

THE CITY OF BERKLEY
Community Development Department
3338 Coolidge, Berkley, Michigan 48072
(248) 658-3320

**Notice
Meeting of the Berkley
Zoning Board of Appeals**

Notice is hereby given, that there will be a meeting of the Zoning Board of Appeals to be held at the City of Berkley in the Council Chambers, 3338 Coolidge, Berkley, Michigan on Monday, July 14, 2025 at 7:00 pm or as near thereto as the matter may be reached.

Application Number PBA-04-25

Salwan Shina, on behalf of Jamil Realty, LLC and Gevalin Gegaj for 4162 Twelve Mile Rd., 4150 Twelve Mile Rd., 4138 Twelve Mile Rd., Parcels 04-25-07-355-039, 04-25-07-355-038 and 04-25-07-355-040, North side of Twelve Mile Rd., between Greenfield Rd. and Ellwood Ave., is requesting a variance for the location of a trash enclosure.

Berkley City Code

Berkley City Code, Chapter 138 *Zoning*, (under previous zoning ordinance) 138-53 Accessory building or structures shall not be erected in any yard, except a rear yard.

Complete application information is available for review at www.berkleymi.gov/community-development/development-projects.

Comments on the granting of the above variance may be made in person on the night of the meeting or in writing. All written comments must be submitted to the Berkley Community Development Department or email to planning@berkleymi.gov before 4:00 p.m. on the date of the Public Hearing.

KIM ANDERSON
ZONING ADMINISTRATOR

Publish Once:

Royal Oak Tribune
Saturday, June 28, 2025



CITY OF BERKLEY COMMUNITY DEVELOPMENT

3338 COOLIDGE HWY, BERKLEY, MICHIGAN 48072

ZONING BOARD OF APPEALS APPLICATION

The Zoning Board of Appeals (ZBA) meets the second Monday of the month. The meetings are held in the Council Chambers at City Hall, 3338 Coolidge Highway, Berkley, Michigan 48072.

The ZBA shall hear requests for use and dimensional variances, appeals of administrative decisions, interpretation of zoning map and text, and interpretations of commercial message for proposed murals.

****Please be advised:** The ZBA may grant a variance where undue hardship or practical difficulty for the property exist. A want or desire (bigger structure, more profit, etc.) is not sufficient grounds for a variance. The ZBA does not have the power to legislate or create new regulations. The Board's purpose is to provide some relief from the Zoning Ordinance depending on the unique circumstances of the property.

APPLICANT INFORMATION

Name: Salwan Shina (Sam) Phone: [REDACTED]

Address: 6476 Orchard Lake Road, Suite A, West Bloomfield, MI 48322

Email: [REDACTED] - Ryan

Relationship to Property (current tenant, representative, future tenant, current owner, future owner):

Representative

PROPERTY OWNER INFORMATION (if different from Applicant)

Name: Jamil Realty, LLC Phone: _____

Address: 4138 West Twelve Mile Road, Berkley, MI 48076

Email: _____

PROPERTY DESCRIPTION

Address: 4162 Twelve Mile Road

Parcel #: 25-07-355-039, 25-07-355-038, & 25-07-355-040 Zoning Classification: Gateway District

Current Use of Property: Multi-use commercial development



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3338 COOLIDGE HWY, BERKLEY, MICHIGAN 48072

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****Please be advised:** The ZBA may grant a variance where undue hardship or practical difficulty for the property exist. A want or desire (bigger structure, more profit, etc.) is not sufficient grounds for a variance. The ZBA does not have the power to legislate or create new regulations. The Board's purpose is to provide some relief from the Zoning Ordinance depending on the unique circumstances of the property.

APPLICANT INFORMATION

Name: Selwan Shina Phone: [REDACTED]
Address: 6476 Orchard Lake Road, Suite A, West Bloomfield, MI 48322
Email: [REDACTED]

Relationship to Property (current tenant, representative, future tenant, current owner, future owner):
Representative

PROPERTY OWNER INFORMATION (if different from Applicant)

Name: Gevalin Gegaj Phone: [REDACTED]
Address: 1879 Windside Dr West Bloomfield, MI 48324
Email: [REDACTED]

PROPERTY DESCRIPTION

Address: 4162 Twelve Mile Road
Parcel #: 25-07-355-039, 25-07-355-038, & 25-07-355-040 Zoning Classification: Gateway District
Current Use of Property: Multi-use commercial development

NATURE OF REQUEST

Check which applies:

- ☒ Variance from Zoning Ordinance (Section I)
- ☐ Interpretation of Zoning Ordinance (Section II)
- ☐ Administrative Review / Appeal of Decision (Section III)
- ☐ Determination of Commercial Message of Mural / Work of Art (Section IV)

Description of Request: Variance for location of trash enclosure (accessory structure) in side yard.

Has the City denied a permit related to the proposed work? ☐ Yes ☒ No

Please fill out ONLY the section below that applies to your request.

I. VARIANCE FROM ZONING ORDINANCE

Please provide a written response to each question below that relates to the variance that is being requested. **DO NOT COMPLETE BOTH SECTIONS.**

A. Use Variance

The Zoning Board of Appeals may grant a use variance (i.e. use of the land not permitted in a particular district) upon finding that an undue hardship exists.

Current Use of Property: _____

Requested Use of Property: _____

1. Explain how the building or land cannot be reasonably used for any of the uses permitted by right or by special land use permit in the current zoning district.

2. Explain how the need for the variance is due to unique circumstances or physical conditions of the property.

3. Explain how the proposed use will not alter the essential character of the neighborhood.

4. Explain how the need for the variance is not the result of actions of the property owner or previous property owners.

B. Dimensional Variance (Non-Use Variance)

The Zoning Board of Appeals may grant a **dimensional variance** (i.e. height, setback, lot coverage, etc) upon finding that undue hardship or practical difficulty exists.

1. Explain how the need for the variance is due to unique circumstances of physical conditions of the property.

The site abuts a roadway on the west, east, and south sides of the parcel and a residential property to the north. In an effort to keep the trash enclosure away from the residential property, while also ensuring trash operations are feasible, we believe the proposed location of the enclosure is the best option, thus the need for a variance.

2. Explain how the need for the variance is not the result of actions of the property owner or previous property owners.

The variance is the result of the need to provide a new trash enclosure on the site as the existing trash enclosure will be removed with the proposed building addition.

3. Explain how strict compliance with the ordinance will unreasonably prevent the property owner from using the property for a permitted purpose or will render conformity with those regulations unnecessarily burdensome.

Strict compliance with the ordinance would result in unfavorable trash operations considering the enclosure would need to be located adjacent to a residential property. In addition, parking spaces would need to be removed to accommodate the truck's access to the enclosure, which in turn, may result in a parking variance.

4. Explain how the requested variance is the minimum variance necessary to do substantial justice to applicant as well as other property owners.

The requested variance is the minimum variance necessary as it will promote effective trash operations while keeping the enclosure away from adjacent property owners.

5. Explain how the requested variance will not adversely impact the surrounding properties.

The variance will help prevent an adverse impact to surrounding properties by permitting the trash enclosure to be located away from the neighboring property.

II. INTERPRETATION OF ZONING ORDINANCE

Provide Section numbers of Zoning Ordinance to be interpreted: _____

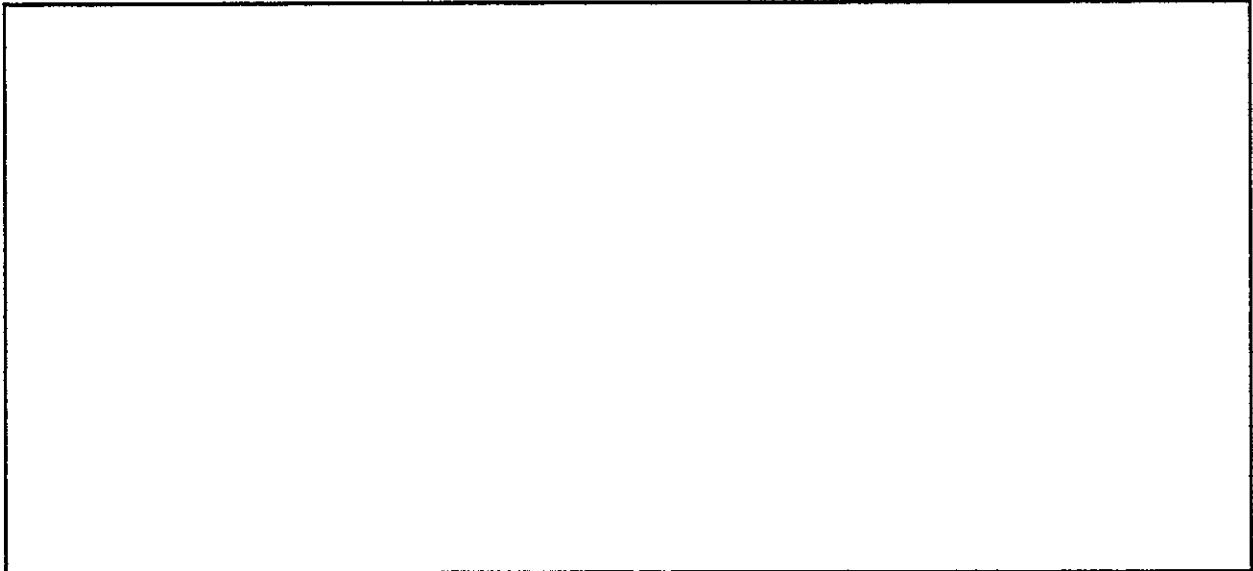
Please describe the request and what needs to be clarified or interpreted by the ZBA.

III. ADMINISTRATIVE REVIEW / APPEAL OF DECISION

Describe the circumstances of each case and provide the minutes of the public meeting noting the denial to be appealed.

IV. DETERMINATION OF COMMERCIAL MESSAGE (MURAL/WORK OF ART)

Describe the proposed mural/work of art. Applicant should include renderings of the proposed design. The ZBA shall determine if the proposed work contains a commercial message.



**** Applicant and artist must provide signed *Mural Installation and Maintenance Agreement* prior to the public meeting.**

SUBMIT THE FOLLOWING:

Provide 15 copies of survey, plot plan or site plan with this application that shows the subject property complete with boundary lines and dimensions, existing building locations, all proposed buildings, easements, utilities, and any site improvements/changes. Setbacks, height of structures, lot coverage, etc. should also be included, if applicable.

A PDF file of the application and supporting documents must also be submitted at the time of application.

PLEASE NOTE: The applicant, or a designated representative, **MUST BE PRESENT** at the meeting in which the case is being reviewed or the request may be postponed due to lack of representation.

We encourage applicants to make a presentation of the proposed request to the Zoning Board of Appeals, if applicable. To assist this effort, we have available for your use a projector, laptop computer and screen. ZBA meetings are recorded and televised.

PROPERTY OWNER'S APPROVAL (Initial each line)

_____ I hereby authorize and give permission for the City of Berkley to install one or more temporary signs on my property, in order to notify the public of the required public hearing related to the above request(s) before the ZBA.

_____ I hereby authorize the employees and representatives of the City of Berkley to enter upon and conduct an inspection and investigation of the above referenced property in relation to the above request.

APPLICANT'S ENDORSEMENT: (Initial each line)

SS All information contained herein is true and accurate to the best of my knowledge.

SS I acknowledge that the ZBA will not review my request unless all information in the application has been submitted to the satisfaction of the Community Development Director.

SS I acknowledge that the City and its employees shall not be held liable for any claims that may arise as a result of acceptance, processing or review of this application.

If an application is withdrawn more than three (3) weeks prior to the meeting date, 90% of the fee will be refunded. If the application is withdrawn less than three (3) weeks prior to the meeting, no refund will be given.

Sam Shine
Applicant Name (print)

[Signature]
Applicant Signature

1/7/25
Date

Applicant Name (print)

Applicant Signature

Date

Wasim Jarral
Property Owner Name (print)

Wasim Jarral
Property Owner Signature

1/7/25
Date

PROPERTY OWNER'S APPROVAL (Initial each line)

GJG I hereby authorize and give permission for the City of Berkley to install one or more temporary signs on my property, in order to notify the public of the required public hearing related to the above request(s) before the ZBA.

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Applicant Name (print)	Applicant Signature	Date
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Applicant Name (print)	Applicant Signature	Date
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GEVALIN GEGAT
Property Owner Name (print)

Gerolene Gogay
Property Owner Signature

1-16-25
Date

Office Use Only

Received 6-17-25 Receipt # _____ Meeting Date 7/14/2025 Case # PBA-04-25

SLU
Upon City Council Approval

Fee: Residential \$400
Commercial \$600 —
Mural \$300



SOURCE: USGS NATIONAL MAPPER, DATE RETRIEVED 1/3/2025

LOCATION MAP

SCALE: 1" = 500'±



SOURCE: NEARMAPS, DATE RETRIEVED 1/3/2025

AERIAL MAP

SCALE: 1" = 50'±

A MISS DIG TICKET WAS REQUESTED PRIOR TO CONDUCTING A SURVEY FOR THE SUBJECT PROPERTY.

TICKET NO: 2024091800753



Know what's below
Call before you dig.

SITE DEVELOPMENT PLANS FOR MUG & JUG PROPOSED COMMERCIAL REDEVELOPMENT

PARCEL IDS: 2507355039, 2507355038, & 2507355040
4162 TWELVE MILE ROAD
CITY OF BERKLEY, OAKLAND COUNTY, MICHIGAN

APPLICANT

SELWAN SHINA
6476 ORCHARD LAKE ROAD, SUITE A
WEST BLOOMFIELD, MI, 48322
248.207.3110
RSHINA@BAYSFD.COM



SOURCE: CITY OF BERKLEY ZONING MAP, DATE RETRIEVED 01/06/2025

- GATEWAY DISTRICT
- TWELVE MILE DISTRICT
- GREENFIELD DISTRICT

ZONING MAP

SCALE: 1" = 50'±

SHEET INDEX

DRAWING TITLE	SHEET #
COVER SHEET	C-1
DEMOLITION PLAN	C-2
SITE PLAN	C-3
GRADING PLAN	C-4
STORMWATER MANAGEMENT PLAN	C-5
UTILITY PLAN	C-6
LIGHTING PLAN	C-7
LANDSCAPING PLAN	C-8
LANDSCAPING DETAILS	C-9
CONSTRUCTION DETAILS	C-10 & C-11

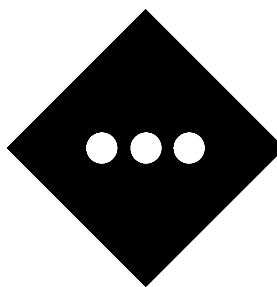
ADDITIONAL SHEETS

DRAWING TITLE	SHEET #
ALTA/NSPS LAND TITLE SURVEY	1 OF 1
LIFE SAFETY AND EGRESS PLAN	A-0.1
ARCHITECTURAL FLOOR PLAN	A-1.1
ARCHITECTURAL ELEVATIONS	A-0.15 & A-2.4
OCWRC SANITARY SEWER DETAILS	1 & 2 OF 2
OCWRC STORM DRAIN DETAILS	1 OF 1

PLAN REFERENCE MATERIALS:

- THIS PLAN SET REFERENCES THE FOLLOWING DOCUMENTS INCLUDING, BUT NOT LIMITED TO:
 - ALTA/NSPS LAND TITLE SURVEY PREPARED BY STONEFIELD ENGINEERING & DESIGN, LLC. DATED 10/10/2024
 - ARCHITECTURAL PLANS PREPARED BY ADG DESIGN STUDIO
 - AERIAL MAP FROM NEARMAPS, DATE RETRIEVED 1/3/2025
 - LOCATION MAP FROM USGS TOPOGRAPHICAL MAPPER, DATE RETRIEVED 1/3/2025
- ALL REFERENCE MATERIAL LISTED ABOVE SHALL BE CONSIDERED A PART OF THIS PLAN SET AND ALL INFORMATION CONTAINED WITHIN THESE MATERIALS SHALL BE UTILIZED IN CONJUNCTION WITH THIS PLAN SET. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN A COPY OF EACH REFERENCE AND REVIEW IT THOROUGHLY PRIOR TO THE START OF CONSTRUCTION.

PLANS PREPARED BY:



STONEFIELD
engineering & design

Birmingham, MI · New York, NY · Salem, MA
Princeton, NJ · Tampa, FL · Rutherford, NJ
www.stonefieldeng.com

555 S. Old Woodward Avenue, Suite 12L, Birmingham, MI 48009
Phone 248.247.1115

SITE DEVELOPMENT PLANS

MUG & JUG

PROPOSED COMMERCIAL
REDEVELOPMENT

PARCEL IDS: 2507355039, 2507355038, & 2507355040
4162 TWELVE MILE ROAD
CITY OF BERKLEY
OAKLAND COUNTY, MICHIGAN



STONEFIELD
engineering & design

SCALE: AS SHOWN PROJECT ID: DET-240246

TITLE:

COVER SHEET

DRAWING:

C-1

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NOT APPROVED FOR CONSTRUCTION

ISSUE	DATE	BY	DESCRIPTION
3	04/23/2025	JD	FOR SITE PLAN / SPECIAL LAND USE APPROVAL
2	03/19/2025	JD	FOR SITE PLAN / SPECIAL LAND USE APPROVAL
1	01/14/2025	JD	FOR SITE PLAN / SPECIAL LAND USE APPROVAL

REMOVAL QUANTITIES

CONCRETE	2,927	SF
ASPHALT PAVEMENT	25,062	SF
CONCRETE CURB	231	LF
CONCRETE WHEEL STOP	48	EA
COMBINED SEWER MAIN	303	LF
STORM PIPE	49	LF
STORM STRUCTURE	7	EA
GAS SERVICE	227	LF
GAS METER	4	EA
ELECTRIC METER	1	EA
OVERHEAD LINE	648	LF
UTILITY POLE	1	EA
LIGHT POLE	2	EA
BUILDING	4,401	SF
TRASH ENCLOSURE	2	EA
SIGN	1	EA
BOLLARD	14	EA

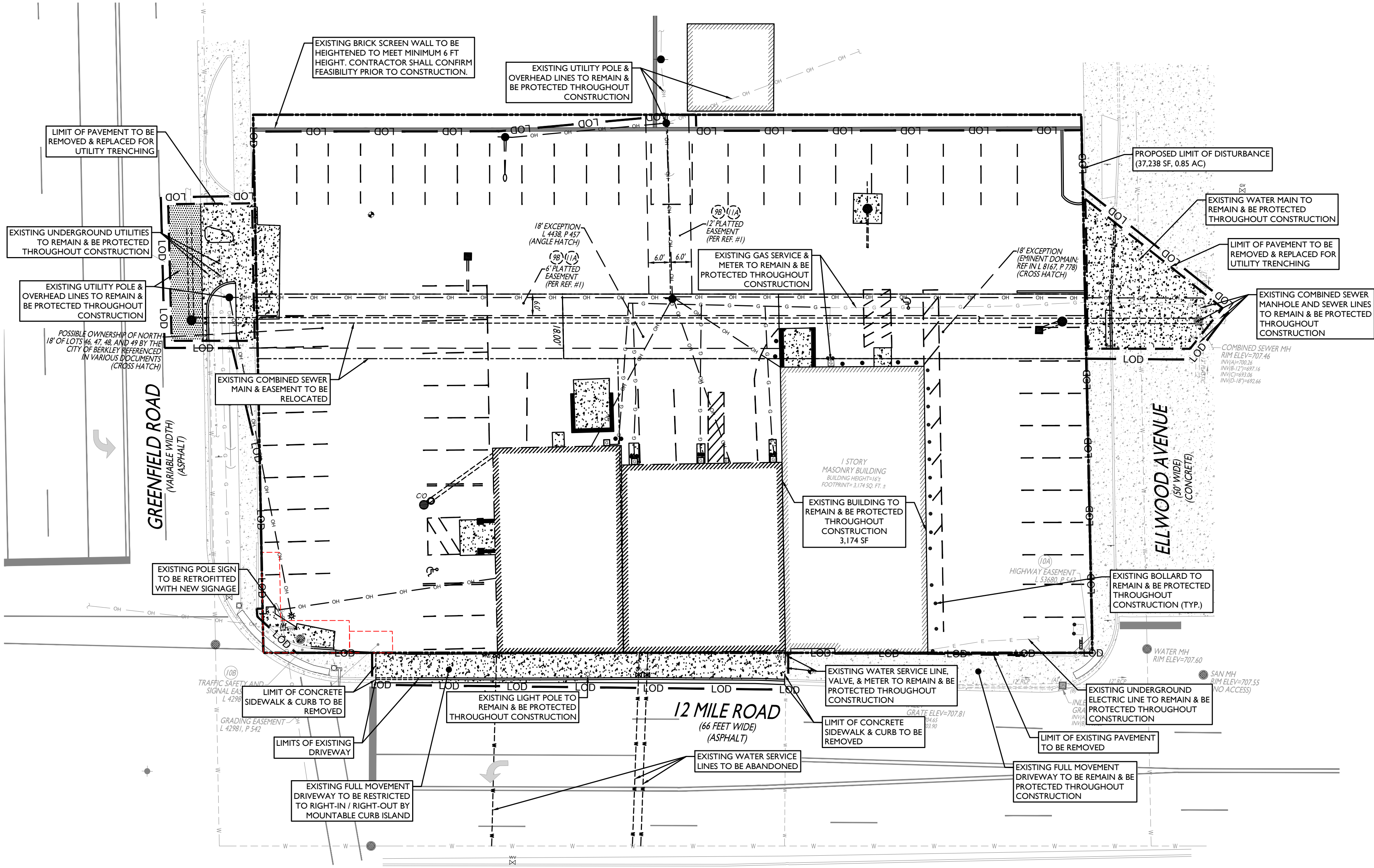
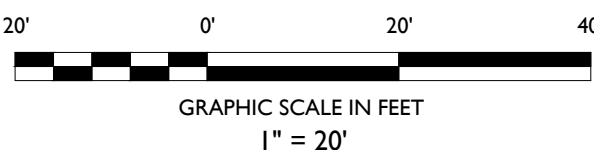
SYMBOL	DESCRIPTION
	FEATURE TO BE REMOVED / DEMOLISHED
	LIMIT OF DISTURBANCE
	EXISTING CONCRETE TO BE REMOVED
	EXISTING ASPHALT TO BE REMOVED

ALL SITE FEATURES WITHIN THE LIMIT OF DISTURBANCE INDICATED ON THIS PLAN ARE TO BE REMOVED / DEMOLISHED UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC. IF SIGNIFICANT DISCREPANCIES ARE DISCERNED BETWEEN THIS PLAN AND FIELD CONDITIONS



Know what's below
Call before you dig.

- DEMOLITION NOTES**
- THE WORK REFLECTED ON THE DEMOLITION PLAN IS TO PROVIDE GENERAL INFORMATION TOWARDS THE EXISTING ITEMS TO BE DEMOLISHED AND/OR REMOVED. THE CONTRACTOR IS RESPONSIBLE TO REVIEW THE ENTIRE PLAN SET AND ASSOCIATED REPORTS/REFERENCE DOCUMENTS INCLUDING ALL DEMOLITION ACTIVITIES AND INCIDENTAL TASKS NECESSARY TO COMPLETE THE SITE IMPROVEMENTS.
 - THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF DEMOLITION ACTIVITIES.
 - EXPLOSIVES SHALL NOT BE USED UNLESS WRITTEN CONSENT FROM BOTH THE OWNER AND ANY APPLICABLE GOVERNING AGENCY IS OBTAINED. BEFORE THE START OF ANY EXPLOSIVE PROGRAM, THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL LOCAL, STATE, AND FEDERAL PERMITS. ADDITIONALLY, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL SEISMIC TESTING AS REQUIRED AND ANY DAMAGES AS THE RESULT OF SAID DEMOLITION PRACTICES.
 - ALL DEMOLITION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL CODES. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL UTILITIES ARE DISCONNECTED IN ACCORDANCE WITH THE UTILITY AUTHORITY'S REQUIREMENTS PRIOR TO STARTING THE DEMOLITION OF ANY STRUCTURE. ALL EXCAVATIONS ASSOCIATED WITH DEMOLISHED STRUCTURES OR REMOVED TANKS SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO SUPPORT SITE AND BUILDING IMPROVEMENTS. A GEOTECHNICAL ENGINEER SHOULD BE PRESENT DURING BACKFILLING ACTIVITIES TO OBSERVE AND CERTIFY THAT BACKFILL MATERIAL WAS COMPACTED TO A SUITABLE CONDITION.
 - DEMOLISHED DEBRIS SHALL NOT BE BURIED ON SITE. ALL WASTE/DEBRIS GENERATED FROM DEMOLITION ACTIVITIES SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL RECORDS OF THE DISPOSAL TO DEMONSTRATE COMPLIANCE WITH THE ABOVE REGULATIONS.



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SITE DEVELOPMENT PLANS

MUG & JUG

**PROPOSED COMMERCIAL
REDEVELOPMENT**

PARCEL IDS: 2507355039, 2507355038, & 2507355040
4162 TWELVE MILE ROAD
CITY OF BERKLEY
OAKLAND COUNTY, MICHIGAN



STONEFIELD
engineering & design

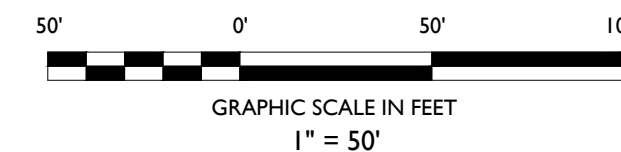
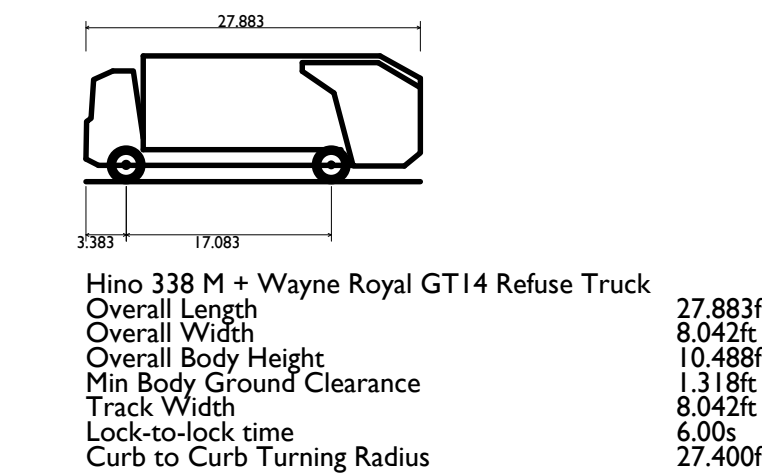
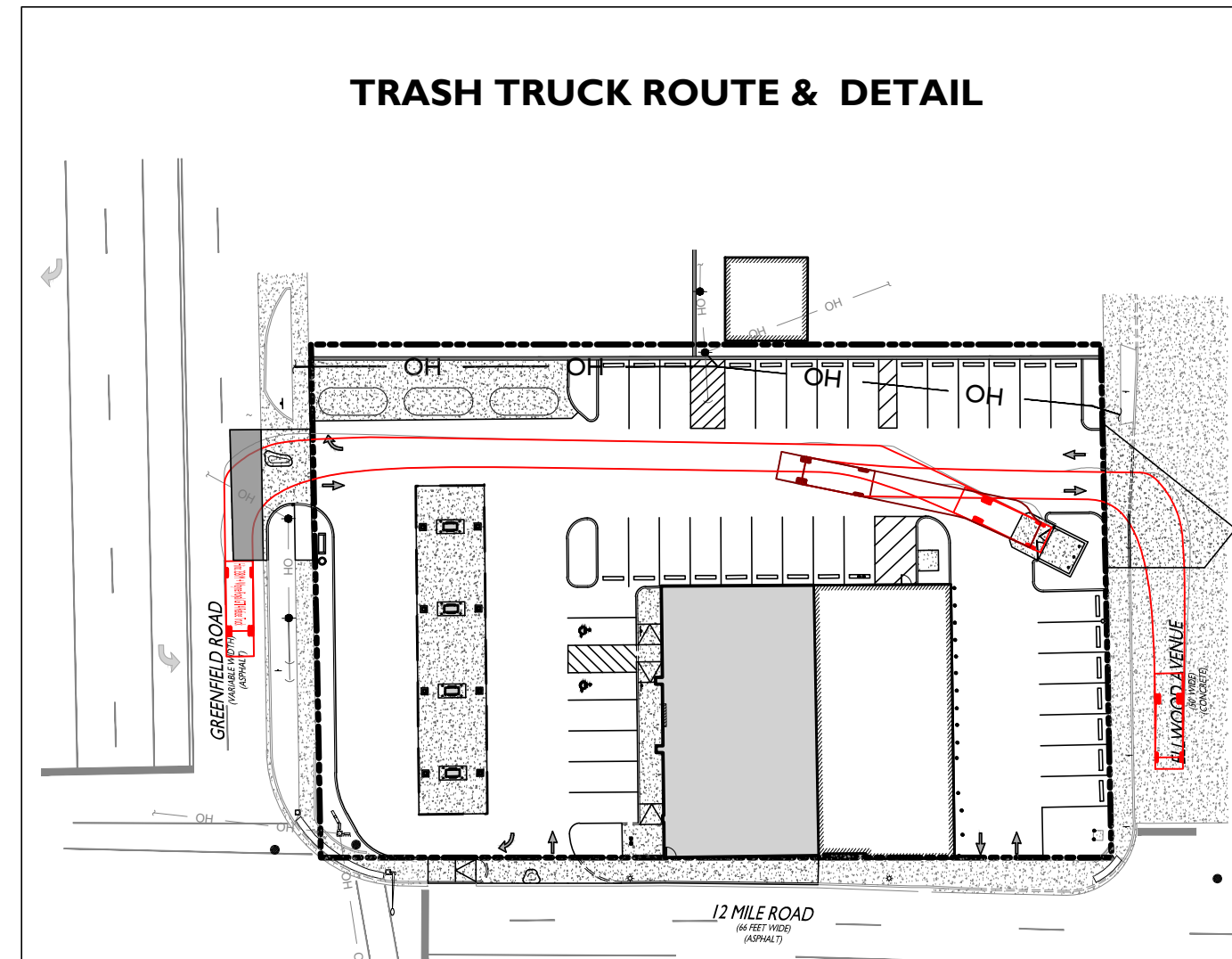
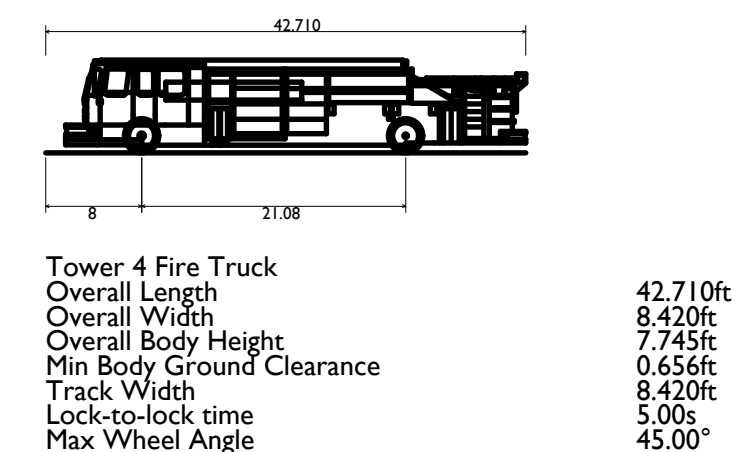
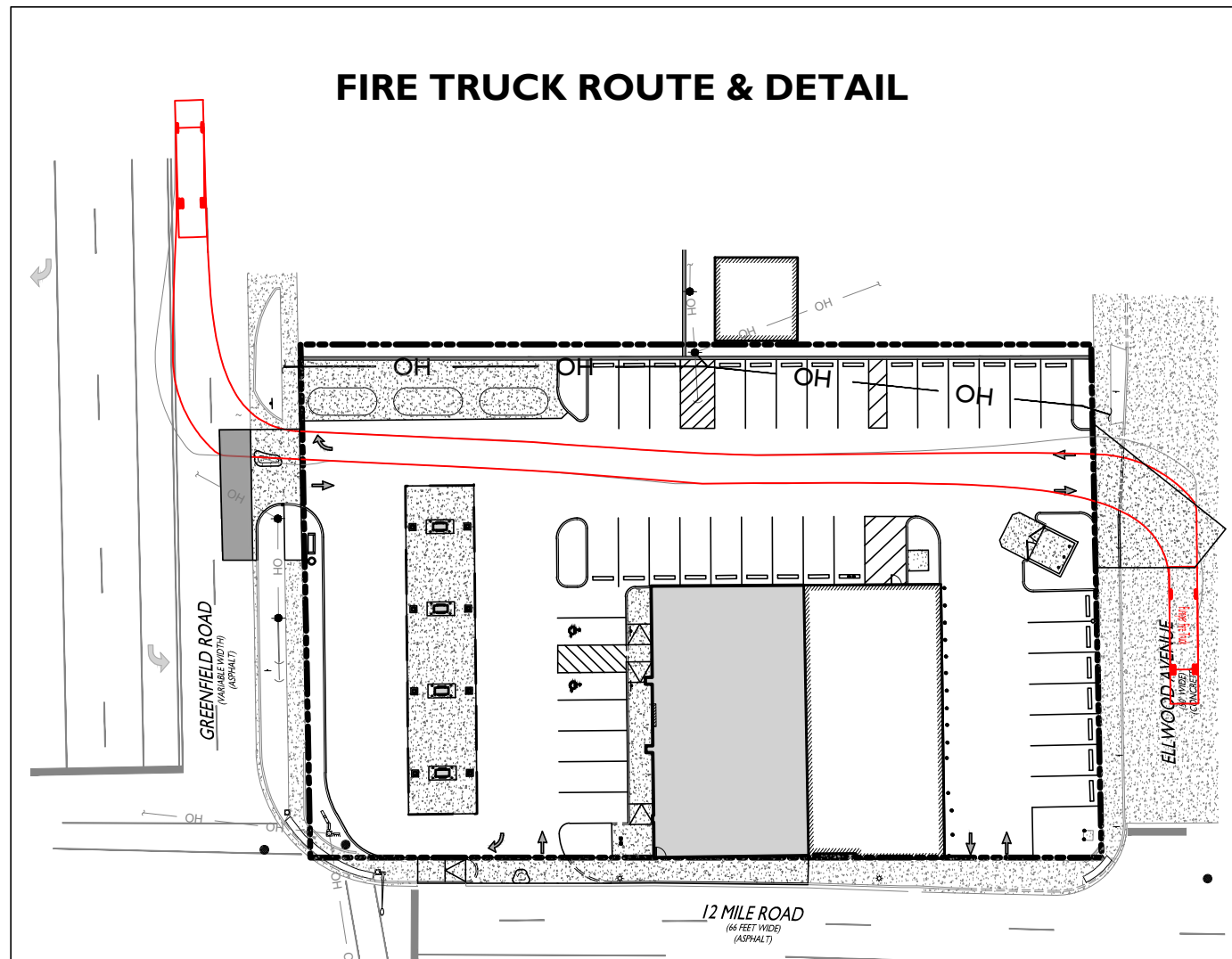
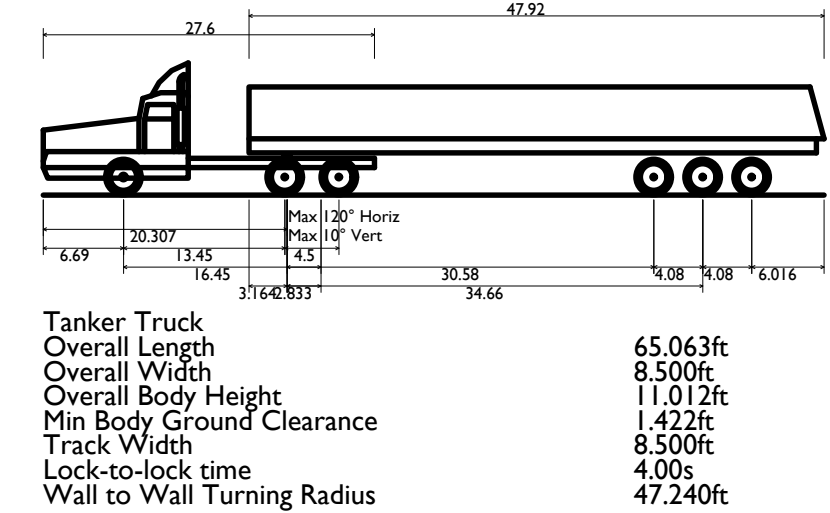
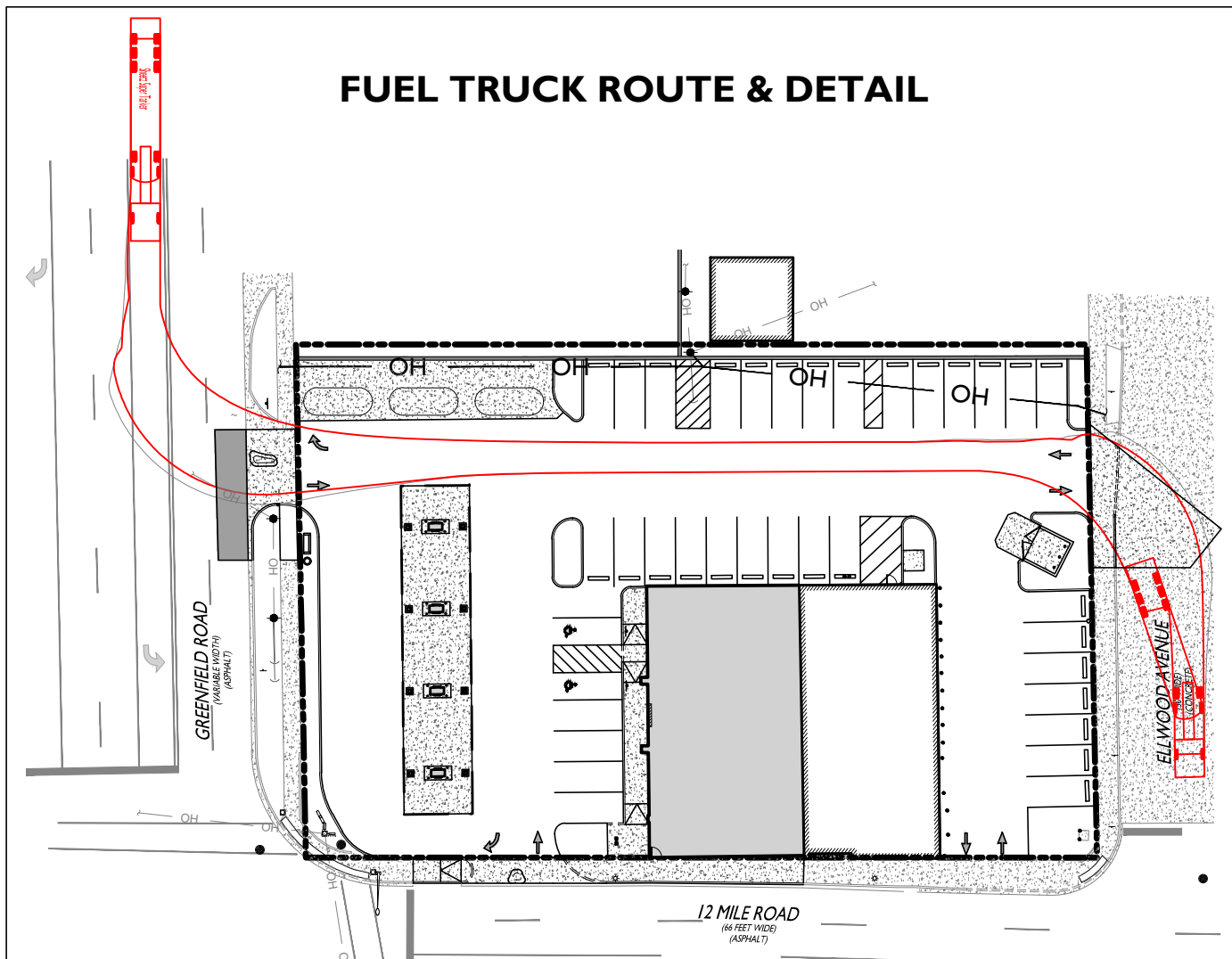
SCALE: 1" = 20' PROJECT ID: DET-240246

TITLE:

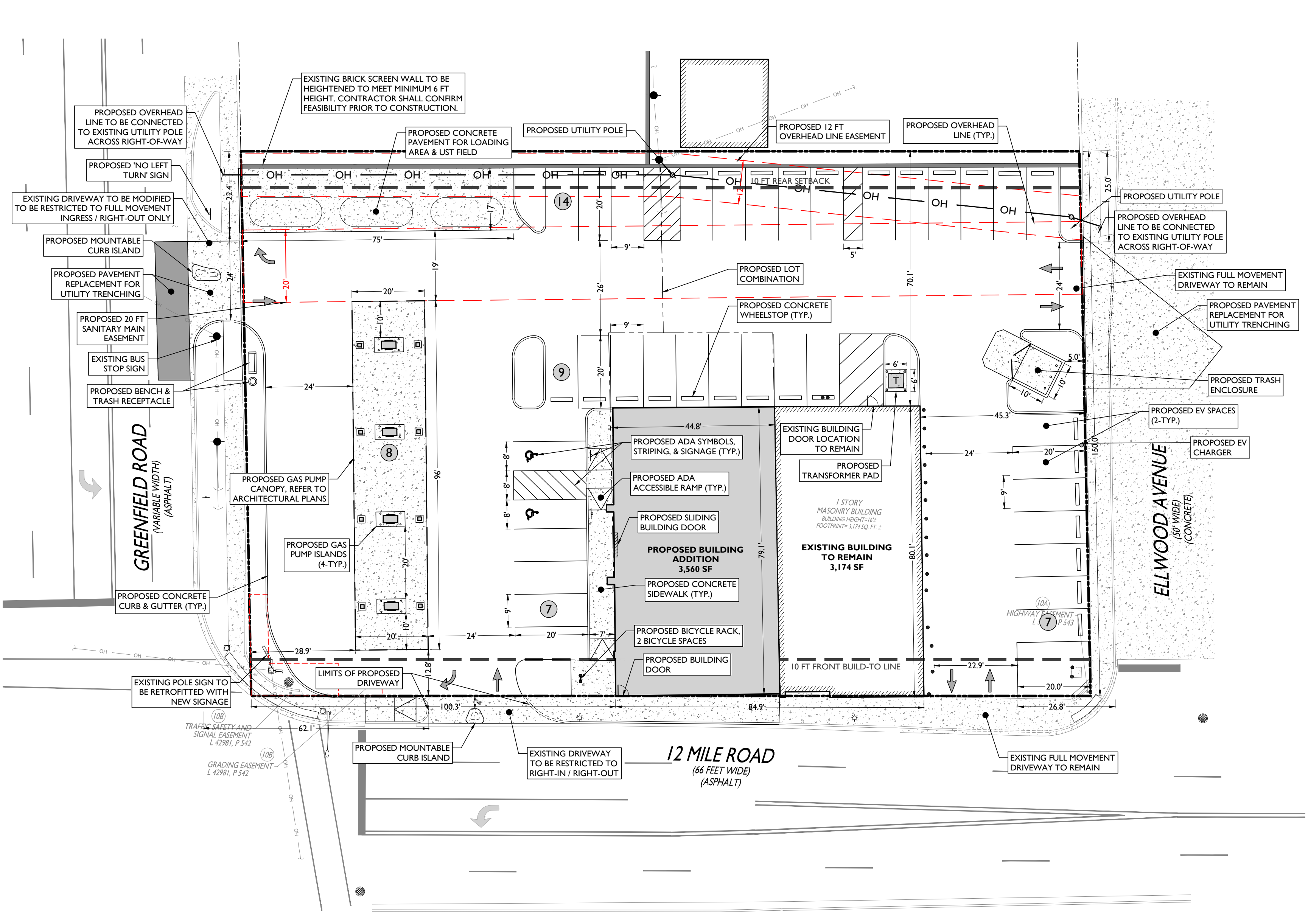
DEMOLITION PLAN

DRAWING:

C-2

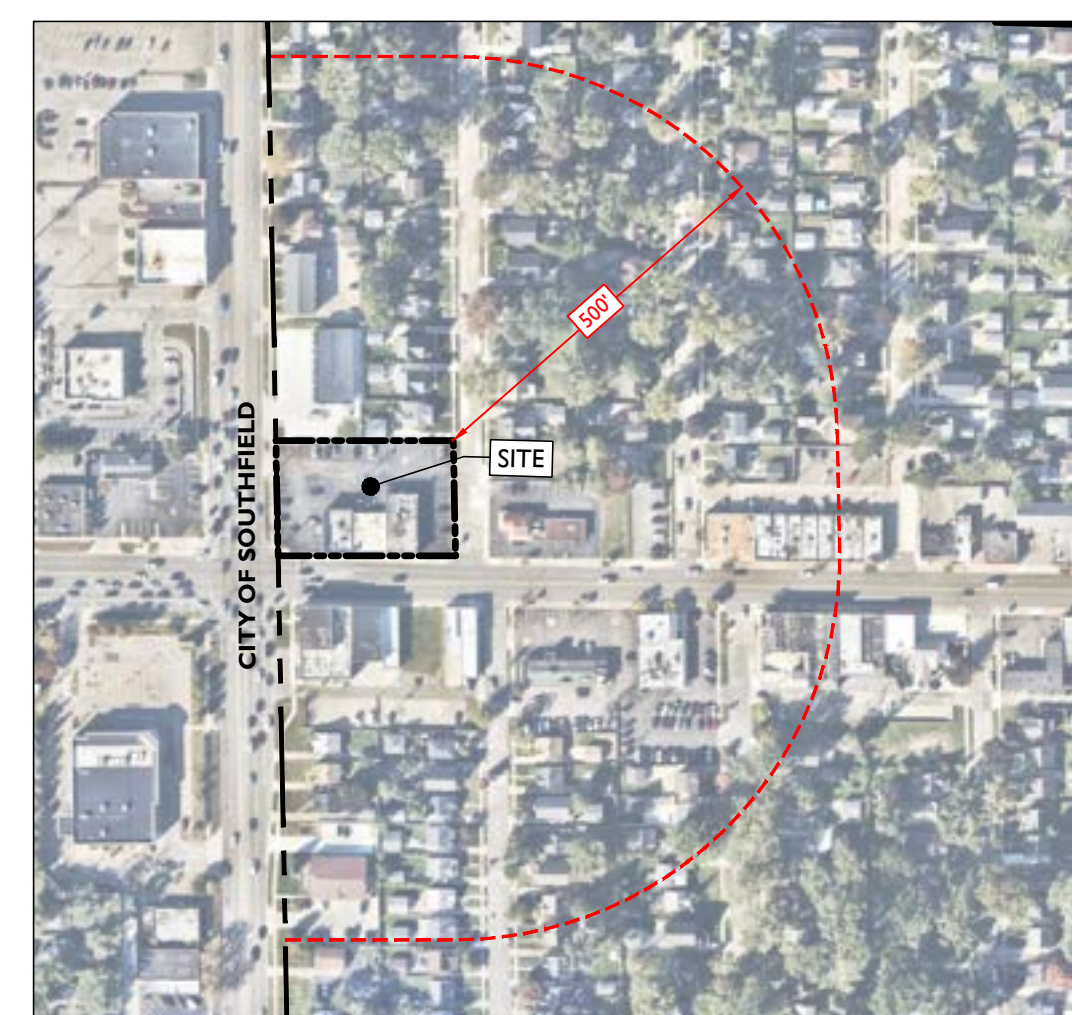


SYMBOL	DESCRIPTION
---	PROPERTY LINE
---	SETBACK LINE
---	PROPOSED EASEMENT
---	PROPOSED CURB
---	PROPOSED FLUSH CURB
---	PROPOSED MOUNTABLE CURB
---	PROPOSED SIGNS / BOLLARDS
---	PROPOSED BUILDING
---	PROPOSED CONCRETE
---	PROPOSED ASPHALT



LAND USE AND ZONING		
PARCEL IDS: 2507355039, 2507355038 & 2507355040		
GATEWAY DISTRICT (GD)		
PROPOSED USE	PERMITTED USE	PERMITTED USE
RESTAURANT	PERMITTED USE	PERMITTED USE
RETAIL STORE	PERMITTED USE	PERMITTED USE
AUTOMOBILE SERVICE STATION	SPECIAL USE	SPECIAL USE
ZONING REQUIREMENT	REQUIRED	PROPOSED
MINIMUM LOT AREA	17,000 SF	34,638 SF (0.80 AC)
MINIMUM LOT WIDTH	130 FT	150.0 FT
MAXIMUM BUILDING HEIGHT	40 FT	< 40 FT
MINIMUM FRONT BUILD-TO-LINE	10 FT	0.0 FT (NC)
FACADE ON BUILD-TO-LINE	75%	100% (NC)
MINIMUM SIDE YARD SETBACK	0 FT	5.0 FT (V) ⁽¹⁾
MINIMUM REAR YARD SETBACK	10 FT	70.1 FT (NC)
DRIVEWAY LOT LINE SPACING	30 FT	26.8 FT (V)
DRIVEWAY INTERSECTION SPACING	20 FT	20.0 FT (NC)
MINIMUM DRIVEWAY WIDTH	22 FT	22.9 FT (NC)
MAXIMUM DRIVEWAY WIDTH	30 FT	24 FT
SERVICE STATION SPACING ^(*)	500 FT	> 500 FT

- (1) VARIANCE
(V) PER § 138-53, TRASH ENCLOSURE (ACCESSORY STRUCTURE) IS NOT PERMITTED IN A SIDE YARD
(NC) NO CHANGE
(*) § 138-429 (b) (1) - AUTOMOBILE FILLING STATION SHALL NOT BE LOCATED NEARER THAN 500 FT TO A SCHOOL, CHURCH, PUBLIC PARK OR AUDITORIUM



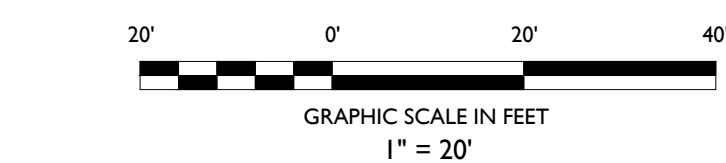
SERVICE STATION SPACING

SCALE: 1" = 250'±

OFF-STREET PARKING REQUIREMENTS		
CODE SECTION	REQUIRED	PROPOSED
§ 138-129	RESTAURANT: 1 SPACE PER 75 SF OF UFA* (702 SF) (0.7) / 1 / 75 SF = 7 SPACES GAS STATION WITH CONVENIENCE: 6 SPACES PER 1,000 SF OF UFA* + 1 SPACE PER PUMP + 2 SPACES (6,032 SF) (0.7) / 6 / 1,000 SF = 25 SPACES + (8 PUMPS) (1 / 1 PUMP) = 8 SPACES TOTAL: 7 + 25 + 8 + 2 = 42 SPACES	37 SPACES 8 PUMP SPACES TOTAL: 45 SPACES
§ 138-220 (a)	90" PARKING DIMENSIONS: 9 FT X 20 FT W/ 24 FT AISLE	9 FT X 20 FT W/ 24 FT AISLE
§ 138-256 (b)	LOADING: 12 FT X 30 FT	12 FT X 75 FT

(*) § 138-217 (b) - USABLE FLOOR AREA SHALL BE ASSUMED TO BE 70% OF TOTAL FLOOR AREA

- GENERAL NOTES**
- THE CONTRACTOR SHALL VERIFY AND FAMILIARIZE THEMSELVES WITH THE EXISTING SITE CONDITIONS AND THE PROPOSED SCOPE OF WORK (INCLUDING DIMENSIONS, LAYOUT, ETC.) PRIOR TO INITIATING THE IMPROVEMENTS IDENTIFIED WITHIN THESE DOCUMENTS. SHOULD ANY DISCREPANCY BE FOUND BETWEEN THE EXISTING SITE CONDITIONS AND THE PROPOSED WORK, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC PRIOR TO THE START OF CONSTRUCTION.
 - THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND ENSURE THAT ALL REQUIRED APPROVALS HAVE BEEN OBTAINED PRIOR TO THE START OF CONSTRUCTION. COPIES OF ALL REQUIRED PERMITS AND APPROVALS SHALL BE KEPT ON SITE AT ALL TIMES DURING CONSTRUCTION.
 - ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD HARMLESS STONEFIELD ENGINEERING & DESIGN, LLC, AND ITS SUB-CONSULTANTS FROM AND AGAINST ANY DAMAGES AND LIABILITIES INCLUDING ATTORNEY'S FEES ARISING OUT OF CLAIMS BY EMPLOYEES OF THE CONTRACTOR IN ADDITION TO CLAIMS CONNECTED TO THE PROJECT AS A RESULT OF NOT CARRYING THE PROPER INSURANCE FOR WORKERS COMPENSATION, LIABILITY INSURANCE, AND LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE.
 - THE CONTRACTOR SHALL NOT DEVIATE FROM THE PROPOSED IMPROVEMENTS IDENTIFIED WITHIN THIS PLAN SET UNLESS APPROVAL IS PROVIDED IN WRITING BY STONEFIELD ENGINEERING & DESIGN, LLC.
 - THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF CONSTRUCTION.
 - THE CONTRACTOR SHALL NOT PERFORM ANY WORK OR CAUSE DISTURBANCE ON A PRIVATE PROPERTY NOT CONTROLLED BY THE PERSON OR ENTITY WHO HAS AUTHORIZED THE WORK WITHOUT PRIOR WRITTEN CONSENT FROM THE OWNER OF THE PRIVATE PROPERTY.
 - THE CONTRACTOR IS RESPONSIBLE TO RESTORE ANY DAMAGED OR UNDERMINED STRUCTURE OR SITE FEATURE THAT IS IDENTIFIED TO REMAIN ON THE PLAN SET. ALL REPAIRS SHALL USE NEW MATERIALS TO RESTORE THE FEATURE TO ITS EXISTING CONDITION AT THE CONTRACTOR'S EXPENSE.
 - CONTRACTOR IS RESPONSIBLE TO PROVIDE THE APPROPRIATE SHOP DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS FOR REVIEW. STONEFIELD ENGINEERING & DESIGN, LLC, WILL REVIEW THE SUBMITTALS IN ACCORDANCE WITH THE DESIGN INTENT AS REFLECTED WITHIN THE PLAN SET.
 - THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
 - THE CONTRACTOR IS RESPONSIBLE TO PERFORM ALL WORK IN THE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AUTHORITY AND SHALL BE RESPONSIBLE FOR THE PROCUREMENT OF STREET OPENING PERMITS.
 - THE CONTRACTOR IS REQUIRED TO RETAIN AN OSHA CERTIFIED SAFETY INSPECTOR TO BE PRESENT ON SITE AT ALL TIMES DURING CONSTRUCTION & DEMOLITION ACTIVITIES.
 - SHOULD AN EMPLOYEE OF STONEFIELD ENGINEERING & DESIGN, LLC, BE PRESENT ON SITE AT ANY TIME DURING CONSTRUCTION, IT DOES NOT RELIEVE THE CONTRACTOR OF ANY OF THE RESPONSIBILITIES AND REQUIREMENTS LISTED IN THE NOTES WITHIN THIS PLAN SET.



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PROPOSED COMMERCIAL
REDEVELOPMENT

PARCEL IDS: 2507355039, 2507355038, & 2507355040
4162 TWELVE MILE ROAD
CITY OF BERKLEY
OAKLAND COUNTY, MICHIGAN

SCALE: 1" = 20'

PROJECT ID: DET-240246

TITLE: SITE PLAN

DRAWING: C-3

FOR SITE PLAN / SPECIAL LAND USE APPROVAL	FOR SITE PLAN / SPECIAL LAND USE APPROVAL	FOR SITE PLAN / SPECIAL LAND USE APPROVAL	FOR SITE PLAN / SPECIAL LAND USE APPROVAL	DESCRIPTION
JD	JD	JD	JD	
04/23/2025	03/19/2025	01/14/2025	01/14/2025	
3	2	1	1	ISSUE
				DATE
				BY
NOT APPROVED FOR CONSTRUCTION				
555 S. Old Woodward Avenue, Suite 12L, Birmingham, MI 48009				
Phone 248.247.1115				


BENCHMARK #1 = MAG NAIL = 708.73 (NAVD88).
- IN CONCRETE SIDEWALK, NORTH SIDE OF 12 MILE ROAD.
BENCHMARK #2 = MAG NAIL = 708.96 (NAVD88).
- IN ASPHALT, LOT 50, FRONT OF PARKING STALL.

GRADING NOTES

- ### ADA NOTES

-
- GRAPHIC SCALE IN FEET
1" = 20'

NOT APPROVED FOR CONSTRUCTION



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Phone 248.247.1115

MUG & JUG

PROPOSED COMMERCIAL REDEVELOPMENT

PARCEL IDS: 2507355039, 2507355038, & 2507355040
4162 TWELVE MILE ROAD
CITY OF BERKLEY
OAKLAND COUNTY, MICHIGAN



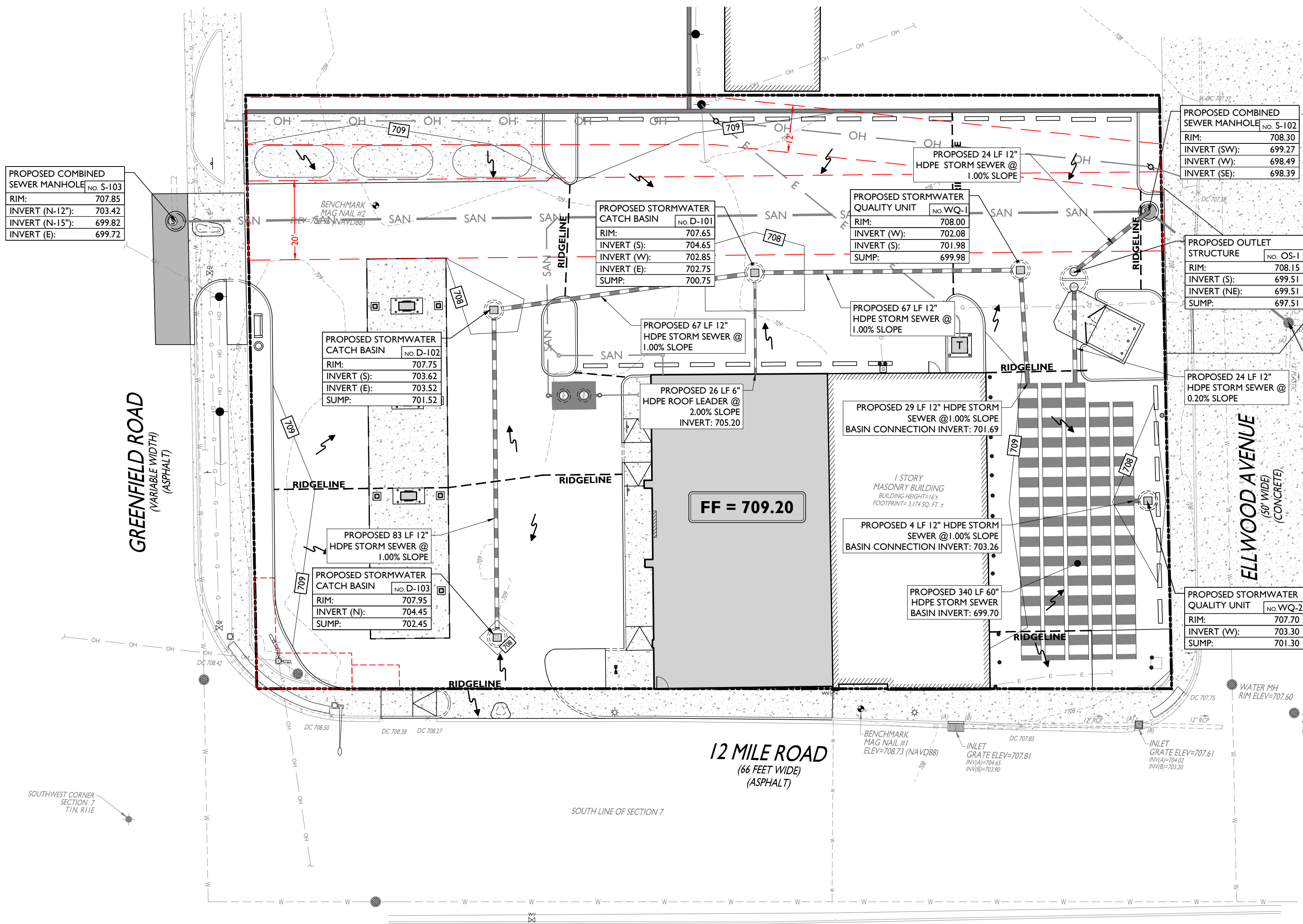
TITLE:

GRADING PLAN

DRAWING

C-4

V:\01204057-24046-BRAMPONT DEVELOPMENT- 4162 12 MILE ROAD, BERKLEY, MI\00010701204057.DWG



STORMWATER MANAGEMENT CALCULATIONS

(Based on Oakland County Stormwater Engineering Design Standards (11-22-2021 ordinance))

Project: Breakpoint Development - Berkley Designer: NAB Date: 01/07/25

PART A: Determination of Surface Runoff

Landcover	Area (AC)	Area (SF)	C-Value*	Weighted Value
Building / Pavement	0.74	32,300	0.95	30,685
Landscaped Areas	HSG D	0.05	0.30	701
Subtotals	0.80	34,638		31,386

*C-values obtained from Oakland County Standards, Section III, Part 'A'

$$I_{wq} = 30.20P^{0.12} / (9.17 + T)^{0.41}$$

T_c, Time of Concentration:
Residential - Assume 20 min
Commercial/Industrial - Assume 15 min
Sites < 5 acres - Assume 10 min

PART C: Channel Protection Volume Control

$$V_{CNA} = 4,719 * C * A$$

Is High Ground Water Present On-Site? No

Is Infiltration >0.24 in/hr Available On-Site? No

K_{sat} < 0.24 in/hr - Soil not suitable for infiltration
0.24 in/hr < K_{sat} < 0.10 in/hr - Supplemental Measures Required
0.50 < K_{sat} - No Supplemental Measures Required

PART D: Water Quality Control Mechanical Separators

Is a Mechanical Separator Proposed? Yes

$$I_r = 30.20 / (T_c + 9.17)^{0.41}$$

$$Q_{wq} = C * A * I_r$$

Sediment Forebay

Is a Forebay Proposed? No

$$V_{FA} = 545 * C * A$$

PART E: Channel Protection Rate Control: Extended Detention

$$V_{ED} = 6,897 * C * A$$

$$H_{ED} = V_{ED} / (4,666 * t_{ED})$$

PART F: Detention & Flood Control Facilities

$$Q_{100yr} = C * I_{100} * A$$

$$I_{100} = 83.3 / (T_c + 9.17)^{0.41}$$

$$Q_{wq} = 1.1055 * 0.206 * LN(A)$$

$$Q_{100yr} = Q_{wq} * A$$

$$R = 0.206 - 0.15 * LN(Q_{100yr} / Q_{wq})$$

$$V_{100yr} = 18,985 * C * A$$

$$V_{100yr} = V_{100yr} * R - V_{CNA}$$

BASIN VOLUME REQUIRED

$$V_r = V_{100yr}$$

UNDERGROUND BASIN VOLUME PROVIDED

Stone Storage Width, W _s :	0.00 FT	Pipe Inner Diameter, H _i :	5.00 FT
Stone Storage Depth, H _s :	0.00 FT	Pipe Outer Diameter, H _o :	5.50 FT
Stone Void Ratio, P _r :	0%	W _r , P _r , & H _o provided only if stone storage is utilized	
$S_R = ((W_s * H_s) - ((H_o * 0.5)^2 * \pi)) * P_r + ((H_o * 0.5)^2 * \pi)$			
$L_R = V_r / S_R$			
		Basin Storage Ratio, S _o :	19.63 C/F
		Required Basin Quantity, L _o :	332 LF
		Basin Quantity Proposed:	340 LF
		Basin Volume Proposed:	6,676 CF

BENCHMARKS

BENCHMARK #1 = MAG NAIL = 708.73 (NAVD88).
- IN CONCRETE SIDEWALK, NORTH SIDE OF 12 MILE ROAD.
BENCHMARK #2 = MAG NAIL = 708.96 (NAVD88).
- IN ASPHALT, LOT S0, FRONT OF PARKING STALL.

SYMBOL

---	PROPERTY LINE
100	PROPOSED GRADING CONTOUR
---	PROPOSED GRADING RIDGELINE
Q	PROPOSED STORMWATER STRUCTURES
---	PROPOSED STORMWATER PIPING
Q	PROPOSED UNDERGROUND OUTLET STRUCTURE

DRAINAGE AND UTILITY NOTES

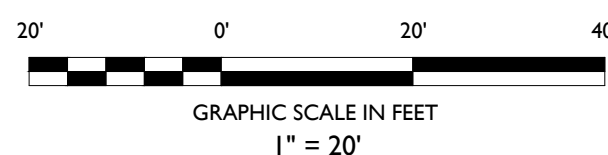
- THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY CROSSINGS FOR STORMWATER IMPROVEMENTS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IN WRITING.
- CONTRACTOR SHALL START CONSTRUCTION OF STORM LINES AT THE LOWEST INVERT AND WORK UP GRADIENT.
- THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE AUTHORITY FOR NOTICE OF CONSTRUCTION EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONFIRM THE HORIZONTAL LOCATION OF UTILITIES IN THE FIELD. SHOULD A DISCREPANCY EXIST BETWEEN THE FIELD LOCATION OF A UTILITY AND THE LOCATION SHOWN ON THE PLAN SET OR SURVEY, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC IMMEDIATELY IN WRITING.
- THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD OF THE AS-BUILT LOCATIONS OF ALL PROPOSED UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN THE AS-BUILT LOCATIONS AND THE LOCATIONS DEPICTED WITHIN THE PLAN SET. THIS RECORD SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.

EXCAVATION, SOIL PREPARATION, AND DEWATERING NOTES

- THE CONTRACTOR IS REQUIRED TO REVIEW THE REFERENCED GEOTECHNICAL DOCUMENTS PRIOR TO CONSTRUCTION. THESE DOCUMENTS SHALL BE CONSIDERED A PART OF THE PLAN SET.
- THE CONTRACTOR IS REQUIRED TO PREPARE SUBGRADE SOILS BENEATH ALL PROPOSED IMPROVEMENTS AND BACKFILL ALL EXCAVATIONS IN ACCORDANCE WITH RECOMMENDATIONS BY THE GEOTECHNICAL ENGINEER OF RECORD.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SHORING FOR ALL EXCAVATIONS AS REQUIRED. CONTRACTOR SHALL HAVE THE SHORING DESIGN PREPARED BY A QUALIFIED PROFESSIONAL SHORING DESIGNS SHALL BE SUBMITTED TO STONEFIELD ENGINEERING & DESIGN, LLC AND THE OWNER PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL OPEN EXCAVATIONS ARE PERFORMED AND PROTECTED IN ACCORDANCE WITH THE LATEST OSHA REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR ANY DEWATERING DESIGN AND OPERATIONS, AS REQUIRED, TO CONSTRUCT THE PROPOSED IMPROVEMENTS. THE CONTRACTOR SHALL OBTAIN ANY REQUIRED PERMITS FOR DEWATERING OPERATIONS AND GROUNDWATER DISPOSAL.

STORMWATER UNDERGROUND BMP CONSTRUCTION NOTES

- THE CONTRACTOR SHALL INSTALL AND BACKFILL THE UNDERGROUND BMP IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- UNDERGROUND BASINS SHALL UTILIZE A STONE BACKFILL WITH A MINIMUM VOID RATIO OF 40%.
- NO CONSTRUCTION LOADING OVER UNDERGROUND BASINS IS PERMITTED UNTIL BACKFILL IS COMPLETE PER THE MANUFACTURER'S SPECIFICATIONS. NO VEHICLES SHALL BE STAGED OR OPERATE FROM A FIXED POSITION OVER THE BASIN.



SITE DEVELOPMENT PLANS

MUG & JUG

PROPOSED COMMERCIAL REDEVELOPMENT

PARCEL IDS: 2507355039, 2507355038, & 2507355040
4162 TWELVE MILE ROAD
CITY OF BERKLEY
OAKLAND COUNTY, MICHIGAN



STONEFIELD engineering & design

SCALE: 1" = 20' PROJECT ID: DET-240246

TITLE:

STORMWATER MANAGEMENT PLAN

DRAWING:

C-5

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FOR SITE PLAN / SPECIAL LAND USE APPROVAL
FOR SITE PLAN / SPECIAL LAND USE APPROVAL
FOR SITE PLAN / SPECIAL LAND USE APPROVAL

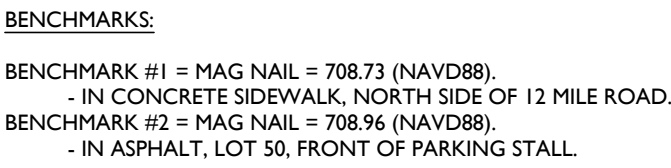
DESCRIPTION

BY

DATE

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DRAINAGE AND UTILITY NOTES

1. THE CONTRACTOR IS REQUIRED TO CALL THE APPROPRIATE AUTHORITY FOR NOTICE OF CONSTRUCTION/EXCAVATION AND UTILITY MARK OUT PRIOR TO THE START OF CONSTRUCTION IN ACCORDANCE WITH STATE LAW. CONTRACTOR IS REQUIRED TO CONDUCT A SHOWN UTILITY SURVEY PRIOR TO ANY WORK IN THE FIELD. SHOULD A DISCREPANCY EXIST BETWEEN THE FIELD LOCATION OF A UTILITY AND THE LOCATION SHOWN ON THE PLAN SET OR SURVEY, THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN LLC IMMEDIATELY AND NOTIFY THE CITY OF DENVER.
2. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN IN OPERATION ALL UTILITIES NOT DESIGNATED TO BE REMOVED.
3. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO ANY EXISTING UTILITY LOCATED WITHIN THE LIMITS OF THE PROPOSED WORK DURING CONSTRUCTION.
4. A MINIMUM HORIZONTAL SEPARATION OF 10 FEET IS REQUIRED BETWEEN ANY SANITARY SEWER LINE AND ANY UTILITY LINE. THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASEMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS PROVIDED BY STONEFIELD ENGINEERING & DESIGN LLC.
5. A MINIMUM VERTICAL SEPARATION OF 18 INCHES FOR SANITARY SEWER LINES BY A MINIMUM DISTANCE OF 18 INCHES, IF THIS SEPARATION CANNOT BE PROVIDED, A CONCRETE ENCASEMENT SHALL BE UTILIZED FOR THE SANITARY SEWER SERVICE AS PROVIDED BY STONEFIELD ENGINEERING & DESIGN LLC.
6. THE CONTRACTOR TO PERFORM A TEST PIT PRIOR TO CONSTRUCTION (RECOMMEND 30 DAYS PRIOR) AT LOCATIONS OF EXISTING UTILITY LINES TO RECORD EXISTING CONDITIONS AND CONNECTION IMPROVEMENTS, SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY STONEFIELD ENGINEERING & DESIGN LLC IN WRITING.
7. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING GAS, ELECTRIC AND TELECOMMUNICATION CONNECTIONS WITH THE APPROPRIATE GOVERNING AUTHORITY.
8. CONTRACTOR SHALL START CONSTRUCTION OF ANY GRAVITY SEWER LINES WITHIN 10 DAYS OF THE START OF WORK OR UPGRADE.
9. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD SET OF PLANS REFLECTING THE LOCATION OF EXISTING UTILITIES THAT ARE NOT TO BE REMOVED AND THE LOCATION OF EXISTING DEMOLITION/REMOVAL ACTIVITIES REQUIRED IN THIS PLAN SET. THIS DOCUMENT SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.
10. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN A RECORD OF THE AS-BUILT LOCATIONS OF ALL PROPOSED UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN THE AS-BUILT LOCATIONS AND THE LOCATION SPECIFIED ON THE PLAN SET. THIS RECORD SHALL BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF WORK.

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PROPOSED COMMERCIAL

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4162 TWELVE MILE ROAD
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SCALE: 1" = 20' PROJECT ID: DET-240246

TITLE:

UTILITY PLAN

DRAWING:

C-6



LIGHT FIXTURE 'A' & 'B'



LIGHT FIXTURE 'C' & 'D'



LIGHT FIXTURE 'E'



LIGHT FIXTURE 'F'

PROPOSED LUMINAIRE SCHEDULE						
SYMBOL	LABEL	QUANTITY	SECURITY LIGHTING	DISTRIBUTION	LLF	MANUFACTURER
	A	2	MIRADA MEDIUM LED AREA LIGHT - 12L - 30K - BACKSHIELD	TYPE II	0.9	LSI LIGHTING
	B	1	MIRADA MEDIUM LED AREA LIGHT - 7L - 30K - BACKSHIELD	FT	0.9	LSI LIGHTING
	C	7	MIRADA MEDIUM WALL SCONCE - 4L - 30K	TYPE III	0.9	LSI LIGHTING
	D	4	MIRADA MEDIUM WALL SCONCE - 8L - 30K	TYPE IV	0.9	LSI LIGHTING
	E	1	MIRADA SMALL SILICONE - 2L - 30K	TYPE II	0.9	LSI LIGHTING
	F	3	LSI LED SOFFIT LIGHT - SS - WW	N/A	0.9	LSI LIGHTING
IES FILE						
MRM-LED-12L-SIL-2-30-70CRI-IL.ies						
MRM-LED-07L-SIL-FT-30-70CRI-IL.ies						
XWM-3-LED-04L-30.ies						
XWM-4-LED-08L-30.ies						
XWS-LED-02L-SIL-2-30-70CRI.ies						
XSPS-S-LED-SS-WW-DF.ies						

LIGHTING REQUIREMENTS		
CODE SECTION	REQUIRED	PROPOSED
§ 138-143 (a), (3)	LIGHTS ON POLES, INCLUDING THE BASE, SHALL NOT BE TALLER THAN THE BUILDING WHOSE AREA THEY ILLUMINATE NOR TALLER THAN 20 FT, WHICHEVER IS SHORTER.	15 FT
§ 138-143 (b), (2)	LEVEL OF LIGHTING SHALL NOT EXCEED: 0.5 FC AT RESIDENTIAL PROPERTY LINE 1.0 FC AT NONRESIDENTIAL PROPERTY LINE	0.5 FC 1.0 FC
§ 138-223 (c)	OFF-STREET PARKING LEVEL OF LIGHTING: MINIMUM 1.5 FC MAXIMUM 5.0 FC	1.5 FC 5.0 FC

Mirada Medium Outdoor LED Area Light

Have questions? Call us at (800) 436-7800

ORDERING GUIDE

TYPICAL ORDER EXAMPLE: MRM LED 30L SIL FTA UNV DIM 50 70CRI ALSCS04 BRZ IL						
Prefix	Light Source	Lumen Package	Lens	Distribution	Orientation	Voltage
MRM - Mirada Medium Area Light	LED	7L - 7,000 lms, 40W 9L - 9,000 lms, 62W 12L - 12,000 lms, 85W 18L - 18,000 lms, 125W 24L - 24,000 lms, 170W 30L - 30,000 lms, 220W 36L - 36,000 lms, 260W 48L - 48,000 lms, 330W 60L - 60,000 lms, 400W 72L - 72,000 lms, 480W Custom Lumen Packages	SIL - Silicone	2 - Type 2 3 - Type 3 4 - Type 4 SW - Type 5 Wide FT - Forward Throw FTA - Forward Throw Automotive AM - Automotive Merchandise LC - Left Corner RC - Right Corner	(Blank) - standard L - Optics rotated left 90° R - Optics rotated right 90°	UNV - Universal Voltage (120-277V) HV - High Voltage (347-480V)
Driver						
DIM - 0-10V Dimming (0-100)						

Color Temp	Color Rendering	Finish	Options
50 - 5000K 40 - 4000K 30 - 3000K AMB - Phosphor Converted Amber	70CRI - 70 CRI	BLK - Black BRZ - Dark Bronze GNG - Gun Metal Gray MSV - Metallic Silver PLP - Platinum Plus SWG - Satin Verde Green WHT - White	(Blank) - None BB - Battery Back-up (0°C) CWBB - Cold Weather Battery Backup (-20°C) YHMA - Pole Mounting Bracket SP1 - 10kV Surge Protection TB - Terminal Block

Controls (Choose One)

(Blank) - None

Wireless Controls System

ALSC - AirLink Synapse Control System

ALSC02 - AirLink Synapse Control System with 12-20" Motion Sensor

ALSC04 - AirLink Synapse Control System with 20-40" Motion Sensor

ALM02L - AirLink Blue Long Range Wireless Motion & Photo Sensor Controller (0-24" mounting height)

ALM02R - AirLink Blue Long Range Wireless Motion & Photo Sensor Controller (25-40" mounting height)

Stand-Alone Controls

EXT - 0-10V Dimming leads extended to housing exterior

CUTP - 7 Pin Control Receptacle ANSI C136.41

MSBTLL - Integral Bluetooth® Motion and Photocell Sensor (0-24" Mtg)

MSBTL - Integral Bluetooth® Motion and Photocell Sensor (25-40" Mtg)

Button Type PhotoCells

PC020 - 120V

PC020-277 - 208-277V

PC047 - 547V

LIGHT FIXTURE 'A' & 'B'

Mirada Medium Wall Sconce (XWM) Outdoor Wall Sconce

Have questions? Call us at (800) 436-7800

ORDERING GUIDE

TYPICAL ORDER EXAMPLE: XWM 2 LED 03L 50 UE BRZ ALSC			
Family	Distribution	Light Source	Lumen Package
XWM - Mirada Medium Wall Sconce	2 - Type 2 3 - Type 3 4 - Type 4 FT - Type 4 Forward Throw	LED	9L - 9,000 12L - 12,000 18L - 18,000 24L - 24,000 30L - 30,000 36L - 36,000 48L - 48,000 60L - 60,000 72L - 72,000 Custom Lumen Packages
Color Temperature			
50 - 3000K 40 - 4000K 30 - 5000K AMB - Phosphor Converted Amber			

Voltage	Finish	Controls	Options
UNV - Universal Voltage (120-277V) HV - High Voltage (347-480V)	BLK - Black BRZ - Dark Bronze GNG - Gun Metal Gray MSV - Metallic Silver PLP - Platinum Plus SWG - Satin Verde Green WHT - White	(Blank) - None Wireless Controls ALSC - AirLink Synapse Control System ALSC01 - AirLink Synapse Control System with 0-12" Motion Sensor ALSC02 - AirLink Synapse Control System with 12-20" Motion Sensor ALM02L - AirLink Blue Wireless Motion & Photo Sensor Controller (0-15" mounting height) ALM02R - AirLink Blue Wireless Motion & Photo Sensor Controller (16-40" mounting height) Stand-Alone Controls DIM - 0-10V Dimming leads extended to housing exterior MSBTLL - Integral Bluetooth® Motion and Photocell Sensor (0-24" Mtg) MSBTL - Integral Bluetooth® Motion and Photocell Sensor (25-40" Mtg) Button Type PhotoCells PC020 - 120V PC020-277 - 208-277V PC047 - 547V	(Blank) - None BB - Battery Back-up (0°C) CWBB - Cold Weather Battery Backup (-20°C) YHMA - Pole Mounting Bracket SP1 - 10kV Surge Protection TB - Terminal Block

LIGHT FIXTURE 'C' & 'D'

Mirada Small Silicone (XWS SIL)

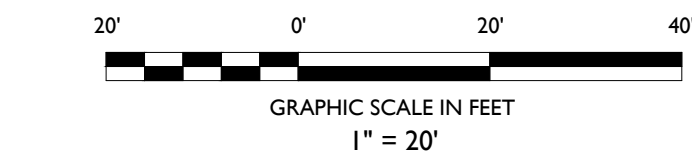
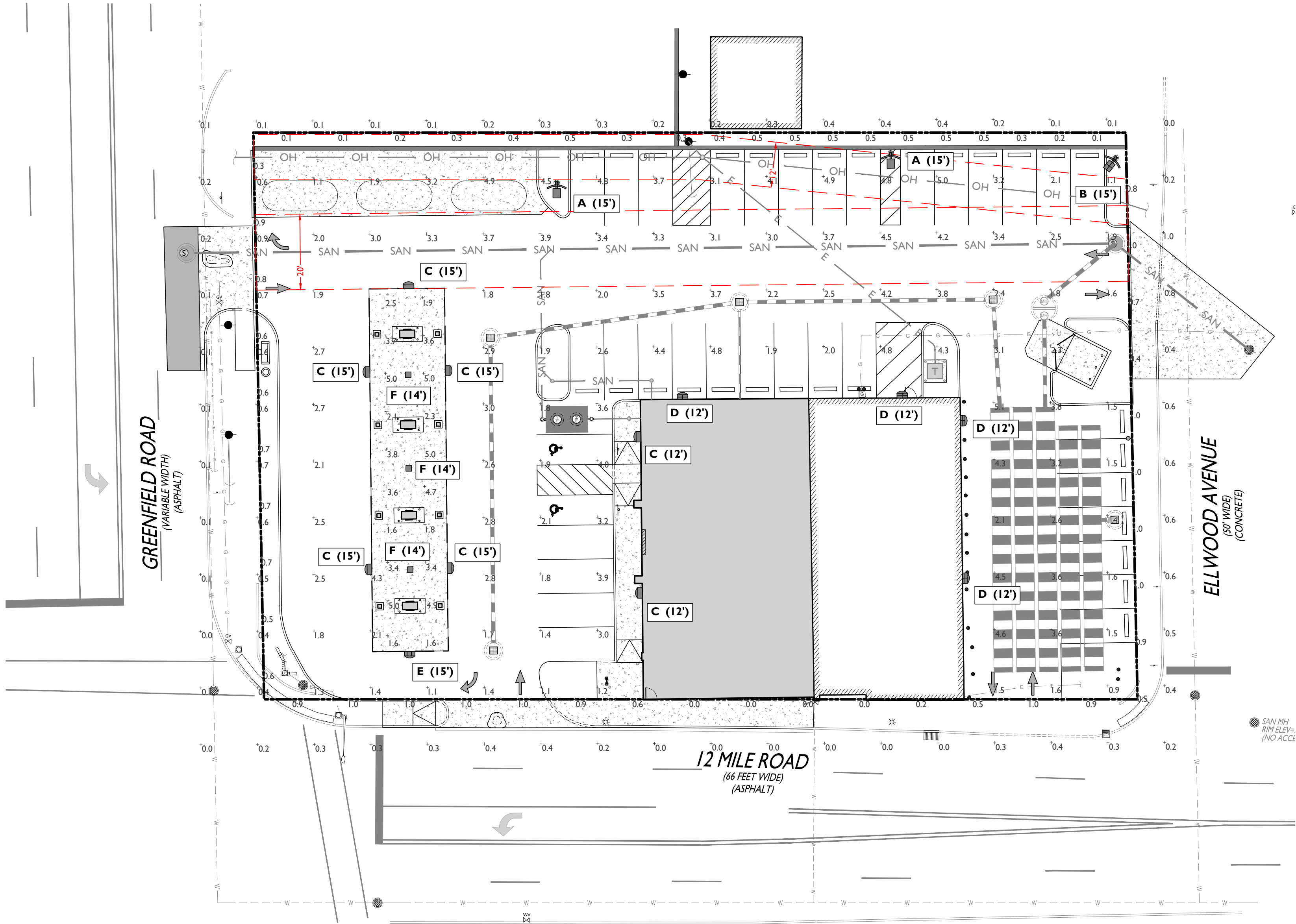
Have questions? Call us at (800) 436-7800

ORDERING GUIDE

TYPICAL ORDER EXAMPLE: XWS LED 6L SIL FT UNV DIM 40 70CRI ALBSC1 BLK CWBB						
Prefix	Light Source	Lumen Package	Lens	Distribution	Voltage	Driver
XWS - Mirada Small Wall Sconce	LED	1L - 1,000 (10W) UNV Only 2L - 2,000 (20W) 3L - 3,000 (30W) 6L - 6,000 (60W) 9L - 9,000 (90W) 12L - 12,000 (120W) 18L - 18,000 (180W) 24L - 24,000 (240W) 30L - 30,000 (300W) Custom Lumen Packages	SIL - Silicone	2 - Type 2 3 - Type 3 FT - Forward Throw	UNV - Universal Voltage (120-277V) HV - High Voltage (347-480V)	DIM - 0-10V Dimming (0-100)

Color Temperature	Color Rendering	Controls	Finish	Options
50 - 5000K 40 - 4000K 30 - 3000K	70CRI - 70 CRI	(Blank) - None Wireless Controls ALM02L - AirLink Blue Multi Range Wireless Motion & Photo Sensor Controller (0-15" mounting height) ALM02R - AirLink Blue Multi Range Wireless Motion & Photo Sensor Controller (16-40" mounting height) Stand-Alone Controls EXT - 0-10V Dimming leads extended to housing exterior MSBTLL - Integral Bluetooth® Motion Sensor 0-24" Mtg MSBTL - Integral Bluetooth® Motion Sensor 8-24" Mtg Button Type PhotoCells PC020 - 120V PC020-277 - 208-277V PC047 - 547V	BLK - Black BRZ - Dark Bronze GNG - Gun Metal Gray MSV - Metallic Silver PLP - Platinum Plus SWG - Satin Verde Green WHT - White	(Blank) - None BB - 10w Battery Back-up (0°C) CWBB - 10w Cold Weather Battery Backup (-20°C) ER - Extended Housing SP1 - 10kV Surge Protection Device

LIGHT FIXTURE 'E'

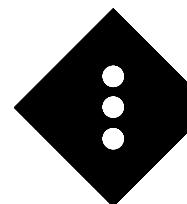


SYMBOL DESCRIPTION

- A (XX') PROPOSED LIGHTING FIXTURE (MOUNTING HEIGHT)
- +XX PROPOSED LIGHTING INTENSITY (FOOT-CANDLES)
- PROPOSED AREA LIGHT
- PROPOSED BUILDING MOUNTED / CANOPY LIGHT

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SITE DEVELOPMENT PLANS

MUG & JUG

PROPOSED COMMERCIAL
REDEVELOPMENT

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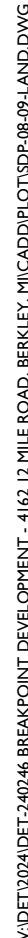
SCALE: 1" = 20' PROJECT ID: DET-240246

TITLE:

LIGHTING PLAN

DRAWING:

C-7

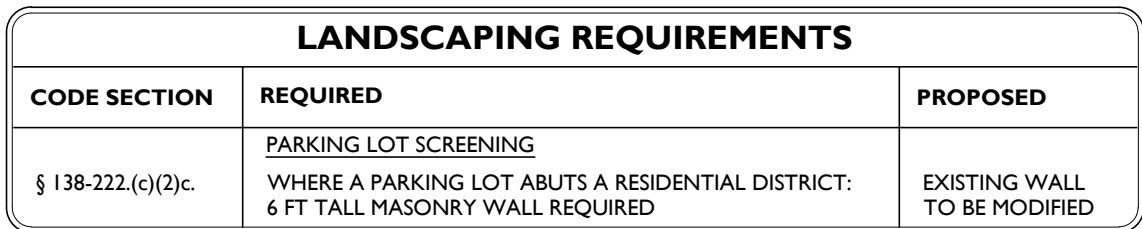



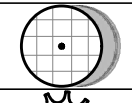
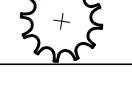
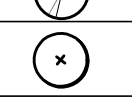
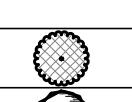
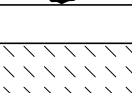
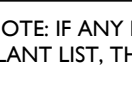

IRRIGATION NOTE:

IRRIGATION CONTRACTOR TO PROVIDE A DESIGN FOR AN IRRIGATION SYSTEM SEPARATING PLANTING BEDS FROM LAWN AREA. PRIOR TO CONSTRUCTION, DESIGN IS TO BE SUBMITTED TO THE PROJECT LANDSCAPE DESIGNER FOR REVIEW AND APPROVAL. WHERE POSSIBLE, DRIP IRRIGATION AND OTHER WATER CONSERVATION TECHNIQUES SUCH AS RAIN SENSORS SHALL BE IMPLEMENTED. CONTRACTOR TO PROVIDE MAXIMUM WATER PENETRATION AND UNIFORMITY OF MEASURED IN PSI. PRESSURE REDUCING DEVICES OR BOOSTER PUMPS SHALL BE PROVIDED TO MEET SYSTEM PRESSURE REQUIREMENTS. DESIGN TO SHOW ALL VALVES, PIPING, HEADS, BACKFLOW PREVENTION, METERS, CONTROLLERS, AND SLEEVES WITHIN HARDCAPE AREAS.

LANDSCAPING NOTES

2. THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRASS AND LANDSCAPED AREAS TO MATCH EXISTING CONDITIONS UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
3. THE CONTRACTOR SHALL RESTORE ALL DISTURBED LAWN AREAS WITH A MINIMUM 4 INCH DEPTH OF TOP SOIL
3. THE CONTRACTOR SHALL RESTORE MULCH AREAS WITH A MINIMUM 3 INCH LAYER OF MULCH -
- THE MAXIMUM SLOPE ALLOWABLE IN LANDSCAPE RESTORATION SHALL BE 3 FEET HORIZONTAL TO FOOT VERTICAL (8% SLOPE) UNLESS INDICATED OTHERWISE WITHIN THE PLAN SET.
- THE CONTRACTOR IS REQUIRED TO LOCATE ALL SPRINKLER HEADS AT LEAST 6 INCHES FROM ANY CURB OR CONSTRUCTION. THE CONTRACTOR SHALL RELOCATE SPRINKLER HEADS AND LINES IN ACCORDANCE WITH OWNER'S DIRECTION WITHIN AREAS OF DISTURBANCE.
6. THE CONTRACTOR SHALL ENSURE THAT ALL DISTURBED LANDSCAPED AREAS ARE GRADED TO MEET FLUSH AT THE ELEVATION OF WALKWAYS AND TOP OF CURB ELEVATIONS EXCEPT WHERE INDICATED OTHERWISE WITHIN THE PLAN SET. NO ABRUPT CHANGES IN GRADE ARE PERMITTED IN DISTURBED LANDSCAPING AREAS.



PLANT SCHEDULE						
SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
DECIDUOUS TREES						
	GLE	1	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER'	SHADEMASTER HONEY LOCUST	2" - 2.5" CAL	B&B
EVERGREEN TREES						
	BLU	14	JUNIPERUS SCOPULORUM 'BLUE ARROW'	BLUE ARROW JUNIPER	6' - 8' HT	B&B
	VIR	6	JUNIPERUS VIRGINIANA 'J.N. SELECT GREEN'	EMERALD FEATHER EASTERN REDCEDAR	6' - 8' HT	B&B
SHRUBS						
	COR	6	CORNUS STOLONIFERA 'FARROW'	ARCTIC FIRE RED TWIG DOGWOOD	18" - 24"	POT
	PHY	5	PHYSCARPUS OPULIFOLIUS 'LITTLE DEVIL'	LITTLE DEW, DWARF NINEBARK	18" - 24"	POT
EVERGREEN SHRUBS						
	ILE	12	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	18" - 24"	POT
	TAX	6	TAXUS X MEDIA 'DENSIFORMIS'	DENSE ANGLO-JAPANESE YEW	18" - 24"	POT
GROUND COVERS						
	BAR	63	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR CREEPING JUNIPER	1 GAL.	POT, 36" O.C.

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN ON THE LANDSCAPE PLAN AND WITHIN THE PLANT LIST, THE PLAN SHALL DICTATE.

[illegible]

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SITE DEVELOPMENT PLANS

MUG & JUG

PROPOSED COMMERCIAL

REDEVELOPMENT

PARCEL IDS: 2507355039, 2507355038, & 2507355040
4162 TWELVE MILE ROAD
CITY OF BERKLEY
OAKLAND COUNTY, MICHIGAN



SCALE:	1" = 20'	PROJECT ID: DET-240246
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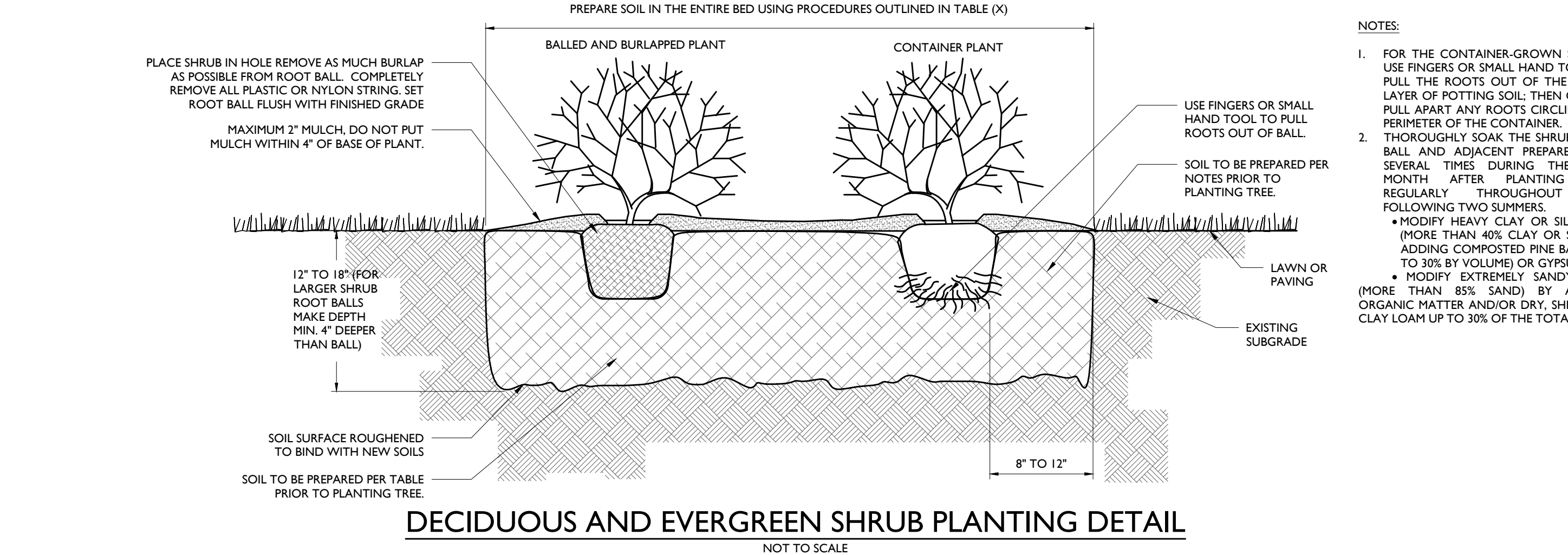
TITLE:

LANDSCAPING PLAN

DRAWING:

C-8

1. FOR CONTAINER-GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCUMFERRING THE PERIMETER OF THE CONTAINER.
2. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
3. SOIL AMENDMENTS:
 - MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM
 - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX



THOROUGHLY SOAK THE GROUND COVER ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST YEAR AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.

SOIL AMENDMENTS:

- MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) GYPHUM
- MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM TO 30% OF THE TOTAL MIX

ALL GROUND COVER AREAS SHALL BE TREATED WITH A PRE-EMERGENT PER MANUFACTURER'S SPECIFICATIONS



1. THE LANDSCAPE CONTRACTOR SHALL FURNISH ALL MATERIALS AND PERFORM ALL WORK IN ACCORDANCE WITH THESE SPECIFICATIONS, APPROVED OR FINAL DRAWINGS, AND INSTRUCTIONS PROVIDED BY THE PROJECT LANDSCAPE DESIGNER. MUNICIPAL OFFICIAL OR OWNER'S REPRESENTATIVE. ALL WORK COMPLETED AND MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH THE INTENTION OF THE SPECIFICATIONS, DRAWINGS, AND INSTRUCTIONS AND EXECUTED WITH THE STANDARD LEVEL OF CARE FOR THE LANDSCAPE INDUSTRY.
2. WORK MUST BE CARRIED OUT ONLY DURING WEATHER CONDITIONS FAVORABLE TO LANDSCAPE CONSTRUCTION AND TO THE HEALTH AND WELFARE OF PLANTS. THE SUITABILITY OF SUCH WEATHER CONDITIONS SHALL BE DETERMINED BY THE LANDSCAPE CONTRACTOR.
3. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR, BEFORE ORDERING OR PURCHASING MATERIALS, TO PROVIDE SAMPLES OF THOSE MATERIALS TO THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL FOR APPROVAL, IF SO REQUESTED.
4. IF SAMPLES ARE REQUESTED, THE LANDSCAPE CONTRACTOR IS TO SUBMIT CERTIFICATION TAGS FROM TREES, SHRUBS AND PERENNIALS TO BE USED AND PLANTED TO OFFICIALS.
5. UNLESS OTHERWISE AUTHORIZED BY THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL, THE LANDSCAPE CONTRACTOR SHALL PROVIDE NOTICE AT LEAST FORTY- EIGHT HOURS (48 HRs) IN ADVANCE OF THE ANTICIPATED DELIVERY DATE OF ANY PLANT MATERIALS TO THE PROJECT SITE. A LEGIBLE COPY OF THE INVOICE, SHOWING VARIETIES AND SIZES OF MATERIALS INCLUDED FOR EACH SHIPMENT SHALL BE FURNISHED TO THE PROJECT LANDSCAPE DESIGNER.
6. THE PROJECT LANDSCAPE DESIGNER OR GOVERNING MUNICIPAL OFFICIAL, RESERVES THE RIGHT TO INSPECT AND REJECT PLANTS AT ANY TIME AND AT ANY PLACE.

BEFORE COMMENCING WORK, ALL EXISTING VEGETATION WHICH COULD BE IMPACTED AS A RESULT OF THE PROPOSED CONSTRUCTION ACTIVITIES MUST BE PROTECTED FROM DAMAGE BY THE INSTALLATION OF TREE PROTECTION FENCING. THE FENCING SHALL BE INSTALLED AT THE OUTLINE OF THE PROPOSED WORK AND SHALL BE MAINTAINED THROUGHOUT THE PROJECT. THE PLAN SET, ESTABLISHING THE TREE PROTECTION ZONE, FENCE INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE PROTECTION FENCE DETAIL." NO WORK MAY BEGIN UNTIL THIS REQUIREMENT IS FULFILLED. THE FENCING SHALL BE MAINTAINED THROUGHOUT THE PROJECT BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.

2. IN ORDER TO AVOID DAMAGE TO ROOTS, BARK OR LOWER BRANCHES, NO VEHICLE, EQUIPMENT, DEBRIS, OR OTHER MATERIALS SHALL BE DRIVEN, PARKED OR PLACED WITHIN THE TREE PROTECTION ZONE. ALL ON-SITE CONTRACTORS SHALL BE REQUIRED TO WEAR PROTECTIVE FOOTWEAR, INCLUDING STEEL TOE BOOTS, SAFETY GLASSES, PAINTS, MASKS, AND ANY OTHER FEATURES EITHER EXISTING OR PREVIOUSLY INSTALLED UNDER THIS CONTRACT.

3. IN RARE INSTANCES WHERE EXCAVATING, FILL, OR GRADING IS REQUIRED WITHIN THE DRILL-PILE OF TREES TO REMAIN, THE FOLLOWING SHALL BE REQUIRED:

- TRENCING: WHEN TRENCING OCCURS AROUND TREES TO REMAIN, THE TREE ROOTS SHALL NOT BE CUT, BUT THE TRENCH SHALL BE RUNNED UNDER OR AROUND THE ROOTS BY CAREFUL HAND DIGGING AND WITHOUT INJURY TO THE ROOTS. NO ROOTS, LIMBS, OR WOODS ARE TO HAVE ANY PAINT OR MATERIAL APPLIED TO ANY SURFACE.
- FILL: WHEN FILL IS REQUIRED TO BE PLACED WITHIN THE DRILL-PILE OF TREES TO REMAIN, THE FILL MUST BE 1/2" MAXIMUM EXCEEDING 6 INCHES (6") IS REQUIRED. CLEAN, WASHED GRAVEL FROM ONE TO TWO INCHES (1" - 2") IN SIZE SHALL BE PLACED DIRECTLY AROUND THE TREE TRUNK. THE GRAVEL SHALL EXTEND OUT FROM THE TRUNK ON ALL SIDES AND BE PLACED TO A MINIMUM OF 12 INCHES (12") FROM THE TRUNK. THE GRAVEL SHALL BE PLACED TO A MINIMUM OF 12 INCHES (12") FROM THE TRUNK. GRAVEL BEFORE ANY EARTH FILL IS PLACED. NEW EARTH FILL SHALL NOT BE LIFT IN CONTACT WITH THE TRUNK OF ANY TREE REQUIRING FILL. WHEN FILL EXCEEDING 6 INCHES (6") IS REQUIRED, A DRY LAID TREE WELL SHALL BE CONSTRUCTED.
- GRADING: WHEN GRADING IS REQUIRED TO BE PLACED WITHIN THE DRILL-PILE OF TREES TO REMAIN, THE GRADING SHALL BE LOWERED GRADES. EXISTING TREES LOCATED IN AREAS WHERE THE NEW FINISHED GRADE IS TO BE LOWERED, SHALL HAVE RE-GRADING WORK DONE BY HAND TO THE INDICATED ELEVATION, NO GREATER THAN SIX INCHES (6"). ROOTS SHALL BE CUT CLEANLY, THREE INCHES (3") BELOW FINISHED GRADE UNDER THE DIRECTION OF A LICENSED ARBORIST.

THE RETAINING WALL INSTALLATION SHALL BE IN ACCORDANCE WITH THE PROVIDED "TREE RETAINING WALL DETAIL."

1. LANDSCAPE CONTRACTOR SHALL OBTAIN A SOIL TEST OF THE IN-SITU TOPSOIL BY A CERTIFIED SOIL LABORATORY PRIOR TO PLANTING. LANDSCAPE CONTRACTOR SHALL ALLOW FOR A TWO WEEK TURNAROUND TIME FROM SUBMITTAL OF SAMPLES TO RESULTS.
2. BASED ON SOIL TEST RESULTS, ADJUST THE RATES OF LIMES AND FERTILIZER THAT SHALL BE MIXED INTO THE TOP SIX INCHES (6") OF TOPSOIL. THE LIME AND FERTILIZER RATES PROVIDED WITHIN THE "SEE SPECIFICATION" OR "SOD SPECIFICATION" IS APPROXIMATE AND FOR BIDDING PURPOSES ONLY. IF ADDITIONAL AMENDMENTS ARE NECESSARY, ADJUST THE TOPSOIL AS FOLLOWS:
 - a. MODIFY HEAVY CLAY OR SILT SOILS (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) OR GYPSUM.
 - b. MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DIRT, SHREDED CLAY LOAM, OR COMPOST TO 20% BY VOLUME.
3. TOPSOIL SHALL BE FERTILE, FRIABLE, NATURAL SOIL, OF LOAMING CHARACTER, WITHOUT ADMIXTURE OF SUBSOIL MATERIAL, OBTAINED FROM A WELL-DRAINED ARABLE SITE, FREE FROM ALL CLAY, LUMPS, COARSE SANDS, STONES, PLANTS, ROOTS, STICKS, AND OTHER FOREIGN MATTER, GREATER THAN ONE INCH (1").
4. TOPSOIL SHALL BE FREE OF RAVES, LUMPS, AND SMALL NAILS. NO MORE THAN 6% ORGANIC MATTER BY WEIGHT.
5. TOPSOIL SHALL ONLY FROM LOCAL SOURCES OR FROM AREAS HAVING SIMILAR CLAY CHARACTERISTICS TO THAT FOUND AT THE PROJECT SITE.
6. CONTRACTOR SHALL PROVIDE A SIX INCH (6") DEEP LAYER OF TOPSOIL IN ALL PLANTING AREAS. TOPSOIL SHALL BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN SOIL CONDITIONS.
7. UNLESS OTHERWISE NOTED IN THE CONTRACT, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVEGETATION OF ANY DISTURBED AREA OF THE PROJECT.
8. LANDSCAPE CONTRACTOR SHALL VERIFY THAT THE SUB-GRADE ELEVATION MEETS THE FINISHED GRADE ELEVATION (LESS THE REQUIRED TOPSOIL), IN ACCORDANCE WITH THE APPROVED OR FINAL PLANNING PLAN.
9. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGES OF ELEVATION OR DEPRESSIONS. ALL FINISH CONSTRUCTION SET UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE DESIGNER OR MUNICIPAL OFFICIAL.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SURFACE AND SUBSURFACE PLANT BED DRAINAGE PRIOR TO THE INSTALLATION OF PLANTINGS. IF POOR DRAINAGE CONDITIONS EXIST, CORRECTIVE ACTION SHALL BE TAKEN PRIOR TO THE INSTALLATION OF PLANTINGS. ALL PLANTING AND LAWN AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW A FREE FLOW OF SURFACE WATER.
11. DOUBLE SHREDED HARDWOOD MULCH OR APPROVED EASILY USED SHALL BE USED AS A THREE INCH (3") TOP DRESSING IN ALL SHRUB PLANTING BEDS AND AROUND ALL TREES PLANTED BY LANDSCAPE CONTRACTOR. GROUND COVER, PERENNIAL, AND ANNUAL PLANTINGS SHALL BE MULCHED WITH A TWO INCH (2") TOP DRESSING. SINGLE TREES OR SHRUBS SHALL BE MULCHED TO AVOID CONTACT WITH TRUNK OR PLANT STEM. MULCH SHALL BE SUFFICIENT CHARACTER AS NOT TO BE EASILY DISPLACED BY WIND OR WATER RUNOFF.
12. WHENEVER POSSIBLE, THE SOIL PREPARATION AREA SHALL BE CONNECTED FROM PLANTING TO PLANTING.
13. SOIL SHALL BE FREE OF ALL STONES, LUMPS, AND OTHER LARGE COARSE-TILING EQUIPMENT UNLESS THE SOIL IS FROZEN OR EXCESSIVELY WET. TILING THAT PRODUCES LARGE, COARSE CHUNKS OF SOIL IS PREFERABLE TO TILING THAT RESULTS IN FINE GRAINS UNIFORM IN TEXTURE. AFTER THE AREA IS LOOSENED IT SHALL NOT BE DRIVEN OVER BY ANY VEHICLE.
14. APPLY PRE-EMERGENT WEED CONTROL TO ALL PLANT BEDS PRIOR TO MULCHING. ENSURE COMPATIBILITY BETWEEN PRODUCT AND PLANT MATERIAL.
15. ALL PLANTING SOIL SHALL BE AMENDED WITH THE FOLLOWING:

MYCORRHIZAL TREE SAVER - A DRY GRANULAR MYCORRHIZAL FUNGUS INOCULANT THAT IS MIXED IN THE BACKFILL WHEN PLANTING TREES AND SHRUBS. IT CONTAINS SPORES OF BOTH ECTOMYCORRHIZAL AND VA MYCORRHIZAL FUNGI (VAM). BENEFITS OF MYCORRHIZAL FUNGUS INOCULANTS INCLUDE: SOIL SUPERABSORBENT HYDROGEL TO REDUCE WATER LEACHING, AND SELECTED ORGANIC MICROBIAL NUTRIENTS.

DIRECTIONS FOR USE: USE 3.0Z PER EACH FOOT DIAMETER OF THE ROOT BALL, OR 3.0Z PER INCH CALIPER. MIX INTO THE BACKFILL WHEN TRANSPLANTING TREES AND SHRUBS. MIX PRODUCT IN A RING-SHAPED VOLUME OF SOIL AROUND THE TRUNK OF THE PLANT. COPELANDS, CROWN ROOTS, AND OTHER ROOTS OF THE PLANT ARE NOT NEARLY AS LONG AND EXTENDING OUT FROM THE ROOT BALL ABOUT 8 INCHES INTO THE BACKFILL. APPLY WATER TO SOIL SATURATION.

MYCORRHIZAL TREE SAVERS IS EFFECTIVE FOR ALL TREE AND SHRUB SPECIES EXCEPT RHODODENDRONS, AZALEAS, AND MOUNTAIN LAUREL, WHICH REQUIRE ERICOID MYCORRHIZAE.

SOIL PH: THE FUNGI IN THIS PRODUCT WERE CHOSEN BASED ON THEIR ABILITY TO SURVIVE AND COLONIZE PLANT ROOTS IN A PH RANGE OF 3 TO 9.

FUNGICIDES: THE USE OF CERTAIN FUNGICIDES CAN HAVE A DETRIMENTAL EFFECT ON THE INOCULATION PROGRAM. SOIL APPLICATION OF ANY FUNGICIDE IS NOT RECOMMENDED FOR TWO WEEKS AFTER APPLICATION.

OTHER PESTICIDES: PESTICIDES, INSECTICIDES, AND HERBICIDES CAN INHIBIT MYCORRHIZAL FUNGAL DEVELOPMENT, BUT MAY INHIBIT THE GROWTH OF SOME TREE AND SHRUB SPECIES IF NOT USED PROPERLY.

- TABLETS ARE FORMULATED FOR LONG-TERM RELEASE BY SLOW BIODEGRADATION, AND LAST UP TO 2 YEARS AFTER PLANTING. TABLETS CONTAIN 12-8-8 NPK FERTILIZER, AS WELL AS A MINIMUM OF SEVEN PERCENT (7%) HUMIC ACID BY WEIGHT, MICROBIAL NUTRIENTS DERIVED FROM SEA KELP, PROTEIN BYPRODUCTS, AND YUCCA SCHIDIGERA, AND A COMPLEMENT OF BENEFICIAL RHIZOSPHERE BACTERIA. THE STANDARD 21 GRAM TABLET IS SPECIFIED HERE. DIRECTIONS FOR USE: FOR PLANTING BALLED & BURLAPPED (B&B) TREES AND SHRUBS, MEASURE THE THICKNESS OF THE TRUNK, AND USE ABOUT 1 TABLET (21-G) PER HALF-INCH. PLACE THE TABLETS DIRECTLY NEXT TO THE ROOT BALL, EVENLY DISTRIBUTED AROUND ITS PERIMETER, AT A DEPTH OF ABOUT 4 INCHES.

1. AT EACH IRRIGATION, APPLY TWO TO THREE GALLONS PER INCH TRUNK CALIPER TO THE ROOT BALL SURFACE. APPLY IT TO THE WETTER, SO ALL WATER SOAKS IN. THE ENTIRE ROOT BALL DO NOT WATER IF ROOT BALL IS WET/SATURATED ON THE IRRIGATION DAY.
2. WHEN IRRIGATING FOR VITALITY, DELETE DAILY IRRIGATION WHEN PLANTING IN WINTER OR WHEN PLANTING IN COOL CLIMATES. ESTABLISHMENT TAKES THREE TO FOUR MONTHS PER INCH TRUNK CALIPER. NEVER APPLY IRRIGATION IF THE SOIL IS SATURATED.
3. WHEN IRRIGATING FOR SURVIVAL, TREES TAKE MUCH LONGER TO ESTABLISH THAN REGULARLY IRRIGATED TREES. IRRIGATION MAY BE REQUIRED IN THE NORMAL HOT, DRY PORTIONS OF THE FOLLOWING YEAR.

2. ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z601-2004) OR LATEST REVISION AS PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
3. ALL BOTANICAL NAMES LISTED WITHIN THE APPROVED OR FINAL PLANT LIST SHALL TAKE PRECEDENCE OVER ANY COMMON NAMES.
4. ALL PLANTS SHALL BE OF SELECTED SPECIMEN QUALITY, EXCEPTIONALLY HEAVY, TIGHTLY KNIT, SO TRAINED OR FAVORED IN GROWTH AS TO BE FREE OF DEFECTS, SUCH AS BRUISES, WOUNDS, FROST DAMAGE, BRANCHES, COMPACTNESS AND SYMMETRY.
5. ALL PLANTS SHALL HAVE A NORMAL HABIT OR ROUND, HEALTHY, VIGOROUS PLANTS WITH WELL DEVELOPED ROOT SYSTEMS. PLANTS SHALL BE FREE OF DISEASE, INSEST PESTS, EGGS OR LARVAE.
6. PLANTS SHALL NOT BE PRUNED BEFORE DELIVERY. TREES WITH ABRASION OF THE BARK, SUNSCALDS, DISFIGURING KNOTS OR FRESH CUTS OF LIMBS OVER ONE AND ONE-FOURTH INCHES (1-1/4") WHICH HAVE NOT BEEN COMPLETELY CALLOUSED SHALL BE REJECTED.
7. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH AND BE LEGIBLY IDENTIFIABLE.
8. THE ROOT SYSTEM OF EACH PLANT SHALL BE WELL PROVIDED WITH FIBROUS ROOTS. ALL PARTS SHALL BE SOUND, HEALTHY, VIGOROUS, WELL-BRANCHED AND DENSELY FOLIATED WHEN IN LEAF.
9. ALL PLANTS DESIGNATED BALL AND BURLAP (B&B) SHALL BE MOVED WITH THE ROOT SYSTEM AS SOLID UNITS WITH BALLS OF EARTH AND BURLAP OR OTHER MATERIALS TO PROTECT THE BALLS OF EARTH MUST BE SUFFICIENT TO ENCOMPASS THE FIBROUS ROOT FEEDING SYSTEMS FOR THE HEALTHY DEVELOPMENT OF THE PLANT. NO PLANT SHALL BE ACCEPTED WHEN THE BALL OF EARTH SURROUNDING ITS ROOTS HAS BEEN BADLY CRACKED OR BROKEN OR WHEN THE BALL OF EARTH OR BURLAP OR OTHER MATERIALS USED TO PROTECT THE BALLS OF EARTH ARE NOT SUFFICIENT TO ENCOMPASS THE FIBROUS ROOT FEEDING SYSTEMS THAT MUST BE HEEL-ED-IN BY SETTING IN THE GROUND AND COVERING THE BALLS WITH SOIL OR MULCH AND THEN WATERING. HEMP BURLAP AND TWINE IS PREFERABLE TO TREATED. IF TREATED BURLAP IS USED, ALL TWINE IS TO BE CUT FROM AROUND THE TRUNK AND ALL BURLAP IS TO BE REMOVED.
10. ALL PLANTS TO BE TRANSPORTED BY TRUCK OR TRAILER SHALL BE PROTECTED BY AN OTHER SUITABLE COVERING SECURELY FASTENED TO THE BODY OF THE VEHICLE TO PREVENT INJURY TO THE PLANTS. CLOSED VEHICLES SHALL BE ADEQUATELY VENTILATED TO PREVENT OVERHEATING OF THE PLANTS. EVIDENCE OF INADEQUATE PROTECTION FOLLOWING DELIVERY, SUCH AS WILTING, DISCOLORATION, OR OTHER DAMAGE TO THE PLANTS, SHALL BE CAUSE FOR REJECTION.
11. PLANT MATERIAL - ALL PLANTS MAY BE IN TRANSIT AND PROTECTED, SUCH AS WHEN SUCH PLANTS COMPASS THE ENTIRE PERIOD DURING WHICH THE PLANTS ARE IN TRANSIT, BEING HANDLED, OR ARE IN TEMPORARY STORAGE.
12. ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE CORRESPONDING LANDSCAPE PLAN AND PLANTING

LANDSCAPE CONTRACTOR SHALL MAKE BEST EFFORT TO INSTALL PLANTINGS ON THE SAME DAY AS DELIVERY. IF PLANTS ARE NOT PLANTED IMMEDIATELY ON SITE, PROPER CARE SHALL BE TAKEN TO PLACE THE PLANTINGS IN PARTIAL SHADE WHERE POSSIBLE. THE ROOT BALL SHALL BE KEPT MOST AT ALL TIME AND COVERED WITH MOISTENED MULCH OR AGED WOODCHIPS. PROPER IRRIGATION SHALL BE SUPPLIED SO AS TO NOT ALLOW THE ROOT BALL TO DRY OUT. PLANTING SHALL BE UNITED AND PROPER SPACING SHALL BE ALLOTTED FOR AIR CIRCULATION AND TO PREVENT DISEASE, WILTING AND LEAF LOSS. PLANTS THAT REMAIN UNPLANTED FOR A PERIOD OF TIME GREATER THAN THREE (3) DAYS SHALL BE HEADED IN WITH TOPS OR MULCH AND WATERED AS REQUIRED TO PREVENT ROOT MOISTURE.

11. NO PLANT MATERIAL SHALL BE PLAINED IN MUDDY OR FROZEN SOIL.

12. PLANTS WITH INJURED ROOTS OR BRANCHES SHALL BE PRUNED PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY DISCARDED OR INJURED PLANTS SHALL BE PLANTED.

13. IF ROCKS OR OTHER UNDERGROUND OBSTRUCTION IS ENCOUNTERED, THE LANDSCAPE DESIGNER RESERVES THE RIGHT TO RELOCATE OR ENLARGE PLANTING PITS TO DELETE PLANT MATERIAL FROM THE CONTRACT.

14. IF PLANTS ARE PROPOSED WITHIN SIGHT TRIANGLES, TREES SHALL BE LIMBED AND MAINTAINED TO A HEIGHT OF EIGHT FEET (8').

15. TREES SHALL BE MAINTAINED TO A HEIGHT OF EIGHT FEET (8') UNTIL THE TREE IS ESTABLISHED. TREES SHALL EXCEED TWO FEET (2') ABOVE GRADE UNLESS OTHERWISE NOTED OR SPECIFIED BY THE GOVERNING MUNICIPALITY OF AGENCY.

16. INSTALLATION SHALL OCCUR DURING THE FOLLOWING SEASONS:

PLANTS (MARCH 15 - DECEMBER 15)

LAWNS (MARCH 15 - JUNE 15 OR SEPTEMBER 1 - DECEMBER 1)

17. THE FOLLOWING TREES ARE SUSCEPTIBLE TO TRANSPORT SHOCK AND SHALL NOT BE PLANTED DURING THE FALL SEASON (STARTING SEPTEMBER 15):

ABIES CONCOLOR
ACER BURGERSIANUM
ACER FREEMANII
ACER RUBRUM
ACER SACCHARINUM
BETULA VARIETIES
CERINUS VARIETIES
CORNUS DODORAE
CISTICUS VARIETIES
CERCIDIPHYLLUM VARIETIES
CERCIS CANADENSIS
CORNUS VARIETIES
CORYLUS VARIETIES
SYLVA SYLVATICA

CORNUS VARIETIES
CRATAEGUS/PARIS LEYLANDII
FLEX VARIETIES
HALESIA VARIETIES
ILAX X FOSTERII
LLEX NELLIE STEVENS
LILAC SPACA
LIGSTRUM VARIETIES
KOELEUTERIA PANCULATA
QUINCULARIA VARIETIES
LYRODENDRON VARIETIES
MALUS IN LEAF
SYLVA SYLVATICA

OSTRYA VIRGINIANA
PINUS NIGRA
PLATANUS VARIETIES
POPULUS VARIETIES
PRUNUS VARIETIES
PYRUS VARIETIES
QUERCUS VARIETIES (NOT Q. PALUSTRIS)
SALIX WEEPING VARIETIES
SILVUS VARIETIES
TAXODIUM VARIETIES
TAXUS B. REPANDENS
ULMUS VARIETIES
ULMUS PARVIFOLIA VARIETIES
ZELKOVA VARIETIES

18. IF A PROPOSED PLANT IS UNAVAILABLE OR ON THE FALL DIPPING HAZARD LIST, AN EQUIVALENT SPECIES OF THE SAME SIZE MAY BE REQUESTED FOR SUBSTITUTION OF THE ORIGINAL PLANT. THIS SUBSTITUTION SHALL BE APPROVED BY THE PROJECT LANDSCAPE DESIGNER OR MUNICIPAL OFFICIAL PRIOR TO ORDERING AND INSTALLATION.

19. DURING THE COURSE OF CONSTRUCTION/PLANT INSTALLATION, EXCESS AND WASTE MATERIALS SHALL BE CONTINUOUSLY AND PROMPTLY REMOVED AT THE END OF EACH WORK DAY. ALL DEBRIS, MATERIALS, AND TOOLS SHALL BE PROPERLY STORAGED, STOCKPILED OR DISPOSED OF AND ALL PAVED AREAS SHALL BE CLEANED.

20. THE LANDSCAPE CONTRACTOR SHALL DISPOSE OF ALL RUBBISH AND EXCESS SOIL AT HIS EXPENSE TO AN OFF-SITE LOCATION AS APPROVED BY THE LOCAL MUNICIPALITY.

21. A 90-DAY MAINTENANCE PERIOD SHALL BEGIN IMMEDIATELY AFTER ALL PLANTS HAVE BEEN SATISFACTORILY INSTALLED.

22. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR OTHER MEANS OR REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR OTHER MEANS OR DISPLACED BY EROSION OR OTHER MEANS. WATERING WHEN NEEDED OR DIRECTED, WEEDING, PRUNING, SPRAYING, FERTILIZING, MOWING THE LAWN, AND PERFORMING ANY OTHER WORK REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION.

23. MOW ALL GRASS AREAS AT REGULAR INTERVALS TO KEEP THE GRASS HEIGHT FROM EXCEEDING THREE INCHES (3"). MOWING SHALL BE PERFORMED ONLY WHEN GRASS IS DRY. MOWER BLADE SHALL BE SET TO REMOVE NO MORE THAN ONE THIRD (1/3) OF THE GRASS. WHEN THE GRASS IS HEAVY, IT SHALL BE REMOVED TO PREVENT THE MOWER FROM CLOGGING OR THE UNDERLYING TURF. MOW GRASS AREAS IN SUCH A MANNER AS TO PREVENT CLIPPINGS FROM BLOWING ON PAVED AREAS AND SIDEWALKS. CLEANUP AFTER MOWING SHALL INCLUDE SWEEPING OR BLOWING OF PAVED AREAS AND SIDEWALKS TO REMOVE CLIPPINGS.

24. GRASSED AREAS DAMAGED DURING THE PROCESS OF THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL RESTORE THE DISTURBED AREAS TO A CONDITION SATISFACTORY TO THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIAL, OR OWNER/OWNER'S REPRESENTATIVE. THIS MAY INCLUDE FILLING TO GRADE, FERTILIZING, SEEDING, AND MULCHING.

25. THE OWNER REQUIRE MAINTENANCE BEYOND THE STANDARD 90-DAY MAINTENANCE PERIOD, A SEPARATE CONTRACT SHALL BE ESTABLISHED.

26. LANDSCAPE CONTRACTOR SHALL WATER NEW PLANTINGS FROM THE TIME OF INSTALL AND THROUGHOUT REQUIRED 90-DAY MAINTENANCE PERIOD UNTIL PLANTS ARE ESTABLISHED. IF ON-SITE WATER IS NOT AVAILABLE AT THE PROJECT LOCATION OR THE CONTRACTOR DOES NOT HAVE ACCESS TO A WATER MAIN OR OTHERS AND GUTS OR OTHERS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE QUANTITY OF WATER APPLIED AT ONE TIME SHALL BE SUFFICIENT TO PENETRATE THE SOIL TO A MINIMUM OF EIGHT INCHES (8") IN SHRUB BEDS AND SIX INCHES (6") IN TURF AREAS AT A RATE WHICH WILL PREVENT SATURATION OF THE SOIL.

27. IF AN AUTOMATIC IRRIGATION SYSTEM HAS BEEN INSTALLED, IT CAN BE USED FOR WATERING PLANT MATERIAL. HOWEVER, FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY OF PLANT HEALTH AND ESTABLISHMENT.

1. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR (1 YR) FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE PROJECT LANDSCAPE DESIGNER, MUNICIPAL OFFICIAL, OR OWNER/OWNER'S REPRESENTATIVE.
2. THE LANDSCAPE CONTRACTOR SHALL REMOVE AND REPLACE DYING, DEAD, OR DEFECTIVE PLANT MATERIAL AT HIS EXPENSE. THE LANDSCAPE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS COMPANY'S OPERATIONS.
3. REPLACEMENT PLANTS SHALL BE OF THE SAME SPECIES AND SIZE AS SPECIFIED ON THE APPROVED OR FINAL PLANT LIST. REPLACEMENTS RESULTING FROM REMOVAL LOSS, OR DAMAGE DUE TO OCCUPANCY OF THE PROJECT IN ANY PART OF THE PROJECT SHALL BE AT THE LANDSCAPE CONTRACTOR'S EXPENSE. ANY LOSSES DUE TO CURTLEMENT OF WATER BY LOCAL AUTHORITIES SHALL BE APPROVED AND PAID FOR BY THE OWNER.
4. THE CONTRACTOR SHALL INSTRUCT THE OWNER AS TO THE PROPER CARE AND MAINTENANCE OF ALL PLANTINGS.

1. SEED MIXTURE SHALL BE FRESH CLEAN, NEW CROP SEED. SOD SHALL BE STRONGLY ROOTED, UNIFORM IN THICKNESS, AND FREE OF WEEDS, DISEASE, AND PESTS.
2. SEED OR SOD SHALL BE PURCHASED FROM A RECOGNIZED DISTRIBUTOR AND SHALL BE COMPOSED OF THE MIX OR BLEND WITHIN THE PROVIDED "SEED SPECIFICATION" OR "SOD SPECIFICATION".
3. THE SEEDING LANDSCAPE PLAN FOR AREAS TO BE SEED OR SOD SHALL BE PROVIDED BY THE OWNER.
4. SEEDING SHALL NOT BE PERFORMED IN WINDY WEATHER. IF THE SEASON OF THE PROJECT COMPLETION PROHIBITS PERMANENT STABILIZATION, TEMPORARY STABILIZATION SHALL BE PROVIDED IN ACCORDANCE WITH THE "TEMPORARY SEEDING SPECIFICATION."
5. PROTECT NEW LAWN AREAS AGAINST TREPPASSING WHILE SEED IS GERMINATING. FURNISH AND INSTALL FENCES, SIGN BARRIERS OR ANY OTHER NECESSARY TEMPORARY PROTECTIVE DEVICES. DAMAGE RESULTING FROM TREPPASS, EROSION, WASHOUTS, LITTLEBURN OR OTHER CAUSES SHALL BE REPAIRED BY THE LANDSCAPE CONTRACTOR AT HIS EXPENSE. REMOVE ALL FENCES, SIGNS, BARRIERS OR OTHER TEMPORARY PROTECTIVE DEVICES ONCE LAWN HAS BEEN ESTABLISHED.

NOT APPROVED FOR CONSTRUCTION

J. REIF
MICHIGAN
LICENSED

PROPOSED COMMERCIAL

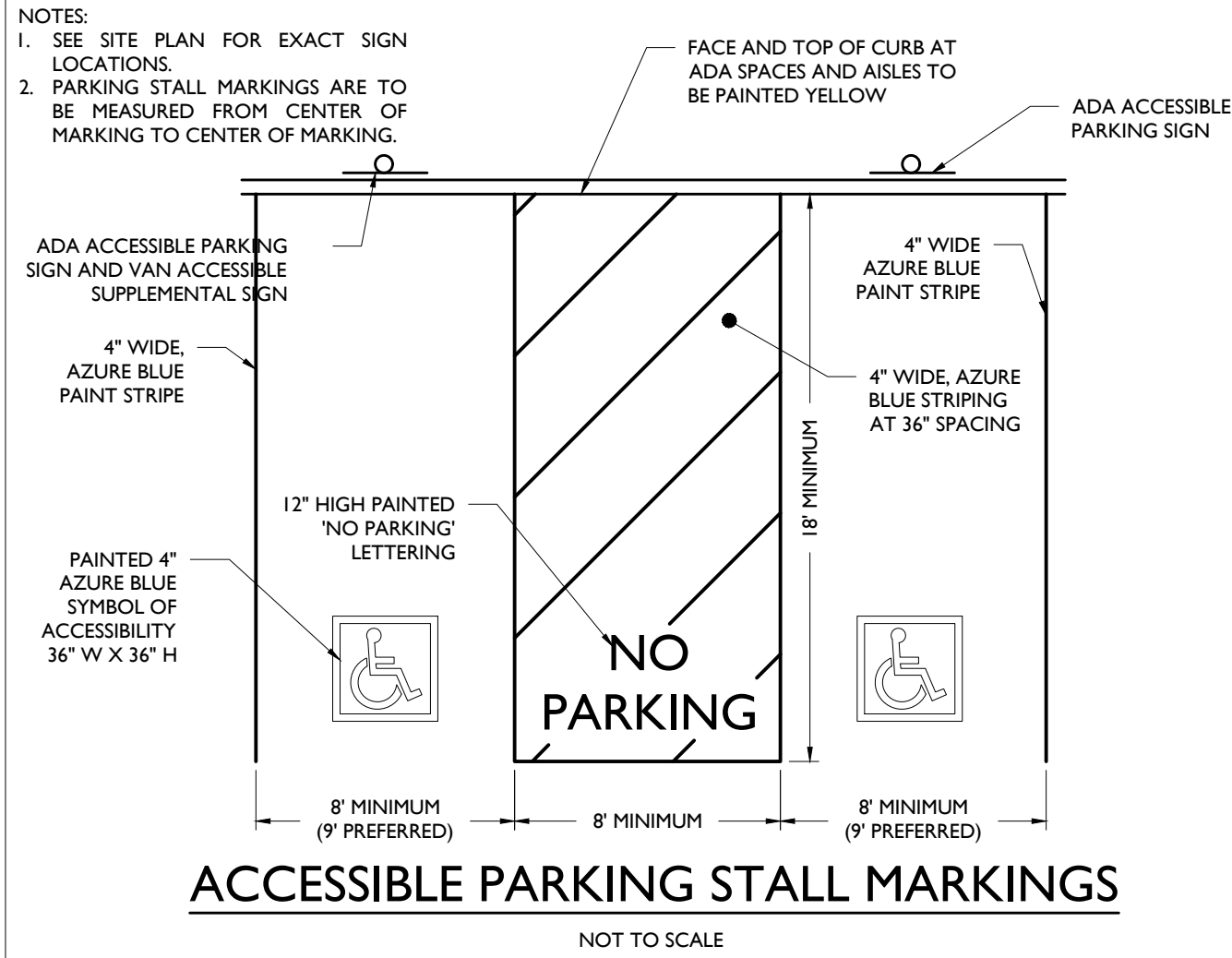
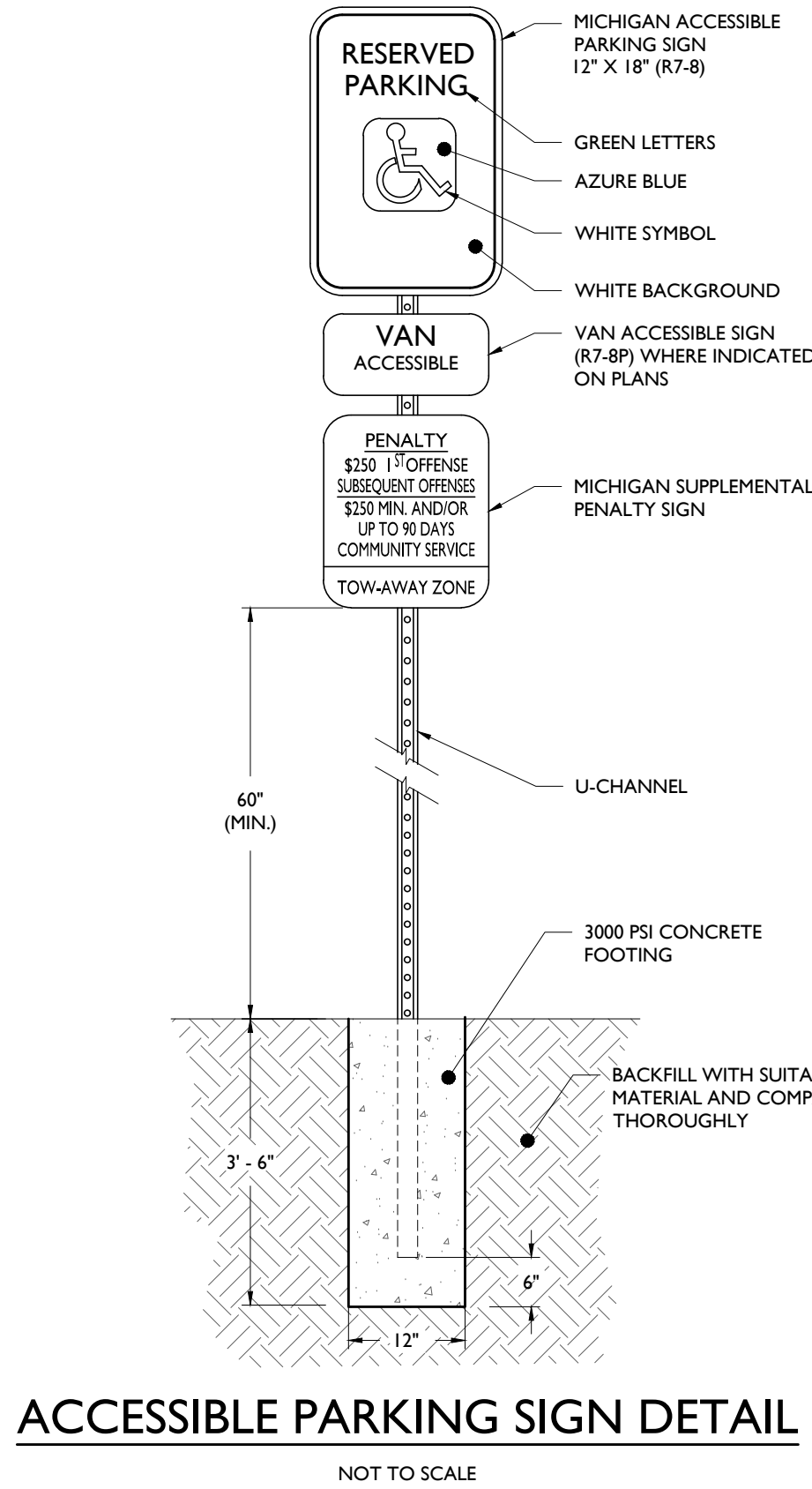
PARCEL IDS: 2507355039, 2507355038, & 2507355040
4162 TWELVE MILE ROAD
CITY OF BERKLEY

428
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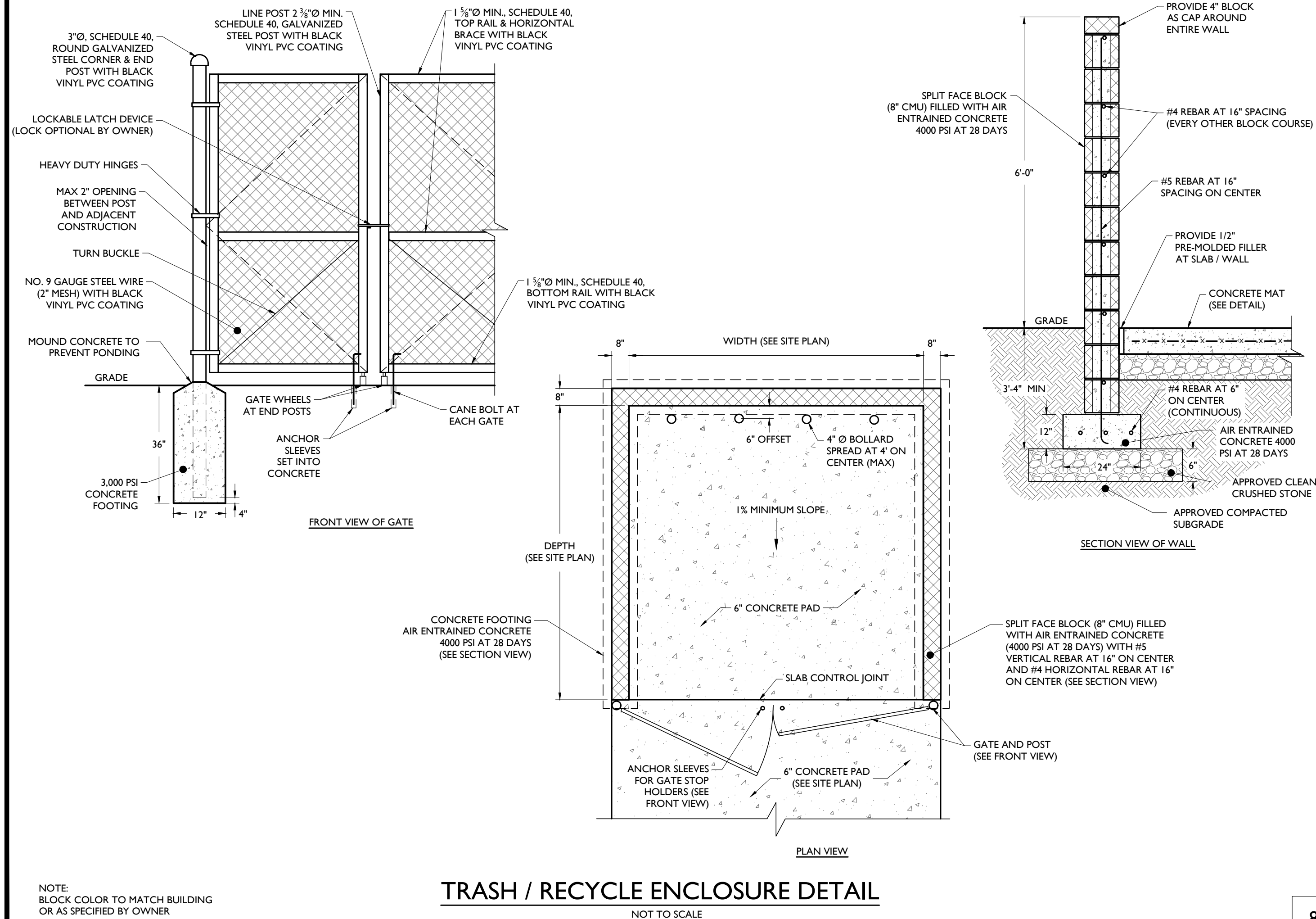
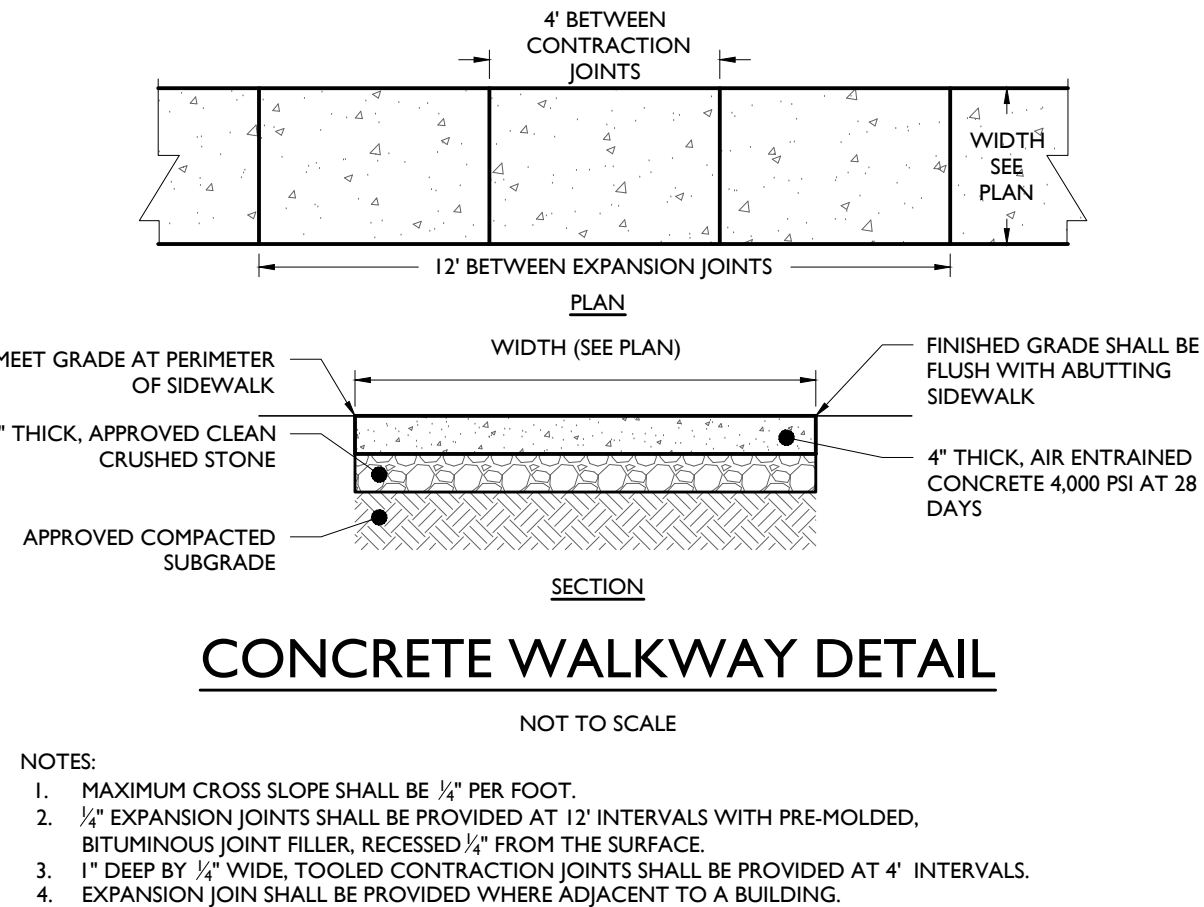
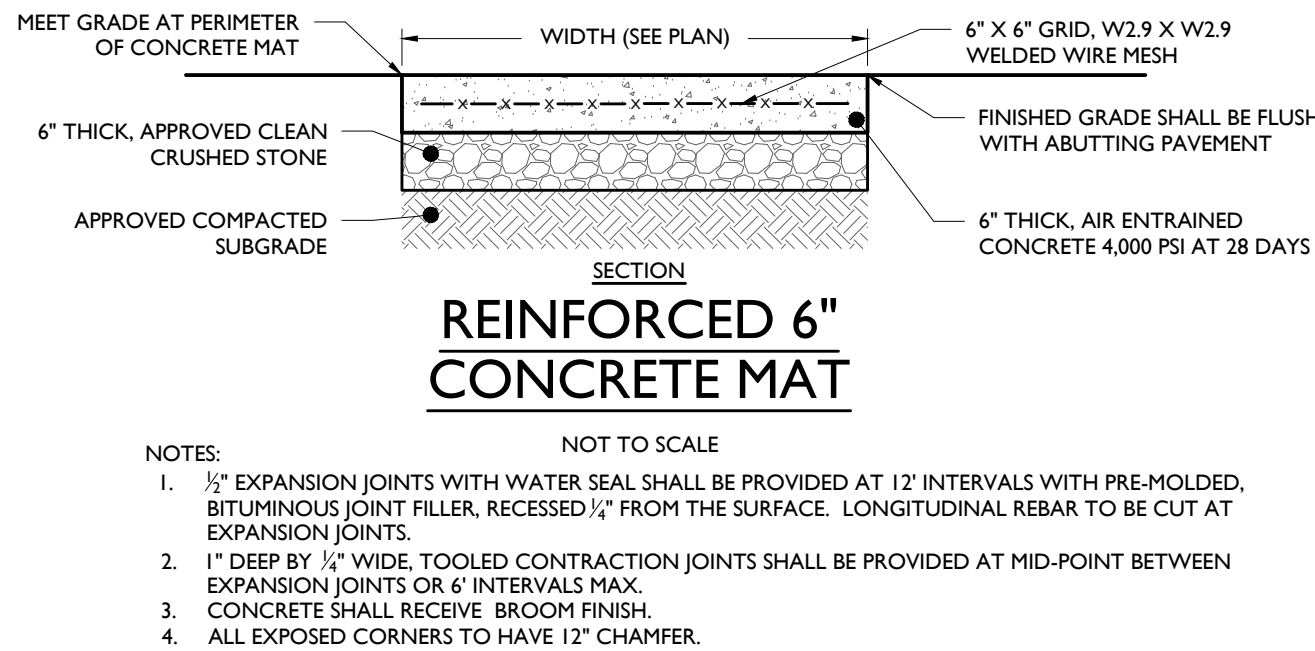
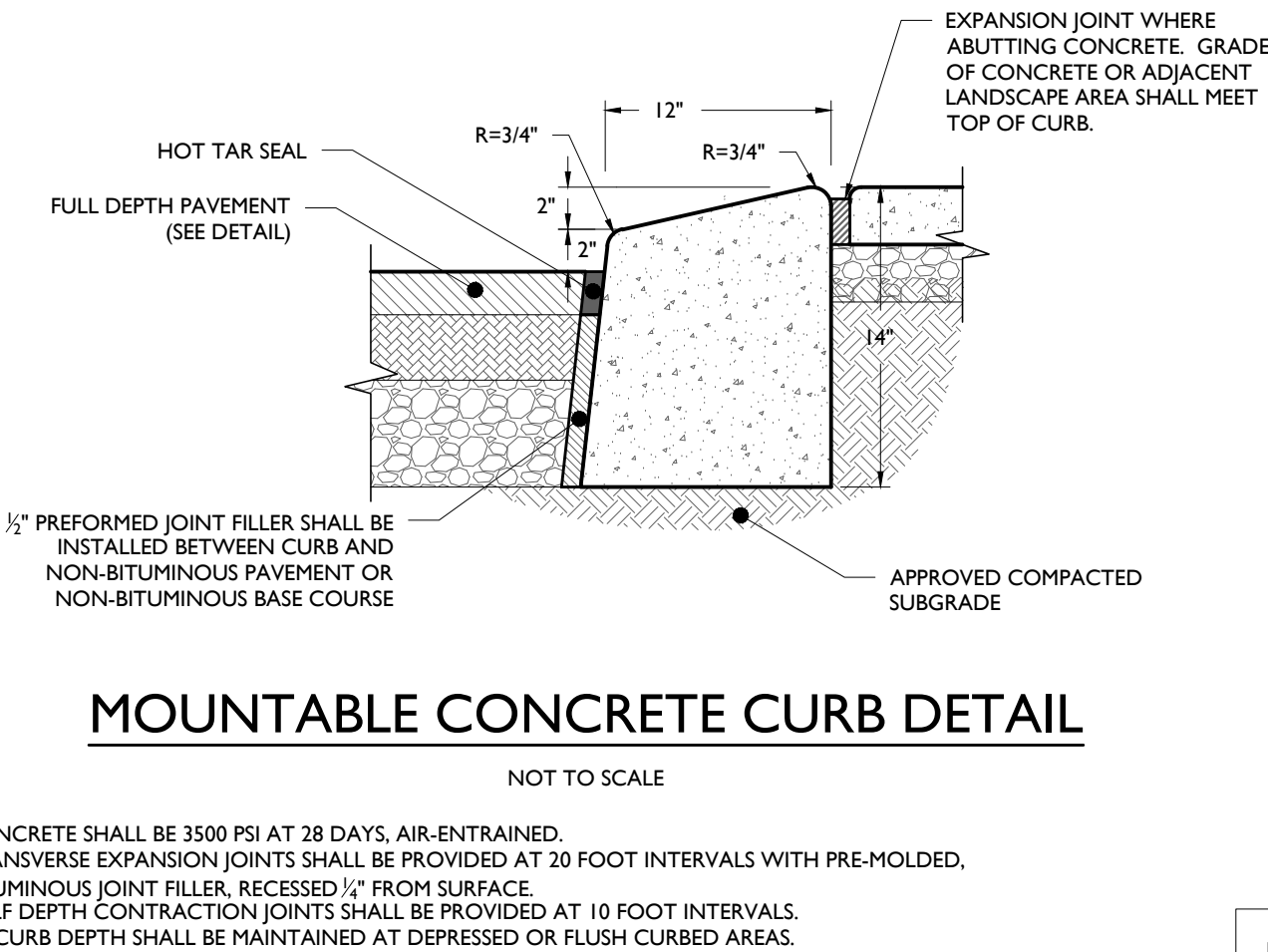
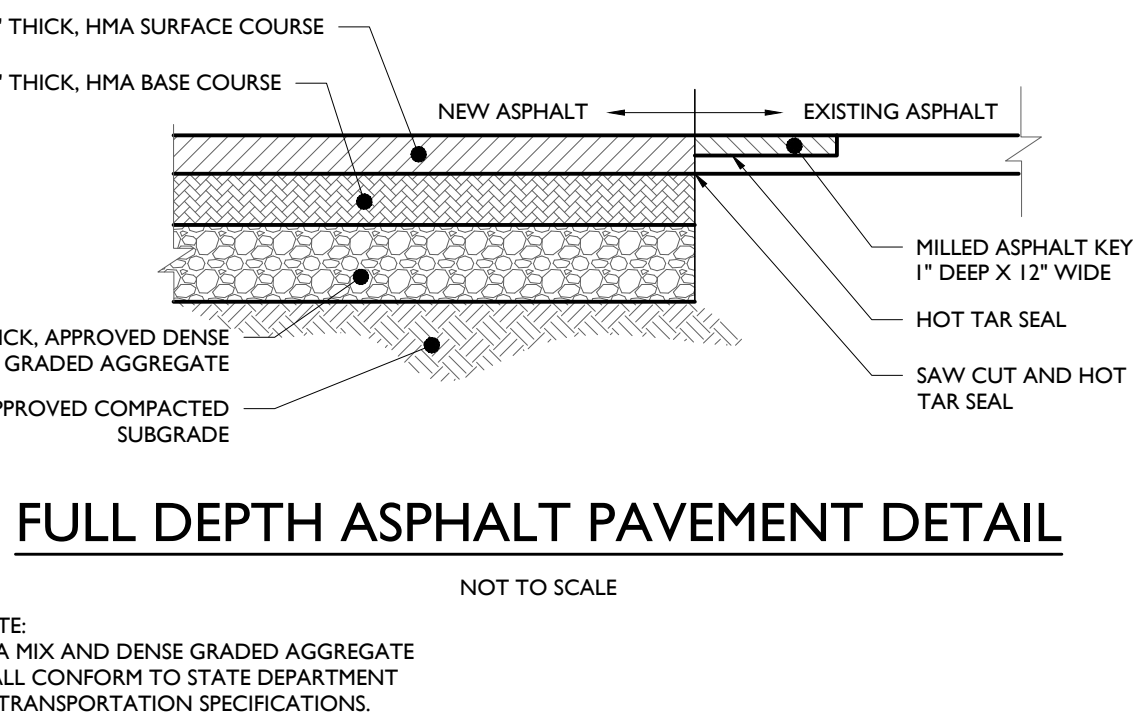
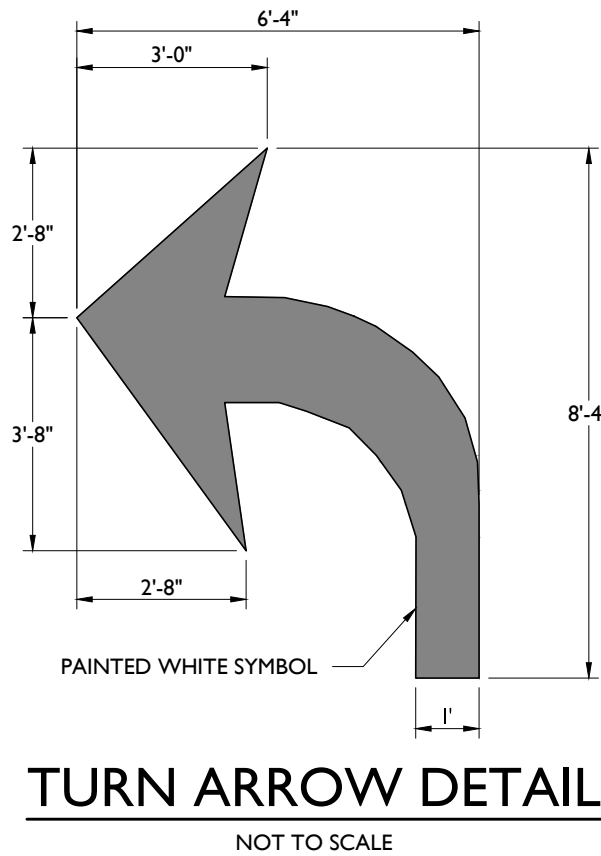
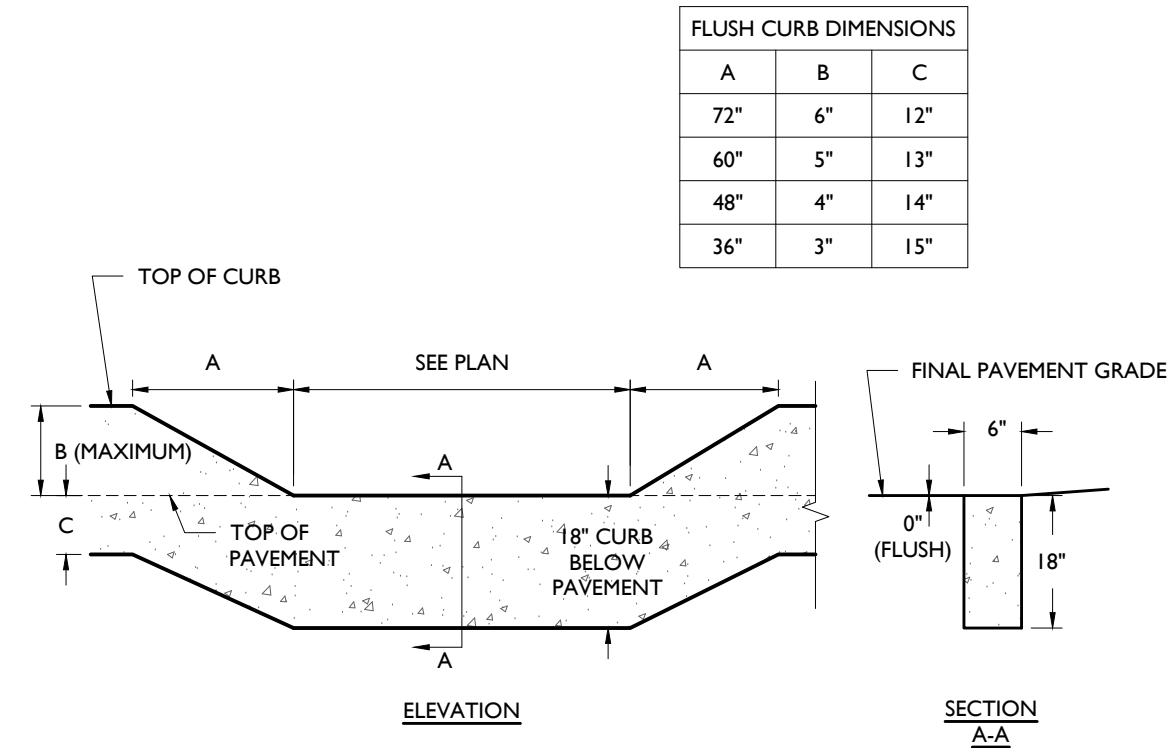
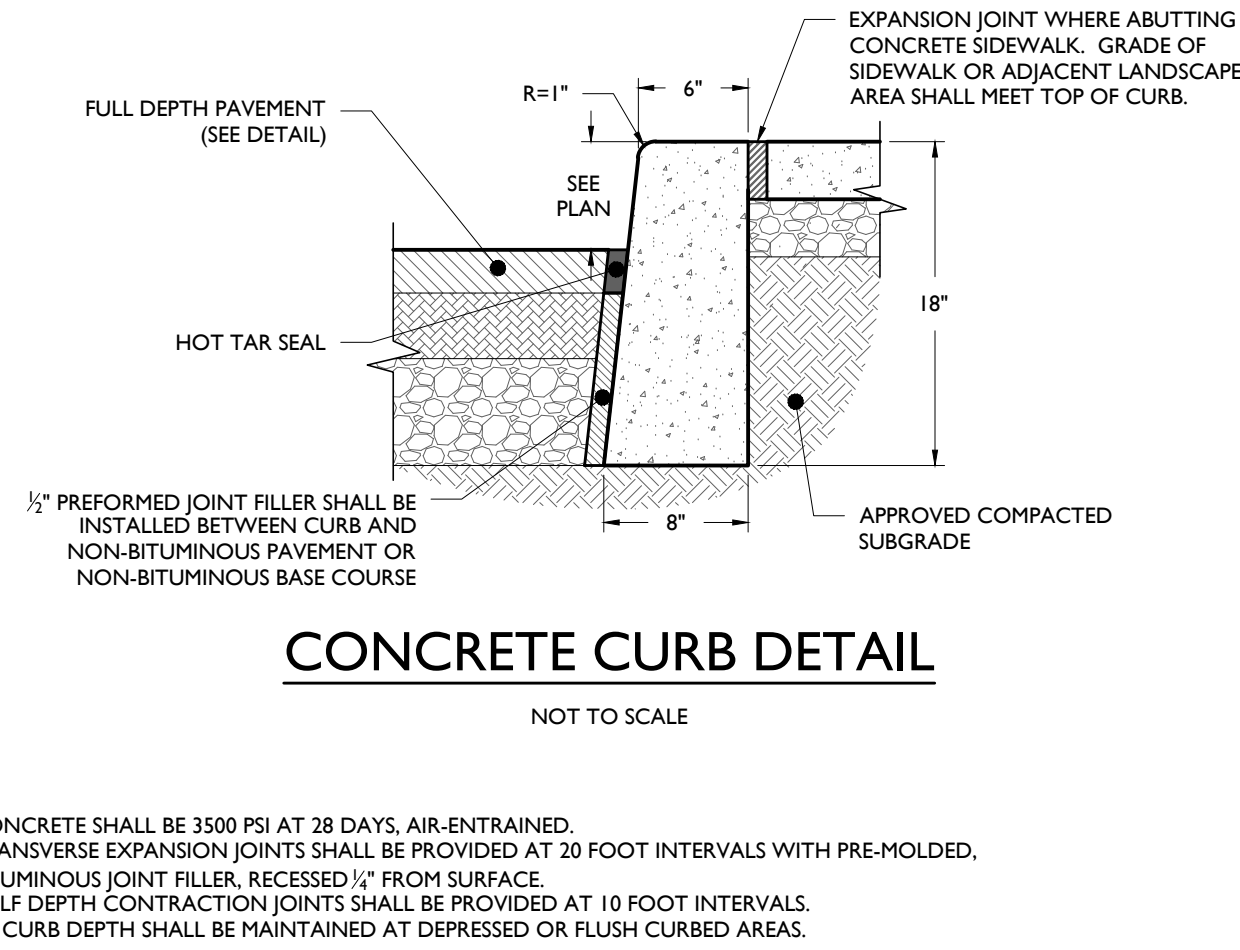
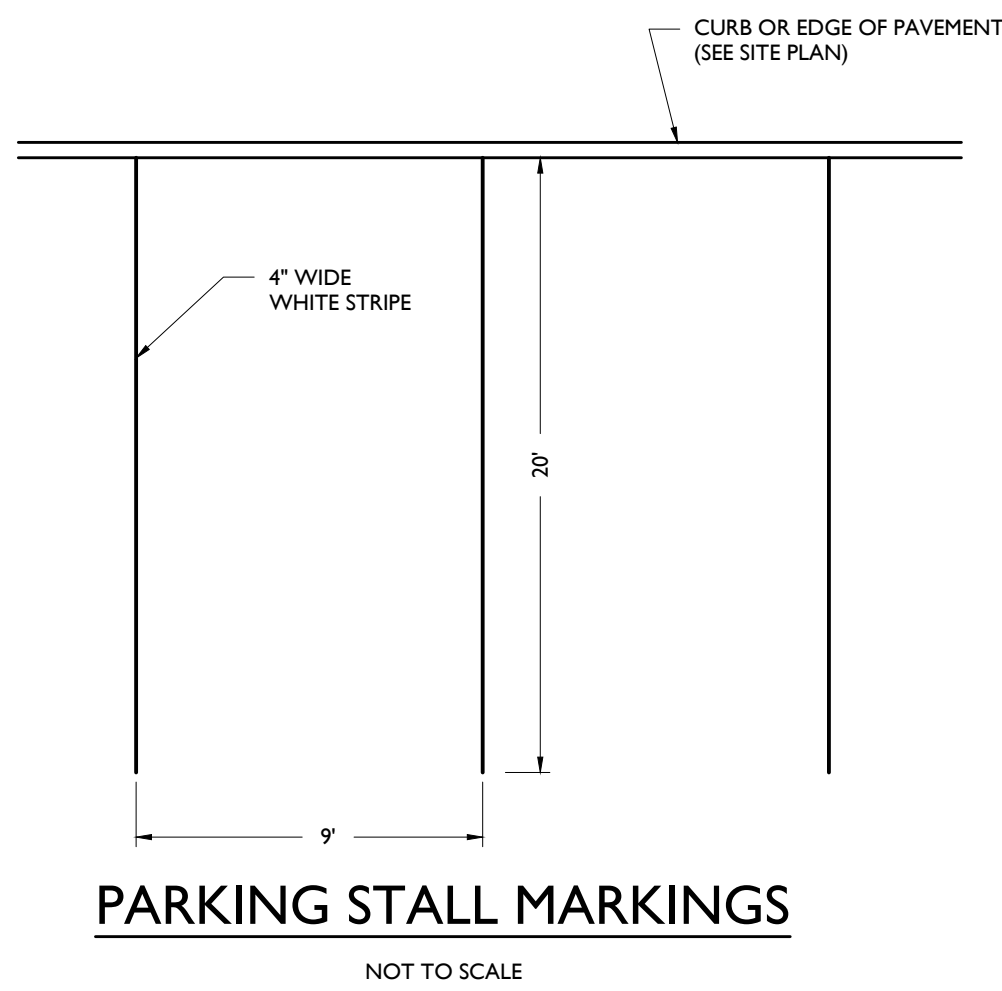
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DET-240

TAIL



- PAVEMENT STRIPING & MARKINGS NOTES:**
1. ALL SIGNING AND STRIPING IN EXISTING CONDITION IN CONFLICT WITH THE PROPOSED DESIGN PLAN SHALL BE REMOVED.
 2. ALL PROPOSED SIGNING AND STRIPING SHALL CONFORM TO THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
 3. PAVEMENT STRIPING AND MARKINGS SHALL BE INSTALLED IN CONFORMANCE WITH ALL APPLICABLE LOCAL, COUNTY AND STATE REQUIREMENTS.
 4. UNLESS OTHERWISE SPECIFIED, ALL STRIPING AND MARKINGS IN THE PUBLIC RIGHT-OF-WAY SHALL BE OF THERMOPLASTIC PAINT OR PREFORMED THERMOPLASTIC MARKINGS.
 5. UNLESS OTHERWISE SPECIFIED, ON SITE PARKING STALL STRIPING, FIRE LANE STRIPING AND DIRECTIONAL ARROWS SHALL BE EPOXY PAINT. ON SITE STOP BARS, "DO NOT ENTER" BARS, AND ASSOCIATED LETTERING SHALL BE THERMOPLASTIC PAINT OR PREFORMED THERMOPLASTIC MARKINGS.



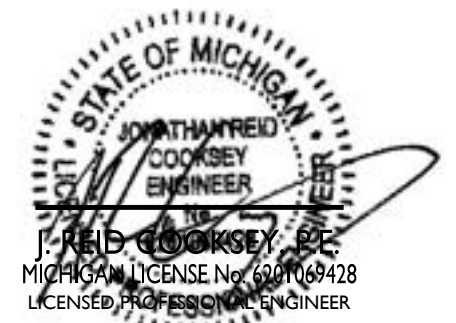
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MUG & JUG

PROPOSED COMMERCIAL REDEVELOPMENT

PARCEL IDS: 2507355039, 2507355038, & 2507355040
4162 TWELVE MILE ROAD
CITY OF BERKLEY
OAKLAND COUNTY, MICHIGAN



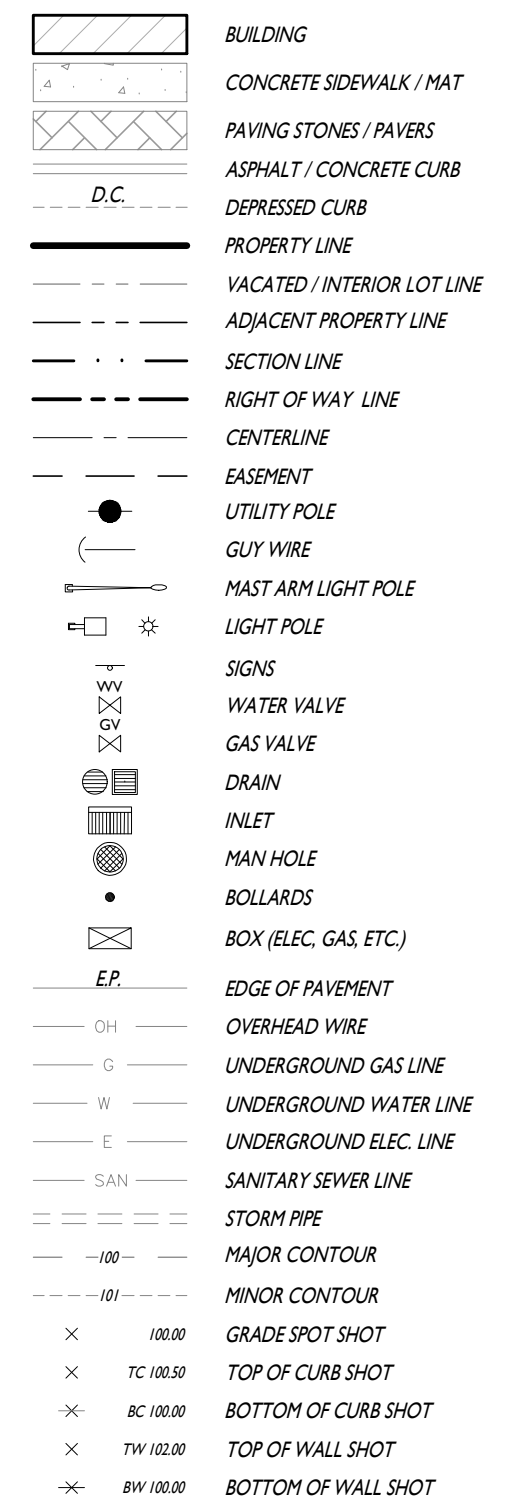
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SCALE: AS SHOWN PROJECT ID: DET-240246

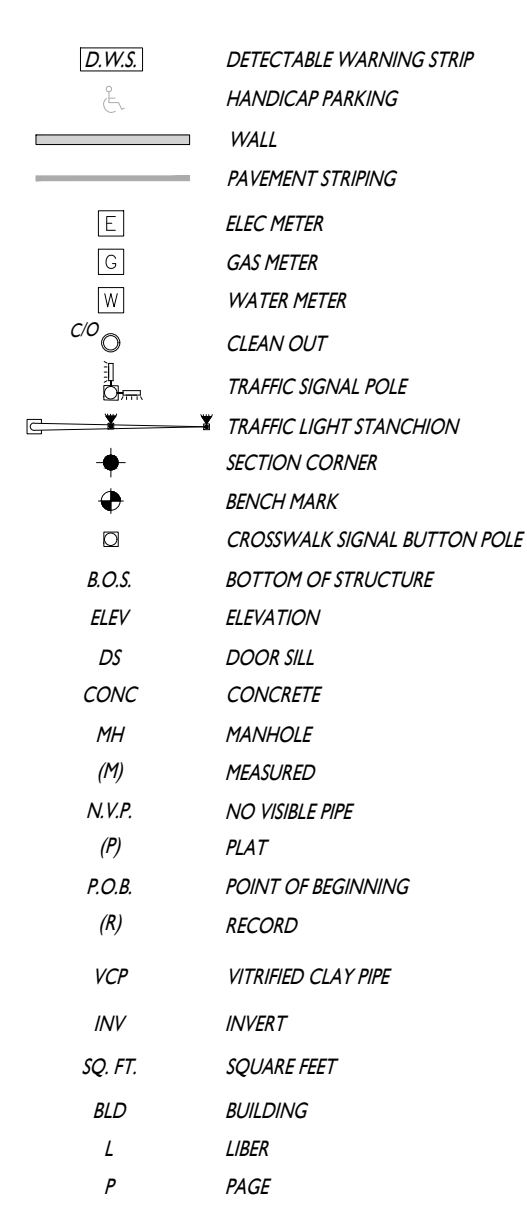
TITLE:
CONSTRUCTION DETAILS

DRAWING:
C-10

SYMBOL DESCRIPTION



SYMBOL DESCRIPTION



SURVEY NOTES:

- THIS SURVEY AND THE BOUNDARIES SHOWN HEREON ARE THE RESULT OF AN ACTUAL FIELD SURVEY PERFORMED ON SEPTEMBER 11, 2024, BASED ON AVAILABLE MAPS AND DEEDS OF RECORD, AND PHYSICAL EVIDENCE. THIS SURVEY IS SUBJECT TO ALL EASEMENTS, RIGHTS OF WAY AND AGREEMENTS OF RECORD THAT A TITLE SEARCH MAY DISCLOSE.
- THIS SURVEY IS VALID ONLY WHEN A DIGITAL SEAL IS AFFIXED HERETO.
- THE SURVEYOR IS NOT QUALIFIED TO IDENTIFY ENVIRONMENTAL CONDITIONS OR THE PRESENCE OR ABSENCE OF WETLANDS.
- THE CERTIFICATION SHOWN HEREON IS NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS.
- ANY SUBSURFACE UTILITIES SHOWN HAVE BEEN LOCATED FROM MARKOUTS OBSERVED ON SITE DURING THE FIELD SURVEY, AND SURFACE FEATURES SUCH AS VALVES, MANHOLES AND GRATES, STORM DRAINAGE AND OR SANITARY INVERTS ARE DEPICTED BASED ON OBSERVATIONS MADE IN THE FIELD. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION USED. THE SURVEY HAS NOT PHYSICALLY LOCATED THE UTILITIES BEFORE ANY EXCAVATIONS ARE BEGUN. THE PROPER UTILITY AGENCIES MUST BE CONTACTED FOR VERIFICATION OF UTILITY TYPE AND FOR FIELD LOCATIONS.
- BEARINGS ARE REFERENCED TO THE MICHIGAN STATE PLANE COORDINATE SYSTEM (NAD83) SOUTH ZONE. ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), ESTABLISHED VIA RTK GPS OBSERVATIONS UTILIZING MICHIGAN DEPARTMENT OF TRANSPORTATION CONTINUOUSLY OPERATING REFERENCE SYSTEM (MDOT CORS).
- BASEMENT OR BELOW GRADE STRUCTURES (IF ANY) ARE UNKNOWN.
- THE ADDRESSES FOR THE PARCELS SHOWN ON THIS SURVEY ARE 4138 12 MILE ROAD, 4150 12 MILE ROAD, AND 4162 12 MILE ROAD, BERKLEY, MI 48072 (FROM TITLE COMMITMENTS).
- BENCHMARK #1 = MAG NAIL = 708.73 (NAVD88).
- IN CONCRETE SIDEWALK, NORTH SIDE OF 12 MILE ROAD.
BENCHMARK #2 = MAG NAIL = 708.96 (NAVD88).
- IN ASPHALT, LOT 50, FRONT OF PARKING STALL.

FLOOD NOTE:

BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS IN ZONE X (UNSHADED) (AREA OF MINIMAL FLOOD HAZARD) OF THE FLOOD INSURANCE RATE MAP, COMMUNITY NO. 260292, MAP NUMBER: 26125C0539F WHICH BEARS AN EFFECTIVE DATE OF: SEPTEMBER 29, 2006.

SURVEY REFERENCES:

- A PLAN ENTITLED "ELLWOOD HEIGHTS, A SUBDIVISION OF A PART OF THE SOUTHWEST 1/4 OF SECTION 7 TOWN 1 NORTH, RANGE 11 EAST, ROYAL OAK TOWNSHIP (NOW CITY OF BERKLEY), OAKLAND COUNTY, MICHIGAN" DATED JUNE 08, 1920 AND RECORDED IN LIBER 23, PAGE 19 OF PLATS, OAKLAND COUNTY RECORDS.
- A MAP ENTITLED "TOPOGRAPHIC/BOUNDARY SURVEY, 3462 & 3478 GREENFIELD, SECTION 7, TOWN 1 NORTH, RANGE 11 EAST, CITY OF BERKLEY, OAKLAND COUNTY, MICHIGAN", DATED SEPTEMBER 08, 2021, PREPARED BY DIFFIN ENGINEERING & SURVEYING.
- A TITLE COMMITMENT ISSUED BY ATA NATIONAL TITLE GROUP, LLC, ISSUING OFFICE FILE NUMBER 63-24928392-SCM, COMMITMENT DATE: SEPTEMBER 11, 2024.
- A TITLE COMMITMENT ISSUED BY MICHIGAN ALLIED TITLE AGENCY LLC, ISSUING OFFICE FILE NUMBER 24-102932-29, COMMITMENT DATE: AUGUST 8, 2024.

EXISTING STRIPED PARKING

REGULAR = 54 SPACES
HANDICAP = 3

TOTAL = 57 SPACES

AREA NOTES

TOTAL LAND AREA
32,017 SQUARE FEET ± OR 0.735 ACRES ±

SCHEDULE B - PART II EXCEPTIONS:
4138 12 MILE ROAD AND 4150 12 MILE ROAD

ATA NATIONAL TITLE GROUP, LLC, ISSUING OFFICE FILE NUMBER 63-24928392-SCM, COMMITMENT DATE: SEPTEMBER 11, 2024.

- 9A. COVENANTS, CONDITIONS AND RESTRICTIONS AND OTHER PROVISIONS BUT OMITTING RESTRICTIONS, IF ANY, BASED ON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS OR NATIONAL ORIGIN AS CONTAINED IN INSTRUMENT RECORDED IN LIBER 589, PAGE 61; LIBER 590, PAGE 348 AND LIBER 614, PAGE 141, OAKLAND COUNTY RECORDS (LIBER 589, PAGE 61, LIBER 590, PAGE 348, AND LIBER 614, PAGE 141 ARE NOT SURVEY RELATED MATTERS, AND ARE NOT SHOWN).

- (10A) HIGHWAY EASEMENT IN FAVOR OF THE BOARD OF ROAD COMMISSIONERS FOR THE COUNTY OF OAKLAND RECORDED IN LIBER 53680, PAGE 543, OAKLAND COUNTY RECORDS. (SHOWN)

- (11A) EASEMENTS OVER SUBJECT PROPERTY AS SHOWN ON THE PLAT OF ELLWOOD HEIGHTS SUBDIVISION AS RECORDED IN LIBER 23, PAGE 19 OF PLATS, OAKLAND COUNTY RECORDS. (SHOWN)

SCHEDULE B - PART II EXCEPTIONS:
4162 12 MILE ROAD

MICHIGAN ALLIED TITLE AGENCY LLC, ISSUING OFFICE FILE NUMBER 24-102932-29, COMMITMENT DATE: AUGUST 8, 2024.

- (9B) EASEMENT(S) AND/OR SETBACK LINES AS DISCLOSED BY THE RECORDED PLAT. (SHOWN)

- (10B) TRAFFIC SAFETY AND SIGNAL EASEMENT GRANTS TO BOARD OF COUNTY ROAD COMMISSIONERS OF THE COUNTY OF OAKLAND, AS DISCLOSED BY INSTRUMENT RECORDED IN LIBER 42981, PAGE 542. (SHOWN)

PARCEL DESCRIPTION:

ATA NATIONAL TITLE GROUP, LLC, ISSUING OFFICE FILE NUMBER 63-24928392-SCM, COMMITMENT DATE: SEPTEMBER 11, 2024.

THE LAND IS DESCRIBED AS FOLLOWS: SITUATED IN THE CITY OF BERKLEY, COUNTY OF OAKLAND, STATE OF MICHIGAN:

LOTS 39, 40, 41, 42, 43, 44 AND EAST 5 FEET OF LOT 45, EXCEPT THE NORTHERLY 18 FEET OF EACH LOT AND LOT 145, ELLWOOD HEIGHTS SUBDIVISION, AS RECORDED IN LIBER 23, PAGE 19 OF PLATS, OAKLAND COUNTY RECORDS.

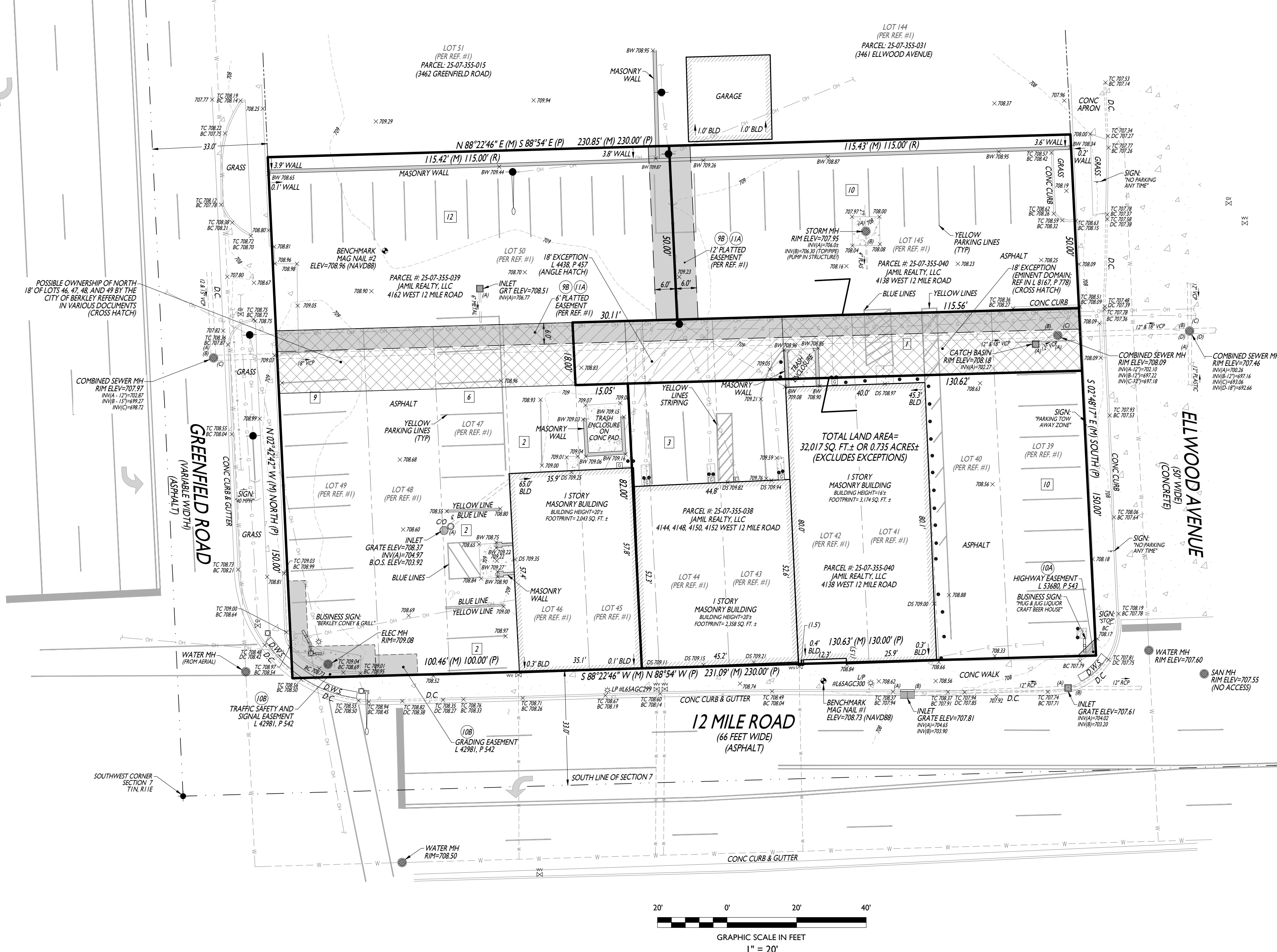
PARCEL DESCRIPTION:

MICHIGAN ALLIED TITLE AGENCY LLC, ISSUING OFFICE FILE NUMBER 24-102932-29, COMMITMENT DATE: AUGUST 8, 2024.

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF OAKLAND, STATE OF MICHIGAN AND IS DESCRIBED AS FOLLOWS:

SITUATED IN THE CITY OF BERKLEY, COUNTY OF OAKLAND, AND STATE OF MICHIGAN, FURTHER DESCRIBED AS:

WEST 15 FEET, EXCEPT THE NORTHERLY 18 FEET, OF LOT 45, ALL OF LOTS 46 THROUGH 50, ELLWOOD HEIGHTS SUBDIVISION, AS RECORDED IN LIBER 23, PAGE 19 OF PLATS, OAKLAND COUNTY RECORDS.



SOURCE: GOOGLE MAPS VICINITY MAP NOT TO SCALE



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ALTA/NSPS LAND TITLE SURVEY

MAP OF SURVEY OF:

SOUTHWEST 1/4 OF SECTION 7, TOWN 1 NORTH, RANGE 11 EAST
PARCEL: 25-07-355-038 (4138 WEST 12 MILE ROAD)
PARCEL: 25-07-355-039 (4162 WEST 12 MILE ROAD)
PARCEL: 25-07-355-040 (4150 WEST 12 MILE ROAD)
CITY OF BERKLEY
OAKLAND COUNTY, MICHIGAN

ISSUE	DATE	DRAFT BY	CHECK BY	FIELD DATE	FIELD CREW	DESCRIPTION
2	10/10/24	RH				ADDITIONAL UTILITY INFORMATION
1	09/19/24	MVZ	AG	09/11/24	JN	FOR ISSUE

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 8, 9 & 13 OF TABLE A THEREOF.

THE FIELDWORK WAS COMPLETED ON SEPTEMBER 11, 2024

ROBERT E. HORNYAK, PS
MICHIGAN PROFESSIONAL SURVEYOR No. 4001044286

SCALE: 1"=20' PROJECT ID: DET-240246 SHEET: 1 OF 1

LIFE SAFETY LEGEND

COMMON PATH OF TRAVEL

FIRE EXTINGUISHER. SEE 04/A-100 FOR MOUNTING HEIGHT (COORDINATE FE SPEC REQUIREMENT AND FINAL LOCATION W/ BUILDING DEPT)

50

0.2

10"

32"

160

OCCUPANT LOAD ATTRIBUTED TO EXIT

WIDTH PER OCCUPANT LOAD FACTOR (1005.1)

REQUIRED OPENING WIDTH

PROVIDED CLEAR OPENING WIDTH (ACTUAL OPENING)

NEW EXIT SIGN, CONFIRM LOCATION REQUIREMENTS W/ FIRE MARSHAL

NEW EMERGENCY LIGHT

NEW EXIT COMBO LIGHT

EXTERIOR REMOTE LIGHT

EXISTING EXIT SIGN

EXISTING EMERGENCY LIGHT

EXISTING EMERGENCY COMBO LIGHT

EXISTING EXTERIOR REMOTE LIGHT

NOTE:
FULLY RECESSED FIRE EXTINGUISHER AND CABINET. COORDINATE FINAL LOCATIONS WITH LOCAL FIRE DEPARTMENT. TOP OF HANDLE TO BE AT +48" A.F.F. PRE-FINISHED STAINLESS CABINET BY ACTIVAR, MODEL SHALL BE 1037F10, 3" ROLLED EDGES.

GYP. BD. OVER METAL STUDS - REFER TO DETAILS

TUB

ATTACHMENT SCREWS

DOOR

HINGE

PULL HANDLE

MOUNTING SCREW

NOTE: CABINET MAY NOT BE REQUIRED PER OWNER'S APPROVAL.

9

FIRE EXTINGUISHER CABINET

N.T.S.

MOUNTING SURFACE

MOUNTING BRACKET

FIRE EXTINGUISHER

2'-0" MAX

4'-0" MAX

T.O. EXTINGUISHER

2'-0" MAX

BOTTOM EDGE

NOTES
COORDINATE FIRE EXTINGUISHER LOCATIONS WITH DIRECTIVES OF LOCAL FIRE MARSHAL. IF ALTERNATE LOCATION IS DIRECTED BY LOCAL AUTHORITY, VERIFY 30"X48" CLEAR FLOOR SPACE IS LOCATED IMMEDIATELY ADJACENT TO EXTINGUISHER.

4

TYP. FIRE EXTINGUISHER DETAIL

N.T.S.

KEYED NOTES

1

G.C. TO FURNISH & INSTALL NEW FIRE EXTINGUISHERS AS REQ'D BY LOCAL CODES. WHEN MOUNTING ADJACENT TO DOOR OPENING, MAINTAIN 12" CLEAR TO DOOR OPENING FOR ADA COMPLIANCE. FINAL LOCATION, MOUNTING HEIGHT, & QUANTITY BY FIRE INSPECTOR. G.C. TO VERIFY FIRE MARSHAL REQUIREMENTS FOR INSPECTION & TAGGING. REFER TO FIRE EXTINGUISHER CABINET DETAIL #9 AND #4 ON THIS SHEET FOR ADDITIONAL INFORMATION. DO NOT EXCEED 75'-0" OF TRAVEL ALONG EXITS FROM AREAS.

KEYED NOTE

A

MIN. 44" PATH OF EGRESS SHALL BE UNOBSTRUCTED AT ALL TIMES.

ACCESSIBILITY PLAN NOTES:

1. AT LEAST 5% OF ALL FIXED SEATING OT TABLES IN A PUBLIC SPACE SHALL COMPLY WITH BUILDING CODE.

2. AISLE'S SHALL HAVE A MINIMUM CLEAR WIDTH OF 44 INCHES.

3. SERVICE COUNTER SHALL BE ACCESSIBLE.

ACCESSIBILITY PLAN LEGEND:

MIN. 44" WIDE CLEAR ACCESSIBLE PASSAGE WAY.

TYPICAL CLEAR WHEELCHAIR FLOOR SPACE WHERE REQUIRED.

EGRESS PATHS	
EXIT PATH	EXIT PATH DISTANCE
'A'	TOTAL PATH LENGTH - 103'-3"
'B'	TOTAL PATH LENGTH - 95'-0"
'C'	TOTAL PATH LENGTH - 72'-0"

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SUITE 200
TROY, MICHIGAN 48083
P. 248-254-3834
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PROJECT:
MUG & JUG
GAS STATION

- BUILDING SHELL & INTERIORS -
4162 TWELVE MILE ROAD,
BERKLEY, MI, 48072

SHEET TITLE:
LIFE SAFETY AND
EGRESS PLAN

DO NOT SCALE DRAWINGS
USE FIGURED DIMENSIONS ONLY

DATE:	ISSUE:
03.20.25	SPA

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PROJECT NO:
091724
SHEET NO:
A-0.1

north

LIFE SAFETY AND EGRESS PLAN

SCALE: 1/8" = 1'-0"

0

2'

4'

8'

16'

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FLOOR PLAN KEY NOTES:	
①	4" H. BURNISHED C-BRICK EXTERIOR STRUCTURAL WALL - 12" D.
②	CLEAR INSULATED GLASS IN BLACK ANODIZED ALUMINUM FRAME ENTRY DOOR.
③	CLEAR INSULATED GLASS IN BLACK ANODIZED ALUMINUM FRAME STOREFRONT/ CURTAIN WALL SYSTEM.
④	NOT USED



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PROJECT:

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GAS STATION

- BUILDING SHELL & INTERIORS -

4162 TWELVE MILE ROAD,
BERKLEY, MI, 48072

SHEET TITLE:

FLOOR PLAN

DO NOT SCALE DRAWINGS
USE FIGURED DIMENSIONS ONLY

DATE:	ISSUE:
03.20.25	SPA

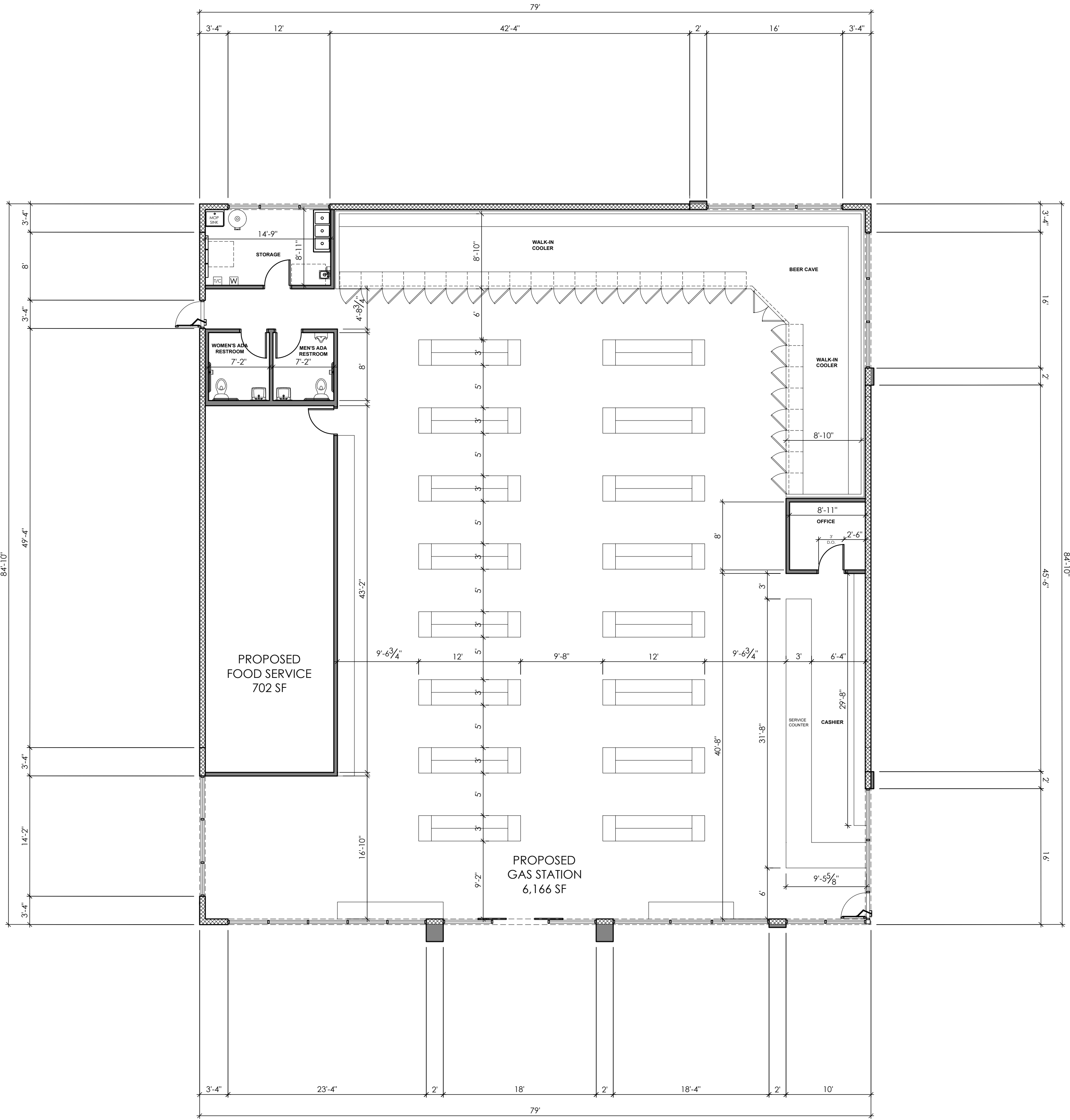
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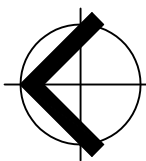
091724

SHEET NO:

A-1.1



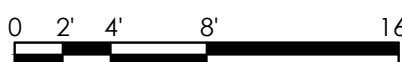
north



FLOOR PLAN

SCALE:

1/8" = 1'-0"



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MUG & JUG
GAS STATION

4162 TWELVE MILE ROAD,
BERKLEY, MI, 48072

GAS PUMP CANOPY PLAN, ELEVATIONS AND DETAILS

DATE: 03.20.25 **ISSUE:** SPA

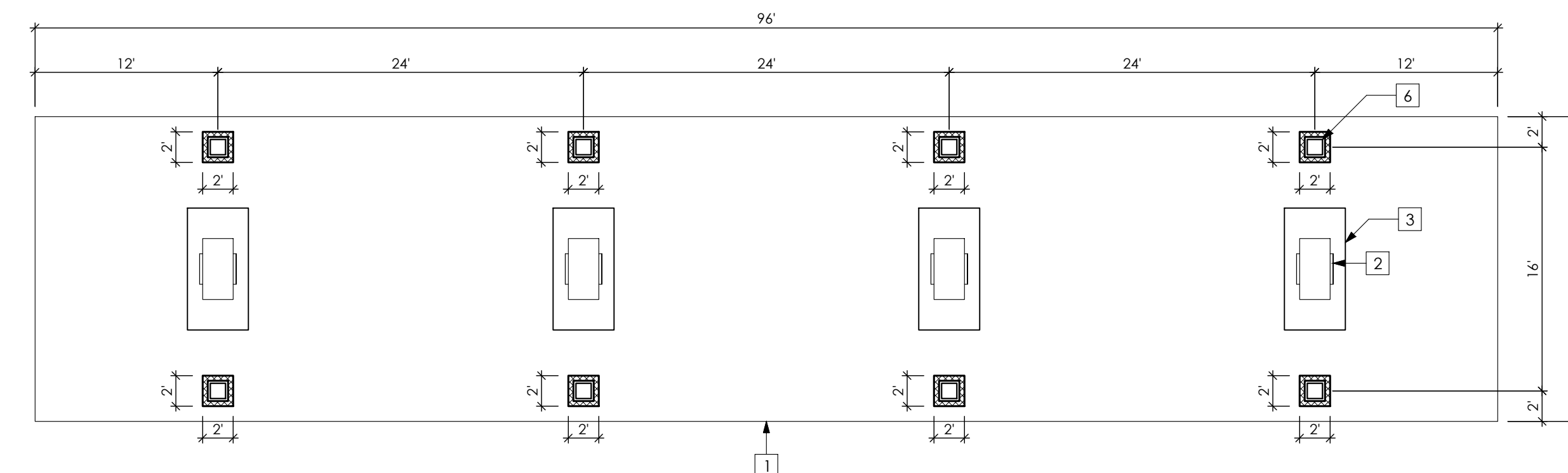
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091724

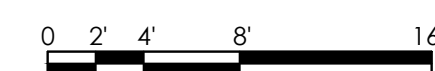
A-0.15



PUMP CANOPY KEY NOTES:	
1	CANOPY OVERHANG, ARTWORK/ BRANDING BY OTHERS. OWNER WILL PROVIDE. VENDOR WILL PROVIDE THEIR OWN STRUCTURAL COLUMNS AND FOOTINGS AS THIS IS NOT PART OF THESE PLANS.
2	GAS PUMPS BY OTHERS.
3	CURB AT PUMP BY OTHERS
4	STRUCTURAL STEEL BUILDING COLUMN.
5	8'D X 4'H X 16"W BURNISHED C-BRICK WALL (BOARDMAN COLOR W/ ACME SHIELD IWR: 97H SUPER BLACK GROUT)
6	VENDOR WILL PROVIDE THEIR OWN STRUCTURAL COLUMNS AND FOOTINGS AS THIS IS NOT PART OF THESE PLANS. PLAN WAS DESIGNED TO BE 12" COLUMN AS THIS INFO WAS PROVIDED BY THE OWNER.



SCALE:

$$1/8'' = 1'-0''$$


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GLAZING SYMBOL KEY:	
TRANSPARENT GLAZING:	
TINTED/ SPANDREL GLASS:	



ADG DESIGN STUDIO
189 E BIG BEAVER ROAD
SUITE 200
TROY, MICHIGAN 48083
P. 248-254-3834
W.ABRODESIGNGROUP.COM

PROJECT:
MUG & JUG
GAS STATION

- BUILDING SHELL & INTERIORS -

4162 TWELVE MILE ROAD,
BERKLEY, MI, 48072

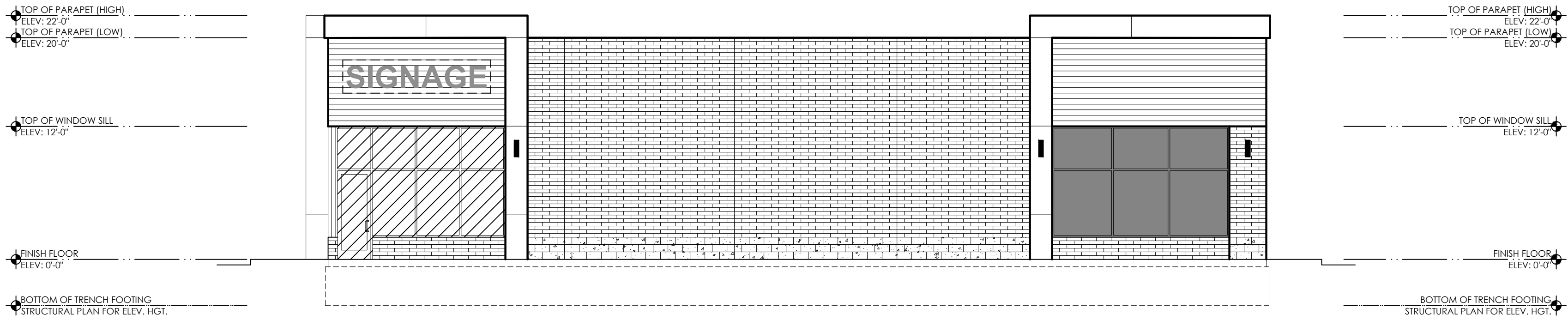
SHEET TITLE:
EXTERIOR
BUILDING
ELEVATIONS -
GLAZING
CALCULATIONS

DO NOT SCALE DRAWINGS
USE FIGURED DIMENSIONS ONLY

DATE: 03.20.25 ISSUE: SPA

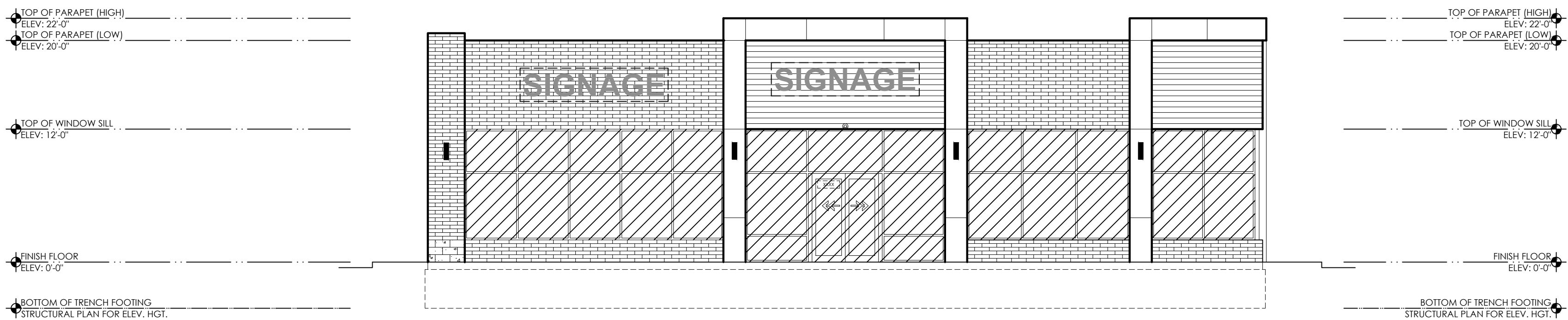
THESE PLANS ARE THE EXCLUSIVE PROPERTY OF ABRO DESIGN GROUP, INC. THESE PLANS ARE NOT TO BE MODIFIED, REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER. NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN PERMISSION CONSENT OF ABRO DESIGN GROUP, INC.

PROJECT NO: 091724
SHEET NO: A-2.4



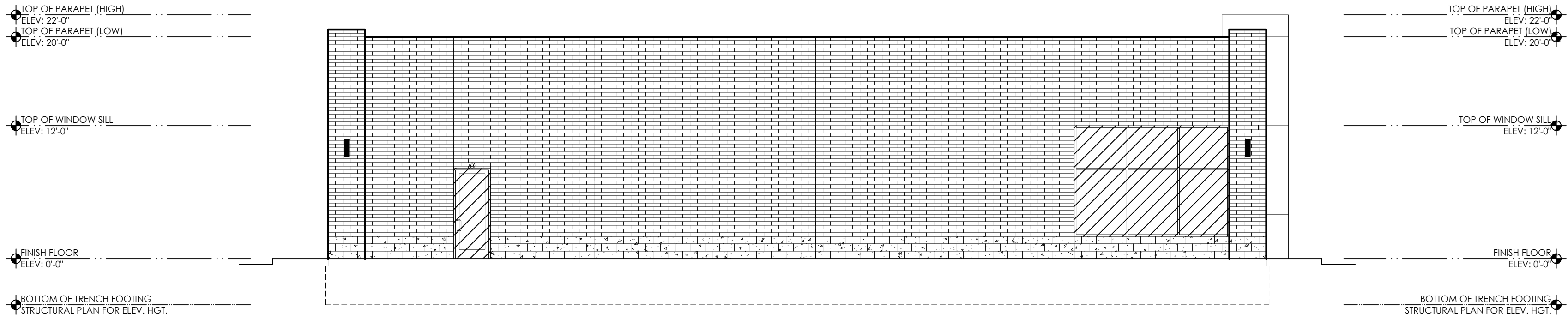
SOUTH ELEVATION (12 MILE ROAD VIEW)
SCALE: 1/8" = 1'-0"

TRANSPARENCY CALCULATION AT SOUTH ELEVATION:			
TOTAL SF. OF TRANSPARENT GLAZING SURFACE:	158 SF	8.9%	
TOTAL SF. OF TINTED/ SPANDREL GLASS:	160 SF	9%	
TOTAL SF. OF BUILDING SURFACE:	1,773 SF	100%	



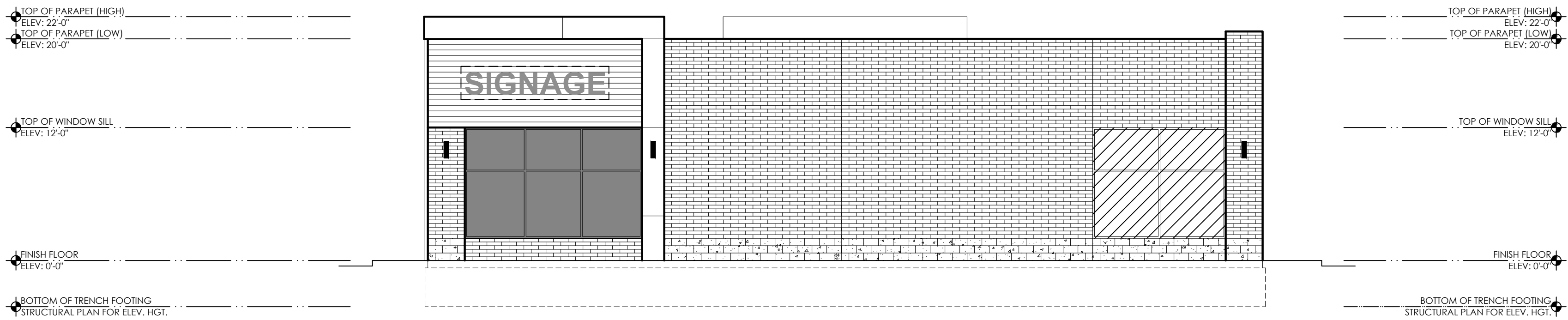
WEST ELEVATION (GREENFIELD ROAD VIEW)
SCALE: 1/8" = 1'-0"

TRANSPARENCY CALCULATION AT WEST ELEVATION:			
TOTAL SF. OF TRANSPARENT GLAZING SURFACE:	689 SF	43.7%	
TOTAL SF. OF TINTED/ SPANDREL GLASS:	0 SF	0%	
TOTAL SF. OF BUILDING SURFACE:	1,577 SF	100%	



NORTH ELEVATION
SCALE: 1/8" = 1'-0"

TRANSPARENCY CALCULATION AT NORTH ELEVATION:			
TOTAL SF. OF TRANSPARENT GLAZING SURFACE:	167 SF	9.8%	
TOTAL SF. OF TINTED/ SPANDREL GLASS:	0 SF	0%	
TOTAL SF. OF BUILDING SURFACE:	1,698 SF	100%	

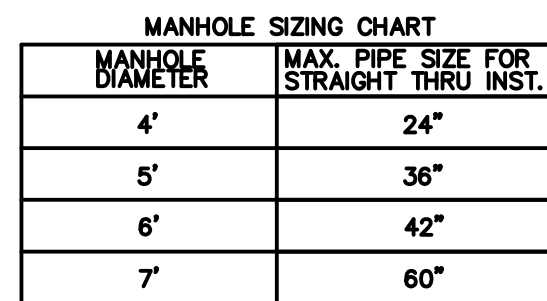
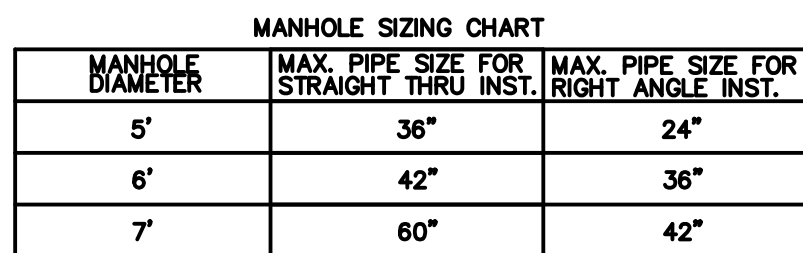
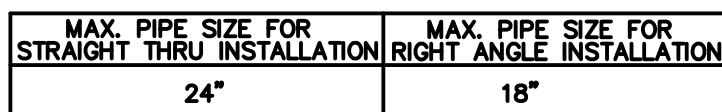


EAST ELEVATION
SCALE: 1/8" = 1'-0"

TRANSPARENCY CALCULATION AT EAST ELEVATION:			
TOTAL SF. OF TRANSPARENT GLAZING SURFACE:	120 SF	7.7%	
TOTAL SF. OF TINTED/ SPANDREL GLASS:	160 SF	10.3%	
TOTAL SF. OF BUILDING SURFACE:	1,552 SF	100%	

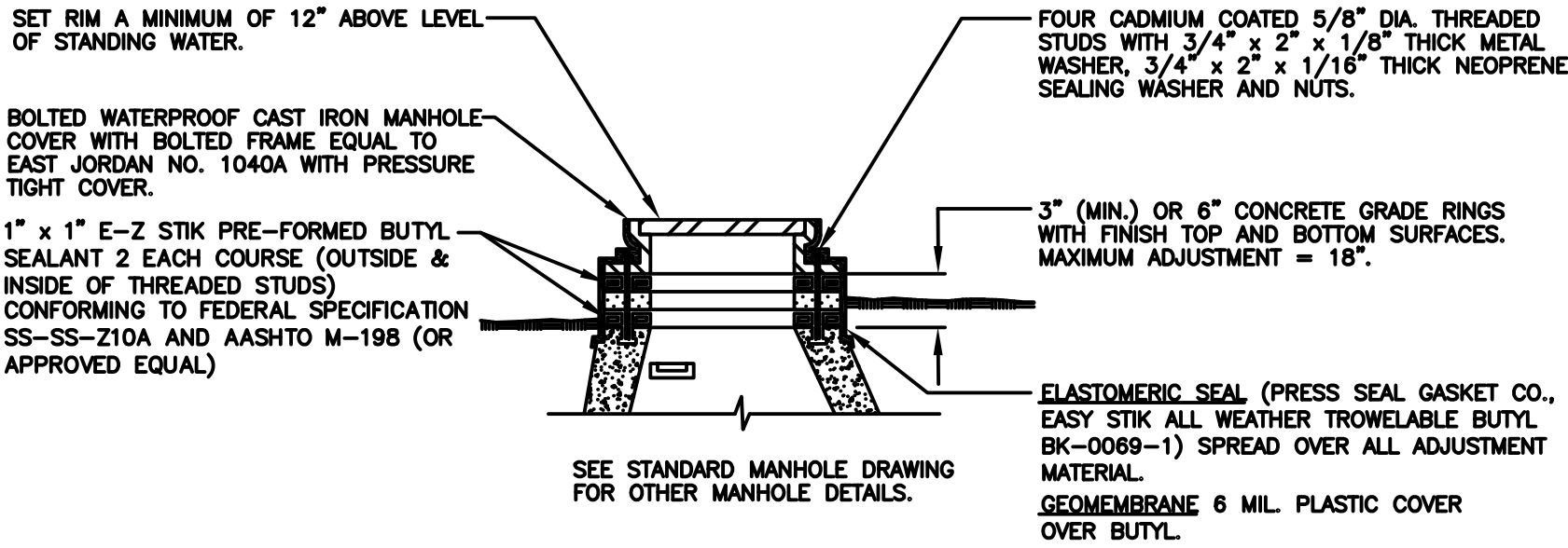
Profile Name: G:\Qtrs.ctb
File Location: J:\Drain\Mapping\Units\STANDARD\DETAIL_S\AppProductionStandard\Sid-Sen1of2.dwg

- Profile Name: G:\Qtrs.ctb
File Location: J:\Drain\Mapping\Units\STANDARD\DETAIL_S\AppProductionStandard\Sid-Sen1of2.dwg

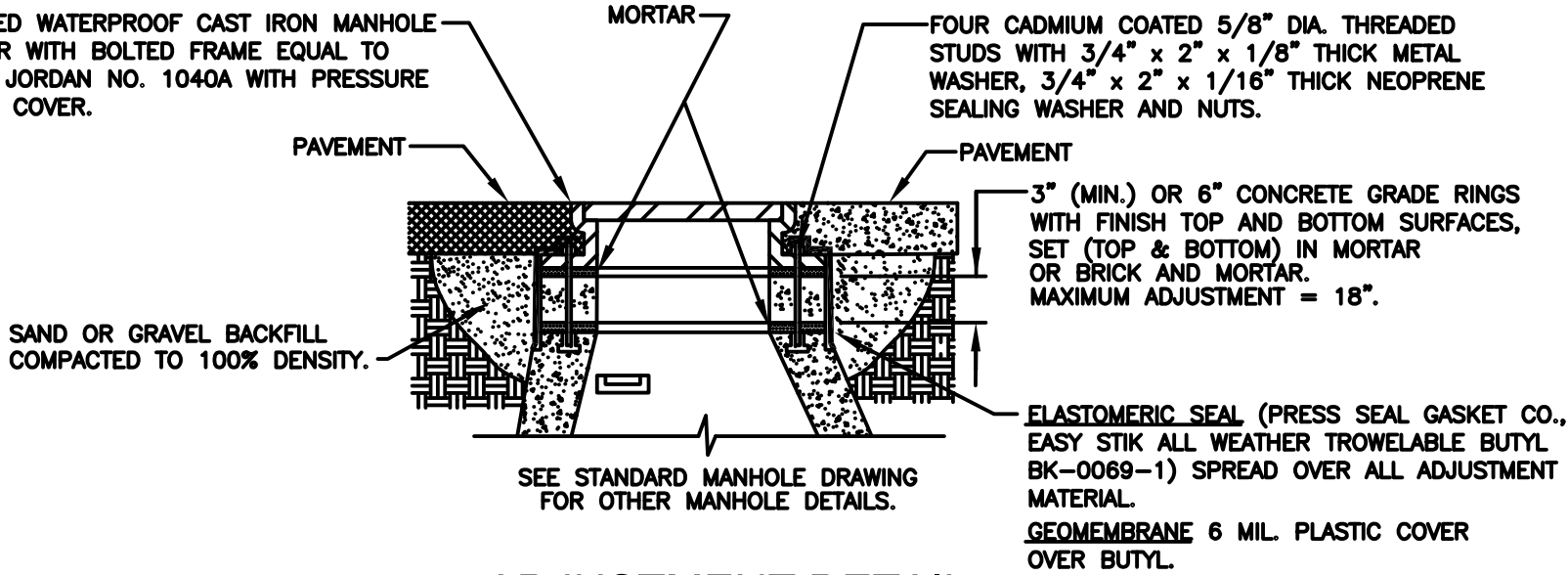


ORIG. DATE:	08/21/02	 WRC WATER RESOURCES COMMISSIONER <i>Jim Nash</i>	ONE PUBLIC WORKS DRIVE, BLDG 95 WEST WATERFORD, MICHIGAN 48328-1907
SCALE:	NO SCALE		SHEET NO.: 1 of 2
DESIGNED BY:	WRC		
DRAWN BY:	WRC Mapping		

MANHOLE RIM ADJUSTMENT CHART	
MANHOLE LOCATION	SET RIM ELEVATION
DITCH	12" ABOVE FINISH GRADE
FLOOD PLAIN	12" ABOVE STANDING WATER
GRAVEL ROAD / SHOULDER	6" BELOW FINISH GRADE
PAVEMENT / GREENBELT	FLUSH WITH FINISH GRADE



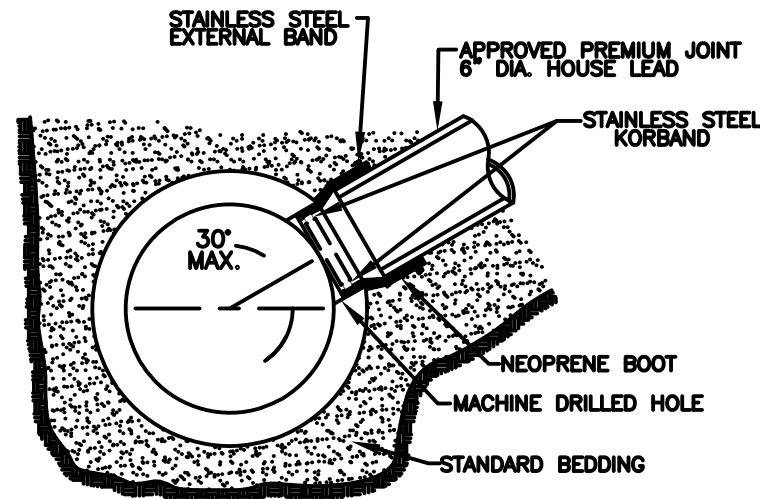
ADJUSTMENT DETAIL FOR
MANHOLE TOPS WITHIN FLOOD PRONE AREAS



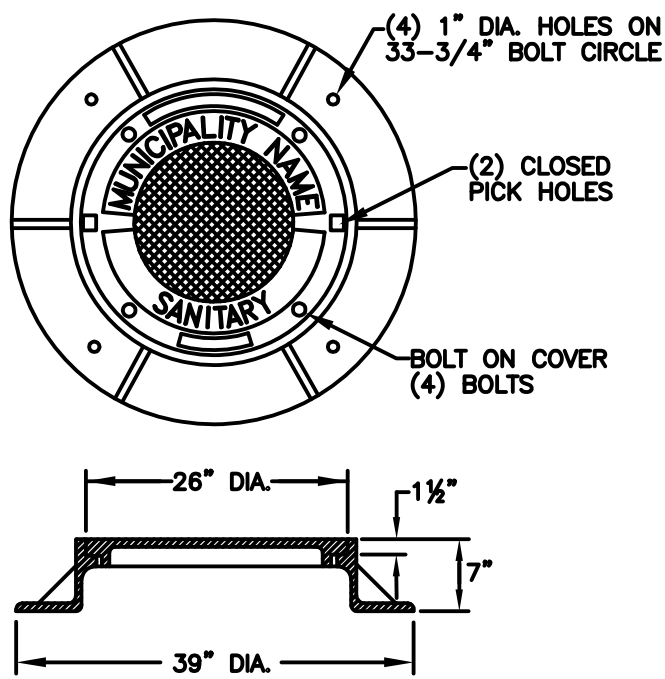
ADJUSTMENT DETAIL
MANHOLE TOPS WITHIN PAVEMENT AREAS

WATER RESOURCES COMMISSIONER GRAVITY BUILDING LEAD REQUIREMENTS AND DETAILS

- ALL BUILDING LEAD WORK MUST BE PERFORMED UNDER WATER RESOURCES COMMISSIONER (WRC) AND/OR LOCAL UNIT OF GOVERNMENT INSPECTION.
- FOR ALL WRC-OPERATED SYSTEMS, CALL 248-858-1110 24-HOURS IN ADVANCE OR WORK TO SCHEDULE INSPECTION.
- NO SANITARY SEWER MAY BE USED AS A CLEANOUT OF DEWATERING OUTLET.
- WHERE AN EXISTING BUILDING LEAD IS BEING EXTENDED, DISSIMILAR TYPES AND SIZES OF PIPE SHALL BE JOINED USING AN WRC APPROVED ADAPTER.
- APPROVED BUILDING LEAD PIPE FOR GRAVITY SEWER LEADS:
 - ABS PLASTIC, ASTM D2751, SDR 23.5.
 - PVC PLASTIC, ASTM D3034, SDR 23.5 OR ASTM D2688, SCHEDULE 40.
 - DUCTILE IRON PIPE, AMERICAN WATER WORKS ASSOCIATION (AWWA) C-104/A21.4, CLASS 54. JOINTS SHALL BE SUPER BEL TITE, TYTON, TY-SEAL, MULTI-TITE, DUAL-TITE, OR VERI-TITE.
 - ANY DEVIATIONS FROM SPECIFIED ABOVE REQUIRE APPROVAL BY WRC.
- ALLOWABLE TYPES OF SEWER PIPE ADAPTERS:
 - FERNCO ADAPTER/REDUCER DONUTS.
 - FERNCO FLEXIBLE COUPLING.
 - MISSION CLAY BAND-SEAL COUPLING.
 - SMITH-BLAIR STAINLESS STEEL REPAIR CLAMP.
 - HURON-CLINTON O-RING ADAPTER.
 - HAMILTON-KENT GEAR GRIP ADAPTER.
 - PLANT FABRICATED JOINT CONVERSION PIPE.

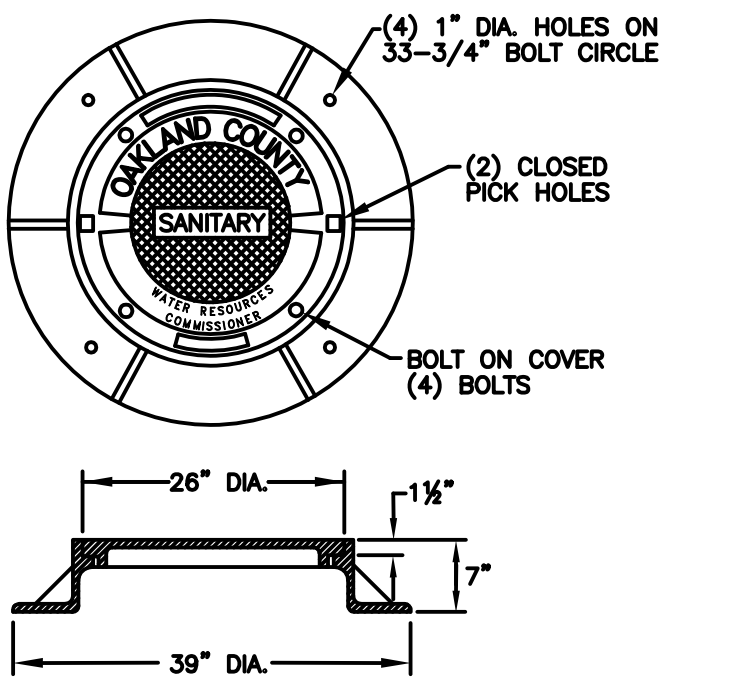


KOR-N-TEE TAP FOR CONCRETE PIPE



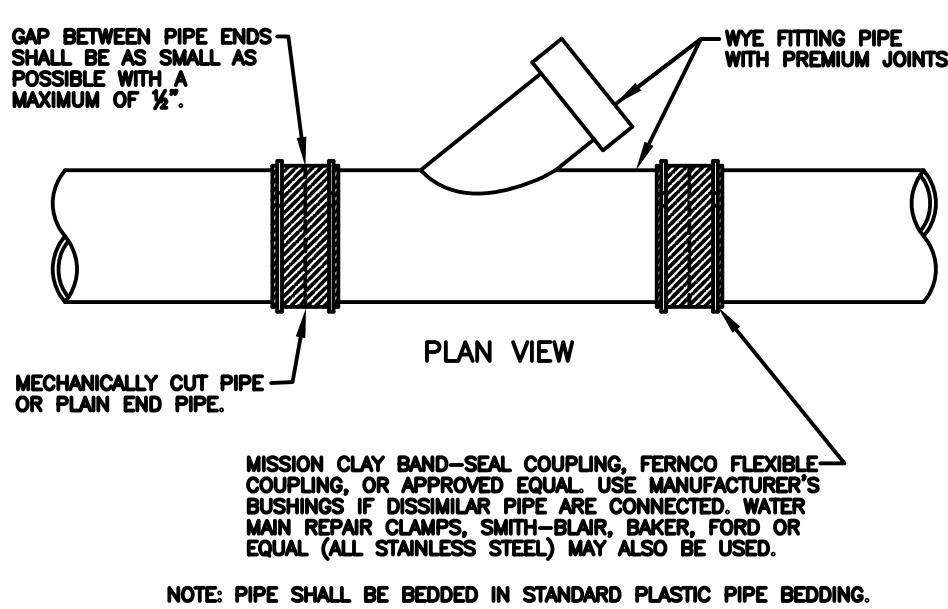
EAST JORDAN IRON WORKS
HEAVY DUTY MATERIAL ASTM A48 CL.35
COVER WT., 150 LBS., CATALOG NO. 1040A
PATTERN NO. 1040A, PRODUCT NO. 1040XX OAKCOSTD.
2" RAISED LETTERS, 1" RAISED LETTERS
ALL RECESSED FLUSH.

LOCAL MUNICIPALITIES MANHOLE COVER

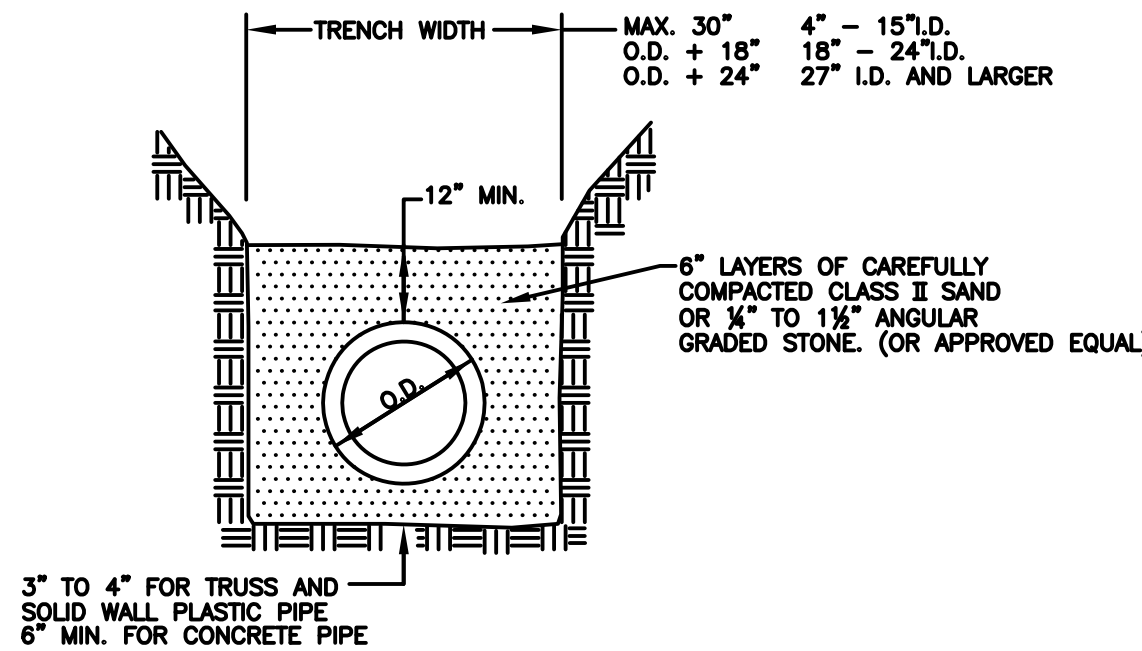


EAST JORDAN IRON WORKS
HEAVY DUTY MATERIAL ASTM A48 CL.35
COVER WT., 150 LBS., CATALOG NO. 1040APT
PATTERN NO. 1040A, PRODUCT NO. NCR09-1280 C
2" RAISED LETTERS, 1" RAISED LETTERS, 3/4" RAISED LETTERS
ALL RECESSED FLUSH.

W.R.C. LETTERED MANHOLE COVER

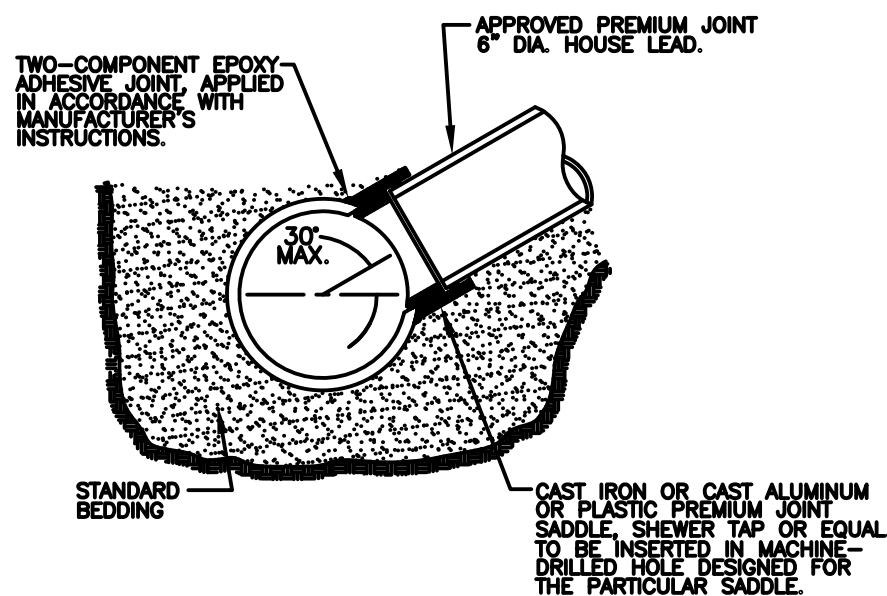


WYE PIPE INSERTION WITH FLEXIBLE COUPLINGS
(RIGID PIPE)



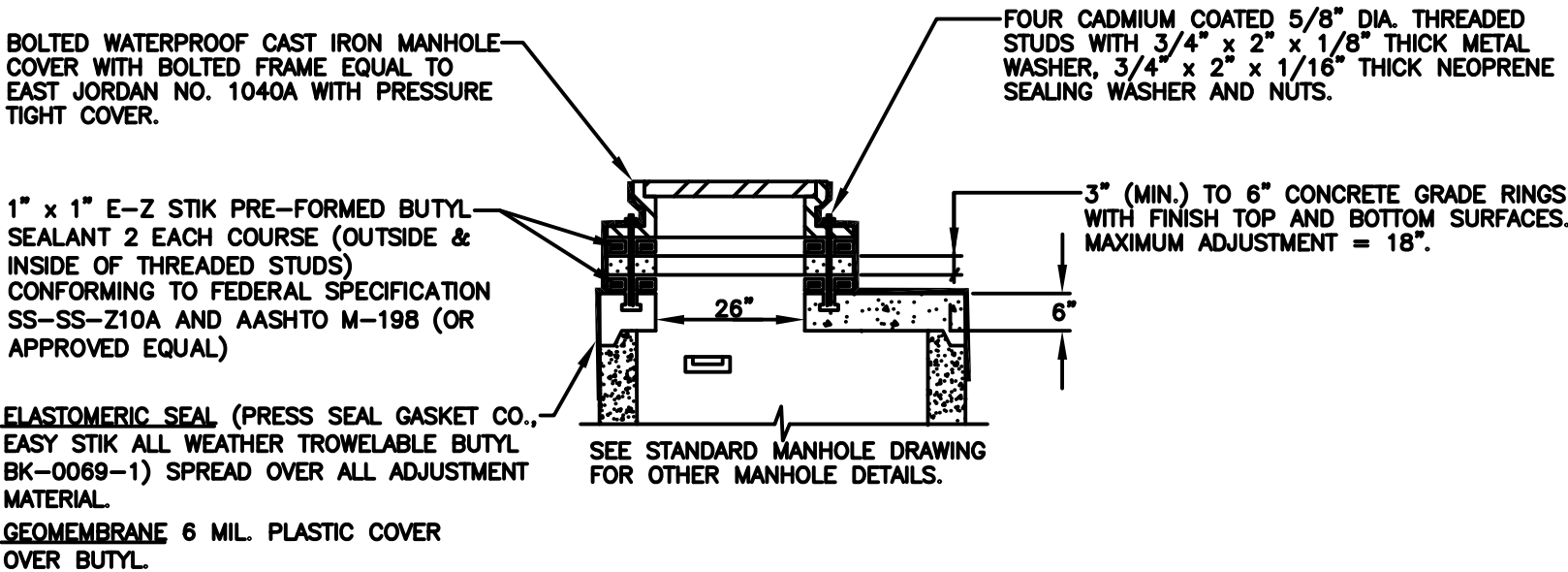
NOTE:
APPROVAL MAY BE GIVEN TO ALTERNATE MATERIALS AND METHODS TO ACHIEVE CLASS B BEDDING.

STANDARD BEDDING
(CLASS B)

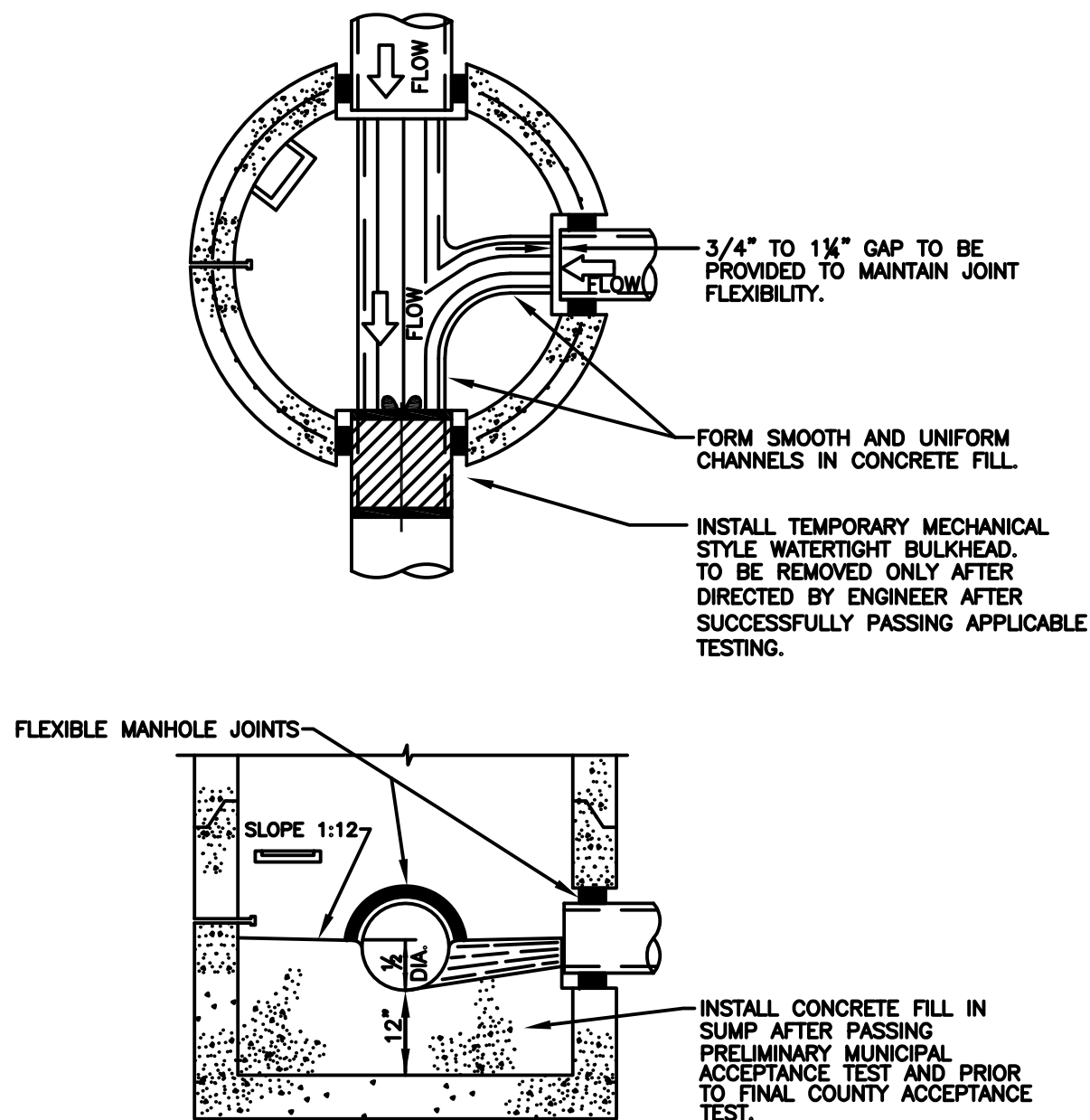


NOTE: SURFACE OF MAIN SEWER SHALL BE CLEANED WITH AN ABRASIVE GRINDER PRIOR TO EPOXY APPLICATION. DUE TO VARIATION OF SET-UP TIME OF EPOXY ADHESIVE, HIGH TEMPERATURE, ANCHOR STRIPS SHALL BE USED TO SECURE SADDLE IN POSITION IN COLD WEATHER OR WHENEVER WORK IS TO PROCEED PRIOR TO COMPLETE CURE OF EPOXY.

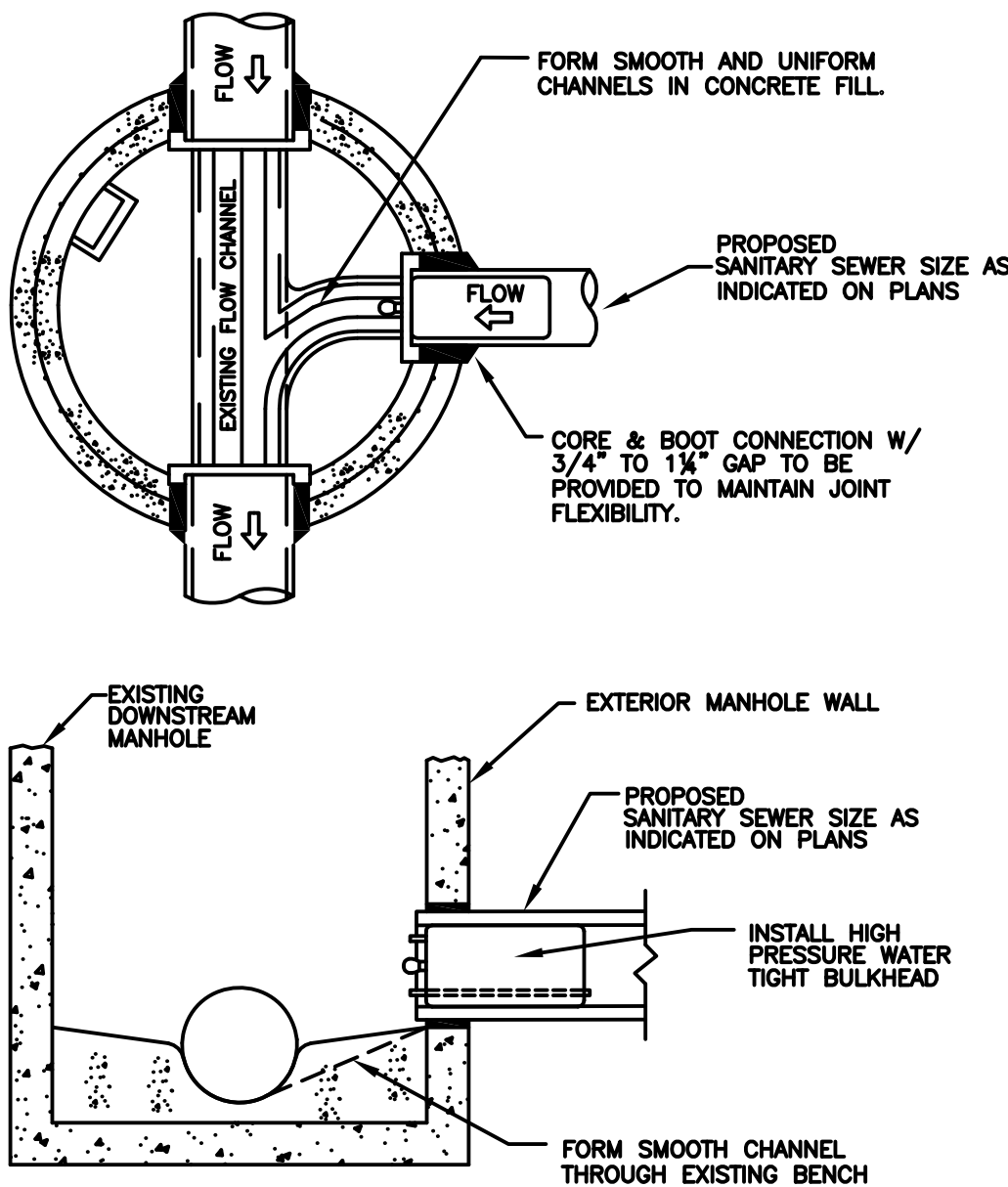
SEWER TAP-ALL SIZES OF MAIN SEWER PIPES
VITRIFIED CLAY



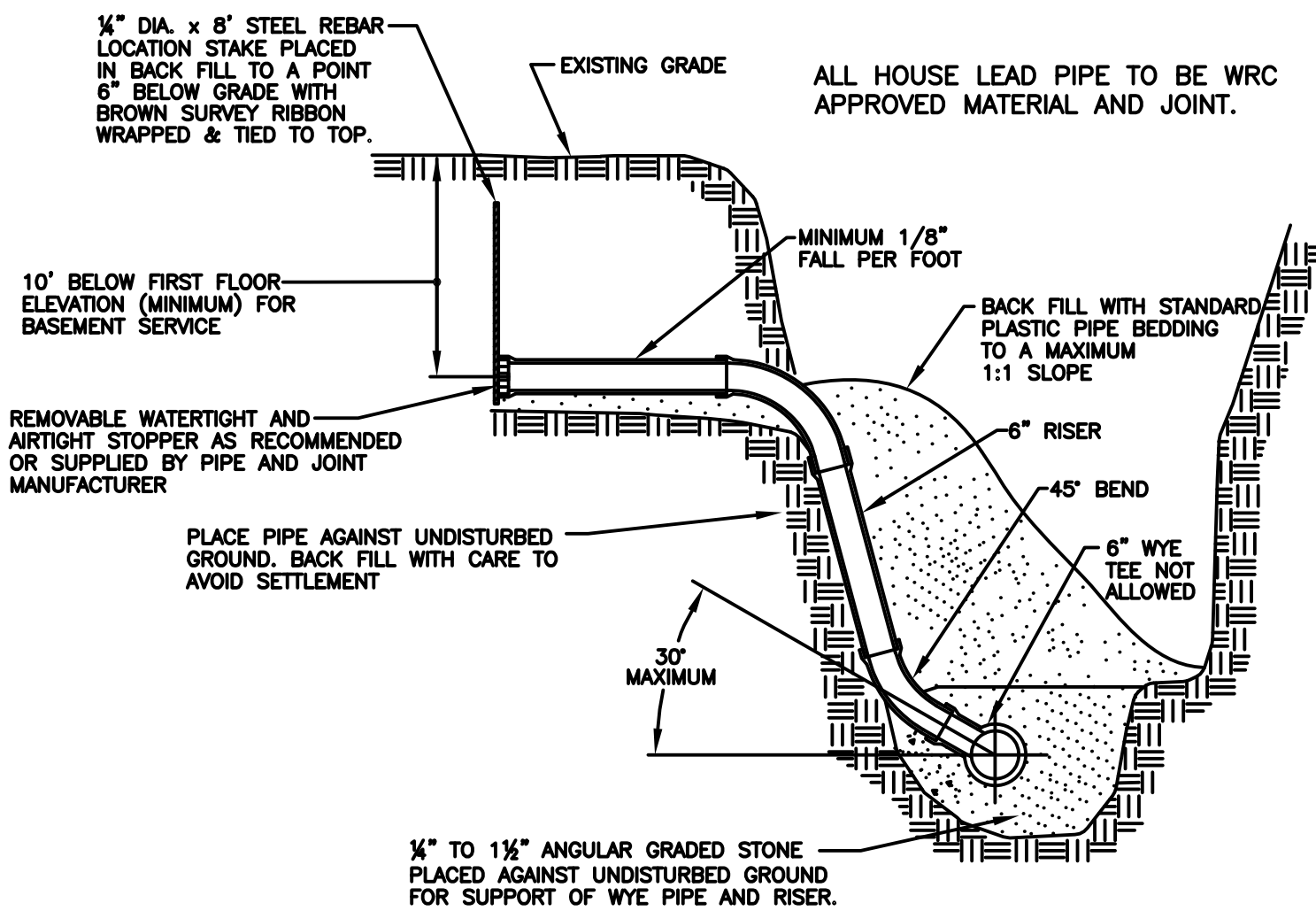
FLAT TOP MANHOLE



SUMP MANHOLE FOR TESTING,
CLEANING AND DEWATERING



TESTING BULKHEAD WITH PIPE TAP

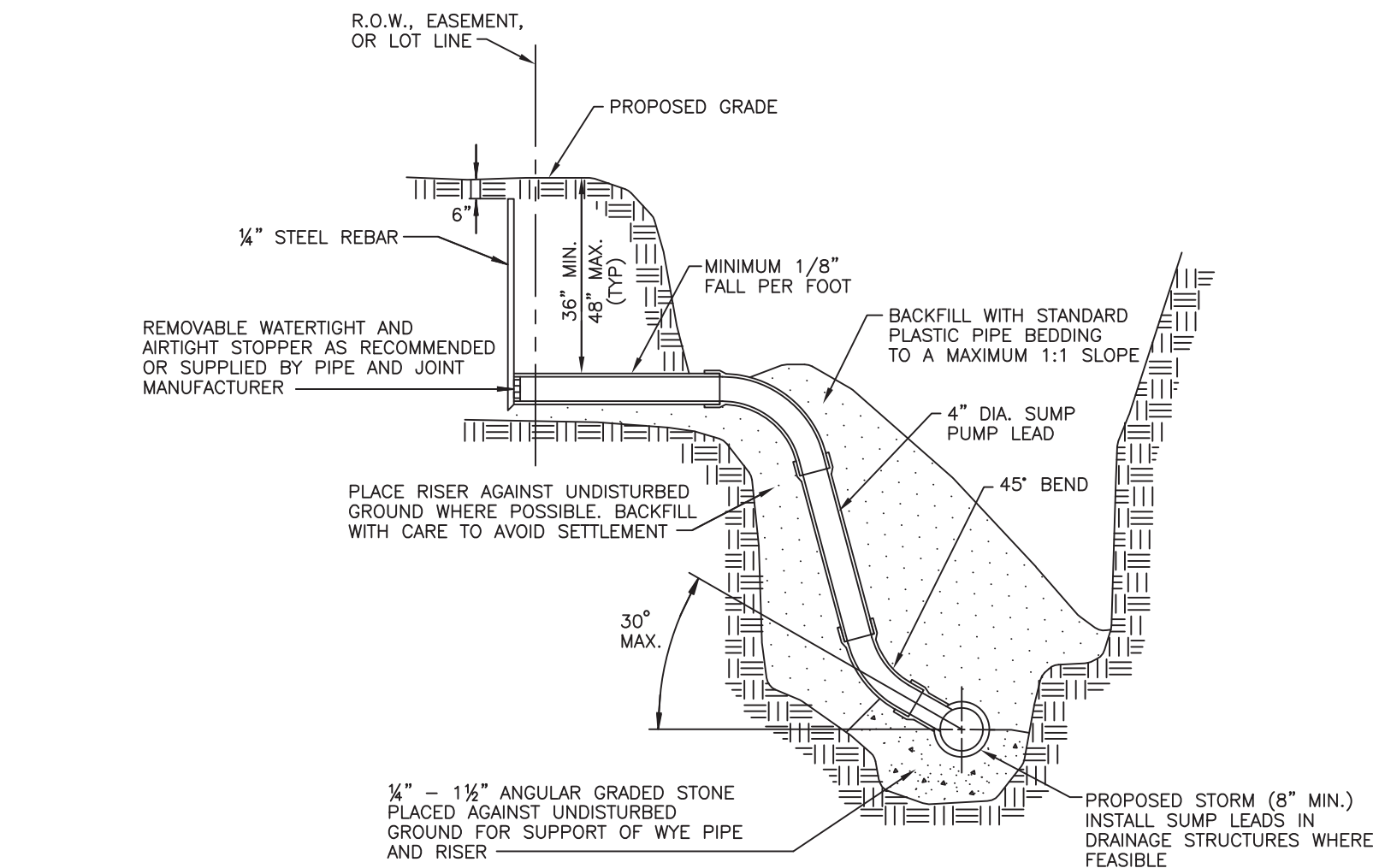


HOUSE LEAD DETAIL

REVISION BLOCK			
Parcel Base / Source Date: N/A			
Rev. No.	Rev. By:	Rev. Date:	Description:
1	DS	06/28/06	ADDED TESTING BULKHEAD WITH PIPE TAP DETAIL
2	IZ	05/28/09	MOVED DETAILS FROM SHEET 1 ONTO SHEET 2
3	IZ	07/14/09	STANDARDIS COMMITTEE APPROVAL FOR DETAIL CHANGES
4	DS	02/03/14	REPLACE UPDATE CDDG WITH WRC FOR THE MANHOLE COVER DETAIL

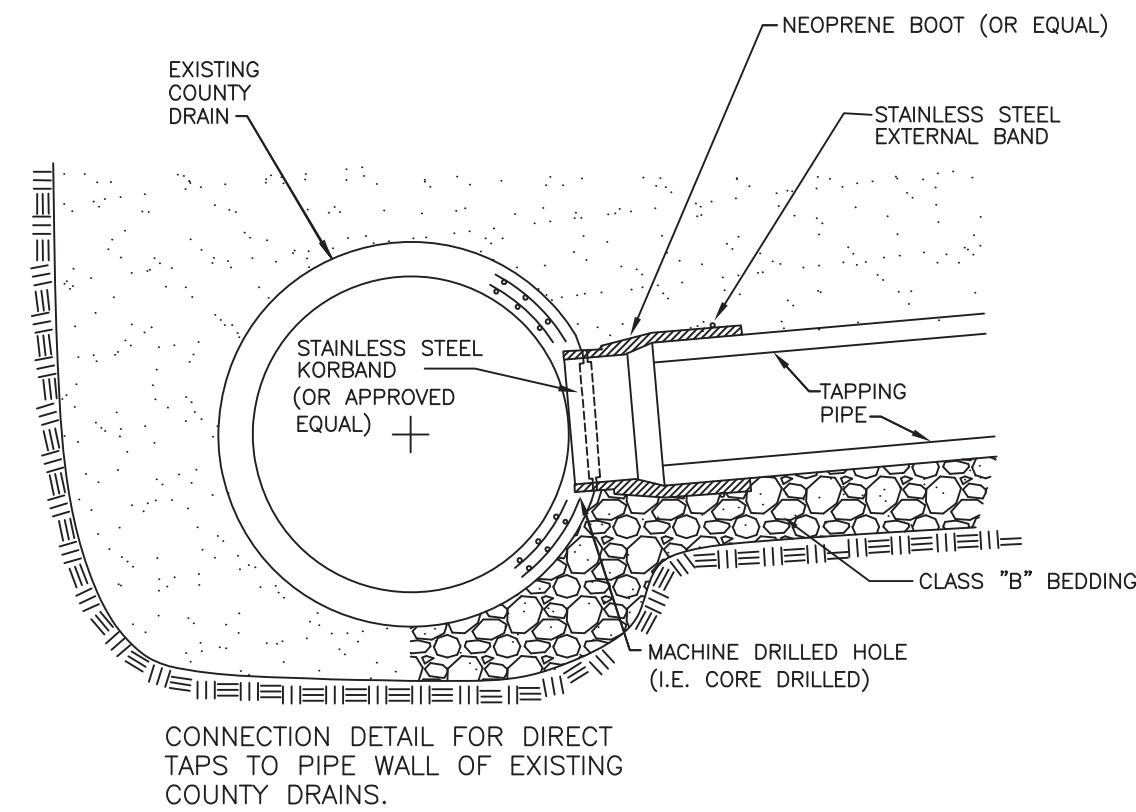
SANITARY SEWER DETAILS AND NOTES

ORIG. DATE:	05-09-03	 WRC WATER RESOURCES COMMISSIONER <i>Jim Nash</i>	ONE PUBLIC WORKS DRIVE, BLDG 95 WEST WATERFORD, MICHIGAN 48328-1907
SCALE:	NO SCALE		
DESIGNED BY:	MWD		SHEET NO.:
DRAWN BY:	Mapping Staff		2 of 2



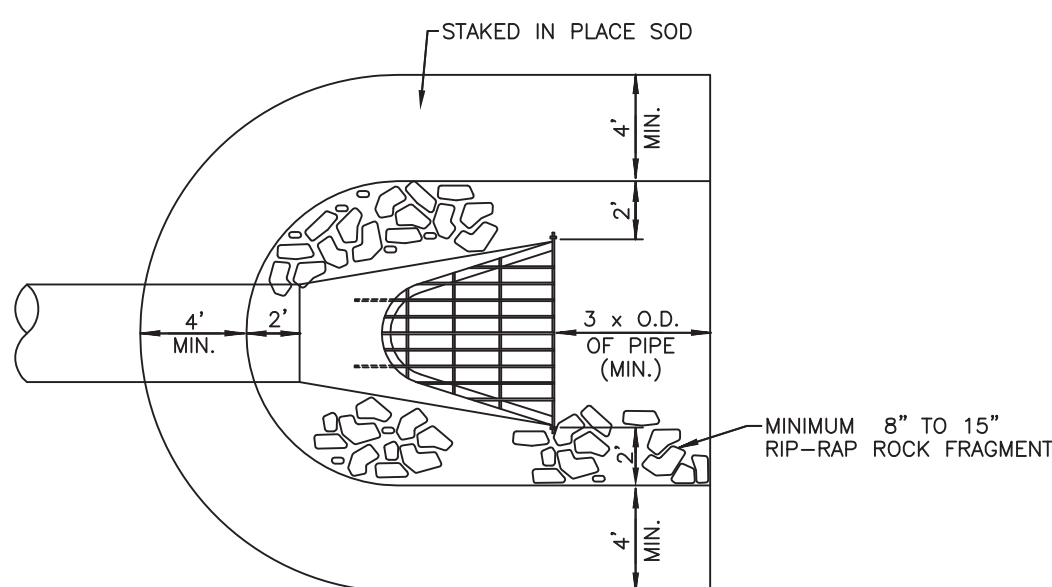
HOUSE LEAD DETAIL FOR 4" DIA.
PLASTIC SUMP PUMP LEADS

NO SCALE

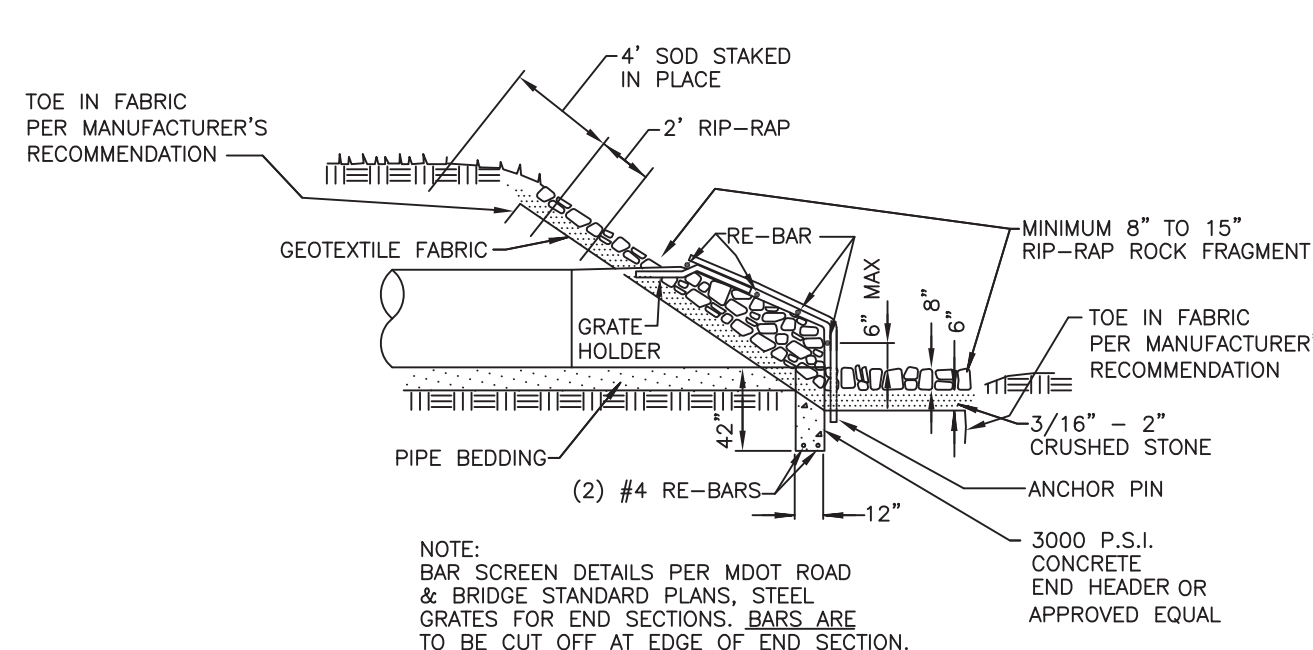


KOR-N-TEE TAP (OR APPROVED EQUAL)

- NO SCALE
- * For non-concrete to concrete taps.
 - * Use link-seal, A-lock or approved equal for concrete to concrete taps.



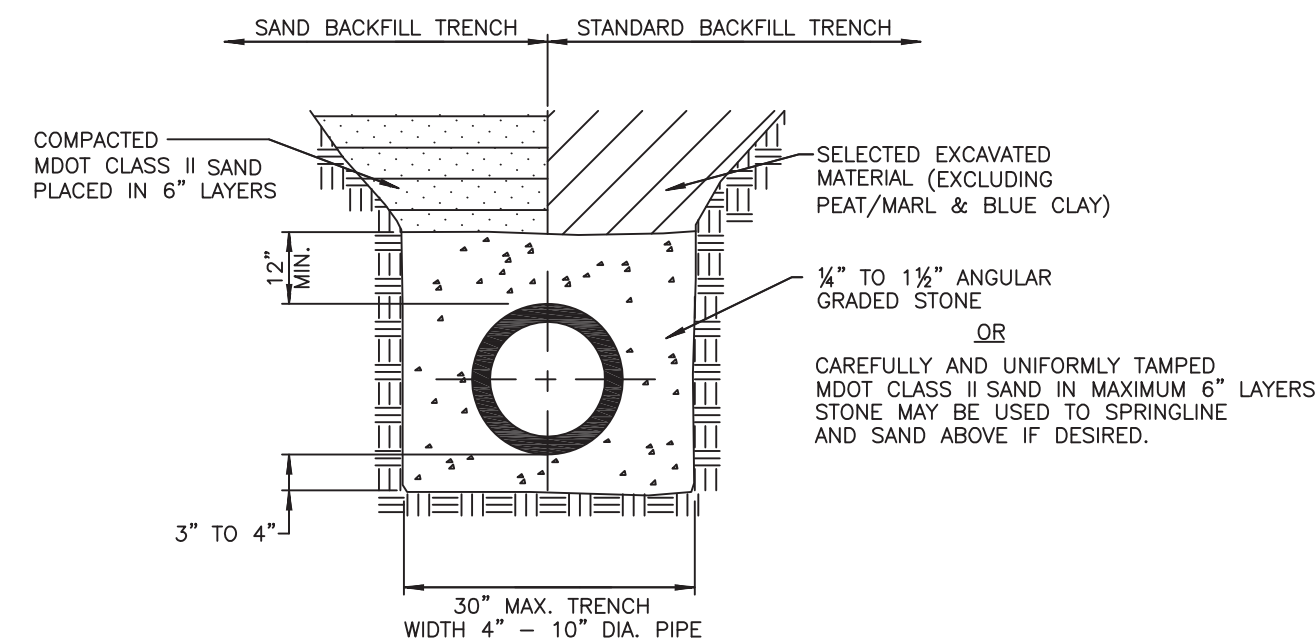
PLAN VIEW



PROFILE VIEW

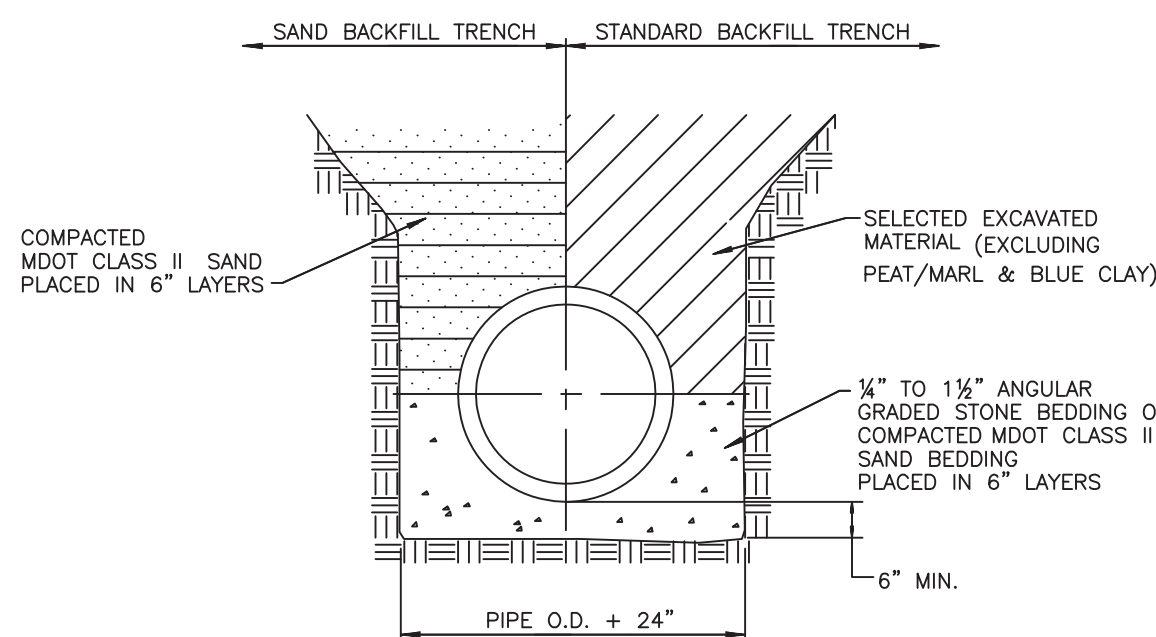
END SECTION AND BAR SCREEN DETAIL

NO SCALE



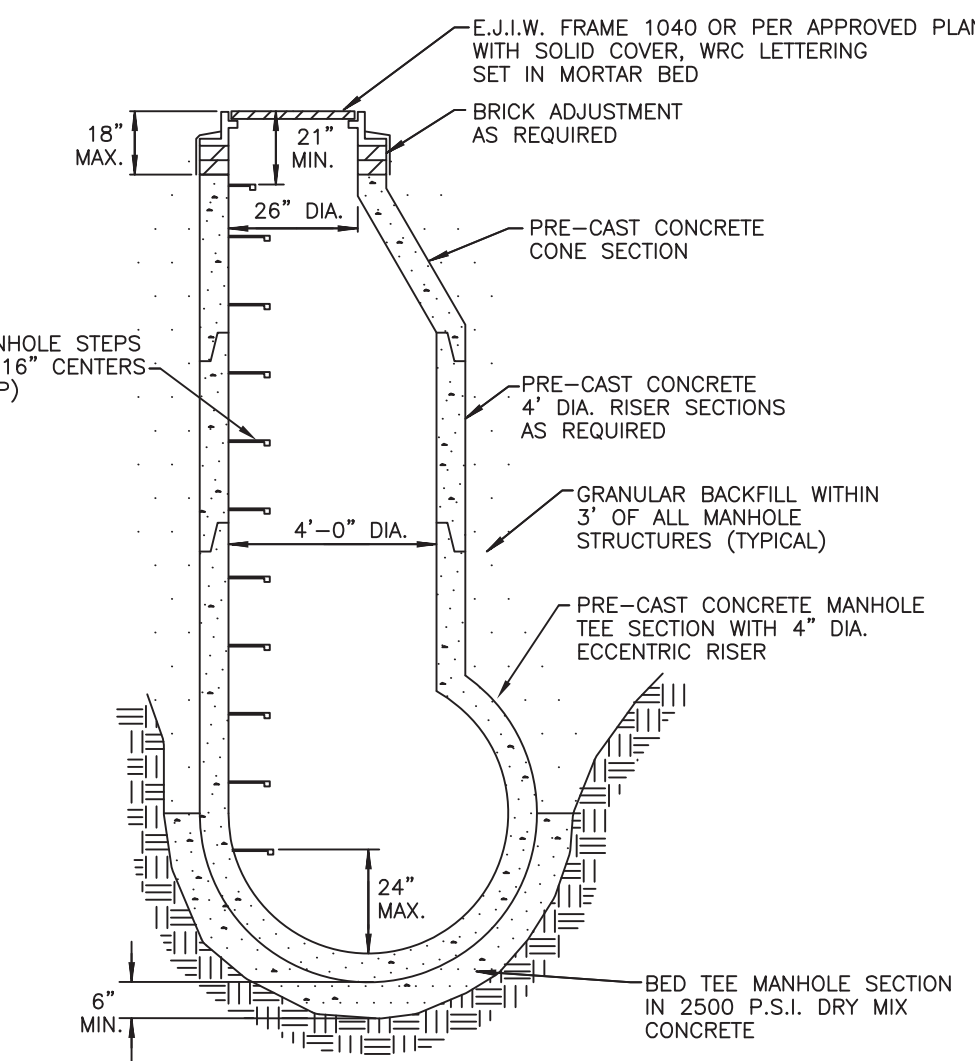
ABS (TRUSS AND SOLID WALL),
PVC (TRUSS, SOLID WALL, A2000),
ADS N-12 WT PIPE BEDDING DETAIL

NO SCALE



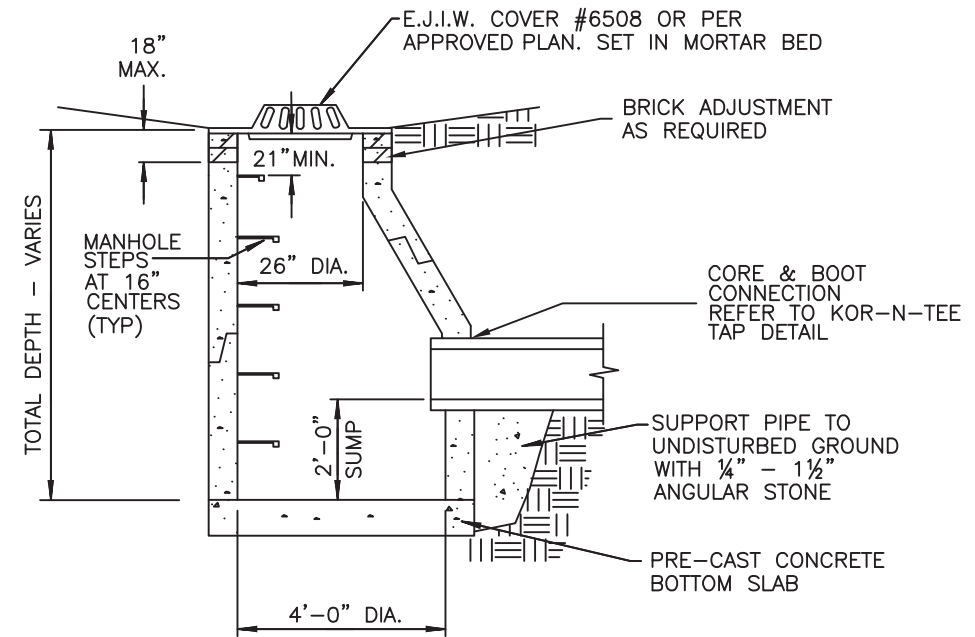
CLASS "B" BEDDING TRENCH DETAIL
FOR 27" DIAMETER AND LARGER
CONCRETE PIPE

NO SCALE



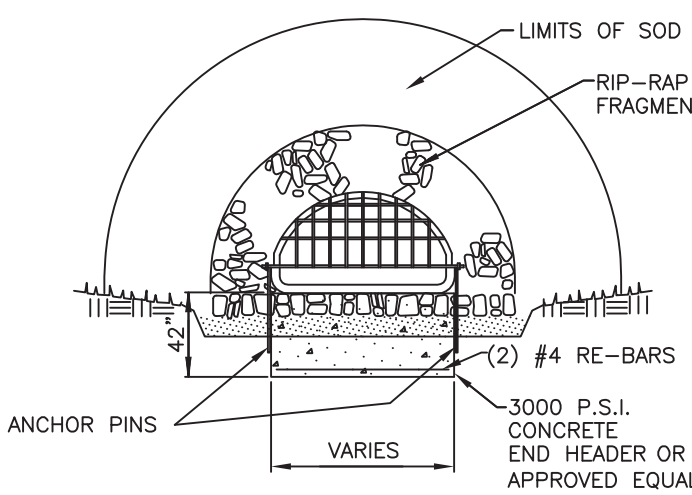
PRE-CAST TEE MANHOLE DETAIL

NO SCALE

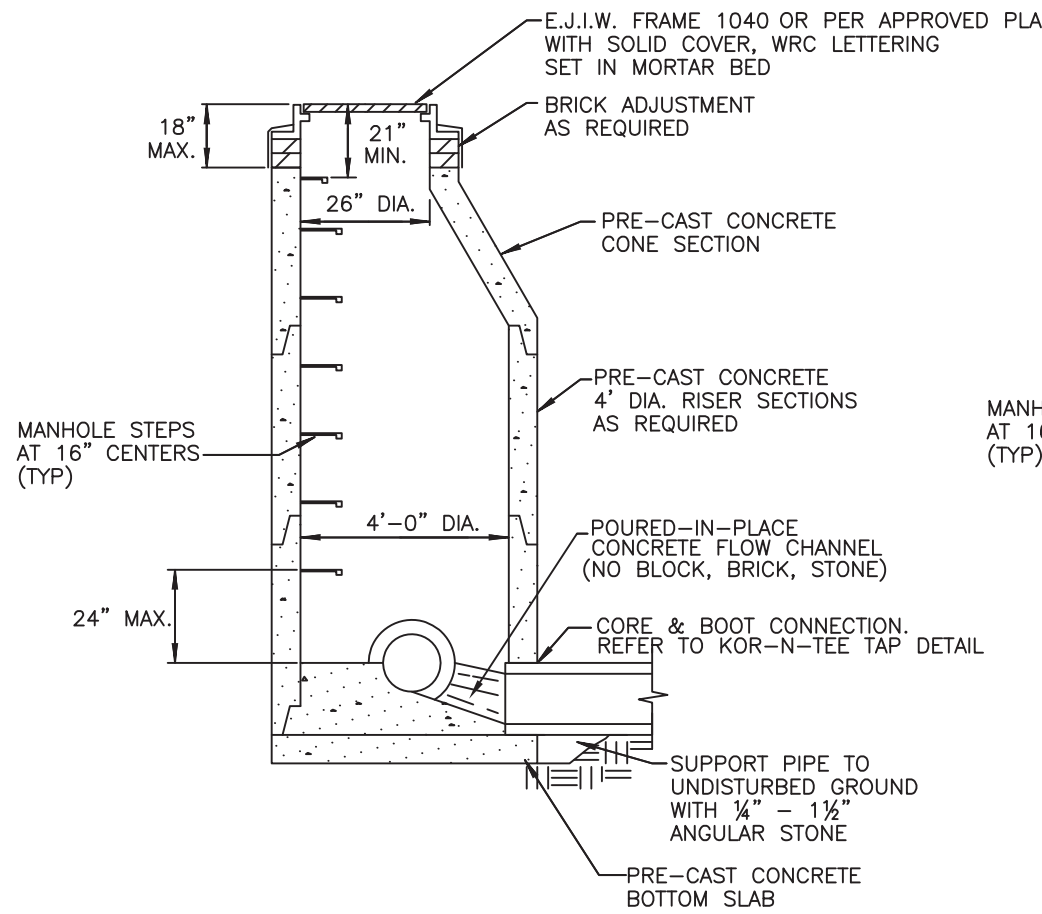


PRE-CAST CATCH BASIN DETAIL

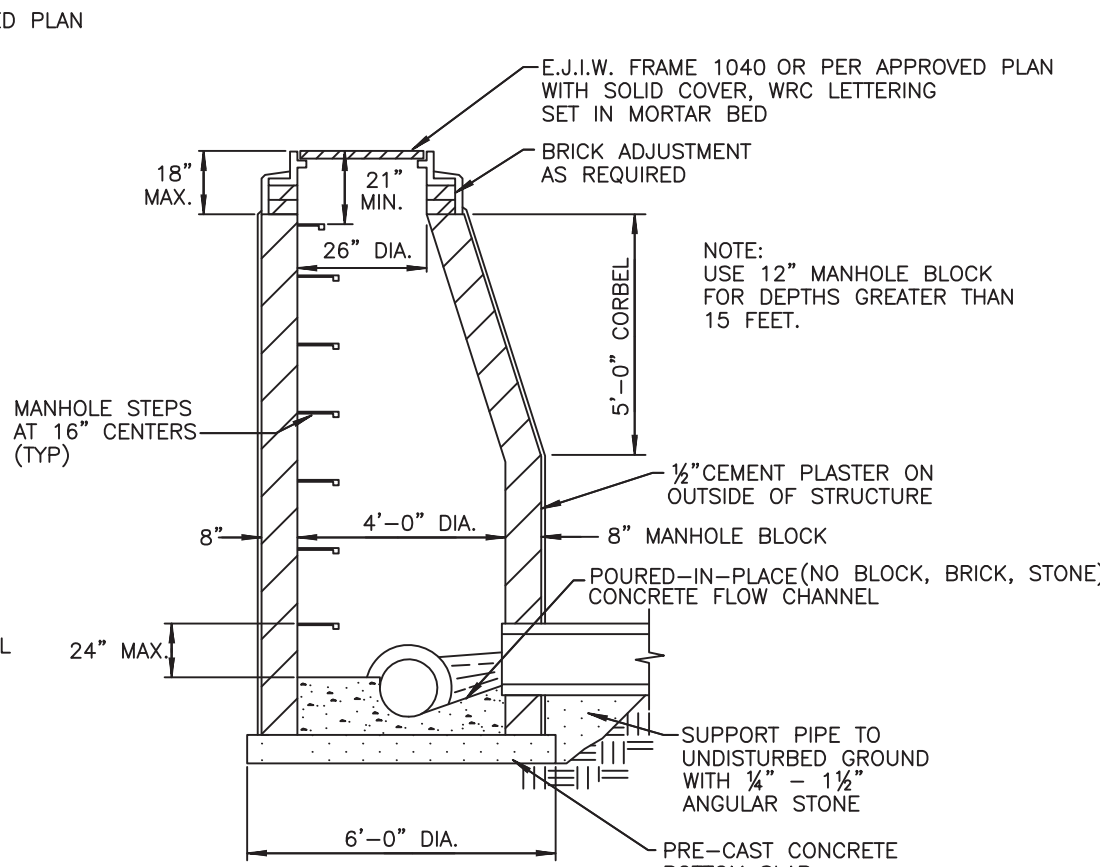
NO SCALE



END VIEW



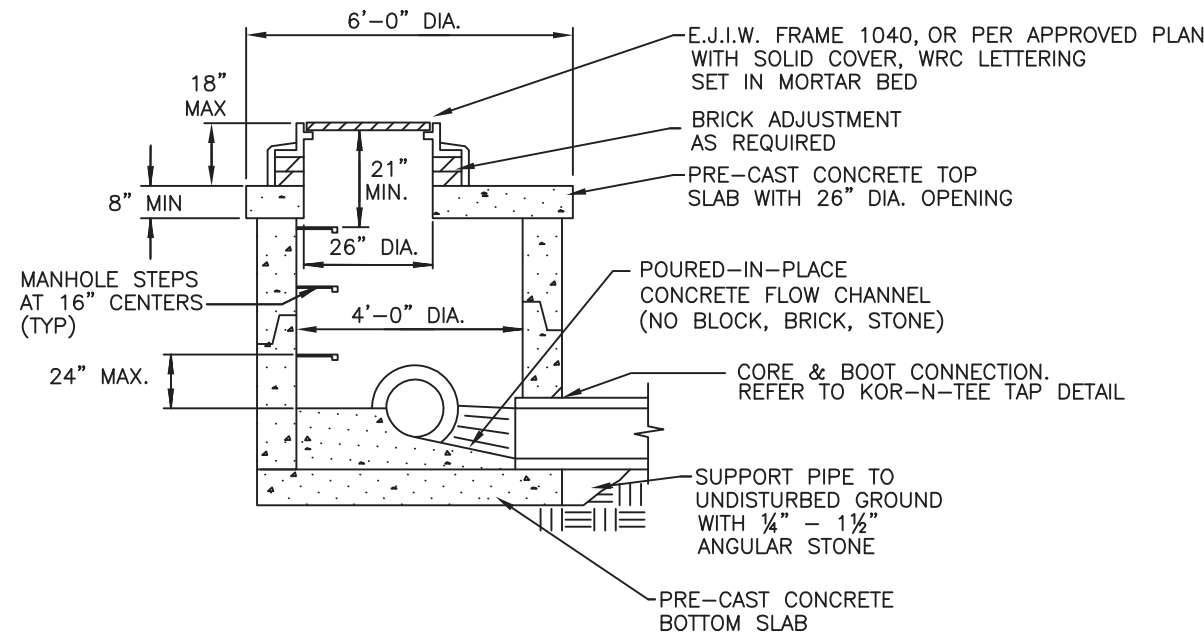
PRE-CAST MANHOLE



BLOCK MANHOLE (PRIOR APPROVAL ONLY)

STANDARD MANHOLE DETAILS

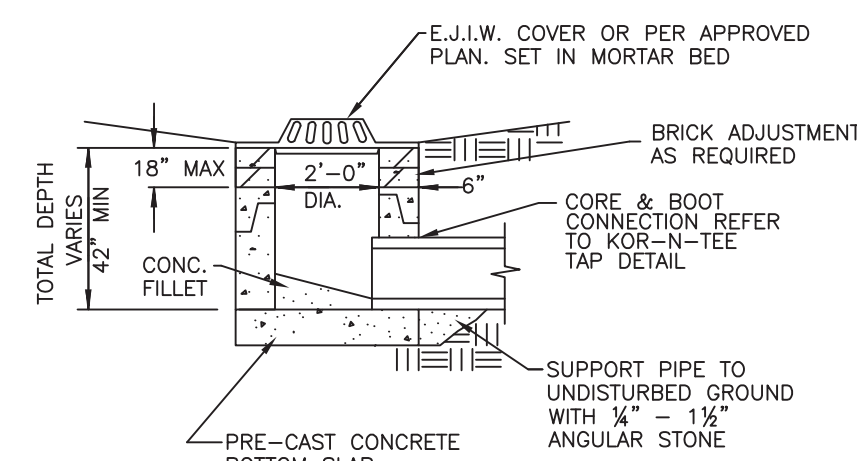
NO SCALE



PRE-CAST LOW HEAD MANHOLE DETAIL

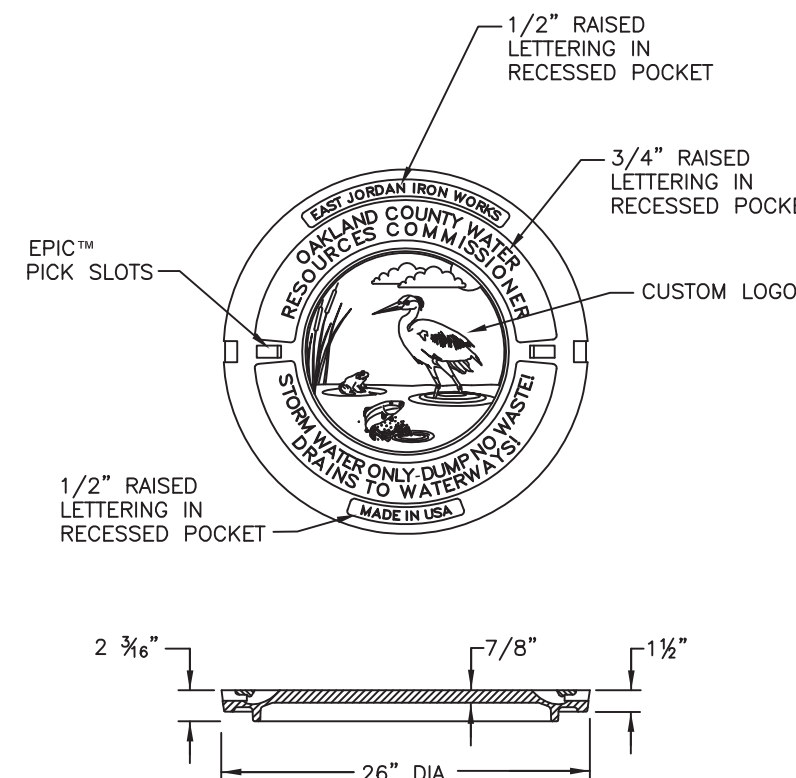
NO SCALE

(PRIOR APPROVAL ONLY)



PRE-CAST INLET DETAIL

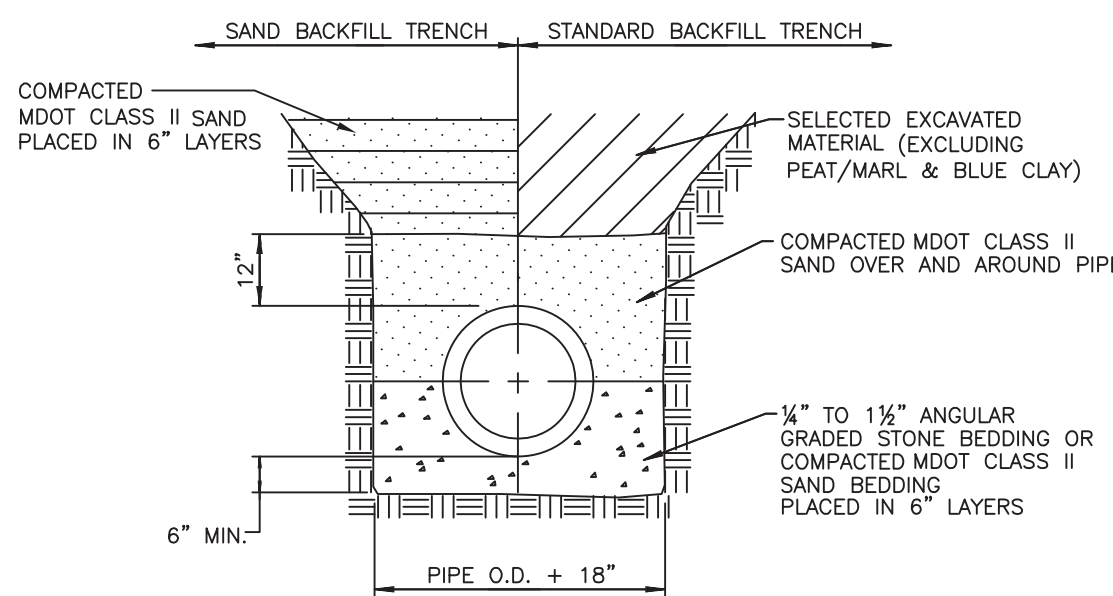
NO SCALE



EAST JORDAN IRON WORKS OR APPROVED EQUAL
HEAVY DUTY MATERIAL ASTM A48 CL35B
CATALOG NO. 1040A
PATTERN NO. 1040A, PRODUCT NO. 104718 OAKCOSTD.
2" HIGH RAISED LETTERS, 1" WIDE RAISED LETTERS
ALL IN RECESSED POCKET.

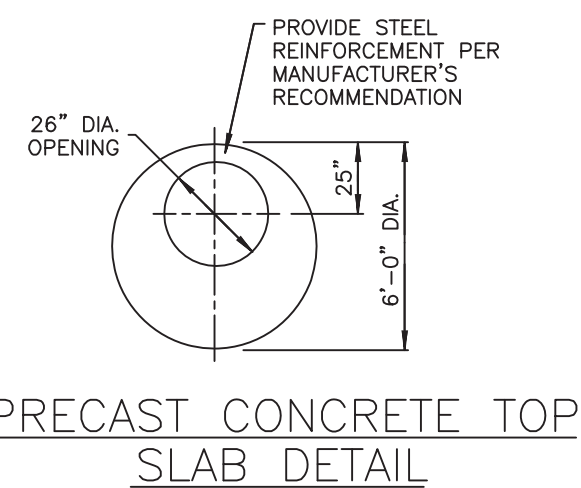
LETTERED MANHOLE COVER
FOR WRC

NO SCALE



CLASS "B" BEDDING TRENCH DETAIL
FOR 24" DIAMETER AND SMALLER
CONCRETE PIPE

NO SCALE



PRECAST CONCRETE TOP
SLAB DETAIL

GENERAL NOTES

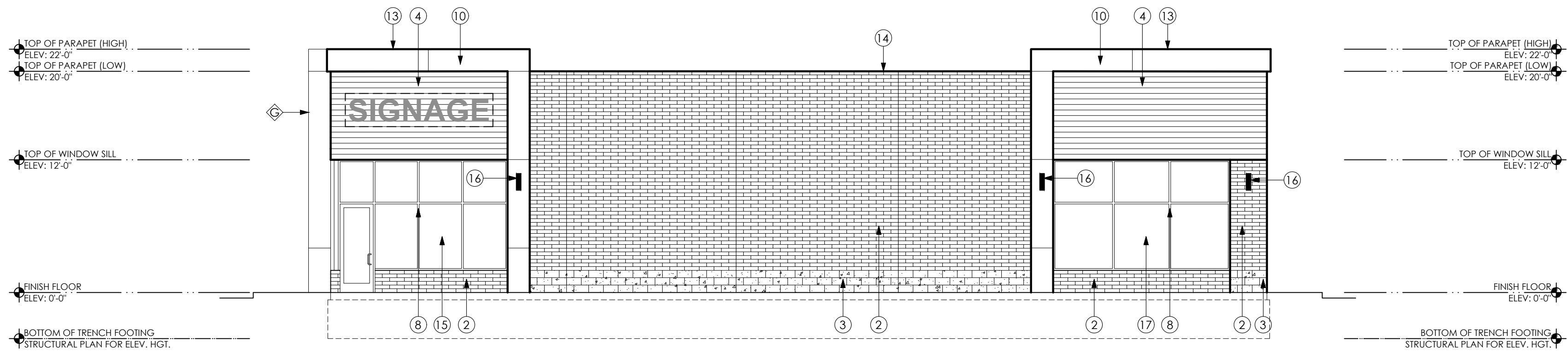
- Type and class of pipe shall be as specified on plans.
- Class "B" bedding shall be used throughout, unless otherwise specified on the plan.
- All end sections 18" and larger shall be provided with a bar screen unless otherwise approved.
- Standard rip-rap shall be 8"-15" fragmented rock, heavy rip-rap shall be 16"-24" fragmented rock. (No Broken Concrete)
- MANHOLE REQUIREMENTS:
 - All new catch basins, inlets, and manholes are to be manufactured to ASTM C-478 specifications.
 - All new catch basins, inlets, and manholes shall have WRC approved flexible, watertight seals where pipes pass through walls. Manholes shall be of precast sections with modified groove tongue and rubber gasket type joints. Pre cast manhole cone sections shall be WRC approved modified eccentric cone type.
 - Taps through manhole joints or cone sections are prohibited unless otherwise approved.
 - Manhole steps to be plastic coated steel meeting the requirements in ASTM D 2146, Type II, Grade 49108, MA. Industries P.S.I. Polypropylene, (or approved equal). Steps to be installed during manhole manufacture. Place at 16" centers 45' from centerline of sewer.
 - Cone section with modified groove tongue joints and with stud inserts cast in place. Top to have flush surface.
 - ASTM C-478 riser section with modified groove tongue joints.
 - Res-seal, link-seal, press wedge II, or kor-n-seal boot (with stainless steel korbard) flexible rubber manhole joints. (or approved equal).
 - The inside joints of manholes, catch basins, and pipe sizes over 42" and larger in diameter shall be pointed up with mortar upon completion of backfilling.
- CONCRETE PIPE REQUIREMENTS:
 - Concrete pipe to be per ASTM C76 standards.
 - It will be required to TV all pipe 30 days after installation
 - The contractor shall provide reinforced concrete pipe as specified on the plans.
 - All reinforced concrete pipe shall have modified grooved tongue joints with o-ring type rubber gasket, per A.S.T.M. specifications C443.
 - The inside joints of manholes, catch basins, and pipe sizes over 42" and larger in diameter shall be pointed up with mortar upon completion of backfilling.
- SUMP PUMP LEAD REQUIREMENTS:
 - All sump pump leads connected to a County Drain pipe shall be pre-manufactured.
 - Sump pump leads connected to a manhole shall be cored and booted. Refer to Kor-N-Tee Tap Detail.
 - Sump pump mains and leads shall be ADS (truss and solid wall), PVC (truss, solid wall , A2000), ADS N-12 WT with premium joints.
 - Ends of all 4" sump pump leads shall be temporarily capped and their location staked, witnessed and recorded.
 - All sump pump leads to be taken to the property line, easement line or as indicated on the plan.
 - Sump pump mains must have a cleanout with a minimum inside diameter of 24" and be constructed at changes of alignment, ends of sump pump mains or as indicated on the plan.
- RESTORATION REQUIREMENTS:
 - All disturbed area within the County Drain right-of-way shall be restored as follows:
 - Under roads, sidewalks, driveways and parking areas, backfill material shall be placed loosely into trenches in six (6) inch layers with each layer compacted to not less than 95% of maximum dry density as determined by the ASTM D 1557 Compaction Standard (modified proctor compaction test). All other areas shall have each layer compacted to not less than 90% of maximum dry density.
 - Finish subgrade
 - Place 3" thickness clean topsoil acceptable to the engineer to attain finished grade. Topsoil must not be contaminated and may not be a mixture of natural underlying soils, subbase materials, or other materials. It must consist of natural loam, sandy loam, silty loam or clay loam humus-bearing soil adapted to the sustenance of plant life. Topsoil must be neither excessively acidic nor excessively alkaline. It must be of mineral origin, exclusive of any peat or muck.
 - Apply seed and fertilizer as follows:*

Location	Seeding Requirements	Fertilizer Requirement
Slopes and Ditch, Banks, Etc.	M.D.O.T. "Roadside Mix" Turf Seed Mixture TGM (10% Kentucky Blue, 20% Perennial Rye, 30% Hard Fescue, 40% Creeping Red Fescue) applied at 220 lb/acre	M.D.O.T. Seeding and Sodding Fertilizers, Class A
Other Areas	M.D.O.T. "Roadside Mix" Turf Seed Mixture THM (30% Kentucky Blue, 20% Perennial Rye, 50% Creeping Red Fescue) applied at 220 lb/acre	M.D.O.T. Seeding and Sodding Fertilizers, Class A

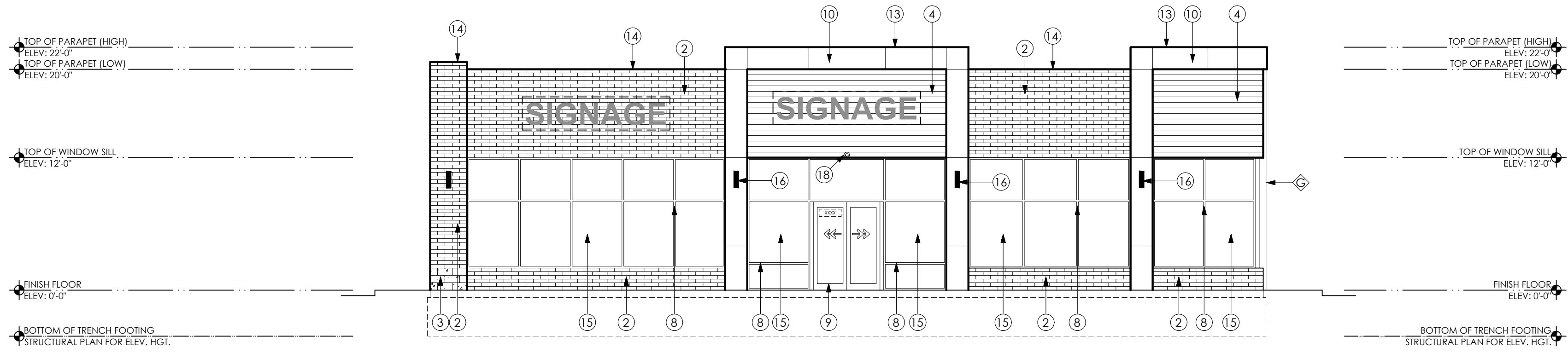
 - * Sod is required in maintained lawn areas. Refer to WRC General Specifications for additional requirements and information.
 - apply straw or marsh hay mulch in an air-dry condition to all seeded areas over the surface to a uniform thickness at 2 tons/acre.
 - mulch shall be anchored in place with biodegradable netting, not larger than 1 1/2" by 2" nor smaller than 1/2" by 1/2".
 - The contractor shall be responsible to insure the growth of all seeded areas, and shall re-seed as necessary to accomplish this.
- The Storm Drain Notes and Details Sheet shall be a supplement to WRC Standards and Specifications, which are available on the WRC website (www.oakgov.com/water/).

STORM DRAIN NOTES AND DETAILS

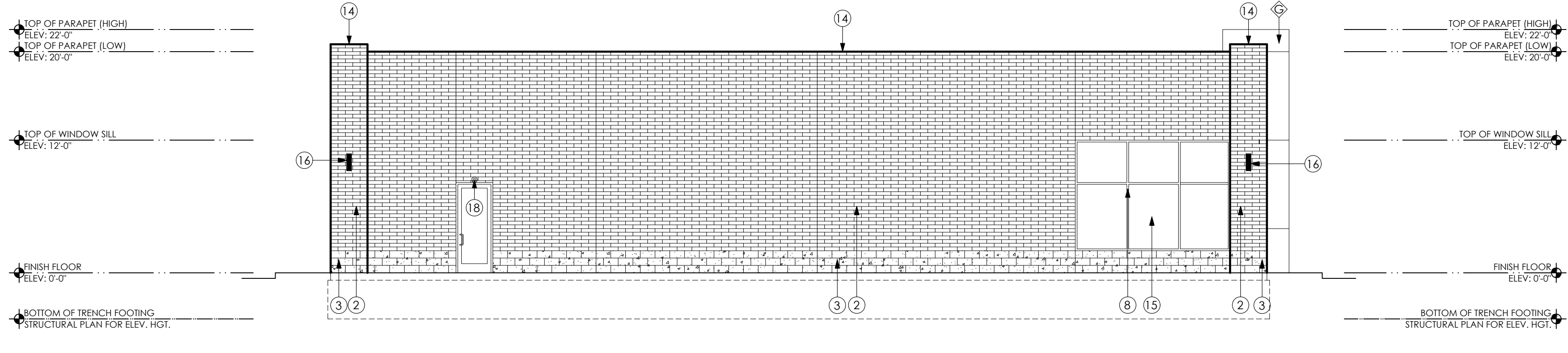
REVISION BLOCK			
Data Source / Source Date: N/A			
Rev. No.	Rev.	Date	Description
1	1	3/17/08	PROPOSED DETAIL CHANGES NEW LOGO
2	1	06/12/08	APPROVAL PER STANDARDS COMMITTEE
3	1	03/28/10	REVISED MH COVER DETAIL
4	05	04/27/10	REVISED GENERAL NOTES
ORIG. DATE: 05/05/97			
SCALE: NONE			
DESIGNED BY: WRC			
DRAWN BY: Mapping			
ONE PUBLIC WORKS DRIVE, BLDG 95 WEST WATERFORD, MICHIGAN 48328-1907		SHEET NO.: 1 of 1	



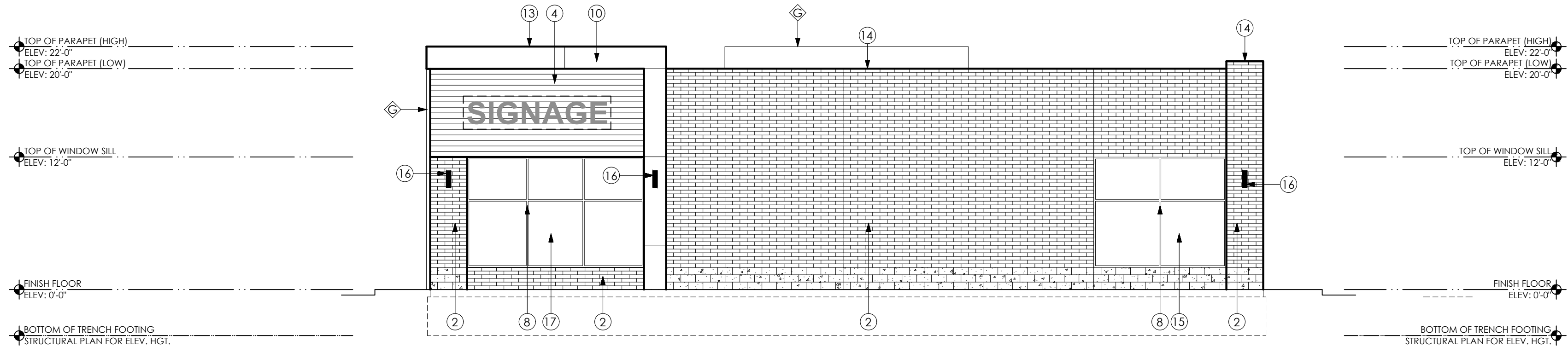
SOUTH ELEVATION (12 MILE ROAD VIEW)
SCALE: 1/8" = 1'-0"



WEST ELEVATION (GREENFIELD ROAD VIEW)
SCALE: 1/8" = 1'-0"



NORTH ELEVATION
SCALE: 1/8" = 1'-0"



EAST ELEVATION
SCALE: 1/8" = 1'-0"

EXTERIOR MATERIAL FINISH SCHEDULE AND NOTES					
TAG	MATERIAL	MANUFACTURE	COLOR/ MODEL	SIZE	REMARKS/ NOTES
1	NOT USED				
2	BURNISHED C-BRICK MASONRY UNIT - EXTERIOR STRUCTURAL WALL W/ ACME SHIELD IWR	GRAND BLANC CEMENT PRODUCTS	BOARDMAN W/ 9TH SUPER BLACK GROUT	12"D X 4"H X 16"W	CONTACT: RALPH (517) 927-3002 SEE MASONRY NOTES BELOW
3	SPLIT-FACE MASONRY UNIT - EXTERIOR STRUCTURAL WALL W/ ACME SHIELD IWR	GRAND BLANC CEMENT PRODUCTS	UNICORN: STANDARD GREY GROUT	12"D X 8"H X 16"W	CONTACT: RALPH (517) 927-3002 SEE MASONRY NOTES BELOW
4	FIBER CEMENT WALL SYSTEM ON MTL. STUD FRAMING SYSTEM	NICHIHA FIBER CEMENT	VINTAGEWOOD: CEDAR	17 7/8" H X 119 5/16" L	CONTACT: NICHIHA (866) 424-4421
5	NOT USED				
6	NOT USED				
7	STOREFRONT TENANT DOOR ENTRY W/ 10" HIGH BOTTOM RAIL	TUBELITE	CLEAR ANODIZED ALUMINUM	SEE SHEET A-8.1 FOR DETAILS	SEE MFG. SPECIFICATIONS FOR DETAILS
8	CLEAR INSULATED GLASS IN ANODIZED ALUMINUM FRAME STOREFRONT SYSTEM	TUBELITE	CLEAR ANODIZED ALUMINUM	SEE SHEET A-8.1 FOR DETAILS	SEE MFG. SPECIFICATIONS FOR DETAILS
9	STOREFRONT TENANT DOOR, AUTOMATIC DOORS, SELECTION BY OWNER	TUBELITE	CLEAR ANODIZED ALUMINUM	SEE SHEET A-8.1 FOR DETAILS	SEE MFG. SPECIFICATIONS FOR DETAILS
10	ALUMINUM COMPOSITE PANEL SYSTEM "CLIP & CAULK" INSTALLATION	OMEGA PANEL PROD. LAMINATORS INC.	SLATE, CAULK JOINT TO MATCH MTL. PANEL	SEE ELEV. AND WALL SECTIONS FOR JOINTS	CONTACT: TOM OLSON (734) 777-6788
11	NOT USED				
12	NOT USED				
13	METAL COPING (TYP.)	PAC-CLAD	COLOR: SLATE		BY OAKLAND METAL SALES 248-377-8847 ADG TO APPROVE COLOR
14	METAL COPING (TYP.)	PAC-CLAD	COLOR: MATTE BLACK		BY OAKLAND METAL SALES 248-377-8847 ADG TO APPROVE COLOR
15	GLASS	VIRACON OR EQUAL	1" CLEAR INSULATED GLAZING		GLASS TO BE TEMPERED PER MBC WHERE NEEDED.
16	EXTERIOR DECORATIVE WALL MOUNTED SCONCE	MAXIM LIGHTING	LIGHTRAY 6102/86102, ARCHITECTURAL BRONZE FINISH	5"W X 15.75"H X 6.5"D	REFER TO ELECTRICAL PLAN FOR DETAILS
17	SPANDREL GLASS	VIRACON OR EQUAL	1" CLEAR INSULATED GLAZING		GLASS TO BE TEMPERED PER MBC WHERE NEEDED.
18	WALL MOUNTED STAND ALONE LED EMERGENCY LIGHTING	LITHONIA LIGHTING AFFINITY SERIES	DARK BRONZE METALLIC	LOCATE 12" ABOVE DOOR. SEE SPECS	REFER TO ELECTRICAL PLAN FOR DETAILS
MASONRY NOTES: INFORMATION PROVIDED BY SUPPLIER, CONTRACTOR TO COORDINATE INFORMATION W/ SUPPLIER.					
1. FOR ALL BURNISHED MASONRY UNITS, PROVIDE PHYLON 1422, SERIES G20 ACRYLIC, 1 COAT ACRYLIC APPLIED AT PLANT AND 1 COAT ACRYLIC APPLIED AT JOB SITE AFTER CLEANING BY THE PAINTING CONTRACTOR AND USE PAINT SPRAYER, NO AIR-LESS SPRAYER. CONTACT RON HUNT FOR ADDITIONAL INFO.					
2. FOR ALL C-BRICK (SMOOTH-FACE)/ SPLITFACE MASONRY UNITS, PROVIDE PRIME-A-PELL PLUS WATER REPELLANT AT JOB SITE AFTER CLEANING BY THE PAINTING CONTRACTOR AND USE PAINT SPRAYER, NO AIR-LESS SPRAYER. CONTACT RON HUNT FOR ADDITIONAL INFO.					
BUILDING ELEVATION NOTES:					
1. ADG SHALL REVIEW AND APPROVE ALL FINAL EXTERIOR MATERIALS AND COLOR FINISH SELECTIONS PRIOR TO PURCHASE/ FABRICATION. SUBMIT MATERIALS, COLOR FINISHES AND PRODUCT SAMPLES FOR APPROVAL.					
2. ALL DOORS AND WINDOWS TO BE TEMPERED PER MBC. PROVIDE SAFETY GLAZING AS REQUIRED PER CODE.					
3. FIELD MEASURE ALL STOREFRONT WINDOWS AND DOOR OPENINGS PRIOR TO FABRICATION. PROVIDE WINDOW SIZES BASED ON FIELD MEASUREMENTS TO FABRICATOR. FABRICATOR TO PROVIDE SHOP DWG'S TO ADG FOR REVIEW PRIOR TO FABRICATION.					
4. ALL SIGNAGE SHALL COMPLY WITH CITY'S ORDINANCE AND SIGNAGE DETAILS SHALL BE SUBMITTED TO THE PLANNING DEPARTMENT IF NEEDED.					
5. ALL EXTERIOR LIGHTING SHALL BE DIRECTED DOWNWARD AND SHIELDED SO THAT LIGHT DOES NOT SHINE INTO THE ADVANCEMENT PROPERTY.					
6. ALL FINISH GRADES/ SLOPES TO BE VERIFIED PER CIVIL ENGINEERING DRAWINGS IF PROVIDED.					
7. ALL RTU TO BE FULLY SCREENED BY PARAPET. PROVIDE SCREENING IF NEEDED BY CONTRACTOR.					
8. ADDITIONAL DOORS AND EXITING REQUIREMENTS WILL BE LOCATED TO MEET THE MBC EXIT REQUIREMENTS ONCE THE INDIVIDUAL TENANT LAYOUTS ARE KNOWN.					
9. "M.C.J.": PROVIDE C-BRICK EXPANSION JOINTS AT 20'-0" O.C. SPACING MAX.					
10. EXPANSION JOINTS COLOR TO MATCH C-BRICK/ BFS/ ETC. PROVIDE SAMPLE TO ADG FOR APPROVAL.					
11. SEALANT: AS REQUIRED PER MBC. COLOR TO MATCH STOREFRONT/ MASONRY, PRODUCT BY TREMPCO					
ELEVATION NOTES:					
G BACK SIDE OF ROOF PARAPET BEYOND ROOFING SYSTEM MEMBRANE EXPOSED.					



ADG DESIGN STUDIO
189 E. BIG BEAVER ROAD
SUITE 200
TROY, MICHIGAN 48083
P. 248-254-3834
W.ABRODESIGNGROUP.COM

PROJECT:
MUG & JUG
GAS STATION

- BUILDING SHELL & INTERIORS -

4162 TWELVE MILE ROAD,
BERKLEY, MI, 48072

SHEET TITLE:
EXTERIOR
BUILDING
ELEVATIONS

DO NOT SCALE DRAWINGS
USE FIGURED DIMENSIONS ONLY

DATE: 03.20.25
ISSUE: SPA

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PROJECT NO:

091724

SHEET NO:

A-2.1









