Director's Report

Project Name: Edendale

Description: Final Site Plan Approval

Date on Agenda this packet pertains to: September 03, 2026

☐Public Hearing

☐Initial Submittal

☐Revised Plans

☐Preliminary Approval

☒Final Site Plan Approval

☐Special Land Use

☐Planned Development Agreement

☐Other:

Contact	Consultants & Departments	Approval	Denial	Approved w/Conditions	Other	Comments
Sean O'Neil	Community Development Director	☐	☐	☐	☒	Based on comments from staff & consultants
Mike Leuffgen	DLZ	☐	☐	☒	☐	See letter dated 5/4/2026
Matteo Passalacqua	Carlisle Wortman Associates, Inc	☐	☐	☒	☐	See letter dated 5/4/2026
Jason Hanifen	WLT Fire Marshal	☒	☐	☐	☐	See letter dated

J EPPINK
PARTNERS INC
Traditional Town Planning
Landscape Architecture

27 S. Squirrel – Ste 104
Auburn Hills, MI 48326
248 922 0789 - t

April 10, 2026

Mr. Sean O'Neil
Community Development Director
White Lake Township
7525 Highland Road
White Lake Township, Michigan 48383

RE: Edendale Crossing
Final Site Plan Submission

Dear Mr. O'Neil:

On behalf of PH Homes, we are pleased to submit the attached final site plan submission documents for the proposed Edendale Crossing neighborhood.

The White Lake Township Board of Trustees approved the preliminary site plan and rezoning of the property to Planned Development (PD) at their March 17, 2026, meeting. That approval established the neighborhood's layout, lot sizes, number of homes, recreation spaces, pathway connections, and associated components of the site plan. Included within this submission are detailed designs that meet the requirements for Final Site Plan as well as clarification of points identified in past DLZ, Carlisle Wortman, and department reviews.

We appreciate the opportunity to work with the Township's planning and engineering departments in the review and processing of the final site plan submission for Edendale Crossing. Please let us know what additional information is needed for your review.

Sincerely,

President, J EPPINK PARTNERS, INC

Carlisle Wortman Assoc review dated December 18, 2025: items addressed.

Phasing:	Sheet C3: Phase 1 = units 1 – 60. Phase 2 = units 61 – 115
Existing Trees:	Sheet L2: 128 existing trees surveyed to remain in addition to existing natural vegetation. Table added to plans.
School pathway:	Sheet 17: A sidewalk extending to school property is depicted. Its final connection point within the school property will be determined by and coordinated with the school facilities department.
Draft Development Agreement:	PH Homes will work in coordination with White Lake Twp to draft development agreement. The Twp will initiate that process during this final site plan stage.
Development Setbacks:	Sheet C3: Front: The minimum front setback from Bogie Lake Road shall be no less than 130' from the right-of-way to the adjacent unit lot line. The minimum front setback from Cedar Island Road shall be no less than 25' from the right-of-way to the unit lot line on units 63, 64, 65, & 66, and shall be no less than 45' on units 54 - 62. Rear: 0' at the west parcel line and 0' at the north parcel line as approved by the Twp Board.
Road Access Points:	PH Homes will coordinate final approval from RCOC for all access points and improvements, as depicted for Bogie Lake Road and Cedar Island Road. (RCOC jurisdiction. No waiver required)
Road Width:	The boulevard exit drive widths are adjusted to 22' minimum. (waiver not requested)
Pathway locations:	Exterior pathways have been adjusted to ensure that they sit within the public right-of-ways.
Perimeter Landscaping:	North: preservation of 56 existing trees & vegetation (waiver requested) East: 32 trees + 186 shrubs (no waiver required) South: 80 trees + 369 shrubs (no waiver required) West: no proposed trees adjacent to ITC corridor (waiver requested)
Landscape Requirements:	Sheet L2: Entranceway landscape calculations added
Landscape at pump station:	Sheet L1: The pump station has been moved south away from the property line. Existing vegetation will remain and new trees are proposed. Most of the equipment is below ground and not visible.
Corner lot width:	The Twp Board approved the site layout and lot sizes which includes seven corner sites with the following sizes: #34 = 77', #37 = 77', #52 = 84', #54 = 77', #96 = 78', #102 = 78', #111 = 78' (no waiver required)

DLZ Engineering review letter dated January 8, 2026: items addressed.

Phasing:	There are now 115 homes with two phases: 1 – 60 and 61-115.
Sheet 19 note:	Former location for school crossing note has been removed.
School Pathway:	Sheet 17: A sidewalk extending to school property is depicted. Its final connection point within the school property will be determined by and coordinated with the school facilities department.
Grading:	Final proposed grades and contours have been added to the plans including in the area north of units 19 – 24.
Fire Truck Turning:	Sheet 5 & 9. Small central island has been adjusted.
Entrance road width:	The boulevard exit drive widths are adjusted to 22' minimum.
Hydrant locations:	Fire hydrants have been shifted to provide coverage.
Cedar Island utility extension:	The Township Board has approved the preliminary site plan including the acknowledgement that utilities will not be extend west on Cedar Island Road beyond the proposed entrance drive. (water & sanitary)
Stormwater calculations:	100-year basin calculations have been revised and are provided on Sheet 11

Fire Department review dated January 7, 2026: items addressed.

Turning radius:	Turning radius' have been added to the submission documents to ensure proper movement for a 40' fire department apparatus.

SITE PLAN

"Edendale Crossing"

SITE CONDOMINIUM

PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E,
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN,

NOTE:
THE CONDOMINIUM ASSOCIATION WILL BE RESPONSIBLE FOR MAINTAINING THE STORM SEWER SYSTEM

ENGINEER & SURVEYOR

KIEFT ENGINEERING, INC.
5852 SOUTH MAIN STREET, STE 1
CLARKSTON, MICHIGAN 48346
Phone (248) 625-5251
Fax # (248) 625-7110
Attn: Patrick McWilliams
Email: pmcwilliams@kiefteng.com

Patrick C. McWilliams
STATE OF MICHIGAN
PATRICK COLIN McWILLIAMS
LICENSE NO. 6201031658
REGISTERED PROFESSIONAL ENGINEER

PROPRIETOR/BUILDER

PH COMMUNITIES, LLC
8255 CASCADE AVENUE, SUITE 110
COMMERCE TOWNSHIP, MICHIGAN 48382
Phone (248) 242-6838
Contact: Craig Piasecki
Email: craigp@myphhome.com

PROPERTY DESCRIPTION

PARCELS 12-29-476-016 thru 12-29-476-024:

PROPOSED PARCEL COMBINATION DESCRIPTION:
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS: BEGINNING AT POINT ON THE SOUTH LINE OF SAID SECTION 29, SAID LINE ALSO BEING THE CENTERLINE OF CEDAR ISLAND ROAD, VARIABLE WIDTH, LOCATED S 89°50'00" W 244.18 FEET ALONG SAID SOUTH LINE FROM THE SOUTHEAST CORNER OF SECTION 29, T3N, R8E; THENCE CONTINUING ALONG SAID SOUTH LINE S 89°50'00" W 1379.73 FEET; THENCE N 01°23'00" E 1297.00 FEET; THENCE S 89°55'52" E 1609.36 FEET TO THE EAST LINE OF SAID SECTION 29, SAID EAST LINE ALSO BEING THE CENTERLINE OF BOGIE LAKE ROAD, VARIABLE WIDTH; THENCE ALONG SAID EAST LINE S 00°44'40" W 809.90 FEET; THENCE S 84°04'15" W 226.85 FEET; THENCE S 03°06'02" W 458.08 FEET TO SAID SOUTH LINE OF SECTION 29 AND TO THE POINT OF BEGINNING. CONTAINING 45.47 ACRES. SUBJECT TO RIGHTS-OF-WAY FOR CEDAR ISLAND AND BOGIE LAKE ROADS. ALSO SUBJECT TO ANY OTHER RIGHTS-OF-WAYS, RESTRICTIONS AND EASEMENTS OF RECORD.

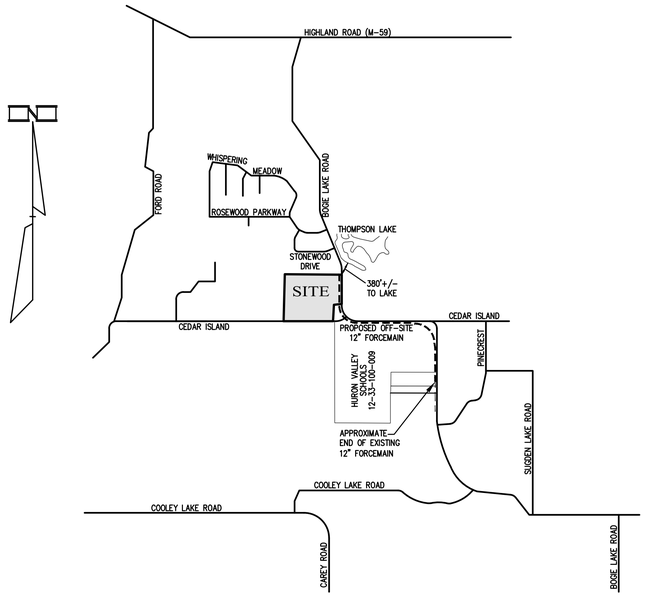
URBAN DESIGN & LANDSCAPE ARCHITECT

J EPPINK PARTNERS, INC.
27 S. Squirrel Road, Ste 104
Auburn Hills, MI 48326
248-922-0789

NOTES:

"THE SOIL EROSION CONTROLS WILL BE MAINTAINED WEEKLY AND AFTER EVERY STORM EVENT".

-GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR THE MAINTENANCE OF THE SOIL EROSION CONTROLS.



LOCATION MAP
SCALE: 1" = 2000'

SHEET INDEX

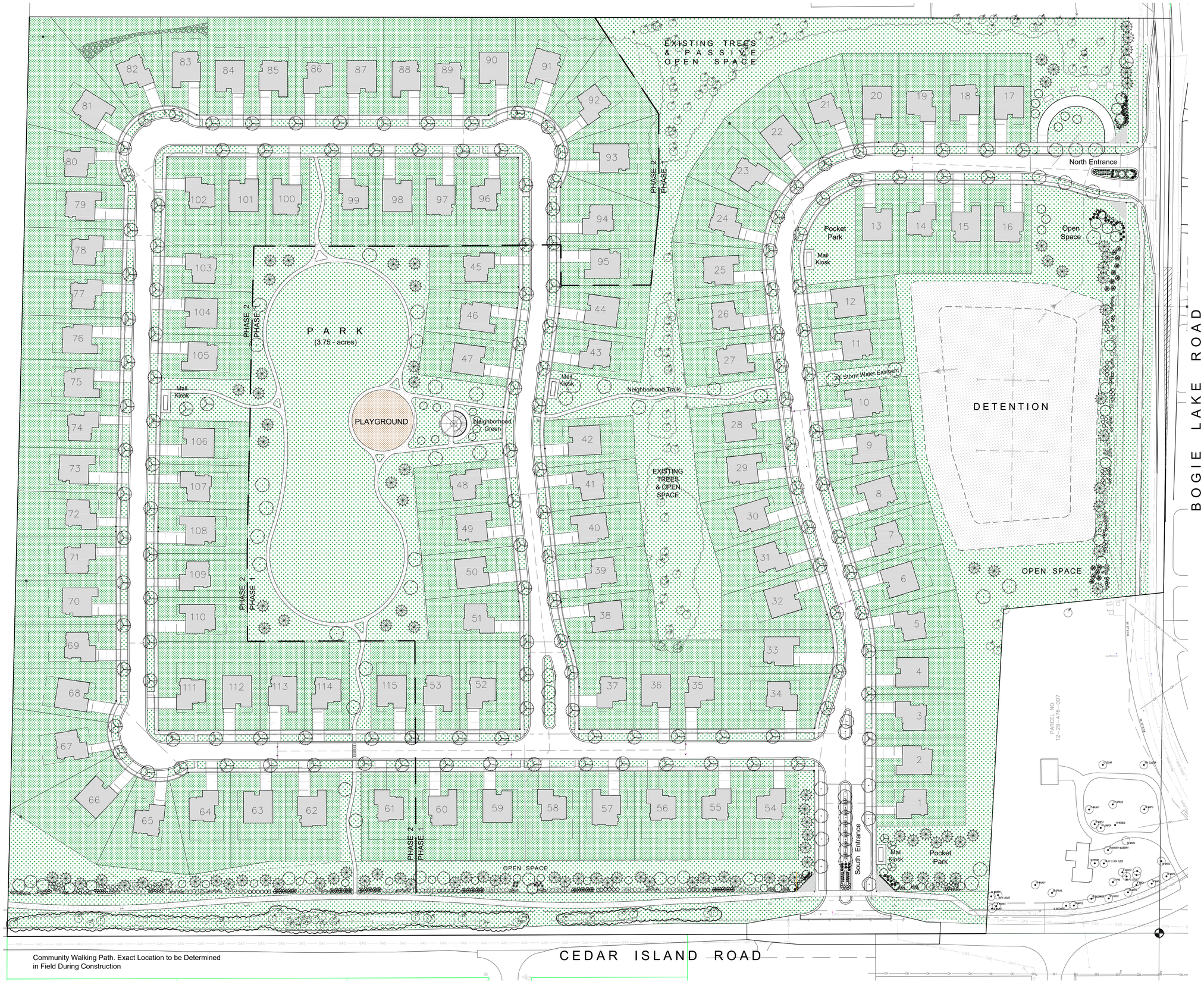
1	COVER SHEET
FSP1	FINAL SITE PLAN SUMMARY
2	EXISTING CONDITIONS PLAN – OVERALL
3	OVERALL SITE PLAN & NOTES
4	SITE PLAN – NORTHEAST
5	SITE PLAN – SOUTHEAST
6	SITE PLAN – SOUTHWEST
7	SITE PLAN – NORTHWEST
8	BOGIE LAKE ROAD ENTRANCE PLAN
9	CEDAR ISLAND ENTRANCE PLAN
10	OFF-SITE STORM SEWER OUTLET PLAN & PRETREATMENT STRUCTURES
11	DETENTION BASIN CALCULATIONS & DETAILS
12	OFF-SITE SANITARY FORCEMAIN PLAN – OVERALL
13	OFF-SITESANITARY FORCEMAIN PLAN – SOUTH CONNECTION
14	OFF-SITE SANITARY FORCEMAIN PLAN
15	OFF-SITE SANITARY FORCEMAIN PLAN
16	OFF-SITE SANITARY FORCEMAIN PLAN
17	OFF-SITE SANITARY FORCEMAIN PLAN
18	OFF-SITE SANITARY FORCEMAIN PLAN – NORTH PUMP STATION & TREE CHART
19	CEDAR ISLAND ROAD & WHITE LAKE MIDDLE SCHOOL SIDEWALK PLAN
L1	COMMON AREA LANDSCAPE PLAN
L2	LANDSCAPE PLAN – ENTRANCE & SCREENING AREAS
L3	LANDSCAPE PLAN – ENTRANCE & SCREENING AREAS
L4	LANDSCAPE DETAILS AND PLANT LIST
A1	ARCHITECTURE

REVISION INDEX

REV. #	DESCRIPTION	DATE	SHEET NUMBERS 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	PER DLZ (8-26-2025)	9-19-2025	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	PER RCOC MTG (10-27-2025) PER DLZ (10-15-25)	10-29-2025	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3	PER CLIENT/PLANNER (11-7-2025)	11-12-2025	X		X	X	X	X	X	X	X	X							X		X
4	PER P.C. MEETING (12-4-25), & CLIENT (12-12-2025)	12-18-2025	X		X	X	X	X	X	X	X	X							X		X
5	PER TOWNSHIP BOARD MEETING (2-17-26) & DLZ (1-8-26)	3-23-2026	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

DATE: 7-2-2025
SHEET 1 OF 19
KE 2025.010

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SITE DATA

Parcel Size :	45.47 acres Gross
Parcel Size :	36.02 acres Net
Zoning :	PD (Planned Dev.)
Proposed Density :	115 Residences 3.13 DU / NET AC (Total Site area less road easements, detention, & utility easements 45.47 ac - 9.45 ac = 36.02 ac / 115 = 3.13)
Phase 1 :	Units 1 - 60
Phase 2 :	Units 61 - 115
Proposed Open Space :	10.21 acres 28.4% Open Space

Roads: 60' ROW (28' back of curb)

See Sheet 3 of 19 "Overall Site Plan & Notes" for site detail

STATE OF MICHIGAN
JAMES T EPPINK
LANDSCAPE ARCHITECT
No. 1309
REGISTERED LANDSCAPE ARCHITECT

J EPPINK PARTNERS, INC
Urban Design Studio

Landscape Architecture
Traditional Town Planning

27 Squirrel Road
Suite 104
Auburn Hills, MI 48326
248.922.0789

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Project:

Edendale Crossing

Bogie Lake Road
White Lake Township, MI

Owner:

PH Homes

8255 Cascade Ave
Suite 110
Commerce Twp, MI 48382
248-242-6838

Sheet:

Final Site Plan Summary

Issues / Revisions

Final Site Plan	04-01-26

Drawn by:

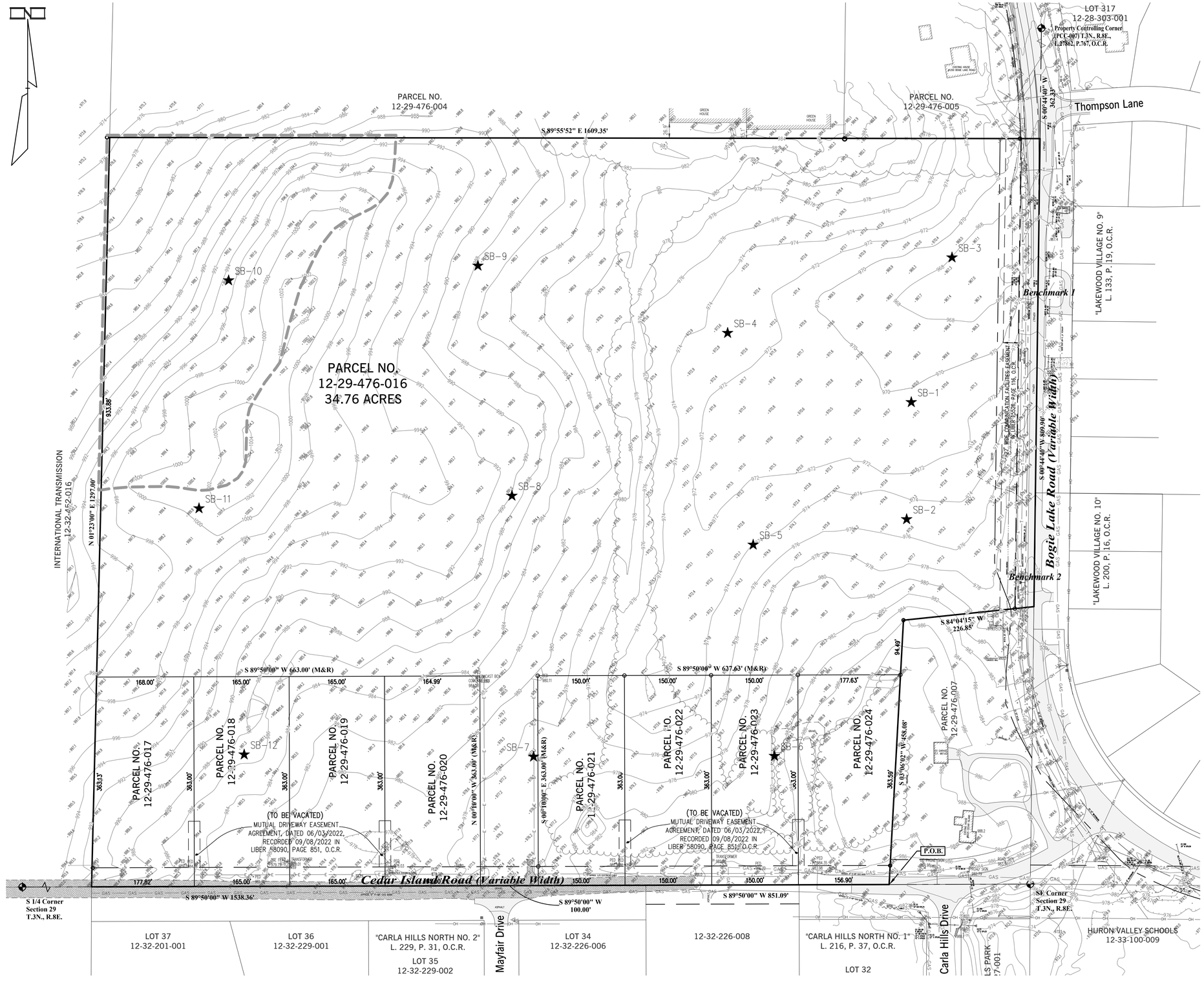
Checked By
JTE

Date
April 1, 2026

Scale
Scale: 1" = 60'

Not for Construction

Sheet
FSP-1



LEGEND

- STORM SEWER
- SANITARY SEWER
- WATERMAIN
- GAS MAIN
- UNDERGROUND ELECTRIC
- STORM MANHOLE
- CATCH BASIN
- INLET
- REARYARD CATCH BASIN
- END SECTION
- SANITARY MANHOLE
- GATE VALVE AND WELL
- HYDRANT
- EXISTING CONTOURS
- OVERHEAD TELE, ELEC, CATV
- POWER POLE
- LIGHT POLE
- GRADE
- SOIL BORING
- EXISTING ASPHALT
- EXISTING CONCRETE
- (R) REMOVE TREE
- DEMOLITION LIMITS

Benchmarks:

BM-1
ARROW OF EXISTING HYDRANT LOCATED 306'+/- SOUTH OF THOMPSON ROAD ON THE WEST SIDE OF BOGIE LAKE ROAD. ELEVATION = 971.63 (NAVD 88)

BM-2
ARROW OF EXISTING HYDRANT LOCATED 450'+/- NORTH OF CEDAR ISLAND ROAD ON THE WEST SIDE OF BOGIE LAKE ROAD. ELEVATION = 983.26 (NAVD 88)

BM-3
MAG NAIL IN NORTH FACE OF POWER POLE LOCATED 50'+/- EAST OF THE NORTH ENTRANCE OF LAKELAND H.S. ON THE SOUTH SIDE OF BOGIE LAKE ROAD. ELEVATION = 981.05 (NAVD 88)

BM-4
ARROW OF EXISTING HYDRANT LOCATED 165'+/- EAST OF THE MIDDLE ENTRANCE OF LAKELAND H.S. ON THE SOUTH SIDE OF BOGIE LAKE ROAD. ELEVATION = 968.44 (NAVD 88)

BM-5
ARROW OF EXISTING HYDRANT LOCATED 80'+/- SOUTH OF FOX N HOUNDS DRIVE ON THE WEST SIDE OF BOGIE LAKE ROAD. ELEVATION = 973.23 (NAVD 88)

BM-6
RR SPIKE IN EAST FACE OF POWER POLE LOCATED 15'+/- SOUTH OF THE SOUTH ENTRANCE OF LAKELAND H.S. ON THE WEST SIDE OF BOGIE LAKE ROAD. ELEVATION = 974.42 (NAVD 88)

PARCELS 12-29-476-016 thru 12-29-476-024:

PROPOSED PARCEL COMBINATION DESCRIPTION:
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS: BEGINNING AT POINT ON THE SOUTH LINE OF SAID SECTION 29, SAID LINE ALSO BEING THE CENTERLINE OF CEDAR ISLAND ROAD, VARIABLE WIDTH, LOCATED S 89°50'00" W 244.18 FEET ALONG SAID SOUTH LINE FROM THE SOUTHEAST CORNER OF SECTION 29, T3N, R8E; THENCE CONTINUING ALONG SAID SOUTH LINE S 89°50'00" W 1379.73 FEET; THENCE N 01°23'00" E 1297.00 FEET; THENCE S 89°55'52" E 1609.36 FEET TO THE EAST LINE OF SAID SECTION 29, SAID EAST LINE ALSO BEING THE CENTERLINE OF BOGIE LAKE ROAD, VARIABLE WIDTH; THENCE ALONG SAID EAST LINE S 00°44'40" W 809.90 FEET; THENCE S 84°04'15" W 226.85 FEET; THENCE S 03°06'02" W 458.08 FEET TO SAID SOUTH LINE OF SECTION 29 AND TO THE POINT OF BEGINNING. CONTAINING 45.47 ACRES. SUBJECT TO RIGHTS-OF-WAY FOR CEDAR ISLAND AND BOGIE LAKE ROADS. ALSO SUBJECT TO ANY OTHER RIGHTS-OF-WAYS, RESTRICTIONS AND EASEMENTS OF RECORD.

STATE OF MICHIGAN
PATRICK COLIN McWILLIAMS
LICENSE NO. 6201031658
REGISTERED PROFESSIONAL ENGINEER

DATE	ISSUE
9-19-2025	PER DLZ (8-26-2025)
10-29-2025	PER ROOK MEETING (10-27-2025) & DLZ (10-15-2025)
2-23-2026	PER TOWNSHIP BOARD MEETING (2-17-26) & DLZ (1-8-26)

PROPRIETOR:
PH COMMUNITIES, LLC
8255 CASCADE AVENUE, SUITE 110
COMMERCE TOWNSHIP, MICHIGAN 48382
(248) 242-6838

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KIEFT ENGINEERING, INC.
PROFESSIONAL ENGINEERS AND PROFESSIONAL SURVEYORS
5852 SOUTH MAIN STREET, SUITE 1, CLARKSTON, MICHIGAN 48346
PHONE (248) 625-5251 www.kiefteng.com FAX (248) 625-7110

DATE 7-2-2025	CKD. BY	DATE
DRAWN GF		
DESIGN PCM		
SECTION 29	T- 3 -N. R- 8 -E.	

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG (800) 482-7171 OR 811

Existing Conditions Plan - Overall

"EDENDALE CROSSING" SITE CONDOMINIUM
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

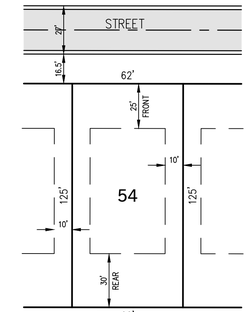
SCALE	1" = 80'
SHEET	2 OF 19
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GENERAL NOTES

1) PROPERTY SIDWELL NUMBERS: 12-29-476-016 THRU 12-29-476-024: SITE AREA = 45.47 ACRES
2) ZONING: EXISTING - AG (AGRICULTURAL)
   PROPOSED - PD (PLANNED DEVELOPMENT)
3) PROPOSED USE: SINGLE FAMILY RESIDENTIAL (SITE CONDOMINIUM).
4) MINIMUM UNIT SIZE PROPOSED: 7,750 SF, WIDTH 62 FEET, AVERAGE UNIT SIZE 8,651 SF.
5) PROPOSED SETBACK REQUIREMENTS:
   TOTAL UNITS PROPOSED - 115
   FRONT SETBACK - 25 FT
   REAR SETBACKS - 30 FT
   SIDE YARD SETBACKS - 10 FT (EACH SIDE), 22 FT BETWEEN HOMES.
   ALL UNITS HAVE AT LEAST 62 FT OF FRONTAGE AT THE FRONT 25 FT SETBACK
6) STREETS ARE 60 FOOT WIDE RIGHT-OF-WAY W/23' WIDE ASPHALT WITH 24" MOUNTABLE CONCRETE CURB AND GUTTER (27' WIDE TOTAL)(4,862 LF TOTAL ROAD LENGTH). THE DEVELOPER INTENDS ALL ROADS TO BE PRIVATE.
7) SEWAGE DISPOSAL: TO BE CONNECTED TO ON-SITE PROPOSED PUMP STATION OUT-LETTING TO MUNICIPAL SANITARY FORCEMAIN SYSTEM (5,066 LF) TO BE CONSTRUCTED ALONG BOGIE LAKE ROAD.
8) WATER SUPPLY: AN 8" WATERMAIN IS PROPOSED TO BE CONNECTED TO THE EXISTING 12" MUNICIPAL WATERMAIN ALONG BOGIE LAKE ROAD.
9) PUBLIC UTILITIES (GAS, ELECTRIC, TELEPHONE & CABLE) SHALL BE INSTALLED UNDERGROUND.
10) NO BRUSH OR GRASS CLIPPINGS WILL BE STORED OR DISPOSED OF INTO THE COMMON/PARK AREAS OR DETENTION BASIN.
11) ALL YARD WASTE TO BE REMOVED FROM SITE.
12) PUBLIC SIDEWALKS ARE PROPOSED AS PER EXISTING ORDINANCE REQUIREMENTS.
13) INDIVIDUAL PLOT PLANS AND GRADING SHALL BE PREPARED BY A LICENSED ENGINEER OR SURVEYOR.
14) PROPOSED SITE GRADES SHALL MATCH EXISTING GRADES AT THE PROPERTY LINE WHERE OFF-SITE GRADING RIGHTS DO NOT EXIST.
15) ALL DISTURBED AREAS SHALL BE RE-VEGETATED.
16) DETENTION BASIN SIDE SLOPES SHALL BE LEFT 1 ON 6.
17) REAR AND SIDE-YARD DRAINAGE EASEMENTS WILL BE SHOWN ON THE GRADING PLAN.
18) ALL FINAL ROAD GRADES WILL COMPLY WITH ROAD COMMISSION FOR OAKLAND COUNTY STANDARDS.
19) TYPICAL UNIT COVERAGE: AVERAGE HOUSE FOOTPRINT = 2,400 SF, AVERAGE DRIVEWAY = 500 SF;
    TOTAL UNIT COVERAGE = 2,900 SF
    TYPICAL UNIT COVERAGE (%) = 2,900 SF/8,651 SF = 33.5% (OR LESS).
20) REQUIRED PERMITS/APPROVALS:
    -WHITE LAKE TOWNSHIP - ENGINEERING PLANS APPROVAL
    -O.C.W.R.C. - SOIL EROSION PERMIT
    -O.C.W.R.C. - WATERMAIN APPROVAL
    -O.C.W.R.C. - SANITARY SEWER APPROVAL
    -M.D.E.Q. - WATERMAIN PERMIT
    -M.D.E.Q. - SANITARY SEWER PERMIT
    -M.D.E.Q. - NPDES NOTICE OF COVERAGE PERMIT
    -M.D.E.Q. - WETLANDS STORM DISCHARGE PERMIT TO OFF-SITE LAKE
    -R.C.O.C. - APPROACH & UNDERGROUND PERMITS
21) THERE ARE NO WETLANDS ON THIS SITE.
22) EACH HOME SHALL HAVE A 2 CAR GARAGE AND DRIVEWAYS WHICH WILL ACCOMMODATE THE REQUIRED OFF-STREET PARKING.
23) OFF-SITE IMPROVEMENTS SHALL BECOME PUBLIC.
24) ALL SIDEWALKS MUST COMPLY WITH ADA STANDARDS.
25) NO STREET LIGHTING IS PROPOSED. EXTERIOR LIGHTS SHALL BE INSTALLED ON INDIVIDUAL HOMES.
26) TRASH PICKUP FOR THE HOMES WILL BE CURBSIDE.
27) PARKING IS NOT ALLOWED ON ANY OF THE BOULEVARD ROAD SECTIONS. PARKING IS ALLOWED ON ONE SIDE ONLY (OPPOSITE THE FIRE HYDRANTS/WATERMAIN).
28) FIRE LANES PROVIDED ALONG BOTH ROADS (27' WIDE).
29) INDIVIDUAL HOME ADDRESSES SHALL BE 6" MINIMUM.
30) STORM SEWER & STORM WATER MANAGEMENT SYSTEM SHALL BE OWNED, OPERATED & MAINTAINED REGULARLY BY THE CONDOMINIUM ASSOCIATION.
31) SINCE ALL PROPOSED HOMES WILL BE SINGLE FAMILY DETACHED HOUSING, THERE COULD BE MANY DIFFERENT TYPES & STYLES OF HOMES. REQUIREMENTS SUCH AS BUILDING MATERIALS & SIZING WILL BE PROVIDED WITHIN FUTURE CONDOMINIUM DOCUMENT.
32) THIS DEVELOPMENT IS PROPOSED TO BE RECORDED AS A CONDOMINIUM UNDER THE CURRENT RULES OF THE MICHIGAN CONDOMINIUM ACT.
33) LANDSCAPE PLAN PREPARED BY J. EPPINK PARTNERS, INC.
34) TWO PROJECT SIGNS WILL BE PROVIDED. SIGN DETAILS WILL BE SUBMITTED BY OTHERS.
35) THIS PROJECT DOES NOT LIE WITHIN THE 100 YEAR FLOOD PLAIN.
36) THERE WILL BE A 10 FT WIDE PRIVATE EASEMENT FOR PUBLIC UTILITIES GRANTED TO THE UTILITY COMPANIES. THERE WILL BE A 20 FT WIDE EASEMENT FOR SANITARY SEWER GRANTED TO WHITE LAKE TOWNSHIP AND CENTERED ON THE UTILITY AS SHOWN. THERE WILL BE A 20 FT WIDE EASEMENT FOR STORM SEWER CENTERED ON THE UTILITY AS SHOWN. THERE WILL BE A 20 FT WIDE EASEMENT FOR WATERMAIN GRANTED TO WHITE LAKE TOWNSHIP.



TYPICAL MINIMUM LOT

LEGEND

EXISTING		PROPOSED
	STORM SEWER	
	SANITARY SEWER	
	WATERMAIN	
GAS GAS	GAS MAIN	GAS GAS
E E	ELEC. TELE. CABLE	E E
OH OH	OVERHEAD WIRES	OH OH
⊘	STORM MANHOLE	◒
□	CATCH BASIN	■
⊠	INLET	■
▽	REARYARD CATCH BASIN	▼
▽	END SECTION	▼
○	SANITARY MANHOLE	●
⊕	GATE VALVE AND WELL	⊕
⍺	HYDRANT	◀
970	CONTOURS	(70)
	MATCH ELEVATION	(M)
	TOP OF CURB	T/C
	TOP OF SIDEWALK	T/S
	TOP OF PAVEMENT	T/P
	TOP OF CONCRETE	TC
	TOP OF WALL	T/W
	BOTTOM OF WALL	B/W
	DITCH	D
	TREE PRESERVATION	

STATE OF MICHIGAN · PATRICK COLIN McWILLIAMS · LICENSE NO. 6201031658 · REGISTERED PROFESSIONAL ENGINEER

DATE	ISSUE
9-19-2025	PER DLZ (8-26-2025)
10-29-2025	PER RCOC MEETING (10-27-2025) & DLZ (10-15-2025)
11-12-2025	REVISED PER CLIENT/PLANNER-62' WIDE LOTS (11-7-2025)
12-18-2025	REVISED PER P.C. MEETING (12-4-25) & CLIENT (12-12-25)
3-23-2026	PER TOWNSHIP BOARD MEETING (2-17-26) & DLZ (1-8-26)

PROPRIETOR:
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PROFESSIONAL ENGINEERS AND PROFESSIONAL SURVEYORS
5852 SOUTH MAIN STREET, SUITE 1, CLARKSTON, MICHIGAN 48346
PHONE (248) 625-5251 www.kiefteng.com FAX (248) 625-7110

DATE 7-2-2025	CKD. BY	DATE
DRAWN GF		
DESIGN PCM		
SECTION 29	T- 3 -N. R- 8 -E.	

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG (800) 482-7171 OR 811

Overall Site Plan & Notes
"EDENDALE CROSSING" SITE CONDOMINIUM
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

SCALE 1" = 80'
SHEET 3 OF 19
KE 2025.010

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PARCEL NO.
12-29-476-004

PARCEL NO.
12-29-476-005

MH-104
R 972.90
8" E 958.35
8" SW 958.45

MH-103
R 970.80
8" E 957.85
8" W 957.75

CB
R 981.50

CB-17
R 970.50

CB-15
R 973.00

CB-14
R 973.00

CB-13
R 973.00

CB-10

CB-9

CB-12
R 972.05

CB-11
R 972.30

CB-1
R 962.40
36" N 952.77
36" S 952.87

CB-2
R 963.80
36" N 953.84
36" S 953.94

CB-3
R 965.00
36" N 954.74
36" S 954.84

CB-4
R 968.00
36" N 955.76
36" S 955.86

CB-5
R 970.00
36" N 956.51
36" S 956.61

CB-6
R 974.00
36" N 957.18
36" S 957.28

CB-7
R 966.75

CB-8
R 966.75

MH-101
R 969.50
8" N 956.00
8" SW 956.13

MH-102
R 967.80
8" NE 956.60
8" W 956.70

MH-103
R 970.80

MH-104
R 972.90

MH-105
R 973.90
8" NE 959.77
8" S 958.88

MH-106
R 973.60

MH-4
R 967.00

MH-5, R 969.39

MH-6
R 970.90

MH-7
R 972.30

MH-8
R 973.40

HY-1
B 971.50

HY-2
B 971.50

HY-3
B 973.10

RELOCATED
HY-1
B 969.30

GW-1
R 967.10

PRETREATMENT
MH-3
R 967.00

PRETREATMENT
MH-6
R 970.90

OVERFLOW
MH-2
R 965.50

IN-1

IN-2
R 972.11

ES-2
15" SW 961.00

ES-3
42" E 961.00

OUTLET CONTROL
STANDPIPE SO-2
R 965.30
W/BARGRATE
COVER

LB-1
R 961.00

LB-2
R 961.00

14' x 6' CONCRETE
GENERATOR PAD
(971.00)

6' x 6' CONCRETE
TRANSFORMER PAD
(971.00)

8' x 5' CONCRETE
CONTROL PANEL
PAD 971.00

VALVE VAULT
FG 970.00

PUMP STATION
FG 971.00

SERVICE DRIVE

Edendale Lane

Bogie Lake Road (Variable Width)

20 FG 972.7
19 FG 971.8
18 FG 970.7
17 FG 970.2
21 FG 973.0
22 FG 973.5
23 FG 974.5
24 FG 975.1
25 FG 975.5
26 FG 975.5
27 FG 975.5
28 FG 975.0
29 FG 975.5
13 FG 972.0
14 FG 970.5
15 FG 970.0
16 FG 969.5
12 D/L 969.5
11 D/L 969.5
10 D/L 969.5
9 D/L 969.5
83 W/O 988.5
84 W/O 987.0
85 W/O 986.0
86 W/O 985.0
87 W/O 983.5
88 W/O 982.5
89 D/L 983.0
90 FG 982

NOTE:
PLACE CULVERT UNDER
WALK-46'-12" @ 1.00%
12" N 973.50
12" S 973.04

O.C.W.R.C. 100 YEAR DETENTION BASIN
100 YEAR DESIGN PCM ELEVATION = 965.30
1' FREEBOARD ELEVATION = 966.30
BOTTOM ELEVATION = 960.00

(SEE SHEET 7)
(SEE SHEET 5)
(SEE SHEET 10)

72 HOURS
(3 WORKING DAYS)
BEFORE YOU DIG
CALL MISS DIG
(800) 482-7171
OR 811

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ISSUE	DATE
PER TWP. METRO (10-25-2022) & DLZ (10-15-2022)	10-28-2022
REVISED PER TWP. METRO (11-7-2022)	11-10-2022
REVISED PER CLIENT/PLANNER-42 WDE UNITS (11-17-2022)	11-17-2022
REVISED PER TWP. METRO (12-5-2022) & DLZ (12-7-2022)	12-7-2022
REVISED PER TWP. METRO (12-15-2022) & DLZ (12-15-2022)	12-15-2022

PROPRIETOR:
PH COMMUNITIES, LLC
8255 CASCADE AVENUE, SUITE 110
COMMERCE TOWNSHIP, MICHIGAN 48382
(248) 242-6838

	DATE	CK'D. BY
DATE	7-2-2025	
DRAWN	GF	
DESIGN	PCM	
SECTION	29	T- 3 -N, R- 8 -E.

Site/Grading Plan - Northeast
"EDENDALE CROSSING" SITE CONDOMINIUM
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

KIEFT ENGINEERING, INC.
PROFESSIONAL ENGINEERS AND PROFESSIONAL SURVEYORS
5655 SOUTH MAIN STREET, SUITE 1, CLARKSTON, MICHIGAN 48346
PHONE (248) 625-5251 FAX (248) 625-7110
www.kiefteng.com

KIEFT ENGINEERING

STATE OF MICHIGAN
PATRICK COLIN McWILLIAMS
LICENSE NO. 6201031658
PROFESSIONAL ENGINEER

SCALE	1" = 30'
SHEET	4 OF 19
KE	2025.010

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(SEE SHEET 4)

(SEE SHEET 4)

O.C.W.R.C. 100 YEAR DETENTION BASIN

100 YEAR DESIGN PCM ELEVATION = 965.30
1' FREEBOARD ELEVATION = 966.30
BOTTOM ELEVATION = 960.00

Bogie Lake Road (Variable Width)

Mollygrace Lane

Edendale Lane

Cedar Island Road (Variable Width)

(SEE SHEET 6)

(SEE SHEET 19)

PARCEL NO.
12-29-476-007

PROPOSED MAILBOX AREA (TYPICAL)

PROPOSED 8' SAFETY PATH CONNECTION TO HURON VALLEY SCHOOL PARKING LOT (SEE SHEET 19)

500' REQUIRED SIGHT DISTANCE

PROPOSED 12" WM LOOP

EXISTING HOUSE #6625 CEDAR ISLAND

EX GARAGE F.F. 987.63

(FILL FOR POSITIVE DRAINAGE)

20' WIDE STORM SEWER & DRAINAGE EASEMENT

3' EASEMENT FOR SANITARY SEWER

10' EASEMENT FOR PUBLIC UTILITIES

10' EASEMENT FOR PUBLIC UTILITIES

OVERFLOW ROUTE

5' CONCRETE SIDEWALK

PROPOSED 8' CONCRETE WALK

APPROX. U/G ELECTRICAL CABLE

CONCRETE WALL

BRUSHLINE

GRAVEL

EX. R.O.W.

EX. 33' R.O.W.

EX. 17' WATERMAIN

EX. 12" F.M.

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ISSUE	DATE
PER ROC MEETING (10-29-2025) & PLT (10-15-2025)	10-29-2025
REVISED PER CLIENT/PLANNER (REZ, WPE UNITS)	11-17-2025
REVISED PER CLIENT/PLANNER (REZ, WPE UNITS)	11-17-2025
PER ROC MEETING (12-15-25) & PLT (12-15-25)	12-22-2025
PER TOWNSHIP BOARD MEETING (12-15-25) & PLT (12-15-25)	12-22-2025

PROPRIETOR:
PH COMMUNITIES, LLC
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COMMERCE TOWNSHIP, MICHIGAN 48382
(248) 242-6838

	DATE	CK'D. BY
DATE	7-2-2025	
DRAWN	GF	
DESIGN	PCM	
SECTION	29	T- 3 -N, R- 8 -E

Site/Grading Plan - Southeast
"EDENDALE CROSSING" SITE CONDOMINIUM
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

KIEFT ENGINEERING, INC.
PROFESSIONAL ENGINEERS AND PROFESSIONAL SURVEYORS
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PHONE (248) 625-5251 www.kieftengr.com FAX (248) 625-7110

KIEFT ENGINEERING

STATE OF MICHIGAN
PATRICK COLIN McWILLIAMS
LICENSE NO. 6201031658
REGISTERED PROFESSIONAL ENGINEER

SCALE	1" = 30'
SHEET	5 OF 19
KE	2025.010

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(SEE SHEET 7)

(SEE SHEET 7)

(SEE SHEET 5)

INTERNATIONAL TRANSMISSION
12-32-452-016

Molygrace Lane

Cedar Island I

20' WIDE STORM SEWER & DRAINAGE EASEMENT

10' EASEMENT FOR PUBLIC UTILITIES

5' CONCRETE SIDEWALK

5' EASEMENT FOR SANITARY SEWER

OVERFLOW ROUTE

DRIVE

DRAINAGE EASEMENT

PROPOSED 6' CONCRETE WALK

EX 33' R.O.W.

APPROX. 6" P-MP GAS MAIN

APPROX UG ELECTRICAL CABLE

GRAVEL

MH-115
R 999.90
8" N 989.77
8" S 989.59

MH-114
R 994.60
8" N 984.00
8" SE 983.90

MH-113
R 991.60
8" NW 981.00
8" E 980.90

MH-112
R 984.70
8" W 973.99
8" E 973.78

MH-111
R 981.40
8" N 966.00
8" W 966.00
8" E 965.90

MH-117
R 979.50
8" N 969.00
8" S 968.90

MH-19
R 987.30

MH-18
R 983.62

MH-17
R 981.42

MH-15
R 980.74

MH-14
R 978.40

MH-13
R 978.50

MH-20
R 981.90

MH-23
R 982.20

CB-59 R 996.15

CB-58 R 995.95

CB-57 R 986.00

CB-56 R 982.50

CB-42 R 983.50

CB-41 R 978.80

CB-40 R 978.80

CB-39 R 993.00

CB-38 R 990.00

CB-37 R 984.00

CB-36 R 976.90

CB-35 R 975.70

CB-33 R 976.50

CB-32 R 987.05

CB-31 R 987.05

CB-30 R 981.17

CB-29 R 981.17

CB-26 R 978.15

CB-55 R 981.95

CB-54 R 980.95

HY-6 B 992.00

HY-5 B 981.00

8" WM

8" GW-9

8" GW-8 R 984.40

8" GW-11 R 981.00

8" GW-7 R 979.90

12" WM

25' WIDE DRAINAGE EASEMENT

5' CONCRETE SIDEWALK

SWALE

M.P.

L.P.

RIM 978.25

22' B/B

27' B/B

PROPRIETOR:
PH COMMUNITIES, LLC
8255 CASCADE AVENUE, SUITE 110
COMMERCE TOWNSHIP, MICHIGAN 48382
(248) 242-6838

DATE	CK'D. BY	DATE
7-2-2025		
DRAWN GF		
DESIGN PCM		
SECTION 29	T- 3 -N, R- 8 -E.	

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ISSUE DATE	
9-25-2025	PER TWP. LTR. (10-2-2025) & PZ (10-15-2025)
11-17-2025	REVISED PER PLANNER #2 - WPE UNITS (11-7-2025)
12-12-2025	REVISED PER CLIENT/PLANNER #2 - 2 UNITS (11-25-25)
12-22-2025	PER TWP/BRIGHTMOOR REVIEW (12-15-25 & 12-19-25)

72 HOURS
(3 WORKING DAYS)
BEFORE YOU DIG
CALL MISS DIG
(800) 482-7171
OR 811

Site/Grading Plan - Southwest

"EDENDALE CROSSING" SITE CONDOMINIUM

PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

KIEFT ENGINEERING, INC.
PROFESSIONAL ENGINEERS AND PROFESSIONAL SURVEYORS
5452 SOUTH MAIN STREET, SUITE 1, CLARKSTON, MICHIGAN 48346
PHONE (248) 625-5251 www.kiefteng.com FAX (248) 625-7110

KIEFT ENGINEERING

STATE OF MICHIGAN
PATRICK COLIN McWILLIAMS
LICENSE NO. 6201031658
LICENSED PROFESSIONAL ENGINEER

SCALE	1" = 30'
SHEET	6 OF 19
KE	2025.010

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PARCEL NO.
12-29-476-004

Mollygrace Lane

INTERNATIONAL TRANSMISSION
12-32-452-016

(SEE SHEET 4)

(SEE SHEET 6)

(SEE SHEET 6)

72 HOURS
(3 WORKING DAYS)
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ISSUE	DATE
PER ROAD METRO (10-25-2023) & DLZ (10-15-2025)	10-29-2025
REVISED PER CLIENT/PLANNER (12-2-2025)	11-17-2025
REVISED PER CLIENT/PLANNER (12-2-2025)	12-2-2025
PER TOWNSHIP REVIEW LETTER (12-15-2025)	12-16-2025

PROPRIETOR:
PH COMMUNITIES, LLC
8255 CASCADE AVENUE, SUITE 110
COMMERCE TOWNSHIP, MICHIGAN 48382
(248) 242-6838

	DATE	CK'D. BY
DATE	7-2-2025	
DRAWN	GF	
DESIGN	PCM	
SECTION	29	T- 3 -N, R- 8 -E.

Site/Grading Plan - Northeast

"EDENDALE CROSSING" SITE CONDOMINIUM

PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

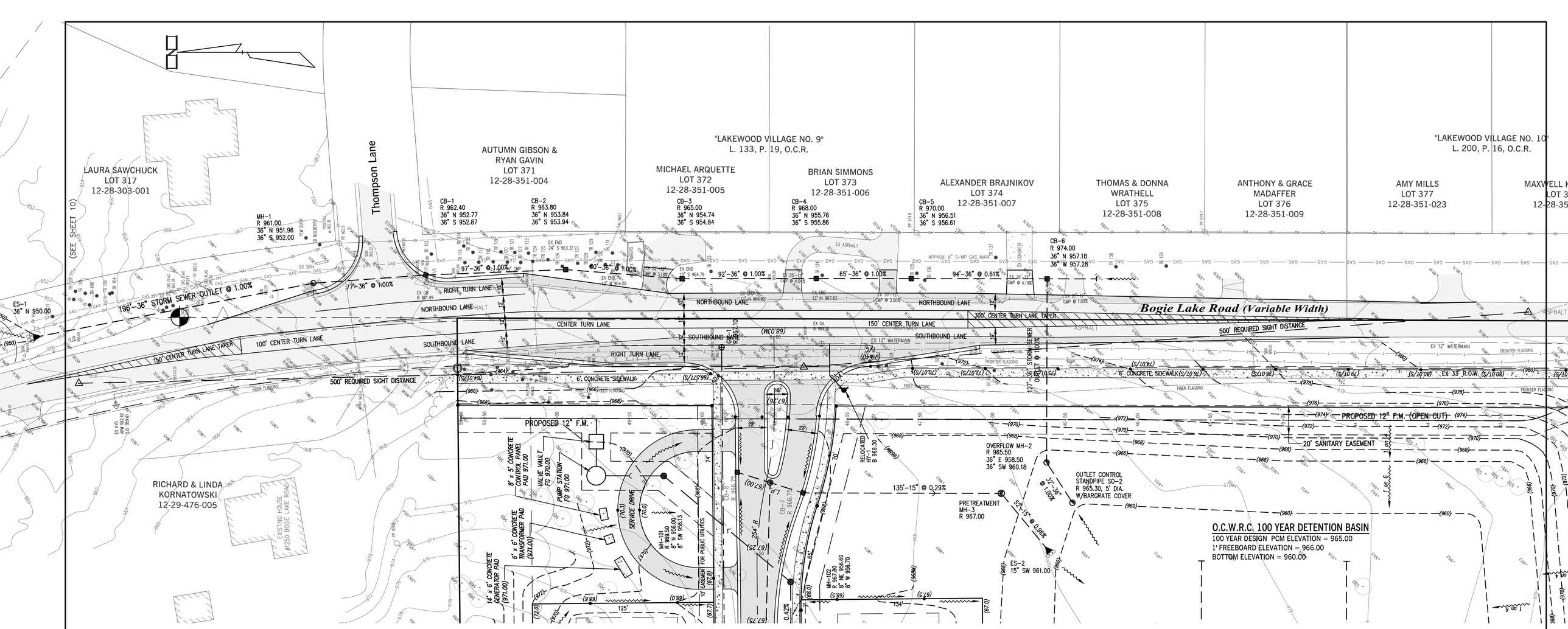
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5863 SOUTH MAIN STREET, SUITE 1, CLARKSTON, MICHIGAN 48346
PHONE (248) 625-5251 FAX (248) 625-7110
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KIEFT ENGINEERING

STATE OF MICHIGAN
PATRICK COLIN McWILLIAMS
LICENSE NO. 6201031658
PROFESSIONAL ENGINEER

SCALE	1" = 30'
SHEET	7 OF 19
KE	2025.010

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DATE	ISSUE
10-29-2025	PER RCOC MEETING (10-27-2025) & DLZ (10-15-2025)
11-12-2025	REVISED PER CLIENT/PLANNER-62' WIDE UNITS (11-7-2025)
12-18-2025	REVISED PER PCM MEETING (12-4-25) & CLIENT (12-12-25)
2-23-2026	PER TOWNSHIP BOARD MEETING (2-17-26) & DLZ (1-8-26)

PROPRIETOR:
PH COMMUNITIES, LLC
8255 CASCADE AVENUE, SUITE 110
COMMERCE TOWNSHIP, MICHIGAN 48382
(248) 242-6838

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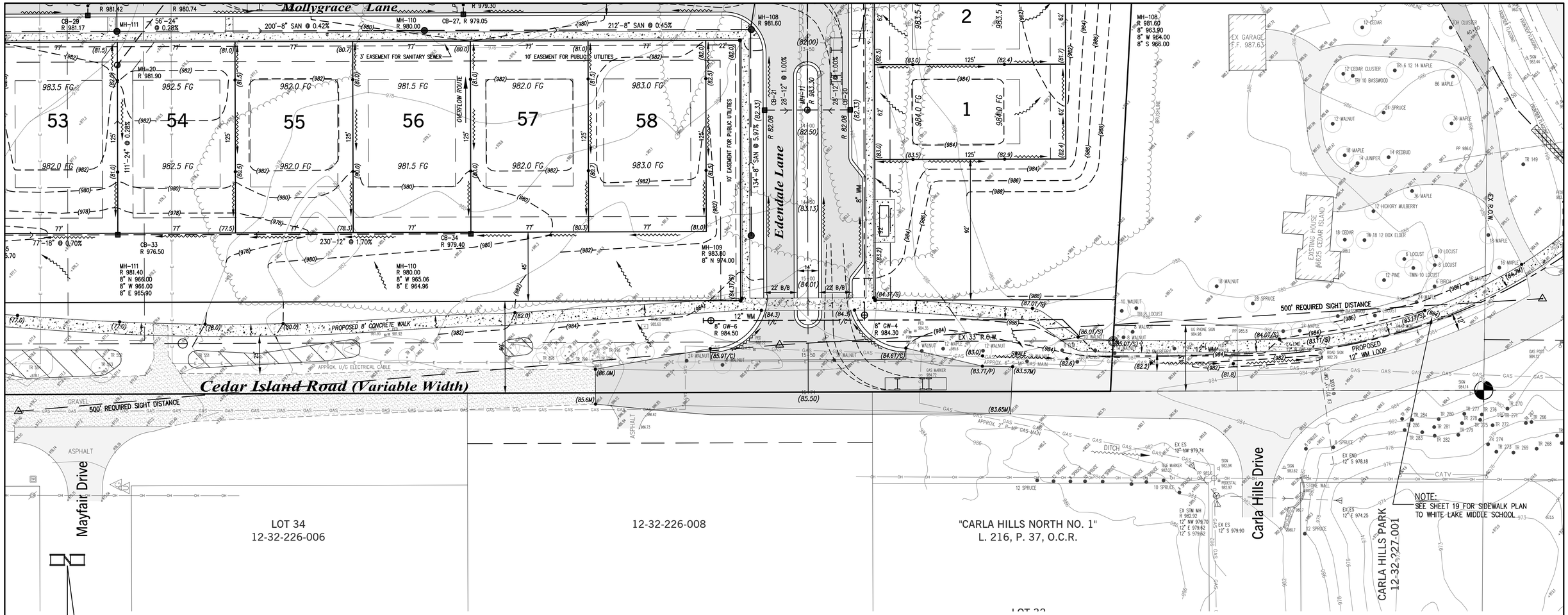
KIEFT ENGINEERING, INC.
PROFESSIONAL ENGINEERS AND PROFESSIONAL SURVEYORS
5852 SOUTH MAIN STREET, SUITE 1, CLARKSTON, MICHIGAN 48346
PHONE (248) 625-5251 www.kiefteng.com FAX (248) 625-7110

DATE	CKD. BY	DATE
DRAWN GF		
DESIGN PCM		
SECTION 29	T- 3 -N. R- 8 -E.	

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG (800) 482-7171 OR 811

Bogie Lake Road Entrance Plan
"EDENDALE CROSSING" SITE CONDOMINIUM
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

SCALE 1" = 30'
SHEET 8 OF 19
KE 2025.010



LOT 34
12-32-226-006

12-32-226-008

"CARLA HILLS NORTH NO. 1"
L. 216, P. 37, O.C.R.

CARLA HILLS PARK
12-32-227-001

LOT 33

DATE	ISSUE
10-29-2025	PER RCOC MEETING (10-27-2025) & DLZ (10-15-2025)
11-12-2025	REVISED PER CLIENT/PLANNER-62' WIDE UNITS (11-7-2025)
12-18-2025	REVISED PER PC MEETING (12-4-25) & CLIENT (12-12-25)
3-23-2026	PER TOWNSHIP BOARD MEETING (2-17-26) & DLZ (1-8-26)

PROPRIETOR:
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8255 CASCADE AVENUE, SUITE 110
COMMERCE TOWNSHIP, MICHIGAN 48382
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PHONE (248) 625-5251 www.kiefteng.com FAX (248) 625-7110

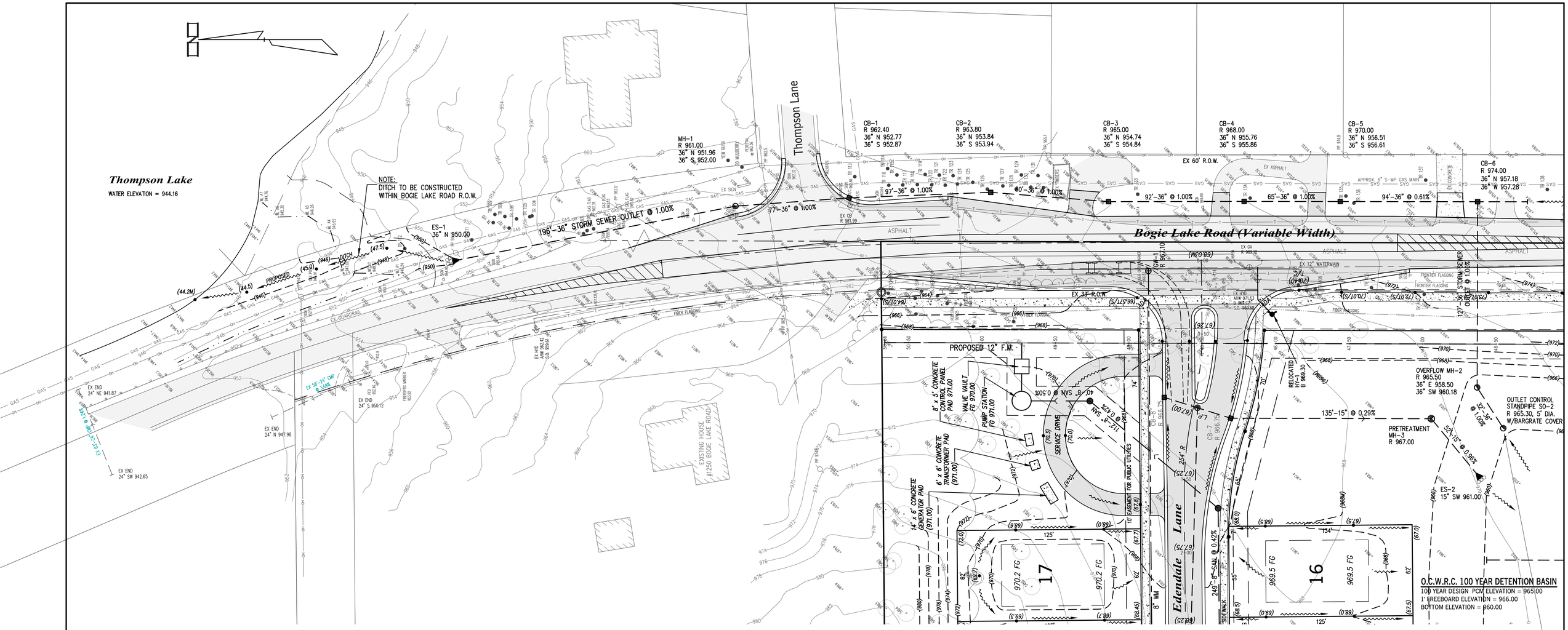
DATE	CKD. BY	DATE
DRAWN GF		
DESIGN PCM		
SECTION 29	T- 3 -N. R- 8 -E.	

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG
CALL MISS DIG (800) 482-7171 OR 811

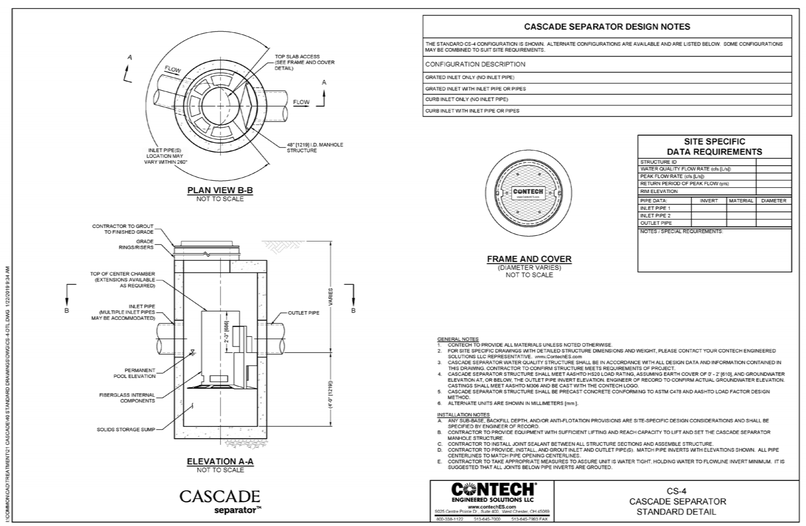
Cedar Island Entrance Plan
"EDENDALE CROSSING" SITE CONDOMINIUM
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

SCALE 1" = 30'
SHEET 9 OF 19
KE 2025.010

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OUTLET CONTROL STANDPIPE SO-2
RIM 965.00, 5' DIA. W/BARGRATE COVER
100 YEAR OUTLET HOLES = (10) 1" DIA., @ 963.50
V_{ED} ELEVATION = 963.50
Q_{ED} OUTLET HOLES = (22) 1" DIA. @ I.E. 961.00
36" NE OUTLET PIPE = 960.50 (10 YEAR FLOW)
2' SUMP BOTTOM = 958.50



CASCADE SEPARATOR DESIGN NOTES

THE STANDARD CS-4 CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES

SITE SPECIFIC DATA REQUIREMENTS

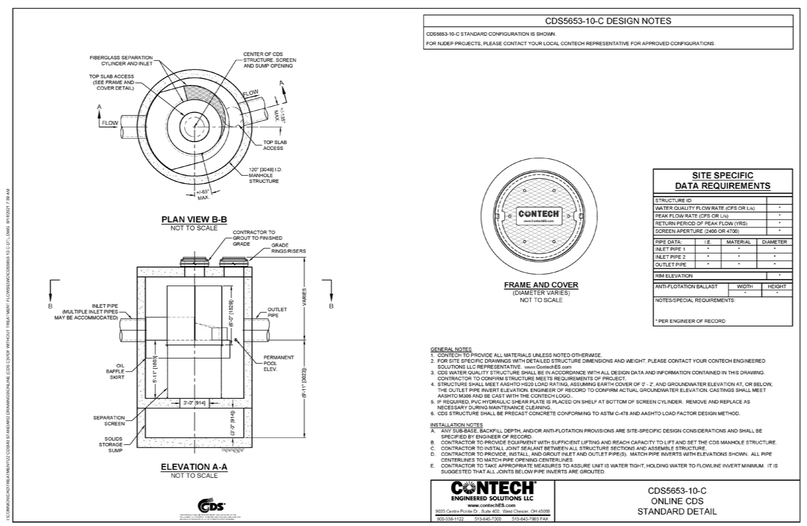
STRUCTURE ID			
WATER QUALITY FLOW RATE (cfs (L/s))			
PEAK FLOW RATE (cfs (L/s))			
RETURN PERIOD OF PEAK FLOW (yrs)			
RIM ELEVATION			
PIPE DATA	INVERT	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			
NOTES / SPECIAL REQUIREMENTS:			

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. CASCADE SEPARATOR STRUCTURE SHALL MEET AASHTO H20 LOAD RATING, ASSUMING EARTH COVER OF 2' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION, ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. CASCADE SEPARATOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT; HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH ENGINEERED SOLUTIONS LLC
www.conteches.com
9025 Centre Pointe Dr. Suite 400 West Chester, OH 45069
800.338.1122 513.645.7000 513.645.7993 FAX

CS-4
CASCADE SEPARATOR
STANDARD DETAIL



CDS5653-10-C DESIGN NOTES

CDS5653-10-C STANDARD CONFIGURATION IS SHOWN.
FOR NJDEP PROJECTS, PLEASE CONTACT YOUR LOCAL CONTECH REPRESENTATIVE FOR APPROVED CONFIGURATIONS.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			*
WATER QUALITY FLOW RATE (CFS OR L/s)			*
PEAK FLOW RATE (CFS OR L/s)			*
RETURN PERIOD OF PEAK FLOW (YRS)			*
SCREEN APERTURE (2400 OR 4700)			*
PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	*	*	*
INLET PIPE 2	*	*	*
OUTLET PIPE	*	*	*
RIM ELEVATION			*
ANTI-FLOTATION BALLAST	WIDTH	HEIGHT	
	*	*	
NOTES/SPECIAL REQUIREMENTS:			

* PER ENGINEER OF RECORD

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO H20 LOAD RATING, ASSUMING EARTH COVER OF 2' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION, ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT; HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

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800.338.1122 513.645.7000 513.645.7993 FAX

CDS5653-10-C
ONLINE CDS
STANDARD DETAIL

LEGEND

EXISTING		PROPOSED
	STORM SEWER	
	SANITARY SEWER	
GAS GAS GAS	WATERMAIN	GAS GAS GAS
E E	GAS MAIN	E E
	ELEC. TELE. CABLE	
	STORM MANHOLE	
	CATCH BASIN	
	INLET	
	REARYARD CATCH BASIN	
	END SECTION	
	SANITARY MANHOLE	
	GATE VALVE AND WELL	
	HYDRANT	
970	CONTOURS	(70)
	MATCH ELEVATION	(M)
	TOP OF CURB	T/C
	TOP OF SIDEWALK	T/S
	TOP OF PAVEMENT	T/P
	TOP OF CONCRETE	TC
	TOP OF WALL	T/W
	BOTTOM OF WALL	B/W
	DITCH	D

STATE OF MICHIGAN
PATRICK COLIN McWILLIAMS
LICENSE NO. 6201031658
PROFESSIONAL ENGINEER

DATE	ISSUE
9-19-2025	PER DLZ (8-26-2025)
10-29-2025	PER RCOC MEETING (10-27-2025) & DLZ (10-15-2025)
11-12-2025	REVISED PER CLIENT/PLANNER-62' WIDE UNITS (11-7-2025)
12-18-2025	REVISED PER RCOC MEETING (12-4-25) & CLIENT (12-12-25)
3-23-2026	PER TOWNSHIP BOARD MEETING (2-17-26) & DLZ (1-8-26)

PROPRIETOR:
PH COMMUNITIES, LLC
8255 CASCADE AVENUE, SUITE 110
COMMERCE TOWNSHIP, MICHIGAN 48382
(248) 242-6838

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KIEFT ENGINEERING

KIEFT ENGINEERING, INC.
PROFESSIONAL ENGINEERS AND PROFESSIONAL SURVEYORS
5852 SOUTH MAIN STREET, SUITE 1, CLARKSTON, MICHIGAN 48346
PHONE (248) 625-5251 www.kieftenq.com FAX (248) 625-7110

DATE	7-2-2025	CKD. BY	DATE
DRAWN	GF		
DESIGN	PCM		
SECTION	29	T- 3 -N. R- 8 -E.	

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG (800) 482-7171 OR 811

Off-Site Storm Sewer Outlet Plan
"EDENDALE CROSSING" SITE CONDOMINIUM
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

SCALE 1" = 30'
SHEET 10 OF 19
KE 2025.010

G:\2020\010 PH Homes - Bogie & Cedar Island\CAD\Edendale Crossing.dwg, 10 Offsite NE, 3/23/2026 9:02:45 AM, , AutoCAD PDF (High Quality Print MOD).pc3

100 YEAR DETENTION BASIN CALCULATION (I.E. WITH OUTLET)

TOTAL CONTRIBUTING AREA: A = 45.47

HYDROLOGIC SOIL GROUP: B

RUNOFF COEFFICIENT

C =	0.95	14.87	+	0.30	28.60	+	1.00	2	
				45.47					
C =	0.54								

		LENGTH		% SLOPE		
SHEET	K = 0.48	L= 230	FT	S= 1.5	V = KS^1/2 =	0.59 FT/S
SWALE	K = 1.20	L=	FT	S=	V = KS^1/2 =	0.00 FT/S
DITCH	K = 2.10	L= 300	FT	S= 1.0	V = KS^1/2 =	2.10 FT/S
PIPES	Longest Run	L= 2400			V = 3	FT/S

T_T = L / 3,600 V

	0.1086	HR	= 6.52 MIN
	0.0396	HR	= 2.38 MIN
	0.2220	HR	= 13.32 MIN
		HR	= MIN

T_C = ΣT_T : 22.0 MIN

I_{100} = 83.3 / $(T_C + 9.17)^{0.81}$ = 5.14 IN/HR

CHANNEL PROTECTION VOLUME CONTROL: RECHARGE

V_{CPVC} = 4,719 CA = 115,869 CF

CAN BE SUBTRACTED FROM V_{100D} IF INFILTRATED

SOILS INFILTRATION RATE FROM BORINGS = 5.00 IN/HR

ABOVE 0.5 IN/HR SUPPLEMENTAL MEASURES NOT REQUIRED

BETWEEN 0.24 IN/HR & 0.5 IN/HR, SUPPLEMENTAL MEASURES REQUIRED

BELOW 0.24 IN/HR, INFILTRATION IMPRACTICAL & WAIVED

EXTENDED DETENTION

V_{ED} = 6,897 CA = 169,347 CF

WATER QUALITY - REMOVAL OF TSS (80 MG/L OR 80% TSS REDUCTION)

MECHANICAL SEPARATOR: N/A

I_1 = 30.2 / $(T_C + 9.17)^{0.81}$ = 1.86 IN/HR

Q_{WQ} = CI_1A = 46.07 CFS

SEDIMENT FOREBAY: N/A

V_F = 0.15V_{WQ} = 545 CA = CF

DETENTION & FLOOD CONTROL

Q_{VRR} = 1.1055-0.206ln(A) = 0.150 CFS/AC

Q_{100P} = Q_{VRR}A = 6.821 CFS

V_{100R} = 18,985 CA = 466,154 CF

Q_{100N} = CI_{100}A = 126.20 IN/HR

R = 0.206 - 0.15ln(Q_{100P}/Q_{100N}) = 0.644

100-YEAR STORAGE VOLUME

V_{100D} = V_{100R}R = 300,064 CF = 300,064 CF PER CPVC

WAS VOLUME CONTORL MET FOR CPVC? Y or N: N

V_{100D} OR V_{ED} CONTROL? V100D 300,064 CF REQ'D

Q_{ED} = V_{ED} / 172,800 = 0.98 CFS

48 HOURS FOR RATE CONTROL

ORIFICE FORMULA

Q_A = 0.62 $(A_O)(2gH^{1/2})$

A_O = AREA ORIFICE PIPE

g = 32.2 FT/SEC^2

H = DEPTH OF BASIN ABOVE CENTERLINE OF OUTLET PIPE

FOREBAY: N/A

V_F = RIM = INVERT =

H = 0.00 FT

EXTENDED DETENTION OUTLET

A_O = Q_{ED} / 0.62 $(2gH)^{1/2}$ = SF = 0.000 IN^2

$A_{1'}$ = πD^2 / 4 = 0.785 IN^2

$A_O/A_{1'}$ = 0.00 → USE 0 1" HOLES EQ. SPACED AROUND STANDPIPE BOTTOM

DETENTION BASIN

EXTENDED DETENTION OUTLET (LOWER)

V_{ED} = HOLES = 963.50 INVERT = 961.00

H = 2.50 FT

A_O = Q_{ED} / 0.62 $(2gH)^{1/2}$ = 0.12 SF = 17.93873 IN^2

D_O = DIAMETER OF ORIFICE

D_O = $\sqrt{4A_O}$ = 0.40 FT = 4.78 INCH

$A_{1'}$ = πD^2 / 4 = 0.785398 IN^2

$A_O/A_{1'}$ = 22.84 → USE 23 1" HOLES EQ. SPACED AROUND STANDPIPE BOTTOM = 961.00

100-YEAR ALLOWABLE OUTLET (UPPER)

V_{100D} = RIM = 965.00 V_{ED} = = 963.50

H = 1.50 FT

A_O = Q_{100P} / 0.62 $(2gH)^{1/2}$ = 0.02 SF = 3.545 IN^2

$A_{1'}$ = πD^2 / 4 = 0.785 IN^2

$A_O/A_{1'}$ = 4.51 → USE 5 1" HOLES EQ. SPACED AROUND V_{ED} ELEVATION = 963.50

"C" CALCULATION

TOTAL SITE AREA = 45.47 ACRES

PAVEMENT AREAS:

ROADS: = 155,000 SF

SIDEWALKS: = 79,000 SF

FUTURE DRIVEWAYS: SAY (800 SF) x (115 DRIVES) = 92,000 SF

TOTAL PAVEMENT AREA = 326,000 SF = 7.48 ACRES @ C = 0.95

ROOF AREAS:
ASSUME (2,800 SF) x (115 HOMES) = 322,000 SF = 7.39 ACRES @ C = 0.95

DETENTION BASIN AREA: 2.00 ACRES @ C = 1.00 (AVERAGE)

GREENBELT AREAS: 28.60 ACRES @ C = 0.20

$$\text{"C"} = \left(\frac{7.48\ \text{ACRES}}{45.47\ \text{AC}} \times 0.95\right) + \left(\frac{7.39\ \text{ACRES}}{45.47\ \text{AC}} \times 0.95\right) + \left(\frac{28.60\ \text{ACRES}}{45.47\ \text{AC}} \times 0.30\right) + \left(\frac{2.00\ \text{ACRES}}{45.47\ \text{AC}} \times 1.00\right) = 0.543 = \underline{0.54}$$

VOLUME PROVIDED:
A_1 = @ 961.00 = 55,000 SF
A_2 = @ 965.30 = 86,000 SF
$V = \frac{H}{3}(A_1 + A_2 + \sqrt{A_1 \times A_2}) = 300{,}677$ CF, OK

DETENTION BASIN

EXISTING WATER ELEVATION = NONE
100 YEAR DESIGN HIGH WATER ELEVATION = 965.30
1' FREEBOARD ELEVATION = 966.30
STORAGE REQUIRED = 300,064 CF
STORAGE PROVIDED = 300,677 CF
SO-2 STANDPIPE RIM = 965.30
OVERFLOW MANHOLE RIM = 965.50
LOWEST EMERGENCY OVERFLOW CATCH BASIN ON N. SIDE IN ENTRY ROAD (OFF BOGIE LAKE ROAD) = 966.75
BOTTOM = 960.00

APPROXIMATE DETENTION BASIN 10 YEAR OUTFLOW CALCULATION

Q = ACI; A = 45.47 ACRES; C = 0.50; I = 175 / (T+25); T = 30 MINUTES+/-.

NOTE: ESTIMATED TIME BASED ON THE LONGEST STORM SEWER RUN ≈ 2,400 LF
THUS, 2,400 LF ÷ 3 FPS (ASSUMED) = 800 SECONDS = 13.33 MINUTES
USE 10 MINUTES TO BE CONSERVATIVE.
20 MINUTES (INITIAL T_C) + 10 MINUTES = 30 MINUTES

I = 175 / 30+25 = 3.18; Q = (45.47)(0.50)(3.18) = 72.30 CFS

USE 36" OUTLET PIPE @ 1.00%; Q = 66.60 CFS; V = 9.42 FPS

Northwest Area Storm Run-off Calculation Comparison

"EXISTING CONDITIONS"
PRESENTLY 4.80 ACRES FLOWS OFF-SITE TO THE NORTHWEST.
EXISTING C = 0.30
FOR A 10 YEAR STORM Q_{10} = ACI
A = 4.80 ACRES
C = 0.30
I = 175 / T+25 ; T = 20 MINUTES; I = 175 / 20+25 = 3.89

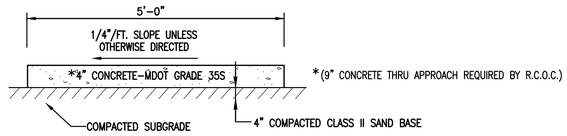
Q_{10} = (4.80)(0.30)(3.89) = 5.60 CFS EXISTING

PROPOSED "C" CALCULATION
(14 HOMES)(REAR ROOF=1,600 SF) = 22,400 SF = 0.51 ACRES @ C = 0.95
REMAINING 1.68 ACRES @ C = 0.30

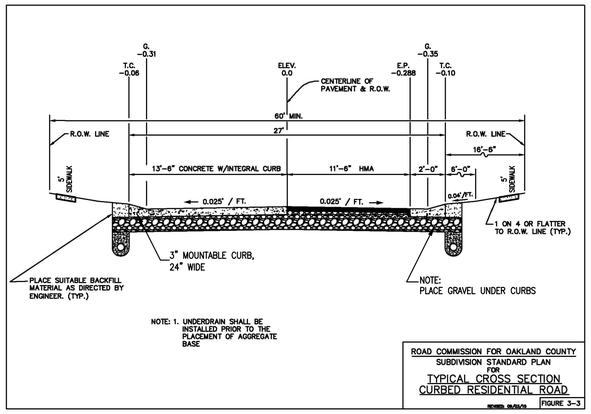
$$\text{"C"} = \left(\frac{0.51\ \text{ACRES}}{2.19\ \text{AC}} \times 0.95\right) + \left(\frac{1.68\ \text{ACRES}}{2.19\ \text{AC}} \times 0.30\right) = \underline{0.45}$$

A = 3.00 ACRES
C = 0.45
I = 3.89
Q_{10} = (2.19)(0.45)(3.89) = 3.83 CFS PROPOSED

THUS, THERE IS LESS PROPOSED STORM WATER RUN-OFF THAT WILL BE FLOWING TO THE LEACH BASIN IN THE NORTHWEST AREA THEN THE EXISTING STORM WATER RUN-OFF FOR A TEN YEAR STORM.

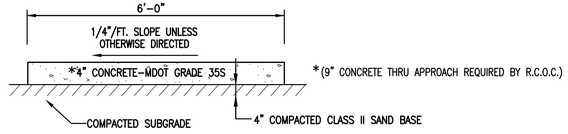


5' WD. 4" THICK CONCRETE SIDEWALK
(ONSITE)

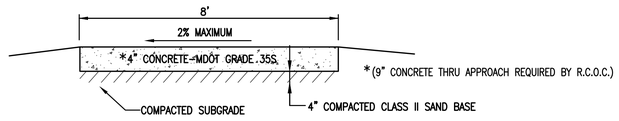


ROAD COMMISSION FOR OAKLAND COUNTY
SUBDIVISION STANDARD PLAN
FOR
TYPICAL CROSS SECTION CURBED RESIDENTIAL ROAD
FIGURE 3-3

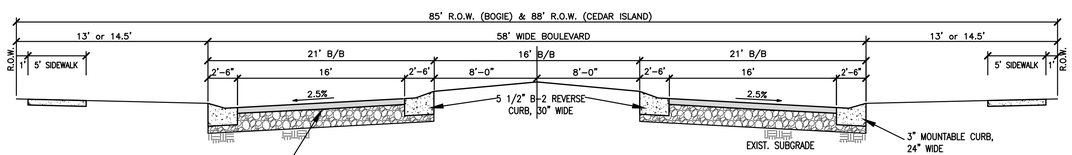
TYPICAL ROAD SECTION "A-A"
(SEE RCOC DETAIL SHEET 22 OF 25)



6' WD. 4" THICK CONCRETE SIDEWALK
(BOGIE LAKE ROAD & R.O.W.)



8' WD, 4" THICK CONCRETE SIDEWALK
CEDAR ISLAND ROAD R.O.W.



BOULEVARD ROAD SECTION "B"-"B"

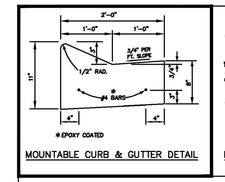
Storm Water Facilities Maintenance Plan

The "Edendale Crossing" Homeowners Association shall be responsible for the maintenance of all the storm water facilities. (Note: The developer is responsible until the HOA exists).

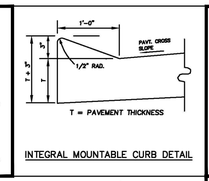
These facilities include the following:
- *Detention Basin*
- *Pretreatment Structure Manholes*
- *Manholes, Rear Yard Catch Basins, Leach Basins, End Sections & connecting pipe work*
- *Rear yard swales (within easements)*

The HOA shall hired a qualified contractor to do the following Maintenance Schedule (including report kept on record):

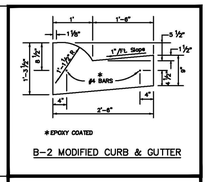
1. *The (2) Pretreatment Structures shall be inspected by a qualified contractor on a semi-annual basis (twice/year) and necessary action taken to clean out the structures in accordance with the manufacturers guidelines.*
2. *The Detention Basin shall be inspected on any annual basis by a qualified contractor and/or civil engineer to insure it is functioning as designed.*
3. *The storm structures & swales shall be inspected on a bi-annual basis (every two years). This is an "above ground" visual inspection to determine if any structures are "failing", (i.e. ground has sank around structure, etc.).*



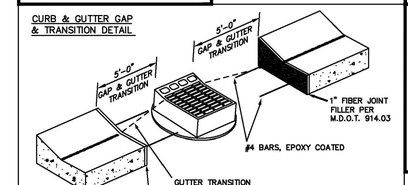
MOUNTABLE CURB & GUTTER DETAIL

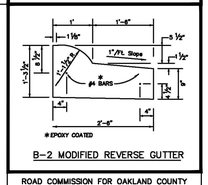


INTEGRAL MOUNTABLE CURB DETAIL



B-2 MODIFIED CURB & GUTTER

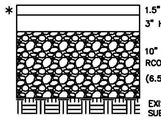




B-2 MODIFIED REVERSE GUTTER

ROAD COMMISSION FOR OAKLAND COUNTY
SUBDIVISION STANDARD PLAN
FOR
CURB & GUTTER DETAILS
REVISED 09/09/15 FIGURE 3-12

HMA



1.5" HMA 13A OR 5E
3" HMA 3C OR 3E
10" 21AA AGGREGATE, RCOC MODIFIED (6.5" UNDER CURB)
EXISTING, APPROVED SUBGRADE

SS-1H @ 0.10/GAL/SYD BETWEEN LIFTS COMMERCIAL A.D.T. COULD WARRANT A DIFFERENT TYPE HMA MIXTURE

CURB TYPE	MAXIMUM RISE (INCHES)	
	A	B
B1	3/4	1
B2	3/4	1
B3	3/4	1
F1	3/4	1
F2	3/4	1
F3	3/4	1
F4	3/4	1
C1	1	1 1/2
C2	1	1 1/2
C3	1	1 1/2
C4	1	1 1/2
C5	1	1 1/2
C6	1	1 1/2
F5	1	1 1/2
F7	1	1 1/2
F8	1	1 1/2
F6	1	1 1/2

FOR CURB TYPES SEE STANDARD PLAN R-50-SERIES

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS

DATE		R-28-J	SHEET 2 OF 3
7-31-2015			
F.H.W.A. APPROVAL	PLAN DATE		

TOTAL SITE

RESIDENTIAL UNITS = 123 REU/UNIT = 123 REU'S

OVERALL SANITARY DESIGN

"AVERAGE FLOW"
123 REU'S @ 2.70 PERSONS/REU = 332.1 PERSONS
332.1 PERSONS x 100 GPCD = 33,210 GPD = 0.03321 MGPD
x 1.55 (conversion)
Q = 0.0515 CFS

"PEAK FLOW"
123 REU'S @ 2.70 PERSONS/REU = 332.1 PERSONS/1000 = 0.3321 = P

Q = 100 x (18 + √P)/(4 + √P) = 405.93 GPCD

332 PERSONS x 405.93 GPCD = 134,769 GPD = 0.13477 MGPD
x 1.55 (conversion)
Q = REQUIRED = 0.2089 CFS

NOTE: AN 8" TRUSS PIPE @ 0.40% CAN CARRY 0.765 CFS @ 2.19 FPS.
A 10" TRUSS PIPE @ 0.30% CAN CARRY 1.194 CFS @ 2.19 FPS.

STATE OF MICHIGAN
PATRICK COLIN McWILLIAMS
LICENSE NO. 6201031658
PROFESSIONAL ENGINEER

DATE	ISSUE
9-19-2025	PER DLZ (8-26-2025)
10-29-2025	PER RCOC MEETING (10-27-2025) & DLZ (10-15-2025)
4-23-2026	PER TOWNSHIP BOARD MEETING (2-17-26) & DLZ (1-8-26)

PROPRIETOR:
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KIEFT ENGINEERING

KIEFT ENGINEERING, INC.
PROFESSIONAL ENGINEERS AND PROFESSIONAL SURVEYORS
5852 SOUTH MAIN STREET, SUITE 1, CLARKSTON, MICHIGAN 48346
PHONE (248) 625-5251 www.kiefteng.com FAX (248) 625-7110

DATE	7-2-2025	CKD. BY	DATE
DRAWN	GF		
DESIGN	PCM		
SECTION	29	T- 3 -N. R- 8 -E.	

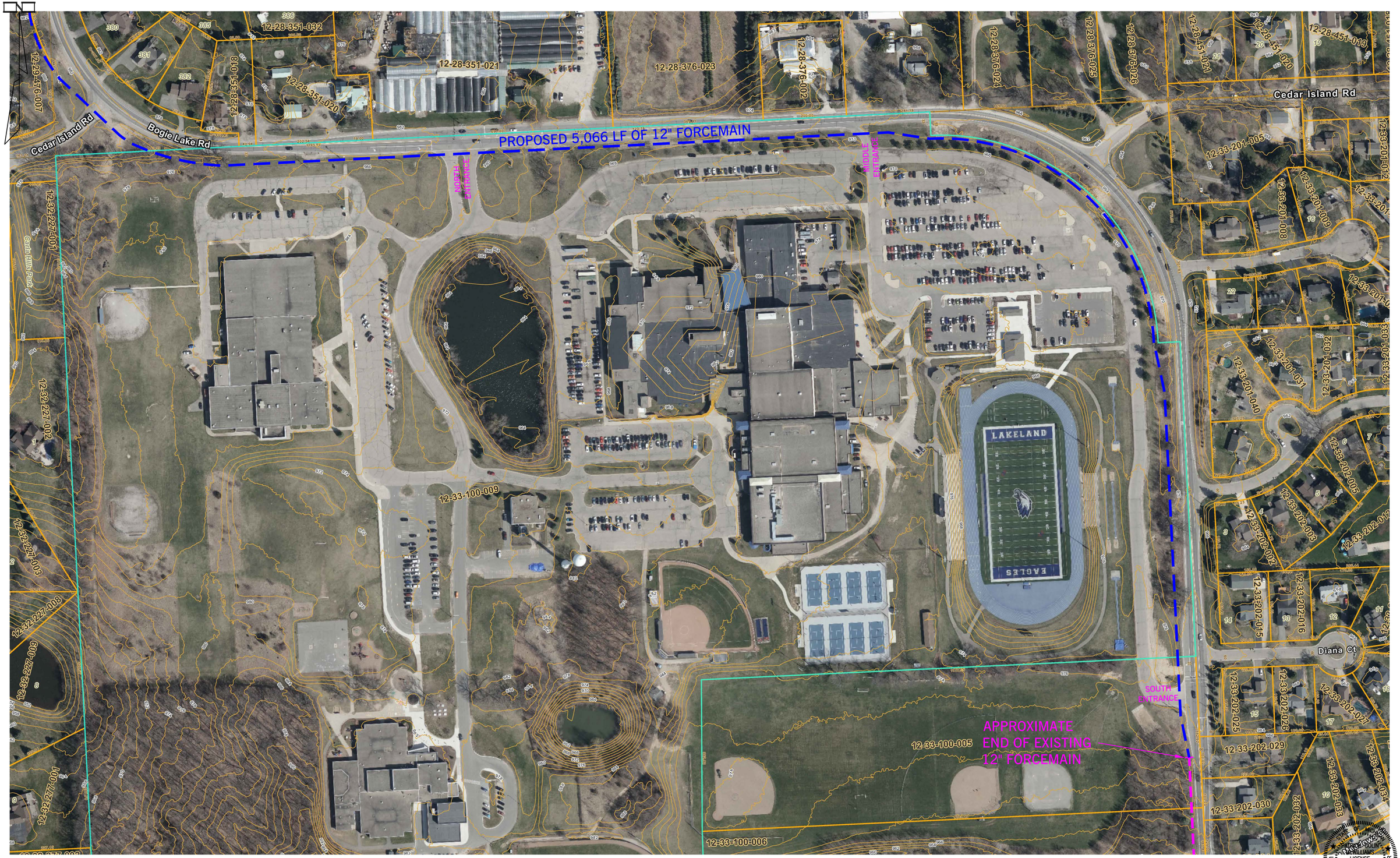
72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG (800) 482-7171 OR 811

Detention Basin Calculations & Details "EDENDALE CROSSING" SITE CONDOMINIUM

PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

SCALE N/A
SHEET 11 OF 19
KE 2025.010

G:\2025\019 PH Homes - Bogie & Cedar Island\CAD\Edendale Crossing.dwg, 11 Detention, 3/23/2026 9:02:49 AM, _AutoCAD PDF (High Quality Print MOD).pc3



DATE	ISSUE
9-19-2025	PER DLZ (8-26-2025)
10-29-2025	PER ROCK MEETING (10-27-2025) & DLZ (10-15-2025)
3-23-2026	PER TOWNSHIP BOARD MEETING (2-17-26) & DLZ (1-8-26)

PROPRIETOR:
PH COMMUNITIES, LLC
8255 CASCADE AVENUE, SUITE 110
COMMERCE TOWNSHIP, MICHIGAN 48382
(248) 242-6838

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DATE	7-2-2025	CKD. BY DATE
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DESIGN	PCM	
SECTION	29	T- 3 -N. R- 8 -E.

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG (800) 482-7171 OR 811

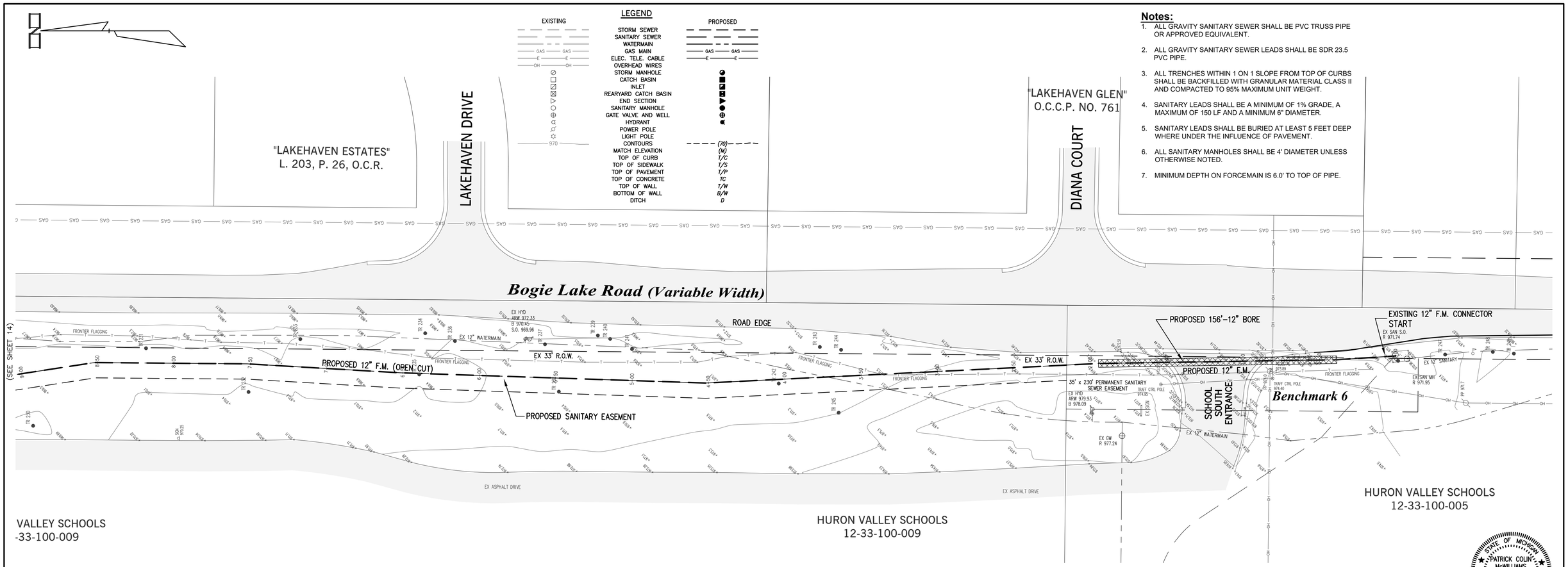
Off-Site Sanitary Forcemain Plan - Overall

"EDENDALE CROSSING" SITE CONDOMINIUM
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

SCALE	1" = 100'
SHEET	12 OF 19
KE	2025.010

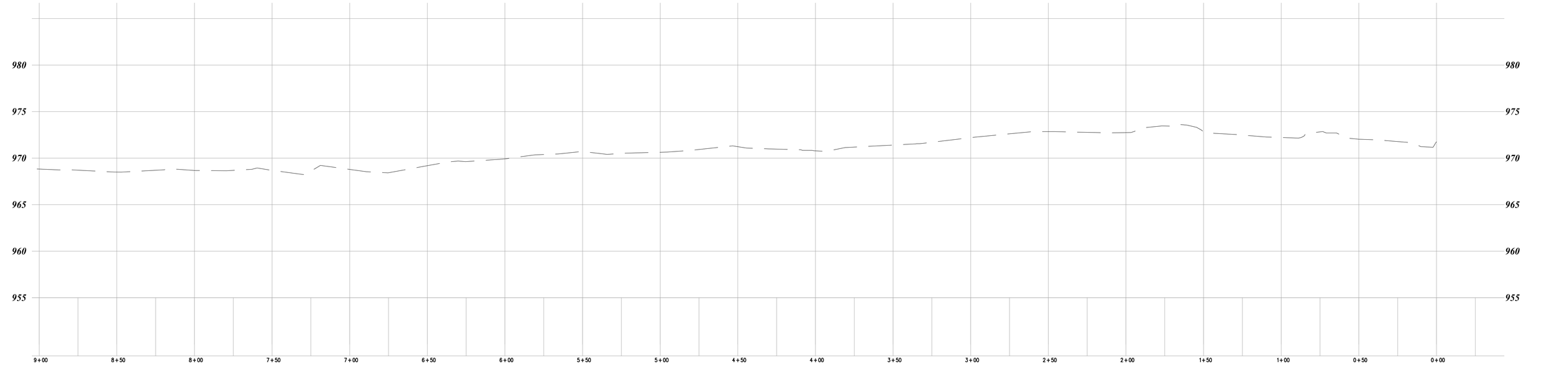
STATE OF MICHIGAN PATRICK MOUNT WILLIAMS LICENSED PROFESSIONAL ENGINEER LICENSE NO. 6201031658

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Notes:

1. ALL GRAVITY SANITARY SEWER SHALL BE PVC TRUSS PIPE OR APPROVED EQUIVALENT.
2. ALL GRAVITY SANITARY SEWER LEADS SHALL BE SDR 23.5 PVC PIPE.
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7. MINIMUM DEPTH ON FORCEMAIN IS 6.0' TO TOP OF PIPE.



STATE OF MICHIGAN
PATRICK COLIN McWILLIAMS
LICENSE NO. 6201031658
REGISTERED PROFESSIONAL ENGINEER

DATE	ISSUE
9-19-2025	PER DLZ (8-26-2025)
10-29-2025	PER RCOC MEETING (10-27-2025) & DLZ (10-15-2025)
2-23-2026	PER TOWNSHIP BOARD MEETING (2-17-26) & DLZ (1-8-26)

PROPRIETOR:
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COMMERCE TOWNSHIP, MICHIGAN 48382
(248) 242-6838

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DATE	7-2-2025
DRAWN	GF
DESIGN	PCM
SECTION	29

CKD. BY | DATE

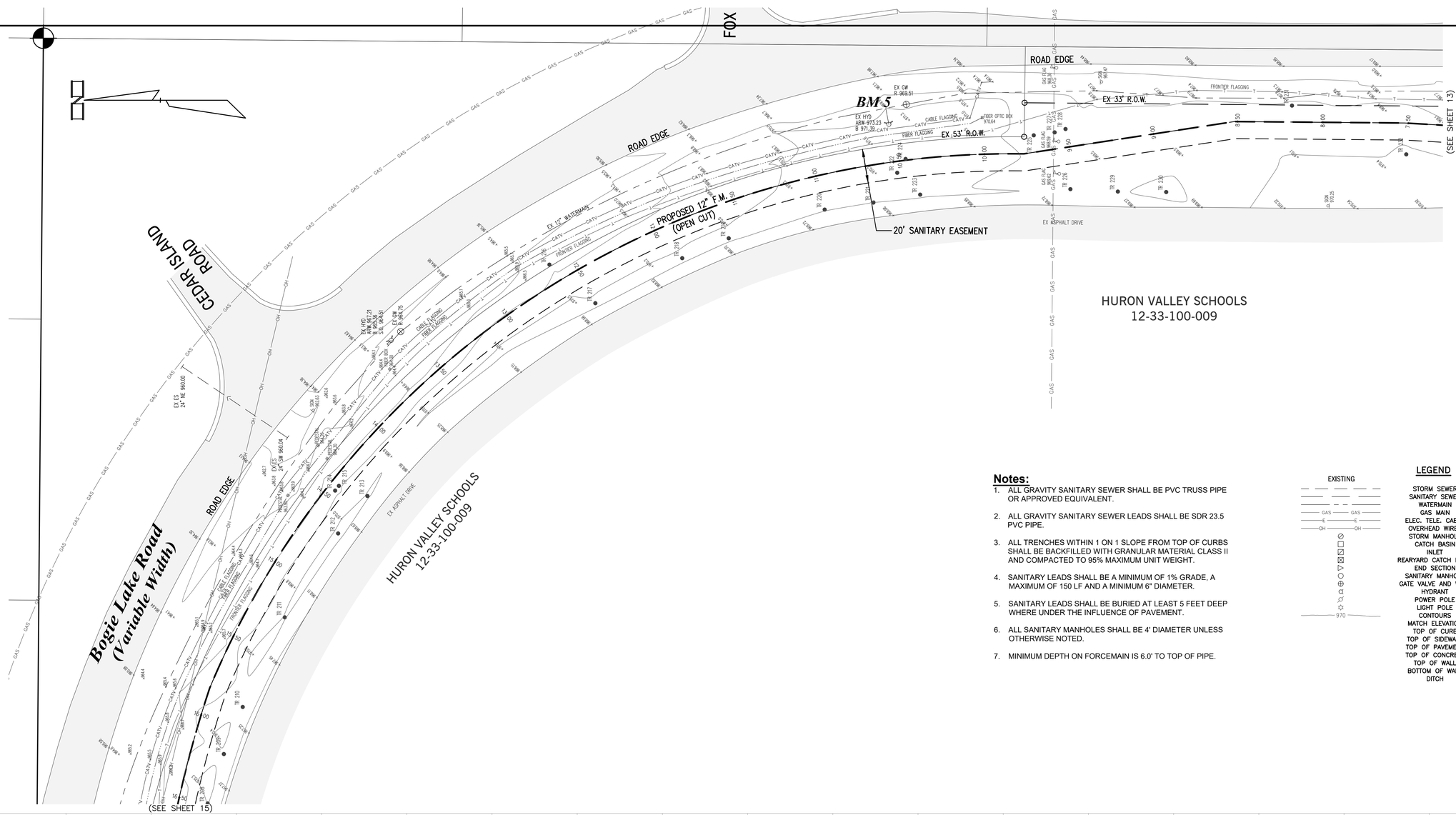
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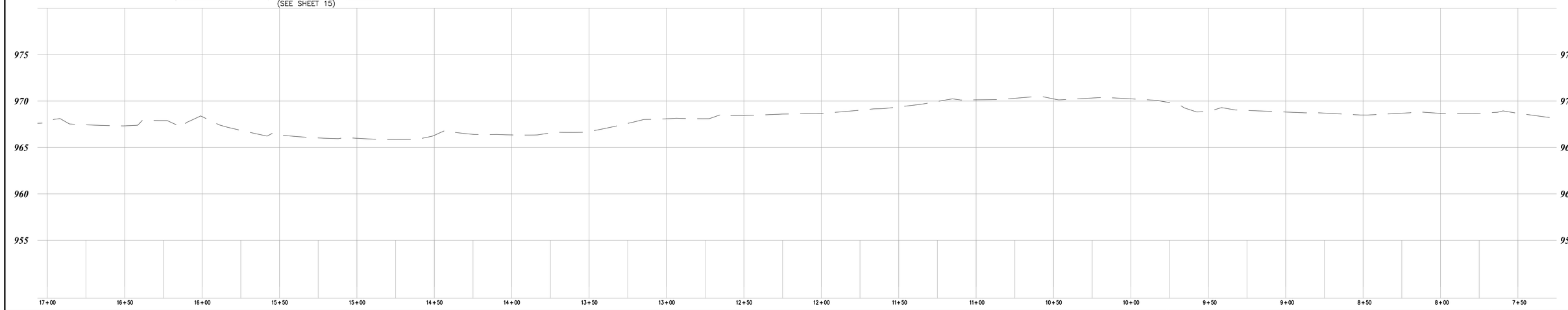
72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG (800) 482-7171 OR 811

Off-Site Sanitary Forcemain Plan - South Connection
"EDENDALE CROSSING" SITE CONDOMINIUM
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

SCALE 1" = 30'
SHEET 13 OF 19
KE 2025.010

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7. MINIMUM DEPTH ON FORCEMAIN IS 6.0' TO TOP OF PIPE.

LEGEND

EXISTING		PROPOSED
	STORM SEWER	
	SANITARY SEWER	
	WATERMAIN	
GAS GAS	GAS MAIN	GAS GAS
E E	ELEC. TELE. CABLE	E E
OH OH	OVERHEAD WIRES	
⊘	STORM MANHOLE	
□	CATCH BASIN	
⊠	INLET	
▽	REARYARD CATCH BASIN	
▷	END SECTION	
○	SANITARY MANHOLE	
⊕	GATE VALVE AND WELL	
☆	HYDRANT	
☼	POWER POLE	
☼	LIGHT POLE	
970	CONTOURS	(70)
	MATCH ELEVATION	(M)
	TOP OF CURB	T/C
	TOP OF SIDEWALK	T/S
	TOP OF PAVEMENT	T/P
	TOP OF CONCRETE	TC
	TOP OF WALL	T/W
	BOTTOM OF WALL	B/W
	DITCH	D

STATE OF MICHIGAN
PATRICK COLIN McWILLIAMS
LICENSE NO. 6201031658
LICENSED PROFESSIONAL ENGINEER

DATE	ISSUE
9-19-2025	PER DLZ (8-26-2025)
10-29-2025	PER RCOC MEETING (10-27-2025) & DLZ (10-15-2025)
3-23-2026	PER TOWNSHIP BOARD MEETING (2-17-26) & DLZ (1-8-26)

PROPRIETOR:
PH COMMUNITIES, LLC
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(248) 242-6838

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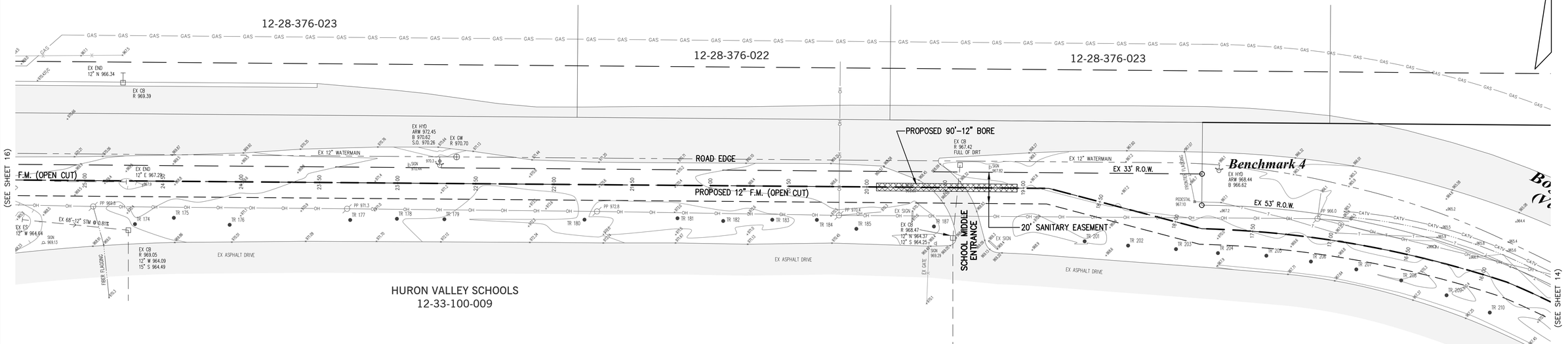
DATE	CKD. BY	DATE
7-2-2025		
GF		
PCM		
29	T- 3 -N. R- 8 -E.	

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Off-Site Sanitary Forcemain Plan
"EDENDALE CROSSING" SITE CONDOMINIUM
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

SCALE 1" = 30'
SHEET 14 OF 19
KE 2025.010

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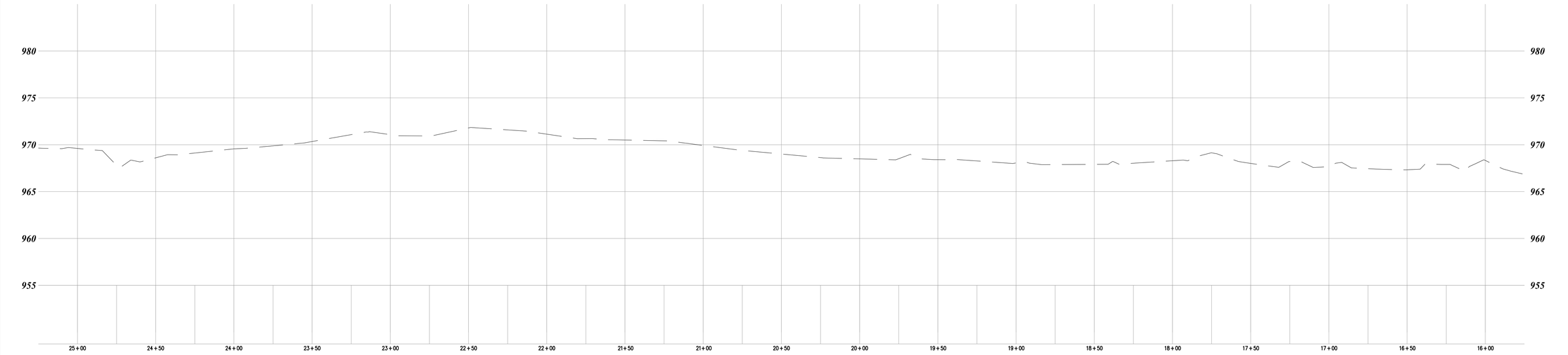
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LEGEND

EXISTING		PROPOSED
	STORM SEWER	
	SANITARY SEWER	
	WATERMAIN	
GAS GAS	GAS MAIN	GAS GAS
E E	ELEC. TELE. CABLE	E E
OH OH	OVERHEAD WIRES	
⊘	STORM MANHOLE	◕
□	CATCH BASIN	■
⊠	INLET	◪
⊠	REARYARD CATCH BASIN	◪
▷	END SECTION	▶
○	SANITARY MANHOLE	●
⊕	GATE VALVE AND WELL	⊕
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☼	LIGHT POLE	
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	TOP OF CURB	T/C
	TOP OF SIDEWALK	T/S
	TOP OF PAVEMENT	T/P
	TOP OF CONCRETE	TC
	TOP OF WALL	T/W
	BOTTOM OF WALL	B/W
	DITCH	D

STATE OF MICHIGAN
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LICENSE NO. 6201031658
REGISTERED PROFESSIONAL ENGINEER



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(248) 242-6838

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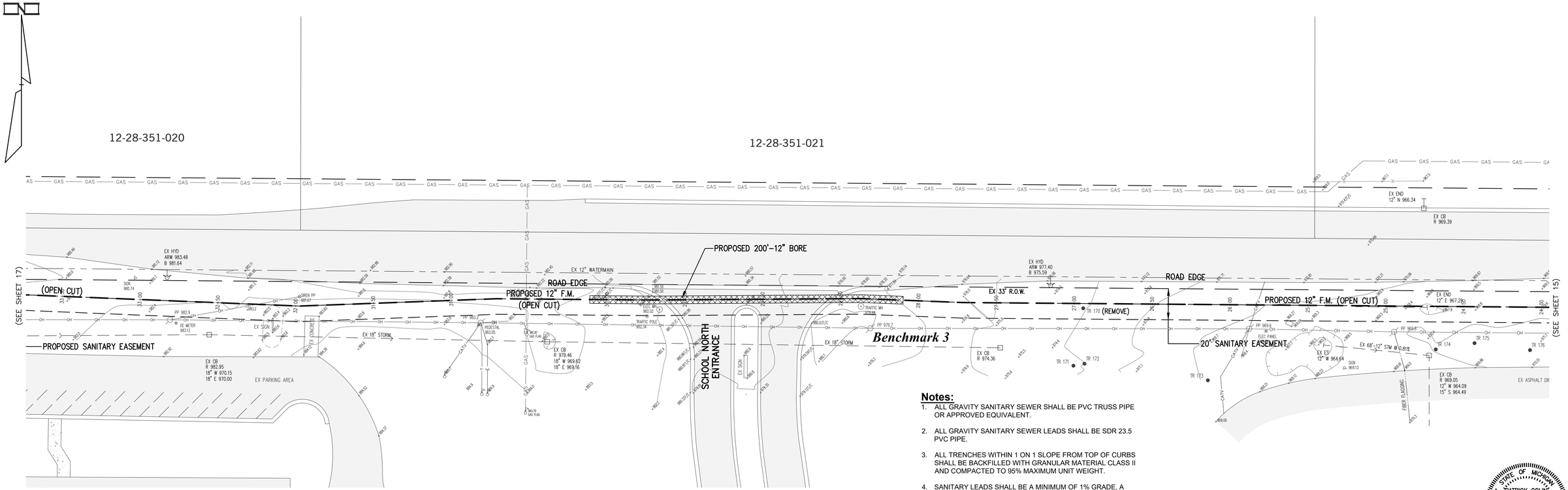
DATE 7-2-2025	CKD. BY	DATE
DRAWN GF		
DESIGN PCM		
SECTION 29	T- 3 -N. R- 8 -E.	

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG (800) 482-7171 OR 811

Off-Site Sanitary Forcemain Plan
"EDENDALE CROSSING" SITE CONDOMINIUM
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

SCALE 1" = 30'
SHEET 15 OF 19
KE 2025.010

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STATE OF MICHIGAN
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LICENSE NO. 6201031658
LICENSED PROFESSIONAL ENGINEER

DATE	ISSUE
9-19-2025	PER DLZ (8-26-2025)
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DATE	7-2-2025	CKD. BY	DATE
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DESIGN	PCM		
SECTION	29	T- 3 -N. R- 8 -E.	

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Off-Site Sanitary Forcemain Plan
"EDENDALE CROSSING" SITE CONDOMINIUM
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

SCALE 1" = 30'
SHEET 16 OF 19
KE 2025.010

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(SEE SHEET 18)

Notes:

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LOT 380
12-28-351-026

LOT 381
12-28-351-027

LOT 382
12-28-351-028

12-28-351-020

12-28-351-018

SKARRITT TRUST
12-29-476-007

PARCEL NO.
12-29-476-007

PROPOSED SANITARY FORCEMAIN EASEMENT TO BE OBTAINED FROM -007

PROPOSED 253'-12" BORE

PROPOSED 12" F.M.

CEDAR ISLAND ROAD

EX. R.O.W.

EX. 33' R.O.W.

(OPEN CUT)

PROPOSED SANITARY EASEMENT

ROAD EDGE

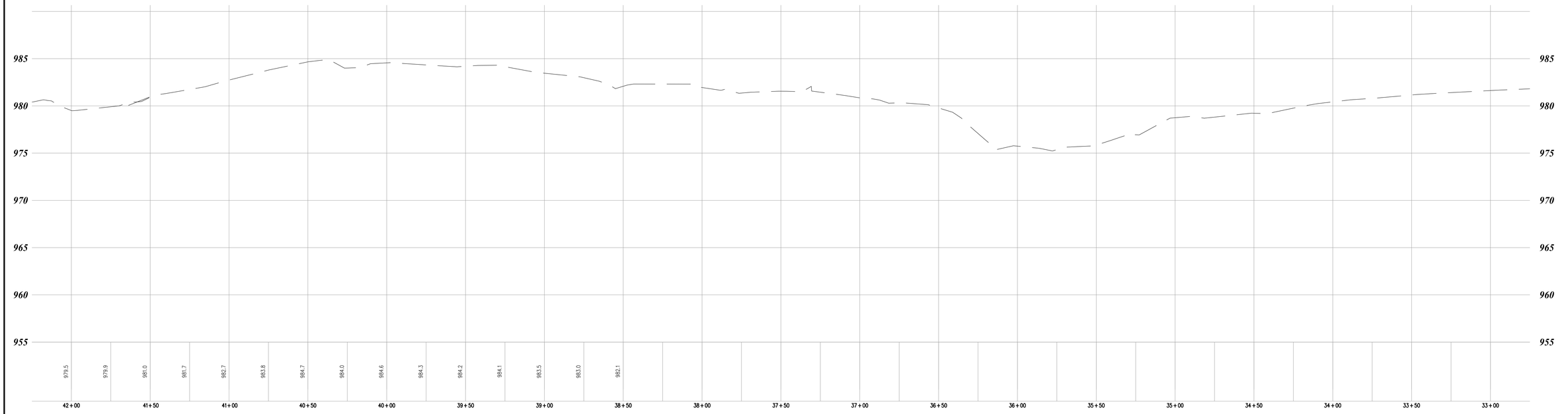
EX. GARAGE
F.F. 957.63

EX. PARKING AREA

PROPOSED END
24" S 975.30

PROPOSED 8' SAFETY PATH CONNECTION TO HURON VALLEY SCHOOL PARKING LOT
NOTE:
SIDEWALK WILL LEAD FROM BOGIE LAKE ROAD / CEDAR ISLAND ROAD INTERSECTION TO SCHOOL PROPERTY AND FINAL LOCATION AND CONNECTION POINT TO BE COORDINATED WITH HURON VALLEY SCHOOL DISTRCIT

(SEE SHEET 16)



DATE	ISSUE
9-19-2025	PER DLZ (8-26-2025)
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Off-Site Sanitary Forcemain Plan
"EDENDALE CROSSING" SITE CONDOMINIUM

PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

SCALE	1" = 30'
SHEET	17 OF 19
	KE 2025.010

STATE OF MICHIGAN
PATRICK COLIN McWILLIAMS
LICENSE NO. 6201031658
LICENSED PROFESSIONAL ENGINEER

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AUTUMN GIBSON & RYAN GAVIN
LOT 371
12-28-351-004

"LAKEWOOD VILLAGE NO. 9"
L. 133, P. 19, O.C.R.

MICHAEL ARQUETTE
LOT 372
12-28-351-005

BRIAN SIMMONS
LOT 373
12-28-351-006

ALEXANDER BRAJNIKOV
LOT 374
12-28-351-007

THOMAS & DONNA WRATHELL
LOT 375
12-28-351-008

ANTHONY & GRACE MADAFFER
LOT 376
12-28-351-009

"LAKEWOOD VILLAGE NO. 10"
L. 200, P. 16, O.C.R.

AMY MILLS
LOT 377
12-28-351-023

MAXWELL KLEPECK
LOT 378
12-28-351-024

LOT 379
12-28-351-025

CB-1
R 962.40
36" N 952.77
36" S 952.87

CB-2
R 963.80
36" N 953.84
36" S 953.94

CB-3
R 965.00
36" N 954.74
36" S 954.84

CB-4
R 968.00
36" N 955.76
36" S 955.86

CB-5
R 970.00
36" N 956.51
36" S 956.61

CB-6
R 974.00
36" N 957.18
36" W 957.28

Bogie Lake Road (Variable Width)

RIGHT TURN LANE
NORTHBOUND LANE
CENTER TURN LANE
SOUTHBOUND LANE
150' CENTER TURN LANE
300' CENTER TURN LANE TAPER
500' REQUIRED SIGHT DISTANCE
EX 12" WATERMAIN
FRONTIER FLAGGING
EX 33' R.O.W.
(SEE SHEET 17)

PROPOSED 12" F.M.
PROPOSED 12" F.M. (OPEN CUT)
(OPEN CUT)
PROPOSED SANITARY FORCEMAIN EASEMENT TO BE OBTAINED FROM -007

6' CONCRETE SIDEWALK
PROPOSED 6' SIDEWALK

Edendale Lane

8' x 5' CONCRETE CONTROL PANEL PAD 971.00
VALVE VAULT FG 970.00
PUMP STATION FG 971.00
6' x 6' CONCRETE TRANSFORMER PAD (971.00)
14' x 6' CONCRETE GENERATOR PAD (971.00)
SERVICE DRIVE
10' EASEMENT FOR PUBLIC UTILITIES

MH-101
R 969.50
8" N 956.00
8" SW 956.13

MH-102
R 967.80
8" NE 956.60
8" W 956.70

CB-7
R 966.74

RELOCATED HY-4 B 969.30

OVERFLOW MH-2
R 965.50
36" E 958.50
36" SW 960.18

PRETREATMENT MH-3
R 967.00

OUTLET CONTROL STANDPIPE SO-2
R 965.30, 5' DIA.
W/BARGRATE COVER

ES-2
15" SW 961.00

20' SANITARY EASEMENT

SKARRITT TRUST
12-29-476-007

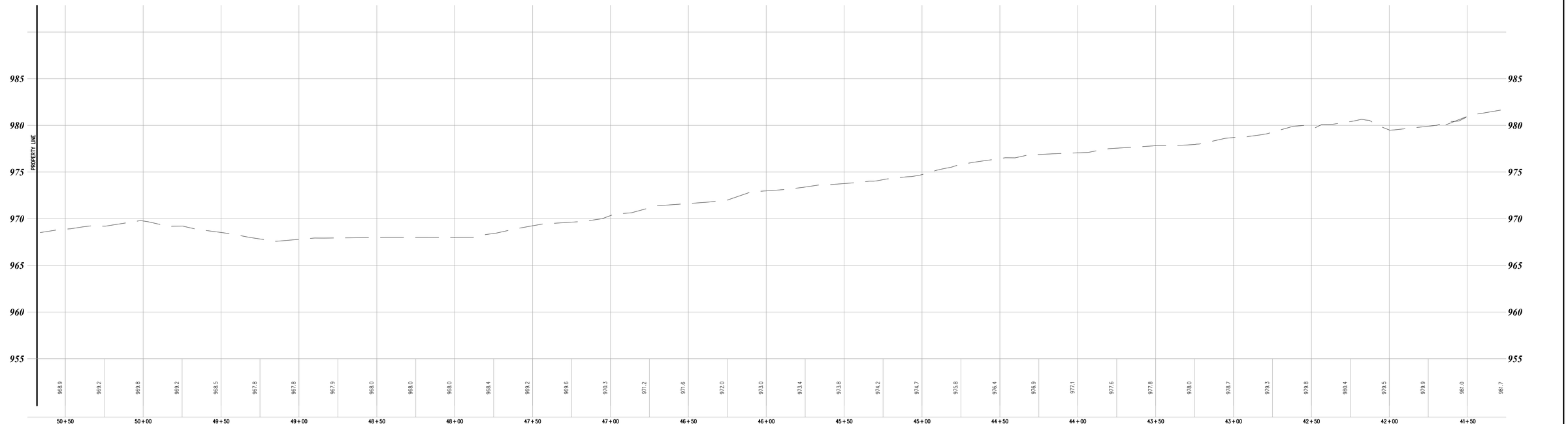
O.C.W.R.C. 100 YEAR DETENTION BASIN
100 YEAR DESIGN PCM ELEVATION = 965.00
1' FREEBOARD ELEVATION = 966.00
BOTTOM ELEVATION = 960.00

PERFORATED PIPE W/6A STONE

Notes:

1. ALL GRAVITY SANITARY SEWER SHALL BE PVC TRUSS PIPE OR APPROVED EQUIVALENT.
2. ALL GRAVITY SANITARY SEWER LEADS SHALL BE SDR 23.5 PVC PIPE.
3. ALL TRENCHES WITHIN 1 ON 1 SLOPE FROM TOP OF CURBS SHALL BE BACKFILLED WITH GRANULAR MATERIAL CLASS II AND COMPACTED TO 95% MAXIMUM UNIT WEIGHT.
4. SANITARY LEADS SHALL BE A MINIMUM OF 1% GRADE, A MAXIMUM OF 150 LF AND A MINIMUM 6" DIAMETER.
5. SANITARY LEADS SHALL BE BURIED AT LEAST 5 FEET DEEP WHERE UNDER THE INFLUENCE OF PAVEMENT.
6. ALL SANITARY MANHOLES SHALL BE 4' DIAMETER UNLESS OTHERWISE NOTED.
7. MINIMUM DEPTH ON FORCEMAIN IS 6.0' TO TOP OF PIPE.

STATE OF MICHIGAN
PATRICK COLIN McWILLIAMS
LICENSE NO. 6201031658
PROFESSIONAL ENGINEER



DATE	ISSUE
9-19-2025	PER DLZ (8-26-2025)
10-29-2025	PER BROC MEETING (10-27-2025) & DLZ (10-15-2025)
11-12-2025	REVISED PER CLIENT/PLANNER-62' WIDE UNITS (11-7-2025)
12-18-2025	REVISED PER P.C. MEETING (12-4-25) & CLIENT (12-12-25)
3-23-2026	PER TOWNSHIP BOARD MEETING (2-17-26) & DLZ (1-8-26)

PROPRIETOR:
PH COMMUNITIES, LLC
8255 CASCADE AVENUE, SUITE 110
COMMERCE TOWNSHIP, MICHIGAN 48382
(248) 242-6838

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PROFESSIONAL ENGINEERS AND PROFESSIONAL SURVEYORS
5852 SOUTH MAIN STREET, SUITE 1, CLARKSTON, MICHIGAN 48346
PHONE (248) 625-5251 www.kiefteng.com FAX (248) 625-7110

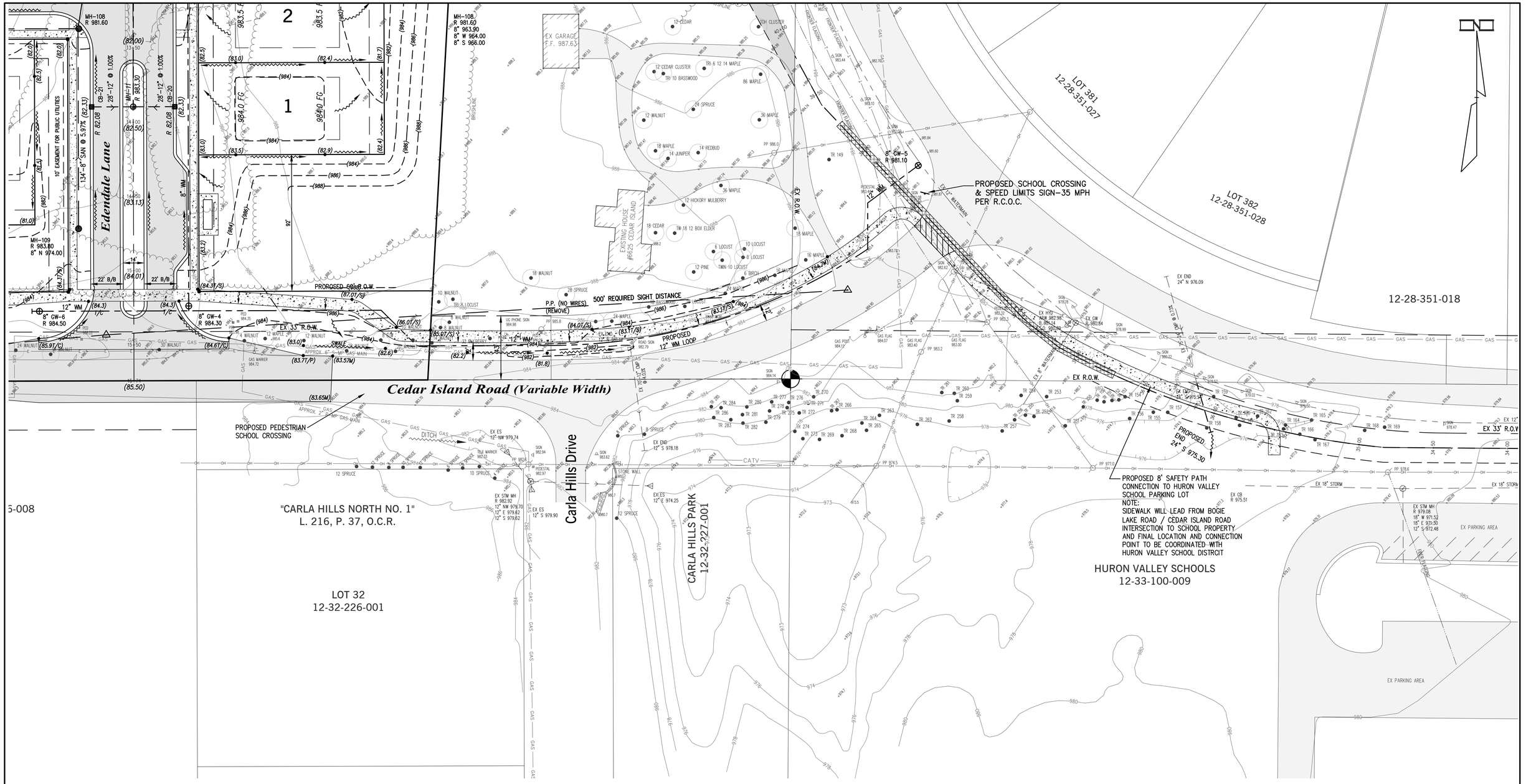
DATE	CKD. BY	DATE
DRAWN GF		
DESIGN PCM		
SECTION 29	T- 3 -N. R- 8 -E.	

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG (800) 482-7171 OR 811

Off-Site Sanitary Forcemain Plan - North Pump Station & Tree Chart
"EDENDALE CROSSING" SITE CONDOMINIUM
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

SCALE 1" = 30'
SHEET 18 OF 19
KE 2025.010

G:\2025\010 PH Homes - Bogie & Cedar Island\CAD\Edendale Crossing.dwg, 18 FM, 3/23/2026 9:03:25 AM, _AutoCAD PDF (High Quality Print MOD).pc3



DATE	ISSUE
9-19-2025	PER DLZ (8-26-2025)
10-29-2025	PER RCOC MEETING (10-27-2025) & DLZ (10-15-2025)
11-12-2025	REVISED PER CLIENT/PLANNER-62 WIDE UNITS (11-7-2025)
12-18-2025	REVISED PER PC MEETING (12-4-25) & CLIENT (12-12-25)
3-23-2026	PER TOWNSHIP BOARD MEETING (2-17-26) & DLZ (1-8-26)

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DATE	CKD. BY	DATE
DRAWN GF		
DESIGN PCM		
SECTION 29	T- 3 -N. R- 8 -E.	

72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG (800) 482-7171 OR 811

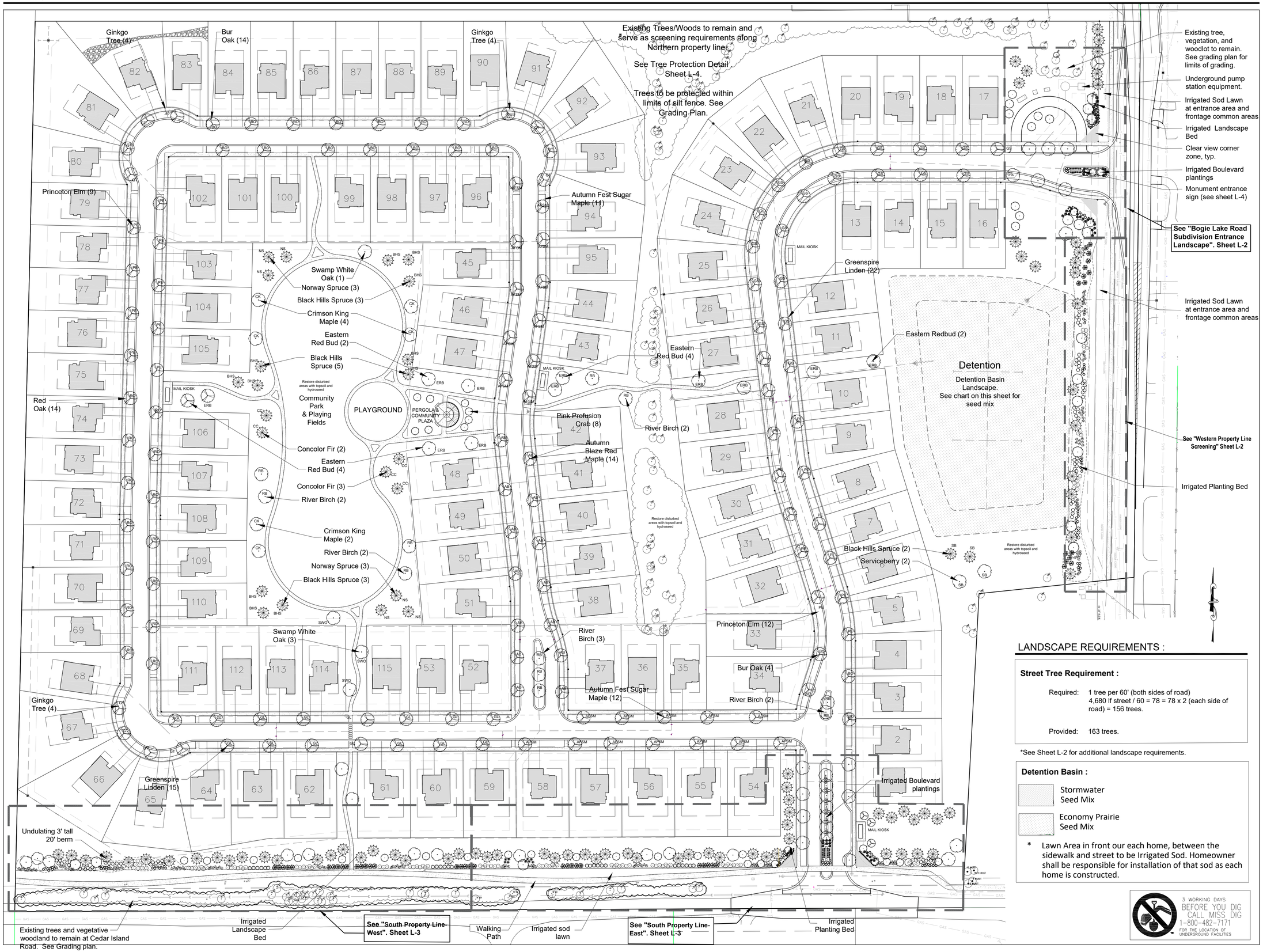
Cedar Island & White Lake Middle School Sidewalk Plan
"EDENDALE CROSSING" SITE CONDOMINIUM
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

SCALE 1" = 30'
SHEET 19 OF 19
KE 2025.010

G:\2025\010 PH Homes - Bogie & Cedar Island\CAD\Edendale Crossing.dwg, 19 SW plan, 3/23/2026 9:03:30 AM, _AutoCAD PDF (High Quality Print MOD).pc3

LANDSCAPE PLAN :

Scale: 1" = 60'



LANDSCAPE REQUIREMENTS :

Street Tree Requirement :

Required: 1 tree per 60' (both sides of road)
4,680 lf street / 60 = 78 = 78 x 2 (each side of road) = 156 trees.

Provided: 163 trees.

*See Sheet L-2 for additional landscape requirements.

Detention Basin :

Stormwater Seed Mix

Economy Prairie Seed Mix

* Lawn Area in front our each home, between the sidewalk and street to be Irrigated Sod. Homeowner shall be responsible for installation of that sod as each home is constructed.

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STATE OF MICHIGAN
REGISTERED LANDSCAPE ARCHITECT
JAMES T. EPPINK
LANDSCAPE ARCHITECT
No. 1309

J EPPINK PARTNERS, INC
Urban Design Studio
Landscape Architecture
Traditional Town Planning
27 Squirrel Road
Suite 104
Auburn Hills, MI 48326
248.922.0789

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Project:

Edendale Crossing

Bogie Lake Road
White Lake Township, MI

Owner:

PH Homes

8255 Cascade Ave
Suite 110
Commerce Twp, MI 48382
248-242-6838

Sheet:

Common Area Landscape Plan

Issues / Revisions

Final Site Plan	04-01-26

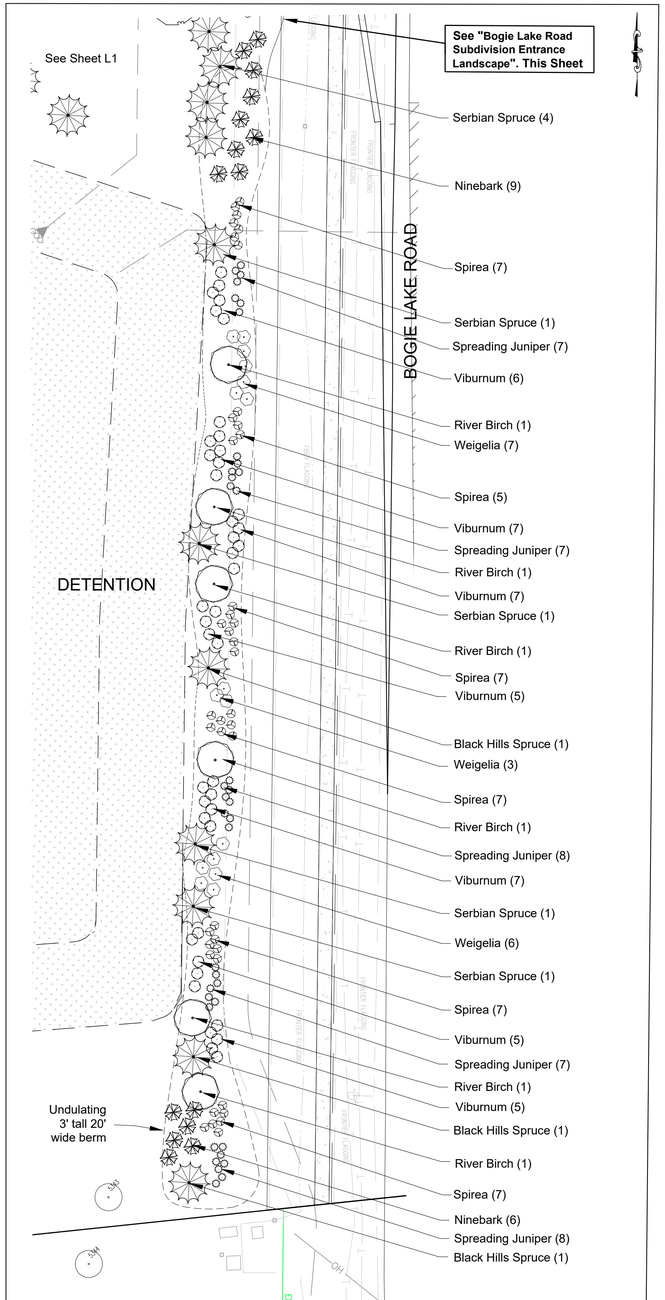
Drawn by: LP
Checked By: JTE
Date: April 1, 2026
Scale: As Noted

Not for Construction

Sheet: L-1

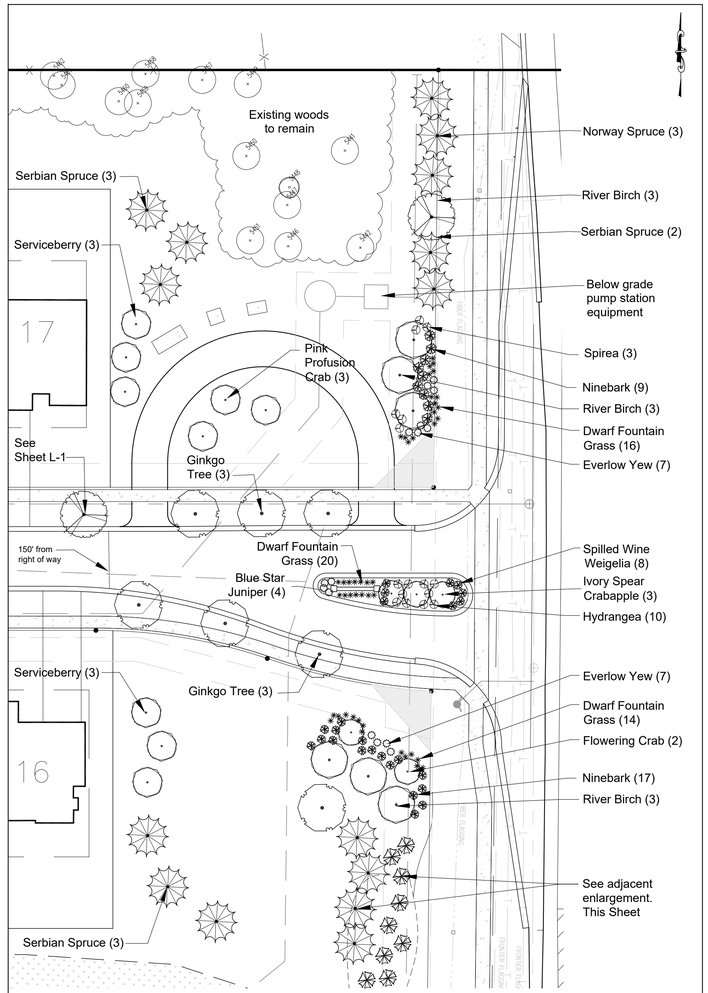
LANDSCAPE PLAN : Western Property Line Screening

Scale: 1" = 30'



LANDSCAPE PLAN : Bogie Lake Road Subdivision Entrance Landscape

Scale: 1" = 20'



Bogie Lake Entrance Drive Calculations: See landscape requirements and landscape provided in adjacent chart : this page. (Bogie Lake entrance exceeds Twp landscape requirements)

LANDSCAPE REQUIREMENTS :

Residential Entranceway Landscape Calculations :

Township Standard: Section 5.19.F

Area of Coverage: First 150' of Entrance Drive

Requirement: 1 tree and 3 shrubs per each 300sf of area

Bogie Lake Road Entrance :

North Side of Bogie Lake Road :

Area: 1,265 sf
1,265 \ 300 = 4.2 = 4

Trees: 4 x 1 = 4
4 Trees Required
6 Trees Provided

Shrubs: 5 x 3 = 15
15 Shrubs Required
22 Shrubs Provided
within entrance planting area.

South Side of Bogie Lake Road :

Area: 824 sf
824 \ 300 = 2.7 = 3

Trees: 3 x 1 = 3
3 Trees Required
8 Trees Provided

Shrubs: 3 x 3 = 9
9 Shrubs Required
21 Shrubs Provided
within entrance planting area.

Bogie Lake Road Entrance Island:

Area: 947 sf
947 \ 300 = 3

Shrubs: 4 x 3 = 12

Trees: 3 x 1 = 3
3 Trees Required
3 Trees Provided

Shrubs: 12 Shrubs Required
19 Shrubs Provided

Cedar Island Road Entrance :

East Side of Cedar Island Road :

Area: 1,736 sf
1,736 \ 300 = 5.7 = 6

Trees: 6x 1 = 6
6 Trees Required
6 Trees Provided

Shrubs: 6 x 3 = 18
18 Shrubs Required
18 Shrubs Provided

West Side of Cedar Island Road :

Area: 2082 sf
2,082 \ 300 = 6.9 =7

Trees: 7 x 1 = 7
7 Trees Required
10 Trees Provided

Shrubs: 7 x 3 = 21
21 Shrubs Required
21 Shrubs Provided

Cedar Island Road Entrance Island:

Area: 2,172 sf
2,172 \ 300 = 7.2 = 8

Trees: 8 x 1 = 8
8 Trees Required
7 Trees Provided

Shrubs: 4 x 3 = 12
12 Shrubs Required
35 Shrubs Provided

*Remaining 1 required trees to be planted along the sides of the road due to spacing constraints in boulevard

Landscape Screening Between Uses Calculations :

Township Standard: Section 5.19.D

Area of Coverage: North, South, East, & Western Boundaries

Requirement: Land Form Buffer (A-2): A 20'-wide, 3'-tall berm with a 3:1 slope max. 1 large deciduous tree + 1 large evergreen tree + 8 shrubs per every 30'.

Northern Property Line : 1,550 lin ft.

Calculation: 1,550 / 30 = 51.6 = 52
"A2" greenbelt required

Required: 52 Deciduous trees
52 Evergreen trees
416 Shrubs

Provided: 56 existing trees and surrounding dense vegetation woodlot to remain and serve as required northern screening. The western portion of the northern boundary is adjacent to the cell-phone tower and the home sites were deliberately moved, at the direction of the Planning Commission, to the north in order to create a larger buffer at Cedar Island.

Waiver Request: Waiver requested at northern boundary to permit existing trees and vegetation to count as vegetative buffer because adjacent property is occupied by a commercial green house and cell tower.

Western Property Line : 1,230 lin ft. (adjacent to AG ITC corridor)

Calculation: 1,230/ 30 = 41
"A2" greenbelt required

Required: 41 Deciduous trees
41 Evergreen trees
328 Shrubs

Provided: No trees or shrubs are proposed along the western boundary. The western boundary is adjacent to the ITC corridor (240' wide) and the existing homes to the west are significantly up hill. The home sites along the western boundary were deliberately moved, at the direction of the Planning Commission, to the west in order to create a larger buffer at Bogie Lake.

Waiver Request: Waiver requested at western boundary omit landscape buffer adjacent to the 240' wide ITC corridor.

Eastern Property Line : 685 lin ft. (Right-of-Way)

Calculation: 685 / 30 = 22.8 = 23

Required: 23 Trees
184 Shrubs
20' wide greenbelt required

Provided: 32 Trees
186 Shrubs
75' - 225' wide greenbelt provided

NO Waiver Requested at Eastern boundary

Southern Property Line : 1,320 lin ft. (Right-of-Way)

Calculation: 1,320 / 30 = 44

Required: 44 Trees
352 Shrubs
20' wide greenbelt required

Provided: 88 Deciduous & Evergreen Trees
369 Shrubs
45' wide greenbelt provided

NO Waiver Requested at Southern boundary

Existing Trees to Remian :

474 Existing trees, 6" dbh or greater, have been located on site

128 Existing trees, 6" dbh or greater, are proposed to remain on site

Additional smaller, non-regulated trees, buffers, and natural vegetative growth and shrubby areas will remain on site within the central natural preservation areas of the neighborhood and adjacent to the Cedar Island Road frontage. The preservation areas are intended to be a community benefit for the preservation of woodland canopy, natural buffering along Cedar Island Road, and a continuous, regional natural habitat for wildlife.

STATE OF MICHIGAN
JAMES T. EPPINK LANDSCAPE ARCHITECT No. 1309
REGISTERED LANDSCAPE ARCHITECT

J EPPINK PARTNERS, INC
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Traditional Town Planning
27 Squirrel Road
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248.922.0789

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Project:

Edendale Crossing

Bogie Lake Road
White Lake Township, MI

Owner:

PH Homes

8255 Cascade Ave
Suite 110
Commerce Twp, MI 48382
248-242-6838

Sheet:

Landscape Plan-Entrance & Screening Areas

Issues / Revisions

Final Site Plan	04-01-26

Drawn by: LP

Checked By: JTE

Date: April 1, 2026

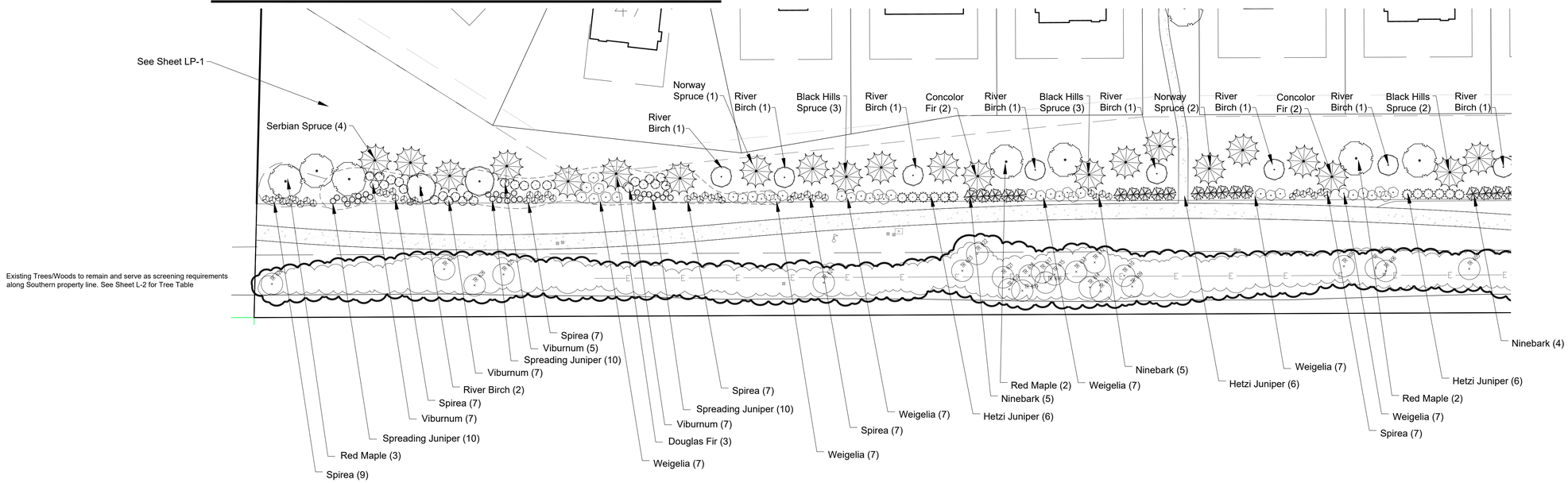
Scale: As Noted

Not for Construction

Sheet: L-2

LANDSCAPE PLAN : South Property Line- West

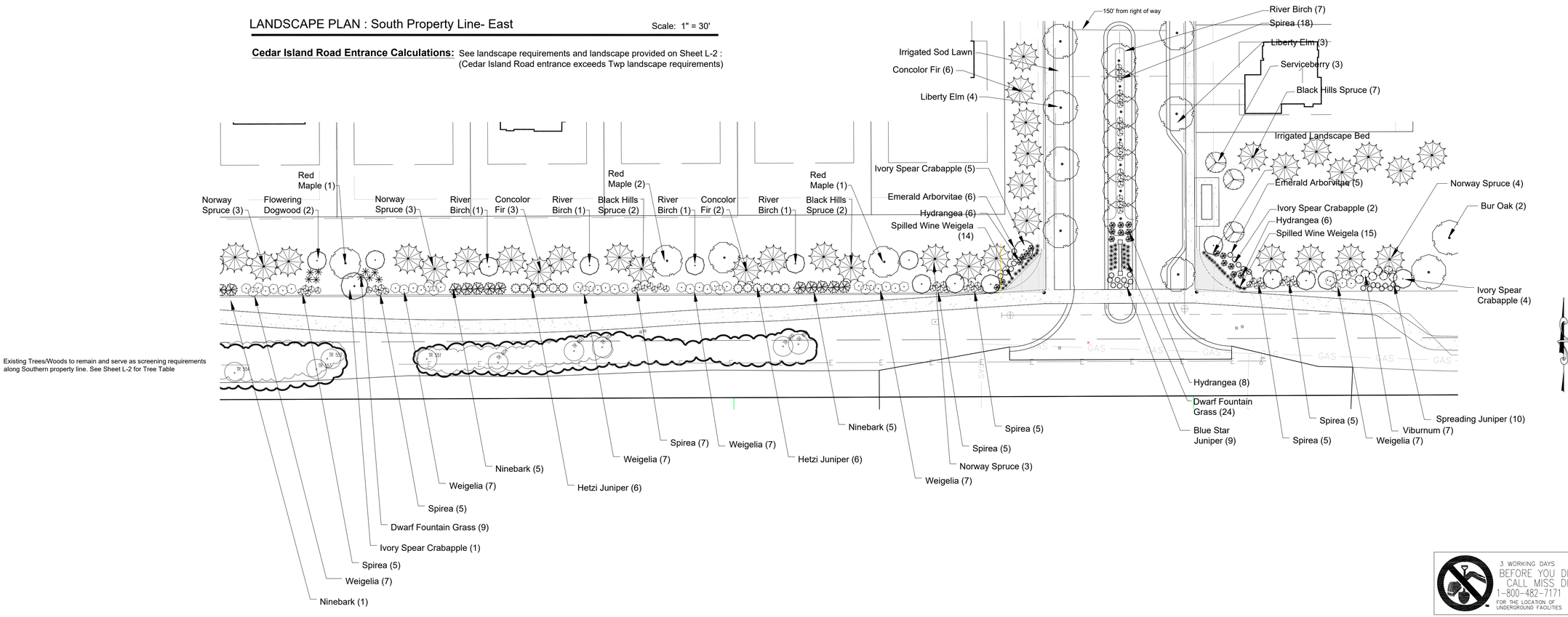
Scale: 1" = 30'



LANDSCAPE PLAN : South Property Line- East

Scale: 1" = 30'

Cedar Island Road Entrance Calculations: See landscape requirements and landscape provided on Sheet L-2 : (Cedar Island Road entrance exceeds Twp landscape requirements)



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STATE OF MICHIGAN
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JAMES T. EPPINK
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Edendale Crossing

Bogie Lake Road
White Lake Township, MI

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8255 Cascade Ave
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248-242-6838

Sheet:

Landscape Plan-Entrance & Screening Areas

Issues / Revisions

Final Site Plan	04-01-26

Drawn by: LP

Checked By: JTE

Date: April 1, 2026

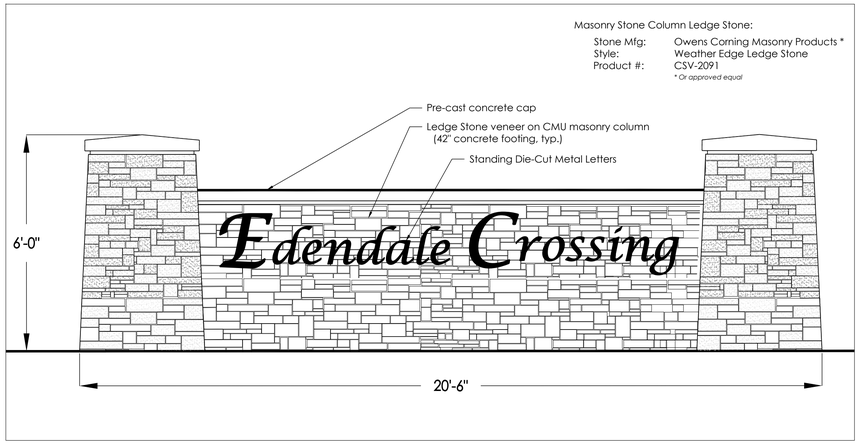
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Not for Construction

Sheet: L-3

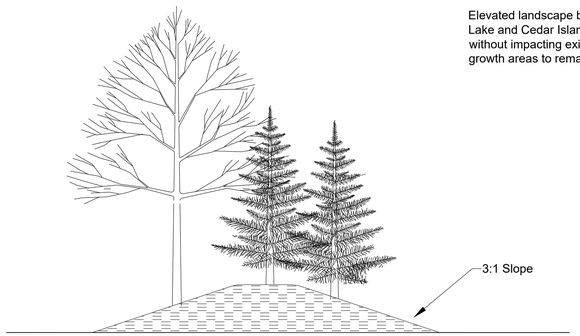
ENTRANCE MONUMENT SIGN (BOGIE LAKE ROAD & CEDAR ISLAND ROAD):

SCALE: 1" = 2'



LANDSCAPE PLAN : Berm Cross Section

Scale: Not to Scale



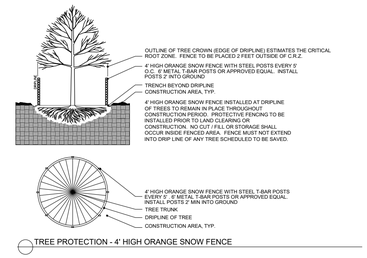
PLANTING LIST :

Quant	Description	Size/Root
16	Abies Concolor Concolor Fir	7' / B&B
6	Acer platanoides 'Crimson King' Crimson King Maple	2.5" / B&B
25	Acer Rubrum Red Maple 'Autumn Blaze'	2.2" / B&B
34	Acer saccharum 'JFS-KW8" Autumn Fest Maple	2.2" / B&B
11	Amalanchier arborea Serviceberry	7' / B&B
35	Betula nigra River Birch	7' / B&B
12	Cercis canadensis 'Forest Pansy' Forest Pansy Redbud	2" / B&B
2	Cornus florida Flowering dogwood	2" / B&B
18	Ginkgo biloba Ginkgo	2.5" / B&B
11	Malus ' Pink Profusion' Pink Profusion Crabapple	2" / B&B
15	Malus 'Ivory Spear' Ivory Spear Crabapple	2" / B&B
27	Picea glauca densata Black Hills Spruce	7' / B&B
3	Pseudotsuga mensiesii Douglas Fir	7' / B&B
20	Picea omorika Serbian Spruce	7' / B&B
22	Picea abies Norway Spruce	7' / B&B
37	Tilia cordata Greenspire Linden	2.5" / B&B
20	Ulmus americana 'Princeton' Princeton Elm	2.5" / B&B
7	Ulmus americana 'American Liberty' Liberty Elm	2.5" / B&B
20	Quercus macrocarpa Bur Oak	2.5" / B&B
14	Quercus rubra Red Oak	2.5" / B&B
4	Quercus bicolor Swamp White Oak	2.5" / B&B
Shrubs		
25	Hydrangea paniculata 'Little Quickfire' Little Quickfire Hydrangea	#5 / Container
66	Phisocarpus opulifolius 'Diablo' Diablo Ninebark	#5 / Container
94	Weigelia florida 'Bokraspiwi' Spilled Wine Weigla	#2 / Container
28	Weigela florida 'Alexandra' Wine and Roses Weiglea	#3 / Container
14	Taxus densformus 'Everlow' Everlow Yew	36"
11	Thuja occidentalis Emerald Arborvitae	#5 / Container
135	Spiraea x bumalda Anthony Waterer Spirea	#2 / Container
83	Juniperus horizontalis Blue Rug Juniper	#3 / Container
30	Juniperus Hetzi Col. Hetzi Juniper	#5 / Container
80	Viburnum dentatum 'Ralph Senior' Autumn Jazz Viburnum	#2 / Container
14	Juniperus squamata 'Blue Star' Blue Star Juniper	#3 / Container
Perennials		
83	Pennisetum alopecuroides 'Hameln' Dwarf Fountain Grass	#2 / Container

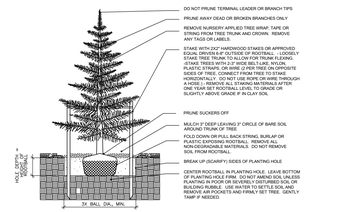
PLANTING NOTES :

1. Contractor shall be responsible for contacting and coordinating with all pertinent utility companies 72 hours in advance of any digging to make themselves familiar with all underground utilities, pipes and structures. Contractor shall take sole responsibility for any cost incurred due to damage of said utilities or structures.
2. Contractor shall not willfully proceed with construction as designed when it is obvious that unknown obstructions and/or grade differences exist. Such conditions shall immediately be brought to the attention of the Owner's Representative. The contractor shall assume full responsibility for all necessary revisions due to failure to give such notification.
3. Any discrepancies between dimensioned layout and actual field conditions shall be reported to the Owner's Representative. Failure to make such discrepancies known will result in contractor's responsibility and liability for any changes and associated costs.
4. Contractor shall be responsible for any coordination with subcontractors as required to accomplish construction installation operations.
5. Contractor shall provide and maintain positive surface drainage.
6. Contractor shall be responsible for any existing materials that are damaged during construction.
7. See Plant & Material List and Planting Details for planting requirements, materials and execution.
8. All trees shall have a clay loam or clay root ball. Trees with sand root balls will not be accepted.
9. All tree varieties and substitutions, or deviations to the landscape plan must be approved prior to installation. Any plant material delivered to site not previously approved may be rejected and are the sole responsibility of the contractor.
10. The contractor shall "water in" and fertilize all plants immediately after planting.
11. Contractor shall install 3" depth Shredded Hardwood Mulch in all shrub and tree planting beds. Peat Moss is to be installed in all perennial flower area. Such beds shall have no shredded mulch, typ.
12. The contractor shall guarantee and maintain all trees, shrubs, ground cover and other plant materials for two years from the date of installation, including labor and removal and disposal of dead material.
13. All plant material shall be grade 1 northern nursery grown from a local source. All trees and plant material shall meet the current standards of the American Society of Nurseryman.
14. Contractor shall adhere to all soil erosion prevention methods as directed by the Municipal Ordinance including maintaining silt fencing and ensuring that soil, silt and other debris is prevented from leaving site or entering area drains, sewer inlets, creeks or natural areas.
15. Contractor shall protect existing irrigation system throughout construction, and shall modify the existing irrigation system as needed to ensure that all lawn and landscape areas within the project area receive irrigation coverage, and that the system operates correctly and efficiently. Contractor shall also install a rain detection and shut-off sensor onto the system.
16. Trees shall not be installed closer than 4' from a property line.
17. Contractor shall ensure that a 25' clear vision zone is maintained at each intersection as depicted, and must ensure that no limbs or obstructions exist between the grade and 8' above the grade within this zone.

PLANTING DETAILS :

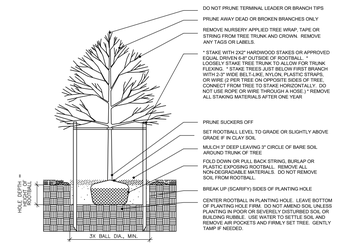


TREE PROTECTION - 4' HIGH ORANGE SNOW FENCE



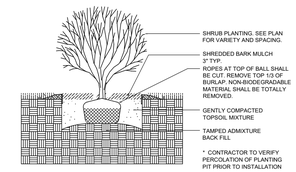
EVERGREEN TREE PLANTING DETAIL, TYP.

NOT TO SCALE



DECIDUOUS TREE PLANTING DETAIL, TYP.

NOT TO SCALE



SHRUB PLANTING - BALL AND BURLAP, TYP.

NOT TO SCALE

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Bogie Lake Road
White Lake Township, MI

Owner:

PH Homes

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Commerce Twp, MI 48382
248-242-6838

Sheet:

Landscape Details & Plant List

Issues / Revisions

Final Site Plan	04-01-26

Drawn by: LZ

Checked By: JTE

Date: April 1, 2026

Scale: As Noted

Not for Construction

Sheet: L-4

Brooklyn Plan (2,128 sf)





Aubrey Plan (2,260 sf)

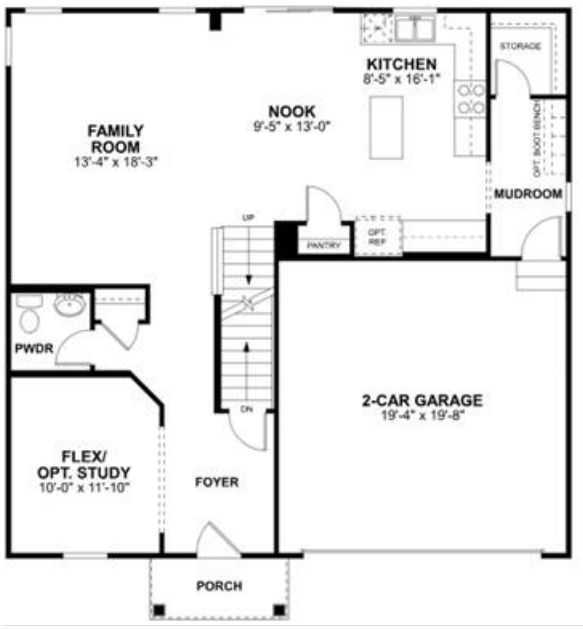






Peyton Plan (2,427 sf)







Connect. Build. Thrive.

May 4, 2026

Sean O' Neil
Community Development Department
Charter Township of White Lake
7525 Highland Road
White Lake, Michigan 48383

RE: Edendale Crossing- Final Site Plan Review – 1st Review

Ref: DLZ No. 2545-7861-07 Design Professional: Kieft Engineering, Inc.

Dear Mr. O' Neil,

Our office has performed a Final Site Plan review for the above-mentioned plan dated March 23, 2026. The plans were reviewed for general conformance with the Township Engineering Design Standards.

General Site Information

This 45.47-acre site is located on the north side of Cedar Island Road and west of Bogie Lake Road.

Site Improvement Information:

- Construction of a ~~123~~ ~~125- 120~~ **115** unit site condominium with private roads. The development is to be phased as follows: Phase I- 60 units; Phase II-55-units.
- Two entrances: One off Bogie Lake Road and one off Cedar Island Road.
- Extension of proposed sidewalk along Cedar Island Road with off-site connection to the Huron Valley Schools property to the southeast.
- Water and sanitary sewer service.
- Storm water management facilities.

The following items should be noted with respect to Planning Commission review:

We note that comments from our January 8, 2026 review are in *italics*. Responses to those comments are in **bold.** New comments are in standard font.

Preliminary Site Plan Comments

General

1. *Sheet 19-Cedar Island & White Lake Middle School Sidewalk Plan- Remove 'Proposed Pedestrian School Crossing' note to the west of Carla Hills Drive as this was where the safety path was previously proposed.* **Comment outstanding.**
2. *Sheet 3- The number of lots for each phase has not been updated to correspond with the reduction in total units from 125 to 120. Please update.* **Comment addressed. Quantities have been updated.**

Paving/Grading

1. *The plan shows a proposed extension of an 8' wide path along the Cedar Island Road frontage. Please note the proposed sidewalk does not extend the entirety of the property width to the east and instead crosses Cedar Island Road and heads further east across Carla Hills Drive then onto Huron Valley Schools property where it terminates at the drive lane of the Middle School. This will require approval/easements from HVS and we question the safety of terminating the sidewalk at a drive lane. Comment addressed at this level of review. Per the design engineer, connection of the path to White Lake Middle School shall be coordinated with Huron Valley Schools. The FEP shall show final location of sidewalk connection to the school. We note that the current submittal shows connection to the White Lake Middle School parking lot. Please see our above comment regarding safety concerns of terminating the sidewalk at a drive lane. Per Item 5a of the 'Resubmission of updated Site Plan letter' from J Eppink Partners, Inc. and dated December 18, 2025, a final connection point for the proposed sidewalk has not yet been determined with Huron Valley Schools; however, the Community Impact Statement, also prepared by J Eppink Partners, Inc. and dated December 18, 2025 states on Page 4 that the proposed sidewalk shall connect to the existing school parking lot(White Lake Middle School) and on Page 9 states the sidewalk shall connect to Lakeland Elementary School Property which is located south of White Lake Middle School. In addition, Sheets 3,5,9,16, and 19 of the Preliminary Site Plan note/show connection of the proposed sidewalk to the White Lake Middle School parking lot. All correspondence and plan sheets shall be updated for consistency regarding the proposed sidewalk connection on the HVS property. We also note that our previous comment regarding the safety of connecting the sidewalk into a traffic circulation lane in a parking lot remains.* **Comment addressed at this level of review; the following comments are to be addressed on the Final Engineering Plan: 1) The final location of the sidewalk connection to HVS; 2) The safety of connecting the sidewalk into a traffic circulation lane in a parking lot on HVS property.**
2. *Is the intent to dedicate right of way along the Bogie Lake Road and Cedar Island Road frontages or to provide easements for the proposed sidewalk/path along these frontages? Comment addressed. ROW to equal 60' width shall be dedicated for both road frontages.* ***We note that offsite easements will be required from*** ~~*Carla Hills and*~~ ***Huron Valley Schools for the proposed 8' wide concrete walk.***

Comment is now outstanding due to the following requested clarification and change in sidewalk layout: The proposed 8' wide path along Cedar Island Road has now been shifted in its entirety to the north side of the road. The Existing Conditions Plan- Overall (Sheet 2) shows 43' existing ROW along Cedar Island Road in front of Parcel 12-29-476-007 while the Overall Site Plan and Notes (Sheet 3) shows the existing ROW in this area as 33'. Please clarify. The right of way along Parcel -007 will determine whether a sidewalk easement will need to be granted by this property owner. Additionally, please revise '8' Wide Safety Path Connection to Huron Valley School Parking Lot' reference notes on Sheets 3 and 5 from Sheet 17 to Sheet 19. Comment addressed. ROW width has now been corrected to 43' on the 'Overall Site Plan & Notes' (Sheet 3), so it now appears that an easement for the proposed path would not be required from Parcel -007. In addition, sheet references have been updated. **Comment remains as a notation.**

3. *Preliminary grading of the site has been proposed and demonstrates general drainage patterns. A more detailed grading review will be provided at the time of Final Engineering Plan submittal/review.* **Comment remains as a notation.**
4. *Provide plan indicating standard length fire truck access and turning radii so as to demonstrate adequate fire truck accessibility to and within the site. Comment addressed. Per design engineer, roads are per RCOC standards and support/provide adequate fire truck access. We note that there are a couple fire truck turning movements shown on the Cedar Island Entrance Plan (Sheet 9); movements show a standard (40' long) fire truck traversing the curb on Edendale Lane. The current plan revisions include slight modification to the configuration of the small island on Edendale Lane in front of proposed unit #3. Please include a turning radius for a fire truck to navigate around this island and note that since there are proposed tree plantings within this island that a fire truck will not be able to traverse over the center of the island. Please also reference Sheet 9 where the Fire truck movements on this sheet still show truck traversing curb after turning left onto Mollygrace Lane. It appears this could just be shifted slightly north to keep the movement within the paved area.* **Comment addressed. Island has been adjusted such that fire truck movements are now contained in the proposed street inside proposed curbing.**
5. *Sheet 4- the previous submittal showed proposed contours in the area north of units 19-24. The current submittal does not show grading in this area; however the proposed grades seem to indicate that additional grading will be necessary with cuts of up to 10 feet. Please clarify as this will impact the disturbance area and the number of existing trees that can remain.* **Comment addressed. The proposed grading and the previously proposed contours are now shown.**
6. *Sheets 5 and 9- Entrance dimensions of Edendale Lane at Cedar Island Road do not correspond to 21' B/B and 16' (island width) when measured per provided scale. Please revise.* **Entrance dimensions have been adjusted to 22' B/B widths.**

<u>Watermain</u>

1. *We defer to the Township Fire Department regarding hydrant coverage.* **Comment remains as a notation.**
2. *The Township requires two or more sources of water supply in any watermain extensions over 600 LF. This plan shows internal looping of watermain as well as stubbing into the right of way on*

Cedar Island Rd. However, there is no secondary source of supply. There would be potential for all ~~123~~ ~~125~~ ~~120~~ **115***homes to be out of water or have disruption of water quality during routine maintenance like valve exercising or hydrant flushing. The developer will need to provide a second connection point and sufficient valving so that approximately 20 homes maximum are out of water at any given time during routine maintenance or emergencies. Comment addressed. A secondary watermain connection has now been provided; a 12" watermain is now proposed along Cedar Island Road with stub shown adjacent to the southeast corner of Unit ~~47~~ ~~50~~ ~~63~~* **58. Comment remains as a notation.**

3. *Township Ordinance requires extension of utilities across property frontages; currently the plan proposes one stub out to the Cedar Island Road Right-of-Way at the Edendale Lane approach.* ***We defer to the Township as to whether the watermain shall be required to be extended across the Cedar Island Road frontage and stubbed to the western property line.*** *Please note that future expansion of the water system will be impacted by lack of access to watermain along Cedar Island Road. Please also note there are known contaminants related to the Huron Valley School site that may make the expansion of the Township water system desirable for nearby residents. Comment remains. Currently the proposed 12" diameter watermain along Cedar Island Road does not extend to the western property line and ends just south of Unit ~~63~~ 58.* **The Township Board at their 02/17/2026 meeting approved the Preliminary Site Plan as presented. Comment remains as a notation.**

Sanitary Sewer

1. *The plan proposes gravity sanitary sewer onsite which will flow to a proposed sanitary sewer pump station. This pump station will need to be designed to OCWRC standards. It should be noted that the plan also includes a significant amount of offsite sanitary sewer forcemain to connect to the existing system near the south end of the Huron Valley school campus along Bogie Road. This forcemain has been sized in accordance with the master plan for future flows from the north.* **Comment remains as a notation.**
2. ***We defer to the Township regarding the requirement to extend sanitary sewer along the Cedar Island Road frontage with a stub at the western property line.*** *Per Township Ordinance, utilities are required to be extended along property road frontages.* **The Township Board at their 02/17/2026 meeting approved the Preliminary Site Plan as presented. Comment remains as a notation.**
3. *Off-site easements shall be required for installation and future maintenance along parts of the proposed forcemain which fall outside of the Bogie Lake Road Right-of-Way. Comment remains as a notation. Per the design engineer, this is in process with Huron Valley Schools. In addition, it appears that an easement shall also be required from Parcel 12-29-476-007.* **Our office is in receipt of easement exhibit documents from both Parcel 12-29-476-007 and Huron Valley Schools. These documents are currently under review; comments shall be sent under separate cover and are forthcoming.**

Stormwater Management

1. *Sheet 8- It appears the discharge from the detention pond will flow across Parcel #12-28-303-001 which may require a storm drainage easement unless the storm sewer can be extended to a point there is no conflict. Comment addressed. A ditch that will route where the drainage to Thompson Lake goes is now proposed within the existing road ROW.* **Comment remains as a notation.**
2. *Sheet 8- The proposed storm sewer layout along Bogie Lake Road will need to be* ***clarified at the time of ~~Final Site Plan/~~Final Engineering Plan*** *to work with existing stormwater features, site drainage, and utility poles etc.* **Comment remains as a notation.**
3. *There are several comments/questions we have regarding the Detention Basin Calculations and Details Sheet 16. We have attached a red lined copy of the sheet for the design engineer's use. Comment partially addressed, but sufficient for this level of review. Please provide the T_t numbers in the 100 Year Basin Calculations. See attached plan sheet for a few remaining questions that can be answered with the FSP/FEP submittals.* **Comment remains partially addressed but is sufficient for FSP level of review. Please see red-lined plan sheet of stormwater management calculations as there are still remaining items within the calculations that will require revision. These calculations shall be required to be addressed on the FEP.**

Final Site Plan Comments

Sanitary Sewer

1. Sheet 11- Please see marked up calculations for revisions that shall be required.
2. We note that the location of the proposed sanitary pump station has changed from the Township Board approved Preliminary Site Plan. We consider the revised orientation to be an improvement compared to what was previously indicated so we do not take issue with this item but wanted to note the change.

Paving/Grading

1. Details of the proposed boulder wall (including cross section, etc.) on Units 73 and 74 shall be required at the time of FEP submittal. In addition, the wall shall require a minimum of a 36" high decorative fence at the top of the wall, as the wall is > 30" in height.

Recommendation

The majority of our above comments have been addressed, and we feel comfortable with remaining items being addressed at the time of Final Engineering Plan (FEP) review.

Please feel free to contact our office should you have any questions.

Sincerely,

DLZ Michigan

Michael Leuffgen, P.E.
Department Manager

Victoria Loemker, P.E.
Senior Engineer

Encl: Sheet 11-Detention Basin Calculations and Details Red Lined Plan Sheet

Cc: Hannah Kennedy-Galley, Community Development, *via email*
Paige Myers, Community Development, *via email*
Aaron Potter, DPS Director, White Lake Township, *via email*
Nick Spencer, Building Official, White Lake Township, *via email*
Jason Hanifen, Fire Marshall, White Lake Township, *via email*
David Waligora, Community Development *via email*
Matteo Passalacqua, Carlisle Wortman, *via email*

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100 YEAR DETENTION BASIN CALCULATION (I.E. WITH OUTLET)

TOTAL CONTRIBUTING AREA — A = 45.47

HYDROLOGIC SOIL GROUP: B

RUNOFF COEFFICIENT

C = (0.95 × 14.87 + 0.30 × 28.60 + 1.00 × 2) / 45.47

C = 0.54

		LENGTH		% SLOPE		
SHEET	K = 0.48	L= 230 FT	S= 1.5	V = $KS^{1/2}$	=	0.59 FT/S
SWALE	K = 1.20	L= FT	S=	V = $KS^{1/2}$	=	0.00 FT/S
DITCH	K = 2.10	L= 300 FT	S= 1.0	V = $KS^{1/2}$	=	2.10 FT/S
PIPES	Longest Run	L= 2400		V =	3	FT/S

T_T = L / 3,600 V

0.1086 HR = 6.52 MIN

0.0396 HR = 2.38 MIN

0.2220 HR = 13.32 MIN

HR = MIN

$T_C = \sum T_T$: 22.0 MIN

$I_{100} = \frac{83.3}{(T_C + 9.17)^{0.81}}$ = 5.14 IN/HR

CHANNEL PROTECTION VOLUME CONTROL: RECHARGE

$V_{CPV/C}$ = 4,719 CA = 115,869 CF

CAN BE SUBTRACTED FROM V_{100D} IF INFILTRATED

SOILS INFILTRATION RATE FROM BORINGS = 5.00 IN/HR

ABOVE 0.5 IN/HR SUPPLEMENTAL MEASURES NOT REQUIRED

BETWEEN 0.24 IN/HR & 0.5 IN/HR, SUPPLEMENTAL MEASURES REQUIRED

BELOW 0.24 IN/HR, INFILTRATION IMPRACTICAL & WAIVED

EXTENDED DETENTION

V_{ED} = 6,897 CA = 169,347 CF

WATER QUALITY - REMOVAL OF TSS (80 MG/L OR 80% TSS REDUCTION)

MECHANICAL SEPARATOR N/A

$I_1 = \frac{30.2}{(T_C + 9.17)^{0.81}}$ = 1.86 IN/HR

$Q_{WQ} = CI_1A$ = 46.07 CFS

SEDIMENT FOREBAY N/A

V_F = 0.15V_{WQ} = 545 CA = CF

DETENTION & FLOOD CONTROL

Q_{VRR} = 1.1055-0.206ln(A) = 0.150 CFS/AC

$Q_{100P} = Q_{VRR}A$ = 6.821 CFS

V_{100R} = 18,985 CA = 466,154 CF

$Q_{100N} = CI_{100}A$ = 126.20 IN/HR

R = 0.206 - 0.15ln(Q_{100P}/Q_{100N}) = 0.644

100-YEAR STORAGE VOLUME

$V_{100D} = V_{100R}$ = 300,064 CF = 300,064 CF PER CPVC

WAS VOLUME CONTORL MET FOR CPVC? Y or N N

V_{100D} OR V_{ED} CONTROL? V100D 300,064 CF REQ'D

$Q_{ED} = \frac{V_{ED}}{172,800}$ = 0.98 CFS

48 HOURS FOR RATE CONTROL

ORIFICE FORMULA

$Q_A = 0.62\ (A_O)(2gH^{1/2})$

A_O = AREA ORIFICE PIPE

g = 32.2 FT/SEC^2

H = DEPTH OF BASIN ABOVE CENTERLINE OF OUTLET PIPE

FOREBAY N/A

V_F = RIM = INVERT =

H = 0.00 FT

EXTENDED DETENTION OUTLET

$A_O = \frac{Q_{ED}}{0.62\ (2gH)^{1/2}}$ = SF = 0.000 IN^2

$A_{1*} = \frac{\pi D^2}{4}$ = 0.785 IN^2

A_O/A_{1*} = 0.00 → USE 0 1" HOLES EQ. SPACED AROUND STANDPIPE BOTTOM

DETENTION BASIN

EXTENDED DETENTION OUTLET (LOWER)

V_{ED} = HOLES = 963.50 INVERT = 961.00

H = 2.50 FT

$A_O = \frac{Q_{ED}}{0.62\ (2gH)^{1/2}}$ = 0.12 SF = 17.93873 IN^2

D_O = DIAMETER OF ORIFICE

$D_O = \sqrt{\frac{4A_O}{}}$ = 0.40 FT = 4.78 INCH

$A_{1*} = \frac{\pi D^2}{4}$ = 0.785398 IN^2

A_O/A_{1*} = 22.84 → USE 23 1" HOLES EQ. SPACED AROUND STANDPIPE BOTTOM = 961.00

100-YEAR ALLOWABLE OUTLET (UPPER)

V_{100D} = RIM = 965.00 V_{ED} = = 963.50

H = 1.50 FT

$A_O = \frac{Q_{100P}}{0.62\ (2gH)^{1/2}}$ = 0.02 SF = 3.545 IN^2

$A_{1*} = \frac{\pi D^2}{4}$ = 0.785 IN^2

A_O/A_{1*} = 4.51 → USE 5 1" HOLES EQ. SPACED AROUND V_{ED} ELEVATION = 963.50

This number and subsequent calculations involving weighted C-factor will have to be adjusted due to calculation error to the right.

Some of storm sewer layout on plan has changed. Is this number still accurate?

To arrive at Q= 0.150 cfs/ac, this assumes A= 103.38 acres which is greater than the actual acreage of 45.47 ac (see below calculation). Q value should be 0.319 based on 45.47 ac. This was correct on the last plan submittal.

QVRR=1.1055-0.206ln(A)
0.150=1.1055-0.206ln(A)
ln(A)=4.638
A=e^4.638
A=103.38 ac

Correct, based on corrected QVRR

Correct, based on corrected Q100P

Correct, based on corrected R

Correct, based on corrected V100D

Correct, based on corrected QVRR

"C" CALCULATION

TOTAL SITE AREA = 45.47 ACRES

PAVEMENT AREAS:

ROADS: = 155,000 SF

SIDEWALKS: = 79,000 SF

FUTURE DRIVEWAYS: SAY (800 SF) x (115 DRIVES) = 92,000 SF

TOTAL PAVEMENT AREA = 326,000 SF = 7.48 ACRES @ C = 0.95

ROOF AREAS:
ASSUME (2,800 SF) x (115 HOMES) = 322,000 SF = 7.39 ACRES @ C = 0.95

DETENTION BASIN AREA: 2.00 ACRES @ C = 1.00 (AVERAGE)

GREENBELT AREAS: 28.60 ACRES @ C = ~~0.20~~

Show below as 0.30

"C" = (7.48 ACRES x 0.95 / 45.47 AC) + (7.39 ACRES x 0.95 / 45.47 AC) + (28.60 ACRES x 0.30 / 45.47 AC) + (2.00 ACRES x 1.00 / 45.47 AC) = 0.543 = 0.54

VOLUME PROVIDED:

A_1 = @ 961.00 = 55,000 SF

A_2 = @ 965.30 = 86,000 SF

$V = \frac{H}{3}(A_1 + A_2 + \sqrt{A_1 \times A_2})$ = 300,677 CF, OK

DETENTION BASIN

EXISTING WATER ELEVATION = NONE
100 YEAR DESIGN HIGH WATER ELEVATION = 965.30
1' FREEBOARD ELEVATION = 966.30
STORAGE REQUIRED = 300,064 CF
STORAGE PROVIDED = 300,677 CF
SO-2 STANDPIPE RIM = 965.30
OVERFLOW MANHOLE RIM = 965.50
LOWEST EMERGENCY OVERFLOW CATCH BASIN ON N. SIDE IN ENTRY ROAD (OFF BOGIE LAKE ROAD) = 966.75
BOTTOM = 960.00

Correct, based on corrected R

Should be based on weighted C calculaton.

APPROXIMATE DETENTION BASIN 10 YEAR OUTFLOW CALCULATION

Q = ACI; A = 45.47 ACRES; C = 0.50; I = $\frac{175}{T+25}$; T = 30 MINUTES+/-.

NOTE: ESTIMATED TIME BASED ON THE LONGEST STORM SEWER RUN ≈ 2,400 LF
THUS, 2,400 LF ÷ 3 FPS (ASSUMED) = 800 SECONDS = 13.33 MINUTES
USE 10 MINUTES TO BE CONSERVATIVE.
20 MINUTES (INITIAL T_C) + 10 MINUTES = 30 MINUTES

I = $\frac{175}{30+25}$ = 3.18; Q = (45.47)(0.50)(3.18) = 72.30 CFS

USE 36" OUTLET PIPE @ 1.00%; Q = 66.60 CFS; V = 9.42 FPS

Northwest Area Storm Run-off Calculation Comparison

"EXISTING CONDITIONS"
PRESENTLY 4.80 ACRES FLOWS OFF-SITE TO THE NORTHWEST.
EXISTING C = 0.30
FOR A 10 YEAR STORM Q_{10} = ACI
A = 4.80 ACRES
C = 0.30
I = $\frac{175}{T+25}$; T = 20 MINUTES; I = $\frac{175}{20+25}$ = 3.89

Q_{10} = (4.80)(0.30)(3.89) = 5.60 CFS EXISTING

Does not match C (0.41)provided on Sheet 3

PROPOSED "C" CALCULATION
(14 HOMES)(REAR ROOF=1,600 SF) = 22,400 SF = 0.51 ACRES @ C = 0.95
REMAINING ~~1.68~~ 2.69 ACRES @ C = 0.30

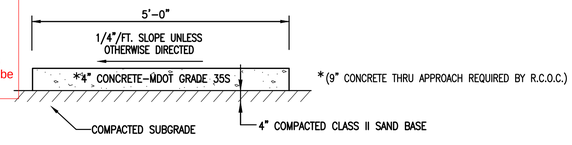
"C" = (0.51 ACRES x 0.95 / ~~2.19~~ AC 3.20) + (~~1.68~~ 2.69 ACRES x 0.30 / ~~2.19~~ AC 3.20) = 0.45

A = 3.00 ACRES
C = 0.45
I = 3.89
Q_{10} = (2.19)(0.45)(3.89) = 3.83 CFS PROPOSED

THUS, THERE IS LESS PROPOSED STORM WATER RUN-OFF THAT WILL BE FLOWING TO THE LEACH BASIN IN THE NORTHWEST AREA THEN THE EXISTING STORM WATER RUN-OFF FOR A TEN YEAR STORM.

Shown on Sheet 3 as 3.20 acres

In addition, Sheet reference note on Sheet 3 references Sheet 16; it should be Sheet 11.



5' WD. 4" THICK CONCRETE SIDEWALK

(ONSITE)

RED LINED COMMENTS TO ACCOMPANY FSP REVIEW.01 LETTER

(SHEET 1 OF 1)

Storm Water Facilities Maintenance Plan

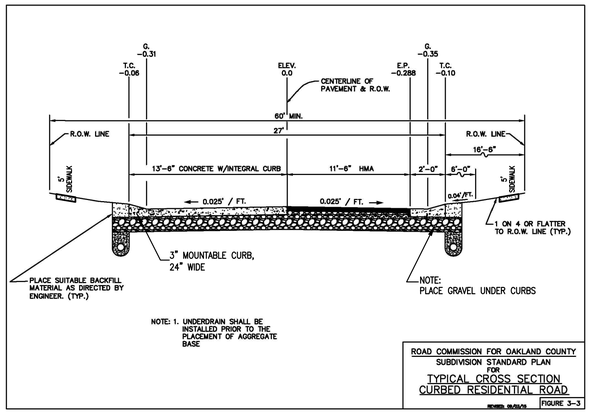
The "Edendale Crossing" Homeowners Association shall be responsible for the maintenance of all the storm water facilities. (Note: The developer is responsible until the HOA exists).

These facilities include the following:

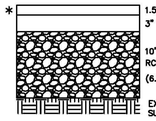
- *Detention Basin*
- *Pretreatment Structure Manholes*
- *Manholes, Rear Yard Catch Basins, Leach Basins, End Sections & connecting pipe work*
- *Rear yard swales (within easements)*

The HOA shall hired a qualified contractor to do the following Maintenance Schedule (including report kept on record):

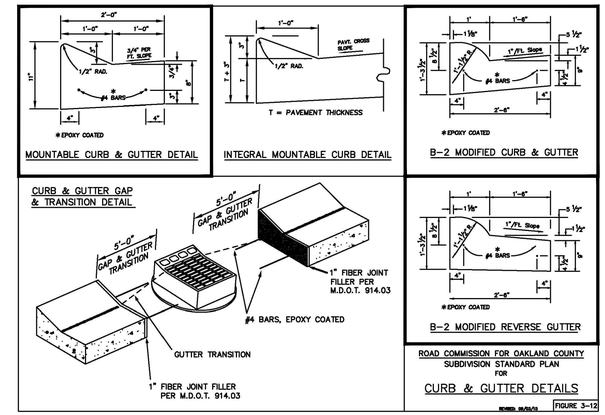
1. *The (2) Pretreatment Structures shall be inspected by a qualified contractor on a semi-annual basis (twice/year) and necessary action taken to clean out the structures in accordance with the manufacturers guidelines.*
2. *The Detention Basin shall be inspected on any annual basis by a qualified contractor and/or civil engineer to insure it is functioning as designed.*
3. *The storm structures & swales shall be inspected on a bi-annual basis (every two years). This is an "above ground" visual inspection to determine if any structures are "failing", (i.e. ground has sank around structure, etc.).*

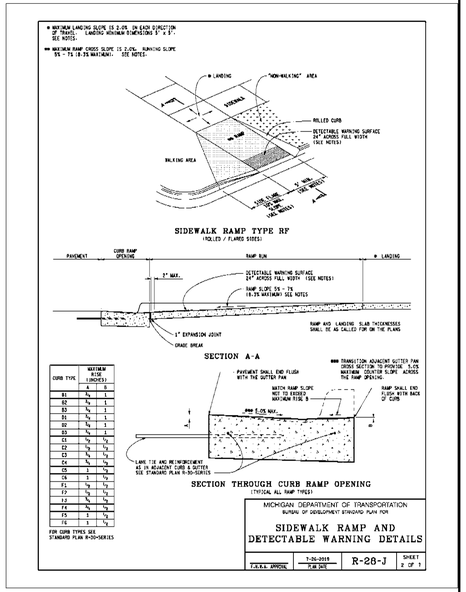


HMA



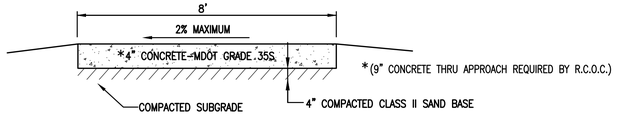
SS-1H @ 0.10/GAL/SYD BETWEEN LIFTS COMMERCIAL A.D.T. COULD WARRANT A DIFFERENT TYPE HMA MIXTURE





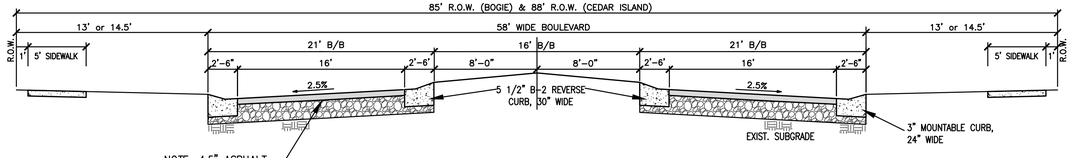
6' WD. 4" THICK CONCRETE SIDEWALK

(BOGIE LAKE ROAD & R.O.W.)



8' WD, 4" THICK CONCRETE SIDEWALK

CEDAR ISLAND ROAD R.O.W.



BOULEVARD ROAD SECTION "B"-"B"

TOTAL SITE

115 Units X 1 REU/Unit= 115 REUs

RESIDENTIAL UNITS = ~~123 REU/UNIT = 123 REU'S~~

OVERALL SANITARY DESIGN

"AVERAGE FLOW" 310.5

115 / ~~123~~ REU'S @ 2.70 PERSONS/REU = ~~332.1~~ PERSONS

~~332.1~~ PERSONS x 100 GPCD = ~~33,210~~ GPD = ~~0.03321~~ MGPD 0.03105

310.5 31050 x 1.55 (conversion)

Q = ~~0.0515~~ CFS 0.0481

"PEAK FLOW" 310.5 0.3105

115 / ~~123~~ REU'S @ 2.70 PERSONS/REU = ~~332.1~~ PERSONS/1000 = ~~0.3321~~ P

407.20

Q = 100 x (18 + √P)/(4 + √P) = ~~405.93~~ GPCD

311 407.20 126699 0.12664

~~332~~ PERSONS x ~~405.93~~ GPCD = ~~134,769~~ GPD = ~~0.13477~~ MGPD

x 1.55 (conversion)

Q = REQUIRED = ~~0.2089~~ CFS 0.1963

NOTE: AN 8" TRUSS PIPE @ 0.40% CAN CARRY 0.765 CFS @ 2.19 FPS.
A 10" TRUSS PIPE @ 0.30% CAN CARRY 1.194 CFS @ 2.19 FPS.

STATE OF MICHIGAN — PATRICK COLIN McWILLIAMS — LICENSE NO. 6201031658 — PROFESSIONAL ENGINEER

DATE	ISSUE
9-19-2025	PER DLZ (8-26-2025)
10-29-2025	PER RCOC MEETING (10-27-2025) & DLZ (10-15-2025)
5-23-2026	PER TOWNSHIP BOARD MEETING (2-17-26) & DLZ (1-8-26)

PROPRIETOR:
PH COMMUNITIES, LLC
8255 CASCADE AVENUE, SUITE 110
COMMERCE TOWNSHIP, MICHIGAN 48382
(248) 242-6838

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DATE	7-2-2025
DRAWN	GF
DESIGN	PCM
SECTION	29

CKD. BY | DATE

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Detention Basin Calculations & Details

"EDENDALE CROSSING" SITE CONDOMINIUM
PART OF THE SOUTHEAST 1/4 OF SECTION 29, T3N, R8E
WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN

SCALE N/A
SHEET 11 OF 19
KE 2025.010

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Carlisle | Wortman
ASSOCIATES, INC.

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

May 4, 2026

Final Site Plan / Site Condominium / Planned Development Review
for
White Lake Charter Township, Michigan

Applicant:	PH Communities LLC
Project Name:	Edendale Crossing
Plan Date:	April 1, 2026
Location:	Northwest corner of Bogie Lake Road and Cedar Island Road Parcel IDs: 12-29-476-016 through 12-29-476-024 (nine adjacent parcels total)
Action Requested:	Final Site Plan / Site Condominium / Planned Development Approval

PROJECT NARRATIVE

On December 4th, 2025, the Planning Commission held a public hearing to review the Edendale Crossing planned unit development preliminary site plan. After consultant reviews, the public hearing was opened. Residents from the community expressed concerns regarding traffic, density of housing, and the development's contrast in character to the surrounding area. After closing the public hearing, The Planning Commission acknowledged that the area is zoned residential and that there was a general expectation that it would be developed into housing but also expressed concerns with the project's proposed density and layout. Commissioners agreed that the PD district was an appropriate mechanism to develop the site but that the site plan was not aligned with the character of the neighborhood. After deliberation, the Planning Commission voted unanimously to recommend denial of the preliminary site plan to the Township Board.

On December 19th, 2025, the applicant submitted a third revision of the preliminary site plan. The primary modifications to the plan are recorded throughout our updated preliminary site plan review dated January 7, 2026 but also listed below:

- Reduction in single family unit count from 125 to 120.
- Increase of open space from 24% to 27%.
- Density reduction to 3.3 units per net acre from 3.4 units per net acre.
- Homes near the north entrance have been moved 70 feet back from the Bogie Lake ROW from the original 40 foot buffer.
- Homes near the south entrance have been moved 45 feet back from the Cedar Island ROW from

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

the original 30 foot buffer. See notes in the Area, Width, Height, Setbacks portion of this review.
- Open space and passive recreation areas have been redesigned. Open space is no longer proposed along the western and northern borders of the development. The central open space has increased in size and now includes a playground and larger walking path. A small pocket park has been included in the northeast corner of the site near units 12 and 13.
- Mollygrace Lane has been eliminated.

The increase in setbacks from Bogie Lake and Cedar Island Roads, as well as the increase in open space and recreation areas better align with the site's Master Plan subarea designation.

The applicant was requesting preliminary site plan approval as well as site condominium and planned development approval to construct a 120-unit site condominium using the Planned Development (PD) zoning option.

After public comment and deliberation, the Planning Commission voted to recommend denial of the preliminary planned development site plan to the Township Board. The applicant opted to take the site plan to the Township Board without modification. During the February 17, 2026 meeting, the Township Board took public comment then discussed the proposed site plan. Primary concerns expressed were housing density, safety, and traffic. Some board members expressed an understanding that change is inevitable and that the site is master planned for some form or dense residential. After deliberation, the Township Board voted five to two to approve the preliminary site plan with the condition that issues cited in staff and consultant reviews be addressed.

The primary modifications to the plan are recorded in depth throughout our final site plan review but summarized below:

- Unit reduction from 120 to 115. Units were located at the Bogie Lake Road entrance and along Cedar Island Road.
- Open Space has increased from 27% to 28.4% per the removal of 5 housing units.
- Addition of service drive to mechanical units near Bogie Lake Road entrance.
- Addition of pedestrian path from Cedar Island Road into the development and open space.
- Pathway to school no longer connects directly to the school parking lot.
- Minor changes to landscaping placement and counts.

When considering a Planned Development or Planned Unit Development, the preliminary site plan review is meant to critique the proposal against the standards of the Planned Development ordinance. This critique is based heavily on the community's Master Plan, applicant's parallel plan, and enhanced design standards and/or proposed community benefits. If the preliminary plan is approved, the purpose of the final site plan is to ensure the development has addressed any conditions tied to the preliminary approval and met the additional standards required at final site plan review.

This report will review the final site plan to ensure it complies with the conditions set forth by the Township Board, meets the requirements of additional information required at final site plan review, and note any other elective changes made to the plan since preliminary approval.

The largest parcel included in the project is 34.76 acres and zoned AG, Agricultural (Five acre minimum lots). The eight remaining parcels are zoned R1-A, Single Family (One acre minimum lots). A rezoning

SITE DESCRIPTION

Lot Area:	45.47 gross acres / 36 net acres
Frontage:	Approx. 809.9 feet along Bogie Lake / Approx. 1,375 feet along Cedar Island Road
Address:	Bogie Road Lot TBD / 5805 – 6605 Cedar Island Road
Current Use:	Vacant

Aerial image of the site

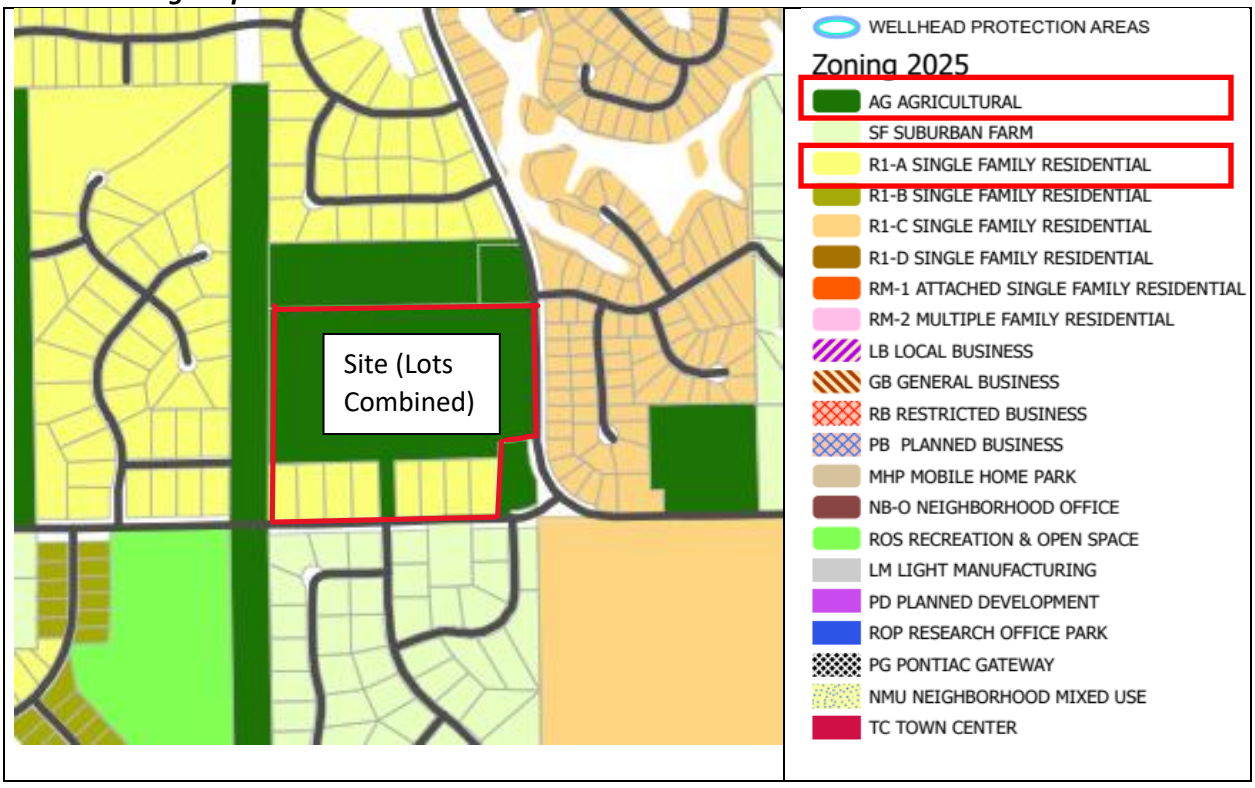


Source: NearMap July 2025

	North	East	South	West
Surrounding Zoning	*AG, Agricultural*	*R1-C, Single Family Residential*	*Suburban Farm*	*AG, Agricultural*
Surrounding Land Uses	*Single Family Home / Landscaping Yard*	*Single Family Homes*	*Single Family Homes*	*Electrical Utility Lines*
Future Land-Use Map	*Neighborhood Residential*	*Neighborhood Residential*	*Agricultural / Rural Residential*	*Agricultural / Rural Residential*

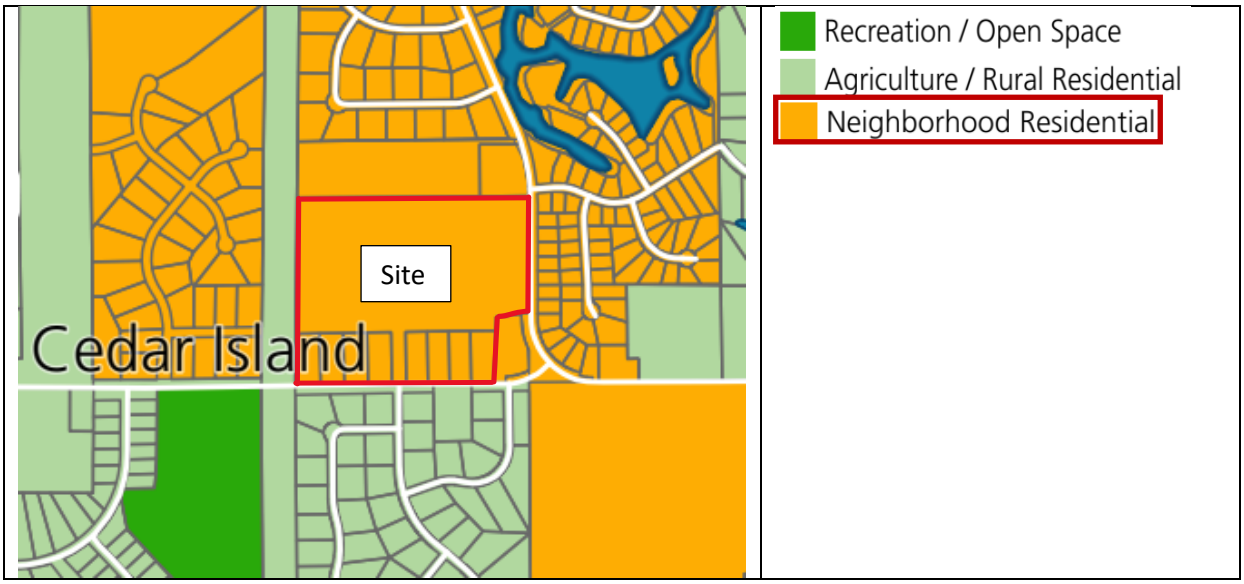
Current Zoning	**AG Agricultural / R1-A Single Family Residential** *AG: The Agricultural District is established as a district in which the principal use of land is for farming, dairying, forestry operations and other agricultural activities. The intent of this article is to protect land needed for agricultural pursuits from encroachment by untimely and unplanned residential, commercial or industrial development.* *R1-A: The Single-Family Residential Districts are established as districts in which the principal use of land is for single family dwellings, located in neighborhoods that include open space and that preserve sensitive natural environmental features.*

Current Zoning Map



Future Land Use	**Neighborhood Residential** *Description: "Maintains existing neighborhoods and provides for denser residential development in places where there is infrastructure to support the density and ensuring density is within the context of the surrounding neighborhood.* *Example of Uses: "Small-lot single family, duplexes, multi-family, parks, convalescent or nursing homes"*

Future Land Use Map



The zoning and Master Plan compatibility of the development is assessed in the Planned Development and Community Impact Statement portions of this review.

Item to be Addressed: *Addressed in other portions of this review.*

PLANNED DEVELOPMENT

Standards for PD projects are outlined in Section 6.7 of the zoning ordinance. This portion of the report will review the items to be addressed as part of the conditional approval granted by the Township Board.

> ***Item:*** *A schedule for the proposed phases is required. Sheet 3 outlines the previous unit count for phasing and should be updated.*
>
> ***CWA Comment:*** *Sheet C3 shows that Phase 1 will consist of 60 units along the perimeter of the site long Bogie Lake Road and Cedar Island Road. Phase will consist of 55 units primarily located in the interior of the lot.*

Item: *The proportions of brick and siding proposed on the façade of the units is complementary, however it is recommended that the brick also be included in a similar proportion on the side and rear elevations.*

CWA Comment: *Elevations provided in the preliminary site plan have not changed. No comment was provided stating whether this recommendation will be utilized.*

Item: *A table should be added to the site plan clearly stating how many trees are onsite and how many are to remain.*

CWA Comment: *Sheet L-2 has a table stating 474 6" dbh trees or greater are located on the site. 128 of those trees are to remain on site.*

Item: *The implementation of the pathway to the school complex will need to be coordinated with the school district and should be reoriented to not terminate into a parking lot.*

CWA Comment: *Sheet 17 shows the pathway running along Bogie Lake Road and terminating prior to the adjacent school parking lot. The applicant states the final connection will be determined by, and coordinated with, the school facilities department. This amenity was offered as a community benefit during preliminary review. The applicant should provide documentation from both parties showing a commitment to implement the pathway into the school campus.*

Item: *A draft development agreement will be required during final site plan review.*

CWA Comment: *The applicant states this process will commence during final site plan. All community benefits and the timeline for their implementation should be incorporated into the development agreement.*

Item: *The Planning Commission will need to consider the site's proposed layout, density, recreation space, pathway connections, and natural features protection and how they align with the Master Plan and proposed community benefits.*

CWA Comment: *This process was conducted during preliminary site plan review.*

Items to be Addressed:

1) *Sheet 17 shows the pathway running along Bogie Lake Road and terminating prior to the adjacent parking lot. The applicant states the final connection will be determined by, and coordinated with, the school facilities department. This amenity was offered as a community benefit during preliminary review. The applicant should provide documentation from both parties showing a commitment to implementing the pathway into the school campus.*
2) *All community benefits and their implementation timeline should be outlined in the development agreement.*

NATURAL RESOURCES

Topography: Sheet 2 shows the existing site topography. The site has a gentle slope going east to west for two thirds of the site then sloping back down at the western end of the lot. Proposed grading will retain a slight rolling hill effect with steeper sloping near the detention basin, and northern portion of the site.

We defer to Township Engineering for any concerns with the proposed grading plans as well as any issues cited regarding stormwater management and natural environment protection.

Wetlands: Sheet 3 states no wetlands are onsite. EGLE wetland mapper confirms no wetlands are present on the lots.

Woodland: Mature woodlands cover the majority of the sites northeast and southeast corners. The center and western half of the site is relatively clear. The site plan states that a portion of the woodlands in the northeastern portion of the site and the area between units lining Edendale Lane and Mollygrace Lane will remain as open space/existing trees.

The final site plan indicates that the development now offers 28.4% open space, an increase from 27% offered in the preliminary site plan. This is primarily a result of the reduction of housing units from the plan. Information on how existing trees will be protected during grading and construction is provided on Sheet L-4.

Soils: Soil survey maps indicate that spinks loamy sand, fix sandy loam, and ormas loamy sand soils are present.

Water: Site does not contain any natural water bodies. Sheet 3 states the site is not within any floodplain. Thompson Lake is approximately 430 feet northeast.

General Notes: The use of a PD district does allow for the consideration of requiring the preservation of natural features as a benefit to the development and community.



Source: Google Maps 2025

Items to be Addressed: *Any cited concerns from Township Engineering.*

AREA, WIDTH, HEIGHT, SETBACKS

Lot calculations and setbacks are provided on Sheet 3. Comparison tables between the proposed standards and R1-D standards is provided in the CIS. Standard bulk and lot regulations for the PD zoning district are set forth in Section 3.1.10. and Section 3.11. Notes on Sheet 3 provide proposed lot and setback information as well as one typical lot and development envelope layout.

Planned Development District Standards

Planned Development	R1-D Parallel Plan	Proposed PD	Deviation
Building Setbacks			
Front	30 feet	25 feet	5 foot reduction
Side	10 feet	10 feet	None
Rear	30 feet	30 feet	None
Wetland	N/A	N/A	N/A

Unit Lot Standards			
Minimum Lot Area	12,000 sqft	7,750 sqft (minimum), 8,651 sqft (average)	Approx. 3,349 - 4,250 sqft reduction
Minimum Lot Width	80 feet	62 feet	18 feet reduction
Maximum Lot Coverage	30%	33.5%	3.5% increase
Depth to Width	Approx. 2 to 1	Approx. 2 to 1	None
Planned Development	**Required**	**Proposed**	**Deviation**
Development Setbacks			
Front	40 feet	130 feet from Bogie Lake Road ROW (See notes below) 25 feet from Cedar Island ROW (See notes below)	None 15 feet Approved by Township Board
Side	25 feet each side	N/A	N/A
Rear	Determined by PC	0 feet at West Lot Line / 0 feet at North Lot Line	Approved by Township Board
Wetland	N/A	N/A	N/A
Density			
	Determined by Net Acreage / 3 units per acre	3.2 units per acre	.20 more units per acre
Lot Standards			
Minimum Lot Area	10 acres	45.47 gross acres	Yes
Minimum Lot Width	TBD	809.9 feet	TBD
Maximum Lot Coverage	TBD	TBD	TBD
Depth to Width	4 to 1	Less than 1 to 1	Yes
Building Height			
	30 feet or 2 stories	30 feet or 2 stories	None
Floor Area			
Two Story	1,500 sqft w/ 900 sqft first floor	Approx. 2,100 sqft to 2,700 sqft w/ 1,100 first floor	None

Setbacks are shown to be 0 feet and 50 feet along the north property line and 0 feet along the west property line from individual unit boundaries.

The setback for units 16 and 17 should be added to Sheet 3.

The Township Board approved the preliminary site plan which retained the majority of setbacks proposed in the final site plan. The primary change in setbacks are at the Bogie Lake Road entrance where units were moved an additional 63.5 feet from the road right-of-way.

Items to be Addressed: *None*

ACCESS & CIRCULATION

Vehicle Access & Circulation

The site is accessed via a boulevard entrance off Bogie Lake Road and another off Cedar Island Road. 60 foot right-of-way streets are proposed throughout the development. Section 6.4 outlines standards for access management. Public roads in the Township are either the jurisdiction on Michigan Department of Transportation (MDOT) or Road Commission of Oakland County (RCOC). The Planning Commission may waive standards for access per Section 6.4.F however permits will be required from RCOC for the proposed access points. Below is a review of the proposed access points per the standards of the zoning ordinance.

Edendale Lane / Bogie Lake Intersection

A 45 mph speed limit requires that the proposed access drive should be 350 feet from driveways on the same side or opposite side of the road. This standard is not met in relation to the distance from the Thompson Lane / Bogie Lake Road intersection. The Township Board approved of this access point during preliminary site plan review.

Edendale Lane / Cedar Island Intersection

Cedar Island is a dirt road. The site plan shows pavement being extended west to the proposed access drive intersection. The speed limit is unposted, and the area is somewhat rural so a 55 mph limit is assumed. This requires that the proposed access drive should be 455 feet from driveways on the same side or opposite side of the road. The distance between the proposed drive at Cedar Island Road and Carla Hills drive is 273 feet. The Township Board approved of this access point during preliminary site plan review.

Traffic Study

A TIS dated September 28th, 2025 was provided by FLEIS&VANDENBRINK during preliminary site plan review.

The study was conducted during the school year and accounts for peak travel times for school activity. The Bogie Lake Road / Cedar Island Road intersection currently operates at grades “E, C, and D” for eastbound traffic and at grades “A and B” for northbound traffic. The development is expected to generate 1,258 average daily trips. Future operations estimate that the grades of service for the northbound traffic will remain “A and B” however the eastbound traffic grades will drop to “E, D, and F”.

The study concludes with a recommendation that exclusive left turn lanes and right turn lanes be incorporated into the Cedar Island approach to the Bogie Lake Road intersection. These improvements have not been incorporated into the final site plan. The project does propose adding a center turn lane to

Bogie Lake Road from the south end of the Edendale Lane entrance north past the Thompson Lane intersection. Acceleration and deceleration lanes have also been added to Bogie Lake Road at the Edendale Lane entrance. These improvements are in response to preliminary notes provided by RCOC.

Per their preliminary review, RCOC has indicated that the location of the proposed development entrances in relation to existing intersections is acceptable.

The Township Board approved of the ingress/egress designs during preliminary site plan review.

Non-Motorized Access and Circulation

Sections 5.20 and 5.21 provide requirements for site sidewalks and pathways. Eight foot wide concrete paths are shown along Clear Island and Bogie Lake Roads. The pathways have been relocated within the ROW's alleviating the need for access easements. On Sheet 17, the developer has provided a safety path extension from the Edendale Lane / Cedar Island Road intersection to the Huron Valley School campus to the east. This would improve non-motorized connectivity and potentially reduce the amount of vehicle traffic during drop off / pickup times. As noted earlier, the design no longer extends to the parking lot however we recommend documentation be provided to the Township outlining each parties dedication to full implementation of the pedestrian connection as it was a community benefit to the project.

Internal sidewalks are shown along all streets as well as cross development pedestrian pathways. These sidewalks are required to be five feet wide as shown on Sheet 16. Additional pedestrian access has been provided to Cedar Island Road between units 50 and 51.

Public Transit

No public transit is accessible near the site.

White Lake Township is served by the Western Oakland Transportation Authority which provides scheduled transportation for Township residents with specific needs.

***Items to be Addressed**:*

1) *Township Engineering concerns.*
2) *Township Public Safety concerns.*
3) *The Road Commission of Oakland County approval of the access to Bogie Lake and Cedar Island Roads will be required.*

PARKING & LOADING

Section 5.11 outlines requirements for off-street parking. Sheet 3 states parking is provided via two garage spaces as well as driveway space for each unit. This meets the ordinance standards.

There are no loading zone requirements for single family developments.

***Items to be Addressed**: None*

ESSENTIAL SERVICES & UTILITIES

The site is not currently served by water or sewer. To address density, the project proposes bringing a force main sanitary line up from south of the Lakeland High School site. This will require a pump station proposed in the northeast corner of the development near unit 18. A water main connection is proposed from existing water lines along Bogie Lake Road. We defer to Township Engineering on the feasibility and capacity of the design of the system.

No circulation plan was provided for emergency vehicles. Notes on Sheet 3 provide information regarding fire lanes and hydrant placement. We defer to Township Public Safety to determine the feasibility of site design and hydrant placement.

Items to be Addressed:

1) *Any cited concerns of Township Engineering.*
2) *Any cited concerns of Township Public Safety.*

LANDSCAPING & SCREENING

The applicant has provided a landscape plan on Sheets L-1, L-2, and L-3. Landscaping plans are required at final site plan review.

Section 5.19.D provides requirements for screening along property lines as it relates to adjacent districts and is reviewed below.

Greenbelts

Property Line	Required	Provided	Compliant
North (AG)	Landscaping, Berms, Obscuring Fencing, and/or Screen Wall 53 deciduous trees, 53 evergreen trees, 424 shrubs	56 existing trees and surrounding brush vegetation.	No / Waiver Requested
East (ROW)	Greenbelt 23 trees and 184 shrubs	32 trees and 186 shrubs	Yes
South (ROW)	Greenbelt 44 trees and 352 shrubs	88 trees, and 369 shrubs	Yes
West (AG / ITC Corridor)	Landscaping, Berms, Obscuring Fencing, and/or Screen Wall 43 deciduous Trees, 43 evergreen trees, 344 shrubs	No new plantings / No major existing vegetation	No / Waiver Requested

The preliminary landscaping plan stated the installation of required screening along the North and South property lines would disturb the existing trees and is not recommended. No landscaping is provided along the west property line per the ITC Corridor. However, west of the ITC lines is a R1-A zoned residential development of which the ITC lines will not obscure view from.



Source: Google Maps 2025

Interior Landscaping

Interior landscaping is not required for condominium developments.

Residential Entrance Landscaping

Standards for residential development entryways is outlined in Section 5.19.F. The Bogie Lake entrance meets plant count requirements. Landscaping is present along the first 150 feet of the entrance roadway however plant counts are not provided to determine if the standard has been met.

The Cedar Island entrance fulfills all plant count requirements however one tree required for the drive island has been moved to the curbside due to size constraints. Landscaping is present along the first 150 feet of the entrance roadway however plant counts are not provided to determine if the standard has been met.

Minimum Plant Size and Species

The proposed plantings and species meet the requirements of Section 5.19.H.

Mechanical Equipment Screening

Per the proposal to bring water and sewer in to service the site, a pump station, transformer, and generator are proposed at the sites northeast corner. Landscaping is proposed around the vicinity of the equipment for the purpose of screening.

Items to be Addressed: *Planning Commission to consider waiving requested greenbelt landscaping deviations along the West and North property lines.*

PERFORMANCE STANDARDS

No issues are anticipated regarding performance standards outlined in Section 5.18. Sheet 3 indicates that no street lighting is proposed and that individual dwelling unit lighting will be provided. The Township has the ability to require lighting where it deems it is necessary for safety and security.

Lighting requirements are reviewed during final site plan review.

Items to be Addressed: *None*

SIGNAGE

Sheet L-4 provides specifications for monument signage proposed at the Bogie Lake Road and Cedar Island Road entrances. Stone veneer is the predominant finish for the sign. Signs are administratively reviewed by the Township.

Items to be Addressed: *None.*

ARCHITECTURE & LAYOUT

The proportions of brick and siding proposed on the façade of the units is complementary. We recommended that the brick also be included in a similar proportion on the side and rear elevations. Elevations provided in the preliminary site plan have not changed. No comment was provided stating whether this recommendation will be utilized.

Items to be Addressed: *Elevations provided in the preliminary site plan have not changed regarding the use of brick along the side and rear unit elevations. No comment was provided stating whether this recommendation will be utilized.*

CONDOMINIUM DOCUMENTS

Draft master deeds are required for final site plan review. Section 6.1.F outlines regulations for condominium development designs. Standards relevant to zoning and site design are reviewed below. We defer to Township Engineering for items referring to utility layout and capacity.

Streets

Sheet 3 states that all internal roads are to be private. A separate application to the Township requesting the roads be private must be provided. Street designs are compliant however we defer to Township Engineering regarding technical aspects of the proposed streets.

Blocks

Blocks, streets, and pedestrian designs conform to requirements.

Easements

No public facilities are offered within the development. We defer to Township Engineering regarding the proposed water/sewer utilities along Bogie Lake Road and the necessary easements to ensure the Township has access.

Condominium Lots

Corner lots are to be 20 feet wider than a standard lot. The development still proposes to offer approximately 15 to 22 foot wider corner lots. Condominium layout requirements state front-to-front lot orientation shall be utilized where possible. The proposed layout accomplishes this standard along most streets. The Township approved this layout during preliminary site plan review.

Public Dedications

The site is not offering any public amenities such as parks or schools.

Trees and Natural Features

As noted in the Natural Features and Landscaping portions of this review, the development is proposing to persevere existing trees along the eastern half of the north and south property line as well as down the middle of the development between dwelling units.

Condominium Documents

A draft master deed shall be provided during final site plan review

Items to be Addressed:

1) *Concerns cited by Township Engineering.*
2) *Concerns cited by Township Counsel.*
3) *A private road application is required.*
4) *A draft master deed will be required during final site plan review.*

SUMMARY

The Planned Development final site plan is substantially complete and should be placed on a Planning Commission agenda. Potential conditions for final site approval are listed below.

Below are waivers/modifications/determinations the Planning Commission will need to consider.

Waivers / Modifications / Determinations

1) *Planning Commission to consider waiving requested greenbelt landscaping deviations along the West and North property lines.*

Items to be addressed at Final Site Plan Review

1) *Concerns cited by Township Engineering.*
2) *Concerns cited by Township Counsel.*
3) *Concerns cited by Public Safety.*
4) *Final approval of the plan will require the condition that the lots be combined into one parcel.*
5) *Sheet 17 shows the pathway running along Bogie Lake Road and terminating prior to the adjacent parking lot. The applicant states the final connection will be determined by, and coordinated with, the school facilities department. This amenity was offered as a community benefit during preliminary review. The applicant should provide documentation from both parties showing a commitment to implementing the pathway into the school campus.*
6) *All community benefits and their implementation timeline should be outlined in the development agreement.*
7) *The Road Commission of Oakland County approval of the access to Bogie Lake and Cedar Island Roads will be required.*
8) *A private road application is required.*
9) *A draft master deed will be required during final site plan review.*

Respectfully,

CARLISLE/WORTMAN ASSOC., INC.
Matteo Passalacqua
Community Planner

Fire Department
Charter Township of White Lake

7420 Highland Road
White Lake, MI 48383
Office (248) 698-3993
www.whitelaketwp.com/fire

Site / Construction Plan Review

To: Sean O'Neil, Planning Department Director

Date: 04-30-2026

Project: Edendale Crossing

Job #: 2025.010

Date on Plans: 03-23-2026

The Fire Department has the following comments with regards to the 5th review of preliminary site plans for the project known as Edendale Crossing

1. The access drive and parking lot shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all weather driving capabilities.
2. The required turning radius shall accommodate the largest Fire Department apparatus (40') and provide a turn radius profile throughout entire plan showing apparatus movement on future plans.
3. The angle of approach/Departure to and from White Lake roads shall not exceed 8 degrees.
4. Where fire hydrants or fire department connections are subject to impact by a motor vehicle, guard posts or other approved means shall comply with section 312.
5. All fire lanes shall be conspicuously posted with uniform "NO PARKING FIRE LANE" signs as prescribed by the fire code official. The location and spacing of the signs, mounted or erected, shall be as directed by the fire code official.
6. The Fire Dept. has no further comments.

Jason Hanifen
Fire Marshal
Charter Township of White Lake
(248)698-3993
jhanifen@whitelaketwp.com

Plans are reviewed using the International Fire Code (IFC), 2021 Edition and Referenced NFPA Standards.