# 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.

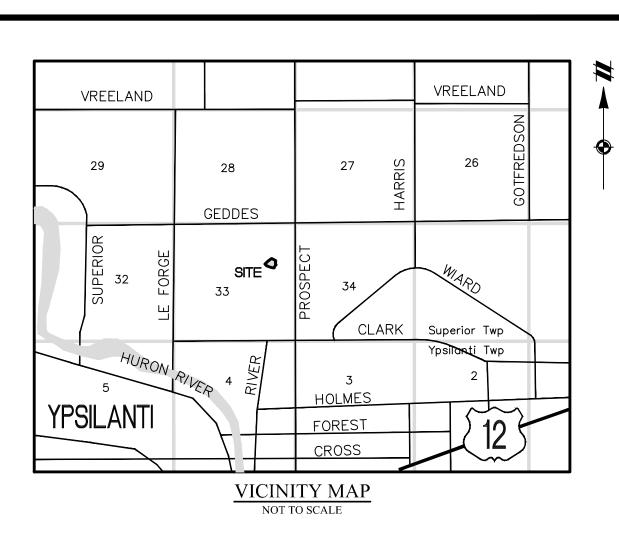
PROSPECT POINTE IS PROPOSED TO CONTAIN PRIVATE ROADS WITH SIDEWALKS ON BOTH SIDES, WHICH HAVE ALREADY RECEIVED APPROVAL FROM THE COUNTY ROAD COMMISSION BASED ON THE PREVIOUSLY APPROVED PLANS FOR THE PROJECT. THE DEVELOPMENT WILL BE SERVICED BY PUBLIC SANITARY SEWER WHICH WILL BE DESIGNED AS AN EXTENSION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

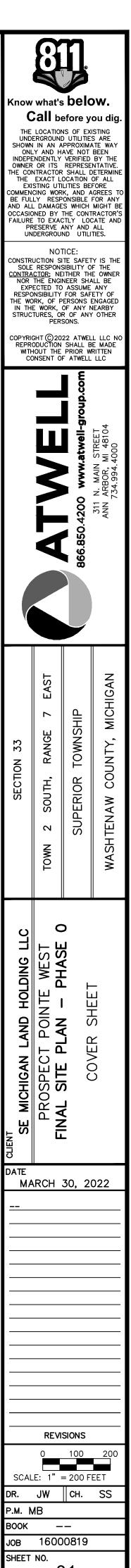
COMPLETION JULY 2022 JULY 2023 APRIL 2025 APRIL 2026 APRIL 2027

NOTES

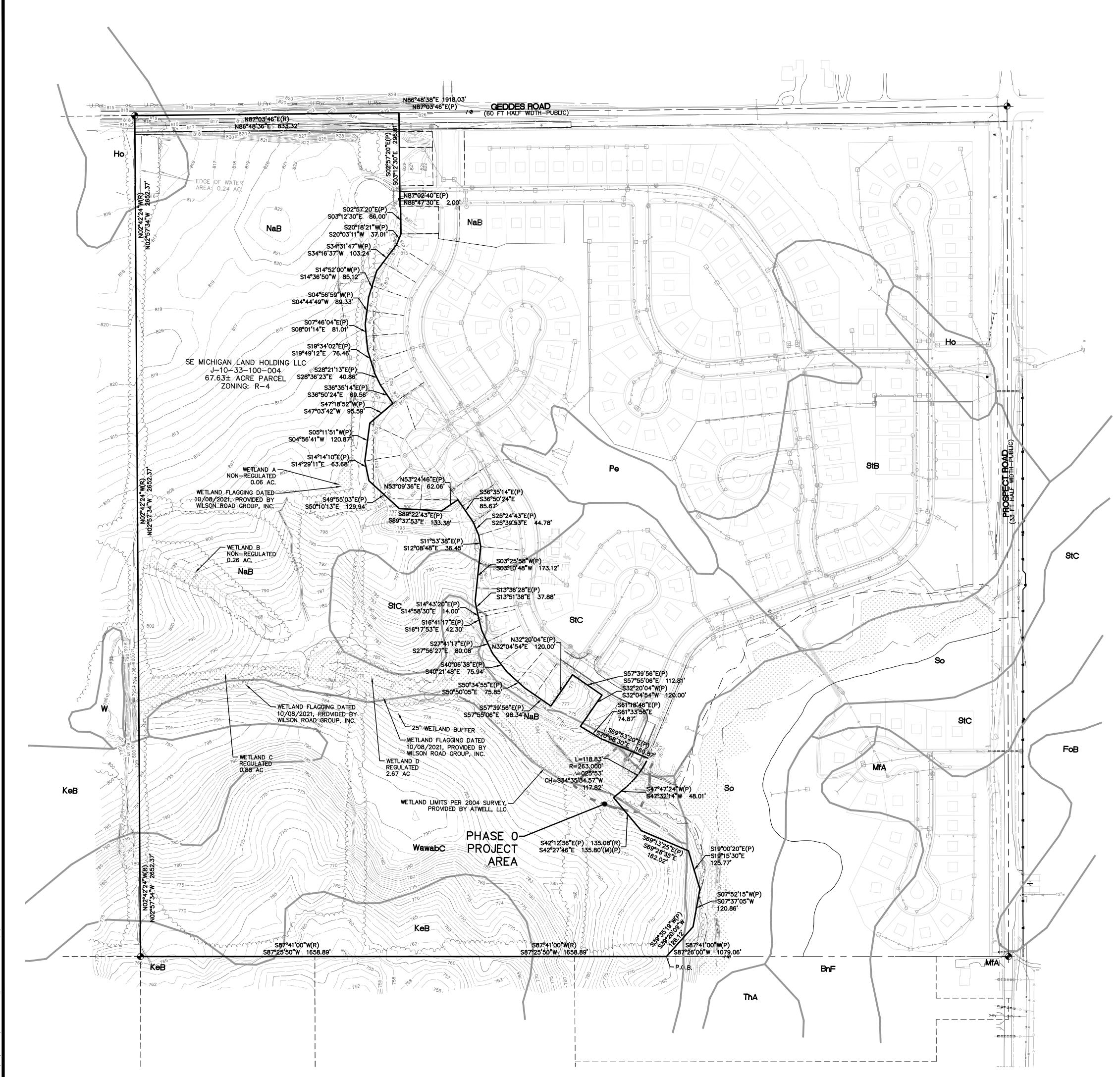
PHASE 0 IS ONLY FOR INSTALLATION OF THE EAST ROAD CROSSING CULVERT. SEE PROJECT NARRATIVE.

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

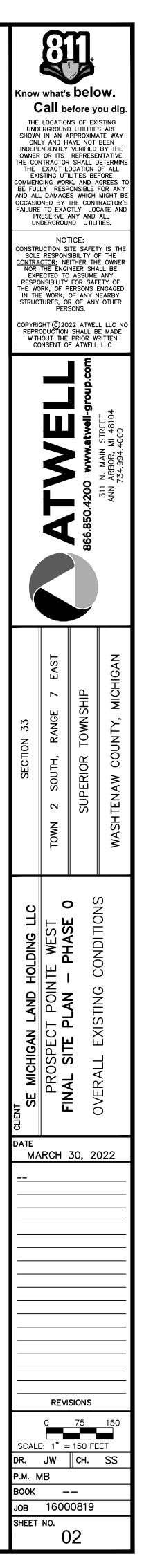
WAWABC WAWASEE LOAM, 6 TO 12 PERCENT SLOPES

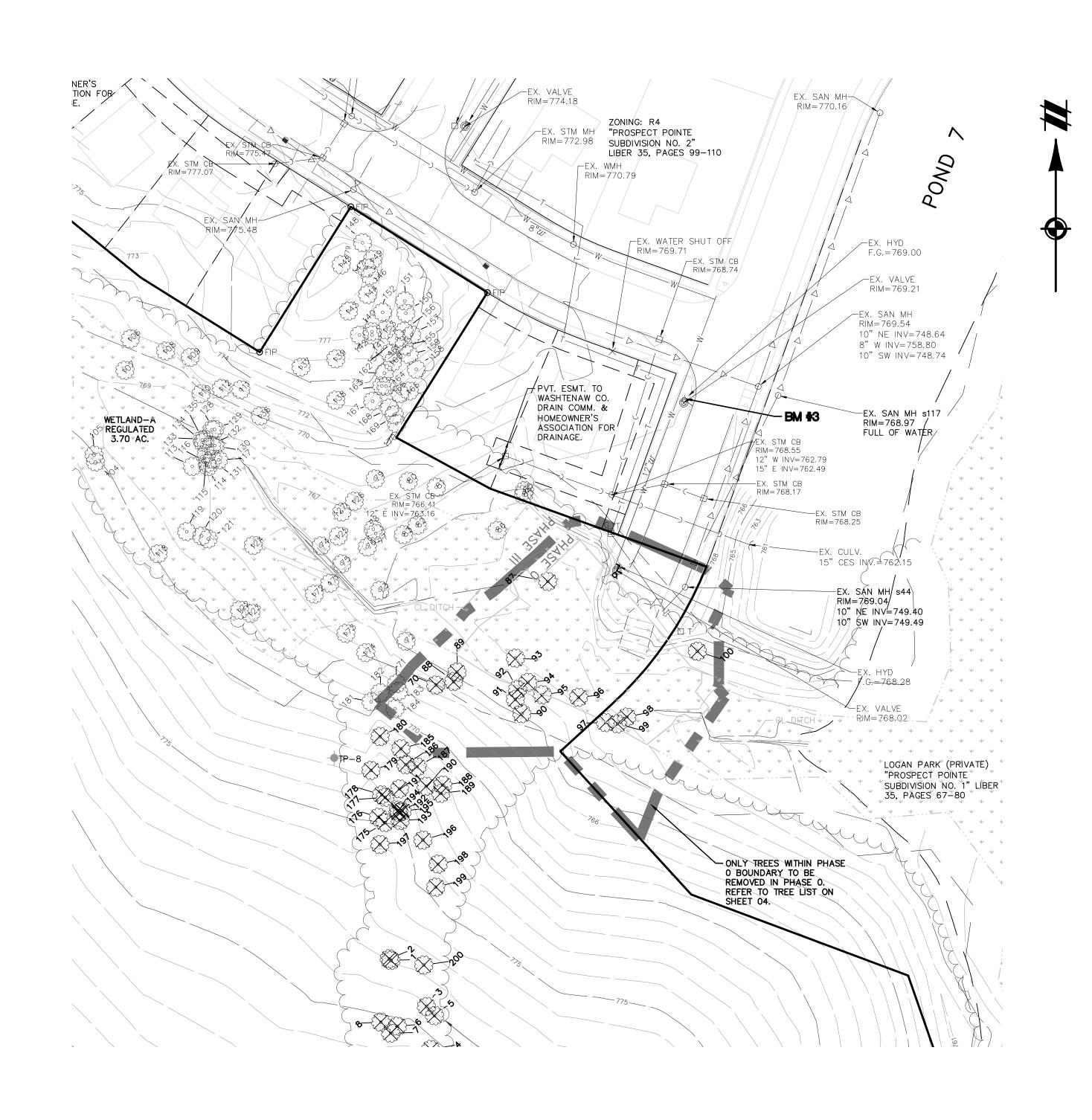
SCHEDULE B II - EXCEPTIONS (PER TITLE COMMITMENT ISSUED BY FIRST AMERICAN TITLE INSURANCE, FILE NO .: 755321, COMMITMENT DATE SEPTEMBER 07, 2016)

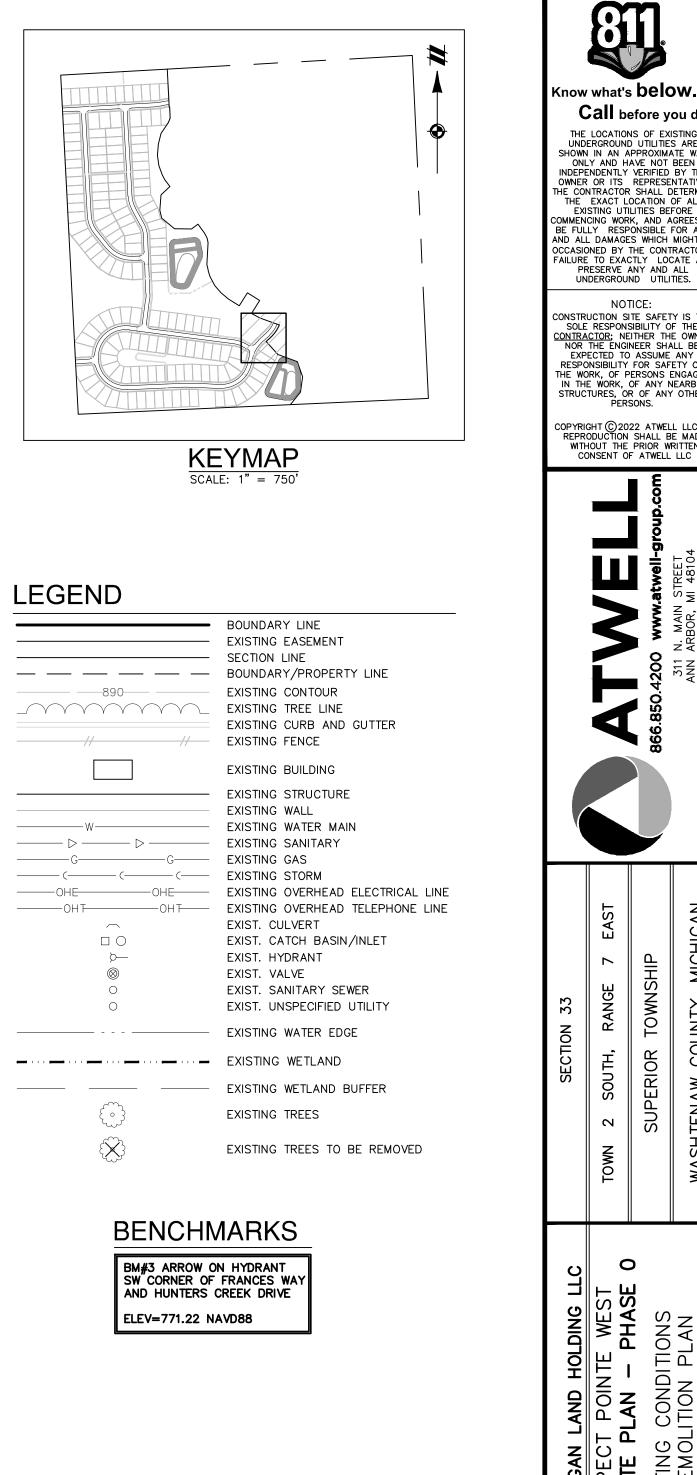
- 6. TERMS AND CONDITIONS CONTAINED IN AGREEMENT TO ESTABLISH THE PROSPECT POINTE DRAIN DRAINAGE DISTRICT AS DISCLOSED BY INSTRUMENT RECORDED IN LIBER 4366, PAGE 973. (COVERS SUBJECT PARCEL AND ADDITIONAL LANDS, BLANKET IN NATURE.)
- 7. TERMS AND CONDITIONS CONTAINED IN SUPERIOR CHARTER TOWNSHIP DEVELOPMENT 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.

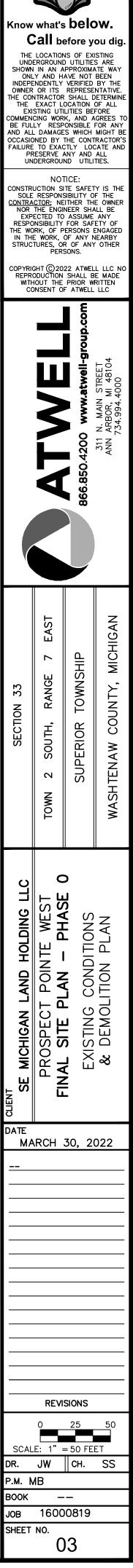
2) WATER MAIN, STORM SEWER, AND SANITARY SEWER UTILITY STRUCTURES HAVE BEEN FIELD LOCATED WHERE VISIBLE. UTILITY AND AS-BUILT MAPS HAVE BEEN REQUESTED AND SOME MAPS HAVE BEEN RECEIVED AT DATE OF THIS SURVEY. FRANCHISE UTILITY MAPS HAVE BEEN REQUESTED FROM THE APPROPRIATE FRANCHISE COMPANY, BUT NOT ALL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

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

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| COMMON NAME          | DIAMETER<br>(IN.) | SOVEREIGN<br>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.

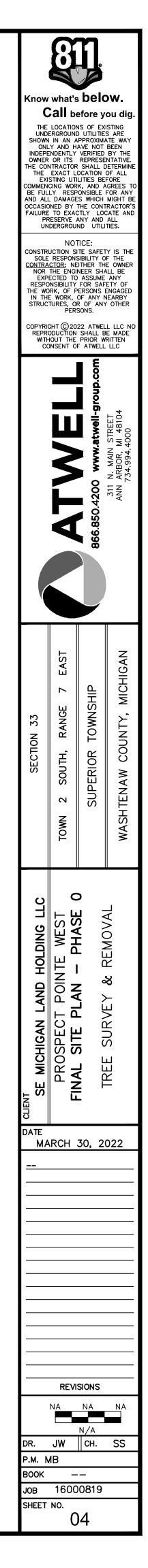
2. CLASSIFICATION: BASED ON SUBSECTION 14.05F (WOODLANDS AND TREE PRESERVATION) OF SUPERIOR TOWNSHIP ZONING ORDINANCE, LANDMARK CRITERIA CORRESPONDS TO LANDMARK TREE, AS REGULATED BY THIS SECTION, SHALL BE ANY TREE THAT HAS A DIAMETER AT BREAST HEIGHT (D.B.H.) OF 24 INCHES OR GREATER; OR THAT IS OF A 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

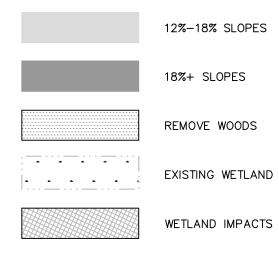
|          | 3 | : | 3  | REPLACEMENT TREES REQUIRED        |
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|          | 2 | : | 6  | REPLACEMENT TREES REQUIRED        |
| VED      | 0 | : | 0  | REPLACEMENT TREES REQUIRED        |
|          | 1 |   | 19 | REPLACEMENT TREES REQUIRED        |
| REQUIRED |   |   | 28 | <b>REPLACEMENT TREES REQUIRED</b> |
|          |   |   |    |                                   |

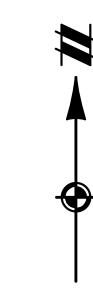
1. TREE LIST INCLUDES SURVEYED TREES OUTSIDE PHASE O AREA. REMOVALS SHOWN ON THIS





#### 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

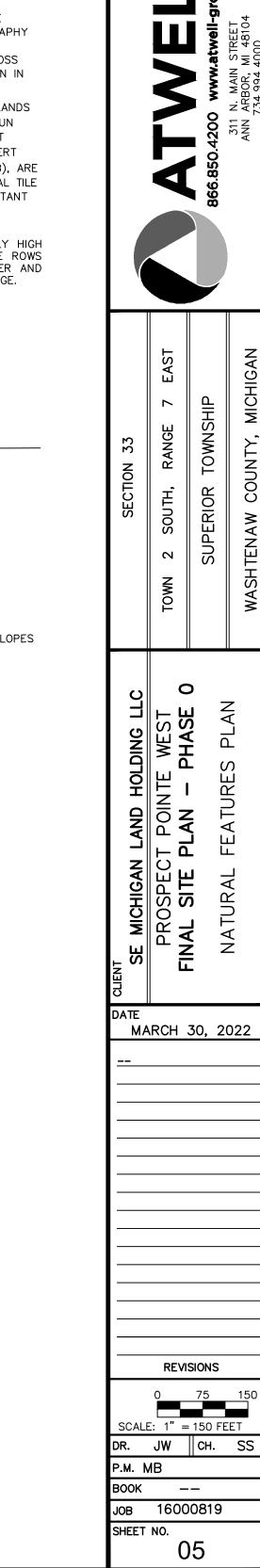
NATURAL FEATURES ON THE SITE CONSIST OF WETLAND, TREES, SLOPES AND AGRICULTURAL FIELD. WITH TWO MAIN HIGH POINTS ON THE SITE, ONE IN THE NORTHERN PORTION AND THE SECOND ON THE FAR SOUTH SIDE, THE TOPOGRAPHY GENERALLY SLOPES TOWARD A WETLAND SWALE IN THE LOWER THIRD OF THE PROPERTY. THERE IS APPROXIMATELY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

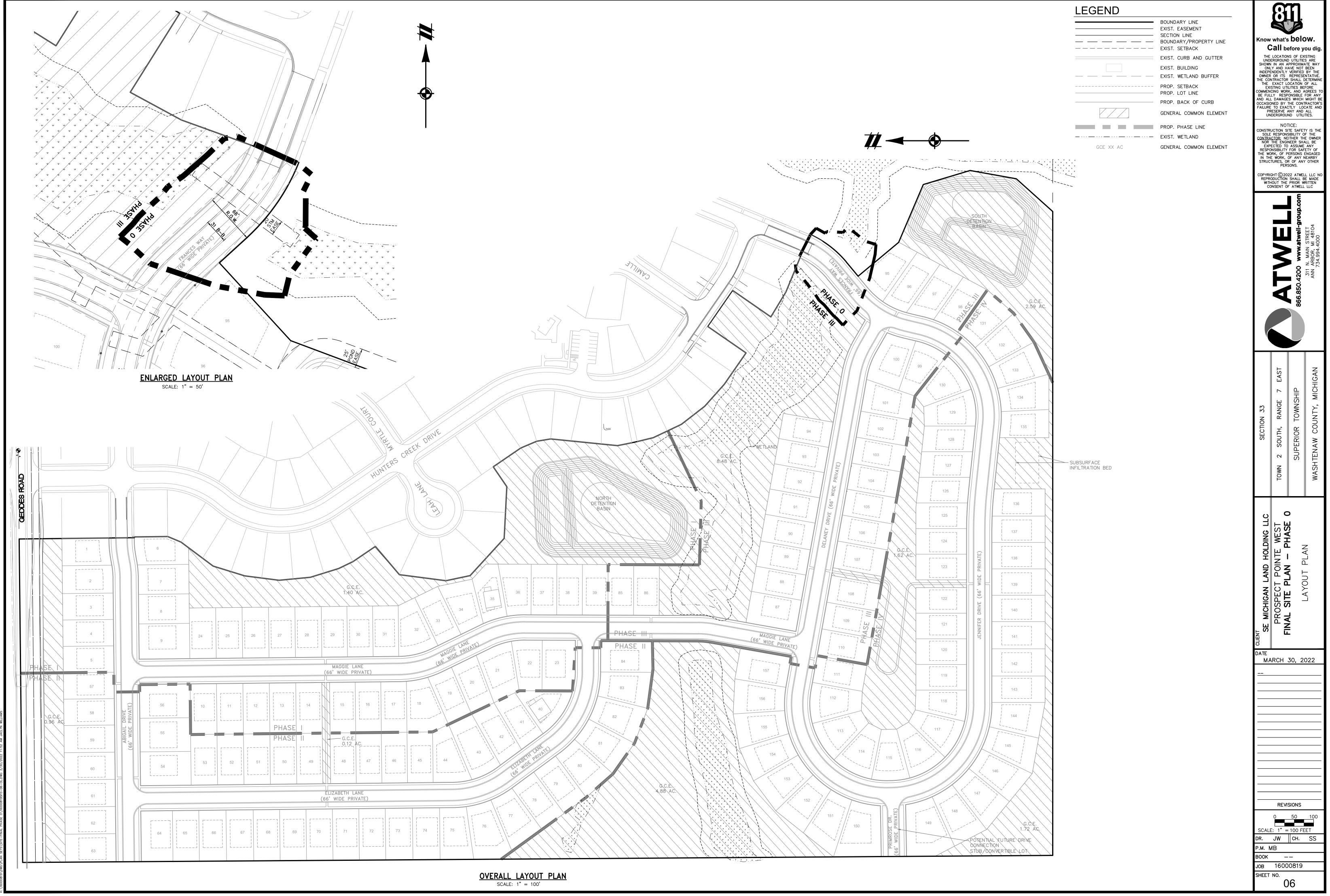
THERE ARE FOUR WETLANDS ON THE SITE. THE TWO LARGER REGULATED WETLANDS (C AND D) ARE HYDRAULICALLY CONNECTED VIA A 12" CULVERT AND BOTH RUN EAST TO WEST ACROSS THE PROPERTY AND LEAD ALL THE WAY TO PROSPECT ROAD, WHERE IT'S CONNECTED TO ANOTHER LARGE WETLAND, BY A 12" CULVERT THAT FLOWS EAST TO WEST. 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.

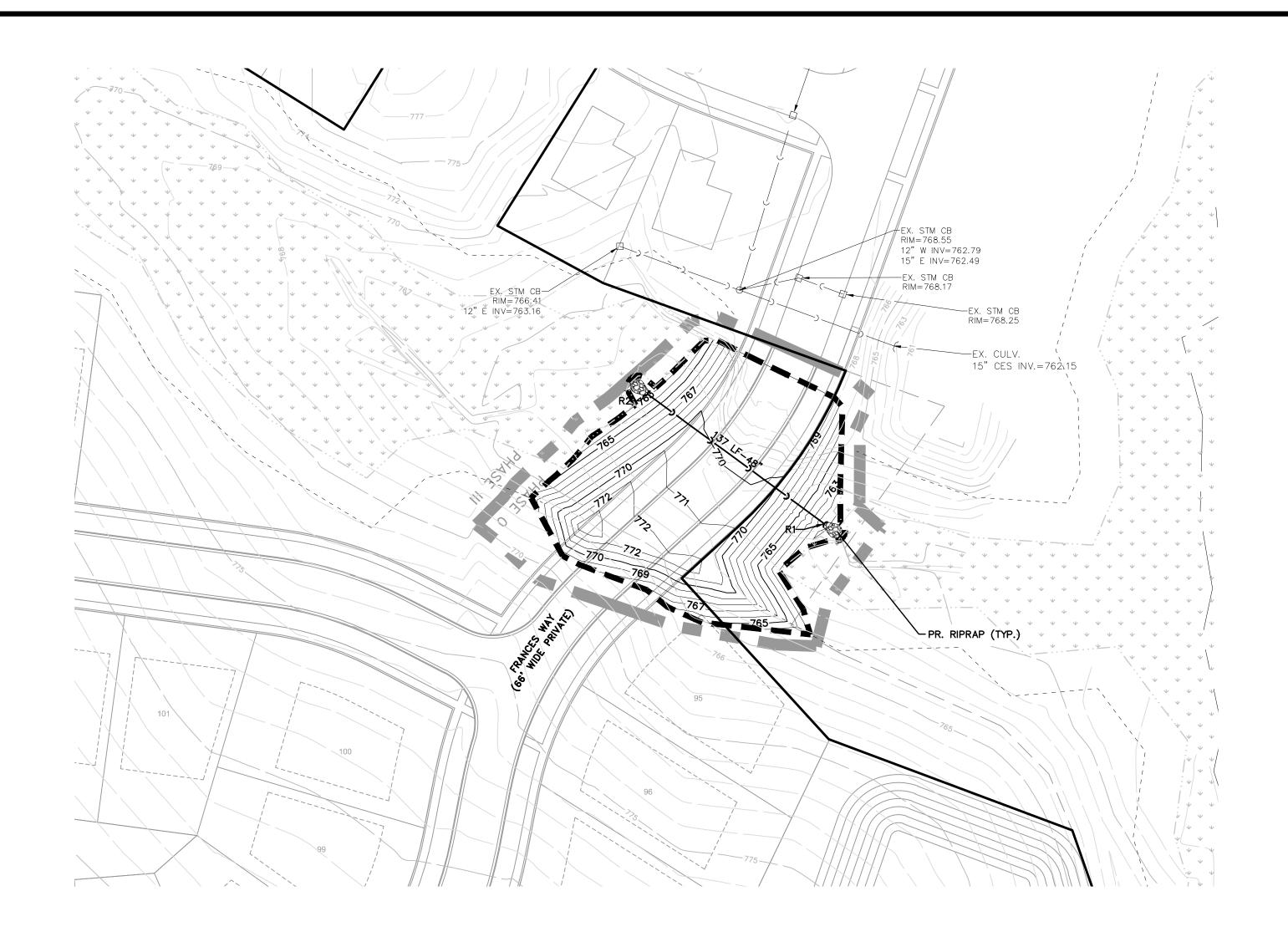
TREES ON THE SITE ALTHOUGH IN GOOD CONDITION, ARE NOT NECESSARILY HIGH QUALITY WITH RESPECT TO SPECIES. THE TREES EXIST LARGELY IN HEDGE ROWS AND SCATTERED CLUSTERS. THE PREDOMINANT SPECIES ARE ELM, BOXELDER AND POPLAR RANGING FROM 6<sup>#</sup>-24<sup>#</sup> WITH THE VAST MAJORITY IN THE 7<sup>#</sup>-13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

#### SOIL INFORMATION

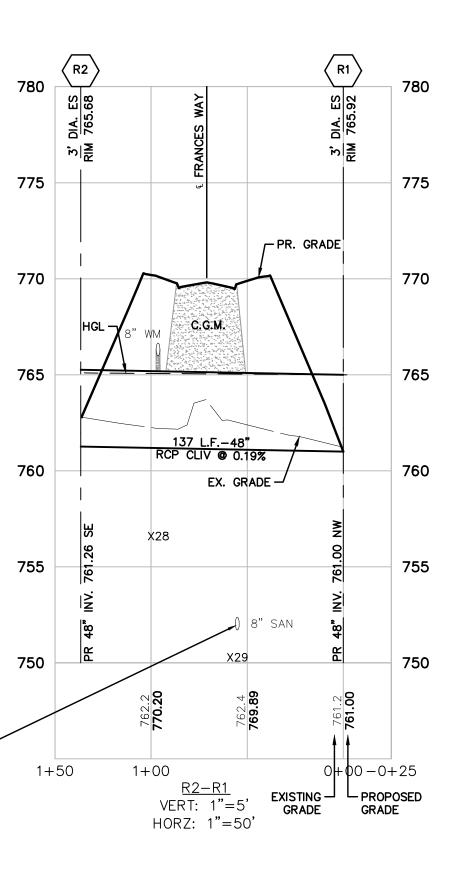
| BNC    | BOYER LOAMY SAND, 6 TO 12 PERCENT SLOPES               |
|--------|--|
| BNF    | BOYER LOAMY SAND, 25 TO 50 PERCENT SLOPES              |
| FOB    | FOX SANDY LOAM, TILL PLAIN, 2 TO 6 PERCENT SLOPES      |
| НО     | HOYTVILLE SILTY CLAY LOAM                              |
| KEB    | KENDALLVILLE 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                   |

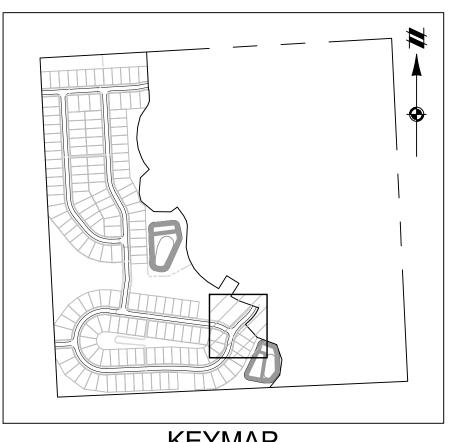






UTILITY INSTALLATION TO -----BE PERFORMED IN FUTURE PHASES (TYP.)





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KEYMAP SCALE: 1" = 750'

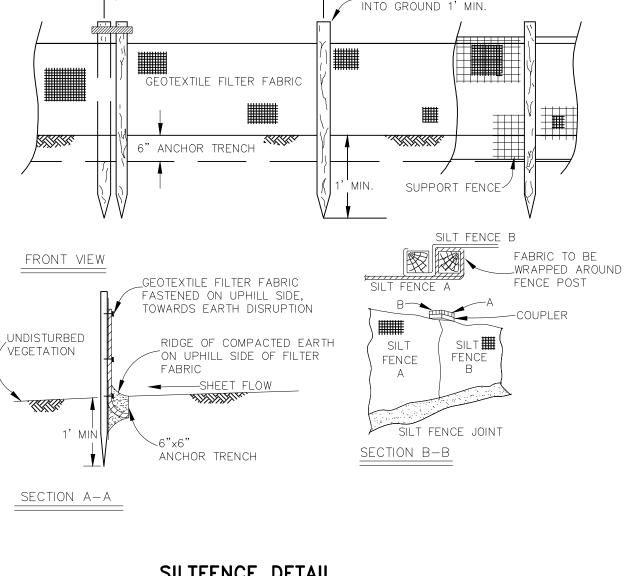
#### LEGEND

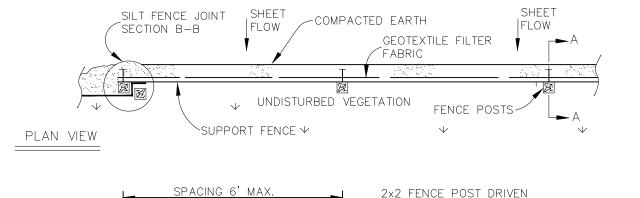
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PROPOSED 1' CONTOUR PROPOSED 5' CONTOUR EXISTING 1' CONTOUR EXISTING 5' CONTOUR PROPERTY LINE GRADING LIMITS PROP. PHASE O LINE

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

| Know what's below.<br>Know what's below.<br>Call before you dig.<br>THE LOCATIONS OF EXISTING<br>UNDERGROUND UTILITIES ARE<br>SHOWN IN AN APPROXIMATE WAY<br>ONLY AND HAVE NOT BEEN<br>INDEPENDENTLY VERIFIED BY THE<br>OWNER OR ITS REPRESENTATIVE.<br>THE CONTRACTOR SHALL DETERMINE<br>THE EXACT LOCATION OF ALL<br>EXISTING UTILITIES BEFORE<br>COMMENCING WORK, AND AGREES TO<br>BE FULLY RESPONSIBLE FOR ANY<br>AND ALL DAMAGES WHICH MIGHT BE<br>OCCASIONED BY THE CONTRACTOR'S<br>FAILURE TO EXACTLY LOCATE AND<br>PRESERVE ANY AND ALL<br>UNDERGROUND UTILITIES.<br>NOTICE:<br>CONSTRUCTION SITE SAFETY IS THE<br>SOLE RESPONSIBILITY OF THE<br>CONTRACTOR: NEITHER THE OWNER<br>NOR THE ENGINEER SHALL BE<br>EXPECTED TO ASSUME ANY<br>RESPONSIBILITY FOR SAFETY OF<br>THE WORK OF DEPERONS ENCOMED |  |  |
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| SUPERIOR TOWNSHIP   | WASHTENAW COUNTY, MICHIGAN   |  |
| 0)  | PLAN & PRUFILE   |  |
| DATE<br>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.

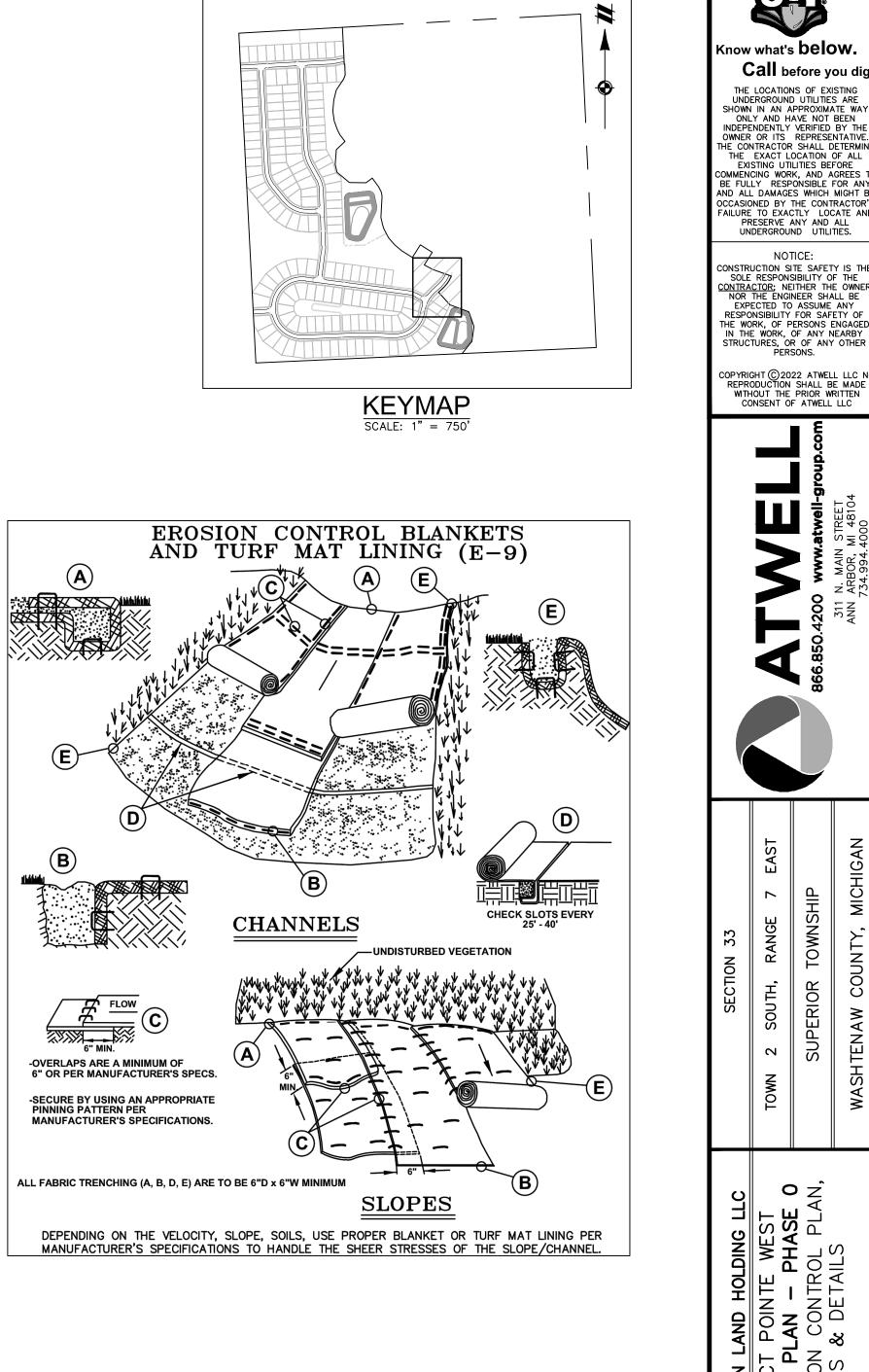
#### SOIL EROSION CONSTRUCTION SEQUENCE

- 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)

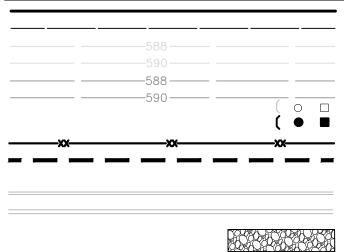
#### SITE INFORMATION

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

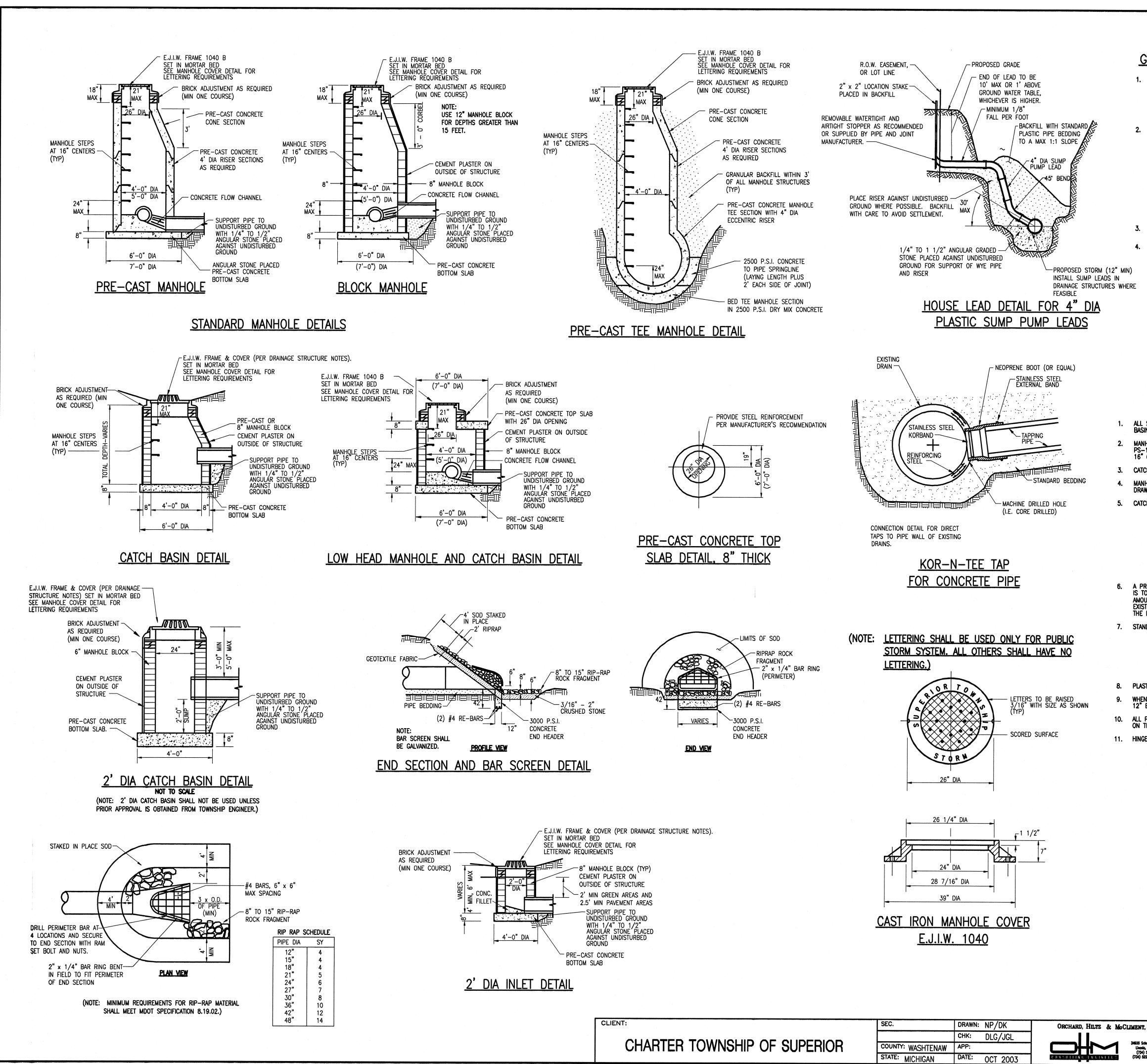


#### LEGEND



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.

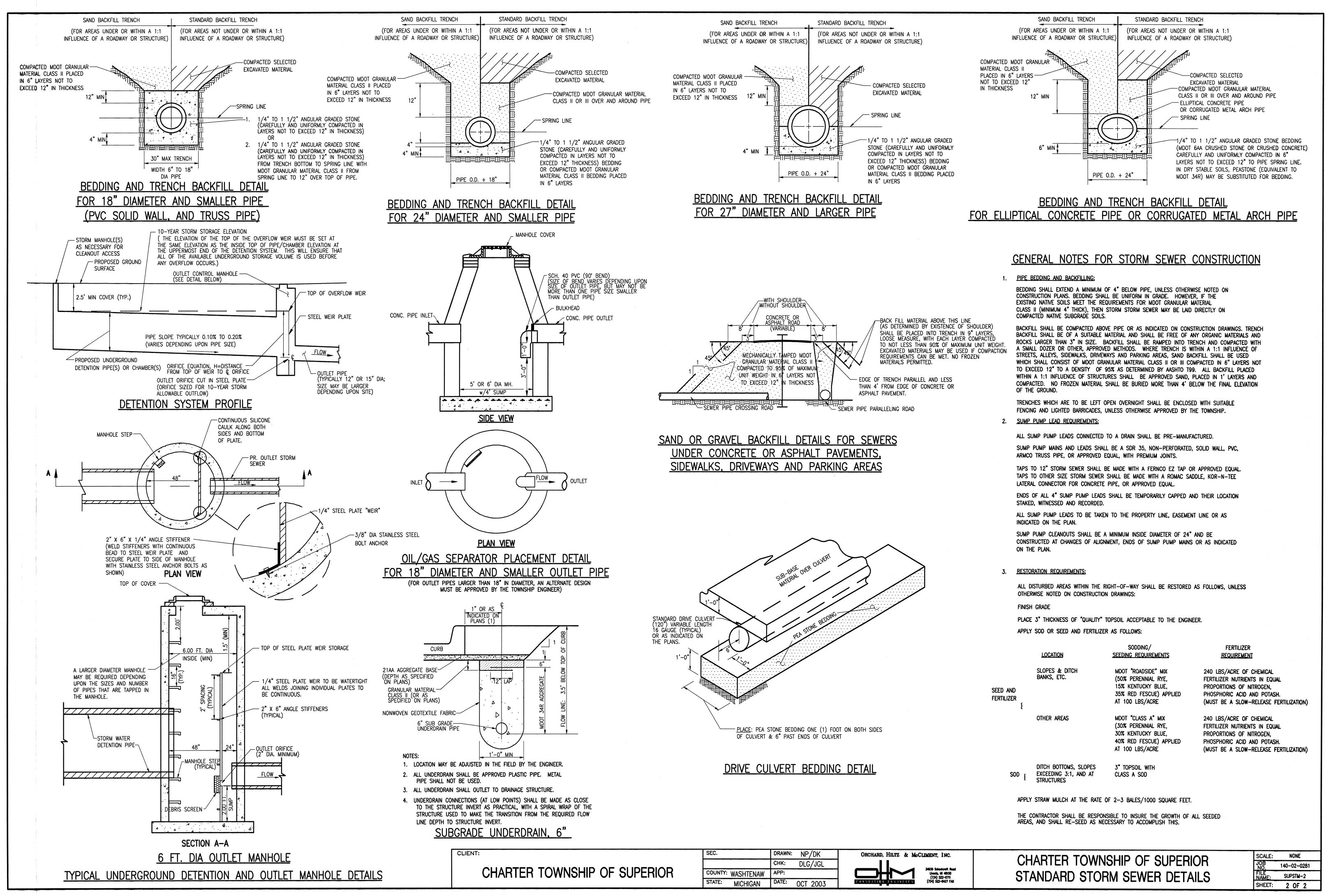
11. HINGED BAR GRATES WILL BE REQUIRED FOR HEADWALLS PER W.C.D.C. AND/OR MDOT STANDARDS, WHICHEVER IS STRICTER.

- 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.

| AMERI, INC.                         |
|-------------------------------------|
| 34935 Schoolcraft Road              |
| Livaria, M. 48150<br>(734) 522-6711 |
| (734) 522-6427 FAX                  |

CHARTER TOWNSHIP OF SUPERIOR STANDARD STORM SEWER DETAILS

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



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