SUPERIOR CHARTER TOWNSHIP PLANNING COMMISSION
SUPERIOR TOWNSHIP HALL
3040 N. PROSPECT, SUPERIOR TOWNSHIP, MI 48198 AGENDA
MAY 22, 2024
7:00 p.m.

1. CALL TO ORDER

2. ROLL CALL

3. DETERMINATION OF QUORUM

4. ADOPTION OF AGENDA

5. APPROVAL OF MINUTES

6. CITIZEN PARTICIPATION

7. CORRESPONDENCE

8. PUBLIC HEARINGS, DELIBERATIONS AND ACTIONS

9. REPORTS

   A. Ordinance Officer Report
   B. Building Department Report
   C. Zoning Administrator Report

10. OLD BUSINESS

11. NEW BUSINESS

    A. STPC 24-01 Prospect Pointe West Phase 2 Final Site Plan
    B. STPC 24-02 Brookswood Superior Preliminary Site Plan

12. POLICY DISCUSSION

13. ADJOURNMENT

Thomas Brennan III, Commission Secretary
3040 N. Prospect, Ypsilanti, MI 48198, 734-482-6099

1. CALL TO ORDER

Chairman Gardner called the regular meeting to order at 7:00 p.m.

2. ROLL CALL

The following members were present: Brennan, Dabish-Yahkind, Findley, Gardner, McGill, Sanii-Yahyai, and Steele. Also present were Ben Carlisle, Carlisle Wortman and George Tsakoff, OHM.

3. DETERMINATION OF QUORUM

A quorum was present.

4. ADOPTION OF AGENDA

A motion was made by Commissioner Findley and supported by Commissioner Sanii-Yahyai to adopt the agenda as presented. The motion carried.

5. APPROVAL OF MINUTES

A. Minutes of the January 24, 2024 Meeting

A motion was made by Commissioner Findley and supported by Commissioner Brennan to approve the minutes as presented. The motion carried.

6. CITIZEN PARTICIPATION

Dave Phillips, Cherry Hill Road, explained he read the Land Use Agreement for Garrett's Space and was surprised that Garrett's Space was not proposed to be a State licensed facility. He asked if there would be any monitoring or oversite of the program. Also, if a neighbor or resident had a complaint, who would they contact?

Mr. Carlisle explained Garrett's Space is not required to be State licensed and the Township cannot require that. The project did receive conditions of zoning approval and a Development Agreement will be in place. If the Township becomes aware of an issue, or discovers the project isn't following guidelines, the Township can go in and inspect and revoke approval if need be.

7. CORRESPONDENCE

Motion by Commissioner Brennan and supported by Commissioner Sanii-Yahyai to receive and file communication.

8. PUBLIC HEARINGS, DELIBERATIONS AND ACTIONS

A. 2024 Comprehensive Master Plan Draft

Motion by Commissioner Brennan supported by Commissioner Sanii-Yahyai to open the public hearing.

Mr. Carlisle noted some public comments had been received during the 63-day review period. Those changes had been incorporated into the document. He explained the Planning Commission can make a recommendation to send the Master Plan on to the Board of Trustees, send to the Board of Trustees with comments, or send back to staff to make revisions.

Joan Martin, 5530 Warren Road noted the Township and Consultants did a terrific job on the Master Plan.

Commissioner Gardner noted resident Dave Phillips submitted written comments regarding the Master Plan to the Planning Commission. Commissioner Gardner felt the comments were more geared toward the people executing the plan, rather than being included within the plan.

Mr. Carlisle reviewed the Huron River Watershed Council's letter and believed many of the comments are regulatory in nature.

Mr. Carlisle noted correspondence was received from resident Ken Schmidt regarding two parcels he owns at Ford and Plymouth Road.

Ms. Martin asked if the conservation easement for Garrett's Space is reflected in the Master Plan.

Mr. Carlisle noted specific conservation easements are not called out, but the Master Plan recommends the use of conservation easements as a conservation strategy.

Ms. Martin asked if a rezoning request were submitted and included a conservation easement, would the rezoning request be "given points" toward approving the rezoning.

Mr. Carlisle replied it is one standard that can be considered as part of the overall consideration. It is just one factor of many.

Commissioner Steele brought up conversation at a previous Master Plan Steering Committee meeting where the Hospital Sub-Area boundary would end at the Huron River and not include the wooded lots along Superior Road.

Mr. Carlisle replied that one option, to keep the sub-area contiguous, is to add the lots between the Huron River and Superior Road to the Gale Road Sub-Area.

Commissioner Gardner noted he is compelled to move the land into the Gale Road Sub-Area.

Motion by Commissioner Steele, supported by Commissioner McGill to reclassify the area between Superior Road and the Huron River, south of Geddes Road from Hospital Sub-Area, to Gale Road Sub-Area.

Roll Call Vote:

Yes:	Brennan, Dabish-Yahkind, Findley, Gardner, McGill, Sanii-Yahyai, Steele.
No:	None.
Abstain:	None.
Absent:	None.

The motion carried.

Ms. Martin noted the matrix on page 80 of the Master Plan. Some items that are listed as "mid" priority could be moved to "immediate" as the Huron River Watershed Council offered volunteer assistance in reaching those goals.

Mr. Carlisle replied if resources become available items can be handled immediately. Or, if the Planning Commission wants to move those items to the "immediate" designation, they can.

Commissioner Gardner stated these are a list of goals, not necessarily commitments. He recommended moving the items from "mid" to "immediate" could be added to the list of changes.

Motion by Commissioner Findley, supported by Commissioner Sanii-Yahyai change the following items in Table 10, Implementation Matrix, from the timeframe of "mid" to "immediate."

- Identify important wildlife corridors to minimize impact on animal habitats and adopt necessary policies and ordinances to protect them.
- Inventory and identify sensitive environmental areas for potential purchase or enhanced protection.

Roll Call Vote:

Yes:	Brennan, Dabish-Yahkind, Findley, Gardner, McGill, Sanii-Yahyai, Steele.
No:	None.
Abstain:	None.
Absent:	None.

The motion carried.

Mr. Carlisle explained the Planning Commission received correspondence from Ken Schmidt, the owner of two adjacent parcels, one of which fronts Plymouth Road, and the other Ford Road. On Map 21 of the Master Plan, Dixboro Future Land Use Map, the Plymouth Road parcel is classified Village Core, and the parcel fronting Ford Road is classified Fleming Creek Preservation Zone. Mr. Schmidt had asked in previous Master Plan Steering Committee Meetings that both parcels be considered Village Core designation. Mr. Schmidt has since combined the parcels into one contiguous parcel fronting Plymouth Road, through the Township Assessing Office, hoping the entire parcel will now be considered Village Core designation on the Dixboro Future Land Use Map.

Commissioner Findley noted her perspective was that the owner created another way to get what he wanted from day one. In her opinion it is self-serving.

Commissioner Gardner stated he did not disagree but thought the Steering Committee had made a decision regarding these two parcels.

Commissioner Findley replied they had said no to his request.

Commissioner Gardner stated on the owner's part there is a commercial interest.

Mr. Carlisle explained the Planning Commission could leave the parcel two different designations, although it is not considered best-practice.

Commissioner Dabish Yahkind felt the owner used his position as a member of the Master Plan Steering Committee to self-serve, and now he's trying to force the Planning Commission's hand by combining the parcels. She felt the owner was acting in self-interest rather than acting in the best interest of the plan.

Commissioner Gardner agreed with Commissioner Findley that the owner did this entirely in his own self-interest. However, since he has combined the two parcels, he can't see why the land use would split the parcel according to the former designation. He asked the Commission how they should proceed now that the land is legally one parcel.

Commissioner Findley noted the Planning Commission does not have to make the parcel all one designation.

Mr. Carlisle stated it is a unique situation.

Commissioner Gardner asked if the Planning Commission could deny making the entire parcel "Village Core" designation because the owner acted unethically?

Mr. Carlisle stated the Planning Commission could decide either way. Ultimately the Township Board of Trustees will ratify this document one way or the other. He went on to explain the rear parcel that fronts Ford Road contains wetlands, which was the justification for the "Fleming Creek Preservation Zone" that is there now. The owner would need to come to the Planning Commission for any development on the property. Because the property has heavy wetlands, he may need the proper EGLE (Environment, Great Lakes, and Energy) permitting, as well.

Commissioner Brennan stated on one hand, he agrees with having the parcel be one designation, but he agrees that the owner "backdoored" his way into getting it.

Commissioner McGill asked, if the parcel was left with both designations, how would that affect development in the future.

Mr. Carlisle stated the owner would likely seek a rezoning in the future. The Planning Commission would look at the future land use plan and see if the rezoning was consistent. If the Planning Commission does not make the entire parcel Village Core designation, the Planning Commission will have to make the determination based on the rezoning if it complies or not. It would make the Planning Commission's job much harder if it were split in the Master Plan.

Motion by Commissioner Steele, supported by Commissioner Brennan, to recognize 5860 Ford Road, (Parcel ID J-10-18-100-030) as entirely Village Core designation on Map 21 of page 91 of the 2024 Draft Comprehensive Plan.

Roll Call Vote:

Yes:	Brennan, Dabish-Yahkind, Gardner, McGill, Sanii-Yahyai, Steele.
No:	Findley.
Abstain:	None.
Absent:	None.

The motion carried.

Motion by Commissioner supported by Commission to close the public hearing.

Motion by Commissioner Brennan, supported by Commissioner McGill, to recommend approval of the 2024 Comprehensive Master Plan Draft, as amended, to the Superior Charter Township Board of Trustees.

Roll Call Vote:

Yes:	Brennan, Dabish-Yahkind, Findley, Gardner, McGill, Sanii-Yahyai, Steele.
No:	None.

Abstain: None.
Absent: None.

The motion carried.

9. REPORTS

A. Ordinance Officer Report

A motion was made by Commissioner Brennan and supported by Commissioner Steele to receive the report. The motion carried.

B. Building Department Report

A motion was made by Commissioner Brennan and supported by Commissioner Steele to receive the report. The motion carried.

Commissioner Findley explained the concerns and major issues regarding Infinity Homes that have been brought to the attention of the Board of Trustees. Commissioner Findley asked if the developer ever came back to the Planning Commission with changes to the approved site plan.

She noted the homes are very close together and is concerned about the number of complaints the Board of Trustees have received.

Commissioner Gardner asked who the builder is.

It was noted Infinity Homes is the builder.

As a Board Member, Commissioner Findley has concerns, and felt the project should have come back to the Planning Commission with the new developer.

10. OLD BUSINESS

A. STPC 23-05 Brookwood Superior Area Plan Amendment
Resolution Recommending Approval

Motion by Commissioner Brennan supported by Commissioner Steele.

Roll Call Vote:

Yes:	Brennan, Dabish-Yahkind, Findley, Gardner, McGill, Sanii-Yahyai, Steele.
No:	None.
Abstain:	None.
Absent:	None.

The motion carried.

11. NEW BUSINESS

A. STPC 22-04 Kinsley Development Final Site Plan

Chris Rothhaar, Atwell, on behalf of Lombardo Homes noted Preliminary Site Plan was granted in November of 2022 and all outside approvals have been received.

Mr. Carlisle presented the Planner's Report dated February 16, 2024.

Mr. Tsakoff presented the Engineer's Report dated February 20, 2024.

Commissioner Gardner noted the site plan depicts two parcels in the center of the development.

Mr. Rothhaar noted those lots will be developed by Lombardo separate from the Kinsley development.

Commissioner Steele inquired about lots C and E. He noted they are larger lots and asked if they could be developed further.

Mr. Rothhaar replied the wetlands and steep slopes prevent the lots from being further developed.

Motion by Commission Brennan supported by Sanii-Yahyai to approve STPC 22-04 Kinsley Development Final Site Plan with the following conditions:

1. Address all items in the Township Engineer's review letter dated February 20, 2024.

Roll Call Vote:

Yes:	Brennan, Dabish-Yahkind, Findley, Gardner, McGill, Sanii-Yahyai, Steele.
No:	None.
Abstain:	None.
Absent:	None.

The motion carried.

12. POLICY DISCUSSION

Steele inquired about the state law that will remove alternative energy from the Township purview.

Mr. Carlisle stated Carlisle Wortman is putting together model ordinance language to send out to their communities. It'll be brought forward to the Board of Trustees and Planning Commission. In some places the Township will be able to maintain local control. If a parcel is over a certain size, there will be no local control. If the parcel is under a certain size, the Township will have control if there is an ordinance in place.

13. ADJOURNMENT

Motion by Commissioner Findley, supported by Commissioner Brennan to adjourn.

The motion carried.

The meeting was adjourned at 8:18 pm.

Respectfully submitted,
Thomas Brennan III, Planning Commission Secretary

Laura Bennett, Recording Secretary
Superior Charter Township
3040 N. Prospect Rd.
Ypsilanti, MI 48198 (734) 482-6099

PROSPECT POINTE WEST

A SINGLE FAMILY DEVELOPMENT

SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

FINAL SITE PLAN - PHASE 2

PROJECT CONTACTS

DEVELOPER / APPLICANT
DIVERSE REAL ESTATE LLC
13001 23 MILE ROAD, SUITE 200
SHELBY TWP, MICHIGAN 48315
CONTACT: AMIE ACKERMAN
PHONE: (248) 561-0001

CIVIL ENGINEER
ATWELL, LLC
311 NORTH MAIN STREET
ANN ARBOR, MICHIGAN 48104
CONTACT: MATT BUSH, P.E.
PHONE: (810) 923-6878

LEGAL DESCRIPTION

DESCRIPTION OF 67.99 ACRE PARCEL OF LAND LOCATED IN THE NORTHEAST 1/4 OF SECTION 33, TOWN 2 SOUTH, RANGE 7 EAST, SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MICHIGAN, INCLUDING A PORTION OF LOT 200 OF AMENDED PLAT OF LOT 1 AND THE VACATED PORTION OF ABIGAIL DRIVE OF "PROSPECT POINTE SUBDIVISION NO. 1" AS RECORDED IN LIBER 36 OF PLATS, PAGE 64, WASHTENAW COUNTY RECORDS, ALSO INCLUDING A PORTION OF LOT 201 OF AMENDED PLAT OF LOT 199 AND THE VACATED PORTION OF FRANCES WAY OF "PROSPECT POINTE SUBDIVISION NO. 2" AS RECORDED IN LIBER 36 OF PLATS, PAGE 65, WASHTENAW COUNTY RECORDS, BEING MORE PARTICULARLY DESCRIBED AS: (AS SURVEYED BY ATWELL)

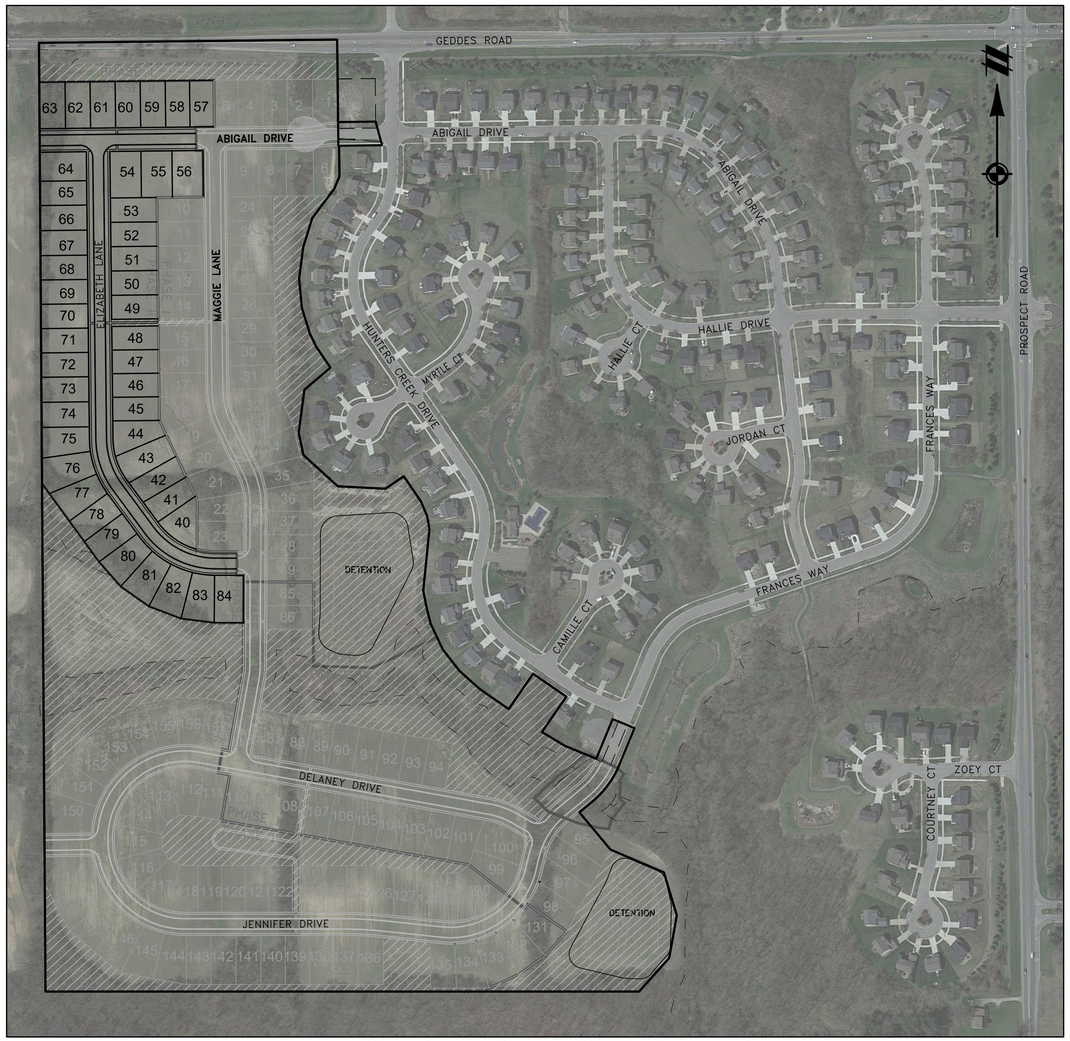
COMMENCING AT THE EAST 1/4 CORNER OF SECTION 33, TOWN 2 SOUTH, RANGE 7 EAST, SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MICHIGAN; THENCE S87°25'50"W (RECORDED AS S87°41'00"W) 1079.06 FEET ALONG THE EAST-WEST 1/4 LINE OF SAID SECTION 33 FOR A **PLACE OF BEGINNING**; THENCE CONTINUING S87°25'50"W (RECORDED AS S87°41'00"W) 1658.89 FEET ALONG THE EAST-WEST 1/4 LINE OF SAID SECTION 33 TO THE CENTER POST OF SAID SECTION 33; THENCE N02°57'34"W (RECORDED AS N02°42'24"W) 2652.37 FEET ALONG THE NORTH-SOUTH 1/4 LINE OF SAID SECTION 33 TO THE NORTH 1/4 CORNER OF SAID SECTION 33; THENCE N86°48'36"E (RECORDED AS N87°03'46"E) 833.32 FEET ALONG THE NORTH LINE OF SAID SECTION 33 AND THE CENTERLINE OF GEDDES ROAD (VARIABLE WIDTH); THENCE S03°12'30"E (PLATTED AS S02°57'20"E) 230.61 FEET ALONG THE WESTERLY LINE OF PROSPECT POINTE SUBDIVISION NO. 1, AS RECORDED IN LIBER 35 OF PLATS, PAGE 67, WASHTENAW COUNTY RECORDS, ALSO BEING THE WEST LINE OF LOT 200 OF AMENDED PLAT OF LOT 1 AND THE VACATED PORTION OF ABIGAIL DRIVE OF "PROSPECT POINTE SUBDIVISION NO. 1" AS RECORDED IN LIBER 36 OF PLATS, PAGE 64, WASHTENAW COUNTY RECORDS; THENCE N86°47'30"E 105.00 FEET; THENCE S17°39'09"E (PLATTED AS S17°23'58"E) 68.15 FEET ALONG THE WEST LINE OF HUNTERS CREEK DRIVE (100 FEET WIDE) OF SAID PROSPECT POINTE SUBDIVISION NO. 1; THENCE S86°47'30"W (PLATTED AS S87°02'40"W) 120.00 FEET ALONG THE SOUTH LINE OF SAID LOT 200, ALSO BEING THE NORTH LINE OF LOT 86 OF SAID PROSPECT POINTE SUBDIVISION NO. 1; THENCE S03°12'30"E (PLATTED AS S02°57'20"E) 86.00 FEET ALONG THE WEST LINE OF SAID PROSPECT POINTE SUBDIVISION NO. 1; THENCE ALONG THE WESTERLY LINE OF PROSPECT POINTE SUBDIVISION NO. 2, AS RECORDED IN LIBER 35 OF PLATS, PAGE 99, WASHTENAW COUNTY RECORDS, FOR THE FOLLOWING TWENTY NINE (29) 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"E (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) 120.87 FEET, S14°29'11"E (PLATTED AS S14°14'10"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 S03°25'58"W) 173.12 FEET, S13°51'38"E (PLATTED AS S13°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°41'17"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 S57°39'56"E) 112.81 FEET, S32°04'54"W (PLATTED AS S32°20'04"W) 120.00 FEET, S61°33'56"E (PLATTED AS S61°18'46"E) 74.87 FEET; THENCE S70°08'30"E (PLATTED AS N69°53'20"W) 94.83 FEET ALONG THE SOUTH LINE OF LOT 201 OF AMENDED PLAT OF LOT 199 AND THE VACATED PORTION OF FRANCES WAY OF "PROSPECT POINTE SUBDIVISION NO. 2" AS RECORDED IN LIBER 36 OF PLATS, PAGE 65, WASHTENAW COUNTY RECORDS; THENCE 8.22 FEET ALONG THE ARC OF A 197.00 FOOT RADIUS CIRCULAR CURVE TO THE LEFT, CHORD BEARING N21°03'12"E 8.22 FEET; THENCE N19°51'30"E 111.78 FEET; THENCE S70°08'30"E (PLATTED AS S69°53'20"E) 66.00 FEET ALONG THE SOUTH LINE OF HUNTERS CREEK DRIVE (66 FEET WIDE) OF SAID PROSPECT POINTE SUBDIVISION NO. 2; THENCE THE FOLLOWING TWO (2) COURSES ALONG THE EAST LINE OF SAID LOT 201, ALSO BEING THE WEST LINE OF SAID PROSPECT POINTE SUBDIVISION NO. 1: S19°51'30"W (PLATTED AS S20°06'40"W) 111.78 FEET AND 8.22 FEET ALONG THE ARC OF A 263.00 FOOT RADIUS CIRCULAR CURVE TO THE RIGHT, CHORD BEARING S20°45'13"W (PLATTED AS S21°00'23"W) 8.22 FEET; THENCE ALONG THE WESTERLY LINE OF SAID PROSPECT POINTE SUBDIVISION NO. 1 FOR THE FOLLOWING SEVEN (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 S07°52'15") 120.86 FEET AND S39°20'09"W (PLATTED AS S39°35'19"W) 126.12 FEET TO THE PLACE OF BEGINNING, CONTAINING 67.99 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 67.99 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 DEVELOPMENT WILL BE CONSTRUCTED IN 4 PHASES. THIS PLAN IS FOR PHASE 1 OF THE DEVELOPMENT.

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.



OVERALL DEVELOPMENT MAP
SCALE: 1" = 200'

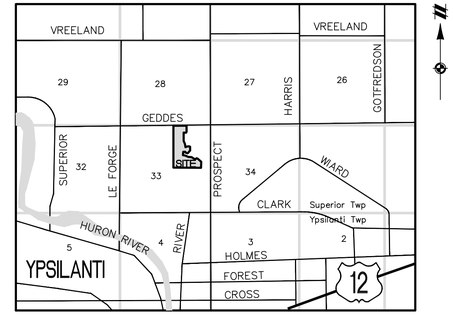
PHASING SCHEDULE

	# UNITS	START	COMPLETION
PHASE I	39	OCTOBER 2023	JULY 2024
PHASE II	45	JUNE 2024	APRIL 2025
PHASE III	26	JUNE 2025	APRIL 2026
PHASE IV	47	JUNE 2026	APRIL 2027

NOTES:
1. ACTUAL START OF PHASES II - IV SUBJECT TO ECONOMIC AND OTHER FACTORS
2. ESTIMATED DATE OF FIRST OCCUPANCY SUMMER 2024

PERMITS AND APPROVALS

Agency	Status/Date Approved	Application/Permit Number
Superior Township Preliminary Site Plan	8/26/2020	
Superior Township Engineering Plan	6/1/2023	
WCWRC SESC	4/13/2023	SESC2023-0054
EGLE Wetlands Permit	3/16/2023	WRP036295
Washtenaw County Road Commission	11/21/2022	2022-000681
WCWRC - Stormwater	7/8/2022	1524
EGLE Water Supply (PA 399)	2/26/2023	ACT-229388
EGLE Waste Water Collection (Part 41)	10/14/2022	P41003992
NPDES Construction Stormwater Discharge	5/16/2023	MIR117620



VICINITY MAP
NOT TO SCALE

SHEET INDEX

1	COVER SHEET	31	DRAINAGE AREA PLAN
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3	ORIGINAL CONDITIONS & DEMOLITION PLAN	33	UTILITY STRUCTURE TABLE
4	ORIGINAL CONDITIONS & DEMOLITION PLAN	34	INTERSECTION DETAILS
5	TREE LIST	35	FIRE PROTECTION PLAN
6	TREE LIST	36	INVASIVE SPECIES REMOVAL PLAN
7	NATURAL FEATURES PLAN	37	DETAIL SHEET 1
8	SOIL EROSION CONTROL PLAN	38	DETAIL SHEET 2
9	SOIL EROSION CONTROL PLAN	39	TYPICAL BUILDING DETAILS
10	TEMPORARY CONSTRUCTION ACCESS DRIVE	40	TYPICAL BUILDING DETAILS
11	SOIL EROSION CONTROL NOTES & DETAILS	41	SUPERIOR TOWNSHIP SANITARY DETAIL SHEET 1
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13	LAYOUT PLAN	43	SUPERIOR TOWNSHIP STORM DETAIL SHEET 1
14	LAYOUT PLAN	44	SUPERIOR TOWNSHIP STORM DETAIL SHEET 2
15	OVERALL GRADING PLAN	45	SUPERIOR TOWNSHIP WATER DETAIL SHEET 1
16	GRADING PLAN	46	SUPERIOR TOWNSHIP WATER DETAIL SHEET 2
17	GRADING PLAN	L-1	LANDSCAPE PLAN
18	OVERALL UTILITY PLAN	L-2	LANDSCAPE DETAILS
19	UTILITY PLAN		
20	UTILITY PLAN		
21	ABIGAIL DRIVE PLAN & PROFILE		
22	ELIZABETH LANE PLAN & PROFILE 1		
23	ELIZABETH LANE PLAN & PROFILE 2		
24	SANITARY PLAN & PROFILE 1		
25	SANITARY PLAN & PROFILE 2		
26	SANITARY PLAN & PROFILE 3		
27	STORMWATER PLAN & PROFILE 1		
28	STORMWATER PLAN & PROFILE 2		
29	STORMWATER PLAN & PROFILE 3		
30	DRAINAGE AREA PLAN		

SITE DATA

GROSS AREA:	67.99 ACRES
GEDDES ROAD ROW:	1.15 ACRES
NET AREA:	66.84 ACRES
EXISTING ZONING:	R4 - SINGLE FAMILY RESIDENTIAL
PROPOSED ZONING:	R4 - SINGLE FAMILY RESIDENTIAL
PROPOSED USE:	SINGLE FAMILY RESIDENTIAL SITE CONDOMINIUM
NUMBER OF PROPOSED LOTS TOTAL:	157
PROPOSED DENSITY (GROSS):	2.31
PROPOSED DENSITY (NET):	2.35
NUMBER OF PROPOSED LOTS PHASE 2:	45
LOT AREA PER DWELLING UNIT:	66' X 130' = 8580 SF (TYPICAL)
MINIMUM LOT WIDTH:	66'
LOT SETBACKS:	
FRONT-	25'
SIDE-	6' MIN. (16' TOTAL)
REAR-	35'
PROPOSED LOT COVERAGE:	MAX 25%
PROPOSED GENERAL COMMON ELEMENT (G.C.E.):	21.77 ACRES
WETLAND IMPACTS:	
REGULATED	0.50 ACRES
NON-REGULATED	0.06 ACRES

*FIRE DEPARTMENT NOTE: ROADWAYS AND BRIDGES TO BE CAPABLE OF SUPPORTING THE IMPOSED LOAD OF FIRE APPARATUS WEIGHTING 80,000 POUNDS

STATE OF MICHIGAN
KYLER SHEERIN
No. 68966
LICENSED PROFESSIONAL ENGINEER

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

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

CLIENT
SE MICHIGAN LAND HOLDING LLC
PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2
COVER SHEET

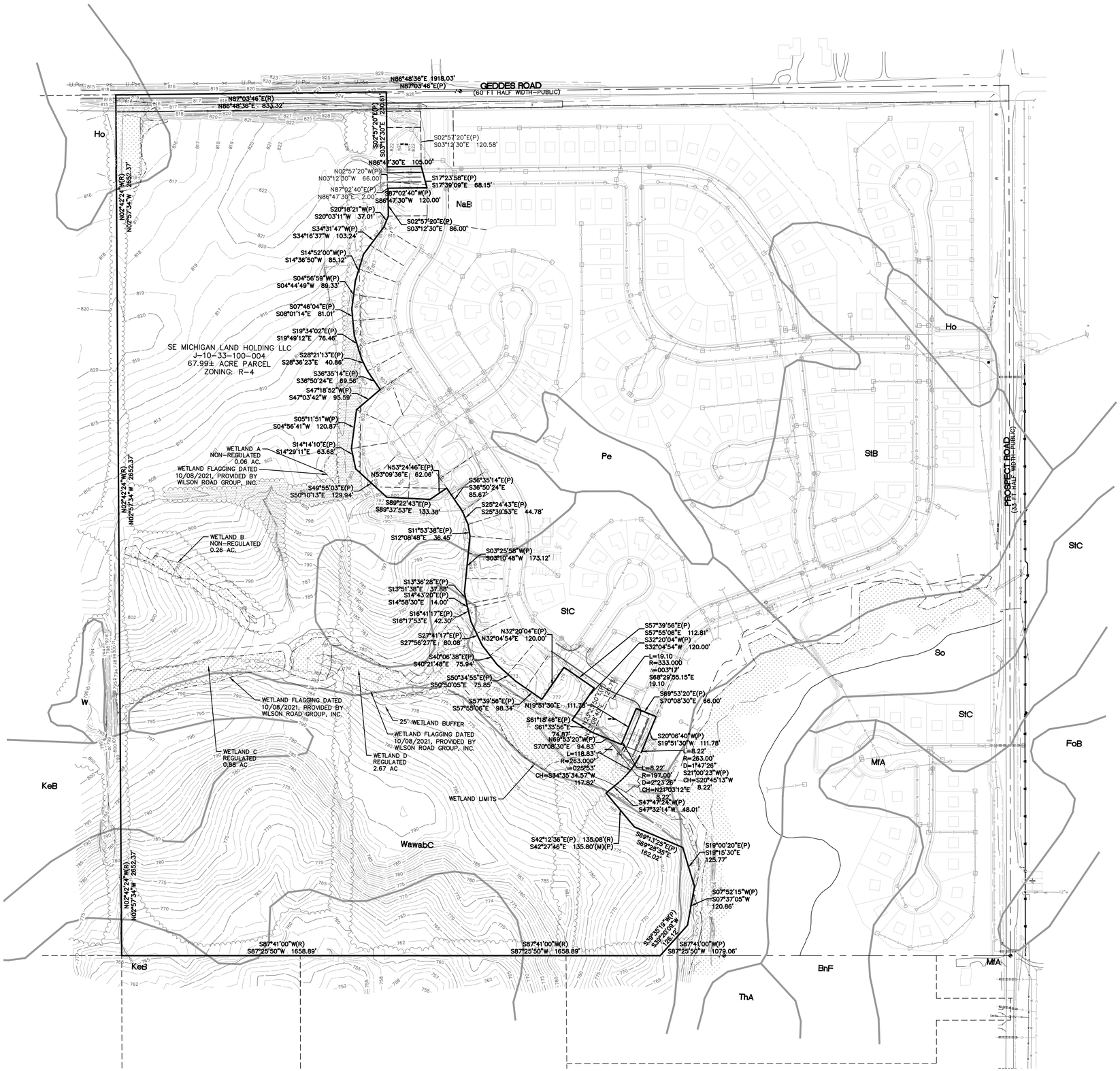
DATE
MARCH 1, 2024

REVISIONS
--

SCALE: 1" = 200 FEET

DR. SK | CH. SS
P.M. MB
BOOK --
JOB 16000819
SHEET NO. 1

K:\SDD\SE\JOB\16000819\CAD\SITE\SITE - FINAL PHASE 2\16000819PP2-SP-COVER_SHEET.DWG 3/7/2024 8:17 PM KYLER SHEERIN



LEGEND

- BOUNDARY LINE
- EXISTING EASEMENT
- SECTION LINE
- BOUNDARY/PROPERTY LINE
- 890 EXISTING CONTOUR
- EXISTING TREE LINE
- EXISTING CURB AND GUTTER
- EXISTING FENCE
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING WALL
- EXISTING WATER MAIN
- EXISTING SANITARY
- EXISTING GAS
- EXISTING STORM
- EXISTING OVERHEAD ELECTRICAL LINE
- 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
- FoB EXISTING SOILS TYPE
- 1 EXISTING TEST PIT
- HEDGEROW TO BE REMOVED

BENCHMARKS

BM#1 ARROW ON HYDRANT SW CORNER OF LOT 1, NORTH 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.)**

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

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

OVERALL ORIGINAL CONDITIONS

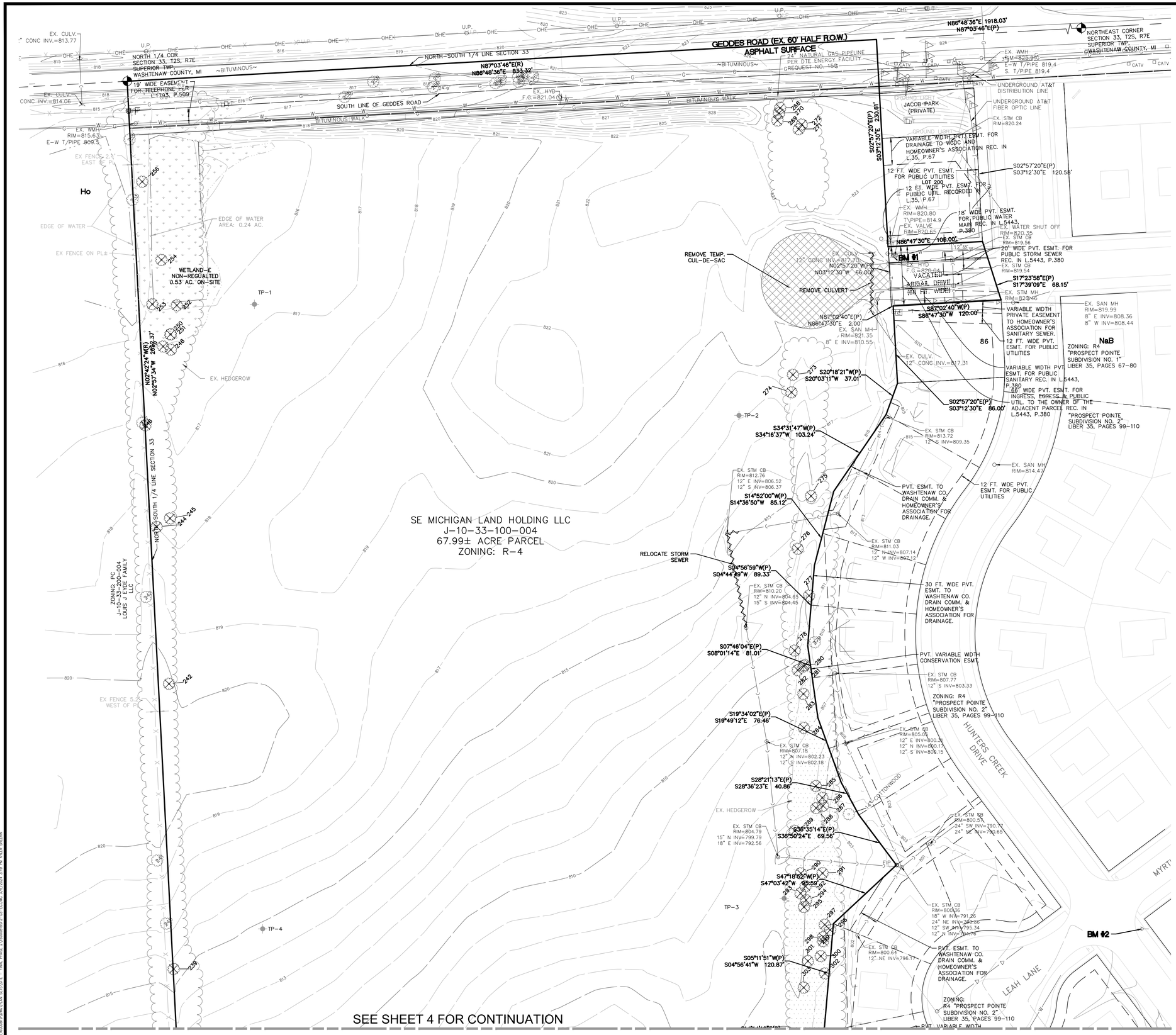
DATE
MARCH 1, 2024

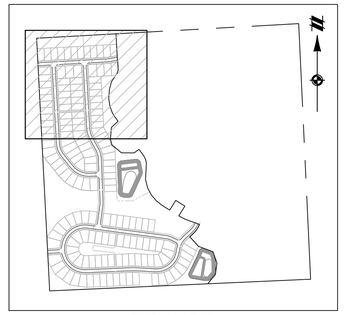
REVISIONS
--

SCALE: 1" = 150 FEET

DR. SK | CH. SS
P.M. MB
BOOK --
JOB 16000819
SHEET NO. 2

L:\16000819\CAD\LAYOUTS\SITE - FINAL PHASE 2\16000819F2-SITE-ORIG.DWG 2/29/2024 3:18 PM KYLER SHEPPEN





KEYMAP
SCALE: 1" = 750'

LEGEND

- BOUNDARY LINE
- EXISTING EASEMENT
- SECTION LINE
- BOUNDARY/PROPERTY LINE
- 890 EXISTING CONTOUR
- EXISTING TREE LINE
- EXISTING CURB AND GUTTER
- EXISTING FENCE
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING WALL
- W EXISTING WATER MAIN
- EXISTING SANITARY
- G EXISTING GAS
- C EXISTING STORM
- OHE EXISTING OVERHEAD ELECTRICAL LINE
- OHT EXISTING OVERHEAD TELEPHONE LINE
- EXIST. CULVERT
- EXIST. CATCH BASIN/INLET
- EXIST. HYDRANT
- EXIST. VALVE
- EXIST. SANITARY SEWER
- EXIST. UNSPECIFIED UTILITY
- EXISTING WATER EDGE
- EXISTING WETLAND
- EXISTING WETLAND BUFFER
- EXISTING TREES
- EXISTING TREES TO BE REMOVED
- HEDGEROW TO BE REMOVED

BENCHMARKS

BM#1 ARROW ON HYDRANT SW CORNER OF LOT 1, NORTH SIDE OF ABIGAIL DR 150' WEST OF HUNTERS CREEK DR

ELEV=822.79 NAVD88

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ELEV=798.38 NAVD88

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

ELEV=771.22 NAVD88

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 DESCRIBES 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 REMOVE 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.

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

CLIENT: SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN - PHASE 2
ORIGINAL CONDITIONS & DEMOLITION PLAN

DATE: MARCH 1, 2024

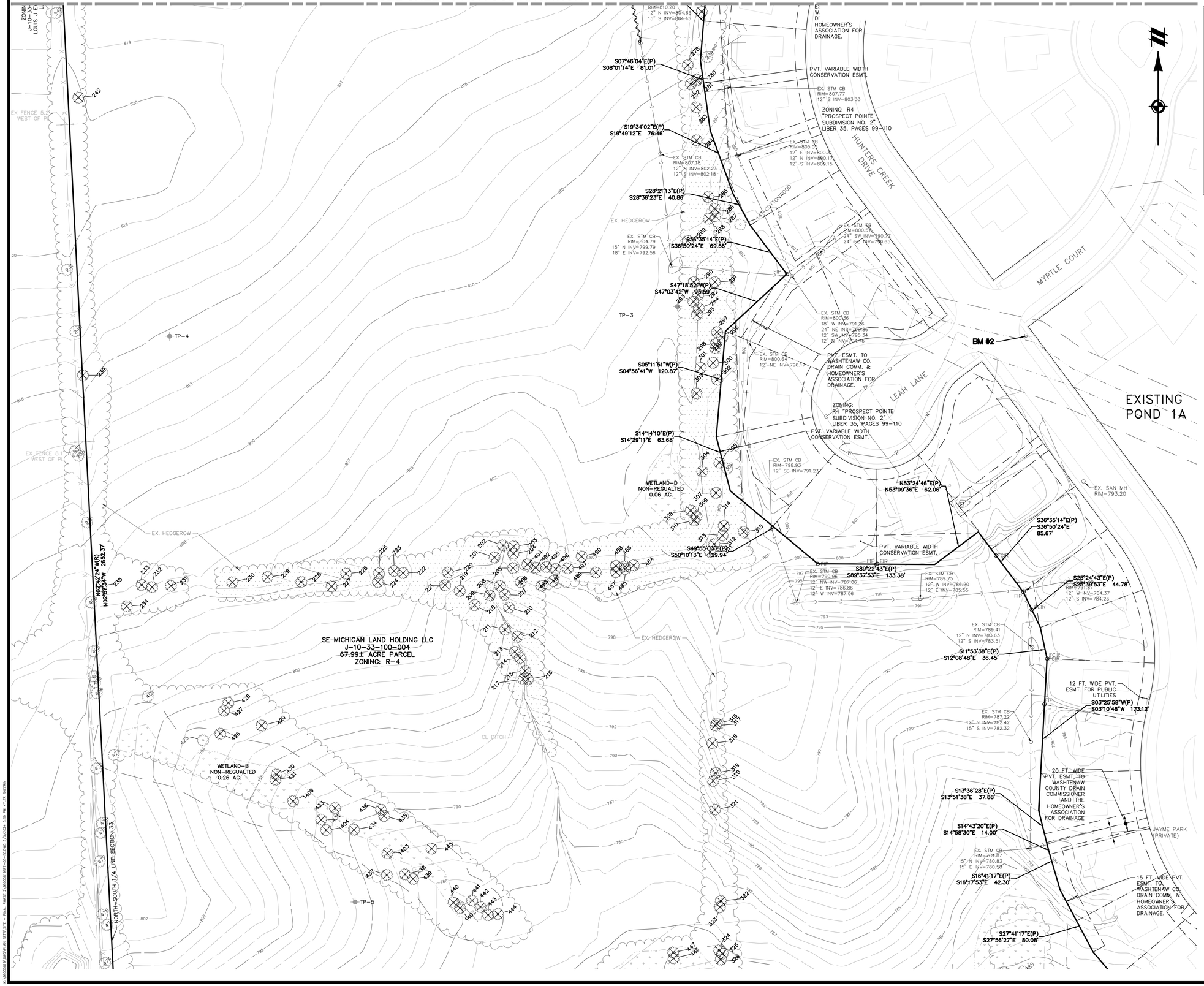
REVISIONS

SCALE: 1" = 50 FEET (0, 25, 50)

DR.	SK
CH.	SS
P.M.	MB
BOOK	--
JOB	16000819
SHEET NO.	3

C:\WORKSPACE\WORKSPACE - FINAL PHASE 2\16000819\P2-SITE-ECOMM_3-5-2024 3:13 PM KYLER.DEBOER

SEE SHEET 3 FOR CONTINUATION


S07°46'04"E(P)
S08°01'14"E 81.01'
S19°34'02"E(P)
S19°49'12"E 76.46'
S28°21'13"E(P)
S28°36'23"E 40.86'
S36°35'14"E(P)
S36°50'24"E 69.56'
S47°18'52"W(P)
S47°03'42"W 35.59'
S05°11'51"W(P)
S04°56'41"W 120.87'
S14°14'10"E(P)
S14°29'11"E 63.68'
S49°55'02"E(P)
S50°10'13"E 129.94'
S89°22'43"E(P)
S89°37'53"E 133.38'
N53°24'46"E(P)
N53°09'36"E 62.06'
S36°35'14"E(P)
S36°50'24"E 85.67'
S25°24'43"E(P)
S25°39'53"E 44.78'
S11°53'38"E(P)
S12°08'48"E 36.45'
S03°25'58"W(P)
S03°10'48"W 173.12'
S13°36'28"E(P)
S13°51'38"E 37.88'
S14°43'20"E(P)
S14°58'30"E 14.00'
S16°41'17"E(P)
S16°17'53"E 42.30'
S27°41'17"E(P)
S27°56'27"E 80.08'
N02°54'24"W(R)
N02°39'34"W 2652.37'
PVT. VARIABLE WIDTH CONSERVATION ESMT.
HOMEOWNER'S ASSOCIATION FOR DRAINAGE.
ZONING: R4 "PROSPECT POINTE SUBDIVISION NO. 2" LIBER 35, PAGES 99-110
HUNTERS CREEK DRIVE
MYRTLE COURT
LEAH LANE
EXISTING POND 1A
BM #2
EX. SAN MH RIM=793.20
JAYME PARK (PRIVATE)
12 FT. WIDE PVT. ESMT. FOR PUBLIC UTILITIES
20 FT. WIDE PVT. ESMT. TO WASHTENAW COUNTY DRAIN COMMISSIONER AND THE HOMEOWNER'S ASSOCIATION FOR DRAINAGE
15 FT. WIDE PVT. ESMT. TO WASHTENAW CO. DRAIN COMM. & HOMEOWNER'S ASSOCIATION FOR DRAINAGE.
PVT. ESMT. TO WASHTENAW CO. DRAIN COMM. & HOMEOWNER'S ASSOCIATION FOR DRAINAGE.
SE MICHIGAN LAND HOLDING LLC
J-10-33-100-004
67.99± ACRE PARCEL
ZONING: R-4
WETLAND-B NON-REGUALTED 0.26 AC.
WETLAND-D NON-REGUALTED 0.06 AC.
NORTH-SOUTH 1/4 LINE SECTION 33
CL DITCH
EX. HEDGEROW
EX. FENCE 5.0' WEST OF PL
EX. FENCE 8.1' WEST OF PL
TP-3
TP-4
TP-5
EX. STM CB RIM=807.77 12" S INV=803.33
EX. STM CB RIM=807.18 12" N INV=802.23 12" S INV=802.18
EX. STM CB RIM=805.09 12" E INV=800.39 12" N INV=800.11 12" S INV=800.15
EX. STM CB RIM=800.53 24" SW INV=790.37 24" NE INV=790.65
EX. STM CB RIM=800.36 18" W INV=791.26 24" NE INV=790.86 12" SW INV=795.34 12" N INV=794.76
EX. STM CB RIM=800.64 12"-NE INV=796.17
EX. STM CB RIM=798.93 12" SE INV=791.23
EX. STM CB RIM=790.96 12" NW INV=787.06 12" E INV=786.86 12" W INV=787.06
EX. STM CB RIM=789.75 12" W INV=786.20 12" E INV=785.55
EX. STM CB RIM=789.41 12" N INV=783.63 12" S INV=783.51
EX. STM CB RIM=787.22 12" N INV=782.42 15" S INV=782.32
EX. STM CB RIM=784.57 15" N INV=780.83 15" E INV=780.58
EX. STM CB RIM=804.79 15" N INV=799.79 18" E INV=792.56
RIM=810.20 12" N INV=804.65 15" S INV=804.45
FIP
FOIR
TOP
EX. 6" TOPWOOD
EX. 12" TOPWOOD
EX. 16" TOPWOOD
EX. 18" TOPWOOD
EX. 24" TOPWOOD
EX. 30" TOPWOOD
EX. 36" TOPWOOD
EX. 42" TOPWOOD
EX. 48" TOPWOOD
EX. 60" TOPWOOD
EX. 72" TOPWOOD
EX. 84" TOPWOOD
EX. 96" TOPWOOD
EX. 108" TOPWOOD
EX. 120" TOPWOOD
EX. 132" TOPWOOD
EX. 144" TOPWOOD
EX. 156" TOPWOOD
EX. 168" TOPWOOD
EX. 180" TOPWOOD
EX. 192" TOPWOOD
EX.

TAG #	COMMON NAME	*BOTANICAL NAME*	DIAMETER (IN.)	CONDITION	LANDMARK	INVASIVE	EXEMPT	REMOVE
1	Pignut Hickory	*Carya glabra*	10	Good				
2	Black Cherry	*Prunus serotina*	21	Poor	Y		Y	
3	Red Oak	*Quercus rubra*	8.5	Good				
4	Black Walnut	*Juglans nigra*	8	Good				
5	Red Oak	*Quercus rubra*	12.5	Good				
6	Bur Oak	*Quercus macrocarpa*	20	Good	Y			
7	Pignut Hickory	*Carya glabra*	9	Fair				
8	Red Oak	*Quercus rubra*	13	Good				
9	Red Oak	*Quercus rubra*	13	Good				
10	Swamp White Oak	*Quercus bicolor*	11.5	Excellent				
11	Black Walnut	*Juglans nigra*	12	Excellent				
12	Black Walnut	*Juglans nigra*	14	Good				
13	Black Walnut	*Juglans nigra*	8.5	Good				
14	Black Cherry	*Prunus serotina*	15	Fair				
15	Box-elder	*Acer negundo*	18	Fair		Y	Y	
16	Pignut Hickory	*Carya glabra*	9	Good				
17	American Elm	*Ulmus americana*	10	Good				
18	Pignut Hickory	*Carya glabra*	12	Good				
19	Black Cherry	*Prunus serotina*	8	Fair				
20	Black Cherry	*Prunus serotina*	18	Good	Y			
21	Black Cherry	*Prunus serotina*	21	Good	Y			
22	Red Oak	*Quercus rubra*	9	Good				
23	Red Oak	*Quercus rubra*	8	Good				
24	Black Cherry	*Prunus serotina*	21	Fair	Y			
25	Apple/Crabapple	*Malus spp.*	8	Good				
26	Black Cherry	*Prunus serotina*	11	Good				
27	Black Cherry	*Prunus serotina*	18	Fair	Y			
28	Black Cherry	*Prunus serotina*	18	Good	Y			
29	Black Cherry	*Prunus serotina*	14	Good				
30	Black Walnut	*Juglans nigra*	16	Excellent				
31	Black Walnut	*Juglans nigra*	17	Good				
32	Black Walnut	*Juglans nigra*	20	Fair	Y			
33	Black Walnut	*Juglans nigra*	10	Good	Y			
34	Black Walnut	*Juglans nigra*	19	Good	Y			
35	Red Oak	*Quercus rubra*	15	Good				
36	Red Oak	*Quercus rubra*	9	Good				
37	Red Oak	*Quercus rubra*	14	Good				
38	Red Oak	*Quercus rubra*	17	Good	Y			
39	Black Walnut	*Juglans nigra*	8.5	Good				
40	White Oak	*Quercus alba*	35	Fair	Y			
41	Black Cherry	*Prunus serotina*	8.5	Fair				
42	Black Cherry	*Prunus serotina*	16	Good				
43	Black Cherry	*Prunus serotina*	8	Good				
44	Black Cherry	*Prunus serotina*	8.5	Good				
45	Black Cherry	*Prunus serotina*	14.5	Fair				
46	White Oak	*Quercus alba*	20	Excellent	Y			
47	Black Cherry	*Prunus serotina*	17	Good				
48	American Elm	*Ulmus americana*	14.5	Good				
49	Box-elder	*Acer negundo*	14	Good		Y	Y	
50	White Oak	*Quercus alba*	42	Fair	Y			
51	Black Cherry	*Prunus serotina*	12	Good				
52	Black Cherry	*Prunus serotina*	11	Fair				
53	Black Cherry	*Prunus serotina*	17	Good				
54	Box-elder	*Acer negundo*	10.5	Good		Y	Y	
55	Black Cherry	*Prunus serotina*	18.5	Good	Y			
56	American Elm	*Ulmus americana*	13.5	Fair				
57	Black Cherry	*Prunus serotina*	24	Good	Y			
58	Black Cherry	*Prunus serotina*	12	Good				
59	Box-elder	*Acer negundo*	11.5	Fair		Y	Y	
60	Box-elder	*Acer negundo*	9.5	Fair		Y	Y	
61	American Elm	*Ulmus americana*	10	Good				
62	Black Cherry	*Prunus serotina*	11	Good				
63	Black Cherry	*Prunus serotina*	9.5	Fair				
64	Cottonwood	*Populus deltoides*	11	Good		Y	Y	
65	Cottonwood	*Populus deltoides*	19	Good		Y	Y	
66	Black Walnut	*Juglans nigra*	14	Good				
67	Bitternut Hickory	*Carya cordiformis*	8.5	Good				
68	American Elm	*Ulmus americana*	20.5	Good				
69	Black Cherry	*Prunus serotina*	9	Good				
70	Box-elder	*Acer negundo*	8	Fair		Y	Y	Y
71	Black Cherry	*Prunus serotina*	14	Fair				
72	White Mulberry	*Morus alba*	14	Good				
73	Willow species	*Salix spp.*	20	Good				
74	Cottonwood	*Populus deltoides*	14	Good		Y	Y	
75	Cottonwood	*Populus deltoides*	33	Good	Y	Y	Y	
76	Black Walnut	*Juglans nigra*	18	Good	Y			
77	Swamp White Oak	*Quercus bicolor*	10	Good				
78	Swamp White Oak	*Quercus bicolor*	9.5	Good				
79	Basswood	*Tilia americana*	17.5	Good				
80	Black Walnut	*Juglans nigra*	17	Excellent				
81	Black Walnut	*Juglans nigra*	13.5	Excellent				
82	Swamp White Oak	*Quercus bicolor*	9	Fair				
83	Swamp White Oak	*Quercus bicolor*	9	Good				
84	Black Walnut	*Juglans nigra*	14	Excellent				
85	Box-elder	*Acer negundo*	9	Fair		Y	Y	
86	Black Walnut	*Juglans nigra*	20	Good	Y			
87	Cottonwood	*Populus deltoides*	28	Good	Y	Y	Y	Y
88	Box-elder	*Acer negundo*	13	Fair		Y	Y	Y
89	Cottonwood	*Populus deltoides*	28	Good	Y	Y	Y	Y
90	Black Walnut	*Juglans nigra*	10	Good				Y
91	Box-elder	*Acer negundo*	8.5	Fair		Y	Y	Y
92	White Mulberry	*Morus alba*	12	Good				Y
93	Cottonwood	*Populus deltoides*	35	Good	Y	Y	Y	Y
94	American Elm	*Ulmus americana*	19	Good	Y			Y
95	Box-elder	*Acer negundo*	11	Good		Y	Y	Y
96	Black Walnut	*Juglans nigra*	9	Good				Y
97	Black Cherry	*Prunus serotina*	12.5	Good				Y
98	Box-elder	*Acer negundo*	13	Fair		Y	Y	Y
99	Box-elder	*Acer negundo*	16	Fair		Y	Y	Y
100	Pignut Hickory	*Carya glabra*	14.5	Excellent				Y
101	Willow species	*Salix spp.*	14	Good				
102	Willow species	*Salix spp.*	9.5	Good				
103	Willow species	*Salix spp.*	17.5	Good				
104	Box-elder	*Acer negundo*	8	Fair		Y	Y	
105	Box-elder	*Acer negundo*	9	Fair		Y	Y	
106	Willow species	*Salix spp.*	20	Good				
107	Willow species	*Salix spp.*	12	Fair				
108	Box-elder	*Acer negundo*	8.5	Fair		Y	Y	
109	Red-Cedar	*Juniperus virginiana*	6.5	Good		Y	Y	
110	Box-elder	*Acer negundo*	9.5	Good		Y	Y	
111	Box-elder	*Acer negundo*	9.5	Good		Y	Y	
112	Apple/Crabapple	*Malus spp.*	9	Good				
113	Willow species	*Salix spp.*	17.5	Good				
114	Willow species	*Salix spp.*	13	Good				
115	Willow species	*Salix spp.*	11	Good				
116	Willow species	*Salix spp.*	12	Good				
117	Willow species	*Salix spp.*	17	Good				
118	Red Maple	*Acer rubrum*	8	Good				
119	Box-elder	*Acer negundo*	8	Good		Y	Y	
120	American Elm	*Ulmus americana*	17.5	Good				
121	Cottonwood	*Populus deltoides*	14	Good		Y	Y	
122	Black Walnut	*Juglans nigra*	9.5	Good				
123	Black Cherry	*Prunus serotina*	8	Good				
124	White Oak	*Quercus alba*	11	Good				
125	Cottonwood	*Populus deltoides*	26	Good	Y	Y	Y	
126	Swamp White Oak	*Quercus bicolor*	9	Good				
127	Cottonwood	*Populus deltoides*	40	Good	Y	Y	Y	
128	American Elm	*Ulmus americana*	8.5	Good				
129	Willow species	*Salix spp.*	9.5	Good				
130	Willow species	*Salix spp.*	9	Good				

TAG #	COMMON NAME	*BOTANICAL NAME*	DIAMETER (IN.)	CONDITION	LANDMARK	INVASIVE	EXEMPT	REMOVE
131	Willow species	*Salix spp.*	10	Good				
132	Willow species	*Salix spp.*	11.5	Good				
133	Willow species	*Salix spp.*	16.5	Good				
134	Willow species	*Salix spp.*	9	Good				
135	Willow species	*Salix spp.*	9	Good				
136	Box-elder	*Acer negundo*	10	Good		Y	Y	
137	American Elm	*Ulmus americana*	8	Poor				
138	Black Cherry	*Prunus serotina*	10	Good				
139	Bitternut Hickory	*Carya cordiformis*	10.5	Good				
140	Bitternut Hickory	*Carya cordiformis*	14	Good				
141	Swamp White Oak	*Quercus bicolor*	9	Good				
142	Swamp White Oak	*Quercus bicolor*	12	Good				
143	White Mulberry	*Morus alba*	15	Fair				
144	Black Cherry	*Prunus serotina*	37	Fair		Y		
145	Apple/Crabapple	*Malus spp.*	12	Good				
146	Apple/Crabapple	*Malus spp.*	8	Good				
147	Basswood	*Tilia americana*	9.5	Good				
148	Bitternut Hickory	*Carya cordiformis*	8	Good				
149	Basswood	*Tilia americana*	16	Good				
150	Bitternut Hickory	*Carya cordiformis*	18	Excellent		Y		
151	American Elm	*Ulmus americana*	14	Excellent				
152	Basswood	*Tilia americana*	12	Good				
153	Black Walnut	*Juglans nigra*	13	Good				
154	Black Walnut	*Juglans nigra*	10.5	Good				
155	Black Walnut	*Juglans nigra*	17	Good				
156	Black Cherry	*Prunus serotina*	8	Good				
157	Bitternut Hickory	*Carya cordiformis*	8	Good				
158	Black Walnut	*Juglans nigra*	9	Good				
159	Bitternut Hickory	*Carya cordiformis*	11	Good				
160	Bitternut Hickory	*Carya cordiformis*	13	Excellent				
161	Bitternut Hickory	*Carya cordiformis*	8	Excellent				
162	American Elm	*Ulmus americana*	20	Good	Y			
163	Black Walnut	*Juglans nigra*	10	Fair				
164	Black Walnut	*Juglans nigra*	8	Good				
165	Black Walnut	*Juglans nigra*	8	Good				
166	Black Walnut	*Juglans nigra*	10	Good				
167	Swamp White Oak	*Quercus bicolor*	9	Good				
168	Black Walnut	*Juglans nigra*	15	Good				
169	Black Walnut	*Juglans nigra*	10.5	Fair				
170	Black Walnut	*Juglans nigra*	14	Excellent				
171	Box-elder	*Acer negundo*	9	Fair		Y	Y	
172	American Elm	*Ulmus americana*	8.5	Good				
173	Box-elder	*Acer negundo*	9	Good		Y	Y	
174	Black Oak	*Quercus velutina*	15	Good				
175	Black Cherry	*Prunus serotina*	10	Fair				Y
176	Box-elder	*Acer negundo*	10.5	Fair		Y	Y	Y
177	Black Cherry	*Prunus serotina*	9	Good				Y
178	Black Cherry	*Prunus serotina*	13.5	Good				Y
179	Black Cherry	*Prunus serotina*	11.5	Good				Y
180	Black Cherry	*Prunus serotina*	12	Good				Y
181	Swamp White Oak	*Quercus bicolor*	15	Good				
182	Swamp White Oak	*Quercus bicolor*	8	Good				
183	Black Cherry	*Prunus serotina*	9	Good				
184	Swamp White Oak	*Quercus bicolor*	13	Excellent				
185	Black Cherry	*Prunus serotina*	15	Fair				Y
186	Black Walnut	*Juglans nigra*	17	Good				Y
187	Black Walnut	*Juglans nigra*	21	Good	Y			Y
188	Box-elder	*Acer negundo*	15	Good		Y	Y	Y
189	Box-elder	*Acer negundo*	9	Good		Y	Y	Y
190	Box-elder	*Acer negundo*	9	Poor		Y	Y	Y
191	Black Cherry	*Prunus serotina*	11	Good				Y
192	Black Cherry	*Prunus serotina*	11	Good				Y
193	Black Cherry	*Prunus serotina*	11	Good				Y
194	Swamp White Oak	*Quercus bicolor*	8	Good				Y
195	Swamp White Oak	*Quercus bicolor*	9	Fair				Y
196	Swamp White Oak	*Quercus bicolor*	10	Good				Y
197	Black Cherry	*Prunus serotina*	8	Good				Y
198	Black Cherry	*Prunus serotina*	13	Fair				Y
199	Black Walnut	*Juglans nigra*	12.5	Good				Y
200	Bitternut Hickory	*Carya cordiformis*	8.5	Good				Y
201	Box-elder	*Acer negundo*	13	Poor		Y	Y	Y
202	Box-elder	*Acer negundo*	12.5	Fair		Y	Y	Y
203	Box-elder	*Acer negundo*	8	Fair		Y	Y	Y
204	Box-elder	*Acer negundo*	13	Poor		Y	Y	Y

TAG #	COMMON NAME	*BOTANICAL NAME*	DIAMETER (IN.)	CONDITION	LANDMARK	INVASIVE	EXEMPT	REMOVE
261	Siberian Elm	*Ulmus pumila*	17.5	Fair				
262	American Elm	*Ulmus americana*	8	Good				
263	American Elm	*Ulmus americana*	10	Good				
264	American Elm	*Ulmus americana*	8.5	Fair				
265	American Elm	*Ulmus americana*	9.5	Fair				
266	American Elm	*Ulmus americana*	11.5	Fair				
267	Apple/Crabapple	*Malus spp.*	9.5	Fair				
268	American Elm	*Ulmus americana*	8	Fair				Y
269	Box-elder	*Acer negundo*	8.5	Fair		Y	Y	Y
270	Apple/Crabapple	*Malus spp.*	10.5	Good				Y
271	Common Buckthorn	*Rhamnus cathartica*	10.5	Fair		Y	Y	Y
272	American Elm	*Ulmus americana*	13.5	Fair				Y
273	Hawthorn	*Crataegus spp.*	8	Good				Y
274	Apple/Crabapple	*Malus spp.*	10.5	Good				Y
275	Hawthorn	*Crataegus spp.*	10.5	Good				Y
276	Hawthorn	*Crataegus spp.*	12.5	Fair				Y
277	Apple/Crabapple	*Malus spp.*	12.5	Fair				Y
278	Hawthorn	*Crataegus spp.*	10.5	Poor			Y	Y
279	Black Cherry	*Prunus serotina*	8.5	Fair				
280	Hawthorn	*Crataegus spp.*	8	Good				Y
281	Hawthorn	*Crataegus spp.*	9	Good				Y
282	Black Cherry	*Prunus serotina*	10.5	Fair				Y
283	Black Walnut	*Juglans nigra*	8	Excellent				
284	Box-elder	*Acer negundo*	10.5	Fair		Y	Y	Y
285	Hawthorn	*Crataegus spp.*	12	Good				Y
286	Box-elder	*Acer negundo*	11	Fair		Y	Y	Y
287	Box-elder	*Acer negundo*	12	Fair		Y	Y	Y
288	Box-elder	*Acer negundo*	8.5	Fair		Y	Y	Y
289	Apple/Crabapple	*Malus spp.*	12.5	Fair				Y
290	Hawthorn	*Crataegus spp.*	10	Fair				Y
291	Hawthorn	*Crataegus spp.*	11	Fair				Y
292	Hawthorn	*Crataegus spp.*	12.5	Fair				Y
293	Black Cherry	*Prunus serotina*	9.5	Good				Y
294	Apple/Crabapple	*Malus spp.*	8	Fair				Y
295	Apple/Crabapple	*Malus spp.*	10	Fair				Y
296	Apple/Crabapple	*Malus spp.*	8.5	Good				Y
297	Apple/Crabapple	*Malus spp.*	8.5	Good				Y
298	Black Cherry	*Prunus serotina*	8	Fair				Y
299	Hackberry	*Celtis occidentalis*	14.5	Good				
300	American Elm	*Ulmus americana*	12	Fair				
301	Apple/Crabapple	*Malus spp.*	11.5	Good				
302	Hawthorn	*Crataegus spp.*	8	Poor			Y	
303	Hawthorn	*Crataegus spp.*	10.5	Fair				Y
304	American Elm	*Ulmus americana*	8	Fair				Y
305	American Elm	*Ulmus americana*	9.5	Fair				Y
306	American Elm	*Ulmus americana*	8.5	Good				
307	Hawthorn	*Crataegus spp.*	10.5	Good				Y
308	American Elm	*Ulmus americana*	9	Good				Y
309	Box-elder	*Acer negundo*	12.5	Fair		Y	Y	Y
310	Common Buckthorn	*Rhamnus cathartica*	9	Fair		Y	Y	Y
311	Apple/Crabapple	*Malus spp.*	8.5	Good				Y
312	American Elm	*Ulmus americana*	9	Good				Y
313	Hawthorn	*Crataegus spp.*	8	Fair				Y
314	Hawthorn	*Crataegus spp.*	8	Fair				Y
315	American Elm	*Ulmus americana*	10	Good				Y
316	Red-Cedar	*Juniperus virginiana*	8	Good		Y	Y	Y
317	Black Cherry	*Prunus serotina*	11	Fair				Y
318	Black Cherry	*Prunus serotina*	8.5	Fair				Y
319	Black Cherry	*Prunus serotina*	15	Fair				Y
320	Hawthorn	*Crataegus spp.*	8	Fair				Y
321	Black Cherry	*Prunus serotina*	8.5	Fair				Y
322	Black Walnut	*Juglans nigra*	14.5	Fair				Y
323	American Elm	*Ulmus americana*	20	Poor	Y		Y	Y
324	Black Walnut	*Juglans nigra*	14	Good				Y
325	Black Walnut	*Juglans nigra*	19	Poor	Y		Y	Y
326	Black Walnut	*Juglans nigra*	8.5	Good				Y
327	Willow species	*Salix spp.*	10	Good				
328	Black Walnut	*Juglans nigra*	29	Excellent	Y			
329	Black Walnut	*Juglans nigra*	14	Good				
330	Black Walnut	*Juglans nigra*	19	Fair	Y			
331	Hackberry	*Celtis occidentalis*	8	Good				
332	Hackberry	*Celtis occidentalis*	9	Good				
333	Black Walnut	*Juglans nigra*	17.5	Good				
334	Black Walnut	*Juglans nigra*	14	Fair				
335	Black Walnut	*Juglans nigra*	27	Fair	Y			
336	Black Walnut	*Juglans nigra*	10.5	Good				
337	Black Walnut	*Juglans nigra*	16.5	Good				
338	Black Walnut	*Juglans nigra*	12	Good				
339	Black Cherry	*Prunus serotina*	14.5	Fair				
340	Black Walnut	*Juglans nigra*	10	Good				
341	Black Walnut	*Juglans nigra*	11.5	Good				
342	Cottonwood	*Populus deltoides*	8	Good		Y	Y	
343	Cottonwood	*Populus deltoides*	20	Good		Y	Y	
344	Cottonwood	*Populus deltoides*	10.5	Good		Y	Y	
345	Cottonwood	*Populus deltoides*	13	Good		Y	Y	
346	Cottonwood	*Populus deltoides*	12	Fair		Y	Y	
347	Willow species	*Salix spp.*	8	Good				
348	Cottonwood	*Populus deltoides*	14.5	Good		Y	Y	
349	Cottonwood	*Populus deltoides*	14	Good		Y	Y	
350	Cottonwood	*Populus deltoides*	9	Good		Y	Y	
351	Cottonwood	*Populus deltoides*	9	Good		Y	Y	
352	Cottonwood	*Populus deltoides*	9	Good		Y	Y	
353	Cottonwood	*Populus deltoides*	10	Good		Y	Y	
354	Cottonwood	*Populus deltoides*	22	Good		Y	Y	
355	Willow species	*Salix spp.*	15.5	Good				
356	Willow species	*Salix spp.*	8.5	Good				
357	Willow species	*Salix spp.*	10.5	Fair				
358	Cottonwood	*Populus deltoides*	12	Good		Y	Y	
359	Willow species	*Salix spp.*	8	Good				
360	Willow species	*Salix spp.*	10	Good				
361	Black Walnut	*Juglans nigra*	9.5	Good				
362	Cottonwood	*Populus deltoides*	14.5	Good		Y	Y	
363	Cottonwood	*Populus deltoides*	15	Good		Y	Y	
364	Cottonwood	*Populus deltoides*	17	Good		Y	Y	
365	Cottonwood	*Populus deltoides*	14	Good		Y	Y	
366	Cottonwood	*Populus deltoides*	14	Good		Y	Y	
367	Cottonwood	*Populus deltoides*	13.5	Good		Y	Y	
368	Willow species	*Salix spp.*	11.5	Good				
369	Cottonwood	*Populus deltoides*	9	Good		Y	Y	
370	American Elm	*Ulmus americana*	13	Good				
371	Cottonwood	*Populus deltoides*	10.5	Good		Y	Y	
372	Cottonwood	*Populus deltoides*	18.5	Good		Y	Y	
373	Cottonwood	*Populus deltoides*	12	Good		Y	Y	
374	Cottonwood	*Populus deltoides*	18	Good		Y	Y	
375	Cottonwood	*Populus deltoides*	12	Good		Y	Y	
376	Willow species	*Salix spp.*	12	Good				
377	Cottonwood	*Populus deltoides*	14.5	Good		Y	Y	
378	Cottonwood	*Populus deltoides*	9	Good		Y	Y	
379	Cottonwood	*Populus deltoides*	10	Good		Y	Y	
380	Willow species	*Salix spp.*	18.5	Fair				
381	Cottonwood	*Populus deltoides*	8	Good		Y	Y	
382	Red Maple	*Acer rubrum*	13.5	Good				
383	Cottonwood	*Populus deltoides*	11.5	Good		Y	Y	
384	Cottonwood	*Populus deltoides*	10	Good		Y	Y	
385	Willow species	*Salix spp.*	11	Fair				
386	Cottonwood	*Populus deltoides*	9.5	Good		Y	Y	
387	Cottonwood	*Populus deltoides*	9	Good		Y	Y	
388	Cottonwood	*Populus deltoides*	14	Good		Y	Y	
389	Cottonwood	*Populus deltoides*	10.5	Good		Y	Y	
391	Cottonwood	*Populus deltoides*	10	Fair		Y	Y	

TAG #	COMMON NAME	*BOTANICAL NAME*	DIAMETER (IN.)	CONDITION	LANDMARK	INVASIVE	EXEMPT	REMOVE
392	Cottonwood	*Populus deltoides*	16.5	Excellent		Y	Y	
393	Willow species	*Salix spp.*	25	Fair	Y			
394	American Elm	*Ulmus americana*	8.5	Fair				
395	Cottonwood	*Populus deltoides*	18	Good		Y	Y	
401	White Mulberry	*Morus alba*	12.5	Good				
402	Black Cherry	*Prunus serotina*	11	Poor			Y	
403	Common Apple	*Malus pumila*	9	Poor			Y	
404	Apple/Crabapple	*Malus spp.*	13	Poor			Y	
405	Sweet Cherry	*Prunus avium*	13	Excellent	Y			
406	Hackberry	*Celtis occidentalis*	18	Excellent				
407	Black Cherry	*Prunus serotina*	8	Good				
408	Box-elder	*Acer negundo*	8	Good		Y	Y	
409	American Elm	*Ulmus americana*	11	Excellent				
410	Apple/Crabapple	*Malus spp.*	8.5	Good				
411	Apple/Crabapple	*Malus spp.*	8	Good				
412	Apple/Crabapple	*Malus spp.*	22	Good				
413	Apple/Crabapple	*Malus spp.*	8.5	Good				
414	Apple/Crabapple	*Malus spp.*	12.5	Excellent				
415	Black Cherry	*Prunus serotina*	12.5	Fair				
415	Black Cherry	*Prunus serotina*	12.5	Fair				
416	Black Cherry	*Prunus serotina*	12.5	Poor			Y	
417	Black Cherry	*Prunus serotina*	9	Fair				
418	Peachleaf Willow	*Salix amygdaloides*	11	Good				
419	Black Cherry	*Prunus serotina*	20.5	Fair	Y			
420	Black Cherry	*Prunus serotina*	13	Good				
421	Black Cherry	*Prunus serotina*	8	Fair				
422	Black Cherry	*Prunus serotina*	8.5	Fair				
423	Common Buckthorn	*Rhamnus cathartica*	14	Fair		Y	Y	
424	Common Pear	*Pyrus communis*	11.5	Good				
425	Common Pear	*Pyrus communis*	15.5	Fair				
426	Cottonwood	*Populus deltoides*	37	Fair	Y	Y	Y	Y
427	Cottonwood	*Populus deltoides*	54.5	Good	Y	Y	Y	Y
428	Box-elder	*Acer negundo*	9	Good		Y	Y	Y
429	Common Apple	*Malus pumila*	13	Good				Y
430	Apple/Crabapple	*Malus spp.*	9	Good				Y
431	Peachleaf Willow	*Salix amygdaloides*	16.5	Excellent				Y
432	Box-elder	*Acer negundo*	9.5	Fair		Y	Y	Y
433	Cottonwood	*Populus deltoides*	26	Good	Y	Y	Y	Y
434	American Elm	*Ulmus americana*	17	Good				Y
435	Black Walnut	*Juglans nigra*	9	Excellent				Y
436	Black Walnut	*Juglans nigra*	8.5	Good				Y
437	Box-elder	*Acer negundo*	13.5	Good		Y	Y	Y
438	American Elm	*Ulmus americana*	9.5	Good				Y
439	Black Walnut	*Juglans nigra*	9	Excellent				Y
440	Common Buckthorn	*Rhamnus cathartica*	16	Fair		Y	Y	Y
441	Common Buckthorn	*Rhamnus cathartica*	19	Fair		Y	Y	Y
442	Apple/Crabapple	*Malus spp.*	8.5	Good				Y
443	Hackberry	*Celtis occidentalis*	21	Good				Y
444	White Mulberry	*Morus alba*	16.5	Fair				Y
445	Black Walnut	*Juglans nigra*	8.5	Excellent				Y
446	Crack Willow	*Salix fragilis*	9.5	Good				Y
447	Crack Willow	*Salix fragilis*	11.5	good				Y
448	Crack Willow	*Salix fragilis*	14.5	Good				Y
449	Peachleaf Willow	*Salix amygdaloides*	11.5	Good				
450	Peachleaf Willow	*Salix amygdaloides*	11	Good				
451	Peachleaf Willow	*Salix amygdaloides*	9	Excellent				
452	Peachleaf Willow	*Salix amygdaloides*	10	Good				
453	Peachleaf Willow	*Salix amygdaloides*	8	Good				
454	Peachleaf Willow	*Salix amygdaloides*	8	Good				
455	Peachleaf Willow	*Salix amygdaloides*	11	Excellent				
456	Peachleaf Willow	*Salix amygdaloides*	9	Good				
457	Peachleaf Willow	*Salix amygdaloides*	9.5	Good				
458	Peachleaf Willow	*Salix amygdaloides*	10.5	Excellent				
459	Peachleaf Willow	*Salix amygdaloides*	9	Good				
460	Peachleaf Willow	*Salix amygdaloides*	11.2	Good				
461	Peachleaf Willow	*Salix amygdaloides*	11	Good				
462	Peachleaf Willow	*Salix amygdaloides*	10	Good				
463	Peachleaf Willow	*Salix amygdaloides*	8.5	Good				
464	Peachleaf Willow	*Salix amygdaloides*	9	Fair				
465	Peachleaf Willow	*Salix amygdaloides*	12	Good				
466	Peachleaf Willow	*Salix amygdaloides*	11	Good				
467	Peachleaf Willow	*Salix amygdaloides*	12	Good				
468	Box-elder	*Acer negundo*	11	Good		Y	Y	
469	Cottonwood	*Populus deltoides*	15.5	Excellent		Y	Y	
1703	Black Walnut	*Juglans nigra*	13.5	Good				
1705	Black Walnut	*Juglans nigra*	14.5	Excellent				

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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 FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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

TAG #	COMMON NAME	*BOTANICAL NAME*	DIAMETER (IN.)	CONDITION	LANDMARK	INVASIVE	EXEMPT	REMOVE
1708	Black Walnut	*Juglans nigra*	15	Good				
1726	Black Walnut	*Juglans nigra*	22	Good	Y			
1737	Black Walnut	*Juglans nigra*	19	Fair	Y			
1901	White Ash	*Fraxinus americana*	8.5	Good				
1908	Red Oak	*Quercus rubra*	19.5	Good	Y			
1909	Black Walnut	*Juglans nigra*	10	Good				
1910	Black Walnut	*Juglans nigra*	13	Good				
1911	Black Walnut	*Juglans nigra*	14	Excellent				
1912	Black Walnut	*Juglans nigra*	13	Good				
1913	American Elm	*Ulmus americana*	15	Good				
1914	Box-elder	*Acer negundo*	12	Good		Y	Y	
1915	American Elm	*Ulmus americana*	9	Good				
1916	Black Walnut	*Juglans nigra*	9	Good				
1917	Black Walnut	*Juglans nigra*	12	Good				
1918	Black Walnut	*Juglans nigra*	15	Good				
1919	Black Walnut	*Juglans nigra*	12	Good				
1920	American Elm	*Ulmus americana*	8	Good				
1921	Bitternut Hickory	*Carya cordiformis*	11	Excellent				
1923	Black Walnut	*Juglans nigra*	10.5	Fair				
1924	Black Walnut	*Juglans nigra*	9.5	Excellent				
1925	Black Walnut	*Juglans nigra*	16	Good				
1926	Box-elder	*Acer negundo*	13.5	Poor		Y	Y	
1927	Black Walnut	*Juglans nigra*	16	Good				
1928	Box-elder	*Acer negundo*	9	Fair		Y	Y	
1929	Box-elder	*Acer negundo*	11	Fair		Y	Y	
1930	Peachleaf Willow	*Salix amygdaloides*	20	Good				
1931	Box-elder	*Acer negundo*	10	Poor		Y	Y	
1932	Black Walnut	*Juglans nigra*	20	Excellent	Y			
1933	Black Walnut	*Juglans nigra*	20.5	Good	Y			
1934	Box-elder	*Acer negundo*	10	Dead		Y	Y	
1936	Box-elder	*Acer negundo*	8	Poor		Y	Y	
1937	Black Walnut	*Juglans nigra*	8.5	Good				
1938	Common Buckthorn	*Rhamnus cathartica*	11	Fair		Y	Y	
1939	American Elm	*Ulmus americana*	12	Good				
1940	Black Walnut	*Juglans nigra*	10	Good				
1941	Box-elder	*Acer negundo*	10	Dead		Y	Y	
1942	Black Walnut	*Juglans nigra*	8	Good				
1943	Black Walnut	*Juglans nigra*	16	Good				
1944	Bitternut Hickory	*Carya cordiformis*	11.5	Excellent				
1945	Red Oak	*Quercus rubra*	11	Good				
1946	Black Cherry	*Prunus serotina*	14	Poor			Y	
1947	American Elm	*Ulmus americana*	9	Fair				
1948	Black Walnut	*Juglans nigra*	12	Good				
1949	Black Walnut	*Juglans nigra*	12	Poor			Y	
1950	Box-elder	*Acer negundo*	8	Fair		Y	Y	
1951	Box-elder	*Acer negundo*	14	Good		Y	Y	
1952	Box-elder	*Acer negundo*	13	Good		Y	Y	
1953	Black Walnut	*Juglans nigra*	11	Fair				
1954	Black Walnut	*Juglans nigra*	21	Good	Y			
1955	Box-elder	*Acer negundo*	10.5	Fair		Y	Y	
1956	Box-elder	*Acer negundo*	10	Fair		Y	Y	
1957	Box-elder	*Acer negundo*	11	Good		Y	Y	
1958	Black Walnut	*Juglans nigra*	11	Fair				
1959	Box-elder	*Acer negundo*	14	Fair		Y	Y	
1960	Box-elder	*Acer negundo*	9.5	Fair		Y	Y	
1961	Box-elder	*Acer negundo*	11.5	Fair		Y	Y	
1962	Black Walnut	*Juglans nigra*	11	Excellent				
1963	Cottonwood	*Populus deltoides*	12.5	Excellent		Y	Y	
1964	Cottonwood	*Populus deltoides*	11.5	Good		Y	Y	
1965	Cottonwood	*Populus deltoides*	14	Excellent		Y	Y	
1966	Cottonwood	*Populus deltoides*	12.5	Good		Y	Y	
1967	Cottonwood	*Populus deltoides*	10.5	Good		Y	Y	
1968	Black Walnut	*Juglans nigra*	12.5	Excellent				
1969	Black Walnut	*Juglans nigra*	8	Good				
1970	Box-elder	*Acer negundo*	9	Good		Y	Y	
1971	Box-elder	*Acer negundo*	8	Poor		Y	Y	
1972	Box-elder	*Acer negundo*	15	Fair		Y	Y	
1973	Black Walnut	*Juglans nigra*	9	Good				
1974	Black Walnut	*Juglans nigra*	17.5	Good				
1975	Black Walnut	*Juglans nigra*	9	Good				
1976	Box-elder	*Acer negundo*	9.5	Fair		Y	Y	
1977	Box-elder	*Acer negundo*	14	Good		Y	Y	
1978	Box-elder	*Acer negundo*	8	Good		Y	Y	
1979	Box-elder	*Acer negundo*	11	Good		Y	Y	
1980	Box-elder	*Acer negundo*	8.5	Fair		Y	Y	
1981	Box-elder	*Acer negundo*	8	Dead		Y	Y	
1982	Box-elder	*Acer negundo*	8	Fair		Y	Y	
4001	Red Oak	*Quercus rubra*	11.3	Good				
4002	Red Oak	*Quercus rubra*	18.2	Good	Y			
4003	Box-elder	*Acer negundo*	9.5	Poor		Y	Y	
4004	Box-elder	*Acer negundo*	8	Poor		Y	Y	
4005	Box-elder	*Acer negundo*	8.5	Poor		Y	Y	
4006	Box-elder	*Acer negundo*	8	Fair		Y	Y	
4007	Box-elder	*Acer negundo*	9	Fair		Y	Y	
4008	Box-elder	*Acer negundo*	11	Fair		Y	Y	
4009	American Elm	*Ulmus americana*	11	Good				
4010	American Elm	*Ulmus americana*	9.5	Excellent				
4011	Box-elder	*Acer negundo*	12	Fair		Y	Y	
4012	Box-elder	*Acer negundo*	12	Poor		Y	Y	
4013	Box-elder	*Acer negundo*	14.5	Fair		Y	Y	
4014	Box-elder	*Acer negundo*	19.5	Good		Y	Y	
4015	Box-elder	*Acer negundo*	10	Fair		Y	Y	
4016	Box-elder	*Acer negundo*	15	Good		Y	Y	
4017	Box-elder	*Acer negundo*	8	Good		Y	Y	
4018	Box-elder	*Acer negundo*	10.5	Poor		Y	Y	
4019	Box-elder	*Acer negundo*	10	Fair		Y	Y	
4020	Box-elder	*Acer negundo*	16	Fair		Y	Y	
4021	Box-elder	*Acer negundo*	11.5	Fair		Y	Y	
4022	Box-elder	*Acer negundo*	21	Good		Y	Y	
4023	Box-elder	*Acer negundo*	9	Fair		Y	Y	
4024	Box-elder	*Acer negundo*	12.5	Fair		Y	Y	
4025	Black Walnut	*Juglans nigra*	22	Excellent	Y			
4026	Box-elder	*Acer negundo*	20	Good		Y	Y	
4027	Hackberry	*Celtis occidentalis*	10	Fair				
4029	American Elm	*Ulmus americana*	14.5	Good				
4030	Black Walnut	*Juglans nigra*	8	Good				
4031	Black Walnut	*Juglans nigra*	8.5	Excellent				
4032	Black Walnut	*Juglans nigra*	15	Good				
4033	Black Walnut	*Juglans nigra*	14	Good				
4034	Black Walnut	*Juglans nigra*	12.5	Good				
4035	Black Walnut	*Juglans nigra*	10	Good				
4036	Box-elder	*Acer negundo*	8.5	Fair		Y	Y	
4037	Box-elder	*Acer negundo*	10	Fair		Y	Y	
4038	Box-elder	*Acer negundo*	8	Fair		Y	Y	
4039	Black Walnut	*Juglans nigra*	9.5	Good				
4040	Black Walnut	*Juglans nigra*	8	Excellent				
4041	Black Walnut	*Juglans nigra*	13	Good				
4042	Cottonwood	*Populus deltoides*	43	Good	Y	Y	Y	
4043	Black Walnut	*Juglans nigra*	10.5	Excellent				
4044	Black Walnut	*Juglans nigra*	9.5	Good				
4045	Pussy Willow	*Salix discolor*	8	Good				
4046	Hackberry	*Celtis occidentalis*	10	Excellent				
4047	Black Walnut	*Juglans nigra*	10	Excellent				
4048	Black Walnut	*Juglans nigra*	13	Excellent				
4049	Black Walnut	*Juglans nigra*	10.5	Good				
4050	Black Walnut	*Juglans nigra*	18	Good	Y			
4051	Black Walnut	*Juglans nigra*	18	Good	Y			
4052	Black Walnut	*Juglans nigra*	23	Good	Y			
4053	Black Walnut	*Juglans nigra*	8.5	Fair				
4054	Black Walnut	*Juglans nigra*	13	Good				

TAG #	COMMON NAME	*BOTANICAL NAME*	DIAMETER (IN.)	CONDITION	LANDMARK	INVASIVE	EXEMPT	REMOVE
4055	Black Walnut	*Juglans nigra*	22	Excellent	Y			
4056	Black Walnut	*Juglans nigra*	11.5	Good				
4057	Black Walnut	*Juglans nigra*	8	Fair				
4058	White Ash	*Fraxinus americana*	8	Fair				
4059	Apple/Crabapple	*Malus spp.*	18.5	Fair				
4060	Black Cherry	*Prunus serotina*	16	Poor			Y	
4061	Black Cherry	*Prunus serotina*	18	Fair	Y			
4062	Black Cherry	*Prunus serotina*	45	Fair	Y			
4063	Black Cherry	*Prunus serotina*	17	Poor			Y	
4064	Black Walnut	*Juglans nigra*	15.5	Good				
4065	Black Cherry	*Prunus serotina*	8	Fair				
4066	American Elm	*Ulmus americana*	10.5	Good				
4067	Apple/Crabapple	*Malus spp.*	12	Fair				
4068	Black Walnut	*Juglans nigra*	11	Good				
4069	Black Walnut	*Juglans nigra*	8	Good				
4070	Black Walnut	*Juglans nigra*	12.5	Good				
4071	Black Walnut	*Juglans nigra*	16.5	Good				
4072	Black Cherry	*Prunus serotina*	17.5	Poor			Y	
4073	Black Walnut	*Juglans nigra*	27	Good	Y			
4076	Black Walnut	*Juglans nigra*	11	Good				
4077	Black Cherry	*Prunus serotina*	15	Poor			Y	
4078	Serviceberry	*Amelanchier spp.*	8	Good				
4079	Black Cherry	*Prunus serotina*	16	Poor			Y	
4080	Black Cherry	*Prunus serotina*	14	Fair				
4081	Black Cherry	*Prunus serotina*	18	Fair	Y			
4082	Apple/Crabapple	*Malus spp.*	13	Good				
4083	Hawthorn	*Crataegus spp.*	13	Good				
4084	Black Cherry	*Prunus serotina*	15	Poor			Y	
4085	Hawthorn	*Crataegus spp.*	8	Fair				
4086	Hawthorn	*Crataegus spp.*	12	Fair				
4087	Hawthorn	*Crataegus spp.*	15.5	Fair				
4088	Black Cherry	*Prunus serotina*	12	Good				
4089	Hawthorn	*Crataegus spp.*	8	Good				
4090	Hawthorn	*Crataegus spp.*	9.5	Excellent				
4091	Black Cherry	*Prunus serotina*	27	Poor	Y		Y	Y
4092	Black Walnut	*Juglans nigra*	28	Good	Y			Y
4093	American Elm	*Ulmus americana*	11	Good				
4094	Black Cherry	*Prunus serotina*	23	Fair	Y			
4095	American Elm	*Ulmus americana*	11	Good				
4096	Black Cherry	*Prunus serotina*	19	Poor	Y		Y	
4097	Black Cherry	*Prunus serotina*	17	Fair				
4098	Shagbark Hickory	*Carya ovata*	12	Excellent				
4099	Black Walnut	*Juglans nigra*	15.5	Excellent				
4100	Black Cherry	*Prunus serotina*	20	Fair	Y			

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

TREE REMOVAL/REPLACEMENT CALCULATION

REGULATED 8"-12" TREES REMOVED	**76**	: **76**	REPLACEMENT TREES REQUIRED
REGULATED 12.1"-16" TREES REMOVED	**25**	: **75**	REPLACEMENT TREES REQUIRED
REGULATED 16.1" & GREATER TREES REMOVED	**9**	: **54**	REPLACEMENT TREES REQUIRED
TOTAL NUMBER OF REGULATED TREES REMOVED	**110**	: **205**	REPLACEMENT TREES REQUIRED
TOTAL NUMBER OF LANDMARK TREES REMOVED	**3**		
TOTAL LANDMARK DBH REMOVED (INCHES)	**68**	: **68**	REPLACEMENT TREES REQUIRED
TOTAL NUMBER OF REPLACEMENT TREES	**273**	TREES	

TREE SURVEY NOTES

1. REMOVALS ON SHOWN ON THIS SHEET WITHIN THE PHASE 2 AREA WERE REMOVED AS PART OF PHASE 1 MASS GRADING EFFORTS.

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).

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

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ANN ARBOR, MI 48104
734.994.4000

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

CLIENT
SE MICHIGAN LAND HOLDING LLC
PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2
TREE LIST

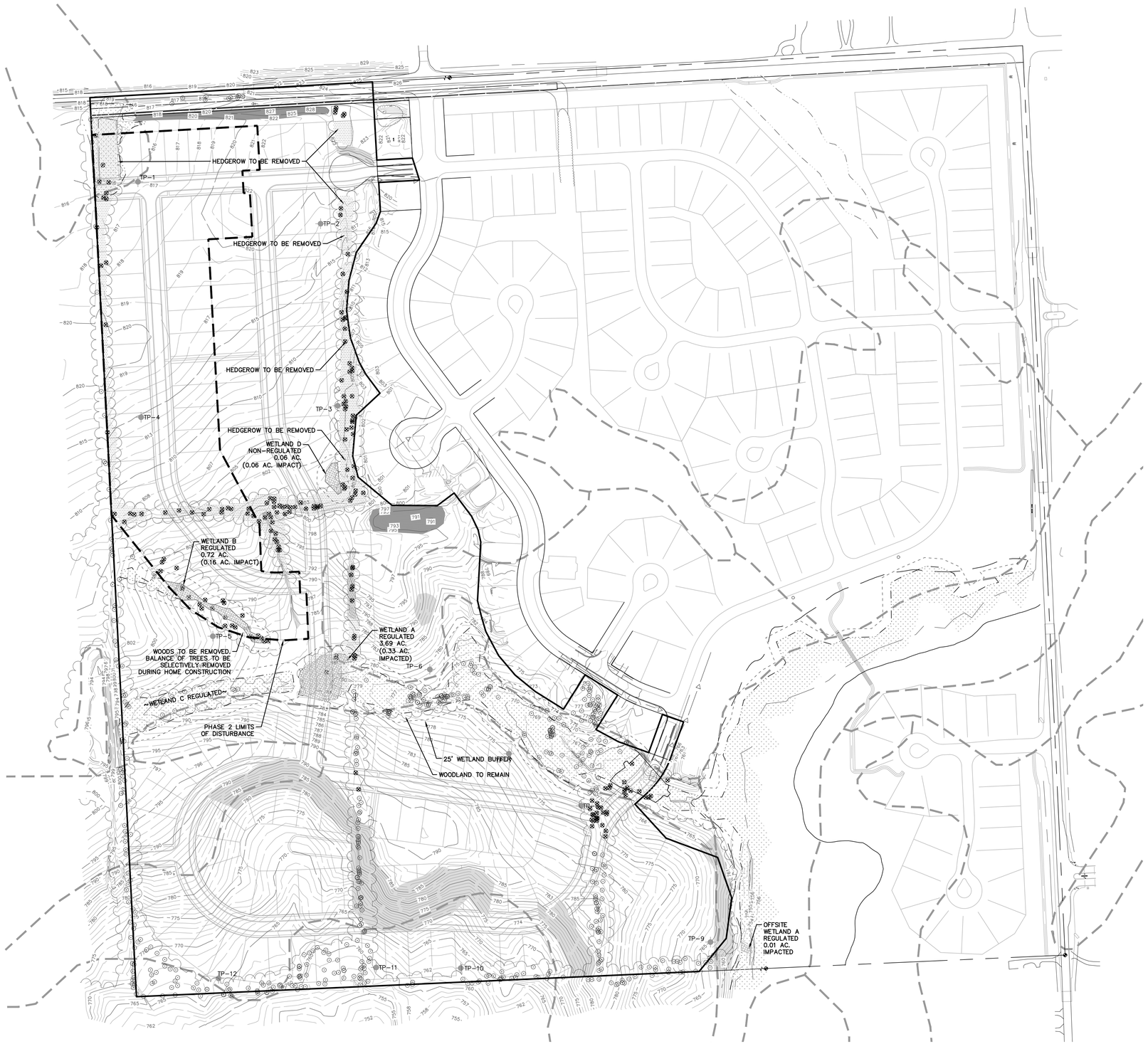
DATE
MARCH 1, 2024

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REVISIONS
NA NA NA
N/A

DR. SK | CH. SS
P.M. MB
BOOK --
JOB 16000819
SHEET NO.
6

N:\16000819\DWG\PLAN SETS\SITE - FINAL PHASE 2\16000819FP2-04-TLDWG 3/7/2024 1:20 PM KYLER GRESSEN



LEGEND

- 12%-18% SLOPES
- 18%+ SLOPES
- REMOVE WOODS
- EXISTING WETLAND
- WETLAND IMPACTS
- LIMITS OF GRADING
- EXISTING SOILS LIMIT
- FoB EXISTING SOILS TYPE

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
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

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 DESCRIBES 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 REMOVE 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.

WETLAND IMPACT SUMMARY

Wetland Impact	Wetland Area (acre)	EGLE Regulated	Regulated Wetland Impact Area (SF)	Regulated Wetland Impact Area (AC)	Estimated Cut Impact Volume (cubic yards)	Estimated Fill Impact Volume (cubic yards)	Estimated Net Impact Volume (cubic yards)
A1	3.69	Yes	14,480	0.33	0	2950	2950
A2	3.69	Yes	611	0.01	52	0	-52
B	0.72	Yes	6,892	0.16	41	295	254
D	0.06	No	0	0.00	-	-	-
Total		**-**	**21,983**	**0.50**	**93**	**3245**	**3152**

811
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SECTION 33
TOWN 2 SOUTH, RANGE 7 EAST
SUPERIOR TOWNSHIP
WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

NATURAL FEATURES PLAN

DATE
MARCH 1, 2024

--

REVISIONS

0 75 150
SCALE: 1" = 150 FEET

DR. SK | CH. SS
P.M. MB
BOOK --
JOB 16000819
SHEET NO. 7

N:\16000819\CAD\LAYOUTS\SITE - FINAL PHASE 2\16000819FP2-SP-NP.DWG, 3/7/2024 4:33 PM, KYLER SHEPPARD

MAINTAIN TEMPORARY ASPHALT DRIVE APPROACH AND GRAVEL DRIVE THROUGHOUT CONSTRUCTION. REPLACE STONE AS NECESSARY. TEMPORARY ACCESS TO BE REMOVED AT DIRECTION OF OWNER.

NORTH 1/4 COR SECTION 33, T2S, R7E SUPERIOR TWP. WASHTENAW COUNTY, MI

NORTH-SOUTH 1/4 LINE SECTION 33

GEDDES ROAD (60 FT HALF WIDTH-PUBLIC)

~BITUMINOUS~

BITUMINOUS WALK

772'

HUNTERS CREEK DR. (100 FT. WD.-PUBLIC)

BM #1

VACATED ABIGAIL DRIVE (66 FT. WIDE)

ABIGAIL DRIVE (66' WIDE PRIVATE)

ABIGAIL DRIVE (66 FT. WIDE)

EDGE OF WOODED AREA (TYP.)

EX. HEDGEROW

TP-1

TP-2

TP-3

TP-4

Ho

NaB

PR. CURB INLET FILTER (SEE DETAIL ON SHEET 11)

ELIZABETH LANE (66' WIDE PRIVATE)

MAGGIE LANE (66' WIDE PRIVATE)

HUNTERS CREEK DR. (66 FT. WIDE)

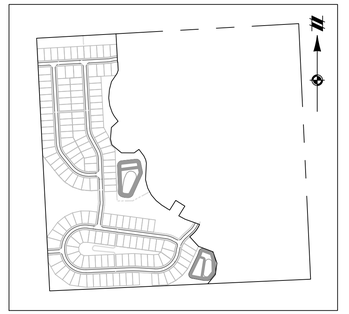
HUNTERS CREEK DRIVE

LEAH LANE (VARIABLE WIDTH-PUBLIC)

LEAH LANE

BM #2

SEE SHEET 9 FOR CONTINUATION



KEYMAP
SCALE: 1" = 750'

LEGEND

- PROPERTY LINE
- EASEMENT
- 588 EXISTING 1' CONTOUR
- 590 EXISTING 5' CONTOUR
- 588 PHASE 1 GRADING 1' CONTOUR
- 590 PHASE 1 GRADING 5' CONTOUR
- 588 PROPOSED PHASE 2 1' CONTOUR
- 590 PROPOSED PHASE 2 5' 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 SILT SACK INLET FILTER
- PROPOSED YARD INLET FILTER
- PROPOSED RIP-RAP
- EX. SOIL TYPE BOUNDARY
- Pe EX. SOIL TYPE LABEL
- PR. LIMIT OF DISTURBANCE

NOTES

IF STOCKPILING IS NECESSARY AND/OR CREATED, SILT FENCE SHALL BE INSTALLED AND MAINTAINED AROUND THE PERIMETER OF THE STOCKPILE IF THE STOCKPILE WILL BE ON-SITE FOR AN EXTENDED PERIOD OF TIME.

MASS GRADING OF THE PHASE 2 AREA WAS PERFORMED DURING PHASE 1 CONSTRUCTION.

811 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:
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SECTION 33
TOWN 2 SOUTH, RANGE 7 EAST
SUPERIOR TOWNSHIP
WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN - PHASE 2

SOIL EROSION CONTROL PLAN

DATE
MARCH 1, 2024

--

REVISIONS

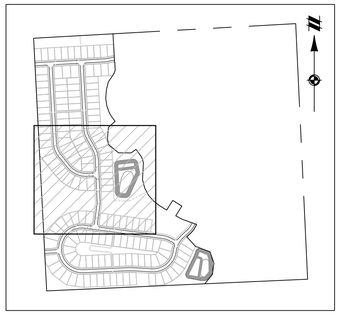
0 25 50
SCALE: 1" = 50 FEET

DR.	SK	CH.	SS
P.M.	MB		
BOOK	--		
JOB	16000819		
SHEET NO.	8		

I:\16000819\CAD\PLAN SETS\FSP - FINAL PHASE 2\16000819FSP2-SC-SESCPAN 7/2/2024 3:22 PM KYLER SHELTON

SEE SHEET 8 FOR CONTINUATION





KEYMAP
SCALE: 1" = 750'

LEGEND

- PROPERTY LINE
- EASEMENT
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- PHASE 1 GRADING 1' CONTOUR
- PHASE 1 GRADING 5' CONTOUR
- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- EXISTING MANHOLE/CATCH BASIN/END SECTION
- PROPOSED MANHOLE/CATCH BASIN/END SECTION
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- GRADING LIMITS
- TREE PROTECTION
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- PROPOSED SILT SACK INLET FILTER
- PROPOSED YARD INLET FILTER
- PROPOSED RIP-RAP
- EX. SOIL TYPE BOUNDARY
- Pe EX. SOIL TYPE LABEL
- PR. LIMIT OF DISTURBANCE
- PHASE LINE

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734.994.4000

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

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

SOIL EROSION CONTROL PLAN

DATE
MARCH 1, 2024

--

REVISIONS

0 25 50
SCALE: 1" = 50 FEET

DR. SK	CH. SS
P.M. MB	
BOOK --	
JOB 16000819	
SHEET NO. 9	

L:\16000819\PLAN\PLAN SETS\FSP - FINAL PHASE 2\16000819FSP2-SE-SESC.DWG 2/5/2024 3:33 PM KEVIN SKERRY

MAINTAIN TEMPORARY ASPHALT DRIVE APPROACH AND GRAVEL DRIVE THROUGHOUT CONSTRUCTION. REPLACE STONE AS NECESSARY. TEMPORARY ACCESS TO BE REMOVED AT DIRECTION OF OWNER.

GEDDES ROAD
(60 FT HALF WIDTH–PUBLIC)
~BITUMINOUS~

U.P.

OHE

815.67EX

815.92EX

R20'

R30'

28'

50'

BITUMINOUS WALK

EDGE OF WATER
AREA: 0.24 AC.

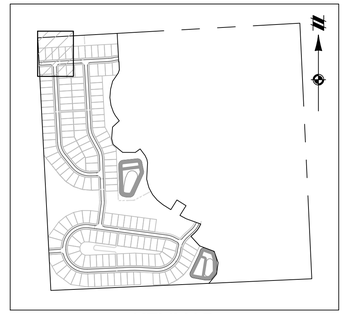
WETLAND–E
NON–REGUALTED
0.53 AC.
ON–SITE

TP–1

EX. HEDGEROW

63 62 61 60 59 58 56 55

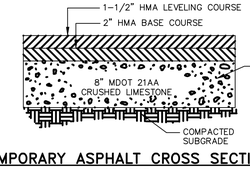
Ho



KEYMAP
SCALE: 1" = 750'

LEGEND

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- 588 EXISTING 1' CONTOUR
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- PROPOSED SILT FENCE
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- PROPOSED SILT SACK INLET FILTER
- PROPOSED YARD INLET FILTER
- PROPOSED RIP–RAP
- EX. SOIL TYPE BOUNDARY
- Pe EX. SOIL TYPE LABEL
- PR. LIMIT OF DISTURBANCE



TEMPORARY ASPHALT CROSS SECTION
NO SCALE

811
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SECTION 33
TOWN 2 SOUTH, RANGE 7 EAST
SUPERIOR TOWNSHIP
WASHTENAW COUNTY, MICHIGAN

CLIENT:
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2
TEMPORARY CONSTRUCTION ACCESS DRIVE

DATE
MARCH 1, 2024

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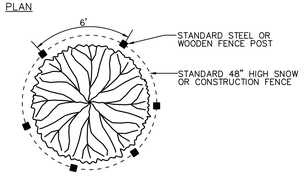
REVISIONS

0 10 20
SCALE: 1" = 20 FEET

DR. SK	CH. SS
P.M. MB	
BOOK --	
JOB 16000819	
SHEET NO. 10	

J:\16000819\DWG\PLAN SETS\SITE - FINAL PHASE 2\16000819P2-05-SESCMS 3/5/2024 3:23 PM KYLER SKEEN

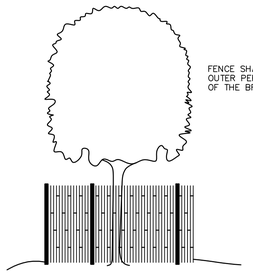
PLAN



TREE PROTECTION NOTES:

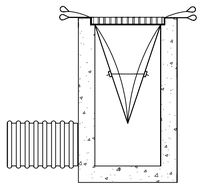
1. ALL TREES TO BE REMOVED WILL BE IDENTIFIED BY RED FLAGGING.
2. TREE PROTECTION FENCING IS TO BE ERECTED PRIOR TO ANY EARTHWORK OR CONSTRUCTION AND IS TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
3. ALL DEBRIS, FILL, EQUIPMENT OR MATERIAL IS TO BE KEPT CLEAR OF AREA WITHIN PROTECTIVE FENCE. NO CLEANING OF EQUIPMENT,OR MATERIAL OR STORAGE OR DISPOSAL OF ANY MATERIAL WITHIN THE DRIP LINE OF ANY TREES TO BE SAVED.

ELEVATION

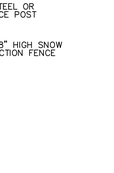


FENCE SHALL BE LOCATED 5' OUT SIDE THE OUTER PERIMETER OF THE SPREAD OF THE BRANCHES (DRIP-LINE)

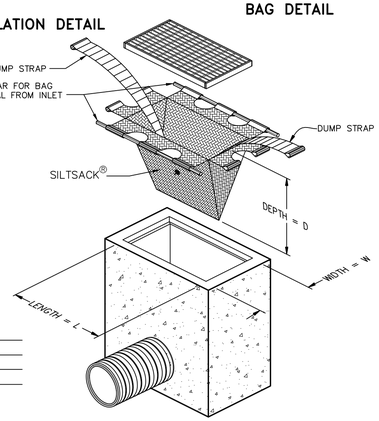
TREE PROTECTION FENCE DETAIL
NO SCALE



INSTALLATION DETAIL

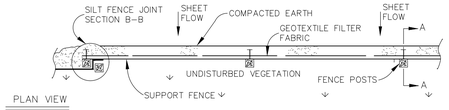


BAG DETAIL

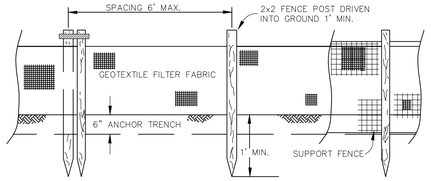


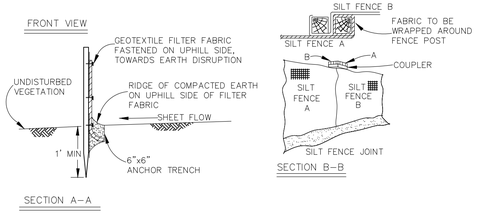
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WIDTH = _____
DEPTH = _____
QUANTITY = _____

SILTSACK DETAIL
NO SCALE

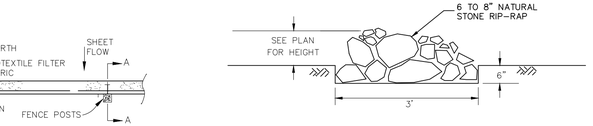


PLAN VIEW

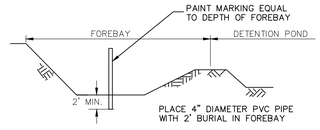




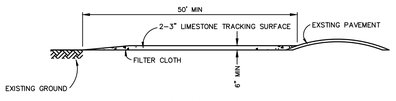
SILTFENCE DETAIL
NO SCALE



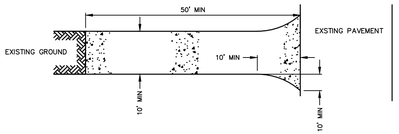
SEDIMENT FOREBAY RIP-RAP BARRIER DETAIL
NO SCALE



SEDIMENT FOREBAY MARKER DETAIL
NO SCALE

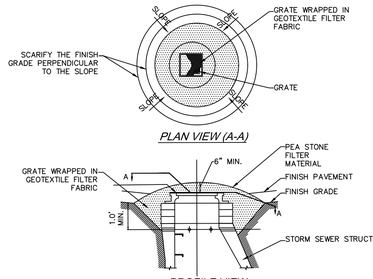


PROFILE

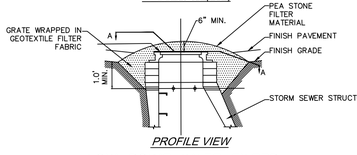


PLAN VIEW

TRACKING SURFACE
NO SCALE

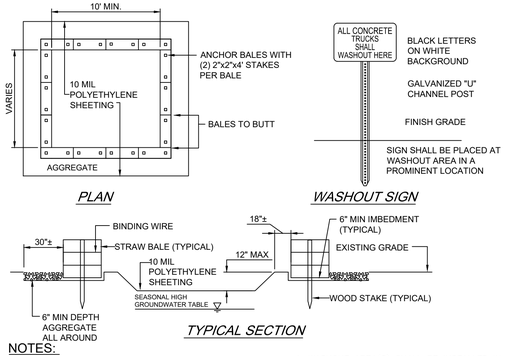


PLAN VIEW (A-A)



PROFILE VIEW

LOW POINT INLET FILTER
NO SCALE



NOTES:

1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE ASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

CONCRETE WASHOUT AREA
NO SCALE

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: 13± ACRES IN PHASE 2
4. THIS PROJECT BOUNDARY IS APPROXIMATELY 60 FEET FROM AN UN-NAMED WATERCOURSE

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.
23. IF STOCKPILING IS NECESSARY AND/OR CREATED, SILT FENCE SHALL BE INSTALLED AND MAINTAINED AROUND THE PERIMETER OF THE STOCKPILE IF THE STOCKPILE WILL BE ON-SITE FOR AN EXTENDED PERIOD OF TIME.
24. AT THE TIME OF PLANT AND SEED DELIVERY, A WCWRC LANDSCAPE REVIEWER MUST BE PRESENT. THE QUANTITY AND SPECIES DELIVERED WILL BE REVIEWED ON SITE. CONTACT CATIE WYTYCHAK AT WYRYCHAKC@WASHTENAW.ORD OR (734) 222-6813.

NOTE: NO WORK WITHIN REGULATED WETLANDS UNTIL EGLE PERMIT IS ISSUED

SOIL EROSION CONSTRUCTION SEQUENCE

1. NOTIFY SOIL EROSION OFFICE 48 HOURS BEFORE WORK IS TO BEGIN.
2. PRIOR TO CONSTRUCTION, INSTALL TEMPORARY STONE ACCESS DRIVES AT ENTRANCE, SILT FENCE, TREE PROTECTION 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. (10/1/23 – 15 DAYS)
4. PAVING ACTIVITIES. REMOVE STONE ACCESS DRIVE WHEN COMPLETE. (11/01/23 – 10 DAYS)
5. INSTALL PUBLIC UTILITIES (ELECTRIC, TELEPHONE, AND CABLE T.V.). (11/15/23 – 30 DAYS)
6. FINAL GRADING AND INSTALLATION OF LANDSCAPING. ESTABLISH PERMANENT VEGETATION FOR REMAINING DISTURBED AREAS. (04/15/24 – 45 DAYS)
7. CLEAN OUT STORM SEWER SYSTEM. CLEAN OUT SEDIMENT AND RESTORE SEDIMENT FOREBAY AND DETENTION POND TO DESIGN SPECIFICATIONS. (MAY 2024 – 15 DAYS)
8. CALL SOIL EROSION OFFICE FOR FINAL INSPECTION. REMOVE TEMPORARY SOIL EROSION MEASURES UPON APPROVAL. (JULY 2024)

Maintenance Tasks and Schedule (during construction)

Tasks	Components: Storm Sewer System	Catch Basin Sumps	Catch Basin Inlet Castings	Channels	Outflow Control Structures	Rip-Rap	Storm Detention Areas	Subsurface Infiltration Bed	Wetlands	Emergency Overflow	Schedule
Inspect for sediment accumulation	*	*			*		*	*	*		Weekly
Removal of sediment accumulation	*	*			*		*	*	*		As needed* and prior to turnover
Inspect for floatables and debris	*	*	*	*	*		*	*	*	*	Quarterly
Cleaning of floatables and debris	*	*	*	*	*		*	*	*	*	Quarterly and at turnover
Inspection for erosion				*	*	*	*		*	*	Weekly
Reestablish permanent vegetation on eroded slopes				*			*		*	*	As needed* and prior to turnover
Replacement of gravel jackets					*						As needed*
Mowing				*			*			*	0 to 2 times per yr.
Inspect structural elements during wet weather and compare as-built plans (by a professional engineer reporting to the Developer)	*			*	*	*	*		*	*	Annually and at turnover
Make adjustments or replacements as determined by pre-turnover inspection	*			*	*	*	*		*	*	As needed*

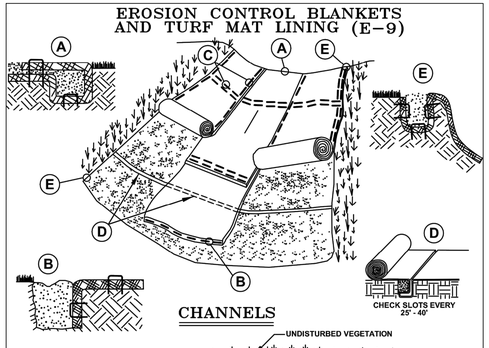
* "as needed" means when sediment has accumulated to a maximum of one foot depth.
Contractor is responsible for maintaining Soil Erosion and Sedimentation Control measures during construction

Maintenance Tasks and Schedule (following construction)

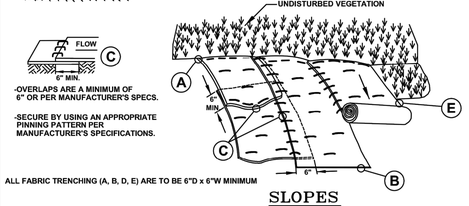
Tasks	Components: Streets	Storm Sewer System	Catch Basin Sumps	Catch Basin Inlet Castings	Channels	Outflow Control Structures	Filtration Basins	Storm Detention Areas	Subsurface Infiltration Bed	Wetlands	Woodlands	Emergency Overflow	Schedule	Annual Cost
Inspect for sediment accumulation		*	*			*	*	*	*	*			Annually	$300.00
Removal of sediment accumulation		*	*			*	*	*	*	*			Every 5-10 yrs as needed	$1,000.00
Inspect for floatables and debris		*	*	*	*	*	*	*	*	*		*	Annually	$300.00
Cleaning of floatables and debris		*	*	*	*	*	*	*	*	*		*	Annually	$400.00
Inspection for erosion					*	*	*	*		*		*	Annually	$300.00
Inspect wetlands and woodlands for invasive species. Remove or treat as needed										*	*		Annually (removal or treatment every 3-5 years as needed)	$800.00
Reestablish permanent vegetation on eroded slopes					*		*	*		*		*	As needed	$500.00
Replacement of gravel jackets						*							Every 3-5 yrs as needed	$700.00
Clean streets	*												Semi-annually	$400.00
Mowing	*				*		*	*				*	0 to 2 times per yr.	$400.00
Inspect structural elements during wet weather and compare as-built plans (by a professional engineer reporting to the condominium association)						*							Annually	$400.00
Make adjustments or replacements as determined by wet weather inspection		*			*	*	*	*	*	*		*	As needed	$500.00
Keep records of all inspections and maintenance activities and report to condominium association		*			*	*	*	*	*	*		*	Annually	
Keep records of all costs for inspections, maintenance and repairs. Report to condominium association		*	*	*	*	*	*	*	*	*	*	*	Annually	
Condominium association reviews cost effectiveness of the preventative maintenance program and makes necessary adjustments		*	*	*	*	*	*	*	*	*	*	*	Annually	
Condominium association to have a professional engineer carry out emergency inspections upon identification of severe problems.		*	*	*	*	*	*	*	*	*	*	*	As needed	$200.00
														$6,200.00

The Condominium Association will assess its members to pay for all maintenance activities on an annual basis

EROSION CONTROL BLANKETS AND TURF MAT LINING (E-9)



CHANNELS



-OVERLAPS ARE A MINIMUM OF 6" OR PER MANUFACTURER'S SPECS.

-SECURE BY USING AN APPROPRIATE PINNING PATTERN PER MANUFACTURER'S SPECIFICATIONS.

ALL FABRIC TRENCHING (A, B, D, E) ARE TO BE 6"D x 6"W MINIMUM

SLOPES

DEPENDING ON THE VELOCITY, SLOPE, SOILS, USE PROPER BLANKET OR TURF MAT LINING PER MANUFACTURER'S SPECIFICATIONS TO HANDLE THE SHEER STRESSES OF THE SLOPE/CHANNEL.

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

CLIENT
SE MICHIGAN LAND HOLDING LLC
PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

SOIL EROSION CONTROL NOTES & DETAILS

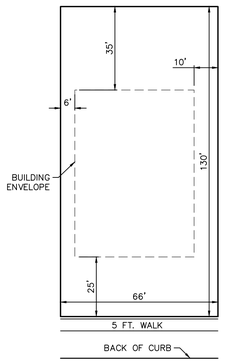
DATE
MARCH 1, 2024

REVISIONS
NA NA NA
N/A

DR. SK CH. SS
P.M. MB
BOOK --
JOB 16000819
SHEET NO. 11

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Parcel Table		Parcel Table	
Parcel #	Area (S.F.)	Parcel #	Area (S.F.)
40	9,359	61	9,100
41	8,529	62	9,100
42	9,565	63	9,379
43	11,546	64	10,543
44	10,175	65	8,871
45	8,580	66	9,152
46	8,580	67	9,172
47	8,580	68	8,928
48	8,580	69	8,947
49	8,728	70	8,966
50	8,840	71	8,984
51	8,840	72	9,003
52	8,840	73	9,287
53	8,840	74	9,307
54	11,267	75	10,389
55	11,266	76	12,167
56	11,267	77	10,576
57	8,840	78	9,254
58	8,840	79	9,251
59	9,100	80	10,257
60	9,100	81	10,483
		82	10,483
		83	10,184
		84	10,776



TYPICAL 66' LOT DETAIL

N.T.S.

SITE DATA

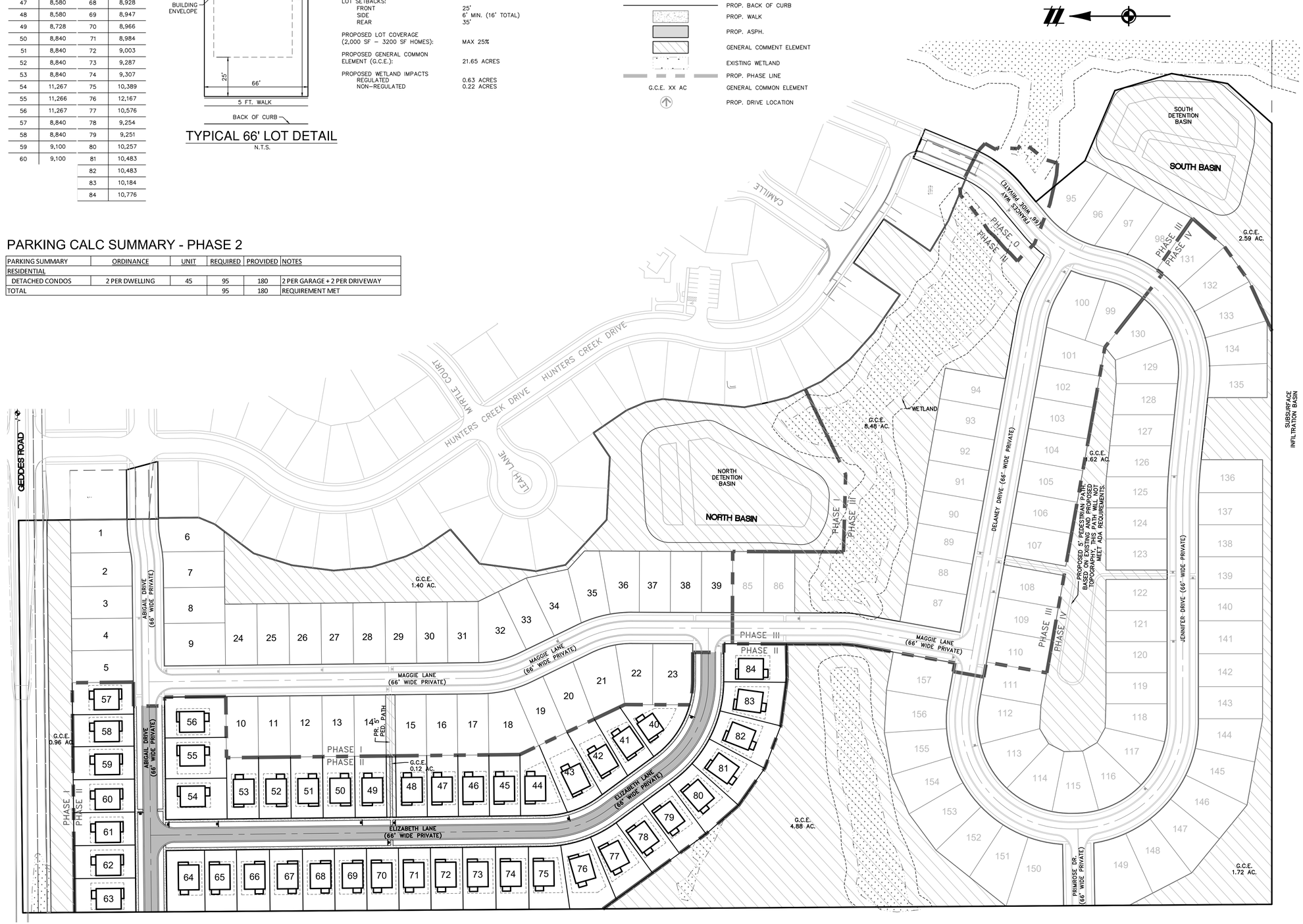
GROSS AREA:	67.99 ACRES
GEDDES ROAD ROW:	1.15 ACRES
NET AREA:	66.84 ACRES
EXISTING ZONING:	R4 SINGLE FAMILY RESIDENTIAL
PROPOSED ZONING:	R4 SINGLE FAMILY RESIDENTIAL
PROPOSED USE:	SINGLE FAMILY RESIDENTIAL SITE CONDOMINIUM
NUMBER OF PROPOSED LOTS:	157
PROPOSED DENSITY (GROSS):	2.31
PROPOSED DENSITY (NET):	2.35
LOT AREA PER DWELLING UNIT:	66' X 130' = 8580 SF (TYPICAL)
MINIMUM LOT WIDTH:	66'
LOT SETBACKS:	
FRONT	25'
SIDE	6' MIN. (16' TOTAL)
REAR	35'
PROPOSED LOT COVERAGE (2,000 SF – 3200 SF HOMES):	MAX 25%
PROPOSED GENERAL COMMON ELEMENT (G.C.E.):	21.65 ACRES
PROPOSED WETLAND IMPACTS	
REGULATED	0.63 ACRES
NON-REGULATED	0.22 ACRES

LEGEND

- BOUNDARY LINE
- EXIST. EASEMENT
- SECTION LINE
- BOUNDARY/PROPERTY LINE
- EXIST. SETBACK
- EXIST. TREE LINE
- EXIST. CURB AND GUTTER
- EXIST. BUILDING
- EXIST. WETLAND BUFFER
- PROP. SETBACK
- PROP. LOT LINE
- PROP. ROAD CENTERLINE
- PROP. BACK OF CURB
- PROP. WALK
- PROP. ASPH.
- GENERAL COMMENT ELEMENT
- EXISTING WETLAND
- G.C.E. XX AC — PROP. PHASE LINE / GENERAL COMMON ELEMENT
- PROP. DRIVE LOCATION

PARKING CALC SUMMARY - PHASE 2

PARKING SUMMARY	ORDINANCE	UNIT	REQUIRED	PROVIDED	NOTES
RESIDENTIAL					
DETACHED CONDOS	2 PER DWELLING	45	95	180	2 PER GARAGE + 2 PER DRIVEWAY
TOTAL			95	180	REQUIREMENT MET



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WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

OVERALL LAYOUT PLAN

DATE
MARCH 1, 2024

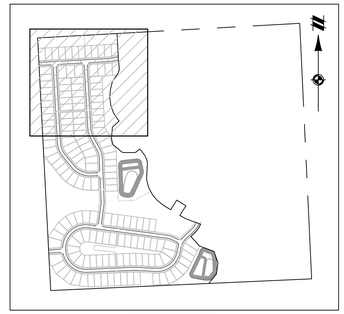
REVISIONS
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SCALE: 1" = 100 FEET

DR.	SK
CH.	SS
P.M.	MB
BOOK	--
JOB	16000819
SHEET NO.	12

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KEYMAP
SCALE: 1" = 750'

LEGEND

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- SECTION LINE
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- PROP. ROAD CENTERLINE
- PROP. BACK OF CURB
- PROP. WALK
- PROP. ASPH.
- GENERAL COMMON ELEMENT
- PROP. PHASE LINE
- EXIST. WETLAND
- GCE XX AC — GENERAL COMMON ELEMENT
- GARAGE/DRIVEWAY LOCATION INDICATOR

SIGN LEGEND

- (A) W11A-2 PEDESTRIAN CROSSING SIGN
- (B) R1-1 STOP SIGN
- (C) D3-1 STREET NAME SIGN
- (D) 'NO PARKING' FIRE LANE SIGN

ABIGAIL DRIVE

ALIGNMENT LINE TABLE				
Line #	Length	Direction	Start Point	End Point
L1	731.26	N86° 48' 35.57"E	(13327274.84,283145.90)	(13328004.96,283186.59)
L2	20.93	N77° 32' 06.87"E	(13328041.80,283191.65)	(13328062.24,283196.17)
L3	8.52	N86° 47' 29.57"E	(13328099.01,283201.23)	(13328107.52,283201.71)

ALIGNMENT CURVE TABLE					
CURVE #	RADIUS	LENGTH	DELTA	CHD. BEARING	CHORD
C1	230.00'	37.23'	9°16'29"	N82°10'21"E	37.19'
C2	230.00'	37.16'	9°15'23"	N82°09'48"E	37.12'

ELIZABETH LANE

ALIGNMENT LINE TABLE				
Line #	Length	Direction	Start Point	End Point
L4	836.40	S3° 11' 24.43"E	(13327437.45,283154.96)	(13327484.00,282319.86)
L5	149.62	S39° 00' 17.08"E	(13327534.91,282187.90)	(13327629.08,282071.63)
L6	112.85	N87° 38' 06.28"E	(13327817.30,281986.58)	(13327930.06,281991.24)

ALIGNMENT CURVE TABLE					
CURVE #	RADIUS	LENGTH	DELTA	CHD. BEARING	CHORD
C3	230.00'	143.77'	35°48'53"	S21°05'51"E	141.44'
C4	230.00'	214.20'	53°21'37"	S65°41'05"E	206.54'

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WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC
PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2
LAYOUT PLAN

DATE
MARCH 1, 2024

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REVISIONS

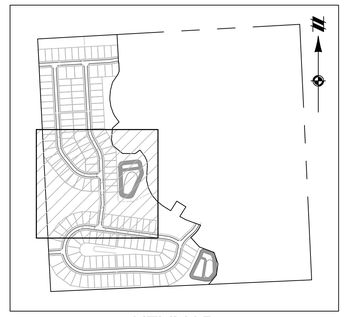
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SCALE: 1" = 50 FEET

DR. SK | CH. SS
P.M. MB
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SHEET NO. 13

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SEE SHEET 13 FOR CONTINUATION





KEYMAP
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ELIZABETH LANE

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FINAL SITE PLAN – PHASE 2

LAYOUT PLAN

DATE
MARCH 1, 2024

REVISIONS
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DR.	SK
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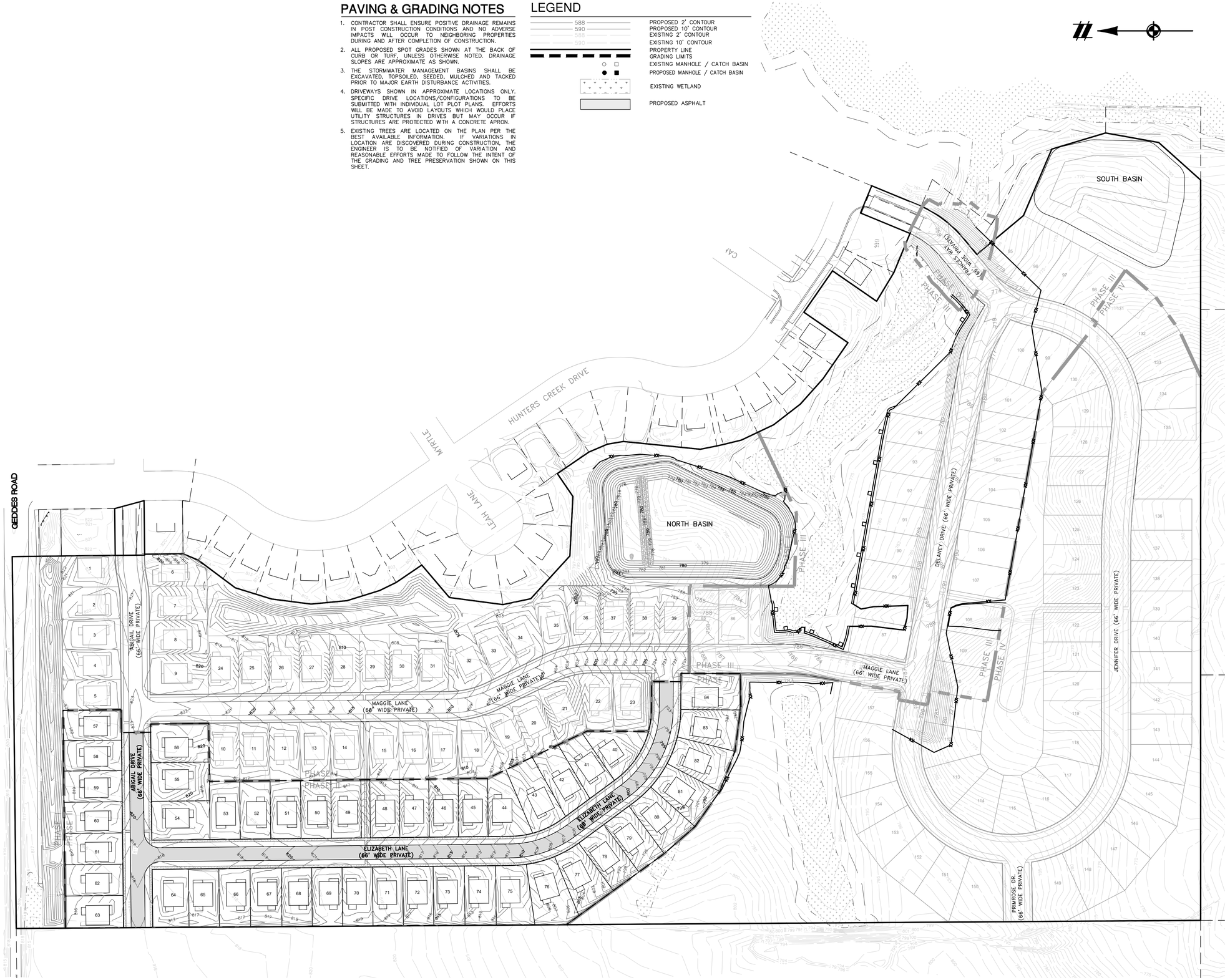
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PAVING & GRADING NOTES

1. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE REMAINS IN POST CONSTRUCTION CONDITIONS AND NO ADVERSE IMPACTS WILL OCCUR TO NEIGHBORING PROPERTIES DURING AND AFTER COMPLETION OF CONSTRUCTION.
2. ALL PROPOSED SPOT GRADES SHOWN AT THE BACK OF CURB OR TURF, UNLESS OTHERWISE NOTED. DRAINAGE SLOPES ARE APPROXIMATE AS SHOWN.
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5. EXISTING TREES ARE LOCATED ON THE PLAN PER THE BEST AVAILABLE INFORMATION. IF VARIATIONS IN LOCATION ARE DISCOVERED DURING CONSTRUCTION, THE ENGINEER IS TO BE NOTIFIED OF VARIATION AND REASONABLE EFFORTS MADE TO FOLLOW THE INTENT OF THE GRADING AND TREE PRESERVATION SHOWN ON THIS SHEET.

LEGEND

- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- PROPERTY LINE
- GRADING LIMITS
- EXISTING MANHOLE / CATCH BASIN
- PROPOSED MANHOLE / CATCH BASIN
- EXISTING WETLAND
- PROPOSED ASPHALT



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SUPERIOR TOWNSHIP
WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

OVERALL GRADING PLAN

DATE
MARCH 1, 2024

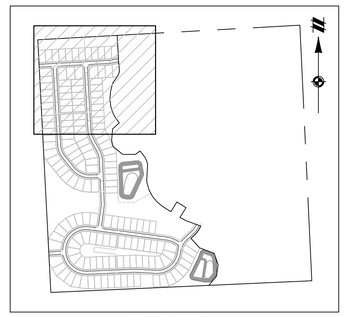
REVISIONS
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SCALE: 1" = 100 FEET

DR.	SK
CH.	SS
P.M.	MB
BOOK	--
JOB	16000819
SHEET NO.	17

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KEYMAP
SCALE: 1" = 750'

LEGEND

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

SPOT GRADE DESIGNATIONS
FG = FINISH GRADE
DBL = DROP BRICK LEDGE
GV = GARDEN VIEW
DLV= DAYLIGHT VIEW
WO = WALKOUT
RIM = RIM GRADE/FLOW LINE
HP = HIGH POINT
TC = TOP OF CURB
TW = TOP OF WALK
T/WALL= TOP OF WALL
B/WALL= BOTTOM OF WALL

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WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

GRADING PLAN

DATE
MARCH 1, 2024

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REVISIONS

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SCALE: 1" = 50 FEET

DR.	SK
CH.	SS
P.M.	MB
BOOK	--
JOB	16000819
SHEET NO.	16

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SEE SHEET 16 FOR CONTINUATION



KEYMAP
SCALE: 1" = 750'

LEGEND

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- PROPOSED 5' CONTOUR
- EXISTING 1' CONTOUR
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GRADING PLAN

DATE
MARCH 1, 2024

REVISIONS
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SCALE: 1" = 50 FEET

DR. SK | CH. SS
P.M. MB
BOOK --
JOB 16000819
SHEET NO. 17

K:\16000819\CIM\CAN SET\SITE - FINAL PHASE 2\16000819SP2-10-2.DWG 9/3/2024 3:33 PM KYLER SHEERIN

INITIAL UTILITY BASIS OF DESIGN

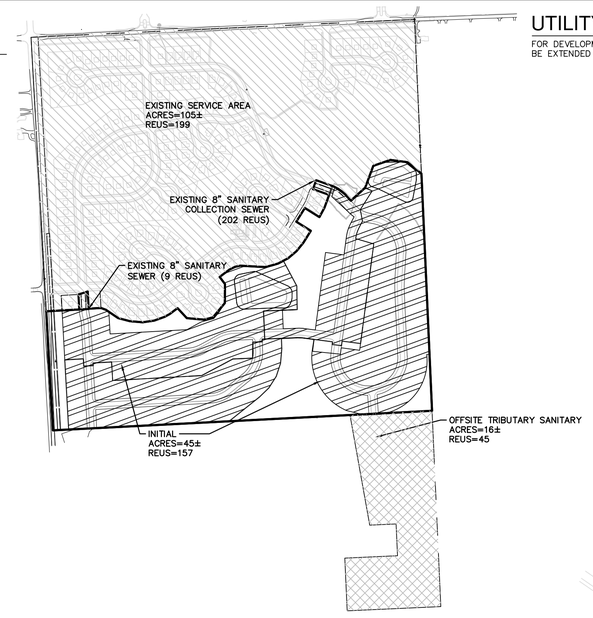
No. of Single Family Lots:			157 Lots
No. of Users per Lot:			3.5 Persons
Total Expected Population Served:			550 Persons
Average Daily Flow (per capita):			100 G.P.D.
Peaking Factor:	$18+\sqrt{(POP/1000)}$ / $4+\sqrt{(POP/1000)}$ =		3.95
Average Demand:	POP * 100 =		**55,000 G.P.D.**
	=		38.2 G.P.M.
	=		0.085 C.F.S.
Peak Demand:	55,000	* 3.95 =	**217,392 G.P.D.**
	=		151.0 G.P.M.
	=		0.336 C.F.S.

ULTIMATE UTILITY BASIS OF DESIGN

	Prospect Pointe West		157 Lots
	Future Service Area		45 Lots
Total No. of Single Family Lots:			202 Lots
No. of Users per Lot:			3.5 Persons
Total Expected Population Served:			707 Persons
Average Daily Flow (per capita):			100 G.P.D.
Peaking Factor:	$18+\sqrt{(POP/1000)}$ / $4+\sqrt{(POP/1000)}$ =		3.89
Average Flow:	POP * 100 =		**70,700 G.P.D.**
	=		49.1 G.P.M.
	=		0.109 C.F.S.
Peak Flow:	70,700	* 3.89 =	**275,169 G.P.D.**
	=		191.1 G.P.M.
	=		0.426 C.F.S.
Pipe Capacity:	8	in. diameter	A= 0.349 sf
	0.40%	slope	R= 0.167 ft
	0.013	Manning's 'n'	
	Manning's Capacity =		0.766 C.F.S.
	Velocity Flowing Full =		2.20 F.P.S.

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4. A MINIMUM VERTICAL SEPARATION OF 18" SHALL BE MAINTAINED BETWEEN CROSSING UTILITIES, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
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8. ALL WATERMAIN SHALL BE INSTALLED 5.5' DEEP. NO PIPE WILL BE ALLOWED DEEPER THAN 10' DEEP.
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11. SANITARY SEWERS LOCATED OUTSIDE OF THE ROAD RIGHT OF WAY SHALL BE LOCATED WITHIN A 20' WIDE EASEMENT.
12. THE MINIMUM COVER OVER SANITARY SEWER IS 4'.
13. TRAFFIC CONTROL TO BE PROVIDED IN ACCORDANCE WITH THE MMUTCD & COUNTY ROAD COMMISSION.
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16. SANITARY SEWER STRUCTURES MAY NOT BE PLACED WITHIN ANY PAVED SURFACE INCLUDING ROADS, DRIVEWAYS, AND SIDEWALKS.
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18. WATER SERVICE TAPS AND LEAD INSTALLATION SHALL OCCUR AFTER WATERMAIN TESTING.
19. SEE SHEETS 19 THROUGH 20 FOR UTILITY EASEMENTS.



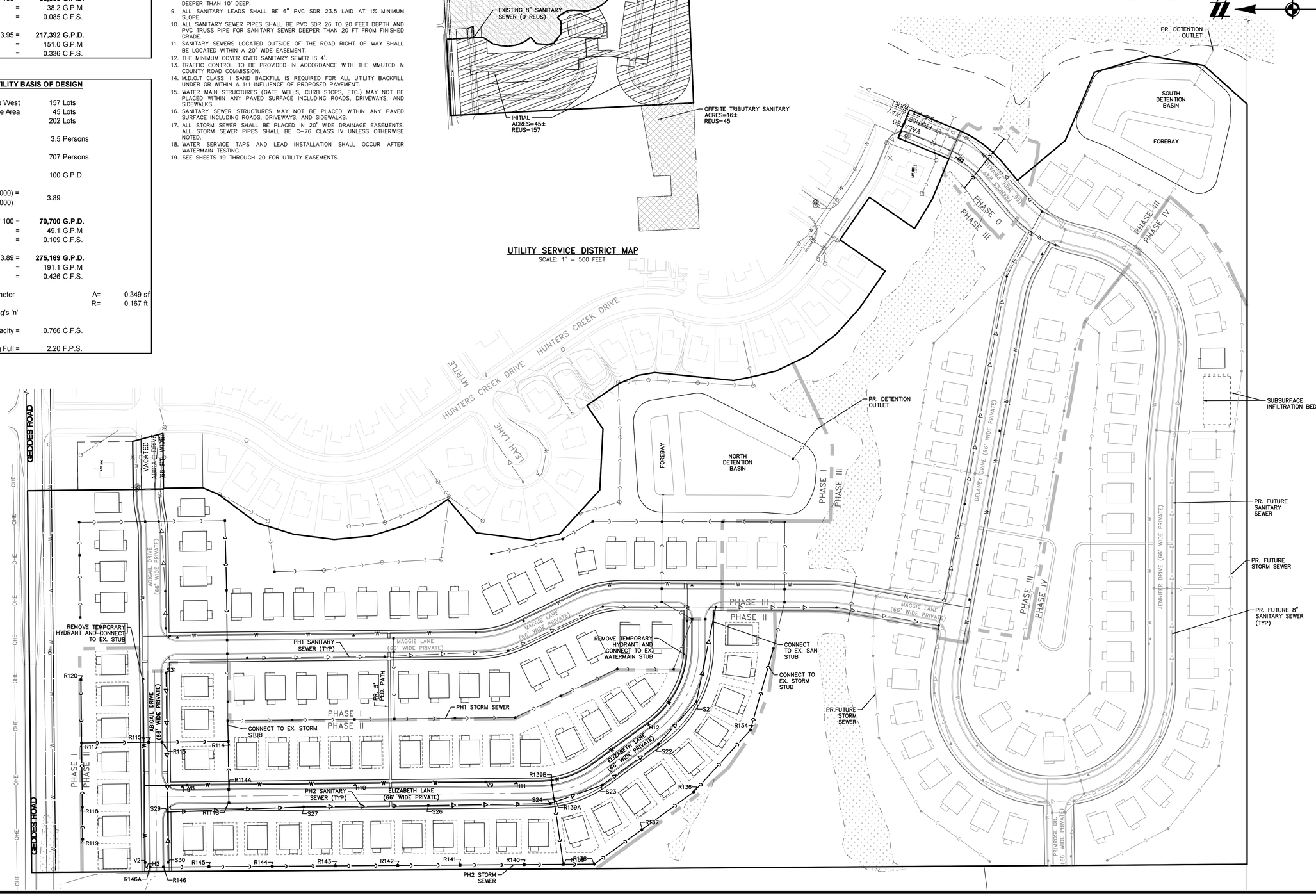
UTILITY SERVICE DISTRICT MAP
SCALE: 1" = 500 FEET

UTILITY NARRATIVE

FOR DEVELOPMENT OF PHASE 2, ALL UTILITIES NEEDED TO SERVICE LOTS 40-84 SHALL BE EXTENDED FROM THE PHASE 1 STUBS.

LEGEND

- PROPERTY LINE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING MANHOLE/CATCH BASIN/END SECTION
- PROPOSED MANHOLE/CATCH BASIN/END SECTION
- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- EXISTING HYDRANT
- PROPOSED HYDRANT
- EXISTING GATE VALVE & WELL
- PROPOSED GATE VALVE & WELL
- EXISTING SANITARY SEWER
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- EXISTING SANITARY SEWER MANHOLE
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PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

OVERALL UTILITY PLAN

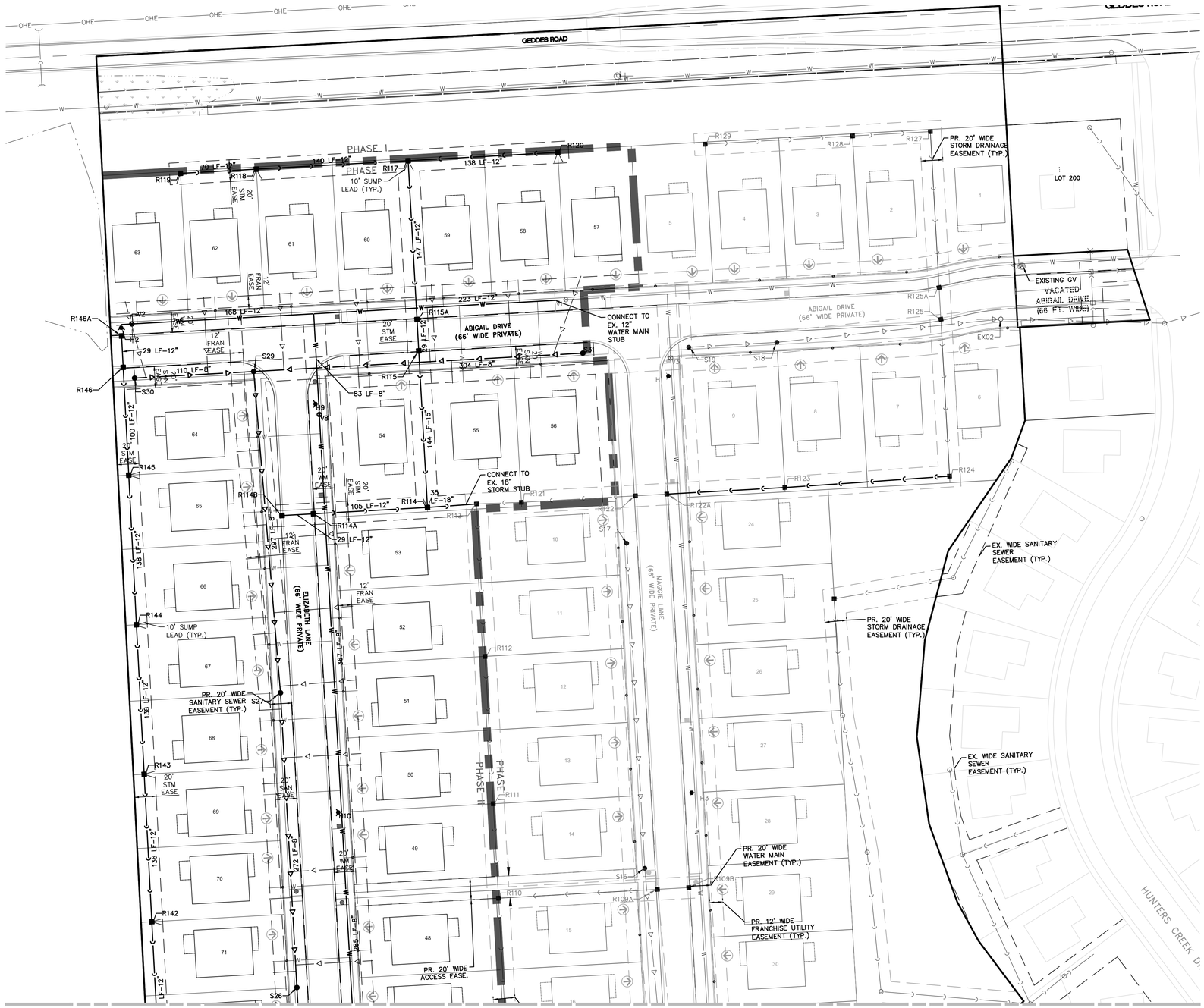
DATE
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REVISIONS

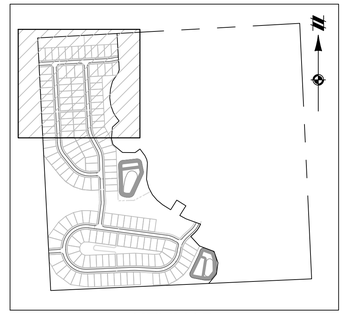
SCALE: 1" = 100 FEET

DR.	SK
CH.	SS
P.M.	MB
BOOK	--
JOB	16000819
SHEET NO.	18

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SEE SHEET 20 FOR CONTINUATION



KEYMAP
SCALE: 1" = 750'

LEGEND

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

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FINAL SITE PLAN – PHASE 2

UTILITY PLAN

DATE
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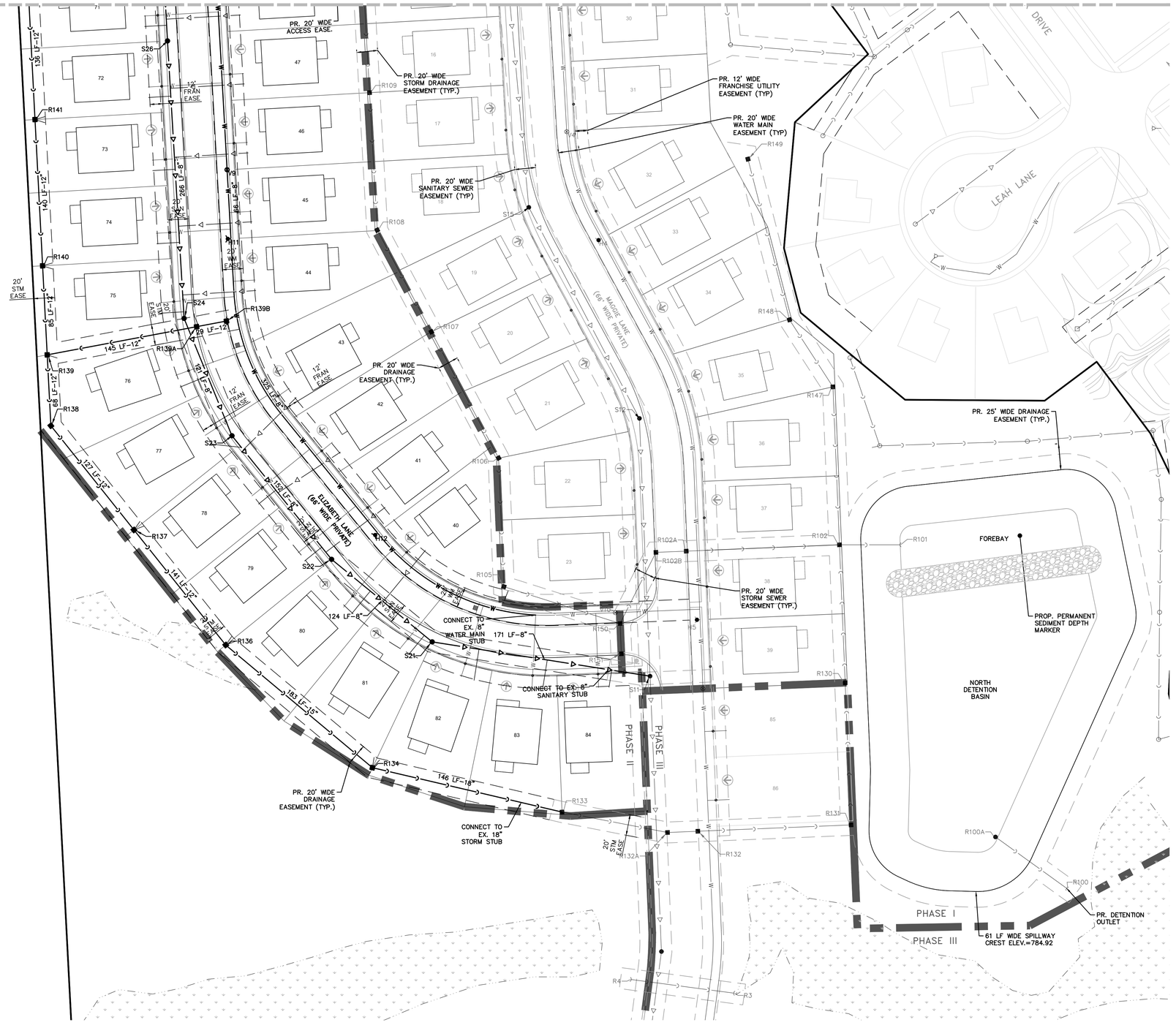
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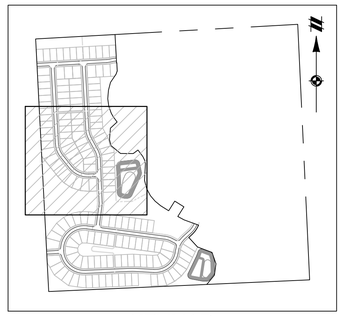
0 25 50
SCALE: 1" = 50 FEET

DR. SK	CH. SS
P.M. MB	
BOOK --	
JOB 16000819	
SHEET NO. 19	

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SEE SHEET 19 FOR CONTINUATION





KEYMAP
SCALE: 1" = 750'

LEGEND

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

NOTES

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8. ALL WATERMAIN SHALL BE INSTALLED 5.5' DEEP. NO PIPE WILL BE ALLOWED DEEPER THAN 10' DEEP.
9. ALL SANITARY LEADS SHALL BE 6" PVC SDR 23.5 LAID AT 1% MINIMUM SLOPE.
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18. WATER SERVICE TAPS AND LEAD INSTALLATION SHALL OCCUR AFTER WATERMAIN TESTING.

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

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

UTILITY PLAN

DATE
MARCH 1, 2024

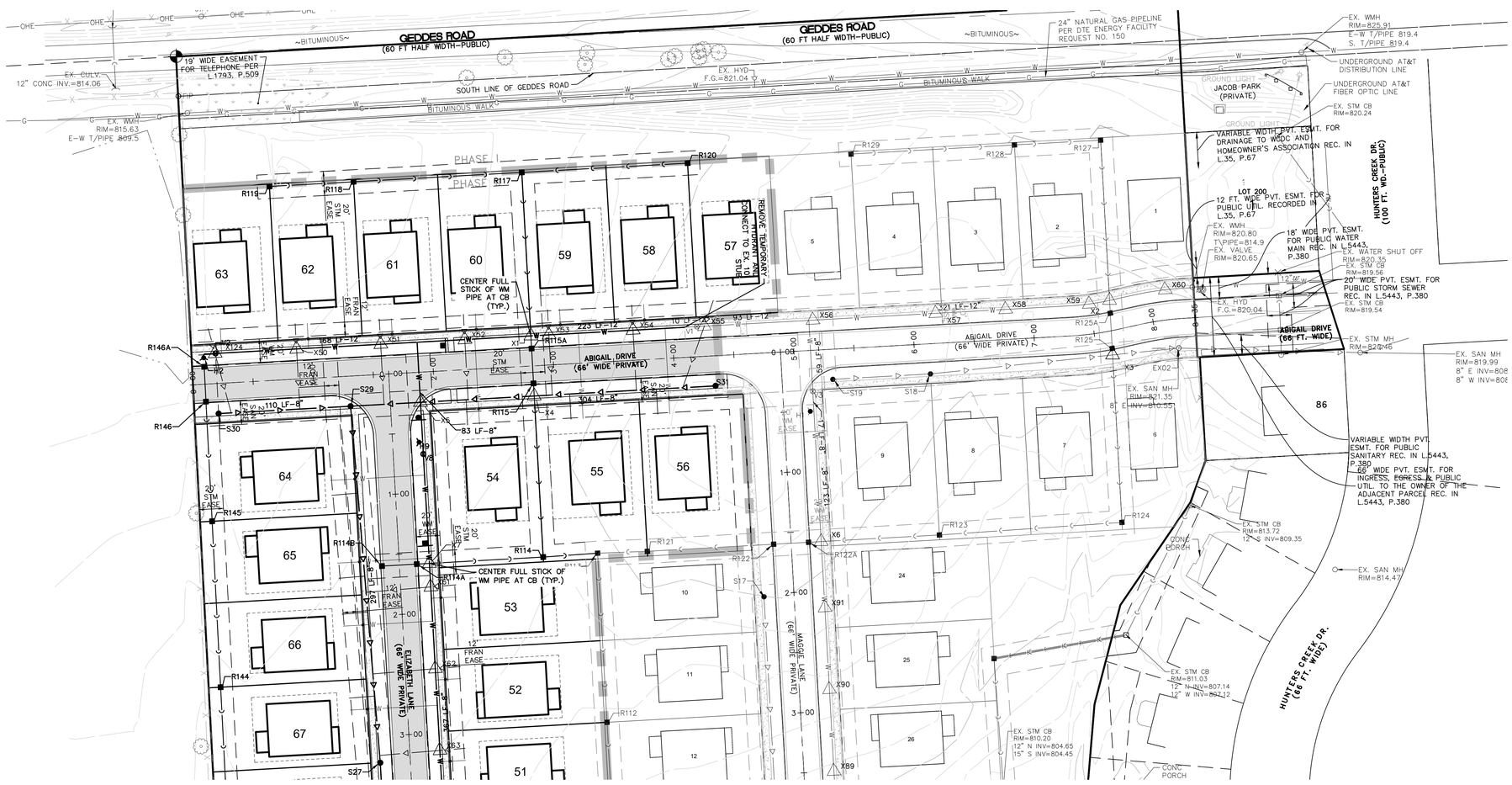
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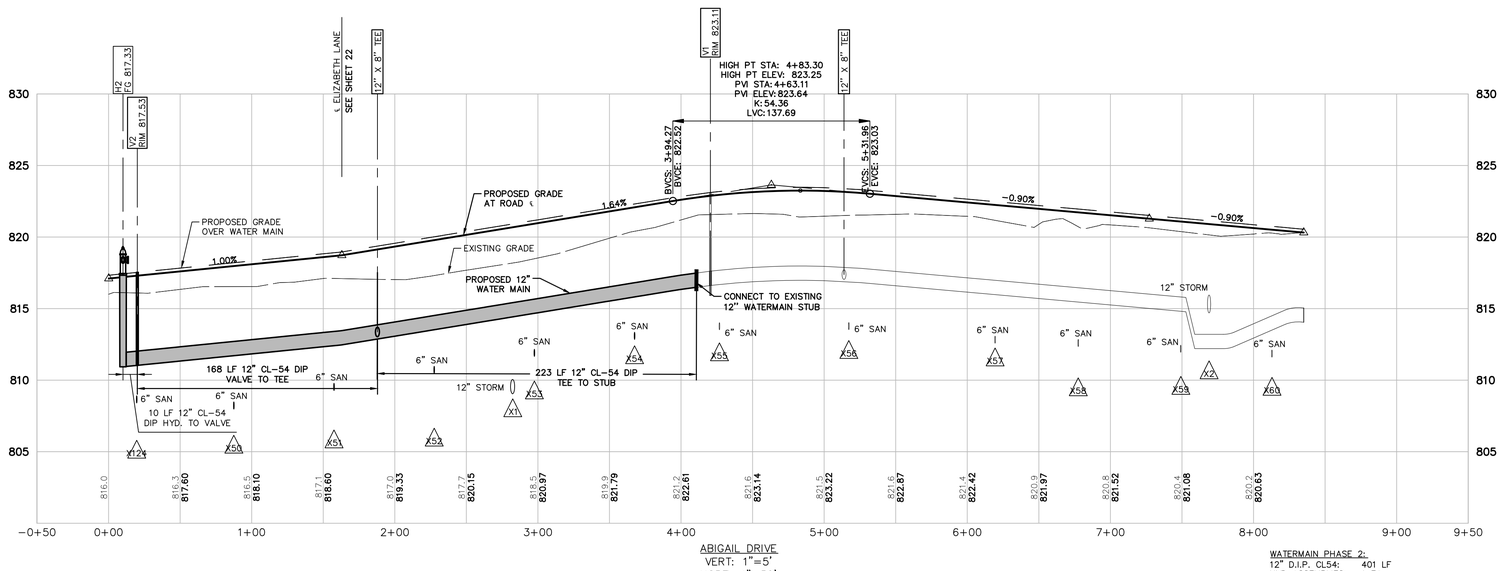
REVISIONS

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SCALE: 1" = 50 FEET

DR. SK	CH. SS
P.M. MB	
BOOK --	
JOB 16000819	
SHEET NO. 20	

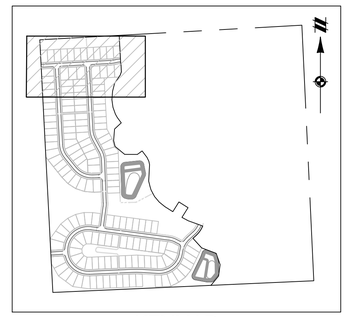
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ABIGAIL DRIVE
VERT: 1"=5'
HORZ: 1"=50'

WATERMAIN PHASE 2:
12" D.I.P. CL54: 401 LF
HYD ASSEMBLIES: 1 EA
12" VALVE: 1 EA



KEYMAP
SCALE: 1" = 750'

LEGEND

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

SEE SHEETS 13 TO 14 FOR ROAD CENTERLINE HORIZONTAL CURVE DATA
SEE SHEET 33 FOR UTILITY CROSSING TABLE

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WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2
ABIGAIL DRIVE PLAN & PROFILE

DATE
MARCH 1, 2024

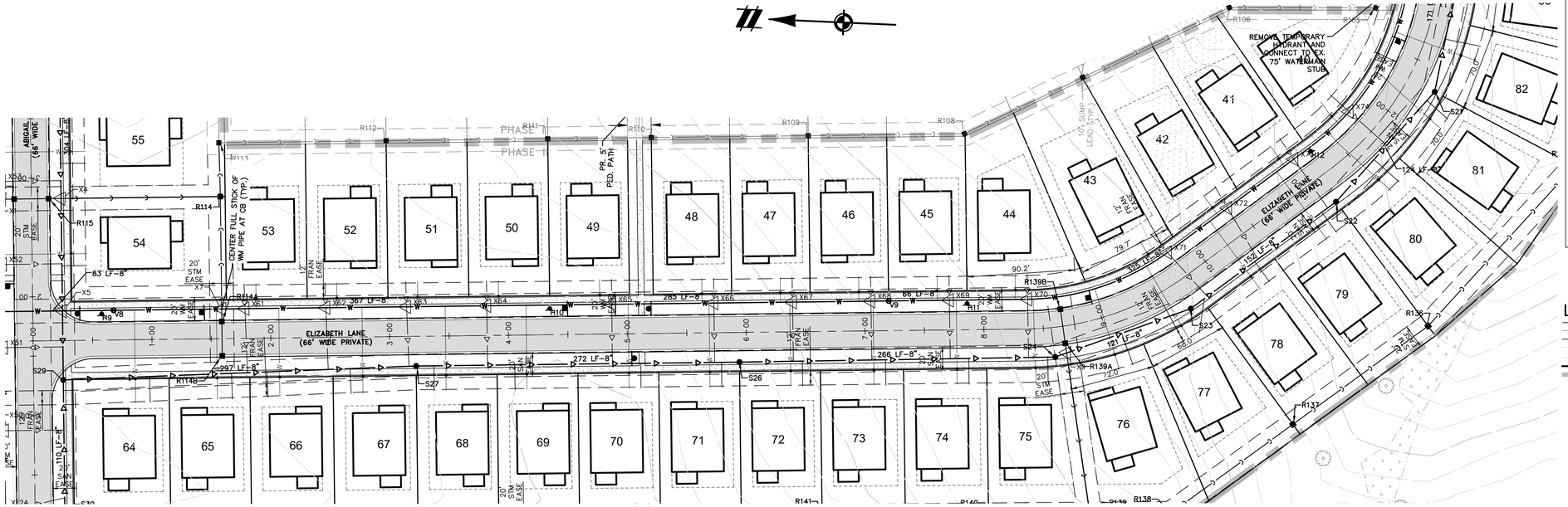
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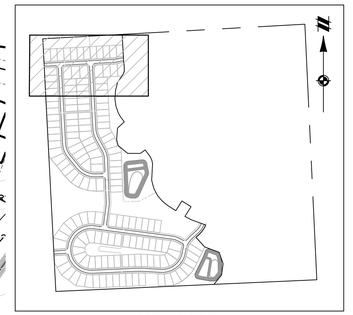
REVISIONS

SCALE: 1" = 50 FEET

DR.	SK
CH.	SS
P.M.	MB
BOOK	--
JOB	16000819
SHEET NO.	21

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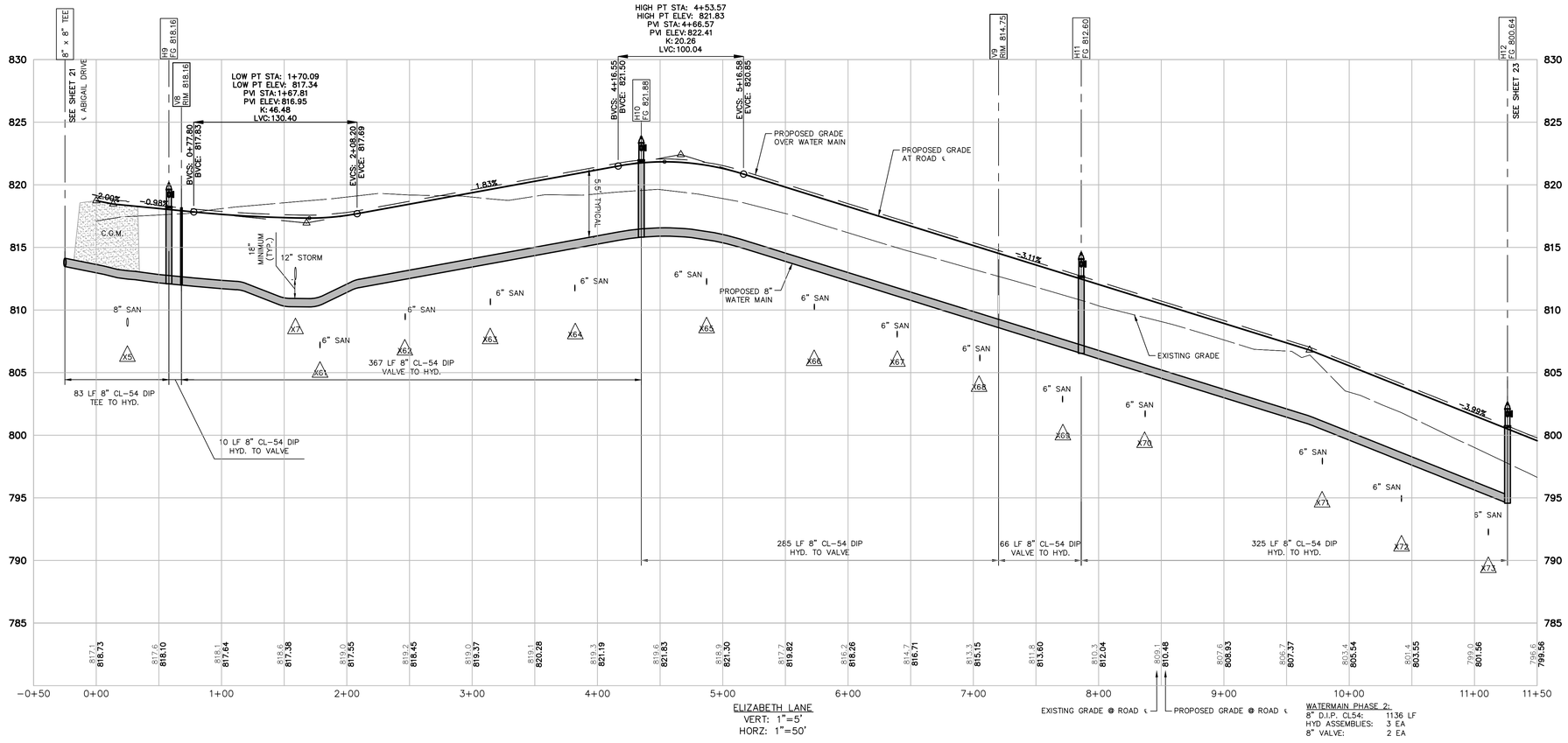




KEYMAP
SCALE: 1" = 750'

LEGEND

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



ELIZABETH LANE
VERT: 1"=5'
HORZ: 1"=50'

EXISTING GRADE @ ROAD ℄ — PROPOSED GRADE @ ROAD ℄

WATERMAIN PHASE 2:

8" D.I.P. CL54:	1136 LF
HYD ASSEMBLIES:	3 EA
8" VALVE:	2 EA

SEE SHEETS 13 TO 14 FOR ROAD CENTERLINE HORIZONTAL CURVE DATA
SEE SHEET 33 FOR UTILITY CROSSING TABLE

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WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2
ELIZABETH LANE PLAN & PROFILE 1

DATE
MARCH 1, 2024

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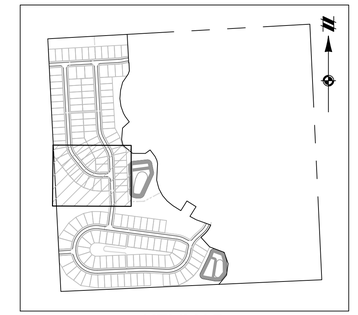
REVISIONS

SCALE: 1" = 50 FEET

DR.	SK
CH.	SS
P.M.	MB
BOOK	--
JOB	16000819
SHEET NO.	22

P:\16000819\DWG\PLAN SETS\SITE - FINAL PHASE 2\16000819P2-25-SDWG X(A) 2024 3:37 PM KYLER SHEPPARD





KEYMAP
SCALE: 1" = 750'

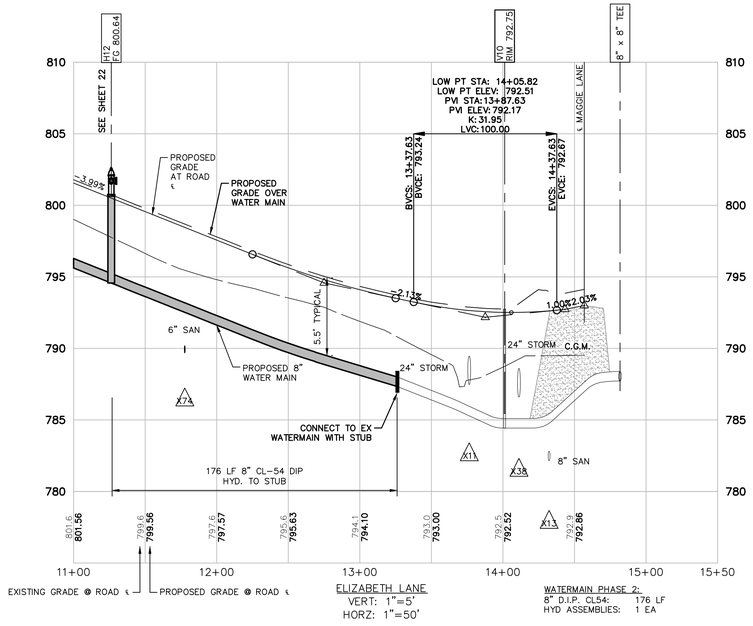
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ELIZABETH LANE
VERT: 1"=5'
HORZ: 1"=50'

WATERMAIN PHASE 2:
8" D.I.P. CL54: 176 LF
HYD ASSEMBLIES: 1 EA

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PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

ELIZABETH LANE PLAN & PROFILE 2

DATE
MARCH 1, 2024

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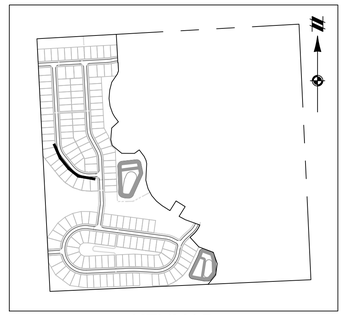
REVISIONS

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SCALE: 1" = 50 FEET

DR. SK | CH. SS
P.M. MB
BOOK --
JOB 16000819
SHEET NO.
23

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KEYMAP
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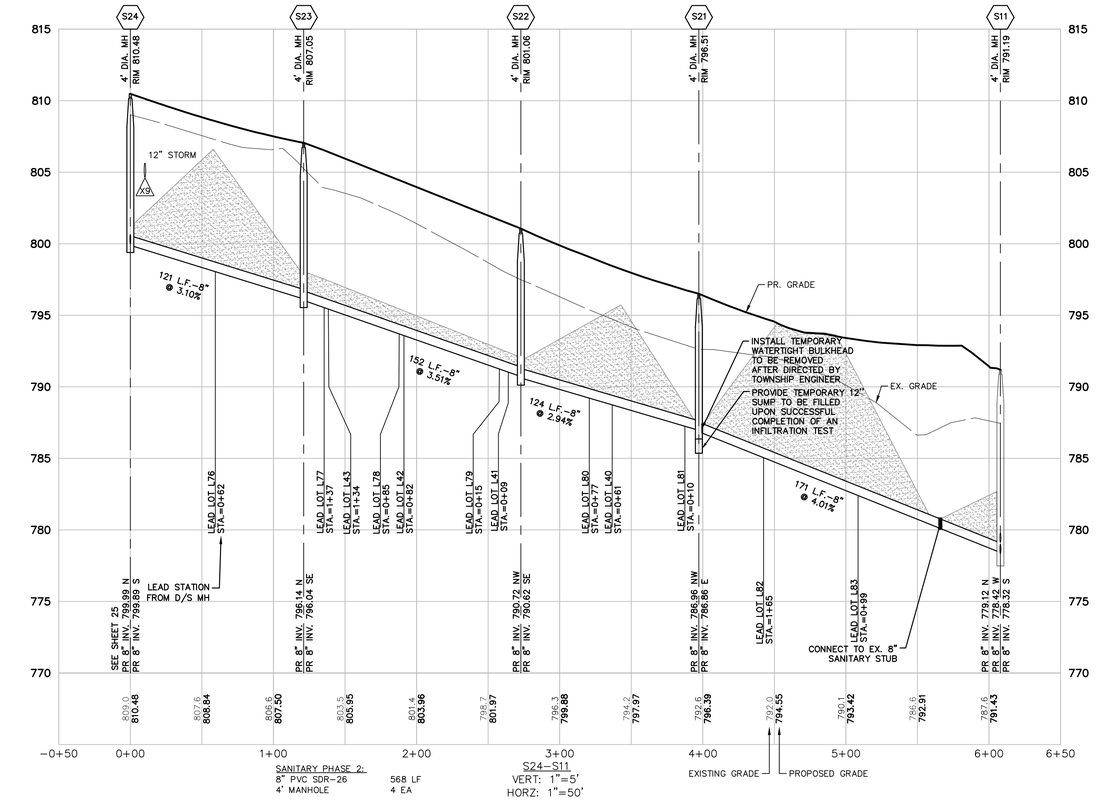
SANITARY LEAD TABLE

Lot No.	Size	Sta	Riser	Length	Invert	F.G.
L 83	6" SDR 23.5	STA 0+99	0.0' RISER	29 LF	784.00	795.00
L 82	6" SDR 23.5	STA 1+65	0.0' RISER	30 LF	786.20	797.20
L 81	6" SDR 23.5	STA 0+10	0.0' RISER	24 LF	788.40	799.40
L 40	6" SDR 23.5	STA 0+61	2.0' RISER	63 LF	790.05	801.00
L 80	6" SDR 23.5	STA 1+84	4.5' RISER	19 LF	780.80	791.80
L 41	6" SDR 23.5	STA 0+09	0.0' RISER	71 LF	792.60	803.60
L 79	6" SDR 23.5	STA 0+15	1.0' RISER	21 LF	793.40	804.40
L 42	6" SDR 23.5	STA 0+82	0.0' RISER	71 LF	795.60	806.60
L 78	6" SDR 23.5	STA 0+85	1.5' RISER	21 LF	796.20	807.20
L 43	6" SDR 23.5	STA 1+34	0.0' RISER	71 LF	798.30	809.30
L 77	6" SDR 23.5	STA 1+37	2.0' RISER	29 LF	798.60	809.60
L 76	6" SDR 23.5	STA 0+62	1.0' RISER	28 LF	800.25	811.25

SEE SHEET 33 FOR UTILITY CROSSING TABLE

NOTES

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3. 10' HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN WATER MAINS AND SEWERS.
4. A MINIMUM VERTICAL SEPARATION OF 18" SHALL BE MAINTAINED BETWEEN CROSSING UTILITIES, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. ALL PROPOSED STORM SEWER SHALL BE R.C.P. CL-IV UNLESS OTHERWISE NOTED.
6. LOW HEAD (FLAT TOP) STRUCTURES SHALL BE PROVIDED FOR STORM STRUCTURES WITH LESS THAN THREE FEET OF COVER.
7. ALL PROPOSED WATER MAIN SHALL BE DUCTILE IRON THICKNESS CL-54, AS APPROVED. WATER LEADS SHALL BE 1" TYPE K COPPER, UNLESS OTHERWISE APPROVED. ALL GATE VALVES, EXCEPT HYDRANT SHUTOFFS, SHALL BE INSTALLED IN WELLS.
8. ALL WATERMAIN SHALL BE INSTALLED 5.5' DEEP. NO PIPE WILL BE ALLOWED DEEPER THAN 10' DEEP.
9. ALL SANITARY LEADS SHALL BE 6" PVC SDR 23.5 LAID AT 1% MINIMUM SLOPE.
10. ALL SANITARY SEWER PIPES SHALL BE PVC SDR 26 TO 20 FEET DEPTH AND PVC TRUSS PIPE FOR SANITARY SEWER DEEPER THAN 20 FT FROM FINISHED GRADE.
11. SANITARY SEWERS LOCATED OUTSIDE OF THE ROAD RIGHT OF WAY SHALL BE LOCATED WITHIN A 20' WIDE EASEMENT.
12. THE MINIMUM COVER OVER SANITARY SEWER IS 4'.
13. TRAFFIC CONTROL TO BE PROVIDED IN ACCORDANCE WITH THE MMUTCD & COUNTY ROAD COMMISSION.
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15. WATER MAIN STRUCTURES (GATE WELLS, CURB STOPS, ETC.) MAY NOT BE PLACED WITHIN ANY PAVED SURFACE INCLUDING ROADS, DRIVEWAYS, AND SIDEWALKS.
16. SANITARY SEWER STRUCTURES MAY NOT BE PLACED WITHIN ANY PAVED SURFACE INCLUDING ROADS, DRIVEWAYS, AND SIDEWALKS.
17. ALL STORM SEWER SHALL BE PLACED IN 20' WIDE DRAINAGE EASEMENTS. ALL STORM SEWER PIPES SHALL BE C-76 CLASS IV UNLESS OTHERWISE NOTED.
18. WATER SERVICE TAPS AND LEAD INSTALLATION SHALL OCCUR AFTER WATERMAIN TESTING.



SANITARY PHASE 2:
8" PVC SDR-26 568 LF
4' MANHOLE 4 EA

S24-S11
VERT: 1"=5'
HORZ: 1"=50'

811
Know what's below.
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SECTION 33
TOWN 2 SOUTH, RANGE 7 EAST
SUPERIOR TOWNSHIP
WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

SANITARY PLAN & PROFILE 1

DATE
MARCH 1, 2024

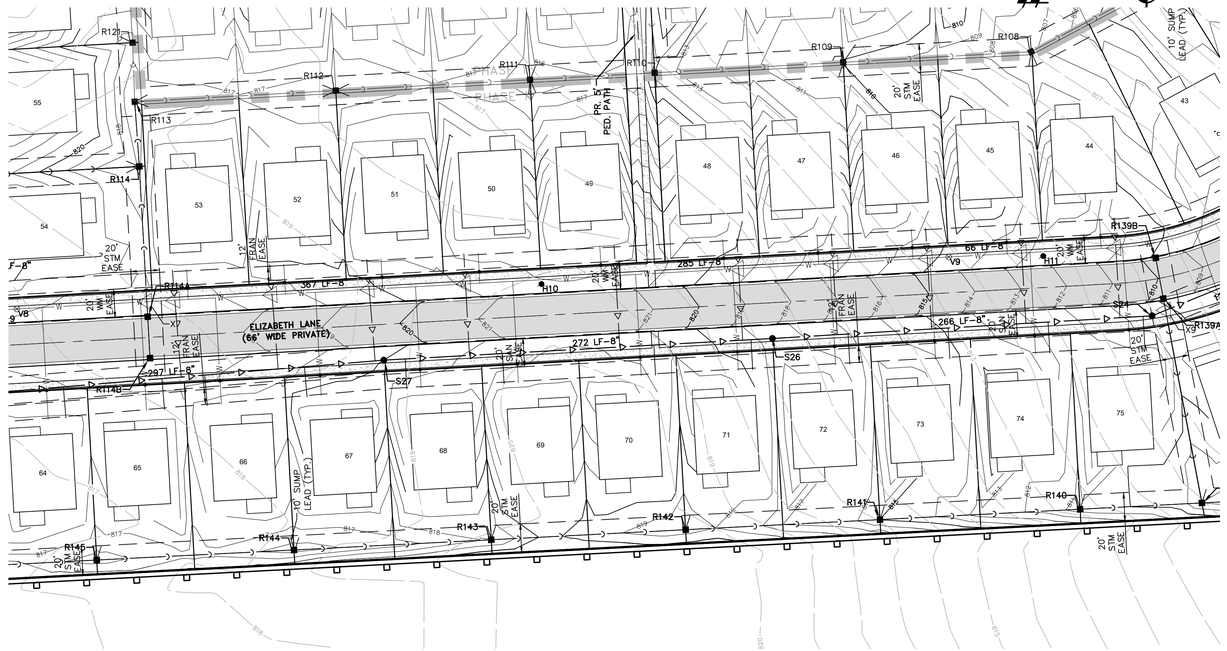
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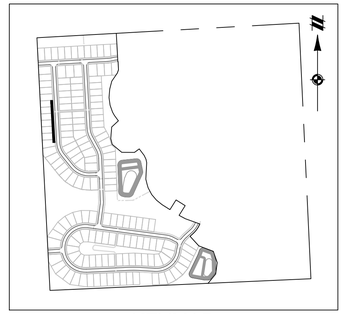
REVISIONS

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SCALE: 1" = 50 FEET

DR. SK | CH. SS
P.M. MB
BOOK --
JOB 16000819
SHEET NO.
24

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KEYMAP
SCALE: 1" = 750'

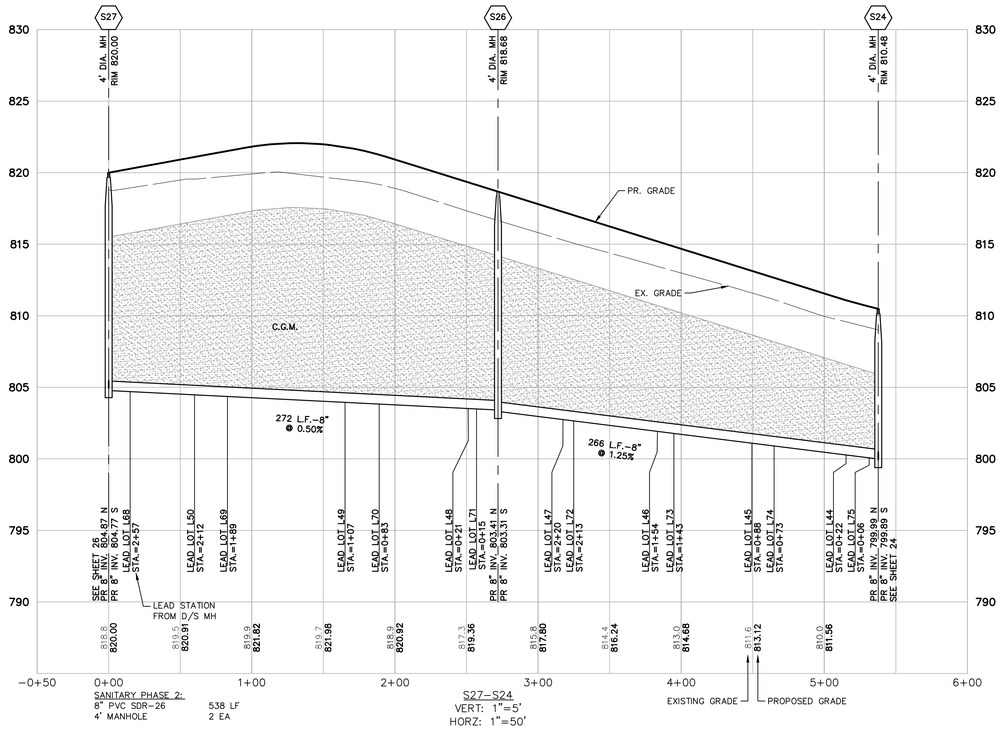
SANITARY LEAD TABLE

Lot No.	Size	Sta	Riser	Length	Invert	F.G.
L 75	6" SDR 23.5	STA 0+06	1.0' RISER	22 LF	802.00	813.00
L 44	6" SDR 23.5	STA 0+22	0.0' RISER	70 LF	802.50	813.50
L 74	6" SDR 23.5	STA 0+73	2.0' RISER	22 LF	804.10	815.10
L 45	6" SDR 23.5	STA 0+88	0.0' RISER	70 LF	804.50	815.50
L 73	6" SDR 23.5	STA 1+43	3.5' RISER	21 LF	806.30	817.30
L 46	6" SDR 23.5	STA 1+54	3.0' RISER	71 LF	806.50	817.50
L 72	6" SDR 23.5	STA 2+13	4.5' RISER	21 LF	808.50	819.50
L 47	6" SDR 23.5	STA 2+20	4.0' RISER	71 LF	808.60	819.60
L 71	6" SDR 23.5	STA 0+15	6.0' RISER	21 LF	810.50	821.50
L 48	6" SDR 23.5	STA 0+21	5.5' RISER	71 LF	810.50	821.50
L 70	6" SDR 23.5	STA 0+83	7.5' RISER	21 LF	812.50	823.50
L 49	6" SDR 23.5	STA 1+07	7.0' RISER	71 LF	812.80	823.80
L 69	6" SDR 23.5	STA 1+89	7.0' RISER	21 LF	812.60	823.60
L 50	6" SDR 23.5	STA 2+12	6.0' RISER	71 LF	812.15	823.15
L 68	6" SDR 23.5	STA 2+57	5.5' RISER	21 LF	811.45	822.45

SEE SHEET 33 FOR UTILITY CROSSING TABLE

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



SANITARY PHASE 2:
8" PVC SDR-26 — 538 LF
4' MANHOLE — 2 EA

S27-S24
VERT: 1"=5'
HORZ: 1"=50'

Know what's below. Call before you dig.
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SUPERIOR TOWNSHIP
WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN - PHASE 2

SANITARY PLAN & PROFILE 2

DATE
MARCH 1, 2024

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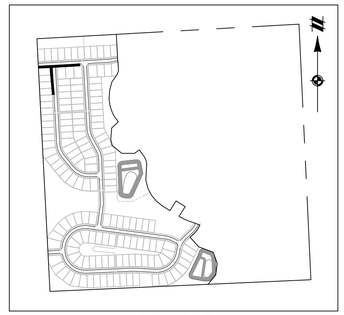
REVISIONS

0 25 50
SCALE: 1" = 50 FEET

DR. SK | CH. SS
P.M. MB
BOOK --
JOB 16000819
SHEET NO.
25

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KEYMAP
SCALE: 1" = 750'

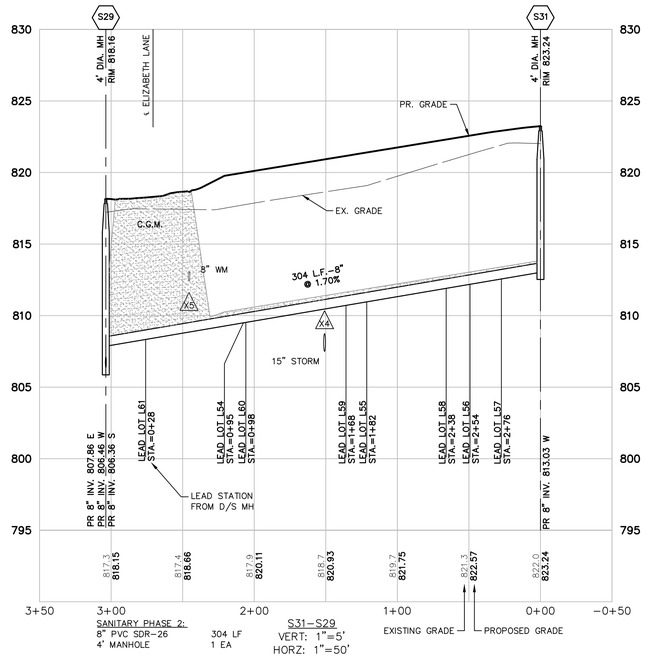
SANITARY LEAD TABLE

Lot No.	Size	Sta	Riser	Length	Invert	F.G.
L 51	6" SDR 23.5	STA 0+06	4.5' RISER	71 LF	811.00	822.00
L 67	6" SDR 23.5	STA 0+56	4.0' RISER	21 LF	810.25	821.25
L 52	6" SDR 23.5	STA 0+74	3.0' RISER	73 LF	809.75	820.75
L 66	6" SDR 23.5	STA 1+26	2.5' RISER	21 LF	808.90	819.90
L 53	6" SDR 23.5	STA 1+42	0.0' RISER	75 LF	808.55	819.55
L 65	6" SDR 23.5	STA 1+56	1.0' RISER	22 LF	808.00	819.00
L 64	6" SDR 23.5	STA 2+25	1.0' RISER	22 LF	808.30	819.30
L 62	6" SDR 23.5	STA 0+42	0.0' RISER	71 LF	808.80	819.80
L 63	6" SDR 23.5	STA 0+99	0.0' RISER	73 LF	808.85	819.25
L 61	6" SDR 23.5	STA 0+28	0.0' RISER	71 LF	809.71	820.40
L 54	6" SDR 23.5	STA 0+96	0.0' RISER	21 LF	811.10	822.10
L 60	6" SDR 23.5	STA 0+98	0.0' RISER	71 LF	810.90	821.70
L 59	6" SDR 23.5	STA 1+68	0.0' RISER	71 LF	812.09	823.00
L 55	6" SDR 23.5	STA 1+82	0.0' RISER	21 LF	812.55	823.55
L 58	6" SDR 23.5	STA 2+38	0.0' RISER	71 LF	813.30	824.30
L 56	6" SDR 23.5	STA 2+54	0.0' RISER	21 LF	813.50	824.50
L 57	6" SDR 23.5	STA 2+76	0.0' RISER	77 LF	814.00	825.00

SEE SHEET 33 FOR UTILITY CROSSING TABLE

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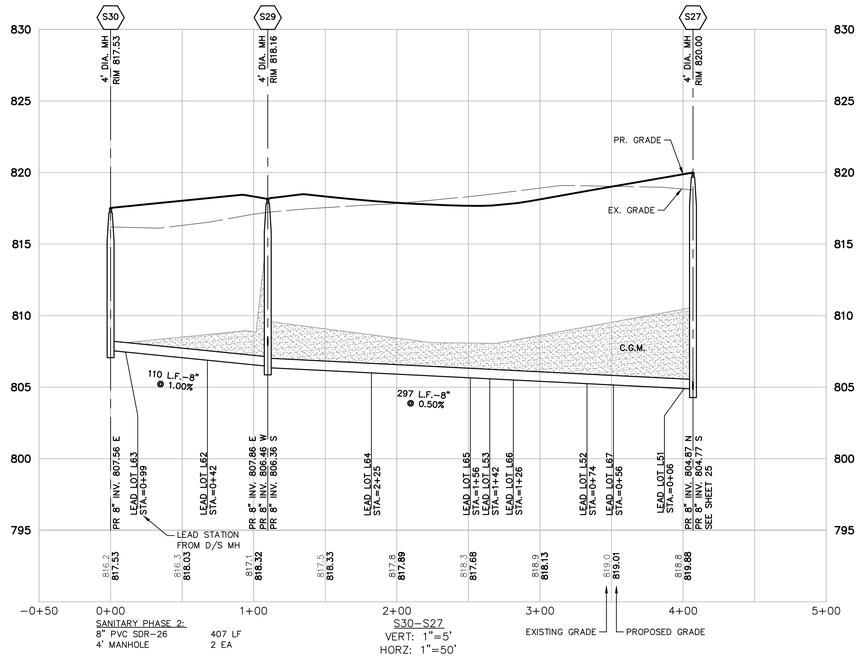


SANITARY PHASE 2:
8" PVC SDR-26
4' MANHOLE

304 LF
1 EA

S31-S29
VERT: 1"=5'
HORZ: 1"=50'

EXISTING GRADE
PROPOSED GRADE



SANITARY PHASE 2:
8" PVC SDR-26
4' MANHOLE

407 LF
2 EA

S30-S27
VERT: 1"=5'
HORZ: 1"=50'

EXISTING GRADE
PROPOSED GRADE

811
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WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

SANITARY PLAN & PROFILE 3

DATE
MARCH 1, 2024

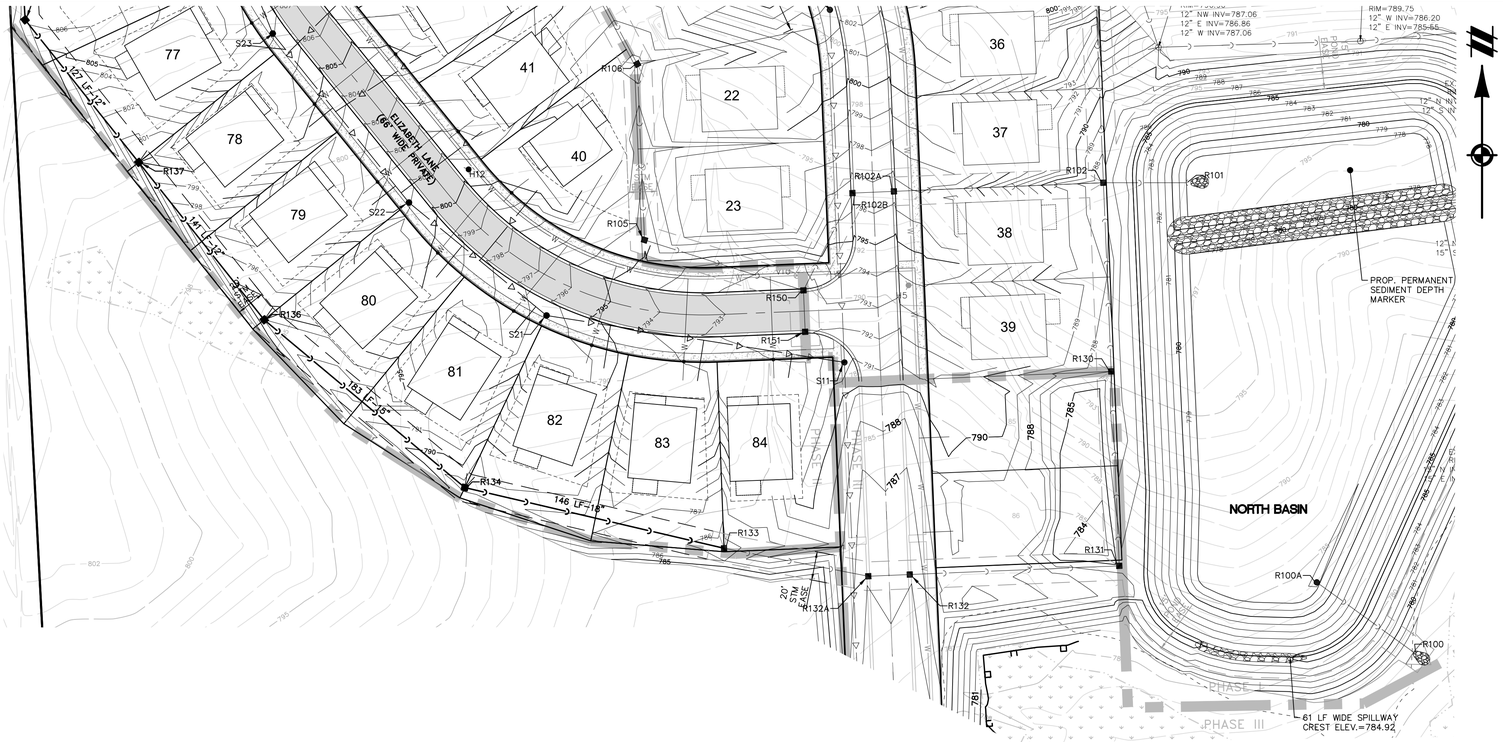
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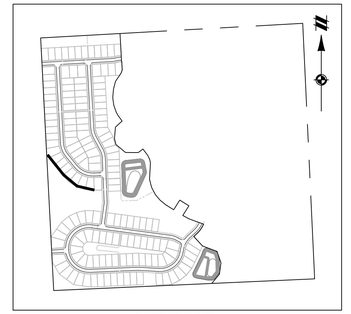
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SCALE: 1" = 50 FEET

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JOB 16000819
SHEET NO. 26

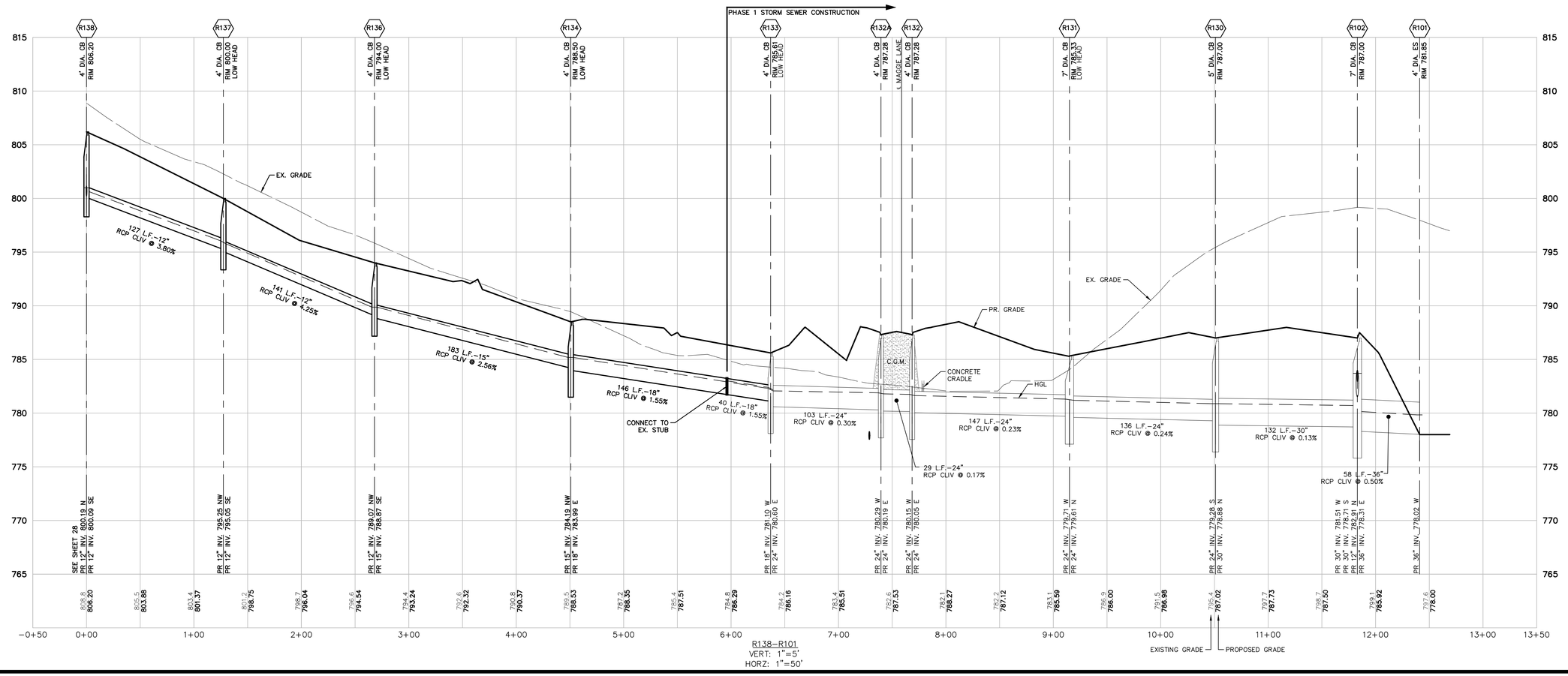
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KEYMAP
SCALE: 1" = 750'

SEE SHEET 33 FOR UTILITY CROSSING TABLE



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CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

STORMWATER PLAN & PROFILE 1

DATE
MARCH 1, 2024

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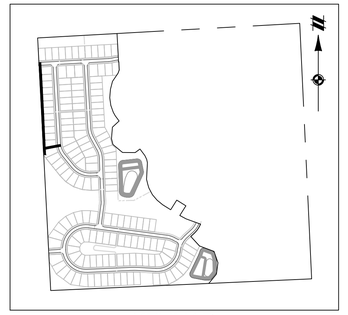
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SCALE: 1" = 50 FEET

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BOOK --
JOB 16000819
SHEET NO. 27

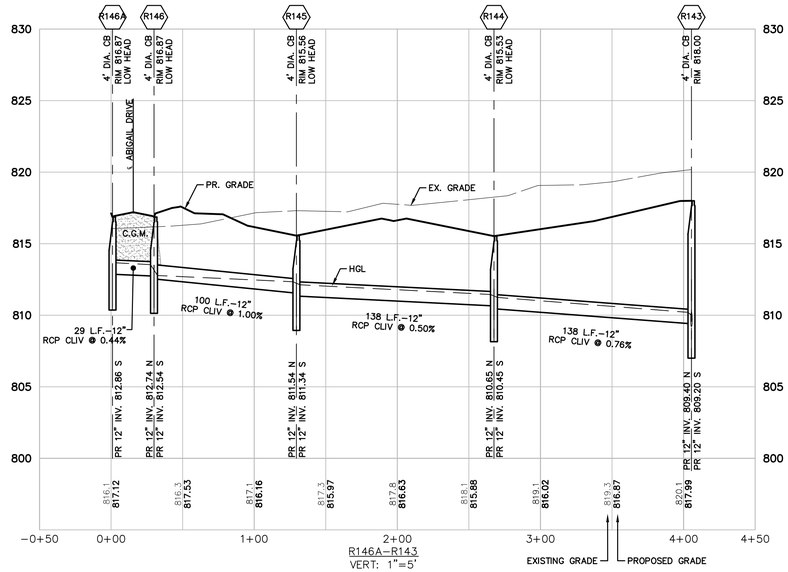
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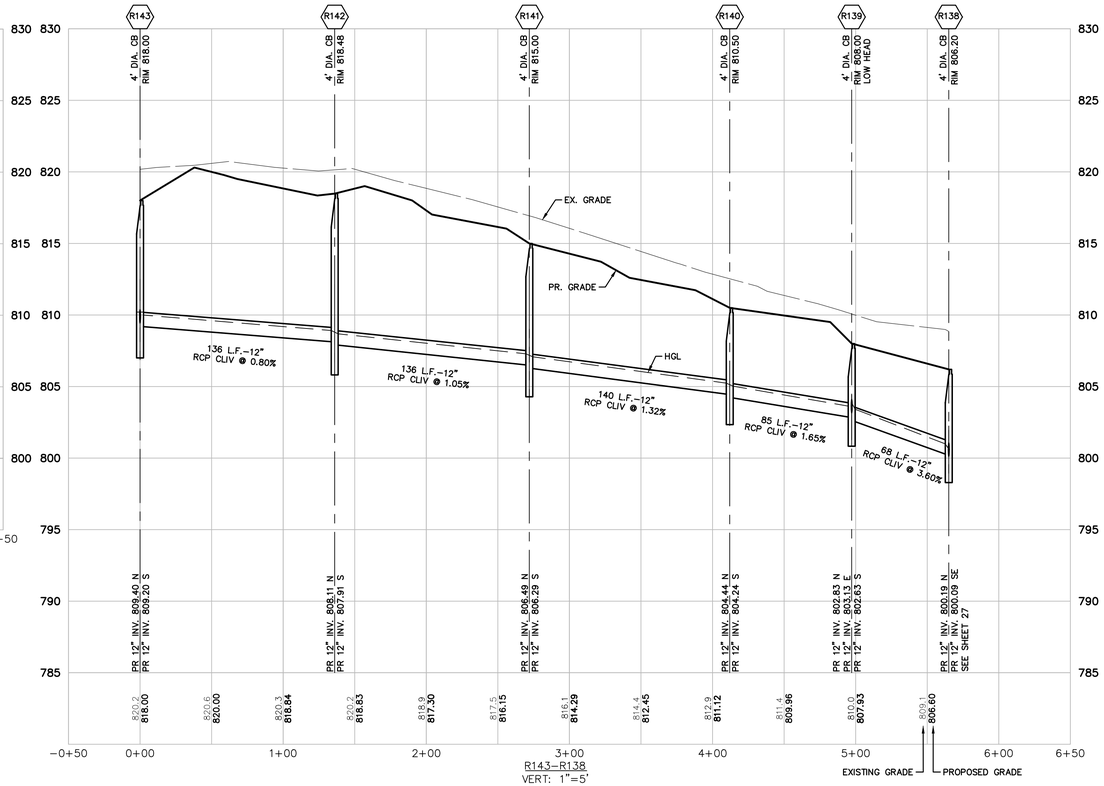


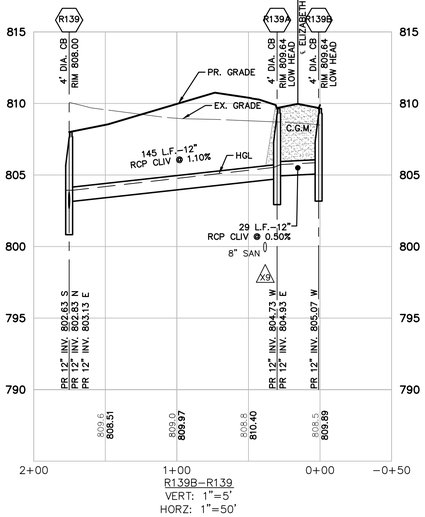


KEYMAP
SCALE: 1" = 750'

SEE SHEET 33 FOR UTILITY CROSSING TABLE







811
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SUPERIOR TOWNSHIP
WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC
PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

STORMWATER PLAN & PROFILE 2

DATE
MARCH 1, 2024

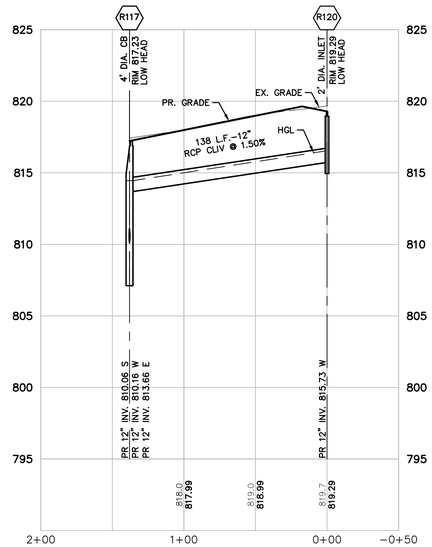
REVISIONS

SCALE: 1" = 50 FEET

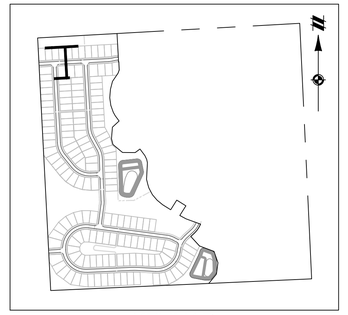
DR.	SK
CH.	SS
P.M.	MB
BOOK	--
JOB	16000819
SHEET NO.	28

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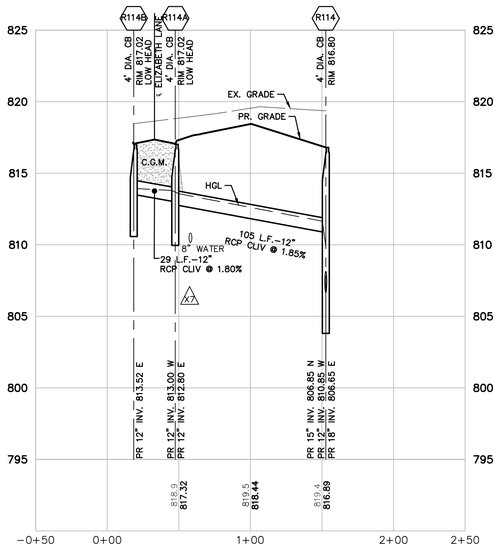


R120–R117
VERT: 1"=5'
HORZ: 1"=50'

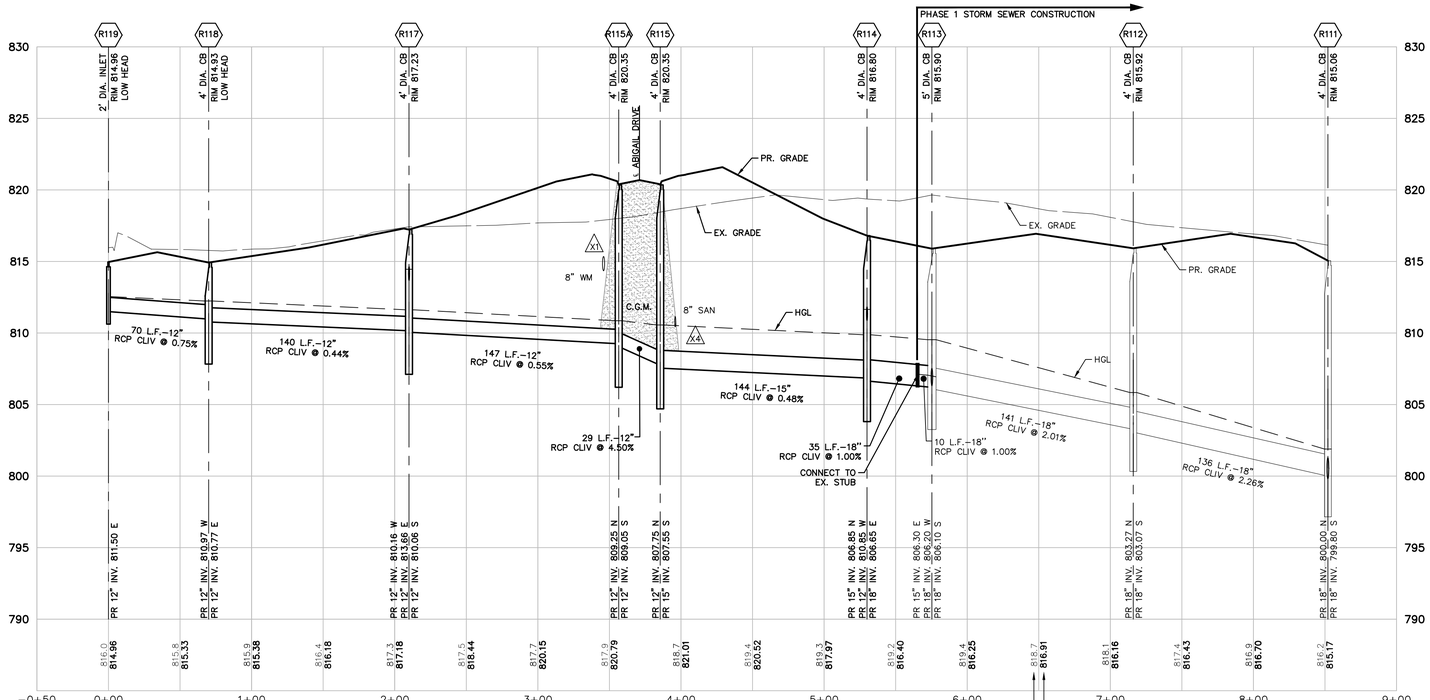


KEYMAP
SCALE: 1" = 750'

SEE SHEET 33 FOR UTILITY CROSSING TABLE



R114B–R114
VERT: 1"=5'
HORZ: 1"=50'



R119–R111
VERT: 1"=5'
HORZ: 1"=50'

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STORMWATER PLAN & PROFILE 3

DATE
MARCH 1, 2024

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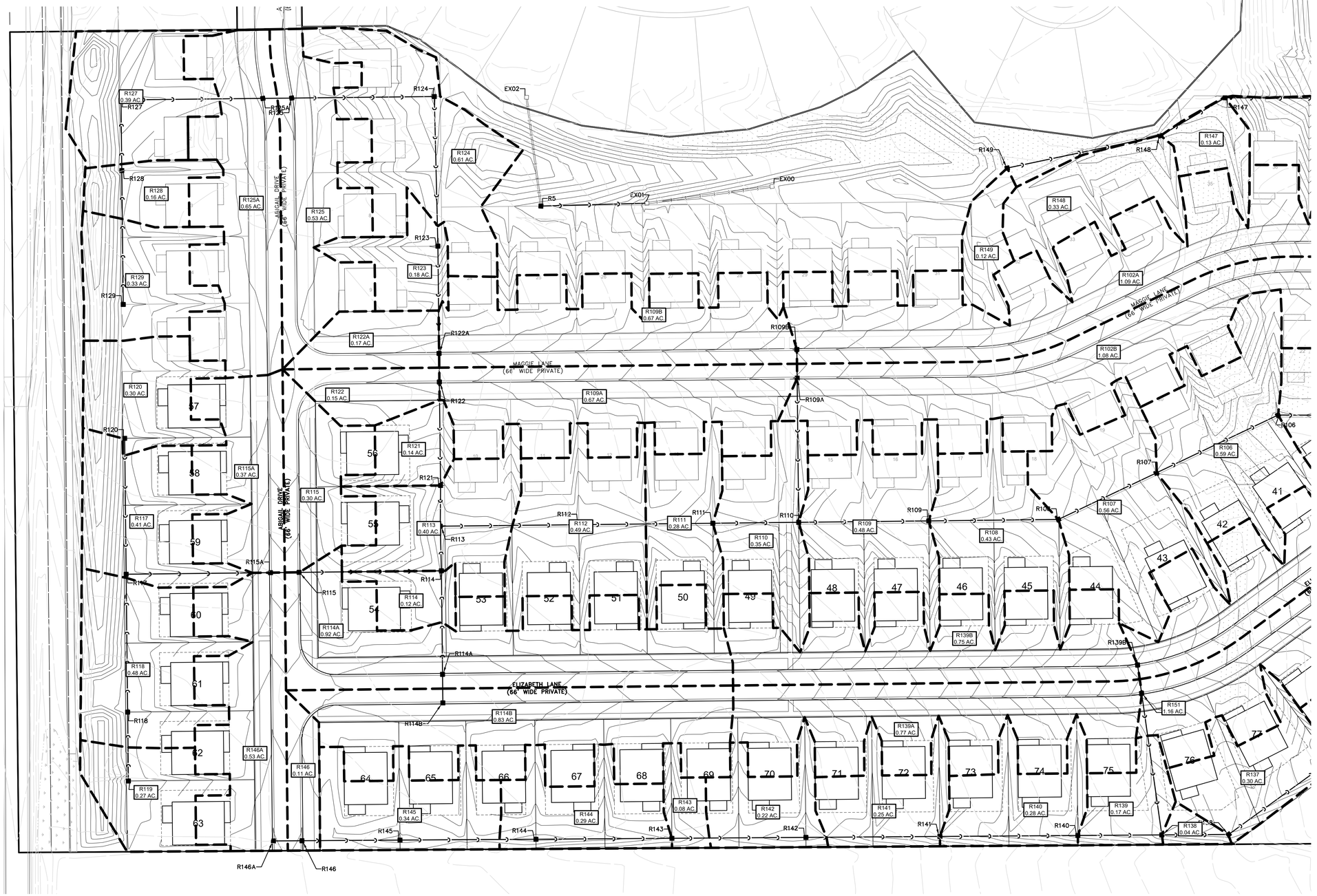
SCALE: 1" = 50 FEET

DR. SK | CH. SS
P.M. MB
BOOK --
JOB 16000819
SHEET NO. 29

J:\16000819\CAD\PLAN SET\SITE - FINAL PHASE 2\16000819FP2-26-4 SPWC 3-7-2024 3-5-24 PLAN VIEWS.dwg

LEGEND

588	PROPOSED 1' CONTOUR
590	PROPOSED 5' CONTOUR
588	EXISTING 1' CONTOUR
590	EXISTING 5' CONTOUR
	PROPERTY LINE
	GRADING LIMITS
	EXISTING MANHOLE / CATCH BASIN
	PROPOSED MANHOLE / CATCH BASIN
	EXISTING HYDRANT
	PROPOSED HYDRANT
	EXISTING GATE VALVE & WELL
	PROPOSED GATE VALVE & WELL
	EXISTING WATER MAIN MANHOLE
	PROPOSED SANITARY SEWER MANHOLE
	EXISTING SANITARY SEWER MANHOLE
	EXISTING WETLAND
	PROPOSED ASPHALT
	PROPOSED CONCRETE
	PROPOSED EMERGENCY OVERFLOW ROUTE



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FINAL SITE PLAN – PHASE 2

DRAINAGE AREA PLAN

DATE
MARCH 1, 2024

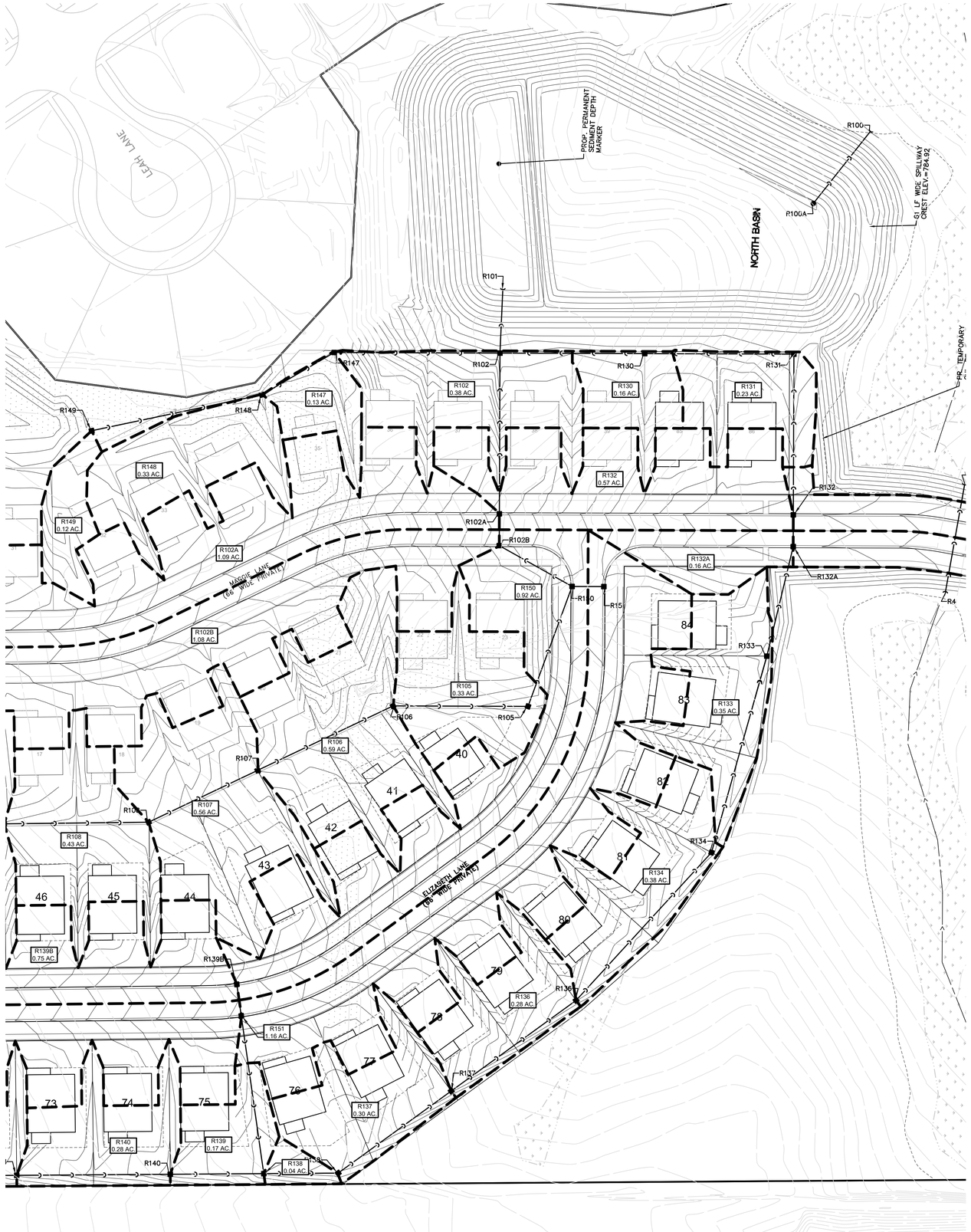
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REVISIONS

0 25 50
SCALE: 1" = 50 FEET

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

C:\WORKFOLDER\PLAN SETS\SITE - FINAL PHASE 2\16000819\02-1-SITE-PLANS 3/5/2024 9:54 AM KYLE SIEBERS



LEGEND

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

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DRAINAGE AREA PLAN

DATE
MARCH 1, 2024

REVISIONS
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0 25 50
SCALE: 1" = 50 FEET

DR. SK	CH. SS
P.M. MB	
BOOK --	
JOB 16000819	
SHEET NO. 31	

C:\WORKFOLDER\PLAN SETS\SITE - FINAL PHASE 2\16000819FP2-1-SITE.DWG, 3/5/2024 3:53 PM, KYLE SKEEN

	FROM STRUCT INPUT	TO STRUCT	A TRIB AREA (AC)	C RUNOFF COEFF	AxC EQUIV AREA	CA DESIGN SUM AxC	T TIME CONC. (MIN)	I INTEN-SITY (IN/HR)	Q FLOW CAxI (CFS)	Qc PIPE CAPAC. (CFS) * see above	D PIPE DIAM. (IN)	L PIPE LENGTH (FT)	S PIPE SLOPE (%)	HGq MIN HG for Q (%)	HGv MIN HG for Vmin (%)	HG HGL SLOPE (%)	VI VEL. FULL (FPS)	TI TIME OF FLOW (MIN)	H.G.L. ELEV. UPPER END	H.G.L. ELEV. LOWER END	RIM/GROUND ELEV. UPPER END	RIM/GROUND ELEV. LOWER END	INVERT ELEV. UPPER END	INVERT ELEV. LOWER END
*	R119	R118	0.27	0.44	0.12	0.12	20.0	3.89	0.47	3.09	12	70	0.75	0.02	0.44	0.44	3.9	0.3	812.55	812.24	814.96	814.93	811.50	810.97
*	R118	R117	0.48	0.50	0.24	0.36	20.3	3.86	1.39	2.36	12	140	0.44	0.15	0.44	0.44	3.0	0.8	812.24	811.63	814.93	817.23	810.77	810.16
*	R117	R115A	0.41	0.47	0.19	0.68	21.1	3.80	2.58	2.64	12	147	0.55	0.52	0.44	0.52	3.4	0.7	811.63	810.86	817.23	820.35	810.06	809.25
*	R115A	R115	0.37	0.74	0.28	0.96	21.8	3.74	3.59	7.56	12	29	4.50	1.02	0.44	1.02	9.6	0.1	810.86	810.56	820.35	820.35	809.05	807.75
*	R115	R114	0.30	0.75	0.23	1.19	21.9	3.73	4.44	4.48	15	144	0.48	0.47	0.32	0.47	3.6	0.7	810.56	809.88	820.35	816.80	807.55	806.85
*	R114	R113	0.12	0.56	0.06	2.49	22.6	3.68	9.15	10.50	18	45	1.00	0.76	0.25	0.76	5.9	0.1	809.88	809.54	816.80	815.90	806.65	806.20
	R113	R112	0.40	0.53	0.21	4.64	22.7	3.67	17.02	17.02 *	18	141	2.01	2.63	0.25	2.63	8.4	0.3	809.54	805.84	815.90	815.92	806.10	803.27
	R112	R111	0.49	0.55	0.27	4.91	23.0	3.65	17.90	17.90 *	18	136	2.26	2.90	0.25	2.90	8.9	0.3	805.84	801.89	815.92	815.06	803.07	800.00
	R111	R110	0.28	0.52	0.15	5.06	23.3	3.62	18.33	18.33 *	18	87	2.39	3.05	0.25	3.05	9.2	0.2	801.89	799.24	815.06	813.55	799.80	797.71
	R110	R109	0.35	0.54	0.19	5.72	23.5	3.61	20.64	20.64 *	24	132	0.67	0.83	0.17	0.83	5.9	0.4	799.24	798.14	813.55	809.84	797.31	796.43
	R109	R108	0.48	0.55	0.27	5.99	23.9	3.58	21.44	21.44 *	24	132	0.73	0.90	0.17	0.90	6.2	0.4	798.14	796.96	809.84	807.21	796.23	795.27
	R108	R107	0.43	0.52	0.22	6.21	24.3	3.55	22.04	22.04 *	24	110	0.78	0.95	0.17	0.95	6.4	0.3	796.96	795.91	807.21	802.00	795.17	794.31
	R107	R106	0.56	0.52	0.29	6.50	24.6	3.53	22.93	30.35	24	137	1.80	1.03	0.17	1.03	9.7	0.2	794.66	793.25	802.00	796.73	794.11	791.65
	R106	R105	0.59	0.51	0.30	6.80	24.8	3.51	23.90	29.50	24	123	1.70	1.12	0.17	1.12	9.4	0.2	792.43	791.06	796.73	795.15	791.55	789.46
	R105	R150	0.33	0.57	0.19	6.99	25.0	3.50	24.47	30.35	24	116	1.80	1.17	0.17	1.17	9.7	0.2	790.22	788.85	795.15	792.18	789.36	787.26
	R150	R102B	0.92	0.73	0.67	8.52	25.2	3.49	29.70	30.35	24	76	1.80	1.72	0.17	1.72	9.7	0.1	788.70	787.39	792.18	796.34	787.16	785.79
	R102B	R102A	1.08	0.74	0.80	9.32	25.3	3.48	32.43	46.77	30	29	1.30	0.62	0.15	0.62	5.1	0.1	787.20	787.01	796.34	796.34	785.39	785.01
	R102A	R102	1.09	0.74	0.81	10.13	25.4	3.47	35.17	46.77	30	147	1.30	0.74	0.13	0.74	9.5	0.3	784.59	783.51	796.34	797.00	783.41	781.51
	R102	R101	0.38	0.54	0.21	13.94	25.7	3.45	48.12	48.12 *	36	58	0.50	0.52	0.10	0.52	6.7	0.1	780.14	779.84	787.00	781.85	778.31	778.02
*	R120	R117	0.30	0.43	0.13	0.13	20.0	3.89	0.51	4.36	12	138	1.50	0.02	0.44	0.44	5.6	0.4	816.53	814.46	819.29	817.23	815.73	813.66
	R129	R128	0.33	0.50	0.17	0.17	20.0	3.89	0.66	2.36	12	136	0.44	0.03	0.44	0.44	3.0	0.8	817.93	817.34	820.54	820.95	816.43	815.83
	R128	R127	0.16	0.50	0.08	0.25	20.8	3.82	0.96	2.36	12	72	0.44	0.07	0.44	0.44	3.0	0.4	817.34	817.02	820.95	820.31	815.73	815.42
	R127	R125A	0.39	0.47	0.18	0.43	21.2	3.79	1.63	2.36	12	144	0.44	0.21	0.44	0.44	3.0	0.8	817.02	816.39	820.31	820.60	815.32	814.68
	R125A	R125	0.65	0.71	0.46	0.89	22.0	3.72	3.31	3.31 *	12	29	0.44	0.87	0.44	0.87	3.0	0.2	816.39	816.14	820.60	820.63	814.58	814.46
	R125	R124	0.53	0.71	0.38	1.27	22.2	3.71	4.71	5.27	12	145	2.19	1.75	0.44	1.75	6.7	0.4	816.14	813.61	820.63	814.81	814.36	811.19
	R124	R123	0.61	0.49	0.30	1.57	22.6	3.68	5.77	6.62	15	152	1.05	0.80	0.32	0.80	5.4	0.5	813.61	812.40	814.81	816.83	810.99	809.40
	R123	R122A	0.18	0.48	0.09	1.66	23.1	3.64	6.04	7.08	15	109	1.20	0.87	0.32	0.87	5.8	0.3	812.40	811.45	816.83	821.36	809.30	807.99
	R122A	R122	0.17	0.61	0.11	1.77	23.4	3.62	6.40	6.40 *	15	29	0.44	0.98	0.32	0.98	3.5	0.1	811.45	811.16	821.36	821.36	807.79	807.66
	R122	R121	0.15	0.64	0.10	1.87	23.5	3.61	6.75	6.75 *	15	105	0.85	1.09	0.32	1.09	4.9	0.4	811.16	810.01	821.36	817.53	807.56	806.67
	R121	R113	0.14	0.52	0.07	1.94	23.9	3.58	6.94	6.94 *	15	41	0.65	1.16	0.32	1.16	4.2	0.2	810.01	809.54	817.53	815.90	806.57	806.30
*	R114B	R114A	0.83	0.73	0.60	0.60	20.0	3.89	2.33	4.78	12	29	1.80	0.43	0.44	0.44	6.1	0.1	813.92	813.80	817.02	817.02	813.52	813.00
*	R114A	R114	0.92	0.70	0.64	1.24	20.1	3.88	4.81	4.85	12	105	1.85	1.82	0.44	1.82	6.2	0.3	813.57	811.65	817.02	816.80	812.80	810.85
	R109B	R109A	0.67	0.35	0.24	0.24	20.0	3.89	0.93	2.36	12	29	0.44	0.07	0.44	0.44	3.0	0.2	810.53	810.41	813.90	813.90	809.73	809.61
	R109A	R110	0.67	0.35	0.23	0.47	20.2	3.87	1.82	3.47	12	146	0.95	0.26	0.44	0.44	4.4	0.6	809.56	808.91	813.90	813.55	809.51	808.11
	R149	R148	0.12	0.35	0.04	0.04	20.0	3.89	0.16	5.40	12	159	2.30	0.00	0.44	0.44	6.9	0.4	802.02	798.37	805.22	801.54	801.22	797.57
	R148	R147	0.33	0.57	0.19	0.23	20.4	3.85	0.89	5.40	12	76	2.30	0.06	0.44	0.44	6.9	0.2	798.27	796.51	801.54	799.80	797.47	795.71
	R147	R102	0.13	0.54	0.07	0.30	20.6	3.84	1.15	7.56	12	151	4.50	0.10	0.44	0.44	9.6	0.3	790.51	783.71	799.80	787.00	789.71	782.91
*	R146A	R146	0.53	0.74	0.39	0.39	20.0	3.89	1.52	2.36	12	29	0.44	0.18	0.44	0.44	3.0	0.2	813.66	813.54	816.87	816.87	812.86	812.74
*	R146	R145	0.11	0.77	0.09	0.48	20.2	3.87	1.86	3.56	12	100	1.00	0.27	0.44	0.44	4.5	0.4	812.74	812.34	816.87	815.56	812.54	811.54
*	R145	R144	0.34	0.49	0.17	0.65	20.6	3.84	2.49	2.52	12	138	0.50	0.49	0.44	0.49	3.2	0.7	812.13	811.45	815.56	815.53	811.34	810.65
*	R144	R129	0.29	0.60	0.17	0.82	21.3	3.78	3.10	3.11	12	138	0.76	0.76	0.44	0.76	4.0	0.6	811.25	810.20	815.53	818.00	810.45	809.40
*	R143	R142	0.08	0.35	0.03	0.85	21.9	3.73	3.17	3.19	12	136	0.80	0.79	0.44	0.79	4.1	0.6	809.99	808.91	818.00	818.48	809.20	808.11
*	R142	R141	0.22	0.57	0.13	0.98	22.5	3.68	3.61	3.65	12	136	1.05	1.03	0.44	1.03	4.7	0.5	808.68	807.29	818.48	815.00	807.91	806.49
*	R141	R140	0.25	0.54	0.14	1.12	23.0	3.65	4.08	4.09	12	140	1.32	1.31	0.44	1.31	5.2	0.4	807.08	805.24	815.00	810.50	806.29	804.44
*	R140	R139	0.67	0.52	0.35	1.47	23.4	3.62	4.56	4.58	12	85	1.65	1.64	0.44	1.64	5.8	0.2	805.03	803.63	810.50	808.00	804.24	802.83
*	R139	R138	0.17	0.49	0.08	1.87	23.6	3.60	6.73	6.76	12	68	3.60	3.57	0.44	3.57	8.6	0.1	803.41	800.99	808.00	806.20	802.63	800.19
	R138	R137	0.04	0.35	0.01	1.88	23.7	3.59	6.76	6.94	12	127	3.80	3.60	0.44	3.60	8.8	0.2	800.63	796.05	806.20	800.00	800.09	795.25
*	R137	R136	0.30	0.51	0.16	2.04	23.9	3.58	7.30	7.34	12	141	4.25	4.20	0.44	4.20	9.4	0.2	795.79	789.87	800.00	794.00	795.05	789.07
*	R136	R134	0.28	0.52	0.14	2.18	24.2	3.56	7.75	10.34	15	183	2.56	1.44	0.32	1.44	8.4	0.4	789.87	785.19	794.00	788.50	788.87	784.19
*	R134	R133	0.38	0.54	0.20	2.38	24.6	3.54	8.43	13.08	18	186	1.55	0.64	0.25	0.64	7.4	0.4	785.19	782.30	788.50	785.61	783.99	781.10
*	R133	R132A	0.35	0.49	0.17	2.55	25.0	3.50	8.93	12.39	24	103	0.30	0.16	0.17	0.17	3.9	0.4	782.07	781.89	785.61	787.28	780.60	780.29
	R132A	R132	0.16	0.67	0.11	2.66	25.6	3.47	9.24	9.33	24	29	0.17	0.17	0.17	0.17	3.0	0.2	781.80	781.75	787.28	787.28	780.19	780.15
	R132	R131	0.57	0.76	0.43	3.09	25.6	3.46	10.69	10.85	24	147	0.23	0.22	0.17	0.22	3.5	0.7	781.64	781.31	787.28	785.33	780.05	779.71
	R131	R130	0.23	0.45	0.10	3.19	26.3	3.41	10.88	11.08	24	136	0.24	0.23	0.17	0.23	3.5	0.6	781.20	780.88	785.33	787.00	779.61	779.28
	R130	R102	0.16	0.64	0.11	3.30	26.9	3.37	11.13	14.79	30	132	0.13	0.07	0.13	0.13	3.0	0.7	780.88	780.71	787.00	787.00	778.88	778.71
*	R139B	R139A	0.75	0.35	0.26	0.26	20.0	3.89	1.01	2.52	12	29	0.50	0.08	0.44	0.44	3.2	0.2	805.86	805.73	809.64	809.64	805.07	804.93
*	R139A	R139	0.77	0.35	0.27	0.53	20.2	3.87	2.05	3.74	12	145	1.10	0.33	0.44	0.44	4.8	0.5	805.53	803.93	809.64	808.00	804.73	803.13
	R151	R150	1.16	0.74	0.86	0.86	20.0	3.89	3.34	3.38	12	29	0.90	0.88	0.44	0.88	4.3	0.1	789.02	788.76	792.18	792.18	788.22	787.96
	R253D	R253C	0.64	0.64	0.41	0.41	20.0	3.89	1.59	2.52	12	29	0.50	0.20	0.44	0.44	3.2	0.2	782.13	782.00	785.38	785.38	781.35	781.20
	R253C	R253B	0.10	0.72	0.07	0.48	20.2	3.87	1.86	7.39	12	58	4.30	0.27	0.44	0.44	9.4	0.1	781.90	779.39	785.38	782.48	781.10	778.59
	R253B	R253A	0.07	0.71	0.05	0.53	20.3	3.86	2.05	2.52	12	29	0.50	0.33	0.44	0.44	3.2	0.2	779.28	779.15	782.48	782.48	778.49	778.35
	R253A	R253	0.36	0.74	0.27	0.80	20.5	3.85	3.08	7.04	12	139	3.90	0.75	0.44	0.75	9.0	0.3	778.95	773.55	782.48	777.80	778.15	772.75
	R253	R252	0.28	0.52	0.15	0.98	20.8	3.82	3.74	7.56	12	79	4.50	1.10	0.44	1.10	9.6	0.1	773.45	769.89	777.80	773.02	772.65	769.09
	R252	R251	0.33	0.49	0.16	1.14	20.9	3.81	4.35	4.65	12	119	1.70	1.49	0.44	1.49	6.3	0.3	769.54	767.76	773.02	771.39	768.99	766.96
	R251	R250	0.59	0.43	0.25	1.39	21.2	3.79	5.27	14.09	18	132	1.80	0.25	0.25	0.25	8.0	0.3	767.76	765.39	771.39	769.41	766.56	764.19
	R250	R249	0.91	0.47	0.43	1.82	21.5	3.76	6.85	9.60	24	132	0.18	0.09	0.17	0.17	3.1	0.8	765.38	765.11	769.41	770.80	763.79	763.51
	R249	R248	0.23	0.45	0.10	1.92	22.3	3.70	7.10	9.60	24	132	0.18	0.10	0.17	0.17	3.1	0.7	764.91	764.68	770.80	772.54	763.31	763.08
	R248	R247	0.42	0.46	0.19	2.11	23.0	3.65	7.69	9.60	24	133	0.18	0.12	0.17	0.17	3.1	0.7	764.57	764.34	772.54	774.28	762.98	762.74
	R247	R246	0.53	0.49	0.26	2.37	23.7	3.59	8.52	9.60	24	119	0.18	0.14	0.17	0.17	3.1	0.7	764.13	763.92	774.28	775.80	762.54	762.32
	R246	R203	0.33	0.49	0.16	2.53	24.4	3.54	8.96	10.12	24	40	0.20	0.16	0.17	0.17	3.2	0.2	763.81	763.74	775.80	775.91	762.22	762.14
	R203	R202B	0.40	0.47	0.19	3.57	24.6	3.53	12.60	20.86	24	116	0.85	0.31	0.17	0.31	6.6	0.3	763.02	762.66	775.91	781.40	762.04	761.06
	R202B	R202A	0.00	0.00	0.00	3.57	24.9	3.51	12.60	25.94	30	84	0.40	0.09	0.13	0.13	5.3	0.3	762.43	762.33	781.40	781.85	760.66	760.33
	R202A	R202	0.00	0.00	0.00	3.57	25.2	3.49	12.60	15.89	30	121	0.15	0.09	0.13	0.13	3.2	0.6	762.20	762.05	781.85	771.42	760.23	760.05
	R202	R201	0.05	0.35	0.02	13.30	25.8	3.44	45.82	46.21	36	76	0.48	0.47	0.10	0.47	6.5	0.2	757.32	756.96	771.42	758.83	755.37	755.00

	FROM STRUCT INPUT	TO STRUCT	A TRIB AREA (AC)	C RUNOFF COEFF	AxC EQUIV AREA	CA DESIGN SUM AxC	T TIME CONC. (MIN)	I INTEN-SITY (IN/HR)	Q FLOW CAxI (CFS)	Qc PIPE CAPAC. (CFS) * see above	D PIPE DIAM. (IN)	L PIPE LENGTH (FT)	S PIPE SLOPE (%)	HGq MIN HG for Q (%)	HGv MIN HG for Vmin (%)	HG HGL SLOPE (%)	VI VEL. FULL (FPS)	TI TIME OF FLOW (MIN)	H.G.L. ELEV. UPPER END	H.G.L. ELEV. LOWER END	RIM/GROUND ELEV. UPPER END	RIM/GROUND ELEV. LOWER END	INVERT ELEV. UPPER END	INVERT ELEV. LOWER END
	R254	R253	0.07	0.35	0.03	0.03	20.0	3.89	0.12	7.56	12	84	4.50	0.00	0.44	0.44	9.6	0.1	778.41	774.65	783.80	777.80	777.61	773.85
	R209	R208	0.37	0.55	0.20	0.20	20.0	3.89	0.78	2.36	12	140	0.44	0.05	0.44	0.44	3.0	0.8	777.06	776.45	779.96	781.00	776.27	775.65
	R208	R207	0.37	0.55	0.20	0.40	20.8	3.82	1.53	2.36	12	140	0.44	0.18	0.44	0.44	3.0	0.8	776.25	775.64	781.00	788.03	775.45	774.84
	R207	R206	0.10	0.43	0.04	0.44	21.6	3.76	1.65	2.36	12	158	0.44	0.22	0.44	0.44	3.0	0.9	775.43	774.74	788.03	785.72	774.64	773.94
	R206	R205	0.24	0.55	0.13	0.57	22.5	3.68	2.10	2.39	12	136	0.45	0.35	0.44	0.44	3.0	0.7	774.52	773.93	785.72	783.00	773.74	773.13
	R205	R204	0.24	0.56	0.13	0.70	23.2	3.63	2.54	2.87	12	136	0.65	0.51	0.44	0.51	3.7	0.6	773.54	772.84	783.00	780.00	772.93	772.04
	R204	R203	0.27	0.53	0.15	0.85	23.8	3.59	3.05	3.56	12	65	1.00	0.73	0.44	0.73	4.5	0.2	772.57	772.09	780.00	775.91	771.94	771.29
	R224	R223	0.75	0.45	0.34	0.34	20.0	3.89	1.32	2.36	12	186	0.44	0.14	0.44	0.44	3.0	1.0	783.81	783.00	786.87	791.90	783.02	782.20
	R223	R222	0.14	0.52	0.07	0.41	21.0	3.80	1.56	2.36	12	184	0.44	0.19	0.44	0.44	3.0	1.0	782.89	782.09	791.90	789.72	782.10	781.29
	R222	R221	0.34	0.49	0.16	0.57	22.0	3.72	2.12	2.36	12	179	0.44	0.35	0.44	0.44	3.0	1.0	781.98	781.20	789.72	787.88	781.19	780.40
	R221	R220B	0.25	0.54	0.14	0.71	23.0	3.65	2.59	2.64	12	102	0.55	0.53	0.44	0.53	3.4	0.5	781.08	780.54	787.88	784.67	780.30	779.74
	R220B	R220A	0.93	0.72	0.67	1.38	23.5	3.61	4.98	5.04	12	29	2.00	1.95	0.44	1.95	6.4	0.1	780.42	779.86	784.67	784.67	779.64	779.06
	R220A	R220	0.36	0.64	0.23	1.61	23.6	3.60	5.80	9.14	15	36	2.00	0.81	0.32	0.81	7.4	0.1	779.43	779.14	784.67	784.69	778.86	778.14
	R220	R219	0.03	0.35	0.01	2.42	23.7	3.59	8.70	8.79	15	76	1.85	1.81	0.32	1.81	7.2	0.2	779.01	777.64	784.69	787.12	778.04	776.63
	R219	R218	0.10	0.39	0.04	2.46	23.9	3.58	8.80	8.80 *	18	132	0.70	0.70	0.25	0.70	5.0	0.4	777.64	776.71	787.12	782.36	776.43	775.51
	R218	R217	0.23	0.38	0.09	2.55	24.3	3.55	9.05	9.10	18	70	0.75	0.74	0.25	0.74	5.2	0.2	776.50	775.98	782.36	780.96	775.31	774.78
	R217	R216	0.13	0.54	0.07	2.89	24.5	3.54	10.22	10.50	18	132	1.00	0.95	0.25	0.95	5.9	0.4	775.71	774.46	780.96	779.37	774.58	773.26
	R216	R215	0.23	0.56	0.13	3.02	24.9	3.51	10.59	17.10	18	132	2.65	1.02	0.25	1.02	9.7	0.2	774.26	770.77	779.37	774.10	773.06	769.57
	R215	R214	0.22	0.57	0.12	3.14	25.1	3.49	10.97	11.02	18	271	1.10	1.09	0.25	1.09	6.2	0.7	770.64	767.68	774.10	776.45	769.47	766.48
	R214	R210B	0.67	0.74	0.50	4.27	25.8	3.44	14.71	14.85	18	115	2.00	1.96	0.25	1.96	8.4	0.2	767.54	765.29	776.45	775.88	766.38	764.09
	R210B	R210A	0.00	0.00	0.00	4.79	26.0	3.43	16.44	16.61	18	143	2.50	2.45	0.25	2.45	9.4	0.3	765.12	761.62	775.88	765.00	763.99	760.42
	R210A	R210	0.16	0.35	0.06	4.85	26.3	3.41	16.54	16.61	18	135	2.50	2.48	0.25	2.48	9.4	0.2	761.49	758.14	765.00	771.02	760.32	756.94
	R210	R202	0.04	0.35	0.02	4.87	26.5	3.40	16.55	16.62	24	70	0.54	0.54	0.17	0.54	5.3	0.2	758.14	757.77	771.02	771.42	756.54	756.17
	R227B	R227A	0.87	0.68	0.59	0.59	20.0	3.89	2.29	2.52	12	29	0.50	0.41	0.44	0.44	3.2	0.2	786.16	786.04	789.13	789.13	785.38	785.24
	R227A	R220	0.30	0.70	0.21	0.80	20.2	3.87	3.10	6.12	12	139	2.95	0.76	0.44	0.76	7.8	0.3	785.94	781.84	789.13	784.69	785.14	781.04
	R217B	R217A	0.15	0.73	0.11	0.11	20.0	3.89	0.43	2.36	12	29	0.44	0.01	0.44	0.44	3.0	0.2	786.84	786.72	789.87	789.87	786.04	785.92
	R217A	R217	0.20	0.79	0.16	0.27	20.2	3.87	1.05	7.56	12	138	4.50	0.09	0.44	0.44	9.6	0.2	784.12	777.88	789.87	780.96	783.32	777.08
	R213	R214	0.87	0.73	0.63	0.63	20.0	3.89	2.45	2.52	12	29	0.50	0.47	0.44	0.47	3.2	0.2	773.22	773.08	776.45	776.45	772.43	772.28
	R212	R211	0.32	0.73	0.23	0.23	20.0	3.89	0.89	2.52	12	29	0.50	0.06	0.44	0.44	3.2	0.2	773.24	773.12	776.46	776.46	772.46	772.32
	R211	R210B	0.40	0.73	0.29	0.52	20.2	3.87	2.01	3.38	12	59	0.90	0.32	0.44	0.44	4.3	0.2	772.75	772.49	776.46	775.88	772.22	771.69
	R237	R236	0.00	0.00	0.00	0.00	20.0	3.89	0.00	7.56	12	150	4.50	0.00	0.44	0.44	9.6	0.3	773.67	766.92	780.97	770.06	772.87	766.12
	R236	R235	0.42	0.46	0.19	0.19	20.3	3.86	0.73	5.63	12	177	2.50	0.04	0.44	0.44	7.2	0.4	766.82	762.41	770.06	765.50	766.02	761.61
	R235	R234	0.53	0.53	0.28	0.47	20.7	3.83	1.80	2.36	12	181	0.44	0.26	0.44	0.44	3.0	1.0	762.30	761.51	765.50	765.71	761.51	760.71
	R234	R233	0.17	0.63	0.11	0.58	21.7	3.75	1.77	2.36	12	138	0.44	0.37	0.44	0.44	3.0	0.8	761.41	760.80	765.71	764.00	760.61	760.00
	R233	R232A	0.30	0.59	0.18	0.76	22.5	3.68	2.80	12.39	24	70	0.30	0.02	0.17	0.17	3.9	0.3	760.61	760.49

SANITARY SEWER TABLE

NUMBER	SIZE	DESC.	ELEVATION	INVERTS	NORTHING EASTING
EX01	4' DIA	EX MH	RIM=769.04	PR. 8" SW INV.749.49	N = 281452.169 E = 13328953.306
EX02	4' DIA	EX MH	RIM=821.35	PR. 8" W INV.810.65	N = 281376.437 E = 13328093.851
S3	4' DIA	MH	RIM=775.53	PR. 8" S INV.756.78 PR. 8" NE INV.756.68 PR. 8" NW INV.756.78	N = 282739.999 E = 13328080.922
S5	4' DIA	MH	RIM=778.15	PR. 8" W INV.764.12 PR. 8" SE INV.764.02	N = 281351.117 E = 13328655.459
S6	4' DIA	MH	RIM=785.00	PR. 8" W INV.772.88 PR. 8" E INV.772.78	N = 281385.533 E = 13328420.819
S7	4' DIA	MH	RIM=791.85	PR. 8" W INV.774.32 PR. 8" E INV.774.22	N = 281420.768 E = 13328155.145
S8	4' DIA	MH	RIM=789.13	PR. 8" N INV.775.77 PR. 8" E INV.775.67 PR. 8" W INV.775.82	N = 281465.319 E = 13327887.681
S9	4' DIA	MH	RIM=786.22	PR. 8" N INV.777.01 PR. 8" S INV.776.91	N = 281689.985 E = 13327917.477
S11	4' DIA	MH	RIM=791.19	PR. 8" N INV.779.12 PR. 8" S INV.778.32 PR. 8" W INV.778.42	N = 281953.240 E = 13327906.605
S12	4' DIA	MH	RIM=802.78	PR. 8" NW INV.791.54 PR. 8" S INV.790.24	N = 282199.651 E = 13327886.428
S15	4' DIA	MH	RIM=808.95	PR. 8" N INV.798.02 PR. 8" SE INV.797.92	N = 282401.433 E = 13327790.767
S16	4' DIA	MH	RIM=814.92	PR. 8" N INV.804.06 PR. 8" S INV.803.96	N = 282670.347 E = 13327765.928
S17	4' DIA	MH	RIM=821.44	PR. 8" S INV.810.66	N = 282969.883 E = 13327749.233
S18	4' DIA	MH	RIM=822.54	PR. 8" W INV.811.78 PR. 8" E INV.811.68	N = 283155.006 E = 13327887.549
S19	4' DIA	MH	RIM=823.07	PR. 8" S INV.812.60	N = 283150.486 E = 13327806.438
* S21	4' DIA	MH	RIM=796.51	PR. 8" NW INV.786.96 PR. 8" E INV.786.86	N = 281986.022 E = 13327698.460
* S22	4' DIA	MH	RIM=801.06	PR. 8" NW INV.790.72 PR. 8" SE INV.790.62	N = 282064.932 E = 13327602.329
* S23	4' DIA	MH	RIM=807.05	PR. 8" N INV.796.14 PR. 8" SE INV.796.04	N = 282183.057 E = 13327507.132
* S24	4' DIA	MH	RIM=810.48	PR. 8" N INV.799.99 PR. 8" S INV.799.89	N = 282295.245 E = 13327461.399
* S26	4' DIA	MH	RIM=818.68	PR. 8" N INV.803.41 PR. 8" S INV.803.31	N = 282560.488 E = 13327445.545
* S27	4' DIA	MH	RIM=820.00	PR. 8" N INV.804.87 PR. 8" S INV.804.77	N = 282832.066 E = 13327430.409
* S29	4' DIA	MH	RIM=818.16	PR. 8" E INV.807.86 PR. 8" W INV.806.46 PR. 8" S INV.806.36	N = 283128.152 E = 13327405.736
* S30	4' DIA	MH	RIM=817.53	PR. 8" E INV.807.56	N = 283122.041 E = 13327296.096
* S31	4' DIA	MH	RIM=823.24	PR. 8" W INV.813.03	N = 283145.053 E = 13327708.964
S34	4' DIA	MH	RIM=782.15	PR. 8" SW INV.758.04 PR. 8" N INV.757.94	N = 281063.434 E = 13328716.396
S35	4' DIA	MH	RIM=780.94	PR. 8" W INV.758.86 PR. 8" NE INV.758.76	N = 280976.457 E = 13328601.412
S36	4' DIA	MH	RIM=777.18	PR. 8" W INV.759.64 PR. 8" E INV.759.54	N = 280962.351 E = 13328466.338
S37	4' DIA	MH	RIM=773.61	PR. 8" W INV.760.71 PR. 8" E INV.760.61	N = 280973.391 E = 13328273.206
S39	4' DIA	MH	RIM=771.71	PR. 8" W INV.762.27 PR. 8" E INV.762.17	N = 280960.320 E = 13327981.952
S40	4' DIA	MH	RIM=773.18	PR. 8" W INV.763.36 PR. 8" E INV.763.26	N = 280951.443 E = 13327784.151
S41	4' DIA	MH	RIM=774.75	PR. 8" NW INV.764.06 PR. 8" E INV.763.96	N = 280972.173 E = 13327666.927
S42	4' DIA	MH	RIM=779.65	PR. 8" NW INV.768.12 PR. 8" SE INV.768.02	N = 281052.302 E = 13327565.182
S43	4' DIA	MH	RIM=784.06	PR. 8" N INV.772.70 PR. 8" SE INV.772.60 PR. 8" W INV.772.70	N = 281153.906 E = 13327519.032
S43A	4' DIA	MH	RIM=786.88	PR. 8" W INV.773.40 PR. 8" E INV.773.30	N = 281154.427 E = 13327397.925
S44	4' DIA	MH	RIM=786.90	PR. 8" N INV.775.99 PR. 8" S INV.775.89	N = 281228.837 E = 13327513.580
S46	4' DIA	MH	RIM=791.85	PR. 8" S INV.781.00	N = 281353.897 E = 13327554.439
S48	4' DIA	MH	RIM=791.71	PR. 8" W INV.781.67 PR. 8" E INV.781.57	N = 281468.316 E = 13327740.226
S49	4' DIA	MH	RIM=792.67	PR. 8" E INV.782.84	N = 281426.686 E = 13327631.274
STUB	???' DIA	STUB	RIM=773.38	PR. 8" E INV.773.60	N = 281153.186 E = 13327377.859

WATER MAIN STRUCTURE TABLE

NUMBER	DESCRIPTION	ELEVATION	NORTHING EASTING
H1	HYD	FG/RIM=822.68	N = 283123.903 E = 13327877.722
* H2	HYD	FG/RIM=817.33	N = 283168.423 E = 13327283.697
H3	HYD	FG/RIM=816.34	N = 282739.999 E = 13327809.119
H4	HYD	FG/RIM=807.60	N = 282370.079 E = 13327857.417
H5	HYD	FG/RIM=793.80	N = 282007.135 E = 13327951.419
H6	HYD	FG/RIM=790.33	N = 281400.920 E = 13327947.309
H7	HYD	FG/RIM=787.67	N = 281351.727 E = 13328318.229
H8	HYD	FG/RIM=776.51	N = 281276.252 E = 13328707.509
* H9	HYD	FG/RIM=818.16	N = 283098.273 E = 13327462.644
* H10	HYD	FG/RIM=821.88	N = 282721.857 E = 13327483.624
* H11	HYD	FG/RIM=812.60	N = 282371.261 E = 13327503.165
* H12	HYD	FG/RIM=800.64	N = 282088.154 E = 13327644.003
H13	HYD	FG/RIM=781.10	N = 281023.510 E = 13328592.338
H14	HYD	FG/RIM=773.22	N = 281018.455 E = 13328229.289
H15	HYD	FG/RIM=772.28	N = 281002.778 E = 13327879.694
H16	HYD	FG/RIM=782.02	N = 281124.786 E = 13327577.166
H17	HYD	FG/RIM=792.69	N = 281370.041 E = 13327629.701
H18	HYD	FG/RIM=786.98	N = 281200.132 E = 13327375.543
V1	GV	FG/RIM=823.11	N = 283194.259 E = 13327693.330
* V2	GV	FG/RIM=817.53	N = 283171.975 E = 13327293.514
V3	GV	FG/RIM=822.65	N = 283140.544 E = 13327789.799
V4	GV	FG/RIM=810.40	N = 282473.697 E = 13327826.966
V5	GV	FG/RIM=790.90	N = 281941.315 E = 13327957.140
V6	GV	FG/RIM=790.51	N = 281387.670 E = 13328024.404
V7	GV	FG/RIM=776.58	N = 281248.297 E = 13328279.120
* V8	GV	FG/RIM=818.16	N = 283088.455 E = 13327466.196
V9	GV	FG/RIM=814.75	N = 282437.326 E = 13327502.487
V10	GV	FG/RIM=792.75	N = 282013.922 E = 13327873.415
V11	GV	FG/RIM=780.82	N = 281822.119 E = 13328580.511
V12	GV	FG/RIM=772.47	N = 281005.282 E = 13327868.570
V13	GV	FG/RIM=790.94	N = 281415.279 E = 13327816.226
V14	GV	FG/RIM=786.98	N = 281203.742 E = 13327385.338

UTILITY CROSSING TABLE

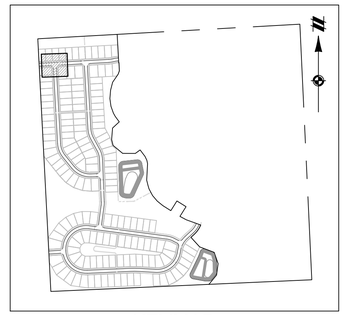
CROSSING	CROSSING PIPE 1		CROSSING PIPE 2	
X1.	12" ST. T/P	810.50	12" W.M. B/P	814.40
X2.	12" ST. B/P	814.54	12" W.M. T/P	813.04
X3.	12" ST. B/P	814.05	8" SAN. T/P	811.64
X4.	15" ST. T/P	808.96	8" SAN. B/P	810.40
X5.	8" SAN. T/P	809.57	8" W.M. B/P	812.43
X6.	15" ST. T/P	809.57	8" W.M. B/P	815.73
X7.	12" ST. B/P	812.41	8" W.M. T/P	810.91
X8.	12" ST. B/P	809.22	8" SAN. T/P	804.24
X9.	12" ST. B/P	804.45	8" SAN. T/P	800.29
X10.	24" ST. B/P	785.93	8" SAN. T/P	784.32
X11.	24" ST. B/P	787.57	8" W.M. T/P	786.07
X12.	12" ST. B/P	779.05	8" SAN. T/P	772.79
X13.	8" SAN. T/P	782.65	8" W.M. B/P	787.83
X14.	24" ST. B/P	780.08	8" SAN. T/P	778.30
X15.	36" ST. B/P	780.05	8" SAN. T/P	777.52
X16.	8" SAN. T/P	776.14	6" W.M. B/P	782.60
X17.	36" ST. B/P	779.92	8" W.M. T/P	778.10
X18.	12" ST. B/P	784.44	8" SAN. T/P	776.02
X19.	12" ST. B/P	782.65	8" SAN. T/P	774.59
X20.	18" ST. B/P	766.54	8" SAN. T/P	763.37
X21.	18" ST. B/P	764.03	8" SAN. T/P	757.54
X22.	12" ST. B/P	777.55	8" W.M. T/P	776.05
X23.	12" ST. B/P	771.69	8" SAN. T/P	757.64
X24.	30" ST. B/P	760.09	8" SAN. T/P	758.58
X25.	12" ST. B/P	766.33	8" SAN. T/P	761.03
X26.	15" ST. B/P	764.38	8" SAN. T/P	762.84
X27.	18" ST. T/P	767.03	8" W.M. B/P	768.43
X28.	48" ST. B/P	760.70	8" W.M. T/P	759.20
X29.	48" ST. B/P	760.63	8" SAN. T/P	752.24
X30.	24" ST. B/P	779.77	8" W.M. T/P	778.27
X31.	30" ST. T/P	786.07	8" W.M. B/P	790.73
X32.	15" ST. B/P	778.24	8" W.M. T/P	776.74
X33.	8" SAN. T/P	759.75	8" W.M. B/P	768.63
X34.	30" ST. T/P	763.36	8" W.M. B/P	775.73
X35.	12" ST. B/P	779.61	8" SAN. T/P	777.17
X36.	12" ST. B/P	779.89	8" SAN. T/P	772.96
X37.	8" SAN. T/P	775.88	8" W.M. B/P	780.03
X38.	24" ST. B/P	786.70	8" W.M. T/P	785.20
X50.	6" SAN. T/P	808.48	12" W.M. B/P	811.70
X51.	6" SAN. T/P	809.77	12" W.M. B/P	812.40
X52.	6" SAN. T/P	810.96	12" W.M. B/P	813.50
X53.	6" SAN. T/P	812.15	12" W.M. B/P	814.7
X54.	6" SAN. T/P	813.35	12" W.M. B/P	815.80
X55.	6" SAN. T/P	814.02	12" W.M. B/P	816.70
X56.	6" SAN. T/P	814.03	12" W.M. B/P	816.90
X57.	6" SAN. T/P	813.08	12" W.M. B/P	816.00
X58.	6" SAN. T/P	812.85	12" W.M. B/P	815.50
X59.	6" SAN. T/P	812.45	12" W.M. B/P	814.80
X60.	6" SAN. T/P	812.11	12" W.M. B/P	814.20
X61.	6" SAN. T/P	807.46	8" W.M. B/P	811.43
X62.	6" SAN. T/P	809.71	8" W.M. B/P	812.43
X63.	6" SAN. T/P	810.91	8" W.M. B/P	813.73
X64.	6" SAN. T/P	812.00	8" W.M. B/P	814.93
X65.	6" SAN. T/P	812.53	8" W.M. B/P	815.63
X66.	6" SAN. T/P	810.49	8" W.M. B/P	813.13
X67.	6" SAN. T/P	808.33	8" W.M. B/P	811.13
X68.	6" SAN. T/P	806.42	8" W.M. B/P	809.03
X69.	6" SAN. T/P	803.13	8" W.M. B/P	807.03
X70.	6" SAN. T/P	801.97	8" W.M. B/P	804.93
X71.	6" SAN. T/P	797.31	8" W.M. B/P	800.43
X72.	6" SAN. T/P	795.20	8" W.M. B/P	797.93
X73.	6" SAN. T/P	792.52	8" W.M. B/P	795.13
X74.	6" SAN. T/P	790.18	8" W.M. B/P	792.53
X75.	6" SAN. T/P	779.11	8" W.M. B/P	781.83
X76.	6" SAN. T/P	779.74	8" W.M. B/P	782.93
X77.	6" SAN. T/P	782.82	8" W.M. B/P	784.83
X78.	6" SAN. T/P	784.49	8" W.M. B/P	788.63
X79.	6" SAN. T/P	787.44	8" W.M. B/P	791.63
X80.	6" SAN. T/P	792.08	8" W.M. B/P	793.83
X81.	6" SAN. T/P	794.31	8" W.M. B/P	796.73
X82.	6" SAN. T/P	795.12	8" W.M. B/P	798.93
X83.	6" SAN. T/P	796.72	8" W.M. B/P	800.43
X84.	6" SAN. T/P	798.50	8" W.M. B/P	801.83
X85.	6" SAN. T/P	801.60	8" W.M. B/P	804.53
X86.	6" SAN. T/P	804.47	8" W.M. B/P	807.53
X87.	6" SAN. T/P	806.12	8" W.M. B/P	809.13
X88.	6" SAN. T/P	807.56	8" W.M. B/P	810.63
X89.	6" SAN. T/P	809.12	8" W.M. B/P	812.23
X90.	6" SAN. T/P	810.60	8" W.M. B/P	813.73
X91.	6" SAN. T/P	812.02	8" W.M. B/P	815.13
X92.	6" SAN. T/P	777.77	8" W.M. B/P	783.93
X93.	6" SAN. T/P	780.66	8" W.M. B/P	783.53
X94.	6" SAN. T/P	781.82	8" W.M. B/P	784.73
X95.	6" SAN. T/P	782.59	8" W.M. B/P	785.43
X96.	6" SAN. T/P	781.27	8" W.M. B/P	783.83
X97.	6" SAN. T/P	779.46	8" W.M. B/P	782.03
X98.	6" SAN. T/P	777.60	8" W.M. B/P	780.13
X99.	6" SAN. T/P	774.04	8" W.M. B/P	778.13
X100.	6" SAN. T/P	773.47	8" W.M. B/P	776.13
X101.	6" SAN. T/P	771.54	8" W.M. B/P	774.13
X102.	6" SAN. T/P	768.21	8" W.M. B/P	771.03
X103.	6" SAN. T/P	770.97	8" W.M. B/P	772.93
X104.	6" SAN. T/P	773.43	8" W.M. B/P	776.13
X105.	6" SAN. T/P	770.36	8" W.M. B/P	772.43
X106.	6" SAN. T/P	768.32	8" W.M. B/P	769.93
X107.	6" SAN. T/P	766.13	8" W.M. B/P	768.33
X108.	6" SAN. T/P	764.96	8" W.M. B/P	767.73
X109.	6" SAN. T/P	762.91	8" W.M. B/P	767.23
X110.	6" SAN. T/P	763.02	8" W.M. B/P	766.73
X111.	6" SAN. T/P	763.10	8" W.M. B/P	766.23
X112.	6" SAN. T/P	763.37	8" W.M. B/P	765.63
X113.	6" SAN. T/P	763.52	8" W.M. B/P	765.53
X114.	6" SAN. T/P	763.96	8" W.M. B/P	765.83
X115.	6" SAN. T/P	764.29	8" W.M. B/P	766.33
X116.	6" SAN. T/P	764.62	8" W.M. B/P	766.83
X117.	6" SAN. T/P	765.41	8" W.M. B/P	768.03
X118.	6" SAN. T/P	769.47	8" W.M. B/P	772.73
X119.	6" SAN. T/P	775.46	8" W.M. B/P	778.63
X120.	6" SAN. T/P	780.73	8" W.M. B/P	783.73
X121.	6" SAN. T/P	783.93	8" W.M. B/P	786.33
X122.	6" SAN. T/P	781.89	8" W.M. B/P	784.93
X123.	6" SAN. T/P	780.82	8" W.M. B/P	784.33
X124.	6" SAN. T/P	808.90	12" W.M. B/P	811.00
X125.	6" SAN. T/P	803.06	8" W.M. B/P	806.03

STORM SEWER TABLE

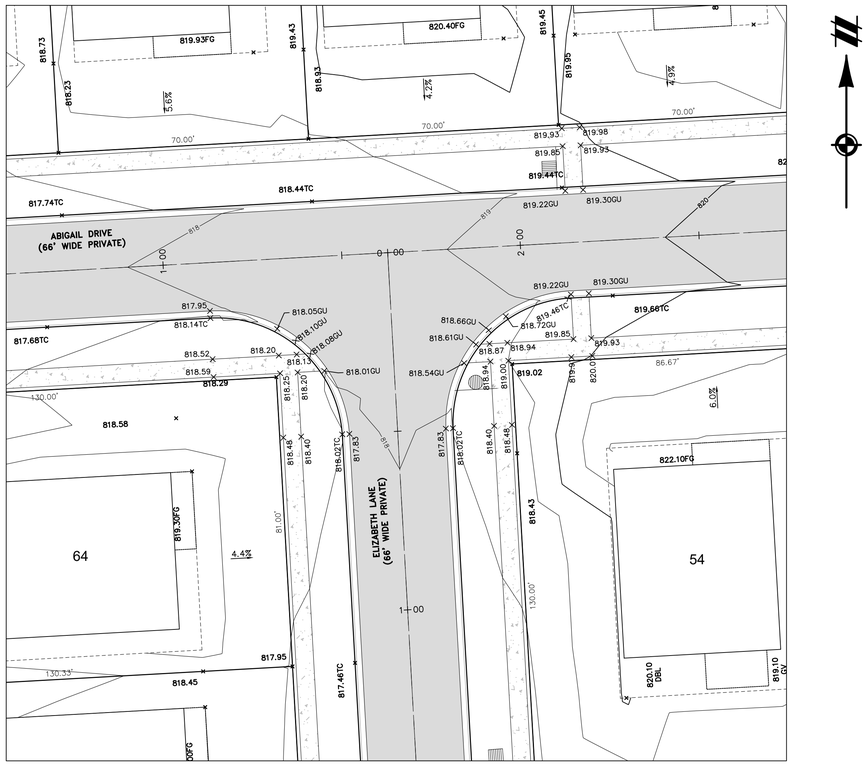
NUMBER	SIZE	DESC.	RIM ELEV.	INVERTS	NORTHING EASTING
EX00	4' DIA.	CB	807.18	EX. 15" N 802.23	N = 282685.132 E = 13327970.823
EX01	4' DIA.	CB	810.20	PR. 12" N 804.65 EX. 15" S 804.45	N = 282811.215 E = 13327948.149
EX02	4' DIA.	CB	811.12	EX. 12" W 807.12	N = 282938.116 E = 13328050.132
R1	3' DIA.	ES		48 inch Concrete Pipe. 48" NW 761.00	N = 281371.183 E = 13328954.916
R2	3' DIA.	ES		48 inch Concrete Pipe. 48" SE 761.26	N = 281452.001 E = 13328844.654
R3	4' DIA.	ES		PR. 60" W 778.62	N = 281650.253 E = 13327986.638
R4	4' DIA.	ES		PR. 60" E 778.86	N = 281663.269 E = 13327888.498
R5	4' DIA.	CB	815.29	PR. 12" S 806.58 EX. 12" E 806.59	N = 282918.597 E = 13327940.383
R100	2' DIA.	ES		PR. 18" NW 776.12	N = 281750.420 E = 13328304.687
R100A	4' DIA.	OCS	784.34	PR. 18" SE 776.35	N = 281799.528 E = 13328236.634
R101	4' DIA.	ES		PR. 36" W 778.02	N = 282078.815 E = 13328145.602
R102	7' DIA.	CB	787.00	PR. 30" W 781.51 PR. 30" S 778.71 PR. 12" N 782.91 PR. 36" E 778.31	N = 282078.815 E = 13328087.577
R102A	4' DIA.	CB	796.34	PR. 30" W 785.01 PR. 30" E 783.41	N = 282072.770 E = 13327941.202
R102B	4' DIA.	CB	796.34	PR. 30" E 785.39 PR. 24" SW 785.79	N = 282071.573 E = 13327912.227
R105	4' DIA.	CB	795.15	PR. 24" W 789.46 PR. 24" E 789.36	N = 282038.814 E = 13327766.955
R106	4' DIA.	CB	796.73	PR. 24" NW 791.65 PR. 24" S 791.55	N = 282161.770 E = 13327761.877
R107	4' DIA.	CB	802.00	PR. 24" NW 794.31 PR. 24" SE 794.11	N = 282282.428 E = 13327697.662
R108	4' DIA.	CB	807.21	PR. 24" N 795.27 PR. 24" SE 795.17	N = 282379.662 E = 13327645.979
R109	5' DIA.	CB	809.84	PR. 24" N 796.43 PR. 24" S 796.23	N = 282511.015 E = 13327636.598
R109A	4' DIA.	CB	813.90	PR. 12" E 809.61 PR. 12" W 809.51	N = 282650.963 E = 13327777.525
R109B	4' DIA.	CB	813.90	PR. 12" W 809.73	N = 282652.577 E = 13327806.480
R110	4' DIA.	CB	813.55	PR. 18" N 797.71 PR. 24" S 797.31 PR. 12" E 808.11	N = 282642.810 E = 13327631.252
R111	4' DIA.	CB	815.06	PR. 18" N 800.00 PR. 18" S 799.80	N = 282729.815 E = 13327626.403
R112	4' DIA.	CB	815.92	PR. 18" N 803.27 PR. 18" S 803.07	N = 282865.604 E = 13327618.834
R113	5' DIA.	CB	815.90	PR. 15" E 806.30 PR. 18" S 806.10 PR. 18" W 806.20	N = 283006.076 E = 13327611.005
* R114	4' DIA.	CB	816.80	PR. 15" N 806.85 PR. 18" E 806.65 PR. 12" W 810.85	N = 283002.865 E = 13327565.784
* R114A	4' DIA.	CB	817.02	PR. 12" W 813.00 PR. 12" E 812.80	N = 282997.012 E = 13327460.777
* R114B	4' DIA.	CB	817.02	PR. 12" E 813.52	N = 282995.398 E = 13327431.821
* R115	4' DIA.	CB	820.35	PR. 12" N 807.75 PR. 15" S 807.55	N = 283147.141 E = 13327557.742
* R115A	4' DIA.	CB	820.35	PR. 12" N 809.25 PR. 12" S 809.05	N = 283176.096 E = 13327556.128
* R117	4' DIA.	CB	817.23	PR. 12" W 810.16 PR. 12" S 810.06 PR. 12" E 813.66	N = 283322.369 E = 13327547.976
* R118	4' DIA.	CB	814.93	PR. 12" W 810.97 PR. 12" E 810.77	N = 283314.578 E = 13327408.193
* R119	2' DIA.	INLET	814.96	PR. 12" E 811.50	N = 283310.682 E = 13327338.301
* R120	2' DIA.	INLET	819.29	PR. 12" W 815.73	N = 283330.048 E = 13327685.762
R121	4' DIA.	CB	817.53	PR. 15" E 806.67 PR. 15" W 806.57	N = 283007.627 E = 13327652.312
R122	4' DIA.	CB	821.36	PR. 15" E 807.66 PR. 15" W 807.56	N = 283013.540 E = 13327757.316
R122A	4' DIA.	CB	821.36	PR. 15" E 807.99 PR. 15" W 807.79	N = 283015.154 E = 13327786.271
R123	4' DIA.	CB	816.83	PR. 15" E 809.40 PR. 15" W 809.30	N = 283021.214 E = 13327895.006
R124	4' DIA.	CB	814.81	PR. 12" N 811.19 PR. 15" W 810.99	N = 283031.670 E = 13328046.659
R125	4' DIA.	CB	820.63	PR. 12" N 814.46 PR. 12" S 814.36	N = 283176.216 E = 13328038.603
R125A	4' DIA.	CB	820.60	PR. 12" N 814.68 PR. 12" S 814.58	N = 283205.468 E = 13328036.972
R127	4' DIA.	CB	820.31	PR. 12" W 815.42 PR. 12" S 815.32	N = 283349.177 E = 13328028.962
R128	4' DIA.	CB	820.95	PR. 12" W 815.83 PR. 12" E 815.73	N = 283345.185 E = 13327957.340
R129	2' DIA.	INLET	820.54	PR. 12" E 816.43	N = 283337.617 E = 13327821.551
R130	5' DIA.	CB	787.00	PR. 24" S 779.28 PR. 30" N 778.88	N = 281946.927 E = 13328093.024
R131	7' DIA.	CB	785.33	PR. 24" W 779.71 PR. 24" N 779.61	N = 281811.043 E = 13328098.636
R132	4' DIA.	CB	787.28	PR. 24" W 780.15 PR. 24" E 780.05	N = 281804.998 E = 13327952.261
R132A	4' DIA.	CB	787.28	PR. 24" W 780.29 PR. 24" E 780.19	N = 281803.801 E = 13327923.285
R133	4' DIA.	CB	785.61	PR. 18" W 781.10 PR. 24" E 780.60	N = 281823.349 E = 13327822.474
* R134	4' DIA.	CB	788.50	PR. 15" NW 784.19 PR. 18" E 783.99	N = 281865.747 E = 13327641.369
* R136	4' DIA.	CB	794.00	PR. 12" NW 789.07 PR. 15" SE 788.87	N = 281983.009 E = 13327501.180
* R137	4' DIA.	CB	800.00	PR. 12" NW 795.25 PR. 12" SE 795.05	N = 282093.029 E = 13327413.516
* R138	4' DIA.	CB	806.20	PR. 12" N 800.19 PR. 12" SE 800.09	N = 282192.657 E = 13327334.132
* R139	4' DIA.	CB	808.00	PR. 12" N 802.83 PR. 12" S 802.63 PR. 12" E 803.13	N = 282260.398 E = 13327330.630
* R139A	4' DIA.	CB	809.64	PR. 12" E 804.93 PR. 12" W 804.73	N = 282287.329 E = 13327473.378
* R139B	4' DIA.	CB	809.64	PR. 12" W 805.07	N = 282292.705 E = 13327501.875
* R140	4' DIA.	CB	810.50	PR. 12" N 804.44 PR. 12" S 804.24	N = 282345.514 E = 13327326.209
* R141	4' DIA.	CB	815.00	PR. 12" N 806.49 PR. 12" S 806.29	N = 282485.327 E = 13327318.963

STORM SEWER TABLE

NUMBER	SIZE	DESC.	RIM ELEV.	INVERTS	NORTHING EASTING
* R142	4' DIA.	CB	818.48	PR. 12" N 808.11 PR. 12" S 807.91	N = 282621.146 E = 13327311.923
* R143	4' DIA.	CB	818.00	PR. 12" N 809.40 PR. 12" S 809.20	N = 282756.965 E = 13327304.883
* R144	4' DIA.	CB	815.53	PR. 12" N 810.65 PR. 12" S 810.45	N = 282894.781 E = 13327297.740
* R145	4' DIA.	CB	815.56	PR. 12" N 811.54 PR. 12" S 811.34	N = 283032.603 E = 13327290.707
* R146	4' DIA.	CB	816.87	PR. 12" N 812.74 PR. 12" S 812.54	N = 283131.971 E = 13327285.569
* R146A	4' DIA.	CB	816.87	PR. 12" S 812.86	N = 283160.933 E = 13327284.072
R147	4' DIA.	CB	799.80	PR. 12" NW 795.71 PR. 12" S 789.71	N = 282229.791 E = 13328081.342
R148	4' DIA.	CB	801.54	PR. 12" N 797.57 PR. 12" SE 797.47	N = 282293.925 E = 13328039.857
R149	2' DIA.	INLET	805.22	PR. 12" S 801.22	N = 282447.539 E = 13328000.155
R150	4' DIA.	CB	792.18	PR. 12" S 787.96 PR. 24" W 787.26 PR. 24" NE 787.16	N = 282003.603 E = 13327878.002
R151	4' DIA.	CB	792.18	PR. 12" N 788.22	N = 281974.627 E = 13327879.199
R200	2' DIA.	ES		PR. 18" NW 754.10	N = 280923.346 E = 13329167.768
R200A	4' DIA.	OCS	760.63	PR. 18" SE 754.34	N = 280960.893 E = 13329090.961
R201	3' DIA.	ES		PR. 36" NW 755.00	N = 280974.962 E = 13328905.394
R202	6' DIA.	CB	771.42	PR. 24" NE 756.17 PR. 30" SW 756.27 PR. 30" NW 760.05 PR. 36" SE 755.37	N = 281008.553 E = 13328837.028
R202A	4' DIA.	MH	781.85	PR. 30" NW 760.33 PR. 30" SE 760.23	N = 281073.165 E = 13328735.189
R202B	5' DIA.	MH	781.40	PR. 24" NW 761.06 PR. 30" SE 760.66	N = 281108.593 E = 13328659.542
R203	6' DIA.	CB	775.91	PR. 12" W 771.29 PR. 24" SE 762.04 PR. 24" SW 762.14	N = 281175.748 E = 13328565.524
R204	4' DIA.	CB	780.00	PR. 12" W 772.04 PR. 12" E 771.94	N = 281195.043 E = 13328503.235
R205	4' DIA.	CB	783.00	PR. 12" W 773.13 PR. 12" E 772.93	N = 281212.924 E = 13328368.415
R206	4' DIA.	CB	785.72	PR. 12" W 773.94 PR. 12" E 773.74	N = 281230.804 E = 13328233.596
R207	4' DIA.	CB	788.03	PR. 12" W 774.84 PR. 12" E 774.64	N = 281251.577 E = 13328076.967
R208	4' DIA.	CB	781.00	PR. 12" E 775.45 PR. 12" W 775.65	N = 281269.984 E = 13327938.182
R209	2' DIA.	INLET	779.96	PR. 12" E 776.27	N = 281288.390 E = 13327799.398
R210	4' DIA.	CB	771.02	PR. 18" NE 756.94 PR. 24" SW 756.54	N = 281071.678 E = 13328867.500
R210A	6' DIA.	CB	765.00	PR. 18" NW 760.42 PR. 18" SW 760.32	N = 281193.133 E = 13328926.194
R210B	5' DIA.	MH	775.88	PR. 12" SW 771.69 PR. 18" SE 763.99 PR. 18" NW 764.09	N = 281269.719 E = 13328805.473
R211	5' DIA.	CB	776.46	PR. 12" W 772.32 PR. 12" NE 772.22	N = 281228.188 E = 13328764.127
R212	4' DIA.	CB	776.46	PR. 12" E 772.46	N = 281236.611 E = 13328736.377
R213	4' DIA.	CB	776.45	PR. 12" NE 772.43	N = 281294.180 E = 13328689.088
R214	6' DIA.	CB	776.45	PR. 18" NW 766.48 PR. 12" SW 772.28 PR. 18" SE 766.38	N = 281319.959 E = 13328702.369
R215	4' DIA.	CB	774.10	PR. 18" W 769.57 PR. 18" SE 769.47	N = 281503.744 E = 13328503.074
R216	4' DIA.	CB	779.37	PR. 18" W 773.26 PR. 18" E 773.06	N = 281521.099 E = 13328372.220
R217	4' DIA.	CB	780.96	PR. 18" W 774.78 PR. 18" E 774.58 PR. 12" S 777.08	N = 281538.453 E = 13328241.366
R217A	4' DIA.	CB	789.87	PR. 12" S 785.92 PR. 12" N 783.32	N = 281401.156 E = 13328223.157
R217B	4' DIA.	CB	789.87	PR. 12" N 786.04	N = 281372.407 E = 13328219.344
R218	4' DIA.	CB	782.36	PR. 18" W 775.51 PR. 18" E 775.31	N = 281547.657 E = 13328171.974
R219	4' DIA.	CB	787.12	PR. 18" W 776.63 PR. 18" E 776.43	N = 281565.011 E = 13328041.119
R220	4' DIA.	CB	784.69	PR. 15" NW 778.14 PR. 15" E 778.04 PR. 12" S 781.04	N = 281574.946 E = 13327965.959
R220A	4' DIA.	CB	784.67	PR. 15" SE 778.86 PR. 12" W 778.06	N = 281604.962 E = 13327846.047
R220B	4' DIA.	CB	784.67	PR. 12" E 779.64 PR. 12" W 779.74	N = 281608.775 E = 13327917.298
R221	4' DIA.	C



KEYMAP
SCALE: 1" = 750'



ABIGAIL DRIVE + MAGGIE LANE

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

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

INTERSECTION DETAILS

DATE
MARCH 1, 2024

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REVISIONS

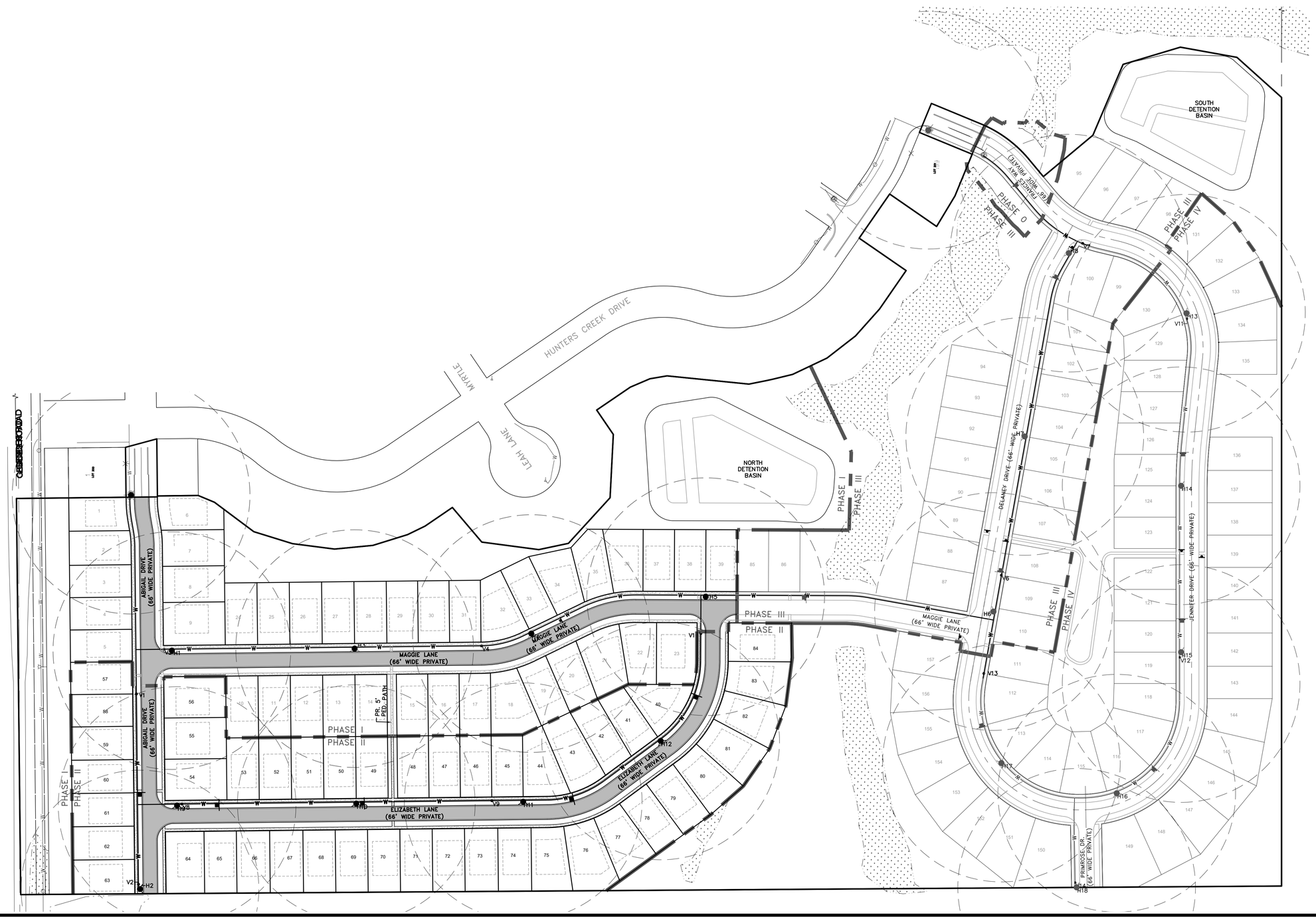
SCALE: 1" = 20 FEET

DR. SK	CH. SS
P.M. MB	
BOOK --	
JOB 16000819	
SHEET NO. 34	

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LEGEND

- PROPOSED WATER MAIN
- EXISTING WATER MAIN
- 250' RADIUS HYDRANT COVERAGE (TYP.)
- PROPOSED PAVEMENT
- PROPOSED HYDRANT
- 'NO PARKING – FIRE LANE' SIGN



811
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WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

FIRE PROTECTION PLAN

DATE
MARCH 1, 2024

REVISIONS
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0 50 100
SCALE: 1" = 100 FEET

DR.	SK
CH.	SS
P.M.	MB
BOOK	--
JOB	16000819
SHEET NO.	35

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INVASIVE SHRUB ERADICATION AND MANAGEMENT PLAN FOR PROSPECT POINTE WEST

1.0 PLAN GOALS AND OBJECTIVES

As part of the development project, an invasive shrub inventory and management plan is proposed. The inventory and management plan are required for a development plan defined by the Superior Charter Township's Woodlands & Tree Preservation, subsection 14.05F of *Article 14 Special Development Provisions* of the Township's zoning ordinance. The goal of the management plan is to eliminate or reduce the presence and growth of four (4) species of invasive woody shrubs during and after the construction of the Project.

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

2.0 INVENTORY FINDINGS

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

Along the perimeter of the Site, common buckthorn is especially prolific, although these areas contain a few individual honeysuckle, autumn-olive, and occasional multi-flora rose plants. These areas contain many common buckthorn seedlings and saplings. The larger buckthorns are scattered, with small multi-stem trees, and with diameters varying in size from about 1.0 inch to 12.0 inches diameter at breast height (dbh). Overall, these invasive buckthorn shrub plants appear to be in fair to good condition, with little to no evidence of decay or damage.

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

The forested areas along the southern perimeter of the Site contain a dense invasive shrub understory consisting primarily of buckthorn, honeysuckle, and multi-flora rose. These areas contain small (less than 10 feet tall) shrubs that are in fair to good health; with little to no evidence of decay or damage. Trees observed along the southern property boundary include: oaks (*Quercus spp.*), maples (*Acer spp.*), hickories (*Carya spp.*), cottonwood, American elm (*Ulmus americana*), and basswood (*Tilia americana*).

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

3.0 CONTROL METHODS

3.1 Developed Areas

Mechanical Control

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

Stockpiled soils will be kept on-site, and a construction barrier will be placed around the perimeter of stockpiles to prevent spread of invasive species and sediment.

1.1 Undeveloped Areas

Herbicide & Stump Cut Treatment

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

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

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

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

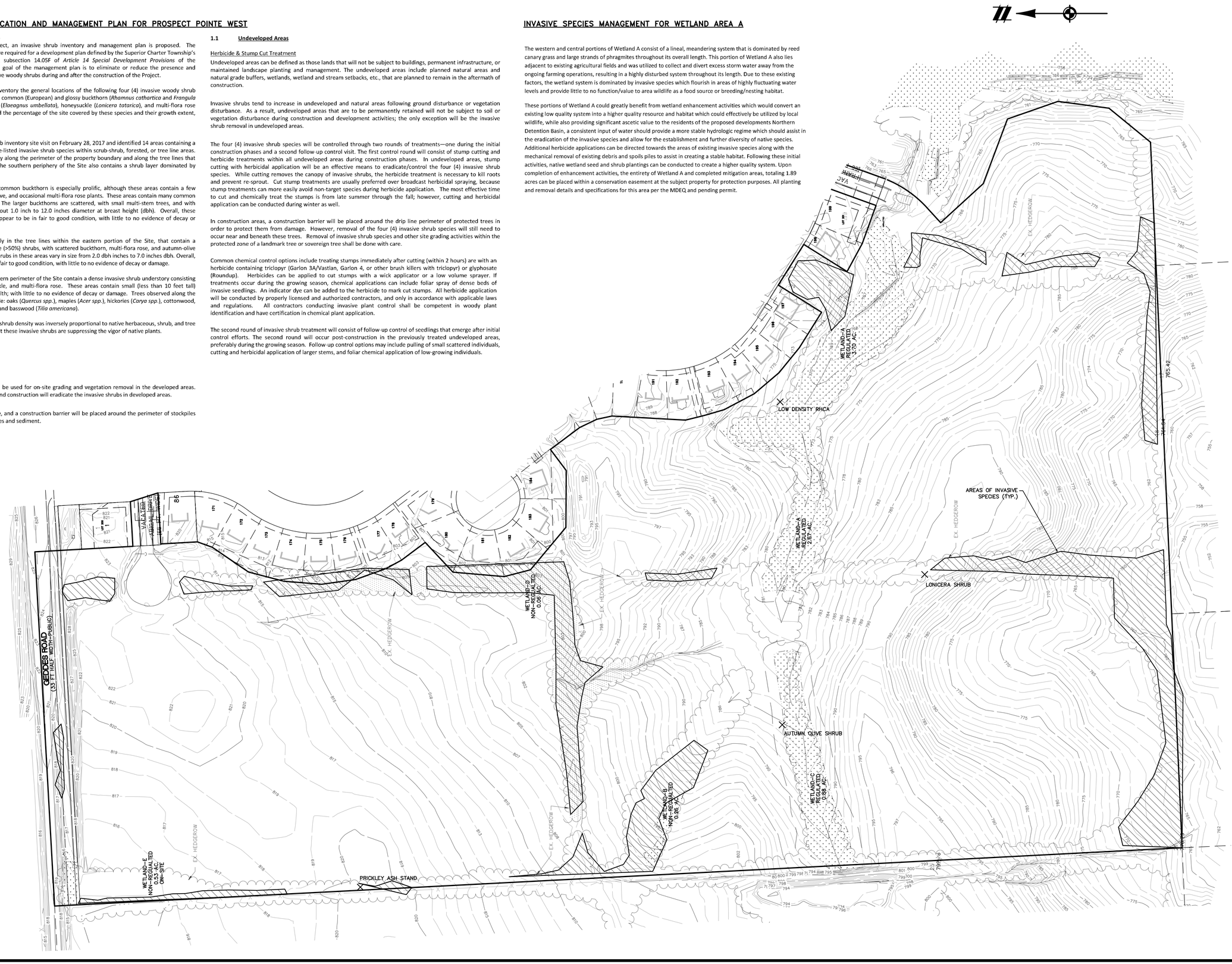
Common chemical control options include treating stumps immediately after cutting (within 2 hours) are with an herbicide containing triclopyr (Garlon 3A/Vastlan, Garlon 4, or other brush killers with triclopyr) or glyphosate (Roundup). Herbicides can be applied to cut stumps with a wick applicator or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

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

INVASIVE SPECIES MANAGEMENT FOR WETLAND AREA A

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

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



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FINAL SITE PLAN – PHASE 2
INVASIVE SPECIES REMOVAL PLAN

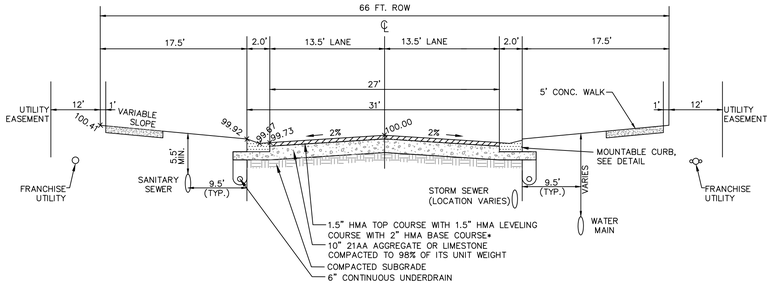
DATE
MARCH 1, 2024

REVISIONS

SCALE: 1" = 100 FEET

DR. SK	CH. SS
P.M. MB	
BOOK --	
JOB 16000819	
SHEET NO. 36	

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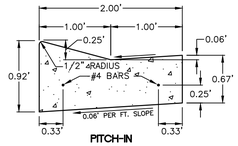


RESIDENTIAL ROADWAYS (PRIVATE)

NOT TO SCALE

* NOTES:
1. REFER TO CURRENTLY APPROVED WCRC HMA MIX DESIGNS AND BINDER REQUIREMENTS PRIOR TO CONSTRUCTION.
2. ALL PROPOSED UTILITIES SHALL BE WITHIN THE RIGHT-OF-WAY OR WITHIN AN EASEMENT OUTSIDE OF THE RIGHT-OF-WAY.

ASSUMED SECTION:
1.5" LVSP WEARING COURSE with 3% max air voids
1.5" LVSP LEVELING COURSE
2" 4E1 BASE COURSE
All HMA shall limit RAP to 25%



PITCH-IN

MOUNTABLE CURB & GUTTER

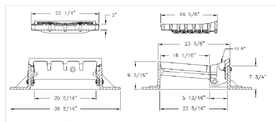
NO SCALE

NOTE:
1. BASE AND SUBBASE AGGREGATES TO EXTEND MINIMUM 1'-0" BEHIND BACK OF CURB.
2. CURB CATCH BASIN CASTING TO BE EJIW 7065 WITH M1 GRATE OR APPROVED ALTERNATE, SEE BELOW.

7065 CATCH BASIN CURB INLET

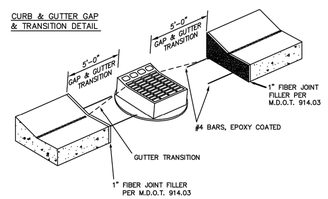
Heavy duty
With 7045 Type M1 grate and 7060 T1 back
Approximate 195 sq. in. open area
Accepts 7045 grates
Special lettered grate
"DUMP NO WASTE!" lettering and fish image





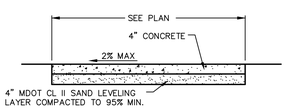
7065 CATCH BASIN CURB CASTING

NO SCALE



CURB & GUTTER GAP & TRANSITION DETAIL

NO SCALE



NOTE: WALKS TO BE 6" THICK THROUGH DRIVES

CONCRETE SIDEWALK SECTION

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

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

DETAIL SHEET 1

DATE
MARCH 1, 2024

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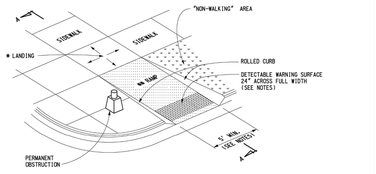
REVISIONS
NA NA NA
N/A

DR. SK | CH. SS
P.M. MB
BOOK --
JOB 16000819
SHEET NO. 37

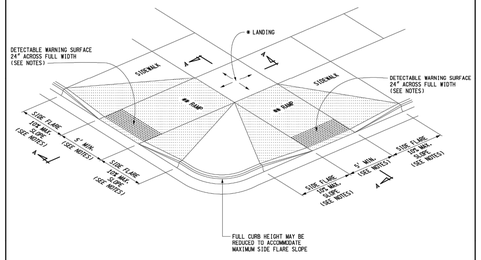
A:\16000819\CAD\PLAN SETS\SITE - FINAL PHASE 2\16000819SP2-21-SITE.DWG 3/7/2024 9:38 AM KYLER SWEDEN

* MAXIMUM LANDING SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.

** MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 5% - 7% (8.3% MAXIMUM). SEE NOTES.



SIDEWALK RAMP TYPE R
(ROLLED SIDES)

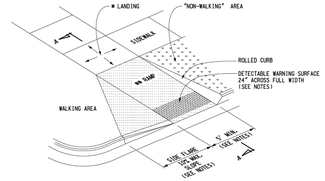


SIDEWALK RAMP TYPE F
(FLARED SIDES, TWO RAMPS SHOWN)

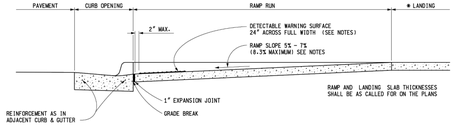
MDOT	DEPARTMENT DIRECTOR Kirk T. Steudle	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR
PREPARED BY DESIGN DIVISION	APPROVED BY: DIRECTOR, BUREAU OF FIELD SERVICES	SIDEWALK RAMP AND DETECTABLE WARNING DETAILS
DRAWN BY: B.L.T.	APPROVED BY: DIRECTOR, BUREAU OF DEVELOPMENT	F.H.W.A. APPROVAL: — | 3-15-2016 PLAN DATE | R-28-J | SHEET 1 OF 7
CHECKED BY: K.K.T.		

* MAXIMUM LANDING SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.

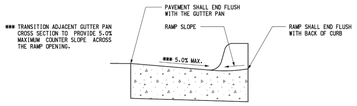
** MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 5% - 7% (8.3% MAXIMUM). SEE NOTES.



SIDEWALK RAMP TYPE RF
(ROLLED / FLARED SIDES)



SECTION A-A

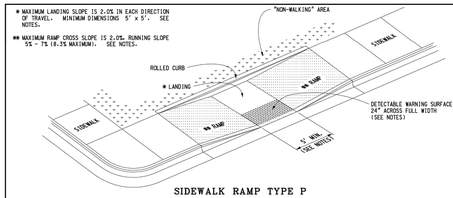


SECTION THROUGH CURB OPENING
(TYPICAL ALL RAMP TYPES)

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR			
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS			
F.H.W.A. APPROVAL	3-15-2016 PLAN DATE	R-28-J	SHEET 2 OF 7

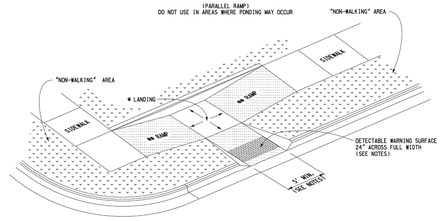
* MAXIMUM LANDING SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.

** MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 5% - 7% (8.3% MAXIMUM). SEE NOTES.



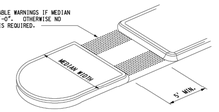
SIDEWALK RAMP TYPE P
(PARALLEL RAMP)

DO NOT USE IN AREAS WHERE PONDING MAY OCCUR



SIDEWALK RAMP TYPE C
(COMBINATION RAMP)

USE 24" DEEP DETECTABLE WARNINGS IF MEDIAN WIDTH IS AT LEAST 6'-0". OTHERWISE, NO DETECTABLE WARNING IS REQUIRED.

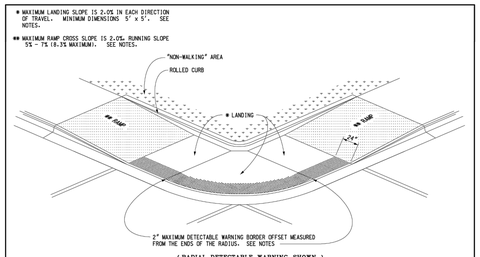


SIDEWALK RAMP TYPE M
(MEDIAN ISLAND)

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR			
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS			
F.H.W.A. APPROVAL	3-15-2016 PLAN DATE	R-28-J	SHEET 3 OF 7

* MAXIMUM LANDING SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.

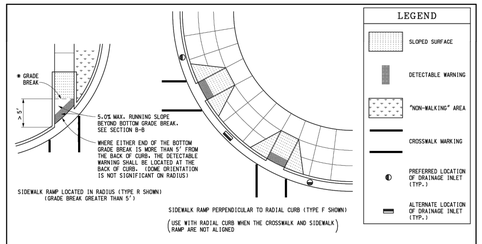
** MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 5% - 7% (8.3% MAXIMUM). SEE NOTES.

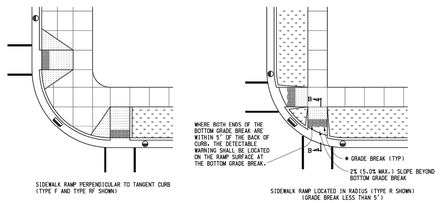


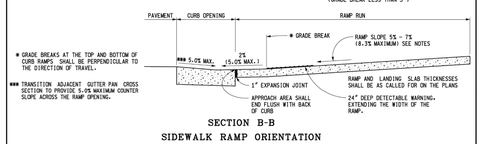
SIDEWALK RAMP TYPE D
(DEPRESSED CORNER)

USE ONLY WHEN INDEPENDENT DIRECTIONAL RAMPS CAN NOT BE CONSTRUCTED FOR EACH CROSSING DIRECTION

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR			
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS			
F.H.W.A. APPROVAL	3-15-2016 PLAN DATE	R-28-J	SHEET 4 OF 7



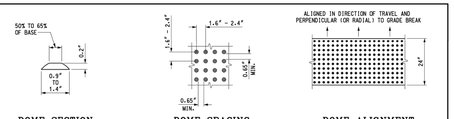




SECTION B-B

SIDEWALK RAMP ORIENTATION

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR			
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS			
F.H.W.A. APPROVAL	3-15-2016 PLAN DATE	R-28-J	SHEET 6 OF 7



DETECTABLE WARNING DETAILS

NOTES:

DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION, RECONSTRUCTION, OR ALTERATION OF STREETS, CURBS, OR SIDEWALKS IN THE PUBLIC RIGHT OF WAY.

SIDEWALK RAMPS ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

RAMPS SHALL BE PROVIDED AT ALL CORNERS OF AN INTERSECTION WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMPS SHALL ALSO BE PROVIDED AT MARKED AND/OR SIGNALIZED MID-BLOCK CROSSINGS.

SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE BROOMING, TRANSVERSE TO THE RUNNING SLOPE.

SIDEWALK SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE WALK.

CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP, WHERE CONDITIONS PERMIT, IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.

RAMP WIDTH SHALL BE INCREASED, IF NECESSARY, TO ACCOMMODATE SIDEWALK SNOW REMOVAL EQUIPMENT NORMALLY USED BY THE MUNICIPALITY.

WHEN 5' MINIMUM WIDTHS ARE NOT FEASIBLE, RAMP WIDTH MAY BE REDUCED TO NOT LESS THAN 4' AND LANDINGS TO NOT LESS THAN 4' x 4'.

DETECTABLE WARNING SURFACE COVERAGE IS 24" MINIMUM IN THE DIRECTION OF RAMP/PATH TRAVEL AND THE FULL WIDTH OF THE RAMP/PATH OPENING EXCLUDING CURVED OR FLARED CURB TRANSITION AREAS. A BORDER OFFSET NOT GREATER THAN 2" MEASURED ALONG THE EDGES OF THE DETECTABLE WARNING IS ALLOWABLE. FOR RADIAL CURB THE OFFSET IS MEASURED FROM THE ENDS OF THE RADIUS.

FOR NEW ROADWAY CONSTRUCTION, THE RAMP CROSS SLOPE MAY NOT EXCEED 2.0%. FOR ALTERATIONS TO EXISTING ROADWAYS, THE CROSS SLOPE MAY BE TRANSITIONED TO MEET AN EXISTING ROADWAY GRADE. THE CROSS SLOPE TRANSITION SHALL BE APPLIED UNIFORMLY OVER THE FULL LENGTH OF THE RAMP.

THE MAXIMUM RUNNING SLOPE OF 8.3% IS RELATIVE TO A FLAT (0%) REFERENCE. HOWEVER, IT SHALL NOT REQUIRE ANY RAMP OR SERIES OF RAMPS TO EXCEED 15 FEET IN LENGTH.

DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMPS. THE LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER THE LOCATION OF THE DRAINAGE STRUCTURE. WHERE EXISTING DRAINAGE STRUCTURES ARE LOCATED IN THE RAMP PATH OF TRAVEL, USE A MANUFACTURER'S ADA COMPLIANT GRATE. OPENINGS SHALL NOT BE GREATER THAN ½". ELONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.

TRANSITION THE GUTTER PAN CROSS SECTION SUCH THAT THE COUNTER SLOPE IN THE DIRECTION OF RAMP TRAVEL IS NOT GREATER THAN 5.0%. MAINTAIN THE NORMAL GUTTER PAN CROSS SECTION ACROSS DRAINAGE STRUCTURES.

THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.

CROSSWALK AND STOP LINE MARKINGS, IF USED, SHALL BE SO LOCATED AS TO STOP TRAFFIC SHORT OF RAMP CROSSINGS. SPECIFIC DETAILS FOR MARKING APPLICATIONS ARE GIVEN IN THE "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

FLARED SIDES WITH A SLOPE OF 10% MAXIMUM, MEASURED ALONG THE CURB/GUTTER LINE, SHALL BE PROVIDED WHERE AN UNOBSTRUCTED CIRCULATION PATH LATERALLY CROSSES THE SIDEWALK RAMP. FLARED SIDES ARE NOT REQUIRED WHERE THE RAMP IS BORDERED BY LANDSCAPING, UNPAVED SURFACE OR PERMANENT FIXED OBJECTS. WHERE THEY ARE NOT REQUIRED, FLARED SIDES CAN BE CONSIDERED IN ORDER TO AVOID SHARP CURB RETURNS AT RAMP OPENINGS.

DETECTABLE WARNING PLATES MUST BE INSTALLED USING FABRICATED OR FIELD CUT UNITS CAST AND/OR ANCHORED IN THE PAVEMENT TO RESIST SHIFTING OR HEAVING.

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR			
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS			
F.H.W.A. APPROVAL	3-15-2016 PLAN DATE	R-28-J	SHEET 7 OF 7

NOTE: CONTRACTOR RESPONSIBLE TO USE THE MOST CURRENT MDOT DETAILS AND SPECIFICATIONS, AS APPLICABLE.

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PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2
DETAIL SHEET 2

DATE
MARCH 1, 2024

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REVISIONS
NA NA NA
N/A

DR. SK | CH. SS
P.M. MB
BOOK --
JOB 16000819
SHEET NO. 38

ATWELL\DOCUMENTS\PROJECTS\16000819\PLANS\SHEETS - FINAL PHASE 2\16000819SP2-21-SITDWG 3/5/2024 3:38 PM KYLER SWEDEN

Nature Series
THE AUSTIN
Lombardo H·O·M·E·S

2,708-3,121 Sq. Ft. | 4-5 Bedrooms | 2.5-3 Baths













Nature Series
THE AUSTIN
Lombardo H·O·M·E·S

2,708-3,121 Sq. Ft. | 4-5 Bedrooms | 2.5-3 Baths



Second Floor Plan



First Floor Plan

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

Rev. 3/18/21

Nature Series
THE AUSTIN
Lombardo H·O·M·E·S

First Floor Options



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

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Rev. 9/16/21

Nature Series
THE AUSTIN
Lombardo H·O·M·E·S

Second Floor Options



Opt. Second Floor Layout with Bedroom 5

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Rev. 2/19/21

Nature Series
THE BLOOMINGTON
Lombardo H·O·M·E·S

2,185-2,276 Sq. Ft. | 3-4 Bedrooms | 2.5-3 Baths













Nature Series
THE BLOOMINGTON
Lombardo H·O·M·E·S

2,185-2,276 Sq. Ft. | 3-4 Bedrooms | 2.5-3 Baths



Second Floor Plan



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Rev. 3/18/21

Nature Series
THE BLOOMINGTON
Lombardo H·O·M·E·S

First Floor Options



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Rev. 2/19/21

Nature Series
THE BLOOMINGTON
Lombardo H·O·M·E·S

Second Floor Options



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Rev. 2/19/21

TYPICAL ELEVATIONS AND FLOORPLANS SHOWN - FOR REPRESENTATIVE PURPOSES ONLY

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

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SECTION 33
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SUPERIOR TOWNSHIP
WASHTENAW COUNTY, MICHIGAN

CLIENT
SE MICHIGAN LAND HOLDING LLC
PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

TYPICAL BUILDING DETAILS

DATE
MARCH 1, 2024

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REVISIONS
NA NA NA
N/A

DR. SK | CH. SS
P.M. MB
BOOK --
JOB 16000819
SHEET NO. 39

K:\16000819\CAD\FINAL SITE PLAN\FINAL PHASE 2\16000819SP2-2H-ELEV.dwg, 3/29/2024 3:38 PM, KYLER SPIELBERG

Nature Series
THE COLUMBIA

2,432-2,782 Sq. Ft. | 4 Bedrooms | 2.5-3 Baths













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



Second Floor Plan



First Floor Plan

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Rev. 3/4/21

Nature Series
THE COLUMBIA
First Floor Options



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

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Rev. 3/20/23

Nature Series
THE COLUMBIA
Second Floor Options



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

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Rev. 3/4/21

Nature Series
THE DAVENPORT

1,856-2,005 Sq. Ft. | 3 Bedrooms | 2 Baths









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



First Floor Plan

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Rev. 4/6/23

Nature Series
THE DAVENPORT
Floor Plan Options



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

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

Rev. 4/6/23

TYPICAL ELEVATIONS AND FLOORPLANS SHOWN - FOR REPRESENTATIVE PURPOSES ONLY

811
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 PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

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

CLIENT
SE MICHIGAN LAND HOLDING LLC

PROSPECT POINTE WEST
FINAL SITE PLAN – PHASE 2

TYPICAL BUILDING DETAILS

DATE
MARCH 1, 2024

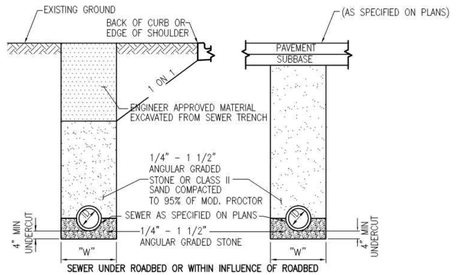
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REVISIONS

NA NA NA
N/A

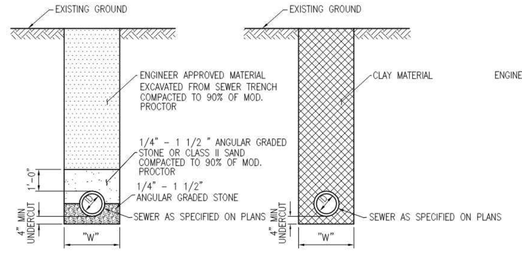
DR. SK | CH. SS
P.M. MB
BOOK --
JOB 16000819
SHEET NO. 40

I:\16000819\CAD\PLAN SETS\FSE - FINAL PHASE 2\16000819FP2-21-ELEV.dwg 3/29/2024 3:39 PM KYLER SPIESS



SEWER UNDER ROADBED OR WITHIN INFLUENCE OF ROADBED

PLASTIC PIPE TRENCH DETAIL A



PLASTIC PIPE TRENCH DETAIL B

PLASTIC PIPE CLAY BACKFILL TRENCH DETAIL

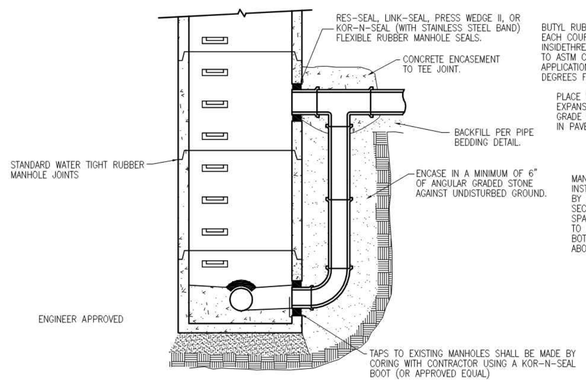
THE FOLLOWING ARE MINIMUM TRENCH WIDTHS:

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

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

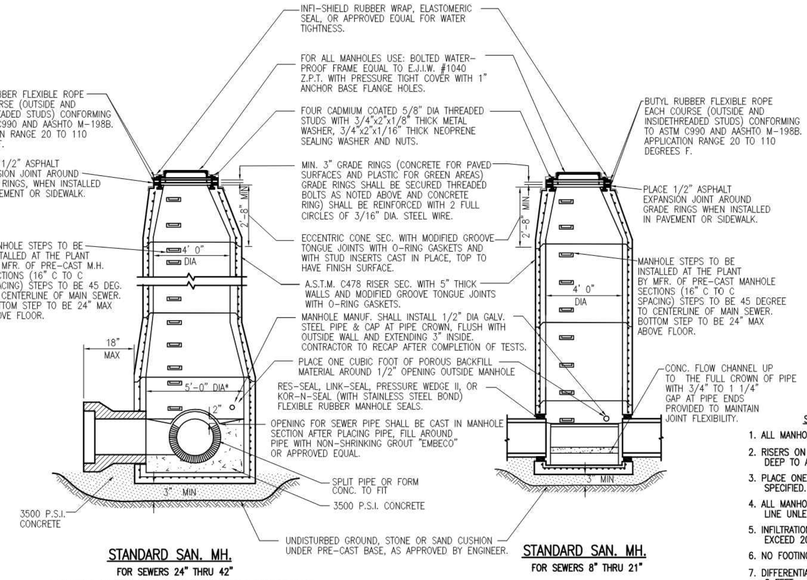
I.D. PIPE SIZE (INCHES)	84	90	96	102	108
"W" TRENCH WIDTH (FEET)	12.0	12.5	13.0	13.5	14.0

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



EXTERNAL DROP CONECTION
(HYDROGEN SULFIDE PROTECTION)

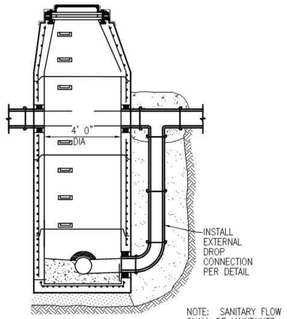
DIA OF SEWER	DIA OF DROP CONNECTION
8" & 10"	8"
12",15" & 18"	12"
21",24" & 30"	18"
36" & 42"	24"



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

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

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



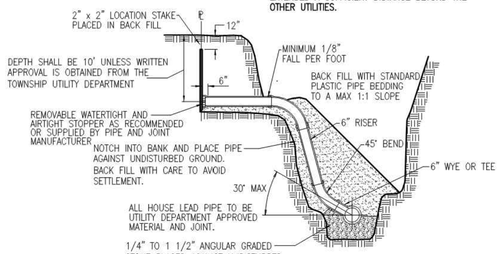
NOTE: SANITARY FLOW SHALL BE MAINTAINED AT ALL TIMES.

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

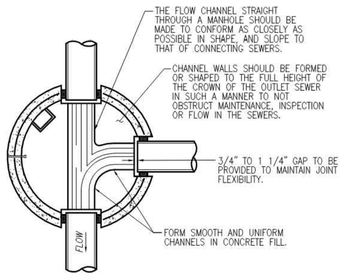
SANITARY SEWER CONSTRUCTION NOTES

1. ALL MANHOLE RIMS SHALL BE SET TO GRADE AS FURNISHED BY THE ENGINEER.
2. RISERS ON SANITARY SEWERS SHALL BE INSTALLED WHERE SEWER ARE OVER 10' DEEP TO A DEPTH OF 10'.
3. PLACE ONE 6" WYE FOR EACH LOT ON SANITARY SEWERS UNLESS OTHERWISE SPECIFIED.
4. ALL MANHOLES SHALL USE ECCENTRIC CONES PLACED TOWARD THE PROPERTY LINE UNLESS OTHERWISE NOTED.
5. INFILTRATION FOR ANY SECTION OF SEWERS BETWEEN MANHOLES SHALL NOT EXCEED 200 GALLONS PER INCH IN DIAMETER PER MILE OF SEWER PER 24 HRS.
6. NO FOOTING OR ROOF DRAINS SHALL BE CONNECTED TO THE PROPOSED SEWER.
7. DIFFERENTIAL OF EXCAVATION AROUND EXISTING MANHOLES SHALL NOT EXCEED 6 FEET.
8. NO CONNECTION RECEIVING STORM WATER, SURFACE WATER, OF GROUND WATER SHALL BE MADE TO SANITARY SEWERS.
9. ALL SEWERS SHALL BE SUBJECT TO TELEVISION INSPECTION AND AIR INFILTRATION OR EXFILTRATION TESTS, OR A COMBINATION OF SAME WITHIN 30 DAY OF BACKFILL, PRIOR TO ACCEPTANCE. ALL SEWERS OVER 24" DIAMETER SHALL BE SUBJECTED TO INFILTRATION TESTS. ALL SEWERS OF 24" DIAMETER OR SMALLER, WHERE THE GROUND WATER LEVEL ABOVE THE TOP OF THE SEWER IS OVER 2 FEET, SHALL BE SUBJECTED TO INFILTRATION TESTS. ALL SEWERS OF 24" DIAMETER OR LESS, WHERE THE GROUND WATER LEVEL ABOVE THE TOP OF THE SEWER IS 2 FEET OR LESS, SHALL BE SUBJECTED TO AIR TESTS OR EXFILTRATION TESTS.
10. ALL SEWER SYSTEM CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND GENERAL SPECIFICATIONS OF THE AGENCY OR AGENCIES HAVING JURISDICTION OF THE SEWER SYSTEM AND CONSTRUCTION AREA.
11. ALL SEWERS SHALL BE TELEVISED, WITH TEST RESULTS APPROVED BY THE TOWNSHIP UTILITY DEPARTMENT PRIOR TO PLACING THE SEWER IN SERVICE.
12. NO SEWER SHALL BE CONSTRUCTED LESS THAN 8" IN DIAMETER.
13. ALL STUBS SHALL HAVE A WATER AND AIR TIGHT BULKHEAD.
14. ALL ELEVATIONS ARE BASED ON NAVD 88 (ORIGINAL)
15. THE MINIMUM DIAMETER OF MANHOLES SHALL BE 48 INCHES, LARGER DIAMETERS ARE PREFERABLE FOR LARGER DIAMETER SEWERS. A MINIMUM ACCESS DIAMETER OF 22 INCHES SHALL BE PROVIDED.
16. CONTRACTOR SHALL PERFORM 9 POINT MANDREL TESTING PER SECTION V, OPEN CUT SEWERS OF THE SPECIFICATIONS.
17. SANITARY SEWER SHALL BE COMPOSITE ABS OR PVC TRUSS PIPE CONFORMING TO REQUIREMENTS OF ASTM D-2680 OR, PVC PIPE CONFORMING TO ASTM D-3034 (SDR 26) MAY BE USED WHERE DEPTH IS LESS THAN 15'.
18. JOINTS FOR PLASTIC PIPE SHALL BE PUSH-ON TYPE OR IN SPECIAL APPLICATIONS ,SOLVENT JOINTS, WHERE SPECIFIED, SHALL CONFORM TO ASTM D-3112 AND F-477. SOLVENT-CEMENTED JOINTS, WHERE SPECIFIED, SHALL CONFROM TO ASTM D-2855.
19. JOINTS ON TRUSS PIPE SHALL CONSIST OF ABS PLASTIC COUPLINGS CHEMICALLY CEMENTED TO THE ENDS OF THE PIPE BEING CONNECTED. SOLVENTS AND METHODS USED IN MAKING THE CHEMICAL BOND SHALL BE IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS, AND THE INSTALLATION TECHNIQUE SHALL CONFORM TO ASTM D - 2321, OR LATEST REVISION.
20. MANHOLE STEPS TO BE PLASTIC COATED MEETING THE REQUIREMENTS IN ASTM D2146, TYPE II, GRADE 49108, M.A. INDUSTRIES P.S.I. POLYPROPYLENE, OR E.J.I.W. 8502.
21. A VIDEOTAPE (WITH LOG AND LEAD LOCATIONS) SHALL BE SUBMITTED AND APPROVED BY THE TOWNSHIP PRIOR TO THE FINAL ACCEPTANCE. SAID VIDEOTAPE SHALL BE PERFORMED PRIOR TO FINAL ACCEPTANCE OF THE SYSTEM.
22. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL TELEPHONE MISS DIG (800-482-7171) A MINIMUM OF 30 DAYS AFTER DAYS AFTER COMPLETION OF BACKFILL. FOR THE LOCATION IF UNDER GROUND PIPELINE AND CABLE FACILITIES AND SHALL ALSO NOTIFY REPRESENTATIVES.
23. MINIMUM DEPTH TO TOP OF PIPE SHALL BE 4 FEET.
24. THE MAXIMUM DEPTH TO INVERT OF ANY SANITARY SEWER SHALL NOT EXCEED THE DEPTH RECOMMENDED BY THE MANUFACTURER FOR EACH SIZE AND CLASS AND PIPE.
25. INLET AND OUTLET PIPES SHALL BE JOINED TO THE MANHOLE WITH A GASKETED FLEXIBLE WATERTIGHT CONNECTION THAT ALLOWS DIFFERENTIAL SETTLEMENT OF THE PIPE AND MANHOLE WALL TO TAKE PLACE.
26. A BENCH SHALL BE PROVIDED ON EACH SIDE OF ANY MANHOLE CHANNEL WHEN THE PIPE DIAMETER IS LESS THAN THE MANHOLE DIAMETER. THE BENCH SHOULD BE SLOPED NO LESS THAN 1/2 INCH PER FOOT. NO LATERAL SEWER, SERVICE CONNECTION, OR DROP MANHOLE PIPE SHALL DISCHARGE ONTO THE SURFACE OF THE BENCH.
27. WHERE WORK IS TO BE PERFORMED IN THE VICINITY OF A SUPERIOR TOWNSHIP MAIN, CONTRACTOR SHALL NOTIFY THE SUPERIOR TOWNSHIP UTILITY DEPARTMENT AT (734) 480-5500 AT LEAST 3 WORKING DAYS PRIOR TO START OF CONSTRUCTION AS WELL AS TOWNSHIP ENGINEER TO SCHEDULE INSPECTION.
28. AN ELASTOMERIC SEAL OR RUBBER WRAP SHALL BE PLACED AROUND EACH MANHOLE FRAME AND CONE SECTION FOR WATER TIGHTNESS.

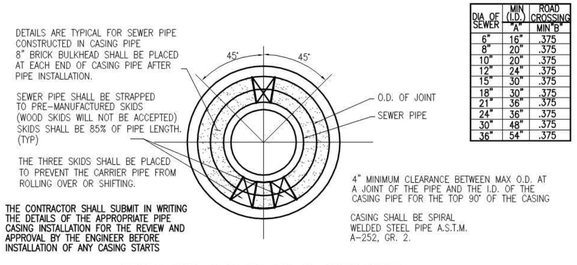
NOTE:
IN THE EVENT THAT OTHER UTILITIES ARE TO BE INSTALLED IN THE EASEMENT ADJACENT TO THE THE PROPERTY LINE, THE SEWER LEAD SHALL BE EXTENDED A SUFFICIENT DISTANCE BEYOND THE OTHER UTILITIES.



HOUSE LEAD DETAIL

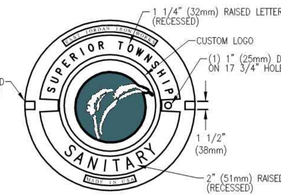


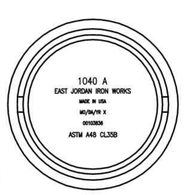
CHANNEL DETAIL



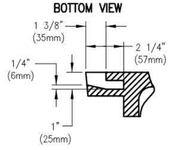
DIA OF SEWER	MIN (I.D.) "A"	ROAD CROSSING MIN "B"
6"	16"	.375
8"	20"	.375
10"	20"	.375
12"	24"	.375
15"	30"	.375
18"	30"	.375
21"	36"	.375
24"	36"	.375
30"	48"	.375
36"	54"	.375

PIPE BARREL SUPPORT FOR SANITARY SEWER CONSTRUCTED IN CASING PIPE

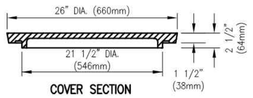




BOTTOM VIEW

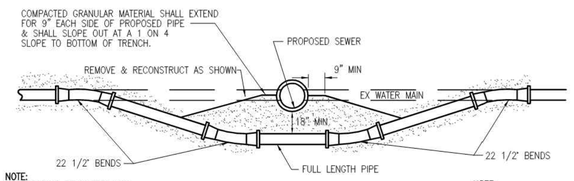


PICKHOLE DETAIL



COVER SECTION

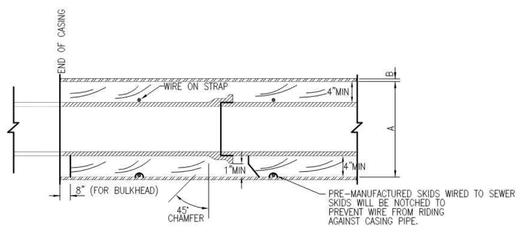
STANDARD COVER & FRAME



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

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

RELOCATION OF WATER MAIN, SANITARY OR STORM



STANDARD CASING SECTION

DRAWING PATH: S:\CVT\Superior Twp\Standards\CAD\Sanitary\SuperiorSan01.dwg Dec 20, 2011 - 4:23pm

OHM

COUNTY: WASHTENAW
CITY/VILLAGE/TOWNSHIP: CHARTER TOWNSHIP OF SUPERIOR
SCALE: H: NTS V: N/A *
HORIZ DATUM: N/A
VERT DATUM: N/A
000-00-0000
WWW.OHM-ADVISORS.COM
34000 Plymouth Road | Livonia, MI 48150 | P (734) 522-6711 | F (734) 522-6427
CHARTER TOWNSHIP OF SUPERIOR
SECTION | TOWN | RANGE | E.&O.
PROJ MGR
ENG / ARCH: DLG/LJGL
CADD: DK
DATE: OCT 2003
REVISIONS:
REVISIONS:

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CHARTER TOWNSHIP OF SUPERIOR
STANDARD SANITARY DETAILS

SHEET 1 OF 2

SANITARY SEWER ACCEPTANCE TESTS

GENERAL

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

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

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

INFILTRATION TEST

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

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

LOW PRESSURE AIR TEST

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

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

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

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

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

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

AIR TEST TABLE FOR VITRIFIED CLAY AND CONCRETE PIPE

	SPECIFICATION TIME (MIN:SEC) REQUIRED FOR PRESSURE DROP FROM 3–1/2 TO 2–1/2 PSIG WHEN TESTING ONE PIPE DIAMETER ONLY														
	PIPE DIAMETER, INCHES														
LENGTH OF LINE, FEET	4	6	8	10	12	15	18	21	24	27	30	33	36	39	42
25	0:04	0:10	0:18	0:22	0:27	0:32	0:36	0:45	0:54	1:03	1:12	1:21	1:30	1:39	1:50
50	0:09	0:21	0:36	0:45	0:54	1:03	1:12	1:30	1:48	2:06	2:42	2:42	3:00	3:18	3:39
75	0:14	0:32	0:54	1:08	1:21	1:34	1:48	2:15	2:42	3:09	3:36	4:03	4:30	4:57	5:29
100	0:18	0:42	1:12	1:30	1:48	2:06	2:24	3:00	3:36	4:12	4:48	5:24	6:00	6:36	7:18
125	0:22	0:52	1:30	1:52	2:15	2:38	3:00	3:45	4:30	5:15	6:00	6:45	7:30	8:15	9:08
150	0:27	1:03	1:48	2:15	2:42	3:09	3:36	4:30	5:24	6:18	7:12	8:06	9:00	9:54	10:57
175	0:32	1:14	2:06	2:38	3:09	3:40	4:12	5:15	6:18	7:21	8:24	9:27	10:30	11:33	12:47
200	0:36	1:24	2:24	3:00	3:36	4:12	4:48	6:00	7:12	8:24	9:36	10:48	12:00	13:12	14:36
225	0:40	1:34	2:42	3:22	4:03	4:44	5:24	6:45	8:06	9:27	10:48	12:09	13:30	14:51	16:26
250	0:45	1:45	3:00	3:45	4:30	5:15	6:00	7:30	9:00	10:30	12:00	13:30	15:00	16:30	18:16
275	0:50	1:56	3:18	4:08	4:57	5:46	6:36	8:15	9:54	11:33	13:12	14:51	16:30	18:09	20:06
300	0:54	2:06	3:36	4:30	5:24	6:18	7:12	9:00	10:48	12:36	14:24	16:12	18:00	19:48	21:54
350	1:03	2:27	4:12	5:15	6:18	7:21	8:24	10:30	12:36	14:42	16:48	18:54	21:00	23:06	25:33
400	1:12	2:48	4:48	6:00	7:12	8:24	9:36	12:00	14:24	16:48	19:12	21:36	24:00	26:24	29:12
450	1:21	3:09	5:24	6:45	8:06	9:27	10:48	13:30	16:12	18:54	21:36	24:18	27:00	29:42	32:51
500	1:30	3:30	6:00	7:30	9:00	10:30	12:00	15:00	18:00	21:00	24:00	27:00	30:00	33:00	36:30

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

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

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

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

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

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

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

EXFILTRATION TEST

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

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

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

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

1) ALL SERVICE LATERALS, STUBS AND FITTINGS INTO THE SEWER LINE(S) BEING TESTED SHOULD BE PROPERLY CAPPED OR PLUGGED, AND CAREFULLY BRACED TO RESIST THE THRUST ACTIONS DEVELOPED BY THE INTERNAL WATER PRESSURE. IN PREPARING THE BLOCKING OF PLUGS OR END CAPS, IT IS EXTREMELY IMPORTANT TO RECOGNIZE THAT THE FIVE (5) TO TEN (10) FEET OF HEAD IN THE STANDPIPE WILL EXERT CONSIDERABLE THRUST AGAINST THE PLUGS OR CAPS.

2) A PLUG IS INSERTED AND TIGHTENED IN THE INLET PIPE OF THE DOWNSTREAM MANHOLE TO WHICH THE WATER SUPPLY CONNECTION IS MADE FOR FILLING THE PIPE.

3) THE UPPER MANHOLE IS PLUGGED AND SECURELY TIGHTENED FOR CONNECTION TO THE STANDPIPE. THE STANDPIPE IS THEN PLACED IN THIS MANHOLE AND CONNECTED TO THE TAPPED PLUG. THE STANDPIPE MUST BE CAPABLE OF HANDLING FROM FIVE (5) TO TEN (10) FEET OF WATER HEAD TO DETERMINE THE TIGHTNESS AND SOUNDNESS OF THE SEWER LINE, AS SPECIFIED AND DIRECTED BY THE ENGINEER.

4) WATER IS INTRODUCED INTO THE LINE AT THE DOWNSTREAM (LOWER) MANHOLE UNTIL THE STANDPIPE IN THE UPSTREAM MANHOLE HAS BEEN COMPLETELY FILLED. BY FILLING THE LINE FROM THE LOWEST LEVEL, THE AIR IN THE LINE IS EASILY PUSHED AHEAD AND, FINALLY DISPELLED THROUGH THE STANDPIPE AT THE UPPER END OF THE TEST SECTION. CARE SHOULD BE TAKEN TO MINIMIZE ENTRAPPED AIR THAT WILL GIVE DISTORTED TEST RESULTS. THE RATE OF DROP IN THE STANDPIPE MAY BE QUITE RAPID UNTIL THE AIR HAS BEEN EXPELLED.

5) AFTER FILLING WITH WATER, THE LINE MUST BE ALLOWED TO STAND FOR AT LEAST FOUR (4) HOURS BEFORE BEGINNING THE TEST. DURING THIS TIME SOME WATER ABSORPTION INTO THE MANHOLE STRUCTURES AND SEWER PIPE WILL TAKE PLACE. AFTER THE WATER ABSORPTION HAS STABILIZED, THE WATER LEVEL IN THE STANDPIPE IS CHECKED AND WATER ADDED IF NECESSARY.

6) THE TEST IS NOW READY TO BEGIN. THE DROP IN THE STANDPIPE IS MEASURED AND RECORDED OVER A FIFTEEN (15) MINUTE PERIOD. TO VERIFY THE FIRST RESULTS, A SECOND FIFTEEN (15) MINUTE TEST IS SUGGESTED. THIS WILL ALSO VERIFY WHETHER A STABLE CONDITION EXISTS IN THE LINE.

7) THE MEASURED DROPS IN THE STANDPIPE ARE CONVERTED TO LEAKAGE IN TERMS OF GALLONS PER INCH DIAMETER PER MILE PER DAY.

8) ANOTHER COMMONLY USED METHOD OF CONDUCTING WATER EXFILTRATION TESTING IS TO UTILIZE THE MANHOLE IN LIEU OF A STANDPIPE. THE TEST PROCEDURE IS EXACTLY AS OUTLINED FOR USING THE STANDPIPE. HOWEVER, SINCE THE MANHOLE IS LARGER IN DIAMETER THAN THE STANDPIPE, THIS METHOD NORMALLY REQUIRES A MINIMUM TWO (2) HOUR TEST PERIOD IN ORDER TO BE ABLE TO RECORD A MEASURABLE WATER LEVEL DROP. MANHOLE LEAKAGE MUST ALSO BE CONSIDERED IN THE LEAKAGE RATE AND TEST RESULTS.

9) CAUTION SHOULD BE TAKEN ABOUT CONDUCTING EXFILTRATION TESTS ON SEWER LINES LAID ON STEEP GRADES. CONSIDERATION MUST BE GIVEN TO THE DOWNSTREAM PORTION OF THE SYSTEM TO PREVENT EXCESSIVE PRESSURES IN THESE LOWER LINES. FOR THESE INSTALLATIONS AND WHERE THE UPSTREAM MANHOLES ARE VERY DEEP, IT IS NOT ADVISABLE TO FILL THE STANDPIPE OR MANHOLE TO THE TOP WHEN PERFORMING THE TEST.

DEFLECTION TEST FOR PLASTIC PIPE

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

VIDEOTAPING

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

DRAWING PATH: S:\CVT\Superior\Twp\Standards\CAD\Sanitary\Superior\SanitZ.dwg Dec 20, 2011 - 4:24pm

OHM

DATE OCT 2003 | CADD DK | ENG / ARCH DLG/GSL | PROJ MGR | SECTION | TOWN | RANGE | COUNTY WASHTENAW | CITY/VILLAGE/TOWNSHIP CHARTER TOWNSHIP OF SUPERIOR | HOR. DATUM N/A | VERT. DATUM N/A | SCALE HZ. NTS VT. N/A | JOB # 000-00-0000 | SHEET NO. 2 OF 2

REVISIONS:

CHARTER TOWNSHIP OF SUPERIOR

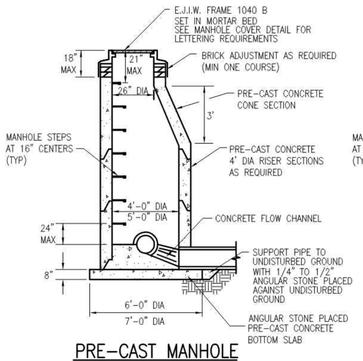
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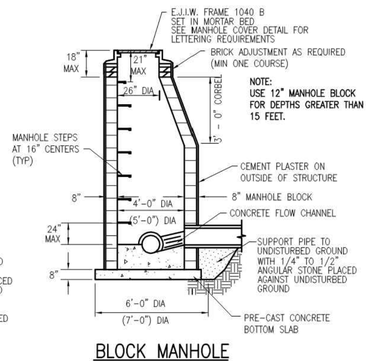
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CHARTER TOWNSHIP OF SUPERIOR
STANDARD SANITARY DETAILS

SHEET 2 OF 2

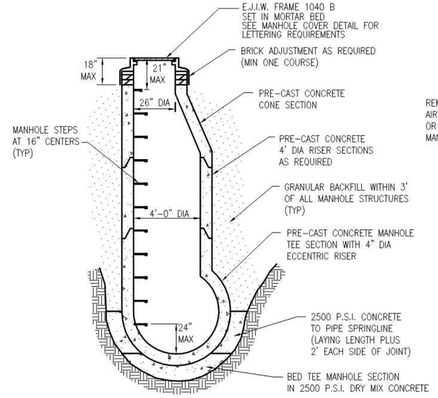


PRE-CAST MANHOLE

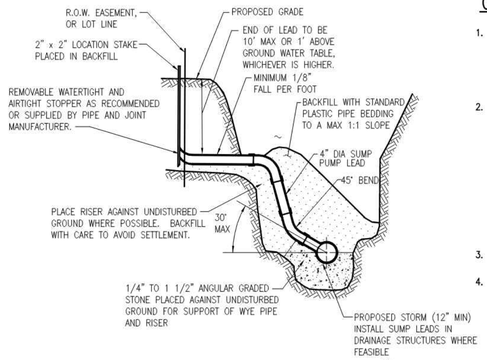


BLOCK MANHOLE

STANDARD MANHOLE DETAILS



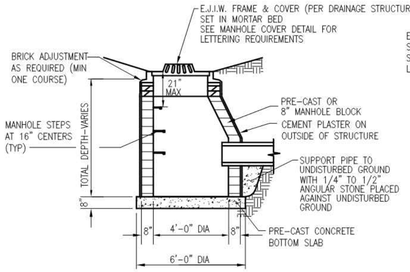
PRE-CAST TEE MANHOLE DETAIL



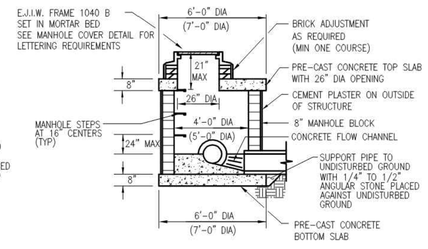
HOUSE LEAD DETAIL FOR 4" DIA
PLASTIC SUMP PUMP LEADS

GENERAL NOTES FOR STORM SEWER CONSTRUCTION

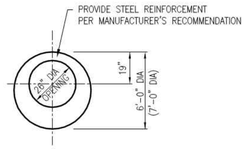
1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF CHARTER TOWNSHIP OF SUPERIOR.
   A. TYPE AND CLASS OF PIPE SHALL BE AS SPECIFIED ON PLANS.
   B. SAND BEDDING SHALL BE USED THROUGHOUT, UNLESS OTHERWISE SPECIFIED ON THE PLAN.
   C. ALL END SECTIONS 18" AND 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 MATERAL 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.



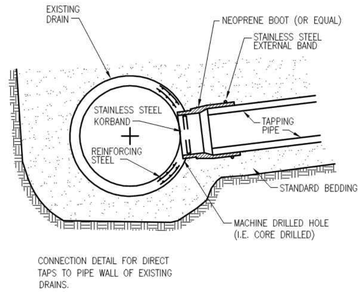
CATCH BASIN DETAIL



LOW HEAD MANHOLE AND CATCH BASIN DETAIL



PRE-CAST CONCRETE TOP
SLAB DETAIL, 8" THICK

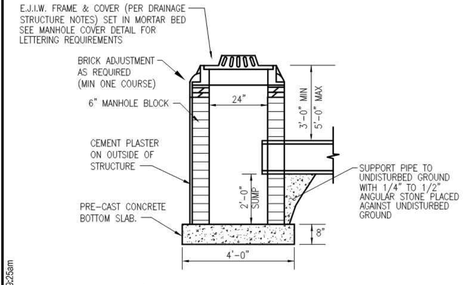


CONNECTION DETAIL FOR DIRECT
TAPS TO PIPE WALL OF EXISTING
DRAINS.

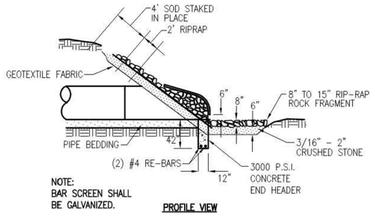
KOR-N-TEE TAP
FOR CONCRETE PIPE

DRAINAGE STRUCTURE REQUIREMENTS:

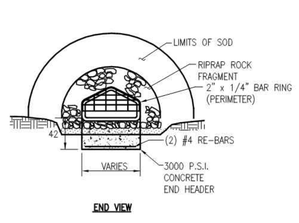
1. ALL STRUCTURE(S) SHALL BE 4' IN DIAMETER UNLESS OTHERWISE INDICATED ON CONSTRUCTION DRAWINGS. 2' DIAMETER CATCH BASINS AND INLETS SHALL BE USED ONLY WITH PRIOR TOWNSHIP APPROVAL.
2. MANHOLE STEPS SHALL BE STEEL, ENCASED WITH POLYPROPYLENE PLASTIC OR APPROVED EQUIVALENT TO M.A. INDUSTRIES, INC., PS-1 FOR BRICK, OR PS-1B FOR BLOCK, EAST JORDAN IRON WORKS 8503 (OR APPROVED EQUAL). MANHOLE STEPS AT 16" CENTERS.
3. CATCH BASIN STEPS SHALL BE EAST JORDAN IRON WORKS 8502 PLASTIC COATED (OR APPROVED EQUAL).
4. 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.
6. 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.
9. 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.



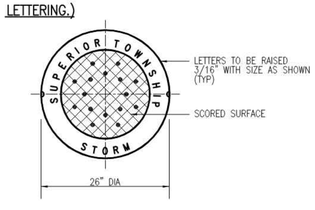
2' DIA CATCH BASIN DETAIL
NOT TO SCALE
(NOTE: 2' DIA CATCH BASIN SHALL NOT BE USED UNLESS PRIOR APPROVAL IS OBTAINED FROM TOWNSHIP ENGINEER.)

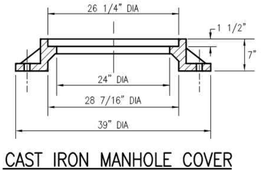


END SECTION AND BAR SCREEN DETAIL

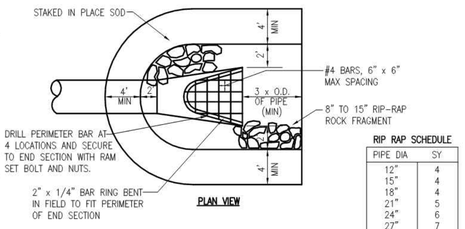


(NOTE: LETTERING SHALL BE USED ONLY FOR PUBLIC STORM SYSTEM. ALL OTHERS SHALL HAVE NO LETTERING.)





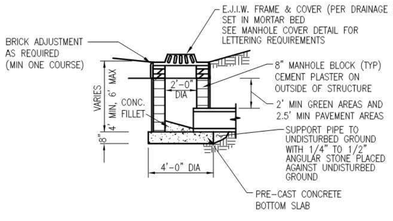
CAST IRON MANHOLE COVER
E.J.I.W. 1040



RIP RAP SCHEDULE

PIPE DIA	SY
12"	4
15"	4
18"	4
21"	5
24"	6
27"	7
30"	8
36"	10
42"	12
48"	14

(NOTE: MINIMUM REQUIREMENTS FOR RIP-RAP MATERIAL SHALL MEET MDOT SPECIFICATION 8.19.02.)



2' DIA INLET DETAIL

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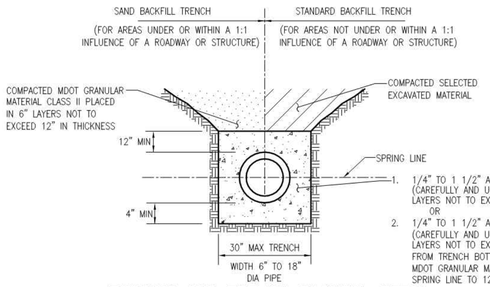
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COUNTY: WASHTENAW
STATE: MI
TOWN: 3 S
RANGE: 7 E
SECTION: 30
PROJ MGR:
ENG / ARCH: DLG/JGL
CADD: DK
DATE: OCT 2003
SCALE: Hz: NTS Vt: N/A
HORZ DATUM: N/A
VERT DATUM: N/A
JOB #: 000-00-0000
REVISIONS:

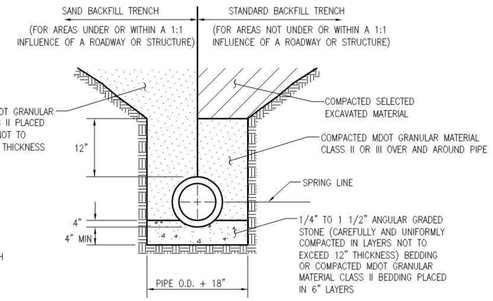
CHARTER TOWNSHIP OF SUPERIOR
STANDARD STORM SEWER DETAILS

SHEET
1
OF 2

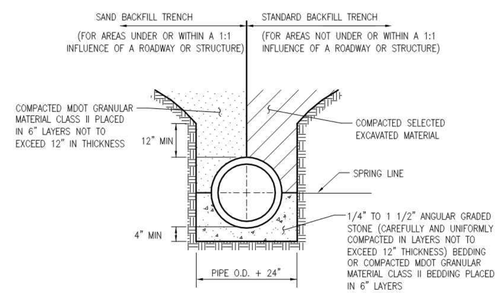
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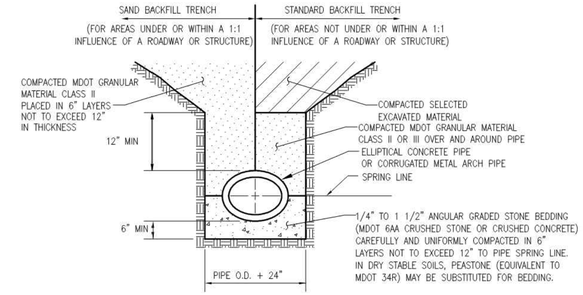
BEDDING AND TRENCH BACKFILL DETAIL FOR 18" DIAMETER AND SMALLER PIPE (PVC SOLID WALL, AND TRUSS PIPE)



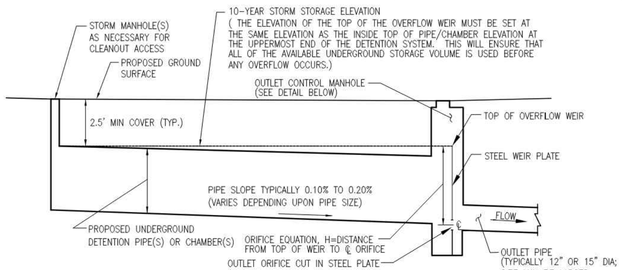
BEDDING AND TRENCH BACKFILL DETAIL FOR 24" DIAMETER AND SMALLER PIPE



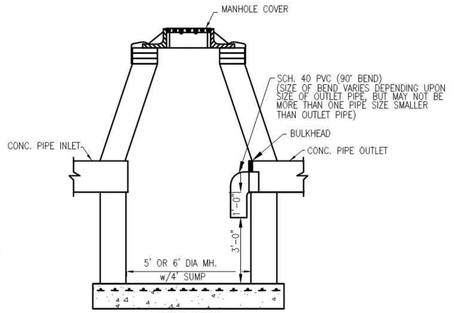
BEDDING AND TRENCH BACKFILL DETAIL FOR 27" DIAMETER AND LARGER PIPE



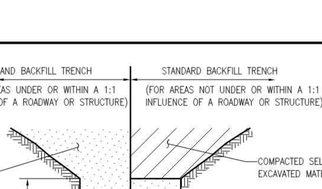
BEDDING AND TRENCH BACKFILL DETAIL FOR ELLIPTICAL CONCRETE PIPE OR CORRUGATED METAL ARCH PIPE



DETENTION SYSTEM PROFILE



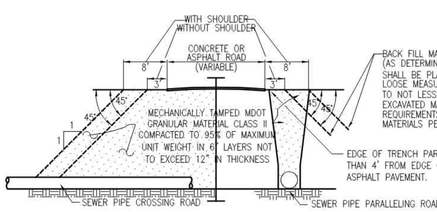
SIDE VIEW



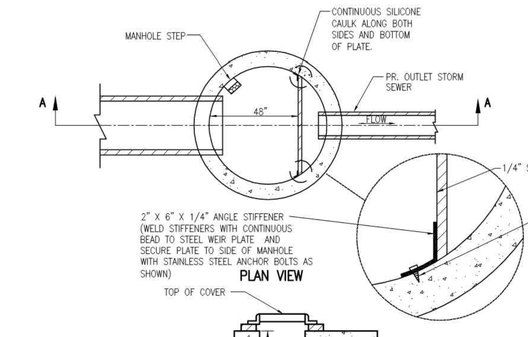
PLAN VIEW

OIL/GAS SEPARATOR PLACEMENT DETAIL FOR 18" DIAMETER AND SMALLER OUTLET PIPE

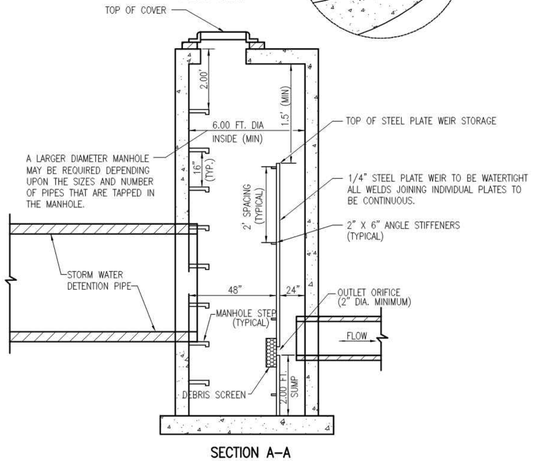
(FOR OUTLET PIPES LARGER THAN 18" IN DIAMETER, AN ALTERNATE DESIGN MUST BE APPROVED BY THE TOWNSHIP ENGINEER)



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



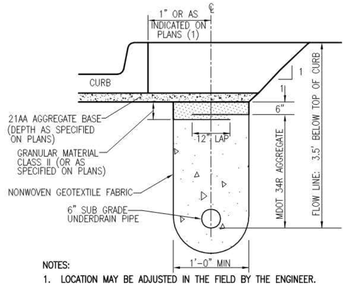
PLAN VIEW



SECTION A-A

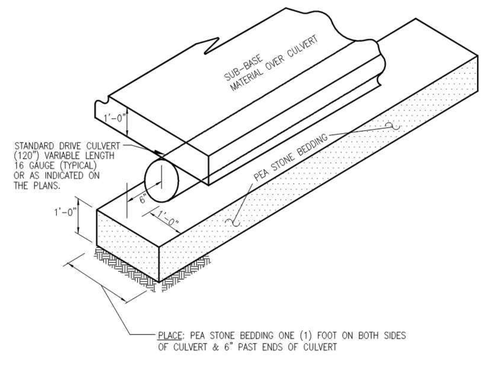
6 FT. DIA OUTLET MANHOLE

TYPICAL UNDERGROUND DETENTION AND OUTLET MANHOLE DETAILS



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

SUBGRADE UNDERDRAIN, 6"



DRIVE CULVERT BEDDING DETAIL

GENERAL NOTES FOR STORM SEWER CONSTRUCTION

1. PIPE BEDDING AND BACKFILLING:

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

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

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

2. SUMP PUMP LEAD REQUIREMENTS:

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

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

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

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

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

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

3. RESTORATION REQUIREMENTS:

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

FINISH GRADE

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

APPLY SOD OR SEED AND FERTILIZER AS FOLLOWS:

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

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

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

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OHM

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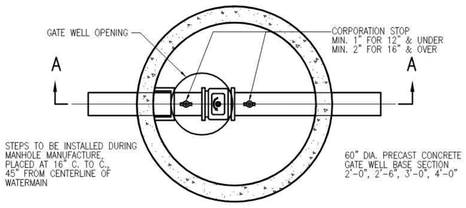
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DATE OCT 2003 | CADD DK | ENG / ARCH DLG/JGL | PROJ MGR | SECTION | TOWN | RANGE | COUNTY WASHTENAW | CITY/VILLAGE/TOWNSHIP CHARTER TOWNSHIP OF SUPERIOR | SCALE H: NTS V: N/A | HORZ DATUM N/A | VERT DATUM N/A | JOB NO. 000-00-0000

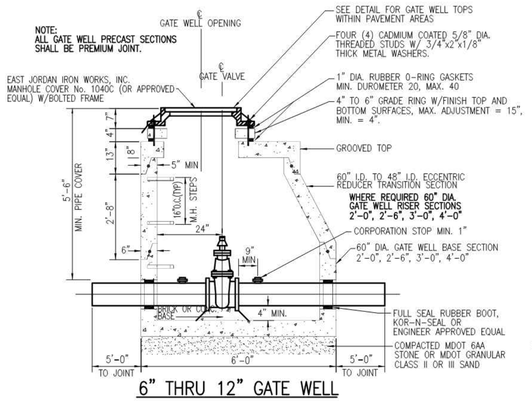
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CHARTER TOWNSHIP OF SUPERIOR
CHARTER TOWNSHIP OF SUPERIOR STANDARD STORM SEWER DETAILS

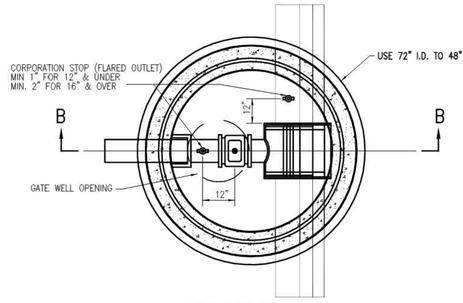
SHEET 2 OF 2



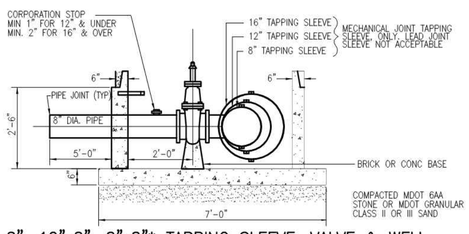
PLAN GATE WELL TYPICAL



6" THRU 12" GATE WELL



TAPPING SLEEVE VALVE & WELL TYPICAL

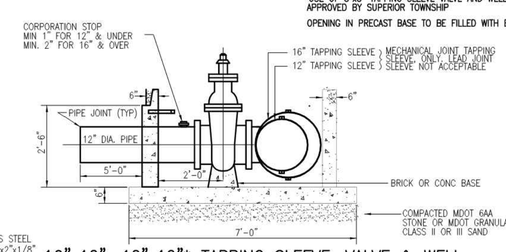


16"x8", 12"x8", 8"x8"* TAPPING SLEEVE, VALVE & WELL

NOTES:
TAPPING SLEEVE VALVE AND WELL FOR WATER MAIN LARGER THAN 16" DIAMETER SHALL BE PER Y.C.U.A AND D.W.S.D. STANDARDS, AND MUST BE SHOWN ON THE PLANS.

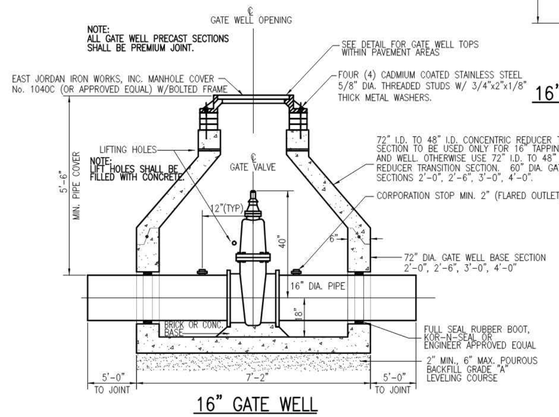
*USE OF 8"x8" TAPPING SLEEVE VALVE AND WELL MUST BE APPROVED BY SUPERIOR TOWNSHIP

OPENING IN PRECAST BASE TO BE FILLED WITH BRICK.

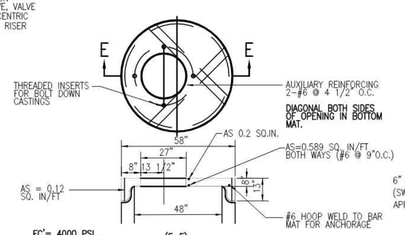


16"x12", 12"x12"* TAPPING SLEEVE, VALVE & WELL

*NOTE:
USE OF 12"x12" TAPPING SLEEVE VALVE AND WELL MUST BE APPROVED BY SUPERIOR TOWNSHIP D.P.W.

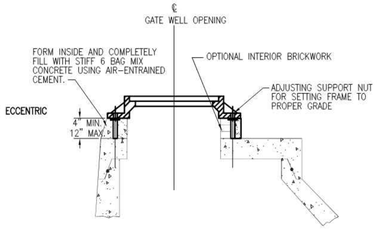


16" GATE WELL



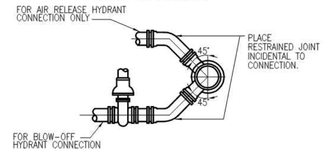
GROOVED TOP DETAIL

NOTE:
AS=CROSS-SECTION AREA OF REINFORCING STEEL, IN SQUARE INCHES PER FOOT.

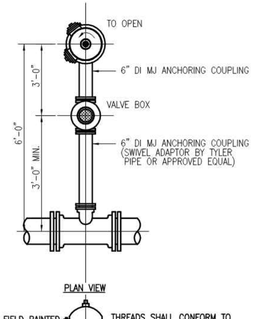


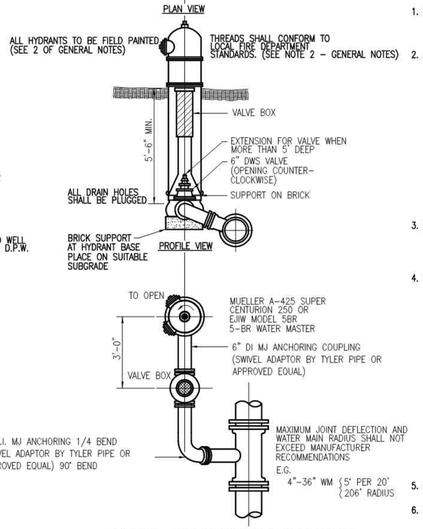
GATE WELL TOPS WITHIN PAVEMENT AREAS

RUBBER 'O' RINGS SHALL NOT BE USED IN PAVEMENT



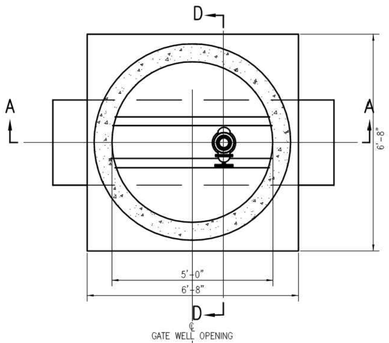
AIR RELEASE AND BLOW-OFF CONNECTION



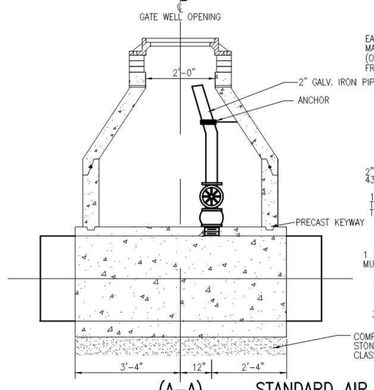


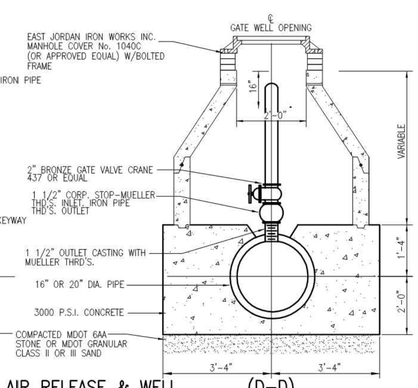
DETAIL OF HYDRANT SETTINGS

NOTE:
ALL HYDRANTS TO BE FULLY RESTRAINED BY MECHANICAL JOINTS APPROVED BY TOWNSHIP ENGINEER.



NOTES:
ALL AIR RELEASE WELLS SHALL BE PRECAST STRUCTURES.
ALL AIR RELEASE VALVES SHALL BE AUTOMATIC.





STANDARD AIR RELEASE & WELL FOR 16" & 20" WATER MAIN

WATER MAIN NOTES

1. All construction procedures and materials used on all water main projects shall conform to Ypsilanti Community Utilities Authority (Y.C.U.A), Detroit Water System Department (D.W.S.D.), and The Charter Township of Superior current Standards and Specifications.
2. All hydrants shall be Mueller A-425-Super-Centurion 250 or E.J.I.W. 5-BR Water Master and shall conform to AWWA current standards and shall have a 5 1/4" valve opening which closes with the water pressure. Hydrants shall be traffic style with breakable flange and coupling. Hydrants shall have a swivel flange to allow bonnet to be turned 360 degrees without removing the bonnet, and barrel flanges shall be integrally cast with the barrel. Inlet shoe shall have a bronze valve seat, which can be removed without digging. Inlet connection shall be 6" mechanical joint, ASA-A21-11. Stem threads shall be sealed with double "O" rings and shall be permanently lubricated with all weather grease. Hose connections: Two (2) 4 1/2" pumper nozzles facing the centerline of the road unless otherwise directed by the Township. Pumper connections shall have: National Standard Threads on one pumper connection (4 1/2" I.D., 4 threads per inch, 5.389 minor dia., 5.761 major dia., 5.586 pitch dia.) and Storz Fitting on the other pumper connection (KLS Manufacturing). Operating Nut: (1) 1 1/2" P-F pentagon, open left. Drain holes in hydrant shall be plugged and watertight. Hydrants shall be painted red above the ground and black below. All hydrants shall be constructed with companion valve in a three piece piece adjustable cast iron valve box.
3. All water mains shall be ductile iron as per the following specification. Ductile iron pipe shall be ANSI 1-A21.51 (AWWA-C151) std. wall thickness, cement lined with bituminous seal coat Class 54 for sizes 6" through 16" Class 55 for 24" pipe, pipe sizes larger than 24" in nominal diameter shall meet all the requirements of the current AWWA C100 for ductile iron pipe.
4. Gate Valves shall be iron body, fully bronze mounted, E.J.I.W. resilient wedge, non-rising stem, opening counterclockwise with 2" square operating nut conforming to Y.C.U.A. and D.W.S.D. specifications. All gate valves with operating nuts at a distance greater than 5' below ground surface shall be provided with an extension stem. The length of the extension shall be such that it will be within 5' of ground surface when an extension stem is used. It shall be held in place by two extension stem guide assemblies. Each assembly shall be comprised of a "J" bracket and "L" bracket supplied by E.J.I.W. The stem guides shall be located opposite from each other, and shall be suitably fastened to the wall of the gate well. In addition, a "stop" shall be welded to the extension stem in a location that will prevent the extension stem from slipping off the operating nut. Details of extension stem and method of installation shall be approved by the engineer prior to installation. All precast concrete gate well sections shall be manufactured to conform with ASTM C478, standard specifications for precast reinforced concrete manhole sections, except wall thickness, shall be shown on these details. All joints for precast concrete gate well sections shall be "modified grooved tongue" with gasket manufactured to conform with ASTM C443, standard specification for joints for circular concrete sewer and culvert pipe rubber gaskets. All gate well covers shall be E.J.I.W. #1040C with bolted frame and have words "Superior Township Water Main and Logo" in raised letters on the frame cover, or approved equal.
5. Tapping sleeve shall be mechanical joint with DWS Mechanical Joint Tapping Gate Valve. Lead joint sleeves shall not be used.
6. No installation of water main is to be attempted without Township's inspector being present. Unless otherwise specified on plans, top of all water mains shall be 5.5 ft. below existing or proposed road centerline, or 5.5 ft. below existing or proposed ground, whichever results in lower elevation. An 18" minimum vertical clearance between storm or sanitary sewer shall be maintained.
7. Three (3) working days before you dig, dial MISS DIG at 1-800-482-7171.
8. All required cross connection devices shall be installed as required by the local plumbing inspector and in accordance with the standards of the Michigan Department of Public Health.
9. The design engineer shall furnish Superior Township with mylar "Record" water main plans along with a computer disk using the most recent release of AutoCAD, upon job completion. Plans shall locate all water mains, hydrants and gate valves and wells.
10. Where work is to be performed in the vicinity of a Superior Township main, contractor shall notify the Superior Township Utility Deprtment at (734) 480-5500 at least 3 working days prior to start of construction as well as township engineer to schedule inspection.
11. All pipe and all pipe fittings shall be made in the U.S.A.
12. All bolts on all flanged and mechanical joint fittings shall be domestic origin high strength, low alloy COR-BLUE steel bolts or approved equal. These bolts shall meet the current provisions of American National Standard ANSI/AWWA C111/A21.11-90 for rubber gasket joints for ductile iron pressure pipes and fittings. Bolt manufacturer's certificate of compliance must accompany each shipment.
13. BACKFILL NOTE: Under road surfaces, pavement, sidewalk, curb, driveways and where the edge of the trench is within 3 (three) feet of the pavement or as called for on the plans, the trench depth shall be 4 (four) inches lower than the proposed water main elevation. The trench width shall be the outside diameter plus 16 (sixteen) inches for pipe diameters up to 36 (thirty-six) inches and larger. The trench shall be backfilled by placing granular material by the "controlled Density Method" or other means having approval of the engineer and compacting it to 95 (ninety-five) percent of its maximum unit weight.
14. "Mega Lugs," "Field Lock Gaskets," or a mechanical joint restraint system shall be used instead of concrete thrust blocks for joint restraint.
15. All bolts used in securing fittings to the water main shall be "COR-BLUE" bolts or approved equal.
16. All buried bolts, nuts and washers shall be "COR-BLUE" or equivalent and poly-wrapped.
17. Like size to like size tapping sleeves shall not be used with transite pipe.
18. Where water main is located under pavement, the Township shall not be responsible for repairing pavement within the easement in the event that maintenance or repairs to the water main become necessary.
19. Mechanical and slip-on joints for ductile iron shall be in accordance with AWWA C111 (ANSI A21.11)
20. All fire hydrant joints shall be totally restrained by use of "Mega Lugs" or other approved restrained joint.
21. Fittings for ductile iron pipe shall be ductile iron or cast iron and shall meet requirements of AWWA C110 (ANSI A21.10) or AWWA C153 (ANSI A21.53). Ductile iron fittings shall be rated for 350 psi, pipe 24" diameter and less and 250 psi for pipe sizes over 24" diameter, except that ductile iron flanged fitting shall be rated for 250 psi for all pipe diameters.
22. 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 8502 (or approved equal). Manhole steps at 16" centers.
23. Maximum joint deflection and water main radius shall not exceed manufacturer recommendations (e.g. 4"-36" WM - 5° per 20' or 206' radius).

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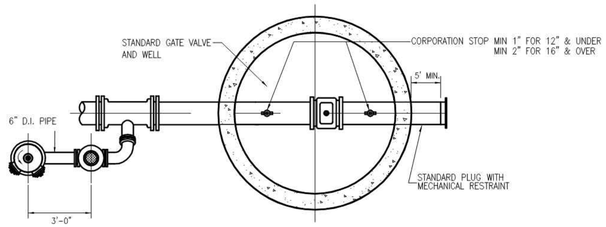
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CHARTER TOWNSHIP OF SUPERIOR
CITY/VILLAGE/TOWNSHIP
CHARTER TOWNSHIP OF SUPERIOR
COUNTY
WASHTENAW
T.&N.
R.&S.
SECTION
TOWN
RANGE
SCALE
Ht. N'TS
Vt. N/A
HORIZ DATUM N/A
VERT DATUM N/A
JOB NO.
000-00-0000
REVISIONS:
DATE
OCT 2003
CADD
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ENG / ARCH
DLG/JGL
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REVISIONS:

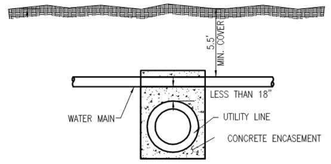
CHARTER TOWNSHIP OF SUPERIOR
STANDARD WATER MAIN DETAILS

SHEET
1
OF 2

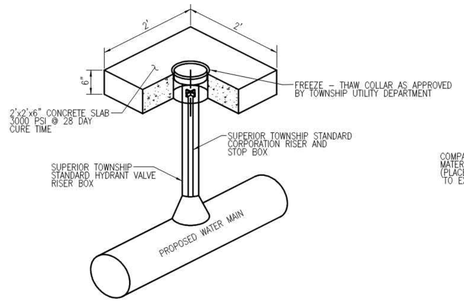
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END OF WATER LINE ASSEMBLY FOR WATER MAINS



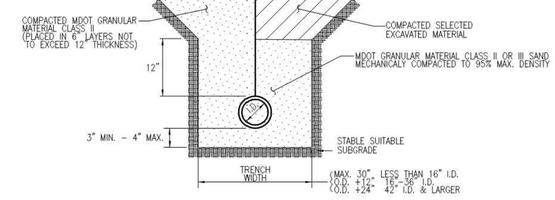
UTILITY CROSSING WITH LESS THAN 18" CLEARANCE



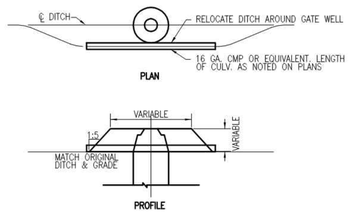
STOP BOX IN PAVEMENT

WATER STOP BOX REQUIREMENTS

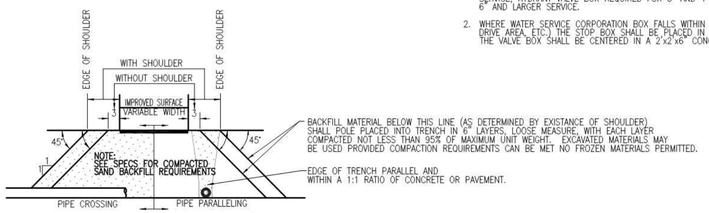
1. TWO HOLE ARCH PATTERN (ERIE PATTERN) TYPE WITH 1" UPPER AND 5' EXTENDED LENGTH WITH 42" ROD (FORD STOP BOX PART NO. EA1-50-40-42R OR APPROVED EQUAL). SMALL BOX REQUIRED FOR 3/4" AND 1" SERVICE; LARGE BOX REQUIRED FOR 1-1/2" AND 2" SERVICE; HYDRANT VALVE BOX REQUIRED FOR 3" AND 4" SERVICE; GATE WELL REQUIRED FOR 6" AND LARGER SERVICE.
2. WHERE WATER SERVICE CORPORATION BOX FALLS WITHIN A PAVED AREA (PARKING LOT, SERVICE DRIVE AREA, ETC.) THE STOP BOX SHALL BE PLACED IN A STANDARD HYDRANT VALVE BOX. THE VALVE BOX SHALL BE CENTERED IN A 2'x2'x6" CONCRETE SLAB.



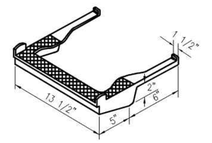
STANDARD BEDDING AND TRENCH BACKFILL DETAIL FOR WATER MAIN



DITCH ENCLOSURE AT GATE WELL

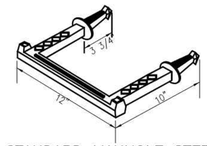


BACKFILL IN THE AREA OF STREETS, ALLEYS SIDEWALKS, DRIVES & PARKING LOTS



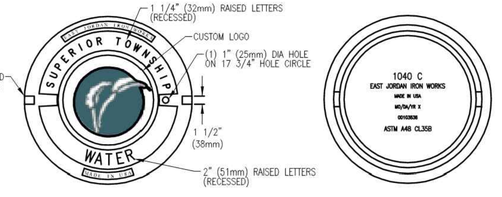
E.J.I.W. 8502

OR

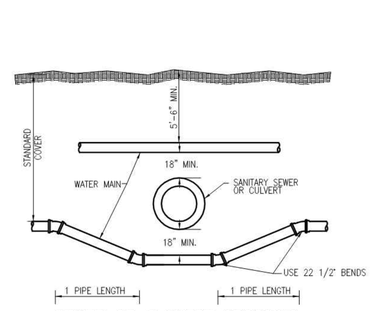


STANDARD MANHOLE STEP

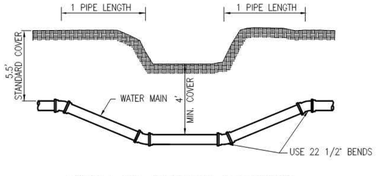
M.A. PSI-375



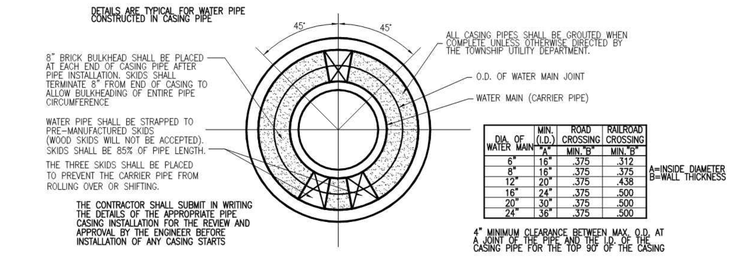
STANDARD COVER & FRAME



SEWER OR CULVERT CROSSING



DITCH OR STREAM CROSSING



DIA. OF WATER MAIN	MIN. (I.D.) "A"	ROAD CROSSING MIN. "B"	RAILROAD CROSSING MIN. "B"
6"	16"	.375	.312
8"	16"	.375	.375
12"	20"	.375	.438
16"	24"	.375	.500
20"	30"	.375	.500
24"	36"	.375	.500

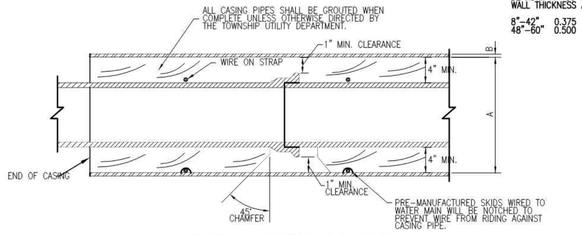
A=INSIDE DIAMETER
B=WALL THICKNESS

PIPE BARREL SUPPORT FOR WATER MAIN CONSTRUCTED IN CASING PIPE

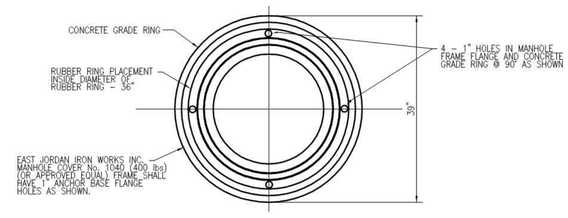
CASING SHALL BE SPIRAL WELDED STEEL PIPE A.S.T.M. A-252, GR. 2.

UNLESS OTHERWISE SPECIFIED, MINIMUM CASING PIPE SHALL BE ASTM A-139 GRADE B, WALL THICKNESS AS FOLLOWS:

8"-42" 0.375
48"-60" 0.500



STANDARD CASING SECTION



CAST IRON GATE WELL COVER AND GRADE RING

DRAWING PATH: S:\CVT\Superior Twp\Standards\CADD\watermain\SuperiorWM02.dwg May 27, 2010 - 9:23am

OHM

CITY/VILLAGE/TOWNSHIP: CHARTER TOWNSHIP OF SUPERIOR
COUNTY: WASHTENAW
RANGE
CLIENT: CHARTER TOWNSHIP OF SUPERIOR
TOWN
SECTION
PROJ MGR
ENG / ARCH: DLG/JGL
CAD: DK
DATE: OCT 2003
REVISIONS:
SCALE: H: NTS V: N/A
JOB #: 000-00-0000
HORZ DATUM: N/A
VERT DATUM: N/A
REVISIONS:

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CHARTER TOWNSHIP OF SUPERIOR
STANDARD WATER MAIN DETAILS

SHEET 2 OF 2

Landscape Summary - Phase 2

Street Trees

Total Street Frontage	3,595'
Street Trees Required	59.9 Trees (3,595' / 60')
Street Trees Provided	60 Trees

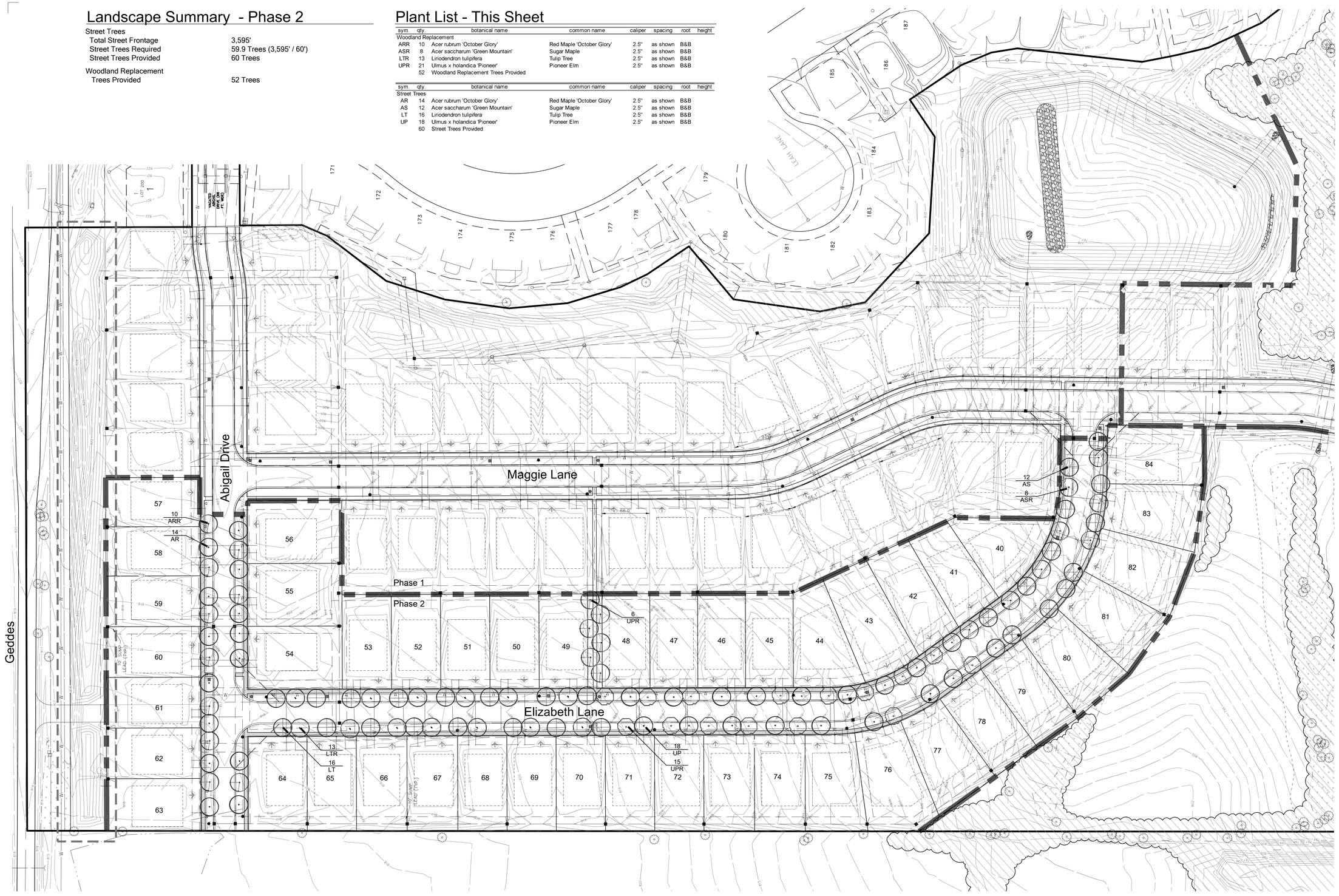
Woodland Replacement

Trees Provided	52 Trees

Plant List - This Sheet

sym.	qty.	botanical name	common name	caliper	spacing	root	height
Woodland Replacement							
ARR	10	Acer rubrum 'October Glory'	Red Maple 'October Glory'	2.5"	as shown	B&B	
ASR	8	Acer saccharum 'Green Mountain'	Sugar Maple	2.5"	as shown	B&B	
LTR	13	Liriodendron tulipifera	Tulip Tree	2.5"	as shown	B&B	
UPR	21	Ulmus x holandica 'Pioneer'	Pioneer Elm	2.5"	as shown	B&B	
	52	Woodland Replacement Trees Provided					

sym.	qty.	botanical name	common name	caliper	spacing	root	height
Street Trees							
AR	14	Acer rubrum 'October Glory'	Red Maple 'October Glory'	2.5"	as shown	B&B	
AS	12	Acer saccharum 'Green Mountain'	Sugar Maple	2.5"	as shown	B&B	
LT	16	Liriodendron tulipifera	Tulip Tree	2.5"	as shown	B&B	
UP	18	Ulmus x holandica 'Pioneer'	Pioneer Elm	2.5"	as shown	B&B	
	60	Street Trees Provided					



ALLENDESIGN
LAND PLANNING / LANDSCAPE ARCHITECTURE
557 Carpenter
Northville, Michigan 48167
e. jca@wideopenwest.com
t. 248.467.4668

Seal:

STATE OF MICHIGAN
JAMES C. ALLEN
Landscape Architect
REGISTERED LANDSCAPE ARCHITECT

Title:

Landscape Plan

Project:

Propsect Point Phase 2
Superior Township, Michigan

Prepared for:

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

Revision:	Issued:
Review	March 1, 2024

Job Number:

21-075

Drawn By:	Checked By:
jca	jca

0' 15' 30' 60'

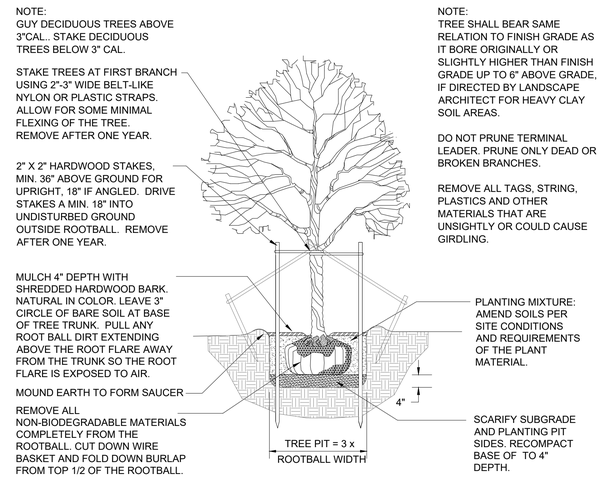
NORTH
1"=60'

Sheet No.

L-1

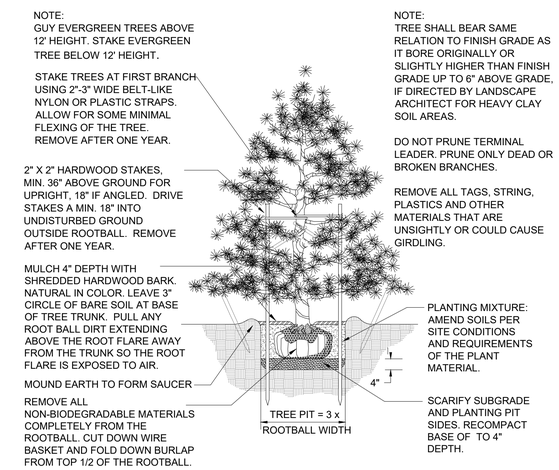
811 Know what's below. Call before you dig.

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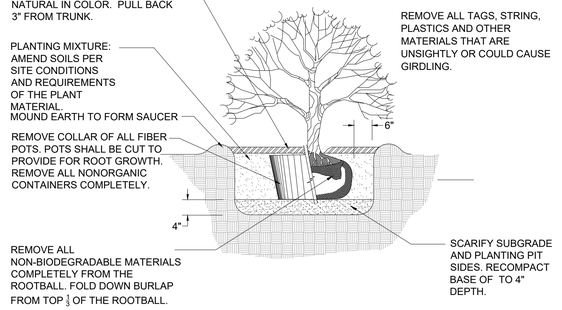
DECIDUOUS TREE PLANTING DETAIL

Not to scale



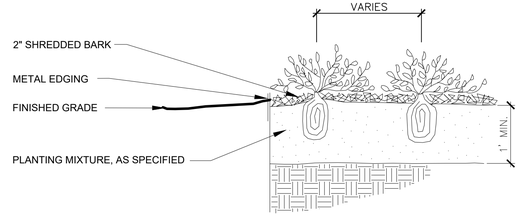
EVERGREEN TREE PLANTING DETAIL

Not to scale



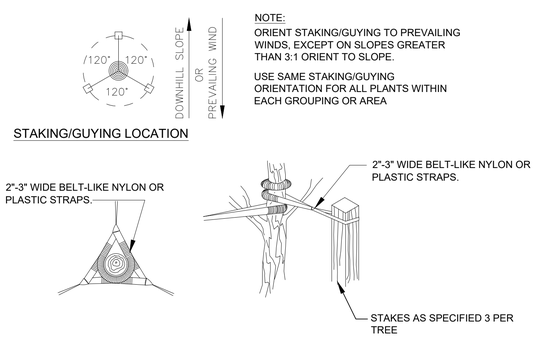
SHRUB PLANTING DETAIL

NOT TO SCALE



PERENNIAL PLANTING DETAIL

Not to scale



TREE STAKING DETAIL

Not to scale

MAINTENANCE NOTES

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

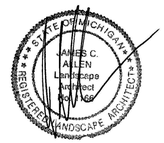
LANDSCAPE NOTES

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

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557 Carpenter
Northville, Michigan 48167
e. jca@wideopenwest.com
t. 248.467.4668

Seal:



Title:

Landscape Details

Project:

Propsect Point Phase 2
Superior Township, Michigan

Prepared for:

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

Revision:	Issued:
Review	March 1, 2024

Job Number:

21-075

Drawn By:	Checked By:
jca	jca

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

Sheet No.

L-2

Carlisle | Wortman
ASSOCIATES, INC.

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

Date: May 15, 2024

Final Site Plan Review
For
Superior Township, Michigan

Applicant: Diverse Real Estate

Project Name: Prospect Pointe West

Location: Southwest of Geddes Road and Prospect Road

Plan Date: March 1, 2024

Zoning: R-4 Single Family Residential

Action Requested: Final Site Plan Approval-Phase 1

PROJECT DESCRIPTION

The applicant received preliminary site plan approval for the development of a single-family site condominium. The development consists of 157 lots that are proposed to be developed in four phases.

The project is proposed in four phases. The applicant provided a phasing schedule on the Cover Page.

The project site is 67.63 gross acres in size. The project is located west of the existing Prospect Pointe neighborhood that is located at the southwest corner of Geddes Road and Prospect Road. The development has 833 feet of road frontage on Geddes Road. Access to the site is proposed to be provided through connections into the existing neighborhood.

Richard K. Carlisle, *President* Douglas J. Lewan, *Executive Vice President*
John L. Enos, *Principal* David Scurto, *Principal* Benjamin R. Carlisle, *Principal* Sally M. Elmiger, *Principal* Craig Strong, *Principal*
Laura K. Kreps, *Associate* Paul Montagno, *Associate*

Aerial Photograph

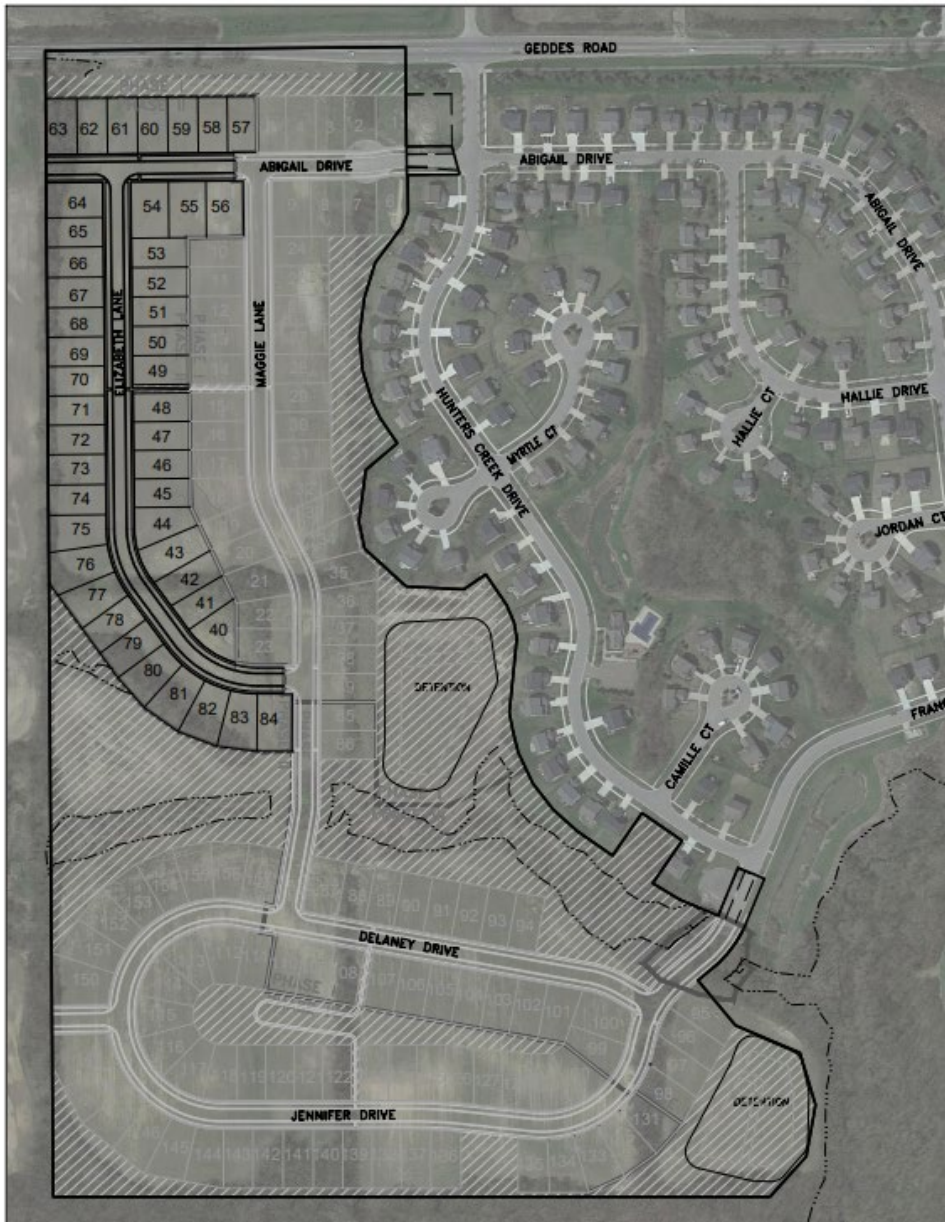


PRELIMINARY SITE PLAN APPROVAL

The Planning Commission approved the preliminary site plan on November 20, 2019.

PHASE 2

The applicant is seeking final site plan approval for Phase 2, which includes 45 lots. Access will be off Maggie Lane and extension of existing Abigail Drive through Phase 1. The submitted final site plan for Phase 2 is consistent with the approved preliminary site plan.



Please note that future phases will require separate final site plan reviews.

FINAL SITE PLAN

The following items are requirements for the final site plan submittal:

1. **Detailed grading plan and utility plans**

   CWA Response: The applicant provided a detailed grading plan and utility plan that will be reviewed by the Township Engineer.

2. **Provide the regulatory status of each wetland along with verification from the EGLE**

   CWA Response: The applicant has obtained the required wetland permit from EGLE.

3. **Detailed tree inventory.**

   CWA Response: The applicant provided a detailed tree inventory. The landscape plan complies with the final engineering plan set.

4. **Details for ramps and cross walks.**

   CWA Response: Details for ramps and cross walks will be reviewed by the Township Engineer.

5. **Detailed landscaping plan.**

   CWA Response: The applicant provided a detailed landscape plan. Landscaping is in compliance.

6. **Detailed lighting plan**

   CWA Response: The applicant is not proposing any site lighting.

7. **Additional building information to determine compliance with Section 14.09.B. of the Zoning Ordinance.**

   CWA Response: In the "Standard Housing Specifications" the applicant notes that primary siding material is vinyl. If vinyl, aluminum, or steel siding is to be installed on any dwelling, the area of all such siding shall not exceed fifty percent (50%) of the total area on the front and side dwelling elevations. The applicant shall revise their submitted elevations and "Standard Housing Specifications" to ensure that no more than 50% of the total area of elevation is vinyl, aluminum, or steel.

8. Phasing Plan

CWA Response: The applicant provided a phasing schedule on the Cover Page.

9. Outside Agency Approvals.

CWA Response: The applicant has obtained all outside agency approvals.

SUMMARY

We recommend approval of the Phase 2 with the following condition:

1. The applicant shall revise their submitted elevations and "Standard Housing Specifications" to ensure that no more than 50% of the total area of elevation is vinyl, aluminum, or steel.



CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, AICP, LEED AP

cc: Ken Schwartz, Township Supervisor
Lynette Findley, Township Clerk
Bill Balmes, Building Department
George Tsakof, Township engineer

May 9, 2024

CHARTER TOWNSHIP OF SUPERIOR
3040 N. Prospect Road
Ypsilanti, MI 48198

Attention: **Lynette Findley, Township Clerk**

Regarding: **Prospect Pointe West – Phase 2**
Final Site Plan Review #1
OHM Job No. 0140-19-1050

Dear Ms. Findley,

On behalf of the Township, we have reviewed the Final Site Plan submittal for Phase 2 on the above referenced project, dated March 1, 2024, and submitted to the Township on March 8, 2024. The work included in this site plan submittal includes: the utility construction, road construction, grading, sidewalks, and landscaping for Phase 2. Please note that construction of Phase 1 utilities and roads have been completed.

In our opinion, this plan is ready for consideration by the Planning Commission at their May meeting regarding Final Site Plan approval. We do offer the following detailed comments to be addressed by the Applicant's Engineer during a resubmittal of the Phase 2 plans for engineering approval to OHM Advisors, which can be reviewed administratively.

Grading

1. A low point exists at the back corner where lots #65 and #66 meet and there are no storm structures proposed to capture this drainage. The grading should be revised at this location, or a catch basin should be added.

Utilities

2. On Plan Sheet 21, Note #6 should be revised to say that low head structures are required where there is less than four feet of cover at storm structures rather than three feet to be consistent with Superior Township Standards.
3. At all locations where proposed water main, sanitary sewer, and storm sewer are to connect to existing stubs that were installed in Phase 1 of the project, invert elevations should be verified against as-built records. This applies to the water main connections on Plan Sheets 21 and 23, the sanitary sewer connection on Plan Sheet 24, and storm sewer connections on Plan Sheets 27 and 29.
4. On Plan Sheet 28, proposed storm structure #R139 is identified as a low head structure in the profile view for sewer run "R143-R138" but not in the profile view for sewer run "R139B-R139." A low head structure is required for structure #R139 and should be indicated in both profile views.
5. On Plan Sheet 29, proposed storm structure #R117 is identified as a low head structure in the profile view for sewer run "R120-R117" but not in profile view for sewer run "R119-R111." A low head structure is required for structure #R117 and should be indicated in both profile views. Additionally, the Township requires minimum depth of cover to top of storm sewer pipe to be 3 feet. The 12-inch pipe at structure #R117 proposed at INV. 813.66 E and heading towards structure #R120 does not meet this minimum requirement and should be revised.
6. On the Residential Roadway cross-section detail included on sheet 37 the water main is to be shown with 5.5 feet of cover rather than "Varies" and the sanitary sewer should be shown with cover that "Varies" rather than "5.5 feet Minimum."

OHM Advisors
34000 PLYMOUTH ROAD
LIVONIA, MICHIGAN 48150
T 734.522.6711
F 734.522.6427
OHM-Advisors.com

Permits and Other Agency Approvals

7. The Superior Township Fire Department has conditionally approved the Phase 2 Final Site Plans in a letter dated April 26, 2024.
8. A Part 303 Wetland Permit and Part 31 Water Resources Protection Permit from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) for disturbance of regulated wetland areas has been approved (Permit No. WRP036295 V.1), which was issued on March 16, 2023, and expires on March 16, 2028.
9. A Part 399 Permit for Water Supply Systems construction has been approved (Permit No. ACT-229388), which was issued by EGLE on February 6, 2023. As construction of the permitted water system commenced with Phase 1 of the development before the permit expiration date (2/6/2025) this permit will not expire.
10. A Part 41 Permit for Construction of Wastewater Systems has been approved (Permit No. P41003992 v.1), which was issued by EGLE on October 14, 2022. As construction of the permitted sanitary sewer system commenced with Phase 1 of the development before the permit expiration date (10/14/2024) this permit will not expire.
11. The stormwater management design plans dated June 15, 2022, for the full development were reviewed by the Washtenaw County Water Resources Commission (WCWRC) and found to be technically correct and do not require revisions for the WCWRC. In addition, the Master Deed and Exhibit B drawings for the site condominium have been approved by the WCWRC.
12. A Soil Erosion and Sedimentation Control (SESC) permit has been approved (Permit No. SESC2023-0054), which was issued by WCWRC on April 13, 2023, and expires on April 14, 2025.
13. A Washtenaw County Road Commission (WCRC) permit (Permit No. 2022-000458) was issued on July 26, 2022, and expires on July 26, 2025, for the private road connections to Abigail Drive and Frances Way. A separate permit (Permit No. 2022-000681) was issued by WCRC on November 21, 2022, and expires on November 21, 2024 for the construction access from Geddes Road within the Geddes Rd ROW.

If you have any questions regarding our review, please do not hesitate to contact me at (734) 466-4439, or Cresson Slotten at (734) 466-4585.

Sincerely,
OHM Advisors

_____
George Tsakoff, PE
Principal

cc: Ken Schwartz, Township Supervisor (via e-mail)
Bill Balmes, CBO, Building Department (via e-mail)
Ben Carlisle, CWA, Twp Planner (via email)
Diane Mulville-Friel, CWA (via email)
Cresson Slotten, OHM
Claire Martin, OHM
file

CHARTER TOWNSHIP OF SUPERIOR FIRE DEPARTMENT

BUREAU OF FIRE PREVENTION

7999 Ford Rd, Ypsilanti, MI 48198

Kyler Sheerin, PE
Project Manager
Atwell, LLC
311 N. Main Street
Ann Arbor, MI 48104

April 26, 2024

RE: Final Site Plan

Project Name:	Prospect Pointe West Phase 2
Project Location:	SW corner of Geddes & Prospect
Plan Date:	3/1/2024
Plan Received Date:	3/11/2024
Project Job Number:	16000819
Applicable Codes:	IFC 2015
Engineer:	Atwell, LLC
Engineer Address:	311 N. Main St, Ann Arbor, MI 48104

Status of Review

Status of review: Approved Conditionally (see comments).

Page 54 was reviewed.

Site Coverage - Access

Comments:

Please make a note on your next plan submittal that the secondary access along Geddes will be maintained at all times, including snow removal. Until the secondary access at Frances Way in phase 3 is constructed.

Sincerely,

Dan Kimball

Dan Kimball, Fire Marshal
Charter Township of Superior Fire Department
CFPS, CFI II, CFPE

BROOKWOOD SUPERIOR TOWNSHIP

PRELIMINARY SITE PLANS

P.I.N.: J-10-33-300-001

SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MICHIGAN
SECTION 33, T-02-S, R-07-E

PROPERTY OWNER

SB INVEST LP
23944 EUREKA ROAD, SUITE 107
TAYLOR, MI 48180
(734) 507-5200 p
ATTN: CHRIS GARNER

ARCHITECT

HOBBS AND BLACK ARCHITECTS
100 N. STATE STREET
ANN ARBOR, MI, 48104
(734) 663-4189 p
ATTN: TOM DILLENBECK

CIVIL ENGINEER

GIFFELS WEBSTER
1025 E. MAPLE ROAD, SUITE 100
BIRMINGHAM, MI 48009
(856) 781-8950 p
(856) 781-8951 f
ATTN: JOSH RATLIFF, PE

LANDSCAPE ARCHITECT

GIFFELS WEBSTER
1025 E. MAPLE ROAD, SUITE 100
BIRMINGHAM, MI 48009
(856) 781-8950 p
(856) 781-8951 f
ATTN: MARK HANSEN, BLA, RLA

LEGAL DESCRIPTION

(PER TAX RECORDS)

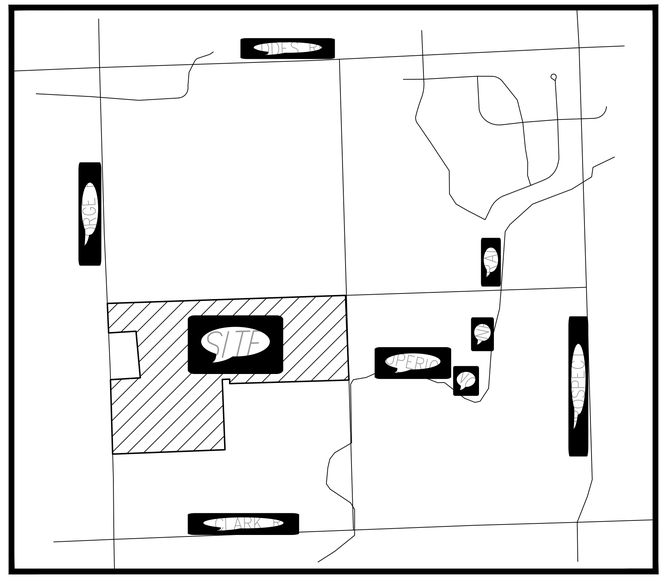
BEGINNING AT THE WEST 1/4 CORNER OF SECTION 33, THENCE NORTH 87 DEGREES 41 MINUTES 30 SECONDS EAST, 2696.01 FEET; THENCE SOUTH 02 DEGREES 42 MINUTES EAST, 971.99 FEET; THENCE SOUTH 87 DEGREES 41 MINUTES 30 SECONDS WEST, 1341.39 FEET; THENCE SOUTH 03 DEGREES 06 MINUTES EAST, 21.88 FEET; THENCE SOUTH 87 DEGREES 39 MINUTES 30 SECONDS WEST, 79.20 FEET; THENCE SOUTH 03 DEGREES 06 MINUTES EAST, 934.65 FEET; THENCE SOUTH 87 DEGREES 39 MINUTES 30 SECONDS WEST, 1255.20 FEET; THENCE NORTH 03 DEGREES 30 MINUTES WEST, 922.46 FEET; THENCE NORTH 87 DEGREES 41 MINUTES 30SECONDS EAST, 358.19 FEET; THENCE NORTH 05 DEGREES 21 MINUTES WEST, 695.92 FEET; THENCE SOUTH 87 DEGREES 41 MINUTES 30 SECONDS WEST, 335.72 FEET; THENCE NORTH 03 DEGREES 30 MINUTES WEST, 312.10 FEET TO THE POINT OF BEGINNING. PART OF THE SOUTHWEST 1/4 OF SECTION 33, TOWN 02 SOUTH, RANGE 07 EAST.

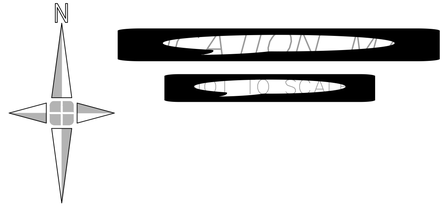
(PER DUTHLER SURVEY DATED JULY 22, 2022, JOB # 220630LS)

LEGAL DESCRIPTION:

PART OF THE SOUTHWEST 1/4 OF SECTION 33, TOWN 2 SOUTH, RANGE 7 EAST, SUPERIOR TOWNSHIP, WASHTENAW COUNTY, STATE OF MICHIGAN, DESCRIBED AS: BEGINNING AT THE WEST 1/4 CORNER OF SAID SECTION 33; THENCE N.87°56'32"E., 2696.00 FEET ALONG THE EAST-WEST 1/4 LINE OF SAID SECTION 33 AS FENCED, MONUMENTED, AND PREVIOUSLY SURVEYED TO THE CENTER POST OF SAID SECTION 33; THENCE ALONG THE NORTH-SOUTH 1/4 LINE OF SAID SECTION 33 AS FENCED, MONUMENTED, AND PREVIOUSLY SURVEYED, S.02°27'10"E., 1035.48 FEET TO A LINE ESTABLISHED BY DEED RECORDED IN LIBER 3891, PAGE 492, AND MORTGAGE RECORDED IN LIBER 1467, PAGE 421 WASHTENAW COUNTY RECORDS, AND AS MONUMENTED, TAXED, FENCED, AND OCCUPIED; THENCE ALONG SAID LINE, S.87°56'50"W., 1340.80 FEET TO THE WEST 1/16TH LINE OF SAID SECTION 33; THENCE ALONG SAID 1/16TH LINE, N.02°51'03"W., 41.51 FEET; THENCE S.87°54'32"W., 79.38 FEET ALONG A LINE ESTABLISHED BY QUIT CLAIM DEED LIBER 5451, PAGE 467, AND MONUMENTED; THENCE ALONG A LINE AS MONUMENTED, FENCED, AND OCCUPIED, S.02°50'58"E., 944.76 FEET TO A LINE ESTABLISHED BY QUIT CLAIM DEED LIBER 5408, PAGE 574, QUIT CLAIM DEED LIBER 5116, PAGE 465, MONUMENTATION, FENCED, AND OCCUPIED; THENCE ALONG SAID LINE, S.87°35'37"W., 1255.01 FEET TO THE WEST LINE OF SAID SECTION 33; THENCE ALONG SAID WEST LINE, N.03°14'54"W, 939.48 FEET (922.46 FEET RECORD); THENCE N.87°56'32"E., 358.19 FEET; THENCE N.05°05'58"W., 695.92 FEET; THENCE S.87°56'32"W., 335.72 FEET TO THE WEST LINE OF SAID SECTION 33; THENCE ALONG SAID WEST LINE, N.03°14'54"W, 312.05 FEET (312.10 FEET RECORD) TO THE POINT OF BEGINNING AND CONTAINING 84.500 ACRES.

SUBJECT TO THE RIGHTS OF THE PUBLIC FOR HIGHWAY PURPOSES ALONG LEFORGE ROAD. SUBJECT TO ALL EASEMENTS, RESTRICTIONS, AND RIGHT OF WAYS OF RECORD.





SHEET INDEX

01	COVER
02	TOPOGRAPHIC SURVEY
03	NATURAL FEATURES PLAN
04	SITE PLAN
05	UTILITY PLAN
06	GRADING PLAN
07	DIMENSIONAL STANDARDS & FIRE TURN DETAILS
L-100	OVERALL LANDSCAPE PLAN
L-101	TYPICAL LANDSCAPE PLAN
L-102	LANDSCAPE DETAILS
L-103	SIGN DETAILS
L-104	DUMPSTER DETAILS

BY OTHERS

AC-101	CLUBHOUSE COMPOSITE FLOOR PLANS
AC-201	CLUBHOUSE COMPOSITE EXTERIOR ELEVATIONS
AF-101	STACKED FLATS COMPOSITE FIRST FLOOR PLANS
AF-102	STACKED FLATS SECOND FLOOR & THIRD FLOOR PLANS
AF-201	STACKED FLATS COMPOSITE EXTERIOR ELEVATIONS
AF-202	STACKED FLATS COMPOSITE EXTERIOR ELEVATIONS
AF-204	STACKED FLATS COMPOSITE EXTERIOR ELEVATIONS
AF-205	STACKED FLATS COMPOSITE EXTERIOR ELEVATIONS
AT-101	TOWNHOME FLOOR PLANS
AT-102	TOWNHOME FLOOR PLANS
AT-103	TOWNHOME FLOOR PLANS
AT-201	TOWNHOME COMPOSITE EXTERIOR ELEVATIONS
AU-101	ATTACHED UNIT COMPOSITE FLOOR PLANS
AU-201	ATTACHED UNIT COMPOSITE EXTERIOR ELEVATIONS
AU-202	ATTACHED UNIT COMPOSITE EXTERIOR ELEVATIONS

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Engineers
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Landscape Architects

1025 East Maple Road
Suite 100
Birmingham, MI 48009
p (248) 852-3100
f (313) 962-5068
www.giffelswebster.com

Executive:	AW
Manager:	JR
Designer:	JR / AR
Quality Control:	-
Section:	33
	T-02-S R-07-E

Professional Seal:

STATE OF MICHIGAN
JOSHUA D. RATLIFF SR.
ENGINEER
No. 6201065198
LICENSED PROFESSIONAL ENGINEER

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

DATE:	ISSUE:
08-29-2023	TOWNSHIP SUBMITTAL
03-25-2024	TOWNSHIP SUBMITTAL
04-30-2024	REV PER TWP REVIEW

Developed For:

GARNER PROPERTY MANAGEMENT

23944 EUREKA ROAD, SUITE 105
TAYLOR, MI 48180

chris@livegpm.com
(734) 287-6619

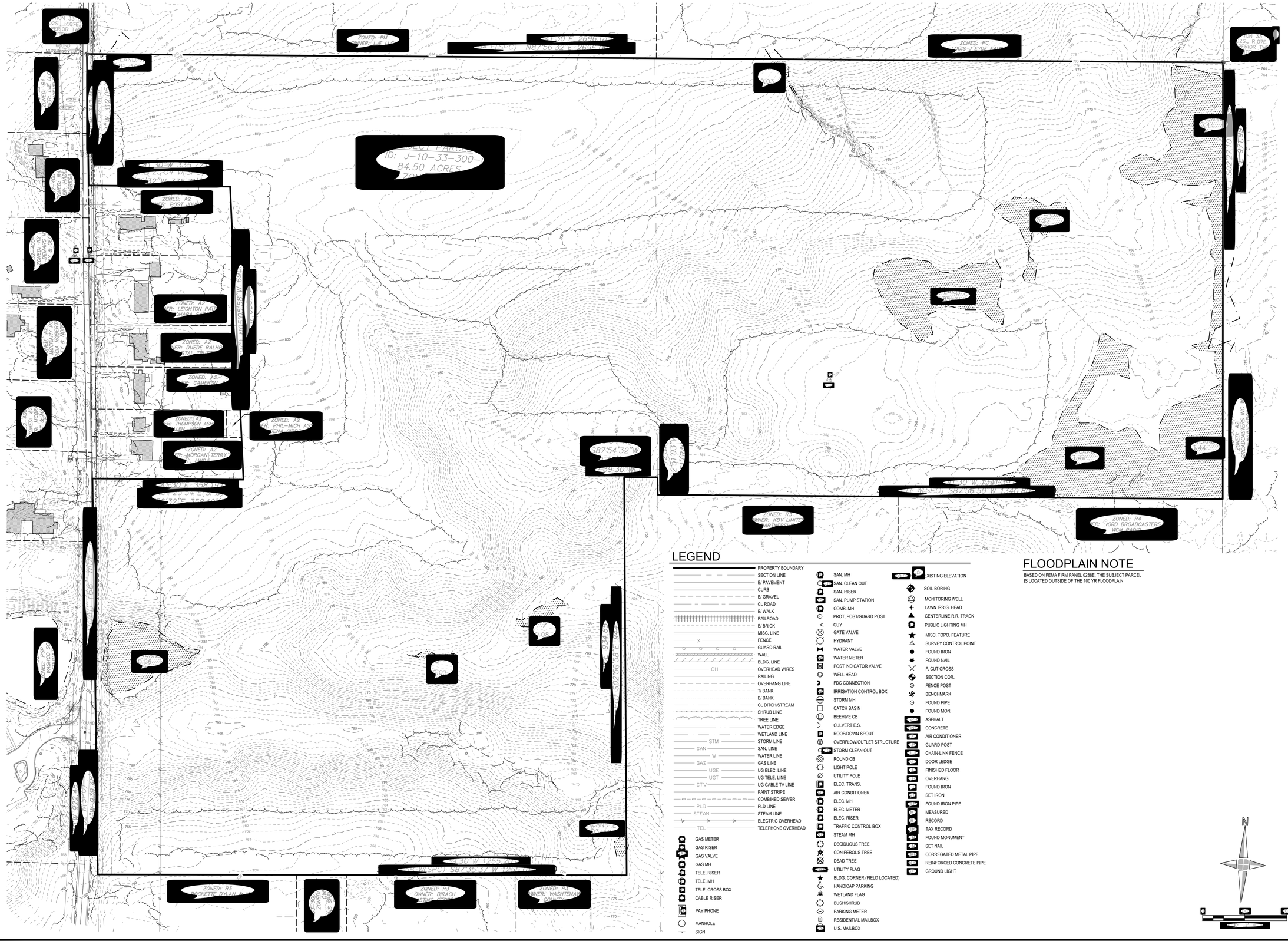
COVER

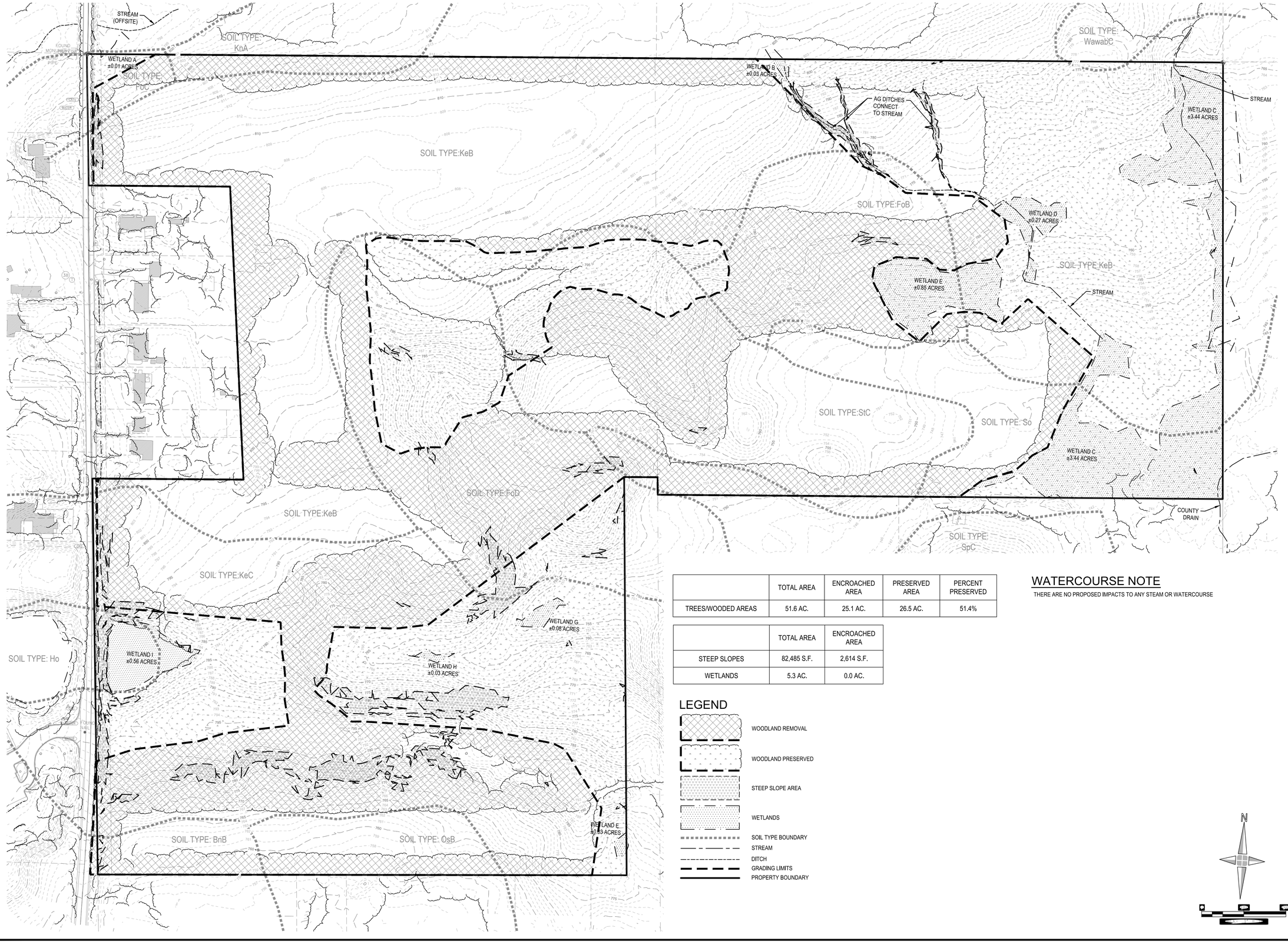
BROOKWOOD SUPERIOR TOWNSHIP

SUPERIOR TWP.
WASHTENAW COUNTY
MICHIGAN

Date:	04.14.2023
Scale:	NA
Sheet:	01
Project:	20249.00

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ZONED: PM
OWNER: LEE
ZONED: PC
LOUIS J EYDE FAM
ZONED: A2
POST
ZONED: A2
CR: LEIGHTON PAUL
ZONED: A2
CR: DUEDE RALPH
ZONED: A2
CAMERRIN
ZONED: A2
CR: THOMPSON AS
ZONED: A2
CR: MORGAN TERRY
ZONED: R3
ROCKETTE DYLAN
ZONED: R3
OWNER: BIRACH
ZONED: R3
OWNER: WASHTENAW
ZONED: R4
CR: JORD BROADCASTERS
ZONED: A2
BROADCASTERS INC
ID: J-10-33-300-
84.50 ACRES
S87°54'32"W
89.30'
WSPO S87°56'50"W 1340.30'
WSPO S87°56'50"W 1340.30'
WSPO S87°56'50"W 1340



	TOTAL AREA	ENCROACHED AREA	PRESERVED AREA	PERCENT PRESERVED
TREES/WOODED AREAS	51.6 AC.	25.1 AC.	26.5 AC.	51.4%

	TOTAL AREA	ENCROACHED AREA
STEEP SLOPES	82,485 S.F.	2,614 S.F.
WETLANDS	5.3 AC.	0.0 AC.

LEGEND

- WOODLAND REMOVAL
- WOODLAND PRESERVED
- STEEP SLOPE AREA
- WETLANDS
- SOIL TYPE BOUNDARY
- STREAM
- DITCH
- GRADING LIMITS
- PROPERTY BOUNDARY

WATERCOURSE NOTE

THERE ARE NO PROPOSED IMPACTS TO ANY STEAM OR WATERCOURSE

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NATURAL FEATURES PLAN

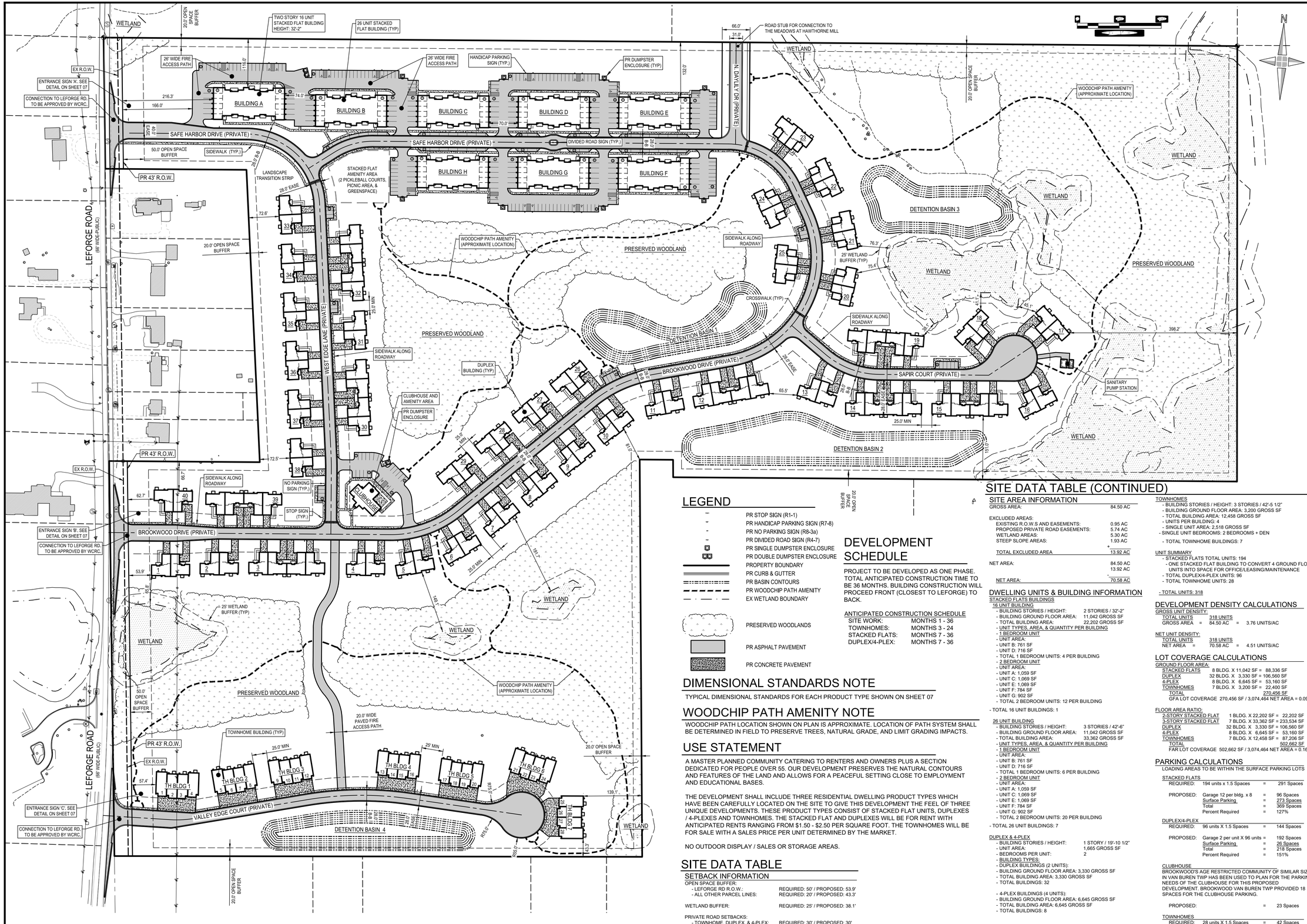
BROOKWOOD SUPERIOR TOWNSHIP

SUPERIOR TWP.
WASHTENAW COUNTY
MICHIGAN

Date:	04.14.2023
Scale:	1"=100'
Sheet:	03
Project:	20249.00

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LEGEND

- PR STOP SIGN (R1-1)
- PR HANDICAP PARKING SIGN (R7-8)
- PR NO PARKING SIGN (R8-3a)
- PR DIVIDED ROAD SIGN (R4-7)
- PR SINGLE DUMPSTER ENCLOSURE
- PR DOUBLE DUMPSTER ENCLOSURE
- PROPERTY BOUNDARY
- PR CURB & GUTTER
- PR BASIN CONTOURS
- PR WOODCHIP PATH AMENITY
- EX WETLAND BOUNDARY
- PRESERVED WOODLANDS
- PR ASPHALT PAVEMENT
- PR CONCRETE PAVEMENT

DEVELOPMENT SCHEDULE

PROJECT TO BE DEVELOPED AS ONE PHASE. TOTAL ANTICIPATED CONSTRUCTION TIME TO BE 36 MONTHS. BUILDING CONSTRUCTION WILL PROCEED FRONT (CLOSEST TO LEFORGE) TO BACK.

ANTICIPATED CONSTRUCTION SCHEDULE

SITE WORK:	MONTHS 1 - 36
TOWNHOMES:	MONTHS 3 - 24
STACKED FLATS:	MONTHS 7 - 36
DUPLEX/4-PLEX:	MONTHS 7 - 36

DIMENSIONAL STANDARDS NOTE

TYPICAL DIMENSIONAL STANDARDS FOR EACH PRODUCT TYPE SHOWN ON SHEET 07

WOODCHIP PATH AMENITY NOTE

WOODCHIP PATH LOCATION SHOWN ON PLAN IS APPROXIMATE. LOCATION OF PATH SYSTEM SHALL BE DETERMINED IN FIELD TO PRESERVE TREES, NATURAL GRADE, AND LIMIT GRADING IMPACTS.

USE STATEMENT

A MASTER PLANNED COMMUNITY CATERING TO RENTERS AND OWNERS PLUS A SECTION DEDICATED FOR PEOPLE OVER 55. OUR DEVELOPMENT PRESERVES THE NATURAL CONTOURS AND FEATURES OF THE LAND AND ALLOWS FOR A PEACEFUL SETTING CLOSE TO EMPLOYMENT AND EDUCATIONAL BASES.

THE DEVELOPMENT SHALL INCLUDE THREE RESIDENTIAL DWELLING PRODUCT TYPES WHICH HAVE BEEN CAREFULLY LOCATED ON THE SITE TO GIVE THIS DEVELOPMENT THE FEEL OF THREE UNIQUE DEVELOPMENTS. THESE PRODUCT TYPES CONSIST OF STACKED FLAT UNITS, DUPLEXES / 4-PLEXES AND TOWNHOMES. THE STACKED FLAT AND DUPLEXES WILL BE FOR RENT WITH ANTICIPATED RENTS RANGING FROM $1.50 - $2.50 PER SQUARE FOOT. THE TOWNHOMES WILL BE FOR SALE WITH A SALES PRICE PER UNIT DETERMINED BY THE MARKET.

NO OUTDOOR DISPLAY / SALES OR STORAGE AREAS.

SITE DATA TABLE

SETBACK INFORMATION

OPEN SPACE BUFFER:	
- LEFORGE RD R.O.W.:	REQUIRED: 50' / PROPOSED: 53.9'
- ALL OTHER PARCEL LINES:	REQUIRED: 20' / PROPOSED: 43.3'
WETLAND BUFFER:	REQUIRED: 25' / PROPOSED: 38.1'
PRIVATE ROAD SETBACKS:	
- TOWNHOME, DUPLEX, & 4-PLEX:	REQUIRED: 30' / PROPOSED: 30'
- STACKED FLATS:	REQUIRED: 14' / PROPOSED: 14'

SITE DATA TABLE (CONTINUED)

SITE AREA INFORMATION

GROSS AREA:	84.50 AC
EXCLUDED AREAS:	
EXISTING R.O.W.S AND EASEMENTS:	0.95 AC
PROPOSED PRIVATE ROAD EASEMENTS:	5.74 AC
WETLAND AREAS:	5.30 AC
STEEP SLOPE AREAS:	1.93 AC
TOTAL EXCLUDED AREA	13.92 AC
NET AREA:	84.50 AC - 13.92 AC
NET AREA:	70.58 AC

DWELLING UNITS & BUILDING INFORMATION

STACKED FLATS BUILDINGS

16 UNIT BUILDING
- BUILDING STORIES / HEIGHT: 2 STORIES / 32'-2"
- BUILDING GROUND FLOOR AREA: 11,042 GROSS SF
- TOTAL BUILDING AREA: 22,202 GROSS SF
- UNIT TYPES, AREA, & QUANTITY PER BUILDING
- 1 BEDROOM UNIT
- UNIT AREA:
- UNIT B: 761 SF
- UNIT D: 716 SF
- TOTAL 1 BEDROOM UNITS: 4 PER BUILDING
- 2 BEDROOM UNIT
- UNIT AREA:
- UNIT A: 1,059 SF
- UNIT C: 1,069 SF
- UNIT E: 1,069 SF
- UNIT F: 784 SF
- UNIT G: 902 SF
- TOTAL 2 BEDROOM UNITS: 12 PER BUILDING

- TOTAL 16 UNIT BUILDINGS: 1

26 UNIT BUILDING
- BUILDING STORIES / HEIGHT: 3 STORIES / 42'-6"
- BUILDING GROUND FLOOR AREA: 11,042 GROSS SF
- TOTAL BUILDING AREA: 33,362 GROSS SF
- UNIT TYPES, AREA, & QUANTITY PER BUILDING
- 1 BEDROOM UNIT
- UNIT AREA:
- UNIT B: 761 SF
- UNIT D: 716 SF
- TOTAL 1 BEDROOM UNITS: 6 PER BUILDING
- 2 BEDROOM UNIT
- UNIT AREA:
- UNIT A: 1,059 SF
- UNIT C: 1,069 SF
- UNIT E: 1,069 SF
- UNIT F: 784 SF
- UNIT G: 902 SF
- TOTAL 2 BEDROOM UNITS: 20 PER BUILDING

- TOTAL 26 UNIT BUILDINGS: 7

DUPLEX & 4-PLEX
- BUILDING STORIES / HEIGHT: 1 STORY / 19'-10 1/2"
- UNIT AREA: 1,665 GROSS SF
- BEDROOMS PER UNIT: 2
- BUILDING TYPES:
- DUPLEX BUILDINGS (2 UNITS):
- BUILDING GROUND FLOOR AREA: 3,330 GROSS SF
- TOTAL BUILDING AREA: 3,330 GROSS SF
- TOTAL BUILDINGS: 32

- 4-PLEX BUILDINGS (4 UNITS):
- BUILDING GROUND FLOOR AREA: 6,645 GROSS SF
- TOTAL BUILDING AREA: 6,645 GROSS SF
- TOTAL BUILDINGS: 8

TOWNHOMES
- BUILDING STORIES / HEIGHT: 3 STORIES / 42'-5 1/2"
- BUILDING GROUND FLOOR AREA: 3,200 GROSS SF
- TOTAL BUILDING AREA: 12,458 GROSS SF
- UNITS PER BUILDING: 4
- SINGLE UNIT AREA: 2,518 GROSS SF
- SINGLE UNIT BEDROOMS: 2 BEDROOMS + DEN

- TOTAL TOWNHOME BUILDINGS: 7

UNIT SUMMARY
- STACKED FLATS TOTAL UNITS: 194
- ONE STACKED FLAT BUILDING TO CONVERT 4 GROUND FLOOR UNITS INTO SPACE FOR OFFICE/LEASING/MAINTENANCE
- TOTAL DUPLEX/4-PLEX UNITS: 96
- TOTAL TOWNHOME UNITS: 28

- TOTAL UNITS: 318

DEVELOPMENT DENSITY CALCULATIONS

GROSS UNIT DENSITY:
TOTAL UNITS 318 UNITS
GROSS AREA = 84.50 AC = 3.76 UNITS/AC

NET UNIT DENSITY:
TOTAL UNITS 318 UNITS
NET AREA = 70.58 AC = 4.51 UNITS/AC

LOT COVERAGE CALCULATIONS

GROUND FLOOR AREA:

STACKED FLATS	8 BLDG. X 11,042 SF =	88,336 SF
DUPLEX	32 BLDG. X 3,330 SF =	106,560 SF
4-PLEX	8 BLDG. X 6,645 SF =	53,160 SF
TOWNHOMES	7 BLDG. X 3,200 SF =	22,400 SF
TOTAL		270,456 SF

GFA LOT COVERAGE 270,456 SF / 3,074,464 NET AREA = 0.09

FLOOR AREA RATIO:

2-STORY STACKED FLAT	1 BLDG. X 22,202 SF =	22,202 SF
3-STORY STACKED FLAT	7 BLDG. X 33,362 SF =	233,534 SF
DUPLEX	32 BLDG. X 3,330 SF =	106,560 SF
4-PLEX	8 BLDG. X 6,645 SF =	53,160 SF
TOWNHOMES	7 BLDG. X 12,458 SF =	87,206 SF
TOTAL		502,662 SF

FAR LOT COVERAGE 502,662 SF / 3,074,464 NET AREA = 0.16

PARKING CALCULATIONS

LOADING AREAS TO BE WITHIN THE SURFACE PARKING LOTS

STACKED FLATS

REQUIRED:	194 units x 1.5 Spaces	=	291 Spaces
PROPOSED:	Garage 12 per bldg. x 8	=	96 Spaces
	Surface Parking	=	273 Spaces
	Total	=	369 Spaces
	Percent Required	=	127%

DUPLEX/4-PLEX

REQUIRED:	96 units X 1.5 Spaces	=	144 Spaces
PROPOSED:	Garage 2 per unit X 96 units	=	192 Spaces
	Surface Parking	=	26 Spaces
	Total	=	218 Spaces
	Percent Required	=	151%

CLUBHOUSE

BROOKWOOD'S AGE RESTRICTED COMMUNITY OF SIMILAR SIZE IN VAN BUREN TWP HAS BEEN USED TO PLAN FOR THE PARKING NEEDS OF THE CLUBHOUSE FOR THIS PROPOSED DEVELOPMENT. BROOKWOOD VAN BUREN TWP PROVIDED 18 SPACES FOR THE CLUBHOUSE PARKING.

PROPOSED:		=	23 Spaces

TOWNHOMES

REQUIRED:	28 units X 1.5 Spaces	=	42 Spaces
PROPOSED:	Garage 2 per unit X 28 units	=	56 Spaces
	Total	=	56 Spaces
	Percent Required	=	133%

giffels webster

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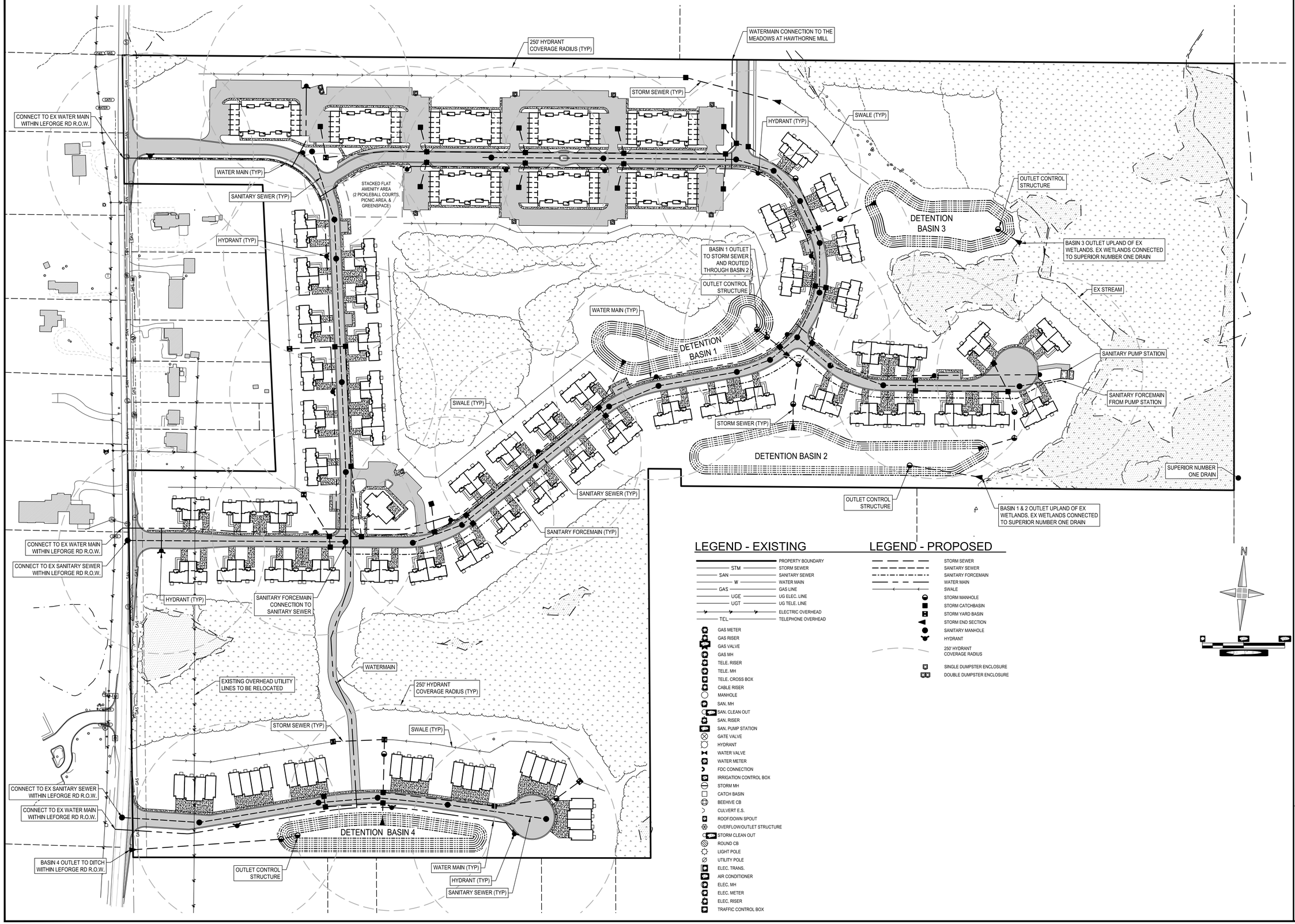
SITE PLAN

BROOKWOOD SUPERIOR TOWNSHIP

SUPERIOR TWP.
WASHTENAW COUNTY
MICHIGAN

Date:	04.14.2023
Scale:	1"=100'
Sheet:	04
Project:	20249.00

H:\20\20200\20249.00 Brookwood Superior Twp\Design\CAD\Special District Area Plan\04 Site Plan.dwg



LEGEND - EXISTING

- PROPERTY BOUNDARY
- STM — STORM SEWER
- SAN — SANITARY SEWER
- W — WATER MAIN
- GAS — GAS LINE
- UGE — UG ELEC. LINE
- UGT — UG TELE. LINE
- ELECTRIC OVERHEAD
- TEL — TELEPHONE OVERHEAD
- GAS METER
- GAS RISER
- GAS VALVE
- GAS MH
- TELE. RISER
- TELE. MH
- TELE. CROSS BOX
- CABLE RISER
- MANHOLE
- SAN. MH
- SAN. CLEAN OUT
- SAN. RISER
- SAN. PUMP STATION
- GATE VALVE
- HYDRANT
- WATER VALVE
- WATER METER
- FDC CONNECTION
- IRRIGATION CONTROL BOX
- STORM MH
- CATCH BASIN
- BEEHIVE CB
- CULVERT E.S.
- ROOF/DOWN SPOUT
- OVERFLOW/OUTLET STRUCTURE
- STORM CLEAN OUT
- ROUND CB
- LIGHT POLE
- UTILITY POLE
- ELEC. TRANS.
- AIR CONDITIONER
- ELEC. MH
- ELEC. METER
- ELEC. RISER
- TRAFFIC CONTROL BOX

LEGEND - PROPOSED

- STORM SEWER
- SANITARY SEWER
- SANITARY FORCEMAIN
- WATER MAIN
- SWALE
- STORM MANHOLE
- STORM CATCHBASIN
- STORM YARD BASIN
- STORM END SECTION
- SANITARY MANHOLE
- HYDRANT
- 250' HYDRANT COVERAGE RADIUS
- SINGLE DUMPSTER ENCLOSURE
- DOUBLE DUMPSTER ENCLOSURE

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Designer:	JR / AR
Quality Control:	-
Section:	33
	T-02-S R-07-E

Professional Seal:

STATE OF MICHIGAN
JOSHUA D. RATLIFF SR.
ENGINEER
No. 6201065198
LICENSED PROFESSIONAL ENGINEER

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03-25-2024	TOWNSHIP SUBMITTAL
04-30-2024	REV PER TWP REVIEW

Developed For:

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chris@livegpm.com
(734) 287-6619

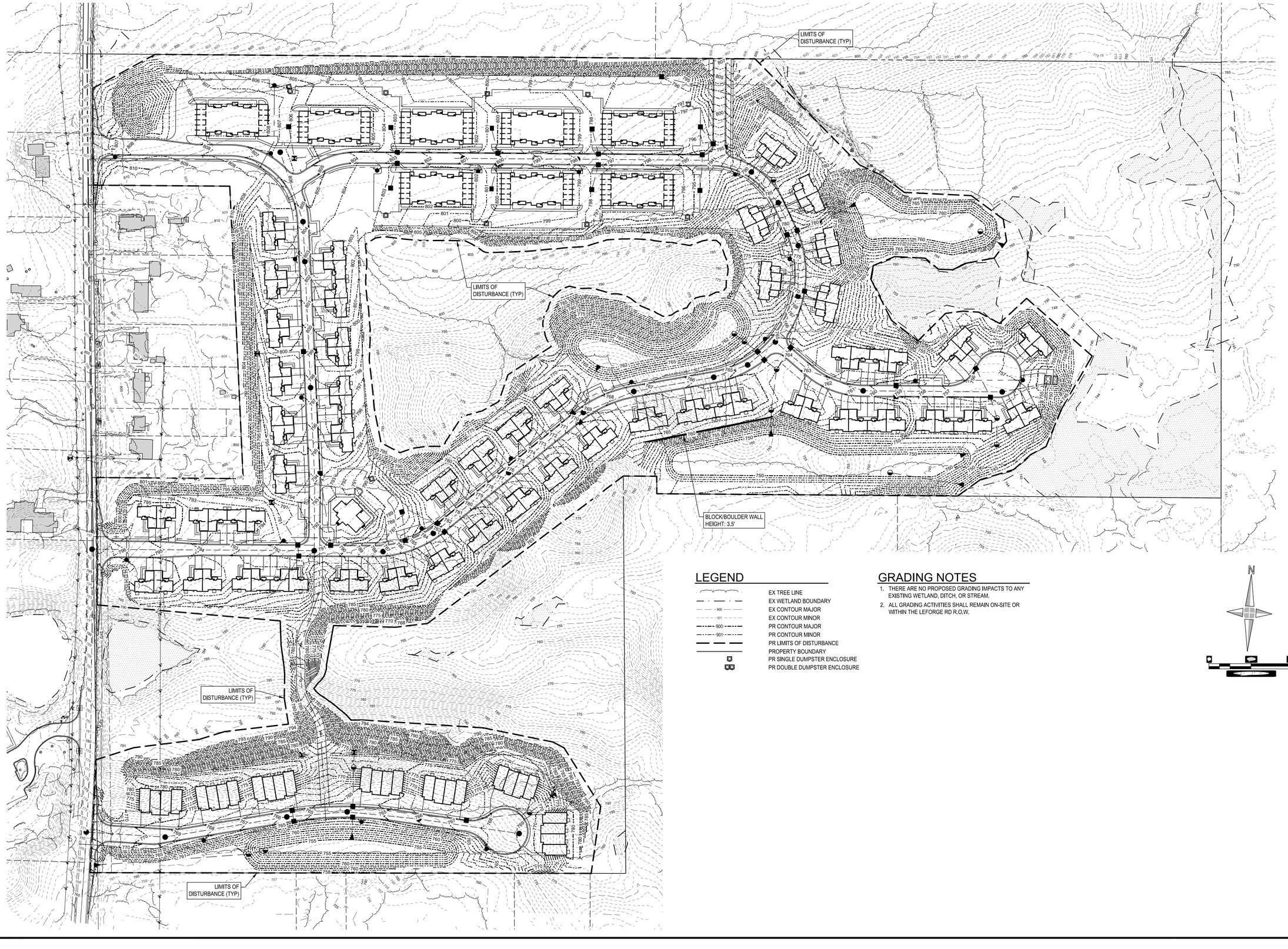
UTILITY PLAN

BROOKWOOD SUPERIOR TOWNSHIP

SUPERIOR TWP.
WASHTENAW COUNTY
MICHIGAN

Date:	04.14.2023
Scale:	1"=100'
Sheet:	05
Project:	20249.00

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LEGEND

- EX TREE LINE
- EX WETLAND BOUNDARY
- EX CONTOUR MAJOR
- EX CONTOUR MINOR
- PR CONTOUR MAJOR
- PR CONTOUR MINOR
- PR LIMITS OF DISTURBANCE
- PROPERTY BOUNDARY
- PR SINGLE DUMPSTER ENCLOSURE
- PR DOUBLE DUMPSTER ENCLOSURE

GRADING NOTES

1. THERE ARE NO PROPOSED GRADING IMPACTS TO ANY EXISTING WETLAND, DITCH, OR STREAM.
2. ALL GRADING ACTIVITIES SHALL REMAIN ON-SITE OR WITHIN THE LEFORGE RD R.O.W.

N

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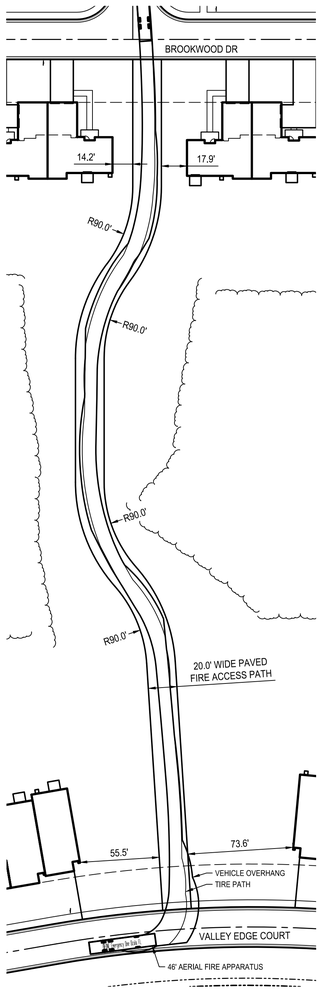
GRADING PLAN

BROOKWOOD SUPERIOR TOWNSHIP

SUPERIOR TWP.
WASHTENAW COUNTY
MICHIGAN

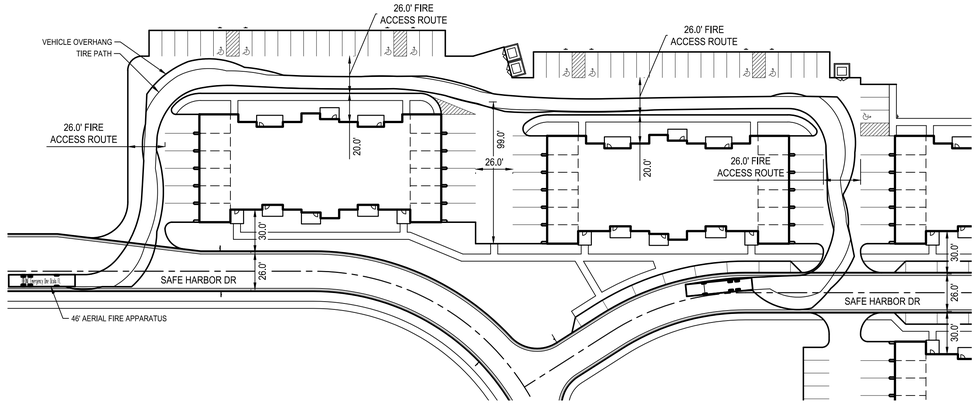
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Project:	20249.00

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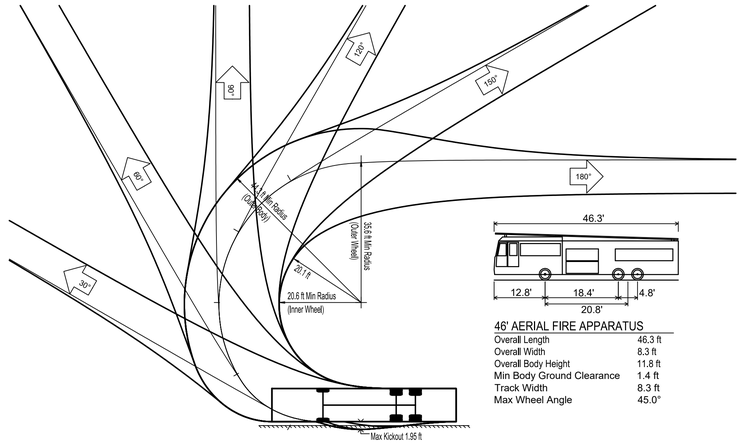
FIRE PATH ACCESS DETAIL

SCALE: 1" = 50'



STACKED FLATS FIRE DETAIL

SCALE: 1" = 50'

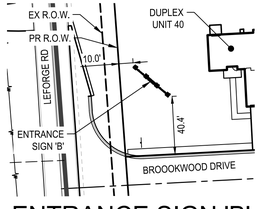


46' AERIAL FIRE APPARATUS

Overall Length	46.3 ft
Overall Width	8.3 ft
Overall Body Height	11.8 ft
Min Body Ground Clearance	1.4 ft
Track Width	8.3 ft
Max Wheel Angle	45.0°

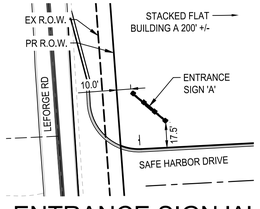
46' AERIAL FIRE APPARATUS DETAIL

NOT TO SCALE



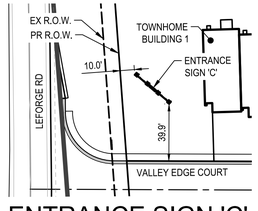
ENTRANCE SIGN 'B' LOCATION DETAIL

SCALE: 1" = 50'



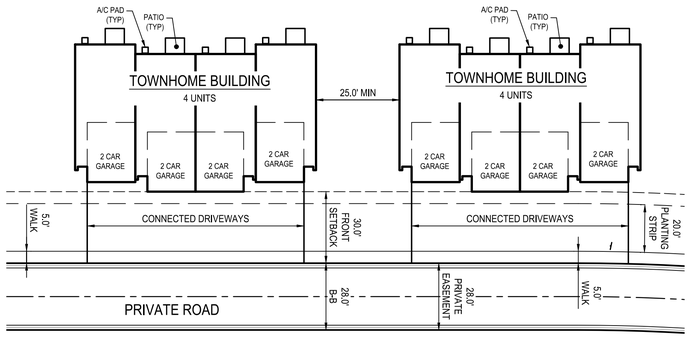
ENTRANCE SIGN 'A' LOCATION DETAIL

SCALE: 1" = 50'



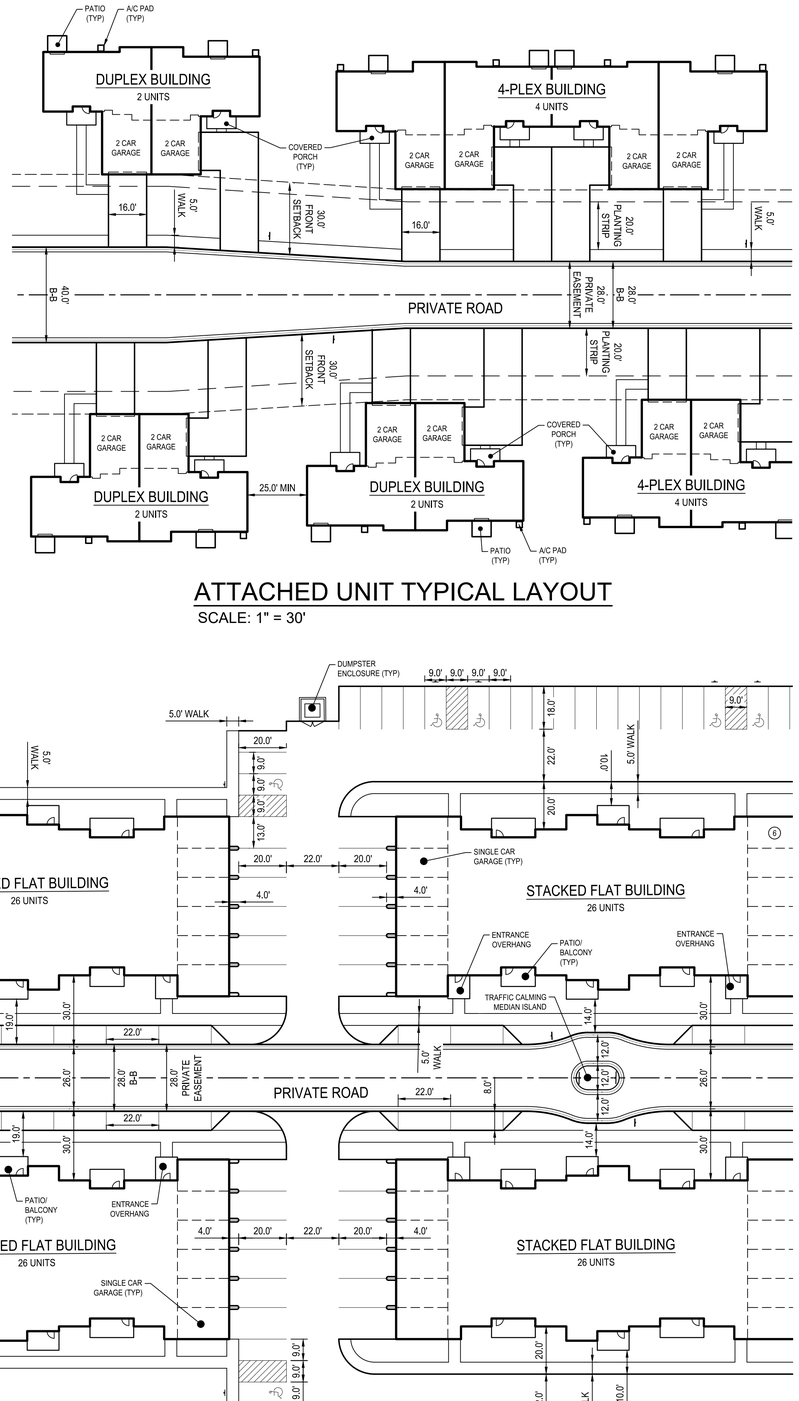
ENTRANCE SIGN 'C' LOCATION DETAIL

SCALE: 1" = 50'



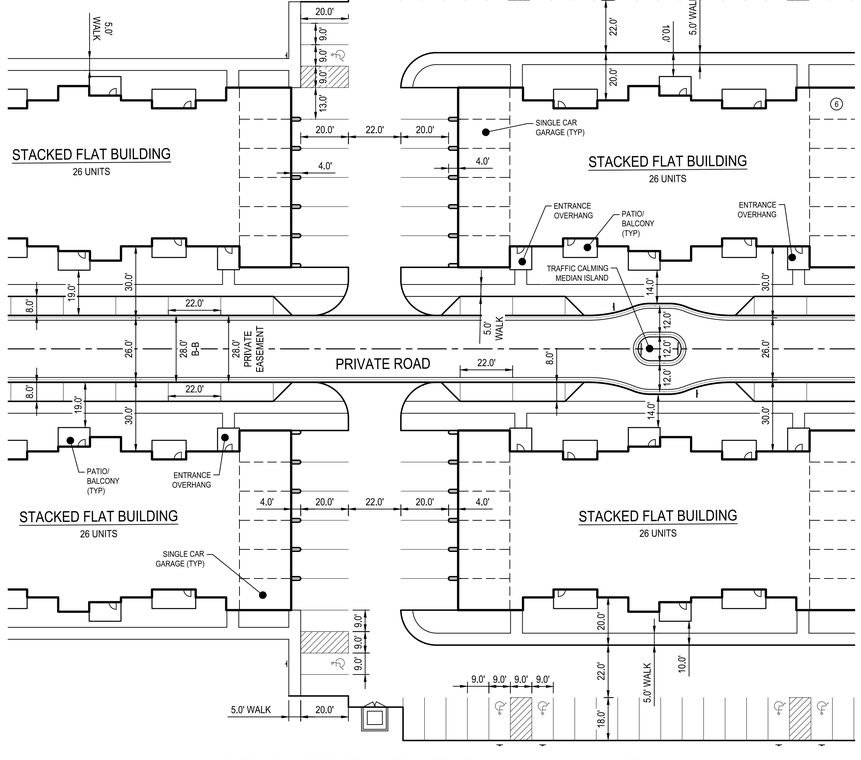
TOWNHOME TYPICAL LAYOUT

SCALE: 1" = 30'



ATTACHED UNIT TYPICAL LAYOUT

SCALE: 1" = 30'



STACKED FLATS TYPICAL LAYOUT

SCALE: 1" = 30'

H:\20\20209\20249.00 Brookwood Superior Twp\Design\CAD\Special District Area Plan\07 Dimensional Standards.dwg

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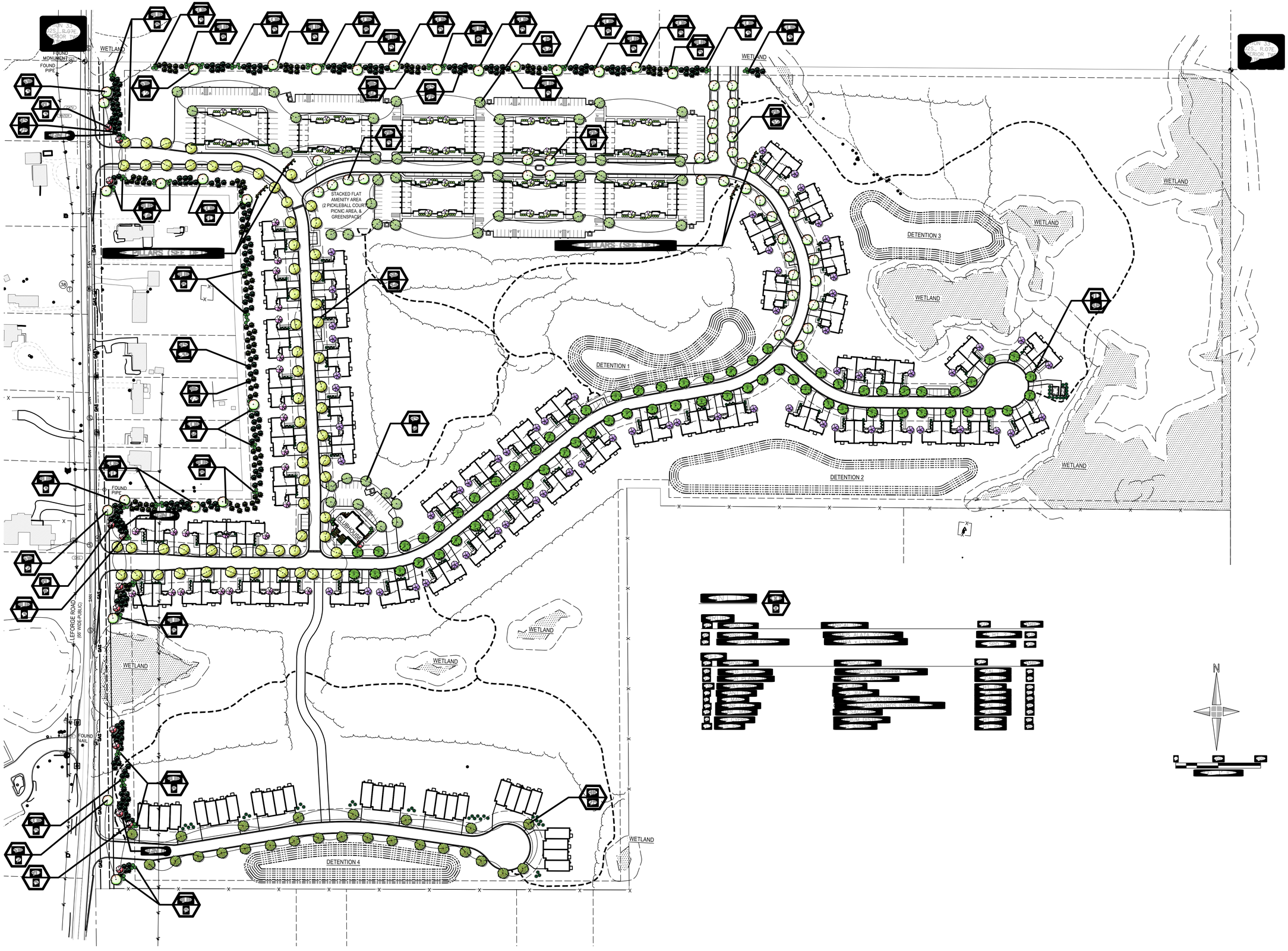
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DIMENSIONAL STANDARDS & FIRE TURN DETAILS

BROOKWOOD SUPERIOR TOWNSHIP

SUPERIOR TWP.
WASHTENAW COUNTY
MICHIGAN

Date:	04.14.2023
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Sheet:	07
Project:	20249.00



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MARK JON HANSEN
LANDSCAPE ARCHITECT
#1276
REGISTERED LANDSCAPE ARCHITECT

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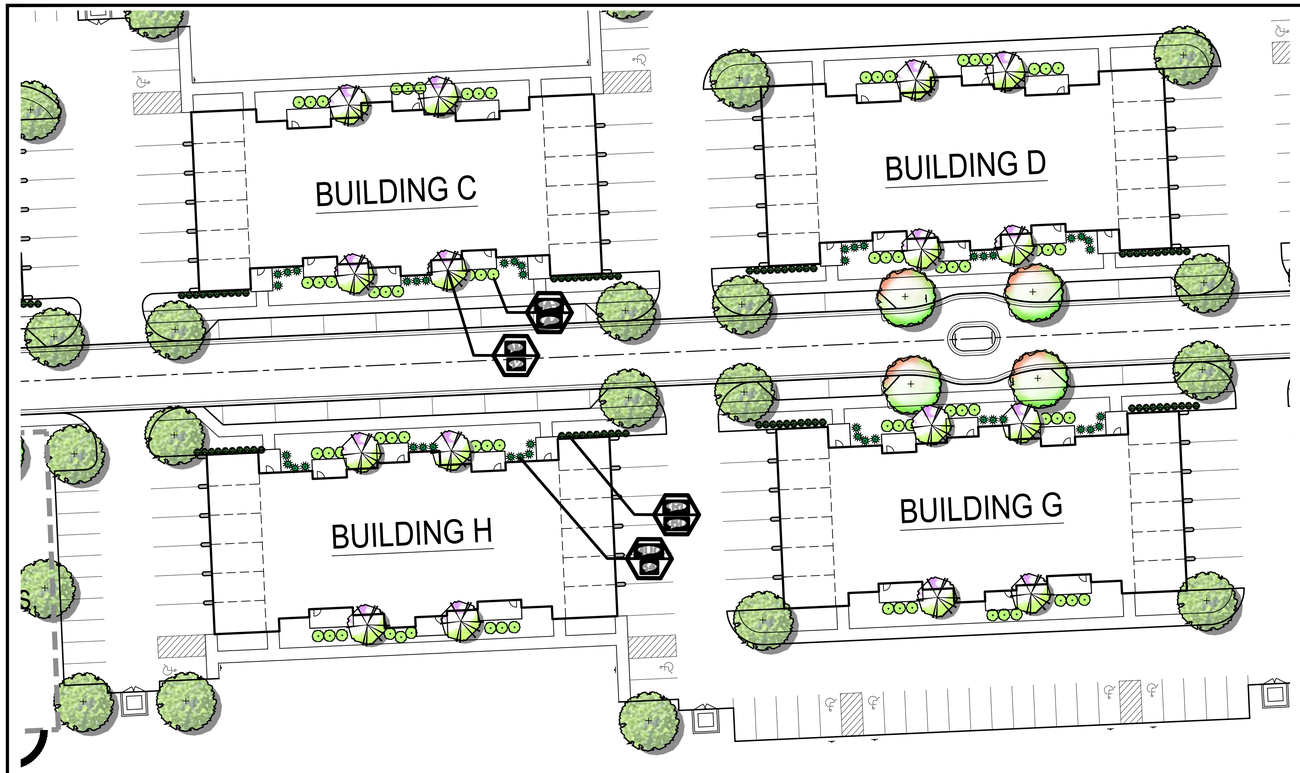
OVERALL LANDSCAPE PLAN

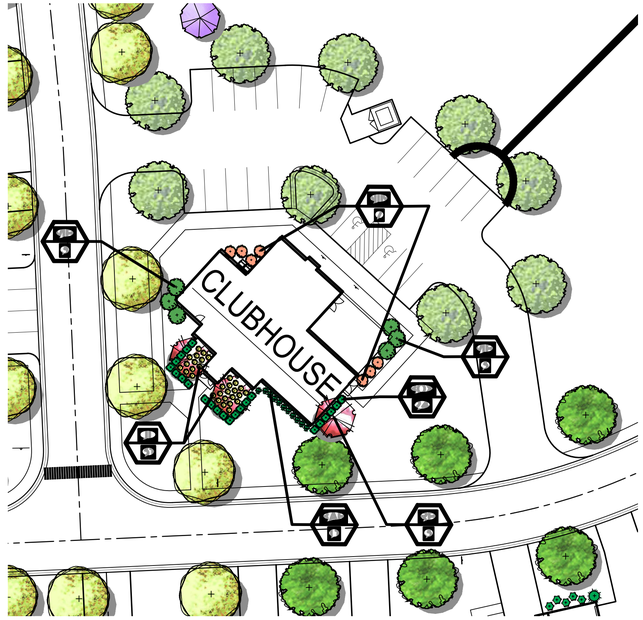
BROOKWOOD SUPERIOR TOWNSHIP

SUPERIOR TWP.
WASHTENAW COUNTY
MICHIGAN

Date:	04.14.2023
Scale:	1"=100'
Sheet:	L-100
Project:	20249.00

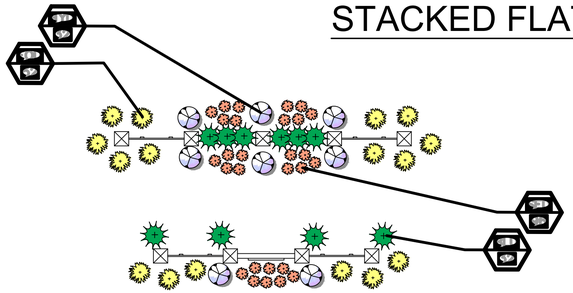
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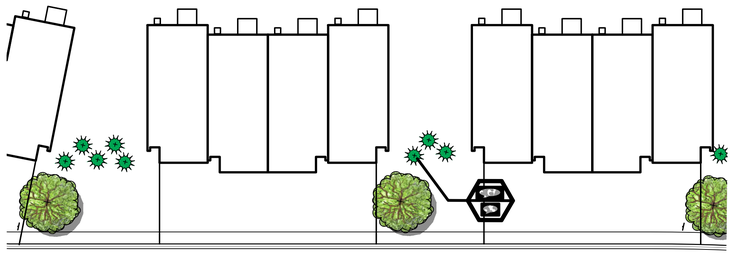


CLUBHOUSE AREA LAYOUT

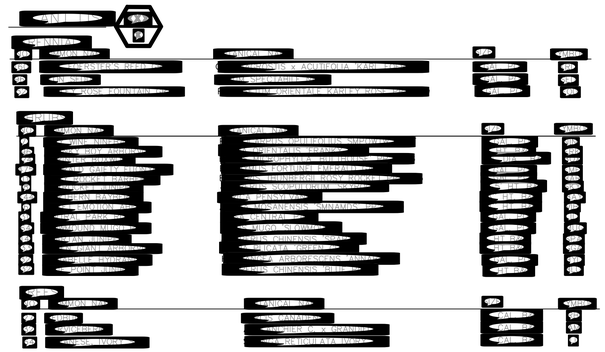
STACKED FLATS TYPICAL LAYOUT

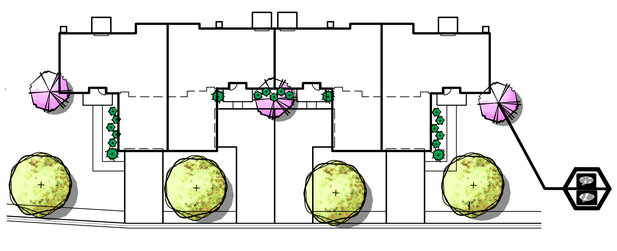


TYPICAL SIGN & PILLAR LAYOUT



TOWNHOME TYPICAL LAYOUT

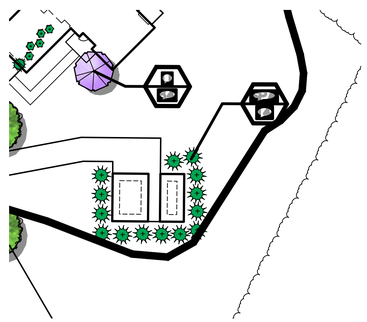




QUADPLEX TYPICAL LAYOUT



DUPLEX TYPICAL LAYOUT



SANITARY PUMP STATION

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MARK JON HANSEN
LANDSCAPE ARCHITECT
A1278
REGISTERED LANDSCAPE ARCHITECT

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TYPICAL LANDSCAPE PLAN

BROOKWOOD SUPERIOR TOWNSHIP

SUPERIOR TWP.
WASHTENAW COUNTY
MICHIGAN

Date:	04.14.2023
Scale:	1"=30'
Sheet:	L-101
Project:	20249.00

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PLANT NOTES:

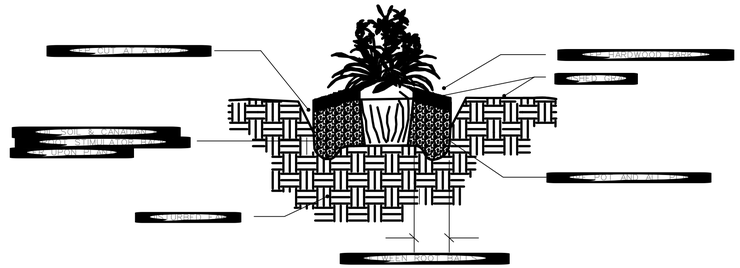
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10. [redacted]
11. [redacted]

GENERAL NOTES:

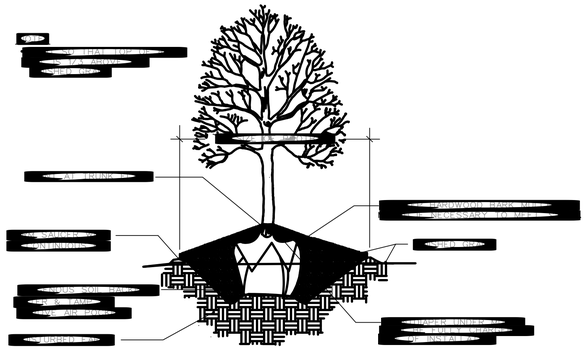
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LANDSCAPE CONTRACTOR'S "TWO-YEAR IRRIGATION REQUIREMENT PERIOD"

1. [redacted]
2. [redacted]
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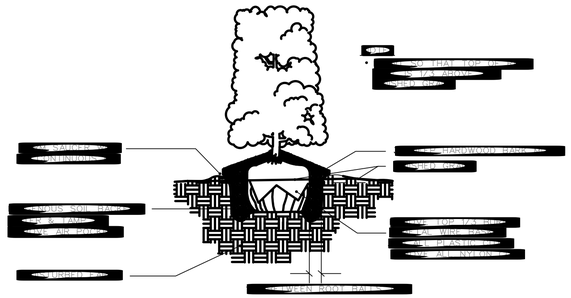


PERENNIAL PLANTING DETAIL

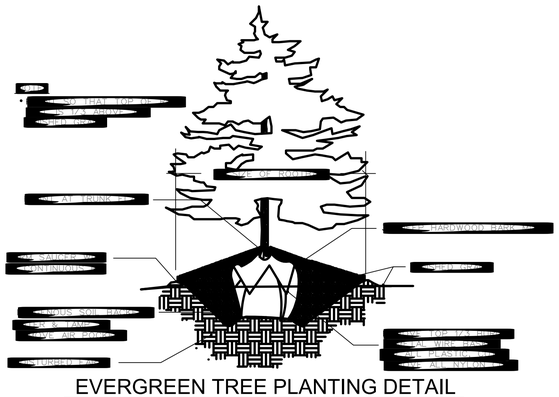


TREE / SHRUB PLANT DIAPER DETAIL

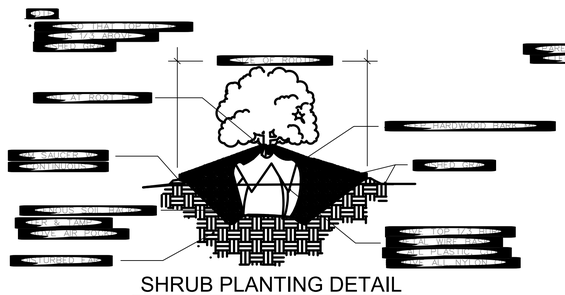




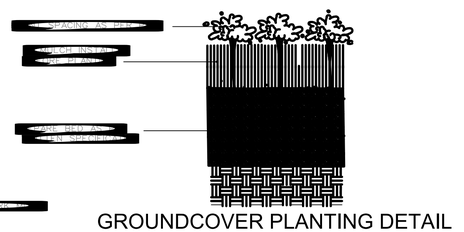
SHRUB HEDGE PLANTING DETAIL



EVERGREEN TREE PLANTING DETAIL



SHRUB PLANTING DETAIL



GROUNDCOVER PLANTING DETAIL

LAWN SEED MIX:

[redacted]

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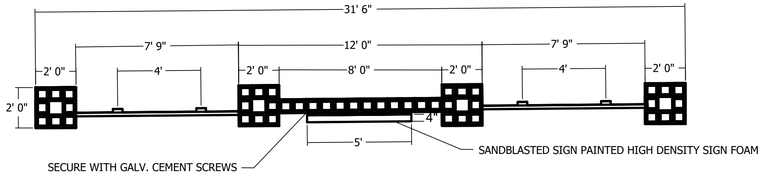
LANDSCAPE DETAILS

BROOKWOOD SUPERIOR TOWNSHIP

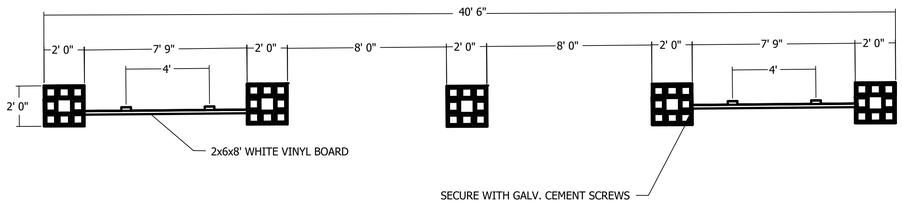
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WASHTENAW COUNTY
MICHIGAN

Date:	04.14.2023
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Sheet:	L-102
Project:	20249.00

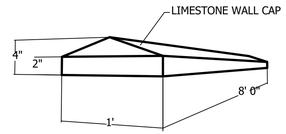
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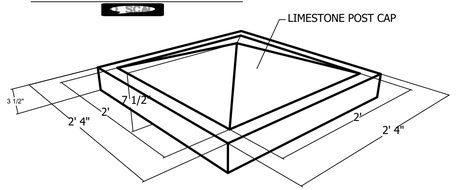
SIGN WALL DETAIL



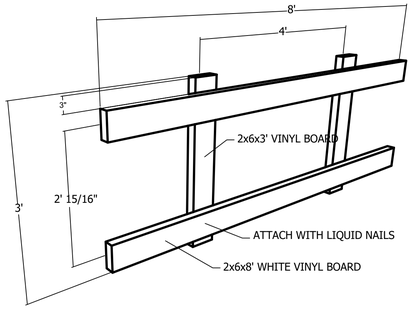
BLOCK PILLARS DETAIL



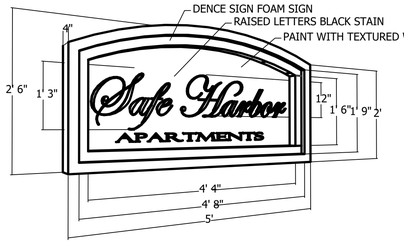
WALL CAP DETAIL



PILLAR CAP DETAIL



FENCE SECTION DETAIL



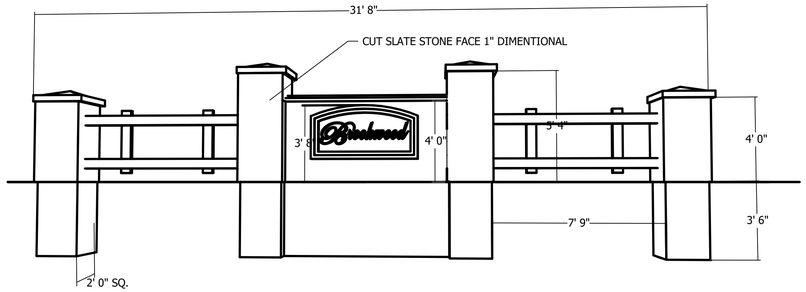
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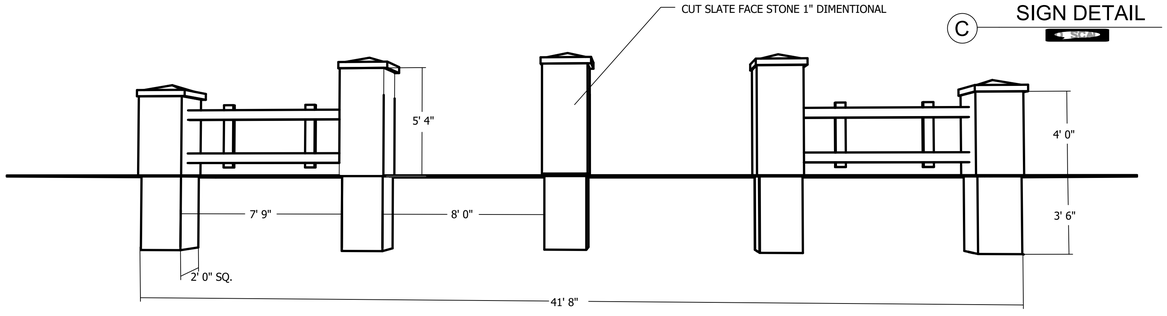
B SIGN DETAIL



C SIGN DETAIL



SIGN WALL & PILLAR ELEVATION



STONE PILLARS ELEVATION

SIGN NOTES:

- [redacted]
- [redacted]



SIGN WALL & PILLAR CONCEPT



STONE PILLARS CONCEPT

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Planners
Landscape Architects

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Birmingham, MI 48009
p (248) 852-3100
f (313) 962-5068
www.giffelswebster.com

Executive:	AW
Manager:	JR
Designer:	JR / AR
Quality Control:	-
Section:	33
	T-02-S R-07-E

Professional Seal:

STATE OF MICHIGAN
MARK JON HANSEN
LANDSCAPE ARCHITECT
1278
REGISTERED LANDSCAPE ARCHITECT

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04-30-2024	REV PER TWP REVIEW

Developed For:

GARNER PROPERTY MANAGEMENT

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TAYLOR, MI 48180

chris@livegpm.com
(734) 287-6619

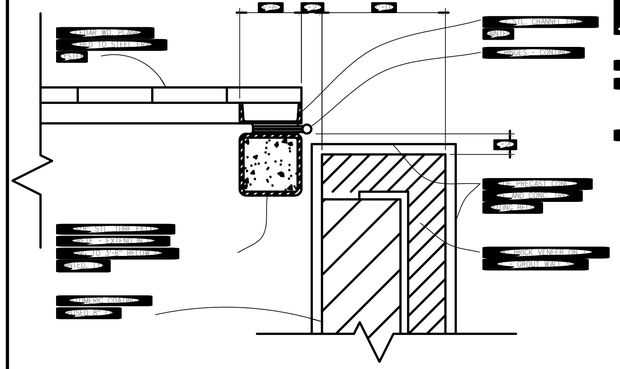
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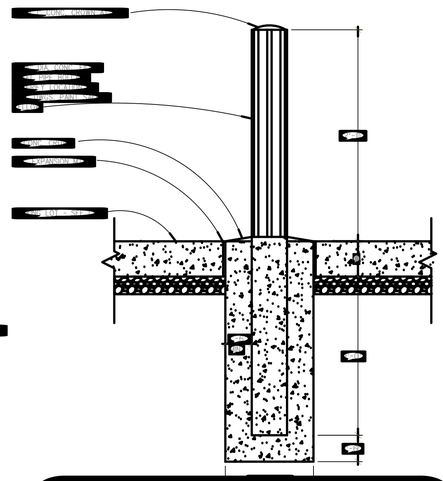
BROOKWOOD SUPERIOR TOWNSHIP

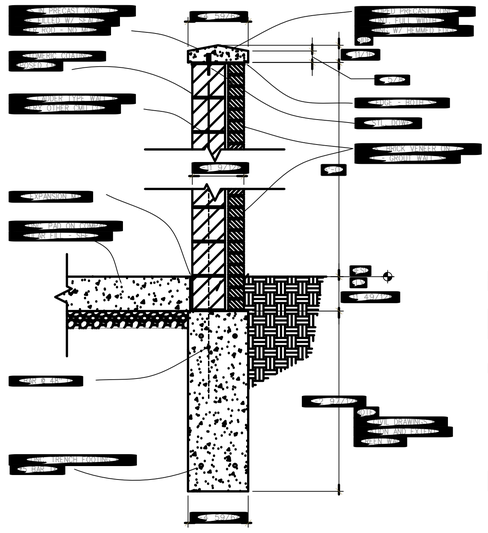
SUPERIOR TWP.
WASHTENAW COUNTY
MICHIGAN

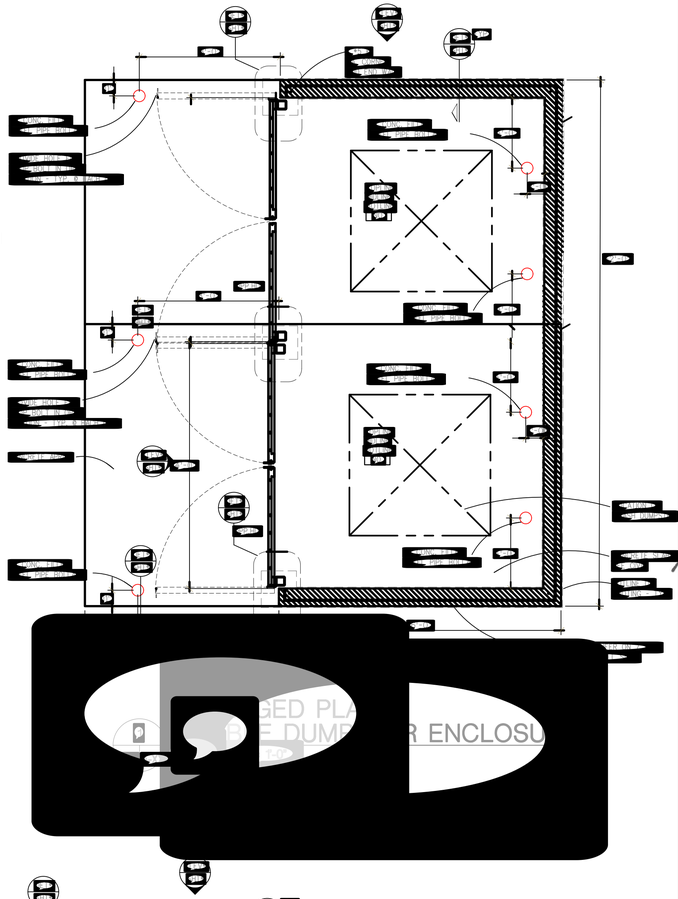
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Sheet:	L-103
Project:	20249.00

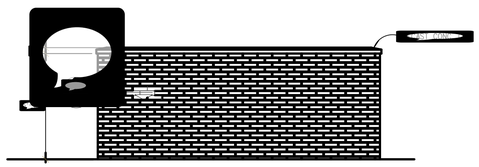
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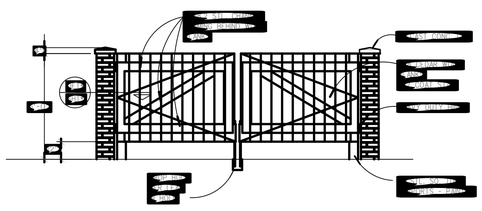


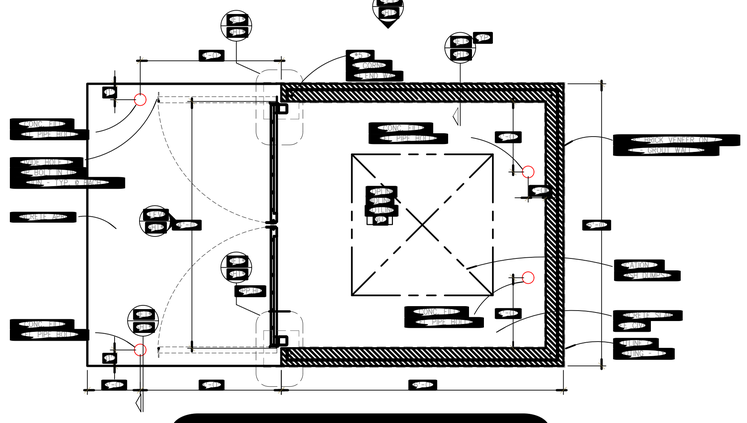












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H:\2020\20200\20249.00 Brookwood Superior Twp\Design\CAD\Special District Area Plan\L-101 Typical Landscape Plan.dwg

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No. 1278
REGISTERED LANDSCAPE ARCHITECT

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04-30-2024	REV PER TWP REVIEW

Developed For:

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TAYLOR, MI 48180

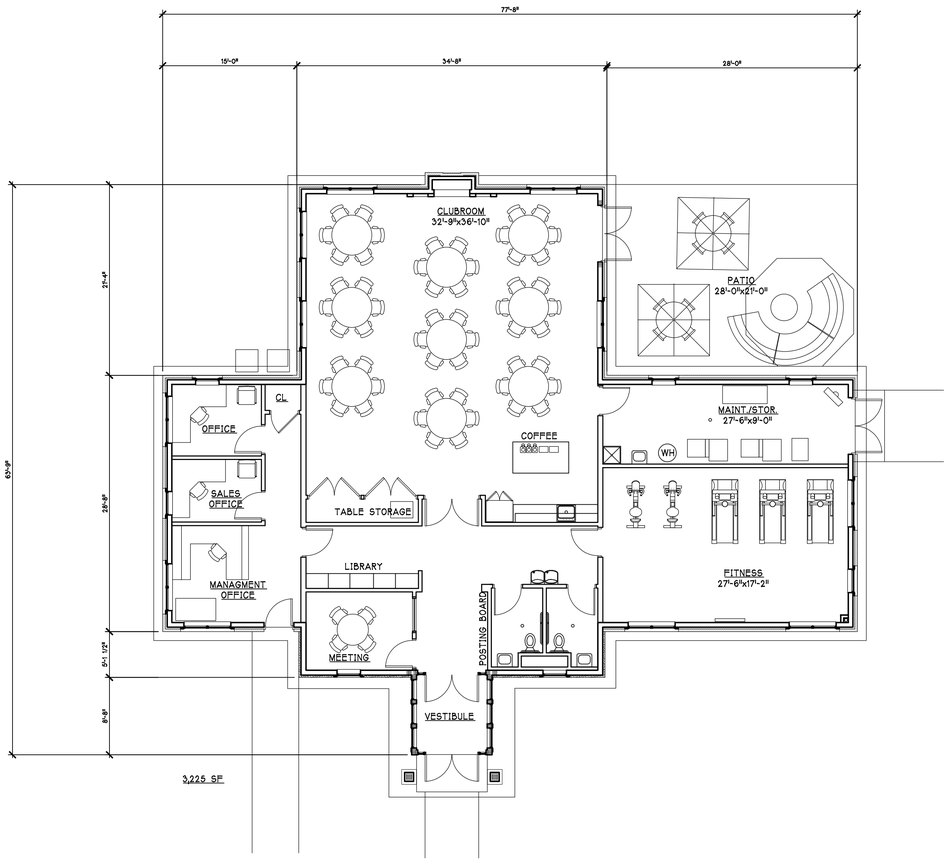
chris@livegpm.com
(734) 287-6619

DUMPSTER DETAILS

BROOKWOOD SUPERIOR TOWNSHIP

SUPERIOR TWP.
WASHTENAW COUNTY
MICHIGAN

Date:	04.14.2023
Scale:	NTS
Sheet:	L-104
Project:	20249.00



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BROOKWOOD DEVELOPMENT
Superior Township, MI

PROJECT

STATE OF MICHIGAN
WILLIAM S. HOBBS
ARCHITECT
No. 1301014119
LICENSED ARCHITECT

CLUBHOUSE COMPOSITE FLOOR PLANS

SHEET TITLE

22-629

PROJECT NUMBER

AC-101

SHEET NUMBER

Drawing: P:\2022\22629\Dwgs\CD\Arch\Area Plan Review\GA\SHAC101.dwg
Date: Aug 25, 2023, 5:26pm Layout: AC101 Plotted by: mhon



SIDE B ELEVATION: CLUBHOUSE

SCALE - 1/8" = 1'-0"

SASHAC201



REAR ELEVATION: CLUBHOUSE

SCALE - 1/8" = 1'-0"

SASHAC201



SIDE A ELEVATION: CLUBHOUSE

SCALE - 1/8" = 1'-0"

SASHAC201



FRONT ELEVATION: CLUBHOUSE

SCALE - 1/8" = 1'-0"

SASHAC201

Drawing: P:\2022\22629\Dwgs\CD\Arch\Area Plan Review\SASHAC201.dwg
Date: Apr 21, 2023, 9:59am Layout: AC201 Plotted by: mhon

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Superior Township, MI

PROJECT

STATE OF MICHIGAN
WILLIAM S. HOBBS
ARCHITECT
No. 1301014119
LICENSED ARCHITECT

CLUBHOUSE COMPOSITE EXTERIOR ELEVATIONS

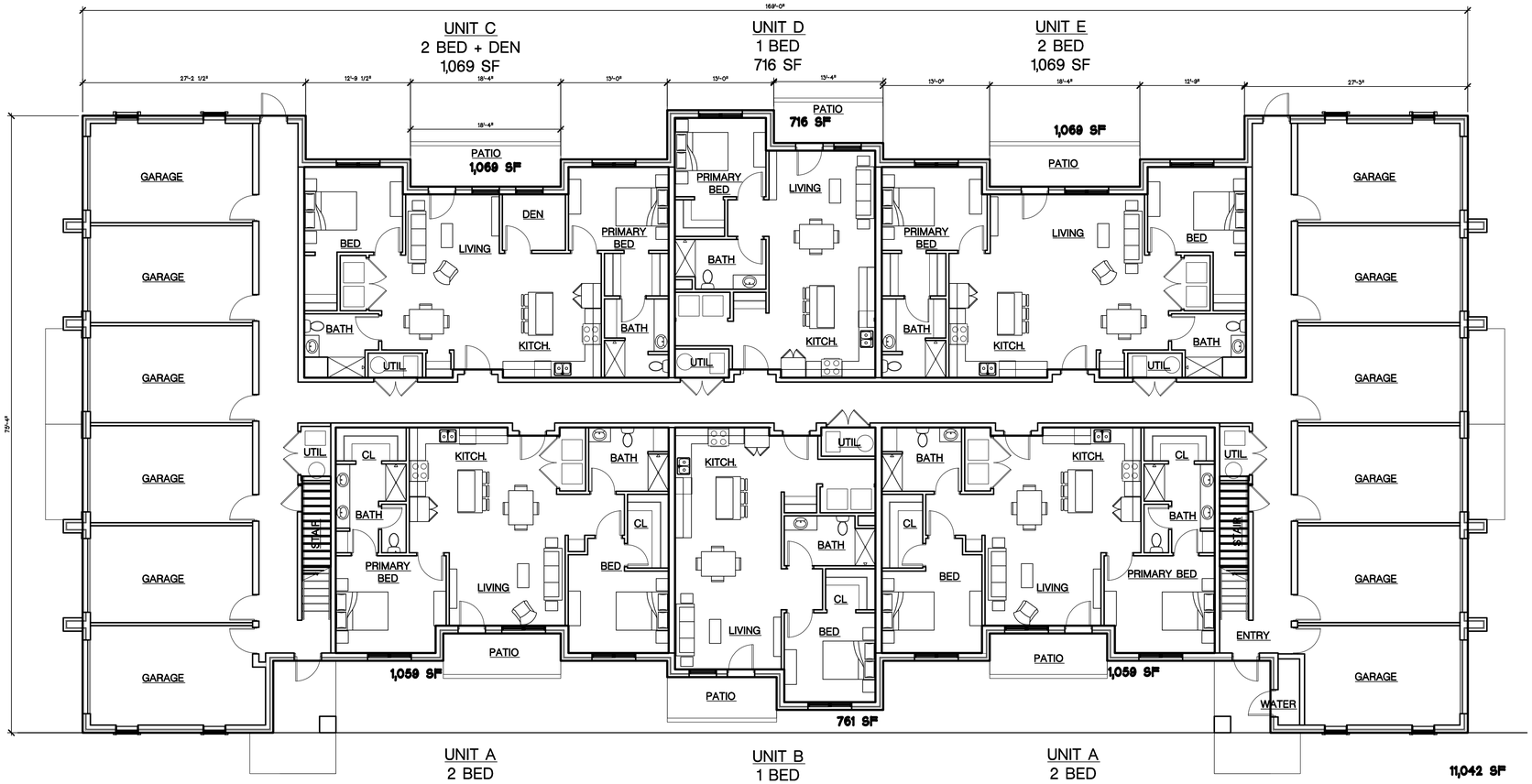
SHEET TITLE

22-629

PROJECT NUMBER

AC-201

SHEET NUMBER



FIRST FLOOR

(2) 1 BED
(3) 2 BED
(1) 2 BED + DEN
(6) UNITS

SECOND FLOOR

(2) 1 BED
(7) 2 BED
(1) 2 BED + DEN
(10) UNITS

THIRD FLOOR

(2) 1 BED
(7) 2 BED
(1) 2 BED + DEN
(10) UNITS

TOTAL BUILDING

(6) 1 BED
(17) 2 BED
(3) 2 BED + DEN
(26) UNITS

APARTMENTS FIRST FLOOR

SCALE - 1/16" = 1'-0"
SASHAF101

BUILDING SIZE

11,042 SF FIRST FLOOR
11,160 SF SECOND FLOOR
11,160 SF THIRD FLOOR
33,362 SF TOTAL

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Superior Township, MI
PROJECT

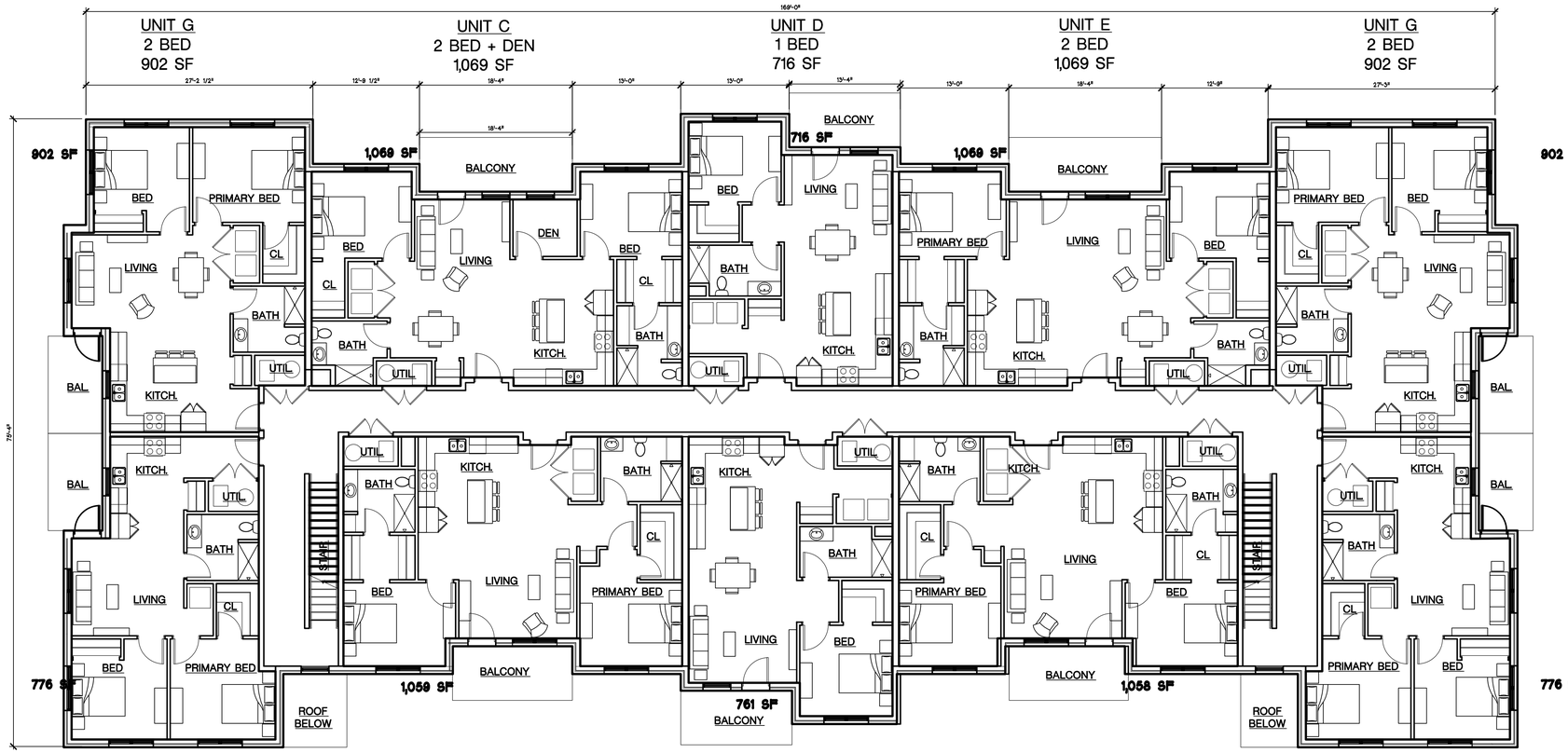
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WILLIAM S. HOBBS
ARCHITECT
No. 1301014119
LICENSED ARCHITECT

STACKED FLATS COMPOSITE FLOOR PLANS 1ST FLOOR
SHEET TITLE

22-629
PROJECT NUMBER

AF-101
SHEET NUMBER

Drawing: P:\2022\22629\Dwgs\CDArch\Area Plan Reveal\SASHAF101.dwg
Date: Aug 25, 2023, 5:09pm Layout: AF101 Plotted by: mhon



902 SF FIRST FLOOR

(2) 1 BED
(3) 2 BED
(1) 2 BED + DEN
(6) UNITS

SECOND FLOOR

(2) 1 BED
(7) 2 BED
(1) 2 BED + DEN
(10) UNITS

THIRD FLOOR

(2) 1 BED
(7) 2 BED
(1) 2 BED + DEN
(10) UNITS

TOTAL BUILDING

(6) 1 BED
(17) 2 BED
(3) 2 BED + DEN
(26) UNITS

APARTMENTS 2nd/3rd FLOOR

SCALE - 1/16" = 1'-0"

SASHAF102

BUILDING SIZE

11,042 SF FIRST FLOOR
11,160 SF SECOND FLOOR
11,160 SF THIRD FLOOR
33,362 SF TOTAL

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BROOKWOOD DEVELOPMENT
Superior Township, MI
PROJECT

STATE OF MICHIGAN
WILLIAM S. HOBBS
ARCHITECT
No. 1301014119
LICENSED ARCHITECT

STACKED FLATS COMPOSITE FLOOR PLANS 2nd & 3rd FLOORS
SHEET TITLE

22-629
PROJECT NUMBER

AF-102
SHEET NUMBER

Drawing: P:\2022\2226229\Dwgs\CDArch\Area Plan Review\SASHAF102.dwg
Date: Aug 25, 2023, 5:16pm Layout: AF102 Plotted by: mhon



REAR ELEVATION: STACKED FLATS

SCALE - 1/8" = 1'-0"

SASHAF201



FRONT ELEVATION: STACKED FLATS

SCALE - 1/8" = 1'-0"

SASHAF201

Drawing: P:\2022\22629\Dwgs\CD\Arch\Area Plan Reviews\SASHAF201.dwg
Date: Aug 24, 2023, 5:10pm Layout: AF201 Plotted by: mhon

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WILLIAM S. HOBBS
ARCHITECT
No. 1301014119
LICENSED ARCHITECT

STACKED FLATS COMPOSITE EXTERIOR ELEVATIONS

SHEET TITLE

22-629

PROJECT NUMBER

AF-201

SHEET NUMBER



SIDE B ELEVATION: STACKED FLATS

SCALE - 1/8" = 1'-0"

SASHAF202



SIDE A ELEVATION: STACKED FLATS

SCALE - 1/8" = 1'-0"

SASHAF202

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ARCHITECT
No. 1301014119
LICENSED ARCHITECT

STACKED FLATS COMPOSITE EXTERIOR ELEVATIONS

SHEET TITLE

22-629

PROJECT NUMBER

AF-202

SHEET NUMBER

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Date: Aug 24, 2023, 5:02pm Layout: AF202 Plotted by: mhon

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FRONT ELEVATION: STACKED FLATS

SCALE - 1/8" = 1'-0"

5ASHAF204-205



REAR ELEVATION: STACKED FLATS

SCALE - 1/8" = 1'-0"

5ASHAF204-205

Drawing: P:\2022\22629\Dwgs\CD\Arch\Area Plan Review\5ASHAF204-205.dwg
Date: Dec 21, 2023, 3:24pm Layout: AF204 Plotted by: wh

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WILLIAM S. HOBBS
ARCHITECT
No. 1301014119
LICENSED ARCHITECT

STACKED FLATS

EXTERIOR ELEVATIONS

SHEET TITLE

22-629

PROJECT NUMBER

AF-204

SHEET NUMBER

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TOP OF ROOF LOW
ELEV = 132'-2"

BOTTOM OF ROOF LOW
ELEV = 128'-0"

BOTTOM OF ROOF LOW
ELEV = 123'-10"

FINISH FLOOR
ELEV = 100'-0"

GRADE LEVEL
ELEV = 99'-0"



SIDE A ELEVATION: STACKED FLATS

SCALE - 1/8" = 1'-0"

5ASHAF204-205

TOP OF ROOF LOW
ELEV = 132'-2"

BOTTOM OF ROOF LOW
ELEV = 128'-0"

BOTTOM OF ROOF LOW
ELEV = 123'-10"

FINISH FLOOR
ELEV = 100'-0"

GRADE LEVEL
ELEV = 99'-0"



SIDE B ELEVATION: STACKED FLATS

SCALE - 1/8" = 1'-0"

5ASHAF204-205

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WILLIAM S. HOBBS
ARCHITECT
No. 1301014119
LICENSED ARCHITECT

STACKED FLATS

EXTERIOR ELEVATIONS

SHEET TITLE

22-629

PROJECT NUMBER

AF-205

SHEET NUMBER

Drawing: P:\2022\22629\Dwgs\CDArch\Area Plan Review\5ASHAF204-205.dwg
Date: Dec 21, 2023, 3:34pm Layout: AF205 Plotted by: wh

NORTH SIDE/HILL

THREE-STORY

GROUND: 312
FIRST FLOOR: 1,45
SECOND FLOOR: 748
UNIT SIZE: 2,5

(EXCLUDES

4) 2 BED + DE
) UNITS

GARA

ENTR

GROUND FLOO

UTH SIDE/POND ACROSS ST

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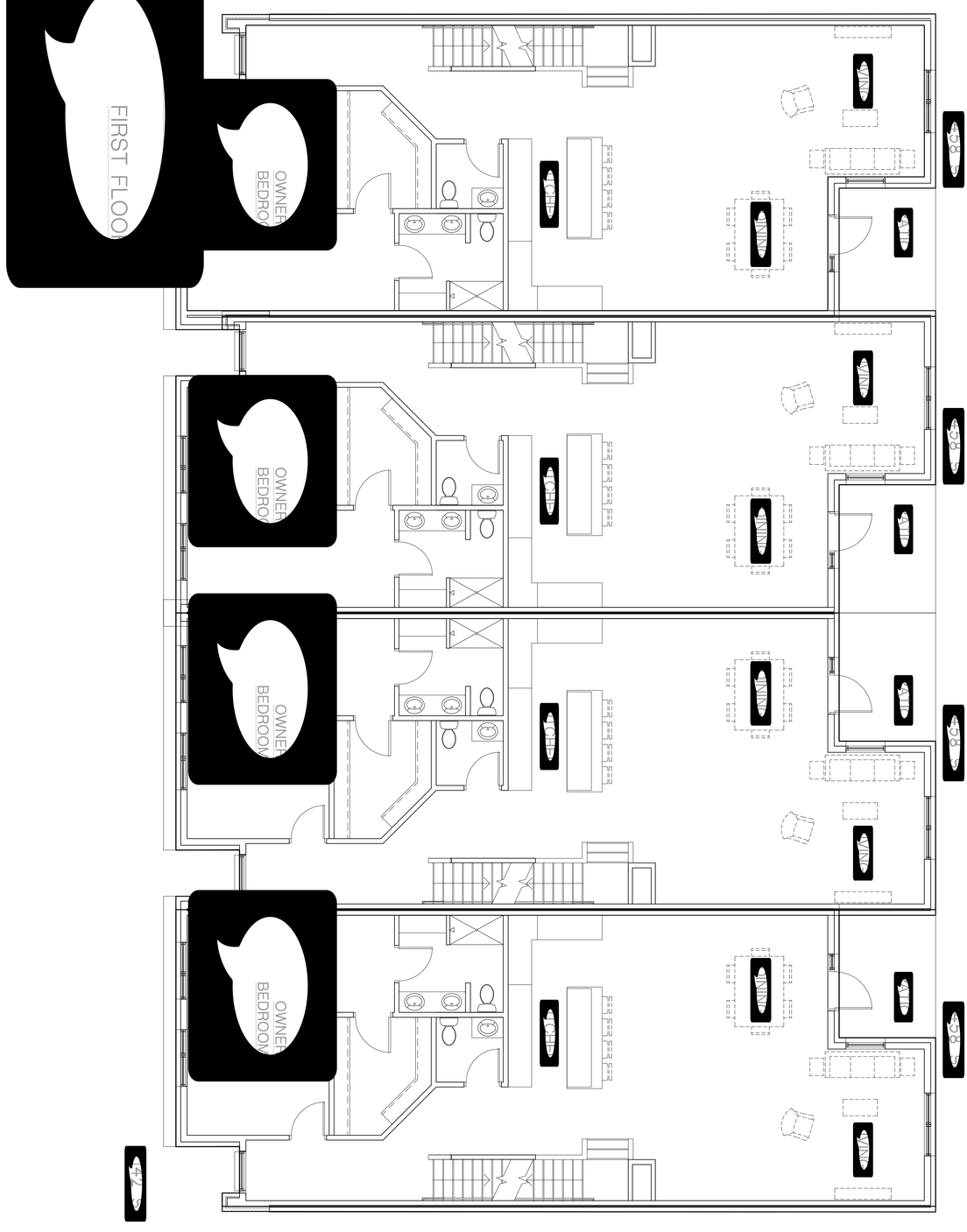
Superior Township, MI

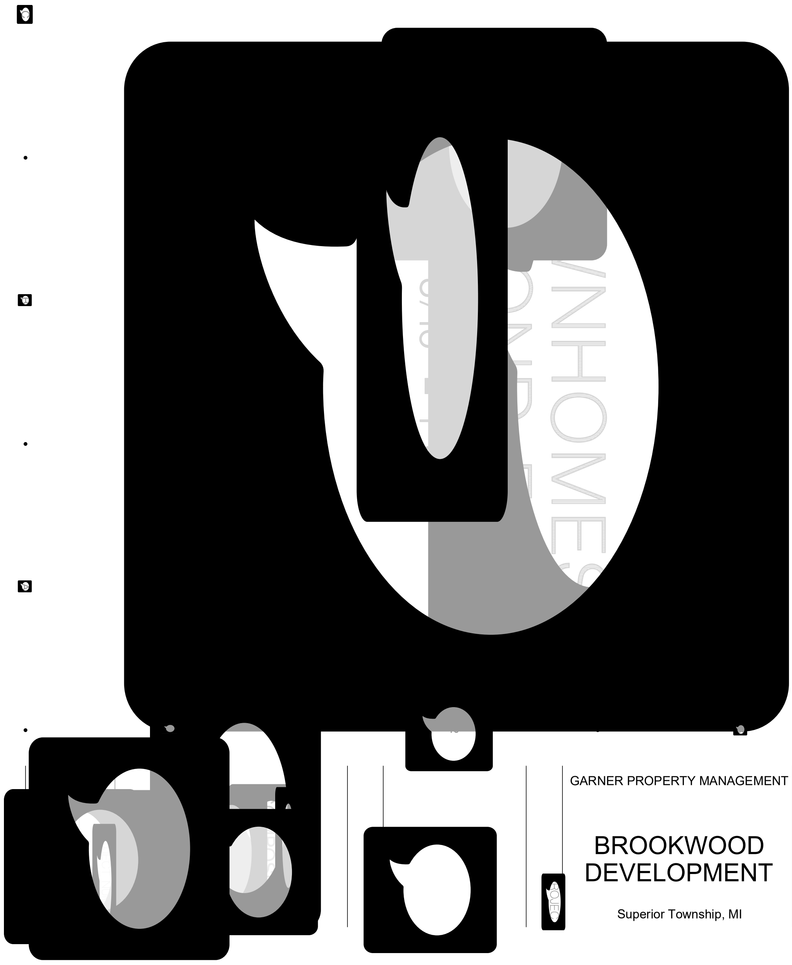
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22 629

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Date: Apr 29, 2024, 11:22pm Layout: AT101

Drawing: P:\2022\22G29\Dwgs\CD\Arch\Area Plan Review\BASHTAT101.dwg
Date: Apr 29, 2024, 11:23pm Layout: AT102 Plotted by: mhon





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Superior Township, MI

Drawing: P:\2022\2226229\Dwgs\CDArch\Area Plan Review\SASHAT101.dwg
Date: Apr 29, 2024, 11:23pm Layout: AT103 Plotted by: mhon



REAR ELEVATION: 4-UNIT

SCALE - 1/8" = 1'-0"

SASHAT201



SIDE B ELEVATION: 4-UNIT

SCALE - 1/8" = 1'-0"

SASHAT201



FRONT ELEVATION: 4-UNIT

SCALE - 1/8" = 1'-0"

SASHAT201



SIDE A ELEVATION: 4-UNIT

SCALE - 1/8" = 1'-0"

SASHAT201

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Superior Township, MI

PROJECT

STATE OF MICHIGAN
WILLIAM S. HOBBS
ARCHITECT
No. 1301014119
LICENSED ARCHITECT

TOWNHOME COMPOSITE EXTERIOR ELEVATIONS

SHEET TITLE

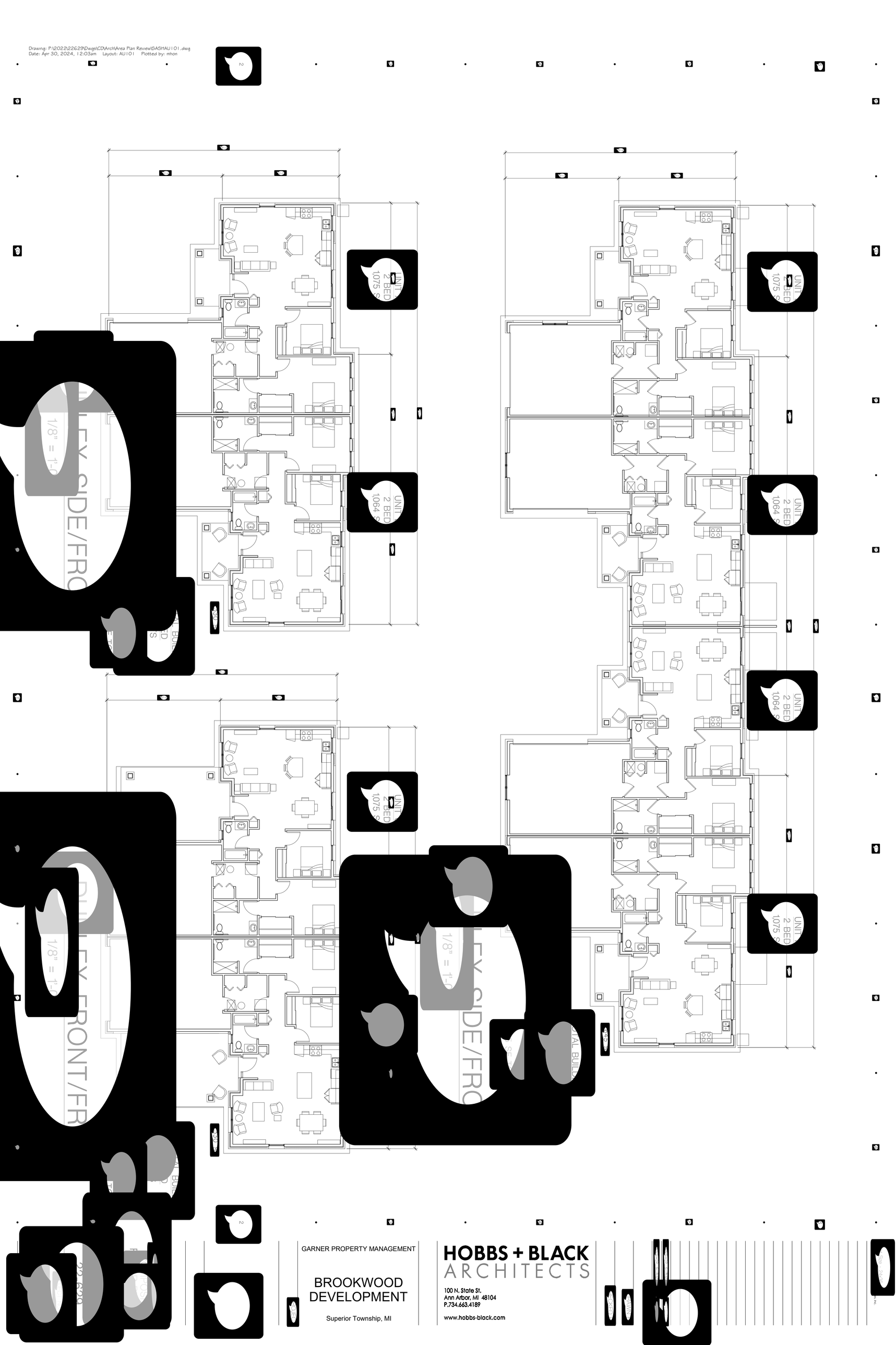
22-629

PROJECT NUMBER

AT-201

SHEET NUMBER

Drawing: P:\2022\22G29\Dwgs\CD\Arch\Area Plan Review\SASHTAU101.dwg
Date: Apr 30, 2024, 12:03am Layout: AU101 Plotted by: mhon



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REAR ELEVATION: 2-UNIT A

SCALE - 1/8" = 1'-0"

SASHAU201



FRONT ELEVATION: 2-UNIT A

SCALE - 1/8" = 1'-0"

SASHAU201

FRONT ELEVATION: 4-UNIT

SCALE - 1/8" = 1'-0"

SASHAU201



REAR ELEVATION: 4-UNIT

SCALE - 1/8" = 1'-0"

SASHAU201

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Superior Township, MI

PROJECT

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WILLIAM S. HOBBS
ARCHITECT
No. 1301014119
LICENSED ARCHITECT

ATTACHED UNIT COMPOSITE EXTERIOR ELEVATIONS

SHEET TITLE

22-629

PROJECT NUMBER

AU-201

SHEET NUMBER

Drawing: P:\2022\2022629\Dwgs\CDArch\Area Plan Review\SASHAU201.dwg
Date: Aug 28, 2023, 11:14am Layout: AU201 Plotted by: mhon



REAL ELEVATION: 2-UNIT B

SCALE - 1/8" = 1'-0"

SASHAU202



FRONT ELEVATION: 2-UNIT B

SCALE - 1/8" = 1'-0"

SASHAU202



SIDE A ELEVATION UNIT A

SCALE - 1/8" = 1'-0"

SASHAU202



SIDE A ELEVATION UNIT B

SCALE - 1/8" = 1'-0"

SASHAU202



SIDE B ELEVATION UNIT B

SCALE - 1/8" = 1'-0"

SASHAU202

Drawing: P:\2022\22-629\Dwgs\CD\Arch\Area Plan Reviews\SASHAU202.dwg
Date: Aug 24, 2023, 6:35pm Layout: AU202 Plotted by: mhon

Sheet Size - 24x36

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TOWNSHIP SUBMITTAL 03-25-2024
TOWNSHIP SUBMITTAL 04-24-2023
DATE ISSUED

DRAWN BY

CHECKED BY

HOBBS + BLACK ARCHITECTS
100 N. State St.
Ann Arbor, MI 48104
P.734.663.4189
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GARNER PROPERTY MANAGEMENT

BROOKWOOD DEVELOPMENT

Superior Township, MI

PROJECT

STATE OF MICHIGAN
WILLIAM S. HOBBS
ARCHITECT
No. 1301014119
LICENSED ARCHITECT

ATTACHED UNIT COMPOSITE EXTERIOR ELEVATIONS

SHEET TITLE

22-629

PROJECT NUMBER

AU-202

SHEET NUMBER

giffels webster

To:	Benjamin Carlisle, AICP, LEED, AP President Carlisle Wortman Associates, Inc 117 North First Street, Suite 70 Ann Arbor, MI 48104	Date:	April 30, 2024
From:	Josh Ratliff, P.E.	Project:	Brookwood Superior
RE:	Brookwood Superior Preliminary Site Plan Review	Project Number:	20249.00

Dear Mr. Carlisle,

Please see our responses below to the review comments included in your letter, dated 4/19/2024. The Preliminary Site Plans for Brookwood Superior have been revised to address the review comments included in your letter. Please find these revised plans enclosed. (responses are *italized*)

1. Clarify timing of the phases.
   The Development Schedule on the site plan sheet has been updated to clarify the construction schedule of the development. In short, the development will be constructed in one phase and the Development Schedule did not reflect this. Sitework for the entire development will be completed at the same time and phasing is not planned for any of this work. The vertical construction, or building construction, will be staggered to allow for residents to occupy the dwellings while the remainder of the buildings are being constructed. The total buildout time for the development is 36 months.
2. Explain how the sites natural resources will be maintained and managed and how common area maintenance and improvements will be codified through the site plan and through a development agreement.
   The sites natural resources will be managed and maintained by the overall property owner just as the grounds for the overall development will be maintained by the owner. The specific natural resource areas of the site are planned to remain in a natural state for the enjoyment of the residents with litter and debris pickup as needed and limited mowing or maintenance to trees only as necessary to preserve a safe environment for the residents. The common area will be maintained by the overall development ownership group either via direct staff or a lawn care service as needed. The specific maintenance and management of the grounds will be finalized within the development agreement.
3. Provide a detailed explanation of how grading will be done is such a way to protect the sites existing natural resources that are identified for protection.
   The limits of grading shall be identified in the engineering plans as well as the trees that are being removed and the woodland areas that are being preserved. The grading for the site's construction will not encroach on the woodland areas that are being preserved. Either silt-fence or snow fencing shall be used during construction to demarcate the limits of grading.
4. Provide as much detail as possible with regards to tree preservation, wetland protection, and steep slope preservation.
   The tree preservation, wetland protection, and steep slope preservation areas are defined on the preliminary site plan's Natural Features Plan. In preparing the final grading design and engineering plans for development, the approved preservation and protection areas shall not be exceeded from the approved amounts. Ensuring that the preservation and protection areas are maintained through the engineering design process for this development.

5. Explain how the sites natural resources will be maintained and managed and how common area maintenance and improvements will be codified through the site plan.
   The sites natural resources and common areas will be called out as such on the Final Site Plans and will refer to the Development agreement for specifics of maintenance and management.
6. Minor errors were noted in the Site Data Table that need to be corrected.
   These errors have been revised as noted in your review letter.
7. Include required and proposed setbacks from wetlands, roadways, and lot lines on the Site Data Table (sheet 04).
   The required and proposed setbacks have been added to the site data table as requested.
8. Added higher, denser screening within the greenbelt along Laforge, as well as adjacent to the existing homes on Laforge; and 4). Add landscaping along northern property line.
   Landscaping has been added or increased as requested.
9. Either reduce parking by at least 49 spaces or provide justification to the satisfaction of the Planning Commission that additional parking is warranted.
   In the calcs on the site plan sheet, the parking total is summed and shown for the entire development. This is not how the parking will be utilized on-site. The parking for each product type (stacked flats, duplex/4plex, clubhouse, townhomes) will be utilized independently of each other, and the total parking for the development should not be added together. For example, garage spaces in the duplexes will not be available for the stacked flat tenants to use. I have rearranged the parking calcs to show the parking based on product type and have provided the percent over the required amount for each product.

   The over parking number problem comes from the parking for the duplex/4-plex and townhomes. The townhomes and duplex/4-plex require 1.5 spaces per unit. Each one of these unit types will include a 2-car garage. The 2 provided garage spaces divided by the 1.5 required spaces comes out 133%. By design the provided 2-car garage exceeds the zoning ordinance maximum. Along with the garage parking, we have planned for 26 surface parking spaces in the duplex/4plex area. These spaces are planned as overflow parking for visitors. Additional visitor parking has been planned because parking is not permitted on the street and due to the location of the development additional parking is not available in the surrounding area. These additional 26 parking spaces count for 18% of the parking overage. If you work from the perspective that only tenants will be parking in the garages, these 26 additional spaces will be necessary to insure visitor parking is properly planned for during times of high visitation, such as major holidays and any planned community events.
10. Design 90 degree parking spaces to be 9.0 feet wide and 20 feet in length.
    Currently parking is shown at 9x18 and includes a 2' overhang of the lawn or sidewalk area adjacent which is customary to allow for less impervious area on the site. If necessary this additional 2' can be paved to meet the 9x20 requirement.
11. Landscape Plans must be signed by design professional.
    The landscape plans have been signed and sealed as needed.
12. Provide a detailed narrative of the architectural concept for the site including materials details;
    Response to be provided by H+B.
13. Confirm that vinyl, aluminum, or steel siding to be installed on dwellings does not exceed fifty percent (50%) of the total area on the front and side dwelling elevations as required per Section 14.09B1.
    Response to be provided by H+B.
14. Confirm that all dwellings eaves and gables have a minimum six (6) inch roof overhang as required per Section 14.09B2.
    Response to be provided by H+B.
15. Update plan set as noted:
    - Does the Preliminary Site Plan submittal include all revisions noted on the Area Plan submittal? The Area Plan has REV PER TWP COMMENTS, dated 12-21-2023) but the Preliminary Site Plan does not.
      Yes, the preliminary site plans contain all revisions that were noted on the Area Plan submittal. The Area Plans and Preliminary Site Plans are two separate drawing packages, and the title blocks are separate from one another. The preliminary site plan's revision dates do not include the area plan revision dates since they are independent drawing packages. The preliminary site plans were originally submitted to the township on 08-29-2023 but have been revised to include all Area Plan revisions post the first submittal.

- Landscape Plans (Sheets L-100 thru L-104) missing design professional's seal.
  The landscape plans have been signed and sealed as needed.
- All sheets - Dimensions of all property boundaries and interior lot lines need to be shown. Add symbol to legend designating property boundaries.
  The dimensions of the property boundaries are shown on the Topographic Survey sheet. There are no interior lot lines being proposed. The property dimensions are only being shown on the topo sheet.

  The property boundary linework has been added to the legends as requested.
- The Topographic Survey included on Sheet 02 was not produced by a registered surveyor. Per Section 10.07 Required Site Plan Information, dimensions, angles, and bearings shall be based upon a boundary survey prepared by a registered surveyor and existing conditions.
  The topographic survey was prepared by a registered surveyor from Giffels Webster. Their seal has been added to the survey plan.
- Sheet 04 contains a written description of how the project is proposed to be phased and the general timeline for construction of the phases; however, the submittal must show the general location(s) and area(s) of each development phase on the site plan.
  See response above in line item 1.
- Sheet 04 - Site Plan. Please provide more detail on how the 15,600 square foot amenity area in the vicinity of the stacked flats is proposed to be used.
  The amenity area in the stacked flats area shall contain 2 pickleball courts and a picnic area. Detailed information for all amenity areas shall be included in the final site plans.
- Sheet 04 - Site Plan. Corrections to SITE DATA TABLE:
  - Provide details on lot area per dwelling unit (3,074,464 SF net area / 318 units= 9,668 sf/unit)
    The site is planned to be maintained and owned by one overall entity with rentals of each individual unit therefore there are no lots are anticipated.
  - Provide details on the percent of the total net area (70.6 acres or 3,074,464) available as common open space (3,074,464 - 270,456 = 2,804,008 / 3,074,464 = 0.912 or 91%).
    The site is planned to be maintained and owned by one overall entity with rentals of each individual unit therefore everything outside of the unit would be considered a common element open space.
  - Please explain why total building area gross sf reported on site data table is less than what would be calculated. For example, if the ground floor area of a 3-story townhome building is 3,200 gross SF then I would expect the total building area to be 9,600 SF (3,200 x 3 stories) not 11,124 SF as reported.
    The architectural designs of the buildings are such that the floor areas are not equal to one another for the same building type. Floor area breakdowns, along with total building areas, are included on the architectural floor plan sheets. Please see these sheets for detail on how the individual floor areas differ.
- Sheet 04 - Show location and setback dimensions of proposed entrance signs and stone pillars and add symbols to legend. Per 9.02.D.4., All signs shall be set back at least ten (10) feet horizontal distance from any utility pole, overhead wire, transformer or streetlight. Per 9.04.A.1., Site entry features may consist of walls, columns, gates, and similar design elements, and may be located within required yard setback areas. Site entry features shall be located outside of any road rights-of-way and a minimum of ten (10) feet from the edge of pavement for any internal access drive.
  Entrance sign location information has been provided as requested.
- Sheets 04 and 05 - Add symbol for proposed dumpster location to legend.
  Dumpster symbols have been added to the legend as requested.
- Sheet 06 - What is the nature of the Landscape Wall identified south of Duplex buildings #11 and #12? This feature is not included on the landscape plans (sheet L-100).
  The callout for the landscape wall has been changed to a block/boulder wall. This wall is planned to be a small retaining element needed to help grading transition through the yard areas in the development. Detailed design information for these wall elements shall be provided in the final site plans.

- Sheet L-104 - Add details for double dumpster enclosure proposed to be located between Building A & B.
  Detail for the double dumpster has been added to the plans as requested.
- Sheet L-100 - Show setback dimensions for proposed site entry features (signs and stone pillars). Per 9.02.D.4., All signs shall be set back at least ten (10) feet horizontal distance from any utility pole, overhead wire, transformer or streetlight. Per 9.04.A.1., Site entry features may consist of walls, columns, gates, and similar design elements, and may be located within required yard setback areas. Site entry features shall be located outside of any road rights-of-way and a minimum of ten (10) feet from the edge of pavement for any internal access drive.
  The locations of the entrance signs have been defined in the plans.
- Sheet L-103 - Sign Details - Add the following note, "External sign illumination shall be permitted, subject to Section 9.02.G.1 standards:
  - The light source(s) shall be fully shielded to prevent upward illumination or glare, directed towards the sign face, and designed to concentrate all light on the sign copy area (see illustration); and
  - The light source(s) shall be arranged and shaded so as not to project onto the public right- of-way and interfere with traffic or project onto adjacent property.

  The requested language has been added to the plans as requested.

If further clarifications are needed please do not hesitate to reach out so that we can assist with this additional review of the plans.

Respectfully,

Giffels Webster



Joshua D Ratliff, PE
Project Manager

May 1, 2024

Benjamin Carlisle, AICP, LEED, AP
President
Carlisle Wortman Associates, Inc.
117 North First Street, Suite 70
Ann Arbor, MI 48104

RE: Brookwood Superior
Hobbs+Black Project #: 22-629, 20249.00

In response to Preliminary Site Plan Review letter dated April 19, 2024,

Architectural plan sheets were completed by Hobbs + Black Architects and included floor plans and building elevations for each of the residential buildings by types. Use of vinyl, aluminum or steel siding is not an encouraged material use.

Items to be Addressed:
1) Provide a detailed narrative of the architectural concept for the site including materials details;

Community Center: all brick and stone veneer with exception to the rear gable which is composite cedar shake.



FRONT ELEVATION: CLUBHOUSE

Three Story Stacked Flats (front): majority brick and cast stone with accent areas of composite board and batten fiber cement trim and flat composite panels. The ratio between brick/stone/composite is 15% synthetic or vinyl. Inclusive of door and window surfaces.



FRONT ELEVATION: STACKED FLATS

Three Story Stacked Flats (side): base material is brick and cast stone. The upper two stories are a combination of composite board and batten fiber cement trim and flat composite panels and vertical cement board siding. The inset balcony alcoves are horizontal vinyl siding. The ratio between brick/stone/composite is 19% synthetic or vinyl. Inclusive of door and window surfaces.



SIDE A ELEVATION: STACKED FLATS
SCALE - 1/8" = 1'-0"

*Two Story stacked Flats (front / side): are the same materials are well below the 50% ratio.

Townhomes (front): base material is brick and cast stone. The upper two stories as a combination of composite board and batten fiber cement trim and flat composite panels, vertical cement board siding and either vertical cement siding in the three front gables or vinyl. There is also a section of metal roofing for the garage overhang, and composite cedar shake in the highest front gable ends. If vinyl is used for three mid-level gables in lieu of composite it would be 25% of the façade.

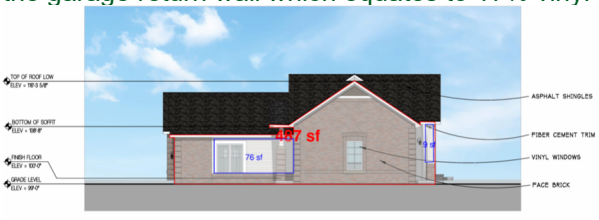


FRONT ELEVATION: 4-UNIT
SCALE - 1/8" = 1'-0"

Townhomes (side): base material would be partially exposed cast in place concrete foundation and cast stone as the grade falls away. From grade to the underside of roof line would be vertical cement board siding. 0% vinyl, aluminum, or steel siding.

Duplex's & Quadplex (front): consist of a face brick cladding with exception to the roof top gables clad in a composite cedar shake. 0% vinyl, aluminum, or steel siding.

Duplex's & Quadplex (side): consist of a face brick cladding with exception to a section of vinyl siding on the garage return wall which equates to 17% vinyl siding where garage door is not present.



SIDE B ELEVATION UNIT B
SCALE - 1/8" = 1'-0"

2) Confirm that vinyl, aluminum, or steel siding to be installed on dwellings does not exceed fifty percent (50%) of the total area on the front and side dwelling elevations as required per Section 14.09B1.;

Confirmed none of the residential units or community center have greater than 50% vinyl, aluminum, or steel siding products on the front or side façade.

3) Confirm that all dwellings' eaves and gables have a minimum six (6) inch roof overhang as required per Section 14.09B2.

Confirmed, all overhangs are greater than 6". The stacked flats have 3' roof overhang, the Townhomes generally have a 2' roof overhang, and the duplex's/quadplex are 1' overhangs.

Sincerely,



Megan Hon
Senior Associate Project Manager

MH

cc: Tom Dillenbeck

P:\2022\22629\DOCS\Plan Review-Permitting

Carlisle | Wortman
ASSOCIATES, INC.

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

Date: May 16, 2024

Preliminary Site Plan Review
For
Superior Township, Michigan

Applicant:	Brookwood Estates, LLC (Christopher L. Garner)
Project Name:	Brookwood Superior
Location:	East side of Leforge Rd, south of Geddes Rd, north of W. Clark Rd (PIN: J-10-33-300-001)
Initial Plan Date:	April 14, 2023 (last revision 4-30-2024)
Current Zoning:	PC, Planned Community District
Action Requested:	Preliminary Site Plan Approval

PROJECT DESCRIPTION

A preliminary site plan application has been submitted to improve an approximately 84.5 gross acres (70.6 net acres) parcel of land situated on the east side of Leforge Road approximately 700 feet north of Clark Road land (see aerial photograph below). The parcel (PIN: J-10-33-300-001) is located in the southwest corner of Section 33 and zoned Planned Community (PC) Special District. The property is undeveloped and has historically been used for farming. Significant natural resources exist onsite including woodlands, steep slopes, wetlands, and a small stream located in the northeast corner. The property is located outside the 100 year floodplain. The first reading of the area plan was approved by the Township Board on March 18, 2024.

The proposal is to develop a Master Planned Community designed for renters and owners plus a section dedicated for people over 55 years of age. As part of the Preliminary Site Plan, the applicant, Brookwood Estates, LLC, proposes the following improvements to the site:

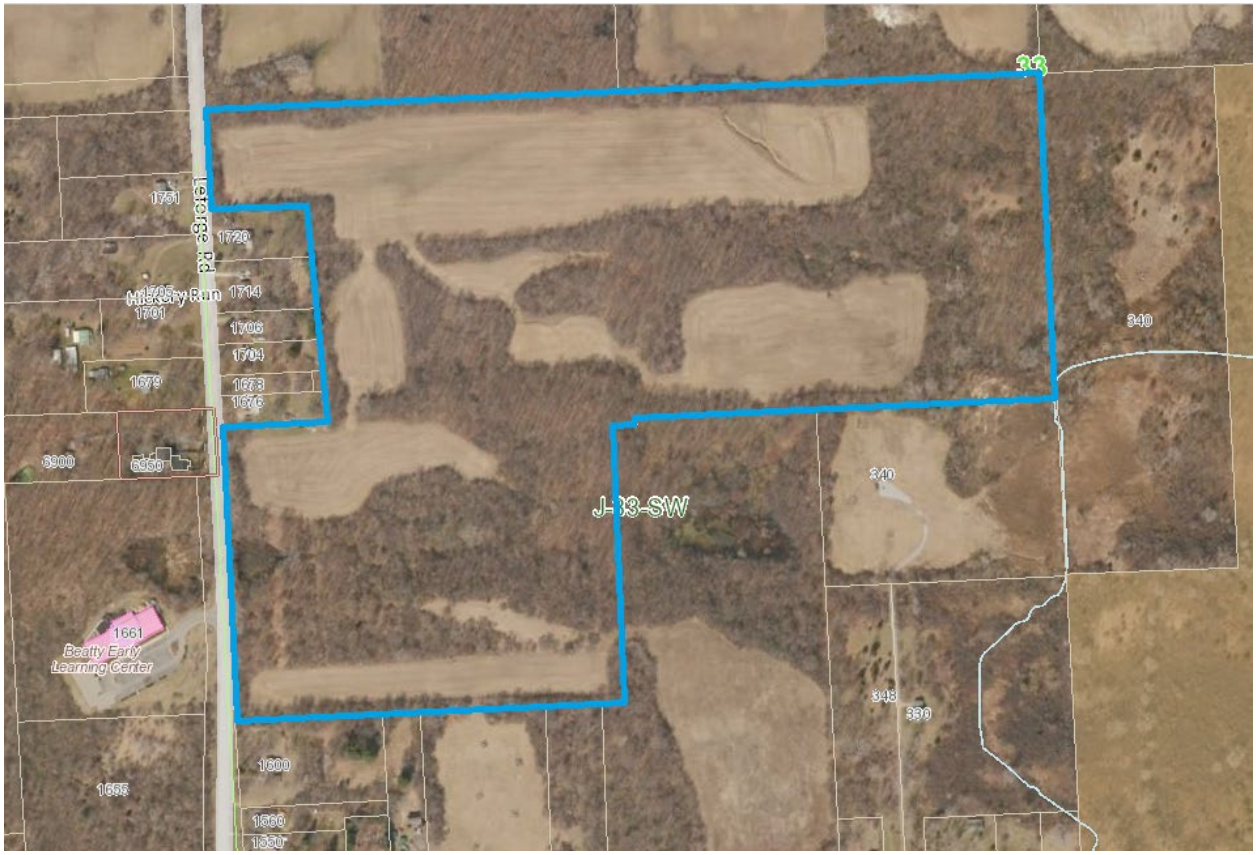
Benjamin R. Carlisle, *President* Douglas J. Lewan, *Executive Vice President* John L. Enos, *Vice President*
David Scurto, *Principal* Sally M. Elmiger, *Principal* R. Donald Wortman, *Principal*
Paul Montagno, *Principal,* Megan Masson-Minock, *Principal,* Laura Kreps, *Senior Associate*
Richard K. Carlisle, *Past President/Senior Principal*

1. Construct 318 dwelling units divided into three (3) residential dwelling product types:
    - 194 stacked flats (1 two-story building with 16 units and 7 three-story buildings with 26 units each). Note: one building will have four (4) units on the ground floor converted to space for office/leasing/maintenance.
    - 64 duplex units (32 one-story buildings with 2 units each);
    - 32 four-plex units (8 one-story buildings with 4 units each), and;
    - 28 attached townhomes (7 three-story buildings with 4 units each).
2. Construct a 3,225 square foot clubhouse building with an outdoor patio and rooms dedicated to recreation and administrative offices.
3. Paved parking areas around the stacked flats and duplexes.
4. Landscaping improvements.
5. Develop a 15,600 square foot "amenity area" readily available to occupants of the stacked flats.
6. Continuous sidewalk network along private drives throughout the development and preserved woodlands are transected by walking paths that connect amenities and with various areas of the development.
7. Extend existing public water and sanitary sewer mains to serve the development.
8. Construct four (4) stormwater detention ponds.
9. Stacked flats and duplexes are anticipated to rent from $1.50 - $2.50 per square foot. The townhomes will be for sale and priced per unit according to the market.

The applicant proposes phased development that proceeds from front (closest to Leforge) to back as follows:

- Phase 1: Site work and townhome completion (months 1-24);
- Phase 2: Site work and portions of stacked flats, senior and club house (months 7-30)
- Phase 3: Complete remainder of stacked flats and senior (months 13-36)

The applicant is required to submit additional details on the phasing to ensure compliance with requirements outlined under Section 7.105. A phase shall not be dependent upon subsequent phases for safe and convenient vehicular and pedestrian access, adequate utility services, or open spaces and recreation facilities; and shall be capable of substantial occupancy, operation, and maintenance upon completion of construction and development. Per Section 7.107.A.2, if the development is to occur in separate phases, a final site plan for each subsequent phase must be submitted to the Planning Commission for review and approval within three (3) years of the date of approval of the immediately preceding final site plan.



Aerial Photograph

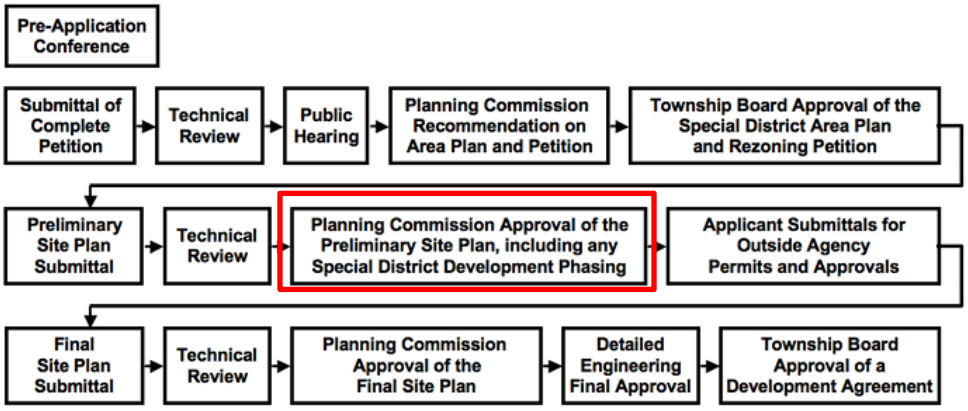
The Zoning and existing land uses for the subject site and surrounding parcels are identified in the following table:

Direction	Zoning	Existing Use
North	PM and PC	Single Family Residential and Vacant
South	R3, R4, and A2	Vacant and Rural Residential
East	R3, R4, and A2	Vacant
West	PSP, R4, R7, A2	Rural Residential and Institutional

PROCESS

The Planned Community (PC) Area Plan originally approved for this site in 2006, expired and an amended Planned Community (PC) Area Plan petition was submitted. The first reading of the revised area plan was approved by the Township Board on March 18, 2024 (Ord. #174-27). Provided that the Township Board approves the second reading, the next step in the Area Plan process is to submit a Preliminary Site Plan for review by the Planning Commission. The second reading of Ordinance #174-27 is scheduled to be held on May 20, 2024.

SECTION 7.100
REVIEW PROCEDURES



NATURAL RESOURCES

The property is currently undeveloped and controlled by an existing PC, Planned Community Area Plan. There are significant natural resources including woodlands, steep slopes, and wetlands on site. The property is located outside the 100-year floodplain.

The applicant has designed the development to maintain a significant amount of the existing natural features on site including:

- Inclusion of 20-to-50-foot open space buffers along the parcel boundaries;
- Preservation of 5.3 acres of wetlands (100% of the wetlands on site);
- Preservation of 26.5 acres of woodlands (51% of woodland on site), and;
- Preservation of 1.8 acres of steeps slopes (97% of steep slopes on site).

The approved Area Plan is designed to conserve open space and preserve natural resources in perpetuity, which may not be accomplished through a conventional subdivision development. While, there are no conservation easements proposed, the applicant has provided a written explanation of how the site's natural resources will be maintained and managed:

> *"The sites natural resources will be managed and maintained by the overall property owner just as the grounds for the overall development will be maintained by the owner. The specific natural resource areas of the site are planned to remain in a natural state for the enjoyment of the residents with litter and debris pickup*

as needed and limited mowing or maintenance to trees only as necessary to preserve a safe environment for the residents. The common area will be maintained by the overall development ownership group either via direct staff or a lawn care service as needed. The specific maintenance and management of the grounds will be finalized within the development agreement."

Any additional common area maintenance and improvements need to be codified through the site plan and through a development agreement.

The applicant provided a Natural Features Plan (sheet 03), which indicates the following:

- Watercourses and Wetlands: Plans note that there are no proposed impacts to any onsite stream(s) or watercourse(s). Plans delineate seven (7) wetlands areas onsite that reportedly total 5.3 acres. The applicant has indicated that none of the seven (7) existing wetlands will be impacted. As part of the Final Site Plan submittal, the applicant needs to add notes to the Natural Feature Plan that provide more details on the wetland areas delineation process (e.g., who and when the survey was completed) and how requirements of subsection 14.05B (Watercourses and Wetlands) will be addressed.

- Slopes: Steep slopes were delineated on the plan and total 82,485 sq. ft. It was noted that encroachment will occur on 2,614 sq. ft. of those steep slopes. As part of the Final Site Plan submittal, the applicant needs to define steep slope areas as 25% or greater and add notes to the Natural Feature Plan that provide a description of where the steep slopes are located as well as how standards of subsection 14.05C (Slopes) will be met. The applicant should indicate any location where new development, grading, or other activity is proposed within a steep slope area as defined in the ordinance.

  The applicant notes:

  "The tree preservation, wetland protection, and steep slope preservation areas are defined on the preliminary site plan's Natural Features Plan. In preparing the final grading design and engineering plans for development, the approved preservation and protection areas shall not be exceeded from the approved amounts."

  Please note that based on final engineering and grading, there may be areas that shown for development on the preliminary site plan that cannot be built upon due to steep slope restrictions.

- Grading: There is significant grading to occur on site. The applicant provided a grading plan (sheet 06) with the Preliminary Site Plan and the following detailed explanation of how grading will be done in such a way to protect the sites existing natural resources that are identified for protection:

  "The limits of grading shall be identified in the engineering plans as well as the trees that are being removed and the woodland areas that are being preserved.

The grading for the site's construction will not encroach on the woodland areas that are being preserved. Either silt-fence or snow fencing shall be used during construction to demarcate the limits of grading."

- Floodplains: Topographic Survey (sheet 02) included in the plan set indicates that based on FEMA FIRM PANEL 0288E, the subject parcel is located outside the 100 year floodplain. This note needs to be added to the Natural Features Plan (sheet 03).

- Groundwater Recharge Area: The applicant did not address groundwater recharge areas. As part of the Final Site Plan submittal, the applicant needs to address the standards of subsection 14.05E (Groundwater Recharge Areas) on the Natural Features Plan (sheet 03). The Planning Commission may require the use of buffer zones to protect surface vegetation, or the installation and use of such other techniques it deems necessary to mitigate or retain stormwater runoff or protect groundwater recharge areas.

- Woodland and Tree Protection: Woodland area were delineated on the plan and total 51.6 acres and it is reported that 25.1 acres of those wooded area will be encroached and 26.5 acres (51.4%) preserved. As part of the Final Site Plan submittal, the applicant needs to meet standards and provide additional details and plan sheets that address subsection 14.05F (Woodlands and Tree Preservation). For example, a detailed tree inventory of all regulated trees be removed, relocated or preserved.

We note that some of the items noted in the natural features review are not required until final site plan review. However, we note that specific items especially tree preservation, wetland protection, and steep slope preservation were discussed in detail as part of the Area Plan approval and are likely to be raised by the Planning Commission as part of the preliminary site plan review. The applicant provided additional detail on these three particular items as part of the Preliminary Site Plan submittal. We are seeking confirmation from the Township Engineer that after review of the grading limits on the Grading Plan that the natural feature areas identified to be preserved are able to be preserved.

Items to be Addressed: *1) Provide more details on the wetland areas delineation process (e.g., who and when the survey was completed) and how requirements of subsection 14.05B (Watercourses and Wetlands) will be addressed; 2) If applicable, delineate and provide a description of groundwater recharge areas and how the standards of subsection 14.05E (Groundwater Recharge Areas) will be addressed; 3) Define steep slope areas as 25% or greater and add notes to the Natural Feature Plan that provide a description of where the steep slopes are located as well as how standards of subsection 14.05C (Slopes) will be met; 4). Provide additional details and plan sheets that address subsection 14.05F (Woodlands and Tree Preservation); and 5). Confirmation from the Township Engineer that after review of the grading limits on the Grading Plan that the natural feature areas identified to be preserved are able to be preserved.*

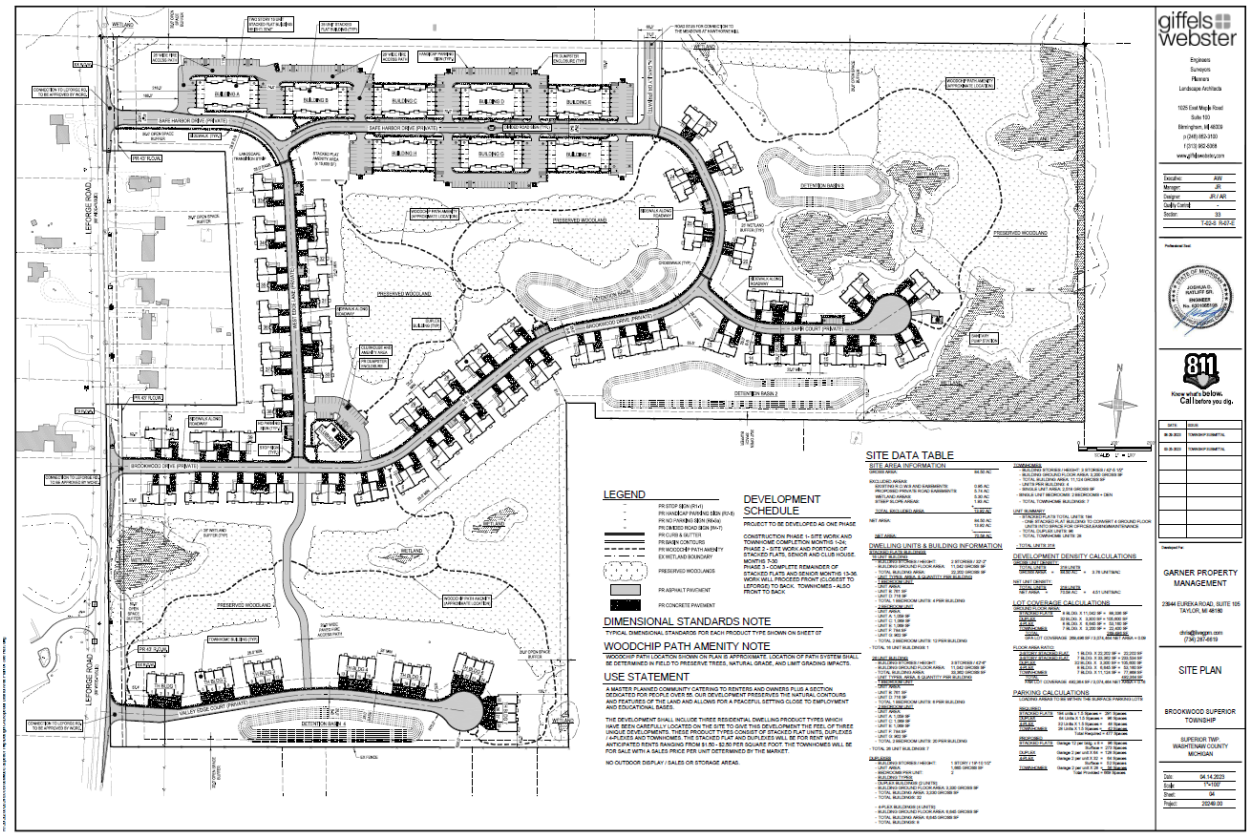
DENSITY, LOT COVERAGE & FAR, HEIGHT, SETBACKS

The 84.5 gross acres (70.6 net acres) consists of one (1) parcel (PIN: J-10-33-300-001) located in the southwest corner of Section 33. The parcel is situated on the east side of Leforge Road approximately 700 feet north of Clark Road and zoned Planned Community (PC) Special District.

The applicant provided a Site Data Table on Site Plan (sheet 04) which includes the following information:

- Development Schedule;
- Use Statement;
- Site Area Information;
- Dwelling Units and Building Information (square footage and heights of buildings by type);
- Development Density Calculations;
- Lot Coverage Calculations, and;
- Parking Calculations.

Setbacks from wetlands, roadways, and lot lines are shown on the Site Plan (sheet 04).



Site Plan (sheet 04)

The Township Board approved the Area Plan and resolution drafted by the Planning Commission which included a recommendation to grant the density bonus. The number of units is set at 318.

Lot Coverage & Floor Area Ratio (FAR) Calculations: The maximum FAR and maximum lot coverage for PC Special District projects without individual lots is outlined under Section 7.301C. The maximum FAR for PC Special District projects or portions thereof without individual lots shall not exceed 0.35, and the maximum lot coverage shall not exceed twenty-five percent (25%). As reported on the Site Data Table, the proposed FAR is 0.16 and proposed lot coverage is 0.09 or approximately nine percent (9%); both well below the maximum allowed.

Height Regulations: Per Section 7.301I, unless otherwise approved by the Township Board after recommendation by the Planning Commission, no building shall exceed a height of two and one-half (2 1/2) stories or 35 feet. Approval of a taller building shall be in accordance with Section 7.003 (Regulatory Flexibility).

The applicant has provided the following information on height of new buildings to be constructed on site:

- Stacked flats - one (1) two-story building (32'-2" in height) and seven (7) three-story buildings (42'-6" in height);
- Duplexes - thirty-two (32) one-story buildings (19'-10 1/2" in height);
- Fourplexes - eight (8) one-story buildings (19'-10 1/2" in height);
- Attached townhomes - seven (7) three-story buildings (42'-5 1/2" in height) and;
- Clubhouse - one (1) 3,225 square foot one-story (19'-1 3/8" in height).

The stacked three-story buildings (42'-6" in height) exceed the height requirements; however, the Planning Commission approved the increase in height as part of the Area Plan petition.

Perimeter Open Space and Yard Requirements: Perimeter open space for PC Special Districts without individual lots is outlined under Section 7.301.F6. Setbacks from wetlands, roadways, and lot lines are shown on the Site Plan (sheet 04). following requirements shall apply to PC Special District projects or portions thereof without individual lots, subject to any approved deviations per Section 7.003 (Regulatory Flexibility):

- An open space setback area at least 50 feet wide shall be provided along the perimeter of the PC Special District adjacent to all road rights-of-way. Sheet 04 shows this condition has been met.

- An open space setback area at least 20 feet wide shall be provided along the perimeter of the PC Special District not adjacent to a road right-of-way. Sheet 04 shows this condition has been met.

- Open space setback area shall be landscaped in accordance with Section 14.10 (Screening and Land Use Buffers), and adequately and permanently maintained by the property owner, tenant, or organization responsible for maintaining common areas. Landscape

plan sheets (L-100 thru L-104) includes details on proposed screening and landscape buffers.

Items to be Addressed: *None*

PARKING

	Required	Provided	Compliance
Multiple-Family Housing, Town-houses, Stacked Flats, and Two-Family (Duplex) Dwellings. One and one-half (1.5) spaces per dwelling unit with up to two bedrooms, and two (2) per three-bedroom or larger dwelling unit	Stacked Flats: 291	369	Compliant
	Duplex/Four-Plex: 144	218	Non-Compliant
	Clubhouse: NA	23	Complies
	Townhomes: 42	56	Non-Compliant
Barrier Free Accessible	9 spaces	26 spaces	Complies

Section 8.05, contains a schedule of off-street parking requirement. None of the residential units proposed contain more than 2 bedrooms and based on the schedule outlining minimum parking requirements, residential units would require a minimum of one and one-half (1.5) parking spaces per dwelling unit with up to two bedrooms each. The applicant exceeds the parking requirement for the duplex , four-plex, and townhomes.

Per Section 8.09B, exceeding the maximum parking space requirements of this Article shall be prohibited, except where the Planning Commission determines that additional parking is necessary to accommodate the use on a typical day of operation, based upon evidence supplied by the applicant. The applicant has provided a detailed evaluation of parking needs for the proposed use. Based on the location and number of surface spaces (26) that will be used for guests for the duplex, four-plexs, and townhomes, we recommend that the Planning Commission approve the additional parking.

Items to be Addressed: *Planning Commission to consider if additional parking is warranted.*

SITE ACCESS, CIRCULATION, AND TRAFFIC

The proposed Brookwood Area Plan was refined after undergoing multiple rounds of reviews from Planning, Engineering, and the Fire Marshall. The proposed Preliminary Site Plan shows private drives/roads throughout the development that will be built to the private road requirements. Access to the site is from a looping private drive with two access points on Leforge Road, and a single dead-end drive at the south end of the site that serves the townhomes. The Brookwood development has a connection point to the Meadows at Hawthorne Mill proposed along the

northern property line; interconnections between neighborhoods are strongly encouraged. An internal 20 foot wide paved fire access path runs north to south and connects the townhome area (south) and the clubhouse and duplex area (north). Interconnected pedestrian trails and sidewalks are included onsite. A fire circulation plan for the site and parking lots was provided on Sheet 07.

Road access and required road improvements will be reviewed by the Road Commission.

Items to be Addressed: *None*

LANDSCAPING

A concept landscape plan has been provided on sheets L-100 thru L-104. A detailed landscape plan is required for final site plan submittal that meets all Perimeter Open Space and Yard Requirements outlined under Section 7.301.F.

The following perimeter open space, transition buffer, and landscape strip requirements shall apply to PC Special District projects:

1. Transition buffer. Transition buffers between land uses within the PC Special District and along the perimeter of the PC Special District shall be provided in accordance with Section 3.203E (Transition Buffer). The Brookwood development does not have any nonresidential uses proposed that would require a transitional buffer.
2. Landscape strip. Landscape strips shall be provided along and adjacent to all road rights-of-way within the PC Special District and on the perimeter of the PC Special District in accordance with Section 3.203F (Landscape Strip). A planted landscape strip containing a mixture of deciduous shade trees, ornamental trees, evergreen trees, and shrubs is proposed to be planted within the required open space setback areas along all private and public street frontages and the abutting residential properties to the west. Such open space setback area shall be landscaped in accordance with Section 14.10 (Screening and Land Use Buffers) and the plans need to provide detail showing that the minimum greenbelt buffer requirements of one (1) tree and three (3) shrubs per 15 linear feet of greenbelt length are being met.

In addition, all standards and required plan information outlined in subsection 14.05F (Woodlands and Tree Preservation) shall apply.

Items to be Addressed: *For final site plan the applicant shall provide a more detailed landscape plan that meets all landscape, screening, and woodland preservation requirements.*

LIGHTING

No lighting plan has been provided. A lighting plan will be required for final site plan approval. All parking lot lighting and building mounted lighting should be fully shielded and down directed.

Items to be Addressed: *For final site plan the applicant shall provide a lighting and photometric plan.*

FLOOR PLANS AND ELEVATIONS

Architectural plan sheets were completed by Hobbs + Black Architects and included floor plans and building elevations for each of the residential buildings by types. Use of vinyl, aluminum or steel siding is not an encouraged material use.

Items to be Addressed: *1) Provide a detailed narrative of the architectural concept for the site including materials details; 2) Confirm that vinyl, aluminum, or steel siding to be installed on dwellings does not exceed fifty percent (50%) of the total area on the front and side dwelling elevations as required per Section 14.09B1.; 3) Confirm that all dwellings eaves and gables have a minimum six (6) inch roof overhang as required per Section 14.09B2.*

SUMMARY

We find that the preliminary site plan conforms to the approved Area Plan. As part of the Preliminary Site Plan discussion, the Planning Commission should discuss the following:

1. Planning Commission to consider if additional parking is warranted.
2. Confirmation from the Township Engineer that after review of the grading limits on the Grading Plan that the natural feature areas identified to be preserved are able to be preserved.
3. Planning Commission to discuss proposed architecture and material use.

We recommend Preliminary Site Plan approval with the following conditions to be addressed as part of the final site plan:

1. Provide additional details on Natural Feature Plan:
    a. Provide more details on the wetland areas delineation process (e.g., who and when the survey was completed) and how requirements of subsection 14.05B (Watercourses and Wetlands) will be addressed.
    b. If applicable, delineate and provide a description of groundwater recharge areas and how the standards of subsection 14.05E (Groundwater Recharge Areas) will be addressed.
    c. Define steep slope areas as 25% or greater and add notes to the Natural Feature Plan that provide a description of where the steep slopes are located as well as how standards of subsection 14.05C (Slopes) will be met.
    d. Provide additional details and plan sheets that address subsection 14.05F (Woodlands and Tree Preservation).
2. Provide a more detailed landscape plan that meets all landscape, screening, and woodland preservation requirements.
3. Provide lighting and photometric plan.

4. *Architecture:*
    a. *Provide a detailed narrative of the architectural concept for the site including materials details.*
    b. *Confirm that vinyl, aluminum, or steel siding to be installed on dwellings does not exceed fifty percent (50%) of the total area on the front and side dwelling elevations as required per Section 14.09B1.*
    c. *Confirm that all dwellings eaves and gables have a minimum six (6) inch roof overhang as required per Section 14.09B2.*

Benjamin R. Carlisle

CARLISLE/WORTMAN ASSOC.,INC
Benjamin R. Carlisle, AICP, LEED AP
President

CARLISLE/WORTMAN ASSOC., INC.
Diane Mulville-Friel, AICP
Senior Associate

cc:

Ken Schwartz, Township Supervisor
Lynette Findley, Township Clerk
Bill Balmes, Building Official
George Tsakof, Township Engineer
Cresson Slotten, Township Engineer

May 9, 2024

CHARTER TOWNSHIP OF SUPERIOR
3040 N. Prospect Road
Ypsilanti, MI 48198

Attention: **Lynette Findley, Township Clerk**

Regarding: **Brookwood Preliminary Site Plan - Review No. 1**
OHM Job No. 0140-23-1030

Dear Ms. Findley,

On behalf of the Township, we have reviewed the Preliminary Site Plan submittal for the above referenced project, as provided to the Township by the Applicant on April 30, 2024. In our opinion, this plan is ready for consideration by the Planning Commission at their May meeting regarding Preliminary Site Plan approval. We offer the following comments related to the submittal to be addressed by the Applicant prior to the submission of the Final Site Plan.

General

1. The names of the private roads and building numbering should be provided on all the applicable plan sheets not just the Site Plan (sheet 4) of the set.

2. Typical pavement cross-sections should be included in the Preliminary and Final Site Plan sets.

3. Details for the landscape wall between Detention Basin 2 and the duplexes on Brookwood Drive (Buildings 11 and 12) should be included in the Preliminary and Final Site Plan sets.

Utilities

4. As noted in our September 21, 2023, review letter for the revised Area Plan submittal, the proposed sanitary pump station and force main would only service the stacked flats and a portion of the duplex units on the proposed development. As the stacked flats and duplexes would all be rental units, i.e., the units would be owned by a single entity that would rent the units to tenants, we recommend that the new pump station and force main be a private system operated and maintained by the property owner. The terms of this maintenance should be included in the Development Agreement for this development.

   It is our understanding that this is permissible by EGLE, and the Township Utilities Department agrees with this approach in this case. We have reached out to EGLE to confirm that this approach is acceptable but have still not yet heard back from EGLE. We are continuing to reach out to EGLE for this confirmation.

5. The sizes of the existing Superior Township public utilities serving the development should be indicated on the plans. The water main at the two northerly water main connections in Leforge Road at Safe Harbor Drive and at Brookwood Drive is 12" AC water main. The water main at the southerly connection at Valley Edge Court is 12" DI water main. The existing sanitary sewers in LeForge Road at the proposed connections at Brookwood Drive and Valley Edge Court are 12" sewers.

6. The Final Site Plan should include the Utility Basis of Design calculations.

7. The water main layout should include 12" water mains on the northerly portion of the site through the stacked flat units, specifically the water main along Safe Harbor Drive from LeForge Road to the intersection of Brookwood Drive and Sapir Court.

8. Easements for the public water mains (12' wide) and public sanitary sewers (20' wide) should be indicated and dimensioned on the plans.

Grading and Drainage

9. The detailed grading plan will be reviewed at the Final Site Plan stage. However, we note that drainage swales are noted on the Utility Plan in various greenbelt locations in lieu of yard drain inlets and storm sewers. Based on the Grading Plan sheet in this Preliminary Site Plan submittal we have noted the following which raise concerns regarding the drainage performance of these swales:
    a. The swale/base of berm north of the stacked flat units and south of the property boundary behind Buildings A-E is extremely long (approximately 1,800 LF) and has less than 1% grade.
    b. The swale behind duplex/fourplex Buildings 26-32 is over 1000 LF long as it flows south-southeast-northeast to Detention Basin 1, with:
        i. The upstream portion (behind Buildings 30-32) at approximately 1.7% grade behind Building 32, and behind Building 31 and the north end of Building 30 drains into the preserved woodland area leading to a newly formed low point (see iii below).
        ii. The swale behind the Clubhouse is at approximately 9% grade, but then turns to the northeast and then behind Building 29 is at approximately 1% grade.
        iii. The area behind Buildings 27 and 28 is draining to a newly formed low point in the preserved woodland created by the grading in this area, which may harm the woodland.
        iv. The portion behind Building 26 has approximately 1% grade until it reaches the detention basin.
    c. The swale behind duplex Buildings 33-38 is over 600 LF long at approximately 1.5-1.8% grade with an intermediate yard drain, and in the area behind Building 37 the swale has approximately 0.6% grade.
    d. The swale behind duplex Building 40 and fourplex Building 39 is at approximately 1% or less.
    e. The swale behind townhomes Buildings 1-3 has approximately 1 – 1.5% grade.
    f. Behind townhomes Buildings 4-6 the proposed contour lines are difficult to interpret and without FF elevations it is unclear whether this area will drain.

10. In an email on May 3, 2023, the Washtenaw County Road Commission (WCRC) indicated that it is acceptable for the drainage from the southerly stormwater detention facility to drain toward the LeForge Road right-of-way with the condition that the outlet pipe be located outside of the future right-of-way donation (43 feet from centerline). The outlet pipe is currently shown in the future right-of-way donation area.

Access and Circulation/Parking Areas

11. Dimensions for the driveways for the Duplex/4-Plex units and townhomes should be provided.

12. The parking calculations on the Overall Layout Plan (sheet 04) note that there are 26 proposed surface parking spaces for the Duplex/4-Plex units, but only 23 are shown on the plan.

13. The parking areas for the stacked flats units indicated on Sheet 7 in the Stacked Flats Typical Layout show parking spaces with a length of 18' and a maneuvering lane width of 22'. Article 8 of the Superior Township Zoning Ordinance, Section 8.06 I. *Parking Layout* calls for a minimum parking space length of

20 feet for 90º spaces and a minimum maneuvering lane width of 20' for two-way lanes. The parking spaces could be lengthened to 20' and the lane width reduced to 20' to meet the Zoning Ordinance requirements while using the same proposed pavement areas.

Summary of future outside Agency Approvals

14. The stormwater management design will need to meet Washtenaw County Water Resources Commissioner (WCWRC) Standards and will need to be submitted to WCWRC for review during site plan review stage. The approval of the stormwater management design needs to be reasonably assured from the WCWRC prior to the Final Site Plan being presented to the Planning Commission.

15. The soil erosion and sedimentation control (SESC) measures on the site plan will need to meet the requirements of WCWRC and approval should be reasonably assured by WCWRC prior to the Final Site Plan being presented to the Planning Commission.

16. Review and approval from WCRC is required as they have jurisdiction within the public ROW of LeForge Road. Work proposed in the LeForge Road ROW would need to meet the requirements of the WCRC and needs to be reviewed with approval reasonably assured by WCRC prior to the Final Site Plan being presented to the Planning Commission.

If you have any questions regarding our review, please do not hesitate to contact me at (734) 466-4439, or Cresson Slotten at (734) 466-4585.

Sincerely,
OHM Advisors

_____
George Tsakoff, PE
Principal

cc: Ken Schwartz, Township Supervisor (via e-mail)
Bill Balmes, Building Department (via e-mail)
Ben Carlisle, CWA, Twp Planner (via email)
Diane Mulville-Friel, CWA (via email)
Cresson Slotten, OHM Advisors
Claire Martin, OHM Advisors
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