PROSPECT POINTE WEST A SINGLE FAMILY DEVELOPMENT SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MICHIGAN FINAL SITE PLAN - PHASE 0

PROJECT CONTACTS

DEVELOPER / APPLICANT DIVERSE REAL ESTATE LLC 13001 23 MILE ROAD, SUITE 200 SHELBY TWP, MICHIGAN 48315 CONTACT: GREG WINDINGLAND PHONE: (586) 781-2364

CIVIL ENGINEER ATWELL, LLC **311 NORTH MAIN STREET** ANN ARBOR, MICHIGAN 48104 CONTACT: MATT BUSH, P.E. PHONE: (734) 994-4000

LEGAL DESCRIPTION

DESCRIPTION OF 67.63 ACRE OF LAND LOCATED IN THE NORTHWEST 1/4 OF SECTION 33, TOWN 2 SOUTH, RANGE 7 EAST, SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MICHIGAN: (AS SURVEYED BY ATWELL)

COMMENCING AT THE EAST 1/4 CORNER OF SECTION 33, TOWN 2 SOUTH, RANGE 7 EAST FOWNSHIP. WASHTENAW COUNTY. MICHIGAN: THENCE S87°25'50"W (RECORDED AS S87°41'00"W) 1079.06 FEET ALONG THE EAST-WEST 1/4 LINE OF SAID SECTION 33 FOR A PLACE OF BEGINNING; THENCE CONTINUING S87°25'50"W (RECORDED AS S87°41'00"W) 1658.89 FEE ALONG THE EAST-WEST 1/4 LINE OF SAID SECTION 33 TO THE CENTER OF SAID SECTION 33 THENCE N02°57'34"W (RECORDED AS N02°42'24"W) 2652.37 FEET ALONG THE NORTI (RECORDED AS N87°03'46"E) 833.32 FEET ALONG THE NORTH LINE OF SAID SECTION NE OF GEDDES ROAD (VARIABLE WIDTH): THENCE ALONG THE WESTERLY LINE OF POINTE SUBDIVISION NO. 1, AS RECORDED IN LIBER 35 OF PLATS, PAGE 6' WASHTENAW COUNTY RECORDS, FOR THE FOLLOWING 3 COURSES: S03°12'30"E S02°57'20"E) 296.61 FEET. N86°47'30"E (PLATTED AS N87°02'40"E) 2.00 FEET (PLATTED AS S02°57'20"E) 86.00 FEET: THENCE ALONG THE WESTERLY LINE OF DIVISION NO. 2. AS RECORDED IN LIBER 35 OF PLATS. PAGE 99. WASHTENAW COUNTY RECORDS, FOR THE FOLLOWING 30 COURSES: S20°03'11"W (PLATTED AS S20°18'21"W 37.01 FEET, S34°16'37"W (PLATTED AS S34°31'47"W) 103.24 FEET, S14°36'50"W (PLATTED AS S14°52'00"W) 85.12 FEET, S04°44'49"W (PLATTED AS S05°59'59"W) 89.33 FEET, S08°01'14"E (PLATTED AS S07°46'04"E) 81.01 FEET, S19°49'12"E (PLATTED AS S19°34'02"E) 76.46 FEET, S28°36'23' (PLATTED AS S28°21'13"E) 40.86 FEET, S36°50'24"E (PLATTED AS S36°35'14") 69.56 FEET S47°03'42"W (PLATTED AS S47°18'52"W) 95.59 FEET, S04°56'41"W (PLATTED AS S05°11'51"W) 120.8° '29'11"E (PLATTED AS S14°14'01"E) 63.68 FEET, S50°10'13"E (PLATTED AS S49°55'03"E 129.94 FEET, S89°37'53"E (PLATTED AS S89°22'43"E) 133.38 FEET, N53°09'36"E (PLATTED AS N53°24'46"E) 62.06 FEET, S36°50'24"E (PLATTED AS S36°35'14"E) 85.67 FEET, S25°39'53"E (PLATTED AS S25°24'43"E) 44.78 FEET, S12°08'48"E (PLATTED AS S11°53'38"E) 36.45 FEET, S03°10'48"W (PLATTED AS \$03°25'58"W) 173.12 FEET, \$13°51'38"E (PLATTED AS \$13°36'28"E) 37.88 FEET. S14°58'30"E (PLATTED AS S14°43'20"E) 14.00 FEET, S16°17'53"E (PLATTED AS S16°02'43"E) 42.30 FEET, S27°56'27"E (PLATTED AS S27°41'17"E) 80.08 FEET, S40°21'48"E (PLATTED AS S40°06'38"E) 75.94 FEET, S50°50'05"E (PLATTED AS S50°34'55"E) 75.85 FEET, S57°55'06"E (PLATTED AS S57°39'56"E) 98.34 FEET, N32°04'54"E (PLATTED AS N32°20'04"E) 120.00 FEET, S57°55'06"E (PLATTED AS \$57°39'56"E) 112.81 FEET, \$32°04'54"W (PLATTED AS \$32°20'04"W) 120.00 FEET, \$61°33'56"E (PLATTED AS S61°18'46"E) 74.87 FEET AND S70°08'30"E (PLATTED AS S69°53'20"E) 160.87 FEET: THENCE ALONG THE WESTERLY LINE OF SAID PROSPECT POINTE SUBDIVISION NO. 1 FOR THE FOLLOWING 7 COURSES: 118.83 FEET ALONG THE ARC OF A 263.00 FOOT RADIUS NON TANGENTIAL CIRCULAR CURVE TO THE RIGHT, CHORD BEARING S34°35'35"W 117.82 FEET, S47°32'14"W (PLATTED AS S47°47'24"W) 48.01 FEET, S42°27'46"E 135.80 FEET (RECORDED AS S42°12'36"E 135.08 FEET AND PLATTED AS S42°12'36"E 135.80 FEET), S69°28'35"E (PLATTED AS S69°13'25"E) 162.02 FEET, S19°15'30"E (PLATTED AS S19°00'20"E) 125.77 FEET, S07°37'05"W (PLATTED AS \$07°52'15") 120.86 FEET, \$39°20'09"W (PLATTED AS \$39°35'19"W) 126.12 FEET TO THE PLACE OF BEGINNING, CONTAINING 67.63 ACRES OF LAND, MORE OR LESS, BEING SUBJECT TO THE RIGHTS OF THE PUBLIC OVER THE NORTHERLY 33 FEET THEREOF AS OCCUPIED BY SAID GEDDES ROAD AND SUBJECT TO EASEMENTS, CONDITIONS, RESTRICTIONS AND EXCEPTIONS OF RECORD, IF ANY.

PROJECT NARRATIVE

PROSPECT POINTE WEST IS LOCATED AT THE SOUTHWEST CORNER OF GEDDES ROAD AND PROSPECT ROAD, WEST OF HUNTERS CREEK DRIVE IN SUPERIOR TOWNSHIP. THIS PARCEL WAS ORIGINALLY PART OF THE PROSPECT POINTE DEVELOPMENT, A PLATTED SUBDIVISION, WHICH WAS PERMITTED THROUGH SUPERIOR TOWNSHIP APPROXIMATELY 10 YEARS AGO. PROSPECT POINTE WEST IS 67.63 ACRES AND IS ZONED R4, SINGLE FAMILY RESIDENTIAL DISTRICT, URBAN.

THE APPLICANT IS PROPOSING TO DEVELOP THE PROJECT AS A 157 - UNIT SITE CONDOMINIUM. THE PROPOSED LOT DIMENSIONS ARE 66' X 130' WITH A MINIMUM LOT SIZE OF 8,580 SF. THE HOMES WILL RANGE IN SIZE FROM 2,000 TO 3,200 SF WITH SALES PRICES STARTING IN THE \$400,000S. THE INTENT IS TO PREPARE ONE SITE PLAN FOR THE OVERALL DEVELOPMENT AND THEN THE DEVELOPMENT WILL BE CONSTRUCTED IN 5 PHASES. THERE ARE SOME TOPOGRAPHIC CHALLENGES WITH THE SITE AND, AS SUCH, THE ENTIRE SITE WILL BE REQUIRED TO BE MASS GRADED IN ORDER TO MINIMIZE IMPORT AND EXPORT OF MATERIAL FROM THE SITE.

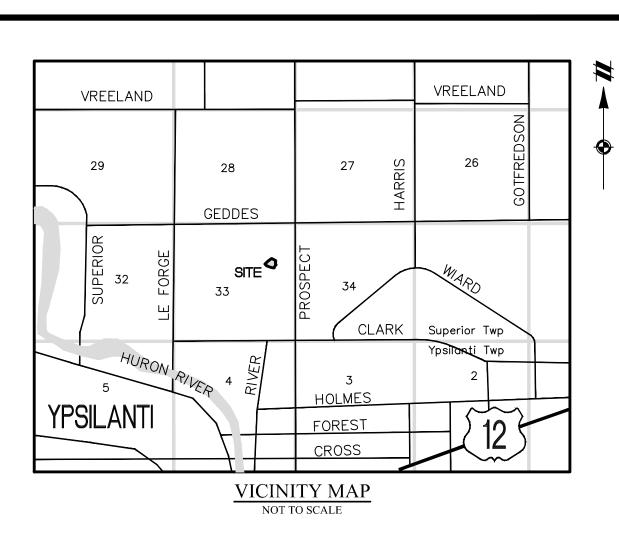
PROSPECT POINTE IS PROPOSED TO CONTAIN PRIVATE ROADS WITH SIDEWALKS ON BOTH SIDES, WHICH HAVE ALREADY RECEIVED APPROVAL FROM THE COUNTY ROAD COMMISSION BASED ON THE PREVIOUSLY APPROVED PLANS FOR THE PROJECT. THE DEVELOPMENT WILL BE SERVICED BY PUBLIC SANITARY SEWER WHICH WILL BE DESIGNED AS AN EXTENSION OFF OF THE EXISTING PROSPECT POINTE DEVELOPMENT. PUBLIC WATER WILL ALSO BE EXTENDED FROM THE EXISTING SUBDIVISION.

THE "PHASE 0" FINAL SITE PLAN IS ONLY FOR THE SCOPE OF WORK NECESSARY TO INSTALI THE PROPOSED EASTERN ROAD CULVERT AND ASSOCIATED FILL ON TOP OF THE CULVERT AS DENOTED ON THESE PLANS. PERMIT NO. WRP007505 WAS PREVIOUSLY ISSUED BY EGLI AUTHORIZING THIS WORK, BUT THIS PERMIT EXPIRES ON JULY 21, 2022 AND THE CULVERT MUST BE INSTALLED PRIOR TO PERMIT EXPIRATION. ALL UTILITIES, PAVEMENT AND SIDEWALK INFRASTRUCTURE ABOVE THE CULVERT TO BE APPROVED AND COMPLETED IN FUTURE PHASES.





OVERALL DEVELOPMENT MAP SCALE: 1" = 200'



SHEET INDEX

- 01 COVER SHEET
- 02 OVERALL EXISTING CONDITIONS
- 03 EXISTING CONDITIONS
- 04 TREE SURVEY & REMOVAL
- 05 NATURAL FEATURES PLAN
- 06 LAYOUT PLAN
- 07 GRADING & STORM PLAN & PROFILE
- 08 SOIL EROSION CONTROL PLAN, NOTES & DETAILS
- 09 SUPERIOR TOWNSHIP STORM DETAIL SHEET
- 10 SUPERIOR TOWNSHIP STORM DETAIL SHEET 2

SITE DATA

GROSS AREA: GEDDES ROAD ROW: NET AREA:

EXISTING ZONING: **PROPOSED ZONING:** PROPOSED USE:

NUMBER OF PROPOSED LOTS: PROPOSED DENSITY (GROSS): PROPOSED DENSITY (NET):

LOT AREA PER DWELLING UNIT:

MINIMUM LOT WIDTH:

LOT SETBACKS: FRONT-SIDE-REAR-

PROPOSED LOT COVERAGE:

PROPOSED GENERAL COMMON ELEMENT (G.C.E.):

<u># UNITS</u>

45

47

WETLAND IMPACTS: REGULATED NON-REGULATED

66.48 ACRES **R4 - SINGLE FAMILY RESIDENTIAL R4 - SINGLE FAMILY RESIDENTIAL** SINGLE FAMILY RESIDENTIAL SITE CONDOMINIUM 157 2.29 2.33 66' X 130' = 8580 SF (TYPICAL) 66' 25' 6' MIN. (16' TOTAL) MAX 25%

PHASING SCHEDULE (ESTIMATED)

21.65 ACRES

0.63 ACRES

0.22 ACRES

67.63 ACRES 1.15 ACRES

PHASE 0	
PHASE I	
PHASE II	
PHASE III	
PHASE IV	

START MAY 2022 NOVEMBER 2022 JUNE 2024 JUNE 2025 JUNE 2026

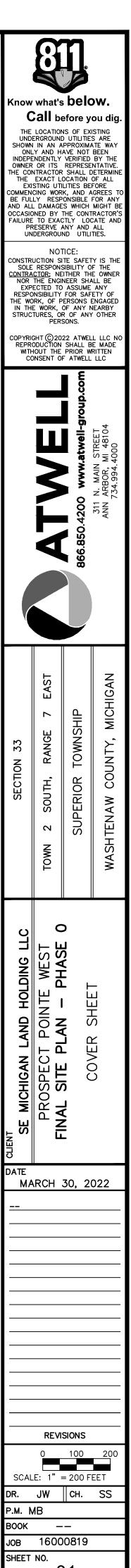
COMPLETION JULY 2022 JULY 2023 APRIL 2025 APRIL 2026 APRIL 2027

NOTES

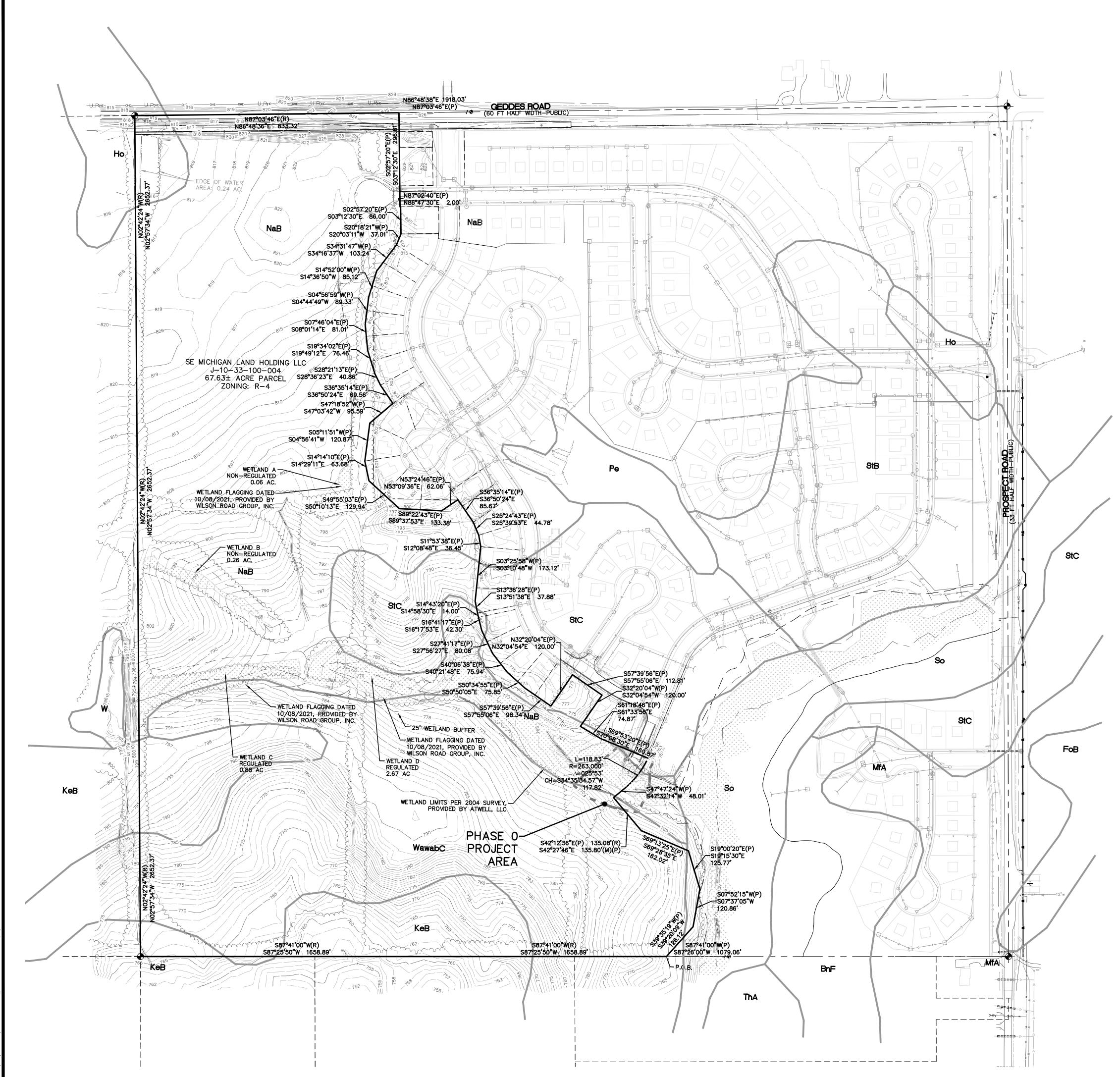
PHASE 0 IS ONLY FOR INSTALLATION OF THE EAST ROAD CROSSING CULVERT. SEE PROJECT NARRATIVE.

2. ACTUAL START OF PHASES II - IV SUBJECT TO ECONOMIC AND OTHER FACTORS

3. ESTIMATED DATE OF FIRST OCCUPANCY FEBRUARY 2023



01



LEGEND

---- BOUNDARY/PROPERTY LINE -890-----_____ EXISTING TREE LINE

→ → → → → → → → EXISTING SANITARY __(____(____(____(____(____(____ $\overline{}$ $\Box \bigcirc$ <u>р</u>

BOUNDARY LINE ----- EXISTING EASEMENT SECTION LINE EXISTING CONTOUR EXISTING CURB AND GUTTER EXISTING FENCE EXISTING BUILDING EXISTING STRUCTURE EXISTING WALL EXISTING WATER MAIN EXISTING STORM OHT OHT EXISTING OVERHEAD TELEPHONE LINE EXIST. CULVERT EXIST. CATCH BASIN/INLET EXIST. HYDRANT EXIST. VALVE EXIST. SANITARY SEWER EXIST. UNSPECIFIED UTILITY EXISTING WETLAND EXISTING WETLAND BUFFER EXISTING SOILS LIMIT

EXISTING SOILS TYPE

EXISTING TEST PIT

FoB **-–**1

BENCHMARKS

BM#1 ARROW ON HYDRANT SW CORNER OF LOT 1, NORT SIDE OF ABIGAIL DR 150' WEST OF HUNTERS CREEK DR ELEV=822.79 NAVD88 BM#2 ARROW ON HYDRANT

SE CORNER OF LEAH LANE AND HUNTERS CREEK DRIVE ELEV=798.38 NAVD88

BM#3 ARROW ON HYDRANT SW CORNER OF FRANCES WAY AND HUNTERS CREEK DRIVE

ELEV=771.22 NAVD88

TEST PIT LOCATIONS

TEST PIT ID	NORTHING	EASTING	ELEVATION
	(SPC MI S)	(SPC MI S)	(NAVD 88)
TP-1	283170.7	13327402.1	816.7
TP-2	283047.3	13327940.1	818.1
TP-3	282510.8	13327990.3	805.4
TP-4	282477.0	13327411.2	815.0
TP-5	281831.7	13327622.6	790.9
TP-6	281734.0	13328261.8	778.6
TP-7	281485.7	13328494.5	775.2
TP-8	281332.6	13328707.7	772.7
TP-9	280930.7	13329088.4	765.0
TP-10	280854.1	13328352.8	762.1
TP-11	280855.9	13328103.7	759.7
TP-12	280823.7	13327639.4	765.8

SOIL INFORMATION

BNC | BOYER LOAMY SAND, 6 TO 12 PERCENT SLOPES

BNF | BOYER LOAMY SAND, 25 TO 50 PERCENT SLOPES FOB FOX SANDY LOAM, TILL PLAIN, 2 TO 6 PERCENT SLOPES

HO HOYTVILLE SILTY CLAY LOAM

KEB KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES

MDA MATHERTON SANDY LOAM, 0 TO 4 PERCENT SLOPES

MFA | METAMORA SANDY LOAM, 0 TO 4 PERCENT SLOPES

NAB NAPPANEE SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES

OSB OSHTEMO LOAMY SAND, 0 TO 6 PERCENT SLOPES

PE PEWAMO CLAY LOAM, 0 TO 2 PERCENT SLOPES SB SEBEWA LOAM, DISINTEGRATION MORAINE, 0 TO 2 PERCENT SLOPES

- SO SLOAN SILT LOAM, WET
- SPB | SPINKS LOAMY SAND, 0 TO 6 PERCENT SLOPES
- STB ST. CLAIR CLAY LOAM, 2 TO 6 PERCENT SLOPES STC | ST. CLAIR CLAY LOAM, 6 TO 12 PERCENT SLOPES
- THA THETFORD LOAMY SAND, 0 TO 4 PERCENT SLOPES

W WATER

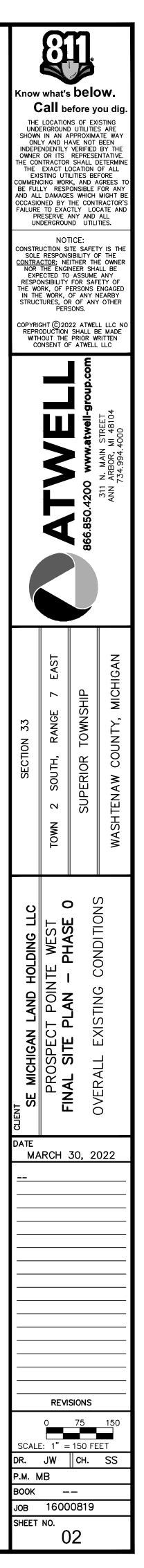
WAWABC WAWASEE LOAM, 6 TO 12 PERCENT SLOPES

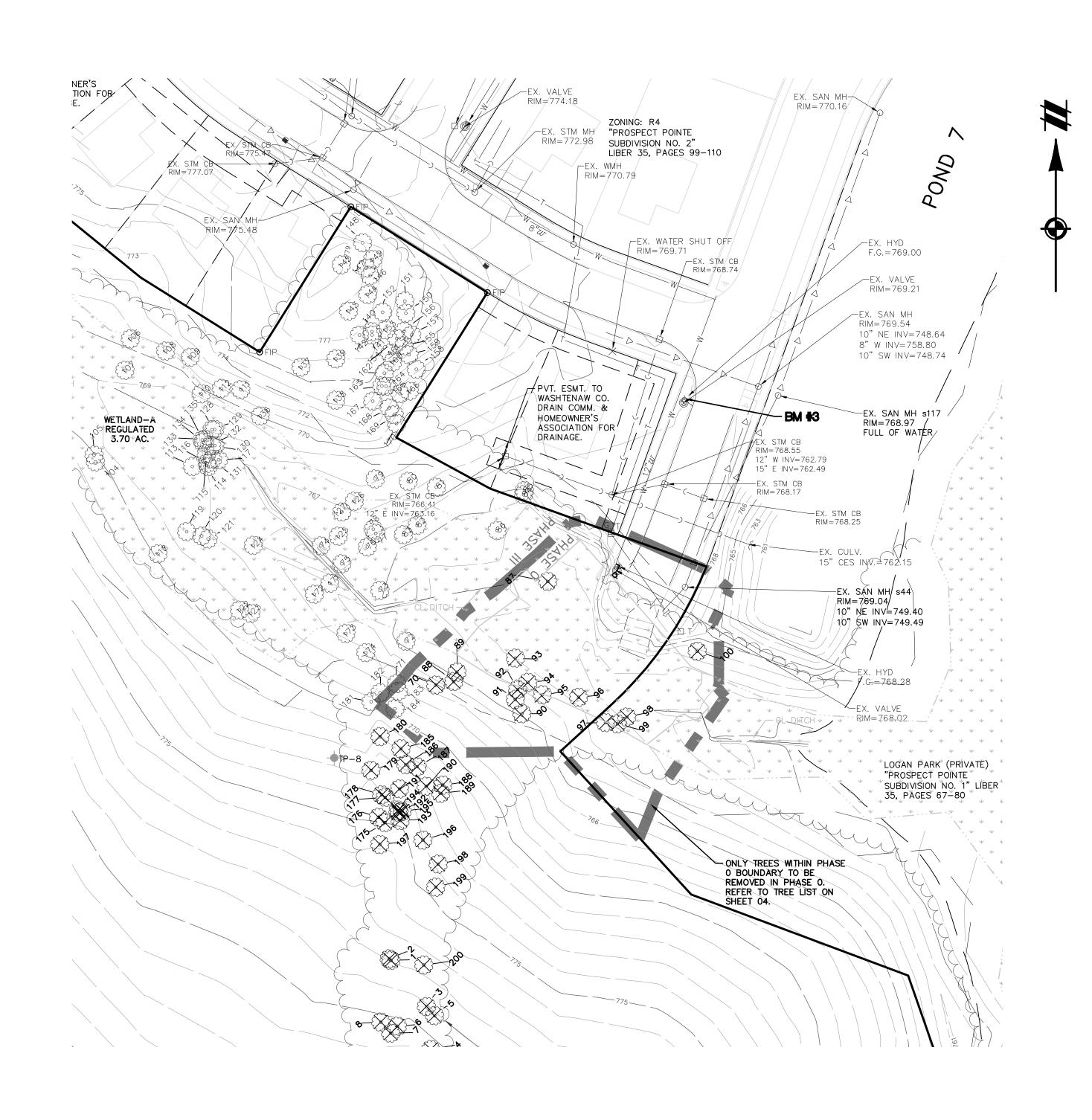
SCHEDULE B II - EXCEPTIONS (PER TITLE COMMITMENT ISSUED BY FIRST AMERICAN TITLE INSURANCE, FILE NO .: 755321, COMMITMENT DATE SEPTEMBER 07, 2016)

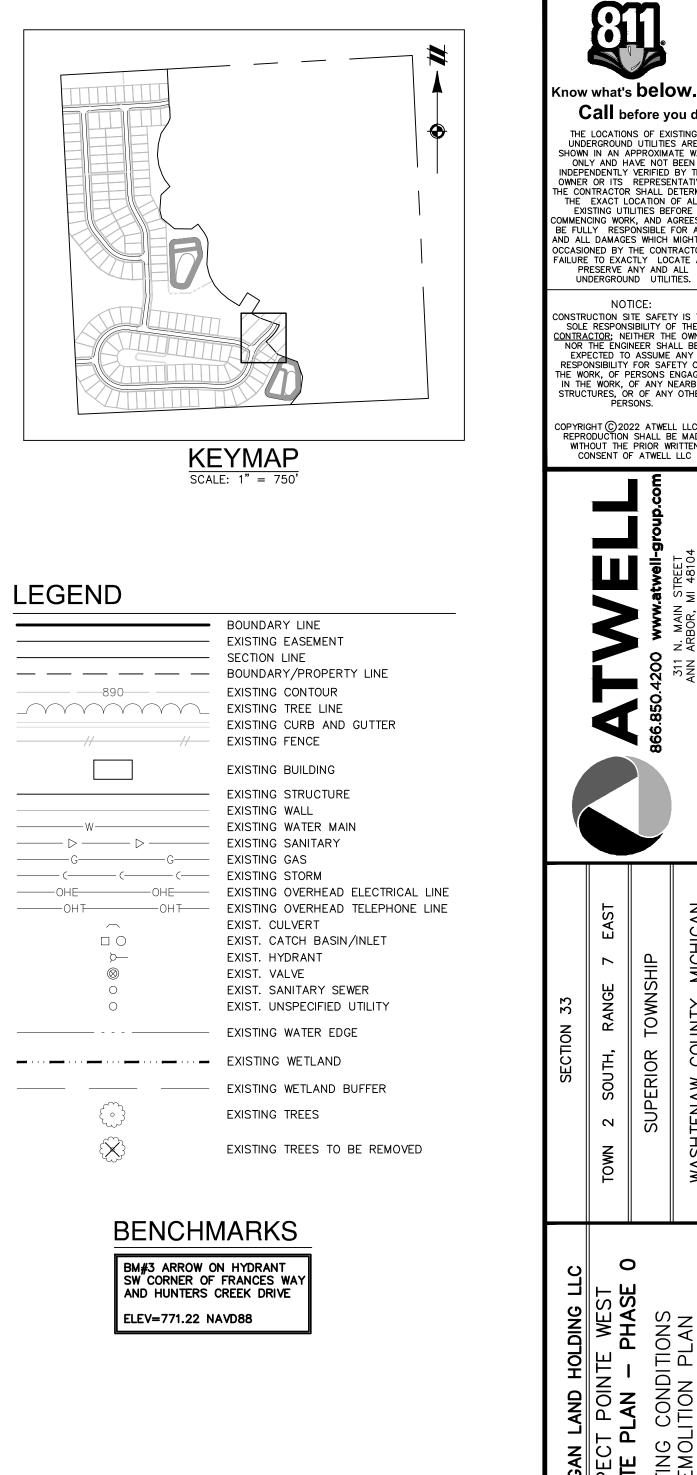
- 6. TERMS AND CONDITIONS CONTAINED IN AGREEMENT TO ESTABLISH THE PROSPECT POINTE DRAIN DRAINAGE DISTRICT AS DISCLOSED BY INSTRUMENT RECORDED IN LIBER 4366, PAGE 973. (COVERS SUBJECT PARCEL AND ADDITIONAL LANDS, BLANKET IN NATURE.)
- 7. TERMS AND CONDITIONS CONTAINED IN SUPERIOR CHARTER TOWNSHIP DEVELOPMENT AGREEMENT AS DISCLOSED BY INSTRUMENT RECORDED IN LIBER 4320, PAGE 260; FIRST AMENDMENT TO SUPERIOR CHARTER TOWNSHIP DEVELOPMENT AGREEMENT RECORDED IN LIBER 5023, PAGE 805, ASSIGNMENT OF DEVELOPER RIGHTS RECORDED IN LIBER 5061, PAGE 898. (L.4320, P.260 COVERS SUBJECT PARCEL AND ADDITIONAL LANDS, BLANKET IN NATURE. L.5023, P.805 COVERS PROSPECT POINTE SUBDIVISION NO. 1 AND PROSPECT POINTE SUBDIVISION NO. 2. L.5061, P.898 COVERS SUBJECT PARCEL AND ADDITIONAL LANDS, BLANKET IN NATURE.)
- 8. TERMS AND CONDITIONS CONTAINED IN PLANNED COMMUNITY AGREEMENT AS DISCLOSED BY INSTRUMENT RECORDED IN LIBER 1549, PAGE 467. (COVERS SUBJECT PARCEL AND ADDITIONAL LANDS, BLANKET IN NATURE.)

9. TERMS AND CONDITIONS CONTAINED IN SANITARY SEWER AGREEMENT AS DISCLOSED BY INSTRUMENT RECORDED IN LIBER 1549, PAGE 462. (COVERS SUBJECT PARCEL AND ADDITIONAL LANDS, BLANKET IN NATURE.)

10. RIGHT OF WAY IN FAVOR OF THE MICHIGAN BELL TELEPHONE COMPANY AND THE COVENANTS, CONDITIONS AND RESTRICTIONS CONTAINED IN INSTRUMENT RECORDED IN LIBER 1330, PAGE 362 AND LIBER 1793, PAGE 509. (L.1793, P.509 AS SHOWN. L.1330, P.362 LIES APPROX. 500' EAST OF SUBJECT PARCEL.)







NOTES

1) BEARINGS ARE BASED ON NAD83 MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, INTERNATIONAL FEET, GROUND DISTANCES. VERTICAL DATUM: NAVD88.

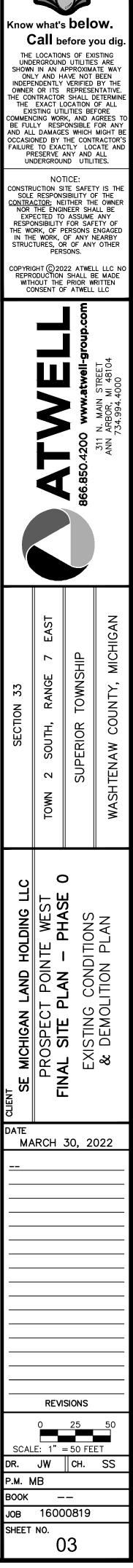
2) WATER MAIN, STORM SEWER, AND SANITARY SEWER UTILITY STRUCTURES HAVE BEEN FIELD LOCATED WHERE VISIBLE. UTILITY AND AS-BUILT MAPS HAVE BEEN REQUESTED AND SOME MAPS HAVE BEEN RECEIVED AT DATE OF THIS SURVEY. FRANCHISE UTILITY MAPS HAVE BEEN REQUESTED FROM THE APPROPRIATE FRANCHISE COMPANY, BUT NOT ALL MAPS HAVE BEEN RECEIVED AT DATE OF SURVEY. FRANCHISE UTILITY STRUCTURES HAVE BEEN FIELD LOCATED WHERE VISIBLE.

3) THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED.

4) SUBJECT PROPERTY AS SHOWN AND NOTED ON SURVEY DÉSCRIBES THE SAME PROPERTY AS SCHEDULE C PROPERTY DESCRIPTION (PER TITLE COMMITMENT ISSUED BY FIRST AMERICAN TITLE INSURANCE, FILE NO.: 755321, COMMITMENT DATE SEPTEMBER 07, 2016)

5) SUBJECT PROPERTY IS NOT LOCATED WITHIN A FLOODPLAIN PER FIRM MAP NUMBER 26161C0288E DATED APRIL 3, 2012.

6) PROSPECT POINTE SUBDIVISION NO. 1 PLAT WAS AMENDED TO RÉMOVE ABIGAIL DRIVE STUB AS PUBLIC RIGHT-OF-WAY AS RECORDED IN LIBER 35, PAGES 67-68 AS OF 12/12/22 AND PROSPECT POINT SUBDIVISION NO. 2 PLAT WAS AMENDED TO REMOVE THE FRANCES WAY STUB AS A PUBLIC RIGHT OF WAY AS RECORDED IN LIBER 5426, PAGE 892, AS OF 11/5/22, AS REQUIRED BY THE WASHTENAW COUNTY ROAD COMMISSION.



TAG #	COMMON NAME	BOTANICAL NAME	DIAMETER (IN.)		LANDMARK	INVASIVE	EXEMPT	REMOVE
1 2	Pignut Hickory Black Cherry	Carya glabra Prunus serotina	10 21	Good Poor	Y		Y	
3 4	Red Oak Black Walnut	Quercus rubra Juglans nigra	8.5 8	Good Good				
5 6	Red Oak Bur Oak	Quercus rubra Quercus macrocarpa	12.5 20	Good Good	Y			
7 8	Pignut Hickory Red Oak	Carya glabra Quercus rubra	9 13	Fair Good				
9 10	Red Oak Swamp White Oak	Quercus rubra Quercus bicolor	13 11.5	Good Excellent				
11 12	Black Walnut Black Walnut	Juglans nigra Juglans nigra	12 14	Excellent Good				
13 14	Black Walnut Black Cherry	Juglans nigra Prunus serotina	8.5 15	Good Fair				
15 16	Box-elder Pignut Hickory	Acer negundo Carya glabra	18 9	Fair Good		Y	Y	
17 18	American Elm Pignut Hickory	Ulmus americana Carya glabra	10 12	Good Good				
19 20	Black Cherry Black Cherry	Prunus serotina Prunus serotina	8 18 21	Fair Good	Y			
21 22	Black Cherry Red Oak	Prunus serotina Quercus rubra	21 9	Good Good	Y			
23 24 25	Red Oak Black Cherry	Quercus rubra Prunus serotina	8 21	Good Fair	Y			
25 26 27	Apple/Crabapple Black Cherry	Malus spp. Prunus serotina	8 11 18	Good Good Fair	Y			
28	Black Cherry Black Cherry	Prunus serotina Prunus serotina	18	Good	Y			
29 30 31	Black Cherry Black Walnut	Prunus serotina Juglans nigra	14 16 17	Good Excellent				
31 32 33	Black Walnut Black Walnut Black Walnut	Juglans nigra Juglans nigra	20 10	Good Fair Good	Y			
34	Black Walnut	Juglans nigra Juglans nigra	19	Good	Y			
35 36 37	Red Oak Red Oak Red Oak	Quercus rubra Quercus rubra Quercus rubra	15 9 14	Good Good				
37 38 39	Red Oak Red Oak Black Walnut	Quercus rubra Quercus rubra Juglans nigra	14 17 8.5	Good Good Good	Y			
40 41	White Oak Black Cherry	Quercus alba Prunus serotina	8.5 35 8.5	Fair Fair	Y			
41 42 43	Black Cherry Black Cherry Black Cherry	Prunus serotina Prunus serotina Prunus serotina	8.5 16 8	Good Good				
43 44 45	Black Cherry Black Cherry Black Cherry	Prunus serotina Prunus serotina Prunus serotina	8.5 14.5	Good Good Fair				
45 46 47	White Oak Black Cherry	Quercus alba Prunus serotina	20 17	Excellent Good	Y			
48	American Elm Box-elder	Ulmus americana Acer negundo	14.5 14	Good Good		Y	Y	
50 51	White Oak Black Cherry	Quercus alba Prunus serotina	42	Fair Good	Y			
52 53	Black Cherry Black Cherry	Prunus serotina Prunus serotina	11 17	Fair Good				
54 55	Box-elder Black Cherry	Acer negundo Prunus serotina	10.5 18.5	Good Good	Y	Y	Y	
56 57	American Elm Black Cherry	Ulmus americana Prunus serotina	13.5 24	Fair Good	Y			
58 59	Black Cherry Box-elder	Prunus serotina Acer negundo	12 11.5	Good Fair		Y	Y	
60 61	Box-elder American Elm	Acer negundo Ulmus americana	9.5 10	Fair Good		Y	Y	
62 63	Black Cherry Black Cherry	Prunus serotina Prunus serotina	11 9.5	Good Fair				
64 65	Cottonwood Cottonwood	Populus deltoides Populus deltoides	11 19	Good		Y Y	Y Y	
66 67	Black Walnut Bitternut Hickory	Juglans nigra Carya cordiformis	14 8.5	Good Good				
68 69	American Elm Black Cherry	Ulmus americana Prunus serotina	10.5 9	Good Good				
70 71	Box-elder Black Cherry	Acer negundo Prunus serotina	8 14	Fair Fair		Y	Y	Y
72 73	White Mulberry Willow species	Morus alba Salix spp.	14 20	Good Good				
74 75	Cottonwood Cottonwood	Populus deltoides Populus deltoides	14 33	Good Good	Y	Y Y	Y Y	
76 77	Black Walnut Swamp White Oak	Juglans nigra Quercus bicolor	18 10	Good Good	Y			
78 79	Swamp White Oak Basswood	Quercus bicolor Tilia americana	9.5 17.5	Good Good				
80 81	Black Walnut Black Walnut	Juglans nigra Juglans nigra	17 13.5	Excellent Excellent				
82 83	Swamp White Oak Swamp White Oak	Quercus bicolor Quercus bicolor	9 9	Fair Good				
84 85	Black Walnut Box-elder	Juglans nigra Acer negundo	14 9	Excellent Fair		Y	Y	
86 87	Black Walnut Cottonwood	Juglans nigra Populus deltoides	20 28	Good Good	Y Y	Y	Y	Y
88 89	Box-elder Cottonwood	Acer negundo Populus deltoides	13 28	Fair Good	Y	Y Y	Y Y	Y Y
90 91	Black Walnut Box-elder	Juglans nigra Acer negundo	10 8.5	Good Fair		Y	Y	Y Y
92 93	White Mulberry Cottonwood	Morus alba Populus deltoides	12 35	Good Good	Y	Y	Y	Y Y
94 95	American Elm Box-elder	Ulmus americana Acer negundo	19 11	Good Good	Y	Y	Y	Y Y
96 97	Black Walnut Black Cherry	Juglans nigra Prunus serotina	9 12.5	Good Good				Y Y
98 99	Box-elder Box-elder	Acer negundo Acer negundo	13 16	Fair Fair		Y Y	Y Y	Y Y
100 101	Pignut Hickory Willow species	Carya glabra Salix spp.	14.5 14	Excellent Good				Y
102 103	Willow species Willow species	Salix spp. Salix spp.	9.5 17.5	Good Good				
104 105	Box-elder Box-elder	Acer negundo Acer negundo	8 9	Fair Fair		Y Y	Y Y	
106 107	Willow species Willow species	Salix spp. Salix spp.	20 12	Good Fair			~	
108 109	Box-elder Red-Cedar	Acer negundo Juniperus virginiana	8.5 6.5	Fair Good		Y Y	Y Y	
110 111 112	Box-elder Box-elder	Acer negundo Acer negundo Malus son	9.5 9.5	Good Good		Y Y	Y Y	
112 113	Apple/Crabapple Willow species	Malus spp. Salix spp.	9 17.5	Good Good				
114 115 116	Willow species Willow species Willow species	Salix spp. Salix spp.	13 11 12	Good Good				
116 117	Willow species Willow species	Salix spp. Salix spp.	12 17	Good Good				
118 119	Red Maple Box-elder	Acer rubrum Acer negundo	8 8 17 E	Good Good		Y	Y	
120 121	American Elm Cottonwood	Ulmus americana Populus deltoides	17.5 14	Good Good		Y	Y	
122 123	Black Walnut Black Cherry	Juglans nigra Prunus serotina	9.5 8	Good Good				
124 125	White Oak Cottonwood	Quercus alba Populus deltoides	11 26	Good Good	Y	Y	Y	
126 127	Swamp White Oak Cottonwood	Quercus bicolor Populus deltoides	9 40	Good Good	Y	Y	Y	
128 129	American Elm Willow species	Ulmus americana Salix spp.	8.5 9.5	Good Good				

TAG #		BOTANICAL NAME	DIAMETER (IN.)	CONDITION	LANDMARK	INVASIV
131 132	Willow species Willow species	Salix spp. Salix spp.	10 11.5	Good Good		
133 134	Willow species Willow species	Salix spp. Salix spp.	16.5 9	Good		
135 135 136	Willow species Box-elder	Salix spp. Salix spp. Acer negundo	9 10	Good Good		Y
130 137 138	American Elm Black Cherry	Ulmus americana Prunus serotina	8	Poor Good		
138 139 140	Bitternut Hickory	Carya cordiformis	10 10.5 14	Good		
141	Bitternut Hickory Swamp White Oak	Carya cordiformis Quercus bicolor	9	Good Good		
142 143	Swamp White Oak White Mulberry	Quercus bicolor Morus alba	12 15	Good Fair		
144 145	Black Cherry Apple/Crabapple	Prunus serotina Malus spp.	37 12	Fair Good	Y	
146 147	Apple/Crabapple Basswood	Malus spp. Tilia americana	8 9.5	Good Good		
148 149	Bitternut Hickory Basswood	Carya cordiformis Tilia americana	8 16	Good Good		
150 151	Bitternut Hickory American Elm	Carya cordiformis Ulmus americana	18 14	Excellent Excellent	Y	
152 153	Basswood Black Walnut	Tilia americana Juglans nigra	12 13	Good Good		
154 155	Black Walnut Black Walnut	Juglans nigra Juglans nigra	10.5 17	Good Good		
156 157	Black Cherry Bitternut Hickory	Prunus serotina Carya cordiformis	8 8	Good Good		
158 159	Black Walnut Bitternut Hickory	Juglans nigra Carya cordiformis	9 11	Good Good		
160 161	Bitternut Hickory Bitternut Hickory	Carya cordiformis Carya cordiformis	13 8	Excellent Excellent		
162 163	American Elm Black Walnut	Ulmus americana Juglans nigra	20 10	Good Fair	Y	
164 165	Black Walnut Black Walnut	Juglans nigra Juglans nigra	8	Good Good		
166 167	Black Walnut Swamp White Oak	Juglans nigra Quercus bicolor	10 9	Good Good		
168 169	Black Walnut Black Walnut	Juglans nigra Juglans nigra	15 10.5	Good Fair		
170 171	Black Walnut Box-elder	Juglans nigra Acer negundo	14 9	Excellent Fair		Y
172 173	American Elm Box-elder	Ulmus americana Acer negundo	8.5 9	Good Good		Y
174 175	Black Oak Black Cherry	Quercus velutina Prunus serotina	15 10	Good Fair		
175 176 177	Box-elder Black Cherry	Acer negundo Prunus serotina	10.5 9	Fair Good		Y
177 178 179	Black Cherry Black Cherry Black Cherry	Prunus serotina Prunus serotina	13.5 11.5	Good Good		
180 181	Black Cherry Swamp White Oak	Prunus serotina Quercus bicolor	11.5 12 15	Good Good		
181 182 183	Swamp White Oak Black Cherry	Quercus bicolor	8	Good Good		
185 184 185	Swamp White Oak	Prunus serotina Quercus bicolor	13 15	Excellent Fair		
185 186 187	Black Cherry Black Walnut Black Walnut	Prunus serotina Juglans nigra	13 17 21	Good	Y	
187 188 189	Box-elder Box-elder	Juglans nigra Acer negundo	15 9	Good Good		Y Y
190	Box-elder	Acer negundo Acer negundo	9 9 11	Poor		Y
191 192 193	Black Cherry Black Cherry Black Cherry	Prunus serotina Prunus serotina Prunus serotina	11 11 11	Good Good Good		
193 194 195	Swamp White Oak Swamp White Oak	Quercus bicolor Quercus bicolor	8	Good Fair		
195 196 197	Swamp White Oak Black Cherry	Quercus bicolor	10 8	Good		
197 198 199	Black Cherry	Prunus serotina Prunus serotina	13 12.5	Fair Good		
200 201	Black Walnut Bitternut Hickory Box-elder	Juglans nigra Carya cordiformis	8.5	Good Good Poor		Y
201 202 203	Box-elder Box-elder	Acer negundo Acer negundo Acer negundo	12.5 8	Fair		Y Y Y
203 204 205	Box-elder Hawthorn	Acer negundo Crataegus spp.	13 9	Poor Poor		Y
205 206 207	Box-elder Box-elder	Acer negundo Acer negundo	8.5 12	Fair Good		Y Y
207 208 209	Box-elder Box-elder	Acer negundo Acer negundo Acer negundo	10.5 11.5	Good Fair		Y Y Y
210 211	Cottonwood Box-elder	Populus deltoides Acer negundo	18	Good		Y Y
211 212 213	Box-elder Box-elder	Acer negundo Acer negundo Acer negundo	8	Good Good		Y Y Y
213 214 215	Box-elder Box-elder	Acer negundo Acer negundo	11.5 9.5	Good Fair		Y Y
215 216 217	Box-elder Box-elder	Acer negundo Acer negundo	12 9	Good		Y Y
217 218 219	Hawthorn Box-elder	Crataegus spp. Acer negundo	8 8.5	Fair Fair		Y
220 221	Black Cherry Box-elder	Prunus serotina Acer negundo	10.5 8	Poor Good		Y
222	Black Cherry Black Cherry	Prunus serotina Prunus serotina	8	Good Good		
223 224 225	Common Buckthorn Apple/Crabapple	Rhamnus cathartica Malus spp.	9.5 9.5	Fair Fair		Y
225 226 227	Apple/Crabapple Apple/Crabapple Apple/Crabapple	Malus spp. Malus spp. Malus spp.	8	Good		
227 228 229	Common Buckthorn Black Cherry	Rhamnus cathartica	8.5	Fair		Y
230	Black Cherry Black Cherry Black Cherry	Prunus serotina Prunus serotina	13	Fair		
231 232	Black Cherry Black Cherry	Prunus serotina Prunus serotina	13.5 10.5 14	Poor Fair Good		
233 234	White Mulberry	Prunus serotina Morus alba	9.5	Good		
235 236	Black Cherry Apple/Crabapple	Prunus serotina Malus spp.	15 14	Fair Fair		
237 238 239	Apple/Crabapple Black Cherry	Malus spp. Prunus serotina	10.5 16	Poor Poor Poor		
239 240	Box-elder Black Cherry	Acer negundo Prunus serotina	17 15.5	Poor Fair		Y
241 242	Black Cherry American Elm	Prunus serotina Ulmus americana	11 13	Poor Good		
243 244	American Elm Box-elder	Ulmus americana Acer negundo	12 8.5	Good Good		Y
245 246	Box-elder Apple/Crabapple	Acer negundo Malus spp.	8.5 17	Good Fair		Y
247 248	Black Cherry Willow species	Prunus serotina Salix spp.	8.5 11	Fair Fair		
249 250	Willow species Willow species	Salix spp. Salix spp.	9 13	Fair Good		
251 252	Willow species Red Maple	Salix spp. Acer rubrum	13 11	Good Good		
253 254	Willow species Red Maple	Salix spp. Acer rubrum	11 11.5	Fair Good		
255 256	Cottonwood Willow species	Populus deltoides Salix spp.	28 21	Fair Fair	Y	Y
257 258	Apple/Crabapple Apple/Crabapple	Malus spp. Malus spp.	8.5 12.5	Good Good		
259	Siberian Elm	Ulmus pumila	19	Fair		

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COMMON NAME	DIAMETER (IN.)	SOVEREIGN DIAMETER (IN.)
Basswood	18	54
Beech	18	45
Ohio Buckeye	18	
Catalpa	18	45
Black Cherry	18	54
American Elm	18	50
Fir	18	
Douglas Fir	18	
Kentucky Coffee Tree	18	40
Pine	18	
Sycamore	18	54
London Plane	18	54
Spruce	18	
Tulip-tree	18	54
Black Walnut	18	54
Shagbark Hickory	18	54
Pignut Hickory	18	54
Bitternut Hickory	16	35
Red Maple	16	48
Red Oak	16	48
Bur Oak	16	48
White Oak	16	48
Black Oak	16	48
Swamp White Oak	16	48
Birch	12	36
Cherry	12	36
Sweet Cherry	12	36
American Chestnut	6	18
Butternut	6	18

COMMON NAME

Common Buckthorn	Y
Glossy Buckthorn	Y
Autumn Olive	Y
Honeysuckle	Y
Multiflora Rose	Y
Phramites	Y
Box-Elder	Y
Silver Maple	Y
Cottonwood	Y
Cottonwood	Y
Red-Cedar	Y

REGULATED 8"-12" TREES REMOVED REGULATED 12.1"-16" TREES REMOVED REGULATED 16.1" & GREATER TREES REMOV NUMBER OF LANDMARK TREES REMOVED TOTAL NUMBER OF REPLACEMENT TREES R

TREE SURVEY NOTES:

SHEET ARE FOR PHASE O SCOPE OF WORK ONLY.

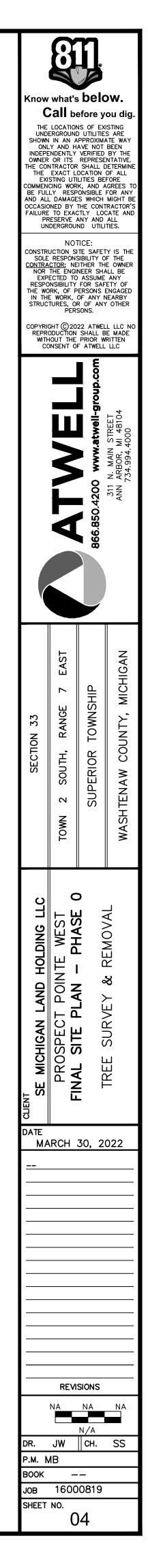
2. CLASSIFICATION: BASED ON SUBSECTION 14.05F (WOODLANDS AND TREE PRESERVATION) OF SUPERIOR TOWNSHIP ZONING ORDINANCE, LANDMARK CRITERIA CORRESPONDS TO LANDMARK TREE, AS REGULATED BY THIS SECTION, SHALL BE ANY TREE THAT HAS A DIAMETER AT BREAST HEIGHT (D.B.H.) OF 24 INCHES OR GREATER; OR THAT IS OF A TYPE AND D.B.H. EQUAL TO OR GREATER THAN THAT SHOWN IN THE ZONING ORDIANCE. A SOVEREIGN TREE, AS REGULATED BY THIS SECTION, SHALL BE ANY TREE THAT IS REGISTERED ON THE NATIONAL BIG TREE REGISTRY OR A SIMILAR NATIONAL OR STATE REGISTRY ACCEPTED BY THE PLANNING COMMISSION; THAT HAS BEEN DOCUMENTED BY THE TOWNSHIP, A HISTORIAN, OR OTHER MEANS ACCEPTED BY THE PLANNING COMMISSION TO BE CLOSELY ASSOCIATED WITH AN EVENT, PERSON, OR PLACE OF HISTORICAL SIGNIFICANCE TO THE TOWNSHIP; OR THAT IS OF A SPECIES AND DIAMETER AT BREAST HEIGHT (D.B.H.) EQUAL TO OR GREATER THAN THAT SHOWN UNDER SUBSECTION 14.05F4 LANDMARK & SOVEREIGN TREE STANDARDS.

3. NO REPLACEMENT NEEDED: NO REPLACEMENTS SHALL BE REQUIRED FOR FOLLOWING TREES OTHERWISE REGULATED BY THIS SECTION, SUBJECT TO DOCUMENTATION AND VERIFICATION AS PART OF THE REQUIRED PLAN INFORMATION, AND SUCH TREES SHALL NOT COUNT TOWARDS THE MINIMUM REQUIRED PERCENTAGE OF PRESERVED TREES: 1.DYING AND DISEASED TREES. 2.ANY INVASIVE WOODY SHRUB SPECIES LISTED IN SECTION 14.05F.3; INCLUDING COMMON BUCKTHORN (RHAMNUS CATHARTICA) 3.ANY OF THE FOLLOWING SPECIES OF TREES: BOX ELDER (ACER NEGUNDO), SILVER MAPLE (ACER SACCHARINUM), COTTONWOOD (POPULUS DELTOIDS), AND RED CEDAR (JUNIPERUS VIRGINIANA).

TREE REMOVAL/REPLACEMENT CALCULATION

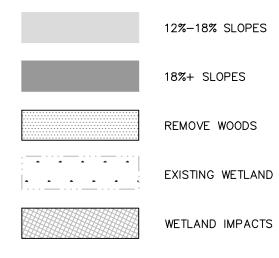
	3	:	3	REPLACEMENT TREES REQUIRED
	2	:	6	REPLACEMENT TREES REQUIRED
VED	0	:	0	REPLACEMENT TREES REQUIRED
	1		19	REPLACEMENT TREES REQUIRED
REQUIRED			28	REPLACEMENT TREES REQUIRED

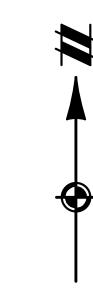
1. TREE LIST INCLUDES SURVEYED TREES OUTSIDE PHASE O AREA. REMOVALS SHOWN ON THIS





LEGEND





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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 AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S

OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTICE:

NO TICE: CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE <u>CONTRACTOR</u>; 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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NATURAL FEATURES NARRATIVE

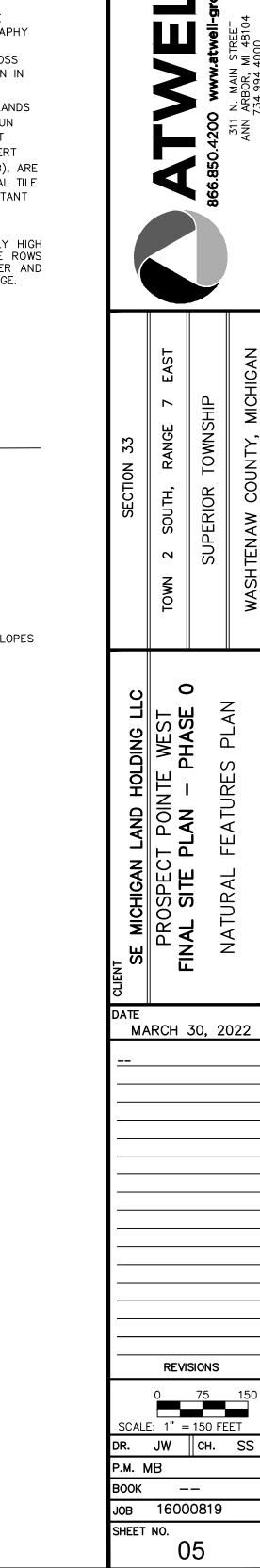
NATURAL FEATURES ON THE SITE CONSIST OF WETLAND, TREES, SLOPES AND AGRICULTURAL FIELD. WITH TWO MAIN HIGH POINTS ON THE SITE, ONE IN THE NORTHERN PORTION AND THE SECOND ON THE FAR SOUTH SIDE, THE TOPOGRAPHY GENERALLY SLOPES TOWARD A WETLAND SWALE IN THE LOWER THIRD OF THE PROPERTY. THERE IS APPROXIMATELY 45 FEET OF TOPOGRAPHIC RELIEF ACROSS THE SITE. THERE ARE STEEP SLOPES ON THE SITE IN THE SOUTHERN PORTION IN THE AREA OF 18%.

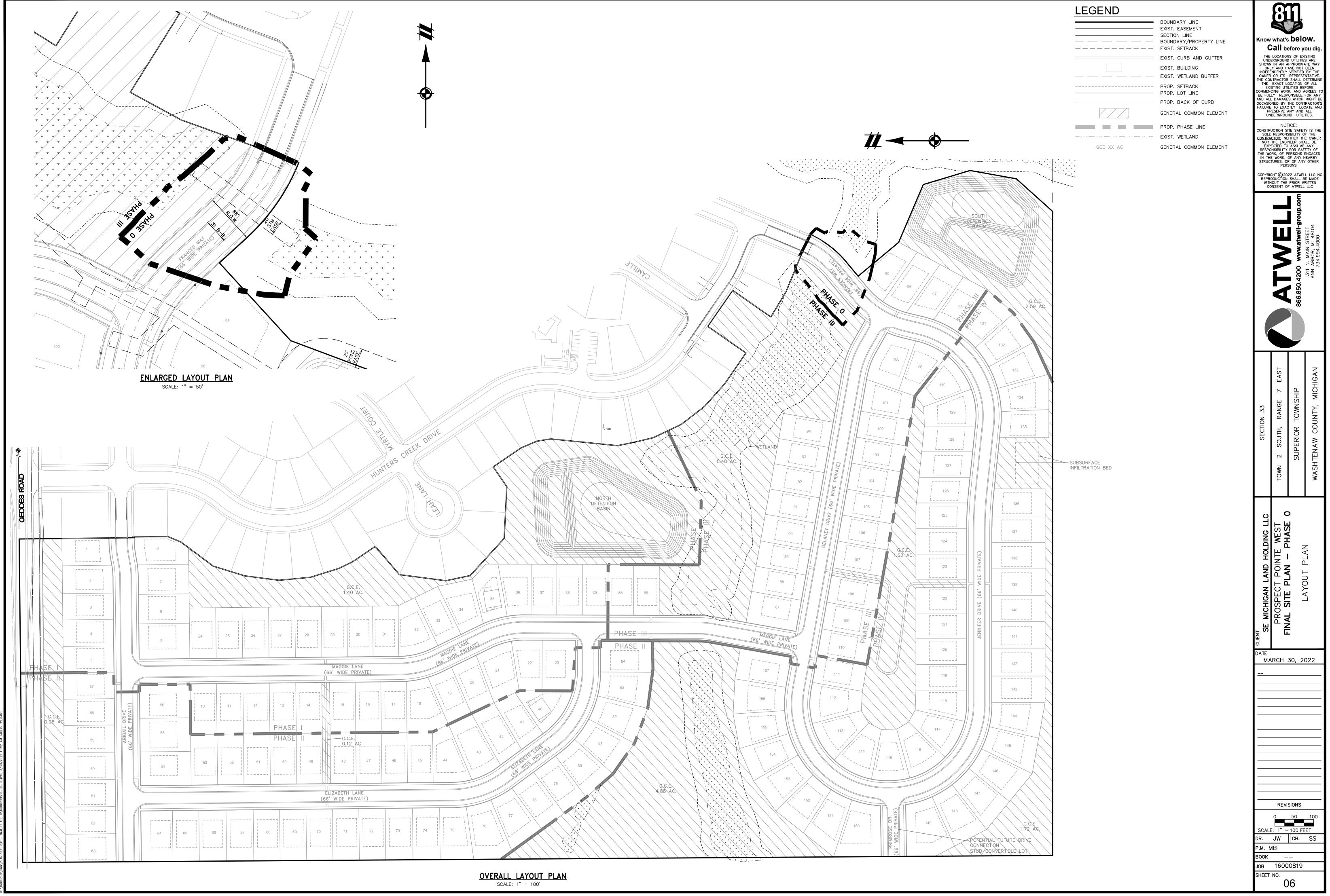
THERE ARE FOUR WETLANDS ON THE SITE. THE TWO LARGER REGULATED WETLANDS (C AND D) ARE HYDRAULICALLY CONNECTED VIA A 12" CULVERT AND BOTH RUN EAST TO WEST ACROSS THE PROPERTY AND LEAD ALL THE WAY TO PROSPECT ROAD, WHERE IT'S CONNECTED TO ANOTHER LARGE WETLAND, BY A 12" CULVERT THAT FLOWS EAST TO WEST. THE TWO SMALLER, POCKET WETLANDS (A AND B), ARE JUST NORTH OF THE LARGER SYSTEM, THEY ARE DEPENDENT ON AGRICULTURAL TILE RUNOFF, WHICH WHEN DISTURBED THE TILE WILL BE REMOVED AND THE RESULTANT HYDROLOGICAL PATTERN WILL BE ALTERED. WETLAND A IS PREDOMINANTLY COTTONWOOD, ELM AND BOXELDER.

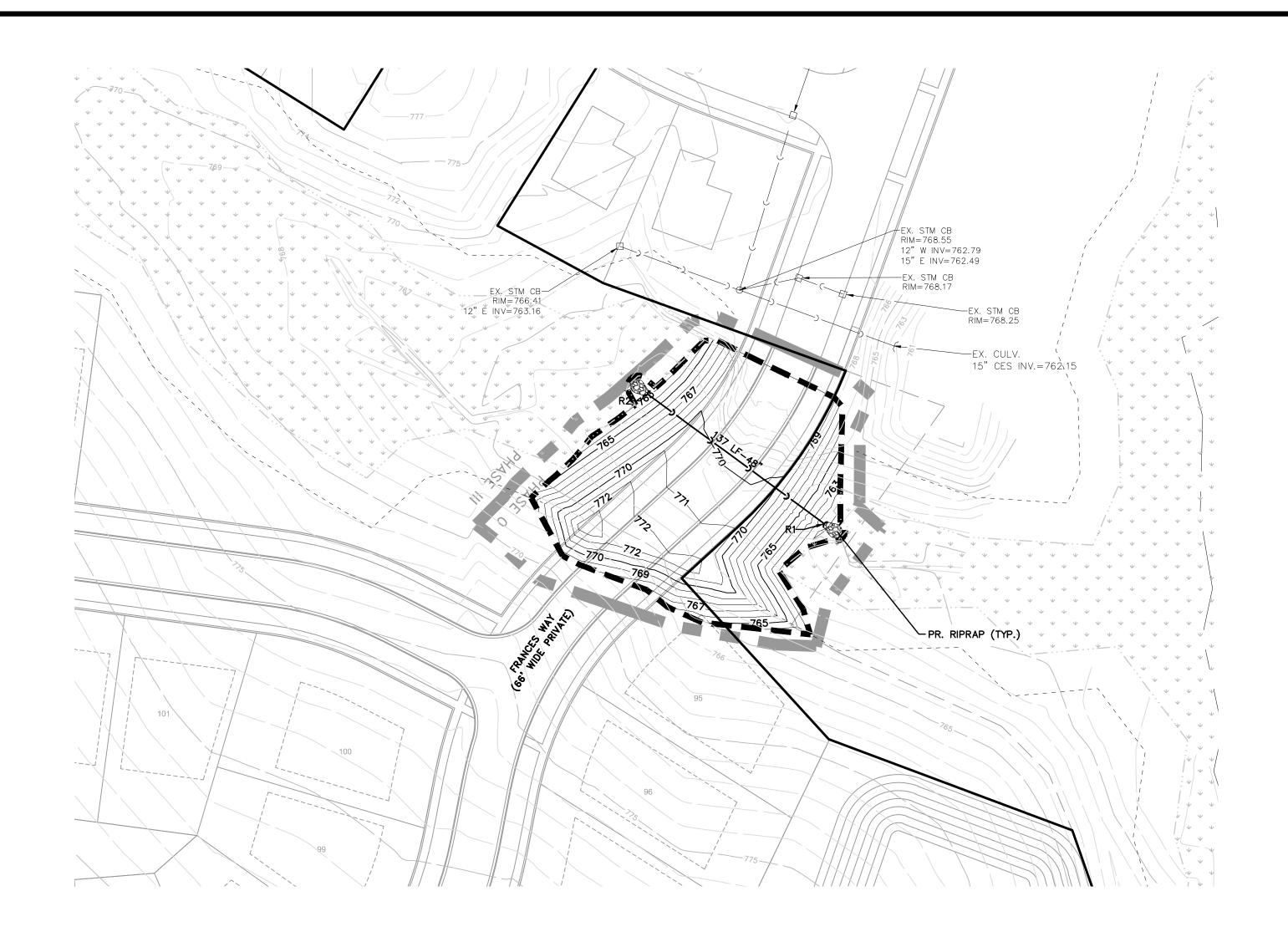
TREES ON THE SITE ALTHOUGH IN GOOD CONDITION, ARE NOT NECESSARILY HIGH QUALITY WITH RESPECT TO SPECIES. THE TREES EXIST LARGELY IN HEDGE ROWS AND SCATTERED CLUSTERS. THE PREDOMINANT SPECIES ARE ELM, BOXELDER AND POPLAR RANGING FROM 6[#]-24[#] WITH THE VAST MAJORITY IN THE 7[#]-13[#] RANGE.

SOIL INFORMATION

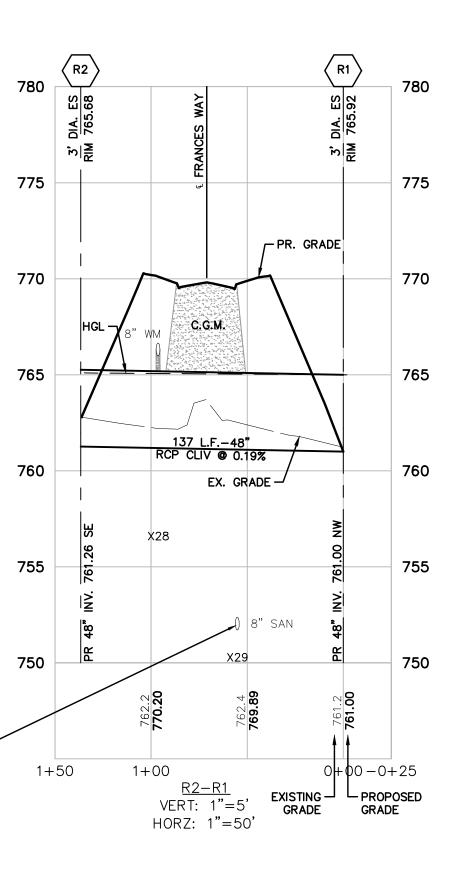
BNC	BOYER LOAMY SAND, 6 TO 12 PERCENT SLOPES
BNF	BOYER LOAMY SAND, 25 TO 50 PERCENT SLOPES
FOB	FOX SANDY LOAM, TILL PLAIN, 2 TO 6 PERCENT SLOPES
НО	HOYTVILLE SILTY CLAY LOAM
KEB	KENDALLVILLE LOAM, 2 TO 6 PERCENT SLOPES
MDA	MATHERTON SANDY LOAM, 0 TO 4 PERCENT SLOPES
MFA	METAMORA SANDY LOAM, 0 TO 4 PERCENT SLOPES
NAB	NAPPANEE SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES
OSB	OSHTEMO LOAMY SAND, 0 TO 6 PERCENT SLOPES
PE	PEWAMO CLAY LOAM, 0 TO 2 PERCENT SLOPES
SB	SEBEWA LOAM, DISINTEGRATION MORAINE, 0 TO 2 PERCENT SL
SO	SLOAN SILT LOAM, WET
SPB	SPINKS LOAMY SAND, 0 TO 6 PERCENT SLOPES
STB	ST. CLAIR CLAY LOAM, 2 TO 6 PERCENT SLOPES
STC	ST. CLAIR CLAY LOAM, 6 TO 12 PERCENT SLOPES
THA	THETFORD LOAMY SAND, 0 TO 4 PERCENT SLOPES
W	WATER
WAWABC	WAWASEE LOAM, 6 TO 12 PERCENT SLOPES

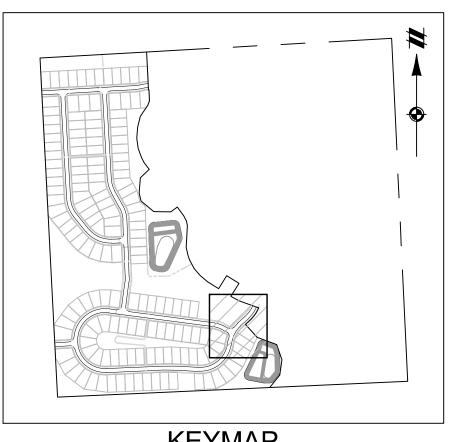






UTILITY INSTALLATION TO -----BE PERFORMED IN FUTURE PHASES (TYP.)





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KEYMAP SCALE: 1" = 750'

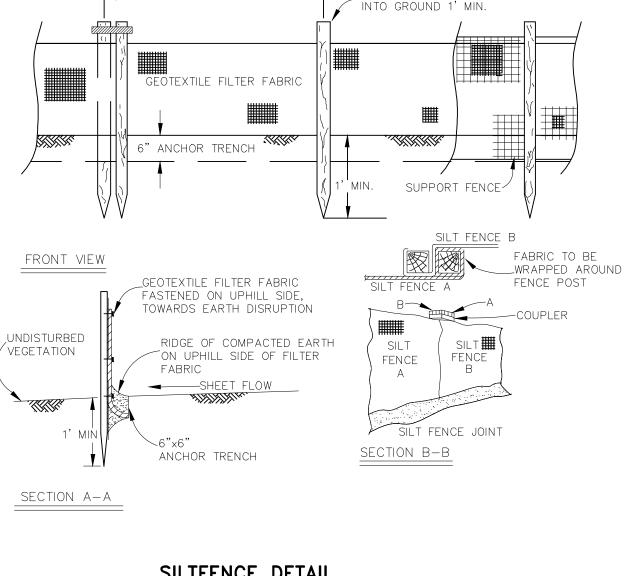
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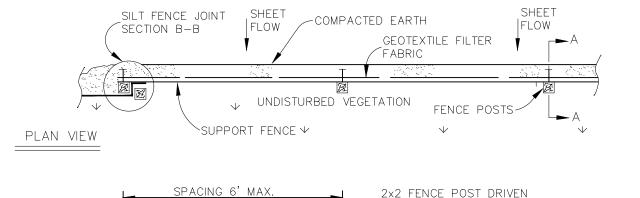
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PROPOSED 1' CONTOUR PROPOSED 5' CONTOUR EXISTING 1' CONTOUR EXISTING 5' CONTOUR PROPERTY LINE GRADING LIMITS PROP. PHASE O LINE

EXISTING MANHOLE / CATCH BASIN PROPOSED MANHOLE / CATCH BASIN PROPOSED HYDRANT PROPOSED GATE VALVE & WELL PROPOSED SANITARY SEWER MANHOLE EXISTING WETLAND

Know what's below. 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 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. 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 DEPERONS ENCOMED		
22 ATWEL SHALL B PRIOR W	RITTEN	
SUPERIOR TOWNSHIP	WASHTENAW COUNTY, MICHIGAN	
0)	PLAN & PRUFILE	
DATE MARCH 30, 2022		
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SOIL EROSION AND SEDIMENTATION CONTROL NOTES:

- 1. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT.
- 2. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHALL BE KEPT TO THE SHORTEST PERIOD OF TIME.
- 3. TEMPORARY VEGETATION AND/OR MULCHING SHALL BE BE USED TO PROTECT CRITICAL AREAS EXPOSED DURING DEVELOPMENT.
- 4. THE PERMANENT FINAL VEGETATION AND STRUCTURES SHALL BE INSTALLED AS SOON AS PRACTICAL IN DEVELOPMENT.
- 5. THE DEVELOPMENT PLAN SHOULD BE FITTED TO THE TOPOGRAPHY AND SOIL SO AS TO CREATE THE LEAST SOIL EROSION POTENTIAL.
- 6. REFER TO WASHTENAW COUNTY STANDARD DETAILS OF THE SESC BMP MEASURES AS THEY CORRESPOND WITH THIS PLAN.
- 7. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE TOWNSHIP AND THE WASHTENAW COUNTY DRAIN COMMISSIONER. 8. THE CONTRACTOR SHALL MAKE DAILY INSPECTIONS TO DETERMINE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES,
- AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY. 9. EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT
- ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
- 10. EROSION AND ANY SEDIMENTATION CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
- 11. PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASES, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED. ALL PERMANENT SOIL EROSION CONTROL MEASURES WILL BE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED.
- 12. A WATER TRUCK SHALL BE AVAILABLE TO WATER DOWN THE SITE ON A DAILY BASIS FOR DUST CONTROL.
- 13. ALL MUD/DIRT TRACKED ONTO EXISTING CITY/COUNTY ROADS FROM THIS SITE, DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR/BUILDER, AS DIRECTED BY THE TOWNSHIP. MUD MAT DAILY MAINTENANCE WILL INCLUDE THE ADDITION OF EXTRA LAYERS OF STONE AS NECESSARY.
- 14. DURING CONSTRUCTION OF THE STORM SEWER SYSTEM, STRAW BALES, STONE FILTERS OR OTHER APPROVED MEANS, WILL PROTECT THE ENDS OF ALL OPEN PIPES.
- 15. PROMPTLY UPON THE BACKFILLING OF STORM STRUCTURES, INLET FILTERS WILL BE PLACED AROUND THE STRUCTURE PER DETAILS.
- 16. WITHIN FIVE (5) DAYS AFTER COMPLETION OF PAVING, A 16-FOOT STRIP AROUND PAVED AREAS SHALL BE PROTECTED FROM SOIL EROSION BY AN APPROVED METHOD CONSISTENT WITH THE GROWING SEASON.
- 17. ANY REMAINING DENUDED AREA SHALL BE SEEDED AND MULCHED WITHIN 5 DAYS AFTER COMPLETION OF FINAL GRADING. SEED MIX AND APPLICATION RATES SHALL BE PER MDOT CLASS A SEED.
- 18. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE MAINTAINED ON A DAILY BASIS TO ENSURE PROPER FUNCTIONING. SEDIMENT DEPOSIT MUST BE REMOVED WHEN ACCUMULATION REACHES 1/3 TO 1/2 OF THE HEIGHT OF THE SILT FENCE AND SHOULD BE REMOVED AFTER EACH STORM EVENT. FABRIC SHALL BE REPLACED PROMPTLY IF IT DECOMPOSES OR BECOMES INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USEABLE LIFE.
- 19. THAT ALL EROSION CONTROL MEASURES ARE INSTALLED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE OF CONSTRUCTION
- 19.1. INSTALL SILT FENCE/STRAW BERMS AS SHOWN ON PLANS.
- 19.2. STRIP AND STOCKPILE TOPSOIL AND GRADE SITE.
- 19.3. INSTALL ON-SITE AND OFF-SITE STORM SEWER SYSTEMS COMPLETE, IMMEDIATELY INSTALL STONE FILTERS ON ALL PIPE INLETS AND CATCH BASINS AND ESTABLISH VEGETATION ON ALL DITCHES, SWALES, AND DISTURBED AREAS.
- 19.4. INSTALL ALL PUBLIC UTILITIES (GAS, ELECTRICITY, AND TELEPHONE)
- 19.5. INSTALL PAVEMENT COMPLETE REPAIR AND/OR REPLACE STONE FILTERS AS REQUIRED.
- 19.6. FINISH GRADE, REDISTRIBUTE TOPSOIL, ESTABLISH VEGETATION AND/OR LANDSCAPE ALL DISTURBED AREAS.
- 19.7. CLEAN PAVEMENT, WALKS, CULVERTS, WATERCOURSES, AND STORM SEWER SYSTEMS OF ALL SEDIMENT IN CONJUNCTION WITH THE REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURES. REESTABLISHED VEGETATION AS NECESSARY.
- 20. SHOULD DEWATERING BE NECESSARY, DISCHARGE SHALL BE ROUTED THROUGH A SEDIMENT FOREBAY, FILTER BAG OVER A WELL VEGETATED AREA OR OTHER APPROVED FILTERING MECHANISM PRIOR TO BEING DISCHARGED FROM THE SITE. DISCHARGE MUST BE LIMITED TO A NON-EROSIVE VELOCITY.
- 21. SOIL EROSION WILL BE CONTROLLED DURING AND AFTER CONSTRUCTION TO PROTECT ADJACENT PROPERTIES OR FACILITIES.
- 22. EROSION CONTROL BLANKET/MATTING SHALL BE INSTALLED ON SLOPES AT OR NEAR MAXIMUM ALLOWABLE GRADE AND AS NEEDED TO EFFECTIVELY ESTABLISH BOTH TEMPORARY AND PERMANENT VEGETATIVE COVER.

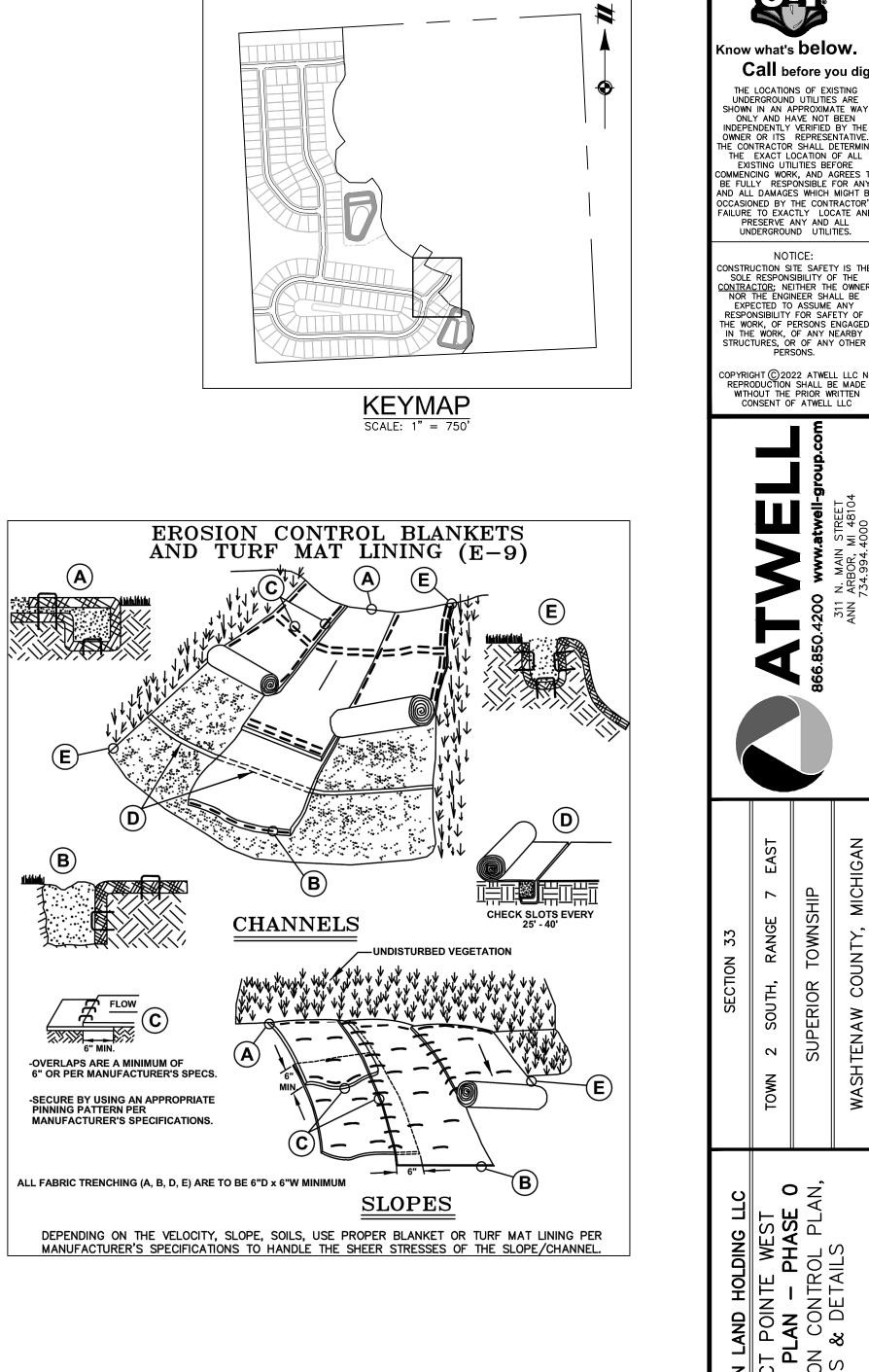
SOIL EROSION CONSTRUCTION SEQUENCE

- 1. NOTIFY SOIL EROSION OFFICE 48 HOURS BEFORE WORK IS TO BEGIN.
- 2. PRIOR TO CONSTRUCTION, INSTALL PERIMETER SILT FENCE, SNOW FENCE, AND EROSION CONTROL MEASURES ON EXISTING STORM INLETS AS DESIGNATED ON THE SESC PLAN.
- 3. INSTALL UNDERGROUND UTILITIES (I.E. SANITARY, STORM, AND WATER MAIN.). INSTALL INLET FILTER PROTECTION ON PROPOSED
- STORM SEWER STRUCTURES. (05/15/22 1 Day)
- 4. FINAL GRADING AND INSTALLATION OF LANDSCAPING. ESTABLISH PERMANENT VEGETATION FOR REMAINING DISTURBED AREAS. (05/18/22 - 1 DAY)

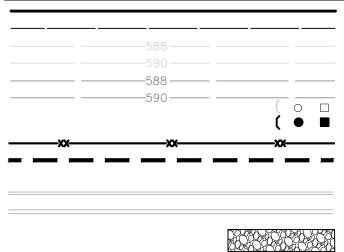
SITE INFORMATION

SITE LOCATION: NORTHEAST 1/4 OF SECTION 33, SUPERIOR TOWNSHIP, MICHIGAN.

- 1. ULTIMATE RECEIVING WATER: HURON RIVER, VIA SUPERIOR DRAIN NO. 1
- 2. SITE SOILS INFORMATION: PER THE NRCS WEB SURVEY FOR WASHTENAW COUNTY; BNC. BNF, FOB, HO, KEB, MDA, MFA, NAB, OSB, PE, SB, SO, SPB, STB, STC, THA, WAWABC
- 3. APPROXIMATE AREA OF DISTURBANCE: .75± ACRES
- 4. THIS PROJECT IS NOT WITHIN 500 FEET OF A WATERBODY OR WATERCOURSE

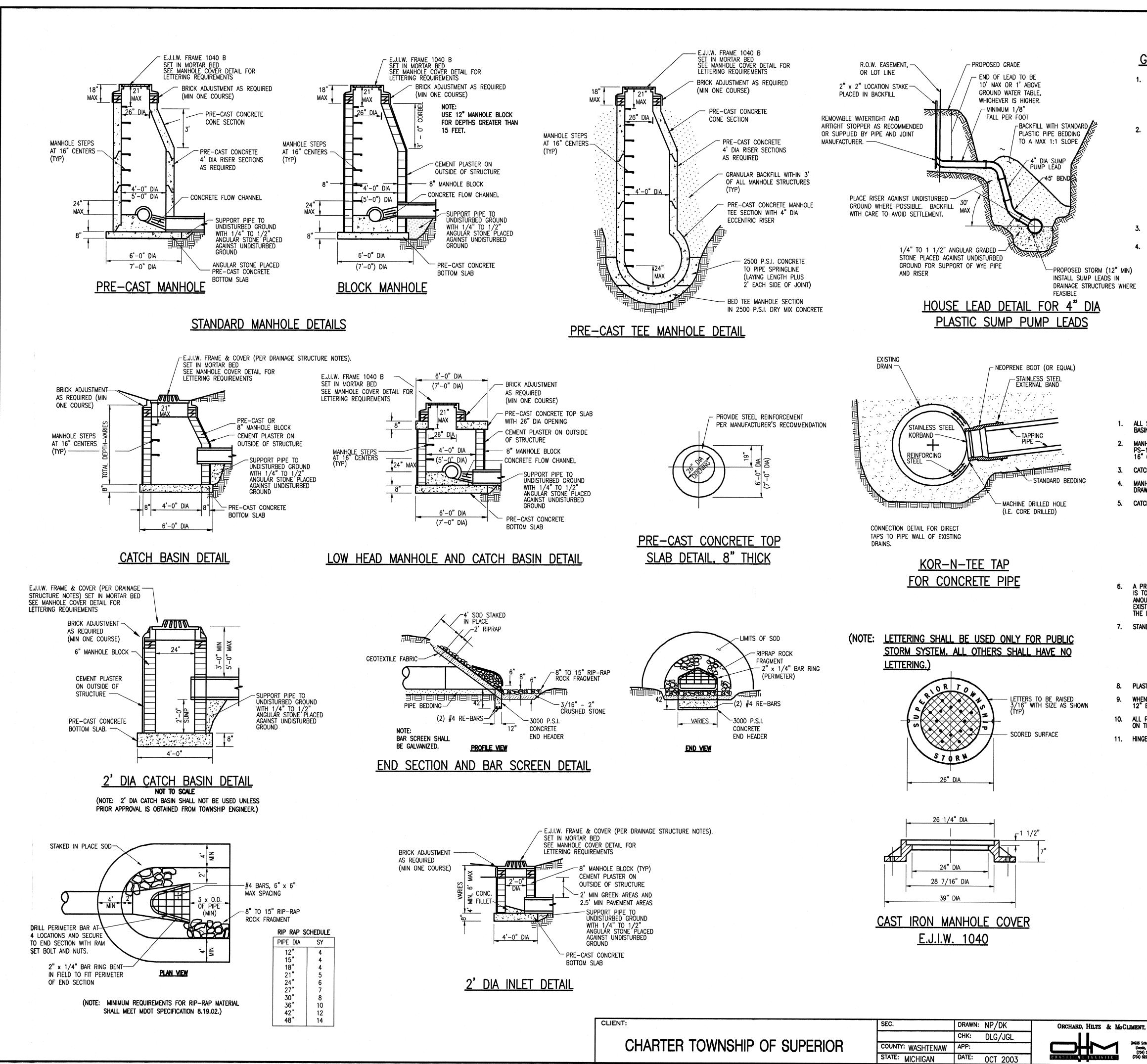


LEGEND



PROPERTY LINE EASEMENT EXISTING 2' CONTOUR EXISTING 10' CONTOUR PROPOSED 2' CONTOUR PROPOSED 10' CONTOUR EXISTING MANHOLE/CATCH BASIN/END SECTION PROPOSED MANHOLE/CATCH BASIN/END SECTION PROPOSED SILT FENCE GRADING LIMITS TREE PROTECTION EXISTING CURB AND GUTTER PROPOSED CURB AND GUTTER PROPOSED RIP-RAP

THE WORK, OF PERSONS ENGAGE IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS. COPYRIGHT © 2022 ATWELL LLC NO REPRODUCTION SHALL BE MADE WITHOUT THE PRIOR WRITTEN CONSENT OF ATWELL LLC ≥ "⊢**_PL** TE SEC CHIG OOAL SI ERC Σ **FIN** . MARCH 30, 2022 REVISIONS SCALE: 1" = 80 FEET DR. JW CH. SS P.M. MB воок —— JOB 16000819 SHEET NO. 80



GENERAL NOTES FOR STORM SEWER CONSTRUCTION

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF CHARTER TOWNSHIP OF SUPERIOR.

- A. TYPE AND CLASS OF PIPE SHALL BE AS SPECIFIED ON PLANS.
- B. SAND BEDDING SHALL BE USED THROUGHOUT, UNLESS OTHERWISE SPECIFIED ON THE PLAN.
- C. ALL END SECTIONS 18" AND LARGER SHALL BE PROVIDED WITH A GALVANIZED BAR SCREEN.
- 2. CONTRACTOR SHALL CONSTRUCT MANHOLES WITH PRECAST REINFORCED CONCRETE IN LIEU OF CONCRETE, BRICK AND BLOCK MANHOLES IN ACCORDANCE WITH THE FOLLOWING CONDITIONS:
 - A. 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.
 - B. 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.
 - C. 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.
- 3. ALL VERTICAL OPENINGS IN CONCRETE BLOCK STRUCTURE WALLS SHALL BE COMPLETELY FILLED WITH MORTAR. ALL VERTICAL WALL JOINTS SHALL BE CEMENT POINTED.
- 4. CONCRETE PIPE REQUIREMENTS:
 - A. THE CONTRACTOR SHALL PROVIDE REINFORCED CONCRETE PIPE AS SPECIFIED ON THE PLANS.
 - B. 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.
 - C. THE INSIDE JOINT OF PIPE SIZES OVER 27" DIAMETER SHALL BE POINTED UP WITH MORTAR UPON COMPLETION OF BACKFILLING OPERATIONS.
 - D. 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.
 - E. 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-1B 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.

5. CATCH BASIN AND INLET FRAME AND COVER SHALL BE:

- A. EAST JORDAN IRON WORKS 5080, TYPE "M1" COVER WITH STRAIGHT FACE CURB AND GUTTER (OR AS APPROVED EQUAL).
- B. EAST JORDAN IRON WORKS 5080, TYPE "M1" COVER WITH MOUNTABLE CURB AND GUTTER AND INTEGRAL CURB AND GUTTER (OR AS APPROVED EQUAL).
- C. 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.
 D. 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.

- 7. STANDARD BRICK ADJUSTMENT: MINIMUM OF ONE COURSE AND A MAXIMUM OF 5 COURSES OF BRICK. A. ALL BRICKS AND BLOCKS USED FOR ADJUSTMENT SHALL BE CONCRETE.
 - B. 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".
 - C. PRECAST REINFORCED CONCRETE SECTION AS MINIMUM SHALL CONFORM TO A.S.T.M. C-478.
- D. CONCRETE BASE FOR MANHOLE, CATCH BASIN, AND INLET SHALL BE MDOT GRADE 30P (MIN), 8" THICK, 3000 PSI. 8. 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.

10. ALL PRECAST RISER(S) SHALL BE PLACED IN A FULL BED OR MORTAR. ALL JOINTS & LIFTHOLES SHALL BE POINTED UP WITH MORTAR ON THE OUTSIDE AND INSIDE.

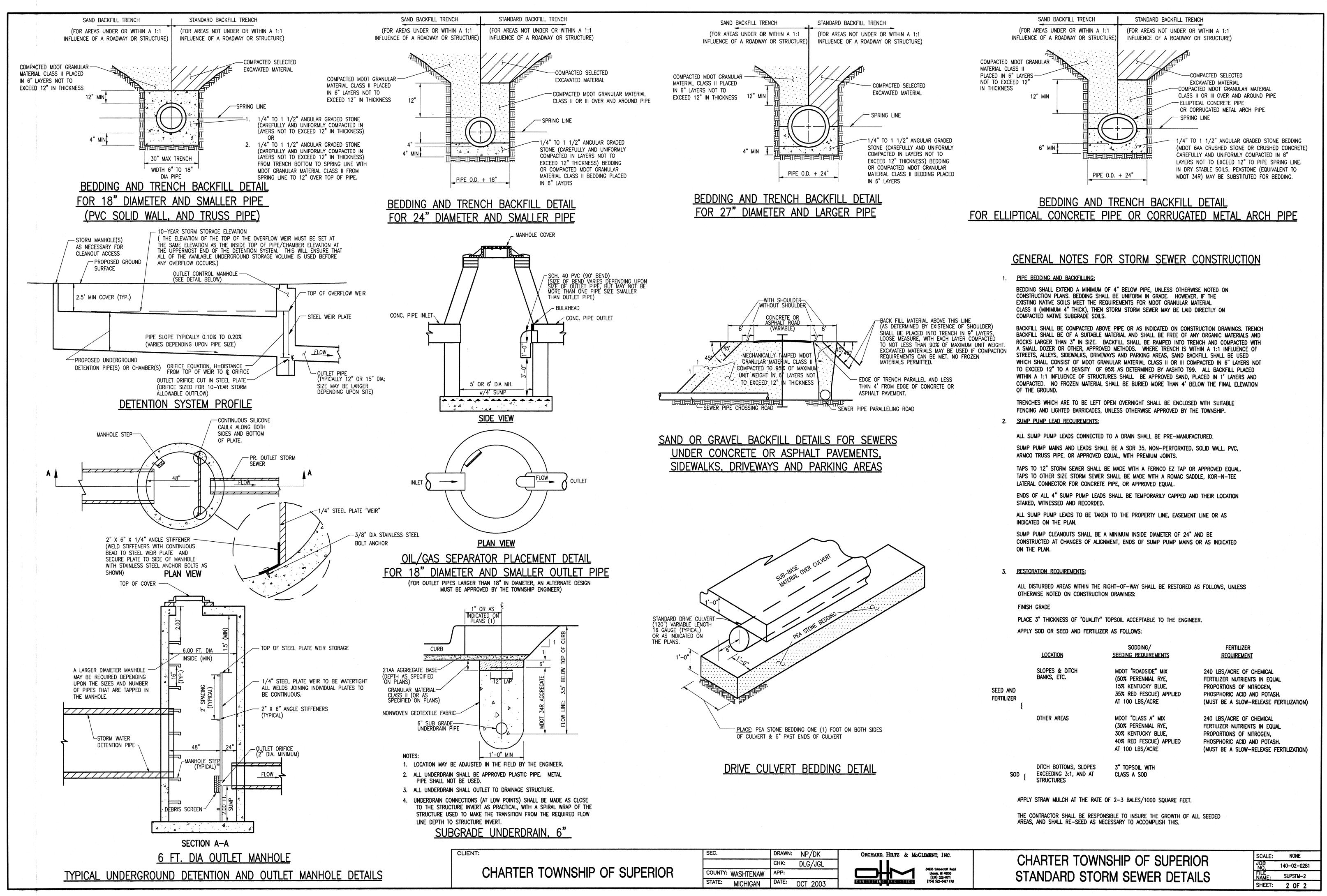
11. HINGED BAR GRATES WILL BE REQUIRED FOR HEADWALLS PER W.C.D.C. AND/OR MDOT STANDARDS, WHICHEVER IS STRICTER.

- A. ALL VERTICAL AND HORIZONTAL BARS SHALL BE TACK-WELDED TO THE ANGLE FRAME.
- B. 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

SCALE:	NONE
JOB NO.	140-02-0281
FILE NAME:	SUPSTM-1
SHEET:	1 OF 2



SCALE:	NONE
JOB NO.	140-02-0281
FILE NAME:	SUPSTM-2
SHEFT	2 05 2