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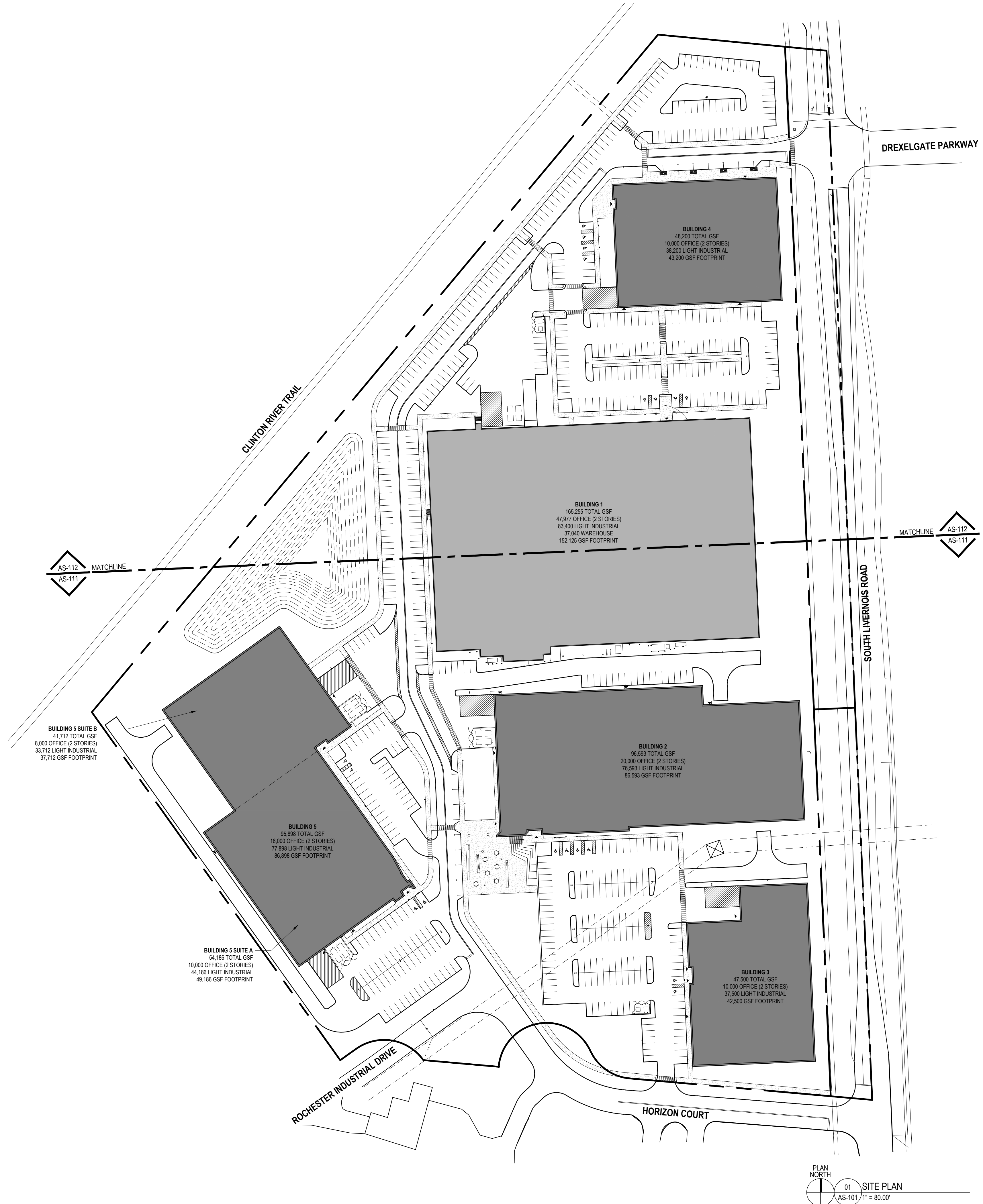
SITE SUMMARY

SITE:	PARCEL ID NO: 70-15-21-276-013	
ADDRESS	1400 SOUTH LIVERNOIS ROAD ROCHESTER HILLS, MICHIGAN 48307	
SITE AREA:	1,056,767 SF (24.26 ACRES)	
	REQUIRED	PROVIDED
SITE COVERAGE:	N/A	411,740 SF (39.0%)
IMPERVIOUS AREA:	N/A	365,378 SF (34.6%)
OPEN AREA:	N/A	279,649 SF (26.4%)
ZONING	REC - W	REC - W
MAX BUILDING HEIGHT	42 FEET	42 FEET (AT HIGHEST DIMENSION)
SETBACKS		
FRONT	10 FEET *	20 FEET (AT LEAST DIMENSION)
SIDE	25 FEET	30 FEET (AT LEAST DIMENSION)
REAR	35 FEET	76 FEET (AT LEAST DIMENSION)
	* SETBACKS LESS THAN 30 FEET SHALL PROVIDE SIDEWALKS ACROSS THE ENTIRE STREET FRONTAGE	
PROPOSED USES	REC-W	
PROFESSIONAL OFFICES	PERMITTED USE	
WAREHOUSING	PERMITTED USE	
RESEARCH AND DEVELOPMENT	PERMITTED USE	
ASSEMBLY & MACHINING (ADJUNCT TO R + D)	PERMITTED USE	
MANUFACTURING - NO RAW MATERIALS	PERMITTED USE	

	USE			TOTAL GSF
	OFFICE	LIGHT INDUSTRIAL	WAREHOUSE	
BUILDING 01	47,977 SF	83,400 SF	37,040 SF	168,417 SF
BUILDING 02	20,000 SF	76,593 SF		96,593 SF
BUILDING 03	10,000 SF	37,500 SF		47,500 SF
BUILDING 04	10,000 SF	38,200 SF		48,200 SF
BUILDING 05	18,000 SF	77,898 SF		95,898 SF
TOTALS	105,977 SF	313,591 SF	37,040 SF	456,608 SF
PARKING REQUIREMENTS				
ORDINANCE RATIO	1 SPACE / 350 SF	1 SPACE / 500 SF	1 SPACE / 1,700 SF	
REQUIRED	303 SPACES	627 SPACES	22 SPACES	952 SPACES
PROPOSED RATIO (65%)	1 SPACE / 535 SF	1 SPACE / 765 SF	1 SPACE / 2,615 SF	
PROPOSED REQUIRED	198 SPACES	410 SPACES	14 SPACES	622 SPACES
PROPOSED PARKING				
PROPOSED 10' PARKING STALLS			107 SPACES	17.2%
PROPOSED 9' PARKING STALLS			497 SPACES	79.9%
ACCESSIBLE SPACES	5 MIN + 2% OF TOTAL SPACES =		18 SPACES	2.9%
TOTAL PROPOSED PARKING			622 SPACES	

SITE NOTES

- ANY AND ALL PROPOSED SIGNAGE MUST MEET THE REQUIREMENTS OF CHAPTER 134 OF THE CITY CODE OF ORDINANCES AND BE APPROVED UNDER A SEPARATE PERMIT TO BE ISSUED BY THE BUILDING DEPARTMENT.



PLAN NORTH
01 SITE PLAN
AS-101 1" = 80.00'

248.449.3564
www.informstudio.com
253 E. W. SUITE 102B
NORTHVILLE, MI 48167

INFORM
HENNESSEY
ENGINEERS

PROJECT
**ROCHESTER HILLS
RESEARCH PARK**
DEREK GENTILE
1400 SOUTH LIVERNOIS
ROCHESTER HILLS, MI 48307

SHEET TITLE
**OVERALL
ARCHITECTURAL
SITE PLAN**

ISSUANCE
DATE
DRAWN
CHECKED
CONSULTANT

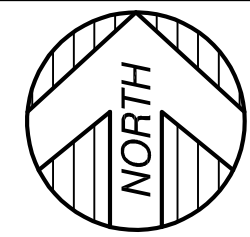
SITE PLAN REVIEW RESPONSE #03
07/23/2021
EK
EK

SITE PLAN REVIEW RESPONSE #01
04/23/2021
EK
EK

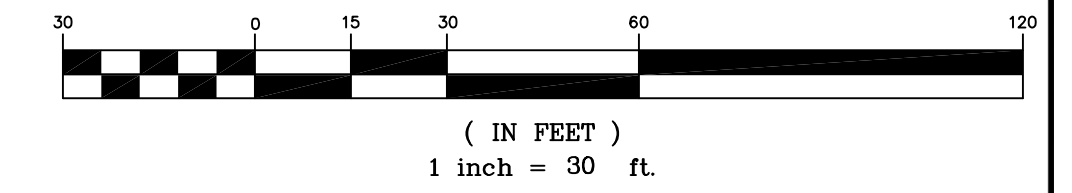
PROJECT NO. 2814.00

SHEET NO. **AS-101**

TOPOGRAPHIC SURVEY

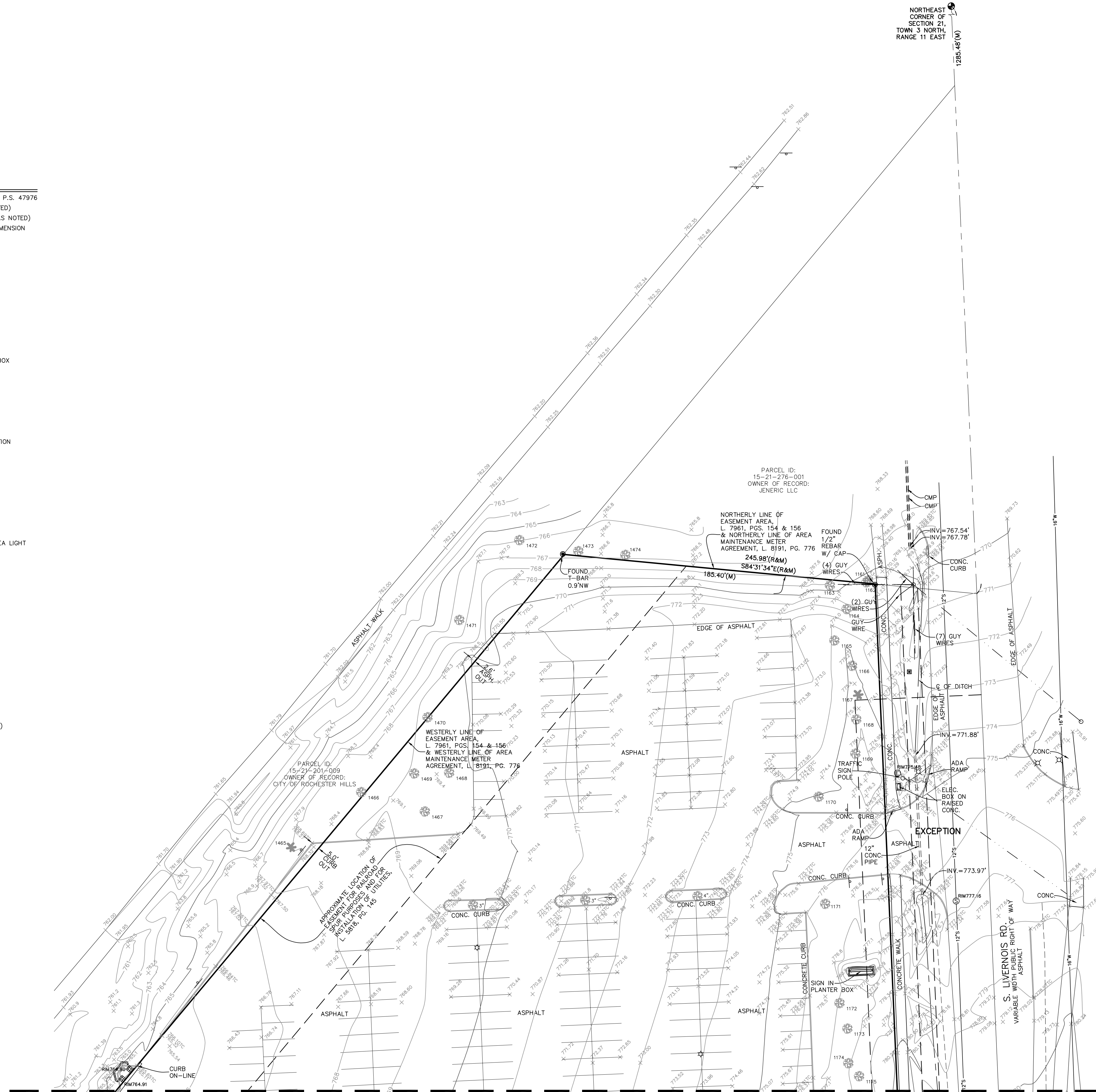


GRAPHIC SCALE



LEGEND

●	SET 1/2" REBAR WITH CAP P.S. 47976
○	FOUND MONUMENT (AS NOTED)
○	FOUND SECTION CORNER (AS NOTED)
(R&M)	RECORD AND MEASURED DIMENSION
(R)	RECORD DIMENSION
(M)	MEASURED DIMENSION
⊕	ELECTRIC MANHOLE
⊕	ELECTRIC PANEL
⊕	ELECTRIC RISER
⊕	TRANSFORMER
⊕	UTILITY POLE
⊕	GAS METER
⊕	GAS VALVE
⊕	TELEPHONE MANHOLE
⊕	CABLE TV RISER
⊕	TRAFFIC SIGNAL
⊕	TRAFFIC SIGNAL CONTROL BOX
⊕	CLEANOUT
⊕	SANITARY MANHOLE
⊕	ROUND CATCH BASIN
⊕	SQUARE CATCH BASIN
⊕	DRAIN
⊕	STORM DRAIN MANHOLE
⊕	FIRE HYDRANT
⊕	FIRE DEPARTMENT CONNECTION
⊕	POST INDICATOR VALVE
⊕	WATER GATE MANHOLE
⊕	WATER VALVE
⊕	WELL
⊕	AIR CONDITIONING UNIT
⊕	BOLLARD
⊕	FLAGPOLE
⊕	WOOD POST
⊕	FLOOD LIGHT
⊕	LIGHTPOST/LAMP POST/AREA LIGHT
⊕	SINGLE POST SIGN
⊕	HANDICAP PARKING
⊕	DECIDUOUS TREE
⊕	CONIFEROUS TREE
---	PARCEL BOUNDARY LINE
---	PLATTED LOT LINE
---	ADJOINER PARCEL LINE
---	SECTION LINE
---	EASEMENT (AS NOTED)
---	EASEMENT CENTERLINE
---	RIGHT-OF-WAY
---	BUILDING
---	BUILDING OVERHANG
---	CENTERLINE DITCH
---	ASPHALT CURB
---	CONCRETE CURB
---	PARKING
---	EDGE OF CONCRETE (CONC.)
---	EDGE OF ASPHALT (ASPH.)
---	EDGE OF GRAVEL
---	FENCE (AS NOTED)
---	WALL (AS NOTED)
---	OVERHEAD UTILITY LINE
---	SANITARY LINE
---	STORM LINE
---	WATER LINE
---	CONTOUR MAJOR
---	CONTOUR MINOR
---	UNDERGROUND PIPE
---	MATCH LINE
---	BUILDING HATCH

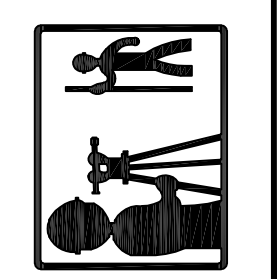


SEE SHEET 3

REVISION	DATE	BY	DESCRIPTION
#5	07-03-19	MRI	ADDED PROPOSED WATER MAIN EASEMENT
#4	06-12-19	JV	RECEIVED TITLE WORK
#3	05-20-19	JV	REVISED PROPERTY DESCRIPTION
#2	09-17-18	JDM	REVISED TREE SCHEDULE
#1	08-17-18	JDM	ADDED GAS LINES

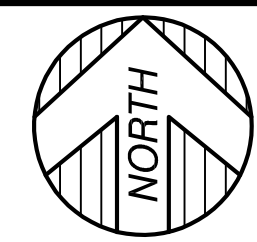
EEL GLOBAL
1400 SOUTH LIVERNOIS ROAD
SECTION 21, TOWN 3 NORTH, RANGE 11 EAST
CITY OF ROCHESTER HILLS, STATE OF MICHIGAN

KEM-TEC & ASSOCIATES
PROFESSIONAL SURVEYING & ENGINEERING
22556 GRATIOT AVE. • EASTPOINTE, MICHIGAN 48021
(586)775-2222 • (800)295-7222 • FAX (586)775-4048

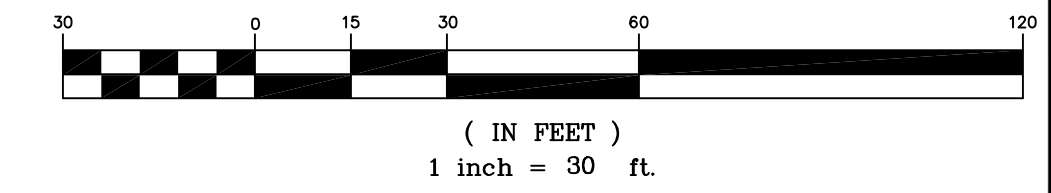


DRAWN BY:	JDM	05/09/18
CHECKED BY:	ATS	05/09/18
DATE:	MARCH 09, 2018	
PROJECT NO.:	18-01235	SCALE: 1" = 30'

TOPOGRAPHIC SURVEY



GRAPHIC SCALE



LEGEND

●	SET 1/2" REBAR WITH CAP P.S. 47976
○	FOUND MONUMENT (AS NOTED)
○	FOUND SECTION CORNER (AS NOTED)
(R&M)	RECORD AND MEASURED DIMENSION
(R)	RECORD DIMENSION
(M)	MEASURED DIMENSION
⊕	ELECTRIC MANHOLE
⊞	ELECTRIC PANEL
⊠	ELECTRIC RISER
⊡	TRANSFORMER
⊢	UTILITY POLE
⊣	GAS METER
⊤	GAS VALVE
⊥	TELEPHONE MANHOLE
⊦	CABLE TV RISER
⊧	TRAFFIC SIGNAL
⊨	TRAFFIC SIGNAL CONTROL BOX
⊩	CLEANOUT
⊪	SANITARY MANHOLE
⊫	ROUND CATCH BASIN
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⊭	DRAIN
⊮	STORM DRAIN MANHOLE
⊯	FIRE HYDRANT
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⊳	WATER VALVE
⊴	WELL
⊵	AIR CONDITIONING UNIT
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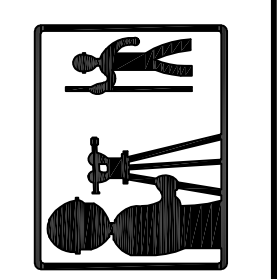
SEE SHEET 3

SEE SHEET 5

REVISION	DATE	BY	DESCRIPTION
#5	07-03-19	JVM	ADDED PROPOSED WATER MAIN EASEMENT
#4	06-12-19	JVM	RECEIVED TITLE WORK
#3	05-20-19	JVM	REVISED PROPERTY DESCRIPTION
#2	09-17-18	JDM	REVISED TREE SCHEDULE
#1	08-17-18	JDM	ADDED GAS LINES

EEL GLOBAL
1400 SOUTH LIVERNOIS ROAD
SECTION 21, TOWN 3 NORTH, RANGE 11 EAST
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DRAWN BY:	JDM	05/09/18
CHECKED BY:	ATS	05/09/18
DATE:	MARCH 09, 2018	
PRODUCT NO.:	18-01235	SCALE: 1" = 30'

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STAMPS

PROJECT: **ROCHESTER HILLS RESEARCH PARK**
 CLIENT: **DEREK GENTILE**
 ADDRESS: **1400 SOUTH LIVERNOIS, ROCHESTER HILLS, MI 48307**

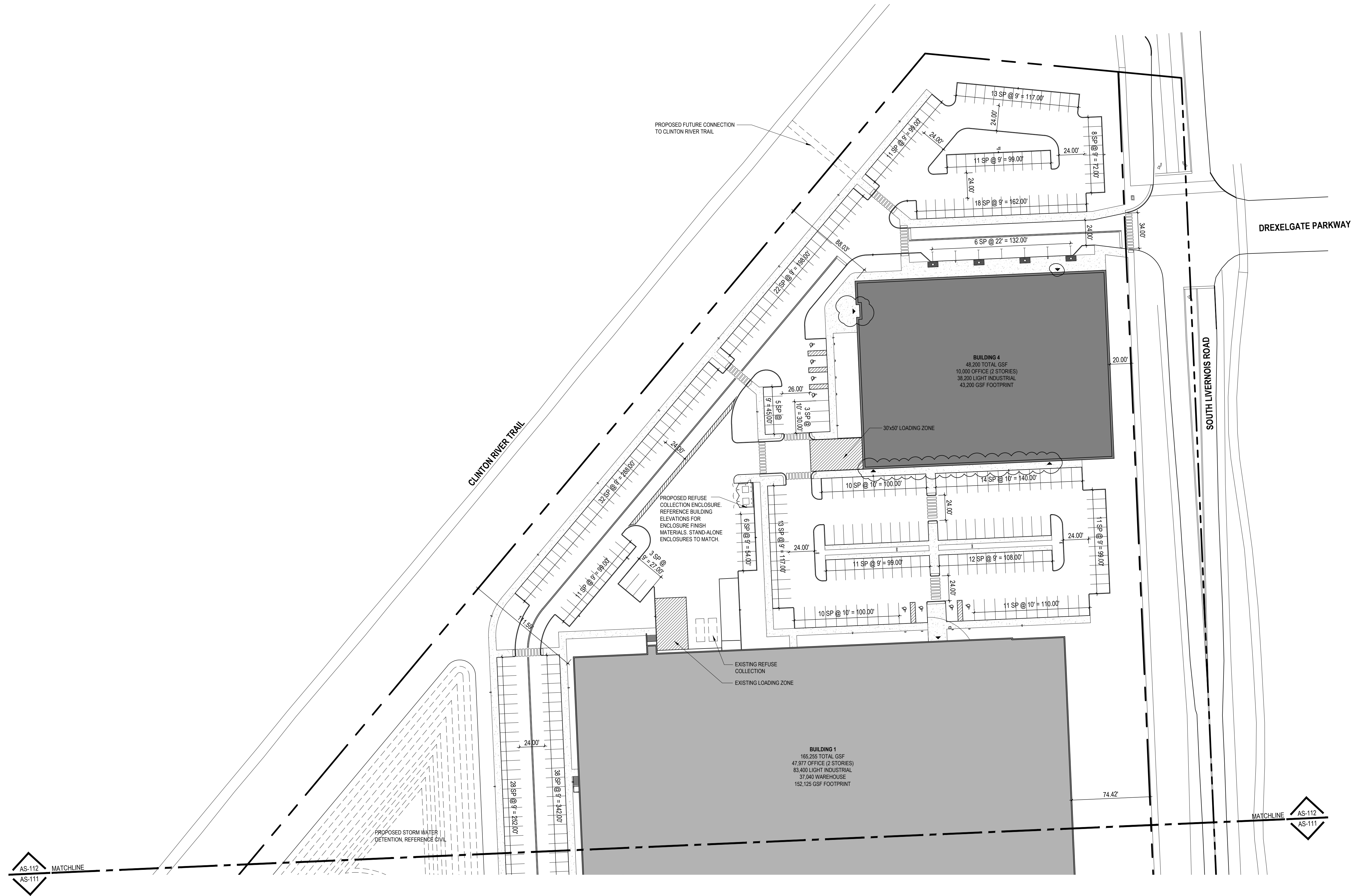
ISSUANCE

DATE	DRAWN	CHECKED	CONSULTANT
04.23.2021	EK	EK	
07.22.2021	EK	EK	

SHEET TITLE
ARCHITECTURAL SITE PLAN

PROJECT NO. 2814.00
SHEET NO. AS-111

HENNESSEY ENGINEERS
 www.informstudio.com
 255 E. WILSON AVE., SUITE 102B
 NORTHVILLE, MI 48867
 248.449.3564



AS-112
AS-111
MATCHLINE

MATCHLINE
AS-112
AS-111

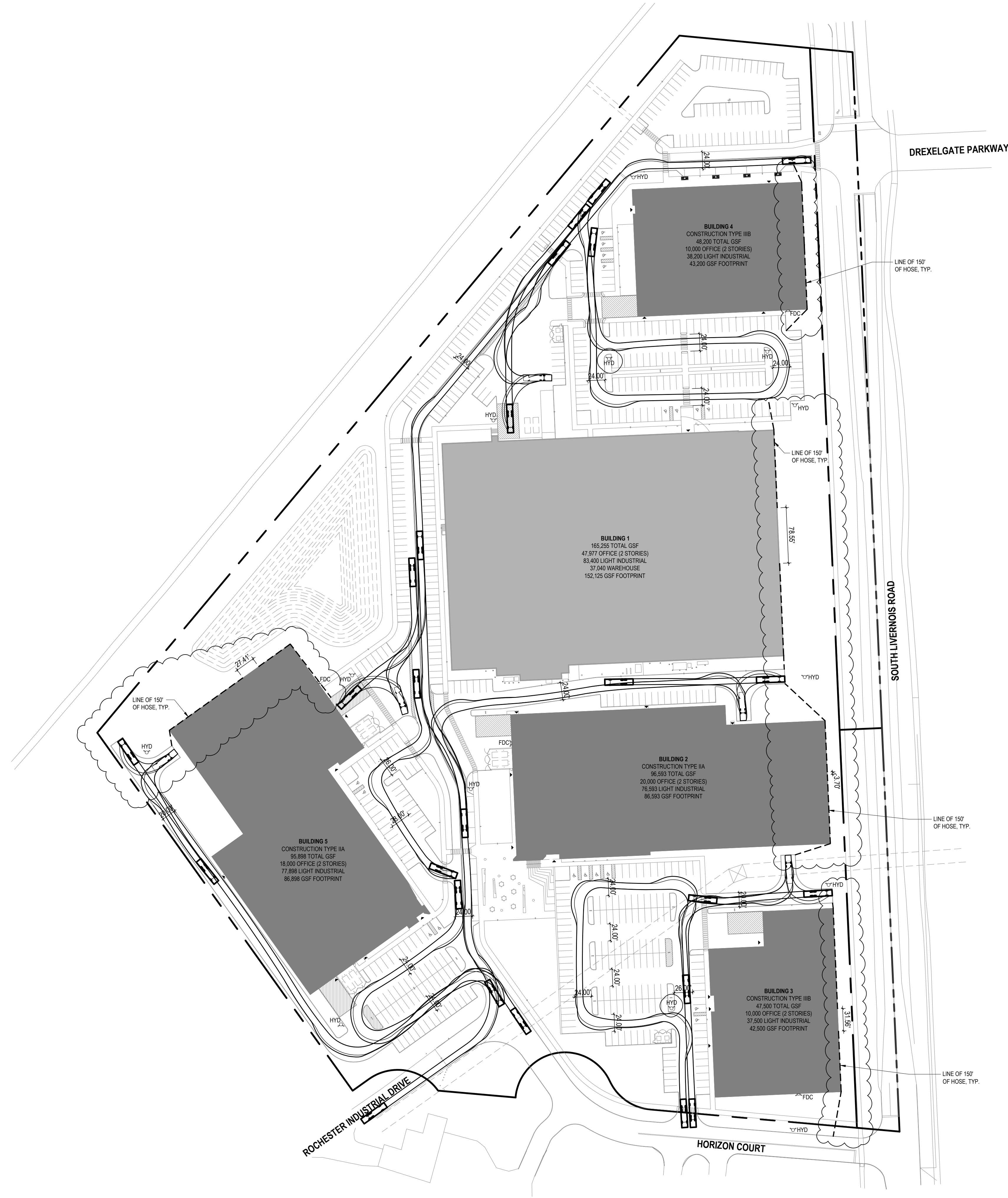
PLAN NORTH
01 ENLARGED SITE PLAN
AS-112 1" = 50.00'

ISSUANCE	DATE	DRAWN	CHECKED	CONSULTANT
SITE PLAN REVIEW RESPONSE #01	04.23.2021	EK	EK	
SITE PLAN REVIEW RESPONSE #02	07.23.2021	EK	EK	

PROJECT
ROCHESTER HILLS
RESEARCH PARK
DEREK GENTILE
1400 SOUTH LIVERNOIS
ROCHESTER HILLS, MI 48307

SHEET TITLE
ENLARGED
ARCHITECTURAL
SITE PLAN

STAMPS
PROJECT NO. 2814.00
SHEET NO. AS-112



- FIRE PROTECTION NOTES**
1. A KNOX KEY SYSTEM SHALL BE INSTALLED, IN A LOCATION APPROVED BY THE FIRE CODE OFFICIAL. ORDERING INFORMATION IS AVAILABLE FROM THE KNOX COMPANY AT KNOXBOX.COM
 2. FIRE LANES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL, AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH FIRE LANE SIGNS SPACED NOT MORE THAN 100 FEET APART. FIRE LANE SIGNS SHALL READ "NO STOPPING, STANDING, PARKING, FIRE LANE", AND SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
 3. CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH FC 2006 CHAPTER 14.
 4. OPEN BURNING IS NOT PERMITTED INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING MATERIALS. OPEN BURNING FOR WARMING OF SAND AND/OR WATER FOR THE PREPARATION OF MORTAR SHALL BE WITHIN THE CITY OF ROCHESTER HILLS BURN PERMIT GUIDELINES.
 5. PROVIDE A "NO PARKING FIRE DEPARTMENT CONNECTION" SIGN OVER THE FIRE DEPARTMENT CONNECTION.

ISSUANCE	DATE	DRAWN	CHECKED	CONSULTANT
SITE PLAN REVIEW RESPONSE #01	04.23.2021	EK	EK	EK
SITE PLAN REVIEW RESPONSE #02	07.22.2021	EK	EK	EK

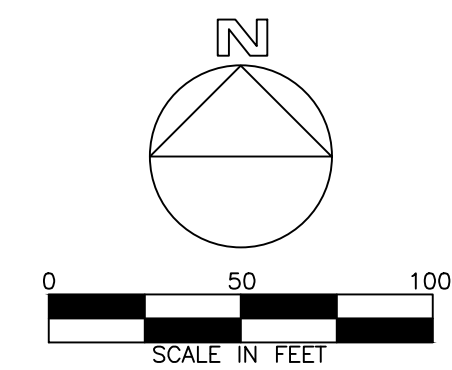
PROJECT
 ROCHESTER HILLS
 RESEARCH PARK
 DEREK GENTILE
 1400 SOUTH LIVERNOS
 ROCHESTER HILLS, MI 48307

SHEET TITLE
 OVERALL FIRE
 PROTECTION PLAN

STAMPS
 PROJECT NO. 2814.00
 SHEET NO. AS-120

PLAN NORTH
 01 FIRE PROTECTION PLAN
 AS-101 1" = 80.00'

- GRADING NOTES:**
1. ALL WORKMANSHIP AND MATERIAL SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ROCHESTER HILLS AND M.D.O.T.
 2. IN AREAS WHERE NEW PAVEMENTS ARE BEING CONSTRUCTED, THE TOPSOIL AND SOIL CONTAINING ORGANIC MATTER SHALL BE REMOVED PRIOR TO PAVEMENT CONSTRUCTION.
 3. ON-SITE FILL CAN BE USED IF THE SPECIFIED COMPACTION REQUIREMENTS CAN BE ACHIEVED. IF ON-SITE SOIL IS USED, IT SHOULD BE CLEAN AND FREE OF FROZEN SOIL, ORGANICS, OR OTHER DELETERIOUS MATERIAL.
 4. THE FINAL SUBGRADE/EXISTING AGGREGATE BASE SHOULD BE THOROUGHLY PROOFROLLED USING A FULLY LOADED TANDEM AXLE TRUCK OR FRONT END LOADER UNDER THE OBSERVATION OF A GEOTECHNICAL/PAVEMENT ENGINEER. LOOSE OR YIELDING AREAS THAT CANNOT BE MECHANICALLY STABILIZED SHOULD BE REINFORCED USING GEOGRID OR REMOVED AND REPLACED WITH ENGINEERED FILL OR AS DICTATED BY FIELD CONDITIONS.
 5. SUBGRADE UNDERCUTTING, INCLUDING BACKFILLING SHALL BE PERFORMED TO REPLACE MATERIALS SUSCEPTIBLE TO FROST HEAVING AND UNSTABLE SOIL CONDITIONS, ANY EXCAVATIONS THAT MAY BE REQUIRED BELOW THE TOPSOIL IN FILL SECTIONS OR BELOW SUBGRADE IN CUT SECTIONS, WILL BE CLASSIFIED AS SUBGRADE UNDERCUTTING.
 6. BACKFILL UNDER PAVED AREAS SHALL BE AS SPECIFIED ON DETAILS.
 7. ANY SUBGRADE WATERING REQUIRED TO ACHIEVE DESIRED DENSITY SHALL BE CONSIDERED INCIDENTAL TO THE JOB.
 8. FINAL PAVEMENT ELEVATIONS SHOULD BE SO DESIGNED TO PROVIDE POSITIVE SURFACE DRAINAGE. A MINIMUM SURFACE SLOPE OF 1.0 PERCENT IS RECOMMENDED.
 9. CONSTRUCTION TRAFFIC SHOULD BE MINIMIZED ON THE NEW PAVEMENT. IF CONSTRUCTION TRAFFIC IS ANTICIPATED ON THE PAVEMENT STRUCTURE, THE INITIAL LIFT THICKNESS COULD BE INCREASED AND PLACEMENT OF THE FINAL LIFT COULD BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. THIS ACTION WILL ALLOW REPAIR OF LOCALIZED FAILURE, IF ANY DOES OCCUR, AS WELL AS REDUCE LOAD DAMAGE ON THE PAVEMENT SYSTEM.
 10. ALL IMPERVIOUS SURFACES WITHIN 10' OF THE BUILDING FOUNDATIONS ARE TO SLOPE AWAY AT 2.0%.
 11. SPOT ELEVATION INDICATE TOP OF PAVEMENT UNLESS OTHERWISE INDICATED:
 TC = PROPOSED TOP OF CURB
 G = PROPOSED GUTTER



HENNESSEY ENGINEERS NOTES:

HENNESSEY ENGINEERS, INC., SHALL NOT BE RESPONSIBLE FOR MEANS, METHODS, PROCEDURES, TECHNIQUES, OR SEQUENCES OF CONSTRUCTION, NOR FOR SAFETY ON THE JOB SITE, NOR SHALL HENNESSEY ENGINEERS, INC., BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

THE CONTRACTOR SHALL IDENTIFY AND SAVE HARMLESS THE OWNER AND ENGINEER FROM ALL LIABILITIES FOR INJURY TO PERSON, OR DAMAGE TO OR LOSS OF PROPERTY, OR ANY OTHER LOSS, COST OF EXPENSE, AS A RESULT OF THE ACTIONS OF THE CONTRACTOR, HIS EMPLOYEES, AGENTS, OR SUBCONTRACTORS.

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 THE 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 PLAN.

ALL FILL IN EXCESS OF TWO FEET (2') SHALL BE ENGINEERED FILL AND SHALL BE COMPACTED TO 95% MAXIMUM DENSITY UNLESS OTHERWISE DIRECTED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DENSITY TESTING.

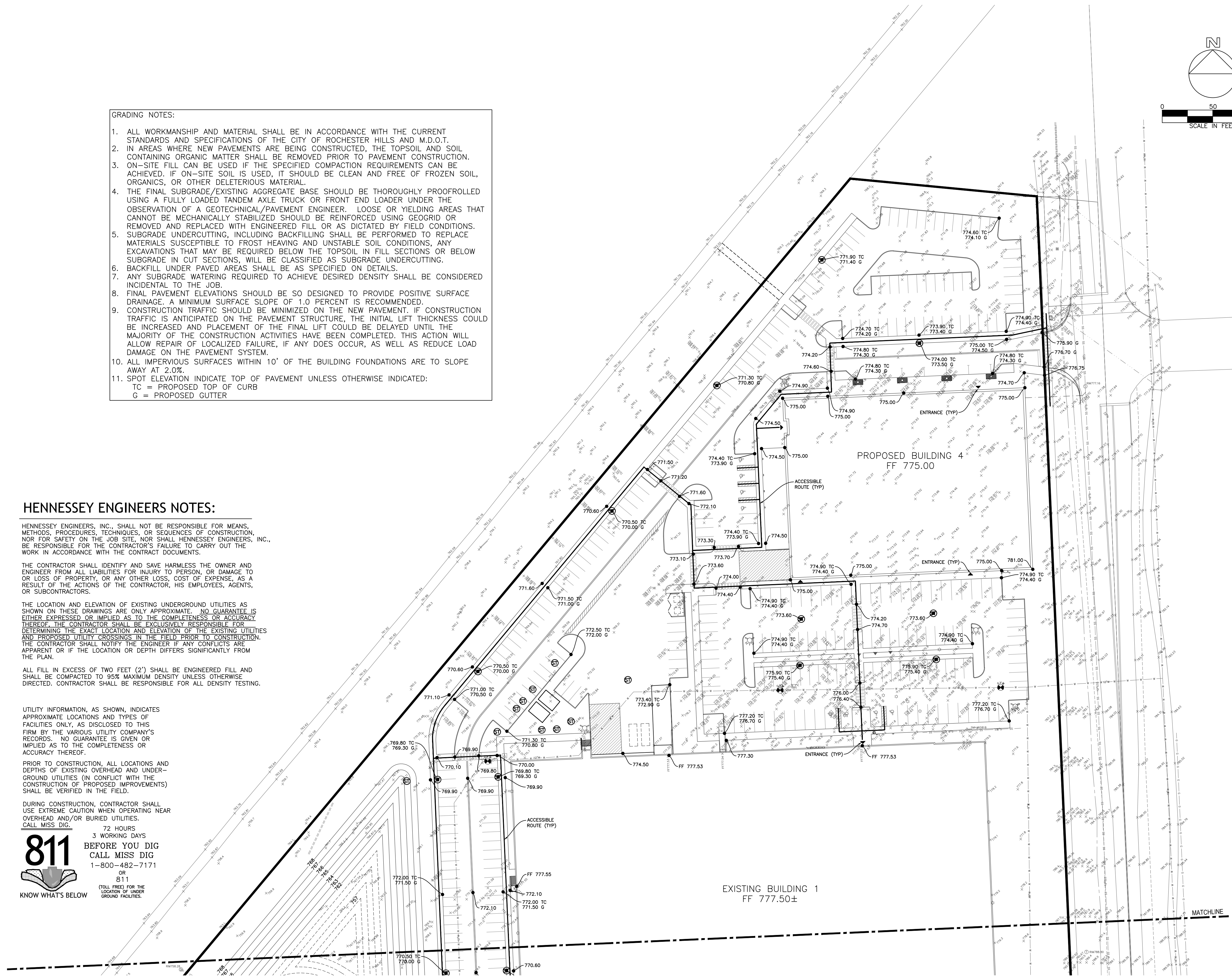
UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF FACILITIES ONLY, AS DISCLOSED TO THIS FIRM BY THE VARIOUS UTILITY COMPANY'S RECORDS. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

PRIOR TO CONSTRUCTION, ALL LOCATIONS AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD.

DURING CONSTRUCTION, CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR OVERHEAD AND/OR BURIED UTILITIES.

CALL MISS DIG.
 72 HOURS
 3 WORKING DAYS
811 BEFORE YOU DIG
 CALL MISS DIG
 1-800-482-7171

OR
 811 (TOLL FREE) FOR THE LOCATION OF UNDERGROUND FACILITIES.
 KNOW WHAT'S BELOW



248.449.3554
 www.in-formstudio.com
 235 E MAIN STREET
 SUITE 102B
 NORTHVILLE, MI 48167

INFORM
 ENGINEERS

ISSUANCE DATE DRAWN CHECKED CONSULTANT
 SITE PLAN REVIEW RESPONSE #01 04.23.2021 NY NY
 SITE PLAN REVIEW RESPONSE #02 07.22.2021 NY NY

PROJECT
 ROCHESTER HILLS
 RESEARCH PARK
 DEREK GENTILE
 1400 SOUTH LIVERNOIS
 ROCHESTER HILLS, MI 48307

SHEET TITLE
 GRADING PLAN
 (NORTH)

STAMPS
 PROJECT NO. 2814.00

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PROJECT: ROCHESTER HILLS RESEARCH PARK
 DEREK GENTILE
 1400 SOUTH LIVERNOS
 ROCHESTER HILLS, MI 48307

SHEET TITLE: GRADING PLAN (SOUTH)
 SHEET NO: 21

STAMPS: PROJECT NO. 2814.00
 CITY FILE # 18-021.2
 SECTION # 21

ISSUANCE: DATE DRAWN CHECKED CONSULTANT
 SITE PLAN REVIEW RESPONSE #01 04.23.2021 NY NY
 SITE PLAN REVIEW RESPONSE #02 07.22.2021 NY NY

HENNESSEY ENGINEERS
 www.h-i-formstudio.com
 248.449.3654
 235 E MAIN STREET
 SUITE 102B
 NORTHVILLE, MI 48167

INFORM

UTILITY NOTES:

1. ALL WORKMANSHIP AND MATERIAL SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ROCHESTER HILLS AND M.D.O.T.
2. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED BY THE CITY OF ROCHESTER HILLS AND HELD PRIOR TO THE START OF CONSTRUCTION.
3. CONTRACTOR MUST CONTACT MISS DIG (811) AT LEAST THREE WORKING DAYS PRIOR TO THE START OF CONSTRUCTION FOR UNDERGROUND UTILITY LOCATIONS. ALL UTILITIES SHALL BE STAKED BEFORE CONSTRUCTION BEGINS.
4. ALL WATER MAIN EASEMENTS SHALL BE PROVIDED PRIOR TO CONSTRUCTION AND ACCEPTANCE OF THE WATER DISTRIBUTION SYSTEM.
5. WATER MAINS SHALL BE CONSTRUCTED WITH A MINIMUM COVER OF 6 FEET BELOW FINISHED GRADE, INCLUDING OPEN DRAINAGE COURSES.
6. ALL TRENCHES UNDER OR WITHIN A 1:1 RATIO OF EXISTING OR PROPOSED PAVEMENT OR DRIVEWAYS, SHALL BE BACKFILLED WITH COMPACTED CLASS II SAND TO GRADE (95% MAXIMUM UNIT DENSITY).
7. WHERE TWO UTILITIES CROSS, PROVIDE CLASS II BACKFILL MATERIAL IN SIX (6) INCH COMPACTED LAYERS TO TOP HIGHEST UTILITY.
8. WHERE WATER MAINS DIP UNDER OTHER UTILITIES, THE SECTIONS WHICH ARE DEEPER THAN NORMAL SHALL BE CONSTRUCTED WITH 11-1/4" VERTICAL BENDS, 22-1/2" OR 45" BENDS MUST BE RODDED AND PROPERLY ANCHORED.
9. ALL PRECAST CONCRETE GATE WELL SECTIONS SHALL BE IN ACCORDANCE WITH A.S.T.M. C478, STANDARD SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS. WALL THICKNESS SHALL BE AS SHOWN ON THESE DETAILS. ALL JOINTS FOR PRECAST CONCRETE GATE WELL SECTIONS SHALL BE "MODIFIED GROOVE TONGUE" WITH GASKET MANUFACTURED TO CONFORM WITH A.S.T.M. C443, STANDARD SPECIFICATION FOR JOINTS FOR CIRCULAR CONCRETE SEWER AND CULVERT PIPE USING RUBBER GASKETS.
10. CONTRACTOR SHALL INSTALL VALVES, TAPPING SLEEVES, AND GATE WELL STRUCTURES IN STRICT COMPLIANCE WITH MEASUREMENTS PROVIDED ON DETAIL SHEET (2'-0" BETWEEN GATE WELL WELL AND CENTERLINE OF OPERATING NUT) TO ALLOW PROPER OPERATION OF VALVE THROUGH GATE WELL OPENING.
11. ALL CROSS-CONNECTION CONTROL DEVICES SHALL BE INSTALLED AS REQUIRED BY THE ROCHESTER HILLS PLUMBING INSPECTOR AND IN ACCORDANCE WITH THE STANDARDS OF THE OAKLAND COUNTY DRAIN COMMISSIONER OPERATION AND MAINTENANCE DIVISION AND THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY (EGLE), DIVISION OF DRINKING WATER AND RADIOLOGICAL PROTECTION.
12. ALL WATER SERVICE CONNECTIONS TWO (2) INCHES AND SMALLER SHALL BE MADE BY THE CITY OF ROCHESTER HILLS DEPARTMENT OF PUBLIC SERVICES AFTER WATER MAIN ACCEPTANCE AND APPLICABLE PERMITS ARE OBTAINED.
13. ALL FITTING AND BENDS SHOULD BE BLOCKED IN ACCORDANCE WITH THRUST BLOCK DETAILS, UNLESS ALTERNATE THRUST RESTRAINT SYSTEM, AS INDICATED PLANS AND SPECIFICATIONS, IS APPROVED BY THE CITY OF ROCHESTER HILLS DEPARTMENT OF PUBLIC SERVICES.

NOTE:
ALL PROPOSED WATER MAIN SHALL BE
12" DUCTILE IRON CL54 UNLESS OTHERWISE NOTED

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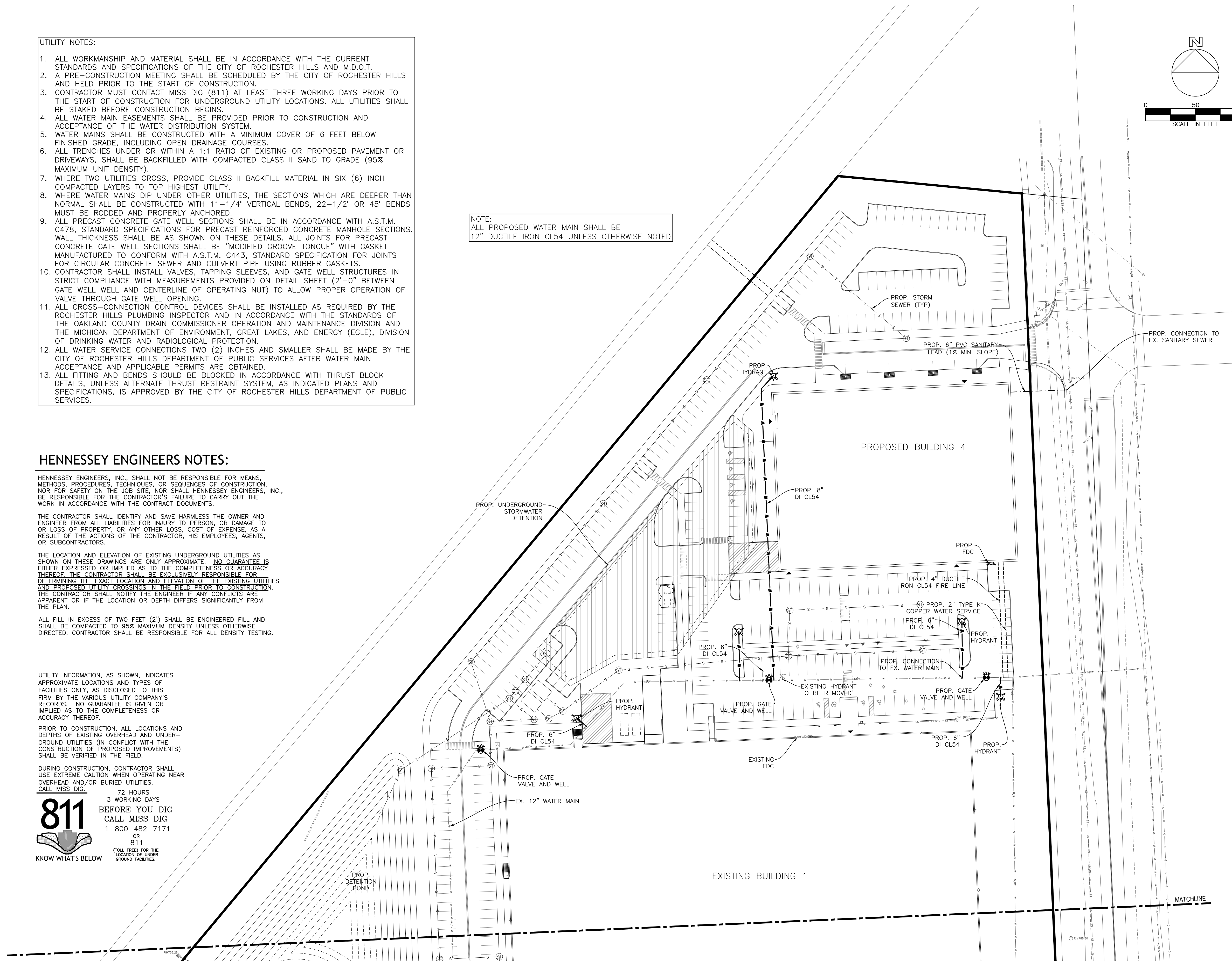
ALL FILL IN EXCESS OF TWO FEET (2') SHALL BE ENGINEERED FILL AND SHALL BE COMPACTED TO 95% MAXIMUM DENSITY UNLESS OTHERWISE DIRECTED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DENSITY TESTING.

UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF FACILITIES ONLY, AS DISCLOSED TO THIS FIRM BY THE VARIOUS UTILITY COMPANY'S RECORDS. NO GUARANTEE IS GIVEN OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.

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811 BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
OR
811
(TOLL FREE) FOR THE LOCATION OF UNDERGROUND FACILITIES.
KNOW WHAT'S BELOW



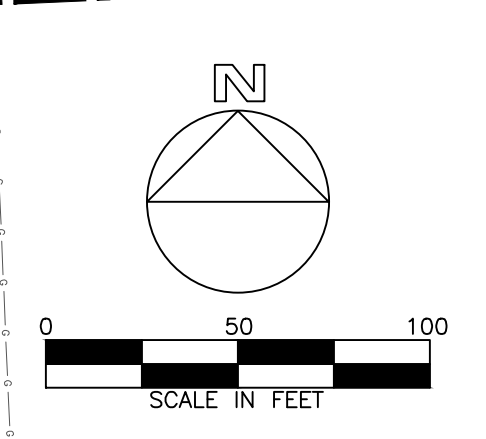
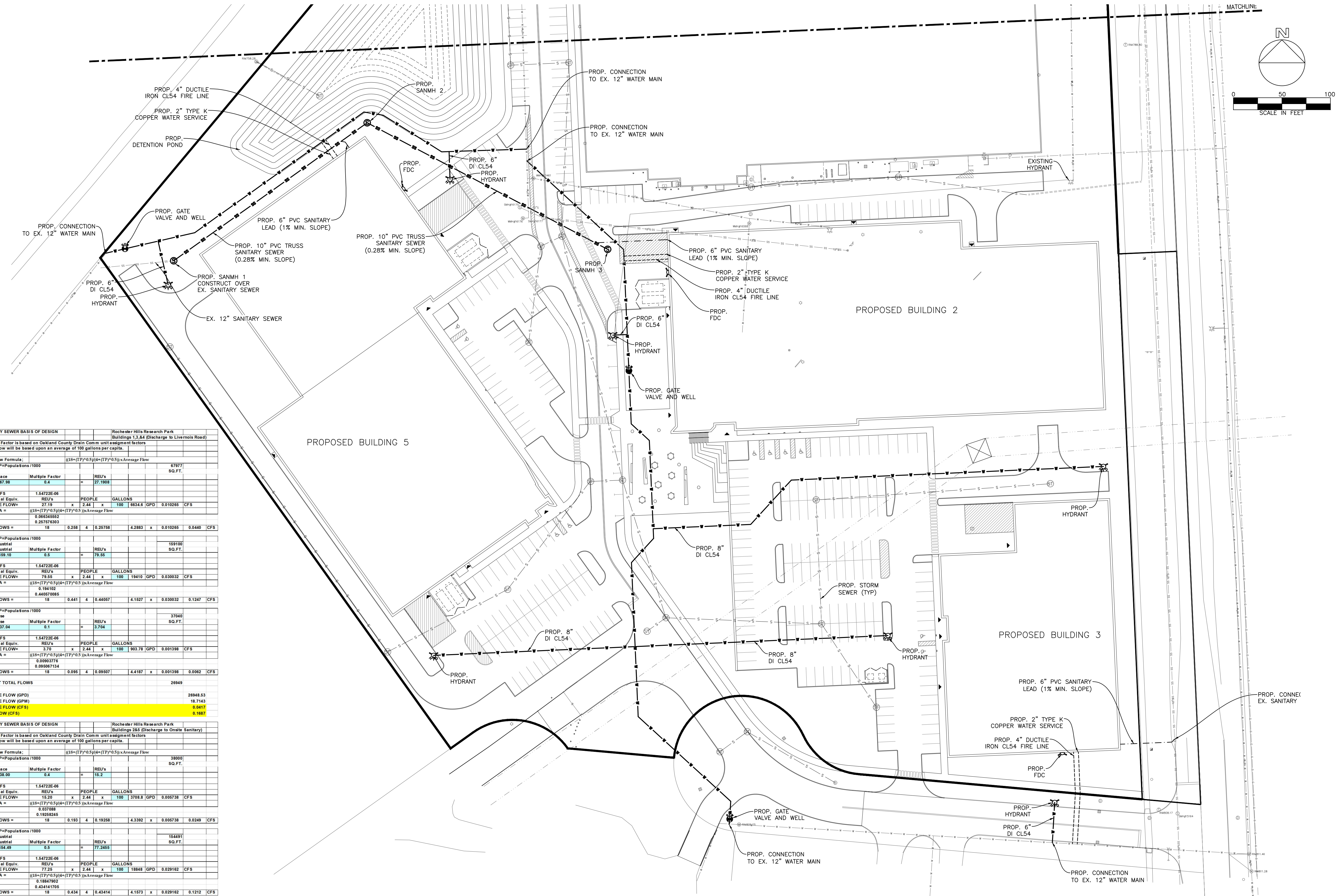
ISSUANCE	DATE	DRAWN	CHECKED	CONSULTANT
SITE PLAN REVIEW RESPONSE #01	04.23.2021	NY	NY	
SITE PLAN REVIEW RESPONSE #02	07.22.2021	NY	NY	

PROJECT
**ROCHESTER HILLS
RESEARCH PARK**
DEREK GENTILE
1400 SOUTH LIVERNOS
ROCHESTER HILLS, MI 48307

SHEET TITLE
**UTILITY PLAN
(NORTH)**

STAMPS
PROJECT NO. 2814.00

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SANITARY SEWER BASIS OF DESIGN		Rochester Hills Research Park Buildings 1,3,4 (Discharge to Livernois Road)	
Multiple Factor is based on Oakland County Drain Comm unit assignment factors Design flow will be based upon an average of 100 gallons per capita.			
Peak Flow Formula: $(1.4 \times (TP)^{0.75})^{1.48} \times (\text{Average Flow})$			
Where TP=Populations/1000		RELU	6797
Office	Multiple Factor		SO.FT.
67.98	0.4	=	27,190.8
GPD to CFS	1.54722E-06	PEOPLE	GALLONS
Residential Equiv.	RELU		
AVERAGE FLOW	27.19	x 2.41	x 100 = 6534.6 GPD 0.10326 CFS
FORMULA =	$(1.4 \times (TP)^{0.75})^{1.48} \times (\text{Average Flow})$		
TP =	0.06634582		
TP*0.5 =	0.03317291		
PEAK FLOWS =	18	0.258	4
		0.25788	4.2883
			x 0.010265
			0.0440 CFS
Where TP=Populations/1000		RELU	15910
Light Industrial	Multiple Factor		SO.FT.
159.10	0.5	=	79.55
GPD to CFS	1.54722E-06	PEOPLE	GALLONS
Residential Equiv.	RELU		
AVERAGE FLOW	79.55	x 2.41	x 100 = 19410 GPD 0.33032 CFS
FORMULA =	$(1.4 \times (TP)^{0.75})^{1.48} \times (\text{Average Flow})$		
TP =	0.194102		
TP*0.5 =	0.097051		
PEAK FLOWS =	18	0.441	4
		0.44027	4.1327
			x 0.030032
			0.1247 CFS
Where TP=Populations/1000		RELU	37045
Warehouse	Multiple Factor		SO.FT.
37.04	0.1	=	3.704
GPD to CFS	1.54722E-06	PEOPLE	GALLONS
Residential Equiv.	RELU		
AVERAGE FLOW	3.70	x 2.41	x 100 = 903.78 GPD 0.00139 CFS
FORMULA =	$(1.4 \times (TP)^{0.75})^{1.48} \times (\text{Average Flow})$		
TP =	0.0093776		
TP*0.5 =	0.0046888		
PEAK FLOWS =	18	0.095	4
		0.09527	4.4187
			x 0.001398
			0.0062 CFS
PROJECT TOTAL FLOWS			26449
AVERAGE FLOW (GPD)			26448.53
AVERAGE FLOW (GPM)			18.7143
AVERAGE FLOW (CFS)			0.0417
PEAK FLOW (CFS)			0.1487

SANITARY SEWER BASIS OF DESIGN		Rochester Hills Research Park Building 2&5 (Discharge to Onsite Sanitary)	
Multiple Factor is based on Oakland County Drain Comm unit assignment factors Design flow will be based upon an average of 100 gallons per capita.			
Peak Flow Formula: $(1.4 \times (TP)^{0.75})^{1.48} \times (\text{Average Flow})$			
Where TP=Populations/1000		RELU	38005
Office	Multiple Factor		SO.FT.
38.00	0.4	=	15.2
GPD to CFS	1.54722E-06	PEOPLE	GALLONS
Residential Equiv.	RELU		
AVERAGE FLOW	15.20	x 2.41	x 100 = 3708.8 GPD 0.005738 CFS
FORMULA =	$(1.4 \times (TP)^{0.75})^{1.48} \times (\text{Average Flow})$		
TP =	0.037088		
TP*0.5 =	0.018544		
PEAK FLOWS =	18	0.193	4
		0.19258	4.3392
			x 0.005738
			0.0249 CFS
Where TP=Populations/1000		RELU	154891
Light Industrial	Multiple Factor		SO.FT.
154.89	0.5	=	77.2455
GPD to CFS	1.54722E-06	PEOPLE	GALLONS
Residential Equiv.	RELU		
AVERAGE FLOW	77.25	x 2.41	x 100 = 18848 GPD 0.029162 CFS
FORMULA =	$(1.4 \times (TP)^{0.75})^{1.48} \times (\text{Average Flow})$		
TP =	0.1884762		
TP*0.5 =	0.0942381		
PEAK FLOWS =	18	0.434	4
		0.43414	4.1073
			x 0.029162
			0.1212 CFS
Where TP=Populations/1000		RELU	0
Warehouse	Multiple Factor		SO.FT.
0.00	0.1	=	0
GPD to CFS	1.54722E-06	PEOPLE	GALLONS
Residential Equiv.	RELU		
AVERAGE FLOW	0.00	x 2.41	x 100 = 0 GPD 0.000000 CFS
FORMULA =	$(1.4 \times (TP)^{0.75})^{1.48} \times (\text{Average Flow})$		
TP =	0		
TP*0.5 =	0		
PEAK FLOWS =	18	0	4
		0	4.5
			x 0.000000
			0.0000 CFS
PROJECT TOTAL FLOWS			22657
AVERAGE FLOW (GPD)			22656.70
AVERAGE FLOW (GPM)			16.4644
AVERAGE FLOW (CFS)			0.0349
PEAK FLOW (CFS)			0.1487

CAPACITY OF 10" PVC @0.28% SLOPE IS 1.51 CFS.

ISSUANCE	DATE	DRAWN	CHECKED	CONSULTANT
SITE PLAN REVIEW RESPONSE #01	04.23.2021	NY		NY
SITE PLAN REVIEW RESPONSE #02	07.22.2021	NY		NY

PROJECT
**ROCHESTER HILLS
 RESEARCH PARK**
 DEREK GENTILE
 1400 SOUTH LIVERNOS
 ROCHESTER HILLS, MI 48307

SHEET TITLE
**UTILITY PLAN
 (SOUTH)**

STAMPS
 PROJECT NO. 2814.00
 SHEET NO.

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DETENTION CALCULATION

VOLUME CALCULATION:
 25 YEAR STORM (BASED ON ROCHESTER HILLS STORMWATER STANDARDS):
 AREA OF SITE (A) = 1,056,768 SF = 24.26 ACRES
 $Q_a = 24.26 \times 0.20 = 4.85$ CFS
 $C_{imperv} = 0.95$ $C_{grass} = 0.30$ $C_{water} = 1.00$
 WEIGHTED VALUE $C_{imperv} = (778,702 \text{ SF}) \times (0.95) = 739,767$ SF
 WEIGHTED VALUE $C_{perv} = (266,301 \text{ SF}) \times (0.30) = 79,890$ SF
 WEIGHTED VALUE $C_{water} = (11,765 \text{ SF}) \times (1.00) = 11,765$ SF

$Cave = (739,767 \text{ SF} + 79,890 \text{ SF} + 11,765 \text{ SF}) / (1,056,768 \text{ SF}) = 0.79$
 $Q_o = (4.85 \text{ CFS}) / (24.26 \times 0.79) = 0.253$
 $T_{25} = -25 + \text{SqRt}(8,062.5 / Q_o) = 153.51$ MIN.
 $V_s = ((12,900 \times T_{25}) / (T_{25} + 25)) - (40 \times Q_o \times T_{25}) = 9,540$ CF
 $V_t = V_s \times A \times 0.79 = 182,838$ CF

REQUIRED TOTAL STORAGE VOLUME = 182,838 CF

DETAILS OF DETENTION BASIN:
 HIGH WATER ELEVATION: 767.00
 AREA AT HIGH WATER: 35,729 SF
 LOW WATER ELEVATION: 762.00
 AREA AT LOW WATER: 11,765 SF
 DEPTH OF THE BASIN: 5 LF
 VOLUME: $((35,729 + 11,765) / 2) \times 5 = 118,735$ CF

DETAILS OF PIPE STORAGE:
 PROPOSED PIPE SIZE = 5' DIA. = 60"
 PIPE AREA = 19.63 SF
 PROVIDED LENGTH OF PIPE = 3,300 LF
 PIPE VOLUME = $(19.63 \text{ SF}) \times (3,300 \text{ LF}) = 64,779$ CF
 BOTTOM OF 4' PIPE IN UNDERGROUND BASIN = 762.00

TOTAL PROVIDED DETENTION VOLUME = 183,514 CF

DETAILS OF PIPE RESTRICTOR:
 $Q_a = 4.85$ CFS
 USE 8" DIAMETER OUTLET PIPE
 $Z_{out} = 762.67$
 $H_{max} = 4.33$ FT
 $A_{out} = Q_a / ((0.62 \times \text{SqRt}(2 \times g \times H_{max})) = 4.85 / ((0.62 \times \text{SqRt}(2 \times 32.2 \times 4.33)) = 0.468$ CFS
 $D_{out} = 0.386$ FT = 4.63 INCH.
 SO USE AN 8" DIAMETER OUTLET PIPE WITH 4.5" RESTRICTOR

PRETREATMENT CALCULATIONS:
 $I = 72 / (T + 25) = 72 / (153.51 + 25) = 1.8$ IN/HR
 $Q = CIA = (0.79)(1.8)(24.26) = 34.5$ CFS
 2 UNITS WILL BE REQUIRED WITH A RATING OF AT LEAST 17.25 CFS
 USE TWO VORTECHS MODEL 16000 OR UNIT WITH EQUIVALENT FLOW CAPACITIES.

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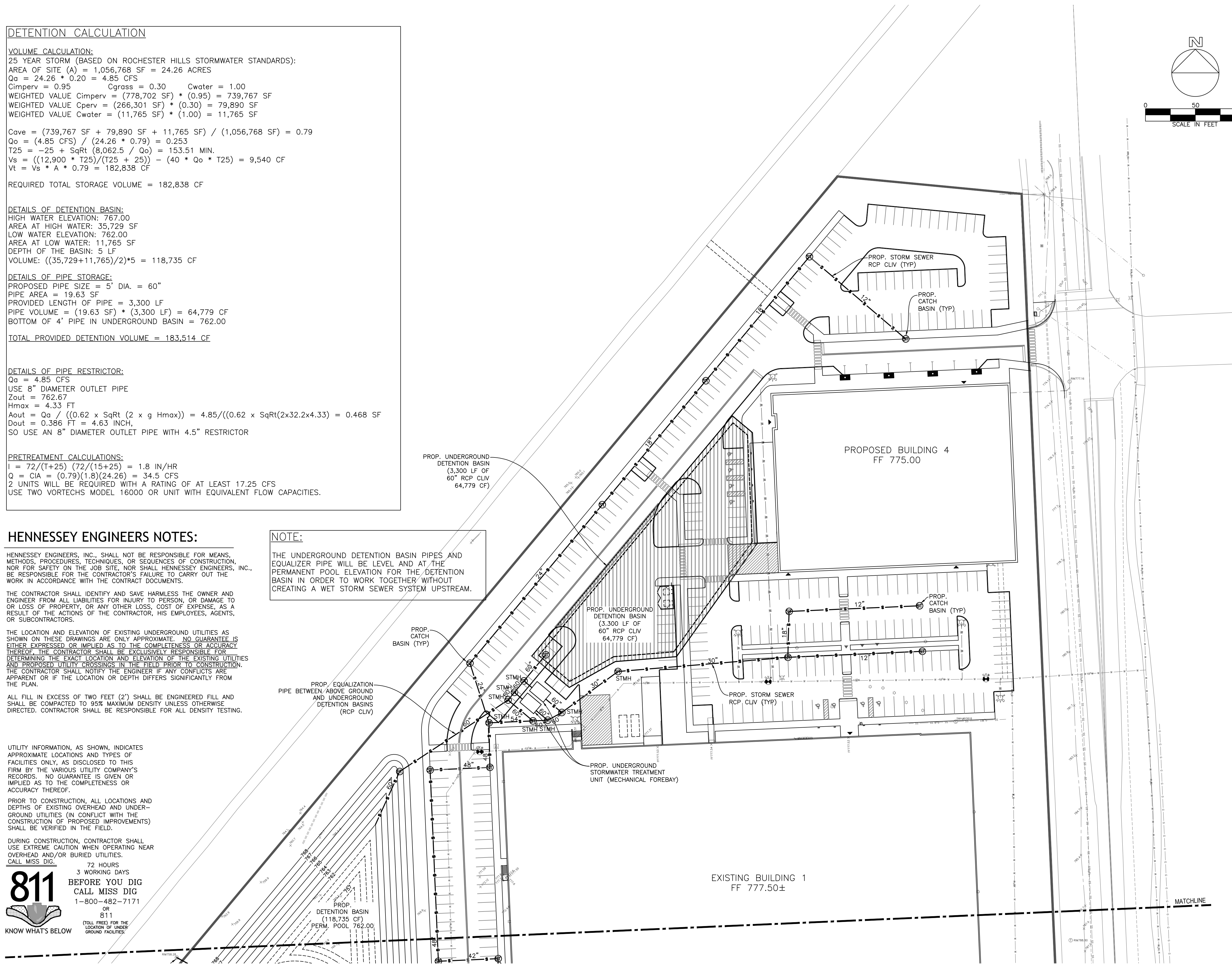
CALL MISS DIG.
 72 HOURS
 3 WORKING DAYS
BEFORE YOU DIG
 CALL MISS DIG
 1-800-482-7171

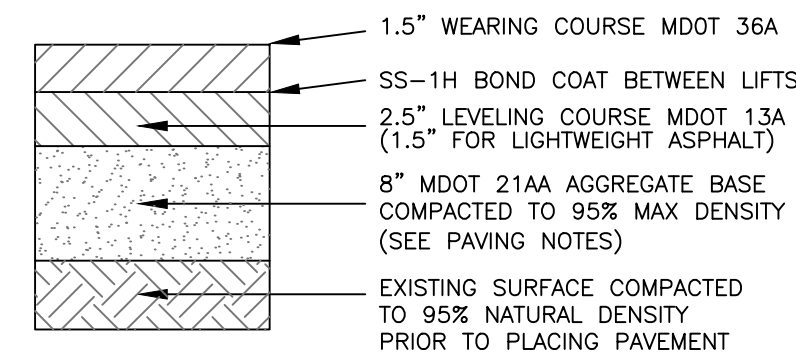
OR
811
 KNOW WHAT'S BELOW

TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

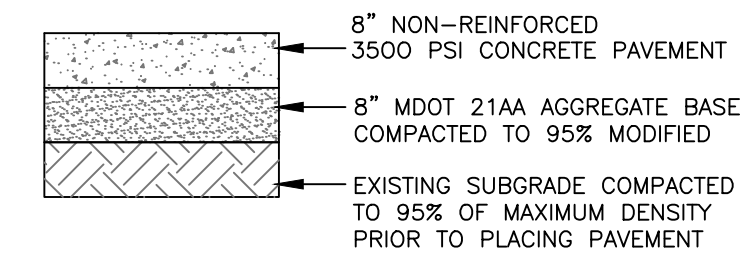
NOTE:

THE UNDERGROUND DETENTION BASIN PIPES AND EQUALIZER PIPE WILL BE LEVEL AND AT THE PERMANENT POOL ELEVATION FOR THE DETENTION BASIN IN ORDER TO WORK TOGETHER WITHOUT CREATING A WET STORM SEWER SYSTEM UPSTREAM.

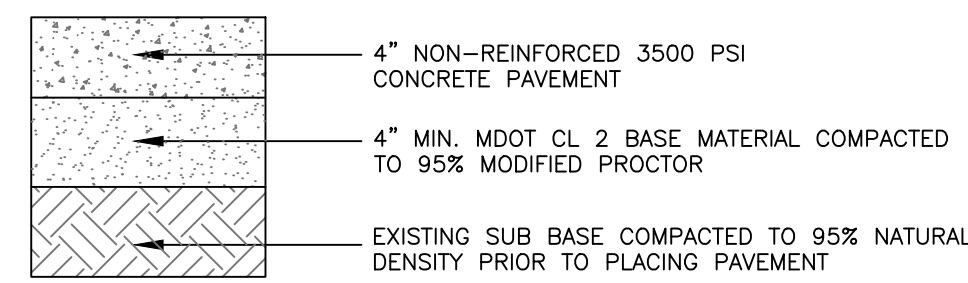




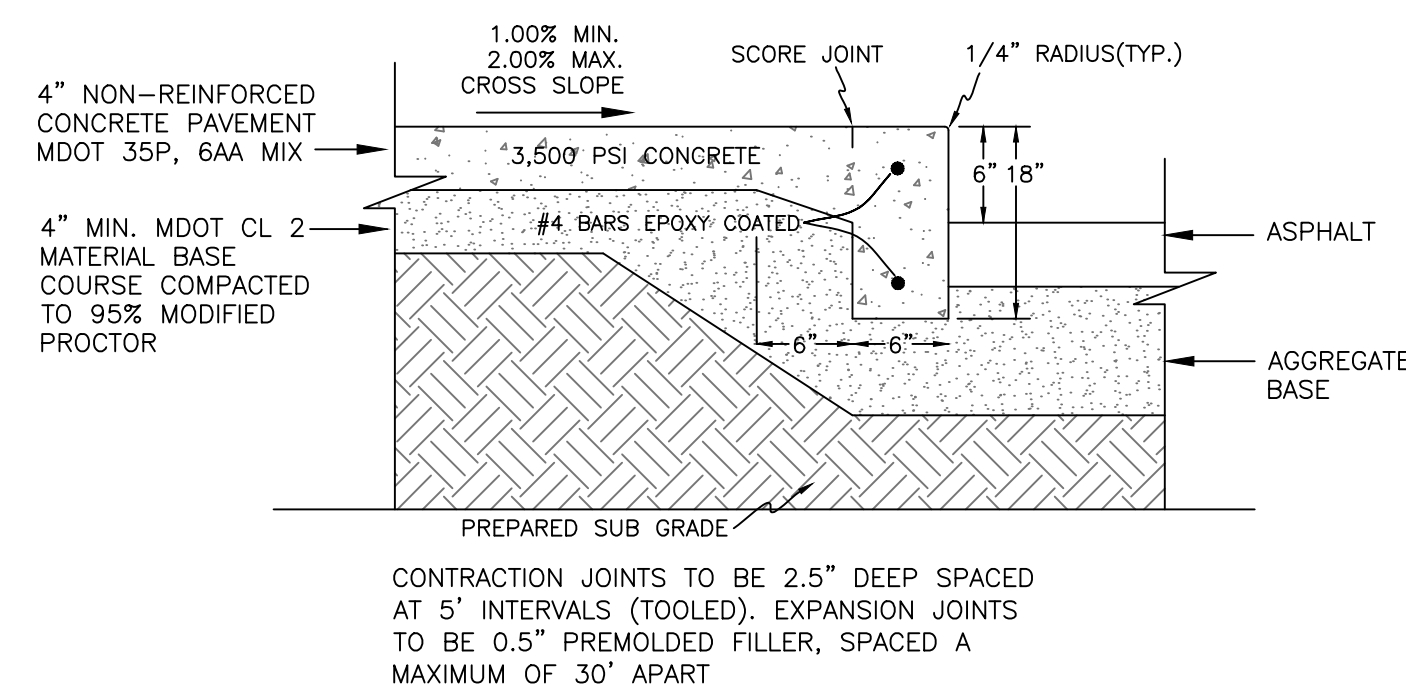
1 ASPHALT PAVEMENT
NTS



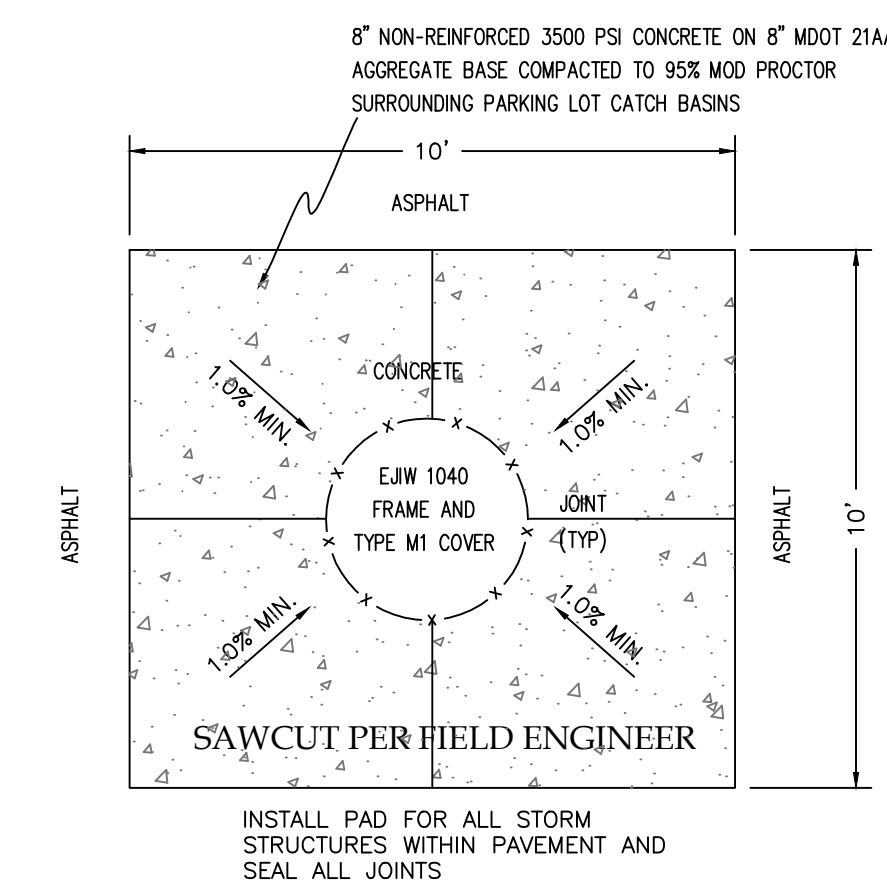
2 HEAVY DUTY CONCRETE
NTS



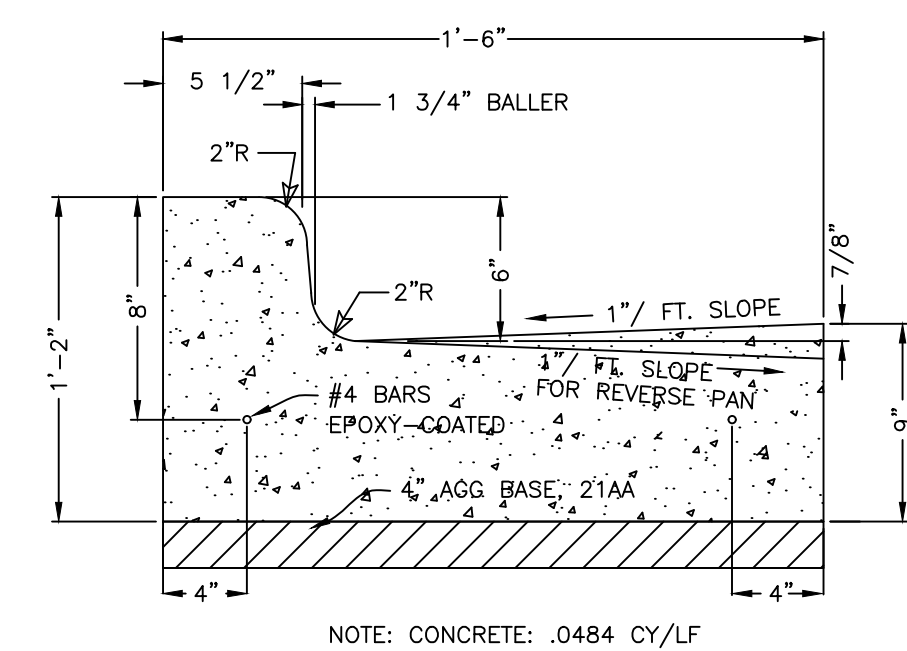
3 CONCRETE SIDEWALK
NTS



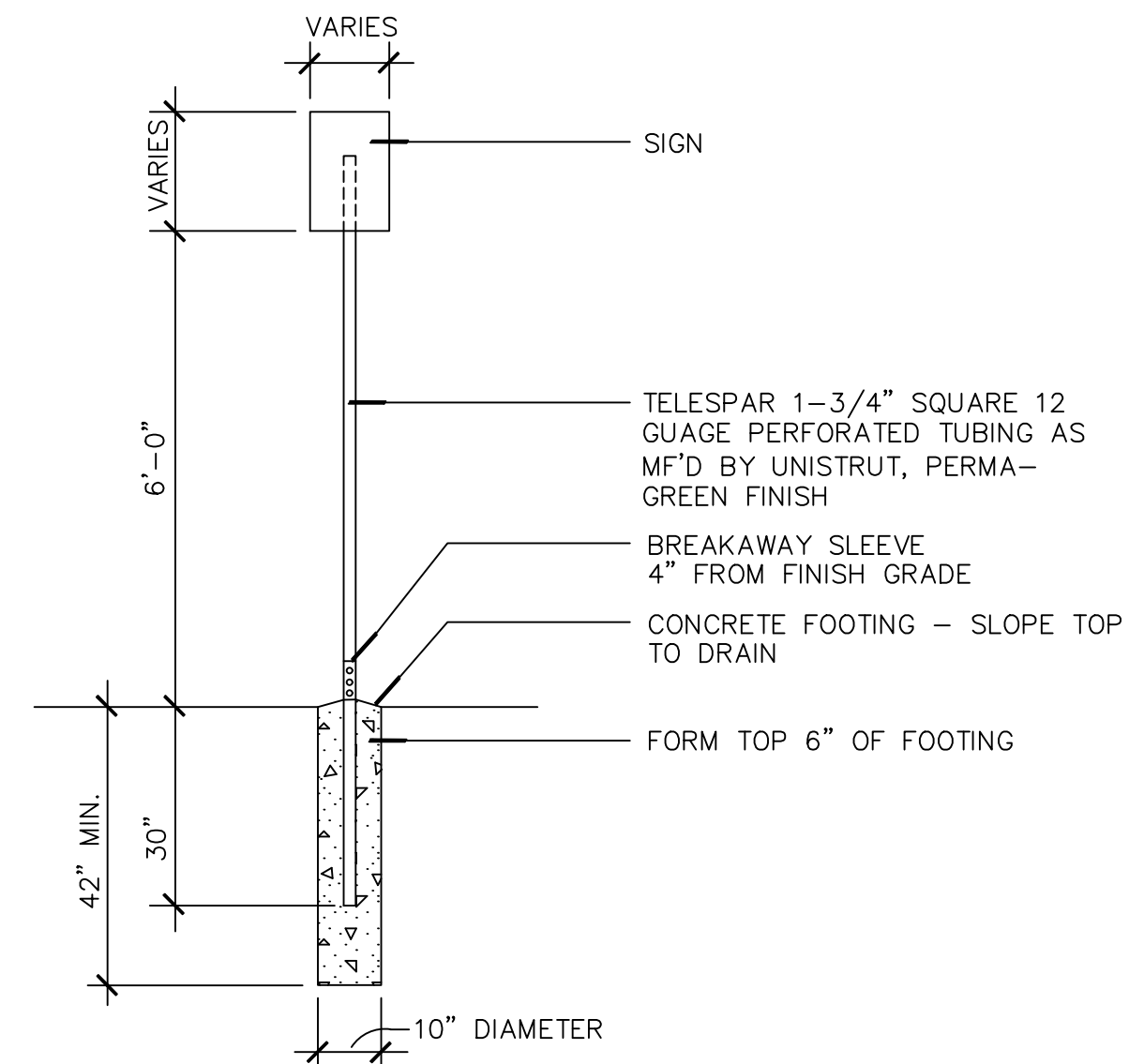
4 INTEGRAL CURB / SIDEWALK
NTS



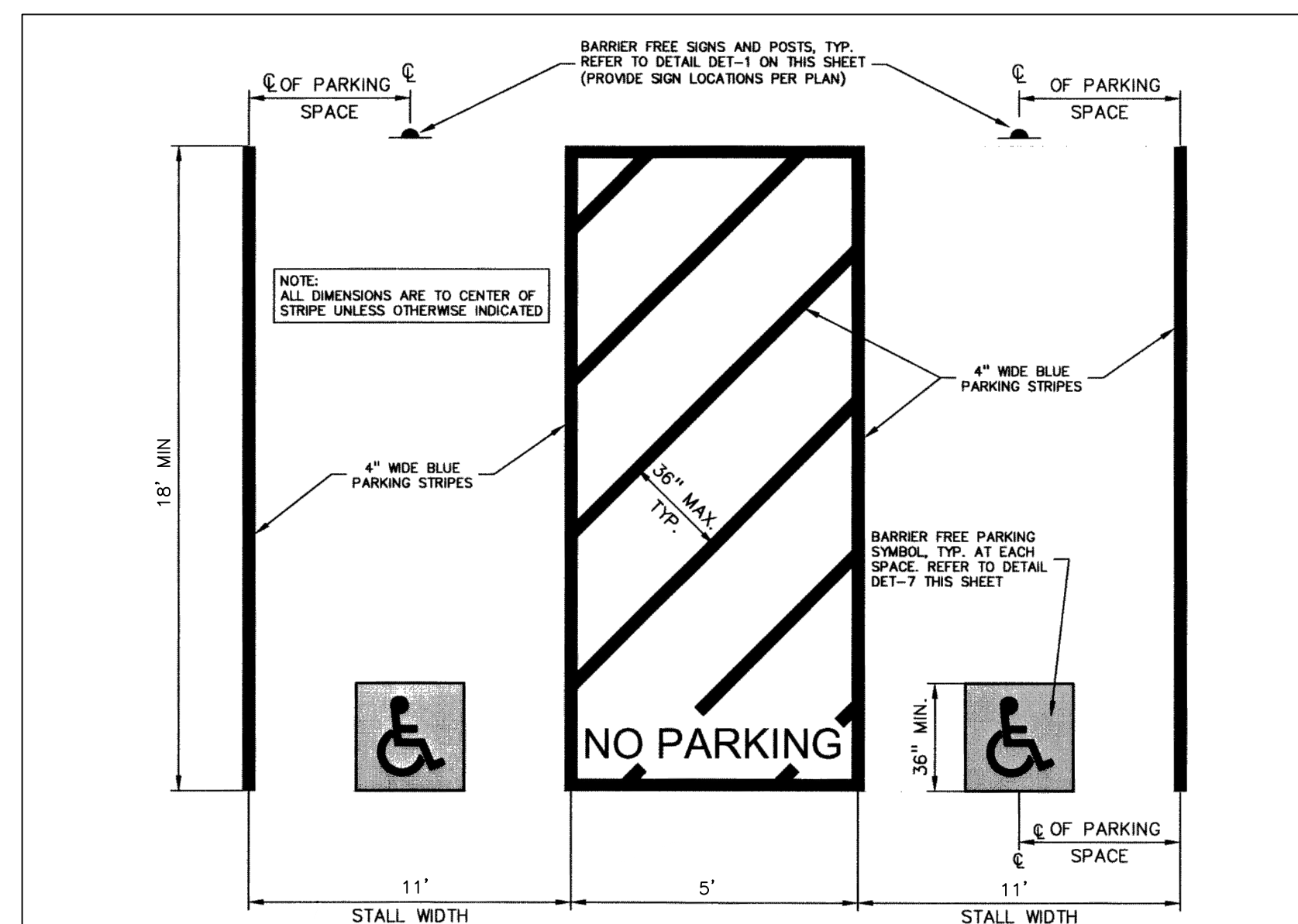
5 CATCH BASIN CONCRETE PAD
NTS



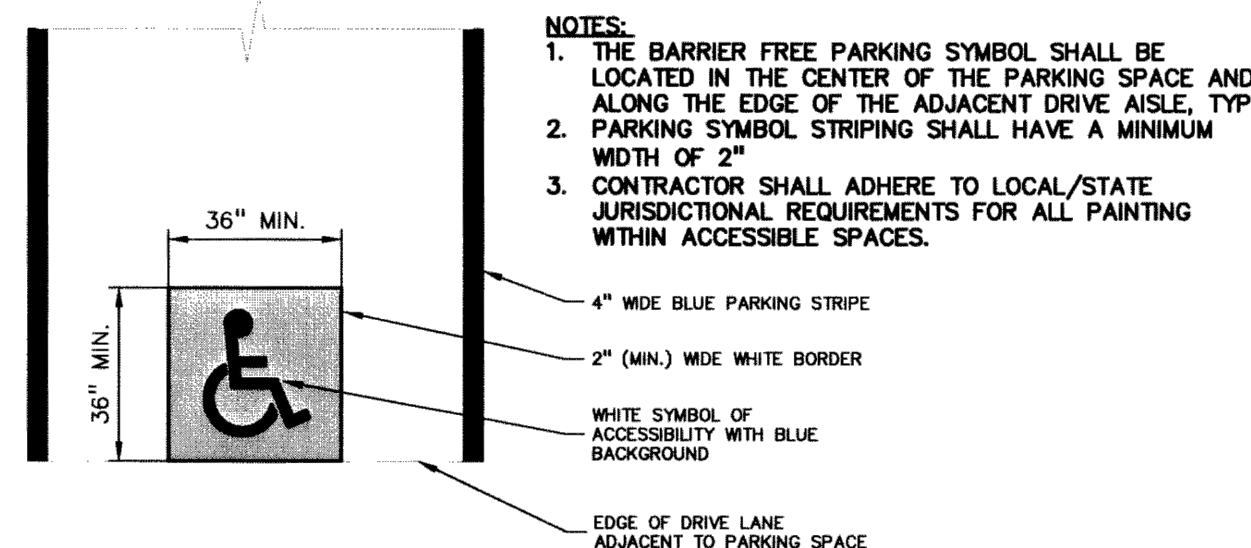
6 MDOT F2 CONCRETE CURB/GUTTER
NTS



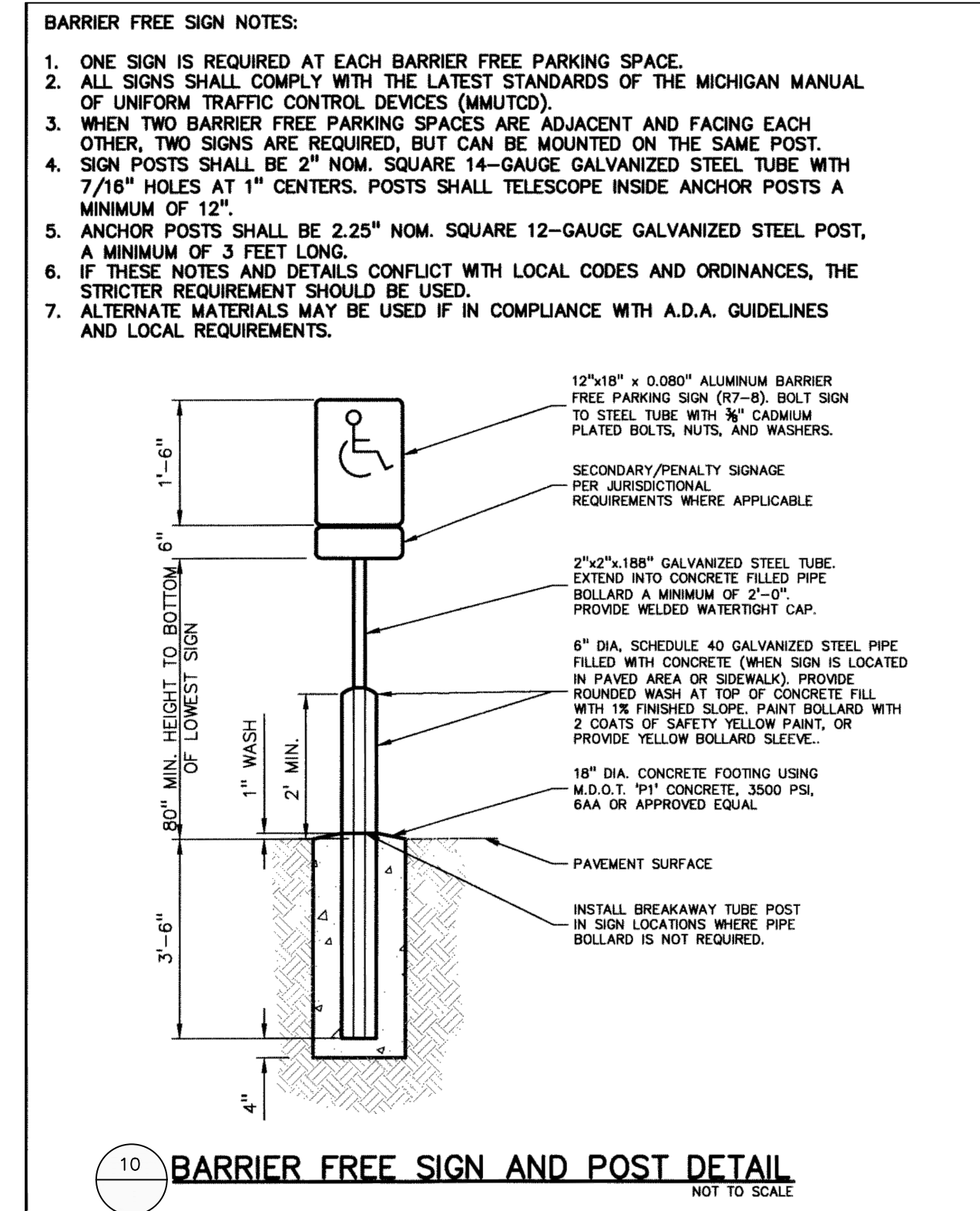
7 SIGN POST DETAIL
NTS



8 BARRIER FREE PARKING STALL DETAIL
NOT TO SCALE



9 BARRIER FREE PARKING SYMBOL DETAIL
(INTERNATIONAL SYMBOL OF ACCESSIBILITY)
NOT TO SCALE



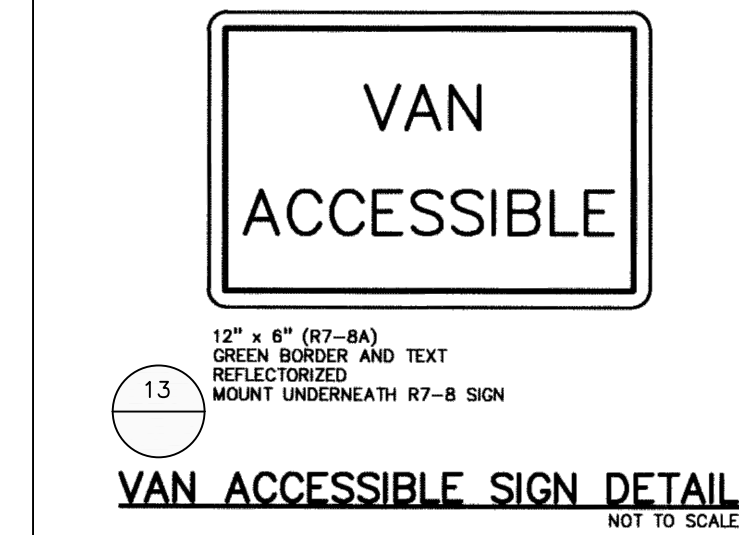
10 BARRIER FREE SIGN AND POST DETAIL
NOT TO SCALE



11 BARRIER FREE PARKING SIGN DETAIL
NOT TO SCALE



12 VAN ACCESSIBLE PARKING SIGN DETAIL
NOT TO SCALE



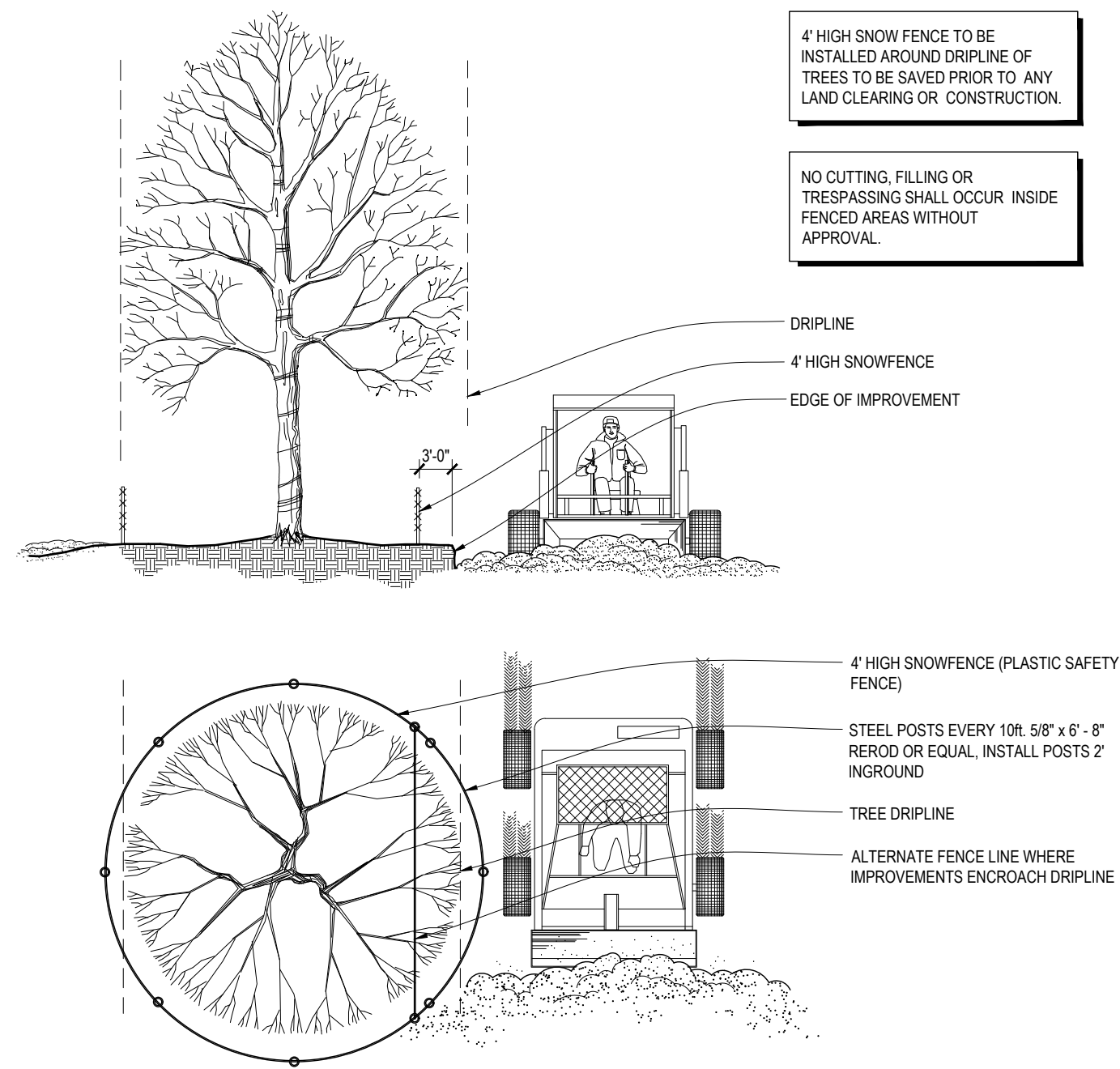
13 VAN ACCESSIBLE SIGN DETAIL
NOT TO SCALE

ISSUANCE	DATE	DRAWN	CHECKED	CONSULTANT
SITE PLAN REVIEW RESPONSE #01	04.23.2021	NY	NY	
SITE PLAN REVIEW RESPONSE #02	07.22.2021	NY	NY	

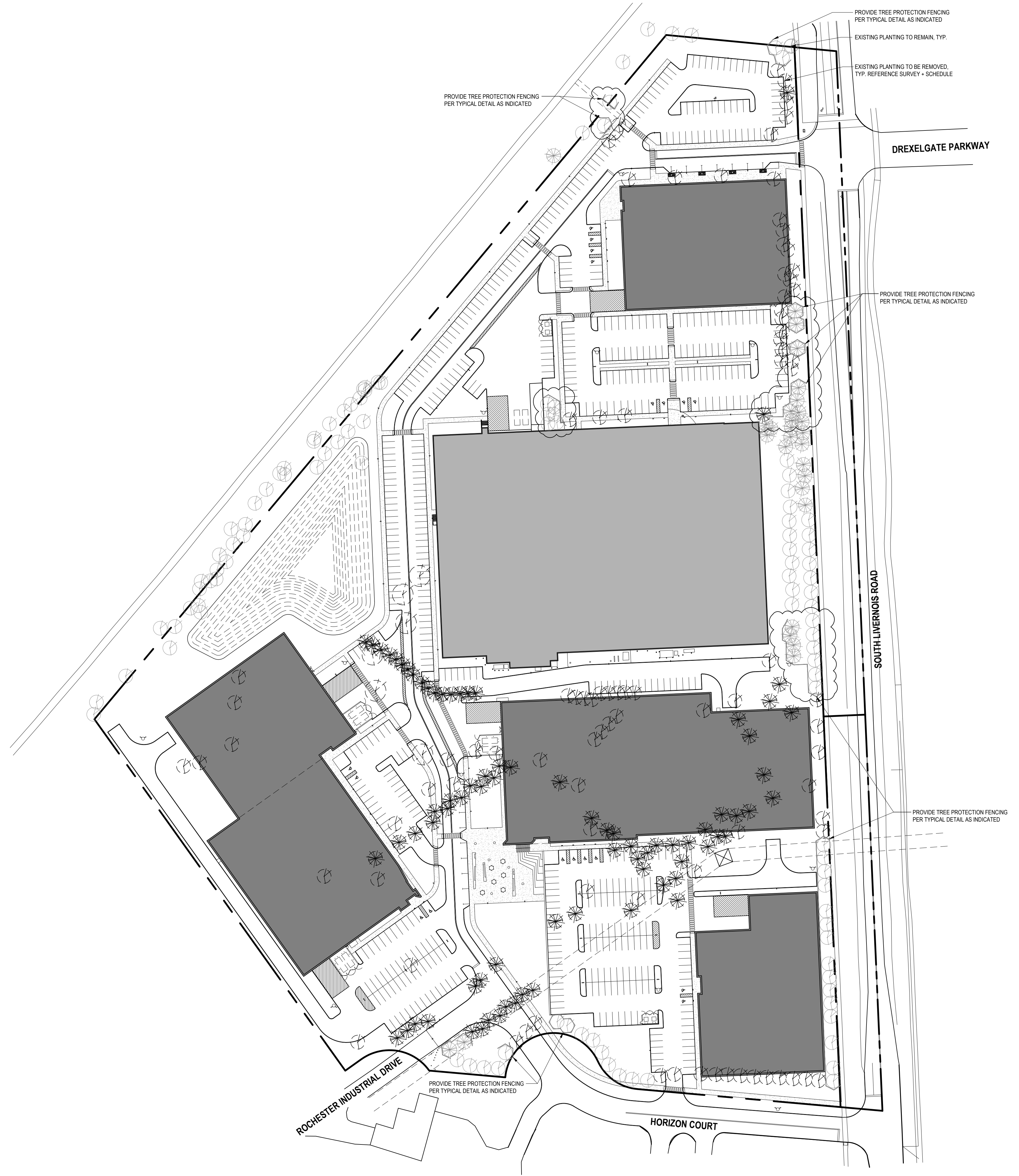
PROJECT
ROCHESTER HILLS
RESEARCH PARK
DEREK GENTILE
1400 SOUTH LIVERNOIS
ROCHESTER HILLS, MI 48307

SHEET TITLE
SITE DETAILS

STAMPS
PROJECT NO. 2814.00



02 TREE PROTECTION DETAIL
LD-101 / NOT TO SCALE



PLAN NORTH
01 OVERALL SITE TREE REMOVAL + PROTECTION PLAN
LD-101 1" = 80.00'

ISSUANCE	DATE	DRAWN	CHECKED	CONSULTANT
SITE PLAN REVIEW RESPONSE #01	04.23.2021	EK	EK	
SITE PLAN REVIEW RESPONSE #02	07.23.2021	EK	EK	

PROJECT
ROCHESTER HILLS RESEARCH PARK
DEREK GENTILE
1400 SOUTH LIVERNOIS
ROCHESTER HILLS, MI 48307

SHEET TITLE
OVERALL SITE LANDSCAPE TREE REMOVAL AND PROTECTION PLAN

STAMPS
PROJECT NO. 2814.00
SHEET NO. **LD-101**

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TREE DEMO + PRESERVATION SCHEDULE					
STATUS	TREE NO.	SIZE	COMMON NAME	SCIENTIFIC NAME	CONDITION
PRESERVE	1161	6	TREE OF HEAVEN	AILANTHUS ALTISSIMA	FAIR
PRESERVE	1162	23	ELM	ULMUS SPP.	FAIR
PRESERVE*	1163	30	ELM	ULMUS SPP.	GOOD
PRESERVE	1164	17	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1165	16	AUSTRIAN PINE	PINUS NIGRA	POOR
DEMO	1166	7	COLORADO SPRUCE	PICEA PUNGENS	FAIR
DEMO*	1167	19	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO*	1168	18	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO*	1169	19	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO*	1170	18	AUSTRIAN PINE	PINUS NIGRA	GOOD
DEMO	1171	15	AUSTRIAN PINE	PINUS NIGRA	GOOD
DEMO	1172	10	COLORADO SPRUCE	PICEA PUNGENS	FAIR
DEMO	1173	14	COLORADO SPRUCE	PICEA PUNGENS	FAIR
DEMO	1174	9	COLORADO SPRUCE	PICEA PUNGENS	FAIR
DEMO	1175	17	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1176	14	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1177	6	COLORADO SPRUCE	PICEA PUNGENS	FAIR
DEMO	1178	11	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1179	11	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1180	6	COLORADO SPRUCE	PICEA PUNGENS	FAIR
DEMO	1181	4	COLORADO SPRUCE	PICEA PUNGENS	FAIR
PRESERVE	1182	5	COLORADO SPRUCE	PICEA PUNGENS	FAIR
DEMO	1183	12	COLORADO SPRUCE	PICEA PUNGENS	GOOD
PRESERVE	1184	14	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1185	14	COLORADO SPRUCE	PICEA PUNGENS	FAIR
DEMO	1186	8	COLORADO SPRUCE	PICEA PUNGENS	FAIR
DEMO	1187	8	COLORADO SPRUCE	PICEA PUNGENS	FAIR
DEMO	1188	7	COLORADO SPRUCE	PICEA PUNGENS	FAIR
PRESERVE	1189	15	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1190	12	AUSTRIAN PINE	PINUS NIGRA	POOR
DEMO	1191	13	AUSTRIAN PINE	PINUS NIGRA	FAIR
PRESERVE	1192	16	AUSTRIAN PINE	PINUS NIGRA	FAIR
PRESERVE	1193	13	AUSTRIAN PINE	PINUS NIGRA	FAIR
PRESERVE	1194	13	AUSTRIAN PINE	PINUS NIGRA	FAIR
PRESERVE	1195	13	AUSTRIAN PINE	PINUS NIGRA	POOR
PRESERVE	1196	9	AUSTRIAN PINE	PINUS NIGRA	POOR
DEMO	1197	11	COLORADO SPRUCE	PICEA PUNGENS	POOR
DEMO	1198	12	COLORADO SPRUCE	PICEA PUNGENS	FAIR
PRESERVE	1199	13	COLORADO SPRUCE	PICEA PUNGENS	FAIR
PRESERVE	1200	15	COLORADO SPRUCE	PICEA PUNGENS	FAIR
PRESERVE	1201	15	AUSTRIAN PINE	PINUS NIGRA	FAIR
PRESERVE	1202	14	AUSTRIAN PINE	PINUS NIGRA	POOR
PRESERVE	1203	15	AUSTRIAN PINE	PINUS NIGRA	FAIR
PRESERVE	1204	11	SUGAR MAPLE	ACER SACCHARUM	FAIR
PRESERVE	1205	12	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1206	12	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1207	14	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1208	13	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1209	12	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1210	11	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1211	12	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1212	13	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1213	11	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1214	10	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1215	12	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1216	11	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1217	11	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1218	12	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1219	15	SUGAR MAPLE	ACER SACCHARUM	FAIR
PRESERVE	1220	14	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1221	9	SUGAR MAPLE	ACER SACCHARUM	FAIR
PRESERVE	1222	13	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1223	7	SUGAR MAPLE	ACER SACCHARUM	GOOD
DEMO	1224	7	SUGAR MAPLE	ACER SACCHARUM	GOOD
DEMO	1225	6	SUGAR MAPLE	ACER SACCHARUM	FAIR
DEMO	1226	9	SUGAR MAPLE	ACER SACCHARUM	GOOD
DEMO*	1227	37	SILVER MAPLE	ACER SACCHARINUM	POOR
DEMO	1228	13	SUGAR MAPLE	ACER SACCHARUM	GOOD
DEMO	1229	10	SUGAR MAPLE	ACER SACCHARUM	FAIR
PRESERVE	1230	12	SUGAR MAPLE	ACER SACCHARUM	FAIR
PRESERVE	1231	14	SUGAR MAPLE	ACER SACCHARUM	FAIR
PRESERVE	1232	12	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1233	11	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1234	10	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1235	12	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1236	13	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1237	13	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1238	14	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1239	13	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1240	12	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1241	9	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1242	13	SUGAR MAPLE	ACER SACCHARUM	GOOD

PRESERVE	1243	12	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1244	12	SUGAR MAPLE	ACER SACCHARUM	GOOD
DEMO	1245	12	SUGAR MAPLE	ACER SACCHARUM	GOOD
DEMO	1246	11	SUGAR MAPLE	ACER SACCHARUM	GOOD
DEMO	1247	14	SUGAR MAPLE	ACER SACCHARUM	GOOD
DEMO	1248	12	SUGAR MAPLE	ACER SACCHARUM	GOOD
DEMO	1249	13	SUGAR MAPLE	ACER SACCHARUM	GOOD
DEMO	1250	13	SUGAR MAPLE	ACER SACCHARUM	FAIR
DEMO	1251	9	SUGAR MAPLE	ACER SACCHARUM	GOOD
DEMO	1252	12	NORWAY MAPLE	ACER PLATANOIDES	FAIR
DEMO	1253	12	NORWAY MAPLE	ACER PLATANOIDES	GOOD
DEMO	1254	7	RED MAPLE	ACER RUBRUM	GOOD
DEMO	1255	11	NORWAY MAPLE	ACER PLATANOIDES	GOOD
DEMO	1256	9	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1257	13	NORWAY MAPLE	ACER PLATANOIDES	GOOD
PRESERVE	1258	11	NORWAY MAPLE	ACER PLATANOIDES	FAIR
PRESERVE	1259	13	NORWAY MAPLE	ACER PLATANOIDES	GOOD
PRESERVE	1260	10	NORWAY MAPLE	ACER PLATANOIDES	GOOD
PRESERVE	1261	12	SUGAR MAPLE	ACER SACCHARUM	GOOD
PRESERVE	1262	9	NORWAY MAPLE	ACER PLATANOIDES	GOOD
PRESERVE	1263	10	NORWAY MAPLE	ACER PLATANOIDES	GOOD
PRESERVE	1264	9	NORWAY MAPLE	ACER PLATANOIDES	GOOD
PRESERVE	1265	9	NORWAY MAPLE	ACER PLATANOIDES	GOOD
DEMO	1266	11	NORWAY MAPLE	ACER PLATANOIDES	GOOD
DEMO	1267	8	RED MAPLE	ACER RUBRUM	GOOD
DEMO	1268	6	RED MAPLE	ACER RUBRUM	GOOD
PRESERVE	1269	13	NORWAY MAPLE	ACER PLATANOIDES	GOOD
PRESERVE	1270	11	RED MAPLE	ACER RUBRUM	GOOD
PRESERVE	1271	12	RED MAPLE	ACER RUBRUM	GOOD
PRESERVE	1272	8	RED MAPLE	ACER RUBRUM	GOOD
PRESERVE	1273	6	RED MAPLE	ACER RUBRUM	FAIR
PRESERVE	1274	7	RED MAPLE	ACER RUBRUM	GOOD
PRESERVE	1275	11	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1276	11	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1277	12	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1278	9	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1279	9	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1280	10	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1281	11	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1282	7	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1283	10	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1284	8	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1285	9	THORNLESS HONEYLOCUST	GLEDITSIA TRIACANTHOS INERMIS	GOOD
DEMO	1286	9	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1287	10	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1288	14	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1289	7	CRABAPPLE	MALUS SPP.	FAIR
DEMO	1290	12	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1291	17	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1292	16	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1293	11	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO*	1294	19	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO*	1295	19	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1296	15	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1297	14	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1298	5	N/A	N/A	DEAD
DEMO	1299	11	N/A	N/A	DEAD
DEMO	1300	14	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1302	15	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1303	12	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1304	9	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1305	13	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1306	13	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1307	10	AUSTRIAN PINE	PINUS NIGRA	POOR
DEMO	1308	11	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1309	9	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1310	13	AUSTRIAN PINE	PINUS NIGRA	POOR
DEMO	1311	7	CRABAPPLE	MALUS SPP.	FAIR
PRESERVE	1312	11	COLORADO SPRUCE	PICEA PUNGENS	FAIR
PRESERVE	1313	11	COLORADO SPRUCE	PICEA PUNGENS	POOR
PRESERVE	1314	12	COLORADO SPRUCE	PICEA PUNGENS	FAIR
PRESERVE	1315	12	COLORADO SPRUCE	PICEA PUNGENS	FAIR
PRESERVE	1316	6	NORWAY MAPLE	ACER PLATANOIDES	GOOD
PRESERVE	1317	6	NORWAY MAPLE	ACER PLATANOIDES	GOOD
PRESERVE	1318	7	NORWAY MAPLE	ACER PLATANOIDES	FAIR
PRESERVE	1319	6	NORWAY MAPLE	ACER PLATANOIDES	GOOD
PRESERVE	1320	6	NORWAY MAPLE	ACER PLATANOIDES	FAIR
PRESERVE	1321	6	NORWAY MAPLE	ACER PLATANOIDES	GOOD
PRESERVE	1322	5	NORWAY MAPLE	ACER PLATANOIDES	GOOD
PRESERVE	1323	4	NORWAY MAPLE	ACER PLATANOIDES	FAIR
PRESERVE	1324	5	NORWAY MAPLE	ACER PLATANOIDES	FAIR
PRESERVE	1325	6	NORWAY MAPLE	ACER PLATANOIDES	GOOD
PRESERVE	1326	7	NORWAY MAPLE	ACER PLATANOIDES	GOOD
DEMO	1327	14	THORNLESS HONEYLOCUST	GLEDITSIA TRIACANTHOS INERMIS	GOOD
DEMO	1328	12	THORNLESS HONEYLOCUST	GLEDITSIA TRIACANTHOS INERMIS	GOOD
DEMO	1329	11	THORNLESS HONEYLOCUST	GLEDITSIA TRIACANTHOS INERMIS	GOOD

PRESERVE	1330	13	THORNLESS HONEYLOCUST	GLEDITSIA TRIACANTHOS INERMIS	GOOD
PRESERVE	1331	9	COLORADO SPRUCE	PICEA PUNGENS	GOOD
PRESERVE	1332	6	COLORADO SPRUCE	PICEA PUNGENS	GOOD
PRESERVE	1333	8	COLORADO SPRUCE	PICEA PUNGENS	GOOD
PRESERVE	1334	9	COLORADO SPRUCE	PICEA PUNGENS	GOOD
PRESERVE	1335	10	COLORADO SPRUCE	PICEA PUNGENS	FAIR
PRESERVE	1337	6	RED MAPLE	ACER RUBRUM	FAIR
DEMO*	1338	24	SILVER MAPLE	ACER SACCHARINUM	GOOD
DEMO*	1339	20	SILVER MAPLE	ACER SACCHARINUM	FAIR
DEMO*	1340	21	SILVER MAPLE	ACER SACCHARINUM	GOOD
DEMO	1341	7	N/A	N/A	DEAD
DEMO	1342	11	COLORADO SPRUCE	PICEA PUNGENS	GOOD
DEMO	1343	8	COLORADO SPRUCE	PICEA PUNGENS	POOR
DEMO	1344	9	COLORADO SPRUCE	PICEA PUNGENS	FAIR
DEMO	1345	10	COLORADO SPRUCE	PICEA PUNGENS	GOOD
DEMO	1346	10	COLORADO SPRUCE	PICEA PUNGENS	GOOD
DEMO	1347	10	COLORADO SPRUCE	PICEA PUNGENS	POOR
DEMO	1348	9	COLORADO SPRUCE	PICEA PUNGENS	GOOD
DEMO	1349	9	COLORADO SPRUCE	PICEA PUNGENS	FAIR
DEMO	1350	6	COLORADO SPRUCE	PICEA PUNGENS	POOR
DEMO	1351	10	COLORADO SPRUCE	PICEA PUNGENS	GOOD
DEMO	1352	10	COLORADO SPRUCE	PICEA PUNGENS	GOOD
DEMO	1353	11	COLORADO SPRUCE	PICEA PUNGENS	GOOD
DEMO	1354	8	COLORADO SPRUCE	PICEA PUNGENS	FAIR
DEMO	1355	9	COLORADO SPRUCE	PICEA PUNGENS	FAIR
DEMO	1356	7	COLORADO SPRUCE	PICEA PUNGENS	FAIR
DEMO	1357	14	COLUMNAR MAPLE	ACER SPP. (RUBRUM X FREEMANNII)	GOOD
DEMO	1358	11	COLUMNAR MAPLE	ACER SPP. (RUBRUM X FREEMANNII)	GOOD
DEMO	1359	11	COLUMNAR MAPLE	ACER SPP. (RUBRUM X FREEMANNII)	GOOD
DEMO	1360	10	COLUMNAR MAPLE	ACER SPP. (RUBRUM X FREEMANNII)	GOOD
DEMO	1361	11	COLUMNAR MAPLE	ACER SPP. (RUBRUM X FREEMANNII)	GOOD
DEMO	1362	11	COLUMNAR MAPLE	ACER SPP. (RUBRUM X FREEMANNII)	GOOD
DEMO	1363	10	COLUMNAR MAPLE	ACER SPP. (RUBRUM X FREEMANNII)	GOOD
DEMO	1364	11	COLUMNAR MAPLE	ACER SPP. (RUBRUM X FREEMANNII)	GOOD
DEMO	1365	12	COLUMNAR MAPLE	ACER SPP. (RUBRUM X FREEMANNII)	GOOD
DEMO	1366	11	COLUMNAR MAPLE	ACER SPP. (RUBRUM X FREEMANNII)	GOOD
DEMO	1367	11	COLUMNAR MAPLE	ACER SPP. (RUBRUM X FREEMANNII)	GOOD
DEMO	1368	11	COLUMNAR MAPLE	ACER SPP. (RUBRUM X FREEMANNII)	GOOD
DEMO	1369	13	COLUMNAR MAPLE	ACER SPP. (RUBRUM X FREEMANNII)	GOOD
DEMO	1370	6	CRABAPPLE	MALUS SPP.	FAIR
DEMO	1371	8	RED MAPLE	ACER RUBRUM	GOOD
DEMO	1372	10	RED MAPLE	ACER RUBRUM	GOOD
DEMO	1373	7	RED MAPLE	ACER RUBRUM	GOOD
DEMO	1374	11	THORNLESS HONEYLOCUST	GLEDITSIA TRIACANTHOS INERMIS	GOOD
DEMO*	1375	19	SILVER MAPLE	ACER SACCHARINUM	GOOD
DEMO	1376	15	THORNLESS HONEYLOCUST	GLEDITSIA TRIACANTHOS INERMIS	GOOD
DEMO	1377	6	RED MAPLE	ACER RUBRUM	FAIR
DEMO	1378	8	NORWAY MAPLE	ACER PLATANOIDES	FAIR
DEMO	1379	13	SILVER MAPLE	ACER SACCHARINUM	FAIR
DEMO	1380	9	THORNLESS HONEYLOCUST	GLEDITSIA TRIACANTHOS INERMIS	GOOD
DEMO	1381	11	AUSTRIAN PINE	PINUS NIGRA	FAIR
DEMO	1382	10	COLORADO SPRUCE	PICEA PUNGENS	GOOD
DEMO	1383	5	COLORADO SPRUCE	PICEA PUNGENS	GOOD
DEMO	1384	10	COLORADO SPRUCE	PICEA PUNGEN	