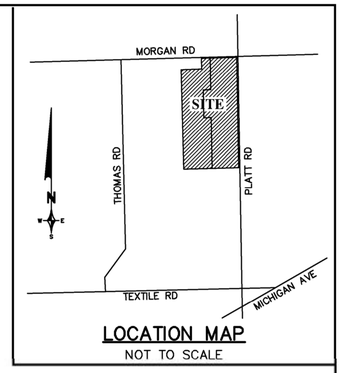
GEDDES VISTA

PITTSFIELD TOWNSHIP, MI



DEVELOPER:

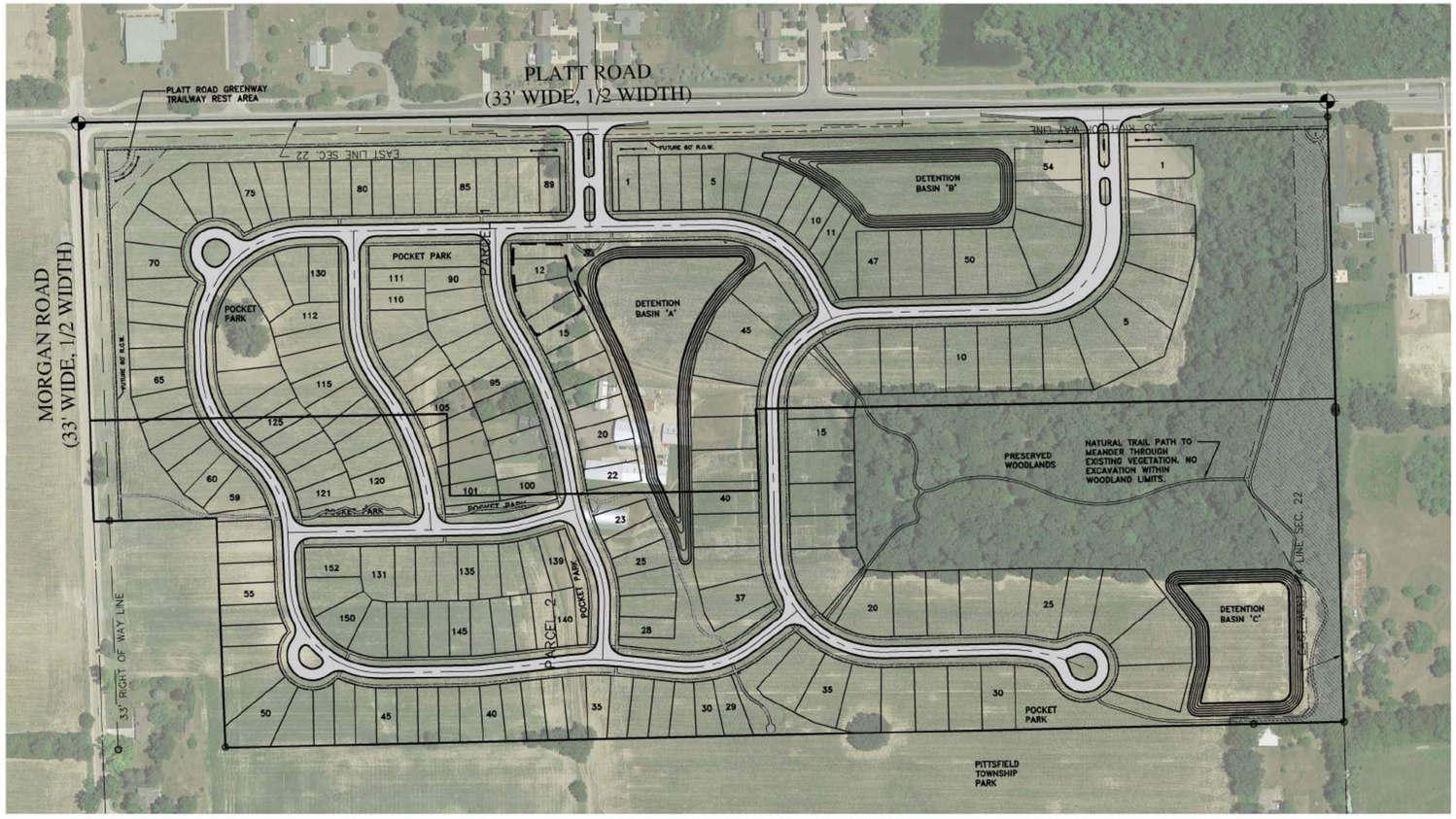
IVANHOE COMPANIE
6689 ORCHARD LAKE ROAD, SUITE 314
WEST BLOOMFIELD, MICHIGAN 48322
P: (248) 626-6114
GARY SHAPIRO

ENGINEER/SURVEYOR:

ZEIMET-WOZNIAK AND ASSOCIATES, INC.
55800 GRAND RIVER AVE, SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 www.zeimetwozniak.com
ANDY WOZNIAK

LANDSCAPE ARCHITECT:

FELINO A. PASCUAL ASSOCIATES
24333 ORCHARD LAKE RD, SUITE G
FARMINGTON HILLS, MICHIGAN 48336
P: (248) 557-5588
FELINO (JOEL) PASCUAL, RLA



SCALE: 1" = 150'

0 75' 150' 300'

Sheet Index

NOTE:

These plans are the property of Zeimet–Wozniak & Associates, Inc. No construction staking or construction inspection or constructive use of these plans shall be made by anyone without the written authorization below.

Authorization by: _____

Zeimet–Wozniak & Associates, Inc. shall not be responsible for means, methods, procedures, techniques, or sequences of construction, nor for safety on the job site, nor shall Zeimet–Wozniak & Associates, Inc. be responsible for the contractor's failure to carry out the work in accordance with the contract documents.

The Contractor shall indemnify and save harmless the Owner and Engineer from all liabilities for injury to persons, or damage to or loss of property, or any other loss, cost or expense, as a result of the actions of the Contractor, his employees, agents, or subcontractors.

All contractors shall name Zeimet–Wozniak & Associates, Inc. as additionally insured on all insurance policies.

The location and elevation of existing underground utilities as shown on these drawings are only approximate. No guarantee is either expressed or implied as to the completeness or accuracy thereof. The Contractor shall be exclusively responsible for determining the exact location and elevation of existing utilities and proposed utility crossings in the field prior to construction. The Contractor shall notify the Engineer if any conflicts are apparent or if the location or depth differs significantly from the plans.

DEVELOPMENT SUMMARY:

THE PROPOSED DEVELOPMENT CONSISTS OF:
152 SINGLE FAMILY LOTS (45' X 120')
54 SINGLE FAMILY LOTS (70' X 143')

REFUSE COLLECTION WILL BE BY CURB SIDE PICK UP SERVICE.

PROPOSED UTILITY SERVICES SHALL BE AS FOLLOWS:

SANITARY SEWER
PUBLIC SANITARY SEWER IS PROPOSED WITHIN PUBLIC EASEMENTS AND WILL BE EXTENDED FROM THE EXISTING " SANITARY SEWER ON THE EAST SIDE OF PLATT ROAD.

WATERMAIN
PUBLIC WATERMAIN IS PROPOSED WITHIN PUBLIC EASEMENTS AND ROAD RIGHT–OF–WAYS FROM MULTIPLE CONNECTIONS TO THE EXISTING 16" WATERMAIN ON THE EAST SIDE OF PLATT ROAD.

STORM WATER MANAGEMENT
THE PROPOSED DEVELOPED AREAS WILL BE COLLECTED INTO THREE (3) DETENTION BASIN SYSTEMS AND OUTLETTED AT A RESTRICTED RATE TO THE EXISTING DRAINAGE DITCH ALONG PLATT ROAD. THE DETENTION BASINS SHALL BE DESIGNED PER CURRENT WCWRC STANDARDS.

FRANCHISE UTILITIES
EXISTING FRANCHISE UTILITIES CURRENTLY SERVICING THE TOWNSHIP SHALL BE EXTENDED THROUGH THE PROPOSED SITE.

ROADS
ALL ROADS WITHIN THE SITE AND ENTRANCES TO PLATT ROAD SHALL BE DESIGNED TO MEET CURRENT WCRC STANDARDS.

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171 — THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

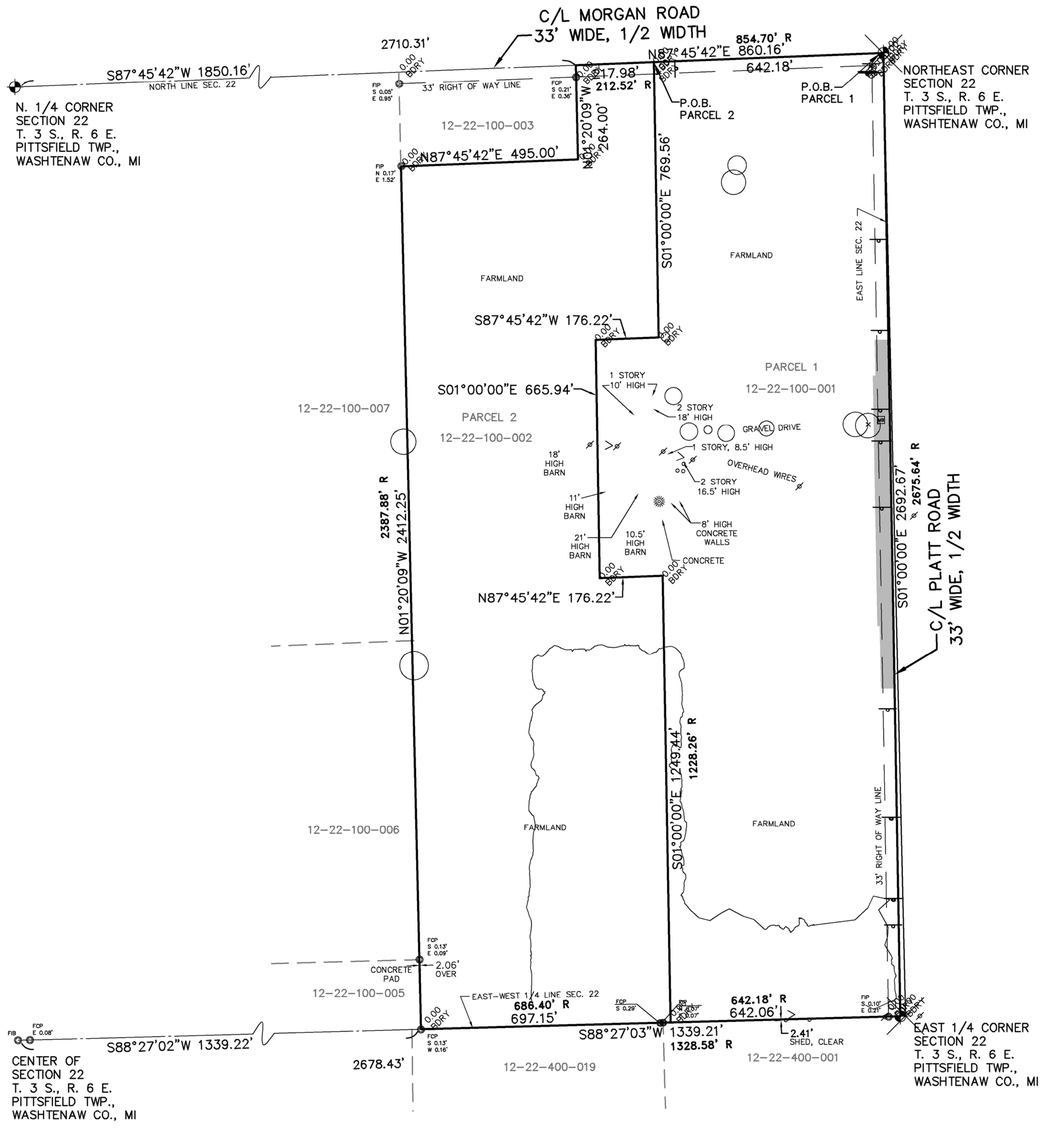
PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

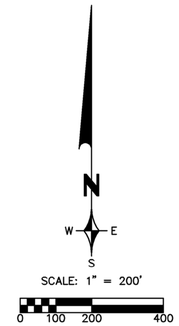
COVER SHEET
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK	DATE 9/23/20	SCALE	HOR: 1" = 150' VER: 1" = N/A
	DESIGNED BY SRB	JOB NO.	18141
	DRAWN BY SRB	SHEET	C–1.0

© COPYRIGHT 2020

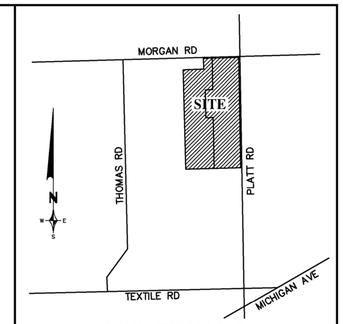
Z:\Projects\18141\DWG\PRELIM SITE PLAN\18141 PSP COVER.dwg, C-1.0 COVER SHEET, 10/8/2020 12:53:52 PM, dbinkoyer





LEGEND

	BOUNDARY LINE		MANHOLE
	PARCEL LINE		CATCH BASIN
	SECTION LINE		GATE VALVE
	EASEMENTS		UTILITY POLE
	FENCE LINE		GUY ANCHOR
	ELECTRIC CABLE		LIGHT POLE
	SECTION CORNER		SIGN
	FCP, FIP, SCI	25	EXCEPTION NUMBER
FCP	FOUND CAPPED PIPE		
FIP	FOUND IRON PIPE		
SCI	SET CAPPED IRON		
10.00' R	RECORD		



LOCATION MAP
NOT TO SCALE

SURVEY NOTES

1. THE SURVEYED PROPERTY IS IN A FEDERALLY DESIGNATED FLOOD ZONE X, FIRM MAP No. 26161C0405E. EFFECTIVE DATE 4–3–2012. THE ABOVE FLOOD PLAIN DESIGNATION IS FOR INFORMATION ONLY AND IS BASED ON THE FIRM MAP LISTED ABOVE AVAILABLE ELECTRONICALLY FROM FEMA ON THE DATE OF THIS SURVEY. THIS SURVEYOR ASSUMES NO LIABILITY FOR THE CORRECTNESS OF THE CITED MAP(S). IN ADDITION, THE ABOVE STATEMENT DOES NOT REPRESENT THIS SURVEYOR'S OPINION OF THE PROBABILITY OF FLOODING.

2. THE BEARINGS ARE BASED ON THE EAST LINE OF SECTION 22 BEING S. 01°00'00" E.

3. UNDERGROUND UTILITIES ARE SHOWN ACCORDING TO VISIBLE SURFACE FEATURES AND AVAILABLE RECORDS. BUILDING APPEARS TO HAVE GAS, WATER, ELECTRIC AND SANITARY SEWER.

4. AT TIME OF INSPECTION THERE WAS NO OBSERVED EVIDENCE OF CEMETERIES LOCATED ON SUBJECT PROPERTY.

5. PARCEL 1 CONTAINS 1,843,618 SQUARE FEET OR 42.32 ACRES OF LAND.
PARCEL 2 CONTAINS 1,641,813 SQUARE FEET OR 37.69 ACRES OF LAND.
OVERALL SUBJECT PROPERTY CONTAINS 3,485,432 OR 80.01 ACRES OF LAND.

6. THE SITE IS ZONED AG, AGRICULTURAL DISTRICT. SETBACKS: FRONT 50', SIDE 30', REAR 50'. SETBACKS ARE LISTED ACCORDING TO THE ZONING ORDINANCE. SETBACKS ARE SUBJECT TO INTERPRETATION OF FRONT, SIDE AND REAR, VARIANCES AND VARIOUS PLANNING AND SITE PLAN APPROVALS. ONLY THE APPROPRIATE MUNICIPAL AUTHORITY CAN DETERMINE IF THE SURVEYED PROPERTY CONFORMS TO SETBACK REQUIREMENTS. THE SURVEYOR CAN SHOW THE SETBACK LINES ON THE DRAWING ONLY IF A ZONING REPORT IS PROVIDED THAT ILLUSTRATES THE SETBACK LINES. A MORE DETAILED RESPONSE TO ITEMS 6a AND 6b REQUIRES A COMPLETE ZONING REPORT. NO ZONING REPORT WAS PROVIDED.

7. THERE ARE NO CHANGES IN STREET RIGHT–OF–WAY KNOWN TO THIS SURVEYOR.

8. THERE WAS NO OBSERVED EVIDENCE OF EARTHWORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS IN RECENT MONTHS ON DATE OF FIELD SURVEY. THERE WERE NO WALLS DESIGNATED BY THE CLIENT TO BE CHECKED FOR PLUMB OR PARTY WALLS.

9. THE PROPERTY HAS DIRECT ACCESS OR FRONTAGE ON PLATT ROAD AND MORGAN ROAD, PUBLIC ROADS.

10. THERE WAS NO OBSERVED EVIDENCE THAT THE SUBJECT SITE IS CURRENTLY BEING USED AS AN ACTIVE SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL ON DATE OF FIELD SURVEY.

11. TO THE BEST OF MY KNOWLEDGE UTILITY SERVICES REQUIRED FOR THE OPERATION OF THE PROPERTY ENTER THE PROPERTY THROUGH ADJOINING PUBLIC STREETS OR FROM PRIVATE LAND THROUGH EASEMENTS.

12. NO DELINEATED WETLANDS WERE OBSERVED AT THE TIME OF THE LATEST FIELD INSPECTION.

13. THE RECORD LEGAL DESCRIPTIONS PROVIDED DO NOT CLOSE. THERE WERE NO GAPS, GORES OR OVERLAPS. THE AS SURVEYED LEGAL DESCRIPTION CONTAINS ALL OF THE PROPERTY INCLUDED IN THE TITLE COMMITMENT.

14. NO IRONS HAVE BEEN SET ON THE COMMON LINES BETWEEN PARCEL 1 AND PARCEL 2. THE PROPERTY IS UNDER CULTIVATION.

SCHEDULE B PART II EXCEPTIONS

1. – 7. **NOT MATTERS OF SURVEY.**

8. ROAD EASEMENT GRANTED TO THE BOARD OF COUNTY ROAD COMMISSIONERS OF THE COUNTY OF WASHTENAW RECORDED IN LIBER 3881, PAGE 223, WASHTENAW COUNTY RECORDS. **SHOWN.**

9. TERMS AND CONDITIONS OF STATE OF MICHIGAN – FARMLAND DEVELOPMENT RIGHTS AGREEMENT RECORDED IN LIBER 4468, PAGE 750, WASHTENAW COUNTY RECORDS. **NOTHING TO PLOT, MAY BE EXPIRED.**

10. **NOT MATTERS OF SURVEY.**

AS SURVEYED LEGAL DESCRIPTION

A PARCEL OF LAND LOCATED IN THE NORTHEAST 1/4 OF SECTION 22, T. 3 S., R. 6 E., PITTSFIELD TOWNSHIP, WASHTENAW COUNTY MICHIGAN DESCRIBED AS:

BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION 22 AND PROCEEDING ALONG THE EAST LINE OF SAID SECTION 22, ALSO BEING THE CENTERLINE OF PLATT ROAD (33 FEET WIDE, 1/2 WIDTH) S. 01°00'00" E. 2692.67 FEET MEASURED (2675.64 FEET RECORD) TO THE EAST 1/4 CORNER OF SAID SECTION 22; THENCE ALONG THE EAST–WEST 1/4 LINE S. 88°27'03" W. 1339.21 FEET MEASURED (1328.58 FEET RECORD); THENCE N. 01°20'09" W. 2412.25 FEET MEASURED (2387.88 FEET RECORD); THENCE N. 87°45'42" E. 495.00 FEET; THENCE N. 01°20'09" W. 264.00 FEET TO A POINT ON THE NORTH LINE OF SAID SECTION 22, ALSO BEING THE CENTERLINE OF MORGAN ROAD (33 FEET WIDE, 1/2 WIDTH); THENCE ALONG SAID LINE N. 87°45'42" E. 860.16 FEET MEASURED (854.70 FEET RECORD) TO THE POINT OF BEGINNING.

LEGAL DESCRIPTION

THE LAND REFERRED TO IN THIS COMMITMENT IS DESCRIBED AS FOLLOWS: TOWNSHIP OF PITTSFIELD, COUNTY OF WASHTENAW, STATE OF MICHIGAN

PARCEL 1

COMMENCING AT THE NORTHEAST CORNER OF SECTION 22, TOWNSHIP 3 SOUTH, RANGE 6 EAST IN MICHIGAN; THENCE SOUTH 88 1/2 DEGREES, WEST NINE CHAINS AND SEVENTY–THREE LINKS TO A STAKE; THENCE SOUTH ONE DEGREE EAST ELEVEN CHAINS AND SIXTY–SIX LINKS TO A STAKE; THENCE SOUTH 88 1/2 DEGREES WEST TWO CHAINS AND SIXTY–SEVEN LINKS TO A STAKE; THENCE SOUTH ONE DEGREE EAST TEN CHAINS AND NINE LINKS TO A STAKE; THENCE NORTH 88 1/2 DEGREES EAST TWO CHAINS AND SIXTY–SEVEN LINKS TO A STAKE; THENCE SOUTH ONE DEGREE EAST EIGHTEEN CHAINS AND SIXTY–ONE LINKS TO A STAKE IN THE EAST AND WEST QUARTER LINE OF SAID SECTION, THENCE NORTH 88 1/2 DEGREES EAST NINE CHAINS AND SEVENTY–THREE LINKS, TO THE QUARTER STAKE ON THE EAST SIDE OF SAID SECTION; THENCE NORTH ONE DEGREE WEST FORTY CHAINS AND FIFTY–FOUR LINKS TO THE PLACE OF BEGINNING.

PARCEL 1 IS ASSESSED AS FOLLOWS:
BEGINNING AT NORTHEAST CORNER OF SECTION 22, THENCE SOUTH 88 DEGREES 30 MINUTES WEST 642.18 FEET IN NORTH LINE OF SECTION, THENCE SOUTH 1 DEGREE EAST 769.56 FEET, THENCE SOUTH 88 DEGREES 30 MINUTES WEST 176.22 FEET THENCE SOUTH 1 DEGREE EAST 665.94 FEET, THENCE NORTH 88 DEGREES 30 MINUTES EAST 176.22 FEET, THENCE SOUTH 1 DEGREE EAST 1228.26 FEET, THENCE NORTH 88 DEGREES 30 MINUTES EAST 642.18 FEET IN EAST AND WEST 1/4 LINE TO EAST 1/4 POST, THENCE NORTH 1 DEGREE WEST 2675.64 FEET IN EAST LINE OF SECTION TO PLACE OF BEGINNING, BEING A PART OF NORTHEAST 1/4 SECTION 22, TOWN 3 SOUTH, RANGE 6 EAST.

PARCEL 2

COMMENCING ON THE NORTH LINE OF SECTION 22, 9 CHAINS AND SEVENTY–THREE LINKS WEST OF THE NORTHEAST CORNER OF SAID SECTION; THENCE SOUTH ONE DEGREE EAST 11 CHAINS AND 66 LINKS TO A STAKE; THENCE SOUTH 88 1/2 (EIGHTY–EIGHT AND ONE–HALF) DEGREES WEST 2 CHAINS AND 67 LINKS TO A STAKE; THENCE SOUTH ONE DEGREE EAST 10 CHAINS AND 9 LINKS TO A STAKE; THENCE NORTH 88 1/2 DEGREES EAST 2 CHAINS AND 67 LINKS TO A STAKE; THENCE SOUTH ONE DEGREE EAST 18 CHAINS AND 61 LINKS TO A STAKE IN THE EAST AND WEST QUARTER LINE OF SAID SECTION; THENCE WEST ON SAID QUARTER LINE 10 CHAINS AND 40 LINKS TO A STAKE IN THE LINE BETWEEN THE EAST AND WEST HALVES OF THE NORTHWEST QUARTER OF SAID SECTION; THENCE NORTH ON THE LINE BETWEEN THE EAST AND WEST HALVES OF SAID QUARTER SECTION 40 CHAINS AND 18 LINKS TO A STAKE IN THE NORTH LINE OF SAID SECTION, THENCE EAST ON SAID NORTH LINE 10 CHAINS AND 72 LINKS TO THE PLACE OF BEGINNING.

LESS AND EXCEPT THE FOLLOWING DESCRIBED PROPERTY: COMMENCING AT THE NORTH 1/4 CORNER OF SECTION 22, TOWNSHIP 3 SOUTH, RANGE 6 EAST, THENCE EASTERLY ALONG THE NORTH LINE OF SAID SECTION AND THE CENTER LINE OF MORGAN ROAD 1356.52 FEET FOR A PLACE OF BEGINNING; THENCE CONTINUING ON THE SAME COURSE ALONG THE NORTH LINE OF SAID SECTION AND THE CENTER LINE OF MORGAN ROAD 495.0 FEET; THENCE SOUTHERLY DEFLECTING 90 DEGREES 45 MINUTES TO THE RIGHT 264.0 FEET; THENCE WESTERLY DEFLECTING 89 DEGREES 15 MINUTES TO THE RIGHT 495.0 FEET; THENCE NORTHERLY DEFLECTING 90 DEGREES 45 MINUTES TO THE RIGHT 264.0 FEET; TO THE PLACE OF BEGINNING, BEING PART OF THE NORTHEAST 1/4 OF SAID SECTION.

PARCEL 2 IS ASSESSED AS FOLLOWS:
COMMENCING AT NORTHEAST CORNER OF SECTION 22, THENCE SOUTH 88 DEGREES 30 MINUTES 642.18 FEET FOR PLACE OF BEGINNING, THENCE SOUTH 1 DEGREE EAST 769.56 FEET, THENCE SOUTH 88 DEGREES 30 MINUTES WEST 176.22 FEET, THENCE SOUTH 1 DEGREE EAST 665.94 FEET, THENCE NORTH 88 DEGREES 30 MINUTES EAST 176.22 FEET, THENCE SOUTH 1 DEGREE EAST 1228.26 FEET, THENCE SOUTH 88 DEGREES 30 MINUTES WEST 686.4 FEET IN EAST AND WEST 1/4 LINE TO WEST LINE OF EAST 1/2 OF NORTHEAST 1/4, THENCE NORTHERLY 2387.88 FEET IN WEST LINE OF EAST 1/2 OF NORTHEAST 1/4, THENCE DEFLECTING 89 DEGREES 15 MINUTES RIGHT 495 FEET, THENCE DEFLECTING 89 DEGREES 15 MINUTES LEFT 264 FEET, THENCE DEFLECTING 89 DEGREES 15 MINUTES RIGHT 212.52 FEET IN NORTH LINE OF SECTION TO PLACE OF BEGINNING, BEING A PART OF NORTHEAST 1/4 SECTION 22, TOWN 3 SOUTH, RANGE 6 EAST.

ATA NATIONAL TITLE GROUP, LLC, FILE NUMBER 81–18610548–SCM, COMMITMENT DATE AUGUST 24, 2018.

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

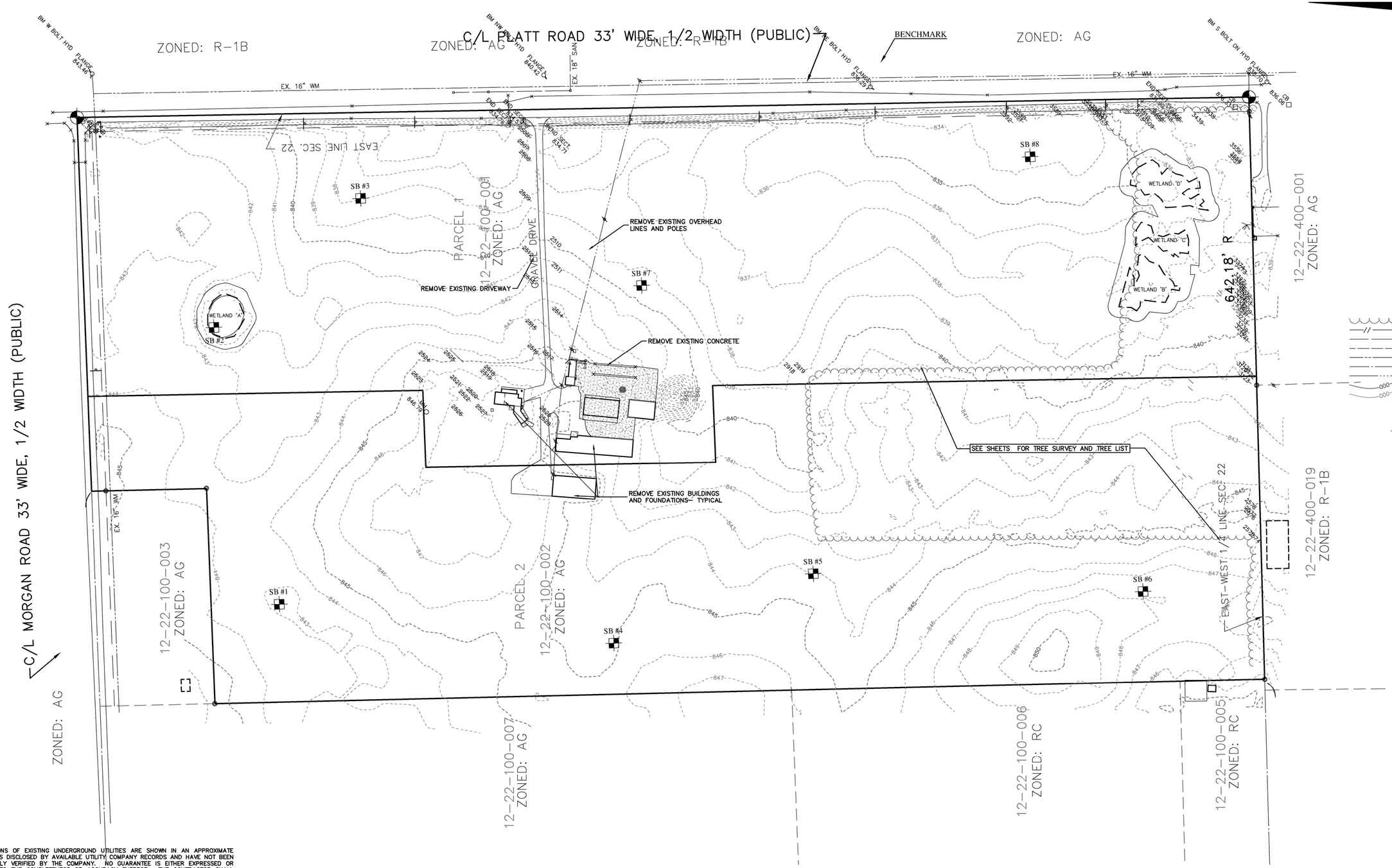
PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

ALTA NSPS LAND TITLE SURVEY
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK	DATE –/–/07	SCALE	HOR: 1" = 200' VER: 1" = N/A
	DESIGNED BY SRB	JOB NO.	18141
	DRAWN BY SRB	SHEET	C–2.0

© COPYRIGHT 2020

Z:\Projects\18141\DWG\18141 ALTA.dwg, C-2.0 ALTA (2), 10/8/2020 12:55:34 PM, dbemboyer



SCALE: 1" = 100'

BENCHMARK:
NE BOLT ON HYDRANT FLANGE, EAST SIDE PLATT ROAD 1,825'± SOUTH OF MORGAN ROAD
ELEVATION: 836.29
USGS DATUM

EXISTING LEGEND

	MANHOLE
	CATCH BASIN
	INLET
	CLEANOUT
	END SECTION
	ROOF DRAIN
	GATE VALVE
	HYDRANT
	WATER SHUT-OFF
	UTILITY POLE
	GUY ANCHOR
	LIGHT POLE
	SIGN
	TREE
	TREE TAG
	TREE TAG (TO BE REMOVED)
	TREE LINE
	FENCE
	SANITARY SEWER
	STORM SEWER
	WATER MAIN
	GAS MAIN
	ELECTRIC CABLE
	CONTOUR MAJOR
	CONTOUR MINOR
T/P	TOP OF PAVEMENT
T/C	TOP OF CURB
B/C	BOTTOM OF CURB
+100.00	SPOT ELEVATION

NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTMENT OF ALL STRUCTURES, KNOWN OR UNKNOWN, SHOWN OR UNSHOWN, LOCATED WITHIN THE LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE IF ANY SUCH STRUCTURES ARE IDENTIFIED. ALL COSTS ASSOCIATED WITH LOCATING AND ADJUSTING THESE STRUCTURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. DESIGN PROFESSIONAL AND CLIENT WARRANT THAT IN TRANSMITTING INSTRUMENTS OF SERVICE, OR ANY OTHER INFORMATION, THE TRANSMITTING PARTY IS THE COPYRIGHT OWNER OF SUCH INFORMATION OR HAS PERMISSION FROM THE COPYRIGHT OWNER TO TRANSIT SUCH INFORMATION FOR ITS USE OF THE PROJECT. IF THE CLIENT AND DESIGN PROFESSIONAL INTEND TO TRANSMIT INSTRUMENTS OF SERVICE OR ANY OTHER INFORMATION OR DOCUMENTATION IN DIGITAL FORM, THEY SHALL ENDEAVOR TO ESTABLISH NECESSARY PROTOCOLS GOVERNING SUCH TRANSMISSIONS.

ZONING DEFINITIONS:

AG–	AGRICULTURAL
RC–	RECREATIONAL CONSERVATION
R-1B–	SINGLE FAMILY SUBURBAN RESIDENTIAL

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

EXISTING CONDITIONS
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK

DATE 9/23/20	SCALE	HOR: 1" = 100' VER: 1" = N/A	
DESIGNED BY SRB	JOB NO.	18141	
DRAWN BY SRB	SHEET	C-3.0	

© COPYRIGHT 2020

Z:\Projects\18141\DWG\18141 TOPO.dwg, C-3.0 EXISTING CONDITIONS, 10/8/2020 12:57:00 PM, zlamberyer

McDOWELL & ASSOCIATES
Geotechnical, Environmental, & Hydrogeologic Services
21355 Hatcher Avenue • Ferndale, MI 48220
Phone: (248) 399-2066 • Fax: (248) 399-2157

LOG OF SOIL BORING NO. 1
PROJECT: Soils Investigation, Proposed Subdivision
LOCATION: 78-9-Acre Parcel, Platt and Morgan Roads, Pittsfield Township, Michigan
JOB NO. 18-318
SURFACE ELEV. ____ DATE 11-21-18

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den. Wt. P.C.F.	Unc. Comp. Strength PSF	Sp. %
	1		Moist dark brown clayey TOPSOIL						
			1'0'						
A SS	2			4					
	3		Stiff moist variegated silty CLAY with sand and pebbles	5	23.9				
				6			*	(3000)	
	4								
B SS	5		4'6"	5					
				9	18.8				
	6		Very stiff moist variegated silty CLAY with sand and pebbles	14			*	(8000)	
			6'6"						
C SS	7			10					
	8		Extremely stiff moist brown silty CLAY with trace of sand and pebbles	15	17.9				
				17			*	(9000+)	
	9		8'6"						
D SS	10			14					
				30					
	11		Extremely stiff moist brown silty CLAY with sand and pebbles and occasional stones	---					
	12								
	13								
	14		14'0'						
E SS	15		Extremely stiff moist brown silty CLAY with sand and pebbles and moist brown clayey sand seams	6					
				12					
	16		15'6'	16					
	17								
	18								
	19								
	20								
	21								
	22								
	23								
	24								
	25								

TYPE OF SAMPLE: D. - DISTURBED; U.L. - UNDIST. LINER; S.T. - SHELBY TUBE; S.S. - SPLIT SPOON; R.C. - ROCK CORE; ( ) - PENETROMETER

REMARKS: *Calibrated penetrometer

Standard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30". Count Made at 6" Intervals

GROUND WATER OBSERVATIONS
G.W. ENCOUNTERED AT ___ FT. ___ INS.
G.W. ENCOUNTERED AT ___ FT. ___ INS.
G.W. AFTER COMPLETION ___ FT. ___ INS.
G.W. AFTER ___ HRS. ___ FT. ___ INS.
G.W. VOLUMES None

McDOWELL & ASSOCIATES
Geotechnical, Environmental, & Hydrogeologic Services
21355 Hatcher Avenue • Ferndale, MI 48220
Phone: (248) 399-2066 • Fax: (248) 399-2157

LOG OF SOIL BORING NO. 2
PROJECT: Soils Investigation, Proposed Subdivision
LOCATION: 78-9-Acre Parcel, Platt and Morgan Roads, Pittsfield Township, Michigan
JOB NO. 18-318
SURFACE ELEV. ____ DATE 11-21-18

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den. Wt. P.C.F.	Unc. Comp. Strength PSF	Sp. %
	1		Moist dark brown clayey TOPSOIL with vegetation						
			2'0'						
A SS	2			3					
	3		Stiff moist variegated silty CLAY with sand and pebbles and wet brown fine sand lenses	5	24.0				
				5			*	(3600)	
	4								
B SS	5		4'6"	3					
				7	18.8				
	6		Very stiff moist variegated silty CLAY with sand and pebbles	15			*	(7500)	
			6'0'						
C SS	7			9					
	8		Very stiff moist variegated silty CLAY with moist to wet brown fine sand seams	11	20.3				
				12			*	(8000)	
	9		8'6"						
D SS	10			4					
				5	5.6				
	11			5					
	12								
	13		Compact moist to wet brown fine SAND with trace of silt and moist brown silty clay seams						
	14								
E SS	15			6					
				7					
	16			7					
	17		17'0'						
	18								
	19								
F SS	20		Very compact moist brown silty fine SAND with trace of gravel and occasional stones	6					
				11					
	21		20'6'	14					
	22								
	23								
	24								
	25								

TYPE OF SAMPLE: D. - DISTURBED; U.L. - UNDIST. LINER; S.T. - SHELBY TUBE; S.S. - SPLIT SPOON; R.C. - ROCK CORE; ( ) - PENETROMETER

REMARKS: *Calibrated penetrometer

Standard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30". Count Made at 6" Intervals

GROUND WATER OBSERVATIONS
G.W. ENCOUNTERED AT 2 FT. 3 INS.
G.W. ENCOUNTERED AT 7 FT. 0 INS.
G.W. AFTER COMPLETION Dry FT. INS.
G.W. AFTER ___ HRS. ___ FT. INS.
G.W. VOLUMES Light

McDOWELL & ASSOCIATES
Geotechnical, Environmental, & Hydrogeologic Services
21355 Hatcher Avenue • Ferndale, MI 48220
Phone: (248) 399-2066 • Fax: (248) 399-2157

LOG OF SOIL BORING NO. 3
PROJECT: Soils Investigation, Proposed Subdivision
LOCATION: 78-9-Acre Parcel, Platt and Morgan Roads, Pittsfield Township, Michigan
JOB NO. 18-318
SURFACE ELEV. ____ DATE 11-27-18

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den. Wt. P.C.F.	Unc. Comp. Strength PSF	Sp. %
	1		Moist dark brown clayey TOPSOIL with vegetation						
			1'2'						
A SS	2		Stiff moist brown silty CLAY with traces of sand and pebbles	5					
	3			5	17.0				
				7			*	(3500)	
	4		3'6'						
B SS	5		Slightly compact moist brown silty fine to medium SAND	2					
				2	12.4				
	6			2					
			6'6'						
C SS	7			2					
	8		Medium compact moist brown fine SAND	2	4.4				
				3					
	9		8'6'						
D SS	10			10					
				10					
	11			12					
	12		Very compact moist brown fine to medium SAND						
	13								
	14								
E SS	15			13					
				14					
	16		15'6'	15					
	17								
	18								
	19								
	20								
	21								
	22								
	23								
	24								
	25								

TYPE OF SAMPLE: D. - DISTURBED; U.L. - UNDIST. LINER; S.T. - SHELBY TUBE; S.S. - SPLIT SPOON; R.C. - ROCK CORE; ( ) - PENETROMETER

REMARKS: *Calibrated penetrometer

Standard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30". Count Made at 6" Intervals

GROUND WATER OBSERVATIONS
G.W. ENCOUNTERED AT ___ FT. ___ INS.
G.W. ENCOUNTERED AT ___ FT. ___ INS.
G.W. AFTER COMPLETION ___ FT. ___ INS.
G.W. AFTER ___ HRS. ___ FT. ___ INS.
G.W. VOLUMES None

McDOWELL & ASSOCIATES
Geotechnical, Environmental, & Hydrogeologic Services
21355 Hatcher Avenue • Ferndale, MI 48220
Phone: (248) 399-2066 • Fax: (248) 399-2157

LOG OF SOIL BORING NO. 4
PROJECT: Soils Investigation, Proposed Subdivision
LOCATION: 78-9-Acre Parcel, Platt and Morgan Roads, Pittsfield Township, Michigan
JOB NO. 18-318
SURFACE ELEV. ____ DATE 11-21-18

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den. Wt. P.C.F.	Unc. Comp. Strength PSF	Sp. %
	1		Moist dark brown clayey TOPSOIL with trace of sand and pebbles						
			1'3'						
A SS	2			4					
	3		Stiff moist brown silty CLAY with trace of sand and pebbles	5	24.9				
				7			*	(3500)	
	4		4'0'						
B SS	5			5					
	6		Very stiff moist brown silty CLAY with sand and pebbles	11	17.0				
				13			*	(7500)	
	6		6'6'						
C SS	7			8					
	8		Extremely stiff moist brown silty CLAY with sand and pebbles	22	17.0				
				24			*	(9000+)	
	9		8'6'						
D SS	10			8					
			Extremely stiff moist brown silty CLAY with sand and pebbles, occasional stones and moist brown fine sand seams	13					
	11			15					
	12		11'6'						
	13								
	14								
E SS	15		Compact moist wet brown fine SAND with trace of silt and moist brown clayey silt seams	4					
				5					
	16			6					
	17								
	18		18'0'						
	19								
F SS	20		Slightly compact wet brown fine SAND	1					
				2					
	21		20'6'	2					
	22								
	23								
	24								
	25								

TYPE OF SAMPLE: D. - DISTURBED; U.L. - UNDIST. LINER; S.T. - SHELBY TUBE; S.S. - SPLIT SPOON; R.C. - ROCK CORE; ( ) - PENETROMETER

REMARKS: *Calibrated penetrometer

Standard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30". Count Made at 6" Intervals

GROUND WATER OBSERVATIONS
G.W. ENCOUNTERED AT 12 FT. 0 INS.
G.W. ENCOUNTERED AT 18 FT. 0 INS.
G.W. AFTER COMPLETION 18 FT. 2 INS.
G.W. AFTER ___ HRS. ___ FT. ___ INS.
G.W. VOLUMES Medium-Light

McDOWELL & ASSOCIATES
Geotechnical, Environmental, & Hydrogeologic Services
21355 Hatcher Avenue • Ferndale, MI 48220
Phone: (248) 399-2066 • Fax: (248) 399-2157

LOG OF SOIL BORING NO. 5
PROJECT: Soils Investigation, Proposed Subdivision
LOCATION: 78-9-Acre Parcel, Platt and Morgan Roads, Pittsfield Township, Michigan
JOB NO. 18-318
SURFACE ELEV. ____ DATE 11-27-18

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den. Wt. P.C.F.	Unc. Comp. Strength PSF	Sp. %
	1		Moist dark brown clayey TOPSOIL with vegetation						
			1'3'						
A SS	2			4					
	3		Stiff moist brown silty CLAY with sand and pebbles	5	23.6				
				6			*	(3000)	
	4								
B SS	5		5'0'	3					
				5	16.6				
	6			7					
C SS	7		Medium compact to compact moist to wet brown fine to medium SAND with trace of silt and moist brown silty clay seams	3					
				2	5.2				
	8			3					
	9								
D SS	10		9'6"	3					
				3	12.9				
	11			4					
	12		Compact moist brown fine SAND with trace of clay						
	13								
	14		13'0'						
E SS	15		Extremely compact moist brown fine to medium SAND	17					
				21					
	16		15'3'	10/3"					
	17								
	18								
	19								
	20								
	21								
	22								
	23								
	24								
	25								

TYPE OF SAMPLE: D. - DISTURBED; U.L. - UNDIST. LINER; S.T. - SHELBY TUBE; S.S. - SPLIT SPOON; R.C. - ROCK CORE; ( ) - PENETROMETER

REMARKS: *Calibrated penetrometer

Standard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30". Count Made at 6" Intervals

GROUND WATER OBSERVATIONS
G.W. ENCOUNTERED AT 5 FT. 0 INS.
G.W. ENCOUNTERED AT ___ FT. ___ INS.
G.W. AFTER COMPLETION Dry FT. ___ INS.
G.W. AFTER ___ HRS. ___ FT. ___ INS.
G.W. VOLUMES None Light

McDOWELL & ASSOCIATES
Geotechnical, Environmental, & Hydrogeologic Services
21355 Hatcher Avenue • Ferndale, MI 48220
Phone: (248) 399-2066 • Fax: (248) 399-2157

LOG OF SOIL BORING NO. 6
PROJECT: Soils Investigation, Proposed Subdivision
LOCATION: 78-9-Acre Parcel, Platt and Morgan Roads, Pittsfield Township, Michigan
JOB NO. 18-318
SURFACE ELEV. ____ DATE 11-27-18

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den. Wt. P.C.F.	Unc. Comp. Strength PSF	Sp. %
	1		Moist dark brown clayey TOPSOIL with sand and pebbles						
			0'9'						
A SS	2			4					
	3		Very stiff moist brown silty CLAY with sand and pebbles and occasional stones	6	17.8				
				15			*	(6000)	
	4								
B SS	5		4'6"	7					
				7	7.1				
	6		Compact moist brown fine SAND	6					
			6'0'						
C SS	7			2					
	8		Slightly compact moist brown fine to medium SAND with trace of silt	2	11.9				
				2					
	9		8'6"						
D SS	10			3					
			Compact moist brown fine SAND	4	5.5				
	11			4					
	12								
	13		13'0'						
	14								
E SS	15			10					
				13					
	16		Extremely compact moist brown fine SAND	17					
	17								
	18								
	19								
F SS	20			20					
				22					
	21		23'3'	10/3"					
	22								
	23								
	24								
	25								

TYPE OF SAMPLE: D. - DISTURBED; U.L. - UNDIST. LINER; S.T. - SHELBY TUBE; S.S. - SPLIT SPOON; R.C. - ROCK CORE; ( ) - PENETROMETER

REMARKS: *Calibrated penetrometer

Standard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30". Count Made at 6" Intervals

GROUND WATER OBSERVATIONS
G.W. ENCOUNTERED AT ___ FT. ___ INS.
G.W. ENCOUNTERED AT ___ FT. ___ INS.
G.W. AFTER COMPLETION ___ FT. ___ INS.
G.W. AFTER ___ HRS. ___ FT. ___ INS.
G.W. VOLUMES None

McDOWELL & ASSOCIATES
Geotechnical, Environmental, & Hydrogeologic Services
21355 Hatcher Avenue • Ferndale, MI 48220
Phone: (248) 399-2066 • Fax: (248) 399-2157

LOG OF SOIL BORING NO. 7
PROJECT: Soils Investigation, Proposed Subdivision
LOCATION: 78-9-Acre Parcel, Platt and Morgan Roads, Pittsfield Township, Michigan
JOB NO. 18-318
SURFACE ELEV. ____ DATE 11-27-18

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den. Wt. P.C.F.	Unc. Comp. Strength PSF	Sp. %
	1		Moist dark brown clayey TOPSOIL with vegetation						
			1'2'						
A SS	2			5					
	3		Very stiff moist brown silty CLAY with sand and pebbles	7	18.1				
				13			*	(6000)	
	4								
B SS	5		4'6'	6					
				10	17.6				
	6		Extremely stiff moist brown silty CLAY with sand and pebbles	16			*	(8000)	
			6'6'						
C SS	7			4					
	8		Stiff moist variegated silty CLAY with sand and pebbles	6	19.6				
				10			*	(4500)	
	9		9'0'						
D SS	10			6					
			Extremely stiff moist variegated silty CLAY with sand and pebbles	12					
	11			20					
	12								
	13								
	14		13'6'						
E SS	15		Slightly compact moist brown fine SAND with trace of clay	2					
				2					
	16		15'6'	2					
	17								
	18								
	19								
	20								
	21								
	22								
	23								
	24								
	25								

TYPE OF SAMPLE: D. - DISTURBED; U.L. - UNDIST. LINER; S.T. - SHELBY TUBE; S.S. - SPLIT SPOON; R.C. - ROCK CORE; ( ) - PENETROMETER

REMARKS: *Calibrated penetrometer

Standard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30". Count Made at 6" Intervals

GROUND WATER OBSERVATIONS
G.W. ENCOUNTERED AT ___ FT. ___ INS.
G.W. ENCOUNTERED AT ___ FT. ___ INS.
G.W. AFTER COMPLETION ___ FT. ___ INS.
G.W. AFTER ___ HRS. ___ FT. ___ INS.
G.W. VOLUMES None

McDOWELL & ASSOCIATES
Geotechnical, Environmental, & Hydrogeologic Services
21355 Hatcher Avenue • Ferndale, MI 48220
Phone: (248) 399-2066 • Fax: (248) 399-2157

LOG OF SOIL BORING NO. 8
PROJECT: Soils Investigation, Proposed Subdivision
LOCATION: 78-9-Acre Parcel, Platt and Morgan Roads, Pittsfield Township, Michigan
JOB NO. 18-318
SURFACE ELEV. ____ DATE 11-27-18

Sample & Type	Depth	Legend	SOIL DESCRIPTION	Penetration Blows for 6"	Moisture %	Natural Wt. P.C.F.	Dry Den. Wt. P.C.F.	Unc. Comp. Strength PSF	Sp. %
	1		Wet to moist dark brown clayey TOPSOIL with vegetation						
			1'6'						
A SS	2			3					
	3			3	24.6				
			Stiff moist variegated silty CLAY with sand and pebbles	4			*	(2000)	
	4								
B SS	5			3					
				3	22.6				
	6			5			*	(2500)	
			3'0'						
C SS	7								
	8			12					
				22	18.1				
	9			28			*	(9000+)	
D SS	10		Extremely stiff moist variegated silty CLAY with sand and pebbles and occasional stones	17					
				20					
	11			10/3"					
	12								
	13								
	14		14'0'						
E SS	15			8					
				16					
	16			16					
	17		Extremely stiff moist blue silty CLAY with sand and pebbles and occasional stones						
	18								
	19								
F SS	20			10					
				13					
	21		20'6'	18					
	22								
	23								
	24		Note: Boring located in standing water area						
	25								

TYPE OF SAMPLE: D. - DISTURBED; U.L. - UNDIST. LINER; S.T. - SHELBY TUBE; S.S. - SPLIT SPOON; R.C. - ROCK CORE; ( ) - PENETROMETER

REMARKS: *Calibrated penetrometer

Standard Penetration Test - Driving 2" OD Sampler 1' With 140# Hammer Falling 30". Count Made at 6" Intervals

GROUND WATER OBSERVATIONS
G.W. ENCOUNTERED AT Surface FT. ___ INS.
G.W. ENCOUNTERED AT ___ FT. ___ INS.
G.W. AFTER COMPLETION 18 FT. 10 INS.
G.W. AFTER ___ HRS. ___ FT. ___ INS.
G.W. VOLUMES Heavy

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

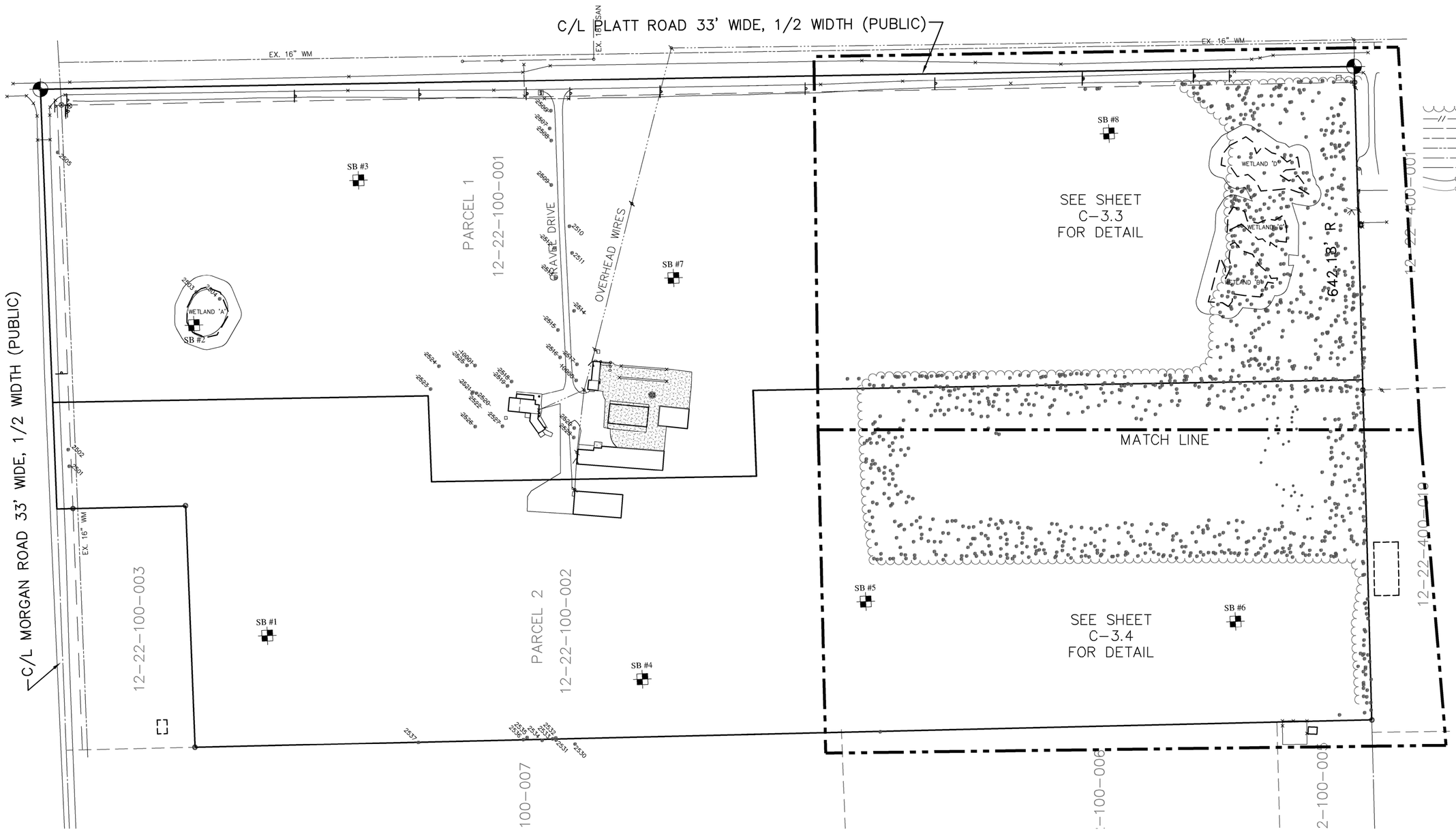
PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

SOIL BORINGS
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK:
DATE 9/23/20
DESIGNED BY SRB
DRAWN BY SRB
SCALE HOR: 1" = N/A VER: 1" = N/A
JOB NO. 18141
SHEET C-3.1

© COPYRIGHT 2020

Z:\Projects\18141\DWG\18141 TOPC.dwg, C-3.1 SOIL BORINGS, 10/8/2020 12:57:35 PM, dsmtmyer



SCALE: 1" = 100'

EXISTING LEGEND

- MANHOLE
- CATCH BASIN
- INLET
- CLEANOUT
- END SECTION
- ROOF DRAIN
- GATE VALVE
- HYDRANT
- WATER SHUT-OFF
- UTILITY POLE
- GUY ANCHOR
- LIGHT POLE
- SIGN
- TREE
- TREE TAG
- TREE TAG (TO BE REMOVED)
- TREE LINE
- FENCE
- SANITARY SEWER
- STORM SEWER
- WATER MAIN
- GAS MAIN
- ELECTRIC CABLE
- CONTOUR MAJOR
- CONTOUR MINOR
- T/P TOP OF PAVEMENT
- T/C TOP OF CURB
- B/C BOTTOM OF CURB
- +100.00 SPOT ELEVATION

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171 — THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

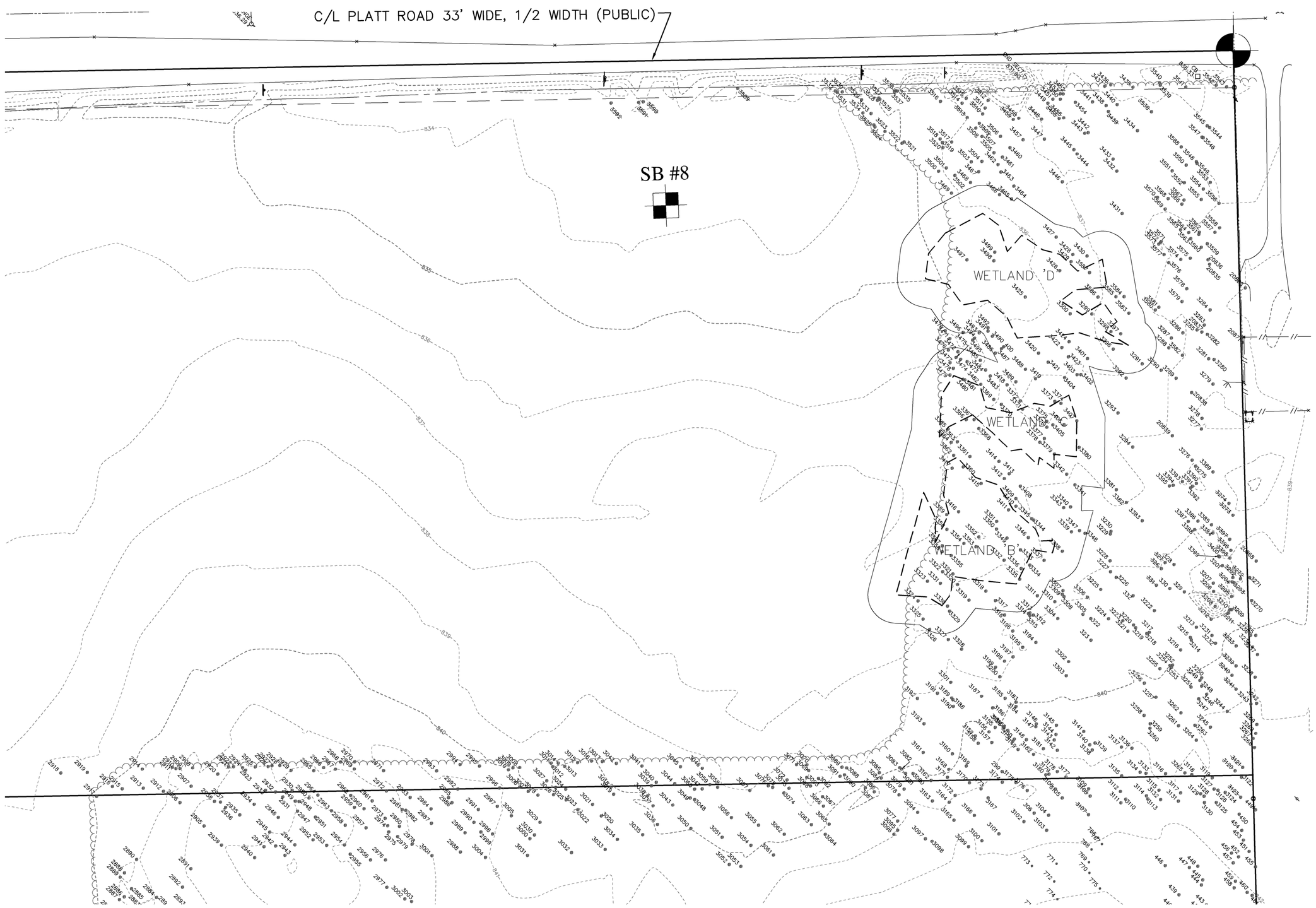
PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

OVERALL TREE SURVEY
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK	DATE 9/23/20	SCALE	HOR: 1" = 100' VER: 1" = N/A
	DESIGNED BY SRB	JOB NO.	18141
	DRAWN BY SRB	SHEET	C-3.2

© COPYRIGHT 2020

Z:\Projects\18141\DWG\18141 TOPO.dwg, C-3.2 OVERALL TREE SURVEY, 10/8/2020 12:58:18 PM, dbimbeyer



EXISTING LEGEND

- MANHOLE
- CATCH BASIN
- INLET
- CLEANOUT
- END SECTION
- ROOF DRAIN
- GATE VALVE
- HYDRANT
- WATER SHUT-OFF
- UTILITY POLE
- GUY ANCHOR
- LIGHT POLE
- SIGN
- TREE
- TREE TAG
- TREE TAG (TO BE REMOVED)
- TREE LINE
- FENCE
- SANITARY SEWER
- STORM SEWER
- WATER MAIN
- GAS MAIN
- ELECTRIC CABLE
- CONTOUR MAJOR
- CONTOUR MINOR
- T/P TOP OF PAVEMENT
- T/C TOP OF CURB
- B/C BOTTOM OF CURB
- +100.00 SPOT ELEVATION

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

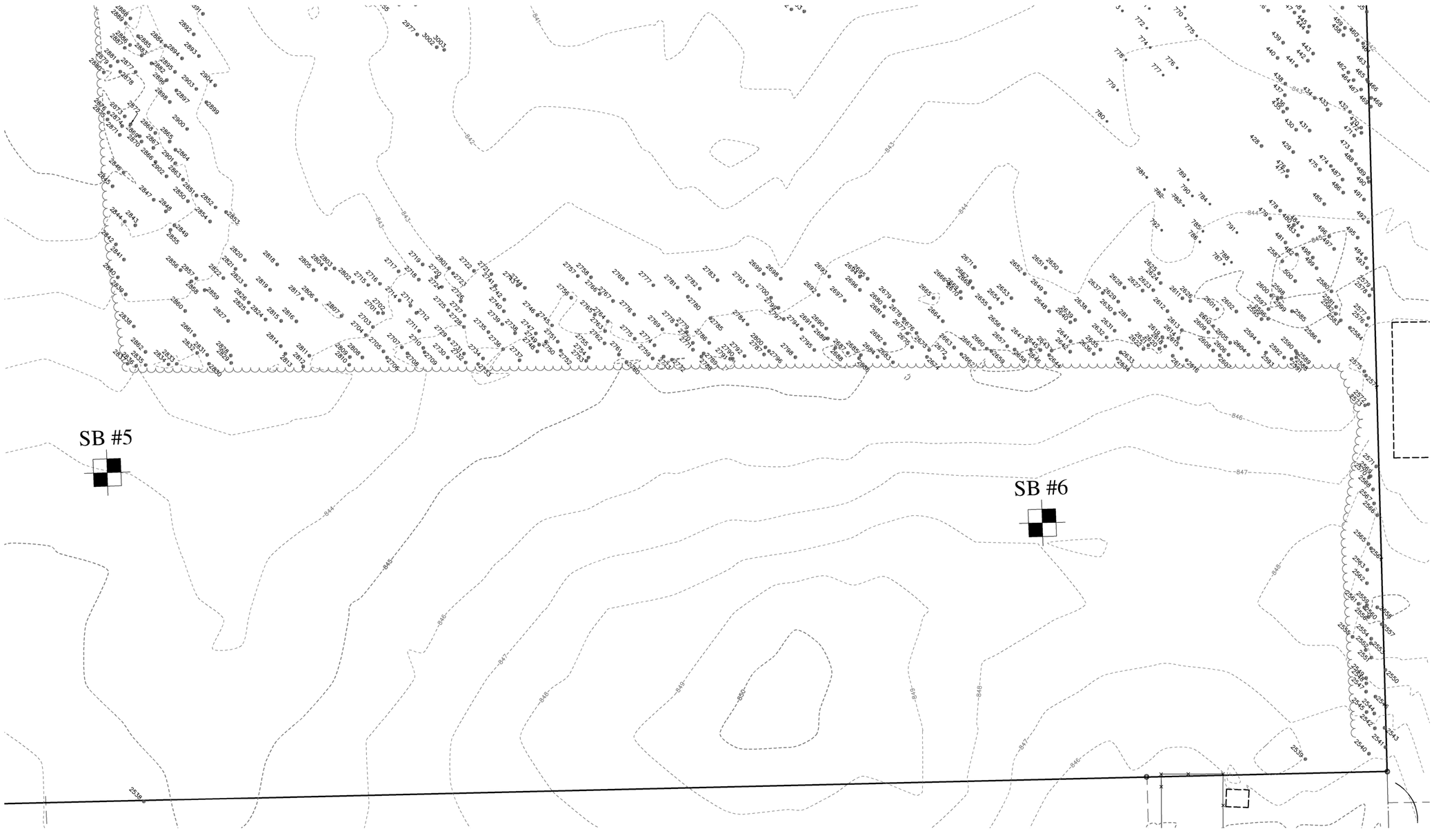
PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

TREE SURVEY DETAIL EAST
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK	DATE 9/23/20	SCALE	HOR: 1" = 40' VER: 1" = N/A
	DESIGNED BY SRB	JOB NO.	18141
	DRAWN BY SRB	SHEET	C-3.3

© COPYRIGHT 2020

Z:\Projects\18141\DWG\18141 TOPO.dwg, C-3.3 TREE SURVEY DETAIL EAST, 10/8/2020 12:58:55 PM, dbembyer



SCALE: 1" = 40'

EXISTING LEGEND

- MANHOLE
- CATCH BASIN
- INLET
- CLEANOUT
- END SECTION
- ROOF DRAIN
- GATE VALVE
- HYDRANT
- WATER SHUT-OFF
- UTILITY POLE
- GUY ANCHOR
- LIGHT POLE
- SIGN
- TREE
- TREE TAG
- TREE TAG (TO BE REMOVED)
- TREE LINE
- FENCE
- SANITARY SEWER
- STORM SEWER
- WATER MAIN
- GAS MAIN
- ELECTRIC CABLE
- CONTOUR MAJOR
- CONTOUR MINOR
- T/P TOP OF PAVEMENT
- T/C TOP OF CURB
- B/C BOTTOM OF CURB
- +100.00 SPOT ELEVATION

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

TREE SURVEY DETAIL WEST
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK

DATE 9/23/20	SCALE	HOR: 1" = 40' VER: 1" = N/A	
DESIGNED BY SRB	JOB NO.	18141	
DRAWN BY SRB	SHEET	C-3.4	

© COPYRIGHT 2020

Z:\Projects\18141\DWG\18141 TOPO.dwg, C-3.4 TREE SURVEY DETAIL WEST, 10/8/2020 12:59:37 PM, dbmbryer

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
201	Acer saccharinum	Sugar Maple	9.5			Fair				
202	Acer saccharinum	Sugar Maple	20.0			Fair	X			
203	Quercus rubra	Red Oak	24.5			Poor	X			
204	Quercus alba	White Oak	17.5			Fair	X			
205	Quercus rubra	Red Oak	18.5			Poor	X			
206	Acer saccharinum	Sugar Maple	9.5			Fair				
207	Carya cordiformis	Bitter Nut Hickory	8.0			Fair				
208	Acer saccharinum	Sugar Maple	7.0			Fair				
209	Acer rubrum	Red Maple	14.9			Fair				
210	Quercus alba	White Oak	13.0			Fair				
211	Quercus alba	White Oak	20.0			Fair	X			
212	Quercus rubra	Red Oak	19.7			Fair	X			
213	Quercus rubra	Red Oak	21.0			Fair	X			
214	Quercus rubra	Red Oak	22.0			Poor	X			
215	Quercus rubra	Red Oak	19.5			Fair	X			
216	Acer saccharinum	Sugar Maple	8.2			Fair				
217	Acer saccharinum	Sugar Maple	18.0	16.0		Fair	X			
220	Carya glabra	Pignut Hickory	14.9			Fair				
221	Carya glabra	Pignut Hickory	6.7			Fair				
222	Acer saccharinum	Sugar Maple	13.0			Fair				
223	Quercus alba	White Oak	22.0			Fair	X			
224	Quercus alba	White Oak	19.2			Fair	X			
225	Acer saccharinum	Sugar Maple	11.8			Fair				
226	Acer saccharinum	Sugar Maple	9.5			Poor				
227	Tilia americana	Basswood	12.2	14.9	10.5	Fair				
228	Acer saccharinum	Sugar Maple	9.8			Fair				
229	Acer saccharinum	Sugar Maple	9.8			Fair				
230	Carya glabra	Pignut Hickory	11.3			Fair				
231	Quercus alba	White Oak	18.2			Fair	X			
232	Quercus rubra	Red Oak	22.6			Poor	X			
233	Acer saccharinum	Sugar Maple	8.1			Fair				
234	Quercus rubra	Red Oak	26.3	20.6		Fair	X			
235	Acer saccharinum	Sugar Maple	10.4			Fair				
236	Quercus rubra	Red Oak	15.4			Fair				
237	Tilia americana	Basswood	12.2			Fair				
238	Quercus rubra	Red Oak	16.1			Fair	X			
239	Acer saccharinum	Sugar Maple	7.5			Fair				
240	Tilia americana	Basswood	16.5			Fair				
241	Tilia americana	Basswood	16.7			Fair				
242	Quercus rubra	Red Oak	18.8			Fair	X			
243	Tilia americana	Basswood	19.2			Fair	X			
244	Acer saccharinum	Sugar Maple	13.2			Fair				
245	Tilia americana	Basswood	18.3			Fair	X			
246	Quercus alba	White Oak	19.9			Fair	X			
247	Acer saccharinum	Sugar Maple	11.2			Fair				
248	Ostrya virginiana	Ironwood	6.0			Fair				
249	Quercus rubra	Red Oak	18.2			Poor	X			
250	Quercus rubra	Red Oak	17.5			Fair	X			
251	Quercus rubra	Red Oak	15.9	16.3		Fair				X
252	Quercus rubra	Red Oak	15.0	17.2		Fair				
253	Quercus rubra	Red Oak	19.5	20.5	22.3	Fair	X			
254	Quercus alba	White Oak	14.7			Fair				
255	Quercus alba	White Oak	16.8			Fair	X			
256	Quercus velutina	Black Oak	20.3			Fair	X			
257	Quercus velutina	Black Oak	13.8			Fair				
258	Quercus alba	White Oak	16.8			Fair	X			
259	Quercus alba	White Oak	19.5			Fair	X			
260	Tilia americana	Basswood	24.2			Fair	X			
261	Quercus alba	White Oak	18.5			Fair	X			
262	Quercus alba	White Oak	12.1			Fair				
263	Quercus alba	White Oak	10.6			Fair				
264	Quercus alba	White Oak	11.9			Fair				
265	Quercus alba	White Oak	18.3			Fair	X			
266	Quercus alba	White Oak	18.7			Fair	X			
267	Tilia americana	Basswood	18.4			Fair	X			
268	Quercus rubra	Red Oak	20.5	16.7		Fair	X			
269	Quercus alba	White Oak	9.3			Fair				
270	Quercus alba	White Oak	12.8			Fair				
272	Quercus alba	White Oak	16.2			Fair	X			
273	Carya glabra	Pignut Hickory	16.2			Fair	X			
274	Acer saccharinum	Sugar Maple	6.7			Fair				
275	Quercus alba	White Oak	13.8			Poor				
276	Ostrya virginiana	Ironwood	6.6			Good				
277	Quercus rubra	Red Oak	20.4			Fair	X			
278	Quercus alba	White Oak	16.0			Fair	X			
279	Quercus velutina	Black Oak	15.3			Fair				
280	Quercus alba	White Oak	12.8			Fair				
281	Quercus rubra	Red Oak	15.8			Fair				
282	Prunus avium	Sweet Cherry	7.0			Fair				
283	Quercus alba	White Oak	19.8			Fair	X			
284	Quercus alba	White Oak	18.7			Fair	X			
285	Carya ovata	Shagbark Hickory	6.1			Fair				
286	Tilia americana	Basswood	8.3			Fair				
287	Carya glabra	Pignut Hickory	7.6			Fair				
288	Prunus serotina	Black Cherry	6.1			Fair				
289	Carya ovata	Shagbark Hickory	16.8			Fair	X			
290	Quercus alba	White Oak	16.9			Fair	X			

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
291	Quercus alba	White Oak	9.8			Fair				
292	Quercus alba	White Oak	12.5			Fair				
293	Acer saccharinum	Sugar Maple	7.9			Fair				
294	Quercus rubra	Red Oak	15.1			Fair				
295	Juglans cinerea	White Walnut	12.1			Fair	X			
297	Quercus alba	White Oak	18.5	16.2	16.5	Fair	X			
298	Quercus alba	White Oak	20.2			Fair	X			
299	Prunus serotina	Black Cherry	7.3			Fair				
300	Prunus serotina	Black Cherry	6.4			Fair				
301	Carya ovata	Shagbark Hickory	9.4			Fair				
302	Quercus alba	White Oak	13.9			Fair				
305	Quercus rubra	Red Oak	23.6			Fair	X			
306	Quercus alba	White Oak	14.8			Fair				
308	Quercus alba	White Oak	14.5			Fair				
309	Quercus alba	White Oak	10.3			Fair				
310	Carya ovata	Shagbark Hickory	11.8			Fair				
311	Carya ovata	Shagbark Hickory	9.1			Fair				
312	Carya ovata	Shagbark Hickory	8.9			Fair				
313	Carya ovata	Shagbark Hickory	8.8			Fair				
314	Carya ovata	Shagbark Hickory	7.4			Fair				
315	Carya ovata	Shagbark Hickory	10.2			Fair				
316	Carya ovata	Shagbark Hickory	13.8	10.3		Fair				
317	Carya ovata	Shagbark Hickory	8.2			Fair				
318	Carya ovata	Shagbark Hickory	8.5			Fair				
319	Carya ovata	Shagbark Hickory	11.0			Fair				
320	Acer saccharinum	Sugar Maple	13.8			Fair				
321	Ulmus rubra	Slippery Elm	6.2			Fair				
322	Acer saccharinum	Sugar Maple	6.3			Fair				
323	Quercus alba	White Oak	11.2			Fair				
324	Acer saccharinum	Sugar Maple	15.6			Fair				
325	Carya ovata	Shagbark Hickory	18.1	12.4	11.8	Fair	X			
326	Carya ovata	Shagbark Hickory	9.9			Fair		9.9		
327	Carya ovata	Shagbark Hickory	11.8			Fair		11.8		
328	Carya ovata	Shagbark Hickory	11.1			Fair				
329	Carya ovata	Shagbark Hickory	8.8			Fair				
330	Quercus macrocarpa	Bur Oak	33.5			Fair	X			
331	Carya ovata	Shagbark Hickory	9.4	8.2		Fair		17.6		
332	Tilia americana	Basswood	8.3			Fair				
333	Populus deltoides	Eastern Cottonwood	8.5			Fair				
334	Populus deltoides	Eastern Cottonwood	7.3			Fair				
336	Ulmus americana	American Elm	13.2			Fair				
337	Populus deltoides	Eastern Cottonwood	12.8			Fair				
338	Populus deltoides	Eastern Cottonwood	9.6			Fair				
339	Populus deltoides	Eastern Cottonwood	6.2			Fair				
340	Ulmus americana	American Elm	10.8			Fair				
341	Ulmus americana	American Elm	7.8			Fair				
342	Populus deltoides	Eastern Cottonwood	9.5			Fair				
343	Populus deltoides	Eastern Cottonwood	6.7			Fair				
344	Populus deltoides	Eastern Cottonwood	8.4			Fair				
345	Ulmus americana	American Elm	10.0			Fair				
346	Acer saccharinum	Sugar Maple	11.0			Fair				
347	Carya glabra	Pignut Hickory	6.2			Fair				
348	Carya ovata	Shagbark Hickory	6.9			Poor				
349	Carya ovata	Shagbark Hickory	9.3			Poor				
350	Carya ovata	Shagbark Hickory	8.7			Poor				
351	Carya ovata	Shagbark Hickory	9.4			Poor				
352	Carya ovata	Shagbark Hickory	9.7			Poor				
353	Carya ovata	Shagbark Hickory	7.6			Poor				
354	Carya ovata	Shagbark Hickory	8.7			Poor				
355	Carya ovata	Shagbark Hickory	13.2			Poor				
356	Carya ovata	Shagbark Hickory	8.8			Poor				
357	Carya ovata	Shagbark Hickory	9.0			Poor				
358	Carya ovata	Shagbark Hickory	6.2			Poor				
360	Carya ovata	Shagbark Hickory	9.8			Poor				
361	Carya ovata	Shagbark Hickory	10.4			Poor				
362	Tilia americana	Basswood	8.0			Poor				
400	Populus deltoides	Cottonwood	6.8			Fair				
428	Prunus serotina	Black Cherry	8.7			Fair				
429	Quercus velutina	Black Oak	15.3			Fair				
430	Quercus macrocarpa	Bur Oak	8.4			Fair				
431	Prunus serotina	Black Cherry	14.3			Fair				
432	Carya ovata	Shagbark Hickory	9.7			Fair				
433	Tilia americana	Basswood	8.8			Fair				
434	Quercus rubra	Red Oak	16.9			Fair	X			
435	Ulmus americana	American Elm	8.8			Fair				
436	Quercus macrocarpa	Bur Oak	9.1			Fair				
437	Tilia americana	Basswood	10.6			Fair				
438	Quercus rubra	Red Oak	9.3			Fair				
439	Prunus serotina	Black Cherry	13.6			Fair				
440	Tilia americana	Basswood	9.5			Fair				
441	Tilia americana	Basswood	14.2			Fair				
442	Tilia americana	Basswood	13.2			Fair				
443	Tilia americana	Basswood	8.5			Poor				
444	Quercus rubra	Red Oak	8.8			Fair				
445	Acer saccharum	Sugar Maple	10.5			Fair				
446	Tilia americana	Basswood	8.0			Fair				

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
447	Quercus alba	White Oak	9.6			Fair				
448	Quercus rubra	Red Oak	11.3			Fair				
449	Carya laciniosa	Shellbark Hickory	10.1	9.5		Fair				
450	Quercus alba	White Oak	16.2			Fair	X			
451	Carya laciniosa	Shellbark Hickory	14.1			Fair				
452	Quercus macrocarpa	Bur Oak	17.2			Fair	X			
453	Quercus macrocarpa	Bur Oak	12.3			Fair				
454	Quercus alba	White Oak	19.4			Fair	X			
455	Quercus macrocarpa	Bur Oak	31.2			Fair	X			
456	Carya laciniosa	Shellbark Hickory	9.5			Fair				
457	Carya laciniosa	Shellbark Hickory	12.8			Fair				
458	Carya laciniosa	Shellbark Hickory	10.0			Fair				
459	Quercus alba	White Oak	16.0			Fair	X			
460	Quercus rubra	Red Oak	25.0			Fair	X			
461	Carya ovata	Shagbark Hickory	8.3			Fair				
462	Quercus rubra	Red Oak	16.7			Fair	X			
463	Carya laciniosa	Shellbark Hickory	8.5			Fair				
464	Quercus rubra	Red Oak	28.0			Fair	X			
465	Tilia americana	Basswood	12.8			Fair				
466	Tilia americana	Basswood	15.5			Fair				
467	Quercus velutina	Black Oak	16.1			Fair	X			
468	Carya ovata	Shagbark Hickory	19.5			Fair	X			
469	Tilia americana	Basswood	9.8			Fair				
470	Quercus alba	White Oak	26.0			Fair	X			
471	Carya laciniosa	Shellbark Hickory	11.8			Fair				
472	Tilia americana	Basswood	12.0			Fair				
473	Carya laciniosa	Shellbark Hickory	12.5			Fair				
474	Quercus rubra	Red Oak	12.4			Fair				
475	Prunus serotina	Black Cherry	12.7			Fair				
476	Prunus serotina	Black Cherry	14.9			Fair				
477	Tilia americana	Basswood	12.5			Fair				
478	Ulmus rubra	Slippery Elm	8.2			Fair				
479	Carya ovata	Shagbark Hickory	8.2			Fair				
480	Prunus serotina	Black Cherry	11.6			Fair				
481	Ostrya virginiana	American Hophornbeam	8.0			Fair	X			
482	Carya cordiformis	Bitternut Hickory	8.2			Fair				
483	Acer rubrum	Red Maple	10.8			Fair				
484	Prunus serotina	Black Cherry	9.0			Poor				
485	Quercus alba	White Oak	13.4			Fair				
486	Prunus serotina	Black Cherry	8.5			Fair				
487	Quercus rubra	Red Oak	17.7			Fair	X			
488	Prunus serotina	Black Cherry	12.2			Fair				
489	Tilia americana	Basswood	15.0			Fair				
490	Tilia americana	Basswood	11.8			Fair				
491	Quercus macrocarpa	Bur Oak	32.0			Fair	X			
492	Quercus alba	White Oak	21.2			Fair	X			
493	Carya laciniosa	Shellbark Hickory	11.3			Fair				
494	Quercus macrocarpa	Bur Oak	10.6			Fair				
495	Quercus alba	White Oak	15.2			Fair				
496	Quercus rubra	Red Oak	10.4			Poor				
497	Quercus rubra	Red Oak	12.7			Fair				
498	Prunus serotina	Black Cherry	14.5			Fair				
499	Quercus rubra	Red Oak	16.4			Fair	X			
500	Acer rubrum	Red Maple	8.0			Fair				
766	Quercus alba	White Oak	19.0			Fair	X			
767	Quercus alba	White Oak	15.5			Fair				
768	Quercus rubra	Red Oak	17.2			Fair	X			
769	Carya glabra	Pignut Hickory	6.0			Fair				
770	Carya glabra	Pignut Hickory	17.5			Fair	X			
771	Quercus rubra	Red Oak	15.0			Fair				
772	Quercus alba	White Oak	16.2			Fair	X			
773	Quercus rubra	Red Oak	17.4			Fair	X			
774	Prunus serotina	Black Charry	7.5			Fair				
775	Carya glabra	Pignut Hickory	9.3			Fair				
776	Quercus macrocarpa	Bur Oak	15.0			Fair				
777	Carya glabra	Pignut Hickory	9.5			Fair				
778	Carya ovata	Shagbark Hickory	11.0			Fair				
779	Quercus alba	White Oak	12.0			Fair				
780	Carya ovata	Shagbark Hickory	10.8			Fair				
781	Acer rubrum	Red Maple	6.8			Fair		6.8		
782	Quercus alba	White Oak	14.1			Fair		14.1		
783	Quercus alba	White Oak	12.2			Fair		12.2		
784	Quercus alba	White Oak	11.5			Fair				
785	Prunus serotina	Black Charry	11.1			Fair				
786	Quercus alba	White Oak	18.0			Fair	X			
787	Quercus rubra	Red Oak	12.3			Fair				
788	Carya glabra	Pignut Hickory	6.0			Fair				
789	Carya glabra	Pignut Hickory	8.0			Fair				
790	Quercus alba	White Oak	21.3			Fair	X			
791	Quercus velutina	Black Oak	20.6			Fair	X			
792	Carya glabra	Pignut Hickory	16.3			Fair	X			
2501	Quercus velutina	Black oak	36.7			Fair	X			
2502	Quercus velutina	Black oak	38.1			Poor	X			
2503	Quercus macrocarpa	Bur oak	30.9			Good	X			
2504	Quercus macrocarpa	Bur oak	39.5			Good	X			
2505	Carya ovata	Shagbark Hickory	25.0			Good	X			

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

TREE LIST
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK

DATE 9/23/20	SCALE	HOR: 1" = N/A VER: 1" = N/A	
DESIGNED BY SRB	JOB NO.	18141	
DRAWN BY SRB	SHEET	C-3.5	

© COPYRIGHT 2020

Z:\Projects\18141\DWG\18141 TOPO.dwg, C-3.5 TREE LIST, 10/6/2020 1:02:21 PM, dbinbeyer

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
2506	Quercus alba	White oak	39.6			Fair	X		39.6	
2507	Quercus alba	White oak	29.1			Fair	X		29.1	
2508	Carya cordiformis	Bittemut Hickory	21.5			Fair	X		21.5	
2509	Quercus alba	White oak	15.9			Fair		15.9		
2510	Acer saccharum	Sugar Maple	21.8			Fair	X			
2511	Juglans nigra	Black Walnut	21.0			Fair	X			
2512	Quercus velutina	Black oak	42.8			Fair	X			
2513	Carya ovata	Shagbark Hickory	21.2			Fair	X			X
2514	Quercus velutina	Black oak	42.1			Poor	X			
2515	Quercus alba	White oak	31.6			Poor	X			X
2516	Juglans nigra	Black Walnut	38.1			Fair	X			X
2517	Acer saccharum	Sugar Maple	23.1			Fair	X			X
2518	Juglans nigra	Black Walnut	40.4			Fair	X			X
2519	Juglans nigra	Black Walnut	24.3			Fair	X			X
2520	Juglans nigra	Black Walnut	14.7			Fair				X
2521	Juglans nigra	Black Walnut	15.5			Fair				X
2522	Juglans nigra	Black Walnut	18.9			Fair	X			X
2523	Prunus serotina	Black cherry	32.1			Fair	X			X
2524	Pyrus communis	European pear	12.8	8.6		Fair	X			X
2525	Malus pumila	Apple	18.8	12.5		Fair	X			X
2526	Malus pumila	Apple	14.5	11.4		Poor	X		25.9	
2527	Pyrus communis	European pear	17.9			Fair	X			X
2528	Picea pungens	Blue spruce	7.4			Fair				X
2529	Picea pungens	Blue spruce	9.8			Fair				X
2530	Quercus macrocarpa	Bur oak	53.0			Fair	X			
2531	Ulmus americana	American Elm	13.7			Fair				
2532	Carya glabra	Pignut Hickory	13.1			Poor				
2533	Prunus serotina	Black cherry	7.7			Fair				
2534	Ulmus pumila	American Elm	29.4	13.7	8.7	Fair	X			
2535	Prunus serotina	Black cherry	13.3			Fair				
2536	Quercus alba	White oak	14.2	12.0		Fair				
2537	Prunus serotina	Black cherry	24.5			Fair	X			
2538	Quercus macrocarpa	Bur oak	50.3			Fair	X			
2539	Carya cordiformis	Bittemut Hickory	11.9			Fair				
2540	Quercus velutina	Black oak	16.3			Fair	X			
2541	Carya ovata	Shagbark Hickory	11.0	8.9		Fair				
2542	Quercus alba	White oak	28.1			Poor	X			
2543	Carya ovata	Shagbark Hickory	6.2			Fair				
2544	Carya glabra	Pignut Hickory	13.2			Fair				
2545	Ulmus americana	American Elm	8.4			Fair				
2546	Carya glabra	Pignut Hickory	8.7	7.6		Fair				
2547	Ulmus americana	American Elm	16.4			Poor				
2548	Prunus serotina	Black cherry	10.7			Fair				
2549	Carya ovata	Shagbark Hickory	9.5			Fair				
2550	Carya ovata	Shagbark Hickory	14.9			Fair				
2551	Carya ovata	Shagbark Hickory	11.0			Fair				
2552	Ulmus americana	American Elm	10.2			Poor				
2553	Quercus velutina	Black oak	27.3			Fair	X			
2554	Carya ovata	Shagbark Hickory	6.0			Fair				
2555	Prunus avium	Sweet cherry	8.6			Fair				
2556	Carya glabra	Pignut Hickory	11.3			Fair				
2557	Carya ovata	Shagbark Hickory	14.5			Fair				
2558	Ulmus americana	American Elm	6.9			Fair				
2559	Carya glabra	Pignut Hickory	18.5			Fair	X			
2560	Carya glabra	Pignut Hickory	17.3	7.0		Fair	X			
2561	Malus pumila	Apple	6.0			Fair				
2562	Prunus serotina	Black cherry	10.0			Fair				
2563	Carya glabra	Pignut Hickory	13.8			Fair				
2564	Carya glabra	Pignut Hickory	14.3	11.4	5.8	Fair				
2565	Prunus serotina	Black cherry	13.5			Fair				
2566	Prunus serotina	Black cherry	15.4			Fair				
2567	Quercus alba	Bur oak	18.5			Fair	X			
2568	Tilia americana	Basswood	21.8	18.8	16.8	Fair	X			
2569	Prunus serotina	Black cherry	12.1			Fair				
2570	Prunus serotina	Black cherry	16.1			Poor				
2571	Prunus serotina	Black cherry	14.1			Fair				
2572	Prunus serotina	Black cherry	23.1			Fair	X			
2573	Carya glabra	Pignut Hickory	6.1			Fair				
2574	Tilia americana	Basswood	27.9	17.0	15.4	Fair	X			
2575	Tilia americana	Basswood	19.8	17.9		Fair	X			
2576	Quercus alba	White oak	17.7			Fair	X			
2577	Quercus rubra	Red oak	29.8	20.6	7.4	Fair	X			
2578	Quercus alba	White oak	17.7			Fair	X			
2579	Carya ovata	Shagbark Hickory	11.0			Fair				
2580	Acer rubrum	Red Maple	8.0			Fair				
2581	Quercus velutina	Black oak	11.9			Fair				
2582	Prunus serotina	Black cherry	15.4			Fair				
2583	Carya cordiformis	Bittemut Hickory	13.2			Fair				
2584	Prunus serotina	Black cherry	6.7			Fair				
2585	Quercus rubra	Red oak	14.2			Fair				
2586	Carya ovata	Shagbark Hickory	7.9			Fair				
2587	Quercus rubra	Red oak	17.0			Fair	X			
2588	Prunus serotina	Black cherry	9.3			Fair				

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
2589	Tilia americana	Basswood	7.2			Fair				
2590	Quercus rubra	Red oak	7.2			Fair				
2591	Tilia americana	Basswood	10.7			Fair				
2592	Prunus serotina	Black cherry	22.5			Fair	X			
2593	Quercus rubra	Red oak	18.5			Fair	X			
2594	Quercus rubra	Red oak	8.0			Fair				
2595	Quercus rubra	Red Oak	8.0			Fair				
2596	Quercus rubra	Red oak	7.9			Fair				
2597	Prunus serotina	Black cherry	7.7			Fair				
2598	Prunus serotina	Black cherry	11.0			Fair				
2599	Quercus rubra	Red oak	23.3			Fair	X			
2600	Prunus serotina	Black cherry	6.0			Fair				
2601	Quercus alba	White oak	17.7			Fair	X			
2602	Quercus alba	White oak	13.2			Fair				
2603	Acer rubrum	Red Maple	20.4			Very Poor	X			
2604	Prunus serotina	Black cherry	8.5			Fair		8.5		
2605	Quercus rubra	Red oak	23.5	21.2		Fair	X			
2606	Carya glabra	Pignut Hickory	11.0			Fair				
2607	Carya glabra	Pignut Hickory	17.3			Fair	X			
2608	Quercus alba	White oak	16.2			Fair	X			
2609	Carya ovata	Shagbark Hickory	8.0			Fair				
2610	Carya ovata	Shagbark Hickory	15.1			Poor				
2611	Carya glabra	Pignut Hickory	16.1			Fair	X			
2612	Quercus alba	White oak	12.1			Fair				
2613	Quercus velutina	Black oak	19.3			Fair	X			
2614	Quercus alba	White oak	13.6			Very Poor				
2615	Quercus alba	White oak	20.5			Fair	X			
2616	Ulmus americana	American Elm	9.4			Fair				
2617	Quercus alba	White oak	12.8			Fair				
2618	Quercus alba	White oak	18.5			Fair	X			
2619	Quercus velutina	Black oak	17.5			Fair	X			
2620	Quercus alba	White oak	21.9			Fair	X			
2621	Quercus velutina	Black oak	14.1			Fair				
2622	Quercus alba	White oak	18.2			Fair	X			
2623	Quercus alba	White oak	13.4			Fair				
2624	Quercus alba	White oak	9.5			Fair				
2625	Carya cordiformis	Bittemut Hickory	9.3			Fair				
2626	Quercus alba	White oak	16.2			Fair	X			
2627	Quercus alba	White oak	10.1			Fair				
2628	Quercus alba	White oak	16.6			Fair	X			
2629	Quercus alba	White oak	10.8			Fair				
2630	Quercus alba	White oak	11.3			Fair				
2631	Quercus alba	White oak	14.6			Fair				
2632	Carya glabra	Pignut Hickory	11.8			Fair				
2633	Quercus alba	White oak	19.7			Fair	X			
2634	Prunus serotina	Black cherry	7.0			Fair				
2635	Quercus alba	White oak	17.1			Fair	X			
2636	Quercus velutina	Black oak	20.4			Fair	X			
2637	Carya glabra	Pignut Hickory	8.3			Fair				
2638	Carya glabra	Pignut Hickory	9.8			Fair				
2639	Quercus velutina	Black Oak	20.7			Fair	X			
2640	Carya ovata	Shagbark Hickory	7.2			Fair				
2641	Prunus serotina	Black cherry	13.7			Very Poor				
2642	Quercus alba	White oak	25.0			Fair	X			
2643	Carya glabra	Pignut Hickory	18.9			Fair	X			
2644	Carya glabra	Pignut Hickory	13.6			Fair				
2645	Quercus alba	White oak	6.3			Fair				
2646	Quercus rubra	Red oak	17.2	13.1		Fair	X			
2647	Prunus serotina	Black cherry	16.9			Fair				
2648	Quercus rubra	Red oak	20.7	20.2		Fair	X			
2649	Quercus alba	White oak	10.4			Fair				
2650	Quercus rubra	Red Oak	19.2			Fair	X			
2651	Carya glabra	Pignut Hickory	7.5			Fair				
2652	Quercus rubra	Red oak	11.3			Fair				
2653	Quercus alba	White oak	10.4			Fair				
2654	Quercus rubra	Red oak	20.4			Fair	X			
2655	Carya glabra	Pignut Hickory	8.2			Fair				
2656	Quercus velutina	Black oak	17.6			Fair	X			
2657	Quercus alba	White oak	13.7			Fair				
2658	Quercus alba	White oak	22.4			Fair	X			
2659	Carya ovata	Shagbark Hickory	8.7			Fair				
2660	Quercus rubra	Red oak	15.7	14.3		Fair				
2661	Carya ovata	Shagbark Hickory	10.0			Fair				
2662	Quercus alba	White oak	29.5			Fair	X			
2663	Quercus velutina	Black oak	22.8			Fair	X			
2664	Quercus rubra	Red oak	21.1			Fair	X			
2665	Quercus velutina	Black Oak	22.5			Fair	X			
2666	Tilia americana	Basswood	16.2			Fair				
2667	Ostrya virginiana	American hophombeam	7.3			Fair				
2668	Carya ovata	Shagbark Hickory	9.7			Fair				
2669	Carya glabra	Pignut Hickory	9.8			Fair				
2670	Carya ovata	Shagbark Hickory	15.2	9.7		Fair				
2671	Quercus rubra	Red Oak	37.0			Fair	X			

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
2672	Tilia americana	Basswood	7.6			Fair				
2673	Carya glabra	Pignut Hickory	19.8			Fair	X			
2674	Quercus alba	White oak	11.0			Very Poor				
2675	Quercus rubra	Red oak	27.2	17.2		Fair	X			
2676	Quercus alba	White oak	10.1			Fair				
2677	Quercus rubra	Red oak	16.0			Fair	X			
2678	Tilia americana	Basswood	7.2			Fair				
2679	Carya glabra	Pignut Hickory	12.1			Poor				
2680	Carya ovata	Shagbark Hickory	7.5			Fair				
2681	Quercus rubra	Red oak	22.9			Fair	X			
2682	Prunus serotina	Black cherry	9.0			Fair				
2683	Prunus serotina	Black cherry	7.4			Poor				
2684	Quercus alba	White oak	15.0			Fair				
2685	Quercus velutina	Black oak	20.1			Fair	X			
2686	Tilia americana	Basswood	7.0			Fair				
2687	Carya glabra	Pignut Hickory	13.8			Fair				
2688	Quercus alba	White oak	24.2			Fair	X			
2689	Quercus rubra	Red oak	15.0			Fair				
2690	Quercus alba	White oak	17.6			Fair	X			
2691	Quercus rubra	Red oak	14.8			Fair				
2692	Quercus rubra	Red oak	20.1			Fair	X			
2693	Acer rubrum	Red Maple	27.5			Fair	X			
2694	Ostrya virginiana	American hophombeam	7.1			Fair				
2695	Quercus rubra	Red oak	18.4			Fair	X			
2696	Carya glabra	Pignut Hickory	6.9			Fair				
2697	Quercus velutina	Black oak	21.0			Fair	X			
2698	Quercus velutina	Black oak	23.3			Fair	X			
2699	Acer rubrum	Red Maple	12.2			Fair				
2700	Quercus rubra	Red oak	19.1			Fair	X			
2701	Carya glabra	Pignut Hickory	11.3			Fair				
2702	Acer saccharinum	Silver Maple	9.5			Fair				
2703	Quercus rubra	Red oak	15.9			Fair				
2704	Prunus serotina	Black cherry	17.3			Fair				
2705	Prunus serotina	Black cherry	16.5			Fair				
2706	Carya glabra	Pignut Hickory	10.4			Fair				
2707	Tilia americana	Basswood	21.3	18.3		Fair	X			
2708	Tilia americana	Basswood	21.5	9.6		Fair	X			
2709	Tilia americana	Basswood	20.0	8.8		Fair	X			
2710	Quercus alba	White oak	14.2			Fair				
2711	Quercus rubra	Red oak	19.9			Fair	X			
2712	Acer saccharinum	Silver Maple	7.3			Fair				
2713	Quercus alba	White oak	14.9			Fair				
2714	Quercus rubra	Red oak	20.2			Fair	X			
2715	Tilia americana	Basswood	15.3	11.1		Fair				
2716	Acer saccharinum	Silver Maple	10.1			Fair				
2717	Carya glabra	Pignut Hickory	8.8			Fair				
2718	Quercus alba	White oak	19.5			Fair	X			
2719	Tilia americana	Basswood	19.4			Fair	X			
2720	Acer saccharinum	Silver Maple	7.9			Fair				
2721	Quercus alba	White oak	19.7			Fair	X			
2722	Quercus alba	White oak	14.2			Fair				
2723	Acer saccharinum	Silver Maple	8.5			Fair				
2724	Carya glabra	Pignut Hickory	8.4			Fair				
2725	Carya glabra	Pignut Hickory	9.4			Fair				
2726	Quercus alba	White oak	14.6			Fair				
2727	Acer saccharinum	Silver Maple	7.7			Fair				
2728	Acer saccharinum	Silver Maple	12.5			Fair				
2729	Quercus velutina	Black oak	14.3			Fair				
2730	Tilia americana	Basswood	10.5			Fair				
2731	Carya cordiformis	Bittemut Hickory	7.8			Fair				
2732	Quercus rubra	Red oak	16.0	9.5		Fair	X			
2733	Acer saccharinum	Silver Maple	10.2			Fair				
2734	Tilia americana	Basswood	8.6			Poor				
2735	Quercus rubra	Red oak	21.2			Fair	X			
2736	Tilia americana	Basswood	11.2			Poor				
2737	Ulmus americana	American Elm	6.2			Fair				
2738	Tilia americana	Basswood	14.4			Fair				
2739	Quercus rubra	Red oak	22.2			Fair	X			
2740	Carya glabra	Pignut Hickory	10.9			Fair				
2741	Ulmus americana	American Elm	7.1			Fair				
2742	Quercus rubra	Red oak	25.4			Fair	X			
2743	Ulmus americana	American Elm	6.6			Fair				
2744	Ulmus americana	American Elm	6.2			Fair				
2745	Acer saccharinum	Silver Maple	11.7			Fair				
2746	Tilia americana	Basswood	9.2			Fair				
2747	Prunus serotina	Black cherry	19.2			Fair	X			
2748	Acer saccharinum	Silver Maple	6.8			Fair				
2749	Carya glabra	Pignut Hickory	13.0			Fair				
2750	Carya glabra	Pignut Hickory	12.6			Fair				
2751	Quercus rubra	Red oak	18.2			Fair	X			
2752	Quercus rubra	Red oak	24.8			Fair	X			
2753	Tilia americana	Basswood	6.3			Fair				
2754	Carya glabra	Pignut Hickory	12.7			Fair				

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

TREE LIST
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK: -
DATE: 9/23/20
SCALE: HOR: 1" = N/A VER: 1" = N/A
DESIGNED BY: SRB
JOB NO. 18141
DRAWN BY: SRB
SHEET C-3.6

© COPYRIGHT 2020

Z:\Projects\18141\DWG\18141 TOPO.dwg, C-3.6 TREE LIST, 10/6/2020 1:04:41 PM, dbarneyer

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
2755	Carya glabra	Pignut Hickory	11.9			Fair				
2756	Quercus rubra	Red oak	13.8			Fair				
2757	Ulmus americana	American Elm	6.7			Fair				
2758	Quercus rubra	Red oak	21.2			Fair	X			
2759	Tilia americana	Basswood	7.5			Fair				
2760	Tilia americana	Basswood	9.4			Fair				
2761	Carya ovata	Shagbark Hickory	10.3			Fair				
2762	Quercus rubra	Red oak	21.6			Fair	X			
2763	Quercus rubra	Red oak	13.3			Fair				
2764	Acer plantanoides	Norway Maple	12.5			Fair				
2765	Quercus rubra	Red oak	22.1			Fair	X			
2766	Quercus rubra	Red oak	21.6			Fair	X			
2767	Quercus rubra	Red oak	36.8			Fair	X			
2768	Quercus rubra	Red Oak	21.8			Fair	X			
2769	Acer saccharinum	Silver Maple	11.2			Fair				
2770	Tilia americana	Basswood	22.6			Fair	X			
2771	Carya glabra	Pignut Hickory	17.1			Fair	X			
2772	Prunus serotina	Black cherry	7.4			Very Poor				
2773	Acer rubrum	Red Maple	8.0			Fair				
2774	Carya glabra	Pignut Hickory	15.0			Fair				
2775	Quercus alba	White oak	11.9			Fair				
2776	Tilia americana	Basswood	8.7			Fair				
2777	Quercus rubra	Red oak	19.3			Fair	X			
2778	Tilia americana	Basswood	16.7			Fair				
2779	Acer saccharinum	Silver Maple	7.7			Fair				
2780	Tilia americana	Basswood	12.3			Fair				
2781	Tilia americana	Basswood	16.8			Fair				
2782	Quercus rubra	Red oak	15.9			Fair				
2783	Tilia americana	Basswood	18.7			Fair	X			
2784	Quercus rubra	Red oak	31.0			Fair	X			
2785	Quercus rubra	Red oak	16.7			Fair	X			
2786	Carya glabra	Pignut Hickory	8.9			Fair				
2787	Quercus velutina	Black oak	15.2			Fair				
2788	Tilia americana	Basswood	7.0			Fair				
2789	Tilia americana	Basswood	13.0	9.3		Fair				
2790	Acer rubrum	Red Maple	7.4			Fair				
2791	Quercus rubra	Red oak	13.0			Fair				
2792	Tilia americana	Basswood	7.7			Fair				
2793	Quercus rubra	Red oak	24.6			Fair	X			
2794	Carya ovata	Shagbark Hickory	14.3			Fair				
2795	Quercus alba	White oak	28.1			Fair	X			
2796	Carya glabra	Pignut Hickory	21.6			Fair	X			
2797	Quercus alba	White oak	15.4			Fair				
2798	Quercus velutina	Black oak	21.8			Fair	X			
2799	Quercus rubra	Red oak	16.8			Fair	X			
2800	Carya glabra	Pignut Hickory	12.5			Fair				
2801	Quercus rubra	Red oak	18.2			Fair	X			
2802	Acer saccharinum	Silver Maple	9.7			Fair				
2803	Acer saccharinum	Silver Maple	10.8			Fair				
2804	Quercus rubra	Red oak	27.0	21.3		Poor	X			
2805	Acer saccharinum	Silver Maple	8.4			Fair				
2806	Quercus rubra	Red oak	23.4			Poor	X			
2807	Quercus alba	White oak	18.5			Fair	X			
2808	Quercus rubra	Red oak	22.0	18.7		Fair	X			
2809	Quercus macrocarpa	Bur oak	30.7			Fair	X			
2810	Tilia americana	Basswood	8.4			Fair				
2811	Carya glabra	Pignut Hickory	17.2			Fair	X			
2812	Acer plantanoides	Norway Maple	8.0	7.0		Fair				
2813	Quercus macrocarpa	Bur oak	22.9			Fair	X			
2814	Quercus rubra	Red oak	23.5			Fair	X			
2815	Quercus alba	White oak	7.4			Fair				
2816	Quercus rubra	Red oak	23.3			Fair	X			
2817	Quercus alba	White oak	8.8			Fair				
2818	Quercus rubra	Red oak	20.0			Fair	X			
2819	Quercus velutina	Black oak	24.4			Poor	X			
2820	Quercus rubra	Red oak	24.5			Fair	X			
2821	Quercus rubra	Red oak	19.7			Poor	X			
2822	Carya glabra	Pignut Hickory	8.3			Fair				
2823	Acer saccharinum	Silver Maple	10.0			Fair				
2824	Carya glabra	Pignut Hickory	10.3			Fair				
2825	Quercus rubra	Red oak	20.4			Fair	X			
2826	Ulmus americana	American Elm	6.7			Fair				
2827	Quercus rubra	Red oak	26.2			Fair	X			
2828	Quercus rubra	Red oak	6.2			Fair				
2829	Prunus serotina	Black cherry	12.2			Poor				
2830	Ulmus americana	American Elm	22.2			Poor	X			
2831	Tilia americana	Basswood	21.0			Poor	X			
2832	Quercus macrocarpa	Bur oak	9.5			Fair				
2833	Ulmus americana	American Elm	18.3			Fair	X			
2834	Juglans nigra	Black Walnut	9.9			Fair				
2835	Tilia americana	Basswood	13.0			Fair				
2836	Tilia americana	Basswood	7.3			Fair				
2837	Tilia americana	Basswood	9.7			Fair				

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
2838	Tilia americana	Basswood	6.2			Fair				
2839	Quercus velutina	Black oak	13.2			Fair				
2840	Rhamnus cathartica	Common buckthorn	14.4			Fair				
2841	Quercus macrocarpa	Bur oak	13.4			Poor				
2842	Tilia americana	Basswood	6.9			Poor				
2843	Quercus alba	White oak	8.0			Fair				
2844	Carya glabra	Pignut Hickory	25.5	19.1		Fair	X			
2845	Prunus serotina	Black cherry	7.5			Fair				
2846	Carya glabra	Pignut Hickory	20.2			Fair	X			
2847	Quercus macrocarpa	Bur oak	23.0			Fair	X			
2848	Carya ovata	Shagbark Hickory	18.5			Fair	X			
2849	Quercus macrocarpa	Bur oak	19.5			Fair	X			
2850	Carya glabra	Pignut Hickory	19.3			Fair	X			
2851	Carya glabra	Pignut Hickory	21.2			Fair	X			
2852	Prunus serotina	Black cherry	19.6			Fair	X			
2853	Carya glabra	Pignut Hickory	9.0			Fair				
2854	Carya glabra	Pignut Hickory	6.0			Fair				
2855	Quercus alba	White oak	22.9			Fair	X			
2856	Acer saccharinum	Silver Maple	22.3			Fair	X			
2857	Quercus alba	White oak	25.0			Fair	X			
2858	Carya ovata	Shagbark Hickory	20.8	15.0		Fair	X			
2859	Acer saccharinum	Silver Maple	10.0			Fair				
2860	Quercus velutina	Black oak	7.9			Fair				
2861	Carya glabra	Pignut Hickory	19.9			Fair	X			
2862	Carya glabra	Pignut Hickory	9.0			Fair				
2863	Quercus alba	White oak	13.6			Fair				
2864	Acer rubrum	Red Maple	13.7			Fair				
2865	Quercus rubra	Bur oak	9.2			Fair				
2866	Quercus rubra	Red oak	6.7			Poor				
2867	Quercus rubra	Red oak	15.6			Fair				
2868	Quercus rubra	Red oak	15.1			Fair				
2869	Acer saccharinum	Silver Maple	16.9			Fair				
2870	Carya glabra	Pignut Hickory	19.2			Poor	X			
2871	Quercus rubra	Red oak	12.4			Fair				
2872	Quercus rubra	Red oak	21.4			Fair	X			
2873	Quercus rubra	Red oak	7.2			Fair				
2874	Quercus rubra	Red oak	33.4	19.2		Fair	X			
2875	Ulmus americana	American Elm	15.7			Fair				
2876	Prunus serotina	Black cherry	8.8			Fair				
2877	Quercus rubra	Red oak	8.4			Fair				
2878	Carya glabra	Pignut Hickory	13.8			Fair				
2879	Tilia americana	Basswood	21.1	13.7		Fair	X			
2880	Prunus avium	Sweet cherry	7.1			Fair				
2881	Carya glabra	Pignut Hickory	19.2			Fair	X			
2882	Carya glabra	Pignut Hickory	16.4			Fair	X			
2883	Quercus rubra	Red oak	13.5			Very Poor				
2884	Quercus alba	White oak	18.1			Very Poor	X			
2885	Quercus alba	White oak	7.6			Fair				
2886	Quercus velutina	Black oak	8.0			Fair				
2887	Carya cordiformis	Bitternut Hickory	7.5			Fair				
2888	Quercus alba	White oak	18.9			Fair	X			
2889	Carya cordiformis	Bitternut Hickory	20.6			Fair	X			
2890	Quercus rubra	Red oak	30.3			Fair	X			
2891	Quercus alba	White oak	8.3			Fair				
2892	Carya glabra	Pignut Hickory	13.2	12.8		Fair				
2893	Carya glabra	Pignut Hickory	7.9			Fair				
2894	Quercus rubra	Red oak	9.0	6.5		Fair				
2895	Tilia americana	Basswood	9.3			Fair				
2896	Tilia americana	Basswood	12.5			Fair				
2897	Quercus rubra	Red oak	22.5			Fair	X			
2898	Quercus rubra	Red oak	10.0			Fair				
2899	Carya glabra	Pignut Hickory	39.7			Poor	X			
2900	Prunus serotina	Black cherry	7.9			Fair				
2901	Carya ovata	Shagbark Hickory	16.5			Fair	X			
2902	Carya glabra	Pignut Hickory	14.3			Fair				
2903	Carya glabra	Pignut Hickory	9.5			Fair				
2904	Quercus alba	White oak	8.6			Fair				
2905	Quercus rubra	Red oak	14.1			Fair				
2906	Quercus rubra	Red oak	11.0			Fair				
2907	Tilia americana	Basswood	8.2			Fair				
2908	Tilia americana	Basswood	8.8			Fair				
2909	Carya glabra	Pignut Hickory	16.6			Fair	X			
2910	Rhamnus cathartica	Common buckthorn	8.6			Fair				
2911	Tilia americana	Basswood	11.0			Fair				
2912	Carya glabra	Pignut Hickory	17.2			Fair	X			
2913	Carya glabra	Pignut Hickory	6.8			Fair				
2914	Rhamnus cathartica	Common buckthorn	10.0			Fair				
2915	Quercus rubra	Bur oak	15.0			Fair				
2916	Prunus avium	Sweet cherry	18.3			Fair	X			
2917	Acer rubrum	Red Maple	10.0			Fair				
2918	Juglans nigra	Black Walnut	19.0			Fair	X			
2919	Acer saccharinum	Silver Maple	16.6			Fair				
2920	Ulmus pumila	American Elm	18.6			Fair	X			

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
2921	Juglans nigra	Black Walnut	25.3			Fair	X			
2922	Juglans nigra	Black Walnut	14.3			Fair				
2923	Tilia americana	Basswood	20.4			Fair	X			
2924	Carya glabra	Pignut Hickory	8.6			Fair				
2925	Tilia americana	Basswood	7.9			Fair				
2926	Juglans nigra	Black Walnut	15.1			Fair				
2927	Juglans nigra	Black Walnut	15.1			Fair				
2928	Juglans nigra	Black Walnut	20.6			Fair	X			
2929	Tilia americana	Basswood	12.0			Fair				
2930	Quercus alba	White oak	18.8			Fair	X			
2931	Quercus alba	White oak	7.5			Fair				
2932	Quercus alba	White oak	11.2			Fair				
2933	Quercus alba	White oak	20.2			Fair	X			
2934	Quercus alba	White oak	20.5			Poor	X			
2935	Quercus alba	White oak	19.9	9.8		Fair	X			
2936	Quercus rubra	Red oak	16.6			Fair	X			
2937	Quercus alba	White oak	22.1			Fair	X			
2938	Quercus alba	White oak	11.7			Fair				
2939	Quercus velutina	Black oak	21.2			Fair	X			
2940	Carya ovata	Shagbark Hickory	7.1			Fair				
2941	Prunus serotina	Black cherry	18.4			Poor	X			
2942	Quercus alba	White oak	12.0			Fair				
2943	Quercus alba	White oak	7.0			Fair				
2944	Acer rubrum	Red Maple	21.7			Fair	X			
2945	Quercus alba	White oak	14.7			Fair				
2946	Carya glabra	Pignut Hickory	10.9			Poor				
2947	Acer rubrum	Red Maple	9.6			Fair				
2948	Quercus rubra	Red oak	12.2			Fair				
2949	Quercus rubra	Red oak	11.7			Fair				
2950	Quercus macrocarpa	Bur oak	7.3			Fair				
2951	Quercus velutina	Black oak	7.3			Fair				
2952	Quercus velutina	Black oak	10.2			Fair				
2953	Quercus rubra	Red oak	8.3			Poor				
2954	Quercus velutina	Black oak	6.8			Fair				
2955	Tilia americana	Basswood	10.4			Fair				
2956	Quercus macrocarpa	Bur oak	21.5			Fair	X			
2957	Quercus macrocarpa	Bur oak	8.9			Fair				
2958	Carya glabra	Pignut Hickory	11.0			Fair				
2959	Ulmus americana	American Elm	6.9			Fair				
2960	Quercus velutina	Black oak	7.6			Fair				
2961	Quercus rubra	Red oak	19.3	19.0		Fair	X			
2962	Carya glabra	Pignut Hickory	11.1			Fair				
2963	Carya glabra	Pignut Hickory	21.6			Poor	X			
2964	Carya glabra	Pignut Hickory	9.7			Fair				
2965	Juglans nigra	Black Walnut	6.2			Fair				
2966	Carya glabra	Pignut Hickory	22.4			Fair	X			
2967	Prunus serotina	Black cherry	14.6			Fair				
2968	Carya cordiformis	Bitternut Hickory	9.6			Fair				
2969	Ulmus pumila	Siberian Elm	8.8			Fair				
2970	Acer rubrum	Red Maple	8.1			Fair				
2971	Ulmus pumila	Siberian Elm	9.2	9.2		Fair				
2972	Quercus velutina	Black oak	7.8			Fair				
2973	Acer rubrum	Red Maple	27.1			Fair	X			
2974	Quercus macrocarpa	Bur oak	15.5			Fair				
2975	Acer rubrum	Red Maple	18.7			Fair	X			
2976	Acer rubrum	Red Maple	9.6			Fair				
2977	Quercus rubra	Red oak	11.0			Fair				
2978	Quercus alba	White oak	6.3			Fair				
2979	Quercus velutina	Black oak	18.2			Fair	X			
2980	Acer saccharinum	Silver Maple	42.0			Very Poor	X			
2981	Carya glabra	Pignut Hickory	9.3			Fair				
2982	Quercus alba	White oak	18.1			Fair	X			
2983	Quercus alba	White oak	9.1	6.8		Fair				
2984	Acer saccharinum	Silver Maple	15.3			Fair				
2985	Quercus alba	White oak	16.0	8.3		Fair	X			
2986	Quercus alba	White oak	15.6			Fair				
2987	Quercus rubra	Red oak	24.0			Fair	X			
2988	Carya glabra	Pignut Hickory	8.8			Fair				
2989	Quercus rubra	Red oak	13.0			Fair				
2990	Acer saccharinum	Silver Maple	8.4			Fair				
2991	Acer saccharinum	Silver Maple	8.9			Fair				
2992	Carya ovata	Shagbark Hickory	17.2			Fair	X			
2993	Acer saccharinum	Silver Maple	7.5			Fair				
2994	Quercus velutina	Black oak	10.3			Fair				
2995	Acer saccharinum	Silver Maple	9.2			Fair				
2996	Quercus alba	White oak	7.2			Fair				
2997	Quercus alba	White oak	19.5			Fair	X			
2998	Tilia americana	Basswood	13.1			Fair				
2999	Quercus alba	White oak	18.0			Fair	X			
3000	Quercus rubra	Red oak	23.4			Fair	X			
3001	Quercus alba	White oak	20.3			Fair	X			
3002	Quercus alba	White oak	13.6			Fair				
3003	Quercus alba	White oak	23.1			Fair	X			

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

TREE LIST
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK: -
DATE 9/23/20 | SCALE HOR: 1" = N/A VER: 1" = N/A
DESIGNED BY SRB | JOB NO. 18141
DRAWN BY SRB | SHEET C-3.7

© COPYRIGHT 2020

Z:\Projects\18141\DWG\18141 TOPO.dwg, C-3.7 TREE LIST, 10/6/2020 1:05:21 PM, dbemiyer

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
3004	Quercus rubra	Red oak	24.0			Fair	X			
3005	Quercus alba	White oak	18.9			Fair	X			
3006	Quercus rubra	Red oak	16.2			Fair	X			
3007	Tilia americana	Basswood	10.0			Fair				
3008	Quercus alba	White oak	8.8	8.7		Fair				
3009	Quercus alba	White oak	7.6			Fair				
3010	Quercus alba	White oak	11.7			Fair				
3011	Tilia americana	Basswood	7.7			Fair				
3012	Tilia americana	Basswood	6.5			Fair				
3013	Tilia americana	Basswood	9.5	6.5		Fair				
3014	Tilia americana	Basswood	8.0			Fair				
3015	Carya glabra	Pignut Hickory	13.0			Fair				
3016	Tilia americana	Basswood	7.6			Fair				
3017	Quercus alba	White oak	8.1			Fair				
3018	Carya glabra	Pignut Hickory	16.9			Fair	X			
3019	Quercus alba	White oak	10.1			Fair				
3020	Tilia americana	Basswood	16.5			Fair				
3021	Tilia americana	Basswood	18.8			Fair	X			
3022	Quercus rubra	Red oak	22.1			Fair	X			
3023	Quercus rubra	Red oak	21.5			Fair	X			
3024	Carya ovata	Shagbark Hickory	7.7			Fair				
3025	Tilia americana	Basswood	11.7			Fair				
3026	Quercus alba	White oak	8.9			Fair				
3027	Ulmus americana	American Elm	10.2			Fair				
3028	Quercus alba	White oak	20.9			Fair	X			
3029	Tilia americana	Basswood	16.1			Fair				
3030	Quercus rubra	Red oak	16.3			Fair	X			
3031	Tilia americana	Basswood	10.5			Fair				
3032	Acer saccharum	Sugar Maple	14.0			Fair				
3033	Carya glabra	Pignut Hickory	7.7			Fair				
3034	Quercus alba	White oak	15.0			Fair				
3035	Quercus alba	White oak	17.3			Fair	X			
3036	Quercus rubra	Red oak	30.1			Fair	X			
3037	Quercus alba	White oak	17.8			Fair	X			
3038	Quercus alba	White oak	22.7			Fair	X			
3039	Quercus alba	White oak	13.7	6.1		Fair				
3040	Prunus serotina	Black cherry	6.0			Fair				
3041	Tilia americana	Basswood	13.0			Fair				
3042	Ulmus americana	American Elm	11.5			Fair				
3043	Quercus alba	White oak	15.2			Fair				
3044	Quercus alba	White oak	23.4			Fair	X			
3045	Tilia americana	Basswood	7.5			Fair				
3046	Tilia americana	Basswood	8.6			Fair				
3047	Prunus serotina	Black cherry	17.9			Fair				
3048	Quercus velutina	Black oak	9.9			Fair				
3049	Quercus alba	White oak	14.0			Fair				
3050	Prunus serotina	Black cherry	18.4			Fair	X			
3051	Quercus alba	White oak	11.7			Fair				
3052	Quercus rubra	Red oak	21.8			Fair	X			
3053	Quercus rubra	Red oak	15.3			Fair				
3054	Quercus alba	White oak	8.3			Fair				
3055	Tilia americana	Basswood	21.1			Fair	X			
3056	Tilia americana	Basswood	12.4			Fair				
3057	Carya cordiformis	Bitternut Hickory	15.0			Fair				
3058	Quercus alba	White oak	24.3			Fair	X			
3059	Carya ovata	Shagbark Hickory	6.9			Fair				
3060	Quercus alba	White oak	9.3			Fair				
3061	Quercus rubra	Red oak	20.9	20.3	19.3	Poor	X			
3062	Ostrya virginiana	American hophornbeam	6.3			Fair				
3063	Ostrya virginiana	American hophornbeam	7.1			Fair				
3064	Tilia americana	Basswood	16.6			Fair				
3065	Prunus serotina	Black cherry	17.5			Fair				
3066	Carya glabra	Pignut Hickory	16.1			Fair	X			
3067	Quercus alba	White oak	13.8			Fair				
3068	Quercus alba	White oak	23.8			Fair	X			
3069	Ulmus americana	American Elm	6.8			Fair				
3070	Ulmus americana	American Elm	10.3			Fair				
3071	Tilia americana	Basswood	6.9			Fair				
3072	Carya glabra	Pignut Hickory	18.0			Fair	X			
3073	Quercus rubra	Red oak	21.4	20.2		Fair	X			
3074	Tilia americana	Basswood	15.5			Fair				
3075	Carya ovata	Shagbark Hickory	13.6			Fair				
3076	Quercus alba	White oak	10.3			Poor				
3077	Carya ovata	Shagbark Hickory	8.1			Fair				
3078	Carya glabra	Pignut Hickory	14.7			Fair				
3079	Ostrya virginiana	American hophornbeam	7.8			Fair				
3080	Carya glabra	Pignut Hickory	60.0	16.2		Fair	X			
3081	Quercus alba	White oak	9.4			Fair				
3082	Tilia americana	Basswood	7.0			Fair				
3083	Tilia americana	Basswood	10.9			Fair				
3084	Quercus alba	White oak	22.2			Fair	X			
3085	Tilia americana	Basswood	6.9			Fair				
3086	Quercus alba	White oak	14.7			Fair				

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
3087	Carya glabra	Pignut Hickory	8.7			Fair				
3088	Tilia americana	Basswood	11.3			Fair				
3089	Tilia americana	Basswood	9.7			Fair				
3090	Tilia americana	Basswood	13.1			Fair				
3091	Tilia americana	Basswood	8.4			Fair				
3092	Ulmus americana	American Elm	9.0			Fair				
3093	Tilia americana	Basswood	6.6			Fair				
3094	Quercus alba	White oak	21.1	16.3		Fair	X			
3095	Quercus alba	White oak	16.0			Fair	X			
3096	Ostrya virginiana	American hophornbeam	6.3			Fair				
3097	Carya glabra	Pignut Hickory	15.9			Fair				
3098	Quercus alba	White oak	13.8			Fair				
3099	Quercus velutina	Black oak	19.8			Fair	X			
3100	Carya cordiformis	Bitternut Hickory	10.5			Fair				19.2
3101	Quercus rubra	Red oak	20.0	17.2		Fair	X			
3102	Quercus alba	White Oak	13.3			Fair				
3103	Carya glabra	Pignut Hickory	12.5			Fair				
3104	Quercus rubra	Red Oak	24.3			Fair	X			
3105	Quercus alba	White Oak	18.6			Fair	X			
3106	Quercus rubra	Red Oak	15.9			Fair				
3107	Carya glabra	Pignut Hickory	10.5			Fair		10.5		
3108	Quercus alba	White Oak	14.7			Fair		14.7		
3109	Quercus alba	White Oak	18.8			Fair	X			
3110	Quercus alba	White Oak	11.8			Fair				
3111	Quercus alba	White Oak	18.0			Fair	X			
3112	Carya glabra	Pignut Hickory	6.0			Fair				
3113	Juglas nigra	Black Walnut	9.7			Fair				
3114	Carya ovata	Shagbark Hickory	7.9			Fair				
3115	Carya glabra	Pignut Hickory	12.6			Fair				
3116	Quercus alba	White oak	20.1			Fair	X			
3117	Carya glabra	Pignut Hickory	9.8			Fair				
3118	Carya laciniosa	Shellbark Hickory	18.2			Fair	X			
3119	Quercus alba	White Oak	19.8			Fair	X			
3120	Tilia americana	Basswood	16.5			Fair				
3121	Carya laciniosa	Shellbark Hickory	28.0			Fair	X			
3122	Quercus alba	White Oak	25.0			Fair	X			
3123	Quercus velutina	Black Oak	18.4			Dead				
3124	Quercus alba	White Oak	19.7			Fair	X			
3125	Quercus alba	White Oak	19.8			Fair	X			
3126	Quercus velutina	Black Oak	17.3			Fair	X			
3127	Carya laciniosa	Shellbark Hickory	10.3			Fair				
3128	Quercus alba	White oak	13.0			Fair				
3129	Quercus alba	White Oak	12.8			Fair				
3130	Quercus velutina	Black oak	12.4			Fair				
3131	Carya glabra	Pignut Hickory	18.4			Fair	X			
3132	Quercus alba	White oak	17.1			Fair	X			
3133	Carya glabra	Pignut Hickory	7.0			Fair				
3134	Carya ovata	Shagbark Hickory	12.5			Fair				
3135	Quercus alba	White Oak	22.0			Fair	X			
3136	Carya ovata	Shagbark Hickory	13.1			Fair				
3137	Carya ovata	Shagbark Hickory	7.3			Fair				
3138	Acer saccharum	Sugar Maple	11.4			Fair				
3139	Acer rubrum	Red Maple	6.7			Fair				
3140	Tilia americana	Basswood	6.6			Fair				
3141	Acer rubrum	Red Maple	13.0			Fair				
3142	Acer rubrum	Red Maple	12.1			Fair				
3143	Tilia americana	Basswood	10.1			Fair				
3144	Populus grandidentata	Big tooth aspen	11.2			Fair				
3145	Populus grandidentata	Big tooth aspen	13.6			Fair	X			
3146	Populus grandidentata	Big tooth aspen	11.9			Fair				
3147	Prunus serotina	Black cherry	6.4			Fair				
3148	Populus grandidentata	Big tooth aspen	11.3			Fair				
3149	Populus grandidentata	Big tooth aspen	11.7			Fair				
3150	Populus grandidentata	Big tooth aspen	12.3			Fair	X			
3151	Populus grandidentata	Big tooth aspen	12.0			Fair	X			
3152	Populus grandidentata	Big tooth aspen	9.9			Fair				
3153	Tilia americana	Basswood	7.0			Fair				
3154	Prunus serotina	Black cherry	6.4			Fair				
3155	Populus grandidentata	Big tooth aspen	14.9			Fair	X			
3156	Ulmus americana	American Elm	7.3			Poor				
3157	Acer rubrum	Red Maple	12.2			Fair				
3158	Acer rubrum	Red Maple	12.3			Fair				
3159	Populus grandidentata	Big tooth aspen	12.8			Fair	X			
3160	Tilia americana	Basswood	10.4			Poor				
3161	Carya ovata	Shagbark Hickory	6.4			Fair				
3162	Carya ovata	Shagbark Hickory	7.4			Fair				
3163	Quercus alba	White oak	17.3			Fair	X			
3164	Carya cordiformis	Bitternut Hickory	6.4			Poor				
3165	Carya glabra	Pignut Hickory	21.3			Fair	X			
3166	Quercus alba	White oak	17.2			Fair	X			
3167	Quercus alba	White Oak	12.2			Fair				
3168	Tilia americana	Basswood	6.4			Fair				
3169	Tilia americana	Basswood	6.5			Fair				

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
3170	Carya ovata	Shagbark Hickory	13.7			Fair				
3171	Quercus rubra	Red oak	15.9			Fair				
3172	Quercus alba	White oak	19.1			Fair	X			
3173	Quercus alba	White oak	14.5			Fair				
3174	Quercus rubra	Red oak	19.2	17.1	16.6	Fair	X			
3175	Quercus alba	White oak	21.0	17.1	16.6	Fair	X			
3176	Quercus velutina	Black oak	12.2			Fair				
3177	Quercus alba	White oak	14.4			Fair				
3178	Carya ovata	Shagbark Hickory	9.5			Fair				
3179	Quercus alba	White oak	10.4			Fair				
3180	Quercus alba	White oak	14.7			Fair				
3181	Prunus serotina	Black cherry	7.2			Fair				
3182	Prunus serotina	Black cherry	6.4			Fair				
3183	Populus grandidentata	Big tooth aspen	15.3	10.4		Fair	X			
3184	Acer rubrum	Red Maple	10.2			Fair				
3185	Populus grandidentata	Big tooth aspen	8.5			Fair				
3186	Populus grandidentata	Big tooth aspen	10.0			Fair				
3187	Populus grandidentata	Big tooth aspen	11.3			Fair				
3188	Tilia americana	Basswood	12.7			Fair				
3189	Tilia americana	Basswood	13.5			Fair				
3190	Acer rubrum	Red Maple	8.6			Fair				
3191	Tilia americana	Basswood	15.2	12.1		Fair				
3192	Prunus serotina	Black cherry	11.2			Fair				
3193	Tilia americana	Basswood	17.2	15.0	11.7	Fair				
3194	Carya ovata	Shagbark Hickory	18.1	12.5	11.8	Fair	X			
3195	Ulmus americana	American Elm	8.4			Fair				
3196	Carya ovata	Shagbark Hickory	15.0	13.4		Fair				
3197	Prunus serotina	Black cherry	6.7			Fair				
3198	Ulmus americana	American Elm	8.0			Fair				
3199	Populus grandidentata	Big tooth aspen	14.7			Fair	X			
3200	Populus grandidentata	Big tooth aspen	11.6			Fair				
3201	Quercus macrocarpa	Bur oak	16.0			Fair	X			
3202	Carya ovata	Shagbark Hickory	7.2			Fair				
3203	Carya ovata	Shagbark Hickory	12.3			Fair				
3204	Carya ovata	Shagbark Hickory	14.4			Fair				
3205	Carya ovata	Shagbark Hickory	6.5			Fair				
3206	Quercus macrocarpa	Bur oak	14.2	10.7		Fair				
3207	Quercus macrocarpa	Bur oak	8.7			Fair				
3208	Quercus macrocarpa	Bur oak	8.2			Fair				
3209	Carya ovata	Shagbark Hickory	10.8			Fair				
3210	Carya ovata	Shagbark Hickory	10.3			Fair				
3211	Carya ovata	Shagbark Hickory	9.9			Fair				
3212	Quercus macrocarpa	Bur oak	7.9			Fair				
3213	Carya ovata	Shagbark Hickory	9.1			Fair				
3214	Carya ovata	Shagbark Hickory	9.2			Fair				
3215	Carya ovata	Shagbark Hickory	11.2	9.3		Fair				
3216	Carya ovata	Shagbark Hickory	8.9			Fair				
3217	Carya ovata	Shagbark Hickory	11.1			Fair				
3218	Carya ovata	Shagbark Hickory	10.2			Fair				
3219	Acer rubrum	Red Maple	8.5			Fair				
3220	Tilia americana	Basswood	8.2			Fair				
3221	Acer rubrum	Red Maple	8.5			Fair				
3222	Carya ovata	Shagbark Hickory	6.6			Fair				
3223	Tilia americana	Basswood	8.6			Fair				
3224	Acer rubrum	Red Maple	9.5			Fair				
3225	Carya ovata	Shagbark Hickory	7.8			Fair				
3226	Ulmus americana	American Elm	14.5			Fair				
3227	Ulmus americana	American Elm	11.0			Fair				
3228	Ulmus americana	American Elm	8.5			Fair				
3229	Ulmus americana	American Elm	9.2			Fair				
3230	Carya ovata	Shagbark Hickory	7.6			Fair				
3231	Quercus macrocarpa	Bur oak	14.5			Fair				
3232	Tilia americana	Basswood	9.7			Fair				
3233	Carya ovata	Shagbark Hickory	9.8			Fair				
3234	Quercus macrocarpa	Bur oak	7.3			Poor				
3235	Tilia americana	Basswood	6.3			Poor				
3236	Prunus serotina	Black cherry	11.1	10.2		Poor				
3237	Quercus alba	White oak	7.2			Poor				
3238	Tilia americana	Basswood	13.3	8.9		Fair				
3239	Carya ovata	Shagbark Hickory	6.5			Fair				
3240	Quercus macrocarpa	Bur oak	34.9			Fair	X			
3241	Quercus alba	White oak	12.9			Fair				
3242	Acer rubrum	Red Maple	10.2			Fair				
3243	Tilia americana	Basswood	10.8	8.2		Fair				
3244	Tilia americana	Basswood	10.2			Fair				
3245	Quercus macrocarpa	Bur oak	10.3			Fair				
3246	Quercus velutina	Black oak	17.0	15.3		Fair	X			
3247	Carya ovata	Shagbark Hickory	9.4			Fair				
3248	Quercus velutina	Black oak	7.3			Fair				
3249	Carya glabra	Pignut Hickory	7.5			Fair				
3250	Carya ovata	Shagbark Hickory	14.8			Fair				
3251	Carya ovata	Shagbark Hickory	8.8			Fair				
3252	Carya ovata	Shagbark Hickory	8.8			Fair				

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171 — THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

PROJECT SPONSOR:
IVANHOEE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

TREE LIST
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK: -
DATE: -/-/07
DESIGNED BY: SRB
DRAWN BY: SRB
SCALE: HOR: 1" = ' VER: 1" = N/A
JOB NO. 18141
SHEET C-3.8

© COPYRIGHT 2020

Z:\Projects\18141\DWG\18141 TOPC.dwg, C-3.8 TREE LIST, 10/6/2020 1:08:08 PM, dbinkeyer

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
3253	Carya ovata	Shagbark Hickory	7.6			Fair				
3254	Carya ovata	Shagbark Hickory	10.6			Fair				
3255	Carya ovata	Shagbark Hickory	7.1			Fair				
3256	Carya ovata	Shagbark Hickory	9.1			Fair				
3257	Carya glabra	Pignut Hickory	8.8			Fair				
3258	Carya ovata	Shagbark Hickory	9.0			Fair				
3259	Carya ovata	Shagbark Hickory	9.0			Fair				
3260	Carya ovata	Shagbark Hickory	8.6			Fair				
3261	Carya ovata	Shagbark Hickory	9.1			Fair				
3262	Tilia americana	Basswood	8.1			Fair				
3263	Carya cordiformis	Bitternut Hickory	6.0			Fair				
3264	Carya cordiformis	Bitternut Hickory	7.3			Fair				
3265	Quercus alba	White oak	9.7	7.5		Fair				
3266	Tilia americana	Basswood	7.6			Fair				
3267	Tilia americana	Basswood	11.5			Fair				
3268	Tilia americana	Basswood	6.8			Fair				
3269	Carya cordiformis	Bitternut Hickory	7.1			Fair				
3270	Quercus macrocarpa	Bur oak	10.6			Fair				
3271	Carya cordiformis	Bitternut Hickory	10.6			Fair				
3272	Acer saccharinum	Silver Maple	8.7			Fair				
3273	Carya ovata	Shagbark Hickory	6.4			Fair				
3274	Carya ovata	Shagbark Hickory	13.2			Fair				
3275	Carya ovata	Shagbark Hickory	7.1			Fair				
3276	Carya ovata	Shagbark Hickory	10.6			Fair				
3277	Carya ovata	Shagbark Hickory	8.1			Fair				
3278	Carya ovata	Shagbark Hickory	6.7			Fair				
3279	Carya ovata	Shagbark Hickory	7.0			Fair				
3280	Carya ovata	Shagbark Hickory	6.3			Fair				
3281	Carya ovata	Shagbark Hickory	15.6			Fair				
3282	Carya ovata	Shagbark Hickory	8.5			Fair				
3283	Carya ovata	Shagbark Hickory	8.5			Fair				
3284	Carya ovata	Shagbark Hickory	13.8	13.3		Fair				
3285	Carya ovata	Shagbark Hickory	7.0			Fair				
3286	Carya ovata	Shagbark Hickory	13.5	12.7		Fair				
3287	Carya ovata	Shagbark Hickory	9.3			Fair				
3288	Carya ovata	Shagbark Hickory	10.7			Fair				
3289	Carya ovata	Shagbark Hickory	36.5			Fair	X			
3290	Carya ovata	Shagbark Hickory	6.7			Fair				
3291	Carya ovata	Shagbark Hickory	7.2			Fair				
3292	Populus deltoides	Cottonwood	8.8			Fair				
3293	Populus deltoides	Cottonwood	10.1			Fair				
3294	Carya ovata	Shagbark Hickory	14.5			Fair				
3295	Rhamnus cathartica	Common buckthorn	12.8			Fair				
3296	Populus deltoides	Cottonwood	14.2			Fair				
3297	Populus deltoides	Cottonwood	6.5			Fair				
3298	Carya cordiformis	Bitternut Hickory	12.8			Fair				
3299	Populus deltoides	Cottonwood	10.7			Fair				
3300	Populus deltoides	Cottonwood	10.7			Fair				
3301	Prunus serotina	Black cherry	7.2			Fair				
3302	Acer rubrum	Red Maple	6.2			Fair				
3303	Populus grandidentata	Big tooth aspen	6.2			Fair				
3304	Carya ovata	Shagbark Hickory	7.7			Fair				
3305	Acer rubrum	Red Maple	8.7			Fair				
3306	Acer rubrum	Red Maple	10.1			Fair				
3307	Carya ovata	Shagbark Hickory	10.4			Fair				
3308	Carya ovata	Shagbark Hickory	6.5			Fair				
3309	Carya ovata	Shagbark Hickory	6.5			Fair				
3310	Carya ovata	Shagbark Hickory	7.8			Fair				
3311	Carya ovata	Shagbark Hickory	7.8			Fair				
3312	Carya ovata	Shagbark Hickory	10.8	9.5		Fair				
3313	Carya ovata	Shagbark Hickory	10.1			Fair				
3314	Carya ovata	Shagbark Hickory	11.6	8.4		Fair				
3315	Carya ovata	Shagbark Hickory	8.2			Fair				
3316	Carya ovata	Shagbark Hickory	11.5	9.1		Fair				
3317	Carya ovata	Shagbark Hickory	8.7			Fair				
3318	Carya ovata	Shagbark Hickory	8.2			Fair				
3319	Ulmus americana	American Elm	7.8			Fair				
3320	Carya ovata	Shagbark Hickory	7.5			Fair				
3321	Carya ovata	Shagbark Hickory	12.9			Fair				
3322	Ulmus americana	American Elm	9.6			Fair				
3323	Carya ovata	Shagbark Hickory	14.3	13.9		Fair				
3324	Ulmus americana	American Elm	8.7			Fair				
3325	Carya ovata	Shagbark Hickory	9.2			Fair				
3326	Ulmus americana	American Elm	15.5			Fair				
3327	Tilia americana	Basswood	6.1			Fair				
3328	Prunus serotina	Black cherry	12.6			Fair				
3329	Carya ovata	Shagbark Hickory	6.4			Fair				
3330	Ulmus americana	American Elm	10.6			Fair				
3331	Ulmus americana	American Elm	11.4	10.4	8.4	Fair				
3332	Acer rubrum	Red Maple	8.7			Fair				
3333	Ulmus americana	American Elm	12.5			Fair				
3334	Ulmus americana	American Elm	20.5			Fair	X			
3335	Acer rubrum	Red Maple	7.3			Poor				

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
3336	Ulmus americana	American Elm	6.2			Fair				
3337	Tilia americana	Basswood	9.2			Poor				
3338	Carya glabra	Pignut Hickory	7.4	7.3		Poor				
3339	Carya ovata	Shagbark Hickory	8.6	7.5		Poor				
3340	Ulmus americana	American Elm	7.8	8.8		Poor				
3341	Quercus velutina	Black oak	11.8			Poor				
3342	Quercus alba	White oak	8.5			Poor				
3343	Quercus alba	White oak	8.8			Poor				
3344	Carya ovata	Shagbark Hickory	7.2			Poor				
3345	Carya ovata	Shagbark Hickory	12.5			Poor				
3346	Quercus alba	White oak	9.5			Poor				
3347	Quercus alba	White Oak	10.5			Poor				
3348	Quercus alba	White oak	19.0	10.5		Poor	X			
3349	Ulmus americana	American Elm	14.2			Poor				
3350	Carya ovata	Shagbark Hickory	21.7			Poor	X			
3351	Carya ovata	Shagbark Hickory	11.0	10.2		Poor				
3352	Acer rubrum	Red Maple	8.3			Poor				
3353	Quercus alba	White oak	10.5	8.7		Poor				
3354	Carya ovata	Shagbark Hickory	8.7			Poor				
3355	Acer saccharinum	Silver Maple	7.0			Poor				
3356	Acer saccharinum	Silver Maple	9.4			Poor				
3357	Ulmus americana	American Elm	11.5	12.4	6.7	Poor				
3358	Quercus macrocarpa	Bur oak	10.9			Fair				
3359	Ulmus americana	American Elm	10.9	6.8		Fair				
3360	Quercus macrocarpa	Bur oak	8.0			Fair				
3361	Quercus macrocarpa	Bur oak	10.5			Fair				
3362	Carya ovata	Shagbark Hickory	11.2			Fair				
3363	Carya ovata	Shagbark Hickory	7.1			Fair				
3364	Carya ovata	Shagbark Hickory	8.8			Fair				
3365	Acer saccharinum	Silver Maple	6.4			Fair				
3366	Carya ovata	Shagbark Hickory	6.5			Fair				
3367	Quercus macrocarpa	Bur oak	9.5			Fair				
3368	Quercus macrocarpa	Bur oak	7.6			Fair				
3369	Acer saccharum	Sugar Maple	9.5			Fair				
3370	Carya ovata	Shagbark Hickory	12.0			Fair				
3371	Carya ovata	Shagbark Hickory	7.3			Fair				
3372	Ulmus americana	American Elm	10.5			Fair				
3373	Populus temuloides	Trembling aspen	7.0			Fair				
3374	Carya ovata	Shagbark Hickory	11.4	9.3		Fair				
3375	Populus deltoides	Cottonwood	10.5			Fair				
3376	Ulmus americana	American Elm	12.8			Fair				
3377	Populus temuloides	Trembling aspen	12.4	8.1		Fair	X			
3378	Populus temuloides	Trembling aspen	14.1	13.1	10.1	Fair	X			
3379	Carya ovata	Shagbark Hickory	15.6			Fair				
3380	Carya ovata	Shagbark Hickory	15.0			Fair				
3381	Ulmus americana	American Elm	13.0	12.0		Fair				
3382	Carya ovata	Shagbark Hickory	11.3	6.0		Fair				
3383	Quercus macrocarpa	Bur oak	10.5			Fair				
3384	Carya glabra	Pignut Hickory	12.6			Fair				
3385	Carya ovata	Shagbark Hickory	10.1			Fair				
3386	Carya ovata	Shagbark Hickory	10.8			Fair				
3387	Carya ovata	Shagbark Hickory	7.2			Fair				
3388	Carya ovata	Shagbark Hickory	10.0	8.8		Fair				
3389	Quercus macrocarpa	Bur oak	11.9			Fair				
3390	Carya ovata	Shagbark Hickory	14.0	11.5		Fair				
3391	Carya ovata	Shagbark Hickory	9.3			Fair				
3392	Carya ovata	Shagbark Hickory	8.5			Fair				
3393	Carya ovata	Shagbark Hickory	9.2			Fair				
3394	Carya ovata	Shagbark Hickory	13.8	12.6		Fair				
3395	Carya ovata	Shagbark Hickory	10.3			Fair				
3396	Quercus macrocarpa	Bur oak	13.8			Fair				
3397	Carya ovata	Shagbark Hickory	17.3			Fair	X			
3398	Quercus macrocarpa	Bur oak	8.2			Fair				
3399	Carya ovata	Shagbark Hickory	17.0			Fair	X			
3400	Carya ovata	Shagbark Hickory	6.4			Fair				
3401	Ulmus americana	American Elm	7.8			Fair				
3402	Ulmus americana	American Elm	8.3			Fair				
3403	Populus deltoides	Cottonwood	6.4			Fair				
3404	Populus temuloides	Trembling aspen	8.0			Fair				
3405	Carya ovata	Shagbark Hickory	7.1			Fair				
3406	Ulmus americana	American Elm	7.4			Fair				
3407	Ulmus americana	American Elm	6.6			Fair				
3408	Acer saccharinum	Silver Maple	10.0			Fair				
3409	Quercus macrocarpa	Bur oak	22.5			Fair	X			
3410	Carya ovata	Shagbark Hickory	12.1			Fair				
3411	Acer saccharinum	Silver Maple	6.4			Fair				
3412	Populus deltoides	Cottonwood	7.6			Fair				
3413	Carya cordiformis	Bitternut Hickory	6.4			Fair				
3414	Carya cordiformis	Bitternut Hickory	7.8			Fair				
3415	Populus deltoides	Cottonwood	12.0			Fair				
3416	Carya ovata	Shagbark Hickory	7.5			Fair				
3417	Quercus macrocarpa	Bur oak	9.0			Fair				
3418	Quercus macrocarpa	Bur oak	8.1			Fair				

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
3419	Populus temuloides	Trembling aspen	6.9			Fair				
3420	Populus temuloides	Trembling aspen	12.3			Fair	X			
3421	Populus temuloides	Trembling aspen	11.1			Fair				
3422	Tilia americana	Basswood	11.2			Fair				
3423	Tilia americana	Basswood	11.2			Fair				
3424	Ulmus americana	American Elm	6.3			Fair				
3425	Populus deltoides	Cottonwood	10.9			Fair				
3426	Populus temuloides	Trembling aspen	12.0			Fair	X			
3427	Acer saccharinum	Silver Maple	8.8			Fair				
3428	Quercus rubra	Red oak	9.1			Fair				
3429	Ulmus americana	American Elm	8.1			Fair				
3430	Tilia americana	Basswood	12.8	11.8		Fair				
3431	Quercus velutina	Black oak	13.7	10.3		Fair				
3432	Populus deltoides	Cottonwood	13.7			Fair				
3433	Quercus velutina	Black oak	12.4			Fair				
3434	Quercus velutina	Black oak	9.5			Fair				
3435	Acer saccharum	Sugar Maple	6.6			Fair				
3436	Prunus serotina	Black cherry	8.0			Fair				
3437	Acer saccharum	Sugar Maple	10.6			Fair				
3438	Quercus velutina	Black oak	9.5			Fair				
3439	Quercus velutina	Black oak	7.9			Fair		7.9		
3440	Quercus velutina	Black oak	6.5			Fair				
3441	Quercus velutina	Black oak	11.7			Fair				
3442	Carya ovata	Shagbark Hickory	6.7			Fair				
3443	Populus deltoides	Cottonwood	7.8			Fair				
3444	Populus deltoides	Cottonwood	11.8			Fair				
3445	Quercus macrocarpa	Bur oak	6.8			Fair				
3446	Quercus macrocarpa	Bur oak	6.1			Fair				
3447	Carya ovata	Shagbark Hickory	7.3			Fair				
3448	Quercus velutina	Black oak	8.4			Fair		8.4		
3449	Quercus velutina	Black oak	14.2			Fair				
3450	Quercus velutina	Black oak	8.9			Fair				
3451	Quercus velutina	Black oak	6.9			Fair				
3452	Tilia americana	Basswood	7.2			Fair				
3453	Tilia americana	Basswood	12.8			Fair				
3454	Quercus macrocarpa	Bur oak	7.5			Fair				
3455	Carya ovata	Shagbark Hickory	6.3			Fair		6.3		
3456	Quercus rubra	Red oak	10.2			Fair		10.2		
3457	Carya ovata	Shagbark Hickory	6.3			Fair				
3458	Carya ovata	Shagbark Hickory	10.6			Fair		10.6		
3459	Tilia americana	Basswood	11.5			Fair		11.5		
3460	Carya ovata	Shagbark Hickory	6.8			Fair				
3461	Carya ovata	Shagbark Hickory	7.9			Fair				
3462	Carya ovata	Shagbark Hickory	8.0	6.2		Fair				
3463	Carya ovata	Shagbark Hickory	6.4			Fair				
3464	Carya ovata	Shagbark Hickory	6.0			Fair				
3465	Quercus rubra	Red oak	12.7			Fair				
3466	Carya ovata	Shagbark Hickory	7.3			Fair				
3467	Carya ovata	Shagbark Hickory	7.8			Fair				
3468	Quercus rubra	Red oak	12.0			Fair				
3469	Carya ovata	Shagbark Hickory	9.3			Fair				
3470	Carya cordiformis	Bitternut Hickory	6.0			Fair				
3471	Carya ovata	Shagbark Hickory	6.1			Fair				
3472	Populus deltoides	Cottonwood	6.4			Fair				
3473	Populus temuloides	Trembling aspen	6.2			Fair				
3474	Populus temuloides	Trembling aspen	7.6			Fair				
3475	Populus temuloides	Trembling aspen	7.6			Fair				
3476	Carya ovata	Shagbark Hickory	6.7			Fair				
3477	Carya ovata	Shagbark Hickory	6.7			Fair				
3478	Ulmus americana	American Elm	14.2			Fair				
3479	Carya ovata	Shagbark Hickory	7.0			Fair				
3480	Tilia americana	Basswood	12.7			Fair				
3481	Tilia americana	Basswood	9.8			Fair				
3482	Carya ovata	Shagbark Hickory	7.0			Fair				
3483	Populus temuloides	Trembling aspen	8.9			Fair				
3484	Populus temuloides	Trembling aspen	8.6			Dead				
3485	Ulmus americana	American Elm	7.0			Fair				
3486	Populus temuloides	Trembling aspen	10.0			Fair				
3487	Populus temuloides	Trembling aspen	6.0			Fair				
3488	Populus temuloides	Trembling aspen	8.6			Fair				
3489	Quercus macrocarpa	Bur oak	6.3			Fair				
3490	Populus temuloides	Trembling aspen	7.4			Fair				
3491	Carya ovata	Shagbark Hickory	7.1			Fair				
3492	Populus temuloides	Trembling aspen	10.0			Fair				
3493	Populus deltoides	Cottonwood	15.0			Fair				
3494	Ulmus americana	American Elm	8.3			Fair				
3495	Populus deltoides	Cottonwood	11.3			Fair				
3496	Populus deltoides	Cottonwood	10.5			Fair				
3497	Ulmus americana	American Elm	8.4			Fair				
3498	Populus deltoides	Cottonwood	19.6	17.3		Fair	X			
3499	Populus deltoides	Cottonwood	13.8			Fair				
3500	Carya ovata	Shagbark Hickory	7.3			Fair				
3501	Carya ovata	Shagbark Hickory	7.1			Fair				

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171 — THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

TREE LIST
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK

DATE 9/23/20	SCALE	HOR: 1" = ' VER: 1" = N/A	
DESIGNED BY SRB	JOB NO.	18141	
DRAWN BY SRB	SHEET	C-3.9	

© COPYRIGHT 2020

Z:\Projects\18141\DWG\18141 TOPO.dwg, C-3.9 TREE LIST, 10/6/2020 1:08:48 PM, dbamberger

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
3502	Carya ovata	Shagbark Hickory	7.5			Fair				
3503	Carya ovata	Shagbark Hickory	7.4			Fair				
3504	Carya ovata	Shagbark Hickory	6.9			Fair				
3505	Carya ovata	Shagbark Hickory	6.4			Fair				
3506	Carya ovata	Shagbark Hickory	7.0			Fair				
3507	Carya ovata	Shagbark Hickory	6.7			Fair				
3508	Carya ovata	Shagbark Hickory	7.7			Fair				
3509	Carya glabra	Pignut Hickory	6.0			Fair		6.0		
3510	Quercus alba	White oak	6.3			Fair		6.3		
3511	Quercus alba	White oak	9.8			Fair				
3512	Tilia americana	Basswood	8.2	6.1		Fair				
3513	Carya ovata	Shagbark Hickory	8.6	6.1		Fair		14.7		
3514	Quercus alba	White oak	8.4			Fair				
3515	Quercus macrocarpa	Bur oak	7.7			Fair				
3516	Carya ovata	Shagbark Hickory	6.0			Fair				
3517	Ulmus americana	American Elm	6.1			Fair				
3518	Carya ovata	Shagbark Hickory	6.9			Fair				
3519	Carya ovata	Shagbark Hickory	6.7			Fair				
3520	Carya ovata	Shagbark Hickory	7.2			Fair				
3521	Carya ovata	Shagbark Hickory	6.8			Fair				
3522	Carya ovata	Shagbark Hickory	6.3			Fair				
3523	Acer saccharum	Sugar Maple	7.2			Fair				
3524	Carya ovata	Shagbark Hickory	6.0			Fair		6.0		
3525	Carya ovata	Shagbark Hickory	7.0			Fair		7.0		
3526	Quercus velutina	Black oak	8.4			Fair				
3527	Quercus alba	White oak	7.4			Fair				
3528	Quercus velutina	Black oak	7.8			Fair				
3529	Carya ovata	Shagbark Hickory	6.1			Fair				
3530	Carya ovata	Shagbark Hickory	6.6			Fair				
3531	Carya ovata	Shagbark Hickory	6.9			Fair				
3532	Carya ovata	Shagbark Hickory	6.5			Fair				
3533	Junprus virginiana	Juniper	6.2			Fair				
3534	Ulmus americana	American Elm	6.3			Fair				
3535	Carya ovata	Shagbark Hickory	6.0			Fair				
3536	Carya ovata	Shagbark Hickory	6.2			Fair				
3537	Carya ovata	Shagbark Hickory	6.2			Fair				
3538	Quercus velutina	Black oak	8.3			Fair		8.3		
3539	Acer saccharum	Sugar Maple	6.5			Fair				
3540	Carya ovata	Shagbark Hickory	10.3			Fair				
3541	Quercus macrocarpa	Bur oak	34.5			Fair	X			
3542	Junprus virginiana	Juniper	7.8			Fair				
3543	Junprus virginiana	Juniper	8.3			Fair	X			
3544	Carya ovata	Shagbark Hickory	9.6			Fair				
3545	Carya ovata	Shagbark Hickory	9.2	6.3		Fair				
3546	Carya ovata	Shagbark Hickory	8.7			Fair				
3547	Carya ovata	Shagbark Hickory	8.4			Fair				
3548	Carya ovata	Shagbark Hickory	8.7			Fair				
3549	Carya ovata	Shagbark Hickory	7.9			Fair				
3550	Carya ovata	Shagbark Hickory	11.1			Fair				
3551	Carya ovata	Shagbark Hickory	9.3	9.0	8.5	Fair				
3552	Carya ovata	Shagbark Hickory	8.8			Fair				
3553	Carya ovata	Shagbark Hickory	11.5	11.2	9.4	Fair				
3554	Carya ovata	Shagbark Hickory	9.7			Fair				
3555	Carya ovata	Shagbark Hickory	10.1			Fair				
3556	Carya ovata	Shagbark Hickory	12.8	11.6		Fair				
3557	Carya ovata	Shagbark Hickory	10.0			Poor				
3558	Carya ovata	Shagbark Hickory	9.8			Poor				
3559	Carya ovata	Shagbark Hickory	8.8			Fair				
3560	Carya ovata	Shagbark Hickory	7.3			Fair				
3561	Carya ovata	Shagbark Hickory	9.8			Fair				
3562	Carya ovata	Shagbark Hickory	9.4			Fair				
3563	Carya ovata	Shagbark Hickory	6.1			Fair				
3564	Carya ovata	Shagbark Hickory	8.7			Fair				
3565	Carya ovata	Shagbark Hickory	7.8			Fair				
3566	Carya ovata	Shagbark Hickory	8.5			Fair				
3567	Carya ovata	Shagbark Hickory	8.3			Fair				
3568	Carya ovata	Shagbark Hickory	10.2			Fair				
3569	Carya ovata	Shagbark Hickory	9.3			Fair				
3570	Carya ovata	Shagbark Hickory	7.2			Fair				
3571	Carya ovata	Shagbark Hickory	7.9			Fair				
3572	Carya ovata	Shagbark Hickory	8.3			Fair				
3573	Carya ovata	Shagbark Hickory	8.6			Fair				
3574	Carya ovata	Shagbark Hickory	9.1			Fair				
3575	Carya ovata	Shagbark Hickory	9.5	8.6		Fair				
3576	Carya ovata	Shagbark Hickory	8.6	8.1		Fair				
3577	Carya ovata	Shagbark Hickory	7.9	7.5		Fair				
3578	Carya ovata	Shagbark Hickory	13.2			Fair				
3579	Carya ovata	Shagbark Hickory	9.7	9.3		Fair				
3580	Quercus velutina	Black oak	12.8			Fair				
3581	Carya ovata	Shagbark Hickory	11.7			Fair				
3582	Carya ovata	Shagbark Hickory	9.0	8.3		Fair				
3583	Carya ovata	Shagbark Hickory	7.4			Fair				
3584	Carya ovata	Shagbark Hickory	8.1			Fair				

			Diameter at Breast Height (DBH)					Trees to be Removed		
Tag	Scientific Name	Common Name	Trunk 1	Trunk 2	Trunk 3	Condition*	Heritage**	Regulated	Heritage	Exempt
3585	Ulmus americana	American Elm	9.2			Fair				
3586	Ulmus americana	American Elm	8.8			Fair				
3587	Acer saccharinum	Silver Maple	9.9			Fair				
3588	Quercus macrocarpa	Bur oak	6.7			Fair				
3589	Acer saccharum	Sugar Maple	23.6			Fair	X		23.6	
3590	Populus deltoides	Cottonwood	15.7	14.3		Fair		30.0		
3591	Populus deltoides	Cottonwood	11.3			Fair		11.3		
3592	Populus deltoides	Cottonwood	13.6			Fair		13.6		
10000	Acer rubrum	Red Maple	21.3			Fair	X			X
10001	Malus pumila	Apple	9.8	7.8		Fair				X
20833	Picea abies	White Spruce	9.0			Fair				
20835	Carya ovata	Shagbark Hickory	13.6	7.0		Fair				
20836	Carya ovata	Shagbark Hickory	11.0			Fair				
20837	Carya ovata	Shagbark Hickory	13.7	11.8		Fair				
20838	Quercus macrocarpa	Bur Oak	19.8			Fair	X			
20839	Carya ovata	Shagbark Hickory	13.7	13.3	11.7	Fair				
20868	Quercus macrocarpa	Bur Oak	23.0			Fair	X			
20871	Malus pumila	Apple	9.2	9.0		Poor				
							Removal (DBH inches)	280.1	139.7	

Required Replacement

Regulated Trees	280.1 x 140% =	392.1	DBH inches
Heritage Trees	139.7 x 150% =	209.6	DBH inches
Total		601.7	DBH inches
Required 3.0" trees		201	Trees

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171 — THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

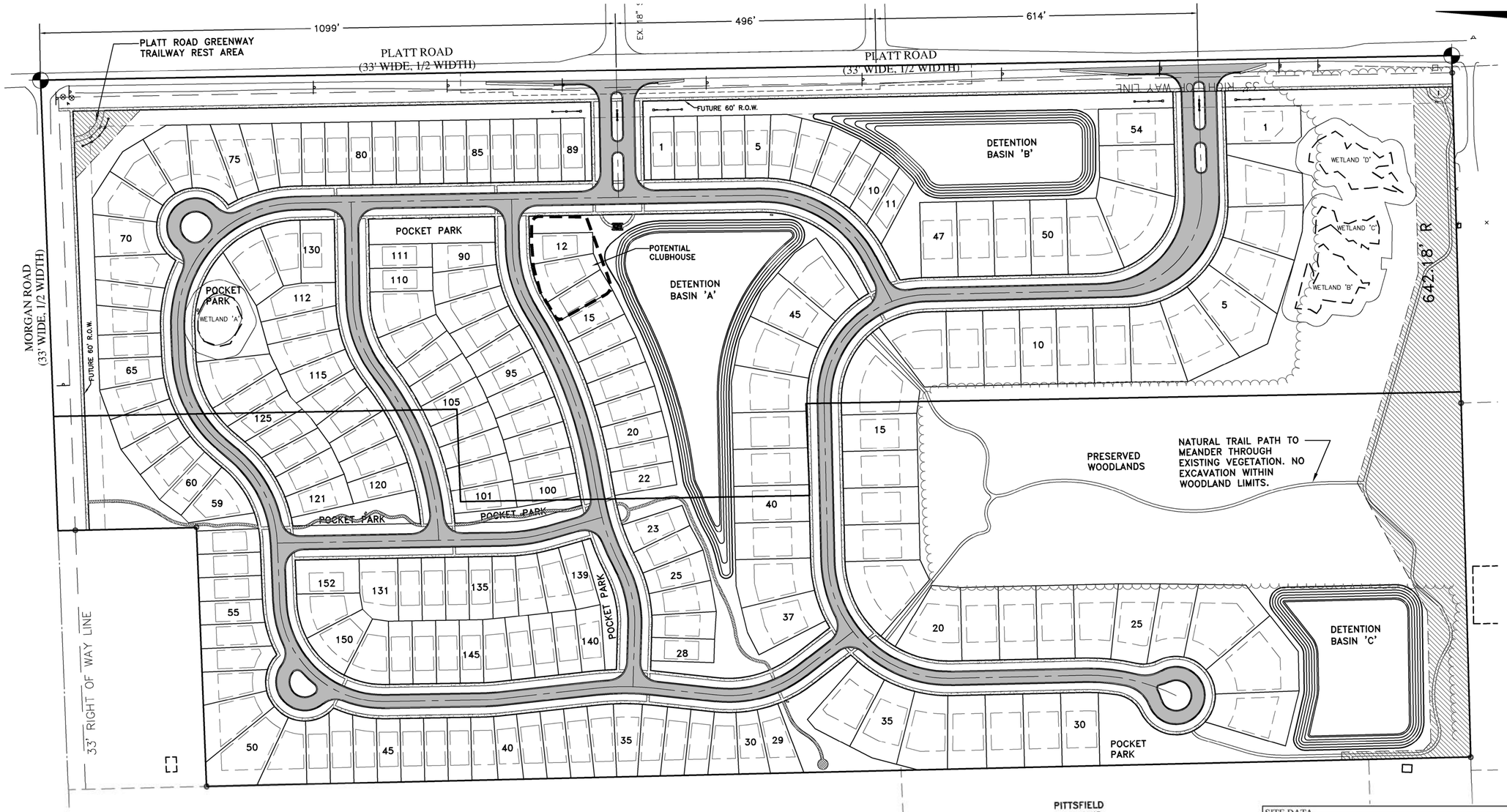
PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

TREE LIST
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK: | DATE 9/23/20 | SCALE HOR: 1" = ' VER: 1" = N/A | DESIGNED BY SRB | JOB NO. 18141 | DRAWN BY SRB | SHEET C-3.10

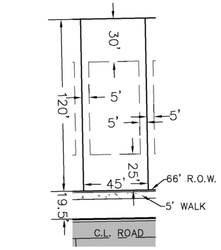
© COPYRIGHT 2020

Z:\Projects\18141\DWG\18141 TOPO.dwg, C-3.10 TREE LIST, 10/8/2020 1:09:26 PM, dbamboyer

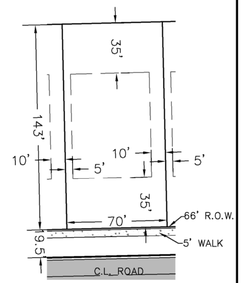


SCALE: 1" = 100'

0 50' 100' 200'



TYPICAL 45' LOT LAYOUT
SCALE: 1"=50'



TYPICAL 70' LOT LAYOUT
SCALE: 1"=50'

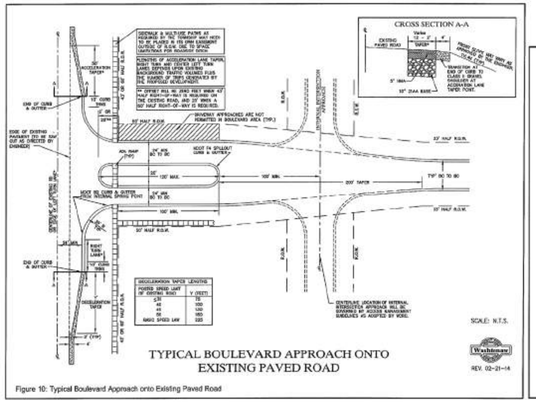
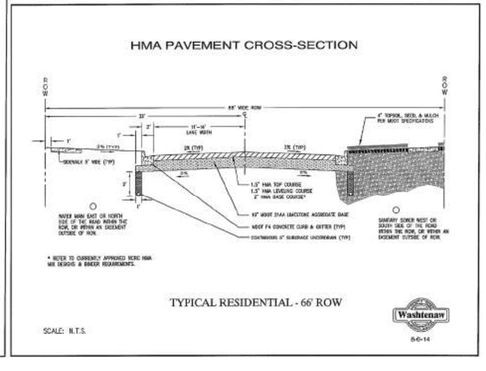
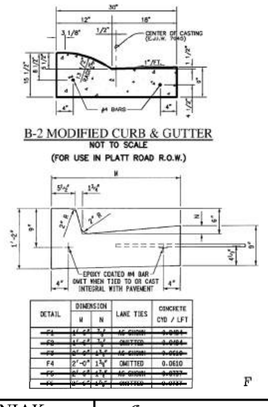


Figure 10: Typical Boulevard Approach onto Existing Paved Road

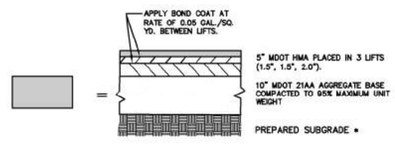




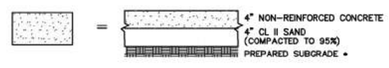
DETAIL	DIMENSION W	DIMENSION N	LANE TIES	CONCRETE CYD / LFT
~~F1~~	~~1'-6"~~	~~1'-6"~~	~~45 GHOST~~	~~0.0181~~
~~F2~~	~~1'-6"~~	~~1'-6"~~	~~OMITTED~~	~~0.0181~~
~~F3~~	~~2'-6"~~	~~1'-6"~~	~~45 GHOST~~	~~0.0510~~
F4	2'-0"	1'-6"	OMITTED	0.0510
~~F5~~	~~2'-0"~~	~~1'-6"~~	~~45 GHOST~~	~~0.0833~~
~~F6~~	~~2'-6"~~	~~1'-6"~~	~~OMITTED~~	~~0.0833~~

F

PITTSFIELD TOWNSHIP PARK



PROPOSED BITUMINOUS PAVING



PROPOSED WALK

SUBGRADE SHALL BE COMPACTED TO 95% MAXIMUM UNIT WEIGHT BEFORE PLACING CURB AND GUTTER AND AGGREGATE BASE.

SITE DATA

PARCEL ID'S	12-22-100-001, 12-22-100-002	
EXISTING ZONING	AG AGRICULTURAL	
PROPOSED ZONING	PRO	
EXISTING LAND USE	AGRICULTURAL	
PROPOSED LAND USE	SINGLE FAMILY RESIDENTIAL	
SITE AREA (TOTAL SITE):		
GROSS AREA	80.01 ACRES 3,485,432 SF	
MORGAN ROAD R.O.W.	1.14 ACRES 49,799 SF	
PLATT ROAD R.O.W.	3.67 ACRES 159,738 SF	
WETLANDS (TOTAL)	0.70 ACRES 30,363 SF	
WETLANDS (PRESERVED)	0.70 ACRES 30,363 SF	
NET AREA	74.50 ACRES 3,245,532 SF	
SINGLE FAMILY RESIDENTIAL:		
45' LOTS (152 LOTS) –	45' X 120' MINIMUM (5,400 SF)	
70' LOTS (54 LOTS) –	70' X 143' MINIMUM (10,000 SF)	
TOTAL LOTS –	206 LOTS	
SETBACKS	45' LOTS	70' LOTS
FRONT	25'	35'
REAR	30'	35'
SIDE	5'/10' TOTAL	5'/15' TOTAL
TOTAL ACRES OF OPEN SPACE/WOODLANDS/ PARK COMMONS/DETENTION AREAS PROVIDED	26.83 ACRES 1,168,545 SF (36%)	
IMPERVIOUS AREA	17.11 ACRES 745,490 SF (23%)	
LOT COVERAGE	15.32 ACRES 667,338 SF (20.6%)	
DENSITY (UNITS/ACRE)	206/74.50 = 2.77	
BUILDING HEIGHT	35' MAX., 2 1/2 STORIES	

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55000 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

OVERALL DIMENSION PLAN
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK

DATE 9/23/20 | SCALE HOR: 1" = 100' VER: 1" = N/A
DESIGNED BY SRB | JOB NO. 18141
DRAWN BY SRB | SHEET C-4.0

© COPYRIGHT 2020

Z:\Projects\18141\DWG\PRELIM SITE PLAN\18141 PSP DIMENSION.dwg, C-4.0 OVERALL DIMENSION PLAN, 10/9/2020 11:10:32 PM, dbrinoyer

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

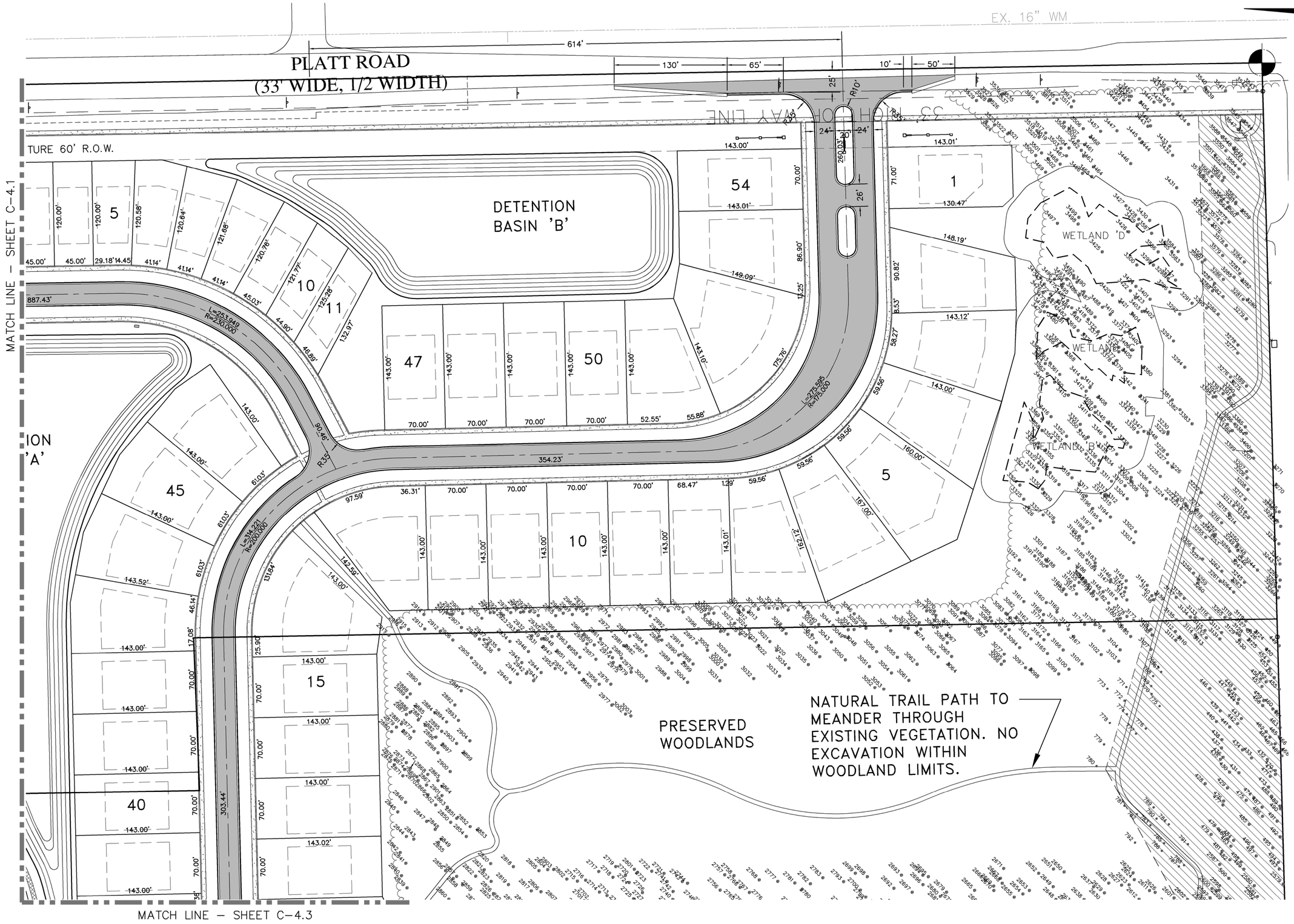
PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

DETAIL DIMENSION PLAN
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK	DATE 9/23/20	SCALE	HOR: 1" = 50' VER: 1" = N/A
	DESIGNED BY SRB	JOB NO.	18141
	DRAWN BY SRB	SHEET	C-4.1

© COPYRIGHT 2020

Z:\Projects\18141\DWG\PRELIM SITE PLAN\18141 FSP DIMENSION.dwg, C-4.1 DETAIL DIMENSION PLAN, 10/8/2020 1:11:47 PM, dsmbryer



REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC.
1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

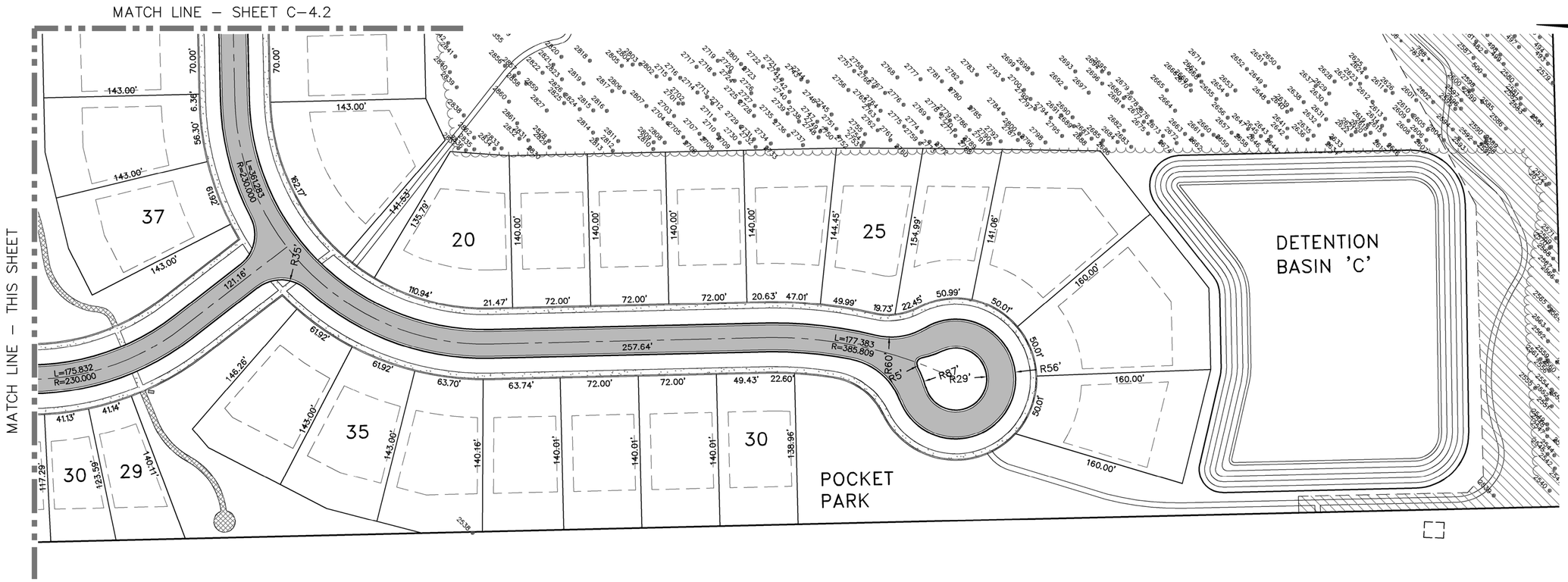
PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

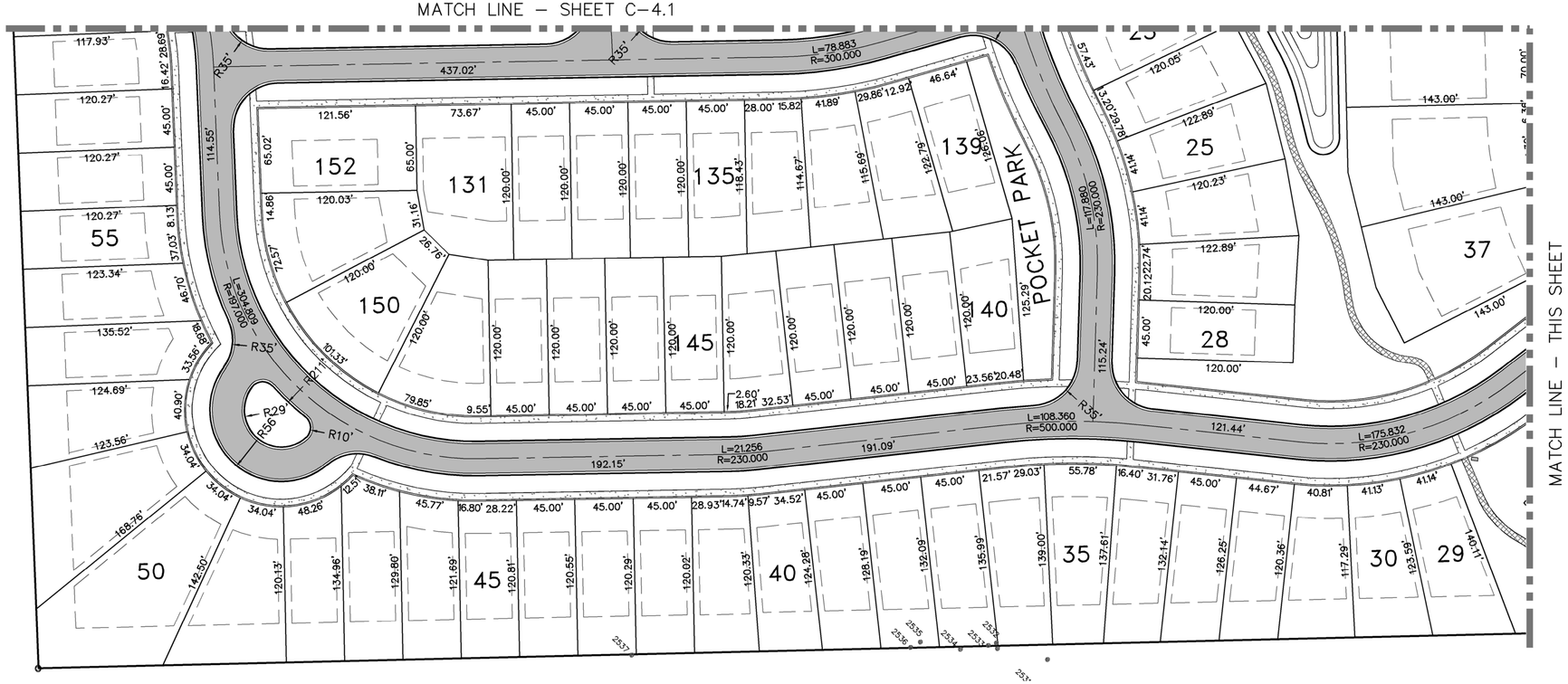
DETAIL DIMENSION PLAN
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK	DATE 9/23/20	SCALE	HOR: 1" = 50' VER: 1" = N/A
	DESIGNED BY SRB	JOB NO.	18141
	DRAWN BY SRB	SHEET	C-4.2

© COPYRIGHT 2020

Z:\Projects\18141\DWG\PRELIM SITE PLAN\18141 PSP DIMENSION.dwg, C-4.2 DETAIL DIMENSION PLAN, 10/8/2020 11:12:38 PM, dlembryer





REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

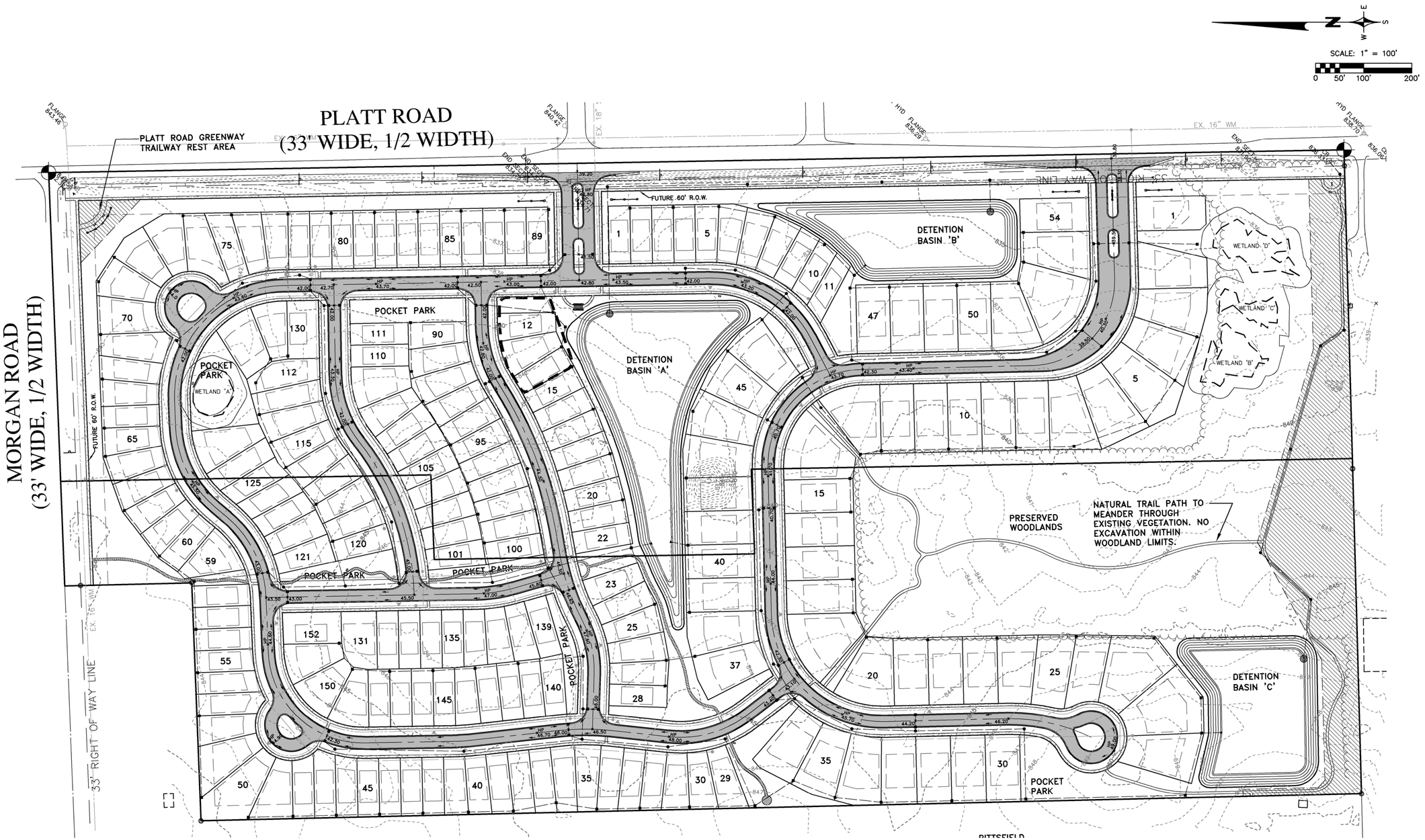
PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

DETAIL DIMENSION PLAN
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK	DATE 9/23/20	SCALE	HOR: 1" = 50' VER: 1" = N/A
	DESIGNED BY SRB	JOB NO.	18141
	DRAWN BY SRB	SHEET	C-4.3

© COPYRIGHT 2020

Z:\Projects\18141\DWG\PRELIM SITE PLAN\18141 PSP DIMENSION.dwg, C-4.3 DETAIL DIMENSION PLAN, 10/8/2020 1:13:21 PM, dbimbyer



REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

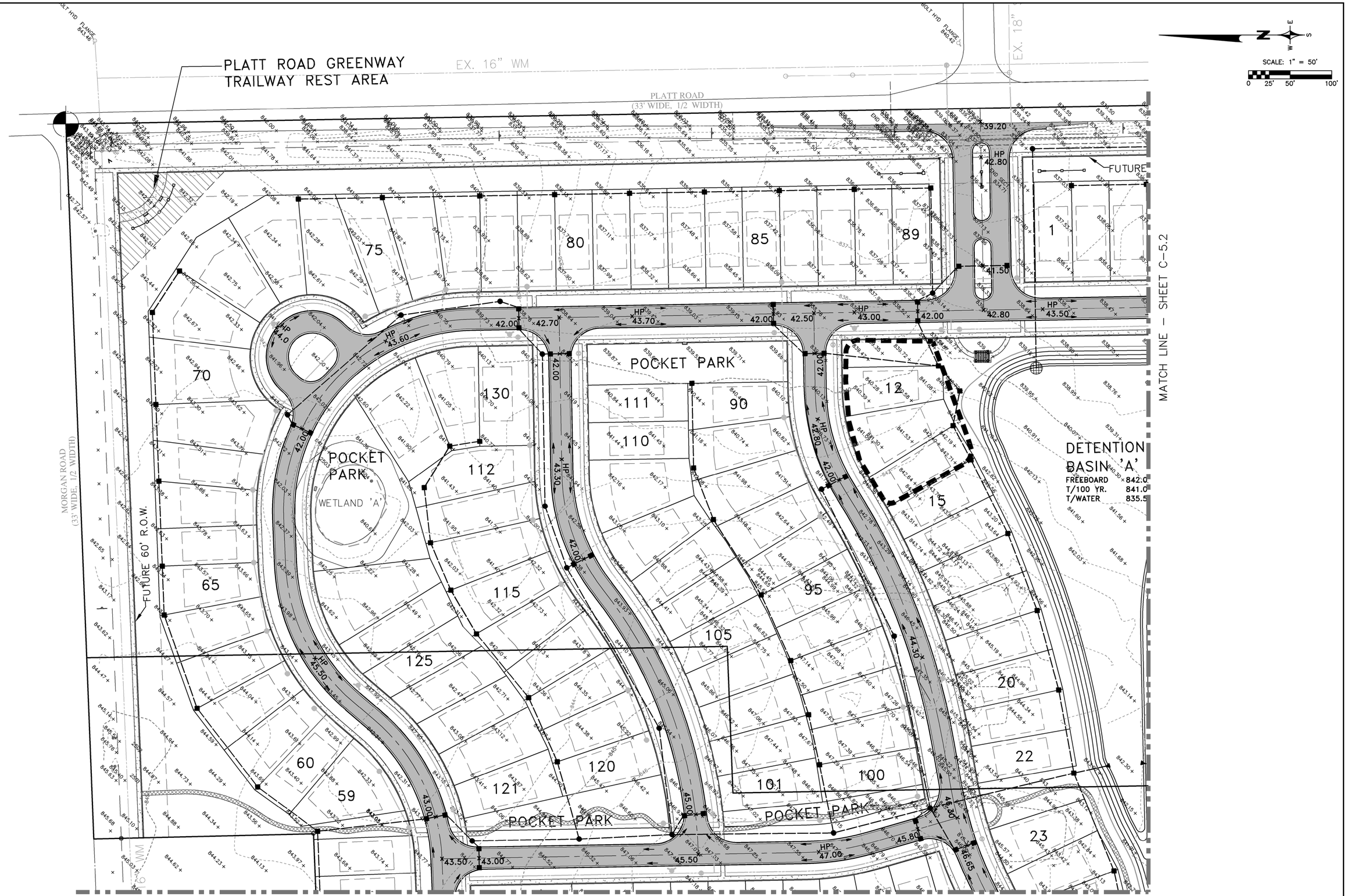
PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

OVERALL GRADING PLAN
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK	DATE 9/23/20	SCALE	HOR: 1" = 100' VER: 1" = N/A
	DESIGNED BY SRB	JOB NO.	18141
	DRAWN BY SRB	SHEET	C-5.0

© COPYRIGHT 2020

Z:\Projects\18141\DWG\PRELIM SITE PLAN\18141 PSP GRADING Avg. C-5.0 OVERALL GRADING PLAN, 10/8/2020 1:14:48 PM, dbrinbryer



REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

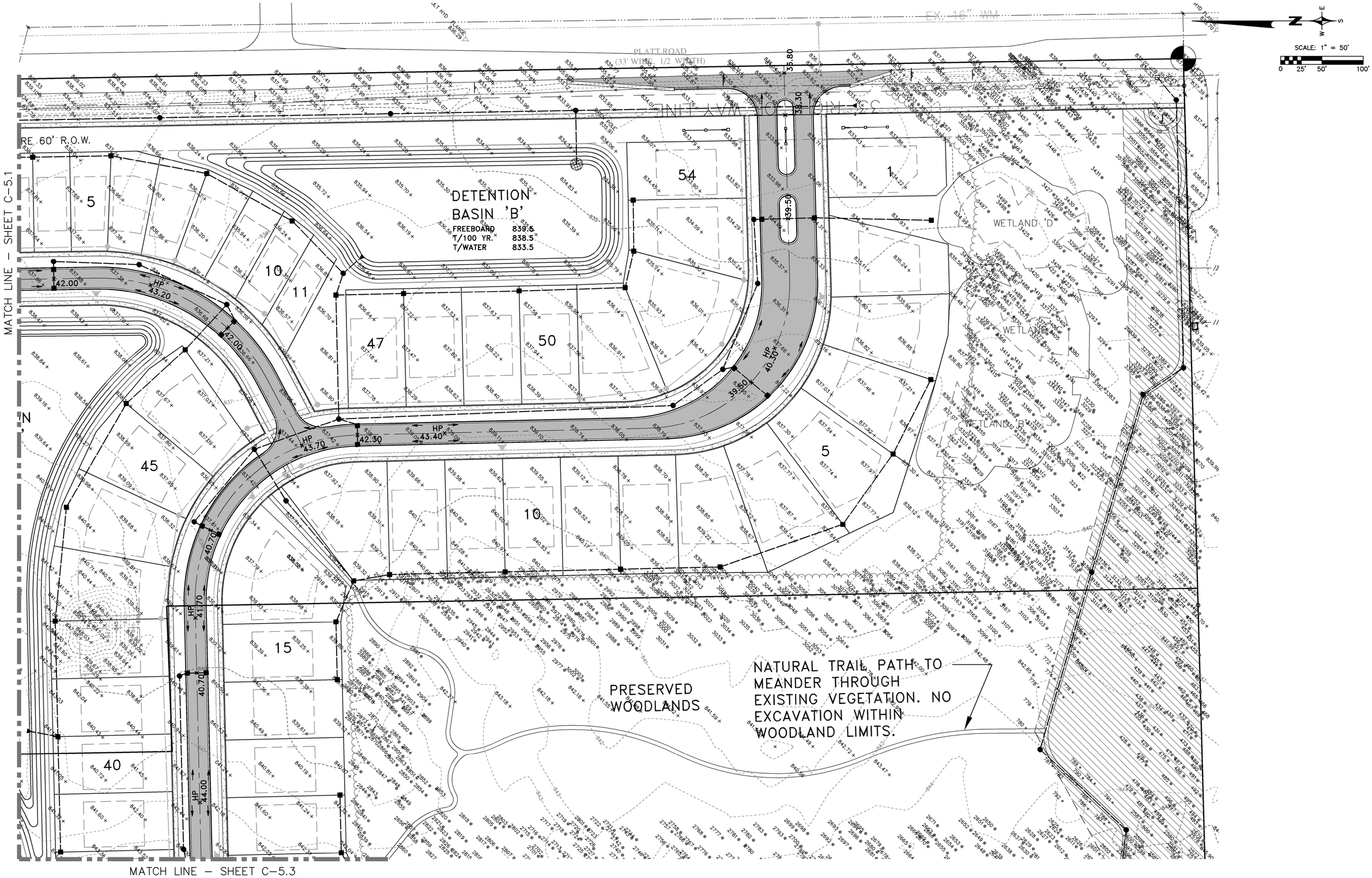
PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

DETAIL GRADING PLAN
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK	DATE 9/23/20	SCALE	HOR: 1" = 50' VER: 1" = N/A
	DESIGNED BY SRB	JOB NO.	18141
	DRAWN BY SRB	SHEET	C-5.1

© COPYRIGHT 2020

Z:\Projects\18141\DWG\PRELIM SITE PLAN\18141 PSP GRADING.dwg, C-5.1 DETAIL GRADING PLAN, 10/8/2020 11:15:40 PM, dbernbeyer



REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC.
1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

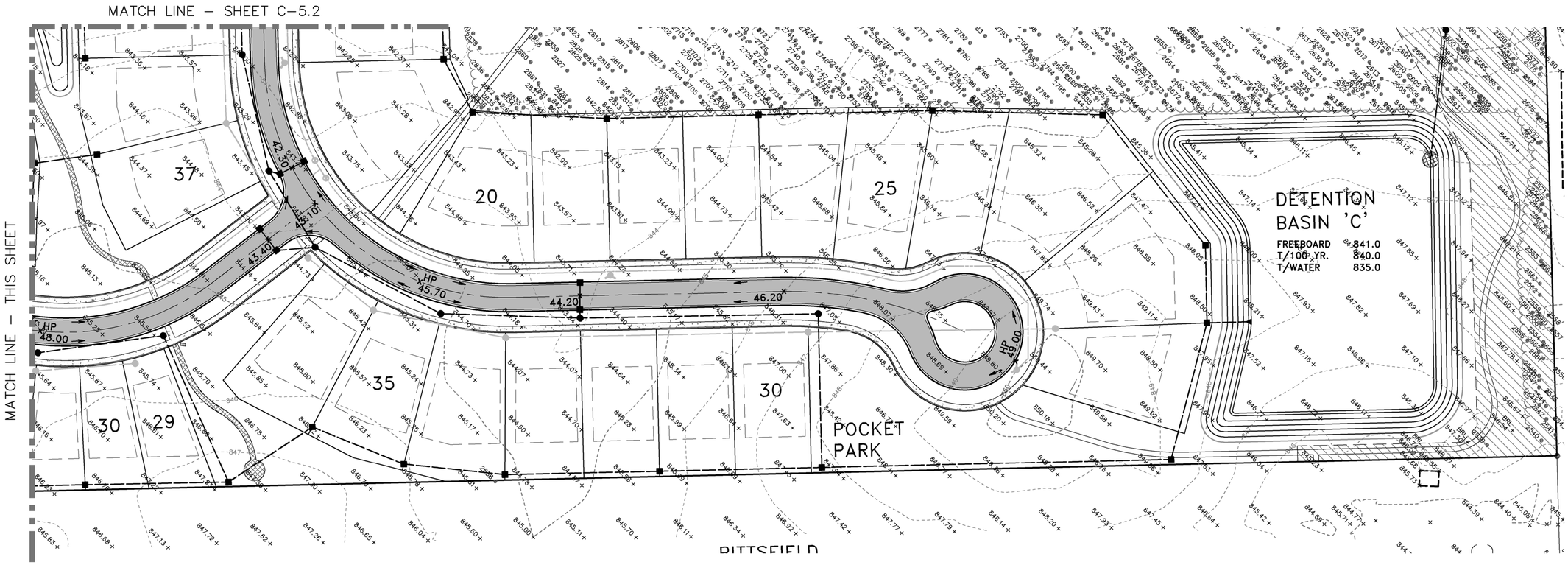
DETAIL GRADING PLAN
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

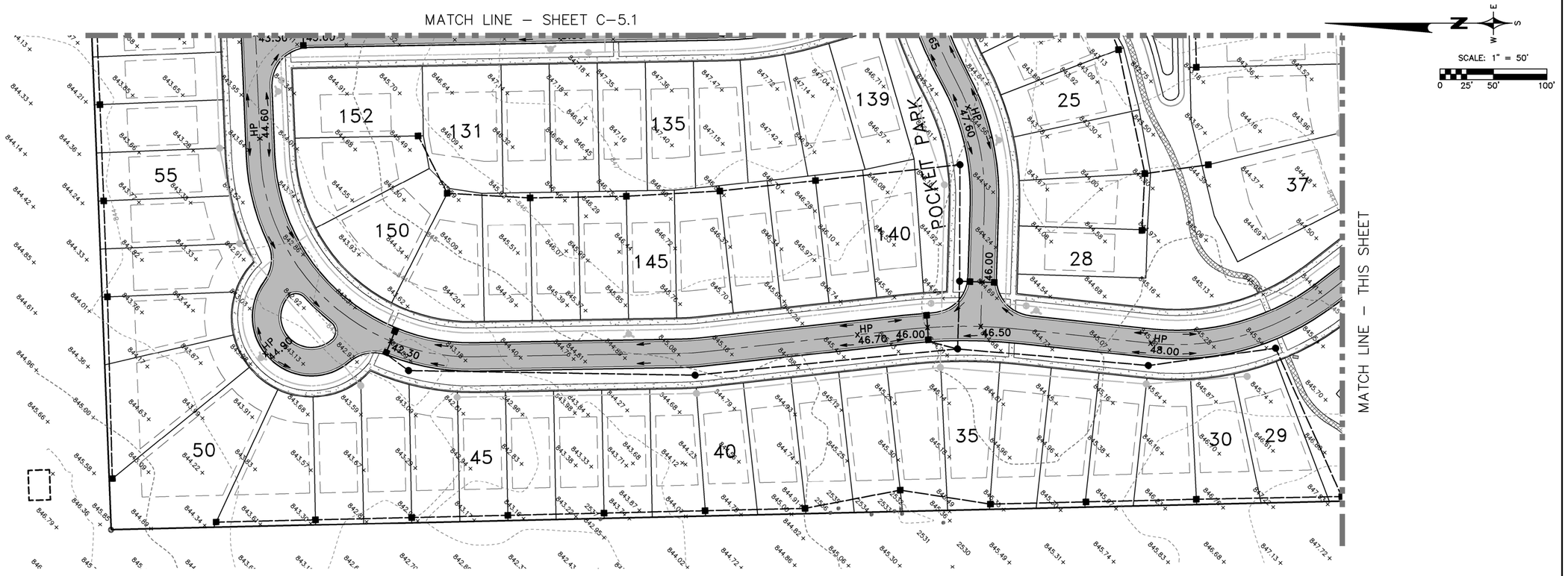
FIELD BOOK

DATE 9/23/20	SCALE	HOR: 1" = 50' VER: 1" = N/A	
DESIGNED BY SRB	JOB NO.	18141	
DRAWN BY SRB	SHEET	C-5.2	

© COPYRIGHT 2020

Z:\Projects\18141\DWG\PRELIM SITE PLAN\18141 PSP GRADING.dwg, C-5.2 DETAIL GRADING PLAN, 10/8/2020 11:16:43 PM, dsmboyer





REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

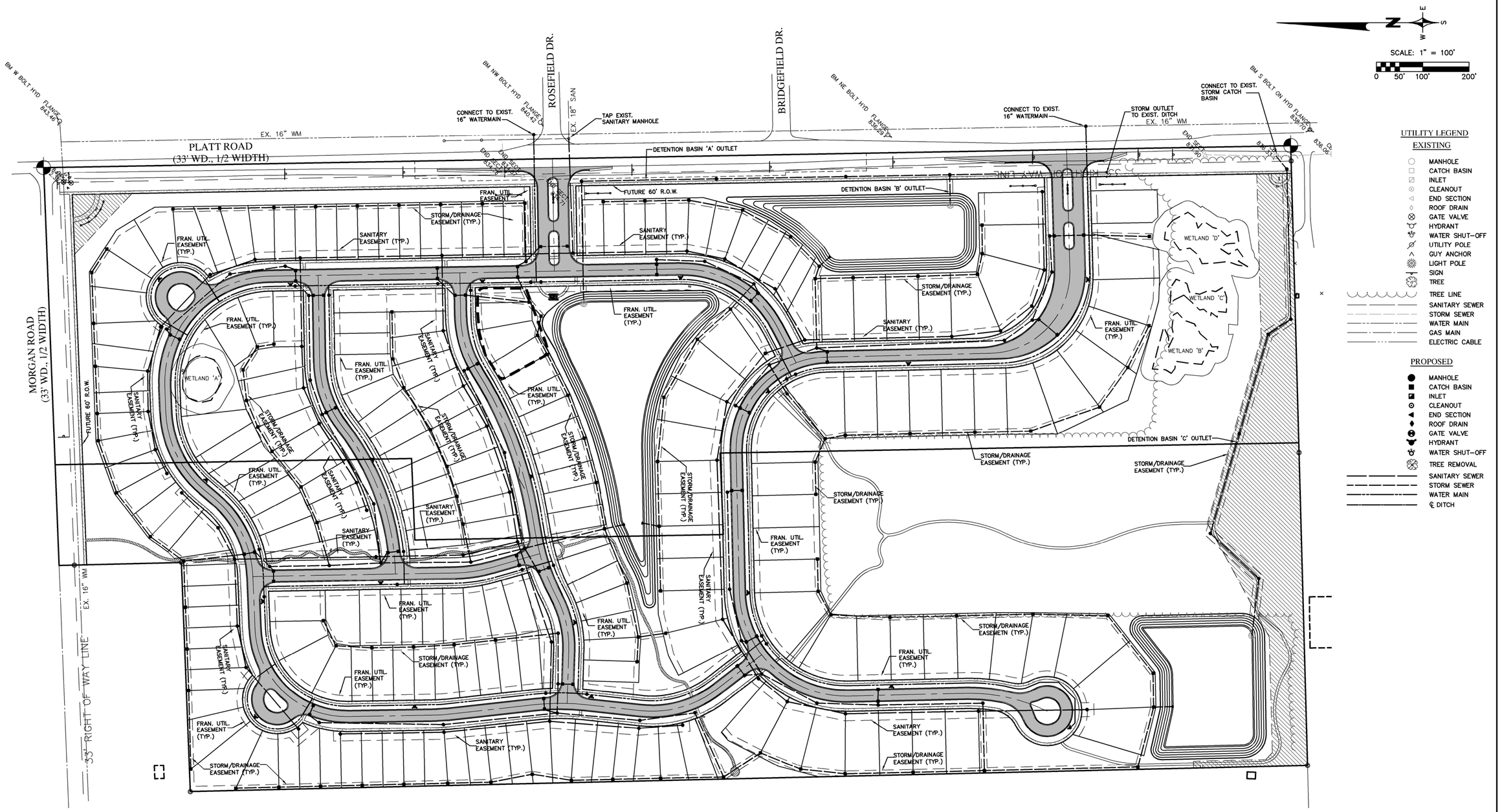
PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

DETAIL GRADING PLAN
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK	DATE 9/23/20	SCALE	HOR: 1" = 50' VER: 1" = N/A
	DESIGNED BY SRB	JOB NO.	18141
	DRAWN BY SRB	SHEET	C-5.3

© COPYRIGHT 2020

Z:\Projects\18141\DWG\PRELIM SITE PLAN\18141 PSP GRADING.dwg, C-5.3 DETAIL GRADING PLAN, 10/8/2020 1:17:31 PM, dbernbryer



UTILITY LEGEND

EXISTING

- MANHOLE
- CATCH BASIN
- INLET
- CLEANOUT
- END SECTION
- ROOF DRAIN
- GATE VALVE
- HYDRANT
- WATER SHUT-OFF
- UTILITY POLE
- GUY ANCHOR
- LIGHT POLE
- SIGN
- TREE
- TREE LINE
- SANITARY SEWER
- STORM SEWER
- WATER MAIN
- GAS MAIN
- ELECTRIC CABLE

PROPOSED

- MANHOLE
- CATCH BASIN
- INLET
- CLEANOUT
- END SECTION
- ROOF DRAIN
- GATE VALVE
- HYDRANT
- WATER SHUT-OFF
- TREE REMOVAL
- SANITARY SEWER
- STORM SEWER
- WATER MAIN
- ℄ DITCH

NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTMENT OF ALL STRUCTURES, KNOWN OR UNKNOWN, SHOWN OR UNSHOWN, LOCATED WITHIN THE LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE IF ANY SUCH STRUCTURES ARE IDENTIFIED. ALL COSTS ASSOCIATED WITH LOCATING AND ADJUSTING THESE STRUCTURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. DESIGN PROFESSIONAL AND CLIENT WARRANT THAT IN TRANSMITTING INSTRUMENTS OF SERVICE, OR ANY OTHER INFORMATION, THE TRANSMITTING PARTY IS THE COPYRIGHT OWNER OF SUCH INFORMATION OR HAS PERMISSION FROM THE COPYRIGHT OWNER TO TRANSIT SUCH INFORMATION FOR ITS USE OF THE PROJECT. IF THE CLIENT AND DESIGN PROFESSIONAL INTEND TO TRANSMIT INSTRUMENTS OF SERVICE OR ANY OTHER INFORMATION OR DOCUMENTATION IN DIGITAL FORM, THEY SHALL ENDEAVOR TO ESTABLISH NECESSARY PROTOCOLS GOVERNING SUCH TRANSMISSIONS.

SANITARY SEWER BASIS OF DESIGN:

NO. OF LOTS =	206 LOTS
REU =	3.4 PEOPLE/LOT
NO. OF PEOPLE = 3.4 x 206 =	700.4 PEOPLE
AVG. DAILY FLOW = 100 GPCPD x 700.4 PEOPLE / (7.5 x 24 x 3600) =	0.11 CFS
PEAKING FACTOR =	4.0
PEAK DAILY FLOW = 4 x 0.11 CFS =	0.44 CFS

A 10" DIAMETER SEWER AT 0.28% (MIN.) SLOPE HAS A CAPACITY OF 1.15 CFS.

SANITARY AND WATER NOTES:

1. ALL PROPOSED SANITARY SHALL BE 10" DIAMETER CENTERED IN MINIMUM 30' WIDE EASEMENT.
2. ALL PROPOSED WATERMAIN SHALL BE 8" DIAMETER WITHIN ROAD RIGHT-OF-WAY OR CENTERED IN 20' WIDE EASEMENT..
3. ALL PROPOSED WATERMAIN CONNECTIONS TO EXISTING MAINS SHALL BE LIVE CONNECTIONS.
4. SANITARY AND WATER SERVICE SHALL BE PROVIDED TO EACH LOT.

PROPOSED EASEMENTS:

1. STORM SEWER/DRAINAGE = 12' WIDE
2. SANITARY SEWER = 30' WIDE (CENTERED). 20' WIDE ALONG LOT FRONTAGE (TYPICAL).
3. FRANCHISE UTILITIES = 12' WIDE

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171 — THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

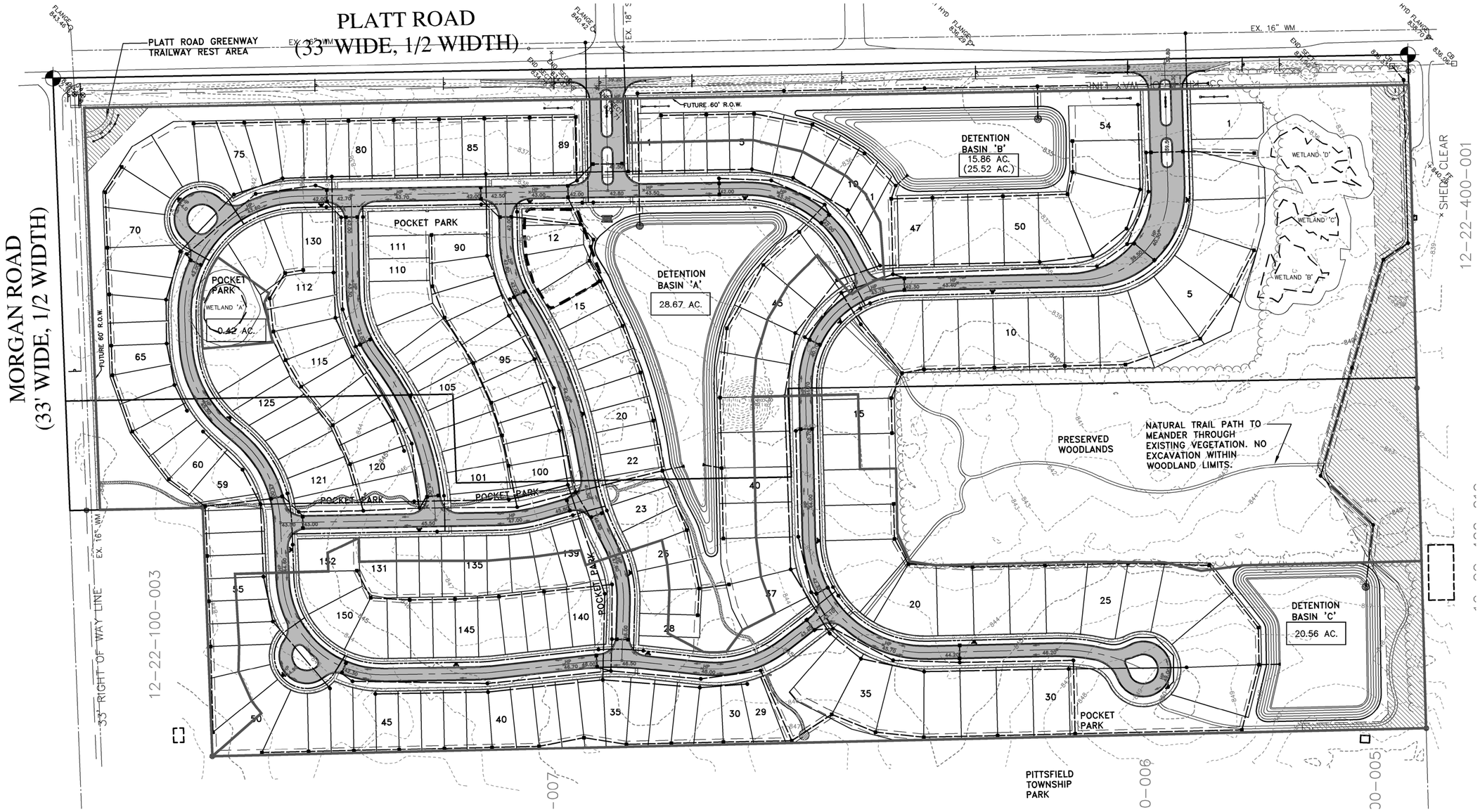
PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

OVERALL UTILITY PLAN
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK	DATE 9/23/20	SCALE	HOR: 1" = 100' VER: 1" = N/A
	DESIGNED BY SRB	JOB NO.	18141
	DRAWN BY SRB	SHEET	C-6.0

© COPYRIGHT 2020

Z:\Projects\18141\DWG\PRELIM SITE PLAN\18141 PSP UTILITY.dwg, C-6.0 OVERALL UTILITY PLAN, 10/8/2020 11:18:44 PM, dbentoyer



REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC.
1-800-482-7171
THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

STORMWATER DRAINAGE PLAN
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK:	DATE 9/23/20	SCALE	HOR: 1" = 100' VER: 1" = N/A
	DESIGNED BY SRB	JOB NO.	18141
	DRAWN BY SRB	SHEET	C-6.1

© COPYRIGHT 2020

Z:\Projects\18141\DWG\PRELIM SITE PLAN\18141 PSP STORMWATER.dwg, C-6.1 STORMWATER DRAINAGE PLAN, 10/8/2020 1:19:51 PM, dbernbryer

W1 Determining Post-Development Cover Types, Areas, Curve Numbers, and Runoff Coefficients

A. Total Site Area = 1,248,865.20 sf or 28.67 ac
Total Site Area Excluding "Self-Crediting" BMPs = 28.7 ac

B. Rational Method Variables:

Cover Type	Soil Type	Area (sf)	Area (ac)	Runoff Coefficient (c)	C x A
Lawn	D	794,279	18.23	0.50	9.12
Roof	D	216,000	4.96	0.95	4.71
Pavement	D	172,239	3.95	0.95	3.76
Pond	D	66,347	1.52	1.00	1.52
			-		-
			-		-
			-		-
		1,248,865	28.67		19.11
				Total - ∑(CN)(Area) =	19.11
				Area Total - ∑ac or ∑sf =	28.67
				Weighted C - ∑(C)(Area)/∑ac or ∑sf =	0.67

Weighted Runoff Coefficient C = 19.11 / 28.67 = **0.67**

C. NRCS Variables:

Pervious Cover Type	Soil Type	Area (ft²)	Area (ac)	Curve Number	(CN)(Area)
Lawn	D	794,279	18.23	80	1,458.73
			-		-
			-		-
			-		-
			-		-
			-		-
		794,279	18.23		1,458.73
				Total - ∑(CN)(Area) =	1,458.73
				Area Total - ∑ac or ∑sf =	18.23
				Pervious Weighted CN - ∑(C)(Area)/∑ac or ∑sf =	80.00

Weighted Pervious Curve Number CN = 1,458.73 / 18.23 = **80**

Impervious Cover Type	Soil Type	Area (ft²)	Area (ac)	Curve Number	(CN)(Area)
Roof	D	216,000	4.96	98	485.95
Pavement	D	172,239	3.95	98	387.50
Pond	D	66,347	1.52	98	149.27
			-		-
			-		-
			-		-
			-		-
		454,586	10.44		1,022.71
				Total - ∑(CN)(Area) =	1,022.71
				Area Total - ∑ac or ∑sf =	10.44
				Impervious Weighted CN - ∑(C)(Area)/∑ac or ∑sf =	98.00

Weighted Impervious Curve Number CN = 1,022.71 / 10.44 = **98**

W2 Standard Method Runoff Volume Calculations

First Flush Runoff Calculations (V_{ff})

A. V_{ff} = (1")(1'/12") x (43560ft²/1ac)x A x C= 43560/12 x 28.67 x 0.67 Vff = **69,359 cf**

W3 Pre-Development Bankfull Calculations

A. 2 year / 24 hour storm event: P = 2.35 in
B. Pre-Development Curve Number (CN): CN = 80
C. S = (1000 / CN) - 10 S = 2.50 in
D. Q = (P-0.2S)^2 / (P + 0.8S) Q = 0.787 in
E. Total Site Area (sf) excluding "Self Crediting" BMPs Area = 1,250,172 sf
F. V_{bfpre} = Q x(1/12) x Area Vbf-pre = **81,968 cf**

W4 Pervious Cover Post-Development Bankfull Runoff Calculations

A. 2 year / 24 hour storm event: P = 2.35 in
B. Pre-Development Curve Number (CN): CN = 80
C. S = (1000 / CN) - 10 S = 2.50 in
D. Q = (P-0.2S)^2 / (P + 0.8S) Q = 0.79 in
E. Pervious Cover Area Area = 794,279 sf
F. $V_{bfperpost}$ = Q x(1/12) x Area Vbf-per-post = **52,077 cf**

W5 Impervious Cover Post-Development Bankfull Runoff Calculations

A. 2 year / 24 hour storm event: P = 2.35 in
B. Pre-Development Curve Number (CN): CN = 98
C. S = (1000 / CN) - 10 S = 0.20 in
D. Q = (P-0.2S)^2 / (P + 0.8S) Q = 2.12 in
E. Impervious Cover Area Area = 454,586 sf
F. $V_{bfimp\text{-}post}$ = Q x(1/12) x Area Vbf-imp-post = **80,374 cf**

W6 Pervious Cover Post-Development 100-Year Storm Runoff Calculations

A. 2 year / 24 hour storm event: P = 5.11 in
B. Pervious Cover Curve Number (CN): CN = 80
C. S = (1000 / CN) - 10 S = 2.50 in
D. Q100-per = (P-0.2S)^2 / (P + 0.8S) Q100-per = 2.99 in
E. Pervious Cover Area Area = 794,279 sf
F. $V_{100perpost}$ = Q x(1/12) x Area V100-per-post = **197845 cf**

W7 Impervious Cover Post-Development 100-Year Storm Runoff Calculations

A. 2 year / 24 hour storm event: P = 5.11 in
B. Impervious Cover Curve Number (CN): CN = 98
C. S = (1000 / CN) - 10 S = 0.20 in
D. Q100-imp = (P-0.2S)^2 / (P + 0.8S) Q100-imp = 4.87 in
E. Impervious Cover CN Area Area = 454,586 sf
F. $V_{100imp\text{-}post}$ = Q x(1/12) x Area V100-per-post = **184,600 cf**

W8 Determine Time of Concentration for Applicable Flow Type

Flow Type	K	Change in Elevation	Length (L)	Slope % (S)	S^0.5	V=K x S^0.5	Tc
Waterway	1.20	8.5	1390	0.61	0.78	0.94	0.41
							0.41

Total Time of Concentration Tc = **0.41 hrs**

W 9 Runoff Summary & Onsite Infiltration Requirement

A. Runoff Summary:

First Flush Volume =				Vff =	**69,359**	**cf**
Predevelopment Bankfull Runoff Volume =				Vbf-pre =	81,968	cf
Pervious Cover Postdevelopment Bankfull Volume =				Vbf-per-post =	52,077	cf
Impervious Cover Postdevelopment Bankfull Volume =				Vbf-imp-post =	80,374	cf
Total Bankfull Volume =	52,077	+	80,374	Vbf-post =	**132,451**	**cf**
Pervious Cover Postdevelopment 100-Yr Volume =				V100-per-post =	197,845	cf
Impervious Cover Postdevelopment 100-Yr Volume =				V100-imp-post =	184,600	cf
Total 100-Yr Volume =	197,845	+	184,600	V100 =	**382,444**	**cf**

B. Determine Onsite Infiltration Requirement:

Total Postdevelopment Bankfull Volume Vbf =					132,451	cf
Predevelopment Bankfull Runoff Volume Vbf-pre =					81,968	cf
Bankfull Volume Difference =	132,451	-	81,968	Vdif =	**50,483**	**cf**
Greater of First Flush Volume and Bankfull Volume Difference				Vinf =	**69,359**	**cf**

W 10 Detention / Retention Requirement

Detention

A. Qp = 238.6 Tc^-0.82 =	238.6 x	0.41	^-0.82 =		Qp =	494.22	in-mi^2
B. Total Site Area (ac) Excluding Self-Crediting BMPs					A =	28.70	
C. Q100 = Q100-per + Q100-imp =	2.99	+	4.87		Q100 =	7.86	in
D. Peak Flow (PF) = (Qp x Q100 x Area) / 640 =							
494.220399 x	x	##	/	640 =			
					PF =	174.24	cfs
E. Δ = PF (cfs) - 0.15 Area (ac) =		-0.15 x	28.70		Δ =	169.94	cfs
F. Vdet = (Δ / PF) x V100 - Vinf =					Vdet =	**303,636**	**cf**

Retention

A. Vret = 2(V100) =	2 x	303,636	=		Vret =	**607,272**	**cf**

W 11 Determine Applicable BMPs and Associated Volume Credits

Proposed BMP	Area (sf)	Storage Volume (cf)	Ave Design Infiltration Rate (in/hr)	Infiltration Volume During Storm (cf)	Total Volume Reduction (cf)
Porous Pavement w/Infiltration					
Infiltration Bed					
Subsurface Infiltration Bed					
Infiltration Trench					
Rain Garden / Bioretention					
Dry Well					
Bioswale					
Vegetated Filter Strip					
Green Roof					

Total Volume Reduction Credit by Proposed Structural BMPs	0 cf
Runoff Volume Infiltration Requirement (Vinf)	69,359.46 cf
After Runoff Volume Credit =	0 cf

W 12 Natural Features Inventory

Existing Natural Resources	Mapped	Area (ac)	Protected Area (ac)
Waterbodies			
Floodplains			
Riparian Areas			
Wetlands	yes	0.15	0
Woodlands			
Natural Drainage Areas			
Steep Slopes, 15-25%			
Steep Slopes, >25%			
Special Habitat Areas			
Other			

W 13 Stormwater Management Summary

Total Required 100-yr Volume (Unadjusted)	=	382,444 cf
Total Infiltration Provided	=	0 cf
Total	=	382,444 cf
Penalty for Lack of Infiltration	=	x 1.20
Grand Total	=	458,933 cf

AVAILABLE STORAGE VOLUME

ELEV.	AREA(SF)	AVG AREA(SF)	DEPTH(FT)	VOL(CF)	TOTAL VOL(CF)
841	109,803				
		105,241	1.0	105,241	469,742
840	100,679				
		96,195	1.0	96,195	364,501
839	91,711				
		87,215	1.0	87,215	268,306
838	82,720				
		78,531	1.0	78,531	181,091
837	74,342				
		70,344	1.0	70,344	102,560
836	66,347				
		64,432	0.5	32,216	32,216
835.5	62,517				

Z:\Projects\18141\DWG\PRELIM SITE PLAN\18141 PBP STORMWATER.dwg, C-6.2-STORMWATER MANAGEMENT CALCULATIONS, 10/6/2020 1:21:10 PM, dsimpyar

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171 THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

STORMWATER MANAGEMENT CALCULATIONS
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK

DATE 9/23/20	SCALE	HOR: 1" = N/A VER: 1" = N/A	
DESIGNED BY SRB	JOB NO.	18141	
DRAWN BY SRB	SHEET	C-6.2	

© COPYRIGHT 2020

W1 Determining Post-Development Cover Types, Areas, Curve Numbers, and Runoff Coefficients

A. Total Site Area = 690,861.60 sf or 15.86 ac
Total Site Area Excluding "Self-Crediting" BMPs = 15.86 ac

B. Rational Method Variables:

Cover Type	Soil Type	Area (sf)	Area (ac)	Runoff Coefficient (c)	C x A
Lawn	D	527,035	12.10	0.50	6.05
Roof	D	60,000	1.38	0.95	1.31
Pavement	D	65,814	1.51	0.95	1.44
Pond	D	38,013	0.87	1.00	0.87
			-		-
			-		-
			-		-
		690,862	15.86		9.67
				Total - ∑(CN)(Area) =	9.67
				Area Total - ∑ac or ∑sf =	15.86
				Weighted C - ∑(C)(Area)/∑ac or ∑sf =	0.61

Weighted Runoff Coefficient C = 9.67 / 15.86 = **0.61**

C. NRCS Variables:

Pervious Cover Type	Soil Type	Area (ft²)	Area (ac)	Curve Number	(CN)(Area)
Lawn	D	527,035	12.10	80	967.92
			-		-
			-		-
			-		-
			-		-
			-		-
			-		-
		527,035	12.10		967.92
				Total - ∑(CN)(Area) =	967.92
				Area Total - ∑ac or ∑sf =	12.10
				Pervious Weighted CN - ∑(C)(Area)/∑ac or ∑sf =	80.00

Weighted Pervious Curve Number CN = 967.92 / 12.10 = **80**

Impervious Cover Type	Soil Type	Area (ft²)	Area (ac)	Curve Number	(CN)(Area)
Roof	D	60,000	1.38	98	134.99
Pavement	D	65,814	1.51	98	148.07
Pond	D	38,013	0.87	98	85.52
			-		-
			-		-
			-		-
			-		-
		163,827	3.76		368.57
				Total - ∑(CN)(Area) =	368.57
				Area Total - ∑ac or ∑sf =	3.76
				Impervious Weighted CN - ∑(C)(Area)/∑ac or ∑sf =	98.00

Weighted Impervious Curve Number CN = 368.57 / 3.76 = **98**

W2 Standard Method Runoff Volume Calculations

First Flush Runoff Calculations (V_{ff})

A. V_{ff} = (1")(1/12') x (43560ft²/1ac)x A x C= 43560/12 x 15.86 x 0.61 Vff = **35,088 cf**

W3 Pre-Development Bankfull Calculations

A. 2 year / 24 hour storm event: P = 2.35 in
B. Pre-Development Curve Number (CN): CN = 80
C. S = (1000 / CN) - 10 S = 2.50 in
D. Q = (P-0.2S)^2 / (P + 0.8S) Q = 0.787 in
E. Total Site Area (sf) excluding "Self Crediting BMPs Area = 690,862 sf
F. $V_{bf\text{-}pre}$ = Q x(1/12) x Area Vbf-pre = **45,296 cf**

W4 Pervious Cover Post-Development Bankfull Runoff Calculations

A. 2 year / 24 hour storm event: P = 2.35 in
B. Pre-Development Curve Number (CN): CN = 80
C. S = (1000 / CN) - 10 S = 2.50 in
D. Q = (P-0.2S)^2 / (P + 0.8S) Q = 0.79 in
E. Pervious Cover Area Area = 527,035 sf
F. $V_{bf\text{-}per\text{-}post}$ = Q x(1/12) x Area Vbf-per-post = **34,555 cf**

W5 Impervious Cover Post-Development Bankfull Runoff Calculations

A. 2 year / 24 hour storm event: P = 2.35 in
B. Pre-Development Curve Number (CN): CN = 98
C. S = (1000 / CN) - 10 S = 0.20 in
D. Q = (P-0.2S)^2 / (P + 0.8S) Q = 2.12 in
E. Impervious Cover Area Area = 163,827 sf
F. $V_{bf\text{-}imp\text{-}post}$ = Q x(1/12) x Area Vbf-imp-post = **28,966 cf**

W6 Pervious Cover Post-Development 100-Year Storm Runoff Calculations

A. 2 year / 24 hour storm event: P = 5.11 in
B. Pervious Cover Curve Number (CN): CN = 80
C. S = (1000 / CN) - 10 S = 2.50 in
D. Q100-per = (P-0.2S)^2 / (P + 0.8S) Q100-per = 2.99 in
E. Pervious Cover Area Area = 527,035 sf
F. $V_{100\text{-}per\text{-}post}$ = Q x(1/12) x Area V100-per-post = **131278 cf**

W7 Impervious Cover Post-Development 100-Year Storm Runoff Calculations

A. 2 year / 24 hour storm event: P = 5.11 in
B. Impervious Cover Curve Number (CN): CN = 98
C. S = (1000 / CN) - 10 S = 0.20 in
D. Q100-imp = (P-0.2S)^2 / (P + 0.8S) Q100-imp = 4.87 in
E. Impervious Cover CN Area Area = 163,827 sf
F. $V_{100\text{-}imp\text{-}post}$ = Q x(1/12) x Area V100-per-post = **66,527 cf**

W8 Determine Time of Concentration for Applicable Flow Type

Flow Type	K	Change in Elevation	Length (L)	Slope % (S)	S^0.5	V=K x S^0.5	Tc
Waterway	1.20	10.0	1490	0.67	0.82	0.98	0.42
							0.42

Total Time of Concentration Tc = **0.42 hrs**

W 9 Runnoff Summary & Onsite Infiltration Requirement

A. Runoff Summary:

First Flush Volume = Vff = **35,088 cf**
Predevelopment Bankfull Runoff Volume = Vbf-pre = 45,296 cf
Pervious Cover Postdevelopment Bankfull Volume = Vbf-per-post = 34,555 cf
Impervious Cover Postdevelopment Bankfull Volume = Vbf-imp-post = 28,966 cf
Total Bankfull Volume = 34,555 + 28,966 Vbf-post = **63,521 cf**
Pervious Cover Postdevelopment 100-Yr Volume = V100-per-post = 131,278 cf
Impervious Cover Postdevelopment 100-Yr Volume = V100-imp-post = 66,527 cf
Total 100-Yr Volume = 131,278 + 66,527 V100 = **197,805 cf**

B. Determine Onsite Infiltration Requirement:

Total Postdevelopment Bankfull Volume Vbf = 63,521 cf
Predevelopment Bankfull Runoff Volume Vbf-pre = 45,296 cf
Bankfull Volume Difference = 63,521 - 45,296 Vdif = **18,224 cf**

Greater of First Flush Volume and Bankfull Volume Difference Vinf = **35,088 cf**

W 10 Detention / Retention Requirement

Detention

A. Qp = 238.6 Tc^-0.82 = 238.6 x 0.42 ^-0.82 = Qp = 485.01 in-mi^2
B. Total Site Area (ac) Excluding Self-Crediting BMPs A = 15.86
C. Q100 = Q100-per + Q100-imp = 2.99 + 4.87 Q100 = 7.86 in
D. Peak Flow (PF) = (Qp x Q100 x Area) / 640 =
485.0069942 x x ## / 640 = PF = 94.49 cfs
E. Δ = PF (cfs) - 0.15 Area (ac) = -0.15 x 15.86 Δ = 92.12 cfs
F. Vdet = (Δ / PF) x V100 - Vinf = Vdet = **157,737 cf**

Retention

A. Vret = 2(V100) = 2 x 157,737 = Vret = **315,474 cf**

W 11 Determine Applicable BMPs and Associated Volume Credits

Proposed BMP	Area (sf)	Storage Volume (cf)	Ave Design Infiltration Rate (in/hr)	Infiltration Volume During Storm (cf)	Total Volume Reduction (cf)
Porous Pavement w/Infiltration					
Infiltration Bed					
Subsurface Infiltration Bed					
Infiltration Trench					
Rain Garden / Bioretention					
Dry Well					
Bioswale					
Vegetated Filter Strip					
Green Roof					

Total Volume Reduction Credit by Proposed Structural BMPs 0 cf
Runoff Volume Infiltration Requirement (Vinf) 35,087.82 cf
After Runoff Volume Credit = 0 cf

W 12 Natural Features Inventory

Existing Natural Resources	Mapped	Area (ac)	Protected Area (ac)
Waterbodies			
Floodplains			
Riparian Areas			
Wetlands	yes	0.55	0.55
Woodlands	no	9.52	9.52
Natural Drainage Areas			
Steep Slopes, 15-25%			
Steep Slopes, >25%			
Special Habitat Areas			
Other			

W 13 Stormwater Management Summary

Total Required 100-yr Volume (Unadjusted)	=	197,805 cf
Total Infiltration Provided	=	0 cf
Total	=	197,805 cf
Penalty for Lack of Infiltration	=	x 1.20
Grand Total	=	237,366 cf

AVAILABLE STORAGE VOLUME

ELEV.	AREA(SF)	AVG AREA(SF)	DEPTH(FT)	VOL(CF)	TOTAL VOL(CF)
838.5	65,847				
		62,676	1.0	62,676	256,146
837.5	59,505				
		56,583	1.0	56,583	193,470
836.5	53,661				
		50,898	1.0	50,898	136,887
835.5	48,135				
		45,525	1.0	45,525	85,989
834.5	42,916				
		40,464	1.0	40,464	40,464
833.5	38,013				

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171 THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

STORMWATER MANAGEMENT CALCULATIONS
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK:
DATE 9/23/20 SCALE HOR: 1" = N/A VER: 1" = N/A
DESIGNED BY SRB JOB NO. 18141
DRAWN BY SRB SHEET C-6.3

© COPYRIGHT 2020

Z:\Projects\18141\DWG\PRELIM SITE PLAN\18141 PSP STORMWATER.dwg, C-6.3 STORMWATER MANAGEMENT CALCULATIONS, 10/8/2020 1:23:17 PM, dlemboyer

W1 Determining Post-Development Cover Types, Areas, Curve Numbers, and Runoff Coefficients

A. Total Site Area = 895,593.60 sf or 20.56 ac

Total Site Area Excluding "Self-Crediting" BMPs = 20.56 ac

B. Rational Method Variables:

Cover Type	Soil Type	Area (sf)	Area (ac)	Runoff Coefficient (c)	C x A
Lawn	D	592,089	13.59	0.50	6.80
Roof	D	135,000	3.10	0.95	2.94
Pavement	D	96,437	2.21	0.95	2.10
Pond	D	72,068	1.65	1.00	1.65
			-		-
			-		-
			-		-
		895,594	20.56		13.50

Total - ∑(CN)(Area) = 13.50

Area Total - ∑ac or ∑sf = 20.56

Weighted C - ∑(C)(Area)/∑ac or ∑sf = 0.66

Weighted Runoff Coefficient C = 13.50 / 20.56 = **0.66**

C. NRCS Variables:

Pervious Cover Type	Soil Type	Area (ft²)	Area (ac)	Curve Number	(CN)(Area)
Lawn	D	592,089	13.59	80	1,087.40
			-		-
			-		-
			-		-
			-		-
			-		-
			-		-
		592,089	13.59		1,087.40

Total - ∑(CN)(Area) = 1,087.40

Area Total - ∑ac or ∑sf = 13.59

Pervious Weighted CN - ∑(C)(Area)/∑ac or ∑sf = 80.00

Weighted Pervious Curve Number CN = 1,087.40 / 13.59 = **80**

Impervious Cover Type	Soil Type	Area (ft²)	Area (ac)	Curve Number	(CN)(Area)
Roof	D	135	0.00	98	0.30
Pavement	D	96,437	2.21	98	216.96
Pond	D	72,068	1.65	98	162.14
			-		-
			-		-
			-		-
			-		-
		168,640	3.87		379.40

Total - ∑(CN)(Area) = 379.40

Area Total - ∑ac or ∑sf = 3.87

Impervious Weighted CN - ∑(C)(Area)/∑ac or ∑sf = 98.00

Weighted Impervious Curve Number CN = 379.40 / 3.87 = **98**

W2 Standard Method Runoff Volume Calculations

First Flush Runoff Calculations (V_{ff})

A. V_{ff} = (1")(1/12') x (43560ft²/1ac)x A x C= 43560/12 x 20.56 x 0.66 Vff = **48,998 cf**

W3 Pre-Development Bankfull Calculations

A. 2 year / 24 hour storm event: P = 2.35 in

B. Pre-Development Curve Number (CN): CN = 80

C. S = (1000 / CN) - 10 S = 2.50 in

D. Q = (P-0.2S)^2 / (P + 0.8S) Q = 0.787 in

E. Total Site Area (sf) excluding "Self Crediting BMPs Area = 895,594 sf

F. V_{bfpre} = Q x(1/12) x Area Vbf-pre = **58,720 cf**

W4 Pervious Cover Post-Development Bankfull Runoff Calculations

A. 2 year / 24 hour storm event: P = 2.35 in

B. Pre-Development Curve Number (CN): CN = 80

C. S = (1000 / CN) - 10 S = 2.50 in

D. Q = (P-0.2S)^2 / (P + 0.8S) Q = 0.79 in

E. Pervious Cover Area Area = 592,089 sf

F. $V_{bfpervpost}$ = Q x(1/12) x Area Vbf-per-post = **38,820 cf**

W5 Impervious Cover Post-Development Bankfull Runoff Calculations

A. 2 year / 24 hour storm event: P = 2.35 in

B. Pre-Development Curve Number (CN): CN = 98

C. S = (1000 / CN) - 10 S = 0.20 in

D. Q = (P-0.2S)^2 / (P + 0.8S) Q = 2.12 in

E. Impervious Cover Area Area = 168,640 sf

F. $V_{bfimp\text{-}post}$ = Q x(1/12) x Area Vbf-imp-post = **29,817 cf**

W6 Pervious Cover Post-Development 100-Year Storm Runoff Calculations

A. 2 year / 24 hour storm event: P = 5.11 in

B. Pervious Cover Curve Number (CN): CN = 80

C. S = (1000 / CN) - 10 S = 2.50 in

D. Q100-per = (P-0.2S)^2 / (P + 0.8S) Q100-per = 2.99 in

E. Pervious Cover Area Area = 592,089 sf

F. $V_{100\text{-}perpost}$ = Q x(1/12) x Area V100-per-post = **147482 cf**

W7 Impervious Cover Post-Development 100-Year Storm Runoff Calculations

A. 2 year / 24 hour storm event: P = 5.11 in

B. Impervious Cover Curve Number (CN): CN = 98

C. S = (1000 / CN) - 10 S = 0.20 in

D. Q100-imp = (P-0.2S)^2 / (P + 0.8S) Q100-imp = 4.87 in

E. Impervious Cover CN Area Area = 168,640 sf

F. $V_{100\text{-}imp\text{-}post}$ = Q x(1/12) x Area V100-per-post = **68,482 cf**

W 8 Determine Time of Concentration for Applicable Flow Type

Row Type	K	Change in Elevation	Length (L)	Slope % (S)	S^0.5	V=K x S^0.5	Tc
Waterway	1.20	14.5	1300	1.10	1.05	1.26	0.29
							0.29

Total Time of Concentration Tc = **0.29 hrs**

W 9 Runnoff Summary & Onsite Infiltration Requirement

A. Runoff Summary:

First Flush Volume = Vff = **48,998 cf**

Predevelopment Bankfull Runoff Volume = Vbf-pre = 58,720 cf

Pervious Cover Postdevelopment Bankfull Volume = Vbf-per-post = 38,820 cf

Impervious Cover Postdevelopment Bankfull Volume = Vbf-imp-post = 53,662 cf

Total Bankfull Volume = 38,820 + 53,662 Vbf-post = **92,482 cf**

Pervious Cover Postdevelopment 100-Yr Volume = V100-per-post = 147,482 cf

Impervious Cover Postdevelopment 100-Yr Volume = V100-imp-post = 123,248 cf

Total 100-Yr Volume = 147,482 + 123,248 V100 = **270,730 cf**

B. Determine Onsite Infiltration Requirement:

Total Postdevelopment Bankfull Volume Vbf = 92,482 cf

Predevelopment Bankfull Runoff Volume Vbf-pre = 58,720 cf

Bankfull Volume Difference = 92,482 - 58,720 Vdif = **33,762 cf**

Greater of First Flush Volume and Bankfull Volume Difference Vinf = **48,998 cf**

W 10 Detention / Retention Requirement

Detention

A. Qp = 238.6 Tc^-0.82 = 238.6 x 0.29 ^-0.82 = Qp = 655.57 in-mi^2

B. Total Site Area (ac) Excluding Self-Crediting BMPs A = 20.56

C. Q100 = Q100-per + Q100-imp = 2.99 + 4.87 Q100 = 7.86 in

D. Peak Flow (PF) = (Qp x Q100 x Area) / 640 =

655.574503 x x ## / 640 =

PF = 165.58 cfs

E. Δ = PF (cfs) - 0.15 Area (ac) = -0.15 x 20.56 Δ = 162.49 cfs

F. Vdet = (Δ / PF) x V100 - Vinf = Vdet = **216,689 cf**

Retention

A. Vret = 2(V100) = 2 x 216,689 = Vret = **433,379 cf**

W 11 Determine Applicable BMPs and Associated Volume Credits

Proposed BMP	Area (sf)	Storage Volume (cf)	Ave Design Infiltration Rate (in/hr)	Infiltration Volume During Storm (cf)	Total Volume Reduction (cf)
Porous Pavement w/Infiltration					
Infiltration Bed					
Subsurface Infiltration Bed					
Infiltration Trench					
Rain Garden / Bioretention					
Dry Well					
Bioswale					
Vegetated Filter Strip					
Green Roof					

Total Volume Reduction Credit by Proposed Structural BMPs 0 cf

Runoff Volume Infiltration Requirement (Vinf) 48,998.14 cf

After Runoff Volume Credit = 0 cf

W 12 Natural Features Inventory

Existing Natural Resources	Mapped	Area (ac)	Protected Area (ac)
Waterbodies			
Floodplains			
Riparian Areas			
Wetlands			
Woodlands			
Natural Drainage Areas			
Steep Slopes, 15-25%			
Steep Slopes, >25%			
Special Habitat Areas			
Other			

W 13 Stormwater Management Summary

Total Required 100-yr Volume (Unadjusted)	=	270,730 cf
Total Infiltration Provided	=	0 cf
Total	=	270,730 cf
Penalty for Lack of Infiltration	=	x 1.20
Grand Total	=	324,876 cf

AVAILABLE STORAGE VOLUME

ELEV.	AREA(SF)	AVG. AREA(SF)	DEPTH(FT)	VOL(CF)	TOTAL VOL(CF)
840.5	76,005				
		73,239	1.0	73,239	337,569
839.5	70,473				
		67,785	1.0	67,785	264,330
838.5	65,098				
		62,489	1.0	62,489	196,545
837.5	59,880				
		57,343	1.0	57,343	134,056
836.5	54,807				
		52,355	1.0	52,355	76,713
835.5	49,904				
		48,716	0.5	24,358	24,358
835.0	47,528				

REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
SPA	10/1/20										

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM, INC. 1-800-482-7171 — THREE FULL WORKING DAYS BEFORE YOU DIG. CALL THE MISS DIG SYSTEM

PROJECT SPONSOR:
IVANHOE COMPANIES
6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 248.626.6114

STORMWATER MANAGEMENT CALCULATIONS
GEDDES VISTA
PITTSFIELD TOWNSHIP, MI

FIELD BOOK:

DATE 9/23/20 | SCALE HOR: 1" = N/A VER: 1" = N/A
DESIGNED BY SRB | JOB NO. 18141
DRAWN BY SRB | SHEET C-6.4

© COPYRIGHT 2020

Z:\Projects\18141\DWG\PRELIM SITE PLAN\18141 PSP STORMWATER.dwg, C-6.4 STORMWATER MANAGEMENT CALCULATIONS, 10/8/2020 1:24:06 PM, dlemboyer