



EXTERIOR RENDERING

1575 E HAMLIN ROAD

CITY FILE #23-0002  
SECTION 24



**BUILDING CODE DATA - MICHIGAN BUILDING CODE - 1575 E HAMLIN ROAD ROCHESTER HILLS**

NO.	SECTION	ISSUE	CODE REQUIREMENT	ACTUAL PROVIDED
901	FIRE PROTECTION SYSTEMS			
903	GROUP B - SPRINKLER REQUIREMENTS	OCCUPANCY GROUP B - NO REQUIREMENTS	NOT REQUIRED FOR 'B' OCCUPANCY	COMPLIES - APPROVED AUTOMATIC SPRINKLER SYSTEM PROVIDED THROUGHOUT ENTIRE DEVELOPMENT
903.2.9	GROUP S-1 - SPRINKLER REQUIREMENTS	AUTOMATIC SPRINKLER SYSTEM REQUIRED THROUGHOUT WITH OCCUPANCY 'S-1' WHEN ONE OF THE FOLLOWING CONDITIONS EXIST: * FIRE AREA EXCEEDS 12,000 S.F. * FIRE AREA IS LOCATED MORE THAN THREE (3) STORIES ABOVE THE GRADE PLANE. * THE COMBINED AREA OF ALL GROUP S-1 FIRE AREAS ON ALL FLOORS, INCLUDING ANY MEZZANINES, EXCEEDS 24,000 S.F.	REQUIRED FOR 'S-1' OCCUPANCY	
905	STANDPIPE SYSTEM	STANDPIPE SYSTEMS CLASS I, II, OR III REQUIREMENTS	CLASS I REQUIRED IN EVERY REQUIRED STAIRWAY WITH FUSE CONNECTIONS AT EVERY INTERMEDIATE FLOOR LANDING; SPECIFIC GROUP 'A' OCCUPANCIES; COVERED MALL BUILDINGS; UNDERGROUND BUILDINGS CLASS II REQUIRED IN GROUPS A-1 & A-2 WITH OCCUPANT LOADS OVER 1,000 CLASS III REQUIRED BASED ON BUILDING HEIGHT; WHERE FLOOR LEVEL OF HIGHEST STORY IS > 30' FROM THE LOWEST LEVEL OF FIRE DEPT VEHICLE ACCESS, WHERE THE LOWEST STORY IS LOCATED > 30' FROM THE HIGHEST LEVEL OF FIRE DEPT VEHICLE ACCESS.	NOT REQUIRED
906	PORTABLE FIRE EXTINGUISHERS	REQUIRED LOCATIONS	PORTABLE FIRE EXTINGUISHERS REQUIRED IN ALL OCCUPANCY B (OFFICE) & OCCUPANCY S (STORAGE) AREAS. REFER TO MICHIGAN BUILDING CODE	APPROVED FIRE EXTINGUISHERS PROVIDED AT ALL REQUIRED AREAS
907.2	FIRE ALARM SYSTEM	MANUAL, AUTOMATIC (OR BOTH) REQUIREMENTS FOR NEW CONSTRUCTION	GROUP 'B': MANUAL SYSTEM REQUIRED FOR OCCUPANCIES OF 500 OR MORE OR 100 PERSONS ABOVE OR BELOW THE LOWEST LEVEL OF EXIT DISCHARGE. MANUAL SYSTEM NOT REQUIRED IF EQUIPPED THROUGHOUT WITH AUTOMATIC SPRINKLER SYSTEM INSTALLED WITH ACCORDANCE WITH SECTION 903.1.1 AND THE OCCUPANT NOTIFICATION APPLIANCES WILL ACTIVATE THROUGHOUT THE NOTIFICATION ZONES UPON SPRINKLER OVERFLOW. GROUP 'S-1': NO REQUIREMENTS	GROUP 'B': NOT REQUIRED - EQUIPPED THROUGHOUT WITH AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.1.1. GROUP 'S-1': NO REQUIREMENTS
907.4.2	MANUAL FIRE ALARMS	LOCATION AND MOUNTING REQUIREMENTS	'RED' MANUAL PULL ALARMS ARE REQUIRED WITHIN 5' OF ALL ENTRANCES/EXITS, SPACED A MAXIMUM OF 200' APART AND MOUNTED 42"-48" MEASURED VERTICALLY FROM THE FLOOR LEVEL TO THE ACTIVATING HANDLE OR LEVER OF THE BOX.	NOT REQUIRED - BUILDING 1 EQUIPPED THROUGHOUT WITH AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.1.1.
907.5.2.3.1	VISIBLE ALARMS	REQUIRED IN ALL PUBLIC & COMMON AREAS	REQUIRED IN OFFICE & THROUGH OUT STORAGE	PROVIDED - SEE ELECTRICAL DRAWINGS
910	SMOKE AND HEAT VENTS	REQUIRED LOCATIONS	OCCUPANCY GROUP B: NO REQUIREMENTS OCCUPANCY GROUP S-1: REQUIRED WHEN UNDIVIDED OVER 50,000 S.F.	GROUP B: NOT REQUIRED GROUP S-1: AREA DOES NOT EXCEED 50,000 S.F.
1003.1	MEANS OF EGRESS			
1003.2	CEILING HEIGHT	1003.2 - CEILING HEIGHT	THE MEANS OF EGRESS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7'-6"	COMPLIES
TABLE 1004.1.1	OCCUPANT LOAD	MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT	BUSINESS - 100 SF/OCCUPANT STORAGE (WAREHOUSES) - 500 SF/OCCUPANT NOTE: GROSS AREA CALCULATIONS ARE FOR OCCUPIABLE AREA	795 / 100 = 8 PEOPLE 87,573 / 500 = 176 PEOPLE TOTAL OCCUPANCY = 184 PEOPLE SEE SHEET EGRESS PLANS FOR ADDITIONAL INFORMATION
1005.1	EGRESS WIDTH	SECTION 1005.1 - OTHER EGRESS COMPONENTS - 0.2 INCHES PER OCCUPANT	OTHER EGRESS COMPONENTS = 0.2 x 184 = 36.8"	REQUIREMENT MET - SEE EGRESS PLANS
1007	ACCESSIBLE MEAN OF EGRESS	EGRESS FROM ACCESSIBLE SPACES	ACCESSIBLE SPACES SHALL BE PROVIDED WITH NOT LESS THAN ONE ACCESSIBLE MEANS OF EGRESS, WHERE MORE THAN ONE MEANS OF EGRESS ARE REQUIRED BY SECTION 1015.1 OR 1021.1 FROM ANY ACCESSIBLE SPACE, EACH ACCESSIBLE PORTION OF THE SPACE SHALL BE SERVED BY NOT LESS THAN TWO ACCESSIBLE MEANS OF EGRESS.	ACCESSIBLE MEANS OF EGRESS ARE PROVIDED
1007.3	ACCESSIBLE STAIRWAYS	MINIMUM ACCESSIBLE EGRESS STAIRWAY WIDTH	PROVIDE A CLEAR WIDTH OF 48" MINIMUM BETWEEN HANDRAILS AND SHALL EITHER INCORPORATE AN AREA OF REFUGE WITHIN AN ENLARGED FLOOR-LEVEL LANDING. EXCEPTIONS: 1. THE CLEAR WIDTH OF 48 INCHES IS NOT REQUIRED IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM.	NOT REQUIRED, BUT MINIMUM 48" CLEAR BETWEEN HANDRAILS AND AREA OF REFUGE PROVIDED. SEE EGRESS PLANS FOR MORE INFORMATION.
1007.6.1	AREAS OF REFUGE	AREA OF REFUGE SIZE	EACH AREA OF REFUGE SHALL BE SIZED TO ACCOMMODATE ONE WHEELCHAIR SPACE OF 30" BY 48" FOR EACH 200 OCCUPANT OR PORTION THEREOF, BASED ON THE OCCUPANT LOAD OF THE AREA OF REFUGE AND AREAS SERVED BY THE AREA OF REFUGE	30" x 48" AREA OF REFUGE NOT REQUIRED
1007.6.3	AREAS OF REFUGE	TWO-WAY COMMUNICATION	AREAS OF REFUGE SHALL BE PROVIDED WITH A TWO-WAY COMMUNICATION SYSTEM COMPLYING WITH SECTION 1007.8.1 AND 1007.8.2	TWO-WAY COMMUNICATION SYSTEM PROVIDED AT ELEVATOR
1008.1.1	MEANS OF EGRESS DOORS	MINIMUM CLEAR WIDTH FOR EGRESS DOORS	MINIMUM 32" WIDE	36" NOMINAL WIDE PROVIDED
1008.1.2	SWING OF DOORS	SWING OF DOORS	DOORS SHALL SWING IN THE DIRECTION OF EGRESS TRAVEL WHERE SERVING A ROOM OR AREA CONTAINING AN OCCUPANT LOAD OF 50 OR MORE PERSONS OR A GROUP 'B' OCCUPANCY.	ALL EGRESS DOORS SWING IN DIRECTION OF TRAVEL
1014.3	COMMON PATH OF EGRESS TRAVEL	EXCEPTION #1 - MAX DISTANCE FOR S-1 OCCUPANCY	MAX. 100 FEET, WITH SPRINKLER SYSTEM	COMPLIES
1015	EXIT & EXIT ACCESS DOORWAYS	TABLE 1015.1 - SPACES WITH ONE MEANS OF EGRESS 1015.2.1 - TWO EXITS OR EXIT ACCESS DOORWAYS ARRANGEMENT EXCEPTION #2 (BUILDING EQUIPPED W/ AUTOMATIC SPRINKLER SYSTEM) 1015.2.2 - THREE OR MORE EXITS OR EXIT ACCESS DOORWAYS ARRANGEMENT	1 EXIT ALLOWED IF OCCUPANT LOAD IS < (B - 49, S-1 - 29) 1/3 OF MAX. BUILDING DIAGONAL (W/ SPRINKLER) AT LEAST TWO EXITS DOORS OR EXIT ACCESS DOORWAY SHALL BE ARRANGE IN ACCORDANCE WITH THE PROVISION OF SECTION 1015.2.1	OCCUPANCY S-1: TWO OR MORE EXITS PROVIDED OCCUPANCY B: ONE EXIT PROVIDED COMPLIES (SEE EGRESS PLANS)
1016	EXIT ACCESS TRAVEL DISTANCE	TABLE 1016.1 - EXIT ACCESS TRAVEL DISTANCE WITH SPRINKLER SYSTEM	B = 200 FT. S-1 = 250 FT. 44' MIN. 36" MIN. W/ REQ'D OCCUPANT CAPACITY OF LESS THAN 50	COMPLIES (SEE EGRESS PLANS)
1018	CORRIDORS	1018.2 - CORRIDOR WIDTH 1018.4 - MAXIMUM DEAD END CORRIDOR LENGTH	50'-0" MAX. (W/ SPRINKLER)	COMPLIES (SEE EGRESS PLANS)
TABLE 1021.1	MINIMUM NUMBER OF EXITS	OCCUPANT LOAD	FIRST FLOOR (1-500) = 2 MIN SECOND FLOOR (1-500) = 2 MIN THIRD FLOOR (1-500) = 2 MIN	COMPLIES (SEE EGRESS PLANS)
TABLE 1505.1	MIN. ROOF COVERING CLASS	CLASS A, B OR C ROOF ASSEMBLIES PER CONSTRUCTION TYPE	CONSTRUCTION TYPE II-B - CLASS B (MODERATE FIRE-TEST EXPOSURE) REQUIRED	CLASS A WILL BE PROVIDED
1507.4	ROOF SLOPE		MIN. 1/4" PER 12" (2%)	1/4" SLOPE PROVIDED ON ALL NEW BUILDINGS

**PLUMBING FIXTURE CALCUALTIONS**

SELF-STORAGE OCCUPANCY:	REQUIRED EMPLOYEE FIXTURES:	PROVIDED FIXTURES FOR NEW SELF-STORAGE:
SELF-STORAGE (USE S-1) BUILDINGS FRONT OFFICE (USE B) - 795 GSF / 100 TOTAL 176 OCCUPANTS 8 OCCUPANTS 184 OCCUPANTS	1 PER 100 MALE AND FEMALE 1 - UNISEX TOILET ROOM (1 WC AND 1 LAVATORY) 1 PER 100 PERSONS 1 - DRINKING FOUNTAIN (ADA COMPLIANT) 1 - SERVICE SINK	4 - UNISEX TOILET ROOMS (1 WC AND 1 LAVATORY EACH) 2 - DRINKING FOUNTAINS - HI-LO (ADA COMPLIANT) 1 - SERVICE SINK
ACTUAL EMPLOYEE COUNT 4 MAX < 5 EMPLOYEES		

**BUILDING CODE DATA - MICHIGAN BUILDING CODE - 1575 E HAMLIN ROAD ROCHESTER HILLS**

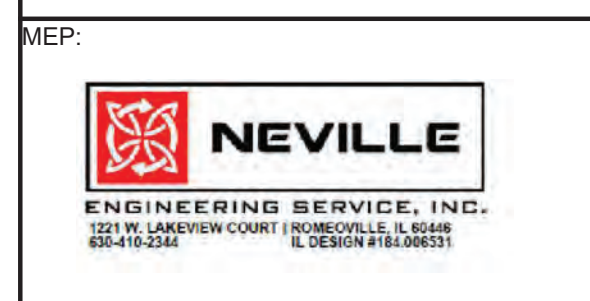
APPLICABLE CODES - BUILDING: MICHIGAN BUILDING CODE 2015 - EFFECTIVE APRIL 20, 2017; REHAB: MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS 2015 - EFFECTIVE DECEMBER 13, 2016  
ACCESSIBILITY: ICC ANS I 117.1 - 2009; MECHANICAL: MICHIGAN MECHANICAL CODE 2015 - EFFECTIVE APRIL 12, 2017; ELECTRICAL: NEC 2017 STATE OF MICHIGAN ELECTRICAL CODE  
2017 NATIONAL ELECTRICAL CODE WITH PART 8 AMENDMENTS - EFFECTIVE JANUARY 4, 2019; PLUMBING: MICHIGAN PLUMBING CODE 2018 - EFFECTIVE SEPTEMBER 15, 2021; ENERGY: MICHIGAN BUILDING CODE 2015 - CHAPTER 13 & MICHIGAN ENERGY CODE 2015 - CHAPTERS 1 THROUGH 6 & MICHIGAN ENERGY CODE, PART 10A, RULES - ANSI/ASHRAE/IES STANDARD 90.1-2013  
EFFECTIVE SEPTEMBER 20, 2017; FUEL GAS: INTERNATIONAL FUEL GAS CODE 2015 - EFFECTIVE APRIL 20, 2017; FIRE: INTERNATIONAL FIRE CODE 2015, AS REFERENCED IN THE 2015 MICHIGAN BUILDING FIRE ALARM: NFPA 72 - 2013

NO.	SECTION	ISSUE	CODE REQUIREMENT	ACTUAL PROVIDED						
302	USE AND OCCUPANCY CLASSIFICATION		GROUP B, BUSINESS (OFFICE) - ACCESSORY USE GROUP S-1, MODERATE HAZARD STORAGE	GROUP B, BUSINESS (OFFICE) - ACCESSORY USE GROUP S-1, MODERATE HAZARD STORAGE						
503	GENERAL BUILDING HEIGHTS AND AREAS									
TABLE 503	ALLOWABLE HEIGHT	HEIGHT & STORY LIMITATIONS BASED ON CONSTRUCTION TYPE II-B (SEE SECTION 503) AND THE MORE RESTRICTIVE OCCUPANCY (S-1 MODERATE HAZARD STORAGE - SEE CHAPTER 9)	MAX. STORIES - 3 75' FOR FULLY SPRINKLER 55' FOR NON SPRINKLER	NEW THREE STORY - 34'-10" TOP OF PARAPET						
TABLE 503	ALLOWABLE BUILDING AREAS	AREA LIMITATIONS BASED ON CONSTRUCTION TYPE II-B (SEE SECTION 602) AND THE MORE RESTRICTIVE OCCUPANCY (S-1 MODERATE HAZARD STORAGE - SEE CHAPTER 9)	MAX. AREA (PER FLOOR) - 52,500 S.F.	*UTILIZE AREA MODIFICATION - SEE BELOW						
504.2	BUILDING HEIGHT - AUTOMATIC SPRINKLER SYSTEM INCREASE	WHERE A BUILDING IS EQUIPPED THROUGHOUT WITH AN APPROVED AUTOMATIC SPRINKLER SYSTEM, THE MAXIMUM NUMBER OF STORIES IS INCREASED BY ONE.	3 STORIES PERMITTED	THREE STORY BUILDINGS * HEIGHT MODIFICATION BY SPRINKLER NOT NECESSARY/ NOT USED						
506.3	BUILDING AREA - AUTOMATIC SPRINKLER SYSTEM INCREASE	AUTOMATIC SPRINKLER SYSTEM INCREASE (b)	100% < 1 STORY BLDGS.							
506.2.2	TABULAR BUILDING AREA	TABULAR BUILDING AREA BY OCCUPANCY, CONSTRUCTION TYPE AND SPRINKLER	S1- OCCUPANCY FULLY SPRINKLERED = 52,500 SF B-OCCUPANCY FULLY SPRINKLERED = 92,000 SF	BUILDING AREAS ARE UNDER TABULAR AREA AND DO NOT REQUIRE FRONTAGE BONUS-AREAS COMPLY WITH LISTED TABULAR AREAS AS FOLLOWS:  BUILDING (B) - 795 SF BUILDING 2 (S-1) - 29,191 SF						
508.2	ACCESSORY OCCUPANCIES	ACCESSORY OCCUPANCIES ARE THOSE OCCUPANCIES THAT ARE ANCILLARY TO THE MAIN OCCUPANCY OF THE BUILDING OR PORTION THEREOF. ACCESSORY OCCUPANCIES SHALL COMPLY WITH THE PROVISIONS OF SECTIONS 508.2.1 THROUGH 508.2.5.3		MAIN OCCUPANCY: GROUP S-1, MODERATE HAZARD STORAGE ACCESSORY OCCUPANCY: GROUP B, BUSINESS						
508.2.1	ACCESSORY OCCUPANCIES AREA LIMITATIONS	AGGREGATE ACCESSORY OCCUPANCIES SHALL NOT OCCUPY MORE THAN 10 PERCENT OF THE BUILDING AREA OF THE STORY IN WHICH THEY ARE LOCATED AND SHALL NOT EXCEED THE TABULAR VALUES IN TABLE 503, WITHOUT BUILDING AREA INCREASES IN ACCORDANCE WITH SECTION 506 FOR SUCH ACCESSORY OCCUPANCIES.	MAXIMUM AREA (PER FLOOR) FOR GROUP B OCCUPANCY: NOT REQUIRED	NOT PROVIDED						
508.2.2	OCCUPANCY CLASSIFICATION	OCCUPANCY CLASSIFICATION OF ACCESSORY OCCUPANCIES	ACCESSORY OCCUPANCIES SHALL BE INDIVIDUALLY CLASSIFY IN ACCORDANCE WITH SECTION 302.1. THE REQUIREMENTS OF THIS CODE SHALL APPLY TO EACH PORTION OF THE BUILDING BASED ON THE OCCUPANCY CLASSIFICATION OF THAT SPACE.	COMPLIES						
508.2.3	ALLOWABLE BUILDING AREA AND HEIGHT	ALLOWABLE BUILDING AREA AND HEIGHT FOR ACCESSORY OCCUPANCIES	THE ALLOWABLE BUILDING AREA AND HEIGHT OF THE BUILDING SHALL BE BASED ON THE ALLOWABLE BUILDING AREA AND HEIGHT FOR THE MAIN OCCUPANCY IN ACCORDANCE WITH SECTION 503.1.	COMPLIES						
508.2.4	SEPARATION OF OCCUPANCIES	SEPARATION OF MAIN AND ACCESSORY OCCUPANCIES	NO SEPARATION IS REQUIRED BETWEEN ACCESSORY OCCUPANCIES AND THE MAIN OCCUPANCY	COMPLIES						
602.2 TABLE 601	CONSTRUCTION CLASSIFICATION REQ'D. FIRE-RESISTANCE RATINGS FOR BUILDING ELEMENTS	CONSTRUCTION TYPE	TYPE II-B	TYPE II-B - NEW						
		STRUCTURAL FRAME	0 HOUR	0 HOUR						
		BEARING WALLS	0 HOUR	0 HOUR						
		EXTERIOR	0 HOUR	0 HOUR						
		INTERIOR	0 HOUR	0 HOUR						
		NON-BEARING WALLS	0 HOUR	0 HOUR						
		EXTERIOR (PER TABLE 602)	SEE TABLE 602 BELOW	SEE TABLE 602 BELOW						
		INTERIOR	0 HOUR	0 HOUR						
		FLOOR CONSTRUCTION	0 HOUR	0 HOUR						
		ROOF CONSTRUCTION	0 HOUR	0 HOUR						
TABLE 602	FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE	TABLE 602 FIRE SEP. DIST = 5 FT - 2 HRS FIRE SEP. DIST = 5' < 10 FT 1 HR FIRE SEP. DIST = 10' < 30 FT 1 HRS FIRE SEP. DIST = 30 FT 0 HRS	N/A N/A APPLIES APPLIES	NORTH WALL > 10' < 30 FT = 0 HRS (Type IIB Const.) SOUTH WALL > 10' < 30 FT = 0 HRS (Type IIB Const.) NORTH WALL > 10' < 30 FT = 0 HRS (Type IIB Const.) SOUTH WALL > 10' < 30 FT = 0 HRS (Type IIB Const.) WEST WALL > 30 FT = 0 HRS EAST WALL > 30 FT = 0 HRS						
TABLE 705.8	MAX. AREA OF EXTERIOR WALL OPENINGS	FIRE SEPARATION DISTANCE	VALUES GIVEN ARE % OF THE AREA OF THE EXTERIOR WALL PER STORY	FIRE SEP. DIST. > 30 FT, UNPROTECTED - NO LIMIT						
		0-3 FT	>3-5 FT	>5-10 FT	>10-15 FT	>15-20 FT	>20-25 FT	>25-30 FT	>30 FT	
		N.P.	10%	15%	25%	45%	70%	NO LIMIT	NO LIMIT	
		PROTECTED	15%	25%	45%	75%	NO LIMIT	NO LIMIT	NO LIMIT	
705.11	PARAPETS	PARAPET NOT REQUIRED WHERE THE WALL, DUE TO FIRE SEPARATION DISTANCE, IS NOT REQUIRED TO BE FIRE RESISTIVE OR IS PERMITTED UNPROTECTED OPENINGS OF AT LEAST 25%								PARAPET NOT REQUIRED @ NORTH, SOUTH, EAST & WEST WALLS
706	FIRE WALLS	706.4 - FIRE RESISTANCE RATING								3 HRS MIN.
708	SHAFT ENCLOSURES	708.4 - FIRE-RESISTANCE RATING								1 HR REQUIRED FOR ELEVATORS & SHAFTS
708.14.1	SHAFT ENCLOSURES	NEW ELEVATOR LOBBY								NOT REQUIRED
713.4.2.1	PENETRATIONS	PENETRATIONS OF NONFIRE-RESISTANT-RATED HORIZONTAL ASSEMBLIES								ELEVATOR LOBBY REQUIRED AT EACH FLOOR WHERE OPENING INTO A FIRE RESISTANCE RATED CORRIDOR, EXCEPT IN BUILDINGS LESS THAN 4 FLOORS THAT ARE PROTECTED THROUGHOUT W/ AUTOMATIC SPRINKLER SYSTEM.
713.4.1.3	PENETRATIONS	NEW DUCTS AND AIR TRANSFER OPENINGS								NON-COMBUSTIBLE PENETRATING ITEMS THAT CONNECT NOT MORE THAN THREE (3) STORIES ARE PERMITTED, PROVIDED THE ANNULAR SPACE IS FILLED TO RESIST THE FREE PASSAGE OF FLAME AND THE PRODUCTS OF COMBUSTION.
TABLE 715.4 715.4.6.1	OPENING PROTECTIVE OPENING PROTECTIVE	NEW FIRE DOOR RATING IN HORIZONTAL ASSEMBLIES NEW FIRE DOOR GLAZING VISION PANEL								ANNULAR SPACE AROUND PENETRATIONS SHALL BE FILLED WITH APPROVED NON-COMBUSTIBLE MATERIALS  ANNULAR SPACE AROUND DUCTS SHALL BE FILLED WITH APPROVED NON-COMBUSTIBLE MATERIALS PER 713.4.2.1
										1 HR BARRIERS / SHAFT EXIT ENCLOSURES - 1 HR FIRE DOOR/SHUTTER REQ'D MAX 100 SQUARE INCHES, MAX. DIMENSION 10" ON EACH SIDE
803	INTERIOR WALL AND CEILING									
TABLE 803.9	INTERIOR WALL AND CEILING FINISH REQUIREMENTS - SPRINKLERED	EXITS ENCLOSURES AND EXIT PASSAGEWAYS: GROUP 'S-1' GROUP 'B'								CLASS 'C' CLASS 'B'
		INDEXES: CLASS A FLAME SPREAD 0-25; SMOKE-DEVELOPED 0-450 CLASS B FLAME SPREAD 26-75; SMOKE-DEVELOPED 0-450 CLASS C FLAME SPREAD 76-200; SMOKE-DEVELOPED 0-450								CLASS 'C' - PROVIDED CLASS 'B' - PROVIDED
		CORRIDORS: GROUP 'S-1' GROUP 'B'								CLASS 'C' - PROVIDED CLASS 'C' - PROVIDED
		ROOMS & ENCLOSED SPACES: GROUP 'S-1' GROUP 'B'								CLASS 'C' - PROVIDED CLASS 'C' - PROVIDED
804	INTERIOR FLOOR FINISH REQUIREMENTS	VERTICAL EXITS, EXIT PASSAGEWAYS AND EXIT ACCESS CORRIDORS								CLASS II - PROVIDED
804.4	(TESTED & APPROVED BY AGENCY IN ACCORD W/ NFPA 253) (TEST, DOC IF-4 "PILL TEST" (C/SP 16 CFR PART 1630) OR WITH ASTM D 2859)	ALL OTHER AREAS (OR WHEN BUILDING IS SPRINKLERED)								CLASS II - PROVIDED

Owner:  
**CDK DEVELOPMENT, LLC**  
10570 SAVANNAH CT.  
HUNTLEY IL, 60142

Structural:  
**SOLID STEEL STRUCTURES**  
1257 BAUER ROAD  
SOMERVILLE OH. 45064

Civil:  
**FENN & ASSOCIATES, INC.**  
14933 COMMERCIAL DRIVE,  
SHELBY TOWNSHIP MI. 48315



Architect:

NO.	DATE	ISSUE DESCRIPTION
2	11-16-23	ISSUE FOR PC COMMENTS
1	08-15-22	ISSUE FOR PERMIT

Project Name:

**EAST HAMLIN ROAD STORAGE**

Project Location  
**1575 E. HAMLIN ROAD**  
ROCHESTER HILLS, MICHIGAN 48307

Drawing Name  
**CODE MATRIX**

Date: \_\_\_\_\_ Seal: \_\_\_\_\_

Drawing No. **A0.0**



GENERAL NOTES

A. DIMENSIONS ARE TO FINISHED SURFACE UNLESS OTHERWISE INDICATED

B. REFER TO STORAGE UNIT DOOR SCHEDULE FOR STORAGE DOOR SIZES (A)(B)(C)(D)

C. SECURITY CAMERA

D. KEY PAD SECURITY CAMERA

E. 360° SWIVEL SECURITY CAMERA

F. KEY PAD

G. INTERCOM

H. ALL DOOR JAMBS TO BE LOCATED 4" PERPENDICULAR TO ADJACENT WALL TYP. U.N.O.



UNIT MIX							
Unit Type	W (short)	L (long)	Area (sf)	Total # of Units	Total Area (sf)	Unit % of Total	Total Per Type
A	5	5	25	40	1000	7.2%	40
B	5	7.5	37.5	58	2175	10.5%	58
C	5	10	50	86	4300	15.6%	86
D	7.5	10	75	29	2175	5.2%	29
E	10	10	100	118	11800	21.3%	118
F	10	15	150	122	18300	22.1%	122
G	10	20	200	56	11200	10.1%	56
H	10	25	250	33	8250	6.0%	33
I	10	30	300	11	3300	2.0%	11
Total				553	62,500	100.0%	100.0%
Building Gross Sq Ft							87,573
Miscellaneous Storage Sq Ft							1,000
Actual Net Storage Sq Ft							63,500
Actual Rough Efficiency							72.51%
Actual Average Unit Size Sq Ft							114.8

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Architect:

NO.	DATE	ISSUE DESCRIPTION
1	08-15-22	ISSUE FOR PERMIT

Project Name:

**EAST HAMLIN ROAD STORAGE**

Project Location  
**1575 E. HAMLIN ROAD**  
 ROCHESTER HILLS, MICHIGAN 48307

Drawing Name  
**FIRST FLOOR PLAN**

Date:

Seal

Drawing No.

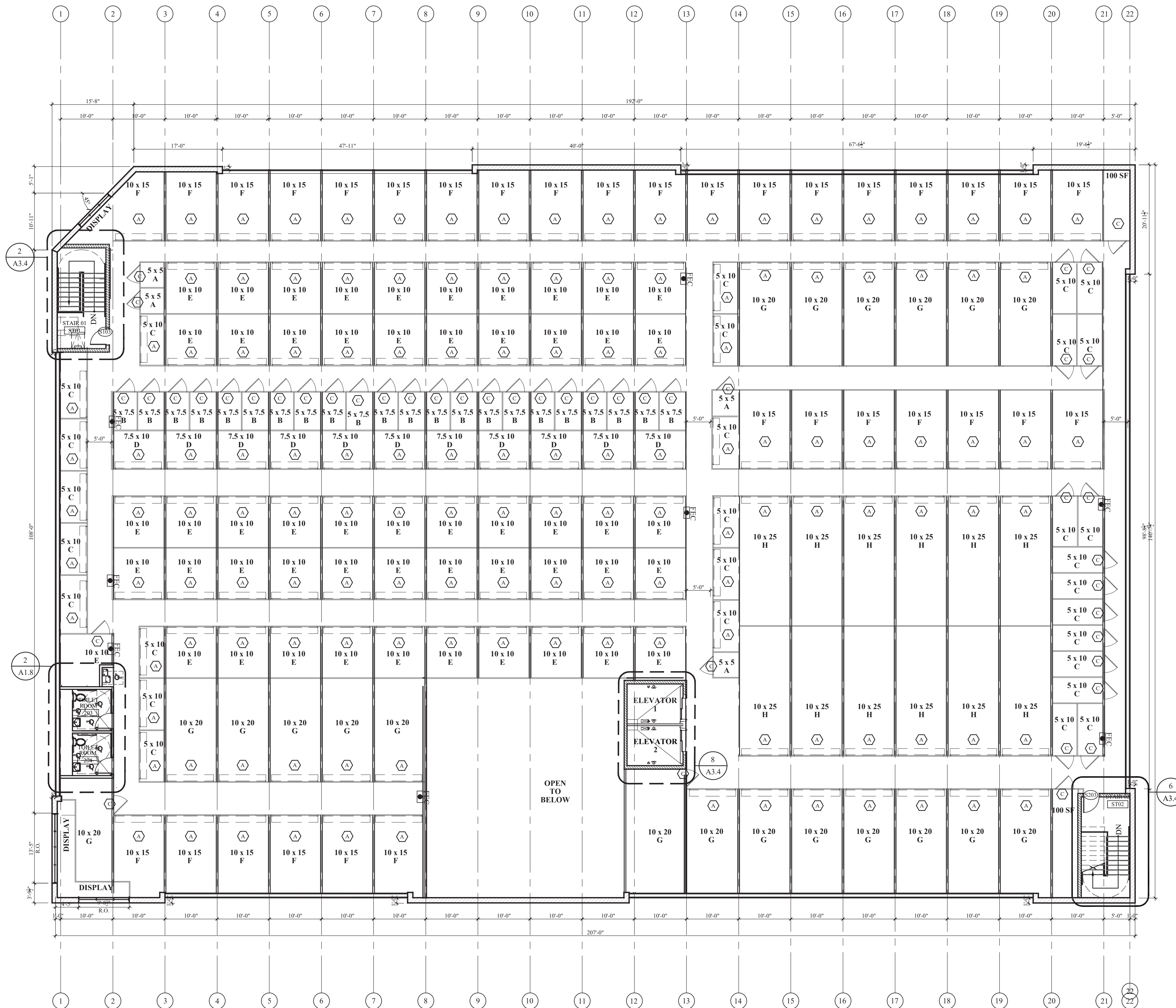
**A1.1**

CITY FILE #23-0002  
 SECTION 24



**1** FIRST FLOOR PLAN  
 A1.1 SCALE: 3/32"=1'-0"





- GENERAL NOTES**
- A. DIMENSIONS ARE TO FINISHED SURFACE UNLESS OTHERWISE INDICATED
  - B. REFER TO STORAGE UNIT DOOR SCHEDULE FOR STORAGE DOOR SIZES (A)(B)(C)(D)
  - C. SECURITY CAMERA
  - D. KEY PAD SECURITY CAMERA
  - E. 360° SWIVEL SECURITY CAMERA
  - F. KEY PAD
  - G. INTERCOM
  - H. ALL DOOR JAMBS TO BE LOCATED 4" PERPENDICULAR TO ADJACENT WALL TYP. U.N.O.

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 14933 COMMERCIAL DRIVE,  
 SHELBY TOWNSHIP MI. 48315



Architect:

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1	08-15-22	ISSUE FOR PERMIT

Project Name:

**EAST HAMLIN ROAD STORAGE**

Project Location  
**1575 E. HAMLIN ROAD**  
 ROCHESTER HILLS, MICHIGAN 48307

Drawing Name  
**SECOND FLOOR PLAN**

Date: \_\_\_\_\_ Seal: \_\_\_\_\_

Drawing No.  
**A1.2**



**1** SECOND FLOOR PLAN  
 A1.2 SCALE: 3/32"=1'-0"

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  - H. ALL DOOR JAMBS TO BE LOCATED 4" PERPENDICULAR TO ADJACENT WALL TYP. U.N.O.

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Project Name:  
**EAST HAMLIN ROAD STORAGE**

Project Location  
**1575 E. HAMLIN ROAD**  
 ROCHESTER HILLS, MICHIGAN 48307

Drawing Name  
**THIRD FLOOR PLAN**

Date: \_\_\_\_\_ Seal: \_\_\_\_\_

Drawing No.  
**A1.3**

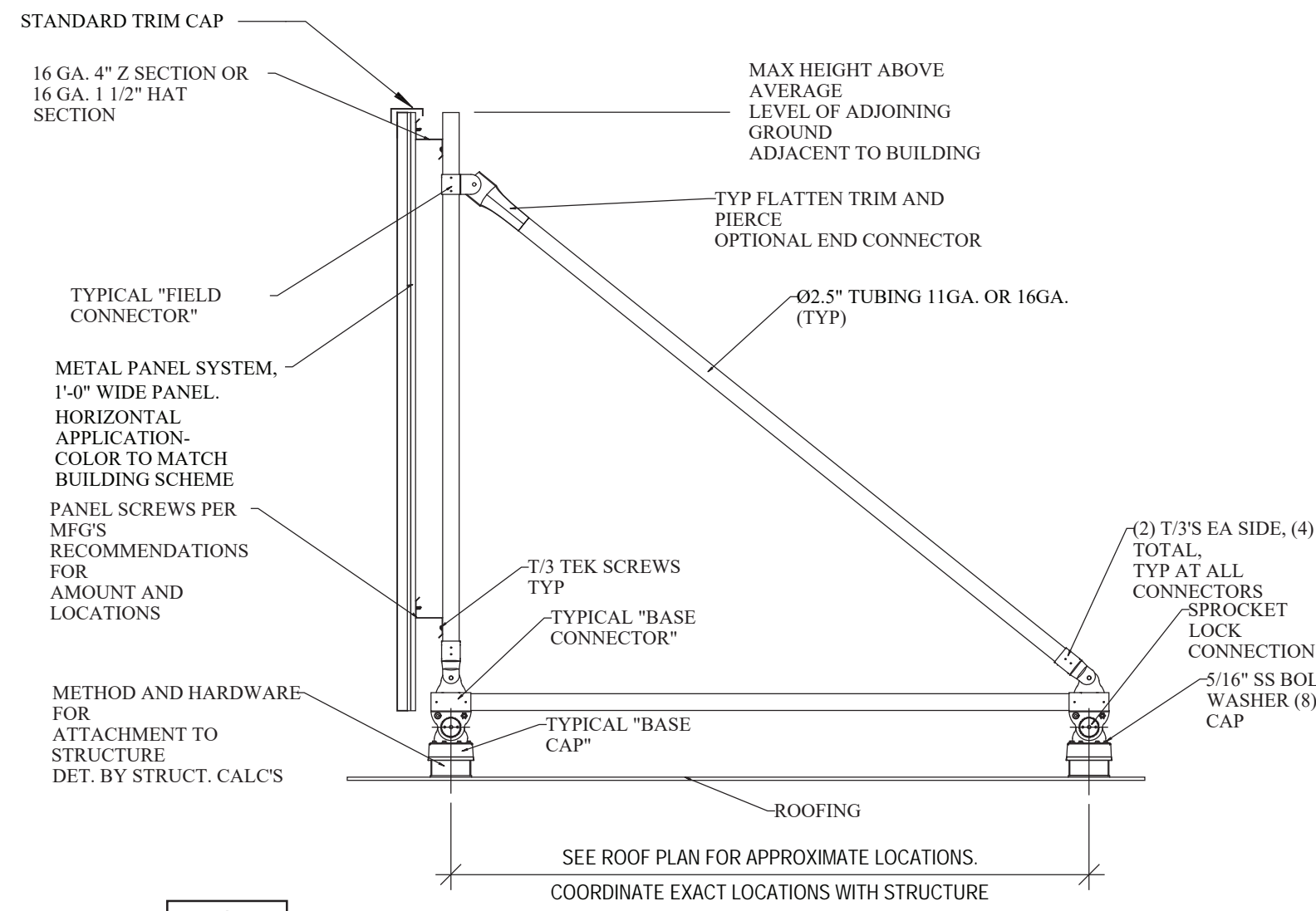


**1** THIRD FLOOR PLAN  
 A1.3 SCALE: 3/32"=1'-0"

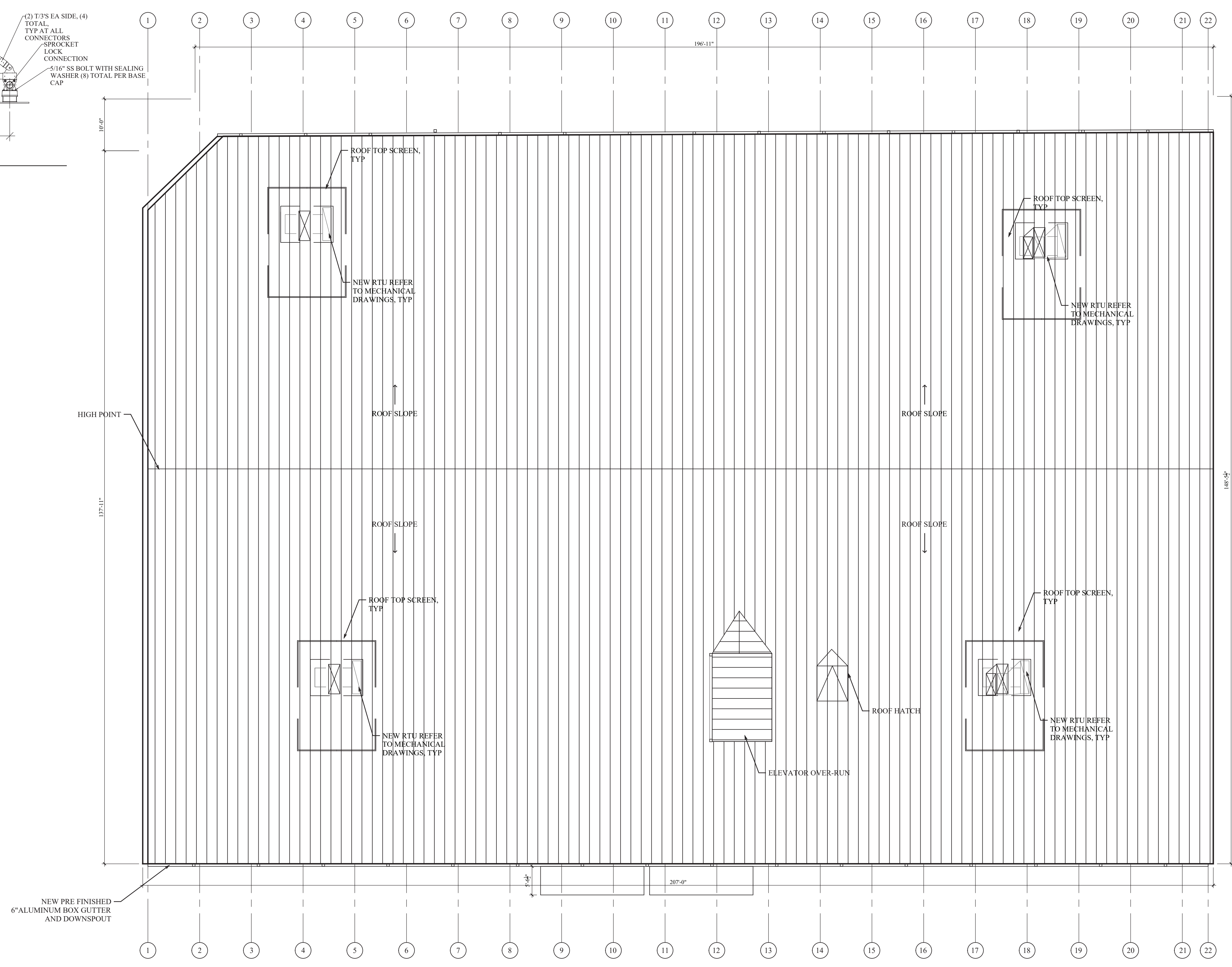
CITY FILE #23-0002  
 SECTION 24







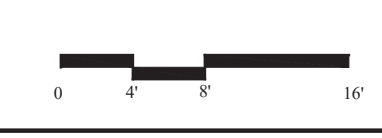
**2** ROOF SCREEN  
A1.7 SCALE: 3/32"=1'-0"



NOTE:  
ALL ROOF SLOPES TO BE A  
MINIMUM OF 1/4" PER 1'-0". TYP.

NOTE:  
ALL NEW ROOF SURFACES  
APPLICATIONS TO BE  
CLASS 'B' OR BETTER

NEW PRE-FINISHED  
6" ALUMINUM BOX GUTTER  
AND DOWNSPOUT



**1** ROOF PLAN  
A1.7 SCALE: 3/32"=1'-0"



CITY FILE #23-0002  
SECTION 24

Owner:  
**CDK DEVELOPMENT, LLC**  
10570 SAVANNAH CT.  
HUNTLEY IL, 60142

Structural:  
**SOLID STEEL STRUCTURES**  
1257 BAUER ROAD  
SOMERVILLE OH. 45064

Civil:  
**FENN & ASSOCIATES, INC.**  
14933 COMMERCIAL DRIVE,  
SHELBY TOWNSHIP MI. 48315



Architect:

NO.	DATE	ISSUE DESCRIPTION
1	08-15-22	ISSUE FOR PERMIT

Project Name:  
**EAST HAMLIN ROAD STORAGE**

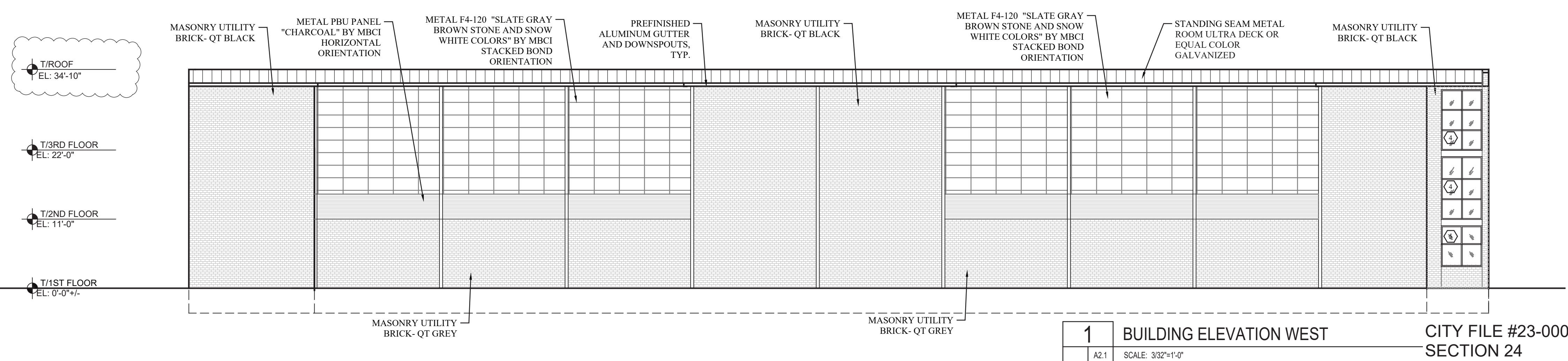
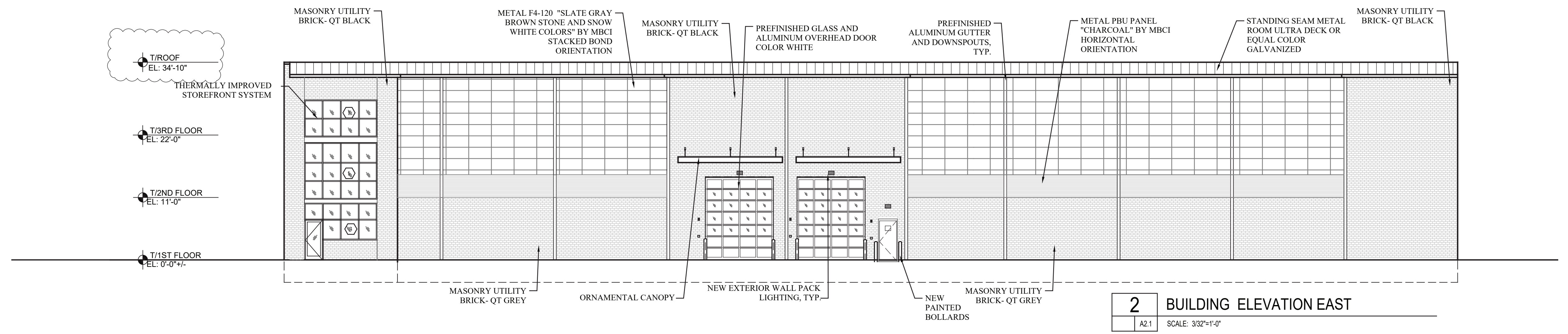
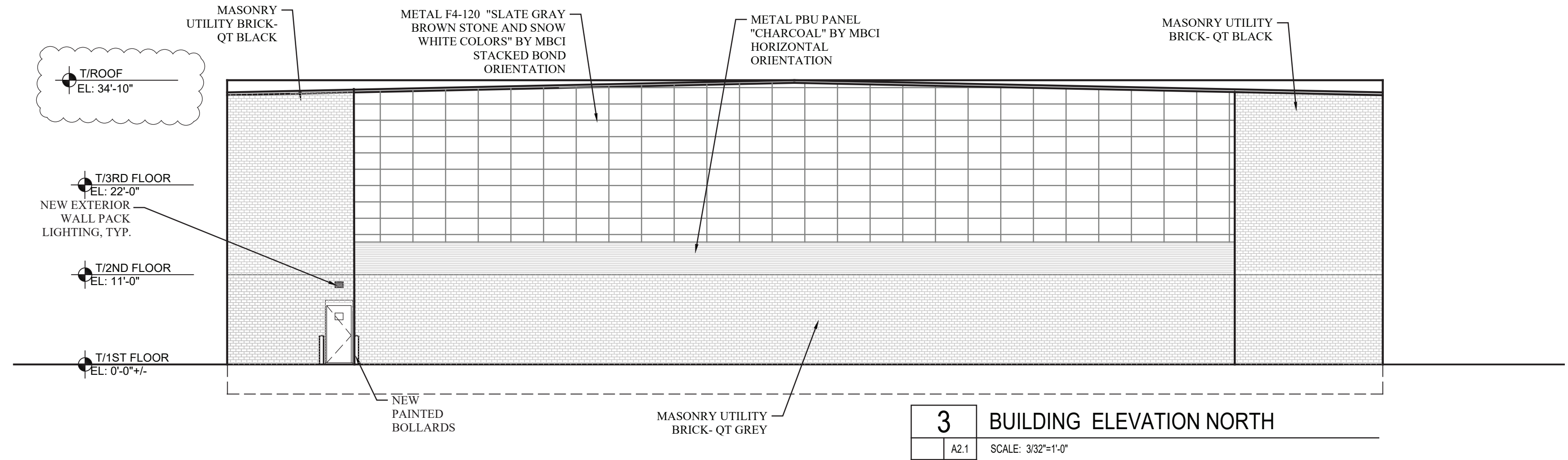
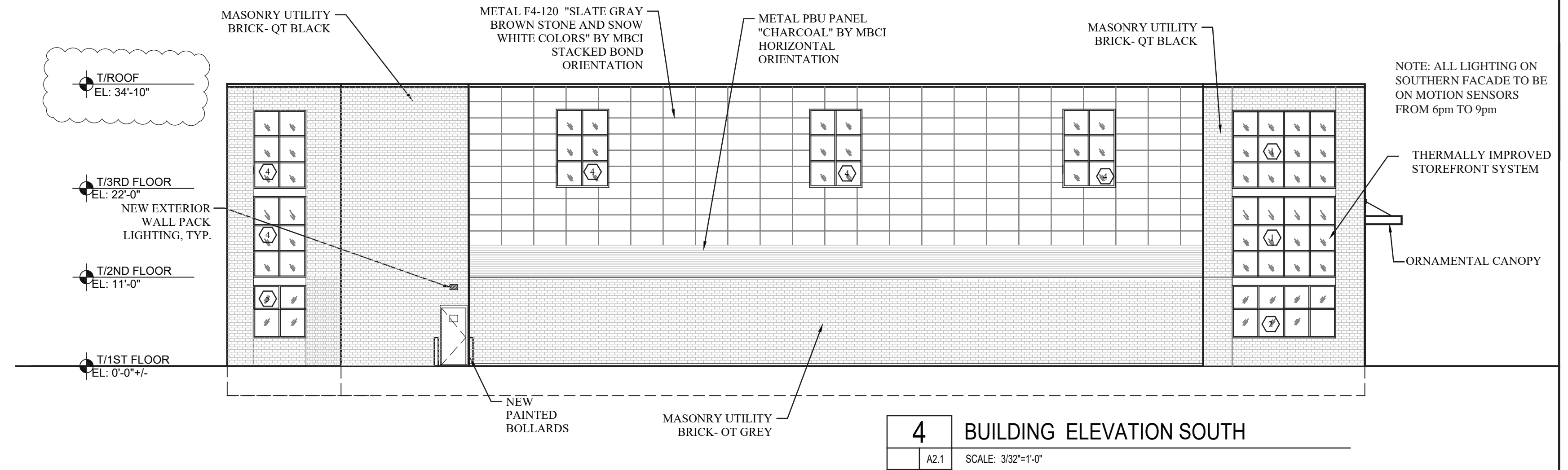
Project Location:  
**1575 E. HAMLIN ROAD**  
ROCHESTER HILLS, MICHIGAN 48307

Drawing Name:  
**ROOF PLAN**

Date: Seal:

Drawing No.  
**A1.7**





CITY FILE #23-0002  
SECTION 24

Owner:  
**CDK DEVELOPMENT, LLC**  
10570 SAVANNAH CT.  
HUNTLEY IL, 60142

Structural:  
**SOLID STEEL STRUCTURES**  
1257 BAUER ROAD  
SOMERVILLE OH, 45064

Civil:  
**FENN & ASSOCIATES, INC.**  
14933 COMMERCIAL DRIVE,  
SHELBY TOWNSHIP MI, 48315



Architect:

NO.	DATE	ISSUE DESCRIPTION
2	11-16-23	ISSUE FOR PC COMMENTS
1	08-15-22	ISSUE FOR PERMIT

Project Name:

**EAST HAMLIN ROAD STORAGE**

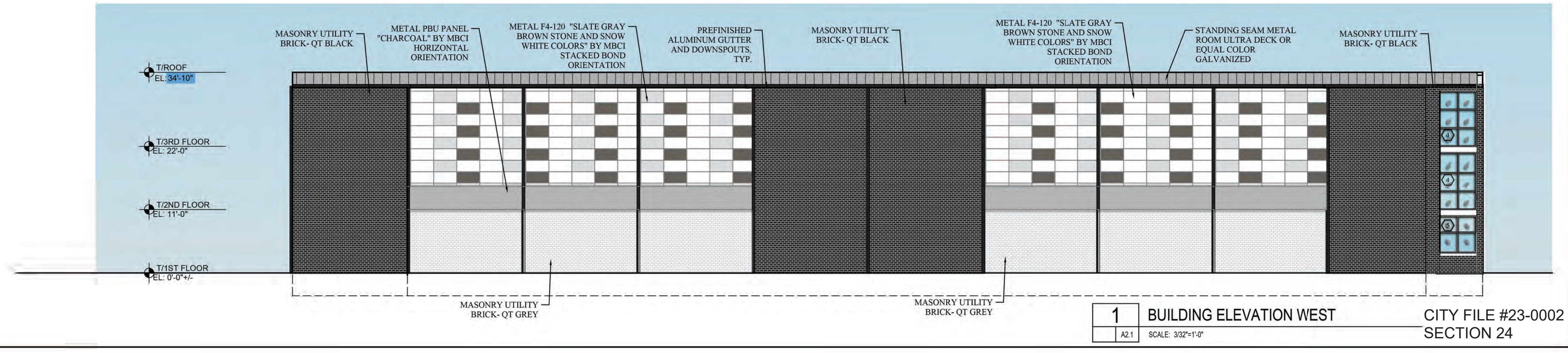
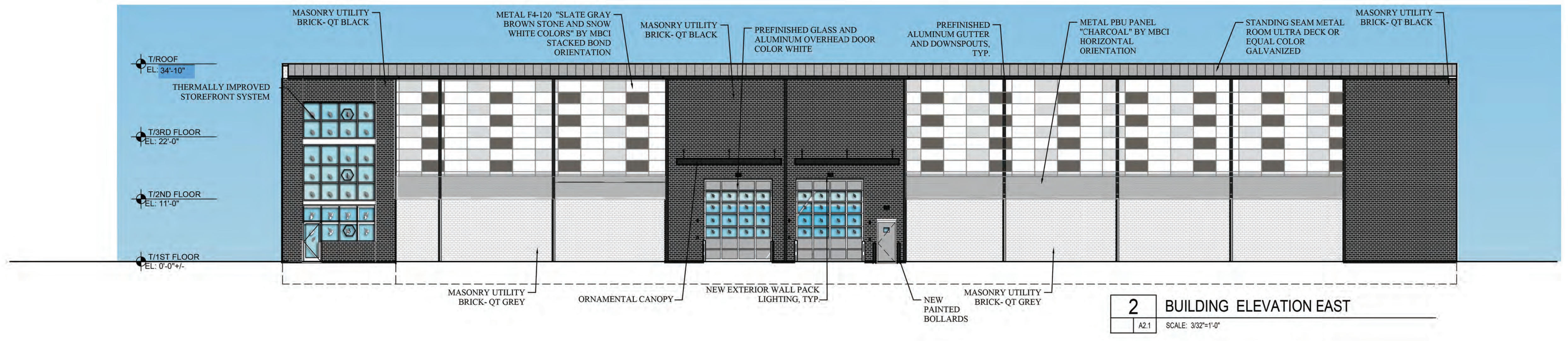
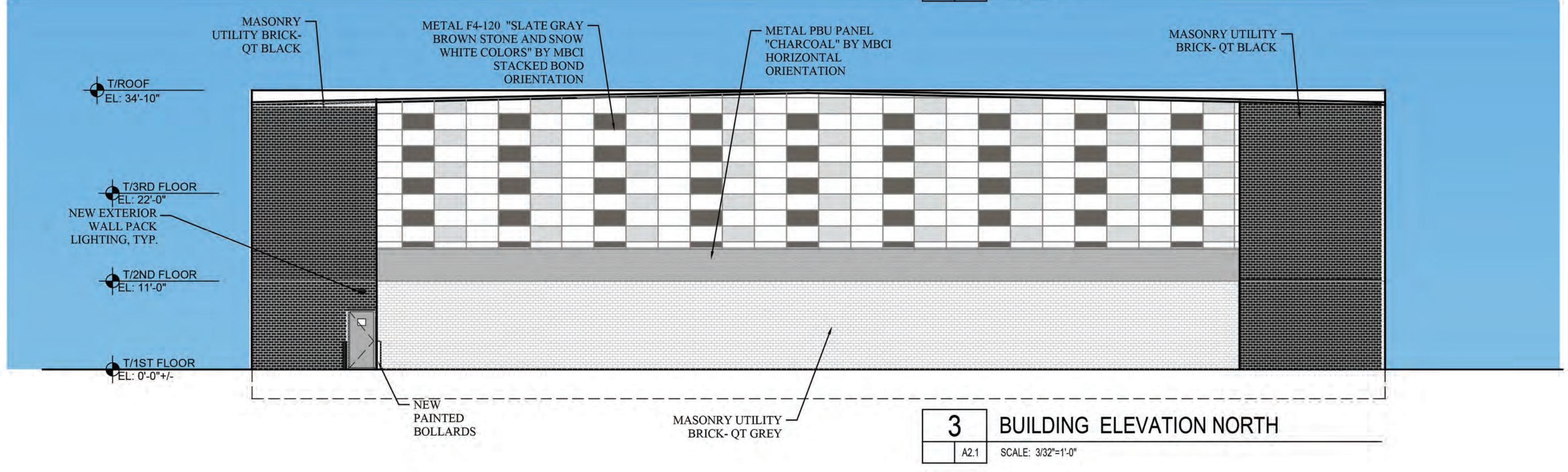
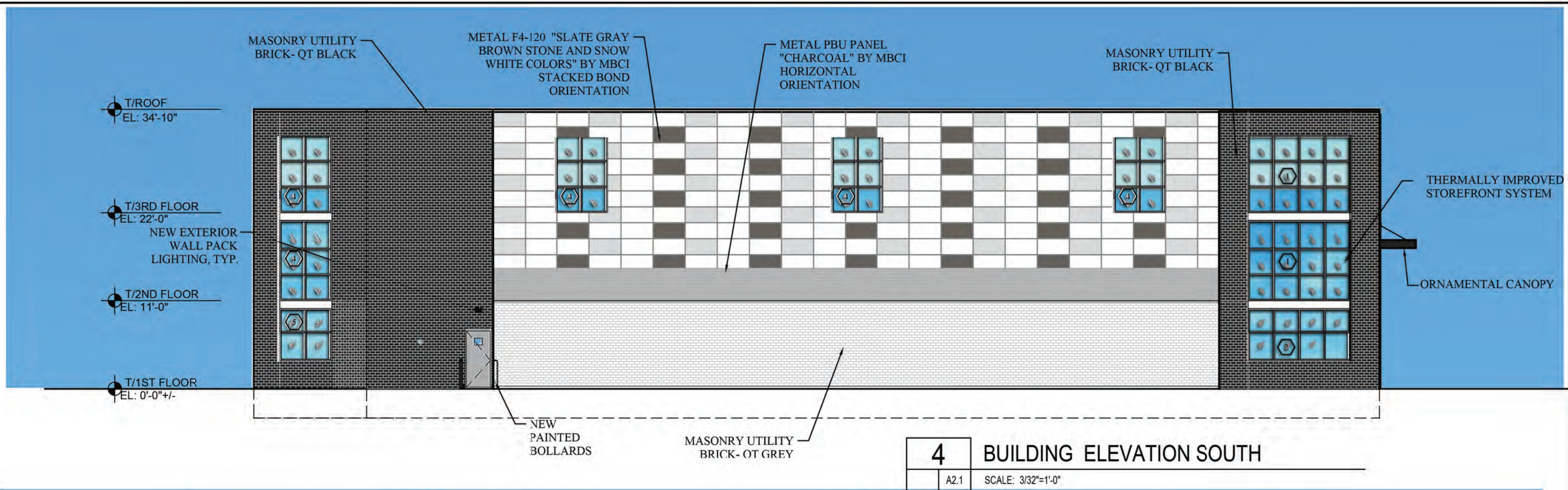
Project Location  
**1575 E. HAMLIN ROAD**  
ROCHESTER HILLS, MICHIGAN 48307

Drawing Name  
**BUILDING EXTERIOR ELEVATIONS**

Date: \_\_\_\_\_ Seal: \_\_\_\_\_

Drawing No.  
**A2.1**





CITY FILE #23-0002 SECTION 24

Owner:  
**CDK DEVELOPMENT, LLC**  
 10570 SAVANNAH CT.  
 HUNTLEY IL, 60142

Structural:  
**SOLID STEEL STRUCTURES**  
 1257 BAUER ROAD  
 SOMERVILLE OH, 45064

Civil:  
**FENN & ASSOCIATES, INC.**  
 14933 COMMERCIAL DRIVE,  
 SHELBY TOWNSHIP MI, 48315



Architect:

NO.	DATE	ISSUE DESCRIPTION
1	08-15-22	ISSUE FOR PERMIT

Project Name:  
**EAST HAMLIN ROAD STORAGE**

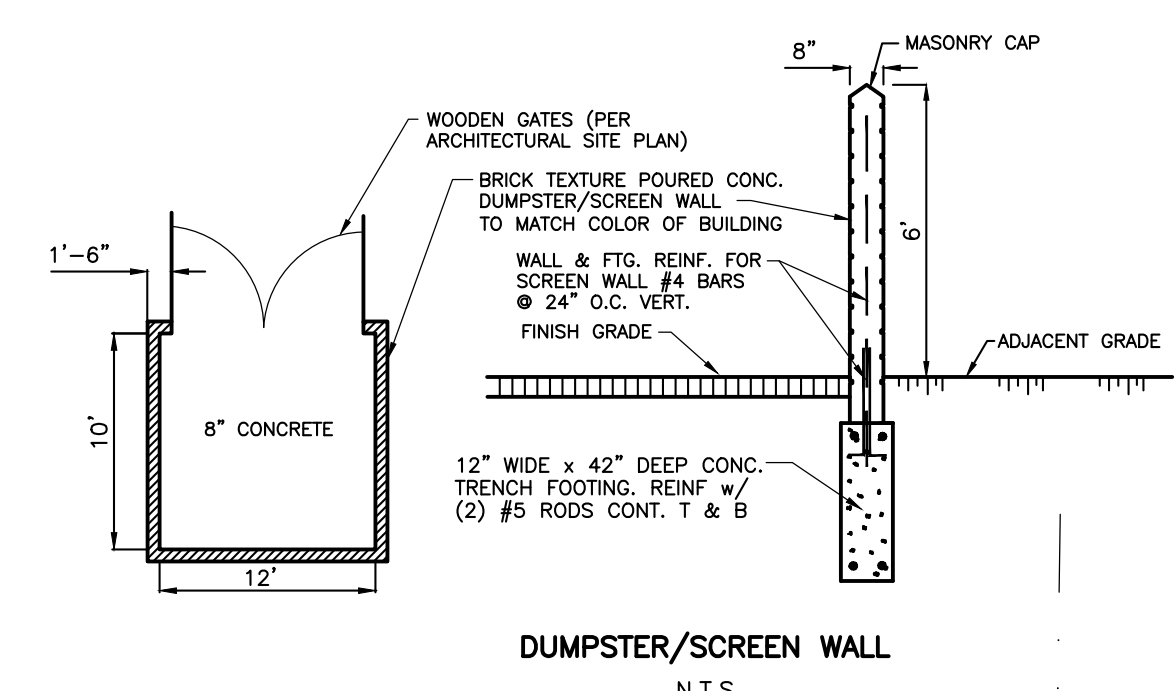
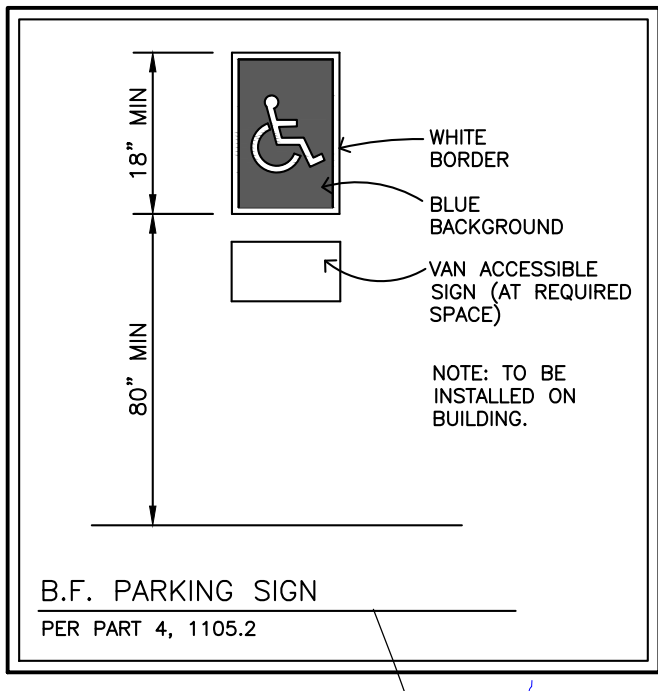
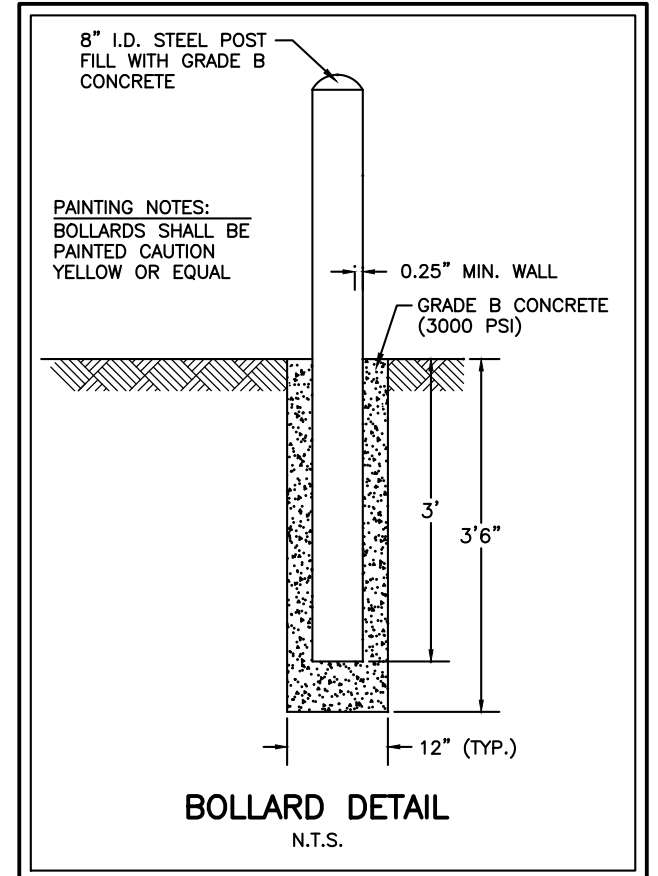
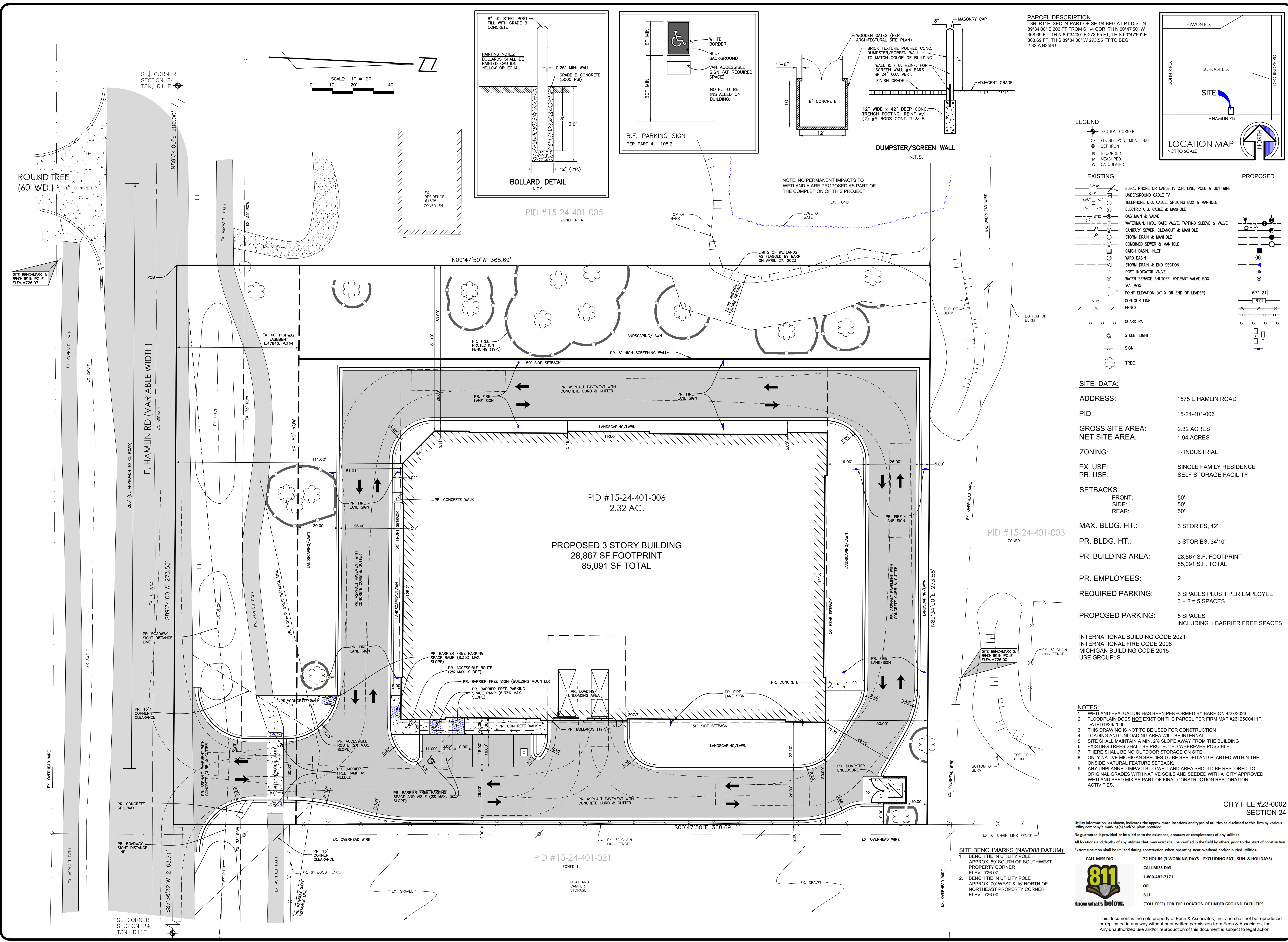
Project Location  
**1575 E. HAMLIN ROAD**  
 ROCHESTER HILLS, MICHIGAN 48307

Drawing Name  
**BUILDING EXTERIOR ELEVATIONS**

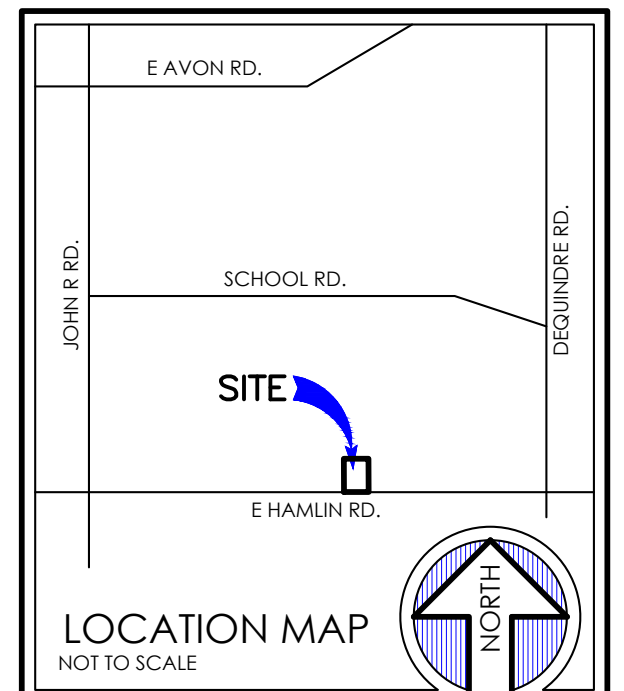
Date: Seal:

Drawing No.  
**A2.1**





**PARCEL DESCRIPTION**  
 T3N, R11E, SEC 24 PART OF SE 1/4 BEG AT PT DIST N 89°34'00" E 200 FT FROM S 1/4 COR, TH N 00°47'50" W 368.69 FT, TH N 89°34'00" E 273.55 FT, TH S 00°47'50" E 368.69 FT, TH S 89°34'00" W 273.55 FT TO BEG 2.32 A B39DD



**LEGEND**

**EXISTING**

- SECTION CORNER
- FOUND IRON, MON., NAIL
- SET IRON
- RECORDED
- MEASURED
- CALCULATED

**PROPOSED**

- ELEC., PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
- UNDERGROUND CABLE TV
- TELEPHONE U.G. CABLE & MANHOLE
- ELECTRIC U.G. CABLE & MANHOLE
- GAS MAIN & VALVE
- WATERMAIN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
- SANITARY SEWER, CLEANOUT & MANHOLE
- STORM DRAIN & MANHOLE
- COMBINED SEWER & MANHOLE
- CATCH BASIN, INLET
- YARD BASIN
- STORM DRAIN & END SECTION
- POST INDICATOR VALVE
- WATER SERVICE SHUTOFF, HYDRANT VALVE BOX
- MAILBOX
- FRONT ELEVATION (AT X OR END OF LEADER)
- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SIGN
- TREE

**SITE DATA:**

**ADDRESS:** 1575 E HAMLIN ROAD

**PID:** 15-24-401-006

**GROSS SITE AREA:** 2.32 ACRES

**NET SITE AREA:** 1.94 ACRES

**ZONING:** I - INDUSTRIAL

**EX. USE:** SINGLE FAMILY RESIDENCE

**PR. USE:** SELF STORAGE FACILITY

**SETBACKS:** FRONT: 50', SIDE: 50', REAR: 50'

**MAX. BLDG. HT.:** 3 STORIES, 42'

**PR. BLDG. HT.:** 3 STORIES, 34'10"

**PR. BUILDING AREA:** 28,867 S.F. FOOTPRINT, 85,091 S.F. TOTAL

**PR. EMPLOYEES:** 2

**REQUIRED PARKING:** 3 SPACES PLUS 1 PER EMPLOYEE, 3 + 2 = 5 SPACES

**PROPOSED PARKING:** 5 SPACES INCLUDING 1 BARRIER FREE SPACES

**INTERNATIONAL BUILDING CODE 2021**  
**INTERNATIONAL FIRE CODE 2006**  
**MICHIGAN BUILDING CODE 2015**  
**USE GROUP: S**

**Fenn & Associates, Inc.**  
 Land Surveying and Civil Engineering  
 14933 Commercial Drive, Shelby Township, MI 48315  
 Phone: 586-254-9577 Fax: 586-254-9020  
 www.fennsurveying.com

**PRELIMINARY SITE PLAN**  
**1575 E HAMLIN RD**  
 PART OF THE SE 1/4 OF SECTION 24, T3N, R11E  
 ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

**DISTRIBUTION**

- PRELIMINARY
- APPROVAL
- CONSTRUCTION
- AS-BUILT

**REVISIONS**

DATE	REMARKS
04/17/23	PER CITY
06/30/23	PER CITY
08/08/23	PER CITY
09/19/23	PER CITY
11/17/23	PER CITY



**CLIENT**  
 CDK DEVELOPMENT  
 10570 SAVANNAH CT.  
 HUNTLEY, IL 60142  
 CONTACT: STEVE OSBORNE  
 PHONE: 224-249-9477

**PROJECT NAME**  
 1575 E HAMLIN ROAD

**PROJECT NUMBER**  
 C22-049.07

**SHEET NAME**  
 PRELIMINARY SITE PLAN

**DRAWING SCALE:** 1" = 20'

**SHEET SIZE:** 24X36

**DATE:** 2/2/23

**PROJECT MANAGER:** JJS, PE

**DESIGNED BY:** JJS, PE

**DRAWN BY:** JJS, PE

**FIELD BY:** BHVA

**CHECKED BY:** JSR, PE/JJS, PE

**SHEET NUMBER**  
 1 OF 6

- NOTES:**
- WETLAND EVALUATION HAS BEEN PERFORMED BY BARR ON 4/27/2023.
  - FLOODPLAIN DOES NOT EXIST ON THE PARCEL PER FIRM MAP #2612500411F, DATED 9/29/2006
  - THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION
  - LOADING AND UNLOADING AREA WILL BE INTERNAL
  - SITE SHALL MAINTAIN A MIN. 2% SLOPE AWAY FROM THE BUILDING
  - EXISTING TREES SHALL BE PROTECTED WHEREVER POSSIBLE
  - THERE SHALL BE NO OUTDOOR STORAGE ON SITE
  - ONLY NATIVE MICHIGAN SPECIES TO BE SEEDED AND PLANTED WITHIN THE ON-SITE NATURAL FEATURE SETBACK
  - ANY UNPLANNED IMPACTS TO WETLAND AREA SHOULD BE RESTORED TO ORIGINAL GRADES WITH NATIVE SOILS AND SEEDED WITH A CITY APPROVED WETLAND SEED MIX AS PART OF FINAL CONSTRUCTION RESTORATION ACTIVITIES.

Utility information, as shown, indicates the approximate locations and types of utilities as disclosed to this firm by various utility company's markings and/or plans provided.

No guarantee is provided or implied as to the existence, accuracy or completeness of any utilities.

All locations and depths of any utilities that may exist shall be verified in the field by others prior to the start of construction.

Extreme caution shall be utilized during construction when operating near overhead and/or buried utilities.

**CALL MISS DIG 72 HOURS (3 WORKING DAYS - EXCLUDING SAT., SUN. & HOLIDAYS)**

**811** CALL MISS DIG 1-800-482-7171 OR 811 (TOLL FREE) FOR THE LOCATION OF UNDER GROUND FACILITIES

Know what's below.

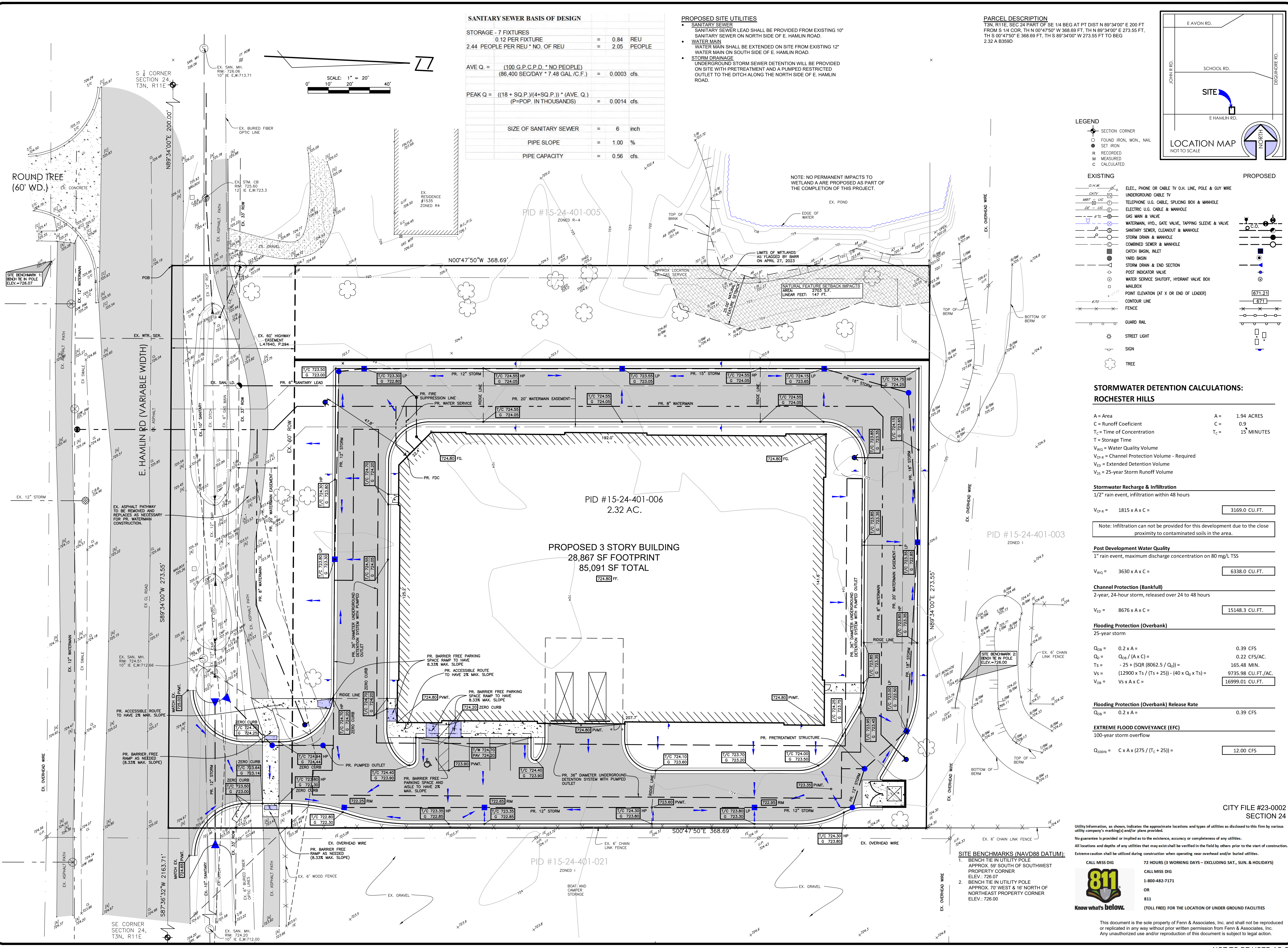
- SITE BENCHMARKS (NAVD88 DATUM):**
- BENCH TIE IN UTILITY POLE APPROX. 59' SOUTH OF SOUTHWEST PROPERTY CORNER ELEV.: 726.07
  - BENCH TIE IN UTILITY POLE APPROX. 70' WEST & 16' NORTH OF NORTHEAST PROPERTY CORNER ELEV.: 726.00

CITY FILE #23-0002 SECTION 24

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NOT TO BE USED AS CONSTRUCTION DRAWINGS





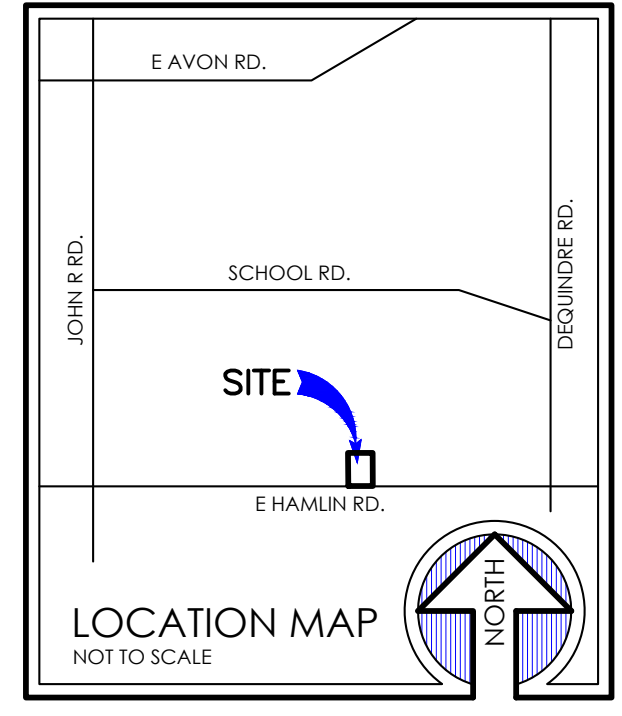
**SANITARY SEWER BASIS OF DESIGN**

STORAGE - 7 FIXTURES	
0.12 PER FIXTURE	= 0.84 REU
2.44 PEOPLE PER FIXTURE * NO. OF REU	= 2.05 PEOPLE
AVE Q. = $(100 \text{ G.P.C.P.D.} \cdot \text{NO. PEOPLE}) / (86,400 \text{ SEC/DAY} \cdot 7.48 \text{ GAL./C.F.}) = 0.0003 \text{ cfs.}$	
PEAK Q. = $((18 + \text{SQ.P.}) / (4 + \text{SQ.P.})) \cdot (\text{AVE. Q.})$ (P=POP. IN THOUSANDS) = 0.0014 cfs.	
SIZE OF SANITARY SEWER	= 6 inch
PIPE SLOPE	= 1.00 %
PIPE CAPACITY	= 0.56 cfs.

**PROPOSED SITE UTILITIES**

- SANITARY SEWER**  
SANITARY SEWER LEAD SHALL BE PROVIDED FROM EXISTING 10" SANITARY SEWER ON NORTH SIDE OF E. HAMLIN ROAD.
- WATER MAIN**  
WATER MAIN SHALL BE EXTENDED ON SITE FROM EXISTING 12" WATER MAIN ON SOUTH SIDE OF E. HAMLIN ROAD.
- STORM DRAINAGE**  
UNDERGROUND STORM SEWER DETENTION WILL BE PROVIDED ON SITE WITH PRETREATMENT AND A PUMPED RESTRICTED OUTLET TO THE DITCH ALONG THE NORTH SIDE OF E. HAMLIN ROAD.

**PARCEL DESCRIPTION**  
T3N, R11E, SEC 24 PART OF SE 1/4 BEG AT PT DIST N 89°34'00" E 200 FT FROM S 1/4 COR. TH N 00°47'50" W 368.69 FT, TH N 89°34'00" E 273.55 FT, TH S 00°47'50" E 368.69 FT, TH S 89°34'00" W 273.55 FT TO BEG 2.32 A. 6559D



**LEGEND**

EXISTING	PROPOSED
SECTION CORNER	ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
FOUND IRON, MON., NAIL	UNDERGROUND CABLE TV
SET IRON	TELEPHONE U.G. CABLE, SPLICING BOX & MANHOLE
RECORDED	ELECTRIC U.G. CABLE & MANHOLE
MEASURED	GAS MAIN & VALVE
CALCULATED	WATERMAN, HYD., GATE VALVE, TAPPING SLEEVE & VALVE
	SANITARY SEWER, CLEANOUT & MANHOLE
	STORM DRAIN & MANHOLE
	COMBINED SEWER & MANHOLE
	CATCH BASIN, INLET
	YARD BASIN
	STORM DRAIN & END SECTION
	POST INDICATOR VALVE
	WATER SERVICE SHUTOFF, HYDRANT VALVE BOX
	MAILBOX
	POINT ELEVATION (AT X OR END OF LEADER)
	CONTOUR LINE
	FENCE
	GUARD RAIL
	STREET LIGHT
	SIGN
	TREE

**STORMWATER DETENTION CALCULATIONS: ROCHESTER HILLS**

A = Area = 1.94 ACRES  
 C = Runoff Coefficient = 0.9  
 T<sub>c</sub> = Time of Concentration = 15 MINUTES  
 T = Storage Time  
 V<sub>WD</sub> = Water Quality Volume  
 V<sub>DP</sub> = Channel Protection Volume - Required  
 V<sub>ED</sub> = Extended Detention Volume  
 V<sub>25</sub> = 25-year Storm Runoff Volume

**Stormwater Recharge & Infiltration**

1/2" rain event, infiltration within 48 hours  
 V<sub>DP</sub> = 1815 x A x C = 3169.0 CU.FT.

Note: Infiltration can not be provided for this development due to the close proximity to contaminated soils in the area.

**Post Development Water Quality**

1" rain event, maximum discharge concentration on 80 mg/L TSS  
 V<sub>WD</sub> = 3630 x A x C = 6338.0 CU.FT.

**Channel Protection (Bankfull)**

2-year, 24-hour storm, released over 24 to 48 hours  
 V<sub>ED</sub> = 8676 x A x C = 15148.3 CU.FT.

**Flooding Protection (Overbank)**

25-year storm  
 Q<sub>0.8</sub> = 0.2 x A = 0.39 CFS  
 Q<sub>0.8</sub> = Q<sub>0.8</sub> / (A x C) = 0.22 CFS/AC.  
 T<sub>s</sub> = -25 + (SQR (8062.5 / Q<sub>0.8</sub>)) = 165.48 MIN.  
 V<sub>s</sub> = (12900 x T<sub>s</sub> / (T<sub>s</sub> + 25)) - (40 x Q<sub>0.8</sub> x T<sub>s</sub>) = 9735.98 CU.FT./AC.  
 V<sub>0.8</sub> = V<sub>s</sub> x A x C = 16999.01 CU.FT.

**Flooding Protection (Overbank) Release Rate**

Q<sub>0.8</sub> = 0.2 x A = 0.39 CFS

**EXTREME FLOOD CONVEYANCE (EFC)**

100-year storm overflow  
 Q<sub>100IN</sub> = C x A x (275 / (T<sub>c</sub> + 25)) = 12.00 CFS

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 Phone: 586-254-9377 Fax: 586-254-9020  
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**PRELIMINARY SITE PLAN**  
**1575 E HAMLIN RD**  
 PART OF THE SE 1/4 OF SECTION 24, T3N, R11E  
 ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

**DISTRIBUTION**

PRELIMINARY	
APPROVAL	
CONSTRUCTION	
AS-BUILT	

**REVISIONS**

DATE	REMARKS
04/17/23	PER CITY
06/30/23	PER CITY
08/08/23	PER CITY
09/19/23	PER CITY
11/17/23	PER CITY

CLIENT  
 CDK DEVELOPMENT  
 10570 SAVANNAH CT.  
 HUNTLEY, IL 60142  
 CONTACT: STEVE OSBORN  
 PHONE: 224-249-9477

PROJECT NAME  
**1575 E HAMLIN ROAD**

PROJECT NUMBER  
**C22-049.07**

SHEET NAME  
**PRELIMINARY UTILITY & GRADING PLAN**

**DRAWING SCALE:** 1" = 20'

**SHEET SIZE:** 24X36

**DATE:** 2/2/23

**PROJECT MANAGER:** JJS, PE

**DESIGNED BY:** JJS, PE

**DRAWN BY:** JJS, PE

**FIELD BY:** BHVA

**CHECKED BY:** JSR, PE/JJS, PE

SHEET NUMBER  
**2 OF 6**

Utility Information, as shown, indicates the approximate locations and types of utilities as disclosed to this firm by various utility company's marking(s) and/or plans provided.  
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**811** CALL MISS DIG 1-800-482-7171  
 OR 811  
 (TOLL FREE) FOR THE LOCATION OF UNDER GROUND FACILITIES

**Know what's below.**

**SITE BENCHMARKS (NAVD88 DATUM):**

- BENCH TIE IN UTILITY POLE APPROX. 50' SOUTH OF SOUTHWEST PROPERTY CORNER ELEV.: 726.07
- BENCH TIE IN UTILITY POLE APPROX. 70' WEST & 16' NORTH OF NORTHEAST PROPERTY CORNER ELEV.: 726.00

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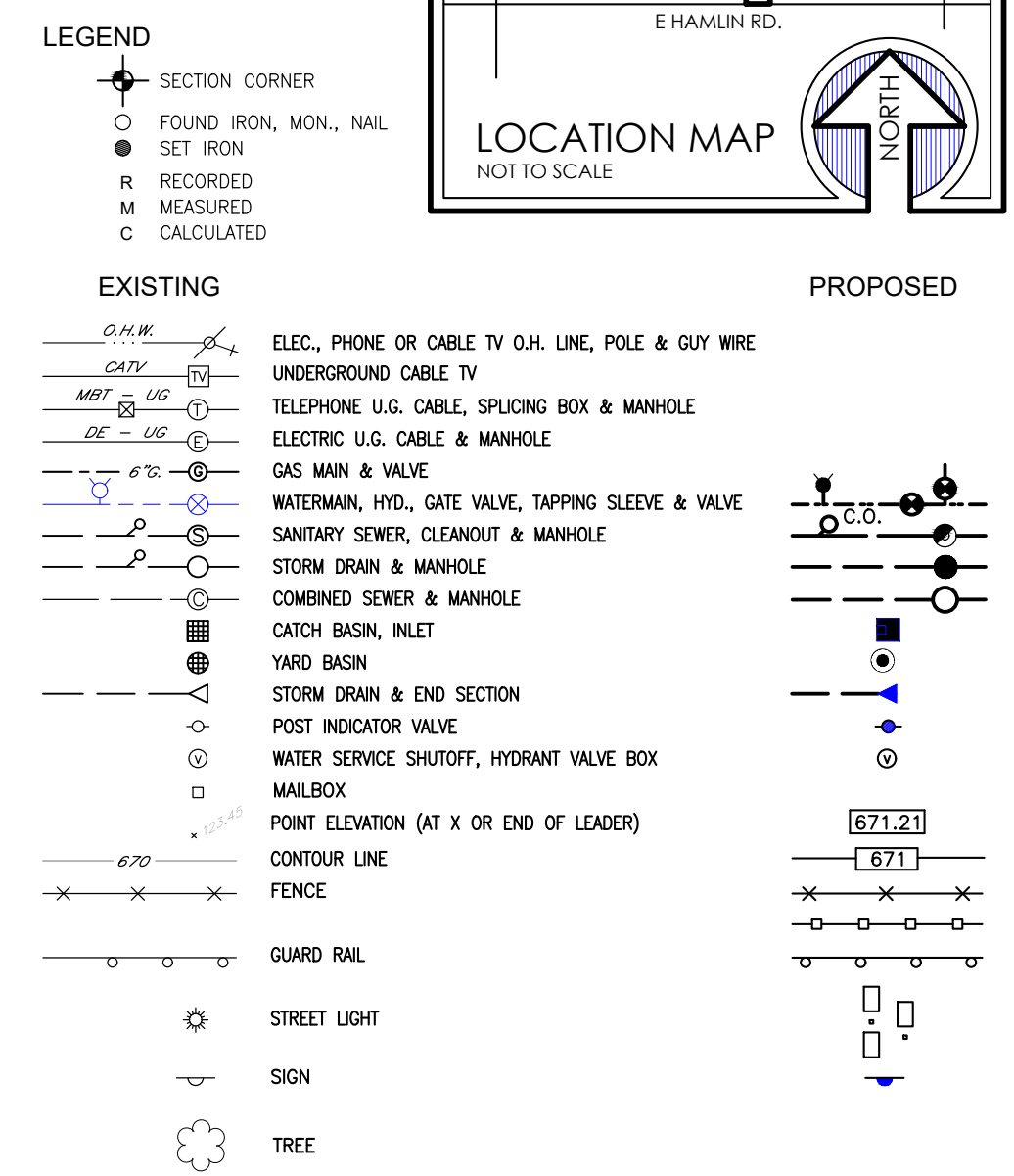
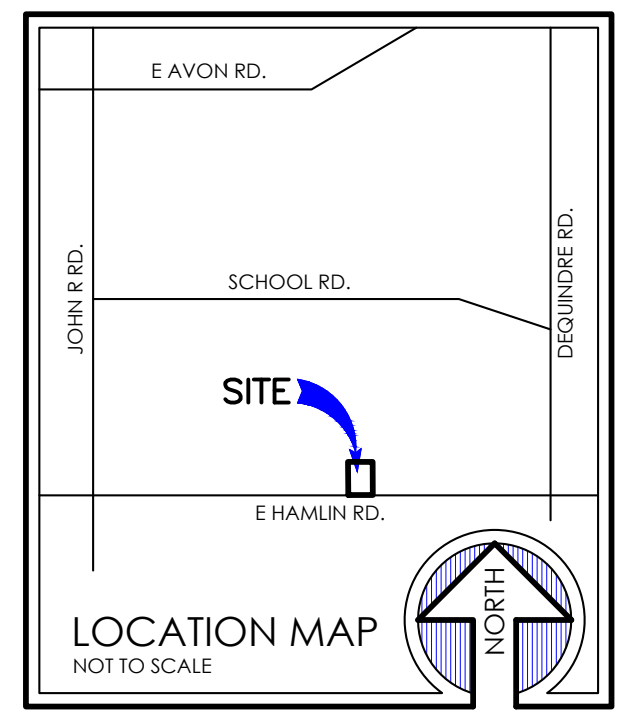


**PARCEL DESCRIPTION**  
 T3N, R11E, SEC 24 PART OF SE 1/4 BEG AT PT DIST N 89°34'00" E 200 FT FROM S 1/4 COR, TH N 00°47'50" W 368.69 FT, TH N 89°34'00" E 273.55 FT, TH S 00°47'50" E 368.69 FT, TH S 89°34'00" W 273.55 FT TO BEG 2.32 A B359D

**FIRE DEPARTMENT NOTES:**

1. A KNOW BOX SYSTEM SHALL BE INSTALLED IN A LOCATION APPROVED BY THE FIRE CODE OFFICIAL. ORDERING INFORMATION IS AVAILABLE THROUGH THE KNOX COMPANY AT WWW.KNOXBOX.COM (IFC 2006 SEC. 1028.2)
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 (FIRE PREVENTION ORDINANCE CHAPTER 58, SEC. 503)
3. CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH IFC 2006 CHAPTER 14
4. OPEN BURNING IS NOT PERMITTED, INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING. 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 FIRE PREVENTION ORDINANCE CHAPTER 58, SEC. 307.6.2 & 307.6.2.3). MORTAR PERMIT CAN BE APPLIED FOR ONLINE AT WWW.ROCHESTERHILLS.ORG/FIRE IN THE "FOR YOUR BUSINESS" SECTION
5. PROVIDE A "NO PARKING FIRE DEPARTMENT CONNECTION" SIGN OVER THE FIRE DEPARTMENT CONNECTION
6. FDC'S SHALL NOT BE OBSTRUCTED BY LANDSCAPING, PARKING, OR ANY OTHER PERMANENT OR TEMPORARY MATERIALS OR DEVICES.
7. IF THE FIRE DEPARTMENT CONNECTION IS NOT LOCATED ON THE STREET FRONT OF THE BUILDING, A WHILE/CLEAR STROBE LIGHT SHALL BE TIED INTO THE FIRE ALARM SYSTEM AND INSTALLED OVER THE FDC.
8. FIRE APPARATUS ACCESS ROADWAY SHOULD BE DESIGNED TO SUPPORT THE LOAD OF THE FIRE APPARATUS (75,000 POUNDS) AND BE SURFACED TO PROVIDE ALL WEATHER DRIVING CAPABILITIES.
9. A FLOW TEST IS REQUIRED TO EVALUATE THE CAPABILITIES OF THE WATER SUPPLY. THIS CAN BE OBTAINED BY CONTACTING THE ROCHESTER HILLS ENGINEERING DEPARTMENT AT 248-656-4840.
10. BUILDINGS OVER 30' IN HEIGHT SHALL PROVIDE AERIAL FIRE APPARATUS ACCESS ROADS AT A MINIMUM WIDTH OF 26'.
11. OVERHEAD UTILITY AND POWER LINES SHALL NOT BE LOCATED WITHIN THE AERIAL FIRE APPARATUS ACCESS ROADWAY.
12. AT LEAST ONE OF THE REQUIRED ACCESS ROUTES SHALL BE LOCATED WITHIN A MINIMUM OF 15' AND A MAXIMUM OF 30' FROM THE BUILDING AND SHALL BE PARALLEL TO THE BUILDING.
13. EXIT DOORS SHALL REMAIN FREE OF OBSTRUCTIONS AT ALL TIMES. PROVIDE GUARD POSTS OR OTHER ACCEPTABLE MEANS OF PROTECTING EXIT DOORS OPENING INTO DRIVES AND PARKING AREAS.
14. ROCHESTER HILLS TOWER LADDER #4 FIRE TRUCK - PIERCE BID #1102 - USED FOR TURNING TEMPLATE AND VEHICLE PATH TRACKING AS SHOWN ON THIS PLAN.

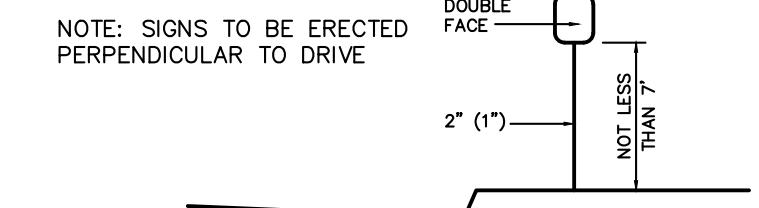
**PR. USE:** SELF STORAGE FACILITY  
**PR. BLDG. HT.:** 3 STORIES, 38'  
**PR. BUILDING AREA:** 29,170 S.F. PER FLOOR  
 87,510 S.F. TOTAL  
**CONSTRUCTION TYPE:** TYPE II-B NON COMBUSTIBLE  
**INTERNATIONAL FIRE CODE 2006**



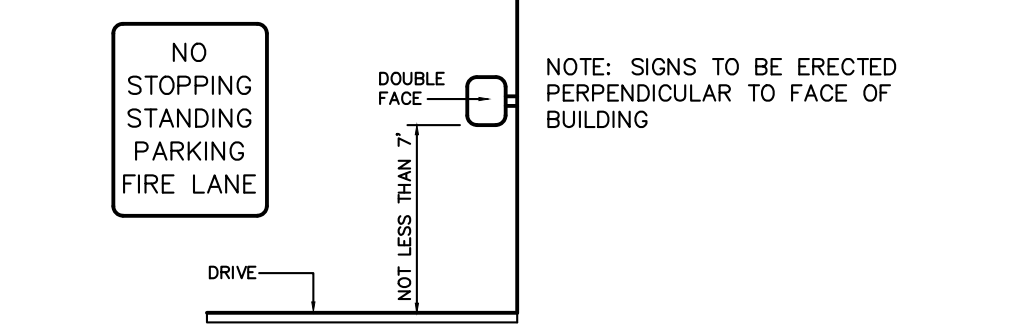
**ROCHESTER HILLS TOWER LADDER 4 AUTO TURN SPECIFICATIONS**

Vehicle	Trailer	Path	ROCHESTER HILLS FIRE TRUCK
Description			7.690
Wheel Width			22.500
Wheel Length			9.140
Vehicle Width			6.330
Front Overhang			16.000
Rear Overhang			2.000
Tire Diameter			4.200
Rear Axle Count			
Rear Axle Offset			

**LATERAL CLEARANCE**  
 IN URBAN AREAS, A MINIMUM CLEARANCE OF TWO FEET BETWEEN CURB FACE AND SIGN INSTALLATION SHOULD BE MAINTAINED, BUT A CLEARANCE OF ONE FOOT FROM CURB FACE IS PERMISSIBLE WHERE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING POLES ARE CLOSE TO THE CURB.



**POSTS AND MOUNTING**  
 SIGN SUPPORTS SHOULD BE OF A BREAKAWAY OR YIELDING DESIGN. CONC. BASES FOR SIGN SUPPORTS SHOULD BE FLUSH WITH GROUND LEVEL.



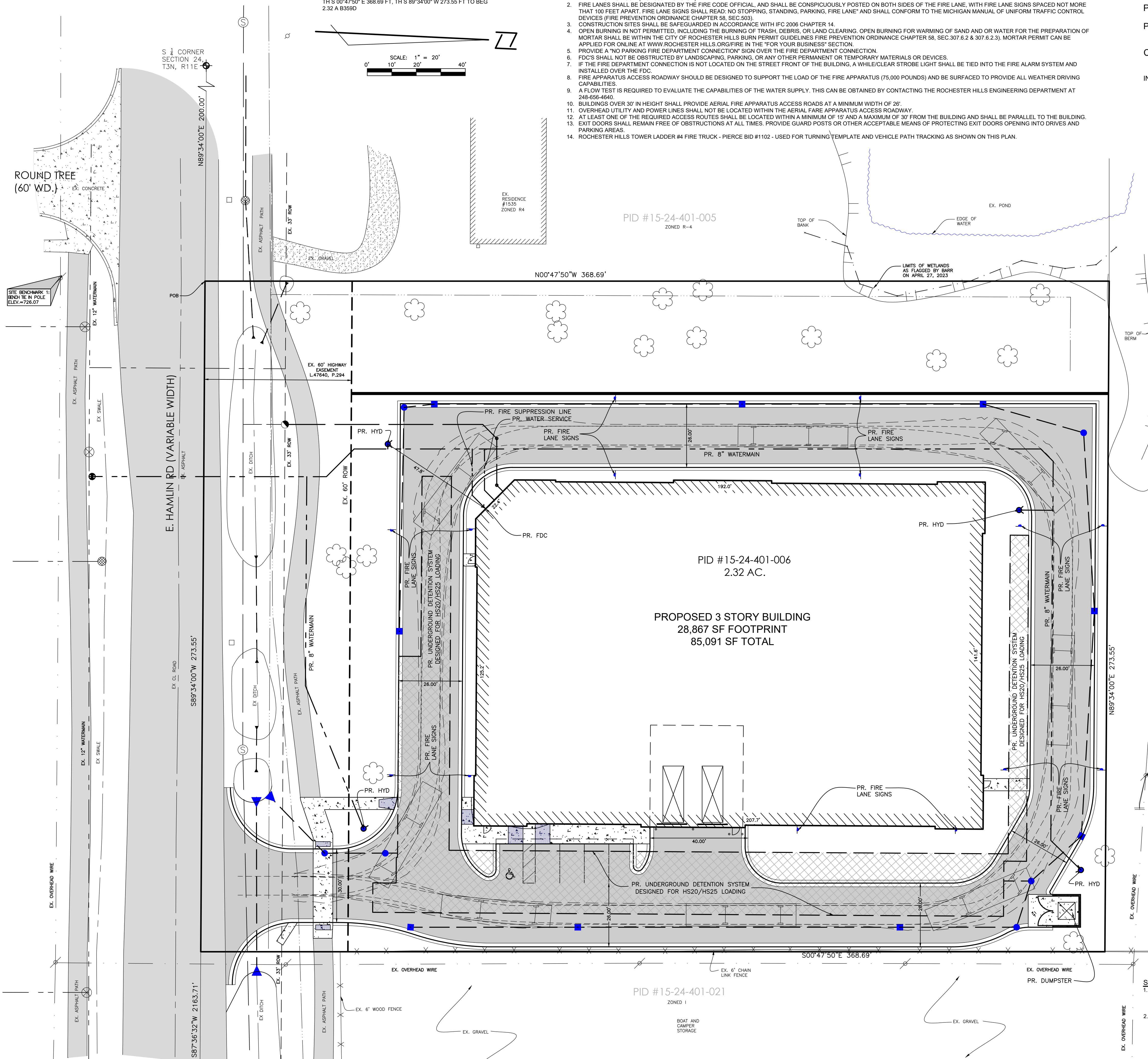
**FIRE LANE SIGN PLACEMENT DETAIL**

CITY FILE #23-0002 SECTION 24

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**CALL MISS DIG** 811  
**72 HOURS (3 WORKING DAYS - EXCLUDING SAT., SUN. & HOLIDAYS)**  
 CALL MISS DIG 1-800-482-7171  
 OR 811  
 [TOLL FREE] FOR THE LOCATION OF UNDER GROUND FACILITIES

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 Phone: 586-254-9377 Fax: 586-254-9020  
 www.fennsurveying.com

**PRELIMINARY SITE PLAN**  
**1575 E HAMLIN RD**  
 PART OF THE SE 1/4 OF SECTION 24, T3N, R11E  
 ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

DISTRIBUTION	
●	PRELIMINARY
○	APPROVAL
◐	CONSTRUCTION
◑	AS-BUILT

REVISIONS	
DATE	REMARKS
04/17/23	PER CITY
06/30/23	PER CITY
08/08/23	PER CITY
09/19/23	PER CITY
11/17/23	PER CITY



**CLIENT**  
 CDK DEVELOPMENT  
 10570 SAVANNAH CT.  
 HUNTLEY, IL 60142  
 CONTACT: STEVE OSBORNE  
 PHONE: 224-249-9477

**PROJECT NAME**  
 1575 E HAMLIN ROAD

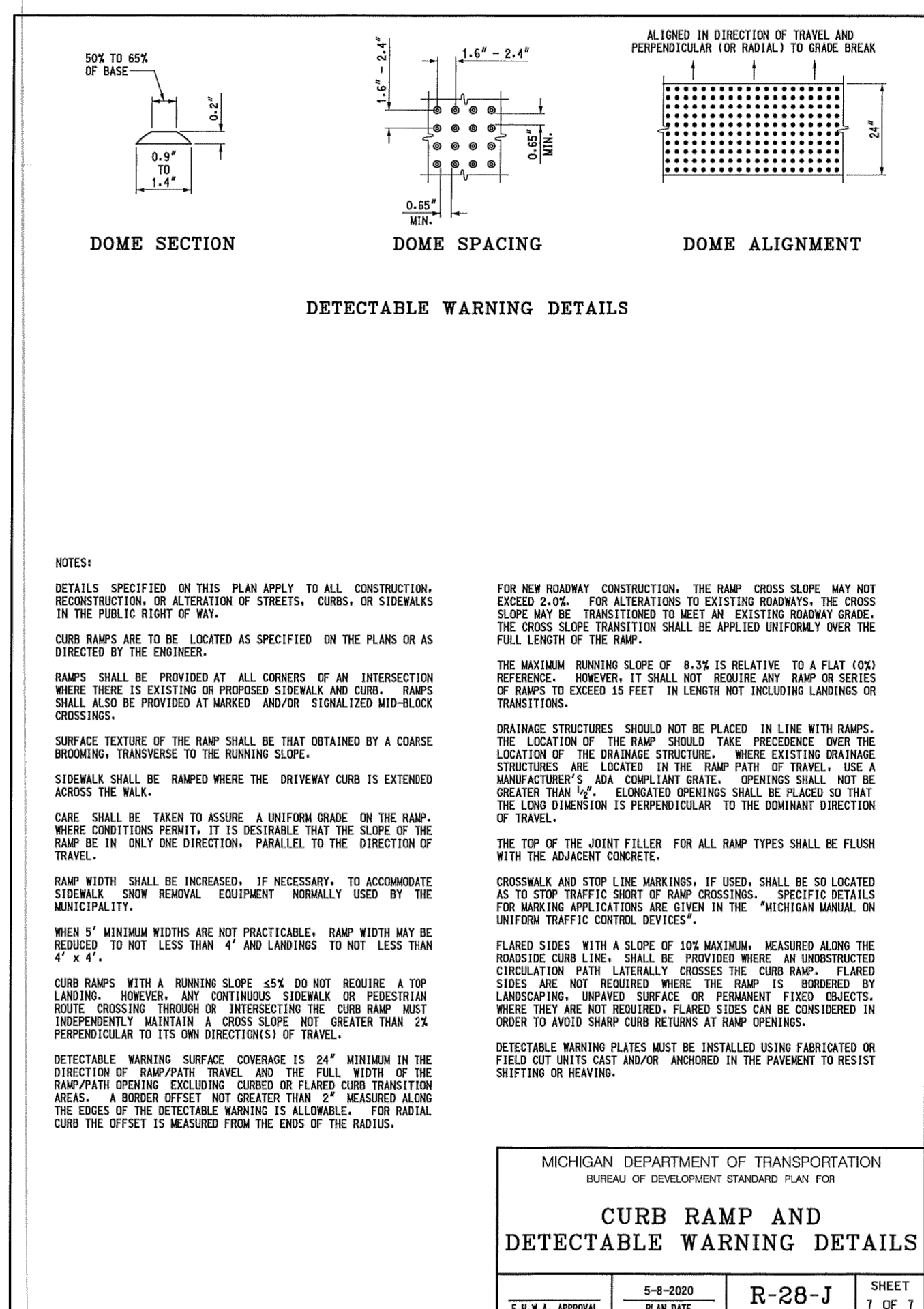
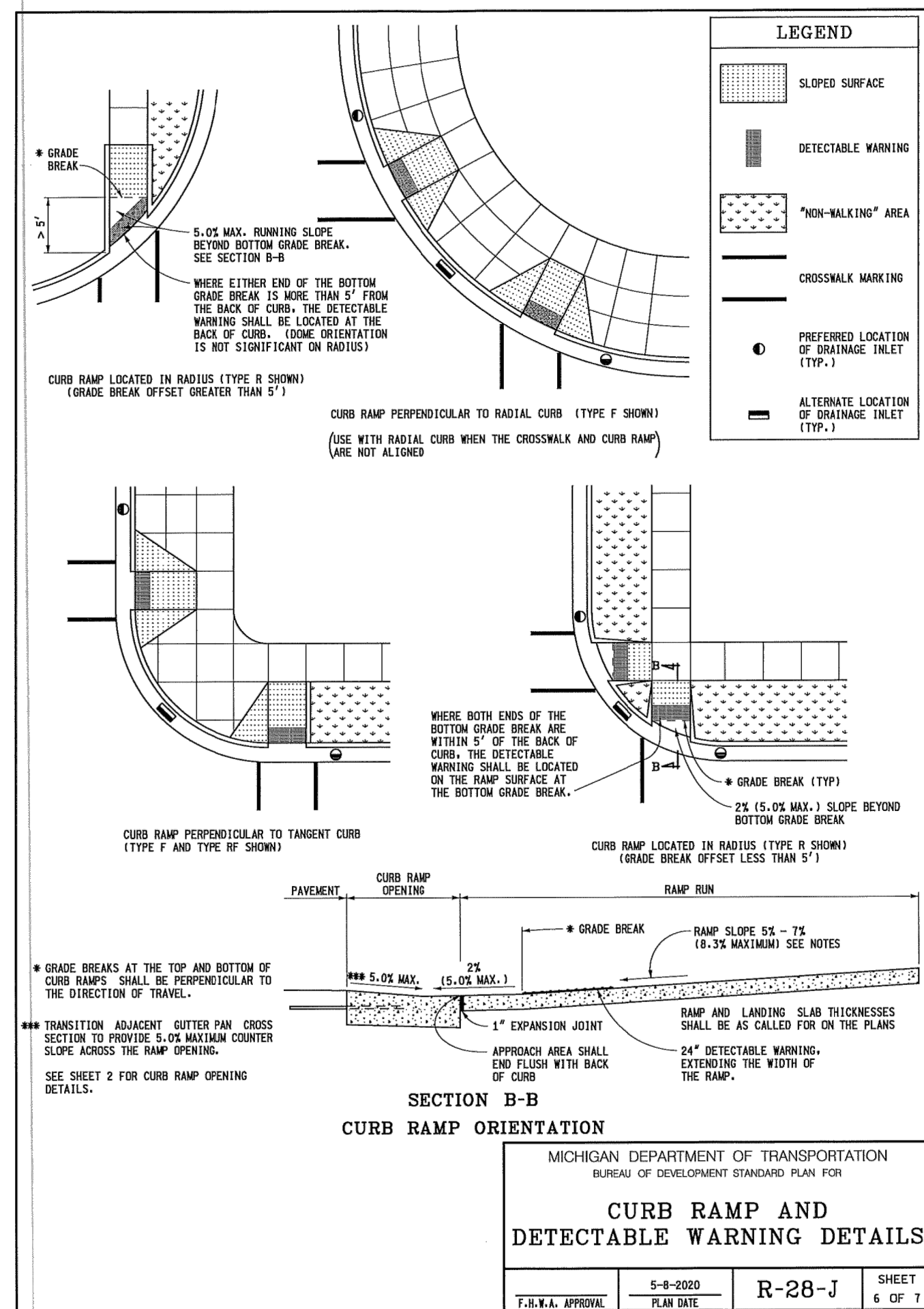
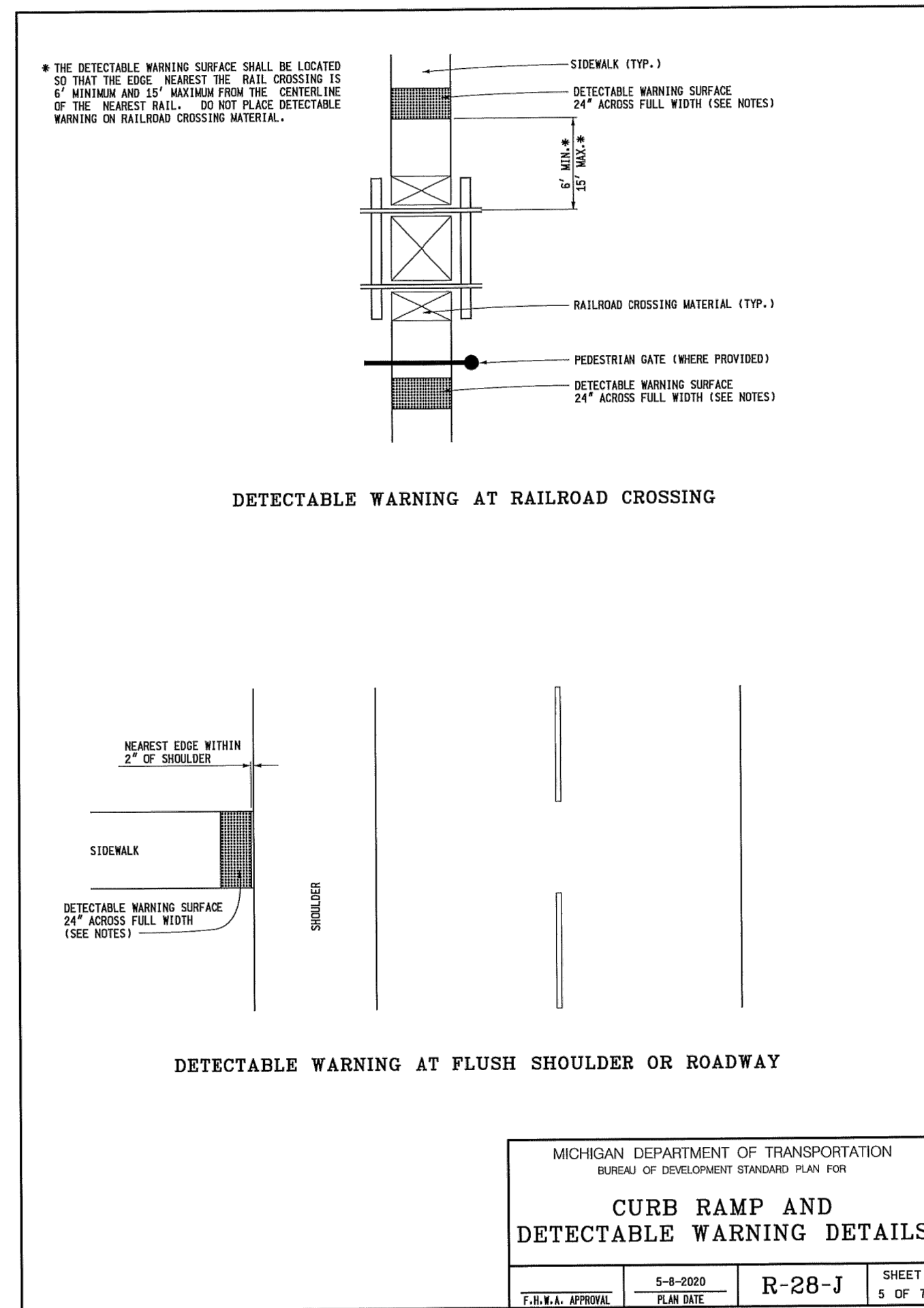
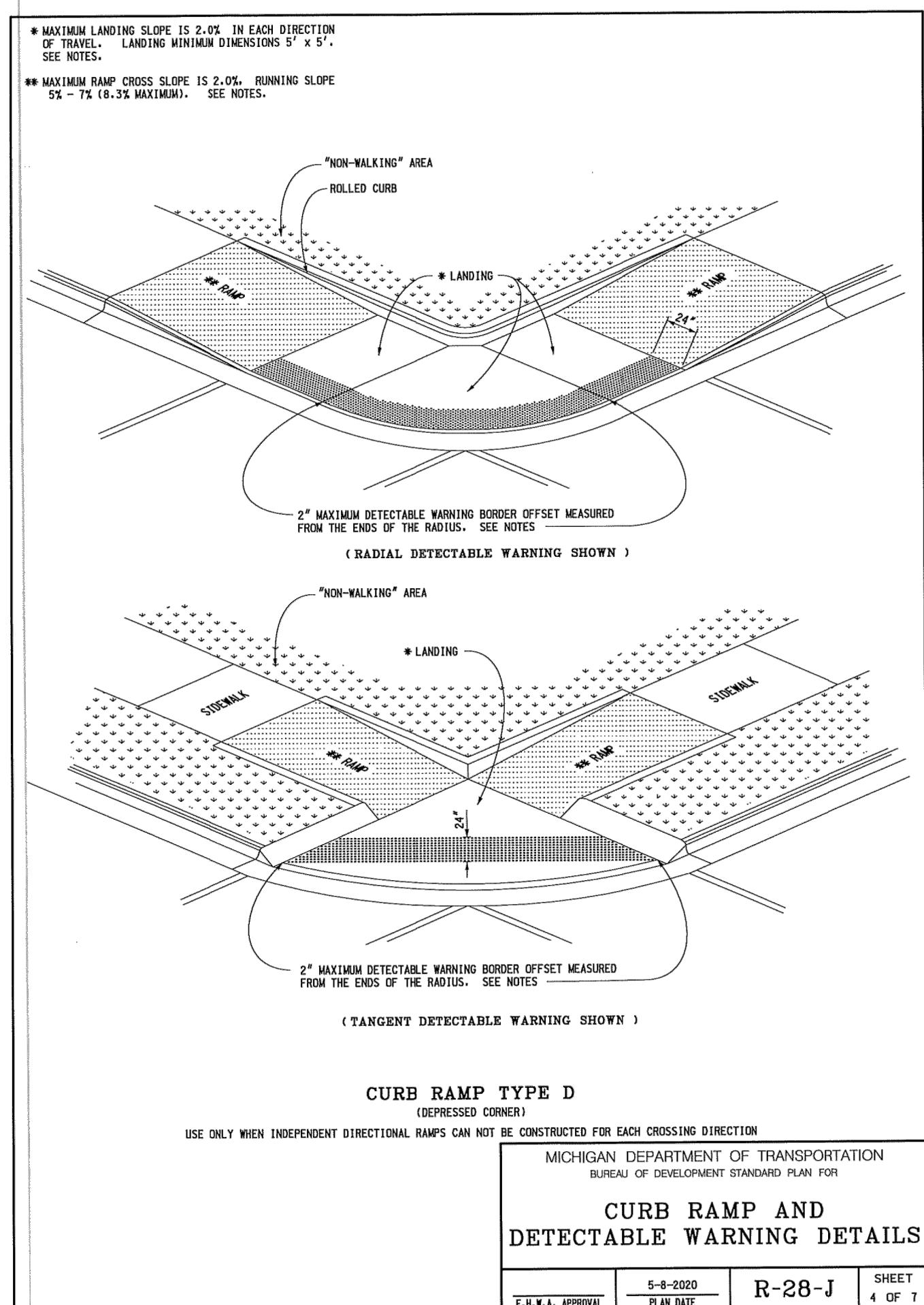
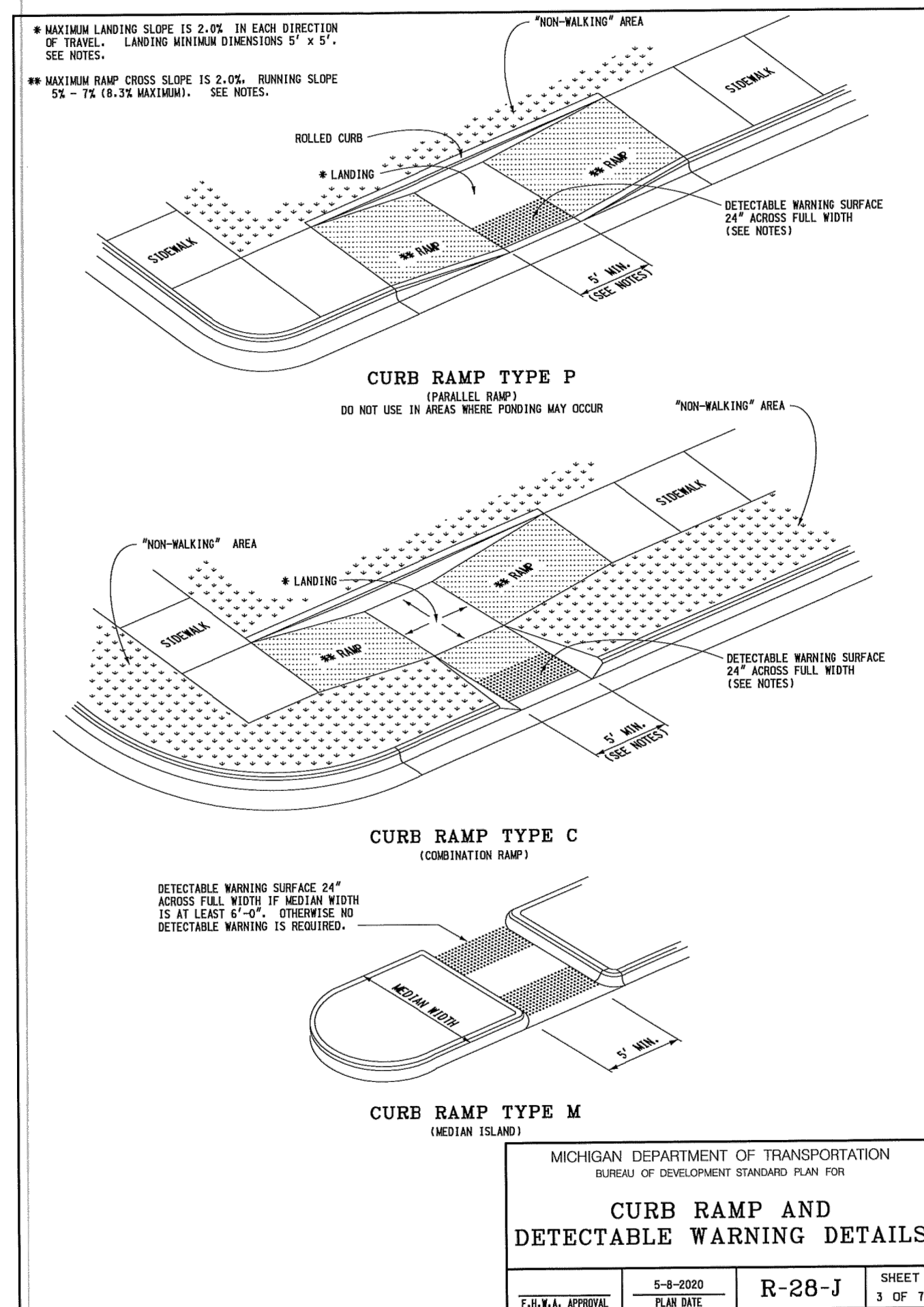
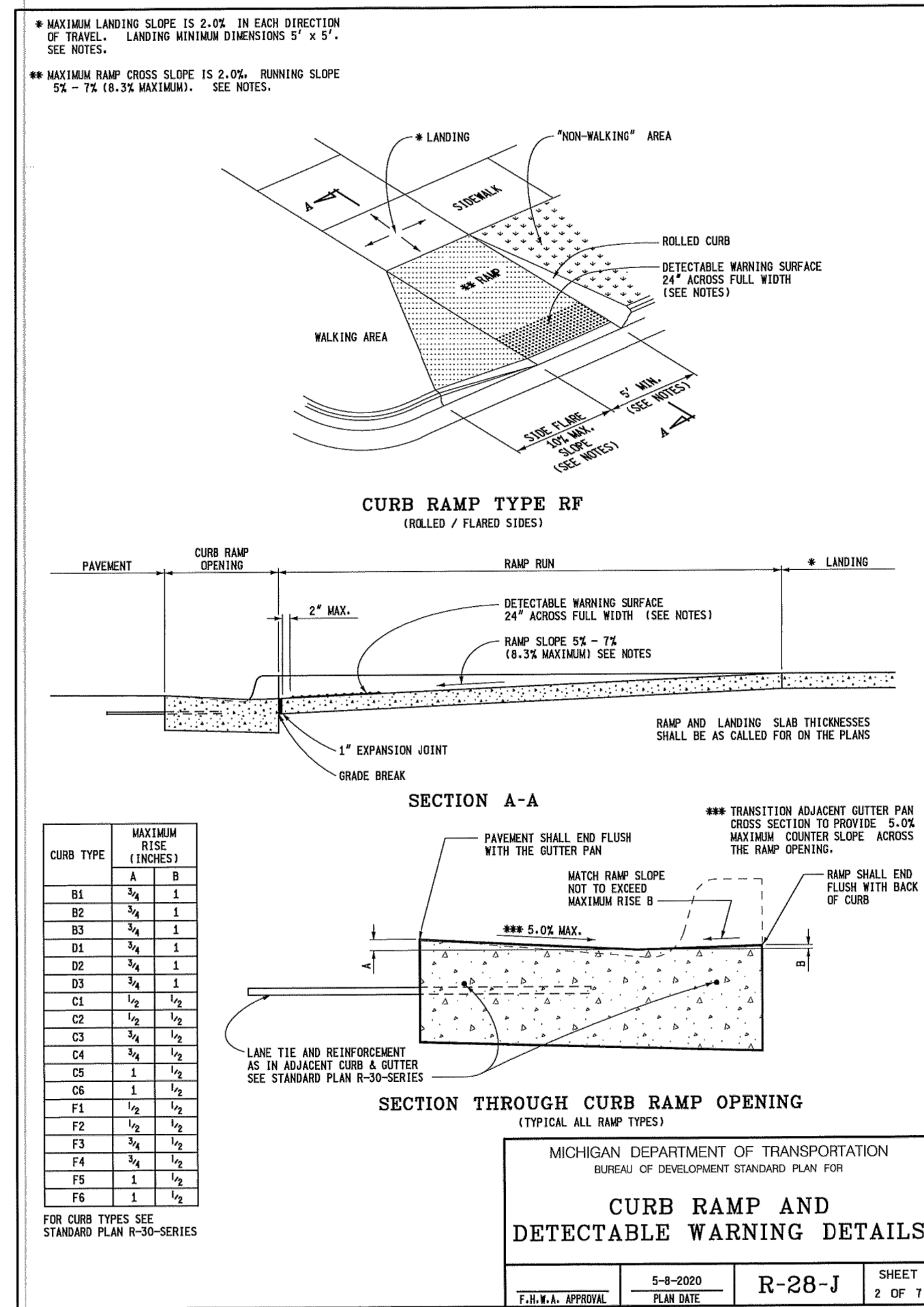
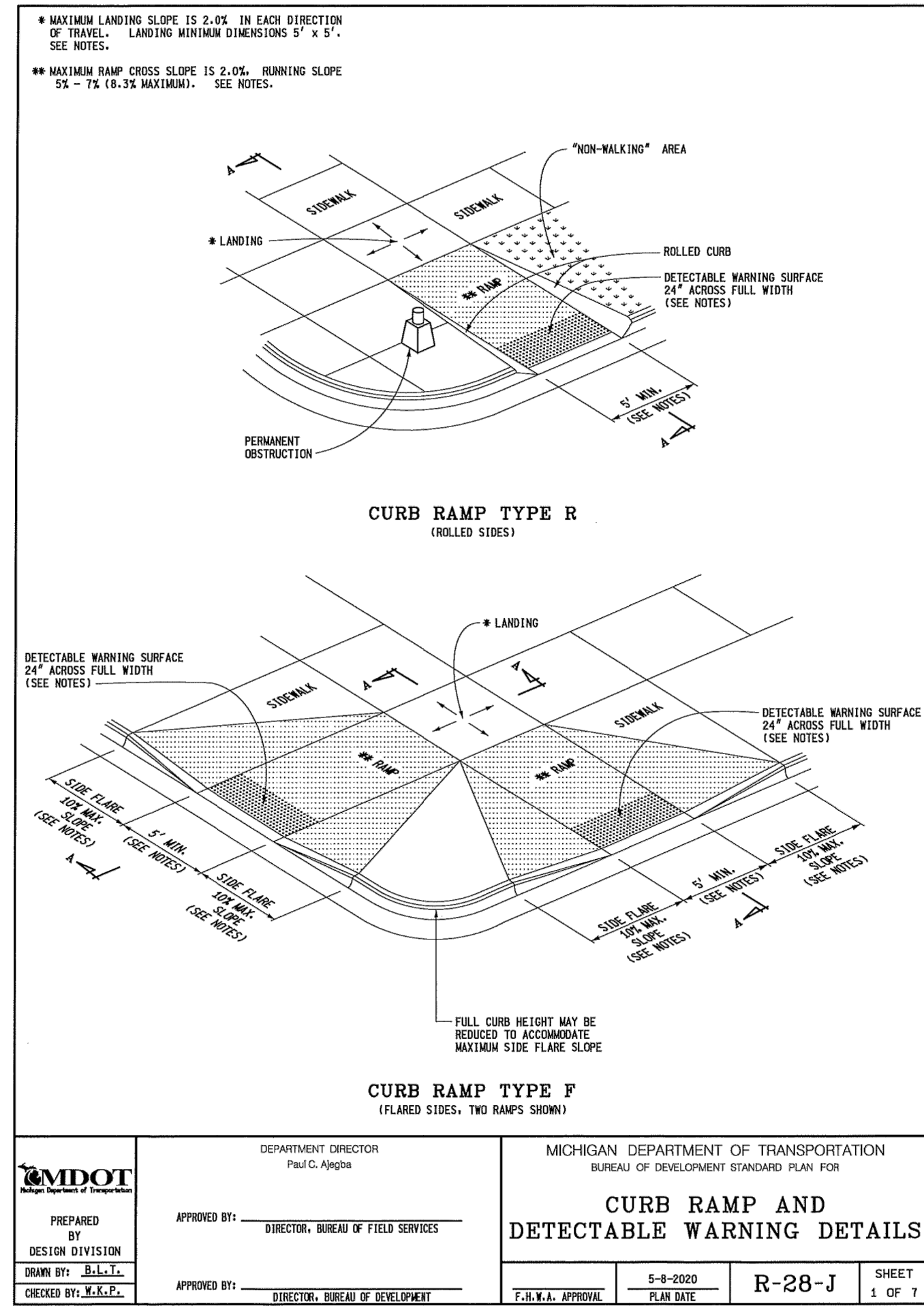
**PROJECT NUMBER**  
 C22-049.07

**SHEET NAME**  
 FIRE PROTECTION PLAN

**DRAWING SCALE:** 1" = 20'  
**SHEET SIZE:** 24X36  
**DATE:** 2/2/23  
**PROJECT MANAGER:** JJS, PE  
**DESIGNED BY:** JJS, PE  
**DRAWN BY:** JJS, PE  
**FIELD BY:** BHVA  
**CHECKED BY:** JSR, PE/JJS, PE

**SHEET NUMBER**  
 3 OF 6





DISTRIBUTION	
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○	APPROVAL
○	CONSTRUCTION
○	AS-BUILT
REVISIONS	
DATE	REMARKS
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09/19/23	PER CITY
11/17/23	PER CITY

SEAL

CLIENT  
CDK DEVELOPMENT  
10570 SAVANNAH CT.  
HUNTLEY, IL 60142  
CONTACT: STEVE OSBORNE  
PHONE: 224-249-9477

PROJECT NAME  
**1575 E HAMLIN ROAD**

PROJECT NUMBER  
**C22-049.07**

SHEET NAME  
**DETAILS**

DRAWING SCALE: N/A  
SHEET SIZE: 24X36  
DATE: 2/27/23  
PROJECT MANAGER: JJS, PE  
DESIGNED BY: JJS, PE  
DRAWN BY: JJS, PE  
FIELD BY: BHVA  
CHECKED BY: BSR/PE/JJS, PE

SHEET NUMBER  
**4 OF 6**

CITY FILE #23-0002  
SECTION 24

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PROJECT NAME  
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PROJECT NUMBER  
**C22-049.07**

SHEET NAME  
**DETAILS**

DRAWING SCALE:	N/A
SHEET SIZE:	24X36
DATE:	2/2/23
PROJECT MANAGER:	JJS, PE
DESIGNED BY:	JJS, PE
DRAWN BY:	JJS, PE
FIELD BY:	BHVA
CHECKED BY:	JSR, PE/JJS, PE

SHEET NUMBER  
**5 OF 6**

**Standard Details:**

**Standard Notes:**

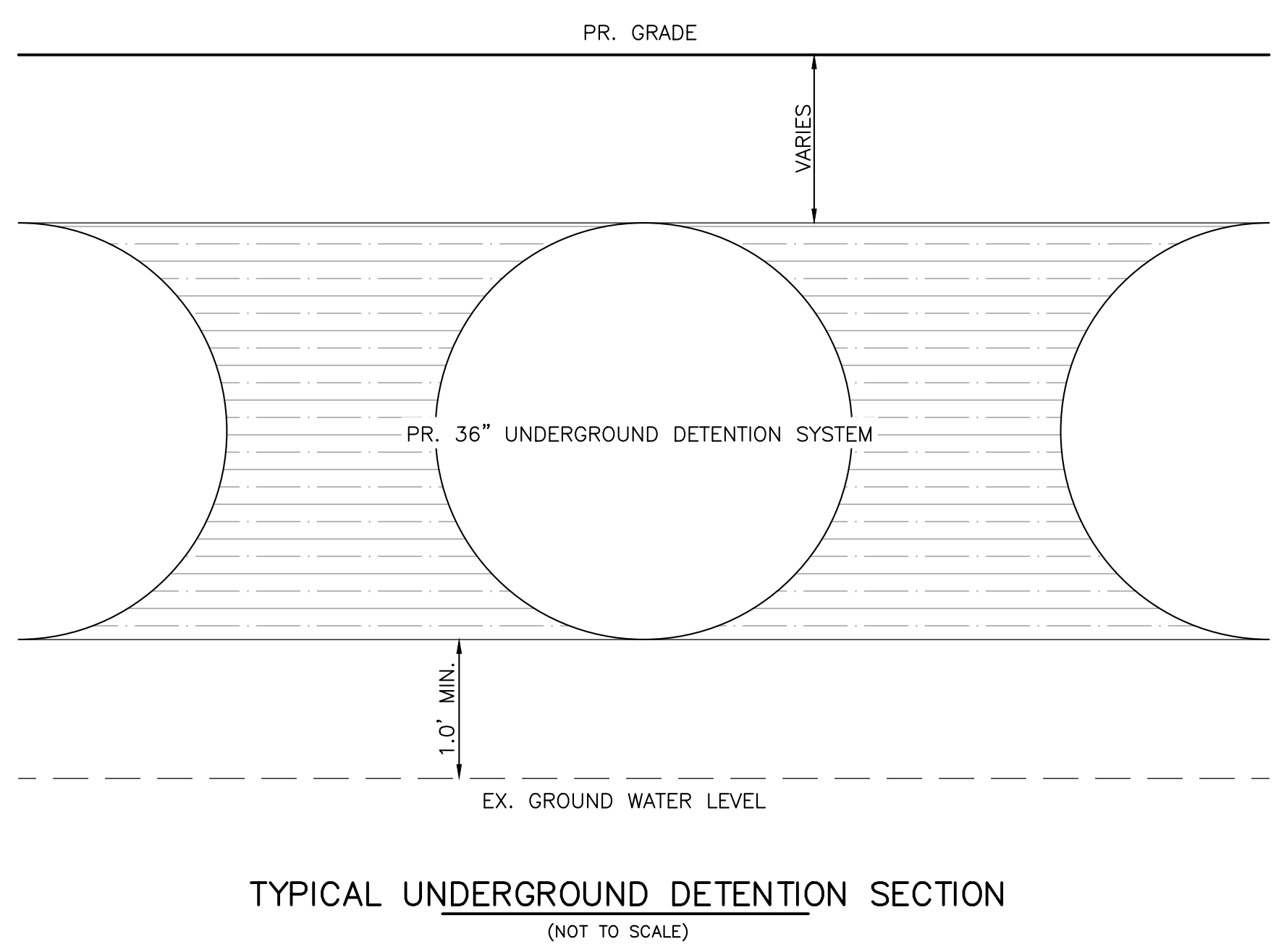
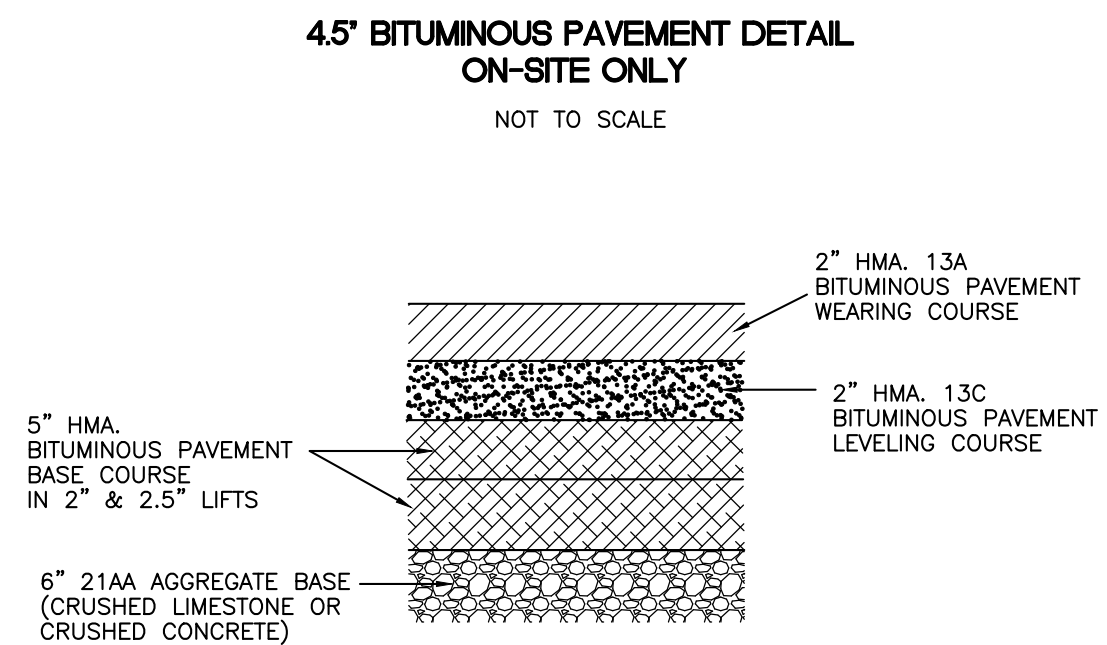
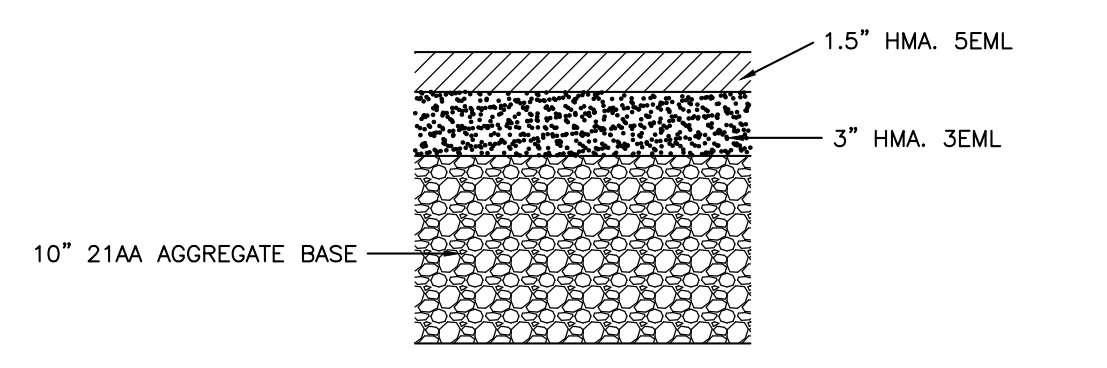
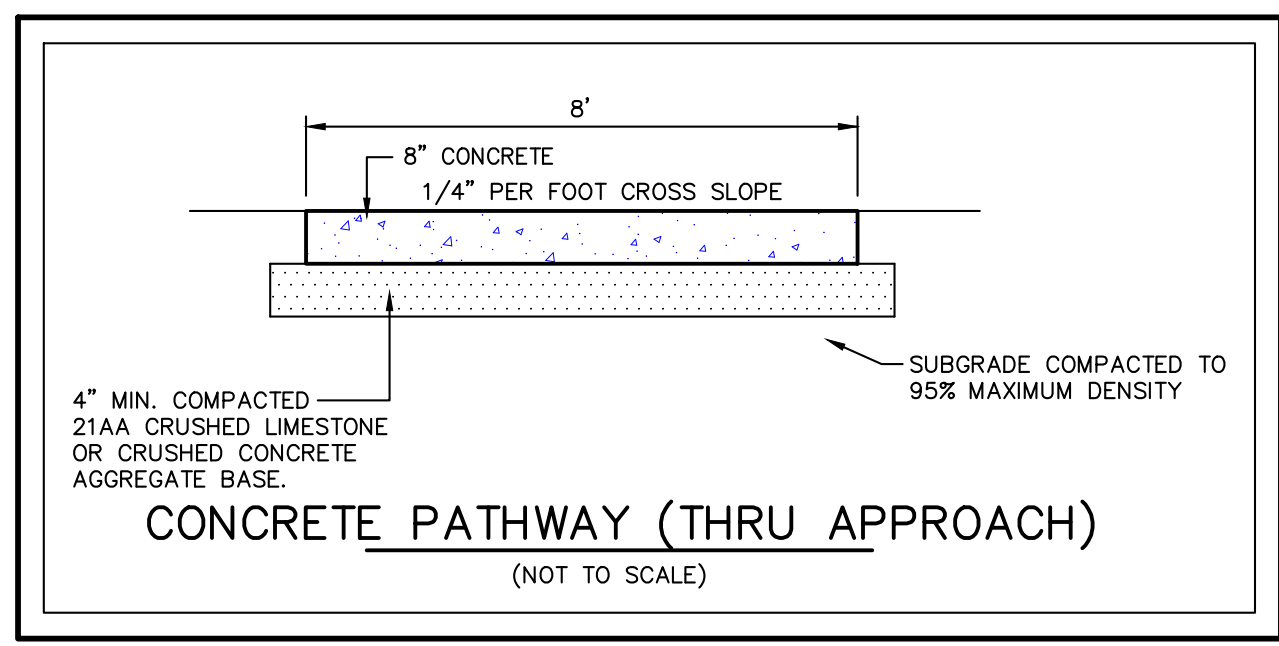
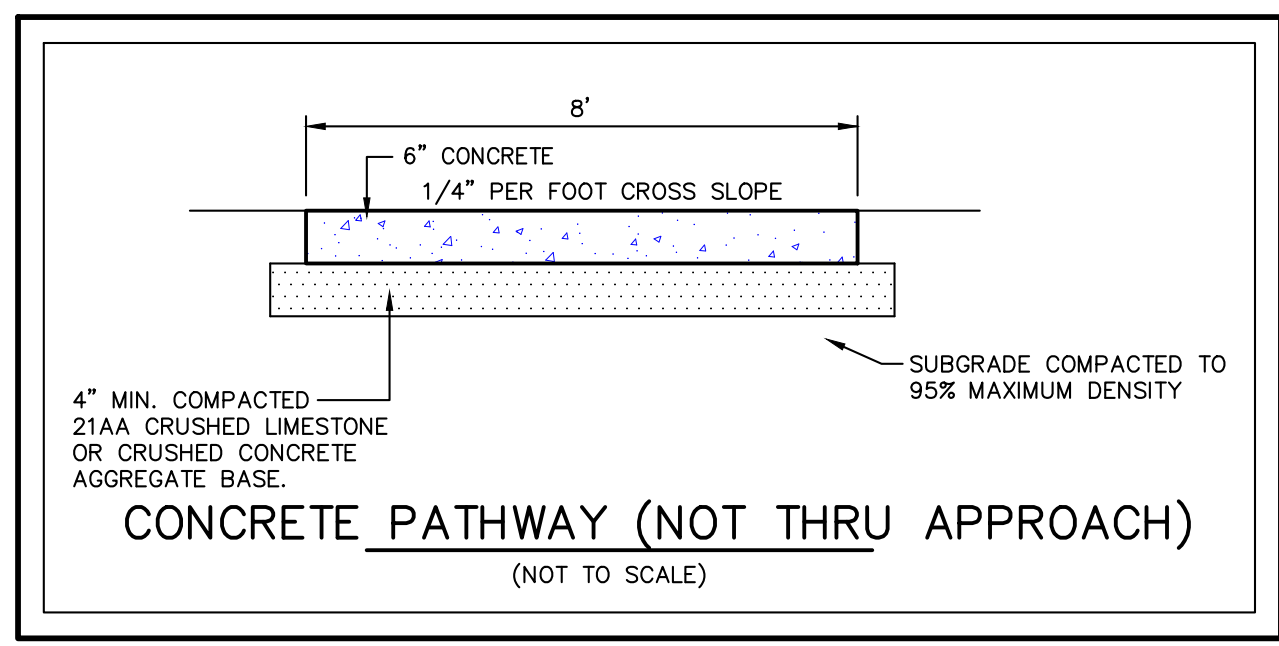
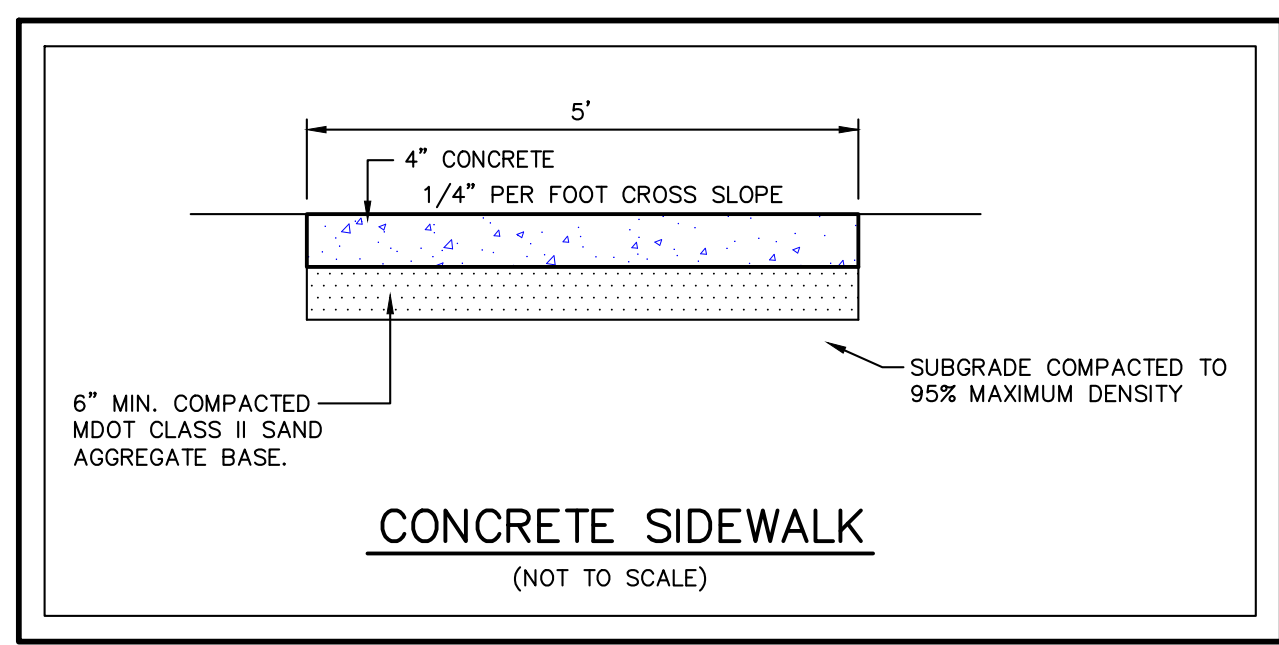
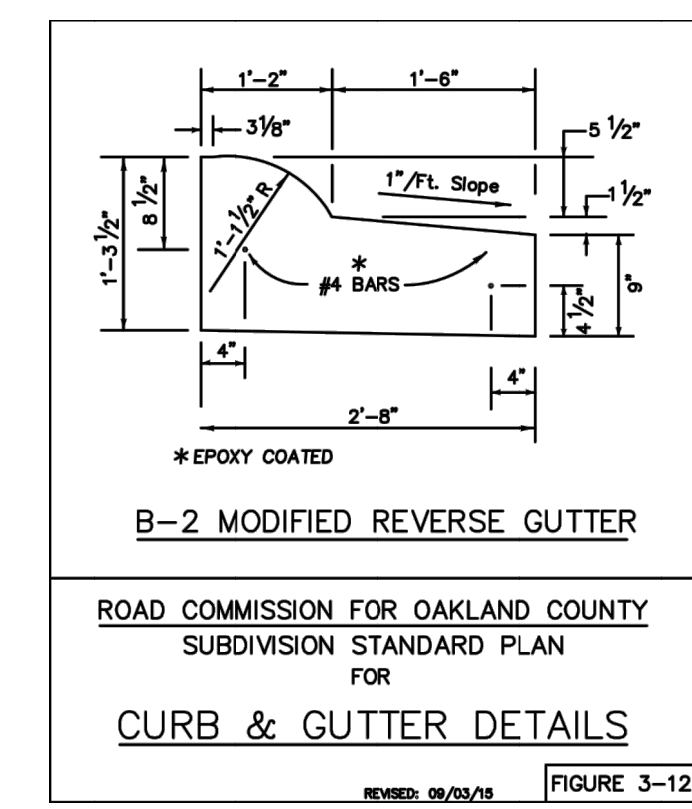
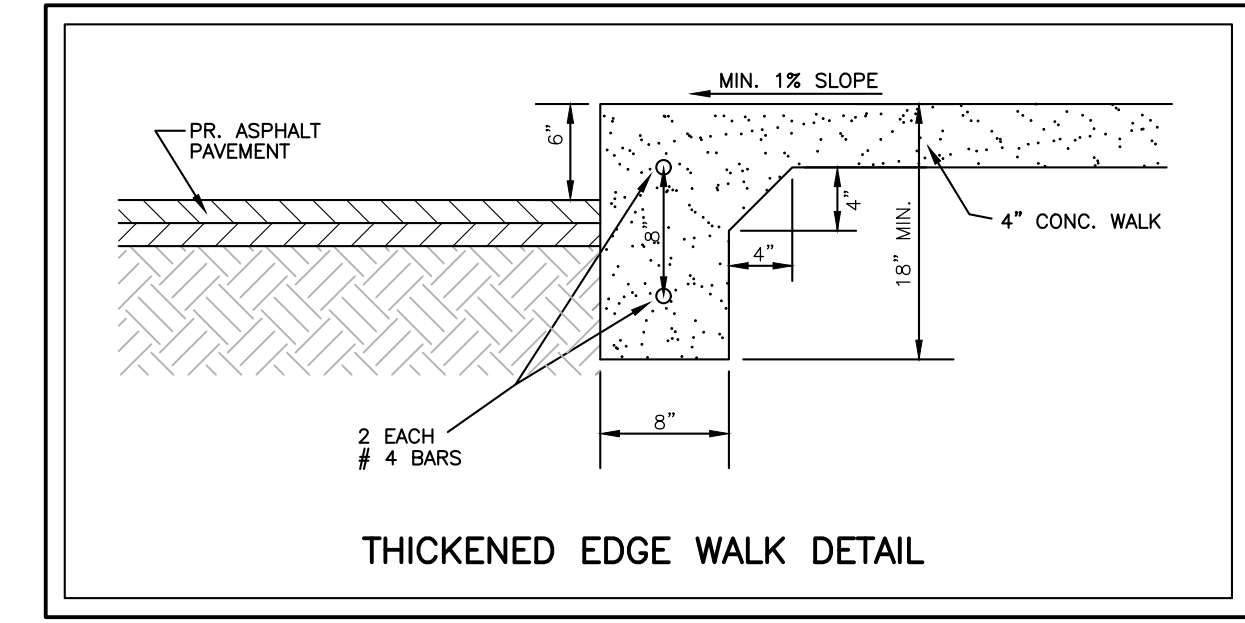
- Maximum grade of 8.33% along pathway (less than 5% is recommended).
- 1% cross slope (i.e. super elevation) for drainage off and away from pathway and graded shoulders (2% maximum cross-slope).
- 60' minimum center line radii for pathway horizontal alignment.
- Provide a minimum of 3' horizontal clearance and 10' vertical clearance from all fixed objects and the edge of pathway surface. Relocation of existing objects (i.e. mail boxes, signs, etc.) shall be considered incidental work items.
- Pathway ramps shall be constructed in accordance with MDOT standard detail R-28 Series and shall have a minimum clear opening of 8' wide.
- A clean saw cut joint shall be provided wherever new pavement matches existing pavement (incidental work item).
- Utility structures shall be adjusted in accordance with the City of Rochester Hills standards and shall match the proposed grade of the pathway.
- Pathway shall be 6 inch thick HMA or concrete through residential drives and 9 inch thick HMA or 8 inch thick concrete through commercial drives.
- Pathway asphalt shall be paid for as "Shared Use Path, HMA" when part of public improvement project.
- Ramps and landings shall be 6 inch thick concrete.
- ADA detectable warning plates shall be performed and brick red in color. Acceptable products included ADA Solutions, Inc., Armor-Tile, E.I., or approved equal.
- Irrigation overspray shall not broadcast onto City pathway or sidewalk.

**CITY OF ROCHESTER HILLS**  
 STANDARD DETAIL FOR:  
**Pathway Details:**  
**Hot-Mixed Asphalt Pathway Construction, Extensions and Relocations**

DRAWN BY:	PLAN DATE:	REVISIONS:	2/8/2022	8/22/2018	01/12/2022
R. GEORGE	8/28/1996	4/12/2012	2/25/2016	11/21/2019	01/25/2022

APPROVED BY: PAUL SHUMEJKO, M.B.A., M.S., P.E., PTOE  
 CITY TRANSPORTATION ENGINEERING MANAGER

NOT TO SCALE SHEET 1 OF 1



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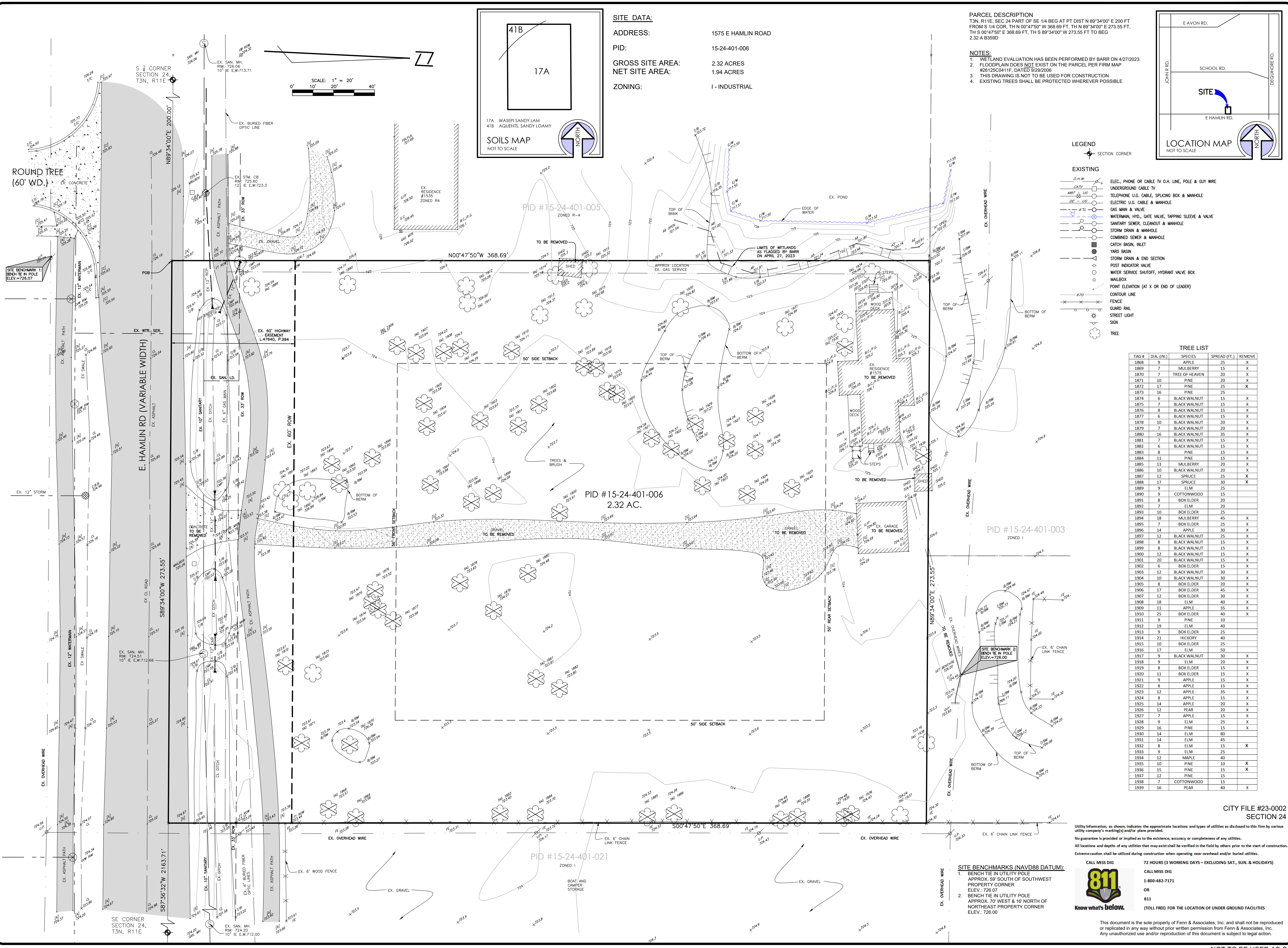
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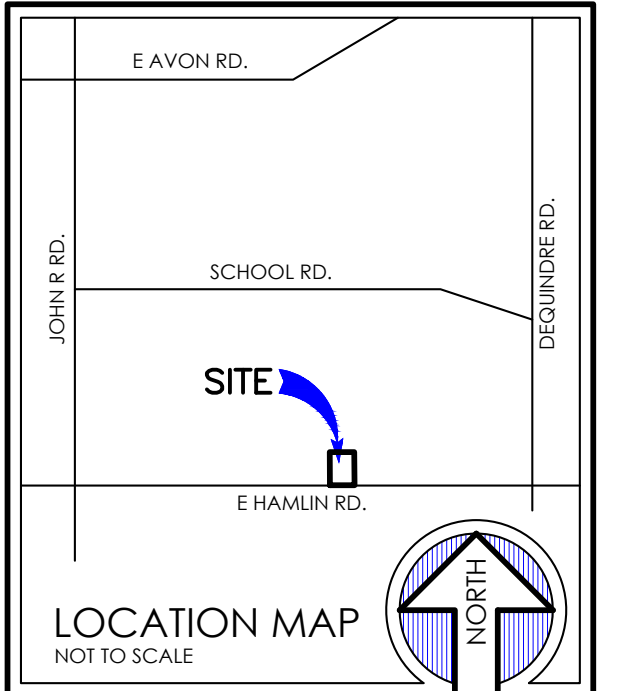
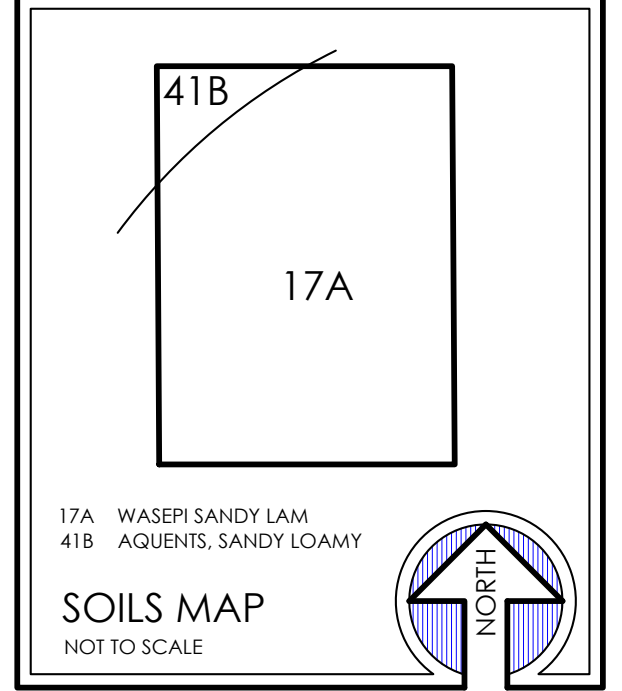




**SITE DATA:**  
**ADDRESS:** 1575 E HAMLIN ROAD  
**PID:** 15-24-401-006  
**GROSS SITE AREA:** 2.32 ACRES  
**NET SITE AREA:** 1.94 ACRES  
**ZONING:** I - INDUSTRIAL

**PARCEL DESCRIPTION**  
 T3N, R11E, SEC 24 PART OF SE 1/4 BEG AT PT DIST N 89°34'00" E 200 FT FROM S 1/4 COR, TH N 00°47'50" W 368.69 FT, TH N 89°34'00" E 273.55 FT, TH S 00°47'50" E 368.69 FT, TH S 89°34'00" W 273.55 FT TO BEG 2.32 A B359D

**NOTES:**  
 1. WETLAND EVALUATION HAS BEEN PERFORMED BY BARR ON 4/27/2023.  
 2. FLOODPLAIN DOES NOT EXIST ON THE PARCEL PER FIRM MAP #28125C0411F, DATED 9/29/2006  
 3. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION  
 4. EXISTING TREES SHALL BE PROTECTED WHEREVER POSSIBLE



- LEGEND**
- SECTION CORNER
  - EXISTING
    - O.H.W. - ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
    - CATV - UNDERGROUND CABLE TV
    - U.G. - TELEPHONE U.G. CABLE, SPLICING BOX & MANHOLE
    - E.C. - ELECTRIC U.G. CABLE & MANHOLE
    - G.M. - GAS MAIN & VALVE
    - W.H.V. - WATERMAIN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE
    - S.S. - SANITARY SEWER, CLEANOUT & MANHOLE
    - S.D. - STORM DRAIN & MANHOLE
    - C.S. - COMBINED SEWER & MANHOLE
    - C.B.I. - CATCH BASIN, INLET
    - S.D.E. - STORM DRAIN & END SECTION
    - P.I.V. - POST INDICATOR VALVE
    - W.S.S. - WATER SERVICE SHUTOFF, HYDRANT VALVE BOX
    - M.B. - MAILBOX
    - N.E. - POINT ELEVATION (AT X OR END OF LEADER)
    - C.L. - CONTOUR LINE
    - F. - FENCE
    - G.R. - GUARD RAIL
    - S.L. - STREET LIGHT
    - S. - SIGN
    - T. - TREE

**TREE LIST**

TAG #	DIA. (IN.)	SPECIES	SPREAD (FT.)	REMOVE
1868	9	APPLE	25	X
1869	7	MULBERRY	15	X
1870	7	TREE OF HEAVEN	20	X
1871	10	PINE	20	X
1872	17	PINE	25	X
1873	16	PINE	25	X
1874	6	BLACK WALNUT	15	X
1875	7	BLACK WALNUT	15	X
1876	8	BLACK WALNUT	15	X
1877	6	BLACK WALNUT	15	X
1878	10	BLACK WALNUT	20	X
1879	7	BLACK WALNUT	20	X
1880	16	BLACK WALNUT	35	X
1881	7	BLACK WALNUT	15	X
1882	6	BLACK WALNUT	15	X
1883	8	PINE	15	X
1884	11	PINE	15	X
1885	13	MULBERRY	20	X
1886	10	BLACK WALNUT	20	X
1887	12	SPRUCE	25	X
1888	17	SPRUCE	30	X
1889	9	ELM	25	X
1890	9	COTTONWOOD	15	X
1891	8	BOX ELDER	20	X
1892	7	ELM	20	X
1893	10	BOX ELDER	25	X
1894	18	MULBERRY	45	X
1895	7	BOX ELDER	25	X
1896	14	APPLE	30	X
1897	12	BLACK WALNUT	25	X
1898	8	BLACK WALNUT	15	X
1899	8	BLACK WALNUT	15	X
1900	12	BLACK WALNUT	15	X
1901	20	BLACK WALNUT	15	X
1902	6	BOX ELDER	15	X
1903	12	BLACK WALNUT	30	X
1904	10	BLACK WALNUT	30	X
1905	8	BOX ELDER	20	X
1906	17	BOX ELDER	45	X
1907	12	BOX ELDER	30	X
1908	18	ELM	40	X
1909	11	APPLE	35	X
1910	25	BOX ELDER	40	X
1911	9	PINE	10	X
1912	19	ELM	40	X
1913	9	BOX ELDER	25	X
1914	21	HICKORY	40	X
1915	10	BOX ELDER	25	X
1916	17	ELM	50	X
1917	9	BLACK WALNUT	30	X
1918	9	ELM	20	X
1919	8	BOX ELDER	15	X
1920	11	BOX ELDER	15	X
1921	9	APPLE	15	X
1922	8	APPLE	15	X
1923	12	APPLE	35	X
1924	8	APPLE	15	X
1925	14	APPLE	20	X
1926	12	PEAR	20	X
1927	7	APPLE	15	X
1928	9	ELM	25	X
1929	16	PINE	15	X
1930	14	ELM	80	X
1931	14	ELM	45	X
1932	8	ELM	15	X
1933	9	ELM	25	X
1934	12	MAPLE	40	X
1935	10	PINE	10	X
1936	15	PINE	15	X
1937	12	PINE	15	X
1938	7	COTTONWOOD	15	X
1939	16	PEAR	40	X

**Fenn & Associates, Inc.**  
 Land Surveying and Civil Engineering  
 14933 Commercial Drive, Shelby Township, MI 48315  
 Phone: 586-254-9377 Fax: 586-254-9020  
 www.fennsurveying.com

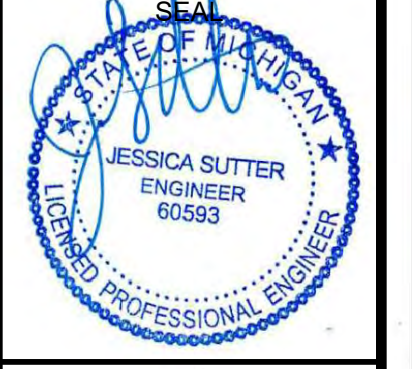
**TOPOGRAPHIC MAPPING**  
**1575 E HAMLIN RD**  
 PART OF THE SE 1/4 OF SECTION 24, T3N, R11E  
 ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

**DISTRIBUTION**

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- APPROVAL
- CONSTRUCTION
- AS-BUILT

**REVISIONS**

DATE	REMARKS
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06/30/23	PER CITY
08/08/23	PER CITY
09/19/23	PER CITY
11/17/23	PER CITY



**CLIENT**  
 CDK DEVELOPMENT  
 10570 SAVANNAH CT.  
 HUNTLEY, IL 60142  
 CONTACT: STEVE OSBORNE  
 PHONE: 224-249-9477

**PROJECT NAME**  
 1575 E HAMLIN ROAD

**PROJECT NUMBER**  
 C22-049.07

**SHEET NAME**  
 TOPOGRAPHIC MAPPING

**DRAWING SCALE:** 1" = 20'  
**SHEET SIZE:** 24X36  
**DATE:** 2/2/23  
**PROJECT MANAGER:** JJS, PE  
**DESIGNED BY:** JJS, PE  
**DRAWN BY:** RP/JJS, PE  
**FIELD BY:** BHVA  
**CHECKED BY:** JSR/PE/JJS, PE

**SHEET NUMBER**  
 6 OF 6

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CITY FILE #23-0002  
 SECTION 24

NOT TO BE USED AS CONSTRUCTION DRAWINGS



**Schedule**

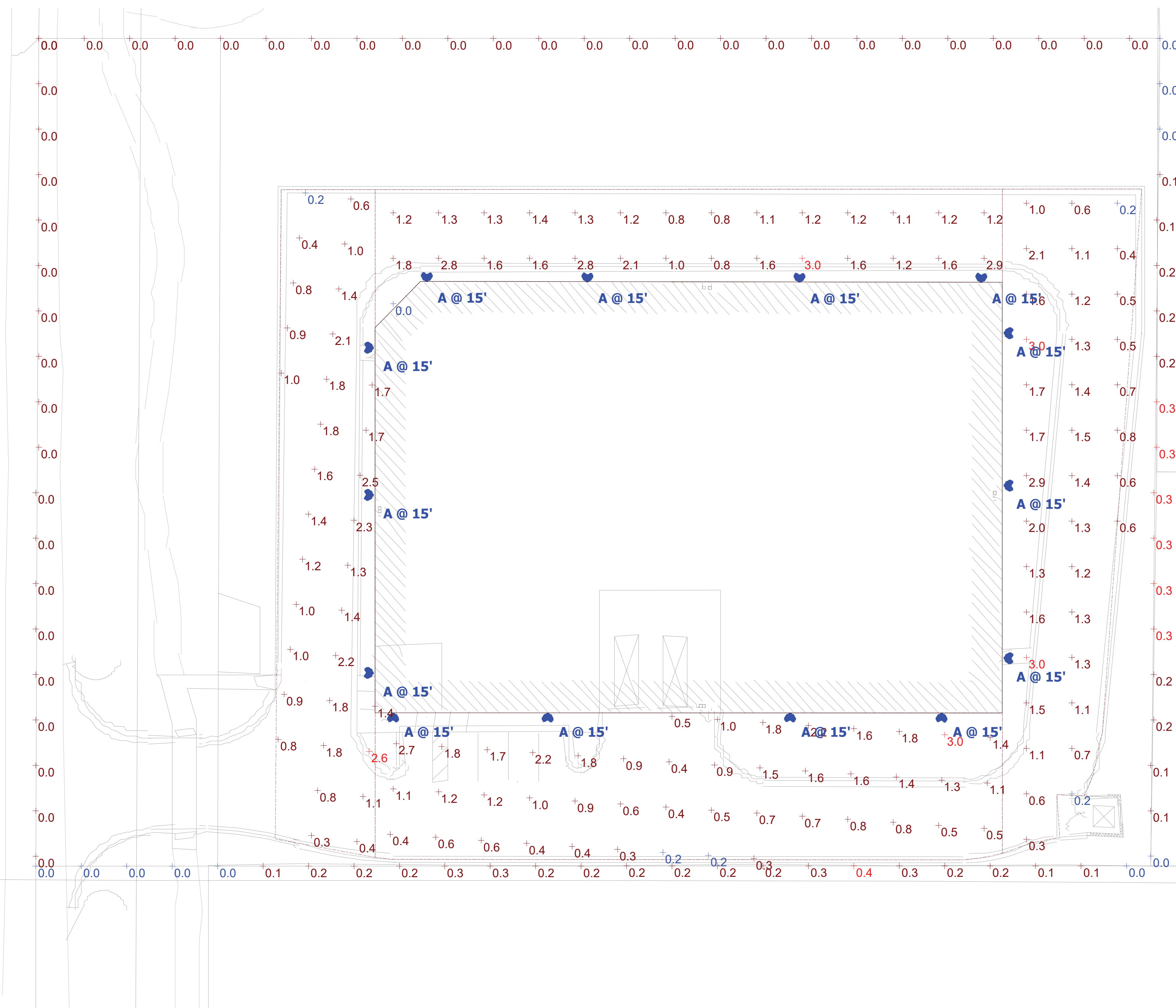
Symbol	Label	Image	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage	Plot
	A		14	Lithonia Lighting	DSXW2 LED 30C 350 30K TFTM MVOLT	DSXW2 LED WITH 3 LIGHT ENGINES, 30 LED's, 350mA DRIVER, 3000K LED, TYPE FORWARD THROW MEDIUM OPTIC	1	4115	1	36	

**Statistics**

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
East Boundary Line	+	0.2 fc	0.3 fc	0.0 fc	N/A	N/A
East Building Exterior	+	1.2 fc	3.0 fc	0.2 fc	15.0:1	6.0:1
North Boundary Line	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A
North Building Exterior	+	1.5 fc	3.0 fc	0.0 fc	N/A	N/A
South Boundary Line	+	0.2 fc	0.4 fc	0.0 fc	N/A	N/A
South Building Exterior	+	1.1 fc	3.0 fc	0.2 fc	15.0:1	5.5:1
West Boundary Line	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A
West Building Exterior	+	1.3 fc	2.6 fc	0.2 fc	13.0:1	6.5:1



Note: All exterior lighting shall incorporate automatic timers and shall be turned off between the hours of 9pm and sunrise, except for lighting necessary for security purposes. These times may be adjusted seasonally.



**Plan View**

1575 E HAMLIN RD PHOTOMETRIC

**Designer**  
RTT  
**Date**  
05/16/2023  
**Scale**  
Not to Scale  
**Drawing No.**

**Summary**

CITY FILE #23-0002  
SECTION 24



project sponsor:  
**CDK DEVELOPMENT**  
 10570 Savannah Ct  
 Huntley, Illinois  
 Contact: Steve Osborne  
 Phone: 224-249-9447

project location:  
**1575 E Hamlin Road**  
 zoned **I-1 Industrial**

project title:  
**LANDSCAPE PLAN**

job no. / issue / revision date:

LS23.028.02	REVIEW	2-9-2023
LS23.028.02	SPA	2-9-2023
LS23.028.05	SPA	5-23-2023
LS23.028.06	SPA	6-29-2023
LS23.028.08	SPA	8-16-2023
LS23.028.09	SPA	9-18-2023
LS23.028.11	COMMENTS	11-15-2023

drawn by:  
**JP**  
 checked by:  
**FP**  
 date:  
**2-1-2023**

notice:  
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The location and elevations of existing underground utilities as shown on this drawing are only approximate. No guarantee is either expressed or implied as to the completeness of accuracy. Contractor shall be exclusively responsible for determining the exact location and elevation prior to the start of construction.

project no:  
**LS23.028.02**

sheet no:  
**LS-1** of 2

**sheet index**

- LS-1 GENERAL LANDSCAPE PLAN
- LS-2 PLANT MATERIAL LIST NOTES & PLANT DETAILS

**general landscape notes:**

1. LANDSCAPE CONTRACTOR SHALL VISIT THE SITE, INSPECT EXISTING CONDITIONS, REVIEW PROPOSED PLANTINGS AND RELATED WORK, CONTACT THE OWNER AND/OR LANDSCAPE ARCHITECT WITH ANY CONCERNS OR DISCREPANCY BETWEEN THE PLAN, PLANT MATERIAL LIST, AND/OR SITE CONDITIONS.
2. PRIOR TO BEGINNING OF CONSTRUCTION ON ANY WORK, CONTRACTORS SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES: GAS, ELECTRIC, TELEPHONE, CABLE TO BE LOCATED BY CONTACTING MISS DIG (1-800-482-7171). ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATE ALL RELATED WORK ACTIVITIES WITH OTHER TRADES AND REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER PRIOR TO COMMENCING.
3. NUMERICAL VALUE ON THE LANDSCAPE QUANTITIES SPECIFIED ON THE PLAN TAKE PRECEDENCE OVER GRAPHIC REPRESENTATION. VERIFY ANY CONCERN-DISCREPANCY WITH LANDSCAPE ARCHITECT.
4. ALL CONSTRUCTION AND PLANT MATERIAL LOCATION TO BE ADJUSTED ON SITE IF NECESSARY.
5. ALL SUBSTITUTIONS OR DEVIATIONS FROM THE LANDSCAPE PLAN MUST BE APPROVED BY CITY OF ROCHESTER HILLS AND LANDSCAPE ARCHITECT.
6. ALL LARGE TREES AND EVERGREENS TO BE STAKED, GUYED AND WRAPPED AS DETAIL SHOWN ON PLAN.
7. PLANT BEDS TO BE DRESSED WITH MIN. 4" OF FINELY DOUBLE SHREDDED HARD BARK MULCH.
8. DIG SHRUB PITS 1' LARGER THAN SHRUB ROOT BALLS AND TREE PITS 2' LARGER THAN ROOT BALL. BACK FILL WITH ONE PART TOP SOIL AND ONE PART SOIL FROM EXCAVATED PLANTING HOLE.
9. NATURAL COLOR, FINELY SHREDDED HARDWOOD BARK MULCH REQUIRED FOR ALL PLANTINGS.
10. REMOVE ALL TWINE, WIRE AND BURLAP FROM TREE AND SHRUB EARTH BALLS, AND FROM TREE TRUNKS. 4" THICK BARK MULCH FOR TREES IN 4" DIA. CIRCLE WITH 3" PULLED AWAY FROM TRUNK. 4" THICK BARK MULCH FOR SHRUBS AND 2" THICK BARK MULCH FOR PERENNIALS.
11. PLANT MATERIAL QUALITY & INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT AMERICAN ASSOCIATION OF NURSERYMEN LANDSCAPE STANDARDS.
12. PROVIDE FEAT SOD FOR ALL NEW AND DISTURBED LAWN AREAS UNLESS NOTED OTHERWISE. NO FEAT SOD.
13. ALL PLANTING AREAS TO BE PREPARED WITH APPROPRIATE SOIL MIXTURES AND FERTILIZER BEFORE PLANT INSTALLATION.
14. PLANT TREES AND SHRUBS GENERALLY NO CLOSER THEN THE FOLLOWING DISTANCES FROM SIDEWALKS, CURBS AND PARKING STALLS.
 

a). SHADE TREES	5 FT.
b). ORNAMENTAL AND EVERGREEN TREES (CRAB, PINE, SPRUCE, ETC.)	10 FT.
c). SHRUBS THAT ARE LESS THAN 1 FOOT TALL AND WIDE AT MATURITY	2 FT.
15. NO TREES OR EVERGREENS TO BE INSTALLED OVER ANY PROPOSED OR EXISTING UTILITY LINES AS SHOWN ON THE OVERALL LANDSCAPE PLAN. SEE ENGINEERING PLANS FOR LOCATION AND DETAILS.
16. ALL LAWN AREAS AND LANDSCAPE BEDS TO BE FULLY IRRIGATED WITH A AUTOMATIC UNDERGROUND SYSTEMS. IRRIGATION SYSTEM TO HAVE SEPARATE ZONES FOR LAWN AREAS, PARKING ISLANDS, AND SHRUB BEDS WITH DIFFERENT CONTROL MOISTURE LEVEL ADJUSTMENT PER ZONE AS REQUIRED.
17. UNLESS NOTED OTHERWISE, LANDSCAPE BEDS ADJACENT TO LAWN TO RECEIVE EDGING. EDGING SHALL BE 4" X 1/8" METAL (FINISH BLACK OR GREEN) OR APPROVED EQUAL AND TO BE INSTALLED WITH HORIZONTAL METAL STAKES AT 32" O.C. OR PER MANUFACTURER'S SPECIFICATION.
18. ALL NEW PARKING ISLANDS AND LANDSCAPE BEDS ADJACENT AND NEXT TO BUILDING SHALL BE EXCAVATED OF ALL BUILDING MATERIALS AND POOR SOILS A MIN. OF 16" - 18" DEPTH. BACK FILL WITH GOOD, MEDIUM TEXTURED PLANTING SOILS. ADD A MIN. 4" OF TOPSOIL OVERFILL. TO FINISH GRADE. PROVIDE POSITIVE DRAINAGE.
19. WATERING OF ALL PLANTS AND TREES TO BE PROVIDED IMMEDIATELY AND MULCHING WITHIN 24 HOURS AFTER INSTALLATION.
20. ALL TREE PITS TO BE TESTED FOR PROPER DRAINAGE PRIOR TO TREE PLANTING. PROVIDE APPROPRIATE DRAINAGE SYSTEM AS REQUIRED IF THE TREE PIT DOES NOT DRAIN SUFFICIENTLY.
21. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE PLANT MATERIALS AND IRRIGATION INSTALLATION FOR A PERIOD OF TWO YEAR BEGINNING AFTER THE COMPLETION OF LANDSCAPE INSTALLATION DATE APPROVED BY THE CITY OR LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE DURING AND AT THE END OF THE GUARANTEE PERIOD, ANY DEAD OR UNACCEPTABLE PLANTS, AS DETERMINED BY THE TOWNSHIP OR LANDSCAPE ARCHITECT, WITHOUT COST TO THE OWNER.

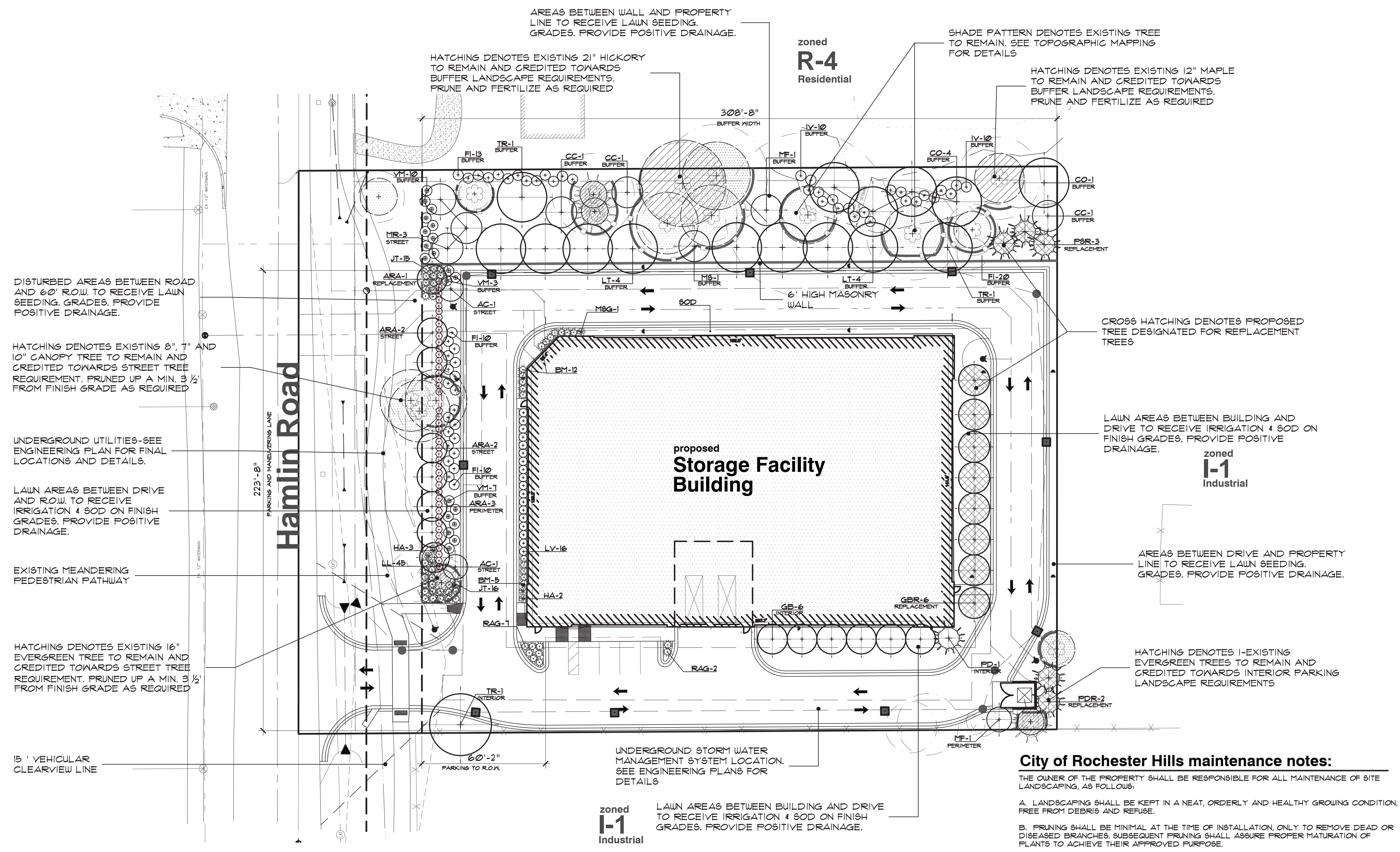
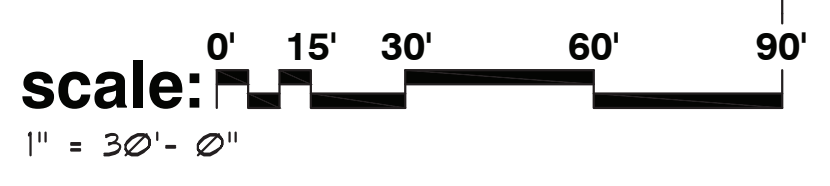
**landscape plan for:**

# 1575 E Hamlin Road

## City of Rochester Hills, Michigan

**note:**

unless noted otherwise, numerical value on landscape quantities specified on plan take precedence over graphic representation.



**landscape requirement summary**

	REQUIRED	PROVIDED
<b>street tree (Hamlin Road)</b>		
TOTAL LINFT. OF HAMLIN ROAD FRONTAGE (213' HAMLIN ROAD FRONTAGE LESS 30' ACCESS DRIVE= 243')	213' ±	
ONE (1) CANOPY OR EVERGREEN TREE PER 35' (243' / 35' PER TREE= 6.9 TREES)	8	4-EXISTING + 4-NEW
ONE (1) ORNAMENTAL TREE PER 60' (243' / 60' PER TREE= 4.05 TREES)	5	5
<b>buffer (west property line * residential R-4 * type-E with wall)</b>		
TOTAL LINFT. OF WEST PROPERTY LINE	308' ±	
TWO+HALF (2.5) CANOPY TREES PER 100' (308' / 100'±3.08 X 2.5 TREES= 7.7 TREES)	8	2-EXISTING + 6-NEW
SIX (6) EVERGREEN TREES PER 100' (308' / 100'±3.08 X 6= TREES= 18.48 TREES)	19	"A"
ONE & HALF (1.5) ORNAMENTAL TREE PER 100' (308' / 100'±3.08 X 1.5= TREES= 4.62 TREES)	5	5
TEN (10) SHRUB PER 100' (308' / 100'±3.08 X 10=SHRUBS= 30.8 SHRUBS)	31	34
"A" WHERE A MASONRY WALL IS PROPOSED, NO EVERGREEN TREES ARE REQUIRED. INSTEAD, ADDITIONAL DECIDUOUS TREES AND SHRUBS SHALL BE PROVIDED AT THE RATE OF 0.9 DECIDUOUS TREES AND 2 SHRUBS FOR EACH EVERGREEN TREE THAT WOULD OTHERWISE BE REQUIRED IN THE BUFFER YARD.		
NO. OF CANOPY TREES (0.5 TREE PER EVERGREEN TREE) (14 EVERGREENS LESS 2 EX EVERGREENS=12 EVERGREENS X 0.5 = 6.5 TREES)	9	9
NO. OF SHRUBS (2 SHRUBS PER EVERGREEN TREE) (14 EVERGREENS- 2 EX EVERGREENS = 12 EVERGREENS X 2 = 24 SHRUBS)	34	34
<b>parking lot landscape</b>		
TOTAL AREA OF VEHICULAR USE (PARKING AND CIRCULATION) INTERIOR LANDSCAPE AREA (5% VEHICULAR USE AREA= 26,471 SQ.FT. X .05 = 1,301 SQ.FT)	26,448 ± SQ.FT.	1,301 SQ.FT. 1,350+ SQ.FT.
ONE (1) TREE PER 150 SQ.FT. (INTERIOR LANDSCAPE AREA) (1,301 / 150 SQ.FT. PER TREE= 8.71 TREES)	9	1-EXISTING + 8-NEW

	REQUIRED	PROVIDED
<b>perimeter landscape</b>		
TOTAL LINFT. PARKING & MANEUVERING LANE WITHIN 100' OF R.O.W.	224' ±	
ONE (1) CANOPY TREE PER 25' (224' / 25' PER TREE= 8.96 TREES)	9	4 ("A")
ONE (1) ORNAMENTAL TREE PER 35' (224' / 35' PER TREE= 6.41 TREES)	7	1 ("A")
ONE (1) SHRUBS PER 2.5' (224' / 2.5' PER SHRUB= 89.6 SHRUBS)	90	90

("A") WAIVER REQUESTED DUE TO LIMITED LANDSCAPE AREAS AND PUBLIC UTILITY EASEMENT RESTRICTIONS

**tree replacement**

TOTAL NO. OF EXISTING 6" DBH TREES SURVEY ON SITE	72
NO. OF TREES LOCATED WITHIN BLDG. ENVELOP	27
NO. OF TREES LOCATED OUTSIDE BLDG. ENVELOP	45
NO. OF EXISTING TREE PRESERVATION REQUIRED (40% OF TREES OUTSIDE BLDG ENVELOP = 45-TREES X 40 = 18-TREES)	18
NO. OF EXISTING TREES PRESERVATION PROVIDED (SAVED)	18 (40%)
TOTAL EXISTING TREES REMOVED	52
NO. OF REGULATED EXISTING TREES REMOVED	44
NO. OF SPECIMEN TREES REMOVED	5 (2-14' APPLE & 20' WALNUT)
NO. OF REGULATED TREE REPLACEMENT	44
NO. OF SPECIMEN TREE REPLACEMENT (50% CALIPER INCHES REMOVED = 48" X 50 = 24" / 2" = 12-TREES)	12

**City of Rochester Hills maintenance notes:**

- THE OWNER OF THE PROPERTY SHALL BE RESPONSIBLE FOR ALL MAINTENANCE OF SITE LANDSCAPING, AS FOLLOWS:
- A. LANDSCAPING SHALL BE KEPT IN A NEAT, ORDERLY AND HEALTHY GROWING CONDITION, FREE FROM DEBRIS AND REFUSE.
  - B. PRUNING SHALL BE MINIMAL AT THE TIME OF INSTALLATION, ONLY TO REMOVE DEAD OR DISEASED BRANCHES. SUBSEQUENT PRUNING SHALL ASSURE PROPER MATURATION OF PLANTS TO ACHIEVE THEIR APPROVED PURPOSE.
  - C. ALL DEAD, DAMAGED, OR DISEASED PLANT MATERIAL SHALL BE REMOVED IMMEDIATELY AND REPLACED WITHIN SIX (6) MONTHS AFTER IT DIES OR IN THE NEXT PLANTING SEASON, WHICHEVER OCCURS FIRST. FOR PURPOSES OF THIS SECTION, THE PLANTING SEASON FOR DECIDUOUS PLANTS SHALL BE BETWEEN MARCH 1 AND JUNE 1 AND FROM OCTOBER 1 UNTIL THE PREPARED SOIL BECOMES FROZEN. THE PLANTING SEASON FOR EVERGREEN PLANTS SHALL BE BETWEEN MARCH 1 AND JUNE 1. PLANT MATERIAL INSTALLED TO REPLACE DEAD OR DISEASED MATERIAL SHALL BE AS CLOSE AS PRACTICAL TO THE SIZE OF THE MATERIAL IT IS INTENDED TO REPLACE. THE CITY MAY NOTIFY PROPERTY OWNERS OF THE NEED TO REPLACE DEAD, DAMAGED, OR DISEASED MATERIAL.
  - D. THE APPROVED LANDSCAPE PLAN SHALL BE CONSIDERED A PERMANENT RECORD AND INTEGRAL PART OF THE SITE PLAN APPROVAL. UNLESS OTHERWISE APPROVED IN ACCORDANCE WITH THE AFOREMENTIONED PROCEDURES, ANY REVISIONS TO OR REMOVAL OF PLANT MATERIALS, OR NON-COMPLIANCE WITH THE MAINTENANCE REQUIREMENTS OF THIS SECTION 138-12.09 WILL PLACE THE PARCEL IN NON-COMFORMITY WITH THE APPROVED LANDSCAPE PLAN AND BE A VIOLATION OF THIS ORDINANCE.
  - E. IF PROTECTED TREES ARE DAMAGED, A FINE SHALL BE ISSUED ON AN INCH-BY-INCH BASIS AT A MONETARY RATE AS DEFINED BY THE FORESTRY DEPARTMENT.

**City of Rochester Hills notes:**

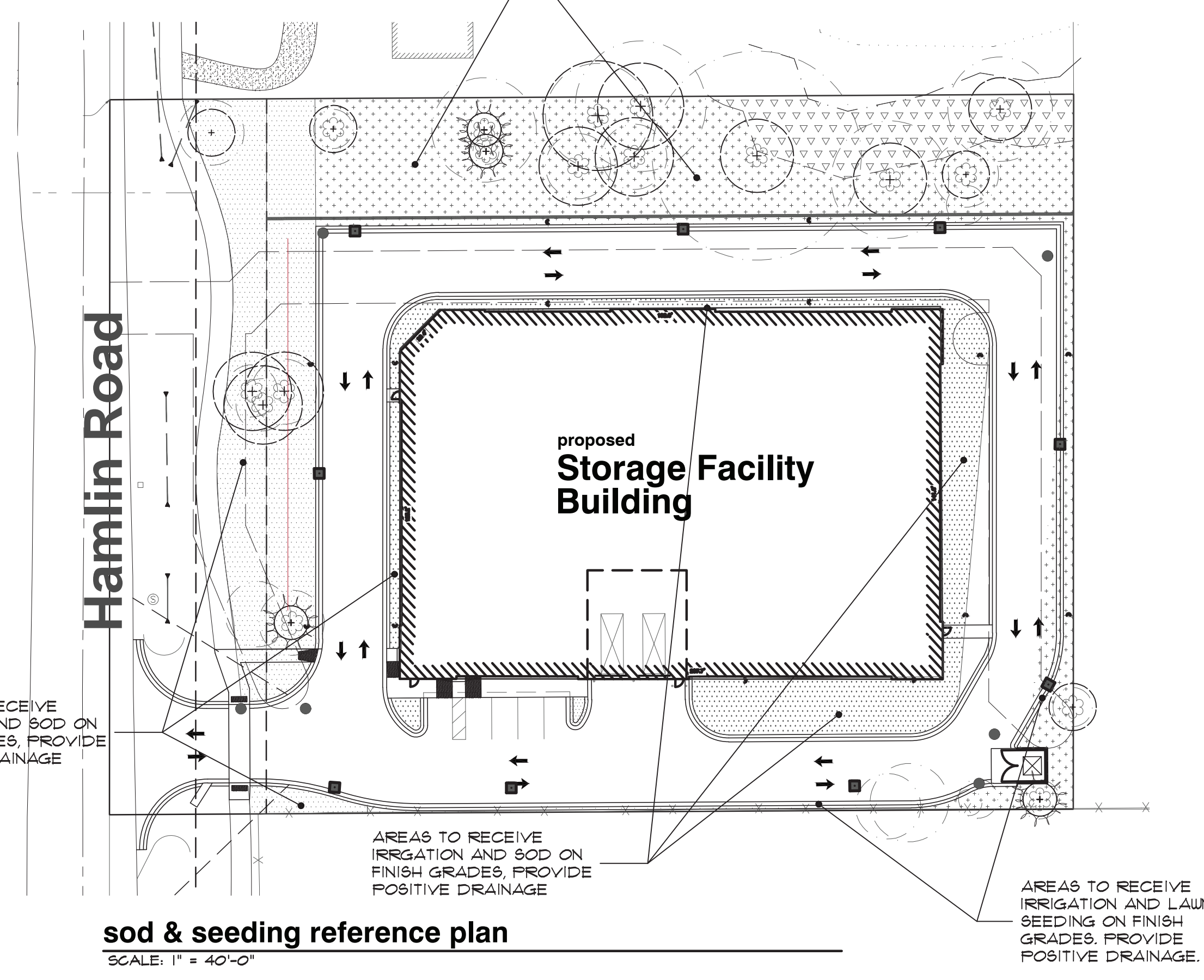
1. PRIOR APPROVAL IS REQUIRED TO PLANT ANY TREE OR SHRUB ON THE PUBLIC RIGHT-OF-WAY.
2. ALL TREES AND SHRUBS MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF THE PUBLIC ROAD. (TREES MUST BE PLANTED AT LEAST 15' AWAY FROM CURB OR ROAD EDGE WHERE THE SPEED LIMIT IS MORE THAN 35 MPH.)
3. SHADE TREES AND SHRUBS MUST BE PLANTED AT LEAST 5' FROM THE EDGE OF THE PUBLIC WALKWAY. EVERGREEN AND ORNAMENTAL TREES MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF THE PUBLIC WALKWAY.
4. NO TREES OR SHRUBS MAY BE PLANTED WITHIN THE TRIANGULAR AREA FORMED AT THE INTERSECTION OF ANY STREET RIGHT-OF-WAY LINES AT A DISTANCE ALONG EACH LINE OF 25' FROM THEIR POINT OF INTERSECTION.
5. NO TREES OR SHRUBS MAY BE PLANTED IN THE TRIANGULAR AREA FORMED AT THE INTERSECTION OF ANY DRIVEWAY WITH A PUBLIC WALKWAY AT A DISTANCE ALONG EACH LINE OF 15' FROM THEIR POINT OF INTERSECTION.
6. ALL TREES AND SHRUBS MUST BE PLANTED AT LEAST 10' FROM ANY FIRE HYDRANT.
7. SHADE AND EVERGREEN TREES MUST BE AT LEAST 15' AWAY FROM THE NEAREST OVERHEAD WIRE. TREES MUST BE PLANTED A MINIMUM OF 5' FROM AN UNDERGROUND UTILITY, UNLESS THE CITY'S LANDSCAPE ARCHITECT REQUIRES A GREATER DISTANCE, PRIOR TO THE RELEASE OF THE PERFORMANCE BOND.
8. THE CITY OF ROCHESTER HILLS FORESTRY UNIT NEEDS TO INSPECT ALL TREES, EXISTING OR PLANTED, TO IDENTIFY ANY THAT POSE A HAZARD TO THE SAFE USE OF THE PUBLIC RIGHT-OF-WAY. FORESTRY MAY REQUIRE THE DEVELOPER TO REMOVE, AND POSSIBLY REPLACE, ANY SUCH TREES. THE ABOVE REQUIREMENTS ARE INCORPORATED INTO THE PLAN.
9. IF PROTECTED TREES ARE DAMAGED, A FINE SHALL BE ISSUED ON AN INCH-BY-INCH BASIS AT A MONETARY RATE AS DEFINED BY THE FORESTRY DEPARTMENT.



**plant material list**

key	quant. LS-1	botanical name	common name	size	comments
<b>REPLACEMENT TREES</b>					
GBR	8	GINKGO BILOBA (FNI 2120) 'PRINCETON SENTRY'	PRINCETON SENTRY MAIDENHAIR TREE	3" BB	MATCH
PDR	2	PICEA GLAUCA 'DENSATA'	BLACK HILL SPRUCE	8" BB	
FOR	3	PINUS STROBUS	EASTERN WHITE PINE	8" BB	
<b>LARGE AND SMALL DECIDUOUS TREES</b>					
GB	6	GINKGO BILOBA (FNI 2120) 'PRINCETON SENTRY'	PRINCETON SENTRY MAIDENHAIR TREE	3" BB	MATCH
CO	5	CELTIS OCCIDENTALIS	COMMON HACKBERRY	3" BB	
LT	8	LIRIODENDRON TULIPIFERA	TULIPTREE	3" BB	
TR	3	TILIA AMERICANA 'REDMOND'	REDMOND LINDEN	3" BB	
ARA	8	ACER R. 'ARMSTRONG'	ARMSTRONG RED MAPLE	3" BB	
CC	3	CERCIS CANADENSIS	EASTERN REDBUD	8" BB	MULTI-STEM
MF	2	MALUS FLORIBUNDA	JAPANESE FLOWERING CRABAPPLE	2" BB	
AC	2	AMECHANCIER CANADENSIS	AUTUMN BRILLIANCE SERVICEBERRY	8" BB	MULTI-STEM
MS	1	MALUS SNOWDRIFT	SNOWDRIFT CRABAPPLE	2" BB	
MR	3	MALUS RED VELVET	RED VELVET CRABAPPLE	2" BB	
PD	1	PICEA GLAUCA 'DENSATA'	BLACK HILL SPRUCE	10" BB	
<b>DECIDUOUS AND EVERGREEN SHRUBS</b>					
IV	20	CORNUS STOLONIFERA	MICHIGAN HOLLY	36" HIGH CONT	60" O.C. SPACING
LV	16	LIGUSTRUM X. 'VICATRI'	GOLDEN VICARY PRIVET	30" HIGH CONT	48" O.C. SPACING
HA	5	HYDRANGEA ANNABELLE	ANNABELLE HYDRANGEA	30" HIGH CONT	36" O.C. SPACING
FI	33	FORSYTHIA X. INTERMEDIA	BORDER FORSYTHIA	30" HIGH CONT	60" O.C. SPACING
JT	31	JUNIPERUS S. TAMARISCIFOLIA	TAMARISK JUNIPER	24" BB	60" O.C. SPACING
VM	20	VIBURNUM MOHAUK	MOHAUK VIBURNUM	6" BB	60" O.C. SPACING
BM	11	BUXUS M. 'GREEN MOUNTAIN'	GREEN MOUNTAIN BOXWOOD	18" BB	36" O.C. SPACING
LL	45	LIGUSTRUM VULGAR. 'LODENSE'	LODENSE PRIVET	30" HIGH CONT	48" O.C. SPACING
RAG	9	RHUS AROMATIC 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	5" CONT.	42" O.C. SPACING
<b>PERENNIALS AND GRASSES</b>					
MSG	1	MISCANTHUS SINENSIS 'MORNING LIGHT'	MORNING LIGHT JAPANESE SILVER GRASS	5" CONT.	42" O.C. SPACING

AREAS TO RECEIVE IRRIGATION AND LAWN SEEDING ON FINISH GRADES. PROVIDE POSITIVE DRAINAGE.



**sod & seeding reference plan**  
SCALE: 1" = 40'-0"

**hatch pattern key**

- AREAS TO RECEIVE IRRIGATION AND SOD, MAINTAINED AND MOWED WEEKLY
- AREAS TO RECEIVE LAWN SEEDING AND IRRIGATION
- AREAS TO RECEIVE WETLAND EDGE SEED MIX

**lawn area:**

SOD LAWN AREAS SHALL BE KENTUCKY BLUE GRASS BLEND GRASS IN A SOD NURSERY ON LOAM SOIL. SOD TO BE INSTALLED ON MINIMUM 4" TOPSOIL. SEEDING LAWN AREAS SHALL CONSIST OF THE FOLLOWING TYPES AND PROPORTIONS:  
5% PERENNIAL RYE GRASS  
10% RED FESCUE  
25% CHEWING FESCUE  
60% KENTUCKY BLUE GRASS  
SEED MIX SHALL BE APPLIED AT A RATE OF 200 POUNDS PER ACRE AND WEED CONTENT SHALL NOT EXCEED 1%. SEED, PROVIDE A MINIMUM 4" TOP SOIL ON ALL SEEDING LAWN AREA.

**wetland edge seed mix:**

SPECIES	COMMON NAME	RATE (LBS./AC.)
ALISMA SUBCORDATUM	COMMON WATER PLANTAIN	0.375
ASCLEPIAS INCARNATA	SWAMP MILKWEED	0.062
ASTER NOVA-ANGLIAE	NEW ENGLAND ASTER	0.062
ASTER SIMPLEX	PANICLED ASTER	0.031
BIDENS CERNUA	NODDING BUR MARIGOLD	0.312
BIDENS FRONDOSA	COMMON BEGGAR'S TICK	0.125
BOLTONIA LATISQUAMA	FALSE ASTER	0.188
CAREX BEBBII	BEBB'S SEDGE	0.125
CAREX COMOSA	BOTTLEBRUSH GRASS	0.125
CAREX LUPULINA C	COMMON HOP SEDGE	0.062
CAREX STIPATA	AWL-FRUITED SEDGE	0.125
CAREX SCOPARIA	POINTED BROOM SEDGE	0.125
CAREX VULPINIDEA	FOX SEDGE	0.500
ELEOCHARIS SPECIOSA	SPIKE RUSH SPECIES	0.062
ELYMUS VIRGINICUS	VIRGINIA WILD RYE	1.500
EUPATORIUM MACULATUM	SPOTTED JOE PYE WEED	0.125
GLYCERIA STRIATA	FOWL MANNA GRASS	0.125
HELENIUM AUTUMNALE	SNEEZEWEED	0.250
IRIS VIRGINICA	SOUTHERN BLUE FLAG	0.188
JUNCUS SPECIES	RUSH SPECIES	0.062
LEERSIA ORYZOIDES	RICE CUT GRASS	0.188
LUDWIGIA POLYCARPA	FALSE LOOSESTRIFE	0.001
MIMULUS RINGENS	MONKEYFLOWER	0.031
ONOCLEA SENSIBILIS	SENSITIVE FERN	0.031
PENTHORUM SEDOIDES	DITCH STONECROP	0.001
POLYGONUM HYDROPERIODES	MILD WATER PEPPER	0.750
RUBRACKIA LACINIATA	GREEN CONEFLOWER	0.125
SAGITTARIA LATIFOLIA	DUCK POTATO	0.062
SCIRPUS ATROVIRENS	DARK GREEN RUSH	1.250
SCIRPUS FLUVIATILIS	RIVER BULRUSH	0.125
SCIRPUS PENDULUS	RED BULRUSH	0.031
SCIRPUS VALIDUS	SOFT STEM BULRUSH	0.031
SPARGANIUM EURYCARPUM	COMMON BUR-REED	0.062
VERONICA FICULATA	COMMON IRONWEED	0.062
VERBENA HASATA	BLUE VERVAIN	0.125
	<b>TOTAL</b>	<b>7.404</b>

COVER CROP	SEED OATS 20.0	ANNUAL RYE 5.0
AVENA SATIVA		
LOLIUM MULTIFLORUM		

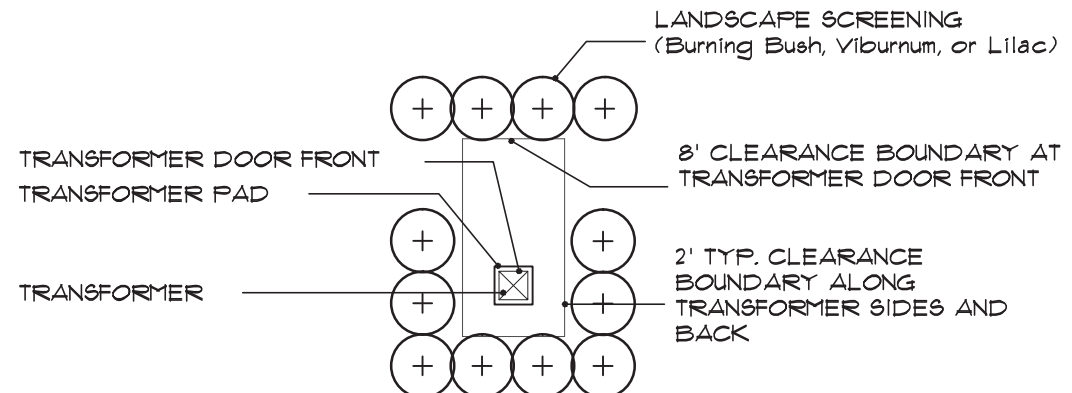
NOTES:  
SEED MIX TO BE BROADCAST OVER WETLAND RESTORATION AREA. THIS IS GENESIS NURSERY'S SEDGE GHETTO-THE NEXT GENERATION SEED MIX MODIFIED FOR USE IN MICHIGAN.

**planting landscape notes:**

- GENERAL NOTES:**
- PLANT MATERIALS TO BE INSTALLED ACCORDING TO THE CITY ROCHESTER AND CURRENT AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARDS.
  - PLANT MATERIALS TO BE GUARANTEED FOR 2 YEARS. REPLACE FALLING MATERIAL WITHIN 1 YEAR, OR THE NEXT APPROPRIATE PLANTING PERIOD.
  - PLANT MATERIALS TO BE OF PREMIUM QUALITY, NO. 1 GRADE NORTHERN NURSERY GROWN, IN HEALTHY CONDITION, FREE OF PESTS AND DISEASES.
  - MULCH IS TO BE NATURAL COLORED, FINELY SHREDDED HARDWOOD BARK OF 4" THICK BARK MULCH FOR TREES IN 4" DIA. CIRCLE W/3" PULLED AWAY FROM TRUNK, 3" THICK BARK MULCH FOR SHRUBS AND 2" THICK BARK MULCH FOR PERENNIALS.
  - CALL MISS DIG AT 1-800-482-7171 PRIOR TO ANY CONSTRUCTION.
- DECIDUOUS & EVERGREEN TREE:**
- TREE SHALL BE INSTALLED SAME RELATIONSHIP TO FINISH GRADE AS IT BORE ORIGINALLY OR SLIGHTLY HIGHER THAN FINISH GRADE UP TO 6" ABOVE GRADE, IF DIRECTED BY LANDSCAPE ARCHITECT FOR HEAVY CLAY SOIL AREAS.
  - DO NOT PRUNE TERMINAL LEADER. PRUNE ONLY DEAD OR BROKEN BRANCHES.
  - REMOVE ALL TAGS, STRING, PLASTICS AND OTHER MATERIALS THAT ARE UNSIGHTLY AND COULD CAUSE GIRDLING.
  - REMOVE TREE STAKES, GUY WIRES AND TREE WRAP AFTER ONE WINTER SEASON.
- SHRUB:**
- SHRUB SHALL BE INSTALLED SAME RELATIONSHIP TO FINISH GRADE AS IT BORE ORIGINALLY OR SLIGHTLY HIGHER THAN FINISH GRADE UP TO 4" ABOVE GRADE, IF DIRECTED BY LANDSCAPE ARCHITECT FOR HEAVY CLAY SOIL AREAS.
  - DO NOT PRUNE TERMINAL LEADER. PRUNE ONLY DEAD OR BROKEN BRANCHES.
  - REMOVE ALL TAGS, STRING, PLASTICS AND OTHER MATERIALS THAT ARE UNSIGHTLY AND COULD CAUSE GIRDLING.
- TREE PROTECTION:**  
EITHER PLASTIC OR WOOD ORANGE SNOU FENCING SHALL BE INSTALLED AT OR BEYOND THE DRIFLINE, UNLESS MORE SUBSTANTIAL FENCING IS REQUIRED. STAKES SHALL BE METAL 1" POLES SPACED NO FURTHER THAN 5' ON CENTER.  
FENCING SHALL NOT BE INSTALLED CLOSER TO THE TREE THAN THE DRIFLINE OF THOSE TREES TO BE SAVED. SPECIAL CIRCUMSTANCES SHALL BE REVIEWED BY THE CITY.  
FENCING SHALL BE ERECTED PRIOR TO CONSTRUCTION. THE CITY SHALL BE NOTIFIED ONCE THE FENCING IS INSTALLED FOR INSPECTION.  
UNDER NO CIRCUMSTANCES SHALL THE PROTECTIVE FENCING BE REMOVED WITHOUT PROPER APPROVAL FROM THE CITY.
- NO PERSON SHALL CONDUCT ANY ACTIVITY WITHIN THE AREAS PROPOSED TO REMAIN. THIS SHALL INCLUDE, BUT NOT LIMITED TO:**
- NO SOLVENTS OR CHEMICALS WITHIN THE PROTECTED AREAS.
  - NO BUILDING MATERIALS OR CONSTRUCTION EQUIPMENT WITHIN THE PROTECTED AREAS.
  - NO GRADE CHANGES, INCLUDING FILL, WITHIN THE PROTECTED AREAS.
  - NO REMOVAL OF VEGETATION FROM THE GROUND UP WITHOUT PERMISSION FROM THE PROPER REVIEWING AUTHORITY, INCLUDING THE WOODLANDS REVIEW BOARD.
  - ANY REQUIRED SWALE NEEDS TO BE DIRECTED AROUND THE PROTECTED AREAS. IN INSTANCES WHERE SWALES ARE APPROVED THRU A PROTECTED AREA, THE SWALES NEED TO BE HAND DUG. MACHINERY OF ANY KIND IS PROHIBITED.
- REGULATED WOODLANDS OR REGULATED TREES ADJACENT TO THE PROPERTY ARE ALSO REQUIRED TO BE PROTECTED WHETHER OR NOT THEY ARE SHOWN ON THE PLAN.

**City of Rochester Hills landscape notes:**

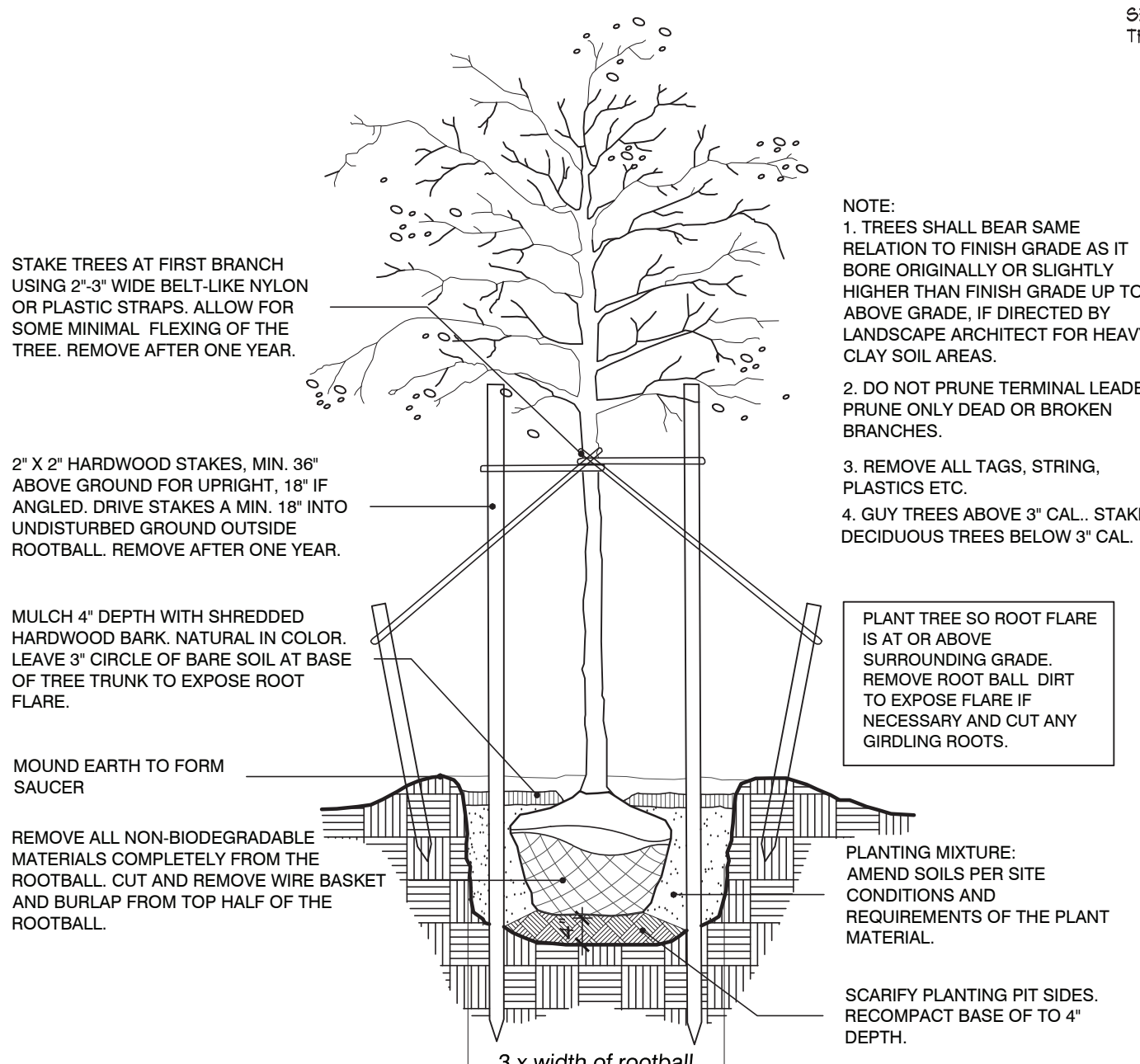
- A LANDSCAPE PLANTING SCHEDULE MUST BE PROVIDED INCLUDING THE SIZE OF ALL PURPOSED LANDSCAPING, A UNIT COST ESTIMATE AND LANDSCAPE COST SUMMARY, INCLUDING IRRIGATION COST, FOR THE LANDSCAPE BOND PURPOSES MUST BE PROVIDED.
- PRIOR TO THE RELEASE OF THE PERFORMANCE BOND, THE CITY OF ROCHESTER HILLS MUST INSPECT ALL LANDSCAPE PLANTINGS.
- ANY PLANT MATERIAL THAT IS DESIGNATED TO BE MAINTAINED THAT DIES OR DAMAGED DURING OR AS A RESULT OF CONSTRUCTION SHALL BE REPLACED IN KIND WITH LIKE SPECIES AND SIZE.
- ALL LANDSCAPE AREAS MUST BE IRRIGATED. IRRIGATION PLAN TO BE SUBMITTED PRIOR TO STAFF APPROVAL OF FINAL SITE PLAN. A NOTE SPECIFYING THAT WATERING WILL ONLY OCCUR BETWEEN THE HOURS OF 12:00 AM AND 5:00 AM.
- ALL GROUND MOUNTED UTILITIES SHALL BE FULLY SCREENED FROM VIEW.
- ALL LANDSCAPE AND GRASS AREAS, INCLUDING RIGHTS OF WAY SHALL BE FULLY IRRIGATED.



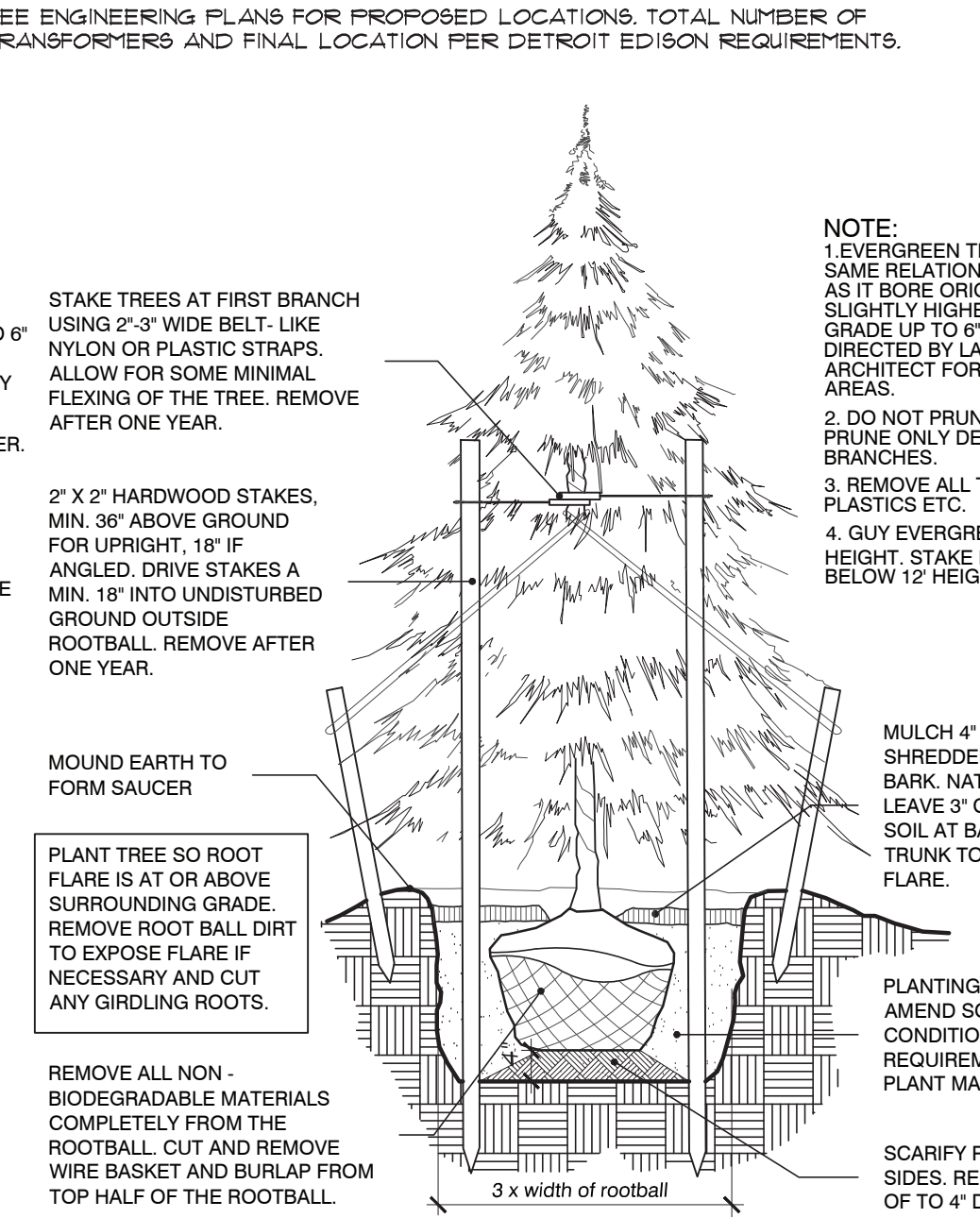
**transformer pad planting detail**  
SCALE: 1" = 20'-0"

A MINIMUM OF 2' SEPARATION BETWEEN TRANSFORMER AND FULL GROWN SHRUBS AND TREES. GROUND COVERS ALLOUED UP TO TRANSFORMER PAD IF MAINTAINED BELOW 4" FULL GROWTH. IF TRANSFORMER FACES TOWARDS THE HOUSE, THEN THE SAME CONDITIONS EXIST. NO FULL GROWTH IN FRONT OF THE TRANSFORMER FOR AT LEAST A MINIMUM OF 8'. THERE ARE NO WAIVERS GRANTED TO THE ABOVE CONDITION. DETAIL PER THE DETROIT EDISON COMPANY-SERVICE PLANNING DEPARTMENT (9-11-98)

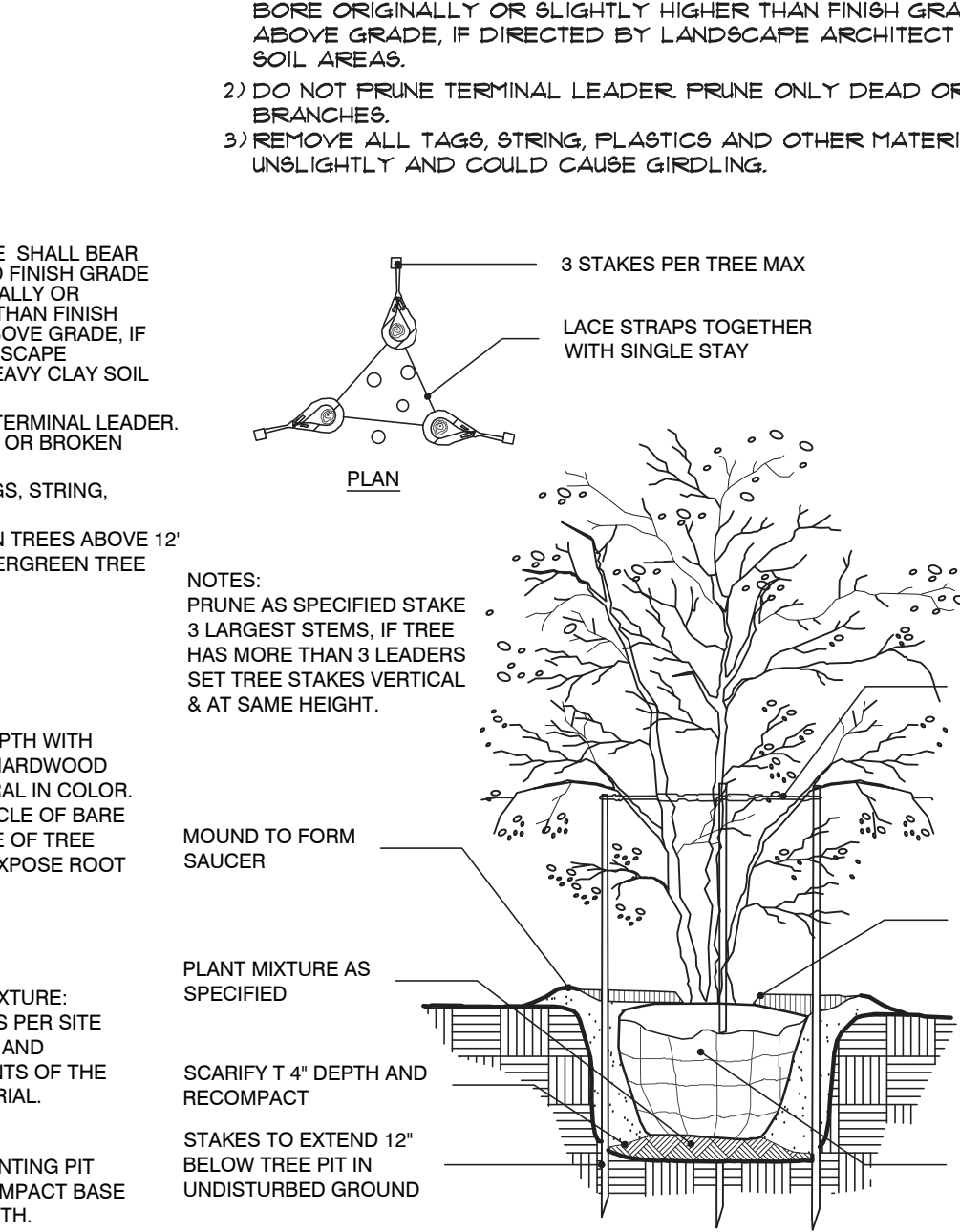
SEE ENGINEERING PLANS FOR PROPOSED LOCATIONS. TOTAL NUMBER OF TRANSFORMERS AND FINAL LOCATION PER DETROIT EDISON REQUIREMENTS.



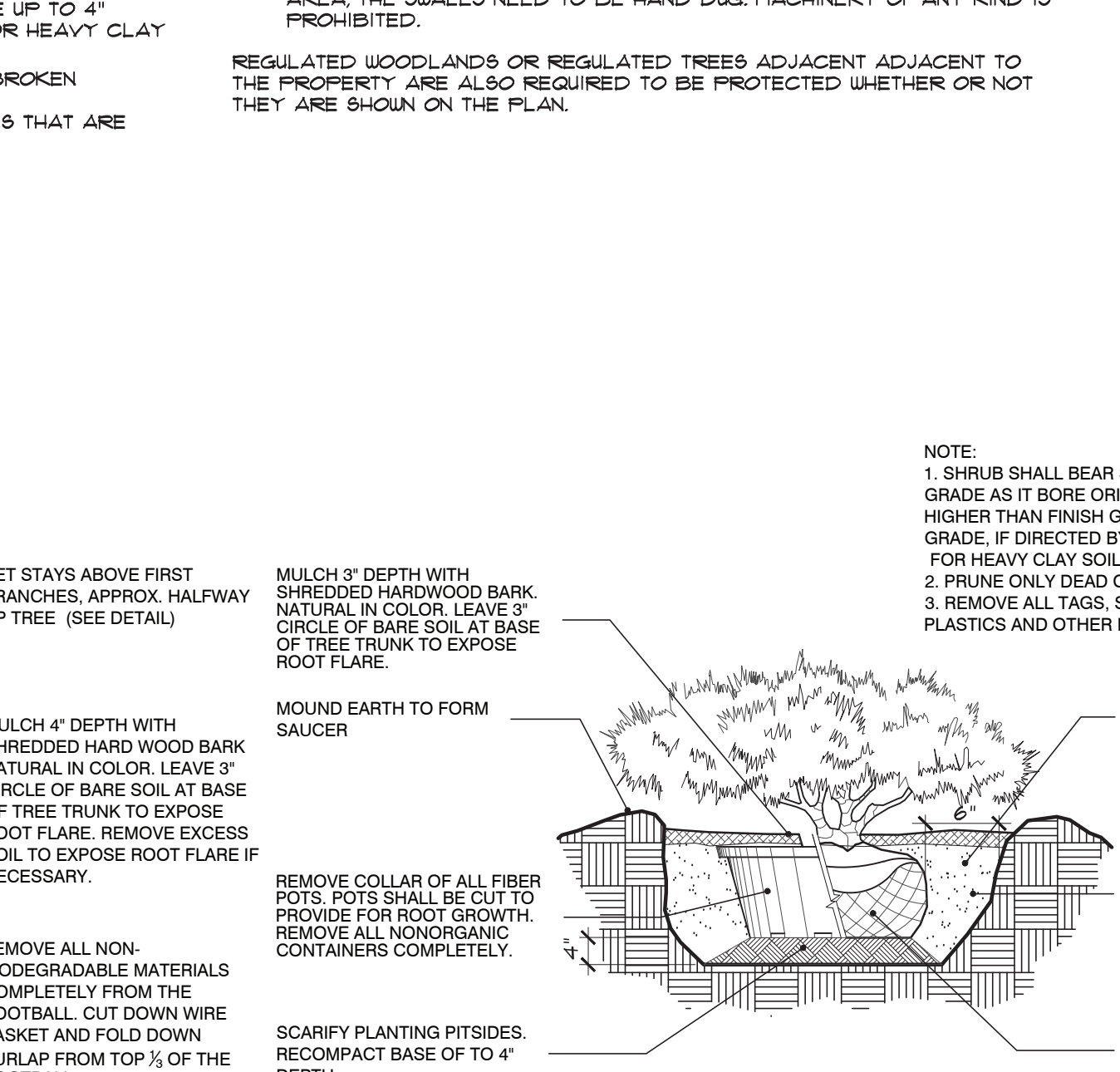
**tree planting detail**  
no scale



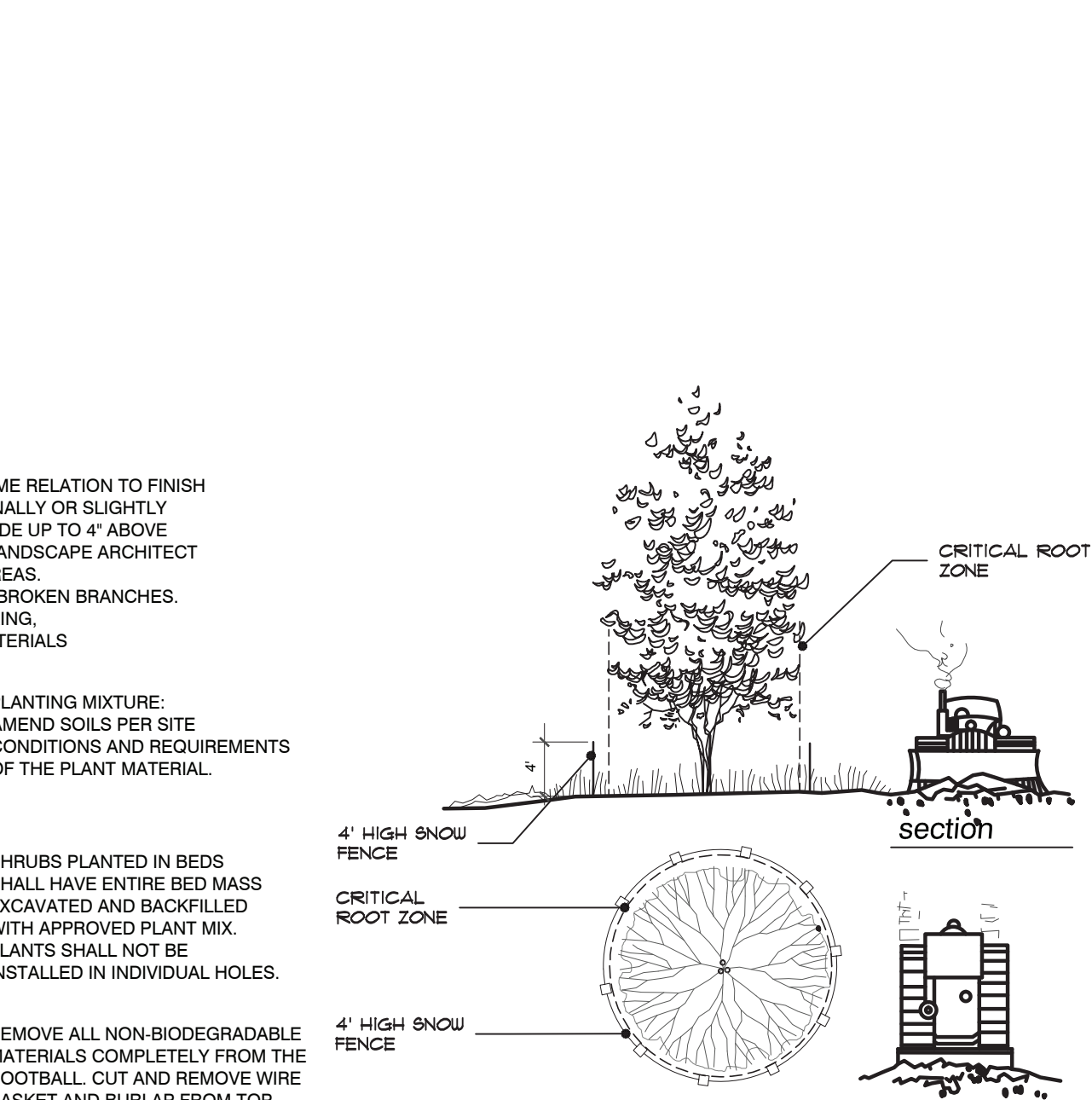
**evergreen planting detail**  
no scale



**multi-stem tree planting detail**  
no scale

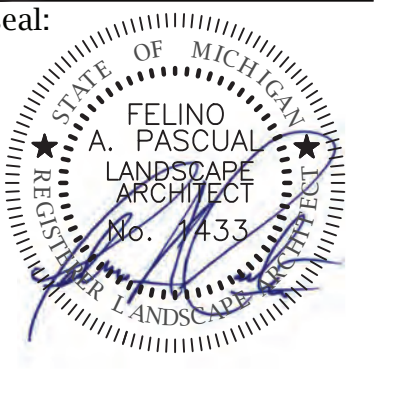


**shrub planting detail**  
no scale



**tree protection detail**  
no scale

**FP A**  
FELINO A. PASCUAL and ASSOCIATES  
Community Land Planner and registered Landscape Architect  
24333 Orchard Lake Rd., Suite G Farmington Hills, Michigan 48336  
phone: (248) 557-5588



project sponsor:  
**CDK DEVELOPMENT**  
10570 Savannah Ct  
Huntley, Illinois  
Contact: Steve Osborne  
Phone: 224-249-9447

project location:  
**1575 E Hamlin Road**

project location:  
**City of Rochester Hills, Michigan**  
1575 E. Hamlin Road

sheet title:  
**PLANTING DETAILS AND LANDSCAPE NOTES**

job no. / issue / revision date:

LS23.028.02	REVIEW	2-9-2023
LS23.028.02	SPA	2-9-2023
LS23.028.05	SPA	5-23-2023
LS23.028.06	SPA	6-29-2023
LS23.028.08	SPA	8-16-2023
LS23.028.09	SPA	9-18-2023
LS23.028.11	COMMENTS	11-15-2023

drawn by:  
**JP**  
checked by:  
**FP**  
date:  
**2-1-2023**

notice:  
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The location and elevations of existing underground utilities as shown on this drawing are only approximate. no guarantee is either expressed or implied as to the completeness of accuracy. contractor shall be exclusively responsible for determining the exact location and elevation prior to the start of construction

project no:  
**LS23.028.02**

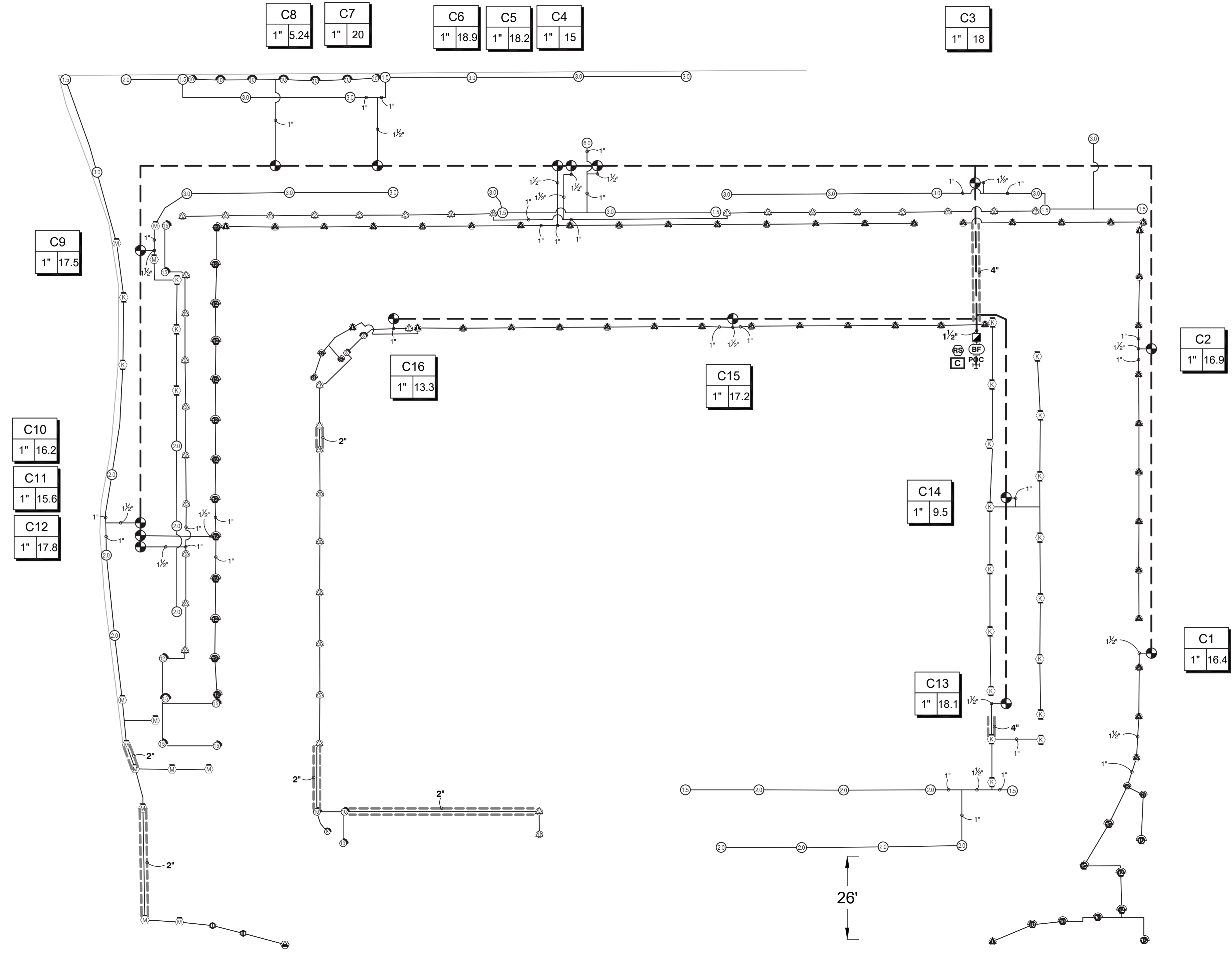
sheet no:



REVISIONS	
Description	Date
▲	08/24/23
▲	
▲	
▲	
▲	
▲	

**IRRIGATION SCHEDULE**

SYMBOL	MANUFACTURER/MODEL	QTY
▲	Hunter PROS-04 5' strip spray	47
○	Hunter PROS-04 8' radius	5
○	Hunter PROS-04 10' radius	3
○	Hunter PROS-04 12' radius	15
○	Hunter PROS-04 15' radius	4
▲	Hunter PROS-12 5' strip spray	37
○	Hunter PROS-12 8' radius	3
○	Hunter PROS-12 10' radius	10
○	Hunter PROS-12 12' radius	1
○	Hunter PROS-12 15' radius	6
▲	Hunter MP Strip PROS-04-PRS40-CV	1
▲	Hunter MP1000 PROS-04-PRS40-CV	12
▲	Hunter MP2000 PROS-04-PRS40-CV	22
▲	Hunter MP800SR PROS-04-PRS40-CV	2
SYMBOL	MANUFACTURER/MODEL	QTY
1.5	Hunter PGP-04 1.5	9
2.0	Hunter PGP-04 2.0	14
3.0	Hunter PGP-04 3.0	16
6.0	Hunter PGP-04 6.0	1
SYMBOL	MANUFACTURER/MODEL	QTY
●	Hunter PGV-101G 1"	16
■	Hunter HQ-44RC 1"	1
BF	Febco 765 1"	1
C	Hunter I2C-1600-PL	1
POC	Hunter WR-CLIK	1
POC	POC 1"	1
—	Irrigation Lateral Line: Polyethylene Pipe 100 PSI 1"	3,259 l.f.
—	Irrigation Lateral Line: Polyethylene Pipe 100 PSI 1 1/2"	209.7 l.f.
—	Irrigation Mainline: PVC Class 160 SDR 26 1 1/2"	961.8 l.f.
—	Pipe Sleeve: PVC Class 160 SDR 26 2"	123.8 l.f.
—	Pipe Sleeve: PVC Class 160 SDR 26 4"	36.2 l.f.



**IRRIGATION SPECIFICATIONS**

- IRRIGATION SYSTEM DESIGN BASED ON 20 GPM AT 57 PSI.
- IRRIGATION DESIGN IS FROM THE POINT OF CONNECTION(POC) ONLY. THE DESIGN IS BASED ON GALLONS PER MINUTE(GPM) AND POUNDS PER SQUARE INCH(PHI) FURNISHED BY OTHERS.
- IRRIGATION CONTRACTOR IS TO VERIFY POINT OF CONNECTION IN THE FIELD. INSTALLER IS TO CONFIRM THE MINIMUM DISCHARGE REQUIREMENTS OF THE POINT OF CONNECTION AS INDICATED ON THE LEGEND PRIOR TO INSTALLATION.
- THE PRESSURE REQUIREMENT AT THE POINT OF CONNECTION IS BASED ON NO MORE THAN 5 FEET OF ELEVATION CHANGE IN THE AREAS OF IRRIGATION.
- ALL PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ACCORDING TO LOCAL BUILDING, ELECTRICAL, AND PLUMBING CODES.
- IRRIGATION CONTRACTOR WILL ARRANGE INSPECTIONS REQUIRED BY LOCAL AGENCIES AND ORDINANCES DURING THE COURSE OF CONSTRUCTION AS REQUIRED. ALL WIRING TO BE PER LOCAL CODE. BACKFLOW PREVENTION TO BE PER LOCAL CODE.
- LOCATION OF IRRIGATION COMPONENTS SHOWN ON DRAWING IS APPROXIMATE. ACTUAL PLACEMENT MAY VARY SLIGHTLY AS REQUIRED TO ACHIEVE FULL, EVEN COVERAGE.
- ALL SPRINKLER HEADS SHALL BE INSTALLED PERPENDICULAR TO FINISH GRADES. EXCEPT AS OTHERWISE INDICATED.
- INSTALL IRRIGATION MAINS WITH A MINIMUM 18" OF COVER BASED ON FINISH GRADES. INSTALL IRRIGATION LATERALS WITH MINIMUM 12" OF COVER BASED ON FINISH GRADES.
- PIPE LOCATIONS ARE DIAGRAMMATIC. VALVES AND MAINLINE SHOWN IN PAVED AREAS ARE FOR GRAPHIC CLARITY ONLY.
- THE IRRIGATION CONTRACTOR SHALL COMPLY WITH PIPE SIZES AS INDICATED.
- ALL WIRE SPLICES OR CONNECTIONS SHALL BE MADE WITH APPROVED WATERPROOF WIRE CONNECTIONS AND BE IN A VALVE OR SPLICE BOX.
- ALL CONTROL WIRING DOWNSTREAM OF THE CONTROLLER IS TO BE 14 AWG, UL APPROVED DIRECT BURY.
- THE DESIGN IS BASED ON THE SITE INFORMATION AND/OR DRAWING SUPPLIED WITH THE DESIGN CRITERIA BEING SET (AREA TO BE IRRIGATED, EQUIPMENT MANUFACTURER AND MODEL TO BE USED, WATER SOURCE INFORMATION, ELECTRICAL POWER AVAILABILITY, ETC...). SITEONE LANDSCAPE SUPPLY BEARS NO RESPONSIBILITY OR LIABILITY FOR ANY ERRORS IN DESIGN OR INSTALLATION THAT ARISE DUE TO INACCURACIES IN THE ABOVE REFERENCED INFORMATION SUPPLIED TO SITEONE LANDSCAPE SUPPLY LANDSCAPES IN RELATION TO THIS PROJECT, UNLESS OTHERWISE NOTED.

