

ADDENDUM No. 1

April 12, 2024

**Southfield Fire Stations #4 & #5
PAVING IMPROVEMENTS
0153-23-0180**

The following changes, additions, and/or clarifications to the Contract Documents shall be incorporated in said documents and shall be allowed for in the unit prices bid by the Contractor such that the unit prices indicated in the Bid Form shall represent the conditions as set forth in the Contract Documents and this addendum. The bidder shall attach the ACKNOWLEDGEMENT of RECEIPT OF ADDENDUM with their bid.

This Addendum contains 41 pages.

ADDITIONS AND CHANGES TO THE PLANS AND SPECIFICATIONS

SECTION Pre-bid Meeting Minutes

1. Meeting notes are included and by reference hereby made part of the Contract Documents.
2. For reference only, the sign-in sheet is included within this addendum.

SECTION Plans

1. Replace the cover sheet the revised sheet attached to this addendum.
2. Replace plan sheet C-120 with the revised plan sheet attached to this addendum.
 - a. Updated to show sidewalk removal at the southwest portion of the main parking lot near the existing retaining wall.
3. Replace plan sheet C-130 with the revised plan sheet attached to this addendum.
 - a. Updated to show proposed 4" sidewalk at the southwest portion of the main parking lot near the existing retaining wall.
 - b. Clarified the location of the 5'x6' frost-free slab near the person door on the west side of the building.
 - c. Revised proposed rolled curb length to 5 linear feet.
 - d. Clarified that frost-free slabs will not be needed at the vehicle entrances to the building.
4. Replace plan sheet C-140 with the revised plan sheet attached to this addendum.
 - a. Revised proposed grading to the retaining wall at the northwestern corner of the site.
 - b. Revised proposed grading to the bays on the north side of the building.
5. Replace plan sheet C-150 with the revised plan sheet attached to this addendum.
 - a. Added underdrain to the proposed retaining wall at the northeastern corner of the site and connected the pipe to proposed catch basin CB3.
 - b. Removed a portion of the proposed underdrain northeast of catch basin CB5.

6. Replace plan sheet C-152 with the revised plan sheet attached to this addendum.
 - a. Revised stormwater calculations.
 - b. Added callout for storm sewer from MTD to IN1.
7. Replace plan sheet C-153 with the revised plan sheet attached to this addendum.
 - a. Revised storm structures OT1 and OCS to include a 2' sump.
8. Replace plan sheet C-160 with the revised plan sheet attached to this addendum.
 - a. Updated staging plan phasing limits.
9. Replace plan sheet C-501 with revised plan sheet attached to this addendum.
 - a. Revised "Frost Free Slab at Person Door" detail.
10. Replace plan sheet C-502 with revised plan sheet attached to this addendum.
 - a. Revised retaining wall cross-section detail.
11. Replace plan sheet C-503 with revised plan sheet attached to this addendum.
 - a. Updated the outlet control structure detail per revised stormwater and added a trash screen to the proposed 1" orifice.
 - b. Added a trash screening detail.

SECTION Instructions to Bidders

1. Replace sheet IB-5 with the revised sheet attached to this addendum.
 - a. To the section entitled "EXECUTION OF CONTRACT AND BOND FORMS" added a line stating the following, "The contractor cannot begin work at Fire Station #5 before June 17, 2024 due to a training event that is scheduled June 14- June 16, 2024."

SECTION Supplemental Bid Sheet

1. Replace sheets SBS-1 through SBS-3 with the revised sheets attached to this addendum.
 - a. Increased quantity of Item 8 – Sidewalk, Rem from 107 syds to 139 syds.
 - b. Increased quantity of Item 21 – Concrete Sidewalk, 4 inch with or without curb from 710 sft to 990 sft.
 - c. Increased quantity of Item 34 – Underdrain, Subgrade, 6-inc from 520 ft to 604 ft.
 - d. Increased quantity of Item 35 – Sewer, Conc, CI IV, 12 inch from 461 ft to 475 ft.
 - e. Increased quantity of Item 36 – Sewer, Conc, CI IV, 15 inch from 36 ft to 47 ft.
 - f. Decreased quantity of Item 37 – Sewer, Conc, CI IV, 18 inch from 33 ft to 17 ft.
 - g. Added Item 50 – Oakland County Road Commission ROW Permit.
 - h. Added Item 51 – Redi Rock Retaining Wall.
 - i. Added Item 52 – Frost Free Footing, 42 inch.

SECTION Method of Payment

1. Replace Method of Payment with the revised sheets attached to this addendum.

- a. Clarified that all concrete shall be per Section 901 in the 2020 MDOT Standard Specifications for Construction.
- b. Added Oakland County Road Commission ROW Permit to Permits Section. Changed the unit to a dollar allowance, rather than a lump sum.
- c. Added method of payment section for the Redi Rock Modular Retaining Wall item.
- d. Added method of payment section for the Frost Free Footing, 42-inch item.

Questions

1. I have a question about a detail on page C-502, the wall cross section detail. It shows a stone retaining wall, but I don't see a line item on the bid form for a stone retaining wall. Is that being corrected or should I include that pricing in another line item?
 - a. The detail on sheet C-502 corresponds to the new bid item #51, Redi Rock Retaining Wall.
2. I was going through the drawings and looking for more detail on the bike hoop. I can't find a specific manufacturer, has one been spec'd yet?
 - a. Any manufacturer can be used, provided it meets the specifications noted on the details.

Pre-Bid meeting **minutes**

City of Southfield Southfield Fire Station 4 & 5 Paving Improvements

About the meeting:

Subject: Southfield – Southfield Fire Station 4 & 5 Paving Improvements

Date: April 4, 2024

Time: 1:30 pm

Location: 24477 Lahser Rd, Southfield, MI, 48033

Distributed Material:

- Sign-in Sheet

Discussion Topics

1. General

a. Project Overview

- Fire Station 4 Lot Rehabilitation/Reconstruction: The City has proposed a mix of different pavement rehabilitation methods to improve the existing parking lot. A portion of the parking lot is recommended to be rehabilitated by utilizing the existing aggregate base and 4-inches of asphalt. The remaining portion of the parking lot is recommended to be reconstructed utilizing the existing aggregate base and 10-inches of concrete pavement with concrete curb and gutter. The plans also propose a bike rack adjacent to the sidewalk near the back asphalt lot.
- Fire Station 5 Lot Reconstruction: The City has proposed full-depth reconstruction with subbase repairs as necessary for both the north and south parking lot. The north parking lot is recommended to be fully reconstructed with 8-inches of aggregate base, 10-inches of concrete pavement with concrete curb and gutter and associated storm sewer and underground detention basin. The south parking lot is recommended to be fully reconstructed with 8-inches of aggregate base and 7-inches of concrete pavement with concrete curb and gutter. The existing fire tower and water storage tank is to be demolished down to 18" below grade. The tank shall be abandoned and backfilled.
- Project quantities are as follows:
 - Station 4: 11,100 square feet of pavement improvements, 100 feet of curb and gutter
 - Station 5: 46,370 square feet of paving improvements, 4,295 feet of curb and gutter, 475 feet of 12-inch storm, 50 feet of 15-inch storm, 20 feet of 18-inch storm, 5 catch basins, 1 outlet control structure, 1 manufactured treatment device and 1 underground detention basin. The proposed storm sewer discharges to an existing manhole at the south end of the north parking lot that is proposed to be reconstructed.



- b. Site Access
 - i. The Contractor shall confine all work activities to City property and rights-of-way.
 - ii. Pedestrian access must always be maintained.
 - iii. Portions of the parking lots may be closed during improvements, however, the Fire Department Staff will require use of at least one bay at all times. See staging plan for more information,

2. Construction

- a. Existing Conditions
 - i. Both parking lots are currently in use by the City’s Fire Department for parking. The expectation is that contractor coordinates with the Fire Department to maintain access and parking for Fire Department staff.
- b. Construction Impacts
 - i. Expectation that Contractor works to maintain a safe job site with attention paid to cleanliness.

3. Review Anticipated Schedule:

Date	Task
April 4, 2024	Pre-Bid Meeting
April 12, 2024	Question Due
April 19, 2024	Bid Opening, 11:00 AM, Clerk’s Office
May 7, 2024	Notice of Award Letter
June 4, 2024	Notice to Proceed Letter
June 4, 2024	Anticipated Construction Start (Station #4 only)
June 14/15, 2024	Fire Department Training at Station #5
June 17, 2024	Anticipated Construction Start (Station #5)
October 15, 2024	Project Substantial Completion
October 31, 2024	Project Final Completion

4. Addendum Items

- a. Addenda 1 – Will be released on April 12.

5. Bid Submittal

- a. Bids are due by 11:00 am on April 19, 2024. Bids are to be submitted electronically on Bidnet Direct.

6. Questions?

- a. Engineer’s Estimate is \$1.5m

meeting attendance record



Subject: City of Southfield – Fire Station 4 & 5 Paving Improvements

Date: 4/4/2024

Time: 1:30 PM

Job No: 0153-23-0180

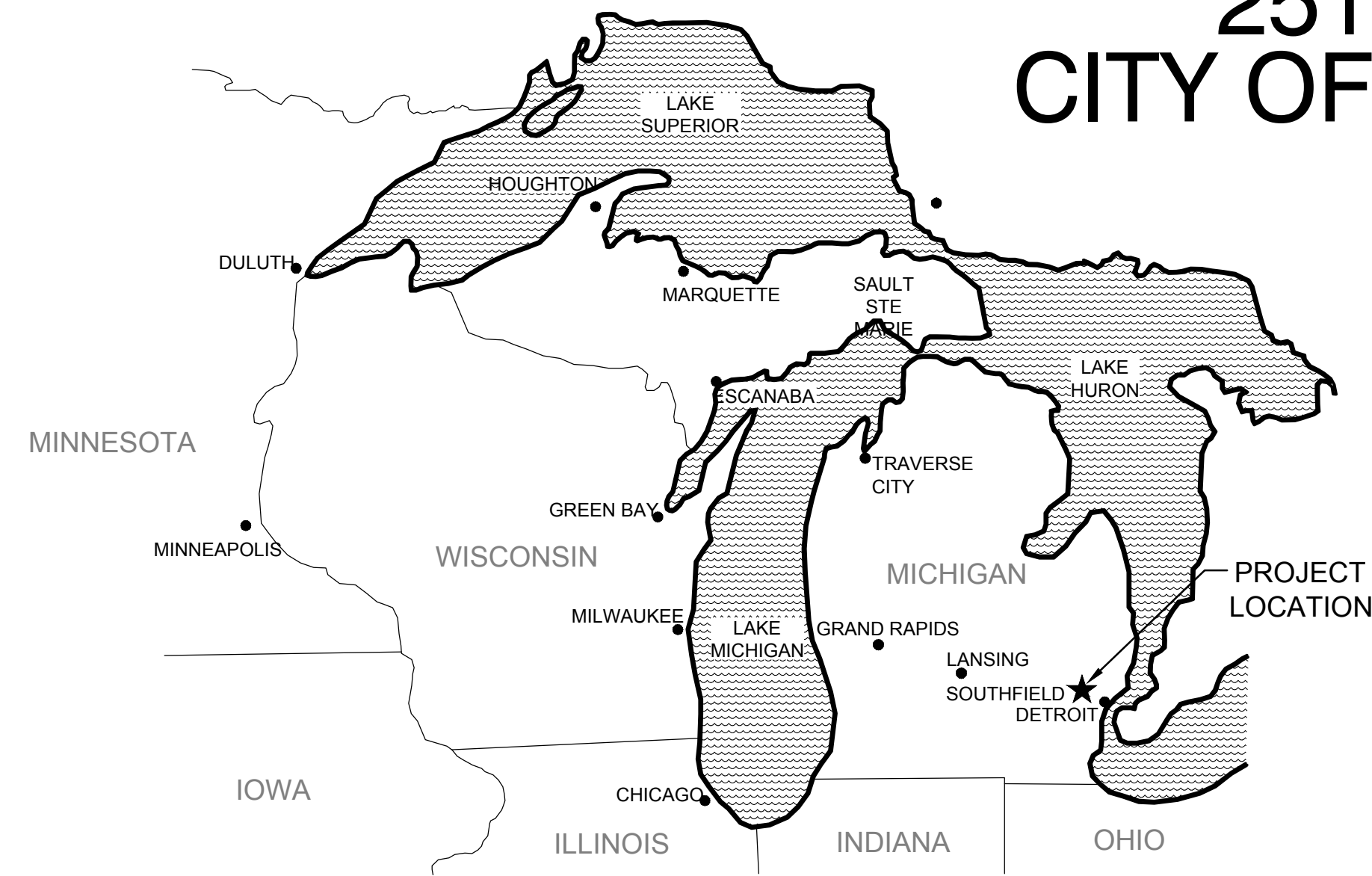
Location: 24477 Lahser Road

Name	Title	Company	Phone	E-Mail
Zack Hampton	Project Engineer	OHM Advisors	(313)481-1253	Zachary.hampton@ohm-advisors.com
Dejah Gaines	Engineer	OHM Advisors	(313)481-1255	dejah.gaines@ohm-advisors.com
Paul Brewer	Project manager	Anglin Civil	248-255-9222	Bid's @ Anglin Civil .com
Marcos Gomez	PM	Eminent Excavating	313 398 9368	Mgomez@eminentexcavating.com
Nicole Humphries	Purchasing ^{agent} Green			

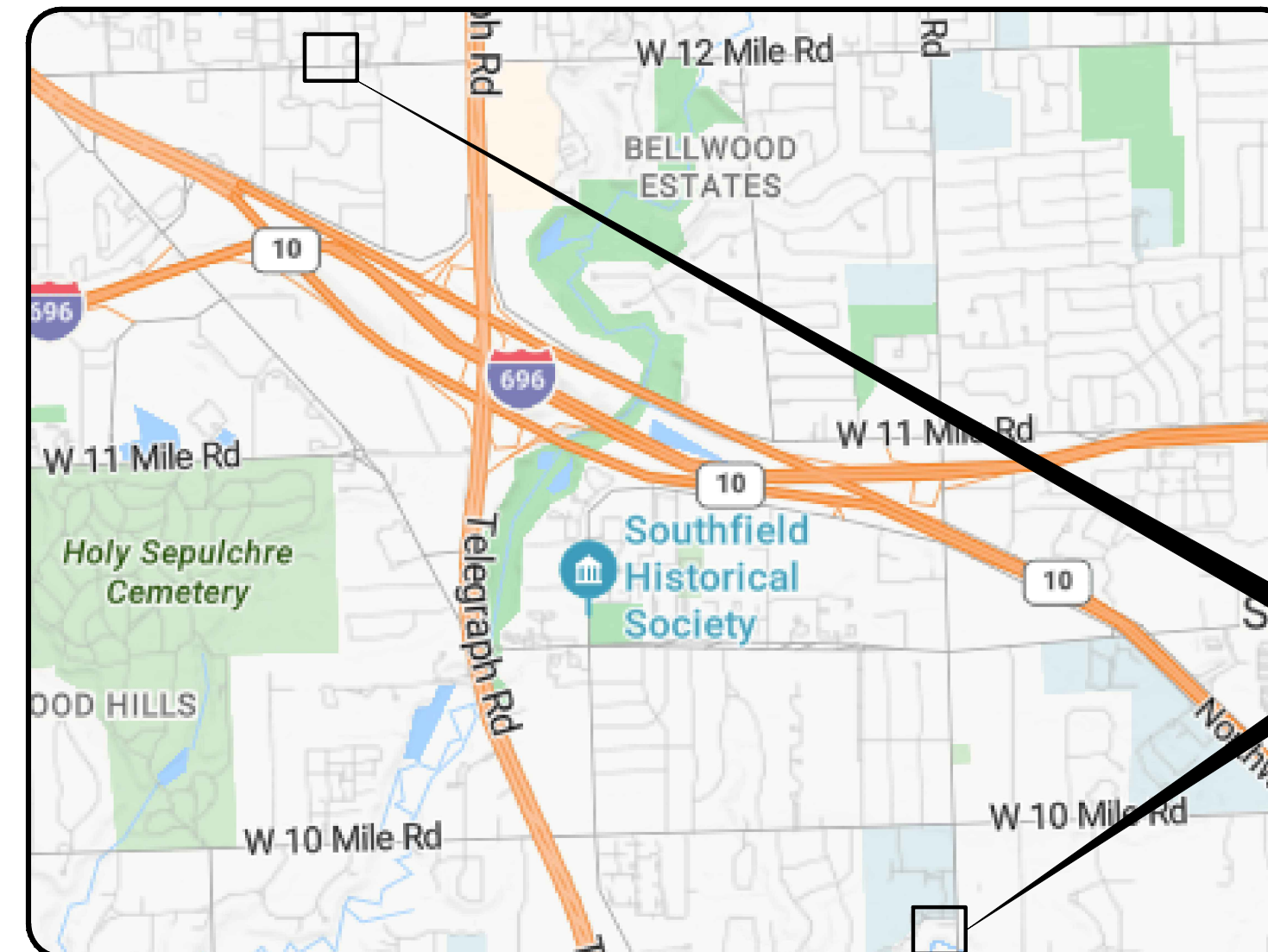
CITY OF SOUTHFIELD

SOUTHFIELD FIRE STATION 4 & 5 PAVING IMPROVEMENTS

25120 W. 12 MILE RD & 24477 LAHSER ROAD
CITY OF SOUTHFIELD, OAKLAND COUNTY, MICHIGAN



AREA LOCATION MAP
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

Characteristic	Existing Conditions	Proposed Conditions
Total Development Area (ac)	2.55	1.05
Impervious Area (ac)	1.49	1.03
Total Pervious Area (ac)	1.06	0.02
Pervious Area Breakdown by Cover Type		
Meadow/fallow/natural areas (non-cultivated)	0.00	0.00
Predominant NRCS Soil Type (A, B, C, or D)	Type D	Type D
Improved Areas (turf grass, landscape, row crops)	1.00	0.02
Predominant NRCS Soil Type (A, B, C, or D)	Type D	Type D
Wooded Areas	0.00	0.00
Predominant NRCS Soil Type (A, B, C, or D)	Type D	Type D
CPVC Volume Calculated (cubic feet)		4,658
CPVC Volume Provided (cubic feet)		0
CPRC Volume Provided (cubic feet)		9,225

The Professional Engineer who signs and seals this site plan certifies that the values in this table reflect the WRC stormwater calculations required for this development and that geotechnical investigations were performed that provide conclusive documentation that demonstrates whether infiltration (i.e., CPVC Volume Control) is practicable.



UTILITY PROVIDERS

<p>SANITARY/WATER CITY OF SOUTHFIELD 25501 CLARA LANE SOUTHFIELD, MI 48034 PHONE: 248-821-5132 EMAIL: COSMISSDIG@CITYOFSOUTHFIELD.COM CONTACT: HENRY GORDON</p> <p>NATURAL GAS CONSUMERS ENERGY 530 W WILLOW ST LANSING, MI 48906 PHONE: 517-374-2002 EMAIL: MISSDIGDESIGNTICKETS@CMSENERGY.COM CONTACT KURT GOLDING</p> <p>ELECTRICITY DETROIT EDISON ONE ENERGY PLAZA, 518 SB DETROIT, MI 48226 PHONE: 313-235-5632 EMAIL: DESIGN_MISSDIG@DTEENERGY.COM</p> <p>TELEPHONE ATT 54 N. MILL ST, 4TH FLOOR PONTIAC, MI 48342 EMAIL: LD2154@ATT.COM CONTACT: HEATHER VALLE-KNOBLAUCH</p> <p>CABLE COMCAST 25626 TELEGRAPH SOUTHFIELD, MI 48034 PHONE: 248-809-2715 EMAIL: CRAIG_PUDAS@CABLE.COMCAST.COM CONTACT: CRAIG PUDAS</p>	<p>WIDE OPEN WEST 32650 N. AVIS RD MADISON HEIGHTS, MI 48071 PHONE: 734-237-4319 EMAIL: JOHN.HAJEC@WOWINC.COM CONTACT: JOHN HAJEC</p> <p>FIBER LINK/ CROWN CASTLE 15000 CORPORATE DRIVE CANNONSBURG, PA 15317 PHONE: 800-654-3110 EXT:2 EMAIL: FIBER.DIG@CROWNCastle.COM CONTACT: FIBER DIG TEAM</p> <p>EVERSTREAM 3950 SPARKS DR SE GRAND RAPIDS, MI 49546 PHONE: 616-608-8945 EMAIL: BKUNTER@EVERSTREAM.NET CONTACT: BRIAN KUNTER</p> <p>METRO FIBERNET LLC PHONE: 812-213-1378 CONTACT: KORIE NELLIS</p> <p>MANAGEDWAY COMPANY 319 EXECUTIVE DR. TROY, MI 48063 PHONE: 888-745-6948 EXT: 216 EMAIL: LOCATE@MANAGEDWAY.COM CONTACT: CHRISTOPHER ECKLESDAFER</p> <p>SPECTRUM BROADBAND, LLC 2722 E MICHIGAN AVE LANSING, MI 48912 PHONE: 616-821-7705 EMAIL: MISSDIG@GOLIGHTSPEED.COM CONTACT: ERIC ESSENBURG</p>	<p>WINDSTREAM COMMUNICATIONS 1450 N CENTER POINT RD HIAWATHA, IA 52233 PHONE: 800-289-1901 EMAIL: LOCATE.DESK@WINDSTREAM.COM CONTACT: LOCATE DESK</p> <p>U.S. SIGNAL CORP. 7020 SOUTHBELT DR SE CALEDONIA, MI 49316 PHONE: 616-455-9840 EMAIL: LOCATEMAPS@TKNS.NET CONTACT: ERICA BENNETT</p> <p>TELNET WORLDWIDE, INC. PO BOX 252 ZEELAND, MI 49464 PHONE: 616-455-9840 EMAIL: LOCATEMAPS@TKNS.NET CONTACT: ERICA BENNETT</p> <p>LEVEL 3 NOW CENTRUYLINK 1025 ELDORADO BLVD BROOMFIELD, CO 80021 PHONE: 877-366-8344 EXT:3 EMAIL: RYAN.EGAN@CENTRUYLINK.COM CONTACT: RYAN EGAN</p> <p>SOUTHFIELD PUBLIC SCHOOLS PHONE: 616-455-9840 EMAIL: LOCATEMAPS@TKNS.NET CONTACT: ERICA BENNETT MCI/VERIZON BUSINESS PHONE: 972-729-6016 EMAIL: INVESTIGATIONS@VERIZON.COM CONTACT: OSP/INVESTIGATIONS</p>
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SHEET INDEX		REVISION KEY		ISSUE	
SHEET	SHEET TITLE	DATE	DESCRIPTION	DATE	DESCRIPTION
C-001	LEGEND	3/1/24	SITE PLAN SUBMISSION		
C-002	NOTES	4/2/24	PLANS FOR BIDDING		
C-003 - C-004	TOPOGRAPHIC SURVEY	4/12/24	ADDENDUM #1		
C-120 - C-121	REMOVAL PLAN				
C-130 - C-131	SITE PLAN				
C-140 - C-141	GRADING PLAN				
C-150 - C-151	UTILITY PLAN				
C-152	STORMWATER MANAGEMENT CALCULATIONS				
C-153	STORM SEWER PROFILES				
C-160	STAGIN PLAN				
C-501 - C-502	STANDARD DETAILS				
C-503	STANDARD STORM DETAILS				
C-504 - C-509	UNDERGROUND DETENTION DETAILS				
C-510	OCWRC STORM STANDARD DETAILS				
C-511	OCWRC SOIL EROSION CONTROL STANDARD DETAILS				
E-001	ELECTRICAL NOTES AND SYMBOLS				
ED101	ELECTRICAL DEMOLITION SITE PLAN				
E-101	ELECTRICAL POWER SITE PLAN				
E-501	ELECTRICAL DETAILS				
F-601	ELECTRICAL SCHEDULES				

OWNER: SOUTHFIELD FIRE DEPARTMENT
CONTACT: RONALD BALLERINI
24477 LAHSER ROAD
SOUTHFIELD, MI 48033
248-796-5607

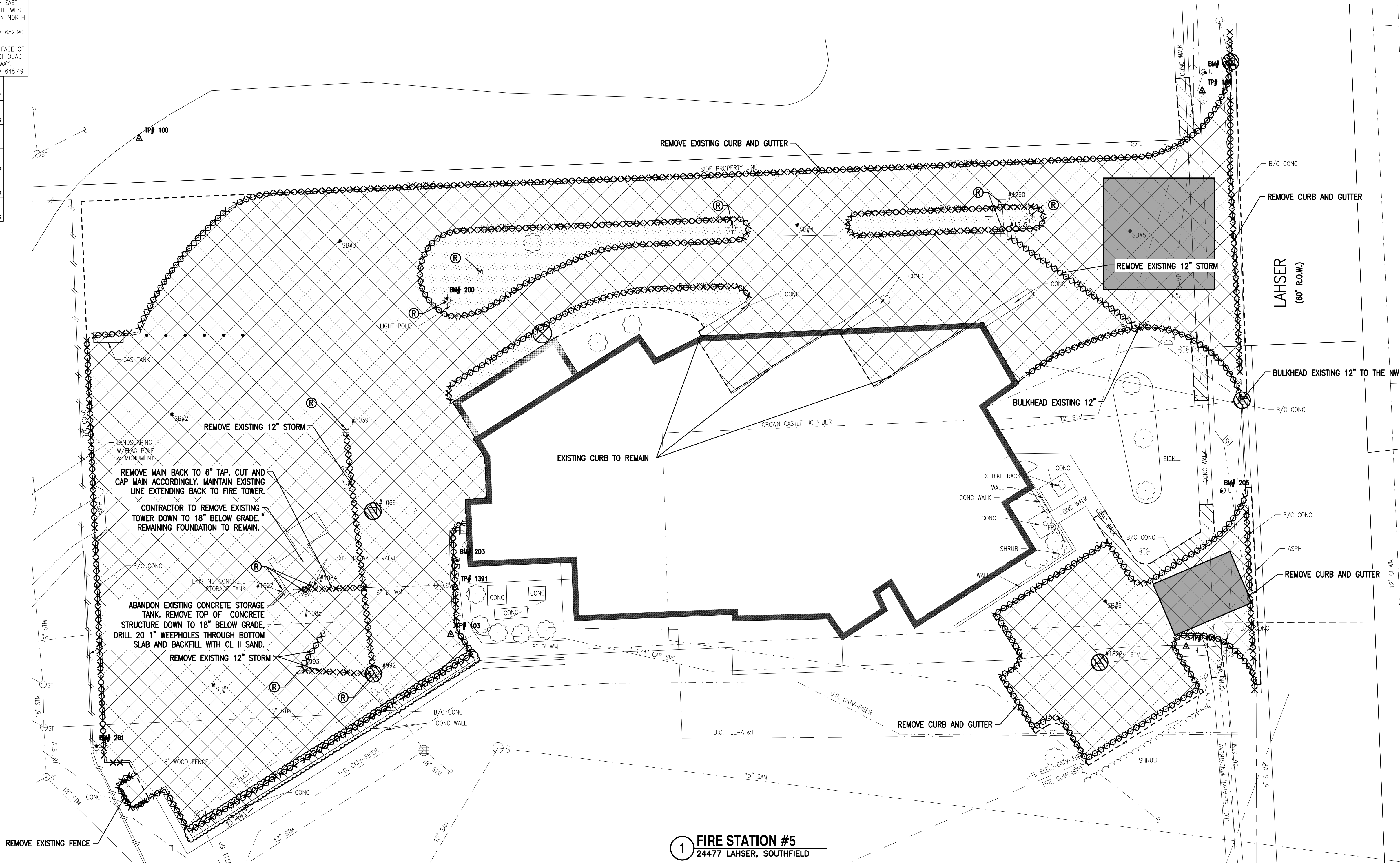
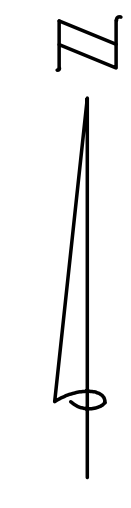
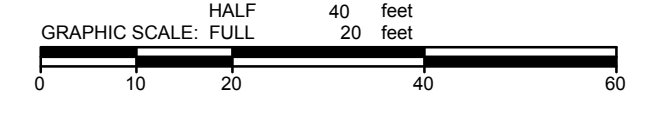
DEVELOPER: SOUTHFIELD FIRE DEPARTMENT
CONTACT: RONALD BALLERINI
24477 LAHSER ROAD
SOUTHFIELD, MI 48033
248-796-5607

ENGINEER: OHM ADVISORS, INC.
CONTACT: ZACHARY HAMPTON, P.E.
1145 GRISWOLD STREET, SUITE 200
DETROIT, MICHIGAN 48226
313-481-1253
ZACHARY.HAMPTON@OHM-ADVISORS.COM

ADDENDUM #1
OHM PROJECT NO. 0153-23-0180
DATE/ISSUE: 4/12/24

I Certify That The Electrical Plans Were Prepared Under My Direct Supervision	I Certify That The Site Plans Were Prepared Under My Direct Supervision
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JOB BENCHMARK #204 SET COTTON SPINDLE IN SOUTH EAST FACE TELEPHONE POLE IN NORTH WEST QUAD LASHER AND FIRE STATION NORTH DRIVEWAY. ELEV 652.90	
JOB BENCHMARK #205 SET COTTON SPINDLE IN WEST FACE OF TELEPHONE POLE IN NORTHWEST QUAD LASHER AND SOUTH LOT DRIVEWAY. ELEV 648.49	
TRAVERSE POINT #100 N 354963.31 E 13421346.59 ELEV 657.87	
TRAVERSE POINT #101 N 354788.40 E 13421251.98 ELEV 658.18	
TRAVERSE POINT #102 N 354646.67 E 13421082.87 ELEV 657.81	
TRAVERSE POINT #103 N 354785.19 E 13421458.64 ELEV 649.60	
TRAVERSE POINT #104 N 354980.53 E 13421728.78 ELEV 652.00	
TRAVERSE POINT #105 N 354780.67 E 13421723.02 ELEV 647.58	



1 FIRE STATION #5
24477 LAHSER, SOUTHFIELD

NOTES:

1. ALL DEMOLITION SHALL CONFORM TO LOCAL CODES AND ORDINANCES.
2. STAGING AND PHASING OF DEMOLITION AND CONSTRUCTION SHALL BE COORDINATED WITH OWNER PRIOR TO WORK BEGINNING.
3. SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY DEMOLITION WORK COMMENCING.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE CLEAN-UP, NOISE CONTROL, DUST CONTROL, AND STREET/PARKING LOT SWEEPING AS SPECIFIED IN THE CONTRACT DOCUMENTS.
5. ONE-CALL UTILITY LOCATING: MISSDIG - 811 OR 800-482-7171. CONTRACTOR SHALL OPEN AN EXCAVATION TICKET A MINIMUM OF 3 WORKING DAYS PRIOR TO ANY EXCAVATION. WHEN MARKINGS AND FLAGS ARE DISRUPTED OR DESTROYED - CALL FOR REMARKING.
6. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATIONS AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND LIMITED MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION SHALL NOT BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY THE OWNER OR ENGINEER OF DISCREPANCIES IN THE PLANS. THE CONTRACTOR SHALL VERIFY THE DEPTH OF ELECTRICAL CONDUIT BEFORE SCARIFYING GRAVEL SURFACE AND PROTECT IN PLACE DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY ELECTRICAL CONDUIT DAMAGED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS UNLESS OTHERWISE NOTED IN THE PLANS OR DIRECTED BY THE OWNER'S REPRESENTATIVE. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF THE LOCATION OR DEPTH OF ANY EXISTING UTILITY SHOWN OR NOT SHOWN ON THE PROJECT DRAWINGS.
8. ALL TREES LARGER THAN 6" DIA. WITHIN THE CONSTRUCTION AREAS SHALL BE PROTECTED FROM DAMAGE, UNLESS IDENTIFIED FOR REMOVAL. TREES IDENTIFIED FOR REMOVAL SHALL INCLUDE THE COMPLETE REMOVAL OF THE STUMP AT NO ADDITIONAL COST TO THE OWNER.
9. ALL PAVEMENT TO BE REMOVED SHALL BE SAW CUT TO THE FULL DEPTH TO PROVIDE A SMOOTH VERTICAL EDGE AND TO PROTECT ADJACENT SURFACES FROM DAMAGE.
10. TOPSOIL STRIPPING
 - A. STRIP THE FULL DEPTH OF TOPSOIL ONLY FROM THOSE AREAS THAT WILL BE DISTURBED BY EXCAVATION, FILLING, CONSTRUCTION, OR COMPACTION BY EQUIPMENT.
 - B. STOCKPILE TOPSOIL WITHOUT INTERMIXING WITH ANY OTHER MATERIAL - BORROW TOPSOIL TO REPLACE MATERIAL CONTAMINATED BY THE CONTRACTOR SHALL BE AT THE CONTRACTOR'S EXPENSE.
 - C. TEMPORARY STABILIZATION OF THE STOCKPILE(S) SHALL BE COMPLETED WITHIN SEVEN (7) DAYS OF THE FORMATION OF THE STOCKPILE, IF IT IS TO REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN THIRTY (30) DAYS.
12. TEMPORARY STOCKPILES: PROTECTIVE MEASURES SHALL BE INCORPORATED BY THE CONTRACTOR TO ENSURE SAFETY AND CONTROL EROSION ASSOCIATED WITH THE TEMPORARY STOCKPILES.
13. EXCAVATED SOILS SHALL BE DISTRIBUTED ON SITE PER THE GRADING PLAN.
14. DISPOSAL: ALL DEMOLITION AND REMOVED MATERIAL BECOMES THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OFF-SITE IN ACCORDANCE TO ALL FEDERAL, STATE, AND LOCAL HAULING AND DISPOSAL REGULATIONS UNLESS DIRECTED OTHERWISE BY THE OWNER. DISPOSAL IN WETLANDS AND FLOODPLAINS IS PROHIBITED. BURNING ON-SITE IS PROHIBITED.

LEGEND

- INLET PROTECTION - FABRIC DROP
- PAVEMENT REMOVAL
- EXCAVATION, EARTH, MODIFIED
- CURB AND GUTTER, REM
- SEWER, REM
- AGGREGATE TRACKING MAT



Know what's below.
Call before you dig.

ISSUED FOR:	ADDENDUM #1	4/12/24
REVISION:	DESCRIPTION	DATE
ADDENDUM #1		4/12/24

CITY OF SOUTHFIELD
SOUTHFIELD FIRE STATIONS 4 & 5 PAVING IMPROVEMENTS
OAKLAND COUNTY
REMOVAL PLAN

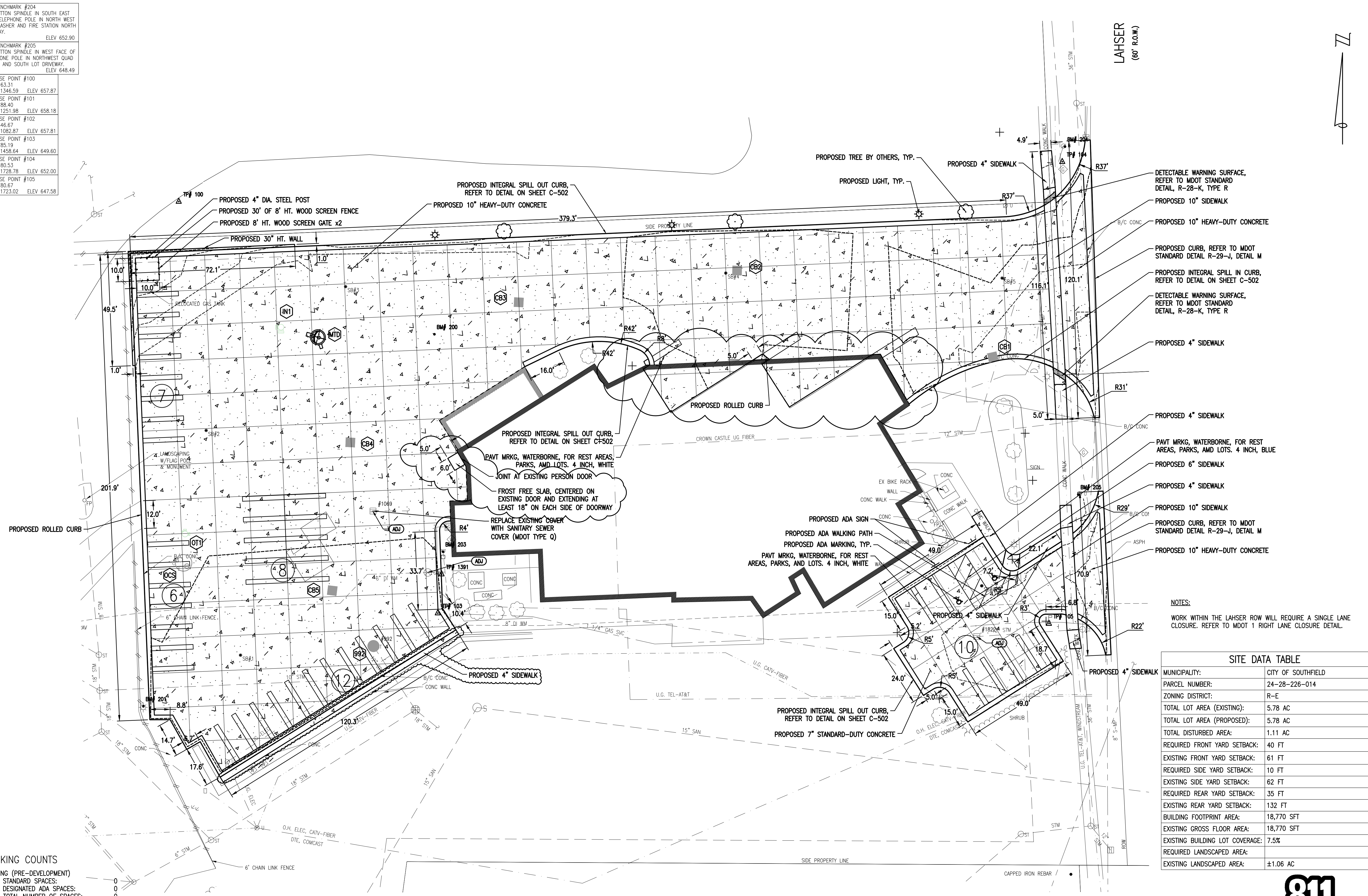
PROJECT NUMBER	PM	ZM
0153-23-0180		

C-120

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JOB BENCHMARK #204 SET COTTON SPINDLE IN SOUTH EAST FACE TELEPHONE POLE IN NORTH WEST QUAD LASHER AND FIRE STATION NORTH DRIVEWAY. ELEV 652.90	
JOB BENCHMARK #205 SET COTTON SPINDLE IN WEST FACE OF TELEPHONE POLE IN NORTHWEST QUAD LASHER AND SOUTH LOT DRIVEWAY. ELEV 648.49	
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TRAVERSE POINT #104 N 354980.53 E 13421728.78 ELEV 652.00	TRAVERSE POINT #105 N 354780.67 E 13421723.02 ELEV 647.58



- DETECTABLE WARNING SURFACE, REFER TO MDOT STANDARD DETAIL, R-28-K, TYPE R
- PROPOSED 10" SIDEWALK
- PROPOSED 10" HEAVY-DUTY CONCRETE
- PROPOSED CURB, REFER TO MDOT STANDARD DETAIL R-29-J, DETAIL M
- PROPOSED INTEGRAL SPILL IN CURB, REFER TO DETAIL ON SHEET C-502
- DETECTABLE WARNING SURFACE, REFER TO MDOT STANDARD DETAIL, R-28-K, TYPE R
- PROPOSED 4" SIDEWALK
- PROPOSED 4" SIDEWALK
- PROPOSED 4" SIDEWALK
- PAVT MRKG, WATERBORNE, FOR REST AREAS, PARKS, AND LOTS. 4 INCH, BLUE
- PROPOSED 6" SIDEWALK
- PROPOSED 4" SIDEWALK
- PROPOSED 10" SIDEWALK
- PROPOSED CURB, REFER TO MDOT STANDARD DETAIL R-29-J, DETAIL M
- PROPOSED 10" HEAVY-DUTY CONCRETE

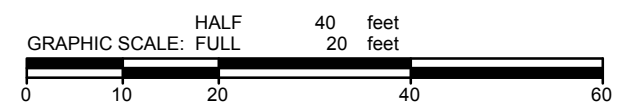
NOTES:
WORK WITHIN THE LAHSER ROW WILL REQUIRE A SINGLE LANE CLOSURE. REFER TO MDOT 1 RIGHT LANE CLOSURE DETAIL.

SITE DATA TABLE	
MUNICIPALITY:	CITY OF SOUTHFIELD
PARCEL NUMBER:	24-28-226-014
ZONING DISTRICT:	R-E
TOTAL LOT AREA (EXISTING):	5.78 AC
TOTAL LOT AREA (PROPOSED):	5.78 AC
TOTAL DISTURBED AREA:	1.11 AC
REQUIRED FRONT YARD SETBACK:	40 FT
EXISTING FRONT YARD SETBACK:	61 FT
REQUIRED SIDE YARD SETBACK:	10 FT
EXISTING SIDE YARD SETBACK:	62 FT
REQUIRED REAR YARD SETBACK:	35 FT
EXISTING REAR YARD SETBACK:	132 FT
BUILDING FOOTPRINT AREA:	18,770 SFT
EXISTING GROSS FLOOR AREA:	18,770 SFT
EXISTING BUILDING LOT COVERAGE:	7.5%
REQUIRED LANDSCAPED AREA:	
EXISTING LANDSCAPED AREA:	±1.06 AC

PARKING COUNTS	
EXISTING (PRE-DEVELOPMENT)	
STANDARD SPACES:	0
DESIGNATED ADA SPACES:	0
TOTAL NUMBER OF SPACES:	0
PROPOSED (POST-DEVELOPMENT)	
STANDARD SPACES:	41
DESIGNATED ADA SPACES:	2
LANDBANKED SPACES:	0
TOTAL NUMBER OF SPACES:	43

MAXIMUM SHIFT SIZE FOR THIS STATION IS 21 PERSONS PER DEPARTMENT STAFF.

1 FIRE STATION #5
24477 LAHSER, SOUTHFIELD



ISSUED FOR:	ADDENDUM #1	4/12/24
REVISION:	DESCRIPTION	DATE
		4/12/24

CITY OF SOUTHFIELD
SOUTHFIELD FIRE STATIONS 4 & 5 PAVING IMPROVEMENTS
OAKLAND COUNTY
SITE PLAN

C-130

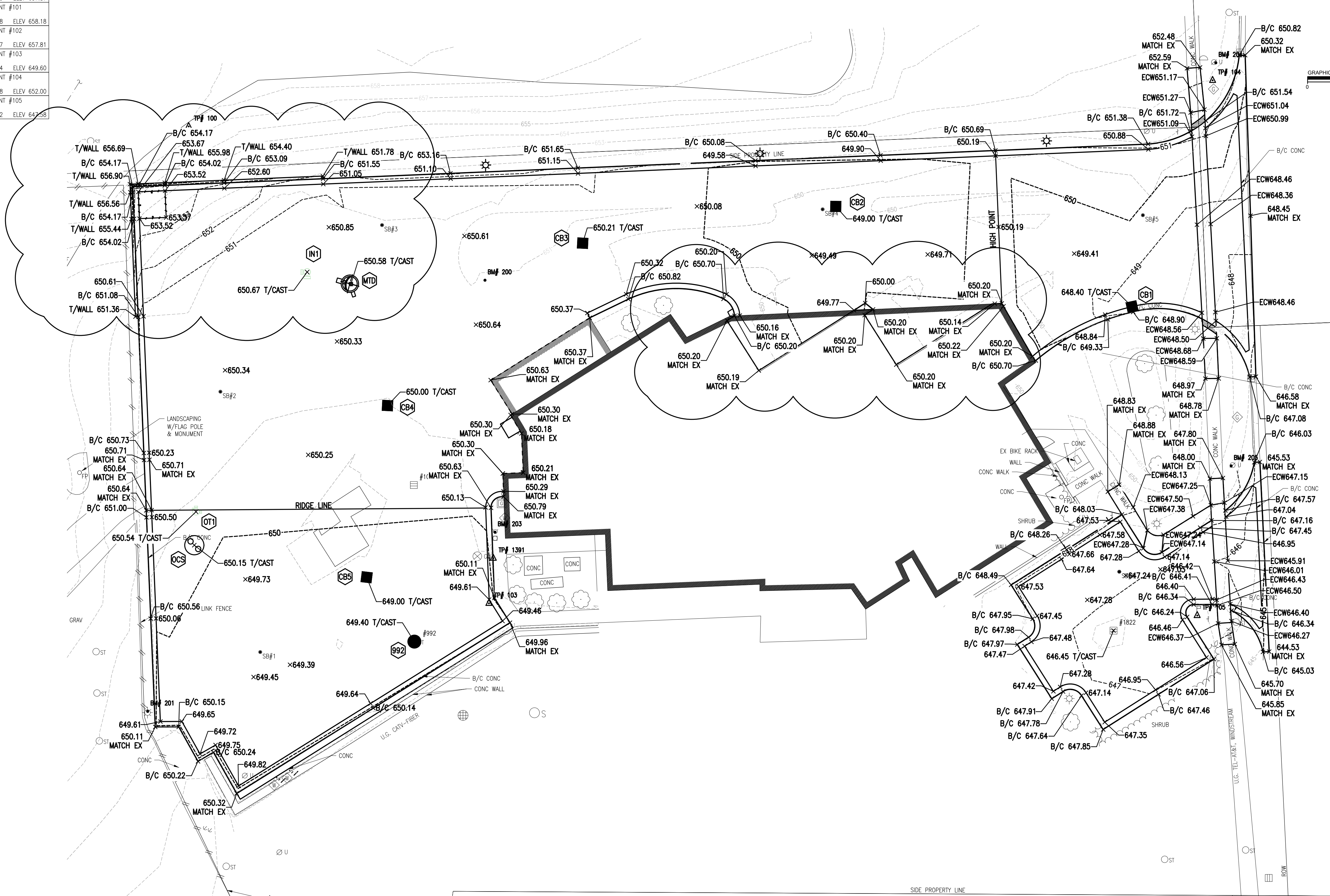
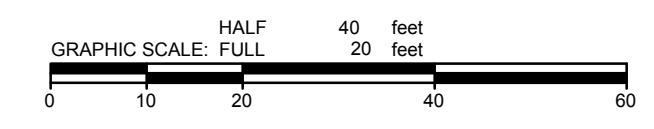
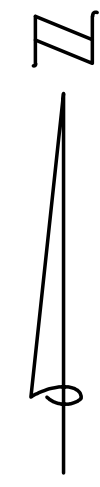
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JOB BENCHMARK #204
SET COTTON SPINDLE IN SOUTH EAST
FACE TELEPHONE POLE IN NORTH WEST
QUAD LASHER AND FIRE STATION NORTH
DRIVEWAY. ELEV 652.90

JOB BENCHMARK #205
SET COTTON SPINDLE IN WEST FACE OF
TELEPHONE POLE IN NORTHWEST QUAD
LASHER AND SOUTH LOT DRIVEWAY. ELEV 648.49

TRAVERSE POINT #100
N 354963.31
E 13421346.59 ELEV 657.87
TRAVERSE POINT #101
N 354788.40
E 13421251.98 ELEV 658.18
TRAVERSE POINT #102
N 354646.67
E 13421082.87 ELEV 657.81
TRAVERSE POINT #103
N 354785.19
E 13421458.64 ELEV 649.60
TRAVERSE POINT #104
N 354980.53
E 13421728.78 ELEV 652.00
TRAVERSE POINT #105
N 354780.67
E 13421723.02 ELEV 647.68



1 FIRE STATION #5
24477 LAHSER, SOUTHFIELD



Know what's below.
Call before you dig.

ISSUED FOR:	ADDENDUM #1	4/12/24
REVISION:	DESCRIPTION	DATE
ADDENDUM #1		4/12/24

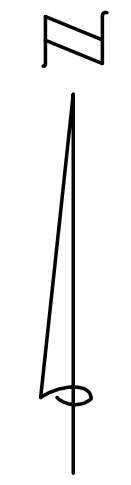
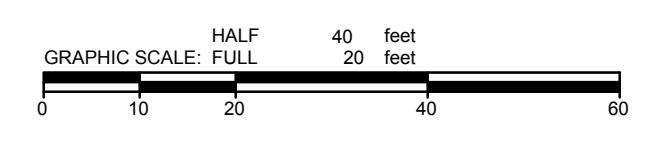
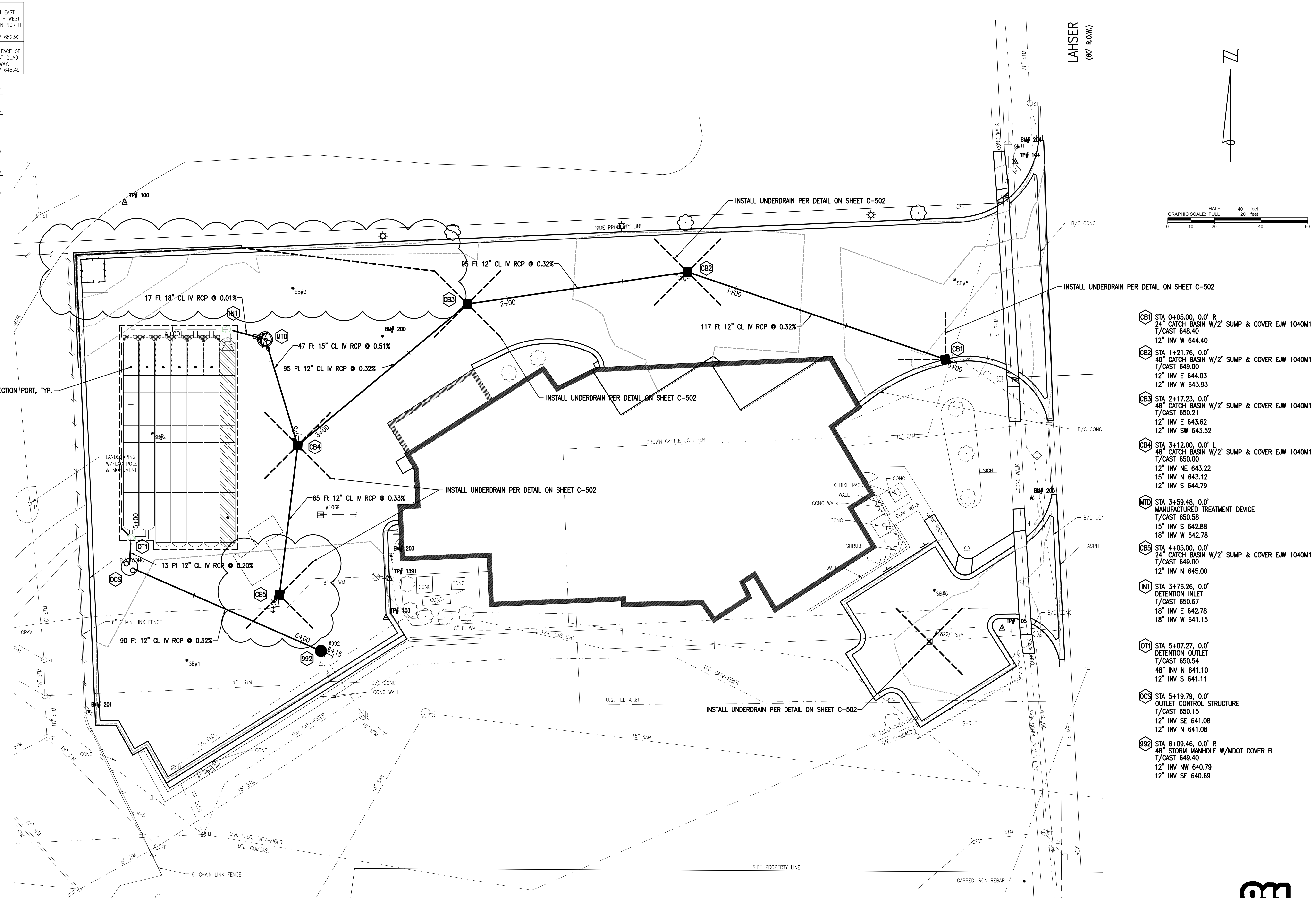
CITY OF SOUTHFIELD
SOUTHFIELD FIRE STATIONS 4 & 5 PAVING IMPROVEMENTS
OAKLAND COUNTY
GRADING PLAN

C-140

DRAWING PATH: P:\0726_0165016320180_Fire Stations_4 & 5_Paving\ImpasDrawings\Civil\Grading\2301BGRD.dwg Apr 11, 2024 - 4:49pm

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JOB BENCHMARK #204 SET COTTON SPINDLE IN SOUTH EAST FACE TELEPHONE POLE IN NORTH WEST QUAD LASHER AND FIRE STATION NORTH DRIVEWAY. ELEV 652.90	
JOB BENCHMARK #205 SET COTTON SPINDLE IN WEST FACE OF TELEPHONE POLE IN NORTHWEST QUAD LASHER AND SOUTH LOT DRIVEWAY. ELEV 648.49	
TRAVERSE POINT #100 N 354963.31 E 13421346.59 ELEV 657.87	
TRAVERSE POINT #101 N 354788.40 E 13421251.98 ELEV 658.18	
TRAVERSE POINT #102 N 354646.67 E 13421082.87 ELEV 657.81	
TRAVERSE POINT #103 N 354785.19 E 13421458.64 ELEV 649.60	
TRAVERSE POINT #104 N 354980.53 E 13421728.78 ELEV 652.00	
TRAVERSE POINT #105 N 354780.67 E 13421723.02 ELEV 647.58	



- CB1 STA 0+05.00, 0.0' R
24" CATCH BASIN W/2' SUMP & COVER EJW 1040M1
T/CAST 648.40
12" INV W 644.40
- CB2 STA 1+21.76, 0.0'
48" CATCH BASIN W/2' SUMP & COVER EJW 1040M1
T/CAST 649.00
12" INV E 644.03
12" INV W 643.93
- CB3 STA 2+17.23, 0.0'
48" CATCH BASIN W/2' SUMP & COVER EJW 1040M1
T/CAST 650.21
12" INV E 643.62
12" INV SW 643.52
- CB4 STA 3+12.00, 0.0' L
48" CATCH BASIN W/2' SUMP & COVER EJW 1040M1
T/CAST 650.00
12" INV NE 643.22
15" INV N 643.12
12" INV S 644.79
- MTD STA 3+59.48, 0.0'
MANUFACTURED TREATMENT DEVICE
T/CAST 650.58
15" INV S 642.88
18" INV W 642.78
- CB5 STA 4+05.00, 0.0'
24" CATCH BASIN W/2' SUMP & COVER EJW 1040M1
T/CAST 649.00
12" INV N 645.00
- INI STA 3+76.26, 0.0'
DETENTION INLET
T/CAST 650.67
18" INV E 642.78
18" INV W 641.15
- OT1 STA 5+07.27, 0.0'
DETENTION OUTLET
T/CAST 650.54
48" INV N 641.10
12" INV S 641.11
- OCS STA 5+19.79, 0.0'
OUTLET CONTROL STRUCTURE
T/CAST 650.15
12" INV SE 641.08
12" INV N 641.08
- 992 STA 6+09.46, 0.0' R
48" STORM MANHOLE W/MDOT COVER B
T/CAST 649.40
12" INV NW 640.79
12" INV SE 640.69

ISSUED FOR	ADDENDUM #1	DATE
REVISION <td>DESCRIPTION <td>ADDENDUM #1</td> </td>	DESCRIPTION <td>ADDENDUM #1</td>	ADDENDUM #1

PROJECT NUMBER: 0153-23-0180
 PM: ZAH
 CITY OF SOUTHFIELD
 SOUTHFIELD FIRE STATIONS 4 & 5 PAVING IMPROVEMENTS
 OAKLAND COUNTY
 UTILITY PLAN



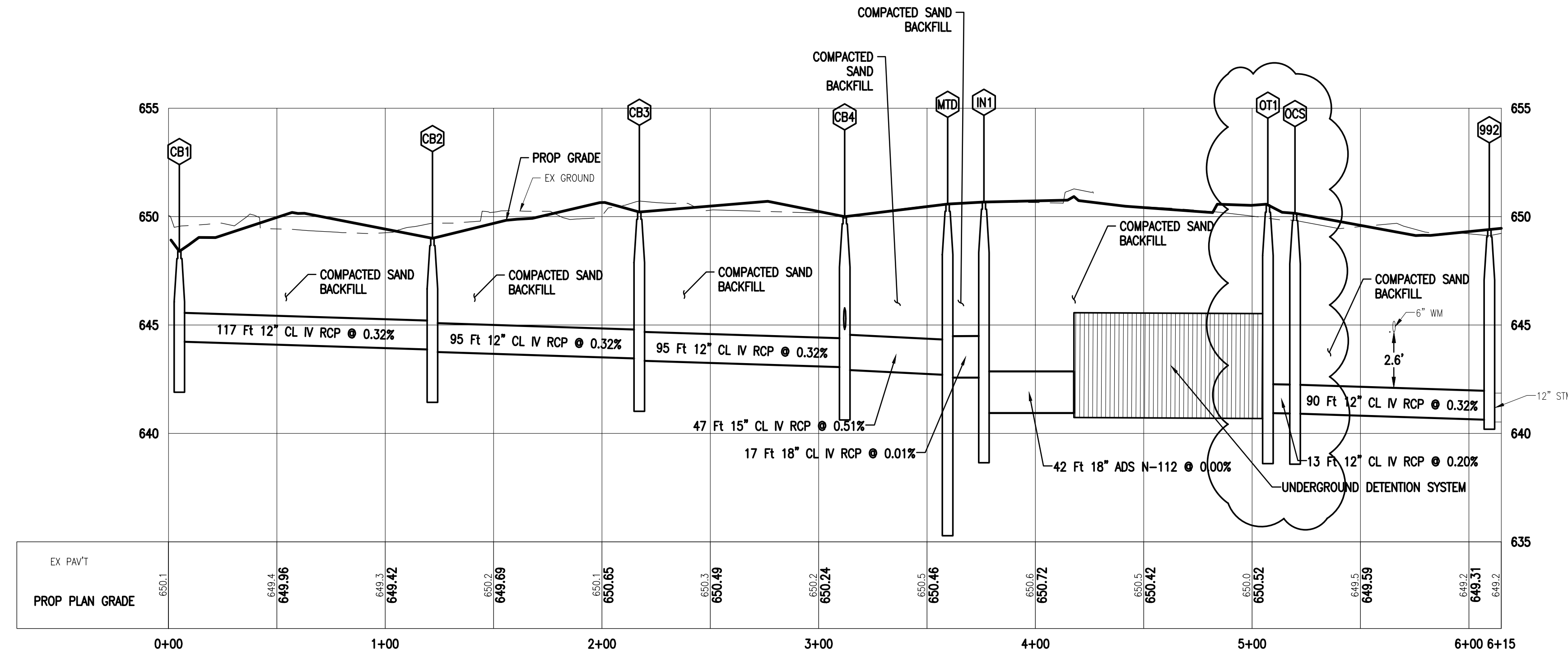
Know what's below.
Call before you dig.

1 FIRE STATION #5
24477 LAHSER, SOUTHFIELD

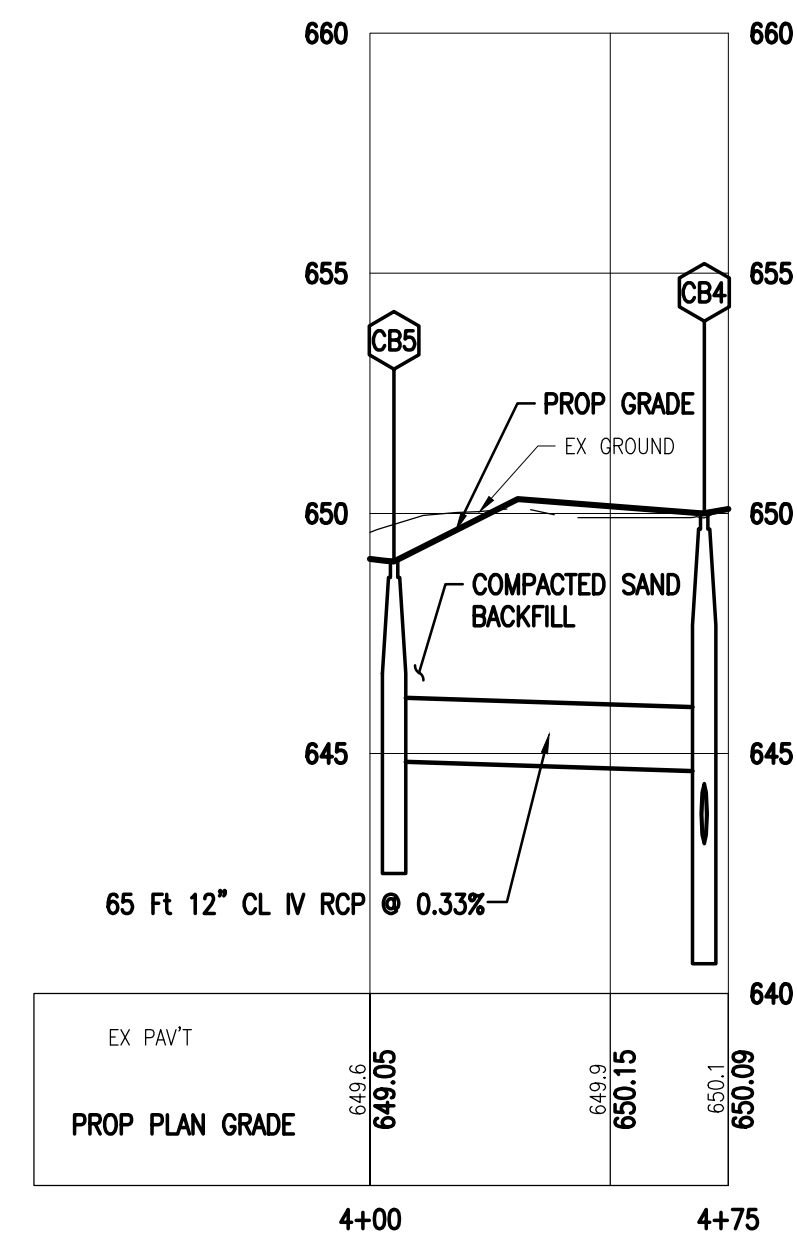
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- CB1 STA 0+05.00, 0.0' R
24" CATCH BASIN W/2' SUMP & COVER EJW 1040M1
T/CAST 648.40
12" INV W 644.40
- CB2 STA 1+21.76, 0.0'
48" CATCH BASIN W/2' SUMP & COVER EJW 1040M1
T/CAST 649.00
12" INV E 644.03
12" INV W 643.93
- CB3 STA 2+17.23, 0.0'
48" CATCH BASIN W/2' SUMP & COVER EJW 1040M1
T/CAST 650.21
12" INV E 643.62
12" INV SW 643.52
- CB4 STA 3+12.00, 0.0' L
48" CATCH BASIN W/2' SUMP & COVER EJW 1040M1
T/CAST 650.00
12" INV NE 643.22
15" INV N 643.12
12" INV S 644.79
- MTD STA 3+59.48, 0.0'
MANUFACTURED TREATMENT DEVICE
T/CAST 650.58
15" INV S 642.88
18" INV W 642.78
- CB5 STA 4+05.00, 0.0'
24" CATCH BASIN W/2' SUMP & COVER EJW 1040M1
T/CAST 649.00
12" INV N 645.00
- IN1 STA 3+76.26, 0.0'
DETENTION INLET
T/CAST 650.67
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18" INV W 641.15
- OT1 STA 5+07.27, 0.0'
DETENTION OUTLET
T/CAST 650.54
48" INV N 641.10
12" INV S 641.11
- OCS STA 5+19.79, 0.0'
OUTLET CONTROL STRUCTURE
T/CAST 650.15
12" INV SE 641.08
12" INV N 641.08
- 992 STA 6+09.46, 0.0' R
48" STORM MANHOLE W/MDOT COVER B
T/CAST 649.40
12" INV NW 640.79
12" INV SE 640.69



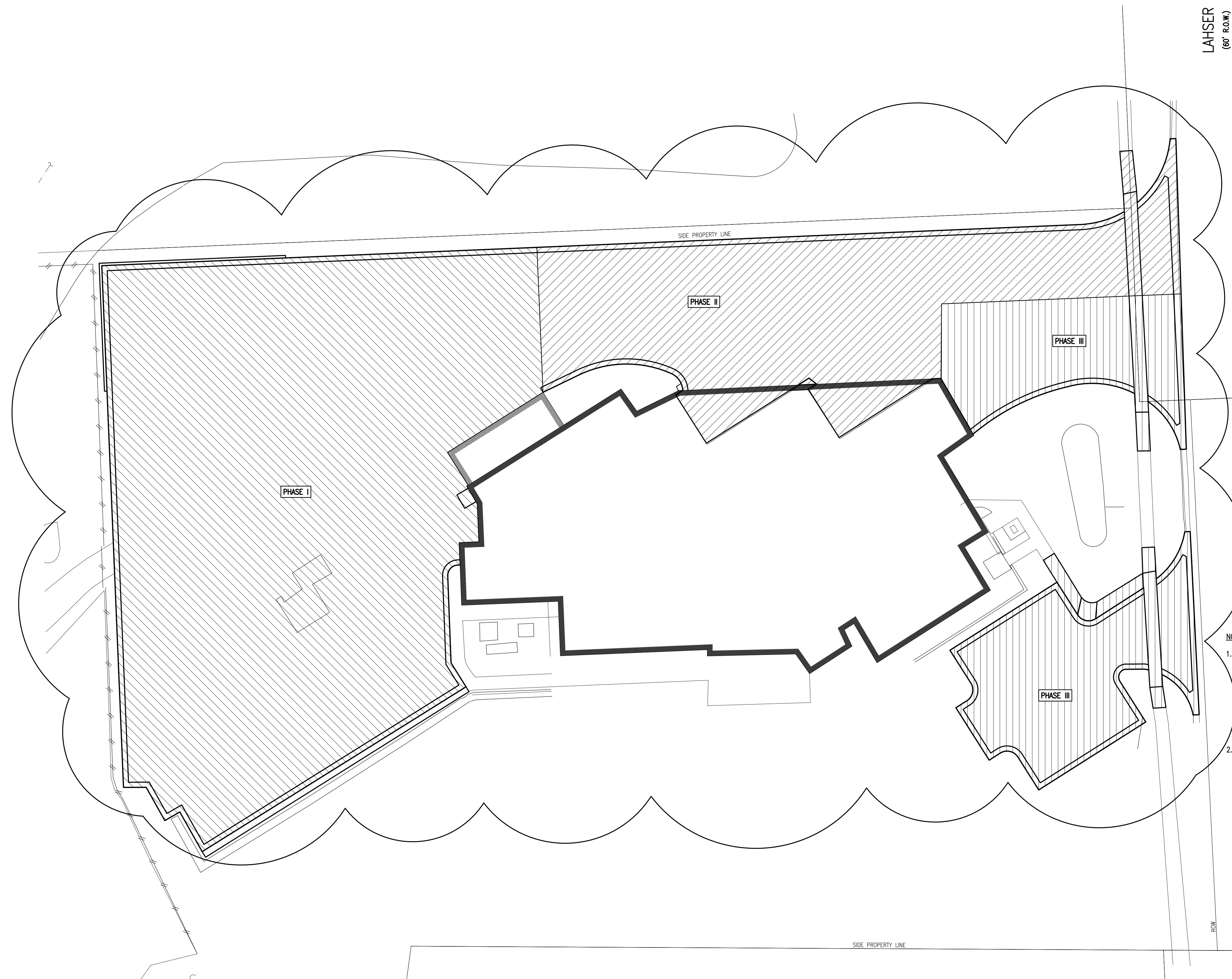
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PROJECT NUMBER: 0153-23-0180
 PM: ZAH
 CITY OF SOUTHFIELD
 SOUTHFIELD FIRE STATIONS 4 & 5 PAVING IMPROVEMENTS
 OAKLAND COUNTY
 STORM SEWER PROFILES

DRAWING PATH: P:\0125_01650153230180_Fire Stations 4 & 5_Pavt_ImprDrawings\CivilPlans_Comet\030180\CON\UTIL.dwg Apr 11, 2024 - 4:49pm

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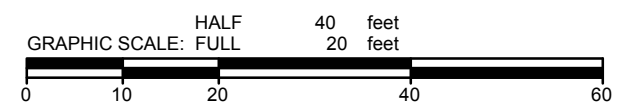
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LAHSER
(60' R.O.W.)



1 FIRE STATION #5
24477 LAHSER, SOUTHFIELD



LEGEND

- STAGING - PHASE I
- STAGING - PHASE II
- STAGING - PHASE III

NOTES:

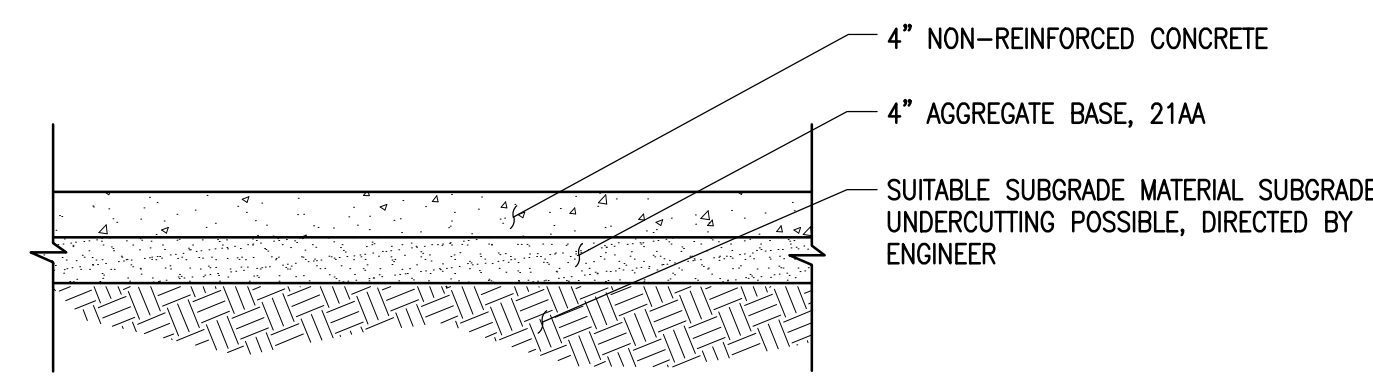
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC TO THE FIRE STATION DURING CONSTRUCTION. AT ANY GIVEN TIME DURING THE CONSTRUCTION AT FIRE STATION #5, AT LEAST ONE OF THE FIRE STATION WELLS SHALL BE OPEN TO TRAFFIC AND ACCESSIBLE FROM LAHSER. IF FOR ANY REASON, ACCESS CANNOT BE MAINTAINED TO THE FIRE STATION, WRITTEN NOTICE SHALL BE GIVEN TO THE OWNER AND THE ENGINEER, A WEEK IN ADVANCE OF THE RESTRICTED ACCESS. PART WIDTH CONSTRUCTION AND COORDINATION REQUIRED TO MAINTAIN ACCESS SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION AND SHALL NOT RESULT IN ANY ADDITIONAL COSTS TO THE PROJECT.
2. CONTRACTOR TO COORDINATE FIRE STATION STAFF PARKING DURING EACH CONSTRUCTION PHASE WITH ADJACENT SCHOOL, NORTH OF THE PROPERTY, SUMMER SCHOOL CLOSING SCHEDULE FROM JUNE 13TH - AUGUST 26TH.

ISSUED FOR:	ADDENDUM #1	DATE
REVISION	DESCRIPTION	4/12/24
ADDENDUM #1		4/12/24

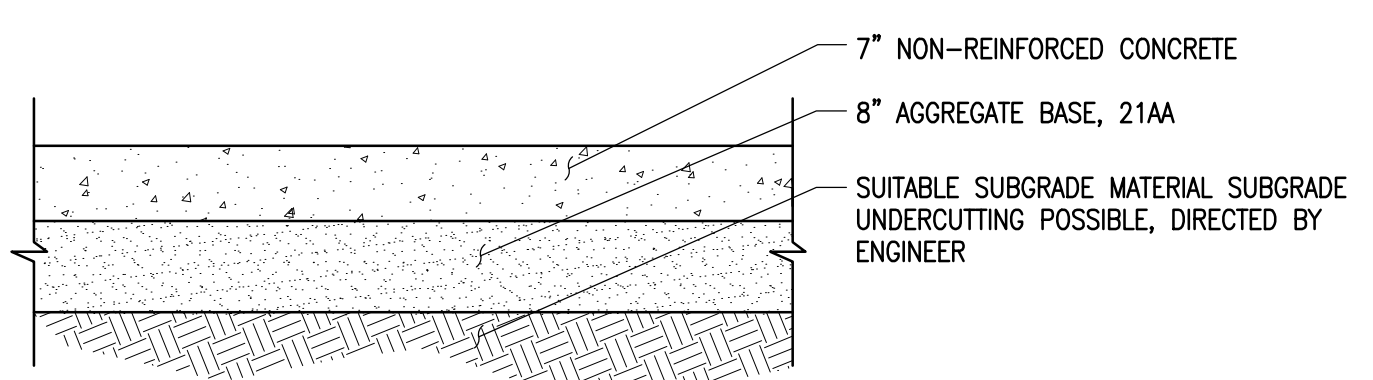
PROJECT NUMBER: 0153-23-0180
 PM: ZAH
 CITY OF SOUTHFIELD
 SOUTHFIELD FIRE STATIONS 4 & 5 PAVING IMPROVEMENTS
 OAKLAND COUNTY
 STAGIN PLAN

C-160

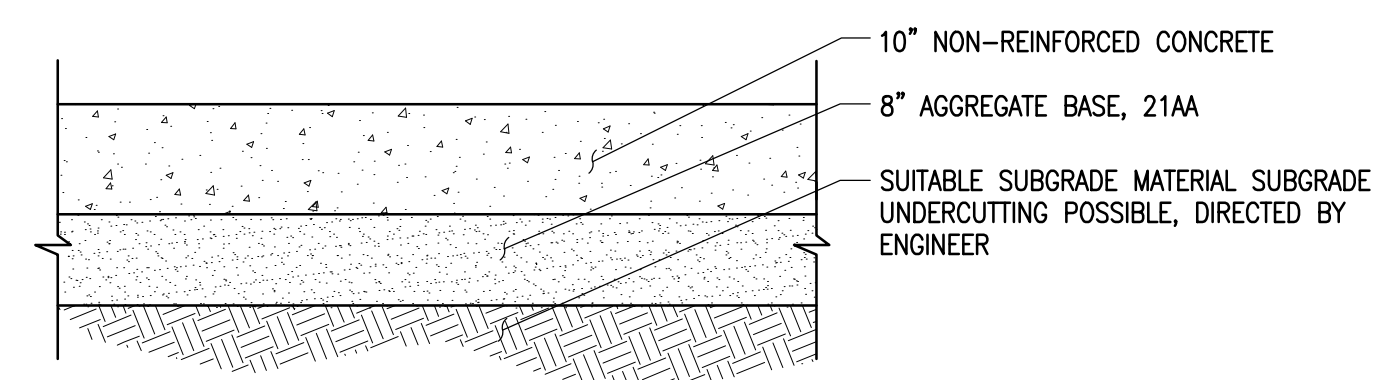
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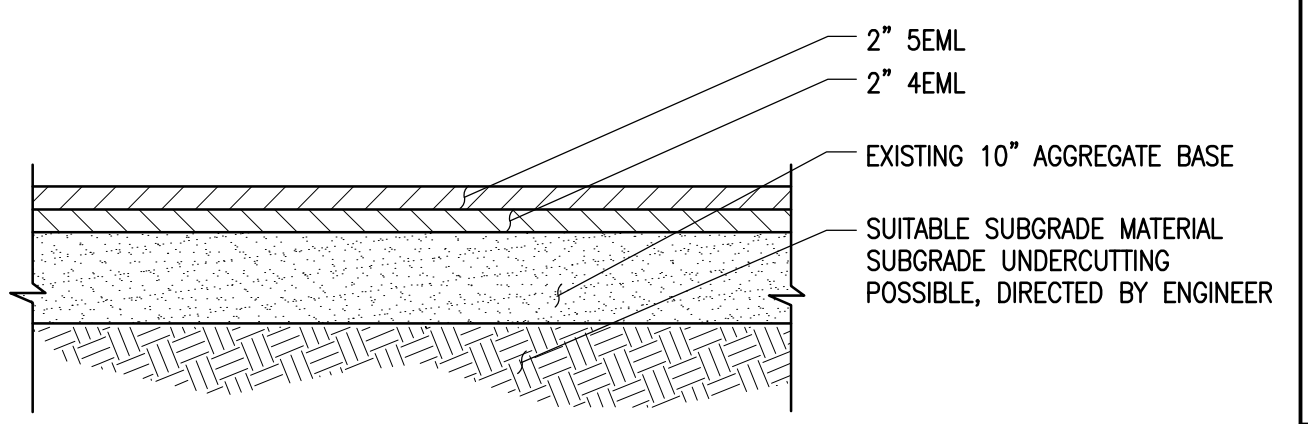
4" CONCRETE SIDEWALK CROSS-SECTION
NOT TO SCALE



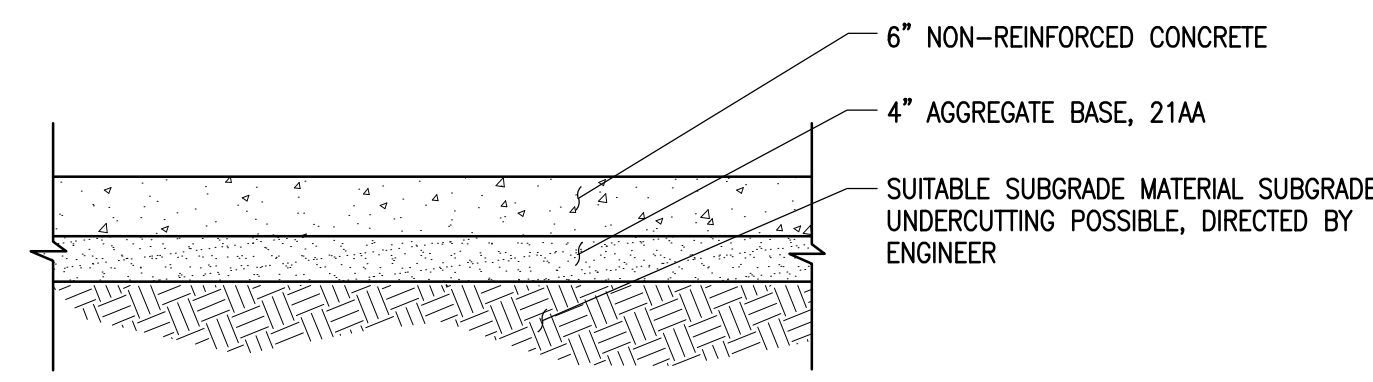
7" STANDARD-DUTY CONCRETE CROSS-SECTION
NOT TO SCALE



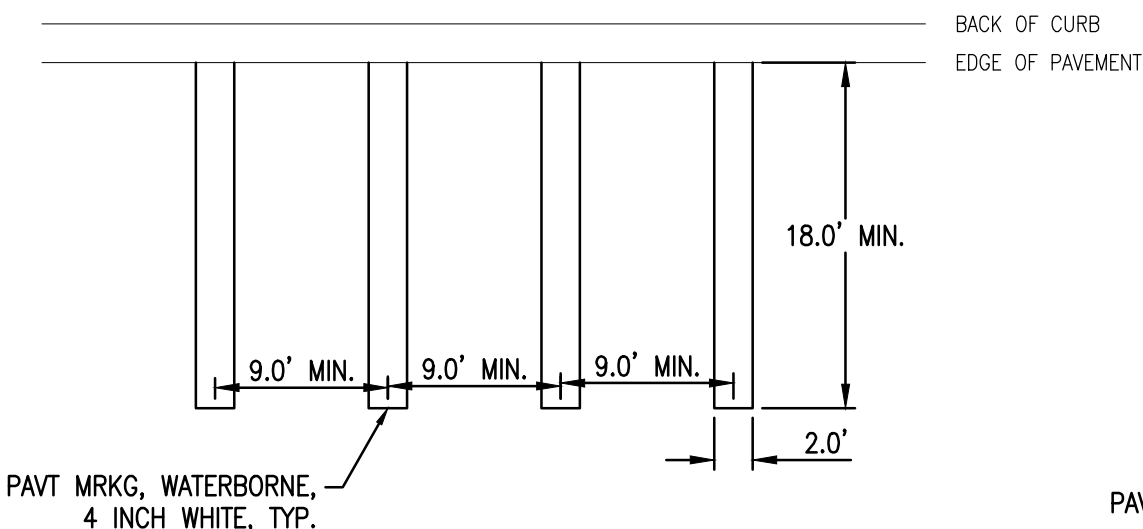
10" HEAVY-DUTY CONCRETE CROSS-SECTION
NOT TO SCALE



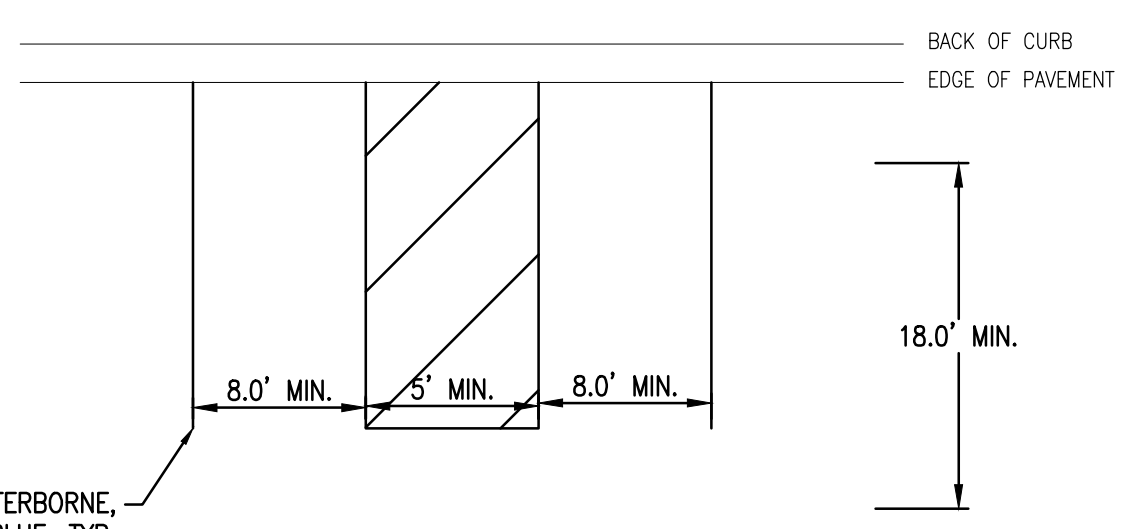
BITUMINOUS PAVEMENT CROSS-SECTION
NOT TO SCALE



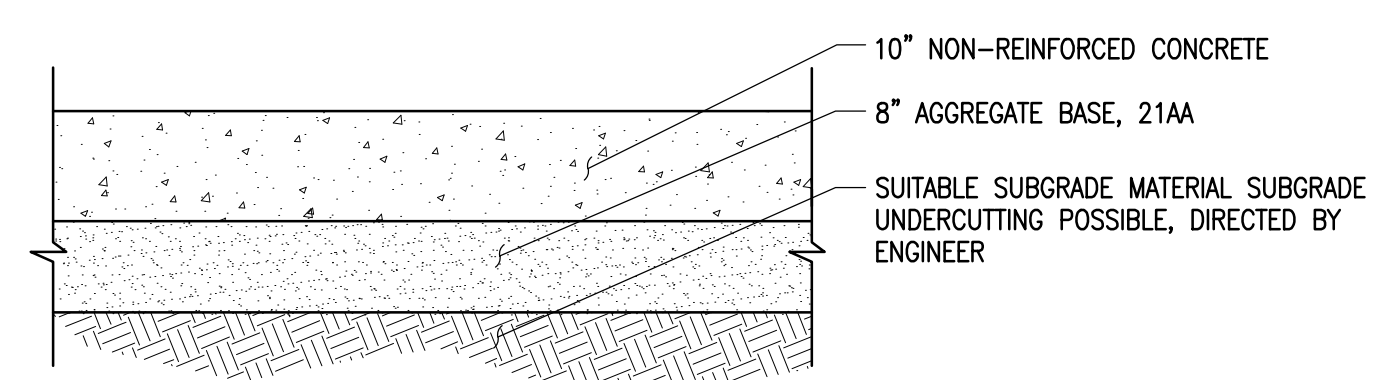
6" CONCRETE SIDEWALK CROSS-SECTION
NOT TO SCALE



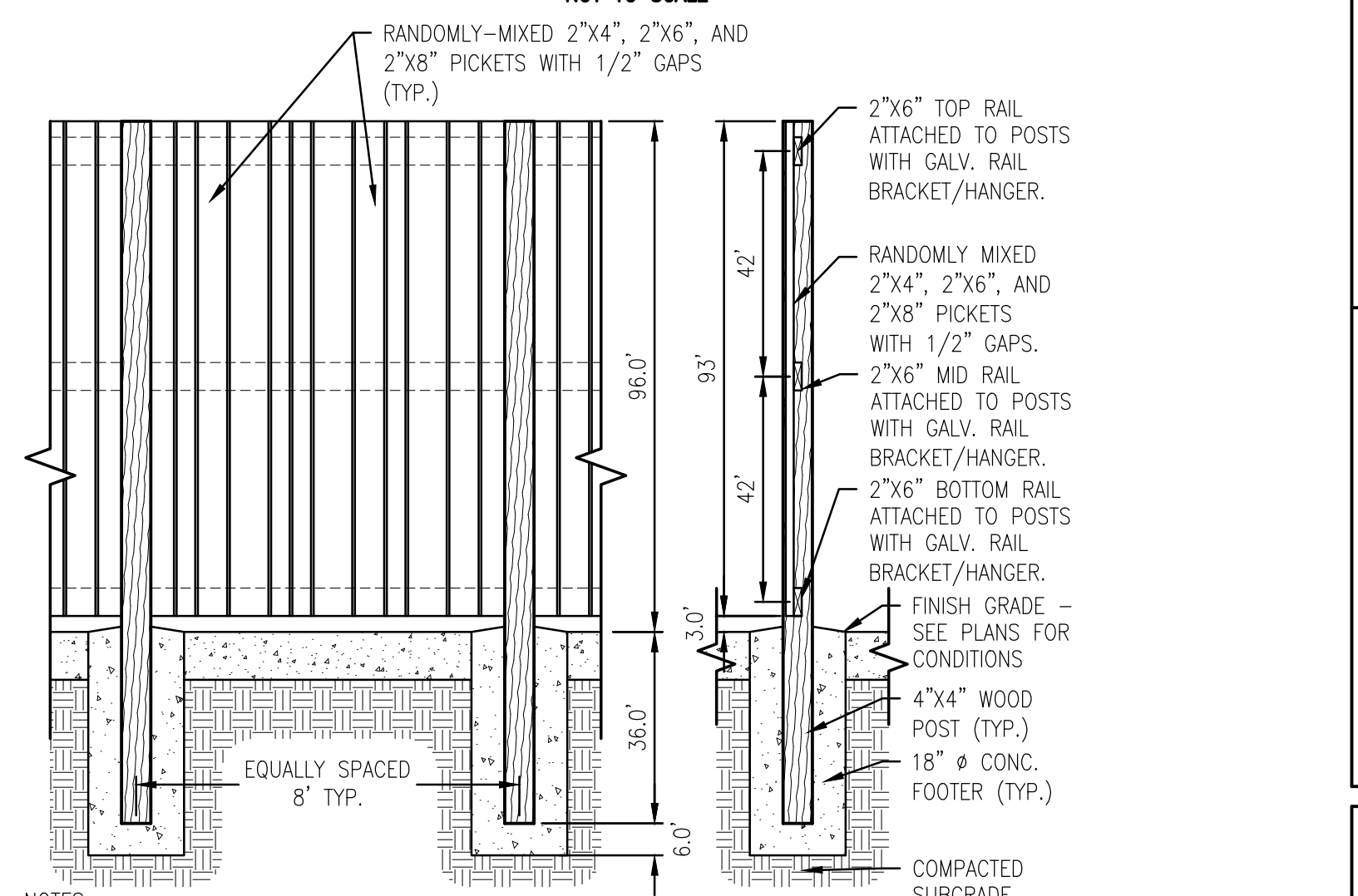
STANDARD PARKING SPACE STRIPING DETAIL



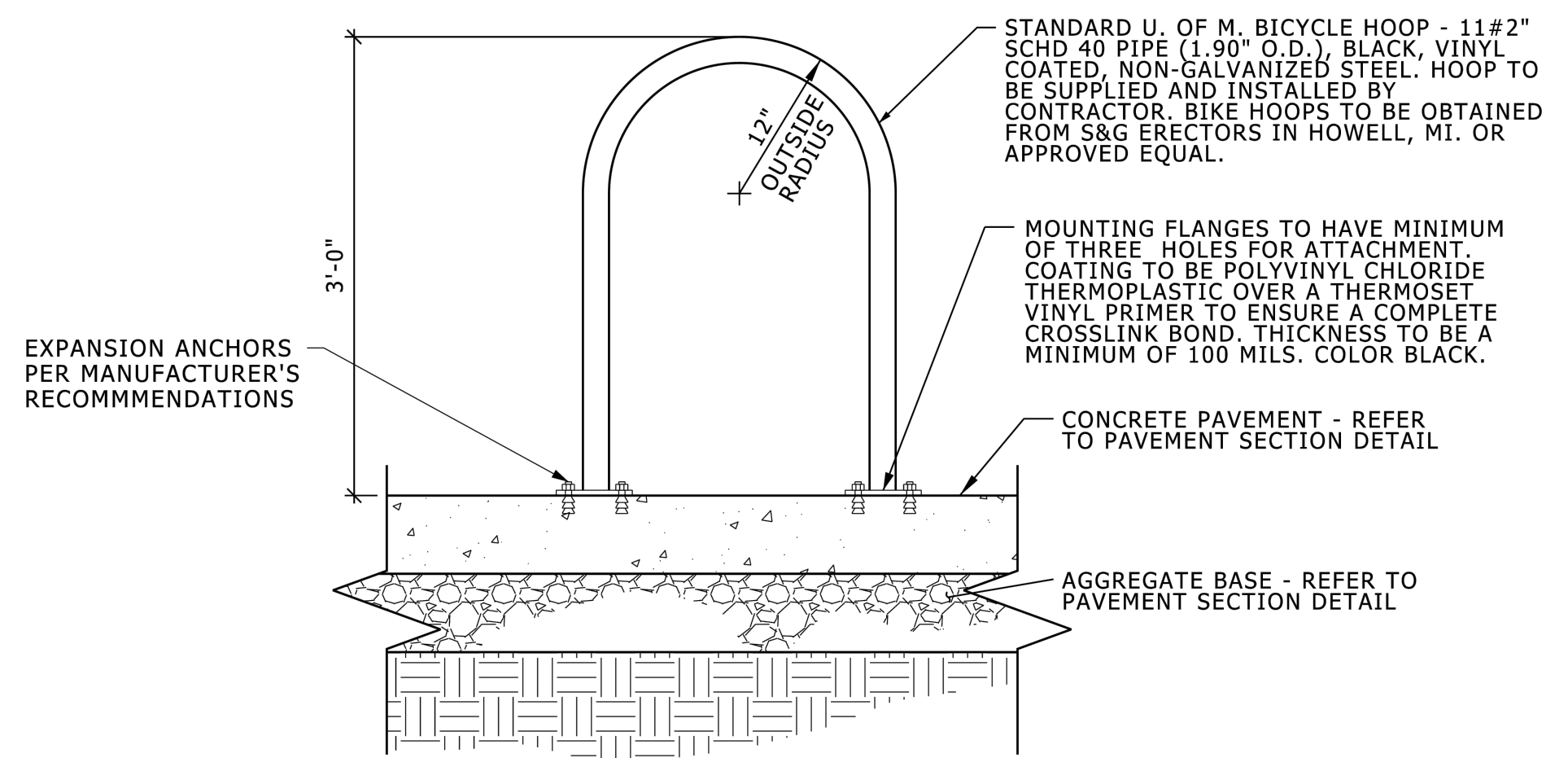
STANDARD ADA PARKING SPACE STRIPING DETAIL



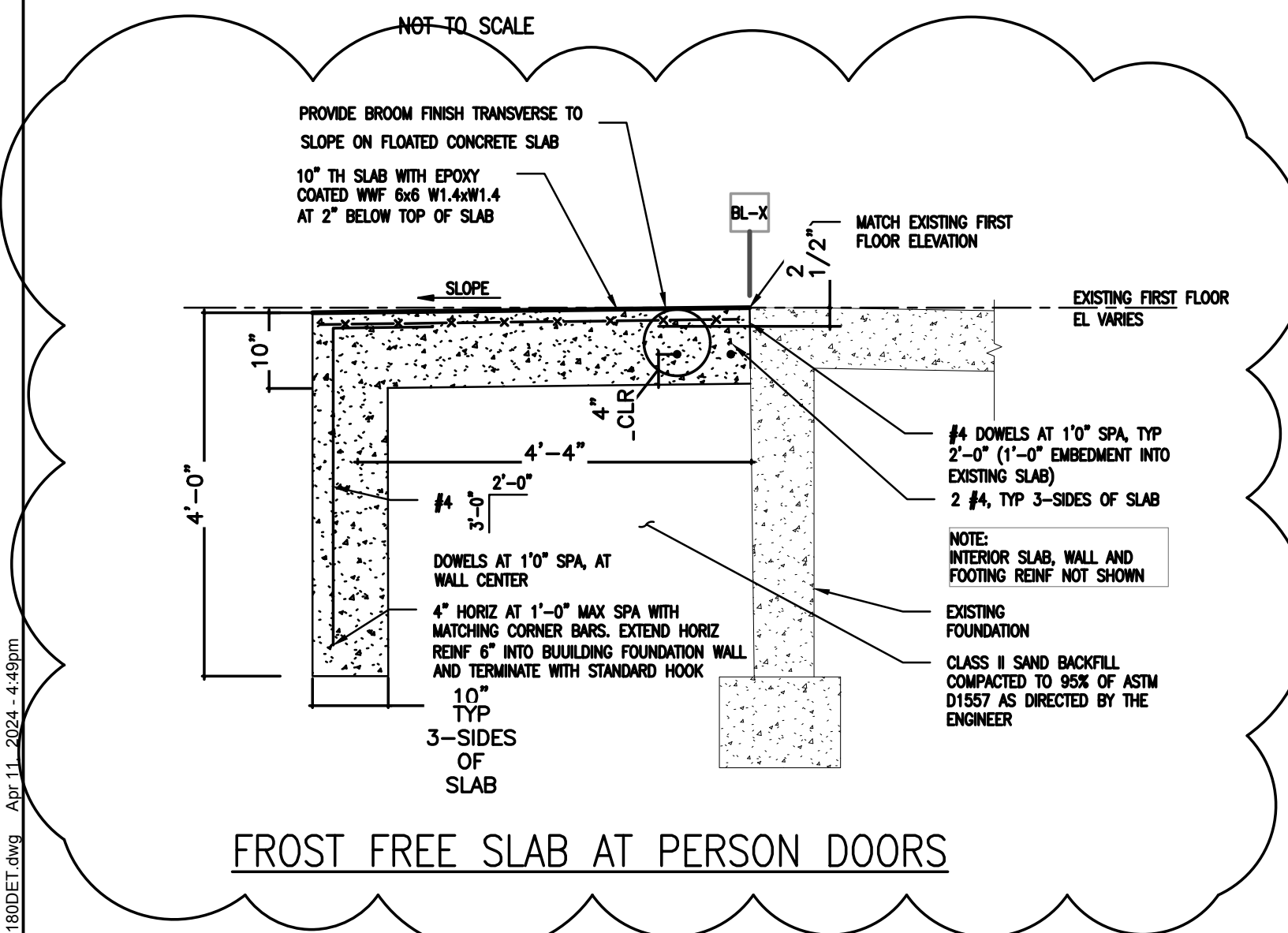
10" CONCRETE SIDEWALK CROSS-SECTION
NOT TO SCALE



- NOTES:**
1. THIS ITEM WORK SHALL BE PERFORMED IN CONFORMANCE WITH ITEM 607 IN THE CMS.
 2. WOOD RAILS SHALL BE SOUTHERN PINE, NO. 2 OR BETTER, PRESERVATIVE-TREATED FOR ABOVE/BELOW GROUND USE, AND KILN-DRIED AFTER TREATMENT.
 3. WOOD POSTS AND PICKETS SHALL BE ROUGH SAWN WESTERN RED CEDAR, GRADE D OR BETTER. PICKETS SHALL BE FASTENED TO TOP, MID, AND BOTTOM RAIL FROM BACK SIDE OF FENCE WITH 2-1/2" NO. 8 GALVANIZED SCREWS (6 PER PICKET MIN.).
 4. ALL FASTENERS SHALL BE EXTERIOR GRADE.
 5. SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR REVIEW AND APPROVAL.
 6. CONTRACTOR SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THIS ITEM AS SHOWN ON THIS DETAIL.



BICYCLE HOOP - SURFACE MOUNT
NO SCALE

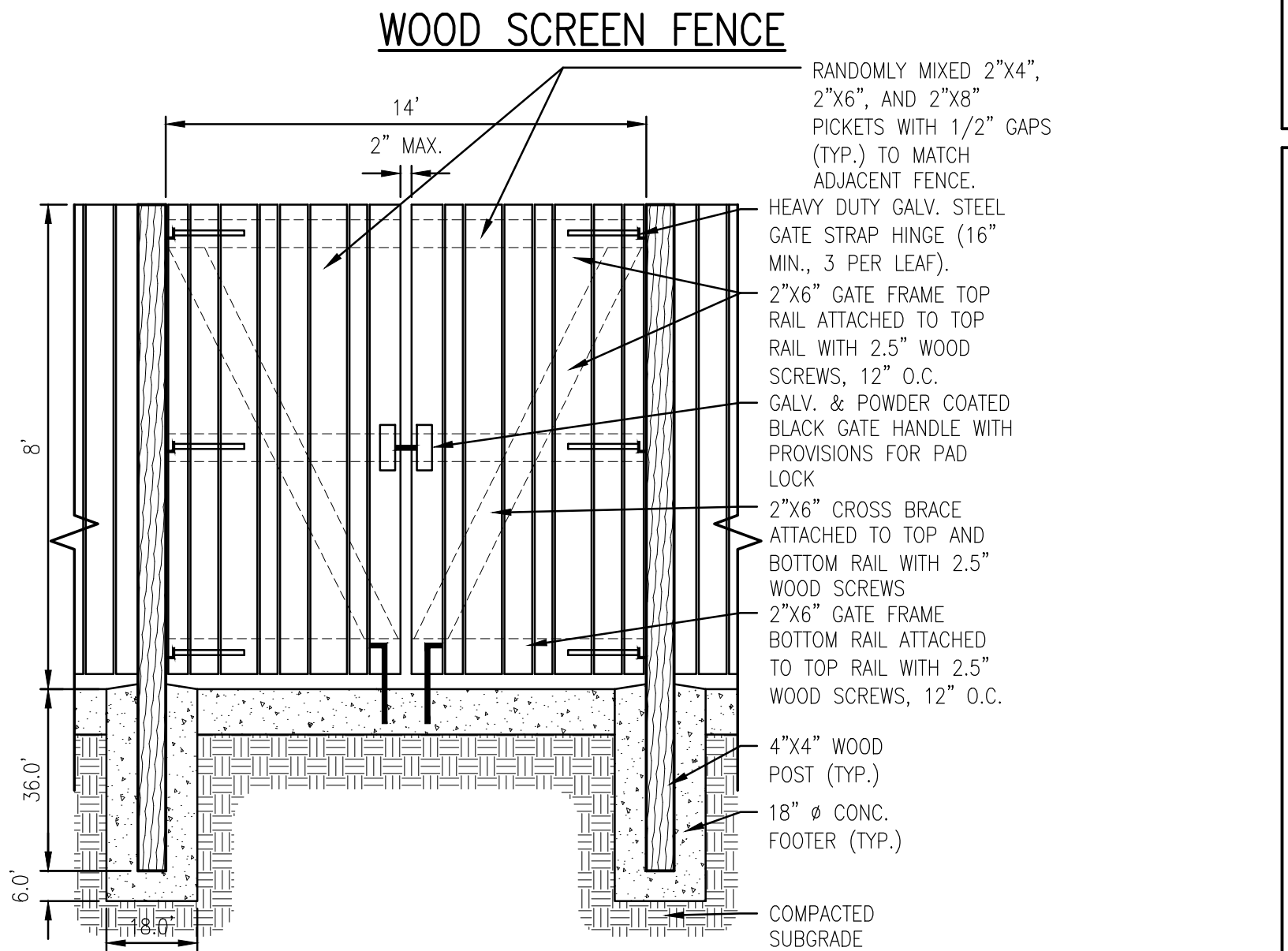


FROST FREE SLAB AT PERSON DOORS

HMA APPLICATION ESTIMATE					
MIX TYPE	ITEM DESCRIPTION	RATE OF APPL. LB/SYD	EST THICKNESS (INCHES)	PERFORMANCE GRADE	LOCATION/NOTES
4EML	HMA, 4EML	220	2	64 - 22	BASE COURSE
5EML	HMA, 5EML	220	2	64 - 22	LEVELING COURSE
*HMA BOND COAT SS-1H @ 0.10 - 0.10 GAL/SYD					INCLUDED IN COST OF HMA ITEMS

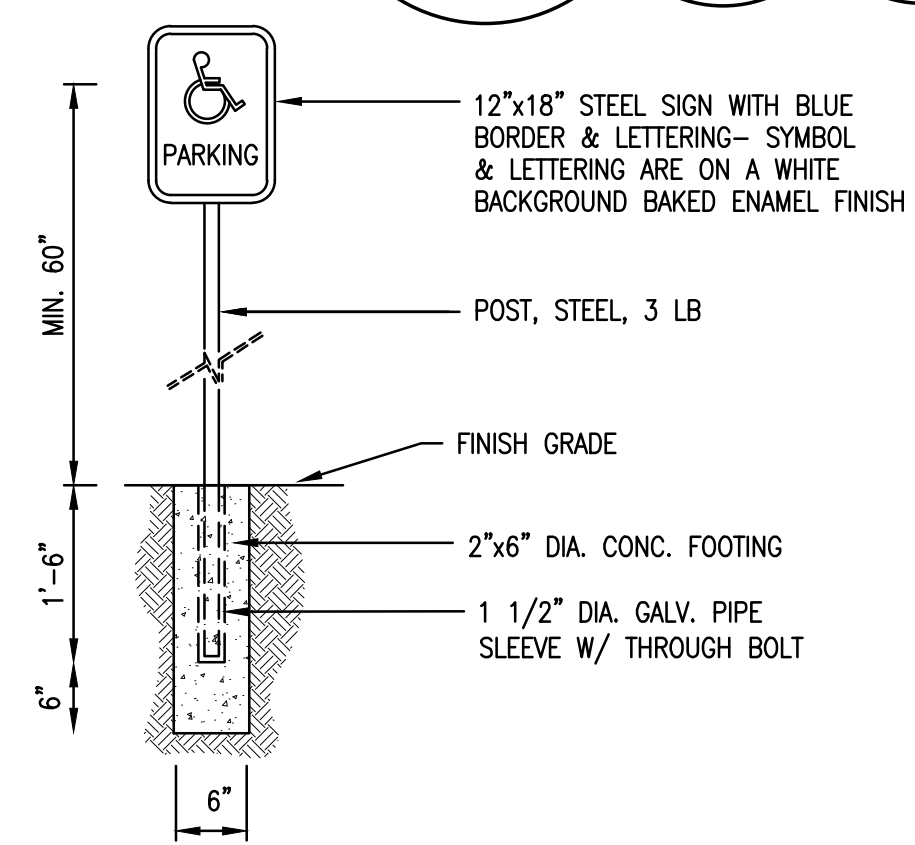
NOTE: * FOR INFORMATION ONLY
PLACE HMA BOND COAT SS-1H @ 0.10 GAL/SYD BETWEEN EXISTING CURB AND GUTTER OR COLD MILLED PAVEMENT AND PROPOSED HMA SURFACING. ALSO PLACE 0.05 GAL/SYD BETWEEN HMA LIFTS. HMA BOND COAT WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE HMA PAY ITEM BEING PLACED.

HMA APPLICATION CHART



- NOTES:**
1. THIS ITEM WORK SHALL BE PERFORMED IN CONFORMANCE WITH ITEM 607 IN THE CMS.
 2. WOOD RAILS SHALL BE SOUTHERN PINE, NO. 2 OR BETTER, PRESERVATIVE-TREATED FOR ABOVE/BELOW GROUND USE, AND KILN-DRIED AFTER TREATMENT.
 3. WOOD POSTS AND PICKETS SHALL BE ROUGH SAWN WESTERN RED CEDAR, GRADE D OR BETTER. PICKETS SHALL BE FASTENED TO TOP, MID, AND BOTTOM RAIL FROM BACK SIDE OF FENCE WITH 2-1/2" NO. 8 GALVANIZED SCREWS (6 PER PICKET MIN.).
 4. ALL FASTENERS SHALL BE EXTERIOR GRADE.
 5. SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR REVIEW AND APPROVAL.
 6. CONTRACTOR SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THIS ITEM AS SHOWN ON THIS DETAIL.

WOOD SCREEN GATE



ACCESSIBLE PARKING SIGN DETAIL

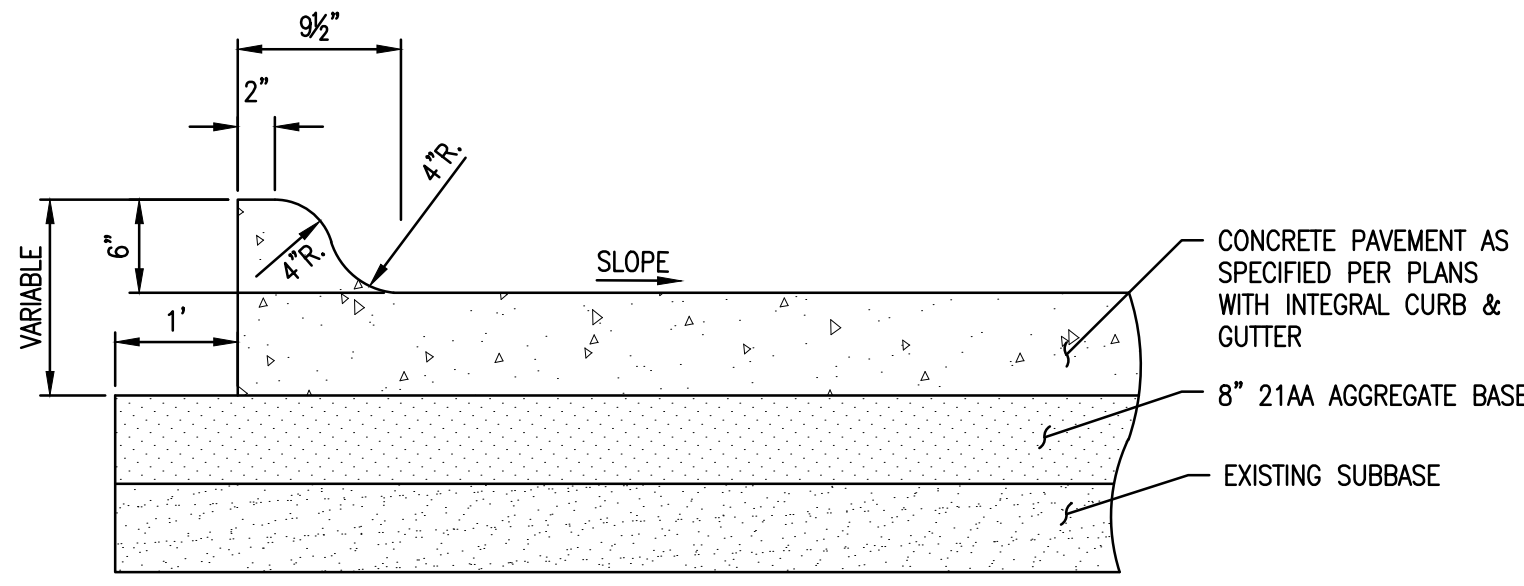
DUMPSTER ENCLOSURE DETAIL

ISSUED FOR: ADDENDUM #1
REVISION: DESCRIPTION
DATE: 4/12/24
ADDENDUM #1

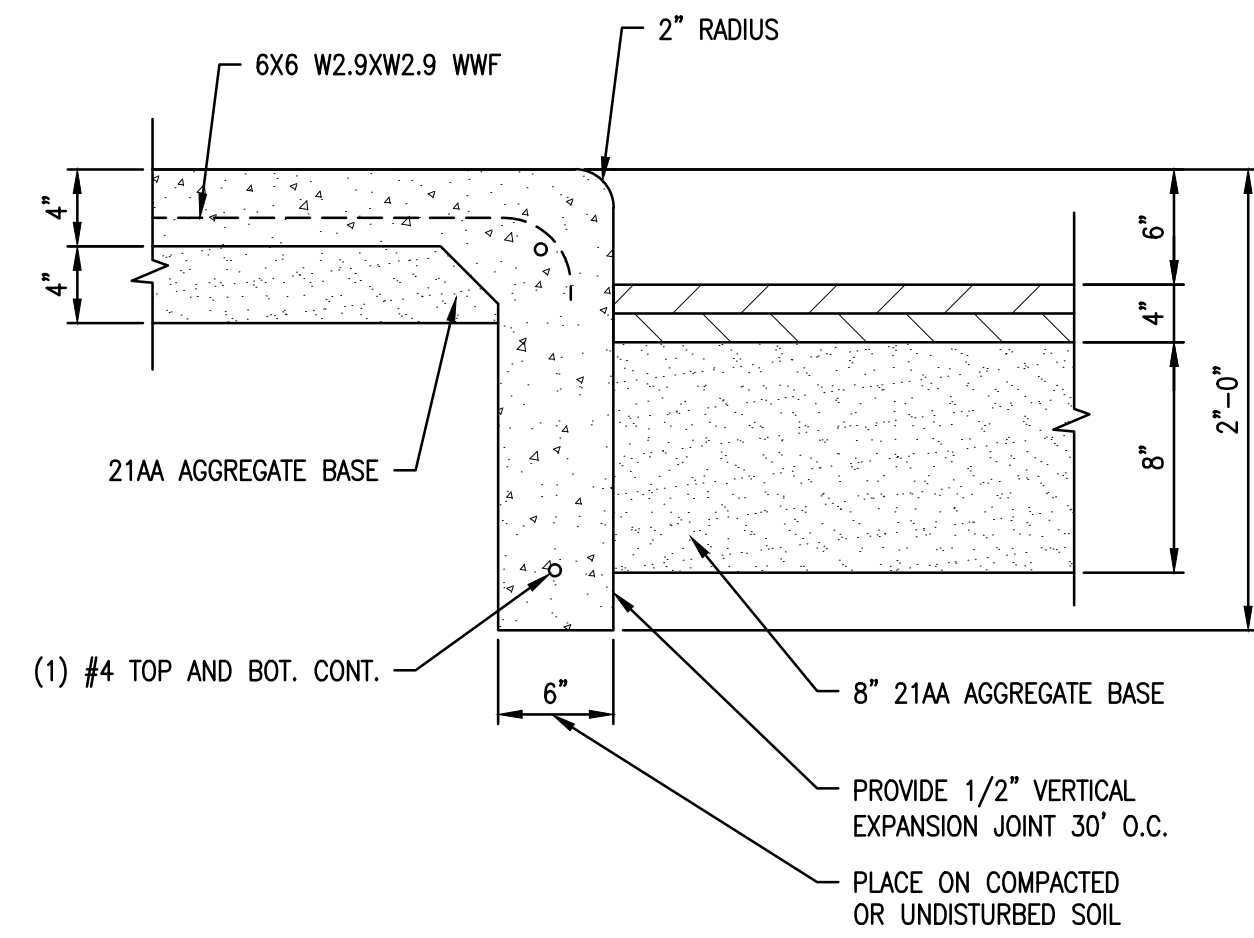
CITY OF SOUTHFIELD
SOUTHFIELD FIRE STATIONS 4 & 5 PAVING IMPROVEMENTS
OAKLAND COUNTY
STANDARD DETAILS

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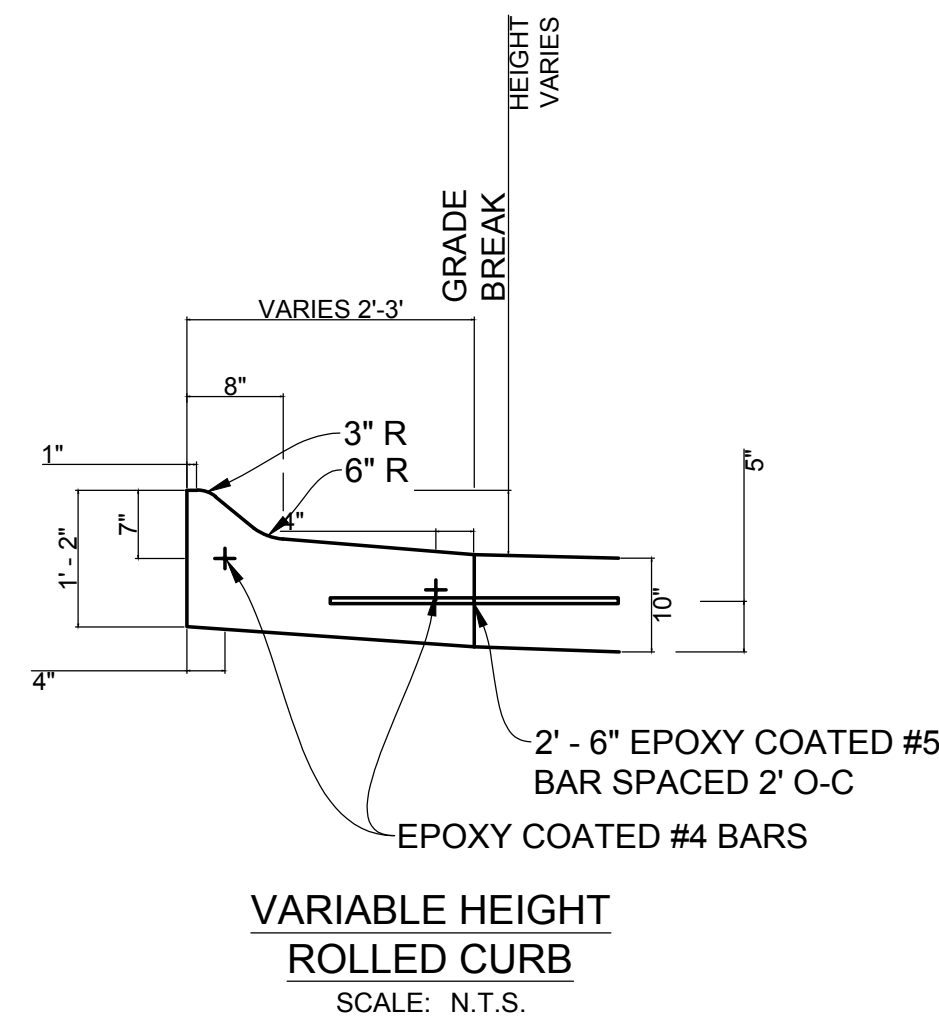
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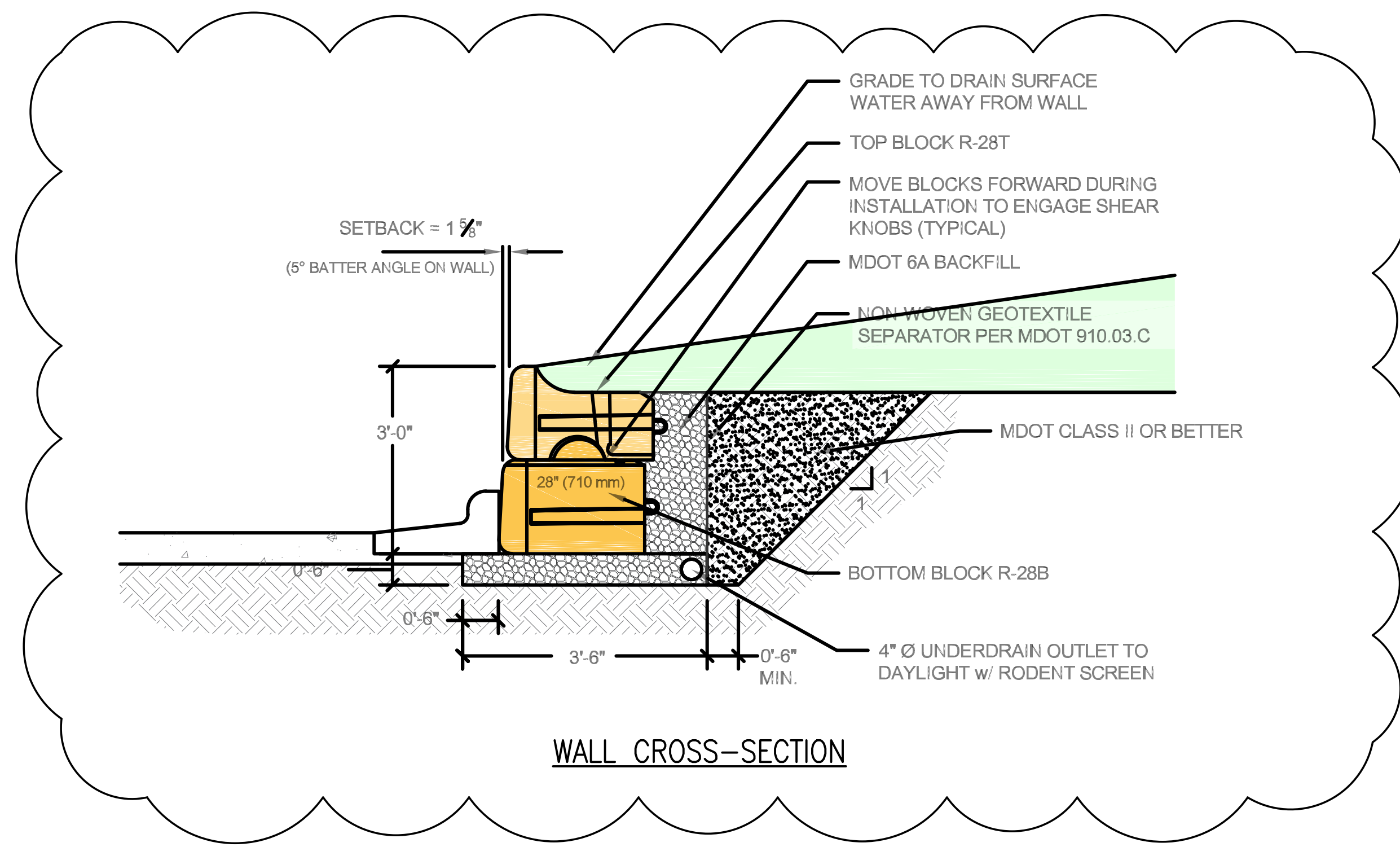
TYPICAL CONCRETE PAVEMENT WITH INTEGRAL CURB DETAIL



WALK WITH INTEGRAL CURB



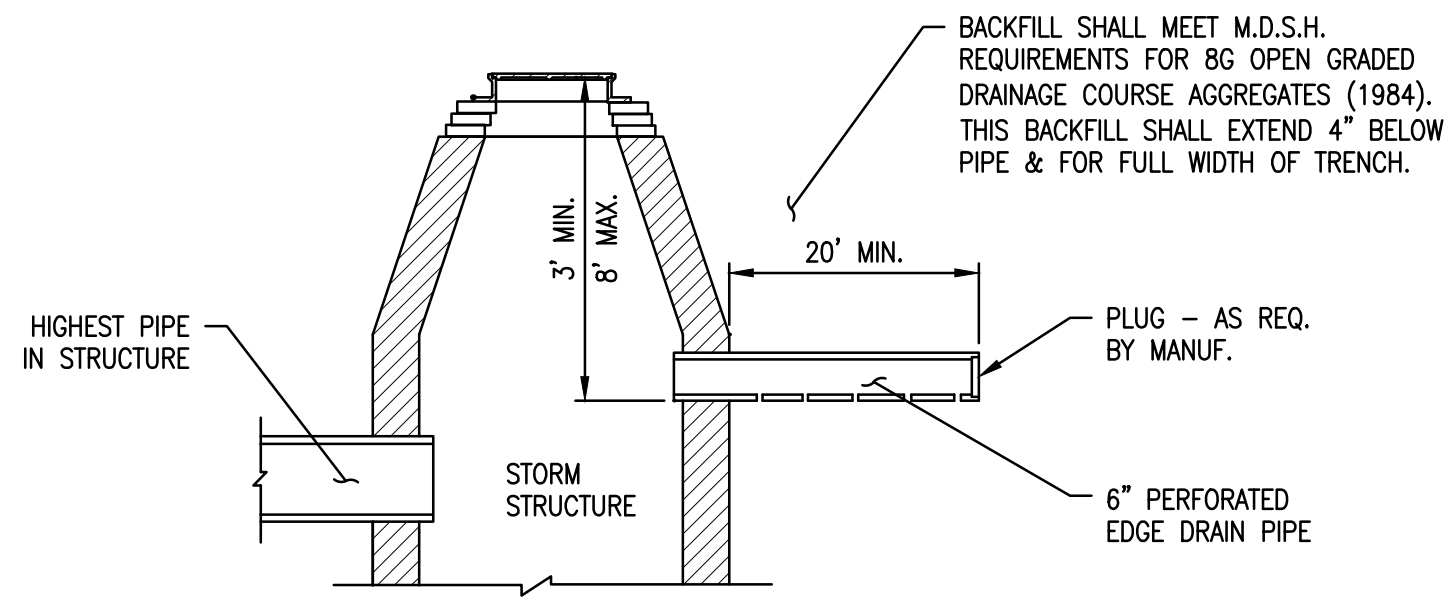
VARIABLE HEIGHT ROLLED CURB
SCALE: N.T.S.



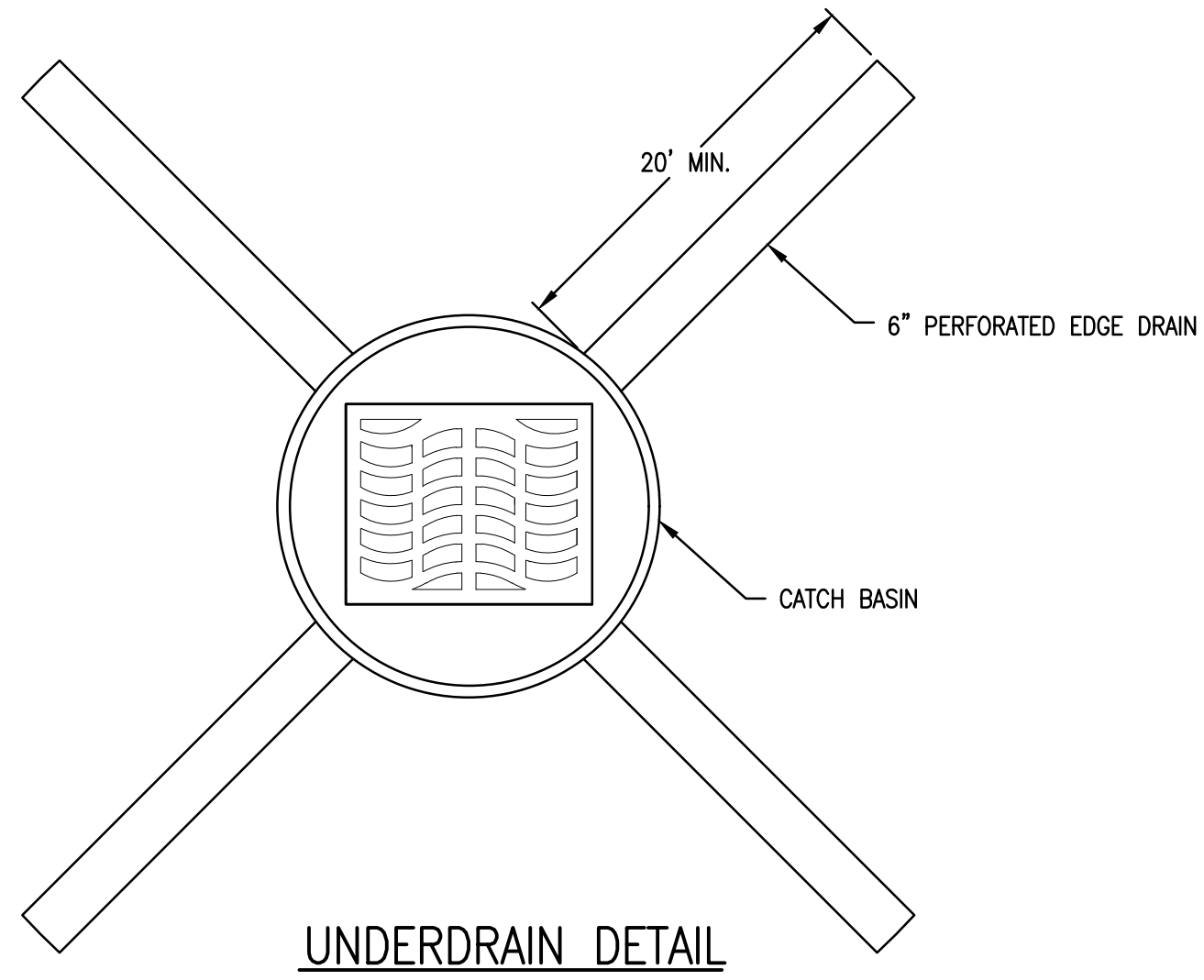
WALL CROSS-SECTION

ISSUED FOR:	ADDENDUM #1	4/12/24
REVISION	DESCRIPTION	DATE
ADDENDUM #1		4/12/24

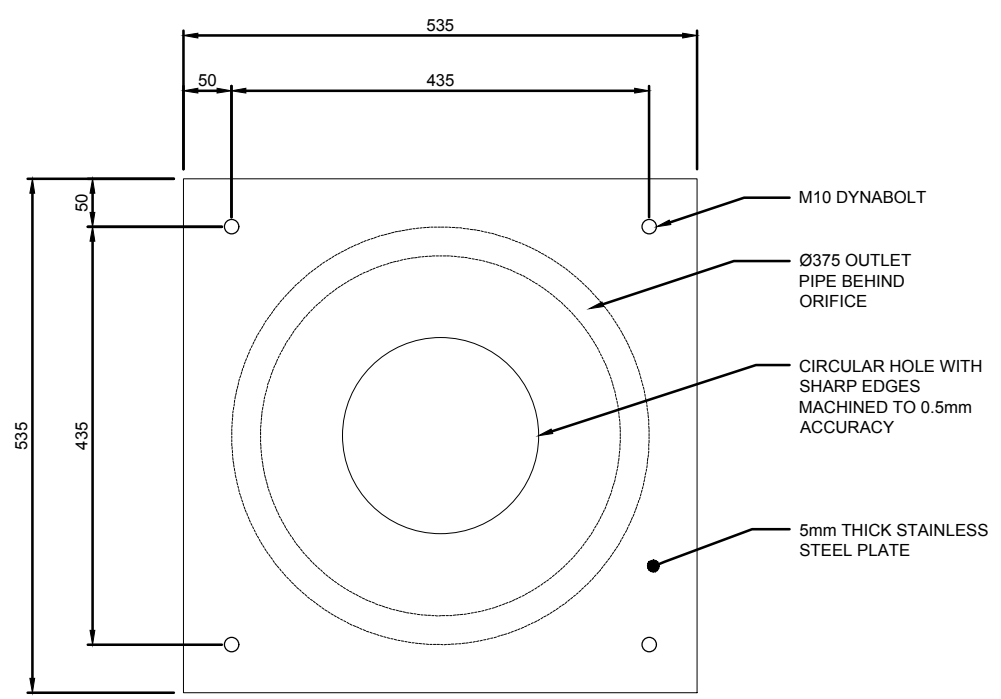
PROJECT NUMBER: 0153-23-0180
 PM: ZJH
 CITY OF SOUTHFIELD
 SOUTHFIELD FIRE STATIONS 4 & 5 PAVING IMPROVEMENTS
 OAKLAND COUNTY
 STANDARD DETAILS



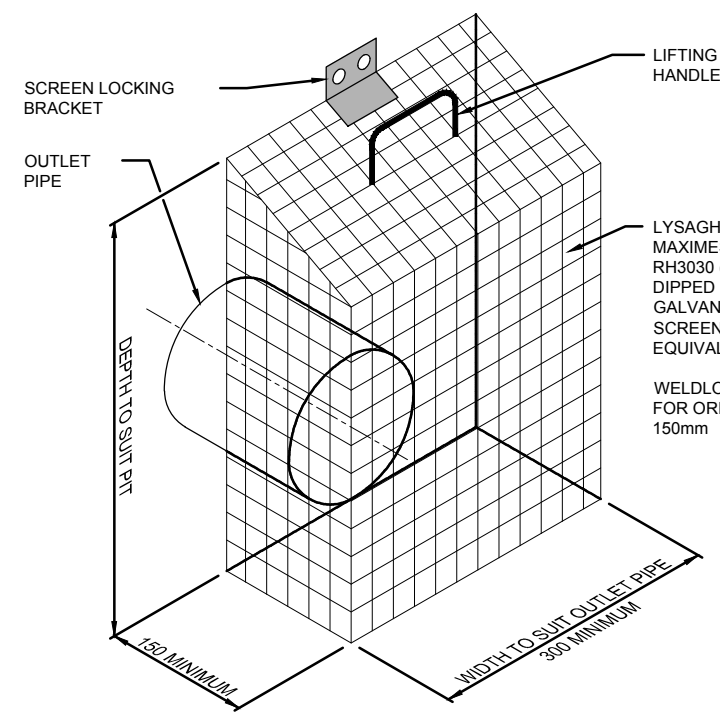
STANDARD UNDERDRAIN



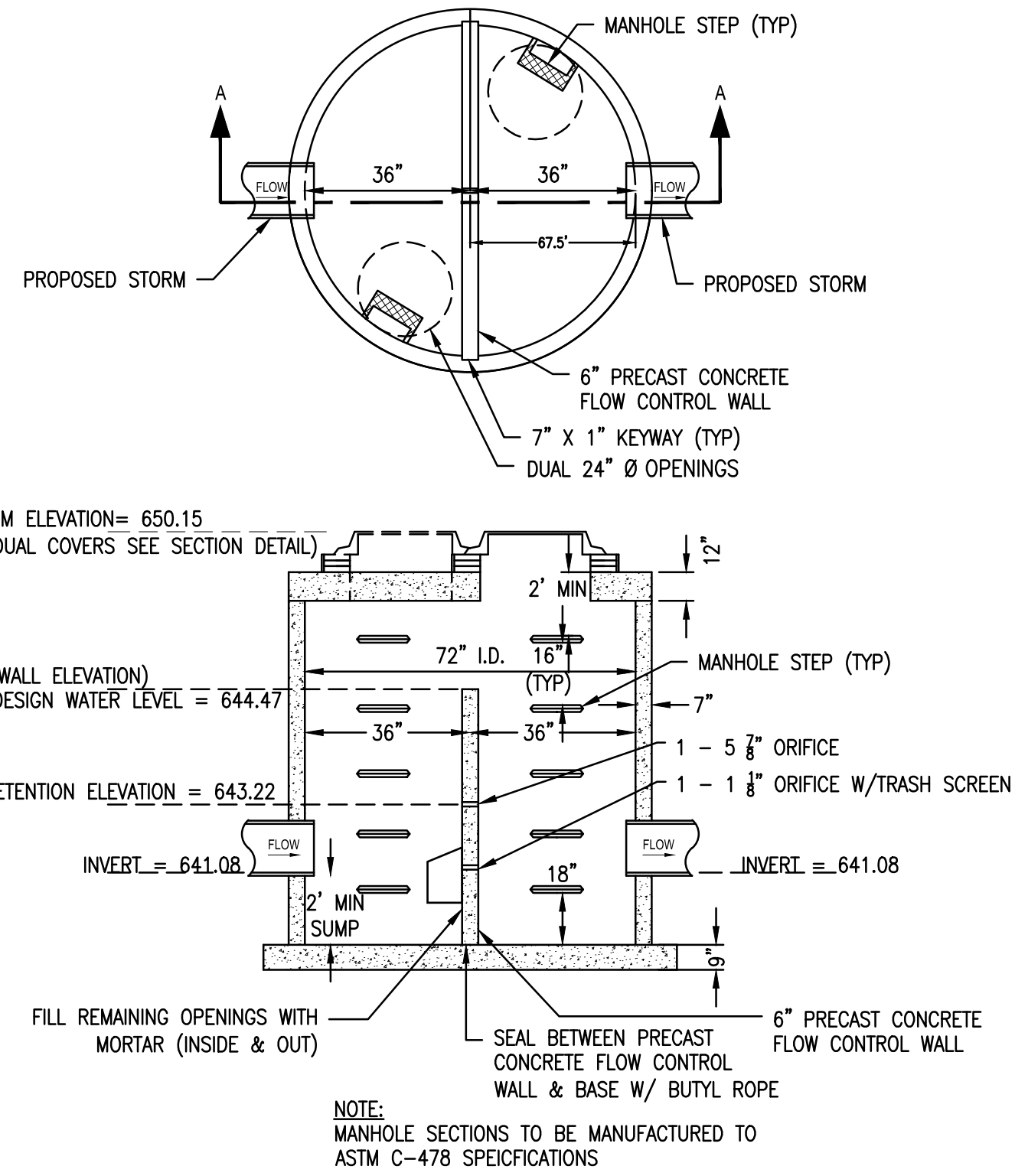
UNDERDRAIN DETAIL



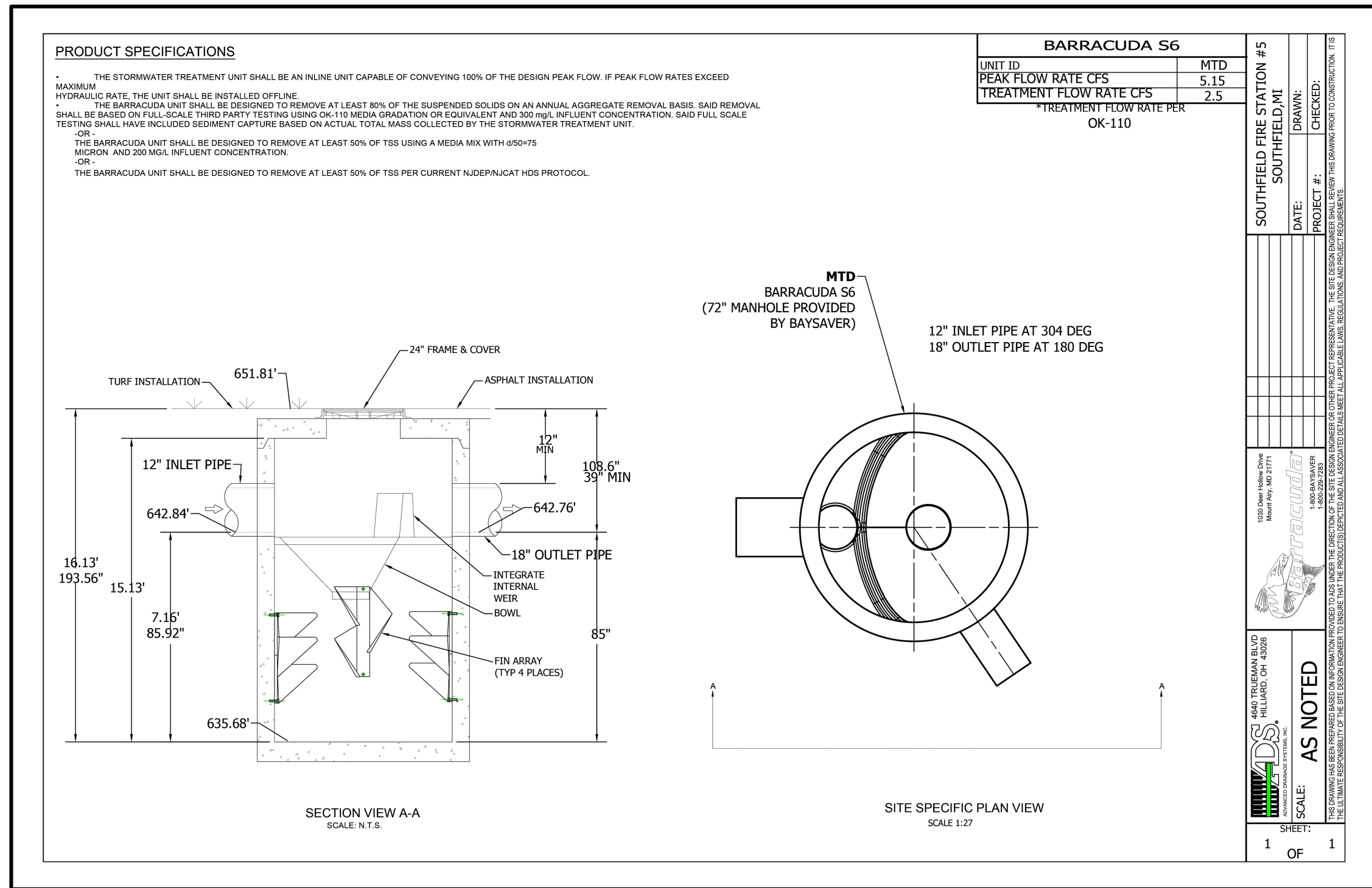
ORIFICE PLATE DETAIL
SCALE 1:5



TYPICAL TRASH SCREEN DETAIL
SCALE 1:5



OUTLET CONTROL STRUCTURE



ADS
Project Name: Southfield Fire Station #5
Location: Southfield, MI
Site Designation: Southfield Fire Station #5
Peak Treatment Rate: 2.5 cfs (Manual Entry)
Barracuda Size: S6
Peak treatment rate: 3.42 cfs
Unit Bypass Flow: 5.15 cfs

Date: 4/1/24

ADS® Barracuda™ Max

The Barracuda Max is a market-changing stormwater quality technology. This high-performance vortex hydrodynamic separator is designed to remove total suspended solids in order to protect our precious receiving waters. The Barracuda Max also offers an outstanding water flow that offers multiple pipe configurations, and quick installation. The "Max" version of the Barracuda is built on the base platform of the original ADS Barracuda with improved removal efficiencies and installation components.

- Features**
- Single manhole design
 - No elevation loss between the inlet and outlet
 - Variable (vertical) angle configurations (not just 90° (45/45) precast manhole, respectively)
 - The S6 & S4 can be provided factory finished with a 30" (900 mm) and 48" (1200 mm) ADS HP manhole and delivered to the jobsite
 - The Barracuda Max "teeth" and deflector plate assembly are fabricated and designed for quick and easy field assembly
 - Designed for easy maintenance using a vacuum truck or similar equipment.
 - Inspection and maintenance are performed from the surface with no confined space entry.

- Benefits**
- Internal components are in stock for quick delivery
 - No elevation loss between the inlet and outlet
 - 36" (900 mm), 48" (1200 mm), 72" (1800 mm), and 96" (2400 mm) precast manhole, respectively
 - 36" (900 mm) and 48" (1200 mm) ADS HP manhole and delivered to the jobsite
 - Revolutionary, patent-pending "teeth"™ and deflector plate assembly are fabricated and designed for quick and easy field assembly
 - Designed for easy maintenance using a vacuum truck or similar equipment.
 - Inspection and maintenance are performed from the surface with no confined space entry.

Barracuda Specification

- Materials and Design**
- Concrete Structures: Designed for H-20 traffic loading and applicable soil loads or as otherwise determined by a Licensed Professional Engineer. The materials and structural design of the devices shall be per ASTM C677 and ASTM C688.
 - 36" (900 mm) and 48" (1200 mm) HP Manhole Structures: Made from an impact modified polypropylene meeting the material requirements of ASTM D2564. The eccentric cone reducer shall be manufactured from polyethylene material meeting ASTM D3350 cell class 21320C. Gaskets shall be made of material meeting the requirements of ASTM F471.
 - Separator Internals shall be substantially constructed of stainless steel, polyethylene or other thermoplastic material approved by the manufacturer.
- Performance**
- The stormwater treatment unit shall be an in-line unit capable of conveying 100% of the design peak flow. If peak flow rates exceed maximum hydraulic rate, the unit shall be installed offline.
 - The Barracuda Max unit shall be designed to remove at least 80% of the suspended solids on an annual aggregate removal basis. Sediment removal shall be based on full-scale third party testing using 200/100 media gradation of equipment and 300 mg/L influent concentration. Sediment testing shall include sediment capture based on actual total mass collected by the stormwater treatment unit.
 - The Barracuda Max unit shall be designed to remove at least 50% of TSS using a media mix with d_{50} 75 micron and 200 mg/L influent concentration.
 - The Barracuda Max unit shall be designed to remove at least 50% of TSS per current NPDES/NCAT HDS protocol.
 - The stormwater treatment unit internals shall consist of (1) separator cone assembly, and (1) sump assembly, which includes the "teeth".

Barracuda Max Model	Manhole Diameter	NPSI (50% Removal)	CR-110 (100% Removal)
S3	36" (900 mm)	0.83 CFS (24.1 L/s)	0.8 CFS (24.1 L/s)
S4	48" (1200 mm)	1.52 CFS (43.0 L/s)	1.52 CFS (43.0 L/s)
S6	72" (1800 mm)	3.40 CFS (96.3 L/s)	3.42 CFS (96.4 L/s)
S8	96" (2400 mm)	6.08 CFS (172.2 L/s)	6.08 CFS (172.2 L/s)

Installation
Installation of the stormwater treatment unit(s) shall be performed per manufacturer's installation instructions. Such instructions can be obtained by calling Advanced Drainage Systems at 800-821-4710 or by logging on to www.adsjpa.com.



adsjpa.com
800-821-4710

Barracuda® Max & Barracuda Maintenance Guide

One of Barracuda's advantages is the ease of maintenance. Like any system that collects pollutants, the Barracuda must be maintained for continued effectiveness. Maintenance is a simple procedure performed using a vacuum truck or similar equipment. The systems were designed to minimize the volume of water removed during routine maintenance, reducing disposal costs.

Contractors can access the pollutants stored in the manhole through the manhole cover. This allows them to gain vacuum hose access to the bottom of the manhole to remove sediment and trash. There is no confined space entry necessary for inspection or maintenance.

The entire maintenance procedure typically takes 2 to 4 hours, depending on the system's size, the captured material, and the vacuum truck's capacity.

Local regulations may apply to the maintenance procedure. Safe and legal disposal of pollutants is the responsibility of the maintenance contractor. Maintenance should be performed only by a qualified contractor.

Inspection and Cleaning Cycle

Periodic inspection is needed to determine the need for and frequency of maintenance. You should begin inspecting as soon as construction is complete and then on an annual basis. Typically, the system needs to be cleaned every 1-3 years.

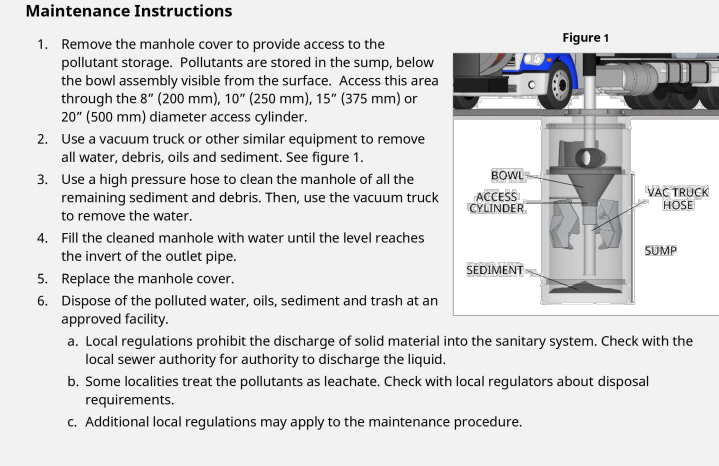
Excessive oils, fuels or sediments may reduce the maintenance cycle. Periodic inspection is important.

Determining When to Clean

To determine the sediment depth, the maintenance contractor should lower a stadia rod into the manhole until it contacts the top of the captured sediment and mark that spot on the rod. Then push the probe through to the bottom of the sump and mark that spot to determine sediment depth. Maintenance should occur when the sediment has reached the levels indicated in the Storage Capacity Chart.

Barracuda Storage Capacities

Model	Manhole Diameter (in./mm)	Total System Volume (Gallons/Liters)	Chamber Capacity (Gallons/Liters)	Standard Sediment Capacity (20" depth) (Yards/meters)	NPSI Sediment Capacity (50% of standard depth) (Yards/meters)
S3	36 (900)	264 (999)	212 (803)	0.44 (0.34)	0.22 (0.17)
S4	48 (1200)	665 (2517)	544 (2052)	0.78 (0.60)	0.39 (0.30)
S6	72 (1800)	1497 (5667)	1269 (4804)	1.75 (1.34)	0.88 (0.67)
S8	96 (2400)	4196 (15884)	3835 (14517)	3.10 (2.37)	1.55 (1.19)



adsjpa.com
1-800-821-4710



adsjpa.com
1-800-821-4710

ISSUED FOR: ADDENDUM #1
DATE: 4/12/24

PROJECT NUMBER: 0153-25-0180
CITY OF SOUTHFIELD
SOUTHFIELD FIRE STATIONS 4 & 5 PAVING IMPROVEMENTS
OAKLAND COUNTY
STANDARD STORM DETAILS

LIQUIDATED DAMAGES

It is expressly covenanted and agreed that time is and shall be considered of the essence of the Contract. In the event that the Contractor shall fail to perform the entire work agreed to by or at the times herein mentioned in Article II and Article III of The Agreement, or within some other certain date subsequent to this to which the time limit for the completion of the work may have been advanced under the provisions of Article II of The Agreement, the Contractor shall pay unto the Owner as and for liquidated damages and not as a penalty, the sum of **Five Hundred Fifty Dollars (\$550.00)** for each and every calendar day that the Contractor shall be in default. Said sum of **Five Hundred Fifty Dollars (\$550.00)** per day, in view of the difficulty of estimating such damages with exactness, is hereby expressly fixed and agreed upon as the damages which will be suffered by the Owner for reason of such defaults. It is also understood and agreed that the liquidated damages herein before mentioned are, in lieu of the actual damages arising from such breaches of this Contract, which said sums the Owner shall have the right to deduct from any monies in hand otherwise due or to become due to the Contractor or to sue for and recover compensation for damages for nonperformance of this contract at the time stipulated herein and provided.

EXECUTION OF CONTRACT AND BOND FORMS

The bidder to whom the contract shall have been awarded will be required to execute the Contract in the form attached hereto and to furnish surety and insurance certificates all as required within **ten (10) calendar days** from the date when notice of award is delivered to the bidder. The notice of award shall be accompanied by the necessary contract and bond forms as required by the General Supplementary Conditions. The notice to proceed shall be issued following the execution of the Contract by the Owner.

The contractor cannot begin work at Fire Station #5 before June 17, 2024 due to a training event that is scheduled June 14- June 16, 2024.

SOIL EROSION AND SEDIMENTATION CONTROL

The Contractor shall make himself thoroughly familiar with the requirements of the Specifications in connection with prevention of soil erosion and sedimentation control.

The Contractor will be responsible for erosion control during the life of the Contract.

The Contractor shall designate a person who shall be responsible for soil erosion and sedimentation control during the life of the Contract.

MAINTAINING TRAFFIC

The Contractor shall be responsible for maintaining traffic during the life of the Contract as required by the Specifications or as directed by the Engineer.

PROGRESS PAYMENTS

Progress payments to the Contractor will be made in accordance with State Act 524, Public Acts of 1980, a copy of which is included in the appendix.

NON-COLLUSION AFFIDAVIT

Bidders do not need to have the Non-Collusion Affidavit notarized but it must be submitted in order for a bid to be declared responsive.

**CITY OF SOUTHFIELD
SUPPLEMENTAL BID SHEET**

SOUTHFIELD FIRE STATION #4 AND #5 PAVING IMPROVEMENTS

The undersigned, having familiarized himself with the local conditions affecting the cost of the work and with the Contract Documents for the designated project, hereby proposes to perform all work and furnish all labor, tools, equipment, and materials, including utility and transportation services, necessary to perform and complete in a workmanlike manner the construction itemized below in the City of Southfield, all in accordance with the Drawings, Specifications and other Contract Documents at the unit prices hereinafter set forth.

Item	Description	Qty	Unit	Unit Price	Amount
1	Mobilization, Max 5%	1	LSUM	\$	\$
2	Pavement, Rem	6200	Syd	\$	\$
3	Structure Removal, Less than 72" Dia	5	Ea	\$	\$
4	Sewer, Rem, Less than 24 inch	202	Lf	\$	\$
5	Sewer Bulkhead	2	Ea	\$	\$
6	Water Main, Rem	28	Ft	\$	\$
7	Fence, Rem	23	Ft	\$	\$
8	Sidewalk, Rem	139	Syd	\$	\$
9	Earth Excavation	345	Cyd	\$	\$
10	Water Appurtenance, Remove	3	Ea	\$	\$
11	Soil Erosion Control	1	LSUM	\$	\$
12	Site Earthwork, Fire Station #4	1	LSUM	\$	\$
13	Site Earthwork, Fire Station #5	1	LSUM	\$	\$
14	Existing Tower, Remove	1	LSUM	\$	\$
15	Storage Tank, Abandon	1	Ea	\$	\$
16	Structure Cover, Adj, Case 1	7	Ea	\$	\$
17	Tree, Rem, 6 inch to 18 inch Diameter	2	Ea	\$	\$
18	Curb and Gutter, Rem	368	Ft	\$	\$
19	Gate, Wood Screened, 96 inch	1	Ea	\$	\$
20	Fence, Wood Screened, 96 inch	30	Ft	\$	\$
21	Concrete Sidewalk, 4 inch with or without curb	990	Sft	\$	\$
22	Concrete Sidewalk, 6 inch	40	Sft	\$	\$

NAME OF BIDDER _____

SBS 1

AUTHORIZED SIGNATURE _____

23	Concrete Sidewalk, 10 inch	890	Sft	\$	\$
24	Sidewalk Ramp, ADA	90	Sft	\$	\$
25	Driveway Opening, Conc, Det M	370	Ft	\$	\$
26	Curb Ramp Opening, Conc	14	Ft	\$	\$
27	Curb and Gutter, Conc, Det B2	20	Ft	\$	\$
28	Conc Pavt, Nonreinf, with or without curb, 7 inch	376	Syd	\$	\$
29	Conc Pavt, Nonreinf, with or without curb, 10 inch	4791	Syd	\$	\$
30	HMA, 5EML	68	Ton	\$	\$
31	HMA, 4EML	68	Ton	\$	\$
32	Aggregate Base, 21AA, 4 inch	1080	Syd	\$	\$
33	Aggregate Base, 21AA, 8 inch	6800	Syd	\$	\$
34	Underdrain, Subgrade, 6-inch	604	Ft	\$	\$
35	Sewer, Conc, CI IV, 12 inch	475	Ft	\$	\$
36	Sewer, Conc, CI IV, 15 inch	47	Ft	\$	\$
37	Sewer, Conc, CI IV, 18 inch	17	Ft	\$	\$
38	Dr Structure, 24 inch	2	Ea	\$	\$
39	Dr Structure, 48 inch	3	Ea	\$	\$
40	Manhole Cover, Type Q	1	Ea	\$	\$
41	ADS Mechanical Treatment Device	1	Ea	\$	\$
42	Outlet Control Structure	1	Ea	\$	\$
43	ADS Underground Stormwater Detention Basin	1	Ea	\$	\$
44	Surface Restoration	700	Syd	\$	\$
45	Bike Hoop, Furnish and Install	2	Ea	\$	\$
46	Parking Lot Lighting	1	LSUM	\$	\$
47	Pavement Markings	1	LSUM	\$	\$
48	Traffic Maintenance and Control	1	LSUM	\$	\$
49	Southfield Building Permit Allowance	2500	Dir	\$ 1.00	\$ 2,500.00
50	Oakland County Road Commission ROW Permit	2000	Dir	\$ 1.00	\$ 2,000.00
51	Redi Rock Retaining Wall	122	Lf	\$	\$

NAME OF BIDDER

SBS 2

AUTHORIZED SIGNATURE

52 Frost Free Footing, 42 inch

30 Sft

\$	_____	\$	_____
\$	_____	\$	_____

BID TOTAL (Items 1-52)

The undersigned attaches hereto a (certified check/bidder's bond) in the sum of \$ _____ (\$ _____) as required in the Instructions to Bidder and the undersigned agrees that, in case he shall fail to fulfill his obligations under the foregoing Proposal and Agreement, the said Owner may, at its option, determine that the undersigned has abandoned his rights and interests in such Proposal and that the certified check or bidder's bond accompanying his Proposal has been forfeited to the said Owner; but otherwise, the said certified check or bidder's bond shall be returned to the undersigned upon the execution of the contract and the acceptance of his bonds or upon the rejection of his Proposal.

It is agreed that this bid may not be withdrawn for a period of sixty (60) days after the opening date.

In submitting this bid, it is understood that the right is reserved by the Owner to reject any or all bids, to accept other than the low bid, and to waive any defect or irregularity in any bid or to split award unless otherwise stipulated, should it be deemed to be in the best interest of the Owner to do so.

The Bidder is required to identify his subcontractors that will be utilized for this project in the following areas:

WORK OR SERVICE PERFORMED	COMPANY NAME	OWNERSHIP (MBE/WBE)
Earthwork/Removals		
Underground Utilities		
Bituminous Pavement		
Concrete Pavement		
Restoration of Lawn Areas		
Electrical Work		
Landscaping		

SUBSTITUTIONS OF SUBCONTRACTORS WILL REQUIRE APPROVAL OF THE OWNER, AS SUBCONTRACTORS WILL BE A CONSIDERATION OF THE AWARD OF THE PROJECT.

Dated and signed at _____, State of Michigan,

this _____ day of _____, 20_____.

Company Name

Signature of Bidder

Title

Business Address

City, State, Zip Code

Telephone Number

FAX Number

Seal if bid is by a Corporation.

NAME OF BIDDER

SBS 3

AUTHORIZED SIGNATURE

METHOD OF PAYMENT

GENERAL.....	2
MOBILIZATION	3
PAVEMENT REMOVAL	3
SIDEWALK, REMOVE.....	4
SEWER, REMOVE.....	4
SEWER BULKHEAD.....	5
STRUCTURE REMOVAL	5
WATER MAIN REMOVAL.....	5
FENCE REMOVAL	6
Water Appurtenance, Remove.....	6
SOIL EROSION CONTROL	6
SITE EARTHWORK.....	7
EXISTING TOWER REMOVE.....	7
Storage Tank, Abandon	8
Structure Adjust	8
Tree, Remove.....	8
Curb and Gutter, Remove	9
FENCE INSTALLATION.....	9
CONCRETE SIDEWALK.....	9
Concrete Sidewalk Ramp, ADA	10
CONCRETE CURB & GUTTER.....	10
CONCRETE PAVEMENT.....	11
Hot Mix Asphalt (HMA) Pavement.....	12
AGGREGATE BASE COURSE	12
Subgrade Underdrain	13
Storm Sewer and Culverts	13
Drainage Structures (Inlets, Catch Basins, Manholes).....	14
ADS MECHANICAL TREATMENT DEVICE	15
Outlet Control Structure.....	15
ADS Underground Stormwater Detention basin.....	15
SURFACE RESTORATION.....	16
SITE FURNISHINGS.....	16
Parking Lot Lighting.....	16
Pavement Markings	17
Traffic Maintenance and Control.....	17
Permits	17
Redi Rock Modular Retaining Wall.....	18
CONCRETE Footing.....	18
MISCELLANEOUS RESTORATION ITEMS.....	18
FINAL CLEAN UP	19

GENERAL

A. PRICES AND MEASUREMENT:

Payment for work under this contract will be based on a unit price or lump sum for work actually completed. Final measurements of the work will be taken by the Engineer to determine the amount of work done and thereby determine the total cost. The method of applying the unit prices to measured quantities will be as herein specified. Payment will include the cost of all labor, tools, materials, and equipment necessary to do the work.

Several items may have been included in the bid form but may not be called for on the plans. These items have been included in order to establish a unit price in the event that the item of work is necessary. The Contractor should be aware that these items may increase, decrease, or be zero based on field conditions, or Owner direction.

B. INCIDENTAL ITEMS:

Any items of work indicated as incidental or included shall be considered as part of the project work and shall be completed at no additional expense to the Owner. Incidental or included items shall include labor, materials, and equipment that may not be specifically listed in the Bid Form or in the drawings or specifications, but which are necessary to complete the work.

C. PERMITS:

A number of permits have been applied for by the Owner of this project. The permits must be acquired from the appropriate agency by the Contractor when they are approved. Any permit fees, bonds, and/or permit agency inspection costs will be the responsibility of the Contractor and shall not result in additional cost to the Owner. A list of permits required for this project is shown in the Supplemental Instructions to Bidders section.

MOBILIZATION

(Bid Item 1)

The completed work as measured for MOBILIZATION will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Mobilization, Max. 5%	lump sum

The lump sum price shall be payment in full for all preparatory work and operations which may include, but is not limited to, the following items:

1. The movement of personnel, equipment, supplies, and incidentals to the project site.
2. The establishment of the Contractor's offices, buildings, and other facilities to work on the project.
3. Other work and operations that must be performed.
4. Expenses incurred, prior to beginning work on the various contract items on the project site.
5. Pre-construction costs, exclusive of bidding costs, which are necessary direct costs to the project rather than directly attributable to other pay items under the contract.
6. Permits, bonds, etc.

The pay item will state the maximum amount that can be bid. When the percentage of the original contract amount earned is less than 5 percent, the costs of project specific bonding, insurances, and permits will be reimbursed when a paid invoice is received by the Engineer. The costs of these will then be made in accordance with the Partial Payment Schedule shown below. The original contract amount is the total value of all contract items including the mobilization item. The percentage earned is exclusive of the mobilization item. The total sum of all payments for this item shall not exceed the original contract amount bid for mobilization, regardless of the fact that the Contractor may have, for any reason, shut down his work on the project, moved equipment away from the project and then back again, or for additional quantities or items of work added to the contract.

Partial Payment Schedule

Percentage of Original Contract Amount Earned	Percentage of Bid Price for Mobilization Allowed
5	50
10	75
25	100

When a pay item for mobilization is not included in the proposal, payment for any such work is considered to have been included in payments made for other items of work.

PAVEMENT REMOVAL

(Bid Item 2)

The completed work as measured for PAVEMENT REMOVAL will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
-----------------	-----------------

Pavement, Rem

square yard

Pavement removal shall be measured in place by area in square yards regardless of the material and thickness. The removal area shall be based upon the average length and width measurements as determined in the field by the Engineer.

The contract unit price shall be payment in full for all labor, material and equipment required to sawcut, remove, and properly dispose of the pavement off site. The contract unit price shall apply to pavement of any thickness (both bituminous, composite and concrete).

SIDEWALK, REMOVE

(Bid Item 8)

The completed work as measured for SIDEWALK, REMOVE will be paid for at the contract unit price for the following contract item (pay item):

Pay Item
Sidewalk, Rem

Pay Unit
square yard

Concrete sidewalk removal shall be measured in place by area in square yards. The removal area shall be based upon the average length and width measurements as determined in the field by the Engineer.

The contract unit price shall be payment in full for all labor, material and equipment required to sawcut, remove, and properly dispose of the sidewalk and ramps off site. The contract unit price shall apply to sidewalk of any thickness.

SEWER, REMOVE

(Bid Item 4)

The completed work as measured for SEWER, REMOVE will be paid for at the contract unit price for the following contract item (pay item):

Pay Item
Sewer, Rem, Less than 24 inch

Pay Unit
foot

Storm sewer removal shall be measured in place horizontally by linear feet. The length shall be measured along the sewer centerline from center of structure to center of structure or to end of end section.

In the event that the storm sewer is not connected to a structure then the measurement for payment shall be made end-to-end of pipe removed.

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to remove and properly dispose of the existing sewer offsite as well as furnish, place, and compact suitable backfill material in the remaining trench. The contract price shall also include any temporary sheeting, shoring, and bracing that may be necessary for the removal work. Payment for removing storm sewer shall not apply when a new storm sewer is to be constructed in the same trench where the existing storm sewer is being removed. In this case, removal of the existing storm sewer shall be considered as incidental to the new storm sewer construction.

SEWER BULKHEAD

(Bid Item 5)

The completed work as measured for SEWER BULKHEAD will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Sewer Bulkhead	each

Sewer Bulkhead shall be measured by the each for each sewer bulkhead that is constructed in an existing structure or an existing sewer line.

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to properly fill the existing void in the structure using a brick and mortar bulkhead. This contract price shall also include any materials, equipment, and labor necessary to construct and properly seal the bulkhead protecting it from infiltration.

STRUCTURE REMOVAL

(Bid Item 3)

The completed work as measured for STRUCTURE REMOVAL will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Structure Removal, Less than 72" Dia	each

The contract unit price shall be payment in full for all labor, materials, and equipment necessary for the complete removal of the structure including the casting, adjusting rings, cone, riser sections and base. Storm structures may include manholes, catch basins, and inlets. Proper offsite disposal of the structures as well as furnishing, placing, and compacting suitable backfill in the remaining hole shall also be considered as included in the work. The contract price shall also include any temporary sheeting, shoring, and bracing that may be necessary for the removal work. If the Owner wishes to retain the salvaged castings, then the Contractor shall deliver them to the Owner's designated site. Otherwise, the Contractor shall dispose of the castings offsite.

WATER MAIN REMOVAL

(Bid Item 6)

The completed work as measured for WATER MAIN REMOVAL will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Water Main, Rem	Lump sum

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to remove the water main as called for on the plans.

Water main removal shall be paid for in a lump sum for all water main removed to properly install the proposed work. The payment shall be the same regardless of pipe size or type. The payment shall

include removing and disposing of the water main and fittings as well as removing and disposing of curb stops & boxes and water service leads up to the property line.

Where existing thrust blocks will interfere with the placement of new utilities, then the thrust blocks shall be removed. Thrust block removal will be considered as included in the water main removal work.

Excavation as well as furnishing, placing, and compacting suitable backfill shall be considered as included in all of the removal work. Furnishing and placing caps and/or plugs and necessary thrust blocks on the remaining water main ends after the removals are complete shall also be considered as included as part of the removal work unless a separate pay item is included in the Bid Form to cap water main.

FENCE REMOVAL
(Bid Item 7)

The completed work as measured for FENCE REMOVAL will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Fence, Rem	feet

Fence removal shall be measured in place by linear feet. The length shall be measured along the base of the fence from end to end of the section that is removed. Removing all fence portions including but not limited to gates and posts shall be considered included in the fence removing work. Furnishing, placing, and compacting suitable backfill for the old postholes shall be considered as included in the fence removing work.

WATER APPURTENANCE, REMOVE
(Bid Item 10)

The completed work as measured for WATER APPURTENANCE, REMOVE will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Water Appurtenance, Remove	each

The contract unit price for removal of water appurtenance includes the removal of any existing water valves or other water appurtenances removed for construction of the proposed work. Any necessary excavation as well as furnishing, placing, and compacting suitable backfill shall be considered as included in the gate valve abandonment work. Disposal of the valve box shall be included in this pay item. If the Owner wishes to retain the salvaged gate valve box, then the Contractor shall deliver these items to the Owner's storage yard. Otherwise, the contractor shall be responsible for disposal of the unwanted appurtenances.

SOIL EROSION CONTROL
(Bid Item 11)

The completed work as measured for SOIL EROSION CONTROL will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
-----------------	-----------------

Soil Erosion Control

lump sum

The contract lump sum price shall be payment in full for all labor, materials, and equipment necessary to furnish, install, and maintain soil erosion control measures as outlined in the project plans and in compliance with applicable laws and permit requirements. Maintenance work will include removal and replacement of soil erosion control items as directed by the Engineer. Removal of erosion control measures, accumulated sediment, and debris upon completion of the project shall be considered as included as part of the work. Up to 75% of the contract lump sum price will be paid upon satisfactory installation of the soil erosion control measures. The remaining 25% will be paid upon final acceptance of the project. Restoration of disrupted areas shall be paid for separately under the appropriate surface restoration pay items.

SITE EARTHWORK

(Bid Item 9, 12, 13)

The completed work as measured for Site Earthwork will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Site Earthwork, Fire Station #4	lump sum
Site Earthwork, Fire Station #5	lump sum
Earth Excavation	cyd

The contract lump sum price shall be payment in full for all labor, materials, and equipment necessary to perform the site earthwork and establish the grades as shown on the project plans for each of the Fire Stations, paid separately. This includes excavation to accommodate aggregate base, swales, ditches, berms and other grading necessary to construct improvements as specified on the plans.

Earth Excavation will be paid for the removal of the existing sloped earth in the northwest corner of the Fire Station #5. This pay item includes the removal and disposal of all existing materials to subbase elevation. This item is exclusive to that area and will not be used as reimbursement for removal of material in any other location in the plan set.

The contract unit price shall include the removal and offsite disposal of earth as specified on the plans. The contractor shall provide documentation of an approved offsite location for review and approval by the Engineer.

EXISTING TOWER REMOVE

(Bid Item 14)

The completed work as measured for Existing Tower, Remove will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Existing Tower, Remove	lump sum

The contract lump sum price shall be payment in full for all labor, materials, and equipment necessary to demolish and dispose of the existing training tower including but not limited to the electrical service disconnection, foundation, demolition, and water service disconnection, necessary backfill placement and compaction required for excavations, and offsite disposal of all related debris. Any pavement removal,

earth excavation, subgrade preparation, or material disposal that is required for the tower removal shall be considered as incidental to the work unless separate pay items have been included in the bid form.

STORAGE TANK, ABANDON
(Bid Item 15)

The completed work as measured for STORAGE TANK, ABANDON will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Storage Tank, Abandon	each

The contract unit price for abandoning the existing storage tank shall include removing the existing structure down to 3 feet below grade and drilling drain holes into the existing tank floor. Any necessary excavation as well as furnishing, placing, and compacting Class II sand shall be considered as included in this pay item. The storage tank includes the metal lid, including access ports and concrete structure. Disposal of any material removed material shall be considered as included as part of the work.

STRUCTURE ADJUST
(Bid Item 16)

The completed work as measured for Structure Cover Adjustment will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Structure Cover, Adj, Case 1	each

The work of adjusting structures shall be paid for on a per structure basis and shall apply when the total amount of vertical change of the casting (up or down) is six inches or less. The pay item for adjusting structures shall apply to existing storm manholes, catch basins, inlets, sanitary manholes and gate wells. The adjust structure pay item shall not apply to new structures since final adjustment in this case is included in the contract unit price of the new structure.

The contract unit price shall be payment in full for all labor, material, and equipment necessary to adjust structures in accordance with the plan details so that the castings will match the new finished pavement or landscape surface grades. Excavation, backfill, cleaning the existing casting and disposal of excess or unsuitable materials shall all be considered as included as part of the adjustment work.

Structure Cover, Adj, Case 1 applies to structures that are located inside the paved areas.

TREE, REMOVE
(Bid Item 17)

The completed work as measured for TREE, REMOVE will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Tree, Rem, 6 inch to 18 inch Diameter	each

The size of trees will be determined by the average diameter of the tree trunk, measured to the nearest full inch, at a point 4 ½ feet above the base of the tree at the ground line. Trees having major limbs lower than 4 ½ feet from the ground shall be measured at the smallest diameter below such limbs.

The contract unit price shall be payment in full for all labor, material and equipment necessary to completely remove the tree, including all foliage and root systems, backfill the remaining hole, and to properly dispose of the materials off site. When tree removal is called for, the payment shall include removal of the stump. Separate payments for tree and stump removal shall not be made for the same tree. Removal of trees under 6" in diameter as well as logs, debris, brush, shrubs, topsoil, and other vegetation will be considered as included in the pay item for clearing and grubbing.

CURB AND GUTTER, REMOVE

(Bid Item 18)

The completed work as measured for CURB AND GUTTER, REM will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Curb and Gutter, Rem	foot

Concrete curb and gutter removal shall be measured along the gutter line in linear feet for any curb proposed for removal that is not integral to the pavement.

The contract unit price shall be payment in full for all labor, materials and equipment required to sawcut, remove, and properly dispose of the concrete curb and gutter offsite.

FENCE INSTALLATION

(Bid Item 19, 20)

The completed work as measured for FENCE INSTALLATION will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Fence, Wood Screened, 96 inch	feet
Gate, Wood Screened, 96 inch	each

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to install the fence and gate accordance with the plan notes and details.

Fence, Wood Screened, 96 inch shall be measured in place by linear feet. The length shall be measured along the base of the fence from end to end of the section that is installed with deduction of the clear opening for each gate installed.

Gate, Wood Screened, 96 inch shall be paid for as one complete unit, both sides of the proposed dumpster enclosure gate. This includes all materials, backfill, concrete, etc necessary to furnish and install the proposed gate per the details in the plan set.

CONCRETE SIDEWALK

(Bid Item 21, 22, 23)

The completed work as measured for CONCRETE SIDEWALK will be paid for at the contract unit prices for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Concrete Sidewalk, 10 inch	square feet
Concrete Sidewalk, 6 inch	square feet
Concrete Sidewalk, 4 inch with or without curb	square feet

Concrete sidewalk shall be measured in place and shall be paid for based upon the length and width measurements of the sidewalk area as determined by the Engineer. These pay items include any integral curb proposed as part of the sidewalk as shown on the plan sheets.

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to construct sidewalk of the required thickness in accordance with the plan details. Furnishing, placing, and compacting a 4-inch thick aggregate base shall be considered as incidental to the sidewalk placement. Any necessary excavation, backfill, and disposal of excess materials shall also be considered as incidental to the sidewalk construction. Concrete shall be per section 901 in the 2020 MDOT Standard Specifications for Construction.

The contractor shall be responsible for all onsite quality control testing as outlined in the project special provisions. All cost associated with onsite testing shall be included in the contract unit price. The contractor shall be responsible for providing the city all correlating documentation.

CONCRETE SIDEWALK RAMP, ADA (Bid Item 24)

The completed work as measured for CONCRETE SIDEWALK RAMP, ADA will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Sidewalk Ramp, ADA	square foot

Concrete sidewalk ramps shall be measured in place and shall be paid for based upon the length and width measurements of the sidewalk ramp area as determined by the Engineer. Concrete shall be per section 901 in the 2020 MDOT Standard Specifications for Construction.

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to construct sidewalk of the required thickness in accordance with the plan details. Furnishing, placing, and compacting a 4-inch thick aggregate base shall be considered as incidental to the sidewalk placement. Any necessary excavation, backfill, and disposal of excess materials shall also be considered as incidental to the sidewalk ramp construction.

The contract unit price shall also include all labor, material, and equipment necessary to construct and place the 24" detectable warning strips as shown in the details, and to construct the ramp in compliance with ADA requirements.

CONCRETE CURB & GUTTER (Bid Item 25, 26, 27)

The completed work as measured for CONCRETE CURB & GUTTER will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Curb and Gutter, Conc, Det B2	foot
Driveway Opening, Conc, Det M	foot
Curb Ramp Opening, Conc	foot

Concrete curb & gutter shall be measured in place by linear feet. The length shall be measured along the gutter line from end of curb to end of curb. Curb endings and curb drops shall all be measured and paid for as part of the adjacent curb pay item. This item shall be for both spill in and spill out curb and gutter. Concrete shall be per section 901 in the 2020 MDOT Standard Specifications for Construction.

Curb and Gutter, Conc, Det B2 shall include all materials, grading, disposal of excavated materials, etc. to install proposed rolled curb where called out in the plan documents. This item shall be measured along the gutter line for both spill out and spill in curb and gutter.

Curb Ramp Opening shall include all materials, disposal of excavated materials, fine grading, etc. to construct a curb ramp opening in accordance with subsection 802.03 of the 2020 MDOT Standard Specifications for Construction, the MDOT Standard Plan R-28 series and as required to conform with the curb ramp geometry including but not limited to, slopes, counter slopes, running slopes, cross slopes, flares and widths.

Driveway Opening, Conc, Det M shall be paid for by the linear foot from springline to springline and shall be constructed per the specifications of the 2020 MDOT Standard Specifications for Construction Manual.

The contract price shall be payment in full for all labor, materials, and equipment necessary to construct the concrete curb and gutter in accordance with the plan details. Any excavation, subgrade compaction, backfilling behind the curb, disposal of excess materials, joints, curing compound, and placement of curb drops shall be considered as incidental to the curb and gutter construction.

CONCRETE PAVEMENT

(Bid Item 28, 29)

The completed work as measured for CONCRETE PAVEMENT will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Conc Pavt, Nonreinf, with or without integral curb, 7 inch	square yard
Conc Pavt, Nonreinf, with or without integral curb, 10 inch	square yard

Concrete pavement shall be measured in place by square yards and the area shall be based upon the pavement length and width measurements as determined by the Engineer. Longitudinal measurements shall be made along the centerline of pavement from end to end. Transverse measurements shall extend from edge of pavement to edge of pavement. If the concrete pavement has an integral curb, then the transverse measurement shall extend to the back of curb so that the integral curb is included in the

pavement area calculation. Concrete shall be per section 901 in the 2020 MDOT Standard Specifications for Construction.

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to form, place, cure, and protect the concrete pavement in accordance with the plan specifications. Concrete pavement joints and joint sealing shall be considered as included in the pavement construction work unless separate pay items for pavement joints are shown on the Bid Form. Backfilling behind curbs or along pavement edges shall also be considered as incidental to the concrete pavement construction.

HOT MIX ASPHALT (HMA) PAVEMENT

(Bid Item 30, 31)

The completed work as measured for HOT MIX ASPHALT (HMA) PAVEMENT will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
HMA, 4EML	ton
HMA, 5EML	ton

HMA pavement for the parking lot shall be measured in tons based upon certified weight delivery tickets. The Contractor must provide certified weight delivery tickets to the Construction Observer.

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to construct the HMA pavement in accordance with the plan details. Furnishing and applying bond coats, pavement compaction, and protection of the work shall all be considered as incidental to HMA pavement construction. The application method and coverage rate shall be in accordance with the plans and specifications.

AGGREGATE BASE COURSE

(Bid Item 32, 33)

The completed work as measured for AGGREGATE BASE COURSE will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Aggregate Base, 21AA, 4 inch	square yard
Aggregate Base, 21AA, 8 inch	square yard

Aggregate base course shall be measured in place by square yards. The area shall be based upon the average length and width measurements of the aggregate placement area as determined by the Construction Observer. Depth measurements will be taken as necessary in order to verify the aggregate base course thickness. Concrete shall be per section 901 in the 2020 MDOT Standard Specifications for Construction.

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to place, grade, and compact the aggregate materials. Any earth excavation, subgrade preparation, or material disposal that is required for the aggregate base course placement shall be considered as incidental to the work unless separate pay items have been included in the bid form for earthwork.

SUBGRADE UNDERDRAIN

(Bid Item 34)

The completed work as measured for SUBGRADE UNDERDRAIN will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Underdrain, Subgrade, 6 inch	foot

Subgrade underdrain shall be measured in place horizontally by linear feet. The length shall be measured along with the centerline of the pipe from end of pipe to end of pipe or to center of structure.

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to construct the underdrain including all excavation, backfill and fill materials, disposal of excess materials, pipe, joint materials, structure taps, complete cleanup, and all other work required for the proper placement of the underdrain in accordance with the plan details. The geotextile trench wrap and trench aggregate that are called for in the plan detail shall be considered as included in the placement of the underdrain.

STORM SEWER AND CULVERTS

(Bid Item 35,36,37)

The completed work as measured for STORM SEWER AND CULVERTS will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Sewer, Conc, CI IV, 12 inch	foot
Sewer, Conc, CI IV, 15 inch	foot
Sewer, Conc, CI IV, 18 inch	foot

Storm sewer shall be measured in place horizontally by linear feet. The length shall be measured along the centerline of the pipe from end of pipe to end of pipe or to center of structure. Radius pipe or bend sections will be measured and paid for as storm sewer.

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to construct the storm sewer. The payment for storm sewer shall include the following (except such items for which separate prices are received on the Bid Form): clearing; excavating; trenching; disposal of items from clearing; disposal of unsuitable or excess excavated materials; temporary sheeting, bracing and shoring of excavations; support, relocation, replacement, connection or reconnection of existing pipe lines, building leads and utilities; furnishing and placing of pipe, jointing materials, fittings, bulkheads, plugs, adaptors; furnishing and placing of required bedding, backfill, and fill materials; complete cleanup and surface restoration. Removal of an existing storm sewer shall be considered as included in the price for the new storm sewer construction if the new storm sewer is being constructed in the same trench as the existing sewer.

Payment for storm sewer shall also include up to 18 inches of trench undercut and refill with compacted MDOT 6A crushed gravel or 6A crushed concrete unless otherwise shown in the plan details. If additional undercut is required beyond 18 inches, then it shall be paid for separately as Trench Undercut and Refill.

The contract unit price shall also include payment in full for dewatering of the excavation as described in the Earthwork section. The contract unit price does not include dewatering by means of deep wells or well points. In the event that dewatering by means of deep wells or well points is required, as determined by the Engineer, then this work shall be paid for separately.

DRAINAGE STRUCTURES (INLETS, CATCH BASINS, MANHOLES)

(Bid Item 38, 39)

The completed work as measured for DRAINAGE STRUCTURES will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Dr Structure, 24 inch	each
Dr Structure, 48 inch	each

The contract unit price shall be payment in full for all labor, materials and equipment necessary to construct the storm structure. Each storm structure shall be complete with base, steps, frames and covers, stubs, pipe opening, channels, and sumps (where appropriate) as called for in the plan details. Payment for storm structures shall include the following (except such items for which separate prices are received on the bid form): excavating; disposal of unsuitable or excess excavated materials; temporary sheeting, bracing and shoring of excavations; support, relocation, replacement, connection or reconnection of existing pipe lines, building leads and utilities; furnishing and placing of structure, jointing materials, fittings, bulkheads, and plugs; cleaning; furnishing and placing of required bedding, backfill and fill materials; final adjustment or reconstruction of casting to finished grade; complete cleanup and surface restoration. Payment will be the same for standard and low head structures of the same diameter. Payment will also be the same for storm manholes of the same diameter both with and without sumps. Removal of an existing storm structure shall be considered as included in the price for the new storm structure construction if the new storm structure is being constructed in the same location as the existing structure.

The following structure covers will be utilized:

- Square Catch Basin covers shall be MDOT 1040M1 covers
- Round Catch Basin covers shall be MDOT type B covers.
- Manhole style drainage structures shall be MDOT type Q covers.

The contract unit price shall also include payment in full for dewatering of the excavation as described in the Earthwork section. The contract unit price does not include dewatering by means of deep wells or well points. In the event that dewatering by means of deep wells or well points is required, as determined by the Engineer, then this work shall be paid for separately.

MANHOLE COVER, TYPE Q

(Bid Item 40)

The completed work as measured for MANHOLE COVER, TYPE Q will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Manhole Cover, Type Q	each

The contract unit price shall be payment in full for all labor, tools, equipment and materials required to complete the work in accordance with the project details and specifications.

This item shall be paid when the structure involved requires removal of the existing frame and cover and replacement with a new frame and cover. Payment shall include furnishing the new frame and cover and delivery of the existing frame and cover to the OWNER. Adjusting the rim elevation to the proposed rim elevation shall be considered as included in this pay item.

ADS MECHANICAL TREATMENT DEVICE

(Bid Item 41)

The completed work as measured for ADS MECHANICAL TREATMENT DEVICE be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
ADS Mechanical Treatment Device	each

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to furnish and install the mechanical treatment device in accordance with the plan details and the manufacturer's requirements. This includes all backfill and necessary materials to backfill the system per the manufacturer's instructions.

OUTLET CONTROL STRUCTURE

(Bid Item 42)

The completed work as measured for OUTLET CONTROL STRUCTURE will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Outlet Control Structure	each

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to furnish and install the outlet control structure in accordance with the plan details. The outlet control structure will include a precast 6-inch weir wall, steps, outlet control tee, orifices, tee, 4-inch caps, risers, pre-cast cover adjustments, manhole frame and covers and all necessary materials to construct the outlet control structure per the detail provided in the plan set.

ADS UNDERGROUND STORMWATER DETENTION BASIN

(Bid Item 43)

The completed work as measured for ADS UNDERGROUND STORMWATER DETENTION BASIN will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
ADS Underground Stormwater Detention Basin	each

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to furnish and install the Underground Stormwater Detention System in accordance with the plan details and

the manufacturer's requirements. This includes all backfill, stone and geofabric and necessary materials to backfill and install the system per the manufacturer's instructions.

SURFACE RESTORATION

(Bid Item 44)

The completed work as measured for SURFACE RESTORATION will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Surface Restoration	square yard

Surface Restoration shall be measured in place by square yards and shall be based upon the average length and width measurements of the restored area as determined by the Construction Observer.

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to furnish and place the topsoil, seed, and mulch or topsoil and sod as called for on the plans and specifications. Watering seed or sod until vigorous turf growth is established shall be considered as incidental to the surface restoration work unless a separate pay item for water is included in the Bid Form.

When Surface Restoration work is completed, including the six (6) week maintenance period, Engineer will, upon request, make a final inspection prior to transferring the responsibility to the City for assuming those areas for completion and watering.

Where inspected Surface Restoration work during the initial six (6) weeks after placement does not comply with requirements, the contractor shall replace rejected work and continue specified six (6) week maintenance until reinspected by Engineer and found acceptable which shall not exceed the six (6) week time frame after placement.

Contractor will be paid 50% of work when the initial seeding is completed and remaining 50% when all provisions of the Surface Restoration special provision is completed.

SITE FURNISHINGS

(Bid Item 45)

The completed work as measured for SITE FURNISHINGS will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Bike Hoop, Furnish and Install	each

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to install in accordance with the manufacturer's recommendations, plan sheets, and details for all site furnishings. Excavation for base and placement of any required foundations shall be considered incidental to the work. Placement of surface concrete such as sidewalk will be paid separately under the corresponding pay item.

PARKING LOT LIGHTING

(Bid Item 46)

The completed work as measured for PARKING LOT LIGHTING will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Parking Lot Lighting	lump sum

The contract lump sum price shall include all labor, materials, and equipment necessary to furnish and install the proposed lighting including light poles, conduit, switches, etc. in accordance with plan details. The lump sum pay item shall be reimbursed upon completion and once functionality can be proven and accepted by both the Owner and the Building Department.

PAVEMENT MARKINGS

(Bid Item 47)

The completed work as measured for PAVEMENT MARKINGS will be paid for at the contract unit prices for the following contract items:

<u>Pay Item</u>	<u>Pay Unit</u>
Pavement Markings	lump sum

Pavement markings as proposed in the plan documents shall be waterborne pavement markings per the specifications of the MDOT standard specifications for construction and shall be paid for by the lump sum.

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to furnish and install the pavement markings in accordance with the plan details and the manufacturer's instructions. All sweeping and preparatory work as well as traffic control and temporary protection of newly placed markings shall be considered as incidental to the pavement marking work. Removal of any temporary pavement markings shall also be considered as incidental unless the Bid Form already includes pay items for removing temporary markings.

TRAFFIC MAINTENANCE AND CONTROL

(Bid Item 48)

The completed work as measured for TRAFFIC MAINTENANCE AND CONTROL will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Traffic Maintenance and Control	lump sum

The contract lump sum price shall be payment in full for all labor, materials, and equipment necessary to furnish, install, and maintain all signs, cones, barricades, flagging, etc. as required by the Michigan Manual of Uniform Traffic Control Devices and the Supplemental Specifications. Removal of any temporary signs or other traffic control equipment upon completion of the project shall be considered as incidental to the traffic maintenance and control work.

PERMITS

(Bid Item 49, 50)

The completed work as measured for SOUTHFIELD BUILDING PERMIT will be paid for at the contract unit prices for the following contract items:

<u>Pay Item</u>	<u>Pay Unit</u>
Southfield Building Permit Allowance	dollar
Oakland County Road Commission ROW Permit	dollar

This pay item dollar allowance shall be the payment in full for the fees associated with furnishing the Southfield Building Department permit and the Oakland County Road Commission ROW Permit per the requirements of the permitting agency. This item will be reimbursed to the Contractor upon furnishing the invoice associated with the permits.

REDI ROCK MODULAR RETAINING WALL

(Bid Item 51)

The completed work as measured for REDI ROCK MODULAR RETAINING WALL be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Redi Rock Modular Retaining Wall	linear feet

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to furnish and install the retaining wall in accordance with the plan details and the manufacturer's requirements. The retaining wall will include base material and underdrain per the specifications of the supplier. This includes all backfill and necessary materials to backfill the wall per the manufacturer's instructions.

CONCRETE FOOTING

(Bid Item 52)

The completed work as measured for CONCRETE FOOTING will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Frost Free Footing, 42-inch	square feet

Frost Free Footing, 42-inch deep shall be measured in place by square feet and the area shall be based upon the pavement length and width measurements as determined by the Engineer. Longitudinal measurements shall be made along the centerline of pavement from end to end. Transverse measurements shall extend from edge of pavement to edge of pavement.

The contract price shall be payment in full for all labor, materials, and equipment necessary to construct the frost free footing in accordance with the plan details. Any excavation, subgrade compaction, backfilling, disposal of excess materials, joints, curing compound, etc. shall be considered as incidental to the construction.

MISCELLANEOUS RESTORATION ITEMS

Restoration of miscellaneous items such as, but not limited to, street signs, traffic signs, shrubbery and other ornamental landscape items which are damaged, removed, or destroyed by the Contractor in the course of the work shall be repaired or replaced by the Contractor with new materials of equal quality as existed prior to the start of work. All such items for which specific bid items are not listed in the proposal shall be considered as incidental work and shall be replaced or repaired at the expense of the Contractor.

FINAL CLEAN UP

Final clean up of the job shall be considered as incidental. Items in this category include removal of debris and litter from the site, removal of surplus materials, sweeping, repair of any damages, and clean out of drainage structures located within the work area.

Surface Restoration shall commence immediately upon completion of final grading or as MDOT seasonal limitations dictate.

ACKNOWLEDGEMENT of RECEIPT OF ADDENDUM

ATTENTION:

Please complete this form and include it with the bid submission.

Our firm: _____

has received from OHM-Advisors.

Addenda No. 1 for:

Fire Station #4 & Fire Station #5 Paving Improvements

City of Southfield

0153-23-0180

Today, _____ (date) at _____ (time) a.m. / p.m. (circle one)

Signature of receiver: _____

Printed name of receiver: _____

Company name: _____

End of Addendum No. 1