

Town of Manlius

Planning Board Agenda

November 28, 2022

6:30PM

1. Zoom Meeting Instructions

Documents:

[ZOOM PLANNING BOARD MEETING INSTRUCTIONS NOVEMBER 28, 2022.PDF](#)

2. Pledge Of Allegiance

3. Approval Of Minutes November 14, 2022 And November 18, 2022

4. A&E & SNY Center - Suite 38, 5781 Bridge Street, East Syracuse, NY 13057 - Public Hearing - Site Plan - Medical Center Drive - Behind Resort Lifestyles - Tax Map # 086.-01-03.9

Documents:

[AANDE AND SNY PLANS.PDF](#)
[OCPB RESOLUTION - MED SPA.PDF](#)
[OCPB REFERAL - MED SPA - AANDE.PDF](#)
[AANDE SWPPP 2022-11-15.PDF](#)
[UPDATED - AE INITIAL SITE PLAN SUBMISSION 2022-06-01.PDF](#)
[UPDATED - AE AND SNY CENTER SHORT EAF.PDF](#)

5. Twin Shores Properties, LLC - 1333 13th Street, East Moline, IL 61244 - Public Hearing - Subdivision- Twin Shores - Fietta Properties - North Burdick Street, Fayetteville, NY 13066 - Tap Map #'s 086.-02-02.1, 086.-02-03.0, 086.-02-04.1, 086.-02-05.1, 086.-02-05.3 And 086.-02-06.1

Documents:

[UPDATED - 2022-11-17 TWIN LAKES COMMERCIAL DEVELOPEMENT DRAWING PACKAGE.PDF](#)
[UPDATED - 2022-11-16 SOCPA RESPONSE \(VOSS\).PDF](#)
[UPDATED - 2022-11-09 CAPACITY LETTER.PDF](#)
[UPDATED - 2022-10-27 TWIN LAKES SWPPP APPENDICES \[COMPLETE\].PDF](#)
[UPDATED -2022-10-27 TWIN LAKES SWPPP \[DRAFT\].PDF](#)

6. Grazi Zazzara Jr. - 344 S. Warren Street, Syracuse, NY 13202 - Zone Change Recommendation To Town Board - Eastern Hills Bible Church - RA To RM - 4600 Enders Road, Manlius, NY 13104 - Tax Map # 117.2-01-04.0

Documents:

[UPDATED - 4600 ENDERS ROAD - COVER LETTER, APPLICATION AND SUPPORTING DOCS.PDF](#)
[UPDATED - 4600 ENDERS ROAD - SURVEY.PDF](#)

[UPDATED -4600 ENDERS ROAD - MAP.PDF](#)

7. Woodland Hills Subdivision (Hoag Lane) - 201 Solar Street, Syracuse, NY 13204 - 2nd Presentation - 16-Lot Subdivision - 5280 Hoag Lane, Fayetteville, NY 13066 - Tax Map # 104.-01-39.2

Documents:

[5280 HOAG LANE - 19-LOT CONVENTIONAL MAP.PDF](#)
[5280 HOAG LANE - APPLICATION.PDF](#)
[5280 HOAG LANE - CONVENTIONAL PLANS.PDF](#)
[5280 HOAG LANE - LAYOUT PLAN.PDF](#)
[HOAG LANE - APPLICATION AND RELATED MATERIALS.PDF](#)
[HOAG LANE - CONVENTIONAL LAYOUT PLAN - 21 LOTS.PDF](#)
[SUBDIVISION MAP.PDF](#)
[UPDATED - WOODLAND HILLS - WET POND OVERFLOW UPDATE.PDF](#)

8. Ron Dimon - 4911 Palmer Road, Manlius, NY 13104 - Initial Presentation - 2-Lot Subdivision - Same Address - Tax Map #'s 116.-01-22.4 & 116.-01-22.2

Documents:

[4911 PALMER ROAD - APPLICATION.PDF](#)
[4911 PALMER ROAD - SUBDIVISION MAP.PDF](#)

9. Danielle & Ryan Ewert - 8291 East Seneca Turnpike, Manlius NY 13104 - Initial Presentation - Site Plan And Special Use Permit - Pawsits Doggie Daycare- Same Address - Tax Map # 099.-01-27.4

Documents:

[8291 EAST SENECA TURNPIKE - PLANNING BOARD APPLICATION.PDF](#)
[8291 EAST SENECA TURNPIKE - SPECIAL PERMIT APPLICATION.PDF](#)
[8291 EAST SENECA TURNPIKE - BUILDING PLANS.PDF](#)
[8291 EAST SENECA TURNPIKE - MAP.PDF](#)
[8291 EAST SENECA TURNPIKE - PLANS.PDF](#)

10. Danielle & Ryan Ewert - 8291 East Seneca Turnpike, Manlius NY 13104 - Initial Presentation - Site Plan And Special Use Permit - Ryan's Landscaping- Same Address - Tax Map # 099.-01-27.4

Documents:

[8291 EAST SENECA TURNPIKE - PLANNING BOARD APPLICATION.PDF](#)
[8291 EAST SENECA TURNPIKE - SPECIAL USE PERMIT APPLICATION.PDF](#)
[8291 EAST SENECA TURNPIKE - MAP.PDF](#)

11. Other Business

12. Adjournment



November 28, 2022

Virtual Planning Board Meeting

Instructions to attend the November 28, 2022 virtual Planning Board meeting:

The easiest way to join is to go to our website www.TownOfManlius.org and click on the link that is located on the homepage. You can also watch on our Facebook page by searching for "Town of Manlius"

Enter the meeting url web address as listed below:

<https://us02web.zoom.us/j/89507689333?>

Password to join when prompted:

Password: 703329

Enter your email address and name and join the meeting!

Join by telephone by dialing the number below:

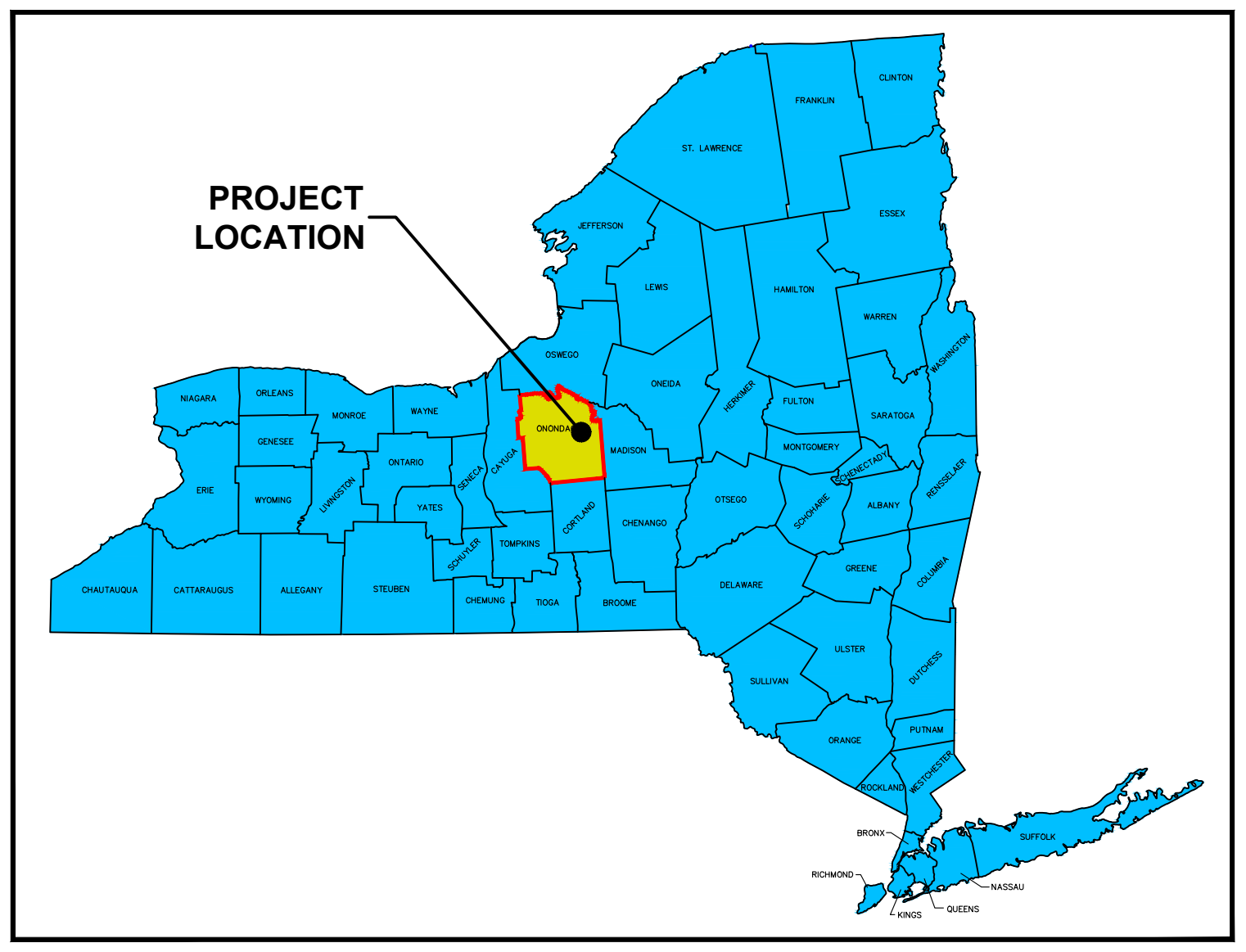
1-(929) -436-2866

When prompted to enter the Webinar ID, use the number below followed by #

Webinar ID: 895 0768 9333

Press # again to skip the personal id and enter the password below followed by #

Password: 703329



SITE LOCATION MAP
NOT TO SCALE



A&E & SNY CENTER

MEDICAL CENTER DRIVE

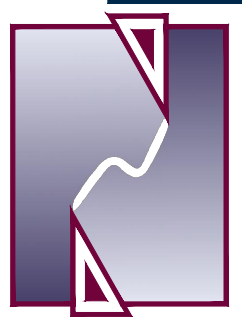
TAX PARCEL No. 086.-01-03.9

TOWN OF MANLIUS

ONONDAGA COUNTY

STATE OF NEW YORK

PREPARED BY:



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PROFESSIONAL ENGINEER, P.C.
SITE • DESIGN • ENGINEERING

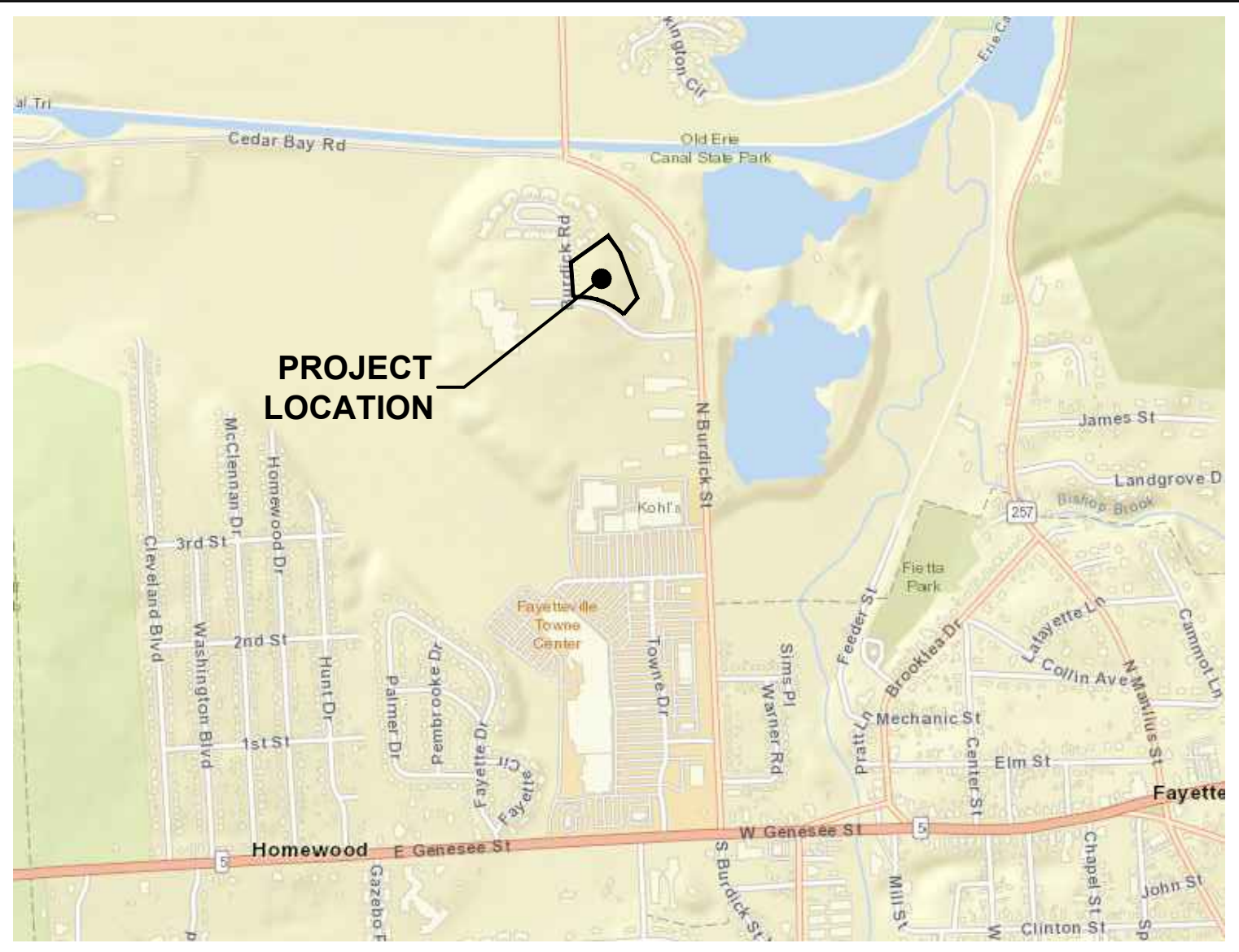
110 FAYETTE STREET
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email: MNAP@NAPCON.COM
PH: (315) 682-5580 FAX: (315) 682-5544

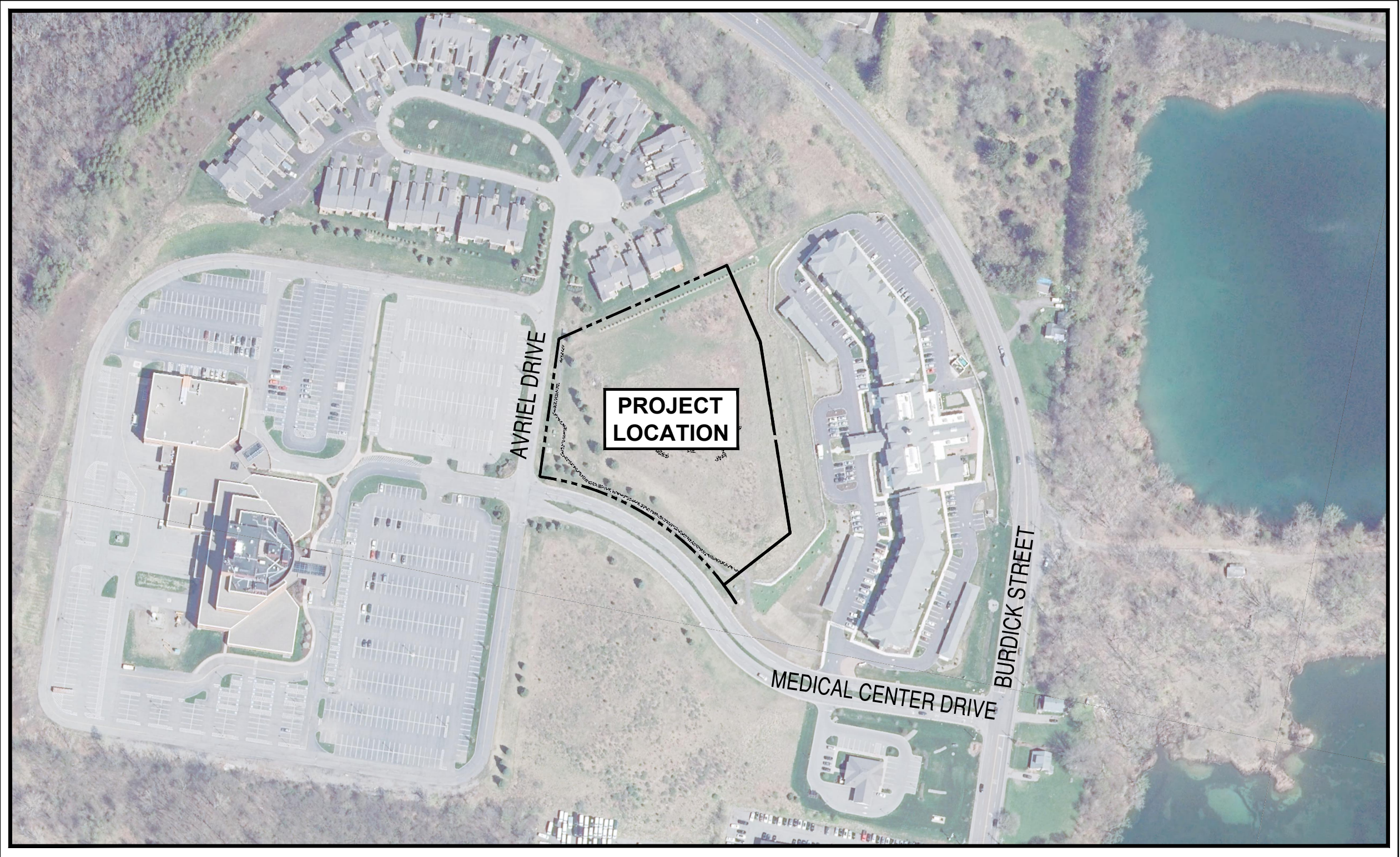
PREPARED FOR:

A&E & SNY CENTER

SUITE 38
5781 BRIDGE STREET
EAST SYRACUSE, NY 13057



PROJECT LOCATION MAP
NOT TO SCALE



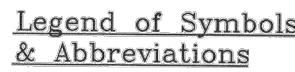
AERIAL MAP
1"=200'



SHEET INDEX:

TITLE SHEET	C-1
SITE SURVEY (BY OTHERS)	C-2
GENERAL NOTES	C-3
SITE PREPARATION PLAN	C-4
LAYOUT PLAN	C-5
UTILITY PLAN	C-6
GRADING PLAN	C-7
EROSION CONTROL PLAN	C-8
LIGHTING AND LANDSCAPING PLAN	C-9 THRU 15
DETAILS	

			SHEET
			C-1
			PROJECT NO.
			21-2022
			DATE
			25 AUG 2022
NO.	REVISION/ISSUE	DATE	
C	PLANNING BOARD SUBMITTAL	11/15/22	
B	PLANNING BOARD SUBMITTAL	10/13/22	
A	PLANNING BOARD SUBMITTAL	08/25/22	



- | | | |
|------|-----|--------------------------|
| ← | --- | GUY WIRE |
| WV | --- | SIG |
| HYD | ○ | HYDRANT |
| WTR | ○ | WATER VALVE |
| TELE | ○ | TELEPHONE PEDESTAL |
| CB | ○ | CATCH BASIN |
| SPR | ○ | SANITARY MANHOLE |
| UT | ○ | UTILITY POLE |
| GL | ○ | GAS VALVE |
| GLM | ○ | GAS LINE MARKER |
| LP | ○ | LIGHT POLE |
| TSP | ○ | TRAFFIC SIGNAL POLE |
| TSP | □ | TRAFFIC SIGNAL BOX |
| --- | --- | WATER LINE |
| --- | --- | GAS LINE |
| --- | --- | STORM SEWER LINE |
| --- | --- | SANITARY SEWER LINE |
| --- | --- | OVERHEAD WIRE |
| TC | --- | TOP OF CURB |
| BC | --- | BOTTOM OF CURB |
| PVC | --- | POLYVINYL CHLORIDE PIPE |
| RCF | --- | REINFORCED CONCRETE PIPE |
| CP | --- | CORRUGATED PLASTIC PIPE |
| YCS | --- | YELLOW CAST IRON SO |

Notes to Title Commitment No. DA-2014

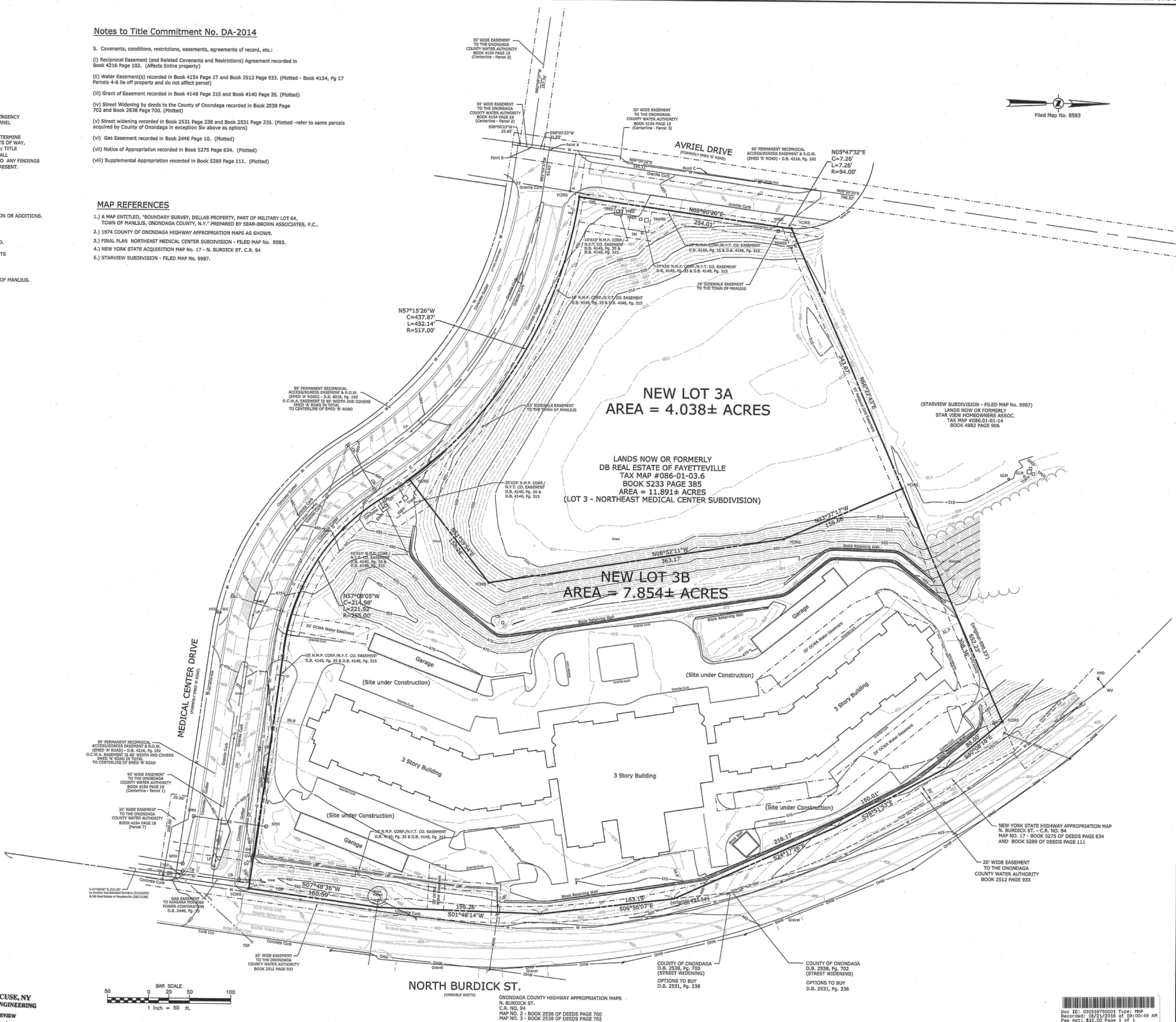
- [illegible]

- (i) Covenants, conditions, restrictions, easements, agreements of record, etc.
- (j) Reciprocal Easement (and Related Covenants and Restrictions) Agreement recorded in Book 4216 Page 102. (Affects entire property)
- (k) Water Easement (see record in Book 4149 Page 17 and Book 2512 Page 633. (Plotted - 4 to 6 ft of property)) (Book 4154, Pg 17)
- (l) Grant of Easement recorded in Book 4149 Page 321 and Book 4140 Page 35. (Plotted)
- (m) Street Widening by deeds to the County of Chondaga recorded in Book 2038 Page 702 and Book 2038 Page 700. (Plotted)
- (n) Street widening recorded in Book 2531 Page 238 and Book 2531 Page 235. (Plotted - refers to same parcels owned by County of Chondaga in exception 5Iv above as options)
- (o) Gas Easement recorded in Book 2446 Page 10. (Plotted)
- (p) Notice of Appropriation recorded in Book 5275 Page 634. (Plotted)
- (q) Supplemental Appropriation recorded in Book 5289 Page 111. (Plotted)

- 1.) A MAP ENTITLED, "BOUNDARY SURVEY, DELLAS PROPERTY, PART OF MILITARY LOT 64, TOWN OF MANLIUS, ONONDAGA COUNTY, N.Y." PREPARED BY SEAR-BROWN ASSOCIATES, P.C.
- 2.) 1974 COUNTY OF ONONDAGA HIGHWAY APPROPRIATION MAPS AS SHOWN.
- 3.) FINAL PLAN - NORTHEAST MEDICAL CENTER SUBDIVISION - FILED MAP No. 8593.
- 4.) NEW YORK STATE ACQUISITION MAP No. 17 - N. BURDICK ST. CR. 94
- 5.) STARVIEW SUBDIVISION - FILED MAP No. 9987.

Zoning Information

DISTRICT	RA - RESTRICTED AGRICULTURAL DISTRICT
ITEM	REQUIRED
MINIMUM SETBACKS:	
FRONT	40 ft.
SIDE	20 ft.
REAR	40 ft.
MINIMUM FRONTAGE WITH PUBLIC SEWER WITHOUT PUBLIC SEWER	150 ft. 200 ft.
MINIMUM LOT SIZE WITH PUBLIC SEWER WITHOUT PUBLIC SEWER	40,000 sq. ft. 100,000 sq. ft.
PARKING:	VARIES BY USE (SITE IS VACANT)



ALLIED AMERICAN ABSTRACT CORP.
HEREBY CERTIFIES THAT ALL REAL
ESTATE TAXES AFFECTING THE
PREMISES ON THE WITHIN MAP ARE
PAID AS OF THE DATE OF THE
FILING OF SAID MAP.

APPROVED: TOWN OF MANLIUS PLANNING BOARD

PLANNING BOARD CHAIRMAN DATE

CITY OF SYRACUSE, NY
DEPARTMENT OF ENGINEERING

3-MILE LIMIT REVIEW
APPROVED 8/26/18

Henry F. Nelson, P.E.
Office of the City Engineer

ONONDAGA COUNTY DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH
AUG 14 2018
This Plan has been reviewed per 17-

Onondaga County Department of Health.
Subdivision approval by this
Department is not required.

Department of Public Health Engineering, F. S. S.

I HEREBY CERTIFY THE DEVELOPER, TOWNE CENTER RETIREMENT COMMUNITY, LLC PROVIDED WRITTEN NOTICE OF INTENT TO SUBDIVIDE TO ALL OWNERS WITHIN A 500 FOOT RADIUS OF EXTERIOR BOUNDARY OF SITE

I HEREBY CERTIFY THAT THIS SUBDIVISION PLAT WAS PREPARED BY ME AND WAS MADE FROM AN ACTUAL FIELD SURVEY COMPLETED BY US ON JULY 17-18, 2014 AND UPDATED MAY 10, 2017.

David M. Sliski April 10, 2018
DAVID M. SLISKI, P.L.S. #50105 DATE

DAVID M. SLISKI
P.L.S. NO. 50105



DATE	REV	
		

	2	
	3	
	4	

	5	
	6	
	7	

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C.T. MALE ASSOCIATES
APPROVED:

DRAFTED : JAD
CHECKED : DMS
PROJ. NO : 14.4342

FINAL SUBDIVISION PLAT

LOT 3 - NORTHEAST MEDICAL CENTER SUBDIVISION
into NEW LOTS 3A & 3B of the NORTHEAST MEDICAL CENTER SUBDIVISION

(No #) NORTH BURDICK STREET
PART OF MILITARY LOT 64 - LOT 3 of the NORTHEAST MEDICAL CENTER SUBDIVISION
ANLIUS ONONDAGA COUNTY, NEW

C.T. MALE ASSOCIATES
Engineering, Surveying, Architecture & Landscape Architecture, P.O.

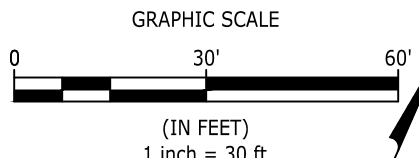
200 GATEWAY PARK DRIVE, BLDG. C, P.O. BOX 3246
CUMMINGS, MO. 63001-0326

Dao ID: 030639750001 Type: MAP
Recorded: 08/21/2018 at 09:00:49 A
Fee Amt: \$10.00 Page 1 of 1

Gnondaga County, NY
Lisa Bell County Clerk
File 12627

CAD DWG. FILE NAME: \\sy-fp\data\projects\144342\Survey\Subdivision\Subdivision Plot.dwg

CAD DWG, FILE NAME: Subdivision Plat.dwg



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RODNEY C. TRES, JR., P.E.
NYS REGISTRATION # 077842

SHEET

PROJECT NO.
21-2022

DATE
25 AUG 2022

SCALE
1"=30'

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MANLIUS, NEW YORK 13104
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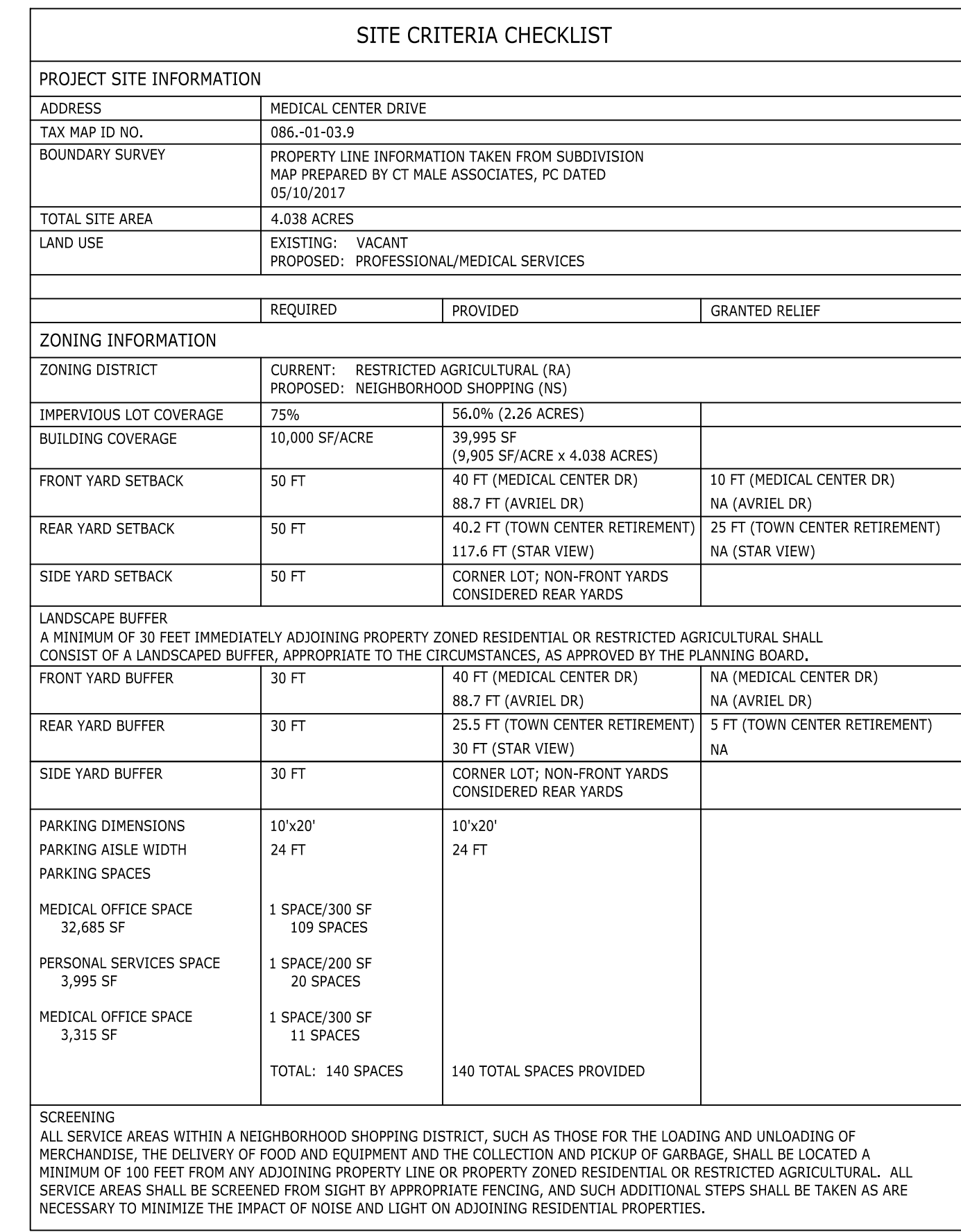
PROJECT TITLE:
A&E & SNY CENTER
MEDICAL CENTER DRIVE
TOWN OF MANLIUS ONONDAGA COUNTY, NEW YORK

NO.	REVISION/ISSUE	DATE
C	PLANNING BOARD SUBMITTAL	11/19/22
B	PLANNING BOARD SUBMITTAL	10/19/22
A	PLANNING BOARD SUBMITTAL	08/25/22

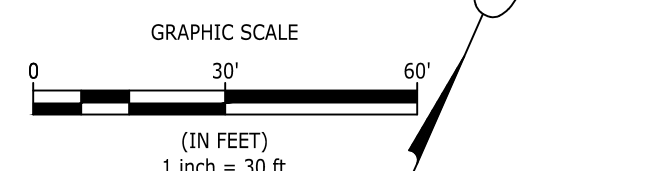
SHEET TITLE:
SITE PREPARATION PLAN

PROJECT TITLE:
A&E & SNY CENTER
MEDICAL CENTER DRIVE
TOWN OF MANLIUS ONONDAGA COUNTY, NEW YORK

PREPARED FOR:
A&E & SNY CENTER
SUITE 38
5781 BRIDGE STREET
EAST SYRACUSE, NY 13057



1	BUILDING MAIN ENTRANCE
2	BUILDING SECONDARY ENTRANCE
3	NOT USED
4	SEGMENTAL BLOCK RETAINING WALL
5	STORMWATER INFILTRATION BASIN
6	ADA ACCESSIBLE PARKING
7	DUMPSTER ENCLOSURE
8	LANDSCAPED ISLAND
9	CONCRETE CURB (6" WIDE) AND SIDEWALK (5.5' WIDE)



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RODNEY C. WES, JR. P.E.

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C-4	PROJECT NO.	21-2022	1"=50'
	DATE	25 AUG 2022	
SHEET	SCALE		

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	110 FAYETTE STREET MANLIUS, NEW YORK 13104		
	email: MNAP@NAPCON.COM PH: (315) 682-5580 FAX (315) 682-5544		

NO.	REVISION/ISSUE	DATE
C	PLANNING BOARD SUBMITTAL	11/15/22
B	PLANNING BOARD SUBMITTAL	10/13/22
A	PLANNING BOARD SUBMITTAL	08/25/22

LAYOUT PLAN	SHEET TITLE:
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PROJECT TITLE: A&E & SNY CENTER MEDICAL CENTER DRIVE	TOWN OF MANLIUS ONONDAGA COUNTY, NEW YORK
--	---

PREPARED FOR: A&E & SNY CENTER SUITE 38 5784 BRIDGE STREET EAST SYRACUSE, NY 13057	
--	--

SHEET TITLE:					
C	PLANNING BOARD SUBMITTAL			11/15/22	
B	PLANNING BOARD SUBMITTAL			10/13/22	
A	PLANNING BOARD SUBMITTAL			08/25/22	
NO.	REVISION/ISSUE			DATE	



GRADING PLAN LEGEND

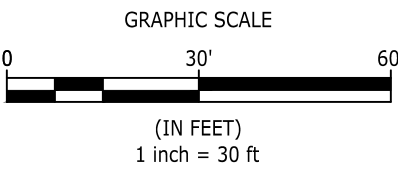
- EXISTING CONTOUR GRADES
- PROPOSED CONTOUR GRADES
- PROPOSED FINISHED SPOT ELEVATION
- PROPOSED TOP OF CURB AND BOTTOM OF CURB ELEVATIONS
- MATCH/MEET EXISTING ELEVATION

PROJECT TITLE:
**A&E & SNY CENTER
MEDICAL CENTER DRIVE**
TOWN OF MANLIUS ONONDAGA COUNTY, NEW YORK
PREPARED FOR:
A&E & SNY CENTER
SUITE 38
5781 BRIDGE STREET
EAST SYRACUSE, NY 13057

GRADING PLAN

NO.	REVISION/ISSUE	DATE
C	PLANNING BOARD SUBMITTAL	11/19/22
B	PLANNING BOARD SUBMITTAL	10/19/22
A	PLANNING BOARD SUBMITTAL	08/25/22

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21-2022
DATE
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DATE 25 AUG 2022

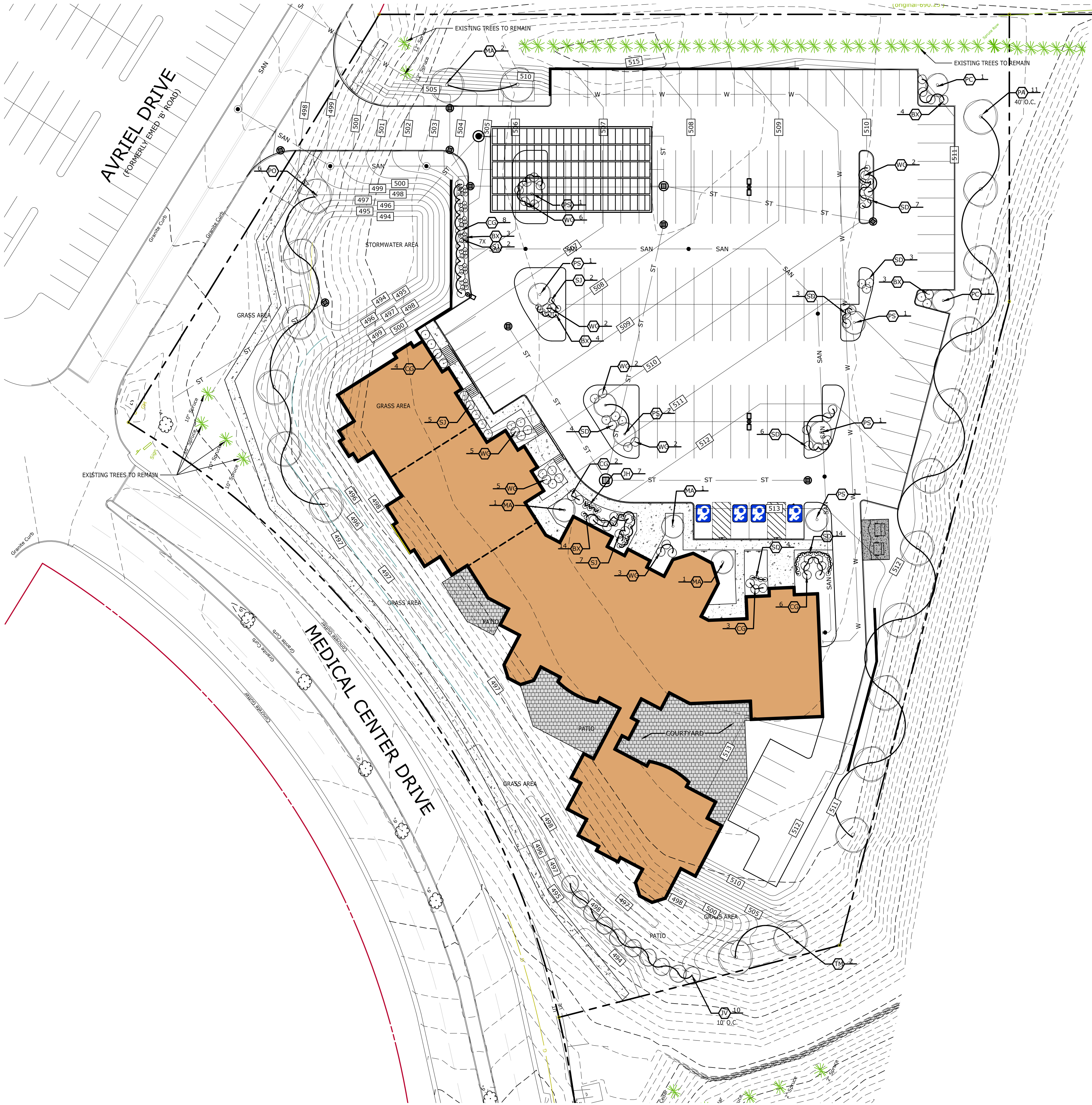
SCALE 1"=30'

SHEET C-7

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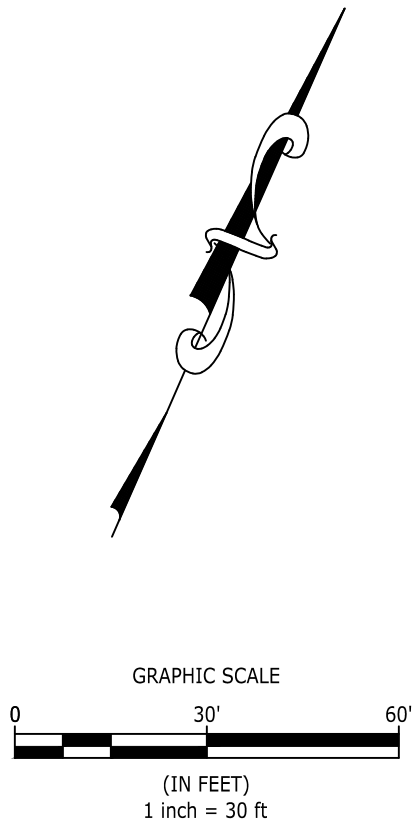
NO.	REVISION/ISSUE	DATE
C	PLANNING BOARD SUBMITTAL	11/19/22
B	PLANNING BOARD SUBMITTAL	10/19/22
A	PLANNING BOARD SUBMITTAL	08/25/22

PROJECT TITLE: **A&E & SNY CENTER MEDICAL CENTER DRIVE**
TOWN OF MANLIUS ONONDAGA COUNTY, NEW YORK
SHEET TITLE: **EROSION CONTROL PLAN**
PREPARED FOR: **A&E & SNY CENTER SUITE 38 5781 BRIDGE STREET EAST SYRACUSE, NY 13057**



KEY	QUANTITY	LATIN NAME	COMMON NAME	CALIPER	HEIGHT	ROOT
SHRUBS/PLANTS						
SD	45	STELLA D'ORO	DAYLILY	-	-	2 GAL
BX	42	BUXUS	GREEN VELVET	-	-	3 GAL
WG	27	WEIGELA FLORIDA	VARIETY	-	-	3 GAL
JH	7	JUNIPERUS WILTONII	CREeping JUNIPER	-	-	1 GAL
SJ	28	SPIRAEA JAPONICA	MAGIC CARPET	-	-	3 GAL
CG	23	CALAMAGROSTIS	KARL FOERSTER GRASS	-	-	2 GAL
ORNAMENTAL TREES						
MA	5	MAGNOLIA STELLATA	STAR MAGNOLIA	-	4'-5'	-
PC	2	PRUNUS CERASIFOLIA	THUNDERCLOUD PLUM	1.5"	-	-
EVERGREEN TREES						
PA	11	PICEA ABEIS	NORWAY SPRUCE	-	6'	-
PO	6	PICEA OMORIKA	SERBIAN SPRUCE	-	6'	-
JV	10	JUNIPER VIRGINIANA	EASTERN RED CEDAR	-	6'	-
DECIDUOUS TREES						
TM	2	TILIA MONGOLICA	HARVEST GOLD LINDEN	4"	-	-
PS	7	PYRUS CALLERYANA	CLEVELAND SELECT	2"	-	-

- LEGEND:
- QT SP
SPECIES KEY
QUANTITY
- LANDSCAPING NOTES:
- 1) ALL TREES AND SHRUBS SHALL BE SURROUNDED BY A BED OF BARK MULCH
 - 2) DEAD MATERIAL SHALL BE REPLACED AND PLANT MATERIAL SHALL BE REGULARLY PRUNED AND NOURISHED TO MAINTAIN HEALTH
 - 3) ANY FERTILIZER USED FOR THE ESTABLISHMENT AND MAINTENANCE OF GRASS AND VEGETATION SHALL BE FREE OF PHOSPHORUS
 - 4) LANDSCAPING MAY BE SUBSTITUTED BY BASED ON AVAILABILITY AND OWNER/LANDSCAPERS PREFERENCE



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PROJECT NO. 21-2022

DATE 25 AUG 2022

SCALE 1"=30'

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DRAWING SHALL BE RESPONSIBLE FOR
THE ALTERATIONS

PROJECT TITLE:
**A&E & SNY CENTER
MEDICAL CENTER DRIVE**

TOWN OF MANLIUS ONONDAGA COUNTY, NEW YORK

PREPARED FOR:
**A&E & SNY CENTER
SUITE 38
5781 BRIDGE STREET
EAST SYRACUSE, NY 13057**

SHEET TITLE:
LANDSCAPING PLAN

NO.	REVISION/ISSUE	DATE
C	PLANNING BOARD SUBMITTAL	11/19/22
B	PLANNING BOARD SUBMITTAL	10/19/22
A	PLANNING BOARD SUBMITTAL	08/25/22

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110 FAYETTE STREET
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SHEET
C-8



PROJECT TITLE: **A&E & SNY CENTER
MEDICAL CENTER DRIVE**

TOWN OF MANLIUS ONONDAGA COUNTY, NEW YORK

PREPARED FOR: **A&E & SNY CENTER
SUITE 38
5781 BRIDGE STREET
EAST SYRACUSE, NY 13057**

DETAILS

NO.	REVISION/ISSUE	DATE
C	PLANNING BOARD SUBMITTAL	11/15/22
B	PLANNING BOARD SUBMITTAL	10/19/22
A	PLANNING BOARD SUBMITTAL	08/22/22

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PROFESSIONAL ENGINEER, P.C.
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email: MNAP@NAPCON.COM
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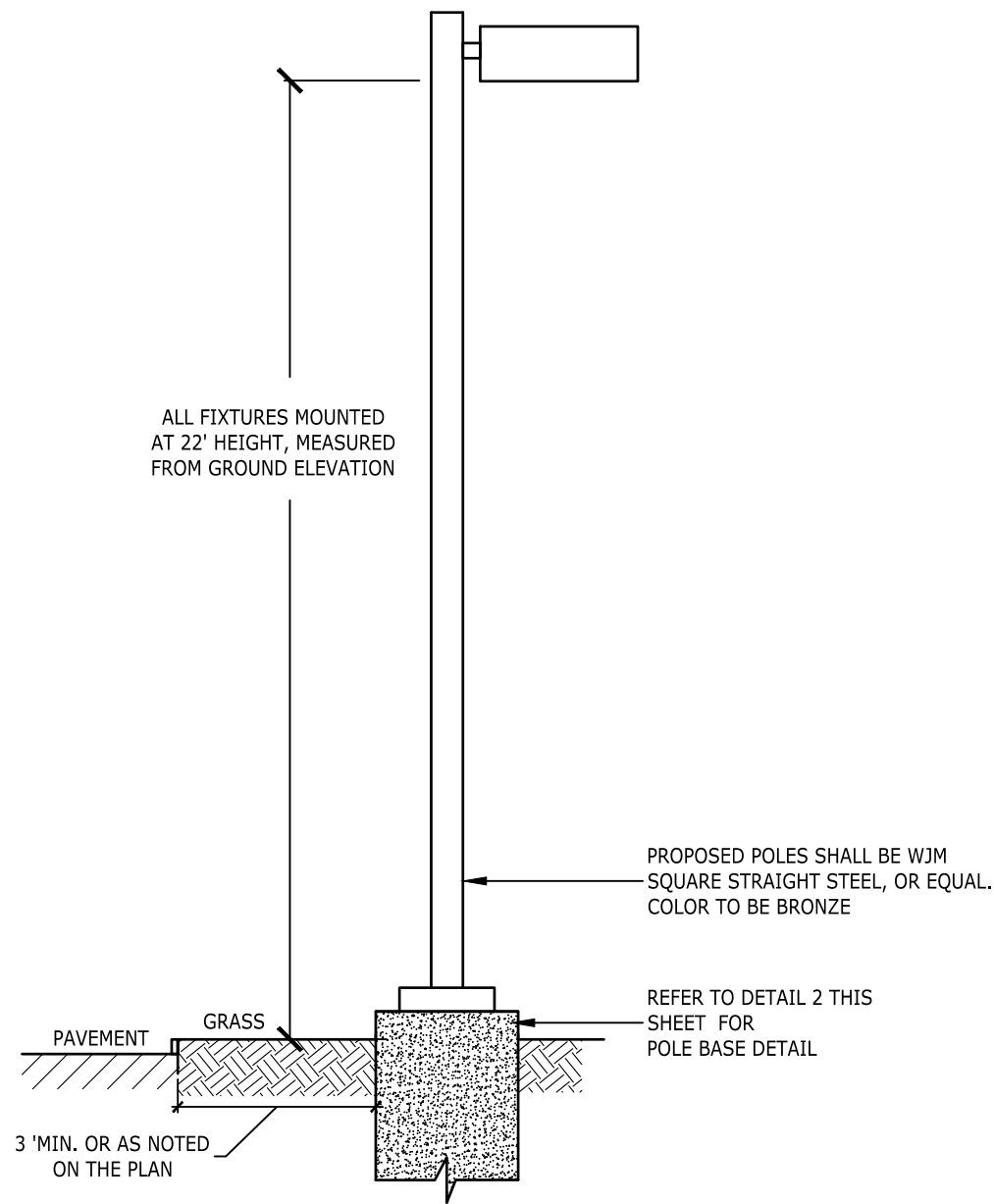
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PLAN SEAL BY:
ROONEY C. IVES, JR., P.E.

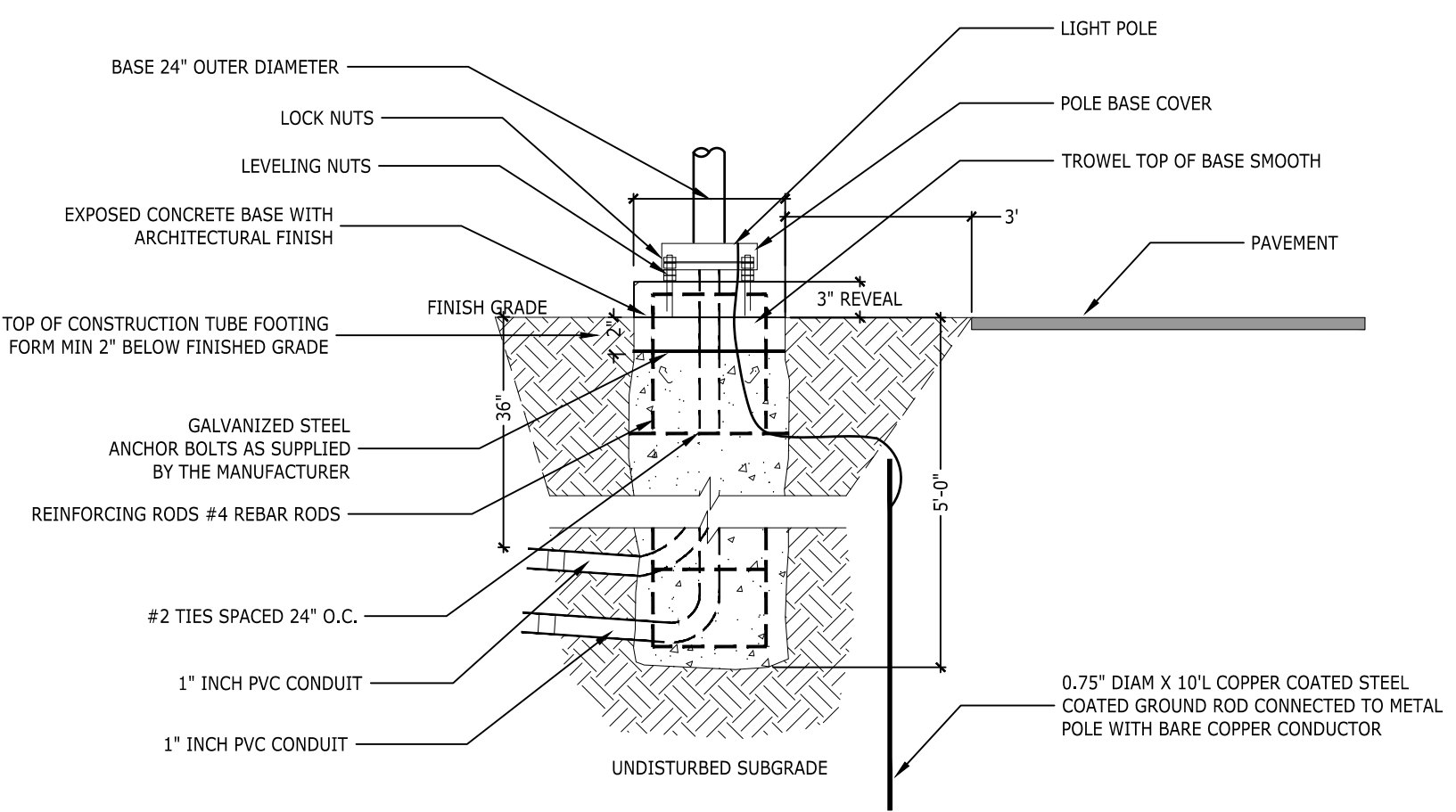
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PROJECT NO.	21-2022
DATE	25 AUG 2022
SCALE	1"=30'

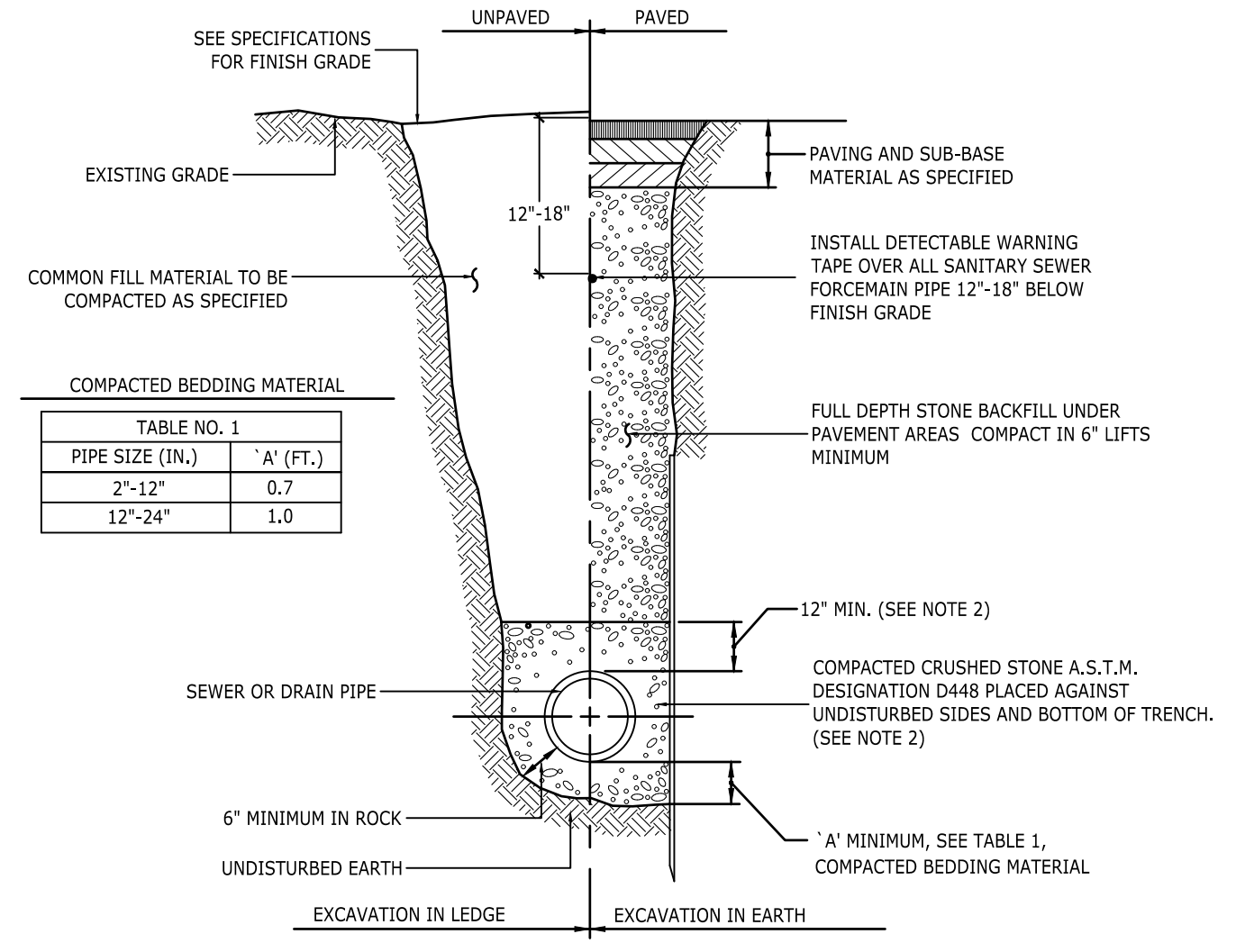
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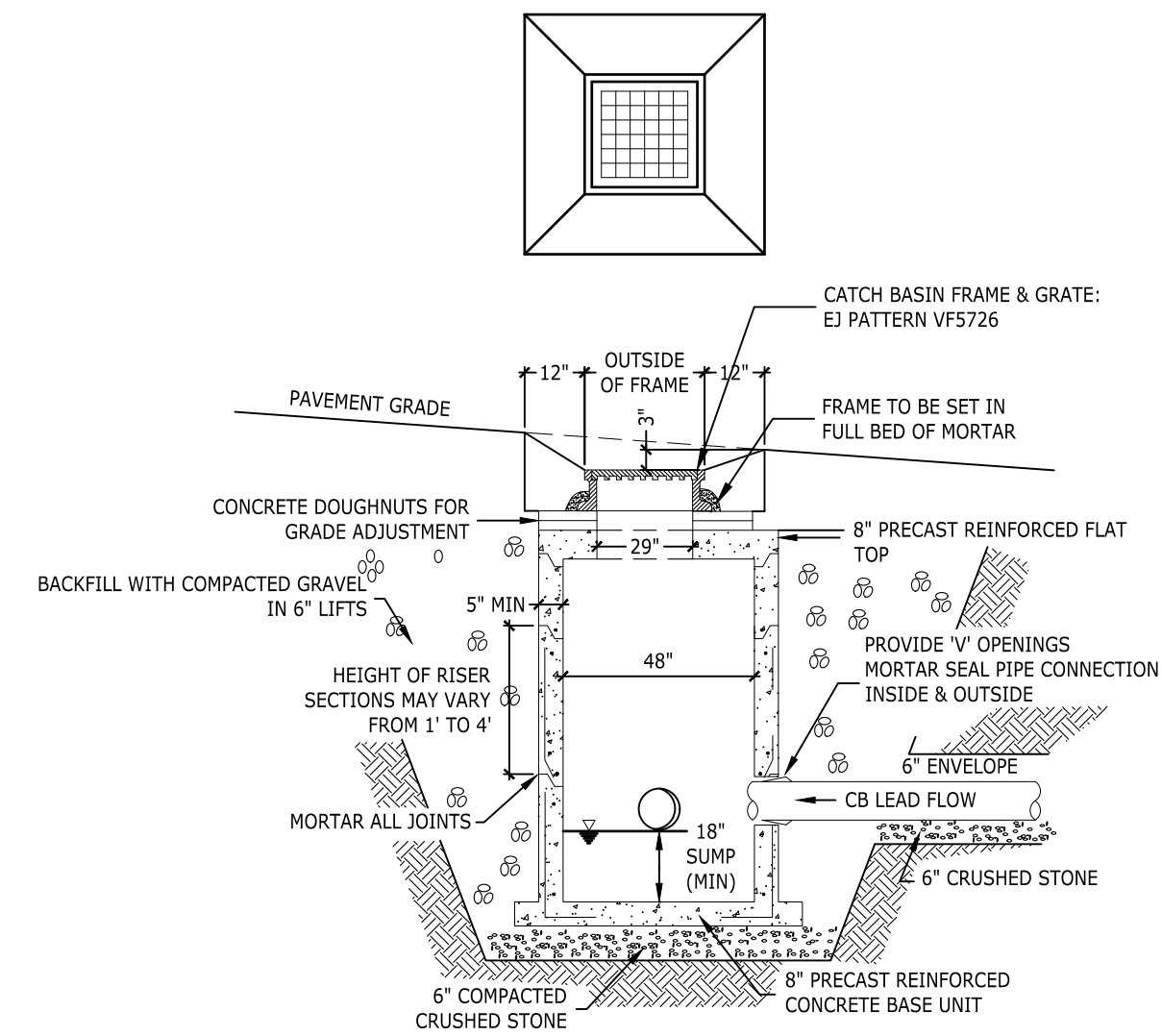
1 LIGHT POLE ELEVATION
C-10 SCALE: NTS



2 LIGHT POLE BASE
C-10 SCALE: NTS

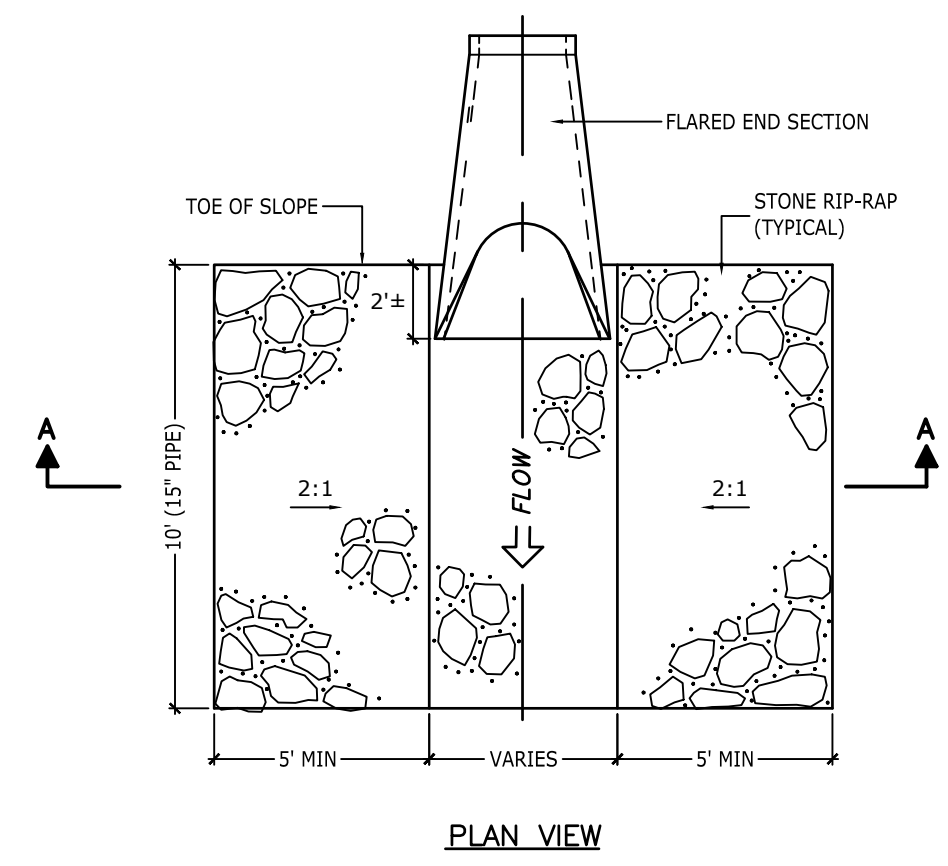


3 TYPICAL SEWER AND DRAIN TRENCH
C-10 SCALE: NTS

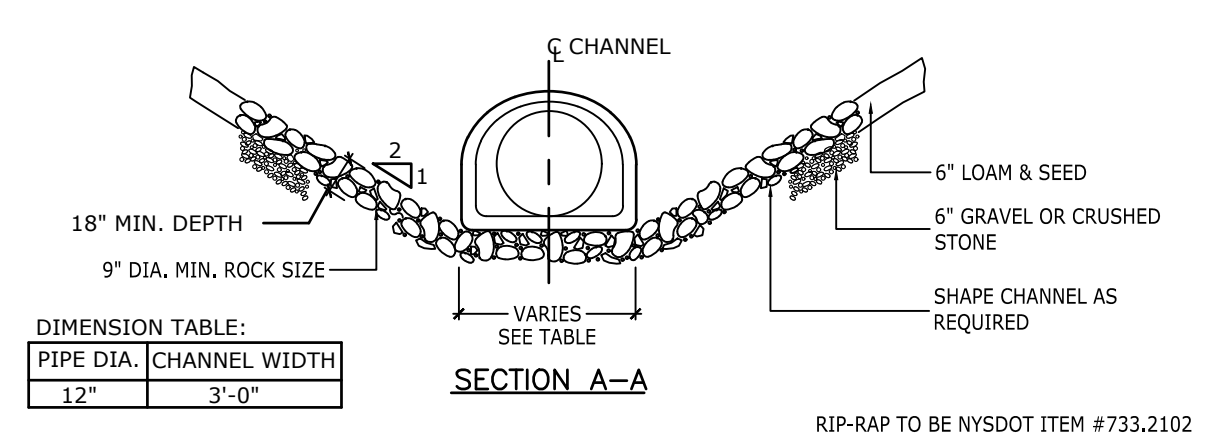


4 CATCH BASIN
C-10 SCALE: NTS

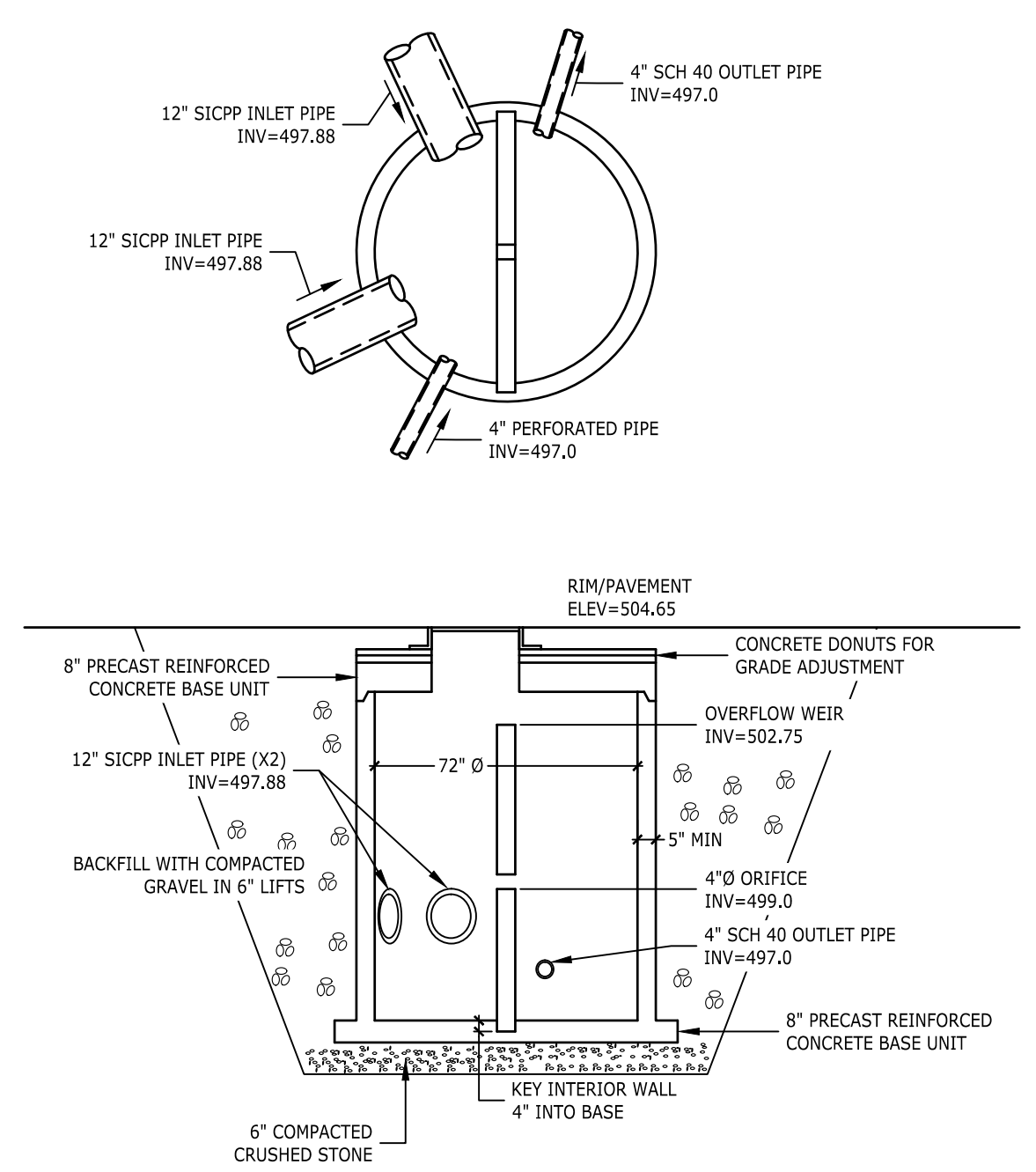
- DRAINAGE STRUCTURE GENERAL NOTES**
1. ALL STRUCTURES SHALL BE RATED FOR H-20 LOADING.
 2. REINFORCING FOR ALL SECTIONS SHALL BE AS FOLLOWS:
TOP: #3 BARS SPACED AT 4" IN BOTH DIRECTIONS.
BOTTOM: #3 BARS SPACED AT 4" IN BOTH DIRECTIONS.
SIDES: #3 BARS SPACED AT 8" IN BOTH HORIZONTAL AND VERTICAL.
 3. ALL REINFORCEMENT SHALL BE PLACED SO IT WILL HAVE A MINIMUM COVER OF 2" AND BE LOCATED APPROXIMATELY WITHIN THE CENTER OF THE SECTION.
 4. TOP SLAB AND/OR FRAME ADJUSTMENT: FOR ALL DRAINAGE STRUCTURES A MAXIMUM OF 6 INCHES OF BRICK AND MORTAR OR A MAXIMUM OF 2 INCHES OF MORTAR ALONE SHALL BE USED FOR TOP SLAB AND/OR FRAME & GRATE ADJUSTMENT. FOR ADJUSTMENTS OVER 6 INCHES AND NOT TO EXCEED 12 INCHES, PRECAST CONCRETE ADJUSTMENT ELEMENT(S) MANUFACTURED IN ACCORDANCE WITH NYS-DOT STANDARD SPEC SUB-SECTION #706-04 SHALL BE USED; A MAXIMUM OF 2 INCHES OF MORTAR SHALL BE ALLOWED ON BOTH THE TOP AND BOTTOM OF THE PRECAST DEVICES. BRICK SHALL BE PRECAST PAVERS CONFORMING TO NYS-DOT STANDARD SPEC SUB-SECTION #704-13 AND MORTAR SHALL BE MORTAR FOR CONCRETE MASONRY CONFORMING TO NYS-DOT STANDARD SPEC SUB-SECTION #705-21.
 5. MANHOLE STEPS SHALL BE REQUIRED IN ALL DRAINAGE STRUCTURES DEEPER THAN 4 FEET. STEPS SHALL CONFORM TO NYS-DOT STANDARD SPEC SUB-SECTION #725-02.
 6. BASE OF PRECAST CATCH BASIN SHALL REST ON BASE MATERIAL COMPACTED IN PLACE WITH A VIBRATORY MECHANICAL TAMPER IN LIFTS NOT TO EXCEED 6" AT A TIME.
 7. TRENCH SIDES SHALL CONFORM TO NYS DEPT OF LABOR AND OSHA SAFETY REGULATIONS.
 8. MANHOLE INLET AND OUTLET PIPE CONNECTIONS MUST BE JOINED TO THE MANHOLE WITH A GASKETED, FLEXIBLE, WATERTIGHT CONNECTION OR IN ANY WATERTIGHT ARRANGEMENT THAT ALLOWS DIFFERENTIAL SETTLING OF THE MANHOLE WALL AND PIPE TO TAKE PLACE.



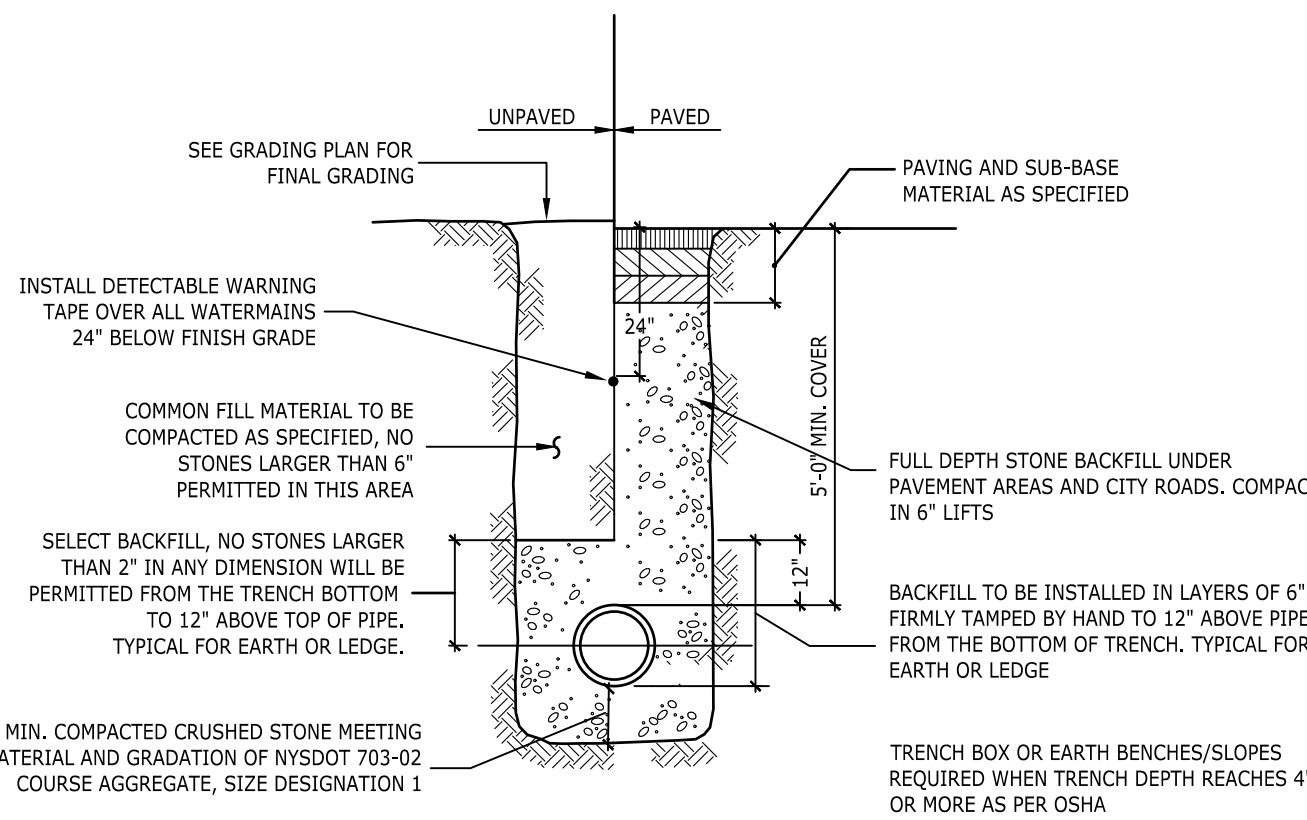
5 STORM PIPE END SECTION
C-10 SCALE: NTS



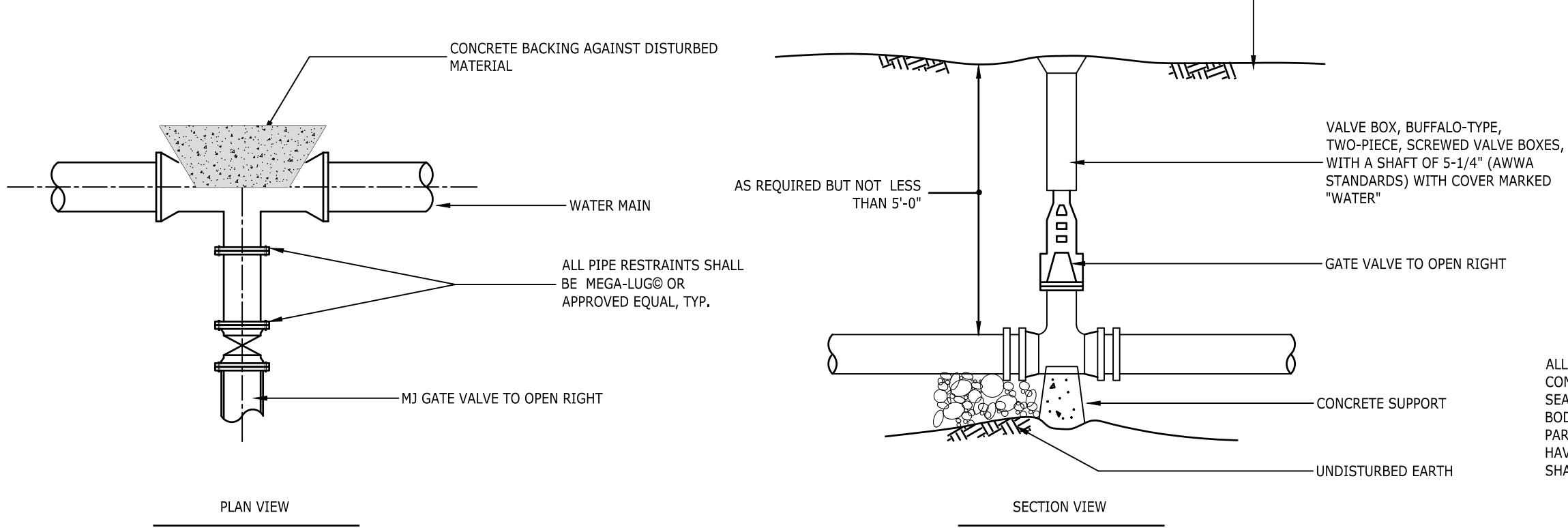
6 OUTLET CONTROL STRUCTURE CB-9
C-10 SCALE: NTS



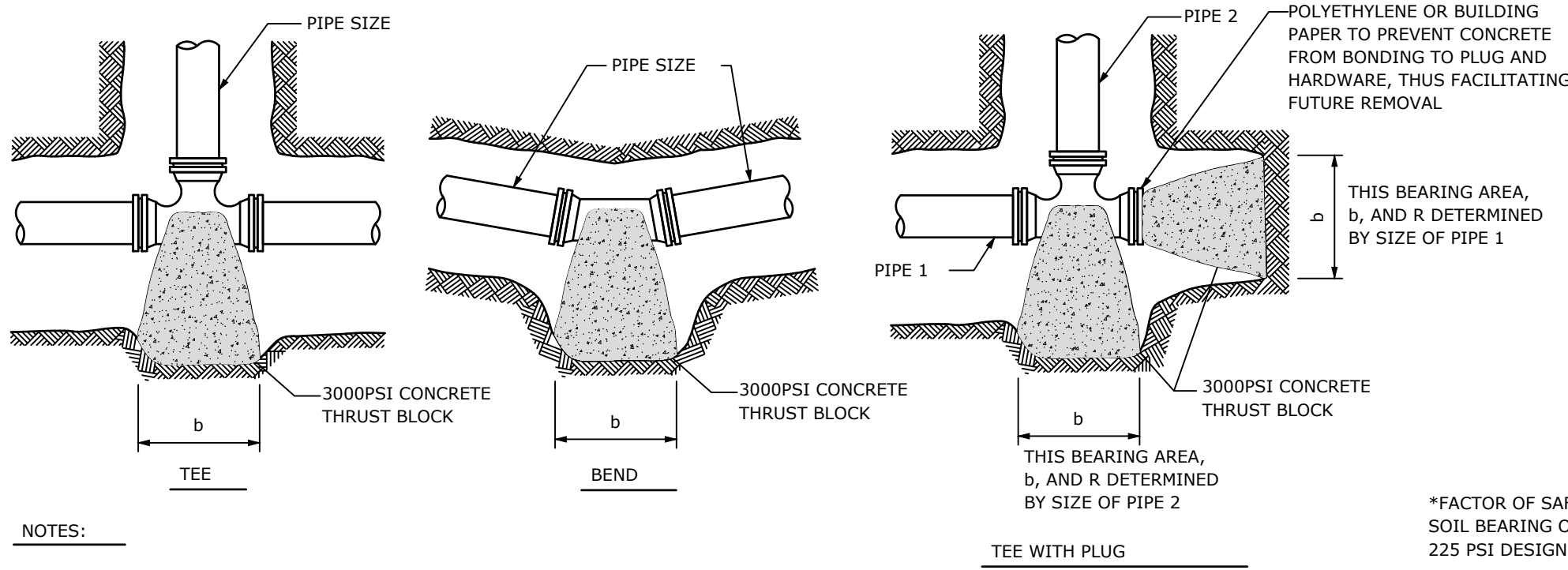
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1 WATERLINE TRENCH - DUCTILE IRON
C-11 SCALE: NTS



2 WATER SERVICE VALVE
C-11 SCALE: NTS



- NOTES:
1. CONCRETE NOT TO OVERLAP ANY JOINT.
 2. CONCRETE TO BE PLACED SO AS NOT TO INTERFERE WITH REMOVING OR INSTALLING ANY OF THE JOINTING HARDWARE.
 3. FOR REDUCERS USE MECHANICAL JOINT FITTINGS WITH RETAINER GLANDS.

*FACTOR OF SAFETY=1.5
SOIL BEARING OF 3,000 PSF
225 PSI DESIGN PRESSURE

- NOTES:
1. VALUES FOR TEE APPLY TO TEES, END PLUGS, CAPS, AND TAPPING SLEEVES.
 2. REQUIRED BEARING AREAS ARE DUE TO THRUSTS CAUSED BY 150PSI WORKING PRESSURE PLUS 50%(75 PSI) SURGE ALLOWANCE RESULTING IN 225 PSI TOTAL INTERNAL PRESSURE.
 3. REQUIRED BEARING AREAS ARE BASED ON ALLOWABLE SOIL BEARING CAPACITY OF 3,000 POUNDS PER SQUARE FOOT. DUE TO OTHER SOIL CONDITIONS ENCOUNTERED, BEARING AREAS MAY BE MODIFIED BY THE ENGINEER.

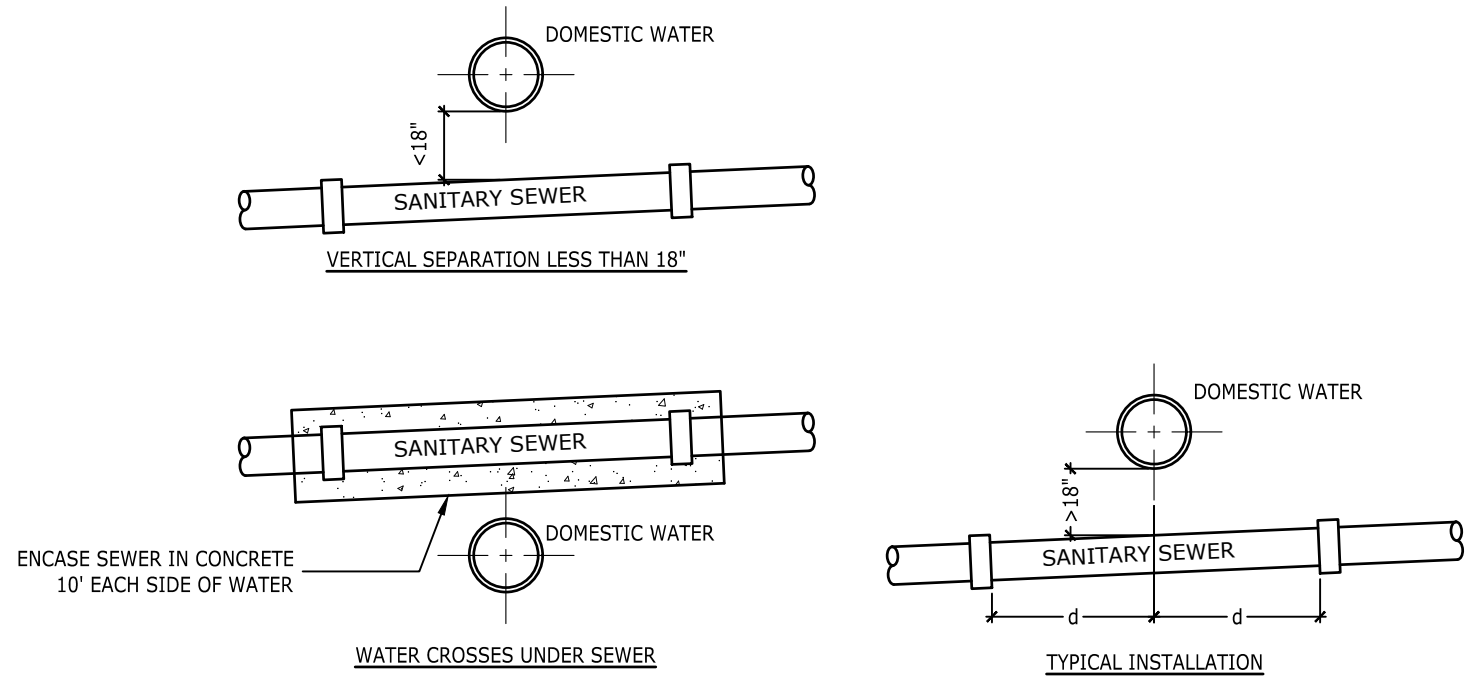
SOIL	BEARING STRENGTH § (LB/SQ FT)
MUCK	0
SOFT CLAY	1,000
SILT	1,500
SANDY SILT	3,000
SAND	4,000
SANDY CLAY	6,000
HARD CLAY	9,000

4. IN MUCK, PEAT, OR RECENTLY PLACED FILL ALL THRUSTS SHALL BE RESISTED BY PILES OR TIE RODS TO SOLID FOUNDATIONS, OR BY REMOVAL OF SUCH UNSTABLE MATERIAL AND REPLACEMENT WITH BALLAST OF SUFFICIENT STABILITY TO RESIST THE THRUSTS, ALL AS REQUIRED BY THE ENGINEER.

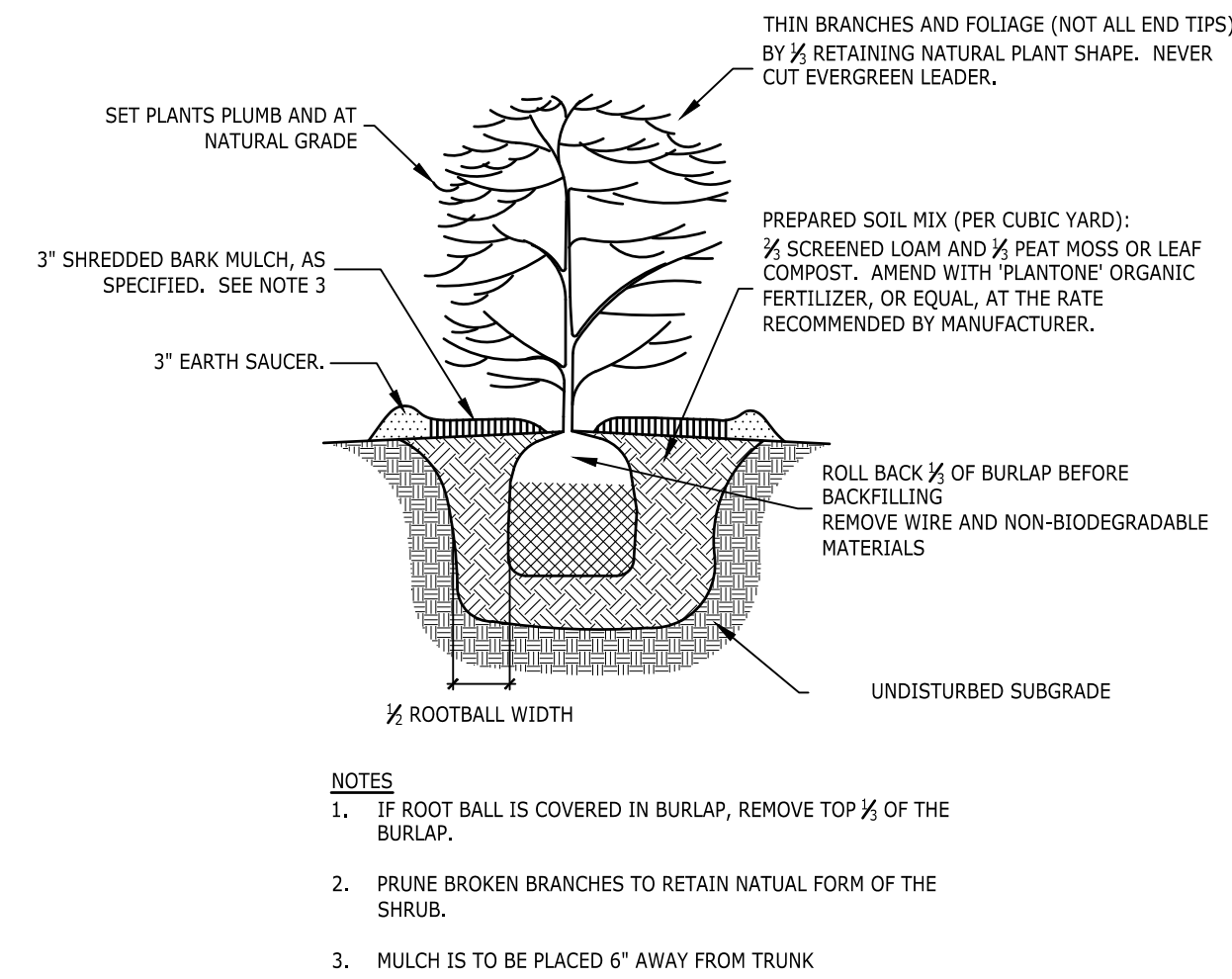
FOR DIMENSIONS AND THRUST REACTIONS SEE TABLE THIS SHEET

THRUST REACTIONS-R(LB) PER 100PSI INTERNAL PRESSURE						REQUIRED BEARING AREAS -b (SQFT) FOR BEARING BLOCKS*					
NOM PIPE DIA IN.	DEAD END	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND	PIPE SIZE (INCHES)	TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4	1,810	2,559	1,385	706	355	4	2.0	2.8	1.5	0.8	0.4
6	3,739	5,288	2,862	1,459	733	6	4.2	5.9	3.2	1.6	0.8
8	6,433	9,097	4,923	2,510	1,261	8	7.2	10.1	5.5	2.8	1.4
10	9,677	13,685	7,406	3,776	1,897	10	10.9	15.4	8.3	4.2	2.1
12	13,685	19,353	10,474	5,340	2,683	12	15.4	21.8	11.8	6.0	3.0

3 THRUST BLOCK SPECIFICATIONS
C-11 SCALE: NTS

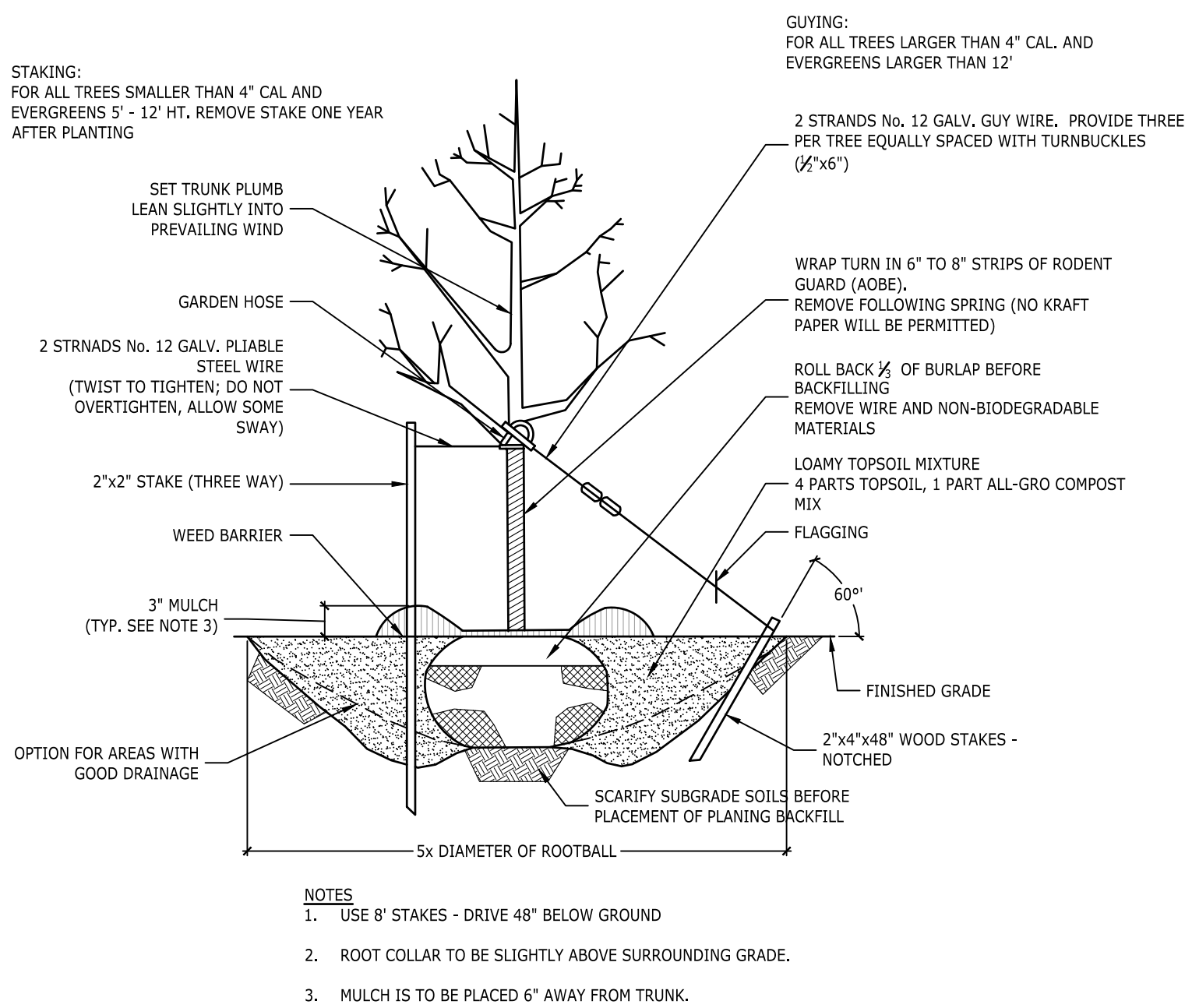


4 WATER AND SEWER SEPARATION
C-11 SCALE: NTS



- NOTES
1. IF ROOT BALL IS COVERED IN BURLAP, REMOVE TOP 1/2 OF THE BURLAP.
 2. PRUNE BROKEN BRANCHES TO RETAIN NATUAL FORM OF THE SHRUB.
 3. MULCH IS TO BE PLACED 6\"/>

5 SHRUB PLANTING
C-11 SCALE: NTS



- NOTES
1. USE 8\"/>
 2. ROOT COLLAR TO BE SLIGHTLY ABOVE SURROUNDING GRADE.
 3. MULCH IS TO BE PLACED 6\"/>

6 TREE PLANTING DETAIL
C-11 SCALE: NTS

PROJECT TITLE:
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MEDICAL CENTER DRIVE**
TOWN OF MANLIUS ONONDAGA COUNTY, NEW YORK

PREPARED FOR:
**A&E & SNY CENTER
SUITE 38
5781 BRIDGE STREET
EAST SYRACUSE, NY 13087**

DETAILS

SHEET TITLE:

NO.	REVISION/ISSUE	DATE
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SITE • DESIGN • ENGINEERING
110 FAYETTE STREET
MANLIUS, NEW YORK 13104
email: MNAP@NAPCON.COM
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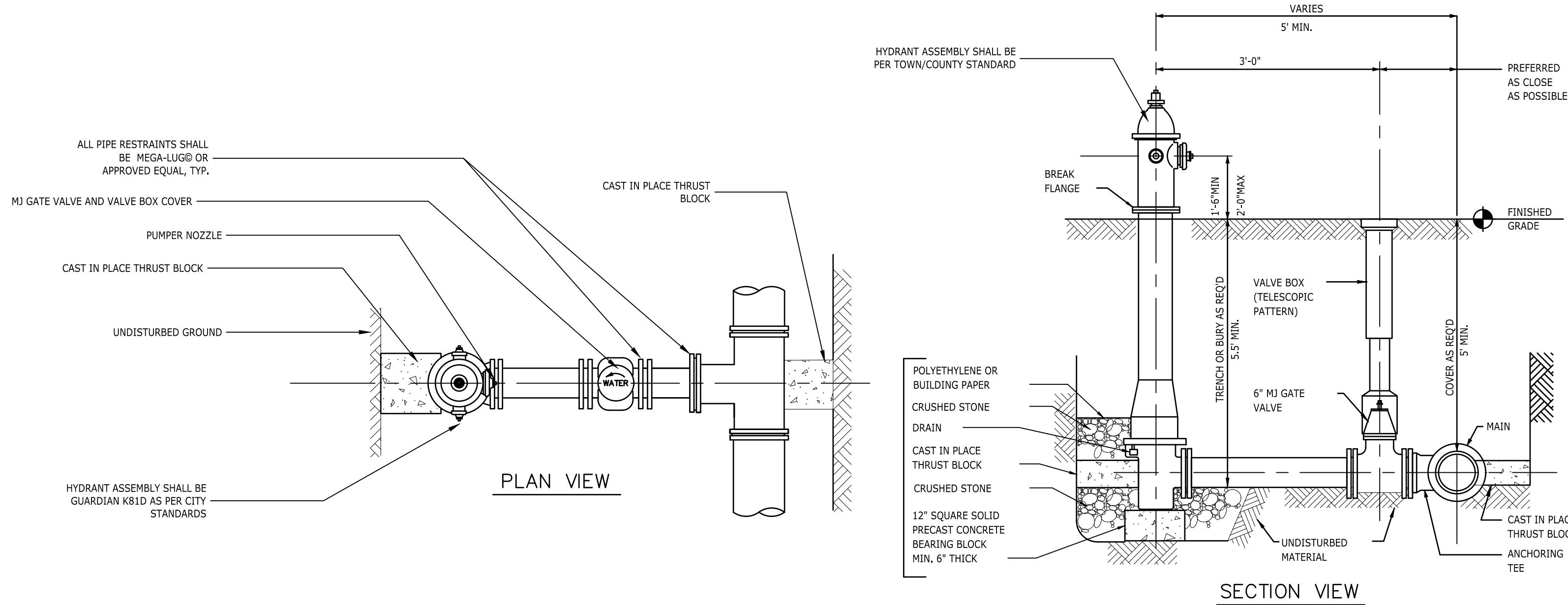
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SHEET
C-11

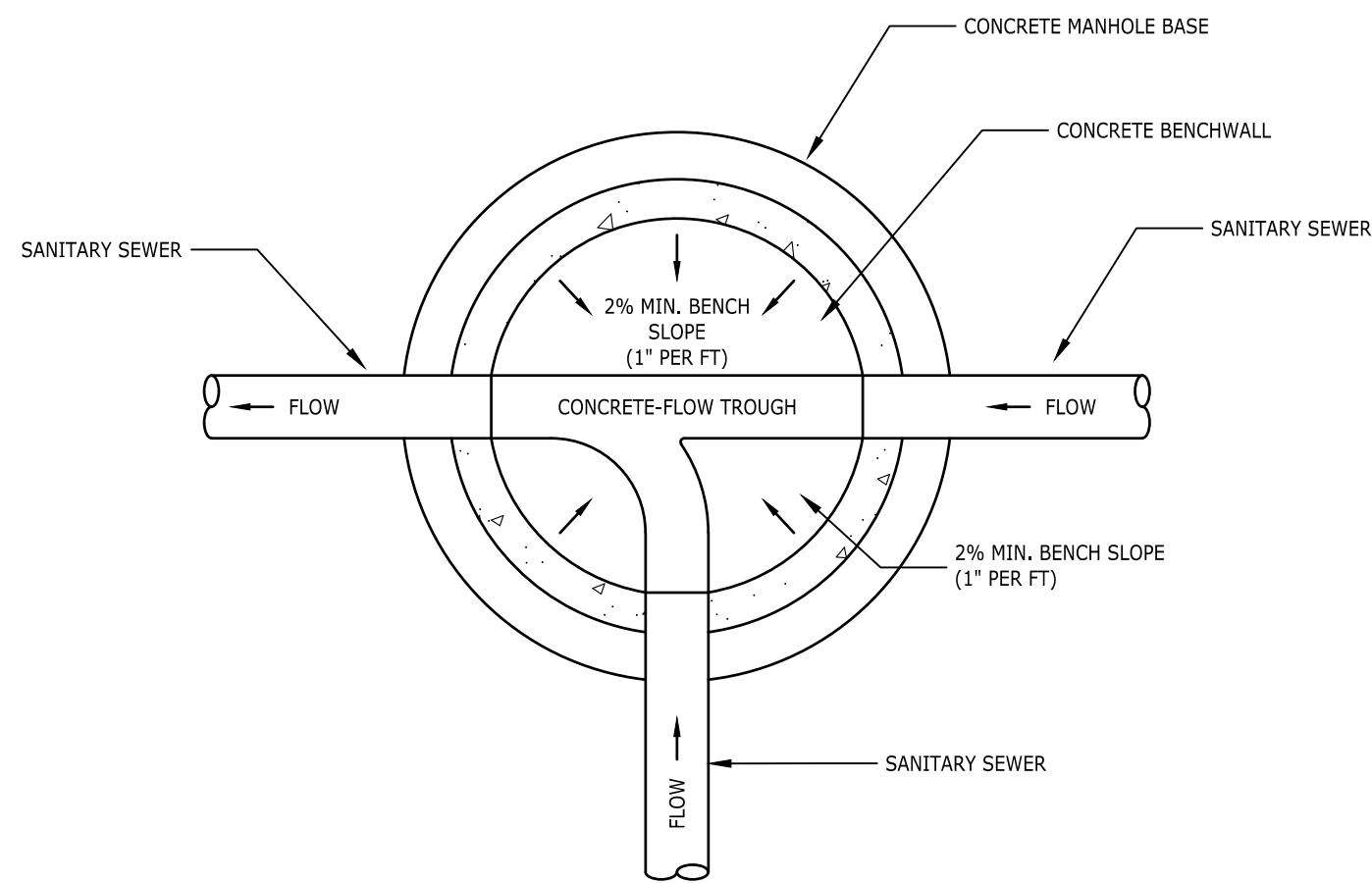
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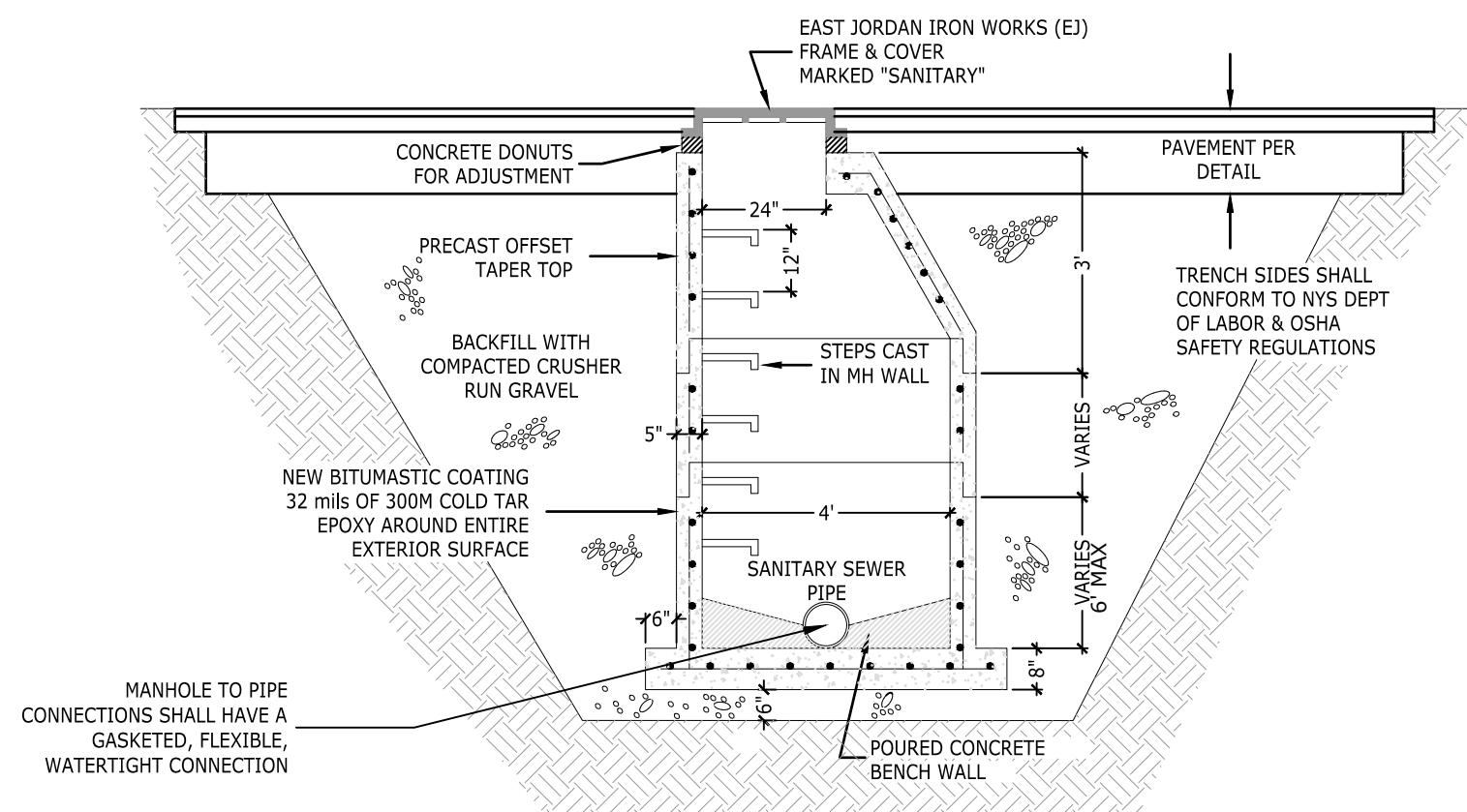
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NY'S REGISTRATION # 077842



1 TYPICAL HYDRANT INSTALLATION
C-12 SCALE: NTS



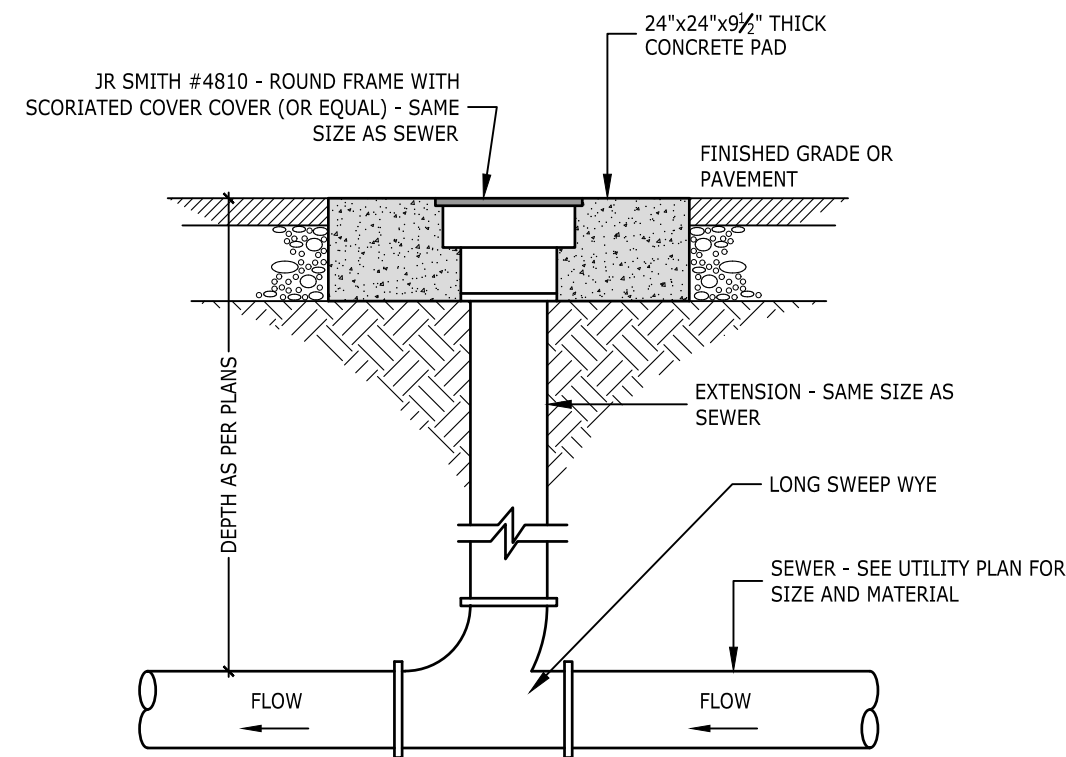
2 SANITARY SEWER MANHOLE BENCH
C-12 SCALE: NTS



SANITARY MANHOLE GENERAL NOTES

1. ALL SANITARY SEWER MANHOLES TO BE RATED FOR H-20 LOADING
2. PRECAST REINFORCED CONCRETE OFFSET TAPER TOP TO BE MANUFACTURED IN ACCORDANCE WITH ASTM C-478. TOP SECTION IS TO BE 3' LONG.
3. PRECAST REINFORCED CONCRETE MANHOLE RISER SECTIONS ARE TO BE MANUFACTURED IN ACCORDANCE WITH ASTM C-478. RISER SECTIONS ARE TO HAVE A 48" INSIDE DIAMETER x 5' WALL AVAILABLE IN 2', 3', OR 4' LENGTHS.
4. PRECAST REINFORCED CONCRETE MANHOLE BASE IS TO MANUFACTURED IN ACCORDANCE WITH ASTM C-478. BASE IS TO HAVE A 48" INSIDE DIAMETER x 5' WALL WITH RUBBER BOOTS AS REQUIRED.
5. REINFORCING FOR ALL SECTIONS SHALL BE 2X4, ¾ W.W. MESH.
6. ALL REINFORCEMENT SHALL BE PLACED SO IT WILL HAVE A MINIMUM COVER OF 2" AND BE LOCATED APPROXIMATELY WITHIN THE CENTER OF THE SECTION.
7. COURSES OF BRICK OR CONCRETE DONUTS ARE TO BE USED FOR RIM GRADE ADJUSTMENTS.
8. BASE OF PRECAST MANHOLE SHALL REST ON UNDISTURBED UNIFORM VIRGIN SOIL OR COMPACTED GRAVEL, COMPACTED IN PLACE WITH VIBRATORY MECHANICAL TAMPERS IN LIFTS NOT TO EXCEED 6" AT A TIME.
9. TRENCH SIDES SHALL CONFORM TO NYS LABOR DEPARTMENT SAFETY REGULATIONS.

3 SANITARY MANHOLE STRUCTURE
C-12 SCALE: NTS



4 TYPICAL SEWER CLEANOUT
C-12 SCALE: NTS

PROJECT TITLE:
**A&E & SNY CENTER
MEDICAL CENTER DRIVE**
TOWN OF MANLIUS ONONDAGA COUNTY, NEW YORK

PREPARED FOR:
A&E & SNY CENTER
SUITE 38
5781 BRIDGE STREET
EAST SYRACUSE, NY 13057

DETAILS

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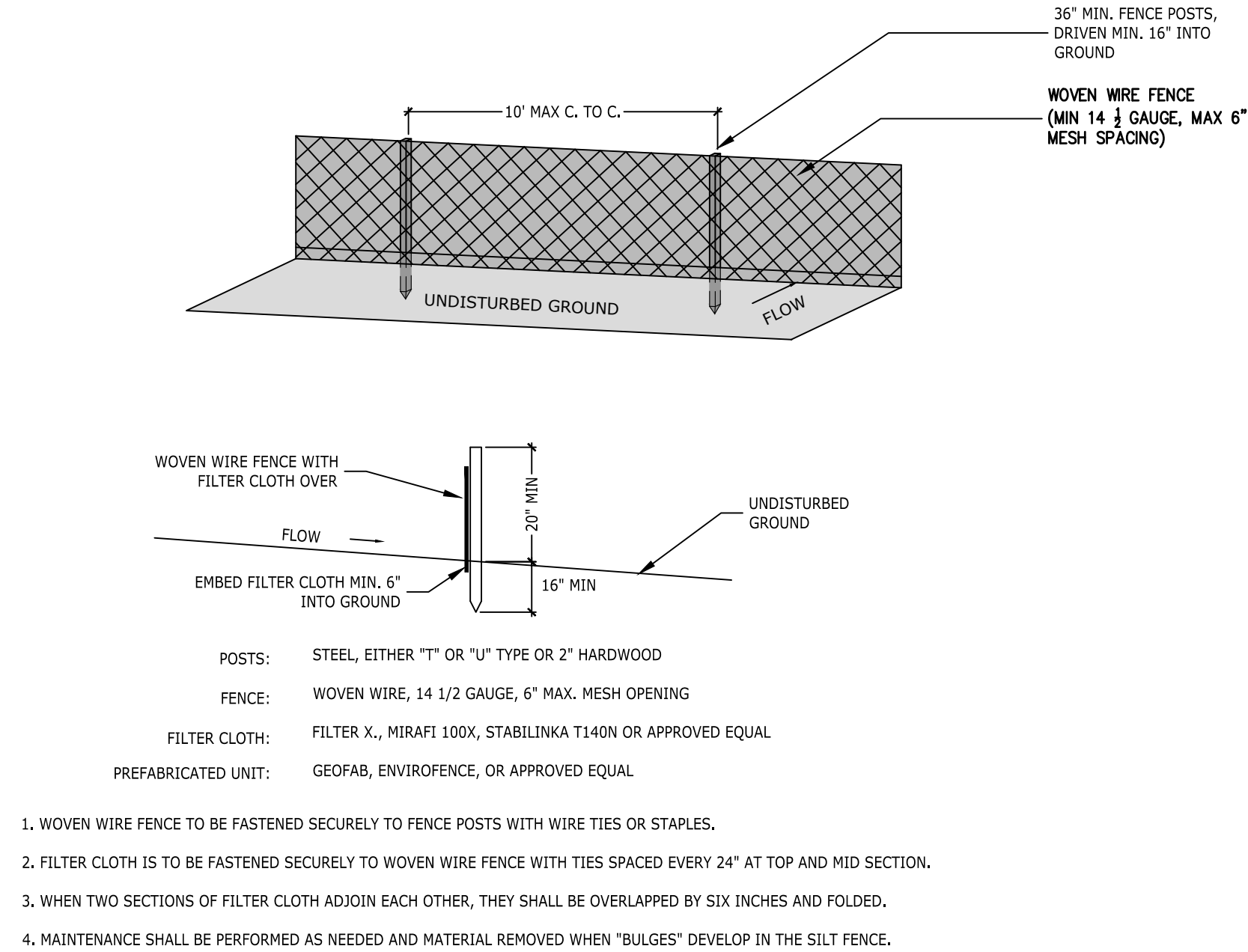
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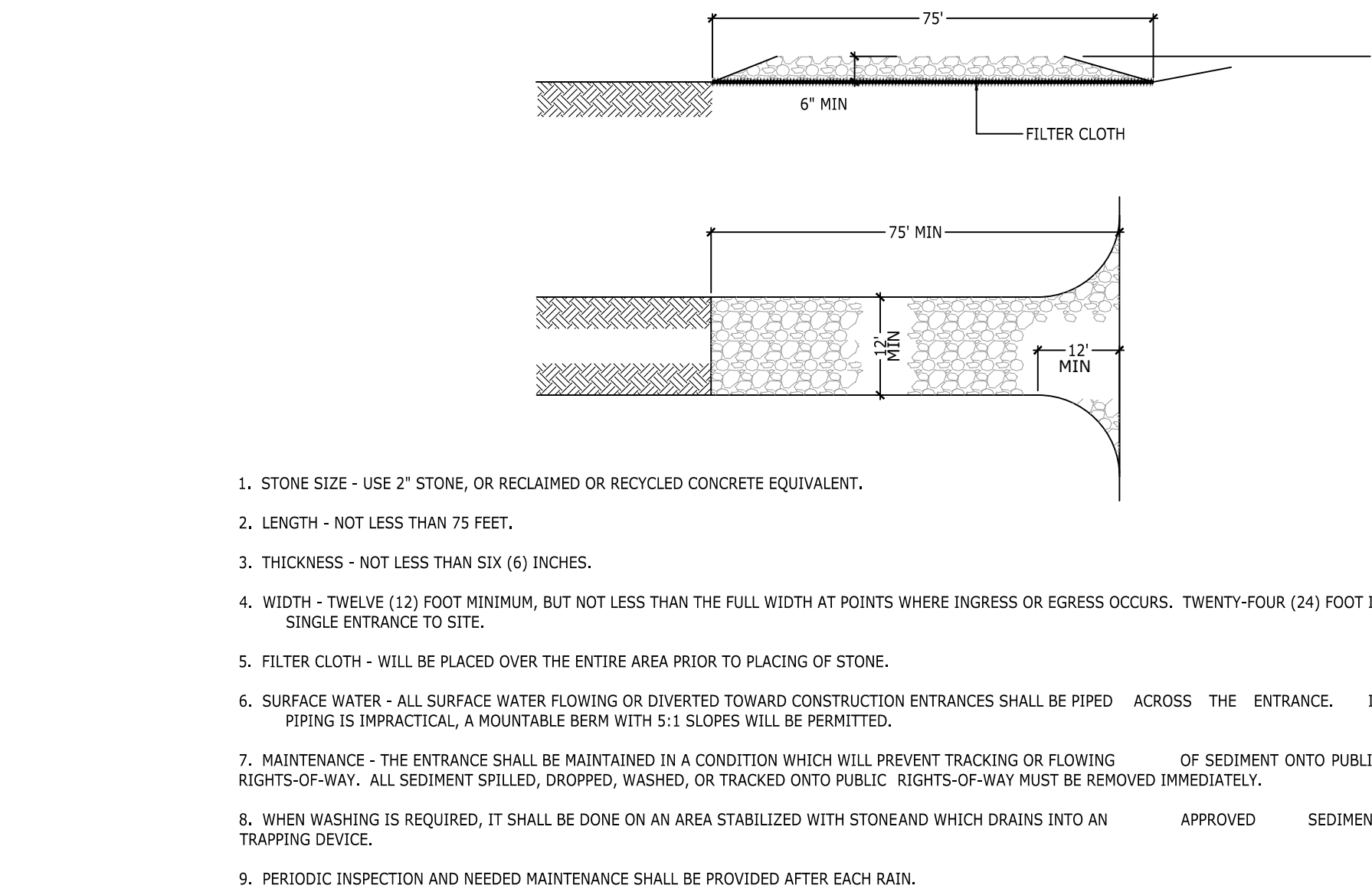
C-12



1 SILT FENCE

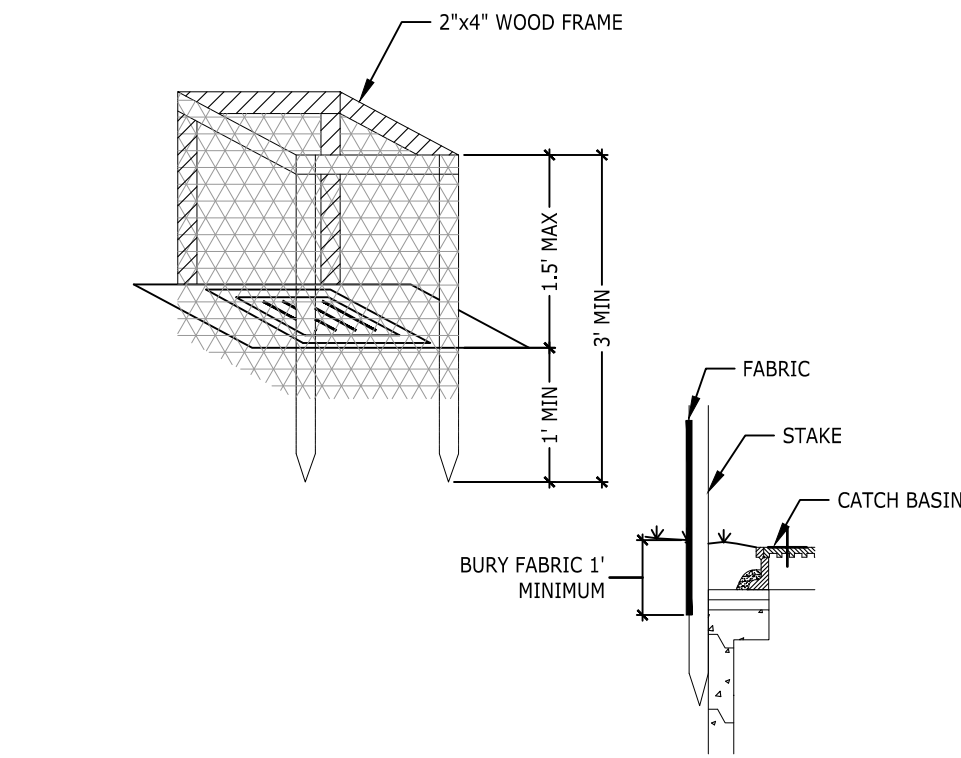
C-13 SCALE: NTS

- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
- FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.



2 CONSTRUCTION ENTRANCE

C-13 SCALE: NTS

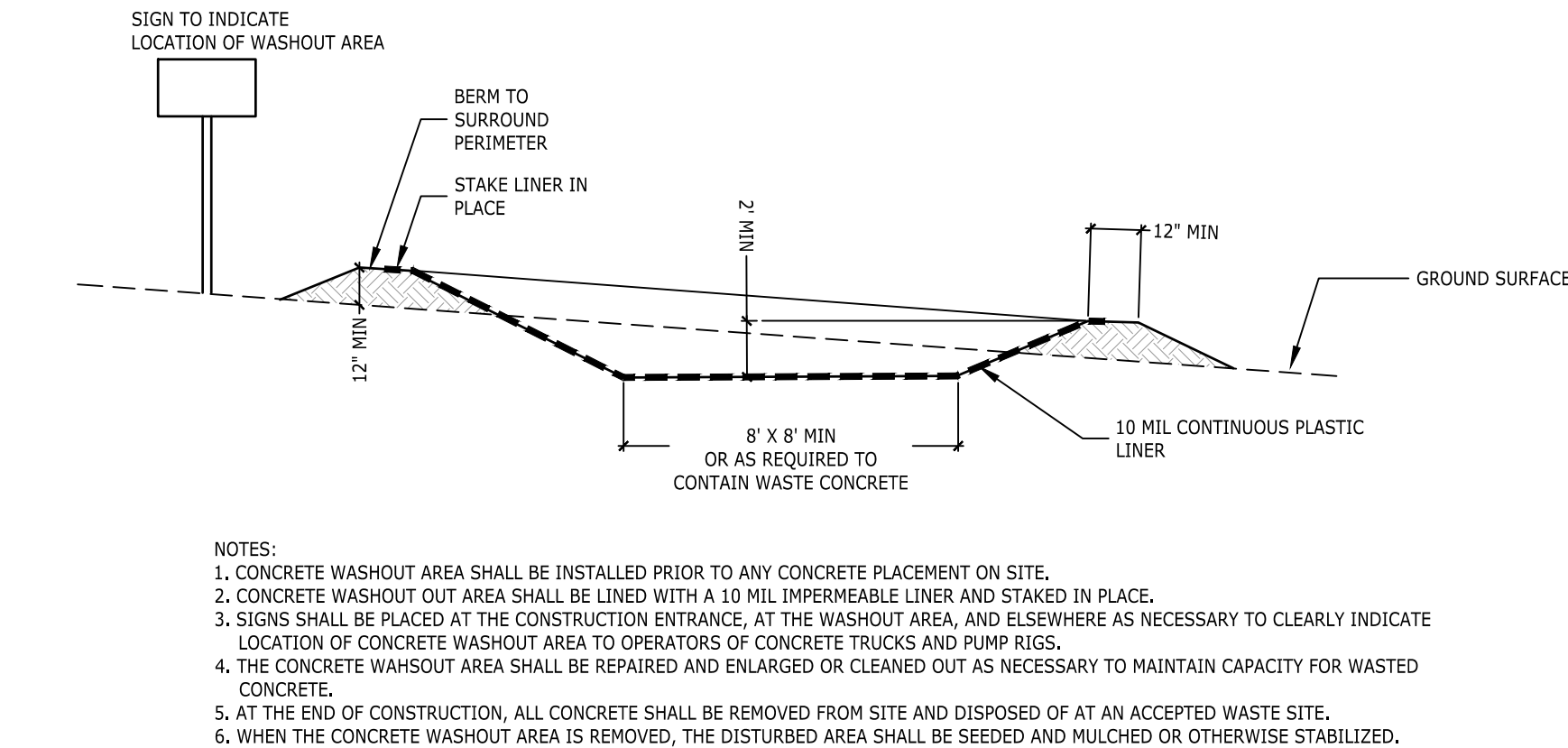


3 INLET PROTECTION - VARIATIONS

C-13 SCALE: NTS

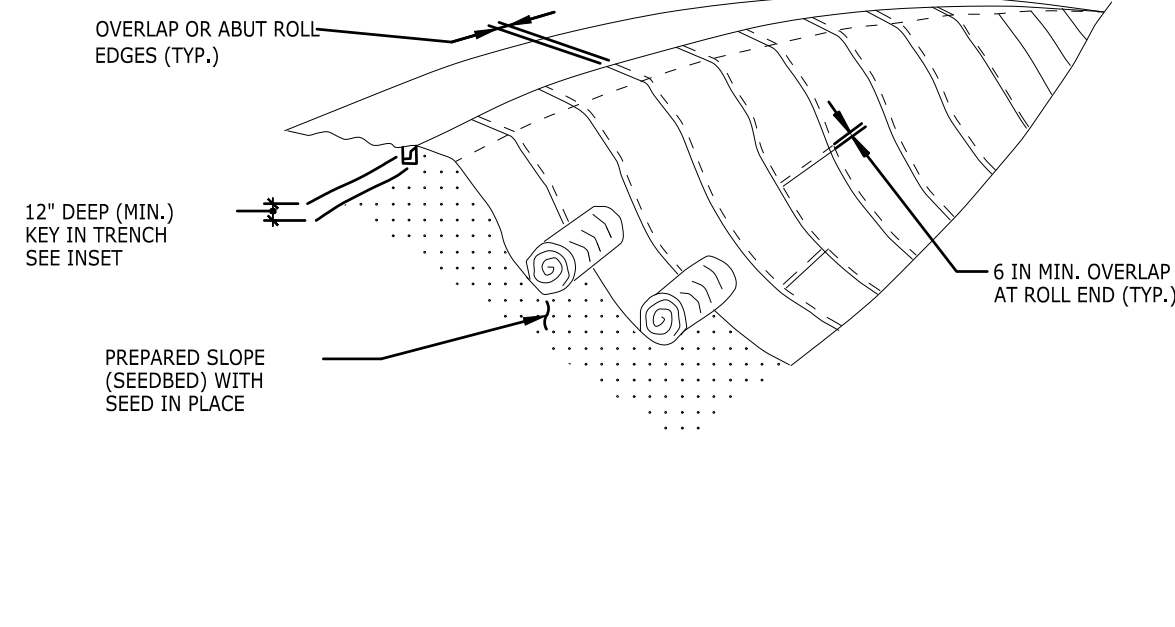
CONSTRUCTION SPECIFICATIONS

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC), MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN, IF PRESENT. NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION & SEDIMENT CONTROL PLAN.
- UNROLL MATTING DOWNSLOPE, LAY MAT SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE, AVOID STRETCHING THE MATTING.
- OVERLAP OR ABUT ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSLOPE MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT.
- KEY IN THE UPSLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.



4 CONCRETE WASHOUT AREA

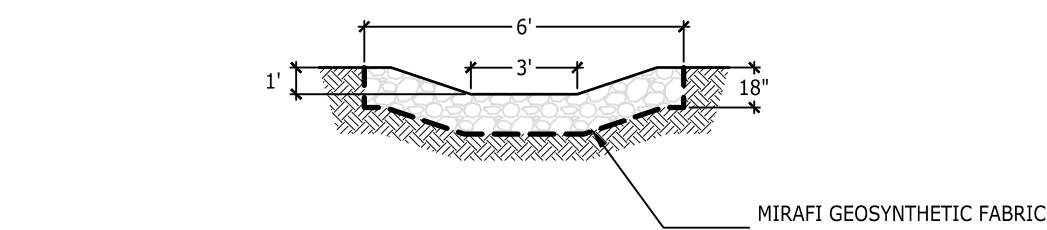
C-13 SCALE: NTS



5 SLOPE STABILIZATION

C-13 SCALE: NTS

SLOPE STABILIZATION MAT SHALL BE PROPLEX LANDLOCK® 450 TURF REINFORCEMENT MAT, OR EQUAL



6 RIP-RAP SWALE

C-13 SCALE: NTS

PROJECT TITLE: **A&E & SNY CENTER MEDICAL CENTER DRIVE**
TOWN OF MANLIUS ONONDAGA COUNTY, NEW YORK
PREPARED FOR: **A&E & SNY CENTER SUITE 38 5781 BRIDGE STREET EAST SYRACUSE, NY 13057**

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PROJECT NO. **21-2022**
DATE **25 AUG 2022**
SCALE **AS SHOWN**

C-13

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NOTES

PLEASE NOTE:

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SHEET

PROJECT NO.

21-2022

25 AUG 2022

25 AUG 2022

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SHEET TITLE F.

DETAILS

PROJECT TITLE:

**A&E & SNY CENTER
MEDICAL CENTER DRIVE**

PREPARED FOR:

A&E & SNY CENTER
SUITE 38
5781 BRIDGE STREET
EAST SYRACUSE, NY 13057



Joanne M. Mahoney
County Executive

Onondaga County Planning Board

RESOLUTION OF THE ONONDAGA COUNTY PLANNING BOARD

Meeting Date: November 09, 2022

OCPB Case # Z-22-311

- WHEREAS, the Onondaga County Planning Board, pursuant to General Municipal Law, Section 239 l, m and n, has considered and reviewed the referral for a SITE PLAN from the Town of Manlius Planning Board at the request of A&E and SNY Surgery Center for the property located at Medical Center Drive; and
- WHEREAS, General Municipal Law Section 239-m allows the County Planning Board to review approval of site plans and the site is located within 500 feet of North Burdick Street (Route 94), a county highway; and
- WHEREAS, the applicant is seeking site plan review of a revised plan to construct an approximately 40,000 square foot medical office/personal services center (A&E SNY Center) on a 4.03-acre parcel in a Neighborhood Shopping (NS) zoning district; and
- WHEREAS, earlier in 2022, the Board recommended No Position with Comment on a zone change referral (Z-22-70) and Modification of a site plan referral (Z-22-156) for the A&E SNY Surgery Center project, citing traffic and screening recommendations; and
- WHEREAS, the subject parcel is located along Medical Center Drive in the Town of Manlius, which contains Medical Center East, the Towne Center Retirement Community, Starview Homes townhouse development, and a proposed memory care facility, and other commercial uses; the site is also adjacent to the Fayetteville Towne Center retail development; and
- WHEREAS, per aerial imagery dated May 2021, the site is vacant land that is mostly cleared; a paved walking path along Medical Center Drive appears to connect the Towne Center Retirement Community to the housing development to the north (to remain); it appears as though there is some utility equipment on the southwest corner of the lot; and
- WHEREAS, a revised Layout Plan dated August 25, 2022 shows one proposed building with a total of 39,995 sf of space at full buildout (previously 30,000 sf), to include a two-story medical office (32,685 sf), attached personal services (salon, at 3,995 sf) and a future medical office expansion (3,315 sf); the building configuration has changed, but generally remains in the same location on the parcel, with the rear of the building along Medical Center Drive and main entries at the interior of the site adjacent to the parking lot; elevation renderings indicate varied rooflines, fenestration, and materials including siding, stone and stucco; and
- WHEREAS, a parking lot with landscaped islands is proposed behind the building including 140 spaces (previously 108 proposed); driveway access is shown onto Avriel Drive, a local road with access to North Burdick Street via Medical Center Drive; sidewalks are shown only in front of the building; and
- WHEREAS, the Landscaping Plan shows an existing screening hedge row at the northern parcel boundary; and trees are shown in various locations surrounding the remainder of the site, particularly near the eastern, sloped border with the Towne Center retirement community; three hardscape patio areas occur at the rear of

the building; and

WHEREAS, it appears multiple small portions of the building, patio areas, several parking spaces and a loading zone area are all proposed within the required 50' front and rear yard setbacks; and

WHEREAS, the site is to be served by municipal drinking water (OCWA);
ADVISORY NOTE: The applicant is advised to contact OCWA's Engineering Department to determine the activities and structures permitted within OCWA easements/right-of-ways, water availability and service options, obtain hydrant flow test information, evaluate backflow prevention requirements, and/or request that the Authority conduct hydrant flow testing to assess fire flow availability; and

WHEREAS, the site is to be served by municipal wastewater service; the site is located in the Meadowbrook-Limestone Wastewater Treatment Plant service area, an area designated as
flow constrained and impacted by excessive wet weather flow;
ADVISORY NOTE: Capacity assurance approval from the Onondaga County Department of Water Environment Protection (OCDWEP) is required in advance of issuance of a plumbing permit from the County's Plumbing Control Division in order to connect into the public sewer system; the Capacity Assurance Form and approval process can now be found online:
<http://www.ongov.net/wep/CapacityAssuranceReviews.html>; and

WHEREAS, per the submitted EAF and preliminary SWPPP (prepared prior to site plan changes), approximately 3 acres of the site will be disturbed by the proposed project; per the revised plans dated August 25, 2022, it appears stormwater facilities have changed to include an underground storage facility in addition to a detention pond;
ADVISORY NOTE: Per the Onondaga County Department of Transportation, additional stormwater runoff into the county's drainage system is prohibited;
ADVISORY NOTE: Any project that cumulatively disturbs one acre or more of land must be covered under the NYS SPDES Permit; the municipality is advised to ensure that the applicant has obtained the appropriate permits from the NYS Department of Environmental Conservation prior to municipal approval; and

WHEREAS, the site may contain the Northern Long-eared Bat, or its associated habitat, which has been listed by the state or federal government as a threatened or endangered animal species (per EAF Mapper); impacts to bat species are often associated with tree clearing and from the plans it appears that no trees will be removed as part of the proposed project; and

NOW THEREFORE BE IT RESOLVED, that the Onondaga County Planning Board recommends the following MODIFICATION(S) to the proposed action prior to local board approval of the proposed action:

The Onondaga County Department of Transportation has determined that the applicant must contact the Department to discuss any required traffic data for the proposed project. Additionally, the applicant must submit a copy of the Stormwater Pollution Prevention Plan (SWPPP) and/or any drainage reports or studies to the Department for review. The municipality must ensure any mitigation as may be determined by the Department is reflected on the project plans prior to, or as a condition of, municipal approval.

A handwritten signature in black ink, appearing to read 'M. E. Voss', with a long horizontal stroke extending to the right.

Martin E. Voss, Chairman
Onondaga County Planning Board

GML 239 Report of Final Action

NYS GML § 239-m.6. and n.6. require the referring body to file a report of the final action it has taken on a referred matter with the county planning agency within 30 days after the final action (separate from the minutes taken at the meeting). A referring body which acts contrary to a County Planning Board recommendation of MODIFICATION or DISAPPROVAL of a referred matter shall also set forth the reasons for the contrary action in such report.

This section to be completed by the Syracuse-Onondaga County Planning Agency

To: Onondaga County Planning Board **From:** Town of Manlius Planning Board

Fax: 435-2439 **Phone:** 435-2611

Re: Applicant: A&E and SNY Surgery Center

Address: at Medical Center Drive

Referral Type: SITE PLAN

OCPB Date: November 09, 2022

OCPB Action: Modification

OCPB Case #: Z-22-311

The local board took the following action regarding the above referenced referral (Check one box. If checking Other, please specify the final action taken. Use the space at the bottom of the report to identify reasons if acting contrary to the OCPB recommendation.):

- ☐ Approved the proposed action with regard to the OCPB's No Position or No Position with Comment.
- ☐ Approved the proposed action as modified by the OCPB.
- ☐ Approved the proposed action contrary to some of the modifications recommended by the OCPB.*
- ☐ Approved the proposed action contrary to all of the modifications recommended by the OCPB.*
- ☐ Approved the proposed action contrary to the disapproval recommended by the OCPB.*

- ☐ Disapproved the proposed action with regard to the OCPB's no position or no position with comment.
- ☐ Disapproved the proposed action with regard to the recommended modification(s) by the OCPB.
- ☐ Disapproved the proposed action as recommended and for reasons set forth by the OCPB.
- ☐ Disapproved the proposed action as recommended but for reasons other than those set forth by the OCPB. (Please list reasons below for local disapproval.)

☐ Other _____

Local Board Date: _____

*List reasons for acting contrary to the OCPB recommendation and include a copy of the local board resolution. Attach additional reasons on a separate sheet of paper as necessary.



Onondaga County Planning Board

GML 239 Referral Notice

Referring Municipality/Board: Town of Manlius Planning Board

Referral Contact: Lisa Beeman

Contact Email/Phone: lbeeman@townofmanlius.org

Type of Referral: ☒ General Municipal Law §239 Review ☐ Informal Review ☐ 3-Mile Limit Review

1. Project Applicant: A&E and SNY Surgery Center 2. Site Address: Medical Center Drive (behind Resort Lifestyle)

3. Tax ID Number(s): 086.-01-03.9 4. Total Acres: 4.03

5. Current Zoning: NS 6. Current Land Use: Vacant

7. Project Description: Build a new Medical office/personal services center

Please indicate the existing AND proposed water and wastewater service. The notes field is available to provide further details which may better describe the proposed conditions, particularly for projects with multiple lots/structures.

Water Service

8a. Existing: ☐ Municipal
☐ Individual Well
☒ None

Provider: _____

8b. Proposed: ☒ New or Additional Municipal Connection
☐ New or Additional Individual Well
☐ No Change

Wastewater Service

9a. Existing: ☐ Municipal Sanitary Sewer
☐ Individual Septic System
☒ None

Provider: _____

9b. Proposed: ☒ New or Additional Municipal Connection
☐ New or Additional Individual Septic System
☐ No Change

Notes: _____

10. ☐ OCPB Jurisdiction (check ALL that apply and specify)

☐ Text Adoption/Amendment -or- ☒ Site is located within 500 feet of:

- ☐ a municipal boundary: _____
- ☒ a state or county thruway/highway/roadway: North Burdick Street
- ☐ an existing or proposed state or county park/recreation area: _____
- ☐ an existing or proposed county-owned stream or drainage channel: _____
- ☐ a parcel containing a state or county-owned building/institution: _____
- ☐ a farm operation located in a New York State Agricultural District (include Ag Data Statement pursuant to AML §305-a)

Referred Action(s)

If referring multiple actions related to the same project, identify the referring municipal board if different from above.

11. ☐ Text Adoption -or- ☐ Text Amendment Referring Board: _____

(Includes: adoption of and amendments to comprehensive plans, local laws, zoning ordinances, subdivision regulations)

Please enclose a document with changes tracked OR the existing and proposed text with a summary of the proposed change(s).

Summary of the proposed additions/changes: _____

12. ☐ Zone Change (Includes map amendments)

Referring Board: _____

Proposed Zoning District: _____ Number of Acres Affected: _____

Purpose and Proposed Use: _____

13. ☒ Site Plan -or- ☐ Project Site Review**Referring Board:** Town of Manlius Planning BoardProposed Use/Improvements: Build a new Medical office/personal services center**14. ☐ Special Permit****Referring Board:**

Section of local zoning code that requires a special permit for this use: _____

Purpose: _____

15. ☐ Preliminary Subdivision -or- ☐ Final Subdivision Referring Board:

Name of Subdivision: _____

Number of Proposed Lots and Use Type (residential and/or commercial): _____

Is this a cluster subdivision pursuant to Section 278 of the New York State Town Law? ☐ Yes ☐ No**16. ☐ Use Variance****Referring Board:**

Section(s) of local zoning code to which the variance is being sought: _____

Describe how the proposed project varies from the above code section: _____

17. ☐ Area Variance**Referring Board:**

Section(s) of local zoning code to which the variance is being sought: _____

Describe how the proposed project varies from the above code section: _____

18. ☐ Other Authorization**Referring Board:**

Indicate the referable action and provide any other applicable details: _____

SEQR Information**Action (check one):**

- ☐ Type I
☐ Type II
☐ Unlisted Action

Determination of Significance (if known):

- ☐ Positive Declaration – Draft EIS Required
☐ Conditional Negative Declaration (for Unlisted Actions only)
☐ Negative Declaration
☐ No Finding (Type II Actions only)

Lead Agency (if known): _____ **Date Lead Agency Assigned:** _____

In order for a referral to be considered complete, the Type of Action must be classified, and the appropriate EAF (Short or Long EAF) must be filled out as required under SEQR, except in the case of Type II Actions which do not require an EAF. If the municipality possesses or will be requiring additional materials in order to make a determination under SEQR, or if a determination has been made, those materials are also required for the referral to be considered complete.

Attachments

- | | | | |
|---|--|---|--------------------------------------|
| ☒ Survey | ☐ Subdivision Plat | ☒ EAF/Related Materials | ☐ Laws/Texts |
| ☒ Site Plan | ☒ Local Application Form | ☐ Ag Data Statement | ☐ Other _____ |

This referral, as required by NYS GML §239 l, m & n, includes all materials required by and submitted to the referring body as an application on the proposed action, including all materials required by the referring body in order to make its determination of significance pursuant to SEQRA.

Lisa Beeman/Clerk

315-637-8619/lbeeman@townofmanlius.org

10-28-22

Name/Title of Person Completing This Form

Phone/Email

Transmittal Date

STORMWATER POLLUTION PREVENTION PLAN

for

**A&E and SNY Center
Medical Center Drive
Town of Manlius, Onondaga County, NY**

Prepared for:

**A&E and SNY
Suite 38
5781 Bridge Street
East Syracuse, NY 13057**

Prepared by



November 15, 2022



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Appendix B:	HydroCAD Output - Existing Conditions
Appendix C:	HydroCAD Output - Proposed Conditions
Appendix D:	Inspection, Operation, and Maintenance



SECTION I SCOPE

A. PURPOSE

Napierala Consulting, Professional Engineer, P.C., has prepared this Stormwater Pollution Prevention Plan (SWPPP) in compliance with the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity. The contractor's participation and adherence to this plan is mandatory. Non-compliance with the plan is subject to various remedies including, without limitation, monetary set-offs, withholding payments; reimbursement for costs, expenses (including reasonable attorney's fees), fines, and civil penalties incurred; and/or liquidated damages. This section provides a descriptive explanation of the Stormwater Pollution Prevention Plan and required contractor participation.

B. SPDES GENERAL PERMIT (GP-0-20-001)

The New York State Department of Environmental Conservation enacted regulations that require permitting for the discharge of stormwater from construction activities on sites where an area of one acre or more of soil disturbance is proposed. In order to comply with these regulations, the developer of the site must request coverage under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001). In order to obtain coverage under the General Permit, a SWPPP for the site must be prepared following the requirements of the New York State Standards and Specifications for Erosion and Sediment Control and the New York State Stormwater Management Design Manual.

The NOI, the SWPPP, and any amendments to the SWPPP, as well as any reports required by the SPDES General Permit for Stormwater Discharges from Construction Activity, must also be submitted concurrently to the local governing body, if required, and any other authorized agency having jurisdiction or regulatory control over the construction project.

C. RESPONSIBILITIES OF THE OWNER

The owner/operator shall identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP. The owner/operator shall identify the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The owner/operator shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. The owner/operator shall ensure that at least one trained contractor is on site on a daily basis when soil disturbance activities are being performed. The owner/operator shall have a qualified inspector conduct the site inspections.

D. RESPONSIBILITIES OF THE CONTRACTOR

The contractor shall manage the discharge of stormwater from the site in accordance with the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity. The contractor shall be responsible for installing and maintaining the stormwater management practices in accordance with the permit. The contractor is responsible for having at least one person onsite during construction activity that has taken the DEC erosion and sediment control class. The owner/operator and contractor shall be responsible for any enforcement action federal, state, or local agencies take or impose, including the cost of fines, construction delays, and remedial actions resulting from the contractor's failure to comply with the permit provisions. ***It shall be the responsibility of the contractor to make any changes to the SWPPP necessary when the contractor or any of his subcontractors elects to use borrow, fill or material storage sites, either contiguous to or remote from the construction site, when such sites are used solely for this construction project.*** Such sites are considered to be part of the construction site that the permit and this SWPPP cover. Off-site borrow, fill, or material storage sites which are used for multiple construction projects are not subject to this requirement, unless state or local regulations specifically require that the SWPPP include such sites. The contractor should consider this requirement in negotiating with earthwork subcontractors since the choice of an off-site borrow, fill, or material storage site may impact their duty to implement, make changes to, and perform inspections the SWPPP for the site requires.



The SWPPP provides forms for both the general contractor and subcontractor(s) that identify the company name, business address and telephone number along with the responsible person for the contractor and all subcontractors who will implement the measures identified in the SWPPP. **The general contractor shall sign the “General Contractor’s Certification” and all subcontractors shall sign the “Subcontractor’s Certification”,** verifying they have been instructed on how to comply with and fully understand the requirements of the NYSDEC and SWPPP. **A fully qualified individual on behalf of each entity must sign this certification prior to the beginning of any construction activities and the certification shall be filed in the project’s SWPPP.**

The SWPPP is meant to be a working document that shall be maintained at the site of the construction activities at all times throughout the project, shall be readily available upon the operator’s personnel, NYSDEC or any other agency with regulatory authority over stormwater issues requests to review the SWPPP, and shall be kept on-site until the site complies with the Final Stabilization section of this document. **A sign or other notice must be posted near the main entrance of the construction site which contains a completed NOI, the location of the SWPPP and the name and phone number of a contact person responsible for scheduling SWPPP viewing times, and any other state specific requirements.**

E. NOTICE OF INTENT

The operator will [has] petition[ed] the NYSDEC for the stormwater discharges during construction at this site to be covered by the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity. The owner/operator will be filing [has filed] a **Notice of Intent** (NOI) to be covered under this permit. The signatory on the NOI must sign all documents (i.e., inspection reports) associated with the SWPPP. If the signatory chooses not to sign all documents, he/she must designate a duly authorized representative to sign all relevant documents. This designation must be made in writing and be included in the SWPPP. The duly authorized representative may be either a named individual or any individual occupying a named position. Additionally, the written designation must be submitted to the NYSDEC.

F. STORMWATER INSPECTIONS

1. Inspection Procedures

Inspections of the erosion control practices are required on a routine basis. A qualified professional shall perform these inspections once a week. All inspections will continue until the site complies with the final stabilization section of this document. “Qualified Professional” means a person knowledgeable in the principles and practices of erosion and sediment controls, such as a licensed Professional Engineer (PE), Certified Professional in Erosion and Sediment Control (CPESC), or soil scientist. A report documenting the inspector’s findings shall follow the inspection; the report shall document the required maintenance and/or repair for the erosion and sedimentation control measures. It is imperative that the contractor documents the inspection and maintenance of all erosion and sedimentation control measures as soon as possible after the inspection and/or maintenance have been completed. These records are used to prove that the required inspection and maintenance were performed. The records shall be placed in the SWPPP. In addition to inspection and maintenance reports, records should be kept of the construction activities that occur on the site. The operator shall post at the site, in a publicly-accessible location, a summary of the site inspection activities on a monthly basis.

2. Record Keeping

The operator shall also prepare a written summary of its status with respect to compliance with this general permit at a minimum frequency of every three months during which coverage under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity exists. The summary should address the status of achieving each component of the SWPPP. The reports shall be signed by the signatory of the NOI or a duly-authorized person and be retained at the construction site.

The contractor shall retain copies of the SWPPP, all reports and data for a minimum of five (5) years after the project. The following list identifies the required inspection and maintenance documentation that must be maintained by the contractor under this SWPPP:

- Inspection Report
- Stabilization Schedule



- Implementation Schedule Status Report
- Project Rainfall Log

G. SWPPP MODIFICATIONS

The inspection report should also identify if any revisions to the SWPPP are warranted due to unexpected conditions. The SWPPP is meant to be a dynamic working document that is to be kept current and amended whenever:

- The NYSDEC provides notification that the SWPPP does not comply with the minimum permit requirements.
- The design, construction, operation, or maintenance of the site changes in a way which significantly affects the potential for the discharge of pollutants or when the plan proves to be ineffective in eliminating or significantly minimized pollutant discharges.
- Within seven (7) calendar days of knowledge of a reportable release.

Any such changes to the SWPPP must be made in writing within seven (7) days of the date such modification or amendment is made. The contractor's failure to monitor or report deficiencies to the operator will result in the contractor being liable for fines and construction delays resulting from any federal, state, or local agency enforcement action.

H. FINAL STABILIZATION AND TERMINATION OF PERMIT COVERAGE

A site can be considered stabilized when all soil disturbing activities have been completed and a uniform perennial vegetative cover with a density of 80% over the unpaved areas and areas not covered by permanent structures has been established or equivalent permanent stabilization measures have been established and the facility no longer discharges stormwater associated with construction activities, and the operator(s) has filed a **Notice of Termination** (NOT) form with the NYSDEC. Prior to filing of the Notice of Termination, the operator shall have the qualified professional perform a final site inspection. The qualified professional shall certify that the site has undergone final stabilization using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fence) not needed for long-term erosion control have been removed. The filing of the NOT terminates coverage under the General Permit and terminates the contractor's responsibility to implement the SWPPP, but the requirements of the SWPPP, including periodic inspections, must be continued until the NOT is filed. Upon achieving this milestone, the contractor shall also submit "Final Stabilization Certification/Termination Checklist". Final payment and/or the release of retainage will be withheld until all provisions of the SWPPP have been submitted, completed and accepted by the operator.



SECTION II SITE DESCRIPTION

A. PROJECT NAME AND LOCATION

A & E and SNY Center
Medical Center Drive
Town of Manlius, Onondaga County, NY

UTM Coordinates from NYSDEC Interactive Map: E: 416883; N: 4765816



Figure 1. Project Location Map

The project is located on Medical Center Drive at the northeast corner of the intersection of Medical Center Drive and Avriel Drive.

B. OWNER/OPERATOR NAME AND ADDRESS

A & E and SNY Center
5781 Bridge Street, Suite 38
East Syracuse, NY 13057

C. PROJECT DESCRIPTION

The existing parcel of land is approximately 4.038 acres located on the north side of Medical Center Drive to the east of the Northeast Medical Center. The site is currently vacant and has a consistent grass/brush cover throughout the lot. The property generally drains as sheet flow in the west, south, and east directions from a highpoint generally in the middle of the property.

The proposed development is a building with an upper level that has a footprint of 24,595 square feet and a lower level, that is similar to a walk-out basement, with a footprint of 15,400 square feet. The building will have 36,000 square feet of medical office space and a 3,995 square foot salon. Associated construction includes asphalt parking and driveways, concrete sidewalks, a dumpster enclosure, underground utilities, and stormwater mitigation facilities. One curb-cut is proposed for access to the site at the northwest corner of the property along Avriel Drive.



The project is located in Region 7 of the New York State Department of Environmental Conservation. The Town of Manlius, in which the project is situated, is a regulated MS4 (municipal separate storm sewer system).

D. RECEIVING WATERS

Runoff from the project site flows in several directions. Runoff in a westerly direction enters a roadside ditch, crosses under Medical Center Drive, and continues to the south, eventually flowing into a wetland that is to the west of the Northeast Medical Center complex. Sheet flow to the south flows into the Medical Center Drive drainage system that discharges into the Burdick Street (Onondaga County DOT) drainage system. Runoff flowing as sheet flow to the east flows down the hill and enters into the drainage system for the Towne Center Retirement Community, which eventually discharges into the Burdick Street drainage system.

The NYS DEC Environmental Resource Mapper shows that no DEC-regulated wetlands are within the vicinity of the project site. The National Wetlands Inventory Mapper also shows that no regulated wetlands are within the vicinity of the project site.



Figure 2: NYSDEC Wetlands Mapping

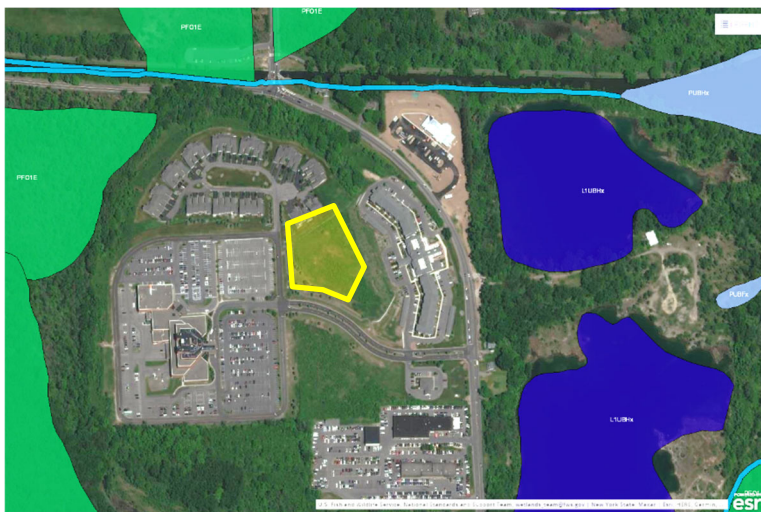


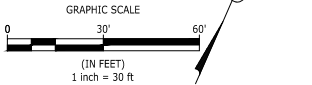
Figure 3: National Wetlands Inventory Mapping



SITE CRITERIA CHECKLIST			
PROJECT SITE INFORMATION			
ADDRESS	MEDICAL CENTER DRIVE		
TAX MAP ID NO.	086,-01-03.9		
BOUNDARY SURVEY	PROPERTY LINE INFORMATION TAKEN FROM SUBDIVISION MAP PREPARED BY CT MALE ASSOCIATES, PC DATED 05/10/2017		
TOTAL SITE AREA	4.038 ACRES		
LAND USE	EXISTING: VACANT PROPOSED: PROFESSIONAL/MEDICAL SERVICES		
		REQUIRED	GRANTED RELIEF
ZONING INFORMATION			
ZONING DISTRICT	CURRENT: RESTRICTED AGRICULTURAL (RA) PROPOSED: NEIGHBORHOOD SHOPPING (NS)		
IMPERVIOUS LOT COVERAGE	75%	56.0% (2.26 ACRES)	
BUILDING COVERAGE	10,000 SF/ACRE	39,995 SF (9,905 SF/ACRE x 4.038 ACRES)	
FRONT YARD SETBACK	50 FT	40 FT (MEDICAL CENTER DR) 88.7 FT (AVRIEL DR)	10 FT (MEDICAL CENTER DR) NA (AVRIEL DR)
REAR YARD SETBACK	50 FT	40.2 FT (TOWN CENTER RETIREMENT) 117.6 FT (STAR VIEW)	25 FT (TOWN CENTER RETIREMENT) NA (STAR VIEW)
SIDE YARD SETBACK	50 FT	CORNER LOT; NON-FRONT YARDS CONSIDERED REAR YARDS	
LANDSCAPE BUFFER A MINIMUM OF 30 FEET IMMEDIATELY ADJOINING PROPERTY ZONED RESIDENTIAL OR RESTRICTED AGRICULTURAL SHALL CONSIST OF A LANDSCAPED BUFFER, APPROPRIATE TO THE CIRCUMSTANCES, AS APPROVED BY THE PLANNING BOARD.			
FRONT YARD BUFFER	30 FT	40 FT (MEDICAL CENTER DR) 88.7 FT (AVRIEL DR)	NA (MEDICAL CENTER DR) NA (AVRIEL DR)
REAR YARD BUFFER	30 FT	25.5 FT (TOWN CENTER RETIREMENT) 30 FT (STAR VIEW)	5 FT (TOWN CENTER RETIREMENT) NA
SIDE YARD BUFFER	30 FT	CORNER LOT; NON-FRONT YARDS CONSIDERED REAR YARDS	
PARKING DIMENSIONS	10'x20'	10'x20'	
PARKING AISLE WIDTH	24 FT	24 FT	
PARKING SPACES			
MEDICAL OFFICE SPACE 32,685 SF	1 SPACE/300 SF 109 SPACES		
PERSONAL SERVICES SPACE 3,995 SF	1 SPACE/200 SF 20 SPACES		
MEDICAL OFFICE SPACE 3,315 SF	1 SPACE/300 SF 11 SPACES		
TOTAL:	140 SPACES	140 TOTAL SPACES PROVIDED	
SCREENING ALL SERVICE AREAS WITHIN A NEIGHBORHOOD SHOPPING DISTRICT, SUCH AS THOSE FOR THE LOADING AND UNLOADING OF MERCHANDISE, THE DELIVERY OF FOOD AND EQUIPMENT AND THE COLLECTION AND PICKUP OF GARBAGE, SHALL BE LOCATED A MINIMUM OF 100 FEET FROM ANY ADJOINING PROPERTY LINE OR PROPERTY ZONED RESIDENTIAL OR RESTRICTED AGRICULTURAL. ALL SERVICE AREAS SHALL BE SCREENED FROM SIGHT BY APPROPRIATE FENCING, AND SUCH ADDITIONAL STEPS SHALL BE TAKEN AS ARE NECESSARY TO MINIMIZE THE IMPACT OF NOISE AND LIGHT ON ADJOINING RESIDENTIAL PROPERTIES.			

LAYOUT PLAN KEYED NOTES:

- 1 BUILDING MAIN ENTRANCE
- 2 BUILDING SECONDARY ENTRANCE
- 3 NOT USED
- 4 SEGMENTAL BLOCK RETAINING WALL
- 5 STORMWATER INFILTRATION BASIN
- 6 ADA ACCESSIBLE PARKING
- 7 DUMPSTER ENCLOSURE
- 8 LANDSCAPED ISLAND
- 9 CONCRETE CURB (6" WIDE) AND SIDEWALK (5.5' WIDE)



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PLANNING BOARD SUBMITTAL
PLANNING BOARD SUBMITTAL
PLANNING BOARD SUBMITTAL

DATE
25 AUG 2022

SCALE
1"=30'

PROJECT NO.
21-2022

DATE
25 AUG 2022

SCALE
1"=30'

PROJECT TITLE:
**A&E & SNY CENTER
MEDICAL CENTER DRIVE**

TOWN OF MANLIUS ONONDAGA COUNTY, NEW YORK

PREPARED FOR:
**A&E & SNY CENTER
SUITE 38
5781 BRIDGE STREET
EAST SYRACUSE, NY 13087**

SHEET TITLE:
LAYOUT PLAN

NO.

REVISION/ISSUE

DATE

PREPARED BY:
NAPIERALA CONSULTING
PROFESSIONAL ENGINEER, P.C.
SITE • DESIGN • ENGINEERING
110 FAYETTE STREET
MANLIUS, NEW YORK 13104
email: MNAP@NAPCON.COM
TEL: (315) 682-5580 FAX: (315) 682-5544

DATE
25 AUG 2022

SCALE
1"=30'

PROJECT NO.
21-2022

DATE
25 AUG 2022

SCALE
1"=30'

C-4



E. ENDANGERED OR THREATENED SPECIES

The NYSDEC Environmental Resource Mapper identifies the site as being in the vicinity of bats listed as endangered or threatened. However, the project site does not include the specific habitat for either the Indiana bat or the Northern Long-eared bat; these bats require mature tree stands for spring and summer roosting and hibernate in caves during the winter. The project site is currently a brush-grass-weed mixture with a few “specimen” (stand-alone) trees.

The US Fish & Wildlife Service identifies four species as either threatened, endangered, or a candidate that are known to or are believed to occur in the vicinity of the project site. Two are the Indiana bat and the Northern Long-eared bat; as stated, the project site does not consist of the habitat that either species favors. The Massasauga rattlesnake is identified as a threatened reptile that may occur in the vicinity of the site. Massasaugas live in wet areas including wet prairies, marshes, fens, sedge meadows, peatlands, and low areas along rivers and lakes; the project site cannot be classified as any of these habitats. The monarch butterfly is a candidate species for listing under section 7 of the Endangered Species Act; no provisions must be undertaken under the Endangered Species Act at this time and the listing as a candidate species does not preclude the project from coverage under the SPDES General Permit for Stormwater Discharges from Construction Activity.



Figure 5: NYSDEC Rare and Endangered Species Mapping



The map displays the 'Project Site' as a dark grey polygon. It is situated near 'Archie Dr' and 'Medical Center'. A large blue area represents a body of water. A scale bar at the bottom left indicates a distance of 100 feet. The map includes a legend with symbols for various features and a north arrow in the top left corner.

Figure 6: NYS SHiPO GIS Map

SECTION III EROSION AND SEDIMENT CONTROLS

Prior to the commencement of construction, the operator will identify the contractor(s) and subcontractor(s) that will implement each erosion and sediment control measure identified in this SWPPP. All contractors and subcontractors identified in the SWPPP must sign a copy of the certification statement in Part III.E. of the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity in accordance with Part V.H. of the SPDES General Permit.

A. EROSION CONTROL PLANNING AND SITE MANAGEMENT

1. Concrete Truck Washout:

A temporary excavated or above ground lined constructed pit where concrete truck mixers and equipment can be washed after their loads have been discharged to prevent highly alkaline runoff from entering storm drainage systems or leaching into soil.

- a. The washout facility is sized to contain solids, wash water, and rainfall. The minimum size shall be eight feet by eight feet at the bottom and two feet deep. If excavated, then the side slopes shall be 2:1 (horizontal to vertical).
- b. The facility shall be located a minimum of 100 feet from drainage swales, storm drain inlets, wetlands, streams, and other surface waters. Surface water shall be prevented from entering the structure except for the access road. Appropriate access shall be provided with a gravel access road sloped down to the structure. Signs shall be placed to direct drivers to the facility after their load is discharged.

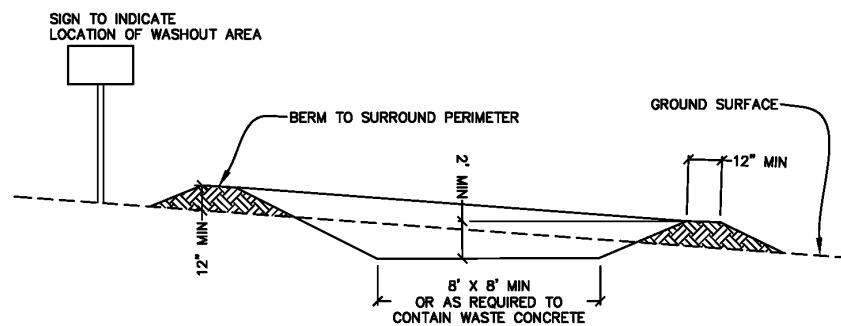


Figure 7: Concrete Washout Area



- c. All washout facilities will be lined to prevent leaching of liquids into the ground. The liner shall be plastic sheeting with a minimum thickness of 10 mils with no holes or tears, and anchored beyond the top of the pit with an earthen berm, sand bags, stone, or other structural appurtenance except at the access point.

2. Dust Control:

The control of dust resulting from land-disturbing activities is required in order to prevent surface and air movement of dust from disturbed soil surfaces that may cause off-site damage, health hazards, and traffic safety concerns.

- a. Non-driving areas - These areas shall use products and materials applied or placed on soil surfaces to prevent airborne migration of soil particles.
 - i. Vegetative Cover - For disturbed areas not subject to traffic, vegetation provided the most practical method of dust control.
 - ii. Mulch (including gravel mulch) - Mulch offers a fast effective means of controlling dust. This can also include rolled erosion control blankets.
- b. Driving areas - These areas utilize water and barriers to prevent dust movement from the traffic surface into the air.
 - i. Sprinkling - The site may be sprayed with water until the surface is wet. This is especially effective on haul roads and access routes to provide short term limited dust control.
 - ii. Barriers - Woven geotextiles can be placed on the driving surface to effectively reduce dust throw and particle migration on haul roads. Stone can also be used for construction roads for effective dust control.
- c. Windbreak - A silt fence or similar barrier can control air currents at intervals equal to ten times the barrier height. Preserve existing wind barrier vegetation as much as practical.

3. Site Pollution Prevention:

A collection of management practices intended to control non-sediment pollutants associated with construction activities to prevent the generation of pollutants due to improper handling, storage, and spills and prevent the movement of toxic substances from the site into surface waters.

- a. All state and federal regulations shall be followed for the storage, handling, application, usage, and disposal of pesticides, fertilizers, and petroleum products.
- b. Vehicle and construction equipment staging and maintenance areas will be located away from all drainage ways with their parking areas graded so the runoff from these areas is collected, contained and treated prior to discharge from the site.
- c. Provide sanitary facilities for on-site personnel.
- d. Store, cover, and isolate construction materials, including topsoil and chemicals, to prevent runoff of pollutants and contamination of groundwater and surface waters.
- e. Develop and implement a spill prevention and control plan.
- f. Provide adequate disposal for solid waste including woody debris, stumps, and other construction waste. Fill, woody debris, stumps, and construction waste shall not be placed in regulated wetlands, streams, or other surface waters.
- g. Distribute or post informational material regarding proper handling, spill response, spill kit location, and emergency actions to be taken, to all construction personnel.
- h. Refueling equipment shall be located at least 100 feet from all wetlands, streams and other surface waters.



4. Stabilized construction access:

A stabilized pad of aggregate underlain with geotextile located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk, or parking area. The purpose of stabilized construction access is to reduce or eliminate the tracking of sediment onto public rights-of-way or streets.

- a. Aggregate size: Use a matrix of one- to four-inch stone, or reclaimed or recycled equivalent.
- b. Thickness: Not less than six inches.
- c. Width: 24-foot minimum.
- d. Length: As required, but not less than 50 feet.
- e. Geotextile: To be placed over the entire area to be covered with aggregate. Piping of surface water under entrance shall be provided as required.

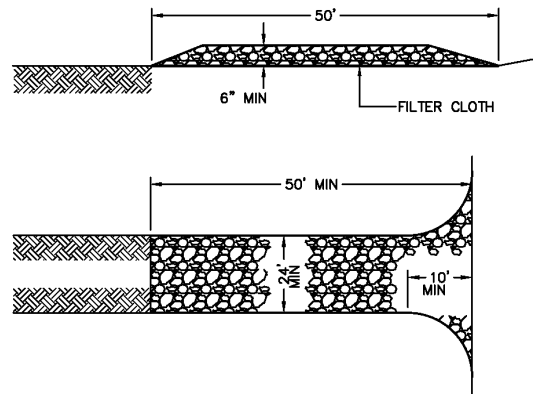


Figure 8: Stabilized Construction Access

5. Winter Stabilization:

A temporary site specific, enhanced erosion and sediment control plan to manage runoff and sediment at the site during construction activities in the winter months to protect off-site water resources. Winter stabilization applies to all construction activities involved with ongoing land disturbance and exposure between November 15th to the following April 1st.

- a. Prepare a snow management plan with adequate storage for snow and control of melt water, required cleared snow to be stored in a manner not affecting ongoing construction activities.
- b. Enlarge and stabilize access points to provide for snow management and stockpiling. Snow management activities must not destroy or degrade installed erosion and sediment control practices.
- c. A minimum 25-foot buffer shall be maintained from all perimeter controls such as silt fence. Mark silt fence with tall stakes that are visible above the snow pack.
- d. Edges of disturbed areas that drain to a water body within 100 feet will have 2 rows of silt fence, 5 feet apart, installed on the contour.
- e. Drainage structures must be kept open and free of snow and ice dams. All debris, ice dams, or debris from plowing operations, that restrict the flow of runoff and snow melt, shall be removed.
- f. Sediment barriers must be installed at all appropriate perimeter and sensitive locations. Silt fence and other practices requiring earth disturbance must be installed before the ground freezes.
- g. Soil stockpiles must be protected by the use of established vegetation, anchored straw mulch, rolled stabilization matting, or other durable covering. A barrier must be installed at least 15 feet from the toe of the stockpile to prevent soil migration and to capture loose soil.
- h. All slopes must be stabilized as soon as practicable but in no case left unprotected for more than three days. Rolled erosion control blankets must be used on all slopes 3 horizontal to 1 vertical or steeper.
- i. If straw mulch alone is used for temporary stabilization, it shall be applied at double the standard rate of 2 tons per acre, making the application rate 4 tons per acre. Other manufactured mulches should be applied at double the manufacturer's recommended rate.



- j. To ensure cover of disturbed soil in advance of a melt event, areas of disturbed soil must be stabilized at the end of each work day unless:
 - i. work will resume with 24 hours in the same area and no precipitation is forecast or;
 - ii. the work is in disturbed areas that collect and retain runoff, such as open utility trenches, foundation excavations, or water management areas.
- k. Use stone to stabilize perimeters of buildings under construction and areas where construction vehicle traffic is anticipated. Stone paths should be a minimum 10 feet in width but wider as necessary to accommodate equipment.

B. TEMPORARY RUNOFF CONTROL

1. Dewatering Sump Pit

A dewatering sump pit is a temporary pit which is constructed using pipe and stone for pumping excessive water from excavations to a suitable discharge area. Sump pits are constructed when water collects during the excavation phase of construction. The site contractor shall determine the number of sump pits and their locations. A design is not required but construction should conform generally to Figure 8.

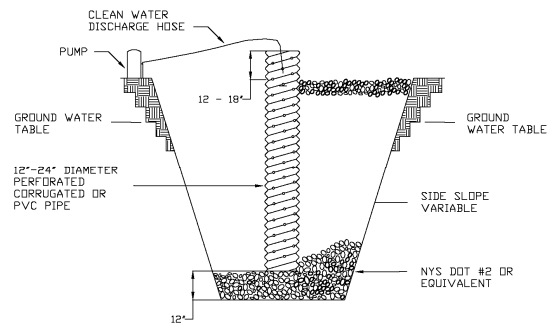


Figure 9: Dewatering Sump Pit

Discharge of turbid water from a sump pit should be to a sediment trap, sediment basin, or stabilized area such as a filter strip. If water from the sump pit will be pumped directly to a storm drain system, filter cloth with an equivalent sieve size between 40 and 80 should be wrapped around the standpipe to ensure clean water discharge. It is recommended that $\frac{1}{4}$ to $\frac{1}{2}$ inch hardware cloth be wrapped around and secured to the standpipe prior to attaching the filter cloth.

C. PERMANENT RUNOFF CONTROL

1. Rock Outlet Protection

A permanent section of rock protection placed at the outlet end of the culverts, conduits, or channels to reduce the depth, velocity, and energy of water such that the flow will not erode the receiving downstream reach. The outlet protection shall be constructed with no slope along its length. The elevation of the downstream end of the apron shall be equal to the elevation of the receiving channel or adjacent ground.

2. Subsurface Drain (if required)

A permanent conduit, such as tile, pipe, or tubing, installed beneath the ground surface, which intercepts, collects, and/or conveys drainage water to serve one or more of the following purposes:

- Improve the environment for vegetative growth by regulating the water table and groundwater flow.
- Intercept and prevent water movement into a wet area.
- Relieve artesian pressures.
- Remove surface runoff.
- Provide internal drainage of slopes to improve their stability and reduce erosion.
- Provide internal drainage behind bulkheads, retaining walls, etc.
- Replace existing subsurface drains that are interrupted or destroyed by construction operations.
- Provide subsurface drainage for dry storm water management structures.
- Improve dewatering of sediment in sediment basins.

- a. Size of Subsurface Drain: All subsurface drains shall have a nominal diameter equal to or greater than six inches.



- b. **Depth and Spacing:** The minimum depth of cover of subsurface drains shall be 24 inches where possible. The spacing of drain laterals will be dependent on the permeability of the soil, the depth of installation of the drains, and degree of drainage required. Generally, drains installed 36 inches deep and spaced 50 feet center-to-center will be adequate.
- c. **Minimum Velocity and Grade:** The minimum grade for subsurface drains shall be 0.10%. Where surface water enters the system a velocity of not less than 2 feet per second shall be used to establish the minimum grades. Provisions shall be made for preventing debris or sediment from entering the system by means of filters or collection and periodic removal of sediment from installed traps.
- d. **Materials for Subsurface Drains:** Acceptable subsurface drain materials include perforated, continuous closed joint conduits of polyethylene plastic, concrete, corrugated metal, polyvinyl chloride, and clay tile. The conduit shall meet strength and durability requirements of the site.
- e. **Loading:** The allowable loads on subsurface drain conduits shall be based on the trench and bedding conditions specified for the job. A factor of safety of not less than 1.5 shall be used in computing the maximum allowable depth of cover for a particular type of conduit.
- f. **Envelopes and Envelope Materials:** Envelopes shall be used around subsurface drains for proper bedding and to provide better flow into the conduit. Not less than three inches of envelope material shall be used for sand/gravel envelopes. Where necessary to improve the characteristics of flow of groundwater into the conduit, more envelope material may be required.

Where county regulations do not allow sand/gravel envelopes, but require a special type and size of envelope material, they shall be followed.

Envelope material shall be placed to the height of the upper-most seepage strata. Behind bulkheads and retaining walls, it shall go to within 12 inches of the top of the structure. This standard does not cover the design of filter materials where needed.

Materials used for envelopes shall not contain materials which will cause an accumulation of sediment in the conduit or render the envelope unsuitable for bedding of the conduit. Envelope materials shall consist of either filter cloth or sand/gravel material, which shall pass a 1 ½ inch sieve, 90 to 100% shall pass a ¾ inch sieve, and not more than 10% shall pass a No. 60 sieve.

Filter cloth envelope can be either woven or non-woven monofilament yarns and shall have a sieve opening ranging from 40 to 80. The envelope shall be placed in such a manner that once the conduit is installed, it shall completely encase the conduit.

The conduit shall be placed and bedded in a sand/gravel envelope. A minimum of three inches depth of envelope materials shall be placed on the bottom of a conventional trench. The conduit shall be placed on this and the trench completely filled with envelope material to minimum depth of three inches above the conduit.

Soft or yielding soils under the drain shall be stabilized where required and lines protected from settlement by adding gravel or other suitable material to the trench, by placing the conduit on plank or other rigid support, or by using long sections of perforated or watertight pipe with adequate strength to ensure satisfactory subsurface drain performance.

- g. **Use of Heavy Duty Corrugated Plastic Drainage Tubing:** Heavy duty corrugated drainage tubing shall be specified where rocky or gravelly soils are expected to be encountered during installation operations. The quality of tubing will also be specified when cover over this tubing is expected to exceed 24 inches for 6- or 8-inch tubing.
- h. **Auxiliary Structure and Subsurface Drain Protection:** The outlet shall be protected against erosion and undermining of the conduit, against damaging periods of submergence, and against entry of rodents or other animals into the subsurface drain. An animal guard shall be installed on the outlet end of the pipe. A swinging animal guard shall be used if surface water enters the pipe.



A continuous 10-foot section of corrugated metal, cast iron, polyvinyl chloride, or steel pipe without perforations shall be used at the outlet end of the line and shall outlet 1.0 foot above the normal elevation of low flow in the outlet ditch. No envelope material shall be used around the 10-foot section of pipe. Two-thirds of the pipe shall be buried in the ditch bank and the cantilevered section shall extend to a point above the toe of the ditch side slope. If not possible, the side slope shall be protected from erosion.

Conduits under roadways and embankments shall be watertight and designed to exclude debris and prevent sediment from entering the conduit. Lines flowing under pressure shall be designed to withstand the resulting pressures and velocity of flow. Surface waterways shall be used where feasible.

The upper end of each subsurface drain line shall be capped with a tight fitting cap of the same material as the conduit or other durable material unless connected to a structure.

D. TEMPORARY SOIL STABILIZATION CONTROL

1. Temporary Construction Area Seeding

Providing temporary erosion control protection to disturbed areas and/or localized critical areas for an interim period by covering all bare ground that exists as a result of construction activities or a natural event. Critical areas may include but are not limited to steep excavated cut or fill slopes and any disturbed, denuded natural slopes subject to erosion.

- a. Water management practices must be installed as appropriate for site conditions. The area must be rough graded and slopes physically stable. Large debris and rocks are to be removed. Seedbed must be seeded within 24 hours of disturbance or scarification of the soil surface will be necessary prior to seeding.
- b. IF: Spring or summer or early fall, then seed the area with ryegrass (annual or perennial) at 30 lbs. per acre (approximately 1 lb/1000 square feet).
- c. IF: Late fall or early winter, then seed with certified 'Aroostook' winter rye (cereal rye) at 100 lbs. per acre (2.5 lbs/ 1000 square feet).
- d. Any seeding method may be used that will provide uniform application of seed to the area and result in relatively good soil to seed contact.
- e. Mulch the area with hay or straw at two tons/acre (approximately 90 lbs./1000 square feet). Quality of the hay or straw mulch allowed will be determined based on long term use and visual concerns. Mulch anchoring will be required where wind or areas of concentrated water are of concern. Wood fiber hydromulch or other sprayable products approved for erosion control (nylon web or mesh) may be used if applied in accordance with manufacturers' specifications.

Caution is advised when using nylon or other synthetic products; they may be difficult to remove prior to final seeding and can be a hazard to young wildlife species.

E. PERMANENT SOIL STABILIZATION CONTROL

1. Anchored Stabilization Matting

A permanent protective covering placed on a prepared planting area that is anchored in place by staples or other means to aid in controlling erosion by absorbing rain splash energy and withstand overland flow as well as provide a microclimate to protect and promote seed establishment. Anchored stabilization mats are required for earthen slopes steeper than three horizontal to one vertical; in vegetated channels where the velocity of the design flow exceeds the allowable velocity for vegetation alone (usually greater than five feet per second); and in areas where wind prevents standard mulching with straw.

2. Landgrading: Permanent reshaping of the existing land surface by grading in accordance with the grading plan and specification to provide for erosion control and vegetative establishment on disturbed, reshaped areas.



- a. All graded or disturbed areas, including slopes, shall be protected during clearing and construction in accordance with the erosion and sediment control plan until they are adequately stabilized.
- b. All erosion and sediment control practices and measures shall be constructed, applied, and maintained in accordance with the erosion and sediment control plan and these standards.
- c. Topsoil required for the establishment of vegetation shall be stockpiled in the amount necessary to complete finished grading of all exposed areas.
- d. Areas to be filled shall be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots, or other objectionable material.
- e. Areas that are to be topsoiled shall be scarified to a minimum depth of four inches prior to placement of topsoil.
- f. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence, or other related problems. Fill intended to support buildings, structures, conduits, etc. shall be compacted in accordance with local requirements or codes.
- g. All fill shall be placed and compacted in layers not to exceed nine inches in thickness.
- h. Fill material shall be free of frozen particles, brush, roots, sod, or other objectionable materials that would interfere with, or prevent, construction of satisfactory fills.
- i. Frozen material or soft, mucky or highly compressible materials shall not be incorporated into fill slopes or structural fills.
- j. Fill shall not be placed on saturated or frozen surfaces.
- k. All benches shall be kept free of sediment during all phases of development.
- l. Seeps or springs encountered during construction shall be handled in accordance with "Subsurface Drain" (see III.C.4).

3. Soil Restoration

The decompaction of areas of a development site or construction project where soils have been disturbed to recover the original properties and porosity of the soil thus providing a sustainable growth medium for vegetation, reduction of runoff and filtering of pollutants from stormwater runoff.

Soil restoration shall be completed in accordance with the following table:

Table 1: Soil Restoration Requirements

Type of Soil Disturbance	Soil Restoration Requirement		Comments/Examples
No soil disturbance	Restoration not permitted		Preservation of Natural Features
Minimal soil disturbance	Restoration not required		Clearing and grubbing
Areas where topsoil is stripped only - no change in grade	HSG A & B	HSG C & D	
	Apply 6 inches of topsoil	Aerate* and apply 6 inches of topsoil	
Areas of cut or fill	HSG A & B	HSG C & D	
	Aerate* and apply 6 inches of topsoil	Apply full Soil Restoration**	
Heavy traffic areas on site (especially in a zone 5 - 25 feet around buildings but not within a 5-foot perimeter around foundation walls)	Apply full soil restoration (decompaction and compost enhancement)		



Type of Soil Disturbance	Soil Restoration Requirement	Comments/Examples
Areas where Runoff Reduction and/or Infiltration practices are applied	Restoration not required, but may be applied to enhance the reduction specified for appropriate practices.	Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct a single phase operation fence area.
Redevelopment projects	Soil Restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area.	
* Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler. ** Per "Deep Ripping and De-compaction, DEC 2008" - Provided in Appendix C		

During periods of relatively low to moderate subsoil moisture, the disturbed subsoils are returned to rough grade and the following Soil Restoration steps applied:

- a. Apply three inches of compost over the subsoil. The compost shall be well decomposed (matured at least three months), weed-free, organic matter. It shall be aerobically composted, possess no objectionable odors, and contain less than 1%, by dry weight, of man-made foreign matter. The physical parameters of the compost shall meet the following standards:
 - Organic matter content: 25% to 100% (dry weight)
 - Organic portion: Fibrous and elongated
 - pH: 6.0 to 8.0
 - Moisture content: 30% to 60%
 - Particle Size: 100% passing a 2" screen and 10 to 50% passing a 3/8" screen
 - Soluble salt concentration: 5.0 dS/m maximum

Note: All biosolids compost produced in New York State (or approved for importation) must meet NYS DEC's 6NYCRR Part 360 (Solid Waste Management Facilities) requirements. The Part 360 requirements are equal to or more stringent than 40 CFR Part 503 which ensure safe standards for pathogen reduction and heavy metal content.

- b. Till compost into subsoil to a depth of at least 12 inches using a cat-mounted ripper, tractor mounted disc, or tiller, to mix and circulate air and compost into the subsoil.
- c. Rock-pick until uplifted stone/rock materials of four inches and larger size are cleaned off the site.
- d. Apply topsoil to a depth of six inches.
- e. Vegetate as required by the seeding plan. Use appropriate ground cover with deep roots to maintain the soil structure.
- f. Topsoil may be manufactured as a mixture of a mineral component and organic material such as compost.

4. Topsoiling

Spreading a specified quality and quantity of topsoil materials on graded or constructed subsoil areas to provide acceptable plant cover growing conditions, thereby reducing erosion; to reduce irrigation water needs; and to reduce the need for nitrogen fertilizer application.

- a. Site Preparation
 - i. As needed, install erosion and sediment control practices such as diversions, channels, sediment traps, and stabilizing measures, or maintain if already installed.
 - ii. Complete rough grading and final grade, allowing for depth of topsoil to be added.
 - iii. Scarify all compact, slowly permeable, medium and fine textured subsoil areas. Scarify at approximately right angles to the slope direction in soil areas that are steeper than 5



- percent. Areas that have been overly compacted shall be decompacted in accordance with the Soil Restoration Standard.
- iv. Remove refuse, woody plant parts, stones over three inches in diameter, and other litter.
- b. Topsoil Materials
- i. Topsoil shall have at least 6% by weight of fine textured stable organic material, and no greater than 20%. Muck soil shall not be considered topsoil.
 - ii. Topsoil shall have not less than 20% fine textured material (passing the No. 200 sieve) and not more than 15% clay.
 - iii. Topsoil treated with soil sterilants or herbicides shall be so identified to the purchaser.
 - iv. Topsoil shall be relatively free of stones over 1 ½ inches in diameter, trash, noxious weeds such as nut sedge and quackgrass, and will have less than 10% gravel.
 - v. Topsoil containing soluble salts greater than 500 parts per million shall not be used.
 - vi. Topsoil may be manufactured as a mixture of a mineral component and organic material such as compost.
- c. Application and Grading
- i. Topsoil shall be distributed to a uniform depth over the area. It shall not be placed when it is partly frozen, muddy, or on frozen slopes or over ice, snow, or standing water puddles.
 - ii. Topsoil placed and graded on slopes steeper than 5% shall be promptly fertilized, seeded, mulched, and stabilized by “tracking” with suitable equipment.
 - iii. Apply topsoil in the amounts shown below:

Table 2: Topsoil Application Depth

Site Conditions	Intended Use	Minimum Topsoil Depth
Deep sand or loamy sand	Mowed lawn	6 inches
	Tall legumes, unmowed	2 inches
	Tall grass, unmowed	1 inch
Deep sandy loam	Mowed lawn	5 inches
	Tall legumes, unmowed	2 inches
	Tall grass, unmowed	None
Six inches or more: silt loam, clay loam, loam, or silt	Mowed lawn	4 inches
	Tall legumes, unmowed	1 inches
	Tall grass, unmowed	1 inch

F. TEMPORARY SEDIMENT CONTROL

1. Silt Fence

A temporary barrier of geotextile fabric installed on the contours across a slope used to intercept sediment laden runoff from small drainage areas of disturbed soil by temporarily ponding the sediment laden runoff allowing settling to occur. The maximum period of use is limited by the ultraviolet stability of the fabric (approximately one year).



G. SEQUENCE OF MAJOR ACTIVITIES

The contractor shall be responsible for implementing the above listed erosion and sediment control practices. The contractor may designate these tasks to certain subcontractors as is seen fit, but the ultimate responsibility for implementing these controls and ensuring their proper function remains with the contractor. The order of activities will be as follows:

1. Install stabilized construction access.
2. Install stabilized staging area.
3. Install silt fence perimeter.
4. Excavate temporary sediment trap.
5. Mass grading (cuts and fills).
6. Building foundation excavation.
7. Parking lot grading and stabilization.
8. Utility installations.
9. Concrete site work.
10. Paving.
11. Final grading, topsoiling, and seeding.
12. Remove temporary sediment trap.
13. Construction of stormwater management practices.

SECTION IV STORMWATER MANAGEMENT

A. METHODOLOGY

1. Hydrologic Conditions

The peak runoff rates for the site were calculated for the existing and proposed hydrologic conditions using HydroCAD software. The HydroCAD program uses the standard SCS TR-55 Curve Number Method for calculation of the time of concentration, composite curve number, and peak runoff rates for the drainage area(s) based on user input. The input data was taken from soil maps, detailed topographic and utility survey information, rainfall distribution maps, and aerial images. The hydrologic conditions are used to assess the impacts to the runoff characteristics and to design appropriate measures to mitigate these impacts. The NYS SPDES General Permit for Stormwater Discharges from Construction Activity requires that a stormwater mitigation system meet the following five design criteria:

- Water Quality Volume: The system must capture and treat 90% of the average annual runoff volume.
- Runoff Reduction Volume: The system must apply green infrastructure techniques and Stormwater Management Practices to replicate pre-development hydrology.
- Provide 24-hour extended detention of the runoff from the one-year, 24-hour rainfall event.
- Attenuation of the post-development 10-year, 24-hour peak discharge rate to predevelopment rates.
- Attenuation of the post-development 100-year, 24-hour peak discharge rate to predevelopment rates.

2. Rainfall Information

The following table shows the rainfall values used in the analysis of the stormwater runoff. These values are taken from rainfall distribution models that the Northeast Regional Climate Center (www.precip.net).



Table 3: Rainfall Data

Precipitation Event	24-Hour Rainfall in inches
Water Quality Volume (WQ _v)	1.00
1-Year, 24-Hour (Cp _v)	2.04
10-Year, 24-Hour (Qp ₁₀)	3.43
100-Year, 24-Hour (Qp ₁₀₀)	5.78

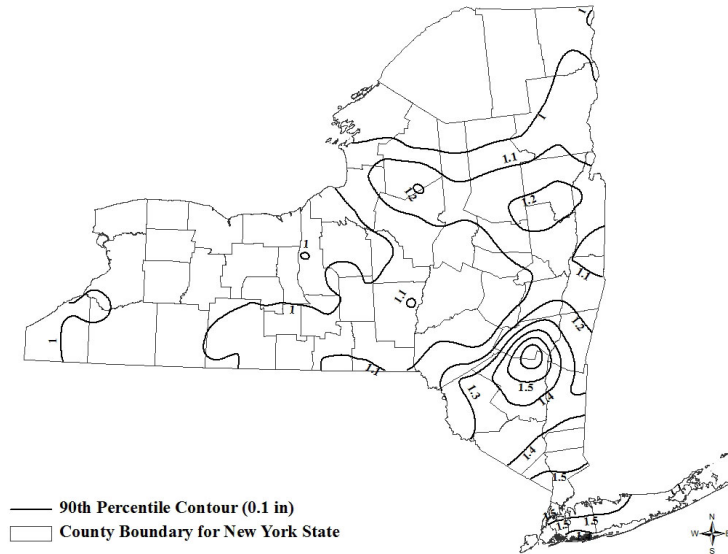


Figure 10: New York State 90% Rainfall Map

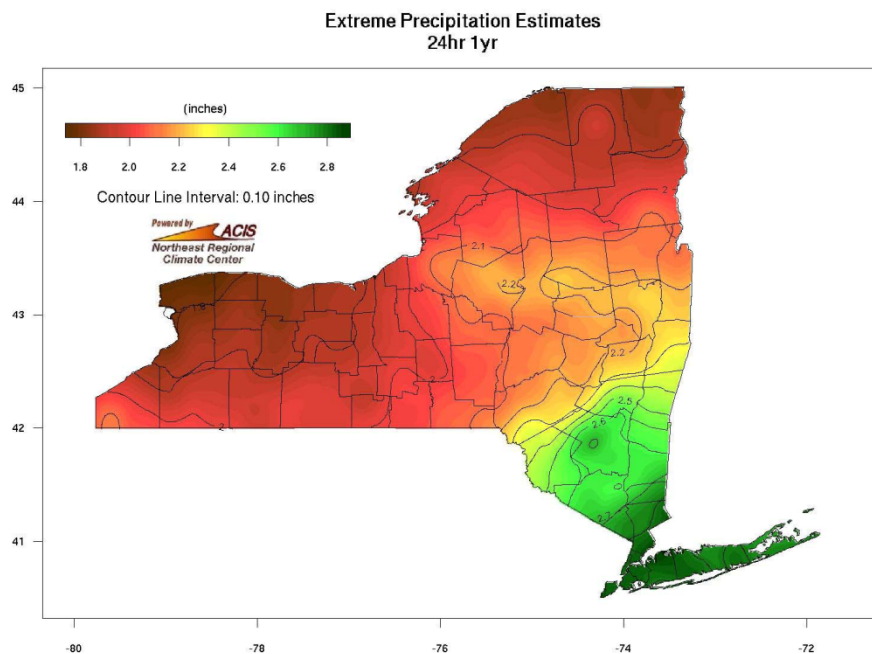


Figure 11: New York State One-Year Design Storm Map

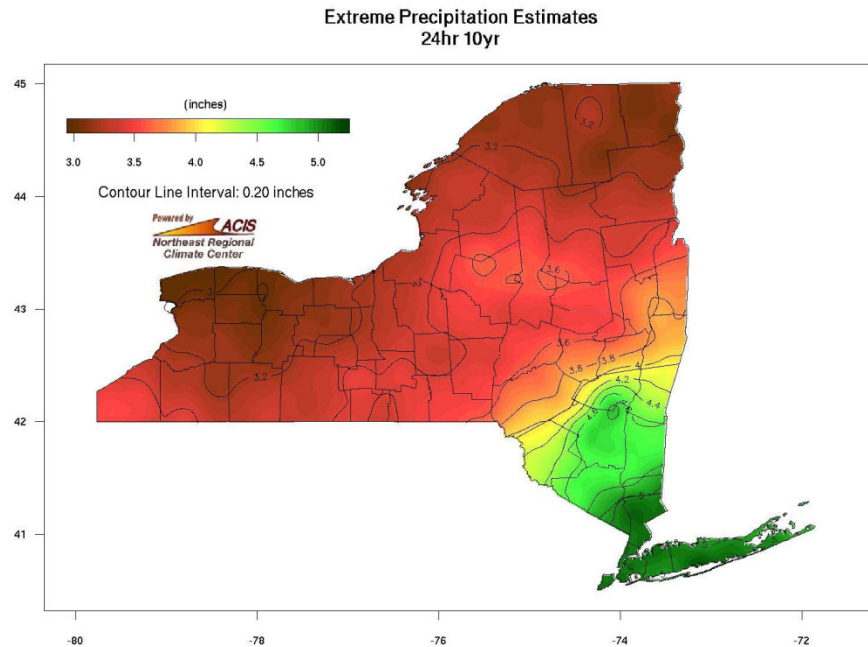


Figure 12: New York State 10-Year Design Storm Map

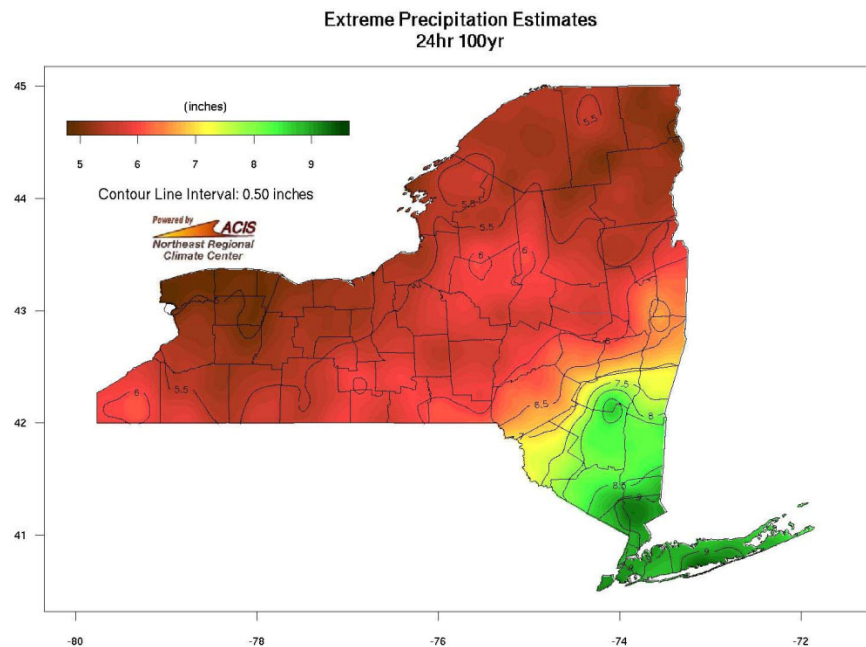


Figure 13: New York State 100-Year Design Storm

3. Soils Information

Soils information for the watershed was collected from the Natural Resource Conservation Service soils mapping database. The watershed consists of one distinct mapping unit, Ontario gravelly loam which belongs to hydrologic soil group B. Group B soils have a moderate infiltration rate and are moderately well-drained. See Appendix B for the NRCS soils map within the project area.



B. EXISTING CONDITIONS

The project site is located at the crest of a hill along Medical Center Drive in the Town of Manlius. The high point of the site is a north-south ridge through the central portion of the site. Areas to the west of the ridge-line flow towards a road-side ditch along Avriel Drive that is tributary to a culvert that conveys runoff under Medical Center Road and then to the south. Areas along the southern portions of the site are tributary to Medical Center Road and discharge into the drainage system within the roadway. To the east of the ridge-line, stormwater runoff flows down the hill and is captured in the stormwater management system that was constructed as part of the Towne Center Retirement Community project.

In order to eliminate any impacts to the Medical Center Drive or Towne Center Retirement Community drainage systems, the stormwater management system for the proposed project will discharge to the 15" culvert at the intersection of Medical Center Drive and Avriel Drive. In order to properly design and manage the runoff, the existing drainage area tributary to the 15" culvert is mapped and compared to the proposed condition drainage area, which includes stormwater management practices that will attenuate the runoff. Under the existing conditions, the tributary area includes grass areas immediately upstream of the culvert; uphill of this grass/lawn area is an area of brush-weed-grass mixture. The different land covers and the topography of the drainage area requires that the two areas be modeled separately and then combined at the culvert. Otherwise, the hydrologic modeling under-estimates the peak flows to the culverts as runoff from the lawn/grass area immediately surrounding the culvert gets to the culvert ahead of the runoff from the uphill brush-weed-grass area.

The following tables summarize the hydrologic characteristics of the existing condition drainage area tributary to the culvert.

Table 4: Existing Conditions DA 1.1

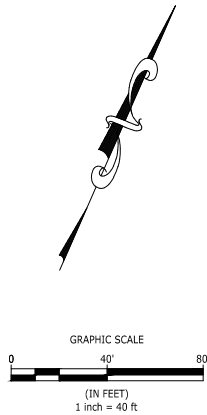
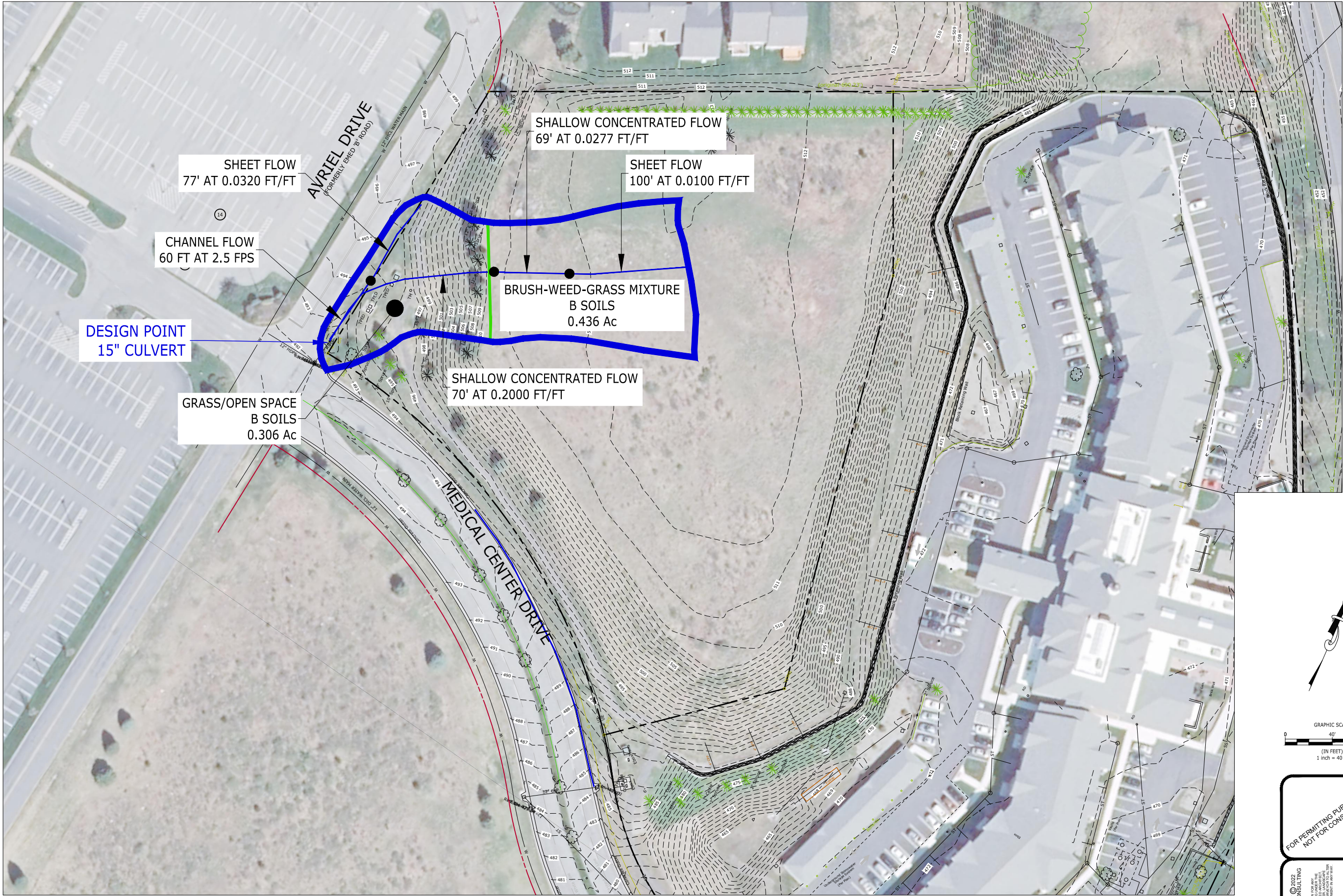
Area (ac)	CN	Description
0.436	48	Brush, Good, HSG B
0.436		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0100	0.11		Sheet Flow, Grass: Short n= 0.150 P2= 2.38"
0.4	69	0.0277	2.68		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.2	70	0.2000	7.20		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
15.6	239	Total			

Table 5: Existing Condition DA 1.2

Area (ac)	CN	Description
0.306	61	>75% Grass cover, Good, HSG B
0.306		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	77	0.0320	0.17		Sheet Flow, Grass: Short n= 0.150 P2= 2.38"
0.4	60		2.50		Direct Entry,
8.0	137	Total			



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CONSULTING.

PREPARED BY:
NAPIERALA CONSULTING
PROFESSIONAL ENGINEER, P.C.
SITE • DESIGN • ENGINEERING
110 FAYETTE STREET
MANLIUS, NEW YORK 13104
email: MNAP@NAPCON.COM
PH: (315) 682-5580 FAX: (315) 682-5544

PROJECT NO. **21-2022**
DATE **01/14/2022**
SCALE **1"=40'**

SHEET

SHEET TITLE:
**EXISTING CONDITION
DRAINAGE AREA MAP**

NO.	REVISION/ISSUE	DATE
C	PLANNING BOARD SUBMITTAL	11/15/22
B	PLANNING BOARD SUBMITTAL	10/12/22
A	PLANNING BOARD SUBMITTAL	08/25/22

PROJECT TITLE:
**A&E & SNY CENTER
MEDICAL CENTER DRIVE**
TOWN OF MANLIUS ONONDAGA COUNTY, NEW YORK
PREPARED FOR:
A&E & SNY CENTER
SUITE 38
5781 BRIDGE STREET
EAST SYRACUSE, NY 13057



C. PROPOSED CONDITIONS

The proposed project consists of the clearing and grading of approximately 3.32 acres of land to construct a building with a footprint of the 25,918± square foot building and the asphalt parking and court yard areas. Other site construction includes the installation of an a stormwater management area to meet the current stormwater regulations. Due to the development of the land from its existing grass field to a commercial property and the associated grading, the stormwater runoff characteristics of the watershed will change. In order to minimize the impact to offsite properties through the concentration of stormwater runoff, the grading and associated stormwater management system has been designed to collect runoff from the project site and direct it to the existing ditch along Avriel Drive. The stormwater management system will mitigate the increase in stormwater runoff to the ditch that the increase in tributary area and the conversion of land creates. The stormwater management system includes an underground stormwater storage system and a downstream infiltration basin. These practices act in concert with each other in order to effectively mitigate the impacts to the stormwater runoff characteristics that the development creates.

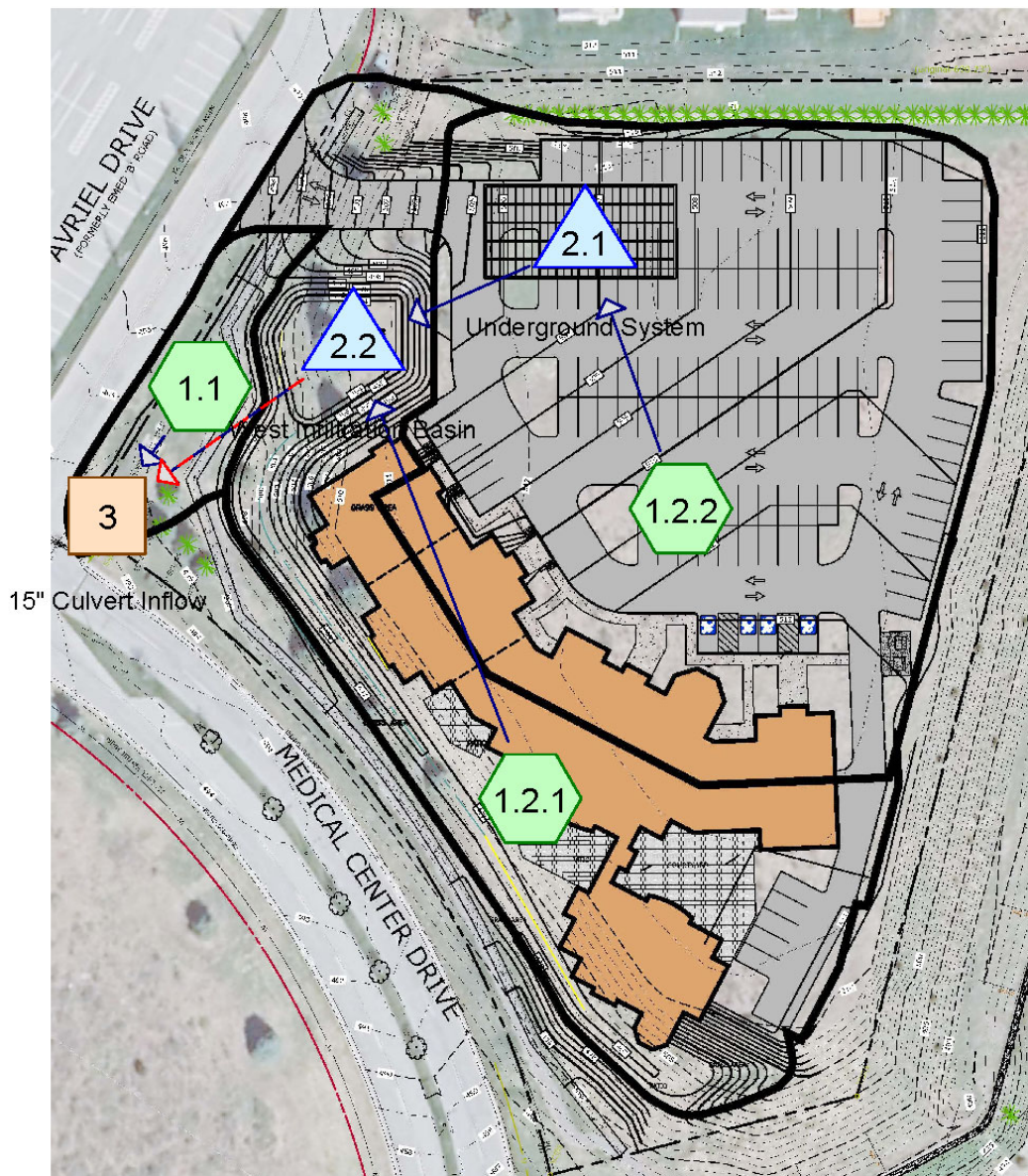


Figure 15: HydroCAD Proposed Condition Model



The proposed condition drainage area is divided into three sub-areas that are tributary to the 15" culvert. Drainage Area 1.1 represents the area downstream of the stormwater management practices that is tributary to the culvert; this area is undisturbed lawn area. Drainage Area 1.2.1 models the portion of the building roof area and other impervious areas that flow into a vegetated swale along the south property line that discharges into the surface infiltration basin. Drainage Area 1.2.2 models the remainder of the building roof area and the parking lot that is tributary to the underground stormwater storage system.

Table 6: Proposed Conditions DA-1.1

Area (ac)	CN	Description
0.203	61	>75% Grass cover, Good, HSG B
0.203		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.2	100	0.0350	0.13		Sheet Flow, Grass: Dense n= 0.240 P2= 2.38"
0.4	61		2.50		Direct Entry, Channel Flow
13.6	161	Total			

Table 7: Proposed Conditions DA-1.2.1

Area (ac)	CN	Description
0.664	98	Paved parking, HSG B
0.624	61	>75% Grass cover, Good, HSG B
1.288	80	Weighted Average
0.624		48.45% Pervious Area
0.664		51.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Table 8: Proposed Conditions DA-1.2.2

Area (ac)	CN	Description
1.596	98	Paved parking, HSG B
0.300	61	>75% Grass cover, Good, HSG B
1.896	92	Weighted Average
0.300		15.82% Pervious Area
1.596		84.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

The first of two stormwater management practices on the site is an underground stormwater storage system that is located in the northerly portion of the parking lot. The underground system will collect stormwater runoff from the parking lot as well as the building area that is on the northside of the roof's apex. The underground system will consist of a drainage stone envelope that surrounds 110 StormTech MC-4500 storage chambers. The underground system has been designed to allow the water volume (WQ_v) from the drainage area to infiltrate into the ground versus



Figure 17: Typical StormTech Chamber



discharging to downstream surface waters; this will improve the quality of downstream water bodies. Upon reaching a depth of 2.0 feet in the system (a slightly greater volume than the required WQ_v) stormwater runoff will begin to discharge to the downstream infiltration/detention basin for additional peak flow attenuation prior to discharging to the road culvert at Medical Center Drive. The underground system has a total depth of 6.75 feet; the five-foot high chambers will set on a nine-inch stone base with 12" of stone above the chambers. The storage capacity of the system is 17,729 ft^3 (0.407 ac·ft) at a depth of 6.75 feet. The following table summarizes the stage-storage-discharge characteristics of the underground system.

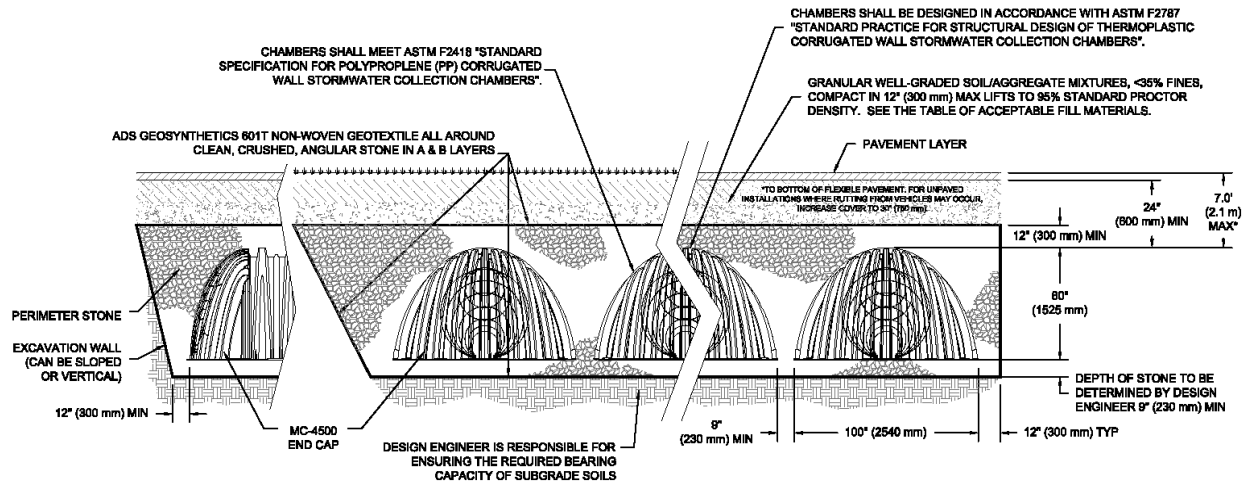


Figure 18: Standard StormTech Cross Section

Table 9: Stage-Storage-Characteristics, Surface Infiltration Basin

Volume	Invert	Avail. Storage	Storage Description
#1	497.00'	0.153 af	46.67'W x 87.97'L x 6.75'H Stone Envelope 0.636 af Overall - 0.254 af Embedded= 0.382 af x 40.0% Voids
#2	497.75'	0.254 af	ADS StormTech MC-4500 b +Cap @ 4.03' L x 100 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.6 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 100 Chambers in 5 Rows Cap Storage= 39.5 cf x 2 x 5 rows = 395.0 cf
		0.407 af	Total Available Storage
Device	Routing	Invert	Outlet Devices
#1	Discarded	497.00'	3,000 in/hr Exfiltration over Surface area
#2	Primary	497.00'	4.0" Round Culvert L= 35.0' Ke= 0.500 Inlet / Outlet Invert= 497.00' / 496.00' S= 0.0286 1/' Cc= 0.900 n= 0.012
#3	Device 2	499.00'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 2	502.75'	12.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

The second stormwater management practice in the system is an infiltration/detention basin located in the northwest corner of the property adjacent to the driveway into the site. The basin collects runoff from the building area that is on the southside of the roof's apex as well the patio areas and the patient pick-up/parking area located on the east side of the building. Runoff from these areas flows into a vegetated swale that discharges into the basin. The basin also collects the discharge from the underground system to provide attenuation and controlled discharge to the Medical Center Drive culvert in order to meet the SPDES General Permit discharge requirements. The basin has a peak storage depth of three feet and a capacity of 15,163 ft^3 (0.348 ac·ft). In order to provide WQ_v treatment of the runoff directly tributary to it, the basin's outlet control



is set 0.9 feet above the bottom of the basin in order to allow 2,614 ft³ (0.060 ac·ft) to infiltrate into the ground versus discharging to the culvert.

Table 10: Detention Basin Stage-Storage

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
494.00	0.060	0.000	0.000
495.00	0.075	0.068	0.068
496.00	0.133	0.104	0.171
497.00	0.220	0.176	0.348

Device	Routing	Invert	Outlet Devices
#1	Discarded	494.00'	3.000 in/hr Exfiltration over Surface area
#2	Primary	494.00'	12.0" Round Culvert L= 100.0' K _e = 0.500 Inlet / Outlet Invert= 494.00' / 493.00' S= 0.0100 '/' C _c = 0.900 n= 0.012, Flow Area= 0.79 sf
#3	Device 2	494.90'	5.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	496.10'	5.0' long + 4.0 '/' SideZ x 8.0' breadth Broad-Crested Rectangular Weir

D. RUNOFF REDUCTION VOLUME (RR_v)

The NYSDEC implemented regulations effective March 1, 2011 that requires all construction projects that disturb greater than one acre of land to provide runoff reduction through the implementation of green infrastructure practices. The goal of the runoff reduction volume criteria is to implement stormwater management practices and green infrastructure techniques to replicate pre-development hydrology. The NYS Stormwater Management Design Manual provides the acceptable green planning techniques and green infrastructure techniques to meet the runoff reduction volume criteria. The following narrative and calculations detail the implementation of the planning and infrastructure techniques on the site to achieve the minimum runoff reduction volume. The narrative follows the Design Manual, Chapter 5.

PLANNING

Plan to preserve, avoid and minimize

	Applicable	Not Applicable
a. Preserve undisturbed, natural buffer, and critical environmental areas.	☐	☒
b. Employ open space, conservation, and clustering site design techniques.	☐	☒
c. Avoid developing in environmentally sensitive areas: floodplain, steep slopes, habitat, ecosystems, bedrock, wetlands, shorelines, shallow groundwater, impervious soils, unstable soils.	☐	☒
d. Minimize impervious surfaces: building footprints, parking, roads, sidewalks, and driveways.	☒	☐
e. Minimize clearing and grading	☒	☐

Discussion:

- These areas do not exist within the property.
- This project is a single-user development. Open space design, as discussed in the Stormwater Management Design Manual, is not applicable to this project. Open space is used in projects on large tracts of land where the development can be concentrated in a portion of the site while maintaining large portions of undisturbed land. Clustering is typically incorporated in subdivision projects involving the creation of multiple lots with multiple buildings.
- The project is located at the top of the hill, as far back as possible from the steep slopes of the site.



- d. The building is multiple floors in order to reduce the footprint and reduce earthwork.
- e. The proposed grading plan for the project minimizes the amount of grading to the maximum extent practicable. Grade requirements for a functional site were taken into account during the initial design phases.

WATER QUALITY VOLUME (before runoff reduction)

2. Calculate the water quality volume (WQ_v):

$$WQ_v = \frac{PR_v A}{12}$$

90-th Percentile Rainfall (P) = 1.00 inch

WQ_v Drainage Area (A) = 3.184 acres

Impervious Area (A_I) = 2.260 acres

$$R_v = 0.05 + 0.9 \left(\frac{A_I}{A} \right)$$

$$R_v = 0.05 + 0.9 \left(\frac{2.260 \text{ ac}}{3.184 \text{ ac}} \right)$$

$$R_v = 0.69$$

$$\text{Original } WQ_v = 0.183 \text{ ac} \cdot \text{ft}$$

3. Minimum RR_v requirements (when 100% WQ_v reduction cannot be achieved)

Calculate minimum required Runoff Reduction Volume (RR_v) using:

$$RR_v = \frac{0.95 P \cdot S \cdot A_I}{12}$$

A_I = total impervious area from #2

S = 0.55 (A Soils), 0.40 (B Soils), 0.30 (C Soils), 0.20 (D Soils), or weighted HSG average in drainage area

B Soils = 100% of area

$$RR_v = \frac{0.95 \cdot 1.00 \cdot 0.40 \cdot 2.260 \text{ ac}}{12}$$

$$\text{Minimum } RR_v \text{ required} = 0.072 \text{ ac} \cdot \text{ft}$$

AREA REDUCTION PRACTICES

4. Incorporate area reduction practices (complete for all applicable practices): (area includes practice and contributing area)

	Contributing A _I	Area
a. Conservation of natural areas	0	0
b. Riparian buffers/filter strips	0	0
c. Tree planting/tree preservation	0	0
Total area reduction	0	0



Total impervious area within area reduction 0 0

Discussion:

- a. The site is currently an open brush-meadow that was previously disturbed during the original construction of the medical center complex.
 - b. The project site does not encompass any riparian areas therefore it is not possible to incorporate riparian buffers or filter strips into the project.
 - c. The site does not contain significant tree communities as the site was previously disturbed.
5. Subtract total area reduction from drainage area:
Remaining drainage area: (#2 area - #4 area) Remaining Drainage Area = 3.184 ac
Remaining impervious area: (#2 A_I - #4 A_I) Remaining A_I = 2.260 ac

6. Recalculate WQ_v for site are remaining after area reductions:
Drainage Area (A) = 3.184 acres
Impervious Area (A_I) = 2.260 acres

$$R_v = 0.05 + 0.9 \left(\frac{A_I}{A} \right)$$

$$R_v = 0.05 + 0.9 \left(\frac{2.260 \text{ ac}}{3.184 \text{ ac}} \right)$$

$$R_v = 0.69$$

$$\boxed{\text{Area Reduced } WQ_v = 0.183 \text{ ac} \cdot \text{ft}}$$

7. Runoff Reduction Volume (RR_v) from #2 (#2 WQ_v - #6 WQ_v):

$$\boxed{RR_v = 0 \text{ ac} \cdot \text{ft}}$$

ROOFTOP DISCONNECTION

Roof top disconnection was not utilized on this project. Alternative green infrastructure practices for the rooftop areas were implemented; the rooftop downspouts discharge into infiltration areas that allow runoff from the 90th-percentile rainfall event to infiltrate into the ground. The discussion of these practices is found under the “Source Control” practices.

SOURCE CONTROL WQ_v TREATMENT PRACTICES

The project includes the construction of two infiltration practices, one a surface infiltration basin and the other an underground infiltration basin, to collect stormwater runoff from the impervious surfaces. Both practices are designed to capture runoff from tributary areas, temporarily store it, and allow the runoff from the 90th-percentile storm to infiltrate into the ground.

Infiltration Practice No. 1 (Drainage Area DA-1.1)

Drainage Area Tributary to Practice (A) = 1.288 acres

Impervious Areas (A_I) = 0.664 acre

$$R_v = 0.51$$

$$WQ_v = 0.055 \text{ ac} \cdot \text{ft} \text{ required}$$



The storage and discharge characteristics of the practice are designed such that the required WQ_v will infiltrate into the ground versus discharging to surface areas downstream. With the outlet control set at 0.9 feet above the bottom of the basin, 2,614 ft^3 (0.060 ac · ft) will infiltrate. Therefore, 0.060 ac · ft of runoff will be removed from the runoff volume.

$$\boxed{RR_v = 0.060 \text{ ac} \cdot \text{ft}}$$

Infiltration Practice No. 2 (Drainage Area DA-1.2)

Drainage Area Tributary to Practice (A) = 1.896 acres

Impervious Areas (A_i) = 1.596 acres

$$R_v = 0.81$$

$$WQ_v = 0.128 \text{ ac} \cdot \text{ft required}$$

The storage and discharge characteristics of the practice are designed such that the required WQ_v will infiltrate into the ground versus discharging to surface areas downstream. With the outlet control set at 2.0 feet above the bottom of the basin, 5,837 ft^3 (0.134 ac · ft) will infiltrate. Therefore, 0.134 ac · ft of runoff will be removed from the runoff volume.

$$\boxed{RR_v = 0.134 \text{ ac} \cdot \text{ft}}$$

TOTAL SOURCE CONTROL RR_v

$$\boxed{RR_v = 0.194 \text{ ac} \cdot \text{ft}}$$

Required Minimum $RR_v = 0.072 \text{ ac} \cdot \text{ft}$

PROVIDED $RR_v = 0.194 \text{ ac} \cdot \text{ft}$

E. WATER QUALITY VOLUME TREATMENT

As the provided RR_v exceeds the WQ_v , no further water quality treatment is required.

F. WATER QUANTITY

As discussed previously in the report, the proposed project alters the hydrologic characteristics of the existing drainage area. Changes in land cover, grading, and the time of concentration due to the proposed project will increase the amount of runoff and the peak flow rates from the site. The stormwater management system must collect, store, and release the runoff such that the discharge from the site complies with the requirements established in the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity. In order to comply with current stormwater regulations, the stormwater system must:

- Control the release of the runoff from the one-year, 24-hour rainfall event such that it is released over a 24-hour period (Channel Protection Volume).
- The peak rate of discharge from the site during the 10-year, 24-hour rainfall event cannot exceed the peak rate of discharge prior to construction (Overbank Flood Control)
- The peak rate of discharge from the site during the 100-year, 24-hour rainfall event cannot exceed the peak rate of discharge prior to construction (Extreme Flood Control).

The HydroCAD computations for the stormwater modeling can be found in Appendices C (Existing Conditions) and D (Proposed Conditions). The following is a summary of the computations and discussion of the results.

1. CHANNEL PROTECTION VOLUME (C_p)

The project site must provide sufficient storage of the 1-year, 24-hour runoff event such that the volume is released over a 24-hour period. The NYS Stormwater Design Manual methodology for determining the storage volume was used (Appendix B.1) and is discussed below.



Tributary Area = 3.184 acres

CN = 87

$t_c = 6.0$ mins

$I_a = 0.299$

$P = 2.04''$

$$\frac{I_a}{P} = 0.147$$

Using I_a/P and T_c , $q_u = 1000$ csm/in (TR-55, Exhibit 4-II)

Using q_u and $T = 24$ hr, $q_o/q_i = .020$ (Design Manual, Figure B.1)

Using formula 2.1.16 (Design Manual, Appendix B.1), calculate V_s/V_r

$$\frac{V_s}{V_r} = 0.654$$

Using formula 2.1.17 (Design Manual, Appendix B.1), calculate V_s

$$V_s = \frac{\left(\frac{V_s}{V_r}\right) Q_d A}{12}$$

HydroCAD provides the volume of runoff ($Q_d A / 12$) = 0.249 ac·ft

$$V_s = 0.654 \cdot 0.249 \text{ ac} \cdot \text{ft}$$

$$V_s = 0.163 \text{ ac} \cdot \text{ft Required}$$

The provided RR_v is subtracted from V_s to determine the required Cp_v . As the RR_v exceeds the Cp_v , no additional Cp_v management is required.

2. PEAK FLOW MITIGATION ($Q_{P10\text{-Year}}$ and $Q_{P100\text{-Year}}$)

The remaining two requirements of the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity are that the stormwater system cannot discharge runoff from the site during the 10-year and 100-year, 24-hour rainfall events at rates higher than the existing condition peak rates of runoff during the correlating rainfall events. The following table summarizes the HydroCAD results for the 10-year and 100-year rainfall events. Complete HydroCAD calculations are presented in Appendix D.

Table 11: Underground Stormwater Storage System

Rainfall Event	Peak Water Surface Elevation (503.75 Max)	Peak Storage (0.407 ac·ft max)	Peak Discharge
10-Year	499.7	0.183 ac·ft	0.31 cfs
100-Year	502.8	0.369 ac·ft	0.68 cfs

Table 12: Surface Basin

Rainfall Event	Peak Water Surface Elevation (497.0 Max)	Peak Storage (0.348 ac·ft max)	Peak Discharge
10-Year	495.2	0.087 ac·ft	0.21 cfs
100-Year	496.1	0.189 ac·ft	0.71 cfs



Table 13: Water Quantity Calculations at Design Point

Rainfall Event	24-Hour Rainfall	Existing Condition Peak Rate of Runoff	Total Proposed Condition Peak Rate of Runoff
10-Year	3.43"	0.22 cfs	0.22 cfs
100-Year	5.78"	1.13 cfs	1.07 cfs

SECTION V INSPECTION AND MAINTENANCE REQUIREMENTS

Best management practices, both construction and operational, must be inspected and maintained on a routine basis in order to ensure continued compliance with the NYS SPDES General Permit for Stormwater Discharges from Construction Activity. The contractor is responsible for inspecting the erosion and sediment control practices daily and after every runoff-producing rainfall event. The operator/owner is responsible for providing a qualified professional, as defined in the SPDES General Permit, to perform the required inspections of the construction site from the time earth-disturbing activities begin until final stabilization is achieved and the Notice of Termination is filed. The inspections shall occur twice a week while the site disturbance is greater than five acres. Once the disturbance is less than five acres, inspection frequency can be reduced to once every seven days. The contractor will submit written evidence of such compliance if requested by the operator or any agent of a regulatory body. The contractor will comply with all conditions of the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity, including the conditions related to maintaining the SWPPP and evidence of compliance with the SWPPP at the job site and allowing regulatory personnel access to the job site and to records in order to determine compliance.

A. CONSTRUCTION MAINTENANCE/INSPECTION PROCEDURES

The operator shall maintain a record of all inspection reports in a site logbook. The logbook shall be maintained on site and be made available to the permitting authority upon request. Prior to the commencement of construction, the operator shall certify in the site logbook that the SWPPP, prepared in accordance with Part III.D. of the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity, meets all Federal, State and local erosion and sediment control requirements.

The operator shall post at the site, in a publicly accessible location, a summary of the site inspection activities on a monthly basis.

1. Inspection and Maintenance Practices

- a. Inspections shall occur at least once every seven calendar days.
- b. At a minimum, the qualified inspector shall inspect all erosion and sediment control practices to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved final stabilization, all points of discharge to natural surface waterbodies located within or immediately adjacent to the property boundaries of the construction site, and all points of discharge from the construction site.
- c. The qualified inspector shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:
 - i. Date and time of inspection;
 - ii. Name and title of person(s) performing inspection;
 - iii. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;
 - iv. A description of the condition of the runoff at all points of discharge from the construction site. This shall include identification of any discharges of sediment from



- the construction site. Include discharges from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;
- v. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any discharges of sediment to the surface waterbody;
 - vi. Identification of all erosion and sediment control practices that need repair or maintenance;
 - vii. Identification of all erosion and sediment control practices that were not installed or are not functioning as designed and need to be reinstalled or replaced;
 - viii. Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporarily and/or final) since the last inspection;
 - ix. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;
 - x. Corrective action(s) that must be taken to install, repair, replace, or maintain erosion and sediment control practices; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s); and
 - xi. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The qualified inspector shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The qualified inspector shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The qualified inspector shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.
- d. Within one business day of the completion of an inspection, the qualified inspector shall notify the owner or operator and appropriate contractor or subcontractor of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.
- e. All inspection reports shall be signed by the qualified inspector. The inspection reports shall be maintained on the site.
- f. ESC Inspection/Maintenance
- i. Concrete Truck Washout:
All concrete washout facilities shall be inspected daily. Damaged or leaking facilities shall be deactivated and repaired or replaced immediately.

Accumulated material shall be removed when 75% of the storage capacity of the structure is filled.

Dispose of hardened material off-site in a construction/demolition landfill. Hardened material can also be recycled or buried and covered with a minimum cover of two feet of clean compacted earthfill that is permanently stabilized to prevent erosion.

The plastic liner shall be replaced with each cleaning of the washout facility.

Inspect the project site frequently to ensure that no concrete discharges are taking place in non-designated areas.



- ii. Dust Control - Maintain dust control measures through dry weather periods until all disturbed areas are stabilized.
- iii. Stabilized Construction Access:

The access shall be maintained in a condition which will prevent tracking of sediment onto public rights-of-way or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, or washed onto public rights-of-way must be removed immediately.

When necessary, wheels must be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device. All sediment shall be prevented from entering storm drains, ditches, or watercourses.
- iv. Winter Stabilization

The site shall be inspected frequently to ensure that the erosion and sediment control plan is performing its winter stabilization function. If the site will not have earth disturbing activities ongoing during the “winter season”, all bare exposed soil must be stabilized by established vegetation, straw, or other acceptable mulch, matting, rock, or other approved material such as rolled erosion control products. Seeding of areas with mulch cover is preferred but seeding alone is not acceptable for proper stabilization.

Compliance inspections must be performed and reports filed properly in accordance with the SWPPP for all sites under winter shutdown.
- v. Check Dams:

The check dams should be inspected after each runoff event. Correct all damage immediately. If significant erosion has occurred between structures, a liner of stone or other suitable material should be installed in that portion of the channel or additional check dams added.

Remove sediment accumulated behind the dam as needed to allow channel to drain through the stone check dam and prevent large flows from carrying sediment over the dam. Replace stones as needed to maintain the design cross section of the structures.
- vi. Sediment Trap

Sediment shall be removed and the trap restored to the original dimensions when the sediment has accumulated to $\frac{1}{2}$ of the design depth. Sediment removed from the trap shall be deposited in a protected area and in such a manner that it will not erode.
- vii. Seeding: Temporary and permanent seeding and all other stabilization measures will be inspected for bare spots, washouts, and healthy growth.
- g. Inspection and Maintenance Report Forms
 - Once installation of any required or optional erosion control device or measure has been implemented, at least twice every seven calendar days a Qualified Professional shall inspect each practice. The inspector shall use the forms found in this SWPPP to inventory and report the condition of each measure to assist in maintaining the erosion and sediment control measures in good working order.
 - These report forms shall become an integral part of the SWPPP and shall be made readily accessible to governmental inspection officials, the operator's engineer, and the operator for review upon request during visits to the project site. In addition, copies of the reports shall be provided to any of these persons upon request, via mail or facsimile transmission. Inspection and maintenance report forms are to be maintained by the permittee for three years following the final stabilization of the site.
 - The operator shall also prepare a written summary of its status with respect to compliance with the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity at a minimum frequency of every three months during which coverage under the SPDES General Permit exists. The summary should address the status of achieving each



component of the SWPPP. The reports shall be signed by the signatory of the NOI or a duly authorized person and be retained at the construction site.

h. Other Record Keeping Requirements

The contractor shall keep the following records related to construction activities at the site:

- Dates when major grading activities occur and the areas which were graded.
- Dates and details concerning the installation of structural controls.
- Dates when construction activities cease in an area.
- Dates when an area is stabilized, either temporarily or permanently.
- Dates of rainfall and the amount of rainfall.
- Dates and descriptions of the character and amount of any spills of hazardous materials.
- Records of reports filed with regulatory agencies if reportable quantities of hazardous materials are spilled.

B. OPERATION MAINTENANCE AND INSPECTIONS PROCEDURES

Long-term maintenance of the stormwater management system will be the responsibility of the property owner. Maintenance and inspection check lists have been included in Appendix F and are summarized below:

1. Infiltration basin

a. Monthly Inspections

i. Debris Cleanout

- 1) Basin surface and contributing areas clean of debris
- 2) Inflow pipes clear of debris
- 3) No dumping of yard wastes into practice
- 4) Litter (branches, dead vegetation, etc.) has been removed

ii. Vegetation

- 1) No placement of inappropriate plants
- 2) Grass height no greater than six inches
- 3) No evidence of erosion

iii. Dewatering

- 1) Dewaterers between storms
- 2) No evidence of standing water

b. Annual, After Major Storms

i. Outlet/overflow

- 1) Good condition, no need for repair
- 2) No evidence of erosion
- 3) No evidence of blockages

2. Underground Storage

a. Monthly Inspections

i. Debris Cleanout

1. Sediment and/or trash accumulation removed
2. Contributing areas clean of debris
3. No dumping of yard wastes into practice

ii. Dewatering

1. Dewaterers between storms
2. No evidence of standing water

b. Annual, After Major Storms

i. Outlet/overflow

1. Good condition, no need for repair
2. No evidence of blockages



SECTION VI MATERIALS MANAGEMENT PLAN

A. MATERIALS COVERED

The following materials or substances are expected to be present onsite during construction:

Concrete/Additives/Wastes	Cleaning Solvents
Detergents	Petroleum-based Products
Paints/Solvents	Pesticides
Acids	Solid and Construction Wastes
Sanitary Wastes	Soil Stabilization Additives

B. MATERIAL MANAGEMENT PRACTICES

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff. The job site superintendent will be responsible for ensuring that these procedures are followed.

1. Good Housekeeping

The following good housekeeping practices will be followed onsite during the construction project:

- An effort will be made to store only enough products required to do the job.
- All materials stored onsite will be stored in a neat, orderly manner and, if possible, under a roof or in a containment area. At a minimum, all containers will be stored with their lids on when not in use. Drip pans shall be provided under all dispensers.
- Products will be kept in their original containers with the original manufacturer's label in legible condition.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposing of the container.
- Manufacturer's recommendations for proper use and disposal will be followed.
- The job site superintendent will be responsible for daily inspections to ensure proper use and disposal of materials.

2. Hazardous Products

These practices will be used to reduce the risks associated with hazardous materials. Material Safety Data Sheets (MSDS's) for each substance with hazardous properties that is used on the job site will be obtained and used for the proper management of potential wastes that may result from these products. An MSDS will be posted in the immediate area where such product is stored and/or used and another copy of each MSDS will be maintained in the SWPPP file at the job site construction trailer office. Each employee who must handle a substance with hazardous properties will be instructed on the use of MSDS sheets and the specific information in the applicable MSDS for the product he/she is using, particularly regarding spill control techniques.

- Products will be kept in original containers with the original labels in legible condition.
- Original labels and material safety data sheets (MSDS's) will be procured and used for each material.
- If surplus product must be disposed of, manufacturer's or local/state/federal recommended methods for proper disposal will be followed.

3. Hazardous Waste

All hazardous waste materials will be disposed of by the contractor in the manner specified by local, state, and/or federal regulations and by the manufacturer of such products. Site personnel will be



instructed in these practices by the job site superintendent, who will also be responsible for seeing that these practices are followed.

4. Product Specific Practices

The following product specific practices will be followed on the job site.

a. Petroleum Products

All onsite vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers, which are clearly labeled. Any petroleum storage tanks used onsite will have a dike or berm containment structure constructed around it to contain any spills that may occur. Drip pans shall be provided for all dispensers. Any asphalt substances used onsite will be applied according to the manufacturer's recommendations.

b. Paints, Paint Solvents, and Cleaning Solvents

All containers will be tightly sealed and stored when not in use. Excess paint and solvents will not be discharged to the storm sewer system but will be properly disposed of according to manufacturer's instructions or state and federal regulations.

C. SPILL PREVENTION AND RESPONSE PROCEDURES

The contractor will train all personnel in the proper handling and cleanup of spilled materials. No spilled hazardous materials or hazardous wastes will be allowed to come in contact with stormwater discharges. If such contact occurs, the stormwater discharge will be contained on site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated stormwater. It shall be the responsibility of the job site superintendent to properly train all personnel in spill prevention and clean up procedures.

In order to minimize the potential for a spill of hazardous materials to come into contact with stormwater, the following steps will be implemented:

1. All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids, paints, paint solvents, cleaning solvents, additives for soil stabilization, concrete curing compounds and additives, etc.) will be stored in a secure location with their lids on, preferably under cover, when not in use.
2. The minimum practical quantity of all such materials will be kept on the job site.
3. A spill control and containment kit (containing, for example, absorbent materials, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) will be provided at the storage site.
4. Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be trained regarding these procedures and the location of the information and cleanup supplies.

In the event of a spill, the following procedures should be followed:

1. All spills will be cleaned up immediately after discovery.
2. The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with the hazardous substances.
3. The project manager and the Engineer-of-Record will be notified immediately.
4. Spills of toxic or hazardous materials will be reported to the appropriate federal, state, and/or local government agency regardless of the size of the spill. Spills of amounts that exceed Reportable Quantities of certain substances specifically mentioned in federal regulations (40 CFR 110, 40 CFR 117, and 40 CFR 302) must be immediately reported to the NYS DEC 24-Hour Spill Hotline at 1-800-457-7362.
5. If the spill exceeds a Reportable Quantity, the SWPPP must be modified within seven (7) calendar days of knowledge of the discharge to provide a description of the release, the circumstances leading to the



release, and the date of the release. The plans must identify measures to prevent the recurrence of such releases and to respond to such releases.

6. The job site superintendent will be the spill prevention and response coordinator. He will designate the individuals who will receive spill prevention and response training. These individuals will each become responsible for a particular phase of prevention and response. The names of these personnel will be posted in the material storage area and in the office trailer onsite.

D. CONTROL OF NON-STORMWATER DISCHARGES

Certain types of discharges are allowable under the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity and it is the intent of this SWPPP to allow such discharges. These types of discharges will be allowed under the conditions that no pollutants will be allowed to come in contact with the water prior to or after it is discharged. The control measures, which have been outlined previously in this SWPPP, will be strictly followed to ensure that no contamination of these non-stormwater discharges takes place. The following non-stormwater discharges are allowed by the NYSDEC and may occur at the job site:

1. Discharges from fire fighting activities
2. Fire hydrant flushing
3. Waters to which cleansers or other components have not been added that are used to wash vehicles or control duct.
4. Routine external building washdown which does not use detergents
5. Pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used
6. Air conditioning condensate
7. Springs
8. Foundation or footing drains where flows are not contaminated with process materials such as solvents.

SECTION VII CERTIFICATION AND NOTIFICATION

The New York State Department of Environmental Conservation requires that the operator and the contractor make certifications of knowledge of the contents of this SWPPP and agreement to follow the SWPPP. The terms of the General Permit also require that each contractor sign the SWPPP plan, thereby making them co-permittees and acknowledging their responsibility for certain operation aspects of the plan. These certifications should be signed before the contractor begins activities and should be filed with the site's SWPPP at the jobsite.

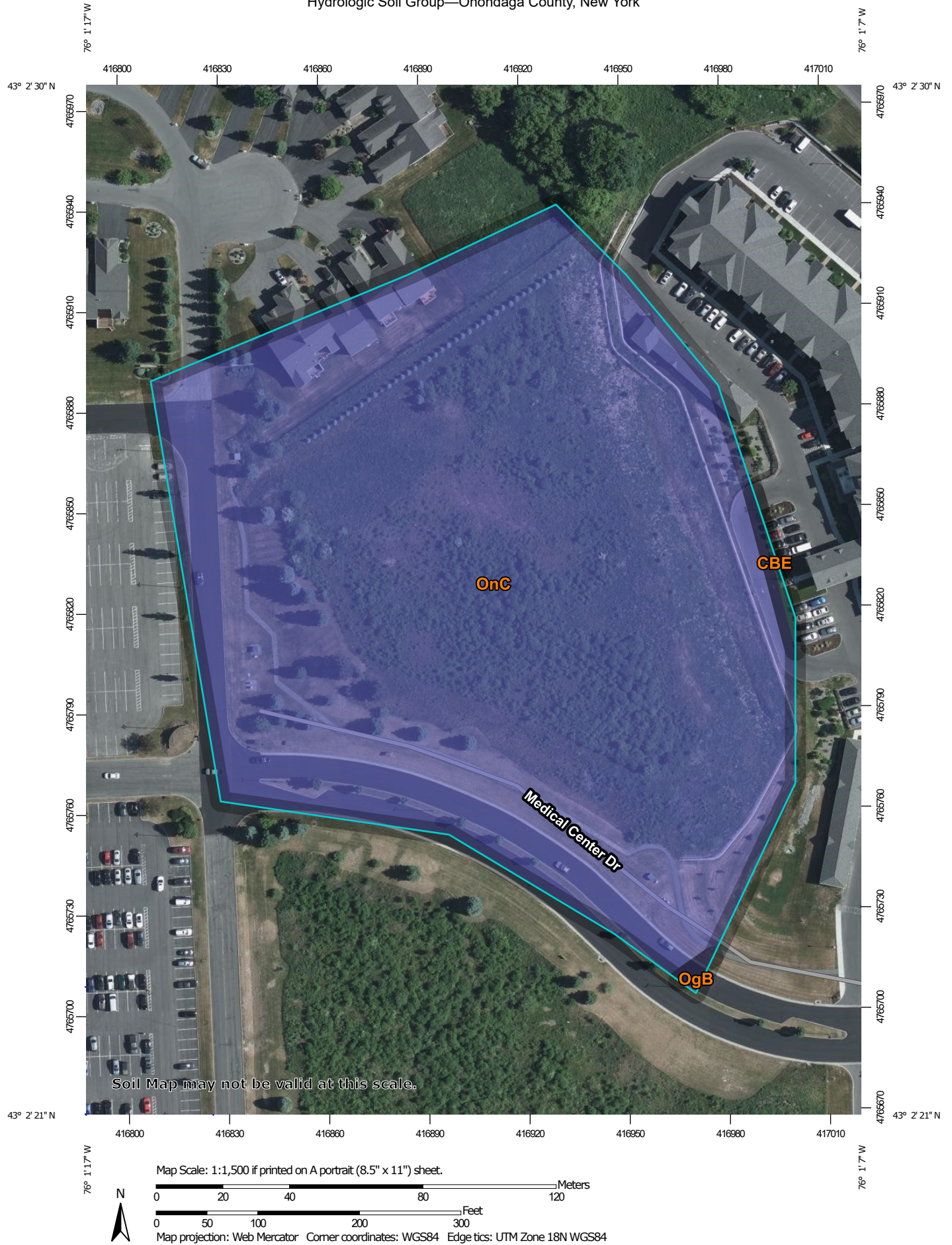
Upon completion of the work, a representative of StormTech will provide the engineer with a certification that the installation of the underground storage system is in compliance with the approved plans and that the manner of installation meets StormTech's specifications. This certification will be submitted to the Town with the Engineer's certification of that the entire stormwater system has been constructed in compliance with the approved plans, specifications, and SWPPP.



APPENDIX A

Background Data

Hydrologic Soil Group—Onondaga County, New York



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

12/13/2021
Page 1 of 4

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Onondaga County, New York
 Survey Area Data: Version 16, Sep 1, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 21, 2020—Jun 17, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
CBE	Camillus and Lairdsville channery soils, steep	C	0.0	0.2%
OgB	Ontario loam, 3 to 8 percent slopes	B	0.0	0.1%
OnC	Ontario gravelly loam, 8 to 15 percent slopes	B	7.4	99.7%
Totals for Area of Interest			7.4	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

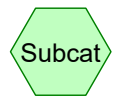
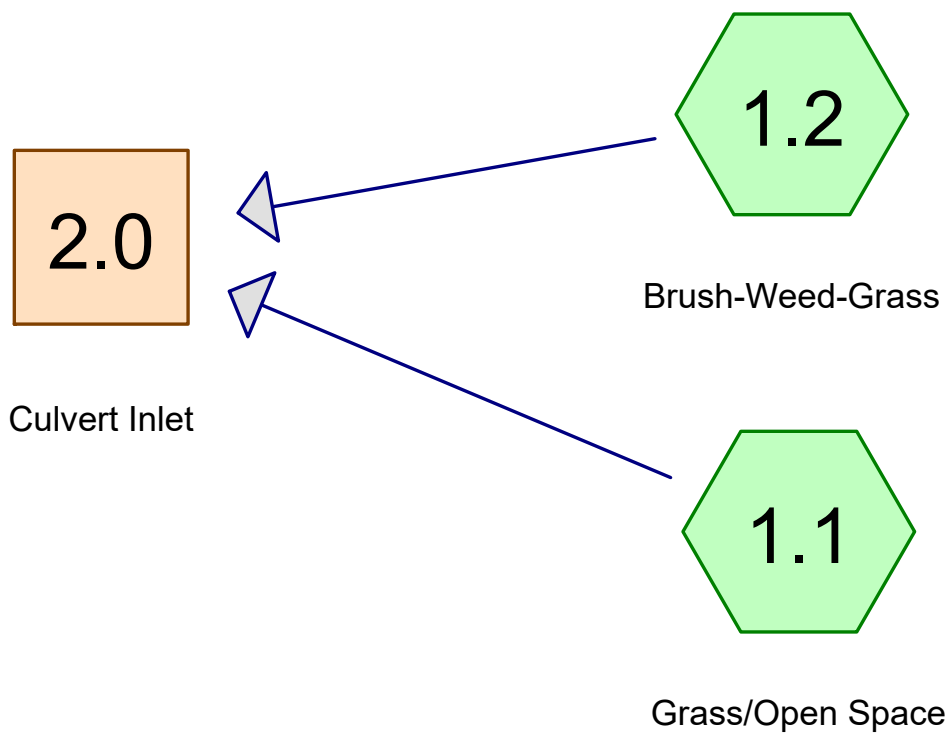
Component Percent Cutoff: None Specified

Tie-break Rule: Higher



APPENDIX B

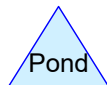
HydroCAD Output - Existing Conditions



Subcat



Reach



Pond



Link

EXISTING CONDITION

Prepared by Napierala Consulting

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Type II 24-hr 10-yr Rainfall=3.43"

Page 2

Summary for Subcatchment 1.1: Grass/Open Space

Runoff = 0.22 cfs @ 12.02 hrs, Volume= 0.014 af, Depth= 0.54"
 Routed to Reach 2.0 : Culvert Inlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-yr Rainfall=3.43"

Area (ac)	CN	Description
0.306	61	>75% Grass cover, Good, HSG B
0.306		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	77	0.0320	0.17		Sheet Flow, Grass: Short n= 0.150 P2= 2.38"
0.4	60		2.50		Direct Entry,
8.0	137	Total			

Summary for Subcatchment 1.2: Brush-Weed-Grass

Runoff = 0.01 cfs @ 12.53 hrs, Volume= 0.005 af, Depth= 0.13"
 Routed to Reach 2.0 : Culvert Inlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-yr Rainfall=3.43"

Area (ac)	CN	Description
0.436	48	Brush, Good, HSG B
0.436		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0100	0.11		Sheet Flow, Grass: Short n= 0.150 P2= 2.38"
0.4	69	0.0277	2.68		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.2	70	0.2000	7.20		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
15.6	239	Total			

Summary for Reach 2.0: Culvert Inlet

Inflow Area = 0.742 ac, 0.00% Impervious, Inflow Depth = 0.30" for 10-yr event
 Inflow = 0.22 cfs @ 12.02 hrs, Volume= 0.019 af
 Outflow = 0.22 cfs @ 12.02 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs

EXISTING CONDITION

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Type II 24-hr 100-yr Rainfall=5.78"

Page 3

Summary for Subcatchment 1.1: Grass/Open Space

Runoff = 0.91 cfs @ 12.00 hrs, Volume= 0.047 af, Depth= 1.86"
 Routed to Reach 2.0 : Culvert Inlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-yr Rainfall=5.78"

Area (ac)	CN	Description
0.306	61	>75% Grass cover, Good, HSG B
0.306		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	77	0.0320	0.17		Sheet Flow, Grass: Short n= 0.150 P2= 2.38"
0.4	60		2.50		Direct Entry,
8.0	137	Total			

Summary for Subcatchment 1.2: Brush-Weed-Grass

Runoff = 0.37 cfs @ 12.11 hrs, Volume= 0.033 af, Depth= 0.90"
 Routed to Reach 2.0 : Culvert Inlet

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-yr Rainfall=5.78"

Area (ac)	CN	Description
0.436	48	Brush, Good, HSG B
0.436		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.0	100	0.0100	0.11		Sheet Flow, Grass: Short n= 0.150 P2= 2.38"
0.4	69	0.0277	2.68		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.2	70	0.2000	7.20		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
15.6	239	Total			

Summary for Reach 2.0: Culvert Inlet

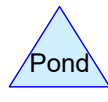
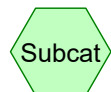
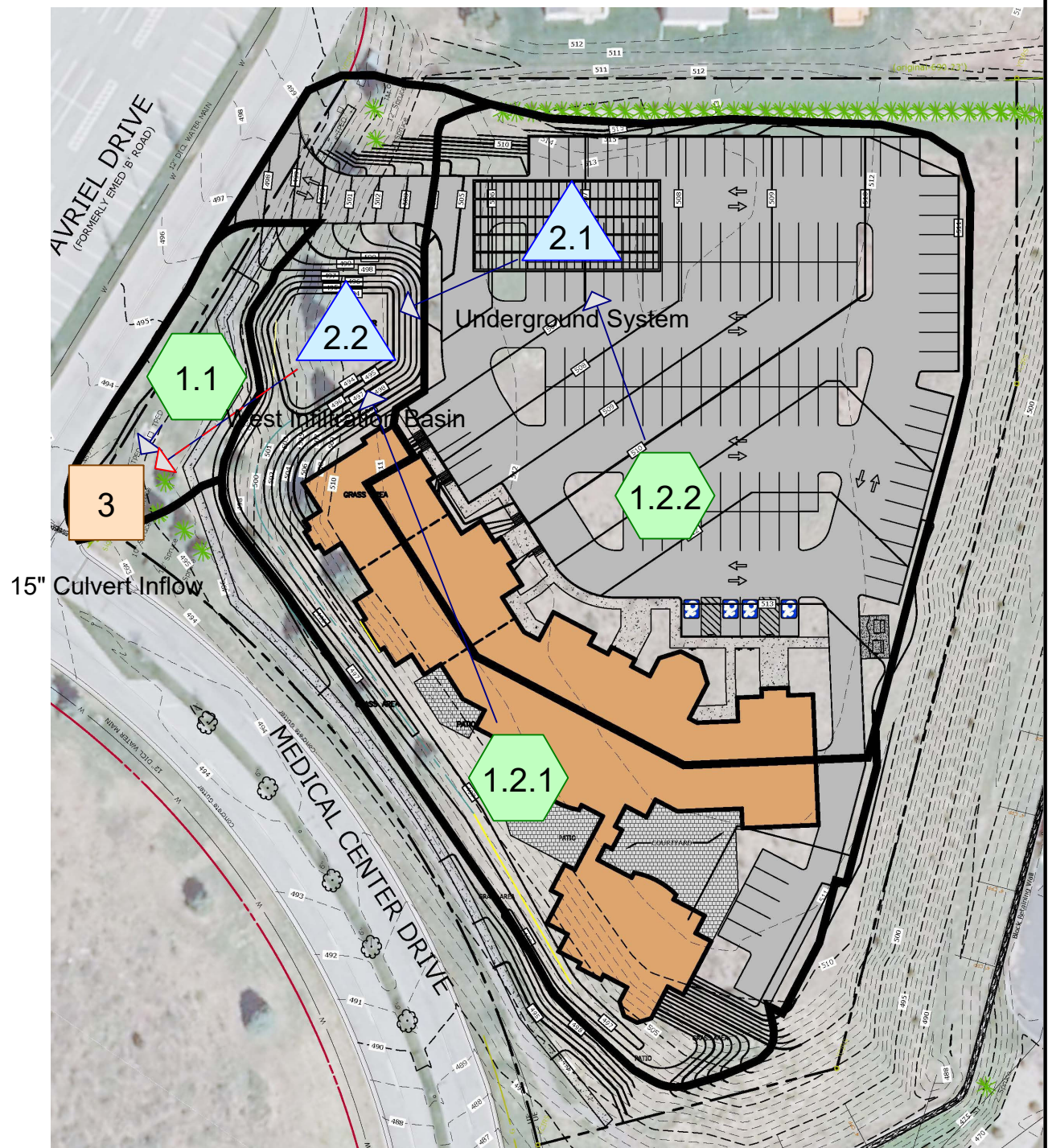
Inflow Area = 0.742 ac, 0.00% Impervious, Inflow Depth = 1.30" for 100-yr event
 Inflow = 1.13 cfs @ 12.02 hrs, Volume= 0.080 af
 Outflow = 1.13 cfs @ 12.02 hrs, Volume= 0.080 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 2.00-30.00 hrs, dt= 0.05 hrs



APPENDIX C

HydroCAD Output - Proposed Conditions



Routing Diagram for PROPOSED CONDITION
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PROPOSED CONDITION

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Type II 24-hr 10-yr Rainfall=3.43"

Page 2

Summary for Subcatchment 1.1:

Runoff = 0.11 cfs @ 12.09 hrs, Volume= 0.009 af, Depth= 0.54"
 Routed to Reach 3 : 15" Culvert Inflow

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-yr Rainfall=3.43"

Area (ac)	CN	Description
0.203	61	>75% Grass cover, Good, HSG B
0.203		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.2	100	0.0350	0.13		Sheet Flow, Grass: Dense n= 0.240 P2= 2.38"
0.4	61		2.50		Direct Entry, Channel Flow
13.6	161	Total			

Summary for Subcatchment 1.2.1:

Runoff = 3.51 cfs @ 11.97 hrs, Volume= 0.170 af, Depth= 1.58"
 Routed to Pond 2.2 : West Infiltration Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-yr Rainfall=3.43"

Area (ac)	CN	Description
0.664	98	Paved parking, HSG B
0.624	61	>75% Grass cover, Good, HSG B
1.288	80	Weighted Average
0.624		48.45% Pervious Area
0.664		51.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment 1.2.2:

Runoff = 7.95 cfs @ 11.96 hrs, Volume= 0.406 af, Depth= 2.57"
 Routed to Pond 2.1 : Underground System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-yr Rainfall=3.43"

Area (ac)	CN	Description
1.596	98	Paved parking, HSG B
0.300	61	>75% Grass cover, Good, HSG B
1.896	92	Weighted Average
0.300		15.82% Pervious Area
1.596		84.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PROPOSED CONDITION

Prepared by Napierala Consulting

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Type II 24-hr 10-yr Rainfall=3.43"

Page 3

Summary for Pond 2.1: Underground System

Inflow Area = 1.896 ac, 84.18% Impervious, Inflow Depth = 2.57" for 10-yr event
 Inflow = 7.95 cfs @ 11.96 hrs, Volume= 0.406 af
 Outflow = 0.60 cfs @ 12.55 hrs, Volume= 0.406 af, Atten= 93%, Lag= 35.1 min
 Discarded = 0.29 cfs @ 11.10 hrs, Volume= 0.348 af
 Primary = 0.31 cfs @ 12.55 hrs, Volume= 0.058 af

Routed to Pond 2.2 : West Infiltration Basin

Routing by Stor-Ind method, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 499.71' @ 12.55 hrs Surf.Area= 0.094 ac Storage= 0.183 af

Plug-Flow detention time=181.3 min calculated for 0.406 af (100% of inflow)
 Center-of-Mass det. time=181.2 min (973.3 - 792.1)

Volume	Invert	Avail.Storage	Storage Description
#1	497.00'	0.153 af	46.67'W x 87.97'L x 6.75'H Stone Envelope 0.636 af Overall- 0.254 af Embedded= 0.382 af x 40.0% Voids
#2	497.75'	0.254 af	ADS StormTech MC-4500 b +Cap @ 4.03' Lx 100 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.6 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 100 Chambers in 5 Rows Cap Storage= 39.5 cf x 2 x 5 rows = 395.0 cf
		0.407 af	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	497.00'	3,000 in/hr Exfiltration over Surface area
#2	Primary	497.00'	4.0" Round Culvert L= 46.0' Ke= 0.500 Inlet / Outlet Invert= 497.00' / 496.00' S= 0.0217'/' Cc= 0.900 n= 0.012, Flow Area= 0.09 sf
#3	Device 2	499.00'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 2	502.75'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s) 5.7' Crest Height

Discarded OutFlow Max=0.29 cfs @ 11.10 hrs HW=497.07' (Free Discharge)

1=Exfiltration (Exfiltration Controls 0.29 cfs)

Primary OutFlow Max=0.31 cfs @ 12.55 hrs HW=499.71' (Free Discharge)

2=Culvert (Passes 0.31 cfs of 0.49 cfs potential flow)

3=Orifice/Grate (Orifice Controls 0.31 cfs @ 3.55 fps)

4=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 2.2: West Infiltration Basin

Inflow Area = 3.184 ac, 70.98% Impervious, Inflow Depth = 0.86" for 10-yr event
 Inflow = 3.51 cfs @ 11.97 hrs, Volume= 0.228 af
 Outflow = 0.47 cfs @ 13.17 hrs, Volume= 0.228 af, Atten= 87%, Lag= 71.5 min
 Discarded = 0.26 cfs @ 13.17 hrs, Volume= 0.190 af
 Primary = 0.21 cfs @ 13.17 hrs, Volume= 0.038 af

Routed to Reach 3 : 15" Culvert Inflow

Secondary= 0.00 cfs @ 2.00 hrs, Volume= 0.000 af

Routed to Reach 3 : 15" Culvert Inflow

Routing by Stor-Ind method, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 495.21' @ 13.17 hrs Surf.Area= 0.087 ac Storage= 0.085 af

Plug-Flow detention time=122.4 min calculated for 0.228 af (100% of inflow)
 Center-of-Mass det. time=122.3 min (949.3 - 827.1)

Volume	Invert	Avail.Storage	Storage Description
#1	494.00'	0.348 af	Custom Stage Data (Prismatic) Listed below (Recalc)

PROPOSED CONDITION

Type II 24-hr 10-yr Rainfall=3.43"

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Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
494.00	0.060	0.000	0.000
495.00	0.075	0.068	0.068
496.00	0.133	0.104	0.171
497.00	0.220	0.176	0.348

Device	Routing	Invert	Outlet Devices
#1	Discarded	494.00'	3.000 in/hr Exfiltration over Surface area
#2	Primary	494.00'	12.0" Round Culvert L= 100.0' Ke= 0.500 Inlet / Outlet Invert= 494.00' / 493.00' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#3	Device 2	494.90'	5.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	496.10'	5.0' long + 4.0 '/' SideZ x 8.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Discarded OutFlow Max=0.26 cfs @ 13.17 hrs HW=495.21' (Free Discharge)↑ **1=Exfiltration** (Exfiltration Controls 0.26 cfs)**Primary OutFlow** Max=0.21 cfs @ 13.17 hrs HW=495.21' (Free Discharge)↑ **2=Culvert** (Passes 0.21 cfs of 3.19 cfs potential flow)↑ **3=Orifice/Grate** (Orifice Controls 0.21 cfs @ 1.90 fps)**Secondary OutFlow** Max=0.00 cfs @ 2.00 hrs HW=494.00' (Free Discharge)↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)**Summary for Reach 3: 15" Culvert Inflow**

Inflow Area = 3.387 ac, 66.73% Impervious, Inflow Depth = 0.17" for 10-yr event

Inflow = 0.22 cfs @ 13.11 hrs, Volume= 0.047 af

Outflow = 0.22 cfs @ 13.11 hrs, Volume= 0.047 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

PROPOSED CONDITION

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Type II 24-hr 100-yr Rainfall=5.78"

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Summary for Subcatchment 1.1:

Runoff = 0.49 cfs @ 12.07 hrs, Volume= 0.031 af, Depth= 1.86"
 Routed to Reach 3 : 15" Culvert Inflow

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-yr Rainfall=5.78"

Area (ac)	CN	Description
0.203	61	>75% Grass cover, Good, HSG B
0.203		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.2	100	0.0350	0.13		Sheet Flow, Grass: Dense n= 0.240 P2= 2.38"
0.4	61		2.50		Direct Entry, Channel Flow
13.6	161	Total			

Summary for Subcatchment 1.2.1:

Runoff = 7.81 cfs @ 11.97 hrs, Volume= 0.385 af, Depth= 3.58"
 Routed to Pond 2.2 : West Infiltration Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-yr Rainfall=5.78"

Area (ac)	CN	Description
0.664	98	Paved parking, HSG B
0.624	61	>75% Grass cover, Good, HSG B
1.288	80	Weighted Average
0.624		48.45% Pervious Area
0.664		51.55% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Summary for Subcatchment 1.2.2:

Runoff = 14.42 cfs @ 11.96 hrs, Volume= 0.767 af, Depth= 4.85"
 Routed to Pond 2.1 : Underground System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
 Type II 24-hr 100-yr Rainfall=5.78"

Area (ac)	CN	Description
1.596	98	Paved parking, HSG B
0.300	61	>75% Grass cover, Good, HSG B
1.896	92	Weighted Average
0.300		15.82% Pervious Area
1.596		84.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

PROPOSED CONDITION

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Type II 24-hr 100-yr Rainfall=5.78"

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Summary for Pond 2.1: Underground System

Inflow Area = 1.896 ac, 84.18% Impervious, Inflow Depth = 4.85" for 100-yr event
 Inflow = 14.42 cfs @ 11.96 hrs, Volume= 0.767 af
 Outflow = 0.96 cfs @ 12.60 hrs, Volume= 0.767 af, Atten= 93%, Lag= 38.2 min
 Discarded = 0.29 cfs @ 9.90 hrs, Volume= 0.475 af
 Primary = 0.68 cfs @ 12.60 hrs, Volume= 0.292 af
 Routed to Pond 2.2 : West Infiltration Basin

Routing by Stor-Ind method, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 502.75' @ 12.60 hrs Surf.Area= 0.094 ac Storage= 0.369 af

Plug-Flow detention time=206.4 min calculated for 0.766 af (100% of inflow)
 Center-of-Mass det. time=206.4 min (981.2 - 774.8)

Volume	Invert	Avail.Storage	Storage Description
#1	497.00'	0.153 af	46.67'W x 87.97'L x 6.75'H Stone Envelope 0.636 af Overall- 0.254 af Embedded= 0.382 af x 40.0% Voids
#2	497.75'	0.254 af	ADS StormTech MC-4500 b +Cap @ 4.03' Lx 100 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.6 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 100 Chambers in 5 Rows Cap Storage= 39.5 cf x 2 x 5 rows = 395.0 cf
			0.407 af Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	497.00'	3.000 in/hr Exfiltration over Surface area
#2	Primary	497.00'	4.0" Round Culvert L= 46.0' Ke= 0.500 Inlet / Outlet Invert= 497.00' / 496.00' S= 0.0217'/' Cc= 0.900 n= 0.012, Flow Area= 0.09 sf
#3	Device 2	499.00'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 2	502.75'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s) 5.7' Crest Height

Discarded OutFlow Max=0.29 cfs @ 9.90 hrs HW=497.07' (Free Discharge)
 1=Exfiltration (Exfiltration Controls 0.29 cfs)

Primary OutFlow Max=0.68 cfs @ 12.60 hrs HW=502.75' (Free Discharge)
 2=Culvert (Barrel Controls 0.68 cfs @ 7.78 fps)
 3=Orifice/Grate (Passes < 0.80 cfs potential flow)
 4=Sharp-Crested Rectangular Weir (Passes < 0.00 cfs potential flow)

Summary for Pond 2.2: West Infiltration Basin

Inflow Area = 3.184 ac, 70.98% Impervious, Inflow Depth = 2.55" for 100-yr event
 Inflow = 8.30 cfs @ 11.97 hrs, Volume= 0.676 af
 Outflow = 1.15 cfs @ 12.83 hrs, Volume= 0.676 af, Atten= 86%, Lag= 51.5 min
 Discarded = 0.44 cfs @ 12.83 hrs, Volume= 0.362 af
 Primary = 0.66 cfs @ 12.83 hrs, Volume= 0.311 af
 Routed to Reach 3 : 15" Culvert Inflow
 Secondary= 0.05 cfs @ 12.83 hrs, Volume= 0.003 af
 Routed to Reach 3 : 15" Culvert Inflow

Routing by Stor-Ind method, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 496.12' @ 12.83 hrs Surf.Area= 0.144 ac Storage= 0.189 af

Plug-Flow detention time=116.9 min calculated for 0.675 af (100% of inflow)
 Center-of-Mass det. time=116.9 min (963.2 - 846.3)

Volume	Invert	Avail.Storage	Storage Description
#1	494.00'	0.348 af	Custom Stage Data (Prismatic) Listed below (Recalc)

PROPOSED CONDITION

Type II 24-hr 100-yr Rainfall=5.78"

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Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
494.00	0.060	0.000	0.000
495.00	0.075	0.068	0.068
496.00	0.133	0.104	0.171
497.00	0.220	0.176	0.348

Device	Routing	Invert	Outlet Devices
#1	Discarded	494.00'	3.000 in/hr Exfiltration over Surface area
#2	Primary	494.00'	12.0" Round Culvert L= 100.0' Ke= 0.500 Inlet / Outlet Invert= 494.00' / 493.00' S= 0.0100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#3	Device 2	494.90'	5.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	496.10'	5.0' long + 4.0 '/' SideZ x 8.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Discarded OutFlow Max=0.44 cfs @ 12.83 hrs HW=496.12' (Free Discharge)↑ **1=Exfiltration** (Exfiltration Controls 0.44 cfs)**Primary OutFlow** Max=0.66 cfs @ 12.83 hrs HW=496.12' (Free Discharge)↑ **2=Culvert** (Passes 0.66 cfs of 4.50 cfs potential flow)↑ **3=Orifice/Grate** (Orifice Controls 0.66 cfs @ 4.85 fps)**Secondary OutFlow** Max=0.05 cfs @ 12.83 hrs HW=496.12' (Free Discharge)↑ **4=Broad-Crested Rectangular Weir** (Weir Controls 0.05 cfs @ 0.38 fps)**Summary for Reach 3: 15" Culvert Inflow**

Inflow Area = 3.387 ac, 66.73% Impervious, Inflow Depth = 1.23" for 100-yr event

Inflow = 1.07 cfs @ 12.09 hrs, Volume= 0.346 af

Outflow = 1.07 cfs @ 12.09 hrs, Volume= 0.346 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs



APPENDIX D

Inspection, Operation, and Maintenance

Isolator[®] Row

O&M Manual



The Isolator[®] Row

Introduction

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row is a technique to inexpensively enhance Total Suspended Solids (TSS) and Total Phosphorus (TP) removal with easy access for inspection and maintenance.

The Isolator Row

The Isolator Row is a row of StormTech chambers, either SC-160, SC-310, SC-310-3, SC-740, DC-780, MC-3500 or MC-7200 models, that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for sediment settling and filtration as stormwater rises in the Isolator Row and passes through the filter fabric. The open bottom chambers and perforated sidewalls (SC-310, SC-310-3 and SC-740 models) allow stormwater to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row protecting the adjacent stone and chambers storage areas from sediment accumulation.

ADS geotextile fabric is placed between the stone and the Isolator Row chambers. The woven geotextile provides a media for stormwater filtration, a durable surface for maintenance, prevents scour of the underlying stone and remains intact during high pressure jetting. A non-woven fabric is placed over the chambers to provide a filter media for flows passing through the chamber's sidewall. The non-woven fabric is not required over the SC-160, DC-780, MC-3500 or MC-7200 models as these chambers do not have perforated side walls.

The Isolator Row is designed to capture the "first flush" runoff and offers the versatility to be sized on a volume basis or a flow-rate basis. An upstream manhole provides access to the Isolator Row and includes a high/low concept such that stormwater flow rates or volumes that exceed the capacity of the Isolator Row bypass through a manifold to the other chambers. This is achieved with an elevated bypass manifold or a high-flow weir. This creates a differential between the Isolator Row row of chambers and the manifold to the rest of the system, thus allowing for settlement time in the Isolator Row. After Stormwater flows through the Isolator Row and into the rest of the chamber system it is either exfiltrated into the soils below or passed at a controlled rate through an outlet manifold and outlet control structure.

The Isolator Row may be part of a treatment train system. The treatment train design and pretreatment device selection by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, StormTech recommend using the Isolator Row to minimize maintenance requirements and maintenance costs.

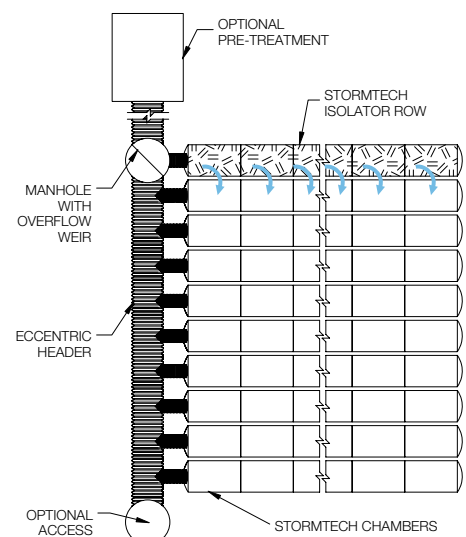
Note: See the *StormTech Design Manual* for detailed information on designing inlets for a StormTech system, including the Isolator Row.



Looking down the Isolator Row from the manhole opening, woven geotextile fabric is shown between the chamber and stone base.



StormTech Isolator Row with Overflow Spillway (not to scale)



Isolator Row Inspection/Maintenance

Inspection

The frequency of inspection and maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the **actual frequency of inspection and maintenance practices**.

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

The Isolator Row incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

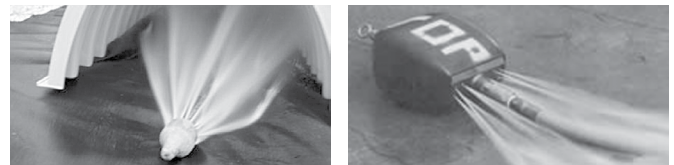
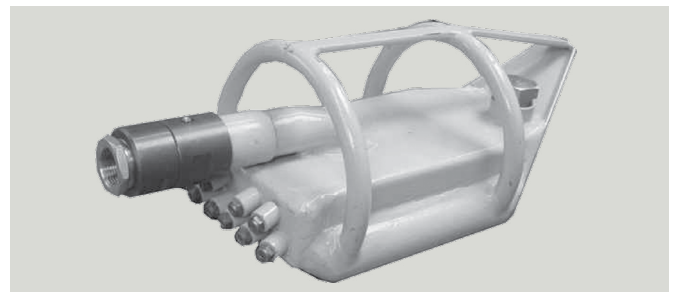
If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row, clean-out should be performed.

Maintenance

The Isolator Row was designed to reduce the cost of periodic maintenance. By “isolating” sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided

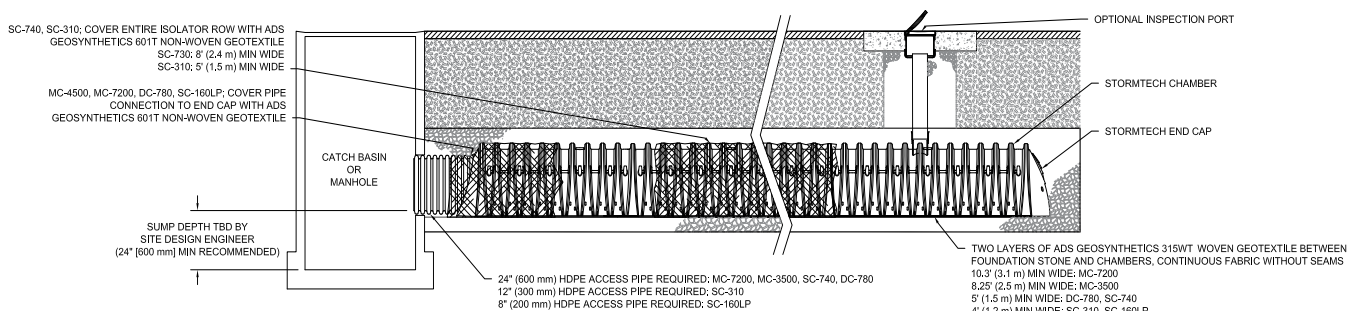
via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entries.

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45” are best. JetVac reels can vary in length. For ease of maintenance, ADS recommends Isolator Row lengths up to 200” (61 m). **The JetVac process shall only be performed on StormTech Isolator Rows that have AASHTO class 1 woven geotextile (as specified by StormTech) over their angular base stone.**



StormTech Isolator Row (not to scale)

Note: Non-woven fabric is only required over the inlet pipe connection into the end cap for SC-160LP, DC-780, MC-3500 and MC-7200 chamber models and is not required over the entire Isolator Row.



Isolator Row Step By Step Maintenance Procedures

Step 1

Inspect Isolator Row for sediment.

- A) Inspection ports (if present)
 - i. Remove lid from floor box frame
 - ii. Remove cap from inspection riser
 - iii. Using a flashlight and stadia rod, measure depth of sediment and record results on maintenance log.
 - iv. If sediment is at or above 3 inch depth, proceed to Step 2. If not, proceed to Step 3.
- B) All Isolator Row
 - i. Remove cover from manhole at upstream end of Isolator Row
 - ii. Using a flashlight, inspect down Isolator Row through outlet pipe
 - 1. Mirrors on poles or cameras may be used to avoid a confined space entry
 - 2. Follow OSHA regulations for confined space entry if entering manhole
 - iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches), proceed to Step 2. If not, proceed to Step 3.

Step 2

Clean out Isolator Row using the JetVac process.

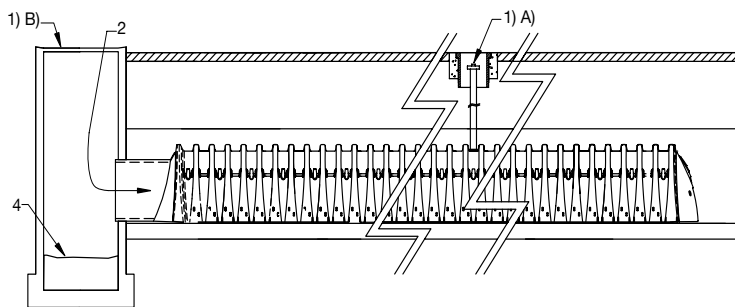
- A) A fixed floor cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable
- B) Apply multiple passes of JetVac until backflush water is clean
- C) Vacuum manhole sump as required

Step 3

Replace all caps, lids and covers, record observations and actions.

Step 4

Inspect & clean catch basins and manholes upstream of the StormTech system.



Sample Maintenance Log

Date	Stadia Rod Readings		Sedi- ment Depth (1)-(2)	Observations/Actions	Inspector
	Fixed point to chamber bottom (1)	Fixed point to top of sediment (2)			
3/15/11	6.3 ft	none		New installation. Fixed point is CI frame at grade	DJM
9/24/11		6.2	0.1 ft	Some grit felt	SM
6/20/13		5.8	0.5 ft	Mucky feel, debris visible in manhole and in Isolator Row, maintenance due	NV
7/7/13	6.3 ft		0	System jetted and vacuumed	DJM

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800-821-6710

Infiltration Stormwater Management Practices Level 1 Inspection Checklist

SMP ID #		SMP Owner		☐ Private ☐ Public
SMP Location (Address; Latitude & Longitude)				
	Latitude		Longitude	
Party Responsible for Maintenance	System Type			Type of Site
☐ Same as SMP Owner ☐ Other 	☐ Seasonal ☐ Continuous Use ☐ Other	☐ Above Ground ☐ Below Ground	☐ Commercial ☐ Industrial ☐ Residential ☐ State	
Inspection Date			Inspection Time	
Inspector				
Date of Last Inspection				

IN Drainage Area

Look for both pervious and impervious areas that are uphill from the Infiltration cell.

Problem (Check if Present)		Follow-Up Actions
	☐ Bare soil, erosion of the ground (rills washing out the dirt)	☐ Seed and straw areas of bare soil to establish vegetation. ☐ Fill in erosion areas with soil, compact, and seed and straw to get vegetation established. ☐ If a rill or small channel is forming, try to redirect water flowing to this area by creating a small berm or adding topsoil to areas that are heavily compacted. ☐ Other:

IN Drainage Area

Look for both pervious and impervious areas that are uphill from the Infiltration cell.

Problem (Check if Present)		Follow-Up Actions
		☐ Kick-Out to Level 2 Inspection: Large areas of soil have been eroded, or larger channels are forming. May require rerouting of flow paths.
☐ For Dry Wells: Leaves, sticks, or other debris in gutters and downspouts		☐ Remove all debris by hand. ☐ Other:
	☐ Piles of grass clippings, mulch, dirt, salt, or other materials	☐ Remove or cover piles of grass clippings, mulch, dirt, etc. ☐ Other:
	☐ Open containers of oil, grease, paint, or other substances	☐ Cover or properly dispose of materials; consult your local solid waste authority for guidance on materials that may be toxic or hazardous. ☐ Other:

IN Inlets

Look for all the places where water flows into the Infiltration practice.

Problem (Check if Present)



- ☐ Inlets are collecting grit and debris or grass/weeds are growing. Some water may not be getting into the Infiltration practice.

Follow-Up Actions

- ☐ Use a flat shovel to remove grit and debris (especially at curb inlets or openings). Parking lots generate fine grit that will accumulate at these spots.
- ☐ Pull out clumps of growing grass or weeds and scoop out the soil or grit that the plants are growing in.
- ☐ Remove any grass clippings, leaves, sticks, and other debris that is collecting at inlets.
- ☐ For pipes and ditches, remove sediment and debris that is partially blocking the pipe or ditch opening where it enters the Infiltration practice.
- ☐ Dispose of all material properly in an area where it will not re-enter the practice.
- ☐ Other:

- ☐ Kick-Out to Level 2 Inspection: Inlets are blocked to the extent that most of the water does not seem to be entering the Infiltration practice.

- ☐ Some or all of the inlets are eroding so that rills, gullies, and other erosion is present, or there is bare dirt that is washing into the Infiltration practice.

- ☐ For small areas of erosion, smooth out the eroded part and apply rock or stone (e.g., river cobble) to prevent further erosion. Usually, filter fabric is placed under the rock or stone.
- ☐ In some cases, reseeding and applying erosion-control matting can be used to prevent further erosion. Some of these materials may be available at a garden center, but it may be best to consult a landscape contractor.
- ☐ Other:

- ☐ Kick-Out to Level 2 Inspection: Erosion is occurring at most of the inlets and it looks like there is too much water that is concentrating at these points. The inlet design may have to be modified.

IN Infiltration Area

Examine the surface of the infiltration area and the observation well. Note: The following Problem and Follow-Up Actions apply to infiltration practice pretreatment areas also.

Problem (Check if Present)



- ☐ For grass-covered Infiltration practices: grass has grown very tall,

Photo credit: Stormwater Maintenance, LLC

Follow-Up Actions

- ☐ Mow infiltration area at least twice per year.
- ☐ Other:



- ☐ For grass-covered Infiltration practices: sparse vegetation cover or bare spots

- ☐ Add topsoil (as needed), grass seed, straw, and water during the growing season to re-establish consistent grass coverage.
- ☐ Other:

- ☐ Kick-Out to Level 2 Inspection: Sparse vegetation cover can be a sign that the infiltration area is not infiltrating at the proper rate and water is standing too long after a storm. The surface may be saturated or squishy, and the conditions do not enable grass to grow. This situation should be evaluated by a Level 2 Inspection and likely corrected by a qualified contractor.

- ☐ Minor areas of sediment, grit, trash, or other debris are accumulating on the surface.

- ☐ Use a shovel to scoop out minor areas of sediment or grit, especially in the spring after winter sanding materials may wash in and accumulate. Dispose of the material where it cannot re-enter the Infiltration practice.
- ☐ If removing the material creates a hole or low area, rake the surface smooth and level.
- ☐ Remove trash, debris, and other undesirable materials.
- ☐ Other:

- ☐ Kick-Out to Level 2 Inspection: Sediment has accumulated more than 2-inches deep and covers 25% or more of the surface of the Infiltration area.

IN Infiltration Area

Examine the surface of the infiltration area and the observation well. Note: The following Problem and Follow-Up Actions apply to infiltration practice pretreatment areas also.

Problem (Check if Present)



- ☐ There is erosion on the surface; water seems to be carving out rills as it flows across the surface of the Infiltration area or sinkholes are forming in certain areas.

Follow-Up Actions

- ☐ For minor areas of erosion, try filling the eroded areas with clean topsoil, sand, or stone (whatever the existing cover is).
- ☐ If the problem recurs, you may have to use larger stone (e.g., river cobble) to fill in problem areas.
- ☐ Other:

- ☐ Kick-Out to Level 2 Inspection: The problem persists or the erosion is more than 3-inches deep and seems to be an issue with how water enters and moves through the infiltration area.
- ☐ Kick-Out to Level 2 Inspection: The problem does not seem to be caused by flowing water but a collapse or sinking of the surface (e.g., "sinkhole") due to some underground problem.



- ☐ Observation well is damaged or cap is missing

- ☐ Kick-Out to Level 2 Inspection: Requires replacing pipes or caps.

IN Infiltration Area

Examine the surface of the infiltration area and the observation well. Note: The following Problem and Follow-Up Actions apply to infiltration practice pretreatment areas also.

Problem (Check if Present)	Follow-Up Actions
 ☐ Water still visible in the observation well more than 72 hours after a rain storm. The Infiltration practice does not appear to be draining properly.	☐ Kick-Out to Level 2 Inspection: This is generally a serious problem, and it will be necessary to activate a Level 2 Inspection.

IN Outlets

Locate and inspect all outlets.

Problem (Check if Present)	Follow-Up Actions
 ☐ Outlet obstructed with sediment, debris, trash, etc.	☐ Remove the debris and dispose of it where it cannot re-enter the infiltration area. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Outlet is completely obstructed; there is too much material to remove by hand or with simple hand tools.
☐ Rills or gullies are forming at outlet.	☐ For minor rills, fill in with soil, compact, and seed and straw to establish vegetation. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Rills are more than 2" to 3" deep and require more than just hand raking and re-seeding.

Additional Notes:

Inspector: _____

Date: _____

Complete the following if follow-up/corrective actions were identified during this inspection:

Certified Completion of Follow-Up Actions:

"I hereby certify that the follow-up/corrective actions identified in the inspection performed on _____ (DATE) have been completed and any required maintenance deficiencies have been adequately corrected."

Inspector/Operator: _____

Date: _____

Infiltration Stormwater Management Practices Level 2 Inspection Checklist

SMP ID #		SMP Owner		☐ Private ☐ Public
SMP Location (Address; Latitude & Longitude)				
	Latitude		Longitude	
Party Responsible for Maintenance	System Type		Type of Site	
☐ Same as SMP Owner ☐ Other _____	☐ Seasonal ☐ Continuous Use ☐ Other	☐ Above Ground ☐ Below Ground	☐ Commercial ☐ Industrial ☐ Residential ☐ State	
Inspection Date		Inspection Time		
Inspector				
Date of Last Inspection				

Level 2 Inspection: INFILTRATION

Recommended Repairs

Triggers for Level 3 Inspection

Observed Condition: Water Stands on Surface for More than 72 Hours after Storm

☐ Condition 1: Small pockets of standing water

For infiltration basins with soil, use a soil probe or auger to examine the soil profile. For gravel infiltration trenches or basins, use a shovel to dig into the gravel layer where the problem is occurring. If isolated areas have accumulated grit, fine silt, or vegetative debris or have bad soil or clogged gravel, try removing and replacing with clean material. If the practice is supposed to have grass cover, it will likely be necessary to replant once the problem is resolved.

☐ Condition 2: Standing water is widespread or covers entire surface

Look in the observation well (if it exists) and use a tape measure to estimate the depth of water standing in the soil or gravel. Requires diagnosis and resolution of problem:

- Too much sediment/grit washing in from drainage area?
- Too much ponding depth?
- Improper infiltration media?
- Underlying soil not suitable for infiltration?

As above, the resolution will likely require replanting and re-establishment of good grass cover if this is part of the design.

- Infiltration media is clogged and problem cannot be diagnosed from Level 2 inspection.
- Level 2 inspection identifies problem, but it cannot be resolved easily or it is associated with the original design of the practice.

☐ Level 3 Inspection necessary

Observed Condition: Severe erosion of infiltration bed, inlets, or around outlets

☐ Condition 1: Erosion at inlets

The lining (e.g., grass, matting, stone, rock) may not be adequate for the actual flow velocities coming through the inlets. First line of defense is to try a less erosive lining and/or extending the lining further down to where inlet slopes meet the infiltration surface. If problem persists, analysis by a Qualified Professional is warranted.

☐ Condition 2: Erosion of infiltration bed

This is often caused by "preferential flow paths" along the surface. The source of flow should be analyzed and methods employed to dissipate energy and disperse the flow (e.g., check dams, rock splash pads).

- Erosion (rills, gullies) is more than 12 inches deep
- The issue is not caused by moving water but some sort of subsurface defect, which may manifest as a sinkhole or linear depression and be associated with problems with the underlying stone or soil.

☐ Level 3 Inspection necessary

Notes:

Inspector: _____

Date: _____

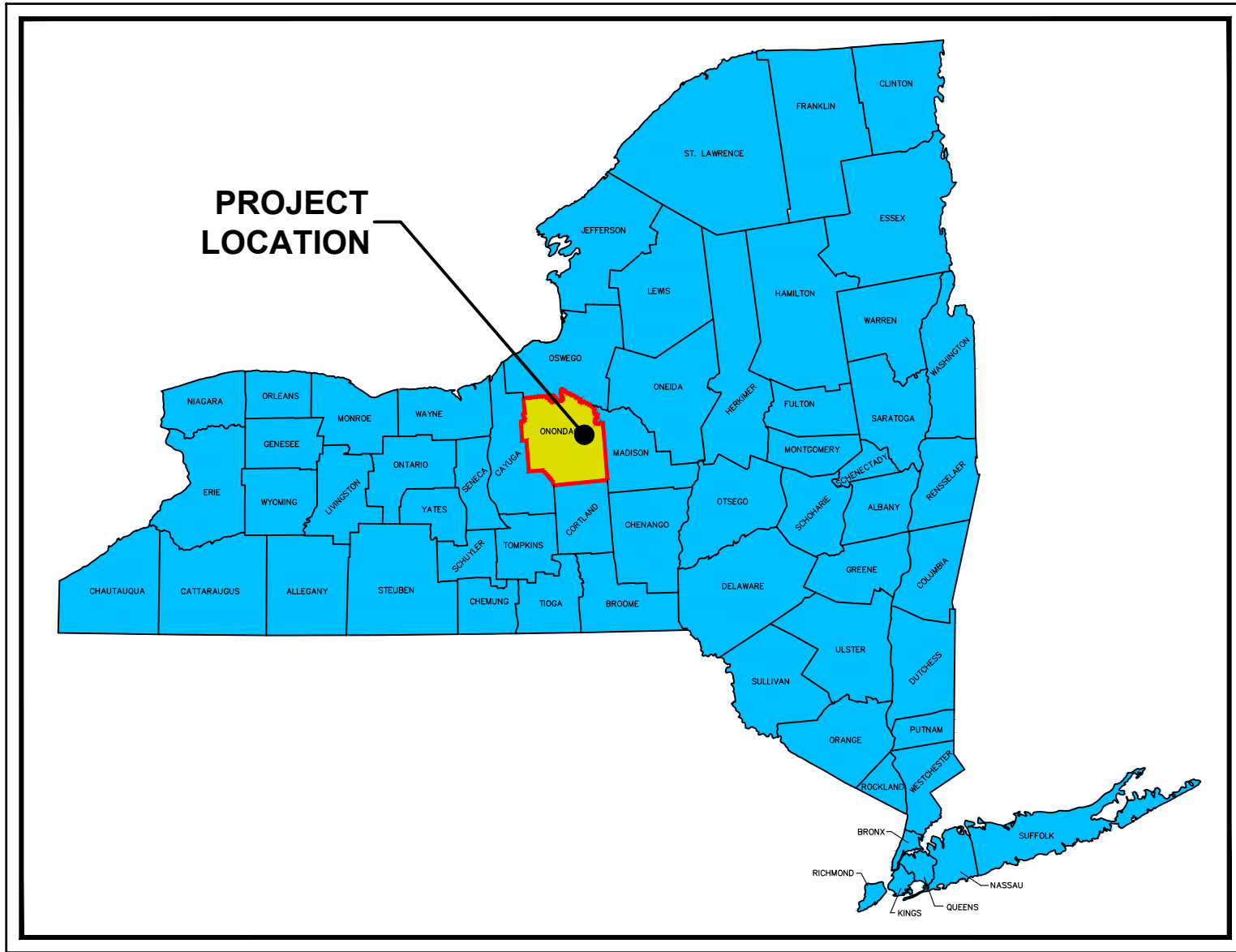
Complete the following if follow-up/corrective actions were identified during this inspection:

Certified Completion of Follow-Up Actions:

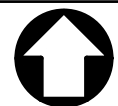
"I hereby certify that the follow-up/corrective actions identified in the inspection performed on _____ (DATE) have been completed and any required maintenance deficiencies have been adequately corrected."

Inspector/Operator: _____

Date: _____



SITE LOCATION MAP
NOT TO SCALE

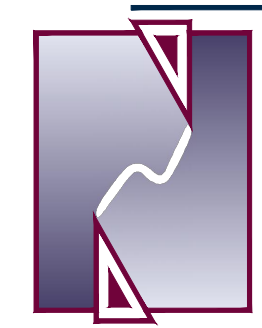


A&E & SNY CENTER

MEDICAL CENTER DRIVE
TAX PARCEL No. 086.-01-03.9

TOWN OF MANLIUS ONONDAGA COUNTY STATE OF NEW YORK

PREPARED BY:



**NAPIERALA
CONSULTING**
PROFESSIONAL ENGINEER, P.C.
SITE • DESIGN • ENGINEERING

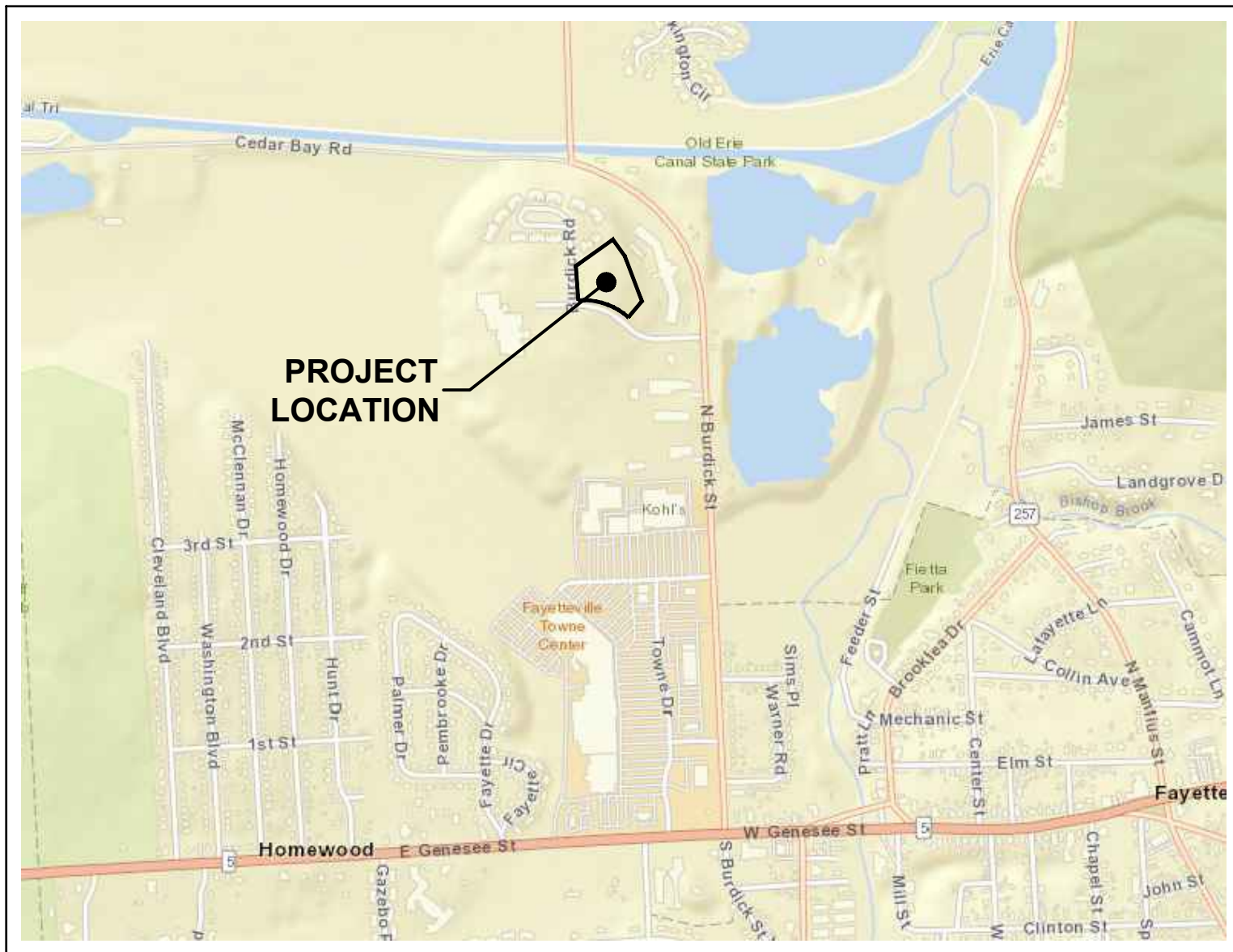
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email: MNAP@NAPCON.COM
PH: (315) 682-5580 FAX: (315) 682-5544

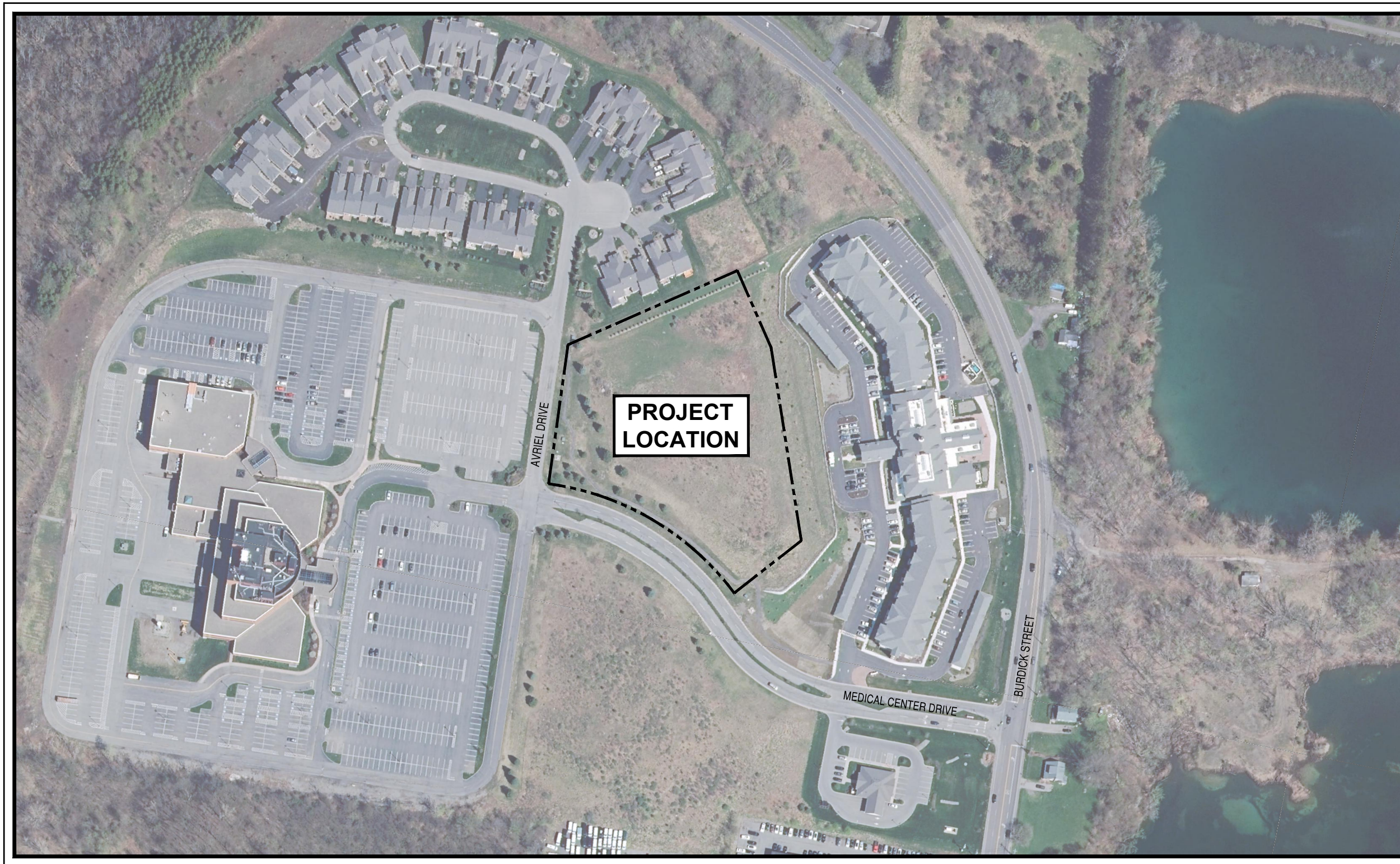
PREPARED FOR:

A&E & SNY CENTER

SUITE 38
5781 BRIDGE STREET
EAST SYRACUSE, NY 13057



PROJECT LOCATION MAP
NOT TO SCALE



AERIAL MAP
1"=200'



SHEET INDEX:

TITLE SHEET
NEIGHBORHOOD PLAN
SITE PLAN
GRADING PLAN
UTILITY PLAN

C-1
C-2
C-3
C-4
C-5

SHEET

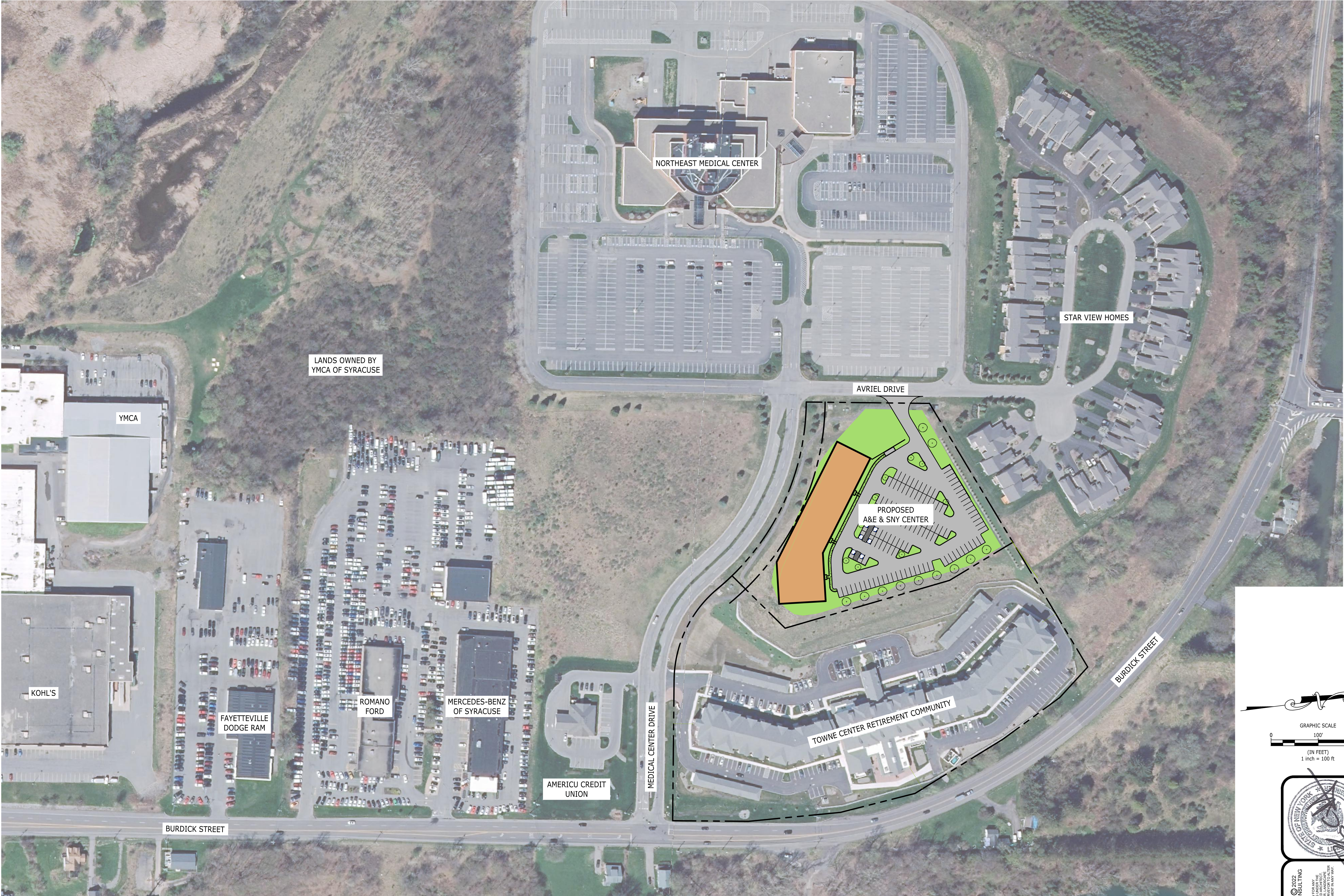
C-1

PROJECT NO.

21-2022

DATE

06/01/2022



LANDS OWNED BY
YMCA OF SYRACUSE

NORTHEAST MEDICAL CENTER

STAR VIEW HOMES

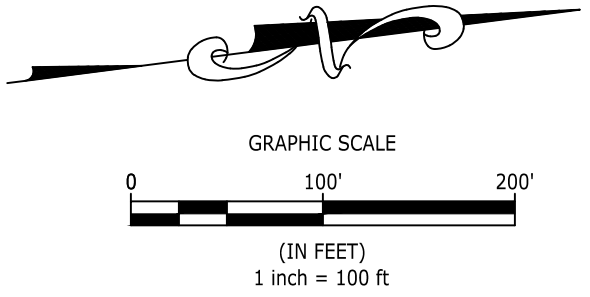
AVRIEL DRIVE

PROPOSED
A&E & SNY CENTER

TOWNE CENTER RETIREMENT COMMUNITY

BURDICK STREET

MEDICAL CENTER DRIVE



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PROJECT TITLE:
**A&E & SNY CENTER
MEDICAL CENTER DRIVE**
TOWN OF MANLIUS ONONDAGA COUNTY, NEW YORK
PREPARED FOR:
A&E & SNY CENTER
SUITE 38
5781 BRIDGE STREET
EAST SYRACUSE, NY 13057

SHEET TITLE:
NEIGHBORHOOD PLAN

NO.	REVISION/ISSUE	DATE

PREPARED BY:
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PROFESSIONAL ENGINEER, P.C.
SITE • DESIGN • ENGINEERING
110 FAYETTE STREET
MANLIUS, NEW YORK 13104
email: MNAP@NAPCON.COM
P/E: (315) 682-5580 FAX: (315) 682-5544

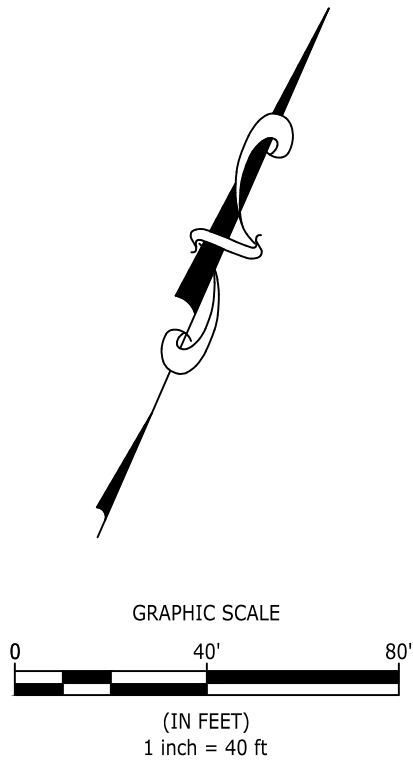
SHEET
PROJECT NO.
21-2022
DATE
06/10/2022
SCALE
1"=100'
C-2



SITE CRITERIA CHECKLIST			
PROJECT SITE INFORMATION			
ADDRESS	MEDICAL CENTER DRIVE		
TAX MAP ID NO.	086-01-03.9		
BOUNDARY SURVEY	PROPERTY LINE INFORMATION TAKEN FROM SUBDIVISION MAP PREPARED BY CT MALE ASSOCIATES, PC DATED 05/10/2017		
TOTAL SITE AREA	4.038 ACRES		
LAND USE	EXISTING: VACANT PROPOSED: PROFESSIONAL/MEDICAL SERVICES		
	REQUIRED	PROVIDED	GRANTED RELIEF
ZONING INFORMATION			
ZONING DISTRICT	CURRENT: RESTRICTED AGRICULTURAL (RA) PROPOSED: NEIGHBORHOOD SHOPPING (NS)		
LOT COVERAGE	75%	58.2%	
BUILDING COVERAGE	10,000 SF/ACRE	40,000 SF (9,906 SF/ACRE x 4.038 ACRES)	
FRONT YARD SETBACK	50 FT	42 FT (MEDICAL CENTER DR) 82.5 FT (AVRIEL DR)	10 FT (MEDICAL CENTER DR) NA (AVRIEL DR)
REAR YARD SETBACK	50 FT	27 FT (TOWN CENTER RETIREMENT) 166.8 FT (STAR VIEW)	25 FT (TOWN CENTER RETIREMENT) NA (STAR VIEW)
SIDE YARD SETBACK	50 FT	CORNER LOT; NON-FRONT YARDS CONSIDERED REAR YARDS	
LANDSCAPE BUFFER A MINIMUM OF 30 FEET IMMEDIATELY ADJOINING PROPERTY ZONED RESIDENTIAL OR RESTRICTED AGRICULTURAL SHALL CONSIST OF A LANDSCAPED BUFFER, APPROPRIATE TO THE CIRCUMSTANCES, AS APPROVED BY THE PLANNING BOARD.			
FRONT YARD BUFFER	30 FT	42 FT (MEDICAL CENTER DR) 82.5 FT (AVRIEL DR)	NA (MEDICAL CENTER DR) NA (AVRIEL DR)
REAR YARD BUFFER	30 FT	27 FT (TOWN CENTER RETIREMENT) 30 FT (STAR VIEW)	5 FT (TOWN CENTER RETIREMENT) NA
SIDE YARD BUFFER	30 FT	CORNER LOT; NON-FRONT YARDS CONSIDERED REAR YARDS	
PARKING DIMENSIONS	10'x20'	10'x20'	
PARKING AISLE WIDTH	24 FT	24 FT	
PARKING SPACES			
MEDICAL OFFICE SPACE (1 SPACE/300 SF)	40,000 SF 134 SPACES	124 SPACES ONSITE 24 OFFSITE - LEASED 148 TOTAL SPACES PROVIDED	
SCREENING ALL SERVICE AREAS WITHIN A NEIGHBORHOOD SHOPPING DISTRICT, SUCH AS THOSE FOR THE LOADING AND UNLOADING OF MERCHANDISE, THE DELIVERY OF FOOD AND EQUIPMENT AND THE COLLECTION AND PICKUP OF GARBAGE, SHALL BE LOCATED A MINIMUM OF 100 FEET FROM ANY ADJOINING PROPERTY LINE OR PROPERTY ZONED RESIDENTIAL OR RESTRICTED AGRICULTURAL. ALL SERVICE AREAS SHALL BE SCREENED FROM SIGHT BY APPROPRIATE FENCING, AND SUCH ADDITIONAL STEPS SHALL BE TAKEN AS ARE NECESSARY TO MINIMIZE THE IMPACT OF NOISE AND LIGHT ON ADJOINING RESIDENTIAL PROPERTIES.			
	100 FT	50 FT (MEDICAL CENTER DR) 50 FT (TOWNE CENTER RETIREMENT)	50 FT (MEDICAL CENTER DR) 50 FT (TOWNE CENTER RETIREMENT)

LAYOUT PLAN KEYED NOTES:

- 1 BUILDING ENTRANCE
- 2 INTEGRAL CONCRETE CURB (6" WIDE) AND SIDEWALK (5' WIDE)
- 3 BIORETENTION FILTER
- 4 SEGMENTAL BLOCK RETAINING WALL
- 5 STORMWATER INFILTRATION BASIN
- 6 ADA ACCESSIBLE PARKING
- 7 DUMPSTER ENCLOSURE
- 8 RAISED CURB LANDSCAPED ISLAND



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PROFESSIONAL ENGINEER
RODNEY C. TYES, JR., P.E.
NY'S REGISTRATION # 077942

PROJECT NO. **21-2022**

DATE **06/01/2022**

SCALE **1"=40'**

SHEET **C-3**

PROJECT TITLE:
**A&E & SNY CENTER
MEDICAL CENTER DRIVE**

TOWN OF MANLIUS ONONDAGA COUNTY, NEW YORK

PREPARED FOR:
**A&E & SNY CENTER
SUITE 38
5781 BRIDGE STREET
EAST SYRACUSE, NY 13057**

SHEET TITLE:
SITE PLAN

NO.	REVISION/ISSUE	DATE

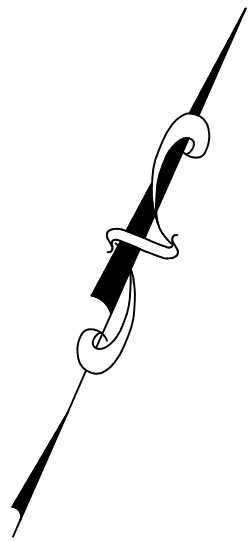
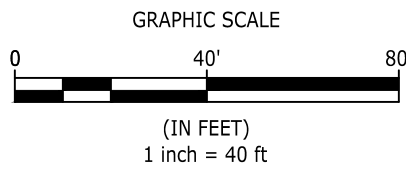
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MANLIUS, NEW YORK 13104
email: MNAP@NAPCON.COM
PH: (315) 682-5580 FAX: (315) 682-5544

PROJECT NO. **21-2022**

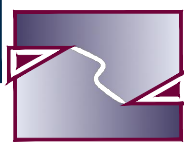
DATE **06/01/2022**

SCALE **1"=40'**

SHEET **C-3**



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P/E: (315) 682-5580 FAX: (315) 682-5544

PROJECT NO.	21-2022
DATE	06/01/2022
SCALE	1"=40'

NO.	REVISION/ISSUE	DATE

SHEET TITLE:

UTILITY PLAN

PROJECT TITLE:

A&E & SNY CENTER
MEDICAL CENTER DRIVE
TOWN OF MANLIUS ONONDAGA COUNTY, NEW YORK

PREPARED FOR:

A&E & SNY CENTER
SUITE 38
5781 BRIDGE STREET
EAST SYRACUSE, NY 13057

Short Environmental Assessment Form

Part 1 - Project Information

Instructions for Completing

Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information			
Name of Action or Project: A&E & SNY Center			
Project Location (describe, and attach a location map): Medical Center Drive at Avriel Drive (Tax Parcel 086.-01-03.9), Town of Manlius, Onondaga County			
Brief Description of Proposed Action: A two-phase development of a medical office / personal services center. The construction includes a 30,000 sf building with an additional 10,000 usable square feet in a basement for a total of 40,000 sf. Associated construction includes a 124-vehicle parking lot and associated utilities (water, sewer, stormwater management, electric, natural gas, communications).			
Name of Applicant or Sponsor: A&E & SNY CENTER		Telephone: (315) 445-1177 E-Mail: papam42020@gmail.com	
Address: Suite 38, 5781 Bridge Street			
City/PO: East Syracuse		State: New York	Zip Code: 13057
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.		NO ☒	YES ☐
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: Manlius Planning Board - Site Plan Approval		NO ☐	YES ☒
3. a. Total acreage of the site of the proposed action?		4.038 acres	
b. Total acreage to be physically disturbed?		3.050 acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		4.038 acres	
4. Check all land uses that occur on, are adjoining or near the proposed action:			
5. ☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☒ Commercial ☒ Residential (suburban)			
☐ Forest ☐ Agriculture ☐ Aquatic ☒ Other(Specify): Undeveloped			
☐ Parkland			

5. Is the proposed action, a. A permitted use under the zoning regulations? b. Consistent with the adopted comprehensive plan?	NO ☐ ☐	YES ☒ ☒	N/A ☐ ☐
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO ☐	YES ☒	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO ☒	YES ☐	
8. a. Will the proposed action result in a substantial increase in traffic above present levels? b. Are public transportation services available at or near the site of the proposed action? c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	NO ☒ ☐ ☐	YES ☐ ☒ ☒	
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: _____ _____	NO ☐	YES ☒	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____ _____	NO ☐	YES ☒	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____ _____	NO ☐	YES ☒	
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	NO ☒ ☒	YES ☐ ☐	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency? b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____ _____ _____	NO ☒ ☒	YES ☐ ☐	

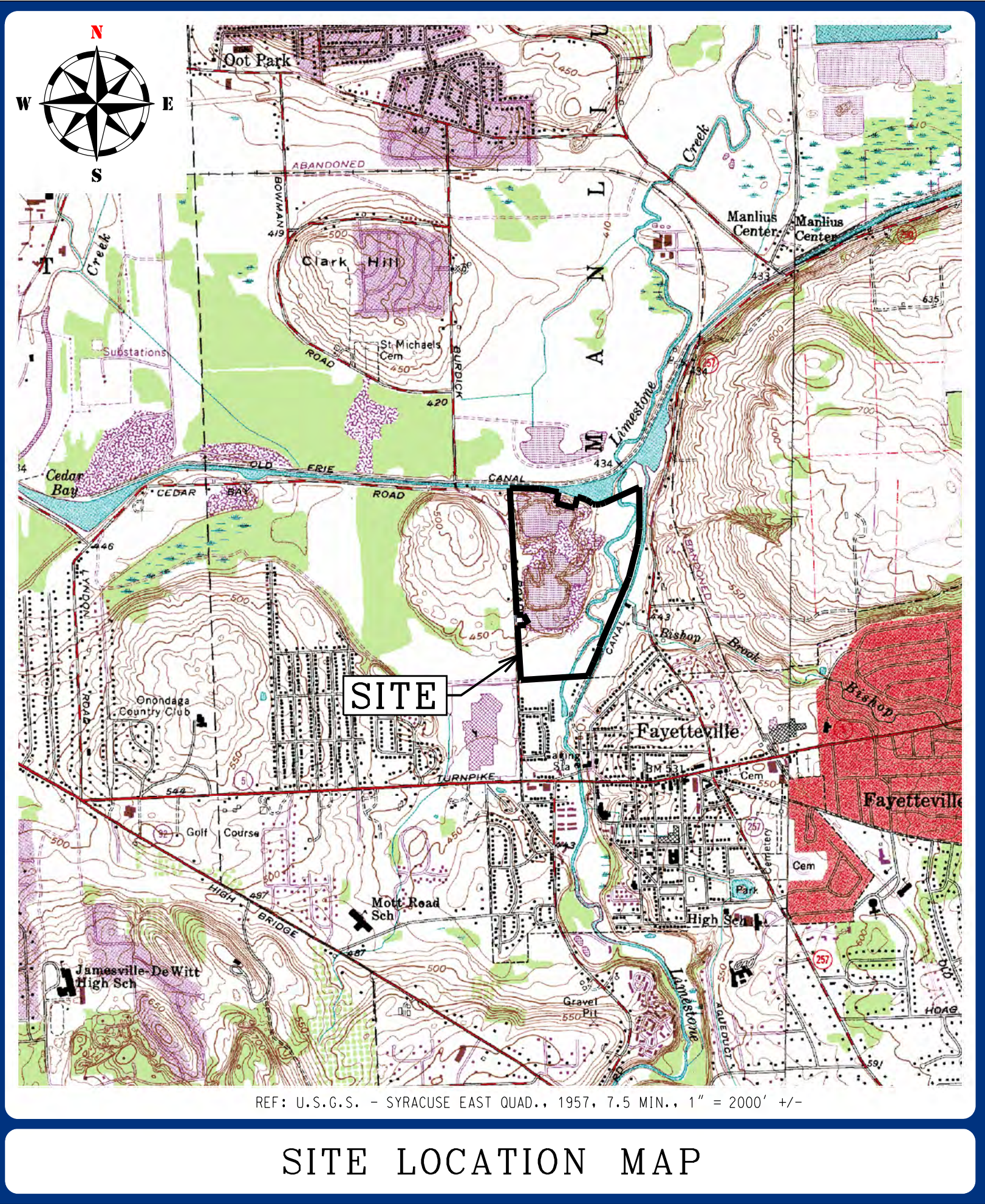
14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: ☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional ☐ Wetland ☐ Urban ☒ Suburban		
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered? Northern Long-eared Bat	NO	YES
	☐	☒
16. Is the project site located in the 100-year flood plan?	NO	YES
	☒	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes,	NO	YES
	☐	☒
a. Will storm water discharges flow to adjacent properties?	☐	☒
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe:	☐	☒
Existing 15" culvert at the intersection of Medical Center Drive and Avriel Drive		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment:	NO	YES
Stormwater management practice to attenuate runoff so as not to adversely impact downstream properties.	☐	☒
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe:	NO	YES
	☒	☐
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe:	NO	YES
	☒	☐
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE Applicant/sponsor/name: <u>A&E AND SMY CENTER</u> Date: <u>06/01/2022</u> Signature: <u></u> Title: <u>PROJECT MANAGER</u> <u>NAPIERALA</u> <u>CONSULTING</u> <u>AGENT FOR APPLICANT</u>		

TWIN LAKES COMMERCIAL DEVELOPMENT

TOWN OF MANLIUS, ONONDAGA COUNTY, NEW YORK

GENERAL NOTES

- THE PROJECT IS LOCATED ON NORTH BURDICK STREET IN THE TOWN OF MANLIUS, ONONDAGA COUNTY, NEW YORK.
- THE TERM "PLANS" REFERS TO THE SET OF SHEETS INDICATED ON THE "INDEX TO SHEETS" CONTAINING PLANS, DRAWINGS, NOTES, DETAILS, SPECIFICATIONS, SECTIONS, ETC. IN ADDITION, "PLANS" SHALL ALSO REFER TO DOCUMENTS, DRAWINGS, PERMITS, ETC. INCORPORATED BY REFERENCE.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND IN CONFORMANCE WITH THE REGULATIONS, CODES, STANDARDS, REQUIREMENTS AND RECOMMENDED PRACTICES OF THE FOLLOWING GOVERNMENTAL AGENCIES:
 - TOWN OF MANLIUS
 - ONONDAGA COUNTY WATER AUTHORITY (OCWA) AND WATER ENVIRONMENT PROTECTION (WEP)
 - ONONDAGA COUNTY DEPARTMENT OF TRANSPORTATION
 - NEW YORK STATE BUILDING CODE, LATEST EDITION
 - NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
 - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT THE PLANS ARE CURRENT, ISSUED FOR CONSTRUCTION AND THAT ALL SUBCONTRACTORS ARE REFERENCING THE SAME DOCUMENTS. THE CONTRACTOR SHALL OBTAIN AND REVIEW ALL PLANS, PERMITS AND DOCUMENTS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SHALL NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCY BETWEEN THE PLANS AND APPLICABLE REGULATIONS, CODES, STANDARDS, REQUIREMENTS AND RECOMMENDED PRACTICES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING ALL INSPECTIONS AND OBTAINING ALL CERTIFICATIONS, AS REQUIRED.
- THE CLIENT WILL POST THE CONSTRUCTION BOND FOR WORK WITHIN SITE SPECIFIC RIGHT-OF-WAY OR COORDINATE WITH GENERAL CONTRACTOR, AS NEEDED.
- THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING SITE CONDITIONS AND NOTIFY THE PROJECT ENGINEER IF THE CONDITIONS ARE DIFFERENT FROM THOSE SHOWN ON THE PLANS OR IF ANY EXISTING SITE FEATURES WILL ALTER THE PLANS.
- PRIOR TO CONSTRUCTION, A PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED WITH ALL INVOLVED PARTIES.
- PRIOR TO INITIATING CONSTRUCTION, THE CONTRACTOR SHALL GIVE TIMELY NOTIFICATION TO ALL UTILITY COMPANIES WITH FACILITIES IN THE AREA AND CONTACT THE LOCAL UNDERGROUND FACILITY PROTECTIVE ORGANIZATION (UDIG NY) AT 811.
- EACH CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS WHILE WORKING TO SAFEGUARD EXISTING STRUCTURES, UTILITIES AND SURVEY MARKERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING STRUCTURES, PAVEMENT, ETC. CAUSED BY THEIR WORK BEING PERFORMED. REPAIRS SHALL BE OF EQUAL OR BETTER QUALITY THAN EXISTING CONDITIONS. NOTIFICATION OF SUCH DAMAGE SHALL BE REPORTED TO THE CLIENT AND THE PROJECT ENGINEER.
- THE CONTRACTOR SHALL PROVIDE HAZARD BARRIERS PLACED CONSPICUOUSLY AROUND ALL PHASES OF CONSTRUCTION TO SAFEGUARD PUBLIC AND TRAFFIC AGAINST DANGEROUS CONDITIONS. ALL TRAFFIC CONTROLS SHALL BE PROVIDED AND MAINTAINED IN CONFORMANCE WITH THE NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND THE NEW YORK STATE SUPPLEMENT, AS APPLICABLE.
- ALL DIMENSIONS AND ELEVATIONS SHOWN ON THESE PLANS MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING CONSTRUCTION. ELEVATION DATA REFER TO THE BENCHMARK ON THE SURVEY INCORPORATED BY REFERENCE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER IN WRITING OF ANY DISCREPANCIES.
- THE CONTRACTOR MUST LOCATE ALL PROPERTY, EASEMENT AND RIGHT-OF-WAY BOUNDARIES PRIOR TO COMMENCING THE WORK. THE CONTRACTOR SHALL NOT TRESPASS OR INITIATE WORK WITHIN EASEMENTS AND RIGHT-OF-WAYS OR ON OTHER PROPERTIES WITHOUT OBTAINING PERMISSION FROM AND MEETING THE REQUIREMENTS OF THE PROPERTY OWNER OR CONTROLLING AGENCY.
- CONTRACTOR SHALL REFER TO ARCHITECTURAL/BUILDING PLANS (BY OTHERS) FOR BUILDING DIMENSIONS ENTRY/EXIT LOCATIONS AND UTILITY CONNECTION LOCATIONS. BUILDING DIMENSIONS PROVIDED HEREIN ARE NOT INTENDED FOR BUILDING LAYOUT. SPECIFIC LAYOUT DIMENSIONS MUST BE OBTAINED FROM THE ARCHITECTURAL PLANS FOR THE BUILDING. ANY DISCREPANCIES BETWEEN THE ARCHITECTURAL PLANS AND THOSE INDICATED ON THESE PLANS SHOULD BE BROUGHT TO THE ATTENTION OF THE CLIENT AND PROJECT ENGINEER PRIOR TO INITIATING THE WORK. THE CONTRACTOR SHOULD STAKE OUT AND VERIFY EACH BUILDING DIMENSION PRIOR TO THE COMMENCEMENT OF WORK.
- ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB LINES UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL NOTIFY THE LANDOWNER AND THE ONONDAGA COUNTY WATER AUTHORITY (OCWA) AND/OR METROPOLITAN WATER BOARD (MWB) AS APPLICABLE TO COORDINATE THE INSTALLATION OF THE WATER SERVICES. THE CONTRACTOR SHALL ALSO NOTIFY THE LANDOWNER AND THE ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION (WEP) TO COORDINATE THE INSTALLATION OF THE SEWER SERVICES.
- DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE AND ALL UNSUITABLE EXCAVATED MATERIAL AND DEBRIS SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.
- IN NO WAY SHALL THE ACTIVITIES OR THE PRESENCE OF THE PROJECT ENGINEER OR ITS EMPLOYEES AND SUBCONSULTANTS AT THE PROJECT SITE RELIEVE THE CONTRACTOR OF THE OBLIGATION, DUTY OR RESPONSIBILITY INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THESE PLANS, RELATED CONTRACT DOCUMENTS, PERMITS OR ANY REGULATIONS. THE PROJECT ENGINEER AND ITS PERSONNEL HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY HEALTH OR SAFETY PROGRAMS OR PROCEDURES.
- CONSTRUCTION METHODS AND MATERIALS NOT SPECIFIED IN THESE PLANS ARE TO MEET OR EXCEED THE CLIENT'S STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL OBTAIN SUCH SPECIFICATIONS DIRECTLY FROM THE CLIENT.
- THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE METHODS/MEANS FOR COMPLETING THE WORK PRIOR TO INITIATING CONSTRUCTION AND NOTIFYING THE CLIENT AND PROJECT ENGINEER WHEN A CONFLICT IS IDENTIFIED.
- IF THE CONTRACTOR DEVIATES FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN AUTHORIZATION FROM THE CLIENT AND PROJECT ENGINEER FOR SUCH DEVIATIONS, THEN THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PAYMENT OF ALL COSTS TO CORRECT ANY WORK DONE INCLUDING ALL FINES OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM.
- ALL CONTRACTORS MUST CARRY STATUTORY WORKER'S COMPENSATION INSURANCE, EMPLOYER'S LIABILITY INSURANCE AND APPROPRIATE LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE (CGL). ALL CONTRACTORS MUST FURNISH THE OWNER WITH CERTIFICATES OF INSURANCE AS EVIDENCE OF THE REQUIRED INSURANCE PRIOR TO INITIATING WORK AND UPON RENEWAL OF EACH POLICY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE THE CLIENT WITH AN ACCURATE RECORD DRAWING OF ALL EQUIPMENT, STRUCTURES AND UTILITIES INSTALLED OR ENCOUNTERED DURING THE PROJECT.



INDEX TO SHEETS	
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PARTIAL SITE PLAN	SP-2
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PAVING, GRADING AND DRAINAGE	
- PLAN	GD-1
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UTILITY	
- PLAN	UP-1
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- DETAILS & SPECIFICATIONS	UP-3
PHOTOMETRIC	
- LIGHTING PLAN	PL-1

OWNER:

TWIN SHORES PROPERTIES, LLC
1333 13th STREET
EAST MOLINE, ILLINOIS 61244

CONTACT: DAVID NEUMAN
TELEPHONE: (315) 729-8459
E-MAIL: dneuman@twin-shores.com

PROJECT ENGINEER:

TDK ENGINEERING ASSOCIATES, P.C.
19 GENESEE STREET
CAMILLUS, NY 13031

CONTACT: JOE DURAND
TELEPHONE: (315) 672-8726
E-MAIL: jdurand@tdkengineering.com

SITE DEVELOPMENT PROJECT

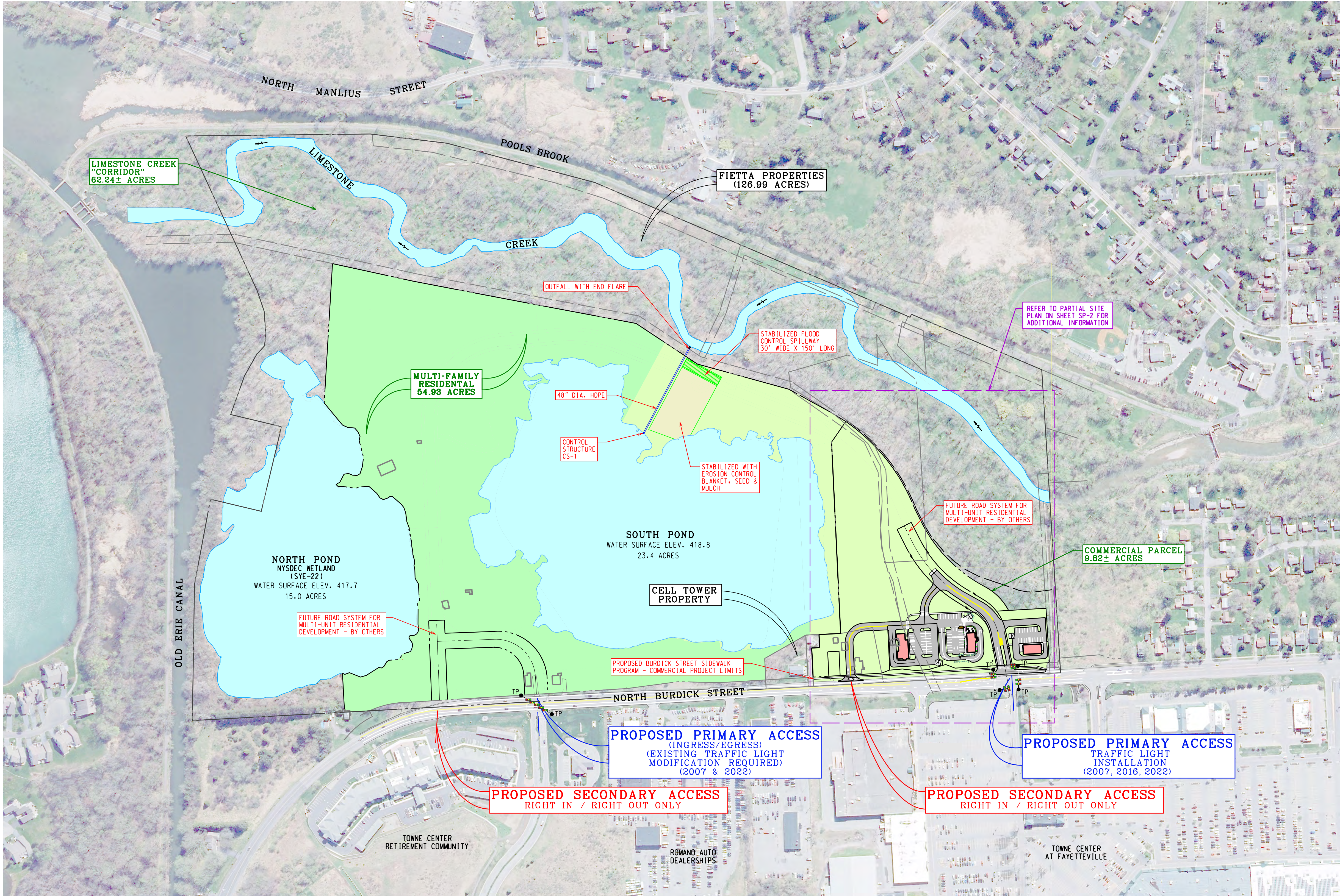
(PROJECT No. 2021054)
NOVEMBER 2022

REVISIONS:

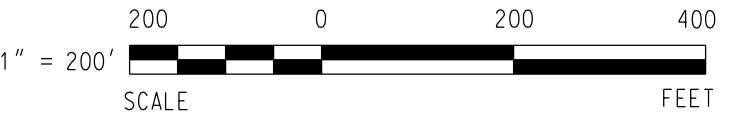
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NOTE: NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.





OVERALL SITE PLAN



- BASEMAP REFERENCES:
1. TOWN OF MANLIUS ZONING MAP, 2016 ZONING.
 2. "BOUNDARY SURVEY", PREPARED BY CNY LAND SURVEYING, DATED 12/28/21.
 3. NYS DIGITAL ORTHOIMAGERY PROGRAM (NYSOT): DATED 2021.
 4. SYRACUSE-ONONDAGA COUNTY GIS ON THE WEB: DATED 2021.



PRELIMINARY
11-16-22
NOT FOR
CONSTRUCTION

REVISIONS:

NO.	DATE:	DESCRIPTION:

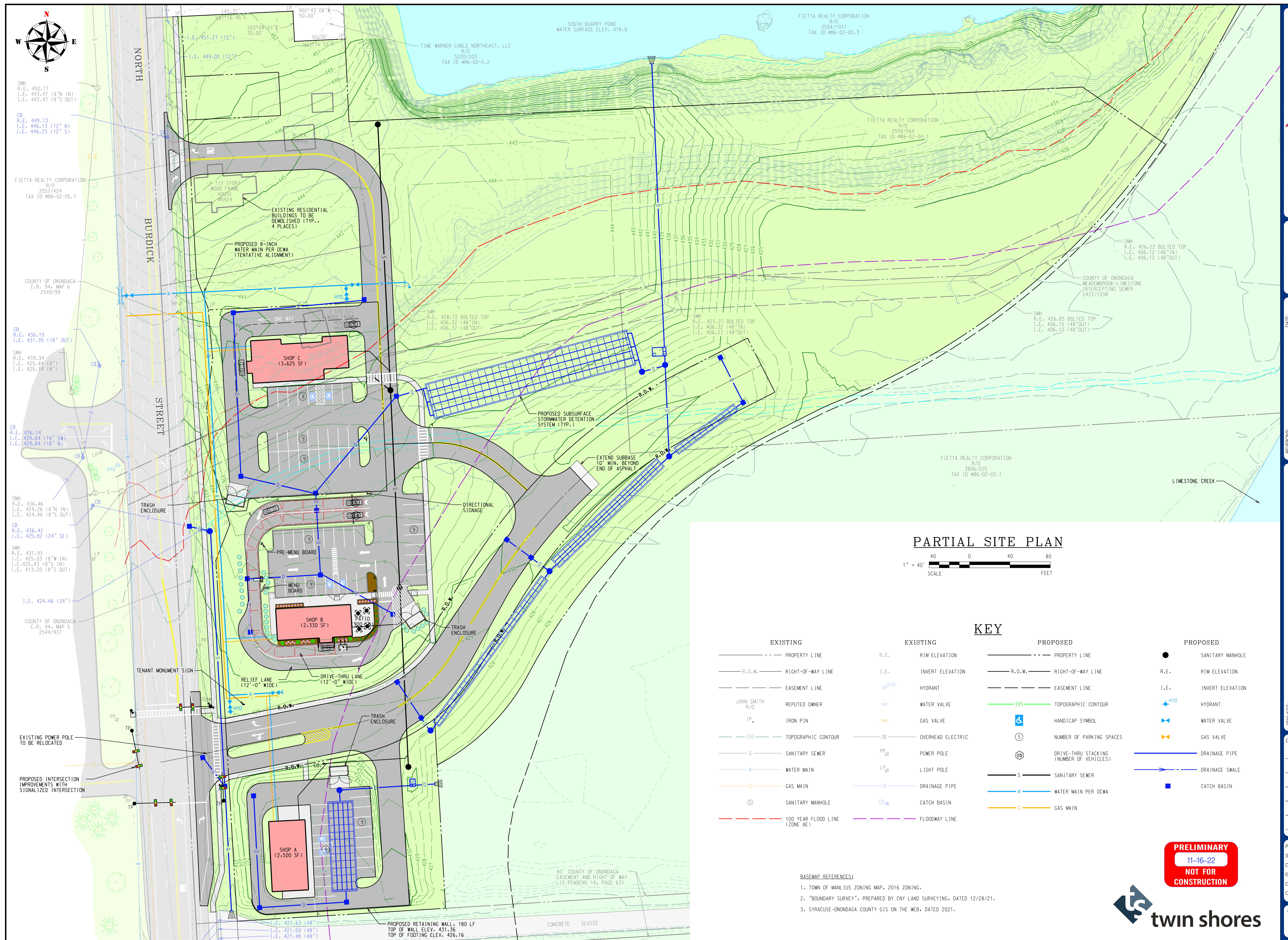
NOTE: NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

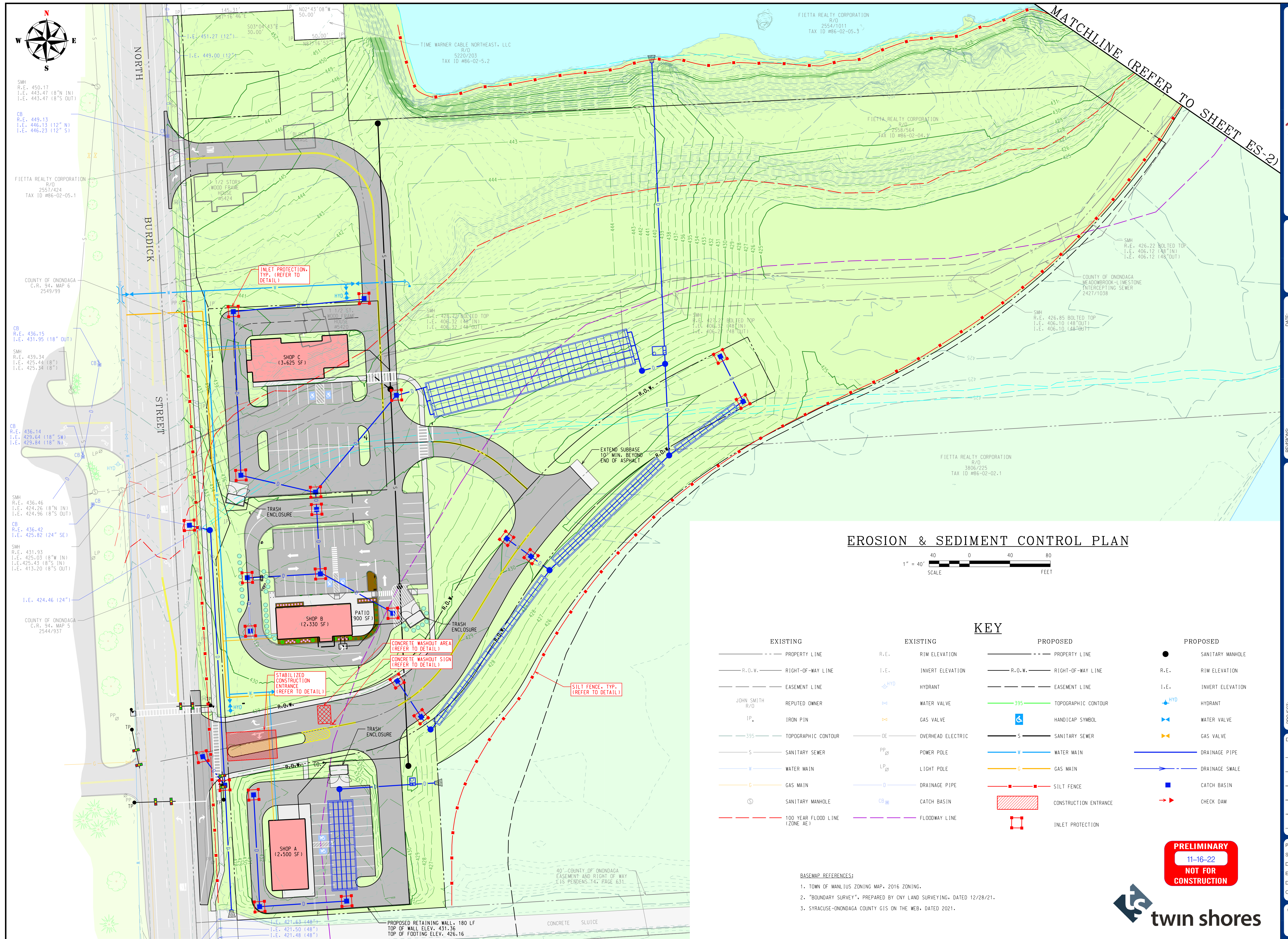
PROJECT: TWIN LAKES COMMERCIAL DEVELOPMENT
CLIENT: TWIN SHORES PROPERTIES, LLC
LOCATION: N. BURDICK STREET, TOWN OF MANLIUS, ONONDAGA COUNTY, NEW YORK

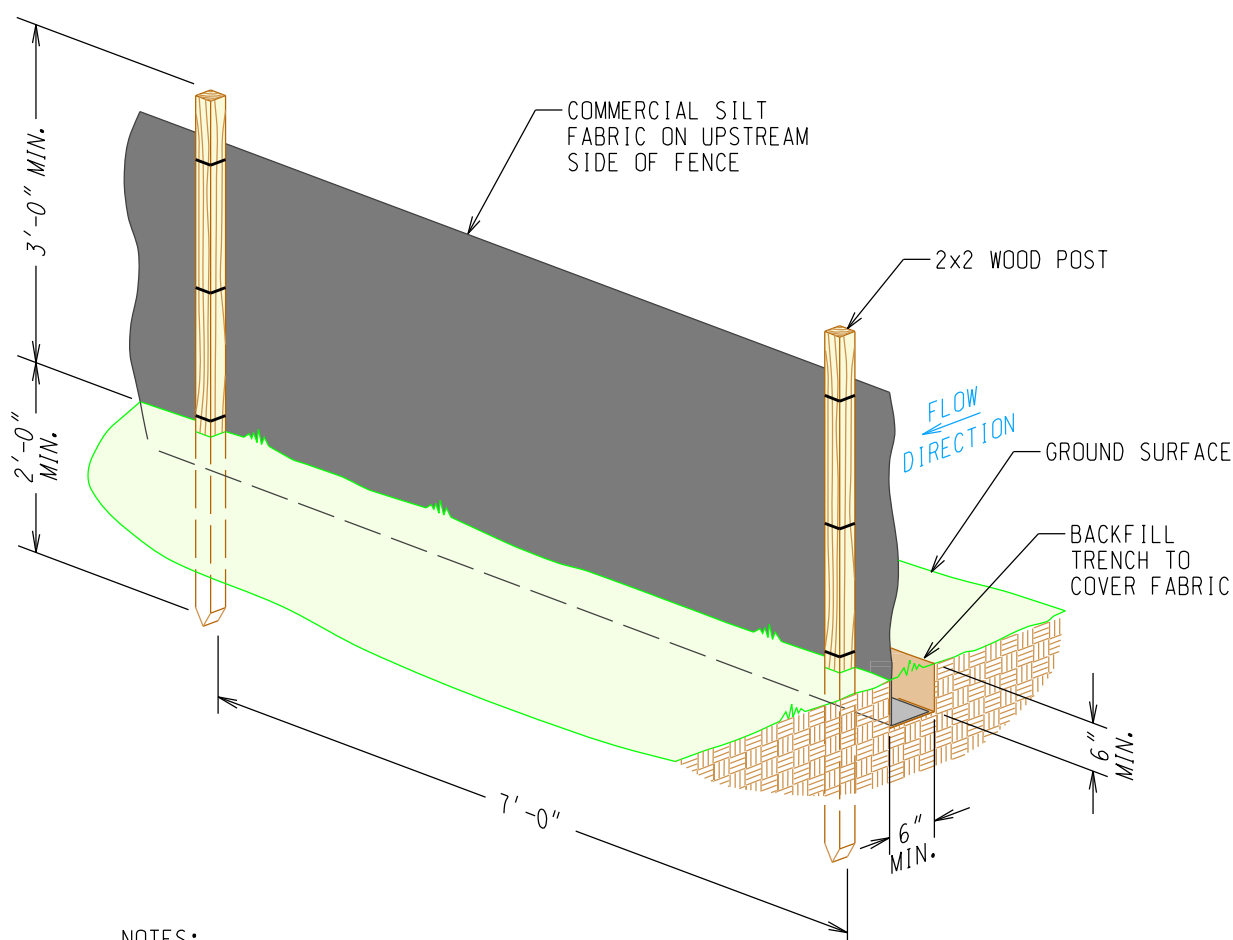
DRAWING TITLE:
OVERALL
SITE PLAN

PROJECT No.: 2021054
SCALE: AS NOTED
DATE:
ENG'D BY: SKO
DRAWN BY: DKC
CHECKED BY: JED

SHEET NO.
SP-1





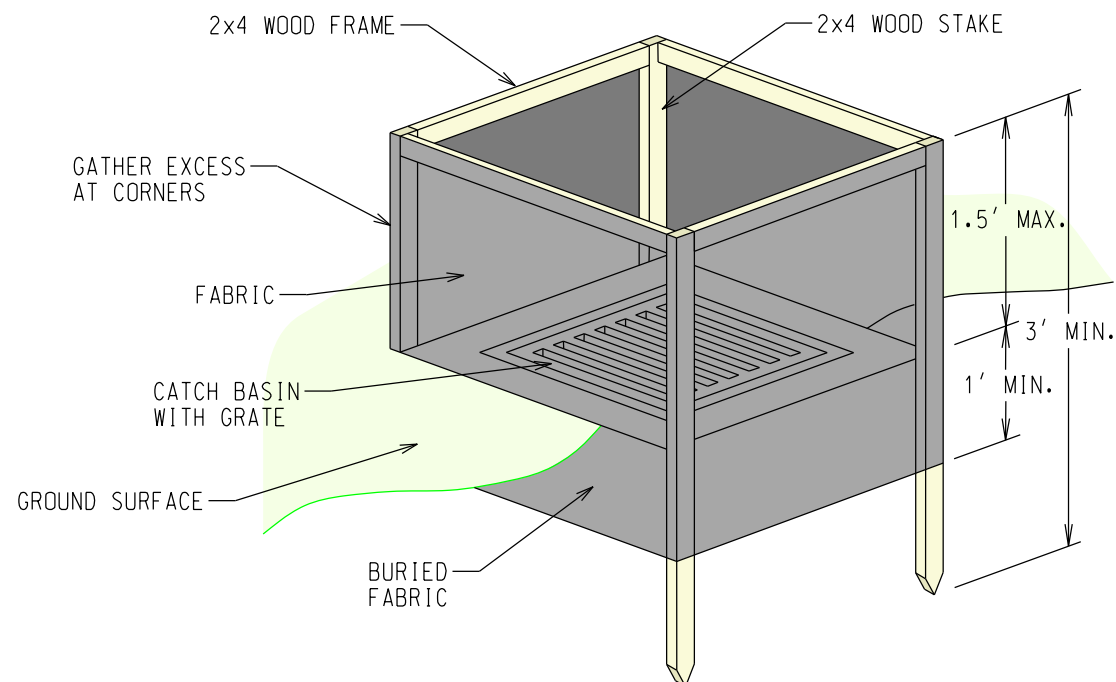


NOTES:

1. FILTER CLOTH SHALL BE MIRAFI 100X, "STABLELINK T140N" OR APPROVED EQUAL. IF A PREFABRICATED UNIT IS UTILIZED USE ENVIROFENCE OR APPROVED EQUAL.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE DETAIL

NOT TO SCALE

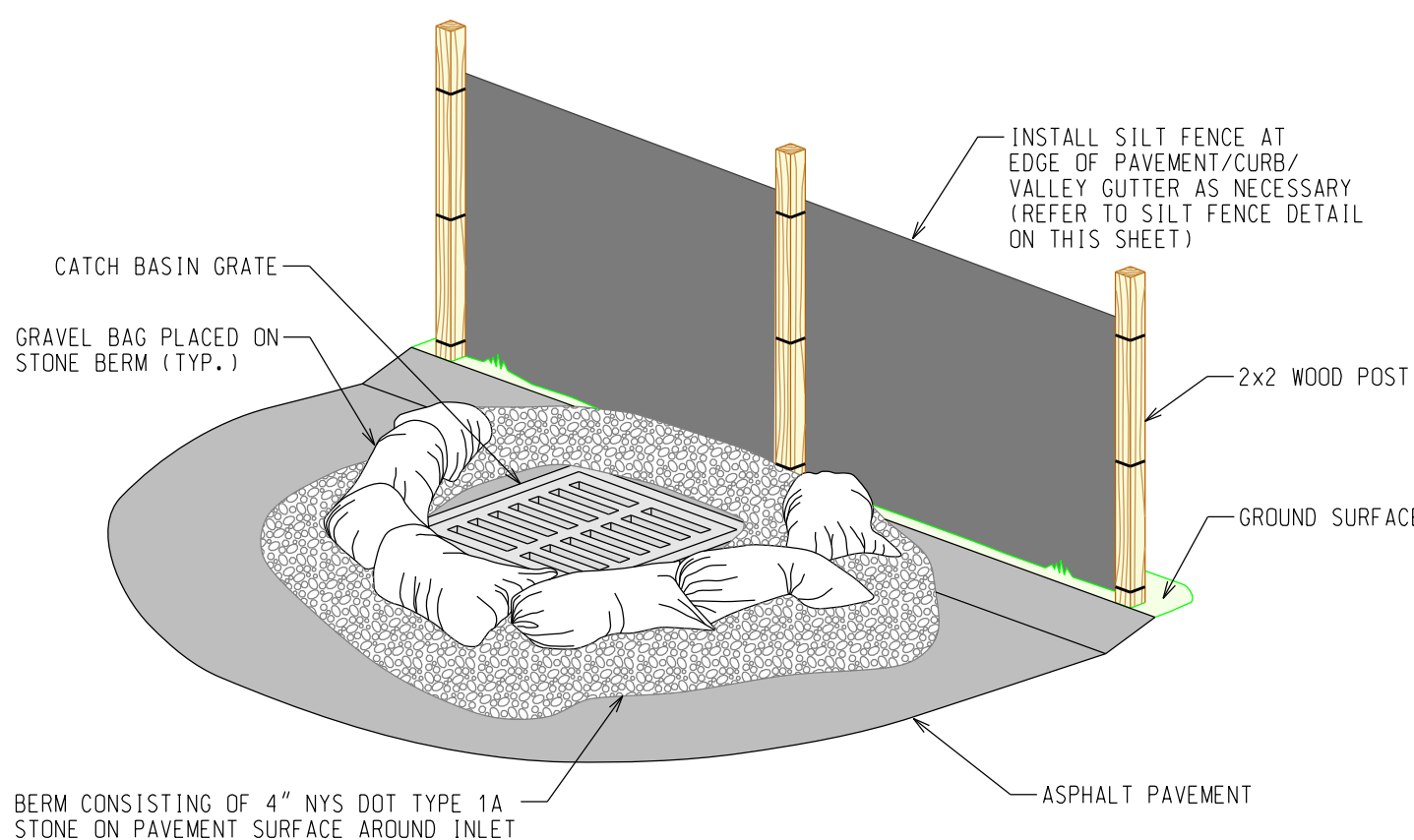


NOTES:

1. FILTER FABRIC SHALL HAVE AN EQUIVALENT OPENING SIZE (EOS) OF 40 TO 85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKES WILL BE STANDARD 2"x4" WOOD OR METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2"x4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVERFLOW STABILITY.
7. ALTERNATE FORM OF INLET PROTECTION MAY BE PERFORMED UPON REVIEW AND APPROVAL FROM PROJECT ENGINEER.

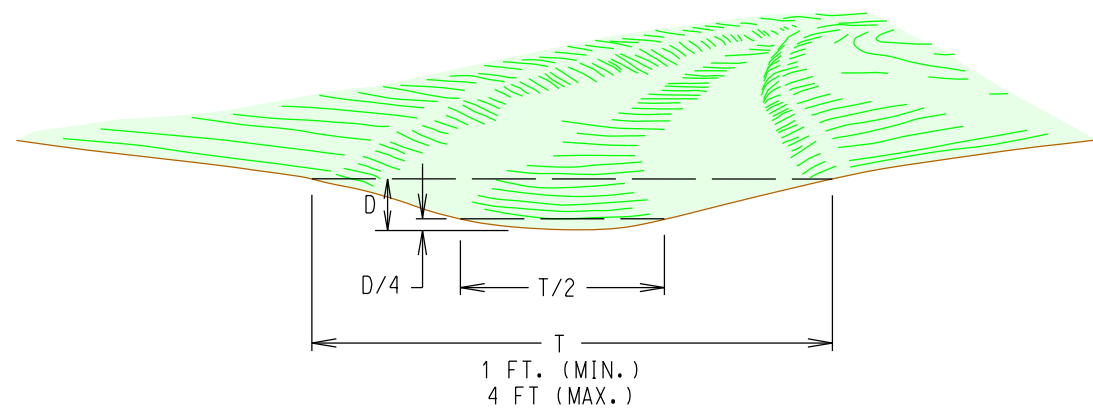
FILTER FABRIC INLET PROTECTION

NOT TO SCALE



PAVEMENT INLET PROTECTION DETAIL

NOT TO SCALE

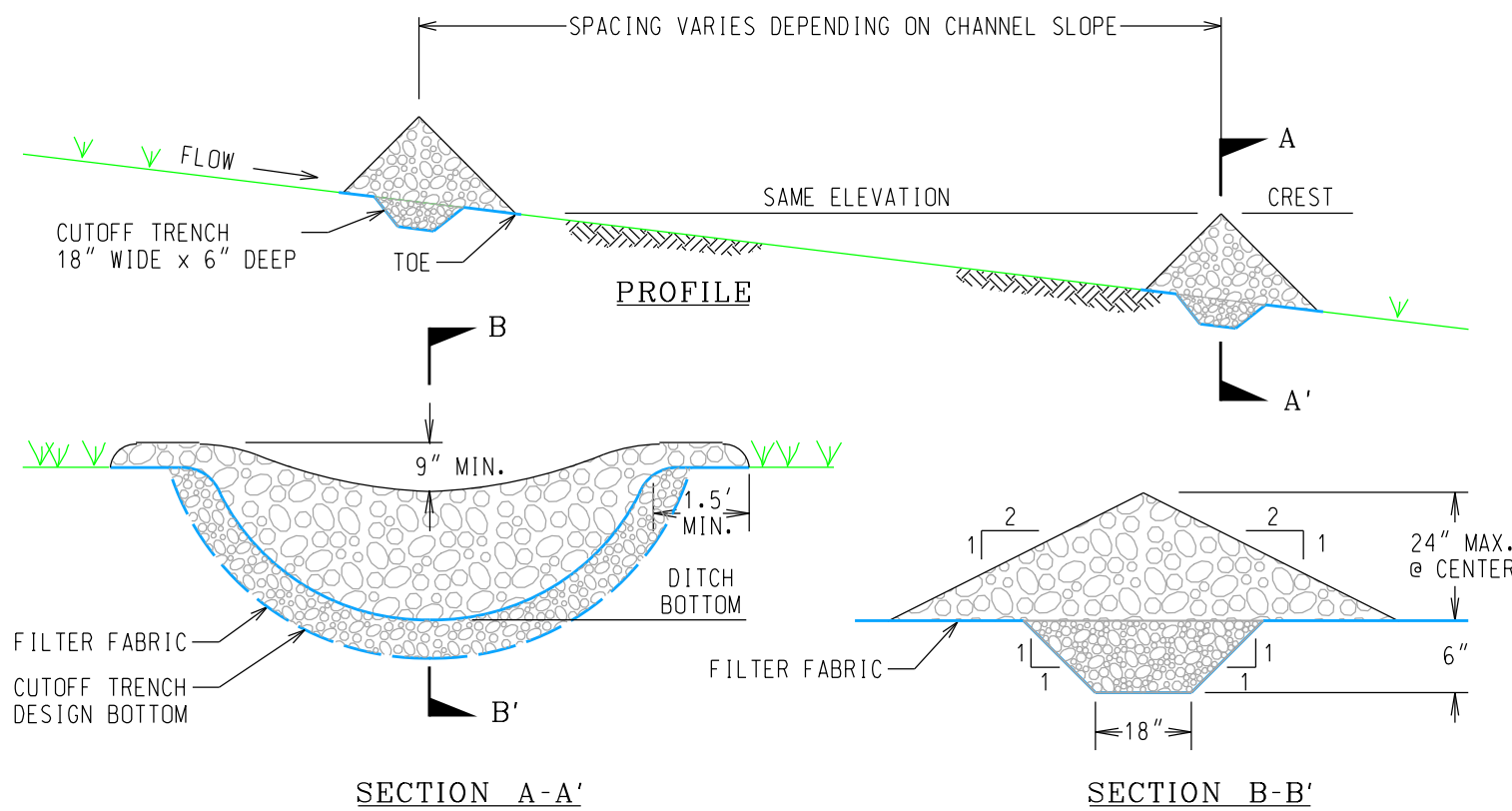


CONSTRUCTION SPECIFICATIONS

1. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED SO AS NOT TO INTERFERE WITH THE FLOW OF WATER.
2. THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN, AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
3. FILLS SHALL BE COMPACTED AS NECESSARY TO PREVENT UNEQUAL SETTLEMENT THAT WOULD CAUSE DAMAGE IN THE COMPLETED WATERWAY.
4. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED SO THAT IT WILL NOT INTERFERE WITH THE WATERWAY.
5. THE WATERWAY SHALL BE STABILIZED ACCORDING TO THE APPROPRIATE STANDARD AND SPECIFICATIONS FOR VEGETATIVE PRACTICES.
 - A. FOR DESIGN VELOCITIES OF LESS THAN 3.5 FEET PER SECOND, SEEDING AND MULCHING MAY BE USED FOR THE ESTABLISHMENT OF THE VEGETATION. IT IS RECOMMENDED THAT, WHEN CONDITIONS PERMIT, TEMPORARY DIVERSIONS OR OTHER MEANS SHOULD BE USED TO PREVENT WATER FROM ENTERING THE WATERWAY DURING THE ESTABLISHMENT OF THE VEGETATION.

GRASSED SWALE DETAIL

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS:

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
6. STONE SIZE: USE GRADED STONE 2 TO 15 INCHES IN SIZE (NYS DOT LIGHT STONE FILL MEETS THESE REQUIREMENTS).
7. FILTER FABRIC: MIRAFI 500X WOVEN GEOTEXTILE OR APPROVED EQUAL.

CHECK DAM DETAIL

NOT TO SCALE

EROSION & SEDIMENT CONTROL SPECIFICATIONS

1. ONE WEEK PRIOR TO BEGINNING EARTHWORK OPERATIONS, A PRECONSTRUCTION MEETING WILL BE HELD TO DISCUSS THE EROSION AND SEDIMENT CONTROL PLAN.
2. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROVIDED PRIOR TO BEGINNING ANY LAND DISTURBANCE ACTIVITIES. THE DEVICES PROVIDING PROTECTION TO A GIVEN AREA SHALL NOT BE REMOVED UNTIL THE DISTURBED LANDS IN THAT AREA ARE STABILIZED.
3. NO DISTURBED AREA SHALL REMAIN EXPOSED FOR MORE THAN 7 CALENDAR DAYS, EXCEPT FOR PORTIONS OF THE SITE IN WHICH WORK WILL BE CONTINUOUS BEYOND 14 DAYS (I.E. THE BUILDING FOOTPRINT)

CONSTRUCTION SEQUENCE:

1. INSTALL CONSTRUCTION ENTRANCE(S).
2. INSTALL SILT FENCES AS INDICATED.
3. BEGIN EARTHWORK, CLEARING AND GRADING OPERATIONS (ALL AREAS).
 - A. PROVIDE SILT FENCING AROUND PERIMETER OF STAGED TOP SOIL AND/OR TEMPORARILY STAGED PILES OF FILL.
 - B. DURING GRADING OPERATIONS, INSTALL AND MAINTAIN SILT FENCING. PRELIMINARY LOCATIONS OF THE SILT FENCING ARE SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN.
4. INSTALL UTILITIES. CONTRACTOR TO PROTECT ALL UTILITIES FROM SEDIMENT INFILTRATION.
5. REMOVE TEMPORARY EROSION CONTROL DEVICES ONCE VEGETATION HAS BEEN ESTABLISHED AND/OR PAVING IS COMPLETED.

INSPECTION PROCEDURES & MAINTENANCE:

1. DURING CONSTRUCTION, THE CONTRACTOR WILL BE RESPONSIBLE FOR INSPECTING AND MAINTAINING THE PERMANENT AND TEMPORARY EROSION CONTROL FACILITIES. ALSO, AREAS THAT HAVE BEEN SEEDED WILL BE INSPECTED REGULARLY AFTER SEED GERMINATION TO ENSURE COMPLETE COVERAGE OF EXPOSED AREAS.
2. INSPECTIONS OF ALL DEVICES SHOULD BE COMPLETED WEEKLY AND AFTER EACH RAINFALL EVENT. REPAIRS SHOULD BE COMPLETED IMMEDIATELY UPON DISCOVERY.

THE CONTRACTOR WILL DESIGNATE A QUALIFIED PERSON(S) TO PERFORM THE FOLLOWING INSPECTIONS:

- A. STABILIZATION MEASURES: DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION WILL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. AFTER A PORTION OF THE SITE IS FINALLY STABILIZED, INSPECTIONS WILL BE CONDUCTED AT LEAST ONCE EVERY MONTH THROUGHOUT THE LIFE OF THE PROJECT.
 - B. STRUCTURAL CONTROLS: FILTER FABRIC FENCES AND ALL OTHER EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED ON THE PLANS, WILL BE INSPECTED REGULARLY FOR PROPER POSITIONING, ANCHORING AND EFFECTIVENESS IN TRAPPING SEDIMENTS. SEDIMENT WILL BE REMOVED FROM THE UPSTREAM OR UP-SLOPE SIDE OF THE FILTER FABRIC.
 - C. DISCHARGE POINTS: DISCHARGE POINTS OR LOCATIONS WILL BE INSPECTED TO DETERMINE WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT AMOUNTS OF POLLUTANTS FROM ENTERING RECEIVING WATERS.
 - D. CONSTRUCTION ENTRANCES: LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE WILL BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.
3. SEDIMENT AROUND THE SILT FENCING SHOULD BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE DEVICES.
 4. ALL SEEDED AREAS SHALL BE MAINTAINED AS FOLLOWS:
 - A. IDENTIFY SEEDED AREAS WITH STAKES, STRING AND BRIGHTLY COLORED FLAGGING. PROTECT SEEDED AREAS UNTIL VEGETATION HAS BEEN ESTABLISHED.
 - B. IMMEDIATELY RESEED AREAS WHICH DO NOT ESTABLISH VEGETATION.
 - C. SUBMIT MAINTENANCE INSTRUCTIONS FOR FERTILIZING AND LAWN CARE.
 5. TO PRESERVE THE FUNCTIONALITY OF THE STORM WATER MANAGEMENT SYSTEM, THE OWNER OF THE PROPOSED FACILITY SHALL COMPLETE THE FOLLOWING:
 - A. INSPECT THE SITE FOR SUBSIDENCE, EROSION, CRACKING OR TREE GROWTH.
 - B. COORDINATE THE REMOVAL OF ANY ACCUMULATED SEDIMENT.
 6. THE OWNER WILL ALSO BE RESPONSIBLE FOR MAINTAINING THE LAWN AND LANDSCAPED AREAS.

LANDSCAPE SPECIFICATIONS

TOPSOIL

TOPSOIL MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF NYS DOT SPECIFICATION SECTION 713, OR SHALL BE SUITABLE MATERIAL APPROVED BY THE PROJECT ENGINEER.

MINIMUM THICKNESS OF 3-INCHES.

AREAS RECEIVING TOPSOIL SHALL BE LEFT NEATLY GRADED AND READY TO RECEIVE SEEDING.

SEEDING

WORK FOR SEEDING SHALL CONSIST OF PREPARING GROUND SURFACES FOR SEEDING, FURNISHING AND INSTALLING FERTILIZER, SEED, AND MULCH ON AREAS INDICATED BY THE PLANS, STANDARD DETAILS AND IN AREAS DIRECTED BY THE PROJECT ENGINEER.

MATERIALS FOR SEED, FERTILIZER AND MULCH SHALL CONFORM TO THE REQUIREMENTS OF NYS DOT SPECIFICATION SECTION 713, OR SHALL BE APPROVED BY THE PROJECT ENGINEER.

THE AREAS TO RECEIVE SEEDING SHALL BE THOROUGHLY PREPARED PRIOR TO SEEDING. SEED AND FERTILIZER SHALL BE SPREAD IN THE AMOUNT SPECIFIED AND SHALL BE EVENLY DISTRIBUTED ON THE AREAS TO BE SEEDED.

SUGGESTED SEED MIX (OR EQUAL):

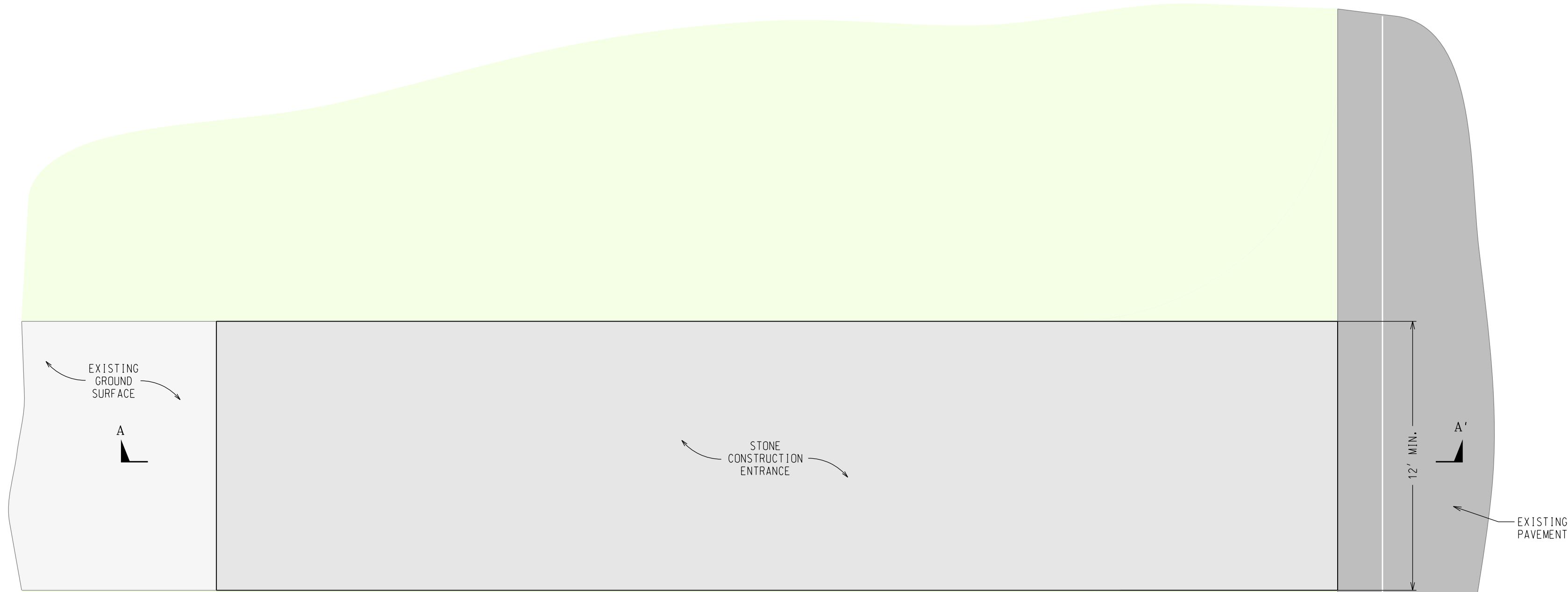
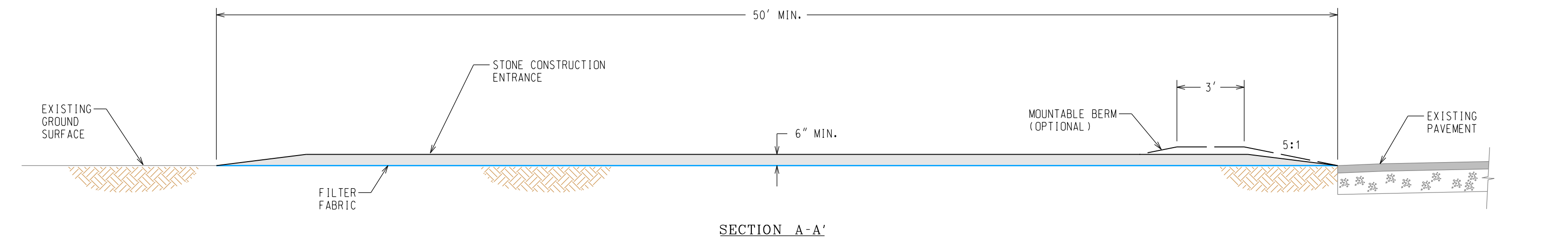
DISTURBED AREAS		
NAME	lbs/ACRE	lbs/1,000 SQ. FT.
65% KENTUCKY BLUEGRASS	85-114	2.0-2.6
20% PERENNIAL RYEGRASS	26-35	0.6-0.8
15% FINE FESCUE	19-26	0.4-0.6
TOTAL	130-175	3.0-4.0

SWALES		
NAME	lbs/ACRE	lbs/1,000 SQ. FT.
KENTUCKY BLUEGRASS	25	0.6
CREeping RED FESCUE	20	0.5
PERENNIAL RYEGRASS	10	0.2
TOTAL	55	1.3

SUGGESTED FERTILIZER (OR EQUAL):
NYS DOT 713-03 TYPE NO. 3, 10-6-4 (50% N-U-F)
FERTILIZER SHALL BE APPLIED AT THE RATE OF 800 POUNDS PER ACRE.

MULCH (HAY OR STRAW) SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE, AND SHALL BE ANCHORED WITH A COMMERCIALLY AVAILABLE MULCH ANCHORAGE PRODUCT, IF NECESSARY.

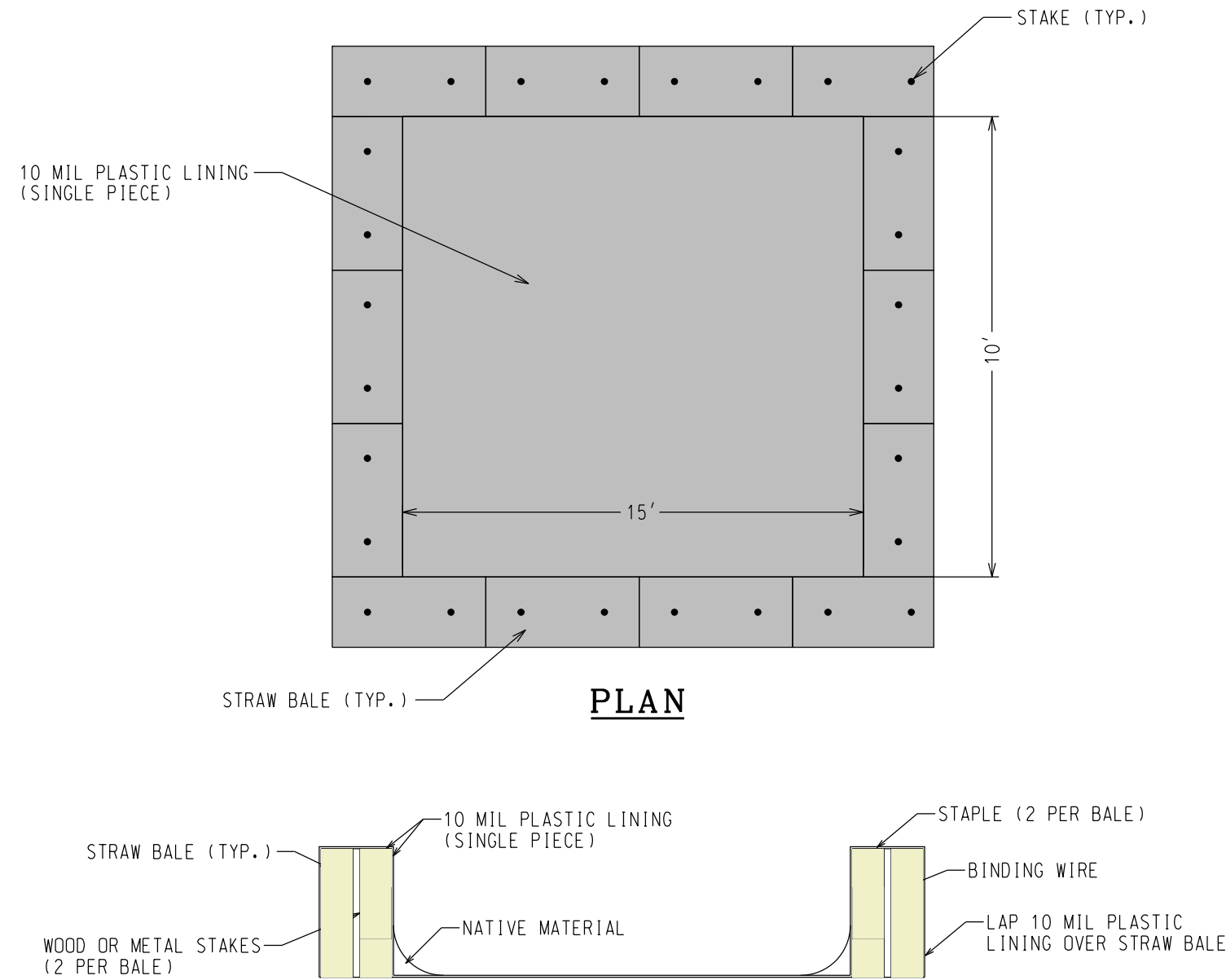
ANCHORING: LIGHT-WEIGHT PAPER, JUTE, WOOD FIBER, PLASTIC OR EXCELSIOR BIODEGRADABLE USE TO PROTECT SEED & MULCH AND SECURE TO SLOPES.



- NOTES:
1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
 2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
 3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
 4. WIDTH - TWELVE (12) FOOT MINIMUM BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FEET IF SINGLE ENTRANCE TO SITE.
 5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
 6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
 7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

CONSTRUCTION ENTRANCE SECTION

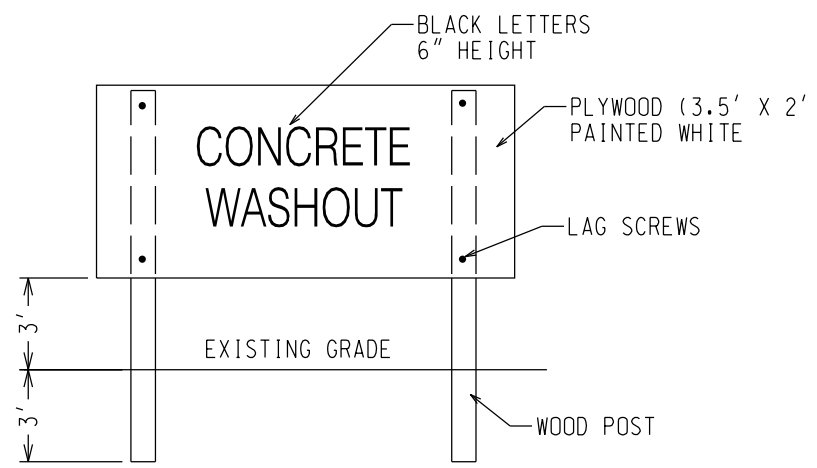
SCALE: 1" = 4'



CONCRETE WASHOUT DETAIL

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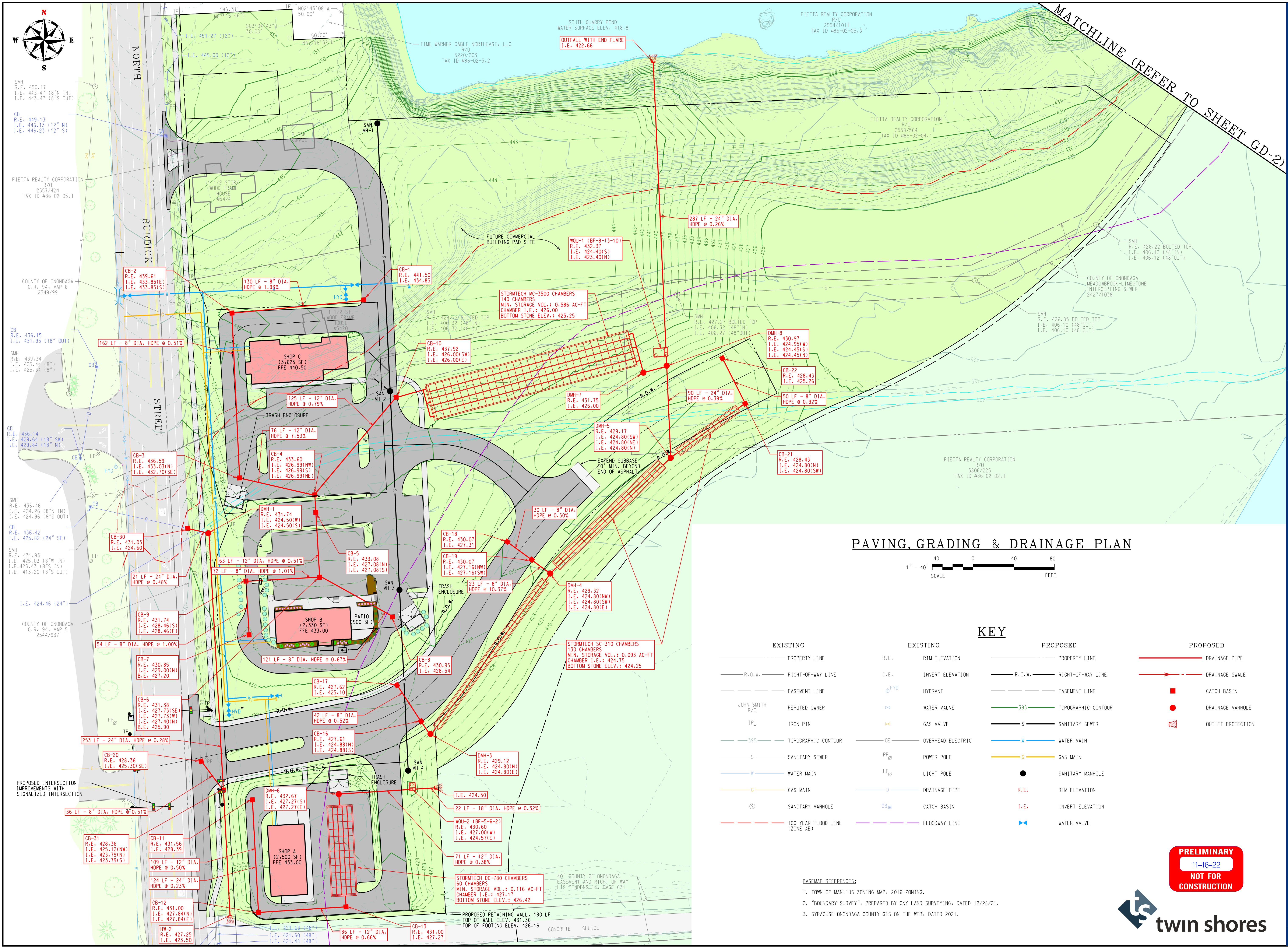
- NOTES:
1. ALL MATERIALS MUST BE REMOVED WHEN THE WASHOUT BECOMES NO MORE THAN 75% FILLED.
 2. ALL HARDENED MATERIALS SHALL BE CLEANED OUT AND DISPOSED OF PROPERLY.
 3. ALL WASHOUTS SHALL BE INSPECTED A MINIMUM OF ONCE A WEEK AND AFTER EACH RAIN EVENT AND ANY REPAIRS MADE AS NEEDED WITHIN 48 HOURS.
 4. INSTALL A STABILIZED ACCESS TO THE WASHOUT AREA.
 5. INSTALL THE CONCRETE WASHOUT SIGN WITHIN 10' OF THE FACILITY.



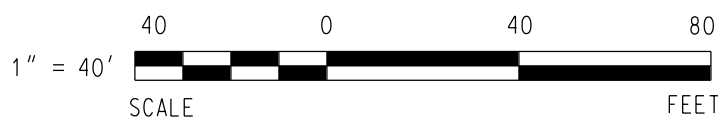
CONCRETE WASHOUT SIGN DETAIL

NOT TO SCALE

PRELIMINARY
11-16-22
NOT FOR
CONSTRUCTION



PAVING, GRADING & DRAINAGE PLAN



KEY

EXISTING		EXISTING		PROPOSED		PROPOSED	
---	PROPERTY LINE	R.E.	RIM ELEVATION	---	PROPERTY LINE	---	DRAINAGE PIPE
---	R.O.W. RIGHT-OF-WAY LINE	I.E.	INVERT ELEVATION	---	R.O.W. RIGHT-OF-WAY LINE	---	DRAINAGE SWALE
---	EASEMENT LINE	HYD	HYDRANT	---	EASEMENT LINE	■	CATCH BASIN
---	JOHN SMITH REPUTED OWNER	WV	WATER VALVE	---	395 TOPOGRAPHIC CONTOUR	●	DRAINAGE MANHOLE
IP	IRON PIN	GV	GAS VALVE	---	S SANITARY SEWER	▲	OUTLET PROTECTION
---	395 TOPOGRAPHIC CONTOUR	OE	OVERHEAD ELECTRIC	---	W WATER MAIN		
---	S SANITARY SEWER	PP	POWER POLE	---	G GAS MAIN		
---	W WATER MAIN	LP	LIGHT POLE	●			
---	G GAS MAIN	D	DRAINAGE PIPE	R.E.			
⊙	SANITARY MANHOLE	CB	CATCH BASIN	I.E.			
---	100 YEAR FLOOD LINE (ZONE AE)	---	FLOODWAY LINE	WV			

- BASEMAP REFERENCES:
- TOWN OF MANLIUS ZONING MAP, 2016 ZONING.
 - "BOUNDARY SURVEY", PREPARED BY CNY LAND SURVEYING, DATED 12/28/21.
 - SYRACUSE-ONONDAGA COUNTY GIS ON THE WEB, DATED 2021.



TPK Engineering Associates, PC

19 Genesee Street • Camillus, New York 13031 • PH: (315) 672-3725 • FX: (315) 672-3722
www.tpkengineering.com

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REVISIONS:

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2	
3	
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PROJECT: **TWIN LAKES COMMERCIAL DEVELOPMENT**

CLIENT: **TWIN SHORES PROPERTIES, LLC**

LOCATION: **N. BURDICK STREET, TOWN OF MANLIUS, ONONDAGA COUNTY, NEW YORK**

DRAWING TITLE:

PAVING, GRADING & DRAINAGE PLAN

PROJECT No.: **2021054**

SCALE: **AS NOTED**

DATE: _____

ENG'D BY: **SKO**

DRAWN BY: **DKC**

CHECKED BY: **JED**

SHEET NO. **GD-1**

CONCRETE SPECIFICATIONS

(CURBING & SIDEWALKS)

CONCRETE AND STEEL REINFORCEMENT:

1.1 CAST-IN-PLACE CONCRETE SHALL CONSIST OF THE FOLLOWING:

- 28-DAY COMPRESSIVE STRENGTH ($f'c$ = 4,000 psi).
- SLUMP RANGE OF 1 TO 3 INCHES.
- TYPE 1A (NORMAL, AIR-ENTRAINED) PORTLAND CEMENT PER ASTM C150.
- NOMINAL MAXIMUM SIZE OF COARSE AGGREGATE SHALL BE 1-INCH.
- TOTAL AIR CONTENT, PERCENTAGE BY VOLUME OF CONCRETE, SHALL BE BETWEEN 3.5% AND 6.5%.
- SYNTHETIC FIBERS (100% VIRGIN POLYPROPYLENE) SHALL BE ADDED AT A RATE OF 1.5 LB PER CUBIC YARD OF CONCRETE. SYNTHETIC FIBERS SHALL BE PROVIDED IN THE SLAB MIXES ONLY.

1.2 REINFORCING STEEL SHALL BE TO THE SIZE AND DIMENSIONS AS INDICATED ON THIS PLAN AND CONFORM TO THE FOLLOWING:

- ASTM A615, 60 KSI YIELD GRADE; UNFINISHED, DEFORMED, BILLET STEEL BARS.

1.3 STEEL REINFORCEMENT ACCESSORIES SHALL CONFORM TO THE FOLLOWING:

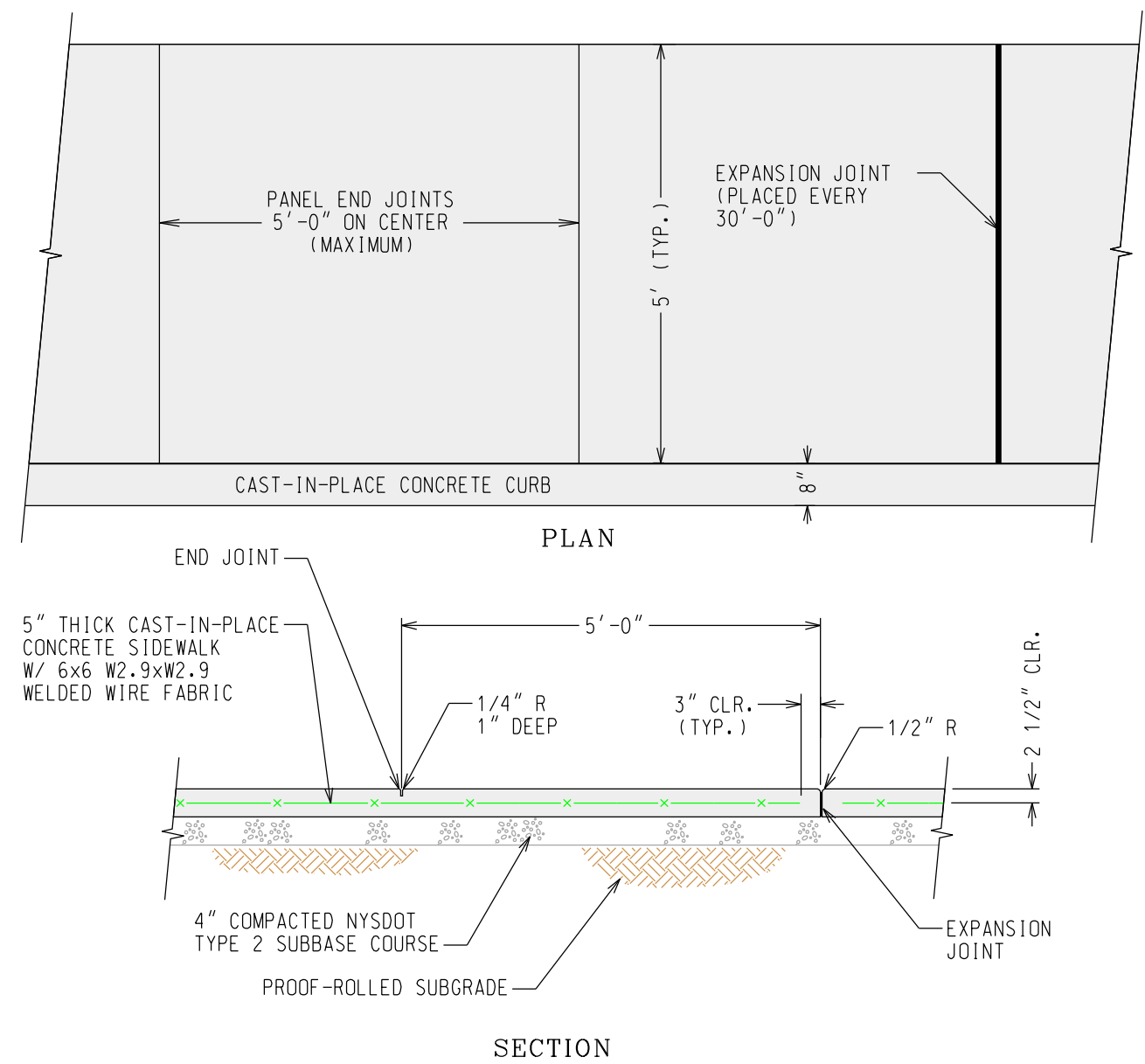
- TIE WIRE: MINIMUM 16 GAUGE ANNEALED TYPE.
- CHAIRS, BOLSTERS, BAR SUPPORTS, SPACERS: SIZED AND SHAPED FOR STRENGTH AND SUPPORT OF REINFORCEMENT DURING CONCRETE PLACEMENT CONDITIONS.

1.4 ALL STEEL REINFORCEMENT SHALL BE FABRICATED TO THE SIZE AND DIMENSIONS INDICATED ON THIS PLAN IN ACCORDANCE WITH:

- CRSI MANUAL OF PRACTICE, LATEST EDITION.
- ACI 318, LATEST EDITION

1.5 CONCRETE SURFACE SHALL BE SEALED WITH "SINAK SEALER S-102", OR PROJECT ENGINEER APPROVED EQUAL.

1.6 ALL CONSTRUCTION AND CONTROL JOINTS IN THE CONCRETE SHALL BE SEALED WITH "MASTER BUILDERS TECHNOLOGIES, SONOLASTIC - SONOMERIC 1", OR APPROVED EQUAL.



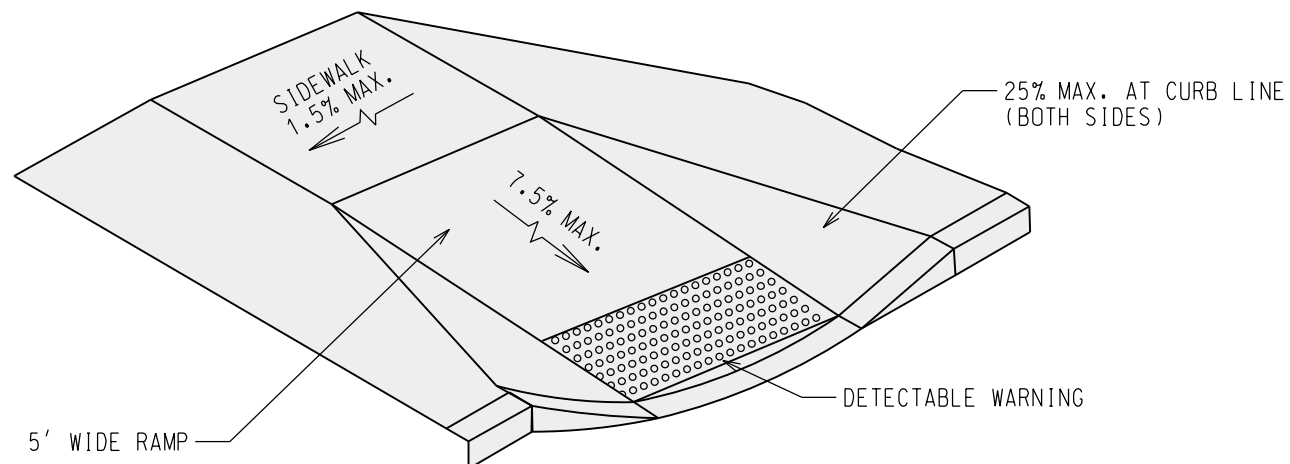
NOTES:

- COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 4,000 P.S.I. (MIN.).
- SURFACE OF CONCRETE SIDEWALK SHALL HAVE A BROOM FINISH.
- EXPANSION JOINTS SHALL BE NON-RIISING, PREMOLDED MASTIC AND SHALL BE LOCATED ON 30'-0" CENTERS (MAX.).
- FOR LOCATION OF ON-SITE SIDEWALKS REFER TO GRADING PLAN.
- STEEL REINFORCEMENT SHALL BE POSITIONED AT MID-DEPTH OF SIDEWALK.
- CONCRETE SURFACE SHALL BE SEALED WITH "SINAK SEALER S-102", OR PROJECT ENGINEER APPROVED EQUAL. PROVIDE SLIP RESISTANT COATING PER HILTON SPECIFICATIONS.

CONCRETE SIDEWALK DETAIL

(PRIVATE PROPERTY)

SCALE: 1/2" = 1'-0"



SIDEWALK CURB DETAIL

NOT TO SCALE

NOTE:

- SLOPES ON BLENDED TRANSITIONS SHALL NOT BE STEEPER THAN 2% (1 ON 50) IN ANY DIRECTION

REFERENCES:

- "SIDEWALK CURB RAMP DETAILS" AS PREPARED BY STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION; SHEET NO. 608-01

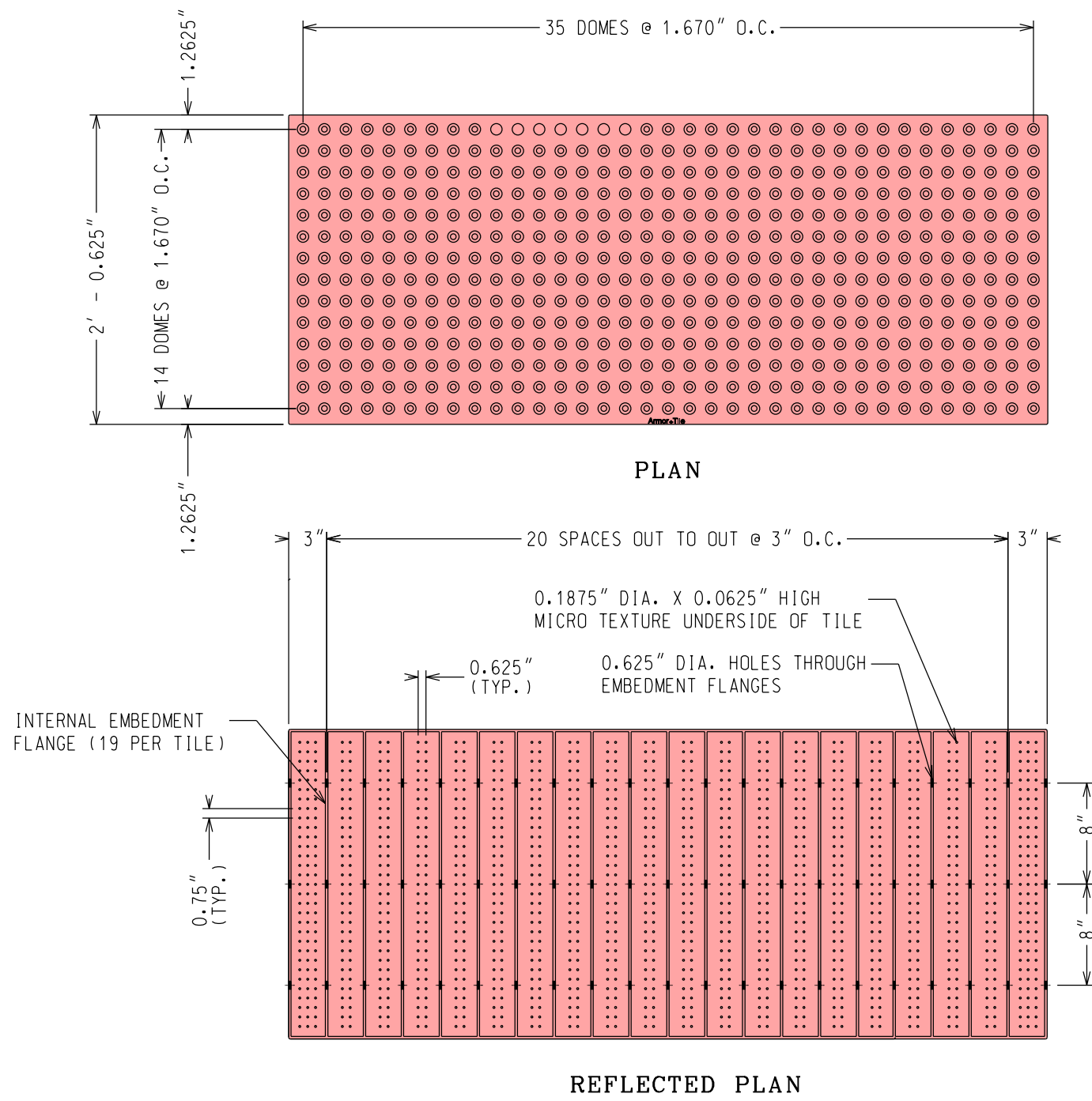
PAVING MATERIAL TABLE

ITEM	NYSOT MATERIAL & SPECIFICATIONS	ITEM No.	THICKNESS	PLACEMENT
TOP	402.1283	DOT 12 F3 HMA	1-1/2"	1 LIFT, MECHANICALLY COMPACTED
BINDER	402.2589	DOT 25 F9 HMA	2-1/2"	1 LIFT, MECHANICALLY COMPACTED
SUBBASE	304.12	TYPE 2 SUBBASE	12"	2 LIFTS (MAX. 8-INCH LIFTS), 95% COMPACTION *
SUBGRADE	N/A	N/A	NA	PROOF ROLLED & EXHIBITING A FIRM STABLE SURFACE

NA NOT APPLICABLE

* PER MODIFIED PROCTOR (ASTM D1557 AND D6938)

REFER TO PROJECT GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION. (GEOTECHNICAL EVALUATION REPORT - PROPOSED MANUFACTURING BUILDING'S STERI-PHARM FACILITY, 429 SOUTH WEST STREET, SYRACUSE, NEW YORK, PREPARED BY KENNEY GEOTECHNICAL ENGINEERING SERVICES, PLLC, DATED JULY 15, 2015).



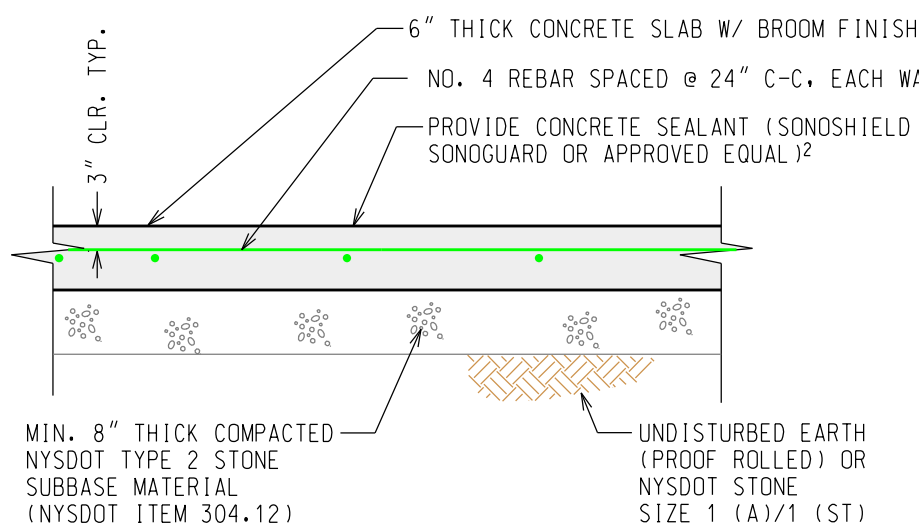
NOTES:

- DETECTABLE WARNING SURFACE SHALL BE ARMOR-TILE DETECTABLE WARNING SURFACE TILE; 24" X 60" CAST IN PLACE INLINE DOME TACTILE TILE. PART NO. ADA-C-2460. ALTERNATIVE DETECTABLE WARNING FIELD MUST BE APPROVED BY PROJECT ENGINEER.
- THE DETAILS PROVIDED ARE NOT DRAWN TO SCALE. THE QUANTITY OF DOMES DEPICTED ON THE DETECTABLE WARNING FIELD (THE DOMES AND THE ENTIRE 2 FT. LEVEL SURFACE) IS FOR ILLUSTRATION ONLY.
- DETECTABLE WARNING FIELD DIMENSIONS
- THE SIZE OF THE DETECTABLE WARNING FIELD SHALL BE 2 FT. IN THE DIRECTION OF TRAVEL AND SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE, EXCLUSIVE OF SIDE FLARES.
- DETECTABLE WARNINGS LOCATIONS

DETECTABLE WARNINGS SHALL BE LOCATED SO THAT THE EDGE OR ON CURB RAMP TYPE 1 AT LEAST ONE CORNER OF THE WARNING FIELD NEAREST TO THE ROADWAY (5 6 INCHES TO 9 INCHES FROM THE FRONT OF THE CURB OR THE EDGE (12 INCHES WHERE TRAVERSABLE CURB IS USED).

DETECTABLE WARNING FIELD FOR CURB RAMP

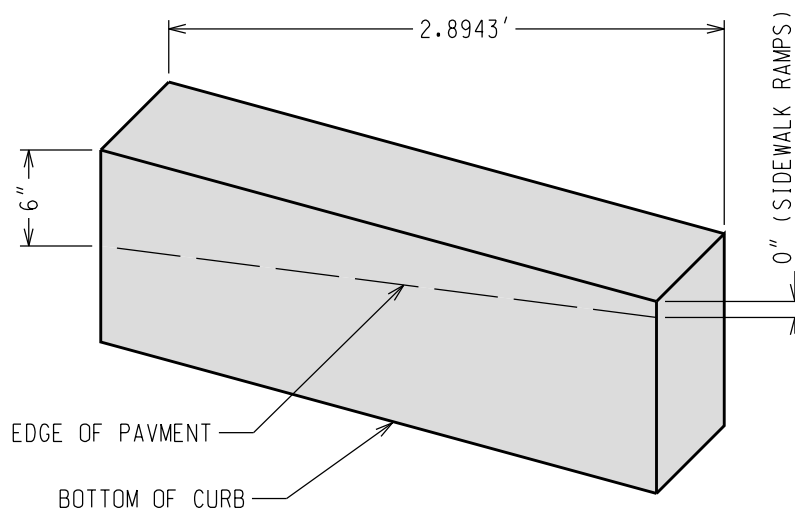
NOT TO SCALE



NOTES:

- GRADING TO BE COORDINATED WITH SITE IMPROVEMENTS AND EXISTING OR PROPOSED DRAINAGE SYSTEM.
- CONCRETE SEALANT SHALL BE APPLIED IN STRICT CONFORMANCE WITH MANUFACTURER'S SPECIFICATIONS.

TYPICAL DRIVEWAY AND DUMPSTER PAD DETAIL

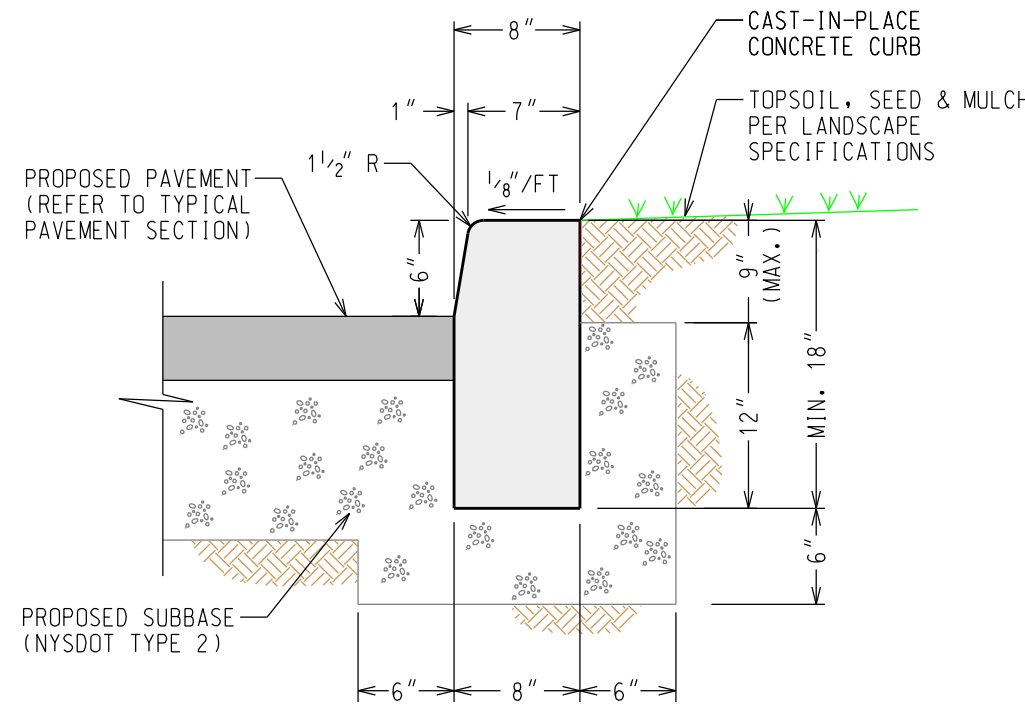


CONCRETE TRANSITION CURB DETAIL

SCALE: 1" = 1'-0"

NOTE:

- REF.: DOT STANDARD SHEET M609-4R1.

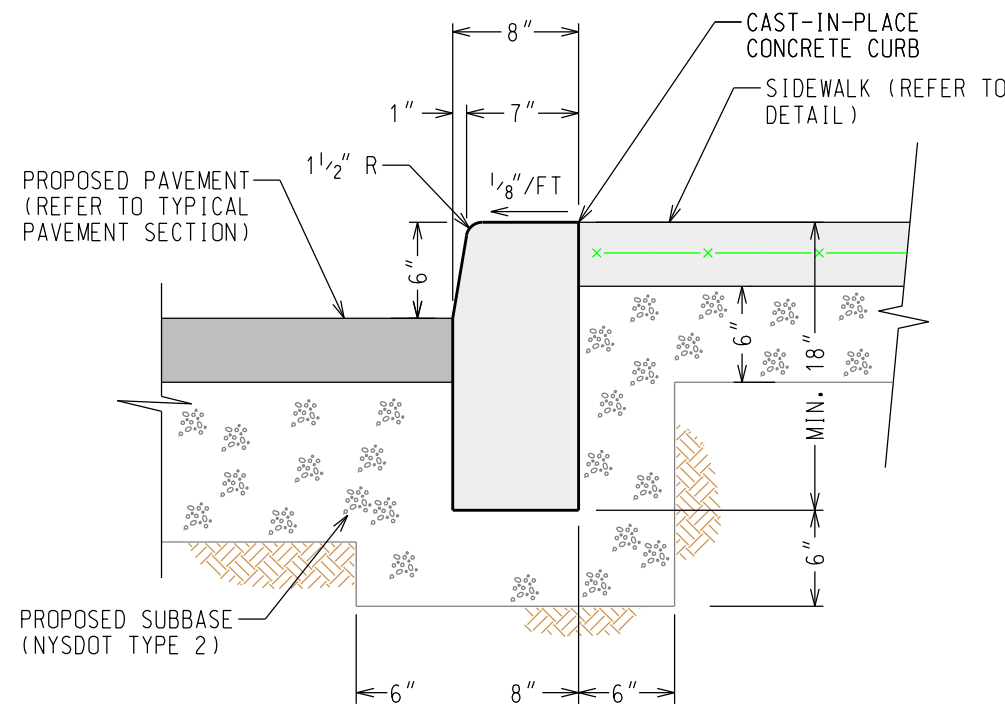


NOTES:

- THE CONCRETE CURB SHALL MEET THE SPECIFICATIONS AND SIZE OF A NYSOT TYPE "VF150" CURB.
- CONTROL JOINTS AT A MINIMUM OF EVERY 10 FEET AND EXPANSION JOINTS AT A MINIMUM OF EVERY 30 FEET.

CONCRETE CURB DETAIL

SCALE: 1" = 1'-0"

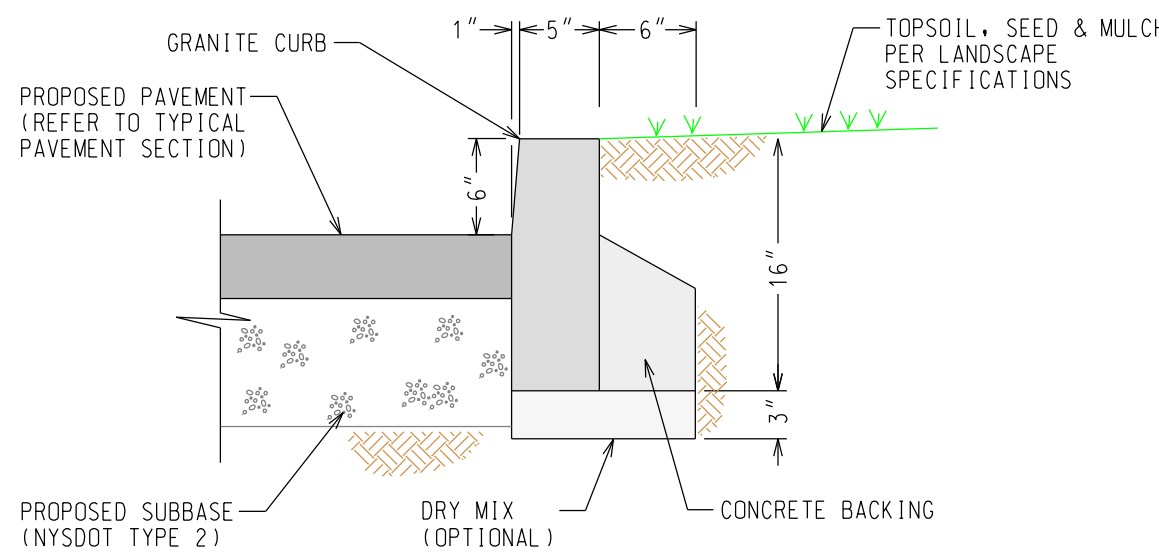


NOTES:

- THE CONCRETE CURB SHALL MEET THE SPECIFICATIONS AND SIZE OF A NYSOT TYPE "VF150" CURB.
- CONTROL JOINTS AT A MINIMUM OF EVERY 10 FEET AND EXPANSION JOINTS AT A MINIMUM OF EVERY 30 FEET.

CONCRETE CURB AND SIDEWALK DETAIL

SCALE: 1" = 1'-0"



NOTES:

- THE GRANITE CURB SHALL MEET THE SPECIFICATIONS AND SIZE OF A NYSOT TYPE "C" CURB (NON-MOUNTABLE).
- STONE OR PRECAST CURB USED ADJACENT TO FLEXIBLE PAVEMENT SHALL BE SET ON A CONTINUOUS CONCRETE BACKING (1 3:6 MIX APPROXIMATE). THE CONTRACTOR SHALL HAVE THE OPTION OF USING A DRY CONCRETE MIX IN THE AREA SHOWN.
- GRANITE CURBING SHALL BE USED AT LOCATIONS INDICATED ON PLANS.

GRANITE CURB DETAIL

SCALE: 1" = 1'

PAVING SPECIFICATIONS

GENERAL:

- SUBSTITUTIONS AND/OR MATERIALS BY DIFFERENT MANUFACTURERS MAY BE USED, PROVIDED THEY MEET THE PERFORMANCE REQUIREMENTS AND ARE PRE-APPROVED BY THE CITY AND THE PROJECT ENGINEER.
- ALL UNDERGROUND UTILITIES INCLUDING ELECTRICAL CONDUIT SHALL BE INSTALLED PRIOR TO PLACING SUBBASE.

MATERIAL SPECIFICATIONS:

- THE SEPARATION FABRIC SHALL BE MIRAFI 500X GEOTEXTILE.
- AGGREGATE AND PAVING MATERIAL PER TABLES.

SITE DEMOLITION:

- SAWCUT AND REMOVE ALL PAVING, CONCRETE PADS, SUBBASE AND OBSTRUCTIONS FROM AREAS TO BE REGRADED & PAVED. HOLES TO BE FILLED WITH SELECT STRUCTURAL FILL TO SUBGRADE. REFER TO SOIL AND AGGREGATE TABLE.
- STRIP AND STOCKPILE TOPSOIL, AS APPLICABLE.
- PERFORM CUT/FILL OPERATIONS. DISPOSE OF EXCESS SPOILS IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
- PROOF ROLL SUBGRADE. OVER DIG ANY "SOFT" AREAS AND REPLACE WITH SELECT STRUCTURAL FILL. PROJECT GEOTECHNICAL ENGINEER TO BE NOTIFIED A MINIMUM OF 48 HOURS IN ADVANCE OF PROOF ROLLING OPERATIONS.

FILL MATERIAL PLACEMENT:

- PLACE SELECT STRUCTURAL FILL MATERIAL (SEE SOIL AND AGGREGATE TABLE) IN MAXIMUM 12-INCH COMPACTED LIFTS. COMPACT TO 95% MAXIMUM DRY DENSITY PER MODIFIED PROCTOR (ASTM D1557 AND D6938).

SUBBASE TESTING:

- SPREAD AGGREGATE OVER PREPARED SUBGRADE TO A TOTAL COMPACTED THICKNESS OF 12-INCHES IN MAX. 8-INCH LIFTS AS REQUIRED TO ACHIEVE PROPOSED GRADES AND/OR MATCH EXISTING GRADES. REFER TO PAVING MATERIAL TABLE FOR SUBBASE MATERIAL SPECIFICATIONS. COMPACT PER PROJECT GEOTECHNICAL REPORT.
- COMPLETE TESTS IN ACCORDANCE WITH ASTM D1557 AND D6938.
- IF TESTS INDICATE WORK DOES NOT MEET SPECIFIED REQUIREMENTS, REMOVE WORK, REPLACE AND RE-TEST.
- FREQUENCY OF TESTS:
 - FOR PAVED AREAS, AT LEAST ONE FIELD DENSITY TEST OF SUBBASE IN EACH COMPACTED FILL LAYER FOR EVERY 10,000 SQUARE FEET OF PAVED AREA, BUT NO LESS THAN THREE TESTS.
 - MOISTURE-DENSITY RELATIONSHIP TESTING SHOULD BE COMPLETED ONCE PER 250 CUBIC YARDS OF MATERIAL PLACED OR WHEN A CHANGE IN MATERIAL GRADATION IS NOTED.

HMA PAVEMENT PLACEMENT

- HMA PAVEMENT MUST BE PLACED ON SURFACES WITH A MINIMUM TEMPERATURE OF 45° FARENHEIT.
- HMA MIXTURE TEMPERATURE MUST BE BETWEEN 250° AND 325° FARENHEIT.

HMA PAVEMENT COMPACTION

- FOLLOW THE GUIDELINES PROVIDED IN THE FOLLOWING TABLE:

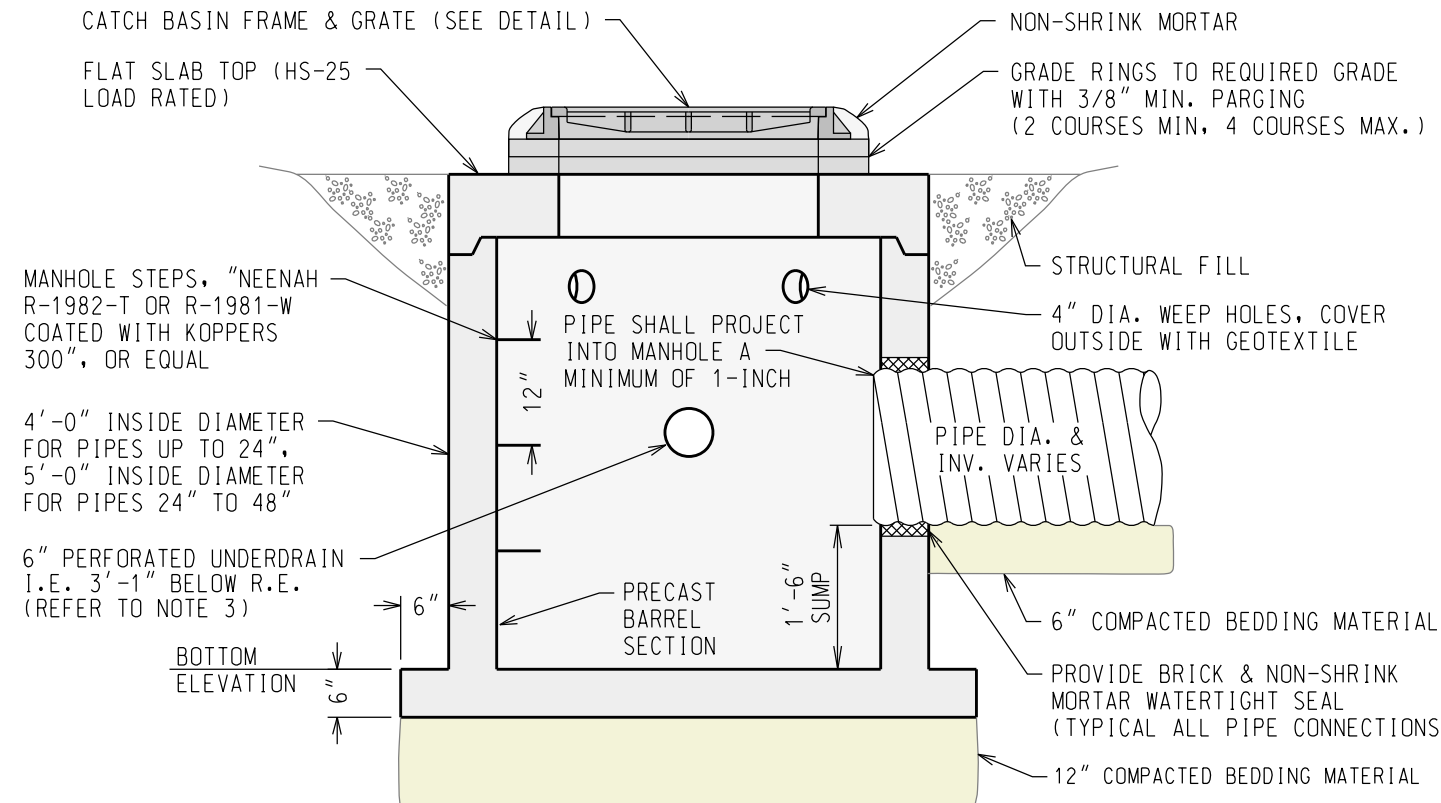
PAVEMENT COURSE	OPTION 1		OPTION 2
	STEEL WHEEL ROLLERS	PNEUMATIC ROLLERS	VIBRATORY PASSES
BINDER	8	3	6
TOP	6	3	4

- THE RECOMMENDED NUMBER OF PASSES IS SUBJECT TO FIELD ADJUSTMENTS BY ENGINEER IN ORDER TO OBTAIN ADEQUATE DENSITIES.
- ENGINEER RESERVES THE RIGHT TO REQUIRE CORE SAMPLES AND NUCLEAR DENSITY GAUGE TESTING TO CONFIRM PAVEMENT DENSITIES WITHIN A RANGE OF 92% TO 91% OF THE MIXTURE MAXIMUM THEORETICAL DENSITY (LIMIT).
- ONE VIBRATORY PASS IS DEFINED AS ONE MOVEMENT OF A SINGLE DRUM OF THE ROLLER OVER THE PAVEMENT SECTION IN EACH DIRECTION.
- ONE STATIC PASS IS DEFINED AS ONE MOVEMENT OF THE ROLLER OVER THE PAVEMENT IN EACH DIRECTION.
- COMPLETE ALL ROLLER PASSES BEFORE THE MAT TEMPERATURE FALLS BELOW 250° FARENHEIT.

TACK COAT

- TACK COAT STORED IN THE DISTRIBUTION TANK SHALL BE HEATED AND MAINTAINED AT A TEMPERATURE BETWEEN 85° FARENHEIT AND 160° FARENHEIT.
- THE TACK COAT SHALL BE APPLIED TO A PREPARED CLEAN PAVEMENT.
- THE TACK COAT SHALL NOT BE APPLIED ON WET PAVEMENT SURFACES OR WHEN THE SURFACE TEMPERATURE IS BELOW 40° FARENHEIT.
- APPLICATION RATES ARE PROVIDED ON THE FOLLOWING TABLE:

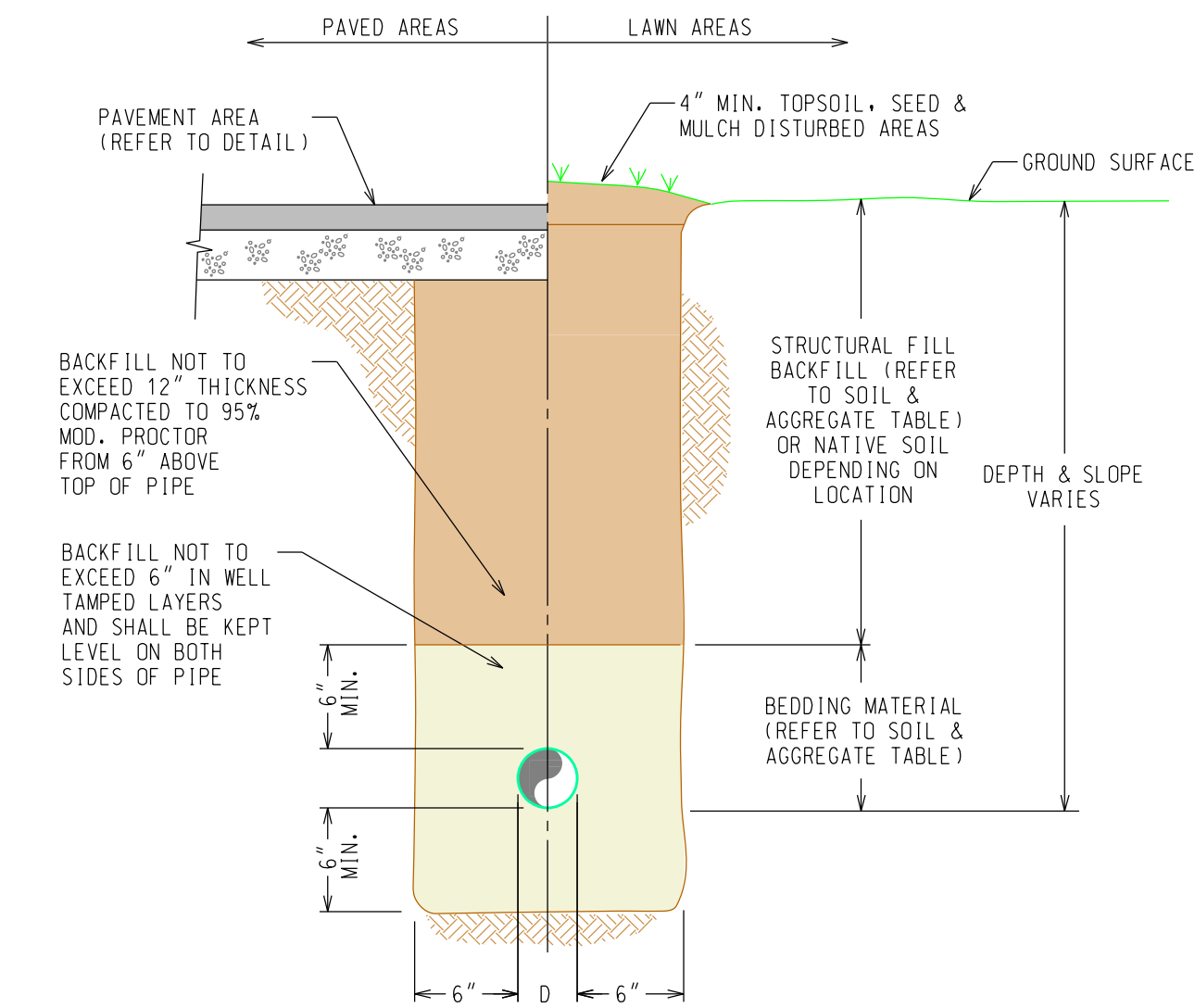
SURFACE TYPE	APPLICATION RATE (GAL/YD.)	
	DILUTED TACK COAT	STRAIGHT TACK COAT
NEW HOT MIX ASPHALT	0.05-0.06	0.03-0.04
MILLED SURFACES AND EXISTING HOT MIX ASPHALT	0.08-0.10	0.05-0.06
PORTLAND CEMENT CONCRETE	0.08-0.10	0.05-0.06
VERTICAL SERVICES	0.09-0.11	0.06-0.07



- NOTES:
1. REFER TO SHEET GD-1, GD-2 AND GD-3 FOR CATCH BASIN RIM AND INVERT ELEVATIONS.
 2. FOR MATERIAL SPECIFICATIONS, REFER TO SOIL & AGGREGATE TABLE ON SHEET RD-6.
 3. CONTRACTOR TO COORDINATE LOCATION OF UNDERDRAIN CONNECTIONS WITH PROJECT ENGINEER.
 4. ALL PRECAST CATCH BASIN MANHOLES SHALL COME FROM SOURCE ON NEW YORK STATE DEPARTMENT OF TRANSPORTATION APPROVED MATERIAL LIST.
 5. ALL PRECAST CATCH BASIN STRUCTURES TO BE HS-25 LOAD RATED

TYPICAL CATCH BASIN DETAIL

SCALE: 1" = 2'

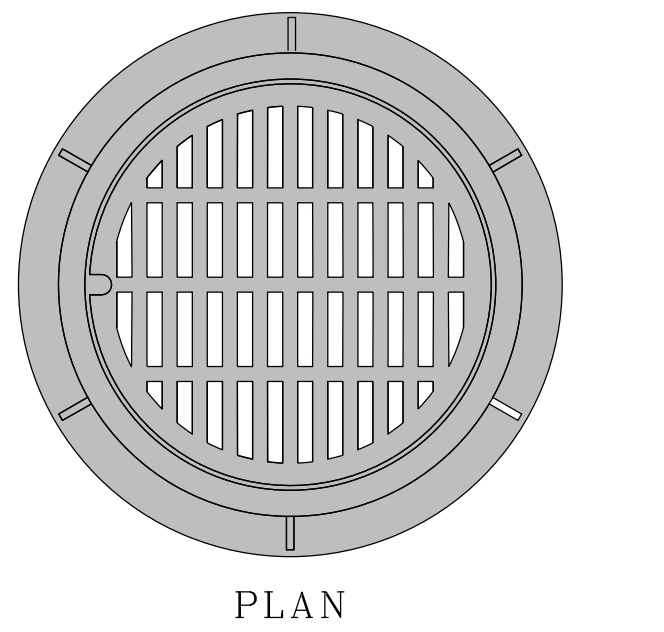


TYPICAL TRENCH DETAIL

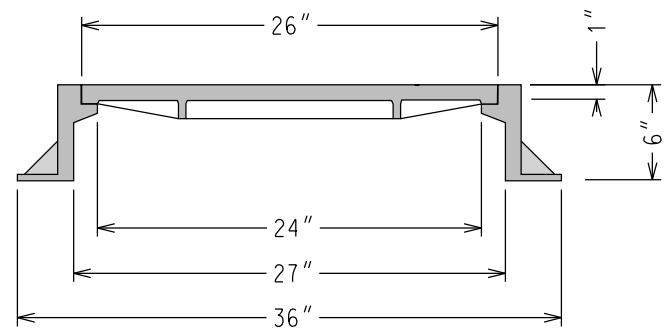
NOT TO SCALE

NOTES:

1. ALL EXCAVATION WORK SHALL BE IN CONFORMANCE WITH THE SPECIFICATIONS DETAILED IN OSHA'S STANDARDS AND INTERPRETATIONS, SUBPART P: SECTION 1926.650 THROUGH 26.652.
2. THE TRENCH SHALL BE EXCAVATED 4-INCHES DEEPER THAN THE FINAL PIPE INVERT OR MANHOLE BASE GRADE.
3. GROUNDWATER SHALL NOT BE PRESENT IN THE TRENCH DURING INSTALLATION AND BACKFILLING ACTIVITIES
4. A 4-INCH THICK BEDDING MATERIAL SHALL BE PLACED TO SUPPORT THE PIPE AND MANHOLES.
5. THE BEDDING MATERIAL SHALL BE A NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, STONE, AND/OR SAND; PER NYS DOT SECTION 620-2.05; EXCEPT WITH 100 PERCENT PASSING A 1-INCH SIEVE AND NOT MORE THAN 8 PERCENT PASSING A NO. 200 SIEVE.
6. THE BEDDING MATERIAL SHALL BE FIRMLY TAMPED USING A VIBRATORY PLATE TAMPER.
7. THE AREA UNDER THE PIPE CONNECTIONS (BELLS) SHALL BE HAND EXCAVATED SO THAT THE PIPE IS FULLY SUPPORTED BY THE BEDDING MATERIAL.
8. BEDDING SHALL BE PLACED TO A DEPTH OF AT LEAST 6 INCHES ABOVE THE TOP OF THE PIPE. CARE SHALL BE TAKEN SO THAT THE MATERIAL IS PACKED UNDER THE HAUNCHES OF THE PIPE. THE PIPE IS NOT TO BE MOVED DURING THE MATERIAL PLACEMENT.
9. THE REMAINING PORTION OF THE TRENCH SHALL BE BACKFILLED WITH NYSDOT TYPE 2 SUBBASE MATERIAL (ITEM NO. 304.03). LARGE ROCKS, ORGANIC MATTER, AND/OR DEBRIS SHALL BE REMOVED FROM THE EXCAVATED MATERIAL BEFORE BACKFILLING. CARE SHALL BE TAKEN NOT TO DISTURB THE PIPE ALIGNMENT WHILE BACKFILLING.



PLAN



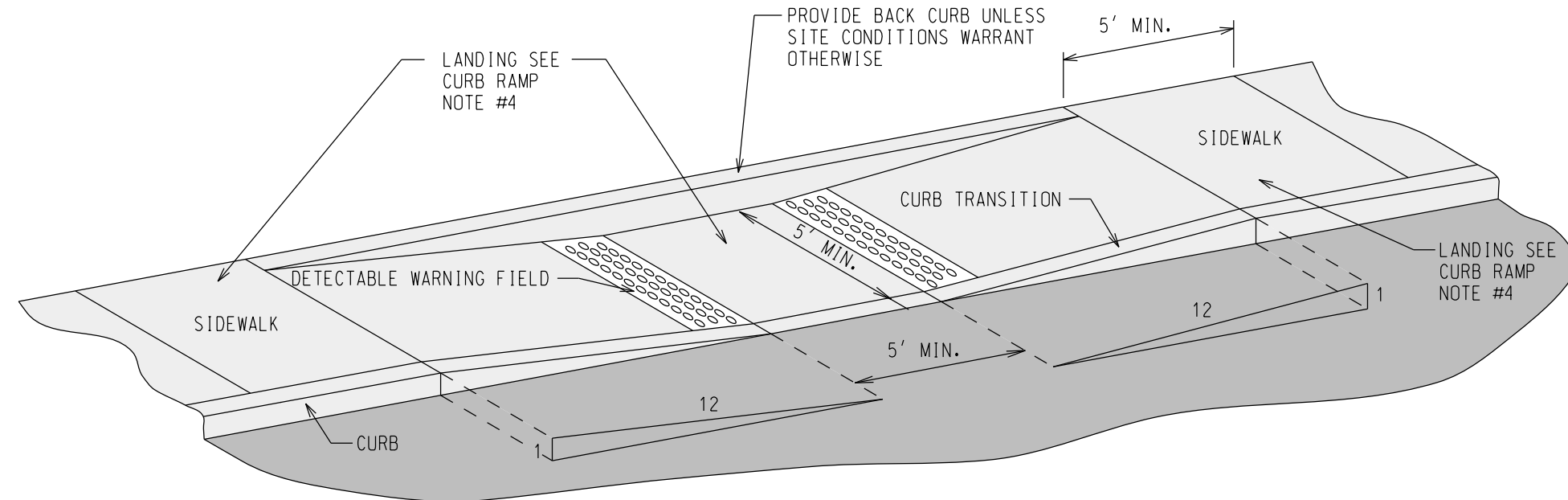
SECTION

TYPICAL CATCH BASIN FRAME & GRATE

SCALE: 1" = 1'-0"

NOTE:

1. THE FRAME & GRATE SHALL BE EAST JORDAN IRON WORKS PART NUMBERS 1207 AND 1203M, RESPECTIVELY, INLET FRAME AND GRATE RATED FOR HEAVY DUTY PERFORMANCE (HS-20), OR APPROVED EQUAL.



PARALLEL CURB RAMP (TYPE 2B)

GENERAL NOTES:

1. REFER TO SIDEWALK DETAIL FOR SIDEWALK CONSTRUCTION INFORMATION.
2. SIDEWALK CURB RAMP TYPE SHALL BE NYSOT TYPE 2B AND LOCATIONS ARE AS SHOWN ON THE PLANS OR AS DIRECTED.
3. DO NOT PLACE SIGNAL POLES, SIGN POSTS, UTILITY POLES, FIRE HYDRANTS, ETC., WITHIN THE RAMP OR SIDE FLARE AREAS.
4. THE SURFACE OF ALL SIDEWALK CURB RAMP SHALL BE STABLE, FIRM, AND SLIP RESISTANT (E.G., A COARSE, BROOM FINISH PERPENDICULAR TO THE RAMP SLOPE IS ACCEPTABLE ON CONCRETE CURB RAMP).

SIDEWALK CURB RAMP CRITERIA NOTES:

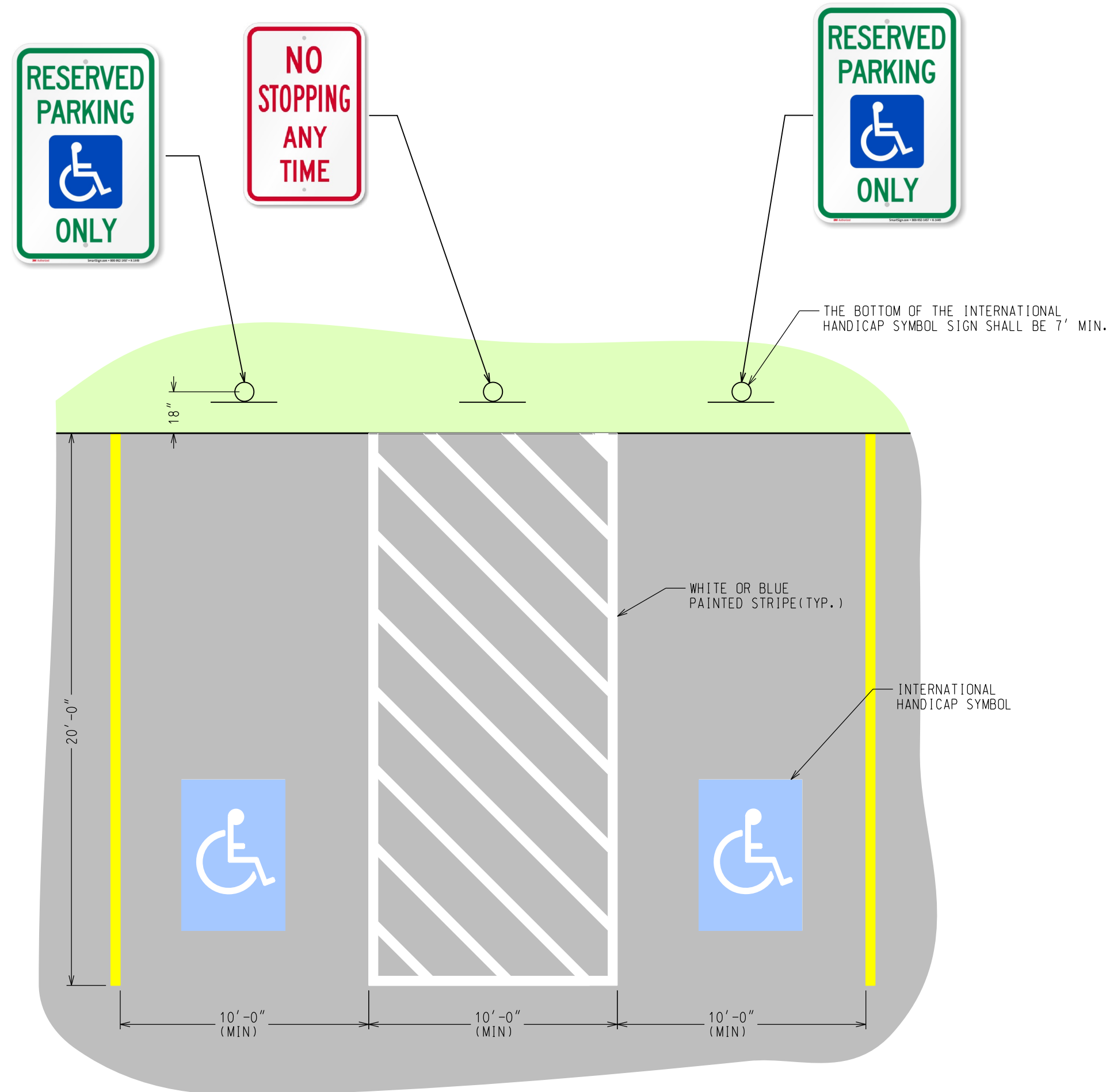
1. THE MAXIMUM SLOPE OF A SIDEWALK CURB RAMP IN NEW CONSTRUCTION SHALL BE 1V:12H.
2. THE MINIMUM WIDTH OF A SIDEWALK CURB RAMP SHALL BE 5'-0", EXCLUSIVE OF FLARED SIDES.
3. ALL SIDEWALK CURB RAMP SHALL HAVE FLUSH, SMOOTH TRANSITIONS TO THE ADJACENT PAVEMENT SURFACE.
4. LANDINGS SHALL HAVE A MINIMUM CLEAR DIMENSION OF 5'-0" x 5'-0", THE MAXIMUM CROSS SLOPE AT LANDINGS IS 2 PERCENT IN ANY DIRECTION.

REFERENCES:

1. AMERICAN NATIONAL STANDARD - ACCESSIBLE AND USABLE BUILDING & FACILITIES (CABO/ANSI) A117.1-1992; AMERICAN NATIONAL STANDARDS INSTITUTE, INC.
2. "SIDEWALK CURB RAMP DETAILS" AS PREPARED BY STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION; SHEET NO. M608-10.

"TYPE 2B" CURB RAMP DETAIL

NOT TO SCALE



HANDICAP ACCESSIBLE SPACE DETAIL

SCALE: NOT TO SCALE

REVISIONS:	DATE:

NOTE: NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

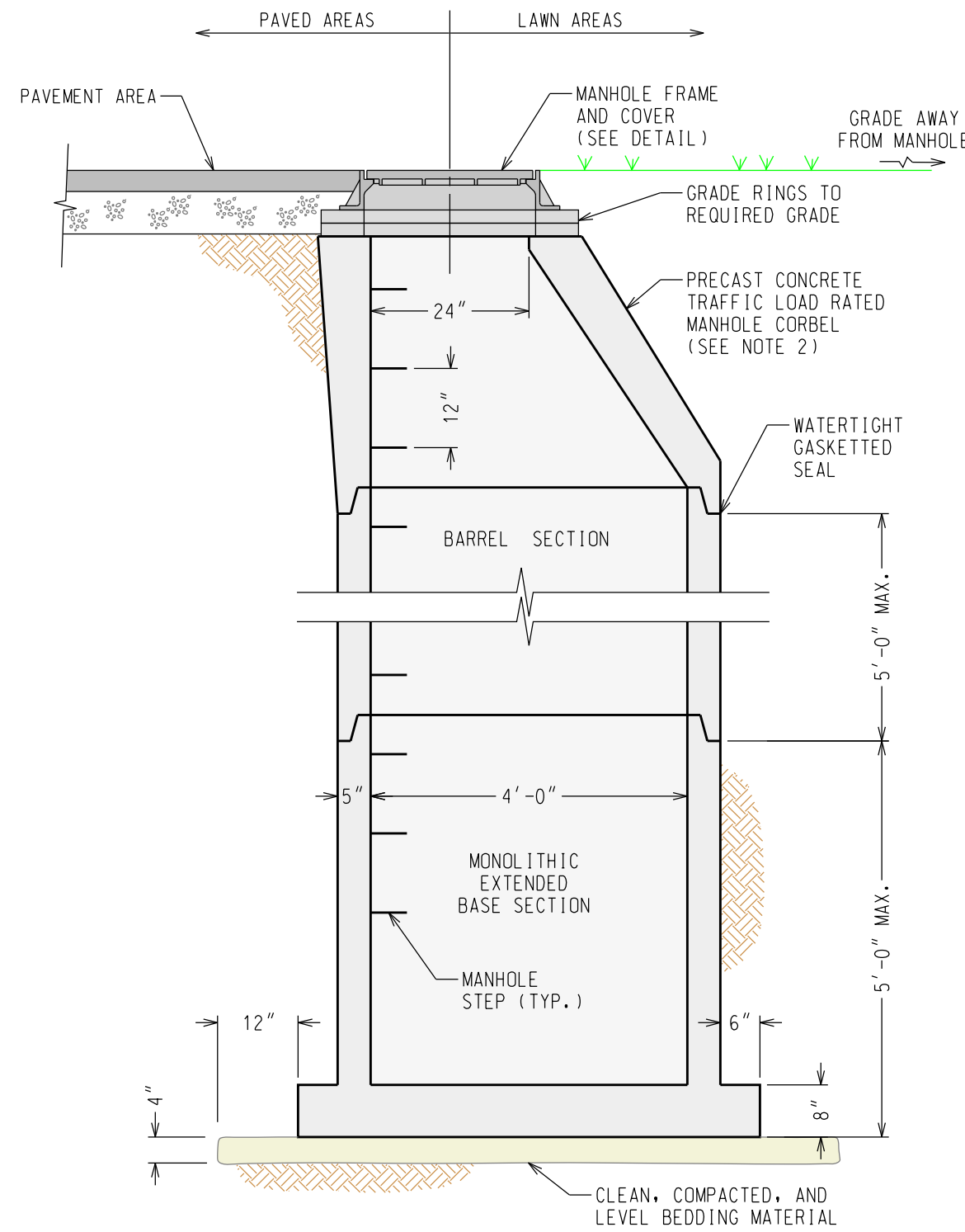
PROJECT:	TWIN LAKES COMMERCIAL DEVELOPMENT
CLIENT:	TWIN SHORES PROPERTIES, LLC
LOCATION:	N. BURDICK STREET, TOWN OF MANLIUS, ONONDAGA COUNTY, NEW YORK

DRAWING TITLE:	PAVING, GRADING & DRAINAGE DETAILS
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PROJECT No.:	2021054
SCALE:	AS NOTED
DATE:	
ENG'D BY:	SKO
DRAWN BY:	NAR
CHECKED BY:	JED

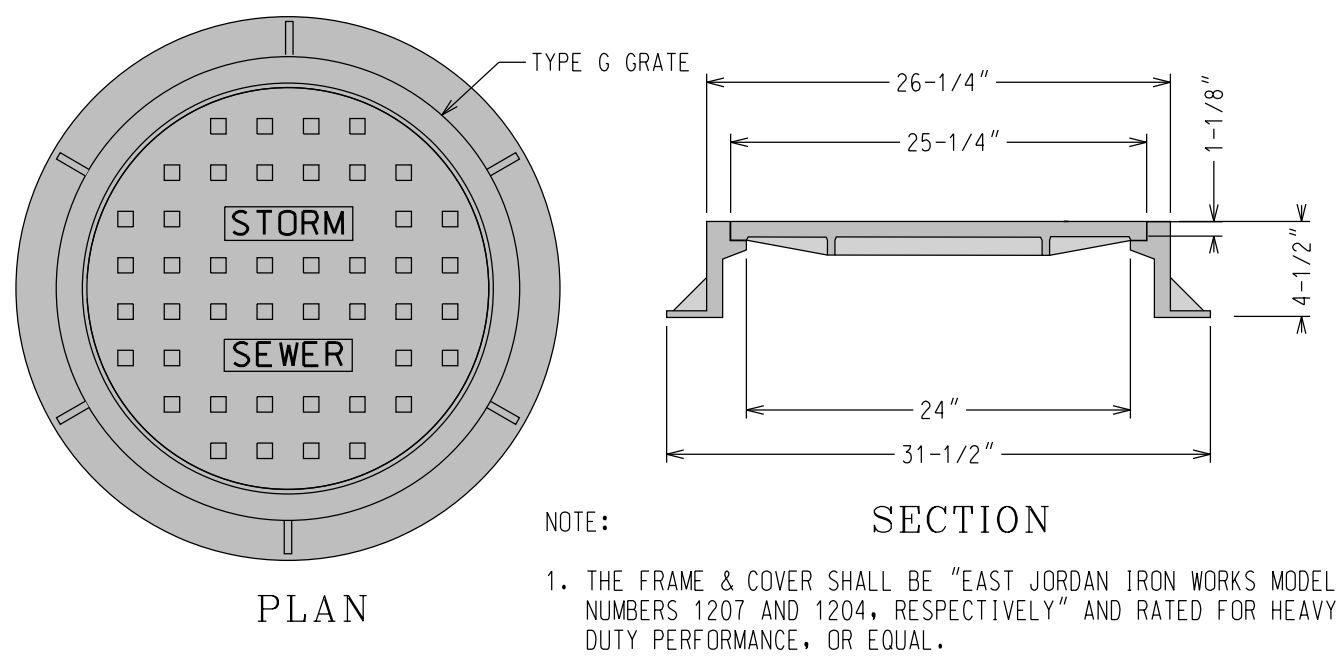
SHEET NO.
GD-4

PRELIMINARY
11-16-22
NOT FOR CONSTRUCTION



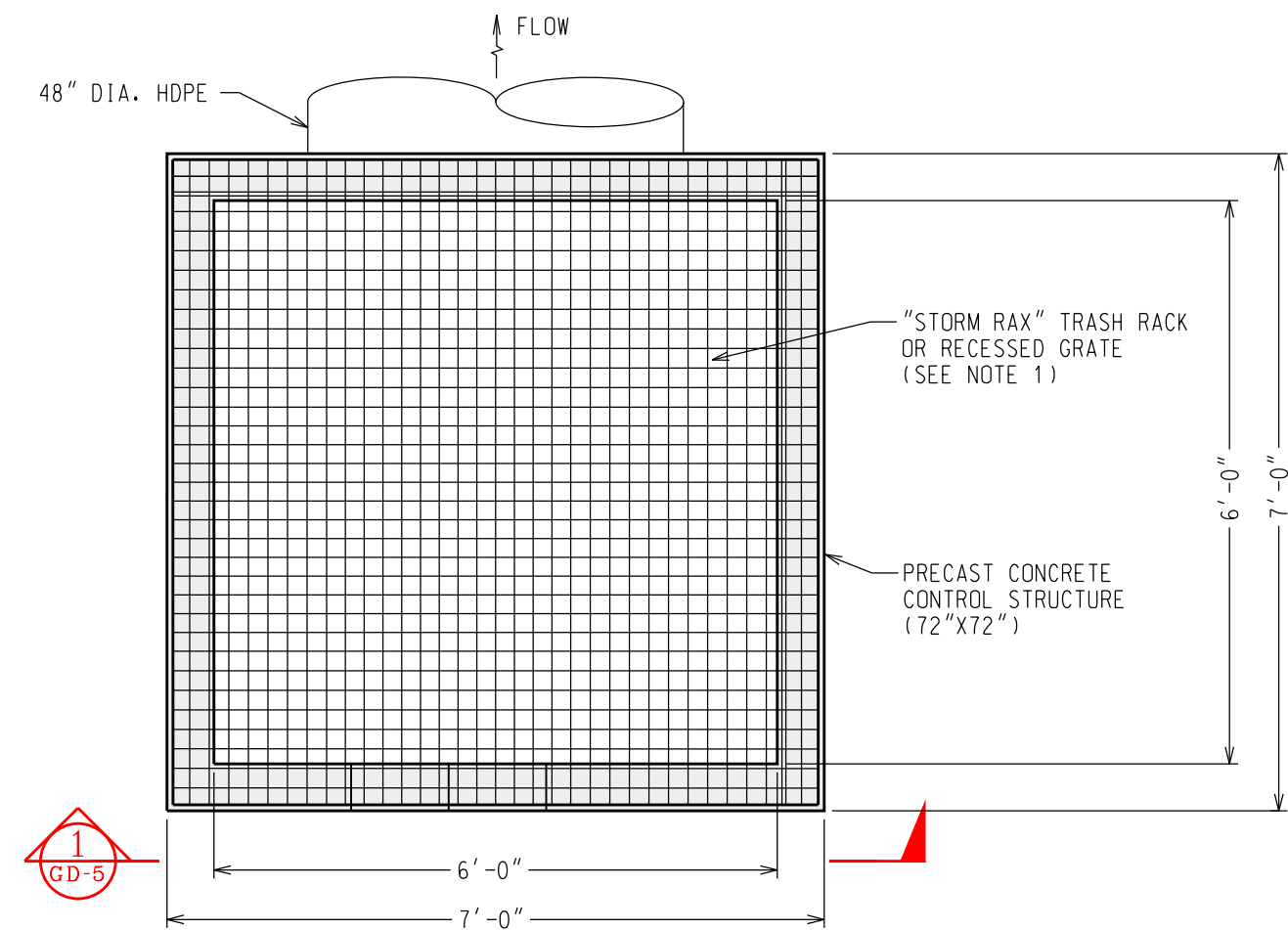
STANDARD PRECAST CONCRETE MANHOLE

- NOTES:
1. CONCRETE AND REINFORCEMENT SHALL MEET THE SPECIFICATIONS OF ASTM C478-85A.
 2. A PRECAST CONCRETE TOP SLAB MAY BE SUBSTITUTED FOR THE ECCENTRIC CORBEL (CONE) AND BARREL SECTION (REFER TO MATERIAL SPECIFICATION NUMBER 2).
 3. ALL PRECAST CONCRETE STRUCTURES SHALL BE HS-25 LOAD RATED.

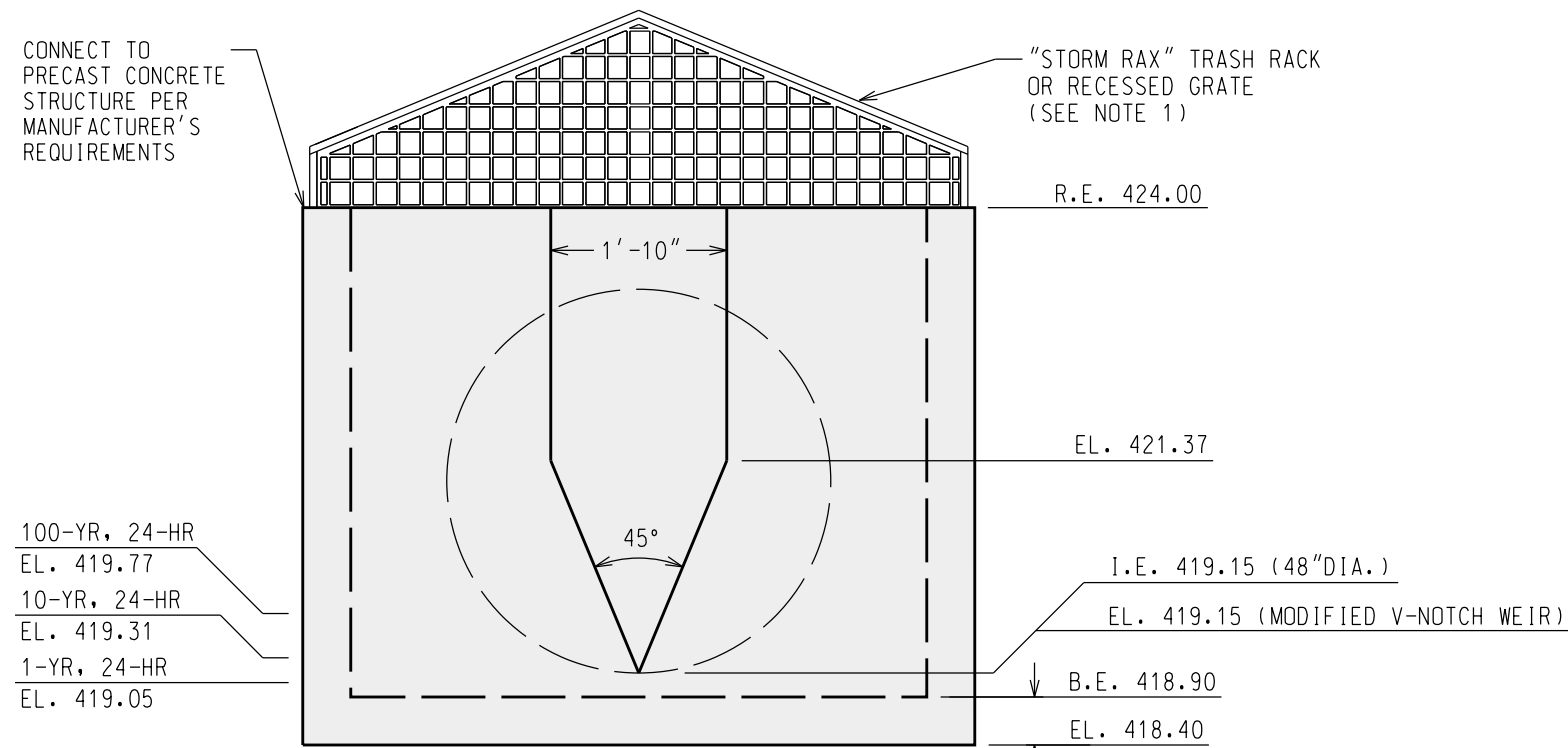


TYPICAL MANHOLE FRAME & COVER

SCALE: 1" = 1"



PLAN VIEW



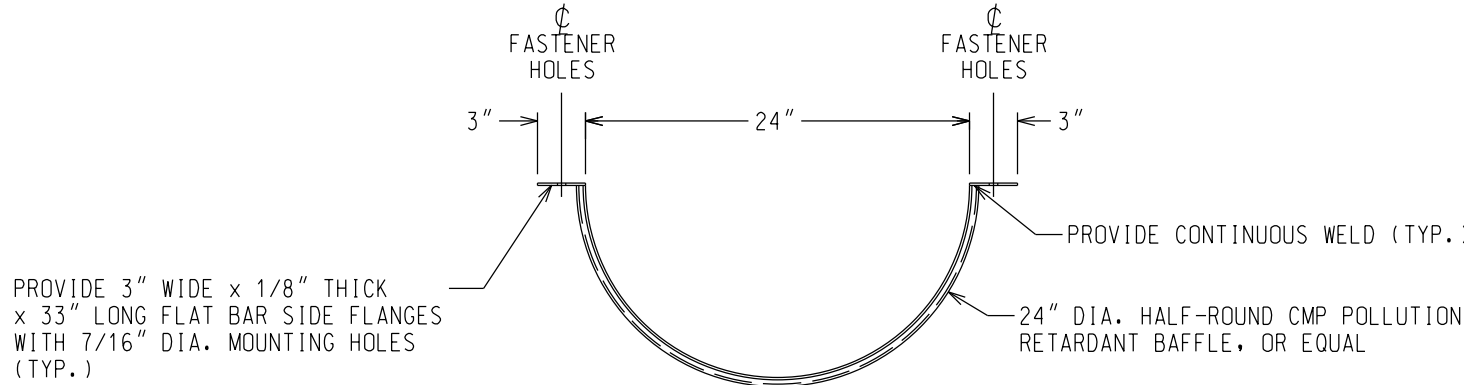
- KEY
- R.E. = RIM ELEVATION
I.E. = INVERT ELEVATION
G.E. = GROUND ELEVATION
B.E. = BOTTOM ELEVATION

SECTION

SCALE: 1" = 2'

DISCHARGE CONTROL STRUCTURE
FOR DETENTION BASIN
(CS-1)

- NOTES:
1. TRASH RACK SHALL BE "STORM RAX" PEAK ROOF STRUCTURE DISTRIBUTED BY CONTECH ENGINEERING SOLUTIONS; OR ALTERNATE RECESSED GRATE.
 2. PROVIDE POLLUTION RETARDANT BAFFLE (REFER TO DETAIL).



POLLUTION RETARDANT BAFFLE DETAIL

SCALE: 1" = 1'

PRELIMINARY
11-16-22
NOT FOR
CONSTRUCTION

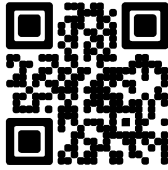
REVISIONS:	DATE:
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NOTE: NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

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CLIENT:	TWIN SHORES PROPERTIES, LLC
LOCATION:	N. BURDICK STREET, TOWN OF MANLIUS, ONONDAGA COUNTY, NEW YORK

DRAWING TITLE:	PAVING, GRADING & DRAINAGE DETAILS
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PROJECT No.:	2021054
SCALE:	AS NOTED
DATE:	
ENG'D BY:	SKO
DRAWN BY:	NAR
CHECKED BY:	JED



DC-780 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH DC-780.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT²%, THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE DC-780 CHAMBER SYSTEM

- STORMTECH DC-780 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH DC-780 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOTTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM .6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH DC-780 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER DC-780 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER Tired LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

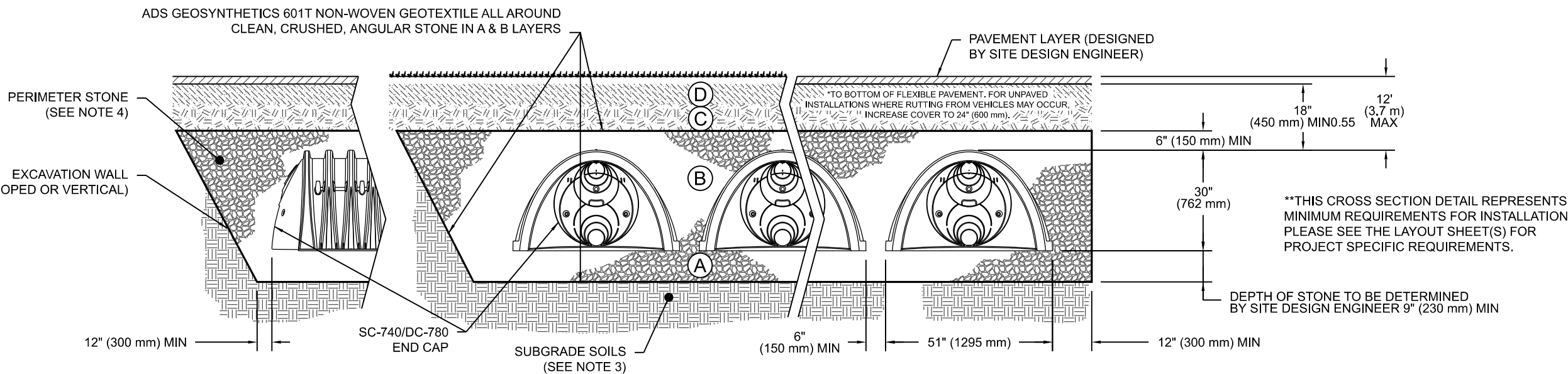
CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

ACCEPTABLE FILL MATERIALS: STORMTECH DC-780 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN), DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

PLEASE NOTE:

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



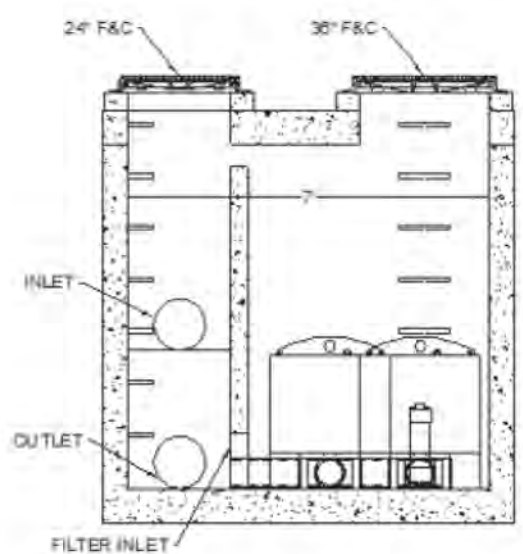
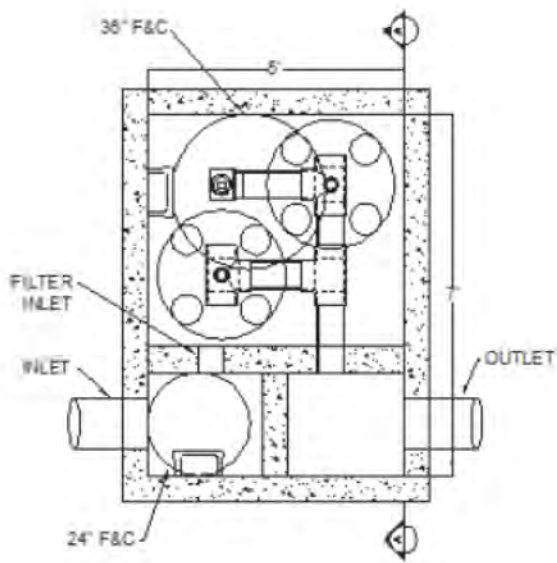
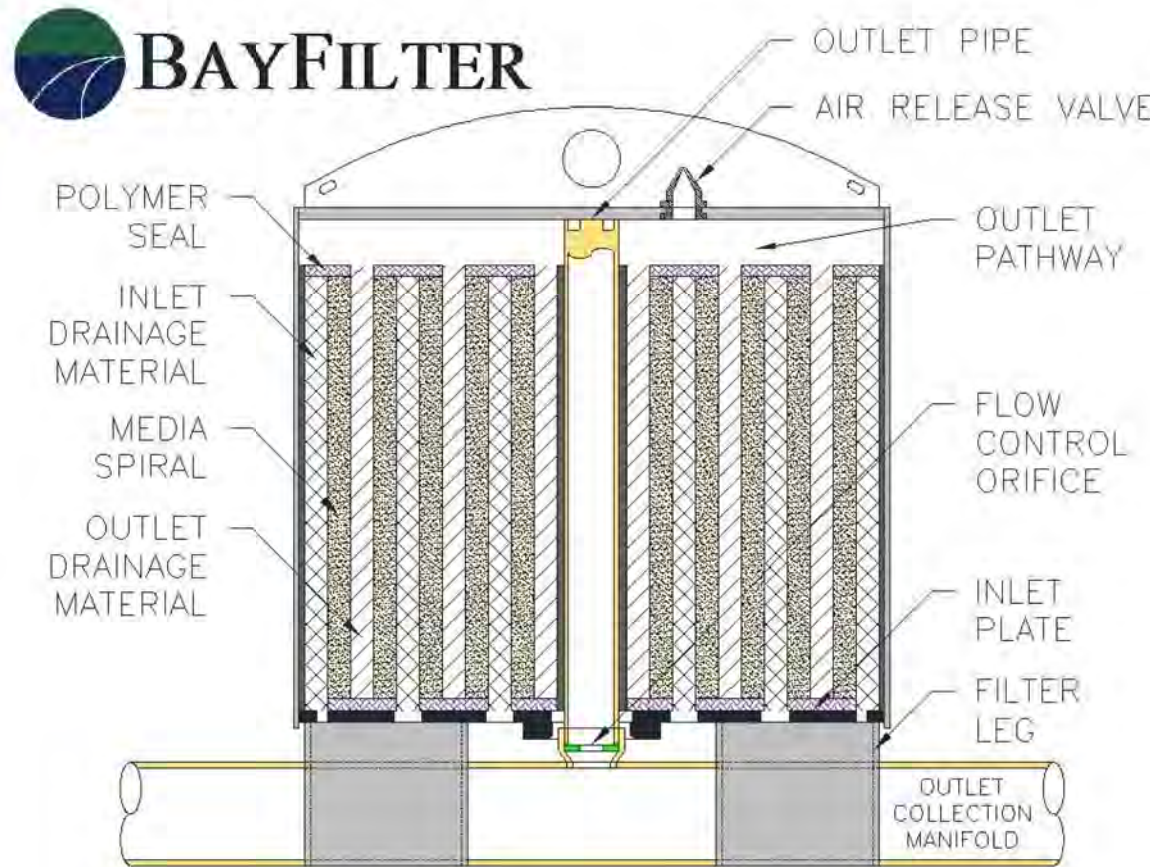
NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- DC-780 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT²%, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

DC-780 CROSS SECTION DETAIL

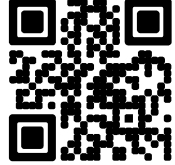
Creation Date: 10/19/2022 7:00:56 AM
Treatment Flow Rate: 0.1 cfs
Cartridge Type: BayFilter™ 522
of Cartridges: 2
Model Number: BF-5-7-2
Rim Elevation: 430.6 ft.
Inlet Elevation: 427 ft.
Outlet Elevation: 424.57 ft.
Drop: 29 in.

5'x7' Internal Bypass Vault



ADS PLAN PRESENTATION DISCLAIMER: "ADVANCED DRAINAGE SYSTEMS, INC. (ADS)" HAS PREPARED THIS DRAWING BASED ON THE INFORMATION PROVIDED BY THE DESIGN ENGINEER FOR THE SPECIFIC PROJECT. THIS DRAWING IS NOT FOR CONSTRUCTION AND IS INTENDED TO DEPICT THE NECESSARY COMPONENTS FOR COMPLIANCE WITH THE ENGINEER'S DESIGN AND/OR LAYOUT. ADS HAS NOT PERFORMED ANY ENGINEERING SERVICES ON THIS PROJECT. NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED BY THE DESIGN ENGINEER. THE DESIGN ENGINEER SHOULD REVIEW THE DRAWING TO INSURE THAT IT IS IN COMPLIANCE WITH THE SPECIFIC DESIGN PROJECT.

PARCEL 1 (SHOP 'A') ONLY



MC-3500 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-3500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPED FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT²%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

- STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER Tired LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

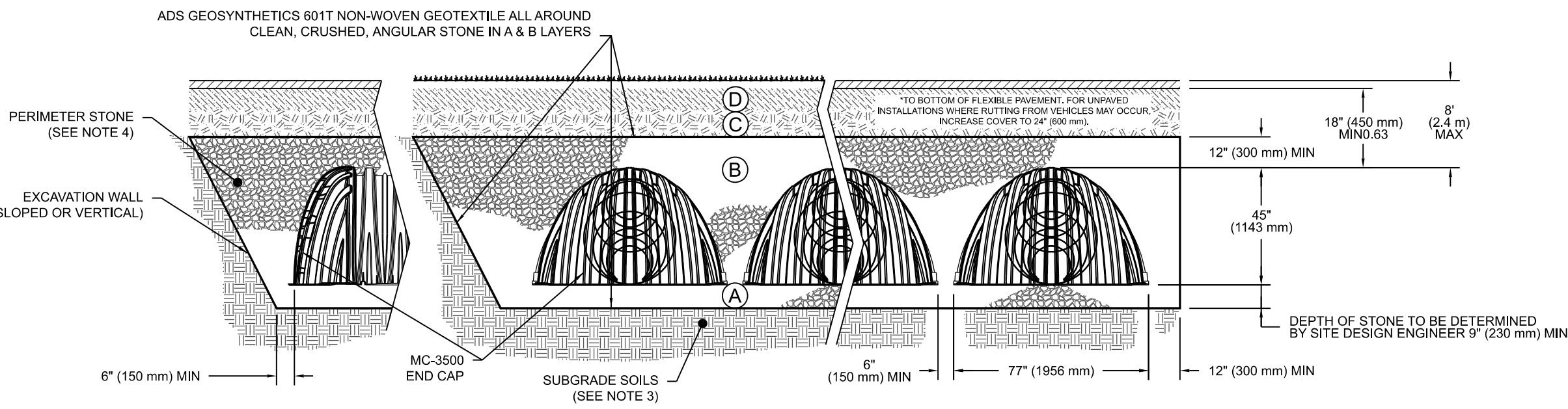
USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER, NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 - WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
 - ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



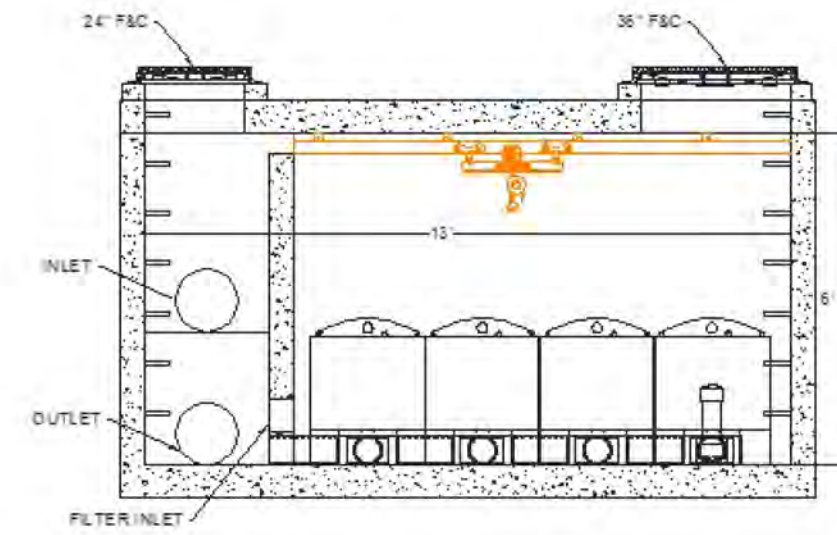
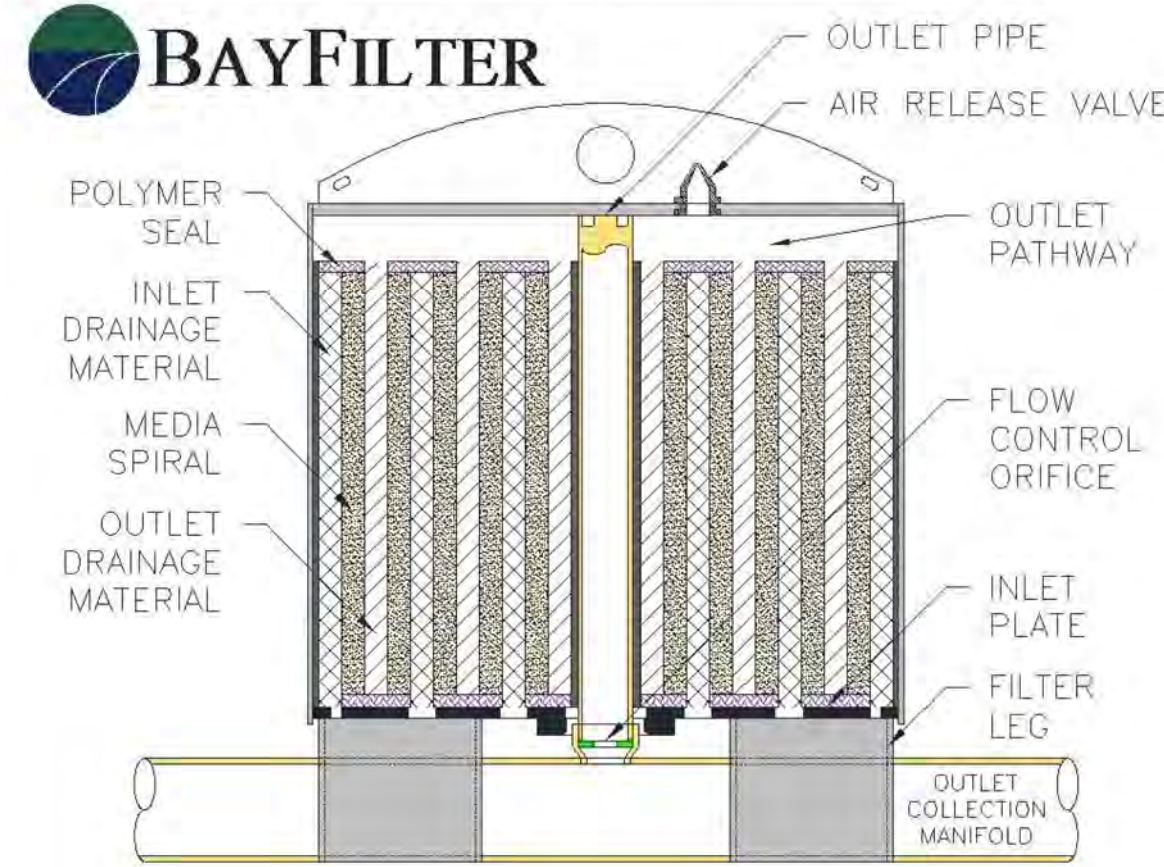
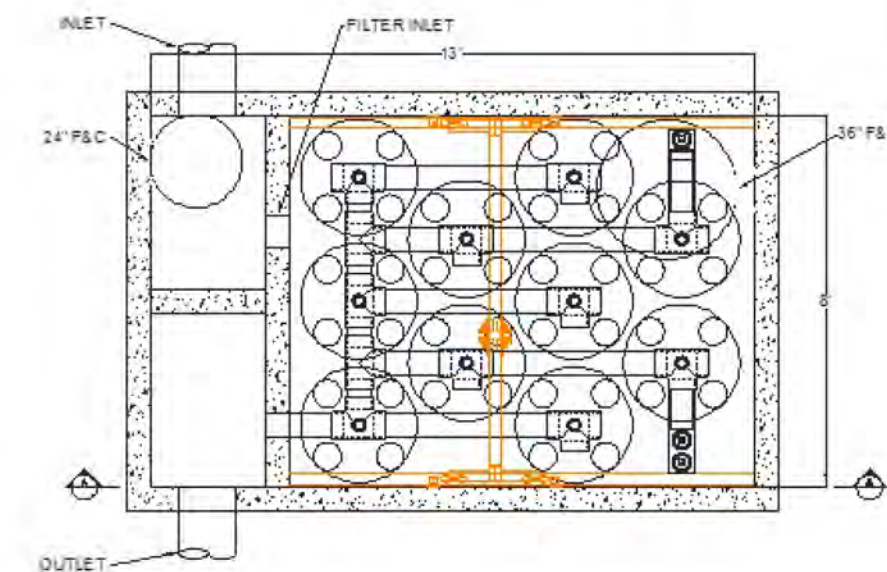
NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT²%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

MC-3500 CROSS SECTION DETAIL

Creation Date: 10/26/2022 6:22:36 AM
Treatment Flow Rate: 1 cfs
Cartridge Type: BayFilter™ 545
of Cartridges: 10
Model Number: BF-8-13-10
Rim Elevation: 431 ft.
Inlet Elevation: 424.4 ft.
Outlet Elevation: 423.4 ft.
Drop: 12 in.
Top of Weir Elevation: 426.23 ft.

8'x13' Internal Bypass Vault



ADS PLAN PRESENTATION DISCLAIMER: "ADVANCED DRAINAGE SYSTEMS, INC. (ADS)" HAS PREPARED THIS DRAWING BASED ON THE INFORMATION PROVIDED BY THE DESIGN ENGINEER FOR THE SPECIFIC PROJECT. THIS DRAWING IS NOT FOR CONSTRUCTION AND IS INTENDED TO DEPICT THE NECESSARY COMPONENTS FOR COMPLIANCE WITH THE ENGINEER'S DESIGN AND/OR LAYOUT. ADS HAS NOT PERFORMED ANY ENGINEERING SERVICES ON THIS PROJECT. NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED BY THE DESIGN ENGINEER. THE DESIGN ENGINEER SHOULD REVIEW THE DRAWING TO INSURE THAT IT IS IN COMPLIANCE WITH THE SPECIFIC DESIGN PROJECT.

PARCELS 2, 3 & 5 (SHOPS 'B' & 'C')



SC-310 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-310.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE OR POLYETHYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT³%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PPPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2922 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310 SYSTEM

- STORMTECH SC-310 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER-TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

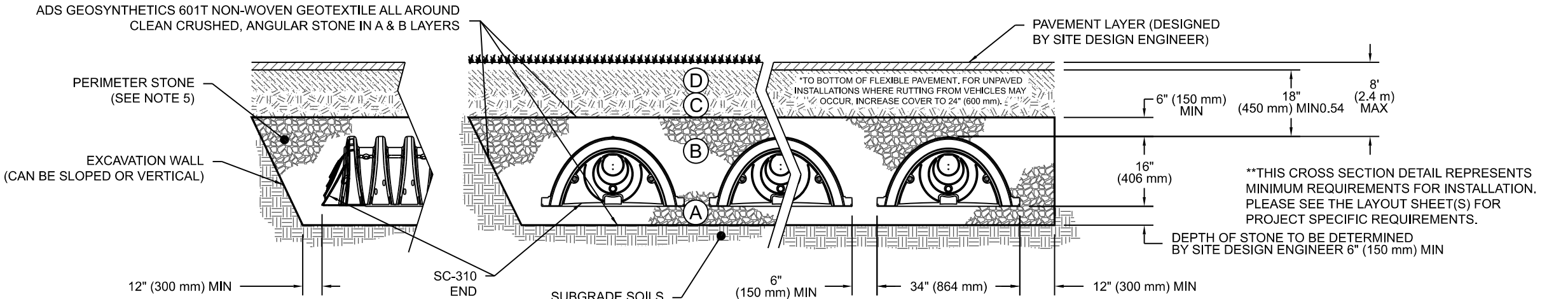
USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL-GRADED MATERIAL AND 85% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR, FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 - WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
 - ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



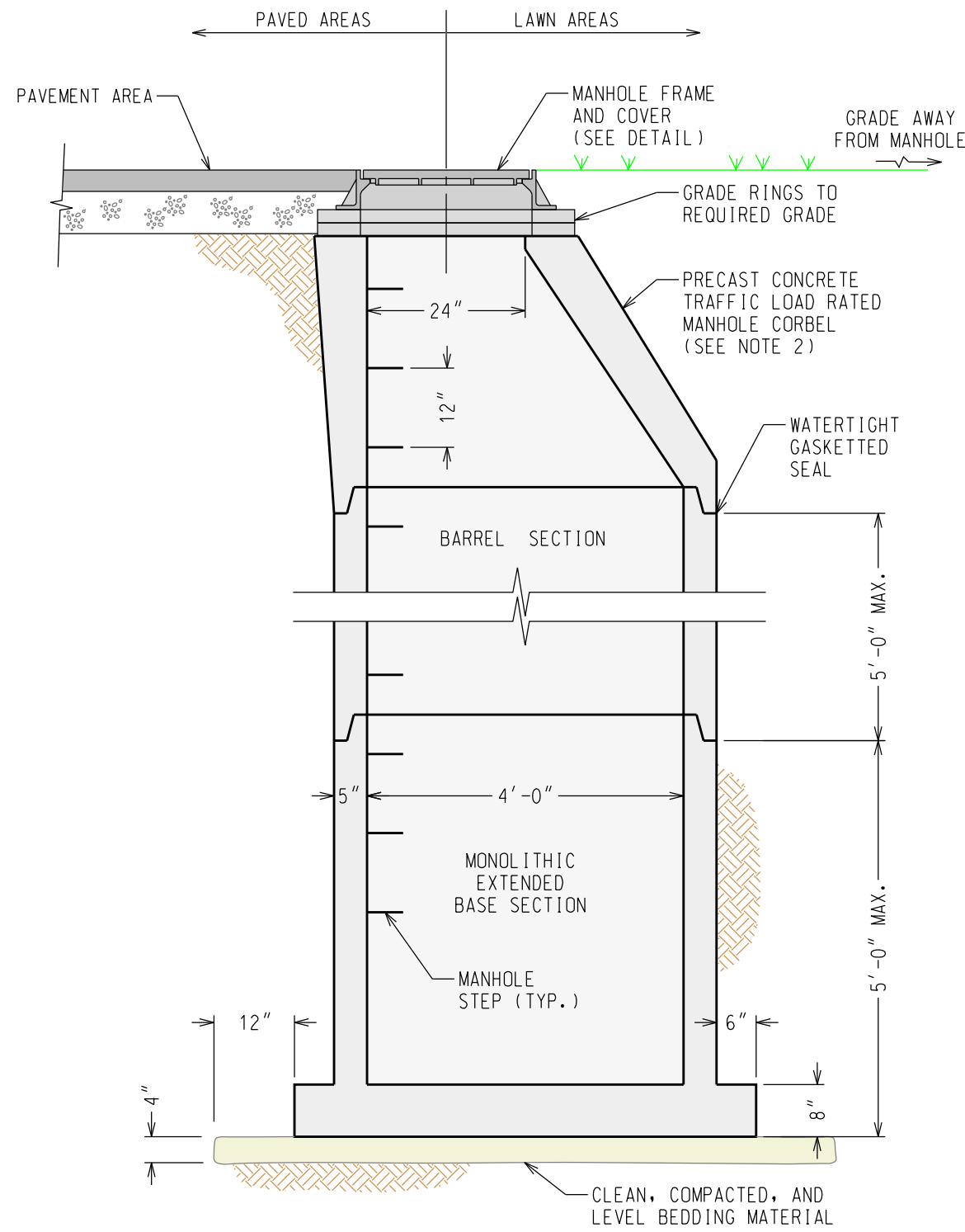
NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2922 SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT³%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

SC-310 CROSS SECTION DETAIL

PROPOSED ROADWAY DRAINAGE SYSTEM ONLY

PRELIMINARY
11-16-22
NOT FOR
CONSTRUCTION

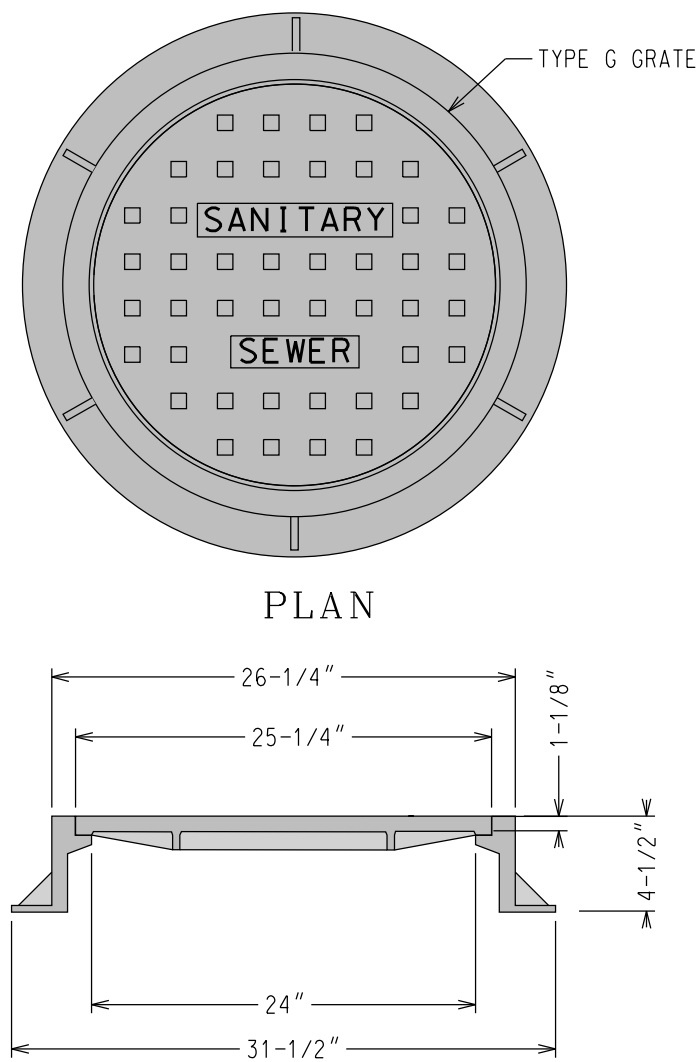


STANDARD PRECAST CONCRETE MANHOLE

SCALE: 1" = 2'

NOTES:

1. CONCRETE AND REINFORCEMENT SHALL MEET THE SPECIFICATIONS OF ASTM C478-85A.
2. A PRECAST CONCRETE TOP SLAB MAY BE SUBSTITUTED FOR THE ECCENTRIC CORBEL (CONE) AND BARREL SECTION (REFER TO MATERIAL SPECIFICATION NUMBER 2).
3. ALL PRECAST CONCRETE STRUCTURES SHALL BE HS-25 LOAD RATED.

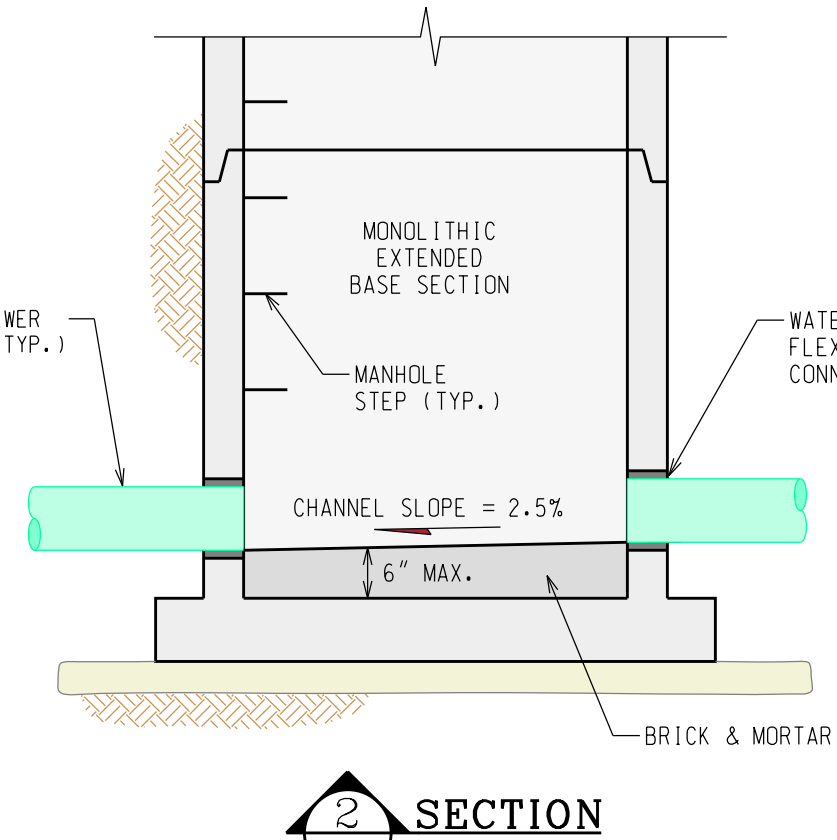
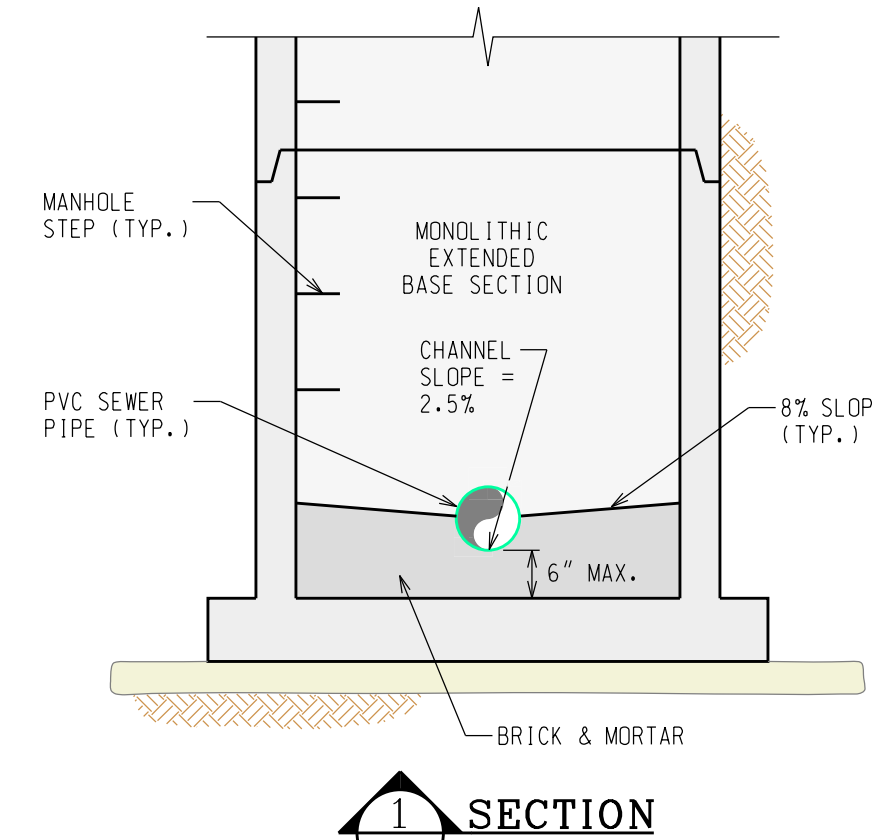
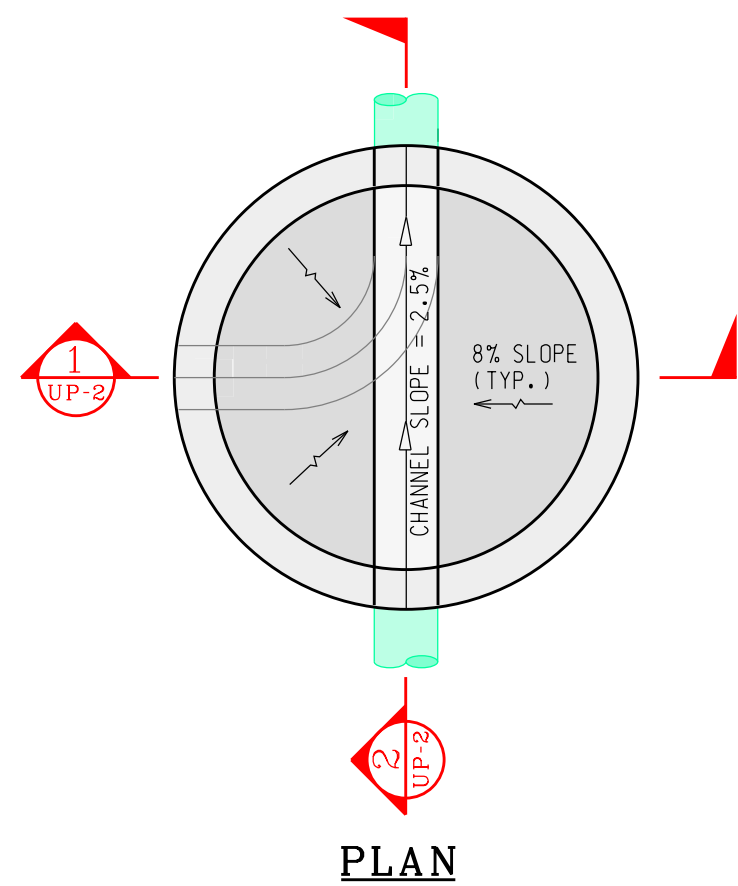


NOTE:

1. THE FRAME & COVER SHALL BE "EAST JORDAN IRON WORKS MODEL NUMBERS 1207 AND 1204, RESPECTIVELY" AND RATED FOR HEAVY DUTY PERFORMANCE, OR EQUAL.

TYPICAL MANHOLE FRAME & COVER

SCALE: 1" = 1'

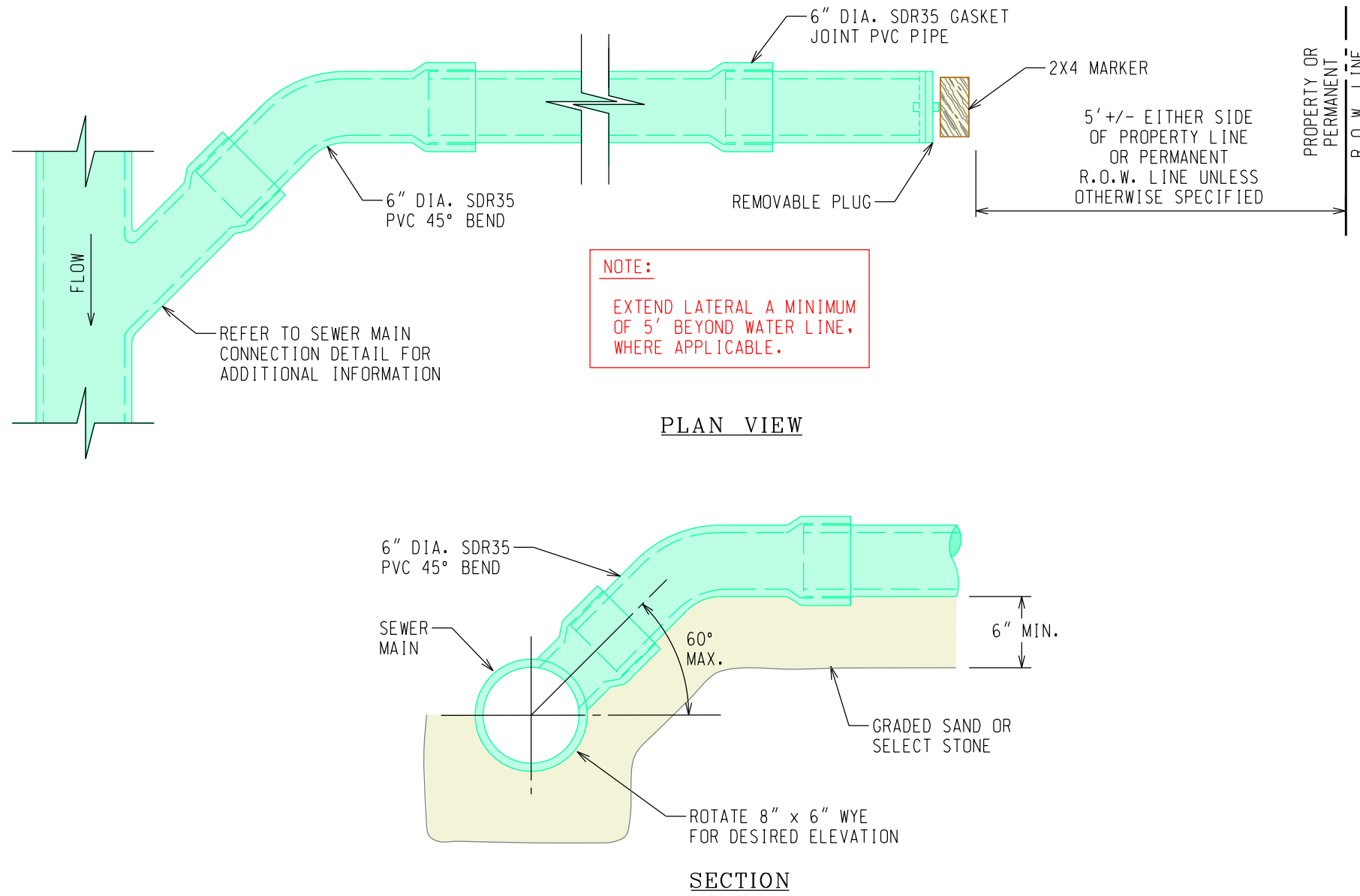


MANHOLE BENCH & CHANNEL DETAILS

SCALE: 1" = 2'

NOTES:

1. FORM FLOW CHANNEL WITH BRICK AND MORTAR IN CONFIGURATION SHOWN. SLOPE BENCHES AT LEAST 1" FROM MANHOLE WALL TO EDGE OF FLOW CHANNEL.
2. OPENINGS FOR PIPE TO BE PRECAST OR MACHINE CORED. SEAL PIPE OPENINGS WITH A WATERTIGHT FLEXIBLE CONNECTOR.
3. THE BENCH AND CHANNEL SHALL BE CONSTRUCTED AFTER THE MANHOLE HAS BEEN TESTED AND INSPECTED.
4. FLOW CHANNELS ARE TO ALLOW SMOOTH FLOW WITH NO OBSTRUCTIONS.

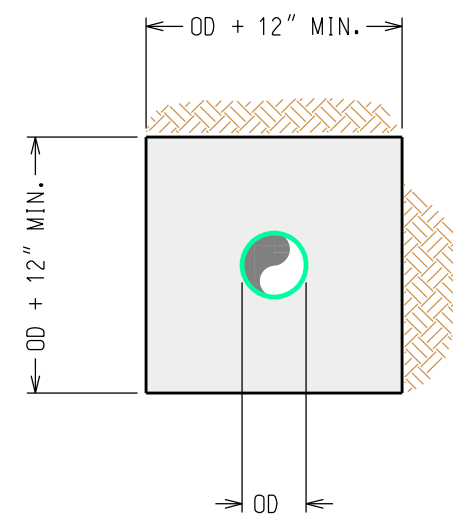


NOTE:

END OF HOUSE LATERAL SHALL BE LOCATED ON THE RECORD DRAWINGS BY DISTANCE FROM DOWNSTREAM LATERAL OR NEAREST DOWNSTREAM MANHOLE AND OFFSET FROM MAIN LINE SEWER. DEPTH OF 2X4 MARKER TO EXTEND FROM INVERT TO FINISH GRADE (MIN. 1).

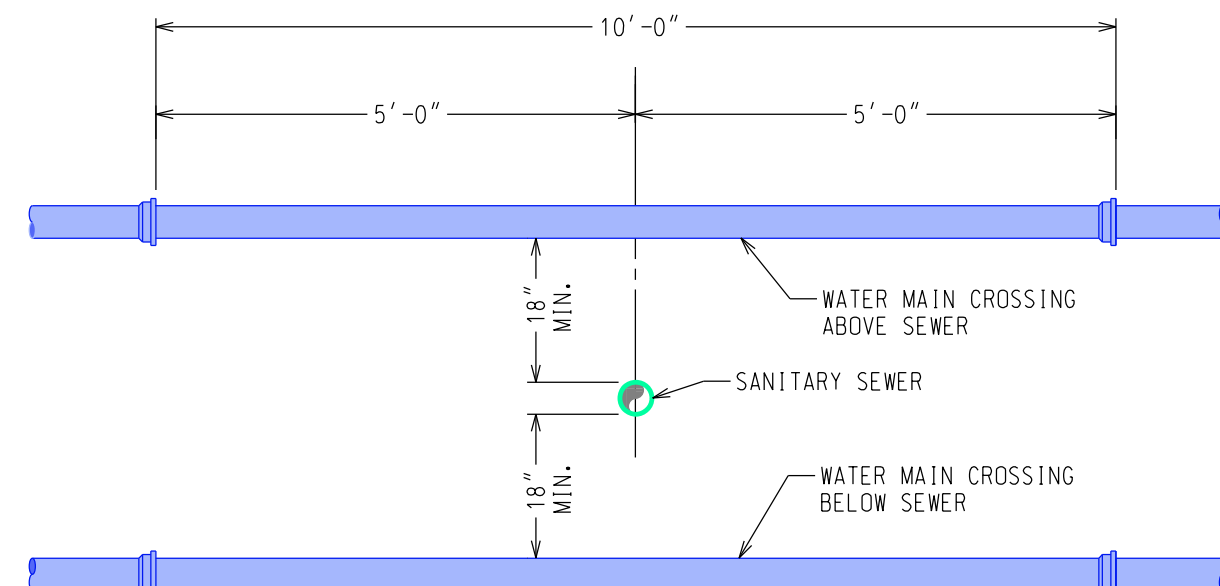
TYPICAL LATERAL DETAIL

NOT TO SCALE



CONCRETE ENCASEMENT DETAIL

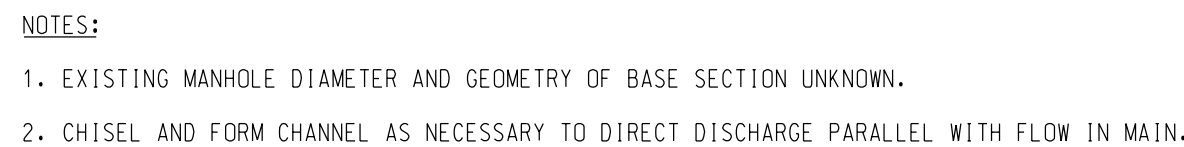
SCALE: 1" = 1'



NOTES:

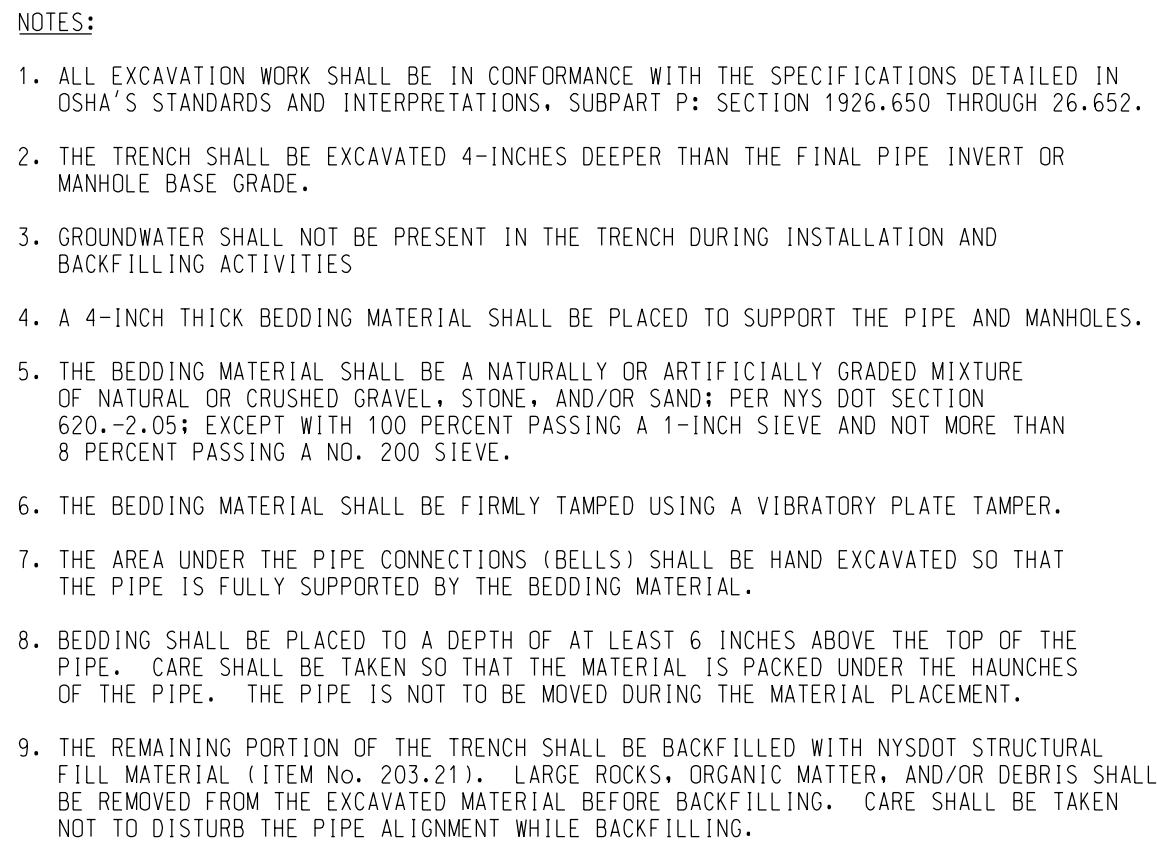
1. SANITARY SEWER TO BE CONCRETE ENCASED (SEE DETAIL) IF 18-INCHES MINIMUM SEPARATION IS NOT MAINTAINED.
2. SEWER TO BE CENTERED BETWEEN WATER MAIN JOINTS.
3. HORIZONTAL SEPERATION SHALL BE 10 FEET MINIMUM EDGE TO EDGE BETWEEN SEWER AND WATER/DRAINAGE.

PRELIMINARY
11-16-22
NOT FOR CONSTRUCTION



REFERENCE:

MEADOWBROOK-LIMESTONE TREATMENT PLANT DISTRICT, MISCELLANEOUS DETAILS (SHEET 19),
PREPARED BY O'BRIEN & GERE, DATED JANUARY 15, 1969 (REV. JUNE 14, 1971).



GENERAL NOTES:

1. SUBSTITUTIONS AND/OR MATERIALS BY DIFFERENT MANUFACTURER'S MAY BE USED PROVIDED THEY MEET THE PERFORMANCE REQUIREMENTS AND ARE PRE-APPROVED BY THE TOWN AND THE PROJECT ENGINEER.

MATERIAL SPECIFICATIONS:

1. ALL 8" GRAVITY SEWER PIPE SHALL BE SDR-35 POLYVINYL CHLORIDE (PVC) PIPE CONFORMING TO ASTM D-3034 SPECIFICATIONS WITH INTEGRAL BELL AND GASKET JOINTS.
2. THE MANHOLES SHALL BE 4-FOOT INSIDE DIAMETER AND SHALL CONFORM WITH ASTM C478 STANDARDS FOR CONCRETE AND REINFORCEMENT. THE MANHOLE SHALL CONSIST OF THREE PARTS: THE BASE, THE BARREL(S) AND THE TOP SLAB (OR CORBEL).

EACH MANHOLE BASE WILL BE INDIVIDUALLY CAST TO MEET DEPTH AND PIPE INVERT REQUIREMENTS. ALL JOINTS SHALL BE SEALED AGAINST INFILTRATION BY USING EITHER AN "O" RING RUBBER GASKET OR A BUTYL JOINT SEALANT THAT COMPLETELY FILLS THE JOINT.

INLET AND OUTLET PIPE ENTRIES TO THE MANHOLE WILL BE FITTED WITH A FLEXIBLE WATERTIGHT GASKET THAT ALLOWS FOR SETTLEMENT OF THE PIPE AND/OR MANHOLE.

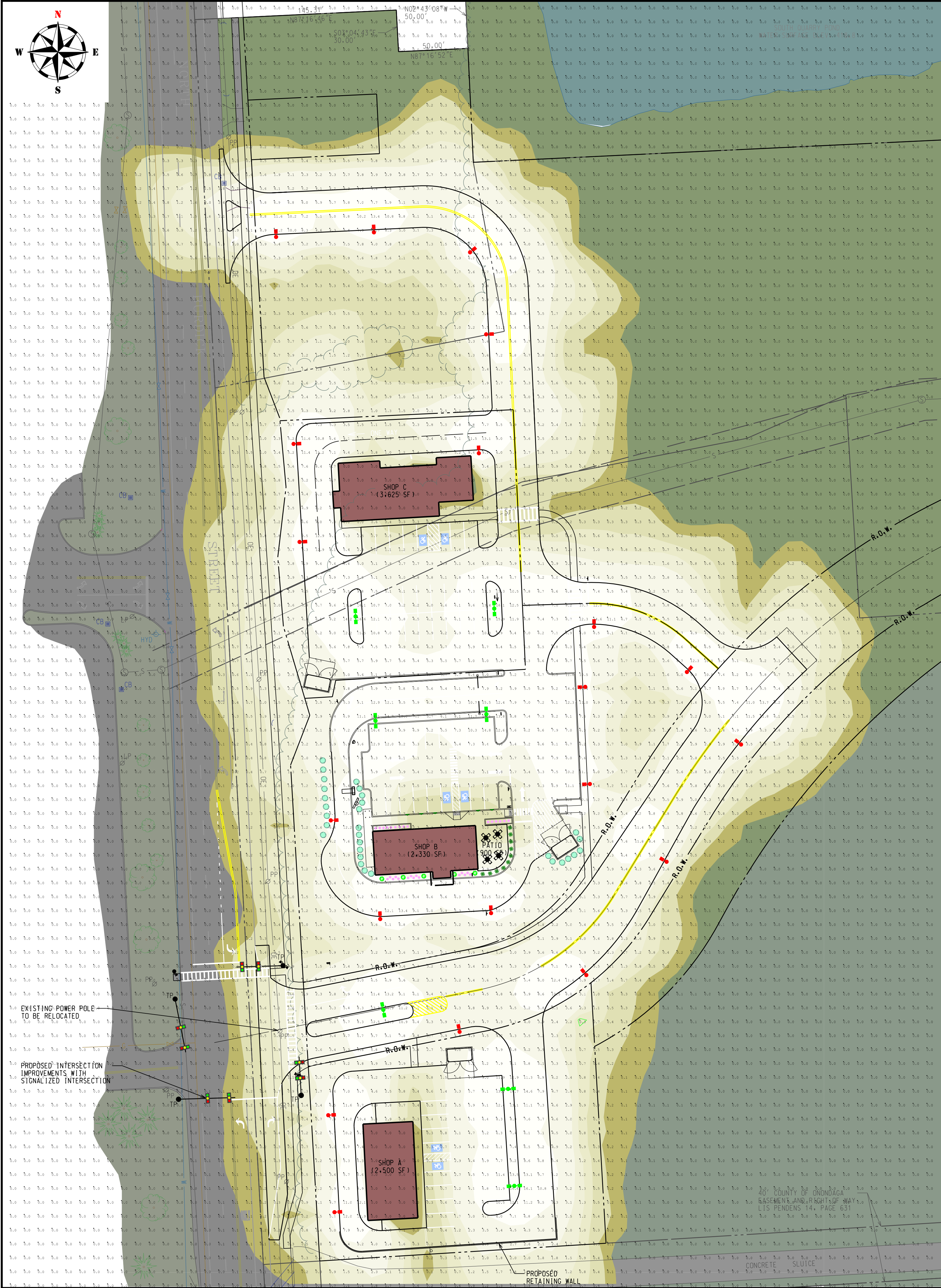
3. THE SANITARY MANHOLE FRAMES AND COVERS SHALL BE "NEENAH MODEL NO. R-1695" AND RATED FOR HEAVY DUTY USE WITH THE COVER MARKED "SANITARY SEWER" AS MANUFACTURED BY THE NEENAH FOUNDRY COMPANY.
4. ALL PRECAST SANITARY MANHOLES SHALL COME FROM SOURCE ON NEW YORK STATE DEPARTMENT OF TRANSPORTATION APPROVED MATERIAL LIST.
5. ALL PRECAST CONCRETE STRUCTURES SHALL BE HS-25 LOAD RATED.

INSPECTION, TESTING & CERTIFICATION:

1. THE INSTALLED SYSTEM SHALL BE INSPECTED/TESTED AS REQUIRED BY THE TOWN. THE PROJECT ENGINEER SHALL INSPECT THE INSTALLED PIPE PRIOR TO BACKFILLING.
2. THE PROJECT ENGINEER WILL BE PRESENT FOR THE FOLLOWING TESTING METHODS:
 - DEFLECTION TEST: SHALL BE REQUIRED IF DETERMINED TO BE NECESSARY BY PROJECT ENGINEER.
 - AN INFILTRATION TEST OR LOW PRESSURE TEST SHALL BE COMPLETED ON THE SEWER MAIN. A VACUUM TEST SHALL BE PERFORMED ON ALL MANHOLES.

THE INFILTRATION TEST OR LOW PRESSURE TEST SHALL BE COMPLETED FOLLOWING THE STANDARDS DESCRIBED IN THE "RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES- 1990 EDITION" (10 STATE STANDARDS), NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC) AND THE ONONDAGA COUNTY DEPARTMENT OF HEALTH.

THE LOW PRESSURE TEST SHALL BE COMPLETED ON THE GRAVITY PIPING
FOLLOWING THE STANDARDS DESCRIBED IN ASTM F 1417 - 92



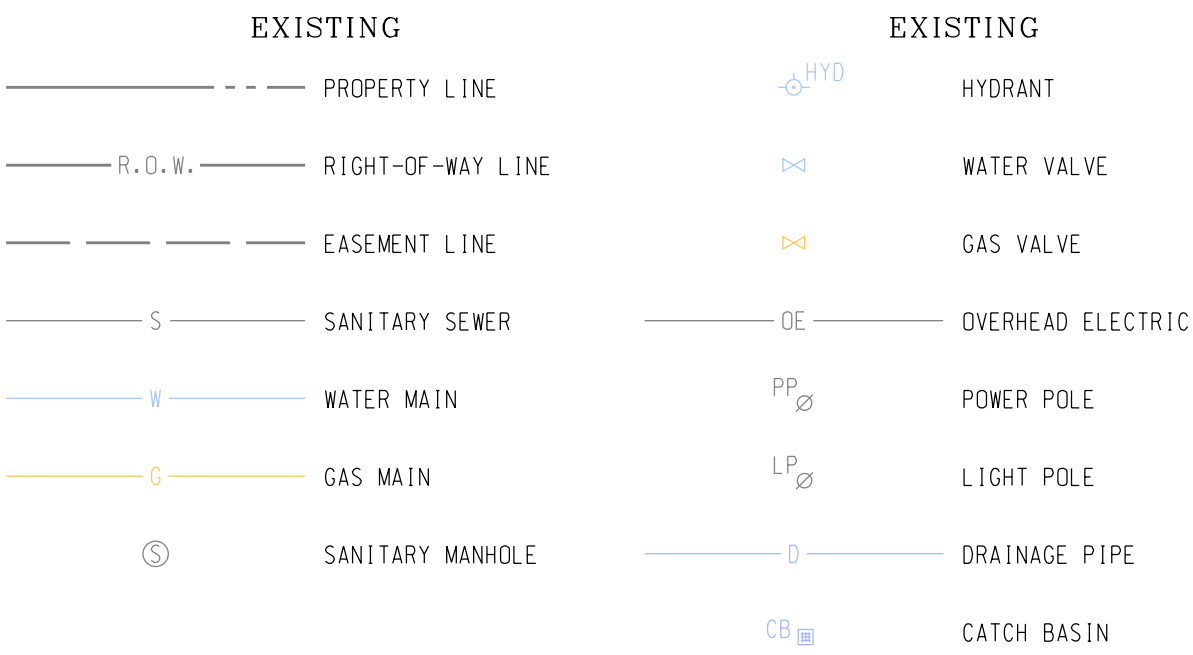
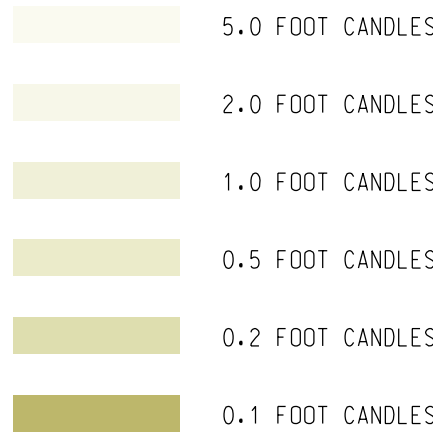
ROAD RIGHT-OF-WAY STATISTICAL SUMMARY				
AVERAGE	MAXIMUM	MINIMUM	MIN./AVG.	MIN./MAX.
4.46 FC	15.9 FC	0.8 FC	0.18	0.05

SHOP 'A' PARCEL STATISTICAL SUMMARY				
AVERAGE	MAXIMUM	MINIMUM	MIN./AVG.	MIN./MAX.
5.37 FC	16.7 FC	0.1 FC	0.02	0.01

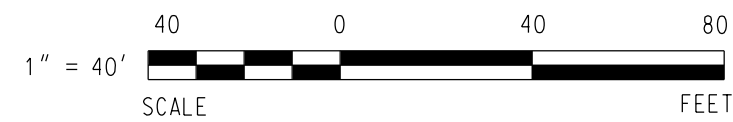
SHOP 'B' PARCEL STATISTICAL SUMMARY				
AVERAGE	MAXIMUM	MINIMUM	MIN./AVG.	MIN./MAX.
6.06 FC	16.4 FC	0.2 FC	0.03	0.01

SHOP 'C' PARCEL STATISTICAL SUMMARY				
AVERAGE	MAXIMUM	MINIMUM	MIN./AVG.	MIN./MAX.
5.22 FC	16.6 FC	0.1 FC	0.02	0.01

LIGHTING KEY



PHOTOMETRIC LIGHTING PLAN



BASEMAP REFERENCES:

- TOWN OF MANLIUS ZONING MAP, 2016 ZONING.
- "BOUNDARY SURVEY", PREPARED BY CNY LAND SURVEYING, DATED 12/28/21.
- SYRACUSE-ONONDAGA COUNTY GIS ON THE WEB, DATED 2021.

AREA LIGHT

NLS LIGHTING

NV-2

AREA LIGHTING

FORM AND FUNCTION

- Sleek, low profile housing
- Spec grade performance
- Engineered for optimum thermal management
- Low depreciation rate
- Reduces energy consumption and costs up to 66%
- Exceeds IES foot candle levels utilizing the least number of poles and fixtures per project
- Optical system designed for:
 - Parking Lots
 - Auto Dealerships
 - General Area Lighting

CONSTRUCTION

- Die Cast Aluminum
- External cooling fins
- Corrosion resistant external hardware
- One-piece silicone gasket ensures IP-65 seal for electronics compartment
- One-piece Optics Plate™ mounting silicone Micro Optics
- Two-piece silicone Micro Optic system ensures IP-67 level seal around each PCB
- Grade 2 Clear Anodized Optics Plate™ standard

FINISH

- 3-5 mils electrostatic powder coat
- NLS' standard high-quality finishes prevent corrosion, protects against and extreme environmental conditions

WARRANTY

Five-year limited warranty for drives and LEDs.

LISTINGS

- Certified to UL 1598
- UL 8750
- CSA C22.2 No. 250.0
- DesignLights Consortium® (DLC)
- DesignLights Consortium Premium® (DLCP)
- IP65/ IP67 Rated
- 3G Vibration Rated per ANSI C136.31-2010
- IDA Dark Sky Approved

PROUDLY MADE IN THE USA

LED WATTAGE CHART

	80L	96L	112L	128L
700 millicandels	33W	40W	47W	54W
1000 millicandels	20W	24W	29W	33W

Project Name:

Type:

Cat#	Light Dist.	# of LEDs	Milliwatts	Kelvin	Volts	Mounting	Color	Options
NV-2 (NV-2)	Type 2 (T2)	80 (80L)	700 (7)	2700K, 80 CRI (2708) 0	120-277 (UVV)	Direct Pole 6' Arm (DP56) 0	Reverse Textured (BR2)	Direct Pole 8' Arm (DP58) 0
	Type 3 (T3)	96 (96L)	1050 (1)	3000K, 80 CRI (3007) 0	120-277 (UVV)	Direct Pole 11' Arm (DP57) 0	White Textured (WT)	Direct Pole 13' Arm (DP59) 0
	Type 4 (T4)	112 (112L)	1280 (2)	3000K, 80 CRI (3007) 0	120-277 (UVV)	Knuckle Mount (KM)	Smooth White (SW)	Knuckle Mount (KM)
	Type 5 (T5)	128 (128L)	1536 (3)	3500K, 80 CRI (3507) 0	120-277 (UVV)	Wall Mount (WM)	Silver (SV)	Wall Mount (WM)
	Type 6 (T6)	144 (144L)	1792 (4)	4000K, 80 CRI (4007) 0	120-277 (UVV)	Truss Mount (TM)	Black Induced (BI)	Truss Mount (TM)
	Type 7 (T7)	160 (160L)	2048 (5)	5000K, 80 CRI (5007) 0	120-277 (UVV)	Tenax Arm (TA)	Smooth Black (SB)	Tenax Arm (TA)
	Type 8 (T8)	176 (176L)	2304 (6)	5000K, 80 CRI (5007) 0	120-277 (UVV)	Model Arm (MA)	Graphite Textured (GP)	Model Arm (MA)
	Type 9 (T9)	192 (192L)	2560 (7)	5000K, 80 CRI (5007) 0	120-277 (UVV)	Model Arm (MA)	Graphite Textured (GP)	Model Arm (MA)

NOTES:

- Consult Factory for Lead Time, Consult Factory for 90 CRI Requests
- Standard finish is stainless steel. Can be painted to match building.
- For limited life span applications, use 80 CRI.
- Universal Voltage (120-277V)
- LEDs not applicable with Tenax 2
- 2000K or warmer must be selected to meet international Dark Sky Association restrictions.

Engineering Associates, PC

TPK

19 Genesee Street • Camillus, New York 13313 • Ph: (315) 672-4325 • Fax: (315) 672-4322
www.tpkengineering.com

Civil • Mining • Site Development • Geotechnical • Structural • Environmental • Industrial • Lighting

DATE: _____

REVISIONS: _____

PROJECT: **TWIN LAKES COMMERCIAL DEVELOPMENT**

CLIENT: **TWIN SHORES PROPERTIES, LLC**

LOCATION: **N. BURDICK STREET, TOWN OF MANLIUS, ONONDAGA COUNTY, NEW YORK**

DRAWING TITLE: **PHOTOMETRIC LIGHTING PLAN**

PROJECT No.: **2021054**

SCALE: **AS NOTED**

DATE: _____

ENG'D BY: **SKO**

DRAWN BY: **DKC**

CHECKED BY: **JED**

SHEET NO: **PL-1**



November 16, 2022

Martin E. Voss, Chairman
ONONDAGA COUNTY PLANNING BOARD
1100 Civic Center
421 Montgomery Street
Syracuse, NY 13202

RE: Twin Shores, LLC – Twin Lakes Commercial Project
5440 North Burdick Street
Proposed Site Plan & Subdivision Review
Town of Manlius, Onondaga County
OCPB RESOLUTION RESPONSE (CASE # S-22-66)
TDK Project No: 2021054

Dear Mr. Voss:

In anticipation of an additional project review by County Planning regarding a proposed commercial development of approximately 9 acres of the above-reference property and in response to your Board's prior recommendations to the Town of Manlius dated November 09, 2022, regarding the preliminary subdivision of above-referenced property, we offer the following:

- ✦ *Wastewater Services - The Town should have assurances that any future development is sensitive to the location of the existing regional wastewater easements and infrastructure on site. Continued coordinated planning with the Onondaga County Department of Water Environment Protection (WEP) is required to ensure the Department continues to be involved throughout the process. The Town should ensure that the applicant obtains approval from WEP for capacity assurance and plan review prior to Town approval.*

TDK Response:

- TDK has received an acceptance letter from WEP (see attached).
- ✦ *Potential Floodplain/Floodway Impacts - The site is significantly encumbered by floodplain and floodway areas associated with on- and off-site water courses. The Town should consider the implications of allowing for more intense development in these sensitive environmental areas, particularly within the more restrictive floodway. The Town should consult their local floodplain ordinance, which contains FEMA requirements including submission of a hydrology study and identification of any*

necessary mitigation to protect the floodway and floodplain, before any development in the floodway. The applicant advised to consider that new structures and parking within a floodplain/floodway may result in significant expense or property flood insurance coverage.

TDK Response:

- A floodplain analysis has been conducted relative to proposed development of approximately 9 acres (7%) of the 130-acre property. Provisions for flood plain mitigation (offset) of impacts have been incorporated into the earthwork and related site development plans such that there will be no net increase in the flood elevations resulting from the proposed commercial project.

In general, Twin Shores proposes to interconnect the existing Limestone Creek floodplain corridor with the 23.5-acre southern quarry pond to provide additional surface water storage capacity for storms in excess of the 10-year, 24-hour storm event. It is worth noting that under existing conditions, both the southern and northern quarry ponds that total 38.5 acres in surface area are both physically located outside of the 100-year floodplain associated with Limestone Creek.

A flood plain development permit application with corresponding flood plain modeling support information and construction details will be provided to the Town for project coordination and approval.

- ✦ *Potential Wetland Impacts - The Town should ensure that the current wetland study and delineations are confirmed by the DEC and ACE and the applicant obtain any necessary permits prior to approving any proposed development. Optimally, a DEC-approved mitigation plan will be developed for any wetland disturbance and/or crossings.*

TDK Response:

- In 2018 a Jurisdictional Determination (JD) was issued by the Army Corps of Engineers (ACE) which indicated that no permits were required for work within the two large quarry ponds or four (4) smaller isolated wetlands within the 130-acre property.
- An additional wetland study was completed by Shumaker Consulting Engineering (Shumaker) on June 8, 2022. The report, along with a request for Approved Jurisdictional Determination (AJD) was submitted to the Army Corps of Engineers (ACE) on July 27, 2022. The New York State Department of Environmental Conservation (DEC) was copied on the request.

- A follow-up site visit was conducted by representatives of Shumaker and ACE on September 20, 2022. On November 5, 2022, the ACE issued a AJD which removed three additional small wetlands from their permitting requirements and a Preliminary Jurisdictional Determination (PJD) which identified three streams (Limestone Creek and two tributaries) within the 130-acre property that may be subject to regulatory jurisdiction.
 - It is understood that applications for permits for work within any regulated aquatic resources will be made to the ACE. No State-designated wetlands exist within the limits of the proposed commercial development.
- ✦ *Potential Stormwater Impacts - The Town should ensure that phase one development approval is contingent on conceptual approval of stormwater impact mitigation and management for full build-out of the overall development. This is necessary given on- and off-site water courses, the proximity and encroachment into floodplain and floodway areas, and potential state and federal wetlands. A Stormwater Pollution Prevention Plan (SWPPP) will be required by the Onondaga County Department of Transportation as part of the Department's review for any future development of the site.*

TDK Response:

- A draft Stormwater Pollution Prevention Plan (SWPPP) has been prepared consistent with the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities (DEC General Permit #GP-0-20-001). The SWPPP only addresses the proposed commercial development, as the balance of the Twin Shore tract that is zoned R-5, will have separate and stand-alone stormwater management system. A copy has been submitted to the Town as part of the site plan approval package.
- Again, regarding floodplain and floodway aspects, existing and proposed conditions have been evaluated and potential impacts addressed in a practical manner to not only serve the commercial project, but to also improve flood water management along the Limestone Creek corridor for the adjacent community.
- This project proposes to incorporate the surface water storage capacity of the 23.5-acre southern quarry pond as an overflow component for storms exceeding the 10-year, 24-hour design storm event, as this quarry pond does not currently lie within the existing 100-year floodplain associated with Limestone Creek.

- Refer to above response to *Potential Wetland Impacts* for additional information regarding federal and state wetland considerations.
- *Potential Traffic Impacts - The applicant should provide additional detail and coordinated planning to review potential traffic impacts of the project. The applicant is advised to coordinate with the Onondaga County Department of Transportation (OCDOT) early in the planning process. Traffic data and a lighting plan for full build-out will be required as part of the Department's review of any future development of the site. The Department advises that the right-in/rightout drives on North Burdick Street shown on the plan will not be permitted.*

TDK Response:

- As requested, an updated traffic study has been prepared to address potential full development of the 130-acre property, but it should be understood that Twin Shores is only proposing to develop the commercially zoned property. The proposed project will include the installation of a previously approved traffic signal as a primary entrance and also proposes to include a secondary driveway to the north that will allow for right in-right out traffic patterns, only. Furthermore, it is our understanding that a coordinated review of this project is currently underway with OCDOT, and we respectfully reserve the right to work through the alternate ingress-egress access point with them, accordingly.
- *Coordination with State Parks - Since the proposed project site is located within 500' of the Old Erie Canal State Park and Green Lakes State Park, the Town should continue coordinating with the Office of Parks, Recreation, and Historic Preservation to ensure any future projects in the proposed zoning areas will not negatively impact nearby parklands.*

TDK Response:

- Recommendation is noted and Twin Shores concurs with the overall objective. Project representatives have been in communication with representatives of the Parks since the initiation of the project.
- *Mobility - Per the recommendations from the Onondaga County Empire State Trail Local Economic Opportunities Plan, the applicant should consider working with OCDOT and CENTRO to include sidewalks and bus stop facilities along the North Burdick Street frontage, including pedestrian push buttons and crosswalks at intersections and bicycle racks where appropriate.*

TDK Response:

- Duly noted and it is our understanding that proposed Burdick Street right-of-way improvements are in progress with all involved parties. Additionally, please note that pedestrian crosswalks with signals and pushbuttons are proposed crossing the proposed site driveway with the extension of sidewalk along the frontage of the commercial property. A pedestrian crossing of North Burdick Street on the north side of the proposed signal, with pedestrian signals and pushbuttons, is also proposed. Full details of the design of these amenities will be finalized with OCDOT through the design/permitting process.
- ✦ *Open Space - The Town and applicant should explore options to dedicate environmentally encumbered lands (ponds, floodway, wetlands) and open space to the Town or a land trust to ensure that the sensitive environmental areas are maintained as open space and protected from future development.*

TDK Response:

- Noted.

We offer the above information for clarification purposes and understand that the Town will be referring this project to you for consideration. However, if you or any of the other Board members have any questions or require additional information regarding this project, please do not hesitate to contact us.

Sincerely,

TDK ENGINEERING ASSOCIATES, P.C.

 FOR JOE

Joseph E. Durand, P.E.

Cc: David Neuman, Twin Shores
John Charters, Twin Shores
Dave Herkala, Esq., Cerio Law
Thomas Cerio, Esq., Cerio Law
Gordon Stansbury, P.E. – GTS Consulting



J. Ryan McMahon, II, County Executive
Shannon L. Harty, P.E., Commissioner
650 Hiawatha Blvd. West
Syracuse, NY 13204-1194
(315) 435-2260 or (315) 435-6820
FAX (315) 435-5023
<http://www.ongov.net/wep/>

October 31, 2022

Joseph E. Durand, PE
Principal, President
TDK Engineering Associates, PC
19 Genesee Street
Camillus, NY 13031

**Re: Request for Capacity Assurance
North Burdick Street, Manlius NY**

Dear Mr. Durand:

Thank you for your submission of the Capacity Assurance form for the above referenced address. Based on your response, the proposed use of the site will release an average of 7,378 gallons of wastewater per day (gpd) or 2.7 million gallons of wastewater per year (gpy) into the sanitary sewer network. A summary of the infrastructure path to treatment is as follows:

Conveyance Type	Segments	Diameter	Feet	Miles	Manholes
<i>County Trunk Sewers</i>	25	48"	8,968	1.7	24

Wastewater Treatment Plant: Meadowbrook Limestone

Please note that because the path of the wastewater will run end at the Meadowbrook Limestone Wastewater Treatment Facility, a flow-constrained network structure, a 2:1 Inflow/Infiltration (I/I) offset is required. Please WEP's Division of Flow Control to develop an adequate I/I reduction plan.

Assuming that the appropriate offset is achieved, the Onondaga County Department of Water Environment Protection (WEP) has determined that the sanitary sewer system does have adequate capacity to accept the projected increase in sanitary sewer (average) daily flow.

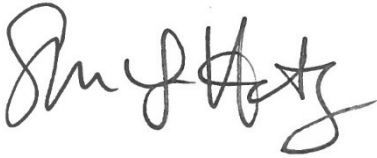
This acceptance is based on County infrastructure capacity only. This letter shall be valid for a period of 24 months commencing from the date of this letter. If construction has not been completed in this 24-month period, please contact this department to apply for an extension. If you need further assistance, please do not hesitate to contact Paul Driscoll at WEP's Division of Flow



Control at 315-435-5402 extension 264.

Sincerely,

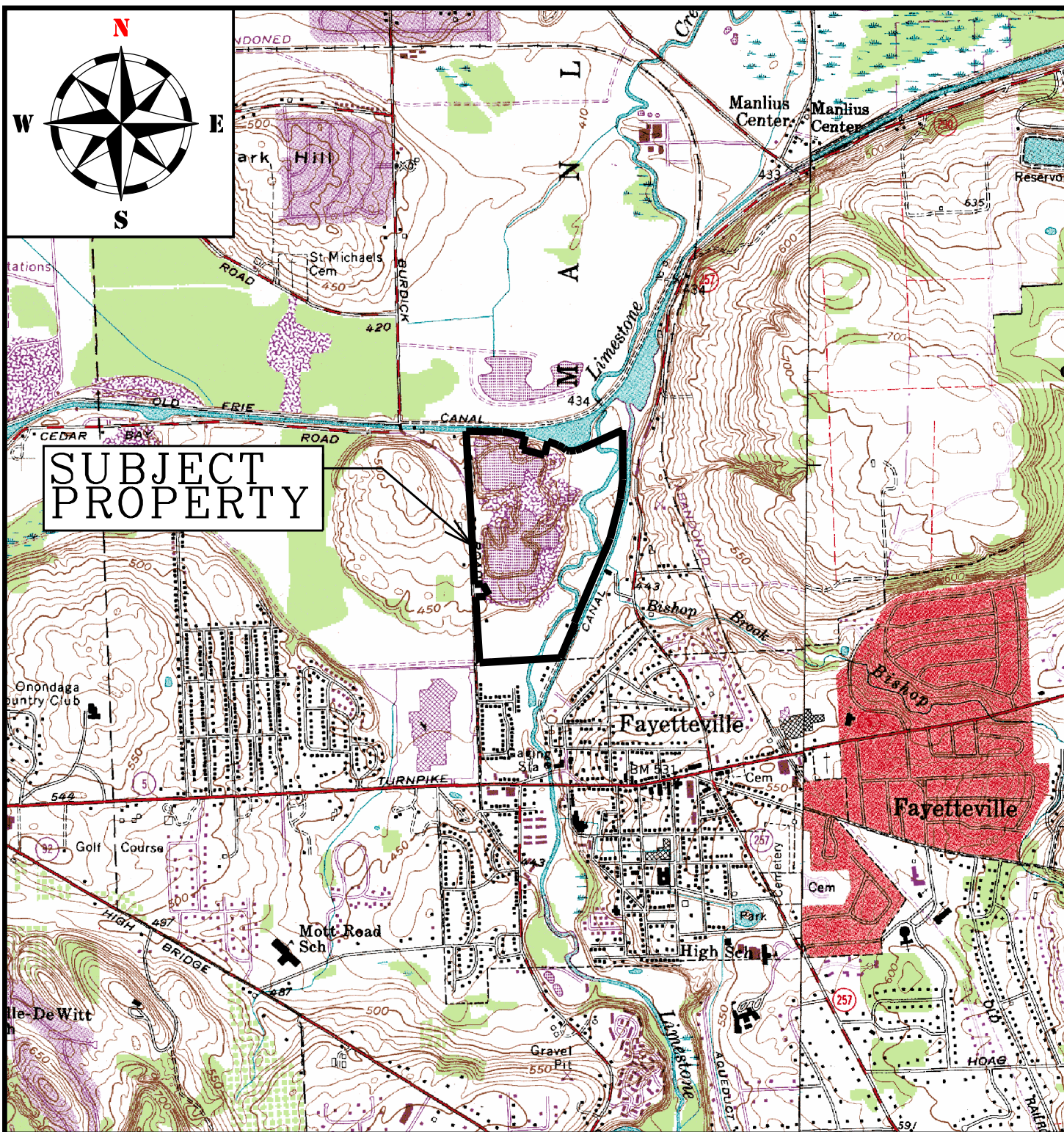
ONONDAGA COUNTY DEPARTMENT OF
WATER ENVIRONMENT PROTECTION

A handwritten signature in black ink, appearing to read "Shannon L. Harty". The signature is fluid and cursive, with the first name "Shannon" and last name "Harty" clearly distinguishable.

Shannon L. Harty, P.E.
Commissioner

APPENDIX 1

SITE LOCATION MAP



REF: U.S.G.S. SYRACUSE EAST QUAD., 1957, PHOTOREVISED 1978, 7.5 MIN.



19 Genesee Street
Camillus, New York 13031
PH: (315) 672-8726 • FX: (315) 672-8732
www.tdkengineering.com

DRAWING TITLE:

SITE LOCATION MAP

PROJECT:

MANLIUS PROJECT

CLIENT:

TWIN SHORES PROPERTIES, LLC

LOCATION:

TOWN OF MANLIUS, ONONDAGA COUNTY, NEW YORK

PROJECT No.: 2021054

SCALE: 1"=2000'

DATE: 10/04/2021

ENG'D BY: SKO

DRAWN BY: NAR

CHECKED BY: JED

SHEET NO.

SLM-1

APPENDIX 2

NRCS INFORMATION



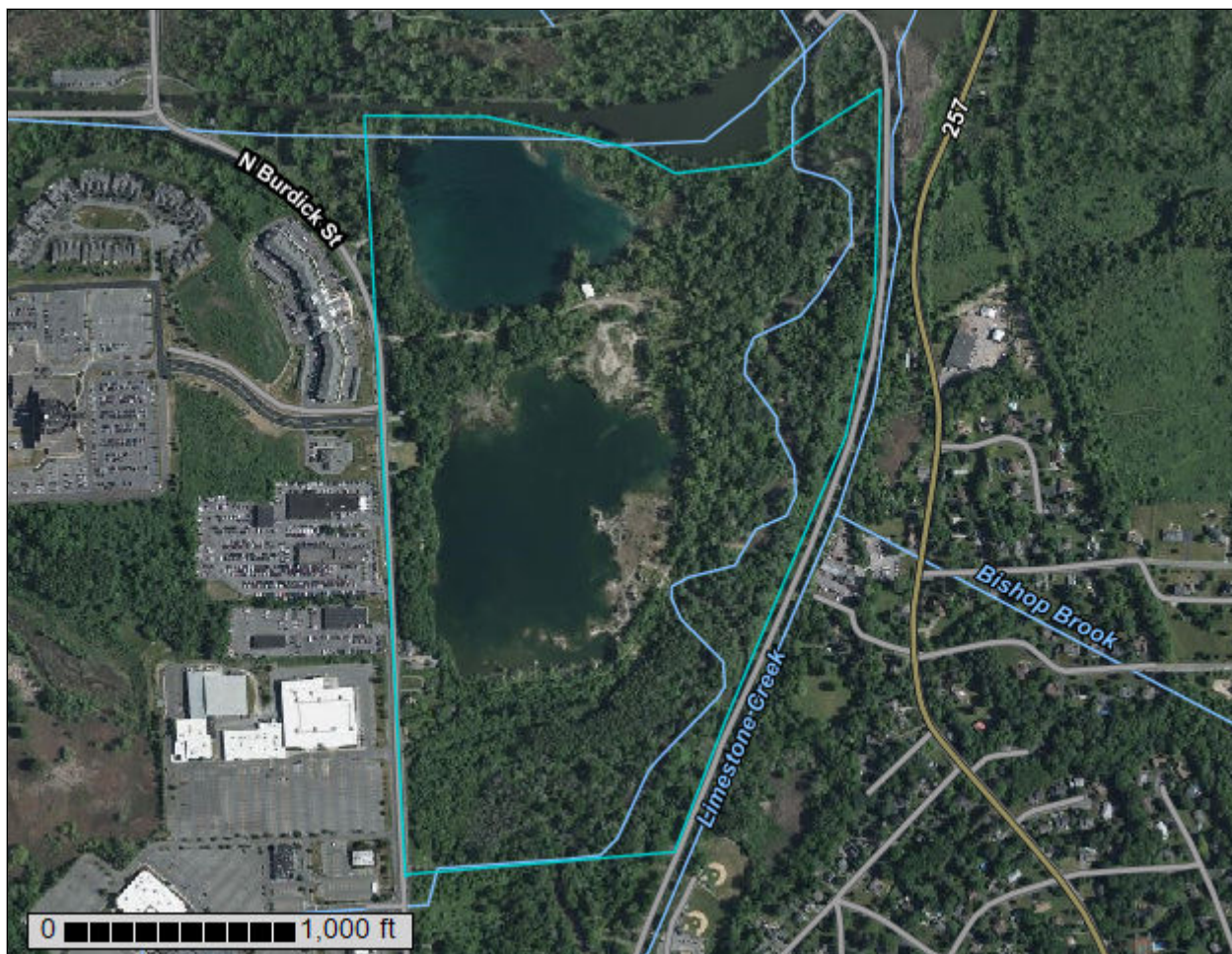
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Onondaga County, New York**



March 11, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Onondaga County, New York
Survey Area Data: Version 16, Sep 1, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 21, 2020—Jun 17, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CfB	Cazenovia silt loam, 2 to 8 percent slopes	6.4	4.9%
CgD	Cazenovia soils, 15 to 25 percent slopes	5.2	4.0%
Hb	Hamlin silt loam	11.5	8.7%
PG	Gravel pits	23.1	17.5%
PgB	Palmyra gravelly loam, 3 to 8 percent slopes	4.7	3.5%
Te	Teel silt loam	11.6	8.8%
W	Water	42.7	32.3%
Wn	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	26.8	20.3%
Totals for Area of Interest		132.0	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor

components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Onondaga County, New York

CfB—Cazenovia silt loam, 2 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9vg5
Elevation: 380 to 1,690 feet
Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Cazenovia and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cazenovia

Setting

Landform: Till plains, reworked lake plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Loamy till that contains limestone with an admixture of reddish lake-laid clays or reddish clay shale

Typical profile

H1 - 0 to 12 inches: silt loam
H2 - 12 to 36 inches: silty clay loam
H3 - 36 to 60 inches: gravelly silty clay loam

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 48 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Ovid

Percent of map unit: 10 percent

Hydric soil rating: No

Unnamed soils

Percent of map unit: 5 percent

Hydric soil rating: No

CgD—Cazenovia soils, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9vg8

Elevation: 390 to 1,670 feet

Mean annual precipitation: 38 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Cazenovia and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cazenovia

Setting

Landform: Till plains, reworked lake plains

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Side slope

Down-slope shape: Concave

Across-slope shape: Convex

Parent material: Loamy till that contains limestone with an admixture of reddish lake-laid clays or reddish clay shale

Typical profile

H1 - 0 to 12 inches: silt loam

H2 - 12 to 36 inches: silty clay loam

H3 - 36 to 60 inches: gravelly silty clay loam

Properties and qualities

Slope: 15 to 25 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 24 to 48 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 15 percent

Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Custom Soil Resource Report

Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F101XY013NY - Moist Till
Hydric soil rating: No

Minor Components

Ovid

Percent of map unit: 5 percent
Hydric soil rating: No

Ontario

Percent of map unit: 5 percent
Hydric soil rating: No

Honeoye

Percent of map unit: 5 percent
Hydric soil rating: No

Schoharie

Percent of map unit: 5 percent
Hydric soil rating: No

Hb—Hamlin silt loam

Map Unit Setting

National map unit symbol: 9vgz
Elevation: 360 to 1,260 feet
Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hamlin and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hamlin

Setting

Landform: Flood plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Silty alluvium mainly from areas of siltstone, shale, and limestone

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 16 inches: silt loam
H3 - 16 to 41 inches: silt loam

Custom Soil Resource Report

H4 - 41 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

*Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)*

Depth to water table: About 36 to 72 inches

Frequency of flooding: OccasionalNone

Frequency of ponding: None

Calcium carbonate, maximum content: 1 percent

Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 1

Hydrologic Soil Group: B

Hydric soil rating: No

Minor Components

Herkimer

Percent of map unit: 5 percent

Hydric soil rating: No

Teel

Percent of map unit: 5 percent

Hydric soil rating: No

Howard

Percent of map unit: 5 percent

Hydric soil rating: No

PG—Gravel pits

Map Unit Setting

National map unit symbol: 9vgr

Mean annual precipitation: 38 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 190 days

Farmland classification: Not prime farmland

Map Unit Composition

Gravel pits: 70 percent

Minor components: 30 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Minor Components

Alton

Percent of map unit: 5 percent

Custom Soil Resource Report

Hydric soil rating: No

Galen

Percent of map unit: 5 percent

Hydric soil rating: No

Howard

Percent of map unit: 5 percent

Hydric soil rating: No

Wampsville

Percent of map unit: 5 percent

Hydric soil rating: No

Fredon

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

Lamson

Percent of map unit: 5 percent

Landform: Depressions

Hydric soil rating: Yes

PgB—Palmyra gravelly loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9vkh

Elevation: 380 to 1,410 feet

Mean annual precipitation: 38 to 42 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 110 to 190 days

Farmland classification: All areas are prime farmland

Map Unit Composition

Palmyra and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Palmyra

Setting

Landform: Terraces, outwash plains, deltas

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy over sandy and gravelly glaciofluvial deposits, derived mainly from limestone and other sedimentary rocks

Typical profile

H1 - 0 to 14 inches: gravelly loam

H2 - 14 to 31 inches: gravelly loam

H3 - 31 to 60 inches: stratified very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Phelps

Percent of map unit: 5 percent
Hydric soil rating: No

Arkport

Percent of map unit: 5 percent
Hydric soil rating: No

Howard

Percent of map unit: 5 percent
Hydric soil rating: No

Schoharie

Percent of map unit: 5 percent
Hydric soil rating: No

Te—Teel silt loam

Map Unit Setting

National map unit symbol: 9vkv
Elevation: 600 to 1,800 feet
Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 190 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Teel and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Teel

Setting

Landform: Flood plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Talf
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Silty alluvium

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 28 inches: silt loam
H3 - 28 to 60 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: OccasionalNone
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Hydric soil rating: No

Minor Components

Hamlin

Percent of map unit: 5 percent
Hydric soil rating: No

Herkimer

Percent of map unit: 5 percent
Hydric soil rating: No

Howard

Percent of map unit: 5 percent
Hydric soil rating: No

Wayland

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

W—Water

Map Unit Setting

National map unit symbol: 9vl1
Mean annual precipitation: 38 to 42 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 110 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Wn—Wayland soils complex, 0 to 3 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2srgv
Elevation: 160 to 1,970 feet
Mean annual precipitation: 31 to 68 inches
Mean annual air temperature: 43 to 52 degrees F
Frost-free period: 105 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Wayland and similar soils: 60 percent
Wayland, very poorly drained, and similar soils: 30 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wayland

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty and clayey alluvium derived from interbedded sedimentary rock

Typical profile

A - 0 to 6 inches: silt loam
Bg1 - 6 to 12 inches: silt loam
Bg2 - 12 to 18 inches: silt loam
C1 - 18 to 46 inches: silt loam
C2 - 46 to 72 inches: silty clay loam

Custom Soil Resource Report

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F139XY009OH - Wet Floodplain
Hydric soil rating: Yes

Description of Wayland, Very Poorly Drained

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Silty and clayey alluvium derived from interbedded sedimentary rock

Typical profile

A - 0 to 6 inches: mucky silt loam
Bg1 - 6 to 12 inches: silt loam
Bg2 - 12 to 18 inches: silt loam
C1 - 18 to 46 inches: silt loam
C2 - 46 to 72 inches: silty clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F139XY009OH - Wet Floodplain
Hydric soil rating: Yes

Minor Components

Wakeville

Percent of map unit: 10 percent

Landform: Flood plains

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Talf

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

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Custom Soil Resource Report

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APPENDIX 3

HISTORIC PLACES OR ARCHEOLOGICAL RESOURCES



Parks, Recreation, and Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

June 29, 2022

Ann Oot
Town Manager
301 Brooklea Drive
Fayetteville, NY 13066

Re: SEQRA
Twin Shores - North Burdick Street Property
Manlius, Onondaga County
22PR04024
TDK No. 2021054

Dear Ann Oot:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP) as part of your SEQRA process. These comments are those of OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

We note that the proposed project is adjacent to several properties eligible for listing in the State and National Registers of Historic Places (S/NRHP). These resources include: Old Erie Canal State Historic Park; Green Lakes State Park; Expansion of Genesee St. Hill – Limestone Plaza NRHD. We further note that the following resources are not eligible for listing in the S/NRHP: Former Maintenance Garage; Former Electrical Substation; Former Scale House; Former Work Shop; 5502 N. Burdick St.; 5500 N. Burdick St.; 5424 N. Burdick St.; Abandoned Residential Garage; 5420 North Burdick Street. Therefore, under SEQRA, our office as subject matter experts, have reviewed the submission received on June 8, 2022, including the photographs and site plan dated May 18, 2022. Based on our review, we have no concerns regarding potential impacts to architectural or archaeological resources.

If the lead agency concludes that additional studies would be beneficial to identify and/or assess potential impacts to archeological and historic resources, our office would be pleased to provide additional guidance.

Please be aware that if this project will involve state or federal permitting, funding or licensing, it may require a more rigorous review for potential impacts to architectural and archaeological resources, in accordance with Section 106 of the National Historic Preservation Act or Section 14.09 of NYS Parks Recreation and Historic Preservation Law.

New York State Office of Parks, Recreation and Historic Preservation

Division for Historic Preservation, Peebles Island, PO Box 189, Waterford, New York 12188-0189
(518) 237-8643 • <https://parks.ny.gov/shpo>

If you have any questions, I can be reached at (518) 268-2170.

Sincerely,

A handwritten signature in dark ink, appearing to read "Robyn Sedgwick", written in a cursive style.

Robyn Sedgwick
Historic Site Restoration Coordinator
e-mail: robyn.sedgwick@parks.ny.gov

via e-mail only

cc: J. Herrmann – TDK Engineering

APPENDIX 4

*NOTICE OF INTENT (NOI) FOR
CONSTRUCTION ACTIVITIES
&
NYSDEC
ACKNOWLEDGEMENT LETTER*

***Insert NYSDEC Acknowledgement Letter
upon receipt and remove this insert***

APPENDIX 5

*DRAINAGE CALCULATIONS
& DRAINAGE PLANS (ED-1 & PD-1)*

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	New York
Location	
Longitude	76.015 degrees West
Latitude	43.040 degrees North
Elevation	0 feet
Date/Time	Thu, 21 Apr 2022 14:20:05 -0400

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.43	0.53	0.70	0.87	1.07	1yr	0.75	0.97	1.21	1.46	1.73	2.05	2.29	1yr	1.81	2.20	2.63	3.17	3.69	1yr
2yr	0.33	0.50	0.63	0.83	1.04	1.28	2yr	0.90	1.16	1.45	1.73	2.04	2.39	2.69	2yr	2.11	2.58	3.03	3.64	4.21	2yr
5yr	0.39	0.61	0.76	1.02	1.31	1.62	5yr	1.13	1.44	1.83	2.17	2.54	2.93	3.32	5yr	2.60	3.19	3.71	4.38	5.00	5yr
10yr	0.44	0.70	0.88	1.20	1.56	1.93	10yr	1.34	1.69	2.19	2.59	3.00	3.43	3.89	10yr	3.04	3.74	4.34	5.04	5.70	10yr
25yr	0.53	0.84	1.07	1.48	1.96	2.44	25yr	1.69	2.10	2.76	3.25	3.73	4.22	4.82	25yr	3.73	4.63	5.33	6.08	6.78	25yr
50yr	0.60	0.96	1.24	1.74	2.34	2.93	50yr	2.02	2.47	3.32	3.87	4.41	4.94	5.66	50yr	4.37	5.45	6.22	7.00	7.73	50yr
100yr	0.70	1.13	1.45	2.06	2.80	3.50	100yr	2.42	2.92	3.96	4.60	5.21	5.78	6.66	100yr	5.12	6.40	7.28	8.06	8.82	100yr
200yr	0.80	1.30	1.69	2.42	3.35	4.19	200yr	2.89	3.45	4.73	5.47	6.15	6.77	7.84	200yr	5.99	7.54	8.51	9.28	10.06	200yr
500yr	0.97	1.60	2.09	3.03	4.24	5.32	500yr	3.66	4.31	5.98	6.87	7.65	8.35	9.73	500yr	7.39	9.35	10.48	11.20	11.99	500yr

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.25	0.38	0.46	0.63	0.77	0.88	1yr	0.66	0.86	0.92	1.10	1.40	1.65	2.04	1yr	1.46	1.96	2.39	2.78	3.32	1yr
2yr	0.32	0.49	0.61	0.82	1.02	1.14	2yr	0.88	1.11	1.27	1.56	1.90	2.32	2.61	2yr	2.06	2.51	2.93	3.55	4.10	2yr
5yr	0.36	0.55	0.68	0.94	1.19	1.35	5yr	1.03	1.32	1.49	1.86	2.27	2.72	3.08	5yr	2.41	2.96	3.46	4.10	4.70	5yr
10yr	0.39	0.60	0.74	1.04	1.34	1.50	10yr	1.16	1.47	1.68	2.08	2.54	3.06	3.47	10yr	2.71	3.34	3.90	4.55	5.19	10yr
25yr	0.44	0.66	0.83	1.18	1.55	1.73	25yr	1.34	1.69	1.97	2.41	2.93	3.54	4.04	25yr	3.13	3.88	4.56	5.21	5.94	25yr
50yr	0.46	0.71	0.88	1.26	1.70	1.92	50yr	1.47	1.87	2.21	2.67	3.25	3.94	4.50	50yr	3.49	4.33	5.12	5.78	6.55	50yr
100yr	0.50	0.76	0.95	1.38	1.89	2.31	100yr	1.63	2.26	2.49	2.96	3.60	4.36	5.01	100yr	3.86	4.82	5.75	6.38	7.24	100yr
200yr	0.54	0.82	1.03	1.50	2.09	2.63	200yr	1.80	2.57	2.78	3.27	3.98	4.83	5.58	200yr	4.27	5.37	6.44	7.03	7.98	200yr
500yr	0.84	1.25	1.61	2.34	3.33	3.13	500yr	2.87	3.06	3.21	3.74	4.55	5.50	6.40	500yr	4.87	6.16	7.46	7.96	9.09	500yr

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
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2021054: Twin Lakes Multi-Use Development

WQv and RRv CALCULATIONS

WATER QUALITY VOLUME (WQv)

$$WQv = \frac{P * Rv * A}{12}$$

Where:

P= 90% Rainfall Event Number

$$Rv = 0.05 + 0.009(I)$$

A = Contributing Drainage Area

I = % Impervious Cover

Sample Calculation: CM-1B

P= 1.0 (*Fig. 4.1 SMDM*)

A = 5.61 ac

$$I = (4.17/5.61) * 100 = 74.33\%$$

$$Rv = 0.05 + 0.009(74.33) = 0.72$$

$$WQv = \frac{1.0 * 0.72 * 5.61}{12} = 0.337 \text{ acre} - \text{feet}$$

MINIMUM RUNOFF REDUCTION VOLUME

$$RRv_{Min} = \frac{P * Rv * Aic * S}{12}$$

Where:

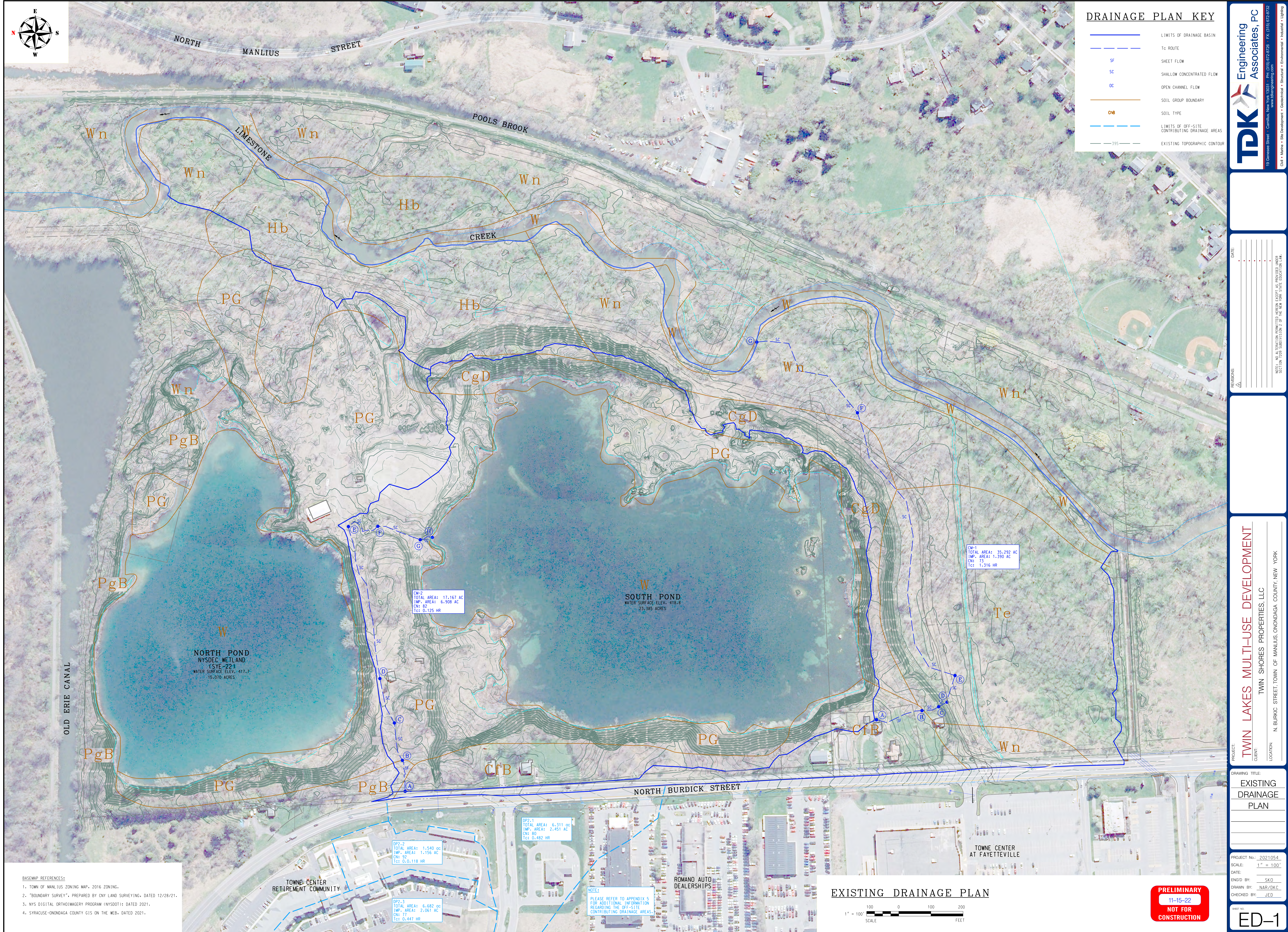
P= 1.0

Rv = 0.95 (100% Imp.)

Aic = 6.79 acres

S = 0.3

$$RRv_{Min} = \frac{1.0 * 0.95 * 6.79 * 0.3}{12} = 0.161 \text{ acre} - \text{feet}$$



DRAINAGE PLAN KEY

	LIMITS OF DRAINAGE BASIN
	TO ROUTE
	SHEET FLOW
	SHALLOW CONCENTRATED FLOW
	OPEN CHANNEL FLOW
	SOIL GROUP BOUNDARY
	SOIL TYPE
	LIMITS OF OFF-SITE CONTRIBUTING DRAINAGE AREAS
	EXISTING TOPOGRAPHIC CONTOUR

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PROJECT	TWIN LAKES MULTI-USE DEVELOPMENT
CLIENT	TWIN SHORES PROPERTIES, LLC
LOCATION	N. BURDICK STREET, TOWN OF MANLIUS, ONONDAGA COUNTY, NEW YORK

DRAWING TITLE	EXISTING DRAINAGE PLAN
---------------	------------------------

PROJECT No.	2021054
SCALE	1" = 100'
DATE	
ENG'D BY	SKD
DRAWN BY	NAR/DKC
CHECKED BY	JED

Project Summary	
Title	2021054 - Twin Lakes - N. Burdick (Existing Conditions)
Engineer	SKO
Company	TDK Engineering Associates. P.C.
Date	10/26/2022
Notes	Existing Conditions

Table of Contents

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Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
CM-1	Pre-Development 1-yr, 24-hr	1	0.976	12.850	3.75
CM-1	Pre-Development 10-yr, 24-hr	10	3.253	12.800	15.86
CM-1	Pre-Development 100-yr, 24-hr	100	8.385	12.650	43.52
CM-2	Pre-Development 1-yr, 24-hr	1	0.973	12.000	16.36
CM-2	Pre-Development 10-yr, 24-hr	10	2.464	11.950	43.21
CM-2	Pre-Development 100-yr, 24-hr	100	5.407	11.950	93.91
S. Pond Surface	Pre-Development 1-yr, 24-hr	1	3.991	11.950	58.65
S. Pond Surface	Pre-Development 10-yr, 24-hr	10	6.678	11.950	98.14
S. Pond Surface	Pre-Development 100-yr, 24-hr	100	11.254	11.950	165.37
DP2.1 (EX.)	Pre-Development 1-yr, 24-hr	1	0.309	12.200	2.97
DP2.1 (EX.)	Pre-Development 10-yr, 24-hr	10	0.825	12.200	8.55
DP2.1 (EX.)	Pre-Development 100-yr, 24-hr	100	1.873	12.150	19.52
DP2.2 (EX.)	Pre-Development 1-yr, 24-hr	1	0.164	11.950	2.88
DP2.2 (EX.)	Pre-Development 10-yr, 24-hr	10	0.329	11.950	5.61
DP2.2 (EX.)	Pre-Development 100-yr, 24-hr	100	0.622	11.950	10.21
DP2.3 (EX.)	Pre-Development 1-yr, 24-hr	1	0.262	12.200	2.44
DP2.3 (EX.)	Pre-Development 10-yr, 24-hr	10	0.762	12.150	8.15
DP2.3 (EX.)	Pre-Development 100-yr, 24-hr	100	1.820	12.150	20.00

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
O-1	Pre-Development 1-yr, 24-hr	1	0.976	12.850	3.75
O-1	Pre-Development 10-yr, 24-hr	10	3.253	12.800	15.86

Subsection: Master Network Summary

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
O-1	Pre-Development 100-yr, 24-hr	100	8.385	12.650	43.52

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
South Pond (IN)	Pre-Development 1-yr, 24-hr	1	5.701	11.950	79.86	(N/A)	(N/A)
South Pond (OUT)	Pre-Development 1-yr, 24-hr	1	0.000	0.000	0.00	419.04	5.701
South Pond (IN)	Pre-Development 10-yr, 24-hr	10	11.059	11.950	155.21	(N/A)	(N/A)
South Pond (OUT)	Pre-Development 10-yr, 24-hr	10	0.000	0.000	0.00	419.26	11.059
South Pond (IN)	Pre-Development 100-yr, 24-hr	100	20.976	11.950	291.39	(N/A)	(N/A)
South Pond (OUT)	Pre-Development 100-yr, 24-hr	100	0.000	0.000	0.00	419.68	20.976

Subsection: Time of Concentration Calculations

Label: CM-1

Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	150.00 ft
Manning's n	0.800
Slope	0.072 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	0.07 ft/s
Segment Time of Concentration	0.599 hours
Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	67.60 ft
Is Paved?	False
Slope	0.034 ft/ft
Average Velocity	2.96 ft/s
Segment Time of Concentration	0.006 hours
Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	29.98 ft
Is Paved?	False
Slope	0.533 ft/ft
Average Velocity	11.78 ft/s
Segment Time of Concentration	0.001 hours
Segment #4: TR-55 Shallow Concentrated Flow	
Hydraulic Length	86.80 ft
Is Paved?	False
Slope	0.027 ft/ft
Average Velocity	2.67 ft/s
Segment Time of Concentration	0.009 hours
Segment #5: TR-55 Shallow Concentrated Flow	
Hydraulic Length	941.30 ft
Is Paved?	False
Slope	0.001 ft/ft
Average Velocity	0.43 ft/s
Segment Time of Concentration	0.613 hours
Segment #6: TR-55 Shallow Concentrated Flow	

Subsection: Time of Concentration Calculations

Label: CM-1

Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Segment #6: TR-55 Shallow Concentrated Flow

Hydraulic Length	427.75 ft
Is Paved?	False
Slope	0.007 ft/ft
Average Velocity	1.35 ft/s
Segment Time of Concentration	0.088 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	1.316 hours
-----------------------------------	-------------

Subsection: Time of Concentration Calculations

Label: CM-1

Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

==== SCS Channel Flow

Tc = $R = Qa / Wp$
 $V = (1.49 * (R^{2/3}) * (Sf^{*-0.5})) / n$

Where: $(Lf / V) / 3600$
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
 $V = 16.1345 * (Sf^{*0.5})$

Paved Surface:
 $V = 20.3282 * (Sf^{*0.5})$

Where: $(Lf / V) / 3600$
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Time of Concentration Calculations

Label: CM-2

Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.011
Slope	0.053 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	1.76 ft/s
Segment Time of Concentration	0.016 hours
Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	120.90 ft
Is Paved?	False
Slope	0.047 ft/ft
Average Velocity	3.50 ft/s
Segment Time of Concentration	0.010 hours
Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	146.90 ft
Is Paved?	False
Slope	0.014 ft/ft
Average Velocity	1.88 ft/s
Segment Time of Concentration	0.022 hours
Segment #4: TR-55 Shallow Concentrated Flow	
Hydraulic Length	487.90 ft
Is Paved?	False
Slope	0.025 ft/ft
Average Velocity	2.53 ft/s
Segment Time of Concentration	0.054 hours
Segment #5: TR-55 Shallow Concentrated Flow	
Hydraulic Length	118.20 ft
Is Paved?	False
Slope	0.042 ft/ft
Average Velocity	3.32 ft/s
Segment Time of Concentration	0.010 hours
Segment #6: TR-55 Shallow Concentrated Flow	

Subsection: Time of Concentration Calculations

Label: CM-2

Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Segment #6: TR-55 Shallow Concentrated Flow

Hydraulic Length	138.80 ft
Is Paved?	False
Slope	0.036 ft/ft
Average Velocity	3.06 ft/s
Segment Time of Concentration	0.013 hours

Segment #7: TR-55 Shallow Concentrated Flow

Hydraulic Length	40.00 ft
Is Paved?	False
Slope	0.205 ft/ft
Average Velocity	7.31 ft/s
Segment Time of Concentration	0.002 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.125 hours
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Subsection: Time of Concentration Calculations

Label: CM-2

Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

==== SCS Channel Flow

Tc = $R = Qa / Wp$
 $V = (1.49 * (R^{2/3}) * (Sf^{0.5})) / n$

Where: $(Lf / V) / 3600$
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
 $V = 16.1345 * (Sf^{0.5})$

Paved Surface:
 $V = 20.3282 * (Sf^{0.5})$

Where: $(Lf / V) / 3600$
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Runoff CN-Area

Label: CM-1

Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil C	98.000	1.390	0.0	0.0	98.000
Brush - brush, weed, grass mix - good - Soil C	65.000	1.330	0.0	0.0	65.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	0.069	0.0	0.0	74.000
Woods - good - Soil B	55.000	6.426	0.0	0.0	55.000
Woods - good - Soil C	70.000	2.484	0.0	0.0	70.000
Woods - good - Soil D	77.000	23.593	0.0	0.0	77.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	35.292	(N/A)	(N/A)	72.871

Subsection: Runoff CN-Area

Label: CM-2

Scenario: Pre-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Brush - brush, weed, grass mix - good - Soil C	65.000	1.459	0.0	0.0	65.000
Woods - good - Soil C	70.000	1.784	0.0	0.0	70.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	0.494	0.0	0.0	74.000
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil C	98.000	0.196	0.0	0.0	98.000
Woods - good - Soil D	77.000	0.927	0.0	0.0	77.000
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil D	98.000	6.712	0.0	0.0	98.000
Brush - brush, weed, grass mix - good - Soil D	73.000	5.595	0.0	0.0	73.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	17.167	(N/A)	(N/A)	82.313

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Master Network Summary...2, 3



	LIMITS OF DRAINAGE BASIN
	Tc ROUTE
SF	SHEET FLOW
SC	SHALLOW CONCENTRATED FLOW
OC	OPEN CHANNEL FLOW
	SOIL GROUP BOUNDARY
Ch	SOIL TYPE
	LIMITS OF OFF-SITE CONTRIBUTING DRAINAGE AREA
395	EXISTING TOPOGRAPHIC CONTOUR
395	PROPOSED TOPOGRAPHIC CONTOUR

TDK  Engineering Associates, PC
Corporate Office: 20000 N. 15th Ave., Suite 100, Phoenix, AZ 85022-4400
Tel: (602) 998-8800 Fax: (602) 998-8801
E-mail: info@tdkcorp.com Website: www.tdkcorp.com

REVISIONS:	DATE:
1	

NOTE: NO ALTERATION PERMITTED HEREIN EXCEPT AS PROVIDED UNDER SECTION 27.06, SUBDIVISIONS OF THE NEW YORK STATE ENGINEERING LAW.

PROJECT: TWIN LAKES MULTI-USE DEVELOPMENT

CLIENT: TWIN SHORES PROPERTIES, LLC

LOCATION: N. BURKIC STREET, TOWN OF MANLIUS, ONONDAGA COUNTY, NEW YORK

DRAWING TITLE:

PROPOSED
DRAINAGE
PLAN

PROJECT No.: 2021054
SCALE: 1" = 100'
DATE: _____
ENG'D BY: SKO
DRAWN BY: NAR/DKC
CHECKED BY: JED

SHEET NO.
PD-1

BASEMAP REFERENCES:

1. TOWN OF MANLIUS ZONING MAP, 2016 ZONING.
2. "BOUNDARY SURVEY", PREPARED BY CNY LAND SURVEYING, DATED 12/28/21.
3. NYS DIGITAL ORTHOIMAGERY PROGRAM (NYSOOT): DATED 2021.
4. SYRACUSE-ONONDAGA COUNTY GIS ON THE WEB, DATED 2021.

NOTE:
PLEASE REFER TO APPENDIX 5
FOR ADDITIONAL INFORMATION
REGARDING THE OFF-SITE
CONTRIBUTING DRAINAGE AREAS.

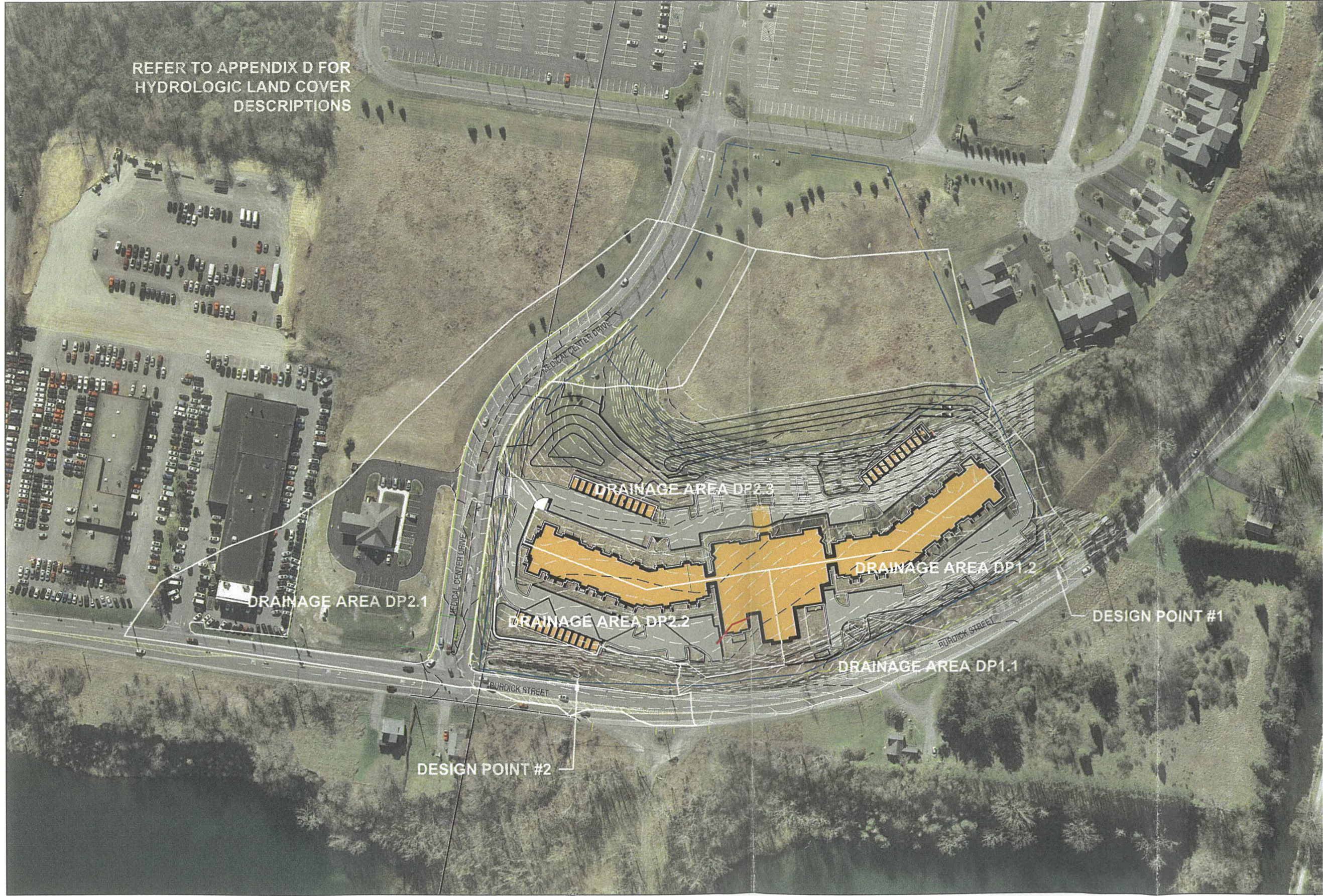
PROPOSED DRAINAGE PLAN

1" = 100'

100 0 100 200

SCALE EFFECT

PRELIMINARY
11-15-22
**NOT FOR
CONSTRUCTION**



REFER TO APPENDIX D FOR
HYDROLOGIC LAND COVER
DESCRIPTIONS

PROJECT NO.

14.1342

DATE

06/05/2015

SCALE

1"=150'

PREPARED BY:



**NAPIERALA
CONSULTING**
PROFESSIONAL ENGINEER, P.C.
SITE • DESIGN • ENGINEERING
110 FAYETTE STREET
MANLIUS, NEW YORK 13104

email: MNAP@NAPCON.COM
PH: (315) 682-5580 FAX: (315)
682-5544

SHEET TITLE:

PROPOSED CONDITION WATERSHED MAPPING

PROJECT TITLE:

**RESORT LIFESTYLE COMMUNITY
NORTH BURDICK STREET**

TOWN OF MANLIUS

ONONDAGA COUNTY, NEW YORK

PREPARED FOR:

CAMERON GENERAL CONTRACTORS

8040 EIGER DRIVE
LINCOLN, NE 68516

Project Summary	
Title	2021054 - Twin Lakes - N. Burdick (Proposed Conditions)
Engineer	SKO
Company	TDK Engineering Associates. P.C.
Date	10/26/2022
Notes	Proposed Conditions

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Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
CM-2	Post-Development 1-yr, 24-hr	1	1.007	12.000	16.90
CM-2	Post-Development 10-yr, 24-hr	10	2.548	11.950	44.53
CM-2	Post-Development 100-yr, 24-hr	100	5.592	11.950	96.78
CM-1E	Post-Development 1-yr, 24-hr	1	0.579	12.800	2.20
CM-1E	Post-Development 10-yr, 24-hr	10	2.083	12.700	10.71
CM-1E	Post-Development 100-yr, 24-hr	100	5.587	12.650	31.37
So. Pond Storage	Post-Development 1-yr, 24-hr	1	3.991	11.950	58.65
So. Pond Storage	Post-Development 10-yr, 24-hr	10	6.678	11.950	98.14
So. Pond Storage	Post-Development 100-yr, 24-hr	100	11.254	11.950	165.37
CM-1A	Post-Development 1-yr, 24-hr	1	0.199	12.000	3.07
CM-1A	Post-Development 10-yr, 24-hr	10	0.417	12.000	6.34
CM-1A	Post-Development 100-yr, 24-hr	100	0.810	12.000	11.95
CM-1B	Post-Development 1-yr, 24-hr	1	0.599	11.950	10.67
CM-1B	Post-Development 10-yr, 24-hr	10	1.200	11.950	20.66
CM-1B	Post-Development 100-yr, 24-hr	100	2.267	11.950	37.50
CM-1D	Post-Development 1-yr, 24-hr	1	0.068	11.950	1.17
CM-1D	Post-Development 10-yr, 24-hr	10	0.128	11.950	2.12
CM-1D	Post-Development 100-yr, 24-hr	100	0.231	11.950	3.69
CM-1C	Post-Development 1-yr, 24-hr	1	0.133	12.000	2.18
CM-1C	Post-Development 10-yr, 24-hr	10	0.286	12.000	4.57
CM-1C	Post-Development 100-yr, 24-hr	100	0.564	12.000	8.70
DP2.1	Post-Development 1-yr, 24-hr	1	0.309	12.200	2.97
DP2.1	Post-Development 10-yr, 24-hr	10	0.825	12.200	8.55
DP2.1	Post-Development 100-yr, 24-hr	100	1.873	12.150	19.52

Subsection: Master Network Summary

Catchments Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
DP2.2	Post-Development 1-yr, 24-hr	1	0.164	11.950	2.88
DP2.2	Post-Development 10-yr, 24-hr	10	0.329	11.950	5.61
DP2.2	Post-Development 100-yr, 24-hr	100	0.622	11.950	10.21
DP2.3	Post-Development 1-yr, 24-hr	1	0.262	12.200	2.44
DP2.3	Post-Development 10-yr, 24-hr	10	0.762	12.150	8.15
DP2.3	Post-Development 100-yr, 24-hr	100	1.820	12.150	20.00

Node Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)
O-1	Post-Development 1-yr, 24-hr	1	0.824	12.050	3.36
O-1	Post-Development 10-yr, 24-hr	10	2.608	12.650	11.49
O-1	Post-Development 100-yr, 24-hr	100	6.845	12.650	32.92

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
So. Pond (IN)	Post-Development 1-yr, 24-hr	1	6.015	11.950	80.56	(N/A)	(N/A)
So. Pond (OUT)	Post-Development 1-yr, 24-hr	1	0.000	0.000	0.00	419.05	6.015
So. Pond (IN)	Post-Development 10-yr, 24-hr	10	12.148	11.950	161.28	(N/A)	(N/A)
So. Pond (OUT)	Post-Development 10-yr, 24-hr	10	0.006	24.000	0.01	419.31	12.142
So. Pond (IN)	Post-Development 100-yr, 24-hr	100	23.501	11.950	334.06	(N/A)	(N/A)

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
So. Pond (OUT)	Post-Development 100-yr, 24-hr	100	0.248	24.000	0.33	419.77	23.252
SUB-1 (MC-3500) (IN)	Post-Development 1-yr, 24-hr	1	0.599	11.950	10.67	(N/A)	(N/A)
SUB-1 (MC-3500) (OUT)	Post-Development 1-yr, 24-hr	1	0.170	18.550	0.17	428.93	0.446
SUB-1 (MC-3500) (IN)	Post-Development 10-yr, 24-hr	10	1.200	11.950	20.66	(N/A)	(N/A)
SUB-1 (MC-3500) (OUT)	Post-Development 10-yr, 24-hr	10	0.745	12.050	13.20	429.90	0.527
SUB-1 (MC-3500) (IN)	Post-Development 100-yr, 24-hr	100	2.267	11.950	37.50	(N/A)	(N/A)
SUB-1 (MC-3500) (OUT)	Post-Development 100-yr, 24-hr	100	1.810	12.000	34.42	430.73	0.585
SUB-3 (DC-780) (IN)	Post-Development 1-yr, 24-hr	1	0.068	11.950	1.17	(N/A)	(N/A)
SUB-3 (DC-780) (OUT)	Post-Development 1-yr, 24-hr	1	0.046	12.850	0.08	427.78	0.042
SUB-3 (DC-780) (IN)	Post-Development 10-yr, 24-hr	10	0.128	11.950	2.12	(N/A)	(N/A)
SUB-3 (DC-780) (OUT)	Post-Development 10-yr, 24-hr	10	0.103	12.000	1.89	428.04	0.052
SUB-3 (DC-780) (IN)	Post-Development 100-yr, 24-hr	100	0.231	11.950	3.69	(N/A)	(N/A)
SUB-3 (DC-780) (OUT)	Post-Development 100-yr, 24-hr	100	0.200	11.950	3.49	428.19	0.057
SUB-2 (SC-310) (IN)	Post-Development 1-yr, 24-hr	1	0.133	12.000	2.18	(N/A)	(N/A)
SUB-2 (SC-310) (OUT)	Post-Development 1-yr, 24-hr	1	0.111	12.200	0.85	425.60	0.053

Subsection: Master Network Summary

Pond Summary

Label	Scenario	Return Event (years)	Hydrograph Volume (ac-ft)	Time to Peak (hours)	Peak Flow (ft ³ /s)	Maximum Water Surface Elevation (ft)	Maximum Pond Storage (ac-ft)
SUB-2 (SC-310) (IN)	Post-Development 10-yr, 24-hr	10	0.286	12.000	4.57	(N/A)	(N/A)
SUB-2 (SC-310) (OUT)	Post-Development 10-yr, 24-hr	10	0.259	12.050	3.74	426.08	0.075
SUB-2 (SC-310) (IN)	Post-Development 100-yr, 24-hr	100	0.564	12.000	8.70	(N/A)	(N/A)
SUB-2 (SC-310) (OUT)	Post-Development 100-yr, 24-hr	100	0.530	12.050	7.98	426.55	0.089

Subsection: Time of Concentration Calculations

Label: CM-1A

Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Time of Concentration Results

Segment #1: TR-55 Sheet Flow

Hydraulic Length	38.90 ft
Manning's n	0.240
Slope	0.039 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	0.11 ft/s
Segment Time of Concentration	0.099 hours

Segment #2: TR-55 Sheet Flow

Hydraulic Length	9.80 ft
Manning's n	0.011
Slope	0.051 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	1.09 ft/s
Segment Time of Concentration	0.003 hours

Segment #3: TR-55 Sheet Flow

Hydraulic Length	19.20 ft
Manning's n	0.240
Slope	0.052 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	0.11 ft/s
Segment Time of Concentration	0.050 hours

Segment #4: TR-55 Sheet Flow

Hydraulic Length	32.10 ft
Manning's n	0.011
Slope	0.039 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	1.24 ft/s
Segment Time of Concentration	0.007 hours

Segment #5: TR-55 Shallow Concentrated Flow

Hydraulic Length	160.30 ft
Is Paved?	True
Slope	0.035 ft/ft
Average Velocity	3.80 ft/s

Subsection: Time of Concentration Calculations

Label: CM-1A

Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Segment #5: TR-55 Shallow Concentrated Flow

Segment Time of Concentration	0.012 hours
-------------------------------	-------------

Segment #6: TR-55 Shallow Concentrated Flow

Hydraulic Length	85.30 ft
Is Paved?	True
Slope	0.012 ft/ft
Average Velocity	2.23 ft/s
Segment Time of Concentration	0.011 hours

Segment #7: TR-55 Shallow Concentrated Flow

Hydraulic Length	147.80 ft
Is Paved?	True
Slope	0.007 ft/ft
Average Velocity	1.68 ft/s
Segment Time of Concentration	0.024 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.205 hours
-----------------------------------	-------------

Subsection: Time of Concentration Calculations

Label: CM-1A

Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

==== SCS Channel Flow

Tc = $R = Qa / Wp$
 $V = (1.49 * (R^{2/3}) * (Sf^{*-0.5})) / n$

Where: $(Lf / V) / 3600$
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
 $V = 16.1345 * (Sf^{*0.5})$

Paved Surface:
 $V = 20.3282 * (Sf^{*0.5})$

Where: $(Lf / V) / 3600$
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Time of Concentration Calculations

Label: CM-1C

Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Time of Concentration Results

Segment #1: TR-55 Sheet Flow

Hydraulic Length	72.10 ft
Manning's n	0.240
Slope	0.042 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	0.13 ft/s
Segment Time of Concentration	0.158 hours

Segment #2: TR-55 Shallow Concentrated Flow

Hydraulic Length	105.80 ft
Is Paved?	True
Slope	0.012 ft/ft
Average Velocity	2.23 ft/s
Segment Time of Concentration	0.013 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.171 hours
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Subsection: Time of Concentration Calculations

Label: CM-1C

Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

==== SCS Channel Flow

Tc = $R = Qa / Wp$
 $V = (1.49 * (R^{2/3}) * (Sf^{-0.5})) / n$

Where: $(Lf / V) / 3600$
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
 $V = 16.1345 * (Sf^{0.5})$

Paved Surface:
 $V = 20.3282 * (Sf^{0.5})$

Where: $(Lf / V) / 3600$
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Time of Concentration Calculations

Label: CM-1E

Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	77.50 ft
Manning's n	0.240
Slope	0.077 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	0.17 ft/s
Segment Time of Concentration	0.130 hours
Segment #2: TR-55 Sheet Flow	
Hydraulic Length	22.50 ft
Manning's n	0.800
Slope	0.001 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	0.01 ft/s
Segment Time of Concentration	0.723 hours
Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	426.80 ft
Is Paved?	False
Slope	0.001 ft/ft
Average Velocity	0.51 ft/s
Segment Time of Concentration	0.232 hours
Segment #4: TR-55 Shallow Concentrated Flow	
Hydraulic Length	427.75 ft
Is Paved?	False
Slope	0.007 ft/ft
Average Velocity	1.35 ft/s
Segment Time of Concentration	0.088 hours
Time of Concentration (Composite)	
Time of Concentration (Composite)	1.174 hours

Subsection: Time of Concentration Calculations

Label: CM-1E

Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

==== SCS Channel Flow

Tc = $R = Qa / Wp$
 $V = (1.49 * (R^{2/3}) * (Sf^{*-0.5})) / n$

Where: $(Lf / V) / 3600$
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
 $V = 16.1345 * (Sf^{*0.5})$

Paved Surface:
 $V = 20.3282 * (Sf^{*0.5})$

Where: $(Lf / V) / 3600$
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Time of Concentration Calculations

Label: CM-2

Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Time of Concentration Results

Segment #1: TR-55 Sheet Flow	
Hydraulic Length	100.00 ft
Manning's n	0.011
Slope	0.053 ft/ft
2 Year 24 Hour Depth	2.4 in
Average Velocity	1.76 ft/s
Segment Time of Concentration	0.016 hours
Segment #2: TR-55 Shallow Concentrated Flow	
Hydraulic Length	120.90 ft
Is Paved?	False
Slope	0.041 ft/ft
Average Velocity	3.27 ft/s
Segment Time of Concentration	0.010 hours
Segment #3: TR-55 Shallow Concentrated Flow	
Hydraulic Length	146.90 ft
Is Paved?	False
Slope	0.014 ft/ft
Average Velocity	1.91 ft/s
Segment Time of Concentration	0.021 hours
Segment #4: TR-55 Shallow Concentrated Flow	
Hydraulic Length	487.90 ft
Is Paved?	False
Slope	0.025 ft/ft
Average Velocity	2.55 ft/s
Segment Time of Concentration	0.053 hours
Segment #5: TR-55 Shallow Concentrated Flow	
Hydraulic Length	118.20 ft
Is Paved?	False
Slope	0.042 ft/ft
Average Velocity	3.31 ft/s
Segment Time of Concentration	0.010 hours
Segment #6: TR-55 Shallow Concentrated Flow	

Subsection: Time of Concentration Calculations

Label: CM-2

Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Segment #6: TR-55 Shallow Concentrated Flow

Hydraulic Length	138.80 ft
Is Paved?	False
Slope	0.036 ft/ft
Average Velocity	3.06 ft/s
Segment Time of Concentration	0.013 hours

Segment #7: TR-55 Shallow Concentrated Flow

Hydraulic Length	40.00 ft
Is Paved?	False
Slope	0.205 ft/ft
Average Velocity	7.31 ft/s
Segment Time of Concentration	0.002 hours

Time of Concentration (Composite)

Time of Concentration (Composite)	0.125 hours
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Subsection: Time of Concentration Calculations

Label: CM-2

Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

==== SCS Channel Flow

Tc = $R = Qa / Wp$
 $V = (1.49 * (R^{2/3}) * (Sf^{-0.5})) / n$

Where: $(Lf / V) / 3600$
R= Hydraulic radius
Aq= Flow area, square feet
Wp= Wetted perimeter, feet
V= Velocity, ft/sec
Sf= Slope, ft/ft
n= Manning's n
Tc= Time of concentration, hours
Lf= Flow length, feet

==== SCS TR-55 Shallow Concentration Flow

Tc = Unpaved surface:
 $V = 16.1345 * (Sf^{0.5})$

Paved Surface:
 $V = 20.3282 * (Sf^{0.5})$

Where: $(Lf / V) / 3600$
V= Velocity, ft/sec
Sf= Slope, ft/ft
Tc= Time of concentration, hours
Lf= Flow length, feet

Subsection: Runoff CN-Area

Label: CM-1A

Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	0.494	0.0	0.0	74.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil D	80.000	0.219	0.0	0.0	80.000
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil D	98.000	1.390	0.0	0.0	98.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	2.103	(N/A)	(N/A)	90.488

Subsection: Runoff CN-Area

Label: CM-1B

Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil D	98.000	4.173	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	0.863	0.0	0.0	74.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil D	80.000	0.575	0.0	0.0	80.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	5.611	(N/A)	(N/A)	92.464

Subsection: Runoff CN-Area

Label: CM-1C

Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil D	98.000	0.768	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil D	80.000	0.731	0.0	0.0	80.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	1.499	(N/A)	(N/A)	89.222

Subsection: Runoff CN-Area

Label: CM-1D

Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil D	98.000	0.460	0.0	0.0	98.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil D	80.000	0.075	0.0	0.0	80.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	0.535	(N/A)	(N/A)	95.477

Subsection: Runoff CN-Area

Label: CM-1E

Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Woods - good - Soil B	55.000	6.391	0.0	0.0	55.000
Woods - good - Soil C	70.000	0.775	0.0	0.0	70.000
Woods - good - Soil D	77.000	17.345	0.0	0.0	77.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	0.433	0.0	0.0	74.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil D	80.000	0.129	0.0	0.0	80.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	25.073	(N/A)	(N/A)	71.140

Subsection: Runoff CN-Area

Label: CM-2

Scenario: Post-Development 1-yr, 24-hr

Return Event: 1 years

Storm Event: 1-yr, 24-hr [2.05"]

Runoff Curve Number Data

Soil/Surface Description	CN	Area (acres)	C (%)	UC (%)	Adjusted CN
Impervious Areas - Paved parking lots, roofs, driveways, Streets and roads - Soil D	98.000	5.991	0.0	0.0	98.000
Woods - good - Soil C	70.000	1.326	0.0	0.0	70.000
Woods - good - Soil D	77.000	0.494	0.0	0.0	77.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil C	74.000	2.889	0.0	0.0	74.000
Brush - brush, weed, grass mix - good - Soil C	65.000	1.001	0.0	0.0	65.000
Brush - brush, weed, grass mix - good - Soil D	73.000	4.678	0.0	0.0	73.000
Open space (Lawns,parks etc.) - Good condition; grass cover > 75% - Soil D	80.000	1.375	0.0	0.0	80.000
COMPOSITE AREA & WEIGHTED CN --->	(N/A)	17.754	(N/A)	(N/A)	81.577

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APPENDIX 6

CONSTRUCTION INSPECTION CHECKLIST(S)

Bioretention Construction Inspection Checklist

Project:
Location:
Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Pre-construction meeting		
Runoff diverted		
Facility area cleared		
If designed as exfilter, soil testing for permeability		
Facility location staked out		
2. Excavation		
Size and location		
Lateral slopes completely level		
If designed as exfilter, ensure that excavation does not compact subsoils.		
Longitudinal slopes within design range		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
3. Structural Components		
Stone diaphragm installed correctly		
Outlets installed correctly		
Underdrain		
Pretreatment devices installed		
Soil bed composition and texture		
4. Vegetation		
Complies with planting specs		
Topsoil adequate in composition and placement		
Adequate erosion control measures in place		
5. Final Inspection		
Dimensions		
Proper stone diaphragm		
Proper outlet		
Soil/ filter bed permeability testing		
Effective stand of vegetation and stabilization		
Construction generated sediments removed		
Contributing watershed stabilized before flow is diverted to the practice		

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's resting on a surface.

[illegible]

Open Channel System Construction Inspection Checklist

Project: _____

Location: _____

Site Status: _____

Date: _____

Time: _____

Inspector: _____

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Pre-Construction		
Pre-construction meeting		
Runoff diverted		
Facility location staked out		
2. Excavation		
Size and location		
Side slope stable		
Soil permeability		
Groundwater / bedrock		
Lateral slopes completely level		
Longitudinal slopes within design range		
Excavation does not compact subsoils		
3. Check dams		
Dimensions		
Spacing		
Materials		

Comments:[illegible]

Actions to be Taken:

This image shows a full page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page, typical of notebook paper. There are no margins, text, or other markings on the page.

Stormwater/Wetland Pond Construction Inspection Checklist

Project:

Location:

Site Status:

Date:

Time:

Inspector:

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
Pre-Construction/Materials and Equipment		
Pre-construction meeting		
Pipe and appurtenances on-site prior to construction and dimensions checked		
1. Material (including protective coating, if specified)		
2. Diameter		
3. Dimensions of metal riser or pre-cast concrete outlet structure		
4. Required dimensions between water control structures (orifices, weirs, etc.) are in accordance with approved plans		
5. Barrel stub for prefabricated pipe structures at proper angle for design barrel slope		
6. Number and dimensions of prefabricated anti-seep collars		
7. Watertight connectors and gaskets		
8. Outlet drain valve		
Project benchmark near pond site		
Equipment for temporary de-watering		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
2. Subgrade Preparation		
Area beneath embankment stripped of all vegetation, topsoil, and organic matter		
3. Pipe Spillway Installation		
Method of installation detailed on plans		
A. Bed preparation		
Installation trench excavated with specified side slopes		
Stable, uniform, dry subgrade of relatively impervious material (If subgrade is wet, contractor shall have defined steps before proceeding with installation)		
Invert at proper elevation and grade		
B. Pipe placement		
Metal / plastic pipe		
1. Watertight connectors and gaskets properly installed		
2. Anti-seep collars properly spaced and having watertight connections to pipe		
3. Backfill placed and tamped by hand under “haunches” of pipe		
4. Remaining backfill placed in max. 8 inch lifts using small power tamping equipment until 2 feet cover over pipe is reached		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
3. Pipe Spillway Installation		
Concrete pipe		
1. Pipe set on blocks or concrete slab for pouring of low cradle		
2. Pipe installed with rubber gasket joints with no spalling in gasket interface area		
3. Excavation for lower half of anti-seep collar(s) with reinforcing steel set		
4. Entire area where anti-seep collar(s) will come in contact with pipe coated with mastic or other approved waterproof sealant		
5. Low cradle and bottom half of anti-seep collar installed as monolithic pour and of an approved mix		
6. Upper half of anti-seep collar(s) formed with reinforcing steel set		
7. Concrete for collar of an approved mix and vibrated into place (protected from freezing while curing, if necessary)		
8. Forms stripped and collar inspected for honeycomb prior to backfilling. Parge if necessary.		
C. Backfilling		
Fill placed in maximum 8 inch lifts		
Backfill taken minimum 2 feet above top of anti-seep collar elevation before traversing with heavy equipment		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
4. Riser / Outlet Structure Installation		
Riser located within embankment		
A. Metal riser		
Riser base excavated or formed on stable subgrade to design dimensions		
Set on blocks to design elevations and plumbed		
Reinforcing bars placed at right angles and projecting into sides of riser		
Concrete poured so as to fill inside of riser to invert of barrel		
B. Pre-cast concrete structure		
Dry and stable subgrade		
Riser base set to design elevation		
If more than one section, no spalling in gasket interface area; gasket or approved caulking material placed securely		
Watertight and structurally sound collar or gasket joint where structure connects to pipe spillway		
C. Poured concrete structure		
Footing excavated or formed on stable subgrade, to design dimensions with reinforcing steel set		
Structure formed to design dimensions, with reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place (protected from freezing while curing, if necessary)		
Forms stripped & inspected for "honeycomb" prior to backfilling; pare if necessary		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
5. Embankment Construction		
Fill material		
Compaction		
Embankment		
1. Fill placed in specified lifts and compacted with appropriate equipment		
2. Constructed to design cross-section, side slopes and top width		
3. Constructed to design elevation plus allowance for settlement		
6. Impounded Area Construction		
Excavated / graded to design contours and side slopes		
Inlet pipes have adequate outfall protection		
Forebay(s)		
Pond benches		
7. Earth Emergency Spillway Construction		
Spillway located in cut or structurally stabilized with riprap, gabions, concrete, etc.		
Excavated to proper cross-section, side slopes and bottom width		
Entrance channel, crest, and exit channel constructed to design grades and elevations		

CONSTRUCTION SEQUENCE	SATISFACTORY / UNSATISFACTORY	COMMENTS
8. Outlet Protection		
A. End section		
Securely in place and properly backfilled		
B. Endwall		
Footing excavated or formed on stable subgrade, to design dimensions and reinforcing steel set, if specified		
Endwall formed to design dimensions with reinforcing steel set as per plan		
Concrete of an approved mix and vibrated into place (protected from freezing, if necessary)		
Forms stripped and structure inspected for "honeycomb" prior to backfilling; parge if necessary		
C. Riprap apron / channel		
Apron / channel excavated to design cross-section with proper transition to existing ground		
Filter fabric in place		
Stone sized as per plan and uniformly place at the thickness specified		
9. Vegetative Stabilization		
Approved seed mixture or sod		
Proper surface preparation and required soil amendments		
Excelsior mat or other stabilization, as per plan		

CONSTRUCTION SEQUENCE	SATISFACTORY/ UNSATISFACTORY	COMMENTS
10. Miscellaneous		
Drain for ponds having a permanent pool		
Trash rack / anti-vortex device secured to outlet structure		
Trash protection for low flow pipes, orifices, etc.		
Fencing (when required)		
Access road		
Set aside for clean-out maintenance		
11. Stormwater Wetlands		
Adequate water balance		
Variety of depth zones present		
Approved pondscaping plan in place Reinforcement budget for additional plantings		
Plants and materials ordered 6 months prior to construction		
Construction planned to allow for adequate planting and establishment of plant community (April-June planting window)		
Wetland buffer area preserved to maximum extent possible		

Comments:

Actions to be Taken:

APPENDIX 7

MAINTENANCE AND MANAGEMENT INSPECTION CHECKLIST(S)

Bioretention Operation, Maintenance and Management Inspection Checklist

Project:

Location:

Site Status:

Date:

Time:

Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Bioretention and contributing areas clean of debris		
No dumping of yard wastes into practice		
Litter (branches, etc.) have been removed		
2. Vegetation (Monthly)		
Plant height not less than design water depth		
Fertilized per specifications		
Plant composition according to approved plans		
No placement of inappropriate plants		
Grass height not greater than 6 inches		
No evidence of erosion		
3. Check Dams/Energy Dissipaters/Sumps (Annual, After Major Storms)		
No evidence of sediment buildup		

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
Sumps should not be more than 50% full of sediment		
No evidence of erosion at downstream toe of drop structure		
4. Dewatering (Monthly)		
Dewaterers between storms		
No evidence of standing water		
5. Sediment Deposition (Annual)		
Swale clean of sediments		
Sediments should not be > 20% of swale design depth		
6. Outlet/Overflow Spillway (Annual, After Major Storms)		
Good condition, no need for repair		
No evidence of erosion		
No evidence of any blockages		
7. Integrity of Filter Bed (Annual)		
Filter bed has not been blocked or filled inappropriately		

Comments:

Actions to be Taken:

Open Channel Operation, Maintenance, and Management Inspection Checklist

Project: _____

Location: _____

Site Status: _____

Date: _____

Time: _____

Inspector: _____

MAINTENANCE ITEM	SATISFACTORY/ UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Contributing areas clean of debris		
2. Check Dams or Energy Dissipators (Annual, After Major Storms)		
No evidence of flow going around structures		
No evidence of erosion at downstream toe		
Soil permeability		
Groundwater / bedrock		
3. Vegetation (Monthly)		
Mowing done when needed		
Minimum mowing depth not exceeded		
No evidence of erosion		
Fertilized per specification		
4. Dewatering (Monthly)		
Dewaters between storms		

MAINTENANCE ITEM	SATISFACTORY/ UNSATISFACTORY	COMMENTS
5. Sediment deposition (Annual)		
Clean of sediment		
6. Outlet/Overflow Spillway (Annual)		
Good condition, no need for repairs		
No evidence of erosion		

Comments:

Actions to be Taken:

Stormwater Pond/Wetland Operation, Maintenance and Management Inspection Checklist

Project _____
 Location: _____
 Site Status: _____

 Date: _____
 Time: _____

 Inspector: _____

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
1. Embankment and emergency spillway (Annual, After Major Storms)		
1. Vegetation and ground cover adequate		
2. Embankment erosion		
3. Animal burrows		
4. Unauthorized planting		
5. Cracking, bulging, or sliding of dam		
a. Upstream face		
b. Downstream face		
c. At or beyond toe		
downstream		
upstream		
d. Emergency spillway		
6. Pond, toe & chimney drains clear and functioning		
7. Seeps/leaks on downstream face		
8. Slope protection or riprap failure		
9. Vertical/horizontal alignment of top of dam "As-Built"		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
10. Emergency spillway clear of obstructions and debris		
11. Other (specify)		
2. Riser and principal spillway (Annual)		
Type: Reinforced concrete _____ Corrugated pipe _____ Masonry _____		
1. Low flow orifice obstructed		
2. Low flow trash rack. a. Debris removal necessary		
b. Corrosion control		
3. Weir trash rack maintenance a. Debris removal necessary		
b. corrosion control		
4. Excessive sediment accumulation insider riser		
5. Concrete/masonry condition riser and barrels a. cracks or displacement		
b. Minor spalling (<1")		
c. Major spalling (rebars exposed)		
d. Joint failures		
e. Water tightness		
6. Metal pipe condition		
7. Control valve a. Operational/exercised		
b. Chained and locked		
8. Pond drain valve a. Operational/exercised		
b. Chained and locked		
9. Outfall channels functioning		
10. Other (specify)		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
3. Permanent Pool (Wet Ponds) (monthly)		
1. Undesirable vegetative growth		
2. Floating or floatable debris removal required		
3. Visible pollution		
4. Shoreline problem		
5. Other (specify)		
4. Sediment Forebays		
1. Sedimentation noted		
2. Sediment cleanout when depth < 50% design depth		
5. Dry Pond Areas		
1. Vegetation adequate		
2. Undesirable vegetative growth		
3. Undesirable woody vegetation		
4. Low flow channels clear of obstructions		
5. Standing water or wet spots		
6. Sediment and / or trash accumulation		
7. Other (specify)		
6. Condition of Outfalls (Annual , After Major Storms)		
1. Riprap failures		
2. Slope erosion		
3. Storm drain pipes		
4. Endwalls / Headwalls		
5. Other (specify)		
7. Other (Monthly)		
1. Encroachment on pond, wetland or easement area		

Maintenance Item	Satisfactory/ Unsatisfactory	Comments
2. Complaints from residents		
3. Aesthetics		
a. Grass growing required		
b. Graffiti removal needed		
c. Other (specify)		
4. Conditions of maintenance access routes.		
5. Signs of hydrocarbon build-up		
6. Any public hazards (specify)		
8. Wetland Vegetation (Annual)		
1. Vegetation healthy and growing Wetland maintaining 50% surface area coverage of wetland plants after the second growing season. (If unsatisfactory, reinforcement plantings needed)		
2. Dominant wetland plants: Survival of desired wetland plant species Distribution according to landscaping plan?		
3. Evidence of invasive species		
4. Maintenance of adequate water depths for desired wetland plant species		
5. Harvesting of emergent plantings needed		
6. Have sediment accumulations reduced pool volume significantly or are plants "choked" with sediment		
7. Eutrophication level of the wetland.		
8. Other (specify)		

Comments:

Actions to be Taken:

APPENDIX 8

STORMWATER DURATION INSPECTIONS

TDK Project Number: _____

Inspections:

Regular

☐

Rainfall

☐

SITE PLAN/SKETCH

Inspector (print name)

Date of Inspection

Qualified Professional (print name)

Qualified Professional Signature

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

Maintaining Water Quality**Yes No NA**

- ☐ ☐ ☐ Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
- ☐ ☐ ☐ Is there residue from oil and floating substances, visible oil film, or globules or grease?
- ☐ ☐ ☐ All disturbance is within the limits of the approved plans.
- ☐ ☐ ☐ Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

Housekeeping**1. General Site Conditions****Yes No NA**

- ☐ ☐ ☐ Is construction site litter and debris appropriately managed?
- ☐ ☐ ☐ Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- ☐ ☐ ☐ Is construction impacting the adjacent property?
- ☐ ☐ ☐ Is dust adequately controlled?

2. Temporary Stream Crossing**Yes No NA**

- ☐ ☐ ☐ Maximum diameter pipes necessary to span creek without dredging are installed.
- ☐ ☐ ☐ Installed non-woven geotextile fabric beneath approaches.
- ☐ ☐ ☐ Is fill composed of aggregate (no earth or soil)?
- ☐ ☐ ☐ Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

Runoff Control Practices**1. Excavation Dewatering****Yes No NA**

- ☐ ☐ ☐ Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- ☐ ☐ ☐ Clean water from upstream pool is being pumped to the downstream pool.
- ☐ ☐ ☐ Sediment laden water from work area is being discharged to a silt-trapping device.
- ☐ ☐ ☐ Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader**Yes No NA**

- ☐ ☐ ☐ Installed per plan.
- ☐ ☐ ☐ Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- ☐ ☐ ☐ Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales**Yes No NA**

- ☐ ☐ ☐ Installed per plan with minimum side slopes 2H:1V or flatter.
- ☐ ☐ ☐ Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- ☐ ☐ ☐ Sediment-laden runoff directed to sediment trapping structure

CONSTRUCTION DURATION INSPECTIONS
Runoff Control Practices (continued)

Page 3 of _____

4. Stone Check Dam

Yes No NA

- ☐ ☐ ☐ Is channel stable? (flow is not eroding soil underneath or around the structure).
☐ ☐ ☐ Check is in good condition (rocks in place and no permanent pools behind the structure).
☐ ☐ ☐ Has accumulated sediment been removed?.

5. Rock Outlet Protection

Yes No NA

- ☐ ☐ ☐ Installed per plan.
☐ ☐ ☐ Installed concurrently with pipe installation.

Soil Stabilization

1. Topsoil and Spoil Stockpiles

Yes No NA

- ☐ ☐ ☐ Stockpiles are stabilized with vegetation and/or mulch.
☐ ☐ ☐ Sediment control is installed at the toe of the slope.

2. Revegetation

Yes No NA

- ☐ ☐ ☐ Temporary seedings and mulch have been applied to idle areas.
☐ ☐ ☐ 4 inches minimum of topsoil has been applied under permanent seedings

Sediment Control Practices

1. Stabilized Construction Entrance

Yes No NA

- ☐ ☐ ☐ Stone is clean enough to effectively remove mud from vehicles.
☐ ☐ ☐ Installed per standards and specifications?
☐ ☐ ☐ Does all traffic use the stabilized entrance to enter and leave site?
☐ ☐ ☐ Is adequate drainage provided to prevent ponding at entrance?

2. Silt Fence

Yes No NA

- ☐ ☐ ☐ Installed on Contour, 10 feet from toe of slope (not across conveyance channels).
☐ ☐ ☐ Joints constructed by wrapping the two ends together for continuous support.
☐ ☐ ☐ Fabric buried 6 inches minimum.
☐ ☐ ☐ Posts are stable, fabric is tight and without rips or frayed areas.
Sediment accumulation is ____% of design capacity.

Sediment Control Practices (continued)**3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)****Yes No NA**

- ☐ ☐ ☐ Installed concrete blocks lengthwise so open ends face outward, not upward.
- ☐ ☐ ☐ Placed wire screen between No. 3 crushed stone and concrete blocks.
- ☐ ☐ ☐ Drainage area is 1acre or less.
- ☐ ☐ ☐ Excavated area is 900 cubic feet.
- ☐ ☐ ☐ Excavated side slopes should be 2:1.
- ☐ ☐ ☐ 2" x 4" frame is constructed and structurally sound.
- ☐ ☐ ☐ Posts 3-foot maximum spacing between posts.
- ☐ ☐ ☐ Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing.
- ☐ ☐ ☐ Posts are stable, fabric is tight and without rips or frayed areas.
- Sediment accumulation ____% of design capacity.

4. Temporary Sediment Trap**Yes No NA**

- ☐ ☐ ☐ Outlet structure is constructed per the approved plan or drawing.
- ☐ ☐ ☐ Geotextile fabric has been placed beneath rock fill.
- Sediment accumulation is ____% of design capacity.

5. Temporary Sediment Basin**Yes No NA**

- ☐ ☐ ☐ Basin and outlet structure constructed per the approved plan.
- ☐ ☐ ☐ Basin side slopes are stabilized with seed/mulch.
- ☐ ☐ ☐ Drainage structure flushed and basin surface restored upon removal of sediment basin facility.
- Sediment accumulation is ____% of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.

Construction inspection checklists for post-development stormwater management practices can be found in Appendix F of the New York Stormwater Management Design Manual.

CONSTRUCTION DURATION INSPECTIONS

b. Modifications to the SWPPP (To be completed as described below)

The Operator shall amend the SWPPP whenever:

1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
 - a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or
 - b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

Modification & Reason:This image shows a full page of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page, providing a template for handwriting practice or general note-taking. There are no margins, text, or other markings on the page.

III. Monthly Summary of Site Inspection Activities

Name of Permitted Facility:	Today's Date:	Reporting Month:
Location:	Permit Identification #:	
Name and Telephone Number of Site Inspector:		

Date of Inspection	Regular / Rainfall based Inspection	Name of Inspector	Items of Concern

Owner/Operator Certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a class A misdemeanor pursuant to Section 210.45 of the Penal Law."

Signature of Permittee or Duly Authorized Representative

Name of Permittee or Duly Authorized Representative Date

Duly authorized representatives must have written authorization, submitted to DEC, to sign any permit documents.

APPENDIX 9

CONTRACTOR CERTIFICATION STATEMENT

GP-0-15-002

CONTRACTOR/SUBCONTRACTOR CERTIFICATION STATEMENT

I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

(Please print)

Name: _____

Title: _____

Firm name: _____

Address: _____

Phone: _____

Signature: _____ Date: _____

APPENDIX 10

OWNER / OPERATOR CERTIFICATION STATEMENT



Owner/Operator Certification Form

SPDES General Permit For Stormwater Discharges From Construction Activity (GP-0-20-001)

Project/Site Name: _____

eNOI Submission Number: _____

eNOI Submitted by: ☐ **Owner/Operator** ☐ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Owner/Operator First Name

M.I. Last Name

Signature

Date

APPENDIX 11

SWPPP PREPARER CERTIFICATION FORM



Department of
Environmental
Conservation

SWPPP Preparer Certification Form

*SPDES General Permit for Stormwater
Discharges From Construction Activity
(GP-0-20-001)*

Project Site Information

Project/Site Name

Owner/Operator Information

Owner/Operator (Company Name/Private Owner/Municipality Name)

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First name

MI

Last Name

Signature

Date

APPENDIX 12

SPDES GENERAL PERMIT

FOR

*STORMWATER DISCHARGES FROM
CONSTRUCTION ACTIVITY - GP-0-20-001*



Department of
Environmental
Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP- 0-20-001

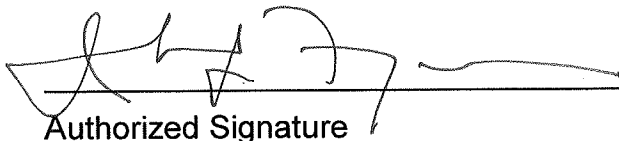
Issued Pursuant to Article 17, Titles 7, 8 and Article 70
of the Environmental Conservation Law

Effective Date: January 29, 2020

Expiration Date: January 28, 2025

John J. Ferguson

Chief Permit Administrator



Authorized Signature

1-23-20
Date

Address: NYS DEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act (“CWA”), stormwater *discharges* from certain *construction activities* are unlawful unless they are authorized by a *National Pollutant Discharge Elimination System (“NPDES”)* permit or by a state permit program. New York administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7, 8 and Article 70.

An *owner or operator* of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of “*construction activity*”, as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a *point source* and therefore, pursuant to ECL section 17-0505 and 17-0701, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM
CONSTRUCTION ACTIVITIES**

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Part 1. PERMIT COVERAGE AND LIMITATIONS

A. Permit Application

This permit authorizes stormwater *discharges* to *surface waters of the State* from the following *construction activities* identified within 40 CFR Parts 122.26(b)(14)(x), 122.26(b)(15)(i) and 122.26(b)(15)(ii), provided all of the eligibility provisions of this permit are met:

1. *Construction activities* involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a *larger common plan of development or sale* that will ultimately disturb one or more acres of land; excluding *routine maintenance activity* that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;
2. *Construction activities* involving soil disturbances of less than one (1) acre where the Department has determined that a *SPDES* permit is required for stormwater *discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of *pollutants* to *surface waters of the State*.
3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

B. Effluent Limitations Applicable to Discharges from Construction Activities

Discharges authorized by this permit must achieve, at a minimum, the effluent limitations in Part I.B.1. (a) – (f) of this permit. These limitations represent the degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement and maintain control measures to *minimize* the *discharge of pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part I.B.1.(a) – (f) of this permit and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in the *Stormwater Pollution Prevention Plan* (“SWPPP”) the reason(s) for the

deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

- a. **Erosion and Sediment Controls.** Design, install and maintain effective erosion and sediment controls to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such controls must be designed, installed and maintained to:
 - (i) *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharges*;
 - (ii) Control stormwater *discharges*, including both peak flowrates and total stormwater volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points;
 - (iii) *Minimize* the amount of soil exposed during *construction activity*;
 - (iv) *Minimize* the disturbance of *steep slopes*;
 - (v) *Minimize* sediment *discharges* from the site;
 - (vi) Provide and maintain *natural buffers* around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce *pollutant discharges*, unless *infeasible*;
 - (vii) *Minimize* soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted;
 - (viii) Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and
 - (ix) *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of pollutants that could be discharged from the site.
- b. **Soil Stabilization.** In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased. For construction sites that *directly discharge* to one of the 303(d) segments

listed in Appendix E or is located in one of the watersheds listed in Appendix C, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. See Appendix A for definition of *Temporarily Ceased*.

- c. **Dewatering.** *Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, must be managed by appropriate control measures.*
- d. **Pollution Prevention Measures.** Design, install, implement, and maintain effective pollution prevention measures to *minimize the discharge of pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be designed, installed, implemented and maintained to:
 - (i) *Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. This applies to washing operations that use clean water only. Soaps, detergents and solvents cannot be used;*
 - (ii) *Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation and to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use) ; and*
 - (iii) *Prevent the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.*
- e. **Prohibited Discharges.** The following *discharges* are prohibited:
 - (i) *Wastewater from washout of concrete;*
 - (ii) *Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;*

- (iii) Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance;
 - (iv) Soaps or solvents used in vehicle and equipment washing; and
 - (v) Toxic or hazardous substances from a spill or other release.
- f. Surface Outlets. When discharging from basins and impoundments, the outlets shall be designed, constructed and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-construction Stormwater Management Practice Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must select, design, install, and maintain the practices to meet the *performance criteria* in the New York State Stormwater Management Design Manual (“Design Manual”), dated January 2015, using sound engineering judgment. Where post-construction stormwater management practices (“SMPs”) are not designed in conformance with the *performance criteria* in the Design Manual, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.
2. The *owner or operator* of a *construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must design the practices to meet the applicable *sizing criteria* in Part I.C.2.a., b., c. or d. of this permit.

a. Sizing Criteria for New Development

- (i) Runoff Reduction Volume (“RRv”): Reduce the total Water Quality Volume (“WQv”) by application of RR techniques and standard SMPs with RRv capacity. The total WQv shall be calculated in accordance with the criteria in Section 4.2 of the Design Manual.
- (ii) Minimum RRv and Treatment of Remaining Total WQv: Construction activities that cannot meet the criteria in Part I.C.2.a.(i) of this permit due to site limitations shall direct runoff from all newly constructed impervious areas to a RR technique or standard SMP with RRv capacity unless infeasible. The specific site limitations that prevent the reduction of 100% of the WQv shall be documented in the SWPPP.

For each impervious area that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered infeasible.

In no case shall the runoff reduction achieved from the newly constructed impervious areas be less than the Minimum RRv as calculated using the criteria in Section 4.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

- (iii) Channel Protection Volume (“Cpv”): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
 - (1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
 - (2) The site discharges directly to tidal waters, or fifth order or larger streams.
- (iv) *Overbank* Flood Control Criteria (“Qp”): Requires storage to attenuate the post-development 10-year, 24-hour peak discharge rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
 - (1) the site discharges directly to tidal waters or fifth order or larger streams, or
 - (2) A downstream analysis reveals that *overbank* control is not required.
- (v) Extreme Flood Control Criteria (“Qf”): Requires storage to attenuate the post-development 100-year, 24-hour peak discharge rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
 - (1) the site discharges directly to tidal waters or fifth order or larger streams, or
 - (2) A downstream analysis reveals that *overbank* control is not required.

b. Sizing Criteria for New Development in Enhanced Phosphorus Removal Watershed

- (i) Runoff Reduction Volume (RRv): Reduce the total Water Quality Volume (WQv) by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24 hour design storm over the post-developed watershed and shall be

calculated in accordance with the criteria in Section 10.3 of the Design Manual.

- (ii) Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part I.C.2.b.(i) of this permit due to *site limitations* shall direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv shall be documented in the SWPPP. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 10.3 of the Design Manual. The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

- (iii) Channel Protection Volume (Cpv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
 - (1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
 - (2) The site *discharges* directly to tidal waters, or fifth order or larger streams.
- (iv) Overbank Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
 - (1) the site *discharges* directly to tidal waters or fifth order or larger streams, or
 - (2) A downstream analysis reveals that *overbank* control is not required.
- (v) Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
 - (1) the site *discharges* directly to tidal waters or fifth order or larger streams, or
 - (2) A downstream analysis reveals that *overbank* control is not required.

c. Sizing Criteria for Redevelopment Activity

- (i) Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* shall be addressed by one of the following options. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C of this permit) shall calculate the WQv in accordance with Section 10.3 of the Design Manual. All other *redevelopment activities* shall calculate the WQv in accordance with Section 4.2 of the Design Manual.
 - (1) Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the Design Manual must be applied to all newly created pervious areas, or
 - (2) Capture and treat a minimum of 25% of the WQv from the disturbed, *impervious area* by the application of standard SMPs; or reduce 25% of the WQv from the disturbed, *impervious area* by the application of RR techniques or standard SMPs with RRV capacity., or
 - (3) Capture and treat a minimum of 75% of the WQv from the disturbed, *impervious area* as well as any additional runoff from tributary areas by application of the alternative practices discussed in Sections 9.3 and 9.4 of the Design Manual., or
 - (4) Application of a combination of 1, 2 and 3 above that provide a weighted average of at least two of the above methods. Application of this method shall be in accordance with the criteria in Section 9.2.1(B) (IV) of the Design Manual.

If there is an existing post-construction stormwater management practice located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 – 4 above.

- (ii) Channel Protection Volume (Cpv): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.
- (iii) Overbank Flood Control Criteria (Qp): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.
- (iv) Extreme Flood Control Criteria (Qf): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site

d. Sizing Criteria for Combination of Redevelopment Activity and New Development

Construction projects that include both New Development and Redevelopment Activity shall provide post-construction stormwater management controls that meet the sizing criteria calculated as an aggregate of the Sizing Criteria in Part I.C.2.a. or b. of this permit for the New Development portion of the project and Part I.C.2.c of this permit for Redevelopment Activity portion of the project.

D. Maintaining Water Quality

The Department expects that compliance with the conditions of this permit will control *discharges* necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any discharge to either cause or contribute to a violation of *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, such as:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;
2. There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and
3. There shall be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the stormwater *discharges* authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standards*; the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this general permit and document in accordance with Part IV.C.4. of this general permit. To address the *water quality standard* violation the *owner or operator* may need to provide additional information, include and implement appropriate controls in the SWPPP to correct the problem, or obtain an individual SPDES permit.

If there is evidence indicating that despite compliance with the terms and conditions of this general permit it is demonstrated that the stormwater *discharges* authorized by this permit are causing or contributing to a violation of *water quality standards*, or if the Department determines that a modification of the permit is necessary to prevent a violation of *water quality standards*, the authorized *discharges* will no longer be eligible for coverage under this permit. The Department may require the *owner or operator* to obtain an individual SPDES permit to continue discharging.

E. Eligibility Under This General Permit

1. This permit may authorize all *discharges* of stormwater from *construction activity to surface waters of the State* and *groundwaters* except for ineligible *discharges* identified under subparagraph F. of this Part.
2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater *discharges*; including stormwater runoff, snowmelt runoff, and surface runoff and drainage, from *construction activities*.
3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater discharges are authorized by this permit: those listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "Discharges from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; waters to which other components have not been added that are used to control dust in accordance with the SWPPP; and uncontaminated *discharges* from *construction site* de-watering operations. All non-stormwater discharges must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with *water quality standards* in Part I.D of this permit.
4. The *owner or operator* must maintain permit eligibility to *discharge* under this permit. Any *discharges* that are not compliant with the eligibility conditions of this permit are not authorized by the permit and the *owner or operator* must either apply for a separate permit to cover those ineligible *discharges* or take steps necessary to make the *discharge* eligible for coverage.

F. Activities Which Are Ineligible for Coverage Under This General Permit

All of the following are **not** authorized by this permit:

1. *Discharges after construction activities* have been completed and the site has undergone *final stabilization*;
2. *Discharges* that are mixed with sources of non-stormwater other than those expressly authorized under subsection E.3. of this Part and identified in the SWPPP required by this permit;
3. *Discharges* that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII.K. of this permit;
4. *Construction activities or discharges from construction activities* that may adversely affect an *endangered or threatened species* unless the *owner or*

operator has obtained a permit issued pursuant to 6 NYCRR Part 182 for the project or the Department has issued a letter of non-jurisdiction for the project. All documentation necessary to demonstrate eligibility shall be maintained on site in accordance with Part II.D.2 of this permit;

5. *Discharges* which either cause or contribute to a violation of *water quality standards* adopted pursuant to the *ECL* and its accompanying regulations;
6. *Construction activities* for residential, commercial and institutional projects:
 - a. Where the *discharges* from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and
 - b. Which are undertaken on land with no existing *impervious cover*; and
 - c. Which disturb one (1) or more acres of land designated on the current United States Department of Agriculture ("USDA") Soil Survey as Soil Slope Phase "D", (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase "E" or "F" (regardless of the map unit name), or a combination of the three designations.
7. *Construction activities* for linear transportation projects and linear utility projects:
 - a. Where the *discharges* from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and
 - b. Which are undertaken on land with no existing *impervious cover*; and
 - c. Which disturb two (2) or more acres of land designated on the current USDA Soil Survey as Soil Slope Phase "D" (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase "E" or "F" (regardless of the map unit name), or a combination of the three designations.

8. *Construction activities* that have the potential to affect an *historic property*, unless there is documentation that such impacts have been resolved. The following documentation necessary to demonstrate eligibility with this requirement shall be maintained on site in accordance with Part II.D.2 of this permit and made available to the Department in accordance with Part VII.F of this permit:
- a. Documentation that the *construction activity* is not within an archeologically sensitive area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant.
 - 1-5 acres of disturbance - 20 feet
 - 5-20 acres of disturbance - 50 feet
 - 20+ acres of disturbance - 100 feet, or
 - b. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and
 - (i) the State Environmental Quality Review (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or
 - (ii) documentation from OPRHP that the *construction activity* will result in No Impact; or
 - (iii) documentation from OPRHP providing a determination of No Adverse Impact; or
 - (iv) a Letter of Resolution signed by the owner/operator, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA); or
 - c. Documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

- (i) No Affect
- (ii) No Adverse Affect
- (iii) Executed Memorandum of Agreement, or

d. Documentation that:

- (i) SHPA Section 14.09 has been completed by NYS DEC or another state agency.

9. *Discharges from construction activities* that are subject to an existing SPDES individual or general permit where a SPDES permit for *construction activity* has been terminated or denied; or where the *owner or operator* has failed to renew an expired individual permit.

Part II. PERMIT COVERAGE

A. How to Obtain Coverage

1. An *owner or operator* of a *construction activity* that is not subject to the requirements of a regulated, traditional land use control MS4 must first prepare a SWPPP in accordance with all applicable requirements of this permit and then submit a completed Notice of Intent (NOI) to the Department to be authorized to discharge under this permit.
2. An *owner or operator* of a *construction activity* that is subject to the requirements of a *regulated, traditional land use control MS4* must first prepare a SWPPP in accordance with all applicable requirements of this permit and then have the SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department. The *owner or operator* shall have the "MS4 SWPPP Acceptance" form signed in accordance with Part VII.H., and then submit that form along with a completed NOI to the Department.
3. The requirement for an *owner or operator* to have its SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department does not apply to an *owner or operator* that is obtaining permit coverage in accordance with the requirements in Part II.F. (Change of Owner or Operator) or where the *owner or operator* of the *construction activity* is the *regulated, traditional land use control MS4*. This exemption does not apply to *construction activities* subject to the New York City Administrative Code.

B. Notice of Intent (NOI) Submittal

1. Prior to December 21, 2020, an owner or operator shall use either the electronic (eNOI) or paper version of the NOI that the Department prepared. Both versions of the NOI are located on the Department's website (<http://www.dec.ny.gov/>). The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the following address:

**NOTICE OF INTENT
NYS DEC, Bureau of Water Permits
625 Broadway, 4th Floor
Albany, New York 12233-3505**

2. Beginning December 21, 2020 and in accordance with EPA's 2015 NPDES Electronic Reporting Rule (40 CFR Part 127), the *owner or operator* must submit the NOI electronically using the *Department's* online NOI.
3. The *owner or operator* shall have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.
4. As of the date the NOI is submitted to the Department, the *owner or operator* shall make the NOI and SWPPP available for review and copying in accordance with the requirements in Part VII.F. of this permit.

C. Permit Authorization

1. An *owner or operator* shall not *commence construction activity* until their authorization to *discharge* under this permit goes into effect.
2. Authorization to *discharge* under this permit will be effective when the *owner or operator* has satisfied all of the following criteria:
 - a. project review pursuant to the State Environmental Quality Review Act ("SEQRA") have been satisfied, when SEQRA is applicable. See the Department's website (<http://www.dec.ny.gov/>) for more information,
 - b. where required, all necessary Department permits subject to the *Uniform Procedures Act* ("UPA") (see 6 NYCRR Part 621), or the equivalent from another New York State agency, have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). *Owners or operators of construction activities* that are required to obtain UPA permits

must submit a preliminary SWPPP to the appropriate DEC Permit Administrator at the Regional Office listed in Appendix F at the time all other necessary *UPA* permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the *construction activity* qualifies for authorization under this permit,

- c. the final SWPPP has been prepared, and
 - d. a complete NOI has been submitted to the Department in accordance with the requirements of this permit.
3. An *owner or operator* that has satisfied the requirements of Part II.C.2 above will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:
- a. For *construction activities* that are not subject to the requirements of a *regulated, traditional land use control MS4*:
 - (i) Five (5) business days from the date the Department receives a complete electronic version of the NOI (eNOI) for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.; or
 - (ii) Sixty (60) business days from the date the Department receives a complete NOI (electronic or paper version) for *construction activities* with a SWPPP that has not been prepared in conformance with the design criteria in technical standard referenced in Part III.B.1. or, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C., the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, or;
 - (iii) Ten (10) business days from the date the Department receives a complete paper version of the NOI for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.

- b. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*:
 - (i) Five (5) business days from the date the Department receives both a complete electronic version of the NOI (eNOI) and signed “MS4 SWPPP Acceptance” form, or
 - (ii) Ten (10) business days from the date the Department receives both a complete paper version of the NOI and signed “MS4 SWPPP Acceptance” form.
- 4. Coverage under this permit authorizes stormwater *discharges* from only those areas of disturbance that are identified in the NOI. If an *owner or operator* wishes to have stormwater *discharges* from future or additional areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department. The *owner or operator* shall not *commence construction activity* on the future or additional areas until their authorization to *discharge* under this permit goes into effect in accordance with Part II.C. of this permit.

D. General Requirements For Owners or Operators With Permit Coverage

- 1. The *owner or operator* shall ensure that the provisions of the SWPPP are implemented from the *commencement of construction activity* until all areas of disturbance have achieved *final stabilization* and the Notice of Termination (“NOT”) has been submitted to the Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of this permit.
- 2. The *owner or operator* shall maintain a copy of the General Permit (GP-0-20-001), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form, inspection reports, responsible contractor’s or subcontractor’s certification statement (see Part III.A.6.), and all documentation necessary to demonstrate eligibility with this permit at the *construction site* until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department. The documents must be maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection.
- 3. The *owner or operator* of a *construction activity* shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land*

use control MS4, the regulated, traditional land use control MS4 (provided the regulated, traditional land use control MS4 is not the owner or operator of the construction activity). At a minimum, the owner or operator must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:

- a. The *owner or operator* shall have a *qualified inspector* conduct **at least** two (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
 - b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.
 - c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.
 - d. The *owner or operator* shall install any additional site-specific practices needed to protect water quality.
 - e. The *owner or operator* shall include the requirements above in their SWPPP.
4. In accordance with statute, regulations, and the terms and conditions of this permit, the Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements or consistent with Part VII.K..
 5. Upon a finding of significant non-compliance with the practices described in the SWPPP or violation of this permit, the Department may order an immediate stop to all activity at the site until the non-compliance is remedied. The stop work order shall be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.
 6. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the

regulated, traditional land use control MS4 in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *regulated, traditional land use control MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *regulated, traditional land use control MS4* prior to commencing construction of the post-construction stormwater management practice.

E. Permit Coverage for Discharges Authorized Under GP-0-15-002

1. Upon renewal of SPDES General Permit for Stormwater Discharges from *Construction Activity* (Permit No. GP-0-15-002), an *owner or operator* of a *construction activity* with coverage under GP-0-15-002, as of the effective date of GP- 0-20-001, shall be authorized to *discharge* in accordance with GP- 0-20-001, unless otherwise notified by the Department.

An *owner or operator* may continue to implement the technical/design components of the post-construction stormwater management controls provided that such design was done in conformance with the technical standards in place at the time of initial project authorization. However, they must comply with the other, non-design provisions of GP-0-20-001.

F. Change of Owner or Operator

1. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original *owner or operator* must notify the new *owner or operator*, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. For *construction activities* subject to the requirements of a *regulated, traditional land use control MS4*, the original *owner or operator* must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.
2. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.B.1. of this permit. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.
3. Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or*

operator was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new *owner or operator*.

Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A. General SWPPP Requirements

1. A SWPPP shall be prepared and implemented by the *owner or operator* of each *construction activity* covered by this permit. The SWPPP must document the selection, design, installation, implementation and maintenance of the control measures and practices that will be used to meet the effluent limitations in Part I.B. of this permit and where applicable, the post-construction stormwater management practice requirements in Part I.C. of this permit. The SWPPP shall be prepared prior to the submittal of the NOI. The NOI shall be submitted to the Department prior to the *commencement of construction activity*. A copy of the completed, final NOI shall be included in the SWPPP.
2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the *pollutants* in stormwater *discharges* and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.
3. All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.
4. The *owner or operator* must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the *owner or operator* shall amend the SWPPP, including construction drawings:
 - a. whenever the current provisions prove to be ineffective in minimizing *pollutants* in stormwater *discharges* from the site;

- b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*;
 - c. to address issues or deficiencies identified during an inspection by the *qualified inspector*, the Department or other regulatory authority; and
 - d. to document the final construction conditions.
5. The Department may notify the *owner or operator* at any time that the SWPPP does not meet one or more of the minimum requirements of this permit. The notification shall be in writing and identify the provisions of the SWPPP that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by the Department, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the *owner or operator* does not respond to the Department's comments in the specified time frame, the Department may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4. of this permit.
6. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor*. The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity*:

"I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with

the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharges* from *construction activities* and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the SWPPP that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for SWPPP implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* shall attach the certification statement(s) to the copy of the SWPPP that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the SWPPP after construction has commenced, they must also sign the certification statement and provide the information listed above.

7. For projects where the Department requests a copy of the SWPPP or inspection reports, the *owner or operator* shall submit the documents in both electronic (PDF only) and paper format within five (5) business days, unless otherwise notified by the Department.

B. Required SWPPP Contents

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Where erosion and sediment control practices are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must demonstrate *equivalence* to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:
 - a. Background information about the scope of the project, including the location, type and size of project

- b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours ; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the stormwater *discharge(s)*;
- c. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);
- d. A construction phasing plan and sequence of operations describing the intended order of *construction activities*, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;
- e. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented;
- f. A temporary and permanent soil stabilization plan that meets the requirements of this general permit and the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of *final stabilization*;
- g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;
- h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any temporary sediment basins and structural practices that will be used to divert flows from exposed soils;
- i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6. of this permit, to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection

schedule shall be in accordance with the requirements in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016;

- j. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the stormwater *discharges*;
 - k. A description and location of any stormwater *discharges* associated with industrial activity other than construction at the site, including, but not limited to, stormwater *discharges* from asphalt plants and concrete plants located on the *construction site*; and
 - l. Identification of any elements of the design that are not in conformance with the design criteria in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.
2. Post-construction stormwater management practice component – The *owner or operator* of any construction project identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the applicable *sizing criteria* in Part I.C.2.a., c. or d. of this permit and the *performance criteria* in the technical standard, New York State Stormwater Management Design Manual dated January 2015

Where post-construction stormwater management practices are not designed in conformance with the *performance criteria* in the technical standard, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

The post-construction stormwater management practice component of the SWPPP shall include the following:

- a. Identification of all post-construction stormwater management practices to be constructed as part of the project. Include the dimensions, material specifications and installation details for each post-construction stormwater management practice;

- b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice;
- c. A Stormwater Modeling and Analysis Report that includes:
 - (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points;
 - (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and post-construction stormwater management practices;
 - (iii) Results of stormwater modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre and post-development runoff rates and volumes for the different storm events;
 - (iv) Summary table, with supporting calculations, which demonstrates that each post-construction stormwater management practice has been designed in conformance with the *sizing criteria* included in the Design Manual;
 - (v) Identification of any *sizing criteria* that is not required based on the requirements included in Part I.C. of this permit; and
 - (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the Design Manual. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the Design Manual;
- d. Soil testing results and locations (test pits, borings);
- e. Infiltration test results, when required; and
- f. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.

3. Enhanced Phosphorus Removal Standards - All construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the applicable *sizing criteria* in Part I.C.2. b., c. or d. of this permit and the *performance criteria*, Enhanced Phosphorus Removal Standards included in the Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.f. above.

C. Required SWPPP Components by Project Type

Unless otherwise notified by the Department, *owners or operators of construction activities* identified in Table 1 of Appendix B are required to prepare a SWPPP that only includes erosion and sediment control practices designed in conformance with Part III.B.1 of this permit. *Owners or operators of the construction activities* identified in Table 2 of Appendix B shall prepare a SWPPP that also includes post-construction stormwater management practices designed in conformance with Part III.B.2 or 3 of this permit.

Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures) and all post-construction stormwater management practices identified in the SWPPP are inspected and maintained in accordance with Part IV.B. and C. of this permit.
2. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York or protect the public health and safety and/or the environment.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity* identified in Tables 1 and 2 of Appendix B shall have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor shall

begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

2. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections. The *trained contractor* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of this permit as soon as soil disturbance activities resume.
3. For construction sites where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

C. Qualified Inspector Inspection Requirements

The *owner or operator* shall have a *qualified inspector* conduct site inspections in conformance with the following requirements:

[Note: The *trained contractor* identified in Part III.A.6. and IV.B. of this permit **cannot** conduct the *qualified inspector* site inspections unless they meet the *qualified inspector* qualifications included in Appendix A. In order to perform these inspections, the *trained contractor* would have to be a:

- licensed Professional Engineer,
 - Certified Professional in Erosion and Sediment Control (CPESC),
 - New York State Erosion and Sediment Control Certificate Program holder
 - Registered Landscape Architect, or
 - someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity].
1. A *qualified inspector* shall conduct site inspections for all *construction activities* identified in Tables 1 and 2 of Appendix B, with the exception of:
 - a. the construction of a single family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located

in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

- b. the construction of a single family home that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;
 - c. construction on agricultural property that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres; and
 - d. *construction activities* located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.
2. Unless otherwise notified by the Department, the *qualified inspector* shall conduct site inspections in accordance with the following timetable:
- a. For construction sites where soil disturbance activities are on-going, the *qualified inspector* shall conduct a site inspection at least once every seven (7) calendar days.
 - b. For construction sites where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part II.D.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
 - c. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4*, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to reducing the frequency of inspections.

- d. For construction sites where soil disturbance activities have been shut down with partial project completion, the *qualified inspector* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4*, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* shall have the *qualified inspector* perform a final inspection and certify that all disturbed areas have achieved *final stabilization*, and all temporary, structural erosion and sediment control measures have been removed; and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the “*Final Stabilization*” and “*Post-Construction Stormwater Management Practice*” certification statements on the NOT. The *owner or operator* shall then submit the completed NOT form to the address in Part II.B.1 of this permit.
 - e. For construction sites that directly *discharge* to one of the 303(d) segments listed in Appendix E or is located in one of the watersheds listed in Appendix C, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved *final stabilization*, all points of *discharge* to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site*, and all points of *discharge* from the *construction site*.
 4. The *qualified inspector* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

- a. Date and time of inspection;
- b. Name and title of person(s) performing inspection;
- c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;
- d. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This shall include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;
- e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This shall include identification of any *discharges* of sediment to the surface waterbody;
- f. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance;
- g. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;
- h. Description and sketch of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection;
- i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;
- j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s);
- k. Identification and status of all corrective actions that were required by previous inspection; and

- I. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.
5. Within one business day of the completion of an inspection, the *qualified inspector* shall notify the *owner or operator* and appropriate contractor or subcontractor identified in Part III.A.6. of this permit of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.
6. All inspection reports shall be signed by the *qualified inspector*. Pursuant to Part II.D.2. of this permit, the inspection reports shall be maintained on site with the SWPPP.

Part V. TERMINATION OF PERMIT COVERAGE

A. Termination of Permit Coverage

1. An *owner or operator* that is eligible to terminate coverage under this permit must submit a completed NOT form to the address in Part II.B.1 of this permit. The NOT form shall be one which is associated with this permit, signed in accordance with Part VII.H of this permit.
2. An *owner or operator* may terminate coverage when one or more the following conditions have been met:
 - a. Total project completion - All *construction activity* identified in the SWPPP has been completed; and all areas of disturbance have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

- b. Planned shutdown with partial project completion - All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational;
 - c. A new *owner or operator* has obtained coverage under this permit in accordance with Part II.F. of this permit.
 - d. The *owner or operator* obtains coverage under an alternative SPDES general permit or an individual SPDES permit.
3. For *construction activities* meeting subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *qualified inspector* perform a final site inspection prior to submitting the NOT. The *qualified inspector* shall, by signing the “*Final Stabilization*” and “Post-Construction Stormwater Management Practice certification statements on the NOT, certify that all the requirements in Part V.A.2.a. or b. of this permit have been achieved.
4. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4* and meet subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *regulated, traditional land use control MS4* sign the “MS4 Acceptance” statement on the NOT in accordance with the requirements in Part VII.H. of this permit. The *regulated, traditional land use control MS4* official, by signing this statement, has determined that it is acceptable for the *owner or operator* to submit the NOT in accordance with the requirements of this Part. The *regulated, traditional land use control MS4* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector’s* final site inspection certification(s) required in Part V.A.3. of this permit.
5. For *construction activities* that require post-construction stormwater management practices and meet subdivision 2a. of this Part, the *owner or operator* must, prior to submitting the NOT, ensure one of the following:
- a. the post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located,

- b. an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s),
- c. for post-construction stormwater management practices that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record,
- d. for post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility; the *owner or operator* has policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

Part VI. REPORTING AND RETENTION RECORDS

A. Record Retention

The *owner or operator* shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5) years from the date that the Department receives a complete NOT submitted in accordance with Part V. of this general permit.

B. Addresses

With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.B.1 of this permit), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate DOW Water (SPDES) Program contact at the Regional Office listed in Appendix F.

Part VII. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The *owner or operator* must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water

Act (CWA) and the ECL and is grounds for an enforcement action against the *owner or operator* and/or the contractor/subcontractor; permit revocation, suspension or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the *owner or operator*.

If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE). *Construction activity* shall not resume until written permission to do so has been received from the RWE.

B. Continuation of the Expired General Permit

This permit expires five (5) years from the effective date. If a new general permit is not issued prior to the expiration of this general permit, an *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the terms and conditions of this general permit, if it is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, until a new general permit is issued.

C. Enforcement

Failure of the *owner or operator*, its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the permit requirements contained herein shall constitute a violation of this permit. There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to \$37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for an *owner or operator* in an enforcement action that it would have been necessary to halt or reduce the *construction activity* in order to maintain compliance with the conditions of this permit.

E. Duty to Mitigate

The *owner or operator* and its contractors and subcontractors shall take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

F. Duty to Provide Information

The *owner or operator* shall furnish to the Department, within a reasonable specified time period of a written request, all documentation necessary to demonstrate eligibility and any information to determine compliance with this permit or to determine whether cause exists for modifying or revoking this permit, or suspending or denying coverage under this permit, in accordance with the terms and conditions of this permit. The NOI, SWPPP and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five (5) business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

G. Other Information

When the *owner or operator* becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any of the documents required by this permit, or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or *impervious area*), which were not reflected in the original NOI submitted to the Department, they shall promptly submit such facts or information to the Department using the contact information in Part II.A. of this permit. Failure of the *owner or operator* to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a violation of this permit.

H. Signatory Requirements

1. All NOIs and NOTs shall be signed as follows:
 - a. For a corporation these forms shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

- (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or
 - (ii) the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or
 - c. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - (i) the chief executive officer of the agency, or
 - (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
2. The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- a. The authorization is made in writing by a person described in Part VII.H.1. of this permit;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field,

superintendent, position of *equivalent* responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position) and,

- c. The written authorization shall include the name, title and signature of the authorized representative and be attached to the SWPPP.
3. All inspection reports shall be signed by the *qualified inspector* that performs the inspection.
4. The MS4 SWPPP Acceptance form shall be signed by the principal executive officer or ranking elected official from the *regulated, traditional land use control MS4*, or by a duly authorized representative of that person.

It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

I. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. *Owners or operators* must obtain any applicable conveyances, easements, licenses and/or access to real property prior to *commencing construction activity*.

J. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

K. Requirement to Obtain Coverage Under an Alternative Permit

1. The Department may require any owner or operator authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any discharger authorized by a general permit to apply for an individual SPDES permit, it shall notify the discharger in writing that a permit application is required. This notice shall

include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the owner or operator to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from owner or operator receipt of the notification letter, whereby the authorization to discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Permit Administrator at the Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Department, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Title.

2. When an individual SPDES permit is issued to a discharger authorized to *discharge* under a general SPDES permit for the same *discharge(s)*, the general permit authorization for outfalls authorized under the individual SPDES permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

L. Proper Operation and Maintenance

The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of the SWPPP.

M. Inspection and Entry

The *owner or operator* shall allow an authorized representative of the Department, EPA, applicable county health department, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the owner's or operator's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment), practices or operations regulated or required by this permit.
4. Sample or monitor at reasonable times, for purposes of assuring permit compliance or as otherwise authorized by the Act or ECL, any substances or parameters at any location.

N. Permit Actions

This permit may, at any time, be modified, suspended, revoked, or renewed by the Department in accordance with 6 NYCRR Part 621. The filing of a request by the *owner or operator* for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not limit, diminish and/or stay compliance with any terms of this permit.

O. Definitions

Definitions of key terms are included in Appendix A of this permit.

P. Re-Opener Clause

1. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with construction activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.
2. Any Department initiated permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

Q. Penalties for Falsification of Forms and Reports

In accordance with 6NYCRR Part 750-2.4 and 750-2.5, any person who knowingly makes any false material statement, representation, or certification in any application, record, report or other document filed or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished in accordance with ECL §71-1933 and or Articles 175 and 210 of the New York State Penal Law.

R. Other Permits

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

APPENDIX A – Acronyms and Definitions

Acronyms

APO – Agency Preservation Officer
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
Cpv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DOW – Division of Water
EAF – Environmental Assessment Form
ECL - Environmental Conservation Law
EPA – U. S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review
SEQRA - State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property – means the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the “Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State” prepared by the Department in cooperation with agencies of New York Nonpoint Source Coordinating Committee (dated June 2007).

Alter Hydrology from Pre to Post-Development Conditions - means the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer - means a sewer that is designed to collect and convey both “sewage” and “stormwater”.

Commence (Commencement of) Construction Activities - means the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the SWPPP. See definition for “*Construction Activity(ies)*” also.

Construction Activity(ies) - means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

Construction Site – means the land area where *construction activity(ies)* will occur. See definition for “*Commence (Commencement of) Construction Activities*” and “*Larger Common Plan of Development or Sale*” also.

Dewatering – means the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Direct Discharge (to a specific surface waterbody) - means that runoff flows from a *construction site* by overland flow and the first point of discharge is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system

and the first point of discharge from the separate storm sewer system is the specific surface waterbody.

Discharge(s) - means any addition of any pollutant to waters of the State through an outlet or *point source*.

Embankment – means an earthen or rock slope that supports a road/highway.

Endangered or Threatened Species – see 6 NYCRR Part 182 of the Department’s rules and regulations for definition of terms and requirements.

Environmental Conservation Law (ECL) - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

Equivalent (Equivalence) – means that the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization - means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

General SPDES permit - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 and Section 70-0117 of the ECL authorizing a category of discharges.

Groundwater(s) - means waters in the saturated zone. The saturated zone is a subsurface zone in which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

Historic Property – means any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) - means all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – means not technologically possible, or not economically practicable and achievable in light of best industry practices.

Larger Common Plan of Development or Sale - means a contiguous area where multiple separate and distinct *construction activities* are occurring, or will occur, under one plan. The term “plan” in “larger common plan of development or sale” is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQRA) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that *construction activities* may occur on a specific plot.

For discrete construction projects that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same “common plan” is not concurrently being disturbed.

Minimize – means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to surface waters of the State;
- (ii) Designed or used for collecting or conveying stormwater;
- (iii) Which is not a *combined sewer*; and
- (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

National Pollutant Discharge Elimination System (NPDES) - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

Natural Buffer – means an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – means any land disturbance that does not meet the definition of Redevelopment Activity included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

NOI Acknowledgment Letter - means the letter that the Department sends to an owner or operator to acknowledge the Department's receipt and acceptance of a complete Notice of Intent. This letter documents the owner's or operator's authorization to discharge in accordance with the general permit for stormwater discharges from *construction activity*.

Nonpoint Source - means any source of water pollution or pollutants which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank –means flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator - means the person, persons or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions.

Performance Criteria – means the design criteria listed under the “Required Elements” sections in Chapters 5, 6 and 10 of the technical standard, New York State Stormwater Management Design Manual, dated January 2015. It does not include the Sizing Criteria (i.e. WQv, RRv, Cpv, Qp and Qf) in Part I.C.2. of the permit.

Point Source - means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be discharged.

Pollutant - means dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast discharged into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq .

Qualified Inspector - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder or other Department endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional - means a person that is knowledgeable in the principles and practices of stormwater management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – means the disturbance and reconstruction of existing impervious area, including impervious areas that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Regulated, Traditional Land Use Control MS4 - means a city, town or village with land use control authority that is authorized to discharge under New York State DEC's

SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Routine Maintenance Activity - means *construction activity* that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including, but not limited to:

- Re-grading of gravel roads or parking lots,
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch,
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch),
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*,
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material,
- Long-term use of equipment storage areas at or near highway maintenance facilities,
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*,
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts.

Site limitations – means site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical site limitations include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of site limitations shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – means the criteria included in Part I.C.2 of the permit that are used to size post-construction stormwater management control practices. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank Flood* (Qp), and *Extreme Flood* (Qf).

State Pollutant Discharge Elimination System (SPDES) - means the system established pursuant to Article 17 of the ECL and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

Steep Slope – means land area designated on the current United States Department of Agriculture (“USDA”) Soil Survey as Soil Slope Phase “D”, (provided the map unit name is inclusive of slopes greater than 25%) , or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Streambank – as used in this permit, means the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – means a project specific report, including construction drawings, that among other things: describes the construction activity(ies), identifies the potential sources of pollution at the *construction site*; describes and shows the stormwater controls that will be used to control the pollutants (i.e. erosion and sediment controls; for many projects, includes post-construction stormwater management controls); and identifies procedures the *owner or operator* will implement to comply with the terms and conditions of the permit. See Part III of the permit for a complete description of the information that must be included in the SWPPP.

Surface Waters of the State - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – means that an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization - means that exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Loads (TMDLs) - A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and *nonpoint sources*. It is a calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet *water quality standards*, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for *point source* discharges, load allocations (LAs) for *nonpoint sources*, and a margin of safety (MOS).

Trained Contractor - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed

training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.6., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity).

The *trained contractor* is responsible for the day to day implementation of the SWPPP.

Uniform Procedures Act (UPA) Permit - means a permit required under 6 NYCRR Part 621 of the Environmental Conservation Law (ECL), Article 70.

Water Quality Standard - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1
Construction Activities that Require the Preparation of a SWPPP That Only
Includes Erosion and Sediment Controls

The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres: • Single family home <u>not</u> located in one of the watersheds listed in Appendix C or <u>not directly discharging</u> to one of the 303(d) segments listed in Appendix E • Single family residential subdivisions with 25% or less impervious cover at total site build-out and <u>not</u> located in one of the watersheds listed in Appendix C and <u>not</u> directly discharging to one of the 303(d) segments listed in Appendix E • Construction of a barn or other <i>agricultural building</i>, silo, stock yard or pen.
The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land: All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.
The following construction activities that involve soil disturbances of one (1) or more acres of land: • Installation of underground, linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains • Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects • Pond construction • Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover • Cross-country ski trails and walking/hiking trails • Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development; • Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path or walking path. • Slope stabilization projects • Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics

**Table 1 (Continued) CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP
THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS**

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Spoil areas that will be covered with vegetation
- Vegetated open space projects (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) excluding projects that *alter hydrology from pre to post development* conditions,
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre to post development* conditions
- Demolition project where vegetation will be established, and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*
- Structural practices as identified in Table II in the “Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State”, excluding projects that involve soil disturbances of greater than five acres and construction activities that include the construction or reconstruction of impervious area
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary impervious areas that will be restored to pre-construction conditions once the construction activity is complete

Table 2
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES
POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Single family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family home that disturbs five (5) or more acres of land
- Single family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% impervious cover at total site build-out
- Single family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development conditions*
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's, water treatment plants, and water storage tanks
- Office complexes
- Playgrounds that include the construction or reconstruction of impervious area
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surface
- Road construction or reconstruction, including roads constructed as part of the construction activities listed in Table 1

Table 2 (Continued)

**CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES
POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES**

The following construction activities that involve soil disturbances of one (1) or more acres of land:

- Parking lot construction or reconstruction, including parking lots constructed as part of the construction activities listed in Table 1
- Athletic fields (natural grass) that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations and well drilling pads, surfaced with *impervious cover*, and constructed as part of an over-head electric transmission line project, wind-power project, cell tower project, oil or gas well drilling project, sewer or water main project or other linear utility project
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a residential, commercial or institutional development
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a highway construction or reconstruction project
- All other construction activities that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre to post development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual (“Design Manual”).

- Entire New York City Watershed located east of the Hudson River - Figure 1
- Onondaga Lake Watershed - Figure 2
- Greenwood Lake Watershed -Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

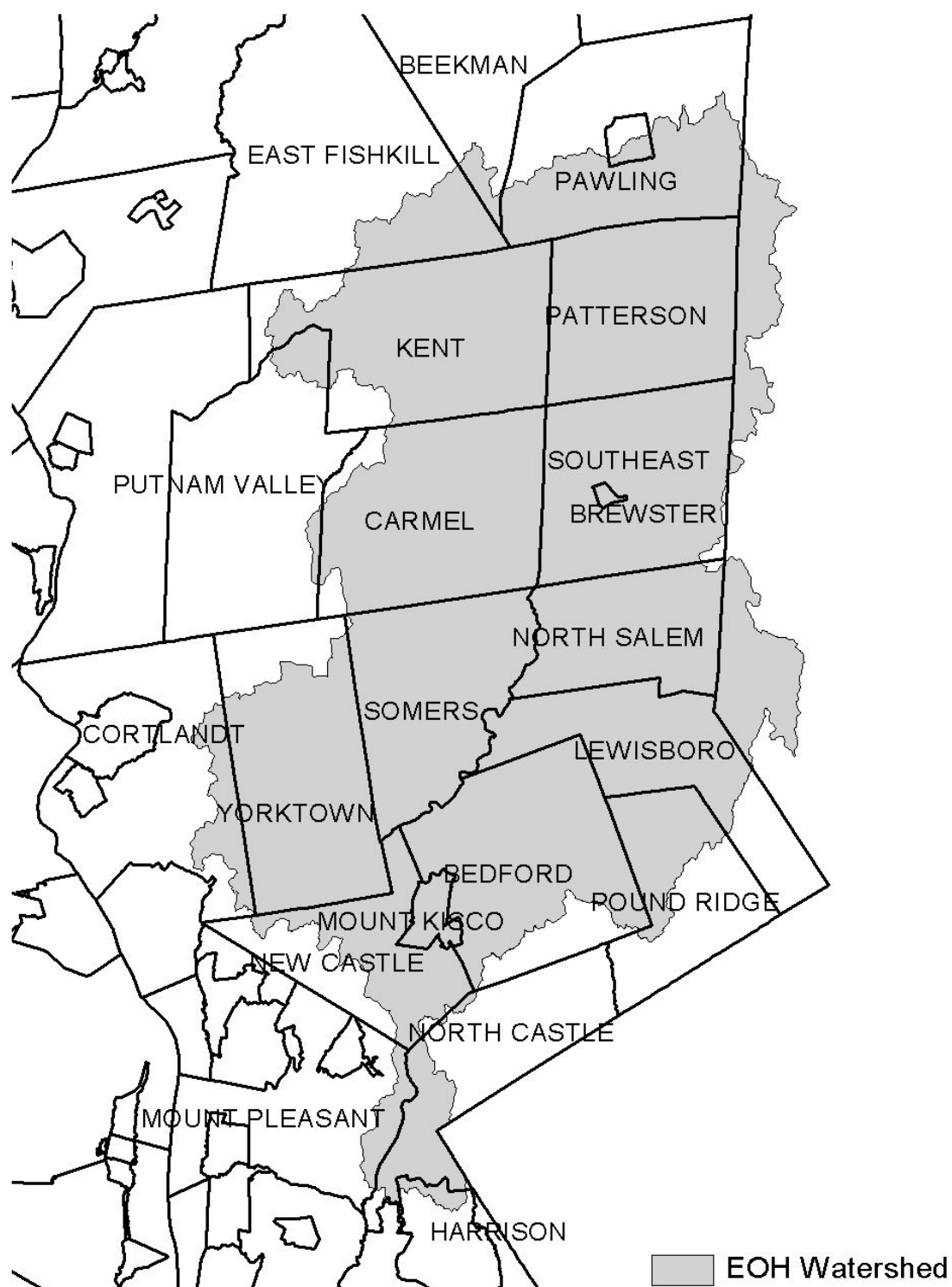
Figure 1 - New York City Watershed East of the Hudson

Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

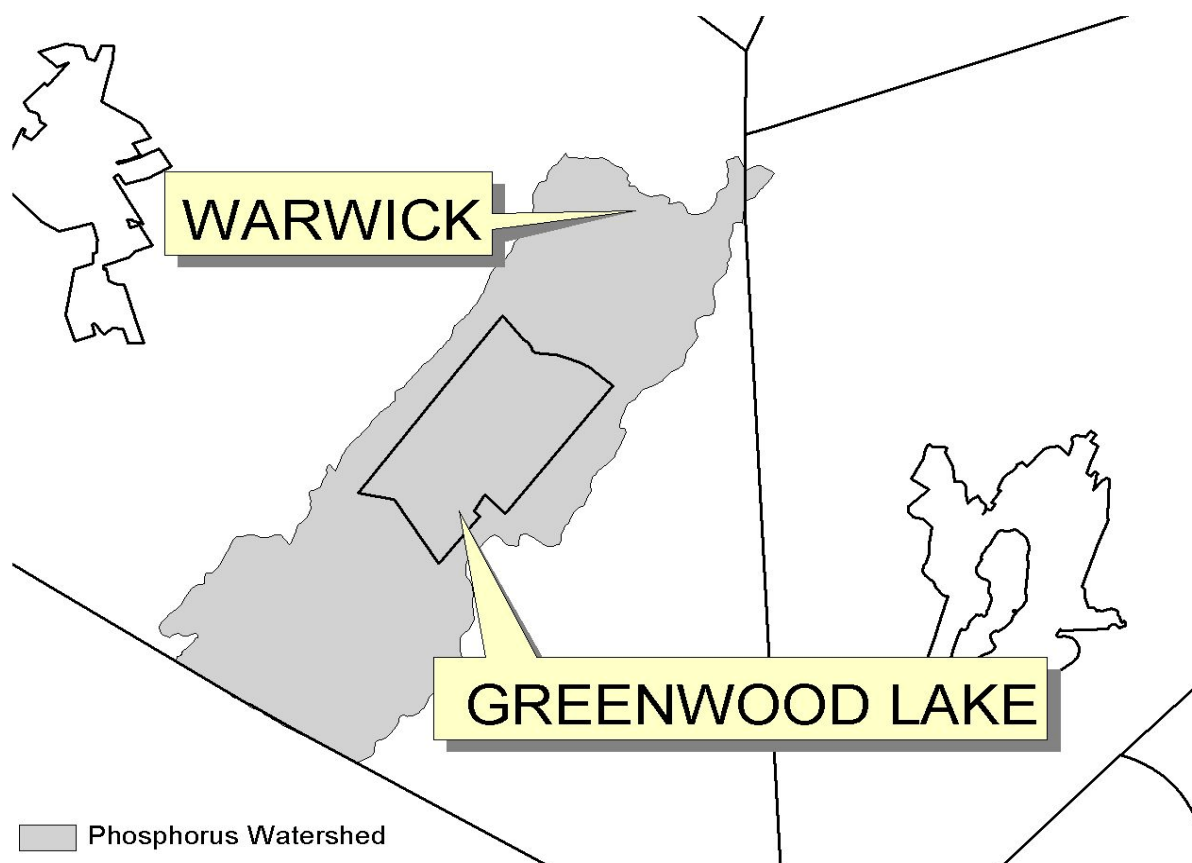


Figure 4 - Oscawana Lake Watershed

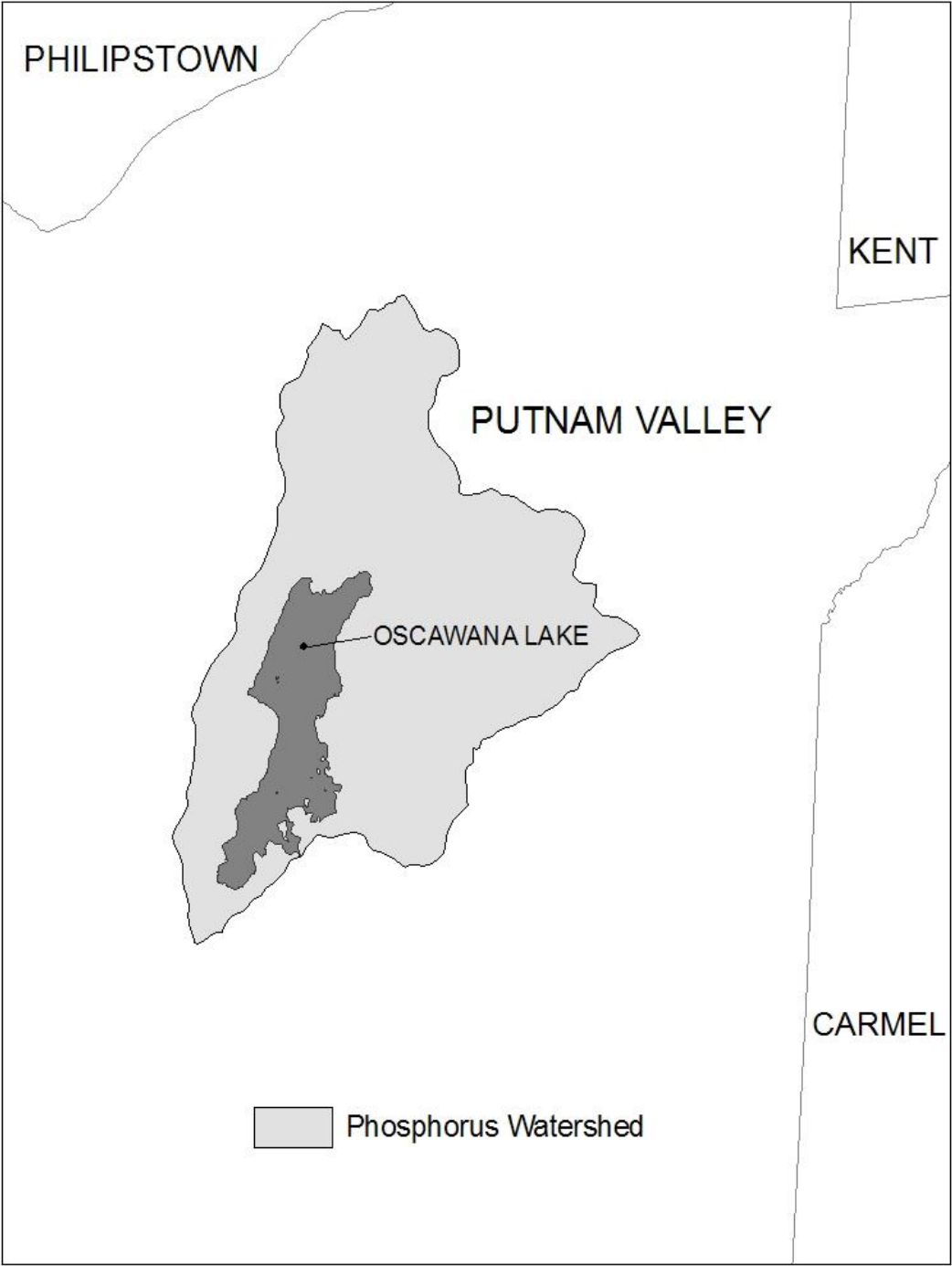
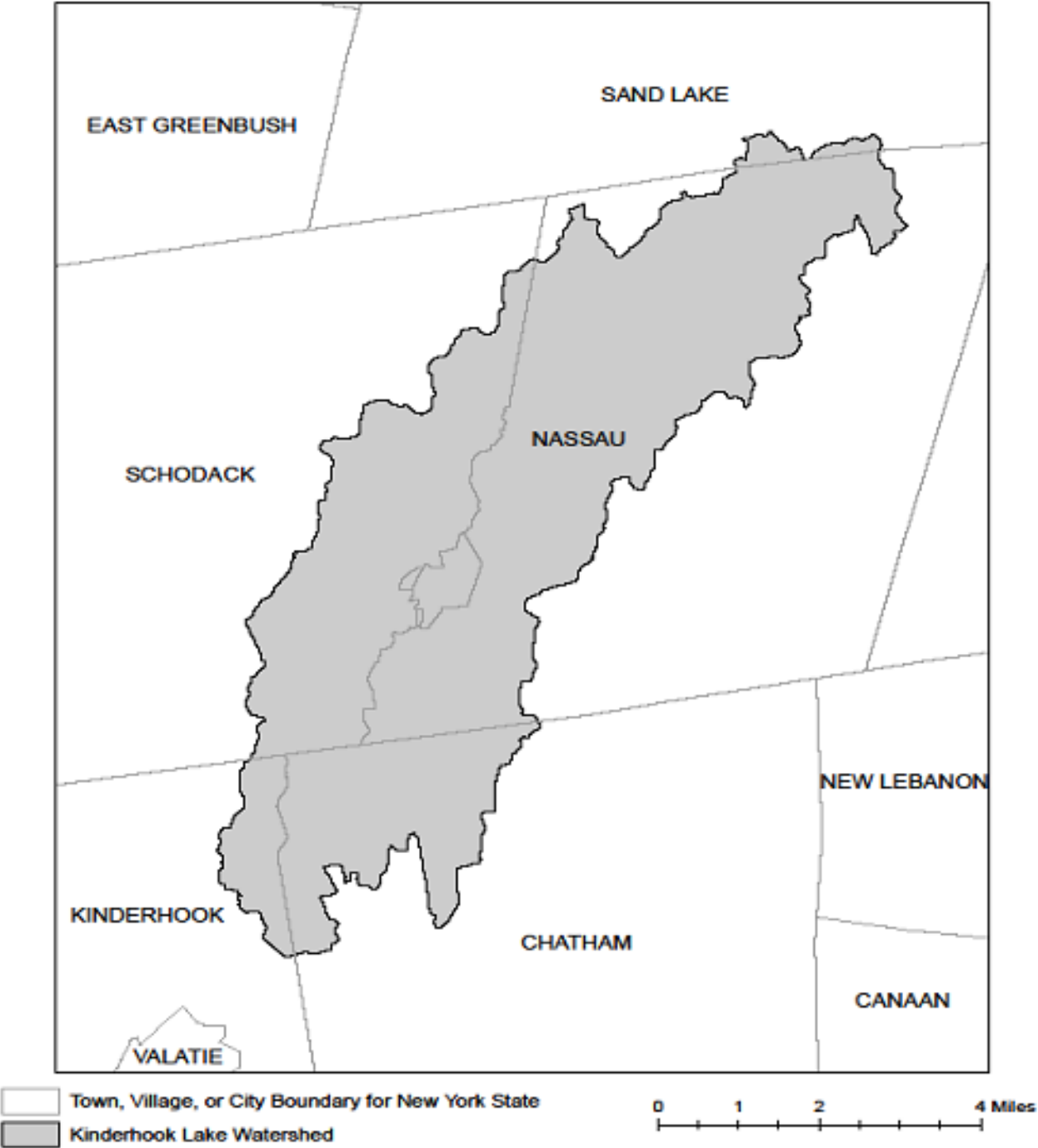


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Watersheds with Lower Disturbance Threshold

Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.

Entire New York City Watershed that is located east of the Hudson River - See Figure 1 in Appendix C
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APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). The list was developed using "The Final New York State 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy" dated November 2016. *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients
Albany	Basic Creek Reservoir	Nutrients
Allegany	Amity Lake, Saunders Pond	Nutrients
Bronx	Long Island Sound, Bronx	Nutrients
Bronx	Van Cortlandt Lake	Nutrients
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients
Broome	Whitney Point Lake/Reservoir	Nutrients
Cattaraugus	Allegheny River/Reservoir	Nutrients
Cattaraugus	Beaver (Alma) Lake	Nutrients
Cattaraugus	Case Lake	Nutrients
Cattaraugus	Linlyco/Club Pond	Nutrients
Cayuga	Duck Lake	Nutrients
Cayuga	Little Sodus Bay	Nutrients
Chautauqua	Bear Lake	Nutrients
Chautauqua	Chadakoin River and tribs	Nutrients
Chautauqua	Chautauqua Lake, North	Nutrients
Chautauqua	Chautauqua Lake, South	Nutrients
Chautauqua	Findley Lake	Nutrients
Chautauqua	Hulburt/Clymer Pond	Nutrients
Clinton	Great Chazy River, Lower, Main Stem	Silt/Sediment
Clinton	Lake Champlain, Main Lake, Middle	Nutrients
Clinton	Lake Champlain, Main Lake, North	Nutrients
Columbia	Kinderhook Lake	Nutrients
Columbia	Robinson Pond	Nutrients
Cortland	Dean Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Dutchess	Fall Kill and tribs	Nutrients
Dutchess	Hillside Lake	Nutrients
Dutchess	Wappingers Lake	Nutrients
Dutchess	Wappingers Lake	Silt/Sediment
Erie	Beeman Creek and tribs	Nutrients
Erie	Ellicott Creek, Lower, and tribs	Silt/Sediment
Erie	Ellicott Creek, Lower, and tribs	Nutrients
Erie	Green Lake	Nutrients
Erie	Little Sister Creek, Lower, and tribs	Nutrients
Erie	Murder Creek, Lower, and tribs	Nutrients
Erie	Rush Creek and tribs	Nutrients
Erie	Scajaquada Creek, Lower, and tribs	Nutrients
Erie	Scajaquada Creek, Middle, and tribs	Nutrients
Erie	Scajaquada Creek, Upper, and tribs	Nutrients
Erie	South Branch Smoke Cr, Lower, and tribs	Silt/Sediment
Erie	South Branch Smoke Cr, Lower, and tribs	Nutrients
Essex	Lake Champlain, Main Lake, South	Nutrients
Essex	Lake Champlain, South Lake	Nutrients
Essex	Willsboro Bay	Nutrients
Genesee	Bigelow Creek and tribs	Nutrients
Genesee	Black Creek, Middle, and minor tribs	Nutrients
Genesee	Black Creek, Upper, and minor tribs	Nutrients
Genesee	Bowen Brook and tribs	Nutrients
Genesee	LeRoy Reservoir	Nutrients
Genesee	Oak Orchard Cr, Upper, and tribs	Nutrients
Genesee	Tonawanda Creek, Middle, Main Stem	Nutrients
Greene	Schoharie Reservoir	Silt/Sediment
Greene	Sleepy Hollow Lake	Silt/Sediment
Herkimer	Steele Creek tribs	Silt/Sediment
Herkimer	Steele Creek tribs	Nutrients
Jefferson	Moon Lake	Nutrients
Kings	Hendrix Creek	Nutrients
Kings	Prospect Park Lake	Nutrients
Lewis	Mill Creek/South Branch, and tribs	Nutrients
Livingston	Christie Creek and tribs	Nutrients
Livingston	Conesus Lake	Nutrients
Livingston	Mill Creek and minor tribs	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs	Nutrients
Monroe	Buck Pond	Nutrients
Monroe	Cranberry Pond	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Monroe	Lake Ontario Shoreline, Western	Nutrients
Monroe	Long Pond	Nutrients
Monroe	Mill Creek and tribs	Nutrients
Monroe	Mill Creek/Blue Pond Outlet and tribs	Nutrients
Monroe	Minor Tribs to Irondequoit Bay	Nutrients
Monroe	Rochester Embayment - East	Nutrients
Monroe	Rochester Embayment - West	Nutrients
Monroe	Shipbuilders Creek and tribs	Nutrients
Monroe	Thomas Creek/White Brook and tribs	Nutrients
Nassau	Beaver Lake	Nutrients
Nassau	Camaans Pond	Nutrients
Nassau	East Meadow Brook, Upper, and tribs	Silt/Sediment
Nassau	East Rockaway Channel	Nutrients
Nassau	Grant Park Pond	Nutrients
Nassau	Hempstead Bay	Nutrients
Nassau	Hempstead Lake	Nutrients
Nassau	Hewlett Bay	Nutrients
Nassau	Hog Island Channel	Nutrients
Nassau	Long Island Sound, Nassau County Waters	Nutrients
Nassau	Massapequa Creek and tribs	Nutrients
Nassau	Milburn/Parsonage Creeks, Upp, and tribs	Nutrients
Nassau	Reynolds Channel, west	Nutrients
Nassau	Tidal Tribs to Hempstead Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Silt/Sediment
Nassau	Tribs to Smith/Halls Ponds	Nutrients
Nassau	Woodmere Channel	Nutrients
New York	Harlem Meer	Nutrients
New York	The Lake in Central Park	Nutrients
Niagara	Bergholtz Creek and tribs	Nutrients
Niagara	Hyde Park Lake	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Oneida	Ballou, Nail Creeks and tribs	Nutrients
Onondaga	Harbor Brook, Lower, and tribs	Nutrients
Onondaga	Ley Creek and tribs	Nutrients
Onondaga	Minor Tribs to Onondaga Lake	Nutrients
Onondaga	Ninemile Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Middle, and tribs	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Onondaga	Onondaga Lake, northern end	Nutrients
Onondaga	Onondaga Lake, southern end	Nutrients
Ontario	Great Brook and minor tribs	Silt/Sediment
Ontario	Great Brook and minor tribs	Nutrients
Ontario	Hemlock Lake Outlet and minor tribs	Nutrients
Ontario	Honeoye Lake	Nutrients
Orange	Greenwood Lake	Nutrients
Orange	Monhagen Brook and tribs	Nutrients
Orange	Orange Lake	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Oswego	Lake Neatahwanta	Nutrients
Oswego	Pleasant Lake	Nutrients
Putnam	Bog Brook Reservoir	Nutrients
Putnam	Boyd Corners Reservoir	Nutrients
Putnam	Croton Falls Reservoir	Nutrients
Putnam	Diverting Reservoir	Nutrients
Putnam	East Branch Reservoir	Nutrients
Putnam	Lake Carmel	Nutrients
Putnam	Middle Branch Reservoir	Nutrients
Putnam	Oscawana Lake	Nutrients
Putnam	Palmer Lake	Nutrients
Putnam	West Branch Reservoir	Nutrients
Queens	Bergen Basin	Nutrients
Queens	Flushing Creek/Bay	Nutrients
Queens	Jamaica Bay, Eastern, and tribs (Queens)	Nutrients
Queens	Kissena Lake	Nutrients
Queens	Meadow Lake	Nutrients
Queens	Willow Lake	Nutrients
Rensselaer	Nassau Lake	Nutrients
Rensselaer	Snyders Lake	Nutrients
Richmond	Grasmere Lake/Bradys Pond	Nutrients
Rockland	Congers Lake, Swartout Lake	Nutrients
Rockland	Rockland Lake	Nutrients
Saratoga	Ballston Lake	Nutrients
Saratoga	Dwaas Kill and tribs	Silt/Sediment
Saratoga	Dwaas Kill and tribs	Nutrients
Saratoga	Lake Lonely	Nutrients
Saratoga	Round Lake	Nutrients
Saratoga	Tribs to Lake Lonely	Nutrients

303(d) Segments Impaired by Construction Related Pollutant(s)

Schenectady	Collins Lake	Nutrients
Schenectady	Duane Lake	Nutrients
Schenectady	Mariaville Lake	Nutrients
Schoharie	Engleville Pond	Nutrients
Schoharie	Summit Lake	Nutrients
Seneca	Reeder Creek and tribs	Nutrients
St.Lawrence	Black Lake Outlet/Black Lake	Nutrients
St.Lawrence	Fish Creek and minor tribs	Nutrients
Steuben	Smith Pond	Nutrients
Suffolk	Agawam Lake	Nutrients
Suffolk	Big/Little Fresh Ponds	Nutrients
Suffolk	Canaan Lake	Silt/Sediment
Suffolk	Canaan Lake	Nutrients
Suffolk	Flanders Bay, West/Lower Sawmill Creek	Nutrients
Suffolk	Fresh Pond	Nutrients
Suffolk	Great South Bay, East	Nutrients
Suffolk	Great South Bay, Middle	Nutrients
Suffolk	Great South Bay, West	Nutrients
Suffolk	Lake Ronkonkoma	Nutrients
Suffolk	Long Island Sound, Suffolk County, West	Nutrients
Suffolk	Mattituck (Marratooka) Pond	Nutrients
Suffolk	Meetinghouse/Terrys Creeks and tribs	Nutrients
Suffolk	Mill and Seven Ponds	Nutrients
Suffolk	Millers Pond	Nutrients
Suffolk	Moriches Bay, East	Nutrients
Suffolk	Moriches Bay, West	Nutrients
Suffolk	Peconic River, Lower, and tidal tribs	Nutrients
Suffolk	Quantuck Bay	Nutrients
Suffolk	Shinnecock Bay and Inlet	Nutrients
Suffolk	Tidal tribs to West Moriches Bay	Nutrients
Sullivan	Bodine, Montgomery Lakes	Nutrients
Sullivan	Davies Lake	Nutrients
Sullivan	Evens Lake	Nutrients
Sullivan	Pleasure Lake	Nutrients
Tompkins	Cayuga Lake, Southern End	Nutrients
Tompkins	Cayuga Lake, Southern End	Silt/Sediment
Tompkins	Owasco Inlet, Upper, and tribs	Nutrients
Ulster	Ashokan Reservoir	Silt/Sediment
Ulster	Esopus Creek, Upper, and minor tribs	Silt/Sediment
Warren	Hague Brook and tribs	Silt/Sediment

303(d) Segments Impaired by Construction Related Pollutant(s)

Warren	Huddle/Finkle Brooks and tribs	Silt/Sediment
Warren	Indian Brook and tribs	Silt/Sediment
Warren	Lake George	Silt/Sediment
Warren	Tribs to L.George, Village of L George	Silt/Sediment
Washington	Cossayuna Lake	Nutrients
Washington	Lake Champlain, South Bay	Nutrients
Washington	Tribs to L.George, East Shore	Silt/Sediment
Washington	Wood Cr/Champlain Canal and minor tribs	Nutrients
Wayne	Port Bay	Nutrients
Westchester	Amawalk Reservoir	Nutrients
Westchester	Blind Brook, Upper, and tribs	Silt/Sediment
Westchester	Cross River Reservoir	Nutrients
Westchester	Lake Katonah	Nutrients
Westchester	Lake Lincolndale	Nutrients
Westchester	Lake Meahagh	Nutrients
Westchester	Lake Mohegan	Nutrients
Westchester	Lake Shenorock	Nutrients
Westchester	Long Island Sound, Westchester (East)	Nutrients
Westchester	Mamaroneck River, Lower	Silt/Sediment
Westchester	Mamaroneck River, Upper, and minor tribs	Silt/Sediment
Westchester	Muscoot/Upper New Croton Reservoir	Nutrients
Westchester	New Croton Reservoir	Nutrients
Westchester	Peach Lake	Nutrients
Westchester	Reservoir No.1 (Lake Isle)	Nutrients
Westchester	Saw Mill River, Lower, and tribs	Nutrients
Westchester	Saw Mill River, Middle, and tribs	Nutrients
Westchester	Sheldrake River and tribs	Silt/Sediment
Westchester	Sheldrake River and tribs	Nutrients
Westchester	Silver Lake	Nutrients
Westchester	Teatown Lake	Nutrients
Westchester	Titicus Reservoir	Nutrients
Westchester	Truesdale Lake	Nutrients
Westchester	Wallace Pond	Nutrients
Wyoming	Java Lake	Nutrients
Wyoming	Silver Lake	Nutrients

APPENDIX F – List of NYS DEC Regional Offices

<u>Region</u>	<u>COVERING THE FOLLOWING COUNTIES:</u>	<u>DIVISION OF ENVIRONMENTAL PERMITS (DEP) PERMIT ADMINISTRATORS</u>	<u>DIVISION OF WATER (DOW) WATER (SPDES) PROGRAM</u>
1	NASSAU AND SUFFOLK	50 CIRCLE ROAD STONY BROOK, NY 11790 TEL. (631) 444-0365	50 CIRCLE ROAD STONY BROOK, NY 11790-3409 TEL. (631) 444-0405
2	BRONX, KINGS, NEW YORK, QUEENS AND RICHMOND	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4997	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4933
3	DUTCHESS, ORANGE, PUTNAM, ROCKLAND, SULLIVAN, ULSTER AND WESTCHESTER	21 SOUTH PUTT CORNERS ROAD NEW PALTZ, NY 12561-1696 TEL. (845) 256-3059	100 HILLSIDE AVENUE, SUITE 1W WHITE PLAINS, NY 10603 TEL. (914) 428 - 2505
4	ALBANY, COLUMBIA, DELAWARE, GREENE, MONTGOMERY, OTSEGO, RENSSELAER, SCHENECTADY AND SCHOHARIE	1150 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2069	1130 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2045
5	CLINTON, ESSEX, FRANKLIN, FULTON, HAMILTON, SARATOGA, WARREN AND WASHINGTON	1115 STATE ROUTE 86, Po Box 296 RAY BROOK, NY 12977-0296 TEL. (518) 897-1234	232 GOLF COURSE ROAD WARRENSBURG, NY 12885-1172 TEL. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7070

APPENDIX 13

MS4 ACCEPTANCE FORM



Department of
Environmental
Conservation

NYS Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

MS4 Stormwater Pollution Prevention Plan (SWPPP) Acceptance Form

for

Construction Activities Seeking Authorization Under SPDES General Permit

*(NOTE: Attach Completed Form to Notice Of Intent and Submit to Address Above)

I. Project Owner/Operator Information

1. Owner/Operator Name:

2. Contact Person:

3. Street Address:

4. City/State/Zip:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/State/Zip:

III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information

8. SWPPP Reviewed by:

9. Title/Position:

10. Date Final SWPPP Reviewed and Accepted:

IV. Regulated MS4 Information

11. Name of MS4:

12. MS4 SPDES Permit Identification Number: NYR20A

13. Contact Person:

14. Street Address:

15. City/State/Zip:

16. Telephone Number:

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name:

Title/Position:

Signature:

Date:

VI. Additional Information

APPENDIX 14

NOTICE OF TERMINATION (NOT)

**New York State Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505**

(NOTE: Submit completed form to address above)

NOTICE OF TERMINATION for Storm Water Discharges Authorized
under the SPDES General Permit for Construction Activity

Please indicate your permit identification number: NYR ____ _

I. Owner or Operator Information

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person:

4a. Telephone:

4b. Contact Person E-Mail:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

III. Reason for Termination

9a. ☐ All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP. ***Date final stabilization completed** (month/year): _____

9b. ☐ Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR ____ _

(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c. ☐ Other (Explain on Page 2)

IV. Final Site Information:

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices? ☐ yes ☐ no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed? ☐ yes ☐ no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

**NOTICE OF TERMINATION for Storm Water Discharges Authorized under the
SPDES General Permit for Construction Activity - continued**

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? ☐ yes ☐ no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

- ☐ Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.
- ☐ Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).
- ☐ For post-construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.
- ☐ For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? _____
(acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? ☐ yes
☐ no
(If Yes, complete section VI - "MS4 Acceptance" statement)

V. Additional Information/Explanation:
(Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:

Date:

NOTICE OF TERMINATION for Storm Water Discharges Authorized under the
SPDES General Permit for Construction Activity - continued

VII. Qualified Inspector Certification - Final Stabilization:

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

IX. Owner or Operator Certification

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

(NYS DEC Notice of Termination - January 2015)

DRAFT

**STORMWATER POLLUTION
PREVENTION PLAN
FOR
CONSTRUCTION ACTIVITIES**



**TWIN LAKES – PROPOSED COMMERCIAL
DEVELOPMENT**

Town of Manlius, Onondaga County, New York

Prepared for:

Twin Shores Properties, LLC
1333 13th Street
East Moline, IL 61244

Prepared by:



19 Genesee Street
Camillus, New York 13031
PH: (315) 672-8726
TDK Project No.: 2021054

June 30, 2022

Revised: October 13, 2022

Revised: October 27, 2022

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INTRODUCTION

Twin Shores Properties, LLC (Twin Shores) proposes to construct a commercial development upon 9.83 acres of a 129.80-acre parcel of land located in the Town of Manlius, Onondaga County, New York. The site is located on the east side of North Burdick Street (CR 94) and is adjacent to the northern boundary of the Village of Fayetteville. In general, the project includes the construction of three (3) commercial buildings that will be occupied by restaurant and retail establishments. Refer to the *Site Location Map* provided in *Appendix 1* and the attached *Site Plan (Sheet SP-1)* for additional information.

This report outlines the methodology for controlling storm water discharges from the site in accordance with the State Pollution Discharge Elimination System's (SPDES) *General Permit for Stormwater Discharges from Construction Activity* (GP-0-20-001) administered by the NYSDEC. It includes storm water design information, erosion and sediment control feature requirements, construction details, and inspection and maintenance procedures to be incorporated into the reclamation of the former quarry site.

According to the State's *Cultural Resource Information System (CRIS)* data base, the subject site is not located within an archeologically and culturally sensitive area. However, a request for project review was submitted to the Office of Parks, Recreation and Historic Preservation's (OPRHP) in order to verify that the proposed project does not impact archeological and/or historic resources. Upon the completion of their review, OPRHP issued a determination of *No Impact* upon archeological and/or historic resources. Please refer to *Appendix 3* for additional information.

PROPOSED SITE DEVELOPMENT INFORMATION

The proposed commercial structures include multiple building sizes with footprints ranging from 2,450 square feet to 3,625 square feet. Related site improvements include the construction of a new access road to be dedicated to the Town, sanitary and storm sewers, water and natural gas distribution systems, parking and loading areas, drive aisles, and stormwater management facilities. Additionally, a flood control spillway will be constructed in order to expand the available floodplain storage associated with Limestone Creek. The project will be constructed in substantial conformance with the Town of Manlius zoning ordinances and the New York State building code, as applicable.

The construction of the proposed roadway, buildings, corresponding parking areas and stormwater management practices will impact approximately 13.60 acres (10.5%) of the subject 129.80-acre property. The proposed building, roadways, drive aisles and corresponding parking areas will occupy approximately 4.25 acre (3.3%). Approximately 4.70 acres (3.6%) will be regraded and utilized for the siting of subsurface stormwater detention systems and landscaped lawn areas. An additional 4.65 (3.6%) acres will be used as an earthwork borrow source and will facilitate the construction of the flood control spillway. The balance of the site is comprised of the north and south quarry ponds and the Limestone Creek corridor which will remain largely undisturbed. The proposed site features and lot coverage information is provided on the enclosed *Proposed Drainage Plan (Sheet PD-1)*.

BACKGROUND INFORMATION

Existing Conditions

The site is located adjacent to the east side of North Burdick Street and south of the Old Erie Canal State Park. Additionally, the site is bordered by Limestone Creek to the east; the Fayetteville Towne Center to the west and on the opposite side of North Burdick Street from the site; and vacant land, residential properties and the municipal boundary between the Town of Manlius and Village of Fayetteville to the south. Existing ground cover includes scrub brush, wooded areas, gravel haul roads and residential lawns and asphalt driveways. The subject property is occupied by two (2) residential homes, eight (8) vacant residential structures and an abandoned mining site that also generated sand and gravel spoils and areas of construction and demolition (C&D) fill. Additionally, the north and south quarry ponds occupy approximately 15.1 and 23.4 acres, respectively.

The property generally slopes from west (N. Burdick St.) to east toward Limestone Creek. Surface slopes range from 0.5% to 10% in undisturbed areas of the site; while mined embankments have slopes approaching 70%. Existing drainage patterns are generally characterized by overland flow toward the quarry ponds and Limestone Creek. Limestone Creek discharges to Chittenango Creek prior to its confluence with Oneida Lake. The proposed site improvements are located within a drainage watershed that contains two (2) sub-catchments identified as *CM-1* and *2* in this report.

Sub-catchment *CM-1* is primarily comprised of vacant land with ground cover characterized by scrub brush and wooded areas. However, the sub-catchment also includes a portion of the N. Burdick St. right-of-way and abandoned residential home sites that direct stormwater runoff toward low-lying lands located within its limits. Surface runoff generated by *CM-1* is directed toward Limestone Creek.

Sub-catchment *CM-2* directs surface runoff toward the south quarry pond. The quarry pond is an isolated water body created during past mining operations that does not discharge to downgradient waterways (e.g., Limestone Creek or Old Erie Canal). As such, the water body essentially serves as a retention pond that provides surface storage of stormwater runoff with no outflow other than evaporation and/or infiltration. Note that the surface area of the quarry pond was modeled as a drainage sub-catchment in order to evaluate increases in the water surface elevation (WSEL) of the pond resulting from stormwater discharges received from contributing drainage areas and the rainfall that lands directly on the surface of the ponds during storm events.

Additionally, the south quarry pond also receives off-site discharges from the developed sites located on the west side of N. Burdick St. and adjacent to its intersection with Medical Center Drive via an 18-inch diameter culvert crossing. The culvert crossing appears to convey stormwater discharge from three (3) off-site drainage catchments to the south quarry pond. The off-site sub-catchments were evaluated and modeled in the project SWPPP¹ prepared for the *Towne Center Retirement Community*

¹ *Stormwater Pollution Prevention Plan for Resort Lifestyle Communities*, prepared by Napierala Consulting, dated June 5, 2015.

and were identified as *DP2.1*, *2.2* and *2.3*. Note that the nomenclature for these sub-catchments was maintained and utilized in this report.

Additionally, hydrological parameters, including catchment land areas, curve numbers (CN) and time of concentrations (Tc), from the previously referenced SWPPP were utilized as input data for calculations associated with the preparation of this report. Please note that outflow hydrographs reflecting the attenuation provided by the stormwater detention systems (e.g., detention basins and subsurface storage systems) located at the off-site properties was not included in the previously prepared SWPPP. As such, peak discharge rates and routing calculations included for these catchments in this report are conservative. Peak discharges are likely of a smaller magnitude and peak time durations longer. However, the runoff volume from each off-site sub-catchment impacts the WSEL of the south quarry pond during storm events and is accounted for in this report. Please note that the off-site properties also include water quality measures and no additional treatment of runoff generated by off-site drainage catchments is required for or provided by the proposed project. Please refer to the *Existing Drainage Plan (Sheet ED-1)* and *Proposed Condition Watershed Mapping* provided in *Appendix 5* for additional information.

Proposed Conditions

Proposed drainage patterns will remain generally consistent with existing conditions; with the exception of surface runoff generated under proposed conditions being directed toward a network of open and closed-channel conveyance and stormwater management systems. All stormwater generated by the proposed commercial properties will be treated by the utilization of subsurface detention and water quality filters that discharge to the south quarry pond and Limestone Creek.

Sub-catchment *CM-1* is further delineated into five (5) additional sub-catchments identified as *CM-1A*, *B*, *C*, *D* and *E* in this report. *CM-1A* is comprised primarily of paved surfaces associated with N. Burdick Street. Surface runoff from *CM-1A* will be directed to the county-owned drainage sluice located adjacent to the subject property's southern boundary and ultimately Limestone Creek.

Sub-catchments *CM-1B* and *1C* will direct surface runoff toward a detention and water quality treatment system that consists of subsurface storage chambers located upstream of a *BayFilter Stormwater Treatment System*. This treatment system will discharge to the south quarry pond.

Sub-catchment *CM-1D* will also direct surface runoff toward a subsurface detention and treatment system similar to the one described above. This system will provide water quantity and quality treatment prior to its discharge toward the Limestone Creek floodplain.

Sub-catchment *CM-2* will continue to discharge directly to the south quarry pond; while sub-catchment *CM-1E* will remain undisturbed and continue to discharge directly to Limestone Creek. Refer to the *Proposed Drainage Plan (Sheet PD-1)* in *Appendix 5* of this report for more information.

COMPARISON OF PRE-DEVELOPMENT AND POST-DEVELOPMENT RUNOFF CONDITIONS

Methodology

The present hydrology was compared to that of the developed conditions. This was accomplished by using a computer stormwater modeling program produced by Haestad Methods known as *Pond Pack*. The peak discharge from both conditions was calculated by using this software in conjunction with site-specific input. The Pond Pack program is based on the calculation procedure from the United States Department of Agriculture's (USDA's) *TR-55, Urban Hydrology for Small Watersheds*.

As part of this study, the Onondaga County Soil Survey, prepared by the Natural Resources Conservation Service (NRCS), was also reviewed. It indicates that approximately 8.9%, 8.7%, 3.5%, 8.8%, and 20.3% of the proposed site consists of Cazenovia silt loam (CfB and CgD), Hamlin silt loam (Hb), Palmyra gravelly loam (PgB), Teel silt loam (Te) and a Wayland soils complex (Wn), respectively. The balance of the site is occupied by gravel pits (17.5%) and surface water (32.3%).

Soils are assigned a hydrological soil group (HSG) that ranks soil types from A to D, with A having a lower potential for generating storm water runoff and a higher infiltration rate, and D having a higher runoff potential and lower infiltration rate. The Cazenovia, Hamlin and Palmyra loam series have HSG classifications of C, B and A, respectively; while the Teel and Wayland soil series have HSG classifications of D. Note that gravel pits are not assigned a HSG classification by the NRCS. As such, hydrologic calculations performed for this report assumed a HSG D classification for these areas. For additional information please refer to the soil report located in *Appendix 2*.

Rainfall data was obtained from the Northeast Regional Climate Center (NRCC) and utilized in the hydrologic calculations performed for this report. The site-specific *Extreme Precipitation Table* provided in *Appendix 5* provides precipitation estimates for each design storm.

Water Quality and Runoff Reduction Volumes

The Water Quality (WQv) and Runoff Reduction (RRv) volumes associated with the project were calculated based upon the proposed site improvements (e.g., building and parking areas) located within sub-catchments *CM-1A*, *1B*, *1C* and *1D* while water quantity calculations account for existing and proposed conditions within the local drainage watershed. The following table provides a summary of the WQv calculations for the proposed development.

Table 1: Water Quality Volume Summary

Catchment ID	Area (ac)	Imp. Area (ac)	I (%)	Rv	P (in)	WQv (ac-ft)
1A	2.10	1.39	66.19	0.65	1.0	0.113
1B	5.61	4.17	74.33	0.72	1.0	0.336
1C	1.50	0.77	51.33	0.51	1.0	0.064
1D	0.54	0.46	85.98	0.82	1.0	0.037
TOTAL	9.75	6.79				0.550

WQv treatment for sub-catchments *CM-1B*, *1C* and *1D* will be provided by two (2) *BayFilter Stormwater Treatment Systems*. Due to the topography of the N. Burdick St. right-of-way, stormwater from the roadway corridor cannot be directed toward the proposed stormwater management systems. However, the two (2) *BayFilter Stormwater Treatment Systems* were sized to treat the 1-yr, 24-hr peak discharge rates from their respective contributing drainage areas. As such, the treatment systems provide additional WQv treatment that accounts for the required WQv associated with *CM-1A*.

Additionally, the proposed water quality treatment systems for *CM-1B* and *1C* discharge to the south quarry pond. Proposed site improvements include the installation of a discharge control structure within the quarry pond that includes a v-notched weir set at an elevation of 419.15. During the 1-yr, 24-hr design storm, the WSEL of the south quarry pond routes to an elevation of 419.05. As such, the entire WQv, RRv and *Channel Protection Volume* (Cpv) associated with the proposed project are retained within the quarry pond with no off-site discharge other than evaporation and/or infiltration. The following table provides a summary of the WQv treatment and RRv provided by the proposed stormwater management system.

Table 2: WQv and RRv Summary

Catchment ID	Treatment Method	WQv Treatment Required (ac-ft)	RRv Provided (ac-ft)	WQv Treatment Provided (ac-ft)
1A	—	0.113	0.000	0.000
1B	BayFilter & S. Pond Retention	0.336	0.559	0.559
1C	BayFilter & S. Pond Retention	0.064	0.133	0.133
1D	BayFilter	0.037	0.000	0.068
TOTAL		0.550	0.692	0.760

As indicated in *Table 2*, the provided WQv of 0.760 acre-feet and RRv of 0.692 acre-feet exceed the required WQv of 0.550 acre-feet. As such, the proposed stormwater management system satisfies the WQv and RRv criteria.

Water Quantity Controls

The Channel Protection Volume (CPv) is equivalent to the surface runoff volume generated by the post-developed site during the 1-year, 24-hour storm event. The CPv for sub-catchments *CM-1B* and *1C* will be retained within the south quarry pond. The south quarry pond will also provide controlled discharge of the runoff volumes generated by the 10 and 100-year storm events and satisfy the NYSDEC's Overbank Flood Control (Qp) and Extreme Flood Control (Qf) requirements.

The CPv, Qp and Qf associated *CM-1D* will be provided by a 2-inch diameter orifice and the controlled discharge provided by the water quality filter. *Tables 3 and 4* provided below summarize drainage calculations for existing and proposed conditions; while *Table 5* provides a direct comparison of existing and proposed peak discharge rates.

Peak Discharge Calculation Summary

Table 3: Existing Conditions

	Existing		Watershed Total
	CM-1	CM-2	
Area – Total (acres)	35.29	17.17	52.46
Pervious	33.90	10.26	44.16
Impervious	1.39	6.91	8.30
Curve Number	73	82	
Time of Concentration (hrs)	1.316	0.125	
Runoff (acre-feet)			At Analysis Pt. 1
1-year/24-hour	0.976	0.973	0.976
10-year/24-hour	3.253	2.464	3.253
100-year/24-hour	8.385	5.407	8.385
Peak Discharge (cfs)			
1-year/24-hour	3.75	16.36	3.75
10-year/24-hour	15.86	43.21	15.86
100-year/24-hour	43.52	93.91	43.52

Table 4: Proposed Conditions

	Proposed						Watershed Total
	CM-1A	CM-1B	CM-1C	CM-1D	CM-1E	CM-2	
Area – Total (acres)	2.10	5.61	1.50	0.54	25.07	17.75	52.57
Pervious	0.71	4.12	0.73	0.08	25.07	11.76	42.47
Impervious	1.39	1.49	0.77	0.46	0.00	5.99	10.10
Curve Number	90	92	89	95	71	82	
Time of Con. [Tc] (hrs)	0.158	0.100	0.171	0.100	1.174	0.125	
Runoff (acre-feet)							Analysis Pt. 1
1-year/24-hour	0.199	0.599	0.133	0.068	0.579	1.007	0.797
10-year/24-hour	0.417	1.200	0.286	0.128	2.083	2.548	2.567
100-year/24-hour	0.810	2.267	0.564	0.231	5.587	5.592	
Peak Discharge (cfs)							
1-year/24-hour	3.07	10.67	2.18	1.17	2.20	16.90	3.36
10-year/24-hour	6.34	20.66	4.57	2.12	10.71	44.53	11.49
100-year/24-hour	11.95	37.50	8.70	3.69	31.37	96.78	32.92

Table 5: Comparison of Existing and Proposed Conditions

Storm Event	Existing (cfs)	Proposed (cfs)
1-year, 24-hour	3.75	3.36
10-year, 24-hour	15.86	11.49
100-year, 24-hour	43.52	32.92

As indicated in *Tables 3 through 5*, proposed peak discharge rates are less than existing conditions and satisfy both NYSDEC and Town requirements. Please refer to the drainage calculations and *PondPack* reports provided in *Appendix 5* for additional information.

Stormwater Management System

Sub-catchments *CM-1B* and *1C* direct stormwater runoff to subsurface detention systems comprised of storage chambers. The detention systems are located upstream of a *BayFilter Stormwater Treatment System* (WQU-1) that has a treatment capacity of 1 cubic-foot per second (cfs) that adequately provides treatment of the runoff generated by the 1-yr, 24-hr storm event. Stormwater inflows in excess of 1 cfs will be diverted to the vault's 36-inch diameter outlet pipe via an internal bypass weir. The outlet pipe discharges to the south quarry pond.

The proposed stormwater management system also includes the installation of a discharge control structure within the quarry pond that includes a v-notched weir set at an elevation of 419.15 within a concrete riser with a rim elevation of 426.50. The 1, 10 and 100-yr, 24-hr design storms route to a WSEL of 419.05, 419.31 and 419.77, respectively.

Sub-catchment *CM-1D* directs stormwater runoff to an additional subsurface detention system that is upstream of another *BayFilter Stormwater Treatment System (WQU-2)*. This filter has a treatment capacity of 0.1 cfs and the detention system provides adequate storage in order to facilitate the treatment of the runoff generated during the 1-yr, 24-hr storm event. An internal bypass weir will divert inflow from storm events that exceed the peak discharge rate of the 1-yr, 24-hr design storm to an 18-inch diameter outfall pipe that discharges to Limestone Creek floodplain.

EROSION & SEDIMENT CONTROL REQUIREMENTS

The erosion and sediment control plan has been developed for the construction activities associated with the proposed project. Both temporary and permanent erosion and sediment control devices will be utilized to reduce the erosion potential from construction and ultimate site use, to decrease water quality degradation and to protect downstream waterways. The means and methods provided in the erosion and sediment control plan are based upon the *New York State Standards and Specifications for Erosion and Sediment Control (July 2016)* as summarized below and presented on the *Erosion and Sediment Control Plan and Construction Details*.

Temporary Erosion and Sediment Control Facilities

The locations and construction specifications for the following temporary erosion and sediment control devices are shown on the erosion and sediment control plan and details:

- ✦ *Silt Fence:* Silt fencing will be placed between graded and undisturbed areas to prevent sediment from entering the undisturbed areas. Silt fence will also be placed around stockpile locations and equipment/material staging areas.
- ✦ *Stabilized Construction Entrance:* Stabilized construction entrance will prevent sediment from leaving the limits of disturbance.
- ✦ *Check Dams:* Temporary stone check dams will be constructed within ditches and swales to decrease flow velocities and allow the settlement of sediment from runoff. The check dams shall be removed upon final stabilization of the channel with vegetation.

Permanent Erosion and Sediment Control Facilities

- ✦ *Outlet Protection:* End treatments will be provided at the culvert outlets as shown on the site plan to minimize scour and erosion.
- ✦ *Surface Stabilization:* Stabilization will be accomplished with vegetation and mulch, as indicated in the landscaping specifications.

Construction Schedule and Sequence

Construction of the project is expected to begin in the spring of 2023. The general site notes and anticipated construction sequence for the site improvements consist of the following:

General Notes:

1. One (1) week prior to beginning earthwork operations, a pre-construction meeting will be held to discuss the erosion and sediment control plan.
2. Erosion and sediment control measures shall be provided prior to beginning any land disturbance activities. The devices providing protection to a given area shall not be removed until the disturbed lands in that area are stabilized.
3. No disturbed area shall remain exposed for more than 7 calendar days, except for portions of the site in which work will be continuous beyond 7 days (e.g., the building footprint). Temporary vegetation shall be provided in all areas where construction activities have ceased for greater than 7 calendar days.
4. A trained contractor shall be on-site during all land disturbance construction activities in order to inspect the erosion and sediment control measures specified in this document and the construction drawings. Active construction zones shall be inspected daily to ensure the proper installation and maintenance of all erosion and sediment control practices. Corrective measures to address any deficiencies identified by the trained contractor shall be implemented within 24 hours.

Construction Sequence:

Site Preparation

1. Install temporary erosion and sediment control measures as indicated on the ESC plan.

Site Grading and Building Construction

1. Create equipment staging and material stockpile locations, as indicated on the ESC plan.
2. Strip and stockpile gravel surface and subgrade from proposed building footprint as needed.
 - Stockpile the removed material at the designated spoils area identified on the ESC plan.
 - Cover stockpile and provide silt fencing around the perimeter of staged spoils and/or temporarily staged piles of fill.
3. Install additional silt fence, as needed, down-gradient from localized areas of construction activities.
4. Silt fence shall be installed parallel to elevation contours.
5. Install utilities as indicated on construction drawings. Please note that material excavated from utility trenches shall be placed on the upstream side of the trench and backfilled immediately upon completion of work. Additionally, contractor shall seed, mulch and stabilize the disturbed area as soon as work is complete.
6. Construct the proposed building(s) as specified in contract documents prepared by the project architect.

7. Complete earthwork and grading operations, including placement of fill to limits indicated. Note that final grading of the stormwater management areas shall not be initiated until all upstream disturbed areas are stabilized.
8. Upon the stabilization of all upstream areas, perform final pond and bioretention filter grading and planting per specifications.
9. Continually maintain all erosion and sediment control devices during grading operations.

Restoration

1. Seed, mulch and stabilize all disturbed ground cover (i.e., lawn and detention basin areas).
2. Install landscaping features (i.e., plants, mulch, etc.).
3. Remove temporary erosion control devices once vegetation has been established.

Inspection Procedures and Maintenance

During construction, the Owner will be responsible for inspecting and maintaining the permanent and temporary erosion control facilities. Also, areas that have been seeded will be inspected regularly after seed germination to ensure complete coverage of exposed areas.

Inspections of all devices should be completed twice per week and after each rainfall event. Repairs should be completed immediately upon discovery.

The inspections shall be performed by a “qualified inspector”, as defined by the DEC’s GP-0-20-001 General Permit Program. The following items shall be documented and the contractor notified of deficiencies requiring corrective action:

- ✦ *Stabilization Measures:* Disturbed areas and areas used for storage of materials that are exposed to precipitation will be inspected for evidence of, or the potential for, pollutants entering the drainage system. After the site is stabilized, inspections will be conducted at least once every month throughout the life of the project.
- ✦ *Structural Controls:* Silt fences, straw bale barriers, and all other erosion and sediment control measures identified in the plan will be inspected regularly for proper positioning, anchoring, and effectiveness in trapping sediments. Sediment will be removed from the upstream or up-slope side of the filter fabric and check dams.
- ✦ *Discharge Points:* Discharge points, as indicated in the facility’s Multi-Sector industrial SPDES permit will be inspected and monitored.
- ✦ *Construction Entrances:* Locations where vehicles enter or exit the site will be inspected for evidence of off-site sediment tracking.

- Accumulated sediments in the temporary sediment basins should be removed when 50% of the storage capacity is filled with sediment, as applicable.
- Sediment around the silt fencing should be removed as needed to maintain the functionality of the devices.
- All seeded areas shall be maintained as follows:
 - Identify seeded areas with stakes, string and brightly colored flagging. Protect seeded areas until vegetation has been established.
 - Immediately re-seed areas which do not establish vegetation.
 - Submit maintenance instructions for fertilizing and lawn care.
- To preserve the functionality of the stormwater management system, a representative of the Owner shall complete the following:
 - Inspect the drainage swales and check dams for subsidence, erosion or tree growth.
 - Coordinate the removal of any accumulated sediment within swales.
 - The inspections will be performed on a monthly basis, or more frequently as weather conditions warrant.
- The Owner will also be responsible for maintaining the lawn areas, in particular the landscaped areas of the swales.

Construction Site Wastes

The following best management practices shall be implemented to ensure proper storage and handling of construction site wastes:

- Non-hazardous construction and demolition material that is suitable for use as fill material shall be transported and placed within the designated stockpile and spoils area identified on the erosion and sediment control plan.
- Designate a waste collection area adjacent to the stockpile and spoils area or within the construction staging area for the management of construction wastes not suitable for use as clean fill material or as deemed appropriate for recycling.
- Ensure that containers have lids so they can be covered before periods of rain, and keep containers in a covered area whenever possible.
- Schedule waste collection to prevent the containers from overfilling.
- Clean up spills immediately. For hazardous materials, follow cleanup instructions on package. Use an absorbent material such as sawdust or kitty litter to contain the spill.

- During the demolition phase of construction, provide extra containers and schedule more frequent pickups.
- Collect, remove, and dispose of all construction site wastes at authorized disposal areas. A local environmental agency can be contacted to identify these disposal sites.

The following steps should be taken to ensure the proper disposal of hazardous materials:

- Local waste management authorities should be consulted about the requirements for disposing of hazardous materials.
- A hazardous waste container should be emptied and cleaned before it is disposed of to prevent leaks.
- The original product label should never be removed from the container as it contains important safety information. Follow the manufacturer's recommended method of disposal, which should be printed on the label.
- If excess products need to be disposed of, they should never be mixed during disposal unless specifically recommended by the manufacturer.

The following practices should be used to reduce risks associated with pesticides or to reduce the amount of pesticides that come in contact with storm water:

- Follow all federal, state, and local regulations that apply to the use, handling, or disposal of pesticides.
- Do not handle the materials any more than necessary.
- Store pesticides in a dry, covered area.
- Construct curbs or dikes to contain pesticides in case of spillage.
- Follow the recommended application rates and methods.
- Have equipment and absorbent materials available in areas where pesticides are stored and used in order to contain and clean up any spills that occur.

The following management practices should be followed to reduce the contamination risk associated with petroleum products:

- Store petroleum products and fuel for vehicles in covered areas with dikes in place to contain any spills.
- Immediately contain and clean up any spills with absorbent materials.
- Have equipment available in fuel storage areas and in vehicles to contain and clean up any spills that occur.

To reduce risks of nutrient pollution the following management practices shall apply:

- Have equipment available in fuel storage areas and in vehicles to contain and clean up any spills that occur.
- Apply fertilizers at the minimum rate and to the minimum area needed.
- Work the fertilizer deeply into the soil to reduce exposure of nutrients to storm water runoff.
- Apply fertilizer at lower application rates with a higher application frequency.
- Limit hydro-seeding, which is the simultaneous application of lime and fertilizers.
- Ensure that erosion and sediment controls are in place to prevent fertilizers and sediments from being transported off-site.
- Use detergents only as recommended, and limit their use onsite. Wash water containing detergents should not be dumped into the storm drain system—it should be directed to a sanitary sewer or be otherwise contained so that it can be treated at a wastewater treatment plant.

RECORD RETENTION

A copy of the SWPPP, signed NOI, and NYSDEC Acknowledgement letter shall be retained at the job site throughout the duration of the project. The Owner shall retain copies of the SWPPP, all reports and records of data used to complete the *Notice of Intent*, for five (5) years from the date the site is finally stabilized.

NOTICE OF TERMINATION

When the project is completed and the site has been stabilized, a *Notice of Termination (NOT)* shall be submitted to the NYS Department of Environmental Conservation, certifying completion and final stabilization of the project, and compliance with the approved Storm Water Pollution Plan (SWPPP).

The following general requirements must be completed prior to the submission of a *NOT*:

- The execution of a maintenance agreement with the Town of Manlius (Town) or a recorded deed covenant that ensures long-term maintenance of the post-construction stormwater practices.
- Certification from a qualified inspector that the ground surfaces have achieved final stabilization and verification that post-construction stormwater management practices have been constructed in accordance with the design specifications.

The NOT form shall be submitted to the following address:

NYS Department of Environmental Conservation
Division of Water
625 Broadway, 4th Floor
Albany, New York 12233-3505

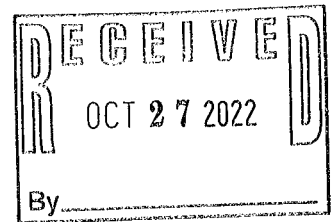
LICENSED PROFESSIONAL’S CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that false statements made herein are punishable as a class A misdemeanor pursuant to Section 210.45 of the Penal Law.

Date: _____
Name: Joseph Durand, P.E.
Title: President, Principal
Firm: TDK Engineering Associates, P.C.
Address: 19 Genesee Street, Camillus, New York 13031
Phone: (315) 672-8726

Signature: _____

Graziano Zazzara Jr
Icon Companies
344 S. Warren Street, Suite 202
Syracuse, New York 13202



October 27, 2022

Town of Manlius
301 Brooklea Drive
Fayetteville, NY 13066

**Re: Zone Change Request for 4600 Enders Road, Manlius New York
(tax map number 117.2-01-04.0)**

Dear Sir/Madam:

We are currently under contract to purchase the property located at 4600 Enders Road, Town of Manlius, tax map number 117.2-01-04.0 (the "Property") from Eastern Hills Bible Church ("Seller").

We have been active in the real estate development in the Central New York area for many years. We have a history of taking vacant under-utilized properties and redeveloping them to allow them to become areas that benefit the surrounding community and add to the tax base. We believe the Property, which is now mostly vacant and unused, can be updated and put back into productive use for the community.

The Property is currently zoned as RA Restricted Agricultural District. This zoning classification was appropriate prior to the commercialization of the surrounding area on Enders Road and Cazenovia Road, which is now a vibrant district.

With the Eastern Hills Bible Church moving to their new location, the previous church structure will remain vacant on the Property. It would benefit the community and Town to have the Property re-zoned as RM. The Seller is fully in agreement with the request for the zone change and we have submitted signed documentation to that end.

The Applicant proposes to use the Property as a mixed use property consisting of a very light office use, and, the balance to be market rate apartments. This would be a much lighter parking use and traffic generator than it had previously as a church, and, lighter than would be under some uses permitted under current RA Zoning

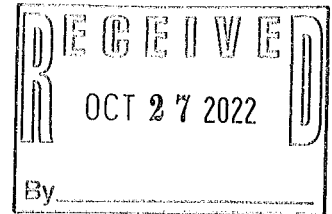
We look forward to discussing this request with the Town and the Planning Board.

Best regards,

A handwritten signature in black ink, appearing to be "GZ" followed by a stylized flourish.

Graziano Zazzara
President
Icon Companies

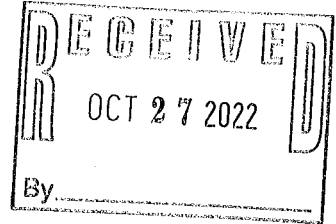
**TOWN OF MANLIUS
ZONE CHANGE APPLICATION**



1. Name of Person applying for Zone Change GRAZI ZAZZARA JR
Address of person applying 344 S Warren Street, Syracuse NY 13202
Cell Number _____ Phone Number 315 299 6292
2. Name: (owner of record) of land where Zone Change would occur Eastern Hills Bible Church
Address (owner of record) 4600 Ender Road
Cell Number (owner of record) _____ Phone Number _____
3. Tax Map Number of property where Zone Change would occur 117.2-81-046
4. Is this property located in a flood hazard area? NO
If so, what flood area is the property in it in?

5. Present zoning classification of property RA
6. Desired zoning classification RM
Reason for Change of Zone (use additional sheets if necessary) See cover Letter.

7. What is lot size? _____
8. If the Zone Change is granted, will the use of the property conform to the District regulations as stated in Chapter 155 Article III of the Town of Manlius Municipal Code? YES
9. Is the property within the protectively zoned area of a housing project authorized under the public housing law? NO
10. Is the property within five hundred (500) feet of the boundaries of any city, village, town, county, state park or parkway? NO
If yes, please specify _____
11. Is the property within five hundred (500) feet from the boundary of any existing or proposed County or State park or other recreation area, or from the right-of-way of any existing or proposed county or state parkway, thruway, expressway, road or highway, or from the existing or proposed right-of-way of any stream or drainage channel owned by the county or for which the county has established channel lines, or from the existing or proposed boundary of any county or state owned land on which a public building or institution is situated? _____



If yes, please specify _____

12. List the uses of all abutting property Residential, Commercial

13. The following must be included with your 12 application packets unless otherwise specified and/or specifically waived by the Town Board:

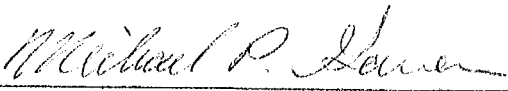
- An environmental assessment form which can be obtained from the Town Clerk, or an environmental impact statement.
- Copy of a survey of the premises certified by a New York State licensed surveyor.
- Legal description of the premises.
- This application must be signed by both the owner of record of the property and the applicant.

The failure to answer any question on this application, the failure to submit any item as specified or the failure to execute this application will result in a delay in the processing of the application.

Date 10/27/22


Applicant 1

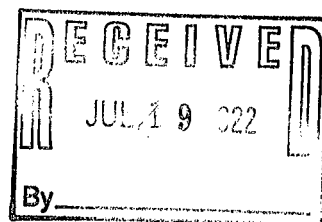
Date 10/27/2022


Applicant 2

Date _____

Applicant

Short Environmental Assessment Form **Part 1 - Project Information**



Instructions for Completing

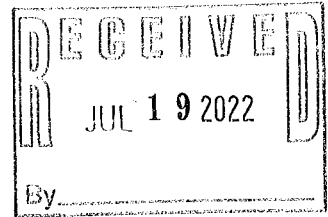
Part 1 - Project Information The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 - Project and Sponsor Information							
Name of Action or Project: 4600 Enders Road, Malius NY							
Project Location (describe, and attach a location map): 4600 Enders Road, North of intersection with NYS Route 92							
Brief Description of Proposed Action: Redevelopment of existing church facility for use as an events venue							
Name of Applicant or Sponsor: Grazi Zazzara		Telephone: 315 569-5678					
		E-Mail: 92AZAZA26@GMAIL.COM					
Address: 344 S. WARREN ST							
City/PO: SYRACUSE		State: N.Y.	Zip Code: 13202				
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation?			<table border="1" style="width:100%; text-align: center;"> <tr> <td>NO</td> <td>YES</td> </tr> <tr> <td>☐</td> <td>☒</td> </tr> </table>	NO	YES	☐	☒
NO	YES						
☐	☒						
If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.							
2. Does the proposed action require a permit, approval or funding from any other government Agency?			<table border="1" style="width:100%; text-align: center;"> <tr> <td>NO</td> <td>YES</td> </tr> <tr> <td>☐</td> <td>☒</td> </tr> </table>	NO	YES	☐	☒
NO	YES						
☐	☒						
If Yes, list agency(s) name and permit or approval: Manlius Zoning approval Manlius Building Permit							
3. a. Total acreage of the site of the proposed action?		_____ acres					
b. Total acreage to be physically disturbed?		_____ acres					
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		_____ acres					
4. Check all land uses that occur on, are adjoining or near the proposed action:							
☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☒ Commercial ☒ Residential (suburban)							
☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other(Specify):							
☐ Parkland							

5. Is the proposed action,	NO	YES	N/A
a. <u>A permitted use under the zoning regulations?</u>	☐	☒	☐
b. <u>Consistent with the adopted comprehensive plan?</u>	☐	☒	☐
6. <u>Is the proposed action consistent with the predominant character of the existing built or natural landscape?</u>	NO	YES	
	☐	☒	
7. <u>Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?</u>	NO	YES	
If Yes, identify: _____	☒	☐	
8. a. <u>Will the proposed action result in a substantial increase in traffic above present levels?</u>	NO	YES	
b. Are public transportation services available at or near the site of the proposed action?	☒	☐	
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☐	☒	
9. <u>Does the proposed action meet or exceed the state energy code requirements?</u>	NO	YES	
If the proposed action will exceed requirements, describe design features and technologies: _____ _____	☐	☒	
10. <u>Will the proposed action connect to an existing public/private water supply?</u>	NO	YES	
If No, describe method for providing potable water: _____ _____	☐	☒	
11. <u>Will the proposed action connect to existing wastewater utilities?</u>	NO	YES	
If No, describe method for providing wastewater treatment: _____ _____	☐	☒	
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	NO	YES	
	☒	☐	
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☒	☐	
13. a. <u>Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?</u>	NO	YES	
	☒	☐	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☒	☐	
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____ _____ _____			

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:		
☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional ☐ Wetland ☐ Urban ☒ Suburban		
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES
	☒	☐
16. Is the project site located in the 100-year flood plan?	NO	YES
	☒	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes,	NO	YES
	☐	☒
a. Will storm water discharges flow to adjacent properties?	☒	☐
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe:	☐	☒
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment:	NO	YES
	☒	☐
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe:	NO	YES
	☒	☐
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe:	NO	YES
	☒	☐
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE		
Applicant/sponsor/name: <u>GOADI ZAZZAN</u> Date: <u>7/18/22</u>		
Signature: <u></u> Title: <u>MANAGER</u>		



TOWN OF MANLIUS

DISCLOSURE AFFIDAVIT

This affidavit is a part of and must be completed and attached to every application, petition, request submitted for a *site plan, variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit.*

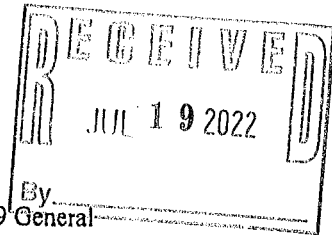
STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

I. Gerrard Zaza Jr., being duly sworn, deposes and says that (s) he is:

Applicant
(applicant, petitioner, corporation officer, property owner, etc.)

II. That deponent has read and is familiar with the provisions of the General Municipal Law, Section 809 which states:

- A. Every application, petition or request submitted for a site plan, variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit, pursuant to the provisions or any ordinance, local law, rule or regulation constituting the zoning and planning regulations of a municipality shall state the name, residence and the nature and extent of the interest of any state officer or any officer or employee of such municipality is a part, in the person, partnership or association making such application, petition or request (hereinafter called the applicant) to the extent known to such applicant.
- B. For the purpose of this action an officer or employee shall be deemed to have an interest in the applicant when (s)he, his/her spouse, or their brothers, sisters, parents, children, grandchildren, or the spouse of any of them:
 - 1) is the applicant, or
 - 2) is an officer, director, partner or employee of the applicant, or
 - 3) legally or beneficially owns or controls stock of a corporate applicant or is a member of a partnership or association applicant, or
 - 4) is a party to an agreement with such an applicant, express or implied, whereby (s) he may receive any payment or other benefit, whether or not for services rendered, or contingent upon the favorable approval of such application, petition or request.
- C. Ownership of less than five percent (5%) of the stock of a corporation whose stock is listed on the New York or American Stock Exchanges shall not constitute an interest for the purposes of this section.
- D. A person who knowingly and intentionally violates this section shall be guilty of a misdemeanor.



III. That no Town of Manlius officer, employee or a relative of either, as defined in Section 809 General Municipal Law has any interest in this application.

-OR-

If a Town of Manlius officer, employee or relative of either as defined in Section 809 General Municipal law has any interest in this application, the full particulars are provided on an attached sheet.

Date: 7/15/, 20 22.

MICHAEL P. GARVER
(Print Name)

Michael P. Garver
(Signature)

EASTERN HILLS BIBLE CHURCH
(Entity Name)

Michael P. Garver CHAIRMAN EASTERN HILLS
By (Officer) (Title) BIBLE CHURCH

4600 ENPEES RD MANLIUS NY 13024
(Mailing Address of Applicant)

(315) 682-5008
(Telephone Number)

Date: 7/18/22, 20 22.

GORTIANO ZAZZARA
(Print Name)

[Signature]
(Signature)

N/A (Proprietor)
(Entity Name)

By (Officer) (Title)

344 S WASHINGTON SYRACUSE NY 13204
(Mailing Address of Applicant)

315 259 6200
(Telephone Number)

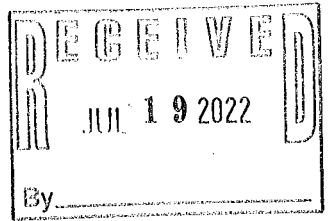
ACKNOWLEDGEMENTS

STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

On this 15th day of July in the year 20 22, before me, the undersigned, a notary public in and for said state, personally appeared Gortiano Zazzara, Michael Garver, and _____ personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within Petition and acknowledged to me the he/she/they executed the same in his/her/their capacity, and that by his/her/their signature(s) on the Petition, the individual or the persons upon behalf of which the individual acted executed the instrument.

[Signature]
Notary Public

KAITLYN QUESINBERRY
NOTARY PUBLIC STATE OF NEW YORK
Registration No 01QU6395745
Qualified in Onondaga County
Commission Expires August 5 2023



CORPORATE ACKNOWLEDGEMENT

STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

Graeme Zarn Jr, being duly sworn, deposes and says the
s(he) is the manager of 4600 Enders Road LLC
corporation named in the within Application/Petition, that s(he) has read the foregoing affidavit and
knows the contents thereof; that the same is true of s(he) own knowledge, except as to those matters
therein stated to be alleged upon information and belief, and as to those matters s(he) believes it to be
true.

Applicant Signature

Subscribed to me before this day
Of July 15th, 20 22

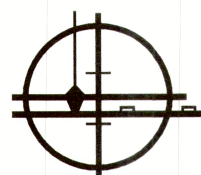
Notary Public

KAITLYN QUESINBERRY
NOTARY PUBLIC STATE OF NEW YORK
Registration No 01QU6395745
Qualified in Onondaga County
Commission Expires August 5 2023

Pt of Lots 98 & 99. Town of Manlius
Onondaga Co., N.Y.

Scale 1" = 30'

July 12, 2022



D. W. HANNIG L.S., P.C.

SURVEYORS - PLANNERS - CONSULTANTS
THE MARKET PLACE, BUILDING #1
MANLIUS, NEW YORK 13104

PHONE: (315) 682-5225 - FAX: (315) 682-7774

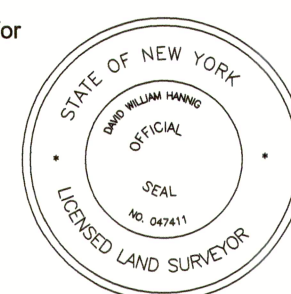
Projects/J82841A/base plan/dwg/ Final Map 4600 enders rd Church

Subject to a Current Abstract of Title

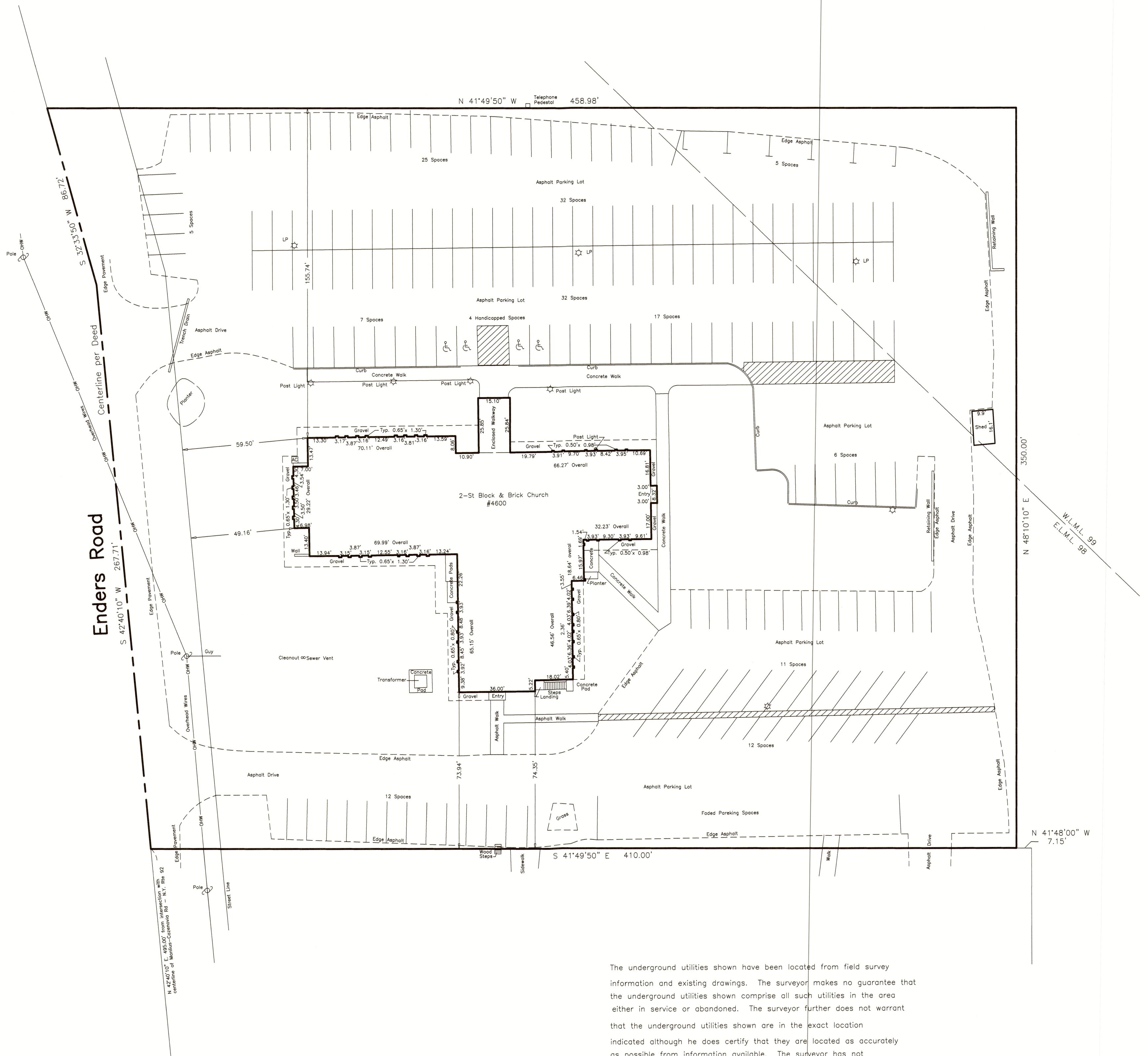
In my professional opinion, and based on my observations and/or scope of service, I hereby certify this map was made from an actual survey on 7/12/2022, and this map is correct.

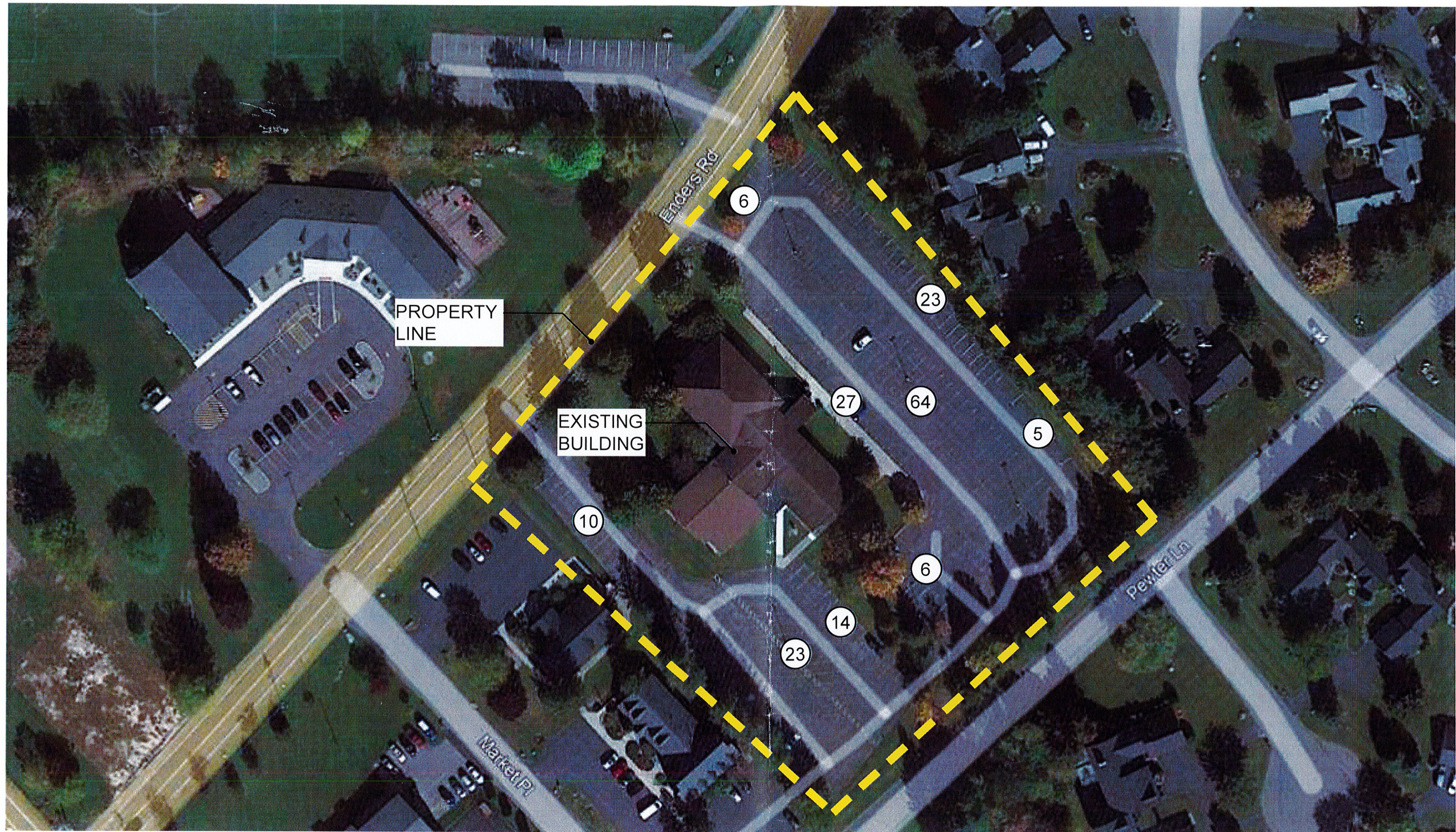
This certification is void unless signed in RED ink.

DAVID WILLIAM HANNIG, P.L.S., - N.Y.S. LIC. NO. 47411



The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantee that the underground utilities shown comprise all such utilities in the area either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities - Underground Facilities Protective Organization (315) 437-7333.





BUILDING SIZE: ±15,144 SF
 LOT SIZE: 2.83 ACRES
 TOTAL AVAILABLE PARKING: ±178 SPACES

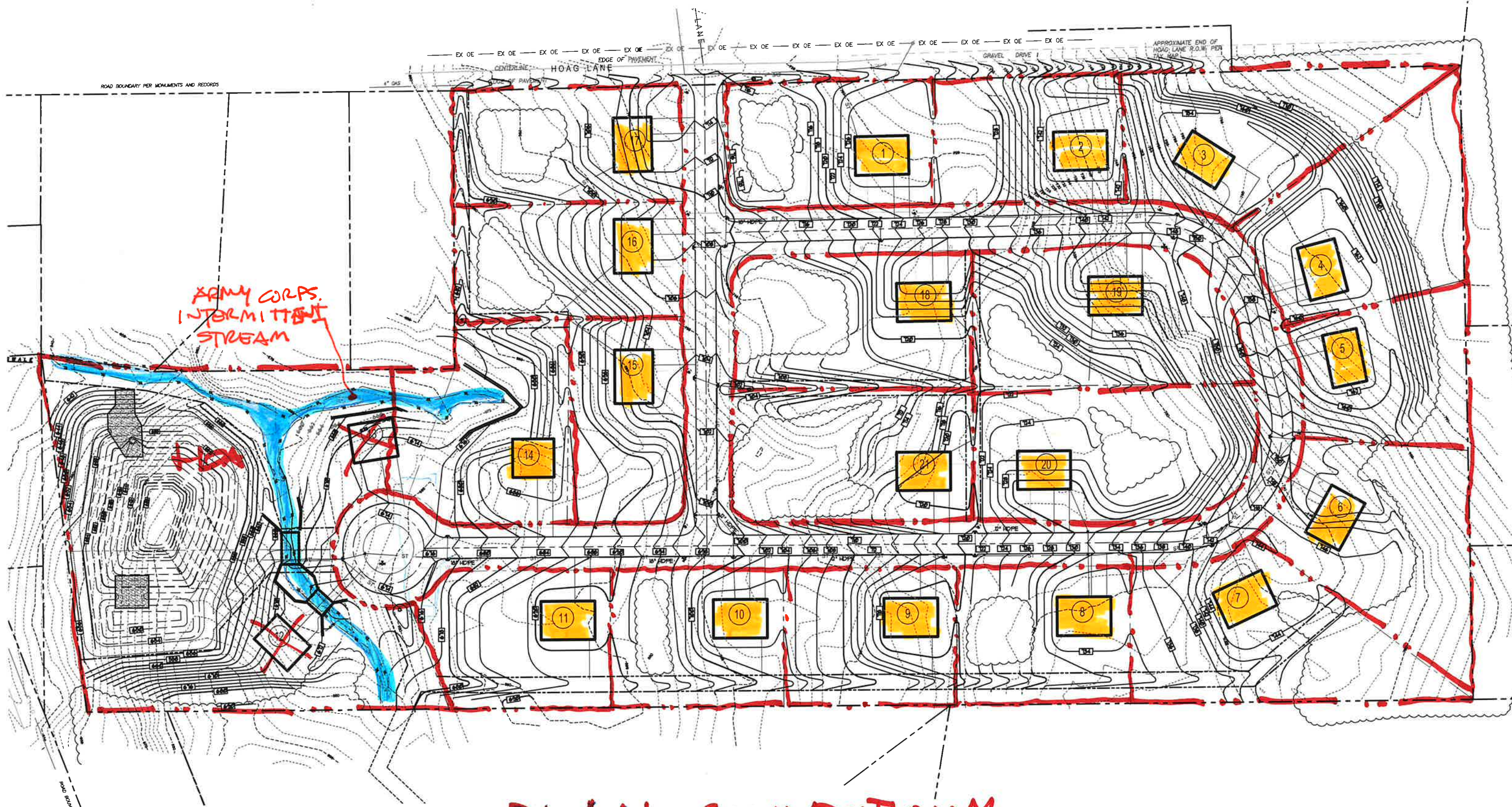
4600 ENDERS ROAD
 MANLIUS, NEW YORK 13104

DATE: JULY 18, 2022
 SCALE: NOT TO SCALE
 SHEET NAME: EXISTING SITE PLAN
 SHEET NUMBER: A101



ARCHITECTS

239 E. Water Street - 2nd Fl.
 Syracuse, New York 13202
www.in-ARCHITECTS.com



HOAG-19 LOT PLAN-CONVENTIONAL

9-20-22

SCALE

1:120

Expected

Fee: _____

TOWN OF MANLIUS
PLANNING DEPARTMENT
INITIAL APPEARANCE APPLICATION

DATE: 5/26/2022

Name of Project: Hog Road Development

Applicant must submit 12 copies of all site plans, surveys, and supporting data with the final application before a planning board meeting can be scheduled.

Location of Project: 5280 Hog Road, Fayetteville, NY 13066

Type of Project:

☐ Division of Land ☒ Subdivision ☐ Accessory Use ☐ Zone Change ☐ Site Review ☐ Other _____

Developer: THOMAS ARNO HOMER INC Phone: 315-263-6662

Address: 5280 Hog Road, Fayetteville, NY Zip: 13066

Tax Map Number(#)/s: 104-01-39.2

Present Zoning: residential RA Desired Zoning: residential RA

Total Acreage: 30.14 Total Number of Lots: 17

Property Owner/s: Hog Road Properties LLC Phone: (315) 263-6504

Address: 300 Fairchild Avenue, Suite 12, Syracuse, NY Zip: 13210

Tax Map#(s): 104-01-39.2 Owner's Signature: [Signature]

Printed Name: William A. Orsini

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

Use next page for additional known property owners' information

Planning Board Meeting Date Assignment: _____

Fee: _____ Paid: _____ Per: ☐ Credit/Debit Card ☐ Check ☐ Cash

TOWN OF MANLIUS
PLANNING DEPARTMENT
INITIAL APPEARANCE APPLICATION
(continued)

Property Owner/s: Hog Road Properties LLC Phone: 315-263-6504

Address: 300 Euclid Avenue, Suite 12, Syracuse, NY Zip: 13210

Tax Map#(s): 104.-01-39.2 Owner's Signature: [Signature]

Printed Name: WALTER A OSIELEWSKI

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

TOWN OF MANLIUS

DISCLOSURE AFFIDAVIT

This affidavit is a part of and must be completed and attached to every application, petition, request submitted for a *site plan, variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit.*

STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

I. William A. Dineen being duly sworn, deposes and says that (s) he is:

Manager/Member of HOAG ROAD PROPERTIES LLC
(applicant, petitioner, corporation officer, property owner, etc.)

II. That deponent has read and is familiar with the provisions of the General Municipal Law, Section 809 which states:

- A. Every application, petition or request submitted for a site plan, variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit, pursuant to the provisions or any ordinance, local law, rule or regulation constituting the zoning and planning regulations of a municipality shall state the name, residence and the nature and extent of the interest of any state officer or any officer or employee of such municipality is a part, in the person, partnership or association making such application, petition or request (hereinafter called the applicant) to the extent known to such applicant.
- B. For the purpose of this action an officer or employee shall be deemed to have an interest in the applicant when (s)he, his/her spouse, or their brothers, sisters, parents, children, grandchildren, or the spouse of any of them:
 - 1) is the applicant, or
 - 2) is an officer, director, partner or employee of the applicant, or
 - 3) legally or beneficially owns or controls stock of a corporate applicant or is a member of a partnership or association applicant, or
 - 4) is a party to an agreement with such an applicant, express or implied, whereby (s) he may receive any payment or other benefit, whether or not for services rendered, or contingent upon the favorable approval of such application, petition or request.
- C. Ownership of less than five percent (5%) of the stock of a corporation whose stock is listed on the New York or American Stock Exchanges shall not constitute an interest for the purposes of this section.
- D. A person who knowingly and intentionally violates this section shall be guilty of a misdemeanor.

III. That no Town of Manlius officer, employee or a relative of either, as defined in Section 809 General Municipal Law has any interest in this application.

-OR-

If a Town of Manlius officer, employee or relative of either as defined in Section 809 General Municipal law has any interest in this application, the full particulars are provided on an attached sheet.

Date: 5/26, 20 22

Date: _____, 20 ____

William A. Osiekowski
(Print Name)

(Print Name)

[Signature]
(Signature)

(Signature)

Home Road Properties LLC
(Entity Name)

(Entity Name)

William A. Osiekowski Managing
By (Officer) (Title)

By (Officer) (Title)

300 Euclid Avenue, Suite 12
Syracuse NY 13210
(Mailing Address of Applicant)

(Mailing Address of Applicant)

(315) 263-6504
(Telephone Number)

(Telephone Number)

ACKNOWLEDGEMENTS

STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

On this 26th day of May in the year 2022, before me, the undersigned, a notary public in and for said state, personally appeared William A. Osiekowski, and _____ personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within Petition and acknowledged to me the he/she/they executed the same in his/her/their capacity, and that by his/her/their signature(s) on the Petition, the individual or the persons upon behalf of which the individual acted executed the instrument.

[Signature]
Notary Public

VAUGHN D. LANG
NOTARY PUBLIC
STATE OF NEW YORK
Reg. No. 02LA4518441
COMMISSION EXPIRES 6/30/ 22

CORPORATE ACKNOWLEDGEMENT

STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

_____, being duly sworn, deposes and says the
s(he) is the _____ of _____
corporation named in the within Application/Petition, that s(he) has read the foregoing affidavit and
knows the contents thereof; that the same is true of s(he) own knowledge, except as to those matters
therein stated to be alleged upon information and belief, and as to those matters s(he) believes it to be
true.

Applicant Signature

Subscribed to me before this day
Of _____, 20 _____

Notary Public

Short Environmental Assessment Form

Instructions for Completing

Part 1 - Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 - Project and Sponsor Information			
Name of Action or Project: <u>HOAG ROAD PROPERTIES</u>			
Project Location (describe, and attach a location map): <u>WOODLAND HILLS SUBDIVISION</u>			
Brief Description of Proposed Action: <u>SIXTEEN LOT (16) SUBDIVISION ON 30+ ACRES ZONED (RA)</u>			
Name of Applicant or Sponsor: <u>TOM DOUGLAS</u>		Telephone: <u>(315) 263-6662</u>	
Address: <u>5280 HOAG LANE</u>		E-Mail: <u>THOMASALLENHOMES@YAHOO.COM</u>	
City/PO: <u>FAY NY 13066</u>		State: <u>NY</u>	Zip Code: <u>13066</u>
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation?		NO	YES
If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.		☒	☐
2. Does the proposed action require a permit, approval or funding from any other governmental Agency?		NO	YES
If Yes, list agency(s) name and permit or approval:		☒	☐
3.a. Total acreage of the site of the proposed action?		<u>30+</u> acres	
b. Total acreage to be physically disturbed?		<u>20</u> acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		<u>30.4</u> acres	
4. Check all land uses that occur on, adjoining and near the proposed action.			
☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☐ Commercial ☒ Residential (suburban) ☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____ ☐ Parkland			

5. Is the proposed action, a. A permitted use under the zoning regulations?	NO	YES	N/A
	☐	☒	☐
b. Consistent with the adopted comprehensive plan?		☒	☐
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	☐	☒	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO	YES	
	☒	☐	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO	YES	
	☒	☐	
b. Are public transportation service(s) available at or near the site of the proposed action?		☒	☐
c. Are any pedestrian accommodations or bicycle routes available on or near site of the proposed action?		☒	☐
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: _____	NO	YES	
	☒	☐	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____	NO	YES	
	☐	☒	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____	NO	YES	
	☐	☒	
12. a. Does the site contain a structure that is listed on either the State or National Register of Historic Places?	NO	YES	
	☒	☐	
b. Is the proposed action located in an archeological sensitive area?		☒	☐
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO	YES	
	☒	☐	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____		☒	☐
14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: ☐ Shoreline ☒ Forest ☐ Agricultural/grasslands ☐ Early mid-successional ☐ Wetland ☐ Urban ☒ Suburban			
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES	
	☐	☒	
16. Is the project site located in the 100 year flood plain?	NO	YES	
	☒	☐	
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? ☐ NO ☐ YES b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe: _____ ☐ NO ☒ YES	NO	YES	
	☐	☒	

	No, or small impact may occur	Moderate to large impact may occur
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	☐	☐
11. Will the proposed action create a hazard to environmental resources or human health?	☐	☐

Part 3 - Determination of significance. The Lead Agency is responsible for the completion of Part 3. For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

☐	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
☐	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.
Name of Lead Agency Date	
Print or Type Name of Responsible Officer in Lead Agency Title of Responsible Officer	
Signature of Responsible Officer in Lead Agency Signature of Preparer (if different from Responsible Officer)	

PRINT

DEEP HOLE TEST RESULTS		
DH -1 0'-12" TOPSOIL 12'-36" GRAVEL LOAM 36'-66" SANDY LOAM	NO GROUNDWATER WITNESSED NO MOTTLING WITNESSED NO BEDROCK WITNESSED	
DH -2 0'-12" TOPSOIL 12'-36" GRAVEL LOAM 36'-66" SANDY LOAM	NO GROUNDWATER WITNESSED NO MOTTLING WITNESSED NO BEDROCK WITNESSED	
DH -3 0'-12" TOPSOIL 12'-36" GRAVEL LOAM 36'-66" SANDY LOAM	NO GROUNDWATER WITNESSED NO MOTTLING WITNESSED NO BEDROCK WITNESSED	
DH -4 0'-12" TOPSOIL 12'-36" SANDY SILT LOAM 36'-66" SILT CLAY LOAM	NO GROUNDWATER WITNESSED NO MOTTLING WITNESSED NO BEDROCK WITNESSED	
DH -5 0'-12" TOPSOIL 12'-36" SANDY SILT LOAM 36'-66" SANDY SILT LOAM	NO GROUNDWATER WITNESSED NO MOTTLING WITNESSED NO BEDROCK WITNESSED	

NOTES:
1. CONDUCTED OCTOBER 10, 2011 BY REPRESENTATIVES OF RZ ENGINEERING & KEPLINGER FREEMAN ASSOCIATES

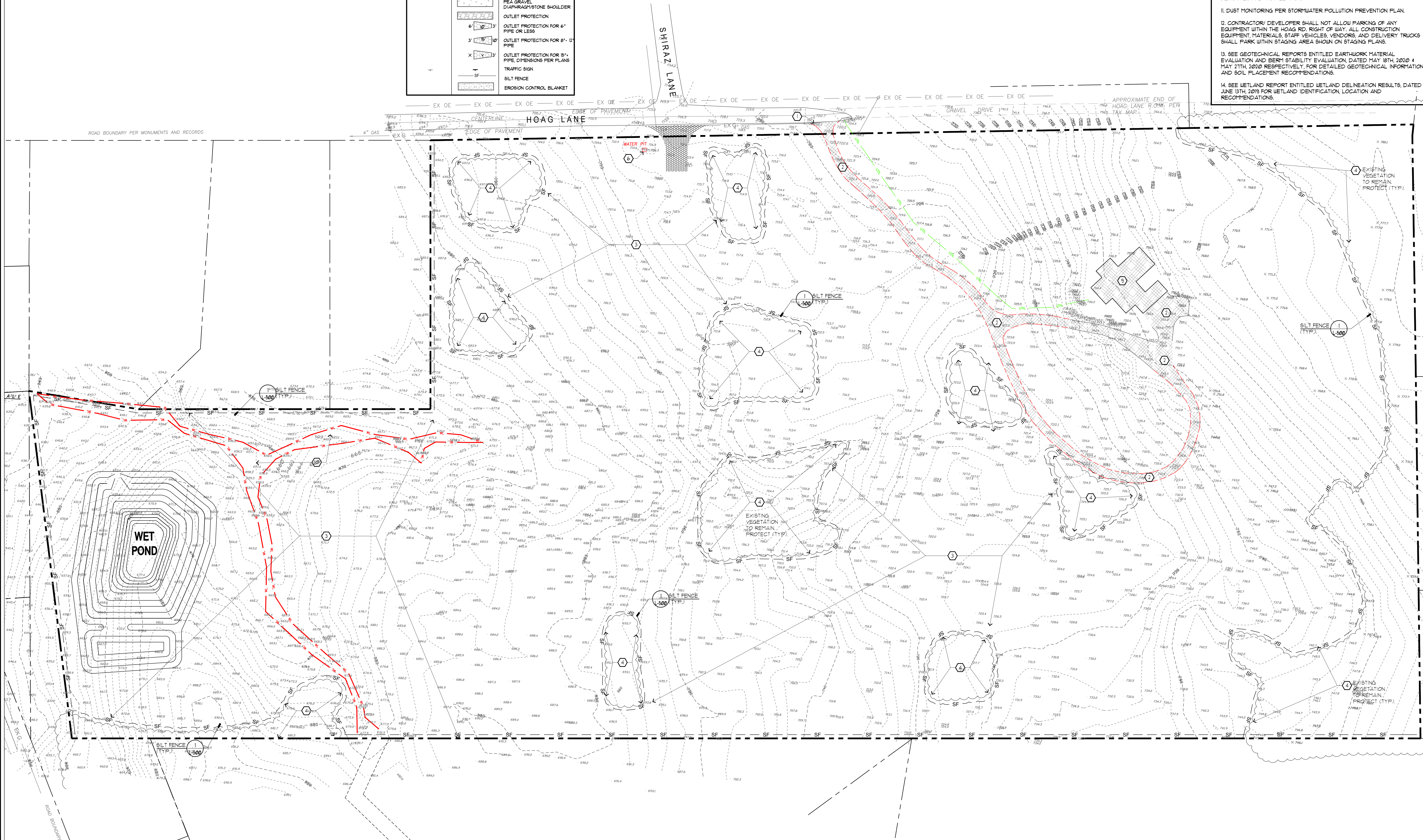
PERCOLATION TEST RESULTS		
LOCATION NUMBER	DEPTH & SOIL DESCRIPTION	RATE OF INFILTRATION
PT-1	24" - SANDY LOAM	35 MINUTES/INCH
PT-2	24" - SILT LOAM	GREATER THAN 120 MIN/INCH
PT-3	24" - SANDY SILT LOAM	3 MINUTES/INCH
PT-4	24" - SANDY SILT LOAM	21 MINUTES/INCH

NOTES:
1. CONDUCTED OCTOBER 10, 2011 BY A REPRESENTATIVE OF RZ ENGINEERING

LEGEND		
EXISTING	PROPOSED	DESCRIPTION
100		CONTOUR
100		SPOT ELEVATION
100		HPI/LP
100		PERCOLATION TEST PIT
100		DEEP HOLE
100		FENCE
100		UTILITY POLE
100		WATER LINE
100		FIRE HYDRANT
100		STORM PIPE
100		TREE
100		SHRUB
100		PLANT KEY
100		VEGETATION
100		UNDERDRAN
100		SANITARY PIPE-GRAVITY
100		SANITARY PIPE-LOW PRESSURE
100		OVERHEAD ELECTRIC
100		UNDERGROUND ELECTRIC
100		TELEPHONE
100		STORM STRUCTURE
100		INLET
100		CATCH BASIN/MANHOLE
100		CLEAN OUT
100		SANITARY MANHOLE
100		ASPHALT PAVEMENT-DRIVEWAY
100		ASPHALT PAVEMENT-ROAD
100		PEA GRAVEL
100		DIAPHRAGM/STONE SHOULDER
100		OUTLET PROTECTION
100		OUTLET PROTECTION FOR 6" PIPE OR LESS
100		OUTLET PROTECTION FOR 8"-12" PIPE
100		OUTLET PROTECTION FOR 15" PIPE DIMENSIONS PER PLANS
100		TRAFFIC SIGN
100		SILT FENCE
100		EROSION CONTROL BLANKET

EXISTING CONDITIONS & REMOVAL/DEMOLITION NOTES	
1	REMOVE EXISTING PAVEMENTS - SEE NOTES 2 BELOW
2	SAUCUT ASPHALT OR CONCRETE PAVEMENT. SAUCUT ASPHALT IN NEAT STRAIGHT LINE AND SAUCUT CONCRETE PAVEMENT AT NEAREST SCORE JOINT. EXISTING SURFACE AND SUBSURFACE CONDITIONS AFFECTING THE NATURE, SCOPE, COMPLEXITY AND COST OF THE CONTRACT WORK.
3	REMOVE EXISTING ASPHALT PAVEMENT IN ITS ENTIRETY INCLUDING ALL SUB-BASE MATERIAL.
4	REMOVE EXISTING VEGETATION IN ITS ENTIRETY INCLUDING ROOTS AND STUMPS AND DISPOSE OF OFF-SITE.
5	VEGETATION TO REMAIN PER HOMEOWNERS ASSOCIATION AGREEMENT, TO BE SUBMITTED AT A LATER DATE.
6	OWNER TO CONTACT ELECTRICAL, GAS, AND WATER DEPARTMENT REGARDING DISCONNECTION PRIOR TO DEMOLITION.
7	DECOMMISSION EXISTING WATER PIT.
8	DEVELOPER TO PROVIDE. REMOVE UNDERBRUSH AND PERSPECTIVE TREES TO REMAIN. DETAILED NEIGHBORHOOD PARK TO BE DESIGNED AT A LATER DATE.
9	CORE OPENING INTO EXISTING SANITARY MANHOLE FOR PROPOSED 6" SANITARY LINE.
10	REMOVE EXISTING STRUCTURE.
11	REMOVE EXISTING WATERBODY. APPLY FOR ARMY CORPS OF ENGINEERS NATIONAL PERMIT.

GENERAL NOTES	
1	TOPOGRAPHIC AND UTILITY INFORMATION TAKEN FROM SURVEY ENTITLED TOPOGRAPHIC MAP - LANDS OF HOAG ROAD PROPERTIES, LLC AS PREPARED BY SEGUN LAND SURVEYING, PLLC, CHITTENANGO NEW YORK, DATED NOVEMBER 6, 2011. OWNER AND ARCHITECT DO NOT CONTRIBUTE THE COMPLETENESS OR ACCURACY OF SUCH INFORMATION. CONTRACTOR IS RESPONSIBLE FOR THOROUGH EXAMINATION AND VERIFICATION OF ALL EXISTING SURFACE AND SUBSURFACE CONDITIONS AFFECTING THE NATURE, SCOPE, COMPLEXITY AND COST OF THE CONTRACT WORK.
2	SAW CUT ONLY FOR PAVING REMOVALS. EXTEND REMOVAL LINES TO INCLUDE ANY ADJOINING BROKEN OR DETERIORATING PAVING. CAREFULLY REMOVE STOCKPILE AND PROTECT ANY ITEMS NOTED FOR SALVAGE. ALL DEMOLITION RUBBLE, DEBRIS AND EXCESS SOILS TO BE PROMPTLY REMOVED FROM SITE UNLESS OTHERWISE NOTED. STRIP AND STOCKPILE SUFFICIENT EXISTING ORGANIC TOPSOILS FOR RESPRADING AS REQUIRED ON DISTURBED AND REGRADED AREAS TO BE ESTABLISHED IN LAWN AND FOR REPAIR OF DISTURBED EXISTING LAWNS TO REMAIN. STOCKPILE ALL MATERIALS IN APPROVED LOCATIONS WITHOUT INTERFERING WITH OTHER CONTRACTOR WORK, SCHOOL, TRAFFIC OR DRAINAGE.
3	ALL FILL/BACKFILL OF EXCAVATIONS AND VOIDS RESULTING FROM REMOVALS AND RELATED WORK UNDER NEW OR REPLACEMENT PAVING AREAS SHALL ONLY BE COARSE AGGREGATE FILL MATERIAL THOROUGHLY COMPACTED.
4	PROTECT ALL FACILITIES AND IMPROVEMENTS ON AND ADJOINING THE PROPERTY WHICH ARE NOT SPECIFICALLY IDENTIFIED FOR REMOVAL. VERIFY LOCATIONS AND DEPTHS OF ALL SUBSURFACE UTILITIES TO REMAIN PRIOR TO ANY ADJACENT REMOVAL AND EXCAVATION WORK.
5	NOTIFY OWNER IMMEDIATELY IF ANY SURFACE OR SUBSURFACE CONFLICTS OR UNKNOWN CONDITIONS ARE ENCOUNTERED IN ORDER TO PERMIT ADJUSTMENT OF WORK IF NECESSARY.
6	CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PRIOR TO COMMENCING WORK.
7	CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND CONFORMING TO ALL TOWN OF MANLIUS SPECIFICATIONS.
8	DIG SAFELY NEW YORK TO BE CONTACTED 12 HOURS PRIOR TO START OF EXCAVATION.
9	REFER TO PLANS L-102 TO L-105 FOR CONSTRUCTION STAGING OF REMOVALS AND INSTALLATION.
10	DUST MONITORING PER STORMWATER POLLUTION PREVENTION PLAN.
11	CONTRACTOR/DEVELOPER SHALL NOT ALLOW PARKING OF ANY EQUIPMENT WITHIN THE HOAG RD. RIGHT OF WAY. ALL CONSTRUCTION EQUIPMENT, MATERIALS, STAFF VEHICLES, VENDORS, AND DELIVERY TRUCKS SHALL PARK WITHIN STAGING AREA SHOWN ON STAGING PLANS.
12	SEE GEOTECHNICAL REPORTS ENTITLED EARTHWORK MATERIAL EVALUATION AND BERRY STABILITY EVALUATION, DATED MAY 18TH, 2020 & MAY 21TH, 2020 RESPECTIVELY, FOR DETAILED GEOTECHNICAL INFORMATION AND SOIL PLACEMENT RECOMMENDATIONS.
13	SEE WETLAND REPORT ENTITLED WETLAND DELINEATION RESULTS, DATED JUNE 13TH, 2019 FOR WETLAND IDENTIFICATION, LOCATION AND RECOMMENDATIONS.

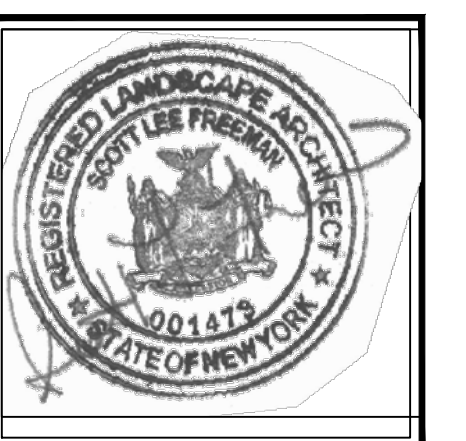


KEPLINGER FREEMAN ASSOCIATES
LANDSCAPE ARCHITECTURE & LAND PLANNING
8300 54th AVE, SUITE 200, EAST FRANKLIN, NEW YORK 12057
PHONE: (518) 445-7800 FAX: (518) 445-7801
RZ Engineering, PLLC
6300 RIVER ROAD, SUITE 100
ROSELAND, NY 12067
PHONE: (518) 432-1888 FAX: (518) 432-1881

FOR CONSTRUCTION
HOAG LANE SUBDIVISION
5280 HOAG LANE, MANLIUS, NY

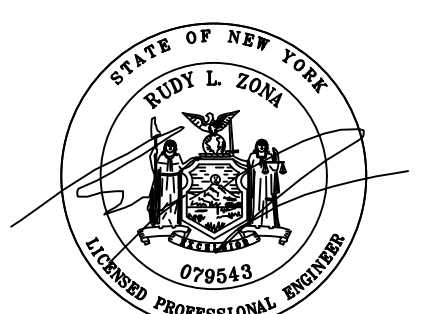
CLIENT:
HOAG ROAD PROPERTIES, LLC

ISSUED AND REVISIONS NOTIFICATION		A - Symbol Indicates Revision Issued	
No.	Description	Date	Revised
1	CHECK SET-TOWN OF MANLIUS	07/20/18	16
2	CHECK SET-TOWN OF MANLIUS	07/20/18	17
3	CHECK SET-TOWN OF MANLIUS	07/20/18	18
4	CHECK SET-TOWN OF MANLIUS	07/20/18	19
5	CHECK SET-TOWN OF MANLIUS	07/20/18	20
6	CHECK SET-TOWN OF MANLIUS	07/20/18	21
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83	CHECK SET-TOWN OF MANLIUS	07/20/18	98
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85	CHECK SET-TOWN OF MANLIUS	07/20/18	100



Drawn By: V.E.R.
Checked By: S.F.
KFA Proj. No.: 31000
Date: DECEMBER 1, 2017
Scale: AS NOTED

CONVENTIONAL
SITE
PREPARATION
PLAN-21 LOT
L-700



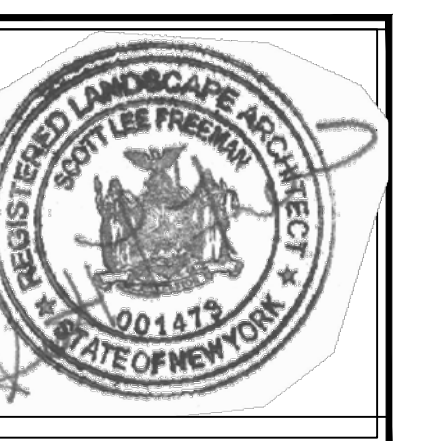
UTILIZED FOR STORMWATER
AND SANITARY DESIGN

HOAG LANE SUBDIVISION

5280 HOAG LANE, MANLIUS, NY

CLIENT:
HOAG ROAD PROPERTIES, LLC

No. Rev.	Description	Date	No. Rev.	Description	Date
1	CHECK SET-TOWN OF MANLIUS	07/19/18	8	21 LOT SITE PLAN SUBMISSION	08/24/19
2	CHECK SET-TOWN OF MANLIUS	07/26/18	9	MANLIUS PLAN SUBMISSION	08/14/19
3	PUBLIC HEARING-MANLIUS	03/29/18	10	MANLIUS PLAN SUBMISSION	07/12/19
4	PUBLIC HEARING-MANLIUS	05/04/18	11	MANLIUS PLAN SUBMISSION	09/23/19
5	PUBLIC HEARING-MANLIUS	06/01/18	12	MANLIUS PLAN SUBMISSION	12/18/19
6	TOWN REV-21 LOT SITE PLAN	10/23/18	13	MANLIUS PLAN SUBMISSION	12/18/19
7	MANLIUS-21 HOME LOTS-P. BD	11/30/18	14	MANLIUS PLAN SUBMISSION	08/15/20
			15	NOTE REMOVAL (NOTE 10)	07/30/20



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Checked By: S.F.
KFA Proj. No.: 31050
Date: DECEMBER, 2017
Scale: AS NOTED

CONVENTIONAL
SWPPP PLAN
-21 LOT

L-701

TOWN OF MANLIUS SUBDIVISION DEVELOPMENT

1. ZONING

- TAX MAP 104-01-392 IS CURRENTLY ZONED RESTRICTED AGRICULTURE (RA) DISTRICTS.
- THE FOLLOWING USES ARE PERMITTED IN RA DISTRICTS:
 - ANY USE PERMITTED IN RESIDENTIAL DISTRICT R-1, ACCORDING TO THE SAME RESTRICTIONS.
 - ANY USE PERMITTED IN RESIDENTIAL DISTRICT R-3, ACCORDING TO THE SAME RESTRICTIONS.
- PARCEL HAS BEEN TREATED AS AN R-3 DISTRICT BECAUSE CLUSTER ZONING IS PERMITTED UNDER NYS SUBDIVISION REVIEW (ARTICLE 87B). THIS ALLOWS DEVELOPMENT OF SMALLER LOTS BASED UPON A LOT COUNT DERIVED FROM EXISTING ZONING REQUIREMENTS FOR THE CURRENT ZONE (RA) AND PROVISIONS OF OPEN SPACE. THE LOT COUNT IS SHOWN ON THE NOT TO BUILD PLAN DEVELOPED BY SEGUN LAND SURVEYING, P.L.L.C. AND A (RA) ZONING DENSITY SITE PLAN PROVIDED BY KFA. <https://www.dos.ny.gov/publications/subdivisionreview.htm>

2. RA BULK REGULATIONS (21 LOT CONVENTIONAL PLAN)

MIN. FRONTAGE	N/A
MIN. LOT AREA	N/A
FRONT YARD SETBACK	40'-0"
SIDE YARD SETBACK	20'-0"
REAR YARD SETBACK	40'-0"

3. PRE CLUSTER & CLUSTER ZONING BULK REGULATIONS

- UTILIZE RESIDENTIAL (R1) DISTRICT ZONING CRITERIA FOR 21 LOT CONVENTIONAL PLAN LOTS.
- UTILIZE RESIDENTIAL (R3) DISTRICT ZONING CRITERIA FOR 21 LOT CLUSTER PLAN WHICH INCLUDES (20) NEW CONSTRUCTION LOTS AND (1) NEWLY FORMED LOT FOR THE EXISTING RESIDENCE.

ZONING	R1 CONVENTIONAL	CLUSTER 23 LOT	CLUSTER 21 LOT
MIN. FRONTAGE	150'-0"	100'-0"	100'-0"
MIN. LOT AREA	40,000 SF	16,000 SF	16,000 SF
FRONT YARD	40'-0"	30'-0"	30'-0"
SIDE YARD	20'-0"	15'-0"	15'-0"
REAR YARD	40'-0"	25'-0"	25'-0"

4. PRE CLUSTER & CLUSTER ZONING LOT SUMMARY

- CONVENTIONAL 21 LOT PLAN BASED ON RESIDENTIAL R1 ZONING TO DEVELOP A MAXIMUM LOT COUNT.
- CLUSTER PLAN BASED ON RESIDENTIAL R3 DISTRICT 21 LOT LAYOUT WHICH INCLUDES (20) NEW CONSTRUCTION LOTS AND (1) NEWLY FORMED LOT FOR THE EXISTING RESIDENCE.

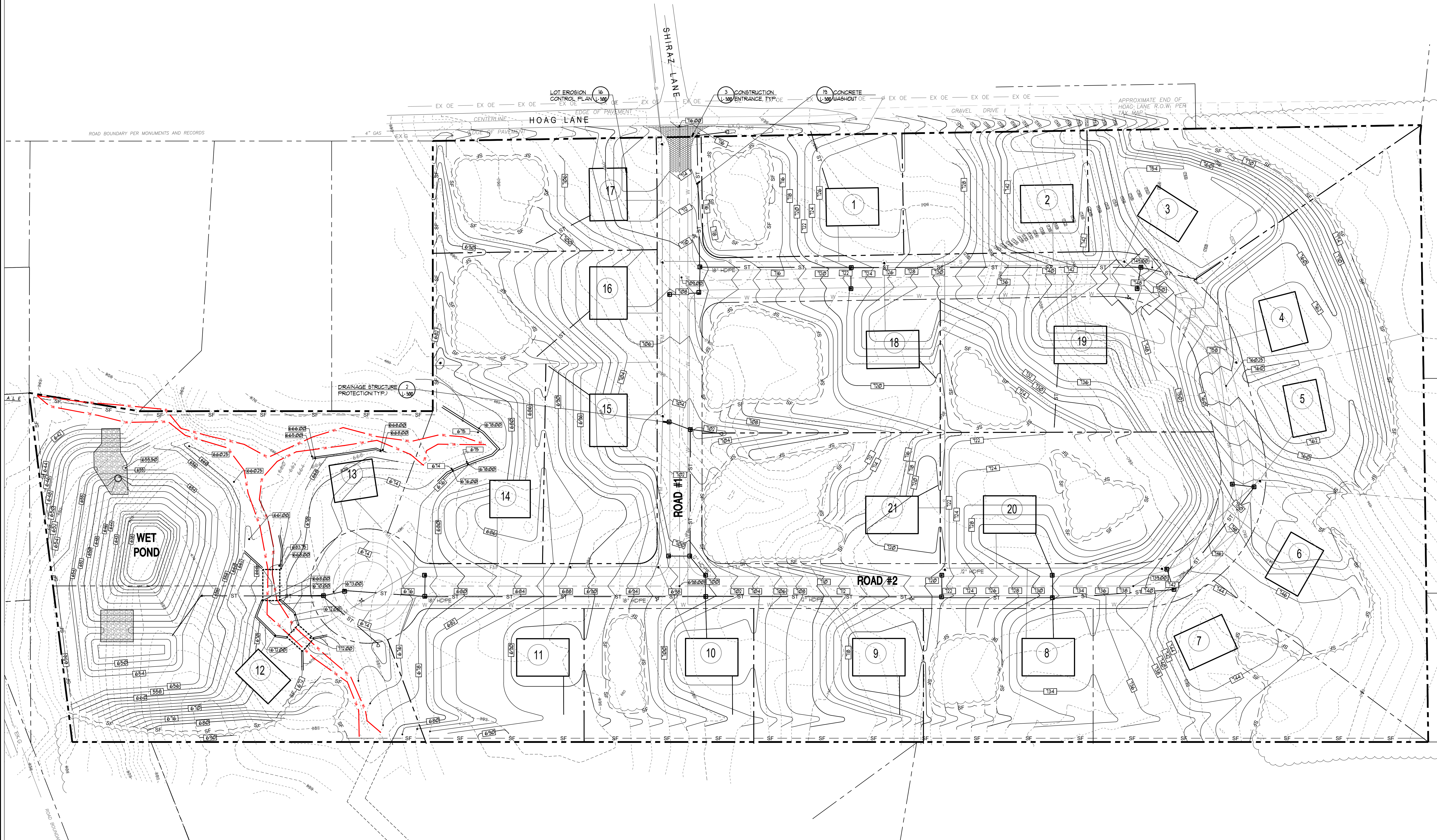
FRONTAGE: 150'-0" MIN: 150'-0"	FRONTAGE: 100'-0" MIN: 100'-0" AVG: 170'-0"
LOT AREA: MINIMUM 40,000 SF	LOT AREA: MINIMUM 16,000 SF

5. GREEN SPACE

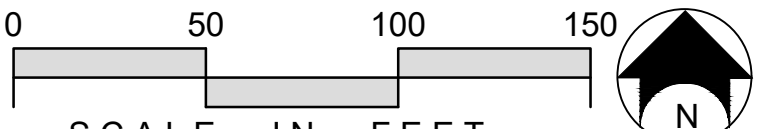
- "FOREVER WILD" AREA- EXISTING VEGETATION TO REMAIN. NO GRADING OR EARTHWORK PERMITTED WITHIN THESE AREAS. COVENANT TO BE INCLUDED WITHIN LEGAL DESCRIPTION OF LOTS WITH "FOREVER WILD" AREA. REFER TO AREAS A,B,C,D AND E BELOW.

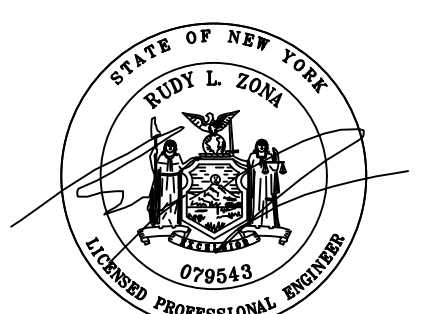
"FOREVER WILD" AREAS	ACREAGE	SQUARE FEET
TOTAL SITE	30.04	1324224.00
"FOREVER WILD" AREA	9.35	408,303.11
(A) EAST "FOREVER WILD" AREA	3.66	159,161.91
(B) SOUTH "FOREVER WILD" AREA	.55	24,041.43
(C) WEST "FOREVER WILD" AREA	.56	24,511.91
(D) NORTH "FOREVER WILD" AREA	.39	17,288.69
(E) HOA "FOREVER WILD" AREA	4.19	182,697.05

NOTES:
1. 31% OF THE TOTAL SITE AREA IS "FOREVER WILD" AREA IN THE CLUSTER SITE PLAN 06/5/2020.



1
L-701
CONVENTIONAL SWPPP PLAN





UTILIZED FOR STORMWATER
AND SANITARY DESIGN

FOR CONSTRUCTION HOAG LANE SUBDIVISION 5280 HOAG LANE, MANLIUS, NY

CLIENT:
HOAG ROAD PROPERTIES, LLC

No. Rev.	Description	Date	No. Rev.	Description	Date
1	CHECK SET-TOWN OF MANLIUS	07/29/18	16	MANLIUS PLAN SUBMISSION	06/20/20
2	CHECK SET-TOWN OF MANLIUS	07/29/18	17	MANLIUS PLAN SUBMISSION	07/17/19
3	PUBLIC HEARING-MANLIUS	03/29/18	18	MANLIUS PLAN SUBMISSION	07/12/19
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5	PUBLIC HEARING-MANLIUS	06/01/18	20	MANLIUS PLAN SUBMISSION	12/18/19
6	TOWN REV-21 LOTS-MANLIUS	10/23/18	21	MANLIUS PLAN SUBMISSION	12/18/19
7	MANLIUS 21 HOME LOTS-P. BD	11/30/18	22	MANLIUS PLAN SUBMISSION	06/15/20
			23	NOTE REMOVAL (NOTE 10)	07/30/20



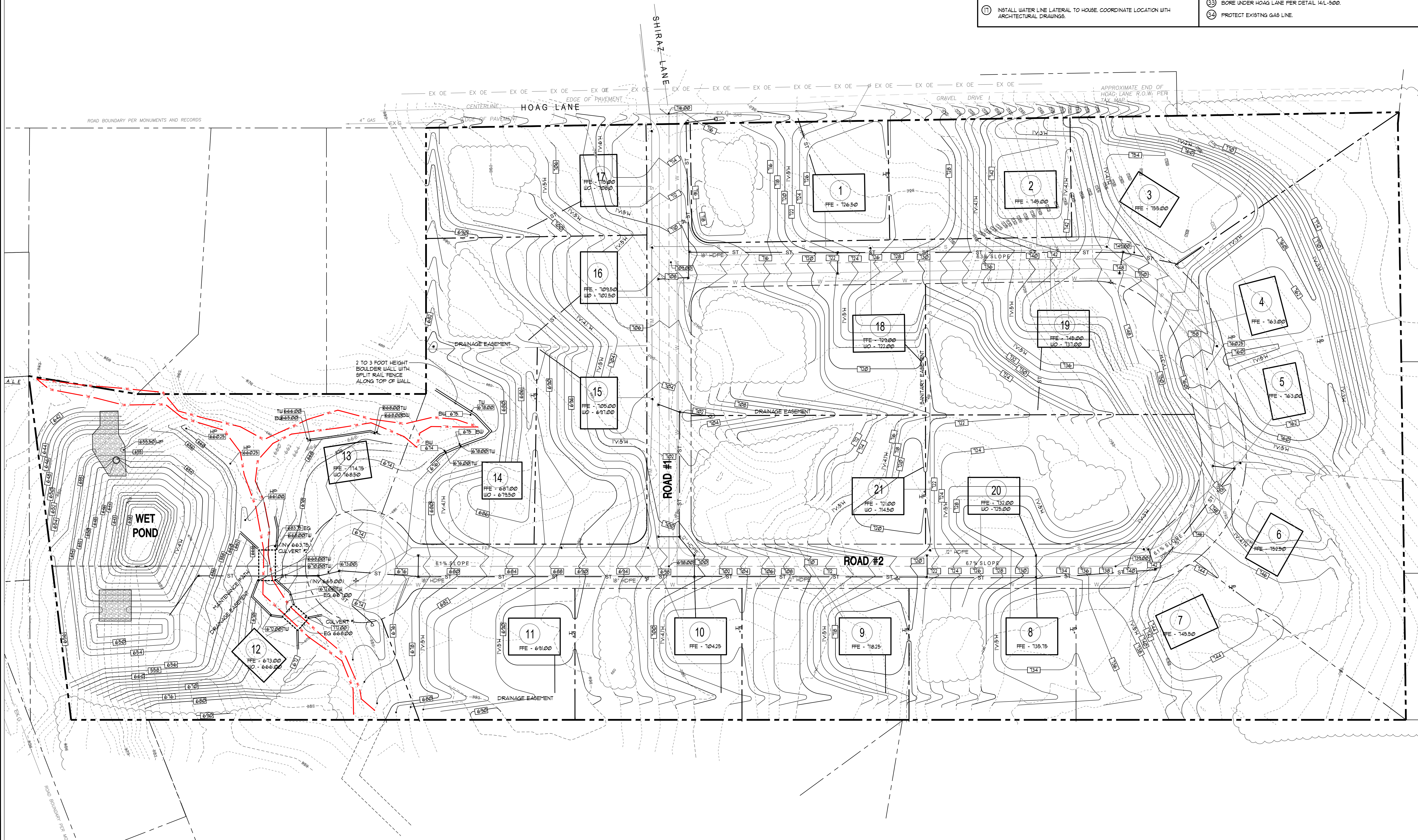
Drawn By: V.E.R.
Checked By: S.F.
KFA Proj. No.: 37050
Date: DECEMBER, 2017
Scale: AS NOTED

CONVENTIONAL
GRADING AND
DRAINAGE PLAN
-21 LOT

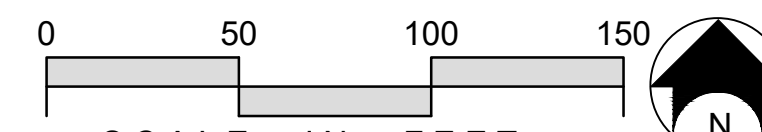
L-702

GRADING, DRAINAGE and UTILITIES NOTES

- MEET EXISTING LINE AND GRADE.
- CORE OPENING INTO EXISTING SANITARY STRUCTURE WITH WATER TIGHT CONNECTION.
- PROPOSED GAS LINES NOT SHOWN. FUTURE GAS LINE LAYOUT TO BE COORDINATED WITH NATIONAL GRID.
- PROPOSED ELECTRIC SERVICE NOT SHOWN. FUTURE ELECTRIC LAYOUT TO BE COORDINATED WITH NATIONAL GRID.
- SURVEYOR TO PROVIDE EASEMENTS FOR FINAL APPROVAL.
- BUILDER TO PROVIDE GRAVITY SANITARY SYSTEM OR APPROVED EQUAL. SEE PROFILE 2/L-600 AND DETAILS ON L-501.
- GRAVITY SANITARY LATERAL. COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS. PROVIDE ONE LATERAL PER LOT. (TYPICAL) MINIMUM SLOPE FOR LATERALS TO BE 2% (1/4" PER FT.). ALL LATERALS TO BE OWNED BY HOMEOWNER.
- E-1 SANITARY SYSTEM LATERAL. COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS AND LOW PRESSURE SYSTEM MANUFACTURER OR APPROVED EQUAL. ALL LATERALS & PUMPS OWNED BY HOMEOWNER. SEE PROFILE 2/L-600.
- LOW PRESSURE SANITARY SEWER FORCE MAIN. SEE PROFILE 2/L-600.
- SANITARY VENT AND TRAP PER DETAIL 5/L-501. COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS AND LOW PRESSURE SYSTEM MANUFACTURER AND E-1 MANUFACTURER OR APPROVED EQUAL.
- NOTE DELETED.
- SANITARY WATER LINE CROSSING. REFER TO DETAIL 3/L-501 FOR REQUIRED SEPARATION DISTANCES OR INSTALLATION METHODS.
- FORCE MAIN CHECKPOINT (NO EXPOSED SEWAGE ACCESS TO PIPES ONLY).
- OCUWA TO PROVIDE DESIGN & INSTALLATION OF ALL WATER FACILITIES INCLUDING FIRE HYDRANTS, VALVES, LINES AND SIZES.
- INSTALL FIRE HYDRANT AND VALVE SHOWN FOR COORDINATION PURPOSES (4 HYDRANTS). REFER TO DETAIL 4/L-501.
- PROVIDE MINIMUM 1" VERTICAL : 41" HORIZONTAL SLOPES ON ALL SLOPES UNLESS OTHERWISE NOTED.
- INSTALL WATER LINE LATERAL TO HOUSE. COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS.
- COMPACTION REQUIREMENTS: 90% STANDARD MAXIMUM PROCTOR DENSITY (95% IN SUBGRADE AREA).
- INSTALL BOULDER WALL PER DETAIL 1-3/L-504 IN PHASE 1 PER L-102.
- FOUNDATION DRAIN SHALL DRAIN TO DAYLIGHT WHEN POSSIBLE. SEE NOTE 33 WHEN FOUNDATION DRAIN CAN NOT DAYLIGHT. RODENT SCREEN TO BE INSTALLED. FOUNDATION DRAIN NOT PART OF SITE PLAN APPROVAL. COORDINATE WITH TOWN OF MANLIUS DURING BUILDING PERMIT. SHOWN FOR COORDINATION PURPOSES ONLY.
- WHERE FOUNDATION DRAINS CANNOT BE DAYLIGHTED, THEY SHALL DRAIN TO A SUMP PUMP CROCK AND A SUMP PUMP BE PROVIDED TO DAYLIGHT. RODENT SCREEN TO BE INSTALLED.
- CONSTRUCT SWALE TO FLOW TOWARDS SWALE ALONG SOUTHERLY PROPERTY LINE. MAINTAIN THROUGHOUT CONSTRUCTION.
- OUTFLOW STRUCTURE AND PIPE PER DETAIL 20/L-500.
- CONTRACTOR TO FIELD VERIFY PIPE, INVERT, SLOPE, SIZE AND LOCATION PRIOR TO CONSTRUCTION.
- WYE CONNECT SANITARY FORCEMAIN SERVICE TO PRIMARY FORCEMAIN. REFER TO SANITARY LATERAL CONNECTION PER DETAIL 6/L-600.
- LOTS 3, 10, 11, 12, 13, 19 AND 20 WILL REQUIRE PLACEMENT OF COMPACTION STONE BELOW THE BASEMENT SLAB PER DETAIL 2/L-503.
- REFER TO L-102 THRU L-108 FOR GRADING AND DRAINAGE THROUGHOUT CONSTRUCTION SEQUENCE STAGES.
- HOME BUILDER TO INSTALL ROOF DRAIN AND DIRECT RUNOFF AWAY FROM HOUSE TOWARDS DRAINAGE SWALE OR STORMWATER EASEMENT.
- HOMEOWNER/ DEVELOPER TO INSTALL PLANT MATERIAL TO STABILIZE SOIL.
- MAINTENANCE ACCESS NYSDOT REQUIRES A 12'-0" WIDE ACCESSWAY AT 12'-0" WIDE * 15% MAXIMUM MAINTENANCE PATH SHOULDER 12'-0" WIDE AND IS CONSTRUCTED AT A MAXIMUM 1V:8H SLOPE (12.5%).
- OUTLET STRUCTURE AND POND DRAIN OUTFLOW PIPES SHALL HAVE ANTISEEP COLLARS INSTALLED PER DETAIL 5/L-500.
- INSTALL 10" POND DRAIN AT LEVEL INVERT 666.25. SEE DETAIL 5/L-504.
- BORE UNDER HOAG LANE PER DETAIL 14/L-500.
- PROTECT EXISTING GAS LINE.



1 CONVENTIONAL GRADING PLAN





UTILIZED FOR STORMWATER
AND SANITARY DESIGN

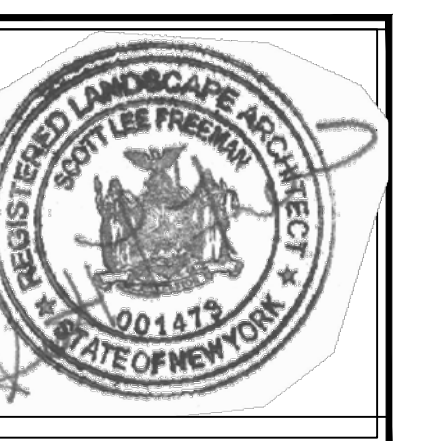
FOR CONSTRUCTION

HOAG LANE SUBDIVISION

5280 HOAG LANE, MANLIUS, NY

CLIENT:
HOAG ROAD PROPERTIES, LLC

No.	Rev.	Description	Date	No.	Rev.	Description	Date
1	1	CHECK SET-TOWN OF MANLIUS	07/20/18	8	1	21 LOT SITE PLAN SUBMISSION	07/20/18
2	1	CHECK SET-TOWN OF MANLIUS	07/20/18	9	1	MANLIUS PLAN SUBMISSION	08/14/19
3	1	PUBLIC HEARING-MANLIUS	03/29/18	10	1	MANLIUS PLAN SUBMISSION	07/12/19
4	1	PUBLIC HEARING-MANLIUS	05/04/18	11	1	MANLIUS PLAN SUBMISSION	09/23/19
5	1	PUBLIC HEARING-MANLIUS	06/01/18	12	1	MANLIUS PLAN SUBMISSION	12/18/19
6	1	TOWN REV-21 LOTS-MANLIUS	10/23/18	13	1	MANLIUS PLAN SUBMISSION	12/18/19
7	1	MANLIUS 21 HOME LOTS-P. BD	11/30/18	14	1	MANLIUS PLAN SUBMISSION	06/15/20
				15	1	NOTE REMOVAL (NOTE 10)	07/30/20



Drawn By: VER
Checked By: SF
KFA Proj. No.: 31050
Date: DECEMBER 1, 2017
Scale: AS NOTED

CONVENTIONAL
SHADE SLOPE
-21 LOT

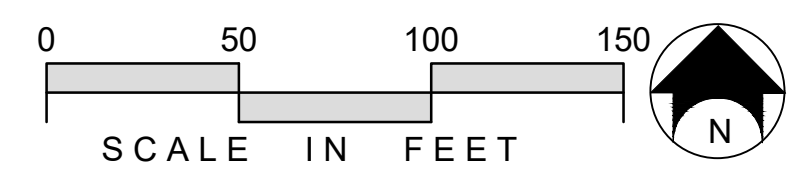
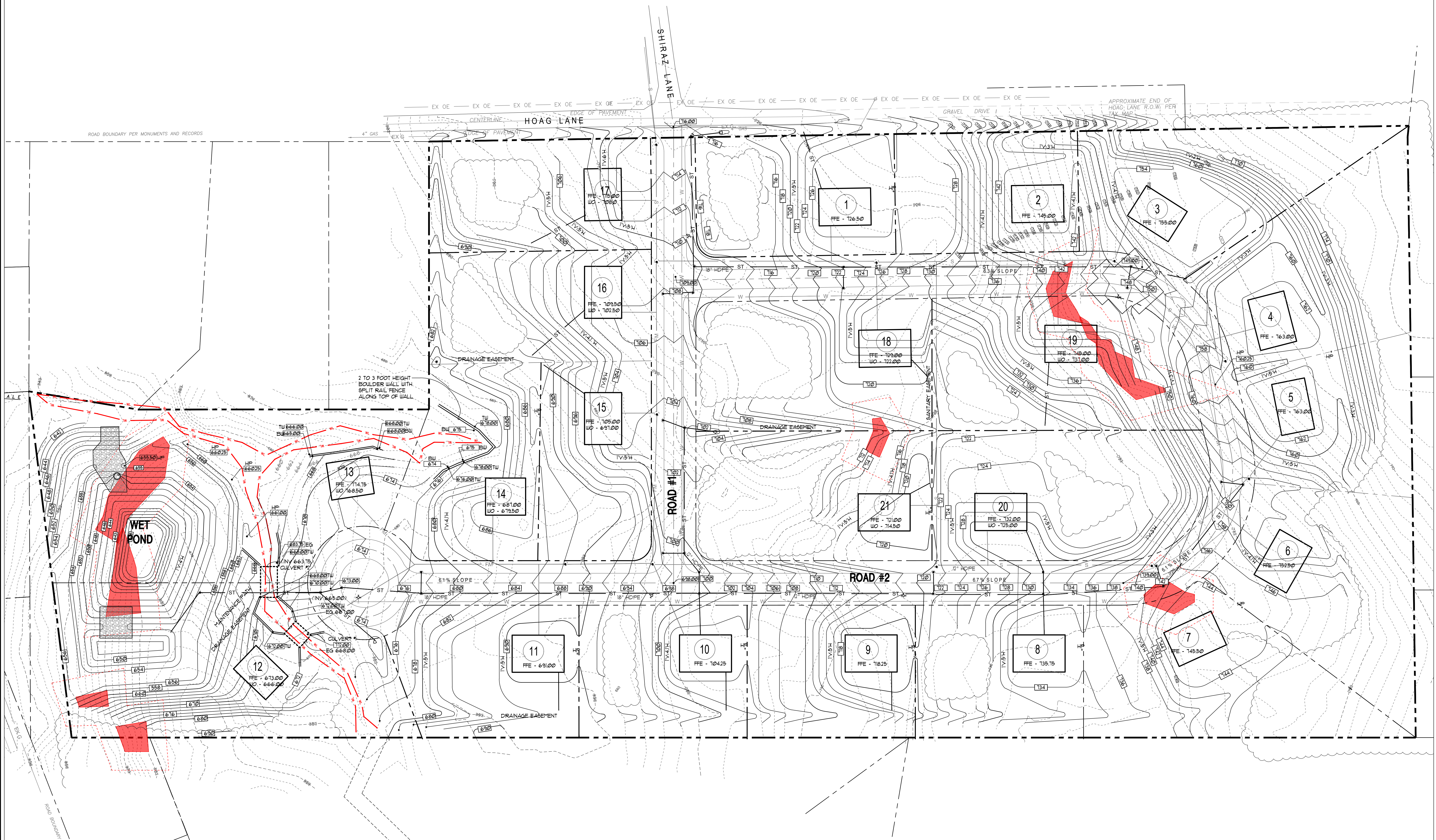
L-703

SHADE RELIEF LEGEND -
TOWN OF MANLIUS

§ 127-19 C FOR PURPOSES OF DETERMINING A BUILDABLE LOT IN THE
CONTEXT OF A SUBDIVISION APPROVAL, A LOT'S BUILDING ENVELOPE,
DEFINED AS THE AREA OF A LOT THAT FALLS WITHIN THE REQUIRED
SETBACKS, SHALL INCLUDE AN AREA LARGE ENOUGH TO FIT A
REASONABLE BUILDING FOOTPRINT, WHICH IS:

(2) NO CLOSER THAN 25 FEET TO SLOPES OF 25% OR MORE.

= AREAS GREATER THAN OR EQUAL TO 25% SLOPES.

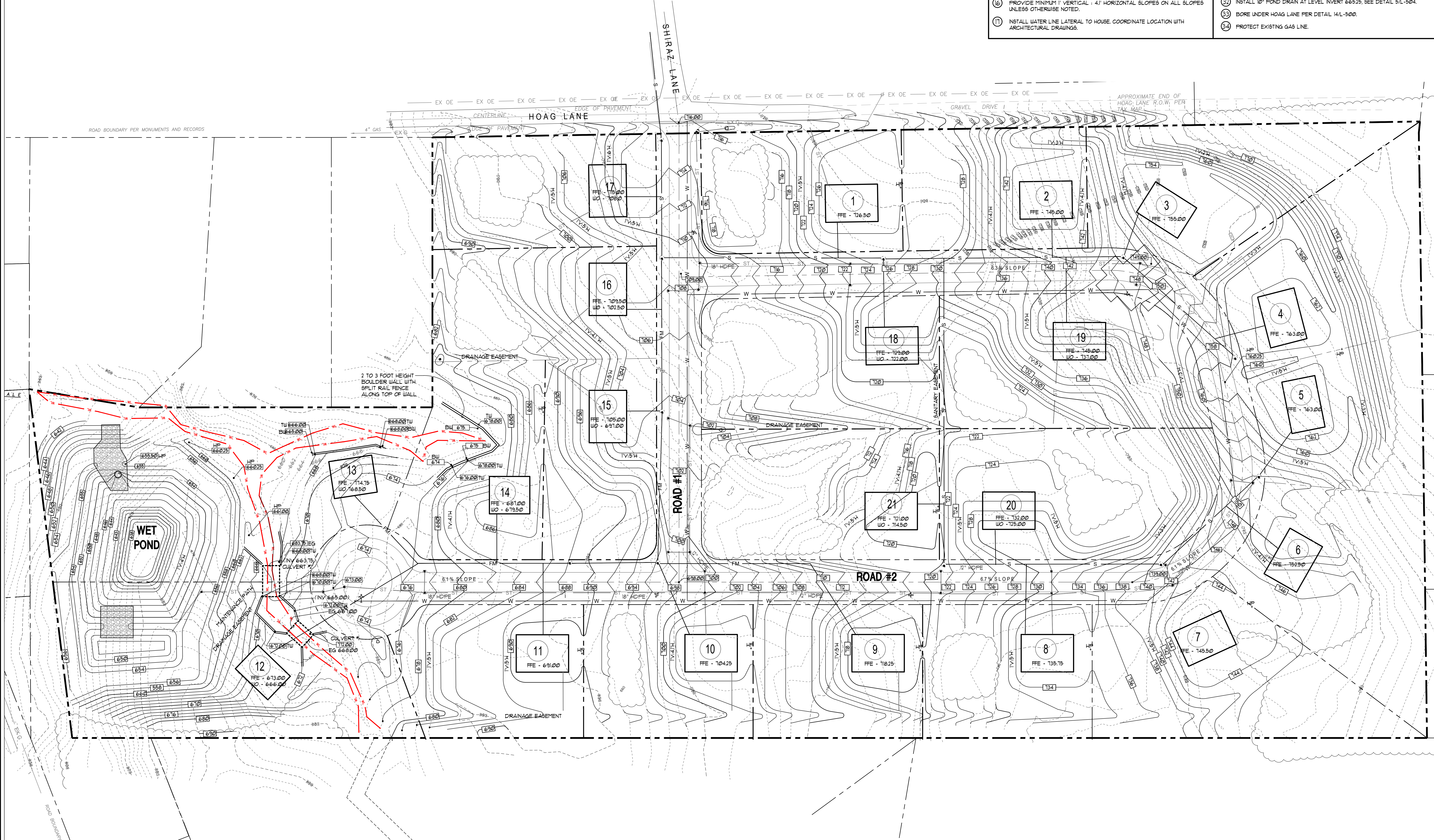


1
L-703 CONVENTIONAL SHADE SLOPE PLAN

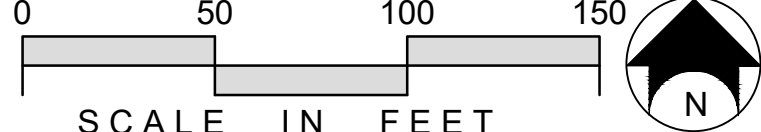
HOAG LANE DEVELOPMENT	
SEWER SYSTEM TYPE (CONVENTIONAL) -HOAG-SEWER	
SEWER SYSTEM TYPE	LOT NUMBERS
FORCE MAIN SYSTEM SEWER	9, 10, 11, 12, 13, 14, 15, 16
GRAVITY SYSTEM SEWER	1, 2, 3, 4, 5, 6, 7, 8, 11, 18, 19, 20, 21

GRADING, DRAINAGE and UTILITIES NOTES

- MEET EXISTING LINE AND GRADE.
- CORE OPENING INTO EXISTING SANITARY STRUCTURE WITH WATER TIGHT CONNECTION.
- PROPOSED GAS LINES NOT SHOWN FUTURE GAS LINE LAYOUT TO BE COORDINATED WITH NATIONAL GRID.
- PROPOSED ELECTRIC SERVICE NOT SHOWN FUTURE ELECTRIC LAYOUT TO BE COORDINATED WITH NATIONAL GRID.
- SURVEYOR TO PROVIDE EASEMENTS FOR FINAL APPROVAL.
- BUILDER TO PROVIDE GRAVITY SANITARY SYSTEM OR APPROVED EQUAL. SEE PROFILE 2/L-600 AND DETAILS ON L-501.
- GRAVITY SANITARY LATERAL. COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS. PROVIDE ONE LATERAL PER LOT. TYPICAL MINIMUM SLOPE FOR LATERALS TO BE 2% (1/4" PER FT.). ALL LATERALS TO BE OWNED BY HOMEOWNER.
- E-1 SANITARY SYSTEM LATERAL. COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS AND LOW PRESSURE SYSTEM MANUFACTURER OR APPROVED EQUAL. ALL LATERALS & PUMPS OWNED BY HOMEOWNER. SEE PROFILE 2/L-600.
- LOW PRESSURE SANITARY SEWER FORCE MAIN. SEE PROFILE 2/L-600.
- SANITARY VENT AND TRAP PER DETAIL 5/L-501. COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS AND LOW PRESSURE SYSTEM MANUFACTURER AND E-1 MANUFACTURER OR APPROVED EQUAL.
- NOTE DELETED.
- SANITARY WATER LINE CROSSING. REFER TO DETAIL 3/L-501 FOR REQUIRED SEPARATION DISTANCES OR INSTALLATION METHODS.
- FORCE MAIN CHECKPOINT (NO EXPOSED SEWAGE, ACCESS TO PIPES ONLY).
- OCMA TO PROVIDE DESIGN & INSTALLATION OF ALL WATER FACILITIES INCLUDING FIRE HYDRANTS, VALVES, LINES AND SIZES.
- INSTALL FIRE HYDRANT AND VALVE. SHOWN FOR COORDINATION PURPOSES (4 HYDRANTS). REFER TO DETAIL 4/L-501.
- PROVIDE MINIMUM 1" VERTICAL : 4" HORIZONTAL SLOPES ON ALL SLOPES UNLESS OTHERWISE NOTED.
- INSTALL WATER LINE LATERAL TO HOUSE. COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS.
- COMPACTION REQUIREMENTS: 90% STANDARD MAXIMUM PROCTOR DENSITY (95% IN SUBGRADE AREA).
- INSTALL BOULDER WALL PER DETAIL 1-3/L-504 IN PHASE I PER L-102.
- FOUNDATION DRAIN SHALL DRAIN TO DAYLIGHT WHEN POSSIBLE. SEE NOTE 33 WHEN FOUNDATION DRAIN CAN NOT BE DAYLIGHT. RODENT SCREEN TO BE INSTALLED. FOUNDATION DRAIN NOT PART OF SITE PLAN APPROVAL. COORDINATE WITH TOWN OF MANLIUS DURING BUILDING PERMIT. SHOWN FOR COORDINATION PURPOSES ONLY.
- WHERE FOUNDATION DRAINS CANNOT BE DAYLIGHTED, THEY SHALL DRAIN TO A SUMP PUMP CROCK AND A SUMP PUMP BE PROVIDED TO DAYLIGHT. RODENT SCREEN TO BE INSTALLED.
- CONSTRUCT SWALE TO FLOW TOWARDS SWALE ALONG SOUTHERLY PROPERTY LINE. MAINTAIN THROUGHOUT CONSTRUCTION.
- OUTFLOW STRUCTURE AND PIPE PER DETAIL 20/L-500.
- CONTRACTOR TO FIELD VERIFY PIPE, INVERT, SLOPE, SIZE AND LOCATION PRIOR TO CONSTRUCTION.
- WYE CONNECT SANITARY FORCEMAIN SERVICE TO PRIMARY FORCEMAIN. REFER TO SANITARY LATERAL CONNECTION PER DETAIL 6/L-600.
- LOTS 3, 10, 11, 12, 13, 19 AND 20 WILL REQUIRE PLACEMENT OF COMPACTION STONE BELOW THE BASEMENT SLAB PER DETAIL 2/L-503.
- REFER TO L-102 THRU L-109 FOR GRADING AND DRAINAGE THROUGHOUT CONSTRUCTION SEQUENCE STAGES.
- HOME BUILDER TO INSTALL ROOF DRAIN AND DIRECT RUNOFF AWAY FROM HOUSE TOWARDS DRAINAGE SWALE OR STORMWATER EASEMENT.
- HOMEOWNER DEVELOPER TO INSTALL PLANT MATERIAL TO STABILIZE SOIL.
- MAINTENANCE ACCESS NYSDOT REQUIRES A 12'-0" WIDE ACCESSWAY AT 12'-0" WIDE & 24" MAXIMUM MAINTENANCE PATH SHOWN IS 12'-0" WIDE AND IS CONSTRUCTED AT A MAXIMUM 14:8% SLOPE (12.5%).
- OUTLET STRUCTURE AND POND DRAIN OUTFLOW PIPES SHALL HAVE ANTISEEP COLLARS INSTALLED PER DETAIL 15/L-500.
- INSTALL 10" POND DRAIN AT LEVEL INVERT 665.25. SEE DETAIL 5/L-504.
- BORE UNDER HOAG LANE PER DETAIL 14/L-500.
- PROTECT EXISTING GAS LINE.



1 CONVENTIONAL UTILITIES PLAN



UTILIZED FOR STORMWATER AND SANITARY DESIGN

FOR CONSTRUCTION
HOAG LANE SUBDIVISION
5280 HOAG LANE, MANLIUS, NY

CLIENT:
HOAG ROAD PROPERTIES, LLC

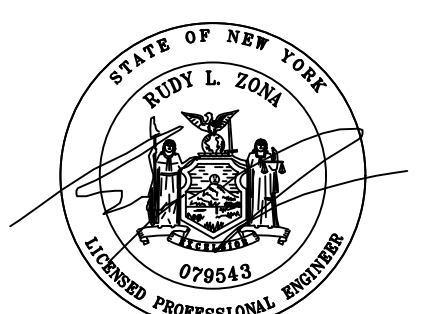
No. Rev.	Description	Date	No. Rev.	Description	Date
1	1. CHECK SET-POINT OF MANLIUS 07/19/18	07/19/18	16	16. MANLIUS PLAN SUBMISSION 06/20/20	06/20/20
2	2. CHECK SET-POINT OF MANLIUS 07/26/18	07/26/18	17	17. MANLIUS PLAN SUBMISSION 06/20/20	06/20/20
3	3. PUBLIC HEARING-MANLIUS 05/04/18	05/04/18	18	18. MANLIUS PLAN SUBMISSION 06/20/20	06/20/20
4	4. PUBLIC HEARING-MANLIUS 05/04/18	05/04/18	19	19. MANLIUS PLAN SUBMISSION 06/20/20	06/20/20
5	5. PUBLIC HEARING-MANLIUS 06/01/18	06/01/18	20	20. MANLIUS PLAN SUBMISSION 06/20/20	06/20/20
6	6. TOWN REV-21 LOTS-MANLIUS 10/23/18	10/23/18	21	21. MANLIUS PLAN SUBMISSION 06/20/20	06/20/20
7	7. MANLIUS-21 HOME LOTS-P. BD 11/30/18	11/30/18	22	22. MANLIUS PLAN SUBMISSION 06/20/20	06/20/20
			23	23. NOTE REMOVAL (NOTE 10) 07/30/20	07/30/20



Drawn By: V.E.R.
Checked By: S.F.
KFA Proj. No.: 31050
Date: DECEMBER 1, 2017
Scale: AS NOTED

CONVENTIONAL UTILITIES PLAN
-21 LOT

L-704



UTILIZED FOR STORMWATER
AND SANITARY DESIGN

FOR CONSTRUCTION

HOAG LANE SUBDIVISION

5280 HOAG LANE, MANLIUS, NY

CLIENT:
HOAG ROAD PROPERTIES, LLC

No. Rev.	Description	Date	No. Rev.	Description	Date
1	CHECK SET-TOWN OF MANLIUS	07/24/18	16	MANLIUS PLAN SUBMISSION	08/20/20
2	CHECK SET-TOWN OF MANLIUS	07/26/18	17	MANLIUS PLAN SUBMISSION	08/20/20
3	PUBLIC HEARING- MANLIUS	03/29/18	9	MANLIUS PLAN SUBMISSION	06/14/19
4	PUBLIC HEARING- MANLIUS	05/04/18	10	MANLIUS PLAN SUBMISSION	07/12/19
5	PUBLIC HEARING- MANLIUS	06/01/18	11	MANLIUS PLAN SUBMISSION	09/23/19
6	TOWN REV-21 LOTS-MANLIUS	10/23/18	12	MANLIUS PLAN SUBMISSION	12/18/19
7	MANLIUS 21 HOME LOTS-PL. BD	11/30/18	13	MANLIUS PLAN SUBMISSION	12/18/19
		14	MANLIUS PLAN SUBMISSION	06/15/20	22
		15	NOTE REMOVAL (NOTE 10)	07/30/20	23



Drawn By: V.E.R.
Checked By: S.F.
KFA Proj. No.: 31050
Date: DECEMBER 1, 2017
Scale: AS NOTED

CONVENTIONAL
LAYOUT PLAN
-21 LOTS

L-705

TOWN OF MANLIUS SUBDIVISION DEVELOPMENT

X-HOAG-ZONING-REVISED

1. ZONING

- TAX MAP 104-01-392 IS CURRENTLY ZONED RESTRICTED AGRICULTURE (RA) DISTRICTS.
- THE FOLLOWING USES ARE PERMITTED IN RA DISTRICTS:
 - ANY USE PERMITTED IN RESIDENTIAL DISTRICT R-1, ACCORDING TO THE SAME RESTRICTIONS.
 - ANY USE PERMITTED IN RESIDENTIAL DISTRICT R-3, ACCORDING TO THE SAME RESTRICTIONS.
- PARCEL HAS BEEN TREATED AS AN R-3 DISTRICT BECAUSE CLUSTER ZONING IS PERMITTED UNDER NYS SUBDIVISION REVIEW (ARTICLE 87B). THIS ALLOWS DEVELOPMENT OF SMALLER LOTS BASED UPON A LOT COUNT DERIVED FROM EXISTING ZONING REQUIREMENTS FOR THE CURRENT ZONE (RA) AND PROVISIONS OF OPEN SPACE. THE LOT COUNT IS SHOWN ON THE NOT TO BUILD PLAN DEVELOPED BY SEGUN LAND SURVEYING, P.L.L.C. AND A (RA) ZONING DENSITY SITE PLAN PROVIDED BY KFA. <https://www.dosny.gov/publications/subdivision-reviews-in-nys-for>

2. RA BULK REGULATIONS (21 LOT CONVENTIONAL PLAN)

MIN. FRONTAGE	N/A
MIN. LOT AREA	N/A
FRONT YARD SETBACK	40'-0"
SIDE YARD SETBACK	20'-0"
REAR YARD SETBACK	40'-0"

3. PRE CLUSTER & CLUSTER ZONING BULK REGULATIONS

ZONING	R1 CONVENTIONAL	CLUSTER 23 LOT	CLUSTER 21 LOT
MIN. FRONTAGE	150'-0"	100'-0"	100'-0"
MIN. LOT AREA	40,000 SF	16,000 SF	16,000 SF
FRONT YARD	40'-0"	30'-0"	30'-0"
SIDE YARD	20'-0"	15'-0"	15'-0"
REAR YARD	40'-0"	25'-0"	25'-0"

4. PRE CLUSTER & CLUSTER ZONING LOT SUMMARY

- CONVENTIONAL 21 LOT PLAN BASED ON RESIDENTIAL R1 ZONING TO DEVELOP A MAXIMUM LOT COUNT.
- CLUSTER PLAN BASED ON RESIDENTIAL R3 DISTRICT 21 LOT LAYOUT WHICH INCLUDES (20) NEW CONSTRUCTION LOTS AND (1) NEWLY FORMED LOT FOR THE EXISTING RESIDENCE.

FRONTAGE: 150'-0" MIN: 150'-0" LOT AREA: MINIMUM 40,000 SF	FRONTAGE: 100'-0" MIN: 100'-0" AVG: 110'-0" LOT AREA: MINIMUM 16,000 SF
--	--

5. GREEN SPACE

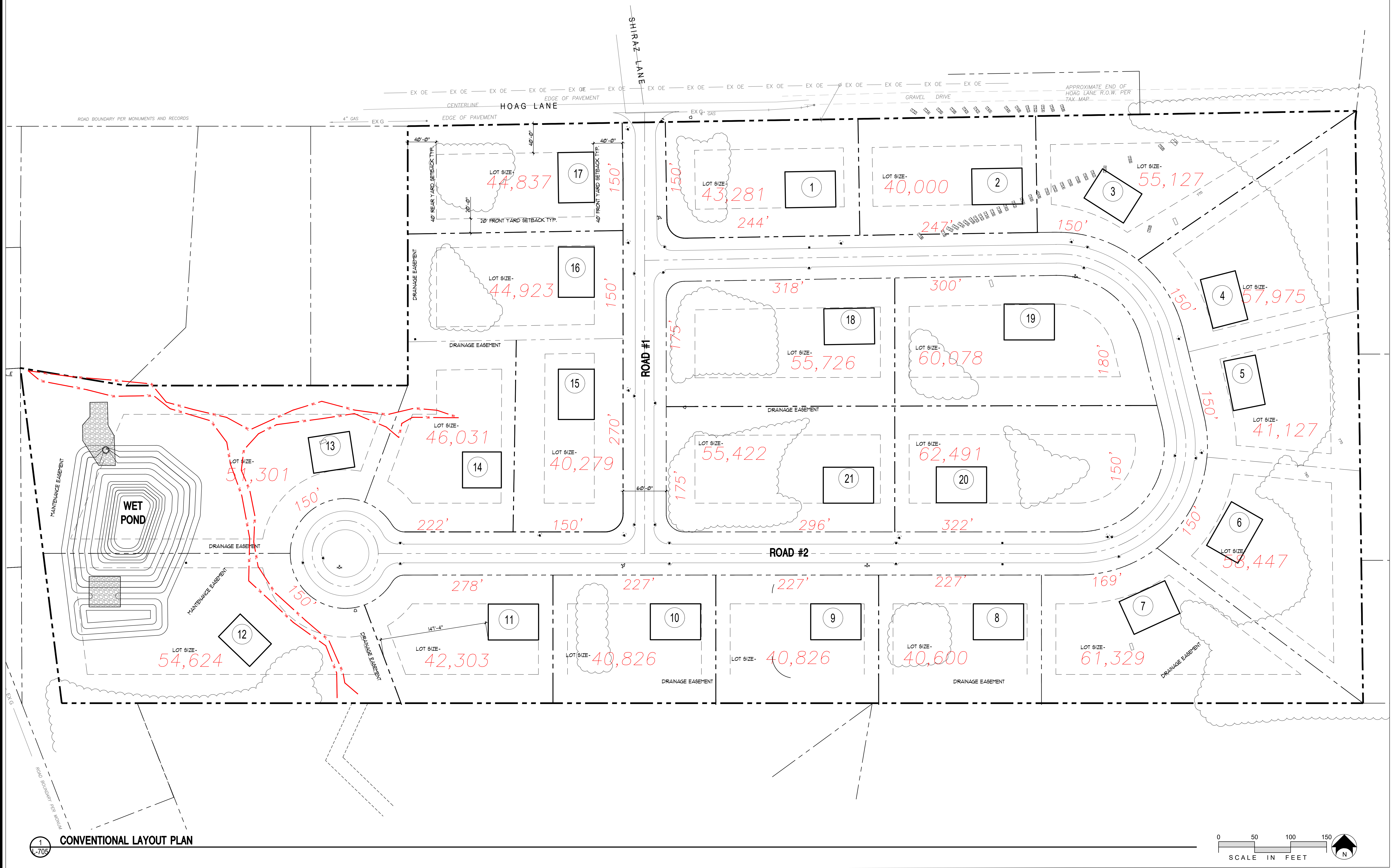
- "FOREVER WILD" AREA- EXISTING VEGETATION TO REMAIN. NO GRADING OR EARTHWORK PERMITTED WITHIN THESE AREAS. COVENANT TO BE INCLUDED WITHIN LEGAL DESCRIPTION OF LOTS WITH "FOREVER WILD" AREA. REFER TO AREAS A,B,C,D AND E BELOW.

"FOREVER WILD" AREAS	ACREAGE	SQUARE FEET
TOTAL SITE	30.04	1324224.00
"FOREVER WILD" AREA	9.35	408,303.11
(A) EAST "FOREVER WILD" AREA	3.66	159,161.91
(B) SOUTH "FOREVER WILD" AREA	5.5	240,414.3
(C) WEST "FOREVER WILD" AREA	5.6	245,119.1
(D) NORTH "FOREVER WILD" AREA	3.9	172,869.9
(E) HOA "FOREVER WILD" AREA	4.18	182,697.05

NOTES:
1. 31% OF THE TOTAL SITE AREA IS "FOREVER WILD" AREA IN THE CLUSTER SITE PLAN 06/5/2020.

LEGEND NOTES

- STORMWATER EASEMENT AREAS
- CONSERVATION EASEMENT AREAS



1
L-705
CONVENTIONAL LAYOUT PLAN

X-HOAG-ZONING-REVISED

- TAX MAP 104-.01-392 IS CURRENTLY ZONED RESTRICTED AGRICULTURE (RA) DISTRICTS.
- THE FOLLOWING USES ARE PERMITTED IN RA DISTRICTS:
 - *** ANY USE PERMITTED IN RESIDENTIAL DISTRICT R-1, ACCORDING TO THE 54TH REVISIONS.
 - *** ANY USE PERMITTED IN RESIDENTIAL DISTRICT R-3, ACCORDING TO THE 54TH REVISIONS.
 - *** 64TH REVISIONS.
- PARCEL HAS BEEN TREATED AS AN R-3 DISTRICT BECAUSE CLUSTER ZONING IS PERMITTED UNDER NYS SUBDIVISION REVIEW (ARTICLE 578). THIS ALLOWED DEVELOPMENT OF SMALLER LOTS BASED UPON A LOT COUNT DERIVED FROM EXISTING ZONING REQUIREMENTS FOR THE CURRENT ZONE (RA) AND PROVISIONS OF OPEN SPACE. THE LOT COUNT IS SHOWN ON THE NOT TO BUILD PLAN DEVELOPED BY SEGUN LIND SURVEYING, PLLC, AND A LOTS AND DIMENSIONS MAP.
- <https://www.dcnyc.gov/gis/publications/subdivisions/a-review/in-nys/sfr>

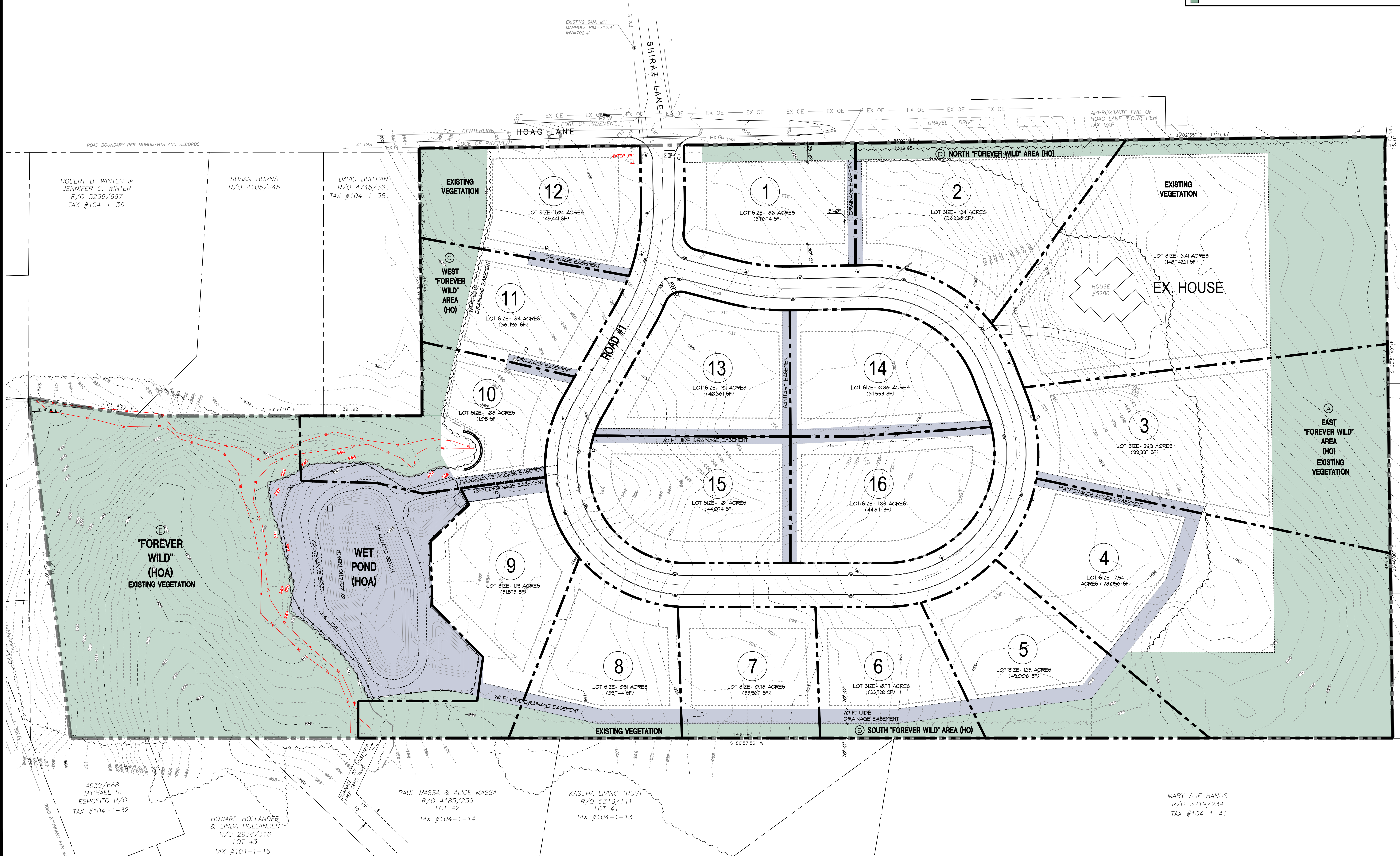
- | ZONING | R1 CONVENTIONAL | CLUSTER 16 LOT |
|---------------|-----------------|----------------|
| MIN. FRONTAGE | 15'-0" | 100'-0" |
| MIN. LOT AREA | 40,000 SF | 16,000 SF |
| FRONT YARD | 4'-0" | 3'-0" |
| SIDE YARD | 3'-0" | 5'-0" |
| REAR YARD | 4'-0" | 5'-0" |

- "FOREVER WILD" AREA- EXISTING VEGETATION TO REMAIN. NO GRADING, OR EARTHWORK PERMITTED WITHIN THESE AREAS. COVENANT TO BE INCLUDED WITHIN LEGAL DESCRIPTION OF LOTS WITH "FOREVER WILD" AREA. REFER TO AREAS A,B,C,D AND E BELOW.

"FOREVER WILD" AREAS		ACREAGE	SQUARE FEET
TOTAL SITE		30.04	1324274.00
"FOREVER WILD" AREA		9.35	408,303.11
(A)	EAST "FOREVER WILD" AREA	3.66	159,761.91
(B)	SOUTH "FOREVER WILD" AREA	.55	24,047.43
(C)	WEST "FOREVER WILD" AREA	.56	24,571.91
(D)	NORTH "FOREVER WILD" AREA	.39	17,186.69
(E)	HOA "FOREVER WILD" AREA	4.19	182,691.05

- NOTES:
1. 31% OF THE TOTAL SITE AREA IS "FOREVER WILD" AREA IN THE CLUSTER SITE PLAN 06/15/2020.

	DRAINAGE EASEMENT AREAS - LICENSED SURVEYOR TO PROVIDE DEED RESTRICTIONS AND DRAINAGE/ ACCESS EASEMENTS AS REQUIRED BY TOWN PURSUANT TO APPROVALS.
	"FOREVER WILD" EASEMENT AREAS- LICENSED SURVEYOR TO PROVIDE DEED RESTRICTIONS AND EASEMENTS AS REQUIRED BY TOWN PURSUANT TO APPROVALS.



NOT FOR CONSTRUCTION

WOODLAND HILLS SUBDIVISION

5280 HOAG LANE, MANLIUS, NY

CLIENT:
HOAG ROAD PROPERTIES, LLC

[illegible]

Drawn By: VER
Checked By: SF
KFA Proj. No.: 37050
Date: JULY 29, 2022
Scale: AS NOTED

Title:
LAYOUT PLAN

L-400

Expected
Fee: _____

TOWN OF MANLIUS
PLANNING DEPARTMENT
INITIAL APPEARANCE APPLICATION

DATE: 5/26/2022

Name of Project: Hoke Road Develop ment

Applicant must submit 12 copies of all site plans, surveys, and supporting data with the final application before a planning board meeting can be scheduled.

Location of Project: 5280 Hoad Road, Fayetteville, NY 13066

Type of Project:

☐ Division of Land ☒ Subdivision ☐ Accessory Use ☐ Zone Change ☐ Site Review ☐ Other _____

Developer: THOMAS ARSEN HOMES INC Phone: 315-263-6662

Address: 5280 Hoad Road, Fayetteville, NY Zip: 13066

Tax Map Number(#)/s: 104.-01-39.2

Present Zoning: residential RA Desired Zoning: residential RA

Total Acreage: 30.14 Total Number of Lots: 17

Property Owner/s: Hoad Road Properties LLC Phone: (315) 263-6504

Address: 300 Fairchild Avenue, Suite 12, Syracuse NY Zip: 13210

Tax Map#(s): 104-01-39.2 Owner's Signature: [Signature]

Printed Name: William A. Orzechowski

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

Use next page for additional known property owners' information

Planning Board Meeting Date Assignment: _____

Fee: _____ Paid: _____ Per: ☐ Credit/Debit Card ☐ Check ☐ Cash

TOWN OF MANLIUS
PLANNING DEPARTMENT
INITIAL APPEARANCE APPLICATION
(continued)

Property Owner/s: Hog Road Properties LLC Phone: 315-263-6504
Address: 300 Euclid Avenue, Suite 12, Syracuse, NY Zip: 13210
Tax Map#(s): 104.-01-39.2 Owner's Signature: [Signature]
Printed Name: William A Osuchowski

Property Owner/s: _____ Phone: _____
Address: _____ Zip: _____
Tax Map#(s): _____ Owner's Signature: _____
Printed Name: _____

Property Owner/s: _____ Phone: _____
Address: _____ Zip: _____
Tax Map#(s): _____ Owner's Signature: _____
Printed Name: _____

Property Owner/s: _____ Phone: _____
Address: _____ Zip: _____
Tax Map#(s): _____ Owner's Signature: _____
Printed Name: _____

Property Owner/s: _____ Phone: _____
Address: _____ Zip: _____
Tax Map#(s): _____ Owner's Signature: _____
Printed Name: _____

Property Owner/s: _____ Phone: _____
Address: _____ Zip: _____
Tax Map#(s): _____ Owner's Signature: _____
Printed Name: _____

TOWN OF MANLIUS

DISCLOSURE AFFIDAVIT

This affidavit is a part of and must be completed and attached to every application, petition, request submitted for a *site plan, variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit.*

STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

I. William A. Dineen, being duly sworn, deposes and says that (s) he is:

Managing Member of HOAG ROAD PROPERTIES LLC
(applicant, petitioner, corporation officer, property owner, etc.)

II. That deponent has read and is familiar with the provisions of the General Municipal Law, Section 809 which states:

- A. Every application, petition or request submitted for a site plan, variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit, pursuant to the provisions or any ordinance, local law, rule or regulation constituting the zoning and planning regulations of a municipality shall state the name, residence and the nature and extent of the interest of any state officer or any officer or employee of such municipality is a part, in the person, partnership or association making such application, petition or request (hereinafter called the applicant) to the extent known to such applicant.
- B. For the purpose of this action an officer or employee shall be deemed to have an interest in the applicant when (s)he, his/her spouse, or their brothers, sisters, parents, children, grandchildren, or the spouse of any of them:
 - 1) is the applicant, or
 - 2) is an officer, director, partner or employee of the applicant, or
 - 3) legally or beneficially owns or controls stock of a corporate applicant or is a member of a partnership or association applicant, or
 - 4) is a party to an agreement with such an applicant, express or implied, whereby (s) he may receive any payment or other benefit, whether or not for services rendered, or contingent upon the favorable approval of such application, petition or request.
- C. Ownership of less than five percent (5%) of the stock of a corporation whose stock is listed on the New York or American Stock Exchanges shall not constitute an interest for the purposes of this section.
- D. A person who knowingly and intentionally violates this section shall be guilty of a misdemeanor.

III. That no Town of Manlius officer, employee or a relative of either, as defined in Section 809 General Municipal Law has any interest in this application.

-OR-

If a Town of Manlius officer, employee or relative of either as defined in Section 809 General Municipal law has any interest in this application, the full particulars are provided on an attached sheet.

Date: 5/26, 20 22.

Date: _____, 20 ____.

William A. Osiekowski
(Print Name)

(Print Name)

[Signature]
(Signature)

(Signature)

Hope Road Properties LLC
(Entity Name)

(Entity Name)

William A. Osiekowski Managing
By (Officer) (Title)

By (Officer) (Title)

300 Euclid Avenue, Suite 12
Syracuse NY 13210
(Mailing Address of Applicant)

(Mailing Address of Applicant)

(315) 263-6504
(Telephone Number)

(Telephone Number)

ACKNOWLEDGEMENTS

STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

On this 26th day of May in the year 20 22, before me, the undersigned, a notary public in and for said state, personally appeared William A. Osiekowski

, and _____ personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within Petition and acknowledged to me the he/she/they executed the same in his/her/their capacity, and that by his/her/their signature(s) on the Petition, the individual or the persons upon behalf of which the individual acted executed the instrument.

[Signature]
Notary Public

VAUGHN D. LANG
NOTARY PUBLIC
STATE OF NEW YORK
Reg. No. 02LA4518441
COMMISSION EXPIRES 6/30/ 22

CORPORATE ACKNOWLEDGEMENT

STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

_____, being duly sworn, deposes and says the
s(he) is the _____ of _____
corporation named in the within Application/Petition, that s(he) has read the foregoing affidavit and
knows the contents thereof; that the same is true of s(he) own knowledge, except as to those matters
therein stated to be alleged upon information and belief, and as to those matters s(he) believes it to be
true.

Applicant Signature

Subscribed to me before this day
Of _____, 20____

Notary Public

617.20
Appendix B
Short Environmental Assessment Form

Instructions for Completing

Part 1 - Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 - Project and Sponsor Information			
Name of Action or Project: <u>HOAG ROAD PROPERTIES</u>			
Project Location (describe, and attach a location map): <u>WOODLAND HILLS SUBDIVISION</u>			
Brief Description of Proposed Action: <u>5280 HOAG LANE, FAY NY 13066</u> <u>SIXTEEN LOT (16) SUBDIVISION ON 30+ ACRES ZONED (RA).</u>			
Name of Applicant or Sponsor: <u>TOM DOUGLAS</u>		Telephone: <u>(315) 263-4662</u> E-Mail: <u>THOMASALLENHOMES@YAHOO.COM</u>	
Address: <u>5280 HOAG LANE</u>			
City/PO: <u>FAY NY 13066</u>		State: <u>NY</u>	Zip Code: <u>13066</u>
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.		NO ☒	YES ☐
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval:		NO ☒	YES ☐
3.a. Total acreage of the site of the proposed action?		<u>30+</u> acres	
b. Total acreage to be physically disturbed?		<u>20</u> acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		<u>30.4</u> acres	
4. Check all land uses that occur on, adjoining and near the proposed action.			
☐ Urban ☐ Rural (non-agriculture) ☐ Industrial ☐ Commercial ☒ Residential (suburban) ☐ Forest ☐ Agriculture ☐ Aquatic ☐ Other (specify): _____ ☐ Parkland			

5. Is the proposed action, a. A permitted use under the zoning regulations?	NO ☐	YES ☒	N/A ☐
b. Consistent with the adopted comprehensive plan?	☐	☒	☐
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO ☐	YES ☒	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO ☒	YES ☐	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO ☒	YES ☐	
b. Are public transportation service(s) available at or near the site of the proposed action?	☒	☐	
c. Are any pedestrian accommodations or bicycle routes available on or near site of the proposed action?	☒	☐	
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: _____	NO ☒	YES ☐	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____	NO ☐	YES ☒	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____	NO ☐	YES ☒	
12. a. Does the site contain a structure that is listed on either the State or National Register of Historic Places?	NO ☒	YES ☐	
b. Is the proposed action located in an archeological sensitive area?	☒	☐	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO ☒	YES ☐	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____	☒	☐	
14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: ☐ Shoreline ☒ Forest ☐ Agricultural/grasslands ☐ Early mid-successional ☐ Wetland ☐ Urban ☒ Suburban			
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO ☐	YES ☒	
16. Is the project site located in the 100 year flood plain?	NO ☒	YES ☐	
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? ☐ NO ☐ YES b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? ☐ NO ☒ YES If Yes, briefly describe: _____	NO ☐	YES ☒	

	No, or small impact may occur	Moderate to large impact may occur
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	☐	☐
11. Will the proposed action create a hazard to environmental resources or human health?	☐	☐

Part 3 - Determination of significance. The Lead Agency is responsible for the completion of Part 3. For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

☐	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
☐	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.
Name of Lead Agency Date	
Print or Type Name of Responsible Officer in Lead Agency Title of Responsible Officer	
Signature of Responsible Officer in Lead Agency Signature of Preparer (if different from Responsible Officer)	

PRINT

TOWN OF MANLIUS SUBDIVISION DEVELOPMENT

1. ZONING

- TAX MAP #04-01-383 IS CURRENTLY ZONED RESTRICTED AGRICULTURE (RA) DISTRICTS.
- THE FOLLOWING USES ARE PERMITTED IN RA DISTRICTS:
 - ANY USE PERMITTED IN RESIDENTIAL DISTRICT R-1, ACCORDING TO THE SAME RESTRICTIONS.
 - ANY USE PERMITTED IN RESIDENTIAL DISTRICT R-3, ACCORDING TO THE SAME RESTRICTIONS.
- PARCEL HAS BEEN TREATED AS AN R-3 DISTRICT BECAUSE CLUSTER ZONING IS PERMITTED UNDER NY'S SUBDIVISION REVIEW (ARTICLE 57-B). THIS ALLOWS DEVELOPMENT OF SMALLER LOTS BASED UPON A LOT COUNT DERIVED FROM EXISTING ZONING REQUIREMENTS FOR THE CURRENT ZONE (RA) AND PROVISIONS OF OPEN SPACE. THE LOT COUNT IS SHOWN ON THE NOT TO BUILD PLAN DEVELOPED BY BAGLIN LAND SURVEYING, P.L.L.C. AND A (RA) ZONING DENSITY SITE PLAN PROVIDED BY KPA. <https://www.nys.gov/2019/06/14/06142019SUBDIVISIONREVIEW%IN%NYSPDF>

2. RA BULK REGULATIONS (21 LOT CONVENTIONAL PLAN)

MIN. FRONTAGE	N/A
MIN. LOT AREA	N/A
FRONT YARD SETBACK	40'-0"
SIDE YARD SETBACK	20'-0"
REAR YARD SETBACK	40'-0"

3. PRE CLUSTER & CLUSTER ZONING BULK REGULATIONS

ZONING	R1 CONVENTIONAL	CLUSTER 23 LOT	CLUSTER 21 LOT
MIN. FRONTAGE	150'-0"	100'-0"	100'-0"
MIN. LOT AREA	40,000 SF	16,000 SF	16,000 SF
FRONT YARD	40'-0"	30'-0"	30'-0"
SIDE YARD	20'-0"	15'-0"	15'-0"
REAR YARD	40'-0"	25'-0"	25'-0"

4. PRE CLUSTER & CLUSTER ZONING LOT SUMMARY

- CONVENTIONAL 21 LOT PLAN BASED ON RESIDENTIAL R1 ZONING TO DEVELOP A MAXIMUM LOT COUNT.
- CLUSTER PLAN BASED ON RESIDENTIAL R3 DISTRICT 21 LOT LAYOUT WHICH INCLUDES (20) NEW CONSTRUCTION LOTS AND (1) NEWLY FORMED LOT FOR THE EXISTING RESIDENCE.

Ⓜ FRONTAGE: 150'-0" MIN. 50'-0" LOT AREA: MINIMUM 40,000 SF

Ⓝ FRONTAGE: 100'-0" MIN. 100'-0" AVG. 110'-0" LOT AREA: MINIMUM 16,000 SF

5. GREEN SPACE

"FOREVER WILD" AREAS	ACREAGE	SQUARE FEET
TOTAL SITE	30.04	1324224.00
"FOREVER WILD" AREA	9.35	408,303.11
(A) EAST "FOREVER WILD" AREA	3.66	159,161.91
(B) SOUTH "FOREVER WILD" AREA	5.5	240,414.3
(C) WEST "FOREVER WILD" AREA	5.6	245,111.91
(D) NORTH "FOREVER WILD" AREA	3.9	172,869.9
(E) HOA "FOREVER WILD" AREA	4.19	182,691.25

NOTES:
1. 31% OF THE TOTAL SITE AREA IS "FOREVER WILD" AREA IN THE CLUSTER SITE PLAN 06/15/2022.

LEGEND NOTES

- STORMWATER EASEMENT AREAS
- CONSERVATION EASEMENT AREAS

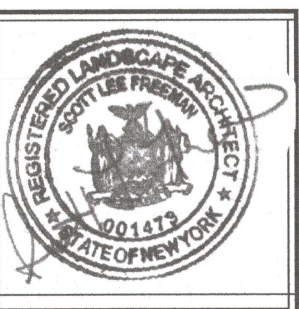


UTILIZED FOR STORMWATER AND SANITARY DESIGN

NOT FOR CONSTRUCTION
HOAG LANE SUBDIVISION
5280 HOAG LANE, MANLIUS, NY

CLIENT:
HOAG ROAD PROPERTIES, LLC

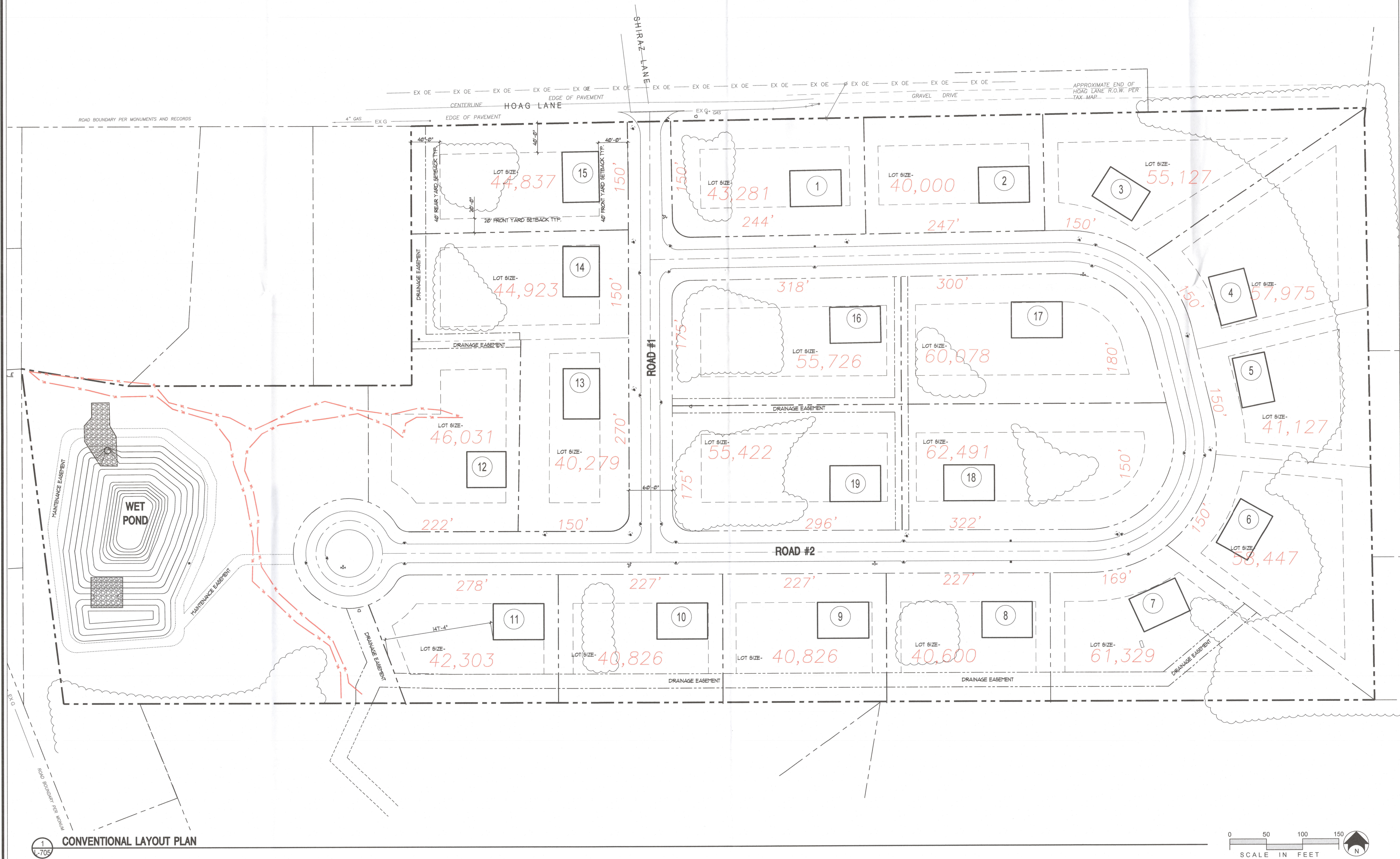
ISSUED AND REVISIONS NOTIFICATION		Symbol Indicates Revision Issued	
No. (Rev.)	Description	Date	No. (Rev.)
1			
2			
3			
4			
5			
6			
7			



Drawn By: VER
Checked By: SF
Title: SEPTEMBER 26, 2022
Scale: AS NOTED

TITLE:
CONVENTIONAL
LAYOUT PLAN
-21 LOTS

L-705



CONVENTIONAL LAYOUT PLAN

	SEWER SYSTEM TYPE	LOT NUMBERS
Force Main	FORCE MAIN SYSTEM SEWER	8, 9, 10, 11, 12, 13, 20 = (7) TOTAL
Gravity	GRAVITY SYSTEM SEWER	1, 2, 3, 4, 5, 6, 7, 14, 15, 16, 17, 18, 19, 21 = (14)

	SEWER SYSTEM TYPE	LOT NUMBERS
Force Main	FORCE MAIN SYSTEM SEWER	8, 9, 10, 11, 12, 13, 20 = (7) TOTAL
Gravity	GRAVITY SYSTEM SEWER	1, 2, 3, 4, 5, 6, 7, 14, 15, 16, 17, 18, 19, 21 = (14)

MANHOLE #	STRUCTURE TYPE	RM ELEVATION	INVERT ELEVATIONS	
			N	OUT
EX MH	EXISTING	102.40	8' * 102.00 (S)	102.00 (E)
MH1	MANHOLE ¹	102.40	8' * 103.30 (S)	8' * 103.00 (N)
MH2	MANHOLE ²	102.60	8' * 103.15 (S)	8' * 103.61 (N)
MH W/RT #A	FORCED MANHOLE ³	102.00	3' * 102.00 (S)	8' * 104.00 (N)
MH3	MANHOLE ⁴	114.00	8' * 109.90 (E)	8' * 109.00 (W)
MH4	MANHOLE ⁵	114.00	8' * 105.95 (E)	8' * 105.68 (W)
MH5	MANHOLE ⁶	114.00	8' * 104.10 (SE)	8' * 104.60 (NW)
MH W/RT #A	FORCED MANHOLE ⁷	102.00	3' * 103.80 (S)	8' * 102.00 (N)
MH5B	MANHOLE ⁸	103.00	8' * 103.00 (S)	8' * 103.00 (N)
MH5C	MANHOLE ⁹	103.00	8' * 103.00 (E)	8' * 103.00 (W)
C/O MH3A	CLEAR OUT MH	65.00	3' * 64.80 (SE)	3' * 64.80 (NE)
C/O MH3A	CLEAR OUT MH	69.00	3' * 68.90 (SE)	3' * 68.90 (NE)

MANHOLE #	STRUCTURE TYPE	RM ELEVATION	INVERT ELEVATIONS	
			N	OUT
EX MH	EXISTING	102.40	8' * 102.00 (S)	102.00 (E)
MH1	MANHOLE ¹	102.40	8' * 103.30 (S)	8' * 103.30 (N)
MH2	MANHOLE ²	102.60	8' * 103.15 (S)	8' * 103.61 (N)
MH W/RT #A	FORCED MANHOLE ³	102.60	3' * 102.60 (S)	8' * 104.25 (N)
MH3	MANHOLE ⁴	114.00	8' * 109.92 (S)	8' * 109.90 (N)
MH4	MANHOLE ⁵	114.00	8' * 109.95 (S)	8' * 109.68 (N)
MH5	MANHOLE ⁶	114.00	8' * 104.16 (SE)	8' * 114.60 (NW)
MH W/RT #A	FORCED MANHOLE ⁷	113.00	3' * 108.80 (S)	8' * 107.00 (N)
MH5B	MANHOLE ⁸	103.00	8' * 103.00 (S)	8' * 103.00 (E)
MH5C	MANHOLE ⁹	103.00	8' * 103.00 (S)	8' * 103.00 (N)
C/O MH3A	CLEAR OUT MH	65.00	3' * 64.80 (SE)	3' * 64.80 (NE)
C/O MH3A	CLEAR OUT MH	69.00	3' * 68.90 (SE)	3' * 68.90 (NE)

1	MEET EXISTING LINE AND GRADE.	14	CONNECTION REQUIREMENTS: 90% STANDARD MAXIMUM FLECTOR DENSITY (90% IN SUBGRADE AREA).
2	CLOSE OPENING INTO EXISTING SANITARY STRUCTURE WITH WATER TIGHT CONNECTION.	15	INSTALL BOLLARD SHALL PER DETAIL 1-34, 304-A IN PAPER 1-102.
3	PROPOSED GAS LINES NOT SHOWN FUTURE GAS LINE LAYOUT TO BE COORDINATED WITH NATIONAL GRID.	16	FOUNDATION DRAM SHALL DRAN TO DAYLIGHT WHEN POSSIBLE. SEE NOTE 33 WHEN FOUNDATION DRAM CAN NOT DAYLIGHT; ROCKET SCREEN TO BE INSTALLED; FOUNDATION DRAM NOT PART OF SITE PLAN APPROVAL. COORDINATE WITH TOWN OF MAINE PLANNING DEPARTMENT SHALL FOR COORDINATION PURPOSES ONLY.
4	PROPOSED ELECTRIC SERVICE NOT SHOWN FUTURE ELECTRIC LAYOUT TO BE COORDINATED WITH NATIONAL GRID.	21	WHERE FOUNDATION DRAINS CANNOT BE DAYLIGHTED, THEY SHALL DRAN TO A SURF PUMP CROCK AND A SURF PUMP BE PROVIDED TO DAYLIGHT. ROCKET SCREEN TO BE INSTALLED.
5	SURVEYOR TO PROVIDE EASEMENTS FOR FINAL APPROVAL.	22	CONSTRUCT CROCK MALE TO FLOW TOWARDS SUEALE ALONG SOUTHERLY PROPERTY LINE. MAINTAIN THROUGHOUT CONSTRUCTION.
6	BUILDUP TO PROVIDE GRASSY SANITARY SYSTEM OR APPROVED EQUAL. SEE PROFILE 21-4-600 AND DETAILS ON 1-501.	23	OUTFLOW STRUCTURE AND PIPE PER DETAIL 20A-500.
7	GRAVITY SANITARY LATERAL, COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS. PROVIDE ONE LATERAL PER LOT. (TYPICAL) MINIMUM SLOPE FOR LATERALS TO BE 1% (1" PER FT.) ALL LATERALS TO BE OWNED BY HOMEOWNER.	24	CONTRACTOR TO FIELD VERIFY PIPE, INVERT, SLOPE, SIZE AND LOCATION PRIOR TO CONSTRUCTION.
8	8.1: SANITARY SYSTEM LATERAL, COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS. PROVIDE ONE LATERAL PER MANUFACTURER OR APPROVED EQUAL. ALL LATERALS & PUMPS OWNED BY HOMEOWNER. SEE PROFILE 24-600.	25	WTE CONNECTION SANITARY FORCEMAIN SERVICE TO PRIMARY FORCEMAIN REFER TO SANITARY LATERAL CONNECTION PER DETAIL 6A-600.
9	LOW SUEALE SANITARY FORCEMAIN MAN. PER PROFILE 24-600.	26	LOTS 3, 6, 11, 12, 13, 15 AND 20 WILL REQUIRE PLACEMENT OF COMPACTION TONS BEHIND THE BASEMENT SLAB PER DETAIL 14-503.
10	SANITARY VENT AND TRAP PER DETAIL 55-501. COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS AND LOW SUEALE SANITARY MANUFACTURER AND 1" MANUFACTURER OR APPROVED EQUAL.	27	REFER TO 1-102 THRU 1-105 FOR GRADINGS AND DRAINAGE THROUGHOUT CONSTRUCTION SEQUENCE STAGES.
11	NOTE DELETED.	28	HOME BUILDER TO INSTALL ROOF DRAM AND DIRECT RUNOFF AWAY FROM HOUSE TOWARDS DRAINAGE SUEALE OR STORMWATER BASEMENT.
12	SANITARY WATER LINE CROSSING REFER TO DETAIL 34-501. FOR REQUIRED SEPARATION DISTANCES OR INSTALLATION METHODS.	29	HOMEOWNER/ DEVELOPER TO INSTALL PLANT MATERIAL TO STABILIZE SOIL.
13	FORCE MAIN CHROVIDE (NO EXPOSED SEWER, ACCESS TO PIPES ONLY.)	30	MAINTENANCE ACCESS: HYDROSC REQUIRES A 10'-0" WIDE ACCESSWAY AT 10'-0" WIDE & A MAXIMUM PLANTMENT PATH BOUND 15'-0" WIDE AND IS CONSTRUCTED AT A MAXIMUM 1% SLOPE (125%).
14	OCULA TO PROPOSED DESIGN & INSTALLATION OF ALL WATER FACILITIES INCLUDING FIRE HYDRANTS, 1/2" & 3/4" LINES AND SIZES.	31	OUTLET STRUCTURE AND POND OUDRAN OUTFLOW PIPES SHALL HAVE ANTISEEP COLLARS INSTALLED PER DETAIL 10A-500.
15	INSTALL PIPE INVERT AND VALVE, BASED ON COORDINATION PURPOSES (& HYDRANTS) IF DETAIL 40-500.	32	INSTALL W/ POND DRAM AT LEVEL INVERT @#229. SEE DETAIL 51A-504.
16	PROVIDE MINIMUM 1" VERTICAL & 41" HORIZONTAL SLOPES ON ALL SLOPES UNLESS OTHERWISE NOTED.	33	BORE UNDER HOUS LANE PER DETAIL 44A-500.
17	INSTALL WATER LINE LATERAL TO PERUSE COORDINATE LOCATION WITH ARCHITECTURAL DRAWINGS.	34	PROTECT EXISTING GAS LINE.

2003

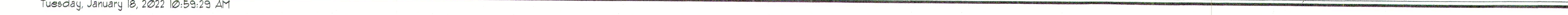
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CLIENT:
HOAG ROAD PROPERTIES, LLC

 Springer

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- TAX MAP #04-01-392 IS CURRENTLY ZONED RESTRICTED AGRICULTURE (RA DISTRICTS).
- THE FOLLOWING USES ARE PERMITTED IN RA DISTRICTS:
 - *** ANY USE PERMITTED IN RESIDENTIAL DISTRICT R-1, ACCORDING TO THE SAME RESTRICTIONS.
 - *** ANY USE PERMITTED IN RESIDENTIAL DISTRICT R-3, ACCORDING TO THE SAME RESTRICTIONS.

MIN. FRONTAGE	N/A
MIN. LOT AREA	N/A
FRONT YARD SETBACK	40'-0"
SIDE YARD SETBACK	20'-0"
REAR YARD SETBACK	40'-0"

- UTILIZE RESIDENTIAL (RI) DISTRICT ZONING CRITERIA FOR 16 LOT CONVENTIONAL PLAN LOTS.

MIN. FRONTAGE	15'-0"
MIN. LOT AREA	40,000 SF
FRONT YARD	4'-0"
SIDE YARD	2'-0"
REAR YARD	4'-0"



NOT FOR CONSTRUCTION

WOODLAND HILLS SUBDIVISION

5280 HOAG LANE, MANLIUS, NY

CLIENT:
HOAG ROAD PROPERTIES, LLC

[illegible]

Drawn By: V.E.R.
Checked By: SF.
KFA Proj. No.: 37050
Date: JULY 29, 2022
Scale: AS NOTED

Title: **LAYOUT PLAN**

L-400

Expected
Fee: _____

TOWN OF MANLIUS
PLANNING DEPARTMENT
INITIAL APPEARANCE APPLICATION

DATE: 11/03/2022

Name of Project: DIMON HILL SUBDIVISION

Applicant must submit 12 copies of all site plans, surveys, and supporting data with the final application before a planning board meeting can be scheduled.

Location of Project: 4911 PALMER ROAD

Type of Project:

☐ Division of Land ☒ Subdivision ☐ Accessory Use ☐ Zone Change ☐ Site Review ☐ Other _____

Developer: RONALD L. DIMON

Phone: (315) 345-4408

Address: 4911 PALMER ROAD, MANLIUS, NY

Zip: 13104

Tax Map Number(#)/s: ORIGINALLY 116-1-22.4 & 116-1-22.2

Present Zoning: RA

Desired Zoning: RA

Total Acreage: 34.907 AC.

Total Number of Lots: 2

Property Owner/s: RONALD L. DIMON

Phone: (315) 345-4408

Address: 4911 PALMER ROAD, MANLIUS, NY

Zip: 13104

Tax Map#(s): 116-1-22.4

Owner's Signature: Ronald L. Dimon

Printed Name: Ronald L. Dimon

Property Owner/s: _____

Phone: _____

Address: _____

Zip: _____

Tax Map#(s): _____

Owner's Signature: _____

Printed Name: _____

Use next page for additional known property owners' information

Planning Board Meeting Date Assignment: _____

Fee: _____

Paid: _____

Per: ☐ Credit/Debit Card ☐ Check ☐ Cash

TOWN OF MANLIUS
PLANNING DEPARTMENT
INITIAL APPEARANCE APPLICATION
(continued)

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

Short Environmental Assessment Form

Part 1 - Project Information

Instructions for Completing

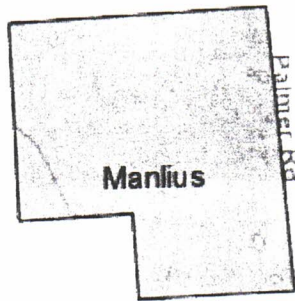
Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

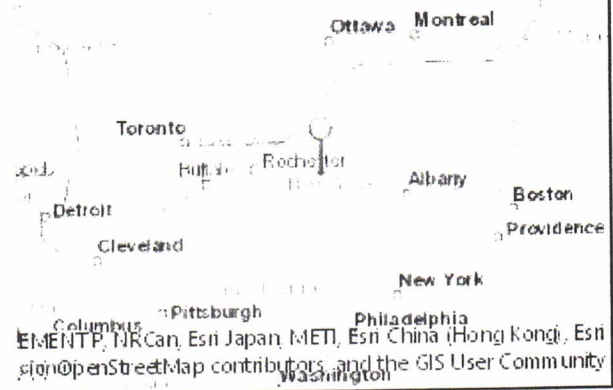
Part 1 – Project and Sponsor Information			
Name of Action or Project: Dimon Hills Subdivision			
Project Location (describe, and attach a location map): West side Palmer Rd., approximately 2550' from the centerline of Peck Hill Road			
Brief Description of Proposed Action: Subdivide an existing residential parcel to create a lot for new building construction.			
Name of Applicant or Sponsor: Ronald L. Dimon		Telephone: 315-345-4408 E-Mail:	
Address: 4911 Palmer Rd.			
City/PO: Manlius		State: NY	Zip Code: 13104
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.		NO ☒	YES ☐
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: OCHD: Sewage Disposal;		NO ☒	YES ☐
3. a. Total acreage of the site of the proposed action?		34.907 acres	
b. Total acreage to be physically disturbed?		0 acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		34.907 acres	
4. Check all land uses that occur on, are adjoining or near the proposed action:			
5. ☐ Urban ☒ Rural (non-agriculture) ☐ Industrial ☐ Commercial ☒ Residential (suburban)			
☐ Forest ☒ Agriculture ☐ Aquatic ☐ Other(Specify):			
☐ Parkland			

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	☒	☐
b. Consistent with the adopted comprehensive plan?	☐	☒	☐
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO ☐	YES ☒	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO ☒	YES ☐	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO ☒	YES ☐	
b. Are public transportation services available at or near the site of the proposed action?	☒	☐	
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☒	☐	
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: _____ _____	NO ☒	YES ☐	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____ Individual dug well. _____	NO ☒	YES ☐	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____ Individual sewage disposal system. _____	NO ☒	YES ☐	
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	NO ☒ ☒	YES ☐ ☐	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO ☐	YES ☒	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☒	☐	
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____ _____ _____			

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: ☐ Shoreline ☐ Forest ☒ Agricultural/grasslands ☐ Early mid-successional ☒ Wetland ☒ Urban ☐ Suburban		
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES
	☒	☐
16. Is the project site located in the 100-year flood plan?	NO	YES
	☐	☒
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe:	NO	YES
	☒	☐
	☐	☐
	☐	☐
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment:	NO	YES
	☒	☐
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe:	NO	YES
	☒	☐
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe:	NO	YES
	☒	☐
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE Applicant/sponsor/name: <u>Ronald L. Dimon</u> Date: <u>11-16-22</u> Signature: <u><i>Ronald L. Dimon</i></u> Title: <u>Owner</u>		

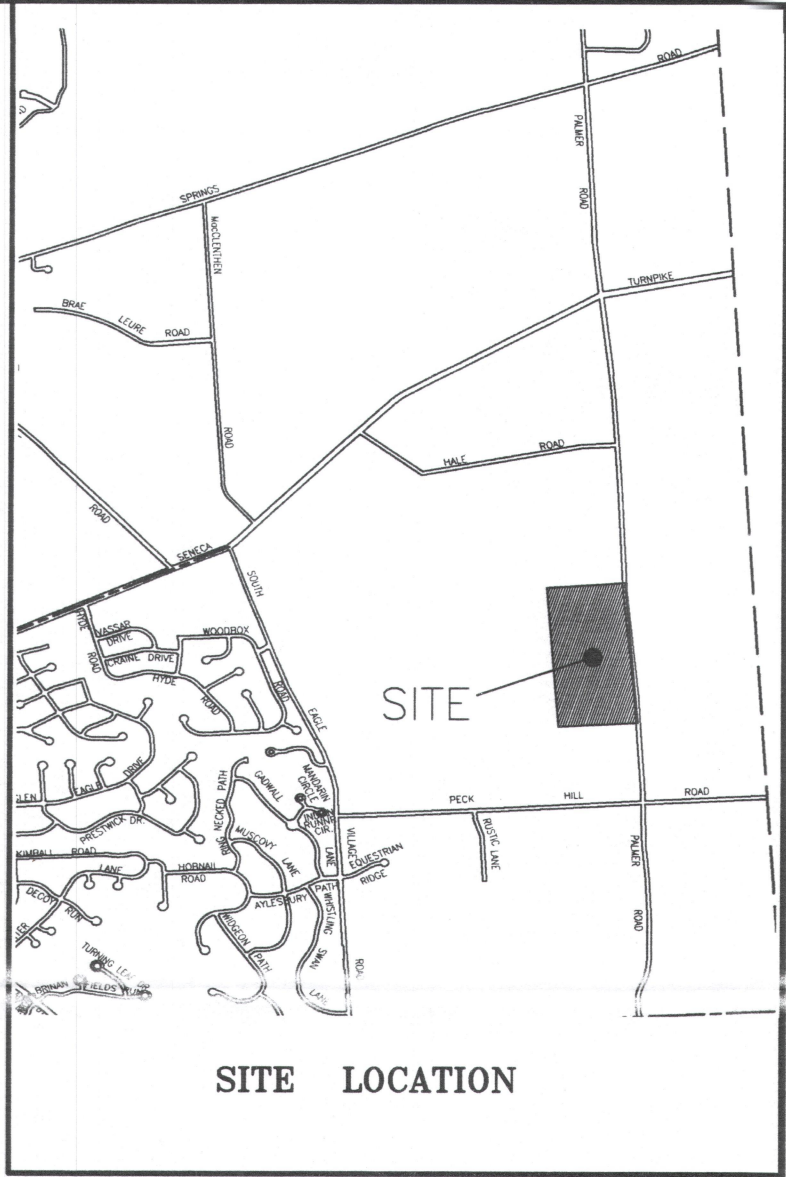


Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

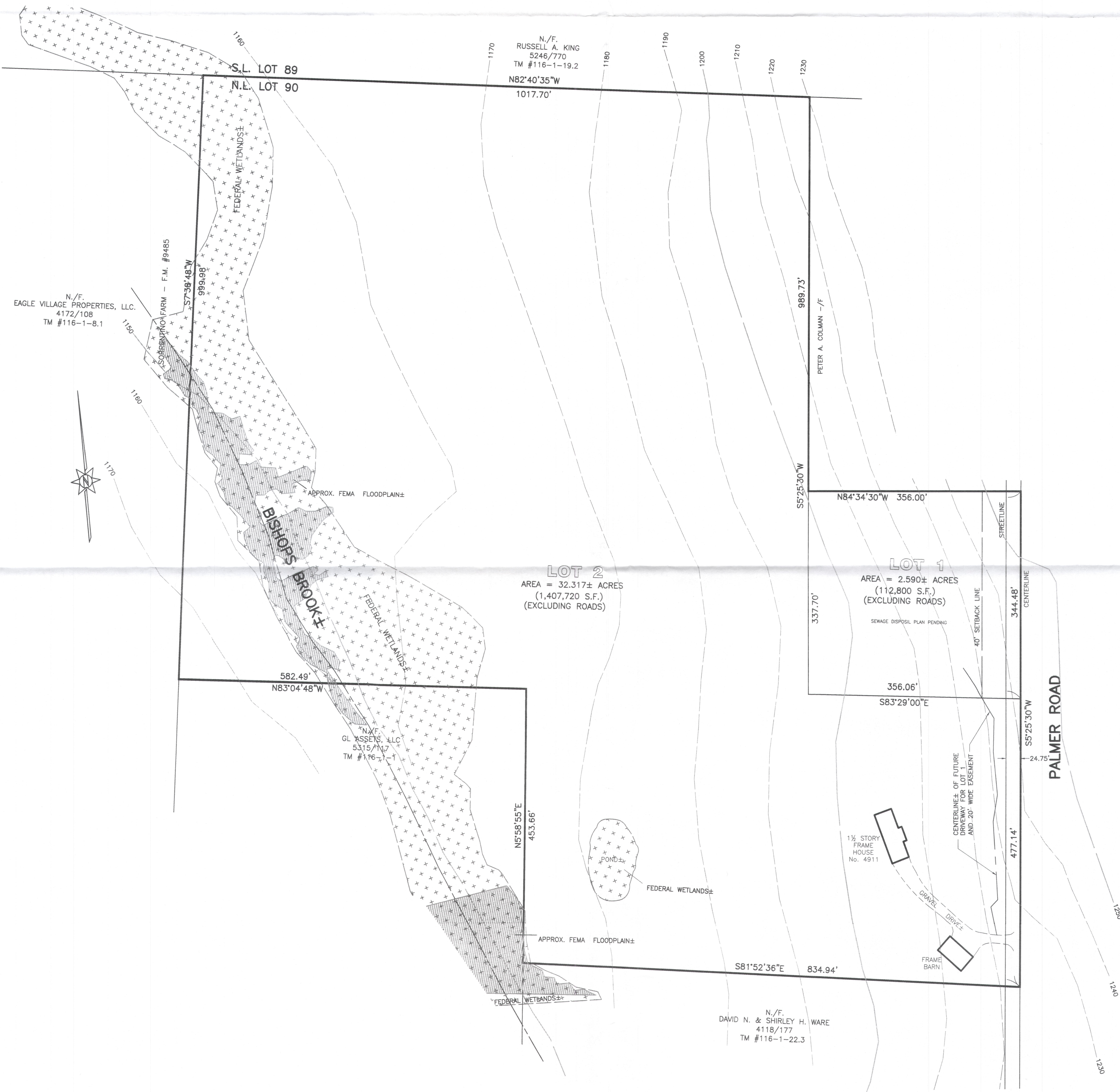


Gamin, USGS, Intermap, INCREMENTP, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	No
Part 1 / Question 12b [Archeological Sites]	No
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	No
Part 1 / Question 16 [100 Year Flood Plain]	Yes
Part 1 / Question 20 [Remediation Site]	No



SITE LOCATION

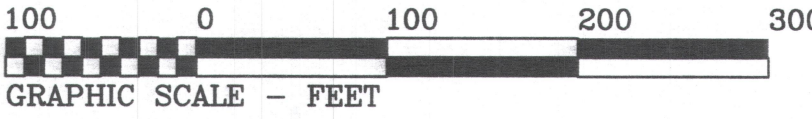


FLOOD ZONE INFORMATION OBTAINED FROM THE ONONDAGA COUNTY GIS SITE

CONTOURS FROM THE ONONDAGA COUNTY GIS SITE
CONTOUR INTERVAL = 10'

ZONED: RA - RESTRICTED AGRICULTURAL
MINIMUM FRONTAGE W/ SEPTIC - 200'
MINIMUM AREA W/ SEPTIC - 100,000 S.F.
MINIMUM FRONT YARD SETBACK - 40'
MINIMUM REAR YARD SETBACK - 40'
MINIMUM SIDE YARD SETBACK - 20'

TOTAL AREA = 34.907± ACRES (EXCLUDING ROADS)



GRAPHIC SCALE - FEET

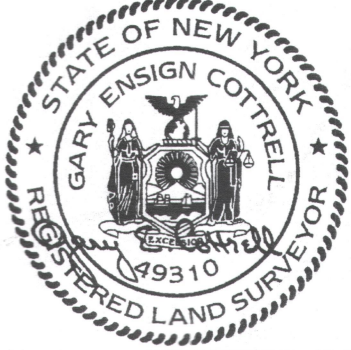
I HEREBY APPROVE THIS TRACT MAP.

RONALD L. DIMON, OWNER
4911 PALMER ROAD
MANLIUS, N.Y. 13104
(315) 345-4408

PLANNING BOARD CHAIRPERSON
TOWN OF MANLIUS

COUNTY HEALTH DEPARTMENT APPROVAL

THE UNDERSIGNED CERTIFIES THAT
THIS MAP WAS MADE FROM AN
ACTUAL SURVEY ON 11-16-1995
VOID WITHOUT SIGNER'S EMBOSSED SEAL.



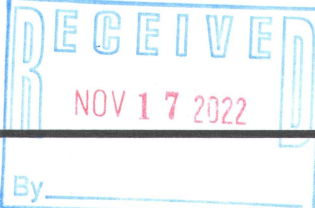
NOT A VALID SUBDIVISION WITHOUT THE
RECORDING DATA OF THE MAP FILING
WITH THE COUNTY CLERK'S OFFICE.

APPROVAL OF THIS PLAN IS INDICATIVE ONLY THAT
LOTS SHOWN HEREON SATISFY MINIMUM TOWN
SUBDIVISION AND ZONING REQUIREMENTS. THEY ARE
NOT BUILDING LOTS UNDER ONONDAGA COUNTY HEALTH
REGULATIONS. CONSTRUCTION PERMITS WILL NOT BE
ISSUED UNTIL INDIVIDUAL LOT SEWAGE DISPOSAL PLANS
ARE SUBMITTED TO AND APPROVED BY THE ONONDAGA
COUNTY HEALTH DEPARTMENT.

- PRELIMINARY PLAN -

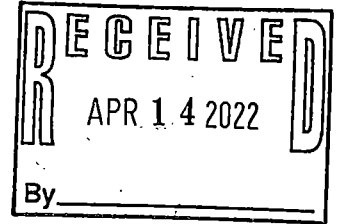
**DIMON HILL SUBDIVISION
PART OF LOT 90 - TOWN OF MANLIUS
ONONDAGA COUNTY, NEW YORK**

I.D: 116-01-22.2	FILE: ROLL: 116-1-22	BIN: 2TT
DATE: 11-01-2022	SCALE: 1" = 100'	B/P:
REVISIONS		
COTTRELL LAND SURVEYORS, PC. 7308 STATE RTE 173, MANLIUS, NY 13104 (315) 682-8121, WWW.COTTRELLSURVEYORS.COM		



Expected
Fee: _____

TOWN OF MANLIUS
PLANNING DEPARTMENT
INITIAL APPEARANCE APPLICATION



DATE: 3/12/2022

Name of Project: "Pawsits Doggy Daycare"

Applicant must submit 12 copies of all site plans, surveys, and supporting data with the final application before a planning board meeting can be scheduled.

Location of Project: 8291 East Seneca turnpike Manlius, NY 13104

Type of Project:

☐ Division of Land ☐ Subdivision ☐ Accessory Use ☒ Zone Change ☐ Site Review ☐ Other _____

Developer: _____ Phone: _____

Address: _____ Zip: _____

Tax Map Number(#)/s: Map # 8701 lot 5 Tynswood

Present Zoning: R1 Desired Zoning: RA

Total Acreage: 7.342 Acres Total Number of Lots: 1

Property Owner/s: Danielle and Ryan Ewert Phone: 315-263-5154

Address: 8291 East Seneca turnpike Manlius, NY Zip: 13104

Tax Map#(s): 8701 Owner's Signature: Danielle Ewert

Printed Name: Danielle Ewert

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

Use next page for additional known property owners' information

Planning Board Meeting Date Assignment: _____

Fee: _____ Paid: _____ Per: ☐ Credit/Debit Card ☐ Check ☐ Cash

Planning Board - Initial

617.20
Appendix B
Short Environmental Assessment Form

Instructions for Completing

Part 1 - Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 - Project and Sponsor Information			
Name of Action or Project: Build Pole barn /structure for upscale doggy daycare			
Project Location (describe, and attach a location map): Map # 8701 on 8291 E. Seneca turnpike Manlius, NY 13104			
Brief Description of Proposed Action: To have a pole barn built approximately 40x50 to create a clean, safe, fun, upscale doggy daycare for people to bring their fur babies while at work or busy. To play + interact with dogs to enrich their lives and their owners.			
Name of Applicant or Sponsor: Danielle and Ryan Ewert		Telephone: 315-263-5154 E-Mail: ewert13104@yahoo.com	
Address: 8291 E. Seneca turnpike			
City/PO: Manlius		State: NY	Zip Code: 13104
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation?		NO	YES
If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.		☒	☐
2. Does the proposed action require a permit, approval or funding from any other governmental Agency?		NO	YES
If Yes, list agency(s) name and permit or approval:		☒	☐
3.a. Total acreage of the site of the proposed action? <u> 7 </u> acres			
b. Total acreage to be physically disturbed? <u> </u> acres			
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? <u> </u> acres We own 7.34 acres			
4. Check all land uses that occur on, adjoining and near the proposed action.			
☐ Urban ☒ Rural (non-agriculture) ☐ Industrial ☐ Commercial ☒ Residential (suburban) ☐ Forest ☒ Agriculture ☐ Aquatic ☐ Other (specify): _____ ☐ Parkland			

5. Is the proposed action,	NO	YES	N/A
a. A permitted use under the zoning regulations?	☐	☒	☐
b. Consistent with the adopted comprehensive plan?	☐	☐	☒
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	☐	☒	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?	NO	YES	
If Yes, identify: _____	☒	☐	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO	YES	
	☒	☐	
b. Are public transportation service(s) available at or near the site of the proposed action?	☒	☐	
c. Are any pedestrian accommodations or bicycle routes available on or near site of the proposed action?	☒	☐	
9. Does the proposed action meet or exceed the state energy code requirements?	NO	YES	
If the proposed action will exceed requirements, describe design features and technologies: _____	☒	☐	
10. Will the proposed action connect to an existing public/private water supply?	NO	YES	
If No, describe method for providing potable water: <u>Not sure yet if we are able to connect to our home or if we will need another line ran</u>	☐	☐	
11. Will the proposed action connect to existing wastewater utilities?	NO	YES	
If No, describe method for providing wastewater treatment: _____	☒	☐	
12. a. Does the site contain a structure that is listed on either the State or National Register of Historic Places?	NO	YES	
b. Is the proposed action located in an archeological sensitive area?	☒	☐	
	☒	☐	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO	YES	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☒	☐	
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____			
14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: ☒ Shoreline ☒ Forest ☐ Agricultural/grasslands ☒ Early mid-successional ☒ Wetland ☒ Urban ☐ Suburban			
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES	
	☒	☐	
16. Is the project site located in the 100 year flood plain?	NO	YES	
	☒	☐	
17. Will the proposed action create storm water discharge, either from point or non-point sources?	NO	YES	
If Yes, a. Will storm water discharges flow to adjacent properties? ☒ NO ☐ YES	☒	☐	
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe: ☒ NO ☐ YES	☒	☐	

18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____	NO	YES
	☒	☐
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____	NO	YES
	☒	☐
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____	NO	YES
	☒	☐
I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE Applicant/sponsor name: <u>Danielle and Robert Everett</u> Date: <u>3/12/2000</u> Signature: <u>Danielle Everett</u> <u>Robert Everett</u>		

Part 2 - Impact Assessment. The Lead Agency is responsible for the completion of Part 2. Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	☐	☐
2. Will the proposed action result in a change in the use or intensity of use of land?	☐	☐
3. Will the proposed action impair the character or quality of the existing community?	☐	☐
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	☐	☐
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	☐	☐
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	☐	☐
7. Will the proposed action impact existing:	☐	☐
a. public / private water supplies?	☐	☐
b. public / private wastewater treatment utilities?	☐	☐
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	☐	☐
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	☐	☐

	No, or small impact may occur	Moderate to large impact may occur
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	☐	☐
11. Will the proposed action create a hazard to environmental resources or human health?	☐	☐

Part 3 - Determination of significance. The Lead Agency is responsible for the completion of Part 3. For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

- ☐ Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
- ☐† Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.

Name of Lead Agency

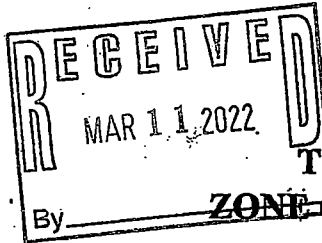
Date

Print or Type Name of Responsible Officer in Lead Agency

Title of Responsible Officer

Signature of Responsible Officer in Lead Agency

Signature of Preparer (if different from Responsible Officer)



\$300

TOWN OF MANLIUS

ZONE CHANGE APPLICATION

1. Name of Person applying for Zone Change Danielle and Ryan Ewert
Address of person applying 8291 East Seneca tpk Manlius, NY 13104
Cell Number 315-263-5154 Danielle Phone Number 315-263-2530 (Ryan cell)
2. Name: (owner of record) of land where Zone Change would occur Danielle and Ryan Ewert
Address (owner of record) 8291 East Seneca turnpike Manlius, NY 13104
Cell Number (owner of record) 315-263-5154 Phone Number _____
3. Tax Map Number of property where Zone Change would occur No 8701- (lot 5, Timswood)
4. Is this property located in a flood hazard area? No 099-01-27.4
If so, what flood area is the property in it?

5. Present zoning classification of property R 1
6. Desired zoning classification RA
Reason for Change of Zone (use additional sheets if necessary) Trying to be approved to have a structure professionally built by a company to have an upscale dog daycare + boarding (short term).
7. What is lot size? 7.342 acres
8. If the Zone Change is granted, will the use of the property conform to the District regulations as stated in Chapter 155 Article III of the Town of Manlius Municipal Code? I believe so
9. Is the property within the protectively zoned area of a housing project authorized under the public housing law? No
10. Is the property within five hundred (500) feet of the boundaries of any city, village, town, county, state park or parkway? No
If yes, please specify _____
11. Is the property within five hundred (500) feet from the boundary of any existing or proposed County or State park or other recreation area, or from the right-of-way of any existing or proposed county or state parkway, thruway, expressway, road or highway, or from the existing or proposed right-of-way of any stream or drainage channel owned by the county or for which the county has established channel lines, or from the existing or proposed boundary of any county or state owned land on which a public building or institution is situated? No

If yes, please specify _____

12. List the uses of all abutting property We have residential with apartments being rented on one side and a commercial vet to the left (other side of us) Behind us ~~we~~ there is 42 acres of horse trails.

13. The following must be included with your 12 application packets unless otherwise specified and/or specifically waived by the Town Board:

- An environmental assessment form which can be obtained from the Town Clerk, or an environmental impact statement.
- Copy of a survey of the premises certified by a New York State licensed surveyor.
- Legal description of the premises.
- This application must be signed by both the owner of record of the property and the applicant.

The failure to answer any question on this application, the failure to submit any item as specified or the failure to execute this application will result in a delay in the processing of the application.

Date 3/9/2022

Danielle Ewert
Applicant 1

Date 3/9/2022

Ryan Ewert
Applicant 2

Date _____

Applicant

TOWN OF MANLIUS

DISCLOSURE AFFIDAVIT

This affidavit is a part of and must be completed and attached to every application, petition, request submitted for a *site plan, variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit.*

STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

I. Danielle Ewert, being duly sworn, deposes and says that (s) he is:

Application

(applicant, petitioner, corporation officer, property owner, etc.)

II. That deponent has read and is familiar with the provisions of the General Municipal Law, Section 809 which states:

- A. Every application, petition or request submitted for a site plan, variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit, pursuant to the provisions or any ordinance, local law, rule or regulation constituting the zoning and planning regulations of a municipality shall state the name, residence and the nature and extent of the interest of any state officer or any officer or employee of such municipality is a part, in the person, partnership or association making such application, petition or request (hereinafter called the applicant) to the extent known to such applicant.
- B. For the purpose of this action an officer or employee shall be deemed to have an interest in the applicant when (s)he, his/her spouse, or their brothers, sisters, parents, children, grandchildren, or the spouse of any of them:
 - 1) is the applicant, or
 - 2) is an officer, director, partner or employee of the applicant, or
 - 3) legally or beneficially owns or controls stock of a corporate applicant or is a member of a partnership or association applicant, or
 - 4) is a party to an agreement with such an applicant, express or implied, whereby (s) he may receive any payment or other benefit, whether or not for services rendered, or contingent upon the favorable approval of such application, petition or request.
- C. Ownership of less than five percent (5%) of the stock of a corporation whose stock is listed on the New York or American Stock Exchanges shall not constitute an interest for the purposes of this section.
- D. A person who knowingly and intentionally violates this section shall be guilty of a misdemeanor.

III. That no Town of Manlius officer, employee or a relative of either, as defined in Section 809 General Municipal Law has any interest in this application.

-OR-

If a Town of Manlius officer, employee or relative of either as defined in Section 809 General Municipal law has any interest in this application, the full particulars are provided on an attached sheet.

Date: 03/10, 2022

Danielle Ewert
(Print Name)

Danielle Ewert
(Signature)

(Entity Name)

By (Officer) _____ (Title)

(Mailing Address of Applicant)

(Telephone Number)

Date: 03/10, 2022

Ryan Ewert
(Print Name)

Ryan Ewert
(Signature)

(Entity Name)

By (Officer) _____ (Title)

(Mailing Address of Applicant)

(Telephone Number)

ACKNOWLEDGEMENTS

STATE OF NEW YORK)
) SS:
COUNTY OF ONONDAGA)

On this 10 day of March in the year 2022, before me, the undersigned, a notary public in and for said state, personally appeared Ryan Ewert and Danielle Ewert, and _____ personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within Petition and acknowledged to me the he/she/they executed the same in his/her/their capacity, and that by his/her/their signature(s) on the Petition, the individual or the persons upon behalf of which the individual acted executed the instrument.

[Signature]
Notary Public

LISA M WELCH
NOTARY PUBLIC STATE OF NEW YORK
ONONDAGA
LIC. #01WE6060394
COMM. EXP. 06/25/2023

SHORT ENVIRONMENTAL ASSESSMENT FORM

For UNLISTED ACTIONS Only

RECEIVED
MAR 11 2022
By _____

PART I – PROJECT INFORMATION (TO BE COMPLETED BY APPLICANT OR PROJECT SPONSOR)

1. APPLICANT/SPONSOR: Danielle and Ryan Ewert	2. PROJECT NAME:
3. PROJECT LOCATION: 8291 East Seneca turnpike Hanlius, NY 13104 COUNTY <u>Oranago</u> MUNICIPALITY	
4. PRECISE LOCATION: (Street address and road intersections, prominent landmarks, etc., or provide map) 8291 East Seneca turnpike Hanlius, NY 13104	
5. PROPOSED ACTION IS: ☒ NEW ☐ EXPANSION ☐ MODIFICATION/ALTERATION	
6. DESCRIBE PROJECT BRIEFLY: To have a company build a polebarn, to create an upscale doggy daycare. To be able to provide a clean, safe, fun environment for people to be able to leave their fur babies while at work or busy.	
7. AMOUNT OF LAND AFFECTED: Initially <u>1</u> Acres Ultimately <u> </u> Acres	
8. WILL PROPOSED ACTION COMPLY WITH EXISTING ZONING OR OTHER EXISTING LAND USE RESTRICTIONS? ☒ Yes ☐ No If no, describe briefly:	
9. WHAT IS THE PRESENT LAND USE IN THE VICINITY OF THE PROJECT? ☒ RESIDENTIAL ☐ INDUSTRIAL ☒ COMMERCIAL ☒ AGRICULTURAL ☐ PARK/FOREST/OPEN SPACE ☐ OTHER Describe: <u>There is a commercial vet to the left of us + a homeowner renting to the right</u>	
10. DOES ACTION INVOLVE A PERMIT APPROVAL, OR FUNDING, NOW OR ULTIMATELY FROM ANY OTHER GOVERNMENTAL AGENCY (FEDERAL, STATE OR LOCAL)? ☐ Yes ☐ No If yes, list agency(s) name and permit/approvals:	
11. DOES ANY ASPECT OF THE ACTION HAVE A CURRENTLY VALID PERMIT OR APPROVAL? ☐ Yes ☒ No If yes, list agency(s) name and permit/approvals:	
12. AS A RESULT OF PROPOSED ACTION, WILL EXISTING PERMIT/APPROVAL REQUIRE MODIFICATION? ☐ Yes ☐ No	
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE TO THE BEST OF MY KNOWLEDGE APPLICANT/SPONSOR NAME: <u>Danielle Ewert</u> SIGNATURE: <u>Danielle Ewert</u> DATE: <u>3/9/2022</u>	

IF THE ACTION IS IN A COASTAL AREA, AND YOU ARE A STATE AGENCY, COMPLETE A COASTAL ASSESSMENT FORM BEFORE PROCEEDING WITH THIS ASSESSMENT.

PART II - ENVIRONMENTAL ASSESSMENT (TO BE COMPLETED BY AGENCY)

- A. DOES ACTION EXCEED ANY TYPE 1 THRESHOLD IN 6 NYCRR, PART 617.4? IF YES, COORDINATE THE REVIEW PROCESS AND USE THE FULL EAF. ☐ YES ☒ NO
- B. WILL ACTION RECEIVE COORDINATED REVIEW AS PROVIDED FOR UNLISTED ACTIONS IN 6 NYCRR, PART 617.6? IF NO, A NEGATIVE DECLARATION MAY BE SUPERSEDED BY ANOTHER INVOLVED AGENCY. ☐ YES ☐ NO
- C. COULD ACTION RESULT IN ANY ADVERSE EFFECTS ASSOCIATED WITH THE FOLLOWING: (ANSWERS MAY BE HANDWRITTEN, IF LEGIBLE).
- C1. EXISTING AIR QUALITY, SURFACE OR GROUNDWATER QUALITY OR QUANTITY, NOISE LEVELS, EXISTING TRAFFIC PATTERNS, SOLID WASTE PRODUCTION OR DISPOSAL, POTENTIAL FOR EROSION, DRAINAGE OR FLOODING PROBLEMS? EXPLAIN BRIEFLY:
NO
- C2. AESTHETIC, AGRICULTURAL, ARCHAEOLOGICAL, HISTORIC, OR OTHER NATURAL OR CULTURAL RESOURCES; OR COMMUNITY OR NEIGHBORHOOD CHARACTER: EXPLAIN BRIEFLY:
NO
- C3. VEGETATION OR FAUNA, FISH, SHELLFISH OR WILDLIFE SPECIES, SIGNIFICANT HABITATS, OR THREATENED OR ENDANGERED SPECIES? EXPLAIN BRIEFLY:
NO
- C4. A COMMUNITY'S EXISTING PLANS OR GOALS AS OFFICIALLY ADOPTED, OR A CHANGE IN USE OR INTENSITY OF USE OF LAND OR OTHER NATURAL RESOURCES? EXPLAIN BRIEFLY:
NO
- C5. GROWTH, SUBSEQUENT DEVELOPMENT, OR RELATED ACTIVITIES LIKELY TO BE INDUCED BY THE PROPOSED ACTION: EXPLAIN BRIEFLY:
NO
- C6. LONG TERM, SHORT TERM, CUMULATIVE, OR OTHER EFFECTS NOT IDENTIFIED IN C1-C5? EXPLAIN BRIEFLY:
NO
- C7. OTHER IMPACTS (INCLUDING CHANGES IN USE OF EITHER QUANTITY OR TYPE OF ENERGY)? EXPLAIN BRIEFLY:
NO
- D. WILL THE PROJECT HAVE AN IMPACT ON THE ENVIRONMENTAL CHARACTERISTICS THAT CAUSED THE ESTABLISHMENT OF A CRITICAL ENVIRONMENTAL AREA (CEA)? ☐ YES ☒ NO. IF YES, EXPLAIN BRIEFLY:
- E. IS THERE, OR IS THERE LIKELY TO BE, CONTROVERSY RELATED TO POTENTIAL ADVERSE ENVIRONMENTAL IMPACTS? ☒ YES ☐ NO. IF YES, EXPLAIN BRIEFLY:
Possibly by a neighbor that we do not get along with.

PART III - DETERMINATION OF SIGNIFICANCE (TO BE COMPLETED BY AGENCY)

Instructions: For each adverse effect identified above, determine whether it is substantial, large, important or otherwise significant. Each effect should be assessed in connection with its (a) setting (i.e., urban or rural); (b) probability of occurring; (c) duration; (d) irreversibility; (e) geographic scope; and (f) magnitude. If necessary, add attachments or reference supporting materials. Ensure that explanations contain sufficient detail to show that all relevant adverse impacts have been identified and adequately addressed. If question D or Part II was checked yes, the determination of significance must evaluate the potential impact of the proposed action on the environmental characteristics of the CEA.

- ☐ CHECK THIS BOX IF YOU HAVE IDENTIFIED ONE OR MORE POTENTIALLY LARGE OR SIGNIFICANT ADVERSE IMPACTS WHICH **MAY** OCCUR. THEN PROCEED DIRECTLY TO THE FULL EAF AND/OR PREPARE A POSITIVE DECLARATION.
- ☒ CHECK THIS BOX IF YOU HAVE DETERMINED, BASED ON THE INFORMATION AND ANALYSIS ABOVE AND ANY SUPPORTING DOCUMENTATION, THAT THE PROPOSED ACTION **WILL NOT** RESULT IN ANY SIGNIFICANT ADVERSE ENVIRONMENTAL IMPACTS **AND** PROVIDE ON ATTACHMENTS AS NECESSARY. THE REASONS SUPPORTING THIS DETERMINATION:

Name of Lead Agency

3/9/2022

Date

Print or Type Name of Responsible Officer in Lead Agency

Title of Responsible Officer

Signature of Responsible Officer in Lead Agency

Signature of Preparer (if different from responsible officer)

BOOK 4437 PAGE 260
BARGAIN AND SALE DEED

014748	RECEIVED
	\$.....
	REAL ESTATE
	JUL 13 2000
	TRANSFER TAX ONONDAGA COUNTY

This **Indenture**, made the 11TH day of June, 2000, between

[REDACTED]
[REDACTED]

DANIELLE J. EWERT AND RYAN EWERT,

MANLIUS
3138

of **8291 EAST SENECA STREET, MANLIUS NEW YORK 13104**, party of the second part:

Witnesseth, that the party of the first part, in consideration of ONE AND 00/100 dollars (\$1.00), lawful money of the United States, paid by the party of the second part, does hereby remise, release, and quitclaim unto the party of the second part, theirs heirs and assigns forever, all

THAT TRACT OR PARCEL OF LAND situate in the Town of Manlius, County of Onondaga and State of New York, being part of Farm Lot 88 in said Town and more particularly described as Lot 5 of the Tyneswood Subdivision according to a map of said Tract made by David A. Vredenburg, L.L.S., filed in the Onondaga County Clerk's Office on November 6, 1998 as Map No. 8701.

Subject to easements, covenants and restrictions of record.

Being the same premises conveyed by Allied Realty Corporation to John Frateschi and Julie Frateschi by deed dated December 3, 1998 and recorded in the Onondaga County Clerk's Office on December 3, 1998 in Book 4285 of Deeds at Page 165.

Together with the appurtenances and all the estate and rights of the party of the first part in and to said premises.

To have and to hold the premises herein granted unto the party of the second part, his heirs and assigns forever. And the party of the first part covenants that he has not done or suffered anything whereby the said premises have been incumbered in any way whatever.

In witness whereof, the party of the first part has hereunto set his hand and seal the day and year first written above written. In presence of:

[Signature] L.S.
[Signature] L.S.

STATE OF NEW YORK }
COUNTY OF ONONDAGA } ss.:

On the 11TH day of June, 2000 before me, the undersigned, personally appeared **JOHN FRATESCHI** and **JULIE FRATESCHI** personally known to me or proved to me on the basis of satisfactory evidence to be the individuals whose names are subscribed to the within instrument and acknowledged to me that they executed the same in their capacities, and that by their signatures on the instrument, the individuals, or the person upon behalf of which the individuals acted, executed the instrument.

LAURA L. SPRING
Notary Public, State of New York
Qualified in Onondaga County, No. 02SP4888675
Commission Expires March 16, 2007

[Signature]

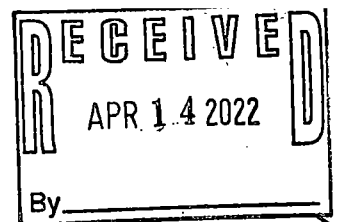
RECORDED & RETURNED
JAMES L. SONNEBORN, PC
241 WEST FAYETTE ST
SYRACUSE, NY 13202

12:53 07/13/00 0793000 D B-04437 P-259

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**TOWN OF MANLIUS
SPECIAL PERMIT APPLICATION
(Original or Renewal)**



DATE: 3/11/2022

Tax Map # 8701 (Lot 5 Tyneswood)

I Danielle and Ryan Ewert as applicant relative to property located at 8291 East Seneca turnpike Manlius, NY 13104 hereby request/apply for issuance/renewal (CIRCLE ONE) of a **SPECIAL PERMIT** from the Town of Manlius Town Board as required by the Town of Manlius Code, submit the following application and documentary evidence and/or information, including comprising the Exhibits in support of this request and certify that it is correct, true and accurate to the best of my/our knowledge and after reasonable due diligence and investigation. I further knowledge and agree that should any such evidence or information be later determined as false or not credible in any material respect, any special permit issued/renewed based thereon may be determined by the Town Board as void from the start or revocable.

Danielle Ewert Ryan Ewert
Applicant's Signature

A 1. Owner(s) of property: Danielle and Ryan Ewert

A 2. Status (Owner, Lessee) of each applicant: OWNER, OWNER

A 3. Present Zoning of Property: R1 changing to RA

A.4. Present Use of Property (describe in detail as best as reasonably possible- add additional pages as needed): Our home

A5 Describe property condition at present: Excellent condition . 7.34 acres

B 1. Proposed use of property: To add a pole barn about 400 yards from home for a potential doggy daycare. (currently have 7.34 acres)

B 2. Anticipated number of employees, guests, customers on property:
only family employees maybe 1 to 2 at most.
Customers limited to drop off + pick up of dogs/pups allowed.

B 3. Hours of Proposed Operation: 7am - 6pm

B 4. Anticipated Automobile Parking: We will provide a small area for up to 10 cars and a pick up + drop off area (10 min)

B 5. Parking Area Buffer/Screening: We will have parking lot buffers

B 6. Anticipated Vehicle Traffic Volume/Flow: We are back about 200 ft off the road so we do not anticipate any traffic change.

B 7. Proposed Site Lighting: Electrical ran

B 8. Anticipated noise sources, known decibel levels: This will be an indoor + outdoor dog daycare. Dogs will not be left out to bark. We do not anticipate any noise source except an occasional bark

B 9. Landscape:

a) Existing landscaping: Natural grass + trees

b) Proposed landscaping: Small landscape bed in front and walkway.

B 10. Proposed Signage: A sign on building and small sized sign at road maybe 3x5, 4x6, 5x6

B 11. Level of municipal and other services required to support the proposed activity (i.e., water supply sanitary sewage facilities): Septic tank installed, public water

B 12. Specific Requirements:

Town Code (District) Requirement: Proposal:

Parking Spaces

Lot Coverage

Front Yard Setback

Side Yard Setback

Rear Yard Setback

Maximum Height of Building

In addition, and notwithstanding any provisions hereof to the contrary or otherwise, any provisions of the Town Code or other laws, rules or regulations providing rights more favorable to and protective of Town shall be deemed incorporated herein by reference, and shall not be deemed superseded by less protective provisions herein.

In the event of a breach or default by Applicant, Town shall be entitled to pursue any and all legal rights and remedies pursuant to applicable law including, without limitation, the Town Code and shall be entitled to recover, in addition to any sums due, reasonable attorney's fees, costs and disbursements incurred in any such efforts.

If any part of this Agreement or the application thereof to any person or entity or circumstance is adjudged invalid, illegal or unconstitutional by any court of competent jurisdiction, such order or judgment shall be confined in its operation to the part of this law or in its application directly involved in the controversy in which such judgment shall have been rendered and shall not affect or impair the validity of the remainder of this Agreement or the application thereof to other persons, entities or circumstances. Further, in adjudging such invalid, illegal or unconstitutional provision or part thereof, the court shall attempt to modify same to a provision or part which is not illegal, invalid or unconstitutional and which best achieves the intent of such illegal, invalid or unconstitutional provision or part thereof.

The Town Supervisor has executed this agreement pursuant to a blanket Resolution adopted by the Town Board at a meeting thereof held on _____, 20__, and is duly authorized and empowered to execute this instrument and enter into this Agreement on behalf of the Town of Manlius.

In the event Applicant is a closely held corporation, partnership or limited liability company, its three (3) largest principals shall be signatories to this Agreement, as joint and severable parties with Applicant and Town.

This instrument shall be executed in triplicate. At least one original shall be permanently filed, after execution thereof, in the office of the Town Clerk and one in the Code Enforcement Office.

Dated: 3/12/2020 Danielle Ewert Danielle Ewert
Print Applicant Name Applicant's Authorized Signature/Title

Applicant Address: 8291 East Seneca turnpike
Manlius, NY 13104

Danielle Ewert Danielle Ewert
Print Applicant (Principal) Name Applicant's Principal Signature
Ryan Ewert Ryan Ewert
Print Applicant (Principal) Name Applicant's Principal Signature

Print Applicant (Principal) Name Applicant's Principal Signature

TOWN OF MANLIUS

By: _____

Name: _____

Title: _____

617.20
Appendix B
Short Environmental Assessment Form

Instructions for Completing

Part 1 - Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 - Project and Sponsor Information							
Name of Action or Project: <u>Pole barn for doggy daycare</u>							
Project Location (describe, and attach a location map): <u>8291 East Seneca Turnpike Manlius, NY 13104</u>							
Brief Description of Proposed Action: <u>To have a Pole barn roughly 40x40 built to have an upscale doggy daycare. To create a clean, safe environment for people to bring their furbabies while they are at work or busy.</u>							
Name of Applicant or Sponsor: <u>Danielle and Ryan Ewert</u>		Telephone: <u>315-263-5154</u>					
		E-Mail: <u>ewert13104@yahoo.com</u>					
Address: <u>8291 East Seneca tpk</u>							
City/PO: <u>Manlius</u>		State: <u>NY</u>	Zip Code: <u>13104</u>				
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">NO</td> <td style="text-align: center;">YES</td> </tr> <tr> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> </table>	NO	YES	☒	☐
NO	YES						
☒	☐						
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval:			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">NO</td> <td style="text-align: center;">YES</td> </tr> <tr> <td style="text-align: center;">☒</td> <td style="text-align: center;">☐</td> </tr> </table>	NO	YES	☒	☐
NO	YES						
☒	☐						
3. a. Total acreage of the site of the proposed action? <u>2</u> acres b. Total acreage to be physically disturbed? <u>1</u> acres c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? <u>1</u> acres <u>Nothing beyond the 7 acres we own.</u>							
4. Check all land uses that occur on; adjoining and near the proposed action. ☐ Urban ☒ Rural (non-agriculture) ☐ Industrial ☐ Commercial ☒ Residential (suburban) ☐ Forest ☒ Agriculture ☐ Aquatic ☐ Other (specify): _____ ☐ Parkland							

5. Is the proposed action, a. A permitted use under the zoning regulations?	NO ☐	YES ☒	N/A ☐
b. Consistent with the adopted comprehensive plan?	☐	☐	☒
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO ☐	YES ☒	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO ☒	YES ☐	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO ☒	YES ☐	
b. Are public transportation service(s) available at or near the site of the proposed action?	☒	☐	
c. Are any pedestrian accommodations or bicycle routes available on or near site of the proposed action?	☒	☐	
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: _____	NO ☒	YES ☐	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: <u>Not sure if we can tap into our home or if we will need another new line run</u>	NO ☐	YES ☐	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____	NO ☒	YES ☐	
12. a. Does the site contain a structure that is listed on either the State or National Register of Historic Places?	NO ☒	YES ☐	
b. Is the proposed action located in an archeological sensitive area?	☒	☐	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO ☒	YES ☐	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____	☒	☐	
14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: ☐ Shoreline ☐ Forest ☐ Agricultural/grasslands ☐ Early mid-successional ☐ Wetland ☐ Urban ☐ Suburban			
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO ☒	YES ☐	
16. Is the project site located in the 100 year flood plain?	NO ☒	YES ☐	
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? ☒ NO ☐ YES	NO ☒	YES ☐	
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe: _____ ☒ NO ☐ YES			

18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____ _____ _____	NO	YES
☒	☒	☐
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____ _____ _____	NO	YES
☒	☒	☐
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____ _____ _____	NO	YES
☒	☒	☐
I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE Applicant/sponsor name: <u>Danielle and Ryan Ewert</u> Date: <u>3/12/2000</u> Signature: <u>Danielle Ewert and Ryan Ewert</u>		

STOP

Part 2 - Impact Assessment. The Lead Agency is responsible for the completion of Part 2. Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	☐	☐
2. Will the proposed action result in a change in the use or intensity of use of land?	☐	☐
3. Will the proposed action impair the character or quality of the existing community?	☐	☐
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	☐	☐
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	☐	☐
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	☐	☐
7. Will the proposed action impact existing:		
a. public / private water supplies?	☐	☐
b. public / private wastewater treatment utilities?	☐	☐
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	☐	☐
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	☐	☐

	No, or small impact may occur	Moderate to large impact may occur
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	☐	☐
11. Will the proposed action create a hazard to environmental resources or human health?	☐	☐

Part 3 - Determination of significance. The Lead Agency is responsible for the completion of Part 3. For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

☐	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
☐	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.
Name of Lead Agency Date	
Print or Type Name of Responsible Officer in Lead Agency Title of Responsible Officer	
Signature of Responsible Officer in Lead Agency Signature of Preparer (if different from Responsible Officer)	

PRINT

TOWN OF MANLIUS

SPECIAL PERMIT APPLICATION – EXHIBIT “G”

PROFESSIONAL FEES REIMBURSEMENT AGREEMENT

As a condition of the application(s) to the Town of Manlius, its Zoning Board of Appeals, Planning Board, codes administration/planning office, and/or Town Board (the “Town”) for various zoning, land use, construction and related reviews, approvals, certificates, permits and related consideration(s) (including for any local governmental assisted funding) related to the request of Danielle and Ryan Ewert: (the “Application”),

[name], [legal address] (“Applicant”) relative to proposed development at 8291 East Seneca Trk Manlius, NY 13104 [project address], Tax Parcel # lot 5 Tyneswood, Manlius, New York, and related matters (the “Project”) agrees as follows:

The Application and Project may or will likely entail that the Town incur legal, engineering, architectural, administrative and related expense(s) including, without limitation, for both on staff and third party consultants involved in the consideration of the Application and Project, and including, without limitation, attendance at Zoning Board of Appeals, Planning Board, and Town Board meetings, consultation with the Applicant, its or the Town’s engineer, architect, attorney, and/or other Town officers and employees, or consultants or professional service providers, incidental to the Application from the earlier of the filing of the Application for and/or first presentation of the Project to Town, and through final completion and issuance of all Town and other governmental permits, certifications and approvals.

In connection with and consideration of the foregoing, Applicant agrees to bear all cost and expense for such administrative, legal, engineering, architect and other professional and consulting assistance to the Town incidental to the Application and Project, and including that expense incurred by the Town for Town employees and officers performing reasonable and necessary work on behalf of the Town incident to the Application or Project.

In connection with the foregoing, Applicant shall reimburse the Town for time spent by outside consultants and professionals at the usual rate charged by them to private clientele, or if none, then the usual rate charged to municipalities. Reimbursement for the cost of Town employees and officers shall be based upon the cost to Town for the services of such persons, including salary and fringe benefits, reduced to an hourly rate and including overtime where directly attributable to the Application or Project.

Should the Town determine, in its sole discretion, that additional services are required to represent, supervise, inspect, evaluate and/or consult, including in order to protect the rights and/or interests of the Town such as relative to an enforcement or violation proceeding, the Applicant shall likewise bear all costs associated with such services.

This Agreement shall be effective as of _____, 20___. The Applicant shall deposit an initial sum of \$_____, and such other amounts as from time to time the Town may determine, payable to and deposited with the Town and which sum or sums shall be applied against those sums reimbursable to the Town pursuant to the terms of this Agreement (the “Deposit”). Upon completion or discontinuance of the Application and Project and payment of all fees incurred, any unused Deposit shall be returned to the Applicant.

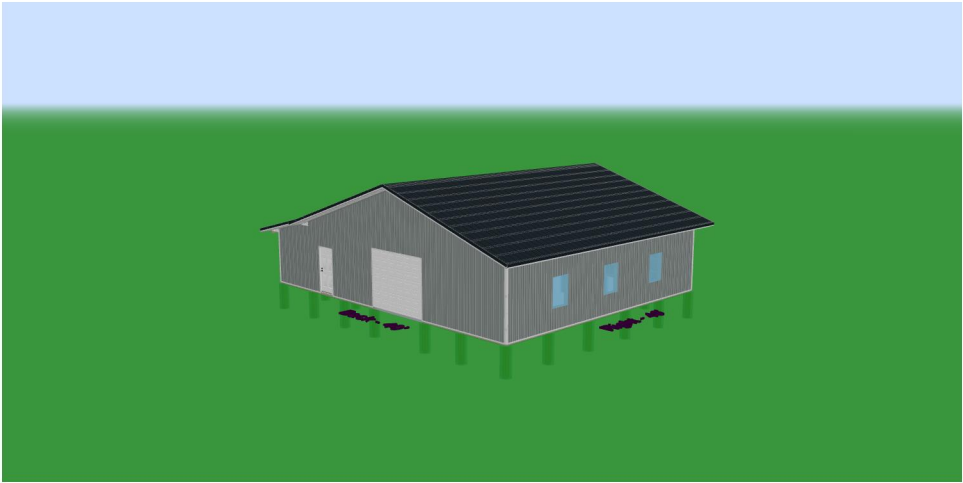
The Applicant shall receive periodically, one or more statements detailing charges for which reimbursement has been made against the Deposit, detailing unpaid amounts, if any, and setting forth any additional Deposit required by the Town. Failure to pay any amounts due the Town of Manlius within twenty (20) days of the date of statement may result in the termination of work/services by Town relative to the Application, the non-issuance suspension or revocation of any certificates, permits or approvals, and/or denial of applications, the Town’s commencement of collection efforts, and/or the exercise of any other rights or remedies available to Town hereunder or pursuant to applicable law, including under the Town Code. No certificates, approvals or permits, including, without limitation, Certificates of Occupancy/Compliance, may be issued until all fees due hereunder are paid or sufficient Deposit for same made.

Notwithstanding any provision hereof to the contrary or otherwise, the intent of this Agreement is to subject all of those subject matter areas under applicable provisions of Federal, State, and County laws, rules and regulations whatsoever, the Town Code including as any of same may be amended from time to time, and without limitation, those provisions under Chapters 59, 63, 72, 83, 95, 96, 104, 119, 123, 125, 126, 127, 131, 147, and 155 of the Town Code to the provisions hereof; in addition any financing or funding applications incidental to the Application or Project and requiring sponsorship or support of Town, and review under the State Environmental Quality Review Act or other State or Federal environmental, historical or related laws, rules or regulations shall likewise be subject to the provisions hereof.

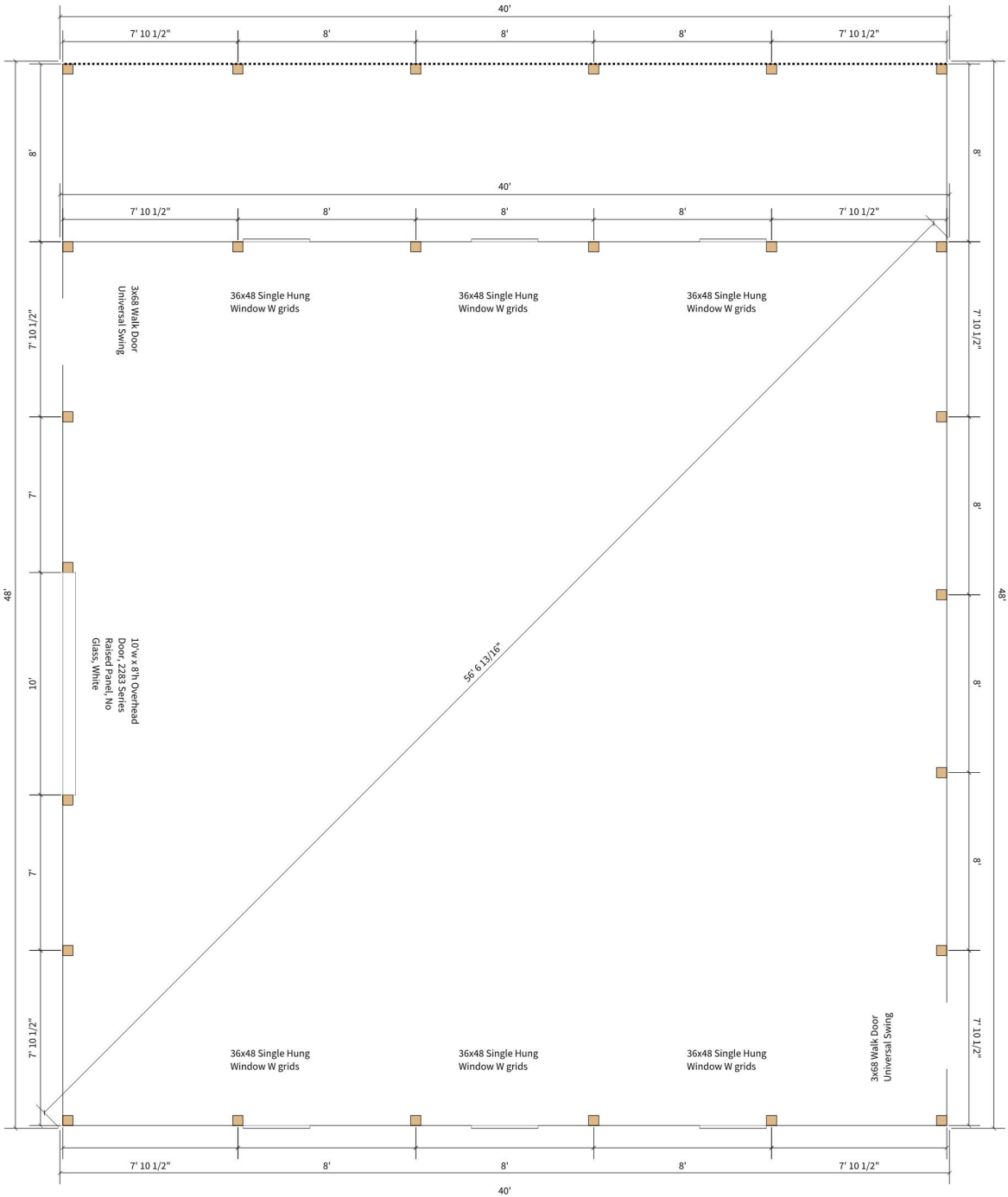
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Overhangs	4
Roof Pitch	4/12

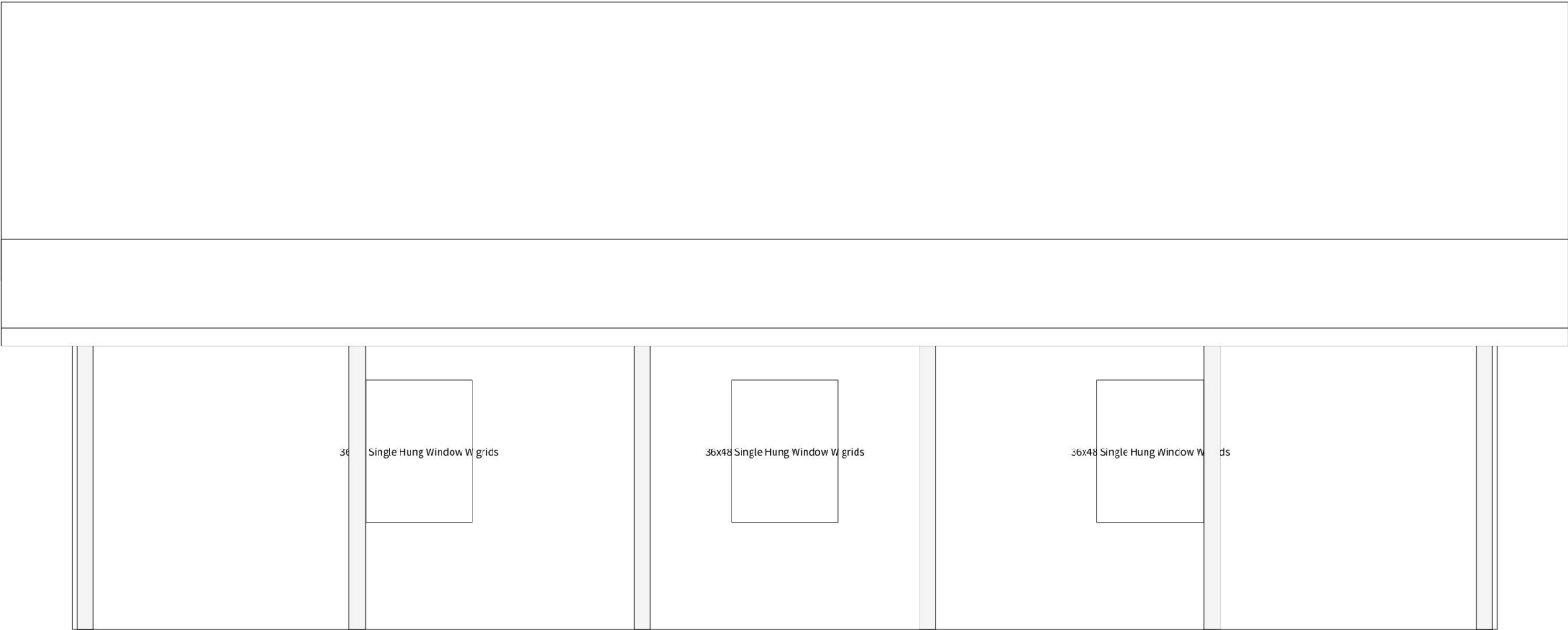
Job Information	
Project Name	Ryan Ewert
Company Name	rls structures
Contact	
Email	
Phone	
Delivery Address	8291 E. Seneca Tpke, Manlius
ZIP code	
Desired Date	
Comments	



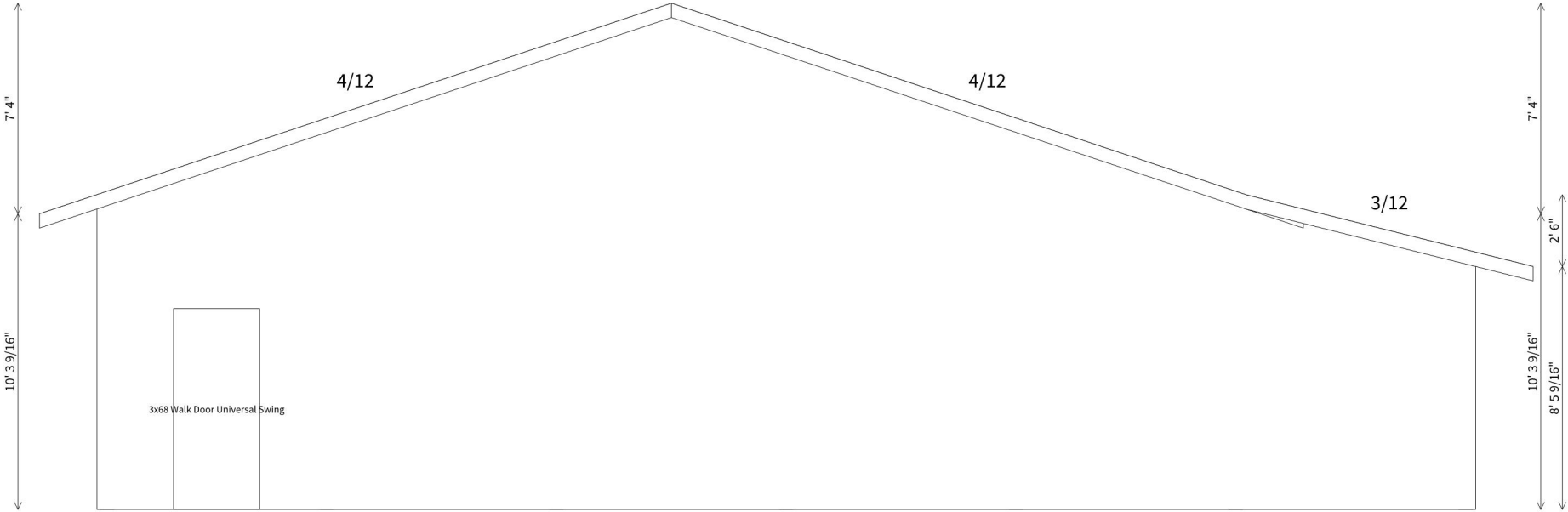
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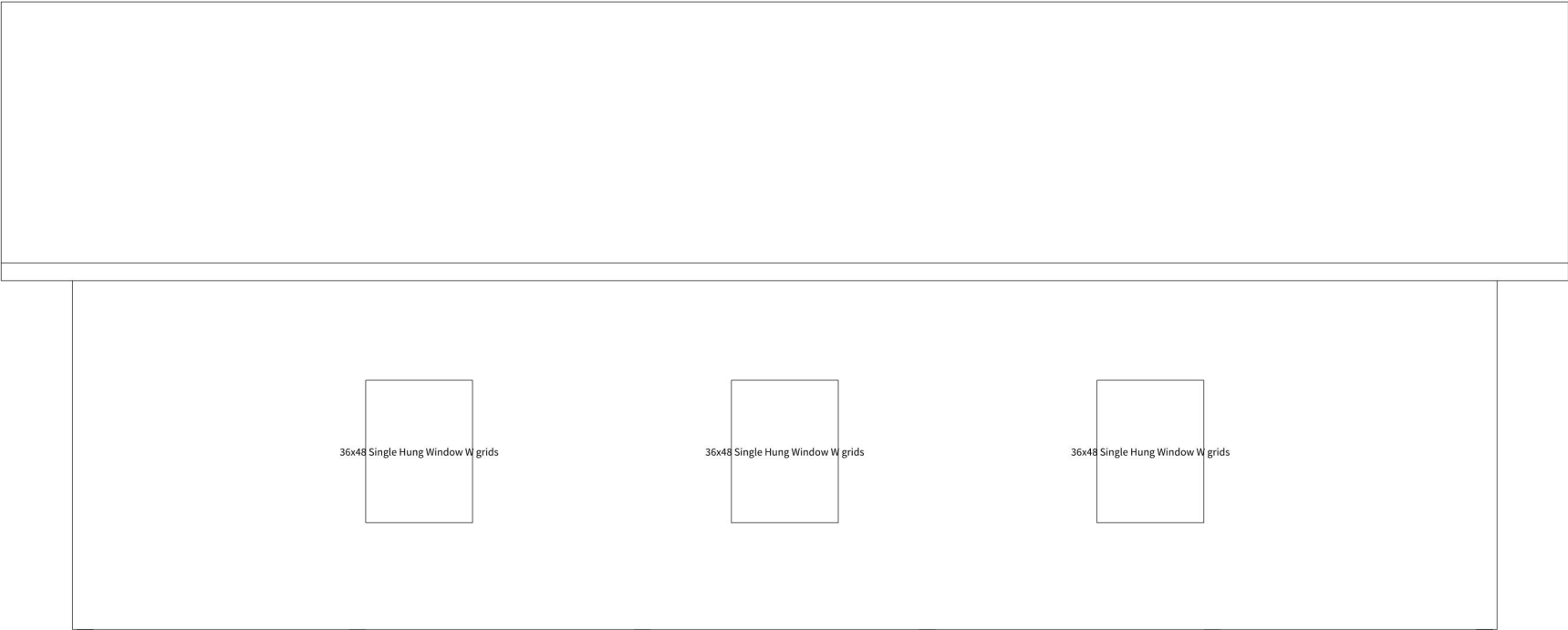
Left Elevation



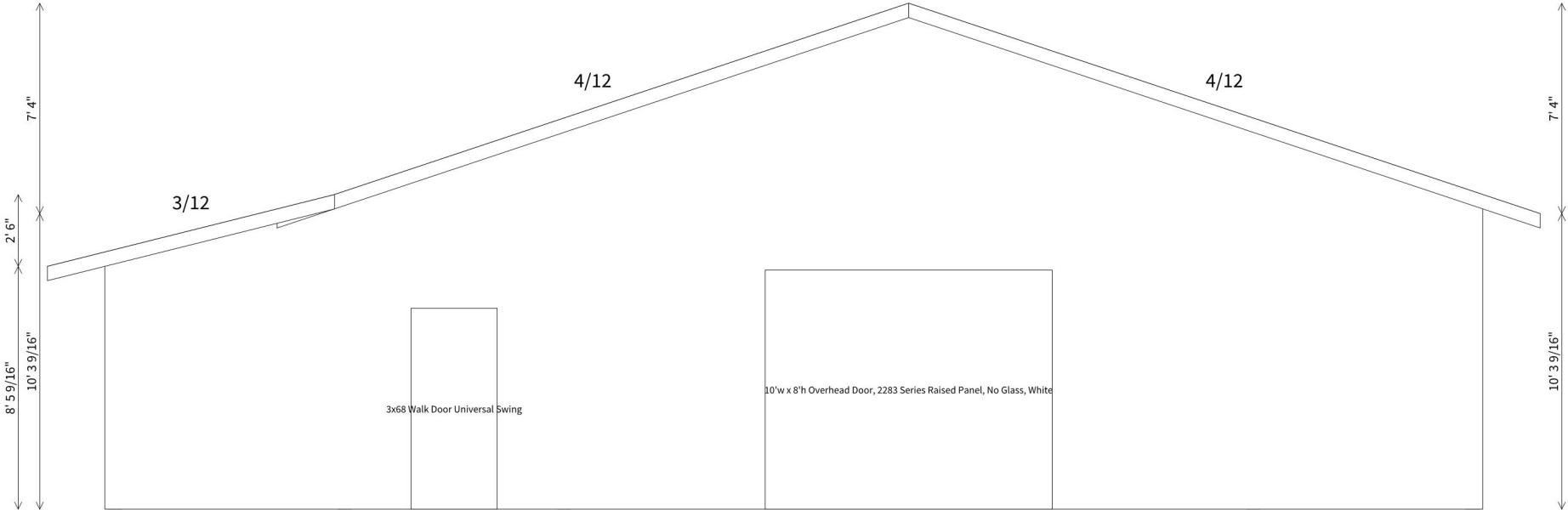
Front Elevation

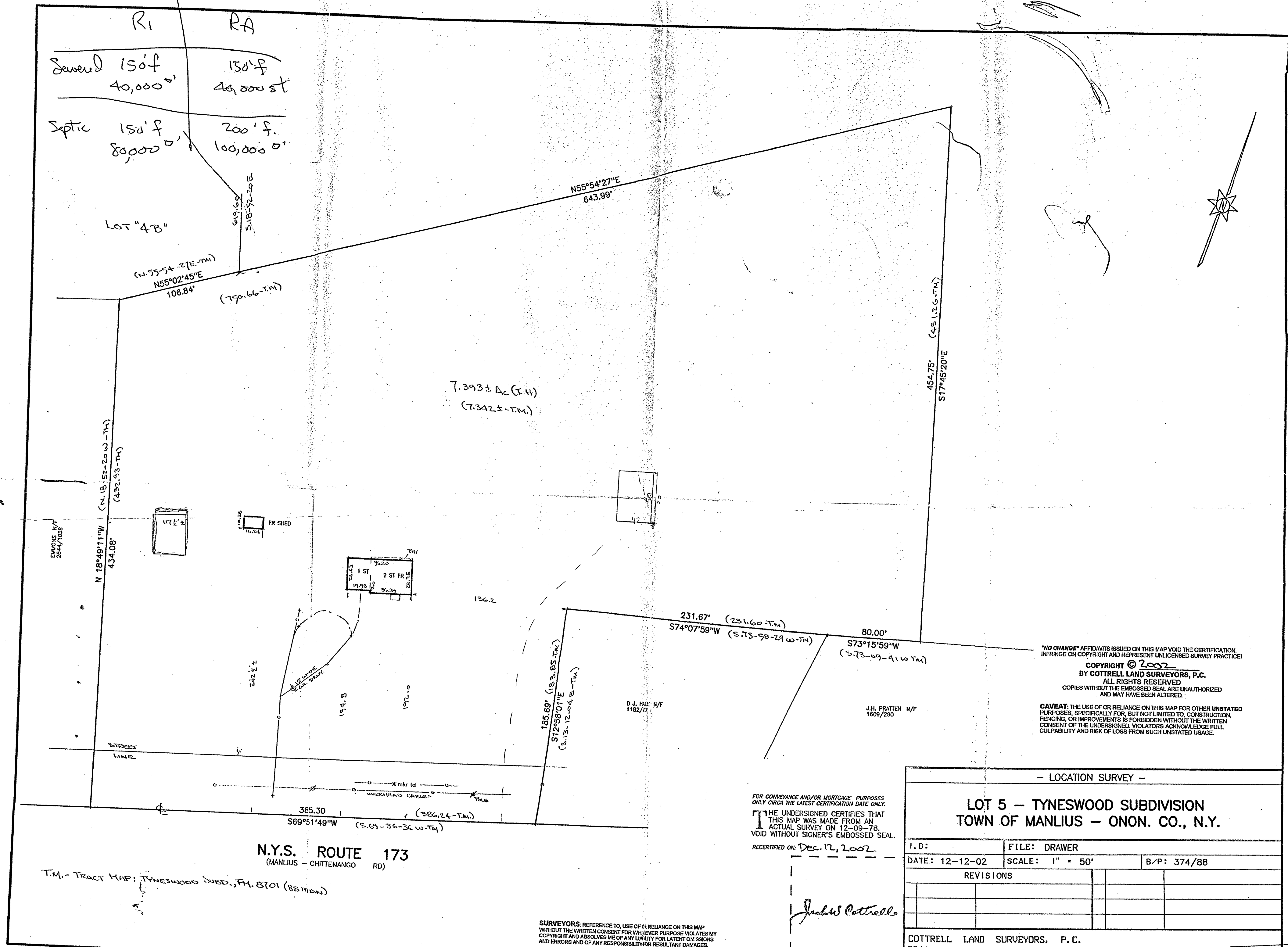


Right Elevation



Back Elevation





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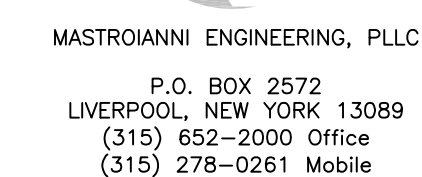
FOR CONVEYANCE AND/OR MORTGAGE PURPOSES ONLY CIRCA THE LATEST CERTIFICATION DATE ONLY.
THE UNDERSIGNED CERTIFIES THAT THIS MAP WAS MADE FROM AN ACTUAL SURVEY ON 12-09-78. VOID WITHOUT SIGNER'S EMBOSSED SEAL.
RECERTIFIED ON: Dec. 12, 2002

James Cottrell
SEAL

SURVEYORS: REFERENCE TO, USE OF OR RELIANCE ON THIS MAP WITHOUT THE WRITTEN CONSENT FOR WHATEVER PURPOSE VIOLATES MY COPYRIGHT AND ABSOLVES ME OF ANY LIABILITY FOR LATENT OMISSIONS AND ERRORS AND OF ANY RESPONSIBILITY FOR RESULTANT DAMAGES.

- LOCATION SURVEY -			
LOT 5 - TYNESWOOD SUBDIVISION TOWN OF MANLIUS - ONON. CO., N.Y.			
I.D:	FILE: DRAWER		
DATE: 12-12-02	SCALE: 1" = 50'	B/P: 374/88	
REVISIONS			
COTTRELL LAND SURVEYORS, P.C. 7308 JAMESVILLE ROAD MANLIUS, N.Y. 13104 PHONE (315) 682-8121			

RECEIVED
APR 1 2022
By



P.O. BOX 2572
 TERPOOL, NEW YORK 13089
 (315) 652-2000 Office
 (315) 278-0261 Mobile

APPROVALS

PROJECT NUMBER
22127

DRAWN BY
JAM

NO.	DATE	ISSUE
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1	2	3
RELEASED BY		

DATE
11/10/22

**8291 East Seneca
Turnpike
Manlius, New York**

SITE INFORMATION

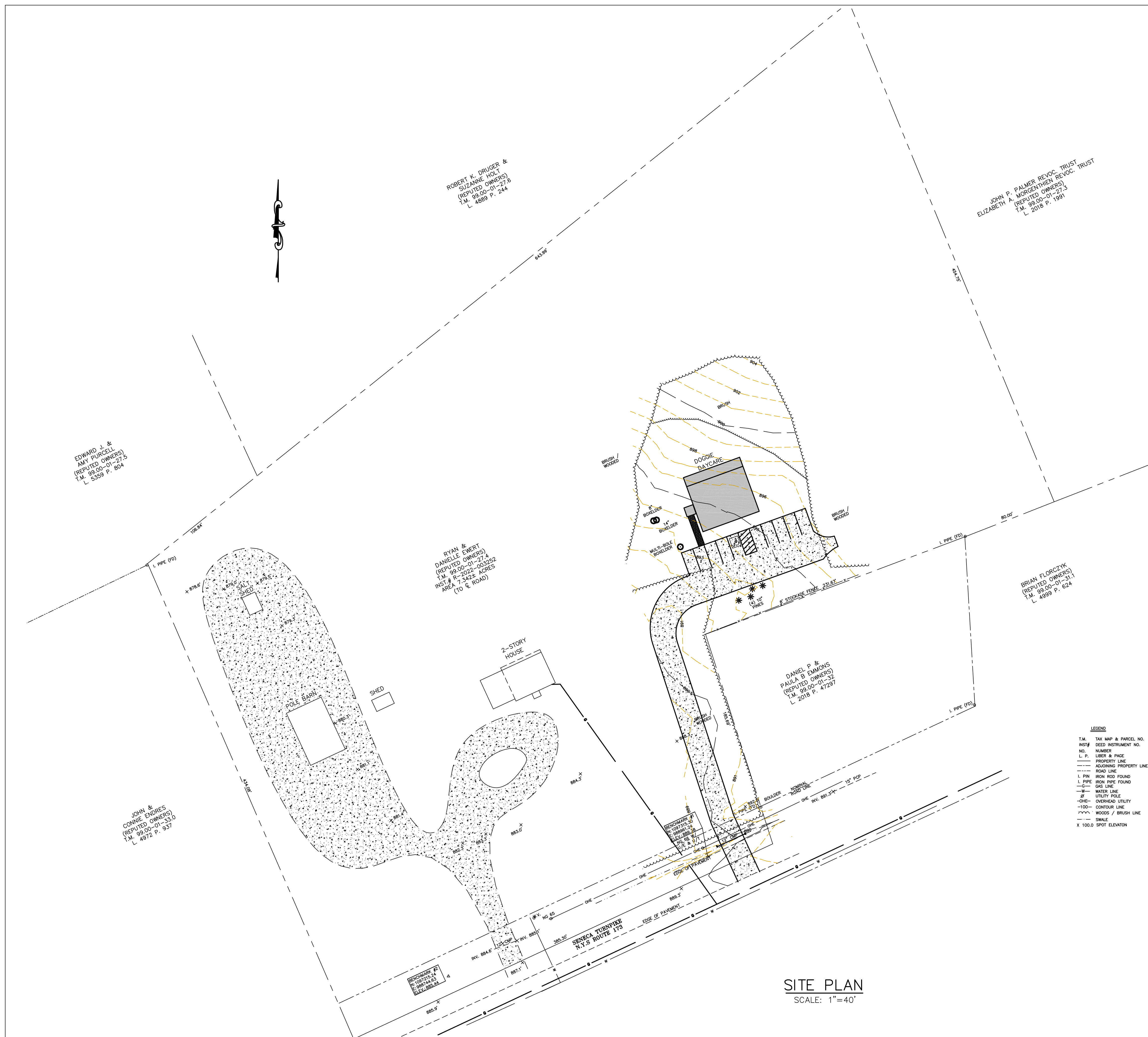
TOWN OF
MANLIUS
ONONDAGA COUNTY
NEW YORK

SHEET TITLE

SITE PLAN

SHEET NUMBER

P-1



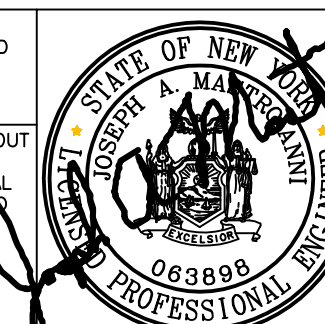
LEGEND

T.M.	TAX MAP & PARCEL NO.
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----	ADJOINING PROPERTY LINE
----	ROAD LINE
I. PIN	IRON ROD FOUND
I. PIPE	IRON PIPE FOUND
-G-	GAS LINE
-W-	WATER LINE
Ø	UTILITY POLE
-OHE-	OVERHEAD UTILITY
-100-	CONTOUR LINE
~~~~~	WOODS / BRUSH LINE
----	SWALE
X 100.0	SPOT ELEVATION

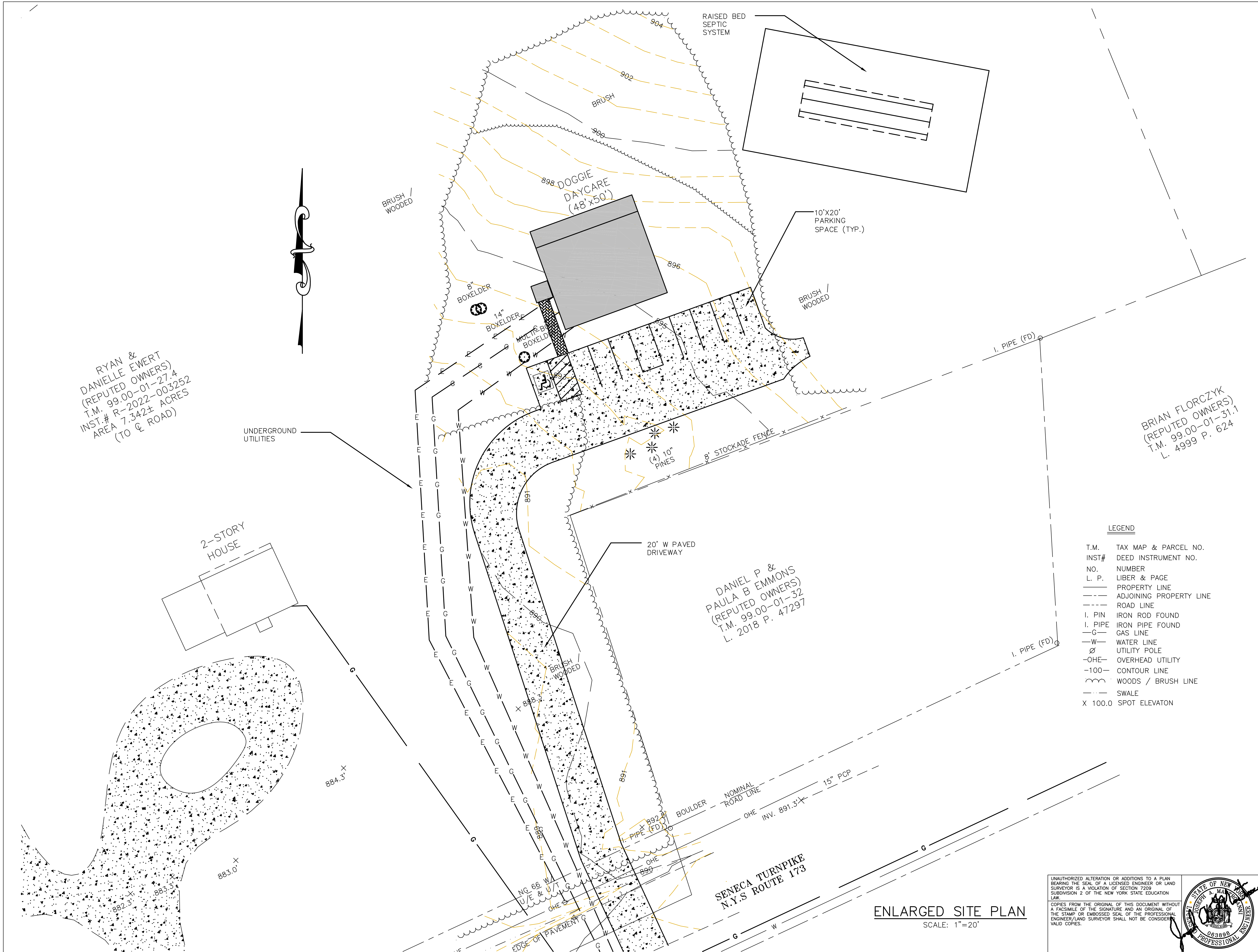
SITE PLAN  
SCALE: 1"=40'

UNAUTHORIZED ALTERATION OR ADDITIONS TO A PLAN BEARING THE SEAL OF A LICENSED ENGINEER OR LAND SURVEYOR IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

COPIES FROM THE ORIGINAL OF THIS DOCUMENT WITHOUT A FACSIMILE OF THE SIGNATURE AND AN ORIGINAL OF THE STAMP OR EMBOSSED SEAL OF THE PROFESSIONAL ENGINEER/LAND SURVEYOR SHALL NOT BE CONSIDERED VALID COPIES.







MASTROIANNI ENGINEERING, PLLC  
P.O. BOX 2572  
LIVERPOOL, NEW YORK 13089  
(315) 652-2000 Office  
(315) 278-0261 Mobile

APPROVALS

PROJECT NUMBER  
22127  
DRAWN BY  
JAM

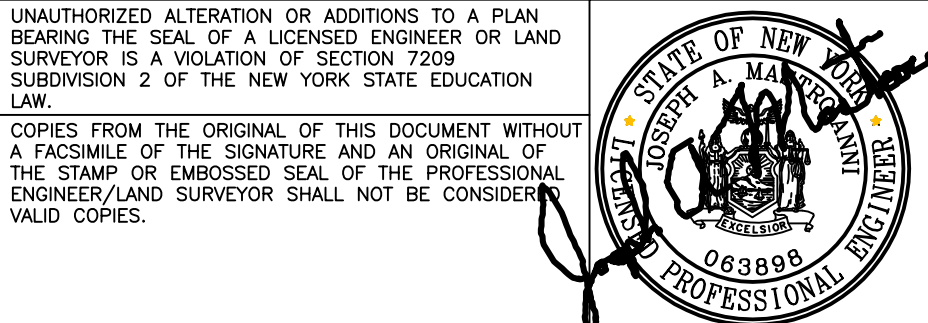
NO. DATE ISSUE  
RELEASED BY  
DATE  
11/10/22

**8291 East Seneca  
Turnpike  
Manlius, New York**

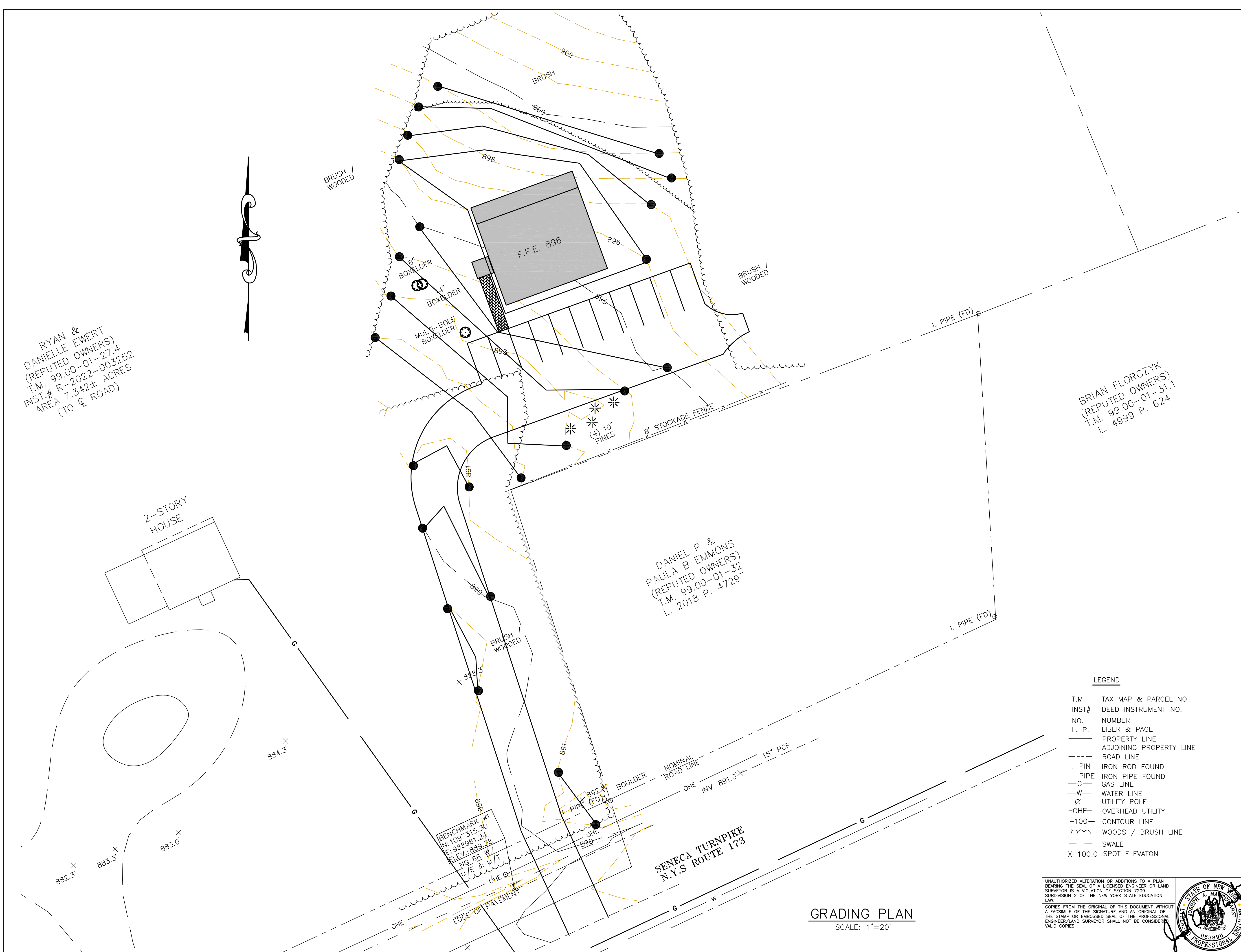
TOWN OF  
MANLIUS  
ONONDAGA COUNTY  
NEW YORK

ENLARGED  
SITE PLAN

P-2







RYAN &  
DANIELLE EWERT  
(REPUTED OWNERS)  
T.M. 99.00-01-27.4  
INST.# R-2022-003252  
AREA 7.342± ACRES  
(TO & ROAD)

BRIAN FLORCZYK  
(REPUTED OWNERS)  
T.M. 99.00-01-31.1  
L. 4999 P. 624

DANIEL P &  
PAULA B EMMONS  
(REPUTED OWNERS)  
T.M. 99.00-01-32  
L. 2018 P. 47297

BENCHMARK #1  
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E: 988961.24  
ELEV: 889.38  
ING 68 W/  
U/E & U/T

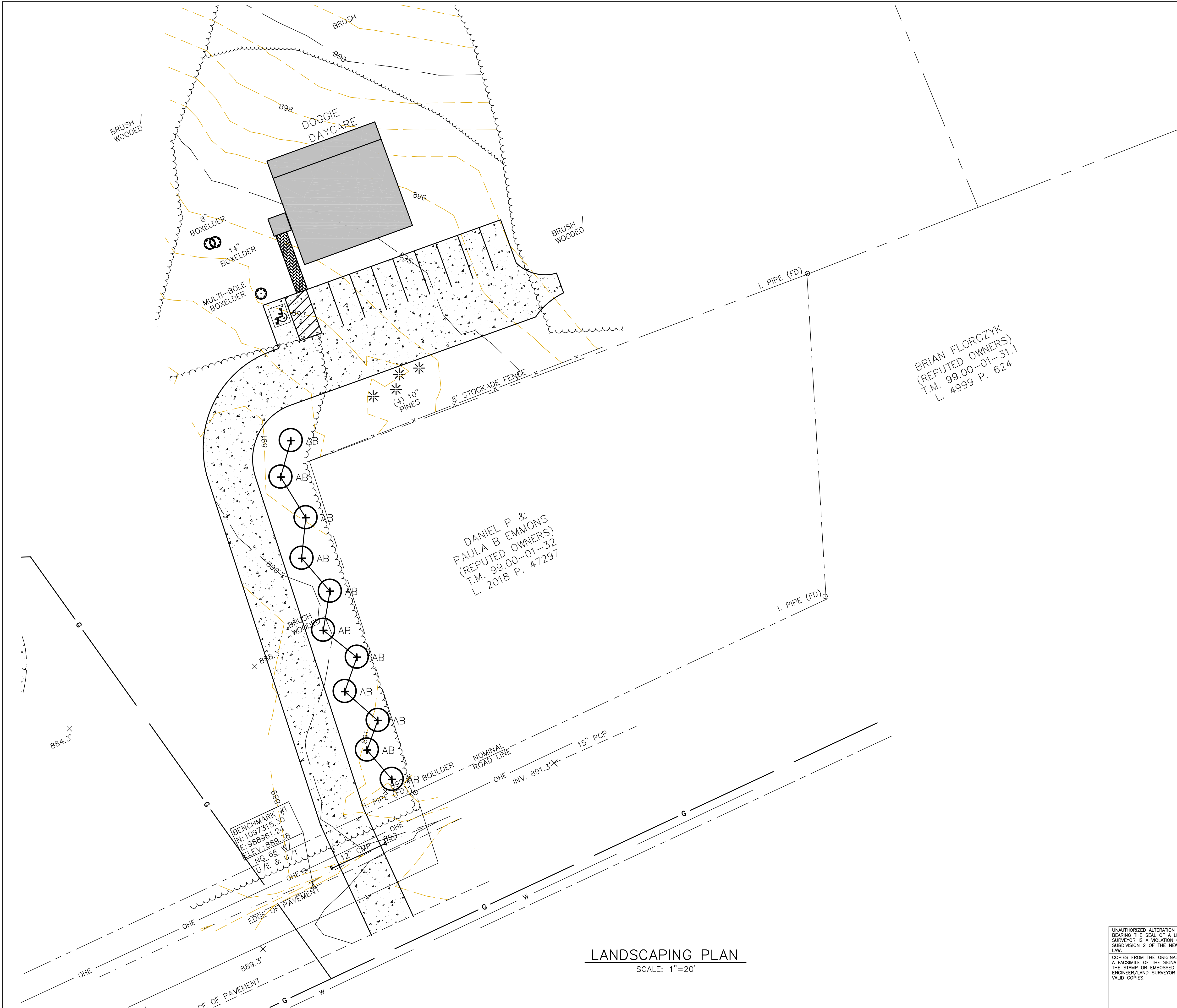
- LEGEND**
- T.M. TAX MAP & PARCEL NO.
  - INST# DEED INSTRUMENT NO.
  - NO. NUMBER
  - L. P. LIBER & PAGE
  - PROPERTY LINE
  - - - ADJOINING PROPERTY LINE
  - - - ROAD LINE
  - I. PIN IRON ROD FOUND
  - I. PIPE IRON PIPE FOUND
  - G- GAS LINE
  - W- WATER LINE
  - Ø UTILITY POLE
  - OHE- OVERHEAD UTILITY
  - 100- CONTOUR LINE
  - Woods / BRUSH LINE
  - SWALE
  - X 100.0 SPOT ELEVATION

UNAUTHORIZED ALTERATION OR ADDITIONS TO A PLAN  
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APPROVALS	
PROJECT NUMBER 22127	
DRAWN BY JAM	
NO.	DATE
ISSUE	
RELEASED BY	
DATE 11/10/22	
<b>8291 East Seneca Turnpike Manlius, New York</b>	
SITE INFORMATION	
TOWN OF MANLIUS ONONDAGA COUNTY NEW YORK	
SHEET TITLE GRADING PLAN	
SHEET NUMBER P-3	





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DATE 11/10/22

**8291 East Seneca  
Turnpike  
Manlius, New York**

SITE INFORMATION

TOWN OF  
MANLIUS  
ONONDAGA COUNTY  
NEW YORK

SHEET TITLE

LANDSCAPING  
PLAN

SHEET NUMBER

P-4

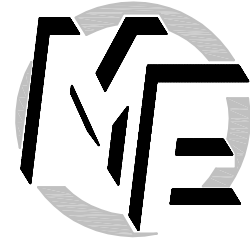
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**PAWSITS  
DOGGIE  
DAYCARE**

8291 EAST SENECA TURNPIKE  
MANLIUS, NEW YORK 13104

SITE INFORMATION

MANLIUS  
ONONDAGA COUNTY  
NEW YORK

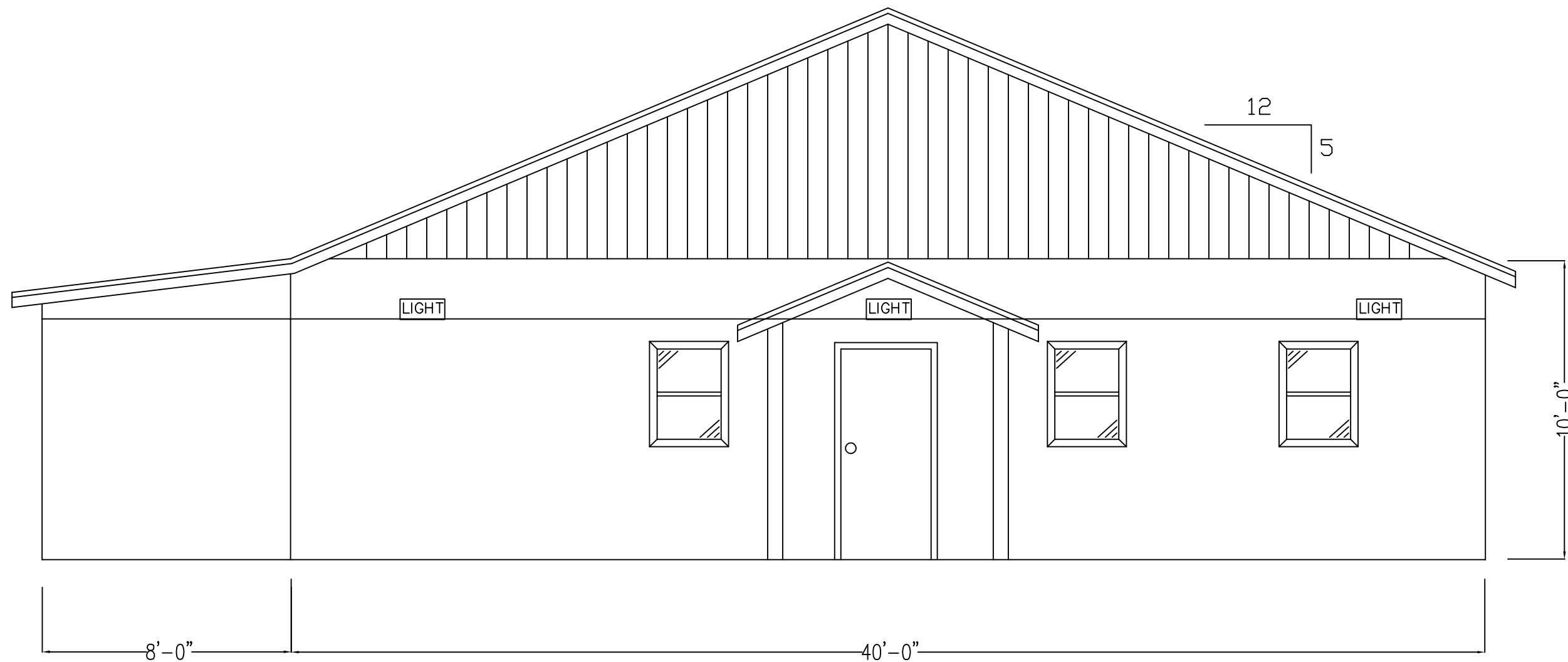
SHEET TITLE

ELEVATIONS

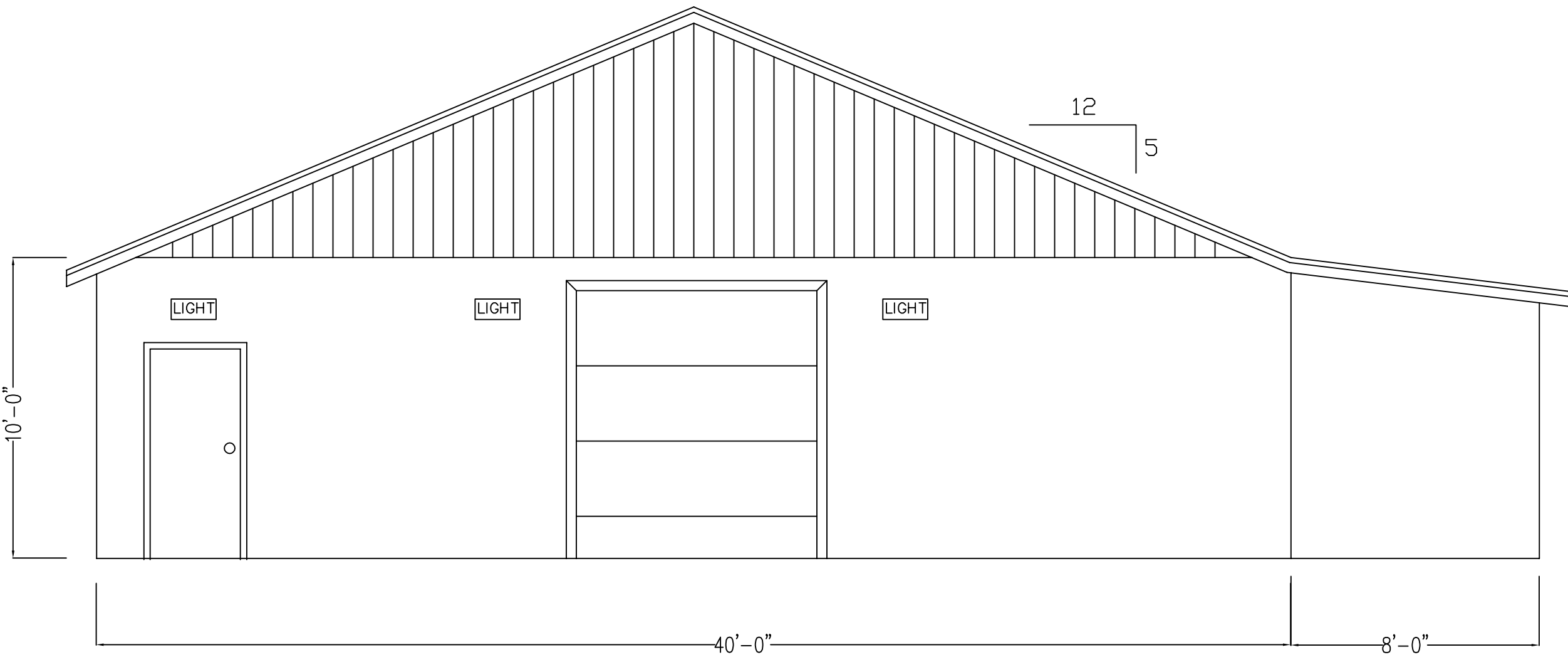
SHEET NUMBER

S-2

UNAUTHORIZED ALTERATION OR ADDITIONS TO A PLAN  
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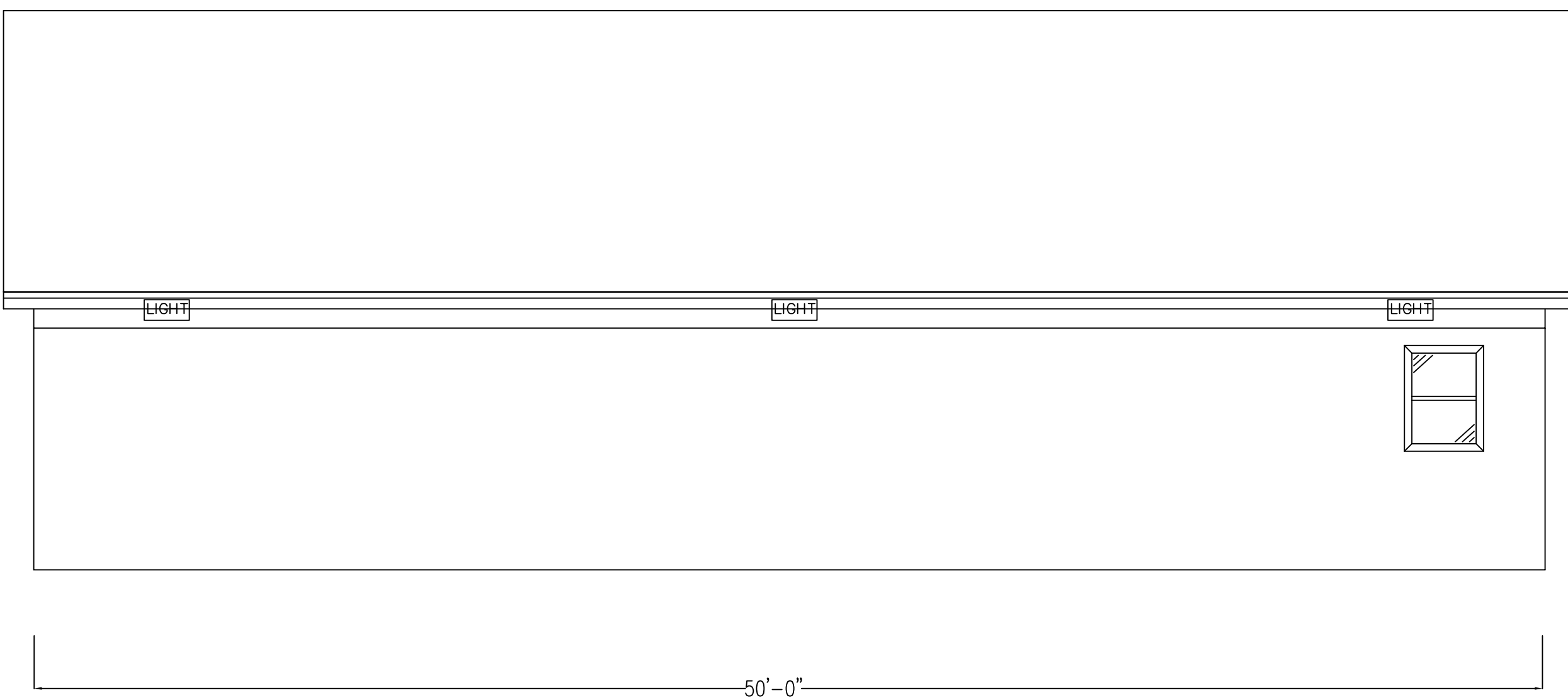
1 WEST FACADE  
S-2 SCALE: 1/4"=1'-0"



2 EAST FACADE  
S-2 SCALE: 1/4"=1'-0"



3 SOUTH FACADE  
S-2 SCALE: 1/4"=1'-0"



4 NORTH FACADE  
S-2 SCALE: 1/4"=1'-0"









6 SILT FENCE – TEMPORARY  
P-3 NOT TO SCALE

5. **SILT FENCE OR HYDRAULIC/STORMWATER DIKE SHALL BE PLACED A MINIMUM OF 5 FT FROM THE TOP OF THE EXISTING EMBANKMENT OR EXISTING DRAINAGE DITCH.**

6. **POSTS MAY BE 3/4"X3/4" MINIMUM HARDWOOD, 1" x 1", 3/4" MINIMUM SOUTHWOOD, OR 106w/1" (4M) GALVANNEAL STEEL. POSTS SHALL BE PLACED AS BE DESIGNATED ON THE DEPARTMENT APPROVED LAYOUT FOR SILT FENCE.**

7. **BALLS FOR DIKE SHALL BE CAST WITH CUT ENDS VERTICAL, AND BALLS BURED A MINIMUM 1/4" DIA.**

8. **APPROVED SILT FENCE ASSEMBLIES ARE INSTALLED ON THE DEPARTMENT APPROVED LAYOUT. THE LAYOUT MAY BE ADJUSTED FOR POST SPACING, AND MAY OR MAY NOT HAVE MESH REINFORCEMENT, AS PER APPROVED LAYOUT.**

9. **THE BOTTOM EDGE OF SILT FENCE SHALL BE BURRED A MINIMUM OF 6" BELOW THE EXISTING GROUND SURFACE. SILT FENCE SHALL BE INSTALLED WITH TENSION ON THE DOWNSTREAM SIDE OF THE FABRIC.**

10. **MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS, AFTER EACH RAINFALL OF 0.2" OR MORE. IF THERE IS ANY DAMAGE TO THE FENCE, IT SHALL BE REPAIRED. IF THERE IS NO DAMAGE TO THE FENCE, THE LEAKAGE AND LEAKAGE RATE SHALL BE RECORDED.**

11. **SEDIMENT SHALL BE REMOVED FROM THE FENCE AT LEAST ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DEPOSITED AS UNSUITABLE MATERIAL.**

12. **DRAINAGE AREAS:**  
MAXIMUM DRAINAGE AREA TRIBUTARY TO 100 FT OF SILT FENCE SHALL BE 0.5 ACRES.  
MAXIMUM DRAINAGE AREA TO 100 FT OF HYDRAULIC DIKE SHALL BE 0.25 ACRES.

13. **THE FOLLOWING ARE MAXIMUM SLOPE LENGTHS FOR THESE MEASURES:**

SLOPE LENGTH	SILT FENCE		HYDRAULIC DIKE		S
	SLOPE	LENGTH	SLOPE	LENGTH	
	(%)	(m) (ft)	(%)	(m) (ft)	
2:1	30	80	2:1	80	
4:1	15	160	3:1	160	
4:1	10	120	2:1	120	
2:1	200	200	2:1	200	
>6:1	>6:1	>6:1	>6:1	>200	

14. **INSTALLATION, LE, EXCAVATION, BACKFILL, COMPACTION, HYDRAULIC/STORMWATER DIKES AND SLOPE FENCE SHALL BE INSPECTED BY THE DEPARTMENT.**

10. INSTALLATION, I.E. EXCAVATION, BACKFILL, COMPACTION, HAYBALE/STRAWBALE DIKE: AND SILT FENCE SHALL BE INCLUDED IN UNIT PRICE BID FOR ITEM.

---

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## APPROVALS

PROJECT NUMBER

22127

DRAWN BY

JAM

NO.	DATE	ISSUE
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1

RELEASED BY

DATE _____

11/10/22

**PAWSITS  
DOGGIE  
DAYCARE**

8291 EAST SENECA TURNPIKE  
MANLIUS, NEW YORK 13104

## SITE INFORMATION

MANLIUS  
ONONDAGA COUNTY  
NEW YORK

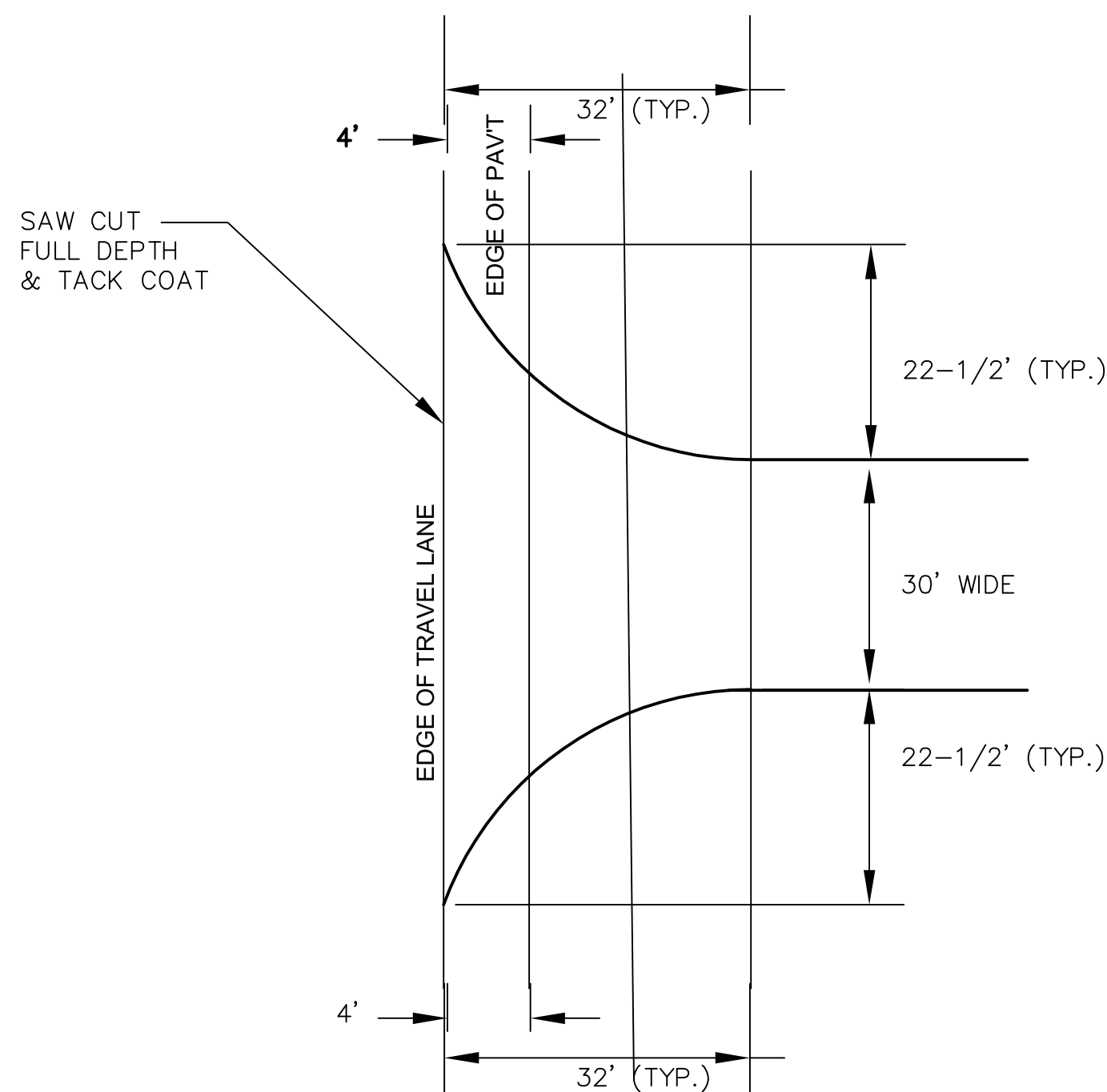
SHEET TITLE

## DETAILS

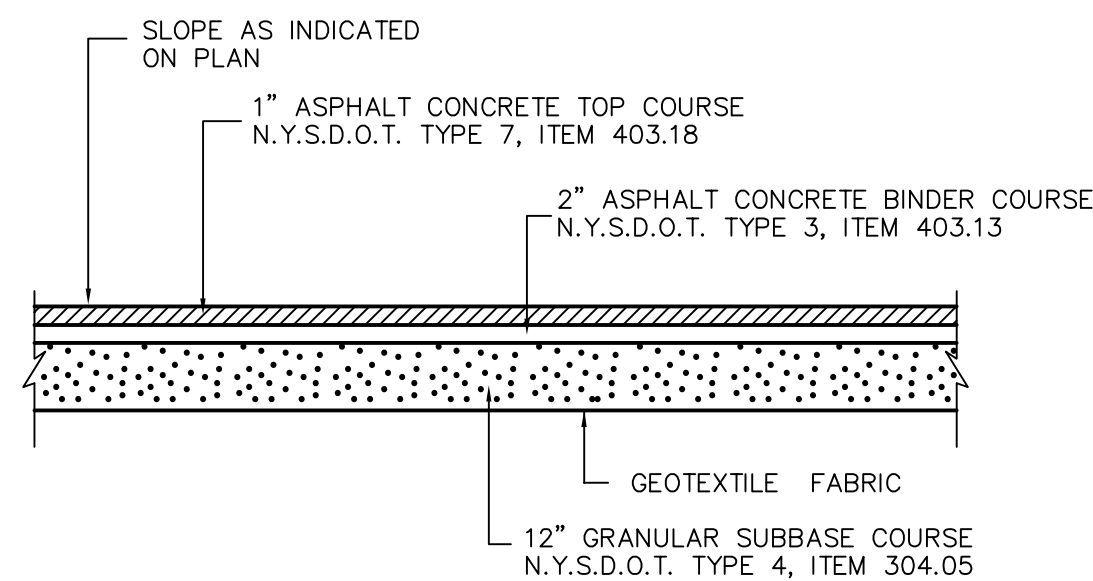
SHEET NUMBER

D-2

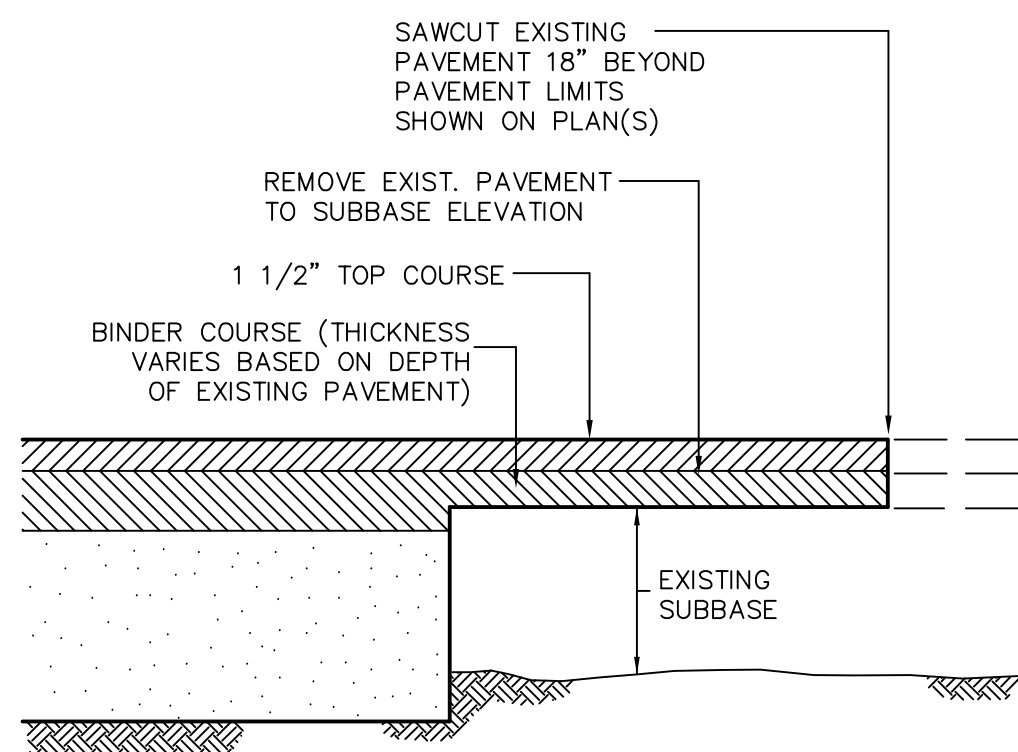




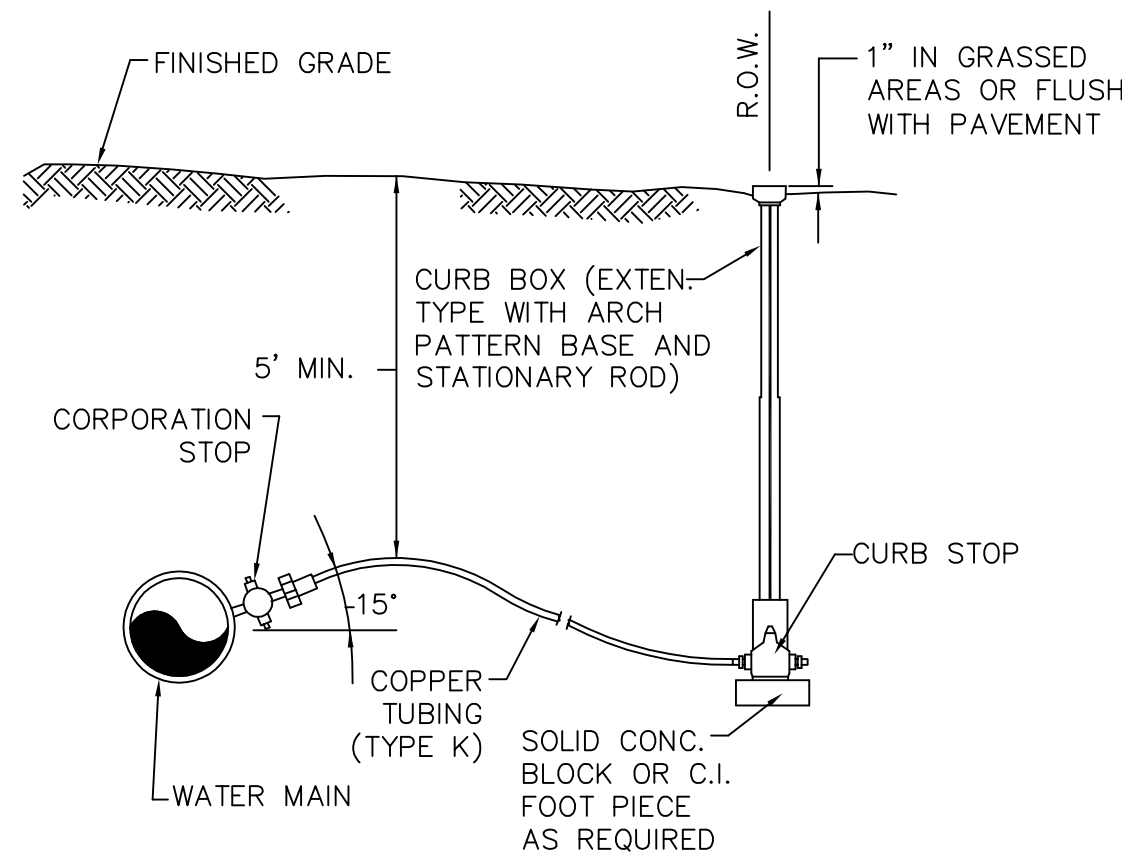
1 EAST SENECA TURNPIKE DRIVEWAY GEOMETRY  
P-2 NOT TO SCALE



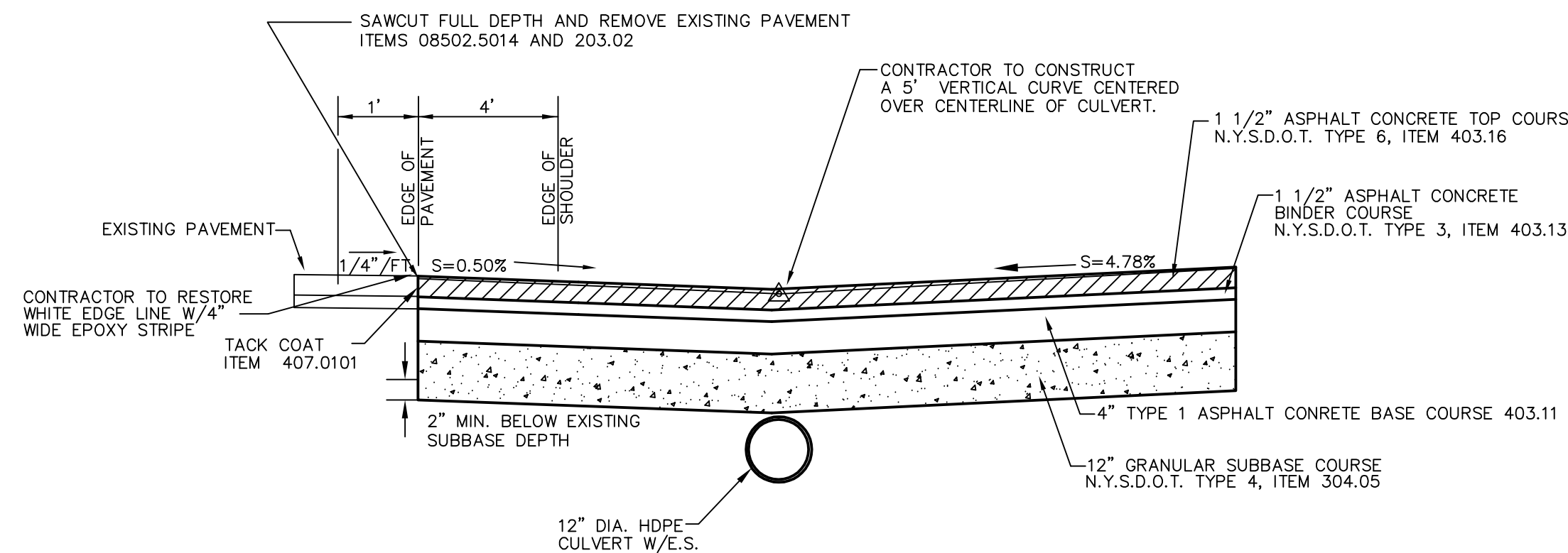
3 ASPHALT CONCRETE PAVEMENT DETAIL  
P-2 NOT TO SCALE



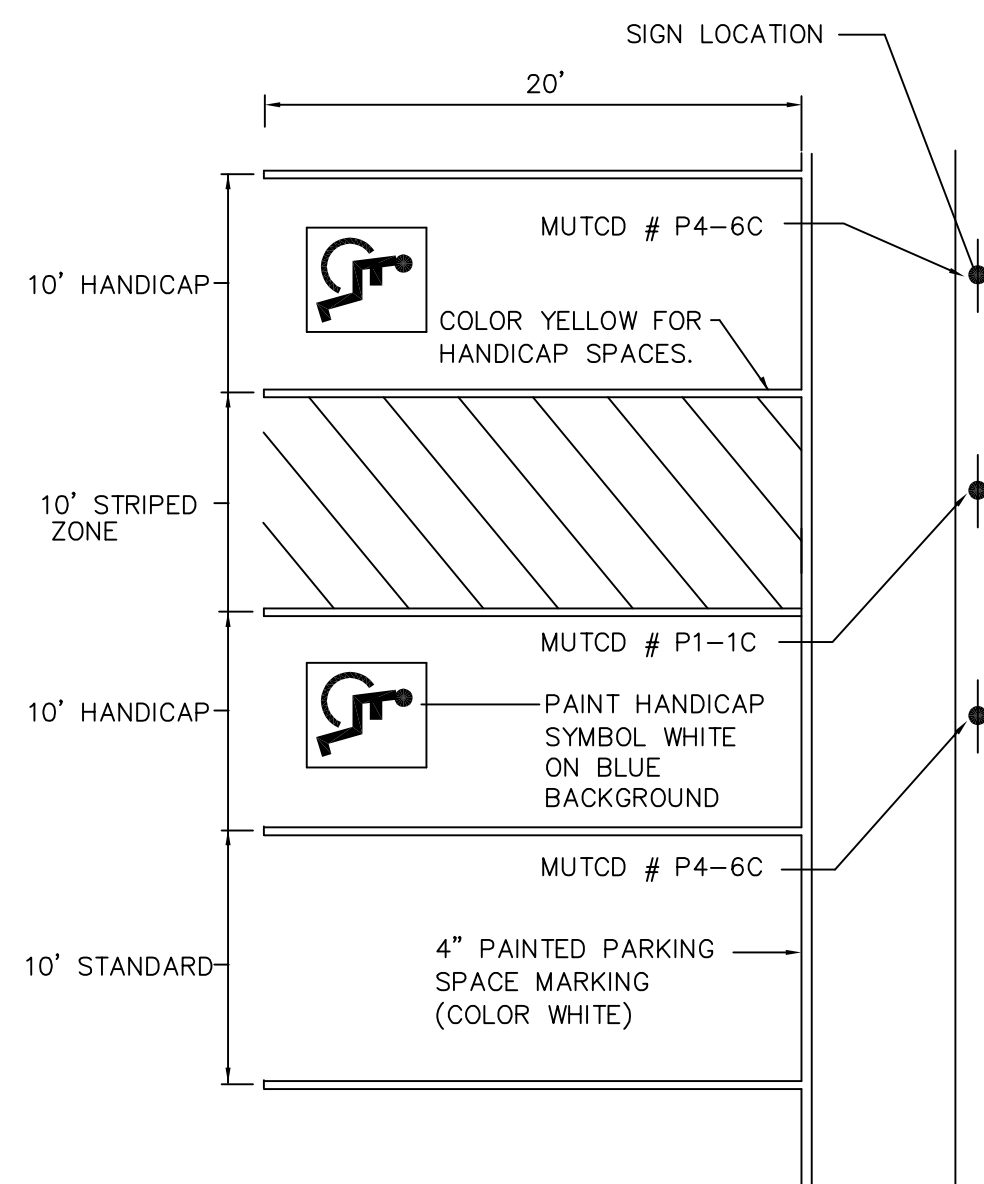
5 PAVEMENT TRANSITION DETAIL  
P-2 NOT TO SCALE



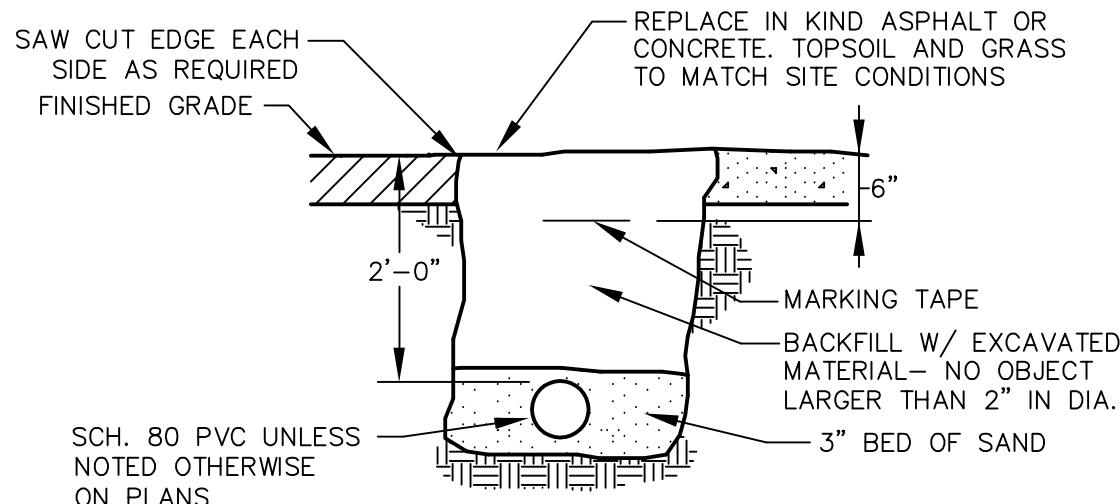
1 WATER SERVICE PIPE  
P-1 CONNECTION DETAIL  
NO SCALE



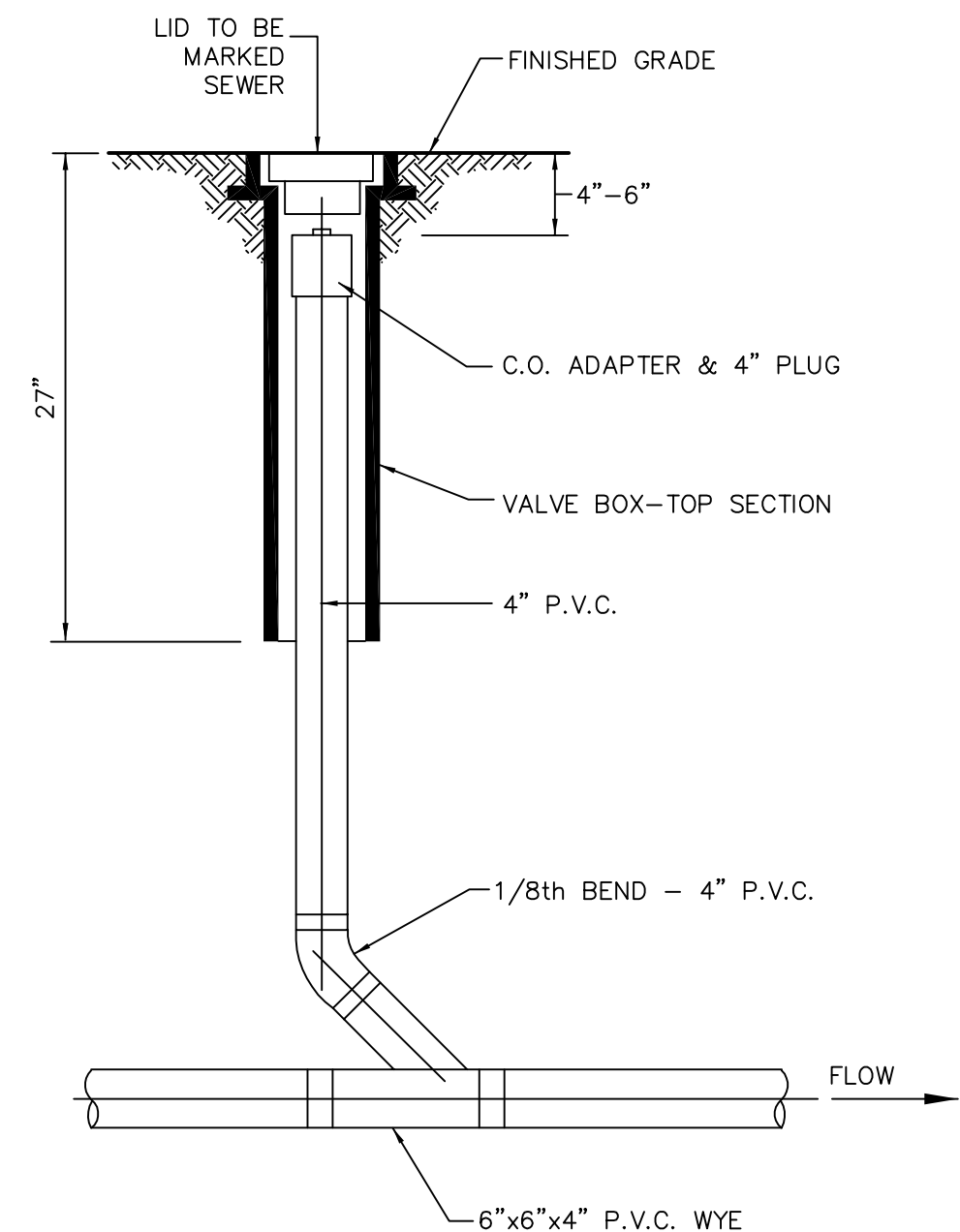
4 PAVEMENT SECTION IN NYSDOT R.O.W. AREA  
P-2 NOT TO SCALE



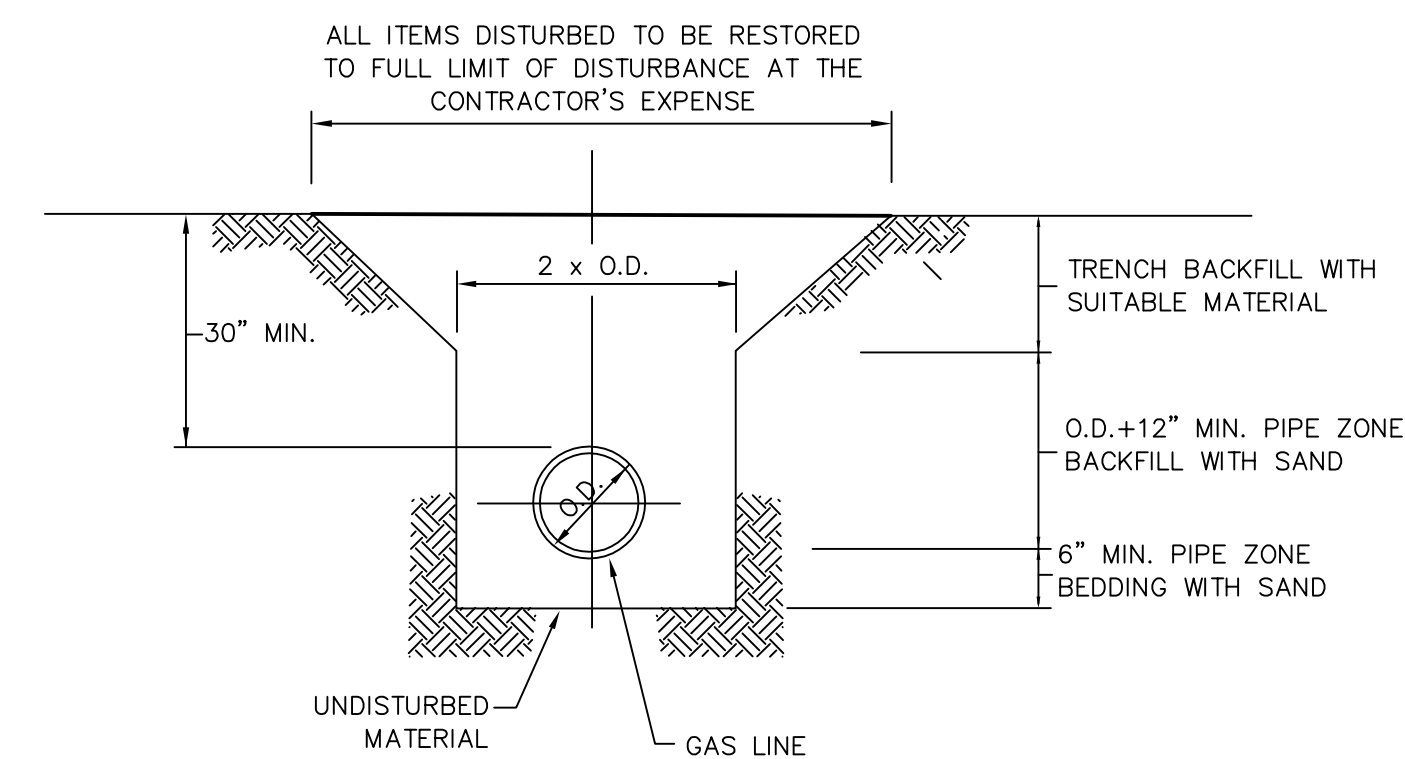
4 90° PAINT STRIPING DETAIL  
P-1 NOT TO SCALE



2 CONDUIT TRENCH DETAIL  
P-2 NOT TO SCALE



2 IN-LINE CLEANOUT  
P-1 NOT TO SCALE



6 TYPICAL TRENCH DETAIL  
P-1 NO SCALE

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NO.	DATE	ISSUE

RELEASED BY  
DATE 11/10/22

**PAWSITS  
DOGGIE  
DAYCARE**

8291 EAST SENECA TURNPIKE  
MANLIUS, NEW YORK 13104

SITE INFORMATION

MANLIUS  
ONONDAGA COUNTY  
NEW YORK

SHEET TITLE

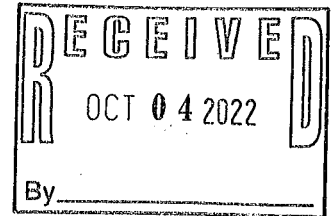
DETAILS

SHEET NUMBER

D-3

Expected  
Fee: _____

TOWN OF MANLIUS  
PLANNING DEPARTMENT  
INITIAL APPEARANCE APPLICATION



DATE: 8/15/2022

Name of Project: Ryans Lawn Care & Landscaping

**Applicant must submit 12 copies of all site plans, surveys, and supporting data with the final application before a planning board meeting can be scheduled.**

Location of Project: 8291 E. Seneca tpk Manlius, NY 13104

Type of Project:  
☐ Division of Land ☐ Subdivision ☐ Accessory Use ☐ Zone Change ☐ Site Review ☒ Other Special permit

Developer: _____ Phone: _____

Address: _____ Zip: 13104

Tax Map Number(s): ~~#8701 1015 1125 1126 1127~~  
099. - 01-27.4

Present Zoning: RA Desired Zoning: RA

Total Acreage: 7.342 acres Total Number of Lots: 1

Property Owner/s: Ryan and Danielle Ewert Phone: 315-263-2520 Ryan  
315-263-5154 Danielle  
Address: 8291 East Seneca tpk Manlius Zip: 13104

Tax Map#(s): 8701 Owner's Signature: Danielle Ewert, Ryan Ewert  
Printed Name: Danielle Ewert, Ryan Ewert

Property Owner/s: _____ Phone: _____

Address: _____ Zip: _____

Tax Map#(s): _____ Owner's Signature: _____

Printed Name: _____

**Use next page for additional known property owners' information**

Planning Board Meeting Date Assignment: _____

Fee: _____ Paid: _____ Per: ☐ Credit/Debit Card ☐ Check ☐ Cash

617.20  
Appendix B  
Short Environmental Assessment Form

**Instructions for Completing**

**Part 1 - Project Information.** The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

<b>Part 1 - Project and Sponsor Information</b>			
Name of Action or Project: <u>Ryans LawnCare &amp; Landscaping</u>			
Project Location (describe, and attach a location map): <u>8291 E. Seneca tpk Manlius, NY 13104</u>			
Brief Description of Proposed Action: <u>To use Pole barn currently on our property to store equipment for Ryans LawnCare &amp; Landscaping.</u>			
Name of Applicant or Sponsor: <u>Ryan Ewert</u>		Telephone: <u>315-263-2520</u>	
Address: <u>8291 E. Seneca tpk</u>		E-Mail: <u>Ryan13104@yahoo.com</u>	
City/PO: <u>Manlius</u>		State: <u>NY</u>	Zip Code: <u>13104</u>
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation?		NO	YES
If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.		<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other governmental Agency?		NO	YES
If Yes, list agency(s) name and permit or approval:		<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.a. Total acreage of the site of the proposed action?		<u>1</u>	acres
b. Total acreage to be physically disturbed?		<u>0</u>	acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		<u>7.342</u>	acres
4. Check all land uses that occur on, adjoining and near the proposed action.			
<input checked="" type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential (suburban)			
<input type="checkbox"/> Forest <input checked="" type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input checked="" type="checkbox"/> Other (specify): <u>42 acres of horse trails that are behind us.</u>			
<input type="checkbox"/> Parkland			



Page 2 of 4

18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE</b> Applicant/sponsor name: <u>Ryan Ewert</u> Date: <u>8/10/2022</u> Signature: <u>[Signature]</u>		

**STOP**

**Part 2 - Impact Assessment.** The Lead Agency is responsible for the completion of Part 2. Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	<input type="checkbox"/>	<input type="checkbox"/>
2. Will the proposed action result in a change in the use or intensity of use of land?	<input type="checkbox"/>	<input type="checkbox"/>
3. Will the proposed action impair the character or quality of the existing community?	<input type="checkbox"/>	<input type="checkbox"/>
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	<input type="checkbox"/>	<input type="checkbox"/>
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	<input type="checkbox"/>	<input type="checkbox"/>
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	<input type="checkbox"/>	<input type="checkbox"/>
7. Will the proposed action impact existing:		
a. public / private water supplies?	<input type="checkbox"/>	<input type="checkbox"/>
b. public / private wastewater treatment utilities?	<input type="checkbox"/>	<input type="checkbox"/>
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	<input type="checkbox"/>	<input type="checkbox"/>
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	<input type="checkbox"/>	<input type="checkbox"/>

	No, or small impact may occur	Moderate to large impact may occur
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	<input type="checkbox"/>	<input type="checkbox"/>
11. Will the proposed action create a hazard to environmental resources or human health?	<input type="checkbox"/>	<input type="checkbox"/>

**Part 3 - Determination of significance.** The Lead Agency is responsible for the completion of Part 3. For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

<input type="checkbox"/>	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
<input type="checkbox"/>	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.
Name of Lead Agency   Date	
Print or Type Name of Responsible Officer in Lead Agency   Title of Responsible Officer	
Signature of Responsible Officer in Lead Agency   Signature of Preparer (if different from Responsible Officer)	

**PRINT**



## TOWN OF MANLIUS

### DISCLOSURE AFFIDAVIT

This affidavit is a part of and must be completed and attached to every application, petition, request submitted for a *site plan, variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit.*

STATE OF NEW YORK     )  
                                  ) SS:  
COUNTY OF ONONDAGA    )

I. Tina Galvin, being duly sworn, deposes and says that (s) he is:

Ryan Fuent  
(applicant, petitioner, corporation officer, property owner, etc.)

II. That deponent has read and is familiar with the provisions of the General Municipal Law, Section 809 which states:

- A. Every application, petition or request submitted for a site plan, variance, amendment, change of zoning, approval of a plat, exemption from a plat or official map, license or permit, pursuant to the provisions or any ordinance, local law, rule or regulation constituting the zoning and planning regulations of a municipality shall state the name, residence and the nature and extent of the interest of any state officer or any officer or employee of such municipality is a part, in the person, partnership or association making such application, petition or request (hereinafter called the applicant) to the extent known to such applicant.
- B. For the purpose of this action an officer or employee shall be deemed to have an interest in the applicant when (s)he, his/her spouse, or their brothers, sisters, parents, children, grandchildren, or the spouse of any of them:
  - 1) is the applicant, or
  - 2) is an officer, director, partner or employee of the applicant, or
  - 3) legally or beneficially owns or controls stock of a corporate applicant or is a member of a partnership or association applicant, or
  - 4) is a party to an agreement with such an applicant, express or implied, whereby (s) he may receive any payment or other benefit, whether or not for services rendered, or contingent upon the favorable approval of such application, petition or request.
- C. Ownership of less than five percent (5%) of the stock of a corporation whose stock is listed on the New York or American Stock Exchanges shall not constitute an interest for the purposes of this section.
- D. A person who knowingly and intentionally violates this section shall be guilty of a misdemeanor.

III. That no Town of Manlius officer, employee or a relative of either, as defined in Section 809 General Municipal Law has any interest in this application.

-OR-

If a Town of Manlius officer, employee or relative of either as defined in Section 809 General Municipal law has any interest in this application, the full particulars are provided on an attached sheet.

Date: 10-1-2022, 20

Ryan Ewert  
(Print Name)

[Signature]  
(Signature)

_____  
(Entity Name)

_____  
By (Officer) (Title)

_____  
(Mailing Address of Applicant)

_____  
(Telephone Number)

Date: _____, 20

_____  
(Print Name)

_____  
(Signature)

_____  
(Entity Name)

_____  
By (Officer) (Title)

_____  
(Mailing Address of Applicant)

_____  
(Telephone Number)

### ACKNOWLEDGEMENTS

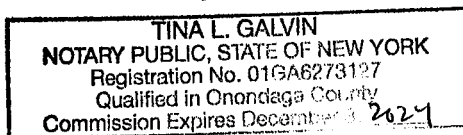
STATE OF NEW YORK )

) SS:

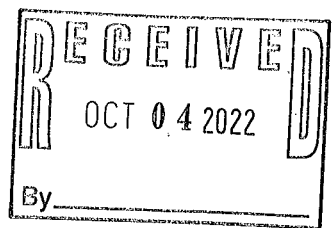
COUNTY OF ONONDAGA )

On this 1st day of November in the year 2022, before me, the undersigned, a notary public in and for said state, personally appeared Ryan Ewert, and _____ personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within Petition and acknowledged to me the he/she/they executed the same in his/her/their capacity, and that by his/her/their signature(s) on the Petition, the individual or the persons upon behalf of which the individual acted executed the instrument.

[Signature]  
Notary Public



**TOWN OF MANLIUS  
SPECIAL PERMIT APPLICATION  
(Original or Renewal)**



DATE: 8/15/2022

Tax Map # 8701

I Ryan Ewert as applicant relative to property located at 8291 East Seneca Pk, Manlius, NY 13104 hereby request/apply for issuance/renewal (CIRCLE ONE) of a **SPECIAL PERMIT** from the Town of Manlius Town Board as required by the Town of Manlius Code, submit the following application and documentary evidence and/or information, including comprising the Exhibits in support of this request and certify that it is correct, true and accurate to the best of my/our knowledge and after reasonable due diligence and investigation. I further knowledge and agree that should any such evidence or information be later determined as false or not credible in any material respect, any special permit issued/renewed based thereon may be determined by the Town Board as void from the start or revocable.

*Applicant's Signature*

A 1. Owner(s) of property: Ryan and Daniello Ewert

A 2. Status (Owner, Lessee) of each applicant: owner

A 3. Present Zoning of Property: RA

A.4. Present Use of Property (describe in detail as best as reasonably possible- add additional pages as needed): We live at this address and store equipment such as trucks, plows and mowers at pole barn which is built to the left of the house.

A5 Describe property condition at present: Well maintained, clean

B 1. Proposed use of property: Landscape storage/co.

B 2. Anticipated number of employees, guests, customers on property:  
5 employees, no customers.

B 3. Hours of Proposed Operation: 8am-5pm Mon-Fri



B 4. Anticipated Automobile Parking: 5 vehicles

B 5. Parking Area Buffer/Screening: To the right by fence that is there to buffer the area.

B 6. Anticipated Vehicle Traffic Volume/Flow: 3 vehicles may in and out. Same as it is now.

B 7. Proposed Site Lighting: Have 2 lights on the current pole beam.

B 8. Anticipated noise sources, known decibel levels: lawn mowers, trucks and skid-steer

B 9. Landscape:

a) Existing landscaping: grass and trees

b) Proposed landscaping: No change

B 10. Proposed Signage: _____

B 11. Level of municipal and other services required to support the proposed activity (i.e., water supply sanitary sewage facilities): Water - currently have

B 12. Specific Requirements:

Town Code (District) Requirement; Proposal:

Parking Spaces

6

Lot Coverage

Quarter of an acre

Front Yard Setback

250 feet back

Side Yard Setback

Rear Yard Setback

Maximum Height of Building

18 feet

### EXHIBITS TO SPECIAL PERMIT APPLICATION:

1. Detailed site plan of any proposed construction anticipated (attach as Exhibit "A"). The Town Board requires that drawings be certified by the appropriate design professional, i.e. a licensed engineer, architect, or surveyor, and include, except as may be permitted at #10 below, at time of application such detail as required per Town Zoning Code §155-28A (1) (13) for site plan submission.
2. Survey Map (Exhibit "B") Certified by a licensed surveyor within two years of date of application. Survey should show all existing state of facts, improvements, structures, easements, rights-of-way, appropriations, landscape features, encroachments and existing pavement on site. Any survey map last re-dated prior to 60 days before the application filing date shall be accompanied by an affidavit from the applicant, owner or occupant, i.e. someone with personal knowledge, that the survey map accurately shows the state of facts of the survey map as of the date of the application filing or if it does not the affidavit should describe any change features.
3. Legal description of proposed site (Exhibit "C"). The legal description must be in a form sufficient to follow the legal description on the survey map submitted.
4. Drainage, SWPPP if applicable, sanitary sewer, water service plans and specifications for proposed site (certified by a licensed professional engineer). Attach as Exhibit "D" and as applicable, numbered sub-exhibits e.g. "D-1", "D-2" etc.
5. Environmental Assessment Form (Exhibit "E"). A short environmental assessment form (see attached form) may be provided with any application for an unlisted action, however acceptance of same shall not be deemed a waiver by the Town of its right to require a long EAF with appropriate documentary substantiation of answers provided (including without limitation #6 following). For Type One Actions a long EAF must be submitted at time of application.
6. Freshwater Wetlands Letter. Pursuant to 6 NYCRR 663.4(a), where the application involves conduct of regulated activity on freshwater wetlands or adjacent areas, the applicant must obtain either a permit or letter of permission from the DEC or the authorized local government having jurisdiction over the wetland. Any delineation such determination is based on shall likewise be provided. Attach as Exhibit "F" and as applicable, with numbered sub-exhibits.
7. Professional Fees Reimbursement Agreement (Exhibit "G").
8. Disclosure Affidavit. The applicant shall submit an affidavit attesting it has reviewed General Municipal Law §809 and is familiar with the provisions contained therein, that no state officer, or any officer or employee of the County of Onondaga or Town of Manlius has any interest in the person, partnership or association owning the premises subject of the application or making such application, and that no other violation of §809 shall result from such application (Exhibit "H").

9. Filing and Professional Review Fees. At the time of application filing, applicant shall submit \$100.00 in the form of a check payable to the Town of Manlius for Special Permit filing or renewal fees. Site Plan filing and Professional Review fees must be paid per Town Code Fee Schedule prior to commencement of Planning Board advisory review.

10. NOTE: THE ABOVE ARE NOT INTENDED AS AN EXHAUSTIVE LISTING OF THE APPLICATION REQUIREMENTS. THE APPLICANT SHALL BE RESPONSIBLE FOR FAMILIARIZING ITSELF WITH ALL TOWN CODE ZONING, SITE PLAN REVIEW, AND SPECIAL PERMIT REQUIREMENTS, AND THE REQUIREMENTS OF OTHER INVOLVED AND PERMITTING AGENCIES INCLUDING RELATIVE TO SEQRA, GENERAL MUNICIPAL LAW SECTION 239 REVIEW, STATE/COUNTY DOT, DOH AND THE LIKE.

THE FOREGOING NOTWITHSTANDING IT IS ACKNOWLEDGED THAT UPON INITIAL APPLICATION CERTAIN OF THE ABOVE MAY NOT, WITHOUT INITIAL INPUT FROM THE TOWN BOARD OR PLANNING BOARD, BE REASONABLY CAPABLE OF FINAL COMPLETION, AND ACCORDINGLY MAY BE WAIVED OR SUCH REQUIREMENTS RELAXED TEMPORARILY AND UNTIL SUFFICIENT SPECIFIC DIRECTION FROM THE RESPECTIVE BOARDS HAS BEEN GIVEN. AT TIME OF SUBMISSION THE APPLICANT SHALL SPECIFICALLY REFERENCE ANY SUCH REQUEST(S) AND ITS REASON(S) FOR SAME IN A DETAILED ENCLOSURE LETTER DESCRIBING THE SUBMISSION AND EXHIBITS.

RENEWAL APPLICATIONS SHALL REQUIRE ONLY SUCH OF THE FOREGOING INFORMATION AND EXHIBITS AS ARE DEEMED NECESSARY FOR CONSIDERATION OF A RENEWAL PERMIT INVOLVING NO MATERIAL CHANGES FROM OR VIOLATIONS UNDER THE PRIOR ISSUED SPECIAL PERMIT.

APPLICATIONS SHALL BE SUBMITTED IN BOUND TABBED BOOKLET FORM WITH A COVER LETTER, TABLE OF CONTENTS REFERENCING EXHIBITS, AND LEGIBLE 11"by 17" MINIMUM DRAWINGS FOLDED TO LETTER SIZE THEREIN. TWENTY COPIES SHALL BE DELIVERED TOGETHER WITH SEVEN (7) FULL SIZE PRINTS OF ALL DRAWINGS. SUBSEQUENT SUBMISSIONS OF MINOR MODIFICATIONS MAY BE SUBMITTED IN THE SAME MANNER WITH A LETTER REFERENCING THE SPECIFICS OF THE SUBSTITUTION, HOWEVER IF NUMEROUS OR MATERIAL IN NATURE ENTIRE REPLACEMENT SUBMISSIONS MAY BE REQUESTED.



617.20  
Appendix B  
Short Environmental Assessment Form

**Instructions for Completing**

**Part 1 - Project Information.** The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

<b>Part 1 - Project and Sponsor Information</b>																		
Name of Action or Project: <u>Ryans Lawn care &amp; landscaping</u>																		
Project Location (describe, and attach a location map): <u>An existing - since we have lived here (2001)</u>																		
Brief Description of Proposed Action: <u>8291 E. Seneca tpk Manlius, NY 13104</u>																		
<u>to keep as is. Not to change anything but to keep code-current.</u>																		
Name of Applicant or Sponsor: <u>Ryan Ewert</u>		Telephone: <u>315-263-2520</u>																
Address: <u>8291 E. Seneca</u>		E-Mail: <u>Ryan13104@yahoo.com</u>																
City/PO: <u>Manlius</u>		State: <u>NY</u>	Zip Code: <u>13104</u>															
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">NO</td> <td style="text-align: center;">YES</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	NO	YES	<input checked="" type="checkbox"/>	<input type="checkbox"/>											
NO	YES																	
<input checked="" type="checkbox"/>	<input type="checkbox"/>																	
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval:			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">NO</td> <td style="text-align: center;">YES</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	NO	YES	<input checked="" type="checkbox"/>	<input type="checkbox"/>											
NO	YES																	
<input checked="" type="checkbox"/>	<input type="checkbox"/>																	
3. a. Total acreage of the site of the proposed action?		<u>1</u> acres																
b. Total acreage to be physically disturbed?		<u>0</u> acres																
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		<u>7.342</u> acres <u>(owned)</u>																
4. Check all land uses that occur on; adjoining and near the proposed action.																		
<table style="width: 100%;"> <tr> <td><input type="checkbox"/> Urban</td> <td><input type="checkbox"/> Rural (non-agriculture)</td> <td><input type="checkbox"/> Industrial</td> <td><input checked="" type="checkbox"/> Commercial</td> <td><input checked="" type="checkbox"/> Residential (suburban)</td> </tr> <tr> <td><input type="checkbox"/> Forest</td> <td><input checked="" type="checkbox"/> Agriculture</td> <td><input type="checkbox"/> Aquatic</td> <td><input checked="" type="checkbox"/> Other (specify):</td> <td><u>Back up to 42 acres of horse trails.</u></td> </tr> <tr> <td><input type="checkbox"/> Parkland</td> <td colspan="4"></td> </tr> </table>				<input type="checkbox"/> Urban	<input type="checkbox"/> Rural (non-agriculture)	<input type="checkbox"/> Industrial	<input checked="" type="checkbox"/> Commercial	<input checked="" type="checkbox"/> Residential (suburban)	<input type="checkbox"/> Forest	<input checked="" type="checkbox"/> Agriculture	<input type="checkbox"/> Aquatic	<input checked="" type="checkbox"/> Other (specify):	<u>Back up to 42 acres of horse trails.</u>	<input type="checkbox"/> Parkland				
<input type="checkbox"/> Urban	<input type="checkbox"/> Rural (non-agriculture)	<input type="checkbox"/> Industrial	<input checked="" type="checkbox"/> Commercial	<input checked="" type="checkbox"/> Residential (suburban)														
<input type="checkbox"/> Forest	<input checked="" type="checkbox"/> Agriculture	<input type="checkbox"/> Aquatic	<input checked="" type="checkbox"/> Other (specify):	<u>Back up to 42 acres of horse trails.</u>														
<input type="checkbox"/> Parkland																		

5. Is the proposed action,	NO	YES	N/A
a. A permitted use under the zoning regulations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Consistent with the adopted comprehensive plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?	NO	YES	
If Yes, identify: _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO	YES	
b. Are public transportation service(s) available at or near the site of the proposed action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c. Are any pedestrian accommodations or bicycle routes available on or near site of the proposed action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9. Does the proposed action meet or exceed the state energy code requirements?	NO	YES	
If the proposed action will exceed requirements, describe design features and technologies: _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
10. Will the proposed action connect to an existing public/private water supply?	NO	YES	
If No, describe method for providing potable water: <u>(our home)</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
11. Will the proposed action connect to existing wastewater utilities?	NO	YES	
If No, describe method for providing wastewater treatment: _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
12. a. Does the site contain a structure that is listed on either the State or National Register of Historic Places?	NO	YES	
b. Is the proposed action located in an archeological sensitive area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO	YES	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:			
† <input type="checkbox"/> Shoreline    † <input type="checkbox"/> Forest <input checked="" type="checkbox"/> Agricultural/grasslands    † <input type="checkbox"/> Early mid-successional			
† <input type="checkbox"/> Wetland    † <input type="checkbox"/> Urban <input checked="" type="checkbox"/> Suburban			
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
16. Is the project site located in the 100 year flood plain?	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
17. Will the proposed action create storm water discharge, either from point or non-point sources?	NO	YES	
If Yes,	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
a. Will storm water discharges flow to adjacent properties? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If Yes, briefly describe: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE</b> Applicant/sponsor name: <u>Ryan Ewert</u> Date: <u>8/15/2022</u> Signature: <u>[Signature]</u>		

**Part 2 - Impact Assessment.** The Lead Agency is responsible for the completion of Part 2. Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Will the proposed action result in a change in the use or intensity of use of land?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Will the proposed action impair the character or quality of the existing community?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Will the proposed action impact existing:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a. public / private water supplies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. public / private wastewater treatment utilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>



	No, or small impact may occur	Moderate to large impact may occur
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Will the proposed action create a hazard to environmental resources or human health?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Part 3 - Determination of significance. The Lead Agency is responsible for the completion of Part 3.** For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

<input type="checkbox"/> Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.	
<input type="checkbox"/> Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.	
_____ Name of Lead Agency	_____ Date
_____ Print or Type Name of Responsible Officer in Lead Agency	_____ Title of Responsible Officer
_____ Signature of Responsible Officer in Lead Agency	_____ Signature of Preparer (if different from Responsible Officer)

TOWN OF MANLIUS

SPECIAL PERMIT APPLICATION – EXHIBIT “G”

PROFESSIONAL FEES REIMBURSEMENT AGREEMENT

As a condition of the application(s) to the Town of Manlius, its Zoning Board of Appeals, Planning Board, codes administration/planning office, and/or Town Board (the “Town”) for various zoning, land use, construction and related reviews, approvals, certificates, permits and related consideration(s) (including for any local governmental assisted funding) related to the request of Special permit: (the “Application”),

Ryan Ewert [name], _____ [legal address] (“Applicant”) relative to proposed development at 8291 E. Seneca Rd Manlius, NY 13104 [project address], Tax Parcel # 8701, Manlius, New York, and related matters (the “Project”) agrees as follows:

The Application and Project may or will likely entail that the Town incur legal, engineering, architectural, administrative and related expense(s) including, without limitation, for both on staff and third party consultants involved in the consideration of the Application and Project, and including, without limitation, attendance at Zoning Board of Appeals, Planning Board, and Town Board meetings, consultation with the Applicant, its or the Town’s engineer, architect, attorney, and/or other Town officers and employees, or consultants or professional service providers, incidental to the Application from the earlier of the filing of the Application for and/or first presentation of the Project to Town, and through final completion and issuance of all Town and other governmental permits, certifications and approvals.

In connection with and consideration of the foregoing, Applicant agrees to bear all cost and expense for such administrative, legal, engineering, architect and other professional and consulting assistance to the Town incidental to the Application and Project, and including that expense incurred by the Town for Town employees and officers performing reasonable and necessary work on behalf of the Town incident to the Application or Project.

In connection with the foregoing, Applicant shall reimburse the Town for time spent by outside consultants and professionals at the usual rate charged by them to private clientele, or if none, then the usual rate charged to municipalities. Reimbursement for the cost of Town employees and officers shall be based upon the cost to Town for the services of such persons, including salary and fringe benefits, reduced to an hourly rate and including overtime where directly attributable to the Application or Project.

Should the Town determine, in its sole discretion, that additional services are required to represent, supervise, inspect, evaluate and/or consult, including in order to protect the rights and/or interests of the Town such as relative to an enforcement or violation proceeding, the Applicant shall likewise bear all costs associated with such services.

This Agreement shall be effective as of _____, 20____. The Applicant shall deposit an initial sum of \$_____, and such other amounts as from time to time the Town may determine, payable to and deposited with the Town and which sum or sums shall be applied against those sums reimbursable to the Town pursuant to the terms of this Agreement (the “Deposit”). Upon completion or discontinuance of the Application and Project and payment of all fees incurred, any unused Deposit shall be returned to the Applicant.

The Applicant shall receive periodically, one or more statements detailing charges for which reimbursement has been made against the Deposit, detailing unpaid amounts, if any, and setting forth any additional Deposit required by the Town. Failure to pay any amounts due the Town of Manlius within twenty (20) days of the date of statement may result in the termination of work/services by Town relative to the Application, the non-issuance suspension or revocation of any certificates, permits or approvals, and/or denial of applications, the Town’s commencement of collection efforts, and/or the exercise of any other rights or remedies available to Town hereunder or pursuant to applicable law, including under the Town Code. No certificates, approvals or permits, including, without limitation, Certificates of Occupancy/Compliance, may be issued until all fees due hereunder are paid or sufficient Deposit for same made.

Notwithstanding any provision hereof to the contrary or otherwise, the intent of this Agreement is to subject all of those subject matter areas under applicable provisions of Federal, State, and County laws, rules and regulations whatsoever, the Town Code including as any of same may be amended from time to time, and without limitation, those provisions under Chapters 59, 63, 72, 83, 95, 96, 104, 119, 123, 125, 126, 127, 131, 147, and 155 of the Town Code to the provisions hereof; in addition any financing or funding applications incidental to the Application or Project and requiring sponsorship or support of Town, and review under the State Environmental Quality Review Act or other State or Federal environmental, historical or related laws, rules or regulations shall likewise be subject to the provisions hereof.

In addition, and notwithstanding any provisions hereof to the contrary or otherwise, any provisions of the Town Code or other laws, rules or regulations providing rights more favorable to and protective of Town shall be deemed incorporated herein by reference, and shall not be deemed superseded by less protective provisions herein.

In the event of a breach or default by Applicant, Town shall be entitled to pursue any and all legal rights and remedies pursuant to applicable law including, without limitation, the Town Code and shall be entitled to recover, in addition to any sums due, reasonable attorney's fees, costs and disbursements incurred in any such efforts.

If any part of this Agreement or the application thereof to any person or entity or circumstance is adjudged invalid, illegal or unconstitutional by any court of competent jurisdiction, such order or judgment shall be confined in its operation to the part of this law or in its application directly involved in the controversy in which such judgment shall have been rendered and shall not affect or impair the validity of the remainder of this Agreement or the application thereof to other persons, entities or circumstances. Further, in adjudging such invalid, illegal or unconstitutional provision or part thereof, the court shall attempt to modify same to a provision or part which is not illegal, invalid or unconstitutional and which best achieves the intent of such illegal, invalid or unconstitutional provision or part thereof.

The Town Supervisor has executed this agreement pursuant to a blanket Resolution adopted by the Town Board at a meeting thereof held on _____, 20__, and is duly authorized and empowered to execute this instrument and enter into this Agreement on behalf of the Town of Manlius.

In the event Applicant is a closely held corporation, partnership or limited liability company, its three (3) largest principals shall be signatories to this Agreement, as joint and severable parties with Applicant and Town.

This instrument shall be executed in triplicate. At least one original shall be permanently filed, after execution thereof, in the office of the Town Clerk and one in the Code Enforcement Office.

Dated: 10-1-22

Ryan J Ewert  
Print Applicant Name

R Ewert owner  
Applicant's Authorized Signature/Title

Applicant Address: 8291 East Seneca tpk  
Manlius, NY 13104

Ryan Ewert  
Print Applicant (Principal) Name

R Ewert  
Applicant's Principal Signature

_____  
Print Applicant (Principal) Name

_____  
Applicant's Principal Signature

_____  
Print Applicant (Principal) Name

_____  
Applicant's Principal Signature

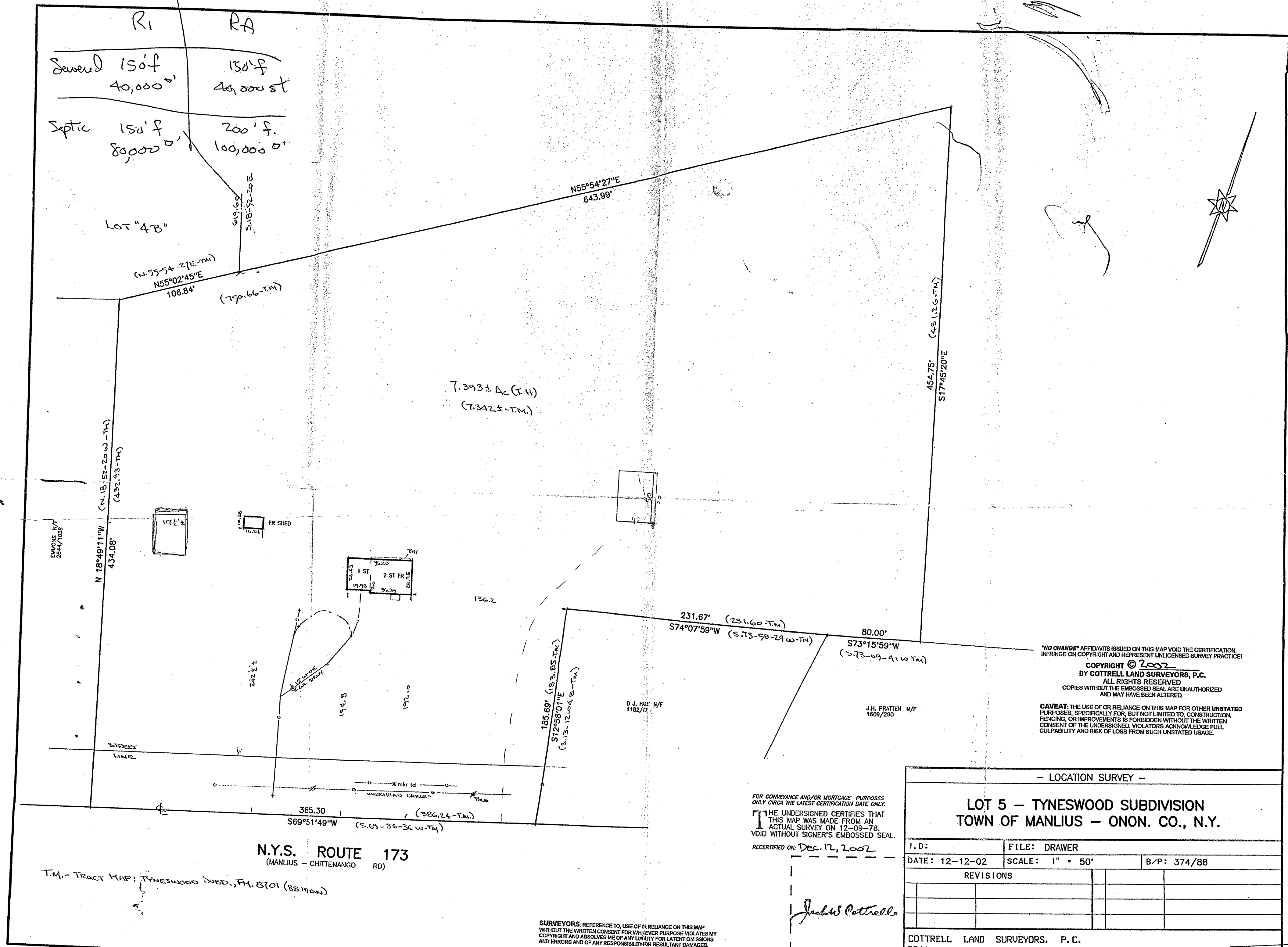
TOWN OF MANLIUS

By: _____

Name: _____

Title: _____





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FOR CONVEYANCE AND/OR MORTGAGE PURPOSES ONLY CIRCA THE LATEST CERTIFICATION DATE ONLY.  
THE UNDERSIGNED CERTIFIES THAT THIS MAP WAS MADE FROM AN ACTUAL SURVEY ON 12-09-78. VOID WITHOUT SIGNER'S EMBOSSED SEAL.  
RECERTIFIED ON: Dec. 12, 2002

*James Cottrell*  
SEAL

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- LOCATION SURVEY -

LOT 5 - TYNESWOOD SUBDIVISION  
TOWN OF MANLIUS - ONON. CO., N.Y.

I.D.:	FILE: DRAWER
DATE: 12-12-02	SCALE: 1" = 50'
B/P: 374/88	
REVISIONS	

COTTRELL LAND SURVEYORS, P.C.  
7308 JAMESVILLE ROAD  
MANLIUS, N.Y. 13104 PHONE (315) 682-8121

RECEIVED  
APR 1 2022  
By