



**WEST SENECA
PLANNING BOARD**
1300 Union Road, West Seneca, NY 14224
6:00 PM in the Community Center
March 12, 2026

AGENDA

Meeting # 2026-03

CALL TO ORDER

APPROVAL OF PROOFS OF PUBLICATION

APPROVAL OF MINUTES

1. Minutes of Meeting #2026-02

OLD BUSINESS

SPR2026-001

A request from Julius Aebly for property located at 1465 Union Rd. to permit the construction of a +/-2,500 SF bank with drive-thru.

NEW BUSINESS

ADJOURN

Proposed Bank

1465 Union Road

West Seneca, New York

AGENCIES

ENGINEERING DEPT.
NAME/TITLE: STEVEN TANNER, P.E., TOWN ENGINEER
COMPANY/DEPT.: TOWN OF WEST SENECA ENGINEERING DEPT.
ADDRESS: 1250 UNION ROAD
WEST SENECA, NEW YORK 14224

TELEPHONE 716-558-3220

CODE ENFORCEMENT DEPT.
NAME/TITLE: JEFFREY SCHIEBER, CODE ENFORCEMENT OFFICER
TOWN OF WEST SENECA CODE ENFORCEMENT DEPT.
COMPANY/DEPT.: 1250 UNION ROAD
ADDRESS: WEST SENECA, NEW YORK 14224

TELEPHONE 716-558-3237

ECDOH
NAME/TITLE:
COMPANY/DEPT.: ERIE COUNTY DEPARTMENT OF HEALTH
ADDRESS: 503 KENSINGTON AVE
BUFFALO, NEW YORK 14214

TELEPHONE 716-961-6854

NYSDEC
NAME/TITLE:
COMPANY/DEPT.: NEW YORK STATE DEPT. OF ENVIRONMENTAL
CONSERVATION
ADDRESS: 270 MICHIGAN AVENUE
BUFFALO, NEW YORK 14203

TELEPHONE 716-851-7070

UTILITIES

NATURAL GAS
NAME/TITLE: DAVID KOZLOWSKI
COMPANY/DEPT.: NATIONAL FUEL GAS
ADDRESS: ORCHARD PARK, NEW YORK 14127

TELEPHONE 716-667-5503

TELEPHONE COMPANY
NAME/TITLE: JIM MURPHY
COMPANY/DEPT.: VERIZON
ADDRESS: 65 FRANKLIN STREET RM 601
BUFFALO, NEW YORK 14202

TELEPHONE 716-840-8698

ELECTRIC
NAME/TITLE: DAN LOSEL
COMPANY/DEPT.: NEW YORK STATE ELECTRIC & GAS
ADDRESS: HAMBURG, NEW YORK 14075

TELEPHONE 716-649-5556

WATER
NAME/TITLE: LEONARD KOWALSKI
COMPANY/DEPT.: ERIE COUNTY WATER AUTHORITY
ADDRESS: 3030 UNION ROAD
CHEEKTOWAGA, NEW YORK 14227

TELEPHONE 716-684-1510

DIG SAFELY NEW YORK

TELEPHONE 811

DESIGN CONSULTANTS

PROJECT SURVEYOR
NAME/TITLE:
COMPANY/DEPT.: TRUE NORTH LAND SURVEYING PLLC
ADDRESS: 150 AERO DRIVE
BUFFALO, NEW YORK 14225

TELEPHONE 716-631-5140

OWNER/DEVELOPER

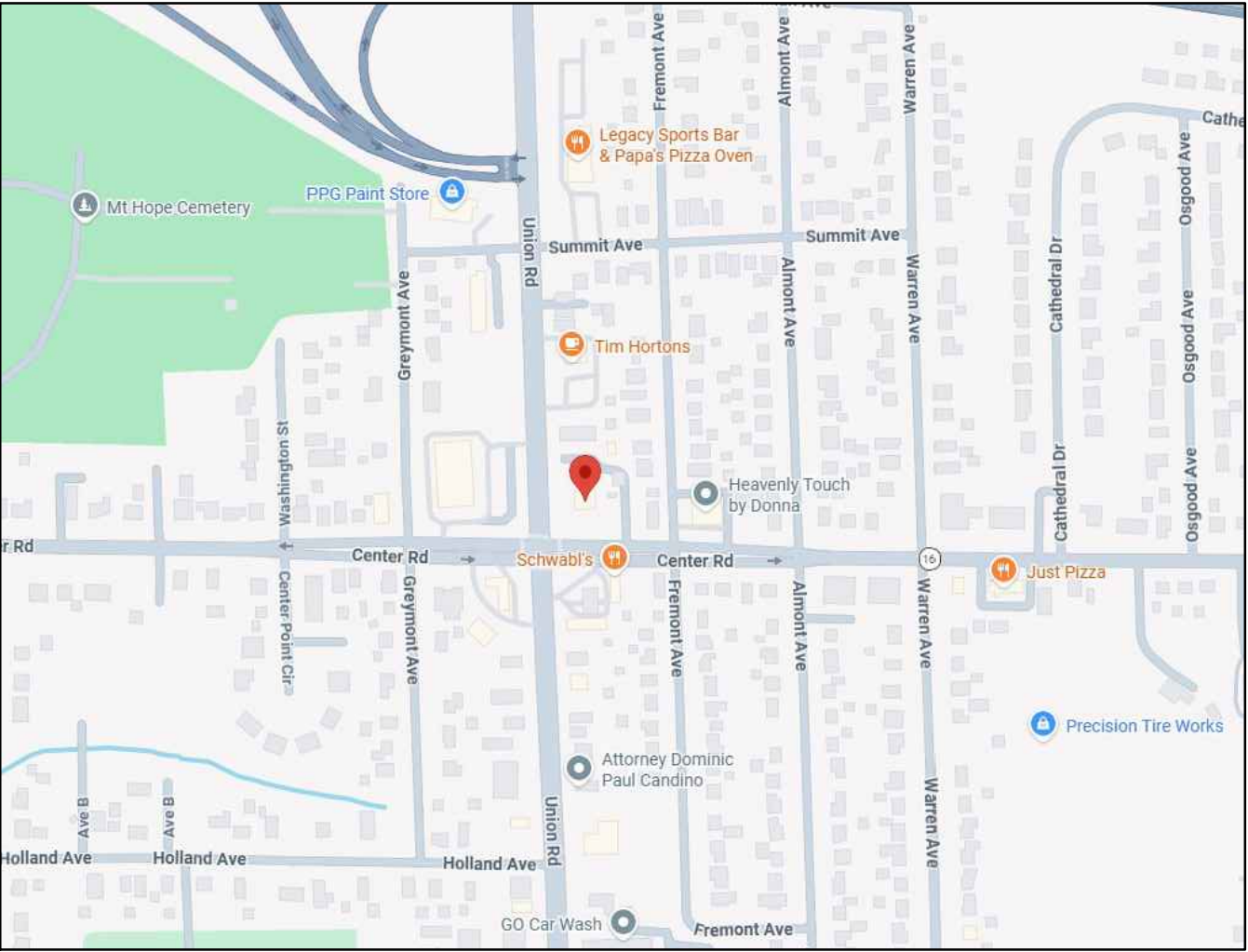
Name: Julius Aebly
Address: 1471 Union Road
West Seneca, NY 14224
Telephone: (716) 675-2100

CARMINAWOOD DESIGN

80 Silo City Row
Buffalo, New York 14203
Phone: (716) 842-3165

111 Bain Street, Suite 332
Greensboro, North Carolina 27406
Phone: (336) 937-9009

DRAWING NO.	DRAWING TITLE
—	COVER SHEET
—	BOUNDARY/TOPO SURVEY (by True North Land Surveying, PLLC)
C-001	DEMOLITION & EROSION CONTROL PLAN
C-002	DEMOLITION & EROSION CONTROL DETAILS
C-100	SITE PLAN
C-101	SITE DETAILS
C-200	GRADING PLAN
C-300	DRAINAGE PLAN
C-301	DRAINAGE DETAILS
C-302	UTILITY PLAN
C-400	UTILITY DETAILS
L-100	LANDSCAPE PLAN, DETAIL & PLANT SCHEDULE
LP-100	LIGHTING PLAN

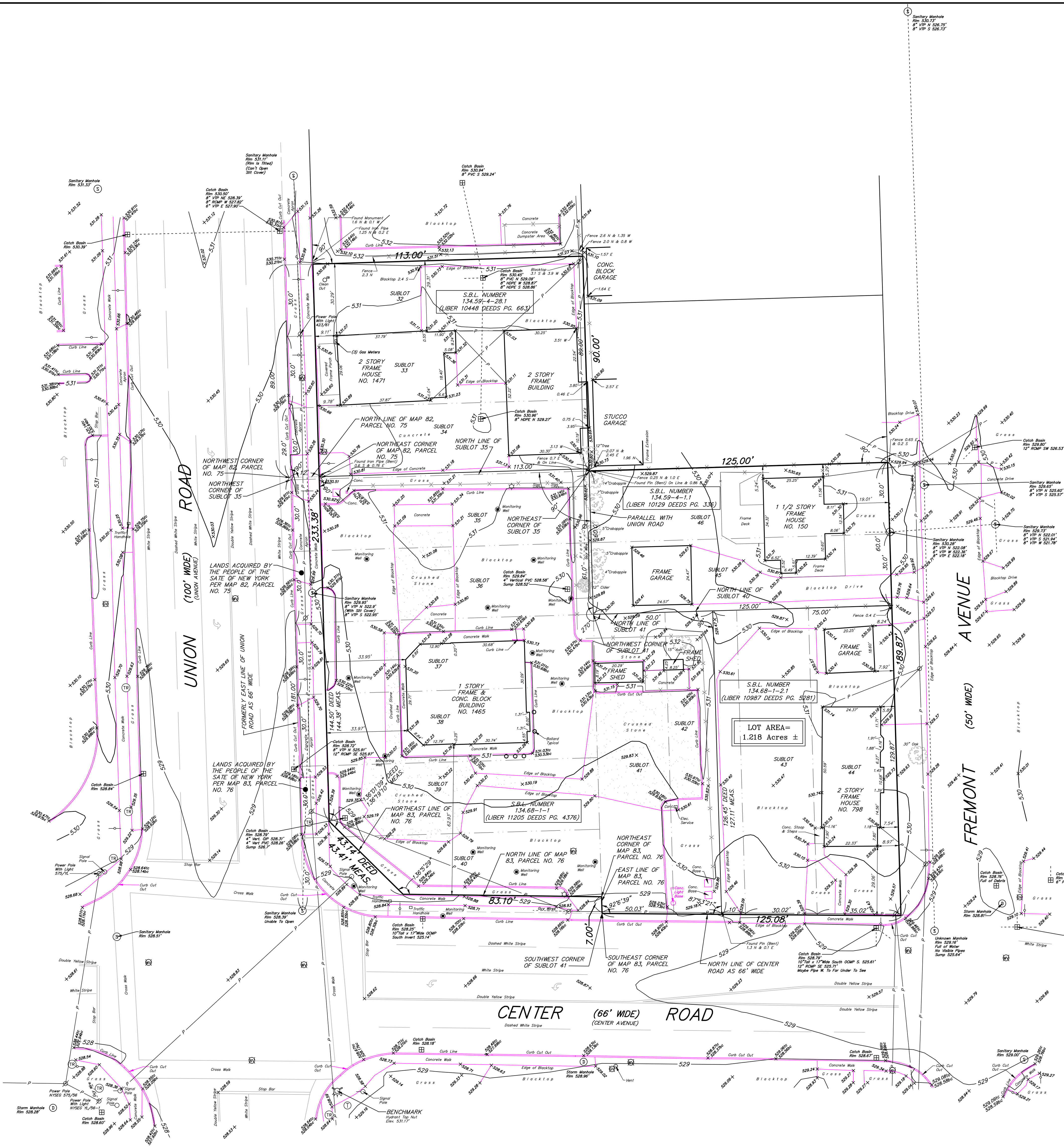


LOCATION MAP
NOT TO SCALE



February 2026

Proposed Bank
1465 Union Road
West Seneca, New York



NOTE:
EASEMENT TO TOWN OF WEST OF SENECA PER LIBER 6854 DEEDS
PAGE 474 (EASEMENT NOW IN P.O.W.)

ELEVATION DATUM
ELEVATIONS ON THIS MAP WERE DETERMINED UTILIZING GPS DATUM:
NAD83 (2011) EPOCH 2010.0 DATUM

UTILITIES

The underground utilities shown have been located from field survey information
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 the information available. This
surveyor has not physically located the underground utilities.

Note: Underground Utility Information has been ordered from the respective
utility companies. As the information is received, this map will be amended to
reflect said information.

National Fuel Attn: Ed Kulpa (716) 857-7000	Spectrum Cable Attn: Chris Smith (800) 262-8600	Verizon Attn: Anne Baglio (716) 840-8748
Erie County Water Dept. Attn: Daniel Workman (716) 684-1510	N.Y.S. Electric & Gas Attn: Sam Cappoglia (716) 651-5256	National Grid Attn: Eric Wright (716) 857-4031

LEGEND

- | | |
|---------------------------|---------------------|
| UTILITY / SERVICE POLE | R.O.W. RIGHT OF WAY |
| WATER LINE VALVE | CONC. CONCRETE |
| FIRE HYDRANT | INV. INVERT |
| D.I. (DROP INLET - STORM) | M.H. MANHOLE |
| MANHOLE (STORM) | GAS LINE |
| MANHOLE (ELECTRIC) | WATER LINE |
| MANHOLE (TRAFFIC) | TELEPHONE LINE |
| MANHOLE (SANITARY) | ELECTRIC LINE |
| MANHOLE (TELEPHONE) | UTILITY LINES |
| GASLINE MARKER | CABLE LINES |
| GAS LINE VALVE | D. DEED |
| LIGHT STANDARD | M. MEASURED |
| SIGN | L. LIBER |
| H.C. HANDICAP | P. PAGE |

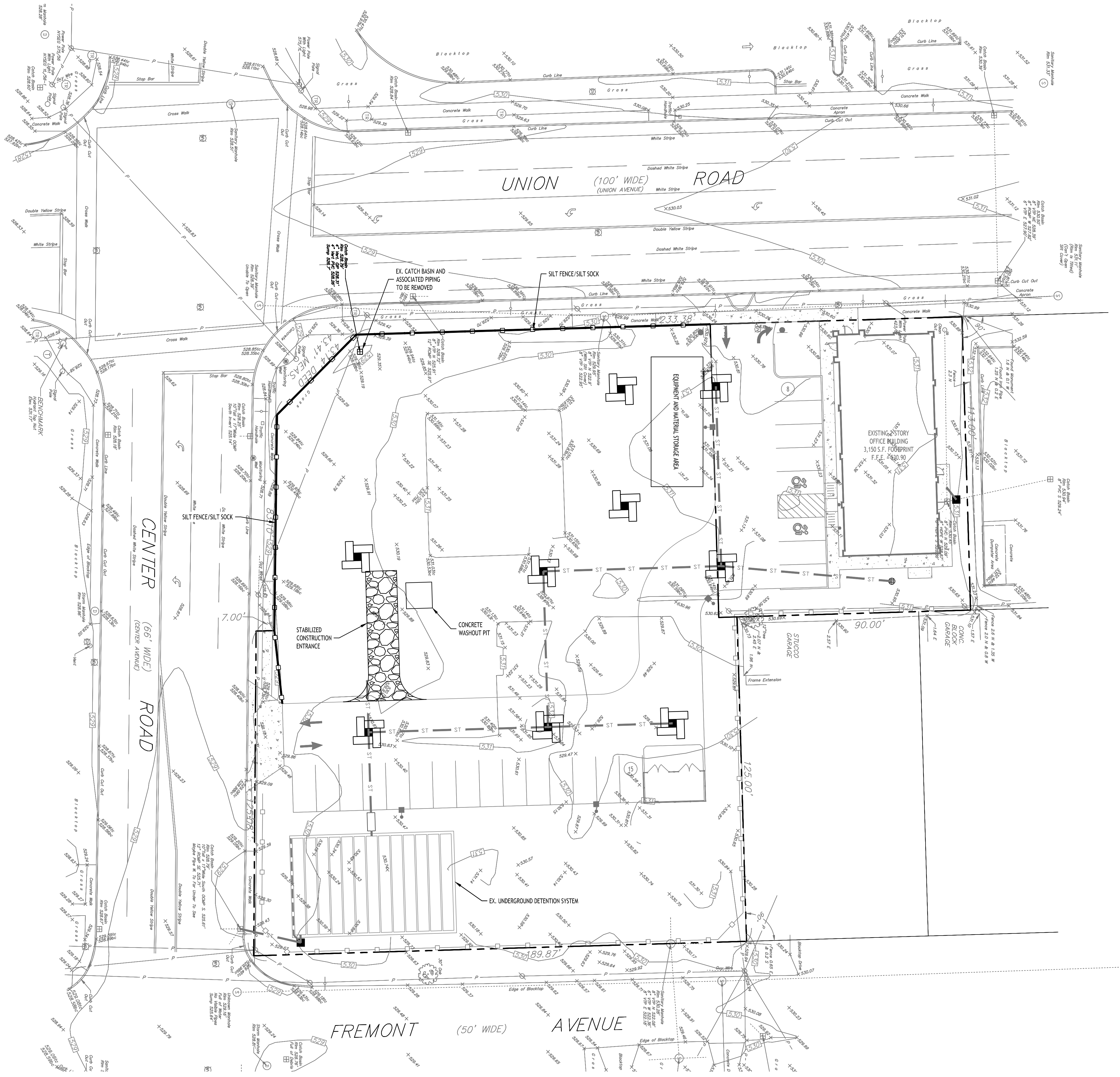


INSTRUMENT(S) UTILIZED IN DETERMINING LOCATION OF BOUNDARY LINES: L11025 Deeds Pg. 4376, L10987 Deeds Pg. 5295, L10448 Deeds Pg. 663, L10129 Deeds Pg. 338
THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT ABSTRACT OF TITLE AND IS SUBJECT TO ANY STATE OF FACTS THAT MAY BE REVEALED IN SAID ABSTRACT.
NOTE: PROPERTY CORNER MONUMENTS WERE NOT PLACED AS PART OF THIS SURVEY.

	©COPYRIGHT 2020 BY: Millard, Mackay & Delles, LLP LAND SURVEYORS, LLP 150 AERO DRIVE BUFFALO, NEW YORK 14225 PHONE (716) 631-5140 ~ FAX 631-3811		AMEND: SURVEY DATE: 9-3-20 DRAWING DATE: 9-25-20 SCALE: 1" = 20' "ALL RIGHTS RESERVED"
	PART OF SUBLOTS 32 TO 40 AND ALL OF SUBLOTS 41 TO 46 ~ BLOCK "B", MAP COVER 467 PART OF LOT 192 SECTION _____ TOWNSHIP _____ RANGE _____ OF THE Ebenzer Lands Survey ~ Erie COUNTY, N.Y. SURVEY OF: 1465 & 1471 Union Rd., 798 Center Rd. & 150 Fremont Ave., Town of West Seneca		THIS MAP VOID UNLESS EMBOSSSED WITH NEW YORK STATE LICENSED LAND SURVEYOR'S SEAL. VIOLATING ANY ITEM ON THIS MAP IS A VIOLATION OF THE LAND EASEMENT AS PROVIDED IN SECTION 7209, PART 2, OF THE NEW YORK STATE EDUCATION LAW. SBL NO. 134.68-1-11.2.1828.

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Demo & Erosion Control Plan
SCALE: 1"=30'

EROSION CONTROL NOTES

THE FOLLOWING EROSION CONTROL PROCEDURES SHALL BE ADHERED TO BY THE CONTRACTOR:

1. INSTALL TEMPORARY SILT FENCE BARRIERS AS DIRECTED BY THE OWNER AND AT ALL EXISTING STORMWATER CATCH BASINS WITHIN THE WORK AREA TO PREVENT SEDIMENT MIGRATION. ALL SILT FENCE BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
2. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR RE-USE AS DIRECTED BY THE OWNER. ALL LOCAL ORDINANCES REGARDING THE SALE OF TOPSOIL MUST BE FOLLOWED. TOPSOIL MAY NOT BE REMOVED WITHOUT A PERMIT.
3. ALL SILT FENCE BARRIERS SHALL BE REPLACED WHEREVER THEY BECOME CLOGGED OR INOPERABLE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS.
5. THE CONTRACTOR MUST CONTROL DUST DURING CONSTRUCTION. DURING EARTHWORK OPERATIONS, WATER-SPREADING EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR, AND SPREAD WATER AS NECESSARY AND AS DIRECTED BY THE OWNER IN ORDER TO CONTROL DUST.
6. DIRT OR DEBRIS LEFT ON LOCAL PUBLIC ROADS AS A RESULT OF THIS CONSTRUCTION PROJECT SHALL BE REMOVED AND ROAD SURFACES CLEANED BY THE CONTRACTOR ON A DAILY BASIS.
7. ALL DISTURBED AREAS (EXCEPT AREAS TO BE PAVED OR BUILT UPON) SHALL BE TOPSOILED TO A MINIMUM 4" DEPTH AND SEEDED IMMEDIATELY AFTER FINE GRADING TAKES PLACE AND AS SOON AS PHYSICALLY POSSIBLE.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF DOWNSTREAM STORM SEWERS, DITCHES, AND CULVERTS. SILT BUILDUP FOUND TO BE A RESULT OF THIS SITE CONSTRUCTION WORK SHALL BE REMOVED FROM DOWNSTREAM CULVERTS BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE TOWN/CITY.
9. ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES AND MATERIALS SHALL BE IN PLACE PRIOR TO BEGINNING EARTHWORK OPERATIONS AND SHALL BE MAINTAINED UNTIL THE NEW SLOPES ARE STABILIZED WITH SEEDING AND/OR SLOPE PROTECTION, AS DIRECTED BY THE ENGINEER.
10. INSTALL TEMPORARY SILT FENCE AROUND THE BASE OF STOCKPILES.
11. THE PROFESSIONAL CERTIFYING COMPLIANCE TO NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS MUST INSPECT AT A MINIMUM WEEKLY AND SHALL PROVIDE THESE INSPECTION REPORT WITH A WRITTEN CERTIFICATION OF CONSTRUCTION COMPLIANCE TO THE TOWN OF WEST SENECA WEEKLY.
12. THE ENGINEER OF RECORD FOR THIS PROJECT CERTIFIES THAT THESE DESIGN PLANS MEET THE REQUIREMENTS AND ARE IN COMPLIANCE WITH THE NEW YORK STORMWATER MANAGEMENT DESIGN MANUAL AND NYSDEC PHASE II STORMWATER REGULATION REQUIREMENTS. DUE TO SOIL DISTURBANCE BEING GREATER THAN ONE ACRE, A NYSDEC SPDES PERMIT MUST BE OBTAINED BEFORE ANY ON-SITE DISTURBANCE IS MADE.

NOTES:

1. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT THOSE ITEMS TO REMAIN, SUCH AS TREES, PROPERTY CORNER PINS, UTILITY POLES, VALVES, HYDRANTS, CURBS, MANHOLES AND CATCH BASINS.
2. TEMPORARY SILT FENCE AND STRAW BALES TO BE INSTALLED AS DIRECTED BY THE OWNERS FIELD REPRESENTATIVE. MAINTAIN UNTIL VEGETATION IS ESTABLISHED AND PAVEMENT IS INSTALLED.
3. FOR THOSE STRUCTURES TO BE DEMOLISHED, ALL EXISTING UTILITY SERVICES SHALL BE ABANDONED IN ACCORDANCE WITH LOCAL REGULATIONS, ALL METERS SHALL BE RETURNED TO PROPER OWNERS.
4. THE CONTRACTOR SHALL INSTALL STABILIZED CONSTRUCTION ENTRANCES WHERE ACCESSING THE SITE FROM PAVED ROADWAYS.
5. THE CONTRACTOR SHALL INSTALL TEMPORARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH NYS M.U.T.C.D. STANDARDS PRIOR TO STARTING WORK.

DEMO & EROSION CONTROL LEGEND:



INSTALL STORM DRAINAGE INLET PROTECTION

PROPOSED SILT FENCE/SILT SOCK

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.



CARMINA WOOD
DESIGN

Buffalo | Utica | Greensboro

Proposed Bank
1465 Union Road
West Seneca, NY

REVISIONS:	Date	
	No.	Description

PRELIMINARY
NOT FOR CONSTRUCTION

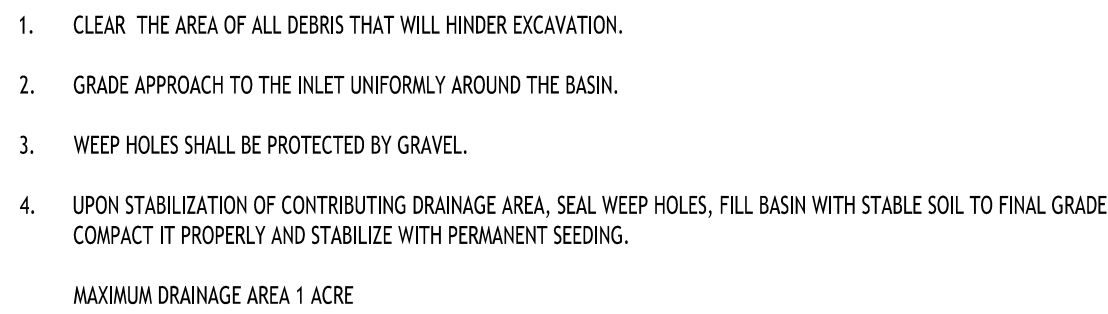
DRAWING NAME:
Demo & Erosion Control Plan

Date: 1/20/26
Drawn By: A. Pandolfe
Scale: As Noted

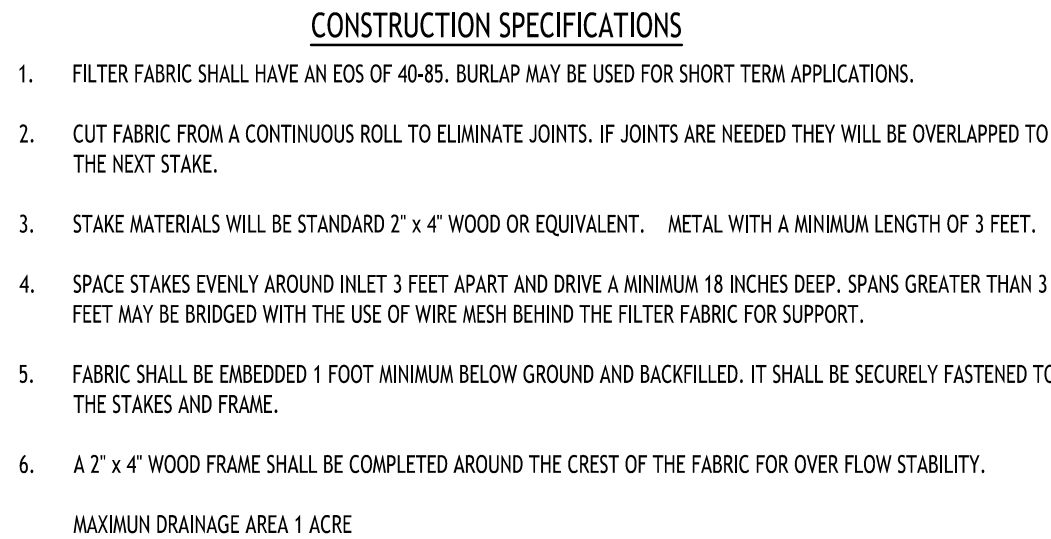
DRAWING NO.

C-001

Project No: 25-4181

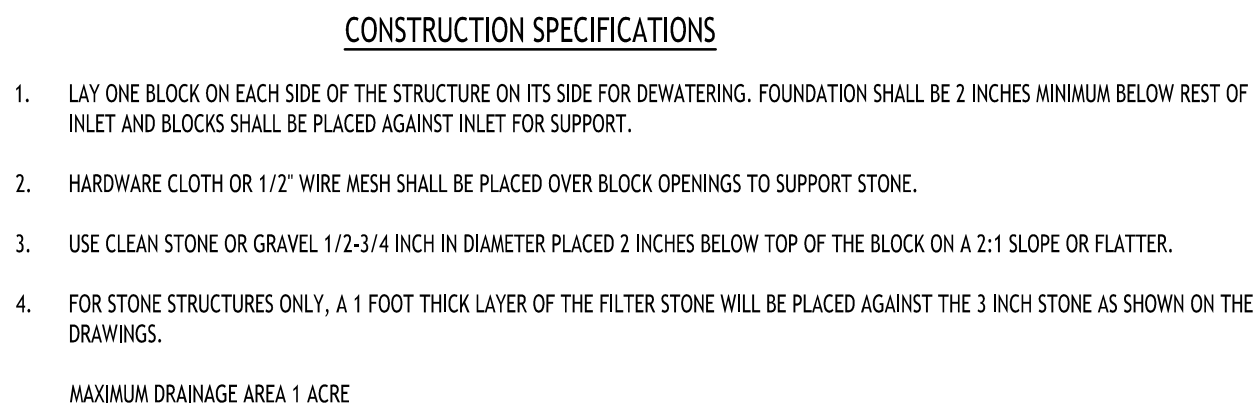


NOT TO SCALE

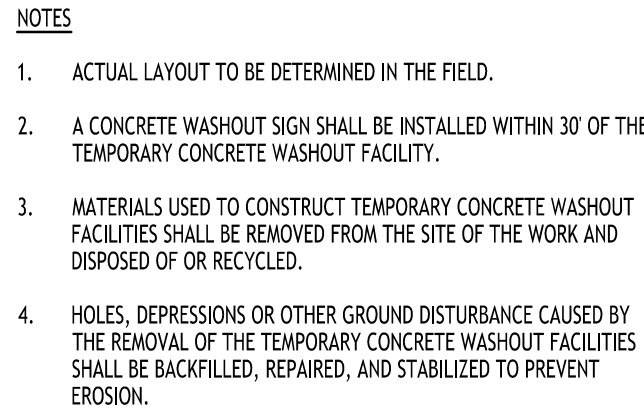


NOT TO SCALE

NOTE: INSTALL ONE OF THE INLET PROTECTION OPTIONS SHOWN PRIOR TO CONSTRUCTION



NOT TO SCALE



NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. WOVEN FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILUNA T140N, OR APPROVED EQUIVALENT.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.



CONTRACTOR SHALL INSPECT AND MAINTAIN SILT SOCK AS NEEDED DURING THE DURATION OF CONSTRUCTION PROJECT.

CONTRACTOR SHALL REMOVE SEDIMENT COLLECTED AT THE BASE OF THE SILT SOCK WHEN IT HAS REACHED $\frac{1}{2}$ OF THE EXPOSED HEIGHT OF THE SILT SOCK. ALTERNATIVELY, RATHER THAN CREATE A SOIL DISTURBING ACTIVITY, THE ENGINEER MAY CALL FOR ADDITIONAL SILT SOCK TO BE ADDED AT AREAS OF HIGH SEDIMENTATION, PLACED IMMEDIATELY ON TOP OF THE EXISTING SEDIMENT LADEN SILT SOCK.

NOT TO SCALE



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) FOOT 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 TRACED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. TEMPORARY ASPHALT SHALL BE PLACED WITHIN RIGHT-OR-WAY TO ENSURE THIS.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A 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.

NOT TO SCALE

REVISIONS:	
No.	Description Date

1465 Union Road
West Seneca, NY

DESIGN

Buffalo | Utica | Greensboro

Date: 1/20/26
Drawn By: A. Pandolfo
Scale: As Noted

DRAWING NO.

C-002

Project No: 25-4181



GENERAL NOTES:

1. INSTALL ALL MATERIALS TO MANUFACTURER'S RECOMMENDATIONS AND BEST STANDARDS OF TRADE INVOLVED.
2. SUBSTITUTIONS SHALL BE MADE ONLY WITH OWNER'S APPROVAL AND BE OF EQUIVALENT QUALITY TO WHAT IS SPECIFIED.
3. WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND OSHA SAFETY RULES AND REGULATIONS.
4. VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. NOTIFY OWNER & ENGINEER OF DISCREPANCIES IN CONDITIONS SHOWN ON DRAWINGS PRIOR TO PROCEEDING WITH THE WORK.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ANY EXISTING STRUCTURES TO REMAIN AND ANY FINISH MATERIAL INSTALLED WHILE WORKING ON OTHER COMPONENTS.
6. CONTRACTOR SHALL KEEP JOB FREE OF DEBRIS AND MAKE FINAL CLEANUP TO SATISFACTION OF OWNER.
7. CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION SO THAT THIS WORK WILL NOT DISTURB EXISTING LINES AND/OR INSTALLATIONS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
8. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS NECESSARY TO PERFORM THE WORK.
9. ALL REASONABLE MEASURES SHALL BE TAKEN TO PROTECT EXISTING TREES WHICH ARE TO BE PRESERVED FROM ALL POSSIBLE TYPES OF ROOT, TRUNK, AND LIMB DAMAGE; INCLUDING BUT NOT LIMITED TO, RETAINING WALLS WHICH PREVENT FILLING ON TOP OF ROOTS OR EXCAVATING TREE ROOTS.

NOTES:

1. ALL RADI SHALL BE 3'-0" UNLESS OTHERWISE NOTED.
2. ALL DISTURBED AREAS SHALL HAVE 4" MIN. OF TOPSOIL & SEED.
3. ALL DIMENSIONS FROM PROPERTY LINES SHALL BE MEASURED PERPENDICULAR TO THE PROPERTY LINE.
4. CENTER ENTRANCE SIDEWALKS ON DOOR OPENINGS.
5. BUILDING DIMENSIONS ARE APPROXIMATE. REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT DIMENSIONS.

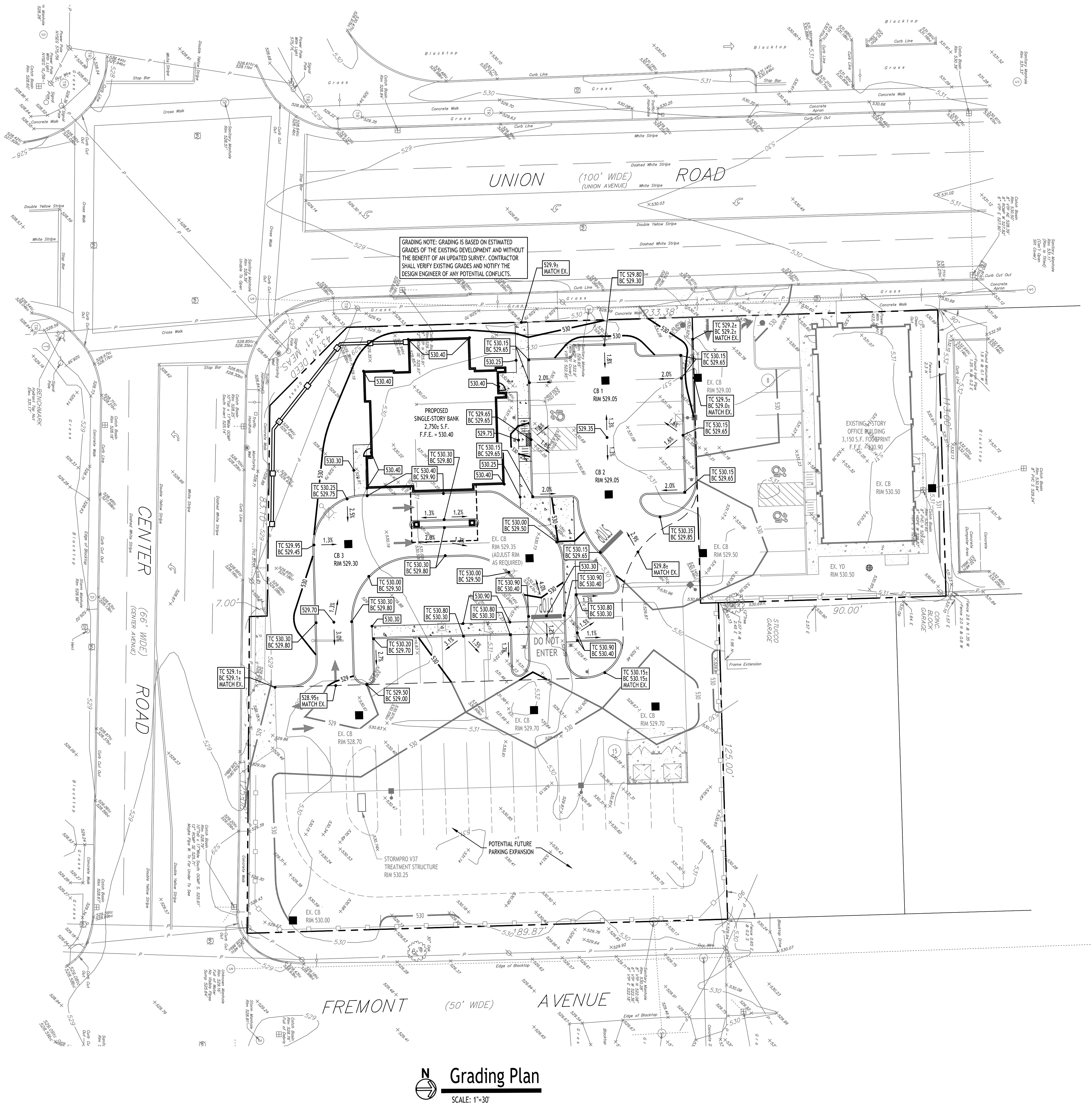
NOTE LEGEND

1	INSTALL STOP SIGN - M.U.T.C.D. SIGN NO. R1-1
2	RUNOUT CURB IN 2' OR MATCH EXISTING CURB
3	SAW CUT LINE, MATCH EXISTING EDGE OF PAVEMENT
4	INSTALL "NO PARKING" SIGN, M.U.T.C.D. SIGN NO. P1-1C
5	LANDSCAPED AREA - SEE LANDSCAPE PLAN, IF NO PLANTINGS, INSTALL TOPSOIL & SEED
6	1' WIDE WHITE PAVEMENT STRIPES @ 1' SPACING BETWEEN 4' WIDE WHITE CROSSWALK LINES
7	INSTALL "DO NOT ENTER" SIGN, M.U.T.C.D. SIGN NO. RS-1
8	MATCH EX. SIDEWALK
9	DECORATIVE BRICK WALL - REFER TO PLANS BY OTHERS
10	DRIVE-THRU DIRECTIONAL SIGN - COORDINATE W/ OWNER
11	CLEARANCE SIGN - COORDINATE W/ OWNER
12	FLAGPOLE - COORDINATE W/ OWNER
13	CANOPY - REFER TO PLANS BY OTHERS

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GRADING NOTE: GRADING IS BASED ON ESTIMATED GRADES OF THE EXISTING DEVELOPMENT AND WITHOUT THE BENEFIT OF AN UPDATED SURVEY. CONTRACTOR SHALL VERIFY EXISTING GRADES AND NOTIFY THE DESIGN ENGINEER OF ANY POTENTIAL CONFLICTS.

Grading Plan
SCALE: 1"=30'

PROPOSED GRADING LEGEND	
PROPOSED CONTOUR	— 101 —
PROPOSED SPOT ELEVATION	100.80
PROPOSED TOP/BOTTOM OF CURB ELEV.	TC 100.50 BC 100.00
PROPOSED CATCH BASIN	■ CB
PAVEMENT/GROUND SLOPE	→
PROPOSED YARD DRAIN	⊗ YD
PROPOSED MANHOLE	● MH

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

20 0 20 40 FT.

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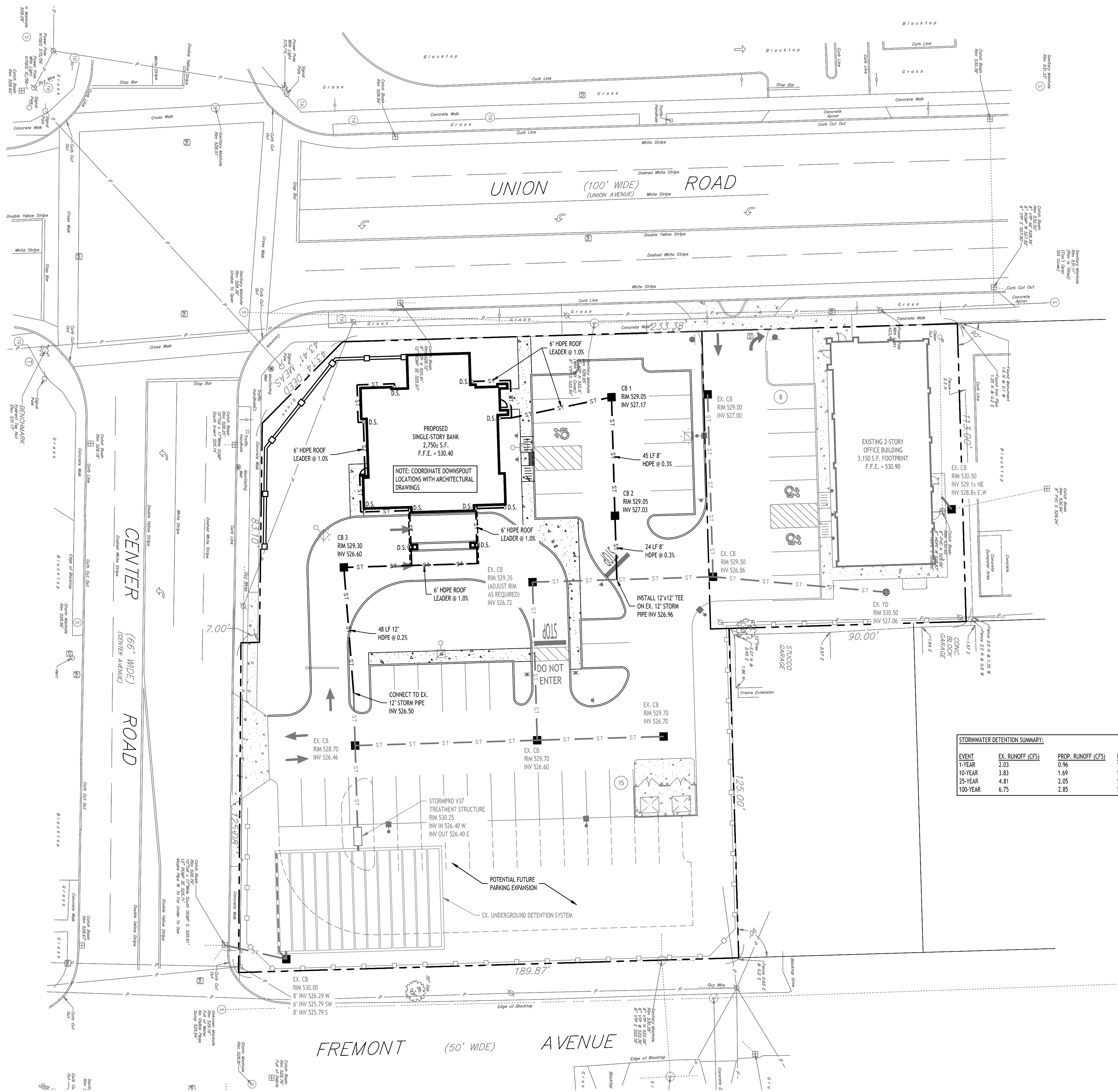
Proposed Bank
1465 Union Road
West Seneca, NY

REVISIONS:	
No.	Description

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWING NAME:
Grading Plan

Date: 1/20/26
Drawn By: A. Pandolfi
Scale: As Noted
DRAWING NO.:
C-200
Project No: 25-4181



STORMWATER DETENTION SUMMARY:				
EVENT	EX. RUNOFF (CFS)	PROP. RUNOFF (CFS)	ELEVATION (FEET)	STORAGE (CF)
1-YEAR	2.03	0.96	526.60	1,104
10-YEAR	3.83	1.69	527.35	2,548
25-YEAR	4.81	2.05	527.83	3,418
100-YEAR	6.75	2.85	529.23	5,193

- PROPOSED UTILITY LEGEND
- PROPOSED STORM SEWER — ST —
 - PROPOSED SANITARY SEWER — 6" SA —
 - PROPOSED WATERLINE — 1" W —
 - PROPOSED CATCH BASIN ■ CB
 - PROPOSED YARD DRAIN ⊗ YD
 - PROPOSED MANHOLE ● MH
 - PROPOSED HYDRANT ASSEMBLY ⚡
 - PROPOSED GATE VALVE ⊕ GV

NOTE: FOR PROPOSED VALVE BOXES, CLEANOUTS, ETC., INSTALL A 3,000 PSI CONCRETE COLLAR AROUND THE ITEM AT GRADE. THE COLLAR SHALL BE A MINIMUM OF 6" WIDER, ON ALL SIDES, THAN THE BOX, CLEANOUT, ETC. THE COLLAR SHALL BE A MINIMUM OF 6" THICK.

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.



Drainage Plan
SCALE: 1"=30'

REVISIONS:	
No.	Description

PRELIMINARY
NOT FOR CONSTRUCTION

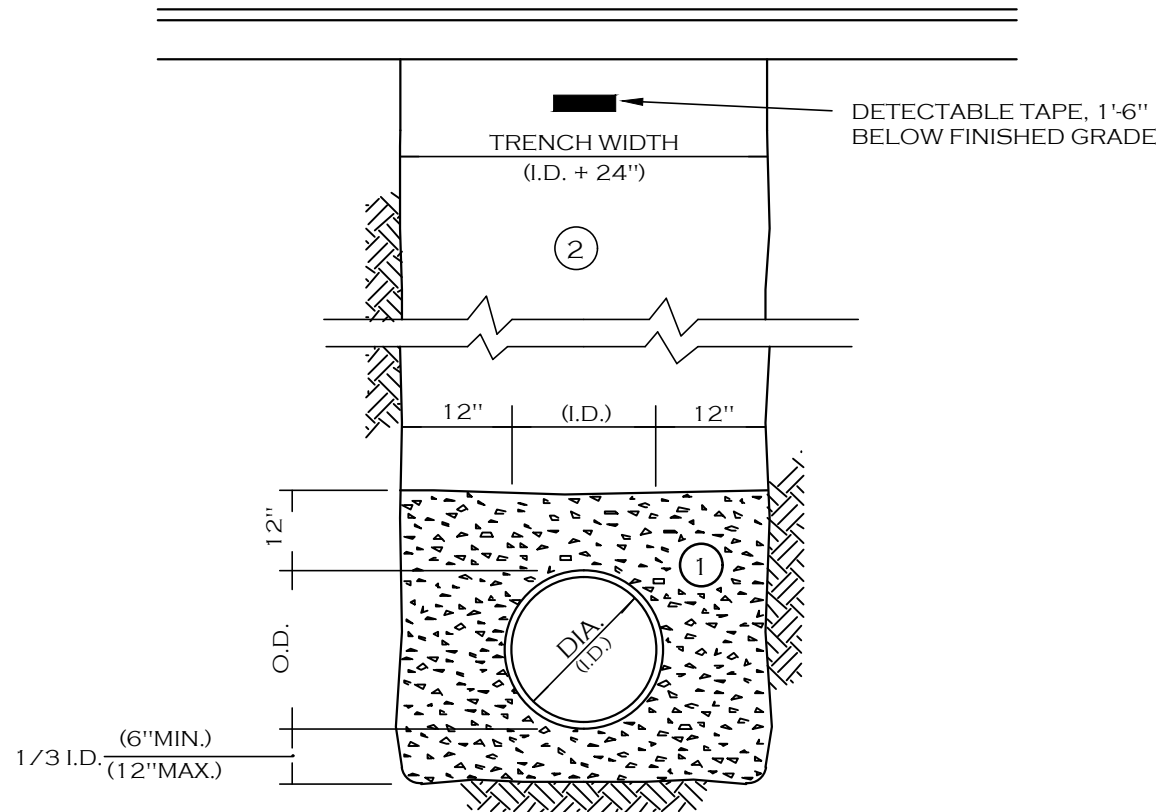
DRAWING NAME:
Drainage Plan

Date: 1/20/26
Drawn By: A. Pandolfe
Scale: As Noted

DRAWING NO.

C-300

Project No: 25-4181



- NOTES:
- A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.
 - C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.
 - D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

PIPE BEDDING MATERIAL (NYS DOT 1985 EDITION)

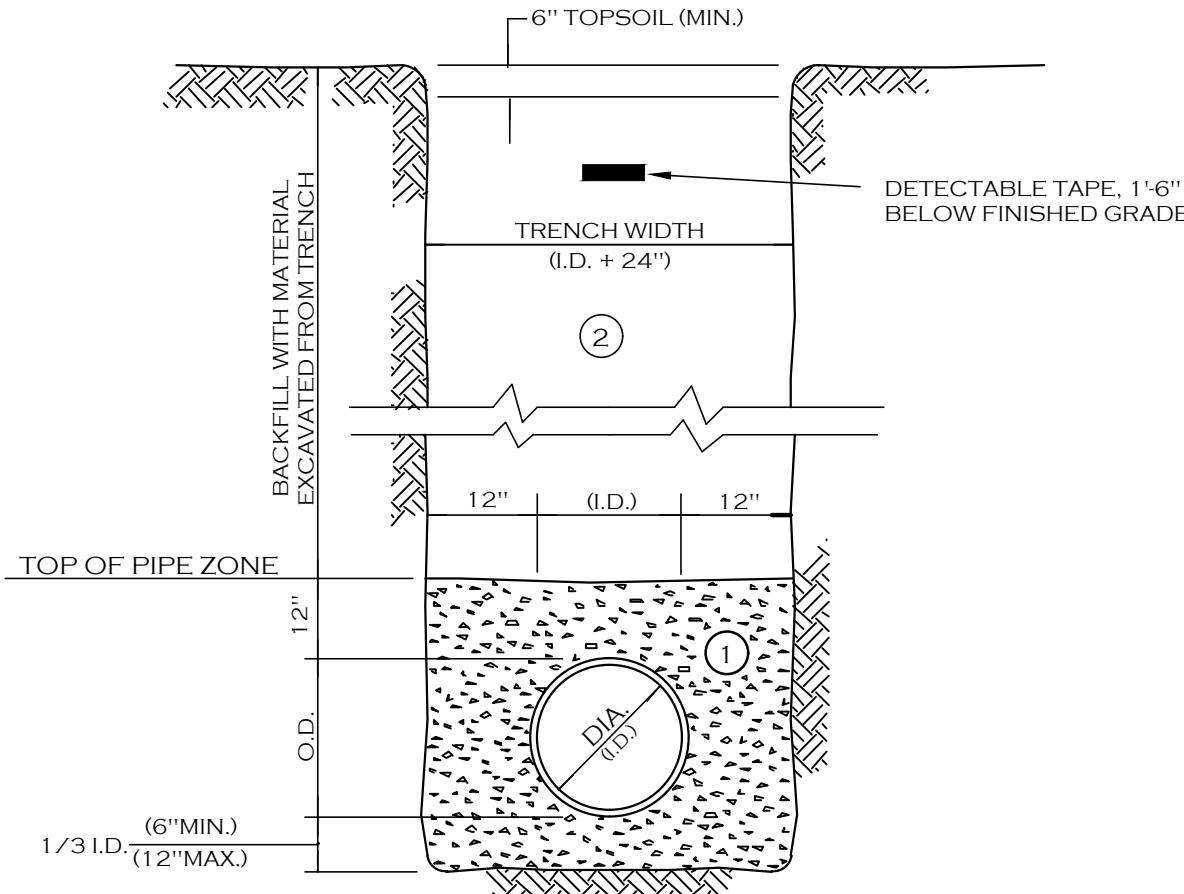
- 1 NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYS DOT SECTION 703.02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL 1

- 2 TYPE 2 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYS DOT SECTION 304.2.02 TYPE 2. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN TWO INCHES AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL 2

**STORM SEWER TRENCH SECTION
IN PAVED AREAS**



- NOTES:
- A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.
 - C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.
 - D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

MATERIALS

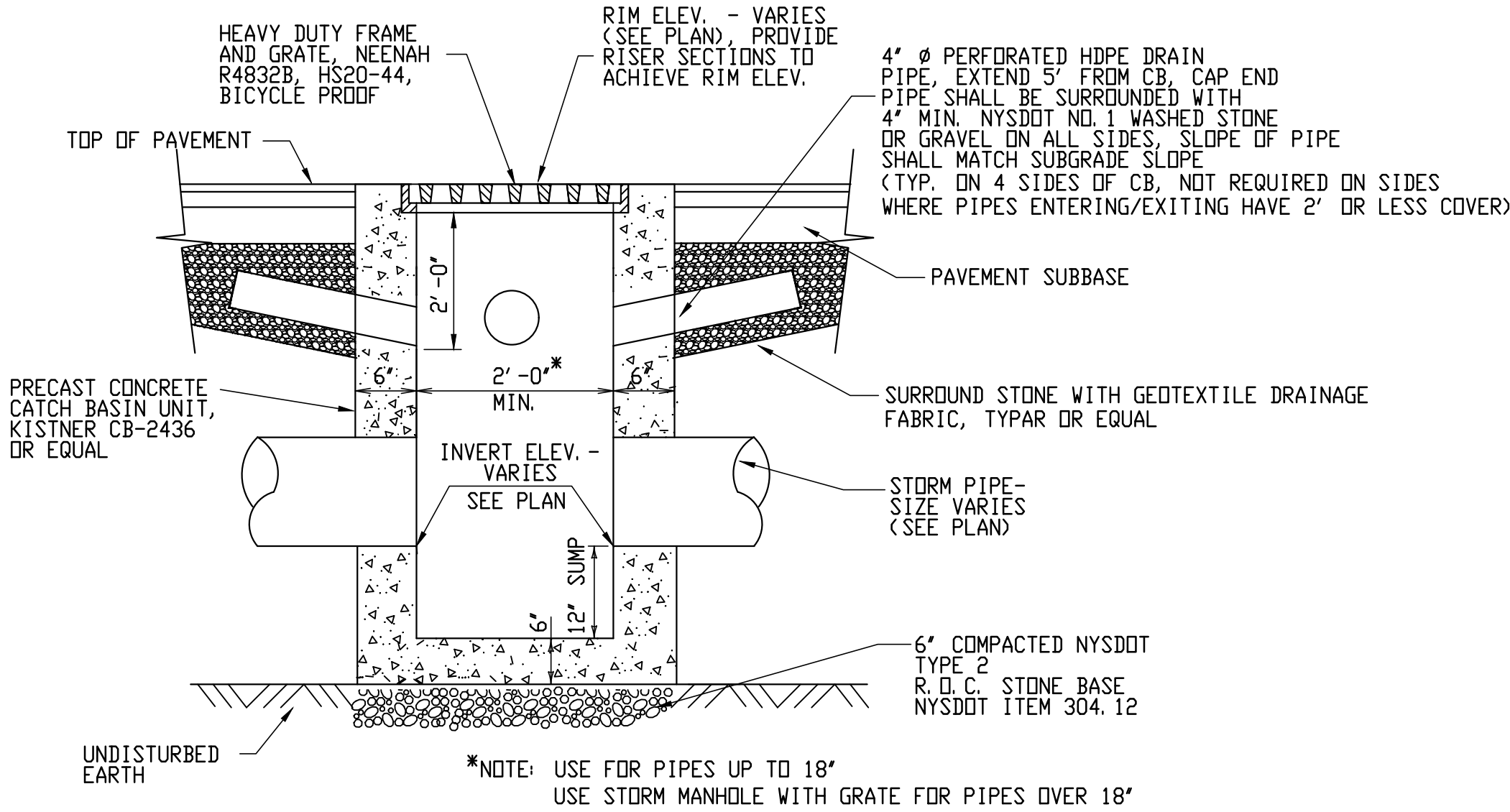
PIPE BEDDING MATERIAL (NYS DOT 1985 EDITION)

- 1 NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYS DOT SECTION 703.02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

NO SLAG SHALL BE ALLOWED FOR MATERIAL 1

- 2 BACKFILL MATERIAL SHALL BE NATIVE SOIL CONTAINING NO UNSUITABLE MATERIAL COMPACTED IN 6" LIFTS.

**STORM SEWER TRENCH SECTION
IN UNPAVED AREAS**



TYPICAL PRECAST CATCH BASIN

STORMWATER DETENTION SUMMARY:

EVENT	EX. RUNOFF (CFS)	PROP. RUNOFF (CFS)	ELEVATION (FEET)	STORAGE (CF)
1 - VEAD	2.02	0.06	526.60	1.104

REVISIONS:	No.	Description	Date

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWING NAME:
Drainage Details

Date: 1/20/26
Drawn By: A. Pandolfe
Scale: As Noted

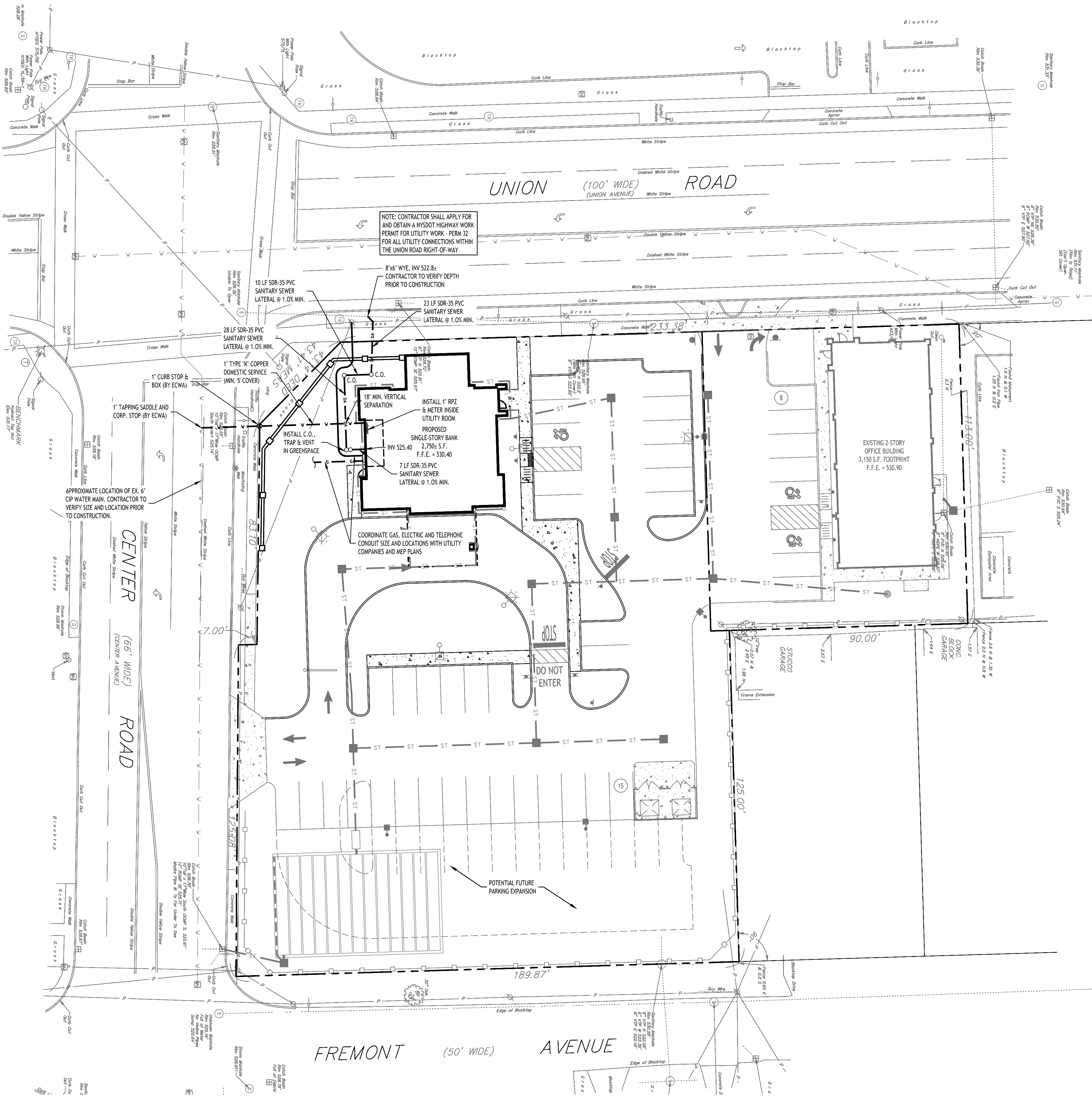
DRAWING NO.

C-301

Project No: 25-4181

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Utility Plan
SCALE: 1"=30'

NOTES:

- ALL SANITARY SEWER CONSTRUCTION SHALL CONFORM TO TOWN OF WEST SENECA SPECIFICATIONS AND DETAILS, AND ERIE COUNTY DEPARTMENT OF HEALTH RULES AND REGULATIONS.
- PRIOR STARTING ANY WORK ASSOCIATED WITH OR NEAR EXISTING SANITARY MANHOLES, THE CONTRACTOR SHALL MEET WITH THE TOWN OF WEST SENECA TO DISCUSS AND AGREE TO THE WORK.
- FILL SHALL BE PLACED AND SATISFACTORILY COMPACTED PRIOR TO INSTALLATION OF UTILITIES, AND MUST BE APPROVED BY THE SUPERVISING PROJECT ENGINEER.
- ALL OTHER REQUIRED PERMITS BY THE STATE OF NEW YORK, COUNTY OF ERIE AND TOWN OF WEST SENECA ARE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER.

UTILITY NOTES:

- FOR ALL SANITARY SEWERS, INSTALL SELECT FILL IN PAVED AREAS, EXTEND 5' MIN. BEYOND PAVEMENT LIMITS
- BUILDINGS TO HAVE A 6" HOUSE TRAP, VENT AND CLEANOUT INSTALLED AT ENTRANCE POINT. INVERT ELEVATION TO BE 5' MIN. BELOW F.F.E. OF THE BUILDING. PIPE TO BE 6" SDR-35 PVC @ 1.0% MIN WITH MIN 4" OF COVER. ADD ADDITIONAL CLEANOUTS @ 100' MAX. SPACING FOR 6" LATERALS OVER 90' IN LENGTH.
- COORDINATE GAS & ELEC. METER BANK LOCATIONS ON BUILDINGS WITH M.E.P. PLANS & UTILITY CO.S.
- COORDINATE LOCATION OF CTV & TELEPHONE SERVICE TO BUILDINGS WITH M.E.P. PLANS AND UTILITY CO.S.
- ANY EXISTING UTILITIES WHICH ARE TO BE ABANDONED AND FALL UNDER PAVEMENT OR BUILDINGS SHALL BE REMOVED VS. BEING ABANDONED UNLESS THOSE UTILITIES ARE FILLED WITH FLOWABLE FILL.
- EXISTING GAS SERVICES TO REMAIN UNLESS OTHERWISE NOTED. ANY PORTIONS TO BE RELOCATED SHALL BE COORDINATED WITH NATIONAL FUEL GAS.
- ALL UNDERGROUND TELEPHONE SERVICES SHALL REMAIN AND BE PROTECTED DURING CONSTRUCTION.
- A MINIMUM OF 10 FEET HORIZONTAL AND 18 INCHES OF VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN ALL SANITARY SEWER AND WATER SERVICES.
- ERIE COUNTY WATER AUTHORITY (ECWA) IS TO BE NOTIFIED A MINIMUM OF 48-HOURS PRIOR TO STARTING THE CONNECTION TO THE NEW WATER SERVICE.
- SELECT BACKFILL IS REQUIRED FOR ALL UTILITIES (GAS, WATER, STORM, SANITARY) THAT CROSS THROUGH PAVEMENT AREAS.

PROPOSED UTILITY LEGEND

PROPOSED STORM SEWER	— ST —
PROPOSED SANITARY SEWER	— 6" SA —
PROPOSED WATERLINE	— 1" W —
PROPOSED CATCH BASIN	■ CB
PROPOSED YARD DRAIN	⊗ YD
PROPOSED MANHOLE	● MH
PROPOSED HYDRANT ASSEMBLY	● GV
PROPOSED GATE VALVE	⊕ GV

NOTE: FOR PROPOSED VALVE BOXES, CLEANOUTS, ETC., INSTALL A 3,000 PSI CONCRETE COLLAR AROUND THE ITEM AT GRADE. THE COLLAR SHALL BE A MINIMUM OF 6" WIDER, ON ALL SIDES, THAN THE BOX, CLEANOUT, ETC. THE COLLAR SHALL BE A MINIMUM OF 6" THICK.

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.



CARMINA WOOD
DESIGN

Buffalo | Utica | Greensboro

Proposed Bank
1465 Union Road
West Seneca, NY

REVISIONS:	Date
No. Description	

PRELIMINARY
NOT FOR CONSTRUCTION

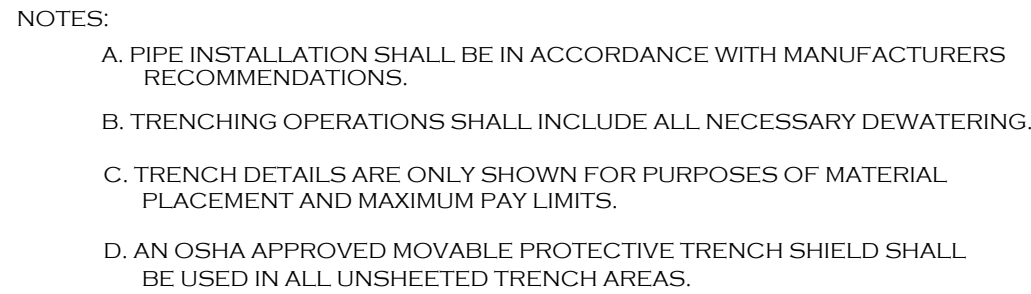
DRAWING NAME:
Utility Plan

Date: 1/20/26
Drawn By: A. Pandolfo
Scale: As Noted

DRAWING NO.

C-400

Project No: 25-4181



PIPE BEDDING MATERIAL (NYS DOT LATEST EDITION)

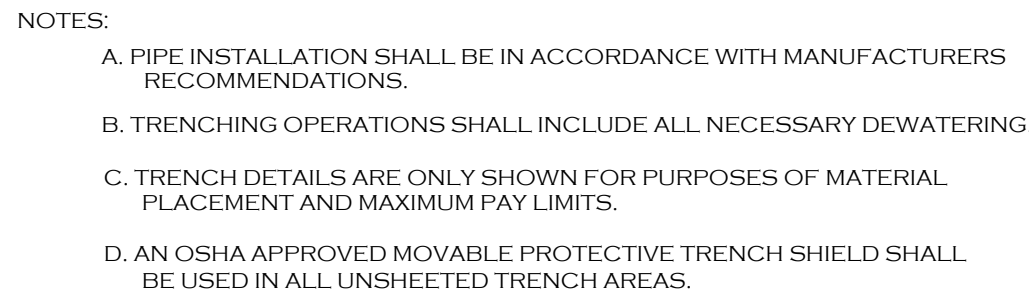
- ① NO.1 CRUSHED STONE WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE CRUSHED STONE SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN 1" AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.
- SELECT MATERIAL BACKFILL (NYSDOT LATEST EDITION)
- ② NO.2 RUN OF CRUSHER STONE OR NO.2 RUN OF CRUSHER GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 4 AND NYSDOT SECTION 703-02. (COMPACTED IN 6" LIFTS TO 90% DENSITY)
- NOTE: SLAG SHALL NOT BE ALLOWED FOR MATERIALS ① AND ②

ELEVATION
SCALE: NONE

1" DOMESTIC SERVICE BACKFLOW PREVENTER INSTALLATION

NOTES:

1. NO TAPS TO BE MADE UPSTREAM OF RPZ & METER.
2. HEAT, LIGHT AND ELECTRIC TO BE PROVIDED AT RPZ LOCATION.
3. COORDINATE LOCATION WITH ARCHITECTURAL PLANS.



PIPE BEDDING MATERIAL (NYSDOT LATEST EDITION)

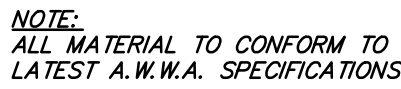
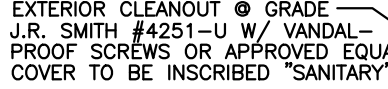
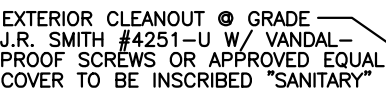
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- SELECT MATERIAL BACKFILL (NYSDOT LATEST EDITION)
- ② NO.2 RUN OF CRUSHER STONE OR NO.2 RUN OF CRUSHER GRAD WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 4 AND NYSDOT SECTION 703-02. (COMPACTED IN 6" LIFTS TO 90% DENSITY) **NOTE:** SLAG SHALL NOT BE ALLOWED FOR MATERIALS ① AND ②

UTILITY TRENCH SECTION IN PAVED AREAS



1" DOMESTIC SERVICE BACKFLOW PREVENTER INSTALLATION

SCALE: NONE



TYPICAL WATER SERVICE LINE INSTALLATION



SCALE: 1"=20'

KEY	QTY.	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS
D E C I D U O U S T R E E S					
GT	5	Gleditsia triacanthos I "Draves"	Street Keeper Honey Locust	2 1/2" - 3" CAL.	B&B, HT. 40', W 35'
ARb	2	Acer rubrum "Bowhall"	Red Maple -Bowhall	2 1/2" - 3" CAL.	B&B, HT. 40', W 35'
QRn	1	Quercus robur x bicolor Nadler PP17604"	Kindred Spirit Oak	2 1/2" - 3" CAL.	B&B, HT. 30', W 6'
QBbm	2	Quercus bicolor "Bonnie & Mike"	Bonnie & Mike Oak	2 1/2" - 3" CAL.	B&B, HT. 40', W 15'

E V E R G R E E N T R E E S					
JS	2	Juniperus scopulorum 'Skyrocket'	Skyrocket Juniper	6-8' Tall	B&B, HT. 16', W 4'
PA	3	Picea abies 'Hillside upright'	Norway Spruce - Upright	6-8' Tall	B&B, HT. 20', W 8'
AC	2	Abies concolor	White Fir	6-8' Tall	B&B, HT. 60', W 20'
CJbd	4	Cryptomeria Japonica 'Black Dragon'	Back Dragon Japanese cedar	6-8' Tall	B&B, HT. 20', W 8'
AK	3	Abies koreana	Korean Fir	6-8' Tall	B&B, HT. 40', W 10'

GRASSES / PERENNIALS / GROUNDCOVERS					
RO	8	Andropogon Gerardii 'Red October'	Red October Big Blue Stem	18-24" Tall	Cont. #3, HT. 4', W 6'
KF	8	Calamagrostis x acutiflora	Karl Foerster Reed Grass	18-24" Tall	Cont. no.3 - 3'Tall, 3'Wide
NxF	8	Nepeta x fraaseni	Nepeta - Walkers Low Catmint	6-12" Tall	Cont. no.3 - 18" Tall, 1-4'Wide



- LEGEND**

DECIDUOUS TREE

SMALL TREE

EVERGREEN TREE/SHRUB

BUSH/ORNAMENTAL GRASS

PERENNIAL



- TYPICAL SPACING "X"
NOTED ON DRAWINGS AND
ON-CENTER DIMENSION.

- SPACING VARIES. SEE PLANT LIST



GROUND COVER PLANT SPACING



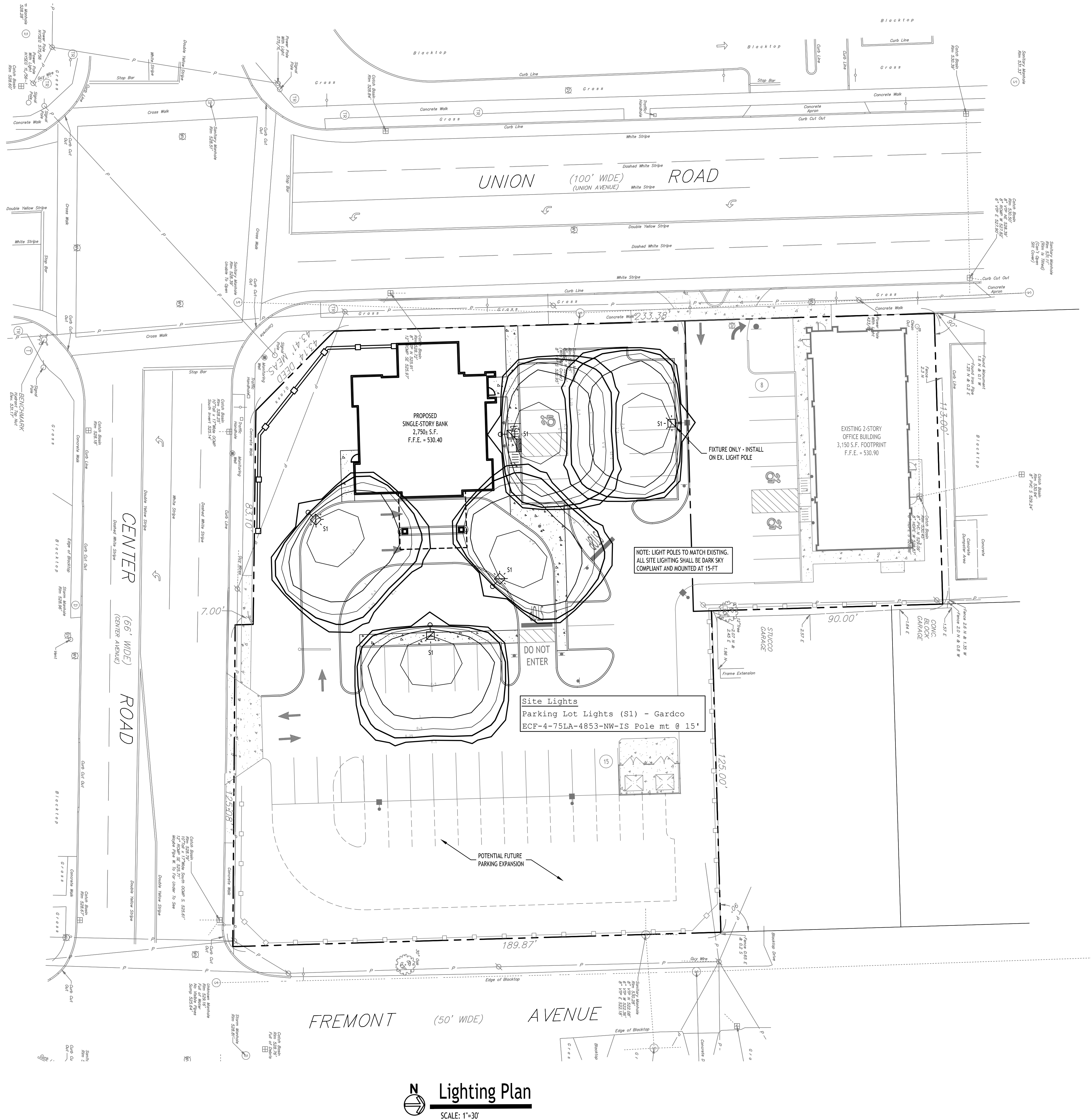
PLANTING NOTES:

- NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS

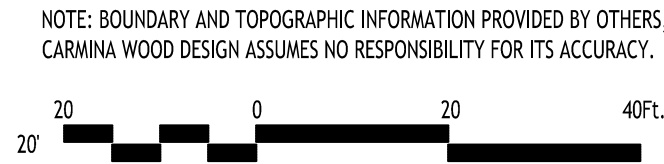


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Lighting Plan
SCALE: 1"=30'



NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS.
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REVISIONS:

No. Description

Date

Proposed Bank

1465 Union Road
West Seneca, NY

PRELIMINARY
NOT FOR CONSTRUCTION

DRAWING NAME:

Lighting Plan

Date: 1/20/26
Drawn By: A. Pandolfe
Scale: As Noted

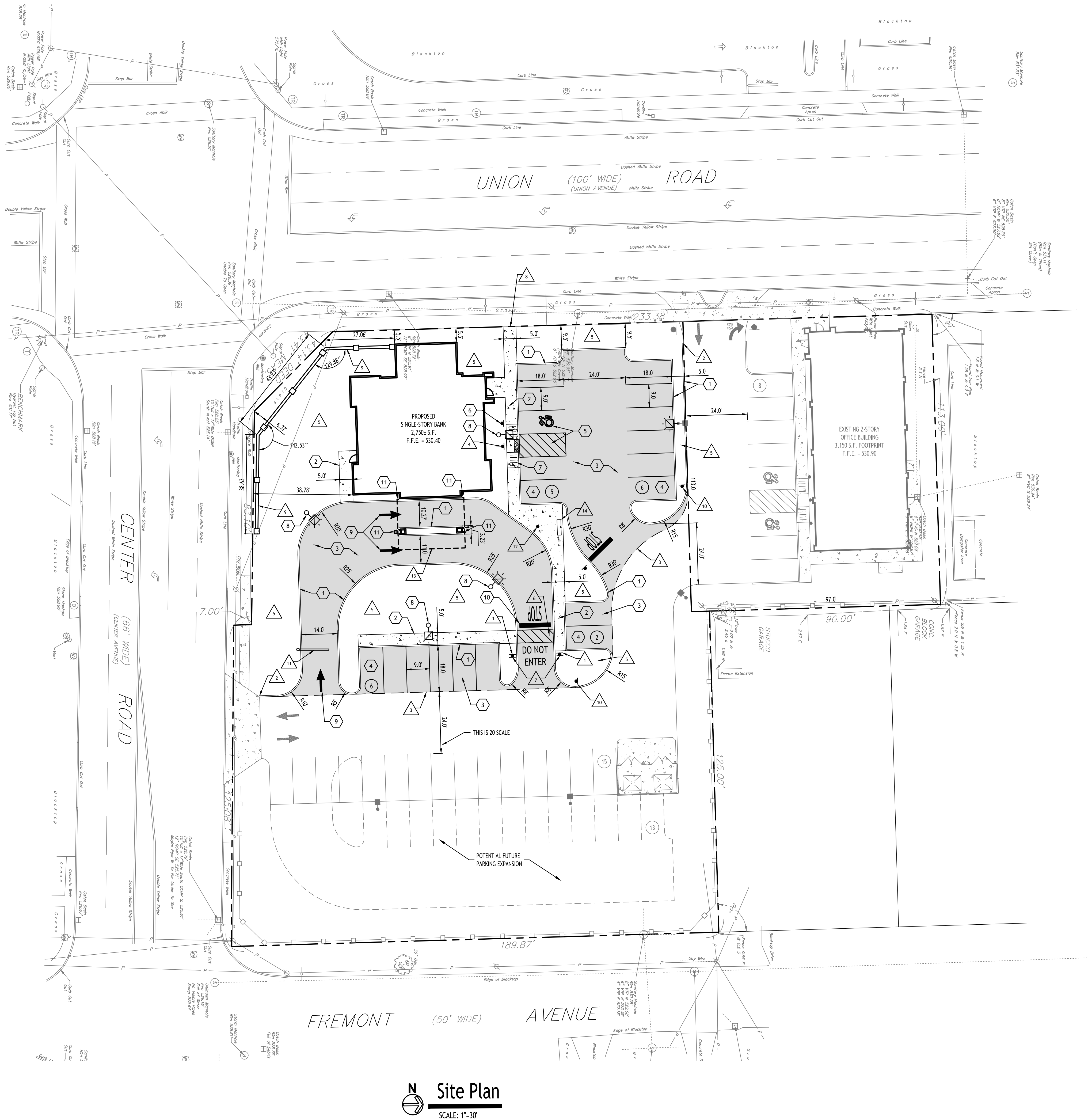
DRAWING NO.

LP-100

Project No: 25-4181

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SITE DATA

SITE AREA = 0.97 ACRES (0.5 AC. TO BE DISTURBED)
ZONED: C-2 (S) (COMMERCIAL DISTRICT) - UNION ROAD CORRIDOR
BUILDING: SINGLE STORY BANK W/ DRIVE-THRU

SETBACKS - BUILDING	REQUIRED	PROVIDED
FRONT:	20 FT MAX.	5.5 FT
SIDE:	5 FT MIN.	44.85 FT
REAR:	30 FT MIN.	> 30 FT

SETBACKS - PARKING	REQUIRED	PROVIDED
FRONT:	N/A	N/A
SIDE (ABUTTING R DISTRICT):	10 FT MIN.	N/A
REAR:	10 FT MIN.	> 10 FT

PARKING (9' x 18'):	8	19
STACKING (9' x 20'):	16	8*
MAX. BUILDING HEIGHT:	40 FT	< 40 FT

*VARIANCE REQUIRED

PARKING CALCULATION:

BANK:
1 SPACES PER 350 S.F. GROSS FLOOR AREA
2,455 / 350 = 8 SPACES REQUIRED

STACKING CALCULATION:

DRIVE-IN BANK ACCESSORY TO OFFICES
8 SPACES PER BOOTH, CUSTOMER FACILITY OR SERVICE WINDOW
8 x 2 SERVICE WINDOWS = 16 SPACES REQUIRED

GENERAL NOTES:

- INSTALL ALL MATERIALS TO MANUFACTURER'S RECOMMENDATIONS AND BEST STANDARDS OF TRADE INVOLVED.
- SUBSTITUTIONS SHALL BE MADE ONLY WITH OWNER'S APPROVAL AND BE OF EQUIVALENT QUALITY TO WHAT IS SPECIFIED.
- WORK SHALL BE COMPLETED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND OSHA SAFETY RULES AND REGULATIONS.
- VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. NOTIFY OWNER & ENGINEER OF DISCREPANCIES IN CONDITIONS SHOWN ON DRAWINGS PRIOR TO PROCEEDING WITH THE WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ANY EXISTING STRUCTURES TO REMAIN AND ANY FINISH MATERIAL INSTALLED WHILE WORKING ON OTHER COMPONENTS.
- CONTRACTOR SHALL KEEP JOB FREE OF DEBRIS AND MAKE FINAL CLEANUP TO SATISFACTION OF OWNER.
- CONTRACTOR SHALL ASCERTAIN THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION SO THAT THIS WORK WILL NOT DISTURB EXISTING LINES AND/OR INSTALLATIONS. COORDINATE ALL WORK WITH THE APPLICABLE UTILITY COMPANIES.
- CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS NECESSARY TO PERFORM THE WORK.
- ALL REASONABLE MEASURES SHALL BE TAKEN TO PROTECT EXISTING TREES WHICH ARE TO BE PRESERVED FROM ALL POSSIBLE TYPES OF ROOT, TRUNK, AND LIMB DAMAGE, INCLUDING BUT NOT LIMITED TO, RETAINING WALLS WHICH PREVENT FILLING ON TOP OF ROOTS OR EXCAVATING TREE ROOTS.

NOTES:

- ALL RADII SHALL BE 3'-0" UNLESS OTHERWISE NOTED.
- ALL DISTURBED AREAS SHALL HAVE 4" MIN. OF TOPSOIL & SEED.
- ALL DIMENSIONS FROM PROPERTY LINES SHALL BE MEASURED PERPENDICULAR TO THE PROPERTY LINE.
- CENTER ENTRANCE SIDEWALKS ON DOOR OPENINGS.
- BUILDING DIMENSIONS ARE APPROXIMATE, REFER TO ARCHITECTURAL DRAWINGS FOR LAYOUT DIMENSIONS.

DETAIL LEGEND

SEE SITE DETAIL SHEET

- TYPE "A" CONCRETE CURB
- CONCRETE SIDEWALK
- STANDARD DUTY ASPHALT
- 90° PARKING STALL
- HANDICAPPED PAVEMENT MARKINGS
- HANDICAPPED PARKING SIGN
- HANDICAPPED PAVEMENT RAMP
- LIGHT POLE FOUNDATION
- PAINTED TRAFFIC ARROWS
- STOP BAR
- PIPE BOLLARD

NOTE LEGEND

- INSTALL STOP SIGN - M.U.T.C.D. SIGN NO. R1-1
- ROUND CURB IN 2' OR MATCH EXISTING CURB
- SAWCUT LINE, MATCH EXISTING EDGE OF PAVEMENT
- INSTALL "NO PARKING" SIGN, M.U.T.C.D. SIGN NO. P1-1C
- LANDSCAPED AREA - SEE LANDSCAPE PLAN, IF NO PLANTINGS, INSTALL TOPSOIL & SEED
- 1" WIDE WHITE PAVEMENT STRIPES @ 1' SPACING BETWEEN 4" WIDE WHITE CROSSWALK LINES
- INSTALL "DO NOT ENTER" SIGN, M.U.T.C.D. SIGN NO. R5-1
- MATCH EX. SIDEWALK
- DECORATIVE BRICK WALL - REFER TO PLANS BY OTHERS
- DRIVE-THRU DIRECTIONAL SIGN - COORDINATE W/ OWNER
- CLEARANCE SIGN - COORDINATE W/ OWNER
- FLAGPOLE - COORDINATE W/ OWNER
- CANOPY - REFER TO PLANS BY OTHERS
- BENCH - COORDINATE W/ OWNER

SITE LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB
- PROPOSED SIDEWALK / CONCRETE PAD
- NUMBER OF PARKING SPACES
- PROPOSED SIGN
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT POLE
- PROPOSED WALL MOUNTED LIGHT

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REVISIONS:	No.	Description	Date
	1	Added bench	2/16/26

DRAWING NAME:

Site Plan

Date: 1/20/26
Drawn By: A. Pandolfi
Scale: As Noted

DRAWING NO.

C-100

Project No: 25-4181



ENGINEER'S REPORT

for

Proposed Bank
1465 Union Road
West Seneca, Erie County, New York

Prepared for

Julius Aebly

1471 Union Road
West Seneca NY, 14224

Prepared by

Carmina Wood Design

80 Silo City Row, Suite 100
Buffalo, NY 14203

Telephone: (716) 842-3165
Fax: (716) 842-0263

February 2026



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Written Engineer's Report

Section 1 - Location & Description	Page 1
Section 2 - Water Service	Page 1
Section 3 - Sanitary Sewer Service	Page 1
Section 4 - Storm Sewer Service	Page 2
Section 5 - Erosion Control Summary	Page 2
Section 6 - Geotechnical Items	Page 3

Appendices

Appendix A	Site Location Map
Appendix B	Sanitary Sewer & Water Demand Calculations
Appendix C	Storm Water Calculations
Appendix D	Soil Information

Section 1 - Location & Description

This redevelopment project involves the construction of a single-story bank with drive-thru located at 1465 Union Road in the Town of West Seneca. Construction will also consist of associated parking, storm water management, utility, lighting, and landscaping improvements. The site is part of a larger redevelopment project that includes the existing two-story office building located on the adjacent parcel of 1471 Union Road. Existing improvements as part of that project included parking for the office building and the curb cuts on Union Road and Center Road. The area of disturbance for this phase of redevelopment is approximately 0.5 acres. The site is currently zoned C-2 (S) - Commercial District and is in the Union Road Corridor.

See Appendix A for Site Location Map.

Section 2 - Water System

The proposed domestic water service will connect to an existing 6" CIP water main located on the north side of Center Road. The proposed 1" copper water service will tap the existing main. A 1" RPZ and meter will be provided inside the mechanical room on the south wall of the building. Drainage due to testing or failure will be via gravity to the nearest drainage inlet. Water inside the building will be used for typical bathroom and janitorial uses.

Domestic Summary:

Peak Operating Demand:	1.98 gpm
Water Main:	10" PVC water main along Jeffrey Boulevard
Static Pressure:	69 psi
Friction Loss:	0.01 psi
Elevation Loss:	1.52 psi
Meter & RPZ Loss:	13 psi
Pressure after RPZ & Meter:	54.5 psi

Repairs to all devices will be made during off hours; dual backflow preventers are not required. The site is not located in a 100-year flood plain.

Disinfection of the water service following installation will be continuous feed, according to AWWA C-651, latest revision.

See Appendix B for Sanitary Sewer & Water Calculations.

Section 3 - Sanitary Sewer Service

The proposed sanitary sewer service will connect to an existing 8" VTP sanitary sewer main located on the east side of Union Road. The proposed service will consist of approximately 68 LF of 6" SDR-35 PVC sanitary sewer lateral at a minimum slope of 1.0%.

Design Parameters:

Contractor Shops: 8 employees x 15 gpd/employee = 120 gpd

The hydraulic loading rates per "Design Standard for Wastewater Treatment Works" 2014, NYSDEC.

See Appendix B for Sanitary Sewer & Water Calculations

Section 4 - Storm Sewer Service

The proposed area of redevelopment was cleared during the first phase of construction and is generally flat. The proposed hydrology for the redevelopment project area will consist of overland sheet flow and pipe channel flow. The storm sewer system for this site will consist of 6", 8" and 12" HDPE pipes connected by a series of catch basins. Stormwater runoff generated from the site will enter the pipe network and connect to the existing on-site storm sewer system. Runoff is then conveyed to an existing water quality treatment structure and underground detention located on the east side of the site. The underground detention discharges runoff, at a controlled rate, to an existing catch basin along Center Road. The underground detention system was designed during the initial phase of construction to handle the future development.

Since the combined area of disturbance for the existing office building and proposed bank was to be over an acre, a SWPPP was prepared and NYSDEC SPDES Permit was obtained. This Permit has remained open with weekly inspections being suspended until disturbance for Phase 2 begins. The Permit will then be closed out following stabilization of the redevelopment activities.

Design Criteria

Storm pipes: 10-year storm

Detention: Comparison of the existing 1-year vs. the proposed 1-year runoff.
Comparison of the existing 10-year vs. the proposed 10-year runoff.
Comparison of the existing 10-year vs. the proposed 25-year runoff.
Comparison of the existing 100-year vs. the proposed 100-year runoff.

Stormwater Detention Summary:

Event	Ex. Runoff (cfs)	Prop. Runoff (cfs)	Elevation (ft)	Storage (cf)
1-yr	2.03	0.96	526.60	1,104
10-yr	3.83	1.69	527.35	2,548
25-yr	4.81	2.05	527.83	3,418
100-yr	6.75	2.85	529.23	5,193

See Appendix C for Storm Water Calculations

Section 5 - Erosion Control Summary

Stabilization Practices

Stabilization practices for this site include:

- A. Land clearing activities shall be done only in areas where earthwork will be performed and shall progress as earthwork is needed.
- B. Use of stabilization fabric for all slopes having a slope greater than 1V:3H.
- C. Permanent seeding and planting of all unpaved areas using the hydromulching grass seeding technique.
- D. Mulching exposed areas.
- E. Frequent watering to minimize wind erosion during construction.

Structural Practices

Structural practices for this site include:

- A. Inlet protection using a method detailed in the Construction Documents
- B. Perimeter protection using temporary silt fence
- C. Temporary stone wash off areas

Sequence of Major Activities

The Contractor will be responsible for implementing the following erosion control and storm water management control measures. The Contractor may designate these tasks to certain subcontractors as he sees fit, but the ultimate responsibility for implementing these controls and ensuring their proper functioning remains with the Contractor. The order of activities will be as follows:

- A. Construct temporary construction exit at location shown on the Demo & Erosion Control Plan Sheet.
- B. Install perimeter silt fences in the locations shown on the Demo & Erosion Control Plan sheet.
- C. Clear and grub site within disturbance limits.
- D. Commence site grading.
- E. Disturbed areas of the site where construction activity has ceased for more than 14 days shall be temporarily seeded and watered.
- F. Construction of building.
- G. Installation of proposed utilities.
- H. Finalize pavement subgrade preparation.
- I. Construct all curb, drainage inlets, storm sewer pipes and storm sewer manholes, as shown on the plans. Install temporary inlet protection at the locations of all new inlets.
- J. Dust control.
- K. Remove inlet protection around inlets and manholes no more than 48 hours prior to placing stabilized base course.
- L. Install base material as required for pavement.
- M. Carry out final grading and seeding and planting.
- N. Clean storm system following construction.
- O. Remove silt fencing only after all paving is complete and exposed surfaces are stabilized.

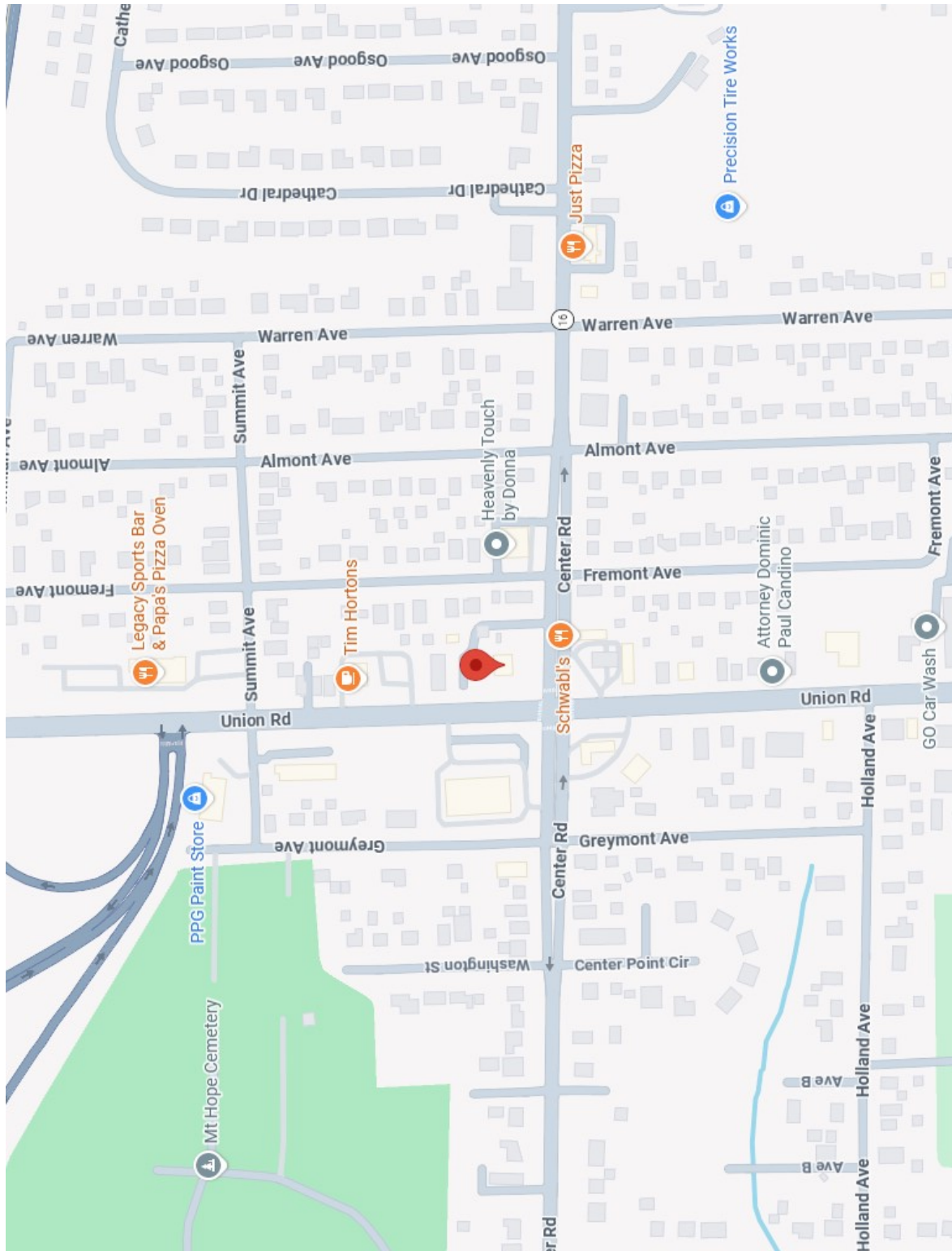
Section 6 - Geotechnical Items

According to the USDA Web Soil Survey, the onsite soil is made up entirely of Niagara silt loam. This soil is categorized under hydrologic soil group D and will have a slow infiltration rate when thoroughly wet.

See Appendix D for Soil Information.

Appendix A
Site Location Map

Site Location Map



Appendix B
Sanitary Sewer & Water Demand Calculations

CARMINA WOOD DESIGN

80 SILO CITY ROW, SUITE 100

BUFFALO, NEW YORK, 14203

(716) 842-3165

FAX (716) 842-0263

Project No.: 25-4181

Date: 2/11/2026

Project Name: Proposed Bank

Project Address: 1465 Union Road - Town of West Seneca

Subject: Sanitary Sewage & Domestic Water Demand Calcs

Sheet: 1 of 1

Sanitary Sewage Demand Calculations:

$$8 \text{ employees} @ 15.0 \text{ gpd/employee} = 120 \text{ gpd}$$

$$\text{Total Demand} = 120 \text{ gpd}$$

Water Demand Calculations (Domestic):**Contractor Shops:**

$$120 \text{ gpd} \times 1.1 = 132 \text{ gpd} \quad \text{*use 110\% of sewage demand}$$

*use 1.8 peaking factor and assume an 12 hour day

$$132 \text{ gpd} \times 1 \text{ day/12hr} \times 1 \text{ hr/60min} = 0.18 \text{ gpm}$$

$$0.18 \text{ gpm} \times 1.8 = 0.33 \text{ gpm} \quad Q_{\text{peak}}$$

Headlosses:

$$Q_{\text{peak}} = 0.33 \text{ gpm}$$

$$\text{Pipe} = 1.00 \text{ inch} \quad \text{Type "k" copper} \quad C = 140$$

$$\text{Length} = 61 \text{ LF} \quad (\text{approx. distance from tap to RPZ})$$

$$H_L = \frac{10.44 L Q^{1.85}}{C^{1.85} D^{4.866}} = \frac{10.44(61)(1.98)^{1.85}}{(140)^{1.85} (1)^{4.866}} = 0.01 \text{ ft} = 0.00 \text{ psi}$$

$$\Delta \text{ elev} = 8.5 \text{ ft} = 3.68 \text{ psi} \quad \text{*RPZ is located inside building}$$

$$\text{Loss through meter} = 1 \text{ psi}$$

$$\text{Loss through RPZ} = 12 \text{ psi}$$

$$\text{Total Losses} = 16.7 \text{ psi}$$

$$\text{Static Pressure} = 80 \text{ psi} \quad \text{*from hydrant flow test}$$

$$\text{Residual Pressure Following RPZ} = 80 - 16.7 = 63.3 \text{ psi} \quad (\text{available after rpz \& meter})$$

Appendix C

Storm Water Calculations

25-4181 storm calcs - existing

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Page 1

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	Type II 24-hr		Default	24.00	1	1.87	2
2	10-Year	Type II 24-hr		Default	24.00	1	3.14	2
3	25-Year	Type II 24-hr		Default	24.00	1	3.84	2
4	100-Year	Type II 24-hr		Default	24.00	1	5.23	2

25-4181 storm calcs - existing

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Type II 24-hr 1-Year Rainfall=1.87"

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Summary for Subcatchment 1S: Existing Site

Runoff = 2.03 cfs @ 12.06 hrs, Volume= 5,636 cf, Depth= 1.28"

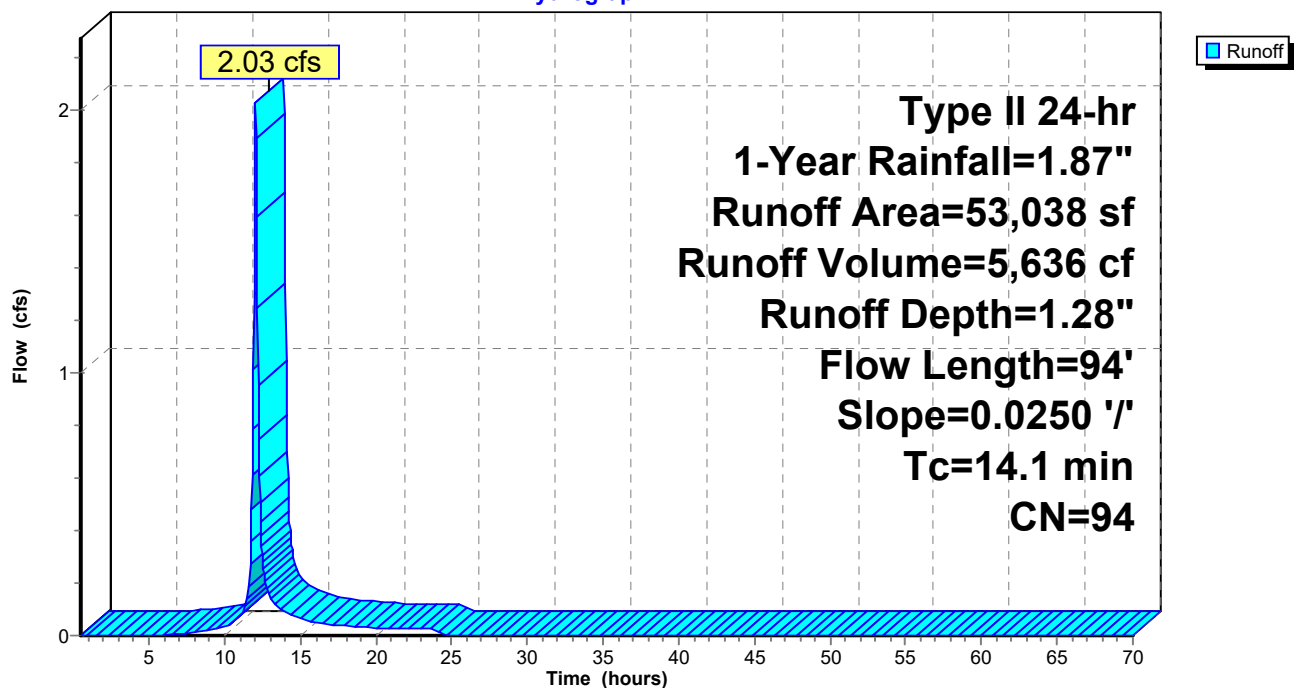
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-70.02 hrs, dt= 0.04 hrs
Type II 24-hr 1-Year Rainfall=1.87"

Area (sf)	CN	Description
8,670	98	Roofs, HSG D
31,405	98	Paved parking, HSG D
12,963	80	>75% Grass cover, Good, HSG D
53,038	94	Weighted Average
12,963		24.44% Pervious Area
40,075		75.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.1	94	0.0250	0.11		Sheet Flow, Grass: Dense n= 0.240 P2= 2.50"

Subcatchment 1S: Existing Site

Hydrograph



25-4181 storm calcs - existing

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Type II 24-hr 10-Year Rainfall=3.14"

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Summary for Subcatchment 1S: Existing Site

Runoff = 3.83 cfs @ 12.05 hrs, Volume= 10,986 cf, Depth= 2.49"

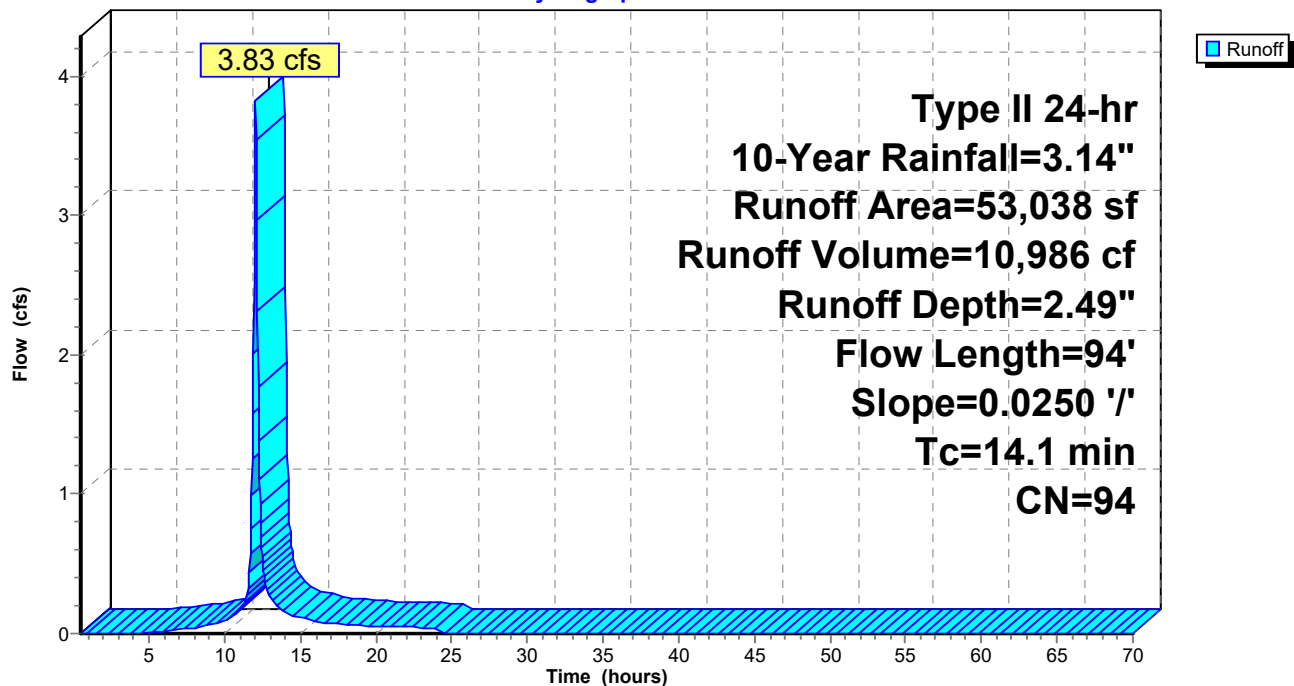
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-70.02 hrs, dt= 0.04 hrs
Type II 24-hr 10-Year Rainfall=3.14"

Area (sf)	CN	Description
8,670	98	Roofs, HSG D
31,405	98	Paved parking, HSG D
12,963	80	>75% Grass cover, Good, HSG D
53,038	94	Weighted Average
12,963		24.44% Pervious Area
40,075		75.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.1	94	0.0250	0.11		Sheet Flow, Grass: Dense n= 0.240 P2= 2.50"

Subcatchment 1S: Existing Site

Hydrograph



25-4181 storm calcs - existing

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Type II 24-hr 25-Year Rainfall=3.84"

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Summary for Subcatchment 1S: Existing Site

Runoff = 4.81 cfs @ 12.05 hrs, Volume= 14,001 cf, Depth= 3.17"

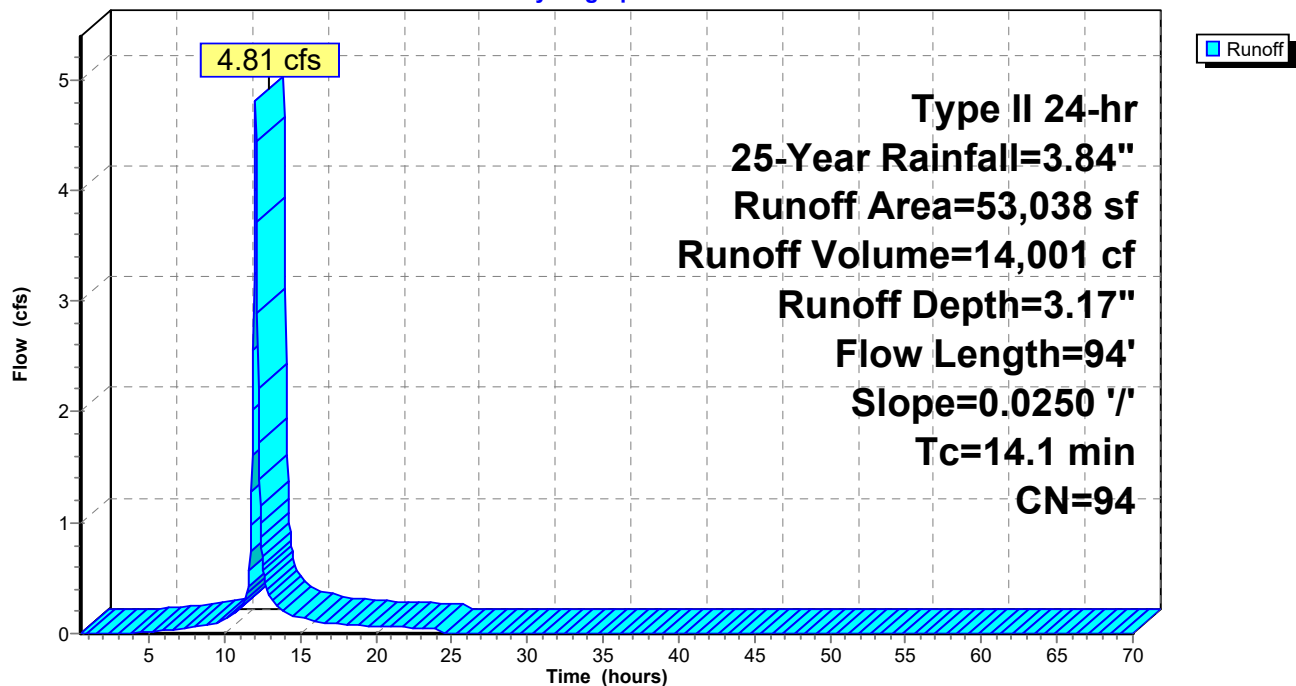
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-70.02 hrs, dt= 0.04 hrs
Type II 24-hr 25-Year Rainfall=3.84"

Area (sf)	CN	Description
8,670	98	Roofs, HSG D
31,405	98	Paved parking, HSG D
12,963	80	>75% Grass cover, Good, HSG D
53,038	94	Weighted Average
12,963		24.44% Pervious Area
40,075		75.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.1	94	0.0250	0.11		Sheet Flow, Grass: Dense n= 0.240 P2= 2.50"

Subcatchment 1S: Existing Site

Hydrograph



25-4181 storm calcs - existing

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Type II 24-hr 100-Year Rainfall=5.23"

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Summary for Subcatchment 1S: Existing Site

Runoff = 6.75 cfs @ 12.05 hrs, Volume= 20,044 cf, Depth= 4.54"

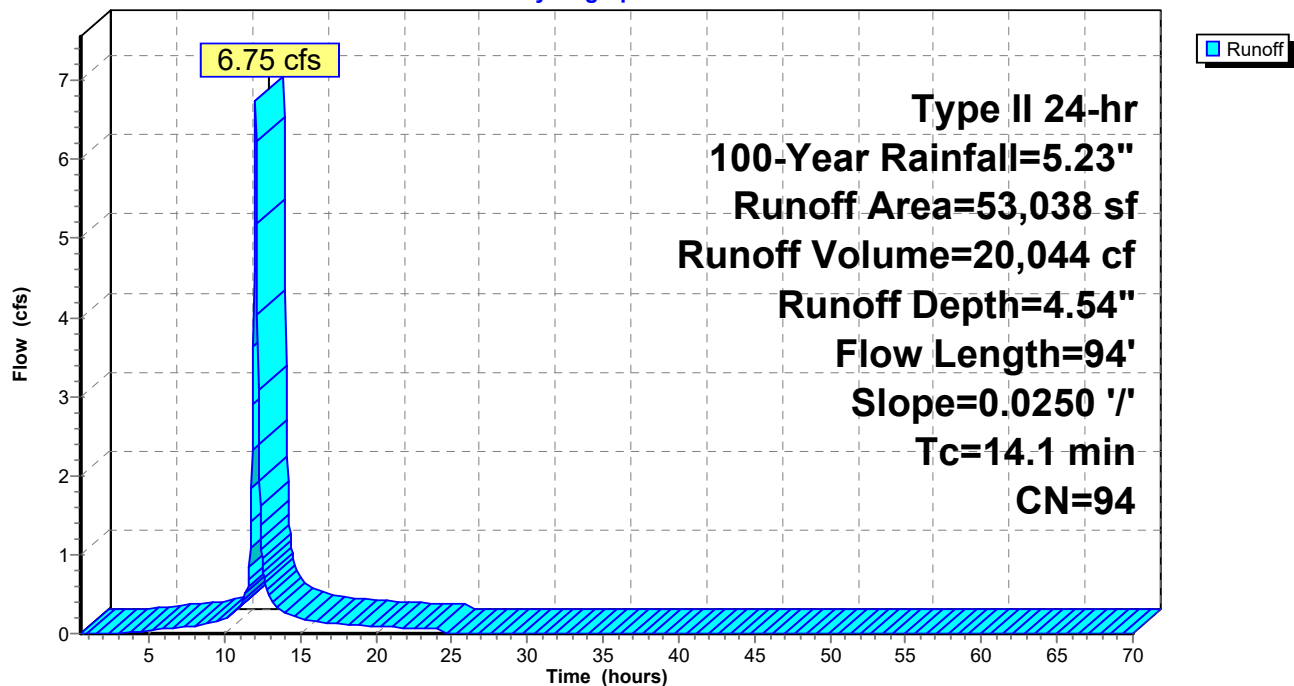
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-70.02 hrs, dt= 0.04 hrs
Type II 24-hr 100-Year Rainfall=5.23"

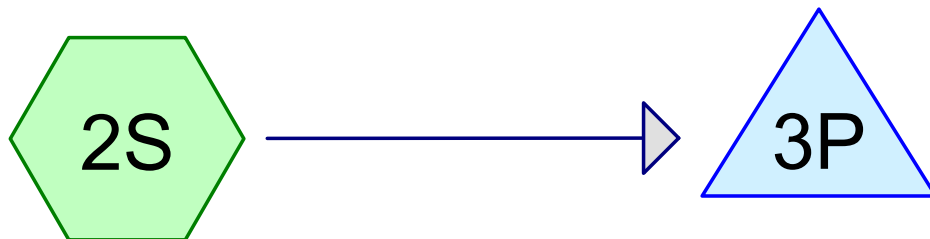
Area (sf)	CN	Description
8,670	98	Roofs, HSG D
31,405	98	Paved parking, HSG D
12,963	80	>75% Grass cover, Good, HSG D
53,038	94	Weighted Average
12,963		24.44% Pervious Area
40,075		75.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.1	94	0.0250	0.11		Sheet Flow, Grass: Dense n= 0.240 P2= 2.50"

Subcatchment 1S: Existing Site

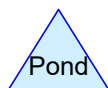
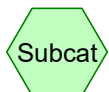
Hydrograph





Proposed Site

Underground Detention



Routing Diagram for 25-4181 storm calcs - proposed
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25-4181 storm calcs - proposed

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	Type II 24-hr		Default	24.00	1	1.87	2
2	10-Year	Type II 24-hr		Default	24.00	1	3.14	2
3	25-Year	Type II 24-hr		Default	24.00	1	3.84	2
4	100-Year	Type II 24-hr		Default	24.00	1	5.23	2

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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
24,735	80	>75% Grass cover, Good, HSG D (2S)
20,800	98	Paved parking, HSG D (2S)
5,900	98	Roofs, HSG D (2S)
1,604	98	Sidewalks (2S)
53,039	90	TOTAL AREA

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Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
0	HSG C	
51,435	HSG D	2S
1,604	Other	2S
53,039		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
0	0	0	24,735	0	24,735	>75% Grass cover, Good
0	0	0	20,800	0	20,800	Paved parking
0	0	0	5,900	0	5,900	Roofs
0	0	0	0	1,604	1,604	Sidewalks
0	0	0	51,435	1,604	53,039	TOTAL AREA

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	2S	0.00	0.00	307.0	0.0020	0.013	0.0	12.0	0.0	
2	3P	525.79	525.67	24.0	0.0050	0.013	0.0	8.0	0.0	

25-4181 storm calcs - proposed

Type II 24-hr 1-Year Rainfall=1.87"

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Time span=0.50-70.00 hrs, dt=0.04 hrs, 1739 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment2S: Proposed Site

Runoff Area=53,039 sf 53.36% Impervious Runoff Depth=0.98"

Flow Length=368' Tc=7.4 min CN=90 Runoff=2.00 cfs 4,350 cf

Pond 3P: Underground Detention

Peak Elev=526.60' Storage=1,104 cf Inflow=2.00 cfs 4,350 cf

8.0" Round Culvert n=0.013 L=24.0' S=0.0050 '/' Outflow=0.96 cfs 4,350 cf

Total Runoff Area = 53,039 sf Runoff Volume = 4,350 cf Average Runoff Depth = 0.98"
46.64% Pervious = 24,735 sf 53.36% Impervious = 28,304 sf

25-4181 storm calcs - proposed

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Type II 24-hr 1-Year Rainfall=1.87"

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Summary for Subcatchment 2S: Proposed Site

[47] Hint: Peak is 126% of capacity of segment #3

Runoff = 2.00 cfs @ 11.99 hrs, Volume= 4,350 cf, Depth= 0.98"
 Routed to Pond 3P : Underground Detention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-70.02 hrs, dt= 0.04 hrs
 Type II 24-hr 1-Year Rainfall=1.87"

Area (sf)	CN	Description
5,900	98	Roofs, HSG D
20,800	98	Paved parking, HSG D
* 1,604	98	Sidewalks
24,735	80	>75% Grass cover, Good, HSG D
53,039	90	Weighted Average
24,735		46.64% Pervious Area
28,304		53.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	27	0.0400	0.10		Sheet Flow, Grass: Dense n= 0.240 P2= 2.50"
0.6	34	0.0210	1.00		Sheet Flow, Smooth surfaces n= 0.011 P2= 2.50"
2.5	307	0.0020	2.03	1.59	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
7.4	368	Total			

25-4181 storm calcs - proposed

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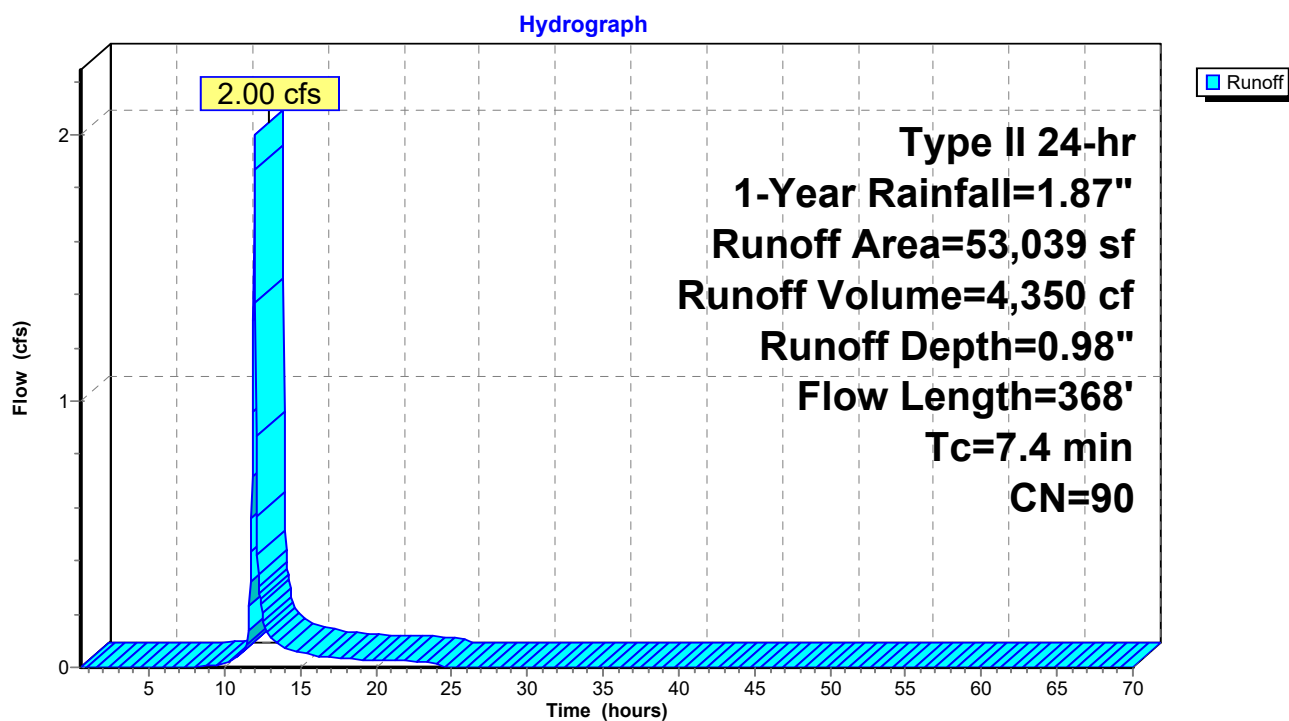
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Type II 24-hr 1-Year Rainfall=1.87"

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Subcatchment 2S: Proposed Site



25-4181 storm calcs - proposed

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Type II 24-hr 1-Year Rainfall=1.87"

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Summary for Pond 3P: Underground Detention

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 53,039 sf, 53.36% Impervious, Inflow Depth = 0.98" for 1-Year event
Inflow = 2.00 cfs @ 11.99 hrs, Volume= 4,350 cf
Outflow = 0.96 cfs @ 12.10 hrs, Volume= 4,350 cf, Atten= 52%, Lag= 6.6 min
Primary = 0.96 cfs @ 12.10 hrs, Volume= 4,350 cf

Routing by Stor-Ind method, Time Span= 0.50-70.02 hrs, dt= 0.04 hrs
Peak Elev= 526.60' @ 12.10 hrs Surf.Area= 2,480 sf Storage= 1,104 cf

Plug-Flow detention time= 32.8 min calculated for 4,347 cf (100% of inflow)
Center-of-Mass det. time= 33.2 min (860.8 - 827.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	525.80'	2,278 cf	63.25"W x 39.22"L x 3.50'H Field A 8,682 cf Overall - 2,986 cf Embedded = 5,695 cf x 40.0% Voids
#2A	526.30'	2,986 cf	ADS_StormTech SC-740 +Cap x 65 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 65 Chambers in 13 Rows
		5,264 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	525.79'	8.0" Round Culvert L= 24.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 525.79' / 525.67' S= 0.0050 ' / Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.96 cfs @ 12.10 hrs HW=526.60' (Free Discharge)

↑ **1=Culvert** (Barrel Controls 0.96 cfs @ 2.86 fps)

25-4181 storm calcs - proposed

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Type II 24-hr 1-Year Rainfall=1.87"

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Pond 3P: Underground Detention - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

5 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 37.22' Row Length +12.0" End Stone x 2 = 39.22' Base Length

13 Rows x 51.0" Wide + 6.0" Spacing x 12 + 12.0" Side Stone x 2 = 63.25' Base Width

6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

65 Chambers x 45.9 cf = 2,986.1 cf Chamber Storage

8,681.6 cf Field - 2,986.1 cf Chambers = 5,695.5 cf Stone x 40.0% Voids = 2,278.2 cf Stone Storage

Chamber Storage + Stone Storage = 5,264.3 cf = 0.121 af

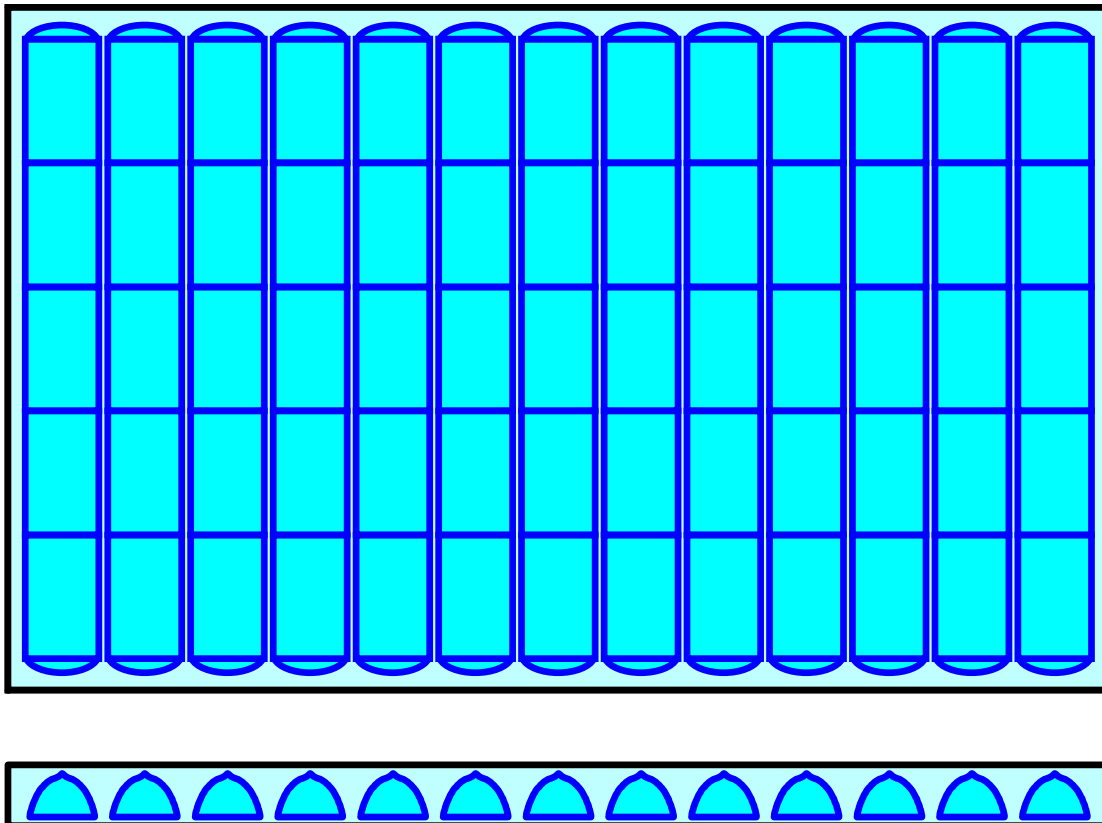
Overall Storage Efficiency = 60.6%

Overall System Size = 39.22' x 63.25' x 3.50'

65 Chambers

321.5 cy Field

210.9 cy Stone



25-4181 storm calcs - proposed

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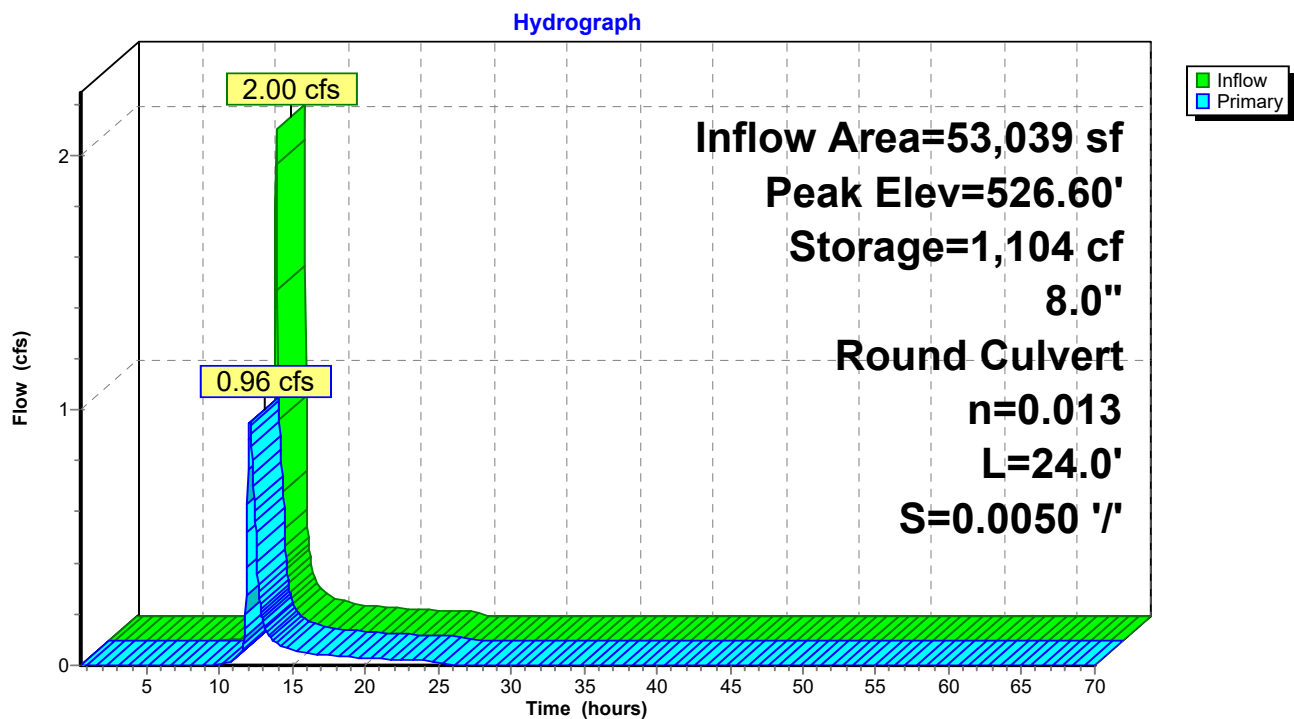
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Type II 24-hr 1-Year Rainfall=1.87"

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Pond 3P: Underground Detention



25-4181 storm calcs - proposed*Type II 24-hr 10-Year Rainfall=3.14"*

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Time span=0.50-70.00 hrs, dt=0.04 hrs, 1739 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment2S: Proposed Site

Runoff Area=53,039 sf 53.36% Impervious Runoff Depth=2.11"

Flow Length=368' Tc=7.4 min CN=90 Runoff=4.19 cfs 9,340 cf

Pond 3P: Underground Detention

Peak Elev=527.35' Storage=2,548 cf Inflow=4.19 cfs 9,340 cf

8.0" Round Culvert n=0.013 L=24.0' S=0.0050 '/' Outflow=1.69 cfs 9,340 cf

Total Runoff Area = 53,039 sf Runoff Volume = 9,340 cf Average Runoff Depth = 2.11"
46.64% Pervious = 24,735 sf 53.36% Impervious = 28,304 sf

25-4181 storm calcs - proposed

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Type II 24-hr 10-Year Rainfall=3.14"

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Summary for Subcatchment 2S: Proposed Site

[47] Hint: Peak is 263% of capacity of segment #3

Runoff = 4.19 cfs @ 11.98 hrs, Volume= 9,340 cf, Depth= 2.11"
 Routed to Pond 3P : Underground Detention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-70.02 hrs, dt= 0.04 hrs
 Type II 24-hr 10-Year Rainfall=3.14"

Area (sf)	CN	Description
5,900	98	Roofs, HSG D
20,800	98	Paved parking, HSG D
* 1,604	98	Sidewalks
24,735	80	>75% Grass cover, Good, HSG D
53,039	90	Weighted Average
24,735		46.64% Pervious Area
28,304		53.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	27	0.0400	0.10		Sheet Flow, Grass: Dense n= 0.240 P2= 2.50"
0.6	34	0.0210	1.00		Sheet Flow, Smooth surfaces n= 0.011 P2= 2.50"
2.5	307	0.0020	2.03	1.59	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
7.4	368	Total			

25-4181 storm calcs - proposed

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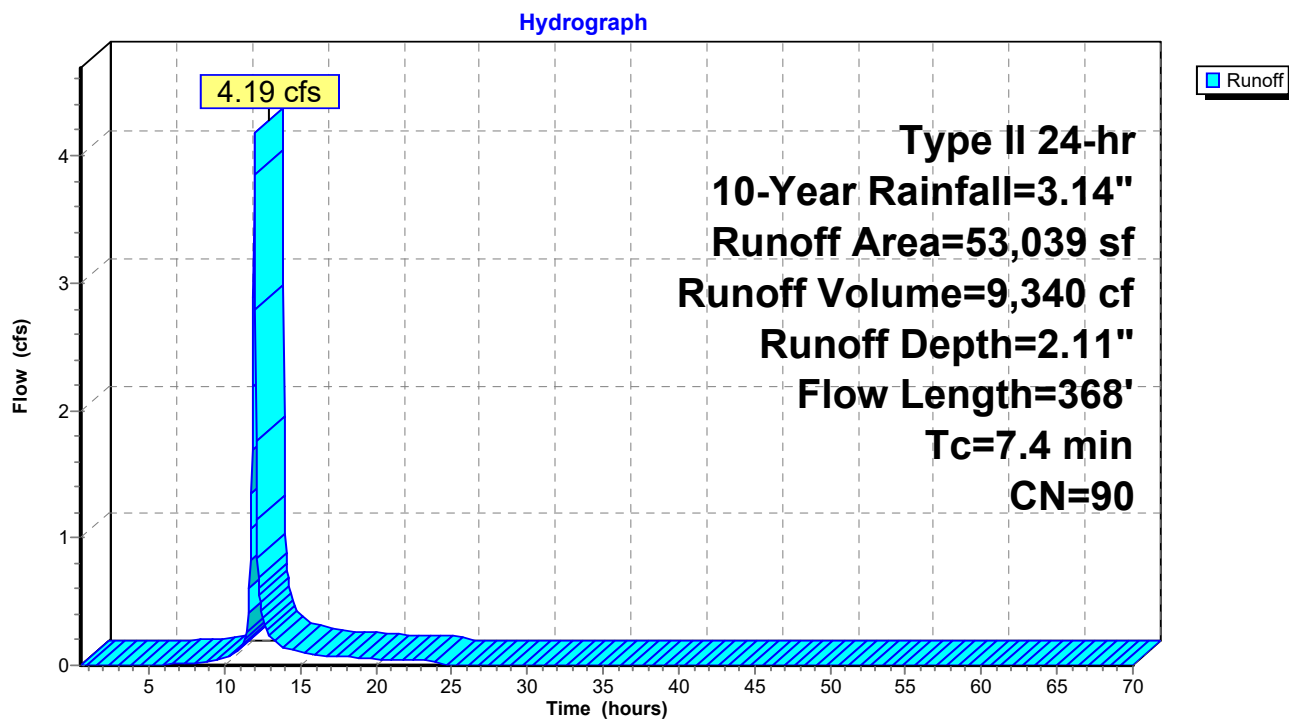
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Type II 24-hr 10-Year Rainfall=3.14"

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Subcatchment 2S: Proposed Site



25-4181 storm calcs - proposed

Type II 24-hr 10-Year Rainfall=3.14"

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Summary for Pond 3P: Underground Detention

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 53,039 sf, 53.36% Impervious, Inflow Depth = 2.11" for 10-Year event
 Inflow = 4.19 cfs @ 11.98 hrs, Volume= 9,340 cf
 Outflow = 1.69 cfs @ 12.11 hrs, Volume= 9,340 cf, Atten= 60%, Lag= 7.5 min
 Primary = 1.69 cfs @ 12.11 hrs, Volume= 9,340 cf

Routing by Stor-Ind method, Time Span= 0.50-70.02 hrs, dt= 0.04 hrs
 Peak Elev= 527.35' @ 12.11 hrs Surf.Area= 2,480 sf Storage= 2,548 cf

Plug-Flow detention time= 28.4 min calculated for 9,334 cf (100% of inflow)
 Center-of-Mass det. time= 28.7 min (834.5 - 805.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	525.80'	2,278 cf	63.25"W x 39.22"L x 3.50'H Field A 8,682 cf Overall - 2,986 cf Embedded = 5,695 cf x 40.0% Voids
#2A	526.30'	2,986 cf	ADS_StormTech SC-740 +Cap x 65 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 65 Chambers in 13 Rows
		5,264 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	525.79'	8.0" Round Culvert L= 24.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 525.79' / 525.67' S= 0.0050 ' / Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=1.68 cfs @ 12.11 hrs HW=527.34' (Free Discharge)

1=Culvert (Barrel Controls 1.68 cfs @ 4.81 fps)

25-4181 storm calcs - proposed

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Type II 24-hr 10-Year Rainfall=3.14"

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Pond 3P: Underground Detention - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

5 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 37.22' Row Length +12.0" End Stone x 2 = 39.22' Base Length

13 Rows x 51.0" Wide + 6.0" Spacing x 12 + 12.0" Side Stone x 2 = 63.25' Base Width

6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

65 Chambers x 45.9 cf = 2,986.1 cf Chamber Storage

8,681.6 cf Field - 2,986.1 cf Chambers = 5,695.5 cf Stone x 40.0% Voids = 2,278.2 cf Stone Storage

Chamber Storage + Stone Storage = 5,264.3 cf = 0.121 af

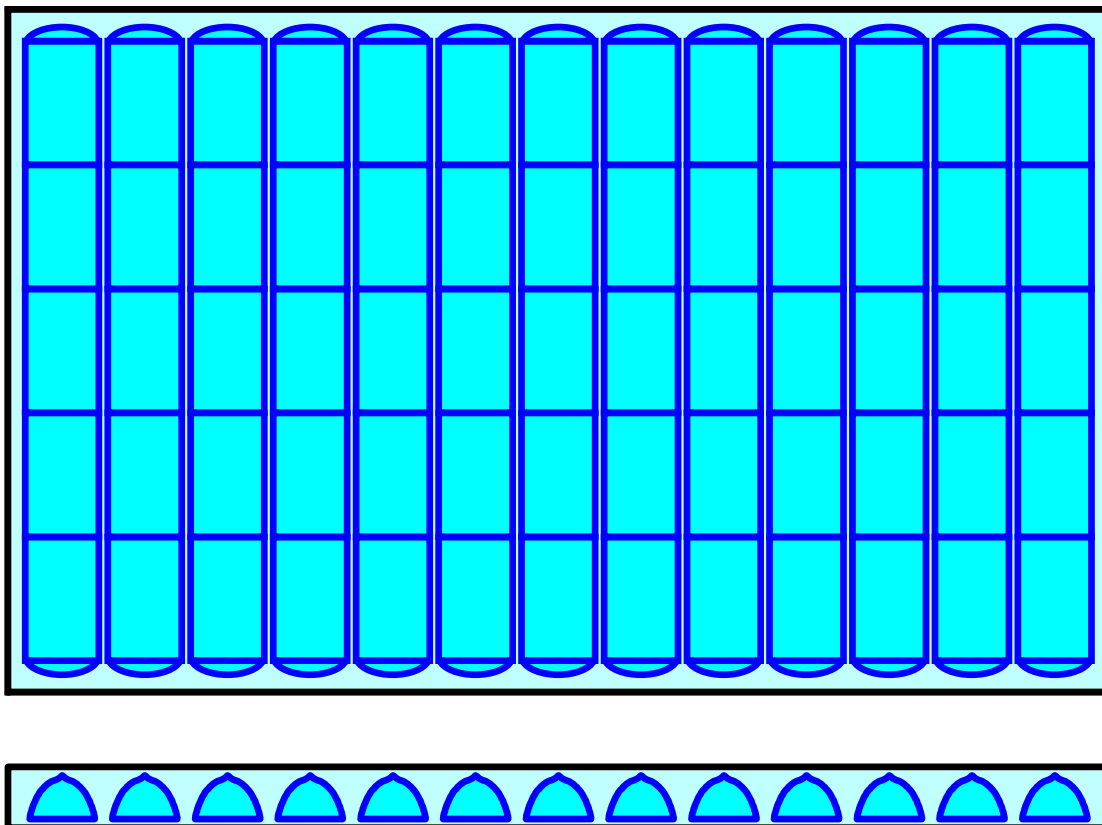
Overall Storage Efficiency = 60.6%

Overall System Size = 39.22' x 63.25' x 3.50'

65 Chambers

321.5 cy Field

210.9 cy Stone



25-4181 storm calcs - proposed

Prepared by Carmina Wood Design

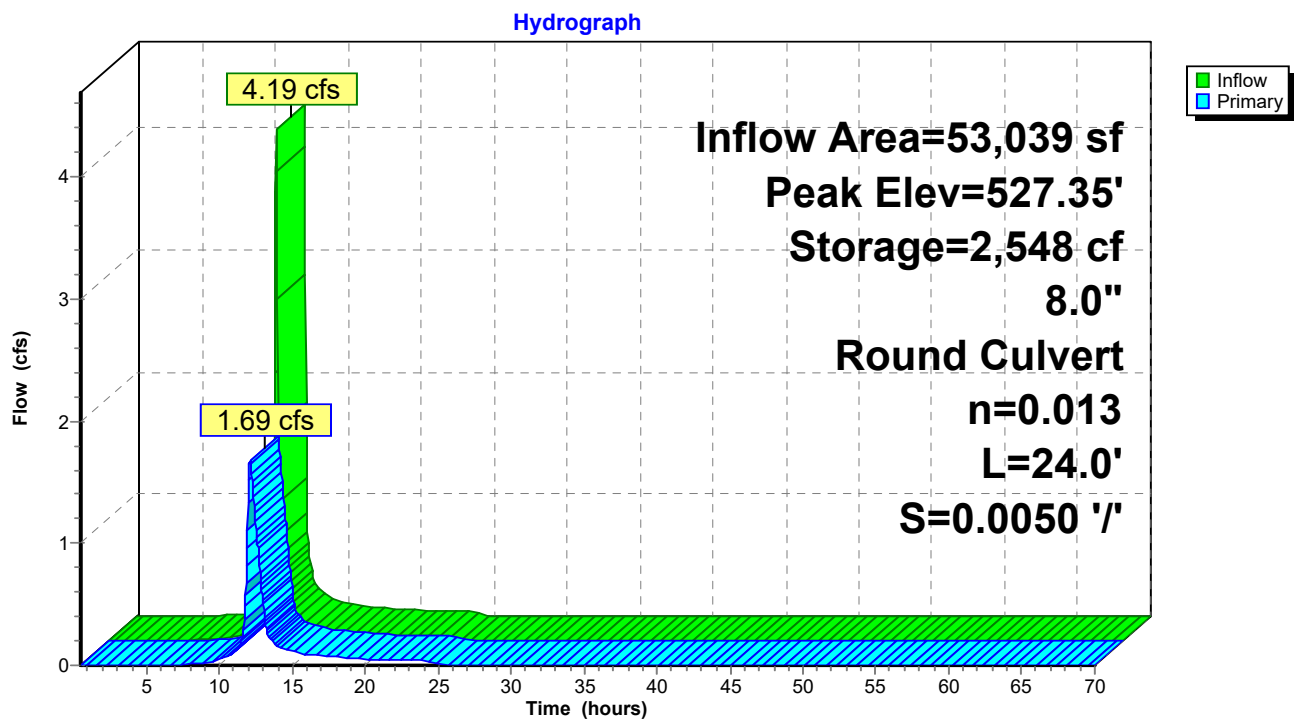
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Type II 24-hr 10-Year Rainfall=3.14"

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Pond 3P: Underground Detention



25-4181 storm calcs - proposed*Type II 24-hr 25-Year Rainfall=3.84"*

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Time span=0.50-70.00 hrs, dt=0.04 hrs, 1739 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment2S: Proposed SiteRunoff Area=53,039 sf 53.36% Impervious Runoff Depth=2.77"
Flow Length=368' Tc=7.4 min CN=90 Runoff=5.41 cfs 12,233 cf**Pond 3P: Underground Detention**Peak Elev=527.83' Storage=3,418 cf Inflow=5.41 cfs 12,233 cf
8.0" Round Culvert n=0.013 L=24.0' S=0.0050 '/' Outflow=2.05 cfs 12,233 cf**Total Runoff Area = 53,039 sf Runoff Volume = 12,233 cf Average Runoff Depth = 2.77"**
46.64% Pervious = 24,735 sf 53.36% Impervious = 28,304 sf

25-4181 storm calcs - proposed

Type II 24-hr 25-Year Rainfall=3.84"

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Summary for Subcatchment 2S: Proposed Site

[47] Hint: Peak is 340% of capacity of segment #3

Runoff = 5.41 cfs @ 11.98 hrs, Volume= 12,233 cf, Depth= 2.77"
 Routed to Pond 3P : Underground Detention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-70.02 hrs, dt= 0.04 hrs
 Type II 24-hr 25-Year Rainfall=3.84"

Area (sf)	CN	Description
5,900	98	Roofs, HSG D
20,800	98	Paved parking, HSG D
* 1,604	98	Sidewalks
24,735	80	>75% Grass cover, Good, HSG D
53,039	90	Weighted Average
24,735		46.64% Pervious Area
28,304		53.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	27	0.0400	0.10		Sheet Flow, Grass: Dense n= 0.240 P2= 2.50"
0.6	34	0.0210	1.00		Sheet Flow, Smooth surfaces n= 0.011 P2= 2.50"
2.5	307	0.0020	2.03	1.59	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
7.4	368	Total			

25-4181 storm calcs - proposed

Prepared by Carmina Wood Design

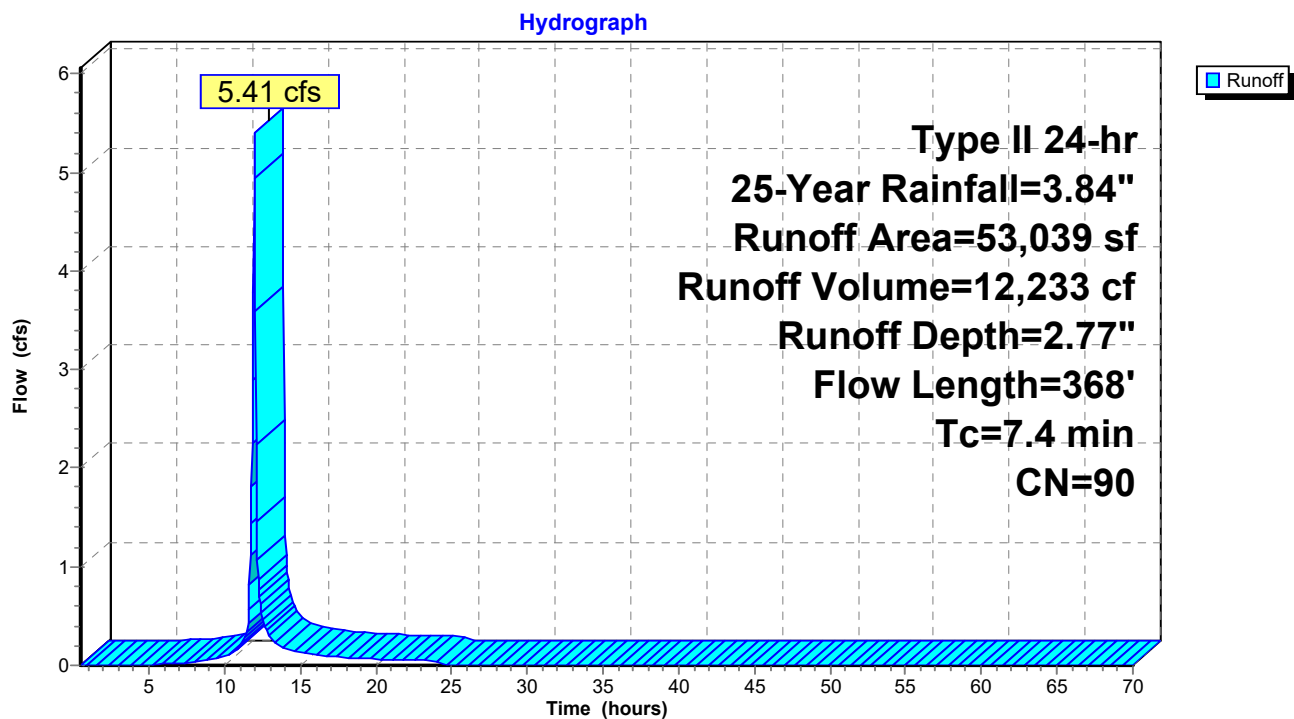
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Type II 24-hr 25-Year Rainfall=3.84"

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Subcatchment 2S: Proposed Site



25-4181 storm calcs - proposed

Type II 24-hr 25-Year Rainfall=3.84"

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Summary for Pond 3P: Underground Detention

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 53,039 sf, 53.36% Impervious, Inflow Depth = 2.77" for 25-Year event
 Inflow = 5.41 cfs @ 11.98 hrs, Volume= 12,233 cf
 Outflow = 2.05 cfs @ 12.11 hrs, Volume= 12,233 cf, Atten= 62%, Lag= 7.8 min
 Primary = 2.05 cfs @ 12.11 hrs, Volume= 12,233 cf

Routing by Stor-Ind method, Time Span= 0.50-70.02 hrs, dt= 0.04 hrs
 Peak Elev= 527.83' @ 12.11 hrs Surf.Area= 2,480 sf Storage= 3,418 cf

Plug-Flow detention time= 28.6 min calculated for 12,233 cf (100% of inflow)
 Center-of-Mass det. time= 28.0 min (826.2 - 798.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	525.80'	2,278 cf	63.25"W x 39.22"L x 3.50'H Field A 8,682 cf Overall - 2,986 cf Embedded = 5,695 cf x 40.0% Voids
#2A	526.30'	2,986 cf	ADS_StormTech SC-740 +Cap x 65 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 65 Chambers in 13 Rows
		5,264 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	525.79'	8.0" Round Culvert L= 24.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 525.79' / 525.67' S= 0.0050 ' / Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=2.04 cfs @ 12.11 hrs HW=527.82' (Free Discharge)↑ **1=Culvert** (Barrel Controls 2.04 cfs @ 5.86 fps)

25-4181 storm calcs - proposed

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Type II 24-hr 25-Year Rainfall=3.84"

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Pond 3P: Underground Detention - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

5 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 37.22' Row Length +12.0" End Stone x 2 = 39.22' Base Length

13 Rows x 51.0" Wide + 6.0" Spacing x 12 + 12.0" Side Stone x 2 = 63.25' Base Width

6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

65 Chambers x 45.9 cf = 2,986.1 cf Chamber Storage

8,681.6 cf Field - 2,986.1 cf Chambers = 5,695.5 cf Stone x 40.0% Voids = 2,278.2 cf Stone Storage

Chamber Storage + Stone Storage = 5,264.3 cf = 0.121 af

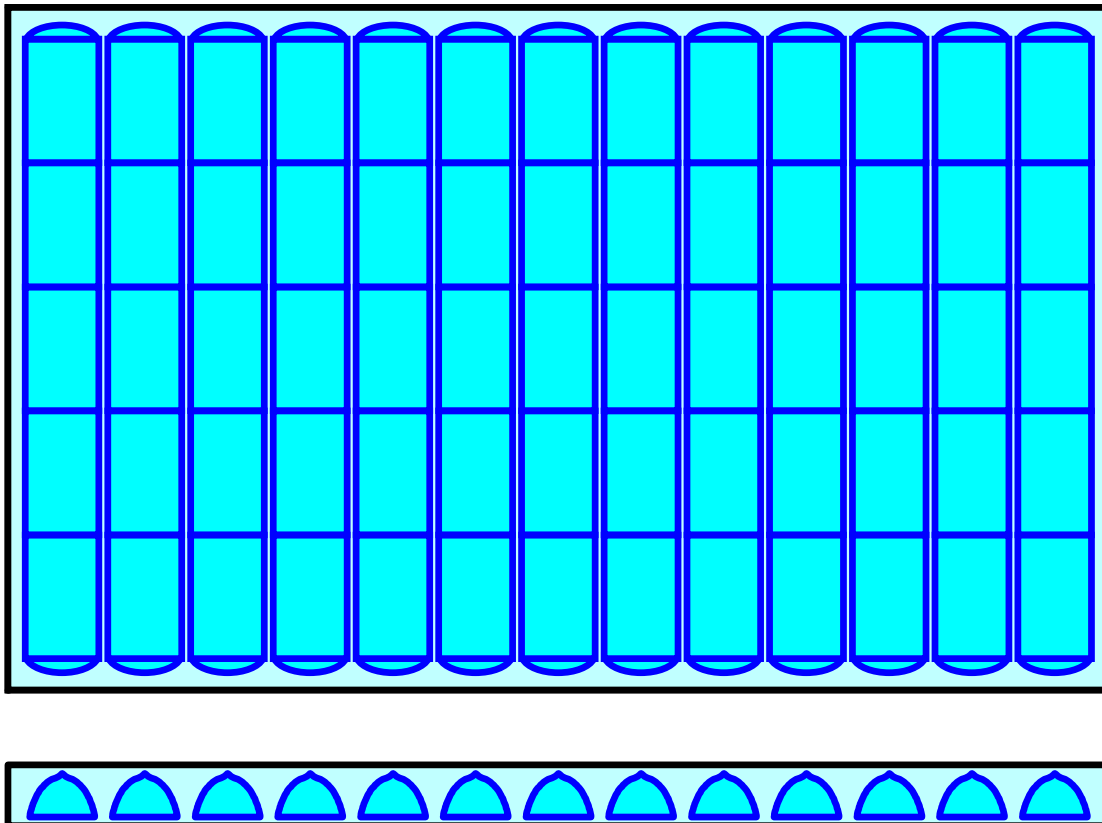
Overall Storage Efficiency = 60.6%

Overall System Size = 39.22' x 63.25' x 3.50'

65 Chambers

321.5 cy Field

210.9 cy Stone



25-4181 storm calcs - proposed

Prepared by Carmina Wood Design

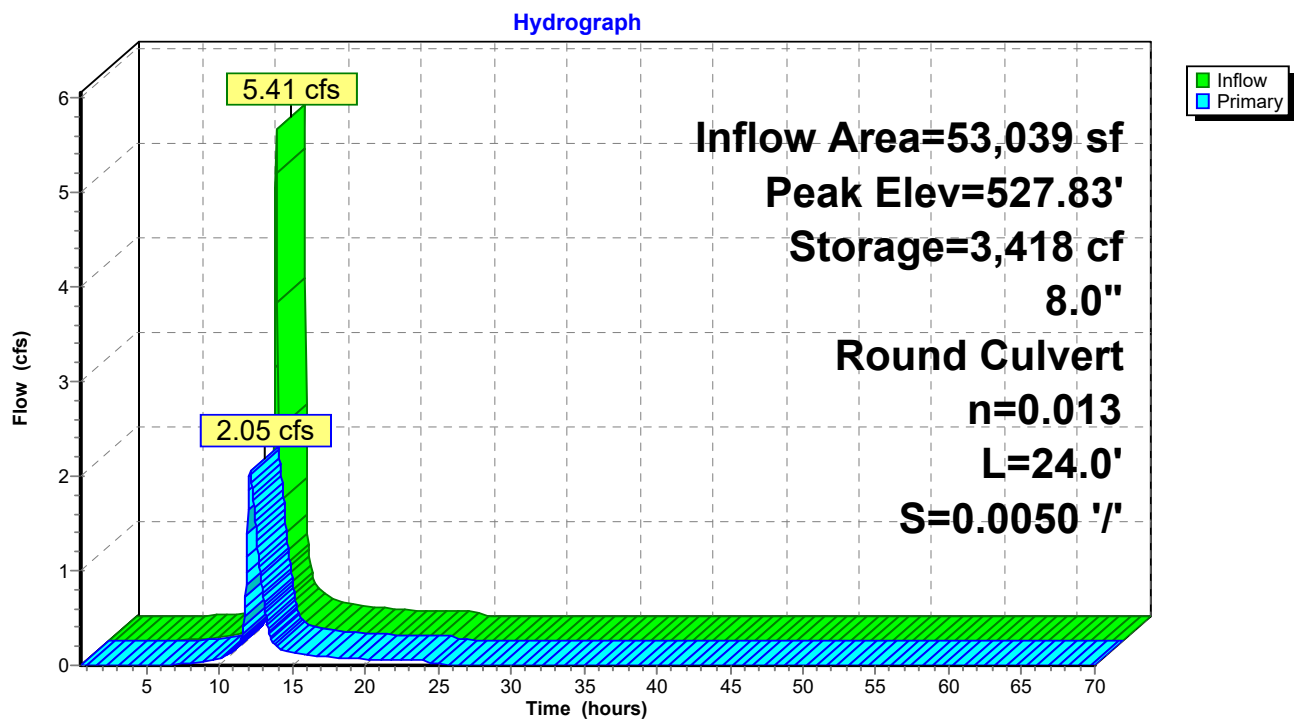
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Type II 24-hr 25-Year Rainfall=3.84"

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Pond 3P: Underground Detention



25-4181 storm calcs - proposed

Type II 24-hr 100-Year Rainfall=5.23"

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Time span=0.50-70.00 hrs, dt=0.04 hrs, 1739 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment2S: Proposed Site

Runoff Area=53,039 sf 53.36% Impervious Runoff Depth=4.10"
Flow Length=368' Tc=7.4 min CN=90 Runoff=7.83 cfs 18,115 cf

Pond 3P: Underground Detention

Peak Elev=529.23' Storage=5,193 cf Inflow=7.83 cfs 18,115 cf
8.0" Round Culvert n=0.013 L=24.0' S=0.0050 ' / ' Outflow=2.85 cfs 18,115 cf

Total Runoff Area = 53,039 sf Runoff Volume = 18,115 cf Average Runoff Depth = 4.10"
46.64% Pervious = 24,735 sf 53.36% Impervious = 28,304 sf

25-4181 storm calcs - proposed

Type II 24-hr 100-Year Rainfall=5.23"

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Summary for Subcatchment 2S: Proposed Site

[47] Hint: Peak is 491% of capacity of segment #3

Runoff = 7.83 cfs @ 11.98 hrs, Volume= 18,115 cf, Depth= 4.10"
 Routed to Pond 3P : Underground Detention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.50-70.02 hrs, dt= 0.04 hrs
 Type II 24-hr 100-Year Rainfall=5.23"

Area (sf)	CN	Description
5,900	98	Roofs, HSG D
20,800	98	Paved parking, HSG D
* 1,604	98	Sidewalks
24,735	80	>75% Grass cover, Good, HSG D
53,039	90	Weighted Average
24,735		46.64% Pervious Area
28,304		53.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	27	0.0400	0.10		Sheet Flow, Grass: Dense n= 0.240 P2= 2.50"
0.6	34	0.0210	1.00		Sheet Flow, Smooth surfaces n= 0.011 P2= 2.50"
2.5	307	0.0020	2.03	1.59	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
7.4	368	Total			

25-4181 storm calcs - proposed

Prepared by Carmina Wood Design

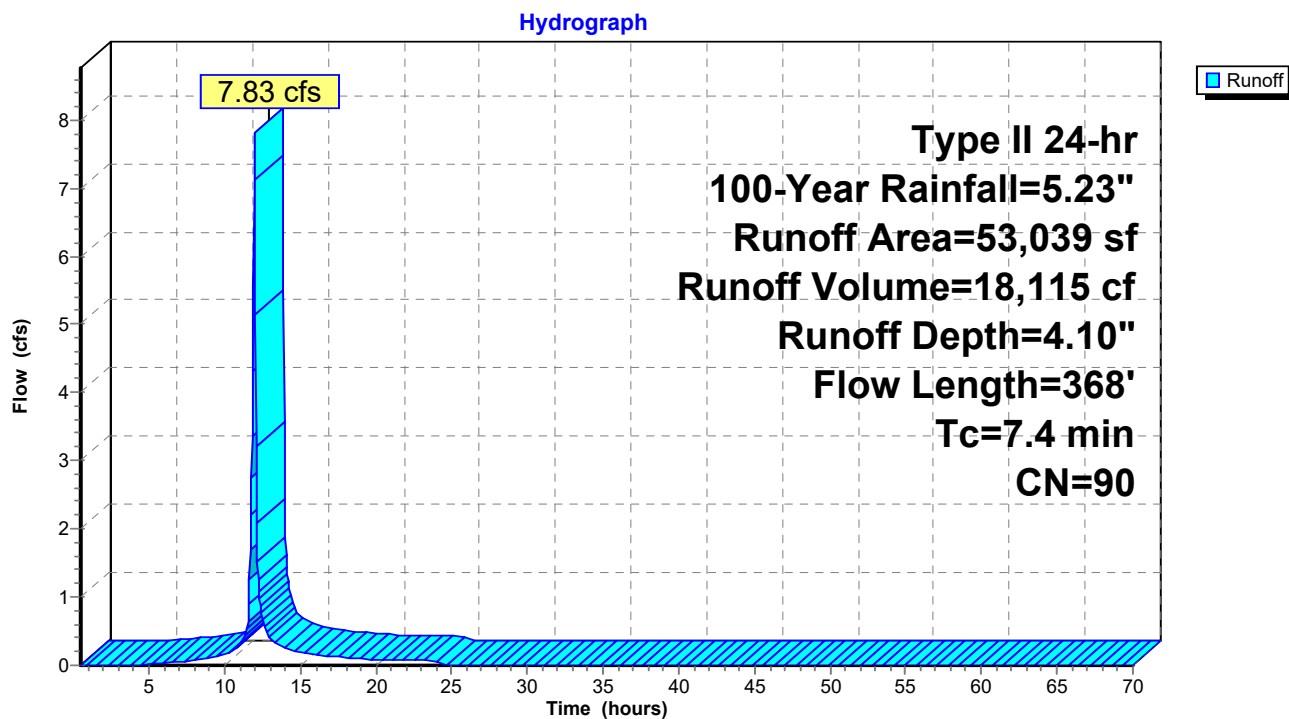
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Type II 24-hr 100-Year Rainfall=5.23"

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Subcatchment 2S: Proposed Site



25-4181 storm calcs - proposed

Type II 24-hr 100-Year Rainfall=5.23"

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Summary for Pond 3P: Underground Detention

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 53,039 sf, 53.36% Impervious, Inflow Depth = 4.10" for 100-Year event
 Inflow = 7.83 cfs @ 11.98 hrs, Volume= 18,115 cf
 Outflow = 2.85 cfs @ 12.12 hrs, Volume= 18,115 cf, Atten= 64%, Lag= 8.0 min
 Primary = 2.85 cfs @ 12.12 hrs, Volume= 18,115 cf

Routing by Stor-Ind method, Time Span= 0.50-70.02 hrs, dt= 0.04 hrs
 Peak Elev= 529.23' @ 12.12 hrs Surf.Area= 2,480 sf Storage= 5,193 cf

Plug-Flow detention time= 27.2 min calculated for 18,104 cf (100% of inflow)
 Center-of-Mass det. time= 27.4 min (814.7 - 787.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	525.80'	2,278 cf	63.25"W x 39.22'L x 3.50'H Field A 8,682 cf Overall - 2,986 cf Embedded = 5,695 cf x 40.0% Voids
#2A	526.30'	2,986 cf	ADS_StormTech SC-740 +Cap x 65 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 65 Chambers in 13 Rows
		5,264 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	525.79'	8.0" Round Culvert L= 24.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 525.79' / 525.67' S= 0.0050 ' / Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=2.84 cfs @ 12.12 hrs HW=529.20' (Free Discharge)↑ **1=Culvert** (Barrel Controls 2.84 cfs @ 8.13 fps)

25-4181 storm calcs - proposed

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Type II 24-hr 100-Year Rainfall=5.23"

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Pond 3P: Underground Detention - Chamber Wizard Field A

Chamber Model = ADS_StormTechSC-740 +Cap (ADS StormTech®SC-740 with cap length)

Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

5 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 37.22' Row Length +12.0" End Stone x 2 = 39.22' Base Length

13 Rows x 51.0" Wide + 6.0" Spacing x 12 + 12.0" Side Stone x 2 = 63.25' Base Width

6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

65 Chambers x 45.9 cf = 2,986.1 cf Chamber Storage

8,681.6 cf Field - 2,986.1 cf Chambers = 5,695.5 cf Stone x 40.0% Voids = 2,278.2 cf Stone Storage

Chamber Storage + Stone Storage = 5,264.3 cf = 0.121 af

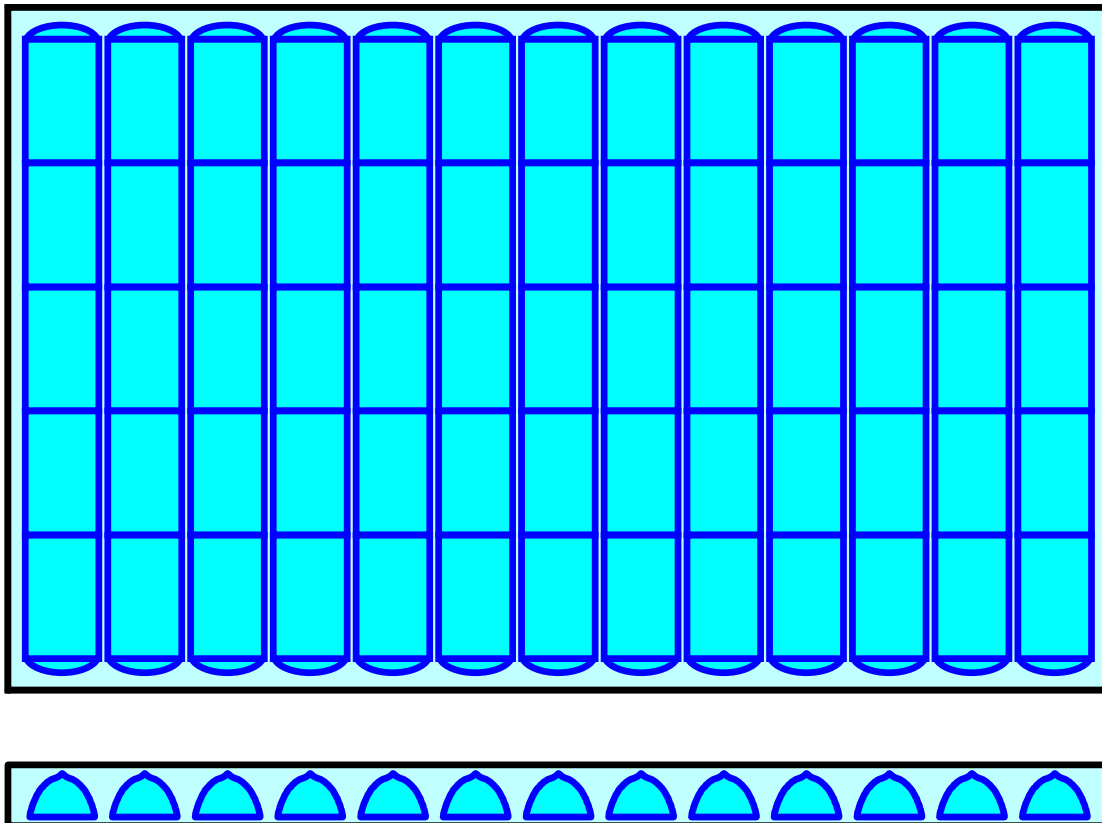
Overall Storage Efficiency = 60.6%

Overall System Size = 39.22' x 63.25' x 3.50'

65 Chambers

321.5 cy Field

210.9 cy Stone



25-4181 storm calcs - proposed

Prepared by Carmina Wood Design

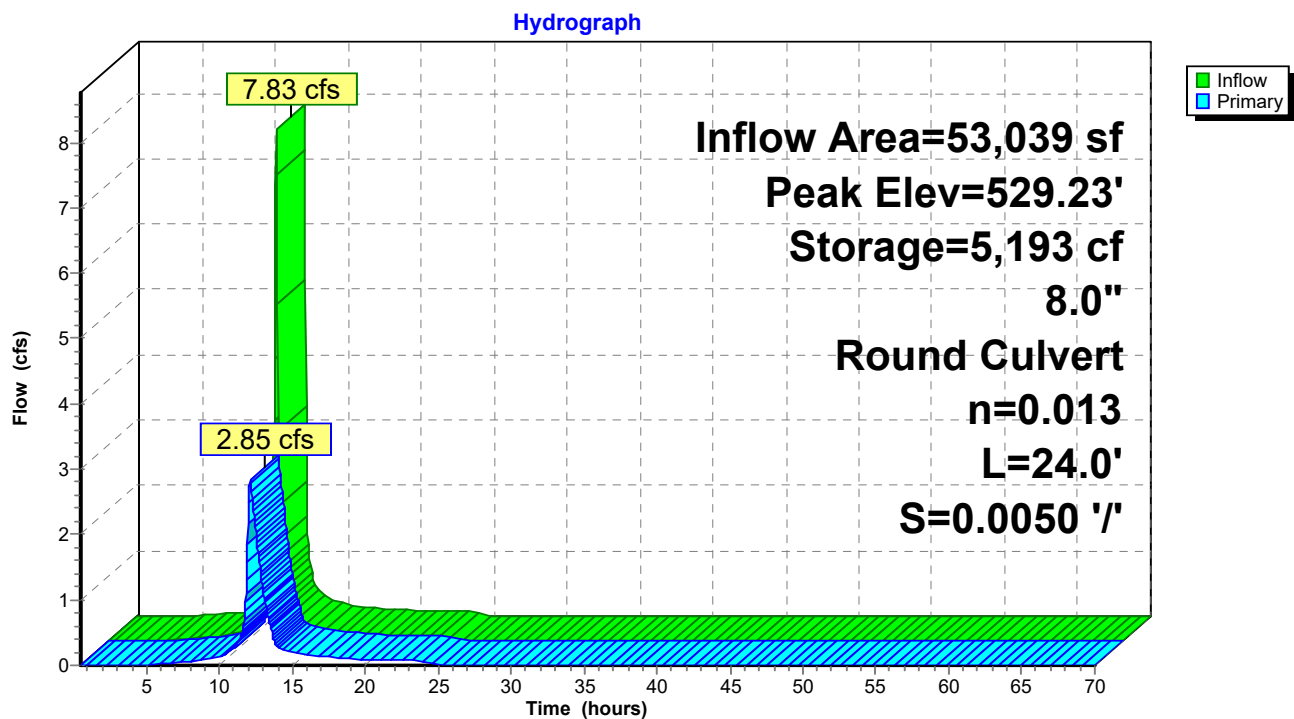
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Type II 24-hr 100-Year Rainfall=5.23"

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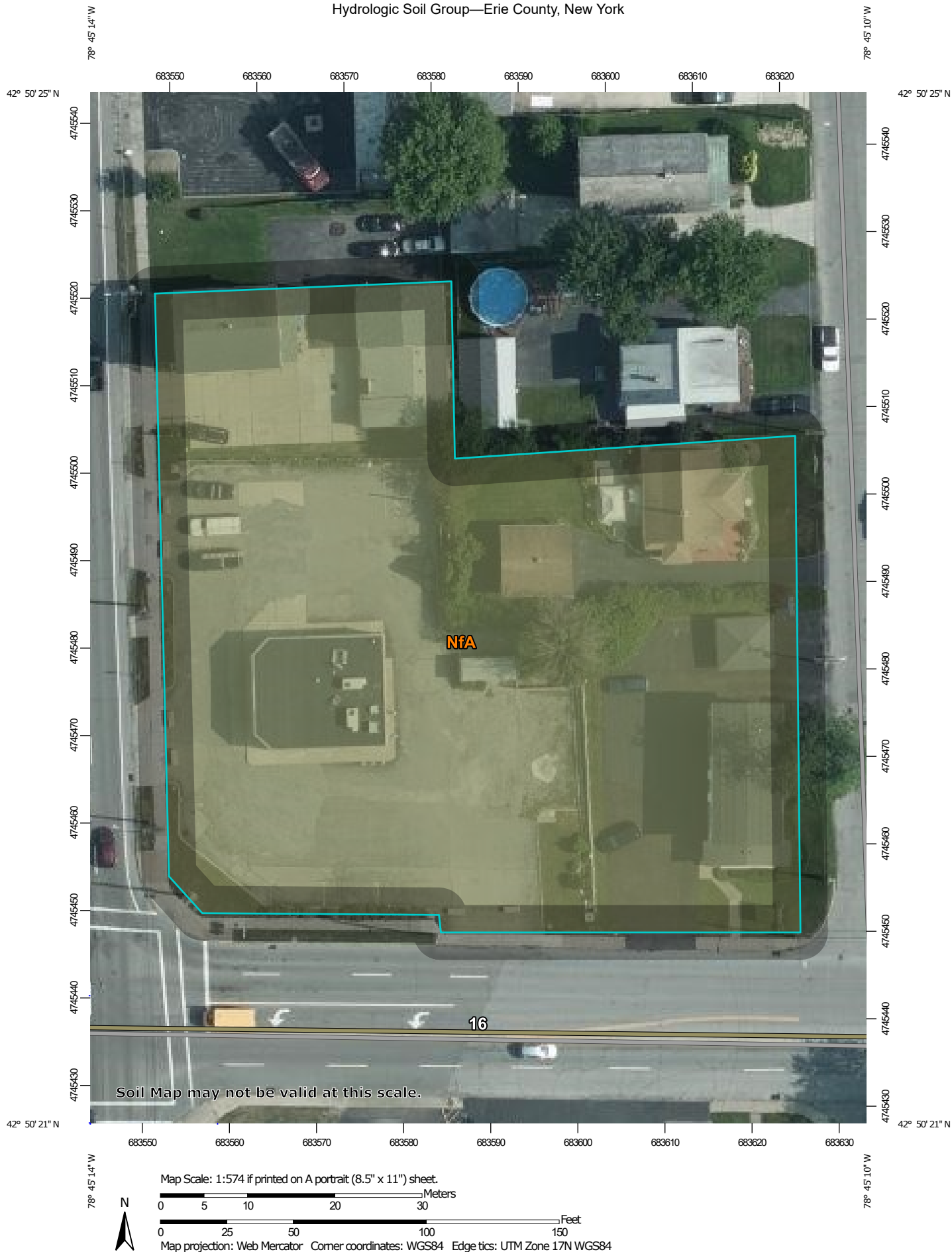
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Pond 3P: Underground Detention



Appendix D
Soil Information

Hydrologic Soil Group—Erie County, New York



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

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

Soil Rating Points

A

A/D

B

B/D

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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: [Web Soil Survey](#)

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: Erie County, New York

Survey Area Data: Version 21, Aug 29, 2021

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

Date(s) aerial images were photographed: Jul 14, 2019—Jul 27, 2019

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
NfA	Niagara silt loam, 0 to 3 percent slopes	C/D	1.1	100.0%
Totals for Area of Interest			1.1	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