\2224-PAZ-CS1-30 SCALE PLOT PLAN.dwg
 DATE: 05/24/16
 PLOTTED BY: JBY



NOTE: AS AN AID TO THE CONTRACTOR, VARIOUS UTILITIES AND UNDERGROUND STRUCTURES ARE SHOWN ON THESE PLANS AND PROFILES. ALL INFORMATION CONCERNING ALL UTILITIES SHOWN ON THE PLANS AND PROFILES IS TAKEN FROM FIELD TOPO AND/OR AVAILABLE RECORDS, BUT THE OWNER AND ENGINEER DO NOT GUARANTEE THEIR LOCATION/ELEVATION, OR THAT ADDITIONAL UNDERGROUND STRUCTURES OR UTILITIES MAY NOT BE ENCOUNTERED. IF THE CONTRACTOR DOES ENCOUNTER A PREVIOUSLY UNIDENTIFIED UTILITY AND/OR STRUCTURE, OR DETERMINES THAT ONE OF THE UTILITIES/STRUCTURES SHOWN ON THESE PLANS IS INCORRECTLY LOCATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER FOR DIRECTION ON HOW TO PROCEED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES. NOTIFY 'MISS DIG' AT 1-800-482-7171, 72 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.



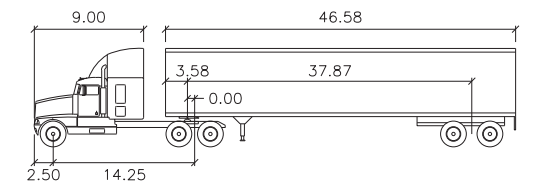
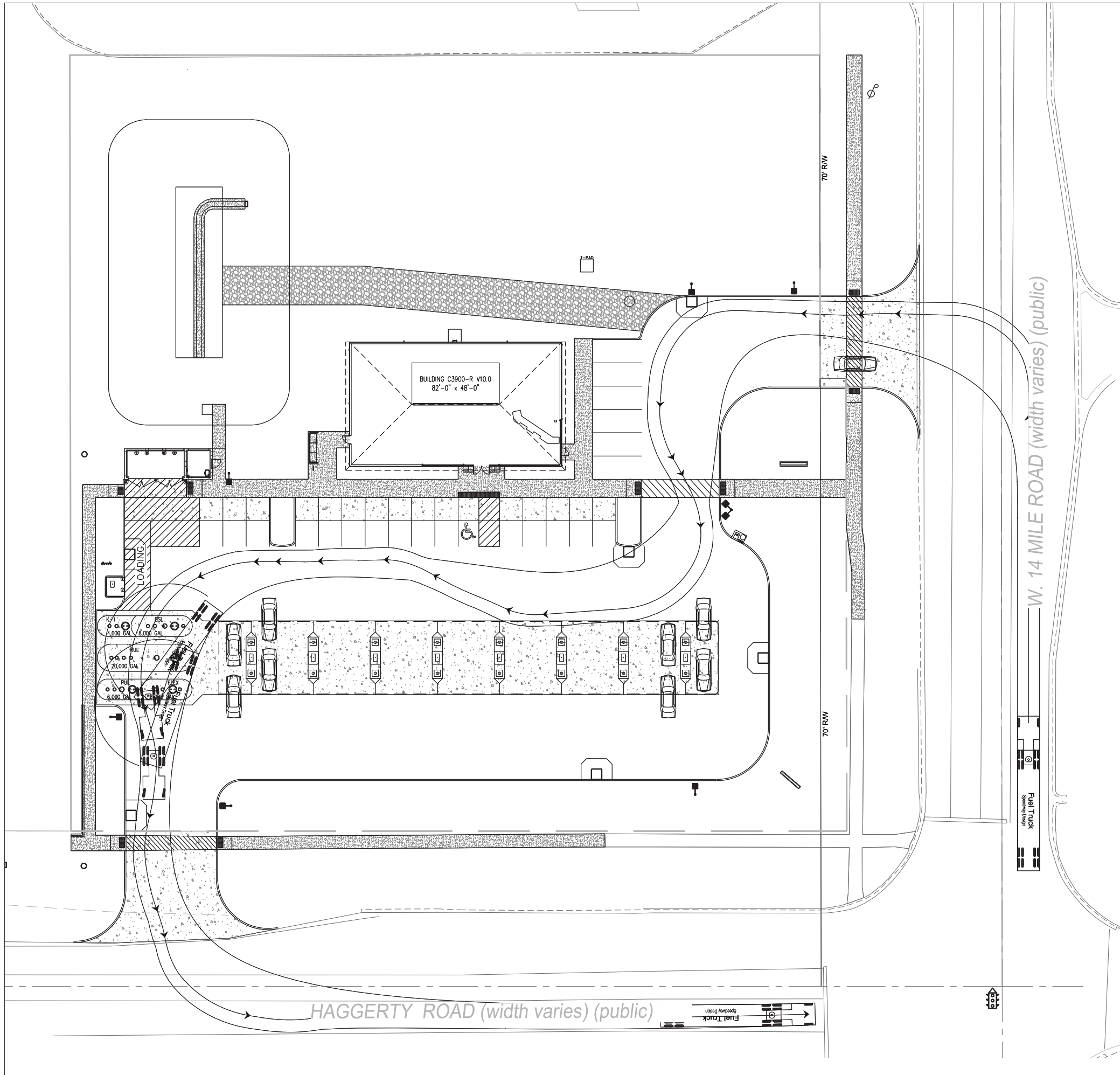
Speedway®
 Prepared By:
 J. COUCH
 Engineering and Construction Dept.
 Enon, OH 45323

NO.	REVISIONS	DESIGNER	PROJ. MGR.	REVIEWER	DATE
1.	REVISED PER CITY COMMENTS RECEIVED 05/13/16	R. THORNTON	J. COUCH	J. COUCH	05/13/16
2.	REVISED PER CITY COMMENTS RECEIVED 07/26/16	R. THORNTON	J. COUCH	J. COUCH	07/26/16

DRIVEWAY LOCATION PLAN
REBUILD
 31275 HAGGERTY ROAD
 OAKLAND COUNTY
 NOVI, MI

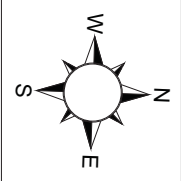
STORE OR BLDG NO. **0002224**
 VERSION OR PROJECT ID **95505**
 SCALE 0 15 30
1"=30'-0"

DESIGN TEAM	DATE
DNOR: R. THORNTON	05/24/16
P.MGR: J. COUCH	05/24/16
RVWR: B. BAIRD	05/24/16
DRWG. NO. 2224 - CS1	



Fuel Truck feet

Tractor Width	: 8.50	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 26.0
Tractor Track	: 8.50	Articulating Angle	: 70.0
Trailer Track	: 8.50		



NO.	REVISIONS	DESIGNER	PROJ. NO.	DATE	REVIEWER	DATE
1.	REVISED PER CITY COMMENTS RECEIVED 05/13/16	R. THORNTON		05/22/16	J. COUCH	05/22/16
2.	REVISED PER CITY COMMENTS RECEIVED 07/06/16	R. THORNTON		07/15/16	J. COUCH	07/15/16

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CIRCULATION PLAN
REBUILD
31275 HAGGERTY ROAD
OAKLAND COUNTY
NOVI, MI

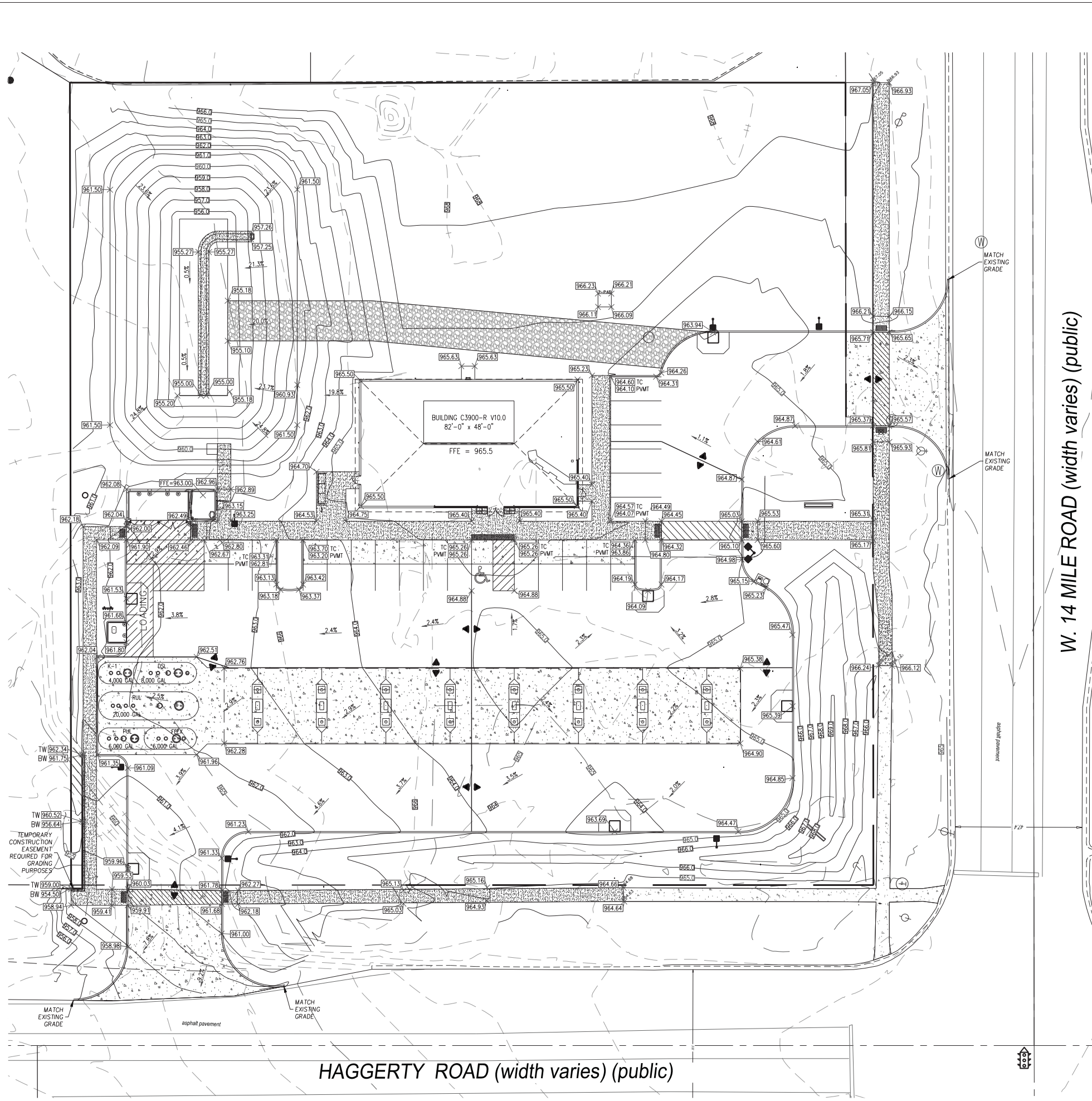
STORE OR BLDG NO. **0002224**
VERSION OR PROJECT ID **95505**
SCALE 0 10 20
1"=20'-0"

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MICHIGAN 811
3 WORKING DAYS BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171

DESIGN TEAM	DATE
DNVR. R. THORNTON	04/15/16
P.MGR. J. COUCH	04/15/16
R.WVR. B. BAIRD	04/15/16

DRWG. NO. **2224 - CR**

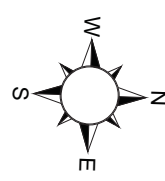


LEGEND

XXX.XX	EXISTING ELEVATION
XXX.XX	EXISTING INTERPOLATED ELEVATION
XXX.XX	NEW PAVEMENT ELEVATION (UNLESS NOTED OTHERWISE)
XXX	EXISTING CONTOUR
XXX.X	NEW CONTOUR
▲	PAVEMENT CROWN LINE

A. GENERAL NOTES

- CONTRACTOR TO USE EXTREME CAUTION WHEN GRADING IN AND AROUND EXISTING UTILITIES. CONTRACTOR SHALL FIELD VERIFY LOCATION AND DEPTH PRIOR TO START OF CONSTRUCTION.
- EXCAVATE SOILS AS NECESSARY TO COMPLETE PROPOSED CONSTRUCTION. UNLESS OTHERWISE DIRECTED (REFER TO GEOTECHNICAL REPORT), USE ALL EXCAVATED SOILS AS FILL ON SITE. ANY SOILS THAT CANNOT BE UTILIZED ON SITE SHALL BE LOADED DIRECTLY ONTO TRANSPORT TRUCKS AND HAULED TO OWNER'S APPROVED LOCATION. ANY IMPACTED SOILS ENCOUNTERED SHALL BE LOADED SEPARATELY AND SHALL NOT BE COMMINGLED WITH CLEAN SOILS. ANY EXCAVATED SOIL OR MATERIALS THAT LEAVE THE SITE MUST GO TO AN APPROVED LANDFILL LOCATION OR BE ACCOMPANIED BY AN APPROVED BILL OF SALE.
- BID AS ALTERNATE A: IMPACTED SOILS SHALL BE PLACED ON MINIMUM 6 MIL. VISQUEEN AND COVERED WITH 40' X 100' SHEETS OF 4 MIL. VISQUEEN. A SAND BERM SHALL BE CONSTRUCTED AROUND ENTIRE PILE OF SOIL TO HOLD THE VISQUEEN DOWN. ALL SEAMS OR OVERLAP (6" MINIMUM) IN THE VISQUEEN COVERING SHALL BE SECURED WITH WEIGHTED MATERIAL.
- BID AS ALTERNATE B: PROVIDE DEWATERING NECESSARY FOR ANY EXCAVATIONS AND TO PREVENT TANKS FROM FLOATING WHILE THE TANKS ARE NOT COVERED BY PROPER OVERBURDEN. DEWATERING SHALL CONSIST OF SUPPLYING EQUIPMENT AND LABOR TO MAINTAIN PUMPING ACTIVITIES AS NECESSARY. COORDINATE WITH OWNER'S REPRESENTATIVE TO DETERMINE WHERE WATER CAN BE PUMPED. IDENTIFY THIS COST AS A SPECIFIC LINE ITEM IN THE BID. DISPOSAL OF CONTAMINATED WATER SHALL BE THE OWNER'S RESPONSIBILITY.
- THE ENVIRONMENTAL CONSULTANT AND THE CONTRACTOR SHALL USE THE "SOILS WORKSHEET" TO ACCOUNT FOR ALL EXCAVATED SOILS.
- A REPORT OF THE SUBSURFACE INVESTIGATION IS MADE AVAILABLE TO THE CONTRACTOR AT TIME OF BIDDING. THE BASE BID SHALL INCLUDE LAND BALANCING ACTIVITIES BASED ON THE ASSUMPTION THAT EXCAVATED SOIL CAN BE REUSED AS NECESSARY FOR CONSTRUCTION. UPON REVIEWING THE SUBSURFACE INVESTIGATION, CONTRACTOR SHALL INCLUDE THE FOLLOWING AS ALTERNATE-A: OVER-EXCAVATE AREAS OF UNSUITABLE SOILS AND STABILIZE AREAS PER THE SUBSURFACE INVESTIGATION. ESTIMATE QUANTITY OF OVER-EXCAVATED AREAS AND REPLACEMENT BACKFILL IN EACH AREA, ALONG WITH THE TYPE OF BACKFILL. ACTUAL QUANTITIES WILL BE VERIFIED DURING CONSTRUCTION PER THE DIRECTION OF THE GEOTECH CONSULTANT AND OWNER'S REPRESENTATIVE, WITH DETAILED CHANGE ORDERS SUBMITTED TO OWNER.
- ANY DISCREPANCIES BETWEEN ELEVATIONS SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE AND THE DESIGN ENGINEER.



NO.	REVISIONS	DATE	BY	CHKD.	APP'D.
1.	REVISED PER CITY COMMENTS RECEIVED 05/13/16	05/13/16			
2.	REVISED PER CITY COMMENTS RECEIVED 07/26/16	07/26/16			

GRADING PLAN
REBUILD
 31275 HAGGERTY ROAD
 OAKLAND COUNTY
 NOVI, MI

STORE OR BLDG NO. **0002224**
 VERSION OR PROJECT ID **95505**
 SCALE 0 10 20
1"=20'-0"

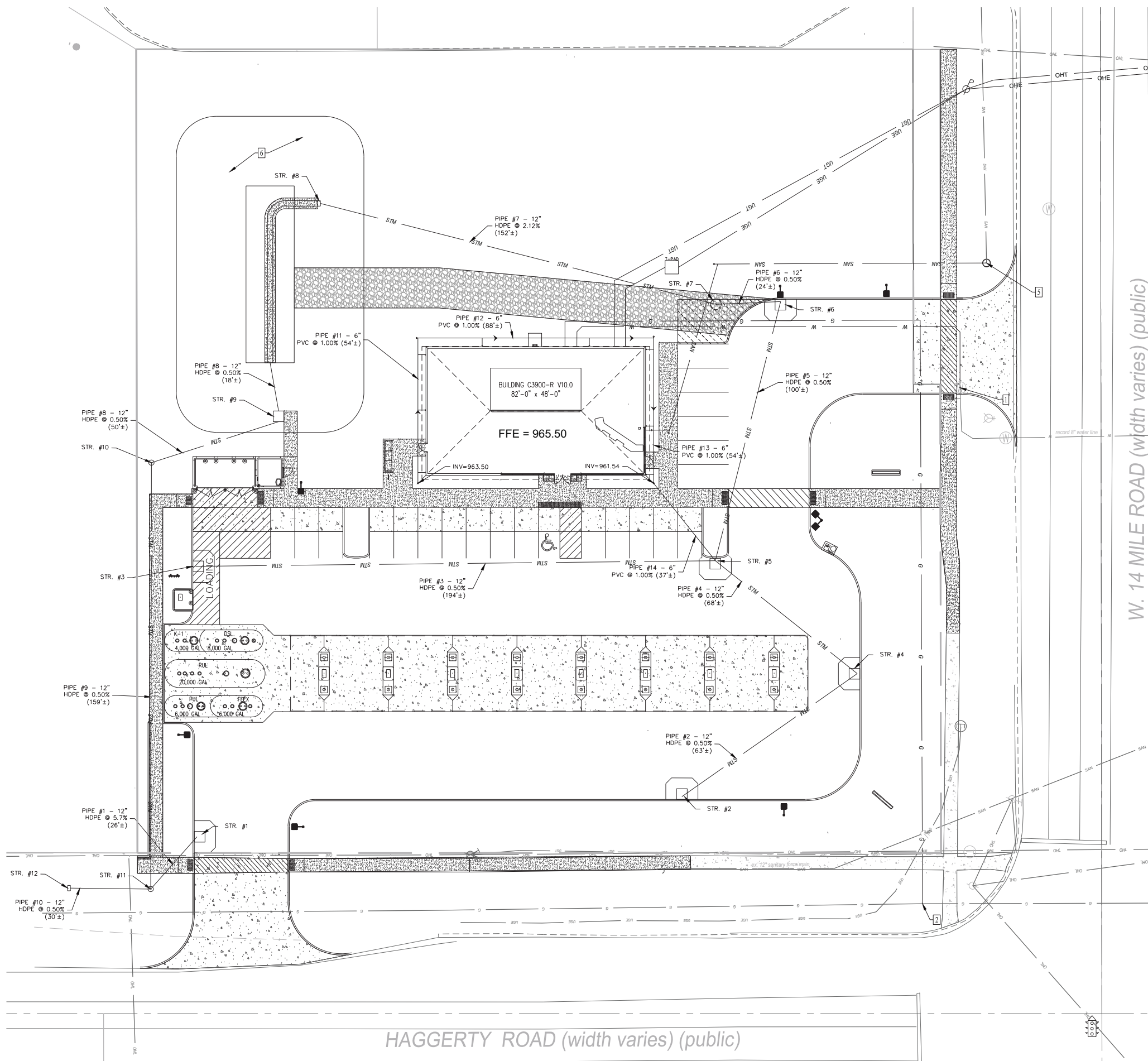
DESIGN TEAM	DATE
DWR: R. THORNTON	04/15/16
P.MGR: J. COUCH	04/15/16
R.VWR: B. BAIRD	04/15/16
DRWG. NO.	

HAGGERTY ROAD (width varies) (public)

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MICHIGAN 811
 3 WORKING DAYS BEFORE YOU DIG
 CALL MISS DIG
 1-800-482-7171

2224 - CG



- PLAN NOTES
1. WATER CONNECTION
 2. GAS CONNECTION
 3. ELECTRIC CONNECTION
 4. TELEPHONE CONNECTION
 5. SANITARY SERVICE CONNECTION (MONITORING MANHOLE)
 6. PROPOSED ABOVEGROUND DETENTION

EXISTING LEGEND		PROPOSED LEGEND	
	STORM SEWER		STORM SEWER
	SANITARY SEWER		SANITARY SEWER
	GAS LINE		GAS LINE
	WATER LINE		WATER LINE
	OVERHEAD ELECTRIC LINE		OVERHEAD ELECTRIC LINE

DETENTION BASIN CALCULATION

ASSUMPTION:

1. THE DETENTION SYSTEM WAS DESIGNED USING THE FLOOD STORAGE VOLUME REQUIREMENT CALCULATIONS AS PROVIDED IN THE ENGINEERING DESIGN MANUAL FOR THE CITY OF NOVI.

Peak Flow Rate
 $Q = C \times i \times A$
 $C = \frac{0.0007 \times (100 - 0.0007 \times 100)}{100} = 0.0007$
 $i = 0.0007$
 $A = 2.03$
 $Q = 0.0007 \times 0.0007 \times 2.03 = 0.716$

Sheet flow - T_s (min)
 $T_s = \frac{1.48 \times L^{0.58}}{C \times S^{0.047}} = \frac{1.48 \times 12^{0.58}}{0.0007 \times 0.0007^{0.047}} = 20.697$ minutes

Piping time (min)
 $T_p = \frac{L}{V} = \frac{12}{7.31} = 1.64$ minutes

Total time of concentration = Sheet flow + Waterway = 20.697 + 1.64 = 22.337 minutes

Flow for 100 year storm = 5.9 in/hr

A = 2.03 acres
 $Q = 0.716 \times 5.9 \times 2.03 = 8.50$ cfs

Required Volume Storage
 $V_s = 0.15 \times 2.03 \times 0.3045 = 0.095$ ac-ft

$V_s = \frac{Q \times T_c}{2.3} = \frac{8.50 \times 22.337}{2.3} = 82.95$ ac-ft

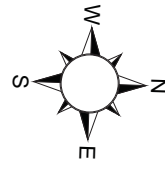
$V_s = \frac{Q \times T_c}{2.3} = \frac{8.50 \times 22.337}{2.3} = 82.95$ ac-ft

REQUIRED DETENTION = 10.882 ac-ft
PROVIDED DETENTION = 15.577 ac-ft

STORM SEWER STRUCTURE SCHEDULE			
NO.	STRUCTURE	GRATE	INVERT
1	4X4 CB	960.00	958.00 (12") S
2	4X4 CB	963.69	961.69 (12") W
3	4X4 CB	961.56	959.56 (12") N
4	4X4 CB	965.38	961.38 (12") SE
5	4X4 CB	964.00	961.38 (12") SW
6	4X4 CB	963.95	958.59 (12") S
7	AQUA SWIRL UNIT	965.09	957.97 (12") N
8	HEADWALL		955.00 (12") E
9	HEADWALL		954.91 (12") W
10	OUTLET CONTROL STRUCTURE	960.15	954.91 (12") S
11	YARD DRAIN	960.62	954.66 (12") NW
12	YARD DRAIN	958.52	953.87 (12") E
13	HEADWALL		953.72 (12") S

W. 14 MILE ROAD (width varies) (public)

HAGGERTY ROAD (width varies) (public)



NO.	REVISIONS	DATE	BY	CHKD.
1.	REVISED PER CITY COMMENTS RECEIVED 05/17/16	05/17/16		
2.	REVISED PER CITY COMMENTS RECEIVED 07/26/16	07/26/16		

UTILITIES PLAN
 REBUILD
 31275 HAGGERTY ROAD
 OAKLAND COUNTY
 NOVI, MI

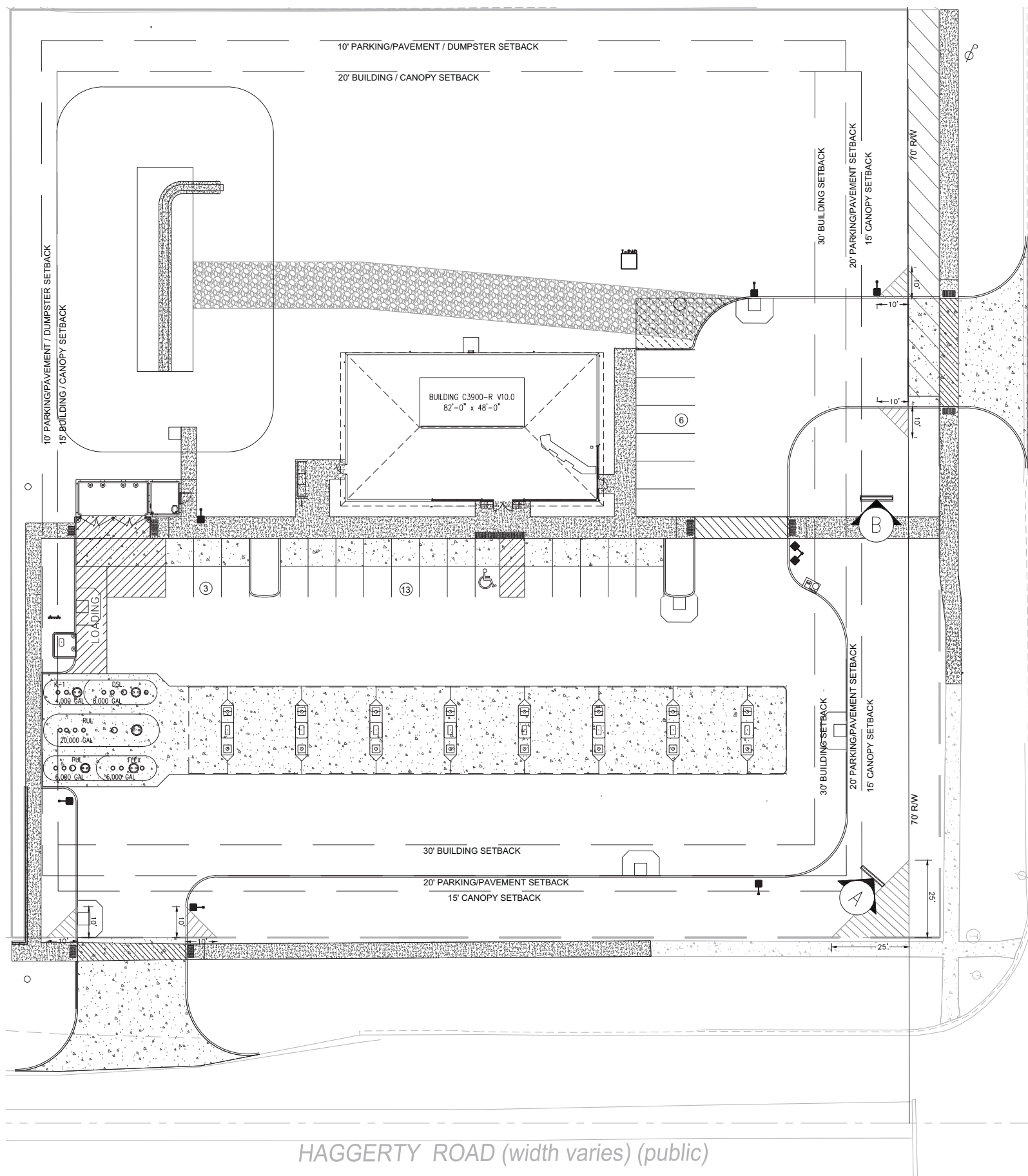
STORE OR BLDG NO. 0002224
 VERSION OR PROJECT ID 955505
 SCALE 0 10 20
 1"=20'-0"

DESIGN TEAM	DATE
DWR. R. THORNTON	04/15/16
P.MGR. J. COUCH	04/15/16
RWR. B. BAIRD	04/15/16
DRWG. NO.	

2224 - CU

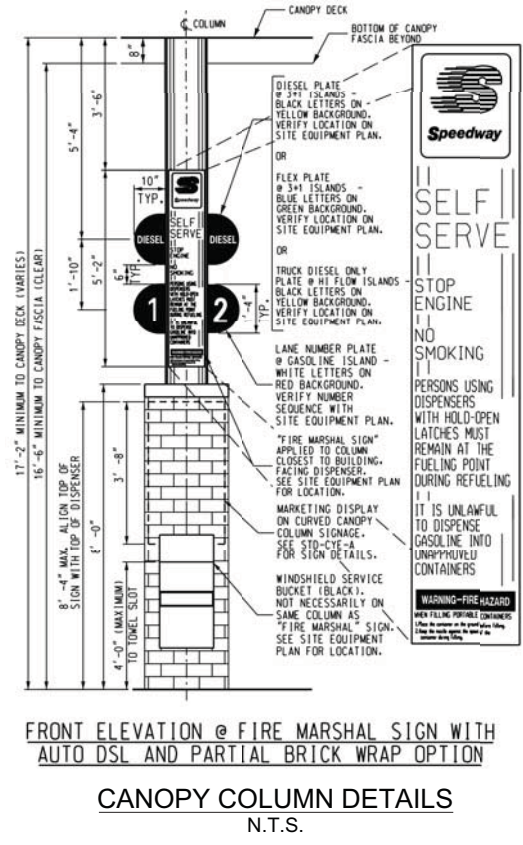
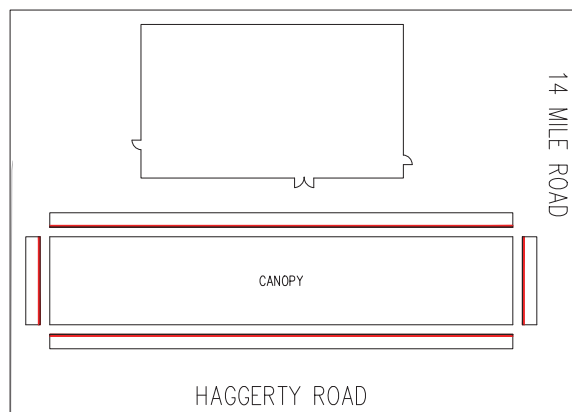
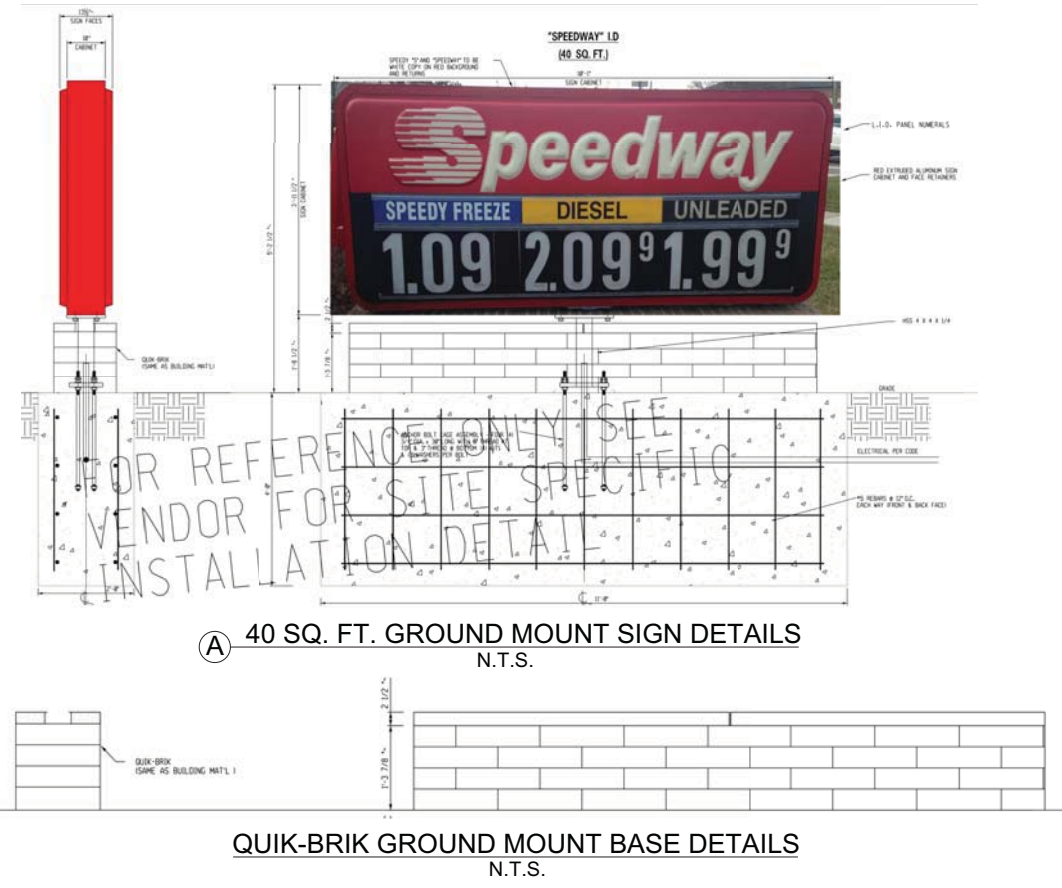
NOTE: AS AN AID TO THE CONTRACTOR, VARIOUS UTILITIES AND UNDERGROUND STRUCTURES ARE SHOWN ON THESE PLANS AND PROFILES. ALL INFORMATION CONCERNING ALL UTILITIES SHOWN ON THE PLANS AND PROFILES IS TAKEN FROM FIELD TOPO AND/OR AVAILABLE RECORDS, BUT THE OWNER AND ENGINEER DO NOT GUARANTEE THEIR LOCATION/ELEVATION, OR THAT ADDITIONAL UNDERGROUND STRUCTURES OR UTILITIES MAY NOT BE ENCOUNTERED. IF THE CONTRACTOR DOES ENCOUNTER A PREVIOUSLY UNIDENTIFIED UTILITY AND/OR STRUCTURE, OR DETERMINES THAT ONE OF THE UTILITIES/STRUCTURES SHOWN ON THESE PLANS IS INCORRECTLY LOCATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER FOR DIRECTION ON HOW TO PROCEED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES. NOTIFY 'MISS DIG' AT 1-800-482-1171, 72 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.

MICHIGAN 811
 3 WORKING DAYS BEFORE YOU DIG
 CALL MISS DIG
 1-800-482-7171



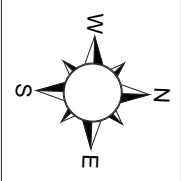
SIGNAGE TOTALS					
REF. LET.	LOCATION	MESSAGE	ILLUMINATION	DIMENSION	AREA
A	NORTHEAST CORNER	TRADEMARK/PRICE	ILLUMINATED	3'-11 1/2" x 10'-1"	40 SF
				SITE TOTAL	40 SF

W. 14 MILE ROAD (width varies) (public)



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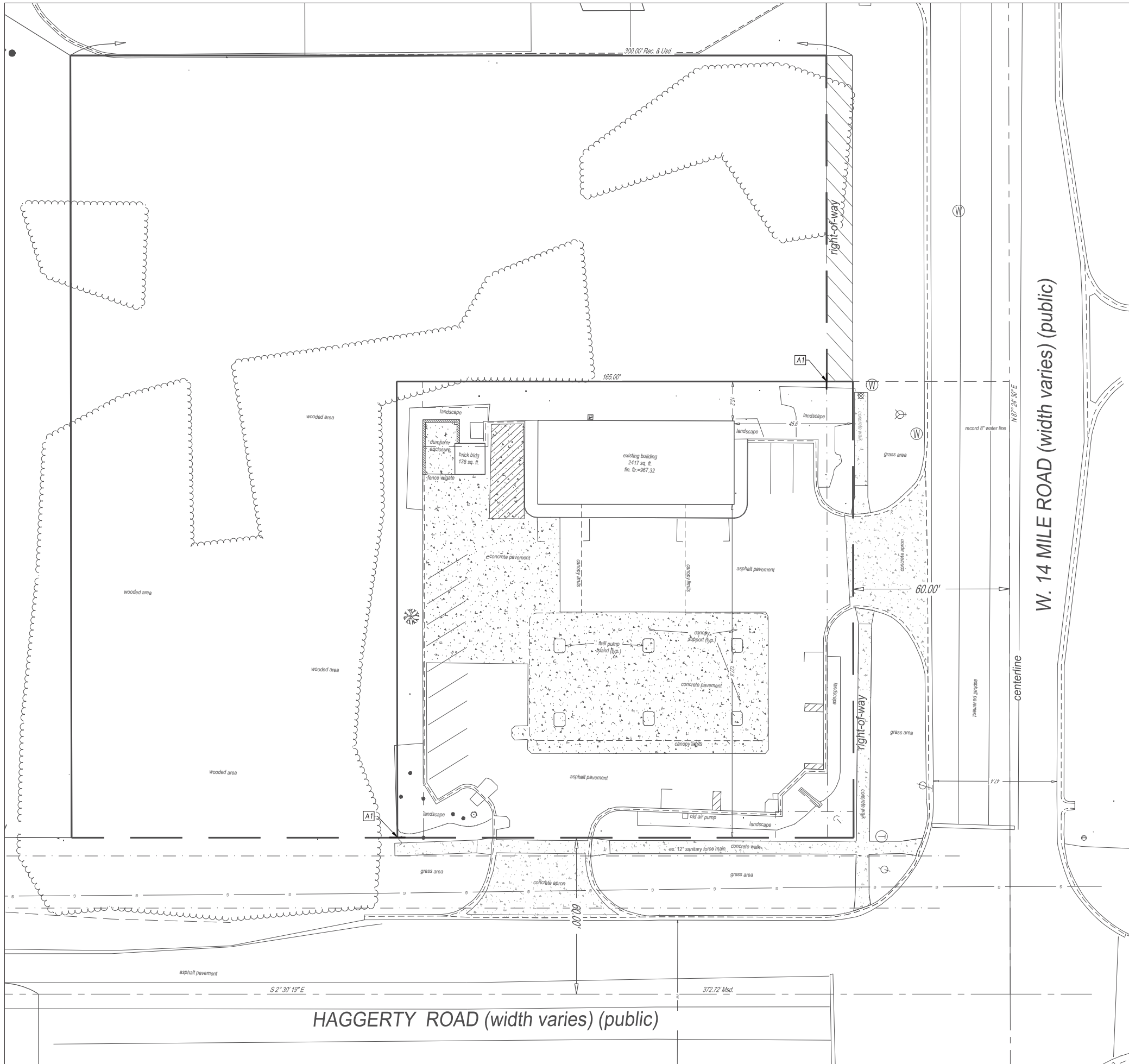
Speedway
Prepared By:
Speedway and Construction Dept.
Elyria, OH 44323

NO.	REVISIONS	DESIGNER	PROJ. MGR.	REVISOR	DATE
1.	REVISED PER CITY COMMENTS RECEIVED 05/13/16	R. THORNTON	J. COUCH		05/26/16
2.	REVISED PER CITY COMMENTS RECEIVED 07/06/16	R. THORNTON	J. COUCH		07/12/16

SIGNAGE PLAN
REBUILD
31275 HAGGERTY ROAD
OAKLAND COUNTY
NOVI, MI

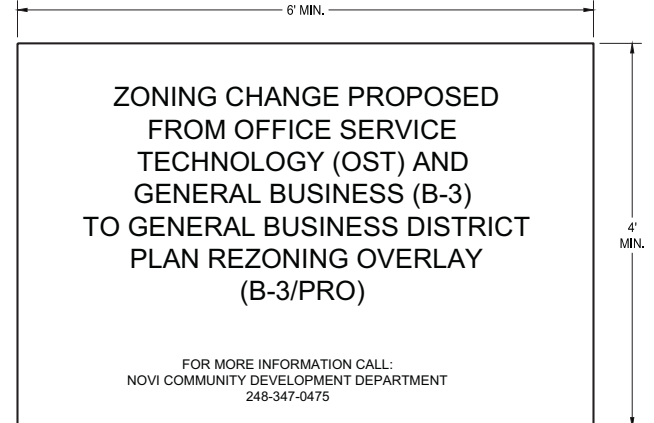
STORE OR BLDG NO. 0002224
VERSION OR PROJECT ID 95505
SCALE 0 10 20
1"=20'-0"

DESIGN TEAM DATE
DGNR. R. THORNTON 04/15/16
P.MGR. J. COUCH 04/15/16
R.WR. B. BAIRD 04/15/16
DRWG. NO. 2224 - SS

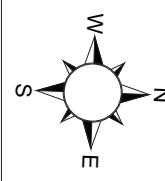


A. GENERAL NOTES

1. REZONING SIGNS TO BE INSTALLED ON VACANT LOT.



REZONING SIGN DETAIL



NO.	REVISIONS	DESIGNER	PROJ. NO.	REVISION DATE
1.	REVISED PER CITY COMMENTS RECEIVED 05/13/16	R. THORNTON	0002224	05/25/16
2.	REVISED PER CITY COMMENTS RECEIVED 07/06/16	J. COUCH	0002224	07/15/16

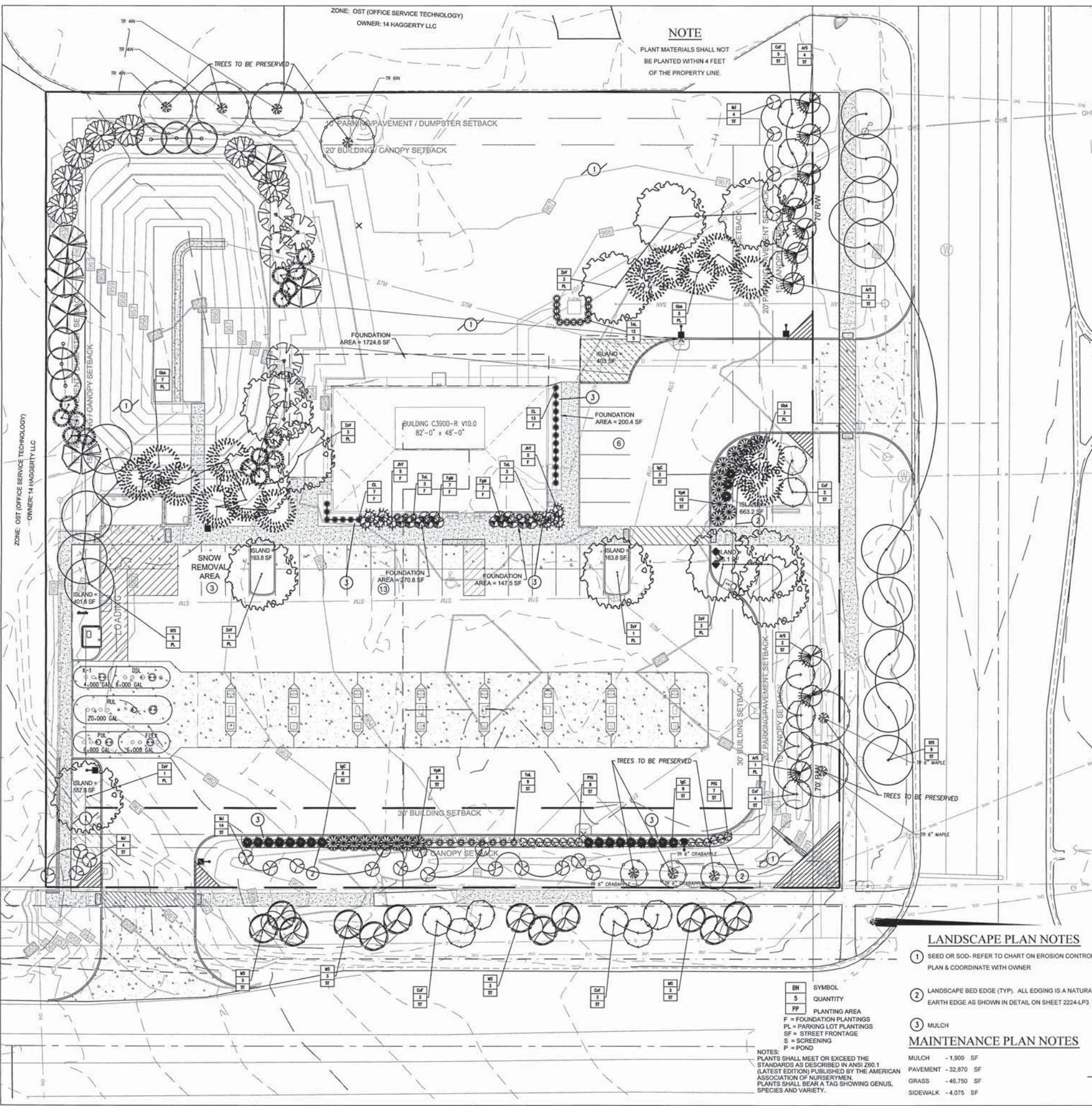
REZONING SIGN PLAN
REBUILD
 31275 HAGGERTY ROAD
 OAKLAND COUNTY
 NOVI, MI

STORE OR BLDG NO. **0002224**
 VERSION OR PROJECT ID **95505**
 SCALE 0 10 20
1"=20'-0"

DESIGN TEAM	DATE
DNVR. R. THORNTON	04/15/16
P.MGR. J. COUCH	04/15/16
R.WDR. B. BAIRD	04/15/16
DRWG. NO.	2224 - SS1

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GENERAL NOTES

- THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK.
- ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN OR EQUIVALENT. ALL MATERIAL SHALL ALSO CONFORM TO THE SPEEDWAY SPECIFICATIONS SECTION 329200 - TURF & GRASSES AND SECTION 329300 - PLANTS. FOR ANY SPECIFICATION CONFLICTS, THE AMERICAN STANDARD FOR NURSERY STOCK IS THE CONTROLLING SPECIFICATION.
- IF DISCREPANCIES BETWEEN THE PLAN AND THE PLANT LIST ARE FOUND, CONTACT THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND FEES THAT MAY BE REQUIRED FOR LANDSCAPE PORTION OF WORK.
- ALL NEW LANDSCAPE PLANTINGS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FOLLOWING FINAL INSPECTION BY OWNER'S REPRESENTATIVE. AT THE END OF THIS PERIOD, PLANT MATERIAL DEEMED AS DEAD OR UNSATISFACTORY BY OWNER'S REPRESENTATIVE SHALL BE REPLACED AT NO ADDITIONAL CHARGE BY THE LANDSCAPE CONTRACTOR.
- CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE IN WRITING PRIOR TO BID DATE OF ANY PLANTS THAT THEY FEEL MAY NOT SURVIVE IN LOCATIONS NOTED. RECOMMEND HARDIER AND SALT TOLERANT VEGETATION FOR COLD WEATHER REGIONS.
- PLANTS AND ALL OTHER MATERIALS TO BE STORED ON SITE WILL BE PLACED WHERE THEY WILL NOT CONFLICT WITH CONSTRUCTION OPERATIONS OR GET DAMAGED.
- NO SUBSTITUTIONS OF PLANT MATERIAL WILL BE ALLOWED. IF PLANTS SHOWN ARE UNAVAILABLE, THE CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE PRIOR TO BID DATE IN WRITING. ALL PLANTS SHALL BE INSPECTED AND TAGGED WITH PROJECT IDENTIFICATION SHOWING GENUS, SPECIES AND VARIETY AT NURSERY OR CONTRACTORS OPERATION PRIOR TO MOVING TO JOB SITE. PLANTS MAY ALSO BE INSPECTED AND APPROVED OR REJECTED ON THE JOB SITE.
- LOOSEN SUBGRADE TO A MINIMUM DEPTH OF 4 INCHES. REMOVE STONES LARGER THAN 1 INCH IN ANY DIMENSION AND STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEOUS MATTER AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY. AFTER REMOVAL OF NOTED ITEMS, AMEND SOIL WITH ONE PART COMMERCIAL GRADE 'POTTING SOIL', 5 PARTS TOPSOIL AND 4 PARTS PEAT MOSS. A FULL 4 INCH LAYER OF APPROVED SHREDDED FIBROUS PEAT MOSS MAY BE USED IN LIEU OF PLANTING MIX.
- ALL PLANTS, INCLUDING TREES, SHRUBS, GROUND COVER, AND FLOWERS, SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT WRAPPING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED AT TIME OF PLANTING. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE CONTAINER BALL SHALL BE CUT THROUGH THE SURFACE IN TWO VERTICAL LOCATIONS.
- GROUND COVER AND FLOWERS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS ORIGINAL GRADE BEFORE DIGGING. TREES AND SHRUBS SHALL HAVE A FINISH GRADE OF +1 INCH MAXIMUM TO ORIGINAL GRADE.
- SIZE OF VEGETATION DEPICTED ON DRAWING IS A MATURE-SIZED REPRESENTATION AND IS NOT INDICATIVE OF SIZE OF ITEM AT PLANTING.
- REFER TO SPEEDWAY SPECIFICATIONS SECTION 329200 - 'TURF & GRASSES' AND SECTION 329300 - 'PLANTS' FOR TYPES OF MULCHES TO BE USED ON SITE.
- TREES ARE TO BE A MINIMUM OF 3 FEET AWAY FROM ANY HARDSCAPE FEATURE SUCH AS CURBS, WALKS, ETC. TREES SHALL HAVE A ROOT BARRIER SYSTEM IF WITHIN 3-5 FEET OF ANY HARDSCAPE FEATURE.
- MAINTAIN 3 FEET MINIMUM FROM THE NEAREST DRIPLINE/ROOT BALL EDGE OF PLANTED TREES TO THE NEAREST EDGE OF ANY UTILITY LINES. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITY LINES PRIOR TO COMMENCING WORK AND PROVIDE A ROOT BARRIER SYSTEM FOR TREES WITHIN 3-5 FEET OF UTILITY LINES.
- ALL AREAS NOTED 'GRADE AND SEED' AND 'MULCHED PLANT BED' WILL RECEIVE TOP SOIL AS INDICATED IN SPEEDWAY SPECIFICATIONS. FOR NON-IRRIGATION SITES, WATER LAWN FOR 30 DAYS POST TURNOVER DATE.
- ALL VEGETATION AND LANDSCAPING PROPOSED WITHIN THE RIGHT-OF-WAY IS ONLY ALLOWED IF REQUIRED BY LOCAL JURISDICTION AGENCY.
- ALL PLANTS SHALL BE SPRAYED WITH AN ANTIDISSICANT AND WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING.
- AN APPROVED PRE-EMERGENT HERBICIDE SHALL BE APPLIED IN ALL PLANTING AND GROUND COVER BEDS AT RATES SPECIFIED BY MANUFACTURER FOR EACH VARIETY OF PLANT.
- ALL STORM WATER DETENTION BASINS SHALL HAVE GRASS COVERAGE UNLESS LOCAL CODE DICTATES OTHER TYPE OF VEGETATION TREATMENT OR AS CALLED OUT ON THE LANDSCAPING PLAN.
- ALL LANDSCAPE MATERIAL MUST BE GUARANTEED FOR 2 GROWING SEASONS AFTER DATE OF THE ACCEPTANCE OF INSTALLATION AND MAINTAINED IN HEALTHY CONDITION BY OWNER OR OWNER'S REPRESENTATIVE.
- ALL PLANT MATERIALS SHALL BE INSTALLED BETWEEN MARCH 15th AND NOVEMBER 15th.
- ALL PLANT MATERIALS ARE TO BE NORTHERN NURSERY GROWN NO. 1 GRADE AND INSTALLED ACCORDING TO ACCEPTED PLANTING PROCEDURES. ALL PLANT MATERIALS SHALL CONFORM TO THE CURRENT AN STANDARDS FOR NURSERY STOCK. THEY SHALL BE PLANTED ACCORDING TO THE CITY OF NOVI PROCEDURES DETAILS AND SPECIFICATIONS. THE CITY SHALL HAVE THE RIGHT TO INSPECT THE PLANT MATERIALS PRIOR TO PLANTING AND TO REJECT ANY PLANT MATERIALS DEEMED TO NOT MEET THE STANDARDS OF THE ZONING ORDINANCE.
- ALL PLANT MATERIAL SHALL BE WARRANTED FOR TWO (2) FULL YEARS AFTER DATE OF ACCEPTANCE BY THE CITY OF NOVI. ALL UNHEALTHY AND DEAD MATERIAL SHALL BE REPLACED WITHIN ONE (1) YEAR OR THE NEXT APPROPRIATE PLANTING PERIOD WHICHEVER COMES FIRST.
- ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION, INCLUDING WATERING, CULTIVATION, WEED CONTROL AND SOIL ENRICHMENTS AS MAY BE NECESSARY.
- ANY SUBSTITUTIONS OR DEVIATIONS FROM THE LANDSCAPE PLAN MUST BE APPROVED IN WRITING BY THE CITY OF NOVI PRIOR TO INSTALLATION.

PLANT SCHEDULE

PLAN KEY	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	ROOT CONDITION	CENTER	SPECIAL INSTRUCTIONS	MATURE SIZE
CANOPY DECIDUOUS TREES								
AS	ACER RUBRUM 'SOMERSET'	SOMERSET RED MAPLE	* 2 1/2"	10	X	SEE PLAN	X	23T x 11W
GIS	GLEDITSIA TRICANTHOS INERMIS 'SKYCOLE'	SKYLINE HONEYLOCUST	* 2 1/2"	14	X	SEE PLAN	X	45T x 35W
GDA	GINKGO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD GINKGO	* 2 1/2"	15	X	SEE PLAN	X	50T x 30W
ZAV	ZELKOVA SERRATA 'VILLAGE GREEN'	VILLAGE GREEN ZELKOVA	* 2 1/2"	12	X	SEE PLAN	X	60T x 50W
ORNAMENTAL UNDERSTORY TREES								
CF	CERCIS CANADENSIS 'FLAME'	FLAME EASTERN REDBUD	2 1/2"	17	X	SEE PLAN	X	25T x 20W
MJ	MALUS 'JARMIN'	MARLEE CRABAPPLE	2 1/2"	22	X	SEE PLAN	X	24T x 10W
MS	MALUS 'SPRING SNOW'	SPRING SNOW CRABAPPLE	2 1/2"	12	X	SEE PLAN	X	25T x 20W
DECIDUOUS SHRUBS								
VpN	VIBURNUM PLICATUM TOMENTOSUM 'NEWZAM'	NEWPORT VIBURNUM	#3	19	X	SEE PLAN	MIN 18"	5T x 6W
PG	POTENTILLA FRUTICOSA 'GOLDFINGER'	GOLDFINGER POTENTILLA	#3	15	X	SEE PLAN	MIN 18"	3T x 3W
FgM	FOTHERGILLA GARDENII 'MT AIRY'	DWARF FOTHERGILLA	#3	14	X	SEE PLAN	MIN 18"	4T x 4W
EVERGREEN SHRUBS								
TGL	THUJA OCCIDENTALIS 'LITTLE GIANT'	GLOBE ARBORVITAE	18"	27	X	SEE PLAN	MIN 18"	3T x 3W
JHY	JUNIPERUS HORIZONTALIS 'YOUNGSTOWN'	YOUNGSTOWN ANDORRA JUNPER	#1	10	X	SEE PLAN	X	1T x 6W
IQC	ILEX GLABRA 'CHAMZIN'	NORDIC HOLLY	18"	20	X	SEE PLAN	MIN 18"	4T x 4W
ORNAMENTAL GRASSES								
CL	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	18"	20	X	SEE PLAN	MIN 18"	5T x 2.5W

* ALL TREES PLANTED IN THE RIGHT-OF-WAY MUST BE 3" CALIPER AT TIME OF PLANTING

LANDSCAPE ORDINANCE REQUIREMENTS

REQUIREMENT:	REQUIRED:	PROVIDED:
STREET FRONTAGE LANDSCAPING - 1 CANOPY OR EVERGREEN TREE PER 35 LINEAR FEET PLANTED ON 3' TALL BERM - 1 SUBCANOPY TREE PER 20 LINEAR FEET PLANTED ON BERM - 1 CANOPY TREE PER 35 LINEAR FEET PLANTED BETWEEN SIDEWALK AND CURB - IF OVERHEAD UTILITIES PREVENT CANOPY TREES, USE 2 SUBCANOPY TREES FOR EACH 1 CANOPY REQUIREMENT - SHRUBS MUST BE PROVIDED - IF ADJACENT TO VEHICULAR AREAS, PROVIDE MINIMUM 36" TALL LANDSCAPE OBSTRUCTION	HAGGERTY RD (300') - 8 CANOPY OR EVERGREEN TREES - 15 SUBCANOPY TREES - 9 CANOPY TREES BETWEEN SIDEWALK AND CURB W 14 MILE RD (300') - 9 CANOPY OR EVERGREEN TREES - 15 SUBCANOPY TREES - 9 CANOPY TREES BETWEEN SIDEWALK AND CURB	HAGGERTY RD (300') - 8 SUBCANOPY TREES - 7 TREE PRESERVATION CREDITS - 18 SUBCANOPY TREES BETWEEN SIDEWALK AND CURB W 14 MILE RD (300') - 9 CANOPY OR EVERGREEN TREES - 15 SUBCANOPY TREES - 9 CANOPY TREES BETWEEN SIDEWALK AND CURB
PARKING AREA INTERIOR LANDSCAPING - 1 PARKING LOT ISLAND PER 15 PARKING SPACES, MINIMUM AREA OF 300 SF - A TOTAL SF OF PARKING SPACES NOT INCLUDING ACCESSDRIVE ASILES X 10% (3,888.7 SF X 10% = 388.9 SF) - B TOTAL SF OF VEHICULAR USE AREAS (NOT INCLUDING A) X 5% (28,981 SF X 5% = 1,449 SF) - A + B = C (388.9 SF + 1,449 SF = 1,838 SF) - C / 75 = TOTAL NUMBER OF TREES REQUIRED (1,838 SF / 75 = 25)	- 25 TREES - 1,838 SF LANDSCAPED ISLAND	- 23 TREES - 2 TREE PRESERVATION CREDITS - 2,659.3 SF LANDSCAPED ISLAND
PARKING AREA PERIMETER LANDSCAPING - 1 TREE PER 35 LINEAR FEET	NORTH (95') - 3 TREES EAST (228') - 7 TREES SOUTH (110') - 3 TREES WEST (126') - 4 TREES	NORTH (95') - 3 TREES EAST (228') - 7 TREES SOUTH (110') - 3 TREES WEST (126') - 4 TREES
BUILDING FOUNDATION LANDSCAPING - MINIMUM SQUARE FOOTAGE OF FOUNDATION LANDSCAPING SHALL BE DETERMINED BY TAKING THE PERIMETER OF THE BUILDING AND MULTIPLYING BY 8. - MINIMUM PLANTING BED DEPTH IS 4" - 60% OF THE BUILDING PERIMETER ALONG STREET FRONTSAGES MUST BE PLANTED WITH TREES, SHRUBS, GROUND COVERS, PERENNIALS, GRASSES, ANNUALS, AND BULBS.	BUILDING PERIMETER (260') - 2,080 SF FOUNDATION PLANTINGS	BUILDING PERIMETER (260') - 2,343 SF FOUNDATION PLANTINGS

LEGEND

- SITE TRIANGLE
- TREE
- PROTECTION FENCE SEE SHEET 2224-LP3 FOR DETAIL

NOTES: AS AN AID TO THE CONTRACTOR, VARIOUS UTILITIES AND UNDERGROUND STRUCTURES ARE SHOWN ON THESE PLANS AND PROFILES. ALL INFORMATION CONCERNING ALL UTILITIES SHOWN ON THE PLANS AND PROFILES IS TAKEN FROM FIELD TOPO AND/OR AVAILABLE RECORDS, BUT THE OWNER AND ENGINEER DO NOT GUARANTEE THEIR LOCATION/ELEVATION OR THAT ADDITIONAL UNDERGROUND STRUCTURES OR UTILITIES MAY NOT BE ENCOUNTERED. IF THE CONTRACTOR DOES ENCOUNTER A PREVIOUSLY UNIDENTIFIED UTILITY AND/OR STRUCTURE, OR DETERMINES THAT ONE OF THE UTILITIES/STRUCTURES SHOWN ON THESE PLANS IS INCORRECTLY LOCATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER FOR DIRECTION ON HOW TO PROCEED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES. NOTIFY 'MISS DIG' AT 1-800-482-7171, 72 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.

MICHIGAN 811
3 WORKING DAYS BEFORE YOU DIG
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LANDSCAPE PLAN
REBUILD
31275 HAGGERTY ROAD
OAKLAND COUNTY
NOVI, MI

STORE OR BLDG NO: 0002224
VERSION OR PROJECT ID: 95505
SCALE: 1" = 20'-0"

DESIGN TEAM
DATE
DGNR: R. THORNTON 03/02/16
P.MGR: M. BERGMAN 03/02/16
RWR: J. COUCH 03/02/16
DGNW: NO. 2224 - LP

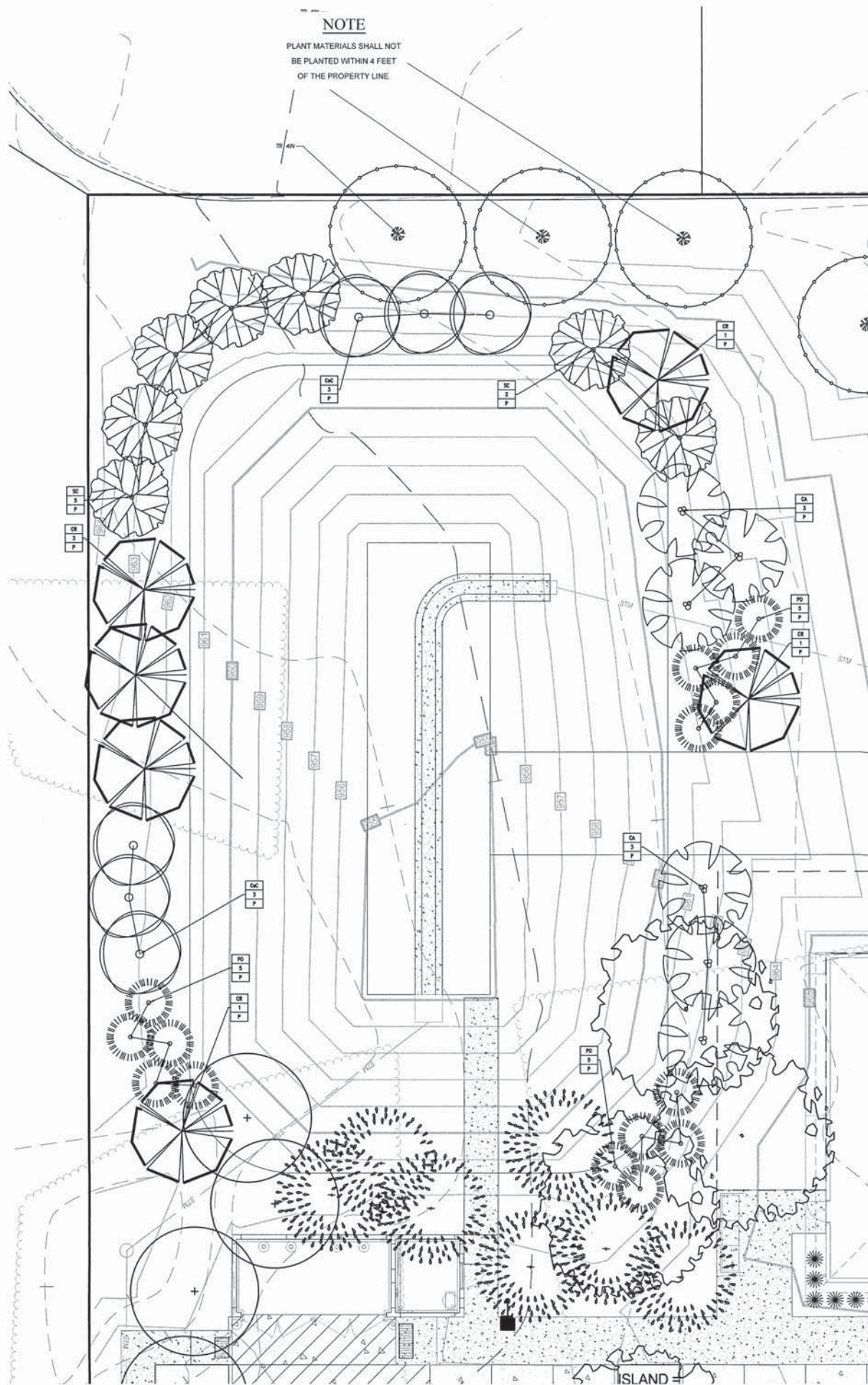
STATE OF MICHIGAN
ERIC A. CARTER
LANDSCAPE ARCHITECT
No. 5901001579
LICENSED PROFESSIONAL ARCHITECT
ERIC A. CARTER, RLA 3901001579

Speedway
Prepared By:
Speedway Landscape and Construction Dept.
Eaton, OH 45323

NO. 2224-LP3
REVISIONS
Revised Per: Per Client and City review

LOCATION: W 12014 W 14610 (20) Engineering (Mapa) (2224) - 021 - LP - LANDSCAPE PLAN.dwg
AUTHOR: LP - LANDSCAPE PLAN
DATE: 03/02/16
PLOTED: 03/02/16

LOCATION: N:\2016\160170\Engineering\design\concept\2224 - LP2 - LP - LANDSCAPE PLAN.dwg
 DATE: 11/11/16 10:51 AM
 DRAWN BY: J. COUCH
 CHECKED BY: M. BERGMAN



NOTE
 PLANT MATERIALS SHALL NOT
 BE PLANTED WITHIN 4 FEET
 OF THE PROPERTY LINE

GENERAL NOTES

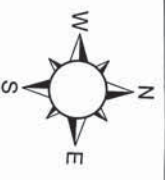
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3. IF DISCREPANCIES BETWEEN THE PLAN AND THE PLANT LIST ARE FOUND, CONTACT THE OWNER'S REPRESENTATIVE.
4. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND FEES THAT MAY BE REQUIRED FOR LANDSCAPE PORTION OF WORK.
5. ALL NEW LANDSCAPE PLANTINGS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FOLLOWING FINAL INSPECTION BY OWNER'S REPRESENTATIVE. AT THE END OF THIS PERIOD, PLANT MATERIAL DEEMED AS DEAD OR UNSATISFACTORY BY OWNER'S REPRESENTATIVE SHALL BE REPLACED AT NO ADDITIONAL CHARGE BY THE LANDSCAPE CONTRACTOR.
6. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE IN WRITING PRIOR TO BID DATE OF ANY PLANTS THAT THEY FEEL MAY NOT SURVIVE IN LOCATIONS NOTED. RECOMMEND HARDIER AND SALT TOLERANT VEGETATION FOR COLD WEATHER REGIONS.
7. PLANTS AND ALL OTHER MATERIALS TO BE STORED ON SITE WILL BE PLACED WHERE THEY WILL NOT CONFLICT WITH CONSTRUCTION OPERATIONS OR GET DAMAGED.
8. NO SUBSTITUTIONS OF PLANT MATERIAL WILL BE ALLOWED. IF PLANTS SHOWN ARE UNAVAILABLE, THE CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE PRIOR TO BID DATE IN WRITING. ALL PLANTS SHALL BE INSPECTED AND TAGGED WITH PROJECT IDENTIFICATION SHOWING GENUS, SPECIES AND VARIETY AT NURSERY OR CONTRACTOR'S OPERATION PRIOR TO MOVING TO JOB SITE. PLANTS MAY ALSO BE INSPECTED AND APPROVED OR REJECTED ON THE JOB SITE.
9. LOOSEN SUBGRADE TO A MINIMUM DEPTH OF 4 INCHES. REMOVE STONES LARGER THAN 1 INCH IN ANY DIMENSION AND STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEIOUS MATTER AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY. AFTER REMOVAL OF NOTED ITEMS, AMEND SOIL WITH ONE PART COMMERCIAL GRADE 'POTTING SOIL', 5 PARTS TOPSOIL, AND 4 PARTS PEAT MOSS. A FULL 4 INCH LAYER OF APPROVED SHREDDED FIBROUS PEAT MOSS MAY BE USED IN LIEU OF PLANTING MIX.
10. ALL PLANTS, INCLUDING TREES, SHRUBS, GROUND COVER, AND FLOWERS, SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT WRAPPING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED AT TIME OF PLANTING. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE CONTAINER BALL SHALL BE CUT THROUGH THE SURFACE IN TWO VERTICAL LOCATIONS.
11. GROUND COVER AND FLOWERS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS ORIGINAL GRADE BEFORE DIGGING. TREES AND SHRUBS SHALL HAVE A FINISH GRADE OF +1 INCH MAXIMUM TO ORIGINAL GRADE.
12. SIZE OF VEGETATION DEPICTED ON DRAWING IS A MATURE-SIZED REPRESENTATION AND IS NOT INDICATIVE OF SIZE OF ITEM AT PLANTING.
13. REFER TO SPEEDWAY SPECIFICATIONS SECTION 329200 - 'TURF AND GRASSES' AND SECTION 329300 - 'PLANTS' FOR TYPES OF MULCHES TO BE USED ON SITE.
14. TREES ARE TO BE A MINIMUM OF 3 FEET AWAY FROM ANY HARDSCAPE FEATURE SUCH AS CURBS, WALKS, ETC. TREES SHALL HAVE A ROOT BARRIER SYSTEM IF WITHIN 3-5 FEET OF ANY HARDSCAPE FEATURE.
15. MAINTAIN 3 FEET MINIMUM FROM THE NEAREST DRIPLINE/ROOT BALL EDGE OF PLANTED TREES TO THE NEAREST EDGE OF ANY UTILITY LINES. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITY LINES PRIOR TO COMMENCING WORK AND PROVIDE A ROOT BARRIER SYSTEM FOR TREES WITHIN 3-5 FEET OF UTILITY LINES.
16. ALL AREAS NOTED 'GRADE AND SEED' AND 'MULCHED PLANT BED' WILL RECEIVE TOP SOIL AS INDICATED IN SPEEDWAY SPECIFICATIONS. FOR NON-IRRIGATION SITES, WATER LAWN FOR 30 DAYS POST TURNOVER DATE.
17. ALL VEGETATION AND LANDSCAPING PROPOSED WITHIN THE RIGHT-OF-WAY IS ONLY ALLOWED IF REQUIRED BY LOCAL JURISDICTION AGENCY.
18. ALL PLANTS SHALL BE SPRAYED WITH AN ANTIDESSICANT AND WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING.
19. AN APPROVED PRE-EMERGENT HERBICIDE SHALL BE APPLIED IN ALL PLANTING AND GROUND COVER BEDS AT RATES SPECIFIED BY MANUFACTURER FOR EACH VARIETY OF PLANT.
20. ALL STORM WATER DETENTION BASINS SHALL HAVE GRASS COVERAGE UNLESS LOCAL CODE DICTATES OTHER TYPE OF VEGETATION TREATMENT OR AS CALLED OUT ON THE LANDSCAPING PLAN.
21. ALL LANDSCAPE MATERIAL MUST BE GUARANTEED FOR 2 GROWING SEASONS AFTER DATE OF THE ACCEPTANCE OF INSTALLATION AND MAINTAINED IN HEALTHY CONDITION BY OWNER OR OWNER'S REPRESENTATIVE.
22. ALL PLANT MATERIALS SHALL BE INSTALLED BETWEEN MARCH 15th AND NOVEMBER 15th.
23. ALL PLANT MATERIALS ARE TO BE NORTHERN NURSERY GROWN NO. 1 GRADE AND INSTALLED ACCORDING TO ACCEPTED PLANTING PROCEDURES. ALL PLANT MATERIALS SHALL CONFORM TO THE CURRENT AAN STANDARDS FOR NURSERY STOCK. THEY SHALL BE PLANTED ACCORDING TO THE CITY OF NOVI PLANTING DETAILS AND SPECIFICATIONS. THE CITY SHALL HAVE THE RIGHT TO INSPECT THE PLANT MATERIALS PRIOR TO PLANTING AND TO REJECT ANY PLANT MATERIALS DEEMED TO NOT MEET THE STANDARDS OF THE ZONING ORDINANCE.
24. ALL PLANT MATERIAL SHALL BE WARRANTED FOR TWO (2) FULL YEARS AFTER DATE OF ACCEPTANCE BY THE CITY OF NOVI. ALL UNHEALTHY AND DEAD MATERIAL SHALL BE REPLACED WITHIN ONE (1) YEAR OR THE NEXT APPROPRIATE PLANTING PERIOD WHICHEVER COMES FIRST.
25. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION, INCLUDING WATERING, CULTIVATION, WEED CONTROL AND SOIL ENRICHMENTS AS MAY BE NECESSARY.
26. ANY SUBSTITUTIONS OR DEVIATIONS FROM THE LANDSCAPE PLAN MUST BE APPROVED IN WRITING BY THE CITY OF NOVI PRIOR TO INSTALLATION.

POND PLANT SCHEDULE									
PLAN KEY	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	ROOT CONDITION	CENTER	SPECIAL INSTRUCTIONS	MATURE SIZE	
ORNAMENTAL UNDERSTORY TREES									
CR	CORNUS RACEMOSA	GRAY DOGWOOD	2 1/2'	6	X		SEE PLAN	X	15T x 15W
DECIDUOUS SHRUBS									
Cx	CORNUS SERICEA 'CARDINAL'	RED TWIG DOGWOOD	#3	6		X	SEE PLAN	MIN 18"	9T x 12W
CA	CORYLUS AMERICANA	AMERICAN HAZELNUT	#3	6		X	SEE PLAN	MIN 18"	16T x 13W
PO	PHYSOCARPUS OPUULIFOLIUS	NINEBARK	#3	15		X	SEE PLAN	MIN 18"	10T x 6W
SC	SAMBUCUS CANADENSIS	ELDERBERRY	#3	7		X	SEE PLAN	MIN 18"	12T x 12W

- BN SYMBOL
- S QUANTITY
- PP PLANTING AREA
- F = FOUNDATION PLANTINGS
- PL = PARKING LOT PLANTINGS
- SF = STREET FRONTAGE
- S = SCREENING
- P = POND

NOTES:
 PLANTS SHALL MEET OR EXCEED THE STANDARDS AS DESCRIBED IN ANSI Z66.1 (LATEST EDITION) PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. PLANTS SHALL BEAR A TAG SHOWING GENUS, SPECIES AND VARIETY.

PLANTS SHALL BE CERTIFIED BY THE STATE OF INDIANA DEPARTMENT OF NATURAL RESOURCES AND FREE FROM DISEASE OR HAZARDOUS INSECTS.



Speedway
 Prepared By:
 Speedway
 Engineering and Construction Dept.
 Elyon, OH 43623

NO.	REVISIONS	DATE	BY	REASON

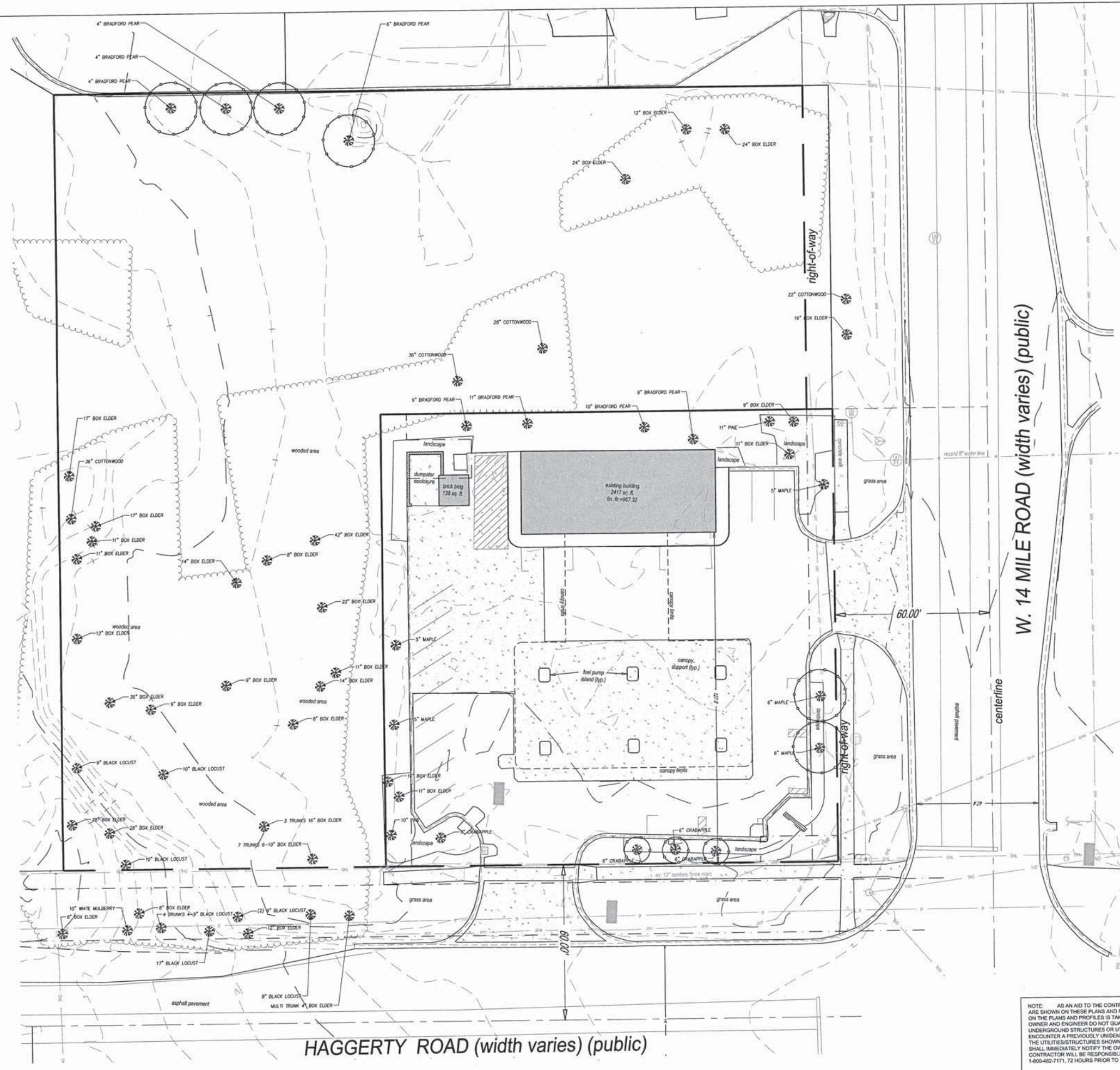
POND PLANTING PLAN
REBUILD
 31275 HAGGERTY ROAD
 OAKLAND COUNTY
 NOVI, MI

STORE OR BLDG NO. 0002224
 VERSION OR PROJECT ID 95505
 SCALE 0 5 10
 1"=10'-0"

DESIGN TEAM	DATE
DGNR. R. THORNTON	03/02/16
P.WCR. M. BERGMAN	03/02/16
RVWR. J. COUCH	03/02/16
DRWG. NO. 2224 - LP2	

MICHIGAN 811
 3 WORKING DAYS BEFORE YOU DIG
 CALL MISS DIG
 1-800-482-7171

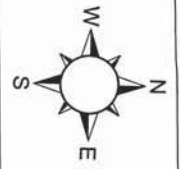
LOCATION: \GIS\Projects\2016\160170\Engineering\Survey\3224 - 0P2 - LP2 - EXISTING TREE SURVEY.dwg
 DATE: 7/16/16, July 01, 2016 - 2:30pm
 DRAWN BY: J. COUCH



PRESERVATION LEGEND

— TREE PROTECTION FENCE SEE SHEET 2224-LP2 FOR DETAIL. ALL EXISTING TREES SHOWN WITH TREE PROTECTION FENCE MUST BE PRESERVED. PRESERVATION CREDITS SHOWN ON PRESERVATION CREDIT TABLE.

PRESERVATION CREDIT TABLE		
TREES TO BE PRESERVED	CALIPER	CREDIT PROVIDED
BRADFORD PEAR	4"	1
BRADFORD PEAR	4"	1
BRADFORD PEAR	4"	1
BRADFORD PEAR	6"	1
MAPLE	6"	1
MAPLE	6"	1
CRABAPPLE	6"	1
CRABAPPLE	6"	1
CRABAPPLE	6"	1
TOTAL CREDITS PROVIDED:		9



Speedway
 Prepared By:
 Speedway
 Engineering and Construction Dept.
 Elyria, OH 45323

NO.	DATE	REVISIONS	BY

EXISTING TREE SURVEY
REBUILD
 31275 HAGGERTY ROAD
 OAKLAND COUNTY
 N.O.M., MI

STORE OR BLDG. NO. 0002224
 VERSION OR PROJECT ID 95505
 SCALE 0 10 20
 1"=20'-0"

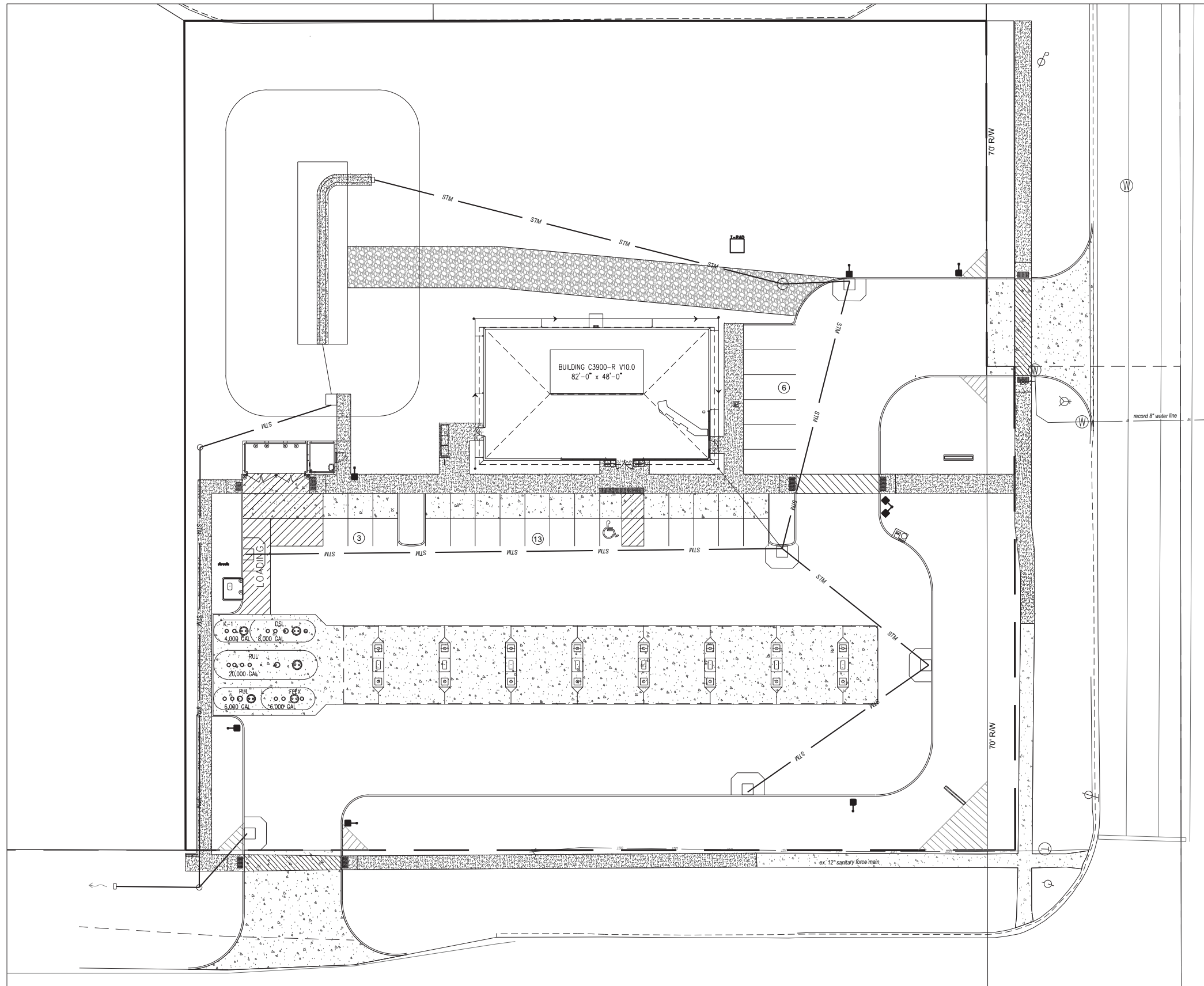
DESIGN TEAM	DATE
DGNR. R. THORNTON	02/02/16
P.WOR. M. BERGMAN	02/02/16
RYWR. J. COUCH	02/02/16
DRWG. NO. 2224 - EX	

NOTE: AS AN AID TO THE CONTRACTOR, VARIOUS UTILITIES AND UNDERGROUND STRUCTURES ARE SHOWN ON THESE PLANS AND PROFILES. ALL INFORMATION CONCERNING ALL UTILITIES SHOWN ON THE PLANS AND PROFILES IS TAKEN FROM FIELD TOPO AND/OR AVAILABLE RECORDS, BUT THE OWNER AND ENGINEER DO NOT GUARANTEE THEIR LOCATION/ELEVATION, OR THAT ADDITIONAL UNDERGROUND STRUCTURES OR UTILITIES MAY NOT BE ENCOUNTERED. IF THE CONTRACTOR DOES ENCOUNTER A PREVIOUSLY UNIDENTIFIED UTILITY AND/OR STRUCTURE, OR DETERMINES THAT ONE OF THE UTILITIES/STRUCTURES SHOWN ON THESE PLANS IS INCORRECTLY LOCATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER FOR DIRECTION ON HOW TO PROCEED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES. NOTIFY "MISS DIG" AT 1-800-482-7171, 72 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.

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 1-800-482-7171

HAGGERTY ROAD (width varies) (public)

W. 14 MILE ROAD (width varies) (public)



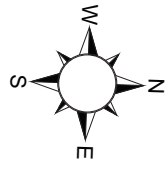
DETENTION BASIN CALCULATION

ASSUMPTION:

1. THE DETENTION SYSTEM WAS DESIGNED USING THE FLOOD STORAGE VOLUME REQUIREMENT CALCULATIONS AS PROVIDED IN THE ENGINEERING DESIGN MANUAL FOR THE CITY OF NOVI.

Peak Flow Rate:
 $Q = C \times I \times A$
 $C = \frac{C_{ASPH} \times C_{CONC} \times C_{SLOPE}}{C_{SLOPE} + 1.0}$
 $C = \frac{0.05 \times 0.8 \times 0.8}{0.8 + 1.0} = 0.028$
Area:
 Asphalt/concrete area = 0.9744 acres
 Native soil area = 1.056 acres
 C of asphalt/concrete = 0.05
 C of native soil (hydrologic group C, adjusted to D due to construction compaction) at 4.0% slope = 0.5
 Sheet flow - T_s (min) = $\frac{L}{48 \times 0.000164} = \frac{100}{0.007968} = 20,697$ minutes
 Piping flow = $\frac{L}{48 \times 0.000164} = \frac{100}{0.007968} = 20,697$ minutes
 Piping time (min) = $\frac{L}{48 \times 0.000164} = \frac{100}{0.007968} = 20,697$ minutes
 Total time of concentration = Sheet flow + Waterway = 20,697 + 0.912 = 21,609 minutes
 (for 100-year storm) = $\frac{21,609}{2.33} = 9,274$ minutes = 5.9 hr/hr
A = 2.03 acres
 $Q = 0.716 \times 5.9 \times 2.03 = 8.58$ cfs
Required Volume Storage:
 $V = \frac{Q \times T_c}{3.6} = \frac{8.58 \times 21,609}{3.6} = 50,905$ cf
 $V = \frac{Q \times T_c}{3.6} = \frac{8.58 \times 21,609}{3.6} = 50,905$ cf
 $V = \frac{Q \times T_c}{3.6} = \frac{8.58 \times 21,609}{3.6} = 50,905$ cf
Volume:
 $V = \frac{Q \times T_c}{3.6} = \frac{8.58 \times 21,609}{3.6} = 50,905$ cf
 $V = \frac{Q \times T_c}{3.6} = \frac{8.58 \times 21,609}{3.6} = 50,905$ cf
PROVIDED DETENTION = 19,405 cf

NOTE: AS AN AID TO THE CONTRACTOR, VARIOUS UTILITIES AND UNDERGROUND STRUCTURES ARE SHOWN ON THESE PLANS AND PROFILES. ALL INFORMATION CONCERNING ALL UTILITIES SHOWN ON THE PLANS AND PROFILES IS TAKEN FROM FIELD TOPO AND/OR AVAILABLE RECORDS, BUT THE OWNER AND ENGINEER DO NOT GUARANTEE THEIR LOCATION/ELEVATION, OR THAT ADDITIONAL UNDERGROUND STRUCTURES OR UTILITIES MAY NOT BE ENCOUNTERED. IF THE CONTRACTOR DOES ENCOUNTER A PREVIOUSLY UNIDENTIFIED UTILITY AND/OR STRUCTURE, OR DETERMINES THAT ONE OF THE UTILITIES/STRUCTURES SHOWN ON THESE PLANS IS INCORRECTLY LOCATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER FOR DIRECTION ON HOW TO PROCEED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES. NOTIFY "MISS DIG" AT 1-800-482-7171, 72 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.



NO.	REVISIONS	DATE	BY	CHKD.	APP'D.
1.	REVISED PER CITY COMMENTS RECEIVED 05/13/16				
2.	REVISED PER CITY COMMENTS RECEIVED 07/26/16				

STORM WATER MANAGEMENT PLAN REBUILD
 31275 HAGGERTY ROAD
 OAKLAND COUNTY
 NOVI, MI

STORE OR BLDG NO. 0002224
 VERSION OR PROJECT ID 95505
 SCALE 0 10 20
 1"=20'-0"

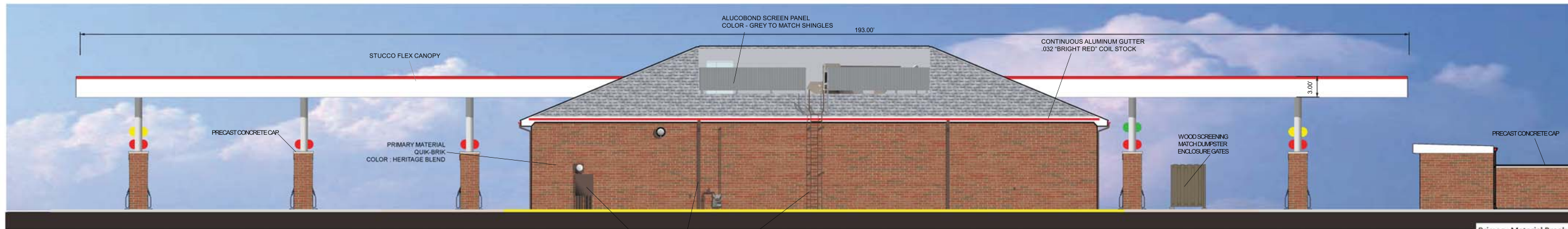
DESIGN TEAM	DATE
DWR: R. THORNTON	04/15/16
P.MCR: J. COUCH	04/15/16
RWR: B. BAIRD	04/15/16
DRWG. NO.	

2224 - SWMP

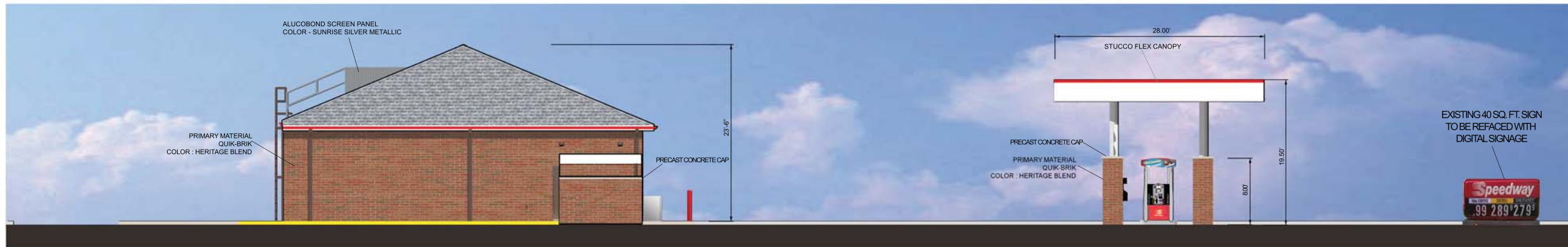
MICHIGAN 811
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FRONT ELEVATION



REAR ELEVATION



LEFT ELEVATION



RIGHT ELEVATION

Primary Material Breakout (Canopy)

Front Elevation	Square Footage	Percentage
ACM Panel (white)	482	61.61%
ACM Panel (Red stripe)	72.375	9.25%
Brick Column wrap	160	20.45%
Exposed Column	68	8.69%
Total	782.375	100.00%

Rear Elevation	Square Footage	Percentage
ACM Panel (white)	482	61.61%
ACM Panel (Red stripe)	72.375	9.25%
Brick Column wrap	160	20.45%
Exposed Column	68	8.69%
Total	782.375	100.00%

Left Elevation	Square Footage	Percentage
ACM Panel (white)	70	50.91%
ACM Panel (Red stripe)	10.5	7.64%
Brick Column wrap	40	29.09%
Exposed Column	17	12.36%
Total	137.5	100.00%

Right Elevation	Square Footage	Percentage
ACM Panel (white)	70	50.91%
ACM Panel (Red stripe)	10.5	7.64%
Brick Column wrap	40	29.09%
Exposed Column	17	12.36%
Total	137.5	100.00%

Primary Material Breakout (Per Elevation)

Front Elevation	Square Footage	Percentage
Brick	604	61.38%
Glass store front	380	38.62%
Total	984	100.00%

Rear Elevation	Square Footage	Percentage
Brick	984	100.00%
Glass Store Front	0	0.00%
Total	984	100.00%

Left Elevation	Square Footage	Percentage
Brick	454	78.82%
Glass Store Front	122	21.18%
Total	576	100.00%

Right Elevation	Square Footage	Percentage
Brick	551.5	95.75%
Egress door	24.5	4.25%
Total	576	100.00%

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 Prepared By:
 Speedway Engineering
 Eng. OH 45323

REVISIONS

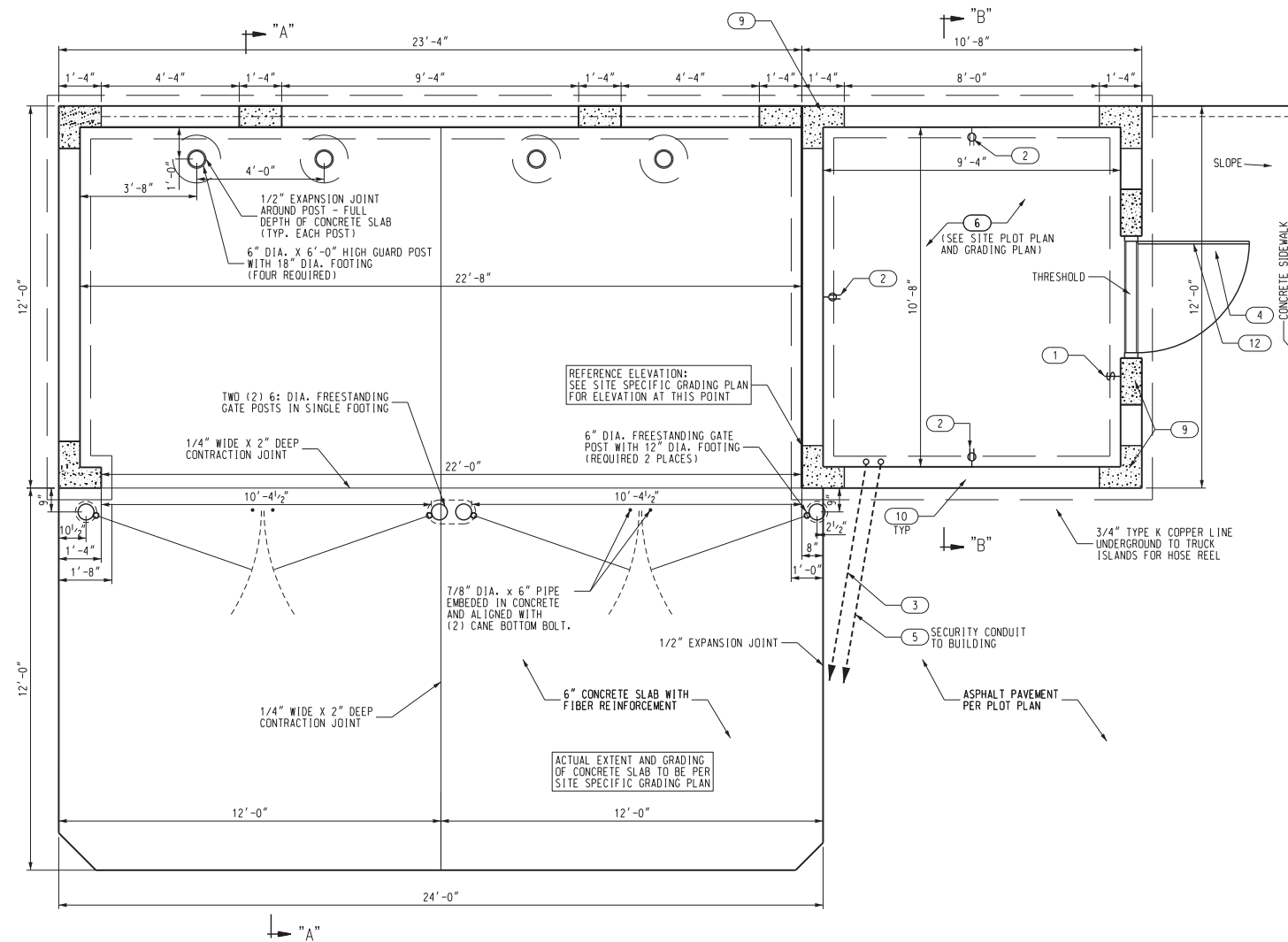
NO.	DATE	DESCRIPTION

BUILDING ELEVATIONS
 REBUILD
 31275 HAGGERTY ROAD
 OAKLAND COUNTY
 NOVI, MI

STORE OR BLDG NO. **2224**
 VERSION OR PROJECT ID **95505**
 SCALE **1/8" = 1'-0"**
 DESIGN TEAM **DATE**
 P. MGR. **STORTENBECKER 4/7/16**
 RYMR.
 DRWG. NO. **2224-ELE**

451116-1-15 15/16/16
 451116-1-15 15/16/16
 451116-1-15 15/16/16
 451116-1-15 15/16/16

FOUNDATION PLAN AND FRONT ELEVATION



GATES SHALL BE CONSTRUCTED WITH 1" x 6" x 5'-8" TREX DECKING (COLOR SHALL BE "SADDLE"). DELETE IF NOT USED

GATES SHALL BE CONSTRUCTED WITH 1" x 6" x 5'-8" LONG CEDAR FENCE BOARDS SPACED AS SHOWN

L 2 1/2" x 2 1/2" x 3#16" STEEL ANGLE FRAME WITH L 2 x 2 x 3#16" DIAGONAL BRACING

4" THICK PRECAST CONCRETE COPING WITH 1/2" SLOPE

HEAVY DUTY GATE HINGE, FILL CAVITY WITH HEAVY DUTY GREASE (TYP.)

STATIONARY STEEL COLLAR BOLTED TO POST (TYP.)

6" SCH. 40 GATE POST FILLED WITH CONCRETE

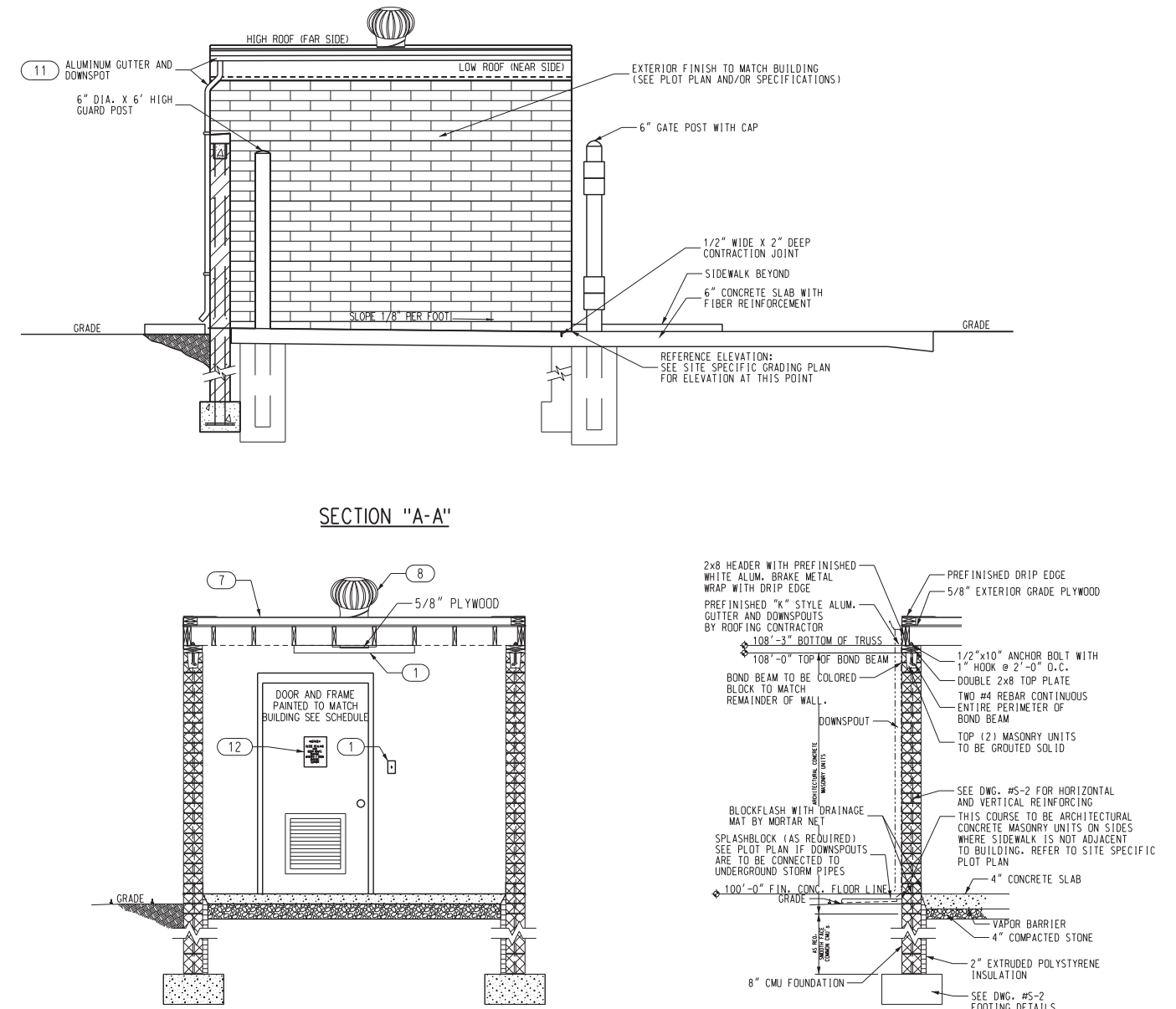
1/8" SLOPE PER FOOT

LATCHING DEVICE

(2) 3/4" DIA. 18" CANE BOTTOM STEEL BOLTS TO BE INSTALLED FOR HOLD OPENS

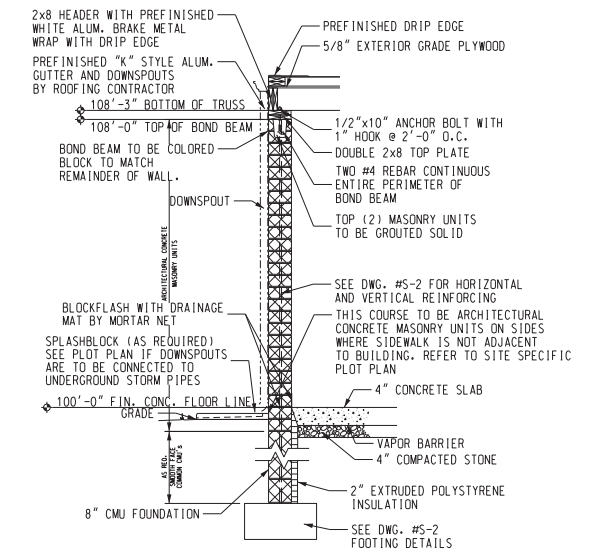
FRONT ELEVATION

SECTIONS



SECTION "A-A"

SECTION "B-B"



CONSTRUCTION NOTES

- CONTRACTOR SHALL FURNISH AND INSTALL TWO (2) FLUORESCENT 4' STRIP LIGHTS (COOPER - MODEL #SP-232-120-EBB1-1) (21 LUMPS, OR EQUIVALENT). LUMPS SHALL BE FURNISHED AND INSTALLED WITH CLEAR TUBE GUARDS (MCGIL MODEL #2295 OR EQUIVALENT) PROVIDE SINGLE-POLE WALL SWITCH (HUBBELL #1221, 50A/125 VAC, OR EQUIVALENT) AT DOOR, MOUNT @ 48" AFF. WITH STAINLESS STEEL COVER PLATE.
- FURNISH & INSTALL THREE (3) DUPLEX RECEPTACLES (HUBBELL #5362-1) ON A GFCI PROTECTED CIRCUIT. MOUNT @ 36" AFF.
- CONTRACTOR SHALL INSTALL ONE (1) 1/2" PVC CONDUIT WITH (4) #2 ANG AND #5 ANG END FROM THE STORAGE SHED TO THE BUILDING ELECTRICAL EQUIPMENT PANEL 'G'.
- DOOR SHALL NORMALLY SWING AWAY FROM THE MAIN BUILDING, SO THE SWING MAY BE REVERSED FROM WHAT IS SHOWN ON THIS DRAWING. SEE PLOT PLAN.
- INSTALL A 3/4" PVC CONDUIT WITH PULL STRING FOR FUTURE SECURITY DEVICE (STUBBED UP 12" AFF.). ROUTE TO SECURITY PANEL AS SHOWN ON THE BUILDING ELECTRICAL DRAWINGS, OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
- 4" FLOOR SLAB SHALL HAVE THE FOLLOWING SPECIFICATION: FIBERS SHALL BE 100% POLYPROPYLENE MULTIFILAMENT FIBERS MANUFACTURED FOR USE AS CONCRETE REINFORCEMENT. THEY SHALL BE 1/2" TO 3/4" IN LENGTH WITH AN ADDITION RATE OF 1-1/2 LB/CY OF CONCRETE. THE USE OF THE FIBERS SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
- SINGLE-PLY MEMBRANE ROOFING SYSTEM SHALL BE AS MANUFACTURED BY: DURALAST INC. 525 MORLEY DRIVE SAGINAW, MICHIGAN 48601 (800) 248-0260
- FURNISH AND INSTALL ONE (1) 12" WIND TURBINE, GALVANIZED BROWN AIR VENT 52607 OR EQUIVALENT.
- TRUSS TYPE CONTINUOUS LENGTH JOINT REINFORCEMENT (ALTERNATE OVERLAP EVERY OTHER COURSE) TO BE PLACED IN THE FIRST TWO COURSES, AND THE LAST TWO COURSES, BEGINNING AT THE FOOTING, AND EVERY OTHER COURSE BETWEEN REINFORCEMENT SHALL NOT BE CONTINUOUS THROUGH CONTROL JOINTS. REFER TO STD-SS-DET FOR CONSTRUCTION DETAILS.
- BLOCK WALL CORES NOT INDICATED FOR REINFORCING SHALL BE POURED FULL OF PERLITE GRANULAR INSULATION.
- PROVIDE A GUTTER AND DOWNSPOUT WHEN THE BACKSIDE OF THE SHED ROOF (OPPOSITE THE ENTRY DOOR) IS NEXT TO HARD IMPERVIOUS SURFACE (E.G. DUMPSTER AREA, SIDEWALK, PAVEMENT, ETC.). IF THE ADJACENT AREA IS A GRASS AREA, THEN THE GUTTER AND DOWNSPOUT CAN BE OMITTED.
- PLACE SIGN ON DOOR OR NEAR LIGHT SWITCH "CLOSE CEILING AND DOOR VENT DURING WINTER / OPEN DURING SUMMER."

GENERAL NOTES

- THE MINIMUM LAP FOR BOTH CONCRETE & MASONRY SPLICES SHALL BE THE FOLLOWING:
#4 - 2'-6"
#5 - 3'-0"
- STANDARD CONSTRUCTION TO BE QUIK-BRIK MASONRY UNITS - (TO MATCH BUILDING) LAID IN RUNNING BOND. SEE PLOT PLAN, SPECIFICATIONS AND/OR OWNER'S REPRESENTATIVE FOR VARIATIONS IN FINISH & COLORS.
- REFER TO GRADING PLAN FOR PAVEMENT ELEVATIONS.

DOOR AND HARDWARE SCHEDULE

- 1 - 3'-10" x 7'-4" x 5 3/4", 16 GAGE HOLLOW METAL FRAME, TO BE INTERNALLY PAINTED WITH RUST INHIBITIVE PRIMER
- 1 - 3'-6" x 7'-0" x 13/4" 18 GAGE HOLLOW METAL DOOR WITH 24" x 24" AIR LOUVERS 1400 SERIES WITH BIRD SCREEN AND RUSKIN MDB35-788 DAMPER WITH JACKSHAFT OPTION
- 1 1/2 - PAIR, STANLEY #FBB 179 HINGES x USP x 4 1/2" x 4 1/2"
- 1 - SARGENT #1431 OR HAGER #5200 DOOR CLOSER
- 1 - SARGENT #28-8L095 LL x 260 BORED LOCK
- 1 - REESE #5204A THRESHOLD
- 1 - REESE #323C SWEEP
- 1 - REESE #D569C WEATHERSTRIP

Speedway[®]
Prepared By:
Engineering and Construction Dept.
Enon, OH 45323

REVISIONS

NO.	DESCRIPTION

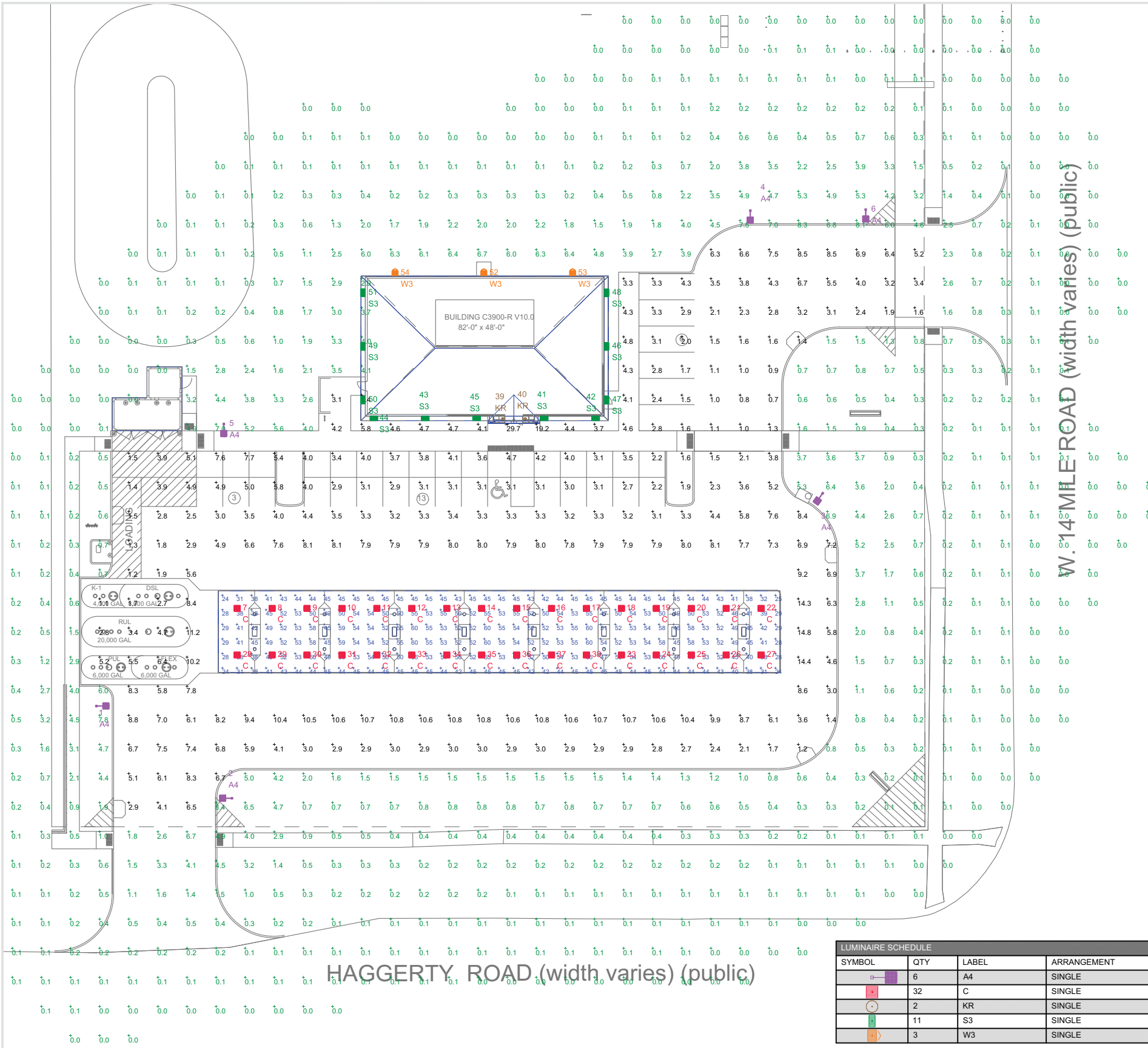
QUICK-BRIK DUMPSTER ENCLOSURE
SIDE BY SIDE WITH SMALL STORAGE
SHED

SCALE 0 1' 2'

3/8" = 1'-0"

DESIGN TEAM	DATE
DNR./BL. ENIX	02/01/16
PM./DP. J. SABOURIN	02/01/16
RVR./DP. E. NICHOLAS	02/01/16

DRWG. NO.
STD-SS-QB-C4



NOTE:
- ALL AREA LIGHTS ON 15 FT. POLE MOUNTED ON 2 FT. CONCRETE BASE

FOOTCANDLE LEVELS CALCULATED AT GRADE USING INITIAL LUMEN VALUES					
LABEL	AVG	MAX	MIN	AVG/MIN	MAX/MIN
PAVED AREA	5.05	29.7	0.7	7.21	42.43
UNDEFINED	0.85	8.4	0.0	N.A.	N.A.
UNDER CANOPY	47.47	60	24	1.98	2.50

LUMINAIRE LOCATION SUMMARY		
LUM NO.	LABEL	MTG. HT.
1	A4	17
2	A4	17
3	A4	17
4	A4	17
5	A4	17
6	A4	17
7	C	16.5
8	C	16.5
9	C	16.5
10	C	16.5
11	C	16.5
12	C	16.5
13	C	16.5
14	C	16.5
15	C	16.5
16	C	16.5
17	C	16.5
18	C	16.5
19	C	16.5
20	C	16.5
21	C	16.5
22	C	16.5
23	C	16.5
24	C	16.5
25	C	16.5
26	C	16.5
27	C	16.5
28	C	16.5
29	C	16.5
30	C	16.5
31	C	16.5
32	C	16.5
33	C	16.5
34	C	16.5
35	C	16.5
36	C	16.5
37	C	16.5
38	C	16.5
39	KR	10
40	KR	10
41	S3	12
42	S3	12
43	S3	12
44	S3	12
45	S3	12
46	S3	12
47	S3	12
48	S3	12
49	S3	12
50	S3	12
51	S3	12
52	W3	10.5
53	W3	10.5
54	W3	10.5

LUMINAIRE SCHEDULE									
SYMBOL	QTY	LABEL	ARRANGEMENT	LUMENS	LLF	ARR. WATTS	TOTAL WATTS	MANUFACTURER	DESCRIPTION
	6	A4	SINGLE	14251	1.040	139	834	Cree Inc	BXSPCHT4MEF57K-JULBZ
	32	C	SINGLE	13251	1.040	134	4288	CREE, INC.	CAN-304-SL-RS-06-E-UL-WH-700-57K
	2	KR	SINGLE	2483	1.040	37.4	74.8	Cree Inc	RLA-KR6-30L-40K-120V-10V
	11	S3	SINGLE	2960	1.040	37	407	Cree Inc.	SFT-228-5M-RM-03-D-UL-WH-350-IC
	3	W3	SINGLE	4031	1.040	42.96	128.88	Cree Inc	XSPWA03MC-UZ

REV.	BY	DATE	DESCRIPTION
R1	FNE	6/23/16	REVISED PER NEW SITE PLAN.

PERSONS USING THIS PROGRAM ARE ADVISED THAT THIS PROGRAM MAY CONTAIN ERRORS WHICH RED LEONARD ASSOCIATES, INC. OR ITS SOFTWARE PROVIDER HAVE NOT OBSERVED. IN ADDITION, THE USE OF THIS PROGRAM TO ADJUST THE LAYOUT OF LIGHTING AND ESTIMATING MATERIAL QUANTITIES IS NOT INTENDED TO REMOVE THE RESPONSIBILITY OF THE USER TO VERIFY THE COMPLETENESS OF ANY BILL OF MATERIAL AND THAT THE LAYOUT OR USE OF LUMINAIRE IS IN FULL ACCORDANCE WITH ALL LOCAL, STATE, OR FEDERAL STATUTES, REGULATIONS OR OTHER REQUIREMENTS, OR THE REQUIREMENTS OF ANY INSURANCE GROUP, ORGANIZATION OR CARRIER REGARDING LUMINAIRE AND THEIR APPLICATION.

FOR INFORMATIONAL AND ILLUSTRATION PURPOSES ONLY - ALL PRODUCT, SERVICE AND CORPORATE NAMES ARE THE PROPERTY OF THEIR RESPECTIVE OWNERS. PRODUCT SPECIFICATIONS AND QUANTITIES MAY VARY. THESE DOCUMENTS ARE THE PROPERTY OF RED LEONARD ASSOCIATES, INC. ANY USE OF THESE DOCUMENTS WITHOUT THE WRITTEN CONSENT OF JIMMY J. LEONARD OF RED LEONARD ASSOCIATES, INC. IS STRICTLY PROHIBITED.

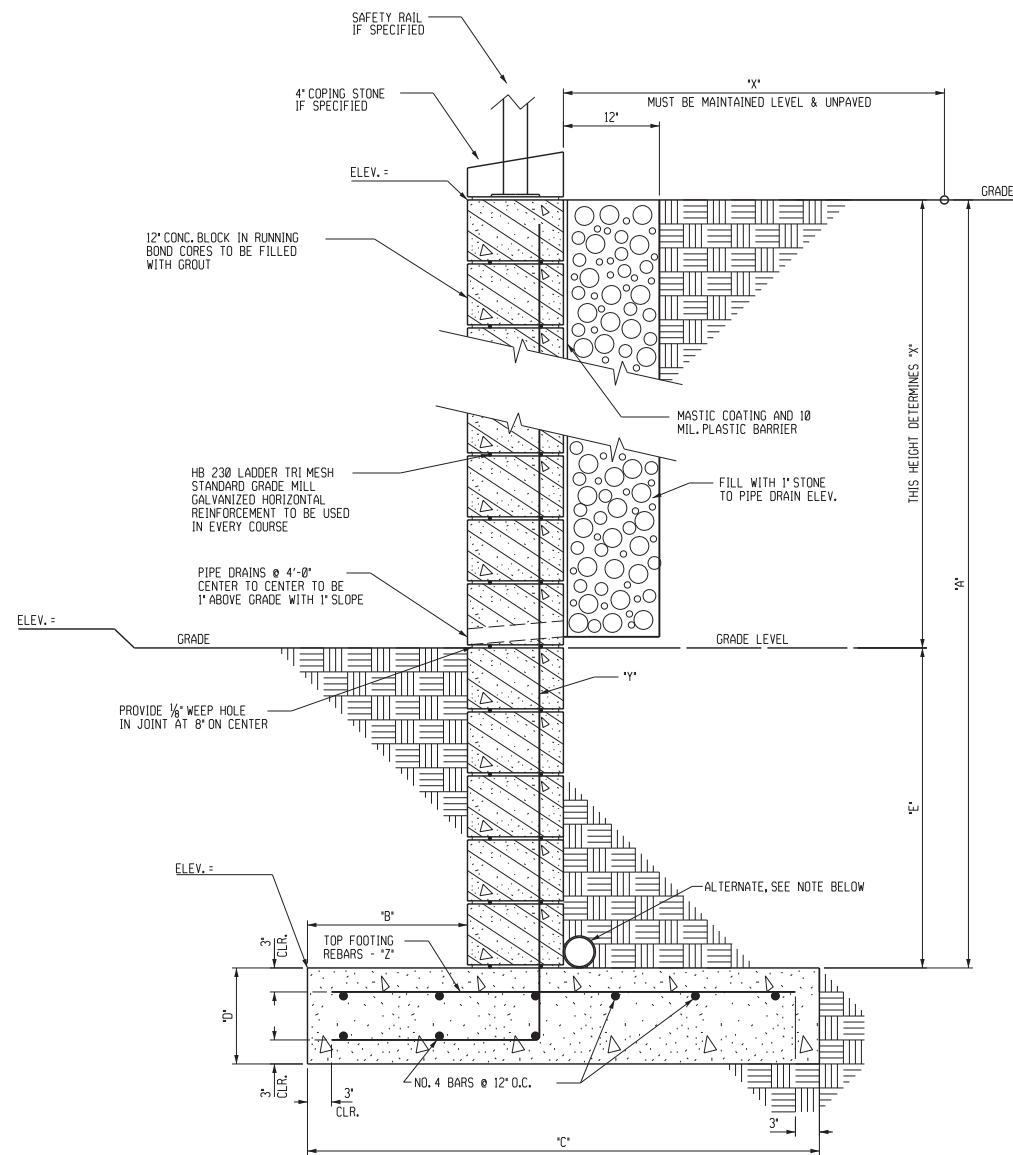
ILLUMINATION RESULTS SHOWN ON THIS LIGHTING APPLICATION ARE BASED ON PROJECT PARAMETERS PROVIDED BY THE MANUFACTURER LISTED, USED IN CONJUNCTION WITH LUMINAIRE TEST PROCEDURES CONDUCTED UNDER LABORATORY CONDITIONS. ACTUAL PROJECT CONDITIONS DIFFER FROM THESE PARAMETERS MAY AFFECT FIELD RESULTS. THE CUSTOMER IS RESPONSIBLE FOR VERIFYING COMPLIANCE WITH ANY APPLICABLE ELECTRICAL, LIGHTING, OR ENERGY CODE.

SCALE: 1" = 20'
LAYOUT BY: FNE
DWG SIZE: D
DATE: 3/30/16

PROJECT NAME:
SPEEDWAY #2224
NOVI, MI
DRAWING NUMBER:
RL-3637-S1-R1



WALL SECTIONS

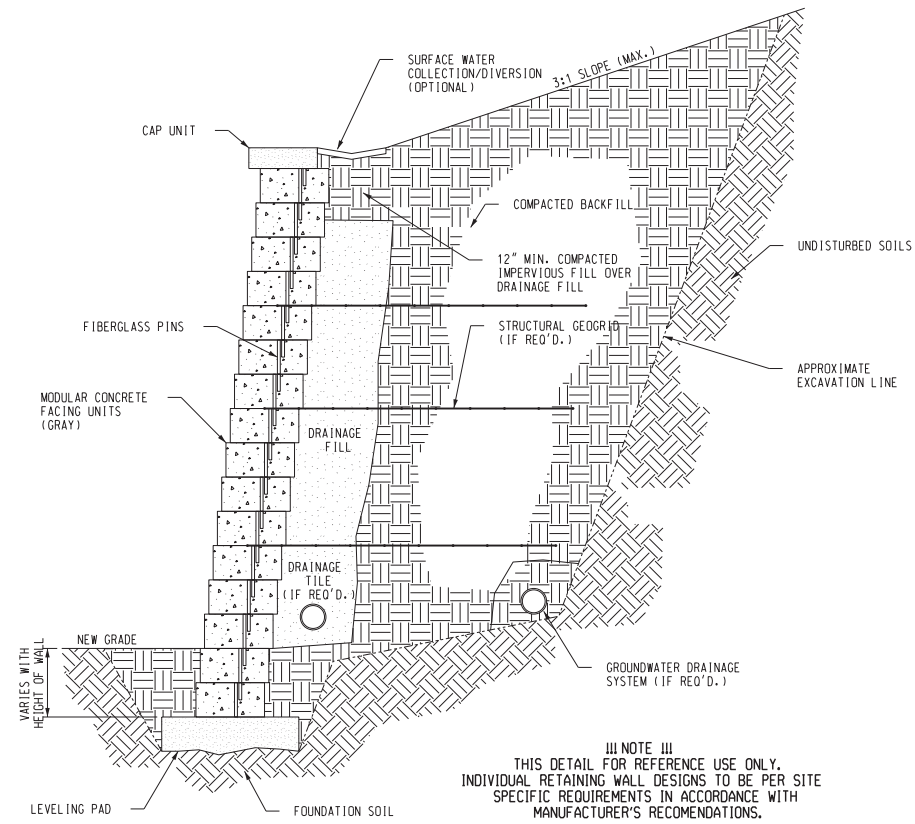


STANDARD CONCRETE MASONRY UNIT (CMU) RETAINING WALL SECTION
SCALE: 1" = 1'-0"

ALTERNATE: AN UNDERDRAIN SYSTEM SHALL BE USED INSTEAD OF THE PIPE DRAINS - WHEN SPECIFIED, THE UNDERDRAIN SHALL BE 4" PERFORATED AND FILTERED P.V.C. PIPE. THE PIPE SHALL BE LOCATED ON TOP OF THE BASE BEHIND THE WALL AS SHOWN, OR AS OTHERWISE SPECIFIED. THE PIPE SHALL OUTLET TO THE STORM DRAINAGE AS INDICATED ON THE PLOT PLAN. THE 1" STONE SHALL CONTINUE TO THE BOTTOM OF THE 4" PIPE.

REINFORCEMENT DETAILS					
A	B	C	D	E	
3'-4"	12"	2'-8"	9"	4"	NO. 4 @ 32" O.C.
4'-0"	12"	3'-0"	9"	5"	NO. 4 @ 32" O.C.
4'-8"	12"	3'-3"	10"	6"	NO. 4 @ 32" O.C.
5'-4"	14"	3'-8"	10"	10"	NO. 4 @ 24" O.C.
6'-0"	15"	4'-2"	12"	10"	NO. 4 @ 16" O.C.
6'-8"	16"	4'-6"	12"	12"	NO. 6 @ 24" O.C.
7'-4"	18"	4'-10"	12"	15"	NO. 7 @ 32" O.C.
8'-0"	20"	5'-4"	12"	16"	NO. 7 @ 24" O.C.
					NO. 4 @ 27" O.C.
					NO. 4 @ 27" O.C.
					NO. 4 @ 25" O.C.
					NO. 4 @ 30" O.C.
					NO. 4 @ 17" O.C.
					NO. 5 @ 26" O.C.
					NO. 5 @ 20" O.C.

NOTE: IF THE NOTES SHOWN ON THESE DRAWINGS CONFLICT WITH SPEEDWAY LLC STANDARDS SPECIFICATIONS, THEN THE NOTES ON THE DRAWINGS TAKE PRECEDENCE. PROJECT MGR. SHALL BE NOTIFIED.



CONCRETE MODULAR BLOCK SCREENING WALL
III NOTE III
THIS DETAIL FOR REFERENCE USE ONLY. INDIVIDUAL RETAINING WALL DESIGNS TO BE PER SITE SPECIFIC REQUIREMENTS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
MANUFACTURERS: VERSA-LOK, (1-800-778-4525) KEYSTONE, (1-800-747-8971) OR APPROVED EQUAL

NOTES AND DETAILS

WALL PREFERENCE:
ATTEMPT TO GRADE SITE SO THAT NO RETAINING WALL IS REQUIRED

GENERAL GUIDELINE TO FOLLOW (SEE MANUFACTURER'S DRAWINGS FOR SITE SPECIFIC DESIGN):
WALL HEIGHT 0'-6' - USE MODULAR RETAINING WALL SYSTEM (KEYSTONE BLOCK OR EQUIVALENT DESIGN)
WALL HEIGHT 6' AND HIGHER - USE MODULAR BLOCK RETAINING WALL (REDI-ROCK OR EQUIVALENT DESIGN) OR CAST-IN-PLACE RETAINING WALL

OTHER DESIGN CONSIDERATIONS:
EASE OF INSTALLATION
- POURED IN-PLACE CONCRETE - ON SITE CONTRACTORS HOWEVER WILL REQUIRE SIGNIFICANT PREP TIME
- MODULAR BLOCK WALL - QUICK PROCESS ONCE BASE LAYER IS COMPLETE HOWEVER GEOGRIDS AND OTHER AMENITIES (POLES, GUIDE RAIL POSTS, ETC.) MAY BE NECESSARY

SURROUNDING CONDITIONS
IS WALL COMPLETELY VERTICAL OR DOES WALL SKEWED BACK AT AN ANGLE
- NEARBY PROPERTY LINES AND EXISTING STRUCTURES WILL AFFECT WALL SLOPE AND SHOULD BE CONSIDERED IN DESIGN

NOTE
A VEHICULAR GUARD RAIL OR PEDESTRIAN HAND RAIL SHALL BE ADDED TO THE PLAN WHEN A 24" MINIMUM DROP RETAINING WALL IS USED IN PROXIMITY TO FREQUENTLY TRAVELED AREAS. ANY DROP OVER 10' SHALL REQUIRE SPECIAL CONSIDERATION AND CONSULT WITH A PE FOR APPROPRIATE DESIGN.

-WHEN DIRECTION OF TRAFFIC IS PARALLEL TO RETAINING WALL:
ADD GUARD RAIL WHEN DROP IS GREATER THAN 24"

-WHEN DIRECTION OF TRAFFIC IS PERPENDICULAR TO RETAINING WALL WITH ADJACENT SIDEWALK BETWEEN PAVEMENT AND RETAINING WALL:
ADD A NON-IMPACT PEDESTRIAN HAND RAIL ON TOP OF THE RETAINING WALL WHEN DROP IS GREATER THAN 2' AND LESS THAN 10'

-WHEN DIRECTION OF TRAFFIC IS PERPENDICULAR TO RETAINING WALL WITH ONLY GRASSY AREA BETWEEN PAVEMENT AND RETAINING WALL:
ADD GUARD RAIL IN YARD AREA PAST THE CURB THEN ADD A HAND RAIL ON TOP OF THE RETAINING WALL OR LANDSCAPING FEATURE AS A VISUAL DETERRENT WHEN DROP IS GREATER THAN 2' AND LESS THAN 10'

MASONRY:
MASONRY WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI/ASCE 530 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" AND "SPECIFICATION FOR MASONRY STRUCTURES", WITH THE FOLLOWING SUPPLEMENTAL REQUIREMENTS:

- MINIMUM 28-DAY COMPRESSIVE STRENGTH OF THE MASONRY (f'_m) SHALL BE 1,500 PSI.
- HOLLOW CONCRETE MASONRY UNITS SHALL BE GRADE N, TYPE J, NORMAL WEIGHT, IN ACCORDANCE WITH ASTM C90. MINIMUM 28-DAY COMPRESSIVE STRENGTH OF UNITS SHALL BE 2,000 PSI BASED ON THE NET AREA.
- MORTAR FOR EXTERIOR CONCRETE MASONRY SHALL BE TYPE S, IN ACCORDANCE WITH ASTM C270.
- MORTAR FOR INTERIOR MASONRY SHALL BE TYPE N IN ACCORDANCE WITH ASTM C270.
- MORTAR FOR SETTING BED AND GROUT SHALL BE TYPE M IN ACCORDANCE WITH ASTM C270.
- REINFORCING STEEL SHALL BE DEFORMED AND CONFORM TO ASTM A615, A616, OR A617, GRADE 60, WITH A MINIMUM YIELD STRESS (f_y) OF 60,000 PSI. REINFORCING SHALL BE HELD IN POSITION AT INTERVALS NOT TO EXCEED 192 BAR DIAMETERS.
- WIRE REINFORCING SHALL CONFORM TO ASTM A82. STANDARD TRUSS-TYPE DUR-O-WAL REINFORCING (OR APPROVED EQUAL). SEE GENERAL NOTES FOR PLACEMENT.

CONCRETE:
CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", WITH THE FOLLOWING SUPPLEMENTAL REQUIREMENTS:

- ALL CONCRETE SHALL BE NORMAL WEIGHT, WITH AGGREGATES CONFORMING TO ASTM C33.
- CONCRETE SHALL DEVELOP THE FOLLOWING 28-DAY COMPRESSIVE STRENGTH ($f'_c = 4,000$ PSI.):
FLOOR SLABS - 4,000 PSI
FOUNDATIONS - 4,000 PSI
- REINFORCING STEEL SHALL BE DEFORMED AND CONFORM TO A615, A616, OR A617, GRADE 60, WITH A MINIMUM YIELD STRESS (f_y) OF 60,000 PSI.
- CONCRETE COVER ON REINFORCING STEEL SHALL BE 3" UNLESS OTHERWISE NOTED.



NO.	REVISIONS	DATE

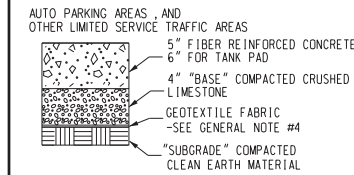
RETAINING WALL WORKSHEET
MECHANICALLY STABILIZED EARTH (MSE) WALLS

SCALE	0	14" = 1'-0"
DESIGN TEAM	DATE	
DCNR	E. NICHOLAS	02/01/16
P.MGR.	J. FRYE	02/01/16
RWR	B. BAIRD	02/01/16
DRWG. NO.	STD-SRW-1	

1/14/2016 8:32:52 AM C:\Users\jfray\appdata\local\temp\proj\csw\l\semmis_ssd_eng\p\code\010251\4510-SRW-1.dgn

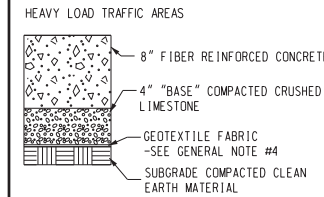
CONCRETE PAVEMENT INSTALLATION AND MAINTENANCE

NORMAL STRENGTH PAVEMENT DETAIL



- CONCRETE PAVING GENERAL NOTES:**
- ALL WORK SHALL BE IN CONFORMANCE WITH OWNER'S SPECIFICATIONS DIVISION 3 - CONCRETE.
 - SEE TANK AND PIPING DRAWING STD-PO-4.1 FOR ADDITIONAL REQUIREMENTS FOR TANK SLABS.
 - SEE DRAWING #STD-CIS-A FOR ADDITIONAL REQUIREMENTS FOR DISPENSER ISLAND SLABS.
 - GEOTEXTILE FABRIC (ONLY IF DIRECTED BY OWNER'S REPRESENTATIVE) 8 OZ./SQ. YD., NON WOVEN NEEDLE PUNCHED FABRIC
 - VERIFY WITH GEOTECHNICAL REPORT

HIGH STRENGTH PAVEMENT DETAIL

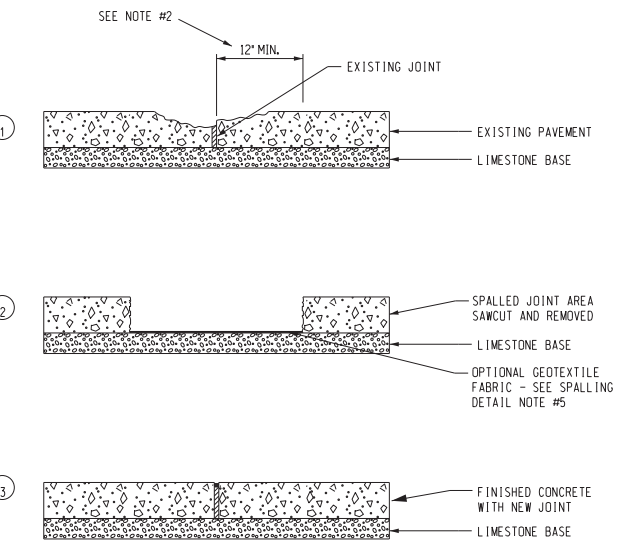


- CONCRETE PAVING MAINTENANCE NOTES:**
- CONTRACTOR SHALL REMOVE CONCRETE FROM FAILED AREA BY SAWCUTTING TO A DEPTH OF 1/4 THE ORIGINAL SLAB DEPTH AND REMOVING THE EXISTING CONCRETE. THE PATCH SHALL BE RECTANGULAR IN SHAPE AND SHALL EXTEND TO THE NEXT JOINT IF WITHIN 3'.
 - ANY JOINTS WHICH ARE REMOVED SHALL BE REPLACED IN THE SAME LOCATION AS THE OLD JOINTS - SEE JOINT DETAILS.
 - CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL DEBRIS PER LOCAL, STATE, AND FEDERAL REGULATIONS.
 - SEE NORMAL STRENGTH PAVEMENT, HIGH STRENGTH PAVEMENT DETAILS FOR FULL DEPTH PATCH REQUIREMENTS.

* CONTRACTOR MUST REFER TO THE GEOTECH REPORT FOR PAVEMENT AND FOUNDATION DESIGN AND CONSTRUCTION RECOMMENDATIONS

SPALLING DETAIL

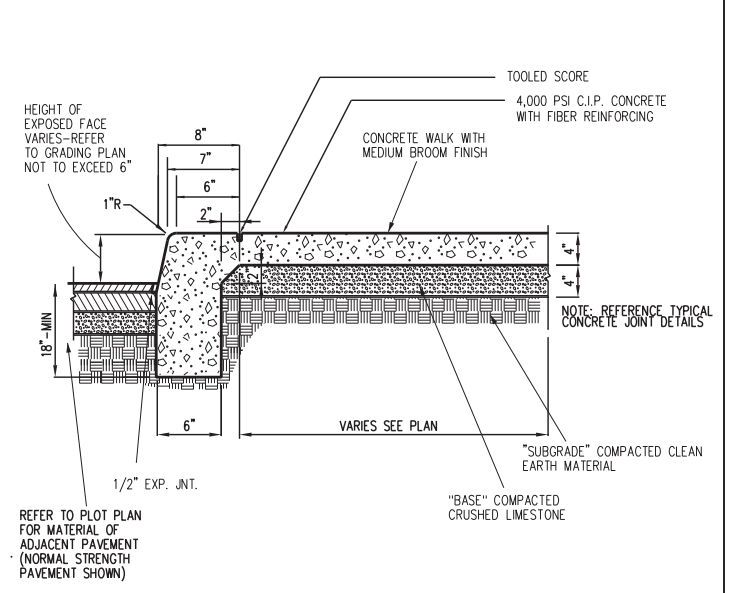
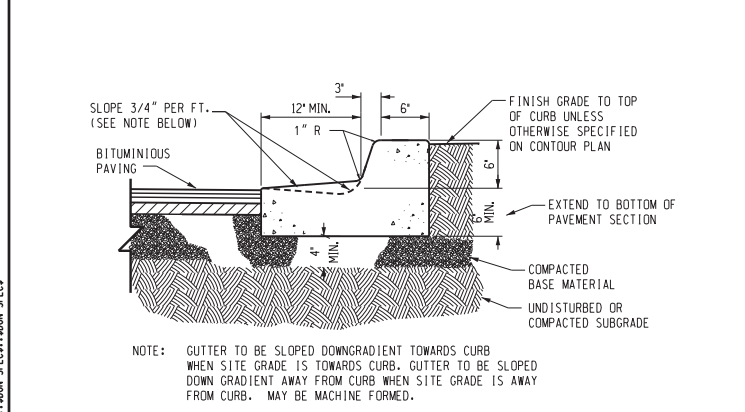
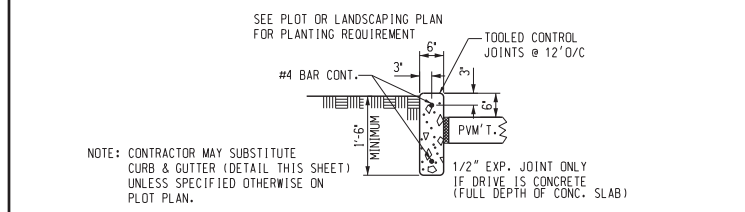
- SPALLING DETAIL NOTES:**
- SPALLING ALONG JOINTS SHALL BE TREATED WITH REPAIR SIMILAR TO THAT OF A FULL DEPTH PATCH.
 - SPALLED CONCRETE SHALL BE REMOVED IN AN AREA NO LESS THAN ONE FOOT FROM THE JOINT BUT LARGE ENOUGH TO REMOVE ALL UNSOUND CONCRETE AND REMOVED TO A DEPTH GREAT ENOUGH TO REACH SUITABLE SUBGRADE.
 - THE CONCRETE SHALL BE REPLACED PER THE FULL DEPTH PATCH DETAIL AND MARATHON'S TERMINAL SPECIFICATIONS.
 - THE JOINT SHALL BE REPLACED PER THE JOINT DETAIL TO COINCIDE WITH THE LOCATION OF THE OLD JOINT. THE JOINT SHALL EXTEND THE FULL DEPTH OF THE NEW PATCH.
 - GEOTEXTILE FABRIC (NEEDS TO BE DETERMINED BY OWNER'S REPRESENTATIVE) 8 OZ./SQ. YD. NEEDLE PUNCHED NON WOVEN, NEEDLE PUNCHED FABRIC



CONCRETE PAVEMENT JOINT DETAILS

TYPE OF JOINT	USE DESCRIPTION	DETAIL
A. CONTROL JOINT 1. SAWN 2. PREMOULD STRIP 3. HAND FORMED AND SAWN AT CRITICAL JOINTS	PLACE JOINTS SO AS TO UNIFORMLY DIVIDE SLABS INTO NOMINAL 12' X 12' (NORMAL STRENGTH) OR 16' X 16' (HIGH STRENGTH) SECTIONS. (SEAL CONTROL JOINTS ONLY IF SPECIFIED ON DRAWINGS OR BY OWNER'S REPRESENTATIVE.)	
B. EXPANSION JOINT (ISOLATION JOINT)	PLACE AGAINST CONCRETE TANK SLAB, ADJUTING ROADWAY PAVEMENTS AND STRUCTURES (BUILDINGS, CANOPY COLUMNS, CATCH BASINS, ETC.)	
C. CONSTRUCTION JOINT	CONSTRUCTION JOINTS MUST BE APPROVED BY OWNER'S REPRESENTATIVE. PLACE WHEN CONTINUOUS POUR OPERATIONS ARE SUSPENDED FOR MORE THAN 30 MINUTES.	

CONCRETE CURBS



INTEGRAL CURB AND WALK
NOTE: EXPOSED FACE OF CURB AND 4" WIDE STRIPE ATOP OF CURB ARE TO BE PAINTED WARNING YELLOW

ASPHALT PAVEMENT INSTALLATION AND MAINTENANCE

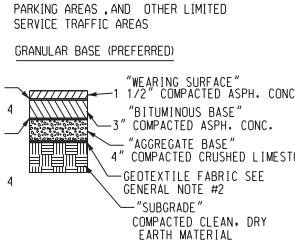
ASPHALT SEALING

- SURFACE CLEANING:** THE SURFACE TO BE SEALED SHALL BE FREE FROM DIRT AND OTHER FOREIGN MATTER. ANY ACCUMULATIONS OF OIL OR GREASE SHALL BE CLEANED OFF THE PAVEMENT WITH DETERGENT SOLUTION. THE RESIDUE OF WHICH SHALL BE THOROUGHLY WASHED AWAY WITH CLEAN WATER BEFORE SEALANT IS APPLIED.
- SEALING:** THE SEAL COATING MATERIAL SHALL BE COMPRISED OF A RUBBERIZED COAL-TAR PITCH EMULSION AND SHALL MEET OR EXCEED FEDERAL SPECIFICATION R-PP-355B. SUPPLIED IN CONCENTRATED FORM, IT SHALL BE DILUTED A MINIMUM OF 15% AND A MAXIMUM OF 25% WITH FRESH, CLEAN WATER. THE SEALANT MATERIAL SHALL CONTAIN 5-6 LBS. PER GALLON OF FINE, CLEAN, DRY SILICA SAND MEETING THE FOLLOWING GRADATION:

SIEVE SIZE	% PASSING
#16	100
#30	80-100
#50	10-60
#100	0-5

THE SEALANT SHALL BE APPLIED TO THE PAVEMENT IN TWO COATS AT THE RATE OF 0.08 TO 0.12 GALLONS PER SQUARE YARD. A LATEX ADDITIVE MAY ALSO BE ADDED TO THE SEALANT TO ALLOW FOR QUICKER DRYING TIME IN THOSE AREAS SPECIFIED BY OWNER'S REPRESENTATIVE.

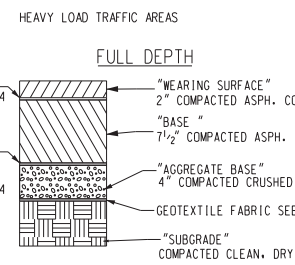
NORMAL STRENGTH PAVEMENT



- ASPHALT PAVEMENT GENERAL NOTES:**
- ALL WORK SHALL BE IN CONFORMANCE WITH OWNER'S SPECIFICATIONS FOR ASPHALTIC CONCRETE PAVING.
 - GEOTEXTILE FABRIC (NEEDS TO BE DETERMINED BY OWNER'S REPRESENTATIVE) 8 OZ./SQ. YD., NON WOVEN, NEEDLE PUNCHED FABRIC.
 - VERIFY WITH GEOTECHNICAL REPORT

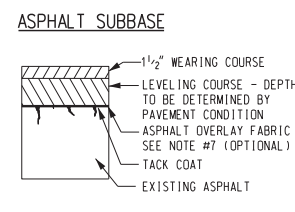
- ASPHALT PAVEMENT MAINTENANCE NOTES:**
- CONTRACTOR SHALL REMOVE ASPHALT FROM FAILED AREA BY SAWCUTTING A RECTANGULAR SHAPE AT LEAST 3' BEYOND THE DAMAGED AREA. TWO OF THE EDGES MUST BE AT RIGHT ANGLES TO THE DIRECTION OF TRAFFIC.
 - SUBGRADE MUST BE REMOVED TO SOLID GROUND AND REPLACED IN ACCORDANCE WITH THE FULL DEPTH PATCH DETAIL AND OWNER'S SPECIFICATIONS.
 - CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL DEBRIS PER LOCAL, STATE, AND FEDERAL REGULATIONS.
 - TACK COAT REQUIRED IF INSTALLING ON SEPARATE POURS. SEE SPEEDWAY SPECIFICATIONS FOR TIMING AND TEMPERATURE GUIDELINES FOR POURS.

HIGH STRENGTH PAVEMENT



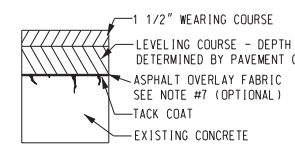
* CONTRACTOR MUST REFER TO THE GEOTECH REPORT FOR PAVEMENT AND FOUNDATION DESIGN AND CONSTRUCTION RECOMMENDATIONS

ASPHALT OVERLAY DETAIL

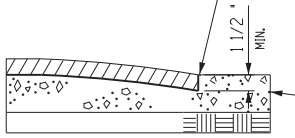


- OVERLAY DETAIL NOTES:**
- THE OVERLAY SHALL BE PLACED IN ACCORDANCE WITH SPEEDWAY'S SPECIFICATIONS.
 - ALL FAILED AREAS SHALL BE REPAIRED WITH PROPER PATCHES BEFORE OVERLAY IS PLACED.
 - IF THE SURFACE IS DISTORTED, THE CONTRACTOR WILL CONSTRUCT LEVELING COURSES TO RESTORE PROPER LINE AND CROSS SECTION.
 - THE PAVEMENT SHALL BE THOROUGHLY CLEANED AND A TACK COAT OF ASPHALT SHALL BE APPLIED BEFORE THE OVERLAY IS PLACED.
 - ALL VERTICAL SURFACES COMING IN CONTACT WITH THE OVERLAY SHALL BE SPRAYED OR PAINTED WITH A UNIFORM COATING OF EMULSIFIED ASPHALT IMMEDIATELY PRIOR TO PAVEMENT CONSTRUCTION.
 - CONTRACTOR IS RESPONSIBLE FOR ENSURING PROPER SURFACE DRAINAGE, PONDING OR PUDDLING OF WATER ON THE FINAL SURFACE WILL BE UNACCEPTABLE.
 - OPTIONAL ASPHALT OVERLAY FABRIC, DETERMINED BY ENGINEER, SHALL BE AMPOLVE NONWOVEN CONSTRUCTION FABRIC.

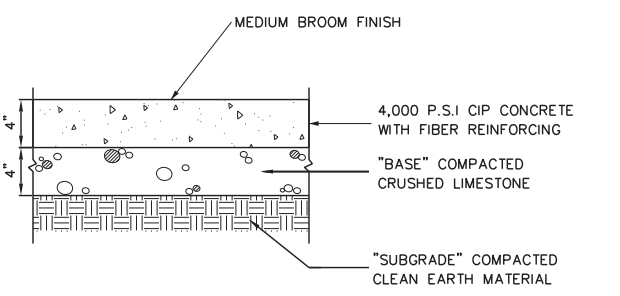
CONCRETE SUBBASE



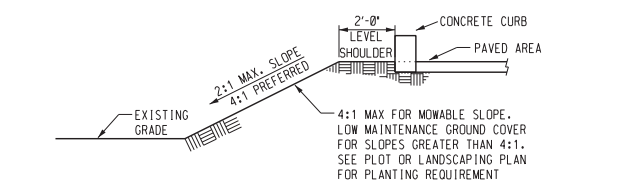
EDGE DETAIL



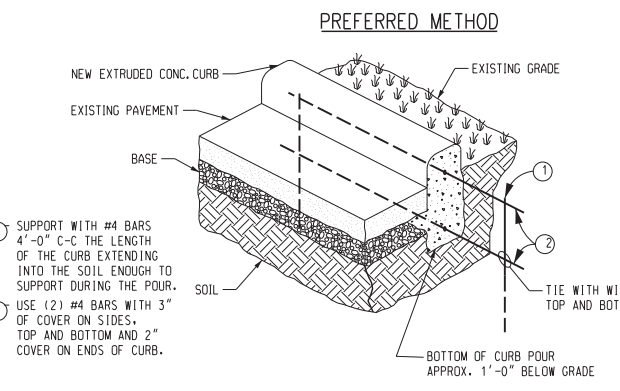
WHERE OVERLAY IS NOT SPECIFIED FOR ENTIRE EXISTING SURFACE, THE INTERFACE BETWEEN THE NEW OVERLAY AND THE OLD PAVEMENT SURFACE SHALL BE PER THE ABOVE DETAIL. FEATHERING OF THE ASPHALT TO MEET THE EXISTING PAVEMENT WILL NOT BE ACCEPTABLE.



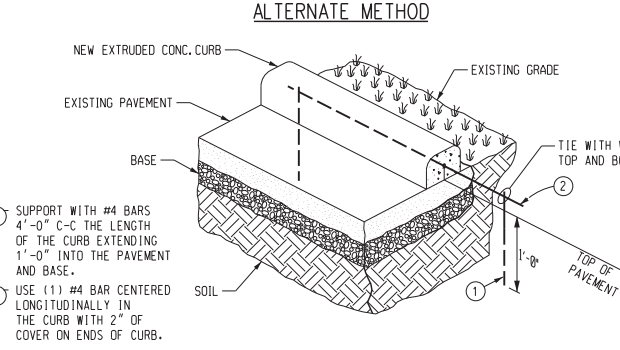
CONCRETE WALK PAVEMENT



PAVEMENT BERM



PREFERRED METHOD



ALTERNATE METHOD



COLD WEATHER CURB INSTALLATION

Speedway
Prepared By:
Civil Engineering and Construction Dept.
Enon, OH 45323

NO.	REVISIONS	DATE

PAVEMENT & CURBING DETAILS

SCALE	AS SHOWN
DESIGN TEAM	DATE
DCMR, E.NICHOLAS	02-01-16
P.MGR, J.FRYE	02-01-16
RWR, B.BAIRD	02-01-16
DWG. NO.	STD-CPC-1

STD-CPC-1, 457 FRAME 1, 457 FRAME 2, 457 FRAME 3, 457 FRAME 4, 457 FRAME 5, 457 FRAME 6, 457 FRAME 7, 457 FRAME 8, 457 FRAME 9, 457 FRAME 10, 457 FRAME 11, 457 FRAME 12, 457 FRAME 13, 457 FRAME 14, 457 FRAME 15, 457 FRAME 16, 457 FRAME 17, 457 FRAME 18, 457 FRAME 19, 457 FRAME 20, 457 FRAME 21, 457 FRAME 22, 457 FRAME 23, 457 FRAME 24, 457 FRAME 25, 457 FRAME 26, 457 FRAME 27, 457 FRAME 28, 457 FRAME 29, 457 FRAME 30, 457 FRAME 31, 457 FRAME 32, 457 FRAME 33, 457 FRAME 34, 457 FRAME 35, 457 FRAME 36, 457 FRAME 37, 457 FRAME 38, 457 FRAME 39, 457 FRAME 40, 457 FRAME 41, 457 FRAME 42, 457 FRAME 43, 457 FRAME 44, 457 FRAME 45, 457 FRAME 46, 457 FRAME 47, 457 FRAME 48, 457 FRAME 49, 457 FRAME 50, 457 FRAME 51, 457 FRAME 52, 457 FRAME 53, 457 FRAME 54, 457 FRAME 55, 457 FRAME 56, 457 FRAME 57, 457 FRAME 58, 457 FRAME 59, 457 FRAME 60, 457 FRAME 61, 457 FRAME 62, 457 FRAME 63, 457 FRAME 64, 457 FRAME 65, 457 FRAME 66, 457 FRAME 67, 457 FRAME 68, 457 FRAME 69, 457 FRAME 70, 457 FRAME 71, 457 FRAME 72, 457 FRAME 73, 457 FRAME 74, 457 FRAME 75, 457 FRAME 76, 457 FRAME 77, 457 FRAME 78, 457 FRAME 79, 457 FRAME 80, 457 FRAME 81, 457 FRAME 82, 457 FRAME 83, 457 FRAME 84, 457 FRAME 85, 457 FRAME 86, 457 FRAME 87, 457 FRAME 88, 457 FRAME 89, 457 FRAME 90, 457 FRAME 91, 457 FRAME 92, 457 FRAME 93, 457 FRAME 94, 457 FRAME 95, 457 FRAME 96, 457 FRAME 97, 457 FRAME 98, 457 FRAME 99, 457 FRAME 100

**Planning Commission
Action Summary
September 14, 2016**



PLANNING COMMISSION ACTION SUMMARY

CITY OF NOVI

Regular Meeting

September 14, 2016 7:00 PM

Council Chambers | Novi Civic Center | 45175 W. Ten
Mile (248) 347-0475

CALL TO ORDER

The meeting was called to order at 7:00 PM.

ROLL CALL

Present: Member Anthony, Member Baratta, Member Giacometti, Member Greco, Member Lynch, Chair Pehrson, Member Zuchlewski,

Also Present: Barbara McBeth, City Planner; Kirsten Mellem, Planner; Adrianna Jordan, Planner; Rick Meader, Landscape Architect; Jeremy Miller, Engineer; Beth Saarela, City Attorney.

APPROVAL OF AGENDA

Motion to approve the September 14, 2016 Planning Commission Agenda. *Motion carried 7-0.*

CONSENT AGENDA

1. ATI LAND HOLDINGS, LLC FAÇADE JSP 14-40

Approval of the request of ATI Land Holdings, LLC for a Section 9 Façade Waiver. The subject property is located in Section 14, on the west side of Meadowbrook Road, south of Twelve Mile Road. The subject property is approximately 12.56 acres and is located in the OST, Planned Office Service Technology District. The applicant is proposing to modify the façade materials for the 107,400 square foot ATI building now under construction. *Motion carried 7-0.*

2. GRAND RIVER SOCCER PARK JSP 16-20

Approval of the request of City of Novi and Suburban Showplace, LLC for Planning Commission's approval of a same-side driveway spacing waiver for the improvements associated with the Grand River Soccer Park located in the I-1, Light Industrial Zoning District, on the south side of Grand River Avenue, west of Taft Road. The applicant is proposing two soccer fields and associated parking on site. *Motion carried 7-0.*

PUBLIC HEARINGS

1. SPEEDWAY (14 MILE & HAGGERTY) JSP16-13 WITH REZONING 18.714

Public hearing at the request of McBride Dale Clarion for Planning Commission's recommendation to the City Council for rezoning of property in Section 1, located at the southwest corner of Fourteen Mile Road and Haggerty Road from B-3 (General Business) and OST (Office Service Technology) to B-3 (General Business) with a Planned Rezoning Overlay (PRO) Concept Plan. The subject property is approximately 2.03 acres and the applicant is proposing to raze the existing fuel station and construct a new 4,000 square foot convenience store and 5,400 square foot fuel canopy over 8 double-sided fuel dispensers.

In the matter of the request of McBride Dale Clarion for Speedway (14 Mile & Haggerty), JSP 16-13, with Zoning Map Amendment 18.714 motion to recommend approval to the City Council to rezone the subject property from B-3 (General Business) and OST (Office Service Technology) to B-3

(General Business) with a Planned Rezoning Overlay (PRO).

The recommendation shall include the following ordinance deviations for consideration by the City Council:

- a. A same side driveway spacing waiver to allow the driveway on 14 Mile Road to be located approximately 121 feet (200 feet required) from the neighboring driveway to the west to align with existing driveway on the north side of 14 Mile Road.
- b. An opposite side driveway spacing waiver to allow the driveway on Haggerty Road to be located approximately 40 feet (200 feet required) from the driveway to the south in order to align with the existing driveway on the east side of Haggerty Road.
- c. Section 9 Façade Waiver for the overage of Asphalt Shingles (maximum 25 percent; proposed 51 percent on east, 35 percent on west, 30 percent on south, 30 percent on north) on the building.
- d. Section 9 Façade Waiver for the overage of Flat Metal Panels (maximum 50 percent; proposed 71 percent on east, 71 percent on west, 59 percent on south, and 59 percent on north), and the underage of Brick (minimum 30 percent; proposed 20 percent on east, 20 percent on west) on the fuel canopy.
- e. Proposed loading zone is located in the front yard, the ordinance indicates it should be located in the interior side yard of a double frontage lot.
Proposed dumpster is located in the front yard, the ordinance indicates it should be located in the interior side yard of a double frontage lot.

If the City Council approves the rezoning, the Planning Commission recommends the following conditions be requirements of the Planned Rezoning Overlay Agreement:

- a. Acceptance of applicant's offer of public benefits as proposed:
 - i. Installation of a "Welcome to Novi" sign along the 14 Mile Road property line.
 - ii. Dedication of 10 feet of ROW along 14 Mile Road to the Road Commission of Oakland County.
 - iii. Redevelop the site with a building and canopy that is architecturally consistent with current zoning regulations.
 - iv. Pedestrian access is improved: (a) sidewalks will be extended the length of the expanded property and will close gaps in the sidewalk system and (b) sidewalk connections from the convenience store to 14 Mile Road and Haggerty Road are provided.
 - v. Safety improvements: (a) relocation of driveway away from 14 Mile and Haggerty intersection and to align with opposing driveway and (b) on-site circulation and visibility with new canopy.
 - vi. Preservation of a 10 foot wide wooded buffer along the east property line.
- b. Applicant shall provide a Noise Impact Statement with the Preliminary Site Plan submittal.
- c. All grades of drive approaches shall not exceed 2-percent within the first 25 feet of the intersection, as demonstrated with the next site plan submittal.
- d. All grading, storm sewer, and drainage areas shall meet all applicable City of Novi standards.
- e. Applicant complying with the conditions listed in the staff and consultant review letters.

This motion is made because:

- a. The Master Plan for Land Use objective to foster a favorable business climate is fulfilled by allowing an existing business to expand and provide 5 more jobs, \$235 thousand in sales tax, and \$3.1 million in investment.
- b. The Master Plan for Land Use objective to support and strengthen existing businesses is fulfilled by allowing an existing business to expand and develop a vacant parcel.
- c. The concept plan improves existing non-conformities (minimum site size from 0.7 acres to 2.03 acres, location of driveways away from intersection, and upgraded stormwater management).
- d. There is a negligible impact on the utilities due to expected utility demand reduced from 4 residential equivalent units to 3, minimal impact on available water capacity, pressure, and flow, and no apparent impact of the downstream sanitary sewer. The rebuild and expansion

of this site provides an update to the visual aesthetic at an entryway to the City, modern fuel dispensers and convenience store, and replacement of underground storage tanks.

Motion carried 7-0.

FELDMAN AUTOMOTIVE JSP16-31WITH REZONING 18.713

Public hearing at the request of Feldman Automotive for Planning Commission's recommendation to City Council for rezoning of property in Section 23, located on the south side of Grand River Avenue between Novi Road and Meadowbrook Road from RM-1 (Low-Density Multiple-Family) to P-1 (Vehicular Parking). The subject property is approximately 1.67 acres with 0.9 acres requested to be rezoned.

In the matter of the request of Feldman Automotive, JSP16-31, with Zoning Map Amendment 18.713, motion to recommend approval to City Council to rezone the subject property from RM-1 (Low-Density Multiple-Family) to P-1 (Vehicular Parking) for the following reasons:

1. The Master Plan for Land Use objective to foster a favorable business climate is fulfilled by allowing an existing business to expand,
2. The Master Plan for Land Use objective to support and strengthen existing businesses is fulfilled by allowing an existing business to expand and develop a vacant parcel,
3. This is a reasonable alternative to the recommended land use and will be consistent with zoning to the east,
4. There is no negative impact expected on public utilities as stated in the Engineering memo, and
5. It provides an opportunity for a long-standing business to expand at their current location.

Motion carried 7-0.

In the matter of the request of Feldman Automotive, JSP16-31, with Zoning Map Amendment 18.713, motion to recommend approval of the Rezoning Traffic Impact Study waiver, as the proposed rezoning is not expected to result in additional trips. *Motion carried 7-0.*

MATTERS FOR CONSIDERATION

1. INTRODUCE ZONING TEXT AMENDMENTS

Motion to approve the introduction of Zoning Text Amendments and for staff to set a public hearing. *Motion carried 7-0.*

2. PLANNING COMMISSION CALENDAR FOR 2017

Motion to approve the Planning Commission Calendar for 2017. *Motion carried 7-0.*

3. ELECTION OF OFFICERS & APPOINTMENTS TO COMMITTEES

Motion to elect Planning Commission Officers and Appointments to Committees. *Motion carried 7-0.*

4. APPROVAL OF THE JUNE 22, 2016 PLANNING COMMISSION MINUTES

Motion to approve the June 22, 2016 Planning Commission Minutes. *Motion carried 7-0*

5. APPROVAL OF THE JULY 13, 2016 PLANNING COMMISSION MINUTES

Motion to approve the July 13, 2016 Planning Commission Minutes. *Motion carried 7-0.*

ADJOURNMENT

The meeting was adjourned at 7:41 P.M.

**Actual language of the motions subject to review.*

PLANNING REVIEW



PLAN REVIEW CENTER REPORT

August 11, 2016

Planning Review

Speedway at 14 Mile & Haggerty
JSP16-13 with PRO Rezoning 18.714

Petitioner

McBride Dale Clarion

Review Type

Rezoning Request from OST (Office Service Technology) & B-3 (General Business) to B-3 (General Business) with Planned Rezoning Overlay (PRO)

Property Characteristics

- Site Location: Southwest corner of 14 Mile Rd. and Haggerty Rd. (Section 1)
- Site Zoning: OST – Office Service Technology
- Adjoining Zoning: North: Commercial (Commerce Charter Township);
Northeast: Commercial (West Bloomfield Township);
East: Commercial (Farmington Hills);
South: OST
West: OST
- Current Site Use: Speedway Gas Station and Convenience Store & Undeveloped
- Adjoining Uses: North: Shopping plaza;
Northeast: Shopping Plaza;
East: CVS, Shopping plaza;
South: Undeveloped
West: Flagstar Bank and Office plaza
- School District: Walled Lake Consolidated School District
- Site Size: 0.70 Acres (Existing) + 1.33 Acres (Rezoning) = 2.03 Acres (Total)

Project Summary

The petitioner is requesting a Zoning Map amendment for a 2.03 acre property on the west of Haggerty Road and south of 14 Mile Road (Section 1) from OST (Office Service Technology) & B-3 (General Business) to B-3 (General Business) utilizing the Planned Rezoning Overlay (PRO) option. The applicant states that the rezoning request is necessary to allow the rebuild of the Speedway gas station and convenience store on a larger site. This will allow the applicant to update and rebuild the whole site.

The PRO option creates a “floating district” with a conceptual plan attached to the rezoning of a parcel. As part of the PRO, the underlying zoning is proposed to be changed (in this case from OST to B-3) and the applicant enters into a PRO agreement with the City, whereby the City and the applicant agree to tentative approval of a conceptual plan for development of the site. Following final approval of the PRO concept plan and PRO agreement, the applicant will submit for Preliminary and Final Site Plan approval under standard site plan review procedures. The PRO runs with the land, so future owners, successors, or assignees are bound by the terms of the agreement, absent modification by the City of Novi. If the development has not begun within two (2) years, the rezoning and PRO concept plan expires and the agreement becomes void.

The applicant has proposed a 4,000 sq. ft. convenience store and 5,400 sq. ft. fuel canopy over 8 double-sided fuel dispensers. Razing the 2,417 sq. ft. existing building and 6 double-sided fuel

dispensers. As part of the redevelopment, existing driveways will be shifted away from the intersection and aligned with the driveways across 14 Mile Road and Haggerty Road. Speedway is proposing to dedicate approximately 10 ft. of ROW along 14 Mile Road. There will be an above-ground detention basin in the southwest corner of the enlarged property.

The **Master Plan and Zoning Committee** met on **August 17, 2016** to discuss the rezoning because it does not follow the Future Land Use Map recommendation for the site. The committee provided some comments regarding the plan.

Master Plan for Land Use

The Future Land Use Map of the 2010 City of Novi Master Plan for Land Use identifies this property and all adjacent land within the City as office research development technology. The proposal would follow objectives listed in the Master Plan for Land Use including the following:

1. Objective: The City, working with the development community and partners, should continue to foster a favorable business climate. The proposal would allow an existing business to expand, provide an update to the visual aesthetic at an entryway to the City, and provide an estimated 5 more jobs, \$5 million in sales volume, \$235 million in sales tax, and \$3.1 million in investment.

2. Objective: Support and strengthen existing businesses, as it is easier to keep a business in the City than attract a new one to fill a vacant facility. The proposal would allow an existing business to expand and develop a vacant parcel.

Existing Zoning and Land Use

The following table summarizes the zoning and land use status for the subject property and surrounding properties.

Land Use and Zoning: For Subject Property and Adjacent Properties

	Existing Zoning	Existing Land Use	Master Plan Land Use Designation
Subject Property	OST: Office Service Technology	Undeveloped	Office Research Technology Development
Northern Parcels	B-2: Community Business (Commerce Charter Twp)	Shopping Plaza (Grocery, Bank, Cleaners, Restaurants)	Community Commercial
Northeast Parcels	B-1: Local Business (West Bloomfield Twp)	Shopping Plaza	General Business
Eastern Parcels	B-2: Community Business (Farmington Hills)	Commercial (CVS), Shopping Plaza	Shopping Center Type Business
Southern Parcels	OST: Office Service Technology	Undeveloped	Office Research Technology Development
Western Parcels	OST: Office Service Technology	Bank, Office Plaza	Office Research Technology Development

Compatibility with Surrounding Land Use

The surrounding land uses are shown on the above chart. The compatibility of the proposed PRO concept plan with the zoning and uses on the adjacent properties should be considered by the Planning Commission in making the recommendation to City Council on the rezoning request with the PRO option.



The properties to the north, northeast, and east are developed commercial. All properties immediately adjacent to the south of the subject property are predominantly underdeveloped or vacant. The properties to the west are developed office.

The properties to the **north** across 14 Mile Rd. have a shopping plaza with a Kroger, Bank, and various other retail and restaurants.

The properties to the **northeast** across 14 Mile Rd. and Haggerty Rd. have a shopping plaza with a Walgreens, FedEx, and various other retail and restaurants.

The properties to the **east** across Haggerty Rd. have a stand-alone CVS and a shopping plaza with an animal hospital and various retail and restaurants.

The properties to the **south** are vacant, undeveloped land with some wetlands and woodlands.

The properties immediately adjacent to the **west** have a bank and medical office building.

Comparison of Zoning Districts

The following table provides a comparison of the current (OST) and proposed (B-3) zoning classifications.

	OST Zoning (Existing)	B-3 Zoning (Proposed)
Principal Permitted Uses	<ol style="list-style-type: none"> Professional office buildings, offices, and office sales and service activities Data processing and computer centers Laboratories Research, testing, design, and development, technical training, an design of pilot or experimental products Hotels and business motels Colleges, universities, and other such post-secondary institutions of higher learning, public or private, offering courses in general, technical, or religious education 	<ol style="list-style-type: none"> Retail businesses use Retail business service uses Dry cleaning establishments, or pick-up stations, dealing directly with the consumer Business establishments which perform services on the premises Professional services Retail business or retail business service establishments Professional and medical offices including laboratories Fueling station

	OST Zoning (Existing)	B-3 Zoning (Proposed)
	7. Motion picture, television, radio and photographic production facilities 8. Medical offices, including laboratories and clinics 9. Facilities for human care 10. Off-street parking lots 11. Publicly owned and operated parks, parkways and outdoor recreational facilities 12. Publicly-owned buildings, telephone exchange buildings, and public utility offices, but no including storage yard, transformer stations, substations or gas regulator stations 13. Financial institution uses with drive-in facilities as an accessory use only 14. Public or private indoor and private outdoor recreational facilities 15. Day care centers and adult day care centers 16. Secondary uses 17. Site down restaurants 18. Other uses similar to the above uses and subject to the same conditions noted 19. Accessory building and uses customarily incidental and integral to any of the above permitted uses	9. Auto wash 10. Bus passenger stations 11. New and used car salesroom, showroom, or office 12. Other uses similar to the above uses 13. Tattoo parlors 14. Publicly owned and operated parks, parkways, and outdoor recreational facilities 15. Accessory structures and uses customarily incidental to the above permitted uses 16. Public or private health and fitness facilities and clubs 17. Microbreweries 18. Brewpubs
Special Land Uses	1. Retail businesses use 2. Retail business service uses 3. Restaurants, including sit down 4. Fast food drive-through restaurants	1. Outdoor space for exclusive sale of new or used automobiles, campers, recreation vehicles, mobile home, or rental or trailers or automobiles 2. Motel 3. Business in the character of a drive-in or open front store 4. Veterinary hospitals or clinics 5. Plant materials nursery 6. Public or private indoor and private outdoor recreational facilities 7. Mini-lube or oil change establishments 8. Sale of produce and seasonal plant materials outdoors 9. Restaurant in the character of a fast food carryout, drive-in, fast food drive-through, or fast food sit-down
Building Height	46 ft. or 3 stories, whichever is less	30 ft.
Building Setbacks	All: 50 ft.	Front: 30 ft. Side: 15 ft. Rear: 20 ft.
Parking Setbacks	All: 20 ft.	Front: 20 ft. Side/Rear: 10 ft.

Infrastructure Concerns

• **Engineering**

The Staff Engineer has reviewed the PRO Concept Plan and request for rezoning. In summary, the concept plan provided with the request proposed a 3,936 sq. ft. retail building with a

demand of 3 REUs which is less than the current zoning. Therefore, the plan would have negligible impact on the utilities.

- **Traffic**

The City's traffic consultant has reviewed the PRO Concept Plan and performed an initial trip generation estimate and a Rezoning Traffic Impact Study is not warranted for this expansion.

Major Conditions of Planned Rezoning Overlay Agreement

The Planned Rezoning Overlay process involves a PRO concept plan and specific PRO conditions in conjunction with a rezoning request. The submittal requirements and the process are codified under the PRO ordinance (Section 7.13.2). Within the process, which is completely voluntary by the applicant, the applicant and City Council can agree on a series of conditions to be included as part of the approval.

The applicant is required to submit a conceptual plan and a list of terms that they are willing to include with the PRO agreement. The applicant has submitted a conceptual plan showing the general layout of the rebuilt convenience store and fuel station, detention pond, and landscaping. The applicant has provided a narrative describing the proposed public benefits.

1. Install a "Welcome to Novi" sign along the 14 Mile Road property line.
2. Dedicate 10 ft. of ROW along 14 Mile Road.
3. Redevelop the site with a building and canopy that is architecturally consistent with current zoning regulations.
4. Pedestrian access is improved: (a) Sidewalks will be extended the length of the expanded property and will close gaps in the sidewalk system and (b) sidewalk connections from the convenience store to 14 Mile Road and Haggerty Road are provided.
5. Safety improvements: (a) relocation of driveway away from 14 Mile and Haggerty intersection and to align with opposing driveway and (b) on-site circulation and visibility with new canopy.

Ordinance Deviations

Section 7.13.2.D.i.c(2) permits deviations from the strict interpretation of the Zoning Ordinance within a PRO agreement. These deviations must be accompanied by a finding by City Council that *"each Zoning Ordinance provision sought to be deviated would, if the deviation were not granted, prohibit an enhancement of the development that would be in the public interest, and that approving the deviation would be consistent with the Master Plan and compatible with the surrounding areas."* Such deviations must be considered by City Council, who will make a finding of whether to include those deviations in a proposed PRO agreement. The proposed PRO agreement would be considered by City Council after tentative approval of the proposed concept plan and rezoning.

The concept plan submitted with an application for a rezoning with a PRO is not required to contain the same level of detail as a preliminary site plan. Staff has reviewed the concept plan inasmuch detail as possible to determine what deviations from the Zoning Ordinance are currently shown. In many cases, additional information is required to make a determination if a deviation is required. The applicant may choose to revise the concept plan to better comply with the standards of the Zoning Ordinance, or may proceed with the plan as submitted with the understanding that those deviations would have to be approved by City Council in a proposed PRO agreement. The following are deviations from the Zoning Ordinance and other applicable ordinances requested by the applicant:

1. Asphalt shingle, flat metal panel, and brick Section 9 façade waiver.
2. Deviation to allow the driveway on 14 Mile Road to be located approximately 121 ft. from the neighboring driveway to the west. The variation is requested to allow the existing driveway on 14 Mile Road to align with the opposing driveway on the north side of 14 Mile Road. The

current driveway is approximately 119 ft. from the intersection, while the relocated driveway is approximately 203 ft. from the intersection. The new driveway location will improve safety and site distance at the intersection.

Applicant Burden under PRO Ordinance

The Planned Rezoning Overlay ordinance requires the applicant to demonstrate that certain requirements and standards are met. The applicant should be prepared to discuss these items, especially in part a, where the ordinance suggests that the enhancement under the PRO request would be unlikely to be achieved or would not be assured without utilizing the Planned Rezoning Overlay. Section 7.13.2.D.ii states the following:

- a. *Approval of the application shall accomplish, among other things, and as determined in the discretion of the City Council, the integration of the proposed land development project with the characteristics of the project area, and result in an enhancement of the project area as compared to the existing zoning, and such enhancement would be unlikely to be achieved or would not be assured in the absence of the use of a Planned Rezoning Overlay.*
- b. *Sufficient conditions shall be included on and in the PRO Plan and PRO Agreement on the basis of which the City Council concludes, in its discretion, that, as compared to the existing zoning and considering the site specific land use proposed by the applicant, it would be in the public interest to grant the Rezoning with Planned Rezoning Overlay; provided, in determining whether approval of a proposed application would be in the public interest, the benefits which would reasonably be expected to accrue from the proposal shall be balanced against, and be found to clearly outweigh the reasonably foreseeable detriments thereof, taking into consideration reasonably accepted planning, engineering, environmental and other principles, as presented to the City Council, following recommendation by the Planning Commission, and also taking into consideration the special knowledge and understanding of the City by the City Council and Planning Commission.*

Public Benefit under PRO Ordinance

Section 7.13.2.D.ii states that the City Council must determine that the proposed PRO rezoning would be in the public interest and the public benefits of the proposed PRO rezoning would clearly outweigh the detriments:

1. Install a "Welcome to Novi" sign along the 14 Mile Road property line.
2. Dedicate 10 ft. of right-of-way along 14 Mile Road.
3. Redevelop the site with a building and canopy that is architecturally consistent with current zoning regulations.
4. Pedestrian access is improved: (a) Sidewalks will be extended the length of the expanded property and will close gaps in the sidewalk system and (b) sidewalk connections from the convenience store to 14 Mile Road and Haggerty Road are provided.
5. Safety improvements: (a) relocation of driveway away from 14 Mile and Haggerty intersection and to align with opposing driveway and (b) on-site circulation and visibility with new canopy.

The proposed benefits should be weighed against the proposal to determine if they clearly outweigh any detriments of the proposed rezoning. Of the 5 benefits listed, three – architectural improvements, pedestrian access, and safety improvements – would be requirements of any new development on the subject property under the existing zoning. The two others – "Welcome to Novi" sign and right-of-way dedication along 14 Mile Road – would be considered enhancements that would benefit the public that would not be required as part of a development under the

existing zoning. However, it should be noted that while it is not required the dedication of right-of-way is typical of developments.

Recommendation

Approval of the **PRO Concept Plan is recommended** because the rezoning request fulfills two objectives of the Master Plan for Land Use by fostering a favorable business climate and strengthening an existing business. The rebuild and expansion of this site provides an update to the visual aesthetic at an entryway to the City, modern fuel dispensers and convenience store, and replacement of underground storage tanks. The rezoning will also have negligible impact on the utilities due to expected utility demand reduced from 4 residential equivalent units to 3, minimal impact on available water capacity, pressure, and flow, and no apparent impact of the downstream sanitary sewer. Finally, the plan improves existing non-conformities (minimum site size from 0.7 acres to 2.03 acres, location of driveways away from intersection, and upgraded stormwater management).

The plan conforms to the requirements of the Zoning Ordinance, with additional details required with the next site plan submittal. The PRO agreement and concept plan approval are step one in the process; the applicant will still need to seek the required approvals from Planning Commission for the Preliminary Site Plan, Section 9 Façade Waiver, and Stormwater Management Plan.

Other Reviews:

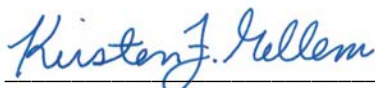
- a. Engineering Review: **Not recommended at this time** with changes needed on the next submittal.
- b. Landscape Review: **Recommended for Approval** with comments to be addressed on the next submittal.
- c. Wetland and Woodland Reviews: It was determined at Pre-Application and again with PRO Concept Plan submittal that there are no regulated wetlands or woodlands on site. No further review is needed.
- d. Traffic Review: **Recommended for Approval** with comments to be addressed on the next submittal.
- e. Facade Review: **Recommended for a Section 9 Façade Waiver**.
- f. Fire Review: **Recommended for Approval** with comments to be addressed on the next submittal.

Response Letter

This Site Plan is scheduled to go before the Planning Commission on September 14, 2016. Please provide the following **no later than September 7, 2016 at Noon** if you wish to keep the schedule.

1. A response letter addressing **ALL** the comments from **ALL** the review letters.
2. A PDF version of all the Site Plan drawings that were dated 7/6/2016 (less than 10 MB). **NO CHANGES MADE**.
3. A color rendering of the Site Plan, if any.

If the applicant has any questions concerning the above review or the process in general, do not hesitate to contact me at 248.347.0484 or kmellem@cityofnovi.org.



Kirsten Mellem, Planner



PLANNING REVIEW CHART: B-3 General Business District

Review Date: August 11, 2016
Review Type: Concept PRO
Project Name: Speedway at 14 Mile and Haggerty
Plan Date: 7.15.2016
Prepared by: Kirsten Mellem, Planner
Contact: E-mail: kmellem@cityofnovi.org Phone: 248.347.0484

Items in **Bold** need to be addressed by the applicant prior to the approval of the Preliminary Site Plan. Items underlined need to be addressed prior to the approval of the Final Site Plan.

Item	Required Code	Proposed	Meets Code	Comments
Zoning and Use Requirements				
Master Plan (adopted August 25, 2010)	Office Research Development Technology	Fueling Station and Retail Food	Yes	
Area Study	The site does not fall under any special category	NA	Yes	
Zoning (Effective Dec. 25, 2013)	B-3: General Business District & OST: Office Service Technology	B-3	Yes	Proposing PRO Rezoning (See Sec.7.13.2 for details)
Uses Permitted (Sec 3.1.12.B & C)	Sec 3.1.12.B Principal Uses Permitted. Sec 3.1.12.C Special Land Uses	Rebuild of fueling station with addition of retail food business	Yes	Permitted Use under B-3
Fueling Stations And Minor Automobile Service Establishments (Sec. 4.29)				
Curb Cuts for Entrances (Sec 4.29.1.A)	Entrances shall be no closer than 100 ft. from street intersections or from adjacent residential districts	Changes to entrances proposed, 100 ft. from intersection	Yes	
Minimum Site Size (Sec 4.29.1.B)	Minimum lot area shall be 1 acre	Combining lots to equal 2.03 acres	Yes	<u>Lot combination required prior to Final Site Plan approval</u>
Location of Fueling station (Sec 4.29.1.C)	<ul style="list-style-type: none"> - Minimize the impact on residential districts, OS-1, OSC or B-1 - Ample space for vehicles waiting for service or picked up after service - Sufficient stacking space shall be provided at the pump 	NA NA Show stacking spaces on site plan	NA NA Yes	

Item	Required Code	Proposed	Meets Code	Comments
Canopies (Sec 4.29.1.D) (Sec. 4.19.2.C.i)	- Attached canopies shall comply with building setback requirements	NA	NA	
	- Detached canopies shall comply with Section 4.19: Canopies shall be 15 ft. from Right-of-way	52 ft. proposed	Yes	
Height, bulk, density and area limitations (Sec 3.1.12)				
Frontage on a Public Street. (Sec. 5.12)	Frontage on a Public Street is required	14 Mile and Haggerty	Yes	
Minimum Zoning Lot Size (Sec 3.6.2.D)	Except where otherwise provided in this Ordinance, the minimum lot area and width, and the maximum percent of lot coverage shall be determined on the basis of off-street parking, loading, greenbelt screening, yard setback or usable open space.	2.03 acres Minimum required is 1 acre (per section 4.29)	Yes	
Open Space Area	---	---	---	---
Maximum % of Lot Area Covered (By All Buildings)	(Sec 3.6.2.D)		NA	
Building Height (Sec. 3.1.23.D)	30 ft.	23.6 ft. provided in project narrative	Yes	
Building Setbacks (Sec 3.1.23.D)				
Front (east)	30 ft.	137 ft.	Yes	
Exterior Side (north)	30 ft. (Sec. 3.6.2.C)	100 ft. and 110 ft.	Yes	
Interior Side (south)	15 ft.	108 ft.	Yes	
Rear (west)	20 ft.	110 ft.	Yes	
Parking Setback (Sec 3.1.23.D)				
Front (east)	20 ft.	108 ft.	Yes	
Exterior Side (north)	10 ft.	68 ft. and 78 ft.	Yes	
Interior Side (south)	10 ft.	38 ft.	Yes	
Rear (west)	10 ft.	111 ft.	Yes	
Note To District Standards (Sec 3.6.2)				

Item	Required Code	Proposed	Meets Code	Comments
Exterior Side Yard Abutting a Street (Sec 3.6.2.C)	All exterior side yards abutting a street shall be provided with a setback equal to the front yard setback requirement of the district in which located.	100 ft. proposed 30 ft. required	Yes	
Minimum Lot Area (Sec. 3.6.2.D)	The minimum lot area and width, and the maximum percent of lot coverage shall be determined on the basis of off-street parking, loading, greenbelt screening, yard setback or usable open space requirements	Proposed	Yes	
Off-Street Parking in Front Yard (Sec 3.6.2.E)	Off-street parking shall be permitted in the front yard, except that said parking shall observe the minimum off-street parking setback requirements in Sec. 3.1 and 5.5.3	Proposed	Yes	
Parking Setback from Residential District (Sec 3.6.2.L)	Wherever property directly abuts or is adjacent to residentially zoned property, the minimum parking setback shall be 20 ft.	NA	NA	
Wetland/ Watercourse Setback (Sec 3.6.2.M)	Refer to Sec 3.6.2 for more details.	NA	NA	
Parking setback screening (Sec 3.6.2.P)	Required parking setback area shall be landscaped per sec 5.5.3.	Landscape plan is provided	Yes	See landscape letter for additional details
Modification of parking setback requirements (Sec 3.6.2.Q)	Refer to Sec 3.6.2 for more details	None proposed	NA	
Parking, Loading, and Dumpster Requirements				
Number of Parking Spaces	1 space per 200 sq. ft. of usable floor area + accessory uses; 3 spaces minimum	38 parking spaces proposed	Yes	
Fueling Station without accessory service garage (Sec.5.2.12.E)	1 per fueling station 16 fueling stations 3,936/200 = 20 spaces 36 spaces required			

Item	Required Code	Proposed	Meets Code	Comments
Parking Space Dimensions and Maneuvering Lanes (Sec. 5.3.2)	<ul style="list-style-type: none"> - 90° Parking: 9 ft. x 19 ft. - 24 ft. two way drives - 9 ft. x 17 ft. parking spaces allowed along 7 ft. wide interior sidewalks as long as detail indicates a 4" curb at these locations and along landscaping 	All parking spaces are proposed to be 9 ft. x 19 ft. Proposed drives are 24 ft. wide	Yes	
Parking stall located adjacent to a parking lot entrance (public or private) (Sec. 5.3.13)	Shall not be located closer than twenty-five (25) feet from the street right-of-way (ROW) line, street easement or sidewalk, whichever is closer	NA	NA	
End Islands (Sec. 5.3.12)	<ul style="list-style-type: none"> - End Islands with landscaping and raised curbs are required at the end of all parking bays that abut traffic circulation aisles. - The end islands shall generally be at least 8 feet wide, have an outside radius of 15 feet, and be constructed 3' shorter than the adjacent parking stall as illustrated in the Zoning Ordinance 	None proposed	NA	
Barrier Free Spaces <i>Barrier Free Code (2012 Michigan Building Code)</i>	<ul style="list-style-type: none"> - 2 barrier free parking spaces required for 26-50 parking requirement - Every 6 or fraction of six accessible parking spaces, at least one shall be van-accessible 	1 van accessible spaces proposed	No	Provide one more ADA/Barrier Free parking space.
Barrier Free Space Dimensions <i>Barrier Free Code (2012 Michigan Building Code)</i>	<ul style="list-style-type: none"> - 8' wide with an 8' wide access aisle for van accessible spaces - 5' wide with a 5' wide access aisle for regular accessible spaces 	8 ft. wide spaces with 8 ft. wide access aisle proposed.	Yes	
Barrier Free Signs <i>Barrier Free Code</i>	One sign for each accessible parking space.	None proposed	Yes	
Minimum number of Bicycle Parking (Sec. 5.16.1)	2 spaces required for fueling stations	2 spaces proposed	Yes	

Item	Required Code	Proposed	Meets Code	Comments
Bicycle Parking General requirements (Sec. 5.16)	<ul style="list-style-type: none"> - No farther than 120 ft. from the entrance being served - When 4 or more spaces are required for a building with multiple entrances, the spaces shall be provided in multiple locations - Spaces to be paved and the bike rack shall be inverted "U" design - Shall be accessible via 6 ft. paved sidewalk 	20 ft. proposed	Yes	
		NA	NA	
		Proposed	Yes	
		7 ft. proposed	Yes	
Bicycle Parking Lot layout (Sec 5.16.6)	Parking space width: 6 ft. One tier width: 10 ft. Two tier width: 16 ft. Maneuvering lane width: 4 ft. Parking space depth: 2 ft. single, 2 ½ ft. double	6 ft. proposed	Yes	
Loading Spaces (Sec. 5.4.2)	<ul style="list-style-type: none"> - Loading, unloading space shall be provided in the rear yard at a ratio of 10 sq. ft. for each front foot of building - Except in the case of a double frontage lot, loading-unloading, as well as trash receptacles may be located in an interior side yard beyond the minimum side yard setback requirement of the district; location subject to approval by the City. 	820 sq. ft. of loading area required. (240+551+168 = 959 sq. ft. proposed)	Yes	Deviation in the PRO should be requested
		Located in the front yard	No	
Dumpster (Sec 4.19.2.F)	<ul style="list-style-type: none"> - Located in rear yard or interior side yard in case of double frontage - Attached to the building OR - No closer than 10 ft. from building if not attached - Not located in parking setback - If no setback, then it cannot be any closer than 10 ft, from property line. - Away from Barrier free Spaces 	Proposed in the front yard	No	Deviation in the PRO should be requested
		NA	NA	
		45 ft. from building	Yes	
		Not in setback, 38 ft. from lot line	Yes	
		NA	NA	
		Proposed away from barrier free	Yes	

Item	Required Code	Proposed	Meets Code	Comments
	except in industrial districts	5 ft. wide.		
Pedestrian Connectivity	Whether the traffic circulation features within the site and location of automobile parking areas are designed to assure safety and convenience of both vehicular and pedestrian traffic both within the site and in relation to access streets	Sidewalk connection to 14 Mile and Haggerty Roads provided.	Yes	
Building Code and Other Design Standard Requirements				
Building Code	Building exits must be connected to sidewalk system or parking lot.	Proposed	Yes	
Design and Construction Standards Manual	Land description, Sidwell number (metes and bounds for acreage parcel, lot number(s), Liber, and page for subdivisions).	Some details provided	No	Provide parcel numbers on the ALTA plans.
General layout and dimension of proposed physical improvements	Location of all existing and proposed buildings, proposed building heights, building layouts, (floor area in sq. ft.), location of proposed parking and parking layout, streets and drives, and indicate sq. ft. of pavement area (indicate public or private).	Provided	Yes	
Economic Impact	<ul style="list-style-type: none"> - Total cost of the proposed building & site improvements - Number of anticipated jobs created (during construction & after building is occupied) 	<ul style="list-style-type: none"> - Redevelopment would increase from 13 to 20 employees. - Sales volume would increase from \$11.7 million to \$16.25 million. - Sales tax generation would increase from \$614,000 to \$850,000. - Estimated redevelopment cost is \$3.1 million. 	Yes	
Development/ Business Sign	<ul style="list-style-type: none"> - Signage if proposed requires a permit. - Exterior Signage is not 	2 signs proposed; one ground and one wall	NA	<u>For sign permit information contact Jeannie Niland</u>

Item	Required Code	Proposed	Meets Code	Comments
	regulated by the Planning Division or Planning Commission.			<u>248-347-0438.</u>
Rezoning Signage Site Plan and Development Manual, Chapter 3	Applicant must install rezoning sign a minimum of 15 days prior to the Planning Commission Hearing. Dimensions and locations specified in the Site Plan Manual.	Proposed	No	Provide the height of the letters on the sign.
Lighting and Photometric Plan (Sec. 5.7)				
Intent (Sec. 5.7.1)	Establish appropriate minimum levels, prevent unnecessary glare, reduce spillover onto adjacent properties & reduce unnecessary transmission of light into the night sky	Photometric plan provided.	Yes	
Lighting Plan (Sec. 5.7.A.1)	Site plan showing location of all existing & proposed buildings, landscaping, streets, drives, parking areas & exterior lighting fixtures	Proposed	Yes	
Lighting Plan (Sec.5.7.A.2)	Specifications for all proposed & existing lighting fixtures: <ul style="list-style-type: none"> ▪ Photometric data ▪ Fixture height ▪ Mounting & design ▪ Glare control devices ▪ Type & color rendition of lamps ▪ Hours of operation Photometric plan illustrating all light sources that impact the subject site, including spill-over information from neighboring properties	Fixture height is proposed to be 15 ft. pole on 2 ft. concrete pad; total is 17 ft. high The store operation is 24/7 and lighting associated with store operation from dusk to dawn.	Yes	
Required Conditions (Sec. 5.7.3.A)	Height not to exceed maximum height of zoning district (or 25 ft. where adjacent to residential districts or uses)	30 ft. maximum 17 ft. proposed	Yes	
Required Conditions (Sec. 5.7.3.B)	<ul style="list-style-type: none"> ▪ Electrical service to light fixtures shall be placed underground ▪ Flashing light shall not be 	Proposed	Yes	

Item	Required Code	Proposed	Meets Code	Comments
	permitted <ul style="list-style-type: none"> ▪ Only necessary lighting for security purposes & limited operations shall be permitted after a site's hours of operation 			
Required Conditions (Sec. 5.7.3.E)	Average to minimum light level of the surface being lit to the lowest light of the surface being lit not to exceed 4:1	Average light proposed is 2.16:1	Yes	
Required Conditions (Sec. 5.7.3.F)	Use of true color rendering lamps such as metal halide is preferred over high & low pressure sodium lamps	LED proposed	Yes	
Min. Illumination (Sec. 5.7.3.k)	<ul style="list-style-type: none"> ▪ Parking areas: 0.2 min ▪ Loading & unloading areas: 0.4 min ▪ Walkways: 0.2 min ▪ Building entrances, frequent use: 1.0 min ▪ Building entrances, infrequent use: 0.2 min 	Lighting minimums and maximums proposed	Yes	
Max. Illumination adjacent to Non-Residential (Sec. 5.7.3.K)	When site abuts a non-residential district, maximum illumination at the property line shall not exceed 1 foot candle	NA	NA	
Cut off Angles (Sec. 5.7.3.L)	<ul style="list-style-type: none"> ▪ Cut off angles of fixtures must be 90° adjacent to residential districts ▪ Max illumination at the property line shall not exceed 0.5 foot candle 	NA	NA	

NOTES:

1. This table is a working summary chart and not intended to substitute for any Ordinance or City of Novi requirements or standards.
2. The section of the applicable ordinance or standard is indicated in parenthesis. Please refer to those sections in Article 3, 4, and 5 of the zoning ordinance for further details.
3. Please include a written response to any points requiring clarification or for any corresponding site plan modifications to the City of Novi Planning Division with future submittals.

ENGINEERING REVIEW



PLAN REVIEW CENTER REPORT

08/12/2016

Engineering Review

Speedway - Rebuild - PRO
JSP16-0013

Applicant

EMRO MARKETING CO

Review Type

Concept Plan

Property Characteristics

- Site Location: S. of 14 Mile Rd. and W. of Haggerty Rd.
- Site Size: 2.03 acres
- Plan Date: 07/15/16
- Design Engineer:

Project Summary

- Construction of an approximately 3,936 square-foot retail building and associated parking. Site access would be provided by new curb cuts onto 14 Mile Rd. and Haggerty Rd. replacing the existing curb cuts closer to the intersection. The 5/6-foot wide sidewalks along the 14 Mile Rd. and Haggerty Rd. frontages would be completed.
- Water service would be provided by 1 or 1.5-inch domestic lead from the existing 8-inch water main stub on the south side of 14 Mile Rd.
- Sanitary sewer service would be provided a 6-inch sanitary lead from the existing sanitary sewer on the south side of 14 Mile Rd.
- Storm water would be collected by a single storm sewer collection system and detained in an on-site basin.

Recommendation

Approval of the Concept Plan and the Concept Storm Water Management Plan is NOT recommended.

Comments:

The Concept Plan does not meet the general requirements of Chapter 11 of the Code of Ordinances, the Storm Water Management Ordinance and/or the Engineering Design Manual. The following items must be addressed prior to resubmittal:

1. The grade of the drive approach shall not exceed 2-percent within the first 25 feet of the intersection. The drive on Haggerty is shown at 9.2-percent. Consider alternate drive locations to reduce the drive slope.
2. Revise the grading, storm sewer, and drainage areas to capture more of the southern portion of the site.

Additional Comments (to be addressed prior to the Final Site Plan submittal):

General

3. Provide a note on the plans that all work shall conform to the current City of Novi standards and specifications.
4. The City standard detail sheets are not required for the Final Site Plan submittal. They will be required with the Stamping Set submittal. They can be found on the City website (www.cityofnovi.org/DesignManual).
5. The plans are not to the specified scale.
6. Provide a minimum of two ties to established section or quarter section corners.
7. **A right-of-way permit will be required from the City of Novi and Oakland County.**
8. Soil borings shall be provided for a preliminary review of the constructability of the proposed development (roads, basin, etc.). Borings identifying soil types, and groundwater elevation should be provided at the time of Preliminary Site plan.
9. Clearly distinguish between proposed improvements and existing features of the site.
10. Provide a traffic control sign table listing the quantities of each sign type proposed for the development. Provide a note along with the table stating all traffic signage will comply with the current MMUTCD standards.
11. Provide a note that compacted sand backfill shall be provided for all utilities within the influence of paved areas, and illustrate on the profiles.
12. Provide a construction materials table on the Utility Plan listing the quantity and material type for each utility (water, sanitary and storm) being proposed.
13. Provide a note stating if dewatering is anticipated or encountered during construction a dewatering plan must be submitted to the Engineering Department for review.

Water Main

14. The proposed water lead is connecting to a water main that is served by Commerce Township. Contact Commerce Township for review and any additional requirements.

Sanitary Sewer

15. Verify the location of the existing sanitary sewer.
16. Provide the size of the existing sanitary sewer.

17. Note on the construction materials table that 6-inch sanitary leads shall be a minimum SDR 23.5, and mains shall be SDR 26.
18. Provide a note on the Utility Plan stating the sanitary lead will be buried at least 5 feet deep where under the influence of pavement.
19. Provide the slope of the proposed sanitary lead. A minimum slope of 1% is required.

Storm Sewer

20. Provide type of H.D.P.E pipe proposed for storm sewer.
21. H.D.P.E. pipe is not permitted in the R.O.W. Storm sewer in the R.O.W. must be class IV R.C.P.
22. Provide profiles for all storm sewer 12-inches or larger.
23. A minimum cover depth of 3 feet shall be maintained over all storm sewers. Currently, a few pipe sections do not meet this standard. Grades shall be elevated and minimum pipe slopes shall be used to maximize the cover depth. In situations where the minimum cover cannot be achieved, Class V pipe must be used with an absolute minimum cover depth of 2 feet. An explanation shall be provided where the cover depth cannot be provided.
24. The structure numbers do not appear to match the callouts on the table on sheet CU.

Storm Water Management Plan

25. The Storm Water Management Plan for this development shall be designed in accordance with the Storm Water Ordinance and Chapter 5 of the new Engineering Design Manual.
26. Provide drawings, details, and a cross-section for the proposed basin outlet.
27. An adequate maintenance access route to the basin outlet structure and any other pretreatment structures shall be provided (15 feet wide, maximum slope of 1V:5H, and able to withstand the passage of heavy equipment). Verify the access route does not conflict with proposed landscaping.
28. Provide a 5-foot wide stone bridge allowing direct access to the standpipe from the bank of the basin during high-water conditions (i.e. stone 6-inches above high water elevation). Provide a detail and/or note as necessary.
29. Provide an access easement for maintenance over the storm water detention system and the pretreatment structure. Also, include an access easement to the detention area from the public road right-of-way.
30. The primary outlet standpipe shall be designed with a secondary outer pipe with numerous holes. The stone filter would rest against this outer pipe and would help protect the design standpipe from clogging.
31. Provide release rate calculations for the three design storm events (first flush, bank full, 100-year).
32. Provide a soil boring in the vicinity of the storm water basin to determine soil conditions and to establish the high water elevation of the groundwater table.

33. A 4-foot wide safety shelf is required one-foot below the permanent water surface elevation within the basin.
34. Provide a cross-section of the basin.
35. Clearly show the emergency overland flow route for the proposed basin.
36. If a wet basin is proposed with a 3 foot permeant water level.

Paving & Grading

37. Provide a note on the Grading Plan stating the right-of-way pathway will match existing grades at both ends.
38. Provide cross-sections of the proposed pavement.
39. The right-of-way sidewalk shall continue through the drive approach. If like materials are used for each, the sidewalk shall be striped through the approach. The sidewalk shall be increased to 8-inches thick along the crossing or match the proposed cross-section if the approach is concrete. The thickness of the sidewalk shall be increased to 8 inches across the drive approach. Provide additional spot grades as necessary to verify the maximum 2-percent cross-slope is maintained along the walk.
40. The City standard straight-faced curb (MDOT C-4 curb detail) shall be provided. Revise details accordingly.
41. Provide top of curb/walk and pavement/gutter grades to indicate height of curb adjacent to parking stalls or drive areas.
42. Curbing and walks adjacent to the end of 17-foot stalls shall be reduced to 4-inches high, rather than the standard 6-inch height to be provided adjacent to 19-foot stalls. Provide additional details as appropriate.

Off-Site Easements

43. Any off-site utility easements anticipated must be executed by both parties **prior to final approval of the plans**. Drafts of the easement shall be submitted at the time of the Preliminary Site Plan submittal for review, and shall be approved by the City prior to final signatures.
 - a. A temporary grading easement is required from the property owner to the south.

The following must be provided at the time of Concept Plan resubmittal:

44. A letter from either the applicant or the applicant's engineer must be submitted with the revised concept highlighting the changes made to the plans addressing each of the comments listed above and indicating the revised sheets involved.

The following must be submitted at the time of Final Site Plan submittal:

45. An itemized construction cost estimate must be submitted to the Community Development Department at the time of Final Site Plan submittal for the determination of plan review and construction inspection fees. This estimate should only include the civil site work and not any costs associated with construction of the building or any demolition work. **The cost estimate must be itemized** for each utility (water, sanitary, storm sewer), on-site paving, right-of-

way paving (including proposed right-of-way), grading, and the storm water basin (basin construction, control structure, pretreatment structure and restoration).

The following must be submitted at the time of Stamping Set submittal:

46. A draft copy of the maintenance agreement for the storm water facilities, as outlined in the Storm Water Management Ordinance, must be submitted to the Community Development Department with the Final Site Plan. Once the form of the agreement is approved, this agreement must be approved by City Council and shall be recorded in the office of the Oakland County Register of Deeds.
47. Executed copies of any required off-site utility easements must be submitted to the Community Development Department.

The following must be addressed prior to construction:

48. A pre-construction meeting shall be required prior to any site work being started. Please contact Sarah Marchioni in the Community Development Department to setup a meeting (248-347-0430).
49. A City of Novi Grading Permit will be required prior to any grading on the site. This permit will be issued at the pre-construction meeting. Once determined, a grading permit fee must be paid to the City Treasurer's Office.
50. A Soil Erosion Control Permit must be obtained from the City of Novi. Contact Sarah Marchioni in the Community Development Department (248-347-0430) for forms and information.
51. A permit for work within the right-of-way of 14 Mile Rd. and Haggerty Rd. must be obtained from the City of Novi. The application is available from the City Engineering Division and should be filed at the time of Final Site Plan submittal. Please contact the Engineering Division at 248-347-0454 for further information.
52. A permit for work within the right-of-way of 14 Mile Rd. and Haggerty Rd. must be obtained from the Road Commission for Oakland County. Please contact the RCOC (248-858-4835) directly with any questions. The applicant must forward a copy of this permit to the City. Provide a note on the plans indicating all work within the right-of-way will be constructed in accordance with the Road Commission for Oakland County standards.
53. Construction Inspection Fees to be determined once the construction cost estimate is submitted must be paid prior to the pre-construction meeting.
54. A storm water performance guarantee, equal to 1.2 times the amount required to complete storm water management and facilities as specified in the Storm Water Management Ordinance, must be posted at the Treasurer's Office.
55. A street sign financial guarantee in an amount to be determined (\$400 per traffic control sign proposed) must be posted at the Treasurer's Office.

56. Permits for the construction of each retaining wall must be obtained from the Community Development Department (248-347-0415).

To the extent this review letter addresses items and requirements that require the approval of or a permit from an agency or entity other than the City, this review shall not be considered an indication or statement that such approvals or permits will be issued.

Please contact Jeremy Miller at (248) 735-5694 with any questions.

A handwritten signature in black ink that reads "Jeremy J. Miller". The signature is written in a cursive style and is positioned above a solid horizontal line.

cc: Rob Hayes, Engineering
Kirsten Mellem, Community Development

MEMORANDUM



TO: BARBARA MCBETH, CITY PLANNER
FROM: JEREMY MILLER, STAFF ENGINEER *JM*
SUBJECT: REVIEW OF REZONING IMPACT ON PUBLIC UTILITIES
REZONING 18.709, SPEEDWAY PRO
DATE: AUGUST 10, 2016

The Engineering Division has reviewed the planned rezoning overlay (PRO) request for the 1.33 gross acres located on the west side of Haggerty Road and south side of 14 Mile Road. The applicant is requesting to rezone 1.33 acres from OST to B-3 as part of a planned rezoning overlay. The Master Plan for Land Use indicates a master planned density of 2.8 units per acre, equivalent to the current B-3 zoning on the property. While the applicant is proposing to rezone the property to B-3 (1.8 units per acre density), a concept plan has been provided as part of the PRO.

Utility Demands

A residential equivalent unit (REU) equates to the utility demand from one single family home. If the area were developed under the current zoning, demand on the utilities for the site would be approximately 4 REUs. The proposed B-3 zoning would yield 3 REUs, a decrease of 1 REUs over the current zoning and the master plan utility demand.

Water System

The project is located within the High Water Pressure District. Water service is currently available from an 8-inch diameter main from the north under 14 Mile Rd. This water main is under the jurisdiction of Commerce Township. Review of the plan by Commerce Township is required. The proposed rezoning would have minimal impact on available capacity, pressure and flows in the water system.

Sanitary Sewer

The project is located within the Commerce Township Sewer District. Sanitary service is currently available from an 8-inch diameter main on the south side of 14 Mile Rd. The proposed rezoning is not anticipated to have an apparent impact on the capacity of the downstream sanitary sewer.

Summary

The concept plan provided with the PRO request proposes a 3,936 retail building with a demand of 3 REUs which is less than the current zoning. Therefore, the plan would have negligible impact on the utilities.

cc: Rob Hayes, P.E.; City Engineer
Ben Croy, P.E.; Water and Sewer Senior Manager

LANDSCAPE REVIEW



PLAN REVIEW CENTER REPORT

July 22, 2016

Preliminary Site Plan - Landscaping

Speedway Rebuild – 14 Mile Rd & Haggerty Rd

Review Type

Preliminary Site Plan Landscape Review

Project Number

JSP16-0013

Property Characteristics

- Site Location: Southwest corner of 14 Mile Road and Haggerty Road
- Site Zoning: OST – Proposed B-3 with PRO
- Adjacent Zoning: OST, Commerce Township, Farmington Hills
- Plan Date: July 1, 2016

Recommendation:

This project is **recommended for approval** with the understanding that the items listed below will be addressed satisfactorily in the Final Site Plans.

Ordinance Considerations

This project was reviewed for conformance with Chapter 37: Woodland Protection, Zoning Article 5.5 Landscape Standards, the Landscape Design Manual and any other applicable provisions of the Zoning Ordinance. Items in **bold** below must be addressed and incorporated as part of the Preliminary Site Plan submittal. Please follow guidelines of the Zoning Ordinance and Landscape Design Guidelines. This review is a summary and not intended to substitute for any Ordinance. Please consult the Landscape Chart for more detailed discussions of some items.

EXISTING ELEMENTS

Existing and proposed overhead and underground utilities, including hydrants.(LDM 2.e.(4))

1. Existing and proposed utilities are shown on landscape plans.
2. **Please clearly indicate the fire hydrant location.**

Existing Trees and Tree Protection (Sec 37 Woodland Protection, Preliminary Site Plan checklist #17 and LDM 2.3 (2))

1. All existing trees, tree removals and trees to be saved are shown on plans.
2. Tree protection fencing and fencing details have been provided.

LANDSCAPING REQUIREMENTS

Adjacent to Public Rights-of-Way – Berm (Wall) & Buffer (Zoning Sec. 5.5.3.B.ii and iii)

1. Twenty foot greenbelt provided meets requirements.
2. **Required berm is provided but needs to be modified to provide minimum height of 3 feet.**
3. **Required canopy and subcanopy trees are provided for all requirements except the Haggerty Road greenbelt. Seven credits for preserved trees are used, but the landscaping still requires either 9 deciduous canopy/large evergreen trees, or 2 deciduous canopy trees and 7 more subcanopy trees.**

Street Tree Requirements (Zoning Sec. 5.5.3.E.i.c and LDM 1.d.)

The required number of street trees along both 14 Mile and Haggerty Roads are provided. 18 subcanopy trees are used along Haggerty Rd instead of 9 canopy trees due to nearby overhead lines.

Parking Lot Landscaping (Zoning Sec. 5.5.3.C)

1. Please combine two 168sf islands in east bay into one and only plant one large deciduous canopy tree in it to provide better survival for that tree
2. Do not count area of islands/corners where no trees are planted.

Parking lot Perimeter Landscaping (Zoning Sec 5.5.3.C.iii footnote)

Ginkgo trees are planted too close together for their mature size. Please provide better spacing for the trees in order to provide better chances for survival. If total requirement for perimeter trees can't be met (i.e. a tree needs to be removed from the crowded areas), that is acceptable.

Storm Basin Landscape (Zoning Sec 5.5.3.E.iv and LDM 1.d.(3))

1. All required detention basin landscaping is provided.
2. Please specify a seed mix for the detention basin that does not include crown vetch, and is composed of native Michigan plants.

Transformer/Utility Box and Fire Hydrant Plantings (LDM 1.3 from 1-5, Zoning Sec 5.5.3.C.ii.d)

Please add shrubs to the west of the transformer per the city standard detail.

Building Foundation Landscaping (Zoning Sec. 5.5.3.D)

1. Foundation landscaping needs to be provided around the entire building.
2. Areas with just lawn cannot be counted as foundation landscape area.
3. Please see the Landscape Chart for additional information regarding this requirement.

OTHER REQUIREMENTS

Plant List, Notations and Details (LDM 2.h. and t.)

All have been provided satisfactorily.

Cost estimates for Proposed Landscaping (LDM 2.t.)

Cost estimates will be needed for Final Site Plans.

Irrigation (LDM 1.a.(1)(e) and 2.s)

An irrigation plan for all landscaped areas is required as part of the Final Site Plans.

Proposed topography. 2' contour minimum (LDM 2.e.(1))

Proposed grading is provided on the landscape plans.

Snow Deposit (LDM.2.q.)

Snow deposit areas have been noted on the plans.

Corner Clearance (Zoning Sec 5.9)

Required corner clearances are provided.

If the applicant has any questions concerning the above review or the process in general, please do not hesitate to contact me at 248.735.5621 or rmeader rmeader@cityofnovi.org.



LANDSCAPE REVIEW SUMMARY CHART

Review Date: July 22, 2016
Project Name: JSP16 – 0013: SPEEDWAY – 14 MILE RD & HAGGERTY
Plan Date: July 1, 2016
Prepared by: Rick Meader, Landscape Architect E-mail: rmeader@cityofnovi.org;
 Phone: (248) 735-5621

Items in **Bold** need to be addressed by the applicant before approval of the Preliminary Site Plan.
Underlined items need to be addressed for Final Site Plan.

Item	Required	Proposed	Meets Code	Comments
Landscape Plan Requirements (LDM (2))				
Landscape Plan <i>(Zoning Sec 5.5.2, LDM 2.e.)</i>	<ul style="list-style-type: none"> ▪ New commercial or residential developments ▪ Addition to existing building greater than 25% increase in overall footage or 400 SF whichever is less. ▪ 1"=20' minimum with proper North. Variations from this scale can be approved by LA ▪ Consistent with plans throughout set 	Yes	Yes	1"=20', 1"=10'
Project Information <i>(LDM 2.d.)</i>	Name and Address	Yes	Yes	
Owner/Developer Contact Information <i>(LDM 2.a.)</i>	Name, address and telephone number of the owner and developer or association	Yes	Yes	
Landscape Architect contact information <i>(LDM 2.b.)</i>	Name, Address and telephone number of RLA	Yes	Yes	
Sealed by LA. <i>(LDM 2.g.)</i>	Requires original signature	Yes	Yes	
Miss Dig Note <i>(800) 482-7171 (LDM.3.a.(8))</i>	Show on all plan sheets	Yes	Yes	
Zoning <i>(LDM 2.f.)</i>	Include all adjacent zoning	Yes	Yes	Ex. Zoning B-3/OST, proposed zoning B-3/PRO; OST west and south, Farmington Hills east, Commerce Township north
Survey information <i>(LDM 2.c.)</i>	<ul style="list-style-type: none"> ▪ Legal description or boundary line survey 	Yes	Yes	Sheets 1-3

Item	Required	Proposed	Meets Code	Comments
	<ul style="list-style-type: none"> Existing topography 			
Existing plant material Existing woodlands or wetlands <i>(LDM 2.e.(2))</i>	<ul style="list-style-type: none"> Show location type and size. Label to be saved or removed. Plan shall state if none exists. 	Yes	Yes	Sheet 2, Sheets L-5 through L-9
Soil types <i>(LDM.2.r.)</i>	<ul style="list-style-type: none"> As determined by Soils survey of Oakland county Show types, boundaries 	Yes	Yes	Sheet 2224-LP3
Existing and proposed improvements <i>(LDM 2.e.(4))</i>	Existing and proposed buildings, easements, parking spaces, vehicular use areas, and R.O.W	Yes	Yes	
Existing and proposed utilities <i>(LDM 2.e.(4))</i>	Overhead and underground utilities, including hydrants	Yes	Yes	
Proposed grading. 2' contour minimum <i>(LDM 2.e.(1))</i>	Provide proposed contours at 2' interval	Yes	Yes	Sheets 5-7
Snow deposit <i>(LDM.2.q.)</i>	Show snow deposit areas on plan	Yes	Yes	Please label as "Snow deposit area"
LANDSCAPING REQUIREMENTS				
Parking Area Landscape Requirements LDM 1.c. & Calculations (LDM 2.o.)				
General requirements <i>(LDM 1.c)</i>	<ul style="list-style-type: none"> Clear sight distance within parking islands No evergreen trees 	Yes	Yes	
Name, type and number of ground cover <i>(LDM 1.c.(5))</i>	As proposed on planting islands	NA		Note indicates that seed or sod is shown on Soil Erosion Control Plan but that sheet was not included in set.
General (Zoning Sec 5.5.3.C.ii)				
Parking lot Islands <i>(a, b. i)</i>	<ul style="list-style-type: none"> A minimum of 300 SF to qualify 6" curbs Islands minimum width 10' BOC to BOC 	Sufficient area, but 1 island has no plantings, 2 islands only 163.8 sf each	Yes/No	<ol style="list-style-type: none"> Don't count area of 401sf island at northeast entry if no tree is planted in it. Please combine two 163.8sf islands (at northern end of bay) to form one large island with 1 large canopy tree.
Curbs and Parking stall reduction <i>(c)</i>	Parking stall can be reduced to 17' and the curb to 4" adjacent to a sidewalk of minimum 7	Yes/No		Spaces at north end of building can be shortened to provide more building

Item	Required	Proposed	Meets Code	Comments
	ft.			foundation landscape area.
Contiguous space limit (i)	Maximum of 15 contiguous spaces	Yes	Yes	
Plantings around Fire Hydrant (d)	No plantings with matured height greater than 12' within 10 ft. of fire hydrants	TBD	TBD	1. Please add note stating trees to be kept 10 feet away from utility structures and fire hydrants. 2. It appears that no plants are near hydrant, but it isn't clear that structure east of north entrance is a fire hydrant. 3. Please clearly label any/all fire hydrant(s) on landscape plan.
Landscaped area (g)	Areas not dedicated to parking use or driveways exceeding 100 sq. ft. shall be landscaped	Yes	Yes	
Clear Zones (LDM 2.3.(5))	25 ft corner clearance required. Refer to Zoning Section 5.5.9	Yes	Yes	
Berms, Walls and ROW Planting Requirements				
Berms				
<ul style="list-style-type: none"> ▪ All berms shall have a maximum slope of 33%. Gradual slopes are encouraged. Show 1ft. contours ▪ Berm should be located on lot line except in conflict with utilities. ▪ Berms should be constructed with 6" of top soil. 				
Residential Adjacent to Non-residential (Sec 5.5.3.A) & (LDM 1.a)				
Berm requirements (Zoning Sec 5.5.A)	Refer to Residential Adjacent to Non-residential berm requirements chart	NA		Site is not adjacent to residential areas.
Planting requirements (LDM 1.a.)	LDM Novi Street Tree List	NA		
Adjacent to Public Rights-of-Way (Sec 5.5.B) and (LDM 1.b)				
Berm requirements (Zoning Sec 5.5.3.A.(5))	Refer to ROW landscape screening requirements chart for corresponding requirements.	Yes	Yes	Berms provided.
Cross-Section of Berms (LDM 2.j)				

Item	Required	Proposed	Meets Code	Comments
Slope, height and width	<ul style="list-style-type: none"> ▪ Label contour lines ▪ Maximum 33% ▪ Constructed of loam with 6" top layer of topsoil. 	No cross section detail provided.	Yes	Please add a typical berm cross section detail showing slope, crest width, minimum height, construction materials.
Type of Ground Cover		Yes	Yes	Seed or sod. Please label which on landscape plan.
Setbacks from Utilities	Overhead utility lines and 15 ft. setback from edge of utility or 20 ft. setback from closest pole	Yes	Yes	
Walls (LDM 2.k & Zoning Sec 5.5.3.vi)				
Material, height and type of construction footing	Freestanding walls should have brick or stone exterior with masonry or concrete interior	NA		No walls proposed.
Walls greater than 3 ½ ft. should be designed and sealed by an Engineer		NA		
ROW Landscape Screening Requirements (Sec 5.5.3.B. ii)				
Greenbelt width (2)(3) (5)	20 ft.	20 ft	Yes	
Min. berm crest width	2 ft.	Yes	Yes	
Minimum berm height (9)	3 ft.	No	No	1. It appears the berm along Haggerty Road does not meet minimum height requirement of 3 feet along entire frontage. Variation in height is provided as required, but minimum height must be maintained along entire berm. 2. Please increase berm height to meet minimum height requirement.
3' wall	(4)(7)	NA		
Canopy deciduous or large evergreen trees Notes (1) (10)	<ul style="list-style-type: none"> ▪ 1 tree per 35 l.f. ▪ 14 Mile Rd: 300/35=9 trees ▪ Haggerty Rd: 300/35 = 	14 Mile Rd: 12 trees Haggerty Rd: 0 large evergreen or deciduous canopy	Yes/No	Either 2 deciduous canopy trees/large evergreen trees and 7 more subcanopy trees

Item	Required	Proposed	Meets Code	Comments
	9 trees	trees . 7 credits for preserved trees used.		or 9 deciduous canopy trees or large evergreen trees should be added to the Haggerty Road greenbelt.
Sub-canopy deciduous trees Notes (2)(10)	<ul style="list-style-type: none"> ▪ 1 tree per 20 l.f.; ▪ 14 Mile Rd: 300/20=15 trees ▪ Haggerty Rd: 300/20 = 15 trees 	14 Mile Rd: 15 trees Haggerty Rd: 21 trees	Yes/No	See above.
Canopy deciduous trees in area between sidewalk and curb (Novi Street Tree List)	<ul style="list-style-type: none"> ▪ 1 tree per 35 l.f. ▪ 14 Mile Rd: 300/35=9 trees ▪ Haggerty Rd: 300/35 = 9 trees 	14 Mile Rd: 9 trees Haggerty Rd: 18 subcanopy trees (overhead line)	Yes	
Screening of outdoor storage, loading/unloading (Zoning Sec. 3.14, 3.15, 4.55, 4.56, 5.5)		None		Additional shrubs should be placed south of south walk to screen loading zone and gasoline tank area from property to south.
Transformers/Utility boxes (LDM 1.e from 1 through 5)	<ul style="list-style-type: none"> ▪ A minimum of 2ft. separation between box and the plants ▪ Ground cover below 4" is allowed up to pad. ▪ No plant materials within 8 ft. from the doors 	Screening on north east and south sides of transformer		Please add line of shrubs on west side of transformer per screening detail.
Foundation Plantings	<ul style="list-style-type: none"> ▪ 8 square feet of landscape area per 1 lf of building perimeter ▪ Landscaping on all four sides of building, minimum width of 4 ft ▪ 60% of sides facing roads to be landscaped ▪ 260 lf * 8 ft = 2,080 sf 	2,343 sf	No	<ol style="list-style-type: none"> 1. Landscaping must surround the building. 2. Lawn areas do not count as foundation landscaping. 3. If sufficient area is not available immediately adjacent to building, alternate areas can be provided to make up the difference. 4. Note: Shrubs along parking perimeter are not required by code. Those areas could be counted toward foundation landscaping. If they are to count, please

Item	Required	Proposed	Meets Code	Comments
				provide their areas in square feet. Note, the total island area of the large islands on the north side cannot count toward both foundation and parking lot island landscaping, but you can split the total area between uses. Please revise the totals if the island is to be split between requirements.
Detention/Retention Basin Requirements (Sec. 5.5.3.E.iv)				
Planting requirements (Sec. 5.5.3.E.iv)	<ul style="list-style-type: none"> ▪ Clusters shall cover 70-75% of the basin rim area ▪ 10" to 14" tall grass along sides of basin ▪ Refer to wetland for basin mix 	Large native shrubs around more than 70% of basin rim.	Yes	Please specify a mix using native Michigan plants for the detention basin and include the mix contents on the plan.
LANDSCAPING NOTES, DETAILS AND GENERAL REQUIREMENTS				
Landscape Notes – Utilize City of Novi Standard Notes				
Installation date (LDM 2.i. & Zoning Sec 5.5.5.B)	Provide intended date	March 15-Nov 15	Yes	
Maintenance & Statement of intent (LDM 2.m & Zoning Sec 5.5.6)	<ul style="list-style-type: none"> ▪ Include statement of intent to install and guarantee all materials for 2 years. ▪ Include a minimum one cultivation in June, July and August for the 2-year warranty period. 	Yes	Yes	Please revise note #5 to state guarantee for 2 years.
Plant source (LDM 2.n & LDM 3.a.(2))	Shall be northern nursery grown, No.1 grade	Yes	Yes	
Irrigation plan (LDM 2.s.)	A fully automatic irrigation system and a method of draining is required with Final Site Plan	No		<u>Need for final site plan</u>
Other information (LDM 2.u)	Required by Planning Commission	NA		
Establishment period (Zoning Sec 5.5.6.B)	2 yr. Guarantee	Yes	Yes	Please revise note #5 to state guarantee for 2 years.

Item	Required	Proposed	Meets Code	Comments
Approval of substitutions. (Zoning Sec 5.5.5.E)	City must approve any substitutions in writing prior to installation.	Yes	Yes	
Plant List (LDM 2.h.) – Include all cost estimates				
Quantities and sizes	<ul style="list-style-type: none"> Refer to LDM suggested plant list 	Yes	Yes	
Root type		Yes	Yes	
Botanical and common names		Yes	Yes	Please note that Ilex glabra does not do well in this area in exposed situations such as those proposed. Please substitute a more hardy shrub in place of that species.
Type and amount of lawn		Yes	Yes	Seed or sod. Quantities of each will be needed for Final Site plan. Seed mixes for each area will need to be specified on the plan.
Cost estimate (LDM 2.t)		<ul style="list-style-type: none"> For all new plantings, mulch and sod as listed on the plan 	Yes	Yes
Planting Details/Info (LDM 2.i) – Utilize City of Novi Standard Details				
Canopy Deciduous Tree	Refer to LDM for detail drawings	Yes	Yes	
Evergreen Tree		NA		
Shrub		Yes	Yes	
Perennial/ Ground Cover		Yes	Yes	
Tree stakes and guys. (Wood stakes, fabric guys)		Yes	Yes	
Tree protection fencing	Located at Critical Root Zone (1' outside of dripline)	Yes	Yes	Please revise detail to show fence at 1 foot outside of dripline.
Other Plant Material Requirements (LDM 3)				
General Conditions (LDM 3.a)	Plant materials shall not be planted within 4 ft. of property line	Yes	Yes	
Plant Materials & Existing Plant Material (LDM 3.b)	Clearly show trees to be removed and trees to be saved.	Yes	Yes	
Landscape tree credit (LDM3.b.(d))	Substitutions to landscape standards for preserved canopy trees outside woodlands/	Yes	Yes	Existing trees to be saved along Haggerty and 14 Mile can be counted toward

Item	Required	Proposed	Meets Code	Comments
	wetlands should be approved by LA. Refer to Landscape tree Credit Chart in LDM			requirement.
Plant Sizes for ROW, Woodland replacement and others (LDM 3.c)	Canopy Deciduous shall be 3" and sub-canopy deciduous shall be 2.5" caliper. Refer to section for more details	Yes	Yes	
Plant size credit (LDM 3.c.(2))	NA	No		
Prohibited Plants (LDM 3.d)	No plants on City Invasive Species List	Yes	Yes	Please do not use any seed mixes with crown vetch, which is very invasive.
Recommended trees for planting under overhead utilities (LDM 3.e)	Label the distance from the overhead utilities	Yes	Yes	Subcanopy trees used as street trees alongPlease label distance.
Collected or Transplanted trees (LDM 3.f)		Yes		Please add notes for transplanted trees from Landscaped Design Manual.
Nonliving Durable Material: Mulch (LDM 4)	<ul style="list-style-type: none"> ▪ Trees shall be mulched to 4" depth and shrubs, groundcovers to 3" depth ▪ Specify natural color, finely shredded hardwood bark mulch. Include in cost estimate. ▪ Refer to section for additional information 	Yes	Yes	

NOTES:

1. This table is a working summary chart and not intended to substitute for any Ordinance or City of Novi requirements or standards.
2. The section of the applicable ordinance or standard is indicated in parenthesis. For the landscape requirements, please see the Zoning Ordinance landscape section 5.5 and the Landscape Design Manual for the appropriate items under the applicable zoning classification.
3. Please include a written response to any points requiring clarification or for any corresponding site plan modifications to the City of Novi Planning Department with future submittals.

TRAFFIC REVIEW

Memorandum

To	Barbara McBeth, AICP	Page	1
CC	Kirsten Mellem		
Subject	JSP 16-0013 Speedway at Haggerty – Preliminary – Traffic Review		
From	Matt Klawon, PE		
Date	September 9, 2016		

The preliminary site plan was reviewed to the level of detail provided and AECOM **recommends approval** for the applicant to move forward with the condition that the comments provided below are adequately addressed to the satisfaction of the City.

GENERAL COMMENTS

1. The project, Speedway #2224, is proposing to enlarge their site by purchasing the adjoining property as well as redevelop the convenience store. The project is located in the southwest corner of 14 Mile Road and Haggerty Road. Both roads are under the Road Commission for Oakland County's jurisdiction. The expanded site will add:
 - a. four additional fueling positions
 - b. larger convenience market
2. The existing site is zoned B-3 General Business District and the adjoining property is zoned OS-T Office Service Technology District. The applicant is requesting a zoning change from B-3 and OS-T to a B-3/PRO District.

TRAFFIC IMPACTS

1. AECOM performed an initial trip generation estimate based on the ITE Trip Generation Manual, 9th Edition, as follows:

ITE Code: 945 – Gasoline/Service Station with Convenience Market
Development-specific Quantity: 4 new fueling positions
Zoning Change: B-3 and OS-T to a B-3/PRO District

Trip Generation Summary				
	City of Novi Threshold	Estimated Trips (Permitted under existing zoning)	Estimated Trips (Permitted under proposed zoning)	Proposed Development
AM Peak-Hour, Peak-Direction Trips	100	N/A	N/A	21
PM Peak-Hour, Peak-Direction Trips	100	N/A	N/A	27
Daily (One-Directional) Trips	750	N/A	N/A	651

- The number of *additional* trips does not exceed the City's threshold of more than 750 trips per day or 100 peak direction trips per either the AM or PM peak hour. AECOM recommends performing the following traffic impact study in accordance with the City's requirements:

Traffic Impact Study Recommendation	
Type of Study	Justification
None	Not warranted.

- The number of *additional* trips does not exceed the City's threshold of more than 1,000 trips per day for a Rezoning Traffic Impact Study (RTIS), and therefore, a RTIS is not warranted.

EXTERNAL SITE ACCESS AND OPERATIONS

The following comments relate to the external interface between the proposed development and the surrounding roadway(s).

- The driveway entrance widths are in compliance with City standards.
- Driveway radii should be labeled in order to ensure compliance with City standards.
- The proposed driveway along Haggerty Road is being shifted to the south and is now located in part of the existing taper section, which is not ideal if it can be avoided
- The applicant should review Figure IX.11 of the City's Code of Ordinances and provide the applicable taper and/or acceleration/deceleration lanes as required.
 - A gasoline station with convenience market with 16 fueling stations is expected to generate 217 trips during the PM peak hour based on the ITE Trip Generation Manual, 9th Edition (ITE Code 945). If equal distribution were to be assumed at both driveways and among left and right-turning vehicles, there would be approximately 27 right turning vehicles during the PM peak hour at each of the site driveways.

- b. According to Southeast Michigan Council of Governments (SEMCOG) traffic count data, the following two-way, 24-hour volumes exist:
 - i. 14 Mile Road (Welch to Haggerty, 2012) = 14,868
 - ii. Haggerty Road (13 Mile to 14 Mile, 2012) = 15,720
 - c. Based on the SEMCOG two-way, 24-hour volumes and the estimated number of right turns into the site, right turn tapers are warranted at both site driveways.
 5. Sight distances should be labeled in the next submittal to ensure that the requirements listed in Figure VIII-E of the City's standards are met.
 6. The applicant is requesting a variance for driveway spacing along 14 Mile Road. The proposed driveway is located 121' from the neighboring driveway to the west but it aligns with the existing driveway on the north side of 14 Mile Road.
 7. **The applicant should request a City Council variance for the driveway on Haggerty Road.** While the proposed Speedway driveway aligns with the CVS driveway on the east side of Haggerty Road, there is a second shopping center driveway less than 200' to the south, which does not meet opposite side driveway spacing requirements.

INTERNAL SITE OPERATIONS

The following comments relate to the on-site design and traffic flow operations.

1. General traffic flow operations is adequate throughout the site with the exception of the following concerns.
 - a. Trucks can adequately maneuver through the site.
 - b. The location of the trash dumpster and loading/unloading area is not in conflict with any parking spaces or pedestrian access.
2. Parking facilities
 - a. The number of parking spaces provided is adequate.
 - b. The design of the parking spaces meets City standards. Note that the parking spaces along the building and in the adjacent parking lot could be reduced to 17' in length if a 4" curb is provided and the sidewalk is constructed at 7'. Such alterations could allow for an increased area of green space.
 - c. Bicycle parking requirements are met.
3. Aisle width requirements are met.
4. The applicant should include radii and end island details throughout the site.
 - a. End islands are required to be 3' shorter than the parking space per Section 5.3.12 of the City's Zoning Ordinance.
 - b. The end island at the north end of the parking bay should have a minimum outside radius of 15' per Section 5.3.12 of the City's Zoning Ordinance
5. The proposed sidewalk is adequate and the applicant should include design details in the next submittal to ensure compliance with ADA requirements.
6. The applicant should include all signing and pavement marking information to verify compliance with the Michigan Manual on Uniform Traffic Control Devices (MMUTCD).

Should the City or applicant have questions regarding this review, they should contact AECOM for further clarification.

AECOM

Sincerely,

AECOM

Handwritten signature of Paula K. Johnson in blue ink.

Paula K. Johnson, PE
Reviewer

Handwritten signature of Matthew G. Klawon in blue ink.

Matthew G. Klawon, PE
Manager, Traffic Engineering and ITS Engineering Services

FAÇADE REVIEW



August 8, 2016

City of Novi Planning Department
 45175 W. 10 Mile Rd.
 Novi, MI 48375- 3024

Review Status Summary:

Section 9 Waiver Recommended, applicant must provide sample board.

Re: **FACADE ORDINANCE - Facade Review –Preliminary Site Plan**
Speedway PRO, PSP16-0100
 Façade Region: 1, Zoning District: B-3/PRO

Dear Ms. McBeth;

The following is the Facade Review for Final Site Plan Approval of the above referenced project based on the drawings prepared by Speedway Engineering, dated 4/7/16. The percentages of materials proposed for each façade are as shown in the tables below. The maximum and minimum percentages allowed by the Schedule Regulating Façade Materials of Ordinance Section 5.15 are shown in the right hand column. Materials in non-compliance with the Façade Chart, if any, are highlighted in bold. A color sample board was not provided at the time of this review.

Canopy (5,400 S.F.)	East (Front)	West (Rear)	South	North	Ordinance Maximum (Minimum)
Brick	20%	20%	30%	30%	100% (30%)
Flat Metal (Stucco Canopy)	71%	71%	59%	59%	50%
Trim (Painted Column)	9%	9%	11%	11%	15%

Building (8,200 S.F.)	East (Front)	West (Rear)	South	North	Ordinance Maximum (Minimum)
Brick	44%	55%	65%	65%	100% (30%)
Asphalt Shingles	51%	35%	30%	30%	25.0%
Flat Metal (RTU Screen)	0%	5%	2%	2%	50.0%
Trim (Gutter, Red)	5%	5%	3%	3%	15%

As shown above the minimum percentage of Brick is not provided on the east and west facades and the percentage of Flat Metal Panels exceeds the maximum amount allowed by the Ordinance on all facades of the canopy and the percentage of Asphalt Shingles exceeds the maximum amount allowed by the Ordinance on all facades of the building. The design is in general compliance with Section 5.15.12 of the Façade Ordinance that requires that not less than 30% of the façade of the canopy be of a material identical to a material used on the building. A Section 9 Waiver would be required for the above indicated deviations from the Façade Ordinance (highlighted in bold).

Recommendation –It is our recommendation that the design is consistent with the intent and purpose of the Façade Ordinance and that a Section 9 Waiver be granted for the overage Flat Metal Panels and Asphalt Shingles and the underage of Brick. This recommendation is contingent upon a sample board showing the color of all materials being provided not less than 7 days prior to the Planning Commission meeting. It should be noted that the red color used on both the gutter and canopy must be a subdued tone consistent with Section 5.15.2 of the Ordinance, which prohibits intense colors. Additionally, the undefined material used in the equipment well area must be Brick or other material consistent with the façade chart. It should be noted that the use of accent illumination on the building or canopy is considered inconsistent with Section 5.15.2 the Façade Ordinance.

Notes to the Applicant:

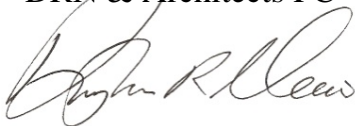
1. It should be noted that any roof top equipment must be screened from view from all on-site and off-site vantage points using compliant materials consistent with the building design.

2. Inspections – The Façade Ordinance requires inspection(s) for all projects. Materials displayed on the approved sample board will be compared to materials delivered to the site. It is the applicant’s responsibility to request the inspection of each façade material at the appropriate time. Inspections may be requested using the Novi Building Department’s Online Inspection Portal with the following link. Please click on “Click here to Request an Inspection” under “Contractors”, then click “Façade”.

<http://www.cityofnovi.org/Services/CommDev/OnlineInspectionPortal.asp>.

If you have any questions regarding this project please do not hesitate to call.

Sincerely,
DRN & Architects PC



Douglas R. Necci, AIA

FIRE REVIEW



July 29, 2016

TO: Barbara McBeth- City Planner
Kirsten Mellem- Plan Review Center

CITY COUNCIL

Mayor
Bob Gatt

Mayor Pro Tem
Dave Staudt

Gwen Markham

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City Manager
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David E. Molloy

Director of EMS/Fire Operations
Jeffery R. Johnson

Assistant Chief of Police
Erick W. Zinser

Assistant Chief of Police
Jerrod S. Hart

RE: Speedway, 31275 Haggerty

PSP#16-0100

Project Description: Renovation of existing station

Comments:

- 1) The dispensing area of a self-service gas station shall at all times be in clear view of the operator or attendant. Placing or allowing any obstacle to come between the dispensing area and the remote control console location is prohibited. Mirrors may be utilized to provide adequate visual control.
- 2) Two-way electronic voice communication shall be provided between the dispensing area of a self-service gas station and the remote control console unless unaided voice communications may be readily heard over all conditions of operation considering distance, noise levels, obstructions and enclosures.
- 3) A self-service gas station shall be equipped with a fire extinguisher having a minimum classification of 2A:40B:C located within thirty (30) feet of each dispensing device.
- 4) A self-service gas station shall be equipped with an approved switch or circuit breaker at the remote control console location to permit the shutting off of power to all dispensing devices in the event of an emergency. The switch or circuit breaker shall be clearly identified and easily accessible. An operator or attendant shall be in constant attendance and control of the switch or circuit breaker.
- 5) "Knox Box" to be installed on building exterior as required. Item will need to be noted on plans and installed in approved location per Fire Marshal's office.

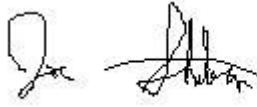
Novi Public Safety Administration
45125 W. Ten Mile Road
Novi, Michigan 48375
248.348.7100
248.347.0590 fax

cityofnovi.org

Recommendation: Please note emergency pump shut down and fire extinguisher locations on future submittals.

Approved with above comment

Sincerely,

A handwritten signature in black ink, appearing to read 'Joseph Shelton', with a stylized flourish at the end.

Joseph Shelton- Fire Marshal
City of Novi – Fire Department

APPLICANT RESPONSE LETTER



September 6, 2016

Ms. Kirsten Mellem
Planner
City of Novi
45175 Ten Mile Road
Novi, Michigan 48375

Via Email

RE: JSP16-13 – Speedway – 31275 Haggerty Road – Comment Response Letter

Dear Kirsten:

The following responses are provided to the comments received from the Plan Center Review Report dated August 11, 2016 for the proposed expansion and reconstruction of Speedway #2224 at 31275 Haggerty Road, Novi, Michigan.

***Community Development Department – Kirsten Mellem, Planner
(Responses are provided in bolded comments received on the Planning Review Chart dated August 11, 2016.)***

1. Parking Setback Screening – See landscape letter for additional details.
Response: Comment was addressed in the Landscape Comment Response letter from Weihe Engineering.
2. Barrier Free Spaces – Provide one more ADA/Barrier Free parking space.
Response: An additional ADA/barrier free parking space will be added to the site plan.
3. Design and Construction Standards Manual – Provide parcel numbers on the ALTA plans.
Response: The parcel number will be added to the ALTA plans.
4. Rezoning Signage – Provide the height of the letters on the sign.
Response: The height of the letters was addressed directly with staff. A revised plan was transmitted to staff on August 17, 2016 and approved prior to signs being created and posted.

Engineering Department – Jeremy Miller, Engineer
Comment responses provided under separate cover.

Community Development Department – Rick Meader, Landscape Architect
Comment responses provided under separate cover.

Community Development Department – Traffic Review – Paula Johnson, P.E. & Matt Klawon, P.E., AECOM

(The responses below are from the comments received on August 1, 2016.)

- External Site Access and Operations:
 - The driveway radii will be labeled on final site plans.
 - Speedway will work with the City of Novi to design and properly illustrate the taper areas as identified in the comment letter.
 - Sight distances will be labeled on the revised plans.
 - Speedway is requesting approval of the driveways as shown on the plans.
- Internal Site Operations
 - The parking islands will be modified to conform with the standards of the landscape regulations and the comments provided in the letter.
 - Design details of the sidewalks will be provided to ensure compliance with ADA standards.
 - All required signage and pavement markings will be provided on final engineering plans.

Community Development Department – Architectural Review – Doug Necci, DRN & Associates

1. Speedway is requesting a waiver for the asphalt shingles as shown on the building elevations. See sheet 2224-ELE.
2. Speedway is requesting approval of the elevations as provided in the submittal packet.
3. Speedway will work with staff on the revised elevations to ensure compliance with City regulations.

Fire Department – Joseph Shelton – Fire Marshal

1. Speedway will work with the Fire Marshal to ensure compliance with this regulation.
2. Final details will be provided on the construction plans.
3. Final details and locations are provided on the construction plans.
4. These will be installed and the locations will be provided on the final site plans.
5. A knox box will be installed and the details will be provided on the final plans.

Please review the responses and contact me immediately if additional information is needed.
Thank you for your continued assistance with this project.

Sincerely,



Robert C. Sweet

Enclosures

cc: Mike Bergman, Speedway
Justin Couch, Speedway
Ryan Roosen, Speedway
MDC #3675

September 6, 2016

Mr. Jeremy Miller
City of Novi
Engineering Department
45175 Ten Mile Road,
Novi, Michigan 48375

RE: JSP 16-13 – Speedway – 31275 Haggerty Road – Engineering Comment Response Letter

Dear Jeremy:

The following responses are provided based on the comments received on August 11, 2016 related to the expansion and reconstruction of Speedway #2224 at 31275 Haggerty Road, Novi, Michigan.

Comments:

1. The grade of the drive approach shall not exceed 2-percent within the first 25 feet of the intersection. The drive on Haggerty is shown at 9.2-percent. Consider alternate drive locations to reduce the drive slope.

Response: The approach grades within the first 25 feet of the intersection have been revised to not exceed 2%.

2. Revise the grading, storm sewer, and drainage areas to capture more of the southern portion of the site.

Response: A majority of the Southern portion drains towards the detention basin or onto our site. There is a yard drain in the South East corner to catch some of the runoff where our site is higher than the neighbor closer to the approach.

General

3. Provide a note on the plans that all work shall conform to the current City of Novi standards and specifications.

Response: Said not will be added to the final set.

4. The City standard detail sheets are not required for the Final Site Plan submittal. They will be required with the Stamping Set submittal. They can be found on the City website (www.cityofnovi.org/DesignManual).

Response: Said detail sheets will be added to the final set.

5. The plans are not to the specified scale.

Response: This will be corrected.

6. 6. Provide a minimum of two ties to established section or quarter section corners.

Response: A minimum of two ties will be shown on the CS plan.

7. A right-of-way permit will be required from the City of Novi and Oakland County.

Response: This permit will be obtained as necessary.

8. Soil borings shall be provided for a preliminary review of the constructability of the proposed development (roads, basin, etc.). Borings identifying soil types, and groundwater elevation should be provided at the time of Preliminary Site plan.
Response: A new sheet will be created to show the boring locations and the boring logs will be provided.
9. Clearly distinguish between proposed improvements and existing features of the site.
Response: This will be done on the CS plan.
10. Provide a traffic control sign table listing the quantities of each sign type proposed for the development. Provide a note along with the table stating all traffic signage will comply with the current MMUTCD standards.
Response: A maintenance of traffic plan will be assembled to address this.
11. Provide a note that compacted sand backfill shall be provided for all utilities within the influence of paved areas, and illustrate on the profiles.
Response: This will be called out and shown on the CU plan.
12. Provide a construction materials table on the Utility Plan listing the quantity and material type for each utility (water, sanitary and storm) being proposed.
Response: This will be shown on the CU plan.
13. Provide a note stating if dewatering is anticipated or encountered during construction a dewatering plan must be submitted to the Engineering Department for review.
Response: This note will be added to the CS plan.

Water Main

14. The proposed water lead is connecting to a water main that is served by Commerce Township. Contact Commerce Township for review and any additional requirements.
Response: Commerce Township will be contacted for review as requested.

Sanitary Sewer

15. Verify the location of the existing sanitary sewer.
Response: We will search for as-builts or perform additional survey work if necessary.
16. Provide the size of the existing sanitary sewer.
Response: We will search for as-builts or perform additional survey work if necessary.
17. Note on the construction materials table that 6-inch sanitary leads shall be a minimum SDR 23.5, and mains shall be SDR 26.
Response: This will be addressed on the CU plan.

18. Provide a note on the Utility Plan stating the sanitary lead will be buried at least 5 feet deep where under the influence of pavement.

Response: This will be addressed on the CU plan.

19. Provide the slope of the proposed sanitary lead. A minimum slope of 1% is required.

Response: This will be addressed on the CU plan.

Storm Sewer

20. Provide type of H.D.P.E pipe proposed for storm sewer.

Response: This will be addressed on the CU plan.

21. H.D.P.E. pipe is not permitted in the R.O.W. Storm sewer in the R.O.W. must be class IV R.C.P.

Response: This will be addressed on the CU plan.

22. Provide profiles for all storm sewer 12-inches or larger.

Response: This will be address by a new CU sheet.

23. A minimum cover depth of 3 feet shall be maintained over all storm sewers. Currently, a few pipe sections do not meet this standard. Grades shall be elevated and minimum pipe slopes shall be used to maximize the cover depth. In situations where the minimum cover cannot be achieved, Class V pipe must be used with an absolute minimum cover depth of 2 feet. An explanation shall be provided where the cover depth cannot be provided.

Response: We will try to meet the 3' cover, but certain to stay below the 2' minimum on our CU plan.

24. The structure numbers do not appear to match the callouts on the table on sheet CU.

Response: This will be addressed accordingly on the table.

Storm Water Management Plan

25. The Storm Water Management Plan for this development shall be designed in accordance with the Storm Water Ordinance and Chapter 5 of the new Engineering Design Manual.

Response: A SWMPP plan will be put together.

26. Provide drawings, details, and a cross-section for the proposed basin outlet.

Response: This will be provided on a new CU sheet.

27. An adequate maintenance access route to the basin outlet structure and any other pretreatment structures shall be provided (15 feet wide, maximum slope of 1V:5H, and able to withstand the passage of heavy equipment). Verify the access route does not conflict with proposed landscaping.

Response: This will be shown on the CS, CG and LP plans.

28. Provide a 5-foot wide stone bridge allowing direct access to the standpipe from the bank of the basin during high-water conditions (i.e. stone 6-inches above high water elevation). Provide a detail and/or note as necessary.

Response: The requested bridge will be shown on the CS plan.

29. Provide an access easement for maintenance over the storm water detention system and the pretreatment structure. Also, include an access easement to the detention area from the public road right-of-way.

Response: The requested access easement will be provided as necessary.

30. The primary outlet standpipe shall be designed with a secondary outer pipe with numerous holes. The stone filter would rest against this outer pipe and would help protect the design standpipe from clogging.

Response: The outlet standpipe will be designed accordingly.

31. Provide release rate calculations for the three design storm events (first flush, bank full, 100-year).

Response: These calculations will be provided.

32. Provide a soil boring in the vicinity of the storm water basin to determine soil conditions and to establish the high water elevation of the groundwater table.

Response: This will be done and shown on the newly created BP plan.

33. A 4-foot wide safety shelf is required one-foot below the permanent water surface elevation within the basin.

Response: This will be shown on the CU plan.

34. Provide a cross-section of the basin.

Response: This will be provided on a new CU sheet.

35. Clearly show the emergency overland flow route for the proposed basin.

Response: Arrows will be provided to clearly show the flow route.

36. If a wet basin is proposed with a 3 foot permanent water level.

Response: No wet basin proposed.

Paving & Grading

37. Provide a note on the Grading Plan stating the right-of-way pathway will match existing grades at both ends.

Response: This will be shown on the CU plans.

38. Provide cross-sections of the proposed pavement.

Response: This will be provided on a new CPC sheet.

39. The right-of-way sidewalk shall continue through the drive approach. If like materials are used for each, the sidewalk shall be striped through the approach. The sidewalk shall be increased to 8-inches thick along the crossing or match the proposed cross-section if the approach is concrete. The thickness of the sidewalk shall be increased to 8 inches across the drive approach. Provide additional spot grades as necessary to verify the maximum 2-percent cross-slope is maintained along the walk.

Response: Additional spot grades will be provided on the CG plan.

40. The City standard straight-faced curb (MDOT C-4 curb detail) shall be provided. Revise details accordingly.

Response: The requested detail will be provided on the CS plan.

41. Provide top of curb/walk and pavement/gutter grades to indicate height of curb adjacent to parking stalls or drive areas.

Response: All spot elevations requested will be provided on the CG plan.

42. Curbing and walks adjacent to the end of 17-foot stalls shall be reduced to 4-inches high, rather than the standard 6-inch height to be provided adjacent to 19-foot stalls. Provide additional details as appropriate.

Response: All stalls are 19' in length.

Off-Site Easements

43. Any off-site utility easements anticipated must be executed by both parties prior to final approval of the plans. Drafts of the easement shall be submitted at the time of the Preliminary Site Plan submittal for review, and shall be approved by the City prior to final signatures.

a. A temporary grading easement is required from the property owner to the south.

Response: This temporary easement will be handled prior to any work.

The following must be provided at the time of Concept Plan resubmittal:

44. A letter from either the applicant or the applicant's engineer must be submitted with the revised concept highlighting the changes made to the plans addressing each of the comments listed above and indicating the revised sheets involved.

Response: This will be done when the plans are resubmitted.

The following must be submitted at the time of Final Site Plan submittal:

45. An itemized construction cost estimate must be submitted to the Community Development Department at the time of Final Site Plan submittal for the determination of plan review and construction inspection fees. This estimate should only include the civil site work and not any costs associated with construction of the building or any demolition work. The cost estimate must be itemized for each utility (water, sanitary, storm sewer), on-site paving, right-of way paving (including proposed right-of-way), grading, and the storm water basin (basin construction, control structure, pretreatment structure and restoration).

Response: The requested cost estimate will be provided.

The following must be submitted at the time of Stamping Set submittal:

46. A draft copy of the maintenance agreement for the storm water facilities, as outlined in the Storm Water Management Ordinance, must be submitted to the Community Development Department with the Final Site Plan. Once the form of the agreement is approved, this agreement must be approved by City Council and shall be recorded in the office of the Oakland County Register of Deeds.

Response: The requested agreement will be put together as necessary.

47. Executed copies of any required off-site utility easements must be submitted to the Community Development Department.

Response: These will be provided as necessary.

The following must be addressed prior to construction:

48. A pre-construction meeting shall be required prior to any site work being started. Please contact Sarah Marchioni in the Community Development Department to setup a meeting (248-347-0430).

49. A City of Novi Grading Permit will be required prior to any grading on the site. This permit will be issued at the pre-construction meeting. Once determined, a grading permit fee must be paid to the City Treasurer's Office.

50. A Soil Erosion Control Permit must be obtained from the City of Novi. Contact Sarah Marchioni in the Community Development Department (248-347-0430) for forms and information.

51. A permit for work within the right-of-way of 14 Mile Rd. and Haggerty Rd. must be obtained from the City of Novi. The application is available from the City Engineering Division and should be filed at the time of Final Site Plan submittal. Please contact the Engineering Division at 248-347-0454 for further information.

52. A permit for work within the right-of-way of 14 Mile Rd. and Haggerty Rd. must be obtained from the Road Commission for Oakland County. Please contact the RCOC (248-858-4835) directly with any questions. The applicant must forward a copy of this permit to the City. Provide a note on the plans indicating all work within the right-of-way will be constructed in accordance with the Road Commission for Oakland County standards.

53. Construction Inspection Fees to be determined once the construction cost estimate is submitted must be paid prior to the pre-construction meeting.

54. A storm water performance guarantee, equal to 1.2 times the amount required to complete storm water management and facilities as specified in the Storm Water Management Ordinance, must be posted at the Treasurer's Office.

55. A street sign financial guarantee in an amount to be determined (\$400 per traffic control sign proposed) must be posted at the Treasurer's Office.

56. Permits for the construction of each retaining wall must be obtained from the Community Development Department (248-347-0415).

To the extent this review letter addresses items and requirements that require the approval of or a permit from an agency or entity other than the City, this review shall not be considered an indication or statement that such approvals or permits will be issued.

Please review the responses and contact me immediately if additional information is needed. Thank you for your continued assistance with this project.

Sincerely,



Robert C. Sweet

Enclosures

cc: Michael Bergman, Speedway
Justin Couch, Speedway
Ryan Roosen, Speedway

September 2, 2016

Mr. Rick Meader
Novi Landscape Architect
45125 W. Ten Mile Road
Novi, Michigan 48375
(248) 735-5621
rmeader@cityofnovi.org

RE: JSP 16-0013

Dear Mr. Meader:

This letter is in response to your comment email dated July 22, 2016 for the above referenced project. We have prepared the following responses to the plan review comments listed below.

EXISTING ELEMENTS:

2. *Comment:* Please clearly indicate the fire hydrant location.

Response: Hydrant is located West of existing entrance on W 14 Mile Rd. A note will be added to identify hydrant.

LANDSCAPING REQUIREMENTS:

2. *Comment:* Required berm is provided but needs to be modified to provide minimum height of 3 feet.

Response: The berm is shown as high as possible while still satisfying the maximum 4:1 slope.

2. *Comment:* Required canopy and subcanopy trees are provided for all requirements except the Haggerty Road greenbelt. Seven credits for preserved trees are used, but the landscaping still requires either 9 deciduous canopy/large evergreen trees, or 2 deciduous canopy trees and 7 more subcanopy trees.

Response: The requested 2 Deciduous and 7 subcanopy trees will be provided.

PARKING LOT LANDSCAPING (ZONING SEC. 5.5.3.C):

1. *Comment:* Please combine two 168sf islands in east bay into one and only plant one large deciduous canopy tree in it to provide better survival for that tree.

Response: Please clarify.

2. *Comment:* Do not count area of islands/corners where no trees are planted..

Response: Noted.

PARKING LOT PERIMETER LANDSCAPING (ZONING SEC 5.5.3.Ciii footnote):

Comment: Gingko trees are planted too close together for their mature size. Please provide better spacing for the trees in order to provide better chances for survival. If total requirement for perimeter trees can't be met (i.e. a tree needs to be removed from the crowded areas), that is acceptable.

Response: Will review and modify accordingly.

STORM BASIN LANDSCAPE (ZONING SEC 5.5.3.E.iv and LDM 1.d(3)):

2. *Comment:* Please specify a seed mix for the detention basin that does not include crown vetch, and is composed of native Michigan plants.

Response: Will modify accordingly.

BUILDING FOUNDATION LANDSCAPING (ZONING SEC. 5.5.3.D):

1. *Comment:* Foundation landscaping needs to be provided around the entire building.

Response: Landscaping on East side of parking to count towards foundation plantings.

2. *Comment:* Areas with just lawn cannot be counted as foundation landscape area.

Response: Noted.

3. *Comment:* Please see the Landscape Chart for additional information regarding this requirement.

Response: Noted.

SNOW DEPOSIT (LDM.2.q):

Comment: Please label as “Snow deposit area”

Response: This will be changed to the “Snow deposit area”

PARKING LOT ISLANDS(a,b,i):

1. *Comment:* Don’t count area of 401sf island at northeast entry if no tree is planted in it.

Response: Noted.

2. *Comment:* Please combine two 163.8sf islands (at northern end of bay) to form one large island with 1 large canopy tree.

Response: Will modify to show one island at 327.6 sf (each is 163.8 sf currently)

CURBS AND PARKING STALL REDUCTIN (c):

Comment: Spaces at north end of building can be shortened to provide more building foundation landscape area.

Response: We are opting to go with the 19’ parking stalls to hinder car overhang on the sidewalk.

PLANTINGS AROUND FIRE HYDRANT (c):

3. *Comment:* Please clearly label any/all fire hydrant(s) on landscape plan.

Response: Fire Hydrant will be labeled.

BERMS: SLOPE, HEIGHT AND WIDTH

Comment: Please add a typical berm cross section detail showing slope, crest width, minimum height, construction materials.

Response: Will show accordingly.

BERMS: TYPE OF GROUND COVER

Comment: Seed or sod. Please label which on landscape plan.

Response: Seed should be shown unless required to be sod.

ROW LANDSCAPE SCREENING REQUIREMENTS – MINIMUM BERM HEIGHT

2. *Comment:* Please increase berm height to meet minimum height requirement.

Response: The berm is shown as high as possible while still satisfying the maximum 4:1 slope.

CNAOPY DECIDUOUS OR LARGE EVERGREEN TREES

Comment: Either 2 deciduous canopy trees/large evergreen trees and 7 more subcanopy trees or 9 deciduous canopy trees or large evergreen trees should be added to the Haggerty Road greenbelt.

Response: Will be added.

SUB-CANOPY DECIDUOUS TREES

Comment: See above.

Response: See above.

SCREENING OF OUTDOOR STORAGE, LOADIN/UNLOADING

Comment: Additional shrubs should be placed south of south walk to screen loading zone and gasoline tank area from property to south.

Response: Will be added.

TRANSFORMERS/UTILITY BOXS

Comment: Please add line of shrubs on west side of transformer per screening detail.

Response: Typically a electric provider requires the side that opens to be clear of shrubs.

FOUNDATION PLANTINGS

1. *Comment:* Landscaping must surround the building.

Response: Noted. Shrubs on East side of parking to count.

2. *Comment:* Lawn areas do not count as foundation landscaping.

Response: Noted.

3. *Comment:* If sufficient area is not available immediately adjacent to building, alternate areas can be provided to make up the difference.

Response: Noted.

4. *Comment:* Note: Shrubs along parking perimeter are not required by code. Those areas could be counted toward foundation landscaping. If they are to count, please provide their areas in square feet. Note, the total island area of the large islands on the north side cannot count toward both foundation and parking lot island landscaping, but you can split the total area between uses. Please revise the totals if the island is to be split between requirements.

Response: Noted. Will use this as foundation planting replacement.

PLANTING REQUIREMENTS

Comment: Please specify a mix using native Michigan plants for the detention basin and include the mix contents on the plan.

Response: Noted.

MAINTENANCE & STATEMENT OF INTENT

Comment: Please revise note #5 to state guarantee for 2 years.

Response: Noted.

ESTABLISHMENT PERIOD

Comment: Please revise note #5 to state guarantee for 2 years.

Response: Noted.

PLANT LIST: BOTANICAL AND COMMON NAMES

Comment: Please note that Ilex glabra does not do well in this area in exposed

situations such as those proposed. Please substitute a more hardy shrub in place of that species.

Response: Noted.

PLANTING DETAILS/INFO: TREE PROTECTION FENCING

Comment: Please revise detail to show fence at 1 foot outside of dripline.

Response: Noted.

OTHER PLANT MATERIAL REQUIREMENTS: PROHIBITED PLANTS

Comment: Please do not use any seed mixes with crown vetch, which is very invasive.

Response: Noted.

OTHER PLANT MATERIAL REQUIREMENTS: RECOMMENDED TREES FOR PLANTING UNDER OVERHEAD UTILITIES

Comment: Subcanopy trees used as street trees along Please label distance.

Response: Noted.

Should you have any further questions or requests for additional information pertaining to this project review, please contact me at 317-846-6611.

Sincerely,

Eric Carter, R.L.A.
Project Manager, Commercial Development

**MASTER PLAN AND ZONING COMMITTEE
DRAFT MEETING MINUTES
AUGUST 17, 2016**



MASTER PLAN AND ZONING COMMITTEE
City of Novi Planning Commission
August 17, 2016 at 6:00 p.m.
Novi Civic Center – Mayor’s Conference Room
45175 W. Ten Mile, Novi, MI 48375
(248) 347-0475
DRAFT Minutes

CALL TO ORDER

The meeting was called to order at 6:00 p.m.

ROLL CALL

Present: Members Robert Giacopetti and Mark Pehrson

Not Present: Member Michael Lynch

Staff Present: Barbara McBeth, Kirsten Mellem, David Gilliam

APPROVAL OF AGENDA

Moved by Pehrson, seconded by Giacopetti.

**VOICE VOTE ON AGENDA APPROVAL, MOTION MADE BY MEMBER GIACOPETTI AND
SECONDED BY MEMBER PEHRSON:**

A motion to approve the August 17, 2016 Master Plan and Zoning Committee agenda. *Motion carried 2-0.*

AUDIENCE PARTICIPATION AND CORRESPONDENCE

None

DISCUSSION ITEMS

- A. Rezoning request from RM-1, Low-Density Multiple-Family to P-1, Vehicular Parking
Review and provide comments on the rezoning request for property east of Novi Road and south of Grand River Ave.

City Planner Barb McBeth presented the application from Feldman Automotive to rezone 0.9-acre of a 1.67-acre property on the south side of Grand River Ave. between Novi Road and Meadowbrook Road (Section 23) from RM-1 (Low-Density Multiple-Family) to P-1 (Vehicular Parking). The Future Land Use Map recommends TC Gateway as the anticipated future use of the property. Since the rezoning is not consistent with the Future Land Use Map, the request has been brought before the Master Plan and Zoning Committee for discussion.

Member Giacopetti commented on the vision and future of the Grand River Corridor and the TC district stating that a dealership is not necessarily one of the uses in that vision. He asked if the property owners had any intentions of moving to another location that is larger and could accommodate the parking needs. The applicant stated that there are limited areas in Novi that would provide the required features. Member Pehrson stated that the parcel is an odd shape and would be limited on its development potential. He mentioned another property in the area that has sat vacant for many years because of its odd shape and location; it is not the intent to see that happen again. The Members were in consensus that the PRO option doesn't make sense for this property. The Traffic Impact Study would also

be unnecessary since there would be less trips made since the vehicles would be closer to the dealership and not at an off-site facility. The Members ultimately had no objection to the proposed rezoning application. The required public hearing will be held on September 14, 2016 at 7:00pm.

B. Rezoning request from OST, Office Service Technology to B-3, General Business with Planned Rezoning Overlay (PRO)

Review and provide comments on the rezoning request for property at the southwest corner of 14 Mile Road and Haggerty Road.

Planner Kirsten Mellem presented the application for rezoning from OST and B-3 to B-3 with PRO. The petitioner is requesting to rezone a 2.03 acre property on the west of Haggerty Road and south of 14 Mile Road (Section 1) from OST (Office Service Technology) and B-3 (General Business) to B-3 (General Business) utilizing the Planned Rezoning Overlay (PRO) option. The Future Land Use Map recommends Office Research Technology as the zoning. Since the rezoning is not consistent with the Future Land Use Map, the request has been brought before the Master Plan and Zoning Committee for discussion.

The applicant has proposed a 4,000 square foot convenience store and 5,400 square foot fuel canopy over 8 double-sided fuel dispensers. This would include razing the existing 2,417 square foot building and 6 double-sided fuel dispensers. As part of the redevelopment, existing driveways will be shifted away from the intersection and aligned with the driveways across 14 Mile Road and Haggerty Road. Speedway is proposing to dedicate approximately 10 feet of ROW along 14 Mile Road to the Road Commission for Oakland County. There will be an above-ground detention basin in the southwest corner of the enlarged property.

Member Giacopetti asked about the aesthetics of the new building stating that this location is very prominent and we would expect a great look at this entry point into the city. The sheets with the elevations were reviewed and the applicant stated that this is one of the top 10 locations in the state. All Speedway stations are corporate owned, which provides quality assurance of product and brand. The investment by Speedway will result in additional employees.

Another question was raised regarding the 30 feet of landscaped area that will be undeveloped on the west side of the parcel. The applicant stated that they intent to landscape and keep as a buffer since the site grades and other constraints prevent them from developing it. Staff pointed out that while this buffer is not required, it is a nice feature to buffer between the proposed development and the existing bank and office building, which currently provide no buffer at the property line. Member Pehrson stated that this proposal fits the area, is a great upgrade for the corner, and has no other concerns. The required public hearing will be held on September 14, 2016 at 7:00pm.

C. Approval of the February 17, 2016 Master Plan and Zoning Committee meeting minutes

VOICE VOTE ON MEETING MINUTES APPROVAL, MOTION MADE BY MEMBER GIACOPETTI AND SECONDED BY MEMBER PEHRSON:

A motion to approve the February 17, 2016 Master Plan and Zoning Committee Meeting minutes. Motion carried, 2-0.

ADJOURN

Moved by Giacopetti, seconded by Pehrson. The meeting was adjourned at 6:39pm.