



CITY OF CHELSEA PLANNING COMMISSION

AGENDA

Wednesday, February 21, 2024, at 7:00 PM

Chelsea City Council Chambers

311 S. Main Street

Remote option available for members of the public. Commissioners must attend in person.

1. Call to Order
2. Approval of the Agenda
3. Approval of the Minutes
 - a. Approval of the meeting minutes for January 23, 2024
4. Public Comment (non-agenda items)
 - a. 3 minutes per speaker
 - b. Speakers are not permitted to grant their reserved time to an alternate speaker
 - c. Accommodations may be made for persons needing assistance while addressing the Planning Commission
5. New Business
 - a. Chelsea Hospital Inpatient Rehabilitation Renovation Site Plan Review
 - b. Heritage Farms Phase II Site Plan Review
6. Discussion
 - a. Staff Report
 - i. Upcoming Agenda Items
 - ii. Local Updates
 - iii. Correspondence
 - b. Commissioner Reports
7. Public Comment (agenda items)
8. Adjournment

Zoom Information

Please click the link below to join the webinar:

<https://us02web.zoom.us/j/85053613074?pwd=Si9nZ2FTU3hWVDgzRTM5NmITMGtpQT09>

Passcode: 170087

+1 312 626 6799 US (Chicago)

Item 3a
January 23, 2024
Meeting Minutes

PLANNING COMMISSION MINUTES
JANUARY 23, 2024
CHELSEA MUNICIPAL BUILDING COUNCIL CHAMBERS
311 S. MAIN STREET, CHELSEA, MI

CALL TO ORDER

Chair Robinson called the meeting to order at 7:00 pm.

Present: Claire Robinson (Chair), Vincent Elie (Vice Chair), Heather Hunnell, Wade Lehmann, Laura Baker, Julianne Chard, Marcia White

Absent: Sarah Haselschwardt (Secretary)

Vacancy: One

Others Present: Michelle Marin (Carlisle Wortman), Tony Iannelli (City Council Liaison) and Rachel Kapolka (Assistant Clerk).

APPROVAL OF THE AGENDA

MOVED by White, SECONDED by Elie to approve the amended agenda to add 3.b). Approval of the meeting minutes for August 15, 2023. All Ayes. Motion Carried.

APPROVAL OF THE MEETING MINUTES

MOVED by Hunnell, SECONDED by White to approve the meeting minutes for December 19, 2023.

All Ayes. Motion Carried.

MOVED by White, SECONDED by Lehmann to approve the meeting minutes for August 15, 2023. (6) Ayes, 1 Abstain. Motion Carried.

PUBLIC COMMENT (non-agenda items only)

None

PUBLIC HEARING

None

OLD BUSINESS

- a. Zoning Ordinance Text Amendment for Section 4.28 – Mobile Food Vending
 - a. Paul Montagno – Staff Report
 - i. At the work session it was discussed that the property owner should be responsible for applying for a permit. Individual vendors will still need to obtain a license to operate.
 - ii. Reviewed draft language with commissioners.

MOVED by Lehmann, SECONDED by White to pass the resolution recommending the approval of the proposed text amendment regulating food trucks to City Council. All Ayes. Motion Carried.

- b. 2024 Planning Commission Calendar Adjustment

MOVED by Chard, SECONDED by White to approve the City of Chelsea Planning Commission 2024 calendar changes including moving the November 5th meeting date to November 6th. All Ayes. Motion Carried.

NEW BUSINESS

- a. 2024 Planning Commission 2023 Annual Report
 - a. Paul Montagno, Michelle Marin – reviewed tables with commissioners. Moving in the direction of the Capital Improvement Planning Process.
 - b. Chair Robinson noted that Commissioners Elie, Haselschwardt and Baker have terms that expire this year and requested that commissioner attendance be included in the report.

MOVED by Hunnell, SECONDED by Elie to forward the 2023 Annual Planning Commission Report to City Council for review. All Ayes. Motion Carried.

DISCUSSION

- 1. Staff Report – Michelle Marin
 - a. Upcoming Agenda items
 - i. Heritage Farms – Phase 2
 - ii. Addition to Chelsea Hospital
 - iii. Rockwell Building – admin review
 - iv. Solar Ordinance – Feb. work session
- 2. Committee Reports
 - a. Council Member Tony Iannelli announced the Annual Visioning Session will be held at Silver Maples on Wednesday, January 31st at 5:30 p.m.

PUBLIC COMMENT (agenda items)

None

ADJOURNMENT

MOVED by Elie, SECONDED by Hunnell to adjourn the meeting. All Ayes. Motion Carried.

Meeting adjourned at 7:35 p.m.

Respectfully Submitted,

Rachel Kapolka (Assistant Clerk)

Item 5a
**Site Plan Review: Chelsea Hospital Inpatient
Rehabilitation Renovation**



Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: February 14, 2024

Preliminary Site Plan Review For City of Chelsea, Michigan

Applicant: Steve VanBrussel, Anne Cox

Location: 775 S Main Street

Parcel ID: 06-06-12-475-054

Project Name: Chelsea Hospital – Inpatient Rehabilitation Renovation

Zoning: MI – Medical Institution, M-52 Overlay District

Plan Date: January 30, 2024

Revisions: February 12 and 13, 2024

Action Requested: Site Plan Approval

SITE DESCRIPTION

The applicant is requesting site plan approval for renovations to the existing inpatient rehabilitation center at Trinity Health Hospital. The subject area is located in the northwest area of the 98.45-acre parcel at 775 S Main Street, also known as parcel number 06-06-12-475-054. The project proposes renovations to two (2) adjacent buildings, including interior reconfigurations and the construction of a new connector structure to offer interior access to the two buildings, effectively combining them. The proposed site plan appears to comply with the requirements of the zoning ordinance and the intentions of the Master Plan for this Zoning District.

The property is located in the MI – Medical Institution Zoning District which includes the Trinity Health campus and other medical uses. The property also lies within the M-52 Corridor District, and as such must comply with regulations established in Section 3.12 of the Zoning Ordinance. The proposed project includes alterations that do not substantially alter the character of the

existing buildings. Figure 1 shows the location of the project area within the broader Chelsea Hospital campus.

Figure 1. Aerial view of the project area and surrounding hospital campus



Source: NearMap

Table 1 indicates the existing use and zoning designation for the subject site and the surrounding properties.

Table 1. Surrounding property details

Direction	Zoning	Current Use
Subject Property	MI – Medical Institution, M-52 Overlay	Chelsea Hospital
North	DT, R-1, R-2, and R-3	Apartments, Single family homes
East	R-1, Single Family Residential	Single family homes
West	R-1, Single Family Residential, M-52 Overlay, RC – Recreation Conservation	Single family homes, Pierce Park
South	MI – Medical Institution, T-2 – Mixed Use, O-1 –Office	Medical facilities, offices, Silver Maples

Items to be addressed: None

NATURAL FEATURES

The site is currently developed. The project area includes the removal of 1,026 square feet of concrete pathway to provide space for the proposed structure. No natural features exist in the project area that warrant assessment or mitigation.

Items to be addressed: None.

SITE ACCESS AND CIRCULATION

This portion of the hospital campus is serviced by the parking areas to the west of the subject buildings. Access to the site is provided from Will Johnson Drive, which circulates passenger vehicles around the hospital buildings, connecting to South Main Street from both the north of Pierce Park and south of the downtown Chelsea area. The site plan does not include a circulation map or details to suggest that there are any proposed changes to site access and circulation, and the applicant has clarified that general site access and circulation are not proposed to change.

The existing eight-foot-wide concrete pedestrian pathway that travels between the two (2) buildings will remain and provide access to the new interior connector structure via two (2) new building entrances.

Items to be addressed: None.

AREA, WIDTH, HEIGHT, SETBACKS

The dimensional requirements in Table 2 below apply to all structures in the MI – Medical Institution District. Sheet C11 of the site plan shows the existing floor area of the Chelsea Hospital structure, and the revised Sheet C11 includes the distances to the property lines, demonstrating compliance with Section 12.03(B) of the Zoning Ordinance. Revised Sheet A3.11 shows how the maximum building height of the proposed connector (11' 11") is lower than the building height of the adjacent Atrium West building.

Table 2. Dimensional regulations

	Required	Provided	Compliance
Front yard setback	30 ft	153 ft	Complies
Rear yard setback	20 ft	661 ft	Complies
Side yard setback	20 ft each, 40 ft total	872 ft, 1352 ft	Complies
Max. lot coverage	25%	7.4%	Complies
Max. Building Height	40 ft	11' 11"	Complies

Items to be addressed: None.

LIGHTING

A lighting and photometric plan was provided by the applicant indicating two (2) proposed ceiling-mounted can lights on each of the two (2) connector structure entrances, mounted on the soffit overhang. The photometric grid, provided by the applicant on “Sheet Ltg Calcs”, indicates that the illumination will reach 0.2 footcandles or less at the exterior edge of the adjacent building.

Items to be addressed: None.

PARKING

Medical office parking calculations are determined by the number of beds and the number of employees during peak shifts. The applicant has indicated that the proposed project does not change either of these values. As such, updated parking calculations are not required.

Items to be addressed: None.

FLOOR PLANS AND ELEVATIONS

The applicant provided proposed floor plans on Sheet A2.11C. The project proposes a structural connection between two (2) adjacent buildings such that interior access is provided. The connector will be 16.8’ wide between the buildings, 17.6’ wide on the southeast end, and 19.6’ wide on the northwest end. The connector is 56’ 10” long, as noted on the revised Sheet C3. The floor plans indicate that the subject buildings being connected include patient rooms with toilets, offices, treatment rooms, a prosthetics lab, a rehabilitation room, and various staff rooms. The elevations show the connector consisting of metal wall panels and windows to connect to the existing brick buildings. The connector structure slopes slightly, and a handrail is provided. The applicant provided a document indicating the proposed façade colors of the connector structure, with the panels matching the colors of the existing structures.

Items to be addressed: None.

LANDSCAPING

A landscaping plan was not included in the site plan submission. The proposed project redevelops a small, existing impervious area that includes no significant site landscaping. No trees are proposed for removal as part of the project. We do not see a need for the applicant to include a landscape plan in the site plan.

Items to be addressed: None.

UTILITIES

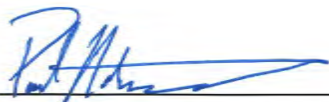
The site plan includes utilities information, including water main and sewer details.

Items to be addressed: We defer to the City Engineer and Department of Public Works to assess the utilities information.

RECOMMENDATIONS

In general, the proposed project appears consistent with the requirements of the Zoning Ordinance. We recommend that the Planning Commission approve the site plan with the condition that the applicant resubmit the site plan that addresses the items in the City Engineer’s report dated 2-7-24 to be reviewed and approved administratively.

Respectfully submitted,



CARLISLE/WORTMAN ASSOC., INC
Paul Montagno, AICP
Principal



CARLISLE/WORTMAN ASSOC., INC.
Michelle Marin
Community Planner

#301-2400

cc. Martin Colburn, City Manager
Derik Bollinger, DPW Superintendent
Matt Forster, City Building Official
Mariah Fink, City Attorney
Steve VanBrussel, Applicant
Anne Cox, Applicant

SITE PLAN

CHELSEA HOSPITAL

INPATIENT REHABILITATION

RENOVATION

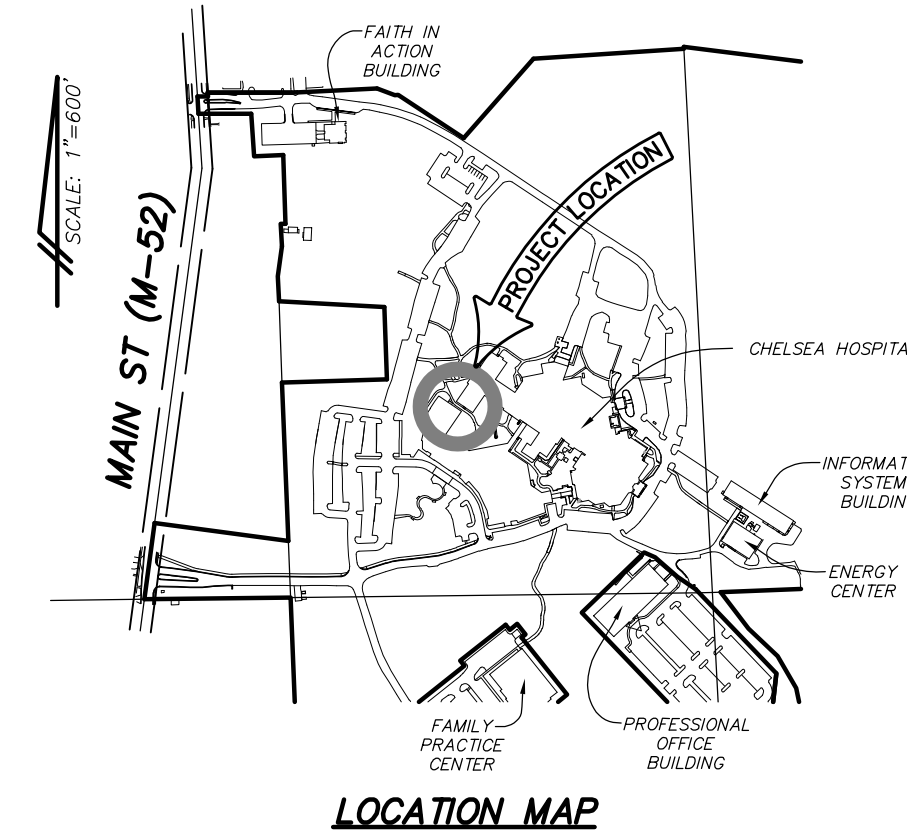
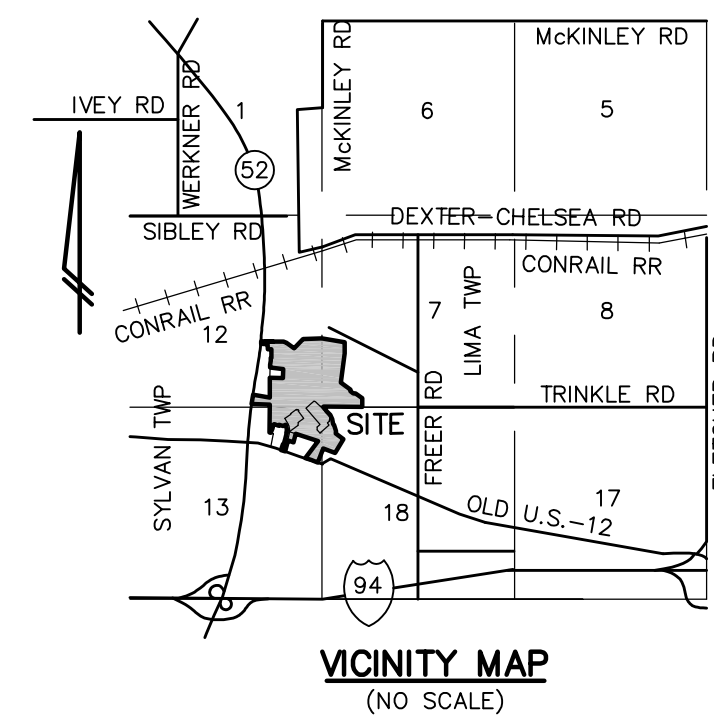
TRINITY HEALTH AND UNIVERSITY OF MICHIGAN - A JOINT VENTURE HOSPITAL

A PART OF THE
SE 1/4 SECTION 12, T2S, R3E,
CITY OF CHELSEA
WASHTENAW COUNTY, MICHIGAN

CONSTRUCTION NOTES:

- 1.) IT IS ESSENTIAL THAT THE CONTRACTOR FAMILIARIZE HIMSELF WITH THE SITE PRIOR TO SUBMITTING PROPOSAL.
- 2.) ALL CONSTRUCTION SHALL BE PERFORMED PER THE CITY OF CHELSEA STANDARD SPECIFICATIONS.
- 3.) THE AREA WITHIN THE CONSTRUCTION LIMITS SHALL BE STRIPPED OF ORGANIC SOILS PRIOR TO COMMENCING GENERAL EXCAVATION. THIS MATERIAL SHALL BE STOCKPILED ON THE PROPERTY OR AS DIRECTED BY THE ENGINEER OR THE OWNER.
- 4.) THE CONTRACTOR WILL BE REQUIRED TO PROOF ROLL (WITH A HEAVY RUBBER-TIRED VEHICLE) ALL FILL AREAS PRIOR TO PLACING ADDITIONAL FILL AND ALL CUT AREAS UPON COMPLETION OF THE CUT AND PRIOR TO PLACING BASE MATERIAL. IF THE PROOF ROLLING INDICATES UNSTABLE AREAS, THE UNSTABLE MATERIAL MUST BE REMOVED AND REPLACED WITH MATERIAL MATCHING THE ADJACENT SOILS TO THE ELEVATION OF THE SUBGRADE.
- 5.) ALL FILL MATERIAL MUST BE PLACED IN LIFTS NOT EXCEEDING 9 INCHES AND COMPACTED TO 95% OF THE MAXIMUM UNIT WEIGHT.
- 6.) THE FINISHED SUBGRADE MUST BE GRADED WITHIN A TOLERANCE OF +/- 0.1 FEET OF DESIGN GRADE COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM UNIT WEIGHT TO A DEPTH OF 9 INCHES AND APPROVED BY THE OWNER'S REPRESENTATIVE/ENGINEER PRIOR TO PLACEMENT OF THE AGGREGATE BASE. FINE GRADING, PRIOR TO THE PLACEMENT OF THE BASE MATERIAL, SHALL BE INCLUDED IN THE COST OF PREPARING THE SUBGRADE.
- 7.) ALL DISTURBED AREAS, DITCH BOTTOMS AND SLOPES UNLESS OTHERWISE NOTED, SHALL BE SEEDED AND MULCHED PER M.D.O.T. SPECIFICATION 815 & 816, INCLUDING PLACEMENT OF A 4-INCH TOPSOIL BED. DITCH BOTTOMS SHALL BE SODDED AND PEGGED WHERE DITCH GRADE EXCEEDS 3.00%.
- 8.) THE CONTRACTOR MUST CONTACT MISS DIG PRIOR TO BEGINNING CONSTRUCTION.
- 9.) ALL CONSTRUCTION ACTIVITIES SHALL BE SIGNED PER THE CURRENT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL MAINTAIN ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES.
- 10.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURES PER THIS APPROVED PLAN.
- 11.) THE CONTRACTOR MUST OBTAIN AN EROSION CONTROL PERMIT PRIOR TO BEGINNING EARTH MOVING. THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PRIOR TO BEGINNING CONSTRUCTION.
- 12.) ANY CONDITIONS (EXISTING) ON THE SITE THAT ARE NOT CONSISTENT WITH THE PLANS OR SOIL EROSION SEDIMENTATION PERMIT WILL RESULT IN A STOP-WORK ORDER AND REVOCATION OF THE SOIL EROSION SEDIMENTATION CONTROL PERMIT.
- 13.) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND/OR OBTAIN ANY INFORMATION NECESSARY REGARDING THE PRESENCE OF UNDERGROUND UTILITIES THAT MAY AFFECT THE WORK.
- 14.) CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO AND THE REPAIR OF ANY EXISTING UTILITY LINE IN THE CONSTRUCTION ZONE.
- 15.) THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THE PLANS ARE ONLY APPROXIMATE. NO FIELD VERIFICATION OF EXISTING UTILITY LINES HAS BEEN DONE.
- 16.) CONTRACTOR SHALL BE AWARE THAT SITE IS A HOSPITAL AND ACCESS SHALL BE MAINTAINED AT ALL TIMES. WORK AREAS THAT MUST BE CLOSED FOR CONSTRUCTION SHALL HAVE PROPER SIGNAGE PROVIDED TO LIMIT PEDISTRIAN AND VEICHULAR ACCESS WITHIN THE WORK ZONE.
- 17.) CONTRACTOR SHALL INCLUDE THE COST OF ALL DEWATERING SYSTEM AND HOSES FOR THE WORK INCLUDED IN THE PLANS FOR THE BASE BID AND ALL BID ALTERNATES. MOST OF THE SITE IS CONSIDERED A REGULATED WETLAND AND CONTRACTOR SHALL TREAT ALL AREAS AS SUCH.

DEVELOPER/OWNER
TRINITY HEALTH AND
UNIVERSITY OF MICHIGAN
A JOINT VENTURE HOSPITAL
775 S. MAIN ST.
CHELSEA, MICHIGAN 48118
734-593-5399
C/O DAVID ROGERS



SURVEYOR/CIVIL ENGINEER

CIVIL ENGINEERS • PLANNERS
SURVEYORS • LANDSCAPE ARCHITECTS

P.O. BOX 1128
3526 WEST LIBERTY RD, SUITE 400 ANN ARBOR, MICHIGAN 48106
TEL: 734-761-8800
E-MAIL: weco@wengco.com

PLANNER/LANDSCAPE ARCHITECT

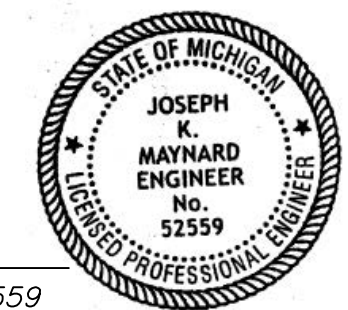
115 1/2 E. LIBERTY STREET
ANN ARBOR, MI 48104
T: (734) 663-1910
F: (846) 732-2148
www.a3c.com

COLLABORATIVE ARCHITECTURE

SHEET TITLE	SHEET NO.
COVER SHEET	C1
EXISTING CONDITIONS	C2
REMOVAL, SITE AND GRADING PLAN	C3
STORM SEWER PLAN AND PROFILE	C4
WATER MAIN PLAN AND PROFILE	C5
CITY OF CHELSEA WATER MAIN STANDARD DETAILS	C6
CITY OF CHELSEA WATER MAIN SPECIFICATIONS	C7
SANITARY AND STORM DETAILS	C8
OVERALL BOUNDARY SURVEY	C9
OVERALL WORK AREA LOCATION PLAN	C10
MC (MEDICAL CENTER) ZONING DISTRICT	C11

ARCHITECTURAL PLANS	
FLOORPLAN LEVEL 1 - AREA C	A2.11C
EXTERIOR ELEVATIONS	A3.11
BUILDING SECTIONS	A3.21
BUILDING SECTIONS	A3.22
WALL SECTIONS	A3.23

PREPARED BY JOSEPH K. MAYNARD P.E., MICH No. 52559

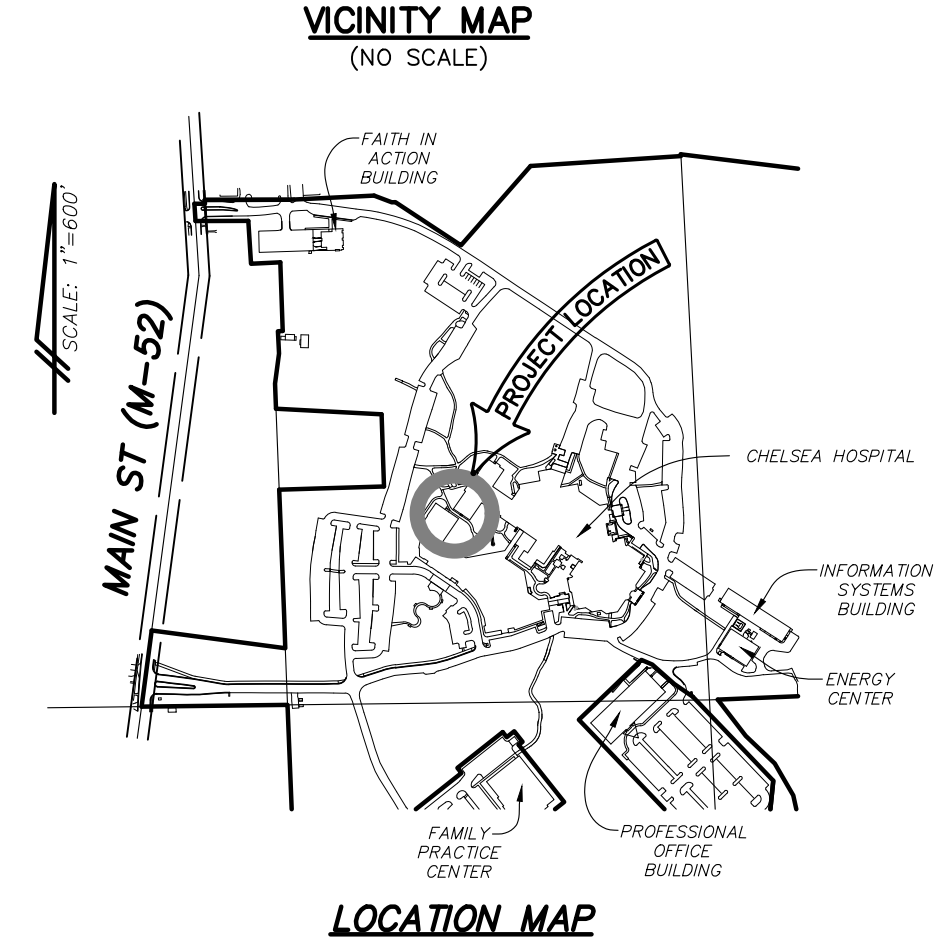
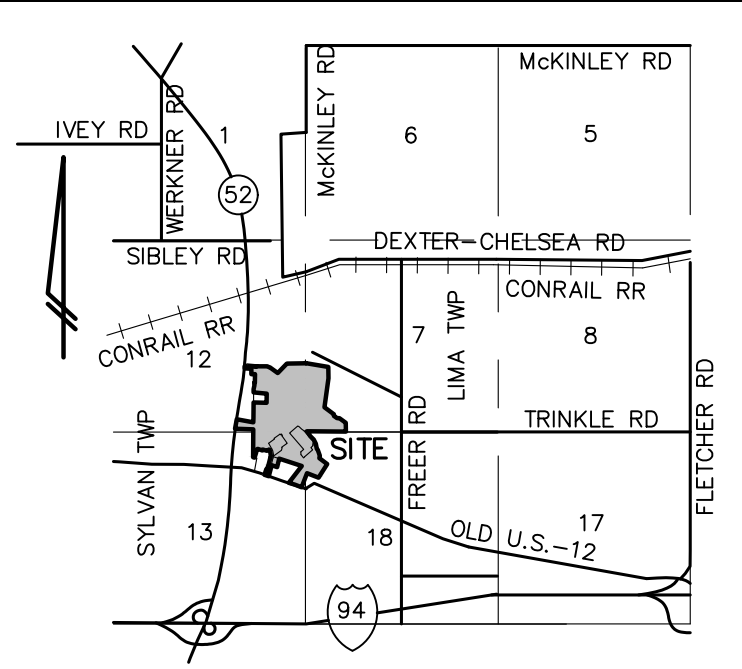


I:\11810mg\310604\11810mg-0101-0101-0101-0101.dwg, 1/20/2024, 2:20:08 PM, 1:1

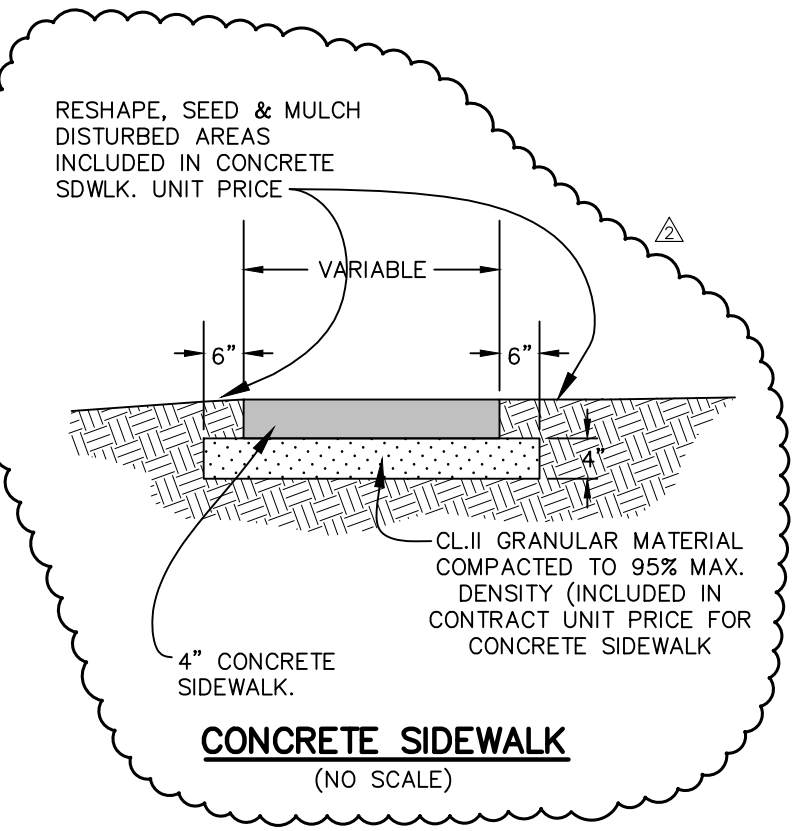
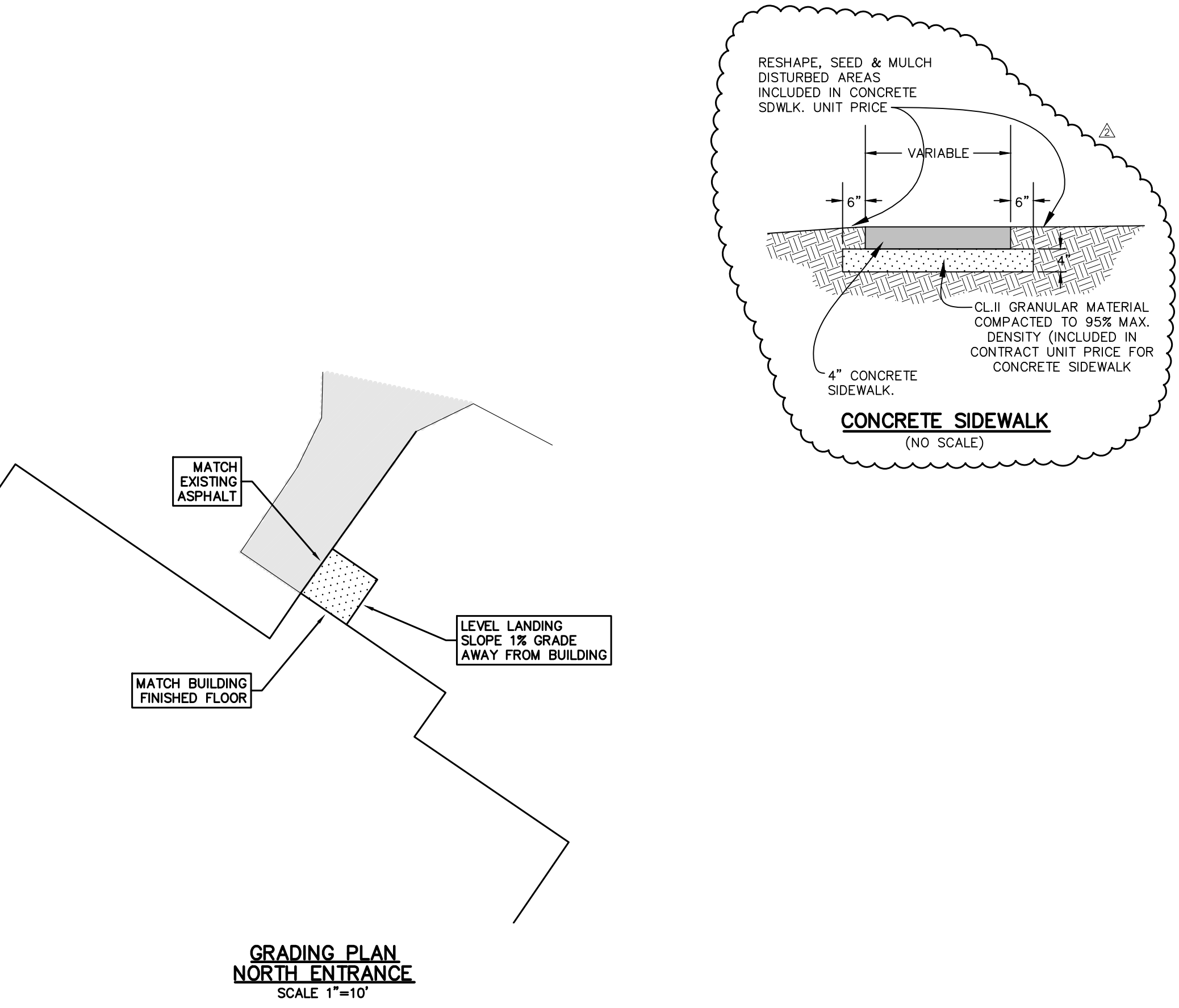
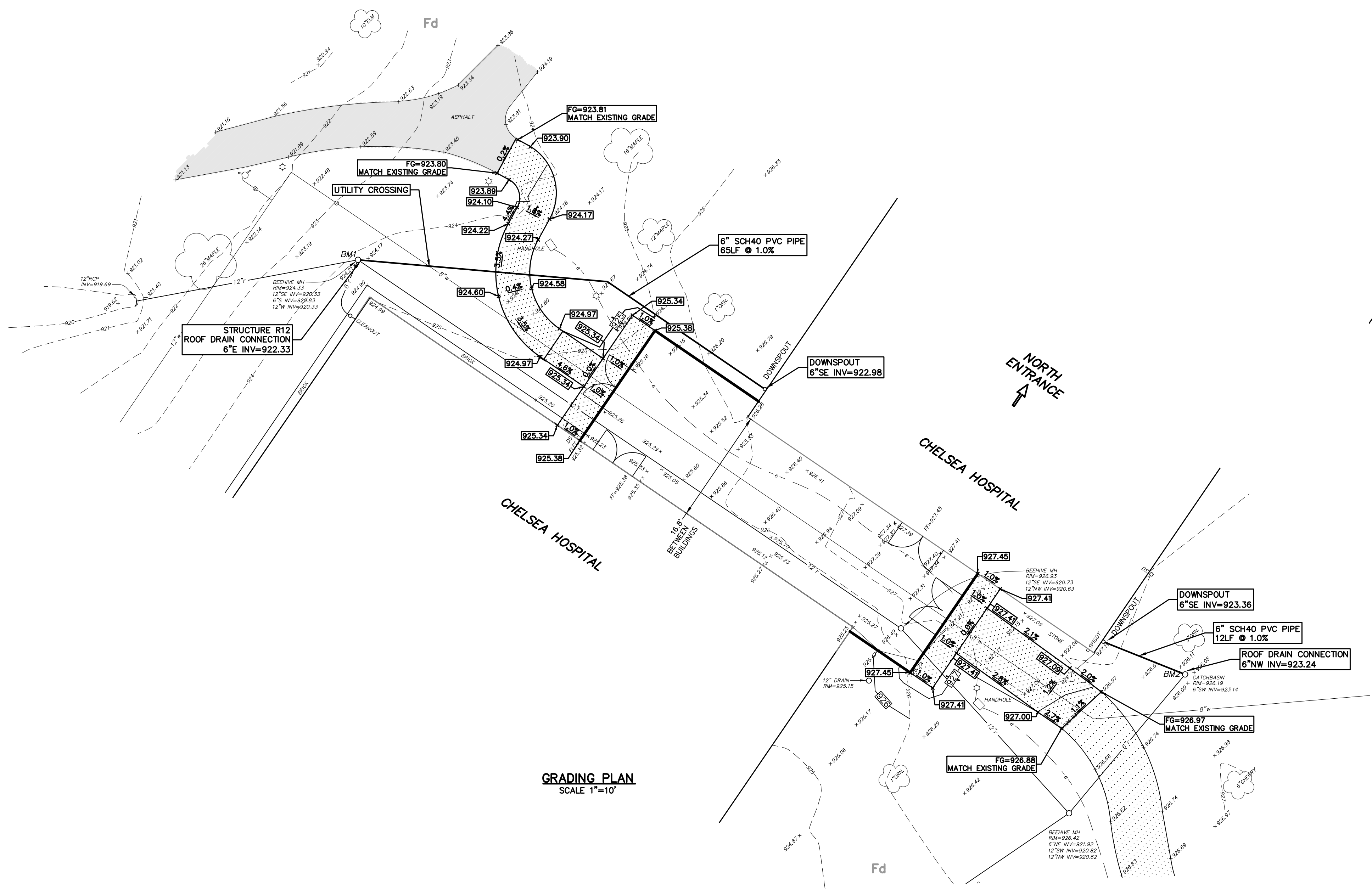
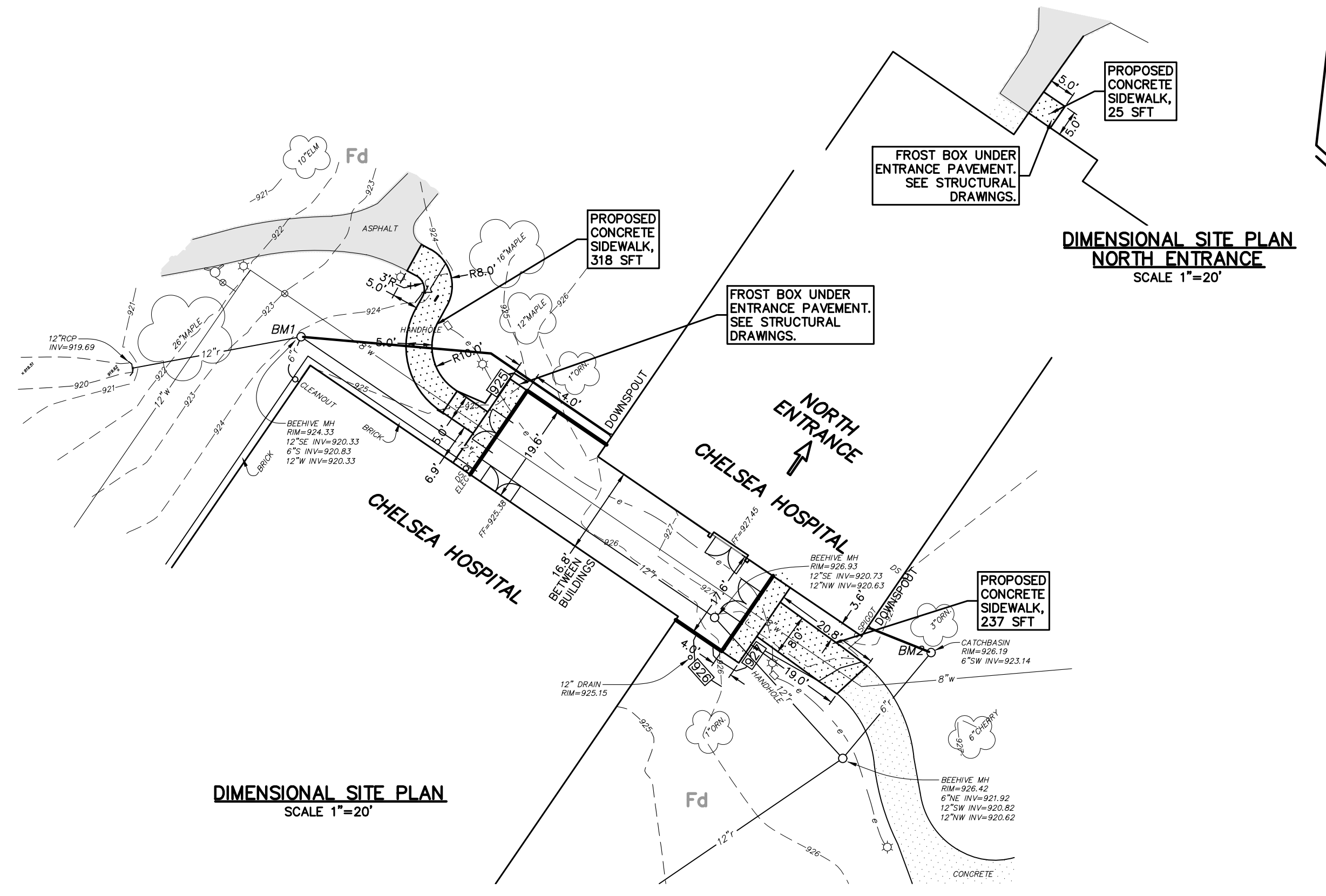
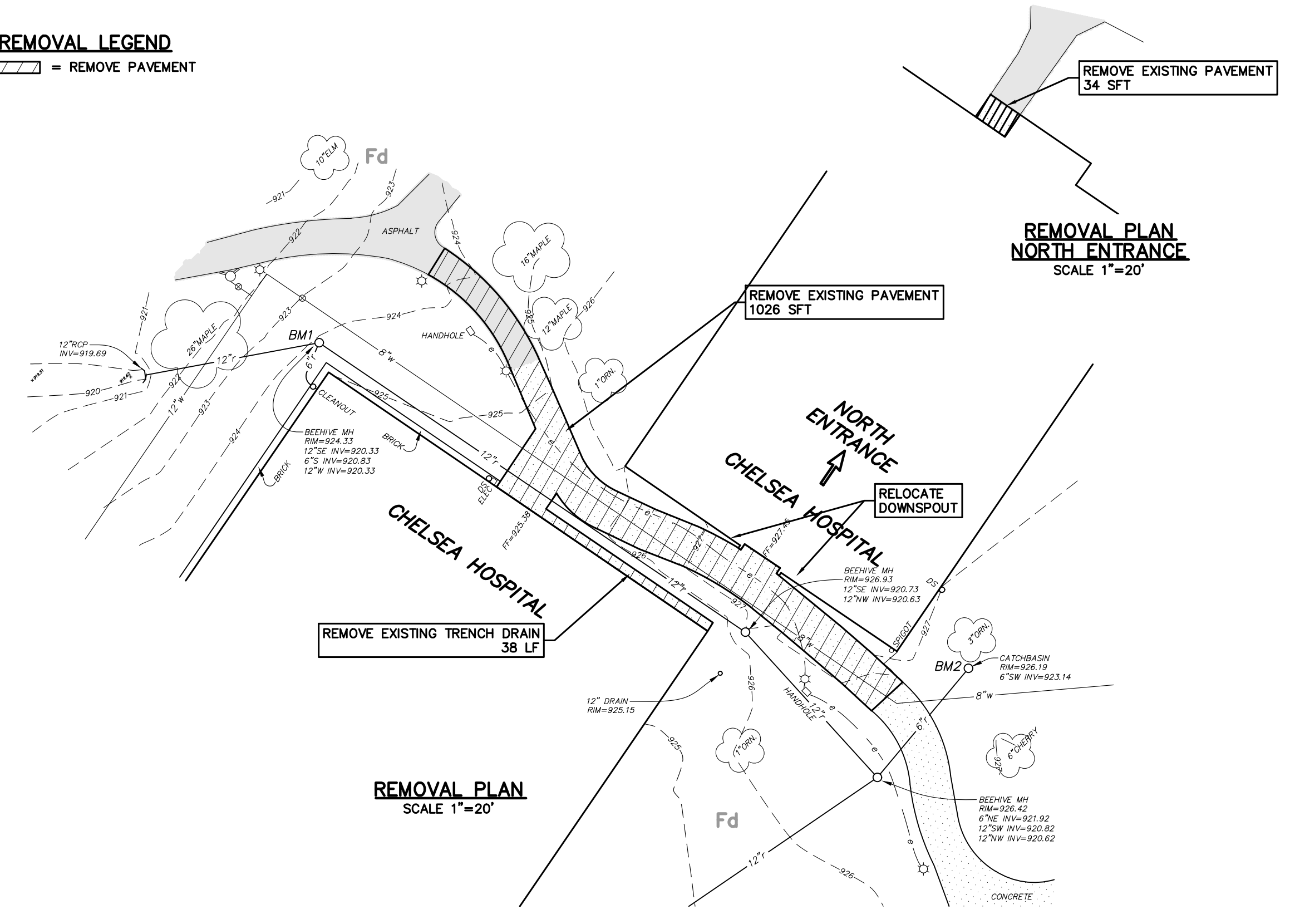
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATE AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2023 WASHTENAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTENAW ENGINEERING COMPANY, INC.

THE USER SHALL NOT USE OR WITHHOLD ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, REFERENCES BY REFERENCE OR OTHERWISE SO LONG AS WASHTENAW ENGINEERING COMPANY (MECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE USER SHALL INDEMNIFY AND HOLD HARMLESS MECO, MECO'S CONSULTANTS AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF OR FROM UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, REFERENCES BY REFERENCE OR OTHERWISE.



REMOVAL LEGEND
 [Hatched Pattern] = REMOVE PAVEMENT

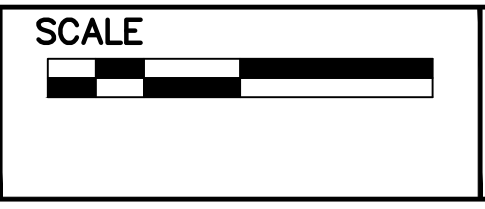


LEGEND

○ = LIGHT POLE	● = SPOT ELEV.	TC = TOP OF CURB	--- = GRAVEL	--- = EXISTING STORM
○ = UTILITY POLE	○ = POST	TW = TOP OF WALL	--- = FENCE	--- = EXISTING SANITARY
○ = GUY ANCHOR	○ = GATE VALVE	○ = MANHOLE	--- = CONCRETE	--- = EXISTING WATER
○ = HYDRANT	○ = SIGN	○ = CATCHBASIN	--- = ASPHALT	--- = EXISTING GAS
		○ = END SECTION		--- = EXISTING ELECTRIC
				--- = EXISTING TELEPHONE

BENCHMARK BM1=RIM ELEVATION OF BEEHIVE MANHOLE NEAR THE NORTHEAST CORNER OF BUILDING, ELEV=924.33 (NAVD 88).
 BM2=RIM ELEVATION OF CATCHBASIN, NORTH OF CONCRETE WALK AND EAST OF BUILDING, ELEV=926.19 (NAVD 88).

REVISIONS 12-14-23 BID/PERMIT SET. 1-4-24 ADDENDUM 2.
 1-30-24 SITE PLAN SUBMITTAL.



WASHTENAW COUNTY SOIL SURVEY CLASSIFICATION
 Fd - FILL LAND
 --- = SOILS BOUNDARY
 SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTENAW COUNTY.

PREPARED BY: *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559

811 Know what's below. Call before you dig.

CLIENT
 A3C
 115 1/2 E. LIBERTY ST
 ANN ARBOR, MI 48104
 TEL: 734-663-1910
 www.wec.com

PROJECT
 CHELSEA HOSPITAL
 INPATIENT REHABILITATION
 RENOVATION

SECTION 12 **TOWN** 2 **SOUTH** RANGE 3 **EAST**

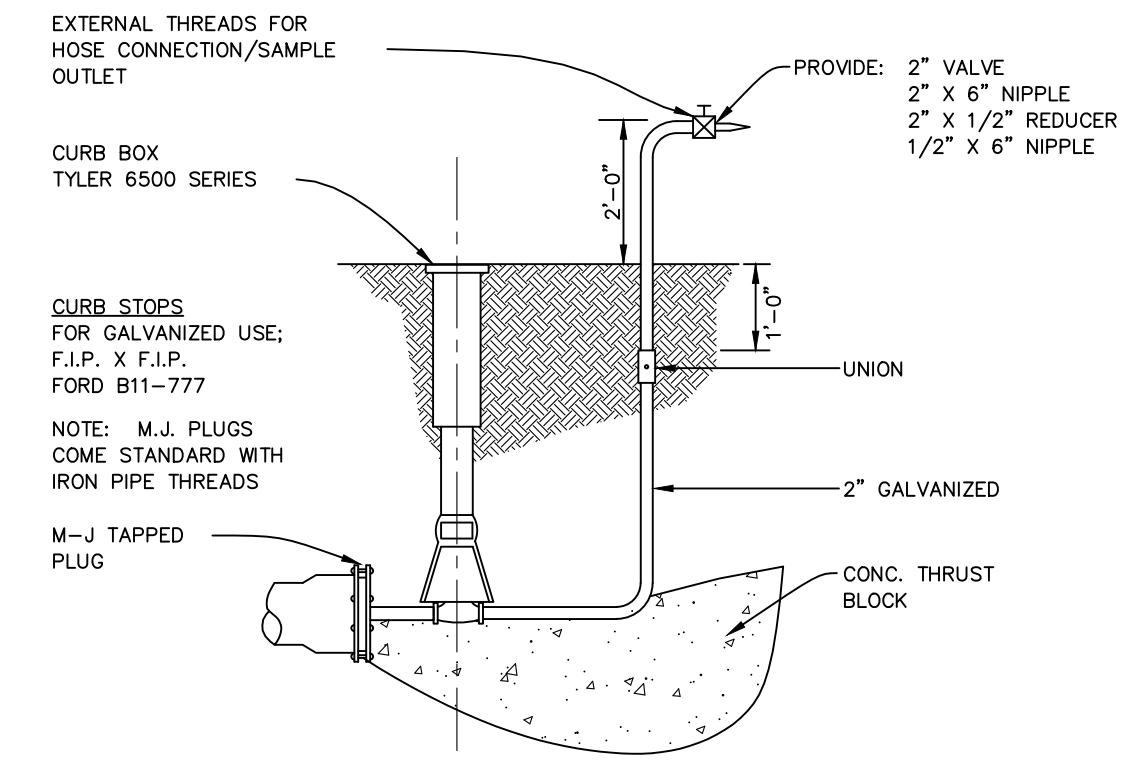
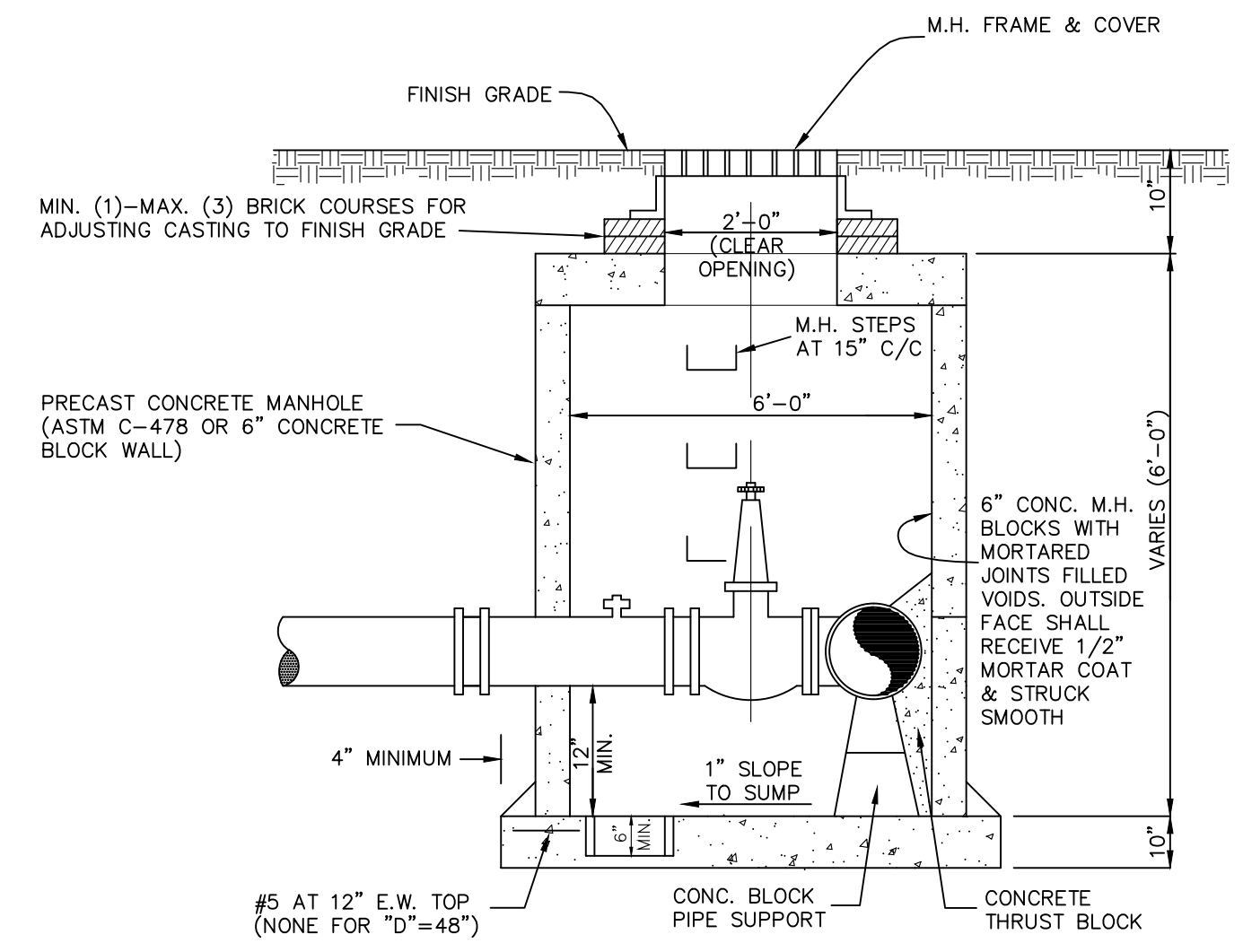
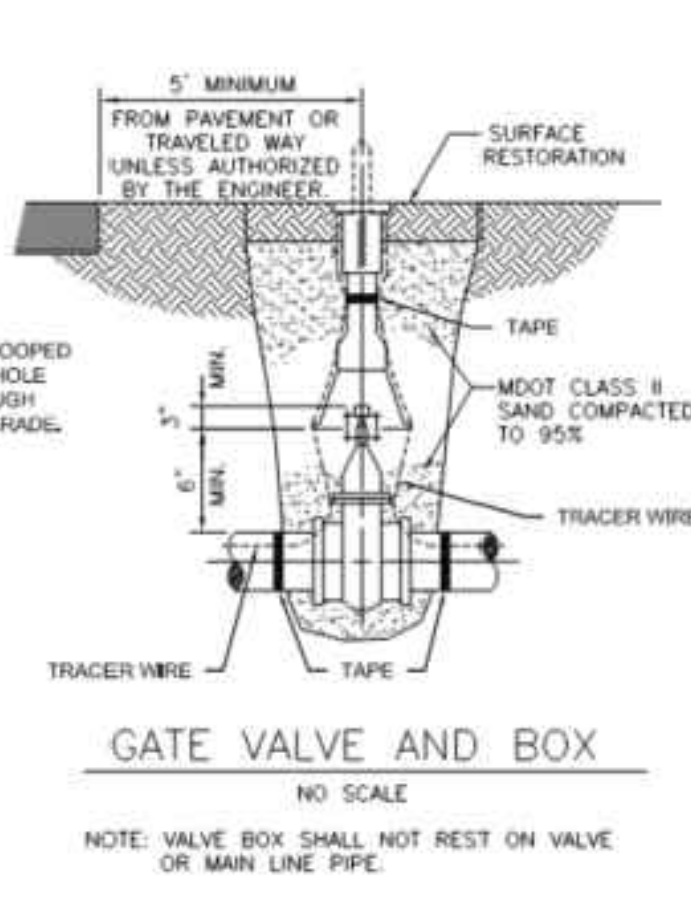
DATE 12-14-2023 **JOB NO.** 33056 **DWG NO.** 056-grd
FIELD BOOK 666 **FILE NO.** 10830

WASHTENAW ENGINEERING
 CIVIL ENGINEERS
 LANDSCAPE ARCHITECTS
 3526 W. LIBERTY RD
 ANN ARBOR, MI 48103
 TEL: 734-761-8900

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. NO REDUCTION OF LIABILITY WILL BE MADE BY THE SURVEYOR UNLESS THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2020 WASHTEWAW ENGINEERING COMPANY, INC. NO REDUCTION OF LIABILITY WILL BE MADE BY THE SURVEYOR UNLESS THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA, AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTEWAW ENGINEERING COMPANY (WECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE OWNER SHALL INDEMNIFY AND HOLD HARMLESS WECO, WECO'S CONSULTANTS AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF OR FROM ANY REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.



EXTERNAL THREADS FOR HOSE CONNECTION/SAMPLE OUTLET

CURB BOX TYLER 6500 SERIES

CURB STOPS FOR GALVANIZED USE: F.I.P. X F.I.P. FORD B11-777

NOTE: M.J. PLUGS COME STANDARD WITH IRON PIPE THREADS

M-J TAPPED PLUG

PROVIDE: 2" VALVE
2" X 6" NIPPLE
2" X 1/2" REDUCER
1/2" X 6" NIPPLE

UNION

2" GALVANIZED

CONC. THRUST BLOCK

NOTE:

- THIS DETAIL APPLIES ONLY TO TEMPORARY DEAD ENDS OF STUBS, WITHOUT SERVICE CONNECTIONS.
- BLOW-OFFS WILL ALWAYS BE USED AS SAMPLE POINTS. VALVING WILL BE AS SHOWN. IN SITUATIONS THAT REQUIRE CONCEALING THE BLOW-OFF, PROVIDE A UNION 12" BELOW GRADE.
- ALTERNATES ARE 4" BLOW-OFF OR TEMPORARY HYDRANTS.
- THE AREA AROUND EACH BLOW-OFF SHALL BE GRADED TO ALLOW SAFE ACCESS AND THE SERVICE BOX SHALL BE OPERATIONAL AT ALL TIMES. THE SIZE OF BLOW-OFFS SHALL BE DETERMINED BY THE WATER DEPARTMENT.
- CONTRACTOR SHALL PUMP DOWN WATER OUT OF THE 2" GALVANIZED PIPE AFTER TESTING BY MEANS OF A WATER PUMP TO ENSURE PIPE WILL BE DRY AND NOT SUBJECT TO FREEZING.

PIT

WM-10

REV. 6/94

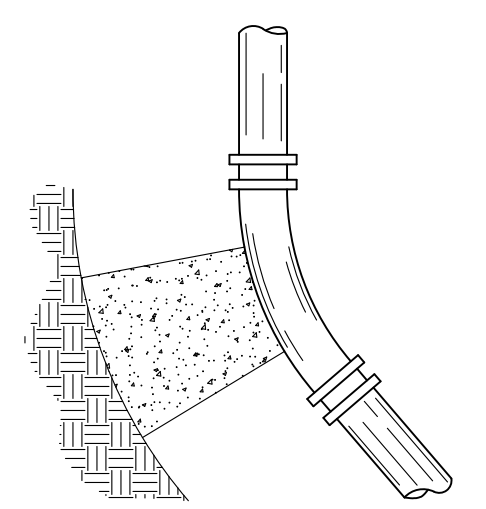
REV. 10/95 WECO

REV. 9/2020 WECO

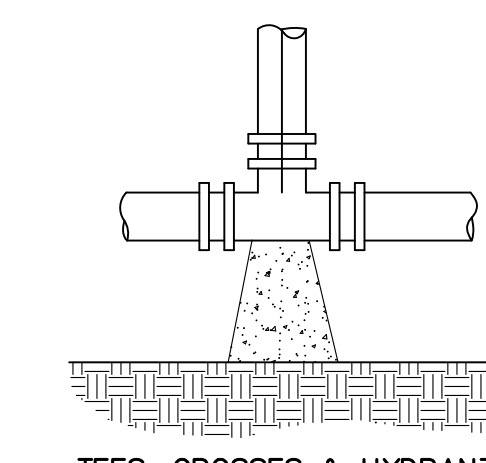
SMALL DIAMETER BLOWOFF DETAIL

(2" MIN.)

(NOT TO SCALE)



PIPE DIA. INCHES	ELBOWS			
	90°	45°	22 1/2°	11 1/4°
4	2.1	1.1	0.6	0.3
6	4.1	2.2	1.1	0.6
8	6.8	3.7	1.9	0.9
10	10.1	5.5	2.8	1.4
12	14.1	7.6	3.9	2.0
16	24.2	13.0	6.7	3.3
18	30.0	16.3	8.3	4.2
20	36.8	19.9	10.1	5.1



PIPE DIA. INCHES	TEES, CROSSES & HYDRANTS	
	BEARING AREA SQUARE FEET	BEARING AREA SQUARE FEET
4	1.5	
6	2.9	
8	4.8	
10	7.1	
12	10.0	
16	17.1	
18	21.0	
20	26.0	

NOTES:

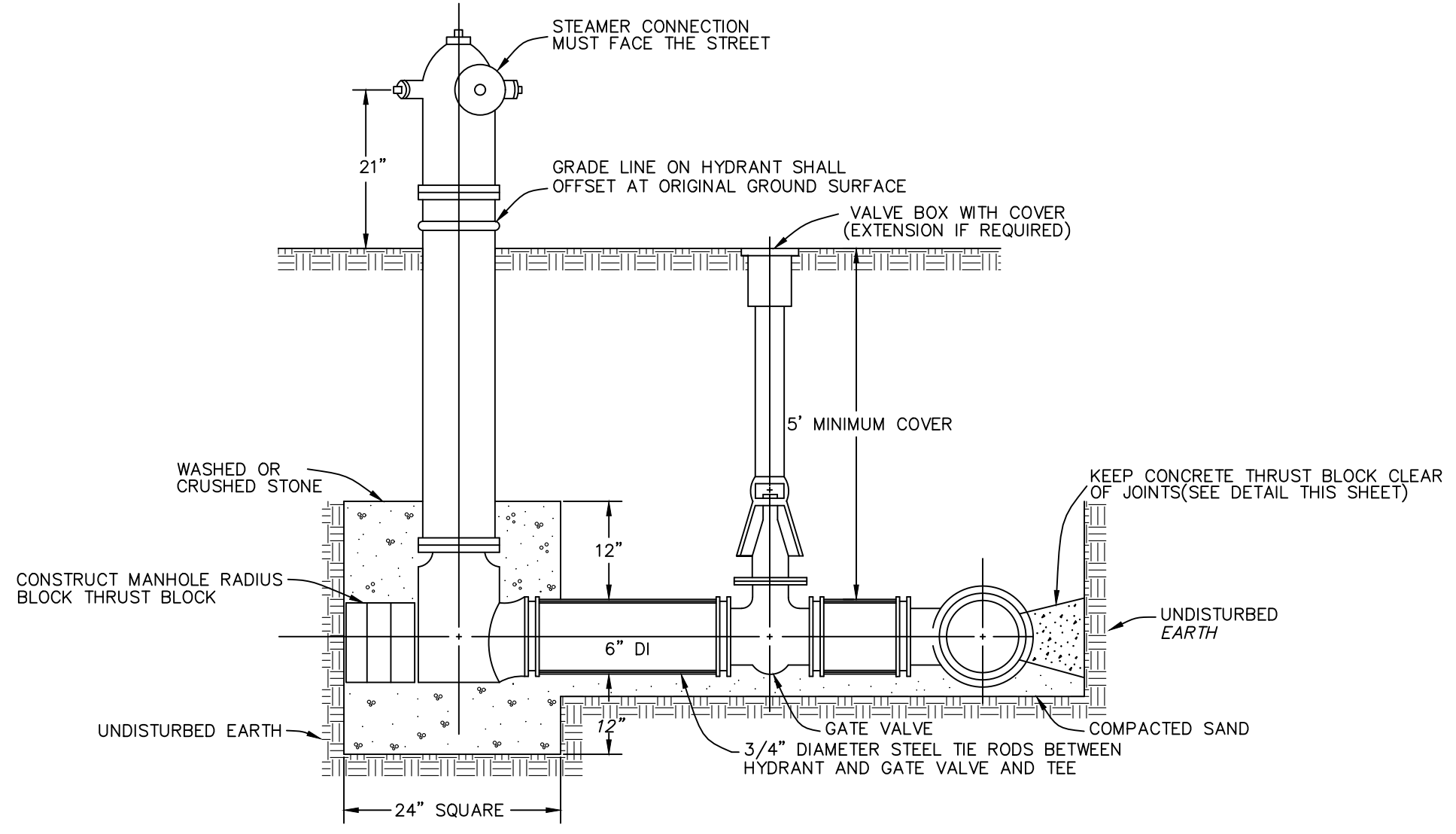
- CONCRETE FOR ALL THRUST BLOCKS SHALL BE 3000 PSI, 20 DAY STRENGTH MIN.
- ALL THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH.
- BOLTS, FITTINGS & JOINTS SHALL BE KEPT CLEAR OF CONCRETE.
- A BEARING CAPACITY OF 2000# PER FOOT WAS USED IN DETERMINING THE MINIMUM "BEARING AREAS" IN THE ABOVE TABLES.
- THE CROSS SECTION OF THE THRUST BLOCKS SHALL BE SQUARE.

SOIL CHARACTERISTICS	FACTOR
(A) LOOSE, COARSE OR MEDIUM SAND, COMPACT FINE SAND, COMPACT SAND-CLAY SOILS; STIFF CLAY	0.33
(B) FIRM FINE SAND; COMPACT INORGANIC SILT; FIRM SAND-CLAY SOILS; MEDIUM CLAY	0.50
(C) LOOSE FINE SAND; FIRM INORGANIC SILT	0.67
(D) LOOSE SAND-CLAY SOILS; LOOSE INORGANIC SILT	1.00

"BEARING AREA" X FACTOR = ACTUAL BEARING AREA
2.1 X .5 = 1.05 SQ. FT.
BASED UPON 150# TEST PRESSURE

THRUST BLOCK

NOT TO SCALE



HYDRANT DETAIL

NOT TO SCALE

PIPE RESTRAINT SCHEDULE

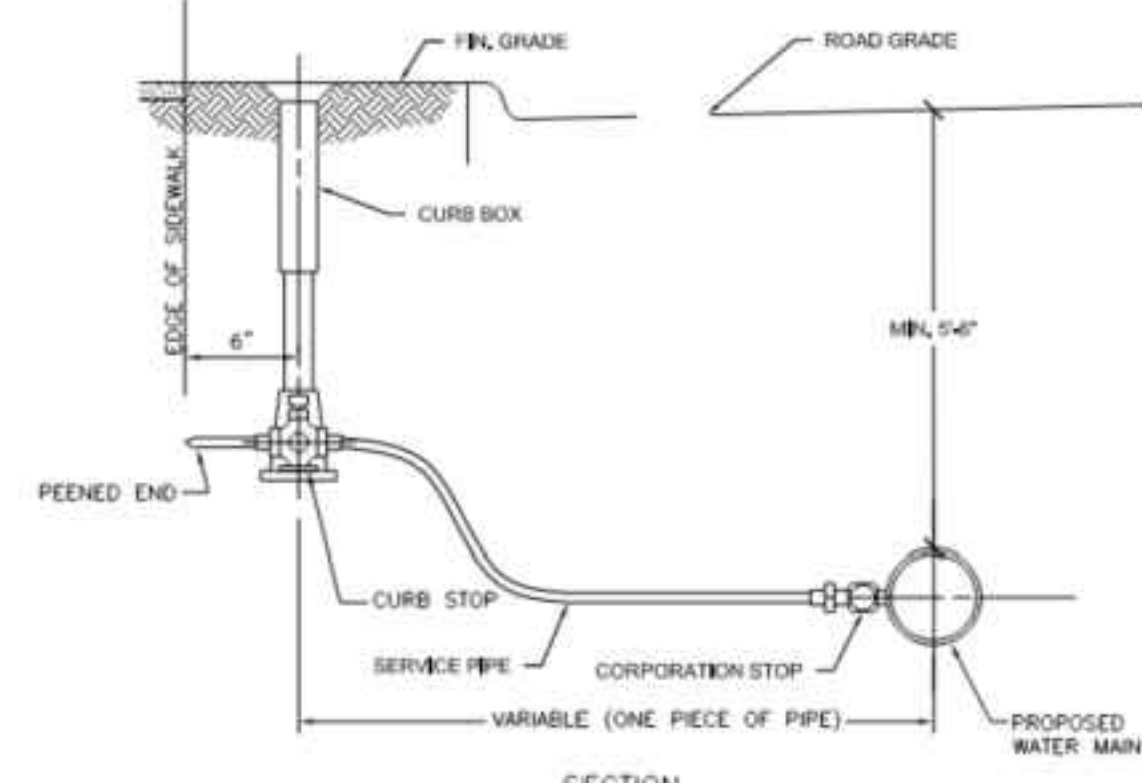
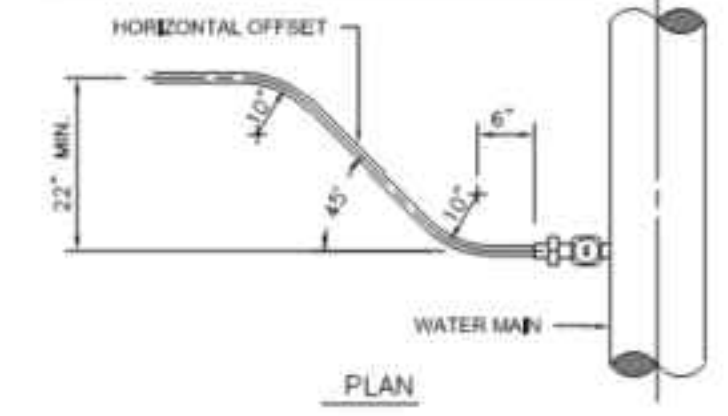
PIPE SIZE\DEFL. DEG.	(22 1/2)	(33 3/4)	45	(56 1/4)	(67 1/2)	(78 3/4)	90/TEE DEAD END
LENGTH OF RESTRAINT REQUIRED IN FEET							
6"	5	8	13	18	25	31	39
8"	6	10	17	24	33	43	52
10"	7	13	20	30	40	51	63
12"	8	15	24	35	47	61	75
16"	10	18	30	44	61	79	97

TABLE BASED ON TEST PRESSURE OF 180 LBS.
FOR OTHER TEST PRESSURES INCREASE OR DECREASE PROPORTIONALLY.

RESTRAIN IN EACH DIRECTION FROM DEFLECTION EXCEPT FOR TEE RESTRAIN ONLY IN DIRECTION OF TEE BRANCH.

IF TIE RODS ARE USED USE 4 RODS MINIMUM AND ADD 1/8" TO BAR DIAMETER AS CORROSION ALLOWANCE.

SERVICE PIPE	CORB STOP	CURB STOP	SERVICE BOX
3/4"	3/4"	3/4"	2 1/2"
1"	1"	1"	2 1/2"
1 1/4"	1 1/4"	1 1/4"	3"
1 1/2"	1 1/4" X 1 1/2"	1 1/2"	3"
2"	1 1/2" X 2"	2"	3"



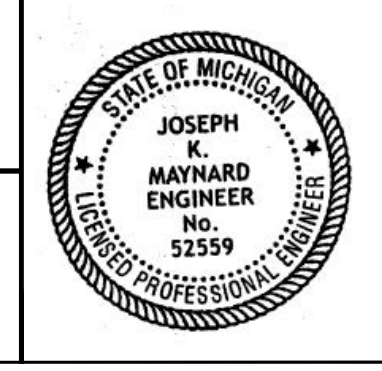
WATER SERVICE INSTALLATION

SCALE NONE

CURB BOX AND STOP ARE MINNEAPOLIS PATTERN

811

Know what's below.
Call before you dig.



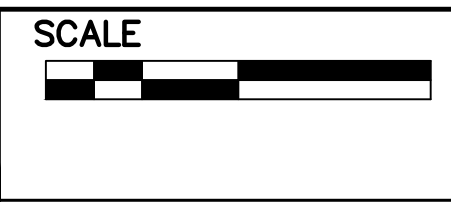
PREPARED BY *Joseph K. Maynard*
JOSEPH K. MAYNARD P.E., MICH No. 52559

LEGEND

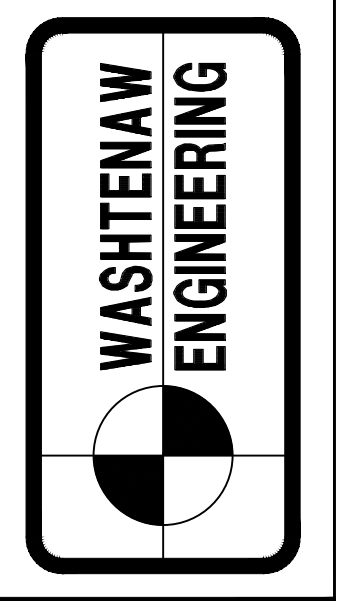
○ = LIGHT POLE	○ = SPOT ELEV.	TC = TOP OF CURB	--- = GRAVEL	--- = EXISTING STORM
○ = UTILITY POLE	○ = POST	TW = TOP OF WALL	--- = FENCE	--- = EXISTING SANITARY
○ = GUY ANCHOR	○ = GATE VALVE	○ = MANHOLE	--- = CONCRETE	--- = EXISTING WATER
○ = HYDRANT	○ = END SECTION	○ = CATCHBASIN	--- = ASPHALT	--- = EXISTING GAS
				--- = EXISTING ELECTRIC
				--- = EXISTING TELEPHONE

BENCHMARK BM1=RIM ELEVATION OF BEEHIVE MANHOLE NEAR THE NORTHEAST CORNER OF BUILDING, ELEV=924.33 (NAVD 88).
BM2=RIM ELEVATION OF CATCHBASIN, NORTH OF CONCRETE WALK AND EAST OF BUILDING, ELEV=926.19 (NAVD 88).

REVISIONS 12-14-23 BID/PERMIT SET. 1-4-24. ADDENDUM 2.
1-30-24 SITE PLAN SUBMITTAL.



CIVIL ENGINEERS
PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS
3526 W. LIBERTY RD
ANN ARBOR, MI 48103
TEL. 734-761-8800



A3C
115 1/2 E. LIBERTY ST
ANN ARBOR, MI 48104
TEL. 734-663-1910
www.weco.com

CITY OF CHELSEA
WATER MAIN STANDARD
DETAILS

CHELSEA HOSPITAL
INPATIENT REHABILITATION
RENOVATION

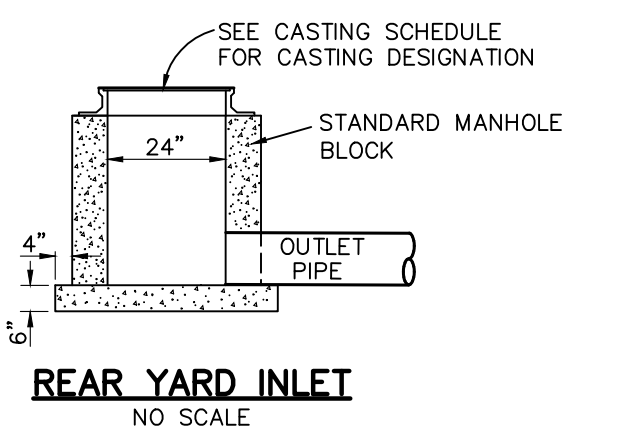
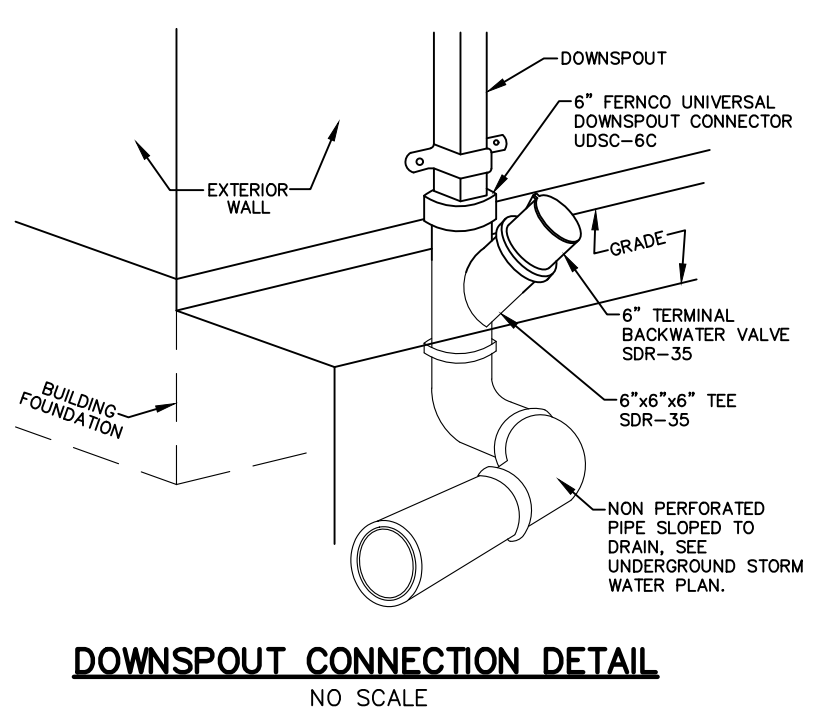
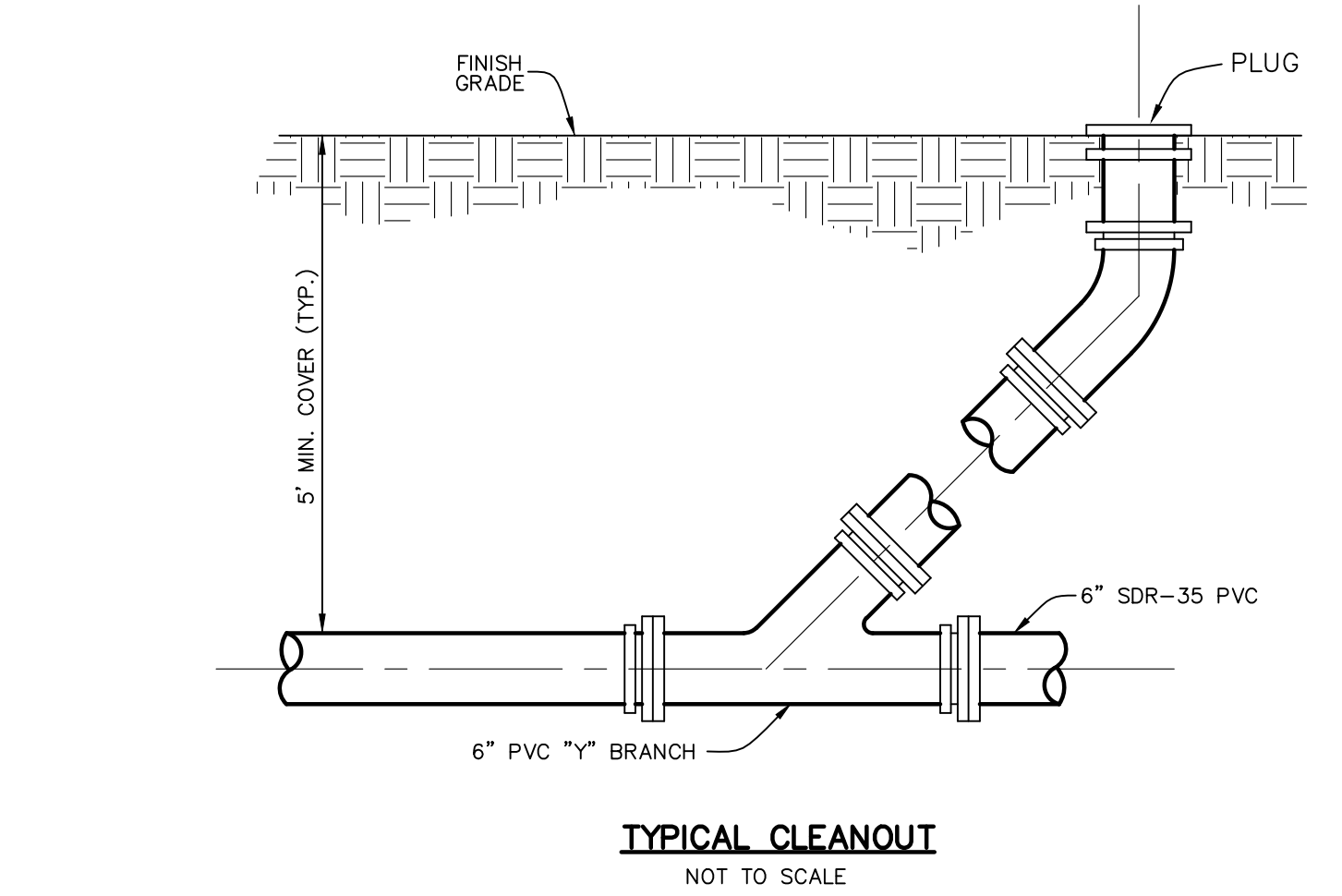
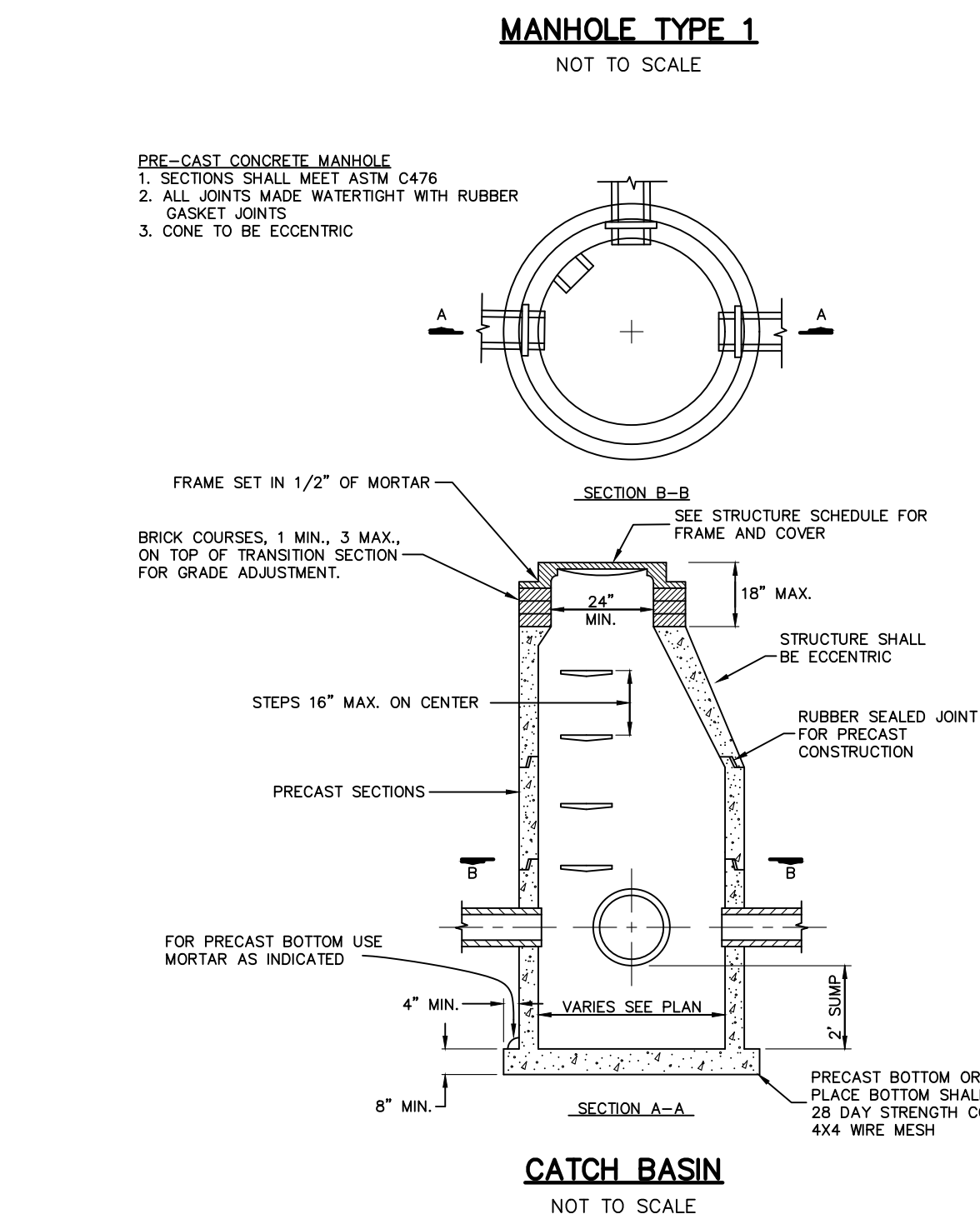
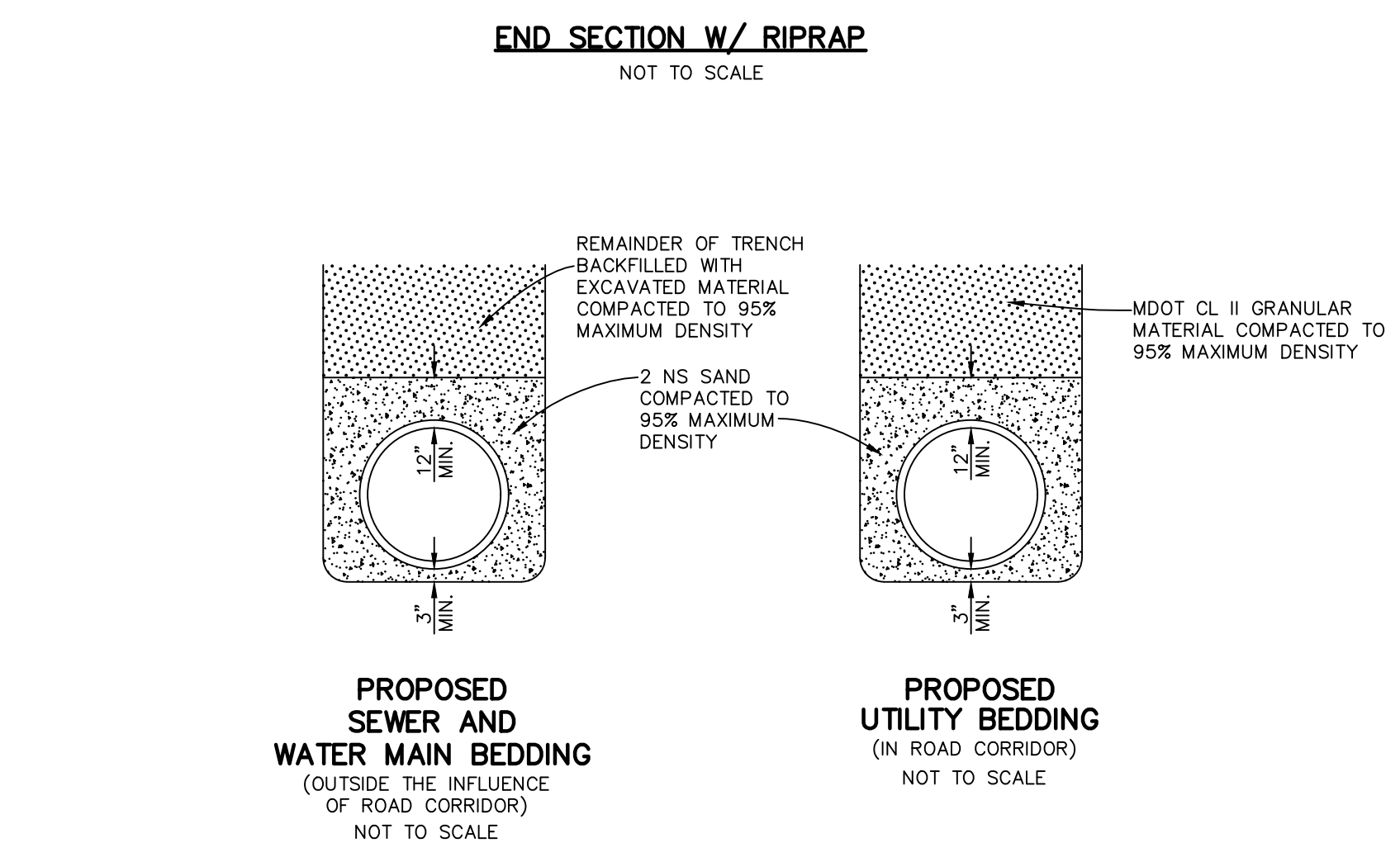
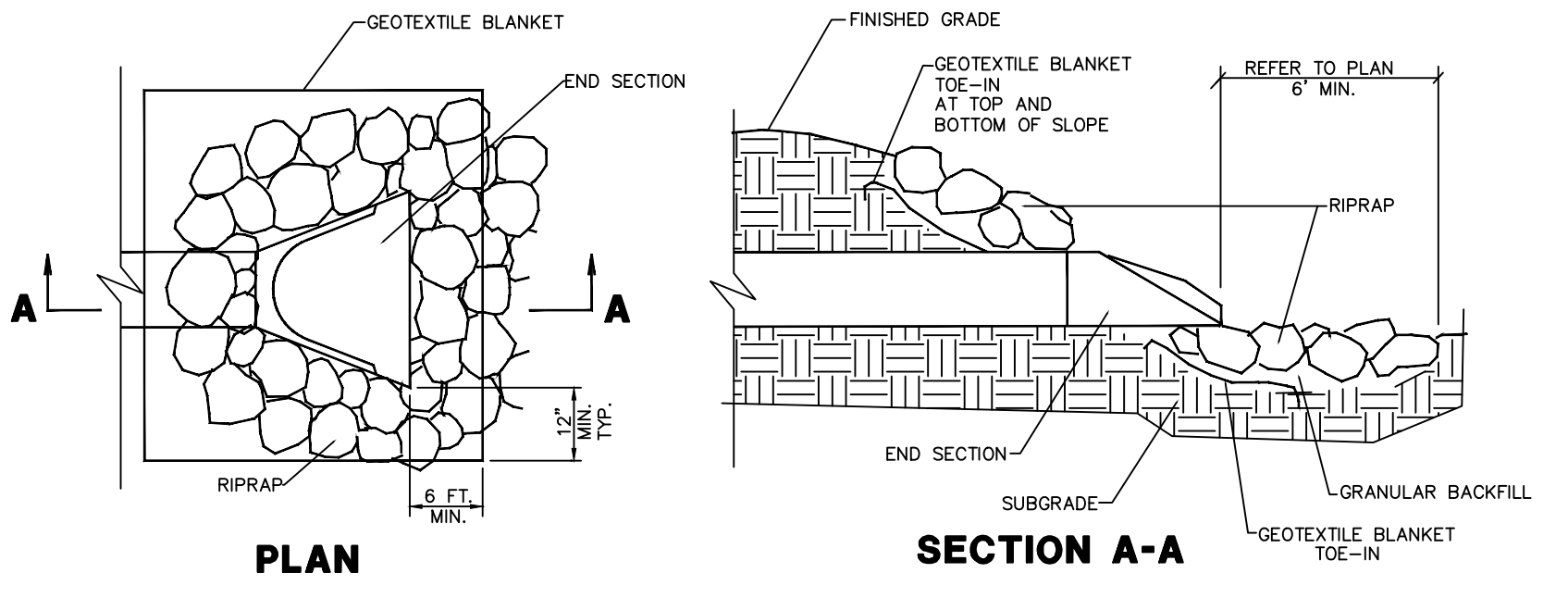
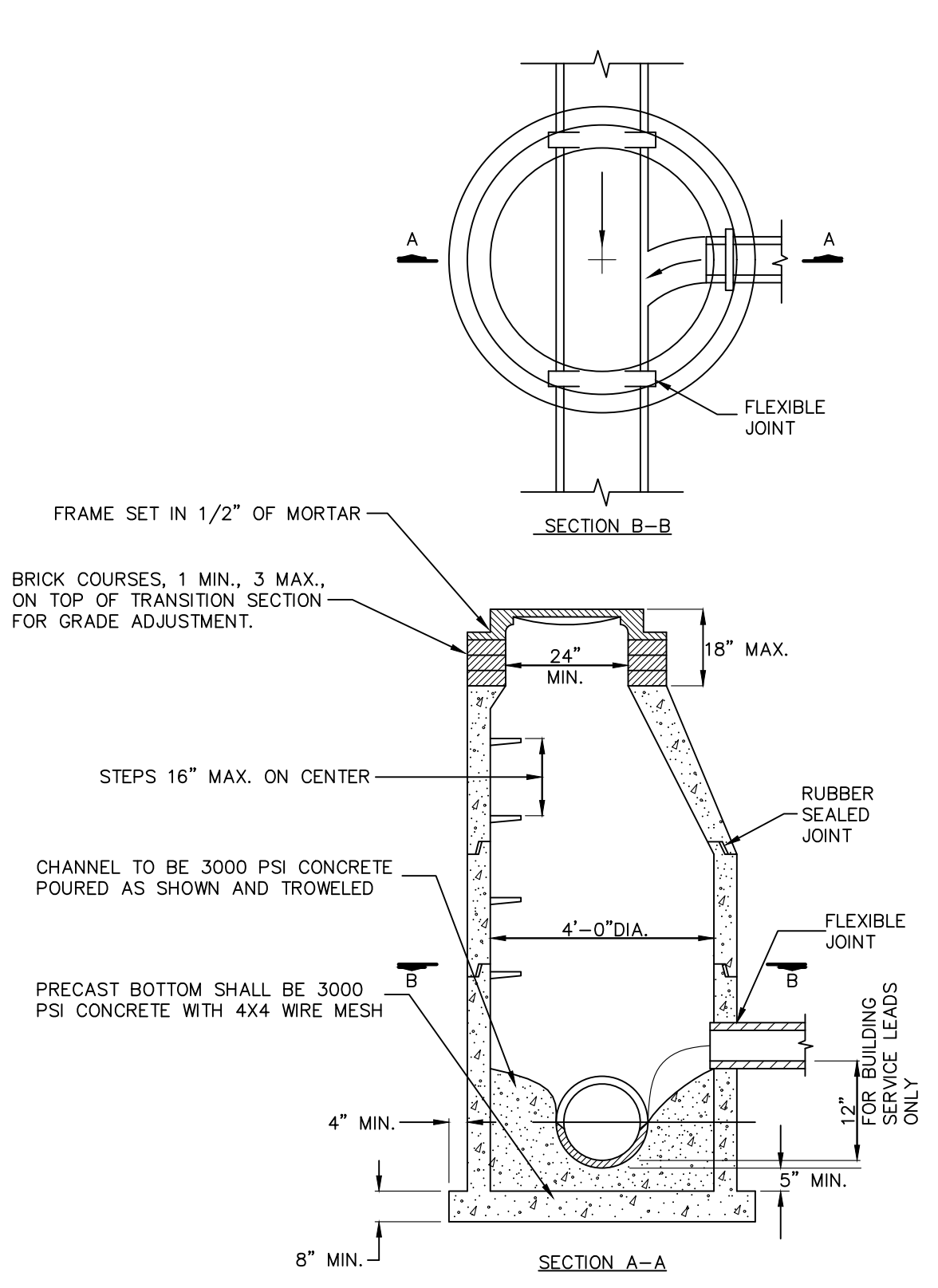
SECTION 12 TOWN 2 SOUTH RANGE 3 EAST
CITY OF CHELSEA
WASHTEWAW COUNTY • MICHIGAN
JOB NO. 33056
DWG NO. 056-city-details
FIELD BOOK 666
FILE NO. 108-50

C6
SHEET

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2023 WASHTEENAW ENGINEERING COMPANY, INC. NO REPRODUCTION OR TRANSMISSION OF THIS DRAWING IS PERMITTED WITHOUT THE WRITTEN CONSENT OF WASHTEENAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA, AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTEENAW ENGINEERING COMPANY (MECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE OWNER SHALL INDEMNIFY AND HOLD HARMLESS MECO, MECO'S CONSULTANTS AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES, ARISING OUT OF OR RESULTING FROM THE USE OF THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.



<p>LEGEND</p> <p>○ = LIGHT POLE ○ = UTILITY POLE ○ = POST ○ = GUY ANCHOR ○ = HYDRANT</p> <p>● = SPOT ELEV. ○ = POST ○ = GATE VALVE ○ = SIGN</p> <p>TC = TOP OF CURB TW = TOP OF WALL ○ = MANHOLE □ = CATCHBASIN ⊂ = END SECTION</p> <p>--- = GRAVEL --- = FENCE [] = CONCRETE [] = ASPHALT</p> <p>--- = EXISTING STORM --- = EXISTING SANITARY --- = EXISTING WATER --- = EXISTING GAS --- = EXISTING ELECTRIC --- = EXISTING TELEPHONE</p>	<p>BENCHMARK BM1=RIM ELEVATION OF BEEHIVE MANHOLE NEAR THE NORTHEAST CORNER OF BUILDING, ELEV=924.33 (NAVD 88).</p> <p>BM2=RIM ELEVATION OF CATCHBASIN, NORTH OF CONCRETE WALK AND EAST OF BUILDING, ELEV=926.19 (NAVD 88).</p>	<p>REVISIONS 12-14-23 BID/PERMIT SET. 1-4-24. ADDENDUM 2. 1-30-24. SITE PLAN SUBMITTAL.</p>
---	--	--

SCALE

PREPARED BY: *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559

CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 3526 W. LIBERTY RD
 ANN ARBOR, MI 48103
 TEL. 734-761-8800

WASHTEENAW ENGINEERING

A3C
 115 1/2 E. LIBERTY ST
 ANN ARBOR, MI 48104
 TEL. 734-663-1910
 www.wec.com

SANITARY AND STORM DETAILS

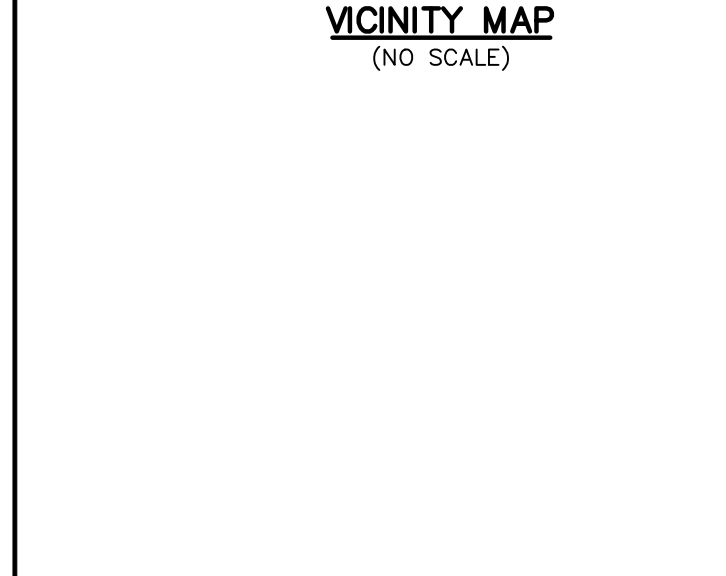
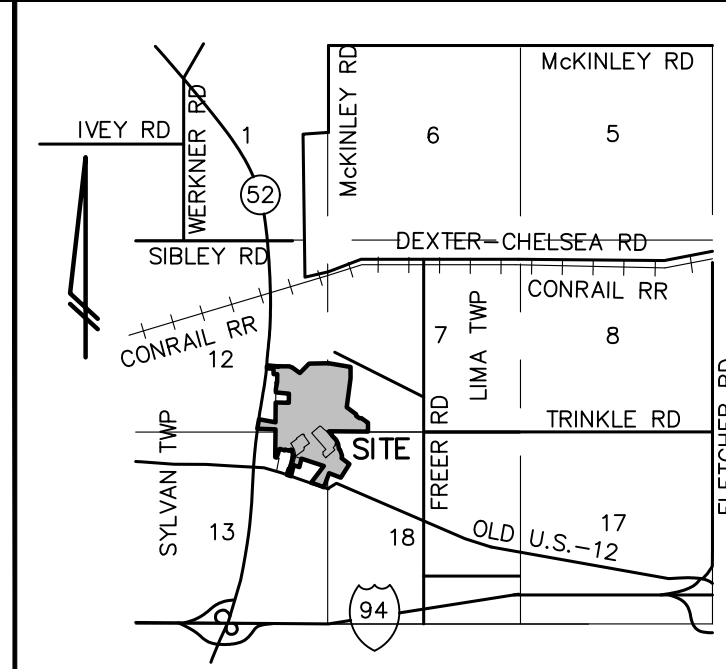
CHELSEA HOSPITAL INPATIENT REHABILITATION RENOVATION

SECTION 12 TOWN 2 SOUTH RANGE 3 EAST
 CITY OF CHELSEA
 WASHTEENAW COUNTY • MICHIGAN
 JOB NO. 33056
 DWG NO. 971-city-details
 FIELD BOOK 666
 FILE NO. 10830

PROJECT SHEET

C8 SHEET

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE ACCURATELY LOCATED OR THAT THEY ARE LOCATED AS SHOWN. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.



Land in the City of Chelsea, County of Washtenaw, State of Michigan being more particularly described as:

PARCEL 1 - MAIN CAMPUS PARCEL
 BEGINNING at the Northwest corner of Section 18, T2S, R4E, City of Chelsea, Washtenaw County, Michigan; thence N87°35'00"E 26.13 feet along the North line of said Section; thence S37°23'25"E 143.34 feet; thence S46°37'45"E 124.89 feet; thence S30°03'00"E 115.37 feet; thence S12°23'20"E 130.93 feet; thence S47°54'00"E 35.00 feet; thence S22°06'35"E 156.61 feet; thence S08°13'45"W 60.00 feet; thence S55°42'07"E 244.88 feet; thence S29°29'13"W 402.87 feet; thence N71°46'15"W 310.91 feet; thence S18°13'45"W 376.04 feet to a point on the centerline of Old US-12; thence N71°46'15"W 175.19 feet along said centerline; thence N74°39'35"W 162.56 feet, continuing along said centerline; thence N34°39'25"E 528.54 feet; thence N74°39'35"W 747.55 feet; thence Northerly 12.82 feet along the arc of a 312.99 foot radius circular curve to the left, through a central angle of 02°20'49", having a chord that bears N03°16'15"E 12.82 feet; thence N51°35'35"E 261.96 feet; thence N09°39'20"E 62.94 feet; thence N38°24'25"W 18.63 feet; thence N51°28'37"E 172.82 feet; thence N38°31'23"W 228.02 feet; thence N51°35'35"E 15.64 feet; thence N38°24'25"W 42.00 feet; thence S51°35'35"W 30.00 feet; thence N38°24'25"W 20.65 feet; thence S51°35'35"W 180.43 feet; thence S38°24'25"E 20.65 feet; thence S51°35'35"W 183.61 feet; thence S31°31'55"E 166.37 feet; thence Southerly 196.53 feet along the arc of a 312.99 foot radius circular curve to the right, through a central angle of 35°58'34", having a chord that bears S13°32'38"E 193.31 feet; thence S74°39'35"E 157.29 feet; thence S11°20'25"W 216.92 feet; thence N74°39'35"W 145.00 feet; thence S11°20'25"W 283.08 feet to a point on the centerline of Old US-12; thence N74°39'35"W 114.24 feet along said centerline; thence N15°20'25"E 152.16 feet; thence S74°39'35"E 17.50 feet; thence N15°20'25"E 141.85 feet; thence N11°20'25"E 163.23 feet; thence Northerly 184.81 feet along the arc of a 246.99 foot radius circular curve to the left, through a central angle of 42°52'20", having a chord that bears N10°05'45"W 180.53 feet; thence N31°31'55"W 21.86 feet; thence S58°28'05"W 29.66 feet; thence S57°43'39"W 32.30 feet; thence N74°32'42"W 108.91 feet; thence S15°25'21"W 27.14 feet; thence N74°34'39"W 121.69 feet; thence S58°28'05"W 23.68 feet; thence S15°21'44"W 74.33 feet; thence S14°10'16"E 10.15 feet; thence S15°20'56"W 131.14 feet; thence N74°39'35"W 38.41 feet; thence N02°16'50"W 693.15 feet to a point on the South line of Section 12, T2S, R3E (as monumented), said point being the Southwest corner of the East 1/2 of the Southeast 1/4 of said Section 12 (as monumented); thence S89°19'25"W 456.30 feet along said South line to a point on the centerline of Main Street (M-52); thence N03°38'49"W 54.00 feet along said centerline; thence N89°55'11"E 33.06 feet to a point on the Easterly right-of-way line of Main Street (M-52); thence N03°38'49"W 12.00 feet along said right-of-way line; thence N89°55'11"E 265.34 feet; thence N87°10'12"E 264.00 feet; thence S69°21'03"E 59.58 feet; thence N87°10'12"E 10.65 feet; thence S56°35'42"E 245.47 feet; thence N41°15'18"E 330.00 feet; thence N86°13'28"E 470.78 feet to a point on the West line of Section 7, T2S, R4E (as monumented); thence N03°00'20"W 5.71 feet along said West line to the Southwest corner of Lucy E. Gates Second Addition to the Village (now City) of Chelsea, as recorded in Liber 2 of Plats, Page 27, Washtenaw County Records; thence S82°59'04"E 573.65 feet along the Southerly line of said Lucy E. Gates Second Addition to the Village (now City) of Chelsea to a point on the Westerly line of Grantwood Addition, as recorded in Liber 2 of Plats, Page 40, Washtenaw County Records; thence S03°17'59"E 284.46 feet along said Westerly line; thence S04°51'25"W 731.91 feet continuing along said Westerly line; thence S56°33'31"E 292.78 feet along the Southerly line of said Grantwood Addition to the West corner of Lot 40; thence S03°18'19"E 41.18 feet; thence S56°33'31"E 95.76 feet; thence N86°41'41"E 55.16 feet to the Southeast corner of said Lot 40; thence S56°33'31"E 200.68 feet along the Southerly line of said Grantwood Addition; thence S03°18'19"E 217.27 feet to a point on the South line of said Section 7; thence S87°35'00"W 996.77 feet along said South line to the Southwest corner of said Section 7; thence S89°19'25"W 41.75 feet along the North line of Section 13, T2S, R3E, (as monumented); thence N43°45'17"W 14.73 feet; thence N55°30'57"W 69.81 feet; thence N48°48'00"W 92.11 feet; thence N66°55'50"W 36.90 feet; thence S46°14'43"W 270.52 feet; thence S43°45'17"E 540.53 feet; thence S46°14'43"W 95.63 feet; thence S03°49'22"E 71.21 feet; thence S43°45'17"E 102.35 feet; thence Northeasterly 32.32 feet along the arc of a 212.00 foot radius circular curve to the right, through a central angle of 08°44'05", having a chord that bears N41°52'40"E 32.29 feet; thence N46°14'43"E 270.36 feet; thence N41°15'55"W 71.07 feet; thence N46°14'43"E 64.57 feet; thence N05°58'34"E 102.88 feet; thence N43°45'17"W 348.77 feet; thence N89°19'25"E 41.75 feet along the North line of said Section 13 to a Point of Beginning. Being a part of the Southeast 1/4 of Section 12, T2S, R3E, part of the Northeast 1/4 of Section 13, T2S, R3E, part of the Southwest 1/4 of Section 7, T2S, R4E and part of the Northwest 1/4 of Section 18, T2S, R4E, City of Chelsea, Washtenaw County, Michigan.

EASEMENT PARCEL:
 Together with a 33 foot easement for roadway as created, limited and defined in Liber 1005, Page 517, Washtenaw County Records.

Commonly known as: 775 S. Main Street
 Tax Parcel ID: Part of 06-06-12-475-049

PARCEL 2 - PROFESSIONAL OFFICE BUILDING - UNITS
 Units 2, 5, 6, 7 and 11, PROFESSIONAL BUILDING AT CHELSEA COMMUNITY HOSPITAL, a condominium according to the Master Deed recorded in Liber 4580, Page 995, Washtenaw County Records, being Washtenaw County Subdivision Plan No. 528, as amended by First Amendment to Master Deed recorded in Liber 4587, Page 8 and by Second Amendment to Master Deed recorded in Liber 4602, Page 196, and by Third Amendment to Master Deed, to be recorded in Washtenaw County Records, together with the rights in the general common elements and limited common elements, as set forth in said Master Deed, and subsequent amendments, and as described in Act 59 of the Public Acts of 1978, as amended.

Commonly known as: 14620 Old US 12
 Tax Parcel ID: 06-88-12-476-002; 06-88-12-476-005; 06-88-12-476-006; 06-88-12-476-007; 06-88-12-476-011

LINE TABLE

LINE	LENGTH	BEARING
L1	152.16	N15°20'25"E
L2	172.50	S74°39'35"E
L3	141.85	N15°20'25"E
L4	21.86	N31°31'55"W
L5	29.66	S58°28'05"W
L6	32.30	S57°43'39"W
L7	108.91	N74°32'42"W
L8	27.14	S15°25'21"W
L9	23.68	S58°28'05"W
L10	74.33	S15°21'44"W
L11	10.15	S14°10'16"E
L12	134.08	N03°38'49"W
L13	165.06	S89°55'11"W
L14	54.00	N03°38'49"W
L15	33.06	N89°55'11"E
L16	12.00	N03°38'49"W
L17	41.18	S03°18'19"E
L18	95.76	S56°33'31"E
L19	55.16	N86°41'41"E
L20	26.13	S87°35'00"W
L21	41.75	N89°19'25"E
L22	69.80	S55°30'57"E
L23	92.11	S48°48'00"E
L24	36.90	S58°55'50"E
L25	71.07	S41°15'55"E
L26	64.57	S46°14'43"W
L27	102.88	S05°58'34"W
L28	363.52	S43°45'17"E
L29	168.38	S31°31'55"E
L30	183.61	N51°28'37"E
L31	20.65	N38°24'25"W
L32	180.43	N51°35'35"E
L33	20.65	N38°24'25"W
L34	30.00	S51°35'35"W
L35	42.00	N38°24'25"W
L36	15.64	N51°35'35"E
L37	172.82	N51°28'37"E
L38	18.63	N38°24'25"W
L39	62.84	N09°39'20"E

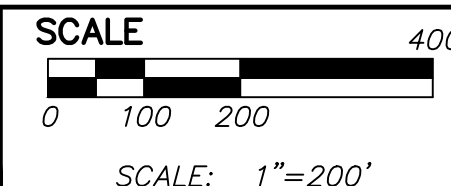
CURVE TABLE

NO.	DELTA	RADIUS	ARC	CHORD	CHORD BEARING
1	06°53'46"	312.99	37.67	37.65	N07°31'35"E
2	02°20'49"	312.99	12.82	12.82	N03°16'15"E
3	33°17'45"	312.99	183.71	181.08	N14°30'33"W
4	35°58'32"	312.99	196.53	193.31	S13°32'38"E
5	42°52'20"	246.99	184.81	180.53	N10°05'45"W
6	08°44'05"	212.00	32.32	32.29	N41°52'40"E

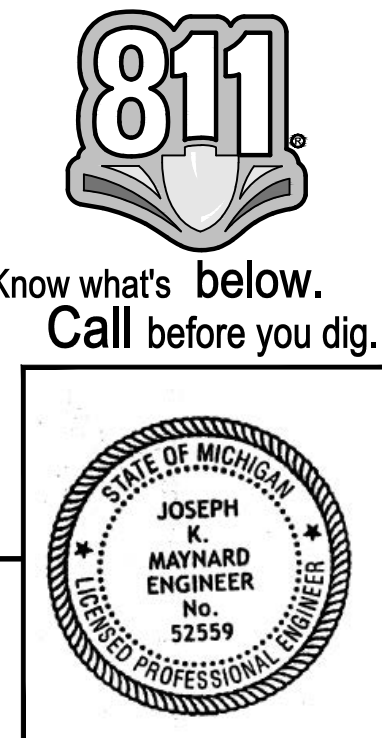
LEGEND
 (C) = CURVE LABEL
 L2 = LINE LABEL
 C = PARCEL IDENTIFICATION

BENCHMARK BM1=RIM ELEVATION OF BEEHIVE MANHOLE NEAR THE NORTHEAST CORNER OF BUILDING, ELEV=924.33 (NAVD 88).
 BM2=RIM ELEVATION OF CATCHBASIN, NORTH OF CONCRETE WALK AND EAST OF BUILDING, ELEV=926.19 (NAVD 88).

REVISIONS 12-14-23 BID/PERMIT SET. 1-4-24 ADDENDUM 2.
 1-30-24 SITE PLAN SUBMITTAL.



PREPARED BY: *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559



CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 3526 W. LIBERTY RD
 ANN ARBOR, MI 48104
 ANN. ASSOCI. NO. 48103
 TEL. 734-761-8900

CLIENT
 A3C
 115 1/2 E. LIBERTY ST
 ANN ARBOR, MI 48104
 TEL: 734-663-1910
 WWW.OCC.COM

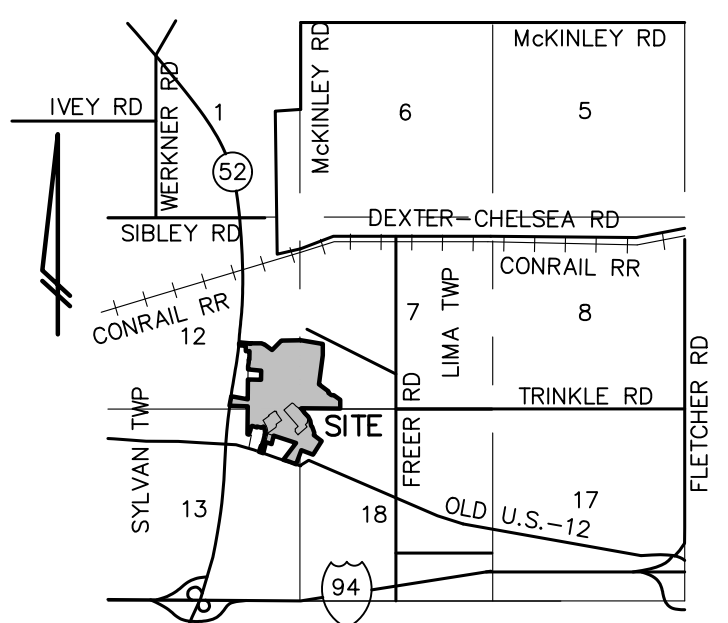
PROJECT
 SECTION 12 TOWN 2 SOUTH RANGE 3 EAST
 CITY OF CHELSEA
 WASHTENAW COUNTY • MICHIGAN
 DATE 01-30-2024
 JOB NO. 330256
 DWS NO. 056-04 survey
 FIELD BOOK 666
 FILE NO. 108-30

SHEET
 9
OVERALL BOUNDARY SURVEY
CHELSEA HOSPITAL INPATIENT REHABILITATION RENOVATION

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE ACCURATELY LOCATED OR DEPTHS ARE ACCURATELY AS REPORTED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2020 WASHTEENAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTEENAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR WITHHOLD ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, REFERENCES BY REFERENCE OR OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTEENAW ENGINEERING COMPANY (MECO) IS NOT ADJOINED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE SURVEYOR SHALL MAINTAIN AND HOLD HARMLESS MECO, MECO'S CONSULTANTS AND AGENCIES AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, REFERENCES BY REFERENCE OR OTHER INSTRUMENTS OF SERVICE.

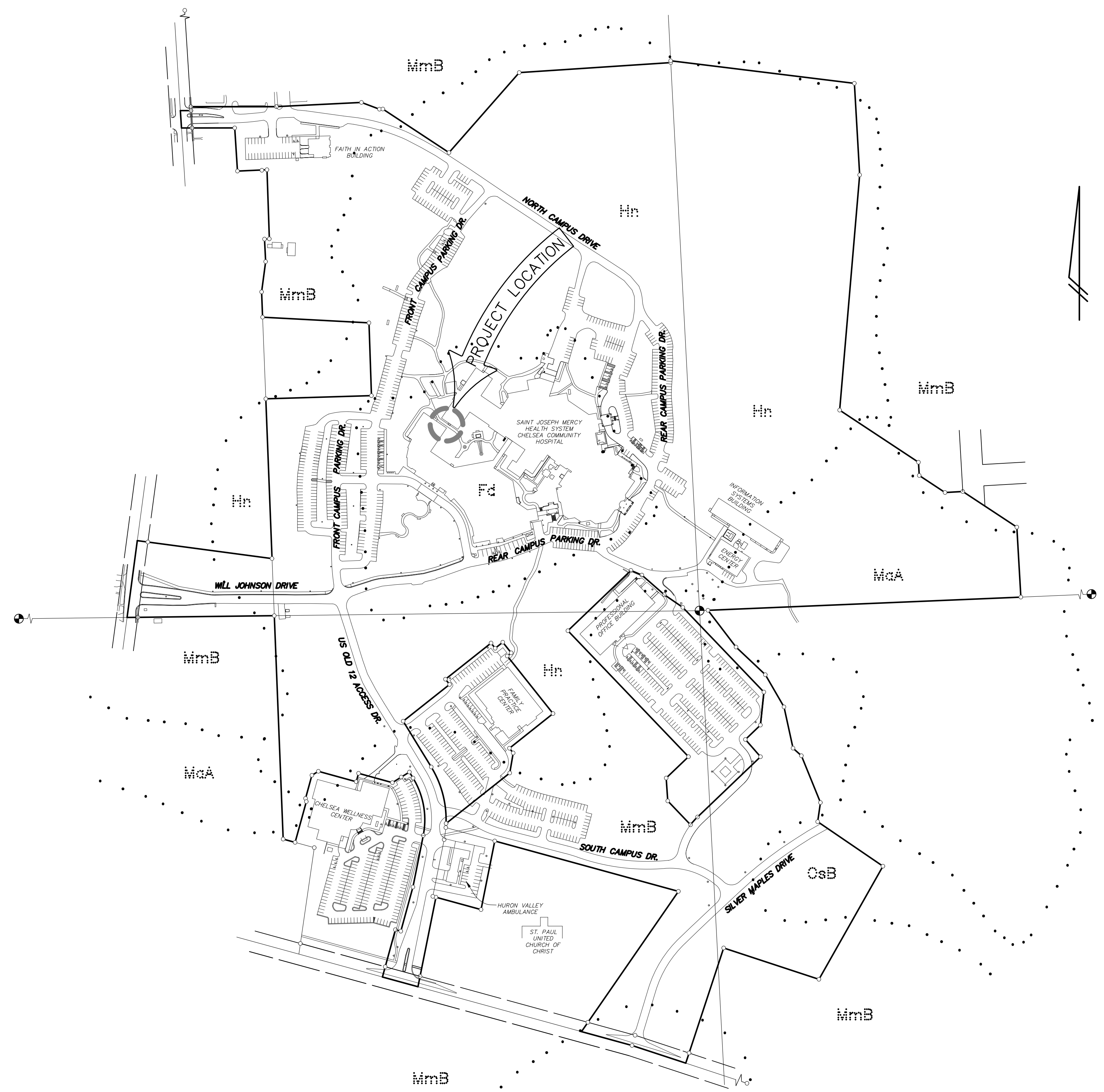


VICINITY MAP
(NO SCALE)

WASHTEENAW COUNTY SOIL SURVEY CLASSIFICATION

- OsB - OSHTEMO LOAMY SAND, 0 TO 6 PERCENT SLOPES
- mmC - MIAMI LOAM, 6 TO 12 PERCENT SLOPES
- mmB - MIAMI LOAM, 2 TO 6 PERCENT SLOPES
- mCA - MACOMB LOAM, 0 TO 4 PERCENT SLOPES
- hm - HOUGHTON MUCK
- fl - FILL LAND
- w - WATER
- - SOILS BOUNDARY

SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTEENAW COUNTY.



LEGEND
--- PROJECT AREA



<p>LEGEND</p> <ul style="list-style-type: none"> ○ = LIGHT POLE ○ = UTILITY POLE ○ = GUY ANCHOR ○ = HYDRANT ○ = SPOT ELEV. ○ = POST ○ = GATE VALVE ○ = SIGN — = TOP OF CURB — = TOP OF WALL ○ = MANHOLE □ = CATCHBASIN — = END SECTION — = GRAVEL — = FENCE — = CONCRETE — = ASPHALT — = EXISTING STORM — = EXISTING SANITARY — = EXISTING WATER — = EXISTING GAS — = EXISTING ELECTRIC — = EXISTING TELEPHONE 	<p>BENCHMARK</p> <p>BM1—RIM ELEVATION OF BEEHIVE MANHOLE NEAR THE NORTHEAST CORNER OF BUILDING, ELEV=924.33 (NAVD 88).</p> <p>BM2—RIM ELEVATION OF CATCHBASIN, NORTH OF CONCRETE WALK AND EAST OF BUILDING, ELEV=926.19 (NAVD 88).</p>	<p>REVISIONS</p> <p>12-14-23 BID/PERMIT SET. 1-4-24 ADDENDUM 2. Δ</p> <p>1-30-24 SITE PLAN SUBMITTAL.</p>	<p>SCALE</p> <p>0 100 200 400</p> <p>SCALE: 1"=200'</p>
--	---	--	--

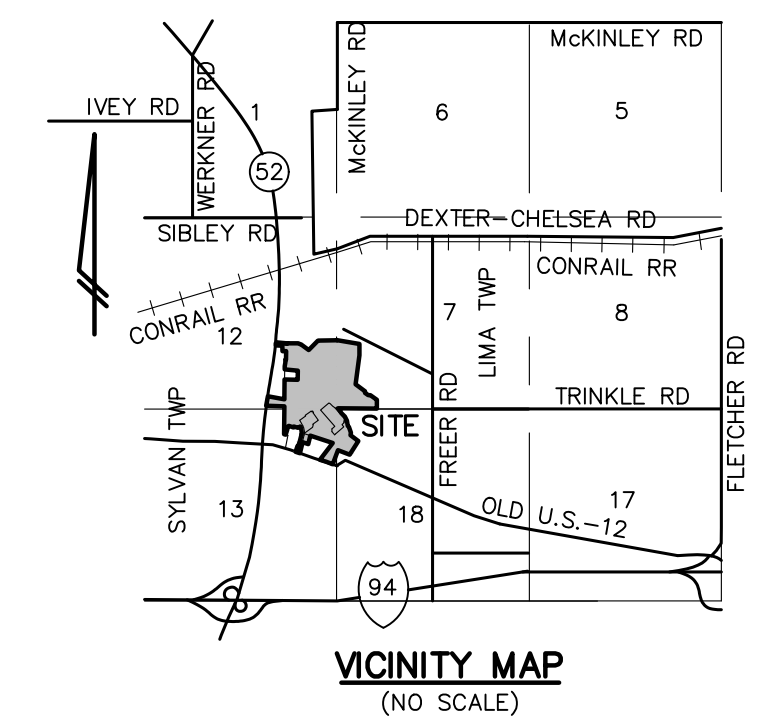
PREPARED BY: *Joseph K. Maynard*
JOSEPH K. MAYNARD P.E., MICH No. 52559

<p>CIVIL ENGINEERS PLANNERS • SURVEYORS LANDSCAPE ARCHITECTS 3526 W. LIBERTY RD ANN ARBOR, MI 48103 TEL. 734-761-8900</p>	<p>WASHTEENAW ENGINEERING</p>	<p>A3C 115 1/2 E. LIBERTY ST ANN ARBOR, MI 48104 TEL. 734-663-1910 www.occ.com</p>	<p>CLIENT</p>
		<p>OVERALL WORK AREA LOCATION PLAN</p>	<p>SHEET</p>
<p>SECTION 12 TOWN 2 SOUTH RANGE 3 EAST</p>	<p>CITY OF CHELSEA WASHTEENAW COUNTY • MICHIGAN</p>	<p>DATE 01-30-2024 JOB NO. 33056 DWS NO. 653-04 site FIELD BOOK 666 FILE NO. 10830</p>	<p>PROJECT</p> <p>CHELSEA HOSPITAL INPATIENT REHABILITATION RENOVATION</p>
<p>FILE NO. 10830</p>	<p>C10 SHEET</p>	<p>811</p>	<p>Know what's below. Call before you dig.</p>

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE ACCURATELY LOCATED OR IDENTIFIED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

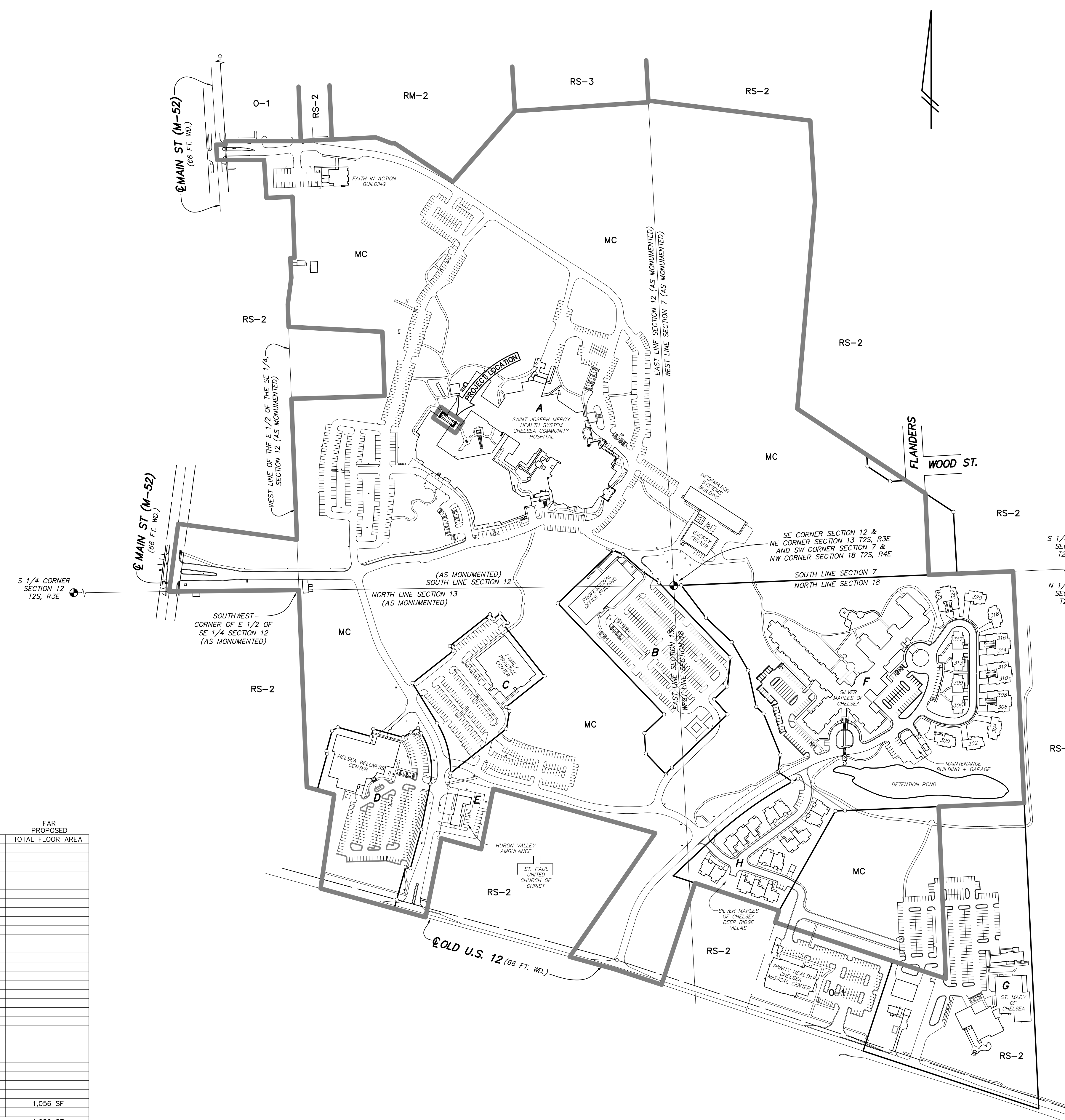
COPYRIGHT © 2023 WASHTENAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTENAW ENGINEERING COMPANY, INC.

THE USER SHALL NOT USE OR WITHHOLD ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, OR INFORMATION HEREON BY ANY OTHER INSTRUMENTS OF SERVICE OR OTHER PROJECTS. FOR ADDITION TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTENAW ENGINEERING COMPANY (WEC) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE USER SHALL MAINTAIN AND HOLD HARMLESS WEC, WEC'S CONSULTANTS AND AGENCIES AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.



LEGEND
C = PARCEL IDENTIFICATION

ZONING LEGEND
MC = MEDICAL CENTER
O-1 = OFFICE
RS-2 = SINGLE FAMILY
RS-3 = TWO FAMILY



- A = PARCEL 1**
MAIN CAMPUS PARCEL
TAX ID 06-06-12-475-053
ST. JOSEPH MERCY HEALTH SYSTEM
PO BOX 170
775 S. MAIN ST
CHELSEA, MI 48118
4,288,645 SF±
98.45 AC±
- B = PARCEL 2**
PROFESSIONAL OFFICE BUILDING PARCEL
UNITS 2, 5, 6, 7 & 11
TAX ID 06-06-12-475-050
ST. JOES MERCY HEALTH SYSTEM
14650 E. OLD US-12
CHELSEA, MI 48118
218,202 SF±
5.01 AC±
- C = FAMILY PRACTICE PARCEL**
TAX ID 06-06-12-475-051
5 HEALTHY TOWNS FOUNDATION
CHELSEA HEALTH & WELLNESS FOUNDATION
14700 E. OLD US-12
CHELSEA, MI 48118
127,580 SF±
2.93 AC±
- D = CHELSEA WELLNESS CENTER PARCEL**
TAX ID 06-06-12-475-052
5 HEALTHY TOWNS FOUNDATION
CHELSEA HEALTH & WELLNESS FOUNDATION
14800 E. OLD US-12
CHELSEA, MI 48118
193,276 SF±
4.44 AC±
- E = HURON VALLEY AMBULANCE LEASE PARCEL**
33,573 SF±
0.77 AC±
- F = SILVER MAPLES OF CHELSEA**
TAX ID 06-07-18-210-007
SILVER MAPLES OF CHELSEA, INC.
100 SILVER MAPLES DR
CHELSEA, MI 48118
750,366 SF±
17.34 AC±
- G = ST. MARY OF CHELSEA**
TAX ID 06-07-18-210-006
ST. MARY OF CHELSEA CHURCH
14200 OLD US-12
CHELSEA, MI 48118
645,995 SF±
14.83 AC±
- H = SILVER MAPLES OF CHELSEA**
DEER RIDGE VILLAS
TAX ID 06-07-18-200-013
SILVER MAPLES OF CHELSEA, INC.
100 SILVER MAPLES DR
CHELSEA, MI 48118
134,899 SF±
3.10 AC±

SITE DATA TABLE

EXISTING USE:	EXISTING CONDITIONS		TOTAL FLOOR AREA	FAR
	EXISTING	PROPOSED		
ZONING:	MC - MEDICAL CENTER	LOT COVERAGE		
SETBACKS:	FRONT 30 FT (ALONG M-52)	SIDE 20 FT	REAR 20 FT	HEIGHT OF STRUCTURES: LESS THAN 40 FT
COVERAGES:	GROUND FLOOR	PROPOSED GROUND FLOOR	EXISTING TOTAL FLOOR AREA	FAR PROPOSED TOTAL FLOOR AREA
MAIN HOSPITAL	176,046 SF		301,462 SF	
INFORMATION SYSTEMS BUILDING	11,550 SF		11,550 SF	
ENERGY CENTER	5,184 SF		5,184 SF	
FAITH IN ACTION	4,003 SF		4,003 SF	
HURON VALLEY AMBULANCE	2,317 SF		2,317 SF	
GARAGE 1	496 SF		496 SF	
GARAGE 2	960 SF		960 SF	
PROFESSIONAL OFFICE BUILDING	21,156 SF		63,489 SF	
FAMILY PRACTICE CENTER	24,100 SF		25,000 SF	
CHELSEA WELLNESS CENTER	32,395 SF		51,003 SF	
SILVER MAPLES OF CHELSEA	76,383 SF		164,752 SF	
SILVER MAPLES MAINTENANCE	3,620 SF		3,620 SF	
300 WOODLANDS DR	2,714 SF		2,714 SF	
302 WOODLANDS DR	2,714 SF		2,714 SF	
304 WOODLANDS DR	2,835 SF		2,835 SF	
305 WOODLANDS DR	2,349 SF		2,349 SF	
306/308 WOODLANDS DR	5,033 SF		5,033 SF	
309 WOODLANDS DR	2,349 SF		2,349 SF	
310/312 WOODLANDS DR	5,033 SF		5,033 SF	
313 WOODLANDS DR	2,349 SF		2,349 SF	
314/316 WOODLANDS DR	5,033 SF		5,033 SF	
317 WOODLANDS DR	2,349 SF		2,349 SF	
318 WOODLANDS DR	2,714 SF		2,714 SF	
320 WOODLANDS DR	2,714 SF		2,714 SF	
322/324 WOODLANDS DR	5,033 SF		5,033 SF	
DEER RIDGE VILLAS - BEECHWOOD	14,760 SF		14,760 SF	
DEER RIDGE VILLAS - BIRCHWOOD	14,824 SF		14,824 SF	
DEER RIDGE VILLAS - GARAGE	432 SF		432 SF	
INPATIENT REHAB. RENNOVATION		1,056 SF		1,056 SF
TOTAL	431,445 SF±	1,056 SF	707,051 SF±	1,056 SF
	432,501 SF±		708,107 SF±	
	7.4%	7.4%	12.2%	12.2%
ALLOWED	25%		35%	
AREA IN MC ZONING	5,816,553.5 SF±	133.5 AC±	5,816,553.5 SF±	133.5 AC±

MC ZONING BOUNDARY TAKEN FROM CITY OF CHELSEA ZONING MAP. THE AREA SHOULD BE CONSIDERED APPROXIMATE ONLY.

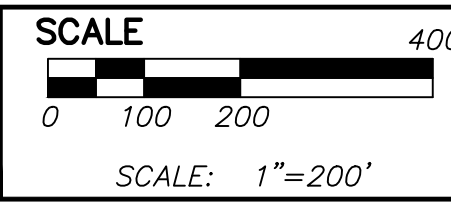
LEGEND

- = LIGHT POLE
- = UTILITY POLE
- ⊕ = GUY ANCHOR
- ⊙ = HYDRANT
- = SPOT ELEV.
- = POST
- ⊕ = GATE VALVE
- ⊙ = SIGN
- TC = TOP OF CURB
- TW = TOP OF WALL
- = MANHOLE
- = CATCHBASIN
- ⊂ = END SECTION
- = GRAVEL
- = FENCE
- = CONCRETE
- = ASPHALT
- = EXISTING STORM
- = EXISTING SANITARY
- = EXISTING WATER
- = EXISTING GAS
- = EXISTING ELECTRIC
- = EXISTING TELEPHONE

BENCHMARK BM1-RIM ELEVATION OF BEEHIVE MANHOLE NEAR THE NORTHEAST CORNER OF BUILDING, ELEV=924.33 (NAVD 88).

BM2-RIM ELEVATION OF CATCHBASIN, NORTH OF CONCRETE WALK AND EAST OF BUILDING, ELEV=926.19 (NAVD 88).

REVISIONS 12-14-23 BID/PERMIT SET. 1-4-24 ADDENDUM 2. 1-30-24 SITE PLAN SUBMITTAL.



PREPARED BY *Joseph K. Maynard*
JOSEPH K. MAYNARD P.E., MICH No. 52559



WASHTENAW ENGINEERING
CIVIL ENGINEERS
PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS
3526 W. LIBERTY RD
ANN ARBOR, MI 48104
TEL: 734-663-4800
FAX: 734-761-8900

A3C
115 1/2 E. LIBERTY ST
ANN ARBOR, MI 48104
TEL: 734-663-1910
WWW.WEC.COM

MC (MEDICAL CENTER) ZONING DISTRICT

CHELSEA HOSPITAL INPATIENT REHABILITATION RENOVATION

SECTION 12 TOWN 2 SOUTH RANGE 3 EAST
CITY OF CHELSEA
WASHTENAW COUNTY • MICHIGAN
DATE 01-30-2024
JOB NO. 33056
DWS NO. 056-MC zoning
FIELD BOOK 666
FILE NO. 10830

C11
SHEET

- NEW WORK PLAN KEYED NOTES:**
- ELECTRICAL PANEL; RE: ELECTRICAL.
 - MEDICAL GAS ALARM PANEL OR VALVE BOX; RE: PLUMBING.
 - RE: DETAIL 3,7,11 ON SHEET A3.25 FOR SILL, HEADER AND JAMB DETAIL OF INFILLED EXTERIOR WALL DETAILS.
 - EXISTING HANDRAIL TO REMAIN. MODIFY AS REQUIRED FOR NEW WORK.
 - MEDICAL GAS VACUUM OUTLET; RE: PLUMBING.
 - FRAME TO REMAIN; PAINT.
 - DROP EXISTING WATER LINE FROM CEILING TO COFFEE MAKERS IN ROOM; RE: PLUMBING.
 - RE: INTERIOR ELEVATIONS, EQUIPMENT LIST (A2.44), AND SPECIFICATIONS FOR TOILET ACCESSORIES.
 - CARD READER/KEY PAD; RE: DOOR SCHEDULE (A2.40), HARDWARE SETS AND ELECTRICAL.
 - PROVIDE 3/4" FRT PLYWOOD FROM 4" A.F.F. TO 8"-4" A.F.F. FOR FULL LENGTH OF WALL NOTED. PAINT PLYWOOD TO MATCH WALL, TYP. WALL BASE TO BE APPLIED TO GWB WALL.
 - 2" FLUSH MOUNTED GROMMET TO ACCESS ELECTRICAL BELOW; RE: ELECTRICAL.
 - EXISTING EXTERIOR WINDOW TO REMAIN. PROVIDE INSULATED INFILL PANEL WHERE PTAC HAS BEEN REMOVED; RE: DETAIL 1,5,9 ON SHEET A3.25 FOR ADDITIONAL INFORMATION.
 - (BID ALTERNATE) INSTALL NEW WINDOW AND INFILL PANEL WITHIN EXISTING MASONRY OPENING. REMOVE SCALE/RUST & RE-PAINT AT EXISTING LINTEL. REFER TO DETAIL 2,6,10 SHEET A3.25 FOR ADDITIONAL INFORMATION.
 - ADD NEW LAYER OF INTERIOR GWB, REPLACE ANY RUSTED/DAMAGED STUDS IN KIND.
 - MEDICAL GAS COMBINATION ALARM PANEL. RE: MECHANICAL, ELECTRICAL, AND PLUMBING PLANS.
 - CLEAN AND REPAIR EXISTING LOCKERS, CABINETS AND MAILBOXES FOR REUSE IN THIS PROJECT.
 - REMOVE SCALE/RUST & RE-PAINT AT EXISTING LINTEL.
 - RELOCATED KEYPAD AND FIRE ALARM PULL. RE: ELECTRICAL & DOOR SCHEDULE
 - MEDICAL GAS COMBINATION ALARM PANEL. SEE MECH, ELEC & PLUMB PLANS.

23041 NWKN

KEYED NOTES

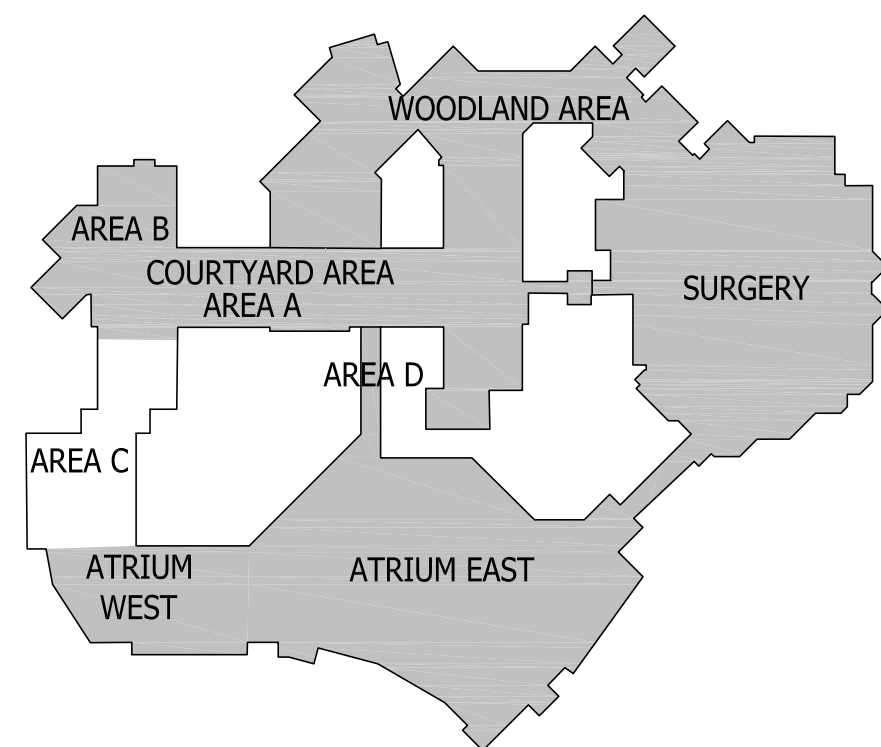
NO SCALE
REF'D FROM: TS **12**

- | | | | | | |
|--|----------------------|--|---------------------------------------|--|---|
| | EXISTING WALL | | NAME
[NO.]
EXISTING
ROOM TAG | | CORNER GUARD |
| | NEW STUD
WALL | | NAME
[NO.]
ROOM TAG | | END CAP |
| | NEW CMU WALL | | NAME
[NO.]
ROOM TAG | | WALL
REINFORCING
EQUIPMENT BY
OWNER.
SHOWN FOR
REFERENCE
ONLY, N.I.C. |
| | NEW CONCRETE
WALL | | ETR COLUMN /
COLUMN TAG | | PHASE 2
RE: G0.07-G0.09 |
| | EXISTING DOOR | | NEW
COLUMN TAG | | EQUIPMENT TAG
RE: A2.43 |
| | NEW DOOR | | DOOR TAG | | WINDOW TAG |
| | KEYED NOTE | | PARTITION TAG | | |

23041 NWKN

FLOOR PLAN LEGEND

SCALE: 1/8"=1'-0"
REF'D FROM: TS **8**



23041 KP-AREA C

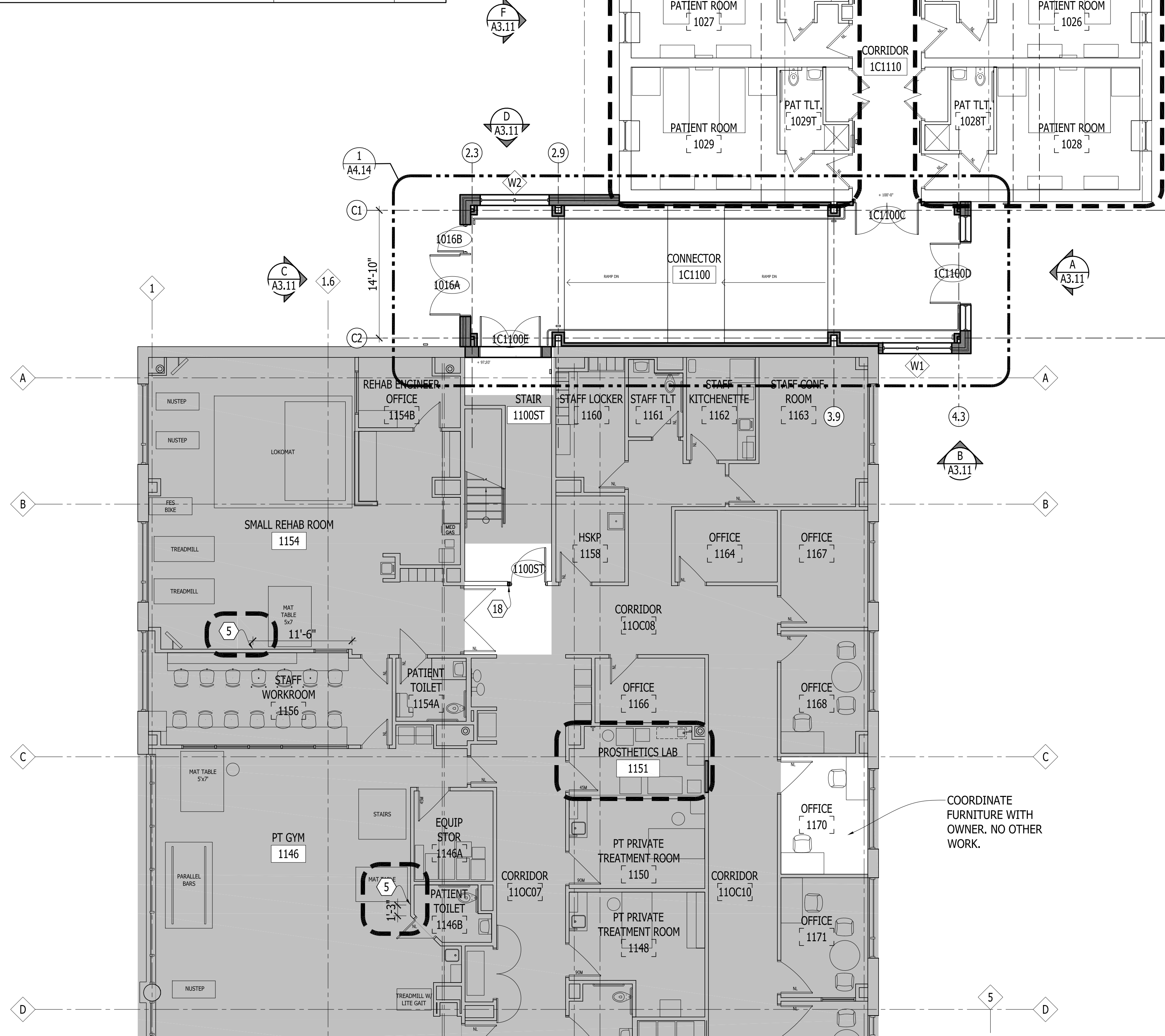
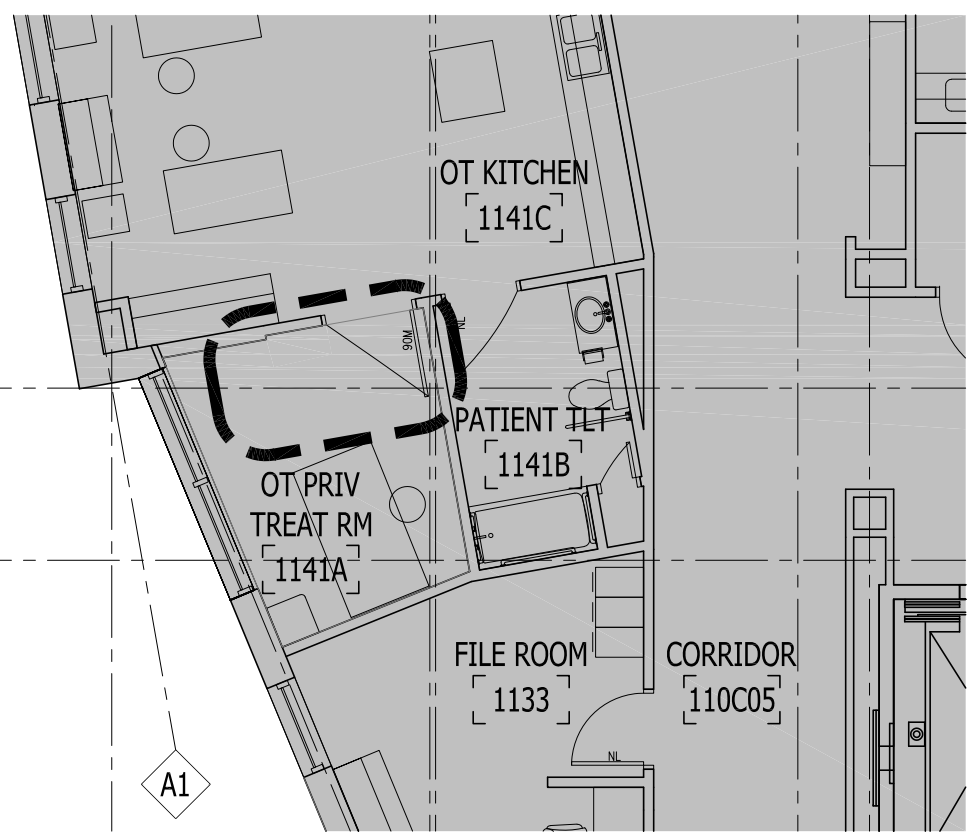
KEY PLAN - BUILDING

SCALE: NTS
REF'D FROM: TS **4**

23041-FL01

NEW WORK - TREATMENT ROOM

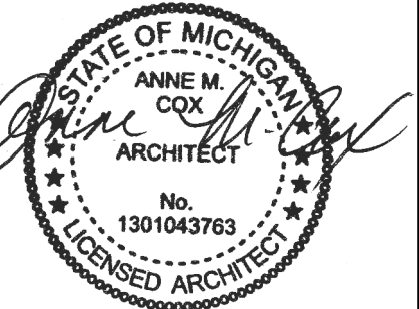
SCALE: 1/8"=1'-0"
REF'D FROM: G0.04 **15**



23041 FL01

FLOOR PLAN - LEVEL 1 - AREA C

SCALE: 1/8"=1'-0"
REF'D FROM: G0.04 **1**



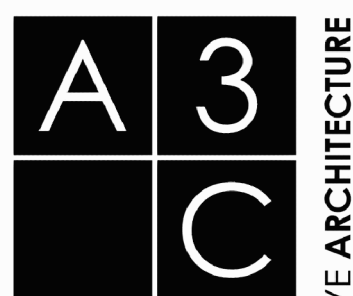
PROJECT NUMBER **23041**

ISSUE

BID/PERMIT SET 12/14/23
DRN: KLJ CHK'D: AMC

CHELSEA HOSPITAL
INPATIENT REHABILITATION
RENOVATION
CHELSEA, MI

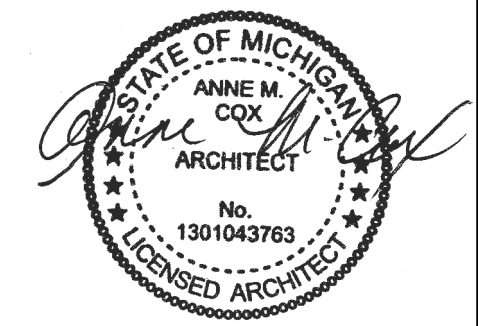
FLOOR PLAN - LEVEL 1 - AREA C



115 1/2 E. LIBERTY STREET
ANN ARBOR, MI 48104
T: (734) 663-1910
F: (866) 732-2168
www.a3c.com

SHEET

A2.11C

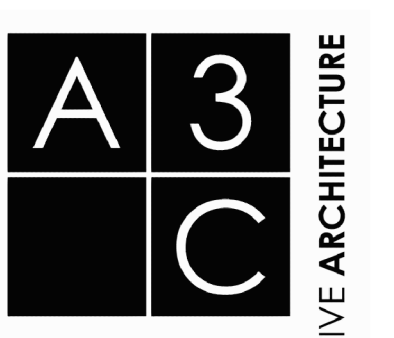


PROJECT NUMBER 23041

ISSUE	
BID/PERMIT SET	12/14/23
DRN: KLJ	CHK'D: AMC

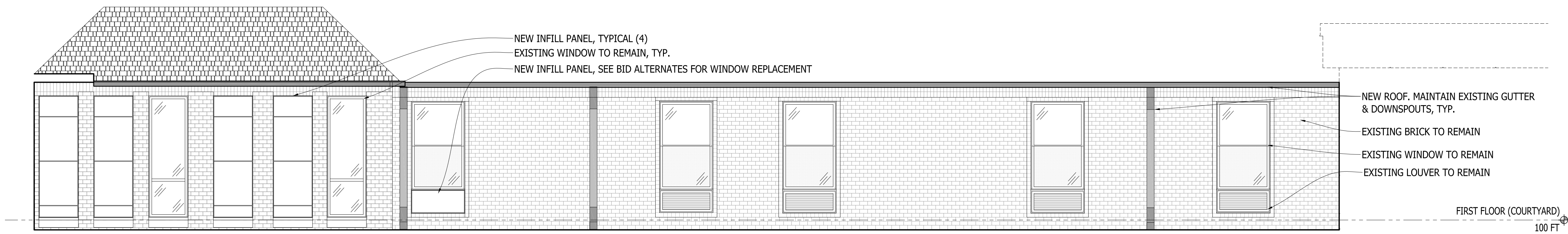
CHELSEA HOSPITAL
INPATIENT REHABILITATION
RENOVATION
CHELSEA, MI

EXTERIOR ELEVATIONS

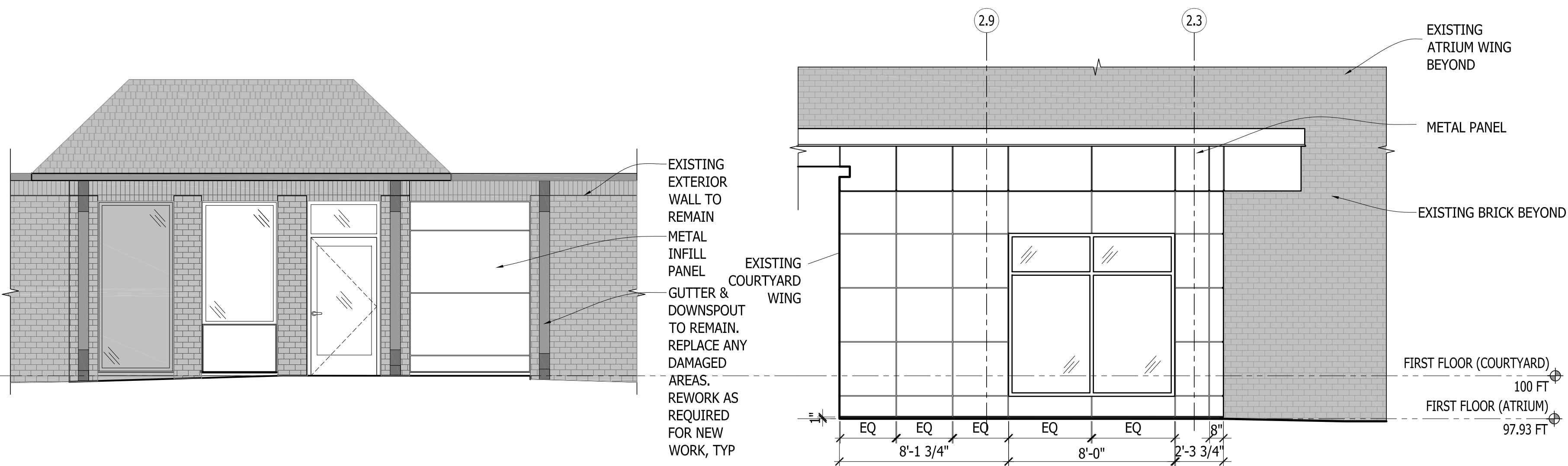


115 1/2 E. LIBERTY STREET
ANN ARBOR, MI 48104
T: (734) 663 - 1910
F: (866) 732 - 2168
www.a3c.com

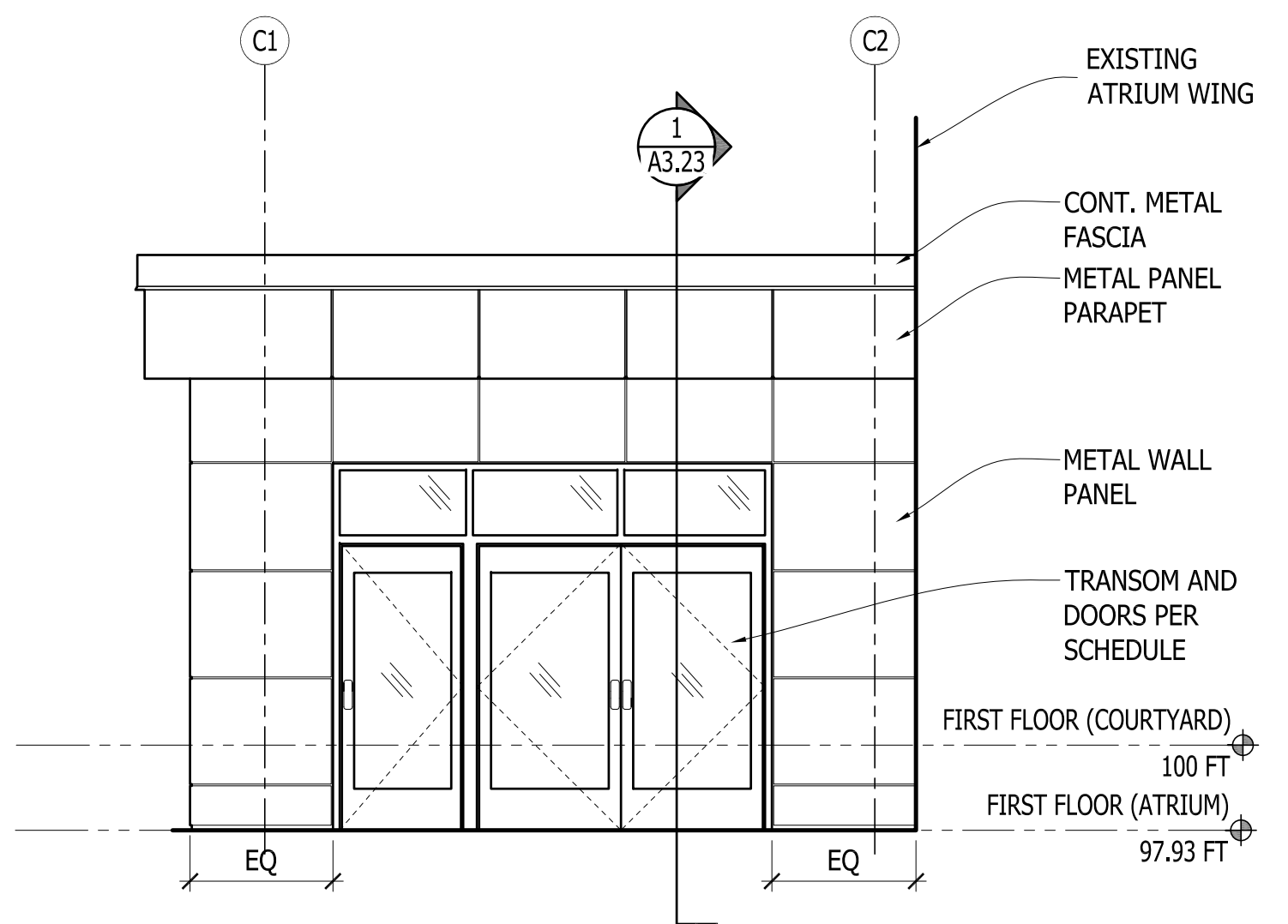
SHEET **A3.11**



F EXTERIOR ELEVATION - F

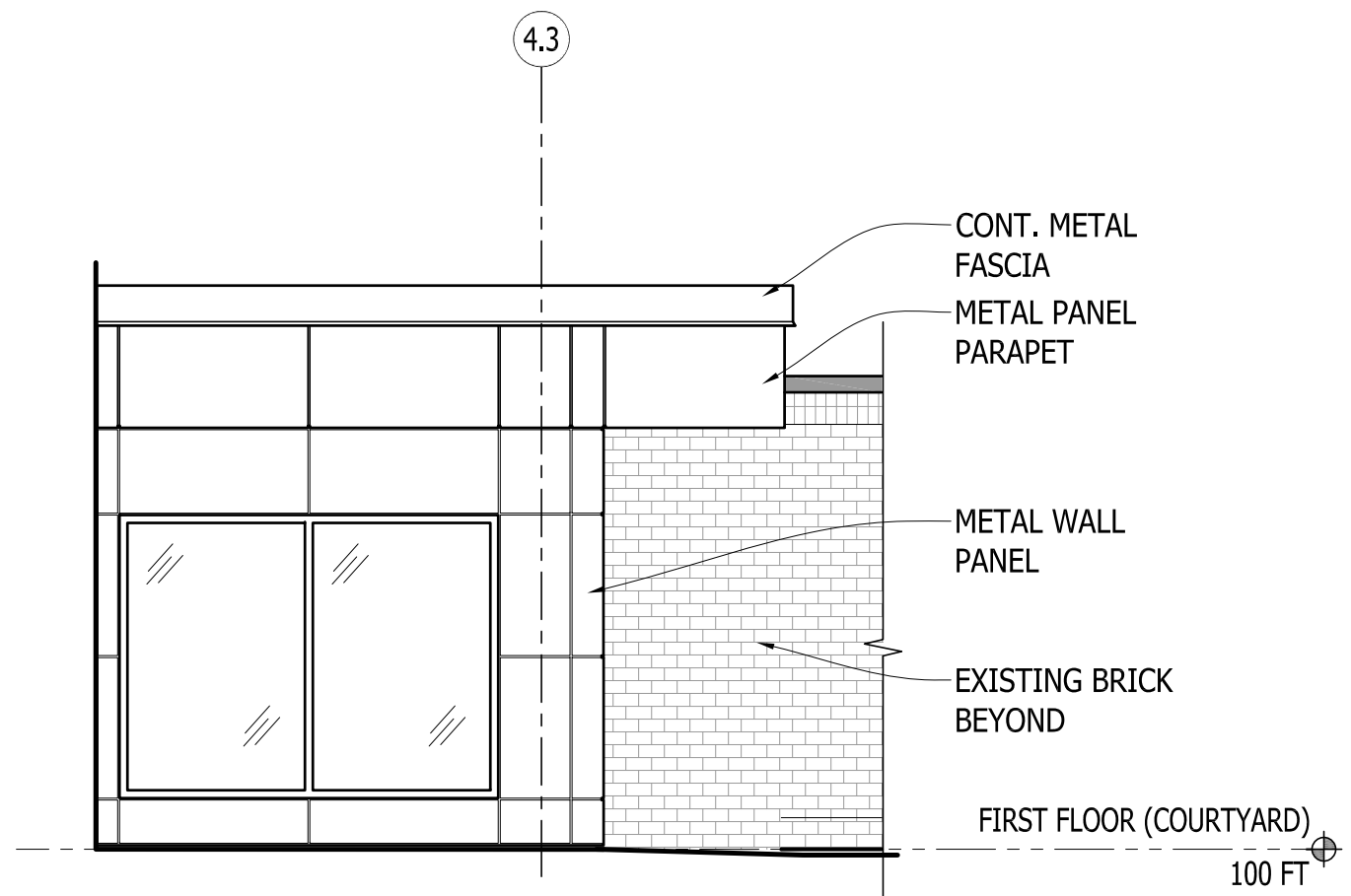


D EXTERIOR ELEVATION - D

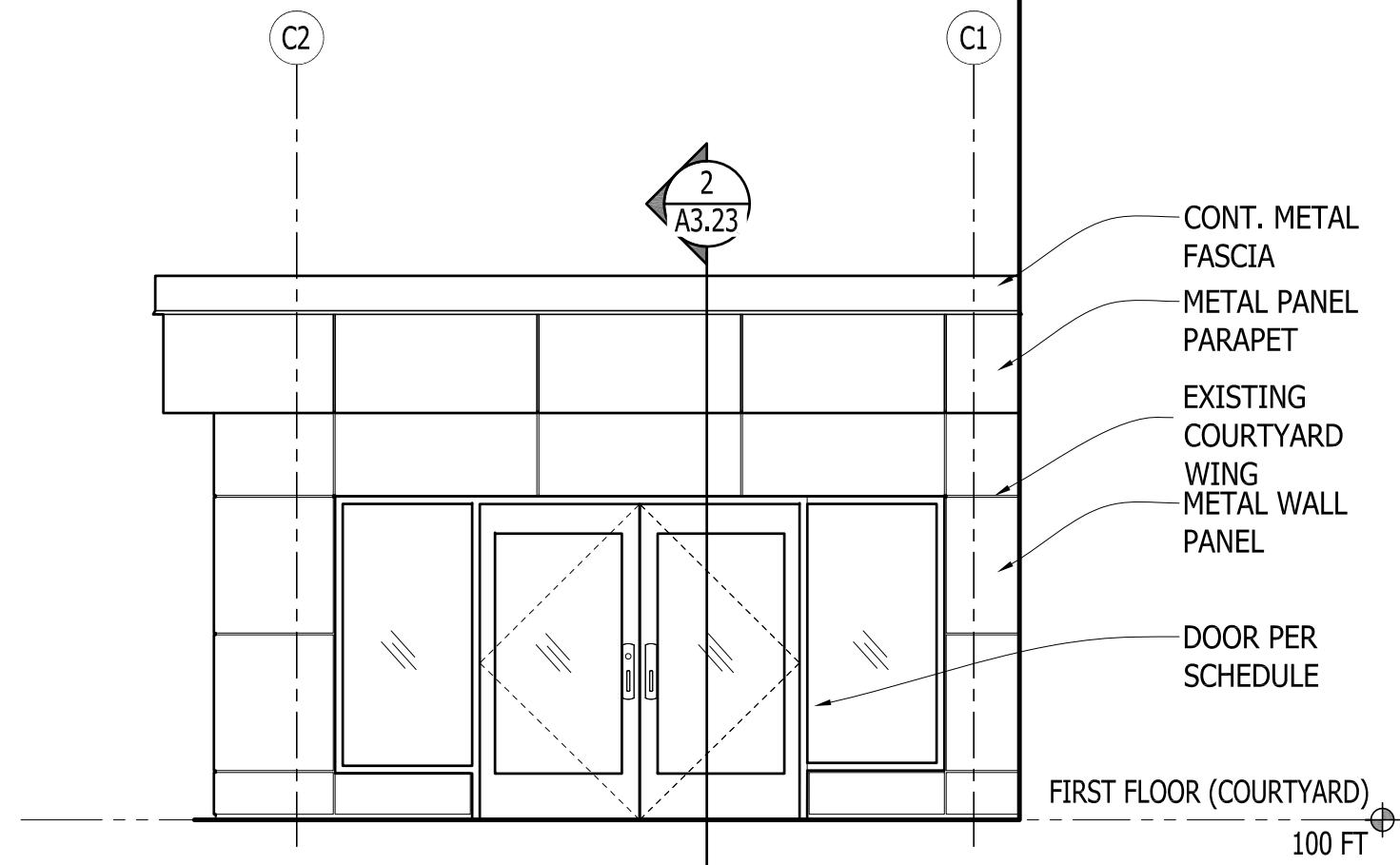


C EXTERIOR ELEVATION - C

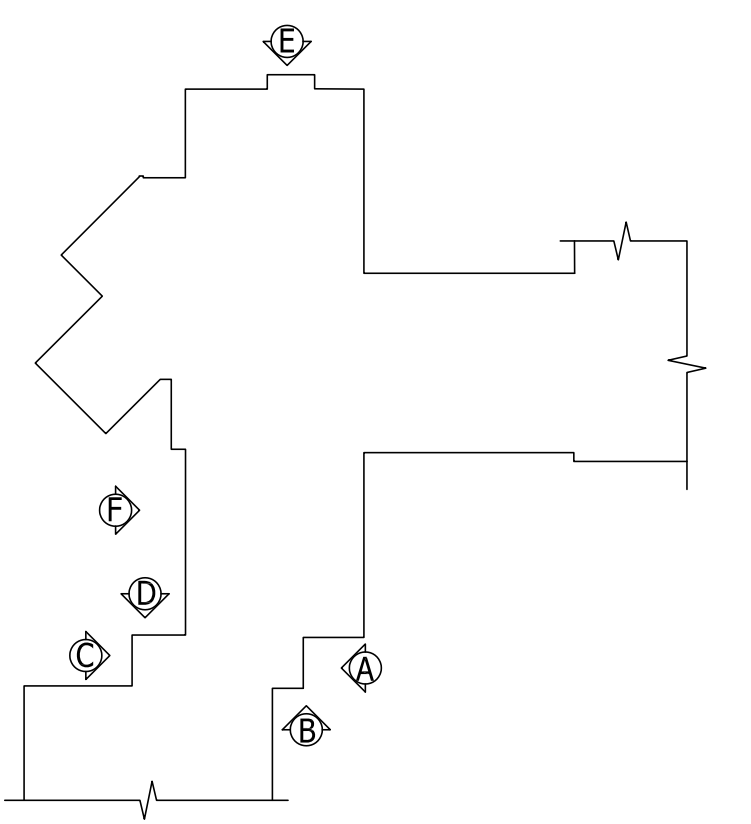
E EXTERIOR ELEVATION - E



B EXTERIOR ELEVATION - B

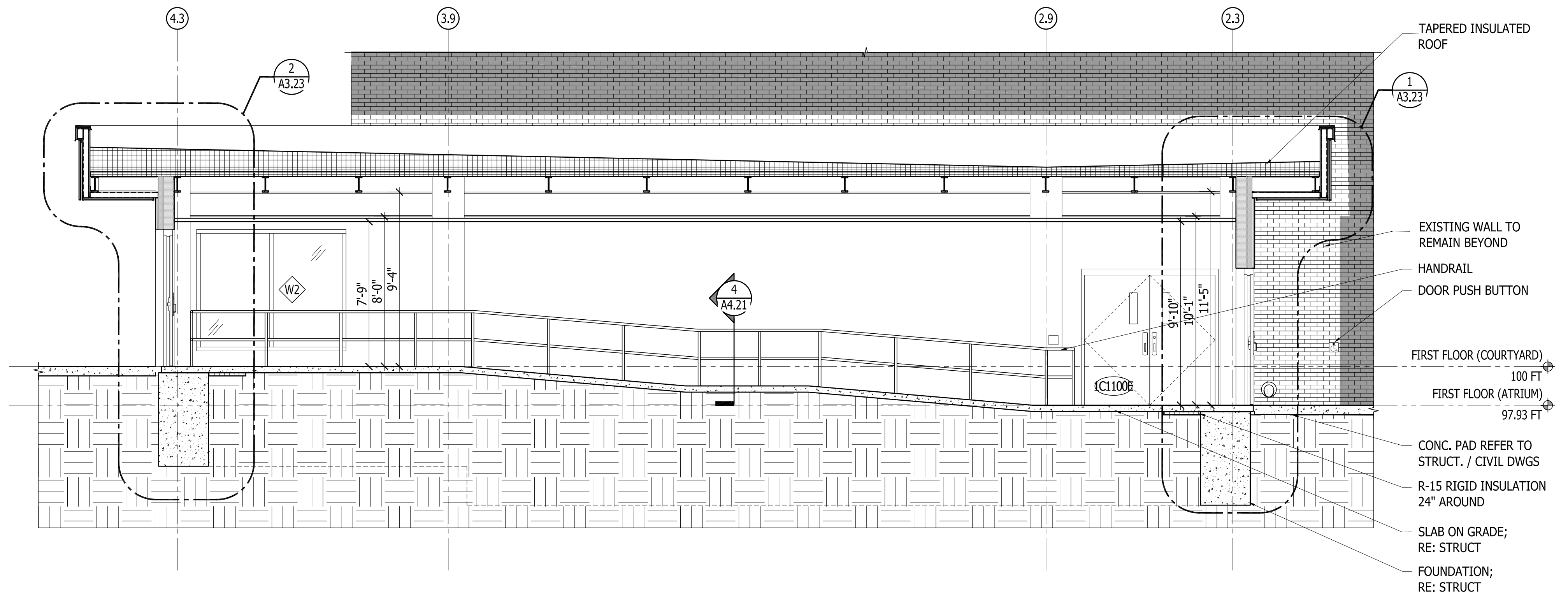


A EXTERIOR ELEVATION - A



23041 EE01

ELEVATION KEY	NO SCALE	4
	REF'D FROM: TS	

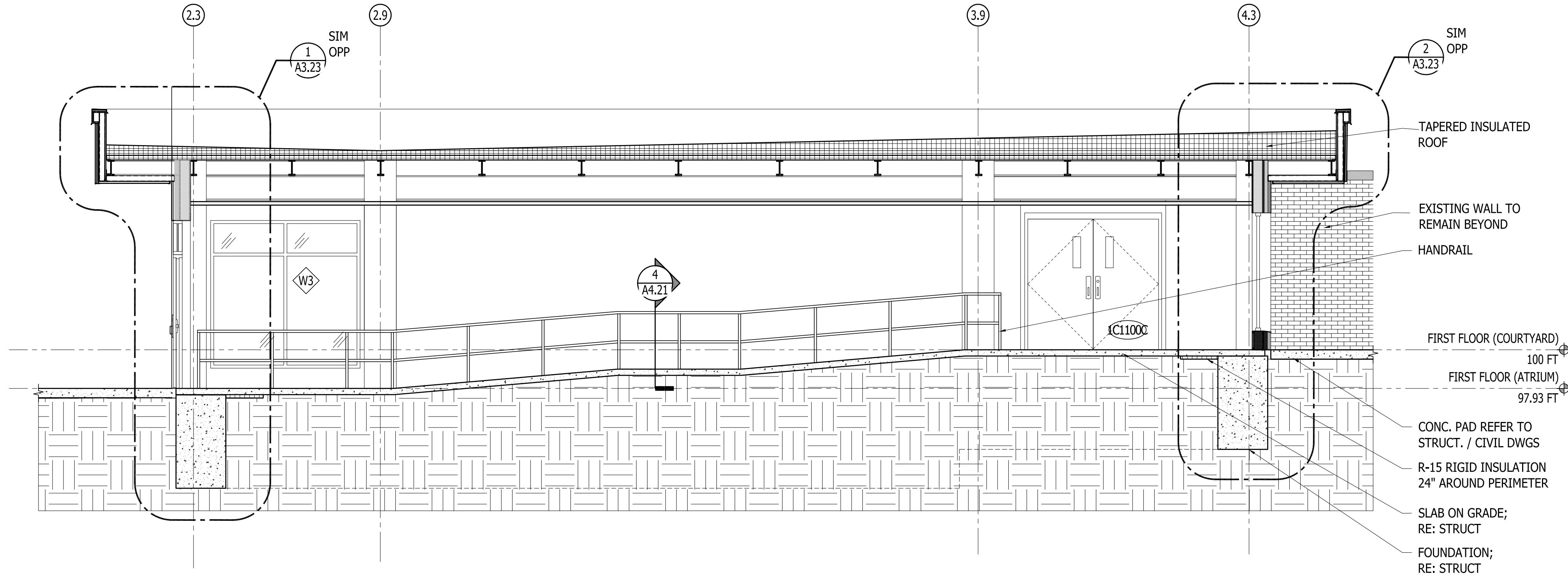


23041 BS01

CONNECTOR 1C1100 BUILDING SECTION

SCALE: 1/4"=1'-0"
REF'D FROM: A4.14

9

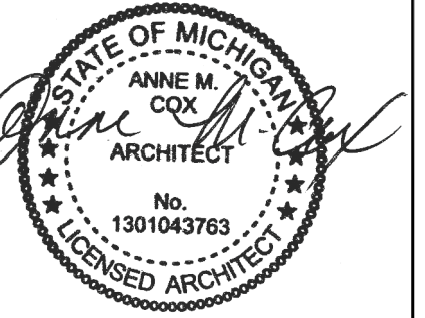


23041 BS01

CONNECTOR 1C1100 BUILDING SECTION

SCALE: 1/4"=1'-0"
REF'D FROM: A4.14

1

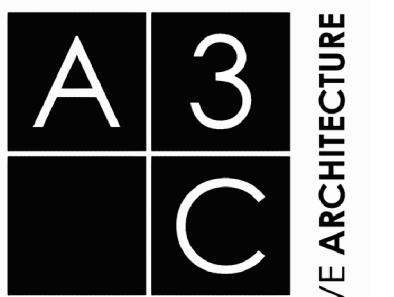


PROJECT NUMBER 23041

ISSUE	
BID/PERMIT SET	12/14/23
DRN: KLJ	CHK'D: AMC

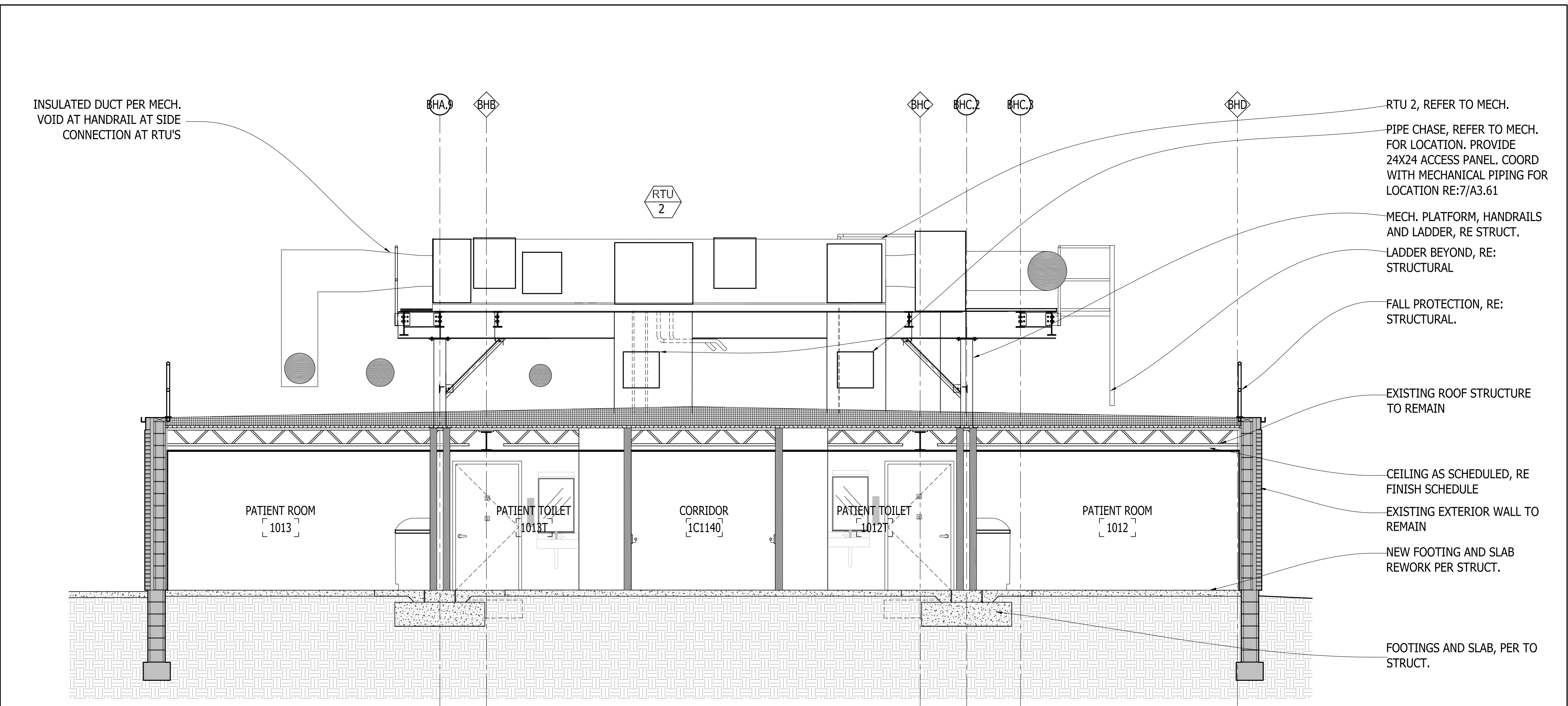
CHelsea HOSPITAL
INPATIENT REHABILITATION
RENOVATION
CHELSEA, MI

BUILDING SECTIONS



115 1/2 E. LIBERTY STREET
ANN ARBOR, MI 48104
T: (734) 663 - 1910
F: (866) 732 - 2168
www.a3c.com

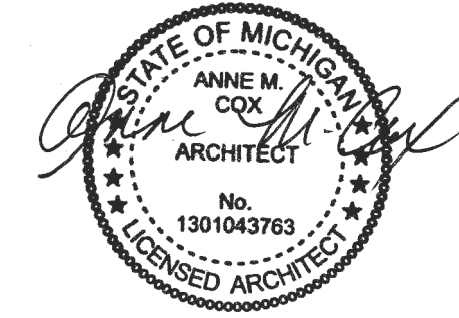
SHEET
A3.21



23041 BS02

BUILDING SECTION

SCALE: 1/4"=1'-0"
REF'D FROM: A2.13B **9**



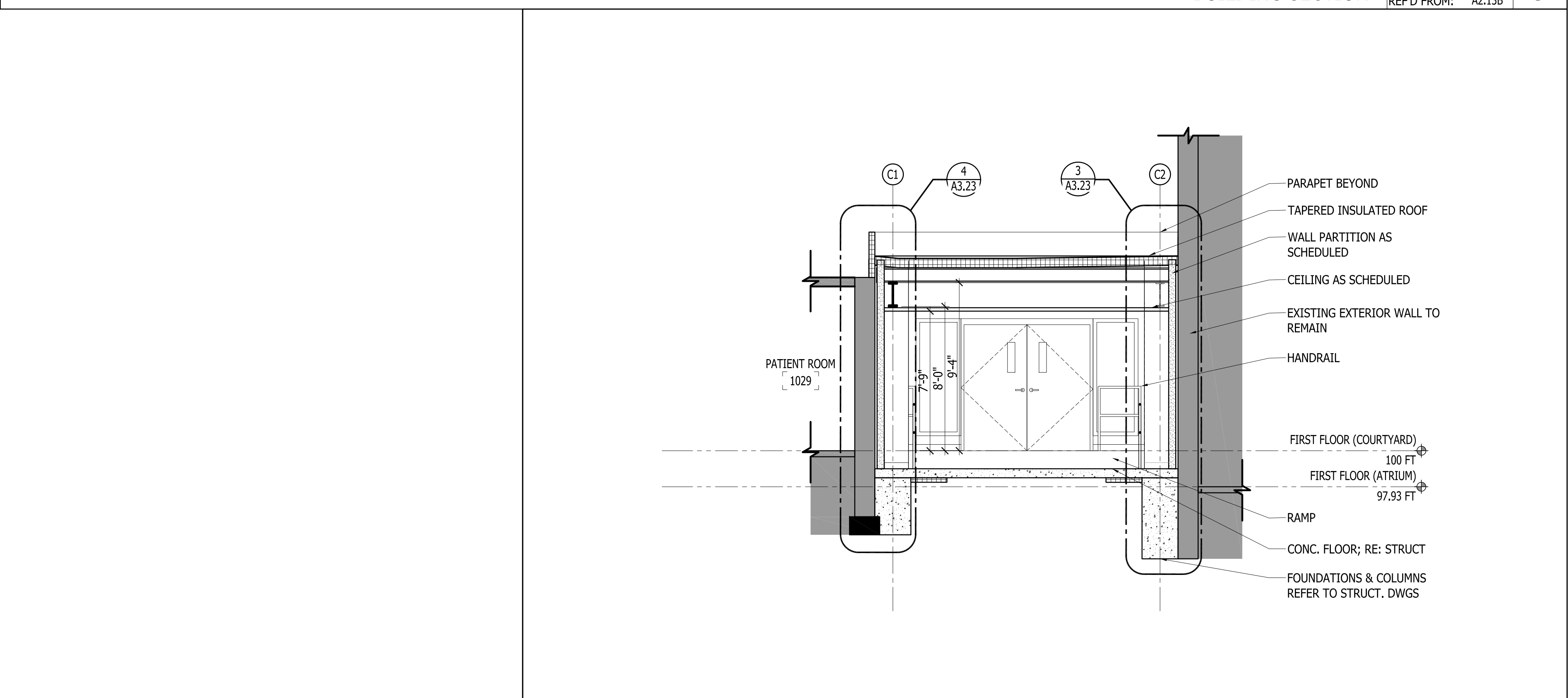
PROJECT NUMBER **23041**

ISSUE	
BID/PERMIT SET	12/14/23

DRN: KLJ CHK'D: AMC

CHELSEA HOSPITAL
INPATIENT REHABILITATION
RENOVATION
CHELSEA, MI

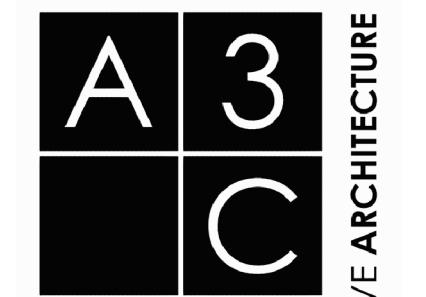
BUILDING SECTIONS



23041 BS01

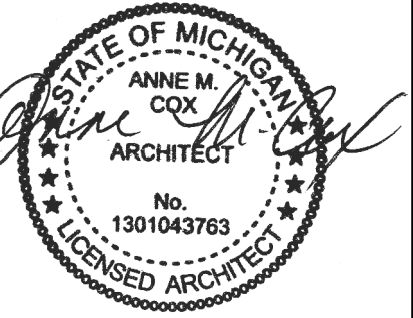
CONNECTOR 1C1100 BUILDING SECTION

SCALE: 1/4"=1'-0"
REF'D FROM: A2.14 **1**



115 1/2 E. LIBERTY STREET
ANN ARBOR, MI 48104
T: (734) 663 - 1910
F: (866) 732 - 2168
www.a3c.com

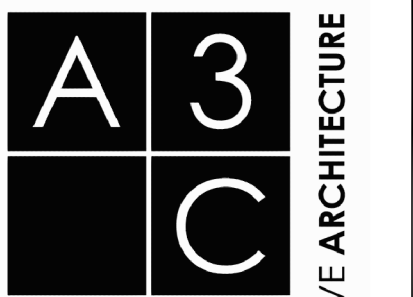
SHEET **A3.22**



PROJECT NUMBER 23041

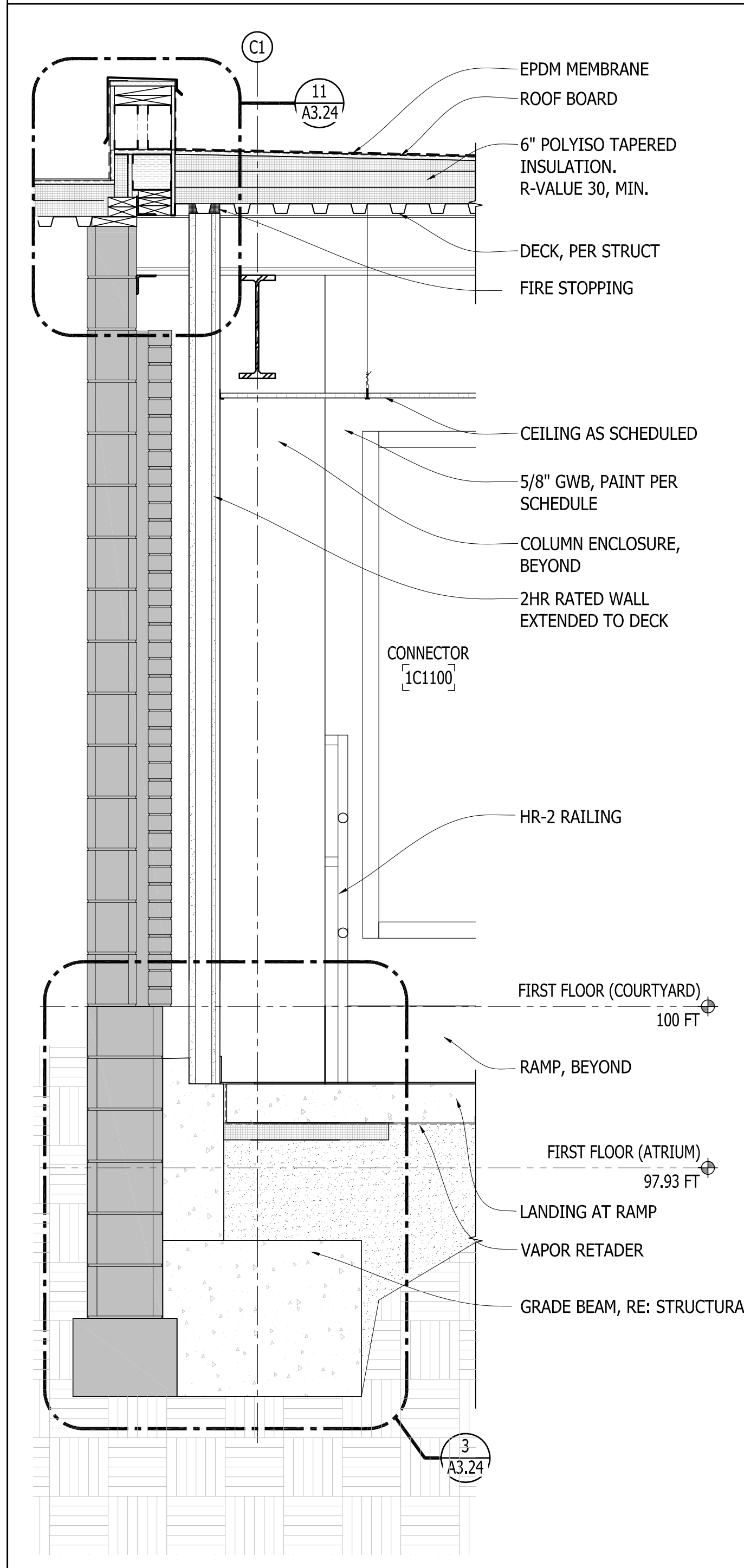
ISSUE	
BID/PERMIT SET	12/14/23
DRN: KLJ	CHK'D: AMC

CHELSEA HOSPITAL
 INPATIENT REHABILITATION
 RENOVATION
 CHELSEA, MI
 WALL SECTIONS

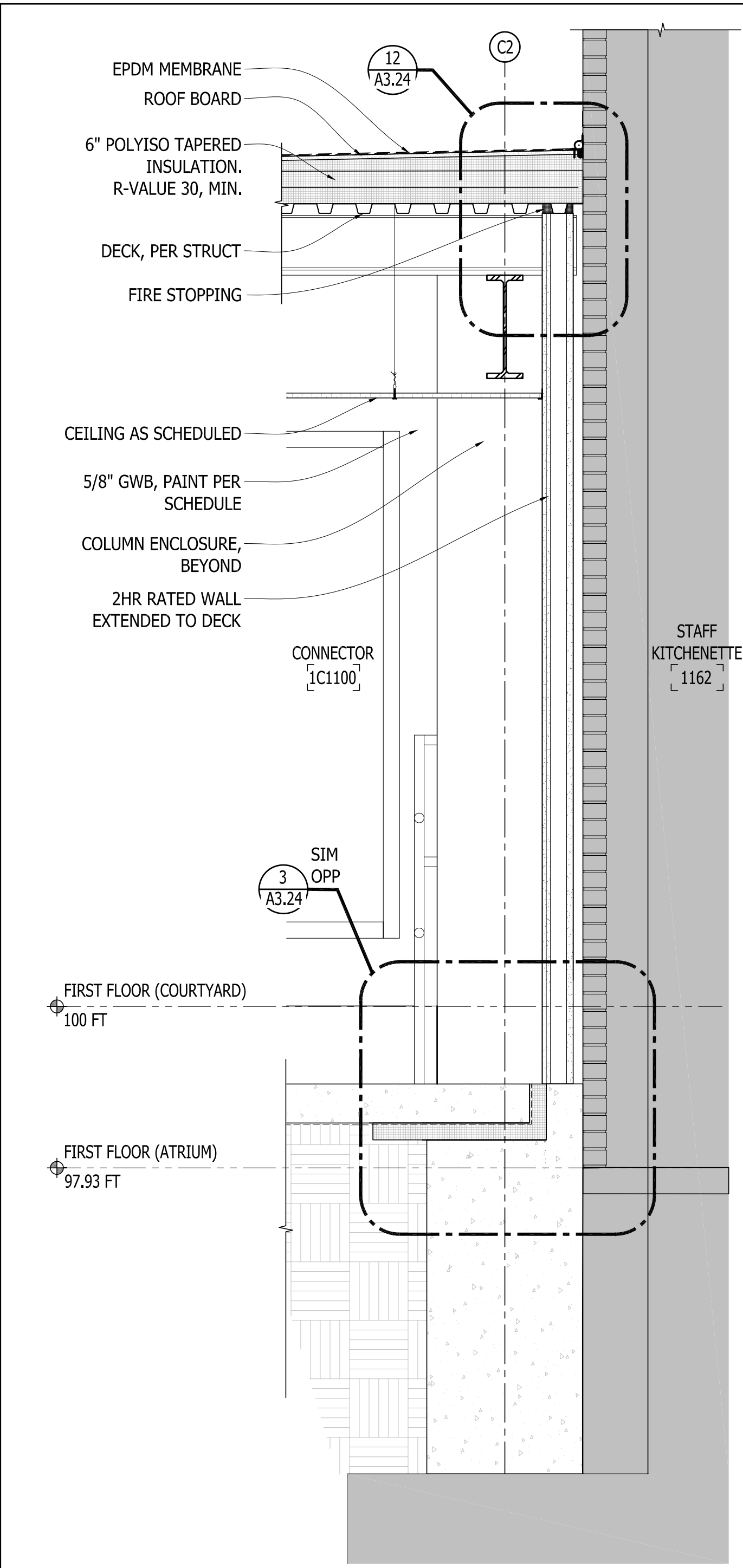


115 1/2 E. LIBERTY STREET
 ANN ARBOR, MI 48104
 T: (734) 663-1910
 F: (866) 732-2168
 www.a3c.com

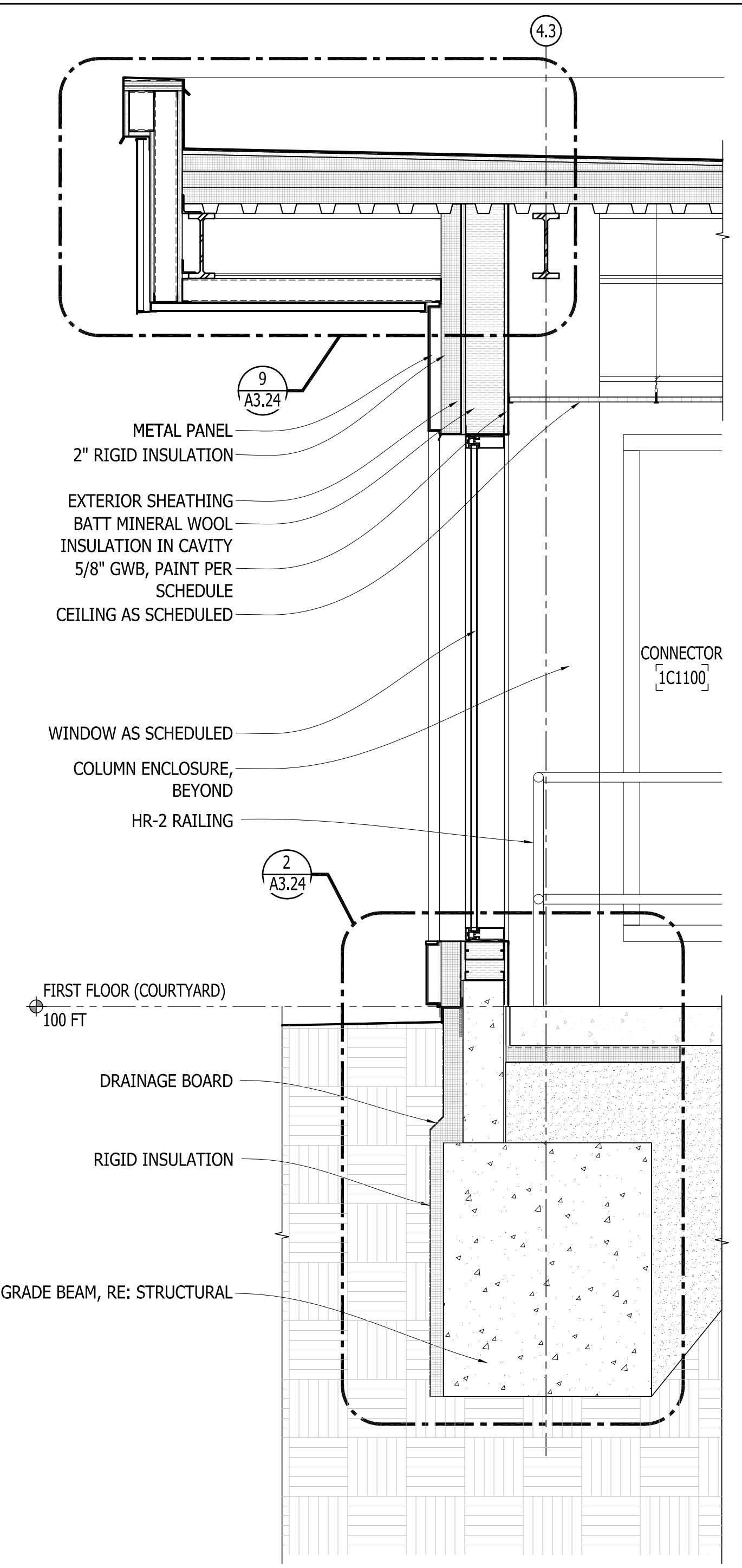
SHEET **A3.23**



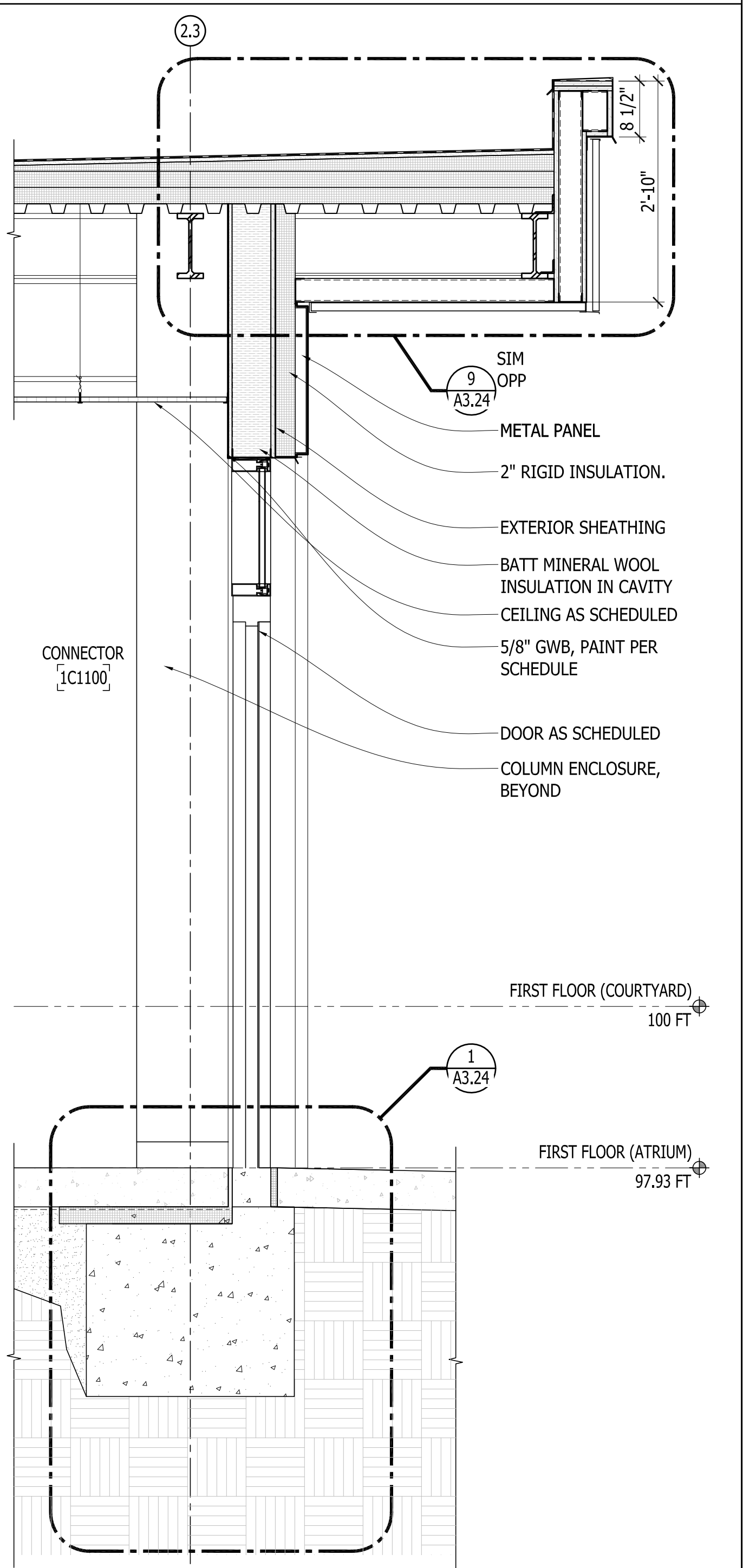
23041 WS01 WALL SECTION SCALE: 3/4"=1'-0" REF'D FROM: A3.22 4



23041 WS01 WALL SECTION SCALE: 3/4"=1'-0" REF'D FROM: A3.22 3



23041 WS01 WALL SECTION SCALE: 3/4"=1'-0" REF'D FROM: A3.21 2



23041 WS01 WALL SECTION SCALE: 3/4"=1'-0" REF'D FROM: A3.21 1

SITE PLAN

CHELSEA HOSPITAL

INPATIENT REHABILITATION

RENOVATION

**TRINITY HEALTH AND UNIVERSITY OF MICHIGAN
A JOINT VENTURE HOSPITAL**

**A PART OF THE
SE 1/4 SECTION 12, T2S, R3E,
CITY OF CHELSEA
WASHTENAW COUNTY, MICHIGAN**


CONSTRUCTION NOTES:

- 1.) IT IS ESSENTIAL THAT THE CONTRACTOR FAMILIARIZE HIMSELF WITH THE SITE PRIOR TO SUBMITTING PROPOSAL.
- 2.) ALL CONSTRUCTION SHALL BE PERFORMED PER THE CITY OF CHELSEA STANDARD SPECIFICATIONS.
- 3.) THE AREA WITHIN THE CONSTRUCTION LIMITS SHALL BE STRIPPED OF ORGANIC SOILS PRIOR TO COMMENCING GENERAL EXCAVATION. THIS MATERIAL SHALL BE STOCKPILED ON THE PROPERTY OR AS DIRECTED BY THE ENGINEER OR THE OWNER.
- 4.) THE CONTRACTOR WILL BE REQUIRED TO PROOF ROLL (WITH A HEAVY RUBBER-TIRED VEHICLE) ALL FILL AREAS PRIOR TO PLACING ADDITIONAL FILL AND ALL CUT AREAS UPON COMPLETION OF THE CUT AND PRIOR TO PLACING BASE MATERIAL. IF THE PROOF ROLLING INDICATES UNSTABLE AREAS, THE UNSTABLE MATERIAL MUST BE REMOVED AND REPLACED WITH MATERIAL MATCHING THE ADJACENT SOILS TO THE ELEVATION OF THE SUBGRADE.
- 5.) ALL FILL MATERIAL MUST BE PLACED IN LIFTS NOT EXCEEDING 9 INCHES AND COMPACTED TO 95% OF THE MAXIMUM UNIT WEIGHT.
- 6.) THE FINISHED SUBGRADE MUST BE GRADED WITHIN A TOLERANCE OF +/- 0.1 FEET OF DESIGN GRADE COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM UNIT WEIGHT TO A DEPTH OF 9 INCHES AND APPROVED BY THE OWNER'S REPRESENTATIVE/ENGINEER PRIOR TO PLACEMENT OF THE AGGREGATE BASE. FINE GRADING, PRIOR TO THE PLACEMENT OF THE BASE MATERIAL, SHALL BE INCLUDED IN THE COST OF PREPARING THE SUBGRADE.
- 7.) ALL DISTURBED AREAS, DITCH BOTTOMS AND SLOPES UNLESS OTHERWISE NOTED, SHALL BE SEEDED AND MULCHED PER M.D.O.T. SPECIFICATION 815 & 816, INCLUDING PLACEMENT OF A 4-INCH TOPSOIL BED. DITCH BOTTOMS SHALL BE SODDED AND PEGGED WHERE DITCH GRADE EXCEEDS 3.00%.
- 8.) THE CONTRACTOR MUST CONTACT MISS DIG PRIOR TO BEGINNING CONSTRUCTION.
- 9.) ALL CONSTRUCTION ACTIVITIES SHALL BE SIGNED PER THE CURRENT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL MAINTAIN ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES.
- 10.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURES PER THIS APPROVED PLAN.
- 11.) THE CONTRACTOR MUST OBTAIN AN EROSION CONTROL PERMIT PRIOR TO BEGINNING EARTH MOVING. THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PRIOR TO BEGINNING CONSTRUCTION.
- 12.) ANY CONDITIONS (EXISTING) ON THE SITE THAT ARE NOT CONSISTENT WITH THE PLANS OR SOIL EROSION SEDIMENTATION PERMIT WILL RESULT IN A STOP-WORK ORDER AND REVOCATION OF THE SOIL EROSION SEDIMENTATION CONTROL PERMIT.
- 13.) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND/OR OBTAIN ANY INFORMATION NECESSARY REGARDING THE PRESENCE OF UNDERGROUND UTILITIES THAT MAY AFFECT THE WORK.
- 14.) CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO AND THE REPAIR OF ANY EXISTING UTILITY LINE IN THE CONSTRUCTION ZONE.
- 15.) THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THE PLANS ARE ONLY APPROXIMATE. NO FIELD VERIFICATION OF EXISTING UTILITY LINES HAS BEEN DONE.
- 16.) CONTRACTOR SHALL BE AWARE THAT SITE IS A HOSPITAL AND ACCESS SHALL BE MAINTAINED AT ALL TIMES. WORK AREAS THAT MUST BE CLOSED FOR CONSTRUCTION SHALL HAVE PROPER SIGNAGE PROVIDED TO LIMIT PEDISTRIAN AND VEICULAR ACCESS WITHIN THE WORK ZONE.
- 17.) CONTRACTOR SHALL INCLUDE THE COST OF ALL DEWATERING SYSTEM AND HOSES FOR THE WORK INCLUDED IN THE PLANS FOR THE BASE BID AND ALL BID ALTERNATES. MOST OF THE SITE IS CONSIDERED A REGULATED WETLAND AND CONTRACTOR SHALL TREAT ALL AREAS AS SUCH.

DEVELOPER/OWNER

TRINITY HEALTH AND
UNIVERSITY OF MICHIGAN
A JOINT VENTURE HOSPITAL
775 S. MAIN ST.
CHELSEA, MICHIGAN 48118
734-593-5399
C/O DAVID ROGERS

SURVEYOR/CIVIL ENGINEER

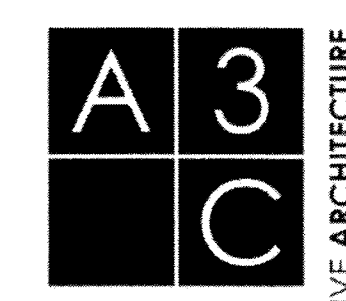


**WASHTENAW
ENGINEERING**

CIVIL ENGINEERS • PLANNERS
SURVEYORS • LANDSCAPE ARCHITECTS

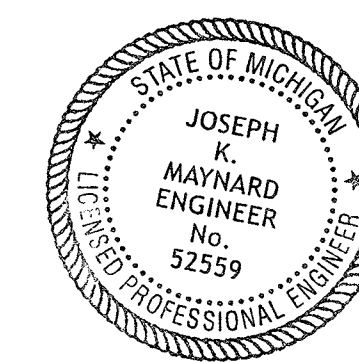
P.O. BOX 1128
3526 WEST LIBERTY RD SUITE 400 ANN ARBOR, MICHIGAN 48106
TEL: 734-761-8800
E-MAIL: weco@wengco.com

PLANNER/LANDSCAPE ARCHITECT



A3C
COLLABORATIVE ARCHITECTURE

115 1/2 E. LIBERTY STREET
ANN ARBOR, MI 48104
T: (734) 663-1910
F: (846) 732-2168
www.a3c.com



PREPARED BY: *Joseph K. Maynard*
JOSEPH K. MAYNARD P.E., MICH No. 52559

SITE DATA TABLE

EXISTING USE:	EXISTING CONDITIONS		PROPOSED CONDITIONS	
	MEDICAL CAMPUS	MEDICAL CAMPUS	MEDICAL CAMPUS	MEDICAL CAMPUS
ZONING:	MC - MEDICAL CENTER	MC - MEDICAL CENTER	MC - MEDICAL CENTER	MC - MEDICAL CENTER
SETBACKS:	LOT COVERAGE		LOT COVERAGE	
FRONT	30 FT (ALONG M-52)	433 FT (ALONG M-52), 1,352 TO OLD 12		
SIDE	20 FT	672 FT		
REAR	20 FT	661 FT		
HEIGHT OF STRUCTURES:	LESS THAN 40 FT		FAR EXISTING	
	EXISTING	PROPOSED	EXISTING	FAR PROPOSED
COVERAGE:	GROUND FLOOR	GROUND FLOOR	TOTAL FLOOR AREA	TOTAL FLOOR AREA
MAIN HOSPITAL	176,046 SF		301,462 SF	
INFORMATION SYSTEMS BUILDING	11,550 SF		11,550 SF	
ENERGY CENTER	5,184 SF		5,184 SF	
FAITH IN ACTION	4,003 SF		4,003 SF	
HURON VALLEY AMBULANCE	2,317 SF		2,317 SF	
GARAGE 1	496 SF		496 SF	
GARAGE 2	960 SF		960 SF	
PROFESSIONAL OFFICE BUILDING	21,156 SF		63,469 SF	
FAMILY PRACTICE CENTER	24,100 SF		25,000 SF	
CHELSEA WELLNESS CENTER	32,395 SF		51,003 SF	
SILVER MAPLES OF CHELSEA	76,383 SF		164,752 SF	
SILVER MAPLES MAINTENANCE	3,620 SF		3,620 SF	
300 WOODLANDS DR	2,714 SF		2,714 SF	
302 WOODLANDS DR	2,714 SF		2,714 SF	
304 WOODLANDS DR	2,835 SF		2,835 SF	
305 WOODLANDS DR	2,349 SF		2,349 SF	
306/308 WOODLANDS DR	5,033 SF		5,033 SF	
309 WOODLANDS DR	2,349 SF		2,349 SF	
310/312 WOODLANDS DR	5,033 SF		5,033 SF	
313 WOODLANDS DR	2,349 SF		2,349 SF	
314/316 WOODLANDS DR	5,033 SF		5,033 SF	
317 WOODLANDS DR	2,349 SF		2,349 SF	
318 WOODLANDS DR	2,714 SF		2,714 SF	
320 WOODLANDS DR	2,714 SF		2,714 SF	
322/324 WOODLANDS DR	5,033 SF		5,033 SF	
DEER RIDGE VILLAS - BEECHWOOD	14,760 SF		14,760 SF	
DEER RIDGE VILLAS - BIRCHWOOD	14,824 SF		14,824 SF	
DEER RIDGE VILLAS - GARAGE	432 SF		432 SF	
INPATIENT REHAB. RENOVATION		1,056 SF		1,056 SF
TOTAL	431,445 SF±	1,056 SF	707,051 SF±	1,056 SF
	7.4%	7.4%	12.2%	12.2%
ALLOWED	25%		35%	
AREA IN MC ZONING	5,816,553.5 SF±	133.5 AC±	5,816,553.5 SF±	133.5 AC±

MC ZONING BOUNDARY TAKEN FROM CITY OF CHELSEA ZONING MAP. THE AREA SHOULD BE CONSIDERED APPROXIMATE ONLY.

SITE PLAN NOTES:

1. NO LANDSCAPING IS PROPOSED AS PART OF THIS PROJECT.
2. NO IMPACT TO ANY EXISTING TREES ARE PROPOSED AS PART OF THIS PROJECT.
3. NO CHANGE TO SITE CIRCULATION OR ACCESS POINTS ARE PROPOSED AS PART OF THIS PROJECT.

SHEET TITLE **SHEET NO.**

COVER SHEET.....	C1
EXISTING CONDITIONS.....	C2
REMOVAL, SITE AND GRADING PLAN.....	C3
STORM SEWER PLAN AND PROFILE.....	C4
WATER MAIN PLAN AND PROFILE.....	C5
CITY OF CHELSEA WATER MAIN STANDARD DETAILS.....	C6
CITY OF CHELSEA WATER MAIN SPECIFICATIONS.....	C7
SANITARY AND STORM DETAILS.....	C8
OVERALL BOUNDARY SURVEY.....	C9
OVERALL WORK AREA LOCATION PLAN.....	C10
MC (MEDICAL CENTER) ZONING DISTRICT.....	C11

ARCHITECTURAL PLANS

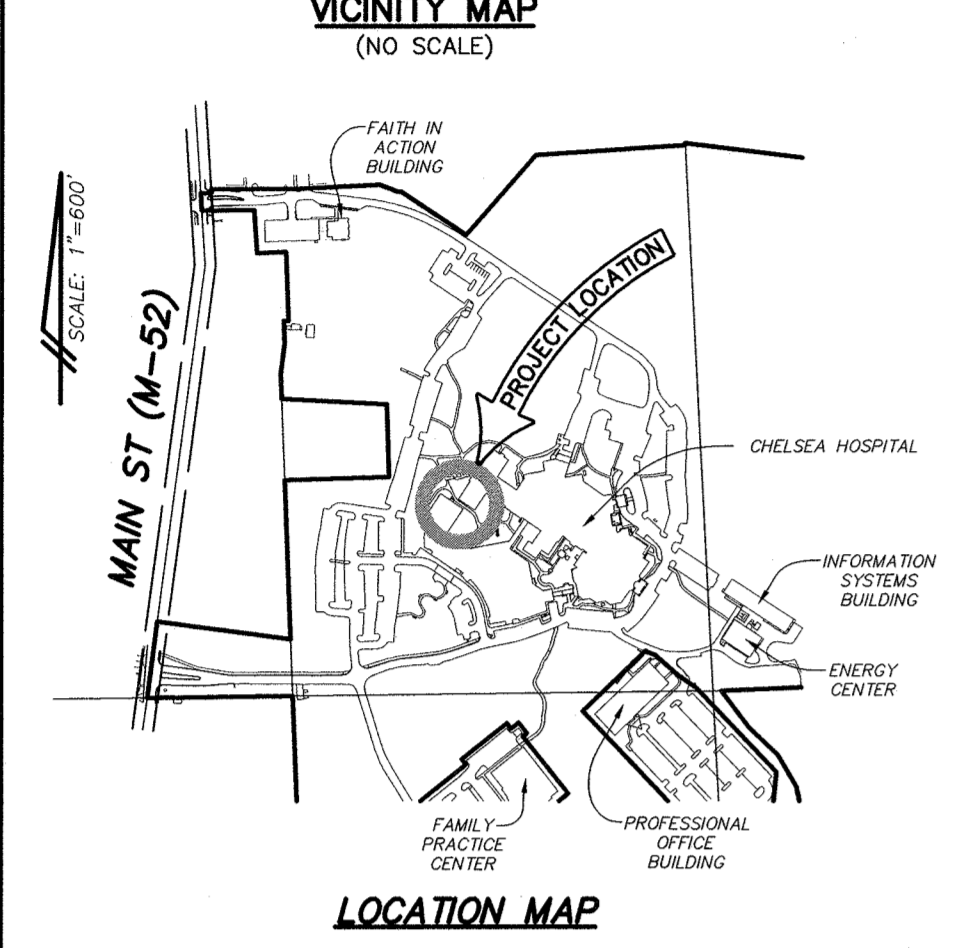
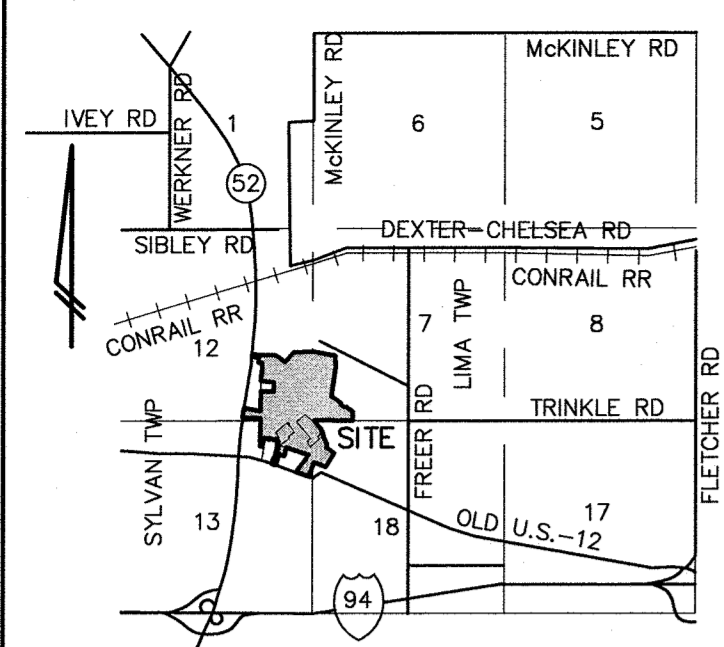
DEMOLITION PLAN - LEVEL 1 - AREA A.....	A1.01A
DEMOLITION PLAN - LEVEL 1 - AREA B.....	A1.01B
DEMOLITION PLAN - LEVEL 1 - AREA C.....	A1.01C
DEMOLITION PLAN - LEVEL 1 - AREA D.....	A1.01D
DEMOLITION PLAN - LEVEL 2.....	A1.02
DEMOLITION PLAN - ROOF.....	A1.03
FLOORPLAN LEVEL 1 - AREA C.....	A2.11C
EXTERIOR ELEVATIONS.....	A3.11
BUILDING SECTIONS.....	A3.21
BUILDING SECTIONS.....	A3.22
WALL SECTIONS.....	A3.23
CONNECTOR PLAN.....	A4.14
LIGHTING PLAN.....	LTG-CALCS

CHELSEA HOSPITAL INPATIENT REHABILITATION RENOVATION

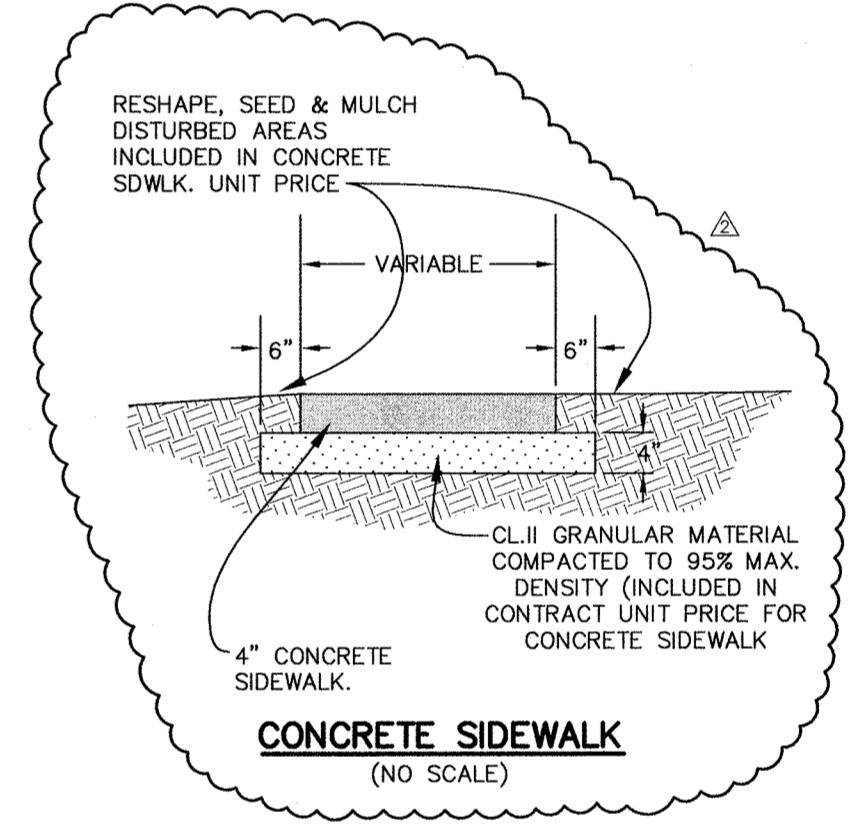
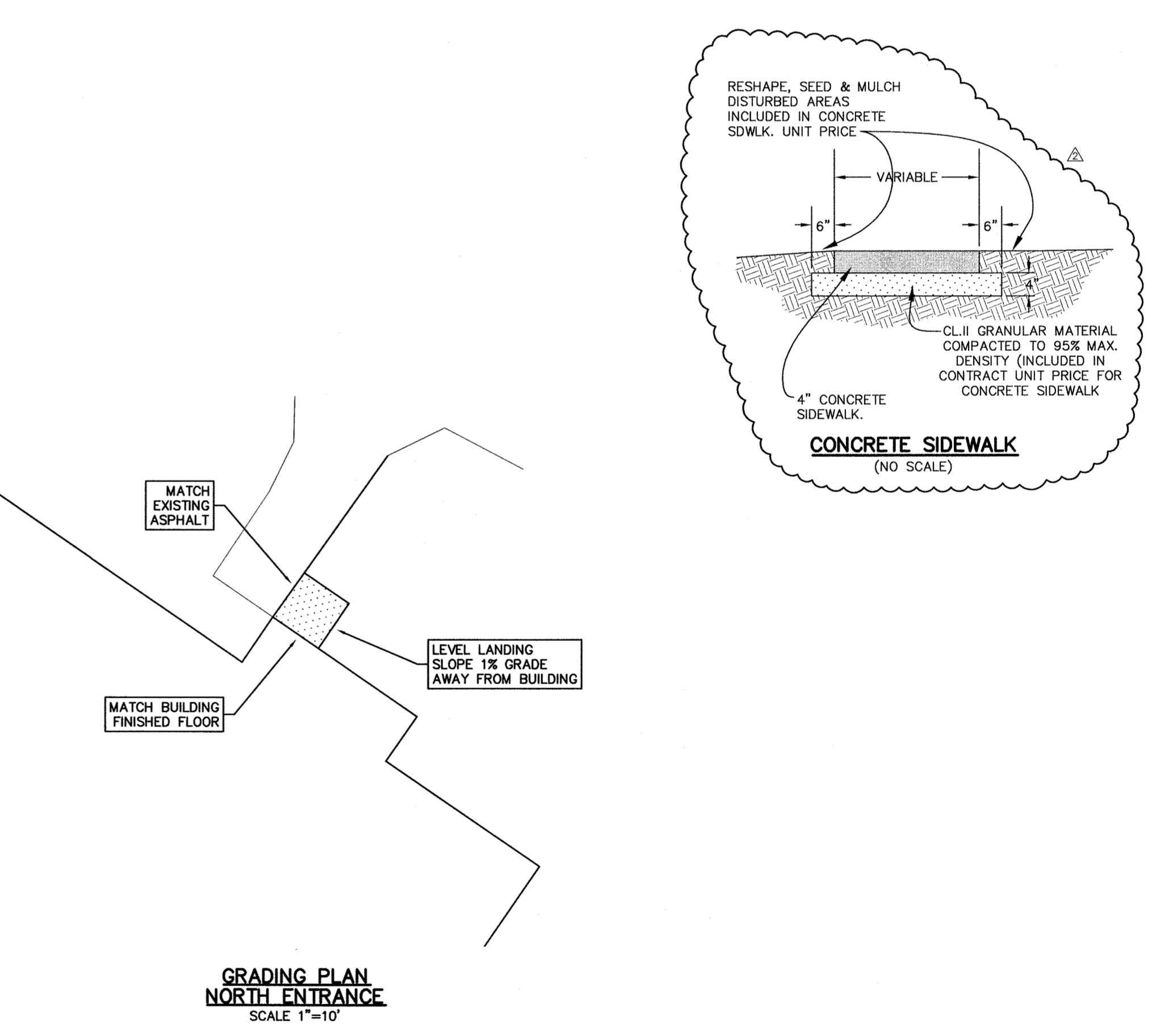
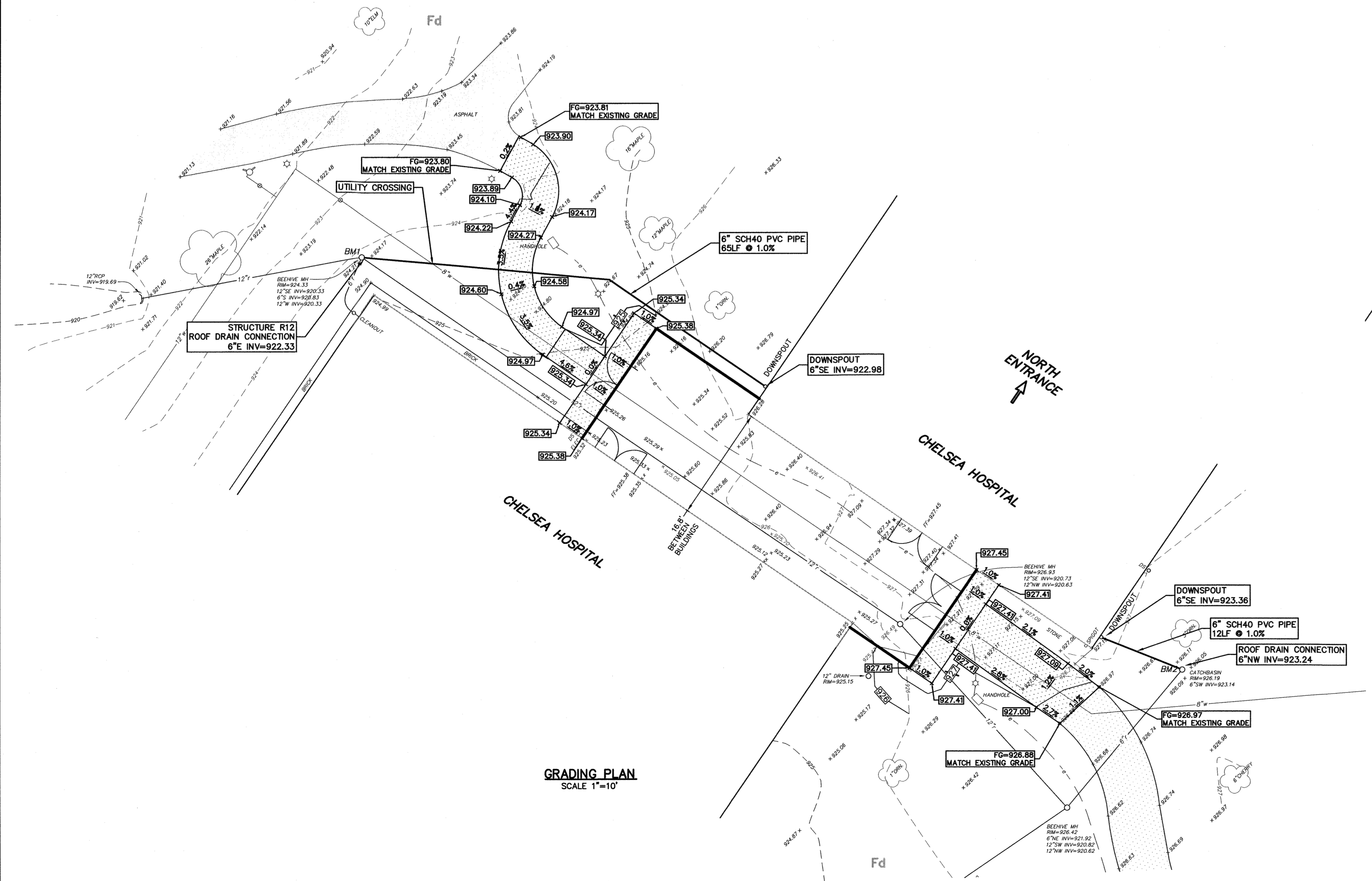
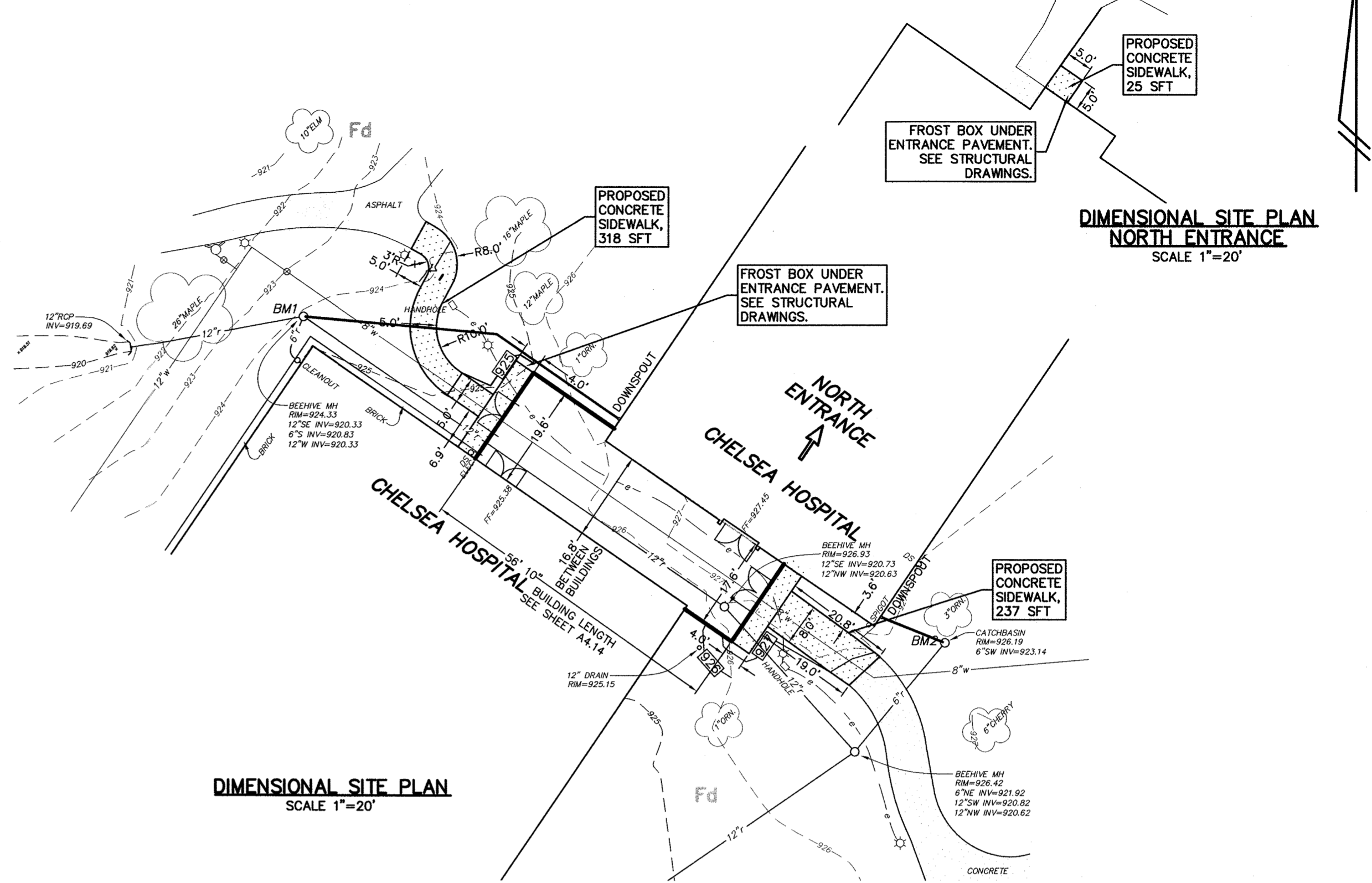
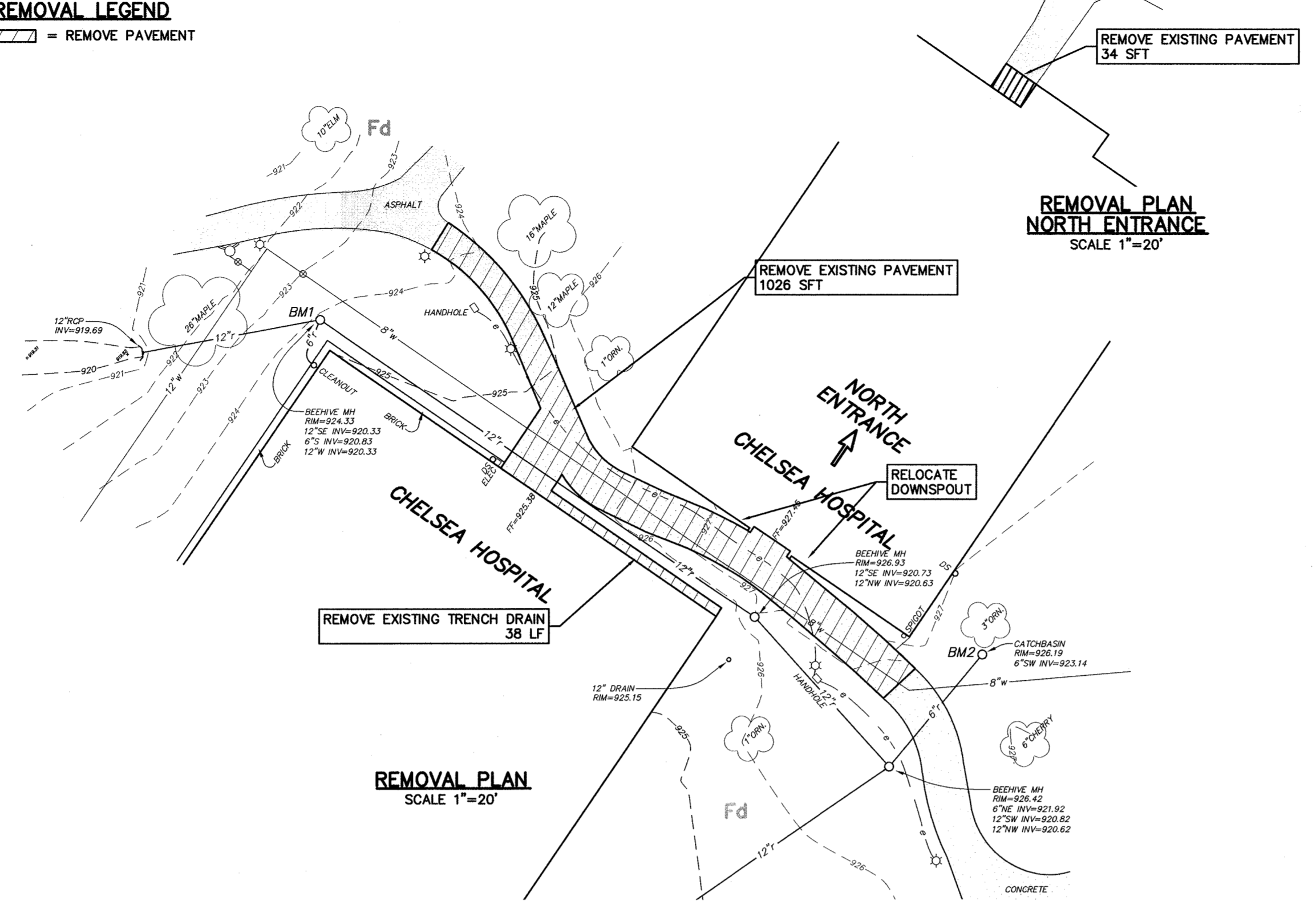
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO WARRANTY AS TO THE ACCURACY OF THE INFORMATION PROVIDED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION AND DEPTH SHOWN, NOR DOES THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS, FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHER INSTRUMENTS OF SERVICE. THE SURVEYOR'S PROFESSIONAL INVOLVEMENT WILL BE AT THE OWNER'S SOLE RISK AND WITHOUT LIABILITY TO WECO. THE OWNER SHALL MAINTAIN AND HOLD HARMLESS WECO, WECO'S CONSULTANTS, AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.

COPYRIGHT © 2023 WASHTEANAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTEANAW ENGINEERING COMPANY, INC.



REMOVAL LEGEND
 = REMOVE PAVEMENT

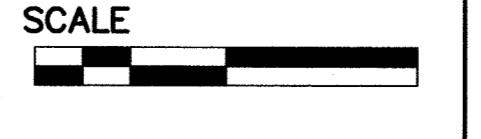


LEGEND

	= LIGHT POLE		= SPOT ELEV.		= GRAVEL		= EXISTING STORM
	= UTILITY POLE		= POST		= FENCE		= EXISTING SANITARY
	= GUY ANCHOR		= GATE VALVE		= CONCRETE		= EXISTING WATER
	= HYDRANT		= MANHOLE		= ASPHALT		= EXISTING GAS
			= CATCHBASIN				= EXISTING ELECTRIC
			= END SECTION				= EXISTING TELEPHONE

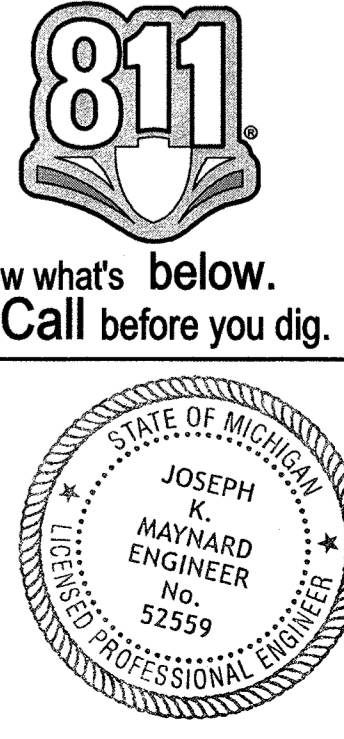
BENCHMARK BM1=RIM ELEVATION OF BEEHIVE MANHOLE NEAR THE NORTHEAST CORNER OF BUILDING, ELEV=924.33 (NAVD 88).
 BM2=RIM ELEVATION OF CATCHBASIN, NORTH OF CONCRETE WALK AND EAST OF BUILDING, ELEV=926.19 (NAVD 88).

REVISIONS 12-14-23 BID/PERMIT SET. 1-4-24 ADDENDUM 2. 1-30-24 SITE PLAN SUBMITTAL.



WASHTEANAW COUNTY SOIL SURVEY CLASSIFICATION
 Fd - FILL LAND
 SOILS BOUNDARY
 SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTEANAW COUNTY.

PREPARED BY:
 JOSEPH K. MAYNARD P.E., MICH No. 52559



CLIENT
 A3C
 115 1/2 E LIBERTY ST
 ANN ARBOR, MI 48104
 TEL: 734-663-1910
 www.a3c.com

PROJECT
 CHELSEA HOSPITAL
 INPATIENT REHABILITATION
 RENOVATION

SHEET
 SECTION 12 TOWN 2 SOUTH RANGE 3 EAST
 CITY OF CHELSEA
 WASHTEANAW COUNTY - MICHIGAN
 JOB NO. 33056
 DWG NO. 056-grd
 FIELD BOOK 666
 FILE NO. 10830

WASHTENAW ENGINEERING
 CIVIL ENGINEERS
 PLANNERS & SURVEYORS
 LANDSCAPE ARCHITECTS
 3528 W. LIBERTY RD
 ANN ARBOR, MI 48103
 TEL: 734-761-8800

811
 Know what's below.
 Call before you dig.

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO WARRANTY AS TO THE ACCURACY OF THE INFORMATION PROVIDED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, NOR DOES THE SURVEYOR WARRANT THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2023 WASHTEENAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTEENAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA AND OTHER INSTRUMENTS OF SERVICE OR OTHER PROJECTS, FOR ADDITION TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHER PERSONS WITHOUT THE WRITTEN CONSENT OF WASHTEENAW ENGINEERING COMPANY, INC. THE SURVEYOR MAKES NO WARRANTY AS TO THE ACCURACY OF THE INFORMATION PROVIDED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, NOR DOES THE SURVEYOR WARRANT THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

SITE DATA TABLE

EXISTING USE:	EXISTING CONDITIONS		TOTAL FLOOR AREA	TOTAL FLOOR AREA
	GROUND FLOOR	PROPOSED GROUND FLOOR		
EXISTING USE:	MEDICAL CAMPUS			
ZONING:	MC - MEDICAL CENTER			
SETBACKS:	LOT COVERAGE			
FRONT	30 FT (ALONG M-52)			
SIDE	20 FT			
REAR	20 FT			
HEIGHT OF STRUCTURES:	LESS THAN 40 FT			
COVERAGE:	EXISTING	PROPOSED	FAR EXISTING	FAR PROPOSED
	GROUND FLOOR	GROUND FLOOR	TOTAL FLOOR AREA	TOTAL FLOOR AREA
MAIN HOSPITAL	176,046 SF		301,462 SF	
INFORMATION SYSTEMS BUILDING	11,550 SF		11,550 SF	
ENERGY CENTER	5,184 SF		5,184 SF	
FAITH IN ACTION	4,003 SF		4,003 SF	
HURON VALLEY AMBULANCE	2,317 SF		2,317 SF	
GARAGE 1	496 SF		496 SF	
GARAGE 2	960 SF		960 SF	
PROFESSIONAL OFFICE BUILDING	21,156 SF		63,469 SF	
FAMILY PRACTICE CENTER	24,100 SF		25,000 SF	
CHELSEA WELLNESS CENTER	32,395 SF		51,003 SF	
SILVER MAPLES OF CHELSEA	76,383 SF		164,752 SF	
SILVER MAPLES MAINTENANCE	3,620 SF		3,620 SF	
300 WOODLANDS DR	2,714 SF		2,714 SF	
302 WOODLANDS DR	2,714 SF		2,714 SF	
304 WOODLANDS DR	2,835 SF		2,835 SF	
305 WOODLANDS DR	2,349 SF		2,349 SF	
306/308 WOODLANDS DR	5,033 SF		5,033 SF	
309 WOODLANDS DR	2,349 SF		2,349 SF	
310/312 WOODLANDS DR	5,033 SF		5,033 SF	
313 WOODLANDS DR	2,349 SF		2,349 SF	
314/316 WOODLANDS DR	5,033 SF		5,033 SF	
317 WOODLANDS DR	2,349 SF		2,349 SF	
318 WOODLANDS DR	2,714 SF		2,714 SF	
320 WOODLANDS DR	2,714 SF		2,714 SF	
322/324 WOODLANDS DR	5,033 SF		5,033 SF	
DEER RIDGE VILLAS - BEECHWOOD	14,760 SF		14,760 SF	
DEER RIDGE VILLAS - BIRCHWOOD	14,824 SF		14,824 SF	
DEER RIDGE VILLAS - GARAGE	432 SF		432 SF	
INPATIENT REHAB. RENOVATION		1,056 SF		1,056 SF
TOTAL	431,445 SF±	1,056 SF	707,051 SF±	1,056 SF
ALLOWED	432,501 SF±		708,107 SF±	
AREA IN MC ZONING	7.4%	7.4%	12.2%	12.2%
	25%		35%	
	5,816,553.5 SF±	133.5 AC±	5,816,553.5 SF±	133.5 AC±

MC ZONING BOUNDARY TAKEN FROM CITY OF CHELSEA ZONING MAP. THE AREA SHOULD BE CONSIDERED APPROXIMATE ONLY.

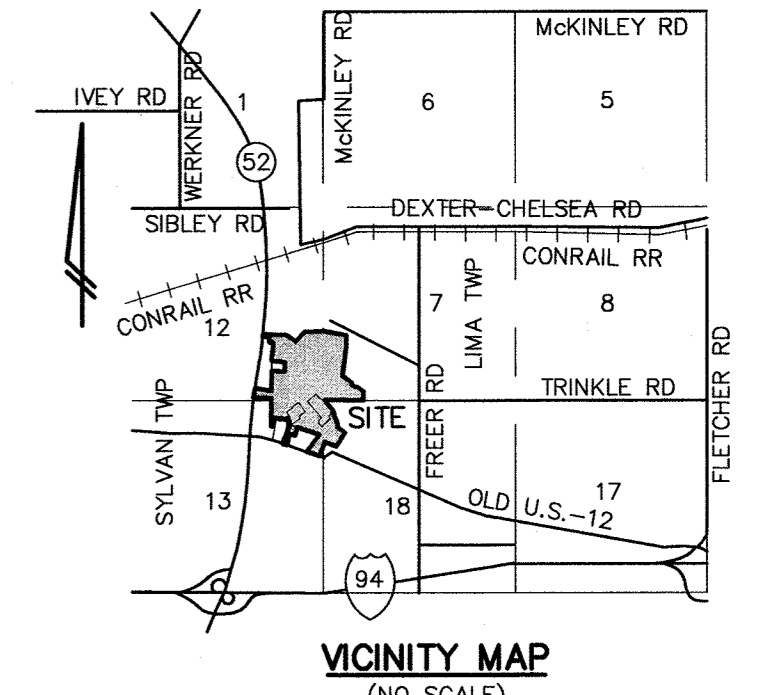
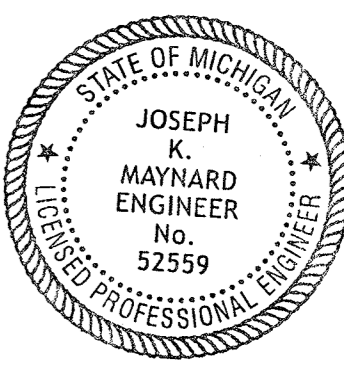
- LEGEND**
- = LIGHT POLE
 - = UTILITY POLE
 - = GUY ANCHOR
 - = HYDRANT
 - = SPOT ELEV.
 - = POST
 - = GATE VALVE
 - = SIGN
 - = TOP OF CURB
 - = TOP OF WALL
 - = MANHOLE
 - = CATCHBASIN
 - = END SECTION
 - = GRAVEL
 - = FENCE
 - = CONCRETE
 - = ASPHALT
 - = EXISTING STORM
 - = EXISTING SANITARY
 - = EXISTING WATER
 - = EXISTING GAS
 - = EXISTING ELECTRIC
 - = EXISTING TELEPHONE

BENCHMARK BM1=RIM ELEVATION OF BEEHIVE MANHOLE NEAR THE NORTHEAST CORNER OF BUILDING, ELEV=924.33 (NAVD 88).
 BM2=RIM ELEVATION OF CATCHBASIN, NORTH OF CONCRETE WALK AND EAST OF BUILDING, ELEV=926.19 (NAVD 88).

REVISIONS 12-14-23 BID/PERMIT SET. 1-4-24 ADDENDUM 2.
 1-30-24 SITE PLAN SUBMITTAL.

SCALE 0 100 200 400
 SCALE: 1"=200'

PREPARED BY *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559



LEGEND
 C = PARCEL IDENTIFICATION

ZONING LEGEND
 MC = MEDICAL CENTER
 O-1 = OFFICE
 RS-2 = SINGLE FAMILY
 RS-3 = TWO FAMILY
 --- = ZONING BOUNDARY

- A = PARCEL 1** MAIN CAMPUS PARCEL
 TAX ID 06-06-12-475-053
 ST. JOSEPH MERCY HEALTH SYSTEM
 PO BOX 170
 775 S. MAIN ST
 CHELSEA, MI 48118
 4,288,645 SF±
 98.45 AC±
- B = PARCEL 2** PROFESSIONAL OFFICE BUILDING PARCEL
 UNITS 2, 5, 6, 7 & 11
 TAX ID 06-06-12-475-050
 ST. JOSEPH MERCY HEALTH SYSTEM
 14650 E. OLD US-12
 CHELSEA, MI 48118
 218,202 SF±
 5.01 AC±
- C = FAMILY PRACTICE PARCEL**
 TAX ID 06-06-12-475-051
 5 HEALTHY TOWNS FOUNDATION
 CHELSEA HEALTH & WELLNESS FOUNDATION
 14700 E. OLD US-12
 CHELSEA, MI 48118
 127,580 SF±
 2.93 AC±
- D = CHELSEA WELLNESS CENTER PARCEL**
 TAX ID 06-06-12-475-052
 5 HEALTHY TOWNS FOUNDATION
 CHELSEA HEALTH & WELLNESS FOUNDATION
 14800 E. OLD US-12
 CHELSEA, MI 48118
 193,276 SF±
 4.44 AC±
- E = HURON VALLEY AMBULANCE LEASE PARCEL**
 33,573 SF±
 0.77 AC±
- F = SILVER MAPLES OF CHELSEA**
 TAX ID 06-07-18-210-007
 SILVER MAPLES OF CHELSEA, INC.
 100 SILVER MAPLES DR
 CHELSEA, MI 48118
 755,366 SF±
 17.34 AC±
- G = ST. MARY OF CHELSEA**
 TAX ID 06-07-18-210-006
 ST. MARY OF CHELSEA CHURCH
 14200 OLD US-12
 CHELSEA, MI 48118
 645,995 SF±
 14.83 AC±
- H = SILVER MAPLES OF CHELSEA**
 DEER RIDGE VILLAS
 TAX ID 06-07-18-200-013
 SILVER MAPLES OF CHELSEA, INC.
 100 SILVER MAPLES DR
 CHELSEA, MI 48118
 134,899 SF±
 3.10 AC±

WASHTEENAW ENGINEERING
 CIVIL ENGINEERS
 LANDSCAPE ARCHITECTS
 3508 W. LIBERTY RD
 SUITE 400
 ANN ARBOR, MI 48103
 TEL: 734-761-8800

A3C
 115 1/2 E. LIBERTY ST
 ANN ARBOR, MI 48104
 TEL: 734-663-1910
 www.a3c.com

MC IMEDICAL CENTER I ZONING DISTRICT

CHELSEA HOSPITAL INPATIENT REHABILITATION RENOVATION

SECTION 12 TOWN 2 SOUTH RANGE 3 EAST
 CITY OF CHELSEA WASHTEENAW COUNTY MICHIGAN
 JOB NO. 33056
 DWG NO. 056-AC zoning
 FIELD BOOK 666
 FILE NO. 10230

C11 SHEET

Item 5b

Site Plan Review: Heritage Farms Phase II



Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: December 15, 2023

Revised: January 22, 2024

Revised: February 14, 2024

Preliminary Site Plan Review

For

City of Chelsea, Michigan

Applicant:	David Straub
Location:	Heritage Farms Blvd
Project Name:	Heritage Farms Phase 2
Zoning:	PUD – Planned Unit Development
Plan Date:	November 1, 2023
Revision Date:	January 15, 2024
Revision Date:	February 6, 2024
Action Requested:	Site Plan Approval

SITE DESCRIPTION

The applicant is requesting site plan approval for Phase 2 of the Heritage Farms Planned Unit Development (PUD). The overall Heritage Farms PUD is situated on one parcel with ID 06-07-06-360-006. Phase 2 includes two non-contiguous areas within the parcel. The combined acreage of the Phase 2 areas is 13.93 acres. The area for Phase 2 is located east of the existing Heritage Pointe development, with access from the intersection of Vicksburg Drive and Elm Street as well as Heritage Farms Blvd, north of Dexter-Chelsea Road.

The Heritage Farms PUD contains 231 total single-family units and is being developed in six (6) phases, with the 48-unit Phase I currently being constructed. The Phase 2 site plan proposes 47 single-family units that will be situated north and east of the Phase I houses. Half of the Phase 2 site is currently undeveloped, and half is used as cropland.

The site plan for Phase 2 includes units 49 through 95, situated on 8.35 acres, and a 2.44-acre open space area used as an infiltration basin. This infiltration basin, open space F, is located north of the Phase 6 units, not contiguous with the Phase 2 units.

Phase 2 of the Heritage Farms PUD is subject to the Original Heritage Farms Development Agreement, dated July 19, 2021. A major amendment to the PUD was approved on February 21, 2023. The Phase 2 site plan is generally consistent with that originally approved PUD, including the major amendment.

Figure 1. Aerial Image of Subject Site and Vicinity



To provide access to the Phase 2 units, several new roads are proposed. Swift Creek Drive will be extended from its stubbed location at Phase 2 northward to proposed unit 73. Whisperwood Way will be extended from its stubbed location on the northeastern corner of the Phase I site northward to proposed unit 60. Countryside Drive will be extended from its stubbed location north of unit 37 in Phase I eastward to proposed unit 80. A new road, Knollwood Bend, is proposed perpendicular to Countryside Drive, north of unit 78. Knollwood Bend will end in a temporary gravel cul-de-sac during Phase 2, northeast of proposed unit 86. A temporary gravel “T” turn is also proposed at the northern end of Swift Creek Road, to provide a vehicle turnaround opportunity near proposed unit 73. A new road, Harvest Way, is proposed to run east-to-west between Swift Creek Road and Whisperwood Way.

Items to be Addressed: None.

NATURAL FEATURES

No wetland delineation report included in the site plan application. A condition of approval of the major amendment to the PUD Area Plan requires confirmation of EGLE’s determination of which wetlands are regulated and submission of any relevant permits. The applicant indicated in a response letter dated December 20, 2023, that an EGLE permit application will be completed as part of Phase 3. This is acceptable as there do not appear to be any EGLE-regulated wetlands in the Phase 2 site area.

Items to be Addressed: None.

AREA, WIDTH, HEIGHT, SETBACKS

The dimensional requirements in Table 1 apply to the residences, as set forth in the Heritage Farms Development Agreement. The Phase 2 site plan shows the building envelope on each individual residential lot, but the structure setbacks are not expressly indicated.

Table 1. Dimensional Requirements

	Required/Allowed
Minimum lot area	7200 square feet
Front yard setback	20 ft
Side yard setback	10 ft each
Rear yard setback	20 ft
Maximum lot coverage	35%
Maximum Floor Area Ratio	0.35
Maximum Building Height	35 feet

Zoning compliance applications for each individual residence are required to clearly indicate the building setbacks, but the site plan should also state how the general Phase 2 setbacks will

comply with the requirements established in the PUD Development Agreement, as indicated by the applicant on the cover sheet of the revised site plan.

Items to be addressed: None.

SITE ACCESS AND CIRCULATION

Access to the Phase 2 residences will be provided from Heritage Farms Boulevard – constructed in Phase 1 – off Dexter-Chelsea Road. The grid-like pattern of the interior roads will provide vehicles with multiple options for accessing the site after driving north up Heritage Farms Boulevard. The proposed roads are twenty-four (24) feet wide. Turning templates are provided on Sheet 28, indicating how vehicles will navigate the proposed interior two-way roads and the temporary gravel “T” at the northern end of Swift Creek Drive. The temporary gravel cul-de-sac at the northern end of Knollwood Boulevard has a radius of fifty-five (55) feet, and the turning template indicates how full vehicle circulation will be possible.

The new roads and road extensions proposed in Phase 2 will include one (1) crosswalk at each roadway intersection, for a total of three (3) crosswalks in Phase 2. Pedestrian sidewalks are provided throughout the Phase 2 site, and Sheet 7 of the revised site plan indicates that the typical sidewalk will be five (5) feet wide.

Items to be Addressed: None.

LIGHTING

A photometric map and lighting plan is provided on sheet P1 of the site plan. Three (3) pole-mounted lights are proposed in Phase 2, as indicated below:

- Northwest corner of Countryside Drive and Knollwood Bend
- Northwest corner of Whisperwood Way and Harvest Way
- Northeast corner of Harvest Way and Swift Creek Drive

The proposed lights are mounted at fourteen (14) feet and will produce a maximum illumination of 2.0 footcandles. The color temperature is not provided; we recommend a color temperature no greater than 3500 K.

The photometric map indicates the illumination from the pole-mounted lights on the roads. As set forth in Section 6.07(E)(1)(b), illumination at residential property lines should be 0.1 footcandles maximum. The illumination at the Heritage Farms development property line is indicated as 0.0 footcandles.

The revised plan submission includes structural and globe light details of the pole-mounted lights on Sheet P1.

Items to be Addressed: None.

LANDSCAPING

Landscape plans are provided on sheets 29 and 30 of the revised site plan. As established in the approval of the PUD area plan, the zoning ordinance landscape standards apply to the Heritage Farms PUD. The landscape requirements in Tables 2 and 3 apply to the subject site. The applicant indicated that nine (9) existing trees will be preserved to offer landscape credits for the buffer requirements, as indicated in Table 3. The existing eight (8) black walnut trees and one (1) white oak tree that are to remain are identified on Sheet 29 and have diameters at breast height between ten (10) inches and sixty-six (66) inches, offering twenty (120) total tree credits. This deviates from the previous site plan submission that identifies six (6) existing black locust and one (1) white oak tree. As set forth in Section 7.03, a tree survey must be conducted detailing any trees proposed for removal that are six (6) inches in diameter at breast height or larger. The tree survey should provide details of the proposed preservation, transplant, or removal of all surveyed trees. The provided tree Identification Table on Sheet 24 of the first site plan submission identifies existing trees, all of which are proposed to be preserved.

Table 2. Street Tree Numerical Requirements

General Requirement	Specific Requirement	Provided	Compliance
1 deciduous/ canopy tree per 50 ft of road frontage	Knollwood Bend = 580 ft $580 / 50 = 11.6 = 12$ trees	12 trees	Complies
	Countryside Drive = 712.2 ft $712.2 / 50 = 14.24 = 15$ trees	15 trees indicated in table, 16 indicated on map of Sheet 29	Complies
	Harvest Way = 1008 ft $1008 / 50 = 20.16 = 21$ trees	21 trees	Complies
	Whisperwood Way = 382 ft $382 / 50 = 7.64 = 8$ trees	9 trees	Complies
	Swift Creek Drive = 780 ft $780 / 50 = 15.6 = 16$ trees	16 trees	Complies

The total number of trees, based on the total lineal feet of streets in this phase, is 72.

Section 7.08 of the zoning ordinance further requires landscape buffers when adjacent to residential uses. The southernmost property line of the Phase 2 boundary abuts single-family residential properties, so buffering is required.

Table 3. Residential Buffer Numerical Requirements

General Requirement	Specific Requirement	Provided	Compliance
10 ft wide greenbelt of continuous evergreen screen or naturally wooded area with at least 1 tree and 8 shrubs per 30 ft	South property line = 447.7 ft $447.7 / 30 = 14.9$ = 15 trees $= 14.9 \times 8 = 119.4$ = 120 shrubs	8 trees 120 shrubs + Preservation of 7 existing trees	Complies

Section 7.11(B) details the standards for plant materials, including the recommended size and species of planted trees. Evergreen trees should have a minimum height of eight (8) feet. The revised landscape plan on Sheet 29 indicates that the ten (10) white pines and five (5) Norway spruces proposed will have a height of eight (8) feet.

Section 7.10 discusses stormwater basin landscaping requirements, indicating that landscape treatments shall include of mixture of native species and that there shall be a perimeter greenbelt, but specific requirements are not included in the zoning ordinance. Sheet 30 indicates that the detention basin will be surrounded by 0.84 acres of a mixture of native wildflower mix. A grass seed mix is also proposed on the southern portion of the detention basin interior. The remainder of the detention basin is proposed to include a washed stone on geo-fabric. Five (5) white oak trees and ten (10) east red cedar trees are proposed around the east and south of the detention basin.

In conversation with the applicant’s landscape architect, it was suggested that a better landscape plan could be designed for the open space landscaping and the detention landscaping that would result in a more natural system that could be sustained as a healthy native ecosystem into the future. The latest site plan submission indicates such a plan with a discussion of the landscape maintenance schedule and planting installation dates to ensure the application of a natural, healthy, native system.

Items to be Addressed: (1) The applicant should be prepared to discuss the discrepancy between existing tree species identified for preservation in the previous site plan submission and the latest site plan submission. (2) The applicant should be prepared to discuss the natural landscape health maintenance program proposed for the retention basin.

GRADING AND STORMWATER

A stormwater detention basin is provided as part of Phase 2, but the basin is located north of the Phase 2 residential units. Stormwater management plans are included on Sheets 27 and 28 of the site plan. The City Engineer reviewed the plans and indicated on their February 14, 2024, review that there are no outstanding issues to address.

Items to be Addressed: None

PARKING AND LOADING

Individual driveways are not indicated on the site plan, but the site plan cover page indicates that each home will have individual garages and driveways for parking. The cover page additionally indicates that on-street parking is proposed on one side of each street and that city-wide restrictions on on-street parking between 2 a.m. and 5 a.m. will apply.

Items to be Addressed: None.

FLOOR PLANS AND ELEVATIONS

Floor plans and elevations for five (5) different housing options are provided on Sheets A1 through A5. The elevations indicate attached garages and optional morning room extensions on the rear of all house models. .With the inclusion of the morning room extension, the square footage of the five (5) housing options ranges from 1,964 to 2711 square feet. . The maximum building height ranges from roughly twenty-one (21') feet to thirty (30') feet.

Sheets A6, A7, and A8 show the proposed building materials, including the color selection. The exterior selection options include various colors of brick, stone, shake siding, lap siding, board & batten siding, and shutters. Black asphalt roof shingles are included in all exterior selections.

Items to be Addressed: None.

RECOMMENDATIONS

The site plan is generally consistent with the PUD Area Plan, We recommend that the Planning Commission approve the Phase 2 Heritage Farms site plan conditioned on the following.

1. The applicant should be prepared to discuss the discrepancy between existing tree species identified for preservation in the previous site plan submission and the latest site plan submission.
2. The applicant should be prepared to discuss the natural landscape health maintenance program proposed for the retention basin.

Respectfully submitted,



CARLISLE/WORTMAN ASSOC., INC
Paul Montagno, AICP
Principal



CARLISLE/WORTMAN ASSOC., INC.
Michelle Marin
Community Planner

#301-2309

cc. Martin Colburn, City Manager
Ray Schmidt, Utilities Director
Matt Forster, City Building Official
Mariah Fink, City Attorney
David Straub, Applicant

GENERAL CONSTRUCTION NOTES:

- 1. IT IS ESSENTIAL THAT THE CONTRACTOR FAMILIARIZE HIMSELF WITH THE SITE PRIOR TO SUBMITTING PROPOSAL.
2. ALL ROAD CONSTRUCTION SHALL IN GENERAL BE PERFORMED PER THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2012 STANDARD SPECIFICATION FOR CONSTRUCTION AND AS DIRECTED IN THE STANDARDS AND SPECIFICATIONS OF THE CITY OF CHELSEA.
3. THE AREA WITHIN THE CONSTRUCTION LIMITS SHALL BE STRIPPED OF ORGANIC SOILS PRIOR TO COMMENCING GENERAL EXCAVATION. THIS MATERIAL SHALL BE STOCKPILED ON THE PROPERTY OR AS DIRECTED BY THE ENGINEER OR THE OWNER.
4. THE CONTRACTOR WILL BE REQUIRED TO PROOF ROLL (WITH A HEAVY RUBBER TIRED VEHICLE) ALL FILL AREAS PRIOR TO PLACING ADDITIONAL FILL AND ALL CUT AREAS UPON COMPLETION OF THE CUT AND PRIOR TO PLACING BASE MATERIAL. IF THE PROOF ROLLING INDICATES UNSTABLE AREAS, THE UNSTABLE MATERIAL MUST BE REMOVED AND REPLACED WITH MATERIAL MATCHING THE ADJACENT SOILS TO THE ELEVATION OF THE SUBGRADE.
5. ALL FILL MATERIAL MUST BE PLACED IN LIFTS NOT EXCEEDING 9 INCHES AND COMPACTED TO 95% OF THE MAXIMUM UNIT WEIGHT.
6. THE FINISHED SUBGRADE MUST BE GRADED WITHIN A TOLERANCE OF +/- 0.1 FEET OF DESIGN GRADE COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM UNIT WEIGHT TO A DEPTH OF 9 INCHES AND APPROVED BY THE OWNER'S REPRESENTATIVE/ENGINEER PRIOR TO PLACEMENT OF THE AGGREGATE BASE. FINE GRADING PRIOR TO THE PLACEMENT OF THE BASE MATERIAL SHALL BE INCIDENTAL TO THE COST OF PREPARING THE SUBGRADE.
7. ALL DISTURBED AREAS, DITCH BOTTOMS AND SLOPES UNLESS NOTED OTHERWISE, SHALL BE SEEDED AND MULCHED PER M.D.O.T. SPECIFICATION 6.53 INCLUDING PLACEMENT OF 4 INCH TOPSOIL BED. DITCH BOTTOMS SHALL BE SODDED AND PEGGED WHERE DITCH GRADE EXCEEDS 3.00%.
8. THE CONTRACTOR MUST CONTACT MISS DIG PRIOR TO BEGINNING CONSTRUCTION.
9. ALL CONSTRUCTION ACTIVITIES SHALL BE SIGNED PER THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. CONTRACTOR SHALL MAINTAIN ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURES PER THIS APPROVED PLAN.
11. CONTRACTOR MUST OBTAIN AN EROSION CONTROL PERMIT FROM THE CHELSEA AREA CONSTRUCTION AGENCY PRIOR TO BEGINNING EARTH MOVING. CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PRIOR TO BEGINNING CONSTRUCTION.
12. SAFETY GRATES ARE REQUIRED FOR ALL END SECTIONS.
13. HOME OWNERS ASSOCIATION SHALL MAINTAIN ALL OPEN SPACES AREA.
14. SANITARY SEWER EASEMENT AND ALL ACCESS LOCATIONS SHALL HAVE COMPACT GRAVEL COVERED WITH TOP SOIL.
15. THERE SHALL BE NO PARKING AT ALL INTERSECTIONS AND WITHIN THE CULL-DE-SAC. SIGN LOCATIONS ARE PROVIDED ON SITE PLAN. AS CITY STREETS ARE PROPOSED ON ONE SIDE OF STREET THERE IS NO STREET PARKING IN THE CITY OF CHELSEA LIMITS BETWEEN 2AM AND 5AM. CITY PARKING ORDINANCE WILL BE ENFORCED AS SPACES MAY NOT BE USED FOR 24 HOUR PARKING.
16. ALL TREES TO BE PRESERVED SHALL HAVE TREE PROTECTION MEASURES IN PLACE PRIOR TO ANY CONSTRUCTION.
17. SEE ENGINEERING SHEETS FOR ALL STREET RADIUS INFORMATION. NO STRUCTURES INCLUDING DECKS OR PORCHES SHALL BE LOCATED WITHIN THE 100FT SETBACK OF TREATMENT PLANT.
18. SEE ENGINEERING SHEETS FOR UTILITY AND GRADING FOR EACH PHASE OF LOT AND ROAD CONSTRUCTION.
19. TO THE GREATEST EXTENT POSSIBLE TREES WITHIN THE SITE SHALL BE PRESERVED. HOWEVER, DUE TO GRADING, UTILITIES, AND OTHER ASPECTS OF IMPLEMENTATION VARIOUS TREES THROUGHOUT THE SITE SHALL BE REMOVED PRIOR TO CONSTRUCTION. ALL TREE IMPACT SHALL BE RE-EVALUATED AT FINAL SITE PLAN.
20. THE LANDSCAPE BUFFER SHALL BE INSTALLED IN A SEQUENCE WHERE BY THE CURRENT PHASE OF CONSTRUCTION.
21. ALL STREETS SHALL BE DEDICATED PUBLIC STREETS TO CITY, UPON INSPECTION AND ACCEPTANCE CONSISTENT WITH PROCESS ESTABLISHED IN PROJECT DEVELOPMENT AGREEMENT.
22. ALL MAIL BOXES SHALL BE GROUPED NEAR OPEN SPACES UNLESS OTHERWISE DICTATED BY THE POST OFFICE.

DESCRIPTION

Land situated in the City of Chelsea, County of Washtenaw, State of Michigan described as follows:

Commencing at the Southwest corner of Section 6, Town 2 South, Range 4 East, City of Chelsea, Washtenaw County, Michigan; thence North 01 degrees 10 minutes 30 seconds West 48.25 feet along the West line of said Section to the Southeast corner of Section 1, Town 2 South, Range 3 East, City of Chelsea, Washtenaw County, Michigan; thence North 00 degrees 20 minutes 05 seconds West 754.06 feet continuing along said West line; thence North 88 degrees 38 minutes 05 seconds East 1051.35 feet to the POINT OF BEGINNING; thence continuing North 88 degrees 47 minutes 05 seconds East 193.79 feet; thence North 00 degrees 20 minutes 35 seconds West 1240.56 feet; thence North 25 degrees 28 minutes 38 seconds East 371.29 feet; thence North 71 degrees 11 minutes 10 seconds East 651.91 feet; thence North 89 degrees 02 minutes 35 seconds East 508.93 feet; thence North 88 degrees 36 minutes 55 seconds East 435.13 feet; thence South 00 degrees 20 minutes 35 seconds East 2581.30 feet to a point on the South line of said Section 6; thence along said South line South 88 degrees 59 minutes 10 seconds West 656.57 feet to the South 1/4 corner of said Section 6; thence continuing along said South line South 88 degrees 59 minutes 25 seconds West 661.36 feet; thence South 00 degrees 02 minutes 15 seconds West 837.50 feet; thence South 89 degrees 52 minutes 55 seconds West 199.71 feet; thence Westerly 71.83 feet along the arc of a 4688.00 foot radius circular curve to the left through a central angle of 00 degrees 52 minutes 40 seconds having a chord that bears South 89 degrees 27 minutes 55 seconds West 71.83 feet; thence North 00 degrees 52 minutes 15 seconds West 834.96 feet; thence North 78 degrees 59 minutes 20 seconds East 42.15 feet; thence North 00 degrees 12 minutes 55 seconds East 391.27 feet; thence South 88 degrees 59 minutes 25 seconds West 356.31 feet; thence North 00 degrees 55 minutes 10 seconds West 406.20 feet to the Point of Beginning. Being a part of the South 1/2 of Section 6 and a part of the Northwest 1/4 of Section 7, Town 2 South, Range 4 East, City of Chelsea, Washtenaw County, Michigan.

HERITAGE FARMS PHASE 2

Commencing at the Southwest corner of Section 6, T2S, R4E, City of Chelsea, Washtenaw County, Michigan; thence N01°10'30"W 48.25 feet along the West line of said Section to the Southeast corner of Section 1, T2S, R3E, City of Chelsea, Washtenaw County, Michigan; thence N00°20'05"W 754.06 feet continuing along said West line; thence N88°47'05"E 1280.15 feet; thence S00°20'35"E 42.00 feet; thence N88°47'05"E 130.01 feet; thence N00°20'35"W 15.94 feet; thence N89°39'25"E 186.00 feet to the POINT OF BEGINNING; thence continuing N89°39'25"E 120.00 feet; thence S80°02'18"E 67.08 feet; thence S00°20'35"E 125.00 feet; thence N89°39'25"E 66.00 feet; thence S00°20'35"E 5.23 feet; thence N88°59'25"E 441.04 feet; thence S00°20'35"E 500.99 feet; thence S88°59'10"W 477.70 feet along the South line of said Section 6; thence N01°00'35"W 124.99 feet; thence N88°59'25"E 8.12 feet; thence N00°20'35"W 190.25 feet; thence S89°39'25"W 812.00 feet; thence N00°20'35"W 273.00 feet; thence S89°39'25"W 120.00 feet; thence N00°20'35"W 180.00 feet to the Point of Beginning. Being a part of the South 1/2 of Section 6, T2S, R4E, City of Chelsea, Washtenaw County, Michigan and containing 11.49 acres of land, more or less. Being subject to easements and restrictions of record, if any.

HERITAGE FARMS PHASE 2 POND AREA

Commencing at the Southwest corner of Section 6, T2S, R4E, City of Chelsea, Washtenaw County, Michigan; thence N01°10'30"W 48.25 feet along the West line of said Section to the Southeast corner of Section 1, T2S, R3E, City of Chelsea, Washtenaw County, Michigan; thence N00°20'05"W 754.06 feet continuing along said West line; thence N88°47'05"E 1280.15 feet; thence S00°20'35"E 42.00 feet; thence N88°47'05"E 130.01 feet; thence N00°20'35"W 15.94 feet; thence N89°39'25"E 306.00 feet; thence S80°02'18"E 67.08 feet; thence S00°20'35"E 125.00 feet; thence N89°39'25"E 66.00 feet; thence S00°20'35"E 125.00 feet; thence N89°39'25"E 66.00 feet; thence S00°20'35"E 5.23 feet; thence N88°59'25"E 441.04 feet; thence S00°20'35"E 500.99 feet; thence S88°59'10"W 477.70 feet along the South line of said Section 6; thence N01°00'35"W 124.99 feet; thence N88°59'25"E 8.12 feet; thence N00°20'35"W 190.25 feet; thence S89°39'25"W 812.00 feet; thence N00°20'35"W 273.00 feet; thence S89°39'25"W 120.00 feet; thence N00°20'35"W 180.00 feet to the Point of Beginning. Being a part of the South 1/2 of Section 6, T2S, R4E, City of Chelsea, Washtenaw County, Michigan and containing 2.44 acres of land, more or less. Being subject to easements and restrictions of record, if any.

HERITAGE FARMS PHASE 2 FUTURE DEVELOPMENT

Commencing at the Southwest corner of Section 6, T2S, R4E, City of Chelsea, Washtenaw County, Michigan; thence N01°10'30"W 48.25 feet along the West line of said Section to the Southeast corner of Section 1, T2S, R3E, City of Chelsea, Washtenaw County, Michigan; thence N00°20'05"W 754.06 feet continuing along said West line; thence N88°47'05"E 1245.14 feet to the POINT OF BEGINNING; thence N00°20'35"W 1240.56 feet; thence N25°28'38"E 371.29 feet; thence N71°11'10"E 651.91 feet; thence N89°02'35"E 508.93 feet; thence N88°36'55"E 435.13 feet; thence S00°20'35"E 2080.31 feet; thence S88°59'25"W 441.04 feet; thence N00°20'35"W 420.03 feet to Point "A"; thence N88°59'25"E 250.02 feet; thence N00°20'35"W 247.29 feet; thence Northwesterly 340.86 feet along the arc of a 217.00 foot radius circular curve to the left, through a central angle of 90°00'00", having a chord that bears N45°20'35"W 306.88 feet; thence S89°39'25"W 33.00 feet; thence S00°20'35"E 467.20 feet to abutmentment Point "A"; thence continuing S00°20'35"E 414.80 feet; thence S89°39'25"W 66.00 feet; thence N00°20'35"W 125.00 feet; thence S89°39'25"W 680.00 feet; thence N00°20'35"W 125.00 feet; thence N80°02'18"W 67.08 feet; thence S89°39'25"W 306.00 feet; thence S00°20'35"E 15.94 feet; thence S88°47'05"W 130.01 feet; thence N00°20'35"W 42.00 feet; thence S88°47'05"W 35.01 feet to the Point of Beginning. Being a part of the South 1/2 of Section 6, T2S, R4E, City of Chelsea, Washtenaw County, Michigan and containing 71.52 acres of land, more or less. Being subject to easements and restrictions of record, if any.

OWNER

JBRMC, LLC.
1765 CYPRESS POINT CT.
ANN ARBOR, MI. 48108
&
DJK ANN ARBOR, LLC.
6589 JACKSON RD.
ANN ARBOR, MI. 48103
&
ANN MERKEL TRUST

APPLICANT

M/I HOMES OF MICHIGAN
40950 WOODWARD AVE,
BLOOMFIELD HILLS, MI. 48304
PH: (248)-221-5011

ENGINEER

WASHTENAW ENGINEERING COMPANY
JOSEPH K. MAYNARD, P.E.
P.O. BOX 1128
3526 W. LIBERTY RD, SUITE 400
ANN ARBOR, MI. 48106
PH: (734) 761-8800
jkm@wengco.com

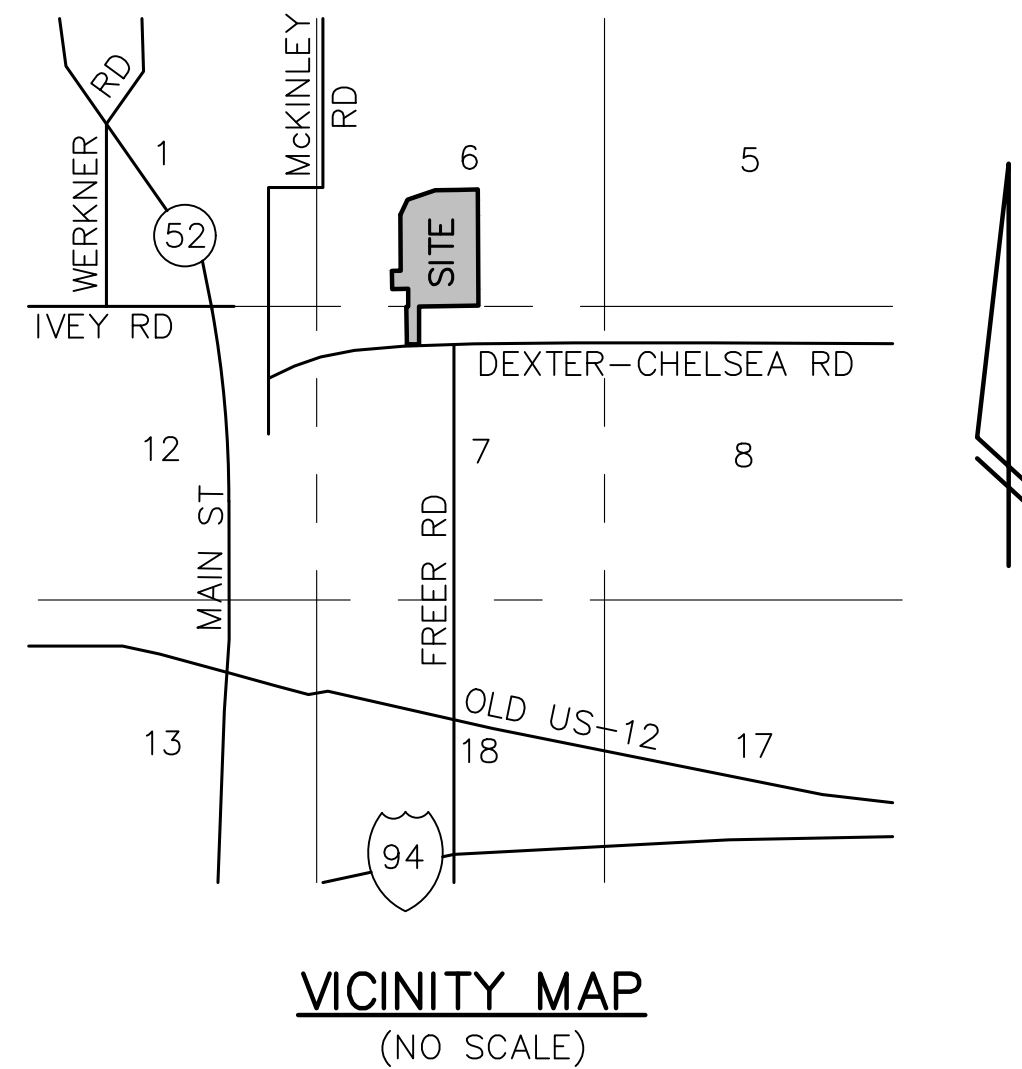
HERITAGE FARMS
FINAL SITE PLAN
PHASE 2

PART OF THE SW 1/4 OF SECTION 6 &
NW 1/4 OF SECTION 7, T2S, R4E, CITY OF CHELSEA,
WASHTENAW COUNTY, MICHIGAN

FOR:

M/I HOMES OF MICHIGAN
40950 WOODWARD AVE,
BLOOMFIELD HILLS, MI. 48304

PH: (248)-221-5011



WASHTENAW ENGINEERING CIVIL ENGINEERS • PLANNERS SURVEYORS • LANDSCAPE ARCHITECTS
P.O. BOX 1128
3526 WEST LIBERTY RD, SUITE 400, ANN ARBOR, MICHIGAN 48106
TEL: 734-761-8800
E-MAIL: wcco@wengco.com



NOTE: EVERGREEN SCREENING OF THE INFILTRATION BASIN IS A CITY OF CHELSEA REQUIREMENT, BUT IS CONFLICTING WITH THE ESTABLISHMENT OF NATIVE SPECIES REQUIRED BY WCWR GUIDELINES AND BMP FOR SUCCESSFUL ESTABLISHMENT OF DEEP ROOTED PRAIRIE PLANTS.

Table with columns: AREA, REQUIRED, PHASE 1, PHASE 2, PHASE 3, PHASE 4, PHASE 5, PHASE 6, TOTAL. Rows include Area (acres), Residential area (acres), Open space area (acres), R.O.W. area (acres), Number of Units, Max. Lot Coverage, Max. Floor Area Ratio, Max. Building Height, Density Units/Acre.

TABLE 1. DIMENSIONAL REQUIREMENTS. Table with columns: MINIMUM LOT AREA, FRONT YARD SETBACK, SIDE YARD SETBACK, REAR YARD SETBACK, MAXIMUM LOT COVERAGE, MAXIMUM FLOOR AREA RATIO, MAXIMUM BUILDING HEIGHT.

PROJECT DESCRIPTION:

PROJECT IS A CONTINUATION OF THE ORIGINAL PUD APPROVED BY THE CITY IN 2004. UPDATED HERITAGE FARMS WILL BE A SEPARATE HOME OWNERS ASSOCIATION THAT WILL COMPLETE THE REMAINING 231 HOMES.

STREET ACCESS: THE PROJECT WILL HAVE ACCESS FROM ELM STREET AND DEXTER-CHELSEA ROAD.

REFUSE: EACH HOME WILL HAVE INDIVIDUAL LOT PICK UP. NO COMMUNITY DUMPSTER ARE PROPOSED.

PARKING: EACH HOME WILL HAVE INDIVIDUAL GARAGES AND DRIVEWAYS FOR PARKING.

STREETS: AS CITY STREETS ARE PROPOSED ON SITE PARKING WILL BE ALLOWED ON ONE SIDE OF STREET. THERE IS NO STREET PARKING IN THE CITY OF CHELSEA CITY LIMITS BETWEEN 2AM AND 5AM. CITY PARKING ORDINANCE WILL BE ENFORCED AS SPACES MAY NOT BE USED FOR 24 HOUR PARKING.

LANDSCAPING: EACH SUBMITTAL OF FINAL SITE PLANS WILL MEET CURRENT CITY OF CHELSEA STANDARDS AND TREE SURVEY REQUIREMENTS OF THE 2021 ZONING ORDINANCE.

LIGHTING: PHOTOMETRIC PLANS WILL BE PROVIDED AS PART OF EACH PHASE, FINAL SITE PLAN SUBMITTAL.

SITE PLAN: HOMES SHALL NOT EXCEED A MAXIMUM FLOOR AREA RATION ("FAR") OF 35%. THE PROPOSED JULIETTE FLOOR PLAN SHALL BE LIMITED TO A MAXIMUM 35% FAR AND BE LOCATED ON LOTS 7,500SF OR LARGER IN ITS BASE PLAN CONFIGURATION, OR 7,800SF OR LARGER IF STRUCTURAL ADDITIONS ARE CHOSEN.

SITE IRRIGATION: SITE TO HAVE IRRIGATION IN OPEN SPACES PER THE PLANS. OPEN SPACE F WILL HAVE AN IRRIGATION SYSTEM AND STREET TREES PLANTED AS PART OF PHASE 4 AND PHASE 6 PLANS.

STORM WATER: THE PROPOSED DEVELOPMENT IS WITHIN THE EXISTING HERITAGE POINTE DRAINAGE DISTRICT.

SHEET INDEX SHEET NO.

COVER 1
OVERALL BOUNDARY AND TOPOGRAPHICAL SURVEY 2
PHASE 2 BOUNDARY AND TOPOGRAPHICAL SURVEY 3
PHASE 2 POND AREA BOUNDARY AND TOPOGRAPHICAL SURVEY. 4
OVERALL PUD SITE PLAN - SOUTH 5
OVERALL PUD SITE PLAN - NORTH 6
PHASE 2 PUD SITE PLAN 7
PHASE 2 PUD SITE PLAN - POND AREA 8
PHASE 2 GRADING & SOIL EROSION CONTROL PLAN 9
PHASE 2 GRADING & SOIL EROSION CONTROL PLAN-POND AREA 10
PHASE 2 GRADING & SOIL EROSION CONTROL PLAN-WEST BERM. 11
PHASE 2 UTILITY PLAN 12
PHASE 2 UTILITY PLAN - POND AREA. 13
ROAD CONSTRUCTION
COUNTRYSIDE DR. STA 28+00 TO STA. 32+44 14
WHISPERWOOD WAY STA. 7+90 TO STA. 12+76. 15
SWIFT CREEK DR. STA. 0+00 TO STA. 6+52 16
HARVEST WAY STA. 0+00 TO STA. 7+58 17
KNOLLWOOD BEND STA. 21+86 TO STA. 25+41. 18
SANITARY SEWER & WATER MAIN
COUNTRYSIDE DR. STA 28+00 TO STA. 32+44 19
WHISPERWOOD WAY STA. 7+90 TO STA. 12+76. 20
SWIFT CREEK DR. STA. 0+00 TO STA. 6+52 21
HARVEST WAY STA. 0+00 TO STA. 7+58 22
KNOLLWOOD BEND STA. 21+86 TO STA. 25+41. 23
STORM SEWER PROFILES 24-26
STORM WATER MANAGEMENT
DRAINAGE AREA OVERALL PROPOSED PLAN 27
CALCULATION STRUCTURAL INFILTRATION BASIN "B". 28
PHASE 2 LANDSCAPE PLAN 29
PHASE 2 LANDSCAPE PLAN - POND AREA 30
ROAD INTERSECTION DETAILS 31
SITE DETAILS 32
FIRE PROTECTION PLAN 33
PHASE 2 IRRIGATION PLAN - POND AREA 34
CITY OF CHELSEA STANDARDS
WATER MAIN STANDARD DETAILS 35
WATER MAIN SPECIFICATIONS 36
SANITARY AND STORM DETAILS 37
SANITARY SEWER SPECIFICATIONS 38
PHOTOMETRIC PLANS (BY LUMECON) P1
OVERALL ELECTRICAL PLAN E1
ARCHITECTURAL PLANS
AUBREY FLOOR PLANS & ELEVATIONS A1
BROOKLYN FLOOR PLANS & ELEVATIONS. A2
JULIET FLOOR PLANS & ELEVATIONS A3
PEYTON FLOOR PLANS & ELEVATIONS A4
SAWYER FLOOR PLANS & ELEVATIONS A5
EXTERIOR SELECTION SERIES 1-4. A6
EXTERIOR SELECTION SERIES 5-8. A7
EXTERIOR SELECTION SERIES 9-12 A8

PREPARED BY: JOSEPH K. MAYNARD P.E., MICHIGAN PROFESSIONAL ENGINEER No. 52559

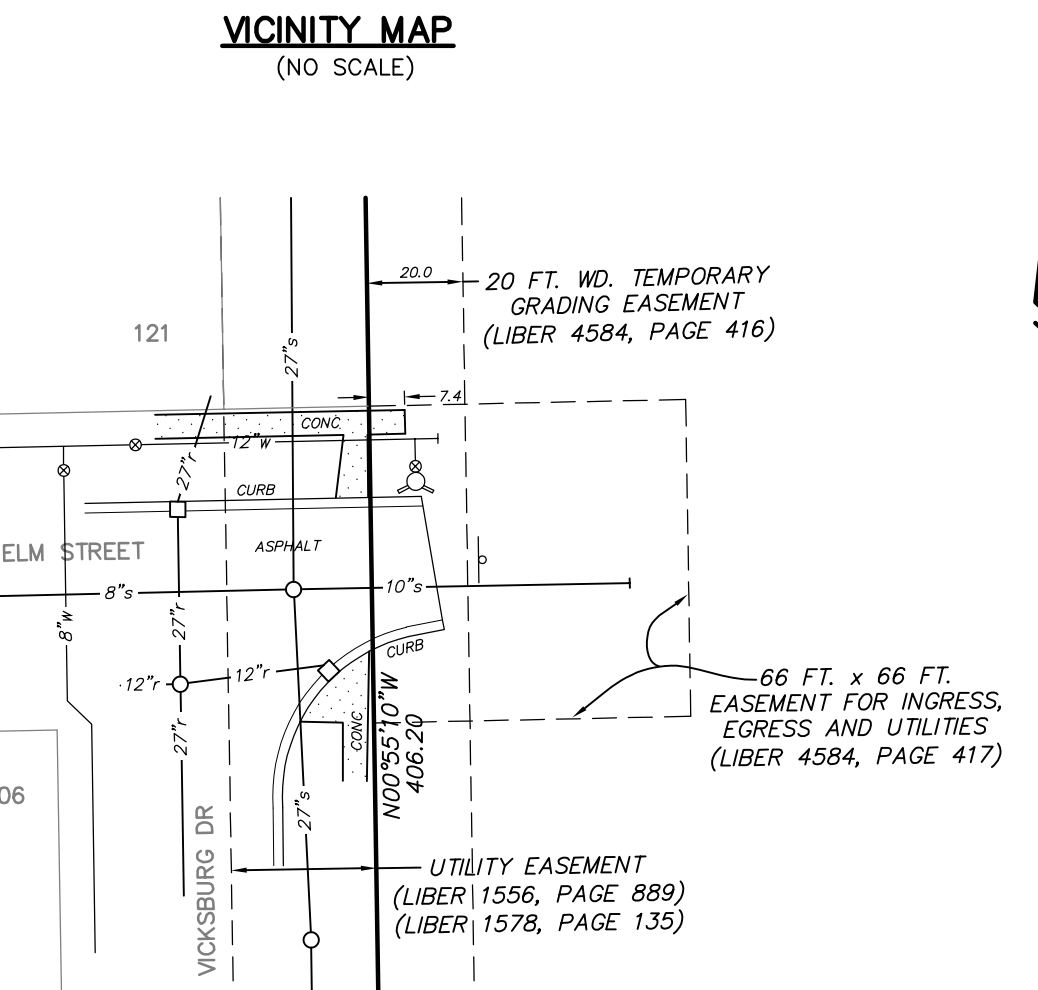
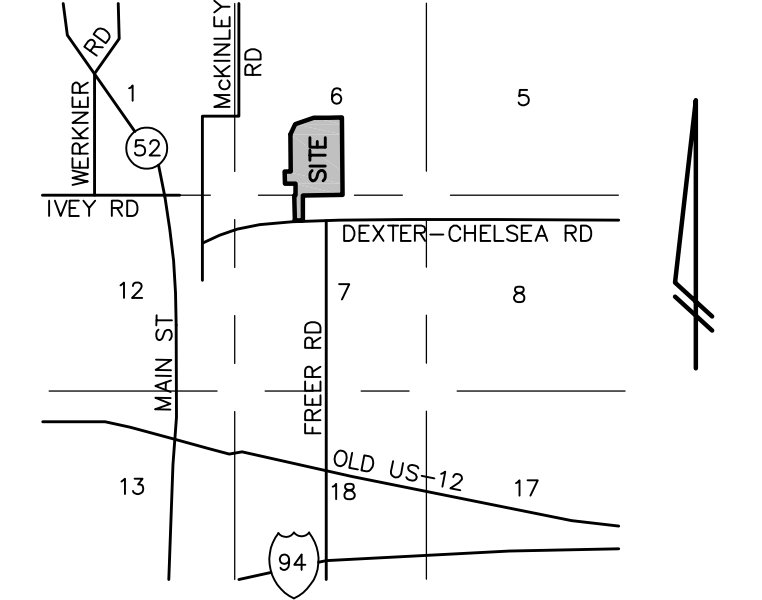
REVISED: 2-6-2024
REVISED: 1-15-2024
ORIGINAL: 11-01-2023

FINAL SITE PLAN - HERITAGE FARMS - PH2

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE AS TO THE ACCURACY OF THE INFORMATION PROVIDED. THE SURVEYOR DOES NOT WARRANT THAT THE INFORMATION PROVIDED IS COMPLETELY ACCURATE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

PROPERTY OF WASHTENAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT WRITTEN CONSENT OF WASHTENAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS, FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHER INSTRUMENTS OF SERVICE. THE SURVEYOR'S PROFESSIONAL LIABILITY WILL BE AT THE OWNER'S SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. THE SURVEYOR'S PROFESSIONAL LIABILITY WILL BE AT THE OWNER'S SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. THE SURVEYOR'S PROFESSIONAL LIABILITY WILL BE AT THE OWNER'S SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR.

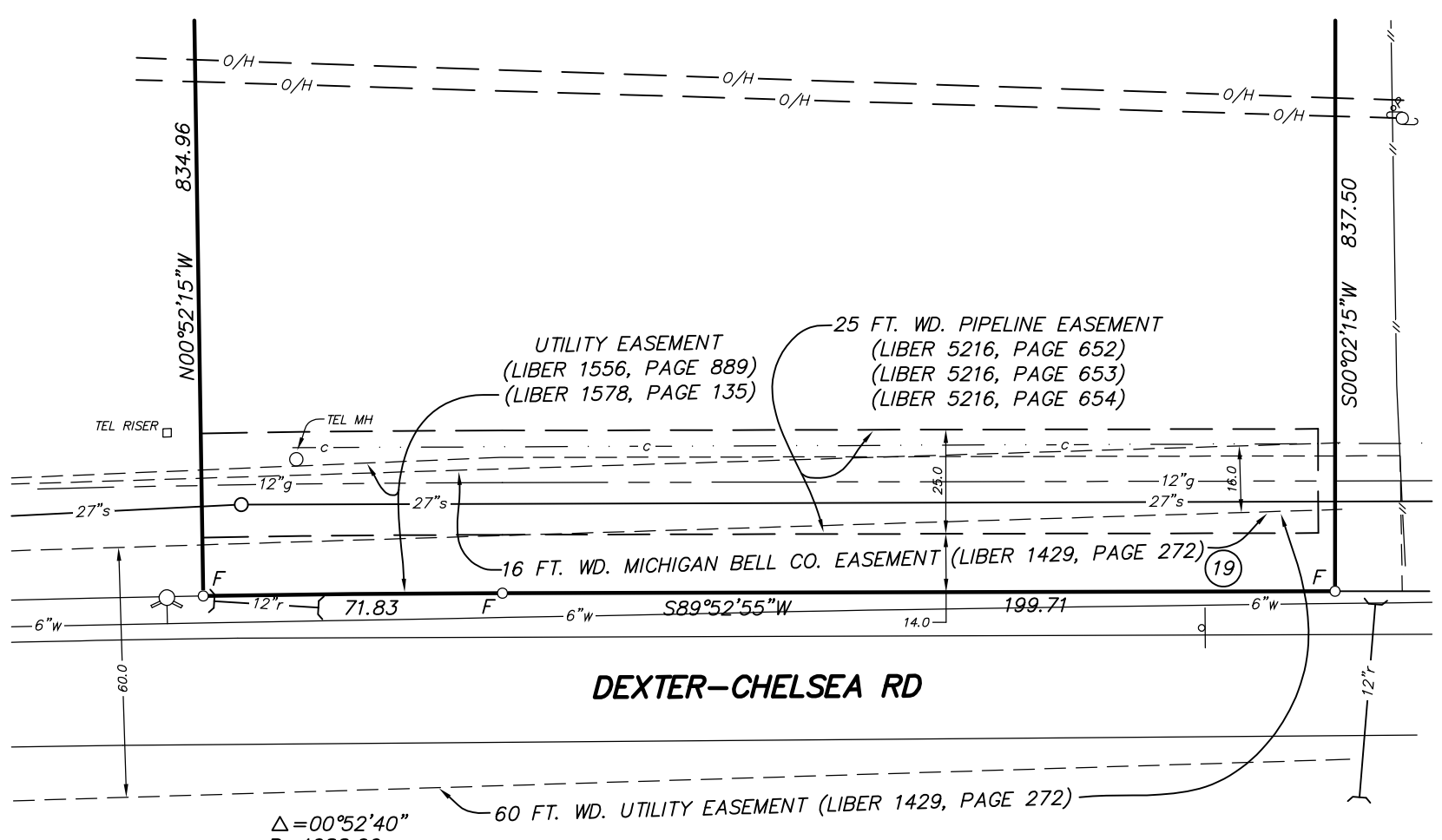


DETAIL "A" (SCALE: 1"=40')

OWNERSHIP TABLE

NO.	TAX ID	NAME	STREET ADDRESS	CITY, STATE, ZIP CODE	CITY / TOWNSHIP	ZONING
1	06-07-07-225-018	SCOTT CHAPMAN	P.O. BOX 338	CHELSEA, MI 48118	CITY OF CHELSEA	RS-1 SINGLE FAMILY
2	06-07-06-360-002	CITY OF CHELSEA	305 S. MAIN ST, STE. 100	CHELSEA, MI 48118	CITY OF CHELSEA	MU-1 MUNICIPAL USE
3	6-07-06-400-003	GARY & JANET ADAMS	13742 DEXTER-CHELSEA RD	CHELSEA, MI 48118	LIMA TOWNSHIP	AG-2 AGRICULTURE
4	6-07-07-100-002	GARY HILBURN & KRISTAL THOMPSON	13880 DEXTER-CHELSEA RD	CHELSEA, MI 48118	LIMA TOWNSHIP	AG-2 AGRICULTURE
5	6-07-07-100-003	DOUGLAS & PATRICE BRINK	13910 DEXTER-CHELSEA RD	CHELSEA, MI 48118	LIMA TOWNSHIP	AG-2 AGRICULTURE
6	06-07-07-125-007	CORKY ORYAN	13966 DEXTER-CHELSEA RD	CHELSEA, MI 48118	CITY OF CHELSEA	AG-1 AGRICULTURAL
7	06-07-07-225-017	RICHARD & VIRGINIA HAUGEN	14080 DEXTER-CHELSEA RD	CHELSEA, MI 48118	CITY OF CHELSEA	AG-1 AGRICULTURAL

7 = ADJACENT OWNER NUMBER



DETAIL "B" (SCALE: 1"=40')

DESCRIPTION

Land situated in the City of Chelsea, County of Washtenaw, State of Michigan described as follows:

Commencing at the Southwest corner of Section 6, Town 2 South, Range 4 East, City of Chelsea, Washtenaw County, Michigan; thence North 01 degrees 10 minutes 30 seconds West 48.25 feet along the West line of said Section to the Southeast corner of Section 1, Town 2 South, Range 3 East, City of Chelsea, Washtenaw County, Michigan; thence North 00 degrees 20 minutes 05 seconds West 754.06 feet continuing along said West line; thence North 88 degrees 47 minutes 05 seconds East 1051.35 feet to the POINT OF BEGINNING; thence continuing North 88 degrees 47 minutes 05 seconds East 193.79 feet; thence North 00 degrees 20 minutes 35 seconds West 1240.56 feet; thence North 25 degrees 28 minutes 38 seconds East 371.29 feet; thence North 71 degrees 11 minutes 10 seconds East 651.91 feet; thence North 89 degrees 02 minutes 35 seconds East 508.93 feet; thence North 88 degrees 36 minutes 55 seconds East 435.13 feet; thence South 00 degrees 20 minutes 35 seconds East 2581.30 feet to a point on the South line of said Section 6; thence along said South line South 88 degrees 59 minutes 10 seconds West 656.57 feet to the South 1/4 corner of said Section 6; thence continuing along said South line South 88 degrees 59 minutes 25 seconds West 661.36 feet; thence South 00 degrees 02 minutes 15 seconds West 837.50 feet; thence South 89 degrees 52 minutes 55 seconds West 199.71 feet; thence Westerly 71.83 feet along the arc of a 4688.00 foot radius circular curve to the left through a central angle of 00 degrees 52 minutes 40 seconds having a chord that bears South 89 degrees 27 minutes 55 seconds West 71.83 feet; thence North 00 degrees 52 minutes 15 seconds West 834.96 feet; thence North 78 degrees 59 minutes 20 seconds East 42.15 feet; thence North 00 degrees 12 minutes 55 seconds East 391.27 feet; thence South 88 degrees 59 minutes 25 seconds West 356.31 feet; thence North 00 degrees 55 minutes 10 seconds West 406.20 feet to the Point of Beginning. Being a part of the South 1/2 of Section 6 and a part of the Northwest 1/4 of Section 7, Town 2 South, Range 4 East, City of Chelsea, Washtenaw County, Michigan.

LEGEND

- [Symbol] = ACCESS EASEMENT
 - [Symbol] = WETLAND BOUNDARY DELINEATED BY: GJS LAND PLANNING, LLC (NOV. 2020)
 - [Symbol] = FLOODWAY
 - [Symbol] = FLOOD ZONE AE (1% HAZARD) (100 YEAR)
 - [Symbol] = FLOOD ZONE X (0.2% HAZARD) (500 YEAR)
- PER FEMA PANEL 26161C0184E
EFFECTIVE DATE: APRIL 3, 2012

WASHTENAW COUNTY SOIL SURVEY CLASSIFICATION

- ADRIAN MUCK, 0 TO 2 PERCENT SLOPES
- BOYER LOAMY SAND, 0 TO 6 PERCENT SLOPES
- CONOVER LOAM, 0 TO 4 PERCENT SLOPES
- EDWARDS MUCK
- KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES
- MIAMI LOAM, 2 TO 6 PERCENT SLOPES
- OSHTEMO LOAMY SAND, 0 TO 6 PERCENT SLOPES

SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTENAW COUNTY.

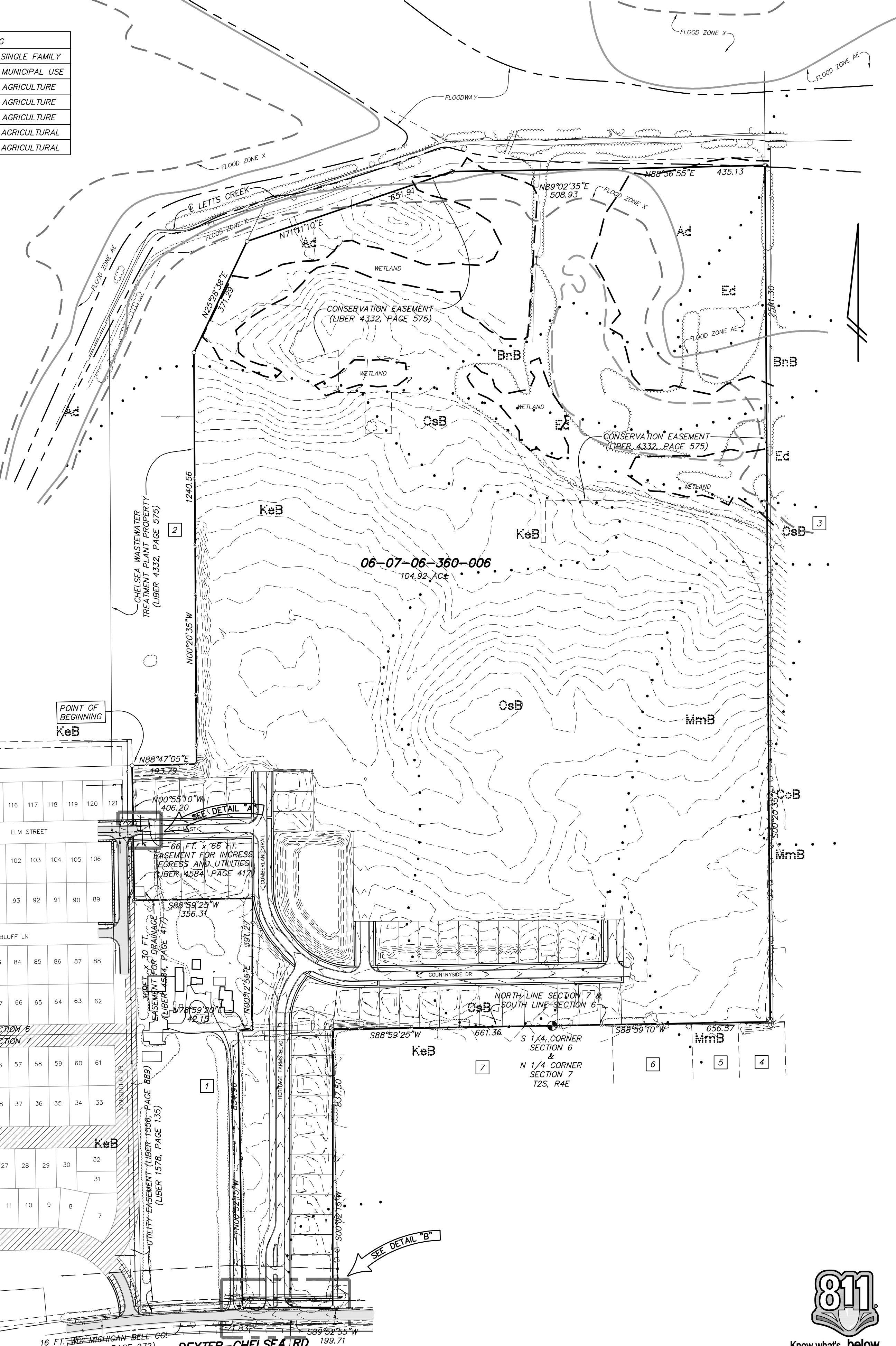
- LEGEND**
- [Symbol] = LIGHT POLE
 - [Symbol] = UTILITY POLE
 - [Symbol] = GUY ANCHOR
 - [Symbol] = HYDRANT
 - [Symbol] = SPOT ELEV.
 - [Symbol] = POST
 - [Symbol] = GATE VALVE
 - [Symbol] = SIGN
 - [Symbol] = TRANSFORMER
 - [Symbol] = MANHOLE
 - [Symbol] = CATCHBASIN
 - [Symbol] = END SECTION
 - [Symbol] = GRAVEL
 - [Symbol] = FENCE
 - [Symbol] = CONCRETE
 - [Symbol] = ASPHALT
 - [Symbol] = EXISTING STORM
 - [Symbol] = EXISTING SANITARY
 - [Symbol] = EXISTING WATER
 - [Symbol] = EXISTING GAS
 - [Symbol] = EXISTING ELECTRIC
 - [Symbol] = EXISTING TELEPHONE

BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9'± WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
BM2= NAIL IN WLY FACE OF 26" WALNUT, 43± NORTH OF DEXTER-CHELSEA RD AND 37'± NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND WOKSBURG DR, ELEV=913.21. (NAVD 88 DATUM)

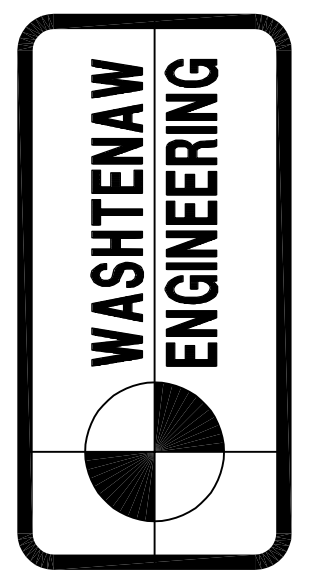
REVISIONS 1-15-2024 PER WCRC AND CITY REVIEWS
2-6-2024 PER WCRC AND CITY REVIEWS

SCALE 0 100 200 400
SCALE: 1"=200'

PREPARED BY: *Joseph K. Maynard*
JOSEPH K. MAYNARD P.E., MICH No. 52559



CIVIL ENGINEERS
PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS
3526 W. LIBERTY RD
SUITE 400
ANN ARBOR, MI 48103
TEL: 734-761-8800

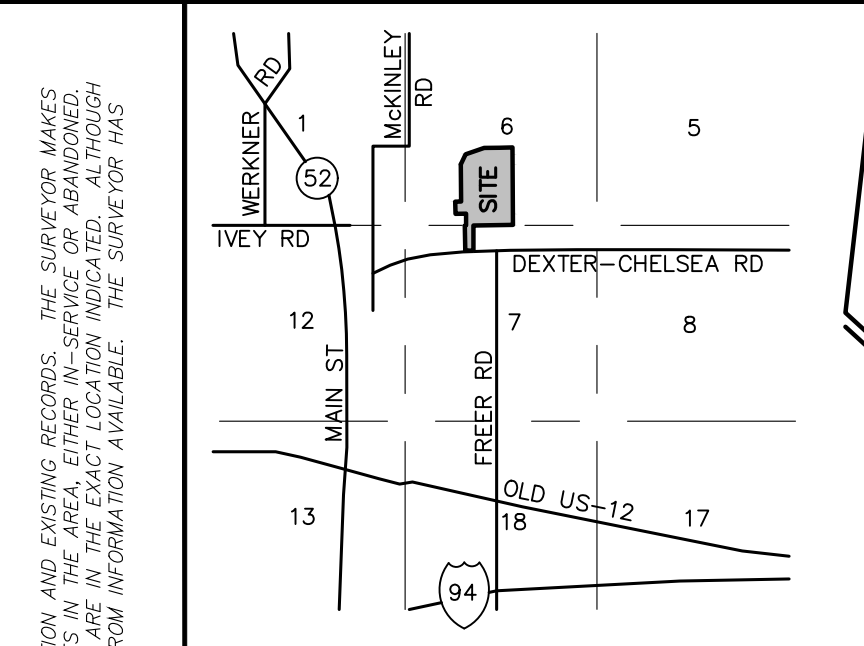


MI HOMES OF MICHIGAN
40950 WOODWARD AVE.
BLOOMFIELD HILLS, MI 48304
PH: (248)-221-5011

OVERALL BOUNDARY AND TOPOGRAPHICAL SURVEY

HERITAGE FARMS PHASE 2

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
CITY OF CHELSEA
WASHTENAW COUNTY • MICHIGAN
JOB NO. 32971
DWG NO. 871-OV-Topo-200
FIELD BOOK 446
FILE NO. 10668



VICINITY MAP
(NO SCALE)

OWNERSHIP TABLE

NO.	TAX ID	NAME	STREET ADDRESS	CITY, STATE, ZIP CODE	CITY / TOWNSHIP	ZONING
1	06-07-07-225-018	SCOTT CHAPMAN	P.O. BOX 338	CHELSEA, MI 48118	CITY OF CHELSEA	RS-1 SINGLE FAMILY
2	06-07-06-360-002	CITY OF CHELSEA	305 S. MAIN ST, STE. 100	CHELSEA, MI 48118	CITY OF CHELSEA	MU-1 MUNICIPAL USE
3	G-07-06-400-003	GARY & JANET ADAMS	13742 DEXTER-CHELSEA RD	CHELSEA, MI 48118	LIMA TOWNSHIP	AG-2 AGRICULTURE
4	G-07-07-100-002	GARY HILBURN & KRISTAL THOMPSON	13880 DEXTER-CHELSEA RD	CHELSEA, MI 48118	LIMA TOWNSHIP	AG-2 AGRICULTURE
5	G-07-07-100-003	DOUGLAS & PATRICE BRINK	13910 DEXTER-CHELSEA RD	CHELSEA, MI 48118	LIMA TOWNSHIP	AG-2 AGRICULTURE
6	06-07-07-125-007	CORKY ORYAN	13966 DEXTER-CHELSEA RD	CHELSEA, MI 48118	CITY OF CHELSEA	AG-1 AGRICULTURAL
7	06-07-07-225-017	RICHARD & VIRGINIA HAUGEN	14080 DEXTER-CHELSEA RD	CHELSEA, MI 48118	CITY OF CHELSEA	AG-1 AGRICULTURAL

7 = ADJACENT OWNER NUMBER

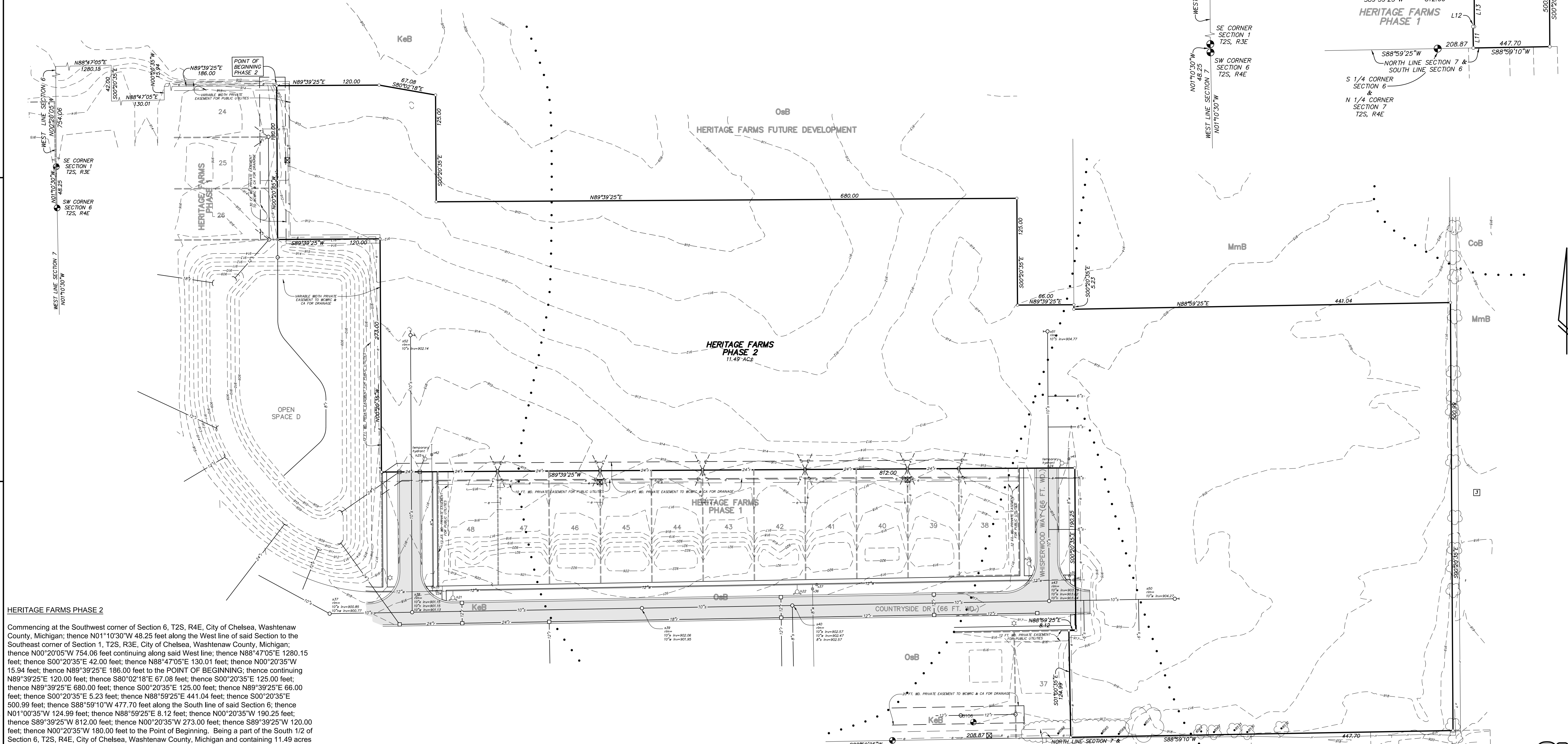
TREE TABLE

TAG	COMMON NAME	DBH	HEIGHT	CONDITION	REMOVE	MITIGATION	PRESERVATION
8565	Black Locust	22		Good			3
8566	Black Locust	14		Good			2
8567	Black Locust	14		Good			2
8568	Black Locust	10		Good			2
8569	Black Locust	12		Good			2
8570	Black Locust	12		Good			2

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT GUARANTEE THAT THE UTILITIES SHOWN ARE ACCURATELY LOCATED AS SHOWN. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTEENAW ENGINEERING COMPANY, INC. NO REPRODUCTION OR TRANSMISSION IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, IS PERMITTED WITHOUT THE WRITTEN CONSENT OF WASHTEENAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELEVATIONS, DATA, AND OTHER INSTRUMENTS OF SERVICE OR INFORMATION FOR ANY PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTEENAW ENGINEERING COMPANY (MECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO PROPERTY OR PERSONS OR FOR ANY LIABILITY OF ANY KIND ARISING FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT, INCLUDING THE USE OF THE DRAWINGS, SPECIFICATIONS, ELEVATIONS, DATA, AND OTHER INSTRUMENTS OF SERVICE.



HERITAGE FARMS PHASE 2
Commencing at the Southwest corner of Section 6, T2S, R4E, City of Chelsea, Washtenaw County, Michigan; thence N01°10'30"W 48.25 feet along the West line of said Section to the Southeast corner of Section 1, T2S, R3E, City of Chelsea, Washtenaw County, Michigan; thence N00°20'05"W 754.06 feet continuing along said West line; thence N88°47'05"E 1280.15 feet; thence S00°20'35"E 42.00 feet; thence N88°47'05"E 130.01 feet; thence N00°20'35"W 15.94 feet; thence N89°39'25"E 186.00 feet to the POINT OF BEGINNING; thence continuing N89°39'25"E 120.00 feet; thence S80°02'18"E 67.08 feet; thence S00°20'35"E 125.00 feet; thence N89°39'25"E 680.00 feet; thence S00°20'35"E 125.00 feet; thence N89°39'25"E 66.00 feet; thence S00°20'35"E 5.23 feet; thence N88°59'25"E 441.04 feet; thence S00°20'35"E 500.99 feet; thence S88°59'10"W 477.70 feet along the South line of said Section 6; thence N01°00'35"W 124.99 feet; thence N88°59'25"E 8.12 feet; thence N00°20'35"W 190.25 feet; thence S89°39'25"W 812.00 feet; thence N00°20'35"W 273.00 feet; thence S89°39'25"W 120.00 feet; thence N00°20'35"W 180.00 feet to the Point of Beginning. Being a part of the South 1/2 of Section 6, T2S, R4E, City of Chelsea, Washtenaw County, Michigan and containing 11.49 acres of land, more or less. Being subject to easements and restrictions of record, if any.

TREE IDENTIFICATION TABLE

TAG	COMMON NAME	DBH	HEIGHT	CONDITION	REMOVE	MITIGATION	PRESERVATION
8565	Black Walnut	22		Good			3
8566	Black Walnut	14		Good			2
8567	Black Walnut	28		Good			2
8568	Black Walnut	10		Good			2
8569	Black Walnut	32		Good			2
8570	Black Walnut	12		Good			2
8571	Swamp White Oak	66		Excellent			3
8572	Black Walnut	10		Good			2
8573	Black Walnut	14		Good			2

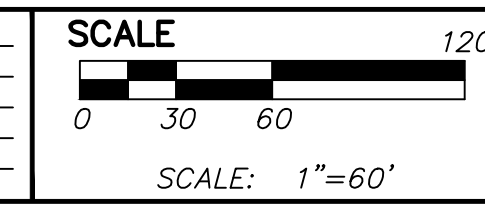
EXISTING TREES TO REMAIN - 66" OAK (8571) WILL REMAIN, NO MITIGATION REQUIRED. (SEE LANDSCAPE PLANS FOR DETAILS)

LEGEND

○ = LIGHT POLE	○ = SPOT ELEV.	⊠ = TRANSFORMER	--- = GRAVEL	--- = EXISTING STORM
○ = UTILITY POLE	○ = POST	○ = MANHOLE	--- = FENCE	--- = EXISTING SANITARY
○ = GUY ANCHOR	○ = GATE VALVE	○ = CATCHBASIN	--- = CONCRETE	--- = EXISTING WATER
○ = HYDRANT	○ = SIGN	○ = END SECTION	--- = ASPHALT	--- = EXISTING GAS
				--- = EXISTING ELECTRIC
				--- = EXISTING TELEPHONE

BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9'E
WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
BM2= NAIL IN WLY FACE OF 26" WALNUT, 43'E NORTH OF DEXTER-CHELSEA RD AND 37'E
NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21
(NAVD 88 DATUM)

REVISIONS 1-15-2024 PER WCWRC AND CITY REVIEWS
2-6-2024 PER WCWRC AND CITY REVIEWS



PREPARED BY *Joseph K. Maynard*
JOSEPH K. MAYNARD P.E., MICH No. 52559

WETLANDS DELINEATED BY:
GJS LAND PLANNING, LLC
NOVEMBER OF 2023.

CIVIL ENGINEERS
PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS

WASHTEENAW ENGINEERING

M/I HOMES OF MICHIGAN
40950 WOODWARD AVE.
BLOOMFIELD HILLS, MI 48304
PH: (248)-221-5011

CLIENT

PHASE 2 BOUNDARY AND TOPOGRAPHICAL SURVEY

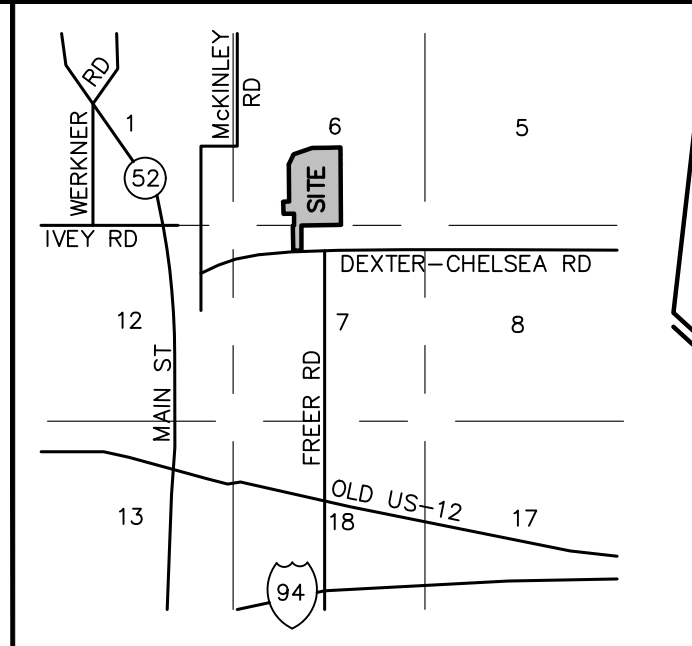
SHEET

PROJECT

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
CITY OF CHELSEA
WASHTEENAW COUNTY • MICHIGAN
DATE 11-1-23
JOB NO. 32971
DWG NO. 971-ph2-topo
FIELD BOOK 446
FILE NO. 10668

3 SHEET

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. NO REPRESENTATION SHALL BE MADE AS TO THE ACCURACY OF ANY INFORMATION PROVIDED BY THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

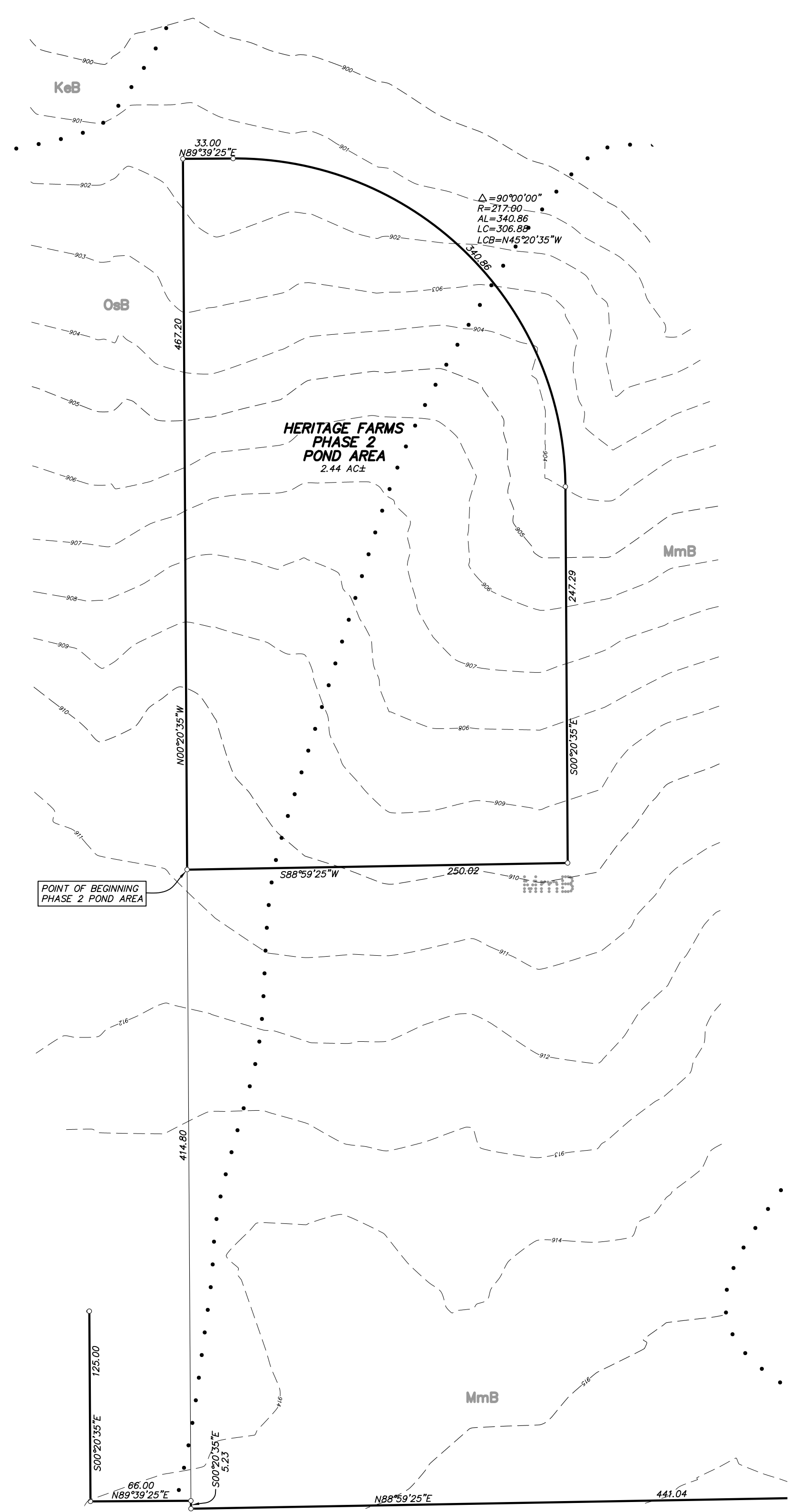


COPYRIGHT © 2024 WASHTEANAW ENGINEERING COMPANY, INC. NO REPRESENTATION SHALL BE MADE AS TO THE ACCURACY OF ANY INFORMATION PROVIDED BY THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA, AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTEANAW ENGINEERING COMPANY (WEC) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE SURVEYOR SHALL INDEMNIFY AND HOLD HARMLESS WEC, WEC'S CONSULTANTS AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES, ARISING OUT OF OR FROM ANY AND ALL REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.

WASHTEANAW COUNTY SOIL SURVEY CLASSIFICATION
CoB - CONOVER LOAM, 0 TO 4 PERCENT SLOPES
KeB - KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES
MmB - MIAMI LOAM, 2 TO 6 PERCENT SLOPES
OsB - OSHTEMO LOAMY SAND, 0 TO 6 PERCENT SLOPES
 - SOILS BOUNDARY
 SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTEANAW COUNTY.

HERITAGE FARMS PHASE 2 POND AREA
 Commencing at the Southwest corner of Section 6, T2S, R4E, City of Chelsea, Washtenaw County, Michigan; thence N01°10'30"W 48.25 feet along the West line of said Section to the Southeast corner of Section 1, T2S, R3E, City of Chelsea, Washtenaw County, Michigan; thence N00°20'05"W 754.06 feet continuing along said West line; thence N88°47'05"E 1280.15 feet; thence S00°20'35"E 42.00 feet; thence N88°47'05"E 130.01 feet; thence N00°20'35"W 15.94 feet; thence N89°39'25"E 306.00 feet; thence S80°02'18"E 67.08 feet; thence S00°20'35"E 125.00 feet; thence N89°39'25"E 680.00 feet; thence S00°20'35"E 125.00 feet; thence N89°39'25"E 66.00 feet; thence N00°20'35"W 414.80 feet to the POINT OF BEGINNING; thence continuing N00°20'35"W 467.20 feet; thence N89°39'25"E 33.00 feet; thence Southeasterly 340.86 feet along the arc of a 217.00 foot radius circular curve to the right, through a central angle of 90°00'00", having a chord that bears S45°20'35"E 306.88 feet; thence S00°20'35"E 247.29 feet; thence S88°59'25"W 250.02 feet to the Point of Beginning. Being a part of the South 1/2 of Section 6, T2S, R4E, City of Chelsea, Washtenaw County, Michigan and containing 2.44 acres of land, more or less. Being subject to easements and restrictions of record, if any.

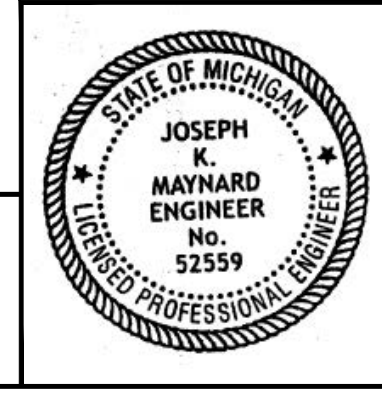


LEGEND LIGHT POLE UTILITY POLE GUY ANCHOR HYDRANT SPOT ELEV. POST GATE VALVE SIGN TRANSFORMER MANHOLE CATCHBASIN END SECTION GRAVEL FENCE CONCRETE ASPHALT EXISTING STORM EXISTING SANITARY EXISTING WATER EXISTING GAS EXISTING ELECTRIC EXISTING TELEPHONE	BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9'± WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68. BM2=NAIL IN WLY FACE OF 26" WALNUT, 43'± NORTH OF DEXTER-CHELSEA RD AND 37'± NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38. BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21. (NAVD 88 DATUM)
---	--

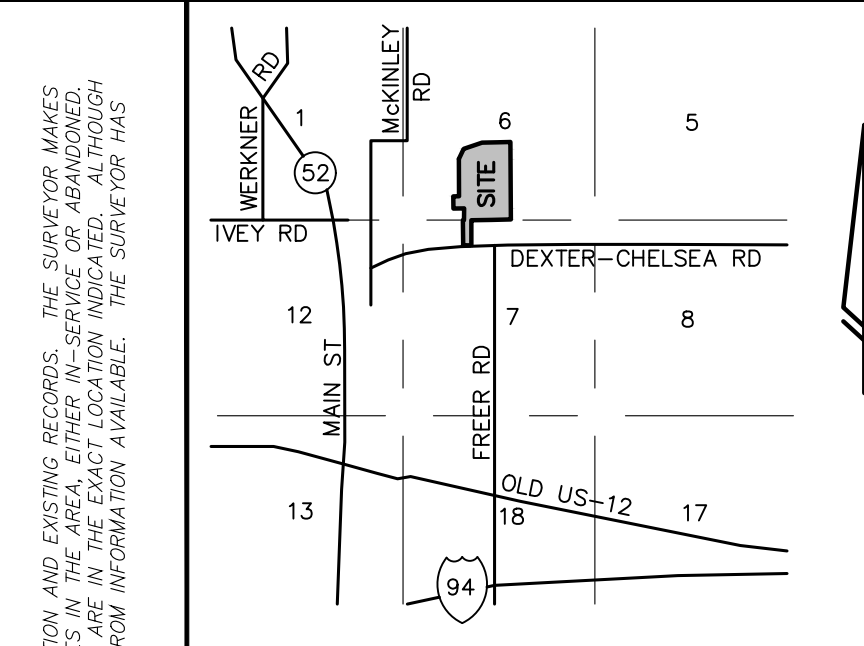
REVISIONS 1-15-2024 PER WCWRC AND CITY REVIEWS 2-6-2024 PER WCWRC AND CITY REVIEWS	SCALE 0 30 60 120 SCALE: 1"=60'
---	--

WETLANDS DELINEATED BY:
 GJS LAND PLANNING, LLC
 NOVEMBER OF 2023.

PREPARED BY: *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559

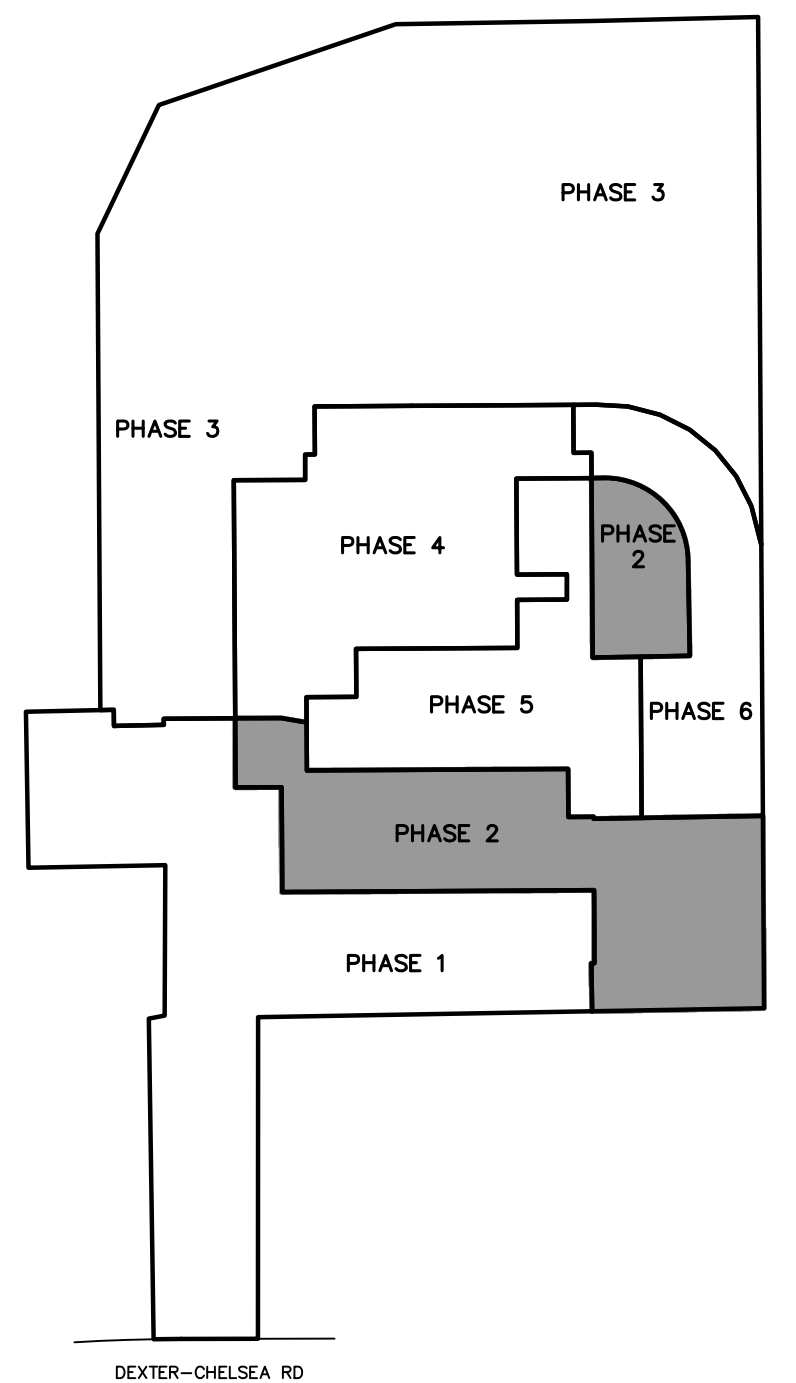


CIVIL ENGINEERS PLANNERS • SURVEYORS LANDSCAPE ARCHITECTS 3526 W. LIBERTY RD ANN ARBOR, MI 48103 TEL. 734-761-8800		CLIENT M/I HOMES OF MICHIGAN 40950 WOODWARD AVE. BLOOMFIELD HILLS, MI 48304 PH: (248)-221-5011
		PROJECT HERITAGE FARMS PHASE 2 SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST CITY OF CHELSEA WASHTEANAW COUNTY • MICHIGAN DATE 11-1-23 JOB NO. 329271 DWG NO. 971-PR2-10pp FIELD BOOK 446 FILE NO. T0668
SHEET PHASE 2 POND AREA BOUNDARY & TOPOGRAPHICAL SURVEY		4 SHEET



VICINITY MAP
(NO SCALE)

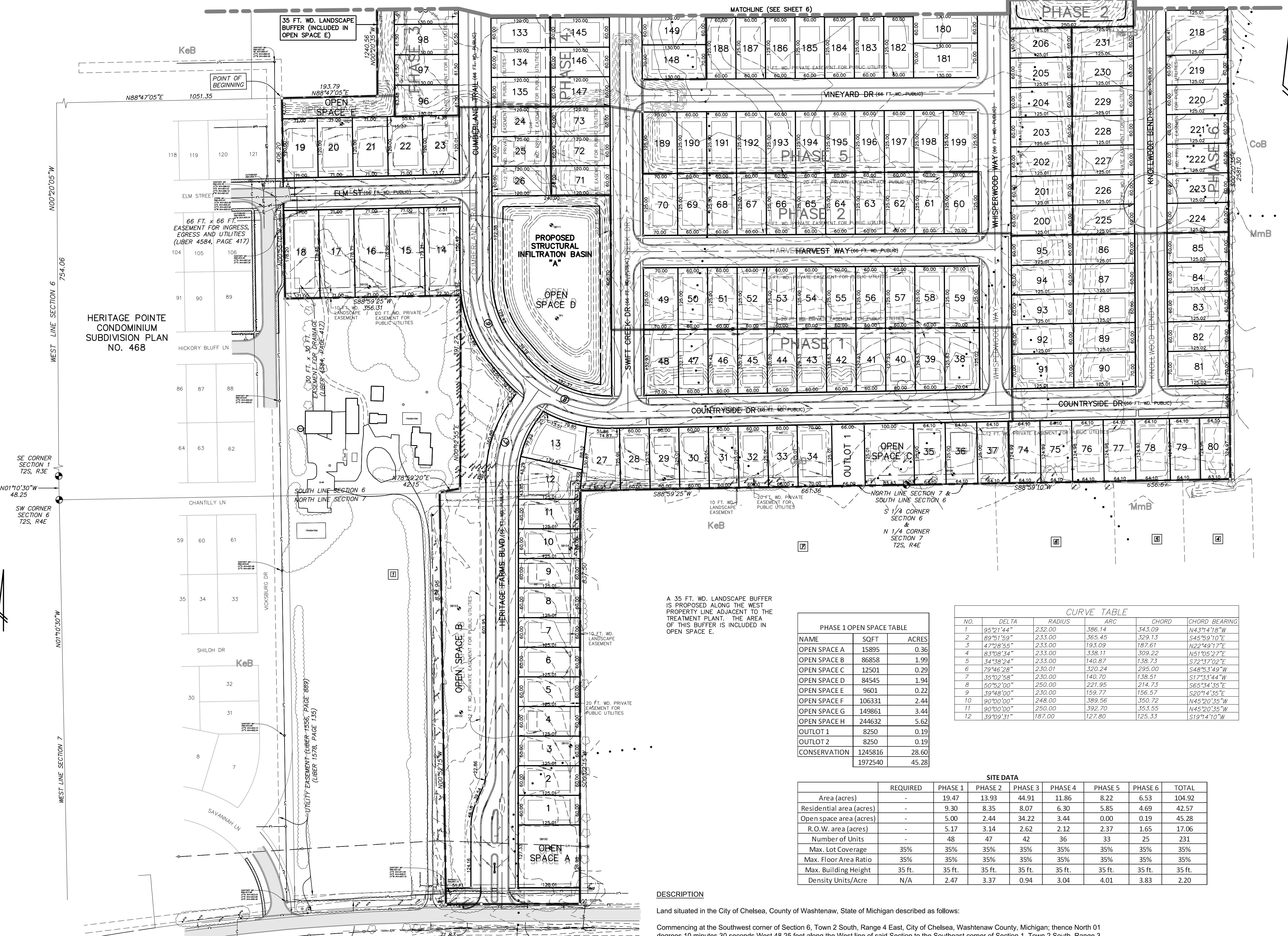
- NOTES:**
- HOMEOWNERS ASSOCIATION SHALL MAINTAIN ALL OPEN SPACE AREAS.
 - SANITARY SEWER EASEMENT AND ALL ACCESS LOCATIONS SHALL HAVE COMPACTED GRAVEL COVERED WITH TOPSOIL.
 - THERE SHALL BE NO PARKING AT ALL INTERSECTIONS AND WITHIN THE CUL-DE-SAC. SIGN LOCATIONS TO BE PROVIDED AT FINAL SITE PLAN. OTHERWISE, PARKING SHALL BE PERMITTED ON ONE SIDE OF ALL STREETS. SIGN LOCATIONS TO BE PROVIDED AT FINAL SITE PLAN.
 - ALL TREES TO BE PRESERVED SHALL HAVE TREE PROTECTION MEASURES IN PLACE PRIOR TO CONSTRUCTION. A TREE SURVEY IS NOT REQUIRED BY THE CITY ZONING ORDINANCE.
 - NO STRUCTURES INCLUDING DECKS OR PORCHES SHALL BE LOCATED WITHIN THE 20 FT. SETBACK OF THE TREATMENT PLANT.
 - SEE ENGINEERING SHEETS FOR UTILITY AND GRADING FOR EACH PHASE OF LOT AND ROAD CONSTRUCTION.
 - TO THE GREATEST EXTENT POSSIBLE, TREES WITHIN THE SITE SHALL BE PRESERVED. HOWEVER, DUE TO GRADING, UTILITIES AND OTHER ASPECTS OF IMPLEMENTATION VARIOUS TREES THROUGHOUT THE SITE SHALL BE REMOVED PRIOR TO CONSTRUCTION. ALL TREE IMPACTS SHALL BE RE-EVALUATED AT FINAL SITE PLAN.
 - THE LANDSCAPE BUFFER SHALL BE INSTALLED IN A SEQUENCE WHERE BY THE CURRENT PHASE OF CONSTRUCTION SHALL INCLUDE THE BUFFER IN THE NEXT PHASE OF THE PROJECT UNTIL THE BUFFER IS COMPLETED.
 - LANDSCAPING SHALL BE PROVIDED AS REQUIRED BY THE ORDINANCE AND SHOWN AT THE TIME OF FINAL SITE PLAN APPROVALS.
 - ALL STREETS SHALL BE DEDICATED PUBLIC STREETS TO CITY STANDARDS.
 - ALL MAILBOXES SHALL BE GROUPED NEAR OPEN SPACES UNLESS OTHERWISE DICTATED BY THE POST OFFICE.
 - PARKING: EACH HOME WILL HAVE INDIVIDUAL GARAGES AND DRIVEWAYS FOR PARKING.
 - STREETS: AS CITY STREETS ARE PROPOSED ON SITE PARKING WILL BE ALLOWED ON ONE SIDE OF STREET. THERE IS NO STREET PARKING IN THE CITY OF CHELSEA CITY LIMITS BETWEEN 2AM AND 5AM. CITY PARKING ORDINANCE WILL BE ENFORCED AS SPACES MAY NOT BE USED FOR 24 HOUR PARKING.



HERITAGE FARMS PHASE KEY
(NOT TO SCALE)

- LEGEND**
- WETLAND BOUNDARY DELINEATED BY: GJS LAND PLANNING, LLC (NOV. 2020)
 - FLOODWAY
 - FLOOD ZONE AE (1% HAZARD) (100 YEAR)
 - FLOOD ZONE X (0.2% HAZARD) (500 YEAR) PER FEMA PANEL 26161C0184E EFFECTIVE DATE: APRIL 3, 2012
 - LIGHT POLE
 - UTILITY POLE
 - GUY ANCHOR
 - HYDRANT
 - SPOT ELEV.
 - POST
 - GATE VALVE
 - SIGN
 - TRANSFORMER
 - MANHOLE
 - CATCHBASIN
 - END SECTION
 - GRAVEL
 - FENCE
 - CONCRETE
 - ASPHALT
 - EXISTING STORM
 - EXISTING SANITARY
 - EXISTING WATER
 - EXISTING GAS
 - EXISTING ELECTRIC
 - EXISTING TELEPHONE

HERITAGE POINT CONDOMINIUM SUBDIVISION PLAN NO. 468



PHASE 1 OPEN SPACE TABLE

NAME	SOFT	ACRES
OPEN SPACE A	15895	0.36
OPEN SPACE B	86858	1.99
OPEN SPACE C	12501	0.29
OPEN SPACE D	84545	1.94
OPEN SPACE E	9601	0.22
OPEN SPACE F	106331	2.44
OPEN SPACE G	149861	3.44
OPEN SPACE H	244632	5.62
OUTLOT 1	8250	0.19
OUTLOT 2	8250	0.19
CONSERVATION	1245816	28.60
	1972540	45.28

CURVE TABLE

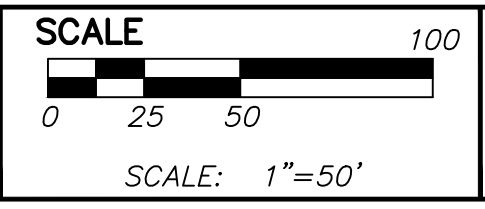
NO	DELTA	RADIUS	ARC	CHORD	CHORD BEARING
1	95°21'44"	232.00	386.14	343.09	N43°14'18"W
2	89°51'59"	233.00	365.45	329.13	S45°59'10"E
3	47°28'55"	233.00	193.09	187.61	N22°49'17"E
4	83°08'34"	233.00	338.11	309.22	N51°06'27"E
5	34°38'24"	233.00	140.87	138.73	S72°47'02"E
6	79°46'28"	230.01	320.24	295.00	S48°53'49"W
7	39°10'58"	230.00	140.70	138.51	S17°53'44"W
8	50°52'00"	250.00	221.95	214.73	S65°54'35"E
9	39°48'00"	230.00	159.77	156.57	S20°14'35"E
10	90°00'00"	248.00	389.56	350.72	N45°20'35"W
11	90°00'00"	250.00	392.70	353.55	N45°20'35"W
12	39°09'31"	187.00	127.80	125.33	S19°14'10"W

SITE DATA

	REQUIRED	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	TOTAL
Area (acres)		19.47	13.93	44.91	11.86	5.85	6.53	104.92
Residential area (acres)		9.30	8.35	8.07	6.30	5.85	4.69	42.57
Open space area (acres)		5.00	2.44	34.22	3.44	0.00	0.19	45.28
R.O.W. area (acres)		5.17	3.14	2.62	2.12	2.37	1.65	17.06
Number of Units		48	47	42	36	33	25	231
Max. Lot Coverage	35%	35%	35%	35%	35%	35%	35%	35%
Max. Floor Area Ratio	35%	35%	35%	35%	35%	35%	35%	35%
Max. Building Height	35 ft.	35 ft.	35 ft.	35 ft.	35 ft.	35 ft.	35 ft.	35 ft.
Density Units/Acre	N/A	2.47	3.37	0.94	3.04	4.01	3.83	2.20

DESCRIPTION
Land situated in the City of Chelsea, County of Washtenaw, State of Michigan described as follows:

Commencing at the Southwest corner of Section 6, Town 2 South, Range 4 East, City of Chelsea, Washtenaw County, Michigan; thence North 01 degrees 10 minutes 30 seconds West 48.25 feet along the West line of said Section to the Southeast corner of Section 1, Town 2 South, Range 3 East, City of Chelsea, Washtenaw County, Michigan; thence North 00 degrees 20 minutes 05 seconds West 754.06 feet continuing along said West line; thence North 88 degrees 47 minutes 05 seconds East 1051.35 feet to the POINT OF BEGINNING; thence continuing North 88 degrees 47 minutes 05 seconds East 193.79 feet; thence North 00 degrees 20 minutes 35 seconds West 1240.56 feet; thence North 25 degrees 28 minutes 38 seconds East 371.29 feet; thence North 71 degrees 11 minutes 10 seconds East 651.91 feet; thence North 89 degrees 02 minutes 35 seconds East 508.93 feet; thence North 88 degrees 36 minutes 55 seconds East 435.13 feet; thence South 00 degrees 20 minutes 35 seconds East 2581.30 feet to a point on the South line of said Section 6; thence along said South line South 88 degrees 59 minutes 10 seconds West 656.57 feet to the South 1/4 corner of said Section 6; thence continuing along said South line South 88 degrees 59 minutes 25 seconds West 661.36 feet; thence South 00 degrees 02 minutes 15 seconds West 837.50 feet; thence South 89 degrees 52 minutes 55 seconds West 159.71 feet; thence West 71.83 feet along the arc of a 4688.00 foot radius circular curve to the left through a central angle of 00 degrees 52 minutes 40 seconds having a chord that bears South 89 degrees 27 minutes 55 seconds West 55 seconds West 71.83 feet; thence North 00 degrees 52 minutes 15 seconds West 834.96 feet; thence North 78 degrees 59 minutes 20 seconds East 42.15 feet; thence North 00 degrees 12 minutes 55 seconds East 391.27 feet; thence South 88 degrees 59 minutes 25 seconds West 356.31 feet; thence North 00 degrees 55 minutes 10 seconds West 406.20 feet to the Point of Beginning. Being a part of the South 1/2 of Section 6 and a part of the Northwest 1/4 of Section 7, Town 2 South, Range 4 East, City of Chelsea, Washtenaw County, Michigan.



PREPARED BY: *Joseph K. Maynard*
JOSEPH K. MAYNARD P.E., MICH No. 52559

811
Know what's below.
Call before you dig.

STATE OF MICHIGAN
JOSEPH K. MAYNARD
ENGINEER
No. 52559
LICENSED PROFESSIONAL ENGINEER

CIVIL ENGINEERS
PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS
3526 W. LIBERTY RD
ANN ARBOR, MI 48103
TEL: 734-761-8900

WASHTENAW ENGINEERING

CLIENT: **M/I HOMES OF MICHIGAN**
40950 WOODWARD AVE.
BLOOMFIELD HILLS, MI 48304
PH: (248)-221-5011

OVERALL PUD SITE PLAN SOUTH

SHEET: **PHASE 2**

PROJECT: **HERITAGE FARMS PHASE 2**

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
CITY OF CHELSEA
WASHTENAW COUNTY • MICHIGAN
DATE: 11-1-23 JOB NO. 32971
DWG NO. 971-01-PUD
FIELD BOOK: 446
FILE NO. 10668

5 SHEET

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO WARRANTY AS TO THE ACCURACY OF THE INFORMATION SHOWN. THE SURVEYOR DOES NOT WARRANT THAT THE INFORMATION SHOWN IS COMPLETE OR ACCURATE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTENAW ENGINEERING COMPANY, INC. ALL RIGHTS RESERVED. NO REPRODUCTION SHALL BE MADE WITHOUT WRITTEN CONSENT OF WASHTENAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS WITHOUT THE SURVEYOR'S CONSENT, THE SURVEYOR'S CONSENT AND APPROVAL MUST BE OBTAINED. THE SURVEYOR'S CONSENT AND APPROVAL WILL BE AT THE OWNER'S SOLE RISK AND WITHOUT LIABILITY TO THEM FROM THE SURVEYOR. THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO PROPERTY OR PERSONS ARISING OUT OF UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.

UNIT NO.	AREA (SF)	UNIT NO.	AREA (SF)	UNIT NO.	AREA (SF)	UNIT NO.	AREA (SF)
1	7,500	76	8,011	151	7,800	226	7,501
2	7,500	77	8,011	152	7,800	227	7,501
3	7,500	78	8,760	153	7,800	228	7,501
4	7,500	79	7,635	154	7,800	229	7,501
5	7,500	80	7,601	155	9,100	230	7,501
6	7,500	81	8,751	156	7,500	231	7,501
7	7,500	82	7,501	157	7,500		
8	7,500	83	7,501	158	7,500		
9	7,500	84	7,501	159	7,500		
10	7,500	85	7,501	160	7,500		
11	7,500	86	7,500	161	7,500		
12	9,310	87	7,500	162	7,500		
13	10,400	88	7,500	163	7,500		
14	12,857	89	7,500	164	7,500		
15	12,715	90	8,751	165	7,500		
16	12,697	91	8,751	166	7,486		
17	12,679	92	7,500	167	7,500		
18	12,661	93	7,500	168	7,500		
19	8,520	94	7,500	169	7,500		
20	8,520	95	7,500	170	7,500		
21	8,520	96	8,123	171	7,500		
22	8,520	97	7,995	172	7,500		
23	8,853	98	7,995	173	7,500		
24	7,200	99	7,995	174	9,100		
25	7,200	100	7,995	175	7,800		
26	7,200	101	7,995	176	7,800		
27	9,391	102	7,995	177	7,800		
28	7,500	103	7,995	178	7,800		
29	7,500	104	7,995	179	7,800		
30	7,500	105	7,995	180	7,800		
31	7,500	106	7,995	181	9,100		
32	7,500	107	7,995	182	7,500		
33	7,500	108	7,995	183	7,500		
34	8,750	109	7,995	184	7,500		
35	8,013	110	7,995	185	7,500		
36	8,013	111	7,995	186	7,500		
37	8,013	112	7,995	187	7,500		
38	8,782	113	7,995	188	7,500		
39	7,571	114	7,995	189	8,750		
40	7,613	115	8,707	190	7,500		
41	7,655	116	10,977	191	7,500		
42	7,697	117	11,242	192	7,500		
43	7,738	118	11,242	193	7,500		
44	7,780	119	10,703	194	7,500		
45	7,822	120	10,476	195	7,500		
46	7,864	121	12,358	196	7,500		
47	7,906	122	9,360	197	7,500		
48	9,277	123	7,800	198	7,500		
49	8,750	124	7,800	199	8,750		
50	7,500	125	9,360	200	7,500		
51	7,500	126	9,600	201	7,500		
52	7,500	127	7,200	202	7,500		
53	7,500	128	7,200	203	7,500		
54	7,500	129	7,200	204	7,500		
55	7,500	130	7,200	205	7,500		
56	7,500	131	7,200	206	7,500		
57	7,500	132	7,200	207	7,500		
58	7,500	133	7,200	208	8,981		
59	8,750	134	7,200	209	9,024		
60	8,750	135	7,200	210	9,024		
61	7,500	136	7,500	211	9,024		
62	7,500	137	7,500	212	9,024		
63	7,500	138	9,600	213	9,024		
64	7,500	139	7,200	214	9,024		
65	7,500	140	7,200	215	8,557		
66	7,500	141	7,200	216	7,500		
67	7,500	142	7,200	217	8,750		
68	7,500	143	7,200	218	11,335		
69	7,500	144	7,200	219	7,501		
70	8,750	145	7,200	220	7,501		
71	7,200	146	7,200	221	7,501		
72	7,200	147	7,200	222	7,501		
73	7,200	148	9,100	223	7,501		
74	8,012	149	7,800	224	7,501		
75	8,011	150	7,800	225	7,501		

WASHTENAW COUNTY SOIL SURVEY CLASSIFICATION

- ADRIAN MUCK, 0 TO 2 PERCENT SLOPES
- BOYER LOAMY SAND, 0 TO 6 PERCENT SLOPES
- CONOVER LOAM, 0 TO 4 PERCENT SLOPES
- EDWARDS MUCK
- KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES
- MIAMI LOAM, 2 TO 6 PERCENT SLOPES
- OSHTOMO LOAMY SAND, 0 TO 6 PERCENT SLOPES

• • • • • SOILS BOUNDARY

SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTENAW COUNTY.

OWNERSHIP TABLE

NO.	TAX ID	NAME	STREET ADDRESS	CITY, STATE, ZIP CODE	CITY / TOWNSHIP	ZONING
1	06-07-07-225-018	SCOTT CHAPMAN	P.O. BOX 338	CHELSEA, MI 48118	CITY OF CHELSEA	RS-1 SINGLE FAMILY
2	06-07-06-360-002	CITY OF CHELSEA	305 S. MAIN ST, STE. 100	CHELSEA, MI 48118	CITY OF CHELSEA	MU-1 MUNICIPAL USE
3	G-07-06-400-003	GARY & JANET ADAMS	13742 DEXTER-CHELSEA RD	CHELSEA, MI 48118	LIMA TOWNSHIP	AG-2 AGRICULTURE
4	G-07-07-100-002	GARY HILBURN & KRISTAL THOMPSON	13880 DEXTER-CHELSEA RD	CHELSEA, MI 48118	LIMA TOWNSHIP	AG-2 AGRICULTURE
5	G-07-07-100-003	DOUGLAS & PATRICE BRINK	13910 DEXTER-CHELSEA RD	CHELSEA, MI 48118	LIMA TOWNSHIP	AG-2 AGRICULTURE
6	06-07-07-125-007	CORKY ORYAN	13966 DEXTER-CHELSEA RD	CHELSEA, MI 48118	CITY OF CHELSEA	AG-1 AGRICULTURAL
7	06-07-07-225-017	RICHARD & VIRGINIA HAUGEN	14080 DEXTER-CHELSEA RD	CHELSEA, MI 48118	CITY OF CHELSEA	AG-1 AGRICULTURAL

LEGEND

- WETLAND BOUNDARY DELINEATED BY: GIS LAND PLANNING, LLC (NOV. 2020)
- FLOODWAY
- FLOOD ZONE AE (1% HAZARD) (100 YEAR)
- FLOOD ZONE X (0.2% HAZARD) (500 YEAR)
- PER FEMA PANEL 26161C0184E
- EFFECTIVE DATE: APRIL 3, 2012

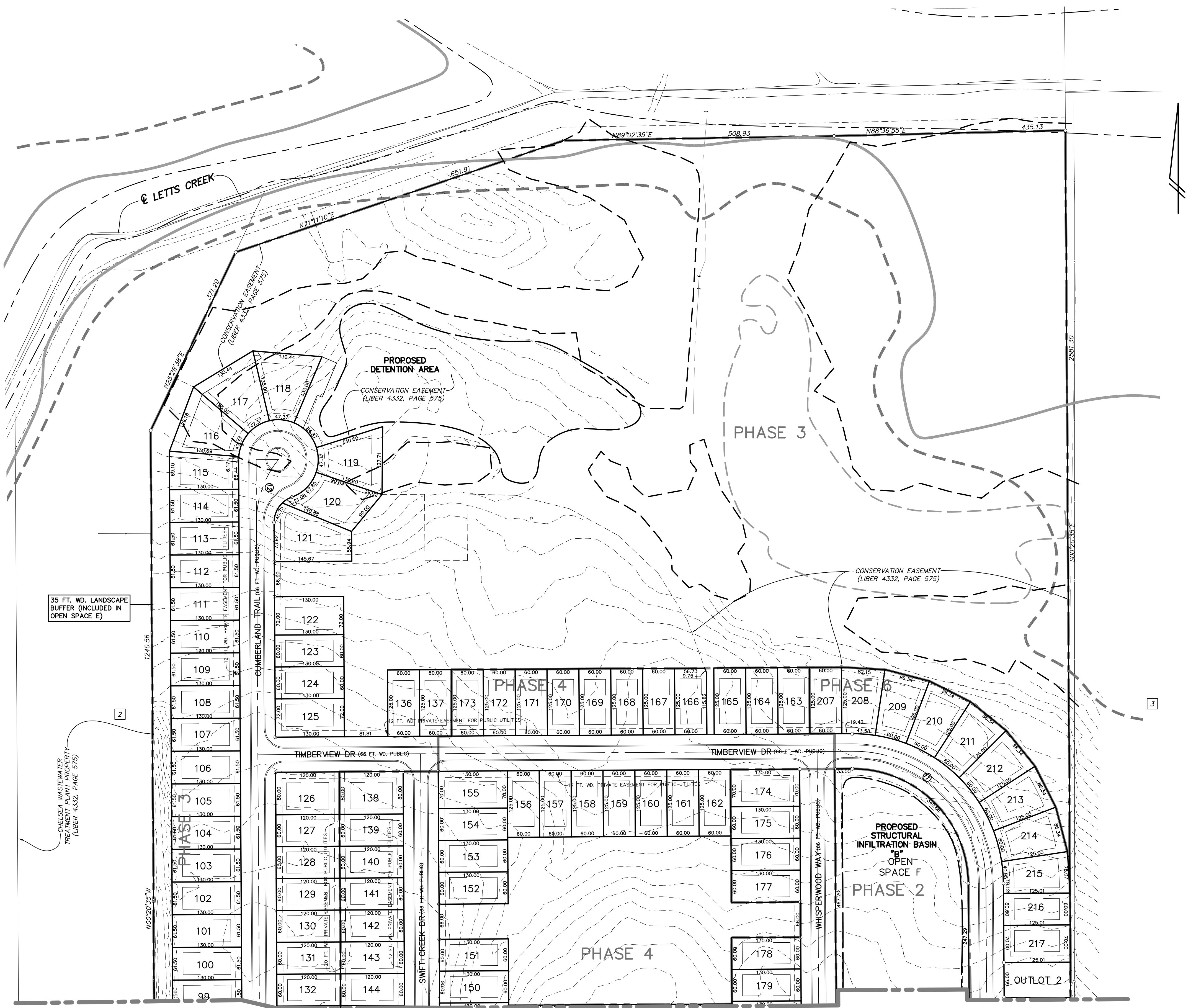
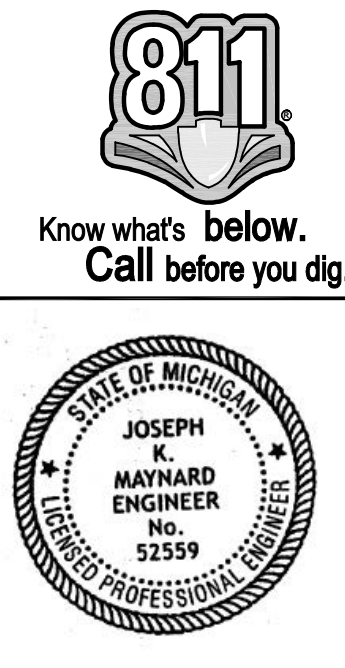
BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9'± WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
 BM2=NAIL IN WLY FACE OF 26" WALNUT, 43'± NORTH OF DEXTER-CHELSEA RD AND 37'± NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.36
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND WICKSBURG DR, ELEV=913.21. (NAVD 88 DATUM)

REVISIONS 1-15-2024 PER WCRC AND CITY REVIEWS
 2-6-2024 PER WCRC AND CITY REVIEWS

SCALE 1"=50'
 0 25 50 100

PREPARED BY: JOSEPH K. MAYNARD P.E., MICH No. 52559

WETLANDS DELINEATED BY: GIS LAND PLANNING, LLC NOVEMBER OF 2023.



WASHTENAW ENGINEERING
 CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 3526 W. LIBERTY RD
 SUITE 400
 ANN ARBOR, MI 48103
 TEL: 734-761-8800

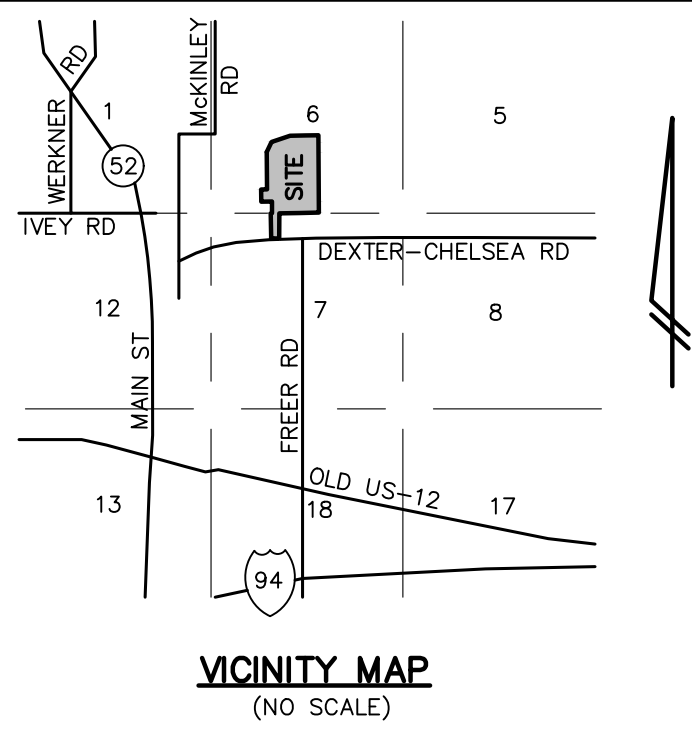
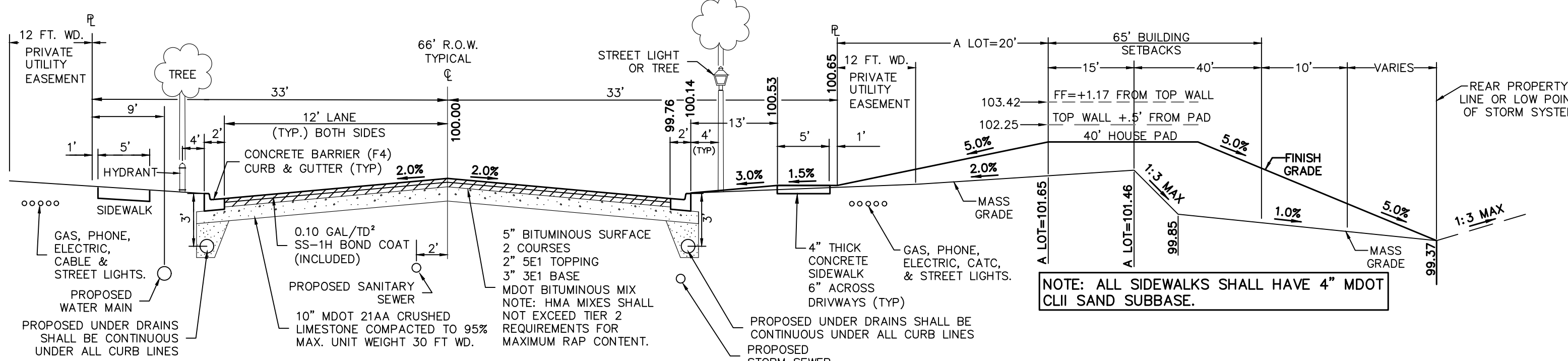
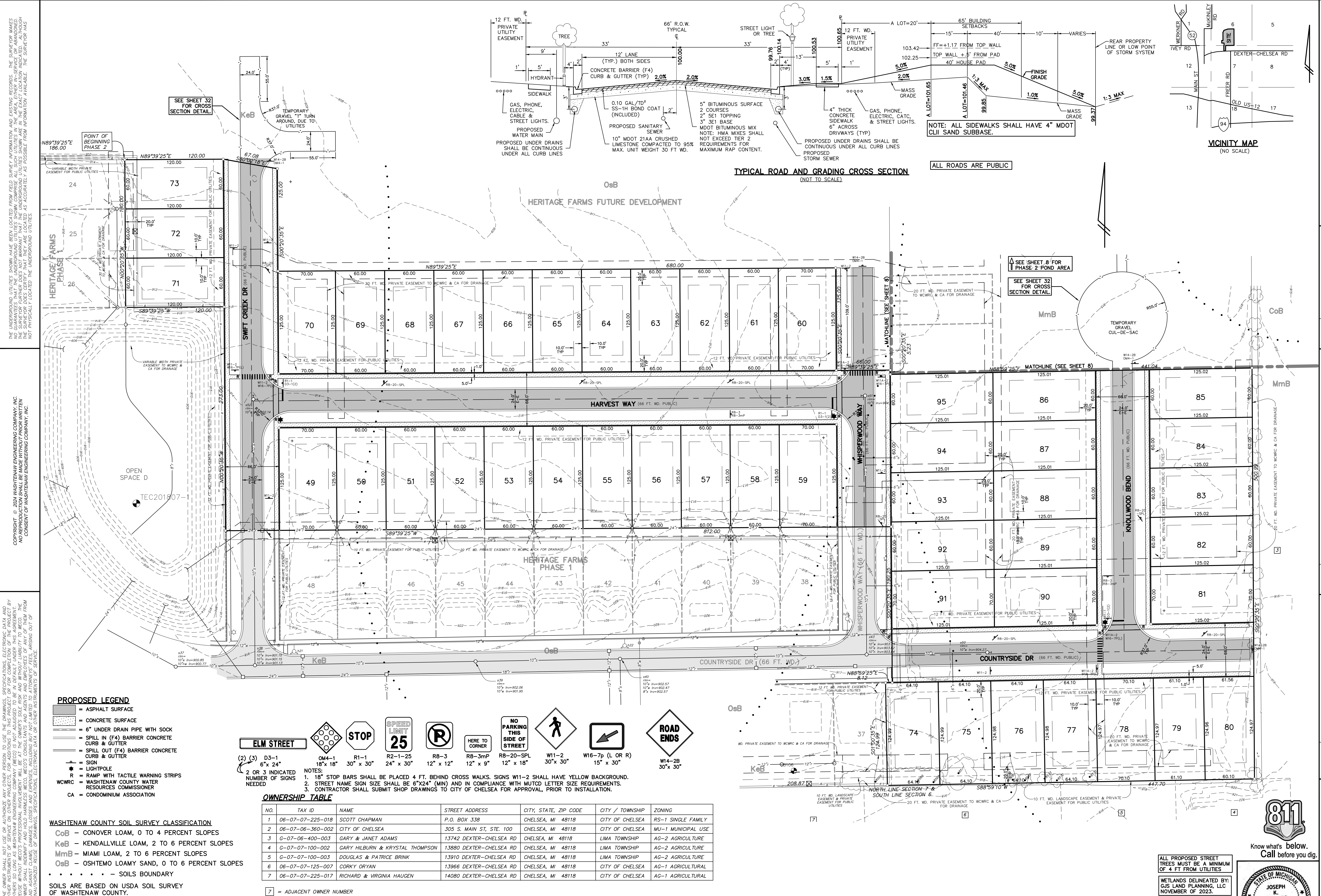
MI HOMES OF MICHIGAN
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

OVERALL PUD SITE PLAN NORTH

HERITAGE FARMS PHASE 2

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
 CITY OF CHELSEA
 WASHTENAW COUNTY • MICHIGAN
 DATE: 11-1-23
 JOB NO. 971-0V-PUD
 FIELD BOOK 446
 FILE NO. 10668

6 SHEET



THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTENAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTENAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR WITHHOLD ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, OR INFORMATION BY ANY OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTENAW ENGINEERING COMPANY (MECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE SURVEYOR DOES NOT WARRANT THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

- PROPOSED LEGEND**
- ASPHALT SURFACE
 - CONCRETE SURFACE
 - 6" UNDER DRAIN PIPE WITH SOCK
 - SPILL IN (F4) BARRIER CONCRETE CURB & GUTTER
 - SPILL OUT (F4) BARRIER CONCRETE CURB & GUTTER
 - SIGN
 - LIGHT POLE
 - RAMP WITH TACTILE WARNING STRIPS
 - WCWR - WASHTENAW COUNTY WATER RESOURCES COMMISSIONER
 - CA - CONDOMINIUM ASSOCIATION

- WASHTENAW COUNTY SOIL SURVEY CLASSIFICATION**
- CoB - CONOVER LOAM, 0 TO 4 PERCENT SLOPES
 - KeB - KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES
 - MmB - MIAMI LOAM, 2 TO 6 PERCENT SLOPES
 - OsB - OSHTOMO LOAMY SAND, 0 TO 6 PERCENT SLOPES
 - - SOILS BOUNDARY

SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTENAW COUNTY.

- ELM STREET**
- D3-1 6"x 24"
 - D3-2 2 OR 3 INDICATED NUMBER OF SIGNS NEEDED
 - OM4-1 18"x 18"
 - R1-1 30"x 30"
 - R2-1-25 24"x 30"
 - R8-3 12"x 12"
 - R8-3MP 12"x 9"
 - R8-20-SPL 12"x 18"
 - W11-2 30"x 30"
 - W16-7p (L OR R) 15"x 30"
 - W14-2B 30"x 30"

OWNERSHIP TABLE

NO.	TAX ID	NAME	STREET ADDRESS	CITY, STATE, ZIP CODE	CITY / TOWNSHIP	ZONING
1	06-07-07-225-018	SCOTT CHAPMAN	P.O. BOX 338	CHELSEA, MI 48118	CITY OF CHELSEA	RS-1 SINGLE FAMILY
2	06-07-06-360-002	CITY OF CHELSEA	305 S. MAIN ST, STE. 100	CHELSEA, MI 48118	CITY OF CHELSEA	MU-1 MUNICIPAL USE
3	G-07-06-400-003	GARY & JANET ADAMS	13742 DEXTER-CHELSEA RD	CHELSEA, MI 48118	LIMA TOWNSHIP	AG-2 AGRICULTURE
4	G-07-07-100-002	GARY HILBURN & KRISTAL THOMPSON	13880 DEXTER-CHELSEA RD	CHELSEA, MI 48118	LIMA TOWNSHIP	AG-2 AGRICULTURE
5	G-07-07-100-003	DOUGLAS & PATRICE BRINK	13910 DEXTER-CHELSEA RD	CHELSEA, MI 48118	LIMA TOWNSHIP	AG-2 AGRICULTURE
6	06-07-07-125-007	CORKY ORYAN	13966 DEXTER-CHELSEA RD	CHELSEA, MI 48118	CITY OF CHELSEA	AG-1 AGRICULTURAL
7	06-07-07-225-017	RICHARD & VIRGINIA HAUGEN	14080 DEXTER-CHELSEA RD	CHELSEA, MI 48118	CITY OF CHELSEA	AG-1 AGRICULTURAL

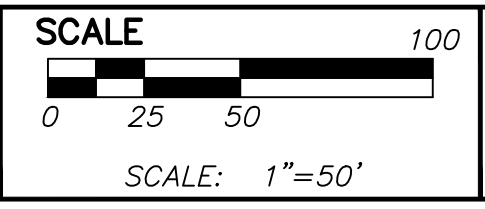
- LEGEND**
- LIGHT POLE
 - UTILITY POLE
 - GUY ANCHOR
 - HYDRANT
 - SPOT ELEV.
 - POST
 - GATE VALVE
 - SIGN
 - TRANSFORMER
 - MANHOLE
 - CATCHBASIN
 - END SECTION
 - GRAVEL
 - FENCE
 - CONCRETE
 - ASPHALT
 - EXISTING STORM
 - EXISTING SANITARY
 - EXISTING WATER
 - EXISTING GAS
 - EXISTING ELECTRIC
 - EXISTING TELEPHONE

BENCHMARK

- BM1-TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9th WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
- BM2-NAIL IN WLY FACE OF 26" WALNUT, 43'S. NORTH OF DEXTER-CHELSEA RD AND 37th NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
- BM3-TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21 (NAVD 88 DATUM)

REVISIONS

- 1-15-2024 PER WCWR AND CITY REVIEWS
- 2-6-2024 PER WCWR AND CITY REVIEWS



PREPARED BY
 JOSEPH K. MAYNARD P.E., MICH No. 52559

811
 Know what's below. Call before you dig.

STATE OF MICHIGAN
 LICENSED PROFESSIONAL ENGINEER
 JOSEPH K. MAYNARD
 No. 52559

WASHTENAW ENGINEERING

CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS

40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

PHASE 2 PUD SITE PLAN

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
 CITY OF CHELSEA
 WASHTENAW COUNTY • MICHIGAN
 DATE 11-1-23
 DWS NO. 971-PH2-pud
 FIELD BOOK 446
 FILE NO. 10668

7 SHEET

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE ACCURATELY LOCATED OR DEPTHS SHOWN ARE ACCURATE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTEANAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTEANAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR WITHHOLD ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, OR INFORMATION BY HIM, AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS, FOR ADDITIONS TO THIS PROJECT, OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTEANAW ENGINEERING COMPANY (MECO) IS NOT ADDED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE SURVEYOR SHALL MAINTAIN AND HOLD HARMLESS MECO, MECO'S CONSULTANTS AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.

- PROPOSED LEGEND**
- = ASPHALT SURFACE
 - = CONCRETE SURFACE
 - = 6" UNDER DRAIN PIPE WITH SOCK
 - = SPILL IN (F4) BARRIER CONCRETE CURB & GUTTER
 - = SPILL OUT (F4) BARRIER CONCRETE CURB & GUTTER
 - = SIGN
 - = LIGHT POLE
 - = RAMP WITH TACTILE WARNING STRIPS
 - = WASHTEANAW COUNTY WATER RESOURCES COMMISSIONER
 - = CONDOMINIUM ASSOCIATION

WASHTEANAW COUNTY SOIL SURVEY CLASSIFICATION

- CoB - CONOVER LOAM, 0 TO 4 PERCENT SLOPES
- KeB - KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES
- MmB - MIAMI LOAM, 2 TO 6 PERCENT SLOPES
- OsB - OSHEMO LOAMY SAND, 0 TO 6 PERCENT SLOPES

..... - SOILS BOUNDARY

SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTEANAW COUNTY.

- LEGEND**
- = LIGHT POLE
 - = UTILITY POLE
 - = GUY ANCHOR
 - = HYDRANT
 - = SPOT ELEV.
 - = POST
 - = GATE VALVE
 - = SIGN
 - = TRANSFORMER
 - = MANHOLE
 - = CATCHBASIN
 - = END SECTION
 - = GRAVEL
 - = FENCE
 - = CONCRETE
 - = ASPHALT
 - = EXISTING STORM
 - = EXISTING SANITARY
 - = EXISTING WATER
 - = EXISTING GAS
 - = EXISTING ELECTRIC
 - = EXISTING TELEPHONE

BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHelsea RD AND 9'± WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
 BM2=NAIL IN WLY FACE OF 26" WALNUT, 43'± NORTH OF DEXTER-CHelsea RD AND 37'± NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21 (NAVD 88 DATUM)

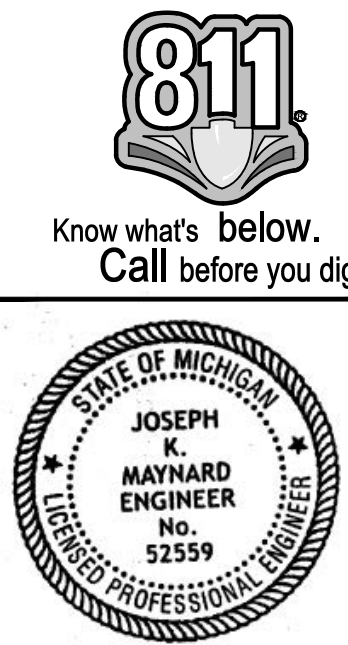
REVISIONS 4-15-2024 PER WCWRG AND CITY REVIEWS
 2-6-2024 PER WCWRG AND CITY REVIEWS

SCALE
 0 25 50 100
 SCALE: 1"=50'

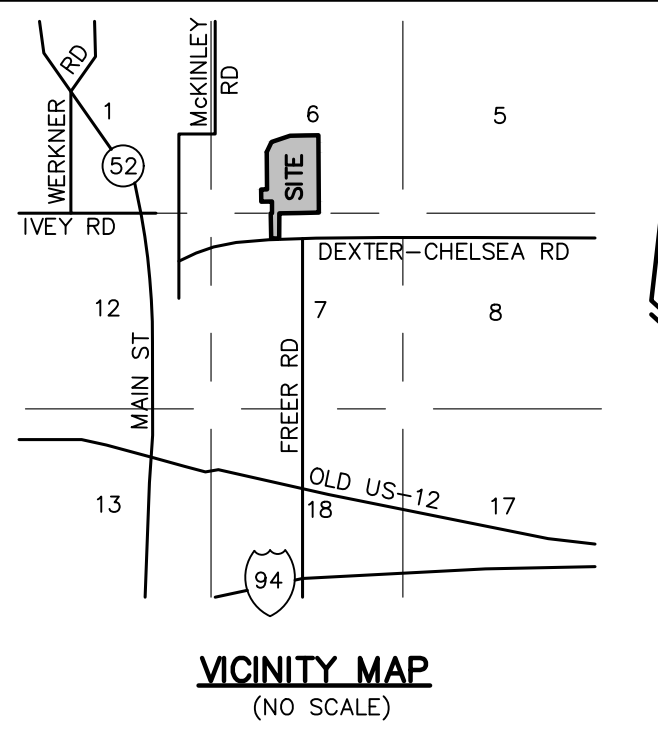
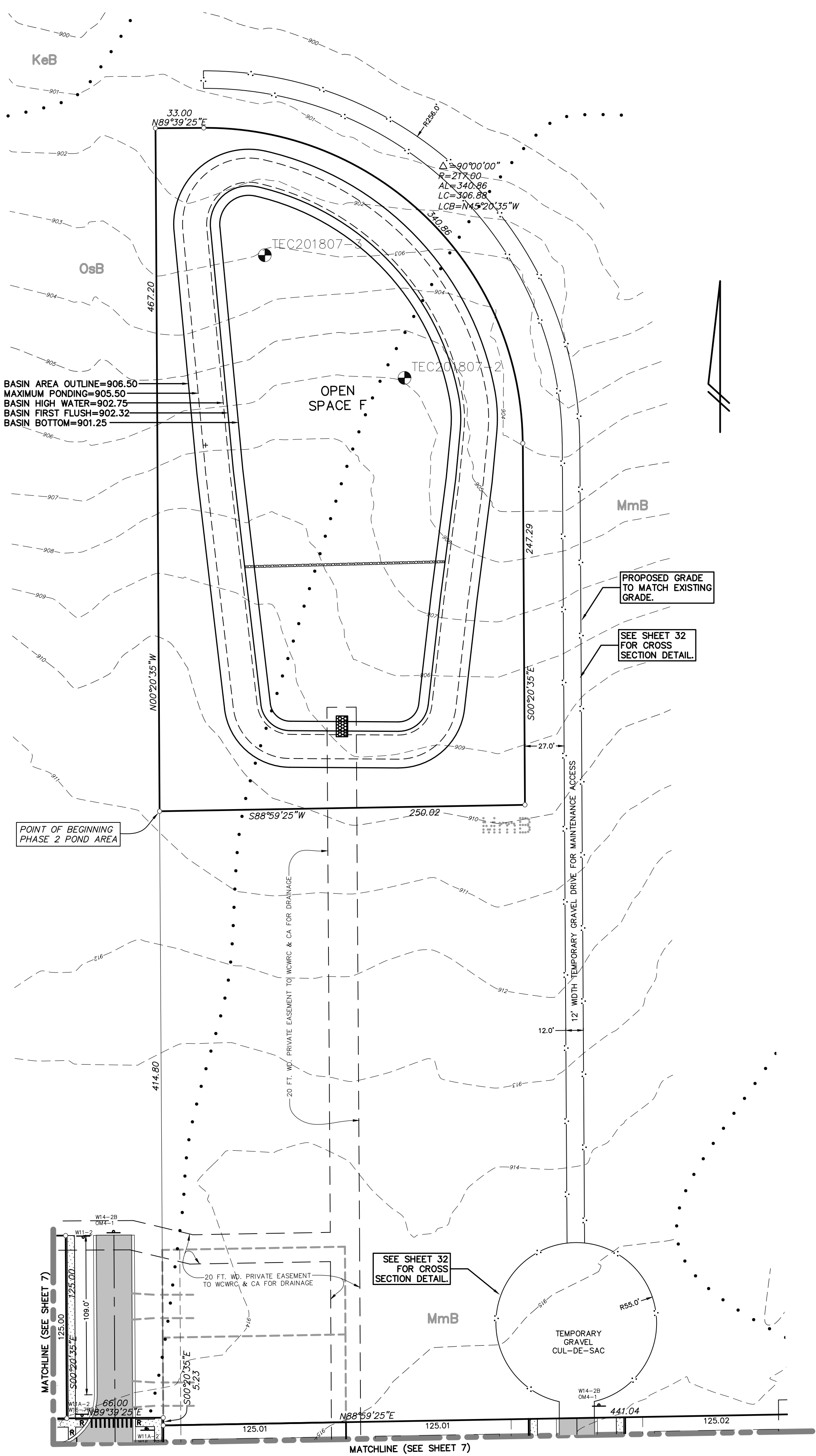
PREPARED BY
 JOSEPH K. MAYNARD P.E., MICH No. 52559

ALL PROPOSED STREET TREES MUST BE A MINIMUM OF 4 FT FROM UTILITIES

WETLANDS DELINEATED BY: GJS LAND PLANNING, LLC NOVEMBER OF 2023.



811
 Know what's below.
 Call before you dig.



CLIENT
 M/I HOMES OF MICHIGAN
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

PROJECT
 PHASE 2 PUD SITE PLAN - POND AREA

SECTION 6 & 7 **TOWN** 2 **SOUTH** **RANGE** 4 **EAST**

DATE 11-1-23 **JOB NO.** 32971 **DWG NO.** 971-PH2-pud **FIELD BOOK** 446 **FILE NO.** 10668

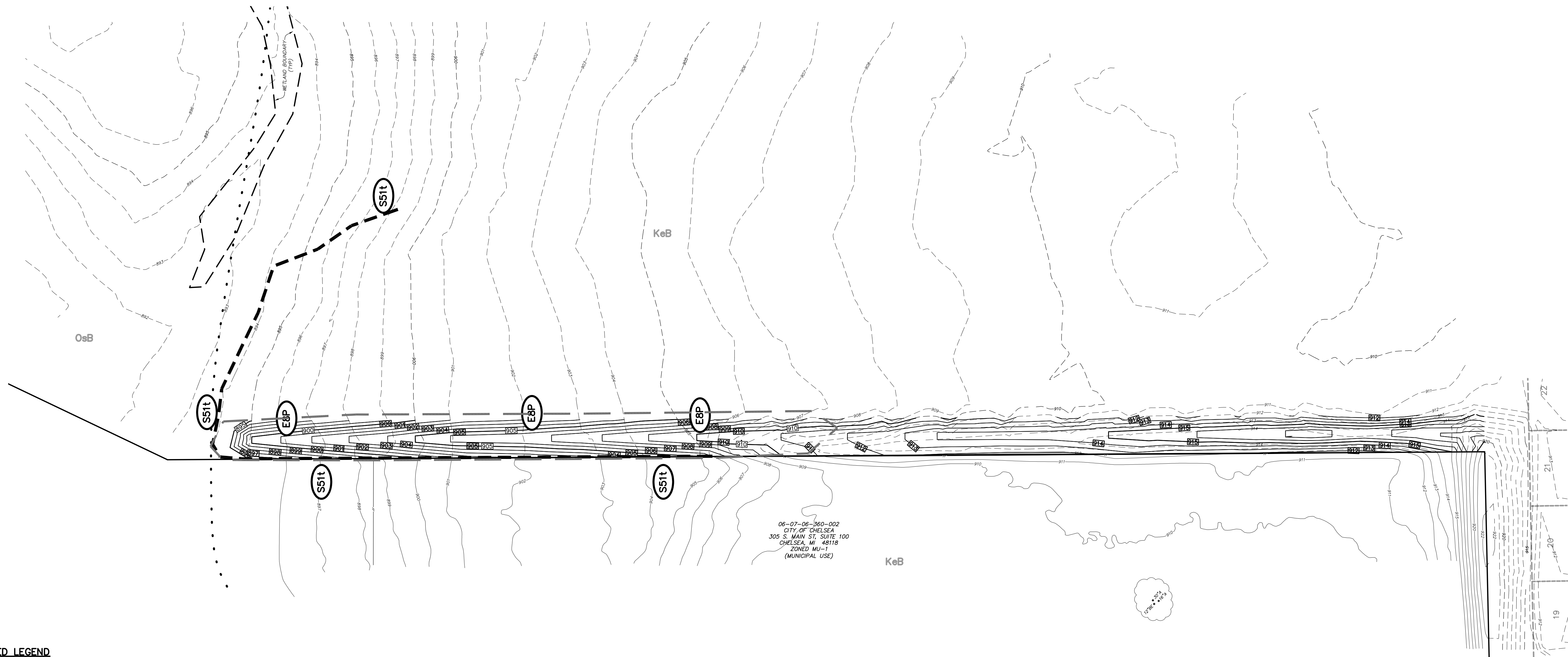
SHEET 8

WASHTENAW ENGINEERING
 CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 3526 W. LIBERTY RD
 ANN ARBOR, MI 48103
 TEL. 734-761-8900

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO WARRANTY AS TO THE ACCURACY OF THE INFORMATION PROVIDED. THE SURVEYOR DOES NOT WARRANT THAT THE INFORMATION PROVIDED IS COMPLETELY ACCURATE. THE SURVEYOR DOES NOT WARRANT THAT THE INFORMATION PROVIDED IS COMPLETELY ACCURATE. THE SURVEYOR DOES NOT WARRANT THAT THE INFORMATION PROVIDED IS COMPLETELY ACCURATE. THE SURVEYOR DOES NOT WARRANT THAT THE INFORMATION PROVIDED IS COMPLETELY ACCURATE.

COPYRIGHT © 2024 WASHTEENAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT WRITTEN CONSENT OF WASHTEENAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHER INSTRUMENTS OF SERVICE, THE SURVEYOR'S PROFESSIONAL LIABILITY WILL BE AT THE OWNER'S SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF ANY STRUCTURES OR UTILITIES. THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF ANY STRUCTURES OR UTILITIES.



06-07-06-360-002
CITY OF CHELSEA
305 S. MAIN ST. SUITE 100
CHELSEA, MI 48118
ZONED MU-1
(MUNICIPAL USE)

PROPOSED LEGEND

- = ASPHALT SURFACE
- = CONCRETE SURFACE
- = 6" UNDER DRAIN PIPE WITH SOCK
- = SPILL IN (F4) BARRIER CONCRETE CURB & GUTTER
- = SPILL OUT (F4) BARRIER CONCRETE CURB & GUTTER
- = SIGN
- = LIGHTPOLE
- = RAMP WITH TACTILE WARNING STRIPS
- = WASHNETAW COUNTY WATER RESOURCES COMMISSIONER
- = CA = CONDOMINIUM ASSOCIATION

WASHTEENAW COUNTY SOIL SURVEY CLASSIFICATION
CoB - CONOVER LOAM, 0 TO 4 PERCENT SLOPES
KeB - KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES
MmB - MIAMI LOAM, 2 TO 6 PERCENT SLOPES
OsB - OSHTEMO LOAMY SAND, 0 TO 6 PERCENT SLOPES

..... - SOILS BOUNDARY
 SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTEENAW COUNTY.

**MICHIGAN DEPARTMENT OF MANAGEMENT AND BUDGET
 S-E-S-C KEYING SYSTEM**

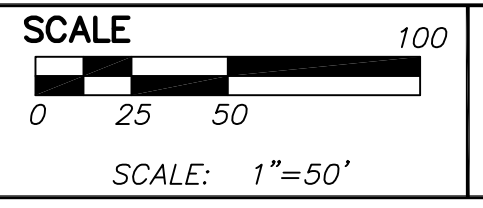
KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
E8	PERMANENT SEEDING		Stabilization method utilized on sites where earth change has been completed (final grading attained).
S51	SILT FENCE		Use adjacent to critical areas, to prevent sediment laden sheet flow from entering these areas.
S52	CATCH BASIN SEDIMENT GUARD		Use in or at stormwater inlets, especially at construction sites.
S53	STABILIZED CONSTRUCTION ACCESS		Used at every point where construction traffic enters or leaves a construction site.
S56	SEDIMENT TRAP		In small drainage areas, along construction site perimeters, and above check dams or drain inlets.
S58	INLET PROTECTION FABRIC DROP		Use at stormwater inlets, especially at construction sites. (SEE DETAIL ABOVE)

- = LIMITS OF CONSTRUCTION
- = SILT FENCE
- = TREE PROTECTION FENCE
- = TEMPORARY
- = PERMANENT
- = FLOW ARROW

- LEGEND**
- = LIGHT POLE
 - = UTILITY POLE
 - = GUY ANCHOR
 - = HYDRANT
 - = SPOT ELEV.
 - = POST
 - = GATE VALVE
 - = END SECTION
 - = TRANSFORMER
 - = MANHOLE
 - = CATCHBASIN
 - = END SECTION
 - = GRAVEL
 - = FENCE
 - = CONCRETE
 - = ASPHALT
 - = EXISTING STORM
 - = EXISTING SANITARY
 - = EXISTING WATER
 - = EXISTING GAS
 - = EXISTING ELECTRIC
 - = EXISTING TELEPHONE

BENCHMARK
 BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9'± WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
 BM2= NAIL IN WLY FACE OF 26" WALNUT, 43'± NORTH OF DEXTER-CHELSEA RD AND 37'± NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND WICKSBURG DR, ELEV=913.21. (NAVD 88 DATUM)

REVISIONS 4-15-2024 PER WCRC AND CITY REVIEWS
 2-6-2024 PER WCRC AND CITY REVIEWS



PREPARED BY: *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559

ALL PROPOSED STREET TREES MUST BE A MINIMUM OF 4 FT FROM UTILITIES

WETLANDS DELINEATED BY: GJS LAND PLANNING, LLC, NOVEMBER OF 2023.

811
 Know what's below.
 Call before you dig.

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
 CITY OF CHELSEA
 WASHTEENAW COUNTY • MICHIGAN
 DATE 11-1-23
 JOB NO. 971-PH2-GRD
 DWG NO. 971-PH2-GRD
 FIELD BOOK 446
 FILE NO. 10668

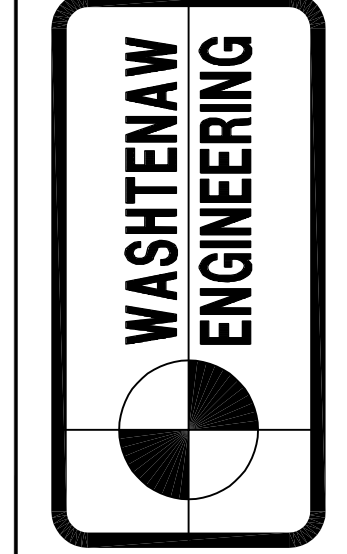
CLIENT
MI HOMES OF MICHIGAN
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

SHEET
PHASE 2
GRADING & SOIL EROSION
CONTROL PLAN - WEST BERM

PROJECT
HERITAGE FARMS
PHASE 2

SCALE
 0 25 50 100
 SCALE: 1"=50'

11
 SHEET

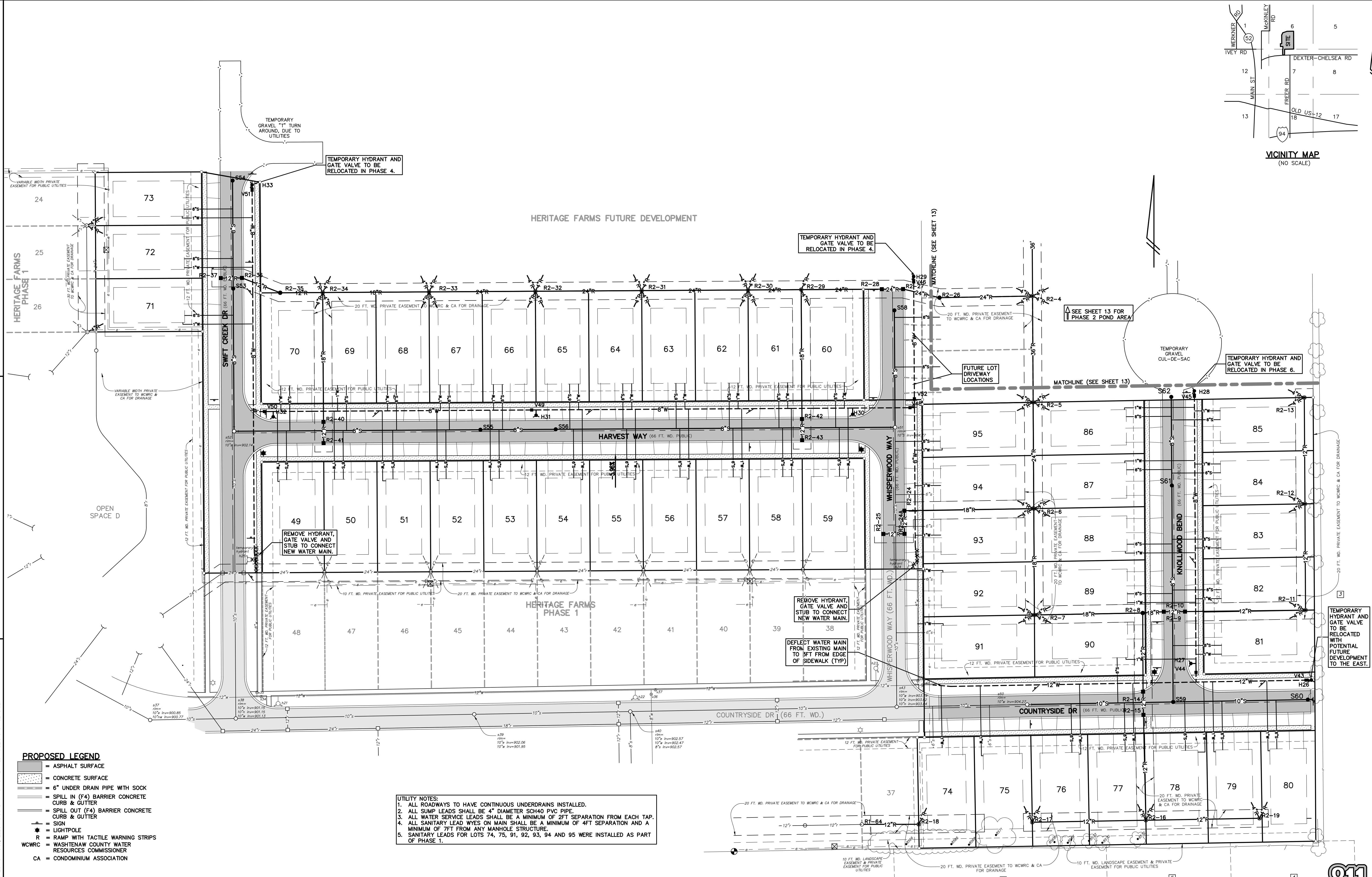
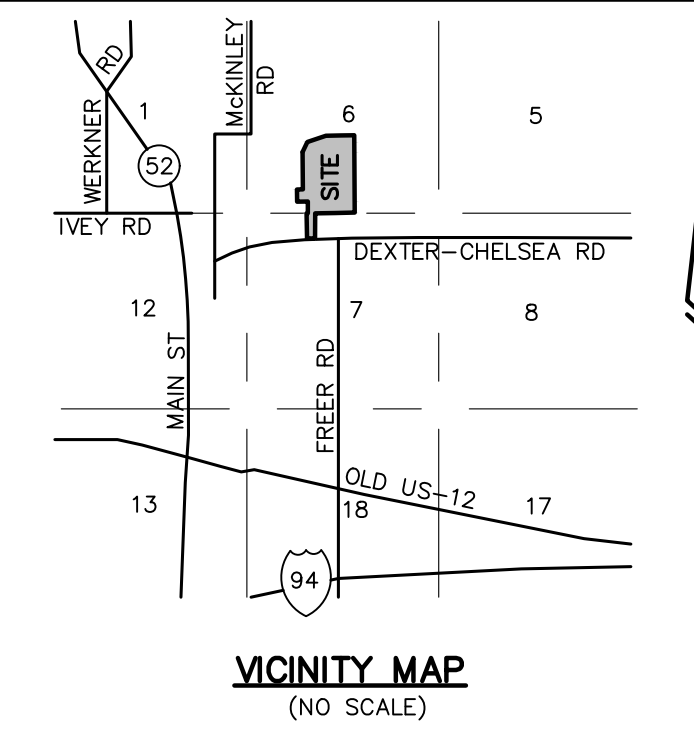


CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 3526 W. LIBERTY RD
 SUITE 400
 ANN ARBOR, MI 48103
 TEL. 734-761-8800

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATE AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTEWAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTEWAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR WITHHOLD ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, OR INFORMATION BY HIM, AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS, FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTEWAW ENGINEERING COMPANY (MECO) IS NOT ADDED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE SURVEYOR SHALL MAINTAIN AND HOLD HARMLESS MECO, MECO'S CONSULTANTS AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.



- PROPOSED LEGEND**
- ASPHALT SURFACE
 - CONCRETE SURFACE
 - 6" UNDER DRAIN PIPE WITH SOCK
 - SPILL IN (F4) BARRIER CONCRETE CURB & GUTTER
 - SPILL OUT (F4) BARRIER CONCRETE CURB & GUTTER
 - SIGN
 - LIGHTPOLE
 - RAMP WITH TACTILE WARNING STRIPS
 - WCWRC = WASHTEWAW COUNTY WATER RESOURCES COMMISSIONER
 - CA = CONDOMINIUM ASSOCIATION

WASHTEWAW COUNTY SOIL SURVEY CLASSIFICATION

- CONOVER LOAM, 0 TO 4 PERCENT SLOPES
- KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES
- MIAMI LOAM, 2 TO 6 PERCENT SLOPES
- OSHTEMO LOAMY SAND, 0 TO 6 PERCENT SLOPES

••••• SOILS BOUNDARY

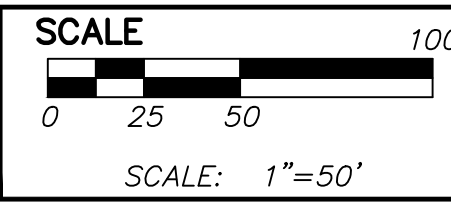
SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTEWAW COUNTY.

- UTILITY NOTES:**
1. ALL ROADWAYS TO HAVE CONTINUOUS UNDERDRAINS INSTALLED.
 2. ALL SUMP LEADS SHALL BE 4" DIAMETER SCH40 PVC PIPE.
 3. ALL WATER SERVICE LEADS SHALL BE A MINIMUM OF 2FT SEPARATION FROM EACH TAP.
 4. ALL SANITARY LEAD WYES ON MAIN SHALL BE A MINIMUM OF 4FT SEPARATION AND A MINIMUM OF 7FT FROM ANY MANHOLE STRUCTURE.
 5. SANITARY LEADS FOR LOTS 74, 75, 91, 92, 93, 94 AND 95 WERE INSTALLED AS PART OF PHASE 1.

- LEGEND**
- LIGHT POLE
 - UTILITY POLE
 - GUY ANCHOR
 - HYDRANT
 - SPOT ELEV.
 - POST
 - GATE VALVE
 - SIGN
 - TRANSFORMER
 - MANHOLE
 - CATCHBASIN
 - END SECTION
 - GRAVEL
 - FENCE
 - CONCRETE
 - ASPHALT
 - EXISTING STORM
 - EXISTING SANITARY
 - EXISTING WATER
 - EXISTING GAS
 - EXISTING ELECTRIC
 - EXISTING TELEPHONE

BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHelsea RD AND 9'± WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
 BM2=NAIL IN WLY FACE OF 26" WALNUT, 43'± NORTH OF DEXTER-CHelsea RD AND 37'± NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21 (NAVD 88 DATUM)

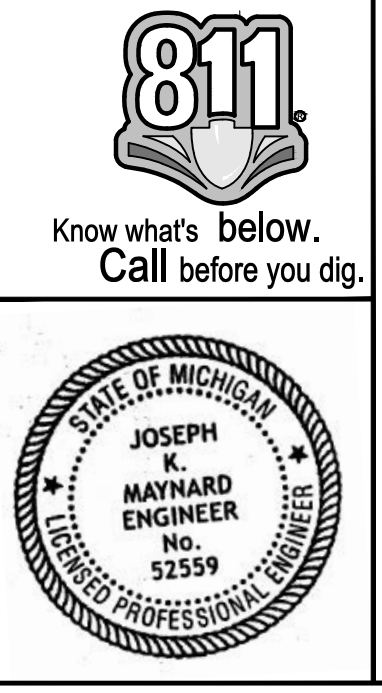
REVISIONS 4-15-2024 PER WCWRC AND CITY REVIEWS
 2-6-2024 PER WCWRC AND CITY REVIEWS



PREPARED BY *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559

ALL PROPOSED STREET TREES MUST BE A MINIMUM OF 4 FT FROM UTILITIES

WETLANDS DELINEATED BY: GJS LAND PLANNING, LLC NOVEMBER OF 2023.



WASHTEWAW ENGINEERING

CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS

3526 W. LIBERTY RD
 ANN ARBOR, MI 48103
 TEL: 734-761-8900

CLIENT: **M/I HOMES OF MICHIGAN**
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

SHEET: **PHASE 2 UTILITY PLAN**

PROJECT: **HERITAGE FARMS PHASE 2**

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
 CITY OF CHELSEA
 WASHTEWAW COUNTY • MICHIGAN
 JOB NO. 32971
 DATE 11-1-23
 DWG NO. 971-PH2-UTIL
 FIELD BOOK 446
 FILE NO. 10668

12 SHEET

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE ACCURATELY LOCATED AS SHOWN OR THAT THEY ARE LOCATED AS SHOWN OR THAT THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTEENAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTEENAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR REPRODUCE ANY OTHER PERSON'S USE OF THE DRAWINGS, SPECIFICATIONS, OR INSTRUMENTS OF SERVICE BY ANY OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTEENAW ENGINEERING COMPANY (WEC) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES, LOSSES, AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.

- PROPOSED LEGEND**
- ASPHALT SURFACE
 - CONCRETE SURFACE
 - 6" UNDER DRAIN PIPE WITH SOCK
 - SPILL IN (F4) BARRIER CONCRETE CURB & GUTTER
 - SPILL OUT (F4) BARRIER CONCRETE CURB & GUTTER
 - SIGN
 - LIGHT POLE
 - RAMP WITH TACTILE WARNING STRIPS
 - WASHTEENAW COUNTY WATER RESOURCES COMMISSIONER
 - CONDOMINIUM ASSOCIATION

WASHTEENAW COUNTY SOIL SURVEY CLASSIFICATION

- CONOVER LOAM, 0 TO 4 PERCENT SLOPES
- KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES
- MIAMI LOAM, 2 TO 6 PERCENT SLOPES
- OSHTEMO LOAMY SAND, 0 TO 6 PERCENT SLOPES

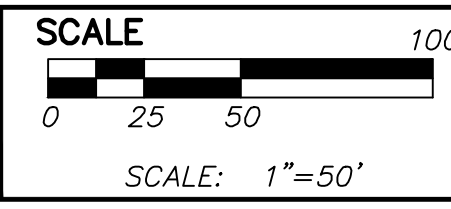
••••• - SOILS BOUNDARY

SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTEENAW COUNTY.

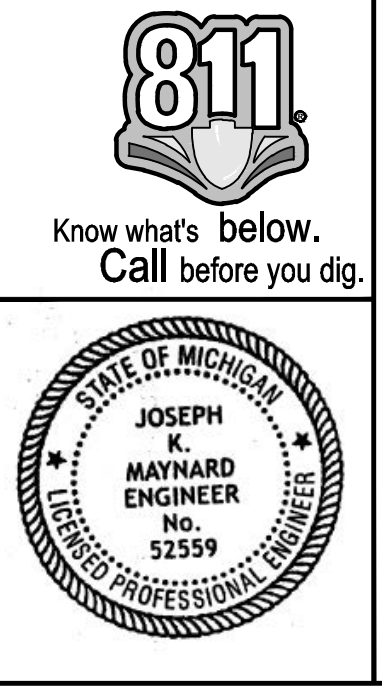
○	UTILITY POLE	○	SPOT ELEV.	⊠	TRANSFORMER	---	GRAVEL	---	EXISTING STORM
○	GUY ANCHOR	○	POST	○	MANHOLE	---	FENCE	---	EXISTING SANITARY
○	HYDRANT	○	GATE VALVE	□	CATCHBASIN	---	CONCRETE	---	EXISTING WATER
		○	SIGN	---	END SECTION	---	ASPHALT	---	EXISTING GAS
								---	EXISTING ELECTRIC
								---	EXISTING TELEPHONE

BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9th WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
 BM2=NAIL IN WLY FACE OF 26" WALNUT, 43'± NORTH OF DEXTER-CHELSEA RD AND 37'± NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21 (NAVD 88 DATUM)

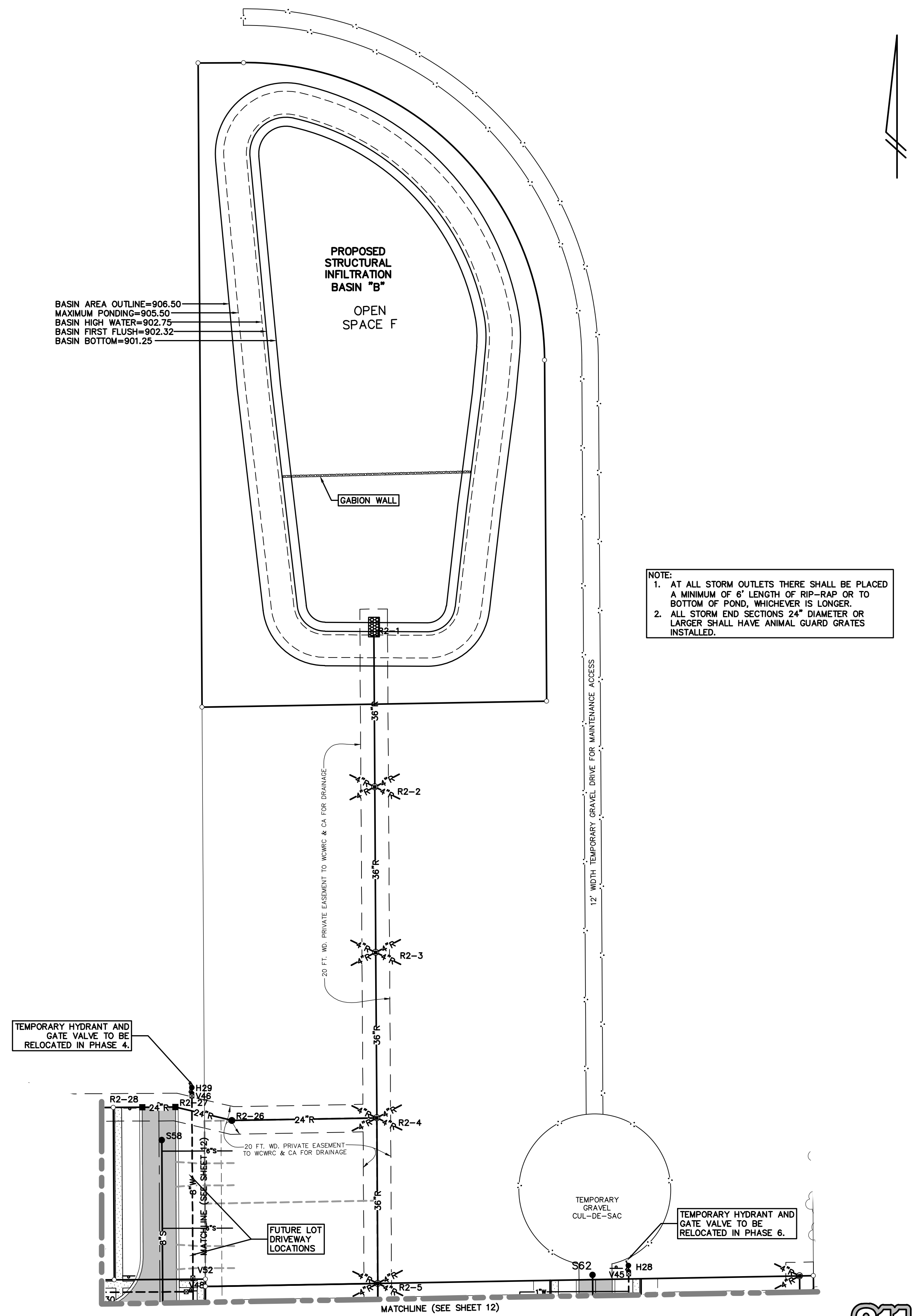
REVISIONS 4-15-2024 PER WCWRC AND CITY REVIEWS
 2-6-2024 PER WCWRC AND CITY REVIEWS



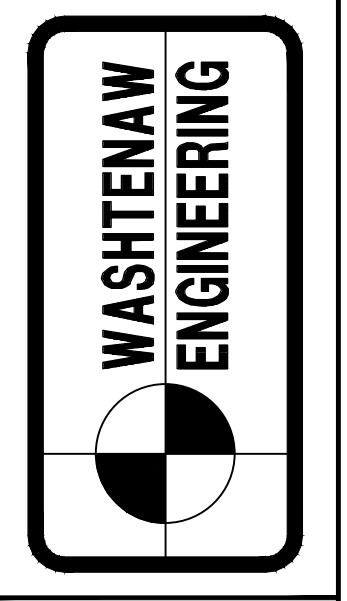
PREPARED BY: *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559



ALL PROPOSED STREET TREES MUST BE A MINIMUM OF 4 FT FROM UTILITIES
 WETLANDS DELINEATED BY: GJS LAND PLANNING, LLC NOVEMBER OF 2023.



CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 3526 W. LIBERTY RD
 SUITE 400
 ANN ARBOR MI 48103
 TEL: 734-761-8800



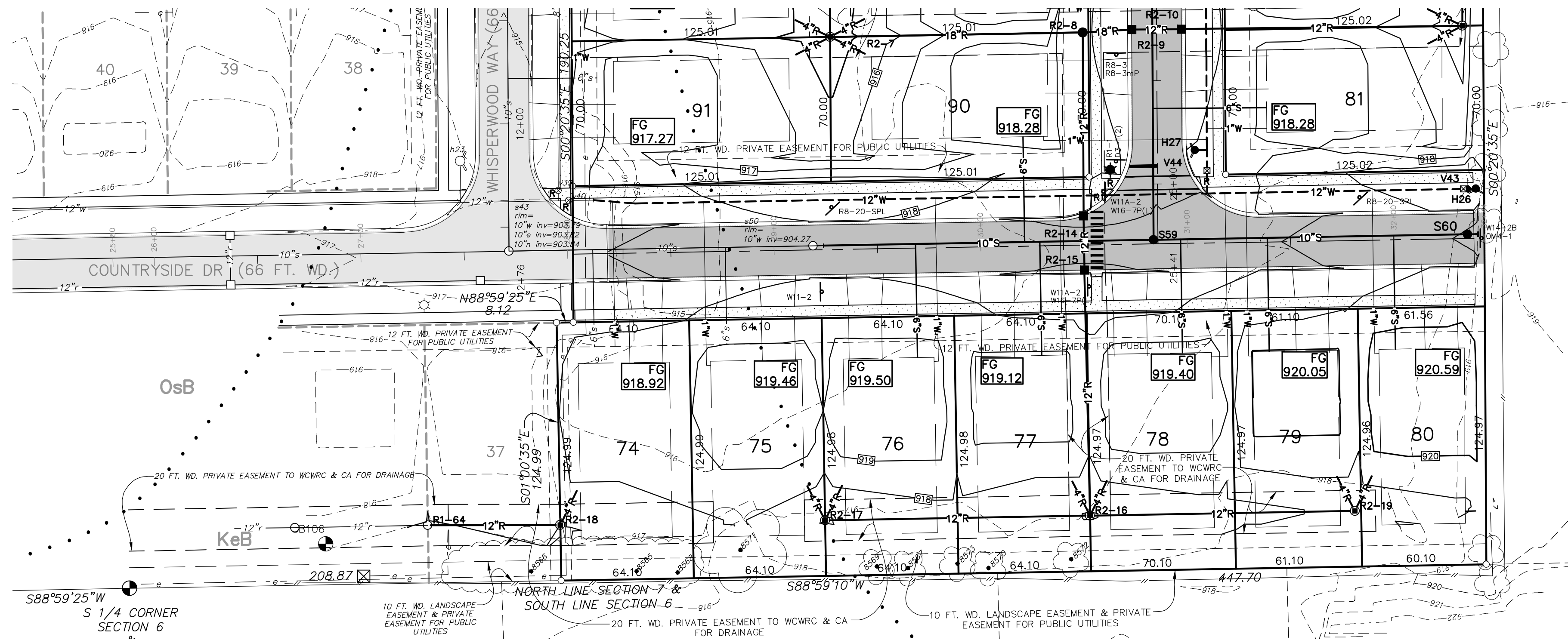
CLIENT
M/I HOMES OF MICHIGAN
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

**PHASE 2
 UTILITY PLAN
 POND AREA**

**HERITAGE FARMS
 PHASE 2**

SECTION 6 & 7	TOWN 2	SOUTH	RANGE 4	EAST
CITY OF CHELSEA WASHTEENAW COUNTY • MICHIGAN				
DATE 11-1-23	JOB NO. 32971	DWG NO. 971-PH2-UTIL	FIELD BOOK 446	FILE NO. 10668
				13 SHEET

COUNTRYSIDE DR (66 FT. WD.) (PUBLIC)



NOTE:
UTILITY EXCAVATION AREAS WITHIN THE ROADWAY CORRIDOR SHALL HAVE 100% CLASS II GRANULAR BACKFILL TO SUBGRADE ELEVATION. COMPACTED TO 95% MAXIMUM UNIT WEIGHT.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

SOILS INFORMATION
THE SOILS INFORMATION AS PRESENTED SHOWS GENERAL CONDITIONS ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF THESE SOIL LOCATION SINCE GROUND CONDITIONS ARE SUBJECT TO CHANGE. IT IS ADVISED THAT THOSE CONTRACTORS SUBMITTING PROPOSALS THROUGHLY ACQUAINT THEMSELVES WITH THE LOCAL CONDITIONS.

NOTE:
ALL DRIVEWAYS OPENINGS SHALL BE MOOT TYPE "L"

ANY CONDITIONS EXISTING ON THE SITE THAT ARE NOT CONSISTENT WITH THE PLANS OR SOIL EROSION SEDIMENTATION PERMIT WILL RESULT IN A STOP WORK ORDER AND REVOCATION OF THE SOIL EROSION SEDIMENTATION CONTROL PERMIT.

PROPOSED LEGEND

- ASPHALT SURFACE
- CONCRETE SURFACE
- 6" UNDER DRAIN PIPE WITH SOCK
- SPILL IN (F4) BARRIER CONCRETE CURB & GUTTER
- SPILL OUT (F4) BARRIER CONCRETE CURB & GUTTER
- SIGN
- LIGHTPOLE
- RAMP WITH TACTILE WARNING STRIPS
- WASHTENAW COUNTY WATER RESOURCES COMMISSIONER
- CONDOMINIUM ASSOCIATION

PROPOSED UTILITY LEGEND

- 12"R = STORM SEWER
- 8"S = SANITARY SEWER
- 8"W = WATER MAIN
- 10"S = EXISTING SANITARY SEWER
- HYDRANT
- GATE VALVE IN WELL
- GATE VALVE IN BOX
- CURB BOX
- FLARED END SECTION
- MANHOLE
- CATCHBASIN

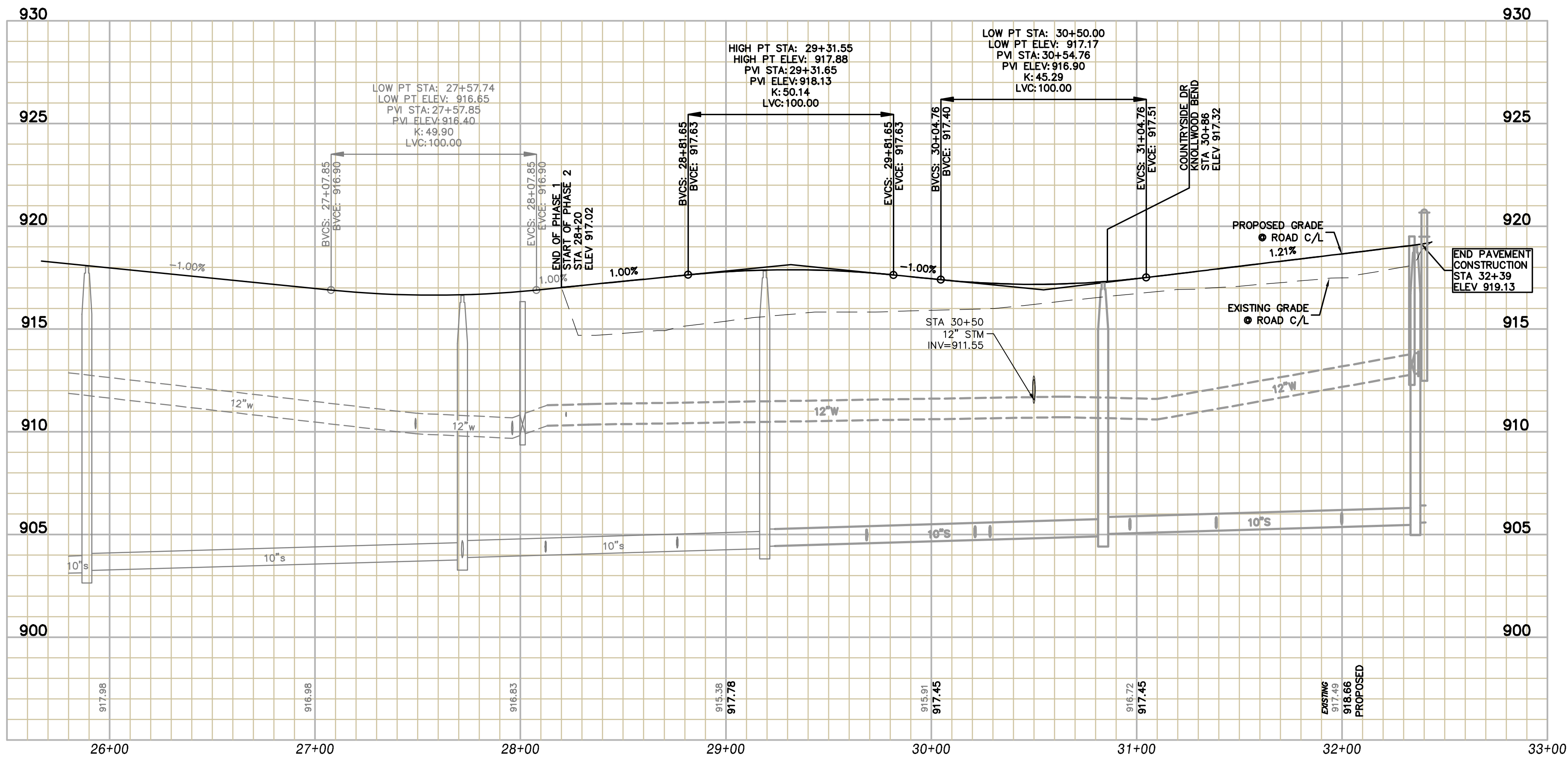
GRADING LEGEND

- PROPOSED 1FT CONTOUR
- PROPOSED 5FT CONTOUR
- FLOW ARROW
- EXISTING ELEVATION
- PROPOSED ELEVATION
- SLOPE

WASHTENAW COUNTY SOIL SURVEY CLASSIFICATION

- CoB - CONOVER LOAM, 0 TO 4 PERCENT SLOPES
- KeB - KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES
- MmB - MIAMI LOAM, 2 TO 6 PERCENT SLOPES
- OsB - OSHTEMO LOAMY SAND, 0 TO 6 PERCENT SLOPES
- SOILS BOUNDARY

SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTENAW COUNTY.



COPYRIGHT © 2024 WASHTENAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTENAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR REPRODUCE ANY DRAWING OR INFORMATION TO USE THE DRAWINGS, SPECIFICATIONS, OR INFORMATION BY HIM OR OTHERS SO LONG AS WASHTENAW ENGINEERING COMPANY (WEC) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AGENCIES AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, OR INFORMATION.

LEGEND

○	LIGHT POLE	○	SPOT ELEV.	⊠	TRANSFORMER	---	GRAVEL
○	UTILITY POLE	○	POST	○	MANHOLE	---	FENCE
○	GUY ANCHOR	○	GATE VALVE	□	CATCHBASIN	---	CONCRETE
○	HYDRANT	○	GATE	---	END SECTION	---	ASPHALT

BENCHMARK

- BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHelsea RD AND 9th WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
- BM2=NAIL IN WLY FACE OF 26" WALNUT, 43'S NORTH OF DEXTER-CHelsea RD AND 37th NE1/4 OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
- BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21 (NAVD 88 DATUM)

REVISIONS

1-15-2024	PER WCWRC AND CITY REVIEWS
2-6-2024	PER WCWRC AND CITY REVIEWS

SCALE

HORIZONTAL: 1 INCH = 40 FEET
VERTICAL: 1 INCH = 4 FEET

PREPARED BY: *Joseph K. Maynard*
JOSEPH K. MAYNARD P.E., MICH No. 52559

ALL PROPOSED STREET TREES MUST BE A MINIMUM OF 4 FT FROM UTILITIES

WETLANDS DELINEATED BY: GJS LAND PLANNING, LLC NOVEMBER OF 2023.

CIVIL ENGINEERS
PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS
3526 W. LIBERTY RD
ANN ARBOR, MI 48106
TEL: 734-761-8800

WASHTENAW ENGINEERING

CLIENT: **M/I HOMES OF MICHIGAN**
40950 WOODWARD AVE.
BLOOMFIELD HILLS, MI 48304
PH: (248)-221-5011

PROJECT: **ROAD CONSTRUCTION**
COUNTRYSIDE DR
STA. 28+00 TO 32+44

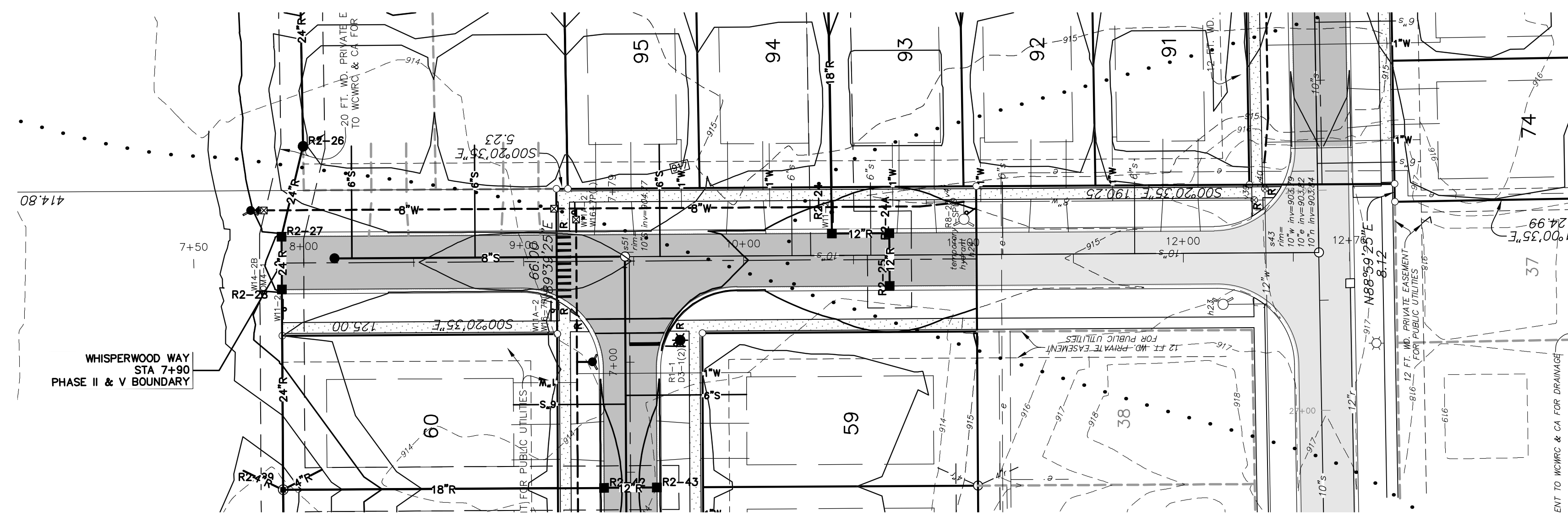
SHEET: **HERITAGE FARMS**
PHASE 2

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST

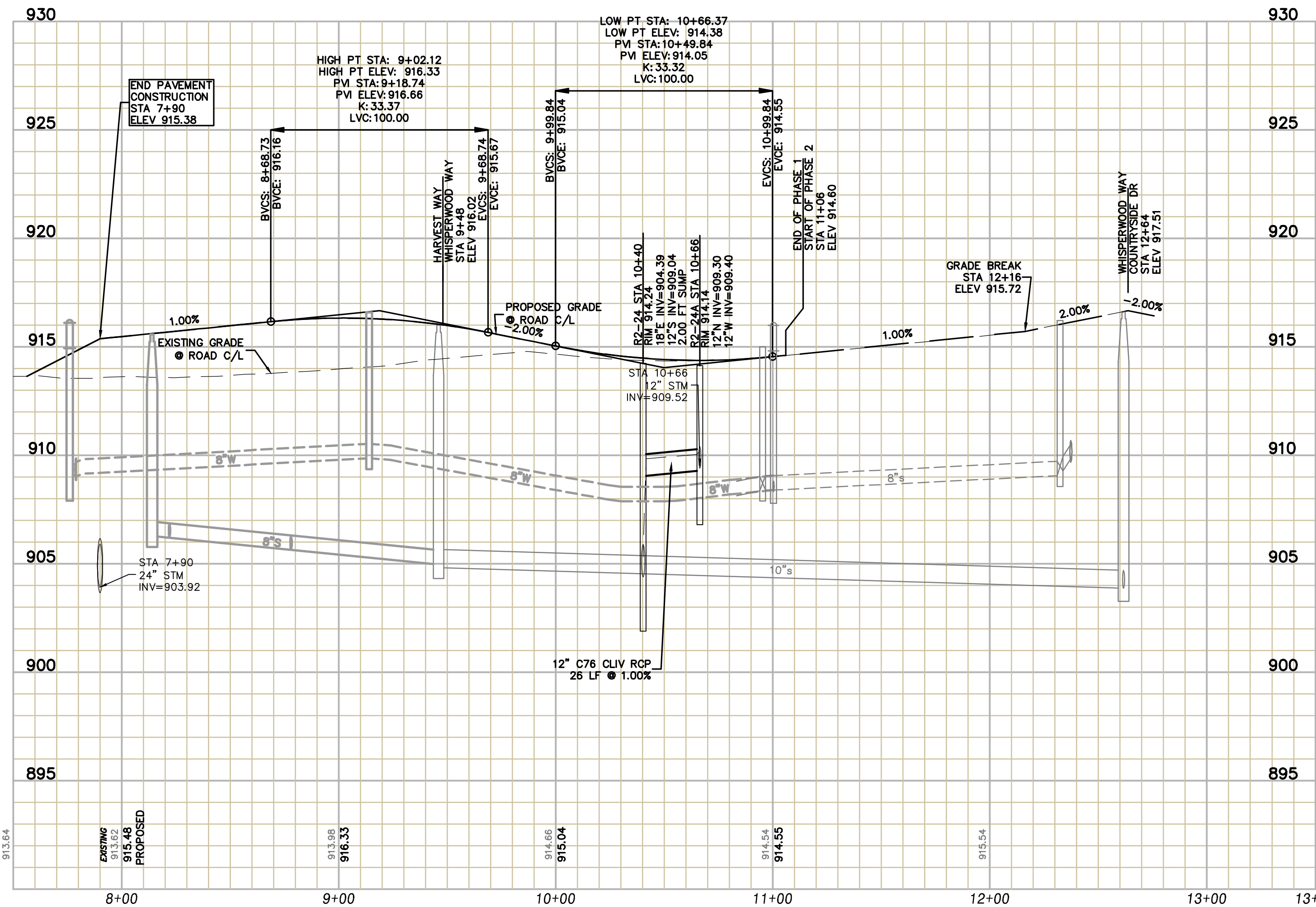
DATE: 11-1-23 JOB NO. 32971
DWS NO. 971-p2-countyside-pro FIELD BOOK 446 FILE NO. 10668

14 SHEET

WHISPERWOOD WAY (66 FT. WD.) (PUBLIC)



Structure Name	Structure Type Frame, Cover and Size	Rim Elevation	Inverts	Pipe Size	Structure Depth	Comments
R2-24	EJW 7045 FRAME TYPE M1 GRATE 7050 T1 BACK 48" DIA. CATCH BASIN	914.24	E 904.39 909.04	18 INCH 12 INCH	11.85'	2.00' SUMP
R2-24A	EJW 7045 FRAME TYPE M1 GRATE 7050 T1 BACK 48" DIA. CATCH BASIN	914.14	N 909.30 909.40	12 INCH 12 INCH	6.84'	2.00' SUMP



THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATE AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

NOTE:
UTILITY EXCAVATION AREAS WITHIN THE ROADWAY CORRIDOR SHALL HAVE 100% CLASS II GRANULAR BACKFILL TO SUBGRADE ELEVATION, COMPACTED TO 95% MAXIMUM UNIT WEIGHT.
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

SOILS INFORMATION
THE SOILS INFORMATION AS PRESENTED SHOWS GENERAL CONDITIONS ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF THESE SOIL LOCATION SINCE GROUND CONDITIONS ARE SUBJECT TO CHANGE. IT IS ADVISED THAT THOSE CONTRACTORS SUBMITTING PROPOSALS THROUGHLY ACQUAINT THEMSELVES WITH THE LOCAL CONDITIONS.

ANY CONDITIONS EXISTING ON THE SITE THAT ARE NOT CONSISTENT WITH THE PLANS OR SOIL EROSION SEDIMENTATION PERMIT WILL RESULT IN A STOP WORK ORDER AND REVOCATION OF THE SOIL EROSION SEDIMENTATION CONTROL PERMIT.

- PROPOSED UTILITY LEGEND**
- 12"R = STORM SEWER
 - 8"S = SANITARY SEWER
 - 8"W = WATER MAIN
 - 10"S = EXISTING SANITARY SEWER
 - HYDRANT
 - GATE VALVE IN WELL
 - GATE VALVE IN BOX
 - CURB BOX
 - FLARED END SECTION
 - MANHOLE
 - CATCHBASIN

- PROPOSED LEGEND**
- ASPHALT SURFACE
 - CONCRETE SURFACE
 - 6" UNDER DRAIN PIPE WITH SOCK
 - SPILL IN (F4) BARRIER CONCRETE CURB & GUTTER
 - SPILL OUT (F4) BARRIER CONCRETE CURB & GUTTER
 - SIGN
 - LIGHTPOLE
 - RAMP WITH TACTILE WARNING STRIPS
 - WCWRC = WASHTENAW COUNTY WATER RESOURCES COMMISSIONER
 - CA = CONDOMINIUM ASSOCIATION

WASHTENAW COUNTY SOIL SURVEY CLASSIFICATION

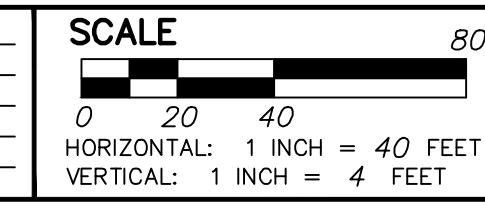
- CoB - CONOVER LOAM, 0 TO 4 PERCENT SLOPES
- KeB - KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES
- MmB - MIAMI LOAM, 2 TO 6 PERCENT SLOPES
- OsB - OSHEMO LOAMY SAND, 0 TO 6 PERCENT SLOPES
- SOILS BOUNDARY

SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTENAW COUNTY.

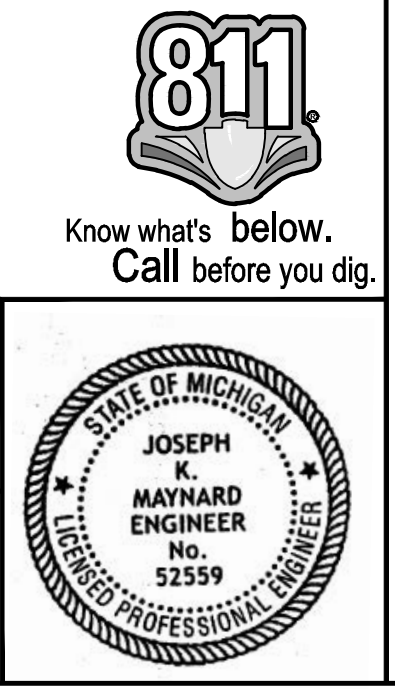
- LEGEND**
- LIGHT POLE
 - UTILITY POLE
 - GUY ANCHOR
 - HYDRANT
 - SPOT ELEV.
 - POST
 - GATE VALVE
 - SIGN
 - TRANSFORMER
 - MANHOLE
 - CATCHBASIN
 - END SECTION
 - GRAVEL
 - FENCE
 - CONCRETE
 - ASPHALT
 - EXISTING STORM
 - EXISTING SANITARY
 - EXISTING WATER
 - EXISTING GAS
 - EXISTING ELECTRIC
 - EXISTING TELEPHONE

BENCHMARK
BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9th WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
BM2=NAIL IN WLY FACE OF 26" WALNUT, 43rd NORTH OF DEXTER-CHELSEA RD AND 37th NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21 (NAVD 88 DATUM)

REVISIONS
1-15-2024 PER WCWRC AND CITY REVIEWS
2-6-2024 PER WCWRC AND CITY REVIEWS

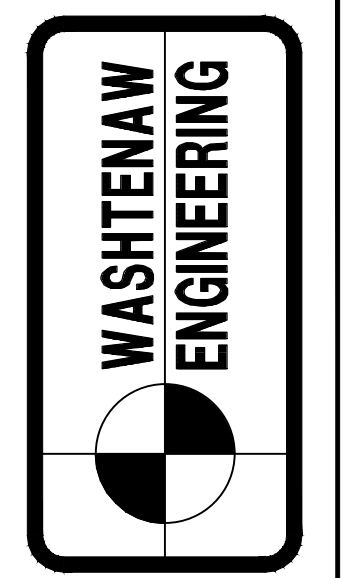


PREPARED BY: *Joseph K. Maynard*
JOSEPH K. MAYNARD P.E., MICH No. 52559



ALL PROPOSED STREET TREES MUST BE A MINIMUM OF 4 FT FROM UTILITIES.
WETLANDS DELINEATED BY: GJS LAND PLANNING, LLC NOVEMBER OF 2023.

CIVIL ENGINEERS
PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS
3526 W. LIBERTY RD
ANN ARBOR, MI 48103
TEL: 734-761-8800



CLIENT
M/I HOMES OF MICHIGAN
40950 WOODWARD AVE.
BLOOMFIELD HILLS, MI 48304
PH: (248)-221-5011

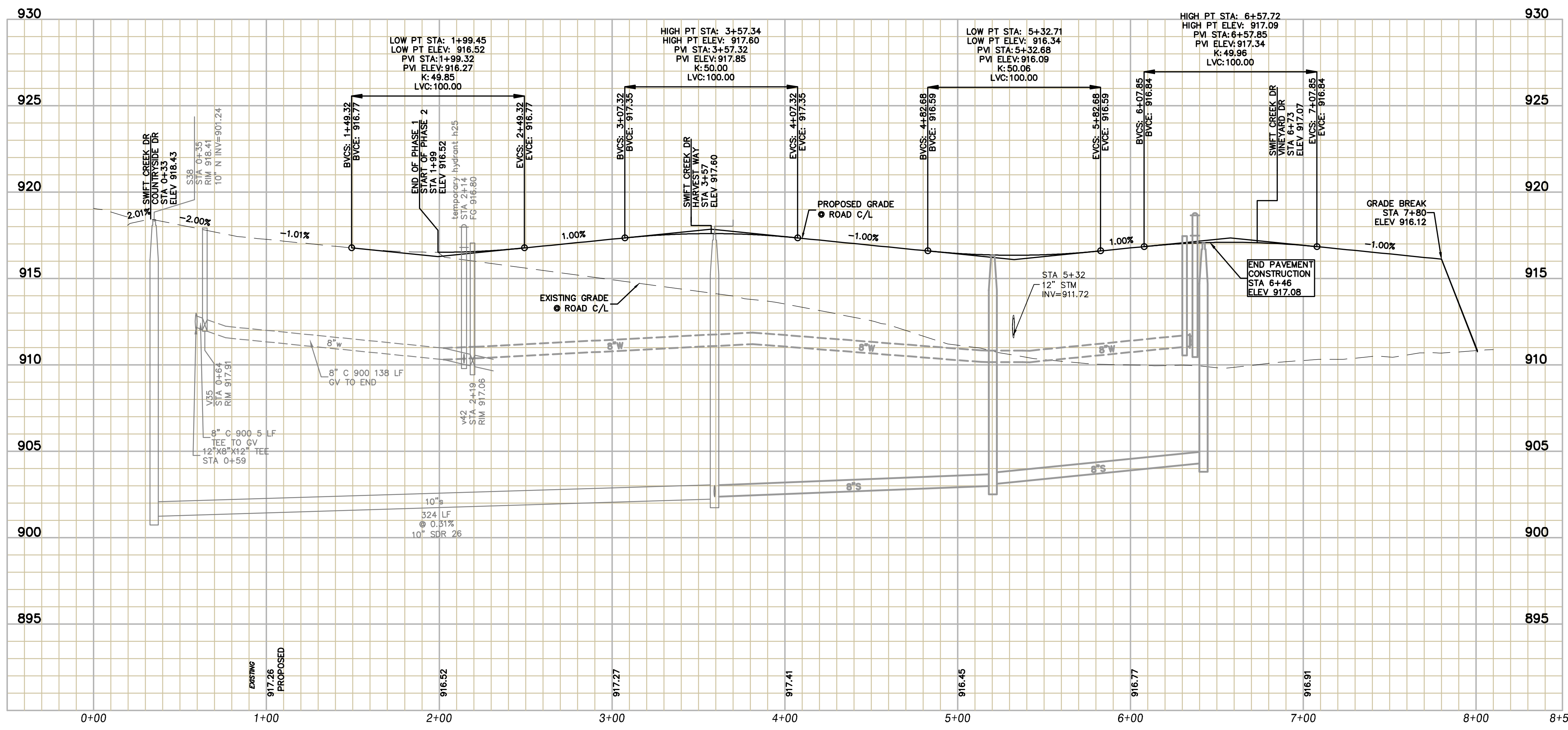
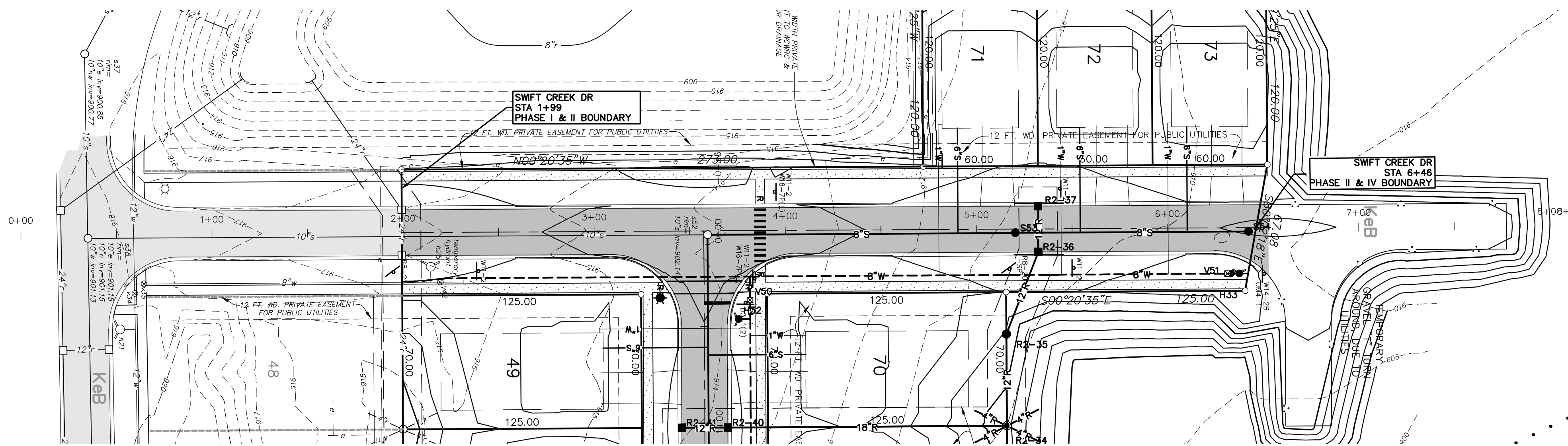
PROJECT
ROAD CONSTRUCTION
WHISPERWOOD WAY
STA. 7+90 TO 12+76

SHEET

PROJECT
HERITAGE FARMS
PHASE 2

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
CITY OF CHELSEA
WASHTENAW COUNTY • MICHIGAN
JOB NO. 32971
DATE 11-1-23
DWS NO. 971-p2-whisperwood-p10
FIELD BOOK: 446
FILE NO. 10668
15 SHEET

SWIFT CREEK DR (66 FT. WD.) (PUBLIC)



NOTE:
UTILITY EXCAVATION AREAS WITHIN THE ROADWAY CORRIDOR SHALL HAVE 100% CLASS II GRANULAR BACKFILL TO SUBGRADE ELEVATION, COMPACTED TO 95% MAXIMUM UNIT WEIGHT.
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

ANY CONDITIONS EXISTING ON THE SITE THAT ARE NOT CONSISTENT WITH THE PLANS OR SOIL EROSION SEDIMENTATION PERMIT WILL RESULT IN A STOP WORK ORDER AND REVOCATION OF THE SOIL EROSION SEDIMENTATION CONTROL PERMIT.

SOILS INFORMATION
THE SOILS INFORMATION AS PRESENTED SHOWS GENERAL CONDITIONS ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF THESE SOIL LOCATION SINCE GROUND CONDITIONS ARE SUBJECT TO CHANGE. IT IS ADVISED THAT THOSE CONTRACTORS SUBMITTING PROPOSALS THROUGHLY ACQUAINT THEMSELVES WITH THE LOCAL CONDITIONS.

- PROPOSED UTILITY LEGEND**
- 12" = STORM SEWER
 - 8" = SANITARY SEWER
 - 8" W = WATER MAIN
 - 10" S = EXISTING SANITARY SEWER
 - HYDRANT
 - GATE VALVE IN WELL
 - GATE VALVE IN BOX
 - CURB BOX
 - FLARED END SECTION
 - MANHOLE
 - CATCHBASIN

- PROPOSED LEGEND**
- ASPHALT SURFACE
 - CONCRETE SURFACE
 - 6" UNDER DRAIN PIPE WITH SOCK
 - SPILL IN (F4) BARRIER CONCRETE CURB & GUTTER
 - SPILL OUT (F4) BARRIER CONCRETE CURB & GUTTER
 - SIGN
 - LIGHTPOLE
 - RAMP WITH TACTILE WARNING STRIPS
 - WCWRC = WASHTENAW COUNTY WATER RESOURCES COMMISSIONER
 - CA = CONDOMINIUM ASSOCIATION

WASHTENAW COUNTY SOIL SURVEY CLASSIFICATION

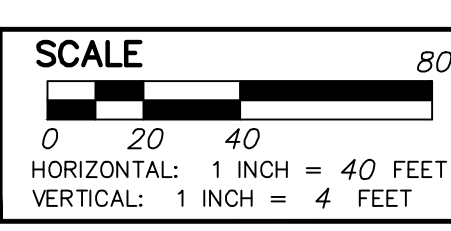
- CoB - CONOVER LOAM, 0 TO 4 PERCENT SLOPES
- KeB - KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES
- MmB - MIAMI LOAM, 2 TO 6 PERCENT SLOPES
- OsB - OSHTEMO LOAMY SAND, 0 TO 6 PERCENT SLOPES
- - SOILS BOUNDARY

SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTENAW COUNTY.

- LEGEND**
- LIGHT POLE
 - UTILITY POLE
 - GUY ANCHOR
 - HYDRANT
 - SPOT ELEV.
 - POST
 - GATE VALVE
 - SIGN
 - TRANSFORMER
 - MANHOLE
 - CATCHBASIN
 - END SECTION
 - GRAVEL
 - FENCE
 - CONCRETE
 - ASPHALT
 - EXISTING STORM
 - EXISTING SANITARY
 - EXISTING WATER
 - EXISTING GAS
 - EXISTING ELECTRIC
 - EXISTING TELEPHONE

BENCHMARK
BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9'
WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
BM2=NAIL IN WLY FACE OF 26" WALNUT, 43' NORTH OF DEXTER-CHELSEA RD AND 37'
NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21
(NAVD 88 DATUM)

REVISIONS
1-15-2024 PER WCWRC AND CITY REVIEWS
2-6-2024 PER WCWRC AND CITY REVIEWS



PREPARED BY: *Joseph K. Maynard*
JOSEPH K. MAYNARD P.E., MICH No. 52559

811
Know what's below.
Call before you dig.

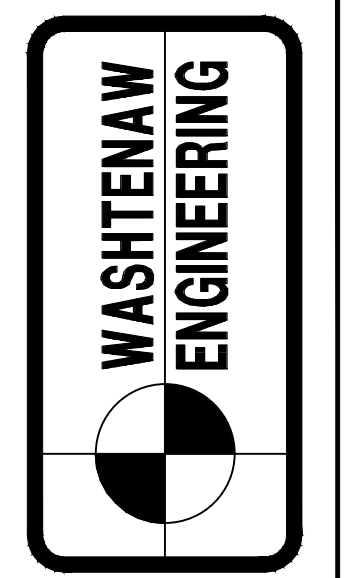
ALL PROPOSED STREET TREES MUST BE A MINIMUM OF 4 FT FROM UTILITIES

WETLANDS DELINEATED BY: GJS LAND PLANNING, LLC NOVEMBER OF 2023.

COPYRIGHT © 2024 WASHTENAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTENAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR WITHHOLD ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, TELEPHONS BY HIM, AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTENAW ENGINEERING COMPANY (MECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE OWNER SHALL INDEMNIFY AND HOLD HARMLESS MECO, MECO'S CONSULTANTS AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, TELEPHONE DATA OR OTHER INSTRUMENTS OF SERVICE.

CIVIL ENGINEERS
PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS
3526 W. LIBERTY RD
ANN ARBOR, MI 48103
TEL: 734-761-8800



M/I HOMES OF MICHIGAN
40950 WOODWARD AVE.
BLOOMFIELD HILLS, MI 48304
PH: (248)-221-5011

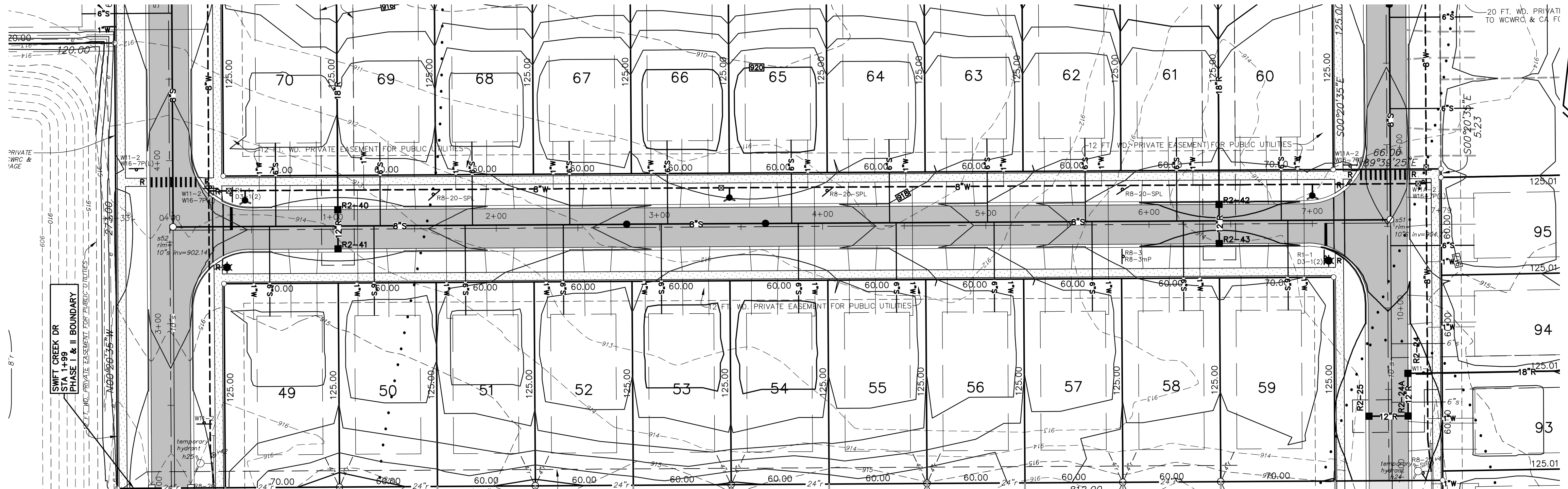
ROAD CONSTRUCTION
SWIFT CREEK DR
STA. 0+00 TO 6+52

HERITAGE FARMS
PHASE 2

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
CITY OF CHELSEA
WASHTENAW COUNTY • MICHIGAN
JOB NO. 32971
DATE 11-1-23
DWS NO. 971-p2-swift creek-pro
FIELD BOOK: 446
FILE NO. 10668

16 SHEET

HARVEST WAY (66 FT. WD.) (PUBLIC)



THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE ACCURATELY LOCATED AS SHOWN OR THAT THEY ARE LOCATED AS SHOWN OR THAT THEY ARE NOT PHYSICALLY LOCATED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

NOTE:
UTILITY EXCAVATION AREAS WITHIN THE ROADWAY CORRIDOR SHALL HAVE 100% CLASS II GRANULAR BACKFILL TO SUBGRADE ELEVATION, COMPACTED TO 95% MAXIMUM UNIT WEIGHT.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

SOILS INFORMATION
THE SOILS INFORMATION AS PRESENTED SHOWS GENERAL CONDITIONS ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF THESE SOIL LOCATION SINCE GROUND CONDITIONS ARE SUBJECT TO CHANGE. IT IS ADVISED THAT THOSE CONTRACTORS SUBMITTING PROPOSALS THROUGHLY ACQUAINT THEMSELVES WITH THE LOCAL CONDITIONS.

ANY CONDITIONS EXISTING ON THE SITE THAT ARE NOT CONSISTENT WITH THE PLANS OR SOIL EROSION SEDIMENTATION PERMIT WILL RESULT IN A STOP WORK ORDER AND REVOCATION OF THE SOIL EROSION SEDIMENTATION CONTROL PERMIT.

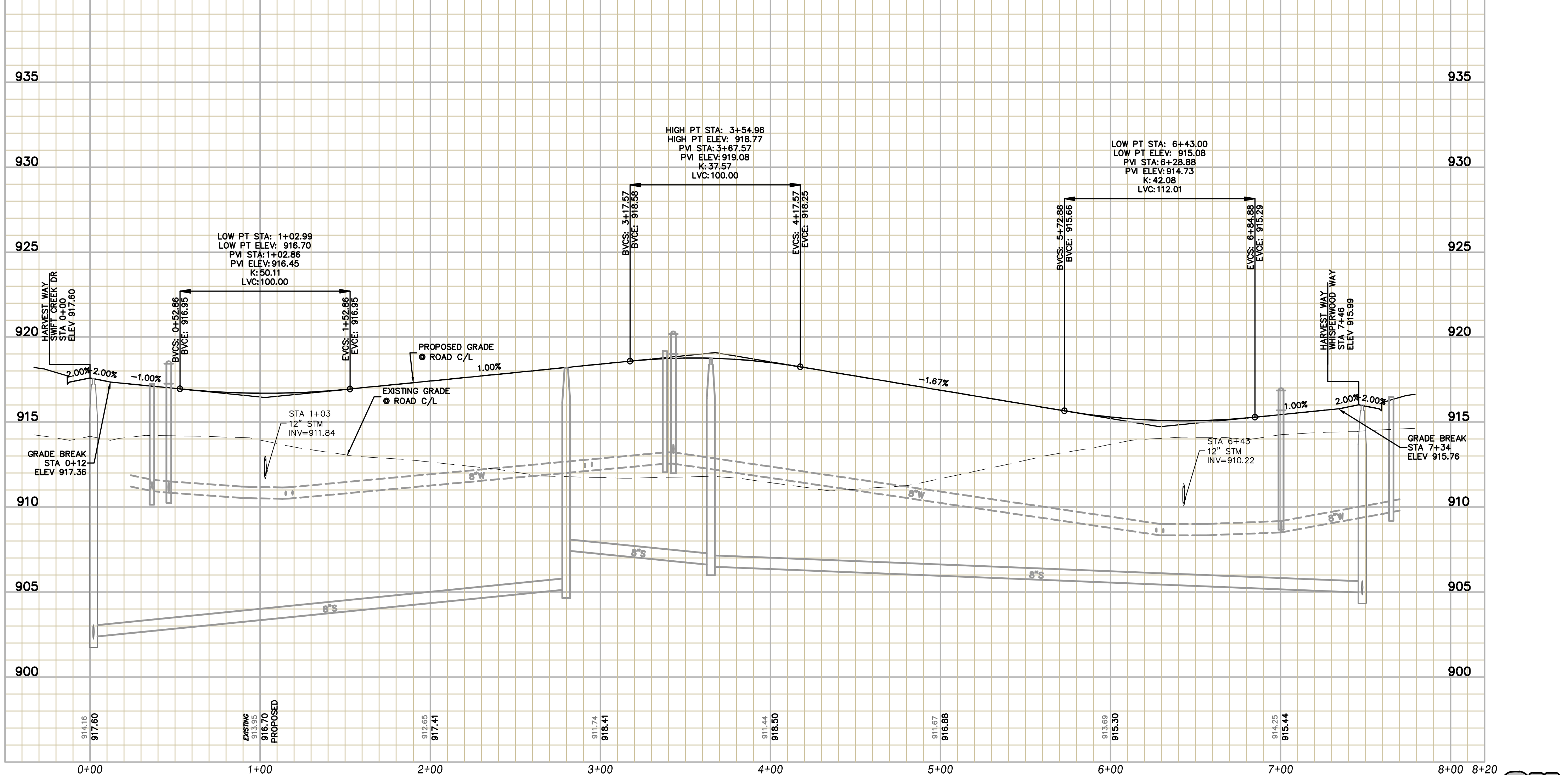
- PROPOSED LEGEND**
- ASPHALT SURFACE
 - CONCRETE SURFACE
 - 6" UNDER DRAIN PIPE WITH SOCK
 - SPILL IN (F4) BARRIER CONCRETE CURB & GUTTER
 - SPILL OUT (F4) BARRIER CONCRETE CURB & GUTTER
 - SIGN
 - LIGHTPOLE
 - RAMP WITH TACTILE WARNING STRIPS
 - WASHTENAW COUNTY WATER RESOURCES COMMISSIONER
 - CONDOMINIUM ASSOCIATION
- PROPOSED UTILITY LEGEND**
- 12" S - STORM SEWER
 - 8" S - SANITARY SEWER
 - 6" W - WATER MAIN
 - 10" S - EXISTING SANITARY SEWER
 - HYDRANT
 - GATE VALVE IN WELL
 - GATE VALVE IN BOX
 - CURB BOX
 - FLARED END SECTION
 - MANHOLE
 - CATCHBASIN

WASHTENAW COUNTY SOIL SURVEY CLASSIFICATION

- CoB - CONOVER LOAM, 0 TO 4 PERCENT SLOPES
- KeB - KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES
- MmB - MIAMI LOAM, 2 TO 6 PERCENT SLOPES
- OsB - OSSTEMO LOAMY SAND, 0 TO 6 PERCENT SLOPES

..... - SOILS BOUNDARY

SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTENAW COUNTY.



- LEGEND**
- LIGHT POLE
 - UTILITY POLE
 - GUY ANCHOR
 - HYDRANT
 - SPOT ELEV.
 - POST
 - GATE VALVE
 - TRANSFORMER
 - MANHOLE
 - CATCHBASIN
 - END SECTION
 - GRAVEL
 - FENCE
 - CONCRETE
 - ASPHALT
 - EXISTING STORM
 - EXISTING SANITARY
 - EXISTING WATER
 - EXISTING GAS
 - EXISTING ELECTRIC
 - EXISTING TELEPHONE

BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9th WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
 BM2=NAIL IN WLY FACE OF 26" WALNUT, 43' NORTH OF DEXTER-CHELSEA RD AND 37th NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21 (NAVD 88 DATUM)

REVISIONS 1-15-2024 PER WCWRG AND CITY REVIEWS
 2-6-2024 PER WCWRG AND CITY REVIEWS

SCALE
 HORIZONTAL: 1 INCH = 40 FEET
 VERTICAL: 1 INCH = 4 FEET

WETLANDS DELINEATED BY: GJS LAND PLANNING, LLC NOVEMBER OF 2023.

PREPARED BY: *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559

CLIENT
 M/I HOMES OF MICHIGAN
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

PROJECT
 ROAD CONSTRUCTION
 HARVEST WAY
 STA. 0+00 TO 7+58

SHEET
 HERITAGE FARMS
 PHASE 2

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST

DATE 11-1-23
JOB NO. 32971
DWG NO. 971-p2-herest-pro
FIELD BOOK 446
FILE NO. 10668

17
 SHEET

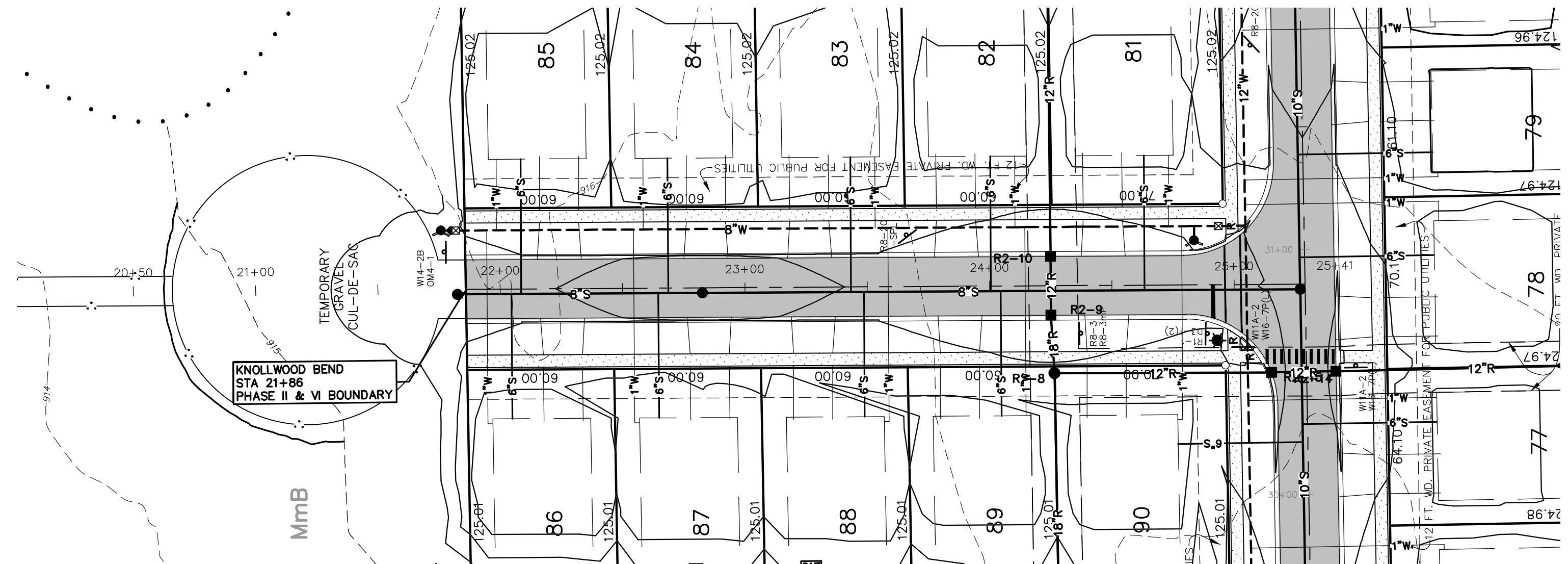
WASHTENAW ENGINEERING
 CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 3526 W. LIBERTY RD
 ANN ARBOR, MI 48103
 TEL: 734-761-8800

811
 Know what's below.
 Call before you dig.

STATE OF MICHIGAN
 JOSEPH K. MAYNARD
 ENGINEER
 No. 52559

H:\MIDWEST\2023\11\p2\phase 2\2023-11-01\p2-herest-pro.dwg, 2/20/2024 5:02:54 PM, 1:1

KNOLLWOOD BEND (66 FT. WD.) (PUBLIC)



THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE ACCURATELY LOCATED AS SHOWN OR THAT THEY ARE LOCATED AS SHOWN. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

NOTE:
UTILITY EXCAVATION AREAS WITHIN THE ROADWAY CORRIDOR SHALL HAVE 100% CLASS II GRANULAR BACKFILL TO SUBGRADE ELEVATION, COMPACTED TO 95% MAXIMUM UNIT WEIGHT.
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

SOILS INFORMATION
THE SOILS INFORMATION AS PRESENTED SHOWS GENERAL CONDITIONS ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF THESE SOIL LOCATION SINCE GROUND CONDITIONS ARE SUBJECT TO CHANGE. IT IS ADVISED THAT THOSE CONTRACTORS SUBMITTING PROPOSALS THROUGHLY ACQUAINT THEMSELVES WITH THE LOCAL CONDITIONS.

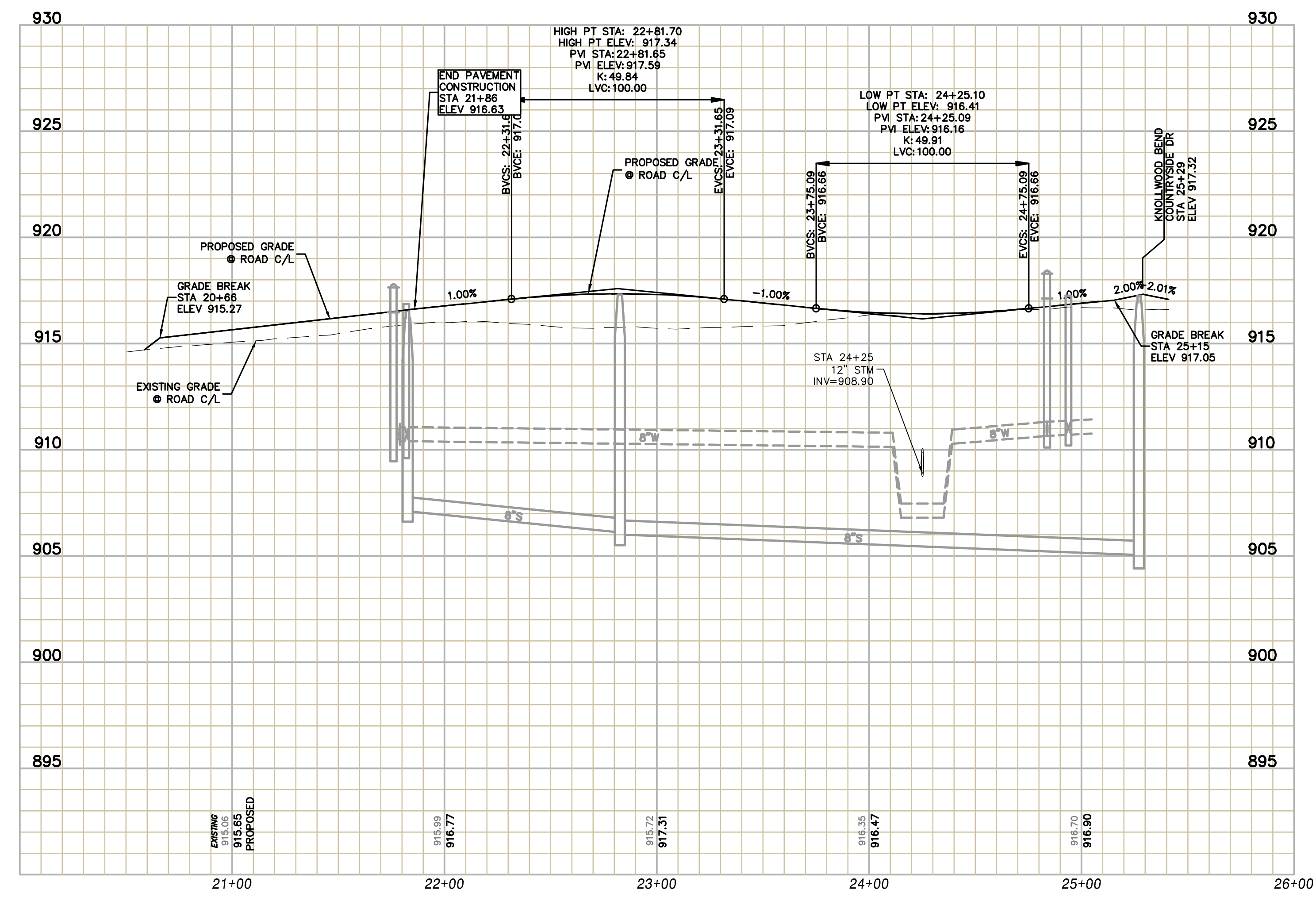
ANY CONDITIONS EXISTING ON THE SITE THAT ARE NOT CONSISTENT WITH THE PLANS OR SOIL EROSION SEDIMENTATION PERMIT WILL RESULT IN A STOP WORK ORDER AND REVOCATION OF THE SOIL EROSION SEDIMENTATION CONTROL PERMIT.

- PROPOSED UTILITY LEGEND**
- 12"r = STORM SEWER
 - 8"r = SANITARY SEWER
 - 8"W = WATER MAIN
 - 10"S = EXISTING SANITARY SEWER
 - HYDRANT
 - GATE VALVE IN WELL
 - GATE VALVE IN BOX
 - CURB BOX
 - FLARED END SECTION
 - MANHOLE
 - CATCHBASIN

- PROPOSED LEGEND**
- ASPHALT SURFACE
 - CONCRETE SURFACE
 - 6" UNDER DRAIN PIPE WITH SOCK
 - SPILL IN (F4) BARRIER CONCRETE CURB & GUTTER
 - SPILL OUT (F4) BARRIER CONCRETE CURB & GUTTER
 - SIGN
 - LIGHTPOLE
 - RAMP WITH TACTILE WARNING STRIPS
 - WCWRC = WASHTENAW COUNTY WATER RESOURCES COMMISSIONER
 - CA = CONDOMINIUM ASSOCIATION

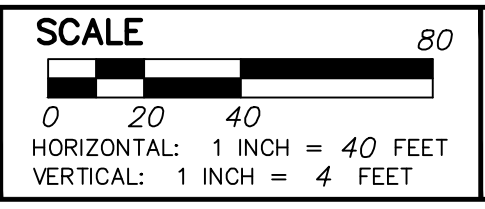
- WASHTENAW COUNTY SOIL SURVEY CLASSIFICATION**
- CoB - CONOVER LOAM, 0 TO 4 PERCENT SLOPES
 - KeB - KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES
 - MmB - MIAMI LOAM, 2 TO 6 PERCENT SLOPES
 - OsB - OSHEMO LOAMY SAND, 0 TO 6 PERCENT SLOPES
 - - SOILS BOUNDARY

SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTENAW COUNTY.



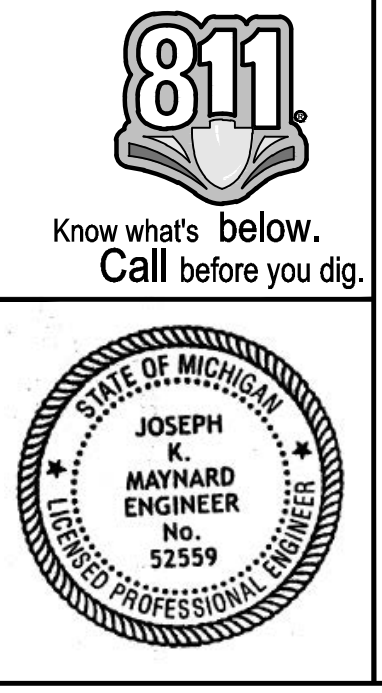
BENCHMARK
BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9th WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
BM2=NAIL IN WLY FACE OF 26" WALNUT, 43rd NORTH OF DEXTER-CHELSEA RD AND 37th NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21 (NAVD 88 DATUM)

REVISIONS
1-15-2024 PER WCWRC AND CITY REVIEWS
2-6-2024 PER WCWRC AND CITY REVIEWS



PREPARED BY: *Joseph K. Maynard*
JOSEPH K. MAYNARD P.E., MICH No. 52559

ALL PROPOSED STREET TREES MUST BE A MINIMUM OF 4 FT FROM UTILITIES.
WETLANDS DELINEATED BY: GJS LAND PLANNING, LLC NOVEMBER OF 2023.



CIVIL ENGINEERS
PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS
3526 W. LIBERTY RD
ANN ARBOR MI 48103
TEL: 734-761-8800

WASHTENAW ENGINEERING

CLIENT
M/I HOMES OF MICHIGAN
40950 WOODWARD AVE.
BLOOMFIELD HILLS, MI 48304
PH: (248)-221-5011

PROJECT
**ROAD CONSTRUCTION
KNOLLWOOD BEND
STA. 21+86 TO 25+41**

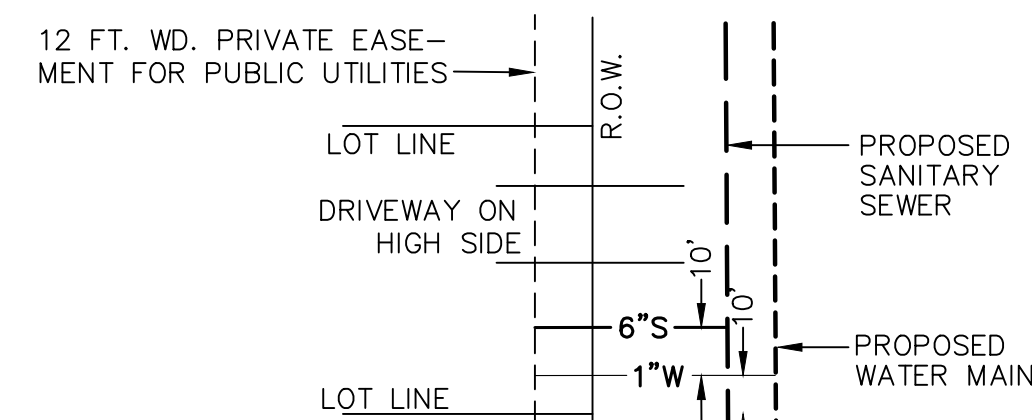
SHEET
**HERITAGE FARMS
PHASE 2**

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
CITY OF CHELSEA
WASHTENAW COUNTY • MICHIGAN
JOB NO. 32971
DATE 11-1-23
DWS NO. 971-p2-knollwood-pr0
FIELD BOOK 446
FILE NO. 10668

18 SHEET

H:\1010\101037\101037.dwg, 2024-11-01 10:04:11 AM, 11

COUNTRYSIDE DR (66 FT. WD.) (PUBLIC)



SANITARY SEWER LEAD & WATER MAIN LEAD DETAIL
(NOT TO SCALE)

SANITARY NOTES:

- ALL CONSTRUCTION WILL CONFORM TO THE CURRENT CITY OF CHELSEA SANITARY SEWER STANDARDS AND SPECIFICATIONS.
- MANHOLE COVERS AND FRAME SHALL BE EAST JORDAN IRON WORKS 1040 HEAVY DUTY OR APPROVED EQUAL. COVERS SHALL BE SOLID WITH NO BOLT HOLES. COVERS SHALL BE CAST WITH THE WORDS "SANITARY SEWER" IN RAISED LETTERS SPACED IN FROM THE PERIPHERY OF THE COVER. COVERS SHALL INCLUDE THE CITY OF CHELSEA LOGO. AN EJW TEMPLATE EXISTS.
- SANITARY CLEANOUTS SHALL BE INSTALLED 3' OFF FOUNDATION WALL INSIDE OF HOME.
- STATIONING FOR SANITARY SEWER ON THIS SHEET IS BASED ON CENTERLINE ROAD ALIGNMENT.

SANITARY SEWER QUANTITIES

- 317 LF 10" SDR 26 SEWER
- 6 EA 6" SDR 26 SEWER LEADS
- 2 EA 4FT DIA. MANHOLE
- 1 EA 10" SDR 26 END CAP

NOTE: NO DUPLICATE QUANTITIES FROM PREVIOUS SHEETS.

WATER MAIN NOTES:

- ALL CONSTRUCTION WILL CONFORM TO THE CURRENT CITY OF CHELSEA WATER MAIN STANDARDS AND SPECIFICATIONS.
- ALL HYDRANTS SHALL BE PROVIDED WITH 2-1/2" CONNECTIONS WITH A 5" STORTZ CONNECTION.
- CONTRACTOR SHALL PUMP DOWN WATER AFTER TESTING.
- IN NO CIRCUMSTANCE SHOULD THE CURB BOX BE LOCATED WITHIN A SIDEWALK, DRIVEWAY, OR OTHER PAVED AREA.
- HYDRANT HEIGHTS SHALL BE IN A WORKABLE RANGE OF NO LOWER THAN 18 INCHES AND NO HIGHER THAN 30 INCHES. MEASUREMENTS SHALL BE MADE FROM THE CENTER OF THE PUMPER OUTLET TO THE FINISH GRADE.
- STATIONING FOR WATER MAIN ON THIS SHEET IS BASED ON CENTERLINE ROAD ALIGNMENT.
- TRACER WIRE TO BE INSTALLED ON ALL WATER MAIN AND LEADS.

NOTE:

UTILITY EXCAVATION AREAS WITHIN THE ROADWAY CORRIDOR SHALL HAVE 100% CLASS II GRANULAR BACKFILL TO SUBGRADE ELEVATION. COMPACTED TO 95% MAXIMUM UNIT WEIGHT.

WATER MAIN QUANTITIES

- 424 LF 12" C900
- 3 LF 6" C 900
- 7 EA 1" SDR 9 HDPE LEAD AND STOP BOX
- 1 EA 12"X8"X12" TEE
- 1 EA TEMPORARY HYDRANT ASSEMBLY
- 1 EA 12" GATE VALVE IN BOX
- 1 EA 12"X6" REDUCER

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NO DUPLICATE QUANTITIES FROM PREVIOUS SHEETS.

SOILS INFORMATION

THE SOILS INFORMATION AS PRESENTED SHOWS GENERAL CONDITIONS ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF THESE SOIL LOCATION SINCE GROUND CONDITIONS ARE SUBJECT TO CHANGE. IT IS ADVISED THAT THOSE CONTRACTORS SUBMITTING PROPOSALS THROUGHLY ACQUAINT THEMSELVES WITH THE LOCAL CONDITIONS.

ANY CONDITIONS EXISTING ON THE SITE THAT ARE NOT CONSISTENT WITH THE PLANS OR SOIL EROSION SEDIMENTATION PERMIT WILL RESULT IN A STOP WORK ORDER AND REVOCATION OF THE SOIL EROSION SEDIMENTATION CONTROL PERMIT.

PROPOSED UTILITY LEGEND

- 12"R = STORM SEWER
- 8"S = SANITARY SEWER
- 8"W = WATER MAIN
- 10"S = EXISTING SANITARY SEWER
- HYDRANT
- GATE VALVE IN WELL
- GATE VALVE IN BOX
- CURB BOX
- FLARED END SECTION
- MANHOLE
- CATCHBASIN

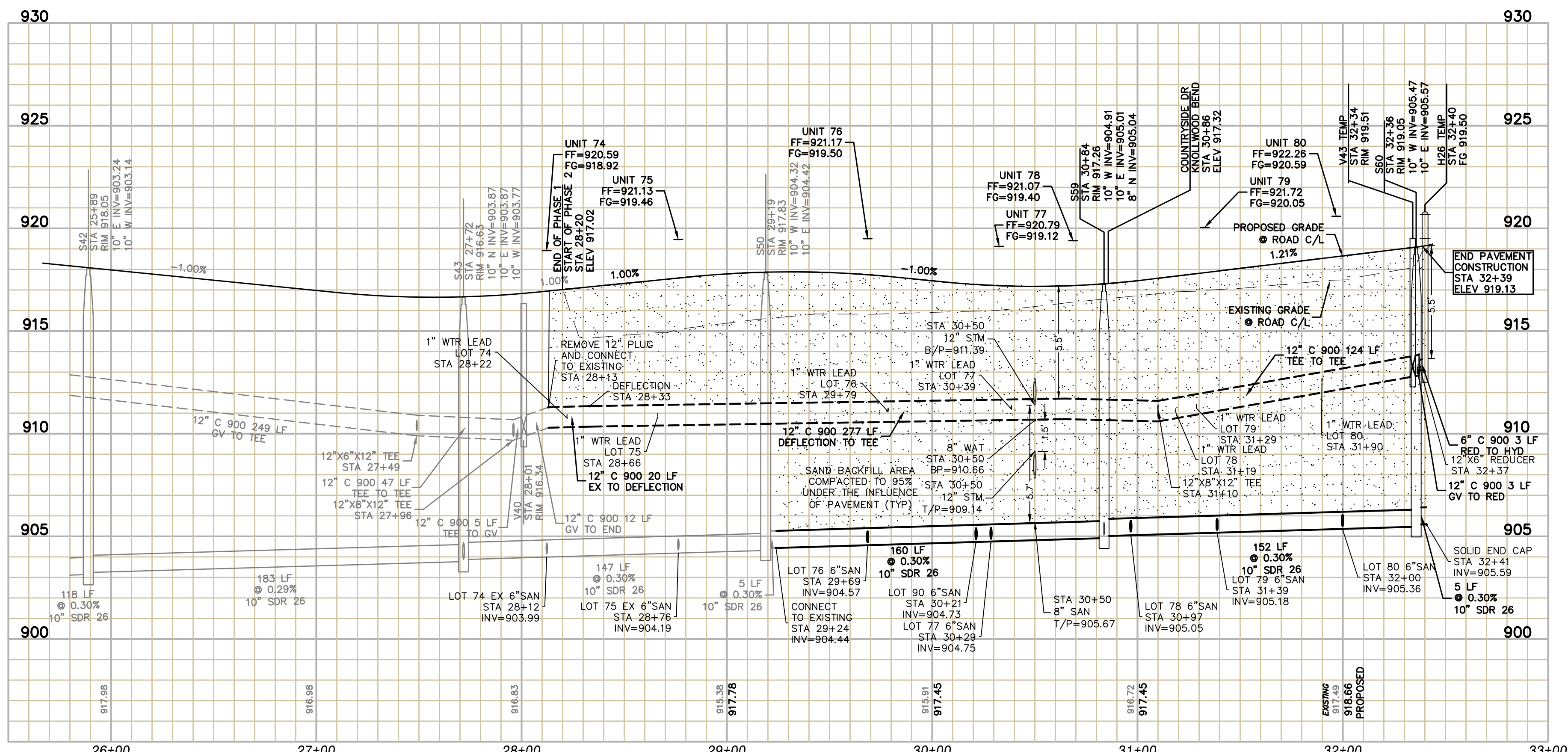
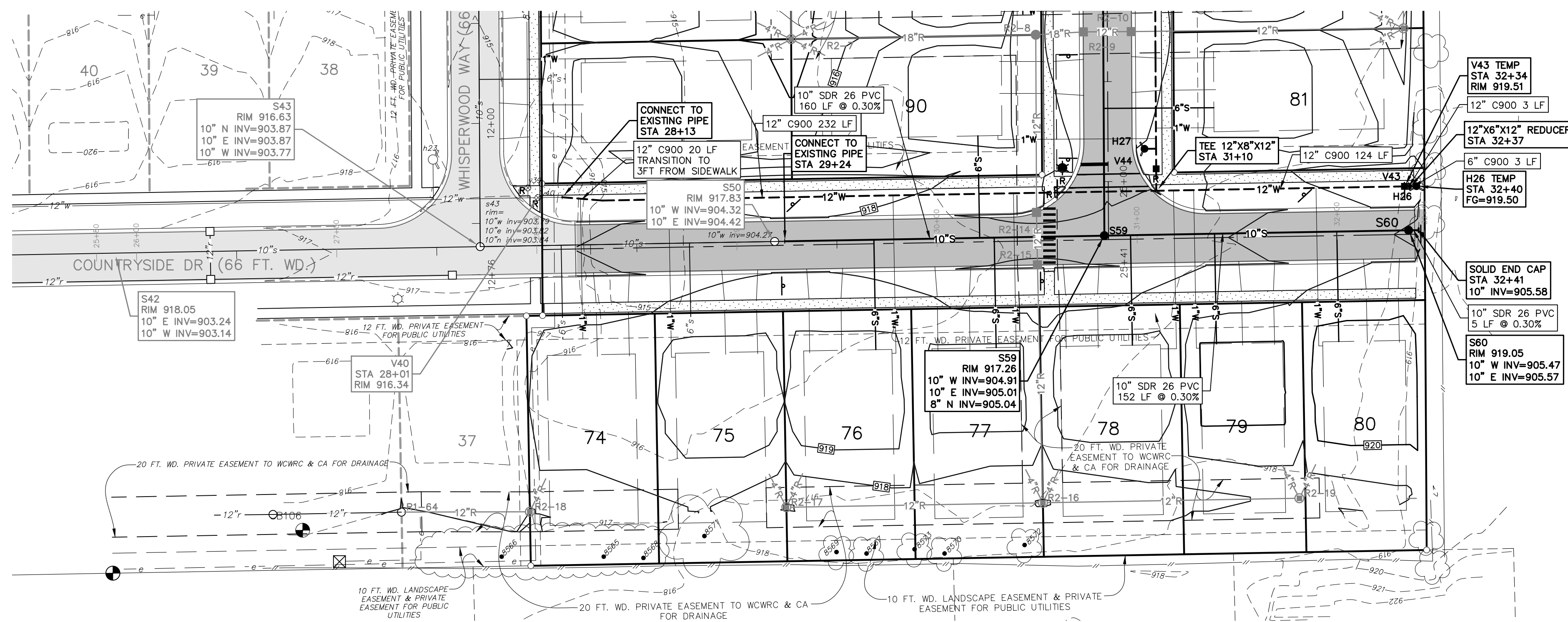
PROPOSED LEGEND

- ASPHALT SURFACE
- CONCRETE SURFACE
- 6" UNDER DRAIN PIPE WITH SOCK
- SPILL IN (F) BARRIER CONCRETE CURB & GUTTER
- SPILL OUT (F) BARRIER CONCRETE CURB & GUTTER
- SIGN
- RAMP WITH TACTILE WARNING STRIPS
- WCWRC = WASHTENAW COUNTY WATER RESOURCES COMMISSIONER
- CA = CONDOMINIUM ASSOCIATION

Structure Name	Structure Type and Size	Rim Elevation	Inverts	Pipe Size	Structure Depth
S50	EXISTING MANHOLE	917.83	E 904.42 W 904.32	10 INCH 10 INCH	13.51'
S59	MANHOLE TYPE 1 4FT DIA.	917.26	E 905.01 W 904.91 N 905.04	10 INCH 10 INCH 8 INCH	12.35'
S60	MANHOLE TYPE 1 4FT DIA.	919.05	E 905.47 W 905.57	10 INCH 10 INCH	13.58'

Road Station	Structure Name	Structure Type	Finished Grade Elevation
STA 32+40	H26	TEMPORARY HYDRANT	919.50

Road Station	Structure Name	Structure Type	Rim Elevation
STA 32+34	V43	TEMPORARY 12" GATE VALVE IN BOX	919.51



Lot No.	DISTANCE FROM DOWN STREAM STRUCTURE	DOWN STREAM MANHOLE	ROAD STATION	MAIN INV. @WYE	MAIN DIA. (INCH)	WYE INV. @MAIN	SAN. LEAD DIA. (INCH)	RISER HEIGHT (FT)	SANITARY LEAD SLOPE (%)	LEAD DISTANCE TO STORM CROSSING	LEAD DISTANCE TO WATER CROSSING	LEAD DISTANCE TO ADDITIONAL RISER	LEAD INVERT AT ADDITIONAL RISER	LEAD LENGTH TO PUBLIC EASEMENT	LEAD INVERT AT PUBLIC EASEMENT	LEAD LENGTH TO HOUSE FOUNDATION (Min Target Depth 12.5)	DEPTH FROM FF TO LEAD INVERT AT HOUSE FOUNDATION	HOUSE FF ELEVATION	FF-FG	HOUSE FG ELEVATION	
76	50	S50	29+69	904.57	10 INCH	904.74	6 INCH	3.4	1.00%					47	908.59	8	908.67	12.50	921.17	1.67	919.50
77	110	S50	30+29	904.75	10 INCH	904.92	6 INCH	2.8	1.00%					47	908.21	8	908.29	12.50	920.79	1.67	919.12
78	13	S50	30+97	905.05	10 INCH	905.22	6 INCH	2.8	1.00%					47	908.49	8	908.57	12.50	921.07	1.67	919.40
79	55	S59	31+36	905.18	10 INCH	905.35	6 INCH	3.3	1.00%					47	909.14	8	909.22	12.50	921.72	1.67	920.05
80	116	S59	32+00	905.36	10 INCH	905.53	6 INCH	3.7	1.00%					47	909.68	8	909.76	12.50	922.26	1.67	920.59
90	102	S50	30+21	904.73	8 INCH	904.81	6 INCH	2.2	1.00%					43	907.49	8	907.57	12.50	920.07	1.67	918.40

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATE AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
 THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES OR STRUCTURES, OR FOR ANY DELAY TO THE PROJECT BY ANY OTHER INSTRUMENTS OF SERVICE OR OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT, OR FOR COMPLETION OF THE AGREEMENT, OTHERS SO LONG AS WASHTENAW ENGINEERING COMPANY (MECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE SURVEYOR SHALL MAINTAIN AND HOLD HARMLESS MECO, MECO'S CONSULTANTS AND AGENCIES AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.
 COPYRIGHT © 2024 WASHTENAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTENAW ENGINEERING COMPANY, INC.

LEGEND

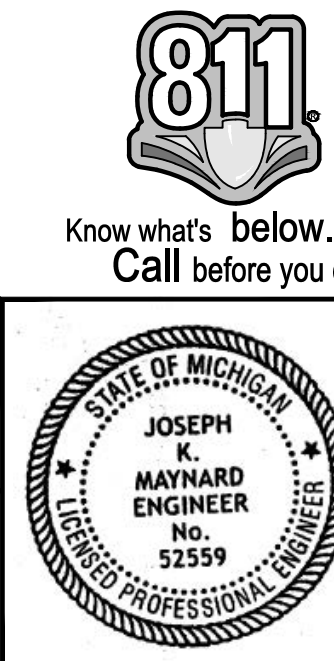
- LIGHT POLE
- UTILITY POLE
- GUY ANCHOR
- HYDRANT
- SPOT ELEV.
- POST
- GATE VALVE
- TRANSFORMER
- MANHOLE
- CATCHBASIN
- END SECTION
- GRAVEL
- FENCE
- CONCRETE
- ASPHALT
- EXISTING STORM
- EXISTING SANITARY
- EXISTING WATER
- EXISTING GAS
- EXISTING ELECTRIC
- EXISTING TELEPHONE

BENCHMARK
 BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9th WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
 BM2=NAIL IN WLY FACE OF 26" WALNUT, 43rd NORTH OF DEXTER-CHELSEA RD AND 37th NELY OF THE SOUTHWEST PROPERTY CORNER, ELEV=927.38
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21 (NAVD 88 DATUM)

REVISIONS
 1-15-2024 PER WCWRC AND CITY REVIEWS
 2-6-2024 PER WCWRC AND CITY REVIEWS

SCALE
 0 20 40
 HORIZONTAL: 1 INCH = 40 FEET
 VERTICAL: 1 INCH = 4 FEET

PREPARED BY
 JOSEPH K. MAYNARD P.E., MICH No. 52559

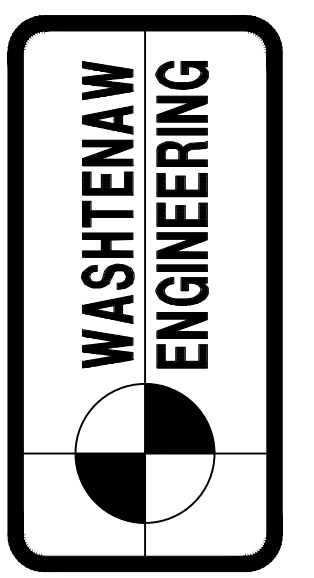


ALL PROPOSED STREET TREES MUST BE A MINIMUM OF 4 FT FROM UTILITIES.
 WETLANDS DELINEATED BY: GJS LAND PLANNING, LLC NOVEMBER OF 2023.



Know what's below. Call before you dig.

CIVIL ENGINEERS
 LANDSCAPE ARCHITECTS
 WASHTENAW ENGINEERING
 3526 W. LIBERTY RD
 ANN ARBOR, MI 48103
 TEL: 734-761-8900



CLIENT
 M/I HOMES OF MICHIGAN
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

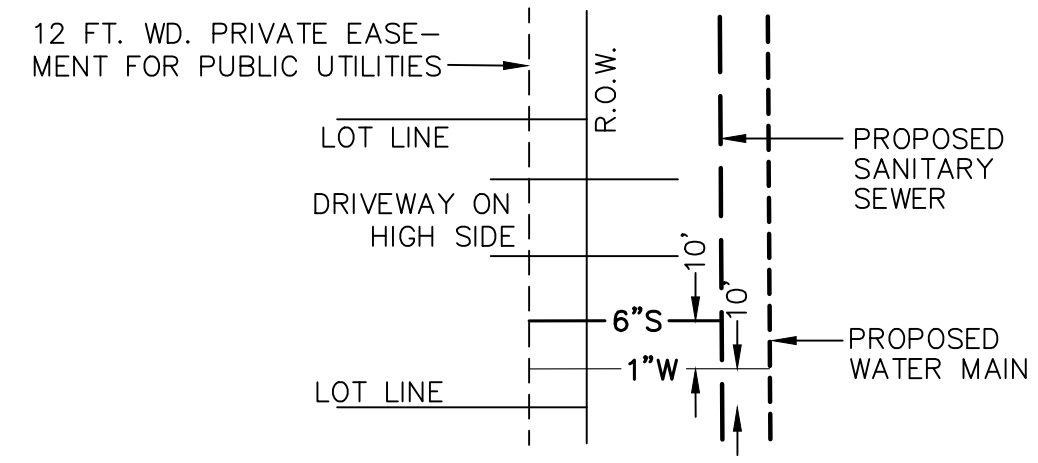
SHEET
 SANITARY SEWER & WATER MAIN
 COUNTRYSIDE DR
 STA. 28+00 TO 32+44

PROJECT
 HERITAGE FARMS
 PHASE 2

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
 CITY OF CHELSEA
 WASHTENAW COUNTY • MICHIGAN
 DATE 11-1-23 JOB NO. 32971
 DWS NO. 971-p2-countyfiled-pro FIELD BOOK 446
 FILE NO. 10668
 19 SHEET

SWIFT CREEK DR (66 FT. WD.) (PUBLIC)

SANITARY SEWER LEAD & WATER MAIN LEAD DETAIL (NOT TO SCALE)



- SANITARY NOTES:**
- ALL CONSTRUCTION WILL CONFORM TO THE CURRENT CITY OF CHELSEA SANITARY SEWER STANDARDS AND SPECIFICATIONS.
 - MANHOLE COVERS AND FRAME SHALL BE EAST JORDAN IRON WORKS 1040 HEAVY DUTY OR APPROVED EQUAL. COVERS SHALL BE SOLID WITH NO BOLT HOLES. COVERS SHALL BE CAST WITH THE WORDS "SANITARY SEWER" IN RAISED LETTERS SPACED IN FROM THE PERIPHERY OF THE COVER. COVERS SHALL INCLUDE THE CITY OF CHELSEA LOGO, AN EJW TEMPLATE EXISTS.
 - SANITARY CLEANOUTS SHALL BE INSTALLED 3' OFF FOUNDATION WALL INSIDE OF HOME.
 - STATIONING FOR SANITARY SEWER ON THIS SHEET BASED ON CENTERLINE OF ROAD ALIGNMENT.

SANITARY SEWER QUANTITIES
 283 LF 8" SDR 26 SEWER
 3 EA 6" SDR 26 SEWER LEADS
 EA 4FT DIA. MANHOLE
 NOTE: NO DUPLICATE QUANTITIES FROM PREVIOUS SHEETS.

- WATER MAIN NOTES:**
- ALL CONSTRUCTION WILL CONFORM TO THE CURRENT CITY OF CHELSEA WATER MAIN STANDARDS AND SPECIFICATIONS.
 - ALL HYDRANTS SHALL BE PROVIDED WITH 2-2 1/2" CONNECTIONS WITH A 5" STORTZ CONNECTION.
 - CONTRACTOR SHALL PUMP DOWN WATER AFTER TESTING.
 - IN NO CIRCUMSTANCE SHOULD THE CURB BOX BE LOCATED WITHIN A SIDEWALK, DRIVEWAY, OR OTHER PAVED AREA.
 - HYDRANT HEIGHTS SHALL BE IN A WORKABLE RANGE OF NO LOWER THAN 18 INCHES AND NO HIGHER THAN 30 INCHES. THE MEASUREMENTS SHALL BE MADE FROM THE CENTER OF THE PUMPER OUTLET TO THE FINISH GRADE.
 - STATIONING FOR WATER MAIN ON THIS SHEET IS BASED ON CENTERLINE ROAD ALIGNMENT.
 - TRACER WIRE TO BE INSTALLED ON ALL WATER MAIN AND LEADS.

NOTE:
 UTILITY EXCAVATION AREAS WITHIN THE ROADWAY CORRIDOR SHALL HAVE 100% CLASS II GRANULAR BACKFILL TO SUBGRADE ELEVATION. COMPACTED TO 95% MAXIMUM UNIT WEIGHT.
 THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCURRED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

ANY CONDITIONS EXISTING ON THE SITE THAT ARE NOT CONSISTENT WITH THE PLANS OR SOIL EROSION SEDIMENTATION PERMIT WILL RESULT IN A STOP WORK ORDER AND REVOCATION OF THE SOIL EROSION SEDIMENTATION CONTROL PERMIT.

SOILS INFORMATION
 THE SOILS INFORMATION AS PRESENTED SHOWS GENERAL CONDITIONS ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF THESE SOIL LOCATION SINCE GROUND CONDITIONS ARE SUBJECT TO CHANGE. IT IS ADVISED THAT SUCH CONTRACTORS SUBMITTING PROPOSALS THROUGHOUTLY ACQUAINT THEMSELVES WITH THE LOCAL CONDITIONS.

- PROPOSED UTILITY LEGEND**
- 12" S --- STORM SEWER
 - 8" S --- SANITARY SEWER
 - 8" W --- WATER MAIN
 - 10" S --- EXISTING SANITARY SEWER
 - HYDRANT
 - GATE VALVE IN WELL
 - GATE VALVE IN BOX
 - CURB BOX
 - FLARED END SECTION
 - MANHOLE
 - CATCHBASIN

- PROPOSED LEGEND**
- ASPHALT SURFACE
 - CONCRETE SURFACE
 - 6" UNDER DRAIN PIPE WITH SOCK
 - SPILL IN (F4) BARRIER CONCRETE CURB & GUTTER
 - SPILL OUT (F4) BARRIER CONCRETE CURB & GUTTER
 - SIGN
 - LIGHTPOLE
 - RAMP WITH TACTILE WARNING STRIPS
 - WCRC = WASHTENAW COUNTY WATER RESOURCES COMMISSIONER
 - CA = CONDOMINIUM ASSOCIATION

WATER HYDRANT SCHEDULE

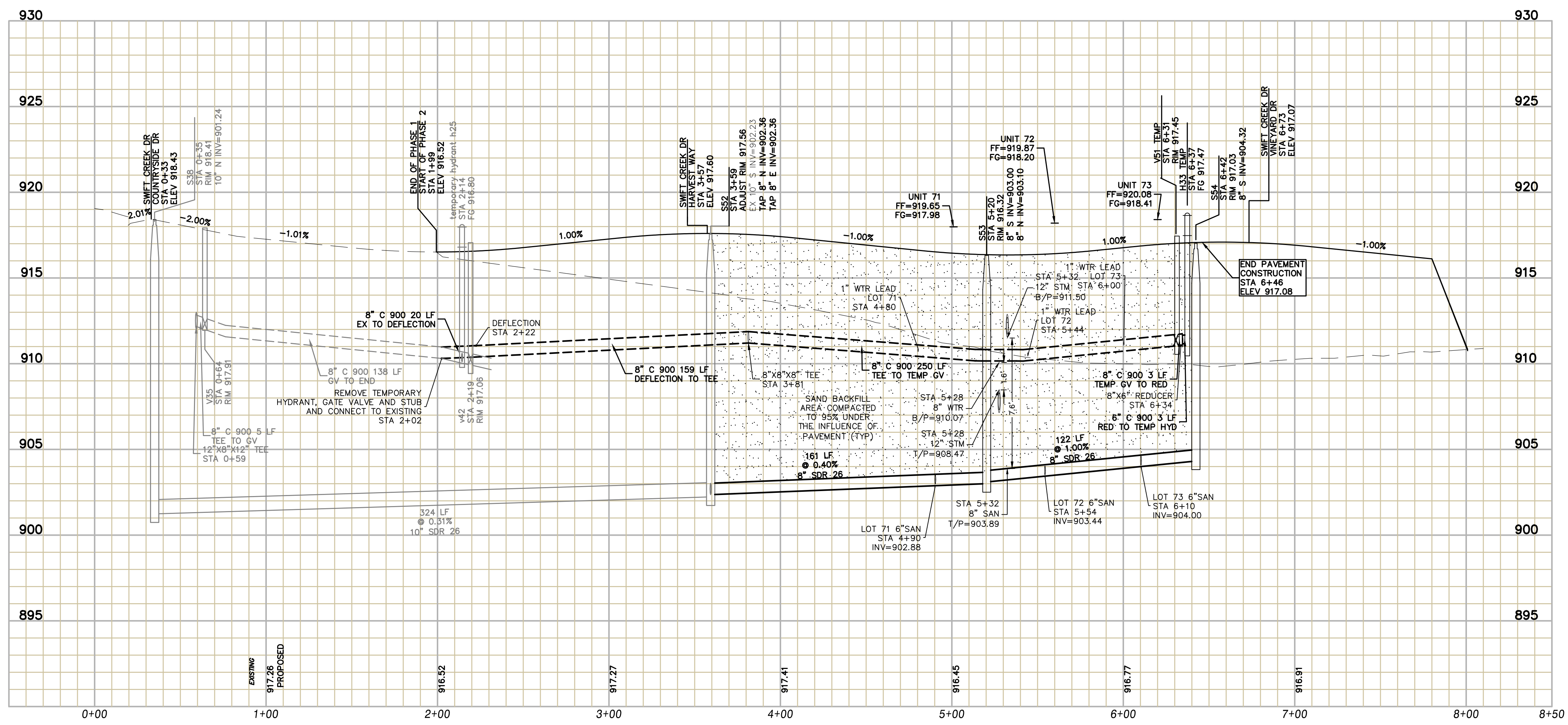
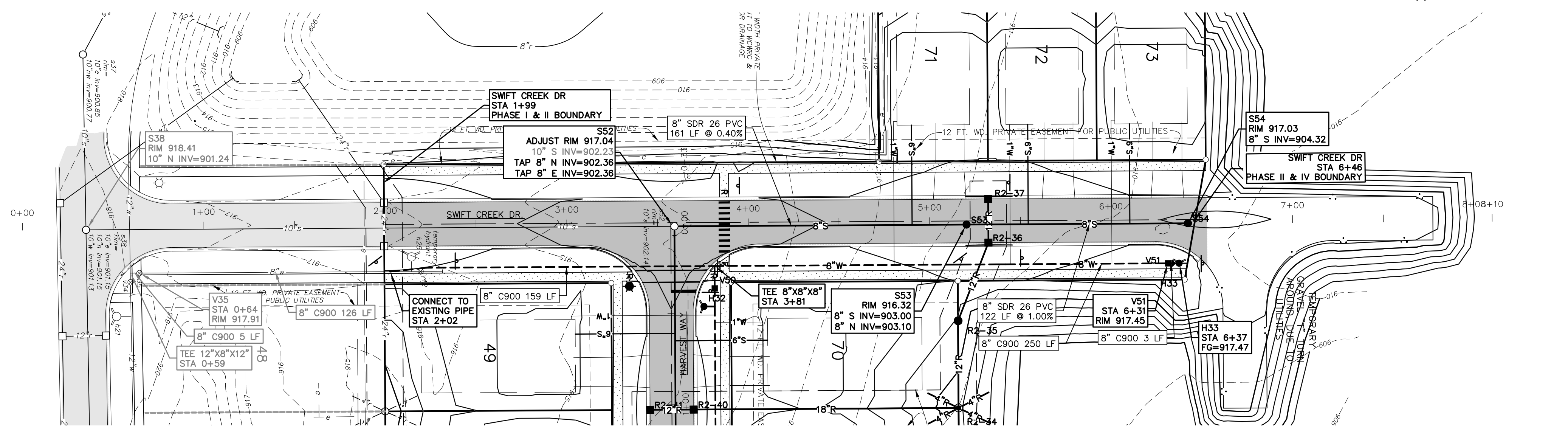
Road Station	Structure Name	Structure Type	Finished Grade Elevation
STA 6+37	H33	TEMPORARY HYDRANT	917.47

WATER VALVE SCHEDULE

Road Station	Structure Name	Structure Type	Rim Elevation
STA 6+31	V51	TEMPORARY 8" GATE VALVE IN BOX	917.45

SANITARY SEWER STRUCTURE SCHEDULE

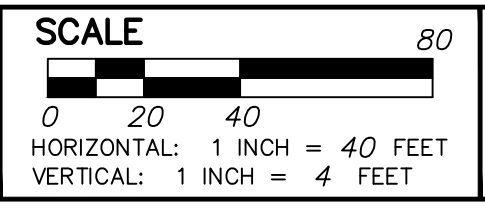
Structure Name	Structure Type and Size	Rim Elevation	Inverts	Pipe Size	Structure Depth
S52	EXISTING MANHOLE	917.56	S 902.23 S 902.36	10 INCH 8 INCH	15.33'
S53	MANHOLE TYPE 1 4FT DIA.	916.32	S 903.00 S 903.10	8 INCH 8 INCH	13.31'
S54	MANHOLE TYPE 1 4FT DIA.	917.03	S 904.32	8 INCH	12.71'



Lot No.	DISTANCE FROM DOWN STREAM STRUCTURE	DOWN STREAM MANHOLE	ROAD STATION	MAIN INV.	MAIN DIA. (INCH)	WYE @MAIN (INCH)	SAN. LEAD DIA. (INCH)	RISER HEIGHT (FT)	SANITARY LEAD SLOPE (%)	LEAD DISTANCE TO STORM TO WATER CROSSING	LEAD DISTANCE TO STORM TO WATER CROSSING	LEAD DISTANCE TO ADDITIONAL RISER	LEAD INVERT AT ADDITIONAL RISER	LEAD LENGTH TO INVERT AT PUBLIC EASEMENT	LEAD LENGTH TO HOUSE FOUNDATION	DEPTH FROM FF TO LEAD INVERT AT HOUSE FOUNDATION (Min Target Depth 12.5)	HOUSE FF ELEVATION	FF-FG	HOUSE FG ELEVATION	
71	131	S52	4+90	902.88	8 INCH	902.96	6 INCH	3.6	1.00%				47	907.07	8	907.15	12.50	919.65	1.67	917.98
72	34	S53	5+54	903.44	8 INCH	903.52	6 INCH	3.3	1.00%				47	907.29	8	907.37	12.50	919.87	1.67	918.20
73	90	S53	6+10	904.00	8 INCH	904.08	6 INCH	2.9	1.00%				47	907.50	8	907.58	12.50	920.08	1.67	918.41

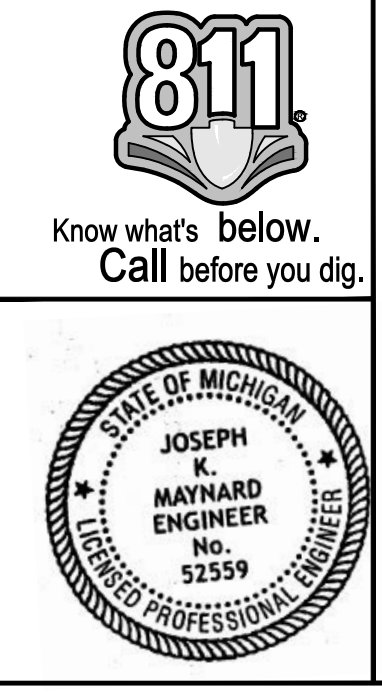
BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9th WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
 BM2=NAIL IN WLY FACE OF 26" WALNUT, 43rd NORTH OF DEXTER-CHELSEA RD AND 37th NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21 (NAVD 88 DATUM)

REVISIONS 4-15-2024 PER WCRC AND CITY REVIEWS
 2-6-2024 PER WCRC AND CITY REVIEWS



PREPARED BY: *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559

ALL PROPOSED STREET TREES MUST BE A MINIMUM OF 4 FT FROM UTILITIES
 WETLANDS DELINEATED BY: GJS LAND PLANNING, LLC NOVEMBER OF 2023.



THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATE AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
 COPYRIGHT © 2024 WASHTENAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTENAW ENGINEERING COMPANY, INC.
 THE OWNER SHALL NOT USE OR WITHHOLD ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, INFORMATION, OR DATA FOR ANY OTHER PROJECTS OR FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHER INSTRUMENTS OF SERVICE OR OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHER INSTRUMENTS OF SERVICE OR OTHER PROJECTS, THE SURVEYOR SHALL BE ADVISED IN WRITING. THE SURVEYOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCURRED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
 UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, INFORMATION, OR DATA FOR OTHER PROJECTS OR FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHER INSTRUMENTS OF SERVICE OR OTHER PROJECTS IS STRICTLY PROHIBITED.

CLIENT
 M/I HOMES OF MICHIGAN
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

SHEET
 SANITARY SEWER & WATER MAIN
 SWIFT CREEK DR
 STA. 0+00 TO 6+52

PROJECT
 SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
 CITY OF CHELSEA
 WASHTENAW COUNTY • MICHIGAN
 JOB NO. 32971
 DATE 11-1-23
 DWS NO. 971-p2-swift creek-pro
 FIELD BOOK 446
 FILE NO. 10668

811
 Know what's below. Call before you dig.

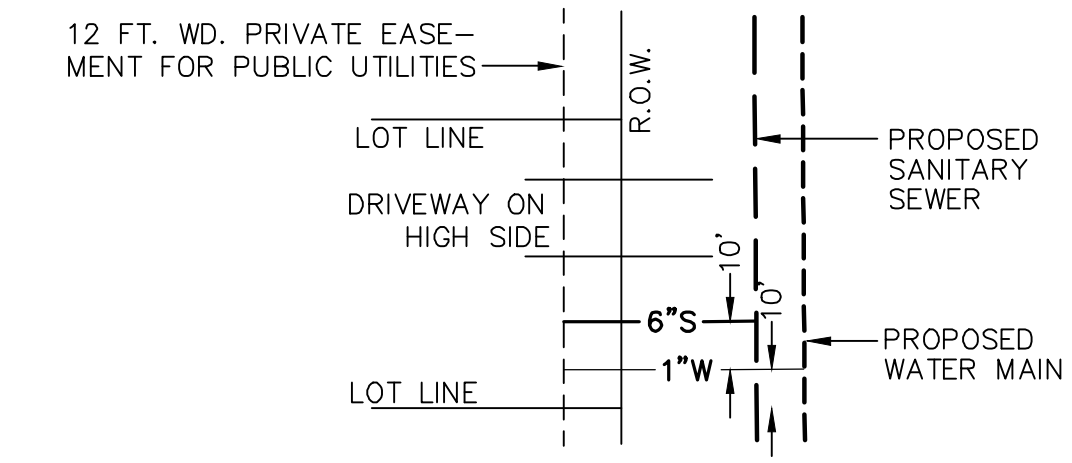
LEGEND
 LIGHT POLE
 UTILITY POLE
 GUY ANCHOR
 HYDRANT
 SPOT ELEV.
 POST
 GATE VALVE
 SIGN
 TRANSFORMER
 MANHOLE
 CATCHBASIN
 END SECTION
 GRAVEL
 FENCE
 CONCRETE
 ASPHALT
 EXISTING STORM
 EXISTING SANITARY
 EXISTING WATER
 EXISTING GAS
 EXISTING ELECTRIC
 EXISTING TELEPHONE

WASHTENAW ENGINEERING
 CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 3526 W. LIBERTY RD
 ANN ARBOR, MI 48103
 TEL. 734-761-8900

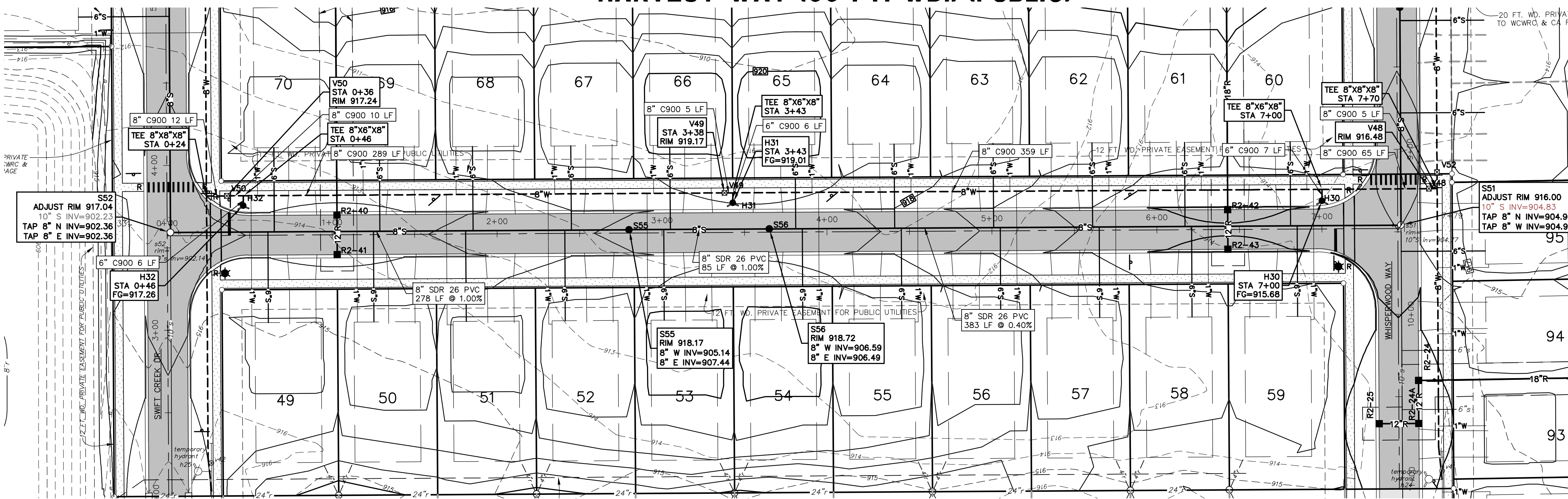
21
 SHEET

HARVEST WAY (66 FT. WD.) (PUBLIC)

SANITARY SEWER LEAD & WATER MAIN LEAD DETAIL (NOT TO SCALE)



- SANITARY NOTES:**
- ALL CONSTRUCTION WILL CONFORM TO THE CURRENT CITY OF CHELSEA SANITARY SEWER STANDARDS AND SPECIFICATIONS.
 - MANHOLE COVERS AND FRAME SHALL BE EAST JORDAN IRON WORKS 1040 HEAVY DUTY OR APPROVED EQUAL. COVERS SHALL BE SOLID WITH NO BOLT HOLES. COVERS SHALL BE CAST WITH THE WORDS "SANITARY SEWER" IN RAISED LETTERS SPACED IN FROM THE PERIPHERY OF THE COVER. COVERS SHALL INCLUDE THE CITY OF CHELSEA LOGO, AN EJW TEMPLATE EXISTS.
 - SANITARY CLEANOUTS SHALL BE INSTALLED 3' OFF FOUNDATION WALL INSIDE OF HOME.
 - STATIONING FOR SANITARY SEWER ON THIS SHEET IS BASED ON CENTERLINE ROAD ALIGNMENT.
- SANITARY SEWER QUANTITIES**
- 746 LF 8" SDR 26 SEWER
 22 EA 6" DIA. MANHOLE
 3 EA 8" GATE VALVE IN BOX
 3 EA 8"x6"x8" TEE
- WATER MAIN NOTES:**
- ALL CONSTRUCTION WILL CONFORM TO THE CURRENT CITY OF CHELSEA WATER MAIN STANDARDS AND SPECIFICATIONS.
 - ALL HYDRANTS SHALL BE PROVIDED WITH 2-2 1/2" CONNECTIONS WITH A 5" STORTZ CONNECTION.
 - CONTRACTOR SHALL PUMP DOWN WATER AFTER TESTING.
 - IN NO CIRCUMSTANCE SHOULD THE CURB BOX BE LOCATED WITHIN A SIDEWALK, DRIVEWAY, OR OTHER PAVED AREA.
 - HYDRANT HEIGHTS SHALL BE IN A WORKABLE RANGE OF NO LOWER THAN 18 INCHES AND NO HIGHER THAN 30 INCHES. THE MEASUREMENTS SHALL BE MADE FROM THE CENTER OF THE PUMPER OUTLET TO THE FINISH GRADE.
 - STATIONING FOR WATER MAIN ON THIS SHEET IS BASED ON CENTERLINE ROAD ALIGNMENT.
 - TRACER WIRE TO BE INSTALLED ON WATER MAIN AND LEADS.



NOTE: UTILITY EXCAVATION AREAS WITHIN THE ROADWAY CORRIDOR SHALL HAVE 100% CLASS II GRANULAR BACKFILL TO SUBGRADE ELEVATION. COMPACTED TO 95% MAXIMUM UNIT WEIGHT.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

WATER MAIN QUANTITIES

- 746 LF 8" C 900
 19 LF 6" C 900
 22 EA 1" SDR 9 HDPE LEAD AND STOP BOX
 3 EA 8" GATE VALVE IN BOX
 3 EA 8"x6"x8" TEE
 3 EA HYDRANT ASSEMBLY WITH COMPANION VALVE

SOILS INFORMATION

THE SOILS INFORMATION AS PRESENTED SHOWS GENERAL CONDITIONS ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF THESE SOIL LOCATIONS SINCE GROUND CONDITIONS ARE SUBJECT TO CHANGE. IT IS ADVISED THAT THOSE CONTRACTORS SUBMITTING PROPOSALS THROUGHLY ACQUAINT THEMSELVES WITH THE LOCAL CONDITIONS.

ANY CONDITIONS EXISTING ON THE SITE THAT ARE NOT CONSISTENT WITH THE PLANS OR SOIL EROSION SEDIMENTATION PERMIT WILL RESULT IN A STOP WORK ORDER AND REVOCATION OF THE SOIL EROSION SEDIMENTATION CONTROL PERMIT.

- PROPOSED LEGEND**
- ASPHALT SURFACE
 - CONCRETE SURFACE
 - 6" UNDER DRAIN PIPE WITH SOCK
 - SPILL IN (F4) BARRIER CONCRETE CURB & GUTTER
 - SPILL OUT (F4) BARRIER CONCRETE CURB & GUTTER
 - SIGN
 - LIGHTPOLE
 - RAMP WITH TACTILE WARNING STRIPS
 - WASHTENAW COUNTY WATER RESOURCES COMMISSIONER
 - CONDOMINIUM ASSOCIATION

Road Station	Structure Name	Structure Type	Finished Grade Elevation
STA 0+46	H32	HYDRANT	917.26
STA 3+43	H31	HYDRANT	919.01
STA 7+00	H30	HYDRANT	915.68

- PROPOSED UTILITY LEGEND**
- 12" S = STORM SEWER
 - 8" S = SANITARY SEWER
 - 8" W = WATER MAIN
 - 10" S = EXISTING SANITARY SEWER
 - HYDRANT
 - GATE VALVE IN WELL
 - GATE VALVE IN BOX
 - CURB BOX
 - FLARED END SECTION
 - MANHOLE
 - CATCHBASIN

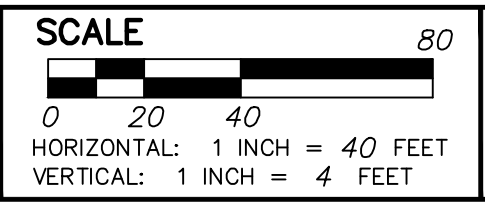
Road Station	Structure Name	Structure Type	Rim Elevation
STA 0+36	V50	GATE VALVE IN BOX	917.24
STA 3+38	V49	GATE VALVE IN BOX	919.17
STA 7+65	V48	GATE VALVE IN BOX	916.48

Structure Name	Structure Type and Size	Rim Elevation	Inverts	Pipe Size	Structure Depth
S51	EXISTING MANHOLE	916.00	904.83 904.96 904.96	10 INCH 8 INCH 8 INCH	11.17'
S52	EXISTING MANHOLE	917.56	902.23 902.36 902.36	10 INCH 8 INCH 8 INCH	15.33'
S55	MANHOLE TYPE 1 4FT DIA.	918.17	905.14 907.19	8 INCH 8 INCH	13.03'
S56	MANHOLE TYPE 1 4FT DIA.	918.72	906.59 906.49	8 INCH 8 INCH	12.22'

Let No.	DISTANCE FROM DOWN STREAM STRUCTURE	DISTANCE DOWN STREAM MANHOLE	ROAD STATION	MAIN INV. @WYE	MAIN DIA. (INCH)	WYE INV. @MAIN (INCH)	SAN. LEAD DIA. (INCH)	RISER HEIGHT (FT)	SANITARY SLOPE (%)	LEAD DISTANCE TO STORM CROSSING	LEAD DISTANCE TO WATER CROSSING	LEAD DISTANCE TO ADDITIONAL RISER	LEAD INVERT AT BUILDING EASEMENT	LEAD LENGTH TO HOUSE FOUNDATION	LEAD INVERT TO HOUSE FOUNDATION SETBACK	DEPTH FROM FT TO FOUNDATION (Min Target Depth 12.5)	HOUSE FF ELEVATION	FF-FG	HOUSE FG ELEVATION	
49	59	552	0+61	902.94	8 INCH	903.02	6 INCH	3.7	1.00%				47	907.18	8	907.26	12.50	919.76	1.67	918.09
50	123	552	0+61	903.58	8 INCH	903.66	6 INCH	3.5	1.00%				47	907.65	8	907.73	12.50	920.23	1.67	918.56
51	179	552	1+81	904.15	8 INCH	904.23	6 INCH	3.5	1.00%				47	908.25	8	908.33	12.50	920.83	1.67	919.16
52	239	552	2+41	904.74	8 INCH	904.82	6 INCH	3.6	1.00%				47	908.85	8	908.93	12.50	921.43	1.67	919.76
53	64	556	3+01	907.23	8 INCH	907.31	6 INCH	1.6	1.00%				47	909.39	8	909.47	12.50	921.97	1.67	920.30
54	363	551	3+85	906.41	8 INCH	906.49	6 INCH	2.5	1.00%				47	909.48	8	909.56	12.50	922.06	1.67	920.39
55	303	551	4+45	906.17	8 INCH	906.25	6 INCH	2.1	1.00%				47	908.86	8	908.94	12.50	921.44	1.67	919.77
56	243	551	5+05	905.93	8 INCH	906.01	6 INCH	1.4	1.00%				47	907.86	8	907.94	12.50	920.44	1.67	918.77
57	183	551	5+65	905.69	8 INCH	905.77	6 INCH	0.6	1.00%				47	906.86	8	906.94	12.50	919.44	1.67	917.77
58	127	551	6+21	905.47	8 INCH	905.55	6 INCH	0.0	1.00%				47	905.99	8	906.07	12.50	918.57	1.67	916.90
59	63	551	6+85	905.21	8 INCH	905.29	6 INCH	0.2	1.00%				47	905.99	8	906.07	12.50	918.57	1.67	916.90
60	67	551	6+81	905.22	8 INCH	905.30	6 INCH	0.3	1.00%	22			43	905.99	8	906.07	12.50	918.57	1.67	916.90
61	131	551	6+17	905.48	8 INCH	905.56	6 INCH	0.0	1.00%				43	906.99	8	907.07	12.50	918.57	1.67	916.90
62	187	551	5+61	905.71	8 INCH	905.79	6 INCH	0.6	1.00%	22			43	906.86	8	906.94	12.50	919.44	1.67	917.77
63	247	551	5+01	905.94	8 INCH	906.02	6 INCH	1.0	1.00%	22	24	907.67	43	907.86	8	907.94	12.50	920.44	1.67	918.77
64	307	551	4+41	906.19	8 INCH	906.27	6 INCH	1.0	1.00%	22	24	908.67	43	908.86	8	908.94	12.50	921.44	1.67	919.77
65	367	551	3+81	906.42	8 INCH	906.50	6 INCH	1.0	1.00%	22	24	909.29	43	909.48	8	909.56	12.50	922.06	1.67	920.39
66	60	556	3+05	907.19	8 INCH	907.27	6 INCH	1.0	1.00%	22	24	909.20	43	909.39	8	909.47	12.50	921.97	1.67	920.30
67	243	552	2+45	904.78	8 INCH	904.86	6 INCH	1.0	1.00%	22	24	908.66	43	908.85	8	908.93	12.50	921.43	1.67	919.76
68	183	552	1+85	904.19	8 INCH	904.27	6 INCH	1.0	1.00%	22	24	908.06	43	908.25	8	908.33	12.50	920.83	1.67	919.16
69	127	552	1+29	903.62	8 INCH	903.70	6 INCH	1.0	1.00%	22	24	907.46	43	907.65	8	907.73	12.50	920.23	1.67	918.56
70	63	552	0+65	902.99	8 INCH	903.07	6 INCH	1.0	1.00%	22	24	906.99	43	907.18	8	907.26	12.50	919.76	1.67	918.09

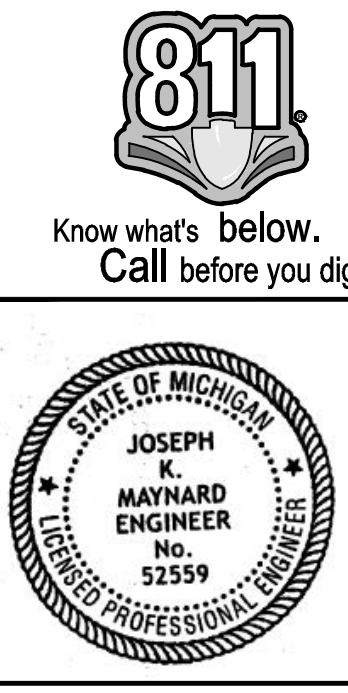
BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9th WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
 BM2=NAIL IN WLY FACE OF 26" WALNUT, 43th NORTH OF DEXTER-CHELSEA RD AND 37th NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND WICKSBURG DR, ELEV=913.21 (NAVD 88 DATUM)

REVISIONS 4-15-2024 PER WCRC AND CITY REVIEWS
 2-6-2024 PER WCRC AND CITY REVIEWS



PREPARED BY: *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559

ALL PROPOSED STREET TREES MUST BE A MINIMUM OF 4 FT FROM UTILITIES.
 WETLANDS DELINEATED BY: GJS LAND PLANNING, LLC NOVEMBER OF 2023.



COPYRIGHT © 2024 WASHTENAW ENGINEERING COMPANY, INC.
 NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTENAW ENGINEERING COMPANY, INC.

THE PLANS SHALL NOT BE USED FOR ANY OTHER PROJECT OR PURPOSE. THE DRAWINGS, SPECIFICATIONS, REVISIONS BY THIS FIRM OR BY OTHERS SO LONG AS WASHTENAW ENGINEERING COMPANY (WEC) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, LICENSES, AND APPROVALS FROM ALL APPLICABLE AGENCIES AND AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, LICENSES, AND APPROVALS FROM ALL APPLICABLE AGENCIES AND AUTHORITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, LICENSES, AND APPROVALS FROM ALL APPLICABLE AGENCIES AND AUTHORITIES.

CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 3526 W. LIBERTY RD
 ANN ARBOR, MI 48103
 TEL: 734-761-8900

**WASHTENAW
ENGINEERING**

CLIENT
 M/I HOMES OF
 MICHIGAN
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

SHEET
 SANITARY SEWER & WATER MAIN
 HARVEST WAY
 STA. 0+00 TO 7+58

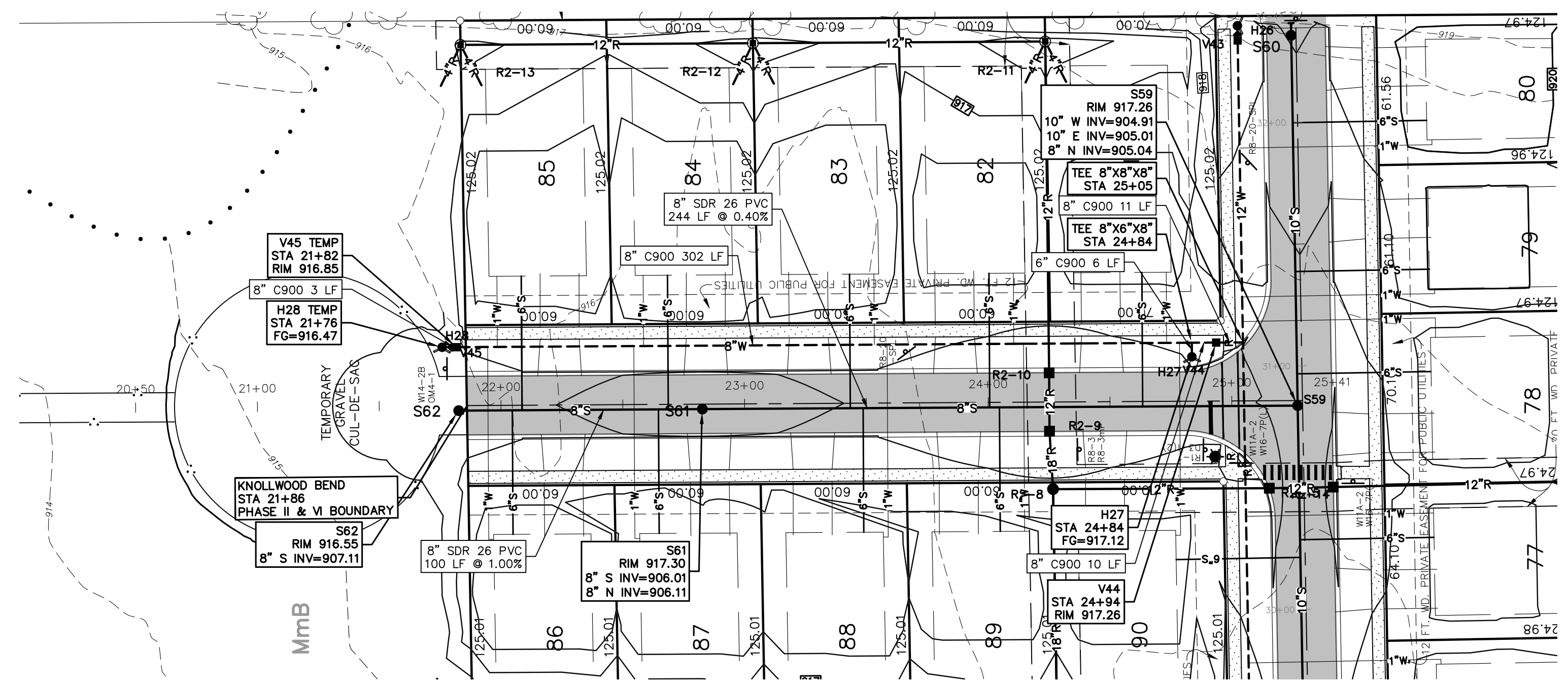
PROJECT
 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
 CITY OF CHELSEA
 WASHTENAW COUNTY • MICHIGAN
 JOB No. 32971
 DWS No. 971-p2-harvest-pro
 FIELD BOOK 446
 FILE No. 10668

DATE 11-1-23

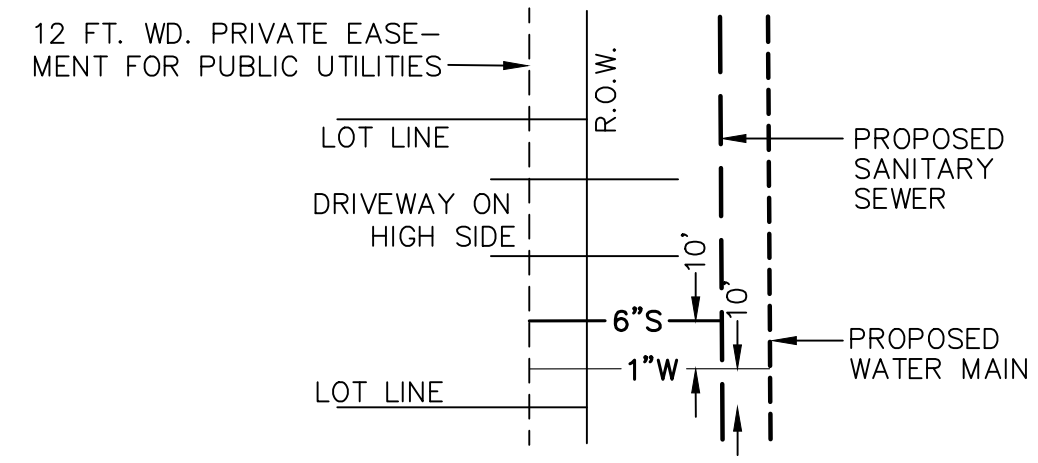
Know what's below.
Call before you dig.

22
SHEET

KNOLLWOOD BEND (66 FT. WD.) (PUBLIC)



SANITARY SEWER LEAD & WATER MAIN LEAD DETAIL (NOT TO SCALE)



- SANITARY NOTES:**
- ALL CONSTRUCTION WILL CONFORM TO THE CURRENT CITY OF CHELSEA SANITARY SEWER STANDARDS AND SPECIFICATIONS.
 - MANHOLE COVERS AND FRAME SHALL BE EAST JORDAN IRON WORKS 1040 HEAVY DUTY OR APPROVED EQUAL. COVERS SHALL BE SOLID WITH NO BOLT HOLES. COVERS SHALL BE CAST WITH THE WORDS "SANITARY SEWER" IN RAISED LETTERS SPACED IN FROM THE PERIPHERY OF THE COVER. COVERS SHALL INCLUDE THE CITY OF CHELSEA LOGO. AN EJW TEMPLATE EXISTS.
 - SANITARY CLEANOUTS SHALL BE INSTALLED 3' OFF FOUNDATION WALL INSIDE OF HOME.
 - STATIONING FOR SANITARY SEWER ON THIS SHEET IS BASED ON CENTERLINE OF PIPE ALIGNMENT.
- SANITARY SEWER QUANTITIES:**
- 544 LF 8" SDR 26 SEWER
 - 9 EA 6" SDR 26 SEWER LEADS
 - 2 EA 4FT DIA. MANHOLE
- NOTE: NO DUPLICATE QUANTITIES FROM PREVIOUS SHEETS.
- WATER MAIN NOTES:**
- ALL CONSTRUCTION WILL CONFORM TO THE CURRENT CITY OF CHELSEA WATER MAIN STANDARDS AND SPECIFICATIONS.
 - ALL HYDRANTS SHALL BE PROVIDED WITH 2-2 1/2" CONNECTIONS WITH A 5" STORTZ CONNECTION.
 - CONTRACTOR SHALL PUMP DOWN WATER AFTER TESTING.
 - IN NO CIRCUMSTANCE SHOULD THE CURB BOX BE LOCATED WITHIN A SIDEWALK, DRIVEWAY, OR OTHER PAVED AREA.
 - HYDRANT HEIGHTS SHALL BE IN A WORKABLE RANGE OF NO LOWER THAN 18 INCHES AND NO HIGHER THAN 30 INCHES. THE MEASUREMENTS SHALL BE MADE FROM THE CENTER OF THE PUMPER OUTLET TO THE FINISH GRADE.
 - STATIONING FOR WATER MAIN ON THIS SHEET IS BASED ON CENTERLINE ROAD ALIGNMENT.
 - TRACER WIRE TO BE INSTALLED ON ALL WATER MAIN AND LEADS.
- WATER MAIN QUANTITIES:**
- 326 LF 8" C 900
 - 9 LF 6" C 900
 - 10 EA 1" SDR 9 HDPE LEAD AND STOP BOX
 - 1 EA TEMPORARY HYDRANT ASSEMBLY
 - 1 EA 8"x6" REDUCER
 - 2 EA 8" GATE VALVE IN BOX
 - 1 EA HYDRANT ASSEMBLY WITH COMPANION VALVE
 - 4 EA 45° BEND
- NOTE: NO DUPLICATE QUANTITIES FROM PREVIOUS SHEETS.

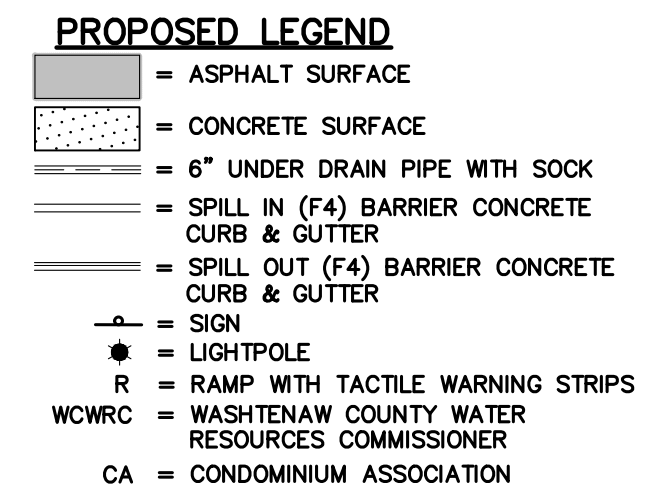
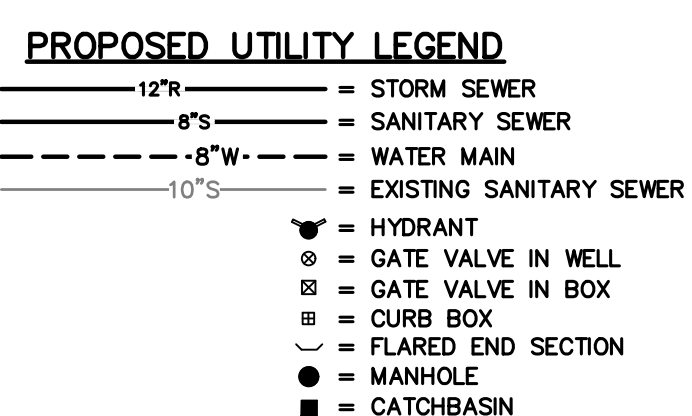
NOTE: UTILITY EXCAVATION AREAS WITHIN THE ROADWAY CORRIDOR SHALL HAVE 100% CLASS II GRANULAR BACKFILL TO SUBGRADE ELEVATION. COMPACTED TO 95% MAXIMUM UNIT WEIGHT.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

SOILS INFORMATION

THE SOILS INFORMATION AS PRESENTED SHOWS GENERAL CONDITIONS ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF THESE SOIL LOCATIONS SINCE GROUND CONDITIONS ARE SUBJECT TO CHANGE. IT IS ADVISED THAT THOSE CONTRACTORS SUBMITTING PROPOSALS THROUGHLY ACQUAINT THEMSELVES WITH THE LOCAL CONDITIONS.

ANY CONDITIONS EXISTING ON THE SITE THAT ARE NOT CONSISTENT WITH THE PLANS OR SOIL EROSION SEDIMENTATION PERMIT WILL RESULT IN A STOP WORK ORDER AND REVOCATION OF THE SOIL EROSION SEDIMENTATION CONTROL PERMIT.



WASHTENAW COUNTY SOIL SURVEY CLASSIFICATION

- CoB - CONOVER LOAM, 0 TO 4 PERCENT SLOPES
- KeB - KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES
- MmB - MIAMI LOAM, 2 TO 6 PERCENT SLOPES
- Osb - OSHTOMO LOAMY SAND, 0 TO 6 PERCENT SLOPES

••••• = SOILS BOUNDARY

SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTENAW COUNTY.

WATER HYDRANT SCHEDULE

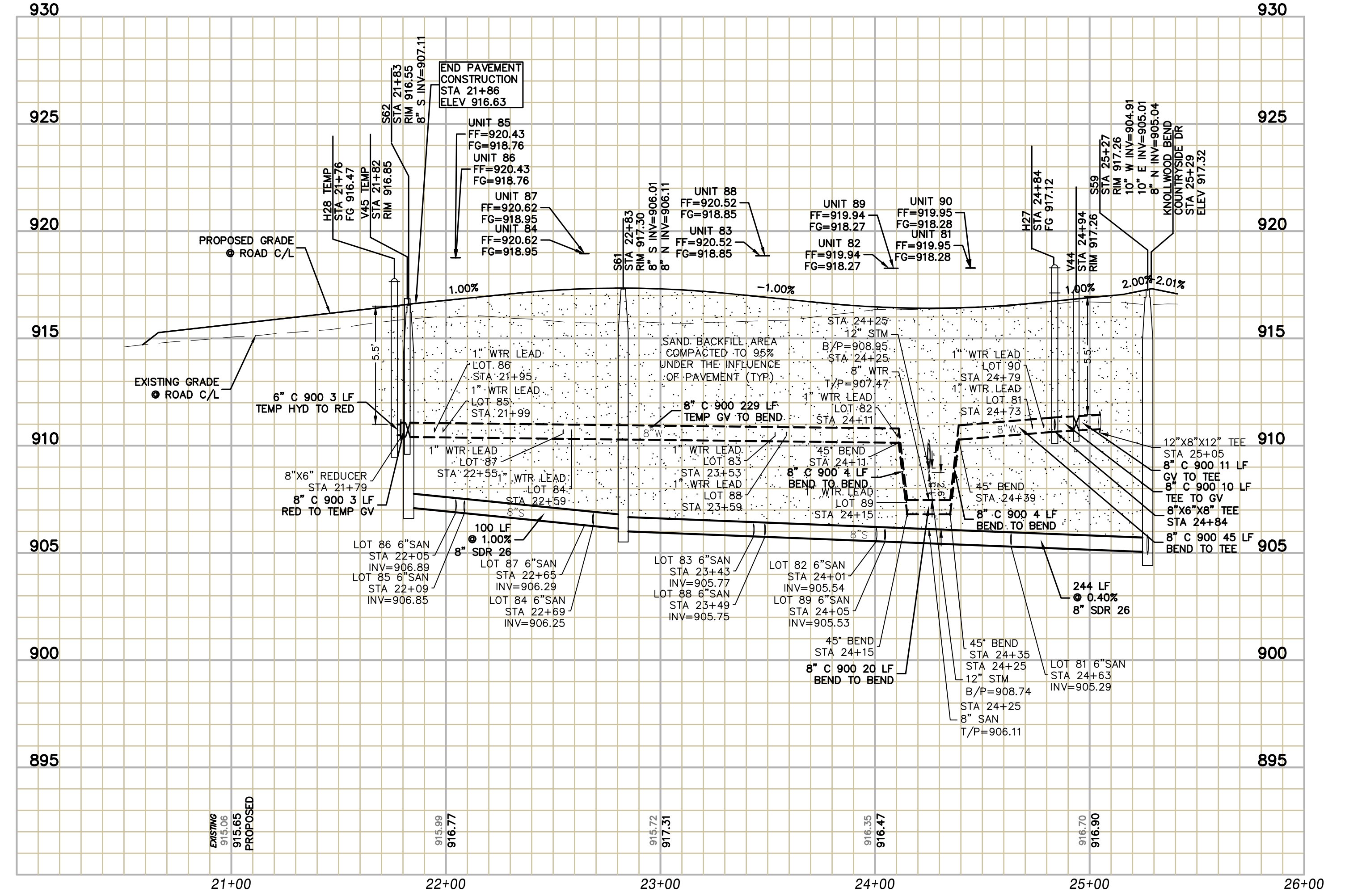
Road Station	Structure Name	Structure Type	Finished Grade Elevation
STA 21+76	H28	TEMPORARY HYDRANT	916.47

WATER VALVE SCHEDULE

Road Station	Structure Name	Structure Type	Rim Elevation
STA 21+82	V45	TEMPORARY 8" GATE VALVE IN BOX	916.85
STA 24+94	V44	8" GATE VALVE IN BOX	917.26

SANITARY SEWER STRUCTURE SCHEDULE

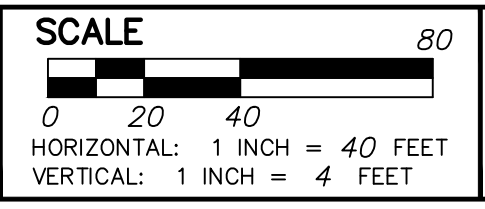
Structure Name	Structure Type and Size	Rim Elevation	Inverts	Pipe Size	Structure Depth
S59	MANHOLE TYPE 1 4FT DIA.	917.26	E 905.01 W 904.91 N 905.04	10 INCH 10 INCH 8 INCH	12.35'
S61	MANHOLE TYPE 1 4FT DIA.	917.30	S 906.01 N 905.11	8 INCH 8 INCH	11.29'
S62	MANHOLE TYPE 1 4FT DIA.	916.55	S 907.11	8 INCH	9.44'



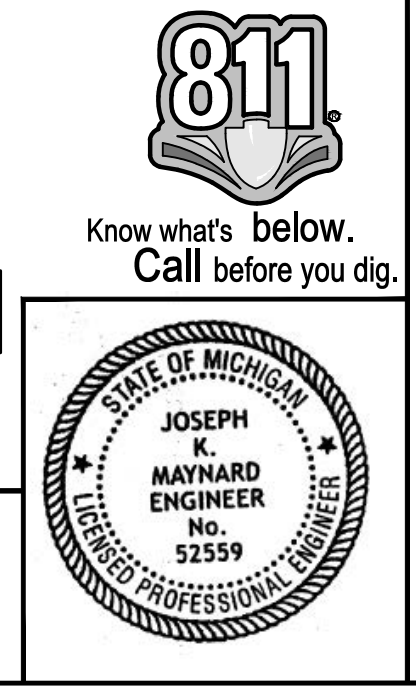
LOT NO.	DISTANCE FROM DOWN STREAM MANHOLE	ROAD STATION	MAIN INV. @WYE	MAIN DIA. (INCH)	WYE INV. (INCH)	SAN. LEAD DIA. (INCH)	RISER HEIGHT (FT)	SANITARY LEAD DIA. (INCH)	LEAD DISTANCE TO STORM CROSSING	LEAD DISTANCE TO WATER CROSSING	LEAD DISTANCE TO ADDITIONAL RISER	LEAD INVERT AT ADDITIONAL RISER	LEAD LENGTH TO PUBLIC EASEMENT	LEAD INVERT AT PUBLIC EASEMENT	LEAD LENGTH TO HOUSE FOUNDATION	LEAD INVERT AT BUILDING SETBACK	DEPTH FROM FF TO LEAD INVERT AT HOUSE FOUNDATION (Min Target Depth 12.5')	HOUSE FF ELEVATION	FF-FG	HOUSE FG ELEVATION
81	64	S59	24+62	905.29	8 INCH	905.37	6 INCH	1.0	1.00%	26	28	907.31	47	907.50	8	907.58	12.50	900.08	1.67	918.41
82	120	S59	24+01	905.54	8 INCH	905.62	6 INCH	1.0	1.00%	26	28	907.32	47	907.51	8	907.59	12.50	900.09	1.67	918.42
83	184	S59	23+43	905.77	8 INCH	905.85	6 INCH	1.0	1.00%	26	28	907.90	47	908.09	8	908.17	12.50	900.67	1.67	919.00
84	14	S61	22+69	906.25	8 INCH	906.33	6 INCH	1.0	1.00%	26	28	908.00	47	908.19	8	908.27	12.50	900.77	1.67	919.10
85	74	S61	22+09	906.85	8 INCH	906.93	6 INCH	0.4	1.00%	26	28	907.83	47	907.83	8	907.91	12.50	900.41	1.67	918.74
86	78	S61	22+05	906.89	8 INCH	906.97	6 INCH	0.4	1.00%	26	28	907.85	47	907.85	8	907.93	12.50	900.43	1.67	918.76
87	18	S61	22+65	906.29	8 INCH	906.37	6 INCH	1.2	1.00%	43	45	908.04	8	908.12	12.50	900.62	1.67	918.95		
88	178	S59	23+49	905.75	8 INCH	905.83	6 INCH	1.8	1.00%	43	45	908.09	8	908.17	12.50	900.67	1.67	919.00		
89	122	S59	24+09	905.53	8 INCH	905.61	6 INCH	1.4	1.00%	43	45	907.49	8	907.57	12.50	900.07	1.67	918.40		

BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9th WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
 BM2=NAIL IN WLY FACE OF 26" WALNUT, 43' NORTH OF DEXTER-CHELSEA RD AND 37th NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21 (NAVD 88 DATUM)

REVISIONS 4-15-2024 PER WCWRC AND CITY REVIEWS
 2-6-2024 PER WCWRC AND CITY REVIEWS



PREPARED BY: *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559



ALL PROPOSED STREET TREES MUST BE A MINIMUM OF 4 FT FROM UTILITIES
 WETLANDS DELINEATED BY: GJS LAND PLANNING, LLC NOVEMBER OF 2023.

COPYRIGHT © 2024 WASHTENAW ENGINEERING COMPANY, INC.
 NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTENAW ENGINEERING COMPANY, INC.

THE PLANS SHALL NOT BE USED FOR ANY OTHER PROJECT OR FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF WASHTENAW ENGINEERING COMPANY, INC. THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE PROJECT AND FOR COMPLETION OF THE PROJECT BY OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS, THE ENGINEER IS NOT RESPONSIBLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND EMPLOYEES OF ANY OF THEM FROM WHOM SMALL MATERIALS AND HOLD HARMLESS MCO, MCO'S CONSULTANTS AND AGENCIES AND EMPLOYEES OF ANY OF THEM FROM UNANNOUNCED REUSE OF DRAWINGS, SPECIFICATIONS, ELEVATIONS, ETC. ARISING OUT OF THE PROJECT.

WASHTENAW ENGINEERING
 CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 3526 W. LIBERTY RD
 ANN ARBOR, MI 48103
 TEL: 734-761-8900

M/I HOMES OF MICHIGAN
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

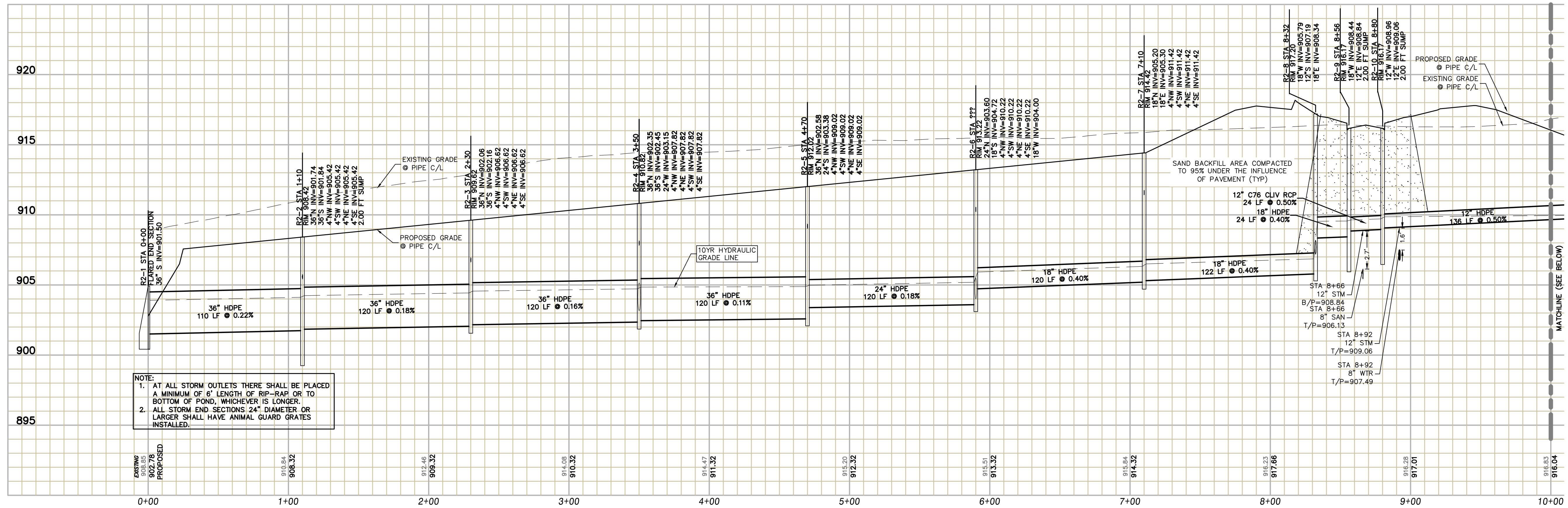
SANITARY SEWER & WATER MAIN KNOLLWOOD BEND STA. 21+86 TO 25+41

HERITAGE FARMS PHASE 2

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
 CITY OF CHELSEA
 WASHTENAW COUNTY • MICHIGAN
 DATE 11-1-23 JOB NO. 32971
 DWS NO. 971-p2-herwood-prj
 FIELD BOOK 446 FILE NO. 10668

23
 SHEET

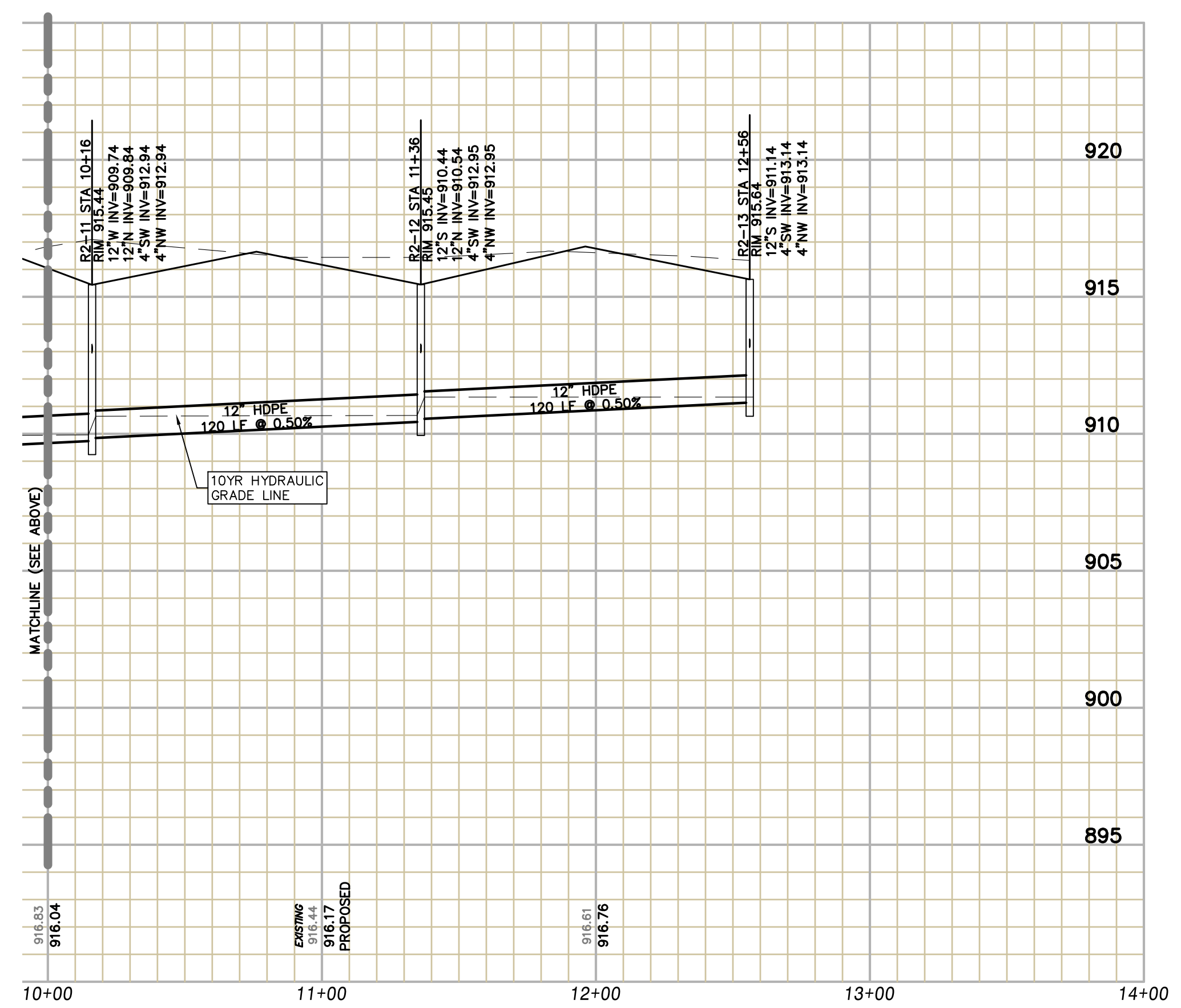
R2-13 TO R2-1



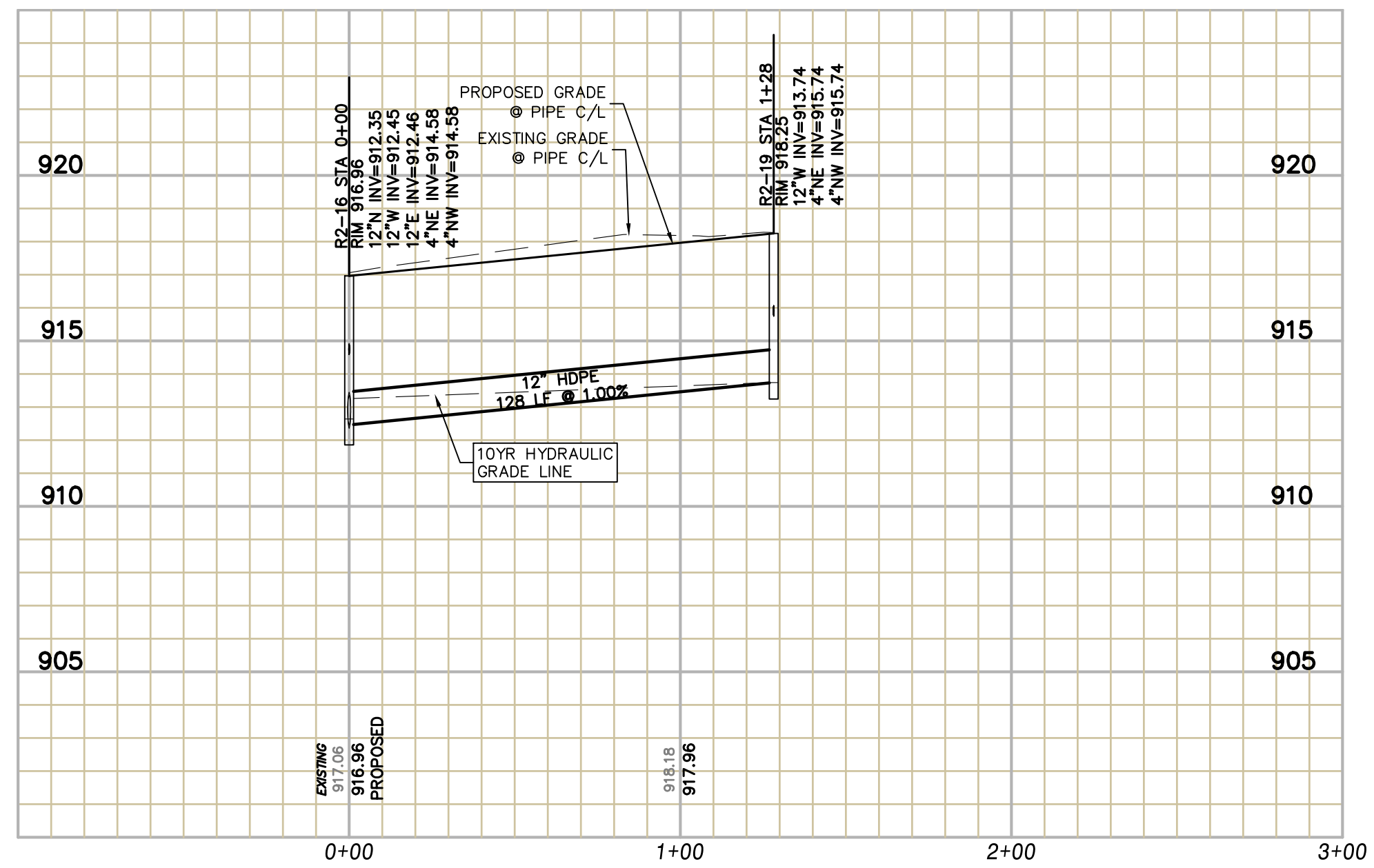
NOTE:
 1. AT ALL STORM OUTLETS THERE SHALL BE PLACED A MINIMUM OF 6' LENGTH OF RIP-RAP OR TO BOTTOM OF POND, WHICHEVER IS LONGER.
 2. ALL STORM END SECTIONS 24" DIAMETER OR LARGER SHALL HAVE ANIMAL GUARD GRATES INSTALLED.

Structure Name	Costing Frame Structure	Inverts	Pipe Size	Comments
R2-1	36" FLARED END SECTION	S 901.50	36 INCH	

Structure Name	Structure Type Frame, Cover and Size	Rim Elevation	Inverts	Pipe Size	Structure Depth	Comments
R2-2	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 72" DIA. CATCH BASIN	908.42	S 901.84 N 901.74 NW 905.42 SW 905.42 NE 905.42 SE 905.42	36 INCH 36 INCH 4 INCH 4 INCH 4 INCH 4 INCH	8.67'	2.00' SUMP
R2-3	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 72" DIA. CATCH BASIN	909.62	N 902.06 S 902.16 NW 906.62 SW 906.62 NE 906.62 SE 906.62	36 INCH 36 INCH 4 INCH 4 INCH 4 INCH 4 INCH	7.56'	0.00' SUMP
R2-4	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 72" DIA. CATCH BASIN	910.82	S 902.45 N 902.35 NW 907.74 SW 907.82 NE 907.82 SE 907.82	36 INCH 36 INCH 4 INCH 4 INCH 4 INCH 4 INCH	8.46'	0.00' SUMP
R2-5	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 60" DIA. CATCH BASIN	912.02	S 903.38 N 902.58 NW 909.02 SW 909.02 NE 909.02 SE 909.02	24 INCH 36 INCH 4 INCH 4 INCH 4 INCH 4 INCH	9.43'	0.00' SUMP
R2-6	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 48" DIA. CATCH BASIN	913.22	S 904.72 N 903.60 NW 910.22 SW 910.22 NE 910.22 SE 910.22 W 904.00	18 INCH 24 INCH 4 INCH 4 INCH 4 INCH 4 INCH 18 INCH	9.62'	0.00' SUMP
R2-7	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 48" DIA. CATCH BASIN	914.42	E 905.30 N 905.20 NW 911.42 SW 911.42 NE 911.42 SE 911.42	18 INCH 18 INCH 4 INCH 4 INCH 4 INCH 4 INCH	9.22'	0.00' SUMP
R2-8	EJW 1040 FRAME TYPE A SOLID COVER 48" DIA. MANHOLE	917.20	S 907.19 E 908.34 W 905.79	12 INCH 18 INCH 18 INCH	11.41'	0.00' SUMP
R2-9	EJW 7045 FRAME TYPE M1 GRATE 7050 TI BACK 48" DIA. CATCH BASIN	916.17	E 908.84 W 908.44	12 INCH 18 INCH	9.73'	2.00' SUMP
R2-10	EJW 7045 FRAME TYPE M1 GRATE 7050 TI BACK 48" DIA. CATCH BASIN	916.17	W 908.96 E 909.06	12 INCH 12 INCH	9.21'	2.00' SUMP
R2-11	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 48" DIA. CATCH BASIN	915.44	N 909.74 S 909.84 NW 912.94 SW 912.94	12 INCH 12 INCH 4 INCH 4 INCH	5.70'	0.00' SUMP
R2-12	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 48" DIA. CATCH BASIN	915.45	N 910.54 S 910.44 NW 912.95 SW 912.95	12 INCH 12 INCH 4 INCH 4 INCH	5.01'	0.00' SUMP
R2-13	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 48" DIA. CATCH BASIN	915.64	S 911.14 N 913.14 NW 913.14	12 INCH 12 INCH 4 INCH	4.50'	0.00' SUMP
R2-16	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 48" DIA. CATCH BASIN	916.96	N 912.45 S 912.35 NE 914.58 NW 914.58	12 INCH 12 INCH 4 INCH 4 INCH	4.61'	0.00' SUMP
R2-19	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 48" DIA. CATCH BASIN	918.25	W 913.74 N 915.74 NW 915.74	12 INCH 4 INCH 4 INCH	4.50'	0.00' SUMP



R2-19 TO R2-16



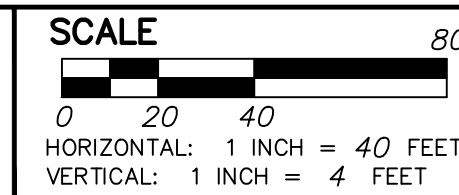
COPYRIGHT © 2024 WASHTENAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTENAW ENGINEERING COMPANY, INC.

THE DRAWER SHALL NOT USE OR WITHHOLD ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, OR INFORMATION BY HIM AND OTHERS SO LONG AS WASHTENAW ENGINEERING COMPANY (MECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE DRAWER SHALL INDEMNIFY AND HOLD HARMLESS MECO, MECO'S CONSULTANTS AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES, ARISING OUT OF UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.

LEGEND	DESCRIPTION
○	LIGHT POLE
□	UTILITY POLE
⊙	GUY ANCHOR
⊕	HYDRANT
●	SPOT ELEV.
○	POST
⊕	GATE VALVE
⊕	SIGN
⊕	TRANSFORMER
⊕	MANHOLE
⊕	CATCHBASIN
⊕	END SECTION
---	GRAVEL
---	FENCE
---	CONCRETE
---	ASPHALT
---	EXISTING STORM
---	EXISTING SANITARY
---	EXISTING WATER
---	EXISTING GAS
---	EXISTING ELECTRIC
---	EXISTING TELEPHONE

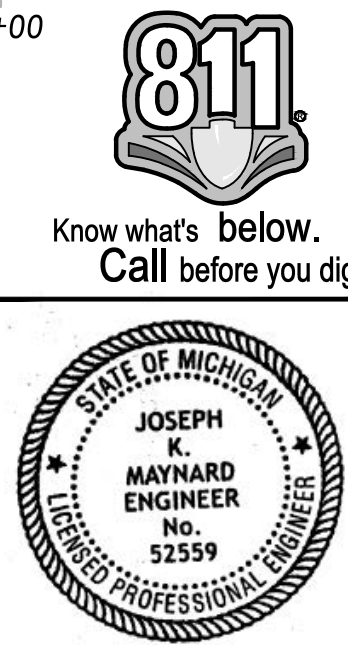
BENCHMARK
 BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9th WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
 BM2=NAIL IN WLY FACE OF 26" WALNUT, 43rd NORTH OF DEXTER-CHELSEA RD AND 37th NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21 (NAVD 88 DATUM)

REVISIONS
 1-15-2024 PER WCVRC AND CITY REVIEWS
 2-6-2024 PER WCVRC AND CITY REVIEWS



PREPARED BY: *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559

ALL PROPOSED STREET TREES MUST BE A MINIMUM OF 4 FT FROM UTILITIES.
 WETLANDS DELINEATED BY: GJS LAND PLANNING, LLC NOVEMBER OF 2023.



SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST

PROJECT

SHEET

DATE 11-1-23

JOB NO. 971-p2-sht-10

FIELD BOOK 446

FILE NO. 10668

CITY OF CHELSEA

WASHTENAW COUNTY • MICHIGAN

PLANNERS • SURVEYORS

LANDSCAPE ARCHITECTS

ANN ARBOR, MI 48103

TEL. 734-761-8900

CLIENT

M/I HOMES OF MICHIGAN

40950 WOODWARD AVE. BLOOMFIELD HILLS, MI 48304

PH: (248)-221-5011

ENGINEERING

STORM SEWER PROFILES

HERITAGE FARMS PHASE 2

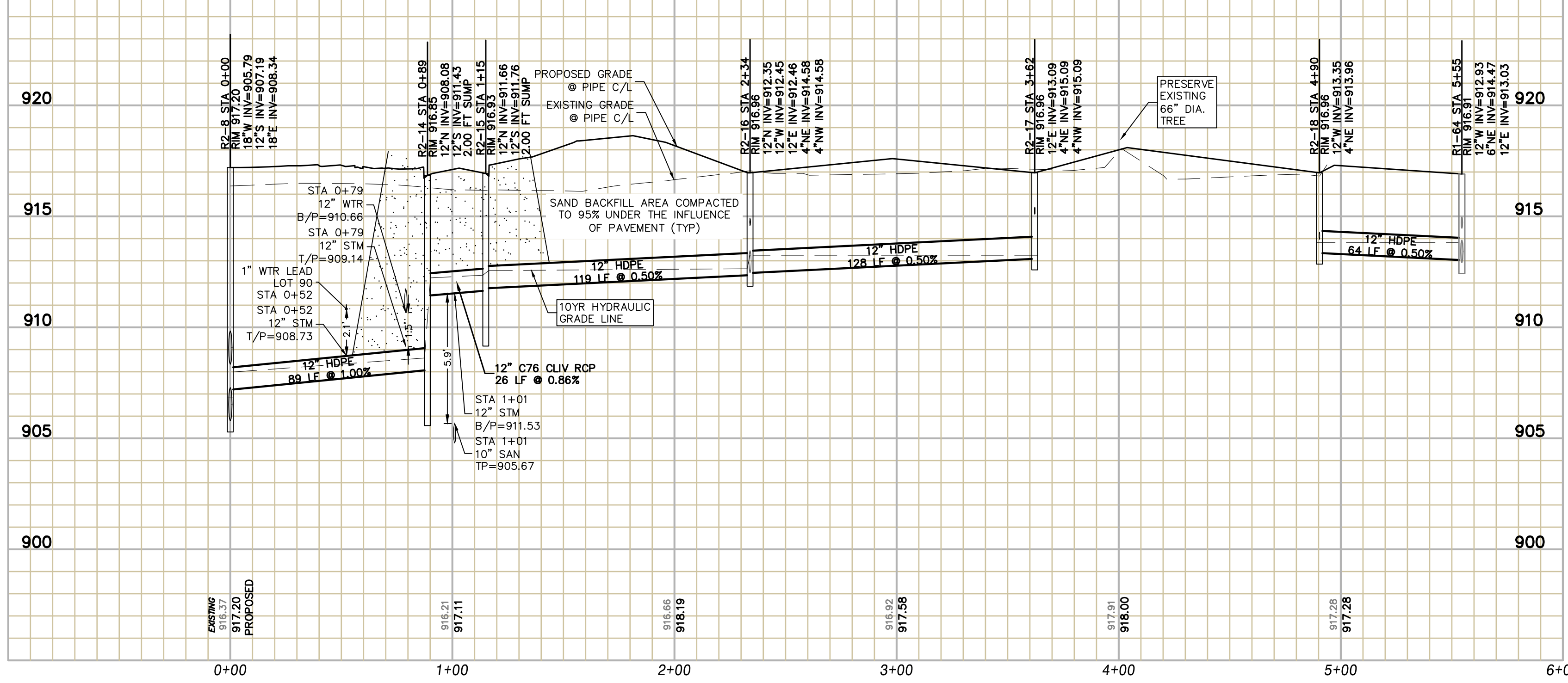
24 SHEET

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE ACCURATELY LOCATED OR THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTENAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTENAW ENGINEERING COMPANY, INC.

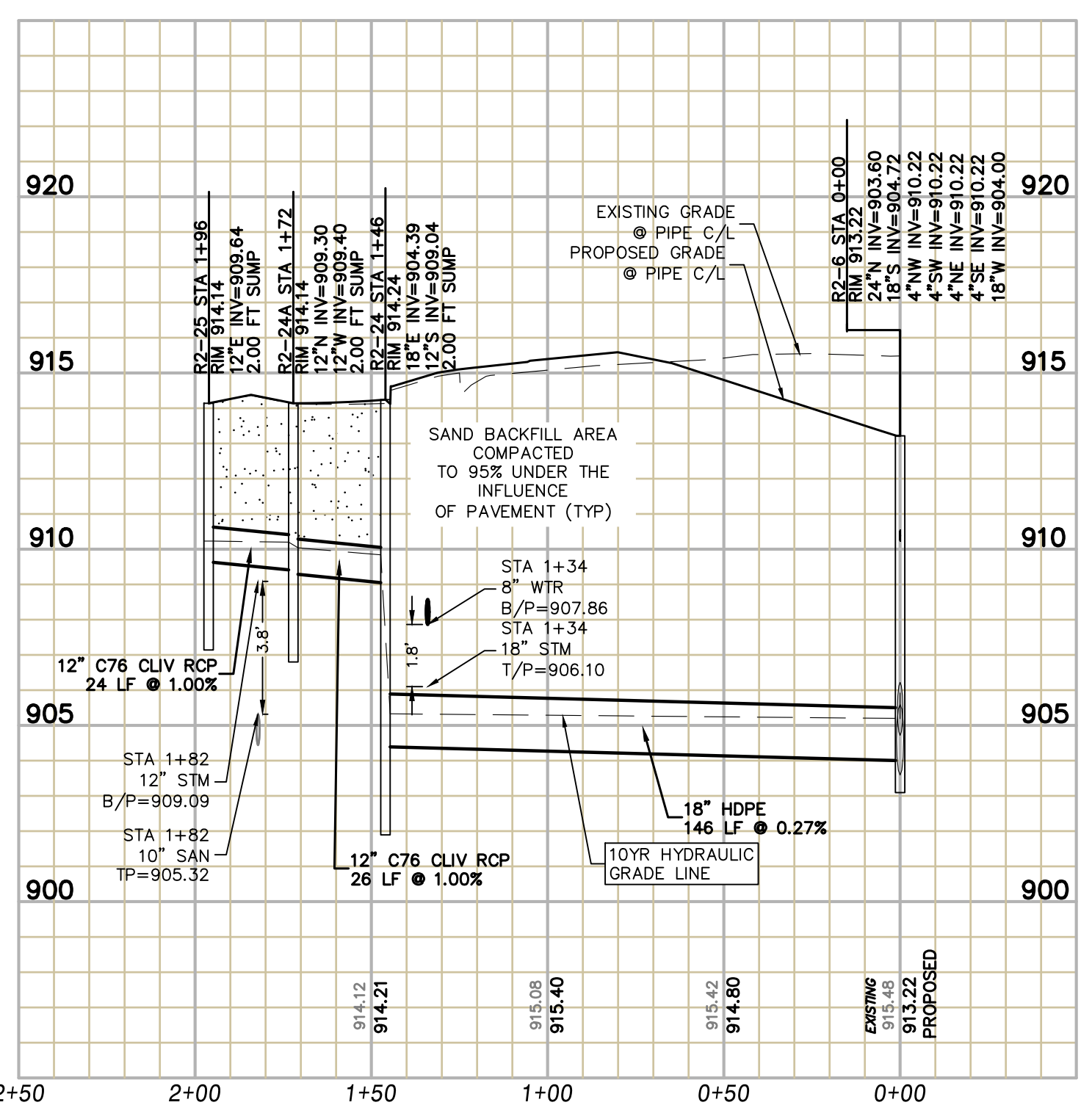
THE OWNER SHALL NOT USE OR WITHHOLD ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, INFORMATION, OR DATA FOR ANY OTHER PROJECTS OR FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTENAW ENGINEERING COMPANY (MECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO PROPERTY OR PERSONS OR FOR ANY CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF OR FROM THE USE OF THE DRAWINGS, SPECIFICATIONS, INFORMATION, OR DATA FOR ANY OTHER PROJECTS OR FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS.

R2-18 TO R2-8

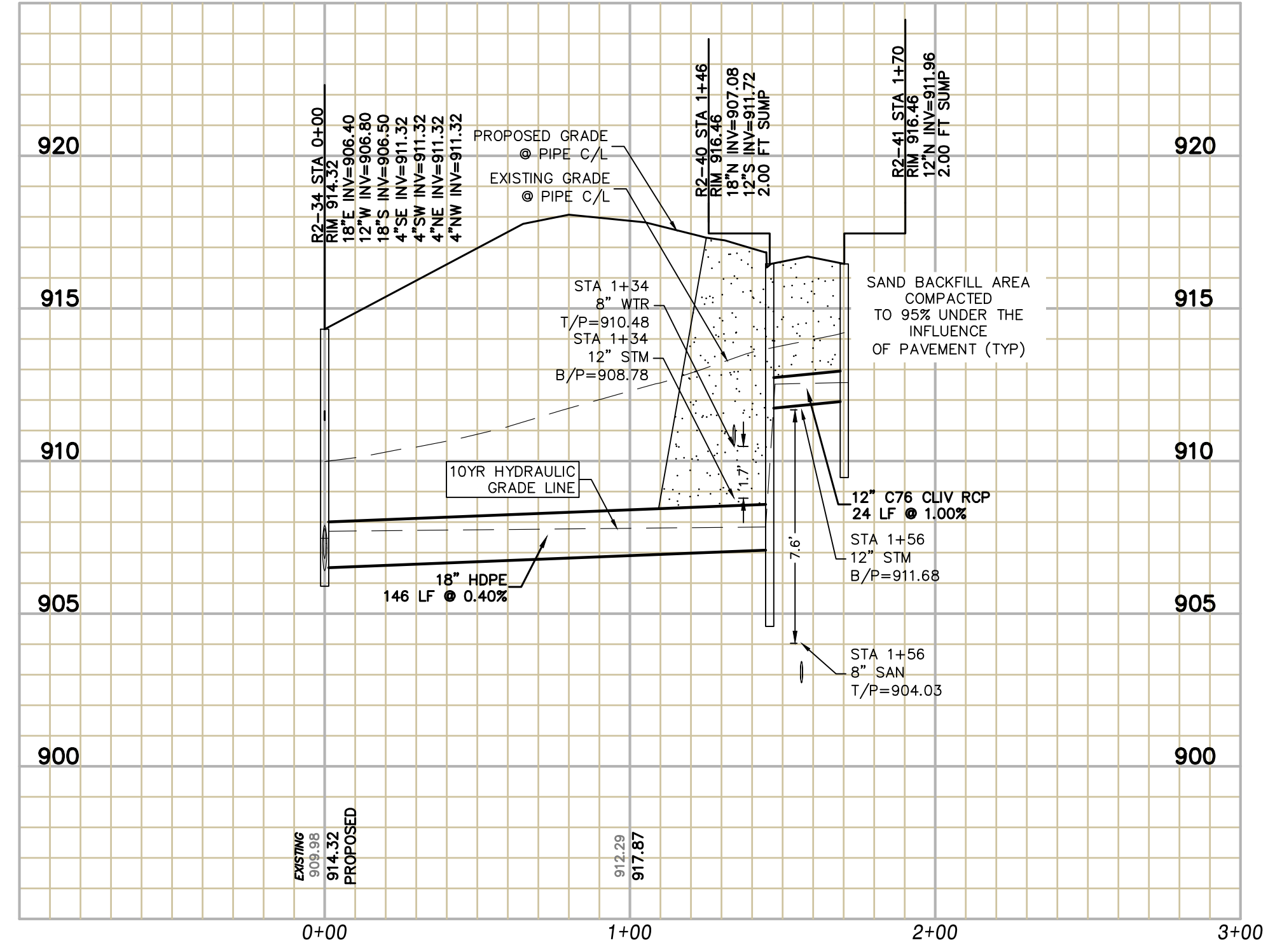


STORM SEWER STRUCTURE SCHEDULE						
Structure Name	Structure Type Frame, Cover and Size	Rim Elevation	Inverts	Pipe Size	Structure Depth	Comments
R2-6	EJIW 1040 FRAME TYPE O2 BEEHIVE GRATE 48" DIA. CATCH BASIN	913.22	S 904.72 N 903.60 SW 910.22 NE 910.22 SE 910.22 W 904.00	18 INCH 24 INCH 4 INCH 4 INCH 4 INCH 18 INCH	9.62'	0.00' SUMP
R2-8	EJIW 1040 FRAME TYPE A SOLID COVER 48" DIA. MANHOLE	917.20	S 907.19 E 908.34 W 905.79	12 INCH 18 INCH 18 INCH	11.41'	0.00' SUMP
R2-14	EJIW 7045 FRAME TYPE M1 GRATE 7050 T1 BACK 48" DIA. CATCH BASIN	916.85	N 908.08 S 911.43	12 INCH 12 INCH	10.77'	2.00' SUMP
R2-15	EJIW 7045 FRAME TYPE M1 GRATE 7050 T1 BACK 48" DIA. CATCH BASIN	916.93	N 911.66 S 911.76	12 INCH 12 INCH	7.28'	2.00' SUMP
R2-16	EJIW 1040 FRAME TYPE O2 BEEHIVE GRATE 48" DIA. CATCH BASIN	916.96	W 912.45 N 912.35 E 912.46 NE 914.58 NW 914.58	12 INCH 24 INCH 4 INCH 4 INCH 4 INCH	4.61'	0.00' SUMP
R2-17	EJIW 1040 FRAME TYPE O2 BEEHIVE GRATE 48" DIA. CATCH BASIN	916.96	E 913.09 NE 915.09 NW 915.09	12 INCH 4 INCH 4 INCH	3.87'	0.00' SUMP
R2-18	EJIW 1040 FRAME TYPE O2 BEEHIVE GRATE 48" DIA. CATCH BASIN	916.96	W 913.35 NE 913.96	12 INCH 4 INCH	3.61'	0.00' SUMP
R2-24	EJIW 7045 FRAME TYPE M1 GRATE 7050 T1 BACK 48" DIA. CATCH BASIN	914.24	E 904.39 S 909.04	18 INCH 12 INCH	11.85'	2.00' SUMP
R2-24A	EJIW 7045 FRAME TYPE M1 GRATE 7050 T1 BACK 48" DIA. CATCH BASIN	914.14	N 909.30 W 909.40	12 INCH 12 INCH	6.84'	2.00' SUMP
R2-25	EJIW 7045 FRAME TYPE M1 GRATE 7050 T1 BACK 48" DIA. CATCH BASIN	914.14	E 909.64	12 INCH	6.50'	2.00' SUMP
R2-29	EJIW 1040 FRAME TYPE O2 BEEHIVE GRATE 48" DIA. CATCH BASIN	912.52	W 904.45 E 904.35 SE 909.52 NE 909.52 S 904.75	24 INCH 24 INCH 4 INCH 4 INCH 18 INCH	8.17'	0.00' SUMP
R2-34	EJIW 1040 FRAME TYPE O2 BEEHIVE GRATE 48" DIA. CATCH BASIN	914.32	W 906.80 E 906.40 SE 911.32 SW 911.32 NE 911.32 NW 911.32	12 INCH 18 INCH 4 INCH 4 INCH 4 INCH 4 INCH	7.92'	0.00' SUMP
R2-40	EJIW 7045 FRAME TYPE M1 GRATE 7050 T1 BACK 48" DIA. CATCH BASIN	916.46	S 911.72 N 907.08	12 INCH 18 INCH	11.37'	2.00' SUMP
R2-41	EJIW 7045 FRAME TYPE M1 GRATE 7050 T1 BACK 48" DIA. CATCH BASIN	916.46	N 911.96	12 INCH	6.50'	2.00' SUMP
R2-42	EJIW 7045 FRAME TYPE M1 GRATE 7050 T1 BACK 48" DIA. CATCH BASIN	914.84	S 910.10 N 905.14	12 INCH 18 INCH	11.69'	2.00' SUMP
R2-43	EJIW 7045 FRAME TYPE M1 GRATE 7050 T1 BACK 48" DIA. CATCH BASIN	914.84	N 910.34	12 INCH	6.50'	2.00' SUMP

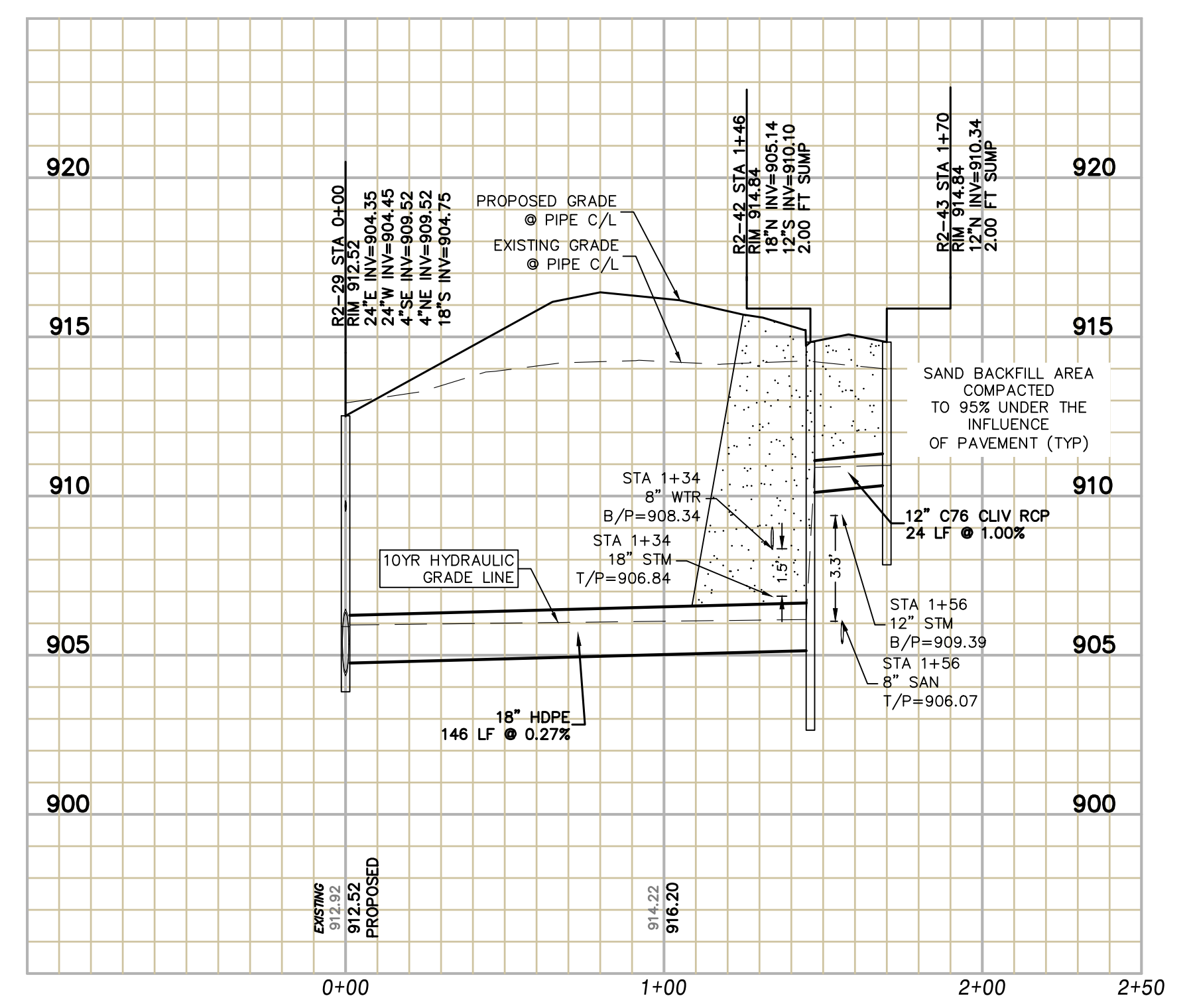
R2-25 TO R2-6



R2-41 TO R2-34



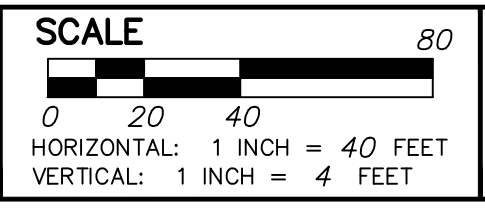
R2-43 TO R2-29



LEGEND	
⊕	LIGHT POLE
⊙	UTILITY POLE
⊚	GUY ANCHOR
⊛	HYDRANT
⊙	SPOT ELEV.
⊙	POST
⊙	GATE VALVE
⊙	SIGN
⊙	TRANSFORMER
⊙	MANHOLE
⊙	CATCHBASIN
⊙	END SECTION
---	GRAVEL
---	FENCE
---	CONCRETE
---	ASPHALT
---	EXISTING STORM
---	EXISTING SANITARY
---	EXISTING WATER
---	EXISTING GAS
---	EXISTING ELECTRIC
---	EXISTING TELEPHONE

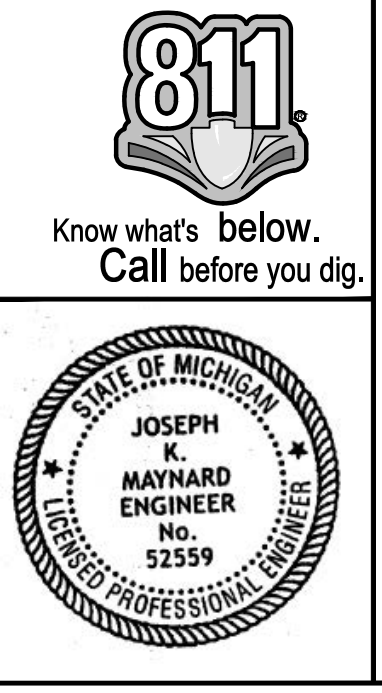
BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9th WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
 BM2=NAIL IN WLY FACE OF 26" WALNUT, 43rd NORTH OF DEXTER-CHELSEA RD AND 37th NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21 (NAVD 88 DATUM)

REVISIONS 1-15-2024 PER WCWRC AND CITY REVIEWS
 2-6-2024 PER WCWRC AND CITY REVIEWS



PREPARED BY: *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559

ALL PROPOSED STREET TREES MUST BE A MINIMUM OF 4 FT FROM UTILITIES.
 WETLANDS DELINEATED BY: GJS LAND PLANNING, LLC NOVEMBER OF 2023.



CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS

WASHTENAW ENGINEERING

M/I HOMES OF MICHIGAN
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

STORM SEWER PROFILES

PROJECT: HERITAGE FARMS PHASE 2

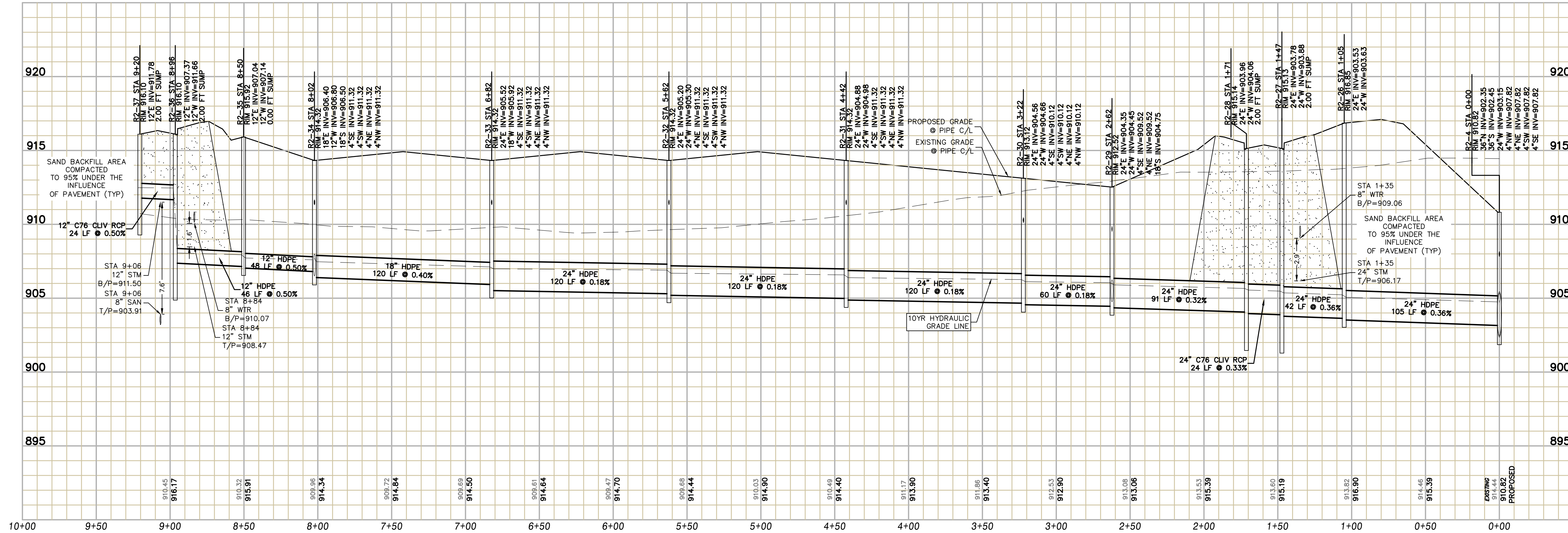
SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST

CITY OF CHELSEA
 WASHTENAW COUNTY • MICHIGAN

DATE: 11-1-23 JOB NO. 32971
 DWS NO. 971-p2-slm-rs
 FIELD BOOK: 446
 FILE NO. 10668

25 SHEET

R2-37 TO R2-4



STORM SEWER STRUCTURE SCHEDULE						
Structure Name	Structure Type Frame, Cover and Size	Rim Elevation	Inverts	Pipe Size	Structure Depth	Comments
R2-4	EJW 1040 FRAME TYPE M1 GRATE 72\"/>					
R2-26	EJW 1040 FRAME TYPE A SOLID COVER 48\"/>					
R2-27	EJW 7045 FRAME TYPE M1 GRATE 7050 T1 BACK 48\"/>					
R2-28	EJW 7045 FRAME TYPE M1 GRATE 7050 T1 BACK 48\"/>					
R2-29	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 48\"/>					
R2-30	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 48\"/>					
R2-31	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 48\"/>					
R2-32	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 48\"/>					
R2-33	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 48\"/>					
R2-34	EJW 1040 FRAME TYPE O2 BEEHIVE GRATE 48\"/>					
R2-35	EJW 1040 FRAME TYPE A SOLID COVER 48\"/>					
R2-36	EJW 7045 FRAME TYPE M1 GRATE 7050 T1 BACK 48\"/>					
R2-37	EJW 7045 FRAME TYPE M1 GRATE 7050 T1 BACK 48\"/>					

COPYRIGHT © 2024 WASHTEWAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTEWAW ENGINEERING COMPANY, INC.

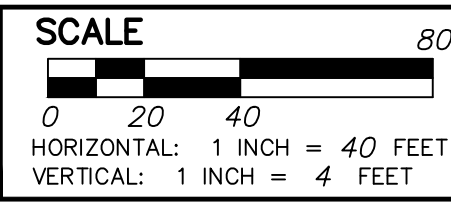
THE OWNER SHALL NOT USE OR WITHHOLD ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, INFORMATION OR DATA BY HIM OR OTHERS SO LONG AS WASHTEWAW ENGINEERING COMPANY (MECO) IS NOT ADDED TO BE IN DEFAULT UNDER THIS AGREEMENT. MECO SHALL INDEMNIFY AND HOLD HARMLESS MECO, MECO'S CONSULTANTS AND AGENTS AND EMPLOYEES FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, INFORMATION OR DATA OR OTHER INSTRUMENTS OF SERVICE.

LEGEND

- Light Pole
- Utility Pole
- Guy Anchor
- Hydrant
- Spot Elev.
- Post
- Gate Valve
- Sign
- Transformer
- Manhole
- Catchbasin
- End Section
- Gravel
- Fence
- Concrete
- Asphalt
- Existing Storm
- Existing Sanitary
- Existing Water
- Existing Gas
- Existing Electric
- Existing Telephone

BENCHMARK
 BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9th WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
 BM2=NAIL IN WLY FACE OF 26\"/>

REVISIONS
 1-15-2024 PER WCWRG AND CITY REVIEWS
 2-6-2024 PER WCWRG AND CITY REVIEWS



PREPARED BY: *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559

ALL PROPOSED STREET TREES MUST BE A MINIMUM OF 4 FT FROM UTILITIES

CLIENT
 M/I HOMES OF MICHIGAN
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

PROJECT
 HERITAGE FARMS PHASE 2

SECTION 6 & 7 **TOWN** 2 **SOUTH** **RANGE** 4 **EAST**

DATE 11-1-23 **JOB NO.** 32971 **DWG NO.** 971-p2-slm-rs
FIELD BOOK 446 **FILE NO.** 10668

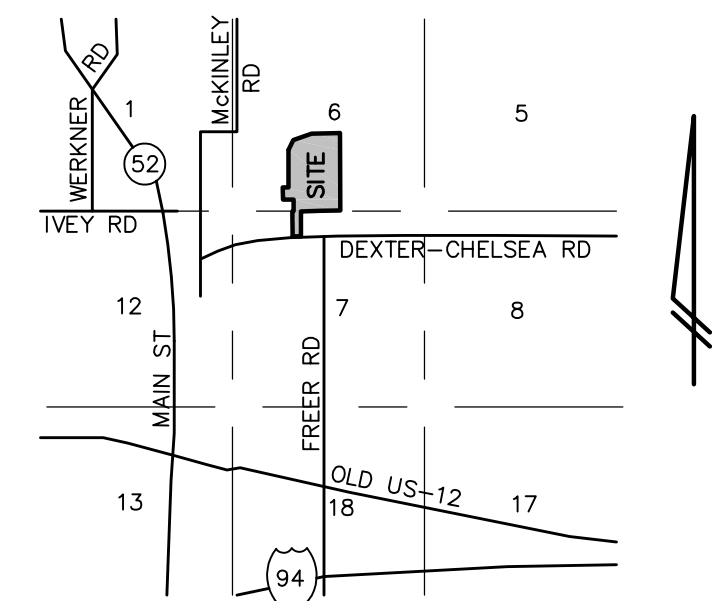
26 SHEET

WASHTEWAW ENGINEERING
 CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 3526 W. LIBERTY RD
 ANN ARBOR, MI 48103
 TEL. 734-761-8900

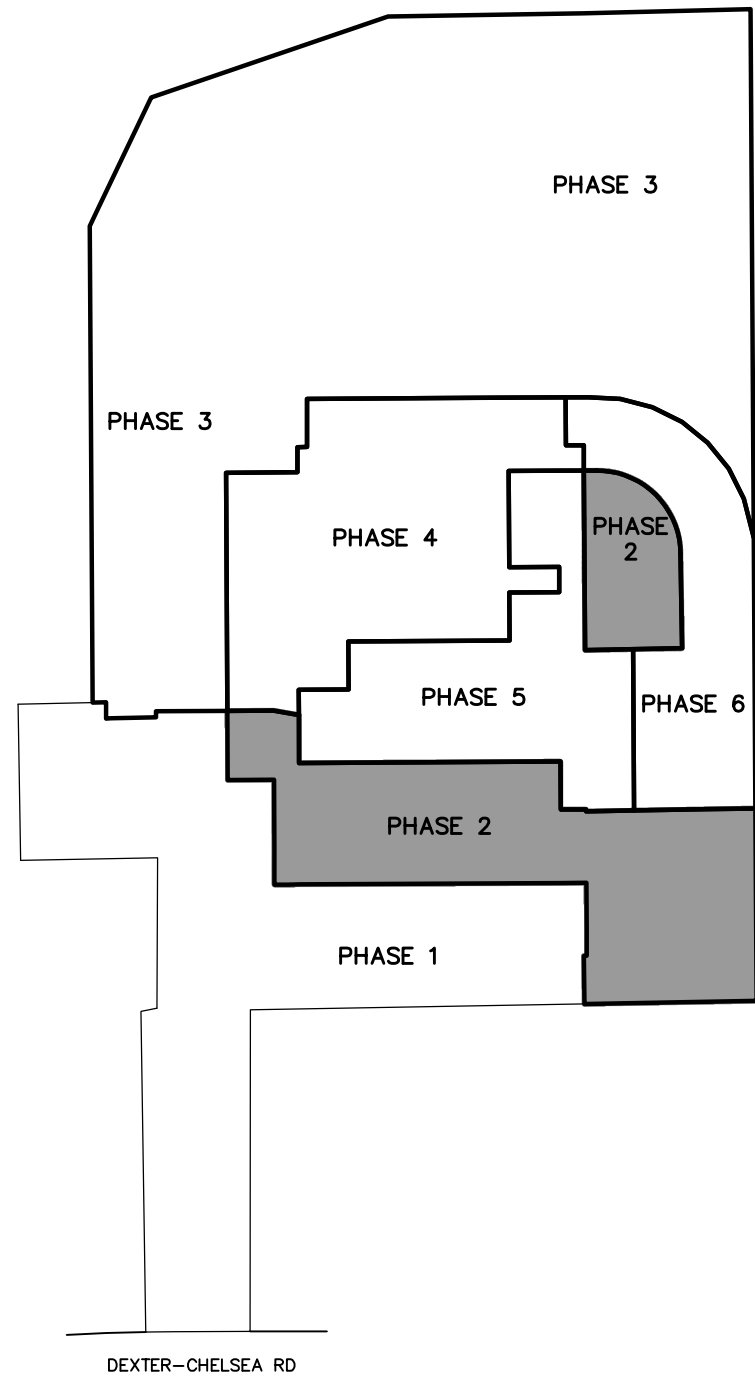
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO WARRANTY AS TO THE ACCURACY OF THE INFORMATION PROVIDED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE, THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTEENAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTEENAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHER INSTRUMENTS OF SERVICE, THE SURVEYOR'S PROFESSIONAL INVOLVEMENT WILL BE AT THE OWNER'S SOLE RISK AND WITHOUT LIABILITY TO WECO. THE OWNER SHALL MAINTAIN AND HOLD HARMLESS WECO, WECO'S CONSULTANTS AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.



VICINITY MAP
(NO SCALE)



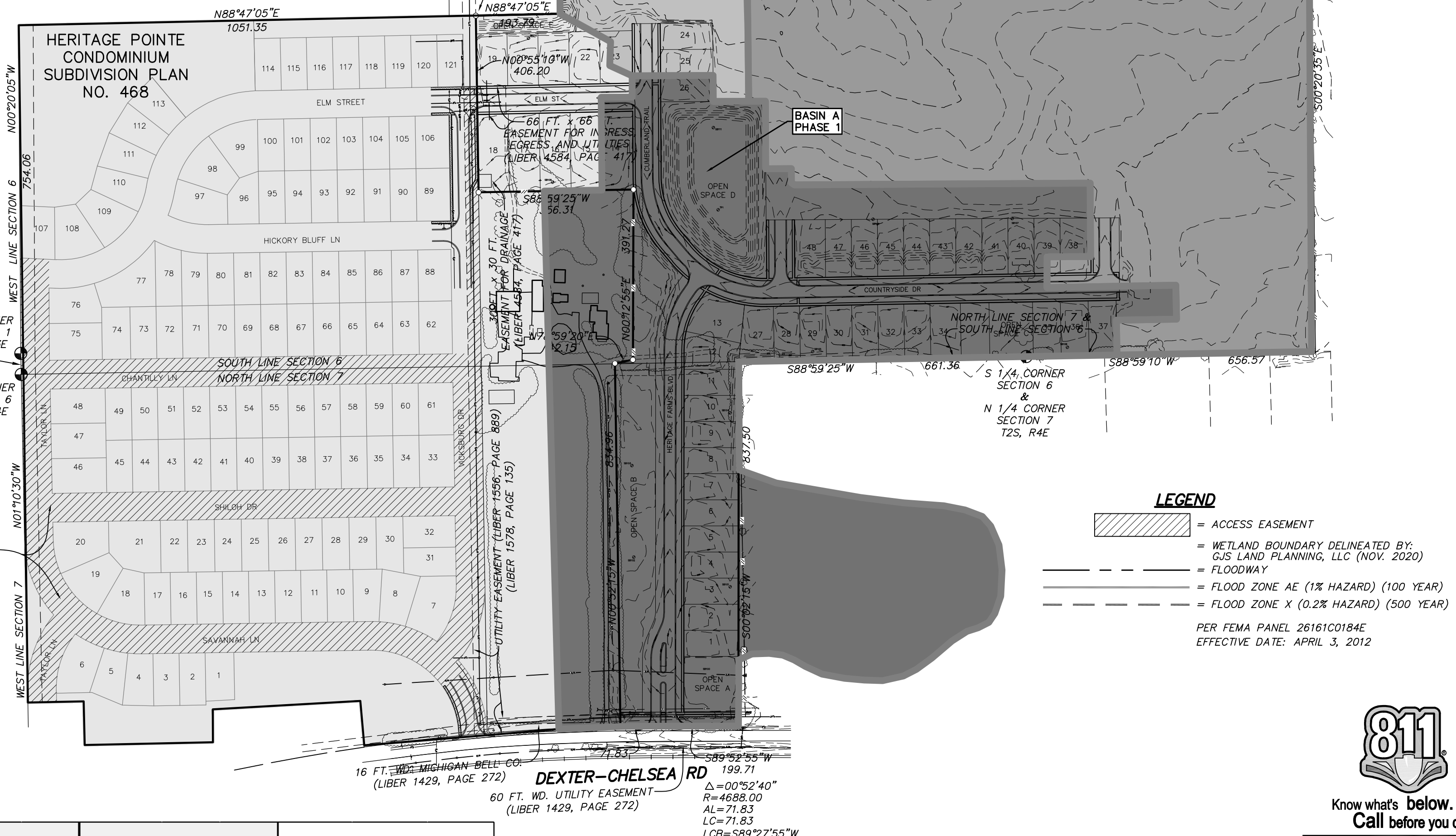
HERITAGE FARMS PHASE KEY
(NOT TO SCALE)

DRAINAGE AREA MAP LEGEND

- = PREVIOUSLY APPROVED DRAINAGE AREA
ELM STREET POND (HERITAGE POINTS)
- = PREVIOUSLY APPROVED DRAINAGE AREA HERITAGE
POINT BLVD POND (HERITAGE FARMS - PHAS 2)
- = DRAINAGE AREA KNOLLWOOD BEND POND
(HERITAGE FARMS - PHASE 2)
- = DRAINAGE AREA ANTIETAM LANE POND
(HERITAGE FARMS - REMAINDER)

NOTE:
• DRAINAGE AREA COMES FROM PREVIOUSLY APPROVED PLAN SET.

ACCESS EASEMENT FOR INGRESS, EGRESS AND UTILITIES OVER ROADS IN RELEASE PARCEL 1 (LIBER 4428, PAGE 468) (LIBER 4580, PAGE 375)



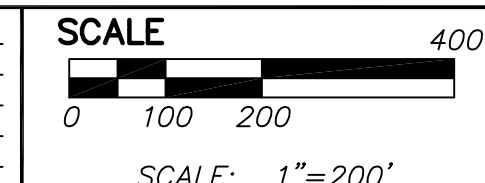
- LEGEND**
- = ACCESS EASEMENT
 - = WETLAND BOUNDARY DELINEATED BY: GIS LAND PLANNING, LLC (NOV. 2020)
 - = FLOODWAY
 - = FLOOD ZONE AE (1% HAZARD) (100 YEAR)
 - = FLOOD ZONE X (0.2% HAZARD) (500 YEAR)
- PER FEMA PANEL 26161C0184E
EFFECTIVE DATE: APRIL 3, 2012

PROPOSED DRAINAGE AREA NAME	ROOF, ASPHALT OR CONCRETE			TYPE B SOILS <4%			TYPE B SOILS 4 - 8%			TYPE B SOILS 8%>			TYPE C SOILS <4%			TYPE C SOILS 4 - 8%			TYPE C SOILS 8%>			TOTAL AREA		
	SFT	ACRE	C	SFT	ACRE	C	SFT	ACRE	C	SFT	ACRE	C	SFT	ACRE	C	SFT	ACRE	C	SFT	ACRE	C	SFT	ACRE	C
DRN2	169,046	3.8808	0.95	165,105	3.7903	0.25	145,739	3.3457	0.30	198,487	4.5566	0.35	-	0.0000	0.30	-	0.0000	0.35	-	0.0000	0.40	678,377	15.5734	0.4644
DRN2 (entire basin)	361,312	8.2946	0.95	263,124	6.0405	0.25	238,457	5.4742	0.30	320,683	7.3619	0.35	-	0.0000	0.30	-	0.0000	0.35	-	0.0000	0.40	1,195,741	27.4505	0.4998

- LEGEND**
- = LIGHT POLE
 - = SPOT ELEV.
 - = TRANSFORMER
 - = FENCE
 - = MANHOLE
 - = CONCRETE
 - = EXISTING WATER
 - = EXISTING GAS
 - = EXISTING ELECTRIC
 - = EXISTING TELEPHONE
 - = GATE VALVE
 - = END SECTION
 - = ASPHALT
 - = GRAVEL
 - = ASPHALT

BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9'± WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
 BM2=NAIL IN WLY FACE OF 26" WALNUT, 43'± NORTH OF DEXTER-CHELSEA RD AND 37'± NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21. (NAVD 88 DATUM)

REVISIONS 1-15-2024 PER WCWRC AND CITY REVIEWS
 2-6-2024 PER WCWRC AND CITY REVIEWS



PREPARED BY: *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559

WETLANDS DELINEATED BY: GIS LAND PLANNING, LLC NOVEMBER OF 2023.

Know what's below.
Call before you dig.

WASHTEENAW ENGINEERING

CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 3526 N. LIBERTY RD
 SUITE 400
 ANN ARBOR, MI 48103
 TEL: 734-761-8800

CLIENT: **MI HOMES OF MICHIGAN**
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5071

SHEET: **STORMWATER MANAGEMENT DRAINAGE AREA OVERALL PROPOSED PLAN**

PROJECT: **HERITAGE FARMS PHASE 2**

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
 CITY OF CHELSEA
 WASHTEENAW COUNTY • MICHIGAN
 JOB NO. 232971
 DWG NO. 971-04.dwg
 FIELD BOOK 446
 FILE NO. 10668

27 SHEET

STRUCTURAL INFILTRATION BASIN "B" CALCULATIONS

Project: **HERITAGE FARMS PHASE 2**
 Basin: **STRUCTURAL INFILTRATION BASIN "B"**
 By: **Seth Garner, P.E.**
 Date: **1/10/2024**

W1 Determine Post-Development Cover Types, Areas, Curve Numbers and Runoff
 Total Site Area = 27,450 ac (0.73 P1 + 12.04 P2 + 3.23 P3 + 2.48 P4)
 Disturbed Site Area = 16.02 ac (0.73 P1 + 12.04 P2 + 3.23 P3 + 2.48 P4)
 % Disturbed = 58%
 Total Tributary Area Excluding "Self-Crediting" BMPs = 27,450 ac

Rational Method Variables

Cover Type	Soil Type	Slope	Area (ft ²)	Area (acre)	Curve Number	(C)(Area)
Impervious	B	8%+	361,312	8.2946	0.95	7,8799
Pervious	B	<4%	293,124	6.0405	0.25	1,5101
Pervious	B	4%+8%	239,497	5.4742	0.3	1,5423
Pervious	B	8%+	320,583	7.3619	0.35	2,5767
Pervious	C	8%+	12,165	0.2793	0.4	0.1117

Weighted C = Σ(C)(Area)/Σ(Area) = 0.4998

NRCS Variables - Pervious Cover

Cover Type	Soil Type	Area (ft ²)	Area (acre)	Curve Number	(C)(Area)
Open Space-Good	B	822,264	18.8766	61	1151.47
Open Space-Good	C	12,165	0.2793	74	20.67

Weighted CN = Σ(C)(Area)/Σ(Area) = 61

NRCS Variables - Impervious Cover

Cover Type	Soil Type	Area (ft ²)	Area (acre)	Curve Number	(C)(Area)
Paved	B	361,312	8.2946	98	812.87

Weighted CN = Σ(C)(Area)/Σ(Area) = 98

W2 First Flush
 V_f = (1/12)(43560R³/13)AC
 Total Area A = 27.45 ac
 Weighted C = 0.4998
 V_f = 49,803 cft

W3 Pre-development Bankfull Runoff Calculation (V_{bfpre})
 NRCS Variables - Pervious Cover
 Curve Number (CN)
 Total Site Area (SF) excluding "Self-Crediting" BMPs Area = 1,195,741 square feet
 V_{bfpre} = Q(1/12)Area = 9,950 ft³

W4 Pervious Cover Post-development Bankfull Runoff Calculation (V_{bfpost})
 2-year/24 hour storm event P = 2.35 inches
 Pervious Curve Number from W1 = 61
 S = (1000/CN) - 10 = 6.393443 inches
 Q = (P-0.25)/(P+0.85) = 0.15375 inches
 Pervious Cover Area from W1 = 834,429 square feet
 V_{bfpost} = Q(1/12)Area = 10,691 ft³

W5 Impervious Cover Post-development Bankfull Runoff Calculation (V_{bfimp})
 2-year/24 hour storm event P = 2.35 inches
 Impervious Curve Number from W1 = 98
 S = (1000/CN) - 10 = 0.204082 inches
 Q = (P-0.25)/(P+0.85) = 2.121674 inches
 Impervious Cover Area from W1 = 361,312 square feet
 V_{bfimp} = Q(1/12)Area = 63,882 ft³

W6 Pervious Cover Post-development 100-year Storm Runoff Calculation (V_{100post})
 100-year/24 hour storm event P = 5.11 inches
 Pervious Curve Number from W1 = 61
 S = (1000/CN) - 10 = 6.393443 inches
 Q = (P-0.25)/(P+0.85) = 1.435628 inches
 Pervious Cover Area from W1 = 834,429 square feet
 V_{100post} = Q(1/12)Area = 99,827 ft³

W7 Impervious Cover Post-development 100-year Storm Runoff Calculation (V_{100imp})
 100-year/24 hour storm event P = 5.11 inches
 Impervious Curve Number from W1 = 98
 S = (1000/CN) - 10 = 0.204082 inches
 Q = (P-0.25)/(P+0.85) = 4.873 inches
 Impervious Cover Area from W1 = 361,312 square feet
 V_{100imp} = Q(1/12)Area = 146,723 ft³

W8 Determine Time of Concentration for Applicable Flow Types (T_c-hrs)
 Total T_c = 0.41

*Sheet flow cannot exceed 300 feet. Anything beyond this is considered waterway.

STRUCTURAL INFILTRATION BASIN "B" CALCULATIONS -CONTINUED

Heritage Farms Phase 2
 Storm Water Narrative
 12-11-2023

W10 Detention/Retention Requirement
 Peak of Unit Hydrograph Q_{pe} = 238.67 cfs @ 0.82 = 496 cfs/in-mi²
 Total Site Area (ac) excluding "Self-Crediting" BMPs Area = 27,450 ac
 Q₁₀₀ = Q_{100pre} + Q_{100imp} = 6,308,287 in
 Peak Flow PF = Q₁₀₀/Area/640 = 134,21063 cfs
 Δ = PF - 0.15 Area = 130,09306 cfs
 V_{det} = (Δ)/PF/V_{100post} = 238,986 ft³

W11 Determine Applicable BMPs and Associated Volume Credits
 Storage Volume = 238,986 ft³
 Structural Infiltration Basin 43,013 201,027 6,452 7.5 161,299 368,778
 Total Volume Reduction Credit by Proposed Structural BMPs = 368,778 ft³
 MAXIMUM allowed Volume Reduction Credit (V_{det}) = 238,986 ft³
 Runoff Volume Infiltration Requirement (V_{inf}) from W9 = 64,623 ft³
 Runoff Volume Credit = 174,363 ft³

Structural Infiltration Basin Surface Storage Volume Chart

Elevation	Area	Volume	Cumulative Volume
906.5	74260	36319	305188
906	71016	34711	268869
905.5	67827	33131	234158
905	64696	61650	201027
904	58903	55670	139377
903	52736	49816	83701
902	47095	33791	37191
901.25	43013	0	0

Surface Storage Volume = 201027 cft
 First Flush storage elevation = 902.32 cft (for no infiltration or soil storage)
 100-yr storage elevation = 902.75 cft (including all BMP soil and infiltration)
 Soil Storage Depth = 0.5 ft
 Bottom area = 43,013 sf
 Soil Storage Volume = Average Bed Area (sf) * Maximum Design Water Depth * Porosity = 43013 sf * 0.5 ft * 0.30 = 6452 cft
 Design Infiltration Rate = 7.5 in/hr
 Bottom Elevation = 901.25
 Total Time to Infiltrate - should be less than 48 hours
 T_{inf} = V₁₀₀ (cft) / (Area (sf) * Design Infiltration Rate (in/hr) * (1/12)")) = 238986 (cft) / (43013 (sf) * 7.5 (in/hr) * 1/12(inches)) = 8.89 hr

W12 Natural Features Inventory

Existing Natural Resources	Mapped (yes, no, n/a)	Total Area (ac)	Protected/ Undisturbed Area (ac)
Waterbodies	N/A		
Floodplains	N/A		
Riparian Areas	N/A		
Wetlands	N/A		
Woodlands	N/A		
Natural Drainage Area	N/A		
Steep Slopes, 15%-25%	N/A		
Steep Slopes, over 25%	N/A		
Special Habitat Areas	N/A		
Other	N/A		
Total Existing (ac)		0	

W13 Summary
 A. Storm Water Management Summary
 Minimum Onsite Infiltration Requirement, V_{inf} = 64,623 cft
 Designed/Provided BMP Volume = 238,986 cft
 % Minimum Required Infiltration Provided = 370%
 Total Calculated Detention Volume, V_{det} = 238,986 cft
 Net Required Detention Volume (V_{det} - Designed/Provided Infiltration Volume) = 0 cft

B. Detention Volume Increase for sites where the required infiltration cannot be achieved.
 % Required Infiltration NOT provided/ N/A
 (100%-Minimum Required Infiltration Provided) N/A %
 Net % Penalty
 (20% x % Required Infiltration NOT provided) N/A %
 Total Required Detention Volume, including penalty
 [(100% + Net % Penalty) x Net Required Detention Volume] N/A cft

Additional Design Requirements
 Sediment Forebay Required Volume = 100yr storage volume*0.05 = 11,949 cft

Sediment Forebay Proposed Volume =

Elevation	Area (sf)	Vol (cft)
902.25	13712	3368
902	13230	3096
901.25	11826	0
Total		12764

Detention Basin Mix

This mix contains at least (10) of the following (4) of the Grasses & Sedges.

Common Name	Scientific Name	#/acre
Temporary Grasses		20
Seed Oats	<i>Avena sativa</i>	
Annual Rye	<i>Lolium multiflorum</i>	
Native Grasses		12
Big Bluestem Grass	<i>Andropogon gerardii</i>	
Fringed Sedge	<i>Carex crinita</i>	
Fox Sedge	<i>Carex vulpinoidea</i>	
Canada Wild Rye	<i>Elymus canadensis</i>	
Dark Green Bulrush	<i>Scirpus atrovirens</i>	
Indian Grass	<i>Sorghastrum nutans</i>	
Prairie Cord Grass	<i>Spartina pectinata</i>	
Native Wildflowers		8
Canada Aster	<i>Aster lateriflorus</i>	
New England Aster	<i>Aster novae-angliae</i>	
Pale Indian Plantain	<i>Cacalia atriplicifolia</i>	
Turtlehead	<i>Chelone glabra</i>	
Joe-pye Weed	<i>Eupatorium maculatum</i>	
Bonaset	<i>Eupatorium perfoliatum</i>	
Ox Eye Sunflower	<i>Heliopsis helianthoides</i>	
Dense Blazingstar	<i>Liatris spicata</i>	
Cardinal Flower	<i>Lobelia cardinalis</i>	
Great Blue Lobelia	<i>Lobelia siphilitica</i>	
Yellow Coneflower	<i>Ratibida pinnata</i>	
Black-eyed Susan	<i>Rudbeckia hirta</i>	
Green-headed Coneflower	<i>Rudbeckia laciniata</i>	
Cupplant	<i>Silphium perfoliatum</i>	
Ohio Goldenrod	<i>Solidago ohioensis</i>	
Riddell's Goldenrod	<i>Solidago riddellii</i>	
Blue Vervain	<i>Verbena hastata</i>	
Culver's Root	<i>Veronicastrum virginicum</i>	
Ironweed	<i>Vernonia gigantea</i>	

Total Pounds Per Acre 40 lbs

NOTE:
 • FOR USE ON UPLAND OPEN SPACE AREAS

R.O.W. LAWN MIX

20%	ELITE KENTUCKY BLUE
20%	ELITE KENTUCKY BLUE
20%	KENTUCKY BLUEGRASS
20%	VARIETY CREEPING, RED FESCUE
20%	TURF TYPE PERENNIAL RYE

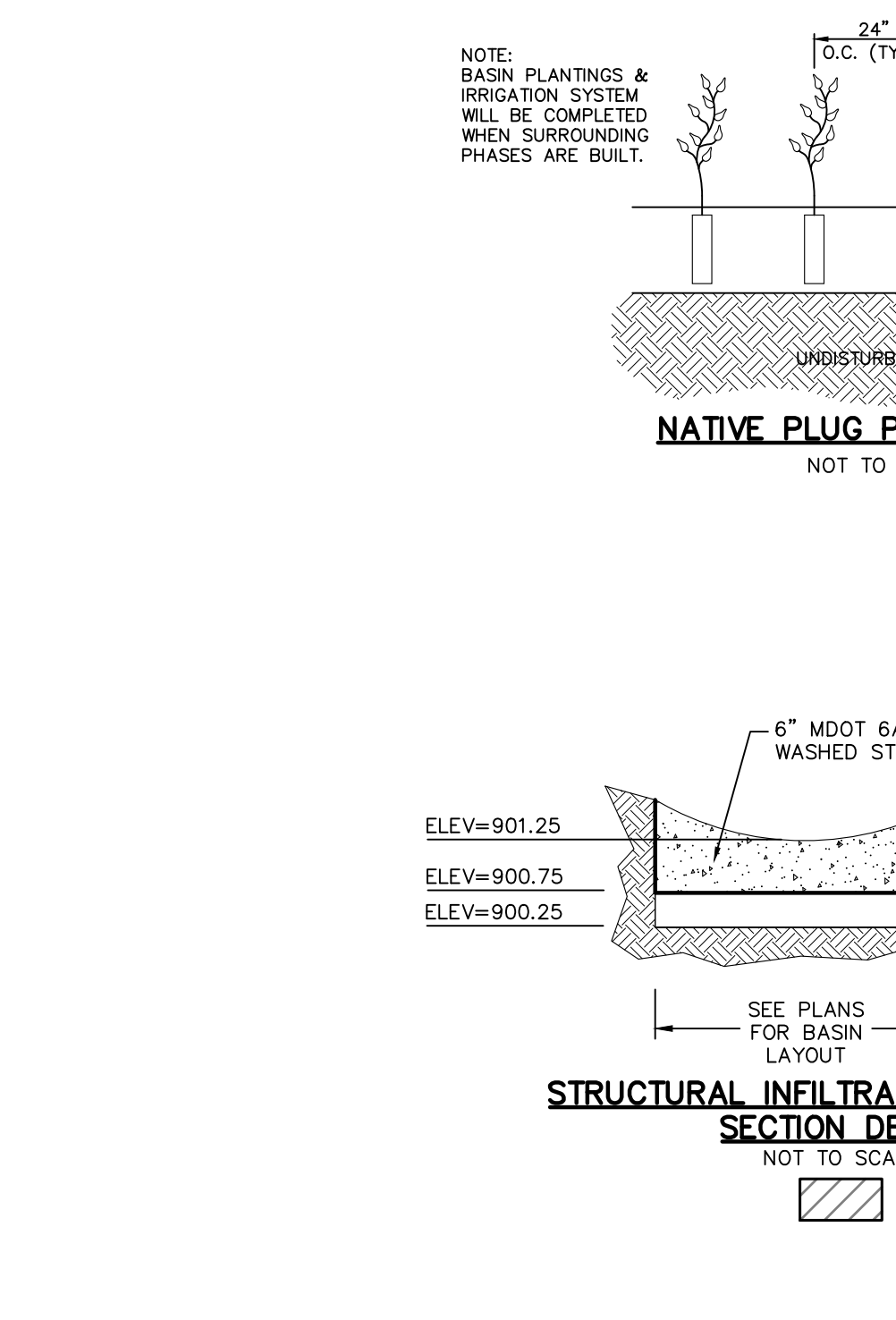
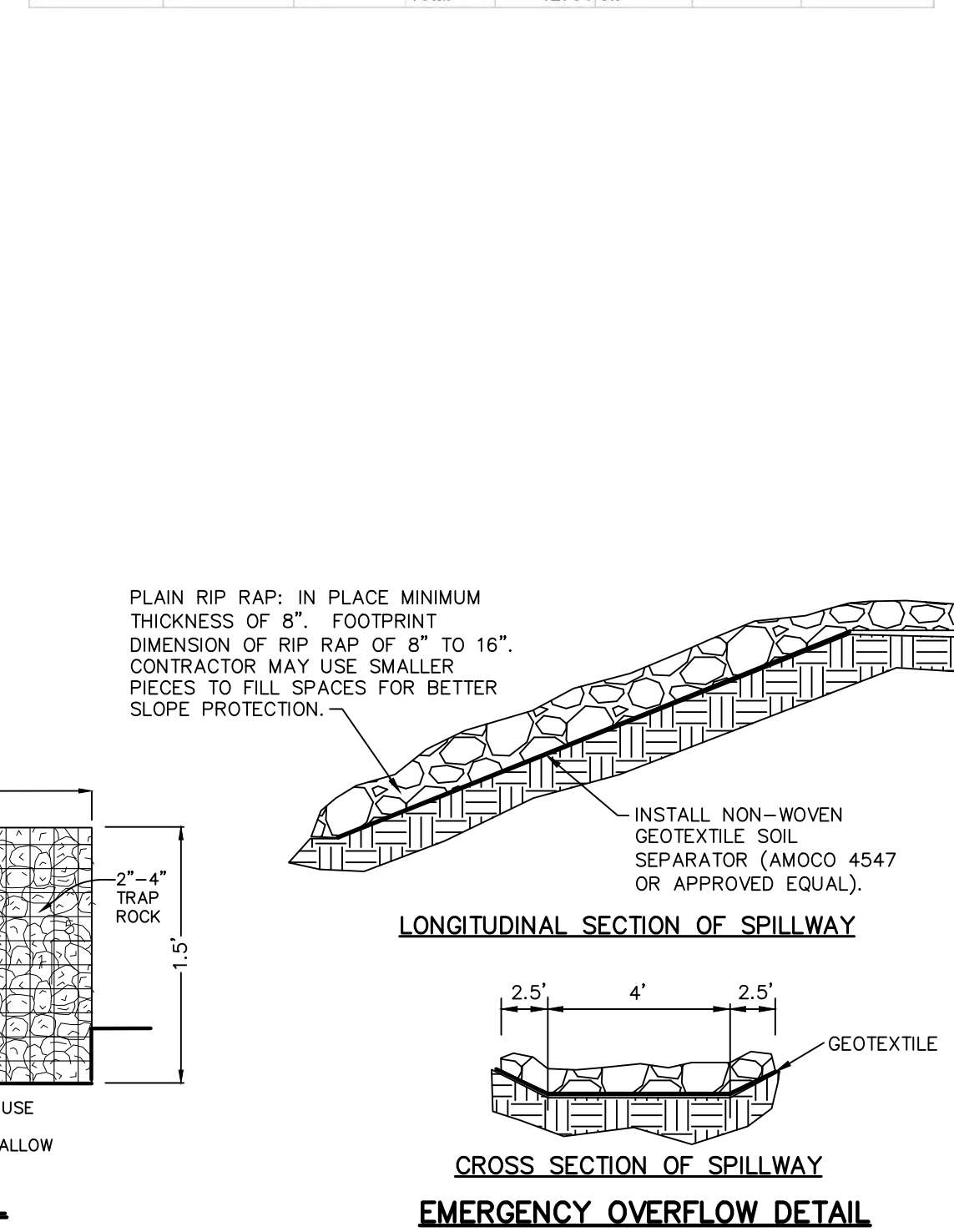
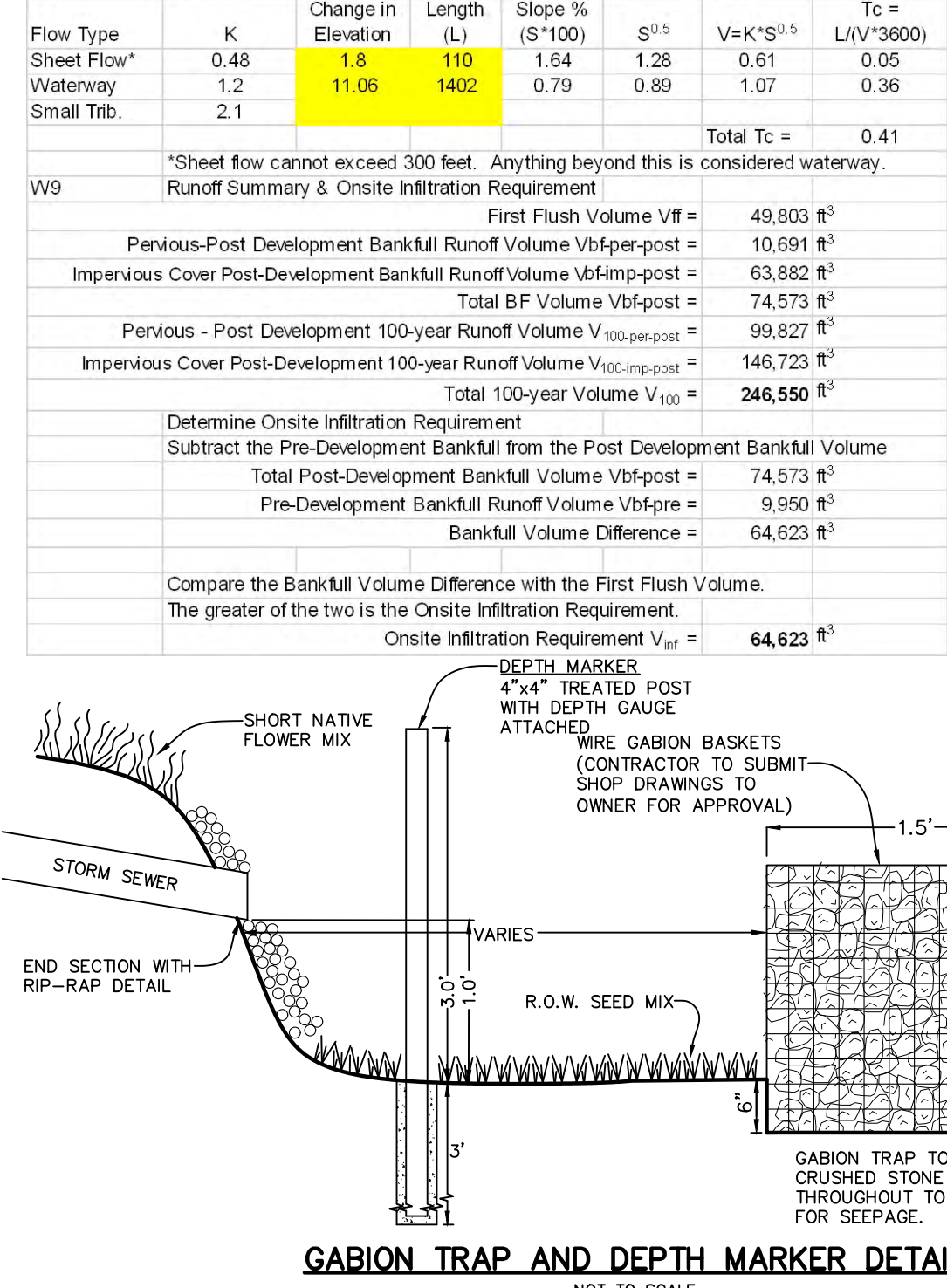
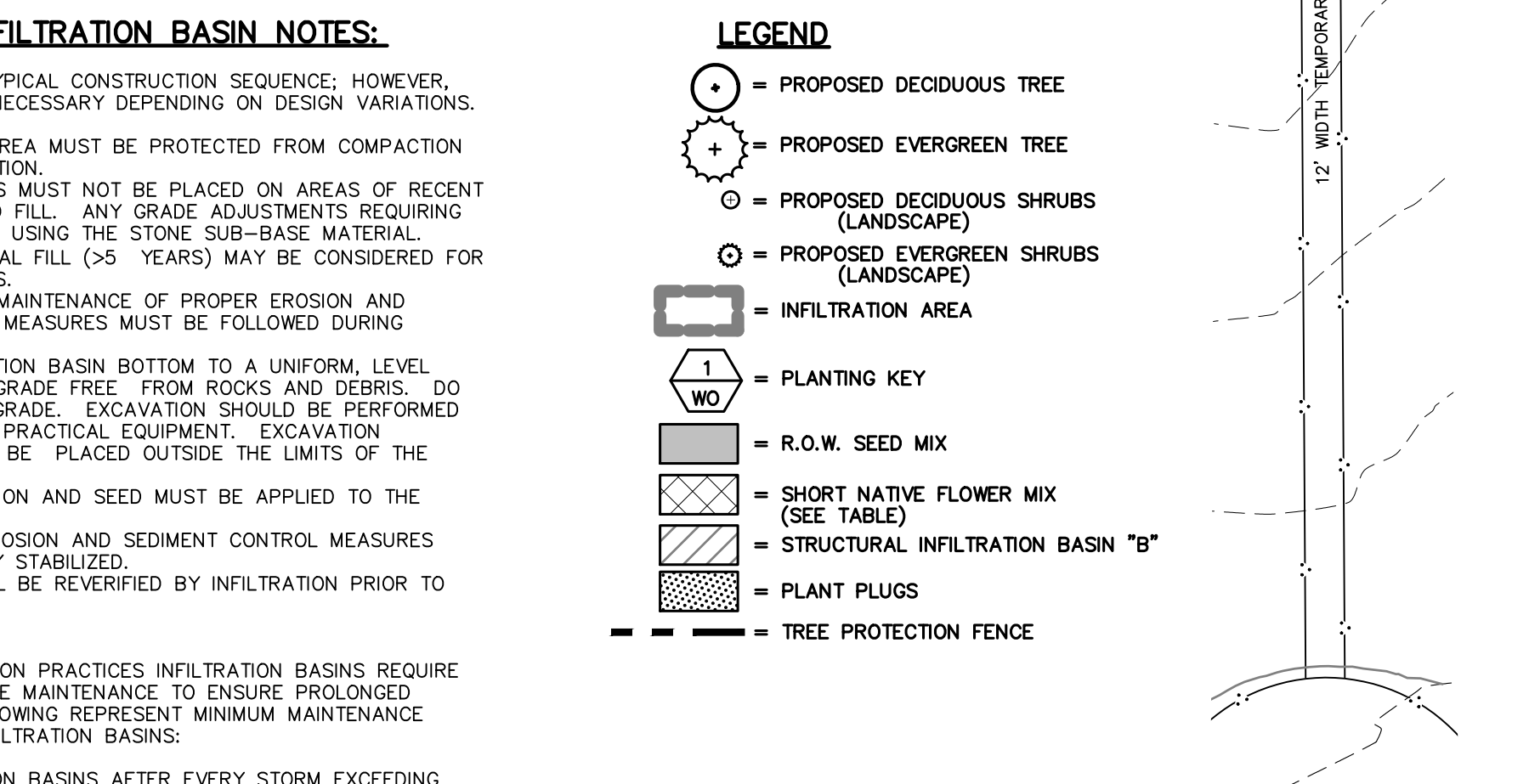
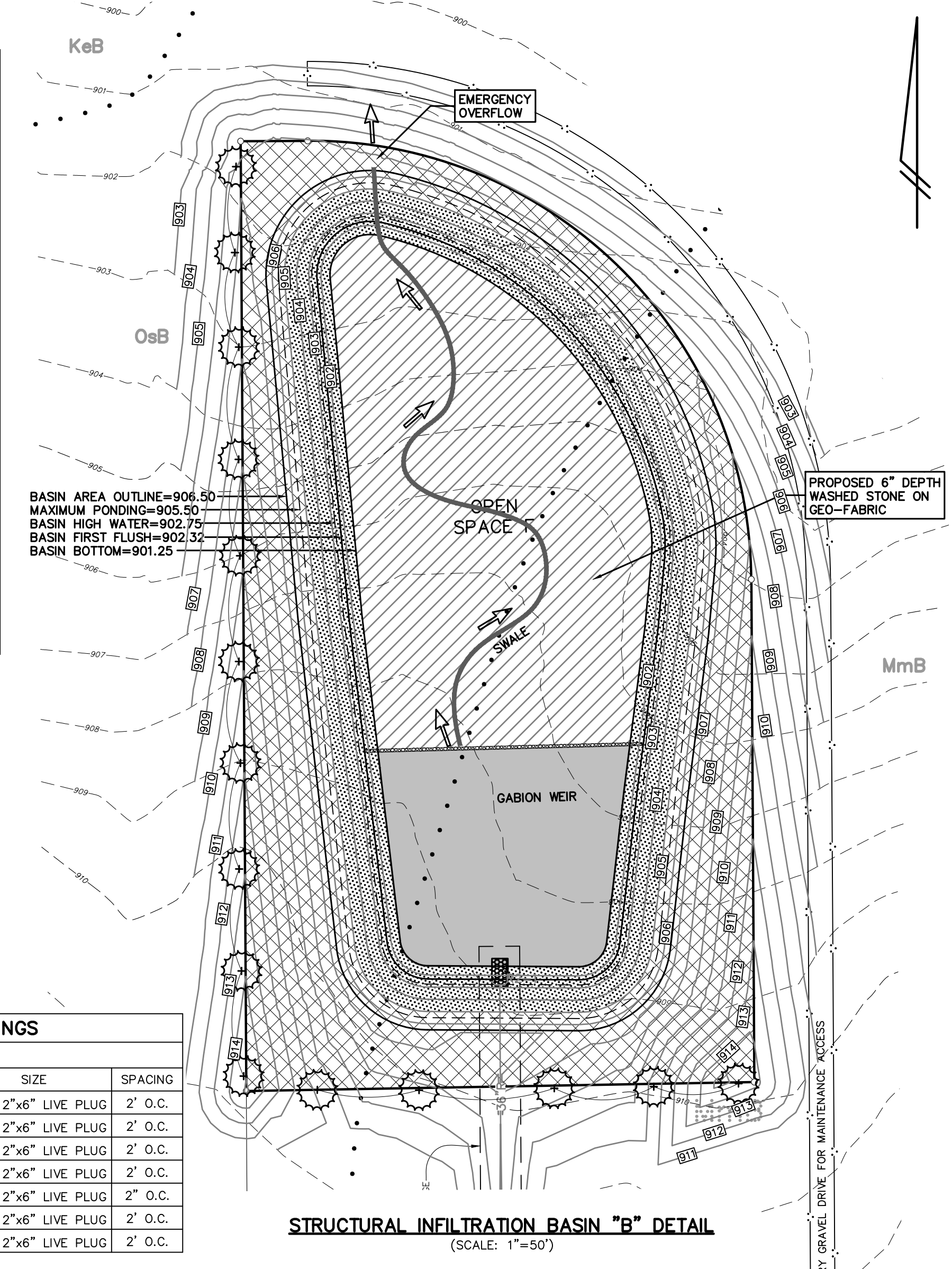
SEED MIXES 3-4 LBS. PER 1,000 SQFT
 12-12-12 ALL PURPOSE FERTILIZER, COVERS 6,000 SQFT PER 50 LBS BAG (FR121212)
 EZ-STRAW SEEDING MULCH WITH TRACKIFIER

DETECTION POND FREEBOARD AREA PLANTINGS

QUA.	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
876	Andropogon gerardii	BIG BLUE STEM	2"x6" LIVE PLUG	2' O.C.
876	Calamagrostis Canadensis	BLUEJOINT GRASS	2"x6" LIVE PLUG	2' O.C.
876	Monarda fistulosa	BEE-BALM	2"x6" LIVE PLUG	2' O.C.
876	Scirpus atrovirens	DARK GREEN BULRUSH	2"x6" LIVE PLUG	2' O.C.
876	Sorghastrum nutans	INDIAN GRASS	2"x6" LIVE PLUG	2' O.C.
876	Ratibida pinnata	YELLOW CONEFLOWER	2"x6" LIVE PLUG	2' O.C.
876	Spartina pectin	PRAIRIE CORD GRASS	2"x6" LIVE PLUG	2' O.C.

STRUCTURAL INFILTRATION BASIN NOTES:

- CONSTRUCTION
 THE FOLLOWING IS A TYPICAL CONSTRUCTION SEQUENCE; HOWEVER, ALTERATIONS WILL BE NECESSARY DEPENDING ON DESIGN VARIATIONS.
 a. THE INFILTRATION AREA MUST BE PROTECTED FROM COMPACTION PRIOR TO INSTALLATION.
 b. INFILTRATION BASINS MUST NOT BE PLACED ON AREAS OF RECENT FILL OR COMPACTED FILL. ANY GRADE ADJUSTMENTS REQUIRING FILL MUST BE DONE USING THE STONE SUB-BASE MATERIAL. AREAS OF HISTORICAL FILL (>5 YEARS) MAY BE CONSIDERED FOR INFILTRATION BASINS.
 c. INSTALLATION AND MAINTENANCE OF PROPER EROSION AND SEDIMENT CONTROL MEASURES MUST BE FOLLOWED DURING CONSTRUCTION.
 d. EXCAVATE INFILTRATION BASIN BOTTOM TO A UNIFORM, LEVEL, UNCOMPACTED SUBGRADE FREE FROM ROCKS AND DEBRIS. DO NOT COMPACT SUBGRADE. EXCAVATION SHOULD BE PERFORMED WITH THE LIGHTEST PRACTICAL EQUIPMENT. EXCAVATION EQUIPMENT SHOULD BE PLACED OUTSIDE THE LIMITS OF THE INFILTRATION BASIN.
 e. TOPSOIL STABILIZATION AND SEED MUST BE APPLIED TO THE DISTURBED AREA.
 f. DO NOT REMOVE EROSION AND SEDIMENT CONTROL MEASURES UNTIL SITE IS FULLY STABILIZED.
 g. PERMEABILITY SHALL BE REVERIFIED BY INFILTRATION PRIOR TO ACCEPTANCE.
 2. MAINTENANCE
 AS WITH ALL INFILTRATION PRACTICES INFILTRATION BASINS REQUIRE REGULAR AND EFFECTIVE MAINTENANCE TO ENSURE PROLONGED FUNCTIONING. THE FOLLOWING REPRESENT MINIMUM MAINTENANCE REQUIREMENTS FOR INFILTRATION BASINS.
 a. INSPECT INFILTRATION BASINS AFTER EVERY STORM EXCEEDING ONE INCH.
 b. INSPECT FOR SEDIMENT ACCUMULATION, OUTLET CONTROL STRUCTURE DAMAGE, EROSION CONTROL MEASURES, SIGNS OF WATER CONTAMINATION/SPILLS AND SLOPE/BERM STABILITY.
 c. MOWING SHOULD OCCUR ONLY AS REQUIRED FOR VEGETATIVE COVER.
 d. DISPOSE OF SEDIMENT, DEBRIS/TRASH, AND ANY OTHER WASTE MATERIAL REMOVED FROM THE INFILTRATION BASIN AT A SUITABLE DISPOSAL/RECYCLING SITE AND IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL WASTE REGULATIONS.
 e. EVALUATE THE DRAIN-DOWN TIME OF THE INFILTRATION BASIN TO ENSURE THE MAXIMUM TIME OF 48 HOURS IS NOT BEING EXCEEDED. IF SLOW DRAINAGE PERSISTS, THE SYSTEM MAY NEED REHABILITATION.
 3. BASIN PLANTING
 a. WITHIN AREAS ABOVE THE MAXIMUM PONDING ELEVATION OF THE PROPOSED INFILTRATION BASIN, SEEDING AND/OR LIVE PLANTINGS ARE ALLOWED. ONLY NATIVE SEEDS (AS DEFINED BY MICHIGAN FLORA, MICHIGANFLORA.NET) ARE ALLOWED FOR PERMANENT SOIL STABILIZATION. ANNUAL SEEDS ARE ALLOWED IN AN AMOUNT NECESSARY TO TEMPORARILY STABILIZE THE LIMITS OF DISTURBANCE.
 b. BELOW THE MAXIMUM PONDING ELEVATION WITHIN THE INFILTRATION BASIN, LIVE PLANTINGS MUST COVER THE ENTIRE AREA. INCLUDE THE QUANTITY OF LIVE PLUGS PROPOSED. THE FIRST FLUSH ELEVATION SHOULD BE NOTED ON THE DETAILS.
 c. PLANTINGS SHOULD BE LOCATED AND APPROPRIATE TO THE HYDRIC CONDITIONS PROPOSED. FOR MORE INFORMATION ON INDIVIDUAL SPECIES, SEE "PLANTS FOR STORMWATER DESIGN: SPECIES SELECTION FOR THE UPPER MIDWEST" BY DANIEL SHAW & RUSTY SCHMIDT.



LEGEND

⊙	LIGHT POLE	⊙	SPOT ELEV.	---	GRAVEL
⊙	UTILITY POLE	⊙	POST	---	EXISTING STORM
⊙	GUY ANCHOR	⊙	GATE VALVE	---	EXISTING SANITARY
⊙	HYDRANT	⊙	SIGN	---	EXISTING WATER
⊙		⊙		---	EXISTING GAS
⊙		⊙		---	EXISTING ELECTRIC
⊙		⊙		---	EXISTING TELEPHONE
⊙		⊙		---	FENCE
⊙		⊙		---	CONCRETE
⊙		⊙		---	ASPHALT

LEGEND

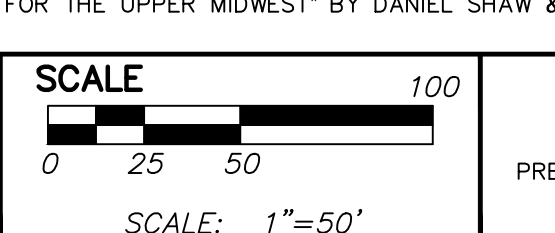
⊙	TRANSFORMER	---	EXISTING STORM
⊙	MANHOLE	---	EXISTING SANITARY
⊙	CATCHBASIN	---	EXISTING WATER
⊙	END SECTION	---	EXISTING GAS
⊙		---	EXISTING ELECTRIC
⊙		---	EXISTING TELEPHONE

LEGEND

⊙	TRANSFORMER	---	EXISTING STORM
⊙	MANHOLE	---	EXISTING SANITARY
⊙	CATCHBASIN	---	EXISTING WATER
⊙	END SECTION	---	EXISTING GAS
⊙		---	EXISTING ELECTRIC
⊙		---	EXISTING TELEPHONE

LEGEND

⊙	TRANSFORMER	---	EXISTING STORM
⊙	MANHOLE	---	EXISTING SANITARY
⊙	CATCHBASIN	---	EXISTING WATER
⊙	END SECTION	---	EXISTING GAS
⊙		---	EXISTING ELECTRIC
⊙		---	EXISTING TELEPHONE



PREPARED BY: *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559

WASHTENAW ENGINEERING
 CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS

M/I HOMES OF MICHIGAN
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

STORMWATER MANAGEMENT CALCULATIONS STRUCTURAL INFILTRATION BASIN "B"

HERITAGE FARMS PHASE 2

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
 CITY OF CHELSEA
 WASHTENAW COUNTY • MICHIGAN
 JOB NO. 32971
 DATE 11-1-23
 DWS NO. 971-PH2-LAND
 FIELD BOOK 446
 FILE NO. 10668

811
 Know what's below. Call before you dig.

STATE OF MICHIGAN
 JOSEPH K. MAYNARD
 No. 52559
 LICENSED PROFESSIONAL ENGINEER

28 SHEET

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE ACCURATELY LOCATED OR DEPICTED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTEANAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTEANAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE ANY INFORMATION FROM THIS PLAN FOR ANY OTHER PROJECTS. THE DRAWINGS, SPECIFICATIONS, REVISIONS BY THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS, THE USER SHALL CONSULT WITH THE ARCHITECT AND ENGINEER. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES AND EMPLOYERS OF ANY OF THEM FROM AND ADHERING TO ALL APPLICABLE REGULATIONS, ORDINANCES, AND LAWS. DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, REVISIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.

PLANT LIST						
KEY	QUA.	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENT
ARM	18	Acer p. 'Armstrong'	ARMSTRONG RED MAPLE	2.5" CAL.	AS SHOWN	B&B
TUL	23	Liriodendron tulipifera	TULIP TREE	2.5" CAL.	AS SHOWN	B&B
GNK	25	Ginkgo biloba	GINKGO	2.5" CAL.	AS SHOWN	B&B
DWN	12	Metasequoia glyptostroboides	DAWN REDWOOD	2.5" CAL.	AS SHOWN	B&B
HET	10	Juniperus virginiana	EAST RED CEDAR	8.0' HT.	AS SHOWN	B&B
GUM	4	Liquidambar styraciflua	SWEET GUM	2.5" CAL.	AS SHOWN	B&B
QR	3	Quercus rubra	RED OAK	2.5" CAL.	AS SHOWN	B&B
QA	8	Quercus alba	WHITE OAK	2.5" CAL.	AS SHOWN	B&B
VIB	34	Viburnum opulus	SNOWBALL BUSH	3.0' HT.	AS SHOWN	CONT.
FOR	25	Foraythia suspense	WEeping FORSYTHIA	3.0' HT.	AS SHOWN	CONT.
HYD	25	Hydrangea arborescens 'Annabelle'	ANNABELLE HYDRANGEA	3.0' HT.	AS SHOWN	CONT.
TOTAL		187	(100 TREES & 120 SHRUBS)			

PLANT LIST REPRESENTS THE TOTAL PHASE 2 SITE.

CITY OF CHELSEA
LANDSCAPE REQUIREMENTS (2021)

SECTION 7.04 - FRONTAGE LANDSCAPING - STREET TREES
ALL WHERE THE SITE ABUTS A PUBLIC OR PRIVATE STREET, THE FOLLOWING FRONTAGE LANDSCAPING SHALL BE PROVIDED IN THE FRONT YARD AREA ADJACENT TO THE STREET RIGHT-OF-WAY. REQUIREMENT IS 1 DECIDUOUS/CANOPY TREE PER 50 LINEAR FEET OF ROAD FRONTAGE

SYMBOL	LOCATION	REQUIREMENT BASIS	REMOVALS	REQUIREMENT	PROVIDED	COMPLIANCE/WAIVER
FL	KNOLLWOOD BEND	740'	10 DRIVEWAYS @ 16' EA. (160')	12 TREES	12 TREES	1 TREE ADDED TO WHISPERWOOD WAY
FL	COUNTRYSIDE DR	824.2'	7 DRIVEWAYS @ 16' EA. (112')	15 TREES	15 TREES	
FL	HARVEST WAY	1360'	22 DRIVEWAYS @ 16' EA. (352')	21 TREES	21 TREES	
FL	WHISPERWOOD WAY	430'	3 DRIVEWAYS @ 16' EA. (48')	8 TREES	9 TREES	
FL	SWIFT CREEK DR	828'	3 DRIVEWAYS @ 16' EA. (48')	16 TREES	16 TREES	
TOTAL				72 TREES	71 TREES	

INFILTRATION BASIN "B", OPEN SPACE F (STORM BASIN PERIMETER) = 0.84 AC±

SECTION 7.08 - BUFFERING FROM RESIDENTIAL USES
ALL PREMISES USED FOR BUSINESS, COMMERCIAL, OR INDUSTRIAL, AS WELL AS APPROVED OR PERMITTED NON-RESIDENTIAL USES IN RESIDENTIAL DISTRICTS, SHALL BE SCREENED ALONG EACH REAR LOT LINE AND EACH INTERIOR LOT LINE WHEN THE REAR LOT LINE OR INTERIOR LOT LINE ABUTS TO A PARCEL WHICH IS ZONED R-1, R-2 OR R-3.

A. BUFFER TYPES.
REQUIRED RESIDENTIAL SCREENING MAY BE SATISFIED BY ANY ONE OR COMBINATION OF ANY OF THE FOLLOWING.

BUFFER TYPES HEIGHT (MIN.)

(1) GREENBELT: 10 FT. WD. GREENBELT CONTAINING ONE OF THE FOLLOWING:

A) CONTINUOUS SCREEN OF EVERGREENS 6 FT.

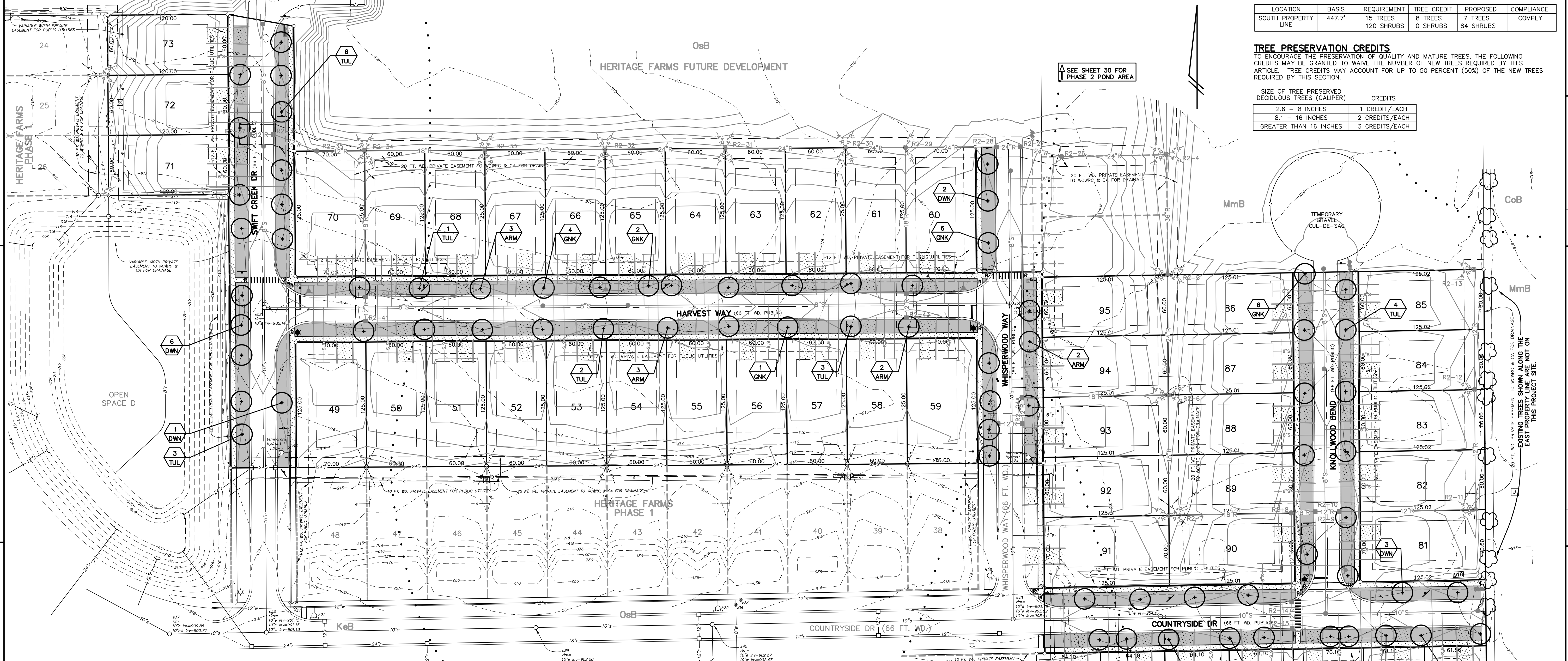
B) A WOODED AREA LEFT IN ITS NATURAL STATE, WITH NO TREES OR OTHER VEGETATION REMOVED UNLESS IT IS DEEMED TO BE DEAD, MAY SERVE AS THE REQUIRED GREENBELT. HOWEVER, IF ANY VEGETATION IS REMOVED FROM THE GREENBELT AT ANY TIME, THEN PLANTINGS MUST BE ADDED TO ENSURE THAT THERE IS AT LEAST ONE (1) TREE AND EIGHT (8) SHRUBS PER 30 FEET OF THE LENGTH OF THE LOT LINE.

LOCATION	BASIS	REQUIREMENT	TREE CREDIT	PROPOSED	COMPLIANCE
SOUTH PROPERTY LINE	447.7'	15 TREES 120 SHRUBS	8 TREES 0 SHRUBS	7 TREES 84 SHRUBS	COMPLY

TREE PRESERVATION CREDITS
TO ENCOURAGE THE PRESERVATION OF QUALITY AND MATURE TREES, THE FOLLOWING CREDITS MAY BE GRANTED TO WAIVE THE NUMBER OF NEW TREES REQUIRED BY THIS ARTICLE. TREE CREDITS MAY ACCOUNT FOR UP TO 50 PERCENT (50%) OF THE NEW TREES REQUIRED BY THIS SECTION.

SIZE OF TREE PRESERVED DECIDUOUS TREES (CALIPER) CREDITS

2.6 - 8 INCHES	1 CREDIT/EACH
8.1 - 16 INCHES	2 CREDITS/EACH
GREATER THAN 16 INCHES	3 CREDITS/EACH



PROPOSED LEGEND

- ASPHALT SURFACE
- CONCRETE SURFACE
- 6" UNDER DRAIN PIPE WITH SOCK
- SPILL IN (F4) BARRIER CONCRETE CURB & GUTTER
- SPILL OUT (F4) BARRIER CONCRETE CURB & GUTTER
- SIGN
- LIGHTPOLE
- RAMP WITH TACTILE WARNING STRIPS
- WCWR - WASHTEANAW COUNTY WATER RESOURCES COMMISSIONER
- CA - CONDOMINIUM ASSOCIATION

WASHTEANAW COUNTY SOIL SURVEY CLASSIFICATION

- CoB - CONOVER LOAM, 0 TO 4 PERCENT SLOPES
- KeB - KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES
- MmB - MIAMI LOAM, 2 TO 6 PERCENT SLOPES
- OsB - OSHTEMO LOAMY SAND, 0 TO 6 PERCENT SLOPES
- SOILS BOUNDARY

SOILS ARE BASED ON USDA SOIL SURVEY OF WASHTEANAW COUNTY.

LEGEND

- PROPOSED DECIDUOUS TREE
- PROPOSED EVERGREEN TREE
- PROPOSED DECIDUOUS SHRUBS (LANDSCAPE)
- PROPOSED EVERGREEN SHRUBS (LANDSCAPE)
- INFILTRATION AREA
- PLANTING KEY
- R.O.W. SEED MIX
- OPEN SPACE F WILDFLOWER MIX
- STRUCTURAL INFILTRATION BASIN "B" (6A WASHED STONE)
- PLANT PLUGS
- SEEDMENT POND SEED MIX
- TREE PROTECTION FENCE

SHADED UNDERSTORY MIX (66" DBH SWAMP WHITE OAK)

Native Grass: Little Bluestem 0.25 Lbs.
Temporary: Seed Oats 32#/acre

Planting: Baby's Breath, Black-eyed Susan, Blue Flax, Catchfly, Cornflower, Domes Rocket, Lance Leaf Coreopsis, New England Aster, Nodding Onion, Ohio Spiderwort, Purple Coneflower, Sheeta Daisy, Showy Goldenrod, Showy Tick Trelfall, Smooth Penstemon, Western Yarrow, Wild Bergamot

Seeding Rate: Broadcast: 1 oz./150 sq ft or 1 lb./3,500 sq ft | Drilled: 10 Lbs./acre
Colors: Blue Orange Pink Purple Red White Yellow
Growing Season: February - August

TREE IDENTIFICATION TABLE

TAG	COMMON NAME	DBH	HEIGHT	CONDITION	REMOVE	MITIGATION	PRESERVATION
8565	Black Walnut	22		Good	3		3
8566	Black Walnut	14		Good	2		2
8567	Black Walnut	28		Good	2		2
8568	Black Walnut	10		Good	2		2
8569	Black Walnut	32		Good	2		2
8570	Black Walnut	12		Good	2		2
8571	Swamp White Oak	66		Excellent	3		3
8572	Black Walnut	10		Good	2		2
8573	Black Walnut	14		Good	2		2

EXISTING TREES TO REMAIN - NO MITIGATION REQUIRED.

NOTES

- BUFFER TREES FOR DETENTION AREA TO BE PLACED ON PROPERTY LINE, SO AS NOT TO CONFLICT WITH WCWR PLANTING REQUIREMENTS.
- SYMBOLS FOR PROPOSED DECIDUOUS AND EVERGREEN TREES ARE SIZED ON PLAN TO REPRESENT CANOPY AT THE TIME OF INSTALLATION AND DO NOT REPRESENT THE CANOPY AT MATURITY.

BENCHMARK
BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9±
WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
BM2=NAIL IN WLY FACE OF 26" WALNUT, 43± NORTH OF DEXTER-CHELSEA RD AND 37±
NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21
(NAVD 88 DATUM)

REVISIONS
1-15-2024 PER WCWR AND CITY REVIEWS
2-6-2024 PER WCWR AND CITY REVIEWS

811
Know what's below.
Call before you dig.

STATE OF MICHIGAN
GERALD J. SOSNOWSKI
LANDSCAPE ARCHITECT
NO. 982

PREPARED BY: *Gerald J. Sosnowski*
GERALD J. SOSNOWSKI RLA, MICH. No. 982

CIVIL ENGINEERS
PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS

WASHTEANAW ENGINEERING

M/I HOMES OF MICHIGAN
40950 WOODWARD AVE.
BLOOMFIELD HILLS, MI 48304
PH: (248)-221-5011

CLIENT

PHASE 2 LANDSCAPE PLAN

SHEET

PROJECT

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST

CITY OF CHELSEA
WASHTEANAW COUNTY • MICHIGAN

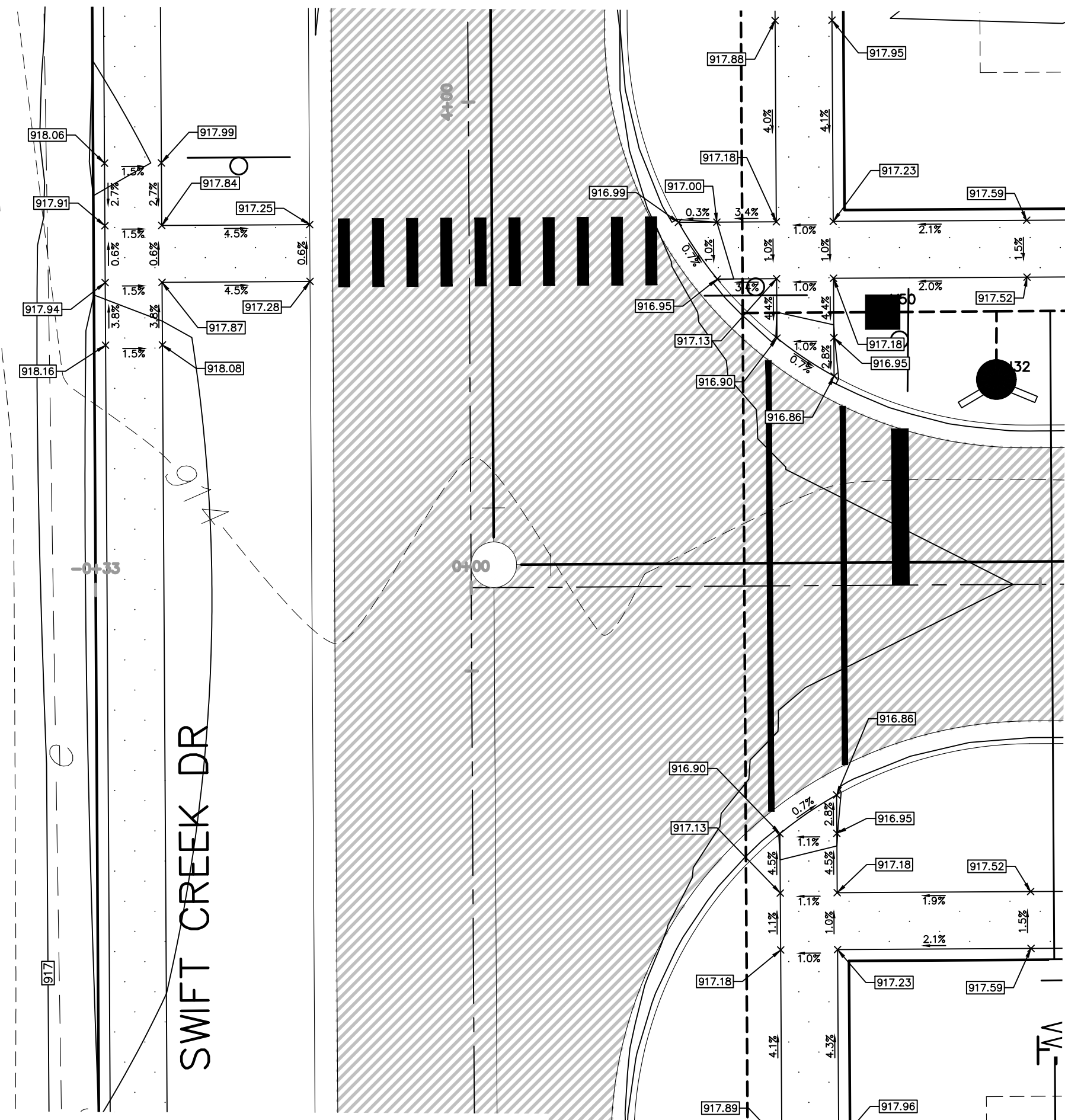
DATE 11-1-23
JOB NO. 32971
DWG NO. 971-PH2-LAND
FIELD BOOK 446
FILE NO. 10668

29 SHEET

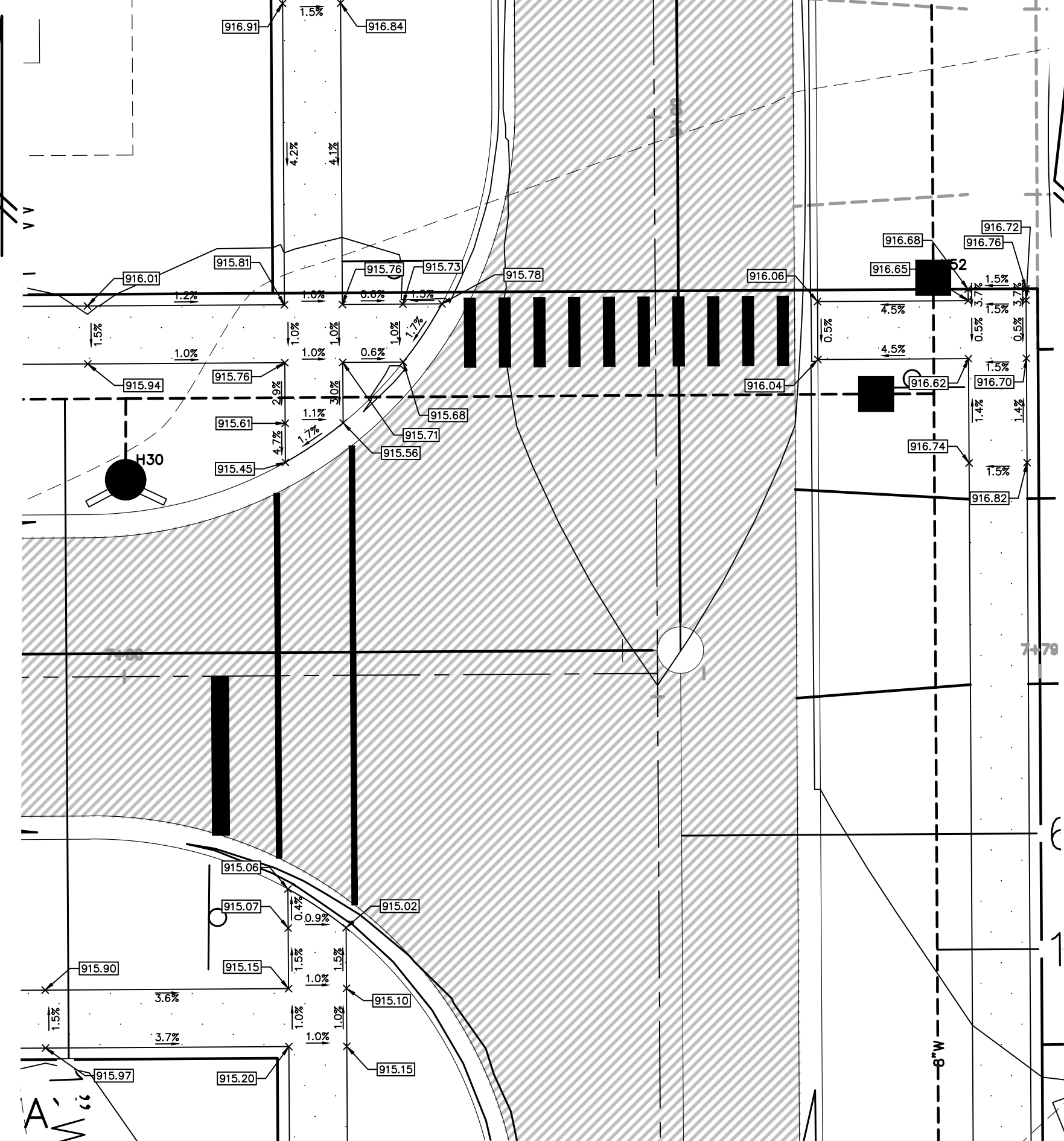
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE ACCURATELY LOCATED OR DEPTHS ARE ACCURATE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTENAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTENAW ENGINEERING COMPANY, INC.

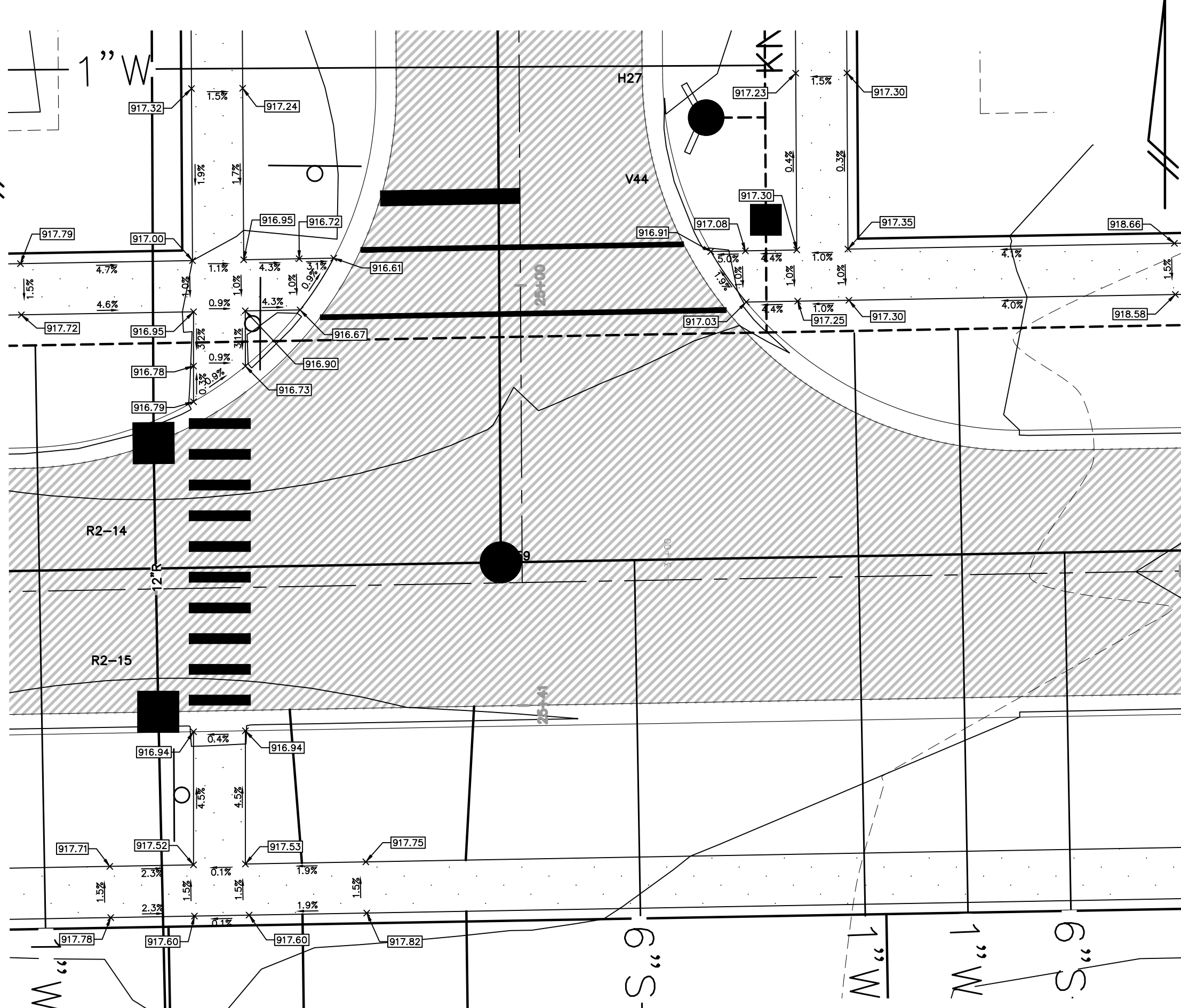
THE OWNER SHALL NOT USE OR WITHHOLD ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, OR INFORMATION BY ANY OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTENAW ENGINEERING COMPANY (MECO) IS NOT ADDED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE SURVEYOR SHALL MAINTAIN AND HOLD HARMLESS MECO, MECO'S CONSULTANTS AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES, ARISING OUT OF UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.



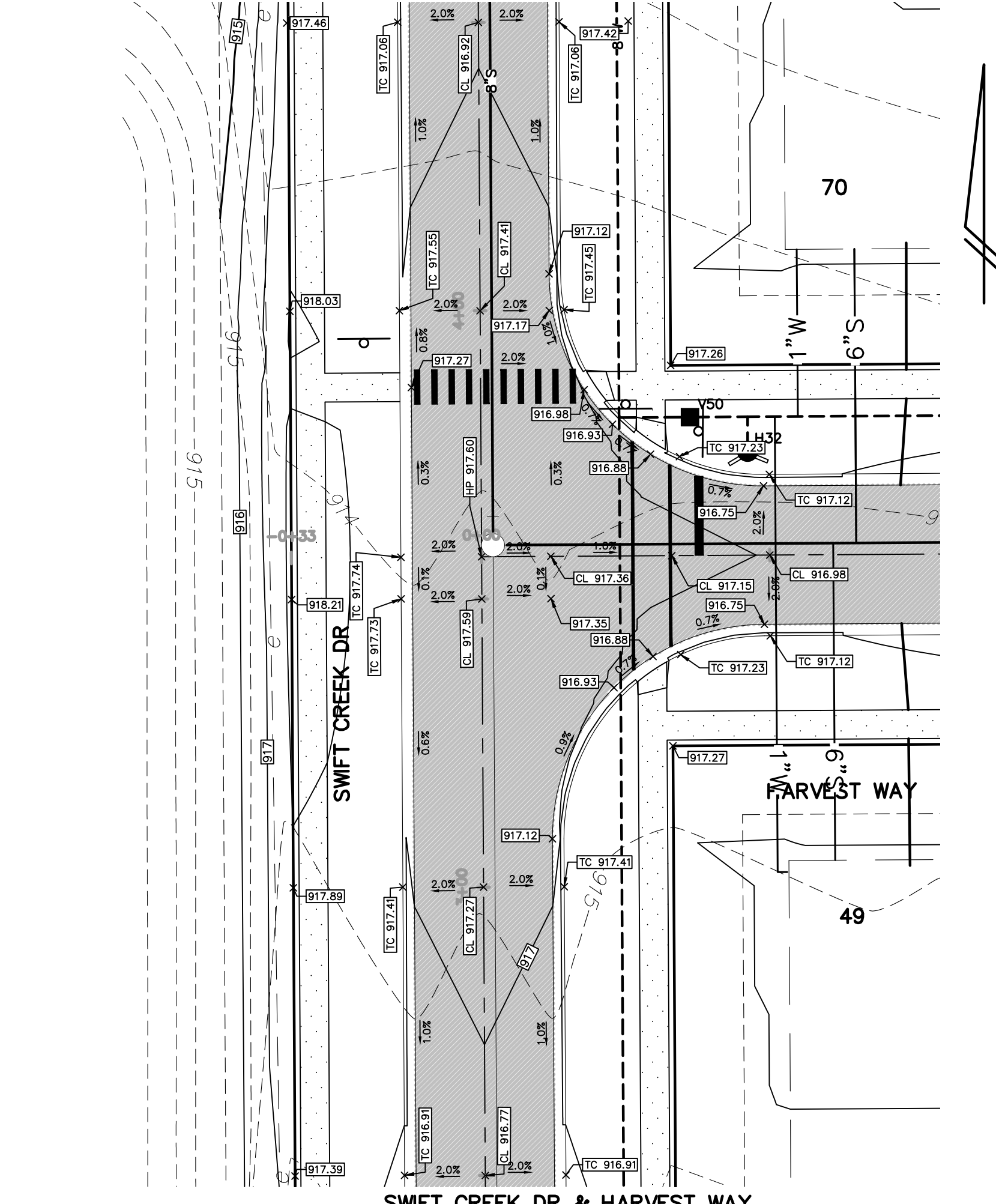
SWIFT CREEK DR & HARVEST WAY SIDEWALK GRADING DETAIL (SCALE: 1"=10')



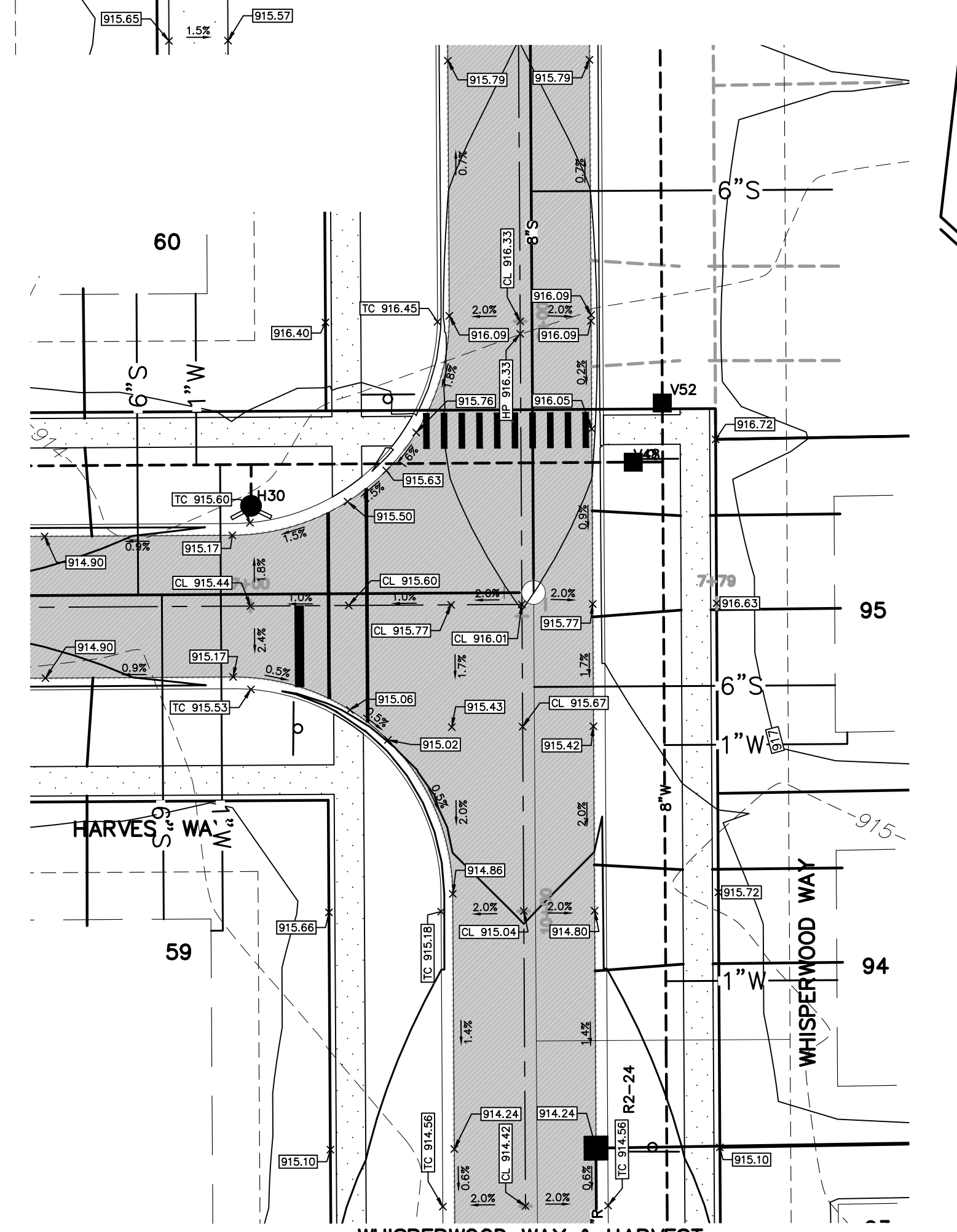
WHISPERWOOD WAY & HARVEST WAY SIDEWALK GRADING DETAIL (SCALE: 1"=10')



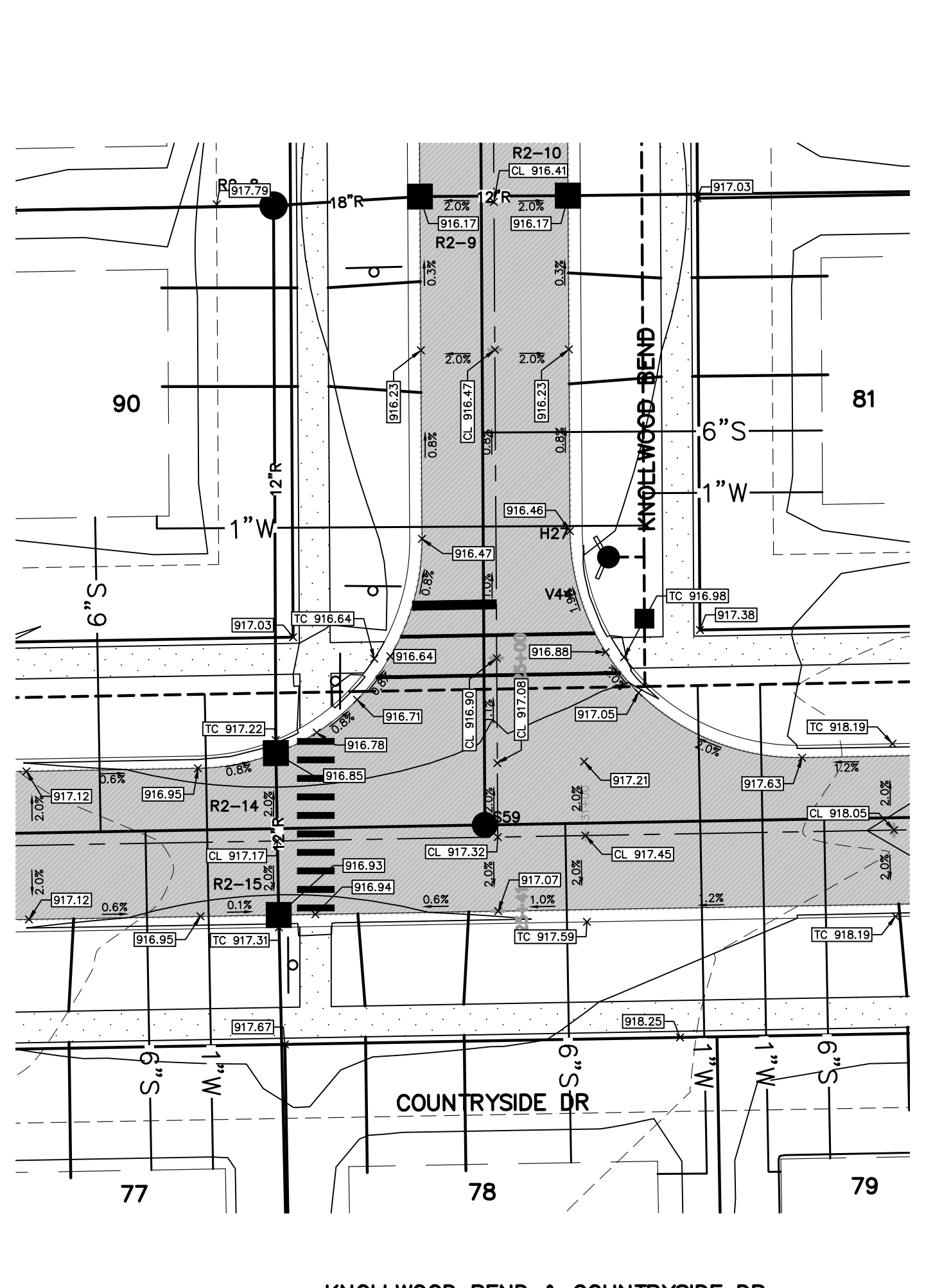
COUNTRYSIDE DR & KNOLLWOOD BEND & COUNTRYSIDE DR SIDEWALK GRADING DETAIL (SCALE: 1"=10')



SWIFT CREEK DR & HARVEST WAY INTERSECTION DETAIL (SCALE: 1"=20')



WHISPERWOOD WAY & HARVEST WAY INTERSECTION DETAIL (SCALE: 1"=20')



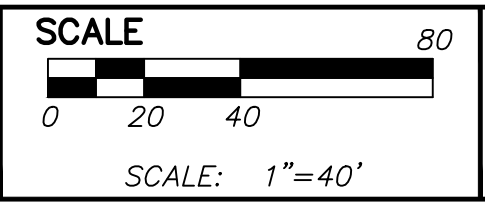
KNOLLWOOD BEND & COUNTRYSIDE DR INTERSECTION DETAIL (SCALE: 1"=20')

- PROPOSED LEGEND**
- = ASPHALT SURFACE
 - = CONCRETE SURFACE
 - = 6" UNDER DRAIN PIPE WITH SOCK
 - = SPILL IN (F4) BARRIER CONCRETE CURB & GUTTER
 - = SPILL OUT (F4) BARRIER CONCRETE CURB & GUTTER
 - = SIGN
 - = LIGHTPOLE
 - = RAMP WITH TACTILE WARNING STRIPS
 - = WASHTENAW COUNTY WATER RESOURCES COMMISSIONER
 - = CONDOMINIUM ASSOCIATION

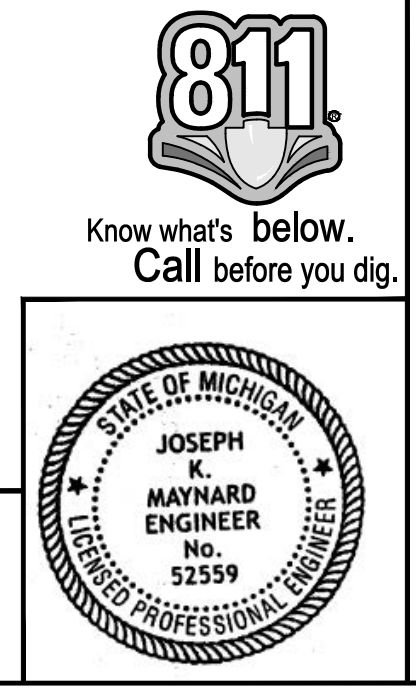
	LIGHT POLE		SPOT ELEV.		GRAVEL		EXISTING STORM
	UTILITY POLE		POST		FENCE		EXISTING SANITARY
	GUY ANCHOR		GATE VALVE		CONCRETE		EXISTING WATER
	HYDRANT		MANHOLE		ASPHALT		EXISTING GAS
			CATCHBASIN				EXISTING ELECTRIC
			END SECTION				EXISTING TELEPHONE

BENCHMARK
 BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-HELSEA RD AND 9th
 WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
 BM2=NAIL IN WLY FACE OF 26" WALNUT, 43' NORTH OF DEXTER-HELSEA RD AND 37th
 NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21
 (NAVD 88 DATUM)

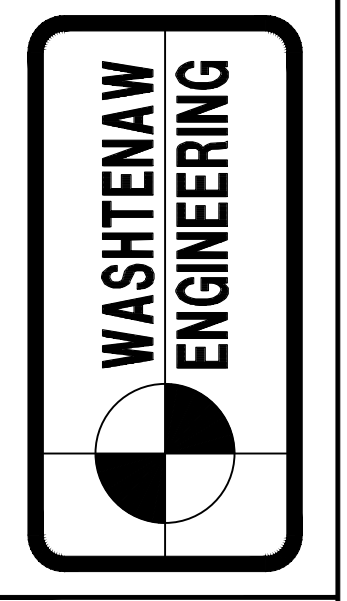
REVISIONS
 1-15-2024 PER WCWRC AND CITY REVIEWS
 2-6-2024 PER WCWRC AND CITY REVIEWS



PREPARED BY *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559



CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 3526 W. LIBERTY RD
 ANN ARBOR, MI 48103
 TEL: 734-761-8900



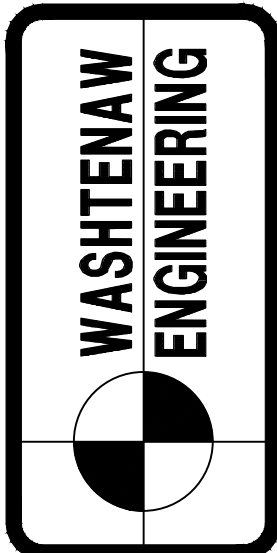
CLIENT
 M/I HOMES OF MICHIGAN
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

PROJECT
HERITAGE FARMS PHASE 2

SHEET
 31

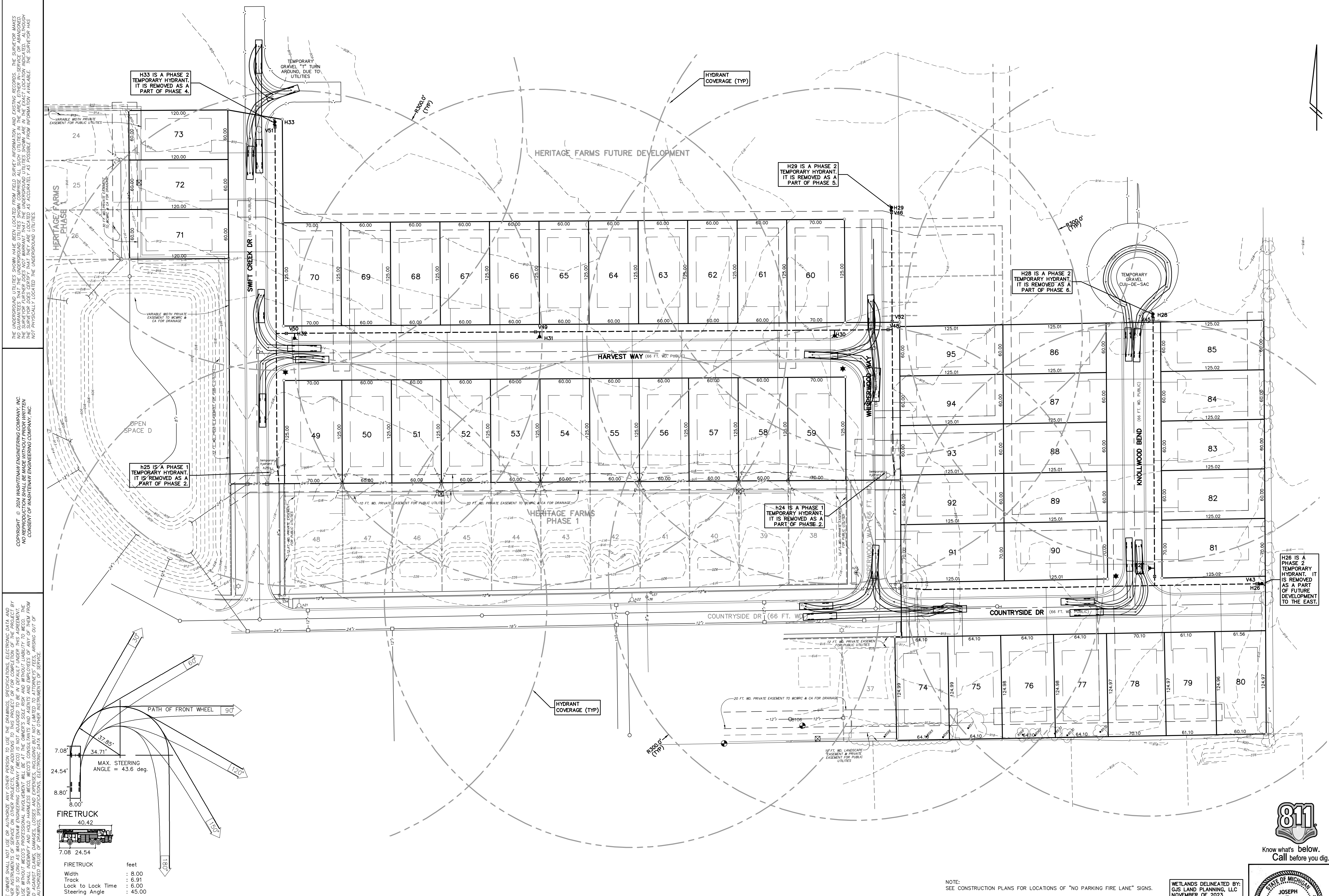
SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
 CITY OF CHELSEA
 WASHTENAW COUNTY • MICHIGAN
 JOB NO. 32971
 DATE 11-1-23
 DWS NO. 971-PH2-road inter
 FIELD BOOK 446
 FILE NO. 10668

Know what's below.
 Call before you dig.



SHEET
FIRE PROTECTION PLAN

PROJECT
HERITAGE FARMS PHASE 2



COPYRIGHT © 2024 WASHTENAW ENGINEERING COMPANY, INC.
NO REPRODUCTION OR TRANSMISSION IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, IS PERMITTED WITHOUT THE WRITTEN CONSENT OF WASHTENAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA, AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS, FOR ADDITION TO THIS PROJECT, OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTENAW ENGINEERING COMPANY (MECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. MECO SHALL INDEMNIFY AND HOLD HARMLESS MECO, MECO'S CONSULTANTS AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF OR FROM UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.

LEGEND

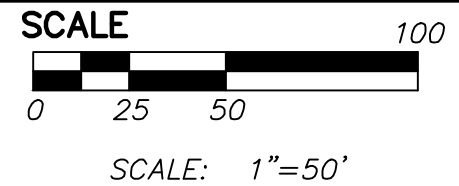
○	LIGHT POLE	○	SPOT ELEV.	⊠	TRANSFORMER	---	GRAVEL	---	EXISTING STORM
○	UTILITY POLE	○	POST	○	MANHOLE	---	FENCE	---	EXISTING SANITARY
○	GUY ANCHOR	○	GATE VALVE	○	CATCHBASIN	---	CONCRETE	---	EXISTING WATER
○	HYDRANT	○	END SECTION	---	ASPHALT	---	ASPHALT	---	EXISTING GAS
								---	EXISTING ELECTRIC
								---	EXISTING TELEPHONE

BENCHMARK
BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9th
WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
BM2=NAIL IN WLY FACE OF 26" WALNUT, 43'± NORTH OF DEXTER-CHELSEA RD AND 37th
NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21
(NAVD 88 DATUM)

REVISIONS
1-15-2024 PER WCWRC AND CITY REVIEWS
2-6-2024 PER WCWRC AND CITY REVIEWS

NOTE:
SEE CONSTRUCTION PLANS FOR LOCATIONS OF "NO PARKING FIRE LANE" SIGNS.

WETLANDS DELINEATED BY:
GJS LAND PLANNING, LLC
NOVEMBER OF 2023.



PREPARED BY
Joseph K. Maynard
JOSEPH K. MAYNARD P.E., MICH No. 52559



811
Know what's below.
Call before you dig.

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THE ACCURACY OF ANY INFORMATION PROVIDED HEREON. THE SURVEYOR DOES NOT WARRANT THE ACCURACY OF ANY INFORMATION PROVIDED HEREON. THE SURVEYOR DOES NOT WARRANT THE ACCURACY OF ANY INFORMATION PROVIDED HEREON. THE SURVEYOR DOES NOT WARRANT THE ACCURACY OF ANY INFORMATION PROVIDED HEREON.

COPYRIGHT © 2024 WASHTEWAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT PRIOR WRITTEN CONSENT OF WASHTEWAW ENGINEERING COMPANY, INC.

THE USER SHALL NOT USE OR REPRODUCE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, INFORMATION, TELEPHONE BY W. AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTEWAW ENGINEERING COMPANY (WECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. WASHTEWAW ENGINEERING COMPANY (WECO) SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES, LOSSES, AND EXPENSES OF ANY KIND FROM AND AGAINST CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES, ARISING OUT OF UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, INFORMATION, TELEPHONE BY W. AND OTHER INSTRUMENTS OF SERVICE.



INDOOR/OUTDOOR IRRIGATION TIMER



MAXI-PAW ROTOR SPRINKLERS
SPRAY DISTANCE FROM 25 TO 40 FEET
ADJUSTABLE SPRAY 45° TO 270°



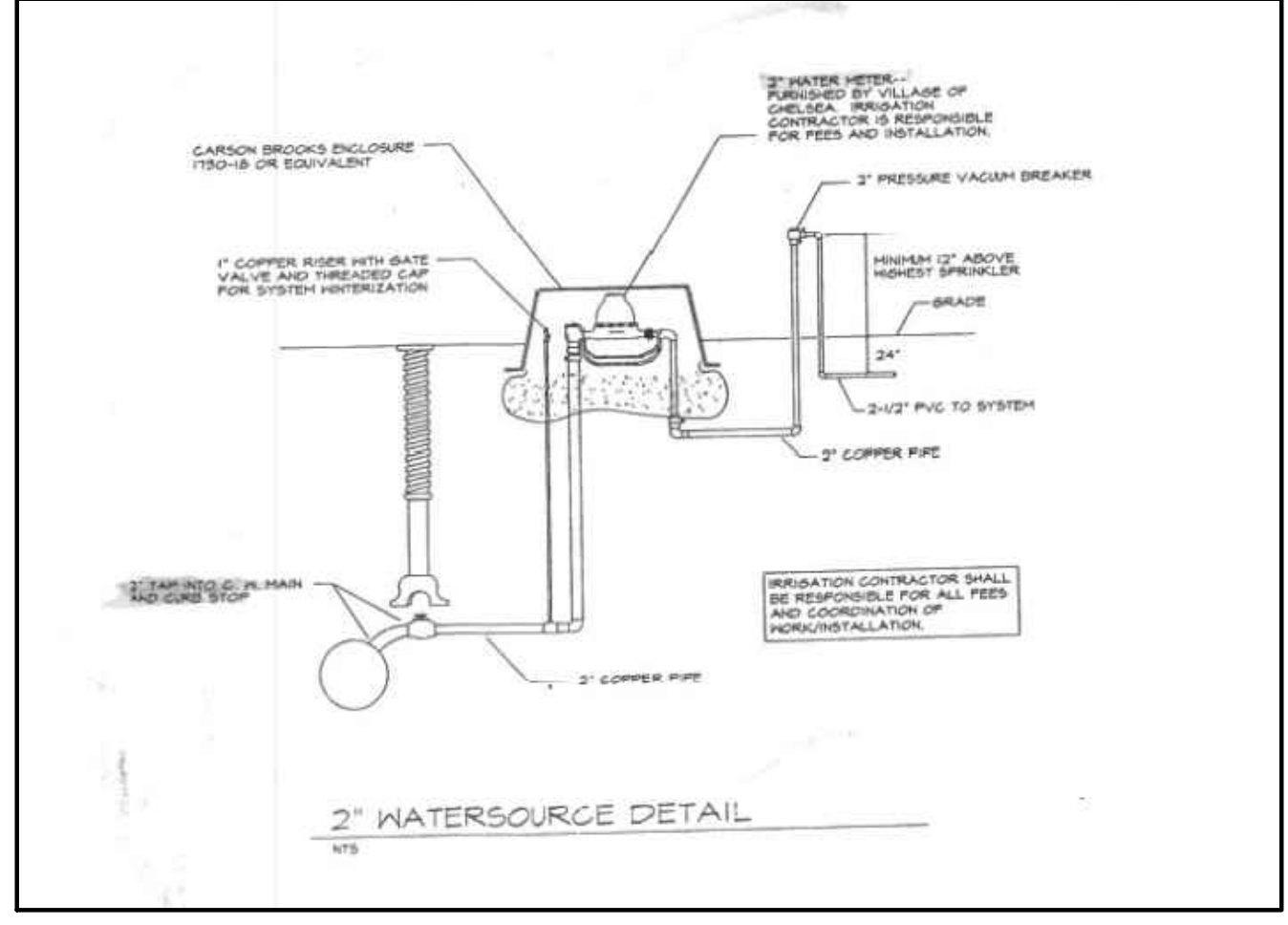
MINI ROTOR SPRINKLERS
SPRAY DISTANCE FROM 17 TO 24 FEET
ADJUSTABLE SPRAY 45° TO 270°



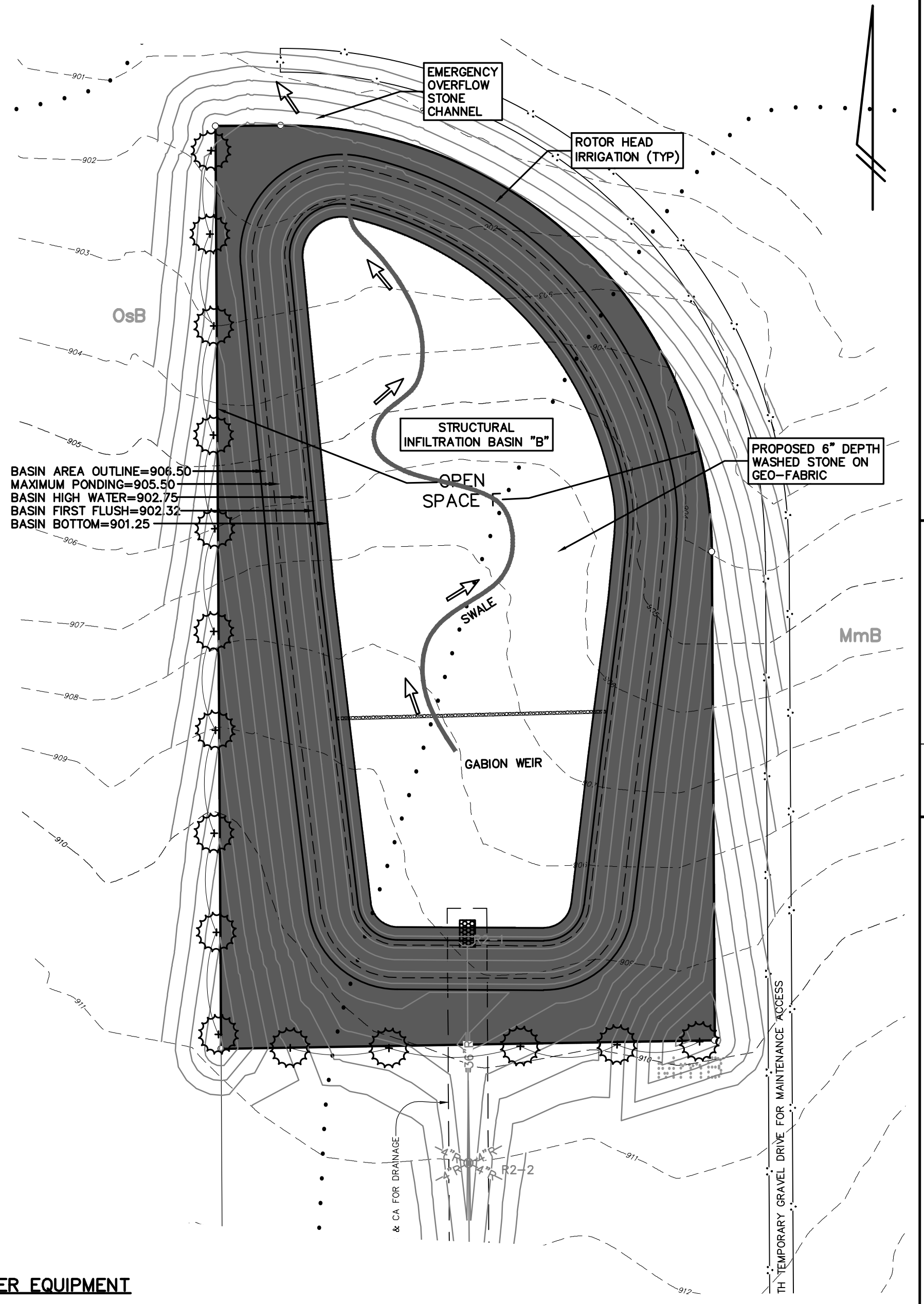
HV & HVF SERIES VALVES



QUICK COUPLER VALVE



2" WATER SERVICE AND METER BOX



BASIN AREA OUTLINE=906.50
MAXIMUM PONDING=905.50
BASIN HIGH WATER=902.75
BASIN FIRST FLUSH=902.32
BASIN BOTTOM=901.25

SPRINKLER EQUIPMENT

- SITE CONTROLLERS**
RAINBIRD 12 STATION OUTDOOR CONTROLLERS
RAINBIRD 24V ELECTRIC VALVES
- SPRAY HEADS**
RAINBIRD 1800 SERIES POP-UP (MINI) ROTOR SPRINKLER HEADS
MAXI-PAW AG5 OR 2045A SERIES ROTOR SPRINKLER HEADS
- OTHER ITEMS**
WILKINS FREEZE RESISTANT, PRESSURE VACUUM BREAKER
WILKINS BACKFLOW PREVENTER
4" DIA. SCH40 PVC SLEEVE FOR LAWN SPRINKLER LINES UNDER VEHICULAR PAVEMENTS
(2) 2" SCH40 PVC SLEEVES UNDER ALL PEDESTRIAN WALKWAYS

IRRIGATION LEGEND

- = CONTROLLER (LOCATION TO BE DETERMINED)
- = PROPOSED ROTOR HEAD SPRINKLER

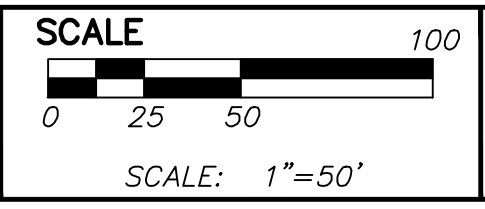
NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR THE FIRST WINTERIZATION AND FIRST SPRING START UP OF THE IRRIGATION SYSTEM.
2. WATER SOURCE IS PUBLIC SYSTEM.
3. IRRIGATION CONTRACTOR TO COORDINATE ALL SLEEVE LOCATIONS WITH THE FLATWORK CONTRACTOR (SEE SHEETS 6 & C11).
4. ALL LAWN AREAS WITHIN PERIMETER SIDEWALK TO BE CLASS A SOD.
5. ALL SPRINKLERS HEADS TO BE HEAD TO HEAD COVERAGE.
6. PLANS ARE GENERALIZED PERFORMANCE OF SPRINKLE AREAS.
7. CONTRACTOR RESPONSIBLE FOR NUMBER OF HEAD, VALVE AND PIPE NEEDS FOR THE PROJECT.
8. ALL SOD TO BE PLACED ON 4" TOPSOIL.
9. ALL SODDED LAWN AREAS AND LIVE PLUG AREAS ON SITE TO BE IRRIGATED WITH AUTOMATIC SPRINKLERS.
10. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR PROVIDING IRRIGATION SYSTEM AS-BUILT DRAWINGS. AS-BUILT DRAWINGS TO INCLUDE: RAIN CONTROL CLOCKS, IRRIGATION ZONES, VALVE LOCATIONS, SLEEVE LOCATIONS, SPRAY HEADS, ROTOR HEADS, MAIN LINES, LATERAL LINES AND VACUUM BREAKERS.
11. 2 QUICK COUPLER VALVES TO BE INCLUDED.
12. ORIENT SPRAY HEADS TO AVOID OVERSPRAY ONTO ARCHITECTURAL DETAILS (FENCES, SIGN ETC.).
13. STREET TREES WILL HAVE GATOR BAGS PLACED ON THE TREES FOR WATERING WHILE TREES GET ESTABLISHED.
14. SITE TO HAVE IRRIGATION IN OPEN SPACES PER THE PLANS. OPEN SPACE F WILL HAVE AN IRRIGATION SYSTEM AND STREET TREES PLANTED AS PART OF PHASE 4 AND PHASE 6 PLANS.

○	SPOT ELEV.	□	TRANSFORMER	---	GRAVEL	---	EXISTING STORM
○	POST	○	MANHOLE	---	FENCE	---	EXISTING SANITARY
○	GUY ANCHOR	□	CATCHBASIN	---	CONCRETE	---	EXISTING WATER
○	HYDRANT	□	END SECTION	---	ASPHALT	---	EXISTING GAS
						---	EXISTING ELECTRIC
						---	EXISTING TELEPHONE

BENCHMARK
BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHelsea RD AND 9th
WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
BM2=NAIL IN WLY FACE OF 26" WALNUT, 43'± NORTH OF DEXTER-CHelsea RD AND 37'± NELY OF THE SOUTHWEST PROPERTY CORNER, ELEV=927.38
BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21 (NAVD 88 DATUM)

REVISIONS
4-15-2024 PER WCMRC AND CITY REVIEWS
2-6-2024 PER WCMRC AND CITY REVIEWS



PREPARED BY: *Gerald J. Sosnowski*
GERALD J. SOSNOWSKI RLA, MICH No. 982

811
Know what's below.
Call before you dig.

STATE OF MICHIGAN
REGISTERED LANDSCAPE ARCHITECT
NO. 982

WASHTEWAW ENGINEERING

CIVIL ENGINEERS
PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS
3526 W. LIBERTY RD
ANN ARBOR, MI 48103
TEL: 734-761-8800

M/I HOMES OF MICHIGAN
40950 WOODWARD AVE.
BLOOMFIELD HILLS, MI 48304
PH: (248)-221-5011

PHASE 2 IRRIGATION PLAN POND AREA

HERITAGE FARMS PHASE 2

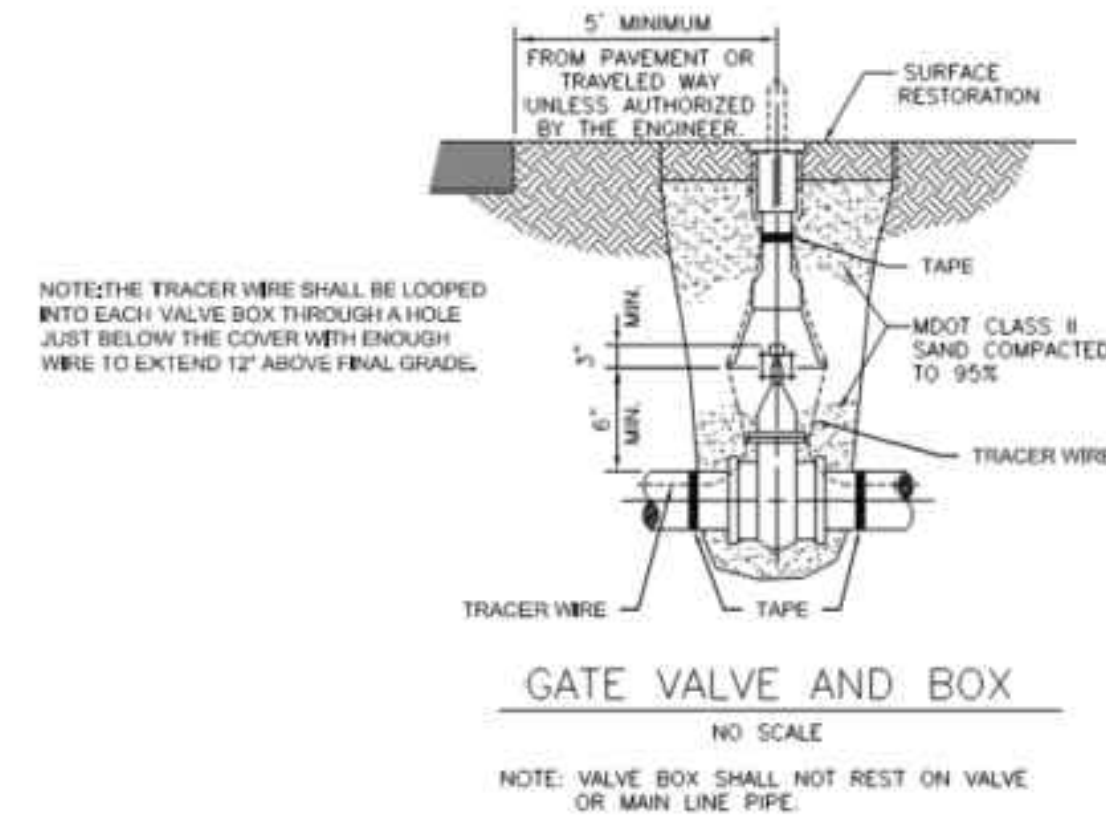
SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
CITY OF CHELSEA
WASHTEWAW COUNTY • MICHIGAN
JOB NO. 32971
DATE 11-1-23
DWS NO. 971-PH2-Irrigation
FIELD BOOK 446
FILE NO. 10668

34 SHEET

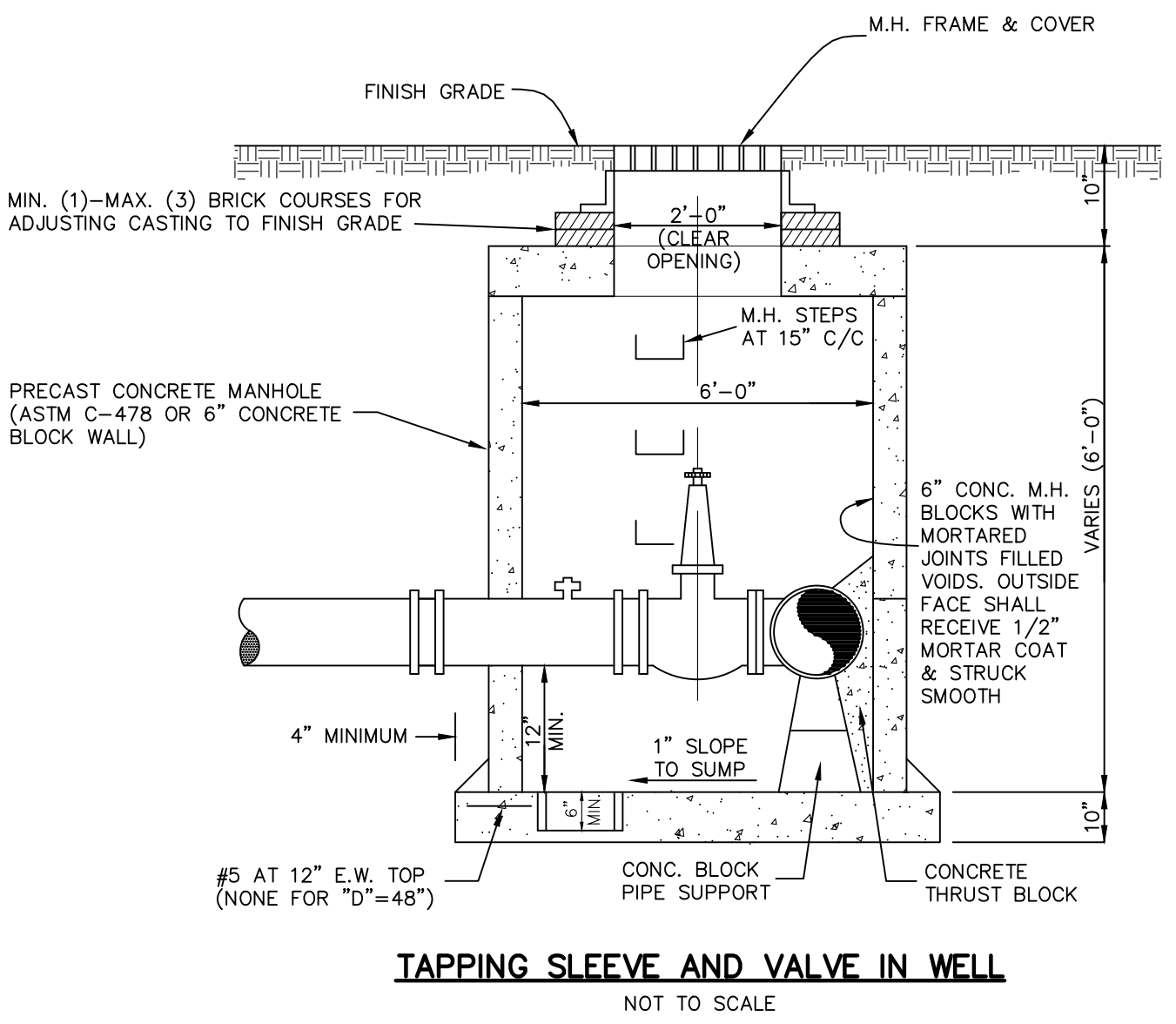
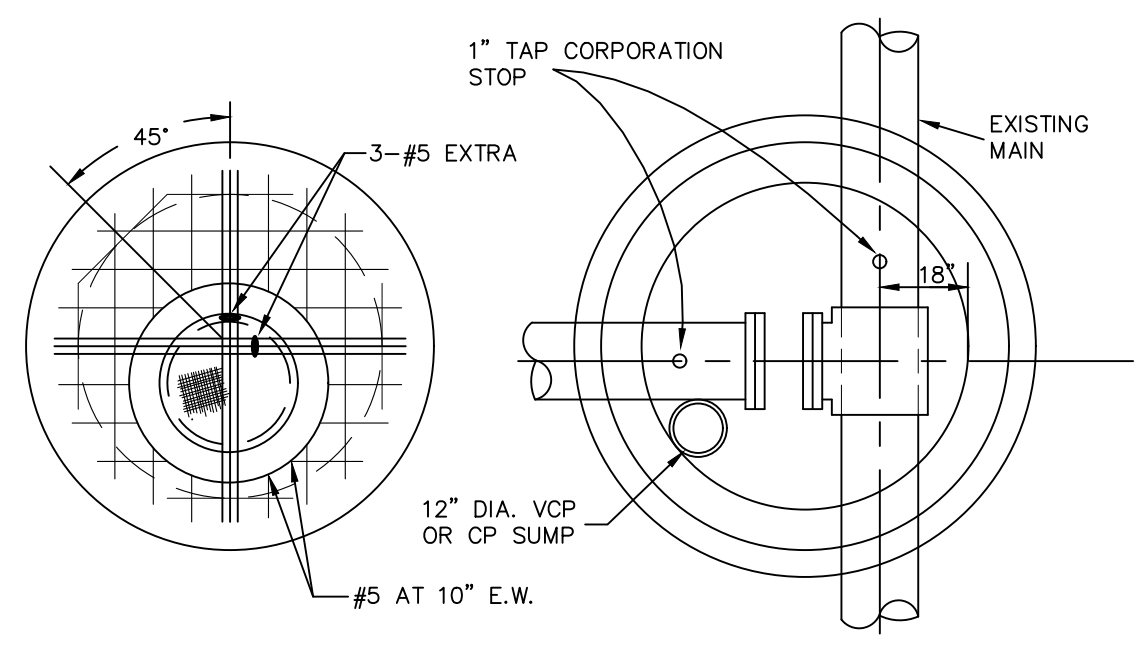
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTEENAW ENGINEERING COMPANY, INC. NO REPRODUCTION OR TRANSMISSION IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, IS PERMITTED WITHOUT THE WRITTEN CONSENT OF WASHTEENAW ENGINEERING COMPANY, INC.

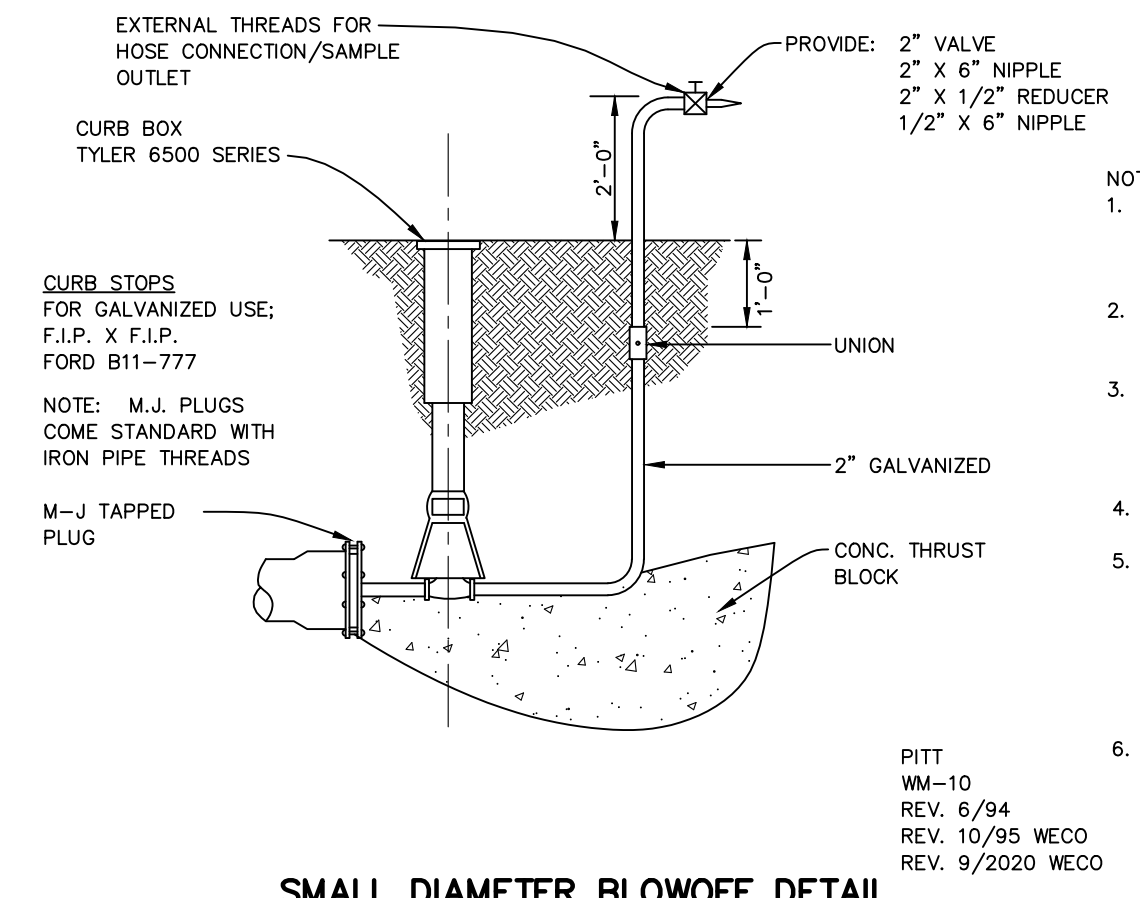
THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA, AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTEENAW ENGINEERING COMPANY (WECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. WASHTEENAW ENGINEERING COMPANY (WECO) SHALL INDEMNIFY AND HOLD HARMLESS WECO, WECO'S CONSULTANTS AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES, ARISING OUT OF OR FROM THE USE OF THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.



GATE VALVE AND BOX
NO SCALE
NOTE: VALVE BOX SHALL NOT REST ON VALVE OR MAIN LINE PIPE.



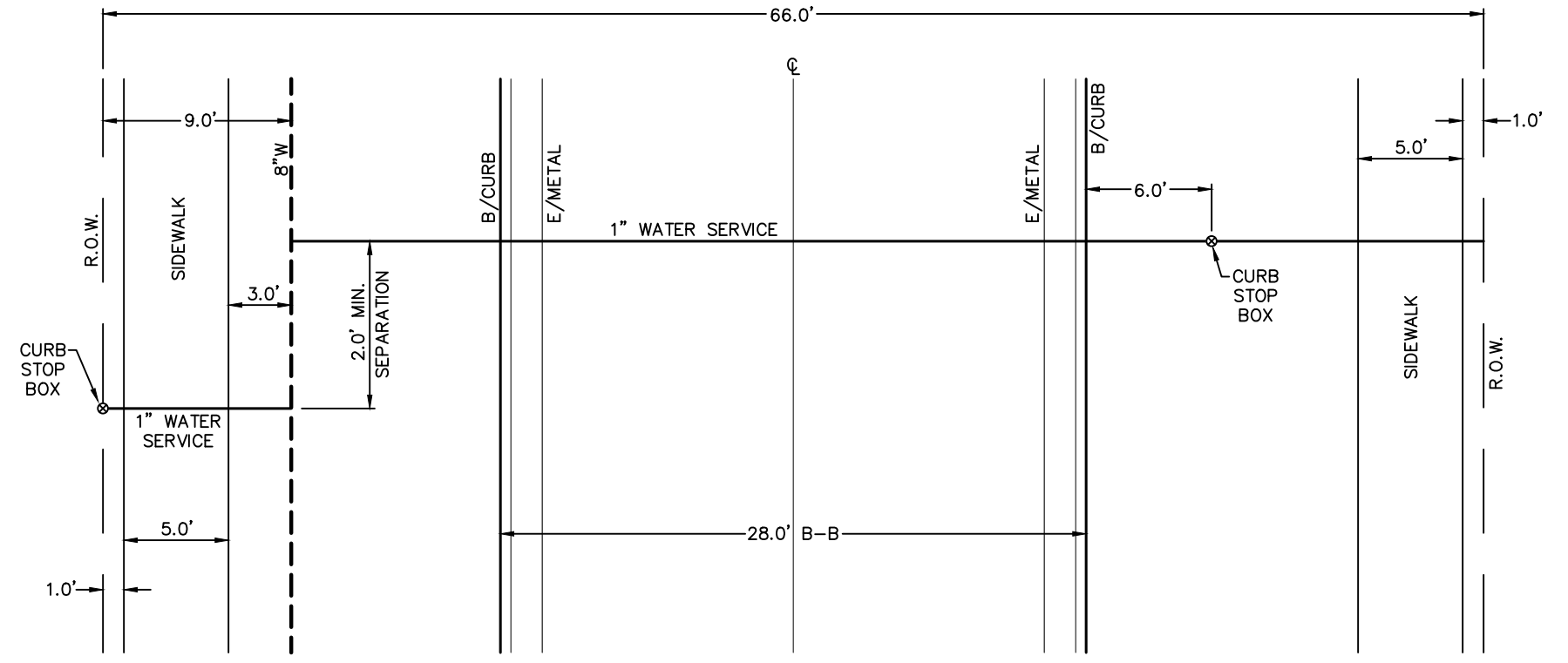
TAPPING SLEEVE AND VALVE IN WELL
NOT TO SCALE



SMALL DIAMETER BLOWOFF DETAIL
(2" MIN.)
(NOT TO SCALE)

- NOTE:
- THIS DETAIL APPLIES ONLY TO TEMPORARY DEAD ENDS OF STUBS, WITHOUT SERVICE CONNECTIONS.
 - BLOW-OFFS WILL ALWAYS BE USED AS SAMPLE POINTS, VALVING WILL BE AS SHOWN.
 - IN SITUATIONS THAT REQUIRE CONCEALING THE BLOW-OFF, PROVIDE A UNION 12" BELOW GRADE.
 - ALTERNATES ARE 4" BLOW-OFF OR TEMPORARY HYDRANTS.
 - THE AREA AROUND EACH BLOW-OFF SHALL BE GRADED TO ALLOW SAFE ACCESS AND THE SERVICE BOX SHALL BE OPERATIONAL AT ALL TIMES. THE SIZE OF BLOW-OFFS SHALL BE DETERMINED BY THE WATER DEPARTMENT.
 - CONTRACTOR SHALL PUMP DOWN WATER OUT OF THE 2" GALVANIZED PIPE AFTER TESTING BY MEANS OF A WATER PUMP TO ENSURE PIPE WILL BE DRY AND NOT SUBJECT TO FREEZING.

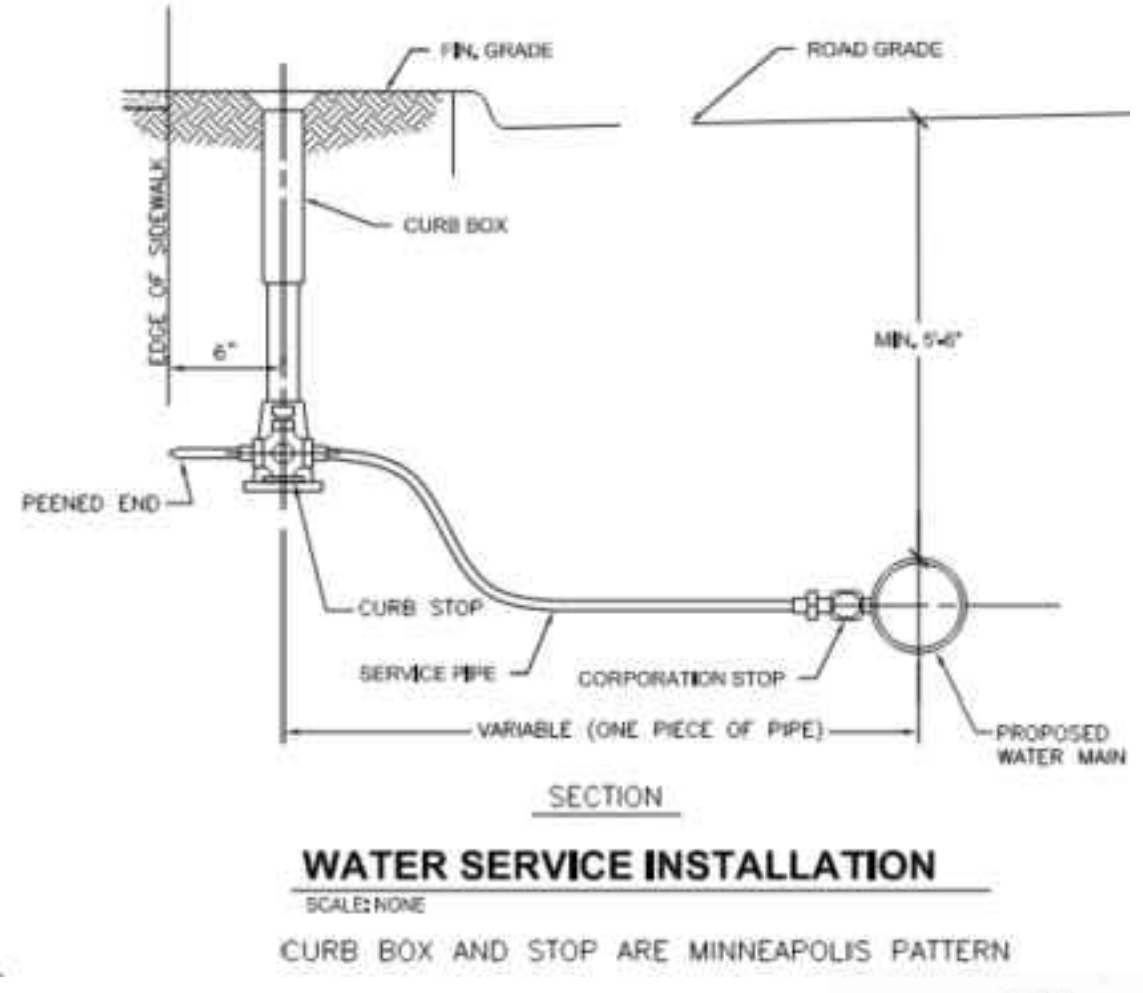
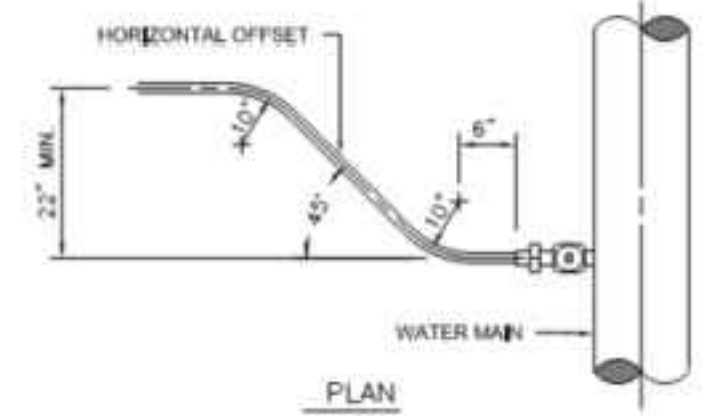
PITT
WM-10
REV. 6/94
REV. 10/95 WECO
REV. 9/2020 WECO



CURB STOP BOXES SHALL BE LOCATED AS FOLLOWS:
ON THE SIDE WITH THE WATER MAIN, CURB STOP TO BE LOCATED AT THE RIGHT-OF-WAY LINE.
IN NO CIRCUMSTANCES SHALL THE CURB STOP BOX BE LOCATED WITHIN A SIDEWALK, DRIVEWAY OR OTHER PAVED AREAS.
ON THE SIDE OPPOSITE THE WATER MAIN, CURB STOP TO BE LOCATED 6.0' BEHIND THE BACK OF CURB.

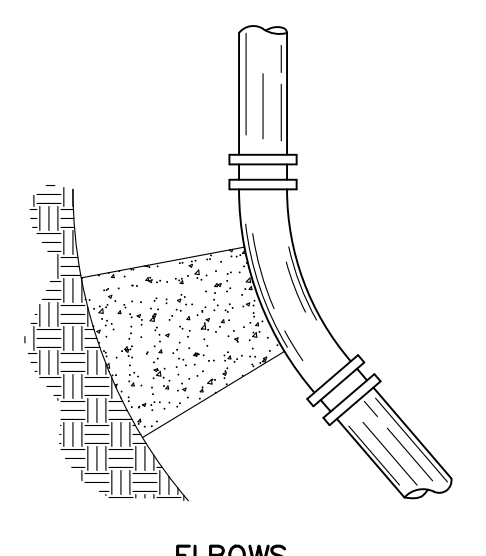
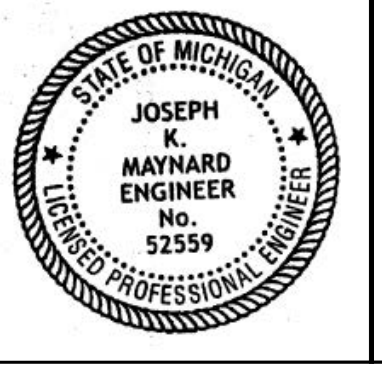
WATER SERVICE CURB STOP BOX LOCATION DETAIL
(NO SCALE)

SERVICE PIPE	CORB STOP	CURB STOP	SERVICE BOX
3/4"	3/4"	3/4"	2 1/2"
1"	1"	1"	2 1/2"
1 1/4"	1 1/4"	1 1/4"	3"
1 1/2"	1 1/4" x 1 1/2"	1 1/2"	3"
2"	1 1/2" x 2"	2"	3"

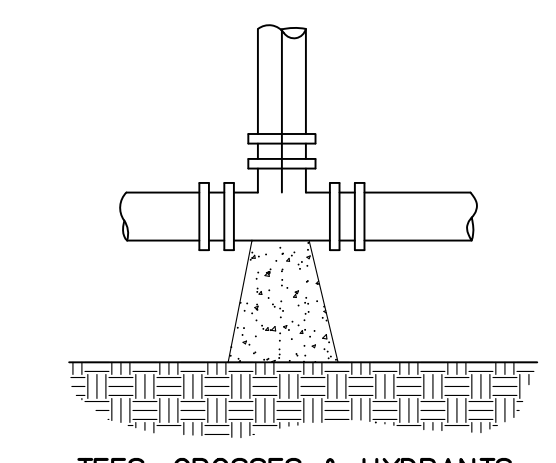


WATER SERVICE INSTALLATION
SCALE NONE
CURB BOX AND STOP ARE MINNEAPOLIS PATTERN

WETLANDS DELINEATED BY:
GJS LAND PLANNING, LLC
NOVEMBER OF 2023.



PIPE DIA. INCHES	ELBOWS			
	90°	45°	22 1/2°	11 1/4°
4	2.1	1.1	0.6	0.3
6	4.1	2.2	1.1	0.6
8	6.8	3.7	1.9	0.9
10	10.1	5.5	2.8	1.4
12	14.1	7.6	3.9	2.0
16	24.2	13.0	6.7	3.3
18	30.0	16.3	8.3	4.2
20	36.8	19.9	10.1	5.1



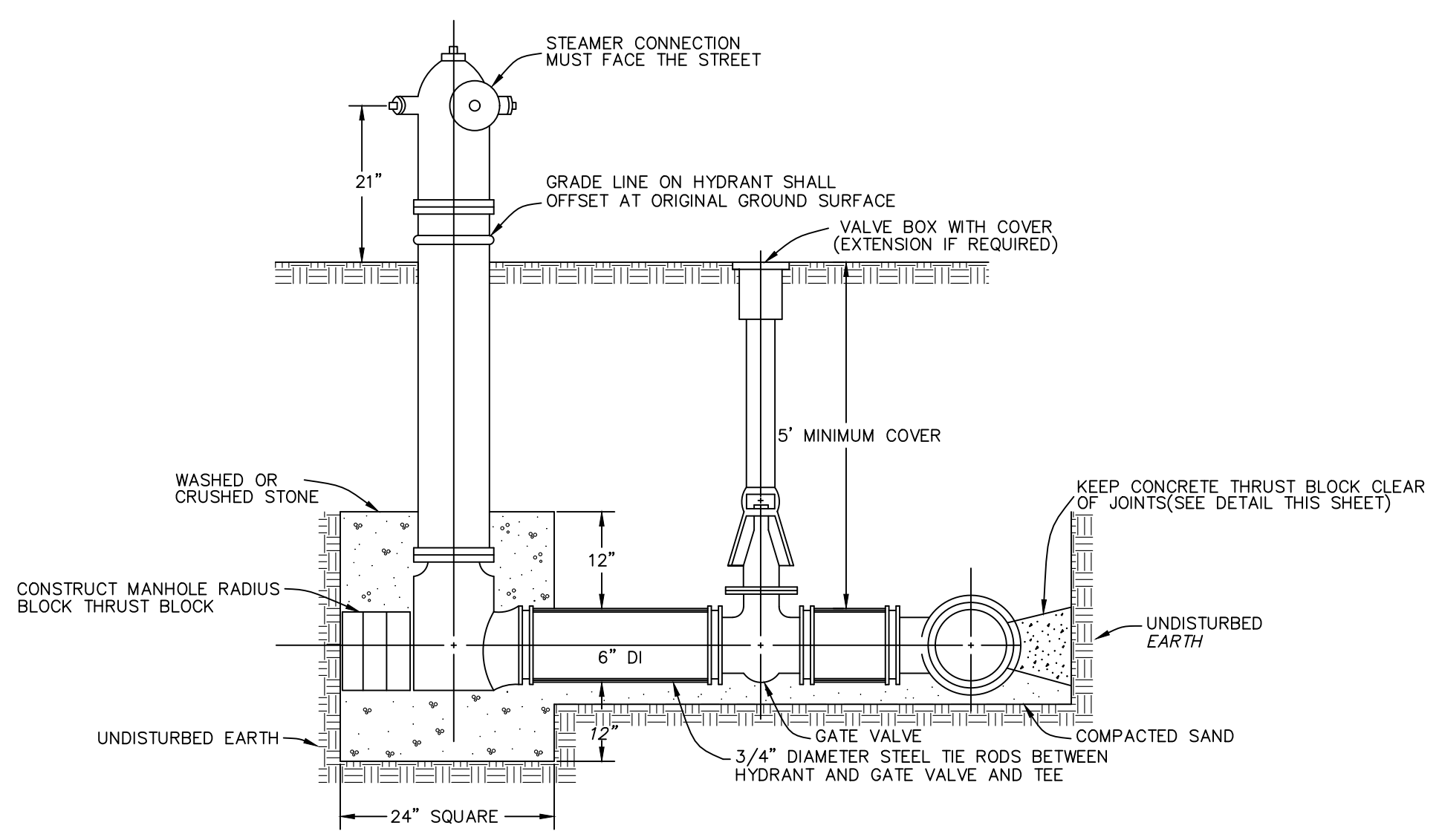
PIPE DIA. INCHES	TEES, CROSSES & HYDRANTS	
	BEARING AREA SQUARE FEET	11 1/4"
4	1.5	
6	2.9	
8	4.8	
10	7.1	
12	10.0	
16	17.1	
18	21.0	
20	26.0	

- NOTES:
- CONCRETE FOR ALL THRUST BLOCKS SHALL BE 3000 PSI, 20 DAY STRENGTH MIN.
 - ALL THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH.
 - BOLTS, FITTINGS & JOINTS SHALL BE KEPT CLEAR OF CONCRETE.
 - A BEARING CAPACITY OF 2000# PER FOOT WAS USED IN DETERMINING THE MINIMUM "BEARING AREAS" IN THE ABOVE TABLES.
 - THE CROSS SECTION OF THE THRUST BLOCKS SHALL BE SQUARE.

SOIL CHARACTERISTICS	FACTOR
(A) LOOSE, COARSE OR MEDIUM SAND, COMPACT FINE SAND, COMPACT SAND-CLAY SOILS; STIFF CLAY	0.33
(B) FIRM FINE SAND; COMPACT INORGANIC SILT; FIRM SAND-CLAY SOILS; MEDIUM CLAY	0.50
(C) LOOSE FINE SAND; FIRM INORGANIC SILT	0.67
(D) LOOSE SAND-CLAY SOILS; LOOSE INORGANIC SILT SOFT CLAY	1.00

"BEARING AREA" X FACTOR = ACTUAL BEARING AREA
2.1 X .5 = 1.05 SQ. FT.
BASED UPON 150# TEST PRESSURE

THRUST BLOCK
NOT TO SCALE



HYDRANT DETAIL
NOT TO SCALE

PIPE DEFL. SIZE / DEG.	PIPE RESTRAINT SCHEDULE						
	(22 1/2)	(33 3/4)	45	(56 1/4)	(67 1/2)	(78 3/4)	90/TEE DEAD END
LENGTH OF RESTRAINT REQUIRED IN FEET							
6"	5	8	13	18	25	31	39
8"	6	10	17	24	33	43	52
10"	7	13	20	30	40	51	63
12"	8	15	24	35	47	61	75
16"	10	18	30	44	61	79	97

TABLE BASED ON TEST PRESSURE OF 180 LBS.
FOR OTHER TEST PRESSURES INCREASE OR DECREASE PROPORTIONALLY.

RETRAIN IN EACH DIRECTION FROM DEFLECTION EXCEPT FOR TEE RESTRAIN ONLY IN DIRECTION OF TEE BRANCH.

IF TIE RODS ARE USED USE 4 RODS MINIMUM AND ADD 1/8" TO BAR DIAMETER AS CORROSION ALLOWANCE.

LEGEND					
○	SPOT ELEV.	⊠	TRANSFORMER	---	EXISTING STORM
⊙	POST	○	MANHOLE	---	EXISTING SANITARY
⊕	GUY ANCHOR	□	CATCHBASIN	---	EXISTING WATER
⊖	GATE VALVE	⊔	END SECTION	---	EXISTING GAS
⊗	HYDRANT	⊔	ASPHALT	---	EXISTING ELECTRIC
⊘		--- </td <td></td> <td>---<!--</td--> <td>EXISTING TELEPHONE</td> </td>		--- </td <td>EXISTING TELEPHONE</td>	EXISTING TELEPHONE
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊗		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊘		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊙		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊕		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	
⊖		--- </td <td></td> <td>---<!--</td--> <td></td> </td>		--- </td <td></td>	

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTEWATER ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT THE WRITTEN CONSENT OF WASHTEWATER ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ESTIMATES, DATA, AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTEWATER ENGINEERING COMPANY (MECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE SURVEYOR SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE DATA AND INFORMATION PROVIDED TO THE OWNER. THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF THE DATA AND INFORMATION PROVIDED TO THE OWNER BY OTHERS. THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF THE DATA AND INFORMATION PROVIDED TO THE OWNER BY OTHERS. THE SURVEYOR SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF THE DATA AND INFORMATION PROVIDED TO THE OWNER BY OTHERS.

LEGEND
☆ = LIGHT POLE
⊕ = UTILITY POLE
⊙ = GUY ANCHOR
⊚ = HYDRANT
SPOT ELEV.
POST
GATE VALVE
SIGN
TRANSFORMER
MANHOLE
CATCHBASIN
EATCH SECTION
GRAVEL
FENCE
CONCRETE
ASPHALT
EXISTING STORM
EXISTING SANITARY
EXISTING WATER
EXISTING GAS
EXISTING ELECTRIC
EXISTING TELEPHONE

CITY OF CHELSEA
STANDARD SPECIFICATIONS
WATER MAIN
Page 1 of 11
Updated 2/10/2021
SECTION 2.09
1.00 GENERAL
1.01 DESCRIPTION
A. The CONTRACTOR shall furnish all labor, materials and equipment required to construct a water main and necessary appurtenance. The water main shall be installed in the locations as shown on the Plans and shall meet the line acceptance tests.
B. All material in contact with potable water shall be NSF 61 certified and marked accordingly. Manufacturer shall provide third party NSF certifications (NSF or Water Quality Association) with shop drawing submittals.
1.02 TESTING
A. General
1. Furnish all equipment and personnel to conduct system acceptance tests as specified herein. All tests shall be conducted under the supervision of the ENGINEER. No acceptance tests shall be conducted until the entire system is constructed or just prior to placing the system in service, providing the water main has been installed and backfilled for not less than 30 days.
2. All water mains, branches, and valves shall be tested for pressure, leakage and disinfection. Disinfection testing shall meet the requirements of the latest version of AWWA 851 and the requirements of this specification.
3. Should the results of any test fail to meet the criteria established in this Specification, the CONTRACTOR shall at his own expense, locate and repair rejected section and retest until it is within specified allowance.
4. Provide all labor, supervision, pumps, measuring devices, power and other materials and equipment necessary for conducting acceptance tests on all piping.
B. Preparation
1. After the pipe has been laid and backfilled as specified, the CONTRACTOR shall tie the line, or a valve section thereof, to be tested with water in such a manner to equal that from the pipe. This may be done through fire hydrants at the high points, or, if no hydrant is available at such point, the CONTRACTOR shall make the taps necessary to accomplish the expansion of air. At the close of the test, all taps shall be satisfactorily plugged with brass plugs.
C. Sequence
1. Nominal pipe size
2. PVC
3. Dimension Ratio, Standard Dimension Ratio, or Schedule
4. AWWA pressure class
5. AWWA standard designation number

City of Chelsea
Standard Specification
Page 2 of 11
Section 2.09
WATER MAIN
1. Mains will be totally isolated from the existing water system with air gaps and pressure testing shall precede chlorination and bacteriological testing. The sequence for acceptance testing shall be:
a. Pressure Testing
b. Piggings and Flushing
c. Chlorination
d. Wait 24 hours
e. Flushing
f. Wait 24 hours
g. Bacteriological Testing
h. Wait 16 hours
i. Bacteriological Testing
j. Place in Service and connect to system (if both sets of bacteriological samples pass.)
To be used only by approval of City ENGINEER.
D. Piggings and Flushing
1. All new mains 4" and larger shall be cleaned and flushed with a polyfoam pig prior to pressure testing and chlorination.
2. Pigs shall be constructed of flexible open cell polyurethane foam and with a center hole to allow water to proceed pig, preventing the embedding of debris. They shall be able to pass through reductions of up to 50% of cross section area of nominal pipe. They shall have the ability to negotiate sharp radius bends, elbows, tees, crosses, wyes, gate valves, multidimensional piping, and reduce part valves. Pig shall be a municipal series, are type, 57 pounds per cubic foot density, and generally be intended for a light cleaning or gauging application.
3. A temporary flush for each pig shall be installed and removed after the piggings is complete. Piggings pits shall be constructed in such a manner, and the temporary flush removed, to prevent the backflow of dirty water into the new main. The contractor shall flush the pig through under City supervision. In lieu of providing temporary flush for the insertion of the pig, the pig may be installed in the first length of a piping segment.
4. Any excavation, main removal and repair require to extricate a trapped pig shall be the CONTRACTOR's responsibility.
5. After piggings, mains shall be flushed with clean potable water until the water runs clear. When flushing mains prior to chlorination, all hydrant heads, operating stems and hydrant valve mechanisms shall be removed.
E. Chlorination
1. All new mains and pipe or any existing mains contaminated by the CONTRACTOR shall be chlorinated to a minimum residual chlorine concentration of fifty (50) parts per million with commercial liquid chlorine solution or approved equal. The chlorinated water shall be allowed to stand in the mains for 24 hours. The end of the 24-hour period the chlorinated water at all parts of the mains shall show a free available chlorine residual of not less than twenty-five (25) parts per million. If less than twenty-five (25) parts per million residual is shown at the end of the first 24 hour period, additional chlorine shall be added until a residual of not less than twenty-five (25) parts per million at all parts of the system is shown after a subsequent 24 hour period. The chlorinated water shall then be removed from the mains and the mains flushed with potable water for bacteriological testing. A dechlorinator shall be used during flushing.
F. Bacteriological Testing
1. The OWNER will take bacteriological samples of the water in the mains for analysis at two different times. The first samples will be taken 24 hours after the mains have been satisfactorily chlorinated, flushed and filled with potable water. The second sample will be taken 16 hours after first sample is taken.
2. The CONTRACTOR shall provide a sufficient number of corporation cocks and copper tubing for taking samples. Samples shall not be collected from hoses or fire hydrants.
G. Pressure Testing
1. All pipe laid under this Contract shall be subjected to a hydrostatic pressure of 150 psi based on the elevation of the lowest point in the system.
The main shall be maintained under the test pressure for a minimum continuous period of two (2) hours by pumping potable water into the line at frequent intervals. The volume of water so added shall be measured and considered to represent the leakage from the main. No pipeline installed will be accepted until the leakage measured over a 1 hour period is less than 1/4 gallon per inch diameter of the pipe per 1000 feet. All visible leaks must be corrected. The maximum length of water main to be tested at one time shall be 2000 feet.
2. In the event that the leakage exceeds the specified amount, the main shall be carefully inspected for leaks and repaired as necessary. Any cracked or defective pipe, fittings, valves or hydrants discovered shall be removed and replaced with sound material at the CONTRACTOR'S expense and the test repeated to the satisfaction of the ENGINEER and OWNER.
3. The CONTRACTOR shall not pressure test against an existing City gate valve.
2.00 PRODUCTS
2.01 PIPE AND FITTINGS
A. Ductile iron pipe water main shall meet all the requirements of the latest revision of the American National Standards Institute Specifications, A21.51 and the American Water Works Association (AWWA) Specification C151. All joints exceeding joints for valves and hydrants shall be "push on". Pipe shall be furnished in 18 or 20 ft. lengths, unless otherwise required. The pipe shall meet the thickness class requirements shown in the table below.

City of Chelsea
Standard Specification
Page 3 of 11
Section 2.09
WATER MAIN
per million. If less than twenty-five (25) parts per million residual is shown at the end of the first 24 hour period, additional chlorine shall be added until a residual of not less than twenty-five (25) parts per million at all parts of the system is shown after a subsequent 24 hour period. The chlorinated water shall then be removed from the mains and the mains flushed with potable water for bacteriological testing. A dechlorinator shall be used during flushing.
F. Bacteriological Testing
1. The OWNER will take bacteriological samples of the water in the mains for analysis at two different times. The first samples will be taken 24 hours after the mains have been satisfactorily chlorinated, flushed and filled with potable water. The second sample will be taken 16 hours after first sample is taken.
2. The CONTRACTOR shall provide a sufficient number of corporation cocks and copper tubing for taking samples. Samples shall not be collected from hoses or fire hydrants.
G. Pressure Testing
1. All pipe laid under this Contract shall be subjected to a hydrostatic pressure of 150 psi based on the elevation of the lowest point in the system.
The main shall be maintained under the test pressure for a minimum continuous period of two (2) hours by pumping potable water into the line at frequent intervals. The volume of water so added shall be measured and considered to represent the leakage from the main. No pipeline installed will be accepted until the leakage measured over a 1 hour period is less than 1/4 gallon per inch diameter of the pipe per 1000 feet. All visible leaks must be corrected. The maximum length of water main to be tested at one time shall be 2000 feet.
2. In the event that the leakage exceeds the specified amount, the main shall be carefully inspected for leaks and repaired as necessary. Any cracked or defective pipe, fittings, valves or hydrants discovered shall be removed and replaced with sound material at the CONTRACTOR'S expense and the test repeated to the satisfaction of the ENGINEER and OWNER.
3. The CONTRACTOR shall not pressure test against an existing City gate valve.
2.00 PRODUCTS
2.01 PIPE AND FITTINGS
A. Ductile iron pipe water main shall meet all the requirements of the latest revision of the American National Standards Institute Specifications, A21.51 and the American Water Works Association (AWWA) Specification C151. All joints exceeding joints for valves and hydrants shall be "push on". Pipe shall be furnished in 18 or 20 ft. lengths, unless otherwise required. The pipe shall meet the thickness class requirements shown in the table below.

City of Chelsea
Standard Specification
Page 4 of 11
Section 2.09
WATER MAIN
Nominal Inside Diameter
Thickness
Class
4 54
6 54
8 54
10 54
12 54
14 54
16 54
18 54
20 54
24 54
B. Pipe shall withstand a working pressure of 125 psi plus a 100 psi surge pressure.
C. Pipe shall be cement lined and seal coated with an approved bituminous seal coat in accordance with ANSI Specification A21.4 (AWWA C-104).
D. Cast iron fittings shall meet all the requirements of the latest revision of the American National Standards Institute Specification A21.10 for a working pressure of 125 psi and be of the mechanical joint type. Flugs, where shown on the Plans, shall be solid mechanical joint plug type.
E. Mechanical joints shall be in conformity with the requirements of the latest revision of the American National Standards Institute A21.11. The bolts shall be of high strength, low alloy steel type.
F. Push-on joints shall meet all the requirements of AWWA Specification C111. Push-on joints shall consist of a ductile iron bell provided with a recess to receive a circular molded rubber gasket to effect the joint seal. A rubber gasket and sufficient lubricant to assemble the joint shall be furnished with each joint. The lubricant shall have no deleterious effect upon the color, taste or odor of potable water and shall not be corrosive to either the pipe or gasket. Pipe furnished with push-on type joints shall be equal in strength and leak tightness to pipe furnished with mechanical joints as specified when installed under identical conditions, and shall meet all other requirements of these specifications. In addition to the above requirements, the gasket and lubricant shall conform to the latest revision of the ANSI Specification A21.11.
G. Polyvinyl Chloride Pressure Pipe (PVC) shall be manufactured of PVC resin compounds Class 14454 A or B conforming to ASTM D 1784 in accordance with ASTM S 2241. Unless otherwise noted, all PVC shall have a pressure rating to of 235 PSI (SDR18).
H. If used for Potable Water Service, PVC shall meet the requirements of AWWA C900 and NSF 14, be colored blue, and be marked as follows:
1. Nominal pipe size
2. PVC
3. Dimension Ratio, Standard Dimension Ratio, or Schedule
4. AWWA pressure class
5. AWWA standard designation number

City of Chelsea
Standard Specification
Page 5 of 11
Section 2.09
WATER MAIN
6. NSF-61 and NSF-14 marks
I. Fittings for PVC pipe shall be cast or ductile iron of comparable sizes, provided with special gaskets for SDR size pipe.
J. Joints for PVC pipe shall be bell and spigot type with a flexible elastomeric gasket conforming to ASTM D 3139. Joints shall be made using lubricant as supplied and directed by the manufacturer. If necessary to field cut standard length pipe, the new spigot end shall be prepared as recommended by the pipe manufacturer.
K. PVC pipe shall be stored as recommended by manufacturer.
L. Piping shall be marked with 6 AAG type RWB copper wire strung continuously along the main. The wire shall be fastened to all gate valves or manholes which may serve as access points.
2.02 VALVES
A. All valves installed under this Specification shall conform to the applicable requirements of AWWA C500 and C504 standards governing construction materials and workmanship. Each valve shall carry the name or trademark of the manufacturer. All valves shall have operating nuts that turn to the left (counterclockwise) to open.
B. Gate Valves
1. All gate valves shall be mechanical joint.
2. Sizes 4", 6", 8", 10", 12", 14", 16", 18", 20"
3. Open left
4. Rubber coated wedge
5. Test pressure 300 P.S.I.
6. Operating pressure 150 P.S.I.
7. Valves shall be mounted horizontally
8. All gate valves shall be manufactured by Waterous 500 series - East Jordan Mueller or equivalent.
9. Ordering code:
a. Size of gate valve
b. M.J. - Mechanical joint
c. O.L. - Open Left
d. R.W. - Rubber Wedge
e. W/access - glands, bolts, gaskets
f. Test pressure 300 P.S.I.

City of Chelsea
Standard Specification
Page 6 of 11
Section 2.09
WATER MAIN
g. Operating Pressure 150 P.S.I.
C. Curb Stops
1. All curb stops shall be manufactured by A.Y. Macdonald or Ford -300 series ball, Minneapolis pattern, or seal type, with threads on top of curb stop for rigid hookup to curb box.
2. Curb stops for 3/4", 1", 1 1/4", 1 1/2" and 2" shall be compression to compression pack joint.
D. Air Release Valves
1. Air release valves when specified shall be designed to operate under a maximum operating pressure of 300 psi and capable of venting 200 CFAS (cubic feet of free air per second). Valves shall be cast iron with bronze internal parts and Type 304SS float.
E. Corporation Stops
1. All corporation cocks shall be manufactured by A.Y. Macdonald or Ford Series 300 ball valve with compression pack joints.
2. 3/4", 1", 1 1/4", 1 1/2" and 2" corporation cocks the tap side of thread is c.c.
3. For ductile iron pipe, a bronze tapping saddle with two (2) straps around the water main shall be used. For all size taps from and including 3/4", 1", 1 1/4", 1 1/2" and 2".
4. For C900 pipe, a 2-piece bolted design brass or stainless steel must be used.
F. Valve Boxes
1. All valve boxes 4" valves and larger shall be 5 1/4" diameter.
2. Cast iron
3. 5 1/4" diameter
4. One (1) saddle
5. One (1) center section
6. One (1) extension
7. One (1) top section
8. One (1) cover or top lid

City of Chelsea
Standard Specification
Page 7 of 11
Section 2.09
WATER MAIN
G. Gatewells
1. Brick for grade adjustment or gatewells shall meet the requirements for "medium brick" of the Standard Specifications for Clay Sewer Brick, ASTM Serial Designation C32, or the latest revision thereof.
2. Mortar for masonry or plastering outside of gatewells shall be made of one part of Portland Cement to two parts of sand. Mortar materials and mixing shall correspond, in general, to those for concrete.
3. Reinforced concrete gatewells shall conform to the latest revision of ASTM Specifications for Precast Reinforced Concrete Manhole Sections, Serial Designation C478, with rubber gasket joints.
4. Steps shall be cast iron or plastic coated steel. They shall be Neenah R-1981-J, East Jordan 8512, M.A. Industries, PSI-PP, or equal. Cast iron steps shall be coated with coal tar pitch varnish.
5. Frames and covers shall be cast iron conforming to the Standard Specifications Castings, Serial Designation A48, or the latest revision thereof, Neenah No. R-1642, with type C solid cover or East Jordan No. 1040 with type A cover, or equal. They shall have machined bearing surfaces and suitable notches for convenient removal of the cover. Covers shall have the letters "Department of Water Supply" cast integrally with the cover. All frames and covers shall be coated at the point of manufacturer with coal tar pitch varnish or other approved asphalt turn coating.
2.03 SERVICE LEADS
A. Pipe for service leads 1" to 2" shall be HDPE SDR 9
1. All brass fittings shall be manufactured by A.Y. McDonald or Ford.
2. HDPE service leads shall be SDR 9 and have tracer wire placed along the pipe. Connections will have stainless steel stiffeners. HDPE pipe shall be NSF-14 certified and stamped accordingly.
3. If existing service leads are found to be lead or galvanized, Contractor to inform the City DPW. The City will replace the lead from the curb box into the house, depending on accessibility.
B. Curb Boxes
1. Curb boxes shall be Minneapolis pattern for 3/4", 1", 1 1/4", 1 1/2" and 2" manufactured by Mueller or equivalent.
2. Curb boxes shall be 1 1/4" diameter iron pipe telescoping type from 4" to 5 1/2". Bottom section cast iron with proper size thread to make rigid hookup to curb stop, 1 1/4", 1 1/2" and 2" curb stop. For 3/4" and 1" curb stop, a bushing of proper size is required in the bottom of telescoping curb box.

City of Chelsea
Standard Specification
Page 8 of 11
Section 2.09
WATER MAIN
3. Curb box shall be coated inside and outside with a tar base enamel.
2.04 HYDRANTS
A. Fire hydrants shall have the following features:
1. Hydrants to be manufactured by American Flow Control - Waterous WB-67 Classic - AWWA Standard C-502.
2. Hydrants shall be bronze mounted, including top of the operating stem where it passes through the double-o-ring seal in the bronze packing gland. The forged operating stem in the base and valve seat shall also be bronze. The molded valve shall be of composition rubber and the cast iron valve clamps shall be packed with o-ring seats and held tight to the stem by a threaded bronze hex retainer ring, and threaded bronze locknut, anchored with set screws.
3. All nozzles shall be mounted in a removable head with a flange so that they may rotate by changing the position of the flange.
4. Hose connections - Two (2) - 2 1/2" National Standard pipe thread and one (1) - 5" Storz connection.
5. Open left.
6. Test pressure - 300 P.S.I.
7. Operating pressure 150 P.S.I.
8. 10" break flange construction. Hydrant shall be compression type to open with the pressure with a 5 1/4" valve opening on bottom.
9. 6" mechanical joint inlet, with mechanical joint MegaLug, mechanical joint gasket, and 6 - 3/8x3 1/2" bolts
10. Barrel drain, with plug uninstalled.
11. 1 1/2" pentagon and operating cap nuts, open left.
12. 5" 6" bury, min. 6" gate valve installed in line to hydrant.
13. Painted red finish.

City of Chelsea
Standard Specification
Page 9 of 11
Section 2.09
WATER MAIN
3.00 EXECUTION
3.01 PIPE INSTALLATION
A. Any pipe damaged in transport or handling shall be rejected and removed from the site of the work.
B. In handling and placing ductile iron pipe and fittings, no metal shall be used in contact with the inside of the pipe to fit or support the pipe. The pipe shall be moved only through the use of ball stings or automatic release type pipe lugs. Care shall be taken not to injure the pipe or valve coating, and to damaged or imperfect pipe shall be used in the work except that minor damage to pipe coating may be repaired subject to the review of the ENGINEER.
C. All excavation and backfill above the pipe shall conform to specifications under Section 2.04, Earthwork. The main shall be laid on a compacted aggregate material, 4 inches thick.
D. Compacted aggregate material shall be placed at the sides of the pipe and cover not less than 12 inches over the pipe.
E. "Aggregate Material" shall be MDO1 Class II Sand, unless wet trench conditions exist. If trench is wet, "Aggregate Material" shall be pea gravel, or crushed stone conforming to ASTM C33 Size No. 67. The "Aggregate Material" shall be placed in not more than 6-inch layers and compacted to not less than 90% standard density.
F. All pipe and fittings shall be carefully lowered and moved into position in the trench or vault in a controlled manner such as will prevent damage to the pipe and its coating and lining.
G. In assembly of push-on or shove type joints, the bell socket recess and the gasket shall be wiped clean and the gasket placed properly in position. A thin film of lubricant shall then be applied to the surface of the gasket to come into contact with the entire pipe. The plain end of the entering pipe shall be cleaned and then entered and forced home to the base of the socket. Where pipe is cut, the entering end shall be beveled before being inserted in the joint. Where time permits drying, the cut and beveled ends shall be coated with coal tar enamel.
H. To prevent trench water from entering the pipe, joints which for any reason may not be completed as the pipe is laid shall be thoroughly packed with approved material, in a manner to make them watertight. Open ends of fittings shall be tightly closed with approved plugs and well packed, as shall the end of the last pipe laid whenever work is not in progress.
I. Each pipe shall be laid accurately to the line and grade given by the ENGINEER. Whenever it is necessary to deflect pipe from a straight line, either in the horizontal or vertical plane, to avoid obstructions, or where long radius curves are permitted, the amount of deflection allowed shall not exceed that required for satisfactory jointing and shall be reviewed by the ENGINEER. In no case shall deflection of joints exceed the manufacturer's recommended maximum deflection.
J. The CONTRACTOR shall not be entitled to any additional compensation because depth is more than specified at certain locations or due to clearances at manholes, or due to unforeseen obstacles, or occasioned in order to avoid undue changes in grade.

City of Chelsea
Standard Specification
Page 10 of 11
Section 2.09
WATER MAIN
K. The trench shall be backfilled closely behind the pipe laying. Unless otherwise directed or permitted by the ENGINEER, the backfilling shall follow at least two lengths behind pipe laying and shall be completed to the top of the trench not more than ten lengths behind pipe laying.
L. External anchorage designed to hold the pipe to proper line and grade against internal static and dynamic forces and external loads shall be provided at all tees, wyes and plugs, and wherever the pipe is deflected from a straight line and the resultant forces are not self-contained through the use of flanges, anchor tees and the like. Concrete thrust blocks or anchorage shall be 3000 PSI concrete.
M. Air release valve and manhole shall be constructed where shown on the Plans. All castings and manholes shall be as specified under gatewells. Gatewells shall be constructed in accordance with the details shown on the Plans.
N. Blow-off valves and manholes shall be constructed in accordance with the details shown on the Plans. All castings shall be as specified under gatewells.
3.02 SERVICE LEADS
A. Service leads shall be installed where shown on the Plans. All service taps shall be the "wet" method type and no tap shall be made until the acceptance test has been conducted and the line is under pressure.
B. When crossing a paved street, the service lead shall be jacked under the pavement. Augering and/or jacking requirements on paved streets for the installation of pipe less than 2 1/2" outside diameter shall be made by a "compact" type machine or similar method without removing existing soil, if soil conditions permit.
3.03 HYDRANTS
A. Fire hydrants shall be constructed in accordance with the details shown on the Plans. Finish grade level to center of nozzle caps shall measure between 18 inches and 24 inches. A maximum of one hydrant barrel extension and one operating stem extension may be used to accommodate changes in grade. Extension length shall not exceed 2 ft. Under no conditions shall extended hydrant have more than one coupling in the operating stem. Pumper connections shall point toward the street. Hydrants shall be set back from the curb 3 ft. to 10 ft.
B. Fire hydrants shall be installed with barrel vertical and properly based. Concrete thrust blocks shall be placed behind the hydrant, tee, and every bend. Care should be taken to insure that the drain holes on the hydrant are not plugged by the thrust blocks. Hydrant shall be set in 1 yard of coarse gravel for drainage purposes. If ground water is encountered, the drain hole shall be plugged as directed by the manufacturer. The backfill shall be sand or granular material thoroughly tamped around the hydrant and valve box in 1 ft. layers.
C. Fire hydrant and gate valve shall be set apart a minimum of 30' from center of hydrant to center of valve. Gate valves and valve box shall be as specified under the valve paragraphs of this Section.

City of Chelsea
Standard Specification
Page 11 of 11
Section 2.09
WATER MAIN
3.04 CONNECTION TO EXISTING MAINS
A. When making a connection to an existing main under this Section, the existing main to which a connection is to be made shall be isolated by the closing of the necessary existing valves, and the water from the existing main shall then be pumped out or removed by other means so the connection may be made in the dry. After the connection has been acceptably made, the portion of the new line to the nearest valve shall be satisfactorily tested and disinfected, along with the drained portion of the existing main, before the isolated existing main is placed back in service, except as the ENGINEER may otherwise direct. Inasmuch as residents served by this isolated main will be temporarily out of water during this period, the work shall be prosecuted as rapidly as possible, and the time of, and the procedure in, making such connections shall be subject to the review of the ENGINEER. Such work may be required to be done at night in order to minimize inconvenience of water users. The CONTRACTOR shall not be entitled to any additional compensation because of night work or other special requirements in work under this Section.
B. The CONTRACTOR shall make particular effort, prior to bidding, to ascertain whether or not valves in the existing mains to be connected to the new mains are so located as to provide isolation. If valves are not found to be adequate, then the CONTRACTOR shall utilize other means to make the connections with a minimum of interruption to service.
C. Wherever adapters are required to properly connect the pipe with existing pipe or other material or manufacturer, the nominal I.D. of adapters shall be the same size as the nominal diameter of pipe connected thereto. Adapters shall also be furnished and used as required by the manufacturer for connection to fittings.
END OF SECTION

City of Chelsea
Standard Specification
Page 11 of 11
Section 2.09
WATER MAIN
3.00 EXECUTION
3.01 PIPE INSTALLATION
A. Any pipe damaged in transport or handling shall be rejected and removed from the site of the work.
B. In handling and placing ductile iron pipe and fittings, no metal shall be used in contact with the inside of the pipe to fit or support the pipe. The pipe shall be moved only through the use of ball stings or automatic release type pipe lugs. Care shall be taken not to injure the pipe or valve coating, and to damaged or imperfect pipe shall be used in the work except that minor damage to pipe coating may be repaired subject to the review of the ENGINEER.
C. All excavation and backfill above the pipe shall conform to specifications under Section 2.04, Earthwork. The main shall be laid on a compacted aggregate material, 4 inches thick.
D. Compacted aggregate material shall be placed at the sides of the pipe and cover not less than 12 inches over the pipe.
E. "Aggregate Material" shall be MDO1 Class II Sand, unless wet trench conditions exist. If trench is wet, "Aggregate Material" shall be pea gravel, or crushed stone conforming to ASTM C33 Size No. 67. The "Aggregate Material" shall be placed in not more than 6-inch layers and compacted to not less than 90% standard density.
F. All pipe and fittings shall be carefully lowered and moved into position in the trench or vault in a controlled manner such as will prevent damage to the pipe and its coating and lining.
G. In assembly of push-on or shove type joints, the bell socket recess and the gasket shall be wiped clean and the gasket placed properly in position. A thin film of lubricant shall then be applied to the surface of the gasket to come into contact with the entire pipe. The plain end of the entering pipe shall be cleaned and then entered and forced home to the base of the socket. Where pipe is cut, the entering end shall be beveled before being inserted in the joint. Where time permits drying, the cut and beveled ends shall be coated with coal tar enamel.
H. To prevent trench water from entering the pipe, joints which for any reason may not be completed as the pipe is laid shall be thoroughly packed with approved material, in a manner to make them watertight. Open ends of fittings shall be tightly closed with approved plugs and well packed, as shall the end of the last pipe laid whenever work is not in progress.
I. Each pipe shall be laid accurately to the line and grade given by the ENGINEER. Whenever it is necessary to deflect pipe from a straight line, either in the horizontal or vertical plane, to avoid obstructions, or where long radius curves are permitted, the amount of deflection allowed shall not exceed that required for satisfactory jointing and shall be reviewed by the ENGINEER. In no case shall deflection of joints exceed the manufacturer's recommended maximum deflection.
J. The CONTRACTOR shall not be entitled to any additional compensation because depth is more than specified at certain locations or due to clearances at manholes, or due to unforeseen obstacles, or occasioned in order to avoid undue changes in grade.

City of Chelsea
Standard Specification
Page 10 of 11
Section 2.09
WATER MAIN
K. The trench shall be backfilled closely behind the pipe laying. Unless otherwise directed or permitted by the ENGINEER, the backfilling shall follow at least two lengths behind pipe laying and shall be completed to the top of the trench not more than ten lengths behind pipe laying.
L. External anchorage designed to hold the pipe to proper line and grade against internal static and dynamic forces and external loads shall be provided at all tees, wyes and plugs, and wherever the pipe is deflected from a straight line and the resultant forces are not self-contained through the use of flanges, anchor tees and the like. Concrete thrust blocks or anchorage shall be 3000 PSI concrete.
M. Air release valve and manhole shall be constructed where shown on the Plans. All castings and manholes shall be as specified under gatewells. Gatewells shall be constructed in accordance with the details shown on the Plans.
N. Blow-off valves and manholes shall be constructed in accordance with the details shown on the Plans. All castings shall be as specified under gatewells.
3.02 SERVICE LEADS
A. Service leads shall be installed where shown on the Plans. All service taps shall be the "wet" method type and no tap shall be made until the acceptance test has been conducted and the line is under pressure.
B. When crossing a paved street, the service lead shall be jacked under the pavement. Augering and/or jacking requirements on paved streets for the installation of pipe less than 2 1/2" outside diameter shall be made by a "compact" type machine or similar method without removing existing soil, if soil conditions permit.
3.03 HYDRANTS
A. Fire hydrants shall be constructed in accordance with the details shown on the Plans. Finish grade level to center of nozzle caps shall measure between 18 inches and 24 inches. A maximum of one hydrant barrel extension and one operating stem extension may be used to accommodate changes in grade. Extension length shall not exceed 2 ft. Under no conditions shall extended hydrant have more than one coupling in the operating stem. Pumper connections shall point toward the street. Hydrants shall be set back from the curb 3 ft. to 10 ft.
B. Fire hydrants shall be installed with barrel vertical and properly based. Concrete thrust blocks shall be placed behind the hydrant, tee, and every bend. Care should be taken to insure that the drain holes on the hydrant are not plugged by the thrust blocks. Hydrant shall be set in 1 yard of coarse gravel for drainage purposes. If ground water is encountered, the drain hole shall be plugged as directed by the manufacturer. The backfill shall be sand or granular material thoroughly tamped around the hydrant and valve box in 1 ft. layers.
C. Fire hydrant and gate valve shall be set apart a minimum of 30' from center of hydrant to center of valve. Gate valves and valve box shall be as specified under the valve paragraphs of this Section.

City of Chelsea
Standard Specification
Page 11 of 11
Section 2.09
WATER MAIN
3.04 CONNECTION TO EXISTING MAINS
A. When making a connection to an existing main under this Section, the existing main to which a connection is to be made shall be isolated by the closing of the necessary existing valves, and the water from the existing main shall then be pumped out or removed by other means so the connection may be made in the dry. After the connection has been acceptably made, the portion of the new line to the nearest valve shall be satisfactorily tested and disinfected, along with the drained portion of the existing main, before the isolated existing main is placed back in service, except as the ENGINEER may otherwise direct. Inasmuch as residents served by this isolated main will be temporarily out of water during this period, the work shall be prosecuted as rapidly as possible, and the time of, and the procedure in, making such connections shall be subject to the review of the ENGINEER. Such work may be required to be done at night in order to minimize inconvenience of water users. The CONTRACTOR shall not be entitled to any additional compensation because of night work or other special requirements in work under this Section.
B. The CONTRACTOR shall make particular effort, prior to bidding, to ascertain whether or not valves in the existing mains to be connected to the new mains are so located as to provide isolation. If valves are not found to be adequate, then the CONTRACTOR shall utilize other means to make the connections with a minimum of interruption to service.
C. Wherever adapters are required to properly connect the pipe with existing pipe or other material or manufacturer, the nominal I.D. of adapters shall be the same size as the nominal diameter of pipe connected thereto. Adapters shall also be furnished and used as required by the manufacturer for connection to fittings.
END OF SECTION

City of Chelsea
Standard Specification
Page 11 of 11
Section 2.09
WATER MAIN
3.00 EXECUTION
3.01 PIPE INSTALLATION
A. Any pipe damaged in transport or handling shall be rejected and removed from the site of the work.
B. In handling and placing ductile iron pipe and fittings, no metal shall be used in contact with the inside of the pipe to fit or support the pipe. The pipe shall be moved only through the use of ball stings or automatic release type pipe lugs. Care shall be taken not to injure the pipe or valve coating, and to damaged or imperfect pipe shall be used in the work except that minor damage to pipe coating may be repaired subject to the review of the ENGINEER.
C. All excavation and backfill above the pipe shall conform to specifications under Section 2.04, Earthwork. The main shall be laid on a compacted aggregate material, 4 inches thick.
D. Compacted aggregate material shall be placed at the sides of the pipe and cover not less than 12 inches over the pipe.
E. "Aggregate Material" shall be MDO1 Class II Sand, unless wet trench conditions exist. If trench is wet, "Aggregate Material" shall be pea gravel, or crushed stone conforming to ASTM C33 Size No. 67. The "Aggregate Material" shall be placed in not more than 6-inch layers and compacted to not less than 90% standard density.
F. All pipe and fittings shall be carefully lowered and moved into position in the trench or vault in a controlled manner such as will prevent damage to the pipe and its coating and lining.
G. In assembly of push-on or shove type joints, the bell socket recess and the gasket shall be wiped clean and the gasket placed properly in position. A thin film of lubricant shall then be applied to the surface of the gasket to come into contact with the entire pipe. The plain end of the entering pipe shall be cleaned and then entered and forced home to the base of the socket. Where pipe is cut, the entering end shall be beveled before being inserted in the joint. Where time permits drying, the cut and beveled ends shall be coated with coal tar enamel.
H. To prevent trench water from entering the pipe, joints which for any reason may not be completed as the pipe is laid shall be thoroughly packed with approved material, in a manner to make them watertight. Open ends of fittings shall be tightly closed with approved plugs and well packed, as shall the end of the last pipe laid whenever work is not in progress.
I. Each pipe shall be laid accurately to the line and grade given by the ENGINEER. Whenever it is necessary to deflect pipe from a straight line, either in the horizontal or vertical plane, to avoid obstructions, or where long radius curves are permitted, the amount of deflection allowed shall not exceed that required for satisfactory jointing and shall be reviewed by the ENGINEER. In no case shall deflection of joints exceed the manufacturer's recommended maximum deflection.
J. The CONTRACTOR shall not be entitled to any additional compensation because depth is more than specified at certain locations or due to clearances at manholes, or due to unforeseen obstacles, or occasioned in order to avoid undue changes in grade.

LEGEND
☆ = LIGHT POLE
⊕ = UTILITY POLE
⊙ = GUY ANCHOR
⊚ = HYDRANT
SPOT ELEV.
POST
GATE VALVE
SIGN
TRANSFORMER
MANHOLE
CATCHBASIN
EATCH SECTION
GRAVEL
FENCE
CONCRETE
ASPHALT
EXISTING STORM
EXISTING SANITARY
EXISTING WATER
EXISTING GAS
EXISTING ELECTRIC
EXISTING TELEPHONE

CIVIL ENGINEERS
PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS
WASHTEWATER ENGINEERING
M/I HOMES OF MICHIGAN
40950 WOODWARD AVE.
BLOOMFIELD HILLS, MI 48304
PH: (248)-221-5011

CLIENT
PROJECT
SHEET
SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
CITY OF CHELSEA
WASHTEWATER COUNTY • MICHIGAN
JOB NO. 32971
DWG NO. 971-ph2-city-details
FIELD BOOK 446
FILE NO. 10668

HERITAGE FARMS
WATER MAIN
SPECIFICATIONS
PHASE 2
811
Know what's below.
Call before you dig.
WETLANDS DELINEATED BY:
GJS LAND PLANNING, LLC
NOVEMBER OF 2023.
JOSEPH K. MAYNARD
ENGINEER
No. 52559
PREPARED BY
JOSEPH K. MAYNARD P.E., MICH No. 52559
36 SHEET

REVISIONS 1-15-2024 PER WCWRG AND CITY REVIEWS
2-6-2024 PER WCWRG AND CITY REVIEWS

BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9th
WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
BM2=NAIL IN WLY FACE OF 26" WALNUT, 4.5' NORTH OF DEXTER-CHELSEA RD AND 37th
NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND WICKSBURG DR, ELEV=913.21
(NAVD 88 DATUM)

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT PHYSICALLY LOCATE THE UTILITIES AND THEREFORE DOES NOT GUARANTEE THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

ENGINEERING STANDARDS CITY OF CHELSEA
SECTION II
SANITARY SEWER DESIGN STANDARDS
1. All workmanship, materials and testing shall be in accordance with current standards and specifications of the City of Chelsea.

ENGINEERING STANDARDS CITY OF CHELSEA
13. Where sanitary sewer crosses a watermain, provide a minimum of 18 inch vertical clearance between watermain and sanitary sewer or encase the watermain with reinforced concrete as directed by the City Engineer.

ENGINEERING STANDARDS CITY OF CHELSEA
14. Contractor shall call MISS DIG at (800) 482-7171 at least three (3) days prior to construction. Contractor shall be responsible for any damage done to any existing utility during construction.

ENGINEERING STANDARDS CITY OF CHELSEA
C. Manholes
1. Manholes on new sanitary sewers of 48-inch diameter and smaller shall be precast reinforced concrete with flexible watertight connections between the manhole wall and the sewer pipe.

ENGINEERING STANDARDS CITY OF CHELSEA
volume, based on dry materials. Castings shall be set accurately to the finished elevation so that no subsequent adjustment will be necessary, or unless otherwise specified by Engineer.

ENGINEERING STANDARDS CITY OF CHELSEA
4. Sanitary Sewer Service Plan Details Required:
a. Length, size and slope of pipe. Required minimum size and slope is six (6) inch pipe at 1% slope.

COPYRIGHT © 2024 WASHTEKAW ENGINEERING COMPANY, INC. NO REPRODUCTION SHALL BE MADE WITHOUT THE WRITTEN CONSENT OF WASHTEKAW ENGINEERING COMPANY, INC.

ENGINEERING STANDARDS CITY OF CHELSEA
operation or use infiltration test after dewatering system is turned off and groundwater has returned to its normal level.

ENGINEERING STANDARDS CITY OF CHELSEA
b. Test equipment shall include source of compressed air, air hose, plugs, hose connections, shut-off valve, throttling valve, cage cock, monitoring pressure gauge, delicate 0.1 psi graduations pressure gauge, and stopwatch.

ENGINEERING STANDARDS CITY OF CHELSEA
4. Ring Deflection Testing:
a. A minimum of 30 days after the sewer has been installed, ring deflection testing shall be performed.

Table with 4 columns: 1 Pipe Diameter (in.), 2 Minimu m Time (min:sec), 3 Length for Longer Length (ft.), 4 Time for Longer Length (sec.). Includes sub-tables for LOW PRESSURE AIR TEST TABLES and TABLE FOR PVC, PVCP, ABS AND DI PIPE.

Table with 4 columns: 1 Pipe Diameter (in.), 2 Minimu m Time (min:sec), 3 Length for Longer Length (ft.), 4 Time for Longer Length (sec.). Includes sub-tables for TABLE FOR VCP AND CONCRETE PIPE and TABLE FOR VCP AND CONCRETE PIPE.

ENGINEERING STANDARDS CITY OF CHELSEA
1. The sanitary sewer easement shall be a minimum of twenty (20) feet wide, centered on the sewer as constructed, and shall be designated on the drawings as such.

THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ESTIMATES, REPORTS, AND OTHER INSTRUMENTS OF SERVICE FOR ANY OTHER PROJECT OR FOR COMPLETION OF THIS PROJECT OR FOR COMPLETION OF THIS PROJECT BY OTHERS SO LONG AS WASHTEKAW ENGINEERING COMPANY (MECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT.

ENGINEERING STANDARDS CITY OF CHELSEA
1. Repair visible leakage in sewers or manholes even though acceptance tests have been satisfactory.

ENGINEERING STANDARDS CITY OF CHELSEA
b. Infiltration/Exfiltration Tests:
a. In sanitary sewers, place weirs temporarily for testing purposes in such manholes as necessary to measure amount of infiltration.

ENGINEERING STANDARDS CITY OF CHELSEA
5. Television Inspection:
a. Provide materials, labor, and equipment for television inspection of all new sanitary sewers. Include necessary cleaning and pumping of sewage.

Table with 4 columns: 1 Pipe Diameter (in.), 2 Minimu m Time (min:sec), 3 Length for Longer Length (ft.), 4 Time for Longer Length (sec.). Includes sub-tables for LOW PRESSURE AIR TEST TABLES and TABLE FOR PVC, PVCP, ABS AND DI PIPE.

ENGINEERING STANDARDS CITY OF CHELSEA
Note: When testing two sizes of pipe simultaneously, time shall be computed by ratio of lengths involved.

ENGINEERING STANDARDS CITY OF CHELSEA
1. The sanitary sewer easement shall be a minimum of twenty (20) feet wide, centered on the sewer as constructed, and shall be designated on the drawings as such.

LEGEND
LIGHT POLE
UTILITY POLE
GUY ANCHOR
HYDRANT
SPOT ELEV.
POST
GATE VALVE
SIGN
TRANSFORMER
MANHOLE
CATCHBASIN
END SECTION
GRAVEL
FENCE
CONCRETE
ASPHALT
EXISTING STORM
EXISTING SANITARY
EXISTING WATER
EXISTING GAS
EXISTING ELECTRIC
EXISTING TELEPHONE

BENCHMARK
BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHELSEA RD AND 9th
BM2= NAIL IN WLY FACE OF 26" WALNUT, 43.5' NORTH OF DEXTER-CHELSEA RD AND 37th
BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21 (NAVD 88 DATUM)

REVISIONS
1-15-2024 PER WCWRC AND CITY REVIEWS
2-6-2024 PER WCWRC AND CITY REVIEWS

SCALE
NO SCALE

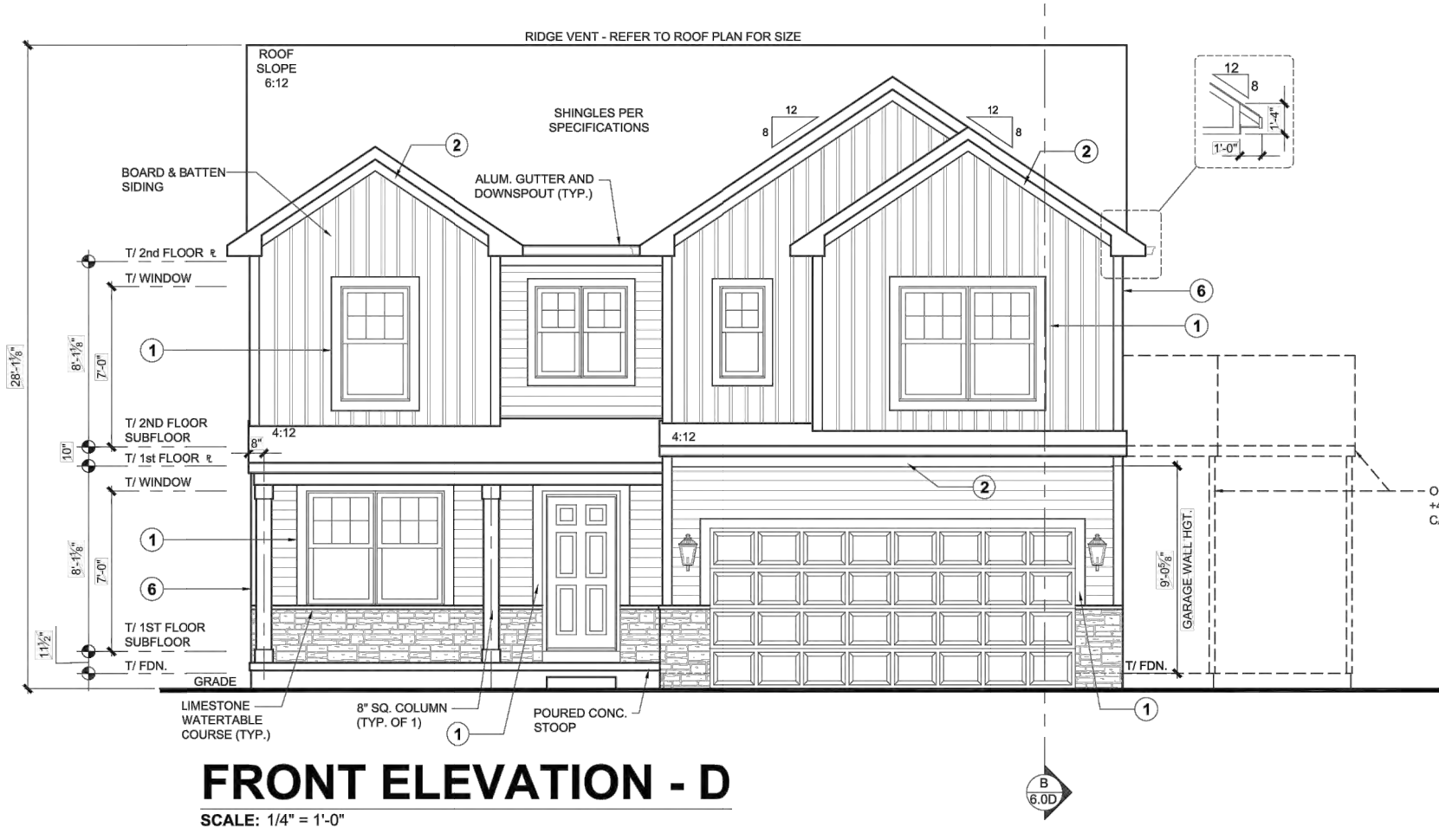
PREPARED BY
JOSEPH K. MAYNARD P.E., MICH No. 52559

WETLANDS DELINEATED BY: GJS LAND PLANNING, LLC NOVEMBER OF 2023.
811 logo
STATE OF MICHIGAN LICENSED PROFESSIONAL ENGINEER JOSEPH K. MAYNARD ENGINEER No. 52559

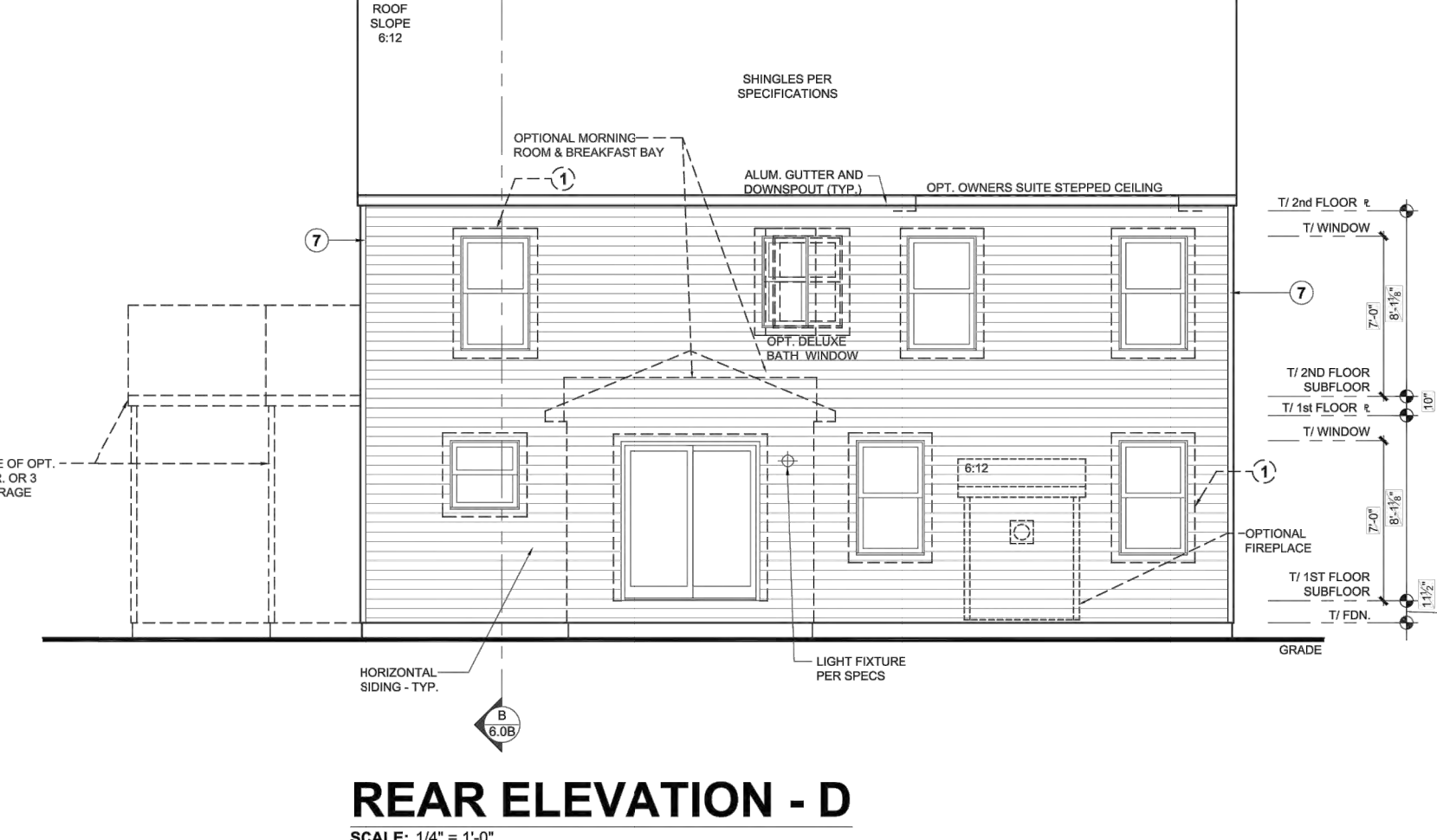
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPARE ALL UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATE AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTEKAW ENGINEERING COMPANY, INC. NO REPRODUCTION OR TRANSMISSION OF THIS DRAWING OR ANY PART THEREOF IS PERMITTED WITHOUT THE WRITTEN CONSENT OF WASHTEKAW ENGINEERING COMPANY, INC.

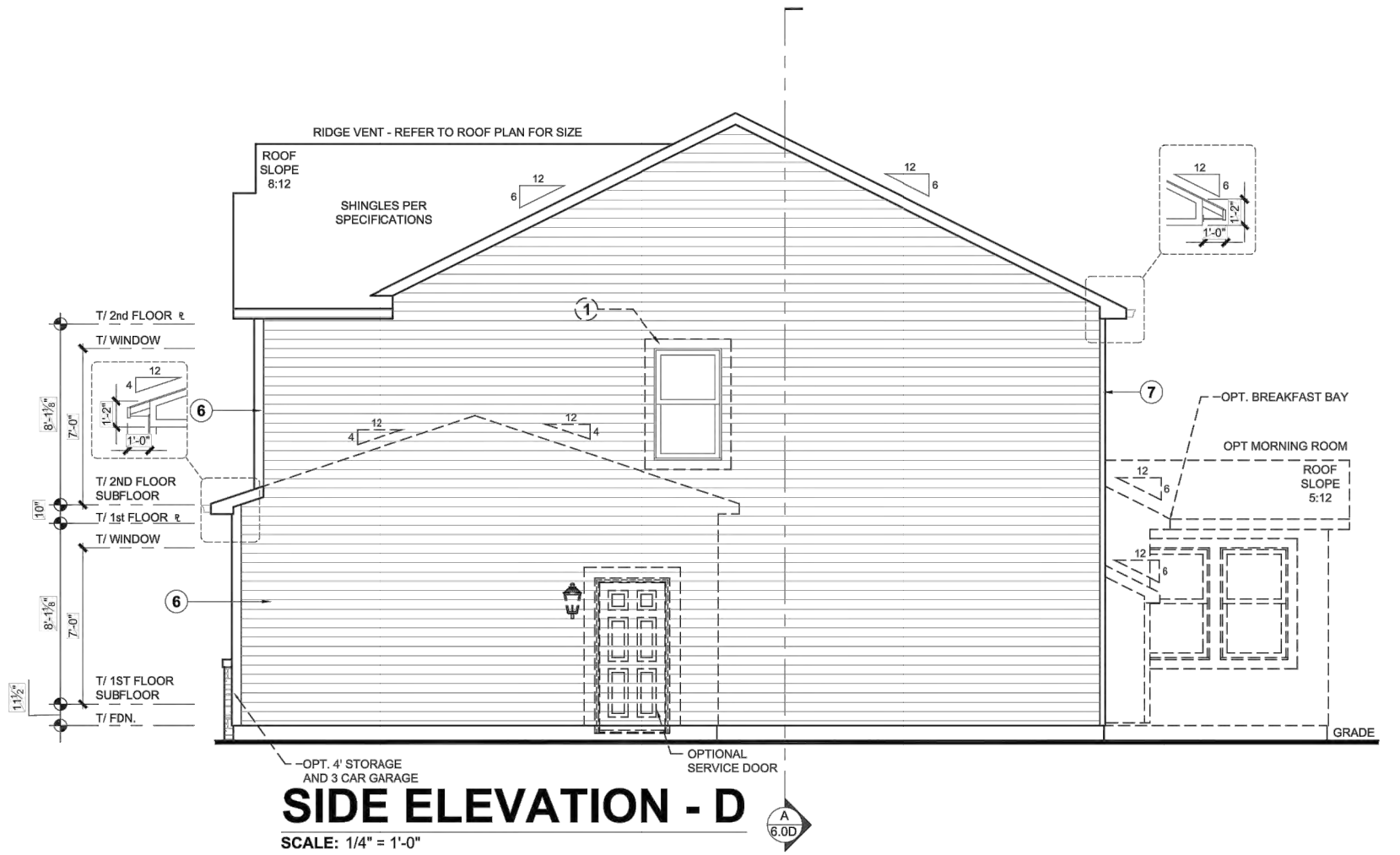
THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA, AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS. FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS, SO LONG AS WASHTEKAW ENGINEERING COMPANY (MECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. MECO SHALL INDEMNIFY AND HOLD HARMLESS MECO, MECO'S CONSULTANTS AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF OR FROM THE USE OF THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.



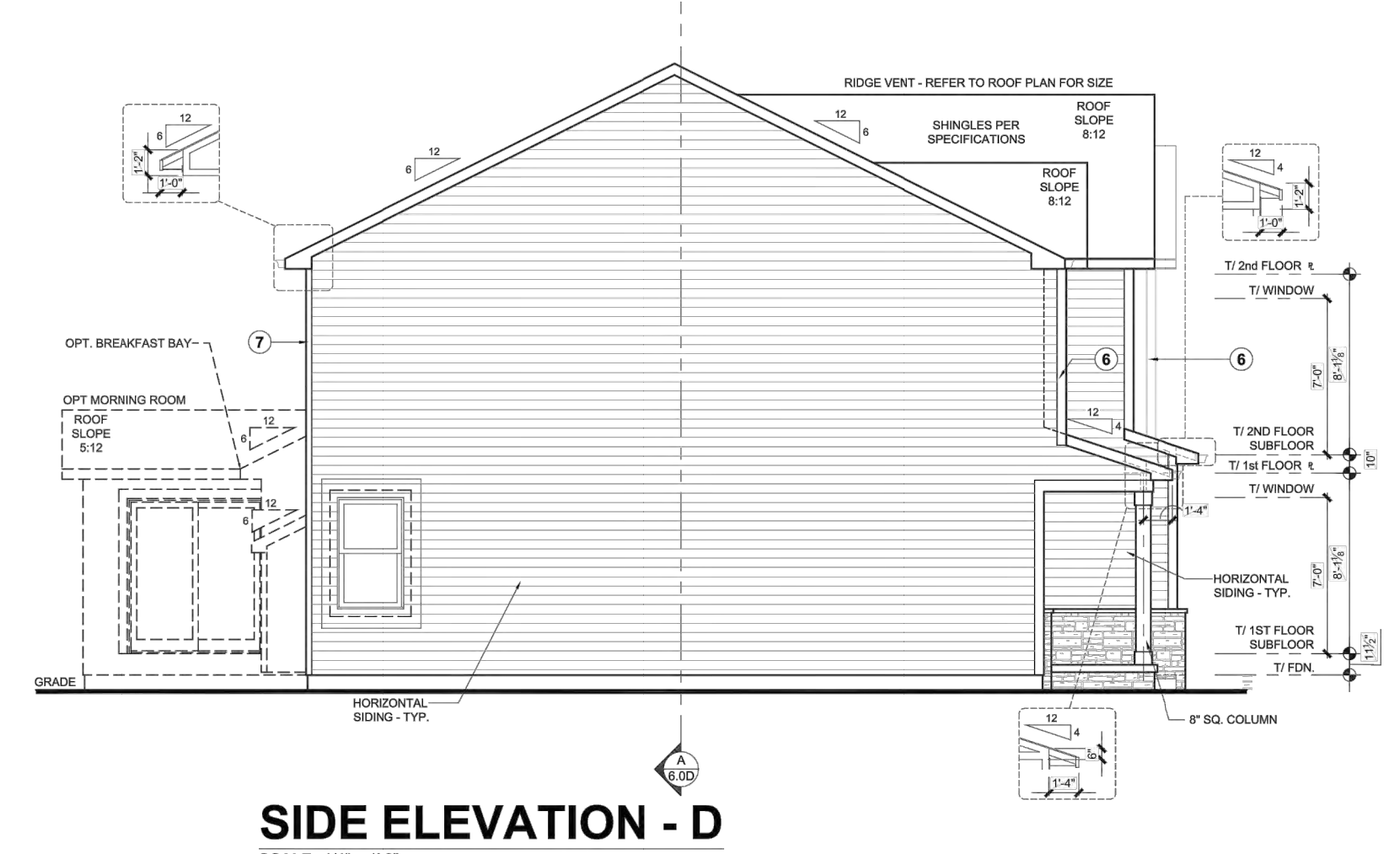
FRONT ELEVATION - D
SCALE: 1/4" = 1'-0"



REAR ELEVATION - D
SCALE: 1/4" = 1'-0"

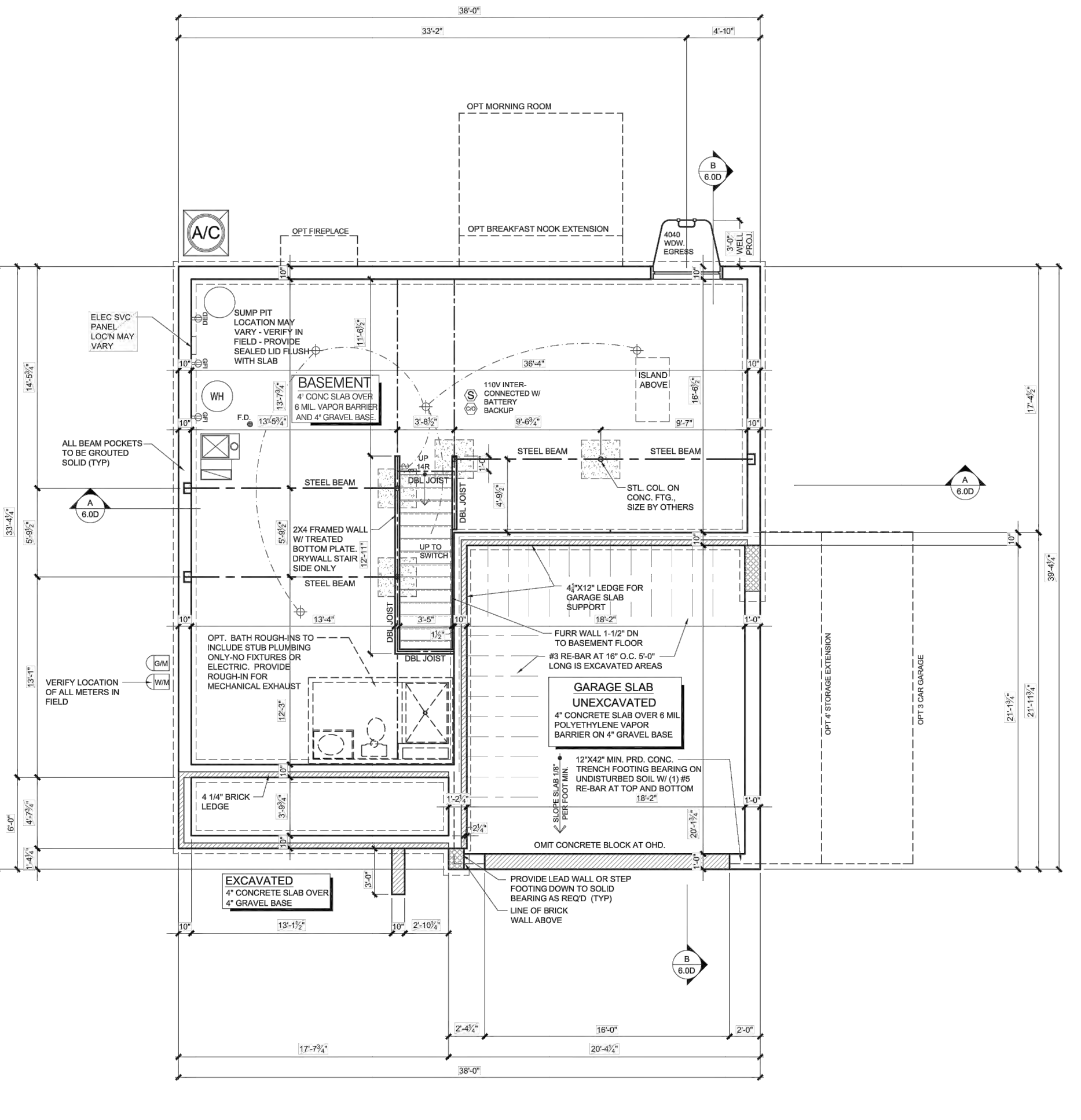


SIDE ELEVATION - D
SCALE: 1/4" = 1'-0"

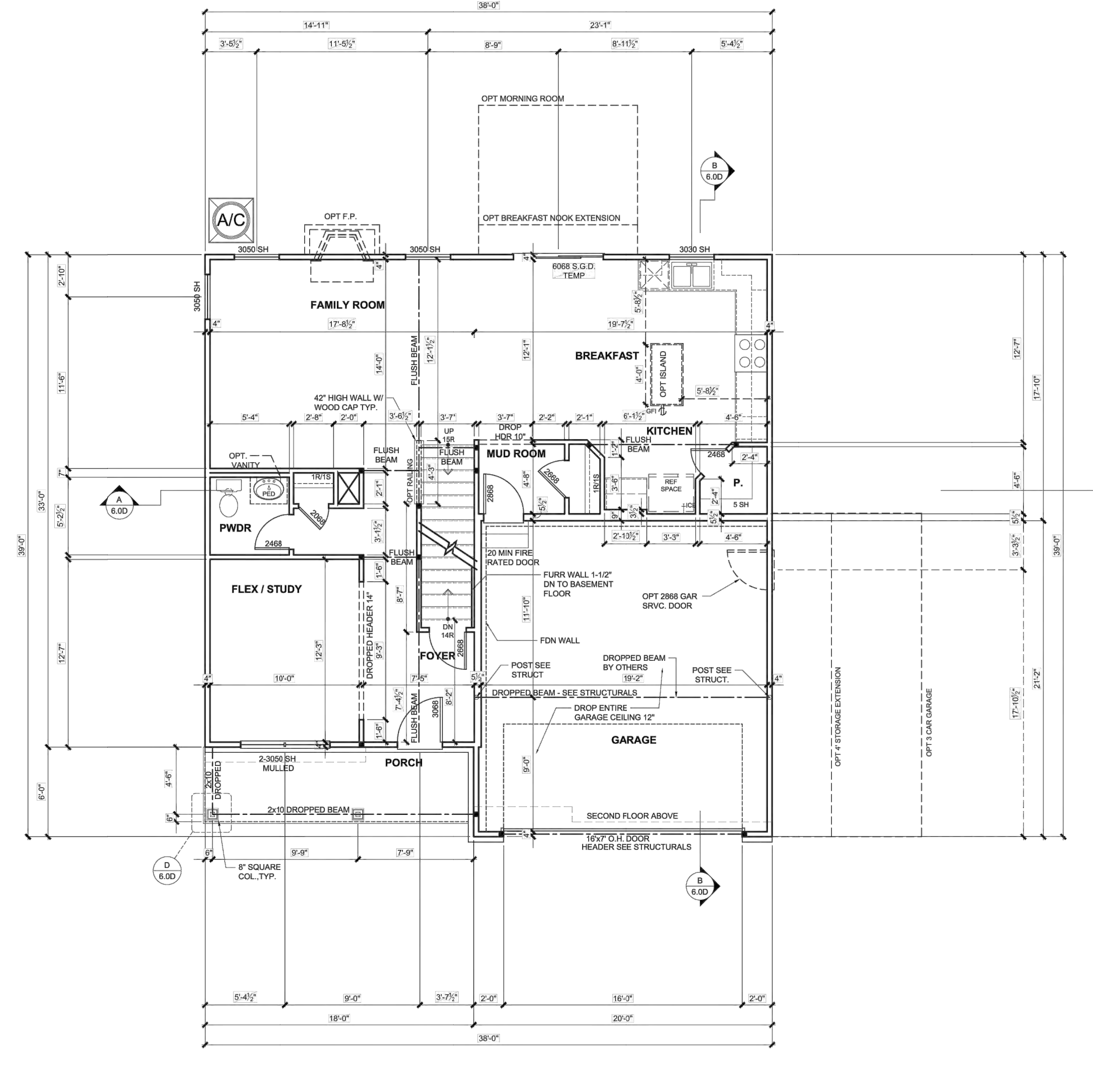


SIDE ELEVATION - D
SCALE: 1/4" = 1'-0"

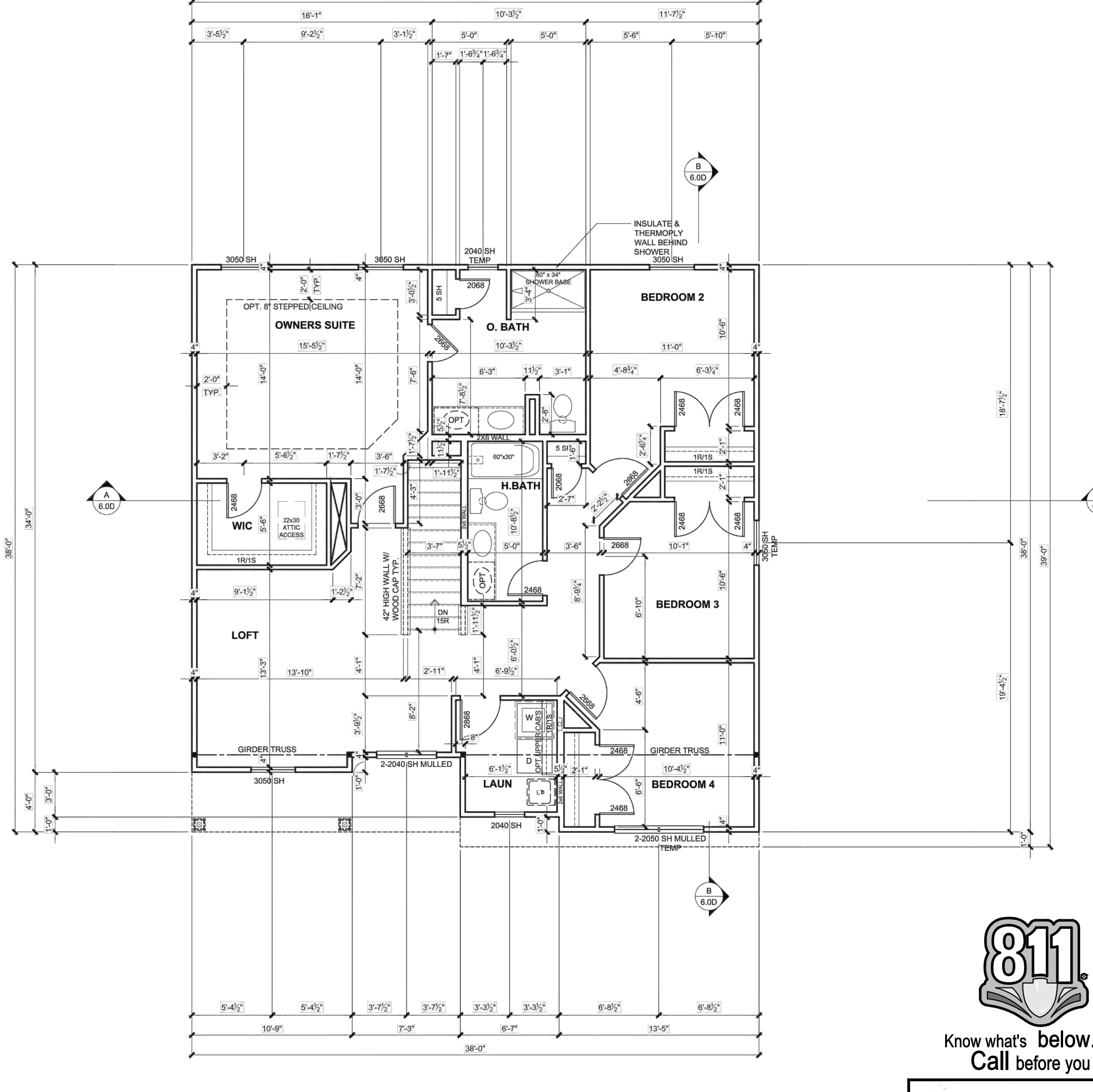
AUBREY:
2,366 SF MAX.
INCLUDES
MORNING ROOM
OPTION.



ELEVATION D FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



FRAMING PLAN FIRST FLOOR PLAN - D
SCALE: 1/4" = 1'-0"



FRAMING PLAN SECOND FLOOR PLAN - D
SCALE: 1/4" = 1'-0"

LEGEND	
☉	LIGHT POLE
☉	UTILITY POLE
☉	GUY ANCHOR
☉	HYDRANT
○	SPOT ELEV.
○	POST
○	GATE VALVE
○	SIGN
○	TRANSFORMER
○	MANHOLE
○	CATCHBASIN
○	END SECTION
---	GRAVEL
---	FENCE
---	CONCRETE
---	ASPHALT
---	EXISTING STORM
---	EXISTING SANITARY
---	EXISTING WATER
---	EXISTING GAS
---	EXISTING ELECTRIC
---	EXISTING TELEPHONE

BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHelsea RD AND 9th ST
 WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68
 BM2=NAIL IN WLY FACE OF 26" WALNUT, 43.5' NORTH OF DEXTER-CHelsea RD AND 37th ST
 NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21
 (NAVD 88 DATUM)

REVISIONS 1-15-2024 PER WCWR AND CITY REVIEWS
 2-6-2024 PER WCWR AND CITY REVIEWS

SCALE
NO SCALE

PREPARED BY
 JOSEPH K. MAYNARD P.E., MICH No. 52559

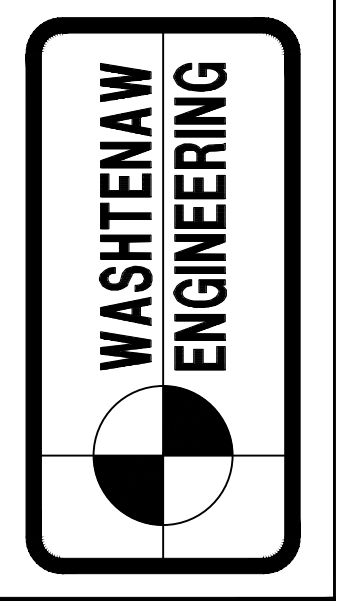
811
 Know what's below.
 Call before you dig.

STATE OF MICHIGAN
 JOSEPH K. MAYNARD
 LICENSED PROFESSIONAL ENGINEER
 No. 52559

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
 CITY OF CHELSEA
 WASHTEKAW COUNTY • MICHIGAN
 DATE 11-1-23 JOB NO. 32971
 DWG NO. 971-PH2-FIRE
 FIELD BOOK 446
 FILE NO. 10668

A1
SHEET

CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 3526 W. LIBERTY RD
 ANN ARBOR, MI 48103
 TEL: 734-761-8800



M/I HOMES OF
 MICHIGAN
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

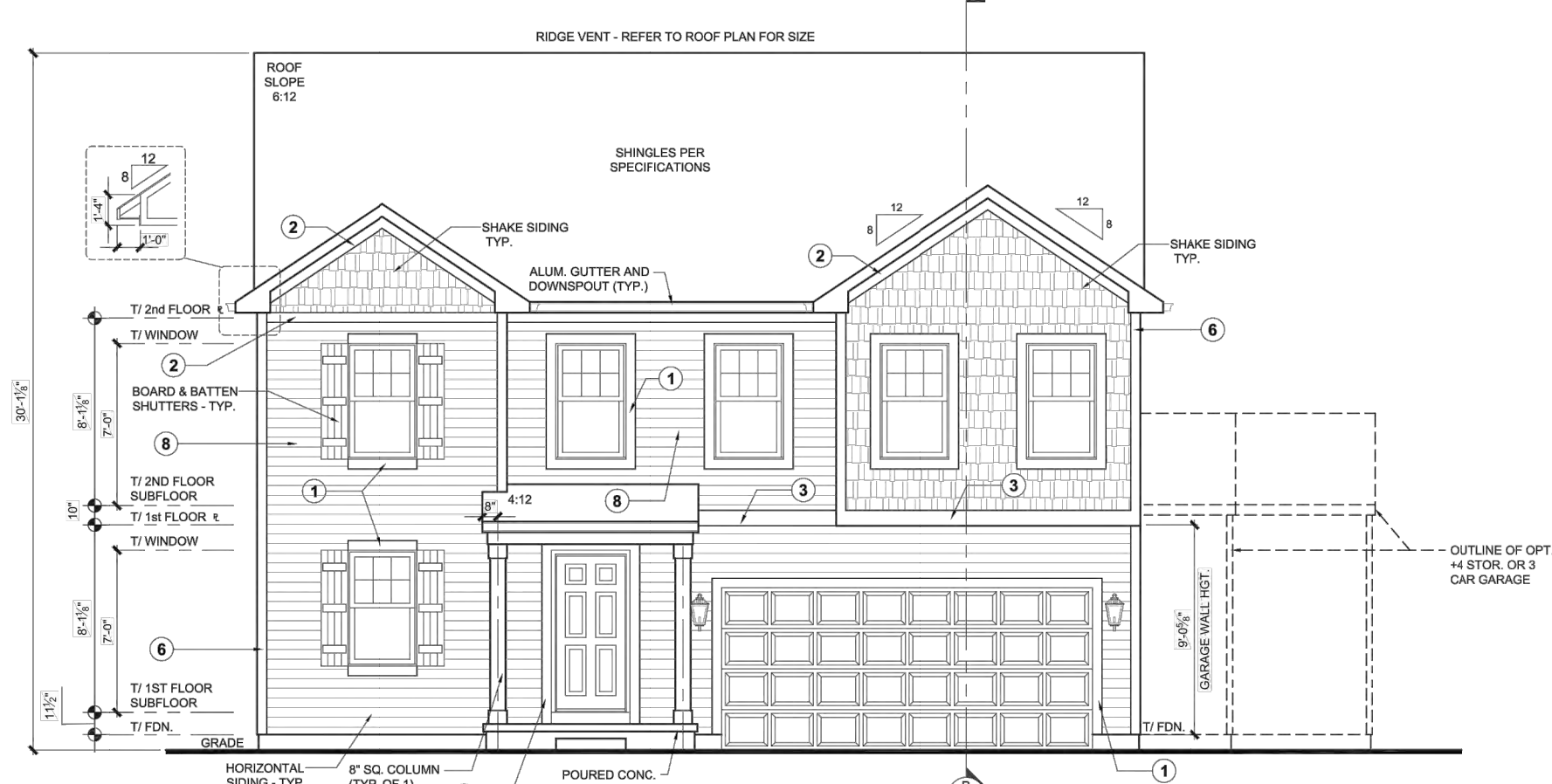
**AUBREY
 FLOOR PLANS & ELEVATIONS**

**HERITAGE FARMS
 PHASE 2**

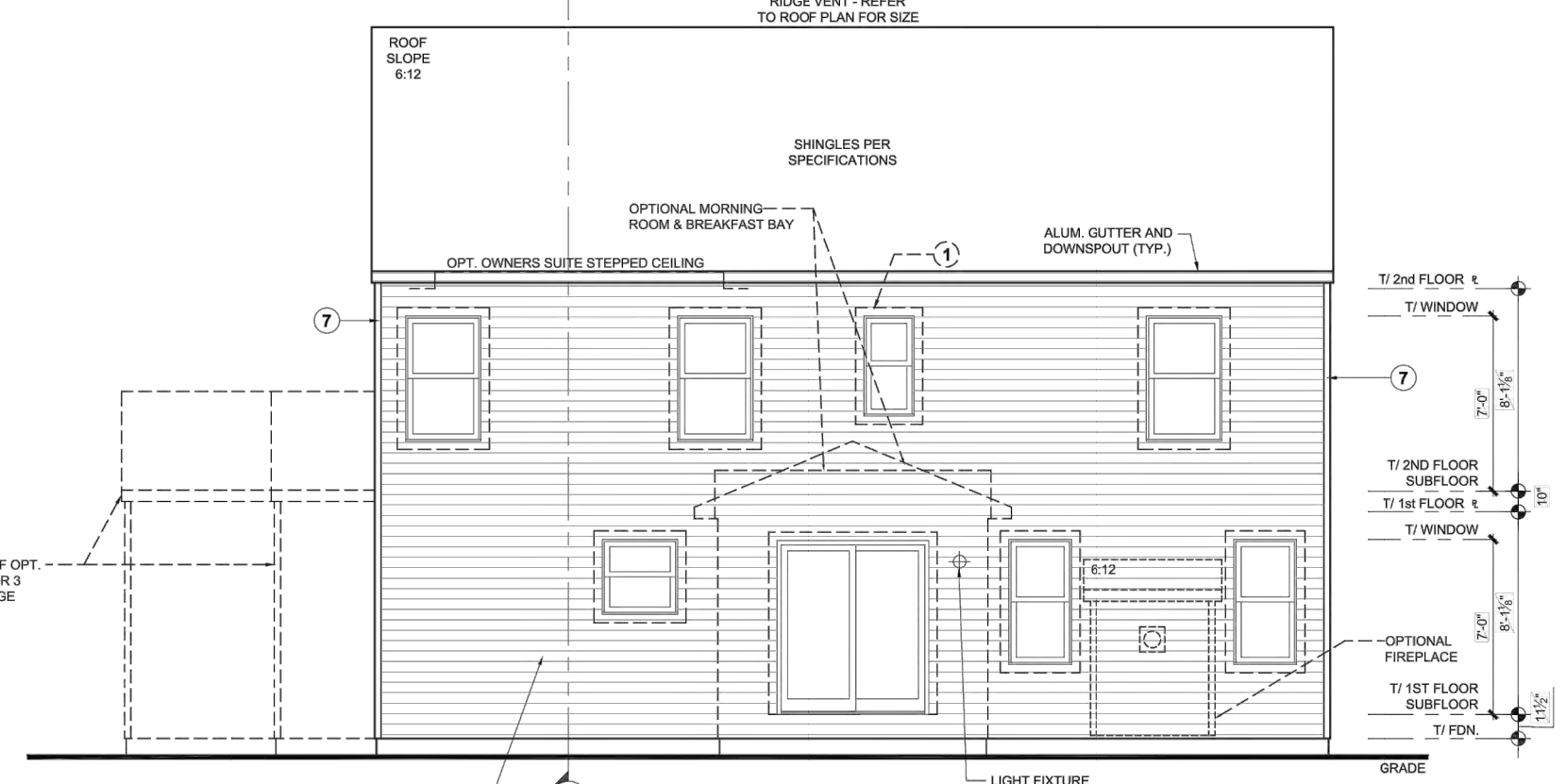
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTEWAW ENGINEERING COMPANY, INC. NO REPRODUCTION OR TRANSMISSION OF THIS DRAWING WITHOUT THE WRITTEN CONSENT OF WASHTEWAW ENGINEERING COMPANY, INC.

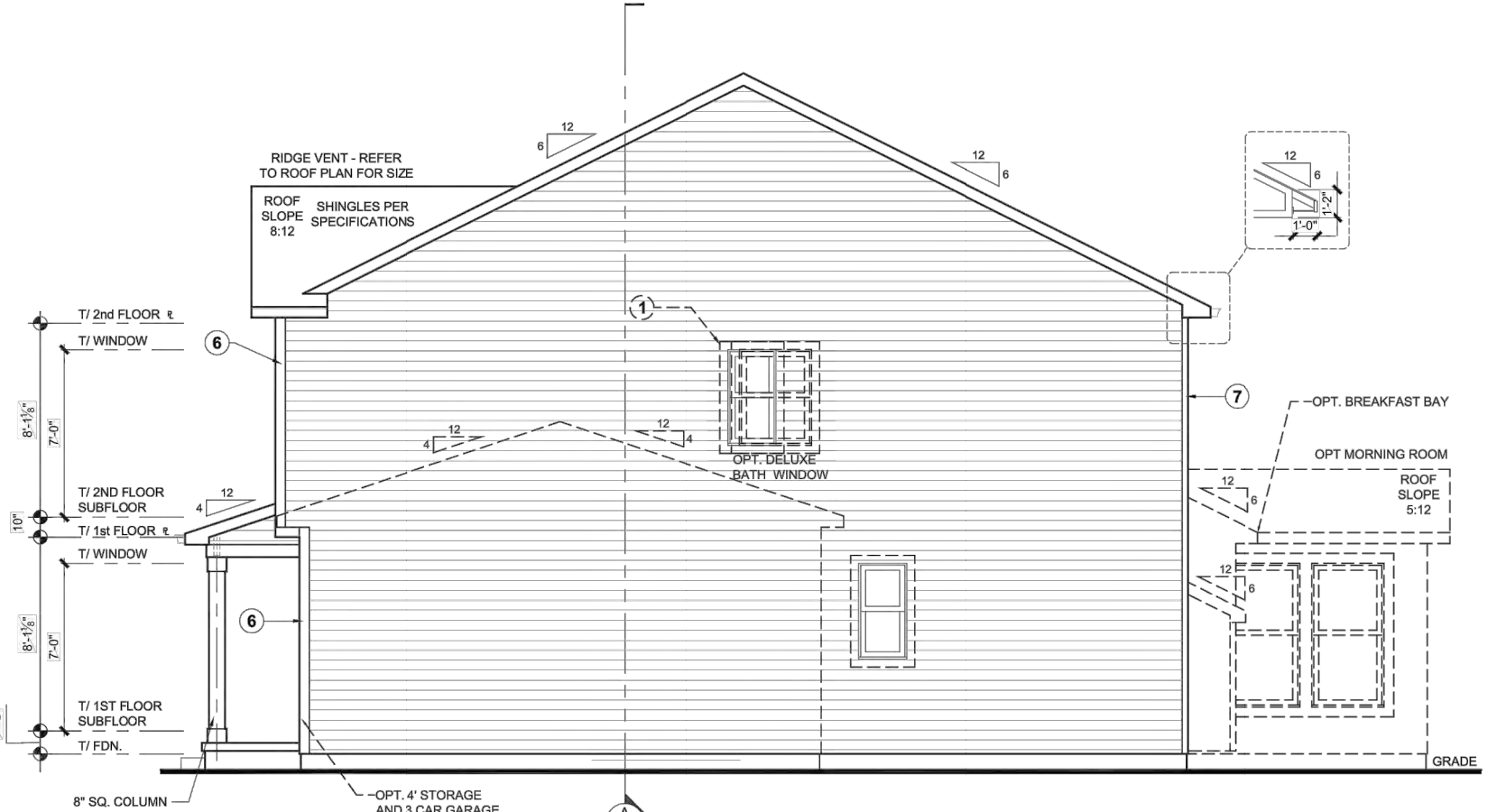
THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA, AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS FOR ADDITIONS TO THIS PROJECT OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTEWAW ENGINEERING COMPANY (MECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. THE OWNER SHALL INDEMNIFY AND HOLD HARMLESS MECO, MECO'S CONSULTANTS AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEY'S FEES, ARISING OUT OF UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.



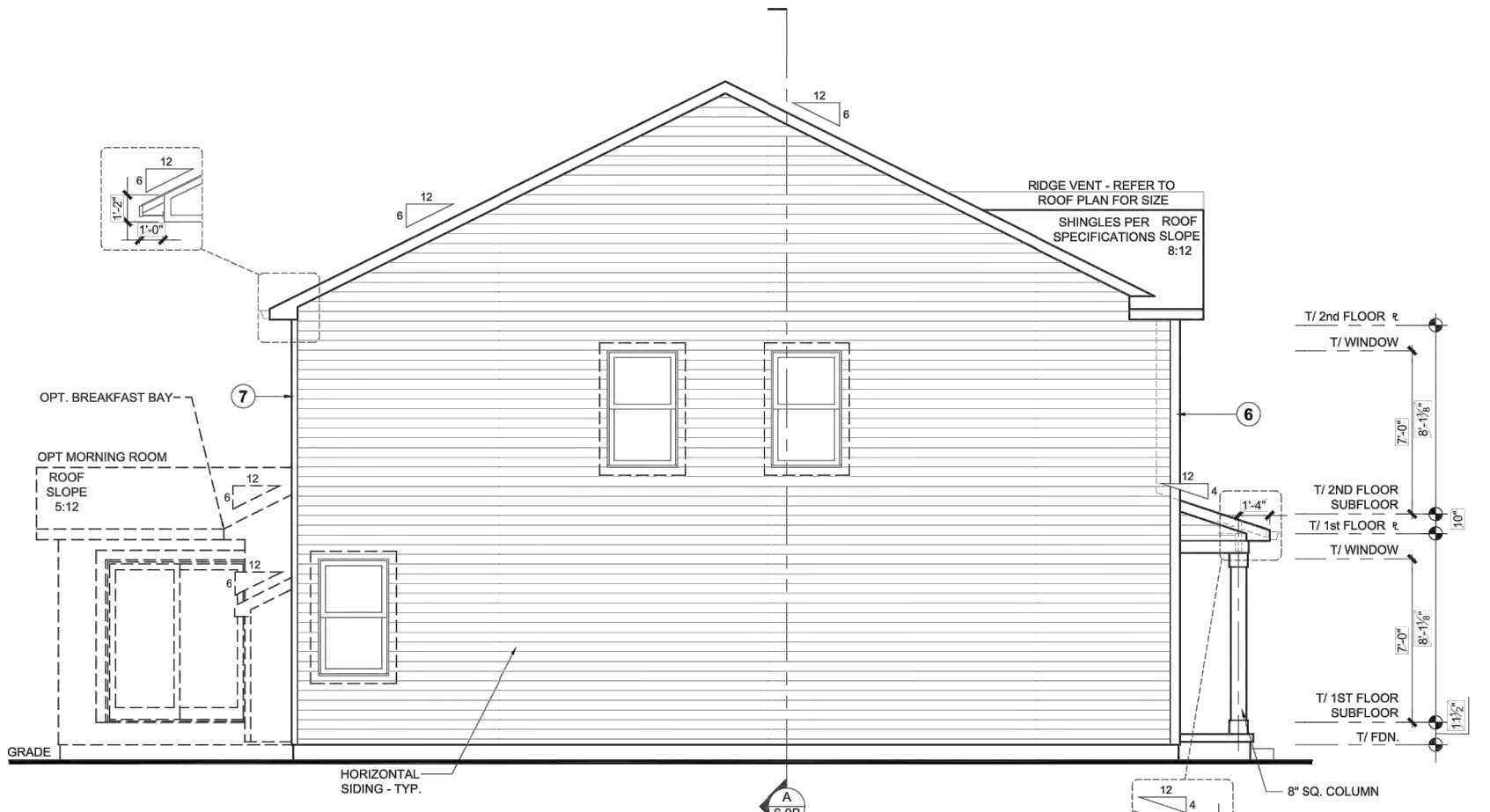
FRONT ELEVATION - B
SCALE: 1/4" = 1'-0"



REAR ELEVATION - B
SCALE: 1/4" = 1'-0"

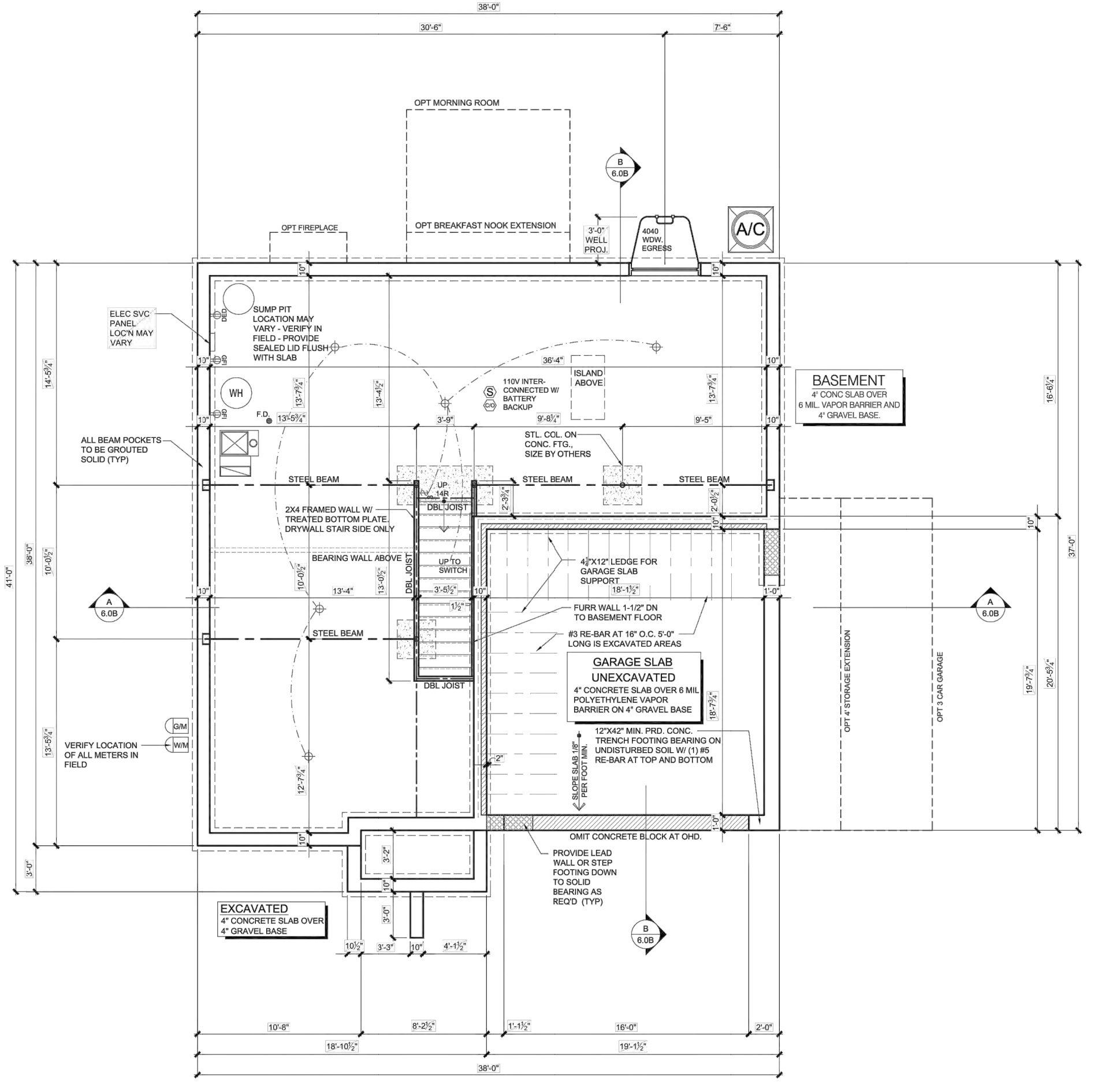


SIDE ELEVATION - B
SCALE: 1/4" = 1'-0"

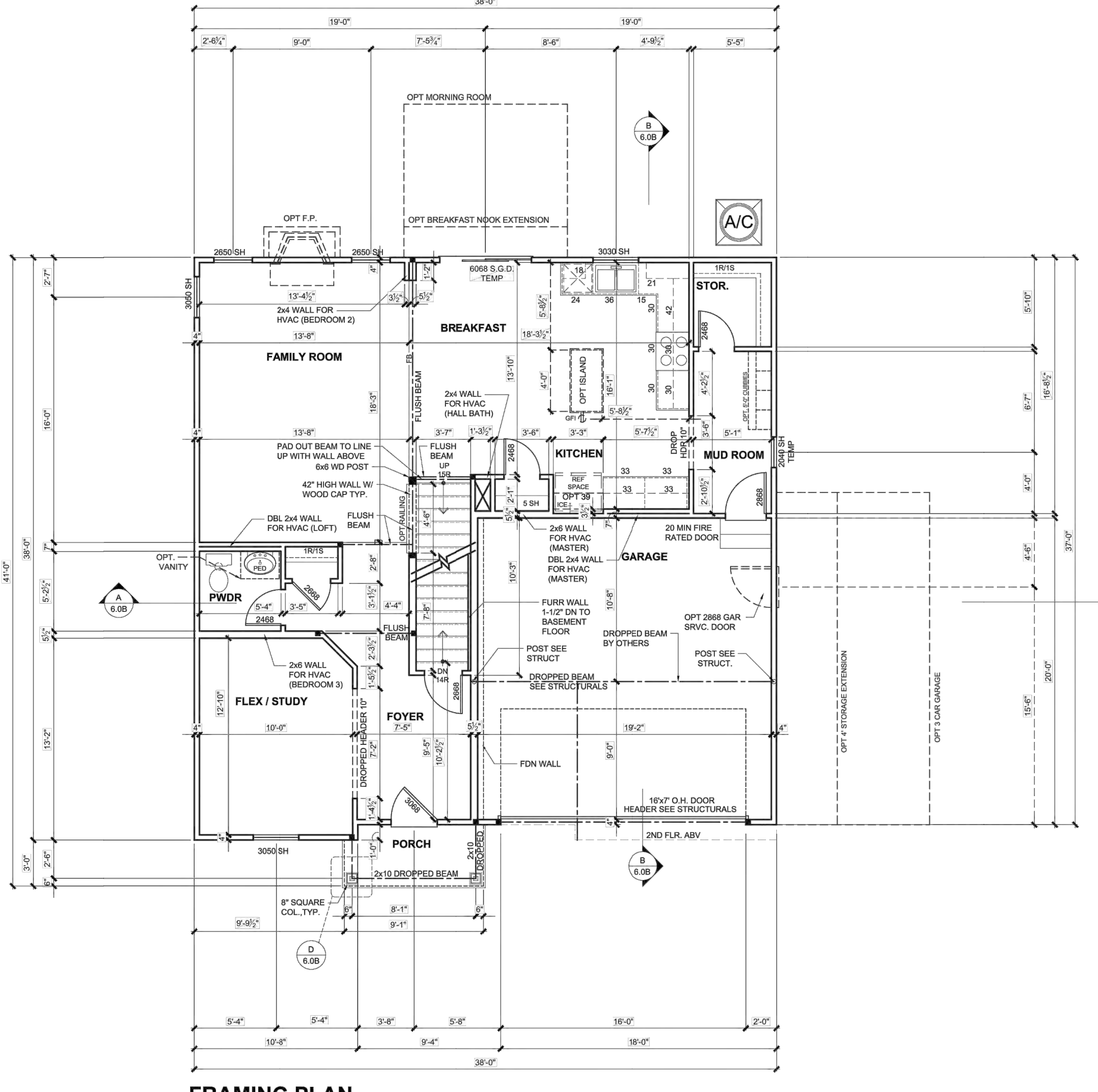


SIDE ELEVATION - B
SCALE: 1/4" = 1'-0"

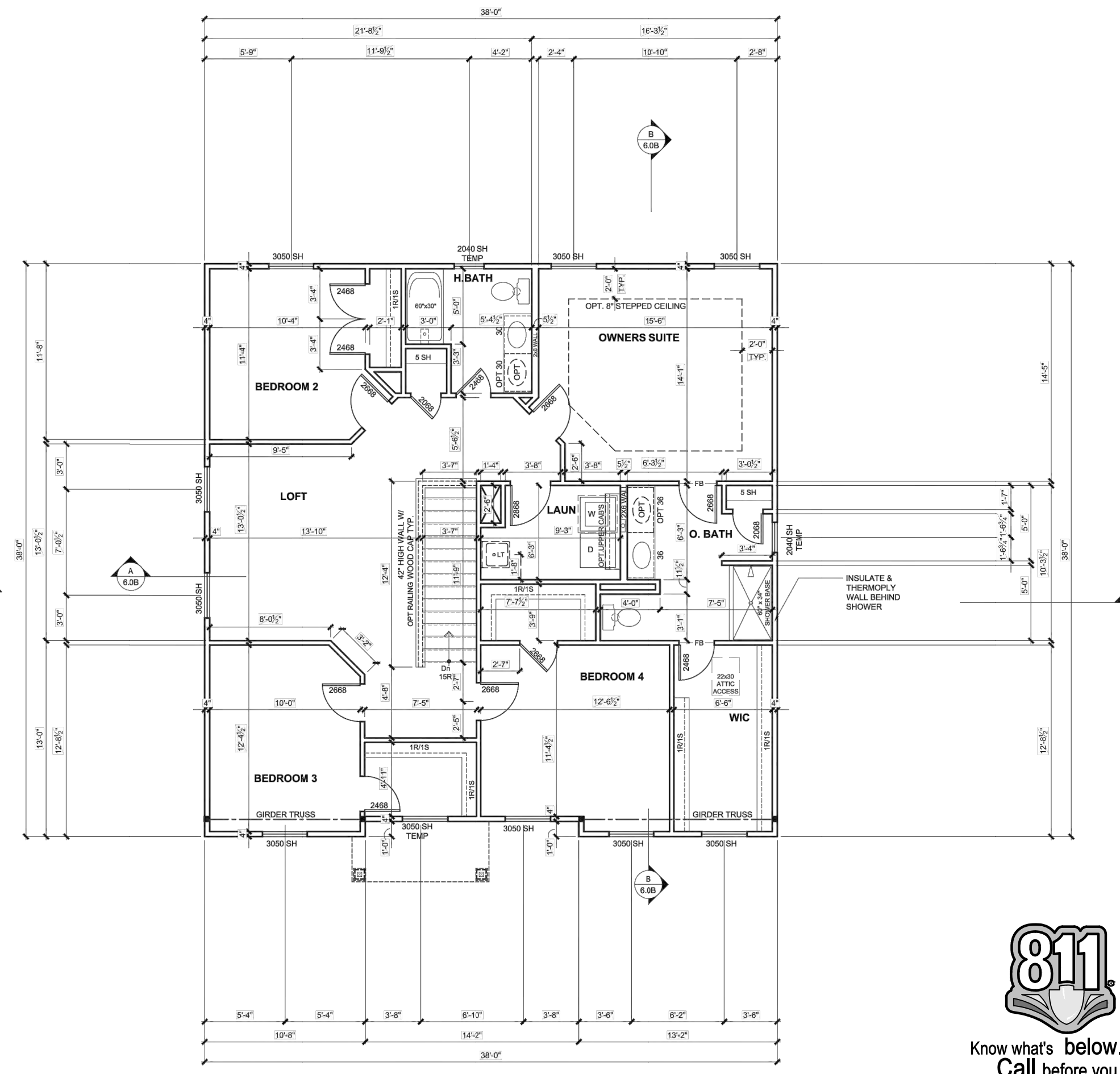
PEYTON:
2,533 SF MAX.
INCLUDES
MORNING ROOM
OPTION.



FOUNDATION B
FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



FRAMING PLAN
FIRST FLOOR PLAN - B
SCALE: 1/4" = 1'-0"



FRAMING PLAN
SECOND FLOOR PLAN - B
SCALE: 1/4" = 1'-0"

LEGEND	
	LIGHT POLE
	UTILITY POLE
	GUY ANCHOR
	HYDRANT
	SPOT ELEV.
	POST
	GATE VALVE
	SIGN
	TRANSFORMER
	MANHOLE
	CATCH BASIN
	END SECTION
	GRAVEL
	FENCE
	CONCRETE
	ASPHALT
	EXISTING STORM
	EXISTING SANITARY
	EXISTING WATER
	EXISTING GAS
	EXISTING ELECTRIC
	EXISTING TELEPHONE

BENCHMARK
BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHelsea RD AND 9th ST.
NEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68.
BM2=NAIL IN WLY FACE OF 26" WALNUT, 43'-5" NORTH OF DEXTER-CHelsea RD AND 37th ST.
NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38.
BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21.
(NAVD 88 DATUM)

REVISIONS
1-15-2024 PER WCWRC AND CITY REVIEWS
2-6-2024 PER WCWRC AND CITY REVIEWS

SCALE
NO SCALE

PREPARED BY
Joseph K. Maynard
JOSEPH K. MAYNARD P.E., MICH No. 52559

811
Know what's below.
Call before you dig.

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
CITY OF CHELSEA
WASHTEWAW COUNTY • MICHIGAN
JOB NO. 32971
DATE 11-1-23
DWG NO. 971-PH2-FIRE
FIELD BOOK 446
FILE NO. T0668
A4 SHEET

PEYTON
FLOOR PLANS & ELEVATIONS

M/I HOMES OF MICHIGAN
40950 WOODWARD AVE.
BLOOMFIELD HILLS, MI 48304
PH: (248)-221-5011

WASHTEWAW ENGINEERING

CIVIL ENGINEERS
PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS
3526 W. LIBERTY RD
ANN ARBOR, MI 48103
TEL: 734-761-8800

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. NO REPRESENTATION SHALL BE MADE AS TO THE ACCURACY OF THE INFORMATION PROVIDED. THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTEANAW ENGINEERING COMPANY, INC. NO REPRESENTATION SHALL BE MADE AS TO THE ACCURACY OF THE INFORMATION PROVIDED WITHOUT THE CONSENT OF WASHTEANAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA, AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS, FOR ADDITIONS TO THIS PROJECT, OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTEANAW ENGINEERING COMPANY (MECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. MECO SHALL INDEMNIFY AND HOLD HARMLESS MECO, MECO'S CONSULTANTS AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES, ARISING OUT OF OR FROM ANY UNAUTHORIZED REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.

Exterior Selection

Material shown are applicable per plan or elevation design

Windows White	Entry Door Tuxedo Gray	Gutters White	Shake Siding Wicker	Lap Siding Harvard Slate	Shutters Tuxedo Gray	Trim & Garage Door White
Brick Jet Black			Roof Shingles Moire Black	Board & Batten Siding Wicker	Accent Lap Siding Wicker	Stone Wairton

Essential Series 1

Exterior Selection

Material shown are applicable per plan or elevation design

Windows White	Entry Door Musket Brown	Gutters White	Shake Siding Flagstone	Lap Siding Pebble Clay	Shutters Musket Brown	Trim & Garage Door White
Brick Gray Ash			Roof Shingles Moire Black	Board & Batten Siding Flagstone	Accent Lap Siding Flagstone	Stone Kingston

Essential Series 2

Exterior Selection

Material shown are applicable per plan or elevation design

Windows White	Entry Door Musket Brown	Gutters White	Shake Siding Flagstone	Lap Siding Sand	Shutters Musket Brown	Trim & Garage Door White
Brick Elyria			Roof Shingles Moire Black	Board & Batten Siding Flagstone	Accent Lap Siding Flagstone	Stone Kingston

Essential Series 3

Exterior Selection

Material shown are applicable per plan or elevation design

Windows White	Entry Door Black	Gutters White	Shake Siding Harvard Slate	Lap Siding Heather	Shutters Black	Trim & Garage Door White
Brick Jet Black			Roof Shingles Moire Black	Board & Batten Siding Harvard Slate	Accent Lap Siding Harvard Slate	Stone Hampton

Essential Series 4

LEGEND	<ul style="list-style-type: none"> ○ = LIGHT POLE ○ = UTILITY POLE ○ = POST ○ = GUY ANCHOR ○ = HYDRANT 	<ul style="list-style-type: none"> ○ = SPOT ELEV. ○ = MANHOLE ○ = CATCHBASIN ○ = END SECTION 	<ul style="list-style-type: none"> ○ = TRANSFORMER ○ = ASPHALT 	<ul style="list-style-type: none"> --- = GRAVEL --- = FENCE --- = CONCRETE --- = ASPHALT 	<ul style="list-style-type: none"> --- = EXISTING STORM --- = EXISTING SANITARY --- = EXISTING WATER --- = EXISTING GAS --- = EXISTING ELECTRIC --- = EXISTING TELEPHONE
---------------	---	--	--	--	--

BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHelsea RD AND 9th WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68.
 BM2= NAIL IN WLY FACE OF 26" WALNUT, 43' E NORTH OF DEXTER-CHelsea RD AND 37th NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38.
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21. (NAVD 88 DATUM)

REVISIONS 1-15-2024 PER WCWRC AND CITY REVIEWS
 2-6-2024 PER WCWRC AND CITY REVIEWS

SCALE
 NO SCALE

PREPARED BY *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559

811
 Know what's below.
 Call before you dig.

STATE OF MICHIGAN
 JOSEPH K. MAYNARD
 ENGINEER
 No. 52559
 LICENSED PROFESSIONAL ENGINEER

CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 3526 W. LIBERTY RD
 ANN ARBOR, MI 48103
 TEL: 734-761-8800

WASHTEANAW ENGINEERING

CLIENT: M/I HOMES OF MICHIGAN
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

PROJECT: HERITAGE FARMS PHASE 2

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
 CITY OF CHELSEA
 WASHTEANAW COUNTY • MICHIGAN
 JOB NO. 32971
 DATE 11-1-23
 DWG NO. 971-PH2-FIRE
 FIELD BOOK 446
 FILE NO. 10668

A6
 SHEET

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. NO REPRESENTATION WILL BE MADE AS TO THE ACCURACY OF THE INFORMATION PROVIDED UNLESS THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTEANAW ENGINEERING COMPANY, INC. NO REPRODUCTION OR TRANSMISSION OF THIS DOCUMENT IS PERMITTED WITHOUT THE WRITTEN CONSENT OF WASHTEANAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA, AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS, FOR ADDITIONS TO THIS PROJECT, OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTEANAW ENGINEERING COMPANY (MECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. OWNER SHALL INDEMNIFY AND HOLD HARMLESS MECO, MECO'S CONSULTANTS AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES, ARISING OUT OF OR FROM ANY REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.

Exterior Selection

Material shown are applicable per plan or elevation design

Windows White	Entry Door Midnight Blue	Gutters White	Shake Siding Sterling	Lap Siding Harvard Slate	Shutters Midnight Blue	Trim & Garage Door White
Brick Anchor Bay			Roof Shingles Moire Black	Board & Batten Siding Sterling	Accent Lap Siding Sterling	Stone Roberveral

Essential Series 5

Exterior Selection

Material shown are applicable per plan or elevation design

Windows White	Entry Door Black	Gutters White	Shake Siding Wicker	Lap Siding Brownstone	Shutters Black	Trim & Garage Door White
Brick Gray Ash			Roof Shingles Moire Black	Board & Batten Siding Wicker	Accent Lap Siding Wicker	Stone Brockton

Essential Series 6

Exterior Selection

Material shown are applicable per plan or elevation design

Windows White	Entry Door Bordeaux	Gutters White	Shake Siding Sand	Lap Siding Sterling	Shutters Bordeaux	Trim & Garage Door White
Brick Elyria			Roof Shingles Moire Black	Board & Batten Siding Sand	Accent Lap Siding Sand	Stone Hampton

Essential Series 7

Exterior Selection

Material shown are applicable per plan or elevation design

Windows White	Entry Door Tuxedo Gray	Gutters White	Shake Siding Sterling	Lap Siding Sterling	Shutters Tuxedo Gray	Trim & Garage Door White
Brick Anchor Bay			Roof Shingles Moire Black	Board & Batten Siding Sterling	Accent Lap Siding Sterling	Stone Roberveral

Essential Series 8

LEGEND	<ul style="list-style-type: none"> ○ = LIGHT POLE ○ = UTILITY POLE ○ = GUY ANCHOR ○ = HYDRANT ○ = SPOT ELEV. ○ = POST ○ = GATE VALVE ○ = SIGN ⊗ = TRANSFORMER ○ = MANHOLE ○ = CATCHBASIN ○ = END SECTION --- = GRAVEL --- = FENCE --- = CONCRETE --- = ASPHALT --- = EXISTING STORM --- = EXISTING SANITARY --- = EXISTING WATER --- = EXISTING GAS --- = EXISTING ELECTRIC --- = EXISTING TELEPHONE
---------------	--

BENCHMARK
 BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHelsea RD AND 9th.
 WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68.
 BM2= NAIL IN WLY FACE OF 26" WALNUT, 43'± NORTH OF DEXTER-CHelsea RD AND 37th.
 NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38.
 BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21.
 (NAVD 88 DATUM)

REVISIONS
 1-15-2024 PER WCWRC AND CITY REVIEWS
 2-6-2024 PER WCWRC AND CITY REVIEWS

SCALE
 NO SCALE

PREPARED BY: *Joseph K. Maynard*
 JOSEPH K. MAYNARD P.E., MICH No. 52559

811
 Know what's below.
 Call before you dig.

STATE OF MICHIGAN
 JOSEPH K. MAYNARD
 ENGINEER
 No. 52559
 LICENSED PROFESSIONAL ENGINEER

CIVIL ENGINEERS
 PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 3526 W. LIBERTY RD
 ANN ARBOR, MI 48103
 TEL: 734-761-8800

WASHTEANAW ENGINEERING

CLIENT: M/I HOMES OF MICHIGAN
 40950 WOODWARD AVE.
 BLOOMFIELD HILLS, MI 48304
 PH: (248)-221-5011

PROJECT: HERITAGE FARMS PHASE 2

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
 CITY OF CHELSEA
 WASHTEANAW COUNTY • MICHIGAN
 JOB NO. 32971
 DATE 11-1-23
 DWG NO. 971-PH2-FIRE
 FIELD BOOK 446
 FILE NO. T0668

A7
 SHEET

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING RECORDS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. NO REPRESENTATION SHALL BE MADE AS TO THE ACCURACY OF THE INFORMATION PROVIDED. THE SURVEYOR DOES NOT WARRANT THAT THE INFORMATION IS COMPLETELY ACCURATE, AS ACCURATE AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

COPYRIGHT © 2024 WASHTEWAW ENGINEERING COMPANY, INC. NO REPRODUCTION OR TRANSMISSION OF THIS DOCUMENT IS PERMITTED WITHOUT THE WRITTEN CONSENT OF WASHTEWAW ENGINEERING COMPANY, INC.

THE OWNER SHALL NOT USE OR AUTHORIZE ANY OTHER PERSON TO USE THE DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA, AND OTHER INSTRUMENTS OF SERVICE ON OTHER PROJECTS, FOR ADDITIONS TO THIS PROJECT, OR FOR COMPLETION OF THE PROJECT BY OTHERS SO LONG AS WASHTEWAW ENGINEERING COMPANY (MECO) IS NOT ADVISED TO BE IN DEFAULT UNDER THIS AGREEMENT. OWNER SHALL INDEMNIFY AND HOLD HARMLESS MECO, MECO'S CONSULTANTS AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES, ARISING OUT OF OR FROM ANY REUSE OF DRAWINGS, SPECIFICATIONS, ELECTRONIC DATA OR OTHER INSTRUMENTS OF SERVICE.

Exterior Selection

Material shown are applicable per plan or elevation design

Windows White	Entry Door Black	Gutters White	Shake Siding Midnight Surf	Lap Siding Midnight Surf	Shutters Black	Trim & Garage Door White
Brick Mentor			Roof Shingles Moire Black	Board & Batten Siding Midnight Surf	Stone Kingston	

Essential Series 9

Exterior Selection

Material shown are applicable per plan or elevation design

Windows White	Entry Door Black	Gutters White	Shake Siding Midnight Surf	Lap Siding Granite	Shutters Black	Trim & Garage Door White
Brick Elyria			Roof Shingles Moire Black	Board & Batten Siding Midnight Surf	Stone Kingston	

Essential Series 10

Exterior Selection

Material shown are applicable per plan or elevation design

Windows White	Entry Door Black	Gutters White	Shake Siding Wedgewood	Lap Siding Weathered Gray	Shutters Black	Trim & Garage Door White
Brick Gray Ash			Roof Shingles Moire Black	Board & Batten Siding Wedgewood	Stone Hampton	

Essential Series 11

Exterior Selection

Material shown are applicable per plan or elevation design

Windows White	Entry Door Black	Gutters White	Shake Siding Tree Moss	Lap Siding Riverway	Shutters Black	Trim & Garage Door White
Brick Jet Black			Roof Shingles Moire Black	Board & Batten Siding Tree Moss	Stone Kingston	

Essential Series 12

LEGEND	LIGHT POLE	SPOT ELEV.	TRANSFORMER	GRAVEL	EXISTING STORM
UTILITY POLE	POST	MANHOLE	CATCHBASIN	FENCE	EXISTING SANITARY
GUY ANCHOR	GATE VALVE	END SECTION	CONCRETE	EXISTING WATER	EXISTING GAS
HYDRANT	SIGN		ASPHALT	EXISTING ELECTRIC	EXISTING TELEPHONE

BENCHMARK BM1=TOP NUT ON HYDRANT, NORTH OF DEXTER-CHelsea RD AND 9th;
WEST OF THE SOUTHWEST PROPERTY CORNER, ELEV=921.68.
BM2= NAIL IN WLY FACE OF 26" WALNUT, 43'-E NORTH OF DEXTER-CHelsea RD AND 37th;
NELY OF THE SOUTHEAST PROPERTY CORNER, ELEV=927.38.
BM3=TOP NUT ON HYDRANT AT NE CORNER OF ELM ST AND VICKSBURG DR, ELEV=913.21.
(NAVD 88 DATUM)

REVISIONS	1-15-2024 PER WCWRC AND CITY REVIEWS
	2-6-2024 PER WCWRC AND CITY REVIEWS

SCALE

NO SCALE

PREPARED BY:
JOSEPH K. MAYNARD P.E., MICH No. 52559

811
Know what's below.
Call before you dig.

CIVIL ENGINEERS
PLANNERS • SURVEYORS
LANDSCAPE ARCHITECTS
3526 W. LIBERTY RD
ANN ARBOR, MI 48103
TEL: 734-761-8800

WASHTEWAW ENGINEERING

CLIENT: M/I HOMES OF MICHIGAN
40950 WOODWARD AVE.
BLOOMFIELD HILLS, MI 48304
PH: (248)-221-5011

PROJECT: HERITAGE FARMS PHASE 2

SECTION 6 & 7 TOWN 2 SOUTH RANGE 4 EAST
CITY OF CHELSEA
WASHTEWAW COUNTY • MICHIGAN
JOB NO. 32921
DATE 11-1-23
DWG NO. 971-PH2-FIRE
FIELD BOOK 446
FILE NO. T0668

A8
SHEET



February 14, 2024

Washtenaw Engineering
3526 W. Liberty Road, Suite 400
Ann Arbor, MI, 48106

Attn: Mr. Joseph K. Maynard, P.E.

Re: Heritage Farms Phase 2 Resubmittal 2
Final Site Plan Review
Revision Date: February 6, 2024

Dear Mr. Maynard:

Pursuant to your request, Midwestern Consulting has reviewed the resubmitted Final Site Plans for Heritage Farms Phase 2. After reviewing the plans, our comments from the previous letter have been addressed, and we have no further engineering comments. Final approval of the plans will be subject to Planning Commission approval.

If there are any questions regarding our review, please feel free to call 734-995-0200 or email at AJL@midwesternconsulting.com.

Sincerely,

MIDWESTERN CONSULTING, LLC

Adam J. Lalik, PE

Item 6a-iii
Correspondence



RE: UPDATE TO THE LIMA TOWNSHIP MASTER PLAN

In accordance with the Michigan Planning Enabling Act (PA 33 of 2008 as amended), Lima Township has prepared an update to the existing Master Plan and requests your cooperation and comment on the Plan. This Update focuses on amendments to the infrastructure and circulation sections; updated goals for waste-water management, residential development, and transportation; updated data and demographics, and updates to the Future Land Use Map. The Update is ready for your review, and a digital draft can be found on the Township website at:

<https://limatownshipmi.gov/wp-content/uploads/2024/01/Master-Plan-update-1-24-24-reduced-file.pdf>

This letter represents the initiation of the 63-day comment period, which will conclude with a public hearing at an upcoming Planning Commission meeting.

Please direct all comments to the Township Planner at the address below.

We thank you for your consideration in this matter. If you have any questions or comments on the Lima Township Master Plan Update or process at this time, please contact:

Paul Montagno
pmontagno@cwaplan.com
P.O. Box 59
Chelsea, MI 48118