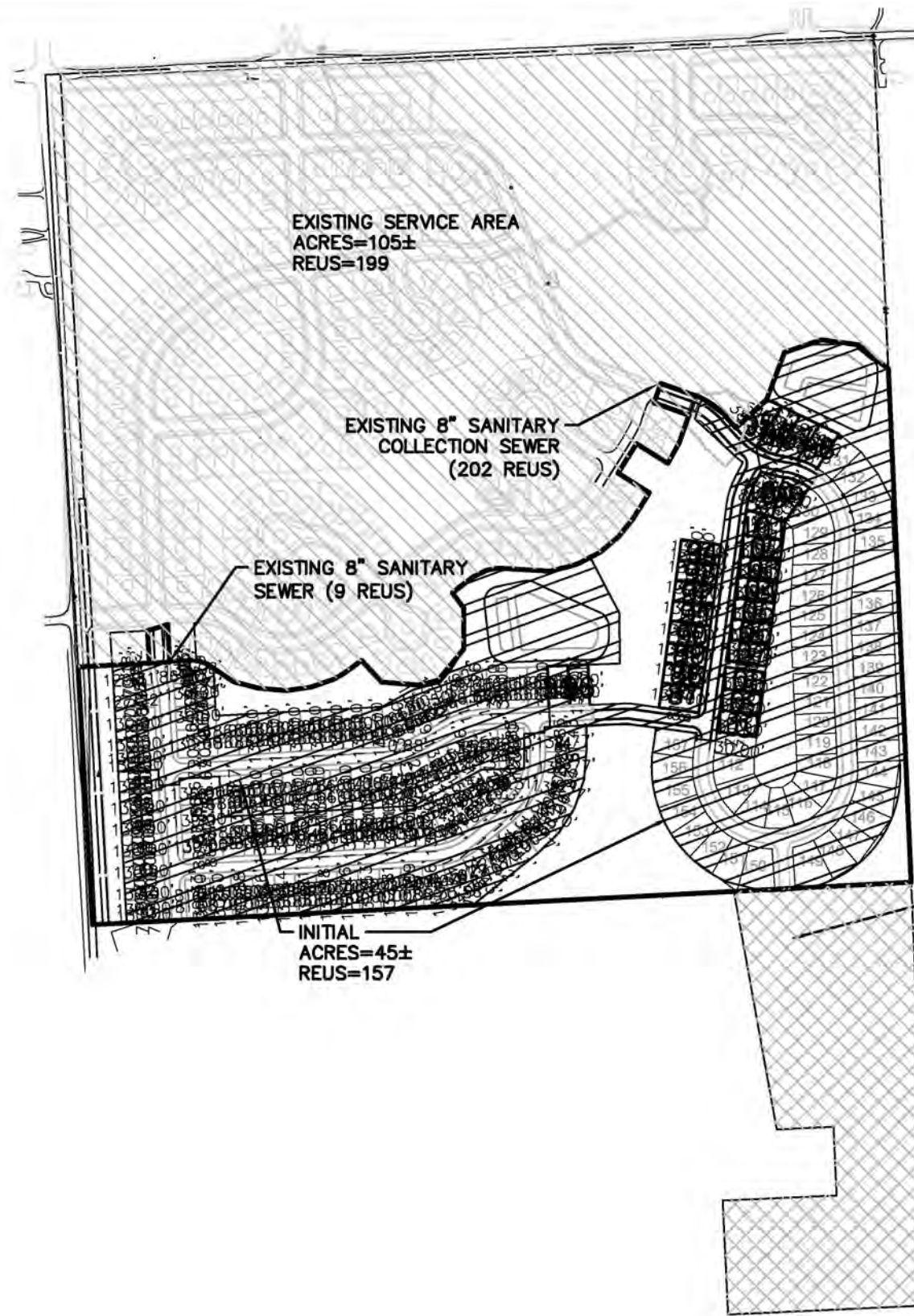


INITIAL UTILITY BASIS OF DESIGN			
No. of Single Family Lots:	157 Lots		
No. of Users per Lot:	3.5 Persons		
Total Expected Population Served:	550 Persons		
Average Daily Flow (per capita):	100 G.P.D.		
Peaking Factor:	$18 + \sqrt{\frac{POP}{1000}} = 3.95$		
Average Demand:	$POP * 100 = 55,000 \text{ G.P.D.}$		
	$= 38.2 \text{ G.P.M.}$		
	$= 0.085 \text{ C.F.S.}$		
Peak Demand:	$55,000 * 3.95 = 217,392 \text{ G.P.D.}$		
	$= 151.0 \text{ G.P.M.}$		
	$= 0.336 \text{ C.F.S.}$		

ULTIMATE UTILITY BASIS OF DESIGN			
Prospect Pointe West	157 Lots		
Future Service Area	45 Lots		
Total No. of Single Family Lots:	202 Lots		
No. of Users per Lot:	3.5 Persons		
Total Expected Population Served:	707 Persons		
Average Daily Flow (per capita):	100 G.P.D.		
Peaking Factor:	$18 + \sqrt{\frac{POP}{1000}} = 3.89$		
Average Flow:	$POP * 100 = 70,700 \text{ G.P.D.}$		
	$= 49.1 \text{ G.P.M.}$		
	$= 0.109 \text{ C.F.S.}$		
Peak Flow:	$70,700 * 3.89 = 275,169 \text{ G.P.D.}$		
	$= 191.1 \text{ G.P.M.}$		
	$= 0.426 \text{ C.F.S.}$		
Pipe Capacity:	8 in. diameter	A= 0.349 sf	
	0.40% slope	R= 0.167 ft	
	0.013 Manning's 'n'		
	Manning's Capacity = 0.766 C.F.S.		
	Velocity Flowing Full = 2.20 F.P.S.		

NOTES

- ALL UTILITIES SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- CONTRACTOR SHALL COORDINATE SCHEDULING AND PROCEDURES WITH THE AUTHORITY HAVING JURISDICTION PRIOR TO PERFORMING THE PROPOSED CONNECTIONS TO THE EXISTING WATER MAIN.
- 10' HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN WATER MAINS AND SEWERS.
- A MINIMUM VERTICAL SEPARATION OF 18" SHALL BE MAINTAINED BETWEEN CROSSING UTILITIES, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- ALL PROPOSED STORM SEWER SHALL BE R.C.P. CL-IV UNLESS OTHERWISE NOTED.
- LOW HEAD (FLAT TOP) STRUCTURES SHALL BE PROVIDED FOR STORM STRUCTURES WITH LESS THAN FOUR FEET OF COVER.
- ALL PROPOSED WATER MAIN SHALL BE DUCTILE IRON THICKNESS CL-54, AS APPROVED. WATER LEADS SHALL BE 1" TYPE K COPPER, UNLESS OTHERWISE APPROVED. ALL GATE VALVES, EXCEPT HYDRANT SHUTOFFS, SHALL BE INSTALLED IN WELLS.
- ALL WATERMAIN SHALL BE INSTALLED 5.5' DEEP. NO PIPE WILL BE ALLOWED DEEPER THAN 10' DEEP.
- ALL SANITARY LEADS SHALL BE 6" PVC SDR 23.5 LAID AT 1% MINIMUM SLOPE.
- ALL SANITARY SEWER PIPES SHALL BE PVC SDR 26 TO 20 FEET DEPTH AND PVC TRUSS PIPE FOR SANITARY SEWER DEEPER THAN 20 FT FROM FINISHED GRADE.
- SANITARY SEWERS LOCATED OUTSIDE OF THE ROAD RIGHT OF WAY SHALL BE LOCATED WITHIN A 20' WIDE EASEMENT.
- THE MINIMUM COVER OVER SANITARY SEWER IS 4'.
- TRAFFIC CONTROL TO BE PROVIDED IN ACCORDANCE WITH THE MMUTCD & COUNTY ROAD COMMISSION.
- M.D.O.T CLASS II SAND BACKFILL IS REQUIRED FOR ALL UTILITY BACKFILL UNDER OR WITHIN A 1:1 INFLUENCE OF PROPOSED PAVEMENT.
- WATER MAIN STRUCTURES (GATE WELLS, CURB STOPS, ETC.) MAY NOT BE PLACED WITHIN ANY PAVED SURFACE INCLUDING ROADS, DRIVEWAYS, AND SIDEWALKS.
- SANITARY SEWER STRUCTURES MAY NOT BE PLACED WITHIN ANY PAVED SURFACE INCLUDING ROADS, DRIVEWAYS, AND SIDEWALKS.
- ALL STORM SEWER SHALL BE PLACED IN 20' WIDE DRAINAGE EASEMENTS. ALL STORM SEWER PIPES SHALL BE C-75 CLASS IV UNLESS OTHERWISE NOTED.
- WATER SERVICE TAPS AND LEAD INSTALLATION SHALL OCCUR AFTER WATERMAIN TESTING.
- SEE SHEETS 19 THROUGH 20 FOR UTILITY EASEMENTS.

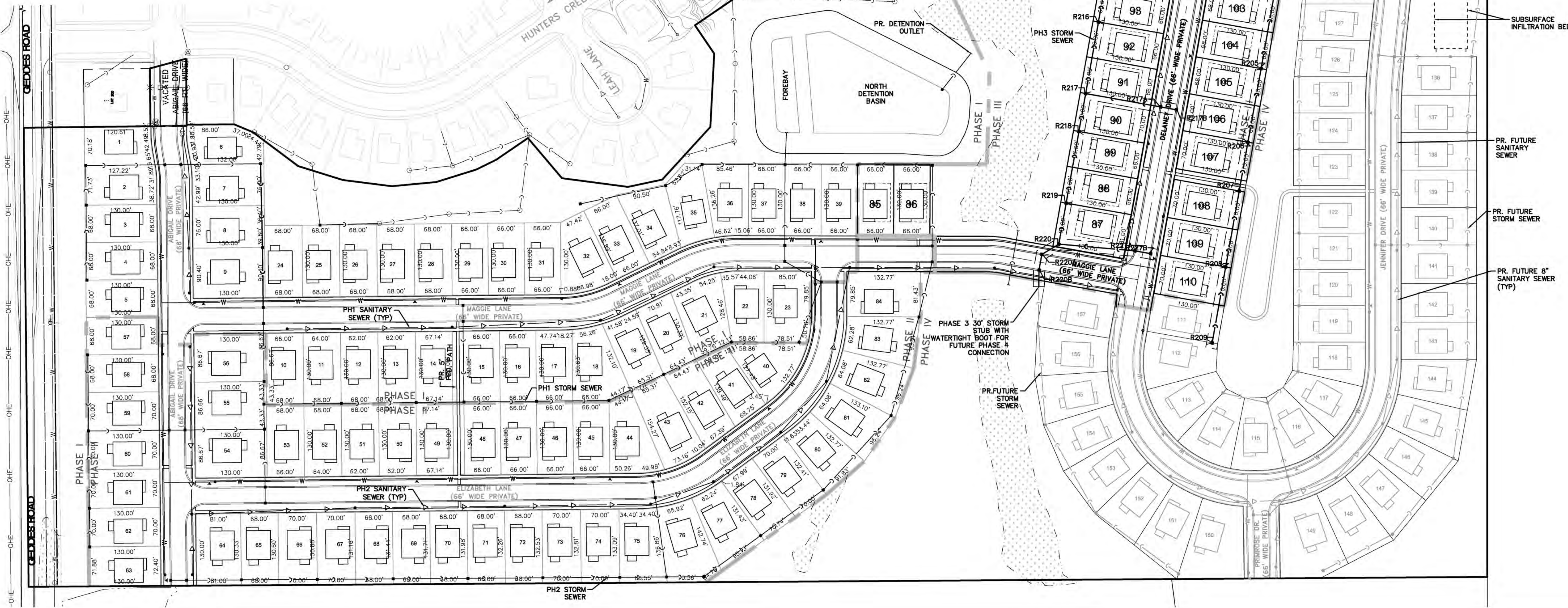
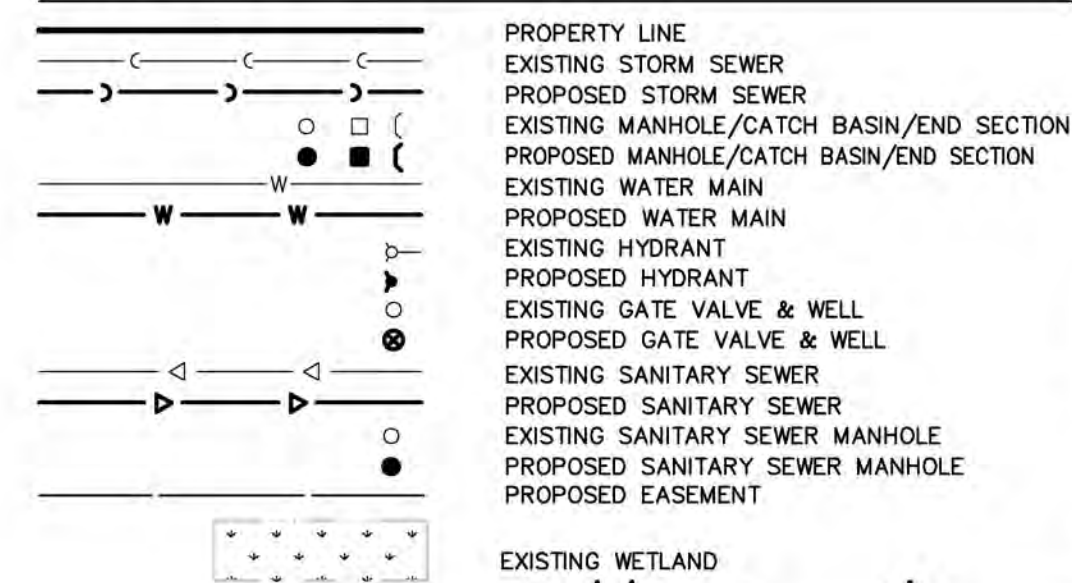


UTILITY SERVICE DISTRICT MAP
SCALE: 1" = 500 FEET

UTILITY NARRATIVE

FOR DEVELOPMENT OF PHASE 3, ALL UTILITIES NEEDED TO SERVICE LOTS 87-110 SHALL BE EXTENDED FROM THE PHASE 1 & 2 STUBS.

LEGEND



Know what's below.
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SECTION 33

TOWN 2 SOUTH, RANGE 7 EAST

SUPERIOR TOWNSHIP

WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC
PROSPECT POINTE WEST
FINAL SITE PLAN - PHASE 3

DATE
NOVEMBER 22, 2024

03-07-2025: PER TWP
04-21-2025: PER TWP

REVISIONS

SCALE: 1" = 100 FEET

DR. SK CH. SS

P.M. MB

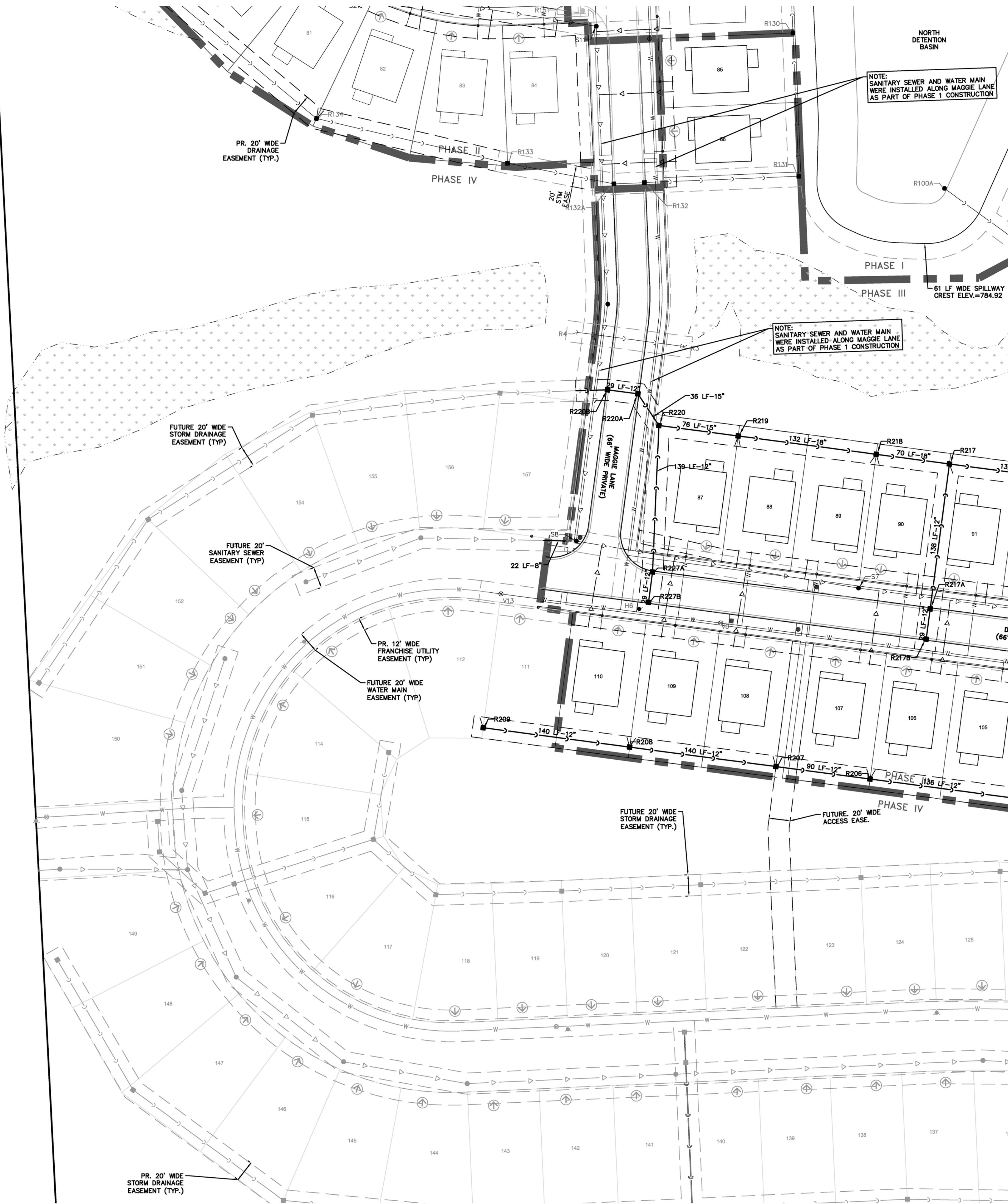
BOOK --

JOB 16000819

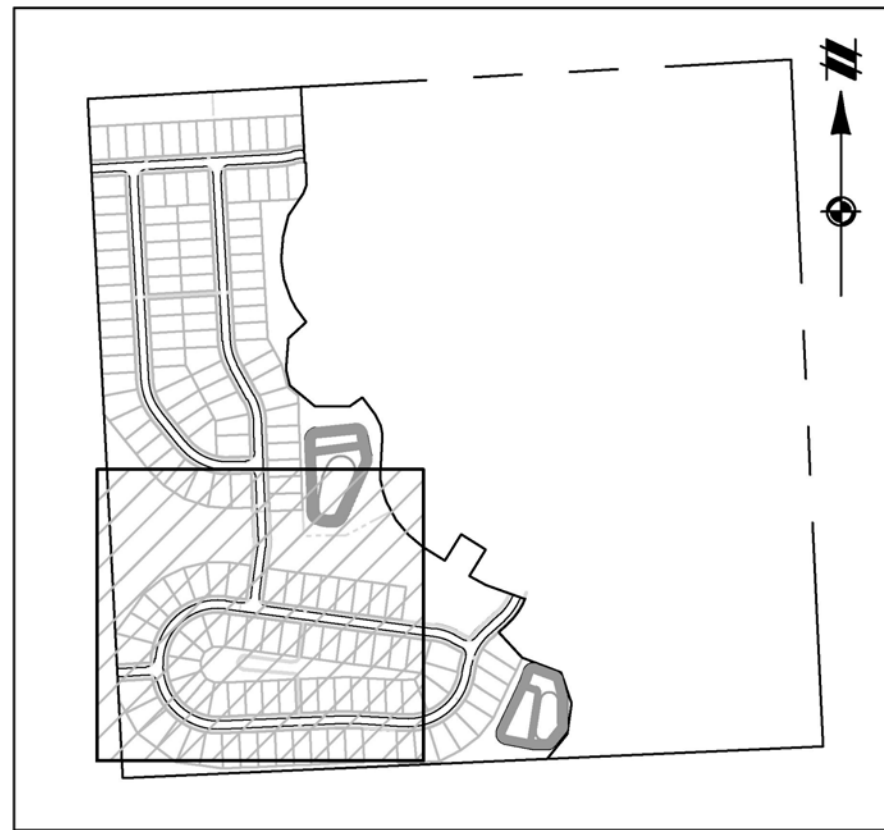
SHEET NO.

18

\\MAIN\PROJECTS\16000819\DWG\16000819-13-LDWG 4/27/2025 10:19 PM MATTHEW MYERS



SEE SHEET 20 FOR CONTINUATION



LEGEND

	PROPERTY LINE
	EXISTING STORM SEWER
	PROPOSED STORM SEWER
	EXISTING MANHOLE/CATCH BASIN/END SECTION
	PROPOSED MANHOLE/CATCH BASIN/END SECTION
	EXISTING WATER MAIN
	PROPOSED WATER MAIN
	EXISTING HYDRANT
	PROPOSED HYDRANT
	EXISTING GATE VALVE & WELL
	PROPOSED GATE VALVE & WELL
	EXISTING SANITARY SEWER
	PROPOSED SANITARY SEWER
	EXISTING SANITARY SEWER MANHOLE
	PROPOSED SANITARY SEWER MANHOLE
	EXISTING WETLAND

NOTES

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18. WATER SERVICE TAPS AND LEAD INSTALLATION SHALL OCCUR AFTER WATERMAIN TESTING.

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TOWN 2 SOUTH, RANGE 7 EAST

SUPERIOR TOWNSHIP

WASHTENAW COUNTY, MICHIGAN

CLIENT

SE MICHIGAN LAND HOLDING LLC
PROSPECT POINTE WEST
FINAL SITE PLAN - PHASE 3
UTILITY PLAN

DATE

NOVEMBER 22, 2024

03-07-2025: PER TWP

04-21-2025: PER TWP

REVISIONS

0 25 50

SCALE: 1" = 50 FEET

DR. SK

CH. SS

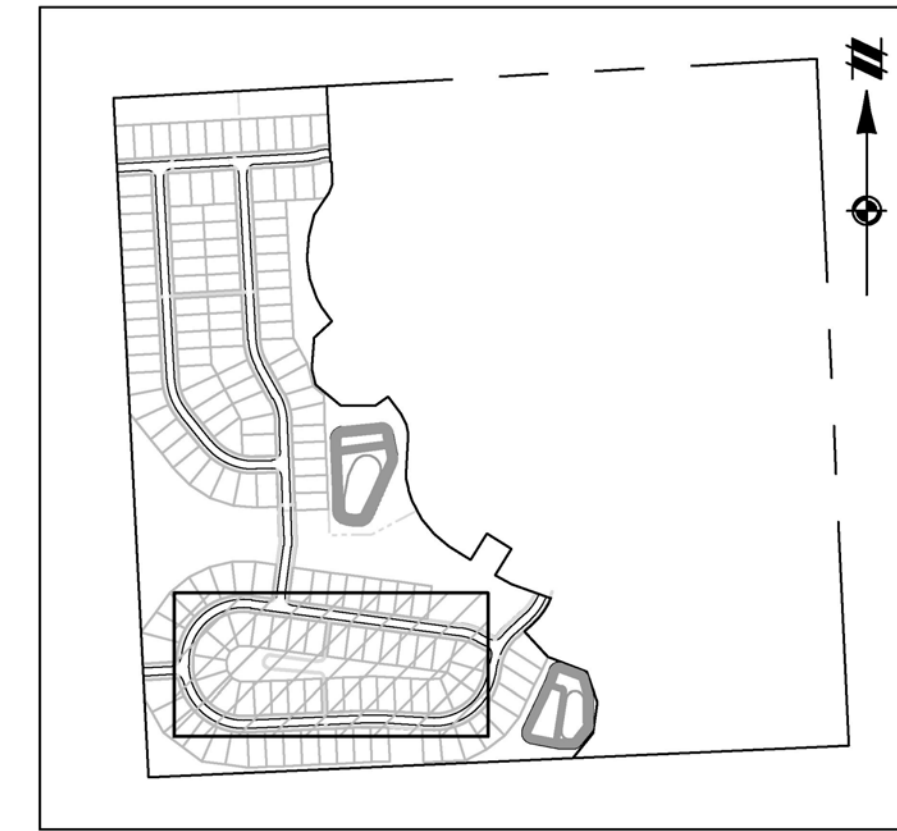
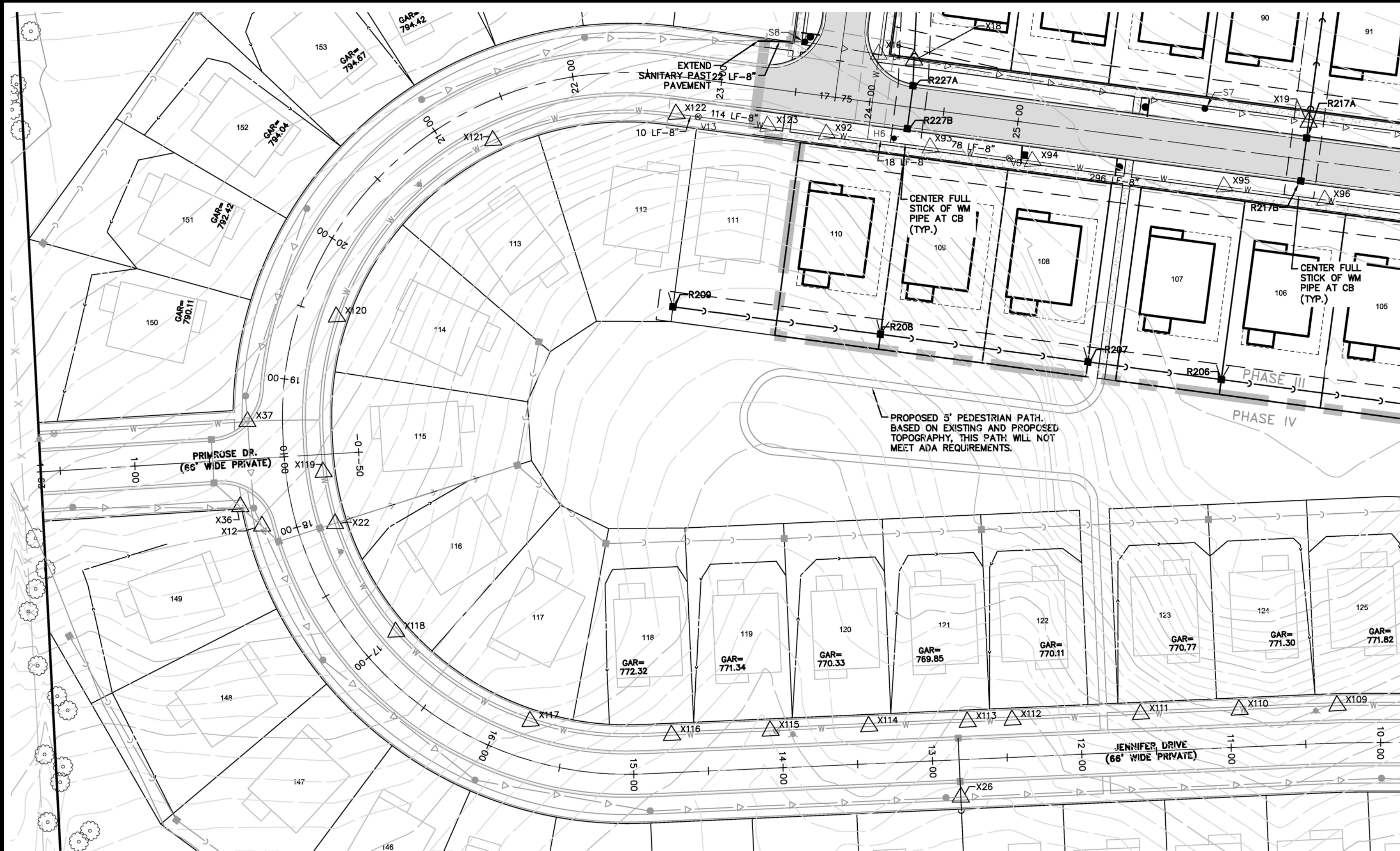
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SHEET NO.

19



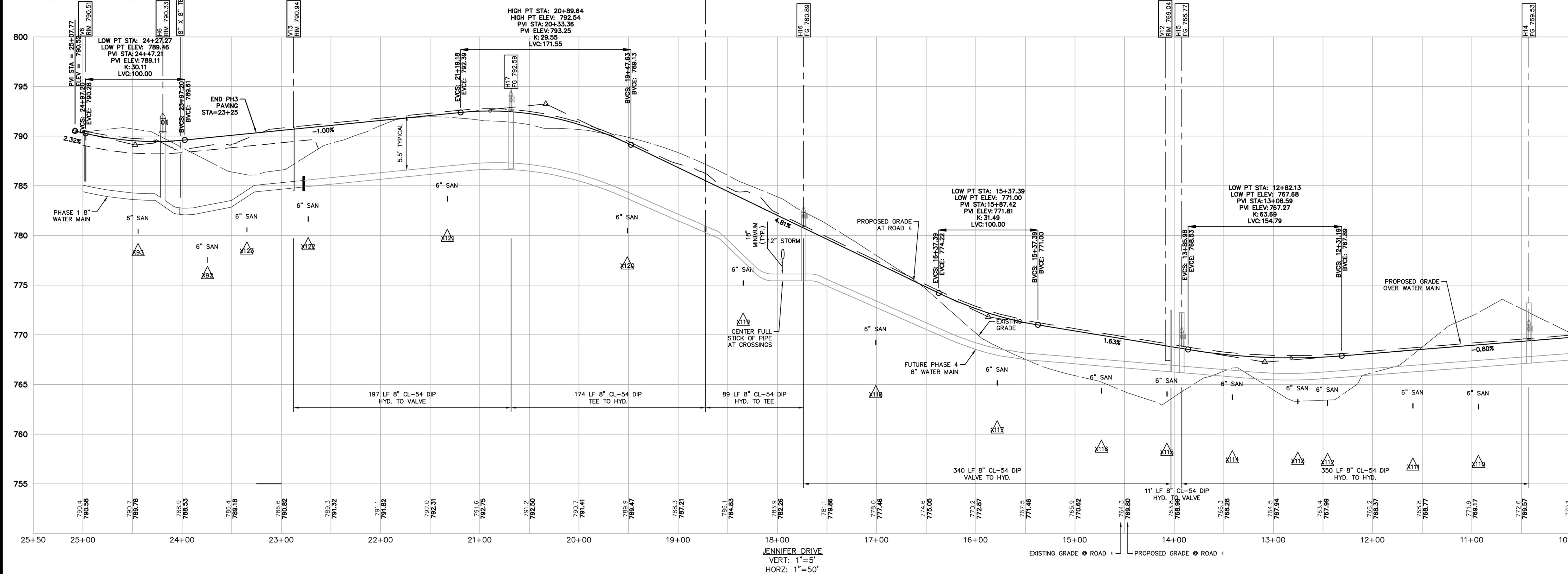
KEYMAP
SCALE: 1" = 750'

SEE SHEETS 13 AND 14 FOR ROAD CENTERLINE HORIZONTAL CURVE DATA

LEGEND

- PROPOSED 1" CONTOUR
- PROPOSED 5" CONTOUR
- EXISTING 1" CONTOUR
- EXISTING 5" CONTOUR
- PROPERTY LINE
- GRADING LIMITS
- EXISTING MANHOLE / CATCH BASIN
- PROPOSED MANHOLE / CATCH BASIN
- EXISTING HYDRANT
- PROPOSED HYDRANT
- EXISTING GATE VALVE & WELL
- PROPOSED GATE VALVE & WELL
- EXISTING WATER MAIN MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING WETLAND
- PROPOSED ASPHALT
- PROPOSED CONCRETE

SEE SHEETS 13 AND 14 FOR ROAD CENTERLINE HORIZONTAL CURVE DATA
SEE SHEET 35 FOR UTILITY CROSSING TABLE



JENNIFER DRIVE
VERT: 1"=5'
HORZ: 1"=50'

Know what's below.
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SUPERIOR TOWNSHIP

WASHTENAW COUNTY, MICHIGAN

CLIENT

SE MICHIGAN LAND HOLDING LLC
PROSPECT POINTE WEST
FINAL SITE PLAN - PHASE 3
JENNIFER DRIVE PLAN
& PROFILE 2

DATE

NOVEMBER 22, 2024

03-07-2025: PER TWP

04-21-2025: PER TWP

REVISIONS

0 25 50

SCALE: 1" = 50 FEET

DR. MB

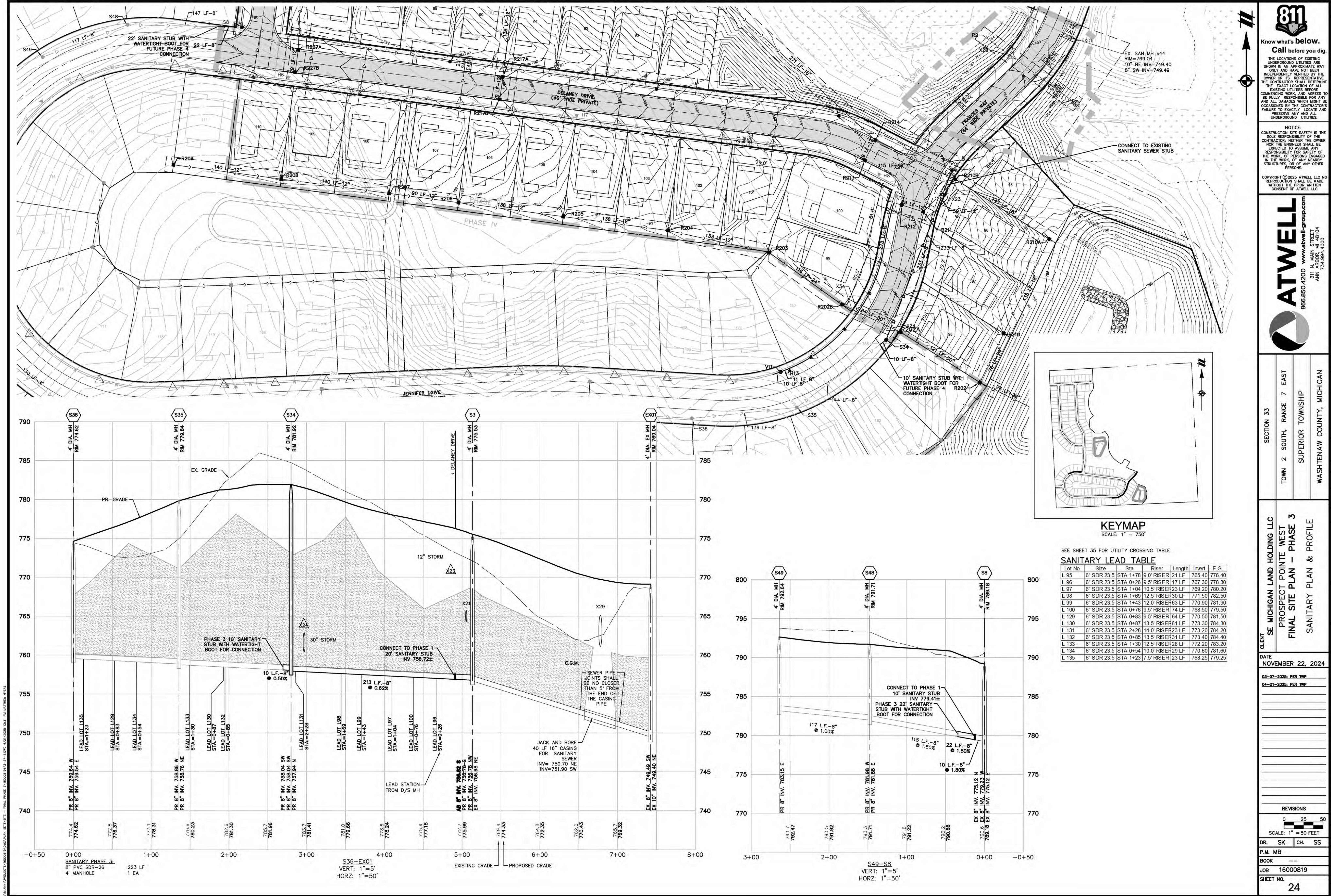
CH. SS

BOOK

16000819

SHEET NO.

23



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SECTION 33

TOWN 2 SOUTH, RANGE 7 EAST

SUPERIOR TOWNSHIP

WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC
PROSPECT POINTE WEST
FINAL SITE PLAN - PHASE 3
SANITARY PLAN & PROFILE

DATE
NOVEMBER 22, 2024

03-07-2025: PER TWP
04-21-2025: PER TWP

REVISIONS

NO.	DATE	DESCRIPTION
1	11/22/24	ISSUED FOR PERMIT

SCALE: 1" = 50 FEET

DR. SK CH. SS

P.M. MB

BOOK --

JOB 16000819

SHEET NO. 24



THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND 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.

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THE WORK, OF PERSONS ENGAGED
IN THE WORK, OF ANY NEARBY
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SECTION 33

TOWN 2 SOUTH, RANGE 7 EAST

SUPERIOR TOWNSHIP

WASHTENAW COUNTY, MICHIGAN

SE MICHIGAN LAND HOLDING LLC PROSPECT POINTE WEST FINAL SITE PLAN – PHASE 3 STORM PLAN AND PROFILES

DATE
NOVEMBER 22, 2024

03-07-2025: PER TWP

REF	REV	DATE	BY	APP	REASON

[illegible]

Category	Percentage
Black Bar	25%
White Bar	25%

SCALE: 1" = 50 FEET

DB	SK	CH	SS
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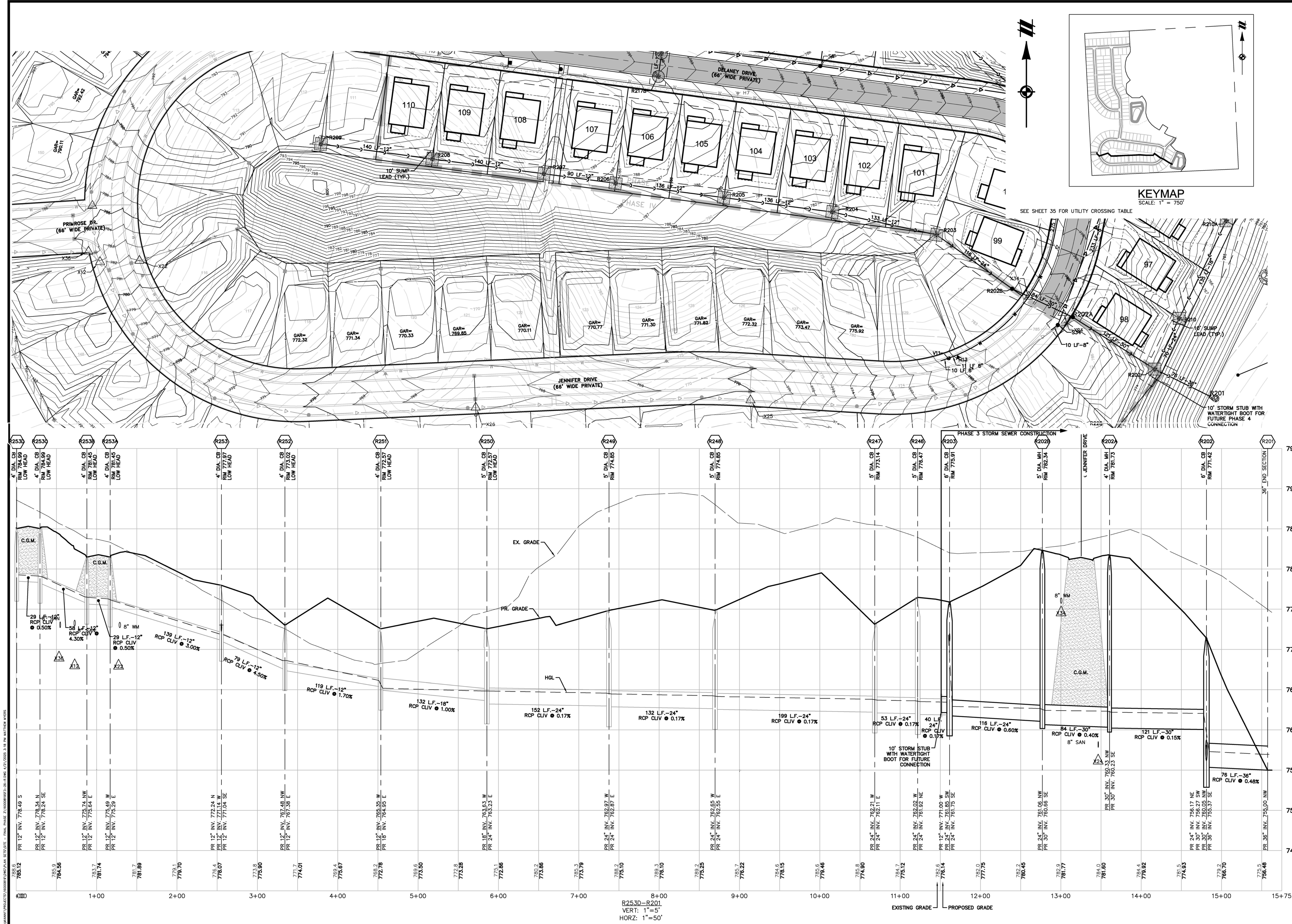
SR	SR	SR	SR
P.M.	MB		

BOOK --

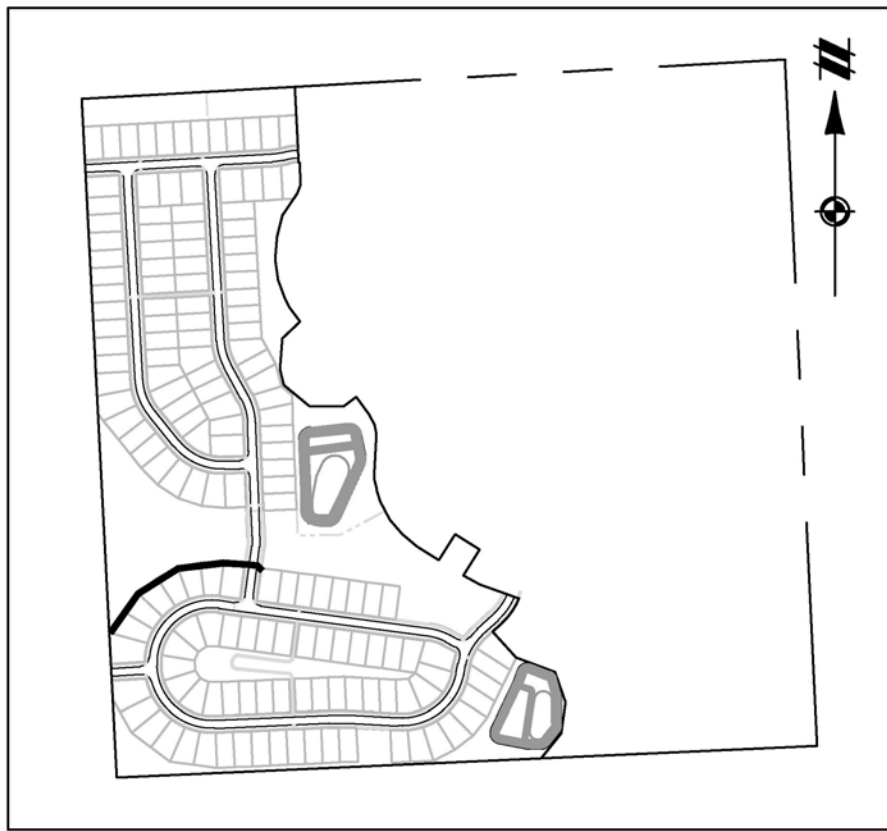
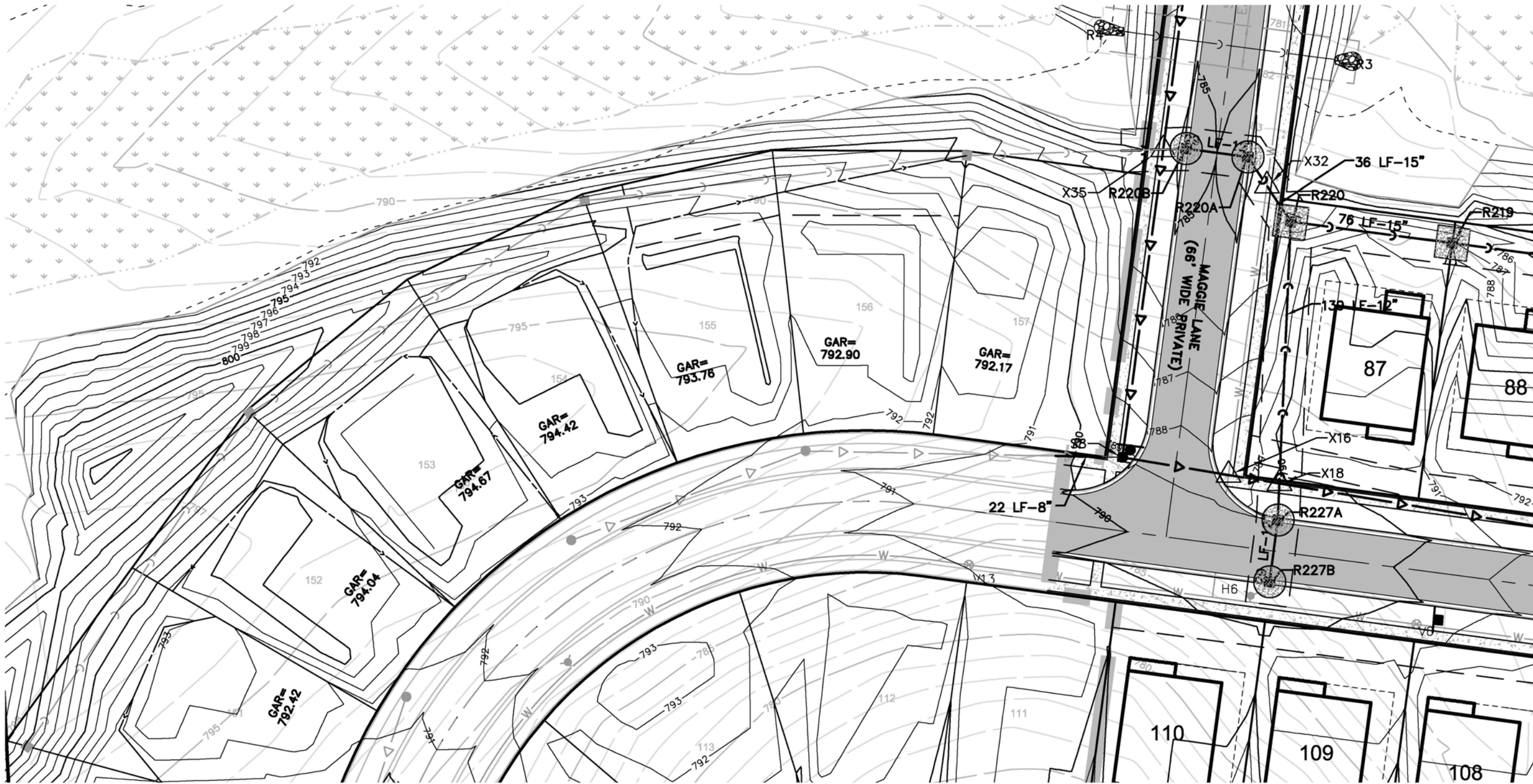
JOB 16000819

SHEET NO.

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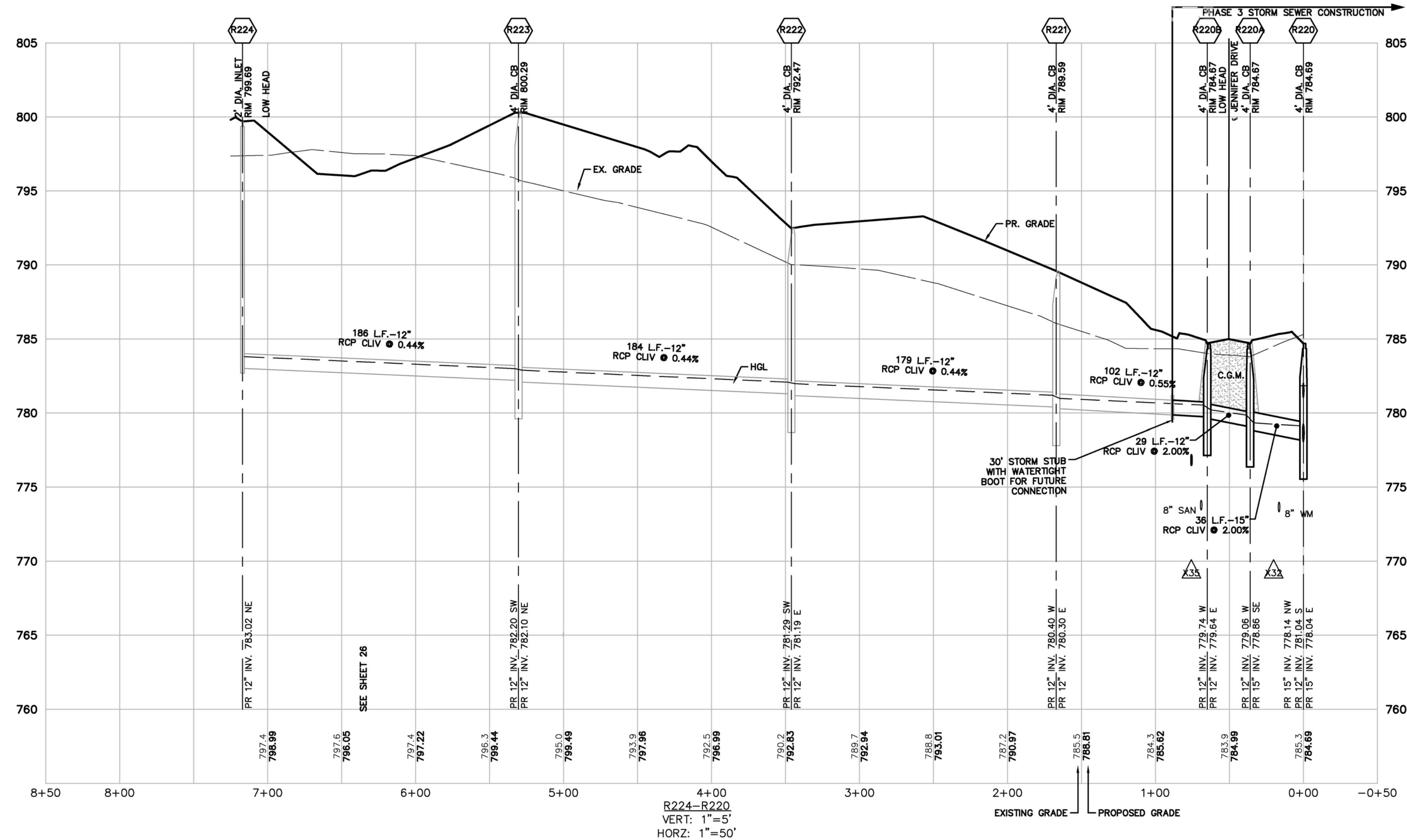


\\MANN\PROJECTS\16000819\DWG\PLAN\REV\REV1 - FINAL PHASE 3\16000819P3-26-1.DWG 4/21/2025 3:22 PM MATTHEW MYERS



KEYMAP
SCALE: 1" = 750'

SEE SHEET 35 FOR UTILITY CROSSING TABLE





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SECTION 33

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SUPERIOR TOWNSHIP

WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC
PROSPECT POINTE WEST
FINAL SITE PLAN - PHASE 3
STORM PLAN AND PROFILES

DATE
NOVEMBER 22, 2024

03-07-2025: PER TWP
04-21-2025: PER TWP

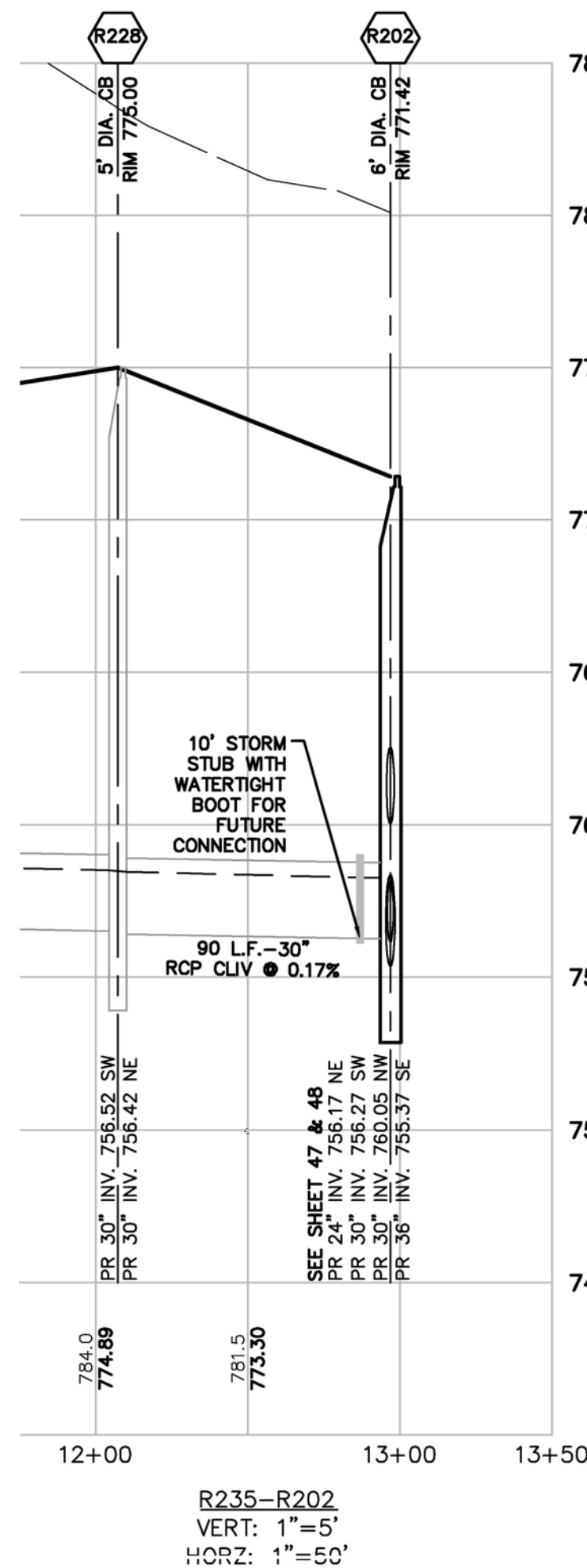
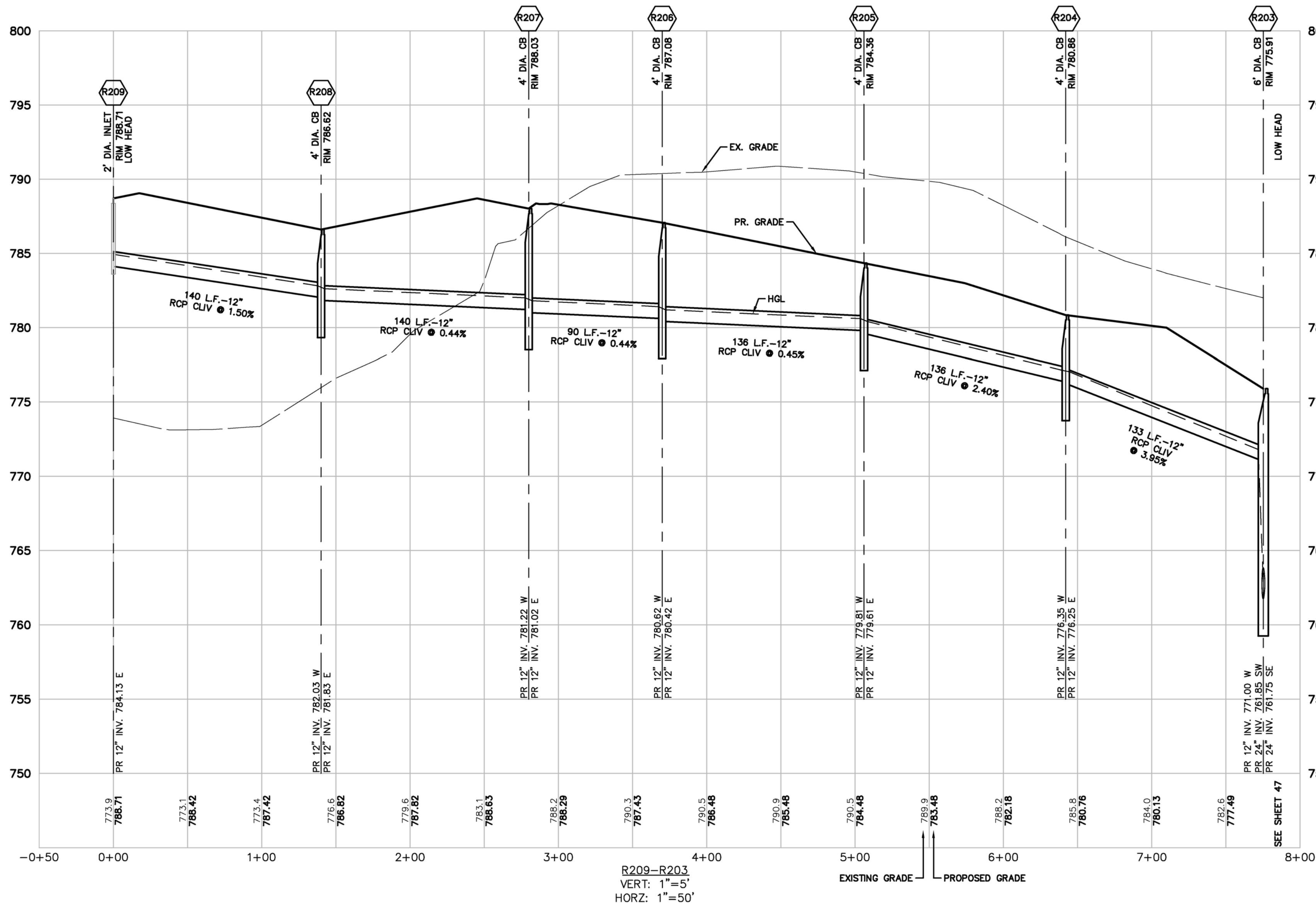
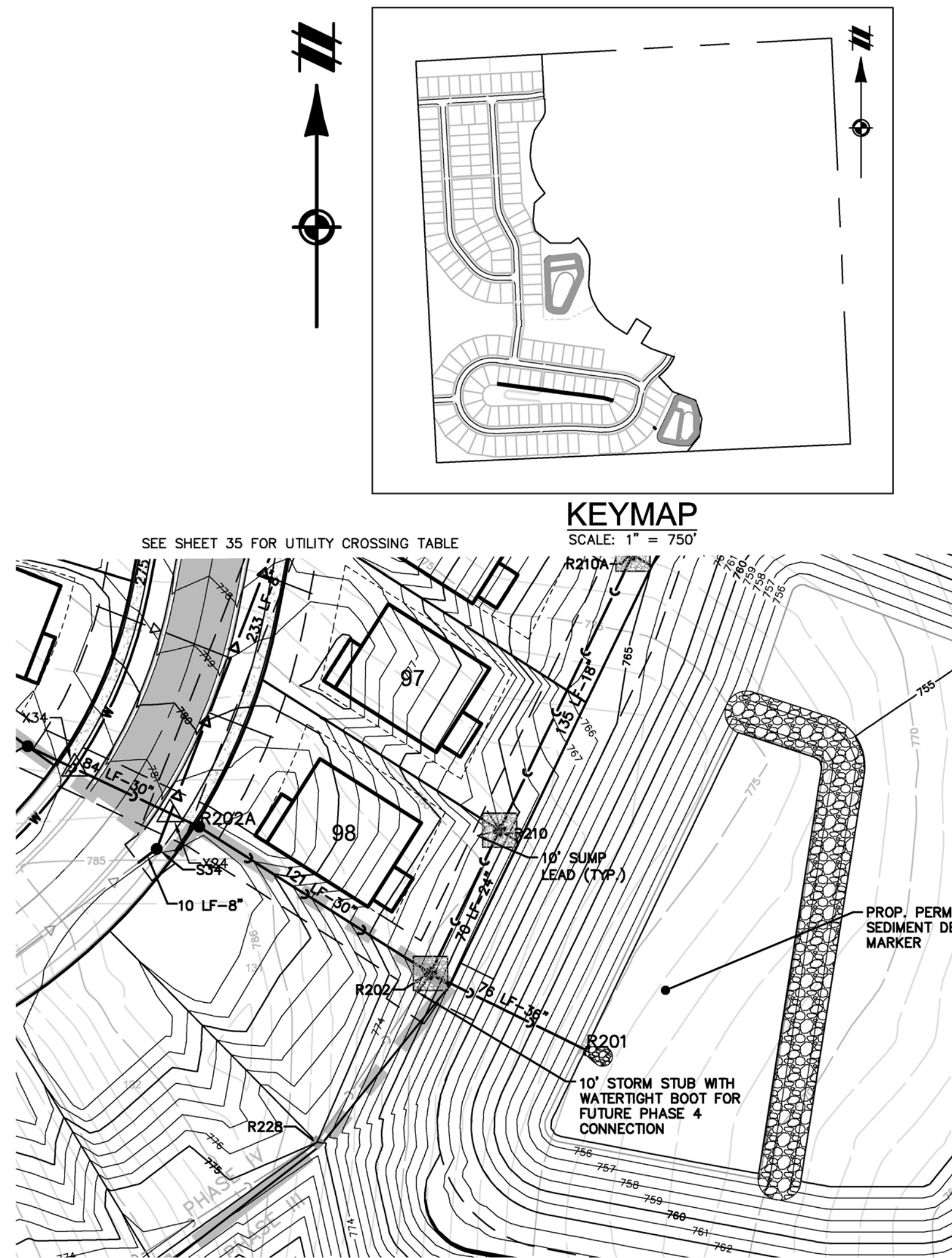
REVISIONS

0	25	50
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SCALE: 1" = 50 FEET

DR.	SK	CH.	SS
P.M.	MB		
BOOK	---		
JOB	16000819		
SHEET NO.	27		

K:\US080818\DWG\PLAN\REVISITEST - FINAL\PHASE 3\US080818P3-26-42W6-4/27/2023 3:39 PM KYLEB SHEPHERD





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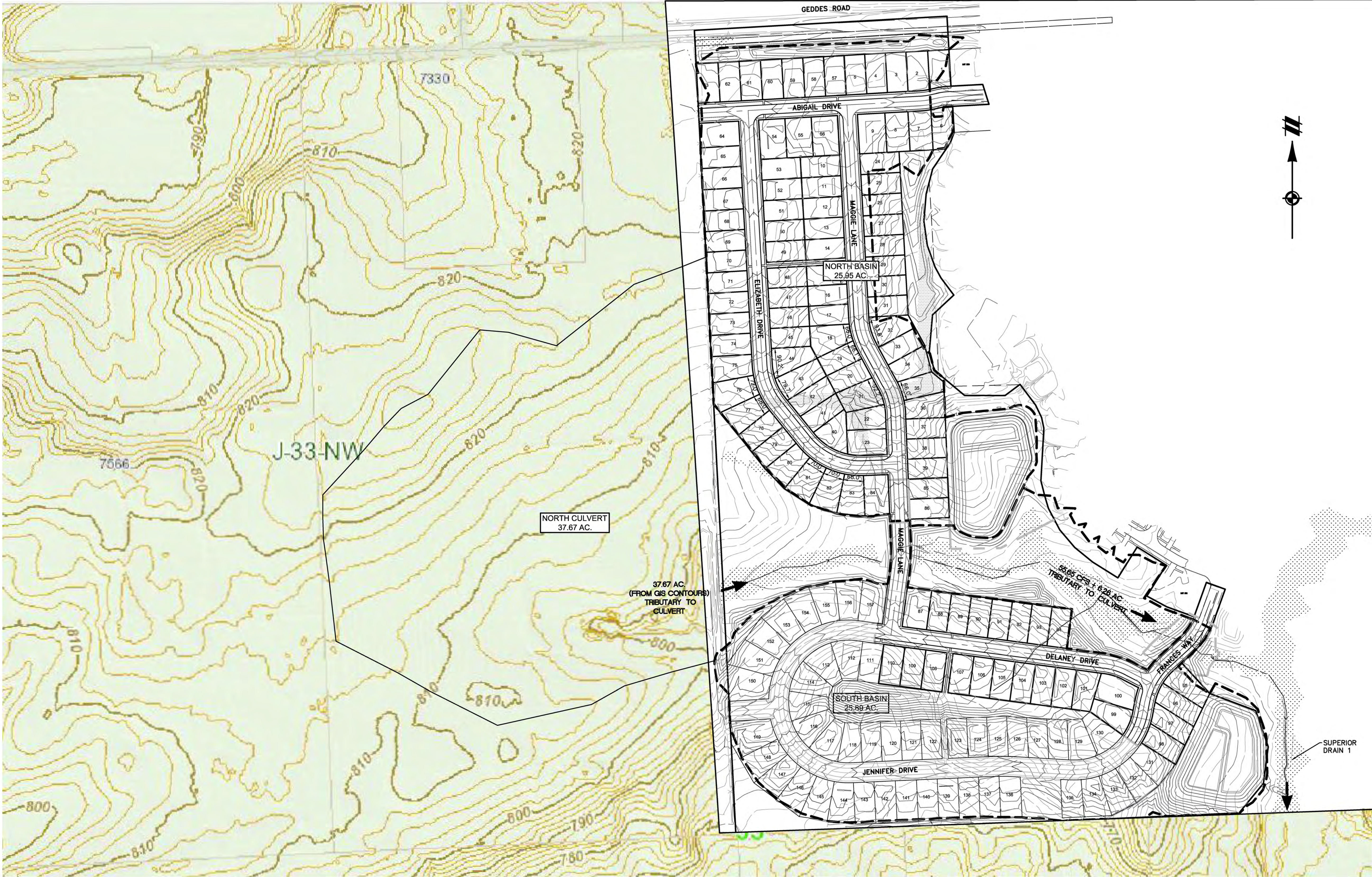
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CLIENT	SE MICHIGAN LAND HOLDING LLC
	PROSPECT POINTE WEST
	FINAL SITE PLAN - PHASE 3
DATE	NOVEMBER 22, 2024
REVISIONS	03-07-2025: PER TWP
	04-21-2025: PER TWP
DR.	SK
CH.	SS
BOOK	--
JOB	16000819
SHEET NO.	28





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CLIENT
SE MICHIGAN LAND HOLDING LLC
PROSPECT POINTE WEST
FINAL SITE PLAN - PHASE 3
OVERALL DRAINAGE AREA PLAN

DATE
NOVEMBER 22, 2024

03-07-2025: PER TWP
04-21-2025: PER TWP

REVISIONS

0	75	150
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SCALE: 1" = 150 FEET

DR.	SK	CH.	SS
P.M.	MB		
BOOK	--		
JOB	16000819		
SHEET NO.	30		

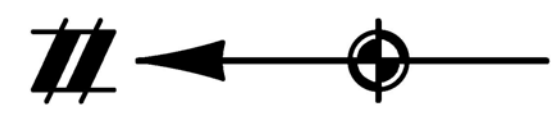


LEGEND

PROPOSED 1' CONTOUR
PROPOSED 5' CONTOUR
EXISTING 5' CONTOUR

PROPERTY LINE
EXISTING MANHOLE / CATCH BASIN
PROPOSED MANHOLE / CATCH BASIN
EXISTING HYDRANT
PROPOSED HYDRANT
EXISTING GATE VALVE & WELL
PROPOSED GATE VALVE & WELL
EXISTING WATER MAIN MANHOLE
PROPOSED SANITARY SEWER MANHOLE
EXISTING SANITARY SEWER MANHOLE

EXISTING WETLAND
PROPOSED ASPHALT
PROPOSED CONCRETE



Know what's below.
Call before you dig.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND 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 AGREE 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.

NOTICE:
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

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CLIENT	SE MICHIGAN LAND HOLDING LLC
	PROSPECT POINTE WEST
	FINAL SITE PLAN - PHASE 3
SECTION 33	TOWN 2 SOUTH, RANGE 7 EAST
	SUPERIOR TOWNSHIP
WASHTENAW COUNTY, MICHIGAN	

DATE
NOVEMBER 22, 2024

03-07-2025: PER TWP
04-21-2025: PER TWP

REVISIONS	
0	25
SCALE: 1" = 50 FEET	
DR.	SK
P.M.	MB
BOOK	--
JOB	16000819
SHEET NO.	31

K:\16000819\DWG\PLAN\REVISED\16000819P3-16.dwg 1/7/2025 4:08 PM KYLEB BUSTON

Project: Prospect Point WEST		Date: 3/18/2022	
Location: Pittsfield Township, Washtenaw County			
Description: South Detention Basin			
W1 Determining Post-Development Cover Types, Areas, Curve Numbers and runoff coefficients			
		Total Contributing Drainage Area =	25.89 Acres
Rational Method Variables	Cover Type	Soil Type	Area (sf)
	Paved Parking Lts., roofs, driveways	-	332,419
	Water Surfaces	-	50,000
	Developed Open Space, Good Condition	B	723,054
	Developed Open Space, Good Condition	D	22,288
	Total - Sum (c) (Area) =		592,744
	Area Total (sf) =		1,127,762
		Weighted C-Sum(c) (Area)/Sum(ac) or Sum(sf) =	0.53
NRCS Variables	Pervious Cover Type	Soil Type	Area (sf)
	Developed Open Space, Good Condition	B	723,054
	Developed Open Space, Good Condition	D	22,288
	Total - Sum (CN)(Area) =		45,889,387
	Area Total - Sum(ac) of Sum(sf) =		745,343
		Weighted CN-Sum(CN)(Area)/Sum(ac) or Sum(sf) =	62
NRCS Variables	Impervious Cover Type	Soil Type	Area (sf)
	Paved Parking Lts., roofs, driveways	-	332,419
	Impervious, Ponds	-	50,000
	Total - Sum (CN)(Area) =		37,477,042
	Area Total - Sum(ac) of Sum(sf) =		382,419
		Weighted CN-Sum(CN)(Area)/Sum(ac) or Sum(sf) =	98
W2 First Flush Runoff Calculations (Vff)			
A.	Vff = (1") (1/12) (43560/1) (C) AC =	49,809	cf
W3 Predevelopment Bankfull Runoff Calculations (Vbf-pre)			
A.	2 year/24 hour storm event	P =	2.35 in
B.	Pervious Cover CN (good condition woods or meadow)	CN =	59
C.	S = (1000/CN) - 10	S =	6.95 in
D.	Q = (P-0.25)*2/(P+0.85)	Q =	0.12 in
E.	Pervious Cover Area	Area =	1,127,762 sf
F.	Vbf-pre = Q(1/12)Area	Vbf-pre =	10,955 sf
W4 Pervious Cover Post-development Bankfull Runoff Calculations (Vbf-post)			
A.	2 year/24 hour storm event	P =	2.35 in
B.	Pervious Cover CN	CN =	62
C.	S = (1000/CN) - 10	S =	6.24 in
D.	Q = (P-0.25)*2/(P+0.85)	Q =	0.17 in
E.	Pervious Cover Area	Area =	745,343 sf
F.	Vbf-post = Q(1/12)Area	Vbf-post =	10,265 cf
W5 Impervious Cover Post-development Bankfull Runoff Calculations (Vbf-imp-post)			
A.	2 year/24 hour storm event	P =	2.35 in
B.	Pervious Cover CN	CN =	98
C.	S = (1000/CN) - 10	S =	0.20 in
D.	Q = (P-0.25)*2/(P+0.85)	Q =	2.12 in
E.	Pervious Cover Area	Area =	382,419 sf
F.	Vbf-imp-post = Q(1/12)Area	Vbf-imp-post =	67,614 cf
W6 Pervious Cover Post-development 100-year Storm Runoff Calculations (V100-imp-post)			
A.	100 year storm event	P =	5.11 in
B.	Pervious Cover CN	CN =	62
C.	S = (1000/CN) - 10	S =	6.24 in
D.	Q = (P-0.25)*2/(P+0.85)	Q =	1.48 in
E.	Pervious Cover Area	Area =	745,343 sf
F.	V100-imp-post = Q(1/12)Area	V100-imp-post =	91,677 cf
W7 Impervious Cover Post-development 100-year Storm Runoff Calculations (V100-imp-post)			
A.	100 year storm event	P =	5.11 in
B.	Pervious Cover CN	CN =	98
C.	S = (1000/CN) - 10	S =	0.20 in
D.	Q = (P-0.25)*2/(P+0.85)	Q =	4.87 in
E.	Pervious Cover Area	Area =	382,419 sf
F.	V100-imp-post = Q(1/12)Area	V100-imp-post =	155,294 cf
W8 Determine Time of Concentration (Tc-hrs)			
User specified; assume 22 minutes from storm sewer calculations - use 20 min		Total Time of Concentration (hrs) =	
		0.33	
W9 Runoff Summary & Onsite Infiltration Requirement			
A.	Runoff Summary from Previous Worksheets		
	Vff =	49,809 cf*	
	Vbf-pre =	10,955 cf	
	Vbf-post =	10,265 cf	
	Vbf-imp-post =	67,614 cf	
	V100-imp-post =	91,677 cf	
	V100-imp-post =	155,294 cf	
	Total BF Volume (Vbf-post)	77,879	cf
	Total 100-year Volume (V100)	246,971	cf
B.	Determine Onsite Infiltration Requirement		
	Vbf-post =	77,879 cf	
	Vbf-post =	10,955 cf	
	Bankfull Volume Difference =	66,925 cf*	
	Onsite Infiltration Requirement (Vinf) = Bankfull Difference =	66,925	cf
W10 Detention / Retention Requirement			
A.	Qd = 238.6 (Tc)^-0.82	587.37	cfs/in-mi^2
B.	Total Site Area	25.89	ac
C.	Q100 = Q100-pre + Q100-imp	6.35	in
D.	Peak Flow (PF) = (Qd*Q100*A)/640	150,857	cfs
E.	Delta = PF - 0.15A	146,973	cfs
F.	Vinf = (Delta/PF) x V100 - Vbf-pre*	240,613	cf
* Vinf refers to total infiltration provided per worksheet W11			
W11 Determine Applicable BMPs and Associated Volume Credits			
Proposed BMP	Area (ft^2)	Storage Depth (ft)	Storage Volume (ft^3)
			Ave. Design Infil. Rate (in/hr)*
			Infil. During Storm (ft^3)
			Total Volume Reduction Credit by Proposed Structural BMPs (Vinf) =
Underground Infiltration Bed	6,300	0.60	1,134
			3.78
			11,907
			13,041
Total Volume Reduction Credit by Proposed Structural BMPs (Vinf) = 13,041 cf			
* A void volume of 0.30 was assumed when calculating storage volume			
* Per Geotechnical investigation, includes a factor of safety of 2.			
Proposed BMP	Ave. Design Infil. Rate (ft/hr)*	Volume Rate (cf/hr)	Estimated Drawdown Time (hrs)
Infiltration Basin	0.3150	1.985	0.57

W12 Infiltration / Detention Summary			
Total Infiltration Required per WCWRC Rules:		66,925 cf	
Total Infiltration Provided:		13,041 cf	
Difference:		(53,884) cf	
% Deficiency:		80.5%	
Pro-Rated 20% Detention Penalty:		16.1%	
Detention Required:		227,572 cf	
Detention Required w/ Pro-Rated Penalty:		264,217 cf	
Total Detention Volume Required:		264,217 cf	
Adjusted First Flush Volume: $V_{ff} - V_{inf}$ =		36,768 cf	
Basin Stage-Storage Summary:			
Elev.	Area	Avg. Area	Depth
Forebay Volume	Basin Volume		Cumulative Volume
762.0	68,375	65,925	1.0
761.0	63,475	60,613	1.0
760.0	57,750	55,950	1.0
759.0	54,150	51,950	1.0
758.0	49,750	38,475	1.0
757.0	27,200	25,450	1.0
756.0	23,700	22,038	1.0
755.0	20,375	16,500	0.5
754.5	12,625	6,313	0.0
		Outlet Elevation	
Total Detention Provided:		286,388 cf	
Vff Elev. =		755.98	
Vbf Elev. =		756.96	
V100 Elev. =		760.63	
Freeboard =		1.37	
Forebay Sizing			
Required Volume (Vfb) = 0.05*V100		12,349 cf	
Forebay Stage-Storage Summary:			
Elev.	Area	Avg. Area	Depth
Volume	Cumulative Volume		
757.0	17,775	16,488	1.0
756.0	15,200	14,350	0.5
755.5	13,500		
Vfb Elev. =		756.31	
Outlet Control Structure Sizing			
1. Standpipe outlet holes sizing - "first flush" runoff			
First flush discharge should be detained for 24 hours			
$Q_{ff} = (V_{ff} - V_{inf}) / 24 \text{ hrs} / 3600 \text{ sec}$		$Q_{ff} = 0.426 \text{ cfs}$	
$h_{ff}(ave) = 2/3 \times (V_{ff} - X_o)$		$h_{ff}(ave) = 0.984 \text{ ft}$	
$A_{ff}(\text{required}) = Q_{ff} / (0.62 \times \text{sqrt}(2*32.2 \text{ h}))$		$A(\text{required}) = 0.086 \text{ sf}$	
Selected Orifice Diameter =		1.5 in	
Area of each orifice =		0.012 sf	
Number of orifice holes required =		7 holes at elev.	
754.50			
Check First Flush discharge release time			
$A_{ff}(\text{actual}) =$		0.0859 ft ²	
$Q_{ff} = A \times 0.62 \times \text{sqrt}(2*32.2 \text{ h}) =$		0.4240 cfs	
$T_{ff} = V_{ff} / (Q_{ff} \times 3600) =$		32.6 hrs	
		O.K.	
2. Standpipe outlet holes sizing - "bankfull flood" discharge			
Bankfull should discharge within 36 to 48 hours			
Check release from first flush holes only			
$h_{bf}(ave) = 2/3 \times (X_{bf} - X_o)$		$h_{bf}(ave) = 1.642 \text{ ft}$	
$Q_{bf} = 0.62 \times A_{ff} \times \text{sqrt}(2*32.2 \text{ h}) =$		$Q_{bf} = 0.548 \text{ cfs}$	
$T_{bf} = V_{bf} / (Q_{bf} \times 3600) =$		$T_{bf} = 39.5 \text{ hrs}$	
		O.K.	
3. Standpipe outlet holes sizing - "100-yr flood" discharge			
$Q_{100} = Q_a$		$Q_{100} = 3.883 \text{ cfs}$	
Release from above holes			
$h_{ff} = (X_{100} - X_o)$		$h_{ff} = 6.134 \text{ ft}$	
$h_{bf} = (X_{100} - X_{ff})$		$h_{bf} = 4.658 \text{ ft}$	
$Q = A \times 0.62 \times \text{sqrt}(64.4 \times h_{ff}) + A \times 0.62 \times \text{sqrt}(64.4 \times h_{bf}) =$		1.059 cfs	
Remaining flow =		$Q_{100} - Q = 2.825 \text{ cfs}$	
$A = (Q_{100} / (0.62 \times \text{sqrt}(2*32.2 \text{ h})))$		$A(\text{required}) = 0.263 \text{ sf}$	
Selected Orifice Diameter =		2.75 in	
Area of each orifice =		0.0412 sf	
Number of orifice holes required =		3 holes at elev.	
756.96			
Check that the actual flow rate does not exceed the allowable flow rate			
$Q_{ff} - 62 \times h_{ff} \text{ holes} \times A \times \text{sqrt}(2 \times 32.2 \times (X_{100} - X_{bf})) =$		1.059 cfs	
$Q_{bf} - 62 \times h_{bf} \text{ holes} \times A \times \text{sqrt}(2 \times 32.2 \times (X_{100} - X_{ff})) =$		0.000 cfs	
$Q_{max} - Q_{ff} - Q_{bf} - (62 \times h_{100} \text{ holes} \times A \times \text{sqrt}(2 \times 32.2 \times (X_{100} - X_{bf}))) =$		2.877 cfs	
		O.K.	
Check "100-yr discharge" holes discharge release time			
$h_{all}(ave) = 2/3 \times (X_{100} - X_{bf}) + (X_{bf} - X_o) =$		$h_{all}(ave) = 4.91 \text{ ft}$	
$Q_{all} = 62 \times h_{ff} \text{ holes} \times A \times \text{sqrt}(2 \times 32.2 \times h) =$		$Q_{all} = 0.947 \text{ cfs}$	
$h_{bf}(ave) = 2/3 \times (X_{100} - X_{bf}) + (X_{bf} - X_{ff}) =$		$h_{bf}(ave) = 3.43 \text{ ft}$	
$Q_{bf} - 100 = A \times 0.62 \times h_{bf} \text{ holes} \times \text{sqrt}(2 \times 32.2 \times h) =$		$Q_{bf} - 100 = 0.000 \text{ cfs}$	
$h_{100}(ave) = 2/3 \times (X_{100} - X_{bf}) =$		$h_{100}(ave) = 2.45 \text{ ft}$	
$Q_{100} = A \times 0.62 \times h_{100} \text{ holes} \times \text{sqrt}(2 \times 32.2 \times h) =$		$Q_{100}(ave) = 0.963 \text{ cfs}$	
$V_{rem} = V_{100} - V_{bf} =$		$V_{rem} = 186.338 \text{ cfs}$	
$T_{100} = T_{bf} + ((V_{rem}) / (Q_{bth} + Q_{100}(ave))) =$		$T_{100} = 66.6 \text{ hrs}$	
		O.K.	
4. Riser Outlet Pipe Design			
Outlet pipe designed to handle the 100-year restricted flow			
100-year restricted flow =		Q = 3.88 cfs	
Choose outflow pipe diameter =		d = 18 in	
Choose outflow pipe slope =		s = 0.18 %	
Assume roughness factor		n = 0.013	
Flow velocity at 100-yr restricted flow (Mannings) =		V = 2.52 fps	
Design Pipe Capacity =		= 4.46 cfs	
Basin Overflow Weir			
Drainage Area, $A =$		25.89 ac	
C-Factor (C) =		0.53	
Time of Conc. (T) =		25.5 min	
Intensity (I) =		5.45 in/hr	
Design Flow (Q) =		74.72 cfs	
Weir Coef (C) =		3.33	
Invert of Weir =		761.13	
Height of Weir (H) =		0.9	
Min. Width of Weir (B) =		27.9 ft	
$L = Q / (C \times H^{3/2})$			

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FROM STRUCT INPUT	TO STRUCT	A TRB AREA (AC)	C RUNOFF COEFF	Ax C EQUIV AREA	CA DESIGN SUM Ax C	T TIME CONC. (MIN)	I INTEN- SITY (IN/HR)	Q FLOW Cx(I) (CFS)	Qc PIPE CAPAC. (CFS)	D PIPE DIAM. (IN)	L PIPE LENGTH (FT)	S PIPE SLOPE (%)	HGq MIN HG for Q (%)	HGv MIN HG for Vmin (%)	HGL HGL SLOPE (%)	Vf VEL FULL (FPS)	Tf TIME OF FLOW (MIN)	H.G.L. ELEV. UPPER END	H.G.L. ELEV. LOWER END	RIM/GROUND ELEV. UPPER END	RIM/GROUND ELEV. LOWER END	INVERT ELEV. UPPER END	INVERT ELEV. LOWER END
* See above																							
R119	R118	0.27	0.44	0.12	0.12	20.0	3.89	0.47	3.09	12	70	0.75	0.02	0.44	0.44	3.9	0.3	812.71	812.40	814.96	814.93	812.13	811.60
R118	R117	0.46	0.50	0.24	0.36	20.3	3.86	1.39	2.36	12	140	0.44	0.15	0.44	0.44	3.0	0.8	812.24	811.63	814.93	814.93	811.40	810.79
R117	R115A	0.41	0.47	0.19	0.68	21.1	3.80	2.58	2.64	12	147	0.55	0.52	0.44	0.52	3.4	0.7	811.63	810.86	817.23	820.35	810.69	809.88
R115A	R115	0.37	0.76	0.28	0.96	21.8	3.74	3.59	7.56	12	29	4.50	1.02	0.44	1.02	9.6	0.1	810.86	810.56	820.35	820.35	809.68	808.38
R115	R114	0.30	0.75	0.23	1.19	21.9	3.73	4.44	4.48	15	144	0.48	0.47	0.32	0.47	3.6	0.7	810.56	809.88	820.35	816.80	808.18	807.48
R114	R113	0.12	0.56	0.06	2.49	22.6	3.68	9.15	10.50	18	45	1.00	0.76	0.25	0.76	5.9	0.1	809.88	809.54	816.80	815.90	806.65	805.20
R113	R112	0.40	0.53	0.21	4.64	22.7	3.67	17.02	17.02 *	18	141	2.01	2.63	0.25	2.63	8.4	0.3	809.54	805.84	815.90	815.92	806.10	803.27
R112	R111	0.49	0.55	0.27	4.91	23.0	3.65	17.90	17.90 *	18	136	2.26	2.90	0.25	2.90	8.9	0.3	805.84	801.89	815.92	815.06	803.07	800.00
R111	R110	0.28	0.52	0.15	5.05	23.3	3.62	18.33	18.33 *	18	87	2.39	3.05	0.25	3.05	9.2	0.2	801.89	799.24	815.06	813.55	799.80	797.71
R110	R109	0.35	0.54	0.19	5.72	23.5	3.61	20.64	20.64 *	24	132	0.67	0.63	0.17	0.63	5.9	0.4	799.24	796.14	813.55	809.84	797.31	796.43
R109	R108	0.48	0.55	0.27	5.99	23.9	3.58	21.44	21.44 *	24	132	0.73	0.90	0.17	0.90	6.2	0.4	796.14	796.96	809.84	807.21	796.23	795.27
R108	R107	0.43	0.52	0.22	6.21	24.3	3.55	22.04	22.04 *	24	110	0.78	0.95	0.17	0.95	6.4	0.3	796.96	795.91	807.21	802.00	795.17	794.31
R107	R106	0.56	0.52	0.29	6.50	24.6	3.53	22.93	30.35	24	137	1.80	1.03	0.17	1.03	9.7	0.2	794.31	793.25	802.00	796.73	794.11	791.65
R106	R105	0.59	0.51	0.30	6.80	24.8	3.51	23.90	29.50	24	123	1.70	1.12	0.17	1.12	9.4	0.2	793.25	791.06	796.73	795.15	791.55	789.46
R105	R150	0.33	0.57	0.19	6.99	25.0	3.50	24.47	30.35	24	116	1.80	1.17	0.17	1.17	9.7	0.2	792.43	788.86	795.15	792.18	789.36	787.26
R150	R102B	0.92	0.73	0.67	8.52	25.2	3.49	29.70	30.35	24	76	1.80	1.72	0.17	1.72	9.7	0.1	788.70	787.39	792.18	796.34	787.16	785.79
R102B	R102A	1.06	0.74	0.80	9.32	25.3	3.48	32.43	46.77	30	29	1.30	0.62	0.13	0.62	9.5	0.1	787.20	787.01	796.34	796.34	785.39	785.01
R102A	R102	1.09	0.74	0.81	10.13	25.4	3.47	35.17	46.77	30	147	1.30	0.74	0.13	0.74	9.5	0.3	784.59	783.51	796.34	787.00	783.41	781.51
R102	R101	0.38	0.54	0.21	13.94	25.7	3.45	48.12	48.12 *	36	58	0.50	0.52	0.10	0.52	6.7	0.1	780.14	779.84	787.00	781.85	778.31	778.02
R120	R117	0.30	0.43	0.13	0.13	20.0	3.89	0.51	4.36	12	138	1.50	0.02	0.44	0.44	5.6	0.4	815.76	813.69	819.29	817.23	814.96	812.89
R129	R128	0.33	0.50	0.17	0.17	20.0	3.89	0.66	2.36	12	136	0.44	0.03	0.44	0.44	3.0	0.8	817.93	817.34	820.54	820.95	816.43	815.83
R128	R127	0.16	0.50	0.08	0.25	20.8	3.82	0.96	2.36	12	72	0.44	0.07	0.44	0.44	3.0	0.4	817.34	817.02	820.95	820.31	815.73	815.42
R127	R125A	0.39	0.47	0.18	0.43	21.2	3.76	1.63	2.36	12	144	0.44	0.21	0.44	0.44	3.0	0.9	817.02	816.39	820.31	820.60	815.32	814.68
R125A	R125	0.65	0.71	0.46	0.89	22.0	3.72	3.31	3.31 *	12	29	4.40	0.87	0.44	0.87	3.0	0.2	816.39	816.14	820.60	820.63	814.58	814.46
R125	R124	0.53	0.71	0.38	1.27	22.2	3.71	4.71	5.27	12	145	2.19	1.75	0.44	1.75	6.7	0.4	816.14	813.61	820.63	814.81	814.36	811.19
R124	R123	0.61	0.49	0.30	1.57	22.6	3.68	5.77	6.62	15	152	1.05	0.80	0.32	0.80	5.4	0.5	813.61	812.40	814.81	816.83	810.99	809.40
R123	R122A	0.16	0.48	0.09	1.65	23.1	3.64	6.04	7.08	15	109	1.20	0.87	0.32	0.87	5.8	0.3	813.40	811.45	816.83	821.36	809.30	807.99
R122A	R122	0.17	0.61	0.11	1.77	23.4	3.62	6.40	6.40 *	15	29	0.44	0.98	0.32	0.98	3.5	0.1	811.45	811.16	821.36	821.36	807.79	807.66
R122	R121	0.15	0.64	0.10	1.87	23.5	3.61	6.75	6.75 *	15	105	0.85	1.09	0.32	1.09	4.9	0.4	811.16	810.01	821.36	817.53	807.56	806.67
R121	R113	0.14	0.52	0.07	1.94	23.9	3.58	6.94	6.94 *	15	41	0.65	1.16	0.32	1.16	4.2	0.2	810.01	809.54	817.53	815.90	806.57	806.30
R114B	R114A	0.83	0.73	0.60	0.60	20.0	3.89	2.33	4.78	12	29	1.80	0.43	0.44	0.44	6.1	0.1	813.92	813.80	817.02	817.02	813.52	813.00
R114A	R114	0.92	0.70	0.64	1.24	20.1	3.88	4.81	4.85	12	105	1.85	1.82	0.44	1.82	6.2	0.3	813.57	811.65	817.02	816.80	812.80	810.85
R109B	R109A	0.67	0.35	0.24	0.24	20.0	3.89	0.93	2.36	12	29	0.44	0.07	0.44	0.44	3.0	0.2	810.53	810.41	813.90	813.90	809.73	809.61
R109A	R110	0.62	0.35	0.23	0.47	20.2	3.87	1.82	3.47	12	146	0.95	0.26	0.44	0.44	4.4	0.6	809.56	808.91	813.90	813.55	809.51	808.11
R149	R148	0.12	0.35	0.04	0.04	20.0	3.89	0.16	5.40	12	159	2.30	0.00	0.44	0.44	6.9	0.4	802.02	798.37	805.22	801.54	801.22	797.57
R148	R147	0.33	0.57	0.19	0.23	20.4	3.85	0.89	5.40	12	76	2.30	0.06	0.44	0.44	6.9	0.2	798.27	796.51	801.54	799.80	797.47	795.71
R147	R102	0.13	0.54	0.07	0.30	20.6	3.84	1.15	7.56	12	151	4.50	0.10	0.44	0.44	9.6	0.3	790.51	783.71	799.80	787.00	789.71	782.91
R146A	R146	0.53	0.74	0.39	0.39	20.0	3.89	1.52	2.36	12	29	0.44	0.18	0.44	0.44	3.0	0.2	813.66	813.54	816.87	816.87	812.86	812.74
R146	R145	0.11	0.77	0.09	0.48	20.2	3.87	1.86	3.56	12	100	1.00	0.27	0.44	0.44	4.5	0.4	812.78	812.34	816.87	815.56	812.54	811.54
R145	R144	0.26	0.53	0.14	0.62	20.6	3.84	2.38	2.52	12	138	0.50	0.45	0.44	0.45	3.2	0.7	812.07	811.45	815.56	815.53	811.34	810.65
R144	R143	0.37	0.55	0.20	0.82	21.3	3.78	3.10	3.11	12	138	0.76	0.76	0.44	0.76	4.0	0.6	811.25	810.20	815.53	818.00	810.45	809.40
R143	R142	0.18	0.48	0.09	1.65	23.1	3.64	6.04	7.08	15	109	1.20	0.87	0.32	0.87	5.8	0.3	813.40	811.45	816.83	821.36	809.30	807.99
R142	R141	0.22	0.57	0.13	0.98	22.5	3.68	3.61	3.65	12	136	1.05	1.03	0.44	1.03	4.7	0.5	808.68	807.29	816.87	815.00	807.91	806.49
R141	R140	0.25	0.54	0.14	1.12	23.0	3.65	4.08	4.09	12	140	1.32	1.31	0.44	1.31	5.2	0.4	807.08	805.24	815.00	810.50	806.29	804.44
R140	R139	0.28	0.52	0.14	1.26	23.4	3.62	4.56	4.58	12	85	1.65	1.64	0.44	1.64	5.8	0.2	805.03	803.63	815.00	808.00	804.24	802.83
R139	R138	0.17	0.49	0.08	1.97	23.6	3.60	6.73	6.76	12	68	3.60	3.57	0.44	3.57	8.6	0.1	803.41	800.99	808.00	806.20	802.63	800.19
R138	R137	0.04	0.35	0.01	1.88	23.7	3.59	6.76	6.94	12	127	3.80	3.60	0.44	3.60	8.8	0.2	800.63	799.05	806.20	800.00	800.09	795.25
R137	R136	0.30	0.51	0.16	2.04	23.9	3.58	7.30	7.34	12	141	4.25	4.20	0.44	4.20	9.4	0.3	796.78	796.87	800.00	794.00	795.05	789.07
R136	R134	0.38	0.54	0.20	2.16	24.2	3.56	7.44	7.45	15	146	2.56	2.44	0.44	2.44	10.4	0.3	794.00	793.56	799.00	794.00	792.30	790.30
R134	R133	0.38	0.54	0.20	2.38	24.6	3.53	8.40	13.08	18	186	1.55	1.64	0.25	0.64	7.4	0.4	793.56	792.30	798.50	785.61	793.99	781.10
R133	R132A	0.35	0.49	0.17	2.55	25.0	3.50	8.93	12.39	24	103	0.30	0.16	0.17	0.17	3.9	0.4	782.07	781.89	785.61	787.28	780.60	780.29
R132A	R132	0.16	0.67	0.11	2.66	25.4	3.47	9.24	9.33	24	29	0.17	0.17	0.17	0.17	3.0	0.2	781.89	781.75	787.28	787.28	780.19	780.15
R132	R131	0.11	0.78	0.06	3.05	26.3	3.46	10.58	14.78	24	147												

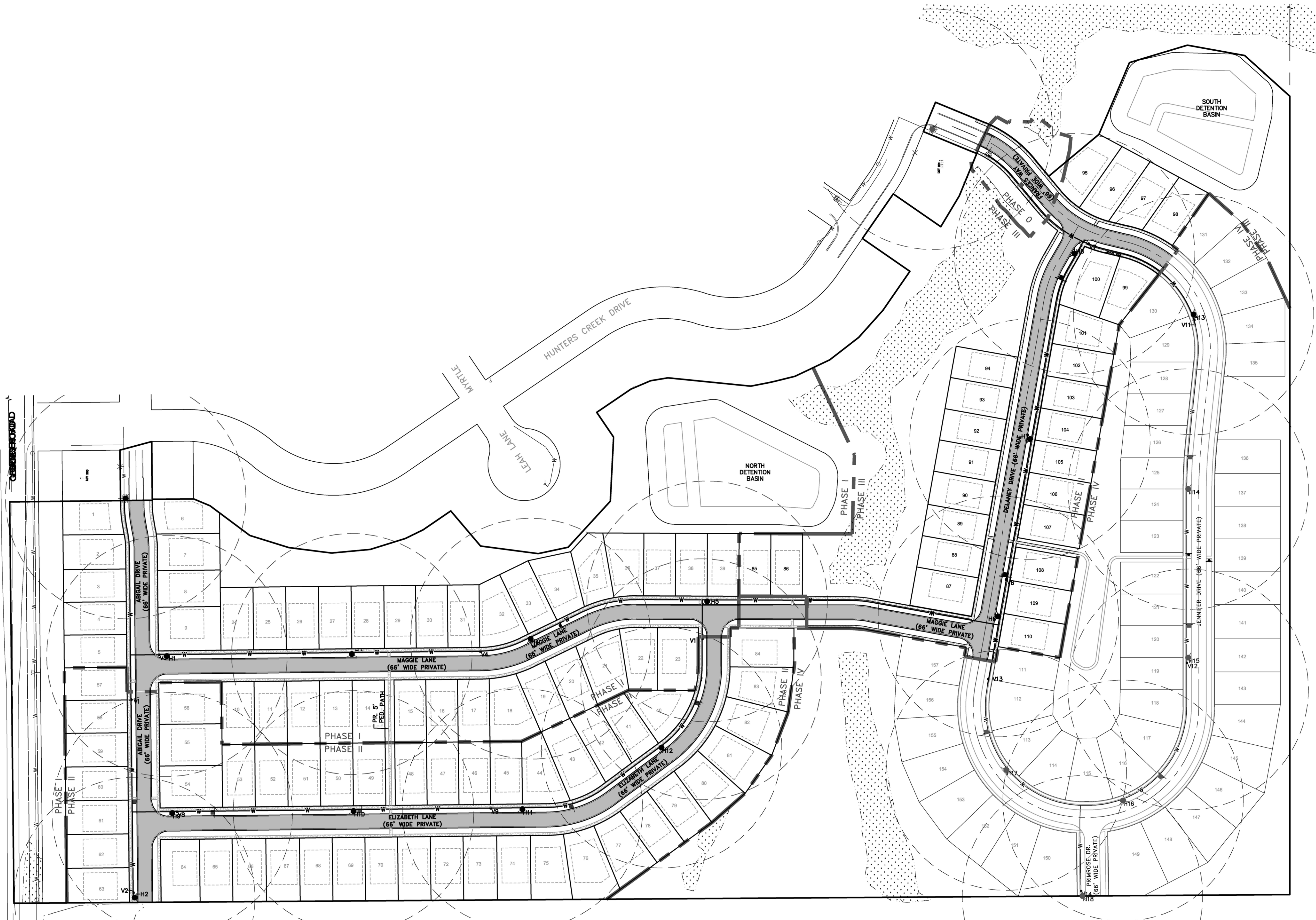
SANITARY SEWER TABLE					
NUMBER	SIZE	DESC.	ELEVATION	INVERTS	NORTHING EASTING
EX01	4" DIA	EX MH	RIM=769.04	PR. 8" SW INV.749.49	N = 281452.169 E = 13328953.306
EX02	4" DIA	EX MH	RIM=821.35	PR. 8" W INV.810.65	N = 283176.437 E = 1332699.851
S3	4" DIA	MH	RIM=775.53	PR. 8" S INV.756.78 PR. 8" NE INV.756.68 PR. 8" NW INV.756.78	N = 281280.998 E = 13328800.922
S5	4" DIA	MH	RIM=778.15	PR. 8" S INV.775.67 PR. 8" SE INV.764.02	N = 281351.117 E = 13328655.459
S6	4" DIA	MH	RIM=784.99	PR. 8" W INV.772.88 PR. 8" E INV.772.78	N = 281385.533 E = 13328420.819
S7	4" DIA	MH	RIM=791.84	PR. 8" W INV.774.32 PR. 8" E INV.774.22	N = 281420.768 E = 13328155.145
S8	4" DIA	MH	RIM=789.18	PR. 8" N INV.775.77 PR. 8" W INV.779.23	N = 281465.319 E = 13327887.681
S9	4" DIA	MH	RIM=786.22	PR. 8" S INV.777.01 PR. 8" S INV.776.91	N = 281689.985 E = 13327917.477
S11	4" DIA	MH	RIM=791.19	PR. 8" N INV.779.03 PR. 8" S INV.778.63 PR. 8" W INV.779.52	N = 281953.240 E = 13327906.605
S12	4" DIA	MH	RIM=802.78	PR. 8" NW INV.791.54 PR. 8" S INV.790.24	N = 282199.651 E = 13327896.428
S15	4" DIA	MH	RIM=808.95	PR. 8" N INV.798.02 PR. 8" S INV.803.96	N = 282401.433 E = 13327791.767
S16	4" DIA	MH	RIM=814.92	PR. 8" N INV.804.06 PR. 8" S INV.803.96	N = 282670.347 E = 13327765.928
S17	4" DIA	MH	RIM=821.44	PR. 8" S INV.810.66	N = 282969.883 E = 13327749.233
S18	4" DIA	MH	RIM=822.54	PR. 8" N INV.811.78 PR. 8" E INV.811.68	N = 283155.008 E = 13327887.549
S19	4" DIA	MH	RIM=823.01	PR. 8" E INV.812.60	N = 283150.486 E = 13327806.438
S21	4" DIA	MH	RIM=796.51	PR. 8" NW INV.788.08 PR. 8" E INV.787.98	N = 281986.022 E = 13327698.460
S22	4" DIA	MH	RIM=801.06	PR. 8" W INV.790.72 PR. 8" SE INV.790.62	N = 282064.932 E = 13327692.329
S23	4" DIA	MH	RIM=807.05	PR. 8" N INV.796.14 PR. 8" SE INV.786.04	N = 282163.057 E = 13327507.132
S24	4" DIA	MH	RIM=810.48	PR. 8" N INV.799.99 PR. 8" S INV.799.89	N = 282295.245 E = 13327461.399
S26	4" DIA	MH	RIM=818.68	PR. 8" N INV.803.41 PR. 8" S INV.803.31	N = 282560.488 E = 13327445.545
S27	4" DIA	MH	RIM=820.00	PR. 8" N INV.804.87 PR. 8" S INV.804.77	N = 282832.066 E = 13327430.409
S29	4" DIA	MH	RIM=818.16	PR. 8" E INV.807.86 PR. 8" W INV.806.46 PR. 8" S INV.806.36	N = 283128.152 E = 13327405.736
S30	4" DIA	MH	RIM=817.53	PR. 8" E INV.807.56	N = 283122.041 E = 13327296.096
S31	4" DIA	MH	RIM=823.24	PR. 8" W INV.813.03	N = 283145.053 E = 1332708.964
S34	4" DIA	MH	RIM=781.92	PR. 8" SW INV.758.04 PR. 8" W INV.757.94 PR. 8" NW INV.758.04	N = 281063.434 E = 13328716.396
S35	4" DIA	MH	RIM=779.84	PR. 8" NE INV.758.76 PR. 8" W INV.758.66	N = 280976.457 E = 13328601.412
S36	4" DIA	MH	RIM=774.62	PR. 8" W INV.759.64 PR. 8" E INV.759.54	N = 280962.351 E = 13328601.412
S37	4" DIA	MH	RIM=769.93	PR. 8" W INV.760.71 PR. 8" E INV.760.61	N = 280973.391 E = 13328273.206
S39	4" DIA	MH	RIM=767.93	PR. 8" W INV.763.15 PR. 8" E INV.763.05	N = 280960.320 E = 13327981.952
S40	4" DIA	MH	RIM=770.46	PR. 8" W INV.764.24 PR. 8" E INV.764.14	N = 280951.443 E = 13327784.151
S41	4" DIA	MH	RIM=772.83	PR. 8" NW INV.764.93 PR. 8" W INV.764.83	N = 280972.173 E = 13327666.927
S42	4" DIA	MH	RIM=778.27	PR. 8" NW INV.769.00 PR. 8" W INV.768.90	N = 281052.302 E = 13327565.182
S43	4" DIA	MH	RIM=784.04	PR. 8" N INV.773.58 PR. 8" SE INV.773.48 PR. 8" W INV.772.70	N = 281153.906 E = 13327519.032
S43A	4" DIA	MH	RIM=786.82	PR. 8" W INV.773.40 PR. 8" E INV.773.30	N = 281154.427 E = 13327917.925
S44	4" DIA	MH	RIM=786.90	PR. 8" N INV.776.86 PR. 8" S INV.776.76	N = 281228.837 E = 13327554.439
S46	4" DIA	MH	RIM=791.61	PR. 8" S INV.781.88	N = 281353.897 E = 13327554.439
S48	4" DIA	MH	RIM=791.71	PR. 8" W INV.781.98 PR. 8" E INV.781.88	N = 281468.316 E = 13327740.226
S49	4" DIA	MH	RIM=792.64	PR. 8" E INV.783.15	N = 281426.686 E = 13327631.274
STUB	??? DIA	STUB	RIM=773.38	PR. 8" E INV.773.60	N = 281153.188 E = 13327377.859

WATER MAIN STRUCTURE TABLE			
NUMBER	DESCRIPTION	ELEVATION	NORTHING EASTING
H1	HYD	FG/RIM=822.68	N = 283123.903 E = 13327787.722
H2	HYD	FG/RIM=817.33	N = 283168.423 E = 13327283.897
H3	HYD	FG/RIM=816.34	N = 282739.999 E = 13327809.119
H4	HYD	FG/RIM=807.80	N = 282370.079 E = 13327857.417
H5	HYD	FG/RIM=793.80	N = 282007.135 E = 13327951.419
H6	HYD	FG/RIM=790.33	N = 281400.920 E = 13327947.309
H7	HYD	FG/RIM=787.67	N = 281351.727 E = 13328318.229
H8	HYD	FG/RIM=776.51	N = 281276.252 E = 13328707.509
H9	HYD	FG/RIM=780.23	N = 281689.985 E = 13327462.644
H10	HYD	FG/RIM=821.88	N = 282721.857 E = 13327483.624
H11	HYD	FG/RIM=812.60	N = 282371.261 E = 13327503.165
H12	HYD	FG/RIM=800.64	N = 282088.154 E = 13327644.003
H13	HYD	FG/RIM=780.11	N = 281023.530 E = 13328592.318
H14	HYD	FG/RIM=769.53	N = 281018.455 E = 13329229.289
H15	HYD	FG/RIM=768.77	N = 281022.778 E = 13327879.694
H16	HYD	FG/RIM=780.89	N = 281214.786 E = 13327757.166
H17	HYD	FG/RIM=780.59	N = 281370.041 E = 13327629.701
H18	HYD	FG/RIM=786.98	N = 281200.322 E = 13327375.543
V1	GV	FG/RIM=823.11	N = 283194.259 E = 13327693.330
V2	GV	FG/RIM=817.53	N = 283171.975 E = 13327293.514
V3	GV	FG/RIM=822.65	N = 283140.544 E = 13327789.799
V4	GV	FG/RIM=810.40	N = 282473.697 E = 13327696.966
V5	GV	FG/RIM=790.90	N = 281941.315 E = 13327957.140
V6	GV	FG/RIM=790.51	N = 281387.670 E = 13328024.404
V7	GV	FG/RIM=776.68	N = 281248.297 E = 13328729.120
V8	GV	FG/RIM=818.16	N = 283068.455 E = 13327686.196
V9	GV	FG/RIM=814.75	N = 282437.326 E = 13327502.487
V10	GV	FG/RIM=792.75	N = 282013.922 E = 1332873.415
V11	GV	FG/RIM=779.68	N = 281022.511 E = 1332860.511
V12	GV	FG/RIM=769.04	N = 281005.282 E = 13327866.570
V13	GV	FG/RIM=790.94	N = 281451.279 E = 13327816.226
V14	GV	FG/RIM=786.94	N = 281203.742 E = 13327385.338

UTILITY CROSSING TABLE		
CROSSING	CROSSING PIPE 1	CROSSING PIPE 2
X1.	12" ST. TIP 810.50	12" W.M. B/P 814.40
X2.	12" ST. B/P 814.54	12" W.M. TIP 813.04
X3.	12" ST. B/P 814.05	8" SAN. TIP 811.64
X4.	15" ST. TIP 808.96	8" SAN. B/P 810.40
X5.	8" SAN. TIP 808.57	8" W.M. B/P 812.43
X6.	15" ST. TIP 809.57	8" W.M. B/P 815.73
X7.	12" ST. B/P 812.41	8" W.M. TIP 810.91
X8.	12" ST. B/P 809.22	8" SAN. TIP 804.24
X9.	12" ST. B/P 804.45	8" SAN. TIP 800.29
X10.	24" ST. B/P 785.93	8" SAN. TIP 784.32
X11.	24" ST. B/P 787.57	8" W.M. B/P 786.07
X12.	12" ST. B/P 779.05	8" SAN. TIP 772.79
X13.	8" SAN. TIP 782.65	8" W.M. B/P 787.83
X14.	24" ST. B/P 780.08	8" SAN. TIP 778.30
X15.	36" ST. B/P 780.05	8" SAN. TIP 777.52
X16.	8" SAN. TIP 776.14	8" W.M. B/P 782.60
X17.	36" ST. B/P 779.92	8" W.M. TIP 778.10
X18.	12" ST. B/P 784.44	8" SAN. TIP 788.58
X19.	12" ST. B/P 782.65	8" SAN. TIP 774.59
X20.	18" ST. B/P 766.54	8" SAN. TIP 763.37
X21.	18" ST. B/P 764.03	8" SAN. TIP 757.54
X22.	12" ST. B/P 777.55	8" W.M. TIP 776.05
X23.	12" ST. B/P 771.69	8" SAN. TIP 757.64
X24.	30" ST. B/P 780.09	8" SAN. TIP 758.58
X25.	12" ST. B/P 766.33	8" SAN. TIP 761.03
X26.	15" ST. B/P 764.38	8" SAN. TIP 762.84
X27.	18" ST. TIP 767.03	8" W.M. B/P 768.83
X28.	48" ST. B/P 760.70	8" W.M. TIP 759.20
X29.	48" ST. B/P 760.63	8" W.M. TIP 752.24
X30.	24" ST. B/P 779.77	8" W.M. TIP 778.27
X31.	30" ST. TIP 786.07	8" W.M. B/P 780.73
X32.	15" ST. B/P 778.24	8" W.M. TIP 776.74
X33.	8" SAN. TIP 759.75	8" W.M. B/P 768.63
X34.	30" ST. TIP 763.36	8" W.M. B/P 775.73
X35.	12" ST. B/P 779.61	8" SAN. TIP 777.17
X36.	12" ST. B/P 779.89	8" SAN. TIP 772.96
X37.	8" SAN. TIP 775.88	8" W.M. B/P 780.03
X38.	24" ST. B/P 786.70	8" W.M. TIP 785.20
X39.	8" SAN. TIP 806.48	12" W.M. B/P 811.70
X40.	8" SAN. TIP 809.77	12" W.M. B/P 812.40
X41.	8" SAN. TIP 810.96	12" W.M. B/P 813.50
X42.	8" SAN. TIP 812.15	12" W.M. B/P 814.7
X43.	8" SAN. TIP 813.35	12" W.M. B/P 815.80
X44.	8" SAN. TIP 814.02	12" W.M. B/P 816.70
X45.	8" SAN. TIP 814.03	12" W.M. B/P 816.90
X46.	8" SAN. TIP 813.08	12" W.M. B/P 816.00
X47.	8" SAN. TIP 812.85	12" W.M. B/P 815.60
X48.	8" SAN. TIP 812.45	12" W.M. B/P 814.80
X49.	8" SAN. TIP 812.11	12" W.M. B/P 814.20
X50.	8" SAN. TIP 807.46	8" W.M. B/P 811.43
X51.	8" SAN. TIP 809.71	8" W.M. B/P 812.43
X52.	8" SAN. TIP 810.91	8" W.M. B/P 813.73
X53.	8" SAN. TIP 812.00	8" W.M. B/P 814.93
X54.	8" SAN. TIP 812.53	8" W.M. B/P 815.83
X55.	8" SAN. TIP 810.49	8" W.M. B/P 813.13
X56.	8" SAN. TIP 808.33	8" W.M. B/P 811.13
X57.	8" SAN. TIP 806.42	8" W.M. B/P 800.03
X58.	8" SAN. TIP 803.13	8" W.M. B/P 807.03
X59.	8" SAN. TIP 801.97	8" W.M. B/P 804.93
X60.	8" SAN. TIP 797.31	8" W.M. B/P 800.43
X61.	8" SAN. TIP 795.20	8" W.M. B/P 797.93
X62.	8" SAN. TIP 792.52	8" W.M. B/P 795.13
X63.	8" SAN. TIP 790.18	8" W.M. B/P 792.53
X64.	8" SAN. TIP 779.11	8" W.M. B/P 781.83
X65.	8" SAN. TIP 776.74	8" W.M. B/P 780.73
X66.	8" SAN. TIP 782.62	8" W.M. B/P 784.83
X67.	8" SAN. TIP 764.49	8" W.M. B/P 786.63
X68.	8" SAN. TIP 787.44	8" W.M. B/P 791.63
X69.	8" SAN. TIP 762.08	8" W.M. B/P 793.83
X70.	8" SAN. TIP 754.31	8" W.M. B/P 796.73
X71.	8" SAN. TIP 758.12	8" W.M. B/P 798.93
X72.	8" SAN. TIP 756.72	8" W.M. B/P 800.43
X73.	8" SAN. TIP 798.50	8" W.M. B/P 801.63
X74.	8" SAN. TIP 801.80	8" W.M. B/P 804.53
X75.	8" SAN. TIP 804.47	8" W.M. B/P 807.53
X76.	8" SAN. TIP 806.12	8" W.M. B/P 809.13
X77.	8" SAN. TIP 807.56	8" W.M. B/P 810.63
X78.	8" SAN. TIP 809.12	8" W.M. B/P 812.23
X79.	8" SAN. TIP 810.60	8" W.M. B/P 813.73
X80.	8" SAN. TIP 812.02	8" W.M. B/P 815.13
X81.	8" SAN. TIP 777.77	8" W.M. B/P 783.93
X82.	8" SAN. TIP 760.66	8" W.M. B/P 783.53
X83.	8" SAN. TIP 781.62	8" W.M. B/P 784.73
X84.	8" SAN. TIP 762.59	8" W.M. B/P 785.43
X85.	8" SAN. TIP 779.46	8" W.M. B/P 782.03
X86.	8" SAN. TIP 777.60	8" W.M. B/P 780.13
X87.	8" SAN. TIP 774.04	8" W.M. B/P 778.13
X88.	8" SAN. TIP 773.47	8" W.M. B/P 776.13
X89.	8" SAN. TIP 771.54	8" W.M. B/P 774.13
X90.	8" SAN. TIP 768.21	8" W.M. B/P 771.03
X91.	8" SAN. TIP 770.97	8" W.M. B/P 772.93
X92.	8" SAN. TIP 773.43	8" W.M. B/P 776.13
X93.	8" SAN. TIP 770.36	8" W.M. B/P 772.43
X94.	8" SAN. TIP 768.32	8" W.M. B/P 769.93
X95.	8" SAN. TIP 768.13	8" W.M. B/P 768.33
X96.	8" SAN. TIP 764.96	8" W.M. B/P 767.73
X97.	8" SAN. TIP 762.91	8" W.M. B/P 767.23
X98.	8" SAN. TIP 763.10	8" W.M. B/P 766.73
X99.	8" SAN. TIP 763.10	8" W.M. B/P 766.23
X100.	8" SAN. TIP 763.37	8" W.M. B/P 765.63
X101.	8" SAN. TIP 763.52	8" W.M. B/P 765.53
X102.	8" SAN. TIP 763.96	8" W.M. B/P 765.83
X103.	8" SAN. TIP 764.29	8" W.M. B/P 766.33
X104.	8" SAN. TIP 764.62	8" W.M. B/P 766.83
X105.	8" SAN. TIP 765.41	8" W.M. B/P 768.03
X106.	8" SAN. TIP 769.47	8" W.M. B/P 772.73
X107.	8" SAN. TIP 775.46	8" W.M. B/P 778.63
X108.	8" SAN. TIP 776.73	8" W.M. B/P 780.13
X109.	8" SAN. TIP 780.73	8" W.M. B/P 783.73
X110.	8" SAN. TIP 783.93	8" W.M. B/P 786.33
X111.	8" SAN. TIP 781.89	8" W.M. B/P 784.93
X112.	8" SAN. TIP 780.82	8" W.M. B/P 784.33
X113.	8" SAN. TIP 808.90	12" W.M. B/P 811.00
X114.	8" SAN. TIP 803.06	8" W.M. B/P 806.03

STORM SEWER TABLE					
NUMBER	SIZE	DESC.	RIM ELEV.	INVERTS	NORTHING EASTING
EX00	4" DIA.	CB	807.18	EX. 15" N 802.23	N = 282626.132 E = 13327970.823
EX01	4" DIA.	CB	810.20	PR. 12" N 804.65 EX. 15" S 804.45	N = 282811.215 E = 13327948.116
EX02	4" DIA.	CB	811.12	EX. 12" W 807.12	N = 282838.116 E = 13328050.132

\\MAIN\PROJECTS\16000819\DWG\PLAN SET\STATE - FINAL\PHASE 3\16000819P3-22-23.DWG 4/27/2023 1:07 PM MATTHEW MYERS



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CLIENT	SECTION 33
	TOWN 2 SOUTH, RANGE 7 EAST
	SUPERIOR TOWNSHIP
	WASHTENAW COUNTY, MICHIGAN
DATE	NOVEMBER 22, 2024
	03-07-2025: PER TWP 04-21-2025: PER TWP
SE MICHIGAN LAND HOLDING LLC PROSPECT POINTE WEST FINAL SITE PLAN - PHASE 3	
FIRE PROTECTION PLAN	
REVISIONS	
0 50 100 SCALE: 1" = 100 FEET	
DR.	SK CH. SS
P.M.	MB
BOOK	--
JOB	16000819
SHEET NO.	37

1.0 PLAN GOALS AND OBJECTIVES

Atwell conducted a site visit to inventory the general locations of the following four (4) invasive woody shrub species within the Site boundaries: common (European) and glossy buckthorn (*Rhamnus cathartica* and *Frangula alnus*, respectively), autumn-olive (*Elaeagnus umbellata*), honeysuckle (*Lonicera tatarica*), and multi-flora rose (*Rosa multiflora*). Atwell also noted the percentage of the site covered by these species and their growth extent, range, condition, and size.

Atwell conducted the invasive shrub inventory site visit on February 28, 2017 and identified 14 areas containing a predominance (>50%) of the above-listed invasive shrub species within scrub-shrub, forested, or tree line areas. These areas are located particularly along the perimeter of the property boundary and along the tree lines that intersect the agricultural fields. The southern periphery of the Site also contains a shrub layer dominated by those four invasive shrubs.

There are select areas, particularly in the tree lines within the eastern portion of the Site, that contain a dominance of invasive honeysuckle (>50%) shrubs, with scattered buckthorn, multi-flora rose, and autumn-olive sapling plants. The honeysuckle shrubs in these areas vary in size from 2.0 dbh inches to 7.0 inches dbh. Overall, these shrub plants appear to be in fair to good condition, with little to no evidence of decay or damage.

Overall, Atwell noted that invasive shrub density was inversely proportional to native herbaceous, shrub, and tree sapling growth, which indicates that these invasive shrubs are suppressing the vigor of native plants.

3.1 Developed Areas

Equipment, such as bulldozers will be used for on-site grading and vegetation removal in the developed areas. Vegetation removal, site grading, and construction will eradicate the invasive shrubs in developed areas.

1.1 Undeveloped Areas

Undeveloped areas can be defined as those lands that will not be subject to buildings, permanent infrastructure, or maintained landscape planting and management. The undeveloped areas include planned natural areas and natural grade buffers, wetlands, wetland and stream setbacks, etc., that are planned to remain in the aftermath of construction.

Invasive shrubs tend to increase in undeveloped and natural areas following ground disturbance or vegetation disturbance. As a result, undeveloped areas that are to be permanently retained will not be subject to soil or vegetation disturbance during construction and development activities; the only exception will be the invasive shrub removal in undeveloped areas.

The four (4) invasive shrub species will be controlled through two rounds of treatments—one during the initial construction phases and a second follow-up control visit. The first control round will consist of stump cutting and herbicide treatments within all undeveloped areas during construction phases. In undeveloped areas, stump cutting with herbicidal application will be an effective means to eradicate/control the four (4) invasive shrub species. While cutting removes the canopy of invasive shrubs, the herbicide treatment is necessary to kill roots and stems. This method is usually preferred over broad herbicidal spraying because it is more targeted. Stump treatments can more easily avoid non-target species during herbicide application. The most effective time to cut and chemically treat the stumps is from late summer through the fall; however, cutting and herbicidal application can be conducted during winter as well.

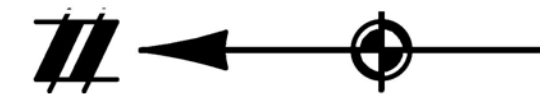
In construction areas, a construction barrier will be placed around the drip line perimeter of protected trees in order to protect them from damage. However, removal of the four (4) invasive shrub species will still need to occur near and beneath these trees. Removal of invasive shrub species and other site grading activities within the protected zone of a landmark tree or sovereign tree shall be done with care.

Common chemical control options include treating stumps immediately after cutting (within 2 hours) are with an herbicide containing triclopyr (Garlon 3A/Vastant, Garlon 4, or other brush killers with triclopyr) or glyphosate (Roundup). Herbicides can be applied to cut stumps with a wick applicator or a low volume sprayer. If treatments occur during the growing season, chemical applications can include foliar spray of dense beds of invasive seedlings. An indicator dye can be added to the herbicide to mark cut stumps. All herbicide application will be conducted by properly licensed and authorized contractors, and only in accordance with applicable laws and regulations. All contractors conducting invasive plant control shall be competent in woody plant identification and have certification in chemical plant application.

The second round of invasive shrub treatment will consist of follow-up control of seedlings that emerge after initial control efforts. The second round will occur post-construction in the previously treated undeveloped areas, preferably during the growing season. Follow-up control options may include pulling of small scattered individuals, cutting and herbicidal application of larger stems, and foliar chemical application of low-growing individuals.

The western and central portions of Wetland A consist of a lineal, meandering system that is dominated by reed canary grass and large strands of phragmites throughout its overall length. This portion of Wetland A also lies adjacent to existing agricultural fields and was utilized to collect and divert excess storm water away from the ongoing farming operations, resulting in a highly disturbed system throughout its length. Due to these existing factors, the wetland system is dominated by invasive species which flourish in areas of highly fluctuating water levels and provide little to no function/value to area wildlife as a food source or breeding/nesting habitat.

These portions of Wetland A could greatly benefit from wetland enhancement activities which would convert an existing low quality system into a higher quality resource and habitat which could effectively be utilized by local wildlife, while also providing significant aesthetic value to the residents of the proposed developments Northern Detention Basin, a consistent input of water should provide a more stable hydrologic regime which should assist in the eradication of the invasive species and allow for the establishment and further diversity of native species. Additional herbicide applications can be directed towards the areas of existing invasive species along with the mechanical removal of existing debris and spoils piles to assist in creating a stable habitat. Following these initial activities, native wetland seed and shrub plantings can be conducted to create a higher quality system. Upon completion of enhancement activities, the entirety of Wetland A and completed mitigation areas, totaling 1.89 acres can be placed within a conservation easement at the subject property for protection purposes. All planting and removal details and specifications for this area per the MDEQ and pending permit.



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IN THE WORK, OF ANY NEARBY
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SECTION 33

CLIENT
SE MICHIGAN LAND HOLDING LLC
PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 3
INVASIVE SPECIES REMOVAL PLAN

DATE	NOVEMBER 22, 2024
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03-07-2025: PER TWP

04-21-2025: PER TWP

REVISIONS

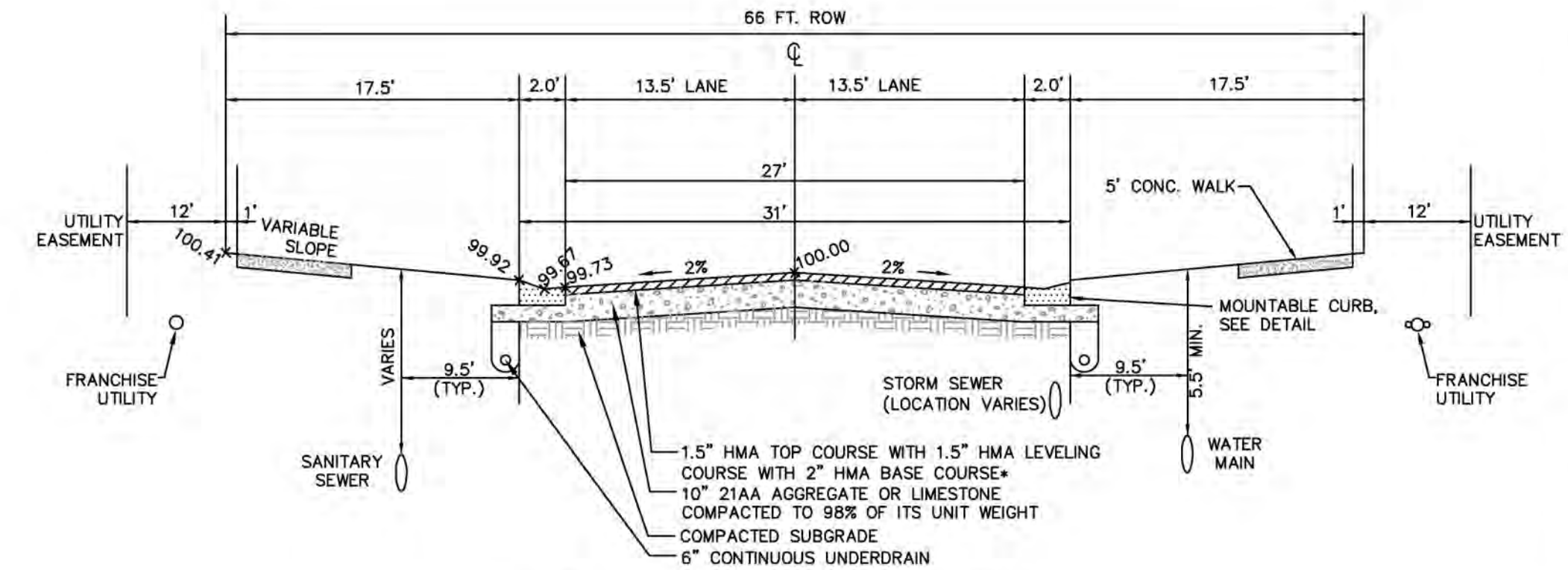
SCALE: 1" = 100 FEET

DR.	SK	CH.	SS
P.M. MB			

BOOK	--
JOB	16000819

SHEET NO. 38

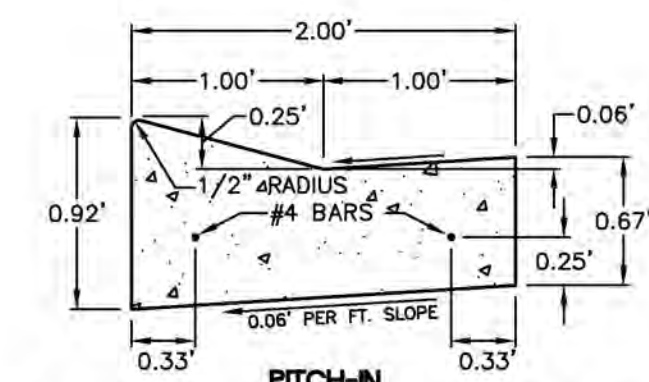
\\MAIN\PROJECTS\0000818\0000818.dwg - 24-07-2025 1:04 PM MATTHEW MYERS



RESIDENTIAL ROADWAYS (PRIVATE)

NOT TO SCALE

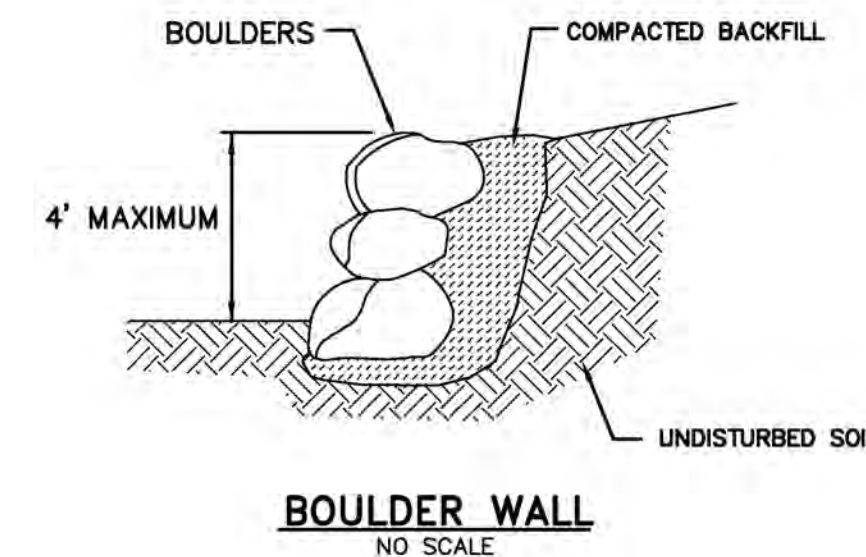
- * NOTES:
1. REFER TO CURRENTLY APPROVED WRCR HMA MIX DESIGNS AND BINDER REQUIREMENTS PRIOR TO CONSTRUCTION.
 2. ALL PROPOSED UTILITIES SHALL BE WITHIN THE RIGHT-OF-WAY OR WITHIN AN EASEMENT OUTSIDE OF THE RIGHT-OF-WAY.
- ASSUMED SECTION:
- 1.5\"
 - 1.5\"
 - 2\"
- All HMA shall limit RAP to 25%



MOUNTABLE CURB & GUTTER

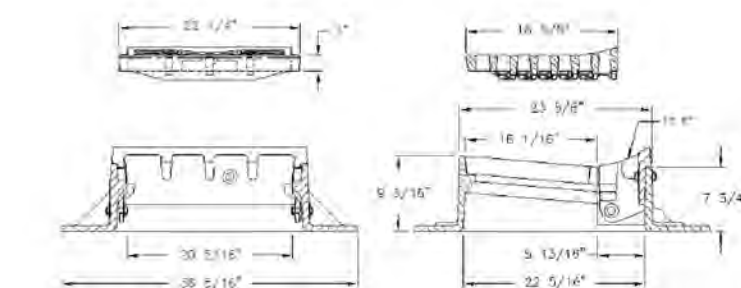
NO SCALE

- NOTE:
1. BASE AND SUBBASE AGGREGATES TO EXTEND MINIMUM 1'-0\"
 2. CURB CATCH BASIN CASTING TO BE E.J.W 7065 WITH M1 GRATE OR APPROVED ALTERNATE, SEE BELOW.



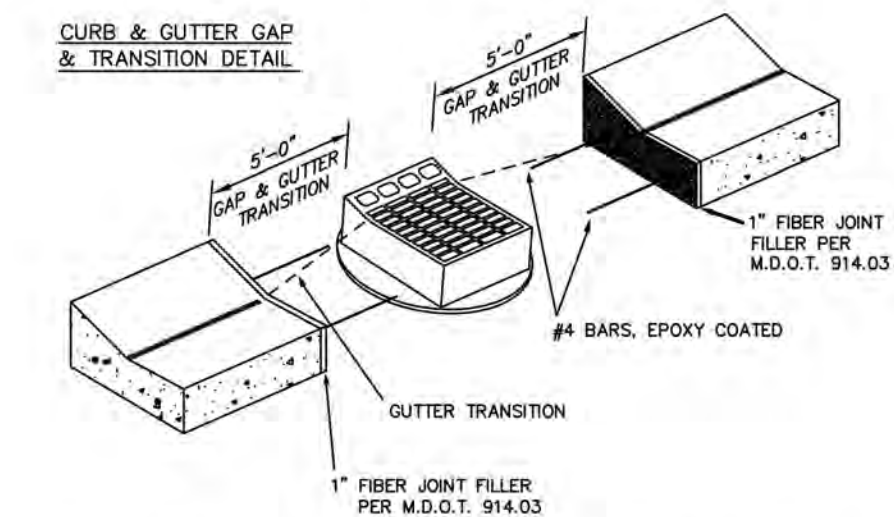
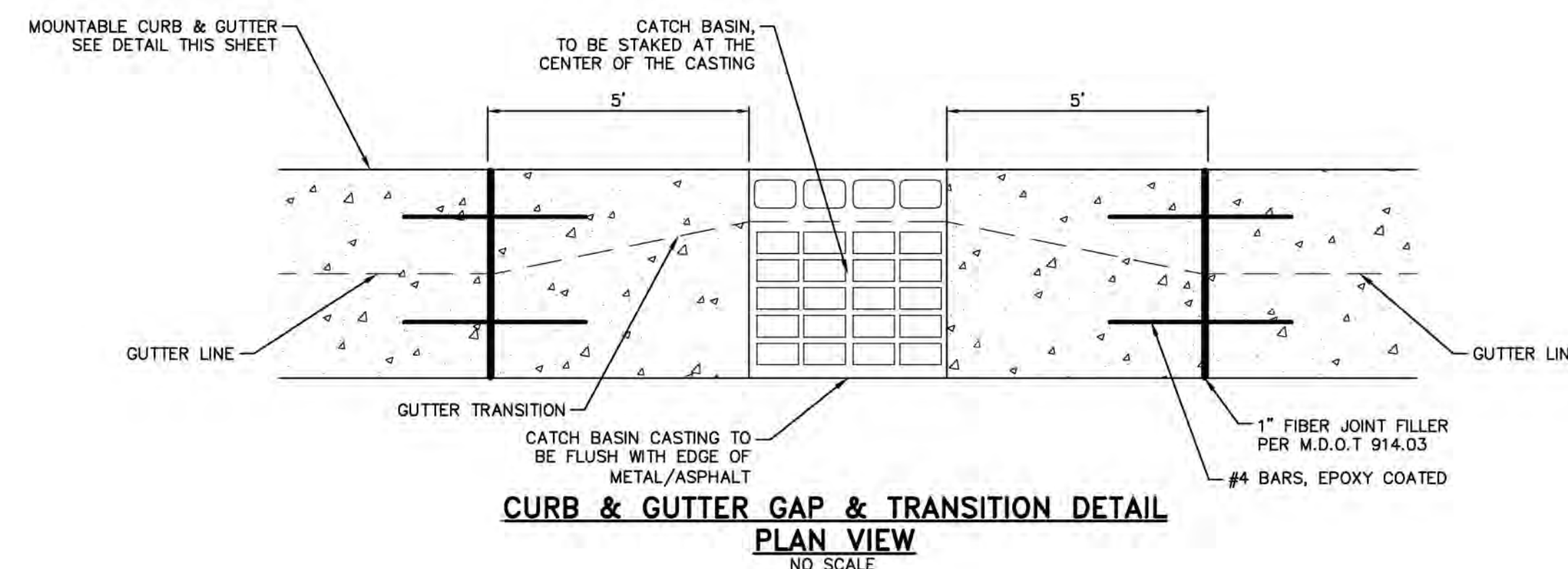
7065 CATCH BASIN CURB INLET

Heavy duty
With 7045 Type M1 grate and 7060 T1 back
Approximate 195 sq. in. open area
Accepts 7045 grates
Special lettered grate
"DUMP NO WASTE!" lettering
and fish image



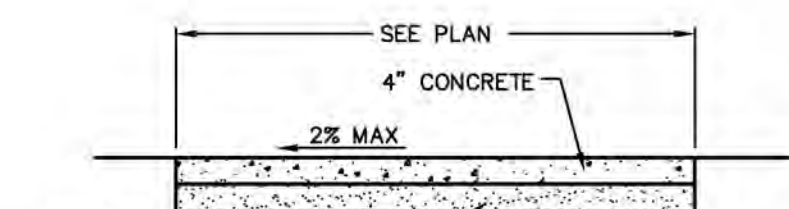
7065 CATCH BASIN CURB CASTING

NO SCALE



CURB & GUTTER GAP & TRANSITION DETAIL

NO SCALE



NOTE: WALKS TO BE 6\"

CONCRETE SIDEWALK SECTION

NOT TO SCALE



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SECTION 33

TOWN 2 SOUTH, RANGE 7 EAST
SUPERIOR TOWNSHIP

WASHTENAW COUNTY, MICHIGAN

CLIENT SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN - PHASE 3

DETAIL SHEET 1

DATE NOVEMBER 22, 2024

03-07-2025: PER TWP
04-21-2025: PER TWP

REVISIONS

NA NA NA
N/A

DR. SK CH. SS

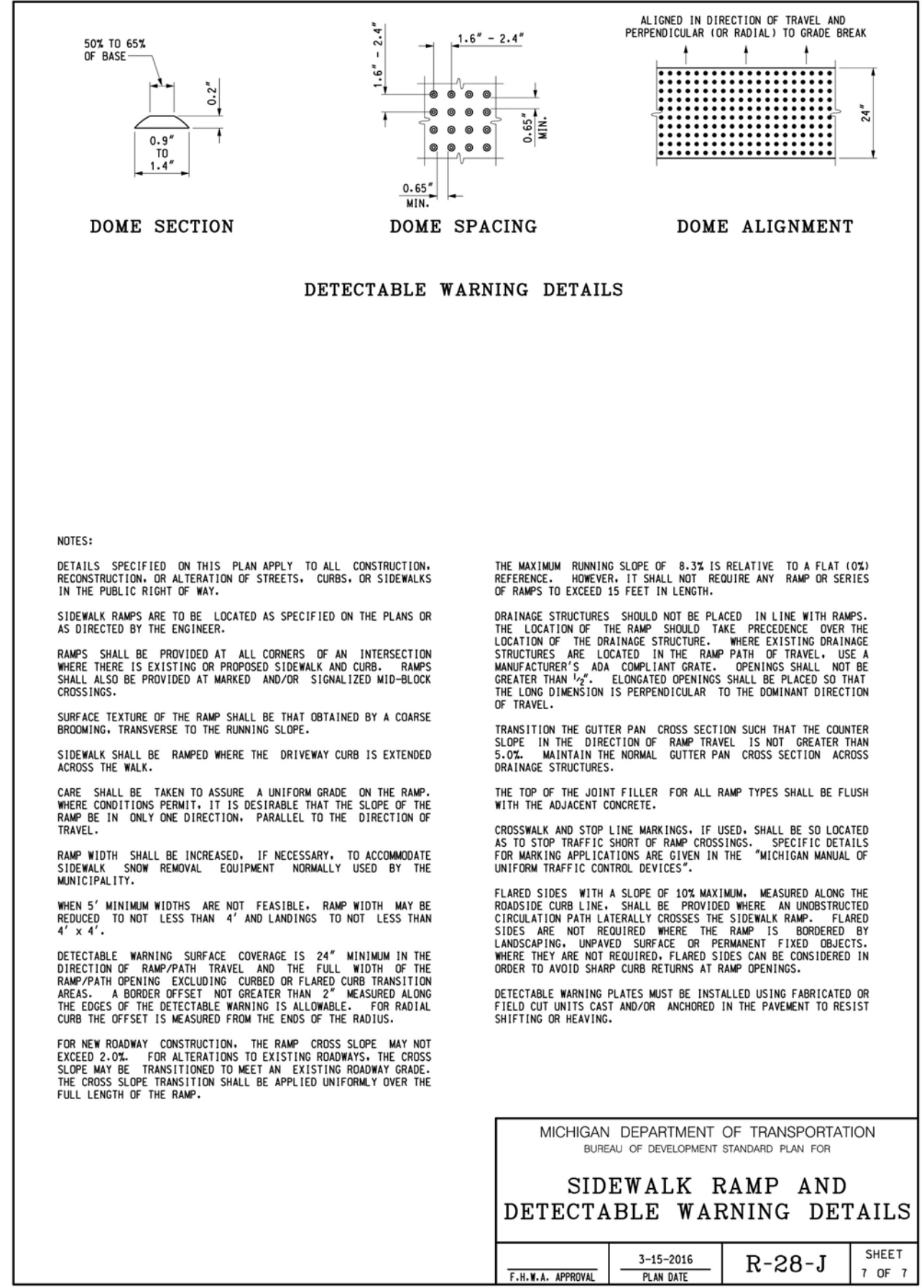
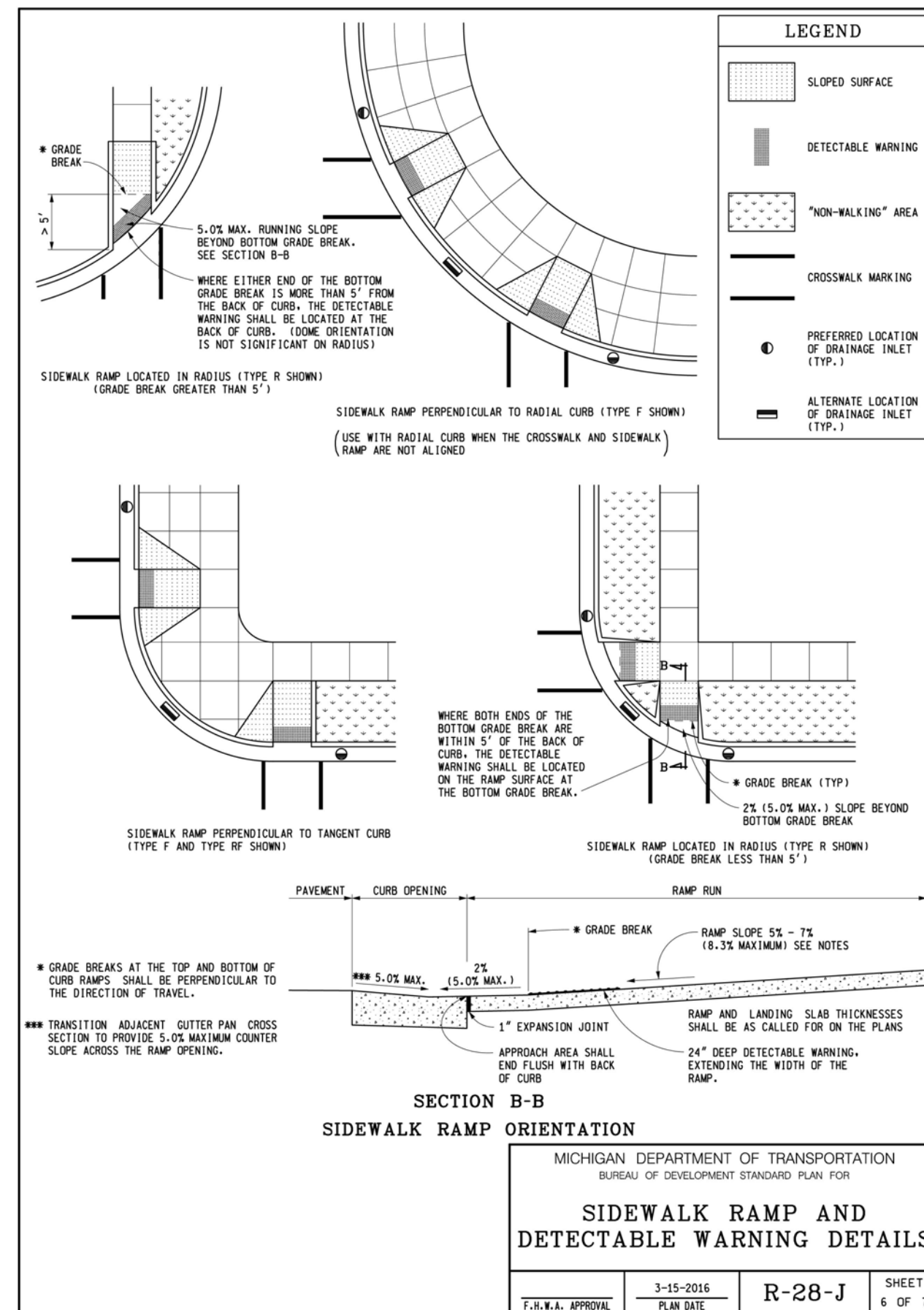
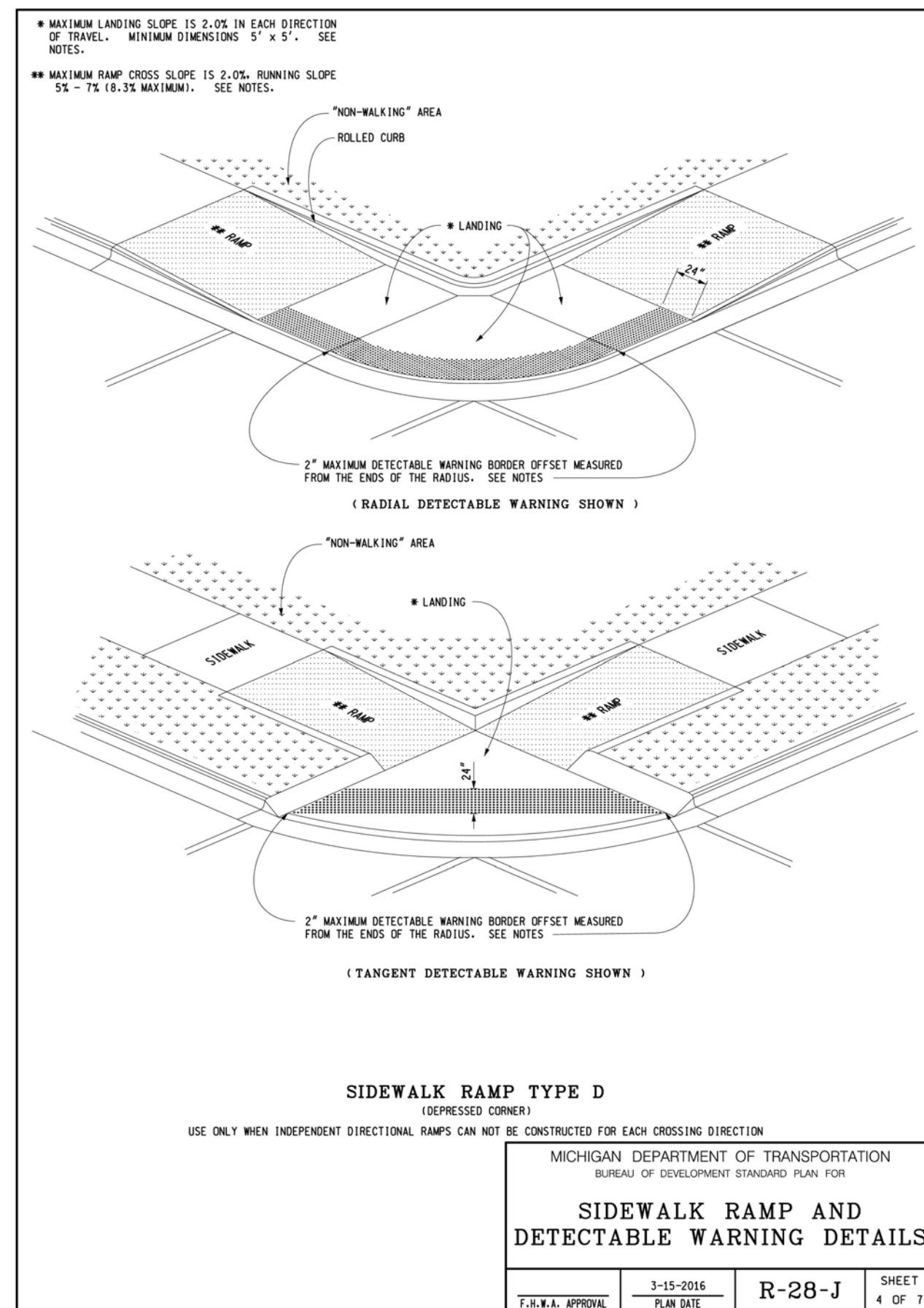
P.M. MB

BOOK --

JOB 16000819

SHEET NO.

39



Prospect Pointe West
THE AUSTIN
2,724-3,172 Sq. Ft. | 4-5 Bedrooms | 2.5-3 Baths



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Prospect Pointe West
THE BLOOMINGTON
2,181-2,479 Sq. Ft. | 3-4 Bedrooms | 2.5-3 Baths



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SUPERIOR TOWNSHIP

WASHTENAW COUNTY, MICHIGAN

CLIENT

SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST

FINAL SITE PLAN - PHASE 3

TYPICAL BUILDING DETAILS

DATE

NOVEMBER 22, 2024

03-07-2025: PER TWP

04-21-2025: PER TWP

REVISIONS

NA NA NA

N/A

DR. SK

CH. SS

P.M. MB

BOOK --

JOB 16000819

SHEET NO. 41

TYPICAL ELEVATIONS AND FLOORPLANS SHOWN - FOR REPRESENTATIVE PURPOSES ONLY

Page 259 of 311

Prospect Pointe West
THE COLUMBIA
2,432-2,707 Sq. Ft. | 4 Bedrooms | 2.5-3 Baths



Nature Series
THE COLUMBIA
2,432-2,782 Sq. Ft. | 4 Bedrooms | 2.5-3 Baths



SECOND FLOOR PLAN



FIRST FLOOR PLAN

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Nature Series
THE COLUMBIA
First Floor Options



Garage options vary by community. Please see sales manager for details.

This depiction represents an artist's conception of the elevation and floor plan and is not intended to be an exact representation or show specific detailing. Plans remain subject to change without notice. Drawings are not to scale. All measurements shown are approximate and not necessarily to scale. Locations, size and construction of doors, windows, wall, fireplace and any other items depicted may vary depending on elevation preference or choice of options and are subject to change without notice. Some options and elevations shown may not be available in every neighborhood, see Sales Manager for details. Due to normal construction tolerances, the room sizes shown may vary slightly. The Builder may change home design, materials, features and methods of construction without prior notice. Model homes may contain some optional features not available through the Builder.

Nature Series
THE COLUMBIA
Second Floor Options



Second Floor with Elevation D (adds 39 sq. ft.)

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Prospect Pointe West
THE DAVENPORT
1,856-2,247 Sq. Ft. | 3 Bedrooms | 2 Baths



Nature Series
THE DAVENPORT
1,856-2,005 Sq. Ft. | 3 Bedrooms | 2 Baths



FIRST FLOOR PLAN

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Nature Series
THE DAVENPORT
Floor Plan Options



Garage options vary by community. Please see sales manager for details.

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SUPERIOR TOWNSHIP
WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC
PROSPECT POINTE WEST
FINAL SITE PLAN - PHASE 3
TYPICAL BUILDING DETAILS

DATE
NOVEMBER 22, 2024

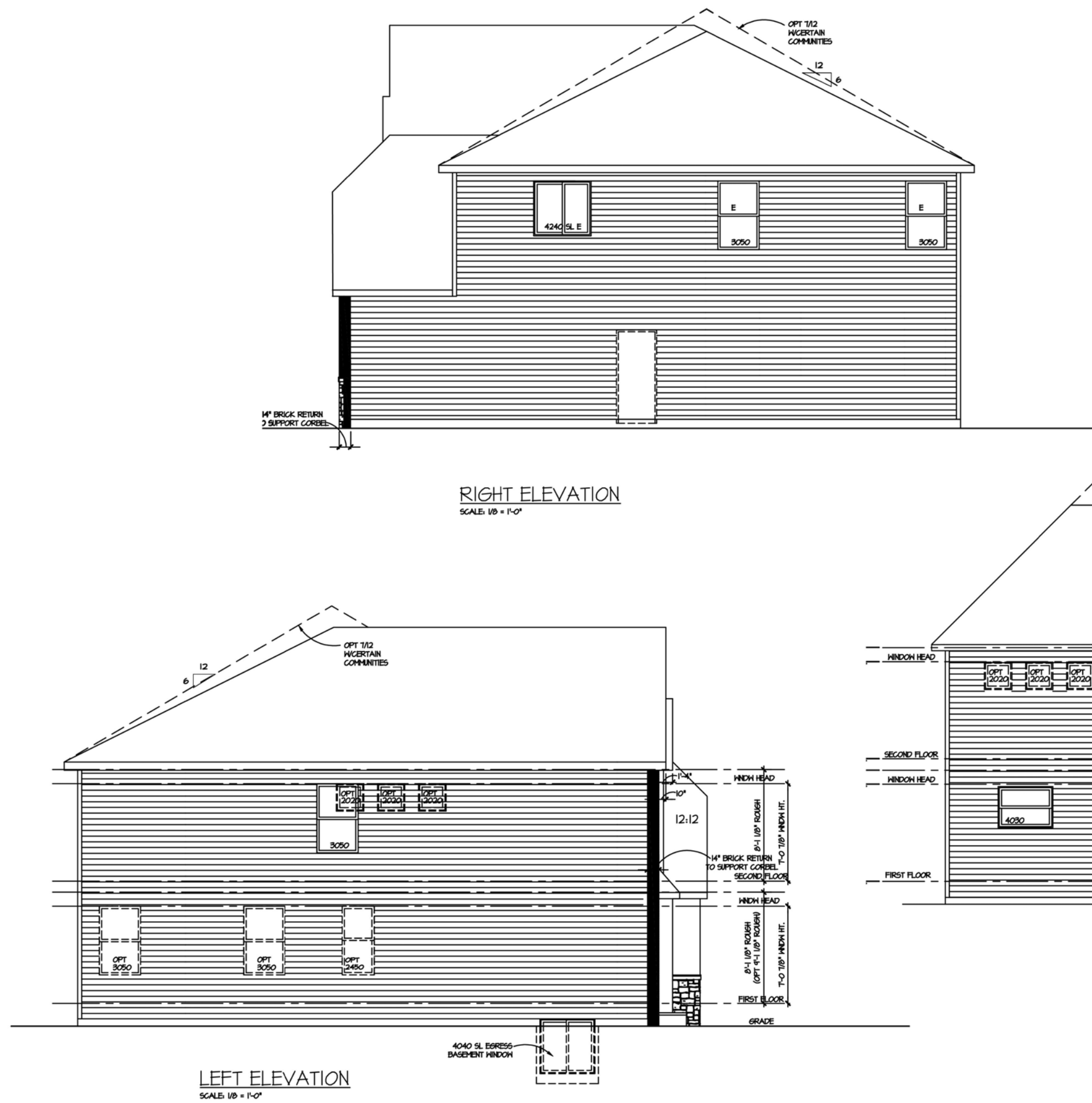
03-07-2025: PER TWP
04-21-2025: PER TWP

REVISIONS
NA
NA
N/A

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P.M.	MB		
BOOK	--		
JOB	16000819		
SHEET NO.	42		

TYPICAL ELEVATIONS AND FLOORPLANS SHOWN - FOR REPRESENTATIVE PURPOSES ONLY

\\MAIN\PROJECTS\16000819\DWG\PLAN SET\SITE - FINAL.PLC 3/16/2025 4:04 PM BRYAN KAMPTER

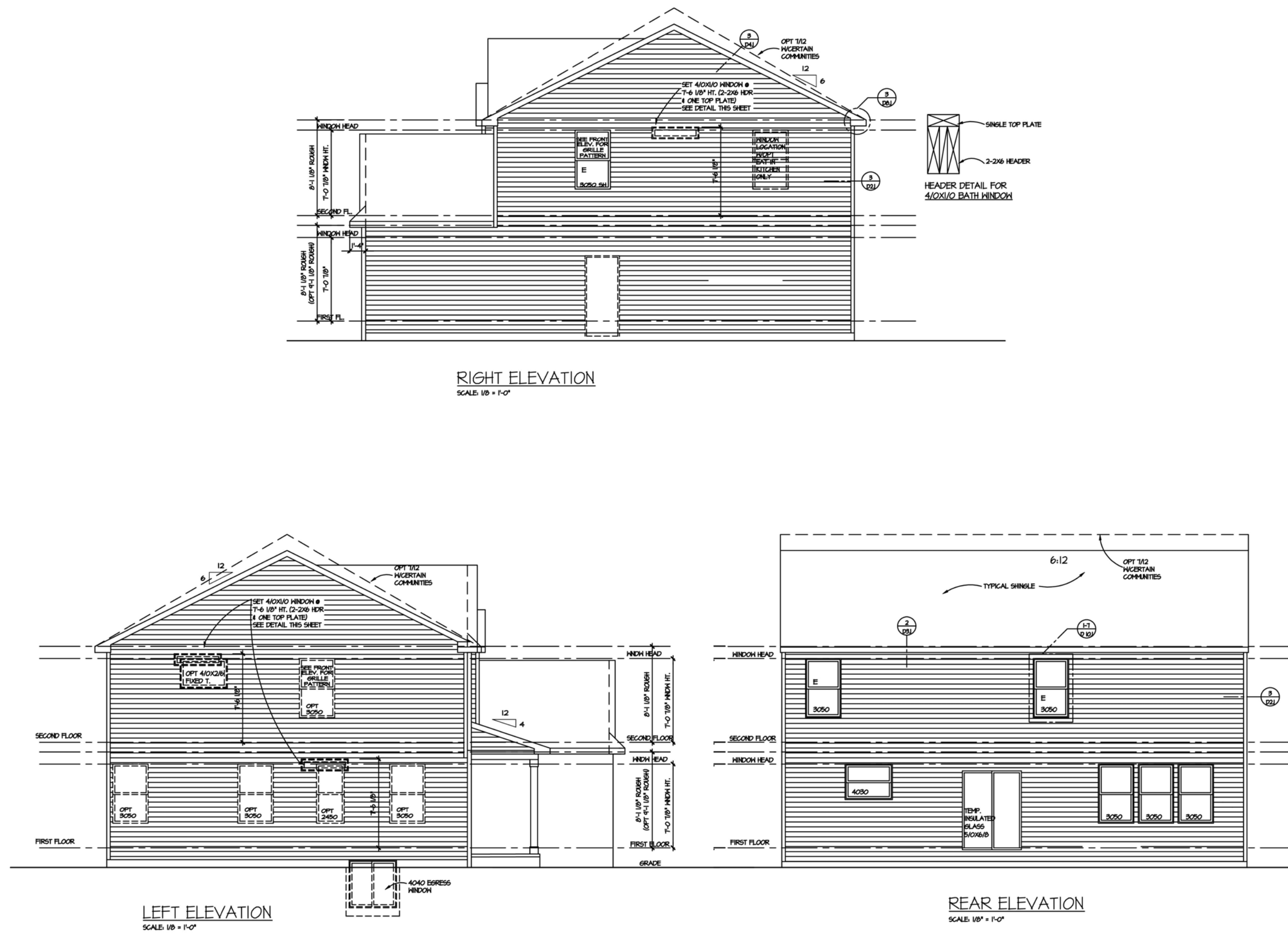


AUSTIN E SIDE AND REAR ELEVATIONS

Lombardo
ARCHITECTS
13001 D MILL RD, SUITE 200
SHELBY TOWNSHIP, MI 48153

PLAN NAME: THE AUSTIN
JOB NUMBER: 4862-01B
SHEET NO. M
5.2.1

SHEET SCALE: (UNLESS NOTED OTHERWISE) 1/8" = 1'-0" ON 11X17 PAPER, 1/4" = 1'-0" ON 24X36 PAPER WHEN PRINTED AT 200%

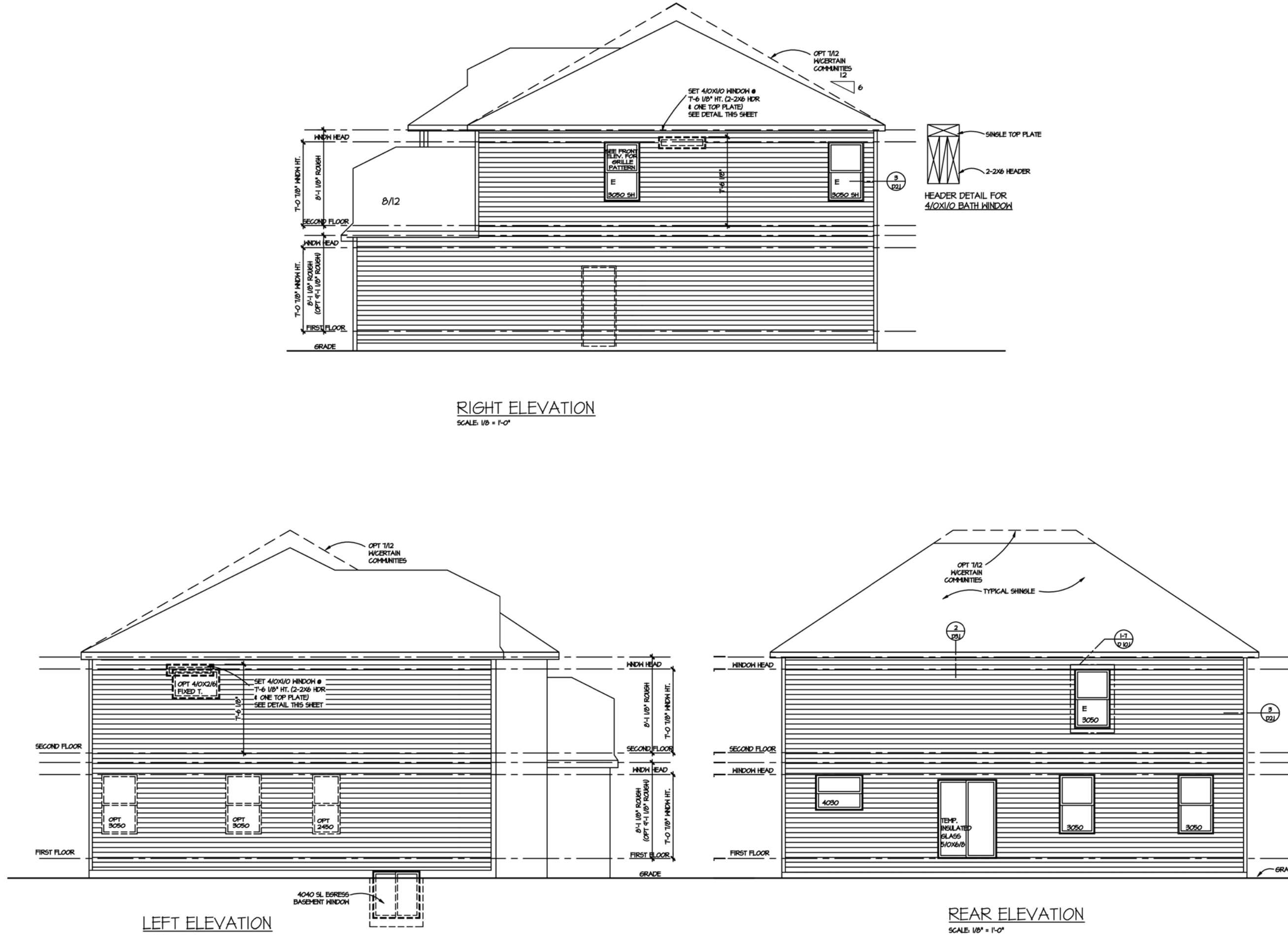


BLOOMINGTON C SIDE AND REAR ELEVATIONS

Lombardo
ARCHITECTS
13001 D MILL RD, SUITE 200
SHELBY TOWNSHIP, MI 48153

PLAN NAME: THE BLOOMINGTON
JOB NUMBER: 5103-111B
SHEET NO. M
5.2.1

SHEET SCALE: (UNLESS NOTED OTHERWISE) 1/8" = 1'-0" ON 11X17 PAPER, 1/4" = 1'-0" ON 24X36 PAPER WHEN PRINTED AT 200%

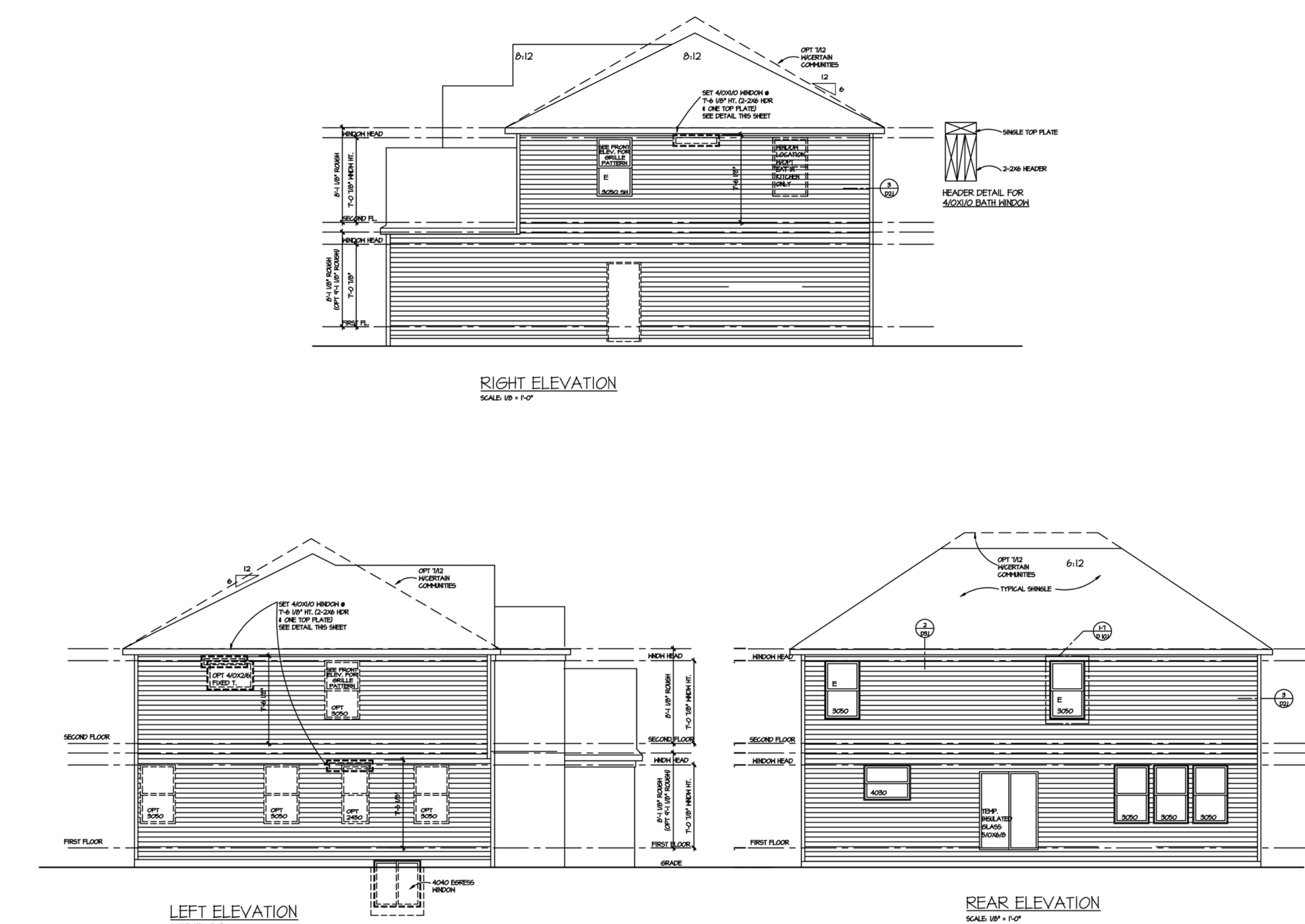


COLUMBIA D SIDE AND REAR ELEVATIONS

Lombardo
ARCHITECTS
13001 D MILL RD, SUITE 200
SHELBY TOWNSHIP, MI 48153

PLAN NAME: THE COLUMBIA
JOB NUMBER: 4945-61B
SHEET NO. M
5.2.1

SHEET SCALE: (UNLESS NOTED OTHERWISE) 1/8" = 1'-0" ON 11X17 PAPER, 1/4" = 1'-0" ON 24X36 PAPER WHEN PRINTED AT 200%



BLOOMINGTON E SIDE AND REAR ELEVATIONS

Lombardo
ARCHITECTS
13001 D MILL RD, SUITE 200
SHELBY TOWNSHIP, MI 48153

PLAN NAME: THE BLOOMINGTON
JOB NUMBER: 5103-111B
SHEET NO. M
5.2.1

SHEET SCALE: (UNLESS NOTED OTHERWISE) 1/8" = 1'-0" ON 11X17 PAPER, 1/4" = 1'-0" ON 24X36 PAPER WHEN PRINTED AT 200%

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CLIENT: SE MICHIGAN LAND HOLDING LLC
PROSPECT POINTE WEST
FINAL SITE PLAN - PHASE 3
SIDE AND REAR ELEVATIONS

SECTION 33
TOWN 2 SOUTH, RANGE 7 EAST
SUPERIOR TOWNSHIP
WASHTENAW COUNTY, MICHIGAN

DATE: NOVEMBER 22, 2024

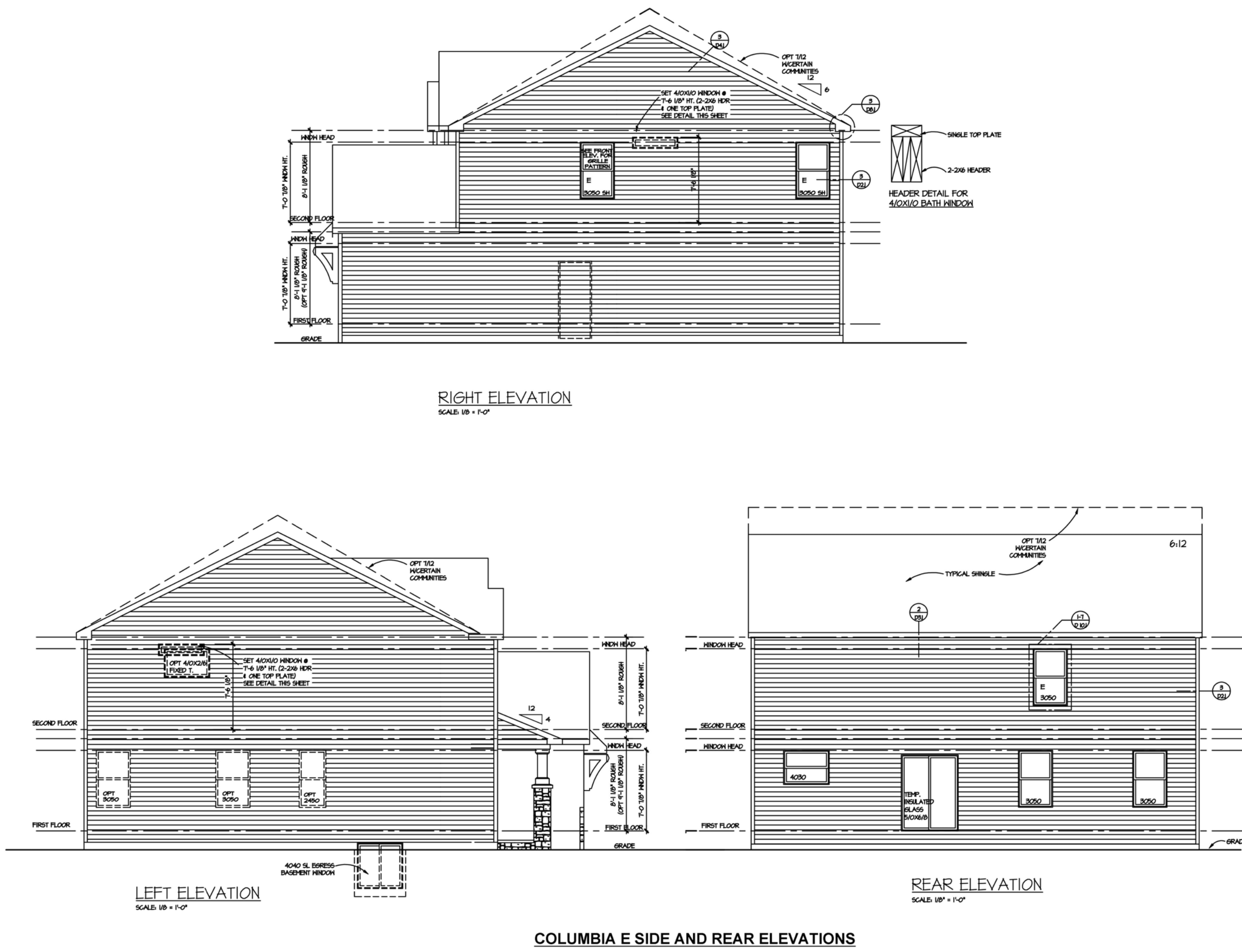
03-07-2025: PER TWP
04-21-2025: PER TWP

REVISIONS

NA	NA
N/A	

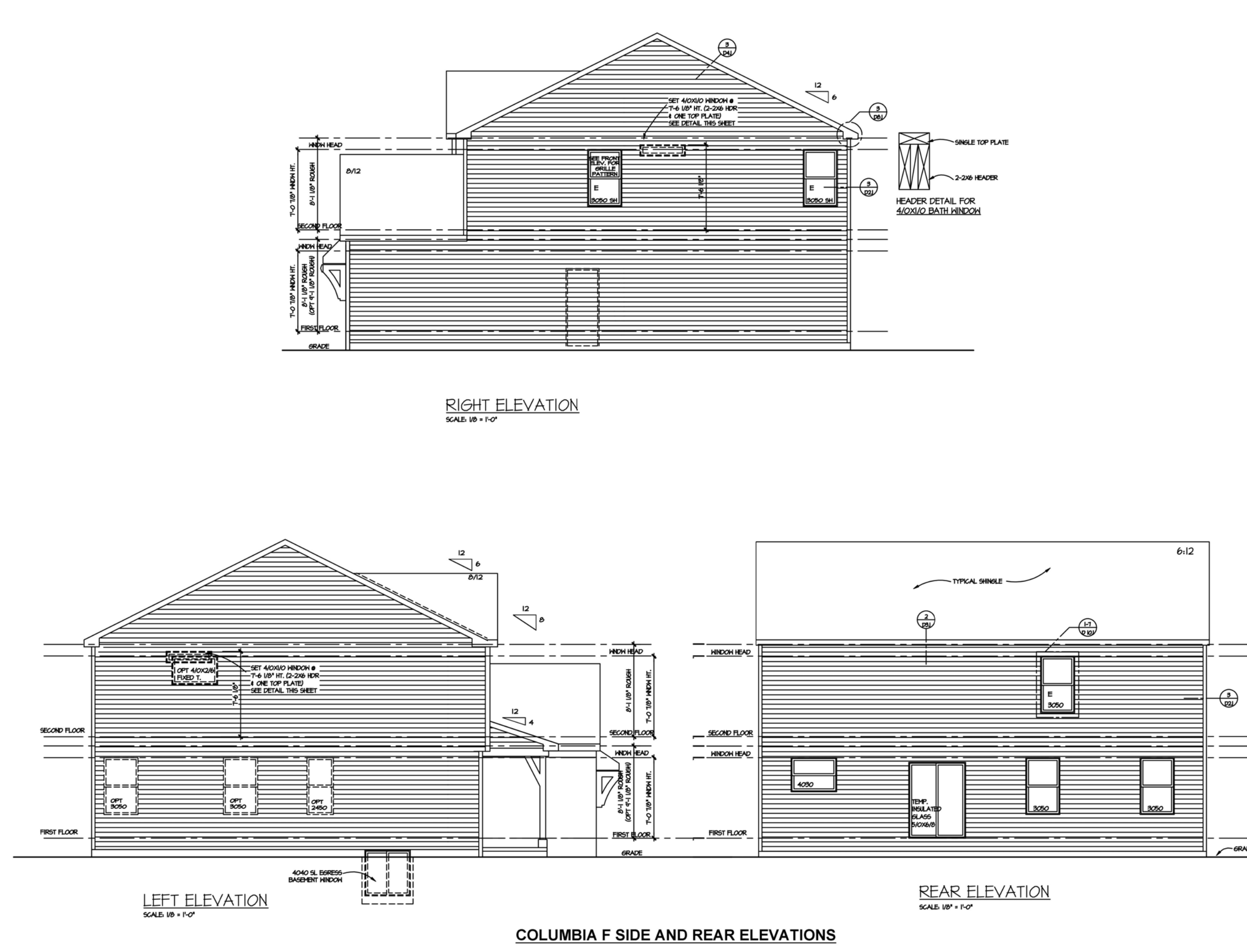
DR. SK CH. SS
P.M. MB
BOOK --
JOB 16000819
SHEET NO. 43

\\MAIN\PROJECTS\16000819\DWG\PLAN SET\SITE - FINAL.PDW 3/16/2025 4:08 PM BRYAN KAMPTER



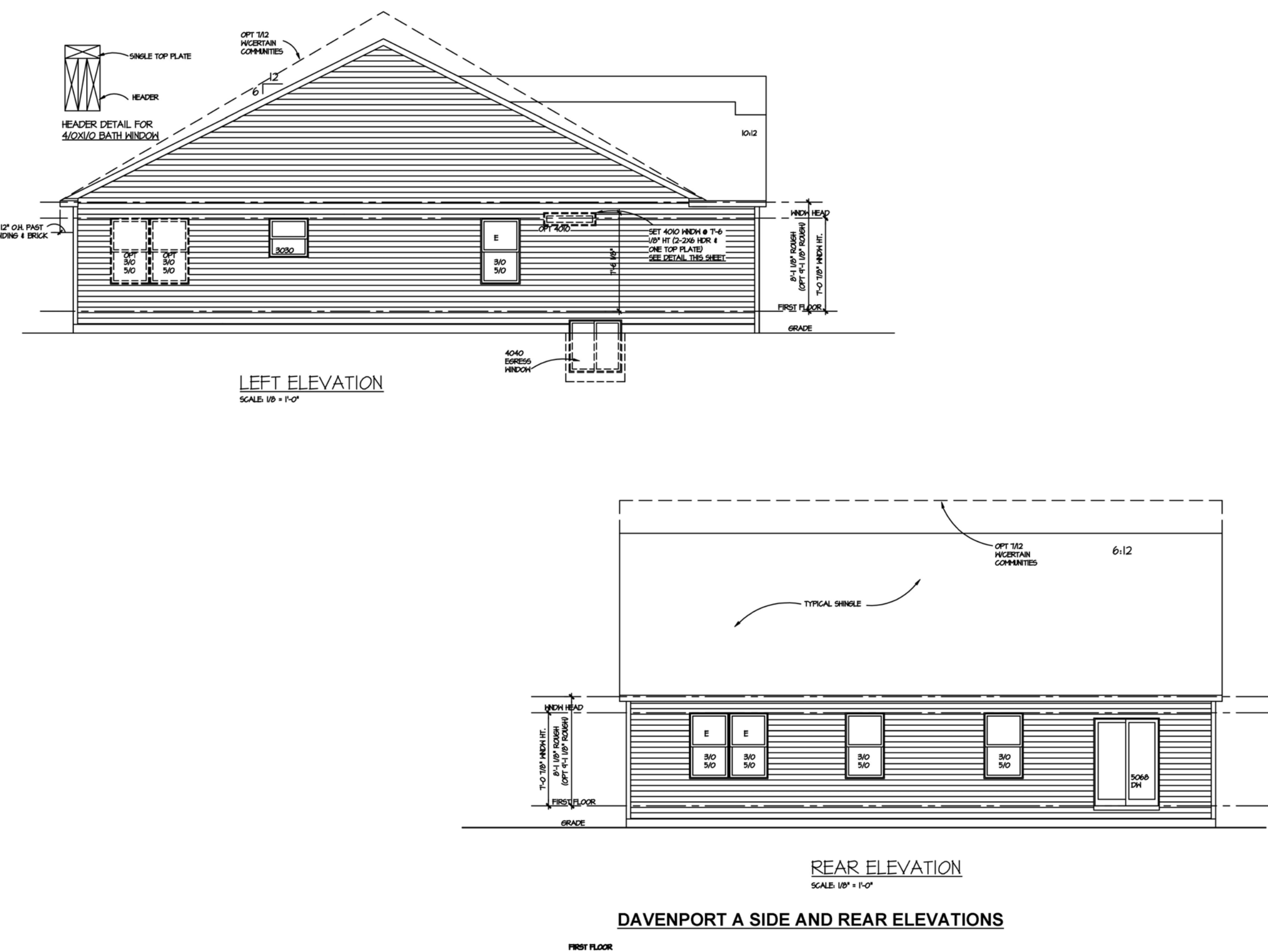
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THE COLUMBIA	10/15/2024	BR	BR	BR	2	INITIALS
THE COLUMBIA	10/15/2024	BR	BR	BR	3	INITIALS
THE COLUMBIA	10/15/2024	BR	BR	BR	4	INITIALS
THE COLUMBIA	10/15/2024	BR	BR	BR	5	INITIALS
THE COLUMBIA	10/15/2024	BR	BR	BR	6	INITIALS
THE COLUMBIA	10/15/2024	BR	BR	BR	7	INITIALS
THE COLUMBIA	10/15/2024	BR	BR	BR	8	INITIALS
THE COLUMBIA	10/15/2024	BR	BR	BR	9	INITIALS
THE COLUMBIA	10/15/2024	BR	BR	BR	10	INITIALS

SHEET SCALE: (UNLESS NOTED OTHERWISE) 1/8" = 1'-0" ON 11X17 PAPER, 1/4" = 1'-0" ON 24X36 PAPER WHEN PRINTED AT 200%



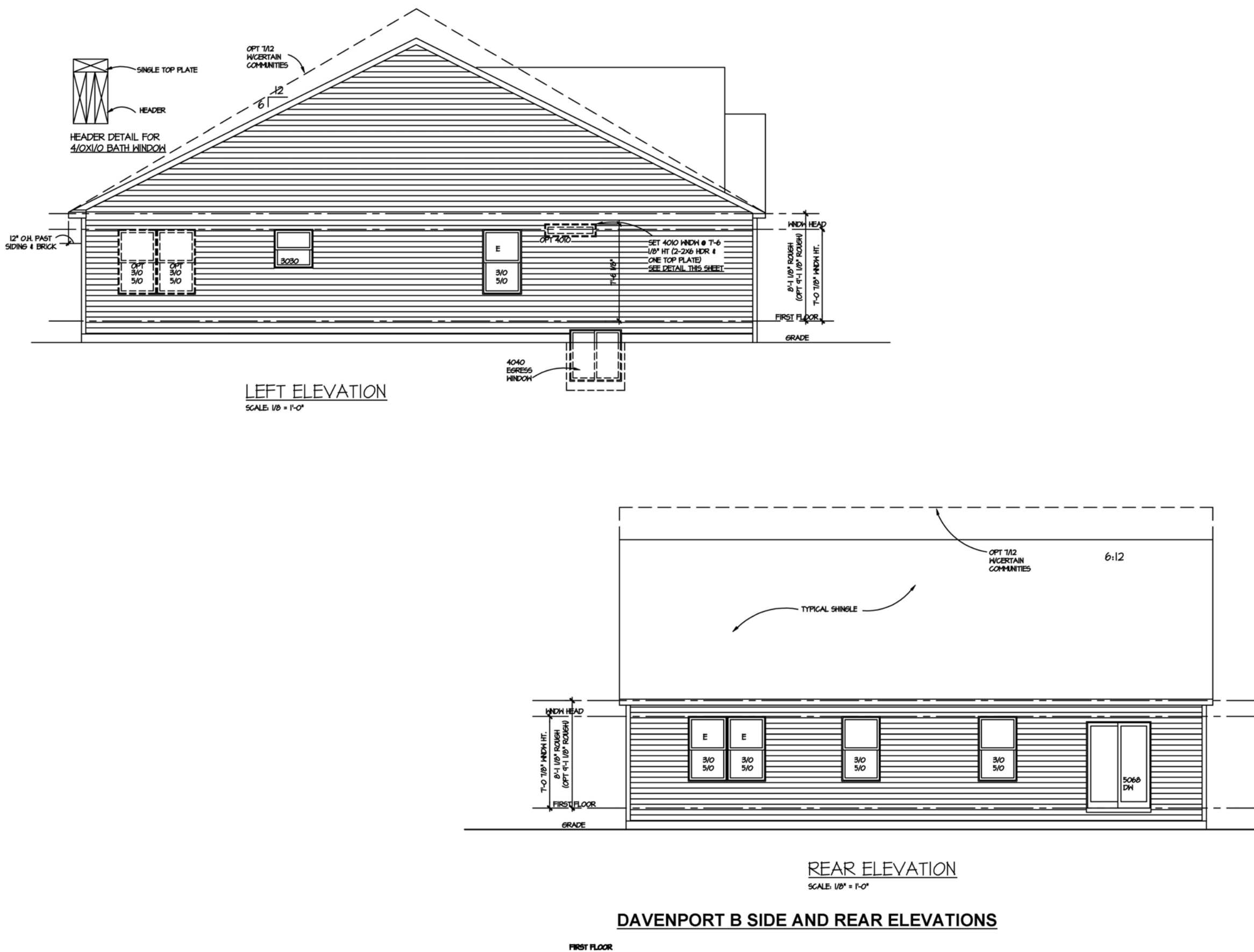
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THE COLUMBIA	10/15/2024	BR	BR	BR	4	INITIALS
THE COLUMBIA	10/15/2024	BR	BR	BR	5	INITIALS
THE COLUMBIA	10/15/2024	BR	BR	BR	6	INITIALS
THE COLUMBIA	10/15/2024	BR	BR	BR	7	INITIALS
THE COLUMBIA	10/15/2024	BR	BR	BR	8	INITIALS
THE COLUMBIA	10/15/2024	BR	BR	BR	9	INITIALS
THE COLUMBIA	10/15/2024	BR	BR	BR	10	INITIALS

SHEET SCALE: (UNLESS NOTED OTHERWISE) 1/8" = 1'-0" ON 11X17 PAPER, 1/4" = 1'-0" ON 24X36 PAPER WHEN PRINTED AT 200%



PLAN NAME	DATE	BY	CHK	APP	REV	DESCRIPTION
THE DAVENPORT	10/15/2024	BR	BR	BR	1	INITIALS
THE DAVENPORT	10/15/2024	BR	BR	BR	2	INITIALS
THE DAVENPORT	10/15/2024	BR	BR	BR	3	INITIALS
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THE DAVENPORT	10/15/2024	BR	BR	BR	5	INITIALS
THE DAVENPORT	10/15/2024	BR	BR	BR	6	INITIALS
THE DAVENPORT	10/15/2024	BR	BR	BR	7	INITIALS
THE DAVENPORT	10/15/2024	BR	BR	BR	8	INITIALS
THE DAVENPORT	10/15/2024	BR	BR	BR	9	INITIALS
THE DAVENPORT	10/15/2024	BR	BR	BR	10	INITIALS

SHEET SCALE: (UNLESS NOTED OTHERWISE) 1/8" = 1'-0" ON 11X17 PAPER, 1/4" = 1'-0" ON 24X36 PAPER WHEN PRINTED AT 200%



PLAN NAME	DATE	BY	CHK	APP	REV	DESCRIPTION
THE DAVENPORT	10/15/2024	BR	BR	BR	1	INITIALS
THE DAVENPORT	10/15/2024	BR	BR	BR	2	INITIALS
THE DAVENPORT	10/15/2024	BR	BR	BR	3	INITIALS
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THE DAVENPORT	10/15/2024	BR	BR	BR	7	INITIALS
THE DAVENPORT	10/15/2024	BR	BR	BR	8	INITIALS
THE DAVENPORT	10/15/2024	BR	BR	BR	9	INITIALS
THE DAVENPORT	10/15/2024	BR	BR	BR	10	INITIALS

SHEET SCALE: (UNLESS NOTED OTHERWISE) 1/8" = 1'-0" ON 11X17 PAPER, 1/4" = 1'-0" ON 24X36 PAPER WHEN PRINTED AT 200%

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734.994.4000

SECTION 33

TOWN 2 SOUTH, RANGE 7 EAST

SUPERIOR TOWNSHIP

WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC
PROSPECT POINTE WEST
FINAL SITE PLAN - PHASE 3

DATE
NOVEMBER 22, 2024

03-07-2025: PER TWP
04-21-2025: PER TWP

REVISIONS

NA

NA

N/A

DR. SK CH. SS

P.M. MB

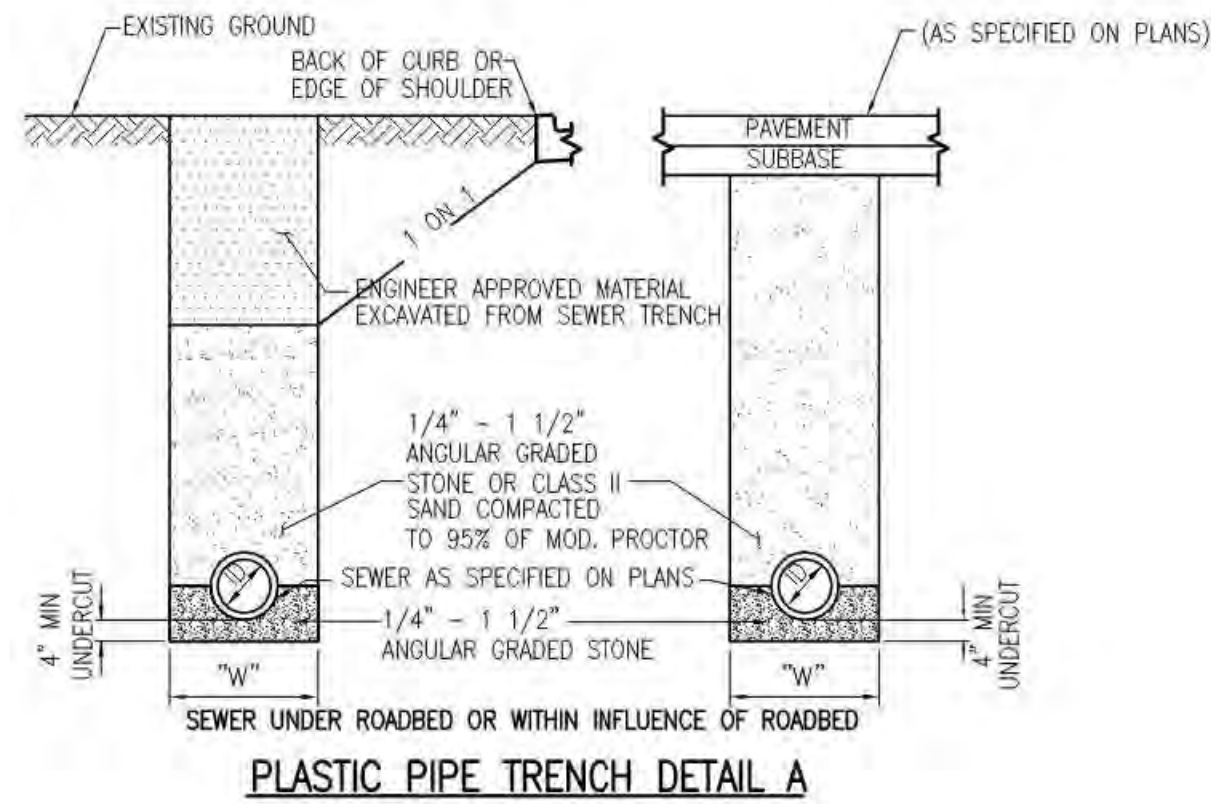
BOOK --

JOB 16000819

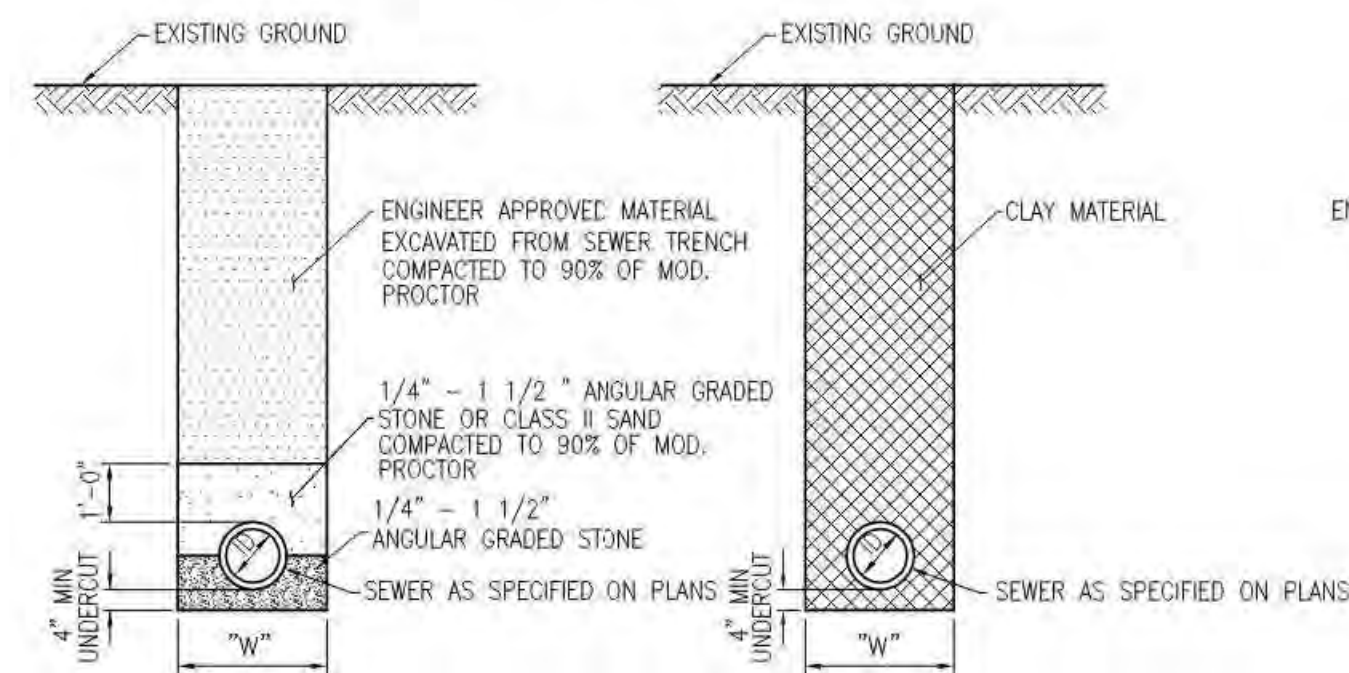
SHEET NO.

44

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PLASTIC PIPE TRENCH DETAIL A



PLASTIC PIPE TRENCH DETAIL B

PLASTIC PIPE CLAY BACKFILL TRENCH DETAIL

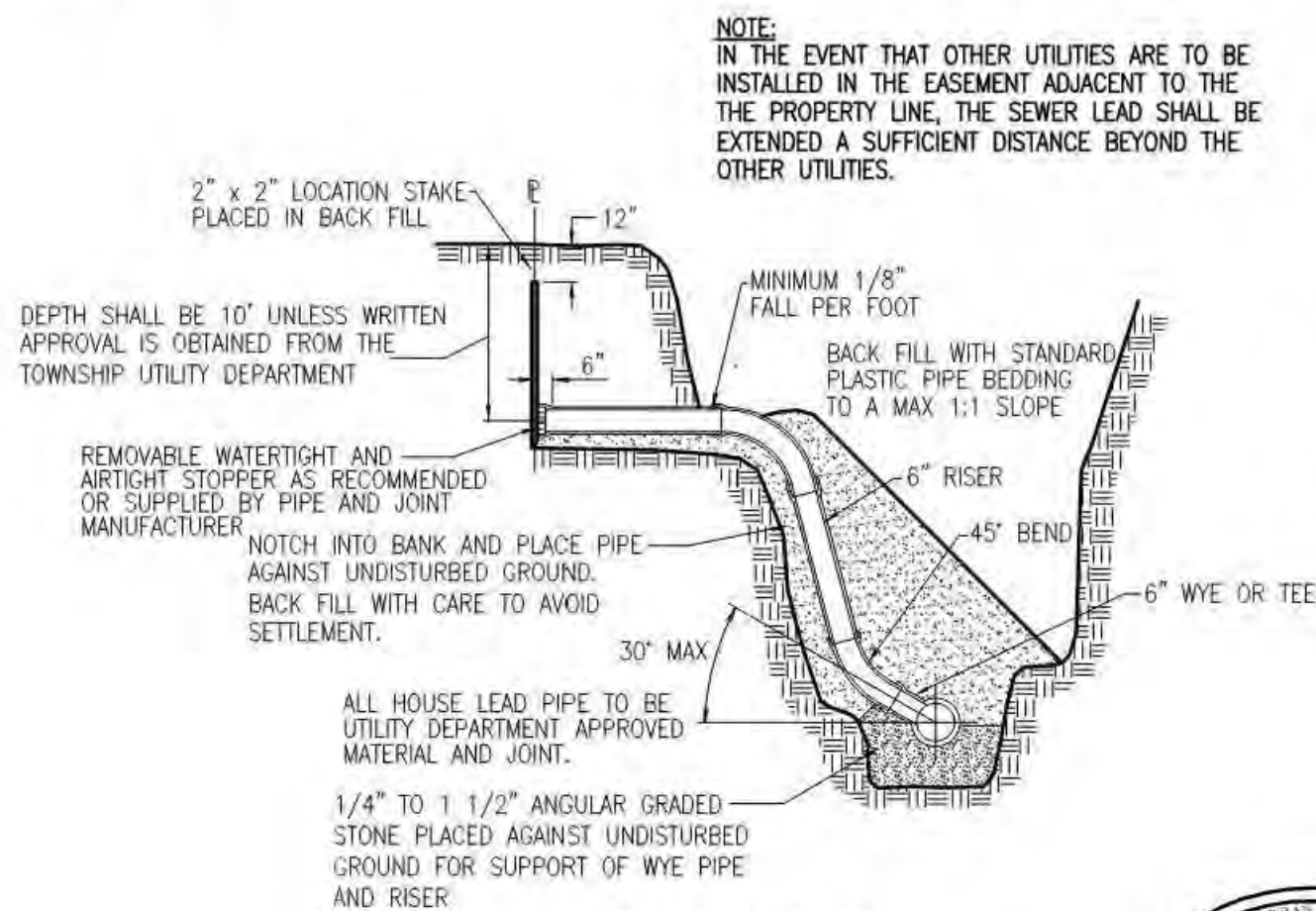
THE FOLLOWING ARE MINIMUM TRENCH WIDTHS:

I.D. PIPE SIZE (INCHES)	LESS THAN 18	21	24	30	36
"W" TRENCH WIDTH (FEET)	3.0	3.5	4.0	5.0	6.0

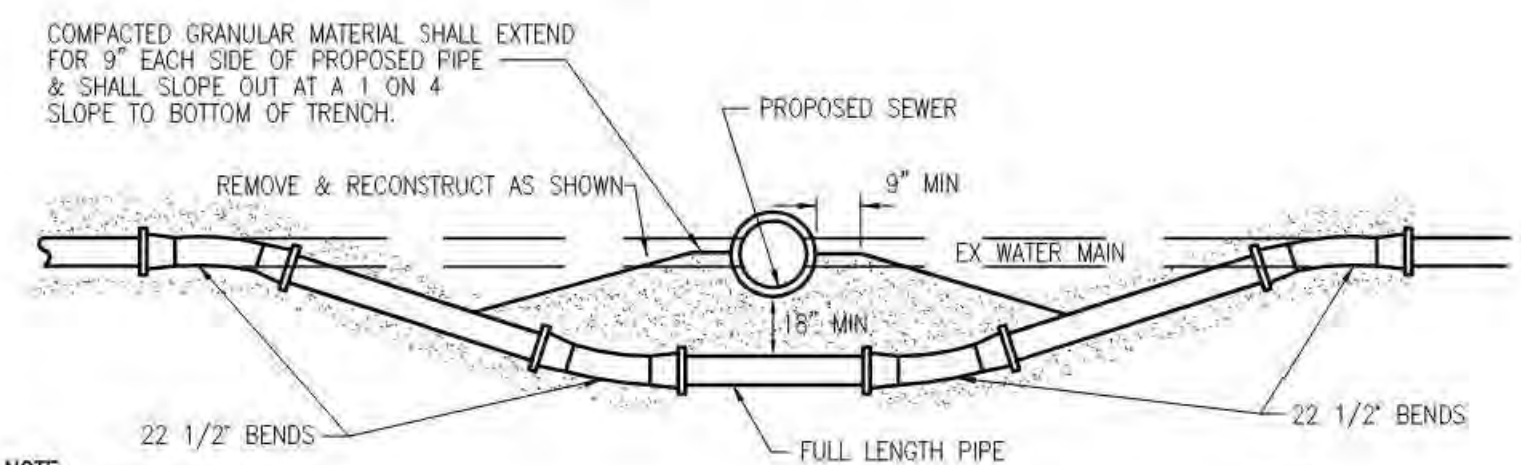
I.D. PIPE SIZE (INCHES)	42	48	54	60	66	72	78
"W" TRENCH WIDTH (FEET)	7.0	8.0	9.5	10.0	10.5	11.0	11.5

I.D. PIPE SIZE (INCHES)	84	90	96	102	108
"W" TRENCH WIDTH (FEET)	12.0	12.5	13.0	13.5	14.0

ESTIMATED PAVEMENT REMOVAL WIDTH IS TO BE TRENCH WIDTH "W" PLUS 1' EACH SIDE OF THE TRENCH (6" MINIMUM).



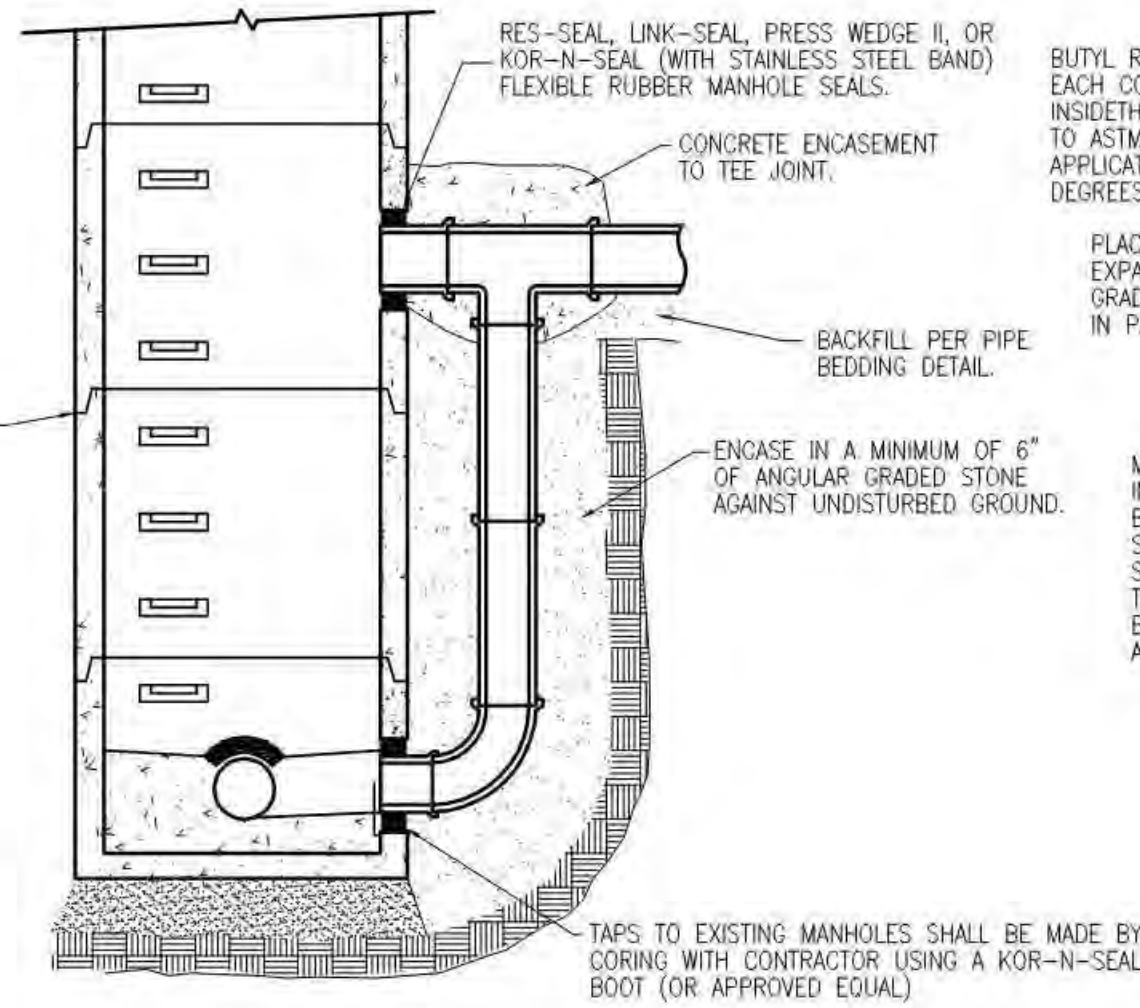
HOUSE LEAD DETAIL



RELOCATION OF WATER MAIN, SANITARY OR STORM

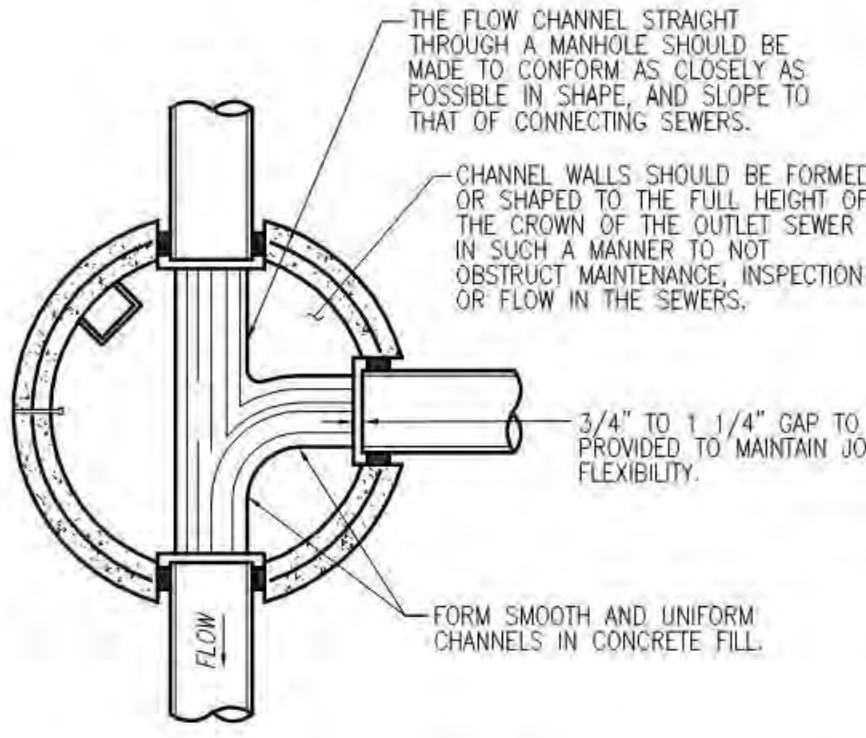
NOTE: FOR BEDDING OF WATER MAIN SEE STANDARD SAND ENCLOSURE DETAIL "B" THIS SHEET.

NOTE: FOR ANCHORAGE DETAILS AT BENDS SEE WATER DETAIL SHEET - W.D.1

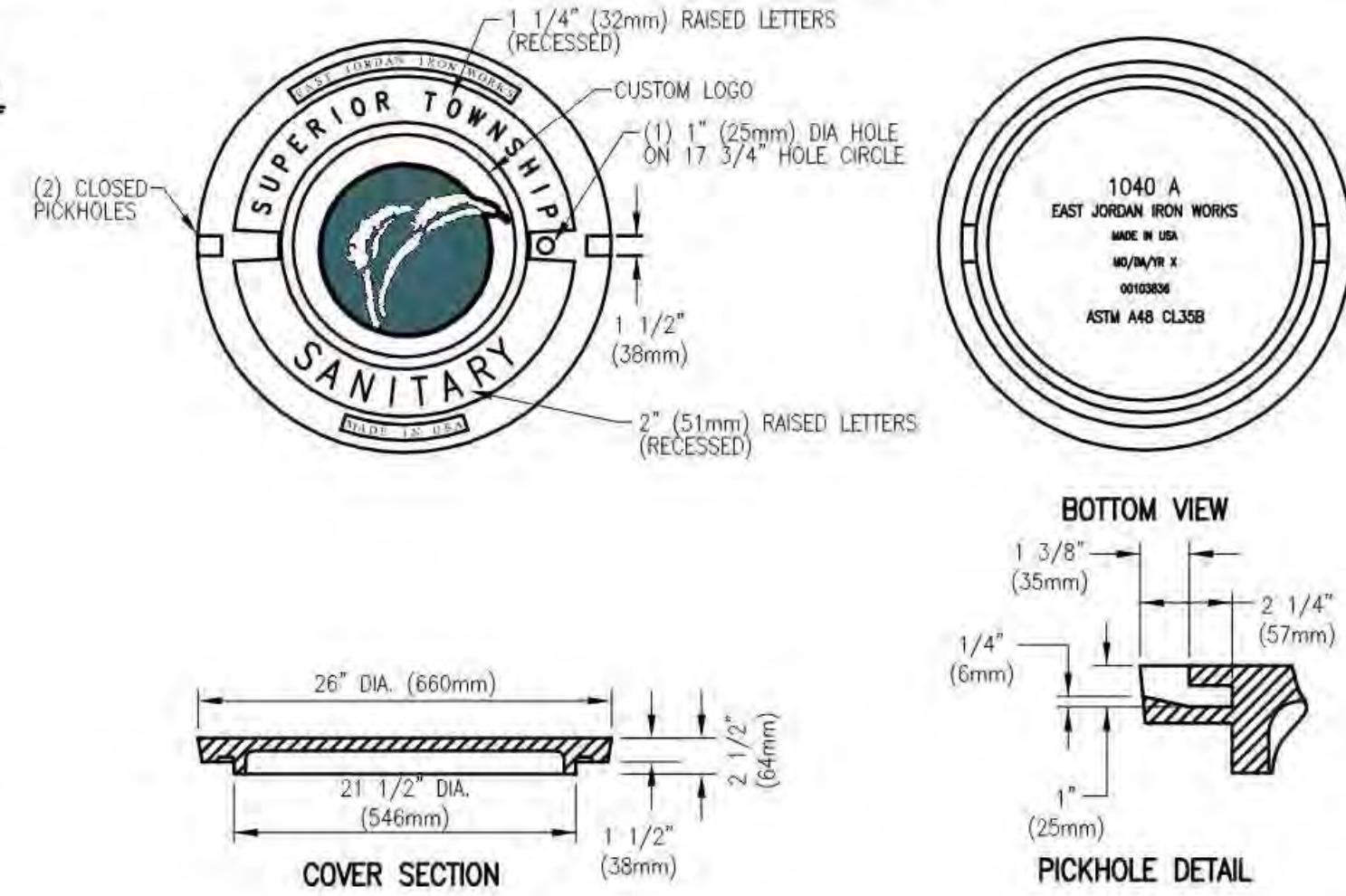


EXTERNAL DROP CONNECTION (HYDROGEN SULFIDE PROTECTION)

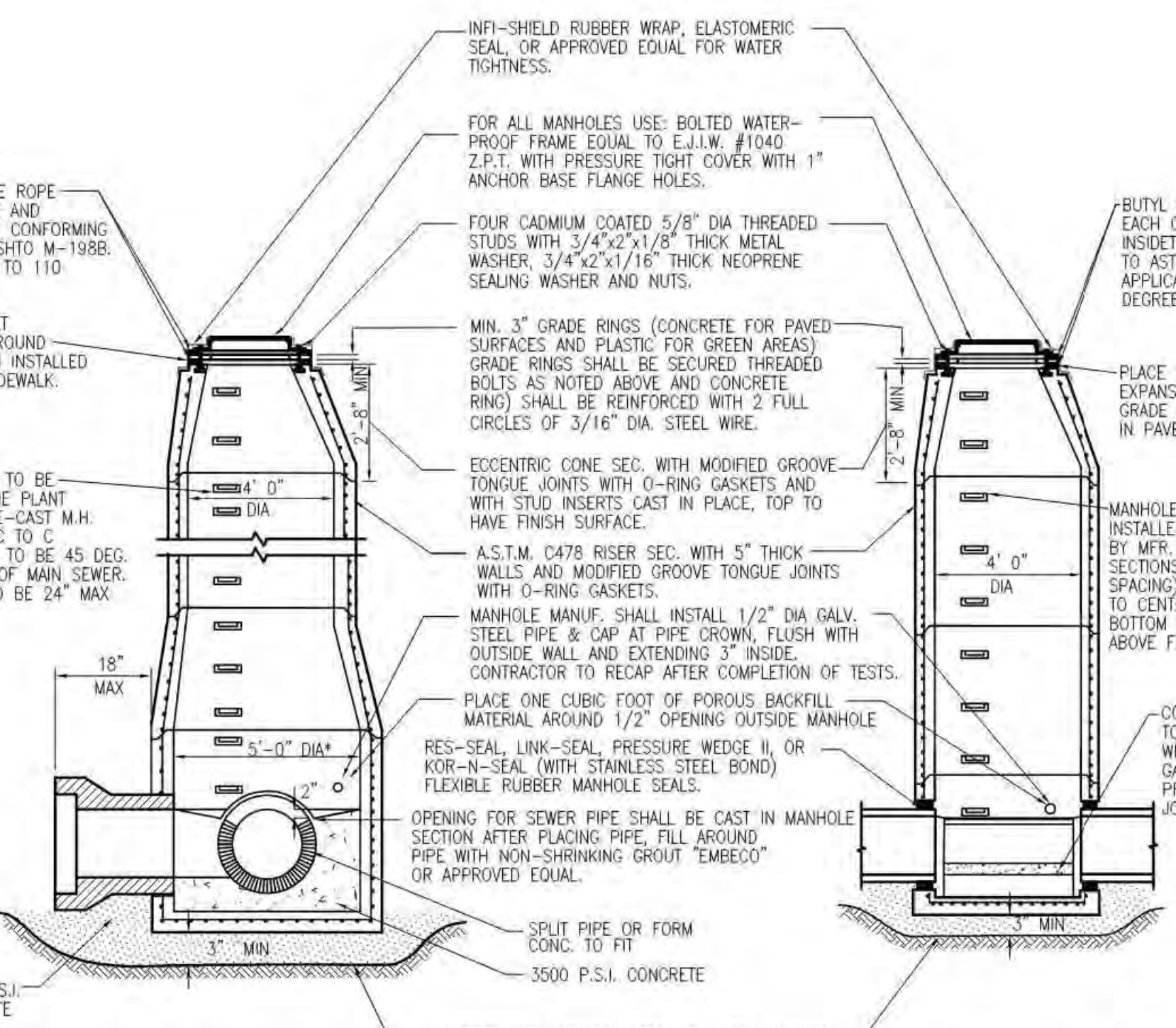
DIA OF SEWER	DIA OF DROP CONNECTION
8" & 10"	8"
12", 15" & 18"	12"
21", 24" & 30"	18"
36" & 42"	24"



CHANNEL DETAIL

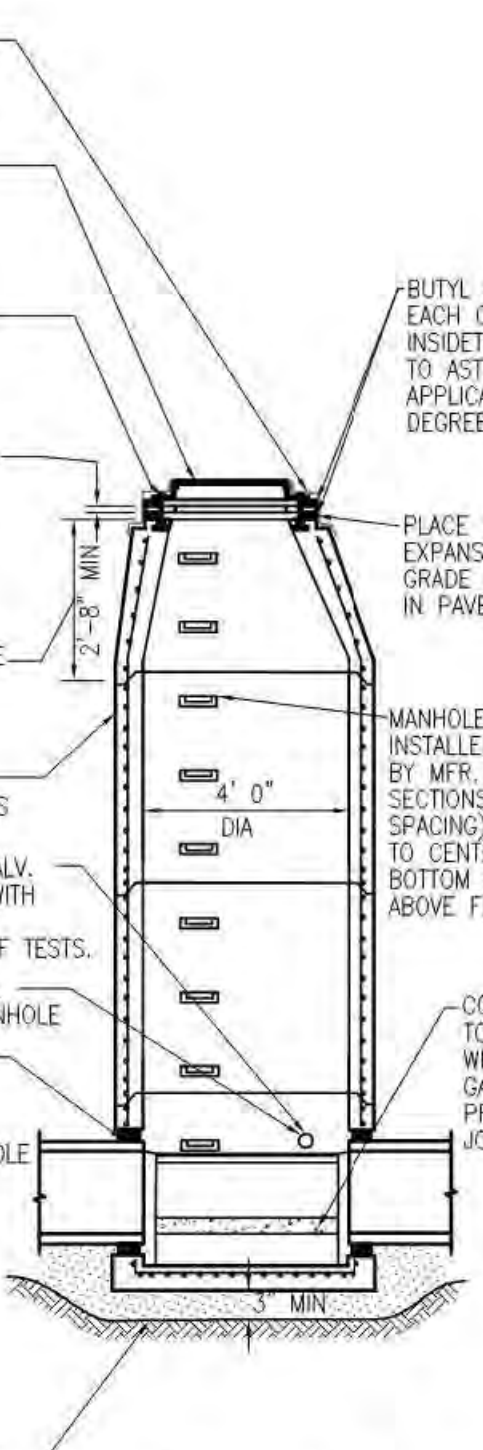


STANDARD COVER & FRAME

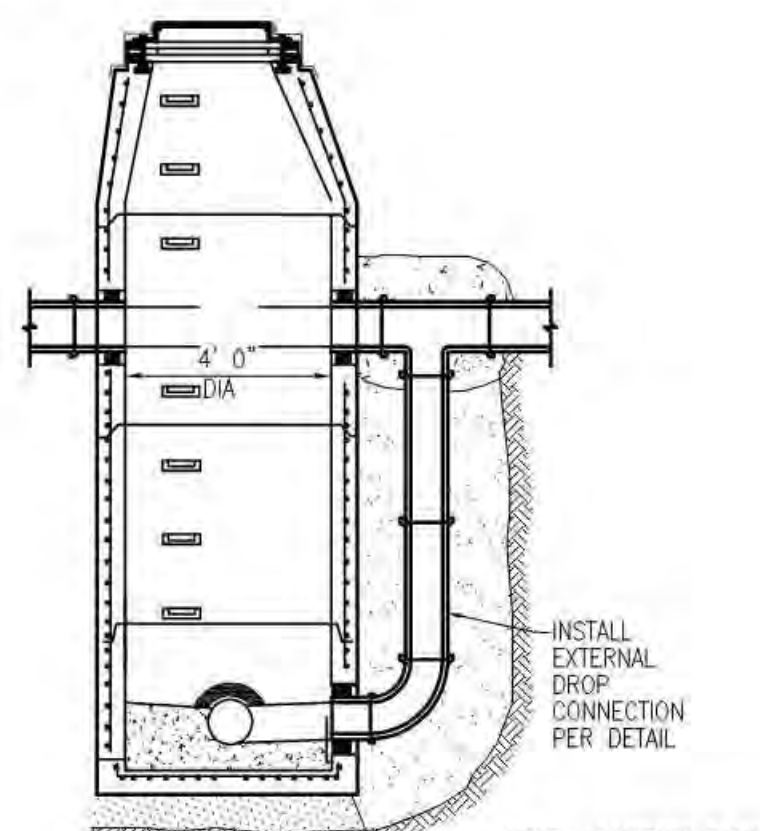


STANDARD SAN. MH. FOR SEWERS 24" THRU 42"

* MANHOLE DIAMETER TO MEET MANUFACTURERS REQUIREMENTS FOR BOTH STRAIGHT THRU & RIGHT ANGLE INSTALLATION



STANDARD SAN. MH. FOR SEWERS 8" THRU 21"



SANITARY MH. BUILT OVER EX SANITARY LINE (SAME AS STANDARD SAN. MH EXCEPT AS INDICATED HERE) (HYDROGEN SULFIDE PROTECTION)

SANITARY SEWER CONSTRUCTION NOTES

1. ALL MANHOLE RIMS SHALL BE SET TO GRADE AS FURNISHED BY THE ENGINEER.
2. RISERS ON SANITARY SEWERS SHALL BE INSTALLED WHERE SEWER ARE OVER 10' DEEP TO A DEPTH OF 10'.
3. PLACE ONE 6" WYE FOR EACH LOT ON SANITARY SEWERS UNLESS OTHERWISE SPECIFIED.
4. ALL MANHOLES SHALL USE ECCENTRIC CONES PLACED TOWARD THE PROPERTY LINE UNLESS OTHERWISE NOTED.
5. INFILTRATION FOR ANY SECTION OF SEWERS BETWEEN MANHOLES SHALL NOT EXCEED 200 GALLONS PER INCH IN DIAMETER PER MILE OF SEWER PER 24 HRS.
6. NO FOOTING OR ROOF DRAINS SHALL BE CONNECTED TO THE PROPOSED SEWER.
7. DIFFERENTIAL OF EXCAVATION AROUND EXISTING MANHOLES SHALL NOT EXCEED 6 FEET.
8. NO CONNECTION RECEIVING STORM WATER, SURFACE WATER, OF GROUND WATER SHALL BE MADE TO SANITARY SEWERS.
9. ALL SEWERS SHALL BE SUBJECT TO TELEVISION INSPECTION AND AIR INFILTRATION OR EXFILTRATION TESTS, OR A COMBINATION OF SAME WITHIN 30 DAY OF BACKFILL, PRIOR TO ACCEPTANCE. ALL SEWERS OVER 24" DIAMETER SHALL BE SUBJECT TO INFILTRATION TESTS. ALL SEWERS OF 24" DIAMETER OR SMALLER, WHERE THE GROUND WATER LEVEL ABOVE THE TOP OF THE SEWER IS OVER 2 FEET, SHALL BE SUBJECT TO INFILTRATION TESTS. ALL SEWERS OF 24" DIAMETER OR LESS, WHERE THE GROUND WATER LEVEL ABOVE THE TOP OF THE SEWER IS 2 FEET OR LESS, SHALL BE SUBJECT TO AIR TESTS OR EXFILTRATION TESTS.
10. ALL SEWER SYSTEM CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND GENERAL SPECIFICATIONS OF THE AGENCY OR AGENCIES HAVING JURISDICTION OF THE SEWER SYSTEM AND CONSTRUCTION AREA.
11. ALL SEWERS SHALL BE TELEVIEWED, WITH TEST RESULTS APPROVED BY THE TOWNSHIP UTILITY DEPARTMENT PRIOR TO PLACING THE SEWER IN SERVICE.
12. NO SEWER SHALL BE CONSTRUCTED LESS THAN 8" IN DIAMETER.
13. ALL STUBS SHALL HAVE A WATER AND AIR TIGHT BULKHEAD.
14. ALL ELEVATIONS ARE BASED ON NAVD 88 (ORIGINAL).
15. THE MINIMUM DIAMETER OF MANHOLES SHALL BE 48 INCHES, LARGER DIAMETERS ARE PREFERABLE FOR LARGER DIAMETER SEWERS. A MINIMUM ACCESS DIAMETER OF 22 INCHES SHALL BE PROVIDED.
16. CONTRACTOR SHALL PERFORM 9 POINT MANHOLE TESTING PER SECTION IX, OPEN CUT SEWERS OF THE SPECIFICATIONS.
17. SANITARY SEWER SHALL BE COMPOSITE ABS OR PVC TRUSS PIPE CONFORMING TO REQUIREMENTS OF ASTM D-2680 OR PVC PIPE CONFORMING TO ASTM D-3034 (SDR 26) MAY BE USED WHERE DEPTH IS LESS THAN 15'.
18. JOINTS FOR PLASTIC PIPE SHALL BE PUSH-ON TYPE OR IN SPECIAL APPLICATIONS, SOLVENT JOINTS, WHERE SPECIFIED, SHALL CONFORM TO ASTM D-2855.
19. JOINTS ON TRUSS PIPE SHALL CONSIST OF ABS PLASTIC COUPLINGS CHEMICALLY CEMENTED TO THE ENDS OF THE PIPE BEING CONNECTED. SOLVENTS AND METHODS USED IN MAKING THE CHEMICAL BOND SHALL BE IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS, AND THE INSTALLATION TECHNIQUE SHALL CONFORM TO ASTM D - 2321, OR LATEST REVISION.
20. MANHOLE STEPS TO BE PLASTIC COATED MEETING THE REQUIREMENTS IN ASTM D2146, TYPE II, GRADE 4810B, M.A. INDUSTRIES P.S.I. POLYPROPYLENE, OR E.L.I.W. 8502.
21. A VIDEOTAPE (WITH LOG AND LEAD LOCATIONS) SHALL BE SUBMITTED AND APPROVED BY THE TOWNSHIP PRIOR TO THE FINAL ACCEPTANCE. SAID VIDEOTAPE SHALL BE PERFORMED PRIOR TO FINAL ACCEPTANCE OF THE SYSTEM.
22. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL TELEPHONE MISS DIG (800-482-7171) A MINIMUM OF 30 DAYS AFTER DAYS AFTER COMPLETION OF BACKFILL FOR THE LOCATION OF UNDER GROUND PIPELINE AND CABLE FACILITIES AND SHALL ALSO NOTIFY REPRESENTATIVES.
23. MINIMUM DEPTH TO TOP OF PIPE SHALL BE 4 FEET.
24. THE MAXIMUM DEPTH TO INVERT OF ANY SANITARY SEWER SHALL NOT EXCEED THE DEPTH RECOMMENDED BY THE MANUFACTURER FOR EACH SIZE AND CLASS AND PIPE.
25. INLET AND OUTLET PIPES SHALL BE JOINED TO THE MANHOLE WITH A GASKETED FLEXIBLE WATER TIGHT CONNECTION THAT ALLOWS DIFFERENTIAL SETTLEMENT OF THE PIPE AND MANHOLE WALL TO TAKE PLACE.
26. A BENCH SHALL BE PROVIDED ON EACH SIDE OF ANY MANHOLE CHANNEL WHEN THE PIPE DIAMETER IS LESS THAN THE MANHOLE DIAMETER. THE BENCH SHOULD BE SLOPED NO LESS THAN 1/2 INCH PER FOOT. NO LATERAL SEWER, SERVICE CONNECTION, OR DROP MANHOLE PIPE SHALL DISCHARGE ONTO THE SURFACE OF THE BENCH.
27. WHERE WORK IS TO BE PERFORMED IN THE VICINITY OF A SUPERIOR TOWNSHIP MAIN, CONTRACTOR SHALL NOTIFY THE SUPERIOR TOWNSHIP UTILITY DEPARTMENT AT (734) 480-5500 AT LEAST 3 WORKING DAYS PRIOR TO START OF CONSTRUCTION AS WELL AS TOWNSHIP ENGINEER TO SCHEDULE INSPECTION.
28. AN ELASTOMERIC SEAL OR RUBBER WRAP SHALL BE PLACED AROUND EACH MANHOLE FRAME AND CONE SECTION FOR WATER TIGHTNESS.



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CHARTER TOWNSHIP OF SUPERIOR
STANDARD SANITARY DETAILS

SANITARY SEWER ACCEPTANCE TESTS

GENERAL

ALL SANITARY SEWERS SHALL BE SUBJECTED TO INFILTRATION, EXFILTRATION OR LOW PRESSURE AIR TESTS, OR A COMBINATION THEREOF PRIOR TO FINAL ACCEPTANCE BY THE TOWNSHIP. IN ADDITION, ALL PVC AND ABS PLASTIC SEWERS SHALL BE SUBJECTED TO DEFLECTION TESTING BY MEANS OF A NINE-POINT MANDREL DEFLECTION TEST.

THE TOWNSHIP'S INSPECTOR SHALL BE PRESENT FOR ALL TESTING OPERATIONS. IF TESTING IS TO BE DONE BY THE CONTRACTOR, ONLY PROPERLY TRAINED PERSONNEL SHALL BE ALLOWED TO PERFORM THE TESTING WORK. IF TESTING IS TO BE DONE BY MUNICIPAL AGENCY WORK FORCES, THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE INSPECTOR IN ORDER TO SCHEDULE THE TESTING.

IN THE EVENT THAT THE SEWER PIPE FAILS ANY OF THE REQUIRED TESTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING THE PIPE AND REPEATING THE TEST UNTIL ACCEPTABLE RESULTS ARE ACHIEVED. THE METHOD OF TESTING AND MEASUREMENT SHALL BE APPROVED BY THE TOWNSHIP. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT AND LABOR FOR MAKING THE TESTS.

INFILTRATION TEST

ALL SANITARY SEWERS THAT ARE OVER TWENTY-FOUR (24) INCHES IN DIAMETER SHALL BE SUBJECTED TO AN INFILTRATION TEST. ALSO, ALL SANITARY SEWERS THAT ARE TWENTY-FOUR (24) INCHES IN DIAMETER AND SMALLER AND WHERE THE GROUND WATER LEVEL IS MORE THAN TWO (2) FEET ABOVE THE TOP OF THE SEWER SHALL BE SUBJECTED TO AN INFILTRATION TEST.

THE INFILTRATION RATE FOR ALL SANITARY SEWERS SHALL NOT EXCEED A MAXIMUM OF TWO HUNDRED (200) GALLONS PER INCH DIAMETER PER MILE OF SEWER PER TWENTY-FOUR (24) HOURS.

LOW PRESSURE AIR TEST

ALL SANITARY SEWERS THAT ARE TWENTY-FOUR (24) INCHES IN DIAMETER OR SMALLER AND WHERE THE GROUND WATER LEVEL IS TWO (2) FEET OR LESS ABOVE THE TOP OF THE SEWER SHALL BE SUBJECTED TO A LOW PRESSURE AIR TEST.

THE PROCEDURE FOR AIR TESTING OF SEWERS SHALL BE AS FOLLOWS:

THE SEWER LINE SHALL BE TESTED IN INCREMENTS BETWEEN MANHOLES. THE LINE SHALL BE CLEANED AND PLUGGED AT EACH MANHOLE. SUCH PLUGS SHALL BE DESIGNED TO HOLD AGAINST THE TEST PRESSURE AND SHALL PROVIDE AN AIRTIGHT SEAL. ONE OF THE PLUGS SHALL HAVE AN ORIFICE THROUGH WHICH AIR CAN BE INTRODUCED INTO THE SEWER. AN AIR SUPPLY LINE SHALL BE CONNECTED TO THE ORIFICE. THE SUPPLY LINE SHALL BE FITTED WITH SUITABLE CONTROL VALVES AND A PRESSURE GAUGE FOR CONTINUALLY MEASURING THE AIR PRESSURE IN THE SEWER. THE PRESSURE GAUGE SHALL HAVE A MINIMUM DIAMETER OF THREE AND ONE-HALF (3-1/2) INCHES AND A RANGE OF 0 - 10 PSIG. THE GAUGE SHALL HAVE MINIMUM DIVISIONS OF 0-10 PSIG AND ACCURACY OF PLUS OR MINUS (+/-) 0.04 PSIG.

THE SEWER SHALL BE PRESSURIZED TO 4 PSIG GREATER THAN THE GREATEST BACK PRESSURE CAUSED BY GROUND WATER OVER THE TOP OF THE SEWER PIPE. AT LEAST TWO (2) MINUTES SHALL BE ALLOWED FOR THE AIR PRESSURE TO STABILIZE BETWEEN THREE AND ONE HALF (3.5) AND FOUR (4) PSIG. IF NECESSARY, AIR SHALL BE ADDED TO THE SEWER TO MAINTAIN A PRESSURE OF 3.5 PSIG OR GREATER.

AFTER THE STABILIZATION PERIOD, THE AIR SUPPLY CONTROL VALVE SHALL BE CLOSED SO THAT NO MORE AIR WILL ENTER THE SEWER. THE SEWER AIR PRESSURE SHALL BE NOTED AND TIMING FOR THE TEST BEGUN. THE TEST SHALL NOT BEGIN IF THE AIR PRESSURE IS LESS THAN THREE AND ONE HALF (3.5) PSIG, OR SUCH OTHER PRESSURE AS IS NECESSARY TO COMPENSATE FOR GROUND WATER LEVEL.

THE TIME REQUIRED FOR THE AIR PRESSURE TO DECREASE ONE (1.0) PSIG DURING THE TEST SHALL NOT BE LESS THAN THE TIME SHOWN IN THE FOLLOWING AIR TEST TABLES. THE CONTRACTOR SHALL USE THE APPROPRIATE TEST TABLE BASED UPON THE SEWER PIPE MATERIAL.

AIR TEST TABLE FOR VITRIFIED CLAY AND CONCRETE PIPE

SPECIFICATION TIME (MIN:SEC) REQUIRED FOR PRESSURE DROP FROM 3-1/2 TO 2-1/2 PSIG WHEN TESTING ONE PIPE DIAMETER ONLY PIPE DIAMETER, INCHES															
	4	6	8	10	12	15	18	21	24	27	30	33	36	39	42
LENGTH OF LINE, FEET	25	0:04	0:10	0:18	0:22	0:27	0:32	0:36	0:45	0:54	1:03	1:12	1:21	1:30	1:50
	50	0:09	0:21	0:36	0:45	0:54	1:03	1:12	1:30	1:48	2:06	2:42	2:42	3:00	3:39
	75	0:14	0:32	0:54	1:08	1:21	1:34	1:48	2:15	2:42	3:09	3:36	4:03	4:30	5:29
	100	0:18	0:42	1:12	1:30	1:48	2:06	2:24	3:00	3:36	4:12	4:48	5:24	6:00	7:18
	125	0:22	0:52	1:30	1:52	2:15	2:38	3:00	3:45	4:30	5:15	6:00	6:45	7:30	9:08
	150	0:27	1:03	1:48	2:15	2:42	3:09	3:36	4:30	5:24	6:18	7:12	8:06	9:00	10:57
	175	0:32	1:14	2:06	2:38	3:09	3:40	4:12	5:15	6:18	7:21	8:24	9:27	10:30	12:47
	200	0:36	1:24	2:24	3:00	3:36	4:12	4:48	6:00	7:12	8:24	9:36	10:48	12:00	14:36
	225	0:40	1:34	2:42	3:22	4:03	4:44	5:24	6:45	8:06	9:27	10:48	12:09	13:30	16:26
	250	0:45	1:45	3:00	3:45	4:30	5:15	6:00	7:30	9:00	10:30	12:00	13:30	15:00	18:16
	275	0:50	1:56	3:18	4:08	4:57	5:46	6:36	8:15	9:54	11:33	13:12	14:51	16:30	20:06
	300	0:54	2:06	3:36	4:30	5:24	6:18	7:12	9:00	10:48	12:36	14:24	16:12	18:00	21:54
	350	1:03	2:27	4:12	5:15	6:18	7:21	8:24	10:30	12:36	14:42	16:48	18:54	21:00	25:33
	400	1:12	2:48	4:48	6:00	7:12	8:24	9:36	12:00	14:24	16:48	19:12	21:36	24:00	29:12
	450	1:21	3:09	5:24	6:45	8:06	9:27	10:48	13:30	16:12	18:54	21:36	24:18	27:00	32:51
	500	1:30	3:30	6:00	7:30	9:00	10:30	12:00	15:00	18:00	21:00	24:00	27:00	30:00	36:30

NOTE: THIS TABLE IS TAKEN FROM THE NATIONAL CLAY PIPE INSTITUTE (NCPI) TABLES WHICH ARE BASED UPON ASTM C828 "TEST METHOD FOR LOW PRESSURE AIR TEST FOR VITRIFIED CLAY PIPE LINES" AND ASTM C924 "STANDARD PRACTICE FOR TESTING CONCRETE PIPE SEWER LINES BY LOW PRESSURE AIR TEST METHOD."

AIR TEST TABLE FOR PVC AND ABS PIPE
MINIMUM SPECIFIED TIME REQUIRED FOR A 1.0 PSIG PRESSURE DROP
FOR SIZE AND LENGTH OF PIPE INDICATED FOR Q=0.0015*

THE MINIMUM HOLDING TIME FOR THE PRESSURE TO DROP FROM 3.5 TO 2.5 PSIG (GREATER THAN ADDED GROUND WATER PRESSURE) SHALL NOT BE LESS THAN THAT GIVEN IN THE FOLLOWING TABLE FOR EACH TESTED RUN OF SEWER BETWEEN MANHOLES:

NOTE: AIR TESTING SHOULD NOT BE USED IF THE AIR PRESSURE REQUIRED FOR THE TEST EXCEEDS 9 PSIG.

PIPE DIAMETER INCHES	MINIMUM TIME MINUTES	LENGTH FOR MINIMUM TIME, FT.	TIME FOR LONGER LENGTH, S	SPECIFICATION TIME FOR LENGTH (L) SHOWN, MINUTES							
				100 FT	150 FT	200 FT	250 FT	300 FT	350 FT	400 FT	450 FT
4	3:46	597	0.380 L	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46
6	5:40	398	0.854 L	5:40	5:40	5:40	5:40	5:40	5:40	5:42	6:24
8	7:34	298	1.520 L	7:34	7:34	7:34	7:34	7:36	8:52	10:08	11:24
10	9:26	239	2.374 L	9:26	9:26	9:26	9:53	11:52	13:51	15:49	17:48
12	11:20	199	3.418 L	11:20	11:20	11:24	14:15	17:05	19:56	22:47	25:38
15	14:10	159	5.342 L	14:10	14:10	17:48	22:15	26:42	31:09	35:36	40:04
18	17:00	133	7.692 L	17:00	19:13	25:38	32:03	38:27	44:52	51:16	57:41
21	19:50	114	10.470 L	19:50	26:10	34:54	43:37	52:21	61:00	69:48	78:31
24	22:40	99	13.674 L	22:47	34:11	45:34	56:58	68:22	79:46	91:10	102:33
27	25:30	88	17.306 L	28:51	43:16	57:41	72:07	86:32			
30	28:20	80	21.366 L	35:37	53:25	71:13	89:02	106:50			
33	31:10	72	25.852 L	43:05	64:38	86:10	107:43	129:16			
36	34:00	66	30.768 L	51:17	76:55	102:34	128:12	153:50			

NOTE: THIS TABLE IS TAKEN FROM ASTM F1417 "STANDARD TEST METHOD FOR INSTALLATION AND ACCEPTANCE OF PLASTIC GRAVITY SEWER LINES USING LOW PRESSURE AIR TEST." ASTM F1417 CONFORMS TO UNI-BELL "RECOMMENDED PRACTICE FOR LOW PRESSURE AIR TESTING OF INSTALLED SEWER PIPE" (UNI-B-6-98)

* Q IS THE ALLOWABLE LEAKAGE RATE IN CUBIC FEET/MINUTE/SQUARE FOOT OF INSIDE SURFACE AREA OF PIPE

EXFILTRATION TEST

EXFILTRATION OR LEAKAGE FROM THE SEWER LINE CAN BE MEASURED BY RECORDING THE WATER LEVEL DROP OVER A GIVEN PERIOD OF TIME IN A STANDPIPE PLACED AND CONNECTED IN THE UPSTREAM MANHOLE. THE MEASURED DROP IN THE TIME PERIOD CAN BE CONVERTED BY CALCULATIONS TO THE LEAKAGE RATE IN TERMS OF GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY.

EXFILTRATION TESTS MAY BE SUBSTITUTED FOR LOW PRESSURE AIR TESTS WHERE APPROVED BY THE TOWNSHIP ENGINEER. EXFILTRATION TESTS WILL NOT BE ALLOWED WHERE THE EXTERNAL WATER PRESSURE EXCEEDS FOUR (4) FEET.

FOR THE PURPOSE OF EXFILTRATION TESTING, THE INTERNAL WATER LEVEL SHALL BE EQUAL TO THE EXTERNAL WATER LEVEL PLUS FOUR (4) FEET AS MEASURED FROM THE TOP OF THE HIGHEST PIPE IN THE SYSTEM BEING TESTED. THIS COULD BE EITHER A HOUSE LEAD OR A LATERAL. HOWEVER, THE MAXIMUM TOTAL HEIGHT OF WATER ABOVE THE INVERT OF THE PIPE AT THE LOWER END SHALL NOT EXCEED SIXTEEN (16) FEET. A PROSPECTIVE TEST THAT WOULD EXCEED THIS SIXTEEN (16) FOOT LIMIT SHOULD NOT BE TAKEN. THE LINE UNDER CONSTRUCTION CAN BE BROKEN DOWN INTO SMALLER SECTIONS SUCH THAT THE MAXIMUM HEAD OF SIXTEEN (16) FEET WILL NOT BE EXCEEDED.

THE MAXIMUM EXFILTRATION RATE SHALL BE THE SAME AS THAT PERMITTED FOR THE INFILTRATION TEST. THE EXFILTRATION TEST PROCEDURE IS SUMMARIZED AS FOLLOWS:

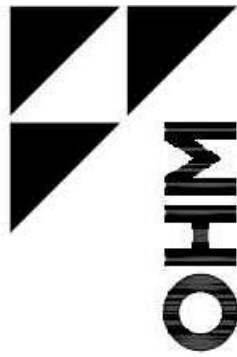
- 1) ALL SERVICE LATERALS, STUBS AND FITTINGS INTO THE SEWER LINE(S) BEING TESTED SHOULD BE PROPERLY CAPPED OR PLUGGED, AND CAREFULLY BRACED TO RESIST THE THRUST ACTIONS DEVELOPED BY THE INTERNAL WATER PRESSURE. IN PREPARING THE BLOCKING OF PLUGS OR END CAPS, IT IS EXTREMELY IMPORTANT TO RECOGNIZE THAT THE FIVE (5) TO TEN (10) FEET OF HEAD IN THE STANDPIPE WILL EXERT CONSIDERABLE THRUST AGAINST THE PLUGS OR CAPS.
- 2) A PLUG IS INSERTED AND TIGHTENED IN THE INLET PIPE OF THE DOWNSTREAM MANHOLE TO WHICH THE WATER SUPPLY CONNECTION IS MADE FOR FILLING THE PIPE.
- 3) THE UPPER MANHOLE IS PLUGGED AND SECURELY TIGHTENED FOR CONNECTION TO THE STANDPIPE. THE STANDPIPE IS THEN PLACED IN THIS MANHOLE AND CONNECTED TO THE TAPPED PLUG. THE STANDPIPE MUST BE CAPABLE OF HANDLING FROM FIVE (5) TO TEN (10) FEET OF WATER HEAD TO DETERMINE THE TIGHTNESS AND SOUNDNESS OF THE SEWER LINE, AS SPECIFIED AND DIRECTED BY THE ENGINEER.
- 4) WATER IS INTRODUCED INTO THE LINE AT THE DOWNSTREAM (LOWER) MANHOLE UNTIL THE STANDPIPE IN THE UPSTREAM MANHOLE HAS BEEN COMPLETELY FILLED. BY FILLING THE LINE FROM THE LOWEST LEVEL, THE AIR IN THE LINE IS EASILY PUSHED AHEAD AND, FINALLY DISPELLED THROUGH THE STANDPIPE AT THE UPPER END OF THE TEST SECTION. CARE SHOULD BE TAKEN TO MINIMIZE ENTRAPPED AIR THAT WILL GIVE DISTORTED TEST RESULTS. THE RATE OF DROP IN THE STANDPIPE MAY BE QUITE RAPID UNTIL THE AIR HAS BEEN EXPELLED.
- 5) AFTER FILLING WITH WATER, THE LINE MUST BE ALLOWED TO STAND FOR AT LEAST FOUR (4) HOURS BEFORE BEGINNING THE TEST. DURING THIS TIME SOME WATER ABSORPTION INTO THE MANHOLE STRUCTURES AND SEWER PIPE WILL TAKE PLACE. AFTER THE WATER ABSORPTION HAS STABILIZED, THE WATER LEVEL IN THE STANDPIPE IS CHECKED AND WATER ADDED IF NECESSARY.
- 6) THE TEST IS NOW READY TO BEGIN. THE DROP IN THE STANDPIPE IS MEASURED AND RECORDED OVER A FIFTEEN (15) MINUTE PERIOD. TO VERIFY THE FIRST RESULTS, A SECOND FIFTEEN (15) MINUTE TEST IS SUGGESTED. THIS WILL ALSO VERIFY WHETHER A STABLE CONDITION EXISTS IN THE LINE.
- 7) THE MEASURED DROPS IN THE STANDPIPE ARE CONVERTED TO LEAKAGE IN TERMS OF GALLONS PER INCH DIAMETER PER MILE PER DAY.
- 8) ANOTHER COMMONLY USED METHOD OF CONDUCTING WATER EXFILTRATION TESTING IS TO UTILIZE THE MANHOLE IN LIEU OF A STANDPIPE. THE TEST PROCEDURE IS EXACTLY AS OUTLINED FOR USING THE STANDPIPE. HOWEVER, SINCE THE MANHOLE IS LARGER IN DIAMETER THAN THE STANDPIPE, THIS METHOD NORMALLY REQUIRES A MINIMUM TWO (2) HOUR TEST PERIOD IN ORDER TO BE ABLE TO RECORD A MEASURABLE WATER LEVEL DROP. MANHOLE LEAKAGE MUST ALSO BE CONSIDERED IN THE LEAKAGE RATE AND TEST RESULTS.
- 9) CAUTION SHOULD BE TAKEN ABOUT CONDUCTING EXFILTRATION TESTS ON SEWER LINES LAID ON STEEP GRADES. CONSIDERATION MUST BE GIVEN TO THE DOWNSTREAM PORTION OF THE SYSTEM TO PREVENT EXCESSIVE PRESSURES IN THESE LOWER LINES. FOR THESE INSTALLATIONS AND WHERE THE UPSTREAM MANHOLES ARE VERY DEEP, IT IS NOT ADVISABLE TO FILL THE STANDPIPE OR MANHOLE TO THE TOP WHEN PERFORMING THE TEST.

DEFLECTION TEST FOR PLASTIC PIPE

DEFLECTION GAUGE (MANDREL): MANDREL TESTING SHALL TAKE PLACE TO ENSURE THE FLEXIBLE PIPE HAS BEEN PROPERLY BEDDED AND BACK-FILLED. THE DEFLECTION TEST MUST BE CONDUCTED NO LESS THAN 30 DAYS AFTER INSTALLATION OF THE FINAL BACKFILL. THE MAXIMUM ALLOWABLE DEFLECTION IS 5 PERCENT. INSTALLATION SHALL CONFORM TO ASTM 2321-89. A NINE-ARM (POINT) MANDREL SHALL BE USED. CHERNE FIXED STEEL DEFLECTION OR APPROVED EQUAL.

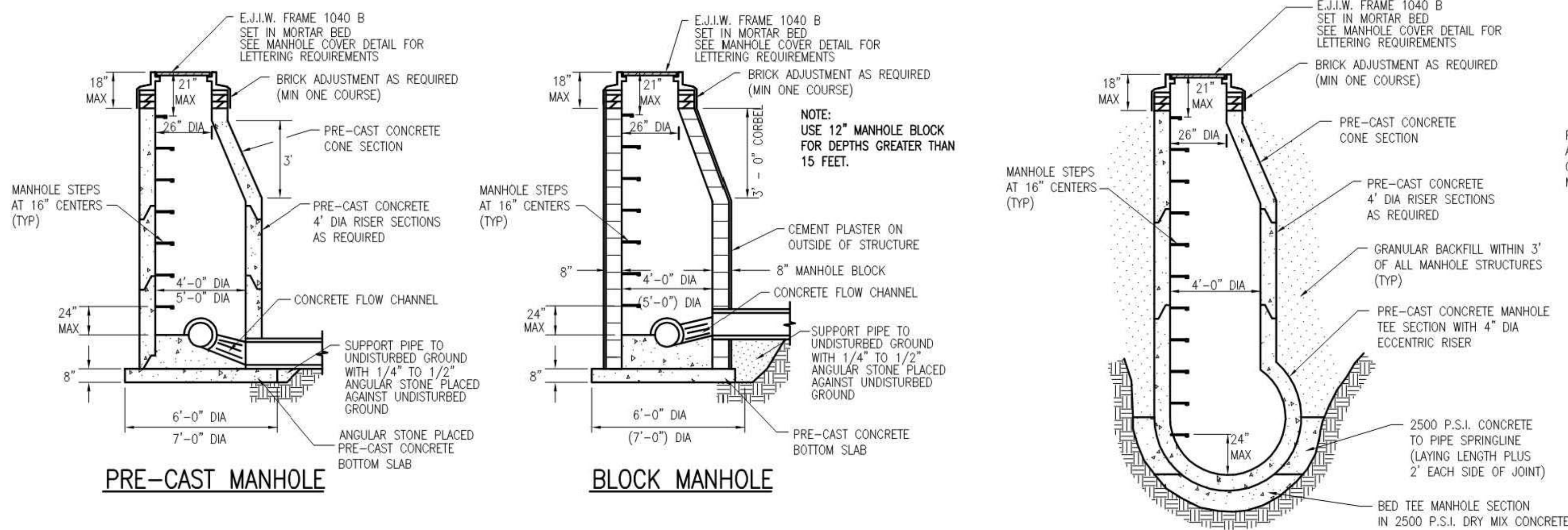
VIDEOTAPING

AS A MEANS OF INSURING THAT PIPE LAYING WAS PROPERLY DONE AND THAT ALL JOINTS ARE IN A "HOME" POSITION, THE CONTRACTOR SHALL PROVIDE VIDEOTAPING OF ALL OF THE PIPE LAID THAT IS THIRTY-SIX (36) INCHES IN DIAMETER AND SMALLER. THIS VIDEOTAPING SHALL BE DONE NO SOONER THAN THIRTY (30) DAYS AFTER COMPLETION OF BACKFILL. THE CONTRACTOR SHALL PROVIDE FORTY-EIGHT (48) HOURS NOTICE TO THE TOWNSHIP PRIOR TO VIDEOTAPING SO THAT A REPRESENTATIVE MAY BE PRESENT. A SATISFACTORY REVIEW OF THE VIDEOTAPE BY THE TOWNSHIP SHALL BE A CONDITION FOR SEWER ACCEPTANCE BY THE TOWNSHIP. TYPICAL ITEMS TO BE REVIEWED ON THE VIDEOTAPE WILL INCLUDE PIPE DEFLECTION, PIPE SETTLEMENT, LEAD CONNECTIONS, JOINTS AND PIPE CLEANLINESS. IF THE VIDEOTAPE REVIEW REVEALS UNSATISFACTORY CONDITIONS, THE CONTRACTOR SHALL CORRECT THE CONDITIONS AND SHALL RE-VIDEOTAPE THE AFFECTED PIPE SECTIONS FOR REVIEW BY THE TOWNSHIP.

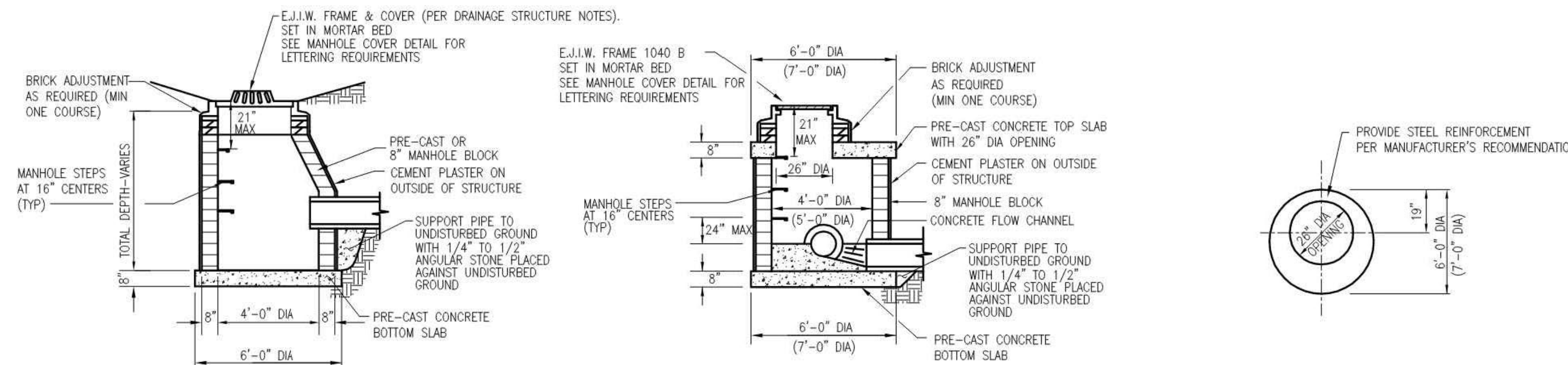


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CADD	PROJ. NO.	SECTION	REVISIONS
DK			
DATE	SCALE	HORIZ DATUM	VERT DATUM
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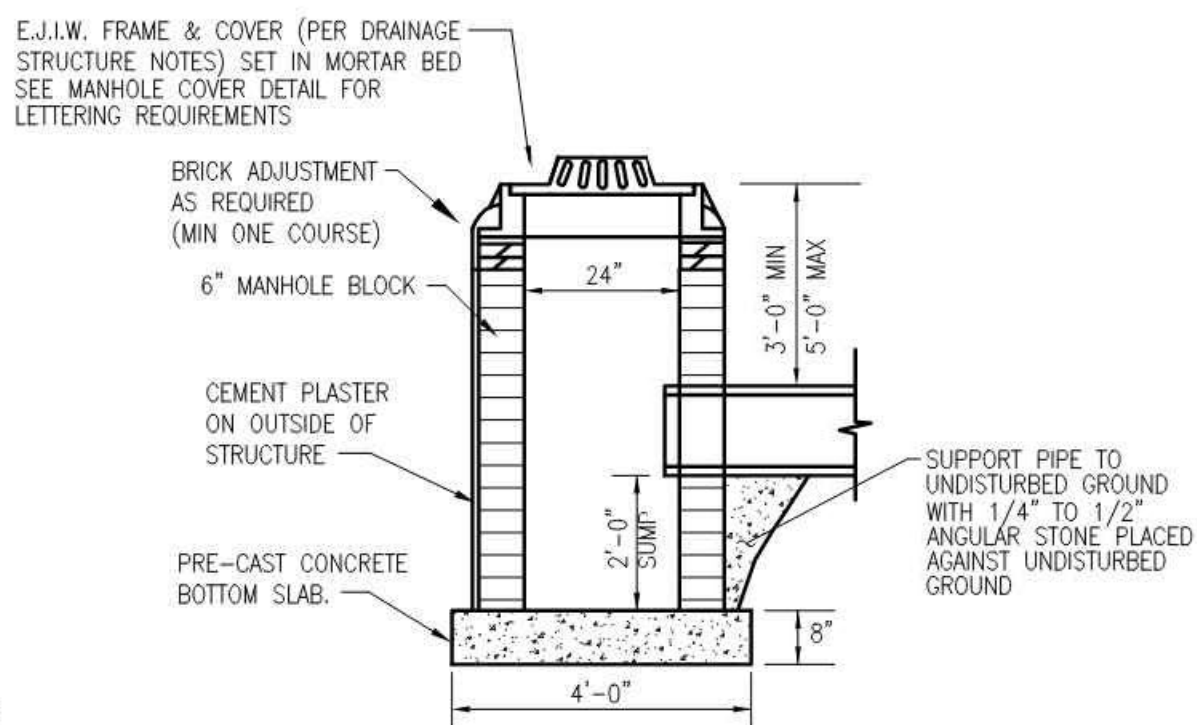
STANDARD MANHOLE DETAILS



CATCH BASIN DETAIL

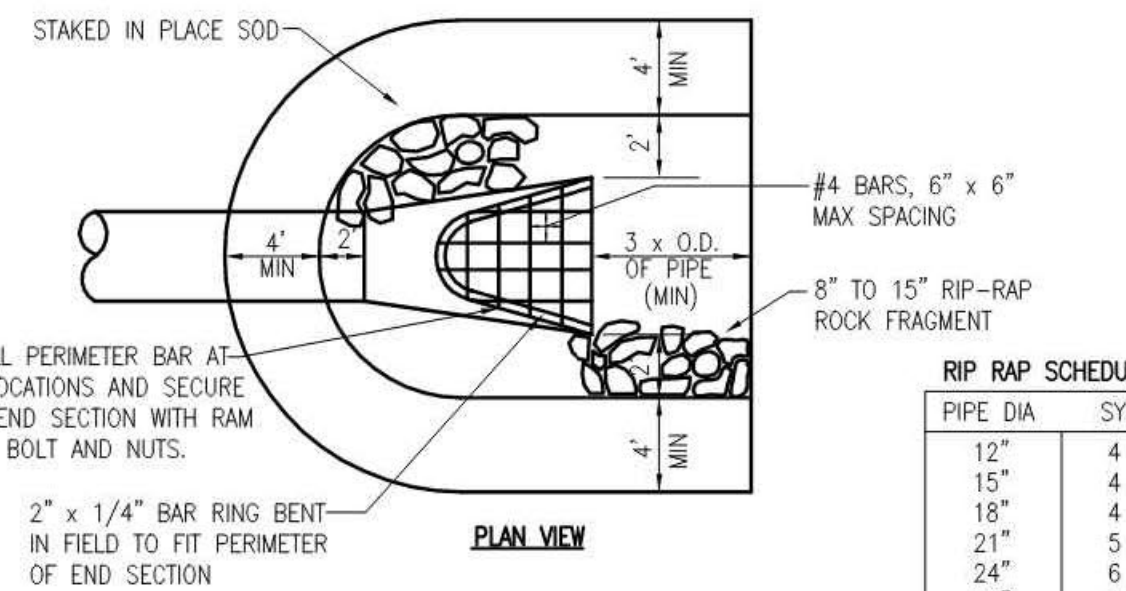
LOW HEAD MANHOLE AND CATCH BASIN DETAIL

PRE-CAST CONCRETE TOP
SLAB DETAIL, 8" THICK

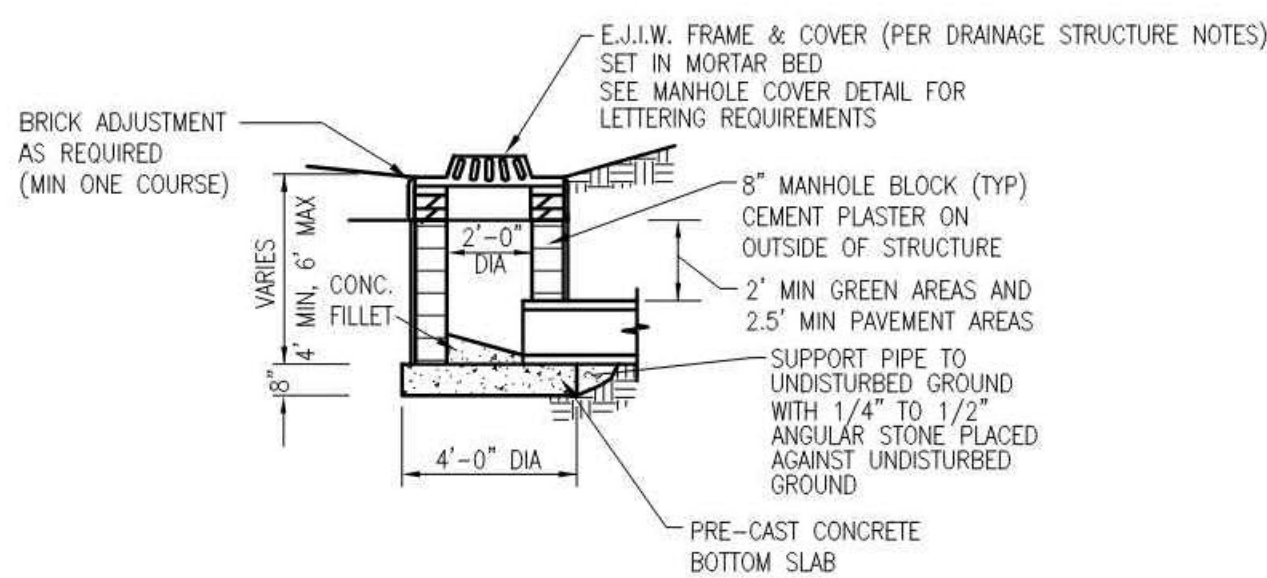


2' DIA CATCH BASIN DETAIL

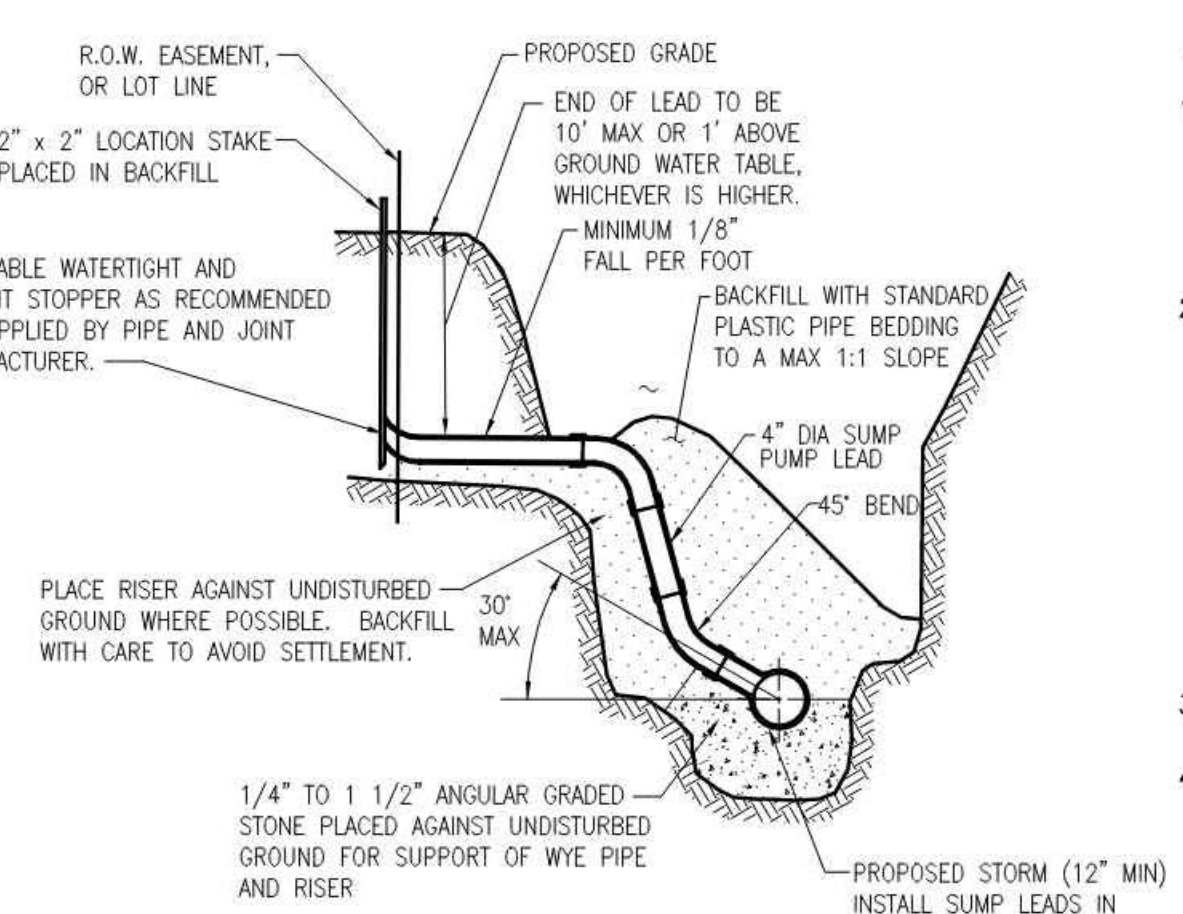
(NOTE: 2' DIA CATCH BASIN SHALL NOT BE USED UNLESS PRIOR APPROVAL IS OBTAINED FROM TOWNSHIP ENGINEER.)



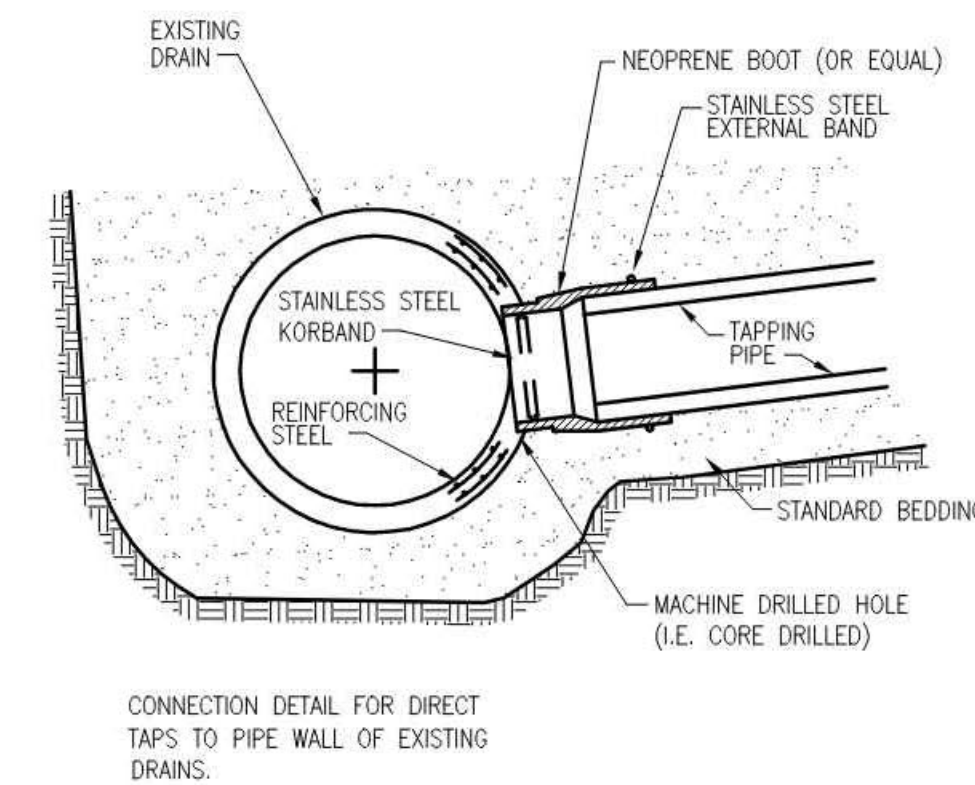
2' DIA INLET DETAIL



END SECTION AND BAR SCREEN DETAIL

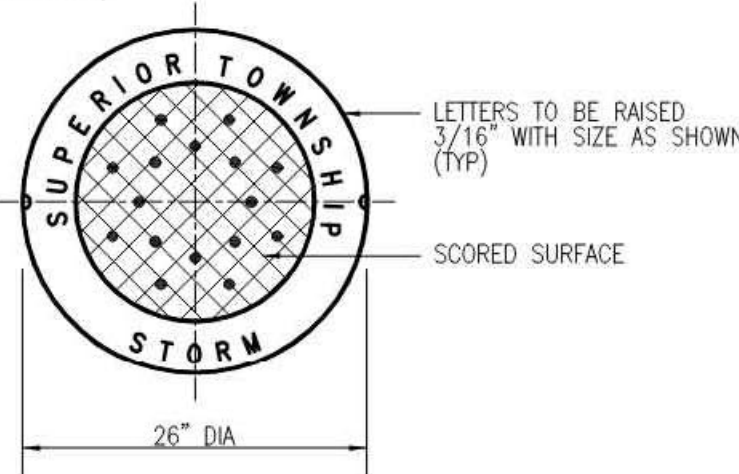


HOUSE LEAD DETAIL FOR 4" DIA
PLASTIC SUMP PUMP LEADS



KOR-N-TEE TAP
FOR CONCRETE PIPE

(NOTE: LETTERING SHALL BE USED ONLY FOR PUBLIC STORM SYSTEM. ALL OTHERS SHALL HAVE NO LETTERING.)



CAST IRON MANHOLE COVER
E.J.I.W. 1040

GENERAL NOTES FOR STORM SEWER CONSTRUCTION

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF CHARTER TOWNSHIP OF SUPERIOR.
 - TYPE AND CLASS OF PIPE SHALL BE AS SPECIFIED ON PLANS.
 - SAND BEDDING SHALL BE USED THROUGHOUT, UNLESS OTHERWISE SPECIFIED ON THE PLAN.
 - ALL END SECTIONS 18" AND LARGER SHALL BE PROVIDED WITH A GALVANIZED BAR SCREEN.
- CONTRACTOR SHALL CONSTRUCT MANHOLES WITH PRECAST REINFORCED CONCRETE IN LIEU OF CONCRETE, BRICK AND BLOCK MANHOLES IN ACCORDANCE WITH THE FOLLOWING CONDITIONS:
 - NO OPENINGS SHALL BE MADE IN PRECAST UNITS WHICH WOULD LEAVE LESS THAN 12" OF UNDISTURBED PRECAST STRUCTURE WALL BETWEEN PIPES (AS MEASURED BETWEEN OUTSIDE PIPE WALLS) OR WOULD REMOVE MORE THAN 40% OF THE CIRCUMFERENCE ALONG ANY HORIZONTAL PLANE.
 - STRUCTURES FOR SEWERS LARGER THAN 18", OR THOSE NOT MEETING THE OPENING REQUIREMENTS, MAY BE BUILT OF BLOCK OR BRICK UP TO A MINIMUM OF 8" ABOVE THE TOP OF SEWER, WITH PRECAST UNITS BEING USED ABOVE THIS POINT. WHERE PRECAST UNITS REST ON THE BLOCK OR BRICK, THE GROOVE IN THE PRECAST UNIT SHALL BE FILLED WITH MORTAR.
 - OPENINGS FOR THE OUTLET SEWER SHALL BE PRECAST WITH A DIAMETER OF 3 INCHES LARGER THAN THE OUTSIDE DIAMETER OF THE OUTLET PIPE. ALL OTHER OPENINGS SHALL BE MADE IN THE FIELD AFTER THE MANHOLE HAS BEEN CONSTRUCTED.
- ALL VERTICAL OPENINGS IN CONCRETE BLOCK STRUCTURE WALLS SHALL BE COMPLETELY FILLED WITH MORTAR. ALL VERTICAL WALL JOINTS SHALL BE CEMENT POINTED.
- CONCRETE PIPE REQUIREMENTS:
 - THE CONTRACTOR SHALL PROVIDE REINFORCED CONCRETE PIPE AS SPECIFIED ON THE PLANS.
 - ALL ROUND REINFORCED CONCRETE PIPE SHALL HAVE MODIFIED GROOVE TONGUE JOINTS WITH O-RING TYPE RUBBER GASKET, PER A.S.T.M. SPECIFICATIONS C443. ALL ELLIPTICAL CONCRETE PIPE SHALL HAVE GROOVE TONGUE JOINTS WITH BITUMINOUS (DEWITT #10) JOINT MATERIAL AND INSIDE MORTAR POINTING. ELLIPTICAL CONCRETE PIPE JOINTS SHALL ALSO BE WRAPPED PER A.S.T.M. SPECIFICATION C877 FOR EXTERNAL SEALING BANDS FOR NON-CIRCULAR CONCRETE PIPE.
 - THE INSIDE JOINT OF PIPE SIZES OVER 27" DIAMETER SHALL BE POINTED UP WITH MORTAR UPON COMPLETION OF BACKFILLING OPERATIONS.
 - WHERE UNSTABLE GROUND CONDITIONS ARE ENCOUNTERED, STONE BEDDING SHALL BE USED AS DIRECTED BY THE ENGINEER IN ORDER TO PROVIDE A STABLE FOUNDATION FOR PIPE AND MANHOLES.
 - ALL PIPES ENTERING OR LEAVING A MANHOLE SHALL BE ADEQUATELY SUPPORTED WITH 1/4" TO 1/2" ANGULAR GRADED STONE FILL FROM UNDISTURBED EARTH TO SPRINGLINE OR WITH APPROVED CRUSHED AGGREGATE.

DRAINAGE STRUCTURE REQUIREMENTS:

- ALL STRUCTURE(S) SHALL BE 4" IN DIAMETER UNLESS OTHERWISE INDICATED ON CONSTRUCTION DRAWINGS. 2" DIAMETER CATCH BASINS AND INLETS SHALL BE USED ONLY WITH PRIOR TOWNSHIP APPROVAL.
- MANHOLE STEPS SHALL BE STEEL, ENCASED WITH POLYPROPYLENE PLASTIC OR APPROVED EQUIVALENT TO M.A. INDUSTRIES, INC., PS-1 FOR BRICK, OR PS-18 FOR BLOCK, EAST JORDAN IRON WORKS 8503 (OR APPROVED EQUAL). MANHOLE STEPS AT 16" CENTERS.
- CATCH BASIN STEPS SHALL BE EAST JORDAN IRON WORKS 8502 PLASTIC COATED (OR APPROVED EQUAL).
- MANHOLE COVERS AND FRAMES SHALL BE EAST JORDAN IRON WORKS 1040, TYPE "B" COVER OR AS PER CONSTRUCTION DRAWINGS.
 - CATCH BASIN AND INLET FRAME AND COVER SHALL BE:
 - EAST JORDAN IRON WORKS 5080, TYPE "M1" COVER WITH STRAIGHT FACE CURB AND GUTTER (OR AS APPROVED EQUAL).
 - EAST JORDAN IRON WORKS 5080, TYPE "M1" COVER WITH MOUNTABLE CURB AND GUTTER AND INTEGRAL CURB AND GUTTER (OR AS APPROVED EQUAL).
 - EAST JORDAN IRON WORKS 1040, TYPE "02" COVER (BEEHIVE) TO BE USED ON OPEN DITCHES AND SWALES, REAR YARD CATCH BASIN (OR AS APPROVED EQUAL). IF WITHIN 8' OF ROAD, TYPE "N" COVER (LOW BEEHIVE) SHALL BE USED.
 - FRAMES SHALL BE SET IN FULL BED OF MORTAR AND THE SIDE SHALL BE OVERLAPPED TO PREVENT LEAKAGE.
- A PROPER CHANNEL SHALL BE CONSTRUCTED WITHIN THE EXISTING MANHOLE OR OTHER STRUCTURE AT WHICH THE CONNECTION IS TO BE MADE TO DIRECT THE FLOW TO THE EXISTING OUTLET IN A MANNER WHICH WILL TEND TO CREATE THE LEAST AMOUNT OF TURBULENCE. THE CHANNEL SHALL BE CONSTRUCTED TO THE SAME SIZE AS THE INSIDE DIAMETER OF THE EXISTING PIPES, AND SHALL BE BUILT TO HEIGHT OF 1/3 THE EXISTING PIPE DIAMETER WITH A MINIMUM OF 2% SLOPE ON THE BENCHES.
- STANDARD BRICK ADJUSTMENT: MINIMUM OF ONE COURSE AND A MAXIMUM OF 5 COURSES OF BRICK.
 - ALL BRICKS AND BLOCKS USED FOR ADJUSTMENT SHALL BE CONCRETE.
 - BLOCK USED FOR STANDARD CATCH BASINS AND MANHOLES SHALL BE 8" (FOR 0'-15" DEEP) AND 12" (FOR 15'-25" DEEP). BLOCK USED FOR 2" DIAMETER INLETS AND CATCH BASINS SHALL BE 6".
 - PRECAST REINFORCED CONCRETE SECTION AS MINIMUM SHALL CONFORM TO A.S.T.M. C-478.
 - CONCRETE BASE FOR MANHOLE, CATCH BASIN, AND INLET SHALL BE MDOT GRADE 30P (MIN), 8" THICK, 3000 PSI.
- PLASTER ALL OUTSIDE MASONRY SURFACES WITH 1:2 1/2 MASONRY CEMENT (TYPE II) 1/2" THICK.
- WHEN TAPPING INTO AN EXISTING STRUCTURE A BRICK COLLAR SHALL BE PLACED 12" THICK AROUND THE PIPE AND EXTENDED 12" BEYOND THE OPENING. IF PRE-CAST SECTION IS TAPPED, BEND MESH AND USE AS REINFORCEMENT WITH BRICK COLLAR.
- ALL PRECAST RISER(S) SHALL BE PLACED IN A FULL BED OF MORTAR. ALL JOINTS & LIFTHOLES SHALL BE POINTED UP WITH MORTAR ON THE OUTSIDE AND INSIDE.
 - ALL VERTICAL AND HORIZONTAL BARS SHALL BE TACK-WELDED TO THE ANGLE FRAME.
 - THE BAR GRATE SCREEN SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IS COMPLETE.



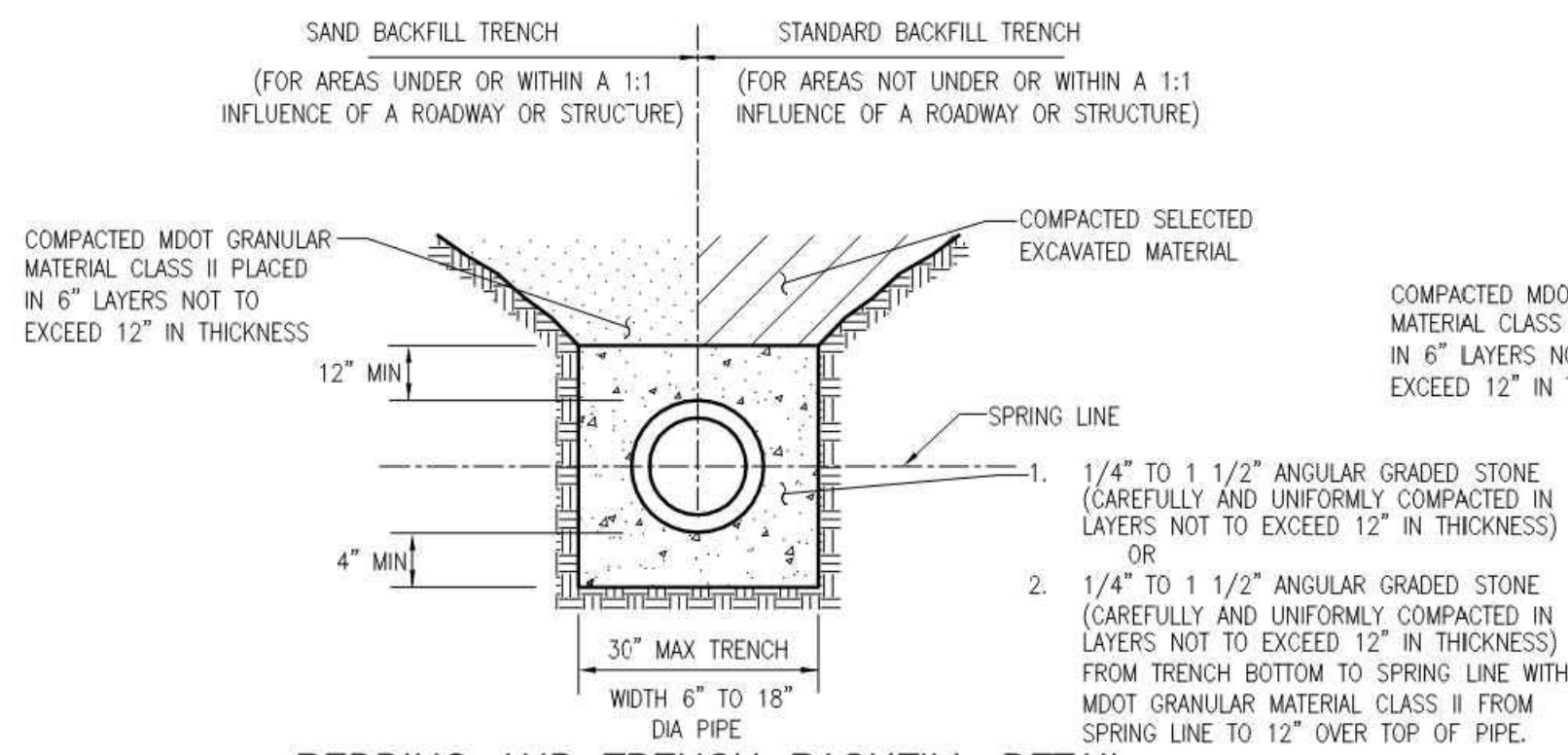
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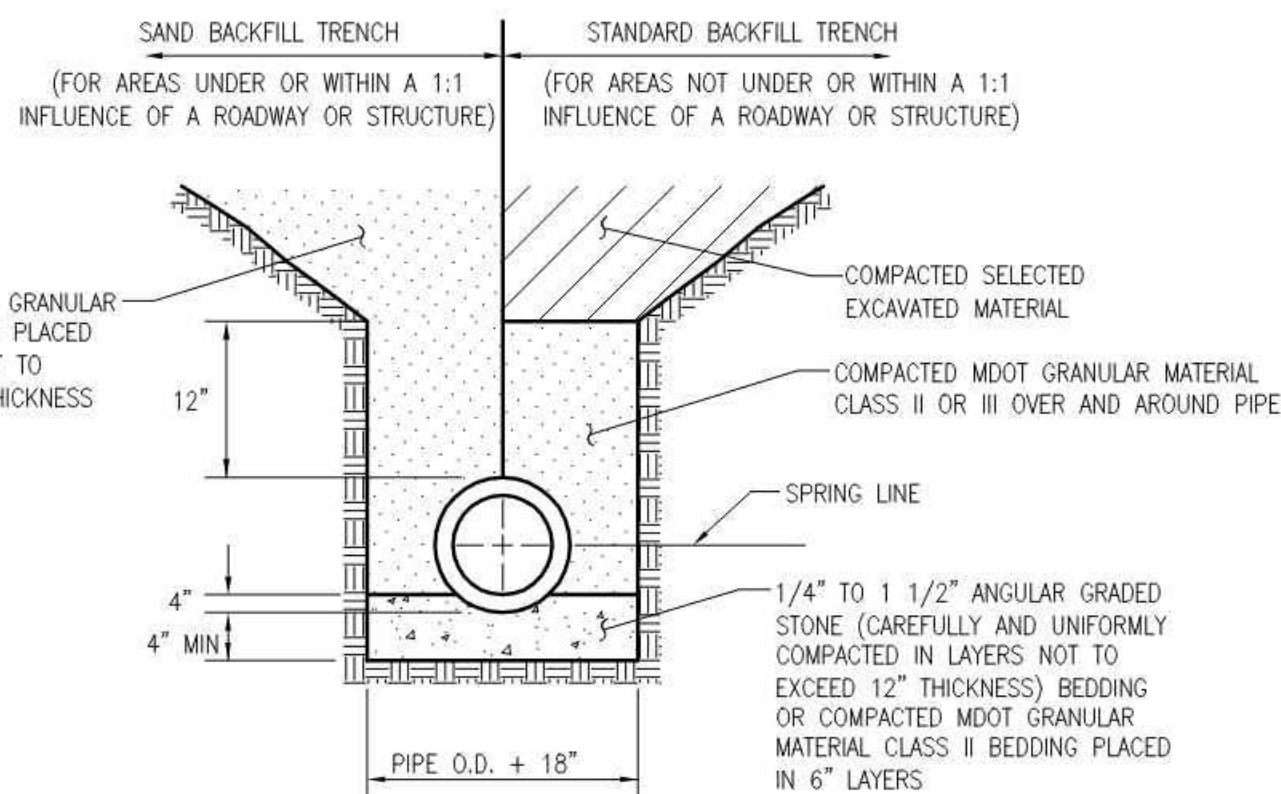
CHARTER TOWNSHIP OF SUPERIOR
STANDARD STORM SEWER DETAILS

SHEET
1
OF 2

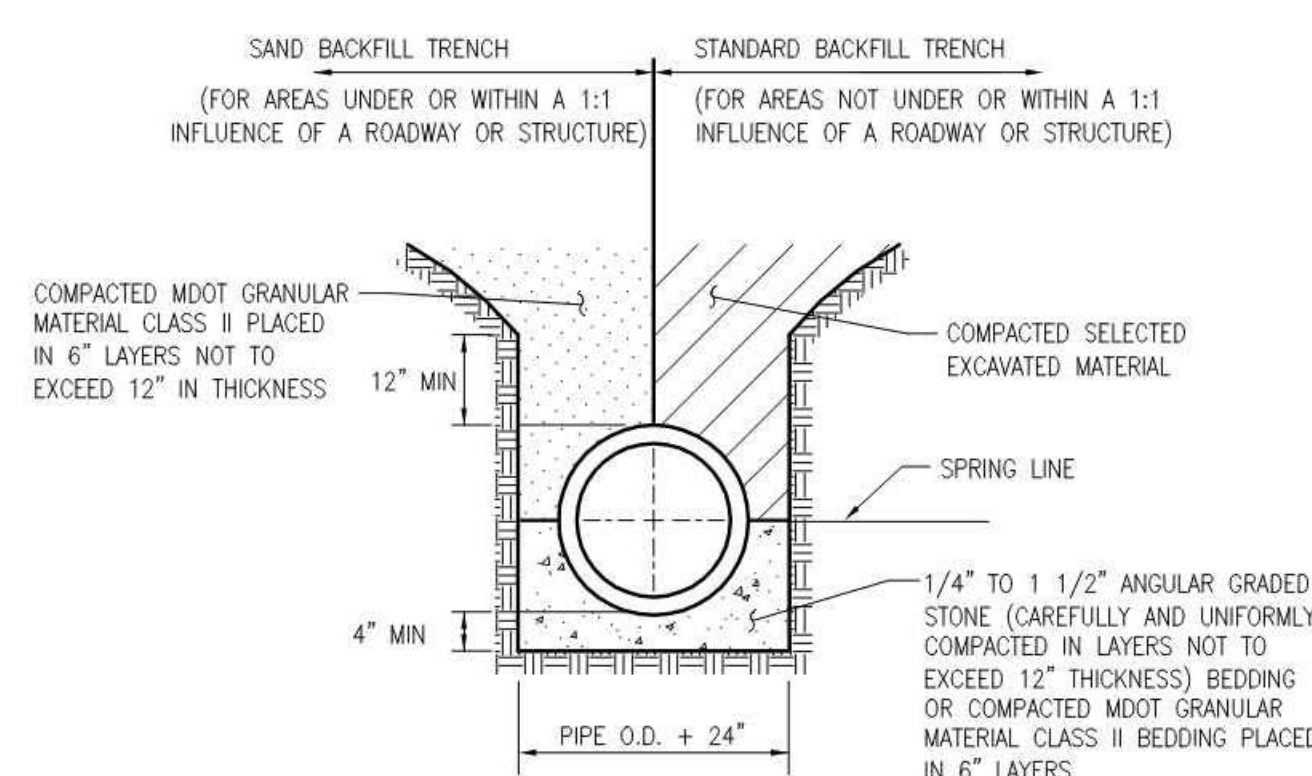
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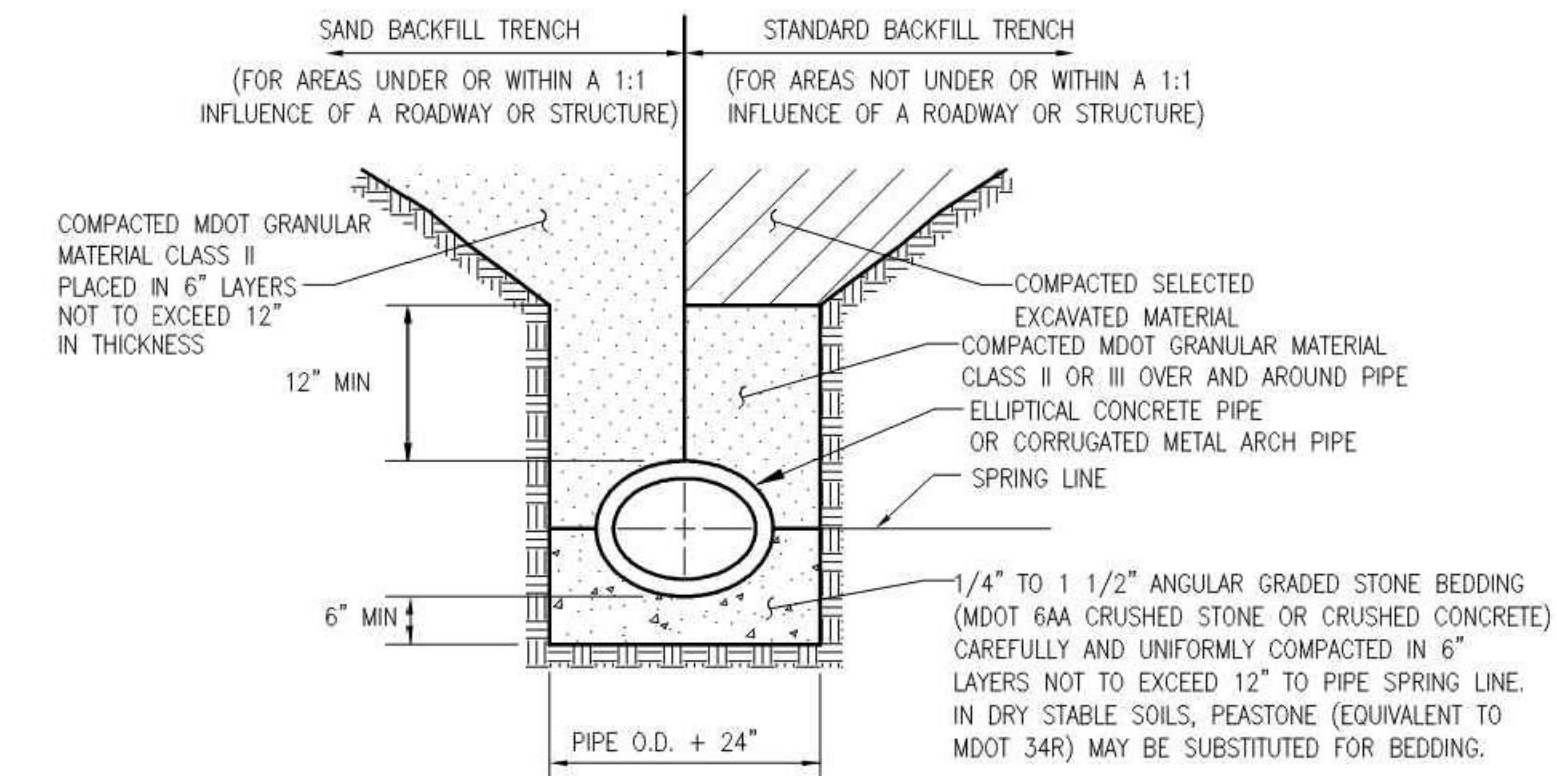
**BEDDING AND TRENCH BACKFILL DETAIL
FOR 18" DIAMETER AND SMALLER PIPE
(PVC SOLID WALL, AND TRUSS PIPE)**



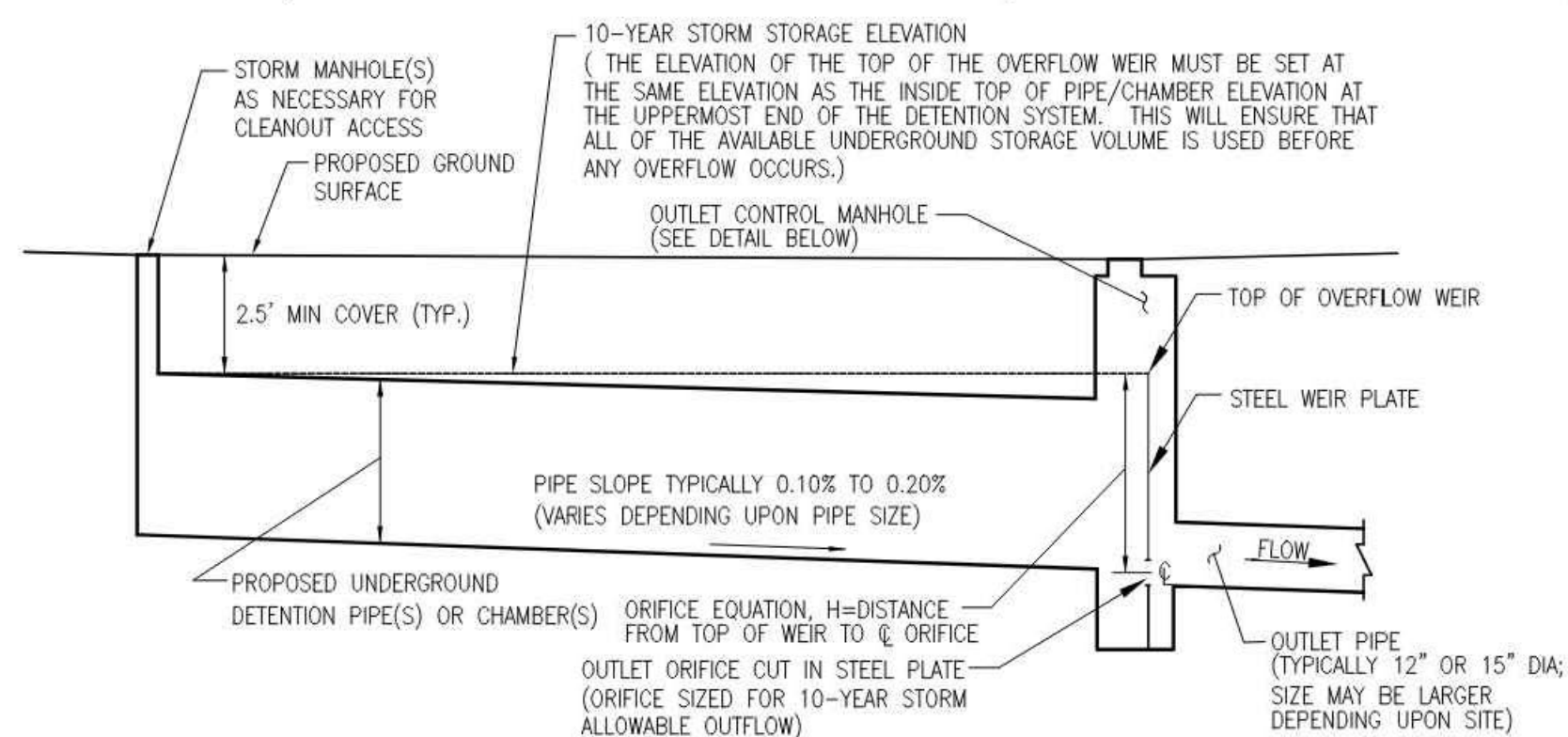
**BEDDING AND TRENCH BACKFILL DETAIL
FOR 24" DIAMETER AND SMALLER PIPE**



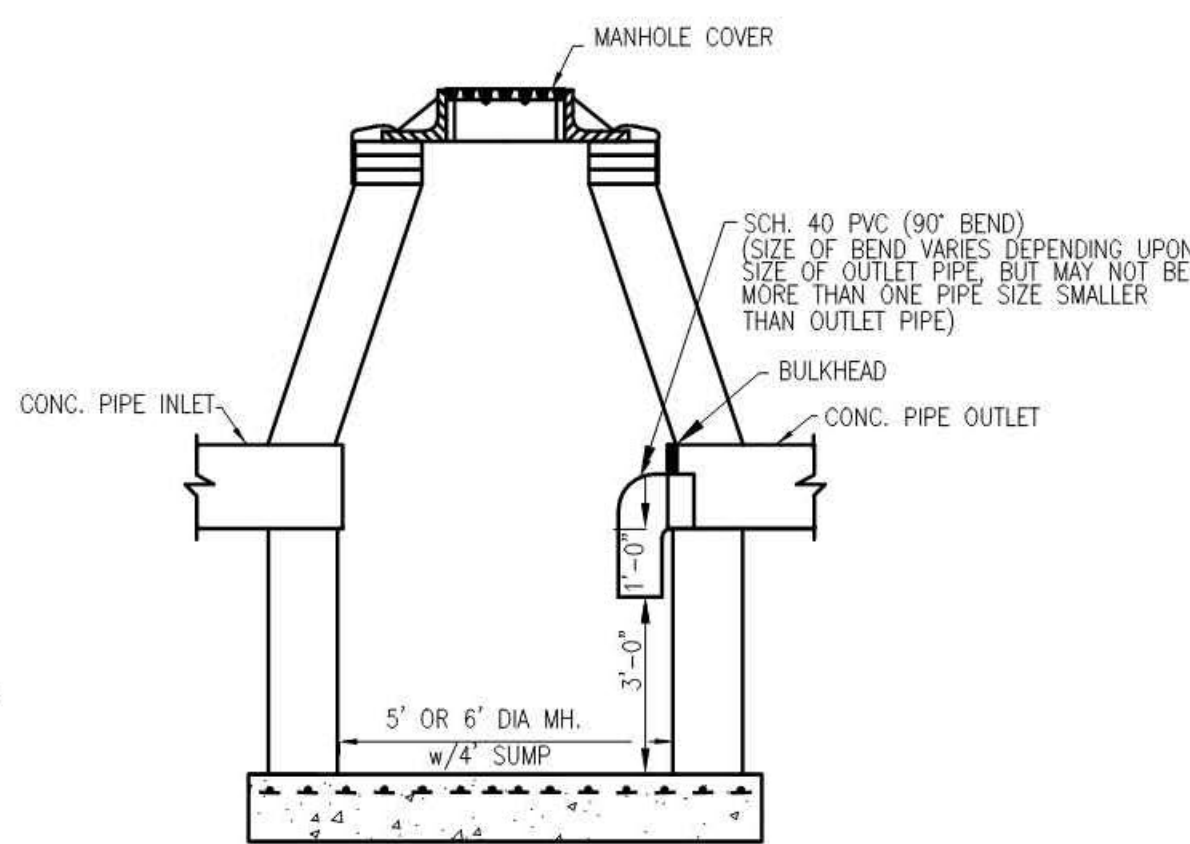
**BEDDING AND TRENCH BACKFILL DETAIL
FOR 27" DIAMETER AND LARGER PIPE**



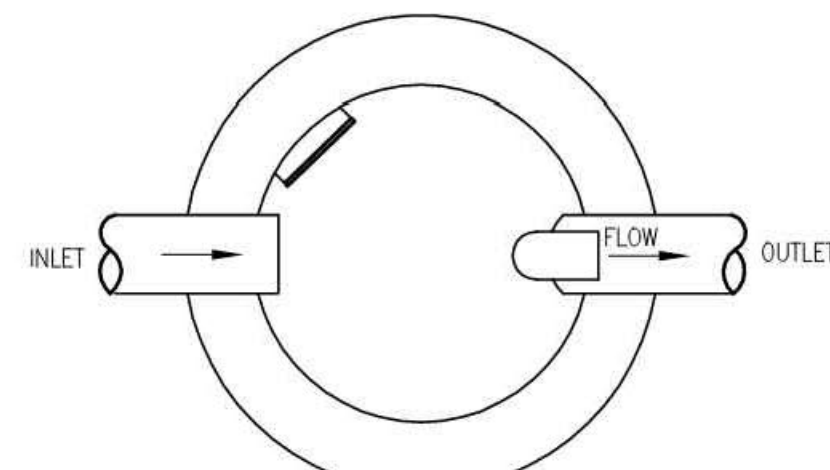
**BEDDING AND TRENCH BACKFILL DETAIL
FOR ELLIPTICAL CONCRETE PIPE OR CORRUGATED METAL ARCH PIPE**



DETENTION SYSTEM PROFILE

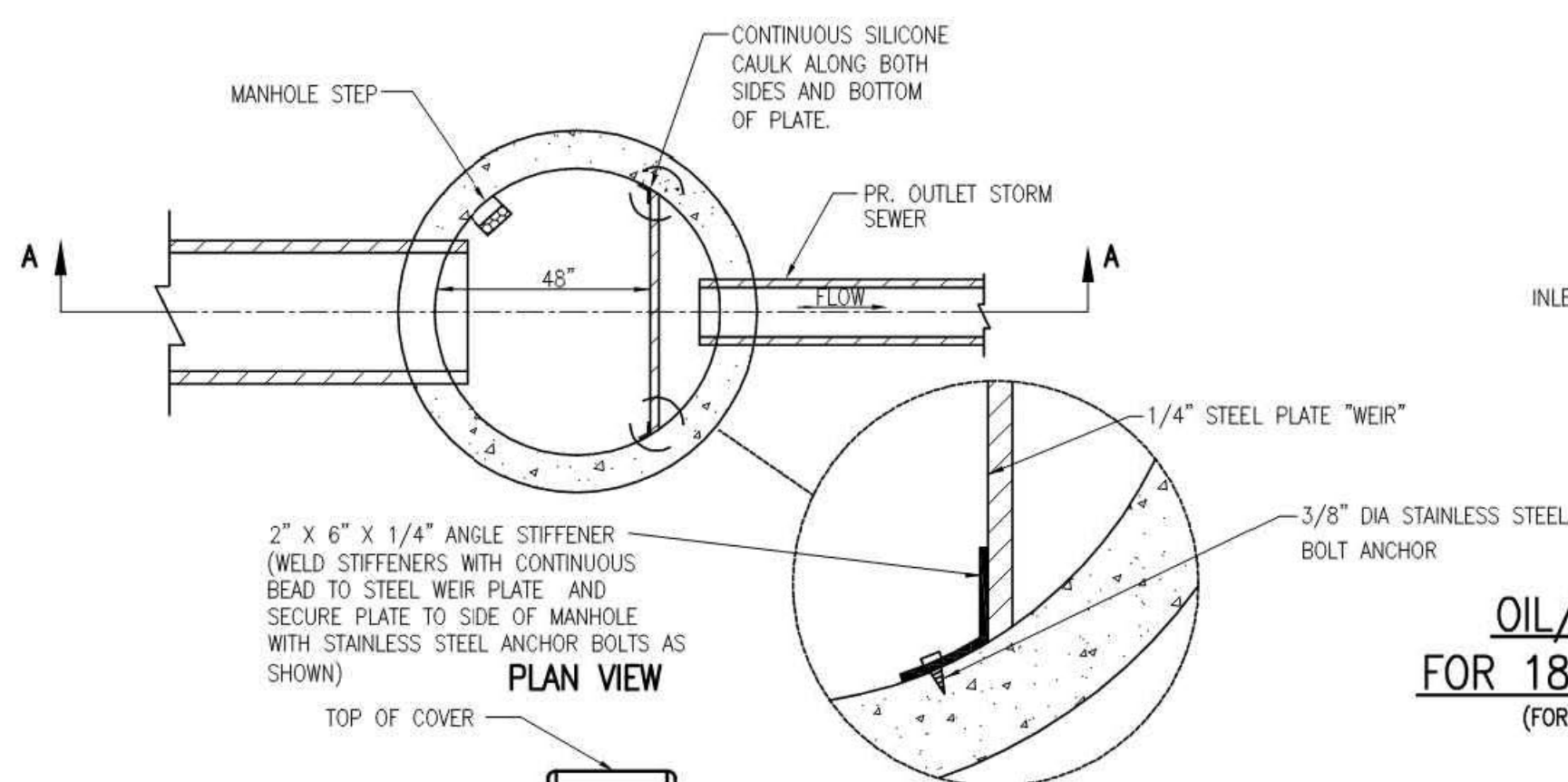


SIDE VIEW

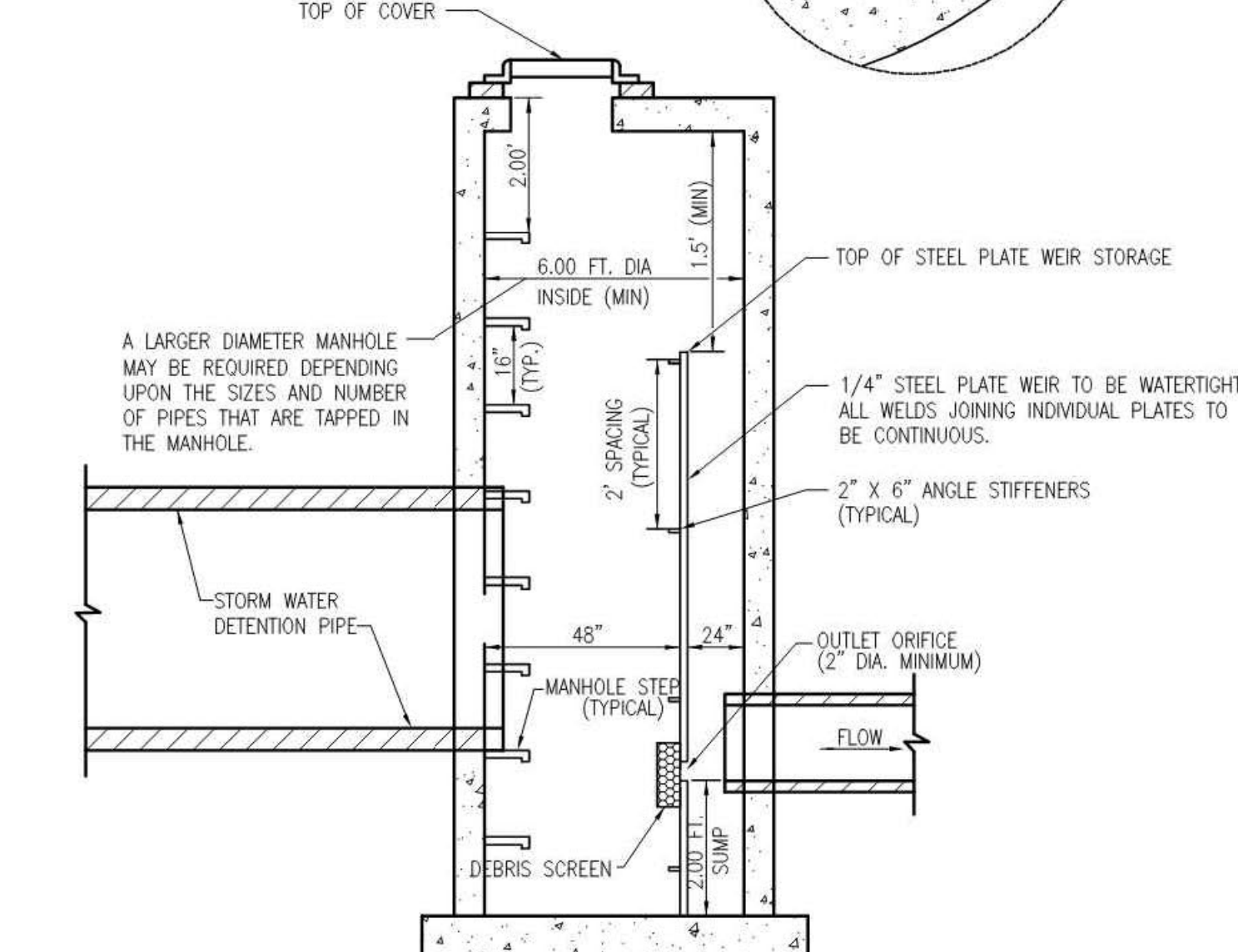


PLAN VIEW

**OIL/GAS SEPARATOR PLACEMENT DETAIL
FOR 18" DIAMETER AND SMALLER OUTLET PIPE
(FOR OUTLET PIPES LARGER THAN 18" IN DIAMETER, AN ALTERNATE DESIGN
MUST BE APPROVED BY THE TOWNSHIP ENGINEER)**



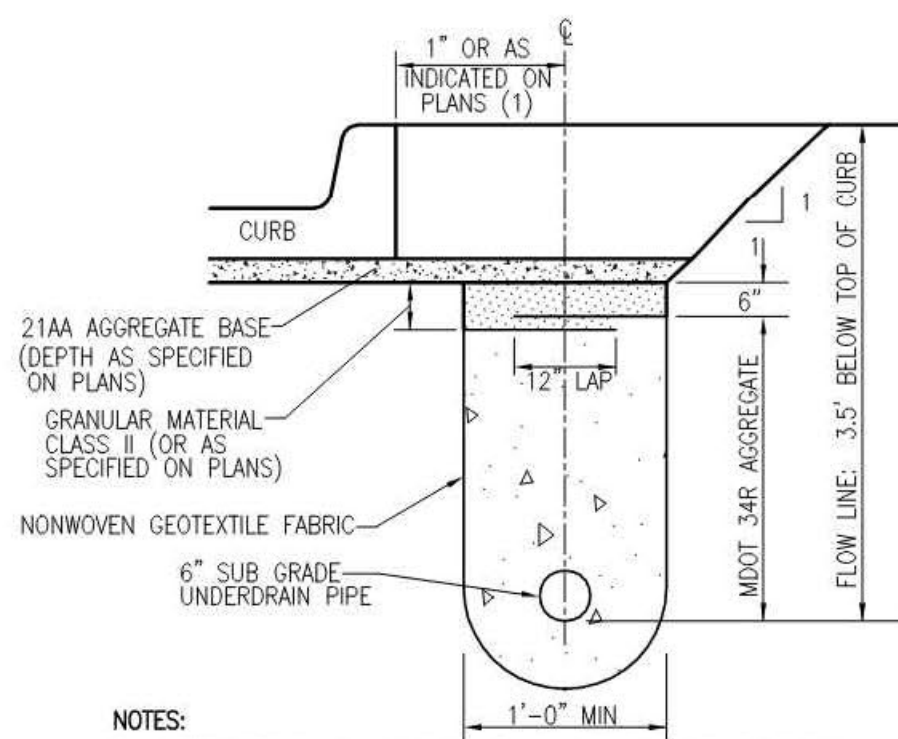
PLAN VIEW



SECTION A-A

6 FT. DIA. OUTLET MANHOLE

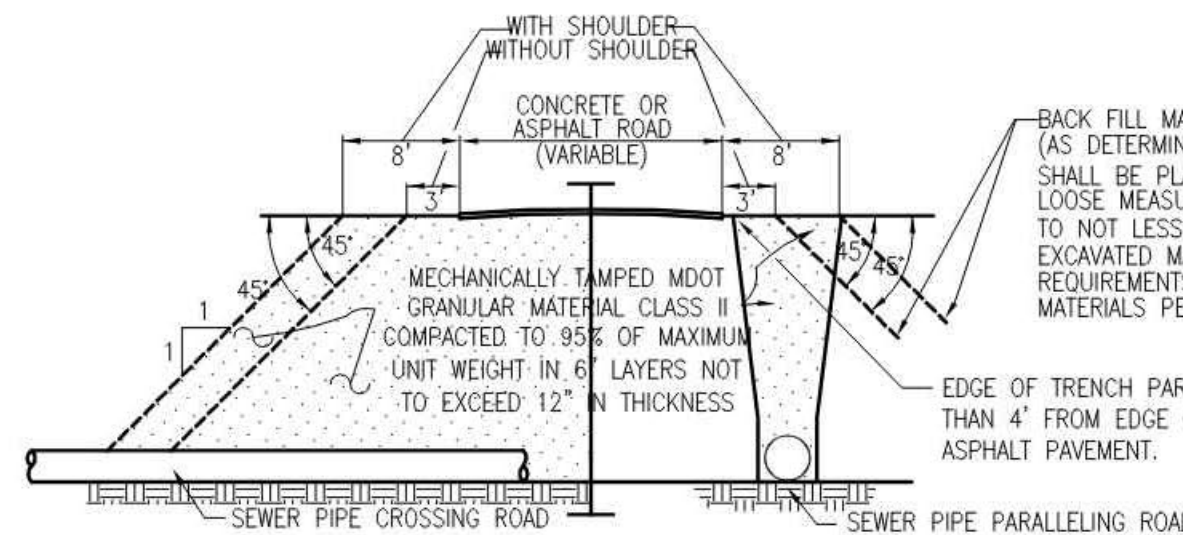
TYPICAL UNDERGROUND DETENTION AND OUTLET MANHOLE DETAILS



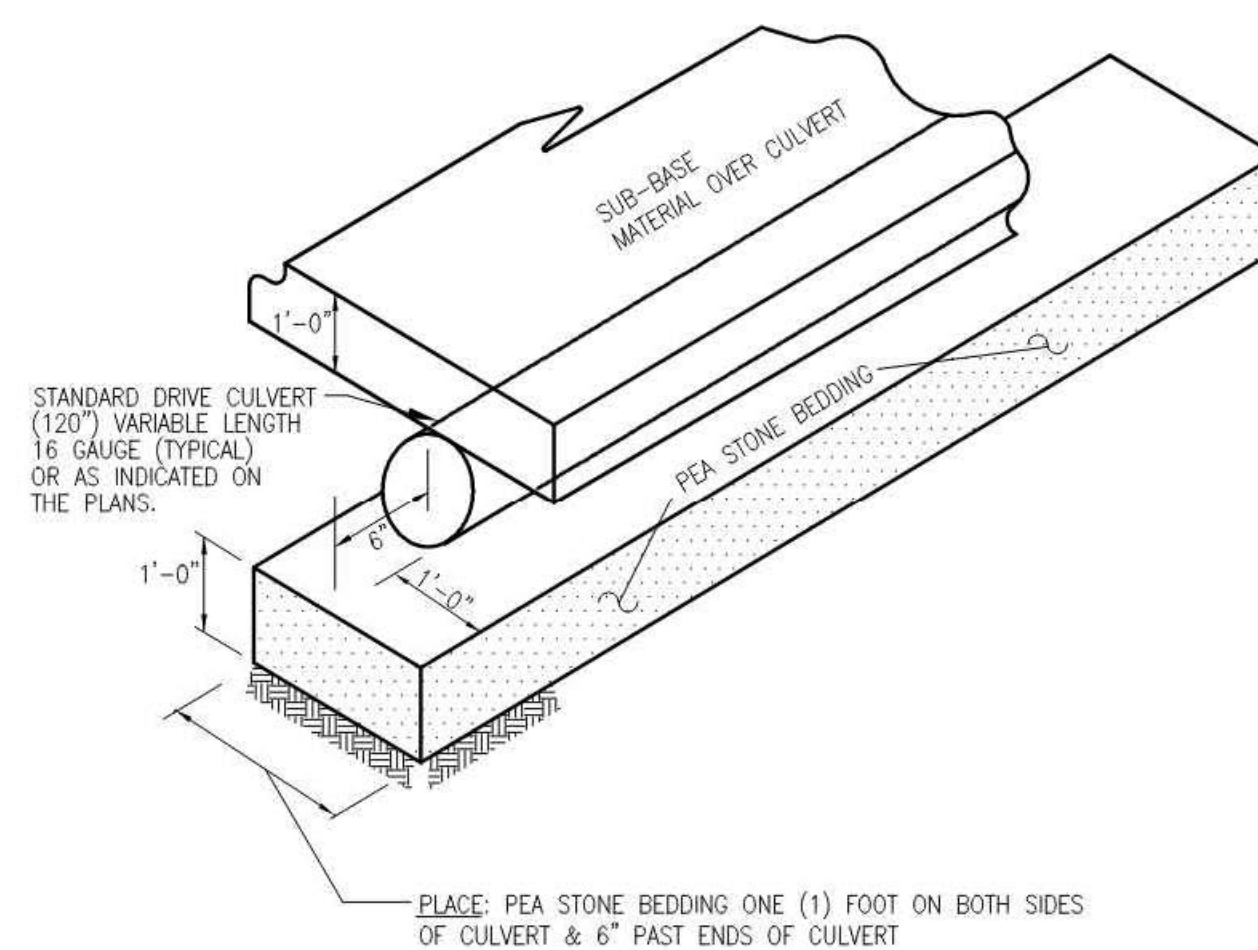
NOTES:

1. LOCATION MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
2. ALL UNDERDRAIN SHALL BE APPROVED PLASTIC PIPE. METAL PIPE SHALL NOT BE USED.
3. ALL UNDERDRAIN SHALL OUTLET TO DRAINAGE STRUCTURE.
4. UNDERDRAIN CONNECTIONS (AT LOW POINTS) SHALL BE MADE AS CLOSE TO THE STRUCTURE INVERT AS PRACTICAL, WITH A SPIRAL WRAP OF THE STRUCTURE USED TO MAKE THE TRANSITION FROM THE REQUIRED FLOW LINE DEPTH TO STRUCTURE INVERT.

SUBGRADE UNDERDRAIN, 6"



**SAND OR GRAVEL BACKFILL DETAILS FOR SEWERS
UNDER CONCRETE OR ASPHALT PAVEMENTS,
SIDEWALKS, DRIVEWAYS AND PARKING AREAS**



DRIVE CULVERT BEDDING DETAIL

GENERAL NOTES FOR STORM SEWER CONSTRUCTION

1. PIPE BEDDING AND BACKFILLING:

BEDDING SHALL EXTEND A MINIMUM OF 4" BELOW PIPE, UNLESS OTHERWISE NOTED ON CONSTRUCTION PLANS. BEDDING SHALL BE UNIFORM IN GRADE. HOWEVER, IF THE EXISTING NATIVE SOILS MEET THE REQUIREMENTS FOR MDOT GRANULAR MATERIAL CLASS II (MINIMUM 4" THICK), THEN STORM STORM SEWER MAY BE LAID DIRECTLY ON COMPACTED NATIVE SUBGRADE SOILS.

BACKFILL SHALL BE COMPACTED ABOVE PIPE OR AS INDICATED ON CONSTRUCTION DRAWINGS. TRENCH BACKFILL SHALL BE OF A SUITABLE MATERIAL AND SHALL BE FREE OF ANY ORGANIC MATERIALS AND ROCKS LARGER THAN 3" IN SIZE. BACKFILL SHALL BE RAMPED INTO TRENCH AND COMPACTED WITH A SMALL DOZER OR OTHER, APPROVED METHODS. WHERE TRENCH IS WITHIN A 1:1 INFLUENCE OF STREETS, ALLEYS, SIDEWALKS, DRIVEWAYS AND PARKING AREAS, SAND BACKFILL SHALL BE USED WHICH SHALL CONSIST OF MDOT GRANULAR MATERIAL CLASS II OR III COMPACTED IN 6" LAYERS NOT TO EXCEED 12" TO A DENSITY OF 95% AS DETERMINED BY AASHTO T99. ALL BACKFILL PLACED WITHIN A 1:1 INFLUENCE OF STRUCTURES SHALL BE APPROVED SAND, PLACED IN 1" LAYERS AND COMPACTED. NO FROZEN MATERIAL SHALL BE BURIED MORE THAN 4' BELOW THE FINAL ELEVATION OF THE GROUND.

TRENCHES WHICH ARE TO BE LEFT OPEN OVERNIGHT SHALL BE ENCLOSED WITH SUITABLE FENCING AND LIGHTED BARRICADES, UNLESS OTHERWISE APPROVED BY THE TOWNSHIP.

2. SUMP PUMP LEAD REQUIREMENTS:

ALL SUMP PUMP LEADS CONNECTED TO A DRAIN SHALL BE PRE-MANUFACTURED.

SUMP PUMP MAINS AND LEADS SHALL BE A SDR 35, NON-PERFORATED, SOLID WALL, PVC, ARMCO TRUSS PIPE, OR APPROVED EQUAL, WITH PREMIUM JOINTS.

TAPS TO 12" STORM SEWER SHALL BE MADE WITH A FERNCO EZ TAP OR APPROVED EQUAL TAPS TO OTHER SIZE STORM SEWER SHALL BE MADE WITH A ROMAC SADDLE, KOR-N-TEE LATERAL CONNECTOR FOR CONCRETE PIPE, OR APPROVED EQUAL.

ENDS OF ALL 4" SUMP PUMP LEADS SHALL BE TEMPORARILY CAPPED AND THEIR LOCATION STAKED, WITNESSED AND RECORDED.

ALL SUMP PUMP LEADS TO BE TAKEN TO THE PROPERTY LINE, EASEMENT LINE OR AS INDICATED ON THE PLAN.

SUMP PUMP CLEANOUTS SHALL BE A MINIMUM INSIDE DIAMETER OF 24" AND BE CONSTRUCTED AT CHANGES OF ALIGNMENT, ENDS OF SUMP PUMP MAINS OR AS INDICATED ON THE PLAN.

3. RESTORATION REQUIREMENTS:

ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE RESTORED AS FOLLOWS, UNLESS OTHERWISE NOTED ON CONSTRUCTION DRAWINGS:

FINISH GRADE

PLACE 3" THICKNESS OF "QUALITY" TOPSOIL ACCEPTABLE TO THE ENGINEER.

APPLY SOD OR SEED AND FERTILIZER AS FOLLOWS:

LOCATION	SODDING/ SEEDING REQUIREMENTS	FERTILIZER REQUIREMENT
SLOPES & DITCH BANKS, ETC.	MDOT "ROADSIDE" MIX (50% PERENNIAL RYE, 15% KENTUCKY BLUE, 35% RED FESCUE) APPLIED AT 100 LBS/ACRE	240 LBS/ACRE OF CHEMICAL FERTILIZER NUTRIENTS IN EQUAL PROPORTIONS OF NITROGEN, PHOSPHORIC ACID AND POTASH. (MUST BE A SLOW-RELEASE FERTILIZATION)
OTHER AREAS	MDOT "CLASS A" MIX (30% PERENNIAL RYE, 30% KENTUCKY BLUE, 40% RED FESCUE) APPLIED AT 100 LBS/ACRE	240 LBS/ACRE OF CHEMICAL FERTILIZER NUTRIENTS IN EQUAL PROPORTIONS OF NITROGEN, PHOSPHORIC ACID AND POTASH. (MUST BE A SLOW-RELEASE FERTILIZATION)
DITCH BOTTOMS, SLOPES EXCEEDING 3:1, AND AT STRUCTURES	3" TOPSOIL WITH CLASS A SOD	

APPLY STRAW MULCH AT THE RATE OF 2-3 BALES/1000 SQUARE FEET.

THE CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THE GROWTH OF ALL SEEDED AREAS, AND SHALL RE-SEED AS NECESSARY TO ACCOMPLISH THIS.



DATE	CADD	SECTION	TOWN	RANGE	COUNTY	CITY/TOWNSHIP	SCALE	VERTICAL	DATE
06/03/2003	DK				WASHTENAW	CHARTER TOWNSHIP OF SUPERIOR	NTS	N/A	000-00-0000
DATE	CADD	SECTION	TOWN	RANGE	COUNTY	CITY/TOWNSHIP	SCALE	VERTICAL	DATE
06/03/2003	DK				WASHTENAW	CHARTER TOWNSHIP OF SUPERIOR	NTS	N/A	000-00-0000

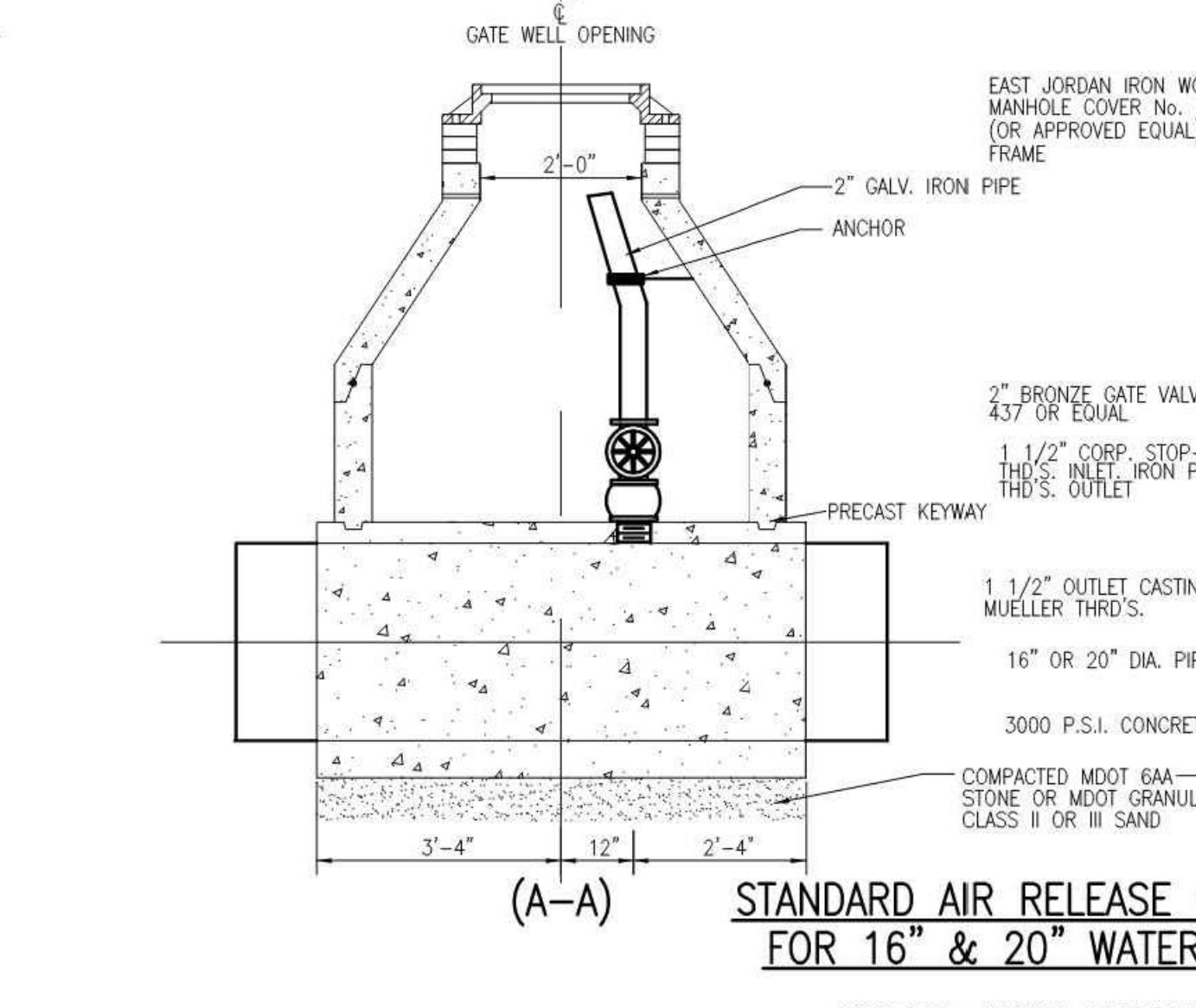
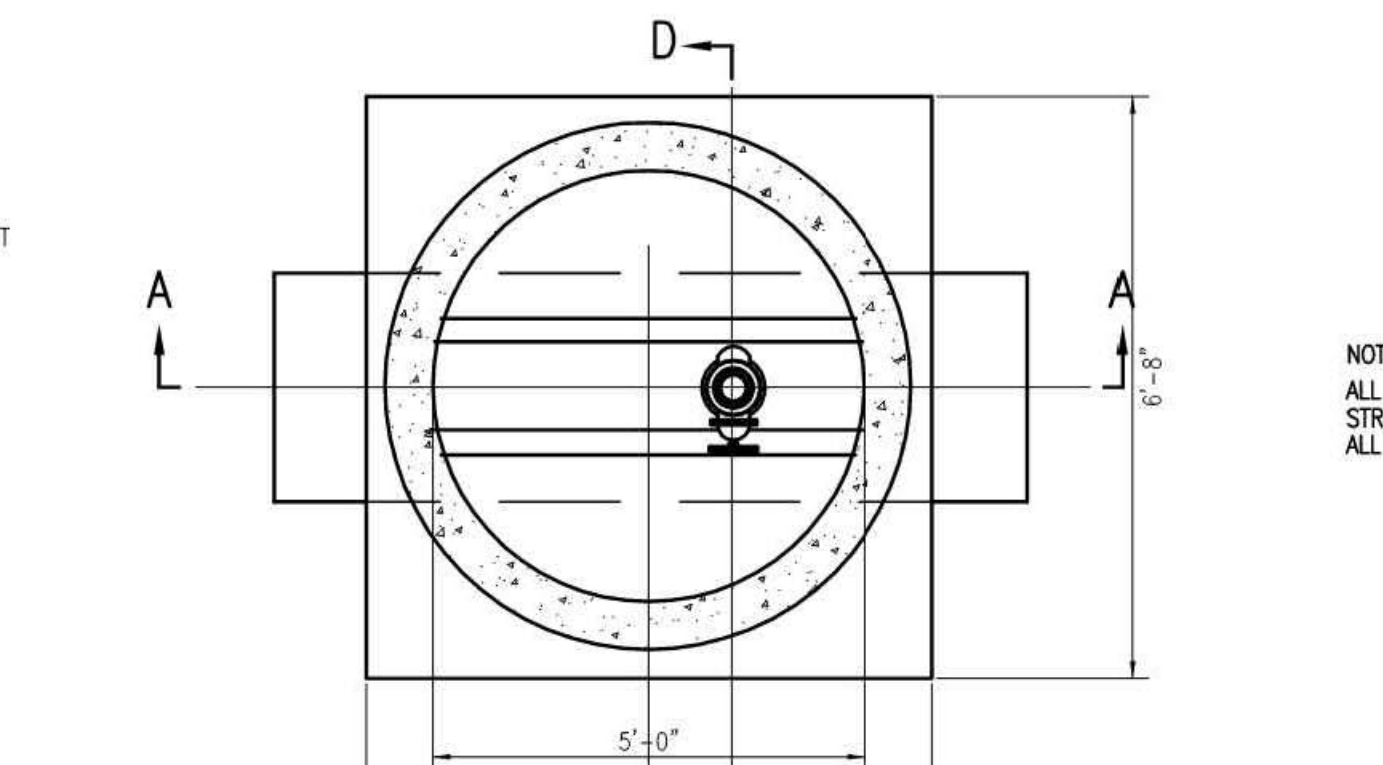
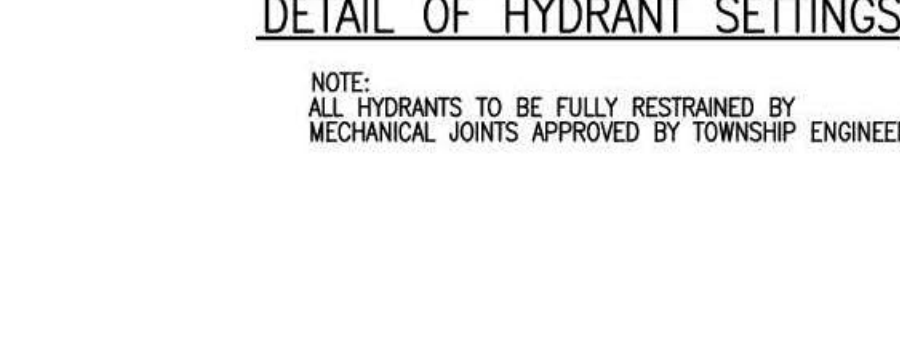
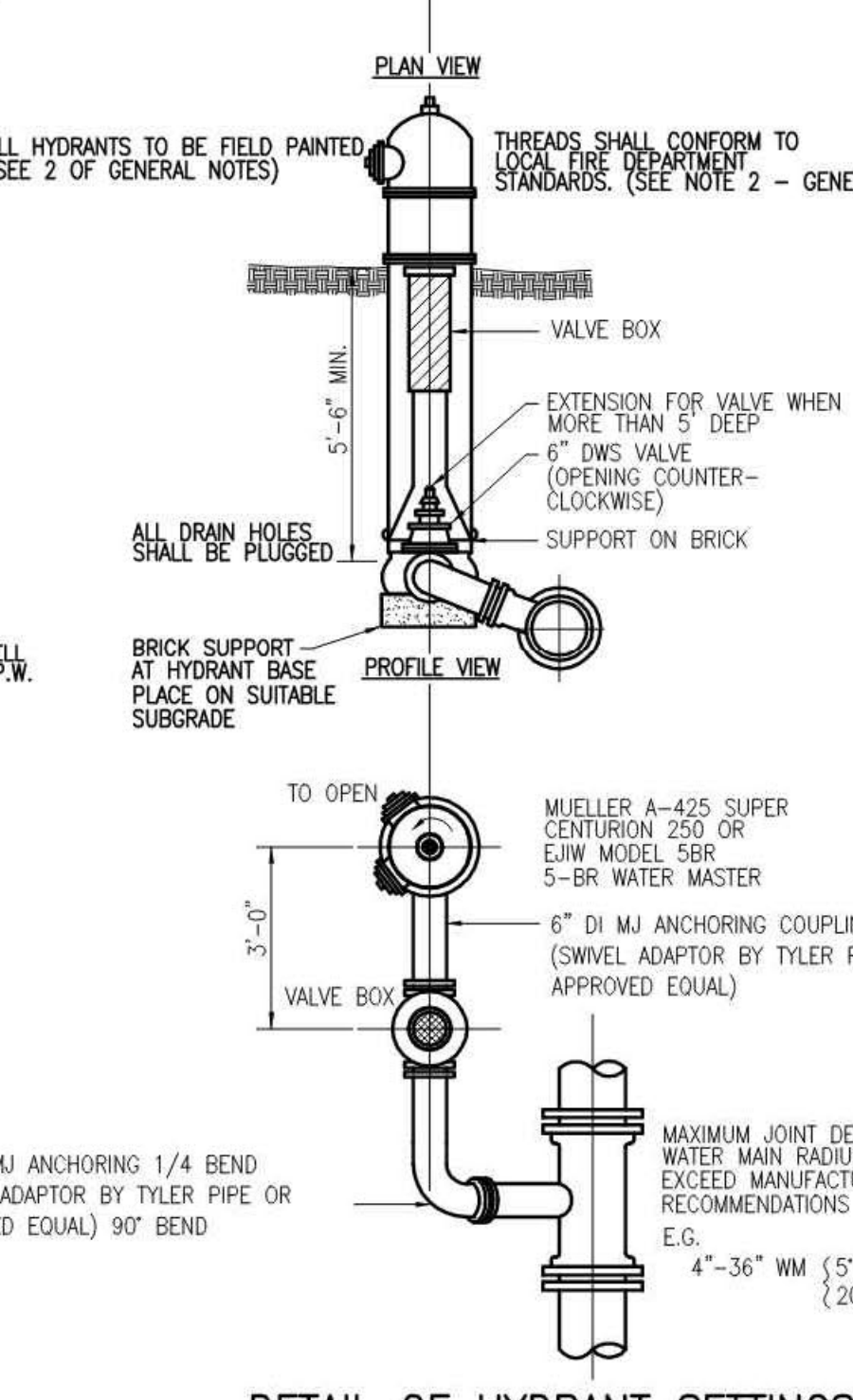
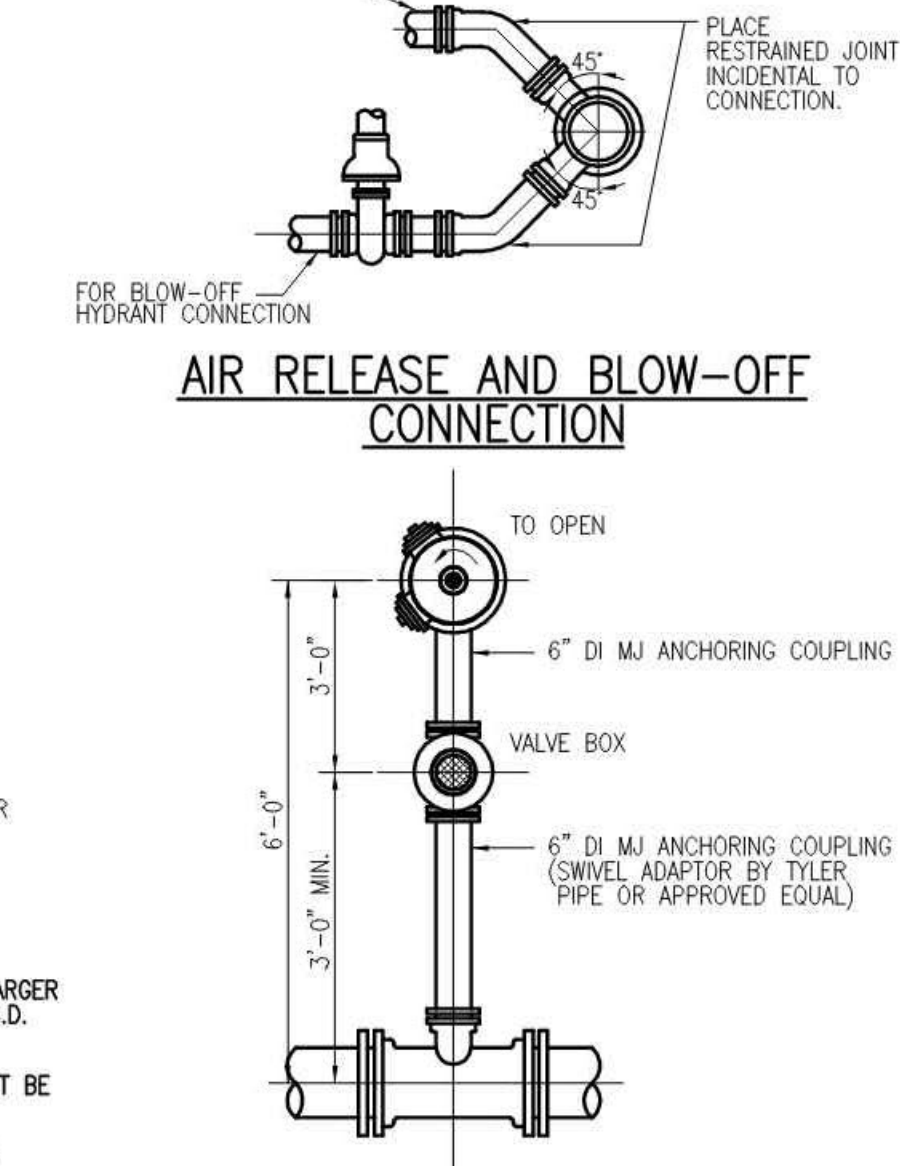
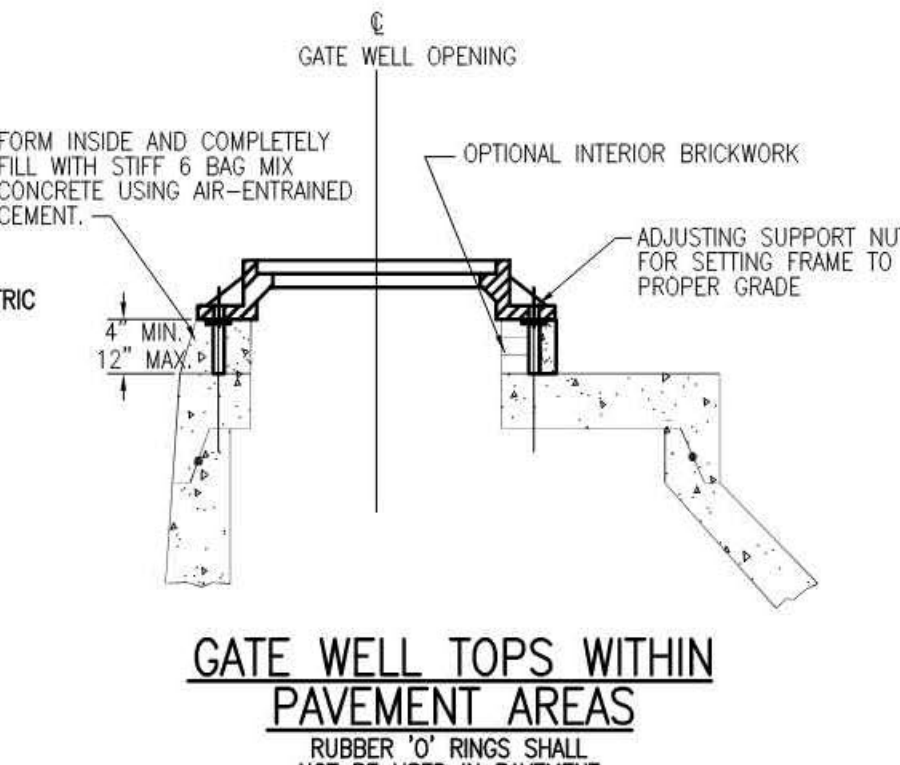
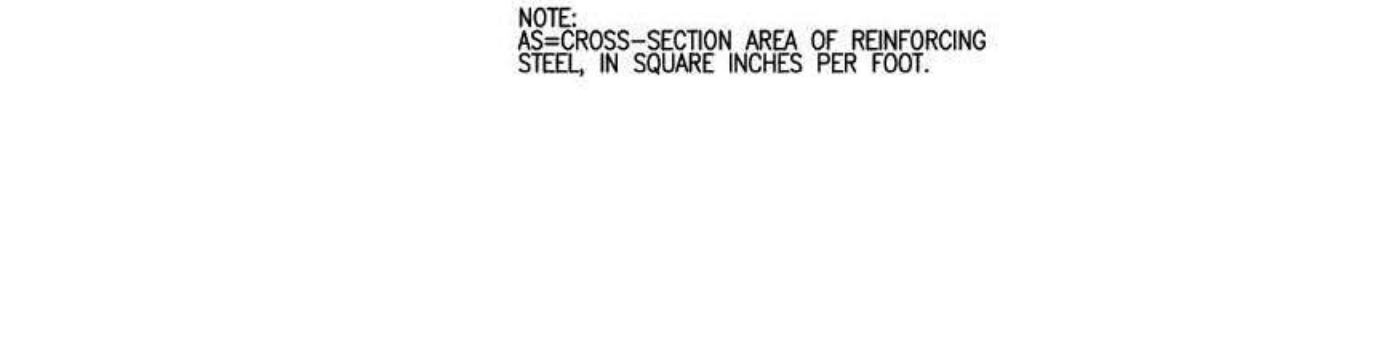
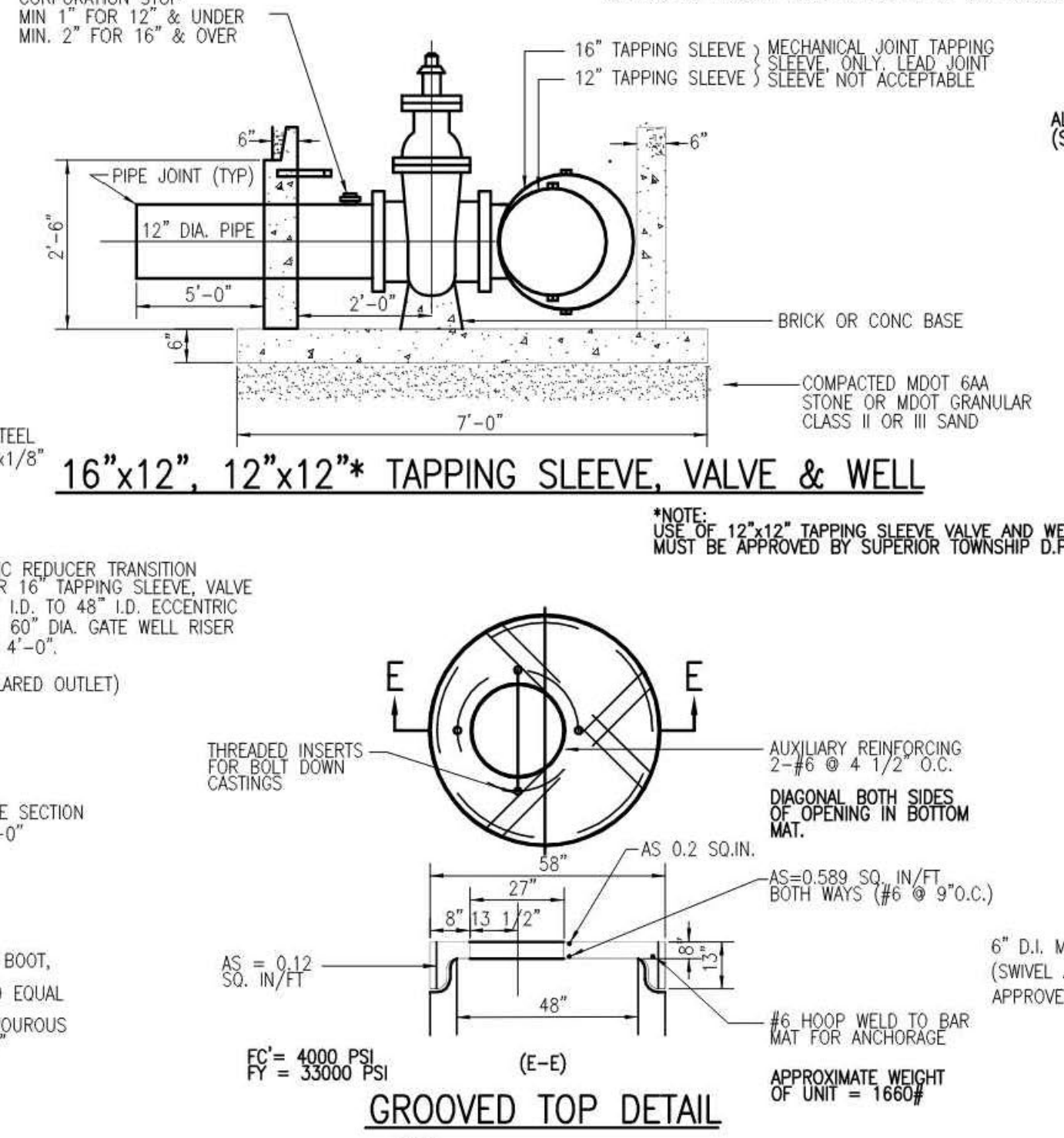
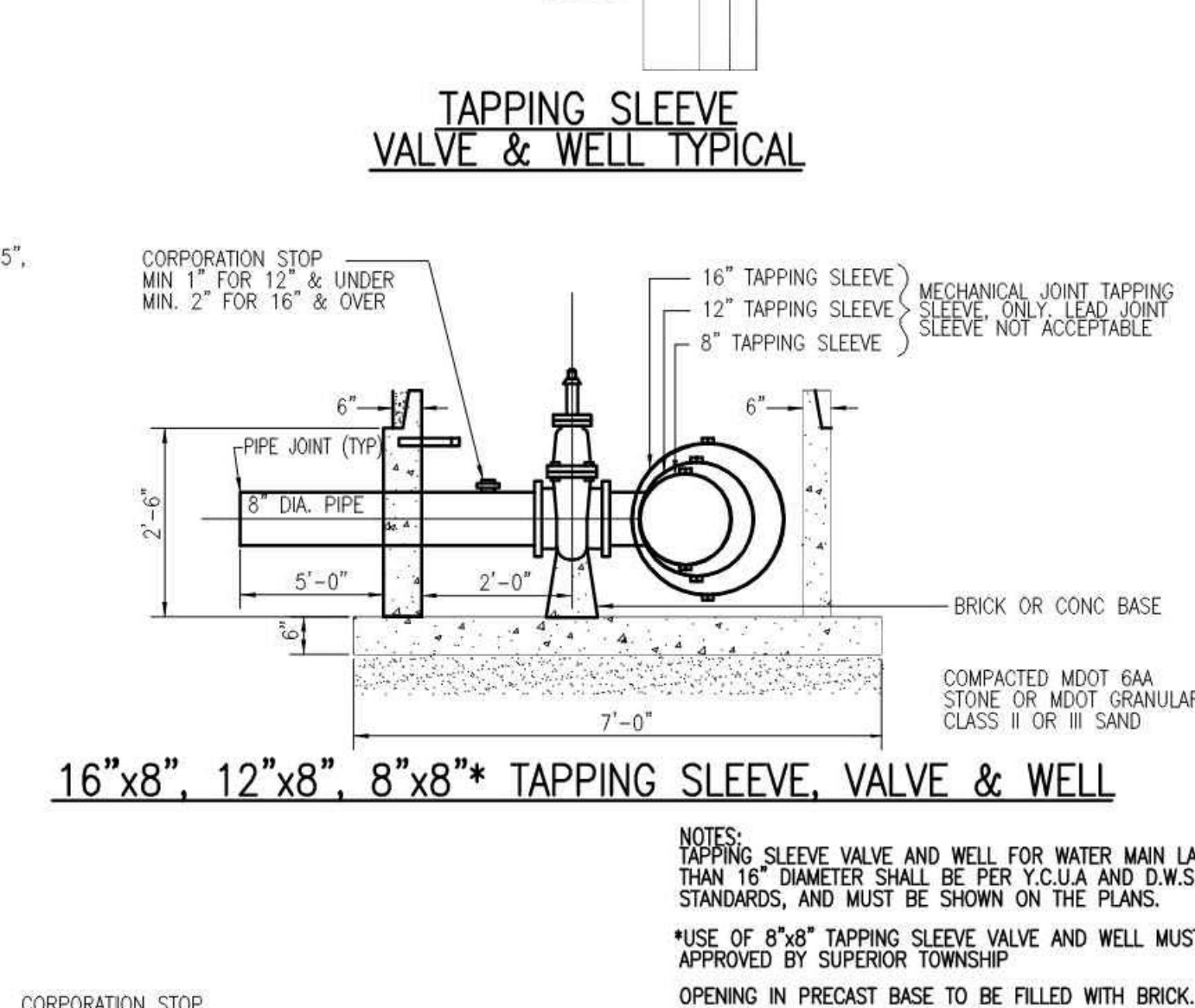
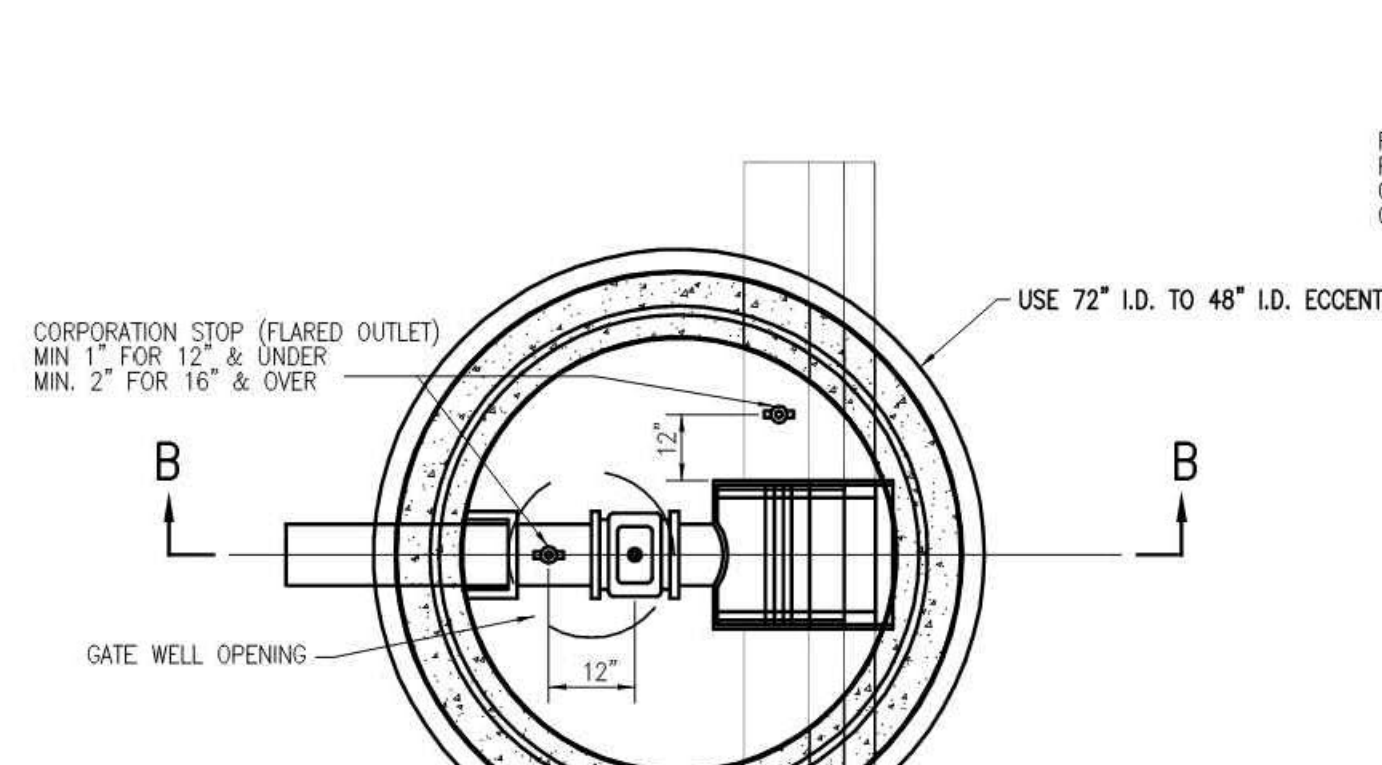
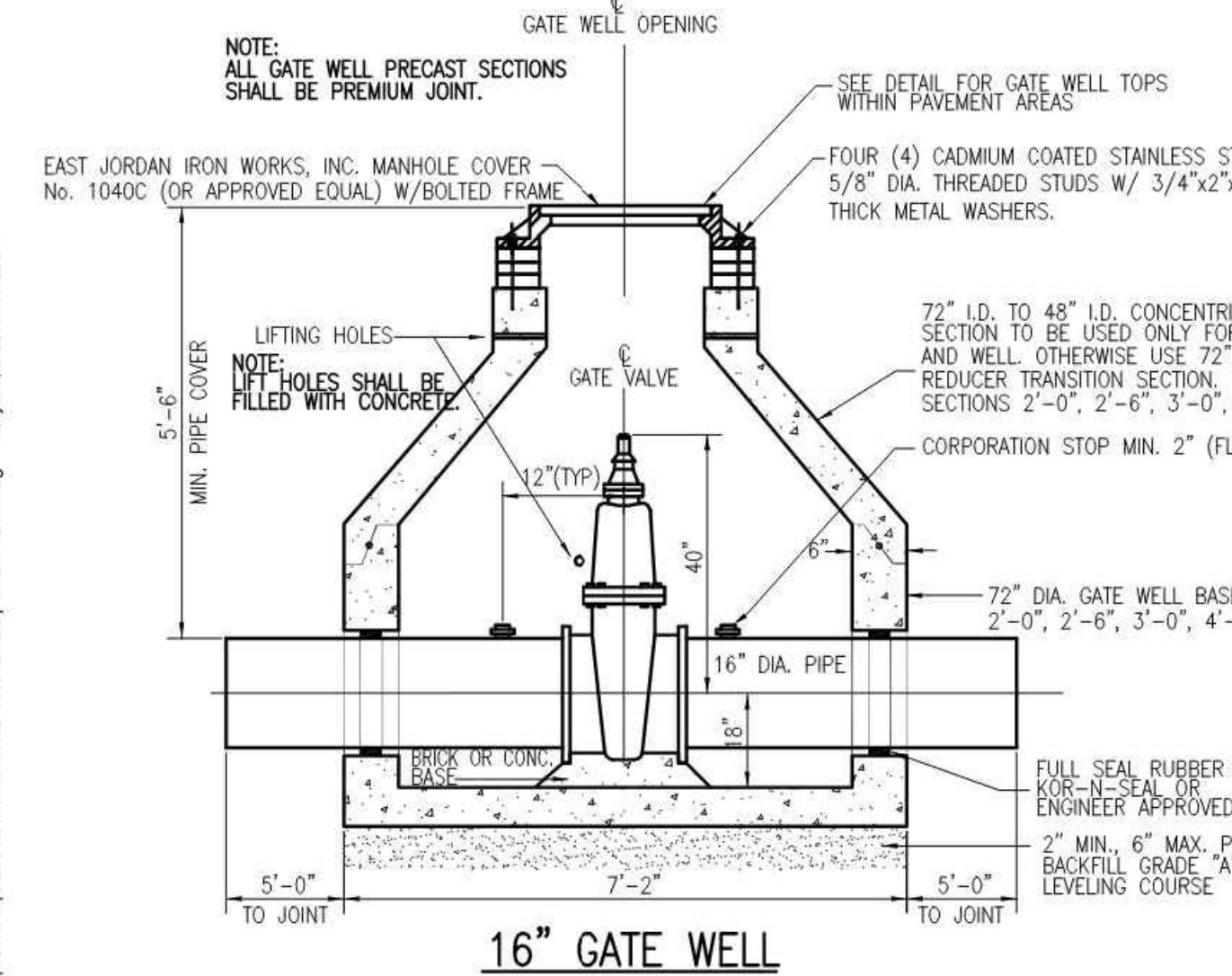
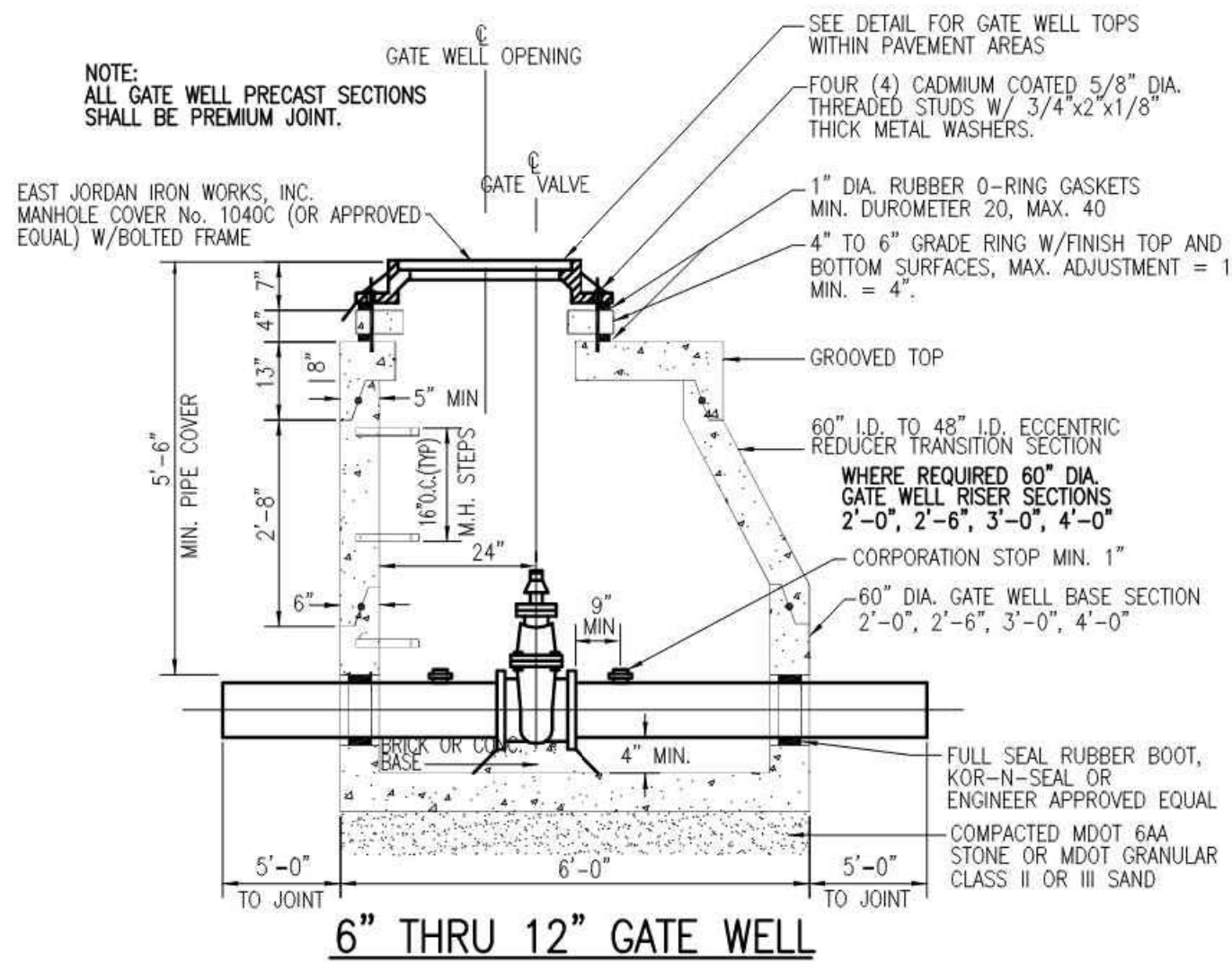
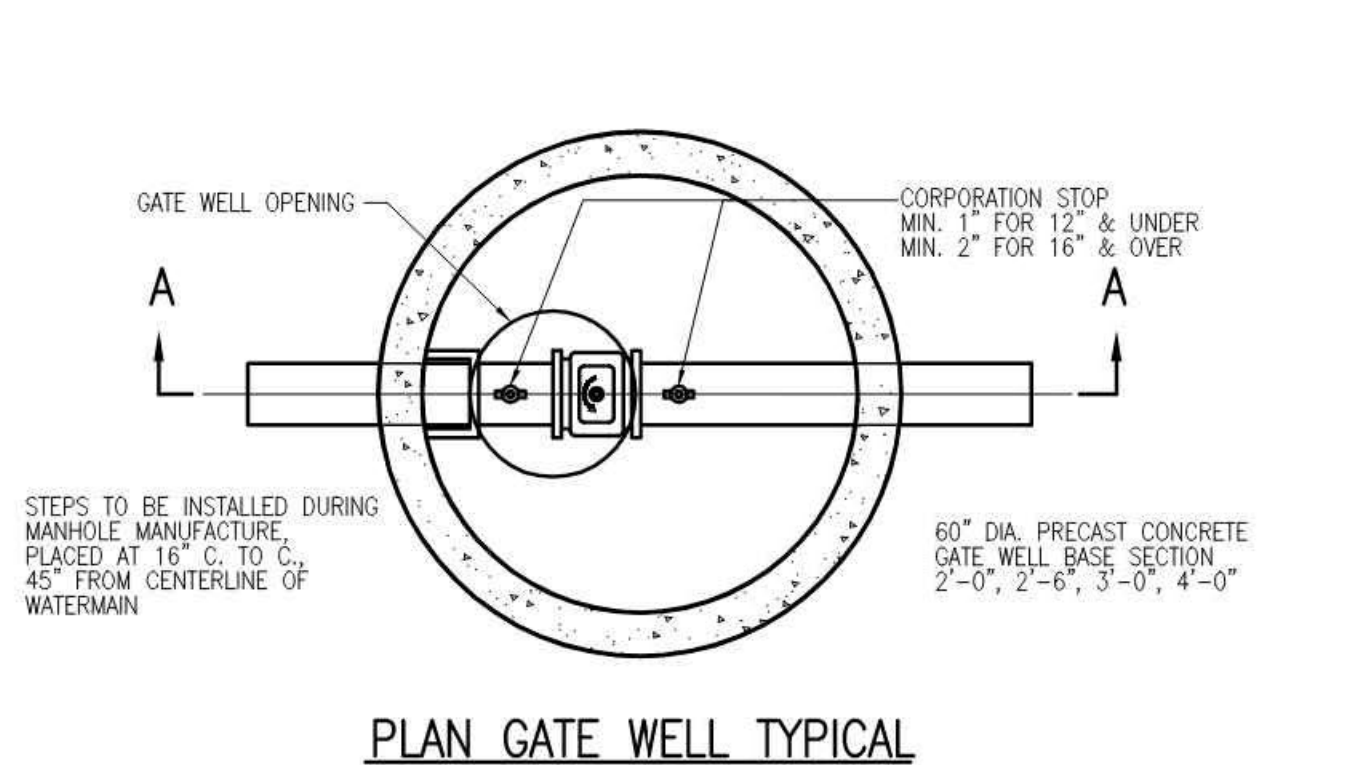
CHARTER TOWNSHIP OF SUPERIOR
STANDARD STORM SEWER DETAILS

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OF 2

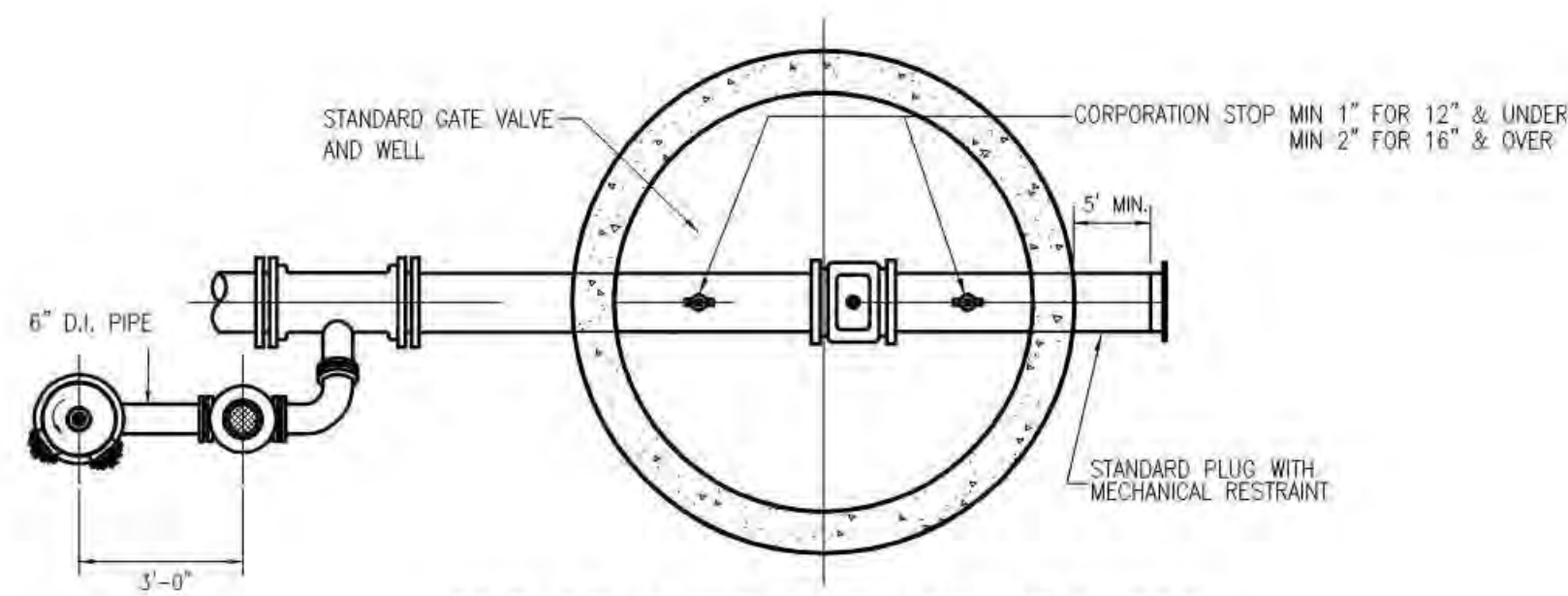
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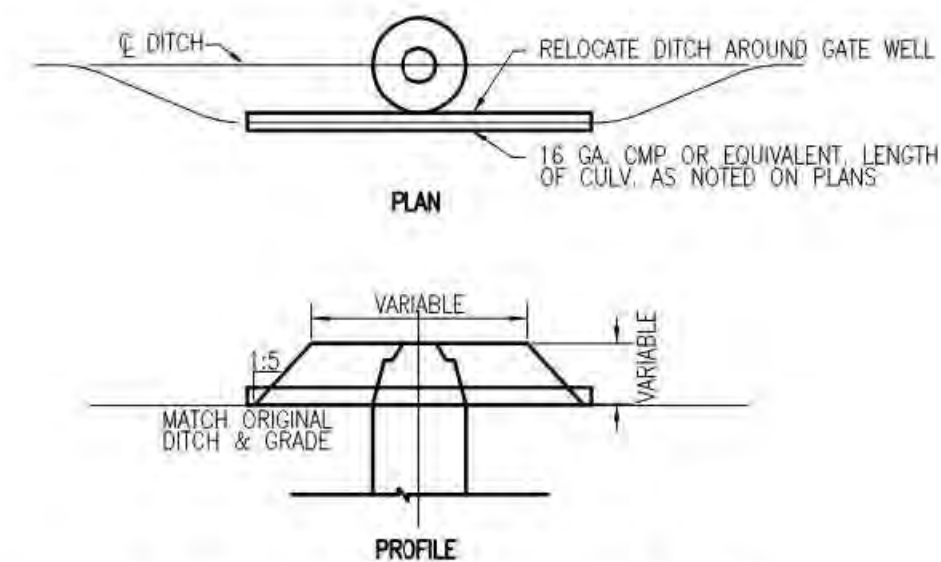
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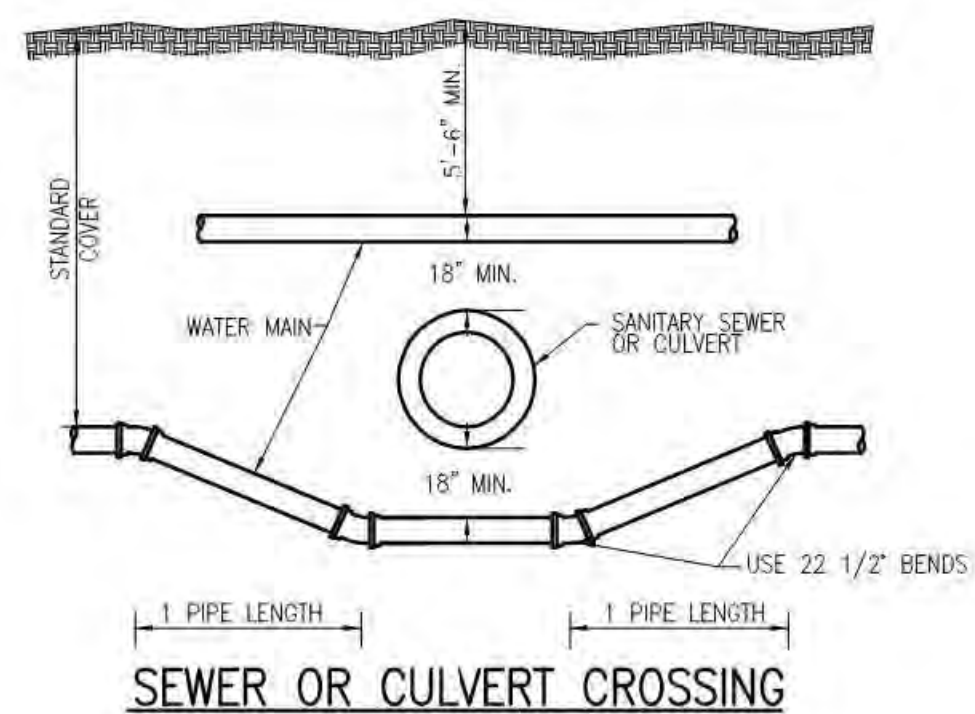
- ### WATER MAIN NOTES
- All construction procedures and materials used on all water main projects shall conform to Ypsilanti Community Utilities Authority (Y.C.U.A.), Detroit Water System Department (D.W.S.D.), and the Charter Township of Superior current Standards and Specifications.
 - All hydrants shall be Mueller A-425-Super-Centurion 250 or E.J.L.W. 5-BR Water Master and shall conform to AWWA current standards and shall have a 5 1/4" valve opening which closes with the water pressure. Hydrants shall be traffic style with breakable flange and coupling. Hydrants shall have a swivel flange to allow bonnet to be turned 360 degrees without removing the bonnet and barrel flanges shall be integrally cast with the barrel. Inlet shoe shall have a bronze valve seat, which can be removed without digging. Inlet connection shall be 6" mechanical joint, ASA-A21-11. Stem threads shall be sealed with double "O" rings and shall be permanently lubricated with all weather grease. Hose connections: Two (2) 4 1/2" pumper nozzles facing the centerline of the road unless otherwise directed by the Township. Pumper connections shall have: National Standard Threads on one pumper connection (4 1/2" I.D., 4 threads per inch, 5.389 minor dia., 5.761 major dia., 5.586 pitch dia.) and Store Fitting on the other pumper connection (RCS Manufacturing). Operating Nut: (1) 1 1/2" P-F pentagon, open left. Drain holes in hydrant shall be plugged and watertight. Hydrants shall be painted red above the ground and black below. All hydrants shall be constructed with companion valve in a three piece piece adjustable cast iron valve box.
 - All water mains shall be ductile iron as per the following specification. Ductile iron pipe shall be ANSI 1-A21.51 (AWWA-C151) std. wall thickness, cement lined with bituminous seal coat Class 54 for sizes 6" through 16" Class 55 for 24" pipe, pipe sizes larger than 24" in nominal diameter shall meet all the requirements of the current AWWA C100 for ductile iron pipe.
 - Gate Valves shall be iron body, fully bronze mounted, E.J.L.W. resilient wedge, non-rising stem, opening counterclockwise with 2" square operating nut conforming to Y.C.U.A. and D.W.S.D. specifications. All gate valves with operating nuts at a distance greater than 5' below ground surface shall be provided with an extension stem. The length of the extension shall be such that it will be within 5' of ground surface when an extension stem is used. It shall be held in place by two extension stem guide assemblies. Each assembly shall be comprised of a "J" bracket and "L" bracket supplied by E.J.L.W. The stem guides shall be located opposite from each other, and shall be suitably fastened to the wall of the gate well. In addition, a "stop" shall be welded to the extension stem in a location that will prevent the extension stem from slipping off the operating nut. Details of extension stem and method of installation shall be approved by the engineer prior to installation. All precast concrete gate well sections shall be manufactured to conform with ASTM C478, standard specifications for precast reinforced concrete manhole sections, except wall thickness, shall be shown on these details. All joints for precast concrete gate well sections shall be "modified grooved tongue" with gaskets manufactured to conform with ASTM C443, standard specification for joints for circular concrete sewer and culvert pipe rubber gaskets. All gate well covers shall be E.J.L.W. #1040C with bolted frame and have words "Superior Township Water Main and Logo" in raised letters on the frame cover, or approved equal.
 - Tapping sleeve shall be mechanical joint with DWS Mechanical Joint Tapping Gate Valve. Lead joint sleeves shall not be used.
 - No installation of water main is to be attempted without Township's inspector being present. Unless otherwise specified on plans, top of all water mains shall be 5.5 ft. below existing or proposed road centerline, or 5.5 ft. below existing or proposed ground, whichever results in lower elevation. An 18" minimum vertical clearance between storm or sanitary sewer shall be maintained.
 - Three (3) working days before you dig, dial MISS DIG at 1-800-482-7171.
 - All required cross connection devices shall be installed as required by the local plumbing inspector and in accordance with the standards of the Michigan Department of Public Health.
 - The design engineer shall furnish Superior Township with mylar "Record" water main plans along with a computer disk using the most recent release of AutoCAD, upon job completion. Plans shall locate all water mains, hydrants and gate valves and wells.
 - Where work is to be performed in the vicinity of a Superior Township main, contractor shall notify the Superior Township Utility Department at (734) 480-5500 at least 3 working days prior to start of construction as well as township engineer to schedule inspection.
 - All pipe and all pipe fittings shall be made in the U.S.A.
 - All bolts on all flanged and mechanical joint fittings shall be domestic origin high strength, low alloy COR-BLUE steel bolts or approved equal. These bolts shall meet the current provisions of American National Standard ANSI/AWWA C111/A21.11-90 for rubber gasket joints for ductile iron pressure pipes and fittings. Bolt manufacturer's certificate of compliance must accompany each shipment.
 - BACKFILL NOTE: Under road surfaces, pavement, sidewalk, curb, driveways and where the edge of the trench is within 3 (three) feet of the pavement or as called for on the plans, the trench depth shall be 4 (four) inches lower than the proposed water main elevation. The trench width shall be the outside diameter plus 16 (sixteen) inches for pipe diameters up to 36 (thirty-six) inches and larger. The trench shall be backfilled by placing granular material by the "controlled Density Method" or other means having approval of the engineer and compacting it to 95 (ninety-five) percent of its maximum unit weight.
 - "Mega Lugs," "Field Lock Gaskets," or a mechanical joint restraint system shall be used instead of concrete thrust blocks for joint restraint.
 - All bolts used in securing fittings to the water main shall be "COR-BLUE" bolts or approved equal.
 - All buried bolts, nuts and washers shall be "COR-BLUE" or equivalent and poly-wrapped.
 - Like size to like size tapping sleeves shall not be used with transite pipe.
 - Where water main is located under pavement, the Township shall not be responsible for repairing pavement within the easement in the event that maintenance or repairs to the water main become necessary.
 - Mechanical and slip-on joints for ductile iron shall be in accordance with AWWA C111 (ANSI A21.11).
 - All fire hydrant joints shall be totally restrained by use of "Mega Lugs" or other approved restrained joint.
 - Fittings for ductile iron pipe shall be ductile iron or cast iron and shall meet requirements of AWWA C110 (ANSI A21.10) or AWWA C153 (ANSI A21.53). Ductile iron fittings shall be rated for 350 psi, pipe 24" diameter and less and 250 psi for pipe sizes over 24" diameter, except that ductile iron flanged fitting shall be rated for 250 psi for all pipe diameters.
 - Manhole steps shall be steel encased with polypropylene plastic or approved equivalent to M.A. Industries, Inc., PS-1 for brick, or PS-18 for block, East Jordan Iron Works 8502 (or approved equal). Manhole steps at 16" centers.
 - Maximum joint deflection and water main radius shall not exceed manufacturer recommendations (e.g. 4"-36" WM - 5' per 20' or 206" radius).



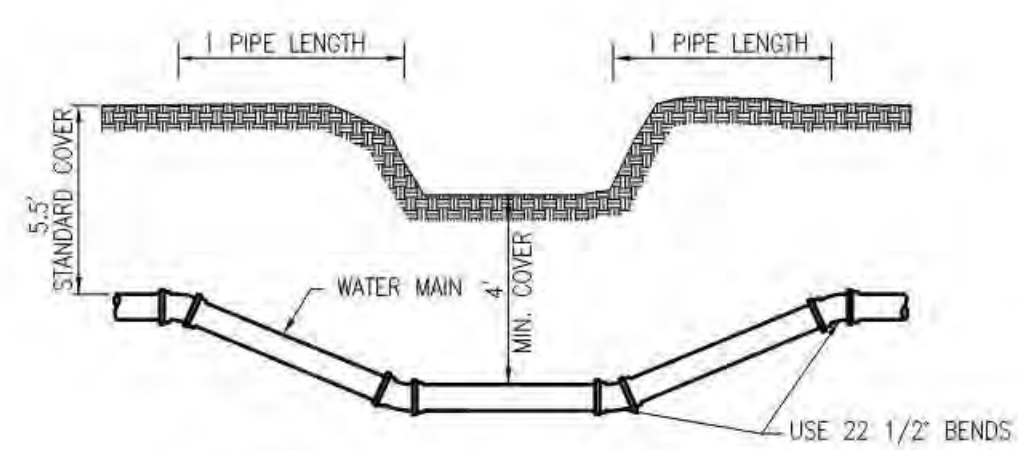
END OF WATER LINE ASSEMBLY FOR
WATER MAINS



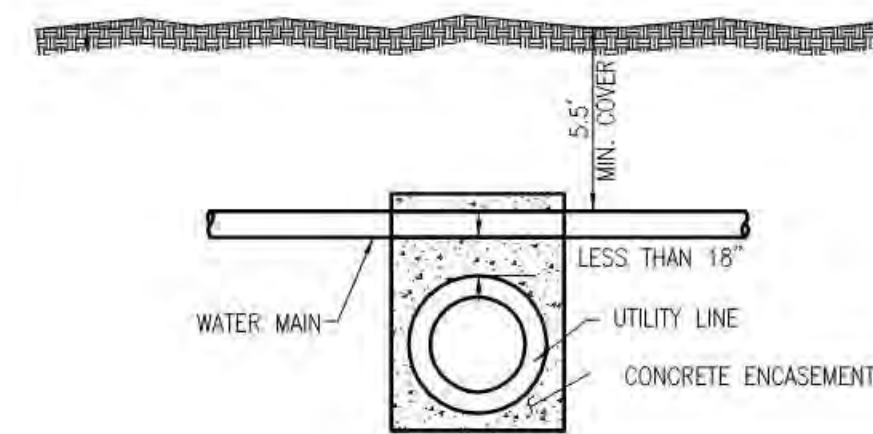
DITCH ENCLOSURE AT GATE WELL



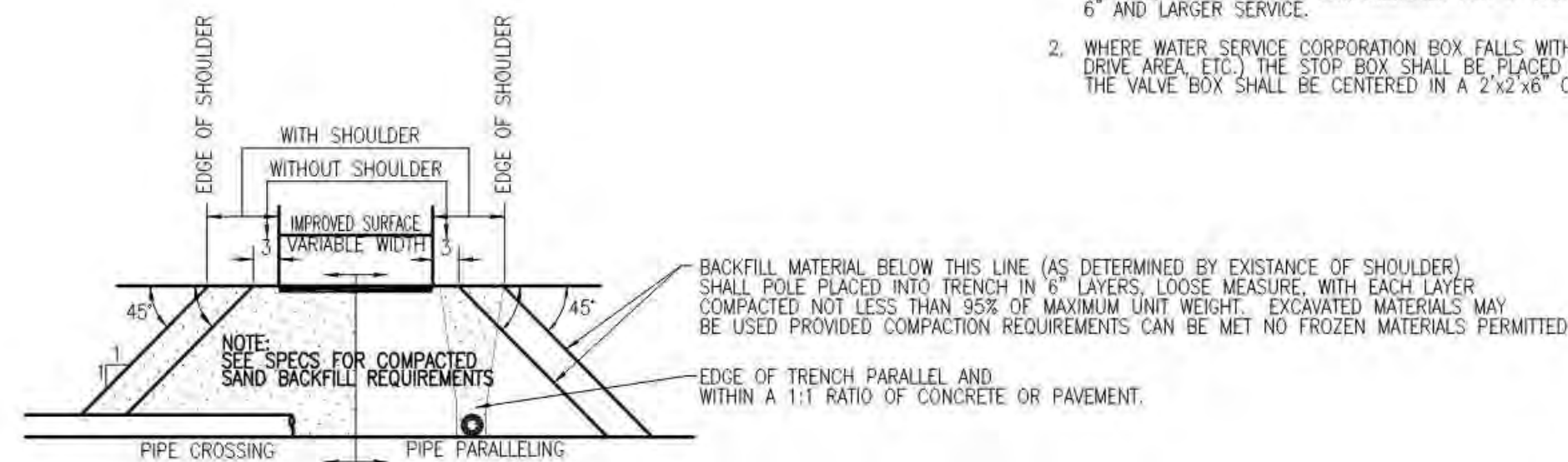
SEWER OR CULVERT CROSSING



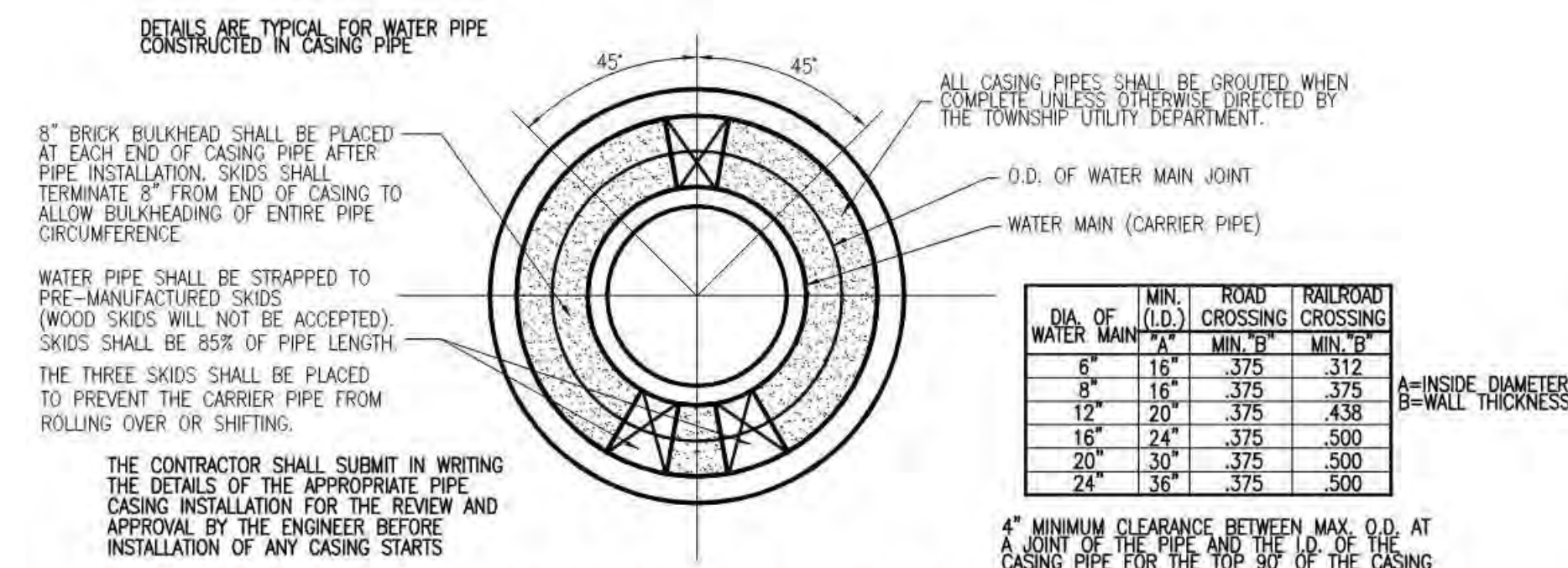
DITCH OR STREAM CROSSING



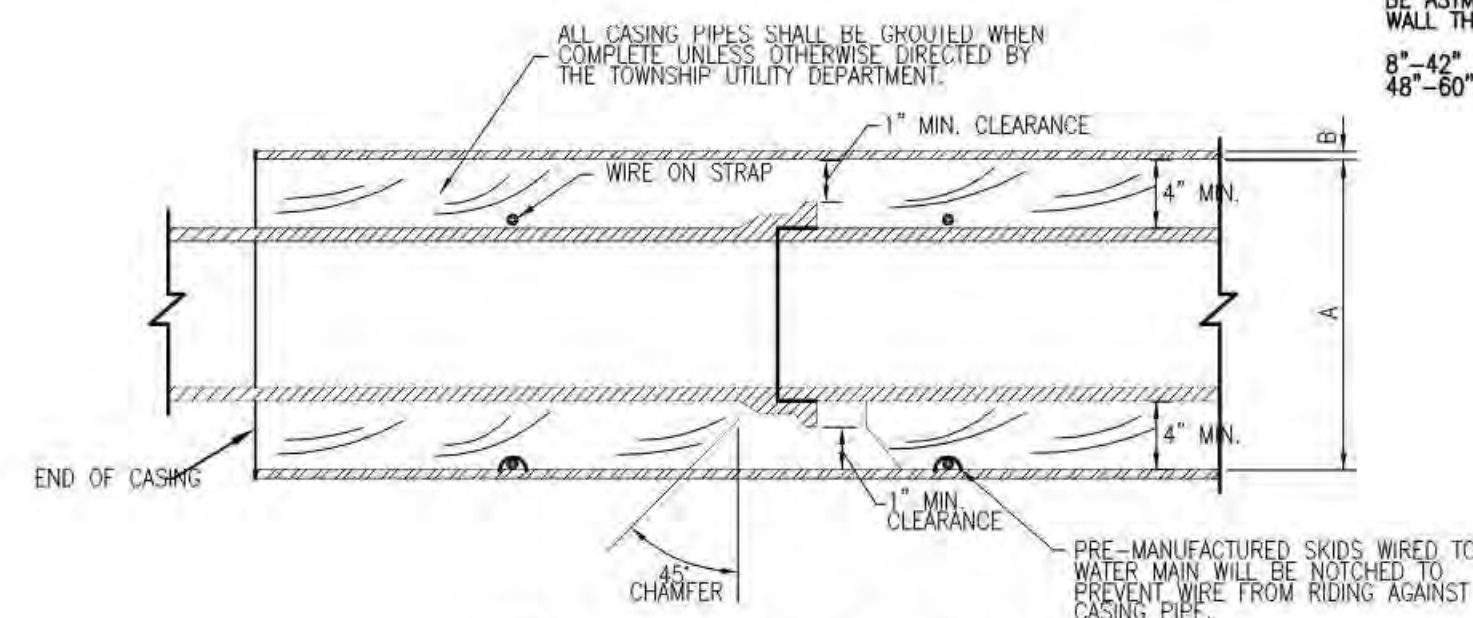
UTILITY CROSSING WITH LESS
THAN 18" CLEARANCE



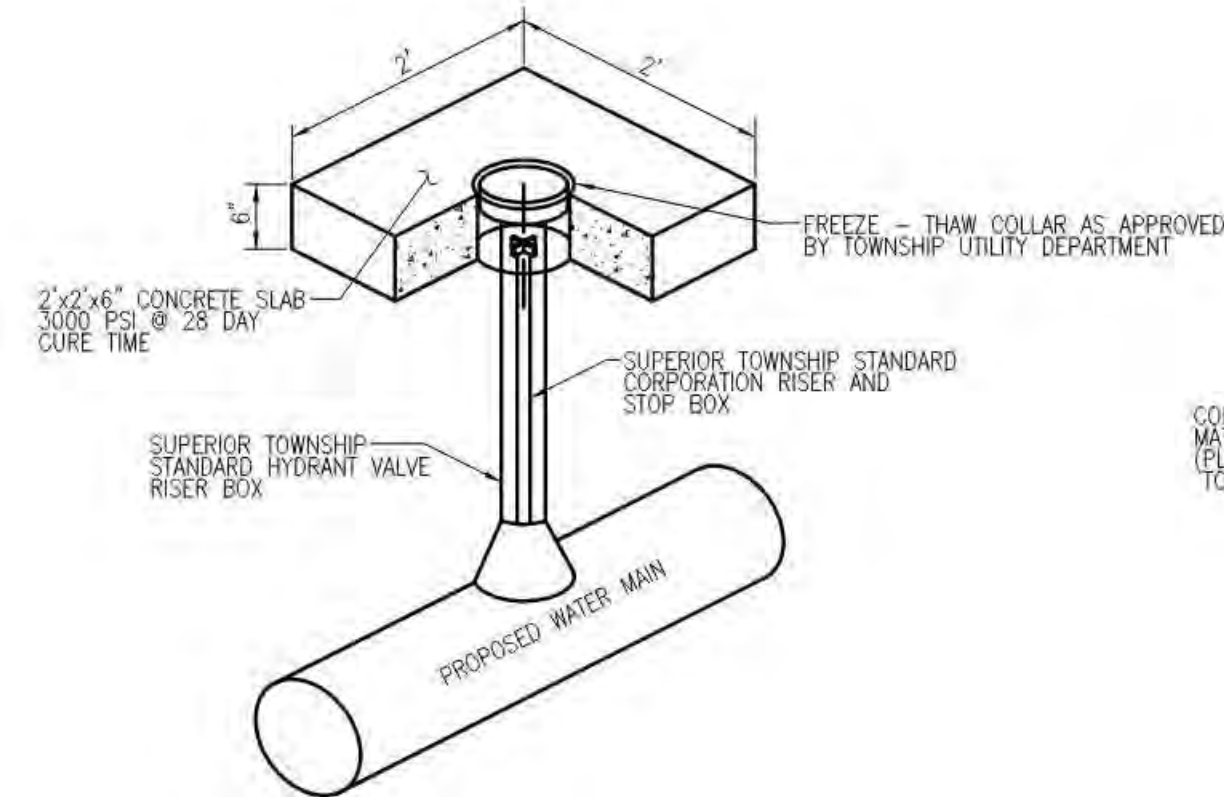
BACKFILL IN THE AREA OF STREETS, ALLEYS
SIDEWALKS, DRIVES & PARKING LOTS



PIPE BARREL SUPPORT FOR WATER MAIN
CONSTRUCTED IN CASING PIPE

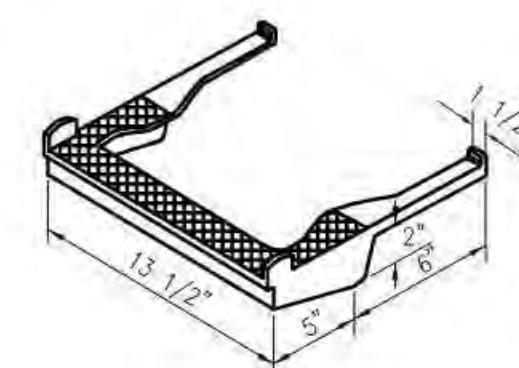


STANDARD CASING SECTION



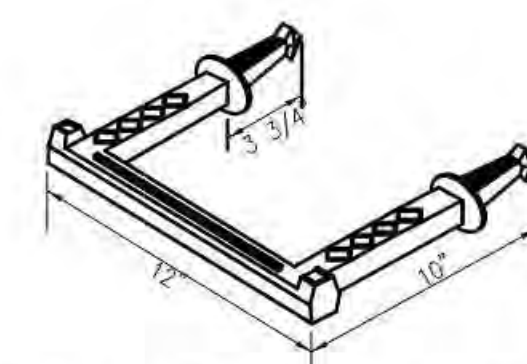
STOP BOX IN PAVEMENT

- WATER STOP BOX REQUIREMENTS:
- TWO HOLE ARCH PATTERN (ERIE PATTERN) TYPE WITH 1" UPPER AND 5' EXTENDED LENGTH WITH 42" ROD (FORD STOP BOX PART NO. EAT-50-40-42" OR APPROVED EQUAL). SMALL BOX REQUIRED FOR 3/4" AND 1" SERVICE. LARGE BOX REQUIRED FOR 1-1/2" AND 2" SERVICE. HYDRANT VALVE BOX REQUIRED FOR 3" AND 4" SERVICE. GATE WELL REQUIRED FOR 6" AND LARGER SERVICE.
 - WHERE WATER SERVICE CORPORATION BOX FALLS WITHIN A PAVED AREA (PARKING LOT, SERVICE DRIVE AREA, ETC.) THE STOP BOX SHALL BE PLACED IN A STANDARD HYDRANT VALVE BOX. THE VALVE BOX SHALL BE CENTERED IN A 2'x2'x8" CONCRETE SLAB.



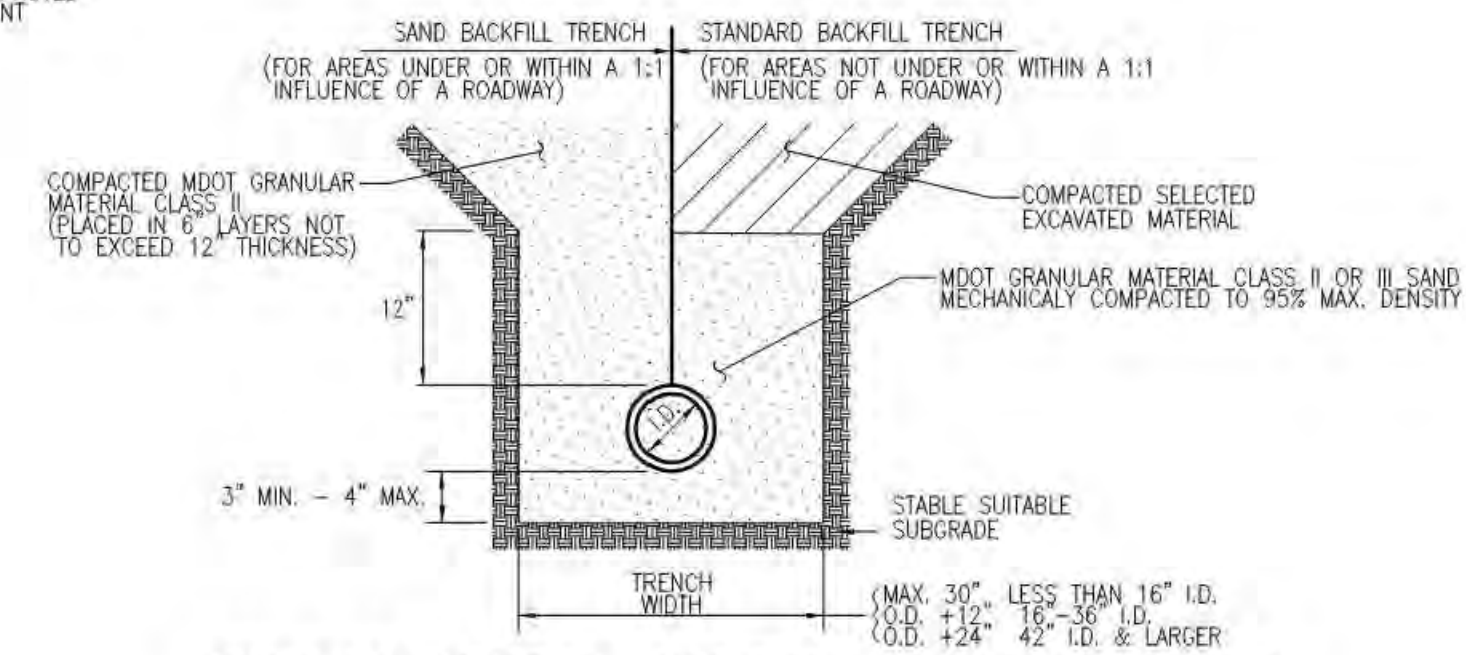
E.J.I.W. 8502

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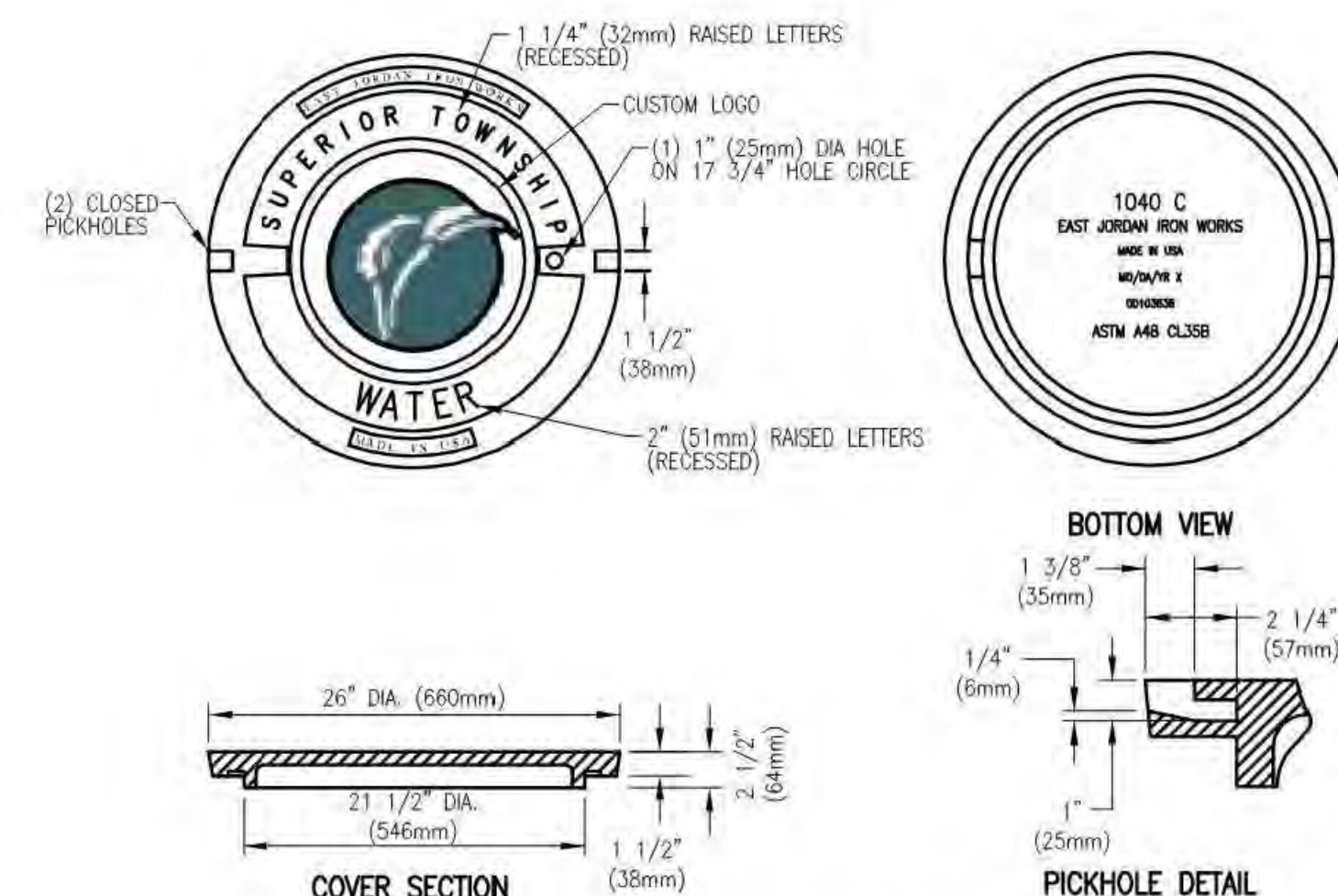


STANDARD MANHOLE STEP

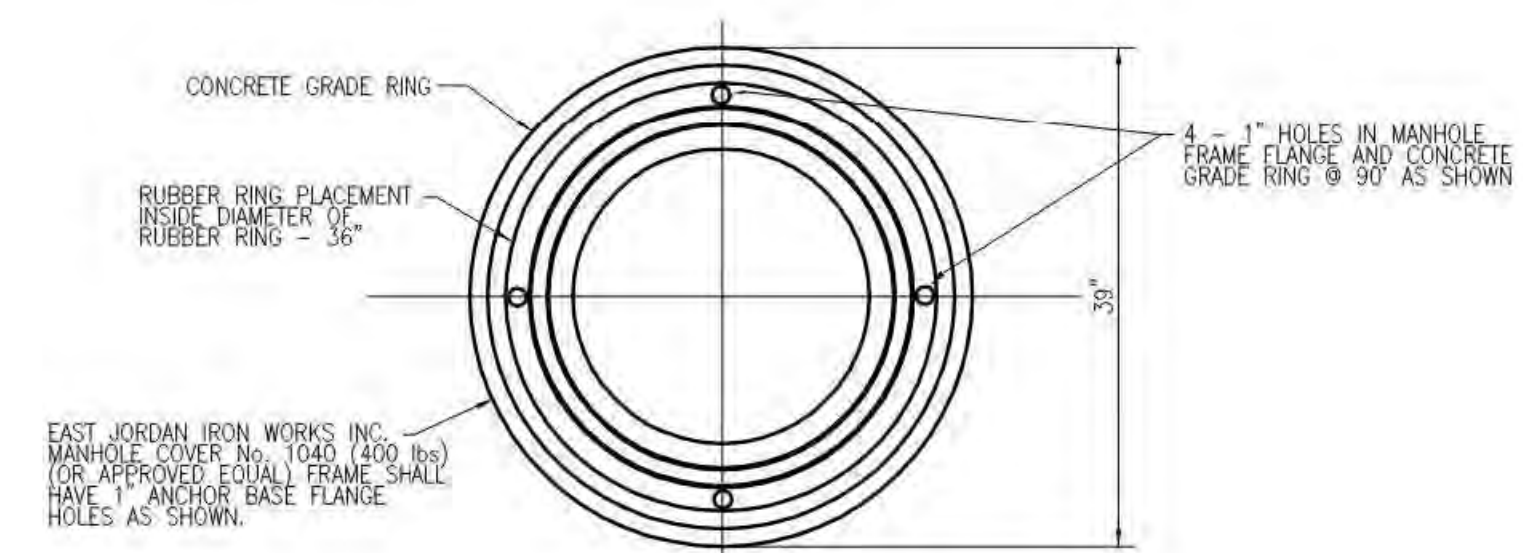
MA PSI-375



STANDARD BEDDING AND TRENCH BACKFILL DETAIL
FOR WATER MAIN



STANDARD COVER & FRAME



CAST IRON GATE WELL COVER AND
GRADE RING



PROJECT NO.	000-00-0000
SCALE	AS SHOWN
DATE	07/2003
DESIGNED BY	DAVID
CHECKED BY	DAVID
APPROVED BY	DAVID
PROJECT LOCATION	CHARTER TOWNSHIP OF SUPERIOR
COUNTY	WASHTENAW
TOWNSHIP	CHARTER TOWNSHIP OF SUPERIOR
SECTION	CHARTER TOWNSHIP OF SUPERIOR
PREPARED BY	DAVID
DATE	07/2003
REVISIONS	

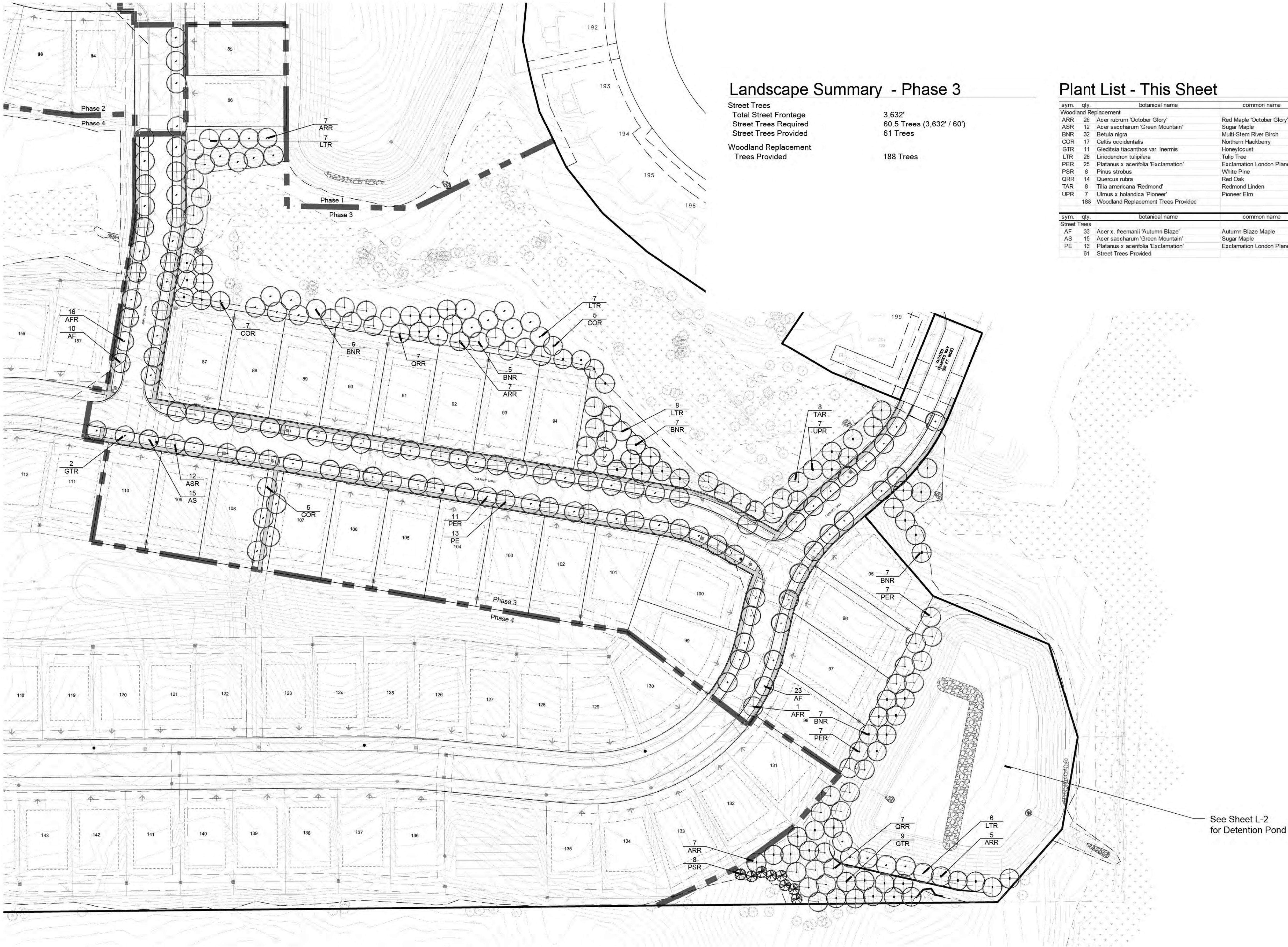
CHARTER TOWNSHIP OF SUPERIOR
STANDARD WATER MAIN DETAILS

SHEET
2
OF 2

WWW.OHM-ADVISORS.COM

34000 Plymouth Road | Livonia, MI 48150 | P (734) 522-6711 | F (734) 522-6427

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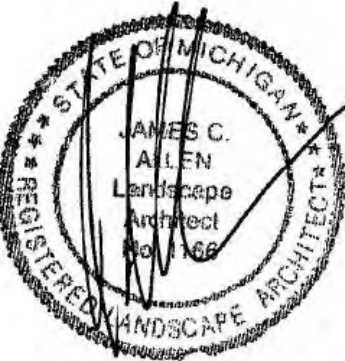
Landscape Summary - Phase 3

Street Trees	3,632'
Total Street Frontage	60.5 Trees (3,632' / 60')
Street Trees Required	61 Trees
Street Trees Provided	
Woodland Replacement	
Trees Provided	188 Trees

Plant List - This Sheet

sym.	qty.	botanical name	common name	caliper	spacing	root	height
Woodland Replacement							
ARR	26	Acer rubrum 'October Glory'	Red Maple 'October Glory'	2.5"	as shown	B&B	
ASR	12	Acer saccharum 'Green Mountain'	Sugar Maple	2.5"	as shown	B&B	
BNR	32	Betula nigra	Multi-Stem River Birch	2.5"	as shown	B&B	10'-12'
COR	17	Celtis occidentalis	Northern Hackberry	2.5"	as shown	B&B	
GTR	11	Gleditsia tiacanthos var. inermis	Honeylocust	2.5"	as shown	B&B	
LTR	28	Liriodendron tulipifera	Tulip Tree	2.5"	as shown	B&B	
PER	25	Platanus x acerifolia 'Exclamation'	Exclamation London Planetree	2.5"	as shown	B&B	
PSR	8	Pinus strobus	White Pine	2.5"	as shown	B&B	6'-7'
QRR	14	Quercus rubra	Red Oak	2.5"	as shown	B&B	
TAR	8	Tilia americana 'Redmond'	Redmond Linden	2.5"	as shown	B&B	
UPR	7	Ulmus x hollandica 'Pioneer'	Pioneer Elm	2.5"	as shown	B&B	
188	Woodland Replacement Trees Provided						
Street Trees							
AF	33	Acer x. freemanii 'Autumn Blaze'	Autumn Blaze Maple	2.5"	as shown	B&B	
AS	15	Acer saccharum 'Green Mountain'	Sugar Maple	2.5"	as shown	B&B	
PE	13	Platanus x acerifolia 'Exclamation'	Exclamation London Planetree	2.5"	as shown	B&B	
61	Street Trees Provided						

Seal:



Title:

Landscape Plan

Project:

Propsect Point Phase 3
Superior Township, Michigan

Prepared for:

SE Michigan Land Holdings LLC
13001 23 Mile Road, Suite 200
Shelby Township, Michigan 48315

Revision:

Review

Issued:

November 22, 2024

Job Number:

21-075

Drawn By:

jca

Checked By:

jca



Sheet No.

L-1



Propsect Point Phase 3
Superior Township, Michigan

Revision:	Issued:
Review	November 22, 2024

Drawn By: jca Checked By: jca



L-2

This site plan illustrates the 762 Freeboard area, which is a large, irregularly shaped region outlined in black. The area is filled with a cross-hatch pattern. A large, curved, hatched feature, likely a stormwater seed, is located within the freeboard area. The plan also shows a series of circular symbols representing live plantings, arranged in a line along the left and bottom edges of the freeboard area. A dashed line, representing the 762 Freeboard, runs along the bottom and left sides of the freeboard area. The plan includes various labels and dimensions, such as '131', '132', '96', '97', '98', '104.41', '104.42', '104.43', '104.44', '104.45', '104.46', '104.47', '104.48', '104.49', '104.50', '104.51', '104.52', '104.53', '104.54', '104.55', '104.56', '104.57', '104.58', '104.59', '104.60', '104.61', '104.62', '104.63', '104.64', '104.65', '104.66', '104.67', '104.68', '104.69', '104.70', '104.71', '104.72', '104.73', '104.74', '104.75', '104.76', '104.77', '104.78', '104.79', '104.80', '104.81', '104.82', '104.83', '104.84', '104.85', '104.86', '104.87', '104.88', '104.89', '104.90', '104.91', '104.92', '104.93', '104.94', '104.95', '104.96', '104.97', '104.98', '104.99', '105.00', '105.01', '105.02', '105.03', '105.04', '105.05', '105.06', '105.07', '105.08', '105.09', '105.10', '105.11', '105.12', '105.13', '105.14', '105.15', '105.16', '105.17', '105.18', '105.19', '105.20', '105.21', '105.22', '105.23', '105.24', '105.25', '105.26', '105.27', '105.28', '105.29', '105.30', '105.31', '105.32', '105.33', '105.34', '105.35', '105.36', '105.37', '105.38', '105.39', '105.40', '105.41', '105.42', '105.43', '105.44', '105.45', '105.46', '105.47', '105.48', '105.49', '105.50', '105.51', '105.52', '105.53', '105.54', '105.55', '105.56', '105.57', '105.58', '105.59', '105.60', '105.61', '105.62', '105.63', '105.64', '105.65', '105.66', '105.67', '105.68', '105.69', '105.70', '105.71', '105.72', '105.73', '105.74', '105.75', '105.76', '105.77', '105.78', '105.79', '105.80', '105.81', '105.82', '105.83', '105.84', '105.85', '105.86', '105.87', '105.88', '105.89', '105.90', '105.91', '105.92', '105.93', '105.94', '105.95', '105.96', '105.97', '105.98', '105.99', '106.00', '106.01', '106.02', '106.03', '106.04', '106.05', '106.06', '106.07', '106.08', '106.09', '106.10', '106.11', '106.12', '106.13', '106.14', '106.15', '106.16', '106.17', '106.18', '106.19', '106.20', '106.21', '106.22', '106.23', '106.24', '106.25', '106.26', '106.27', '106.28', '106.29', '106.30', '106.31', '106.32', '106.33', '106.34', '106.35', '106.36', '106.37', '106.38', '106.39', '106.40', '106.41', '106.42', '106.43', '106.44', '106.45', '106.46', '106.47', '106.48', '106.49', '106.50', '106.51', '106.52', '106.53', '106.54', '106.55', '106.56', '106.57', '106.58', '106.59', '106.60', '106.61', '106.62', '106.63', '106.64', '106.65', '106.66', '106.67', '106.68', '106.69', '106.70', '106.71', '106.72', '106.73', '106.74', '106.75', '106.76', '106.77', '106.78', '106.79', '106.80', '106.81', '106.82', '106.83', '106.84', '106.85', '106.86', '106.87', '106.88', '106.89', '106.90', '106.91', '106.92', '106.93', '106.94', '106.95', '106.96', '106.97', '106.98', '106.99', '107.00', '107.01', '107.02', '107.03', '107.04', '107.05', '107.06', '107.07', '107.08', '107.09', '107.10', '107.11', '107.12', '107.13', '107.14', '107.15', '107.16', '107.17', '107.18', '107.19', '107.20', '107.21', '107.22', '107.23', '107.24', '107.25', '107.26', '107.27', '107.28', '107.29', '107.30', '107.31', '107.32', '107.33', '107.34', '107.35', '107.36', '107.37', '107.38', '107.39', '107.40', '107.41', '107.42', '107.43', '107.44', '107.45', '107.46', '107.47', '107.48', '107.49', '107.50', '107.51', '107.52', '107.53', '107.54', '107.55', '107.56', '107.57', '107.58', '107.59', '107.60', '107.61', '107.62', '107.63', '107.64', '107.65', '107.66', '107.67', '107.68', '107.69', '107.70', '107.71', '107.72', '107.73', '107.74', '107.75', '107.76', '107.77', '107.78', '107.79', '107.80', '107.81', '107.82', '107.83', '107.84', '107.85', '107.86', '107.87', '107.88', '107.89', '107.90', '107.91', '107.92', '107.93', '107.94', '107.95', '107.96', '107.97', '107.98', '107.99', '108.00', '108.01', '108.02', '108.03', '108.04', '108.05', '108.06', '108.07', '108.08', '108.09', '108.10', '108.11', '108.12', '108.13', '108.14', '108.15', '108.16', '108.17', '108.18', '108.19', '108.20', '108.21', '108.22', '108.23', '108.24', '108.25', '108.26', '108.27', '108.28', '108.29', '108.30', '108.31', '108.32', '108.33', '108.34', '108.35', '108.36', '108.37', '108.38', '108.39', '108.40', '108.41', '108.42', '108.43', '108.44', '108.45', '108.46', '108.47', '108.48', '108.49', '108.50', '108.51', '108.52', '108.53', '108.54', '108.55', '108.56', '108.57', '108.58', '108.59', '108.60', '108.61', '108.62', '108.63', '108.64', '108.65', '108.66', '108.67', '108.68', '108.69', '108.70', '108.71', '108.72', '108.73', '108.74', '108.75', '108.76', '108.77', '108.78', '108.79', '108.80', '108.81', '108.82', '108.83', '108.84', '108.85', '108.86', '108.87', '108.88', '108.89', '108.90', '108.91', '108.92', '108.93', '108.94', '108.95', '108.96', '108.97', '108.98', '108.99', '109.00', '109.01', '109.02', '109.03', '109.04', '109.05', '109.06', '109.07', '109.08', '109.09', '109.10', '109.11', '109.12', '109.13', '109.14', '109.15', '109.16', '109.17', '109.18', '109.19', '109.20', '109.21', '109.22', '109.23', '109.24', '109.25', '109.26', '109.27', '109.28', '109.29', '109

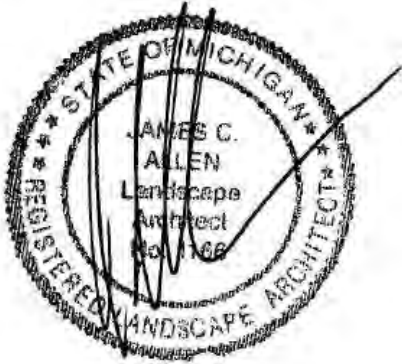
Note to Contractor:
1. When Ordering Seed Mix, Annual Ryegrass Shall not Exceed 56 Oz/acre.

34,435 s.f. Total Area
34.2 lbs. per Acre Application Rate
27.0 lbs. of Storm Water Seed Mix Required

qty	botanical name	common name	spacing	container
Phase 3				
1,210	Agastache nepetoides	Yellow Giant Hyssop	24" o.c.	2" Pot or cells
1,210	Asclepias incarnata	Swamp Milkweed	24" o.c.	2" Pot or cells
1,210	Carex grayi	Gray's Sedge	24" o.c.	2" Pot or cells
1,210	Doellingeria umbellata	Flat-Top White Aster	24" o.c.	2" Pot or cells
1,210	Eupatorium perfoliatum	Boneseet	24" o.c.	2" Pot or cells
1,210	Eutrochium maculatum	Joe-Pye Weed	24" o.c.	2" Pot or cells
1,210	Helienium autumnale	Sneezeweed	24" o.c.	2" Pot or cells
33,949 s.f.	Wet Meadow Area			

1. No Chemicals are Allowed in Stormwater Features or Buffer Zones with the Following Exception: Invasive Species may be Treated with Chemicals by a Certified Applicator. Mowing is Allowed Only Twice a Year.
2. Soils Must be Amended with a Composted Organic Material. Soils Must be Free of Construction Debris and Subsoils. Soils Must Contain 20%-30% Compost.
3. Infiltration Basin Soils Must Contain 20%-30% Compost, 70%-80% Topsoil with a Maximum of 10% Clay. At the time of plant and seed delivery, a WCCWRG landscape reviewer must be present. The quantity and species delivered will be reviewed on site. Contact Catie Wytchak at wytchakc@ewashnetaw.org or (734) 222-6813 to coordinate.
4. All Seeded Areas to Receive Bio-degradable Seed Mats.
5. Prior to Spreading Planting Soil or Planting Seeds and/or Live Plants, Infiltration Testing Must be Performed to Confirm that the Design for the Infiltration Rate has been Achieved.

Sheet No. _____



Seal:

Title:

Landscape Details

Project:

Propsect Point Phase 3
Superior Township, Michigan

Prepared for:

SE Michigan Land Holdings LLC
13001 23 Mile Road, Suite 200
Shelby Township, Michigan 48315

Revision:

Revision

Issued:

November 22, 2024

Job Number:

21-075

Drawn By:

jca

Checked By:

jca

Sheet No.

L-3

NOTE:
GUY DECIDUOUS TREES ABOVE
3" CAL. STAKE DECIDUOUS
TREES BELOW 3" CAL.

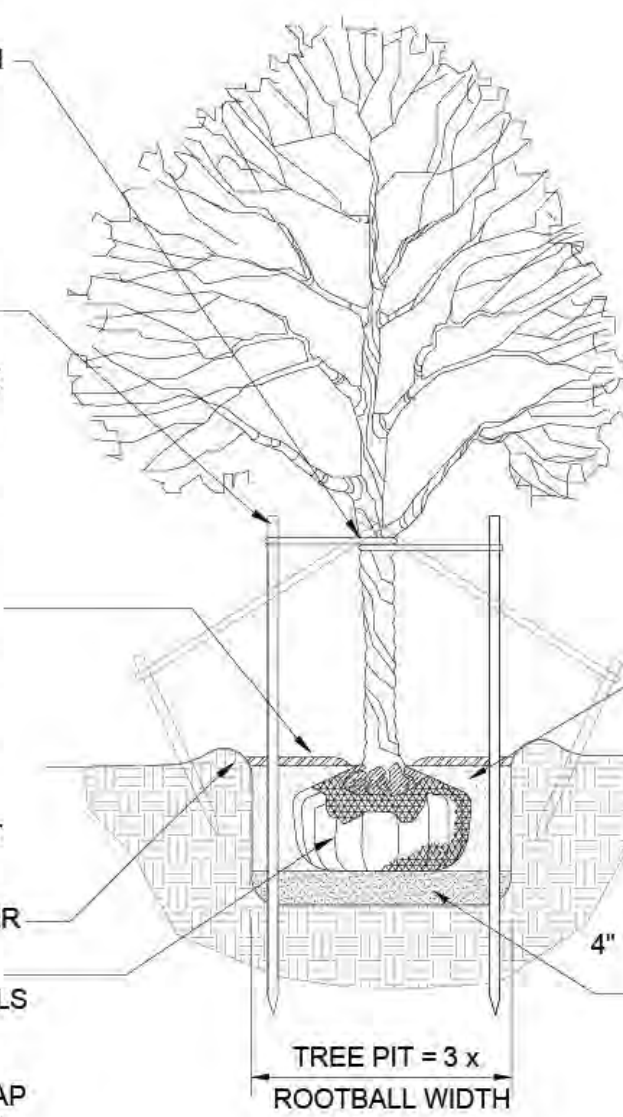
STAKE TREES AT FIRST BRANCH
USING 2"-3" WIDE BELT-LIKE
NYLON OR PLASTIC STRAPS.
ALLOW FOR SOME MINIMAL
FLEXING OF THE TREE.
REMOVE AFTER ONE YEAR.

2" X 2" HARDWOOD STAKES,
MIN. 36" ABOVE GROUND FOR
UPRIGHT, 18" IF ANGLED. DRIVE
STAKES A MIN. 18" INTO
UNDISTURBED GROUND
OUTSIDE ROOTBALL. REMOVE
AFTER ONE YEAR.

MULCH 4" DEPTH WITH
SHREDDED HARDWOOD BARK.
NATURAL IN COLOR. LEAVE 3"
CIRCLE OF BARE SOIL AT BASE
OF TREE TRUNK. PULL ANY
ROOT BALL DIRT EXTENDING
ABOVE THE ROOT FLARE AWAY
FROM THE TRUNK SO THE ROOT
FLARE IS EXPOSED TO AIR.

MOUND EARTH TO FORM SAUCER

REMOVE ALL
NON-BIODEGRADABLE MATERIALS
COMPLETELY FROM THE
ROOTBALL. CUT DOWN WIRE
BASKET AND FOLD DOWN BURLAP
FROM TOP 1/2 OF THE ROOTBALL.



NOTE:
TREE SHALL BEAR SAME
RELATION TO FINISH GRADE AS
IT BORE ORIGINALLY OR
SLIGHTLY HIGHER THAN FINISH
GRADE UP TO 6" ABOVE GRADE,
IF DIRECTED BY LANDSCAPE
ARCHITECT FOR HEAVY CLAY
SOIL AREAS.

DO NOT PRUNE TERMINAL
LEADER. PRUNE ONLY DEAD OR
BROKEN BRANCHES.

REMOVE ALL TAGS, STRING,
PLASTICS AND OTHER
MATERIALS THAT ARE
UNSIGHTLY OR COULD CAUSE
GIRDLING.

PLANTING MIXTURE:
AMEND SOILS PER
SITE CONDITIONS
AND REQUIREMENTS
OF THE PLANT
MATERIAL.

SCARIFY SUBGRADE
AND PLANTING PIT
SIDES. RECOMPACT
BASE OF TO 4"
DEPTH.

NOTE:
GUY EVERGREEN TREES ABOVE
12' HEIGHT. STAKE EVERGREEN
TREE BELOW 12' HEIGHT.

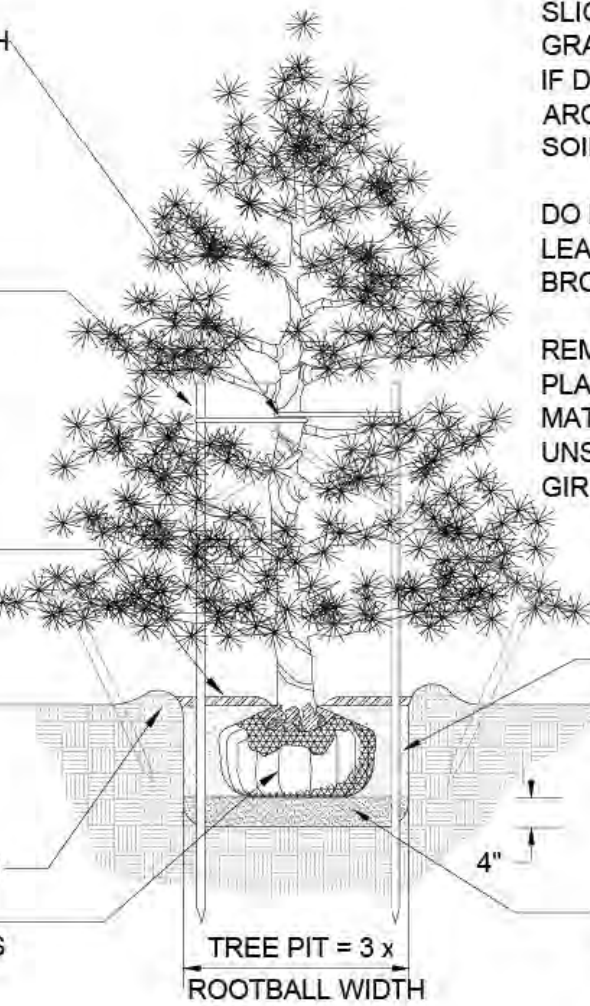
STAKE TREES AT FIRST BRANCH
USING 2"-3" WIDE BELT-LIKE
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ALLOW FOR SOME MINIMAL
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2" X 2" HARDWOOD STAKES,
MIN. 36" ABOVE GROUND FOR
UPRIGHT, 18" IF ANGLED. DRIVE
STAKES A MIN. 18" INTO
UNDISTURBED GROUND
OUTSIDE ROOTBALL. REMOVE
AFTER ONE YEAR.

MULCH 4" DEPTH WITH
SHREDDED HARDWOOD BARK.
NATURAL IN COLOR. LEAVE 3"
CIRCLE OF BARE SOIL AT BASE
OF TREE TRUNK. PULL ANY
ROOT BALL DIRT EXTENDING
ABOVE THE ROOT FLARE AWAY
FROM THE TRUNK SO THE ROOT
FLARE IS EXPOSED TO AIR.

MOUND EARTH TO FORM SAUCER

REMOVE ALL
NON-BIODEGRADABLE MATERIALS
COMPLETELY FROM THE
ROOTBALL. CUT DOWN WIRE
BASKET AND FOLD DOWN BURLAP
FROM TOP 1/2 OF THE ROOTBALL.



NOTE:
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RELATION TO FINISH GRADE AS
IT BORE ORIGINALLY OR
SLIGHTLY HIGHER THAN FINISH
GRADE UP TO 6" ABOVE GRADE,
IF DIRECTED BY LANDSCAPE
ARCHITECT FOR HEAVY CLAY
SOIL AREAS.

DO NOT PRUNE TERMINAL
LEADER. PRUNE ONLY DEAD OR
BROKEN BRANCHES.

REMOVE ALL TAGS, STRING,
PLASTICS AND OTHER
MATERIALS THAT ARE
UNSIGHTLY OR COULD CAUSE
GIRDLING.

PLANTING MIXTURE:
AMEND SOILS PER
SITE CONDITIONS
AND REQUIREMENTS
OF THE PLANT
MATERIAL.

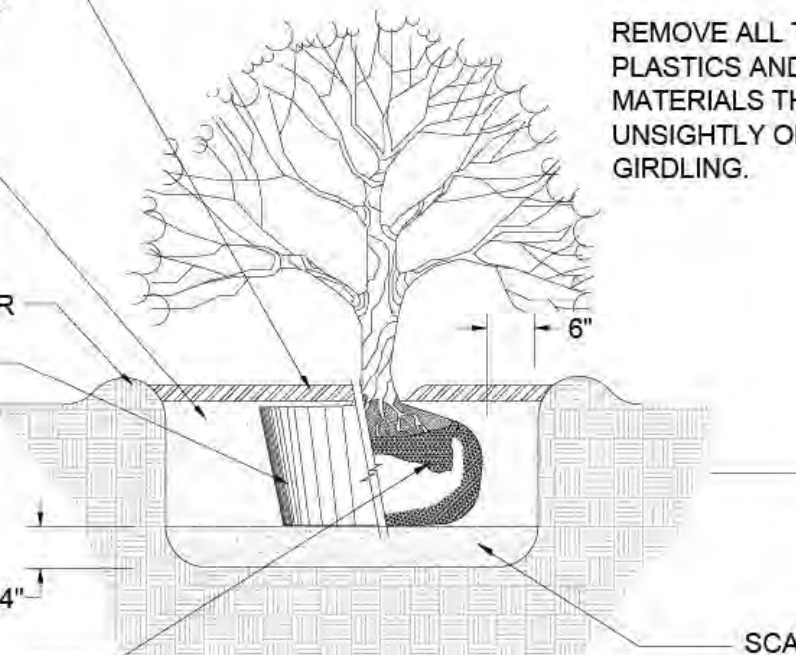
SCARIFY SUBGRADE
AND PLANTING PIT
SIDES. RECOMPACT
BASE OF TO 4"
DEPTH.

MULCH 3" DEPTH WITH
SHREDDED HARDWOOD BARK.
NATURAL IN COLOR. PULL BACK
3" FROM TRUNK.

PLANTING MIXTURE:
AMEND SOILS PER
SITE CONDITIONS
AND REQUIREMENTS
OF THE PLANT
MATERIAL.
MOUND EARTH TO FORM SAUCER

REMOVE COLLAR OF ALL FIBER
POTS. POTS SHALL BE CUT TO
PROVIDE FOR ROOT GROWTH.
REMOVE ALL NONORGANIC
CONTAINERS COMPLETELY.

REMOVE ALL
NON-BIODEGRADABLE MATERIALS
COMPLETELY FROM THE
ROOTBALL. FOLD DOWN BURLAP
FROM TOP 1/2 OF THE ROOTBALL.



NOTE:
TREE SHALL BEAR SAME
RELATION TO FINISH GRADE AS
IT BORE ORIGINALLY OR
SLIGHTLY HIGHER THAN FINISH
GRADE UP TO 4" ABOVE GRADE,
IF DIRECTED BY LANDSCAPE
ARCHITECT FOR HEAVY CLAY
SOIL AREAS.

PRUNE ONLY DEAD OR BROKEN
BRANCHES.

REMOVE ALL TAGS, STRING,
PLASTICS AND OTHER
MATERIALS THAT ARE
UNSIGHTLY OR COULD CAUSE
GIRDLING.

SCARIFY SUBGRADE
AND PLANTING PIT
SIDES. RECOMPACT
BASE OF TO 4"
DEPTH.

DECIDUOUS TREE PLANTING DETAIL

Not to scale

EVERGREEN TREE PLANTING DETAIL

Not to scale

SHRUB PLANTING DETAIL

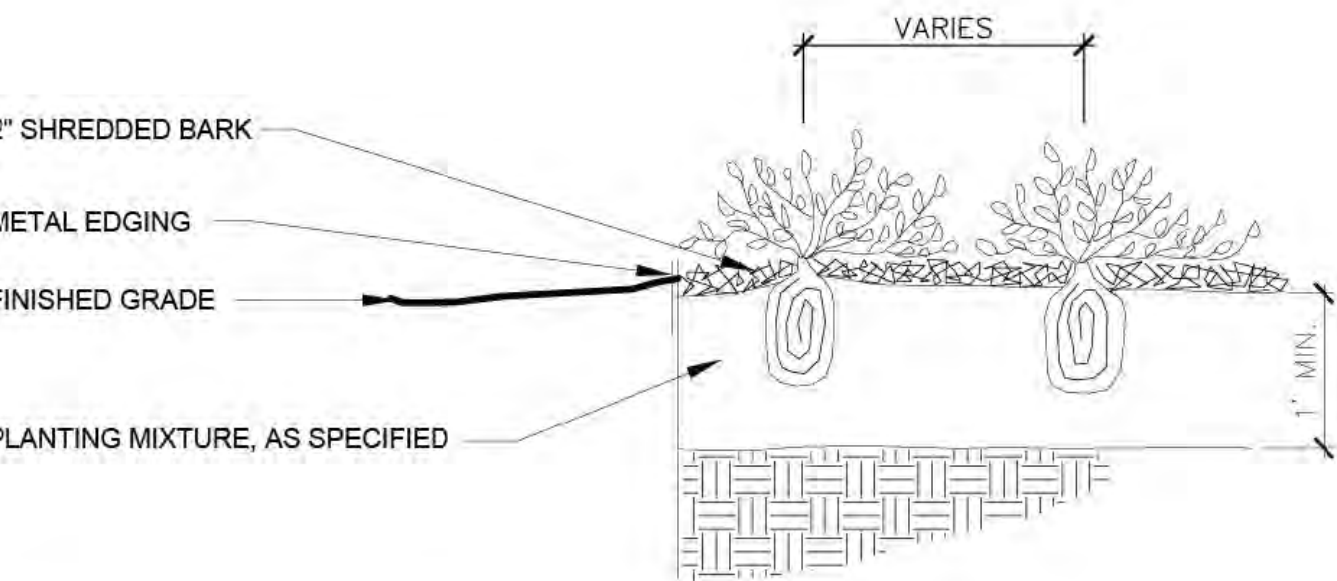
NOT TO SCALE

MAINTENANCE NOTES

- Maintenance procedures and frequencies to be followed shall be specified on the site plan, along with the manner in which the effectiveness, health, and intended functions of the screening elements and plant materials on the site will be ensured.
- Adequate provisions shall be made to regularly supply water to all required plant materials as necessary to ensure proper growth and development.
- Plant materials shall be kept in a neat, orderly and healthy growing condition, free from weeds, debris and refuse. Tree stakes, guy wires and tree wrap shall be removed after one (1) year.
- Pruning of plant materials shall be limited to the minimum necessary to ensure proper maturation of plants to achieve their intended purpose.
- All required screening elements and plant materials shall be planted and maintained in accordance with an approved site plan. Failure to maintain required screening, including the removal and replacement of dead or diseased plant materials, shall be a violation of this Ordinance.
- The replacement or removal of plant materials in a manner not consistent with an approved site plan shall be a violation of this Ordinance.

LANDSCAPE NOTES

- All plants shall be north Midwest American region grown, No. 1 grade plant materials, and shall be true to name, free from physical damage and wind burn.
- Plants shall be full, well-branched, and in healthy vigorous growing condition.
- Plants shall be watered before and after planting is complete.
- All trees must be staked, fertilized and mulched and shall be guaranteed to exhibit a normal growth cycle for at least two (2) full years following Township approval.
- All material shall conform to the guidelines established in the most recent edition of the American Standard for Nursery Stock.
- Provide clean backfill soil, using material stockpiled on site. Soil shall be screened and free of any debris, foreign material, and stone.
- "Agriform" tabs or similar slow-release fertilizer shall be added to the planting pits before being backfilled.
- Amended planting mix shall consist of 1/3 screened topsoil, 1/3 sand and 1/3 peat, mixed well and spread to the depth as indicated in planting details.
- All plantings shall be mulched per planting details located on this sheet.
- The Landscape Contractor shall be responsible for all work shown on the landscape drawings and specifications.
- No substitutions or changes of location, or plant types shall be made without the approval of the Landscape Architect.
- The Landscape Architect shall be notified in writing of any discrepancies between the plans and field conditions prior to installation.
- The Landscape Contractor shall be responsible for maintaining all plant material in a vertical condition throughout the guaranteed period.
- The Landscape Architect shall have the right, at any stage of the installation, to reject any work or material that does not meet the requirements of the plans and specifications, if requested by owner.
- Contractor shall be responsible for checking plant quantities to ensure quantities on drawings and plant list are the same. In the event of a discrepancy, the quantities on the plans shall prevail.
- The Landscape Contractor shall seed and mulch or sod (as indicated on plans) all areas disturbed during construction, throughout the contract limits.
- A pre-emergent weed control agent, "Preen" or equal, shall be applied uniformly on top of all mulching in all planting beds.
- Sod shall be two year old "Baron/Cheridolph" Kentucky Blue Grass grown in a sod nursery on loam soil.



PERENNIAL PLANTING DETAIL

Not to scale

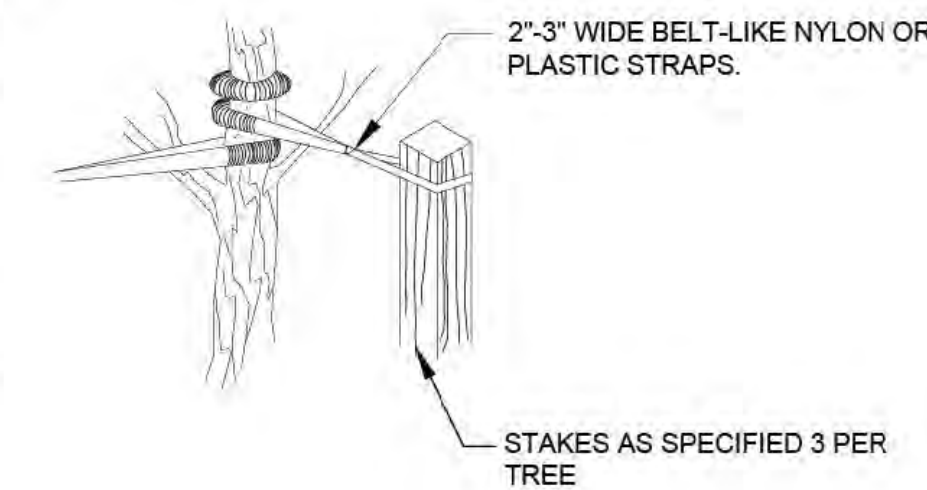


STAKING/GUYING LOCATION

NOTE:
ORIENT STAKING/GUYING TO PREVAILING
WINDS, EXCEPT ON SLOPES GREATER
THAN 3:1 ORIENT TO SLOPE.

USE SAME STAKING/GUYING
ORIENTATION FOR ALL PLANTS WITHIN
EACH GROUPING OR AREA

2"-3" WIDE BELT-LIKE NYLON OR
PLASTIC STRAPS.



GUYING DETAIL

STAKING DETAIL

TREE STAKING DETAIL

Not to scale



CHARTER TOWNSHIP OF SUPERIOR

3040 North Prospect Road Ypsilanti, MI 48198

Telephone (734) 482-6099 Fax (734) 482-3842

Please submit one completed form for each agenda item

TO: Superior Township Board of Trustees

FROM: Emily Dabish Yahkind

DATE SUBMITTED: 9/8/25

BOARD MEETING DATE: 9/15/25

ITEM TITLE: Cameras for Town Hall, Substation, Fire Station 2

DESCRIPTION OF ITEM/RESOLUTION:

Provide a clear/concise summary of the item being presented.

Proposal to install new security camera systems at Township Hall and Fire Station #2, including exterior and interior coverage, servers with 30-day storage, and integration of existing cameras.

REQUESTED BOARD ACTION:

Specify the action you are asking the Board to take (e.g. approval, adoption, review, authorization).

Approve and award a contract for security camera installation based on review of three competitive quotes received.

BACKGROUND/JUSTIFICATION:

Provide relevant history, previous board actions, community input, or project developments.

The Township obtained three quotes for upgraded camera systems to improve security, protect Township assets, and support public safety in collaboration with the Washtenaw County Sheriff's Office, as the project directly affects the Sheriff's substation.

IMPACT ON TOWNSHIP BUDGET (if applicable):

Project costs will be allocated to Law Fund.

TOWNSHIP DEPARTMENTS OR OUTSIDE AGENCIES INVOLVED:

List any departments or external entities responsible for or impacted by this item.

Supervisor's Office, Fire Department, IT/Facilities staff, and Washtenaw County Sheriff's Office.

DEADLINES OR URGENCY (if applicable):

Include any timelines, deadlines or reasons for urgency.

Timely approval will allow contractor scheduling and implementation without delays to facility safety improvements.

SUPPORTING DOCUMENTS ATTACHED:

Include number of attachments and a brief title of each file.

Three bids from competitive contractors and resolution.

CONTACT PERSON FOR QUESTIONS:

Name: Emily Dabish Yahkind

Title: Supervisor

Phone:

Email: edy@superior-twp.org

Please attach this form with all supporting documents in the same email and CC the following: arobinson@superior-twp.org, cbenitez@superior-twp.org, krankin@superior-twp.org, edy@superior-twp.org

**CHARTER TOWNSHIP OF SUPERIOR
WASHTENAW COUNTY, MICHIGAN**

**RESOLUTION TO APPROVE CAMERA SYSTEM INSTALLATION
AT TOWNSHIP FACILITIES**

RESOLUTION NUMBER: 2025-64

DATE: SEPTEMBER 15, 2025

WHEREAS, the Charter Township of Superior has identified a need to upgrade and expand security camera coverage at Township Hall and Fire Stations #1 and #2 in order to protect public facilities, employees, and residents; and

WHEREAS, Industrial Electric Co. of Detroit, Inc. has provided a written proposal (Quote #INDELC-2025-1801, dated July 17, 2025) to supply labor and materials to install new cameras, servers, and network video recorders (NVRs), and to integrate existing cameras into a single viewing platform; and

WHEREAS, the proposal includes the following work:

- **Township Hall:** Installation of ten (10) exterior turret cameras, new server with thirty (30) days of video storage, integration of existing cameras into new NVR, and final aiming with Township personnel;
- **Fire Station #2:** Installation of eight (8) exterior turret cameras and two (2) interior turret cameras, new server with thirty (30) days of video storage, integration of existing cameras into new NVR, and final aiming with Township personnel;
- **Fire Station #1:** Installation of new NVR and integration of existing cameras to ensure a single dashboard for department use; and

WHEREAS, the total cost of the proposal is **Twenty-Eight Thousand Three Hundred Eighty Dollars (\$28,380.00)**; and

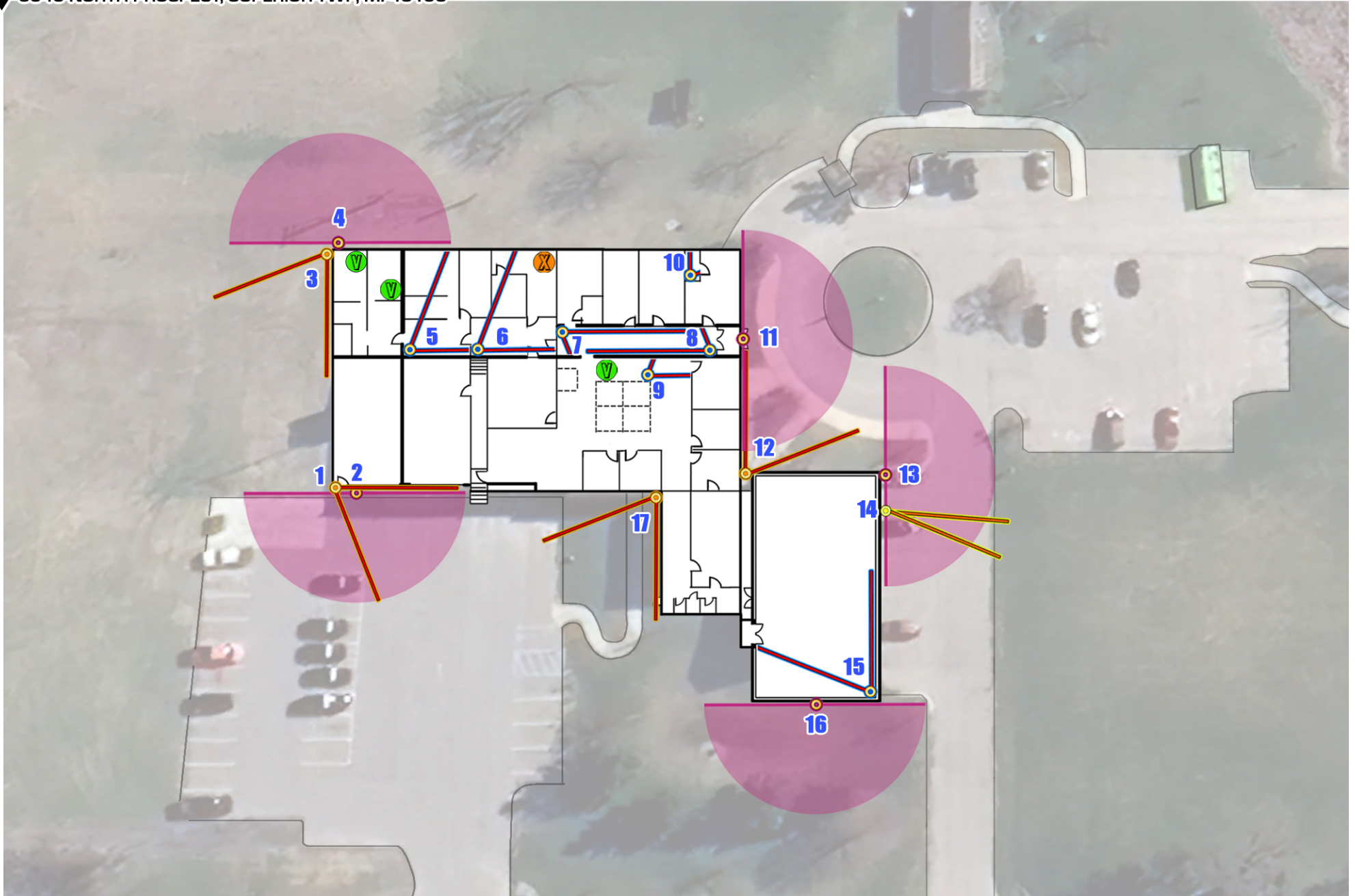
WHEREAS, it is in the best interest of the Township to proceed with this project to improve facility safety and operational efficiency.

NOW, THEREFORE, BE IT RESOLVED that the Charter Township of Superior Board of Trustees hereby approves the proposal from Industrial Electric Co. of Detroit, Inc. in the amount of **\$28,380.00**, and authorizes the Supervisor and/or Clerk to execute any necessary agreements and documents to complete the installation.

SUPERIOR TOWNSHIP

CAMERA LAYOUT 2025 (CITY HALL)

3040 NORTH PROSPECT, SUPERIOR TWP, MI 48198





QUOTE
EST-000474

Logical Owl

3011 W. Grand Blvd
Suite 475
Detroit Michigan 48202
U.S.A

Superior Township

3040 North Prospect
Superior Township
48198 Michigan
U.S.A

Quote Date : 07.30.2025
Expiry Date : 08.30.2025
Reference# : Superior Twp. - City Hall
CCTV Installation

#	Description	Qty	Rate	Amount
1	CCTV (1) 13-24 Channel Network Video Recorder - Rack Mount Chassis/ 120 Gigabyte Solid State HD for OS / 12 Terabyte Purple HD for Storage / i5 Intel 6 Core Processor / 16 GB DDR4 Memory / Linux - Ubuntu 20.04 OS / Wireless Keyboard & Mouse Combo / 20" LED Monitor & Mount / 30+ Days Recording	1.00	4,770.00	4,770.00
2	CCTV (3) Viewing Station PC Mini-ITX / 120 Gigabyte Solid State HD for OS / i5 Intel Quad-Core Processor / 8 GB DDR4 Memory / 32 GB Flash Drive for Video Back-up / Windows 10 Premium OS / Wireless Keyboard & Mouse Combo	1.00	3,060.00	3,060.00
3	CCTV (3) 32" LED Full-HD TV	1.00	1,256.40	1,256.40
4	CCTV (2) 26" through 55" Wall TV Mount with Tilt and Re-Direct	1.00	405.60	405.60
5	CCTV (7) 4 Megapixel High Definition 2688 x 1520 / Starlite Image Sensor / IP Dome Camera with 2.8mm MP Lens / POE / Analytic Capabilities (License Included)	1.00	4,611.60	4,611.60
6	CCTV (4) 5 Megapixel High Definition 2880 X 1620 / White Lite Image Sensor / IP Bullet Camera with 4mm MP Lens / POE / Analytic Capabilities / Exterior Junction Box (License Included)	1.00	3,163.20	3,163.20
7	CCTV (1) 5 Megapixel 4X Optical Zoom Rapid 2880 X 1620 Pan Tilt Zoom Infrared Camera / Wide Dynamic Range / 120 Degree Tilt - 360 Degree Rotation / Color Day Night Mode / People Tracking / Line Crossing (Includes Standard or Pendant Mount)	1.00	994.80	994.80

#	Description	Qty	Rate	Amount
8	CCTV (5) 180 Degree Dual Wide Camera / 2 x 2MP Lens / POE / License Included	1.00	5,394.00	5,394.00
9	CCTV (1) 24 Port POE Gigabit Switch Unmanaged	1.00	682.80	682.80
10	CCTV (20) Black Category 6 Cable and or 18-2 Including Misc Connections (Per Camera)	1.00	1,800.00	1,800.00
11	CCTV (1) Total Labor & Installation Costs	1.00	8,400.00	8,400.00
12	CCTV (1) Eos Protection Plan Includes: 1 Year All Parts and Labor Warranty; Training with Training Manual; Website for Remote Internet Viewing (Must be at least Windows 7 or Mac 10); Networking and Router Configuration; 1 Year On-Line Support; iPhone/Droid Setup - Port Forwarding and Configuration	1.00	0.00	0.00
			Sub Total	34,538.40
			Total	\$34,538.40

We are looking forward to earning your business.

Thank you for allowing us to quote your project. Logical Owl requires 50% Deposit on all work to secure scheduling of project. Remaining amount will be due in accordance with invoice terms at end of project. If the final invoice isn't paid within 30 days, a compounded, 5% delayed payment fee is charged. By accepting this estimate, you confirm that you are an authorized agent of the company and agree to the pricing and terms and conditions contained herein.

This estimate is valid for 30 days from date of proposal. The rates above are for this project only. Anything outside the scope of work above will be considered additional and will need to be priced as such.

This Standard Payment Terms Agreement ("Agreement") is made and entered by and between Logical Owl or ("CONTRACTOR") and Invoice Recipient or ("CLIENT") "Contractor" and "Client" hereby agree as follows:

PAYMENT: Client shall pay for the services and/or equipment furnished by Contractor in accordance with the charges on the Service Agreements or Change Orders to those agreements within thirty (30) days of the date of Contractor's invoice.

All invoices not contested in writing within five (5) business days of receipt are deemed accepted by Client as true and accurate and are payable in full. Interest will be charged on all accounts not paid at not more than the maximum rate allowed by law. In the event Client fails to pay Contractor all amounts which become due under the Service Agreement(s) pursuant to this invoice or fails to perform its obligations hereunder, and Contractor refers such matter to an attorney or collection agency.

Client agrees to pay, in addition to the amounts due, any and all costs incurred by Contractor as a result of such action, including reasonable attorneys fees. Contractor has the right to charge a return check fee or a fee to restart Client work if interrupted off for poor pay history.

Service Fees: Contractor may charge a convenience surcharge for invoice(s) paid by Credit Card. If applicable, this fee will not exceed the maximum amount allowed by law or be in conflict with applicable regulations.

STANDARD WORK DISCLAIMERS:

- Anything outside of normal scope of work will be considered a change or upon request and incur additional fees. This includes, but is not limited to, construction delays, drywall, obstructions, etc.
- Unless noted, prices don't include additional construction materials (i.e; conduit, boxes and power etc.)
- Installation: Customer hereby grants to Logical Owl the right to install the equipment, and represents and warrants that all necessary governmental and third-party approvals for installation have been obtained. Delays in installation caused by public agencies, manufacturers, suppliers, acts of God, strikes or other union bargaining, and all acts not directly attributable to Logical Owl shall not in any way affect the obligations of Customer. Logical Owl shall not be responsible for damages for any such delay.

Installation (field assembly, interconnection, equipment calibration and checkout) is to be performed by the Logical Owl' trained technical employees. There may be times that Logical Owl will find it necessary to employ sub-contractors to assist in or carry out, in whole or in part, the installation. Logical Owl shall coordinate and cooperate with other trades to facilitate satisfactory work progress. If the Logical Owl's work in progress is impeded by other trades and/or contractors (excluding Logical Owl's own subcontractors) or by scheduling delays due to the Customer, time delays in the final installation as well as additional charges including labor, travel and reasonable expenses may result.

The Customer shall be responsible for preparing, at its own expense, the installation site in accordance with the Logical Owl' instructions, including the requirements specified in the quotation. Logical Owl shall not be responsible for any high voltage electrical work, conduits, raceways, cable trays, ceiling modifications, structural modifications, or mechanical systems modifications. Unless otherwise specified, Customer shall provide Logical Owl with source code (un-compiled) including GUI touch panel files for any non-Logical Owl programmed remote control systems required to be modified under the terms of this agreement. All building renovations, structural, aesthetic, trim, drywall, finish work or otherwise are not included in Logical Owl' pricing. If such obstructions prevent and/or alter Logical Owl's work, additional fees may incur at Customer's expense. Logical Owl is not responsible for changes in Internet Service Provider(s) (ISP) design, scope of work, or requirements. If ISPs request differ from what was provided by Logical Owl, Logical Owl will not be held responsible.

Installation price reflects work performed during normal business hours only, unless specified in writing.

The Customer shall provide Logical Owl with reasonable access to the installation site before delivery, for purposes of determining site readiness for installation, and shall designate an individual on Customer's staff to serve as a contact person for all site preparation and installation issues. The installation will be scheduled through this single point of contact. If the Customer needs to move the per-scheduled installation date 10 business days or closer before the per-scheduled install date, additional fees may incur.

Customer shall provide Logical Owl with access to the installation site to prepare for installation. The Customer shall indemnify the Logical Owl against any loss, damage or claim arising out of the condition of the storage and installation premises. Customer shall obtain at its expense and keep effective all permissions, licenses, and permits whenever required for the installation and/or use of the Equipment and the premises where the Equipment shall be situated. Any Permit needed must be pulled by Client. Logical Owl waives the right to pull permits for this site.

- Contractor will not be responsible and will not supply any power sources.

- If cabling is required, cabling prices are based on standard cable runs, if cabling installation exceeds standard install, outlet labor may be additional

. Responsibility: Until balance is paid, Customer agrees to take proper care of the Equipment on premises and to be responsible for its damage or loss by fire, theft, casualty or any other cause whatsoever, and will not permit or suffer same to be removed from the place of its location at address of Customer, without written consent of Logical Owl or assigns.

General: This Agreement constitutes the sole and entire understanding between the parties with respect to the subject matter hereof and supersedes all prior conversations, agreements, representations and promises, whether verbal or written. No modification of this Agreement shall be valid unless made in writing and properly signed by each party.

Infrastructure: In the event that Logical Owl is installing equipment or systems that require connectivity to the Customer network including, but not limited to, VOIP / SIP / POTs connectivity, Internet Access, Wireless Network Access, firewall traversal, port forwarding, and/or RF COAX, Logical Owl may advise Customer as to the network requirements. Any responsibility for infrastructure on the part of Logical Owl stops at the installed equipment's network jack or wireless connection; and configuration of the network settings on the device sold. Logical Owl is not responsible for updating network settings in the event the Customer's network changes. If the Customer's network is not "Plug and Play" then any custom network settings must be supplied by the Customer to Logical Owl before the completion of installation.

- Restocking Fees: Equipment returns must be authorized in writing by Logical Owl and may incur a re-stocking fee plus total freight.

- Shipping: All shipments of equipment are FOB Logical Owl distribution facilities, unless otherwise noted in quotation.

- Limitations of Warranty – Products of Others: This proposal will include a limited one-year, on-site parts and labor warranty against defective workmanship on the installation and on the products included in the system. The system warranty is initiated at the time of substantial system completion. Unless otherwise specified, no warranty is provided for "consumables" including batteries, lamps, glassware and evacuated devices. Logical Owl obligation with respect to any material or part identified in the quotation, literature, or specifications furnished to the Customer as manufactured or supplied by others, shall be to pass on to the Customer the applicable manufacturer's warranties, if any. Logical Owl makes no implied or assumed claims regarding performance, capabilities or interface capability of the equipment listed unless otherwise noted.

- Confidentiality: This entire document and all information enclosed including drawings, specifications and designs is the property of

Logical Owl, LLC. Proprietary information provided to Customer (or agents) is for the sole purpose of demonstrating Logical Owl's capabilities and shall be held in confidence. These materials may not be copied, distributed or disclosed in any way without the sole written permission of an authorized representative of Logical Owl.

Marvin Williams

Customer Signature

Industrial Electric Company of Detroit

Superior Township Camera Layout

2025



Quote

Industrial Electric Co. of Detroit, Inc.

275 East Milwaukee
Detroit, Michigan 48202
United States
Tel: 313- 872-1133

Quote # INDEL-2025- 1801
Job date: Jul. 17, 2025
Estimate Prepared by: Nate Cubbison
Job Number:

Billing address:

Superior Township

Attn: Lori Maher
3040 N Prospect Rd
Superior Township, Michigan 48198
United States
Tel: 734-482-6099

Site address:

Superior Township

Attn: Lori Maher
3040 N Prospect Rd
Superior Township, Michigan 48198

Work Description

Provide Labor and Material to Install:

- Camera system at Township Hall.
 - >(10) Turret cameras on exterior of building.
 - >New server with 30-days of storage for video.
 - >Integration of existing cameras into new NVR.
 - >Final aiming of each camera with township personell.
- Camera system at Fire station #2.
 - >(8) Turret cameras on exterior of building.
 - >(2) Turret cameras on interior of building.
 - >New server with 30-days of storage for video.
 - >Integration of existing cameras into new NVR.
 - >Final aiming of each camera with township personell.
- Camera NVR at Fire station #1.
 - >Installation of new NVR at fire station #1.
 - >Integration of existing cameras to ensure single dashboard for camera viewing for fire department personell.

*Quoted on straight time.

*Camera and NVR specifications included in proposal.

Summary	Total (\$)
Subtotal	28,380.00
Total	\$28,380.00

Terms

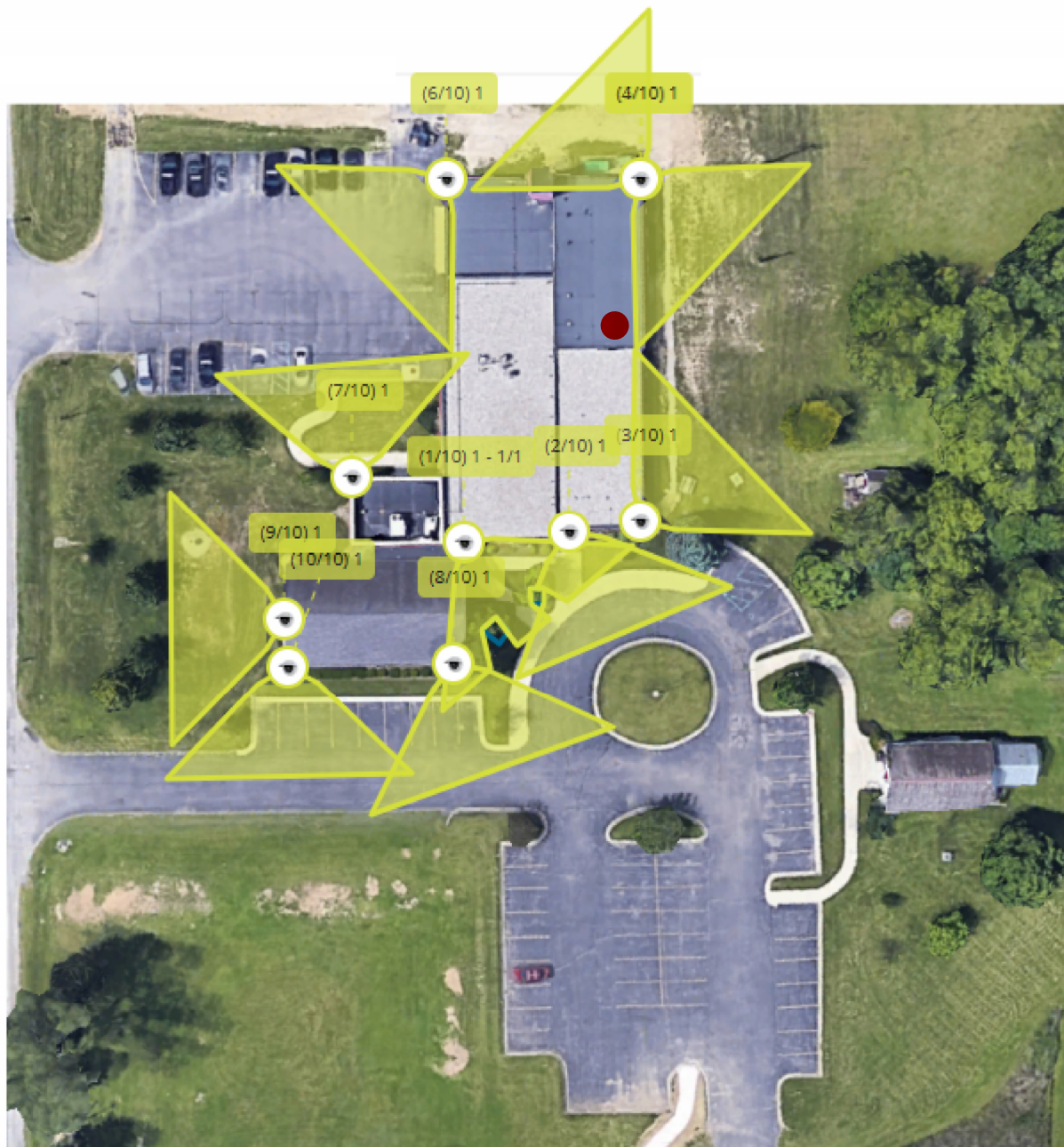
Our price is valid for 30 days and subject to changes any time thereafter.

Client Name: _____

Date: _____

Signature: _____

I hereby acknowledge the satisfactory completion of the above described work.



Key: G5 Turret Ultra ● Server ●



Tech Specs

[UniFi](#) [UISP](#) [Branding](#)

[Switching](#)

[WiFi](#)

[Camera Security](#)

[Door Access](#)

[CloudKeys & Gateways](#)

[Power Tech](#)

[New Intro](#)

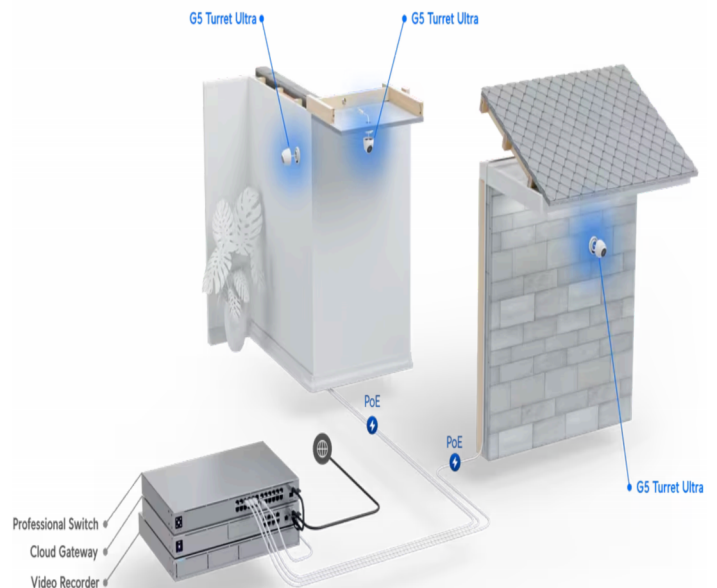
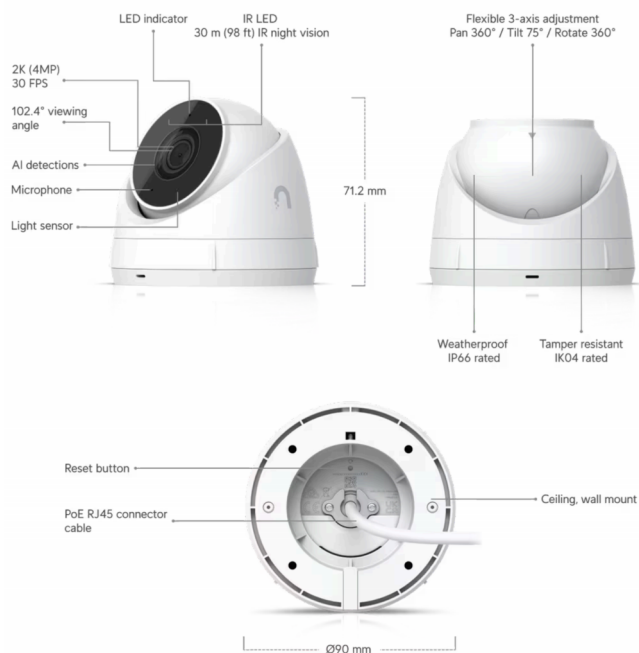
Camera Security > [G5 Turret Ultra](#)

[Datasheet](#)

[In The Box](#)

[Marketing Images](#)

[Installation Guide](#)



Mechanical

Dimensions

Ø90 x 71.2 mm (Ø3.5 x 2.8")

Weight

330 g (11.6 oz)

Enclosure material

Aluminum alloy, UV-stabilized polycarbonate

Weatherproofing

IP66

Resistance	IK04
Cable jacket enclosure dimensions	Ø20 x 70.6 mm (0.8 x 2.8")
Cable jacket enclosure materials	Thermoplastic elastomer, polycarbonate, silicone rubber
Cable length	30 cm (1 ft)
Cable diameter	5 mm (0.2")
Cable jacket material	Polycarbonate
Cable connector type	RJ45

Optics

Sensor	1/2.4" CMOS
Lens	Fixed focal length
View angle	H: 102.4°, V: 54.9°, D: 120.6°
Night mode	Built-in IR LED illumination and IR cut filter

Video

Resolution	4MP 2688 x 1512 (16:9)
Max. frame rate	30 FPS
Image settings	Color, brightness, sharpness, contrast, white balance, exposure control, 2DNR, 3DNR, NR by motion, masking, text overlay

System

Processor	Dual-core Arm® Cortex®-A7 based chip
Networking interface	10/100 MbE RJ45 port
Max. power consumption	4W
Power method	PoE
Supported voltage range	37-57V DC

LED	R/G/B/W
Button	Factory reset
Mounting	Surface mount
Ambient operating temperature	-30 to 50° C (-22 to 122° F)
Ambient operating humidity	0 to 90% noncondensing
Certifications	FCC, IC, CE

Audio

Microphone	Yes (Can be disabled)
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Proposal & Scope of Work

Date: 8/4/2025

Proposal ID: SST250303001

TO: M. LORI MAHER
DEPUTY SUPERVISOR, SUPERIOR TWP.

FROM: Eric J Peterson
PROJECT: SUPERIOR TWP. CAMERA INSTALLATIONS

Shaw Service and Maintenance Contacts

Eric Peterson, Service Engineer	Direct (248) 228-2080 (248)534-7602 epeterson@shawsi.com
Dispatch	Direct (248) 228-2080 service@shawsi.com
After Hours Emergency Number	(877) 370-7076
Service Email	service@shawsi.com

Included	Excluded		Included	Excluded	
☒	☐	Sales & Use Tax	☐	☒	Payment & Performance Bonds
☐	☒	Electrical Permit Costs & Fees	☐	☒	Overtime Costs
☐	☒	Fire Division Inspection Fees	☐	☒	Temperature Controls
☐	☒	Building Permit Fees	☐	☒	Patching &/or repair of holes in walls or floors

This Proposal is based upon Shaw Service & Maintenance's Standard Terms and Conditions (see Page 2) unless otherwise indicated below.

CITY HALL SCOPE OF WORK:

SHAW will furnish and install cameras, mounts, cabling, raceway, sleeves, jacks, patch cables and other necessary materials for camera installations for the following locations:

LOCATION	MODEL
#1 NW CORNER 180	P3827-PVE
#2 NW CORNER LOT	P3267-LVE
#3 NE CORNER	P3267-LVE
#4 NE CORNER 180	P3827-PVE
#5 SHERIFF CAM 1	P3265-LV
#6 SHERIFF CAM 2	P3265-LV
#7 BLD DEPT HALLWAY	P3265-LV
#8 TREASURY HALL	P3265-LV
#9 TREASURY WINDOW	P3265-LV
#10 OFFICE INT	P3265-LV
#11 CIRCLE DRIVE 180	P3827-PVE
#12 CIRCLE DRIVE ENTRANCE	P3267-LVE
#13 SOUTH 180	P3827-PVE
#14 SOUTH PTZ	Q6075-E
#15 OFFICE #2 INT	P3265-LV
#16 WEST 180	P3827-PVE
#17 WEST ENTRANCE PTZ	Q6075-E
#18 EAST SIDE 180	P3827-PVE

SHAW will utilize AXIS' integrated "EDGE Camera Station Edge" Technology for cloud based VMS including live views, timeline searches, video exporting functionality. (Refer to attached documentation for camera model information and VMS capabilities)

Pricing includes demo of existing cameras, programming, installation, viewing stations, and (1) 8-hour block of technician training / support as needed.

MATERIAL: \$31,644.00

LABOR: \$39,759.00

EQUIPMENT: \$3,422.00

TOTAL OFFERING PRICE: \$74,825.00

EXCLUSIONS & ASSUMPTIONS:

All work to be performed during normal working hours Monday through Friday.
Customer to provide IP addresses, switches, port availability prior to installation
New or additional Switches and Patch Panels not included in offered price

Eric J Peterson

Shaw Service & Maintenance



Proposal & Scope of Work

Standard Terms & Conditions

1. **Payment terms are monthly progress payments net 30 days due.**
2. The offering price is valid for 30 days. Shaw Service & Maintenance reserves the right to extend this term without notice.
3. Subcontract terms and conditions are subject to review and approval prior to award of a subcontract to Shaw Service & Maintenance.
4. Terms are pending approval by Shaw Service & Maintenance credit manager.
5. This Proposal is based on the schedule and time durations presented at time of bid. A change in schedule shall constitute a change in scope of work.
6. All equipment furnished is F.O.B. shipping points with freight allowed to jobsite.
7. The price includes a warranty as specified in the Bid Documents. No other warranty is expressed or implied.



Proposal & Scope of Work

Date: 8/4/2025

Proposal ID: SST250303001

TO: M. LORI MAHER
DEPUTY SUPERVISOR, SUPERIOR TWP.

FROM: Eric J Peterson
PROJECT: SUPERIOR TWP. CAMERA INSTALLATIONS

Shaw Service and Maintenance Contacts

Eric Peterson, Service Engineer	Direct (248) 228-2080 (248)534-7602 epeterson@shawsi.com
Dispatch	Direct (248) 228-2080 service@shawsi.com
After Hours Emergency Number	(877) 370-7076
Service Email	service@shawsi.com

Included	Excluded		Included	Excluded	
☒	☐	Sales & Use Tax	☐	☒	Payment & Performance Bonds
☐	☒	Electrical Permit Costs & Fees	☐	☒	Overtime Costs
☐	☒	Fire Division Inspection Fees	☐	☒	Temperature Controls
☐	☒	Building Permit Fees	☐	☒	Patching &/or repair of holes in walls or floors

This Proposal is based upon Shaw Service & Maintenance's Standard Terms and Conditions (see Page 2) unless otherwise indicated below.

FIRE STATION 2 SCOPE OF WORK:

SHAW will furnish and install cameras, mounts, cabling, raceway, sleeves, jacks, patch cables and other necessary materials for camera installations for the following locations:

LOCATION	MODEL
NORTH 360	Q6075-E
WEST 360	Q6075-E
WEST LPR	Q1700-LE
INT SW DOME	P3265-LV
INT NE DOME	P3265-LV
EAST LPR	Q1700-LE
EAST 360	Q6075-E
SOUTH DOME	P3267-LVE

SHAW will utilize AXIS' integrated "EDGE Camera Station Edge" Technology for cloud based VMS including live views, timeline searches, video exporting functionality. (Refer to attached documentation for camera model information and VMS capabilities)

Pricing includes demo of existing cameras, programming, installation, viewing station, and (1) 8-hour block of technician training / support as needed.

Pricing includes furnishing and installation of conduit within high-bay areas of fire station for cabling protection

MATERIAL: \$23,631.00
LABOR: \$29,463.00
EQUIPMENT: \$4,023.00
TOTAL OFFERING PRICE: \$57,117.00

EXCLUSIONS & ASSUMPTIONS:

All work to be performed during normal working hours Monday through Friday.
Customer to provide IP addresses, switches, port availability prior to installation
New or additional Switches and Patch Panels not included in offered price

Eric J Peterson

Shaw Service & Maintenance



Proposal & Scope of Work

Standard Terms & Conditions

1. **Payment terms are monthly progress payments net 30 days due.**
2. The offering price is valid for 30 days. Shaw Service & Maintenance reserves the right to extend this term without notice.
3. Subcontract terms and conditions are subject to review and approval prior to award of a subcontract to Shaw Service & Maintenance.
4. Terms are pending approval by Shaw Service & Maintenance credit manager.
5. This Proposal is based on the schedule and time durations presented at time of bid. A change in schedule shall constitute a change in scope of work.
6. All equipment furnished is F.O.B. shipping points with freight allowed to jobsite.
7. The price includes a warranty as specified in the Bid Documents. No other warranty is expressed or implied.



CHARTER TOWNSHIP OF SUPERIOR

3040 North Prospect Road Ypsilanti, MI 48198

Telephone (734) 482-6099 Fax (734) 482-3842

Please submit one completed form for each agenda item

TO: Superior Township Board of Trustees

FROM: Lisa Lewis

DATE SUBMITTED: 9/5/25

BOARD MEETING DATE: 9/18/25

ITEM TITLE: Investment Policy

DESCRIPTION OF ITEM/RESOLUTION:

Provide a clear/concise summary of the item being presented.

Annual review of the investment policy.

REQUESTED BOARD ACTION:

Specify the action you are asking the Board to take (e.g. approval, adoption, review, authorization).

Review and adoption

BACKGROUND/JUSTIFICATION:

Provide relevant history, previous board actions, community input, or project developments.

Policy is reviewed and adopted

IMPACT ON TOWNSHIP BUDGET (if applicable):

None

TOWNSHIP DEPARTMENTS OR OUTSIDE AGENCIES INVOLVED:

List any departments or external entities responsible for or impacted by this item.

Following the suggestions of auditors

DEADLINES OR URGENCY (if applicable):

Include any timelines, deadlines or reasons for urgency.

N?A

SUPPORTING DOCUMENTS ATTACHED:

Include number of attachments and a brief title of each file.

1 attachment

CONTACT PERSON FOR QUESTIONS:

Name: Lisa Lewis

Title: Treasurer

Phone: 734-482-6099

Email: llewis@superior-twp.org

Please attach this form with all supporting documents in the same email and CC the following: arobinson@superior-twp.org, cbenitez@superior-twp.org, krankin@superior-twp.org, edy@superior-twp.org

SUPERIOR CHARTER TOWNSHIP
WASHTENAW COUNTY, MICHIGAN
INVESTMENT POLICY

Effective Date: June 1998

Updated: August 2025

1.0 PURPOSE AND POLICY

Superior Charter Township (“the Township”) is a Michigan Charter Township governed by an elected Township Board and operating under state statutes. This Investment Policy establishes guidelines for the prudent investment of Township funds in compliance with Michigan Public Act 20 of 1943 (MCL 129.91), MCL 41.77, and other applicable laws.

It is the policy of the Township to invest public funds in a manner that prioritizes the safety and security of investments, ensures sufficient liquidity to meet daily cash flow and operational needs, and provides a reasonable rate of return in accordance with statutory requirements and sound financial management. All investments shall conform to applicable state statutes and local ordinances governing the investment of public funds.

2.0 SCOPE

This policy applies to all financial assets and investment activities of the Township except for employee pension funds or deferred compensation funds which are governed separately. Covered funds include, but are not limited to:

- General Fund (101)
- Side Street Maintenance Fund (203)
- Fire Operating Fund (206)
- Legal Defense Fund (211)
- Street Light Fund (219)
- Building Fund (249)
- Law Enforcement Fund (266)
- ARPA Fund (464)
- Parks & Recreation Fund (508)
- Trust & Agency Fund (701)
- Payroll Fund (704)
- Utilities (Water & Sewer)

Any new fund created by the governing body, unless specifically exempted by the governing body.

Excluded from this policy are pension and retiree health care funds managed under the Michigan Municipal Employees Retirement System (MERS).

3.0 OBJECTIVES

Funds of the Township will be invested in accordance with Michigan Public Act 20 of the Public Acts of 1943, as amended, and in accordance with the following objectives in order of priority.

3.1 Safety – Safety of principal is the foremost objective. Investments shall be undertaken in a manner that seeks to ensure preservation of capital.

3.2 Diversification – The investments shall be diversified by specific maturity dates, individual financial institution(s) or a specific class of securities in order that potential losses on individual securities do not exceed the income generated from the remainder of the portfolio.

3.3 Liquidity – The investment portfolio will remain sufficiently liquid to meet all operating requirements, which might be reasonably anticipated

3.4 Return on Investment – The investment portfolio shall be designed with the objective of obtaining a rate of return throughout budgetary and economic cycles, considering the investment risk constraints and cash flow characteristics of the portfolio.

4.0 DELEGATION OF AUTHORITY

Pursuant to MCL 41.76, the Township Treasurer is vested with the authority to oversee and manage the Township's investment program. The Treasurer, acting as the Township's investment officer, is responsible for establishing procedures and internal controls to ensure compliance with this policy. No individual may engage in investment transactions except as authorized under this policy and the procedures set forth by the investment officer. The investment officer shall be accountable for all transactions and for maintaining a system of controls to govern the activities of any subordinate officials.

5.0 AUTHORIZED INSTRUMENTS

In Accordance with Public Act 20 of the Public Acts of 1943, as amended, the surplus funds of the Township may be invested as follows:

5.1 Bonds, securities, and other obligations of the United States or an agency or instrumentality of the United States.

5.2 Certificates of deposit, savings accounts, deposit accounts, or depository receipts of a financial institution. That is eligible to be a depository of funds belonging to the state under a law or rule of this state or the United States. Financial institution means a state or nationally chartered bank or a state or federally chartered savings and loan association, savings bank, or credit union

whose deposits are insured by an agency of the United States government that maintains a principal office or branch office located in this state under the laws of this state or the United States.

5.3 Commercial paper rated at the time of purchase within the two highest classifications established by not less than two standard rating services and that matures not more than 270 days after the date of purchase.

5.4 Repurchase agreements consisting of instruments listed in subdivision (a) above. Repurchase agreements shall be negotiated only with dealers or financial institutions with whom the Township has negotiated a Master Repurchase Agreement. Repurchase Agreements must be signed with the bank or dealer and must contain provisions comparable to those outlined in the Public Security Association's model Master Repurchase Agreement.

5.5 Bankers' acceptances of United States banks.

5.6 Obligations of this state or any of its political subdivisions that at the time of purchase are rated as investment grade by not less than one (1) standard rating service.

5.7 Mutual funds registered under the Investment Company Act of 1940 with the intention to maintain a \$1.00 per share net asset value and purchase only investment vehicles that are legal for direct investment by a public corporation.

5.8 Obligations described in subdivisions (a) through (g), as named above, if purchased through an interlocal agreement under the Urban Cooperation Act of 1967.

5.9 Investment pools are organized under the surplus funds' investment pool act, P.A. 367 of 1982.

5.10 Investment pools are organized under the local government investment pool act, 121 of 1985.

6.0 SAFEKEEPING AND CUSTODY

All security transactions, including collateral for repurchase agreements and financial institution deposits, entered by the Township, shall be on a cash basis. Securities may be held by a third- party custodian designated by the treasurer and evidenced by safekeeping receipts as determined by the investment officer.

7.0 STANDARDS OF PRUDENCE AND ETHICS

7.1 Prudence – Investments shall be made with judgment and care, under circumstances then prevailing, which persons of prudence, discretion, and intelligence exercise in the management of their own affairs, not for speculation but for investment, considering the probable safety of capital as well as the probable income to be derived. This is known as the "fiduciary standard."

7.2 Ethics and Conflicts of Interest – The Treasurer and all employees involved in the investment process shall refrain from any personal business activity that could conflict with the proper execution and management of Township investments or impair their ability to make impartial decisions. They shall disclose any material interests in financial institutions with which the Township conducts business and shall subordinate any personal investment transactions to those of the Township.

8.0 AUTHORIZED INVESTMENTS

Investments will comply with Michigan Public Act 20 and may include:

- Certificates of deposit, savings accounts, or deposit accounts of Michigan-based financial institutions
- Bankers' acceptances
- Municipal bonds rated investment grade
- Money market mutual funds registered under the Investment Company Act of 1940
- Local government investment pools (e.g., Michigan CLASS)

Prohibited investments include derivative securities, structured notes, and cryptocurrencies.

9.0 DEPOSITORY AND BROKER/DEALER REQUIREMENTS

Financial institutions and broker/dealers must:

- Provide audited financial statements
- Demonstrate FDIC or NCUA insurance coverage
- Provide proof of state registration and compliance with applicable laws
- Acknowledge receipt of and compliance with this Investment Policy

The Treasurer shall annually review and approve qualified institutions and present the list to the Township Board.

10.0 REPORTING AND REVIEW

10.1 Within 120 days of the end of the fiscal year, the treasurer shall prepare an annual written report to the governing body regarding the investment of the funds.

10.2 Annual Review – An annual review of this policy and financial institutions shall be conducted. Updates or amendments must be approved by the Township Board.

11.0 TRAINING

The Township Treasurer and any staff designated to assist with investment activities shall complete a minimum of six (6) hours of investment-related training every two years. Training shall include updates on statutory requirements, best practices in public fund investing, and current market conditions to ensure informed and prudent investment decisions.

12.0 POLICY REVIEW AND AMENDMENTS

This policy shall be reviewed annually and updated as necessary. Amendments must be approved by resolution of the Township Board.

13.0 ADOPTION

This policy shall become effective immediately upon adoption by the **Charter Township of Superior Board of Trustees**.

Adopted this ____ day of _____, 2025.

By: Superior Charter Township Board
Emily Dabish Yahkind, Township Supervisor
Angela Robinson Township Clerk
Lisa A. Lewis Township Treasurer

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SUPERIOR TOWNSHIP

Record of Disbursements

Date: September 15, 2025

*Contains all checks written since last report for the following funds:

General Bank - includes all checks written from the following funds:

101 - General Fund

203 - Side Street Maintenance Fund

211 - Legal Defense Fund

219 - Streetlight Fund

249 - Building Fund

266 - Law Fund

508 - Park Fund

206 - Fire Fund

592 - Utility Dept.

701 - Trust & Agency Fund

Total amount for all disbursements - \$ 1,101,674.17

Note: Some of these checks were presented to the board for approval. All others are either pre-approved or under \$3,000.00 for Government Funds and \$5,000 for Utility Dept.

Check Date	Bank	Check	Vendor Name	Description	Amount
Bank FIRE FIRE FUND					
Check Type: Paper Check					
08/26/2025	FIRE	28058	ALPHA PSYCHOLOGICAL SERVICES, P.C.	NEW HIRE EXAMS	1,590.00
08/26/2025	FIRE	28059	BREWER'S INC.	TOWING SERVICE FOR TWO TRUCKS	1,330.00
08/26/2025	FIRE	28060	DELTA DENTAL	DENTAL INSURANCE - SEPT 2025	1,096.06
08/26/2025	FIRE	28061	EMERGENT HEALTH PARTNERS	2025 - AUGUST	3,820.00
08/26/2025	FIRE	28062	JEFFREY KUJAWA	REIMBURSEMENT FOR CELL PHONE CASE	30.73
08/26/2025	FIRE	28063	OCCUPATIONAL HEALTH CENTERS OF MI	NEW HIRE PHYSICALS	1,258.00
08/26/2025	FIRE	28064	SUPERIOR TOWNSHIP CREDIT CARD ACCT	MI ASSOCIATION OF FIRE CHIEFS TRAINING	49.00
				MI FIRE INSPECTOR CONFERENCE - KIMBALL	538.62
				MI FIRE INSPECTOR CONFERENCE - CHIEF	538.62
					1,126.24
08/26/2025	FIRE	28065	SUPERIOR TOWNSHIP TREASURER	OVERPAYMENTS BY TREASURY DEPARTMENT	9,719.28
08/26/2025	FIRE	28066	TRUGREEN PROCESSING CENTER	STATION #1 - LAWN TREATMENT	217.14
08/26/2025	FIRE	28067	VSP INSURANCE CO	VISION INSURANCE - SEPT 2025	240.79
08/26/2025	FIRE	28068	SUPERIOR TWP PAYROLL FUND	CASH TRANSFER 8/28/25 PAY	74,910.32
09/04/2025	FIRE	28069	AMAZON CAPITAL SERVICES, INC	TRUCK SUPPLIES	431.72
09/04/2025	FIRE	28070	AMERICAN AQUA, INC.	WATER SOFTNER SUPPLIES	193.50
09/04/2025	FIRE	28071	AMERICAN AWARDS AND ENGRAVING	ACCOUNTABILITY TAGS FOR NEW FIREFIGHTERS	34.50
09/04/2025	FIRE	28072	ANN ARBOR ARMS, LLC	FIRE ARMS TRAINING - CHIEF & MARSHAL	550.00
09/04/2025	FIRE	28073	ANN ARBOR CLEANING SUPPLY	BUILDING SUPPLIES	663.88
09/04/2025	FIRE	28074	ANN ARBOR TOWNSHIP FIRE DEPARTMENT	TRAINING - RUSH	50.00
09/04/2025	FIRE	28075	AUTO VALUE YPSILANTI	TRUCK WAX	31.98
09/04/2025	FIRE	28076	CANON FINANCIAL SERVICES INC.	LEASE ON COPY MACHINE - COPY USAGE	206.10
09/04/2025	FIRE	28077	COMCAST	ADD'L OUTLET STATION #1 -AUG 2025	10.53
				INTERNET SERVICES - ST #1 -SEPT 2025	385.17
					395.70
09/04/2025	FIRE	28078	CORRIGAN OIL COMPANY	297.8 GALLONS DIESEL	849.65
09/04/2025	FIRE	28079	CYNERGY PRODUCTS	REPAIR ON FIRE-COM SYSTEM ENGINE 11-1	976.95
09/04/2025	FIRE	28080	DTE ENERGY	GAS - STATION #1 -AUG 2025	78.91
				ELECTRIC @ STATION #1 -AUG 2025	936.96
				ELECTRIC & GAS - STATION #2- AUG 2025	763.79
					1,779.66
09/04/2025	FIRE	28081	DUROCHER'S	BEDS - STATION #2	3,248.00
09/04/2025	FIRE	28082	EMERGENT HEALTH PARTNERS	2025 - SEPTEMBER	3,820.00
09/04/2025	FIRE	28083	EMPCO, INC.	LIEUTENANT TESTING WRITTEN EXAM	1,689.00
09/04/2025	FIRE	28084	FIREWRENCH OF MICHIGAN	ENGINE 1 REPAIR WORK	766.15
				ENGINE 2 REPAIR WORK	350.00
				ENGINE 1 REPAIR WORK	587.45
				ENGINE 2 REPAIR WORK	834.29
				ENGINE 1 REPAIR WORK	1,071.60
					3,609.49
09/04/2025	FIRE	28085	GABBYS BP	REC FUEL	73.71
09/04/2025	FIRE	28086	JEFF FRENCH	ACCELERANT ANNUAL SUBSCRIPTION 8/30/25-8/	120.00
09/04/2025	FIRE	28087	LINDE GAS & EQUIPMENT, INC	OXYGEN CYLINDER RENTAL	103.81
09/04/2025	FIRE	28088	MACQUEEN EMERGENCY	HOSE	415.55
				RESCUE TOOLS	250.00

Check Date	Bank	Check	Vendor Name	Description	Amount
09/04/2025	FIRE	28089	PAYETTE SALES & SERVICE, INC.	FEDERAL NOZZLE AND APPLIANCE GRANT EMW-2023	18,177.45
				FEDERAL NOZZLE AND APPLIANCE GRANT EMW-2023	26,420.00
					45,263.00
09/04/2025	FIRE	28089	PAYETTE SALES & SERVICE, INC.	PEDAL - THROTTLE FLOOR	1,372.10
09/04/2025	FIRE	28090	ROBERTSON MORRISON INC.	FURNANCE WORK - STATION #2	1,559.50
				FURNANCE WORK - STATION #1	1,390.00
					2,949.50
09/04/2025	FIRE	28091	SUPERIOR TOWNSHIP CREDIT CARD ACCT	ADD'L LICENSES FOR ACTIVE 911	68.35
09/04/2025	FIRE	28092	SUPERIOR TWP PAYROLL FUND	PENSION/HOSP - AUGUST 2025	28,617.26
09/04/2025	FIRE	28093	SUPERIOR TWP UTILITY DEPARTMENT	WATER -STATION #2	95.67
09/04/2025	FIRE	28094	TAZ NETWORKS, INC	NETWORK FLAT FEE -AUGUST 2025	1,648.38
09/04/2025	FIRE	28095	TIMOTHY WINTERS	HEALTH INSURANCE REIMBURSEMENT -SEPT 202	334.91
09/04/2025	FIRE	28096	TRUGREEN PROCESSING CENTER	STATION #1 - LAWN TREATMENT	217.14
09/04/2025	FIRE	28097	TURNING OUT SOLUTIONS	HOSE STRAP RED PULL	290.00
09/04/2025	FIRE	28098	WASHTEENAW AREA MUTUAL AID ASSOC	MAYDAY MANAGEMENT TRAINING COURSE	300.00
09/09/2025	FIRE	28099	COMCAST	TELEPHONES - SEPTEMBER 2025	644.07
09/09/2025	FIRE	28100	CUMMINS SALES AND SERVICE	STATION #1 GENERATOR WORK	805.56
09/09/2025	FIRE	28101	SUPERIOR TOWNSHIP CREDIT CARD ACCT	AUSTIN HARDWARE -BALANCED OWED	5.74
09/09/2025	FIRE	28102	SUPERIOR TWP GENERAL FUND	AMOUNT OWED CURRENTLY FOR SUPERVISOR PAY	7,087.36
09/09/2025	FIRE	28103	VERIZON WIRELESS	CELL PHONES -AUGUST 2025	521.20
09/09/2025	FIRE	28104	WEX BANK	FUEL - AUGUST 2025	165.03
09/09/2025	FIRE	28105	SUPERIOR TWP PAYROLL FUND	CASH TRANSFER 9/11/25 PAY	84,394.98
				Total Paper Check:	288,946.46

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FREE TOTALS:

Total of 48 Checks: 288,946.46

Less 0 Void Checks: 0.00

Total of 48 Disbursements: 288,946.46

Check Date	Bank	Check	Vendor Name	Description	Amount
Bank GENL GENERAL BANK					
Check Type: Paper Check					
08/26/2025	GENL	49839	BILL BALMES	CELL PHONE STIPEND - AUG 25	50.00
08/26/2025	GENL	49840	BOB MAYNARD	DUMP TICKET REIMBURSEMENT	50.00
08/26/2025	GENL	49841	CANON FINANCIAL SERVICES INC.	LEASE ON (2) COPY MACHINES & COPIES	651.77
08/26/2025	GENL	49842	CARL RINGBLOOM II	2-ELECTRICAL INSPECTIONS 8/22/25	100.00
08/26/2025	GENL	49843	CINTAS CORPORATION - 300	RUG SERVICE MONTH OF AUGUST 2025	351.85
08/26/2025	GENL	49844	DELTA DENTAL	DENTAL INSURANCE - SEPTEMBER 2025	947.34
08/26/2025	GENL	49845	JALEEN WILSON	TRASH PICK-UP MACARTHUR/WIARD/ROW	221.00
				TRASH PICK-UP MACARTHUR/WIARD/ROW	221.00
					442.00
08/26/2025	GENL	49846	KEN WASILEWSKI	11 BUILDING INSPECTIONS 8/20-22/25	550.00
08/26/2025	GENL	49847	KRISTINA CARR-RANKIN	CELL PHONE STIPEND - AUG 25	50.00
08/26/2025	GENL	49848	LISA LEWIS	CELL PHONE STIPEND - AUG 25	50.00
08/26/2025	GENL	49849	NANCY MASON	CELL PHONE STIPEND - AUG 25	50.00
08/26/2025	GENL	49850	PAULA CALOPISTIS	CELL PHONE STIPEND - AUG 25	50.00
08/26/2025	GENL	49851	ROBERT ACTON	59-MECH/PLUMB INSPECTIONS 8/9-22/25	2,950.00
08/26/2025	GENL	49852	ROBERT BUTLER	2025 CONTRACT - 9	1,766.67
08/26/2025	GENL	49853	RONNIE WILLIAMS	CELL PHONE STIPEND - AUG 25	50.00
08/26/2025	GENL	49854	SUPERIOR TOWNSHIP CREDIT CARD ACCT	HVAC CONFERENCE	160.00
				SMARTSHEET -AUGUST	24.00
					184.00
08/26/2025	GENL	49855	SUPERIOR TOWNSHIP TREASURER	OVERPAYMENTS BY TREASURY DEPARTMENT	9,855.04
08/26/2025	GENL	49856	TERMINIX EHRlich	PEST CONTROL -AUGUST 2025	134.62
08/26/2025	GENL	49857	VSP INSURANCE CO	VISION INSURANCE - SEPT 2025	232.32
08/26/2025	GENL	49858	WASHTENAW COUNTY TREASURER	2025 CONTRACT	120,101.77
08/26/2025	GENL	49859	SUPERIOR TWP PAYROLL FUND	CASH TRANSFER 8/28/25 PAY	60,285.27
08/28/2025	GENL	49860	PRINTING SYSTEMS, INC.	POSTAGE DUE FOR AV APPLICATION MAILING	375.33
09/04/2025	GENL	49861	AMAZON CAPITAL SERVICES	PROPANE TORCH	49.99
09/04/2025	GENL	49862	AMAZON CAPITAL SERVICES, INC	BUILDING SUPPLIES	98.68
				BUILDING SUPPLIES	83.50
					182.18
09/04/2025	GENL	49863	ASSOCIATED PLUMBING & SEWER INC.	PLUMBING WORK FOR LAW/GENERAL	2,057.00
09/04/2025	GENL	49864	BRYAN CLARK	BOR MILEAGE REIMBURSEMENT	4.06
09/04/2025	GENL	49865	C & C HEATING & AIR CONDITIONING	OVERPAYMENT ON PERMIT 325 WESTLOCH CIR	180.00
09/04/2025	GENL	49866	CARL SADDLER	DUMP TICKET REIMBURSEMENT	18.00
09/04/2025	GENL	49867	DTE ENERGY	APT "1" GAS -AUG 2025	54.84
				OLD TOWN HALL GAS -AUGUST 2025	53.06
				GEN/LAW SPLIT/GENERATOR-GAS -AUG 2025	110.51
				GEN/LAW SPLIT/OLD TOWN HALL ELEC -AUG	1,195.19
				ELECTRIC - PARKS BARN - AUG 2025	20.74
					1,434.34
09/04/2025	GENL	49868	ERIK HALL	DUMP TICKET REIMBURSEMENT	22.00
09/04/2025	GENL	49869	HOME DEPOT CREDIT SERVICES	MISC SHOP/MAINT SUPPLIES/GENERAL NEW MAI	1,193.49
09/04/2025	GENL	49870	HOWLETT LOCK & DOOR, INC.	NEW KEYS FOR FILING CABINETS FOR ELECTIO	56.56
09/04/2025	GENL	49871	JALEEN WILSON	TRASH PICK-UP MACARTHUR/WIARD/ROW	221.00
09/04/2025	GENL	49872	JAMES SWITALA	BOR MILEAGE REIMBURSEMENT	5.46
09/04/2025	GENL	49873	JOHN COUCH	SITE INSPECTIONS	575.00

Check Date	Bank	Check	Vendor Name	Description	Amount
09/04/2025	GENL	49874	JOHN MACNICOL	BOR MILEAGE REIMBURSEMENT	3.92
09/04/2025	GENL	49875	LAWRENCE HENDRICKS	INTRO TO TENNIS INSTRUCTOR	135.00
09/04/2025	GENL	49876	QUADIENT FINANCE USA, INC.	POSTAGE REFILL FOR MACHINE	799.93
09/04/2025	GENL	49877	SAM'S CLUB/SYNCHRONY BANK	WATER & SNACKS FOR BUG HUNT	63.12
09/04/2025	GENL	49878	STANDARD PRINTING	LETTER HEAD & ENVELOPES - TREASURY	590.00
09/04/2025	GENL	49879	STAPLES	OFFICE SUPPLIES	386.15
09/04/2025	GENL	49880	SUPERIOR TOWNSHIP CREDIT CARD ACCT	QUICKBOOKS - AUG 2025	338.00
				ZOOM -AUGUST 2025	81.98
				DTE SHUT OFF FOR 4745 NAPIER CT	720.00
				DRACO MEMBERSHIP FOR BALMES	95.00
				PAYROLL CHECK STOCK FOR NEW SYSTEM - NEL	159.15
				GO DADDY YEARLY RENEWAL - ADD'L OWED	13.20
				MAILCHIMP AUGUST 2025	26.50
					1,433.83
09/04/2025	GENL	49881	SUPERIOR TWP PAYROLL FUND	PENSION /HCSP - AUGUST 2025	14,511.22
09/04/2025	GENL	49882	SUPERIOR TWP UTILITY DEPARTMENT	CELL PHONE JUAN - AUGUST	49.93
09/04/2025	GENL	49883	SUSAN ISKENDERIAN	DUMP TICKET REIMBURSEMENT	33.00
09/04/2025	GENL	49884	TAZ NETWORKS, INC	NETWORK FLAT FEE -AUGUST 2025	2,999.92
09/04/2025	GENL	49885	TRUGREEN PROCESSING CENTER	LAWN SERVICE	157.76
09/04/2025	GENL	49886	WALMART	MOVIES IN THE PARK	48.11
09/04/2025	GENL	49887	WASHTENAW COUNTY ROAD COMMISSION	PLYMOUTH ROAD PATHWAY	210.29
				GEDDES ROAD PATHWAY	64,960.00
					65,170.29
09/04/2025	GENL	49888	WEINGARTZ	EXMARK MOWER REPAIR	701.86
09/04/2025	GENL	49889	WEST SHORE SERVICES, INC.	2025 ANNUAL INSPECTION OUTDOOR WARNING S	1,652.00
09/09/2025	GENL	49890	ANGELA ROBINSON	REIMBURSEMENT FOR ROOM FOR TRAINING CIAS	221.48
09/09/2025	GENL	49891	APEX SOFTWARE	ANNUAL MAINTENANCE 10/01/25-10/01/26	1,040.00
09/09/2025	GENL	49892	BOULLION SALES, INC.	STIHL EDGER	504.95
09/09/2025	GENL	49893	CHRISTINA PAULEY	DUMP TICKET REIMBURSEMENT	33.00
09/09/2025	GENL	49894	COMCAST	TELEPHONES - SEPTEMBER 2025	549.63
09/09/2025	GENL	49895	DR TRAILER SALES	DUMP TRAILER REPAIR	701.70
09/09/2025	GENL	49896	DTE ENERGY	DIXBORO VILLAGE GREEN ELECTRIC -AUG	62.98
				SIREN @ 1989 PROSPECT -- AUG 2025	24.37
					87.35
09/09/2025	GENL	49897	GMAR MLS	2025 QUARTERLY MLS DUES	99.00
09/09/2025	GENL	49898	JALEEN WILSON	TRASH PICK-UP MACARTHUR/WIARD/ROW	204.00
09/09/2025	GENL	49899	JAMES RATLIFF	8-MECHANICAL & PLUMBING INSPECTIONS	400.00
09/09/2025	GENL	49900	KRISTINA CARR-RANKIN	CELL PHONE STIPEND - APRIL 2025	50.00
09/09/2025	GENL	49901	LISA LEWIS	MILEAGE REIMBURSEMENT 8/5-9/5/25	111.00
09/09/2025	GENL	49902	MPARKS	CP51 CLASS - JUAN/MARCO	1,290.00
09/09/2025	GENL	49903	O'REILLY AUTOMOTIVE, INC.	TOOLS/TRUCK & TRAILER REPAIR	84.43
09/09/2025	GENL	49904	PARKWAY SERVICES	PORTAJOHN @ FIREMAN'S PARK AUGUST	130.00
09/09/2025	GENL	49905	PRINTING SYSTEMS, INC.	ELECTION SUPPLIES	1,224.79
09/09/2025	GENL	49906	ROBERT ACTON	21-MECH/PLUMB INSPECTIONS 8/23-9/5/25	1,050.00
09/09/2025	GENL	49907	ROBERT BUTLER	2025 CONTRACT -10	1,766.67
09/09/2025	GENL	49908	SUPERIOR TOWNSHIP CREDIT CARD ACCT	ADOBE - MONTHLY SCRIPT SEPT 25	167.93
09/09/2025	GENL	49909	WEX BANK	FUEL- AUGUST 2025	103.47
09/09/2025	GENL	49910	WEX BANK	FUEL- AUGUST 2025	84.71
09/09/2025	GENL	49911	WEX BANK	FUEL - AUG 2025/PROPANE	498.06
09/09/2025	GENL	49912	SUPERIOR TWP PAYROLL FUND	CASH TRANSFER 9/11/25 PAY	59,134.65
				Total Paper Check:	363,549.92

Check Date	Bank	Check	Vendor Name	Description	Amount
GENL TOTALS:					
Total of 74 Checks:					363,549.92
Less 0 Void Checks:					0.00
Total of 74 Disbursements:					<u>363,549.92</u>

Check Date	Bank	Check	Vendor Name	Description	Amount
Bank TRUST TRUST & AGENCY					

Check Type: Paper Check

09/04/2025	TRUST	1135	LOMBARDO HOMES	TEMP C/O BOND REFUND - 7477 ABIGAIL DR	500.00
				TEMP C/O BOND REFUND - 1969 MAGGIE LANE	500.00
				TEMP C/O BOND REFUND - 1963 MAGGIE LANE	500.00
				TEMP C/O BOND REFUND - 1955 MAGGIE LANE	500.00
				TEMP C/O BOND REFUND - 1966 MAGGIE LANE	500.00
				TEMP C/O BOND REFUND - 1952 MAGGIE LANE	500.00
				TEMP C/O BOND REFUND - 1972 MAGGIE LANE	500.00
				TEMP C/O BOND REFUND - 7467 ABIGAIL DR	500.00
				TEMP C/O BOND REFUND - 1946 MAGGIE LANE	500.00
				TEMP C/O BOND REFUND - 1958 MAGGIE LANE	500.00
					5,000.00
09/04/2025	TRUST	1136	VOID	VOID Reason: Created From Check Run Process	V
09/04/2025	TRUST	1137	PAGIE PURIFY	PARK PAVILION RENTAL REFUND	200.00
09/04/2025	TRUST	1138	SUPERIOR TOWNSHIP BUILDING FUND	TEMP CO BOND ADMIN FEE 5387 PLYMOUTH ROA	80.00
09/04/2025	TRUST	1139	SUPERIOR TWP GENERAL FUND	TRAILER FEES - JULY 2025	174.00
09/04/2025	TRUST	1140	WASHTENAW COUNTY TREASURER	TRAILER FEES - JULY 2025	870.00
09/09/2025	TRUST	1141	SUPERIOR TWP GENERAL FUND	POINT & PAY ERROR	200.00
				TRAILER FEES - AUGUST 2025	228.50
					428.50
09/09/2025	TRUST	1142	WASHTENAW COUNTY TREASURER	TRAILER FEES - AUGUST 2025	1,142.50
				Total Paper Check:	7,895.00
TRUST TOTALS:					
Total of 8 Checks:					
Less 1 Void Checks:					
Total of 7 Disbursements:					

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SUPERIOR TOWNSHIP UTILITY DEPARTMENT

09/09/25

CHECK REGISTER

ACCRUAL BASIS

AUGUST 19 THROUGH SEPTEMBER 15, 2025

DATE	NUM	NAME	MEMO	AMOUNT
100 · CASH - O&M				
101 · CHECKING - CHASE 205000485529				
08/26/25	15890	AUTO VALUE YPSILANTI	TRUCK BATTERIES, OIL DRY, BRAKE CLEAN	(537.18)
08/26/25	15891	BLUE WATER SOLUTIONS	RESIDENTIAL 5/8 AND 3/4 METERS	(11,734.99)
08/26/25	15892	DELTA DENTAL PLAN OF MICHIGAN	DENTAL INSURANCE - SEPT 25	(859.70)
08/26/25	15893	DTE	GAS-ELEC - AUG 25	(2,212.20)
08/26/25	15894	FONSON COMPANY, INC.	HYDRANT METER REFUND	(2,398.64)
08/26/25	15895	GARY FOSTER	CDL LICENSE RENEWAL	(30.00)
08/26/25	15896	LIVE VOICE	ANSWERING SERVICE	(391.98)
08/26/25	15897	LOMA TRUCKING	CLASS II SAND FOR MAINT BLDG	(774.00)
08/26/25	15898	ON GRADE SPECIALISTS	EXCAVATION WORK	(11,387.50)
08/26/25	15899	PARAGON LABORATORIES	WATER SAMPLES	(509.00)
08/26/25	15900	PROFESSIONAL BUILDING MAINTEN...	CLEANING OF BUILDINGS - AUG 2025	(1,042.00)
08/26/25	15901	QUADIENT LEASING USA, INC.	FOLDER LEASE	(992.31)
08/26/25	15902	TERMINIX PROCESSING CENTER	PEST CONTROL FOR JULY 2025	(81.62)
08/26/25	15903	TRUGREEN	LAWN CARE	(287.89)
08/26/25	15904	VERIZON	CELL PHONES - AUG25	(499.63)
08/26/25	15905	VISION SERVICE PLAN	VISION INSURANCE - SEPT 25	(170.61)
08/26/25	15906	YPSILANTI COMM. UTILITIES AUTHO...	W/S PURCH. - JUL25	(283,558.79)
08/26/25	15907	SUPERIOR TWP. PAYROLL FUND	PAYROLL 8/28/25	(33,056.10)
09/04/25	15908	AMAZON CAPITAL SERVICES, INC.	STUFF FOR MAINT. BLDG	(339.84)
09/04/25	15909	BADGER METER	MONTHLY SERVICES - AUG25	(3,318.44)
09/04/25	15910	BEAVER RESEARCH COMPANY	MAINTENANCE BLDG SUPPLIES	(314.95)
09/04/25	15911	CINTAS CORPORATION	FIRST AID CABINET RESTOCK	(119.09)
09/04/25	15912	DTE	GAS-ELEC AUG 25	(1,913.83)
09/04/25	15913	FASTENAL	NUTS AND BOLTS FOR VALVE REPAIRS	(252.25)
09/04/25	15914	JACK DOHENY COMPANIES, INC.	REPAIRED VACTOR TRUCK REMOTE CONTROL	(211.39)
09/04/25	15915	PARAGON LABORATORIES	WATER SAMPLES	(150.00)
09/04/25	15916	POWER VAC OF MICHIGAN	JETTED THE SEWER MAIN ON HARVEST LN.	(4,664.00)
09/04/25	15917	SAM'S CLUB	SHOP SUPPLIES -MF	(133.94)
09/04/25	15918	SUPERIOR TOWNSHIP CREDIT CAR...	QB MONTHLY CHARGE FOR USERS -AUGUST	(338.00)
09/04/25	15919	THOMAS, MARLENE.	CUSTOMER REFUND OVERPAYMENT	(179.76)
09/04/25	15920	SUPERIOR TWP. PAYROLL FUND	PENSION - HCPS - AUGUST 2025	(8,357.99)
09/04/25	15921	TAZ NETWORKS INC.	FLAT RATE FEE - AUGUST 2025	(1,149.22)
09/04/25	15922	YPSILANTI ACE HARDWARE	4-1" COUPLERS, HAND TOOLS	(69.34)
09/09/25	15923	ADVANCED UNDERGROUND INSPEC...	ADVANCE UNDERGROUND INSPECTIONS VAN AND ...	(3,993.75)
09/09/25	15924	COMCAST - PHONES	PHONES ADMIN/MAINT -AUGUST	(496.32)

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09/09/25
ACCURAL BASIS

SUPERIOR TOWNSHIP UTILITY DEPARTMENT
CHECK REGISTER
AUGUST 19 THROUGH SEPTEMBER 15, 2025

DATE	NUM	NAME	MEMO	AMOUNT
09/09/25	15925	MILLENNIUM BUSINESS SYSTEMS	COPIER LEASE AND INK	(484.31)
09/09/25	15926	PARAGON LABORATORIES	GEDDES SITE ONE BACTI SAMPLES- DISTRIBUTION...	(75.00)
09/09/25	15927	WEX BANK	FUEL - AUG 25	(446.39)
09/09/25	15928	SUPERIOR TWP. PAYROLL FUND	PAYROLL 9/9/25	(26,673.17)
TOTAL 101 - CHECKING - CHASE 2050000485529				(404,205.12)
TOTAL 100 - CASH - O&M				(404,205.12)
120 - CASH - CAPITAL RESERVE				
125 - CR CHKG. - CHASE 639918234				
08/26/25	1265	DENEWETH, VITTIGLIO & SASSAK, P...	LEGAL SERVICES	(22,827.67)
08/26/25	1266	WATERTAP, INC	12 INCH HYDRA STOP VALVE INSTALLED FOR THE ...	(14,250.00)
TOTAL 125 - CR CHKG. - CHASE 639918234				(37,077.67)
TOTAL 120 - CASH - CAPITAL RESERVE				(37,077.67)
TOTAL				(441,282.79)

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