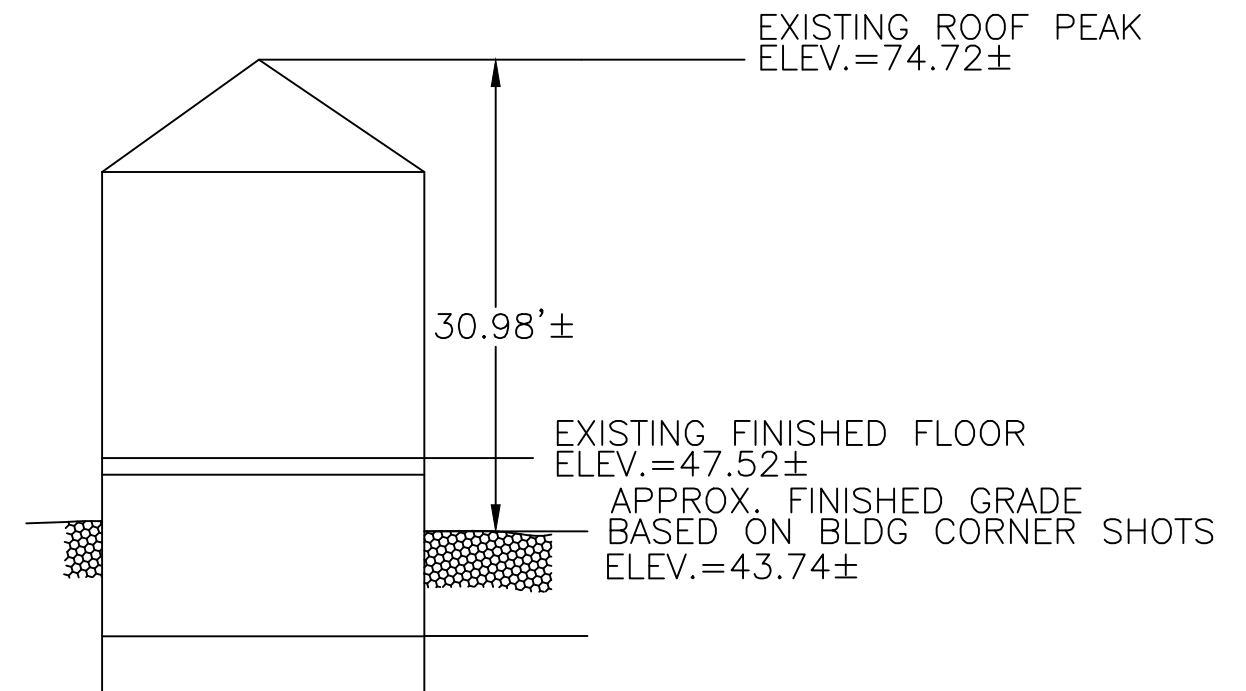


**LEGEND**

□	BOUND
○	IRON PIN/PIPE
⊙	STONE POST
🌳	TREE
🌳	TREE STUMP
🌿	SHRUBS/FLOWERS
♣	SIGN
●	BOLLARD
⊙	SEWER MANHOLE
⊙	DRAIN MANHOLE
⊙	CATCH BASIN
⊙	WATER MANHOLE
⊙	WATER VALVE
⊙	HYDRANT
⊙	GAS VALVE
⊙	ELECTRIC MANHOLE
⊙	ELECTRIC HANDHOLE
⊙	UTILITY POLE
⊙	LIGHT POLE
⊙	MANHOLE
⊙	SPOT GRADE
TW	TOP OF WALL
BW	BOTTOM OF WALL
▨	EXISTING BUILDING
▨	RETAINING WALL
▨	STONE WALL
—	FENCE
—	TREE LINE
S	SEWER LINE
D	DRAIN LINE
W	WATER LINE
G	GAS LINE
E	UNDERGROUND ELECTRIC LINE
OHW	OVERHEAD WIRES
145	CONTOUR LINE (MJR)
146	CONTOUR LINE (MNR)

N/F  
GPH WEST NEWTON LLC  
BK. 47345 PG. 499



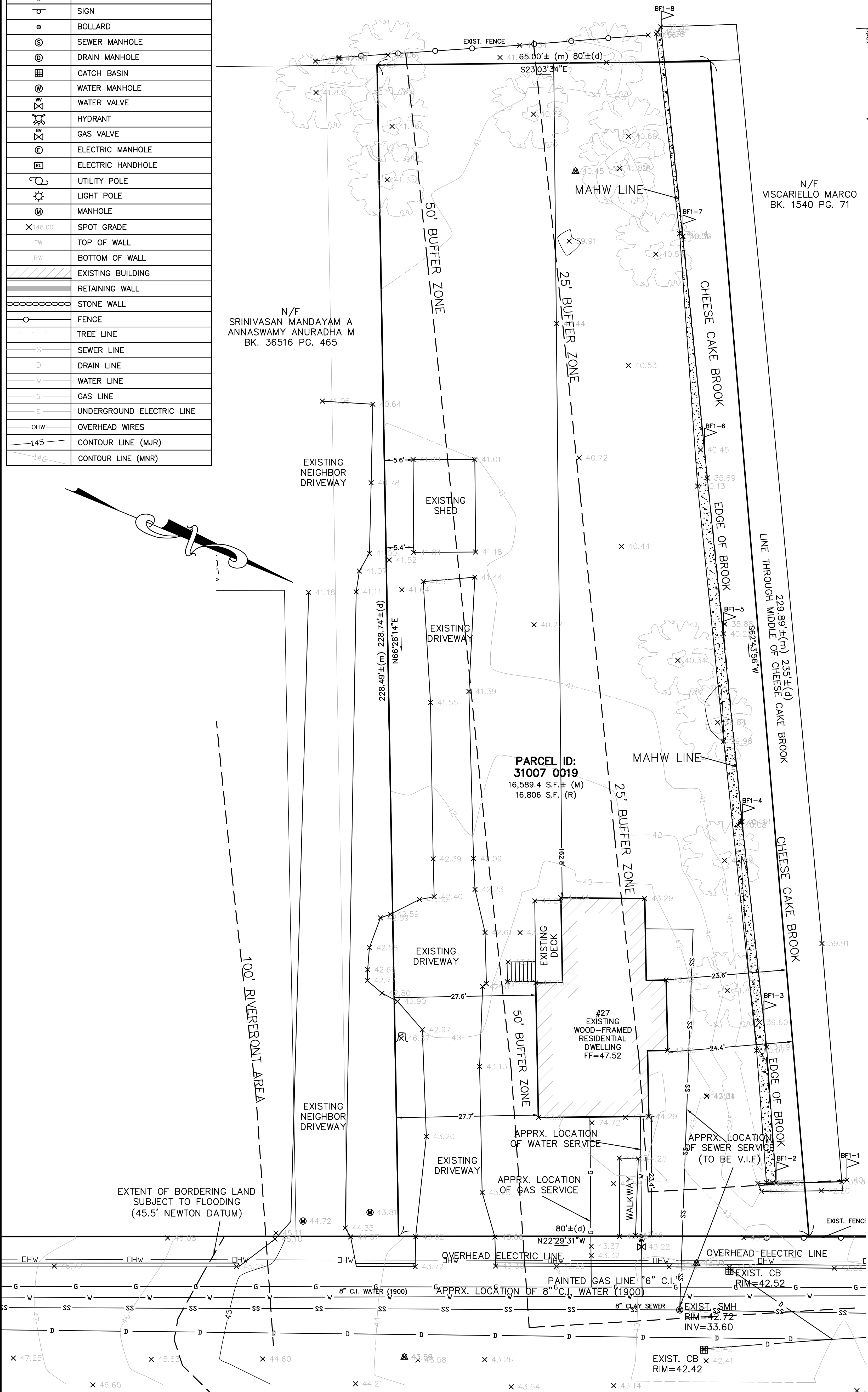
**EXISTING PROFILE**  
NOT TO SCALE

N/F  
VISCARIELLO MARCO  
BK. 1540 PG. 71

N/F  
SRINIVASAN MANDAYAM A  
ANNASWAMY ANURADHA M  
BK. 36516 PG. 465

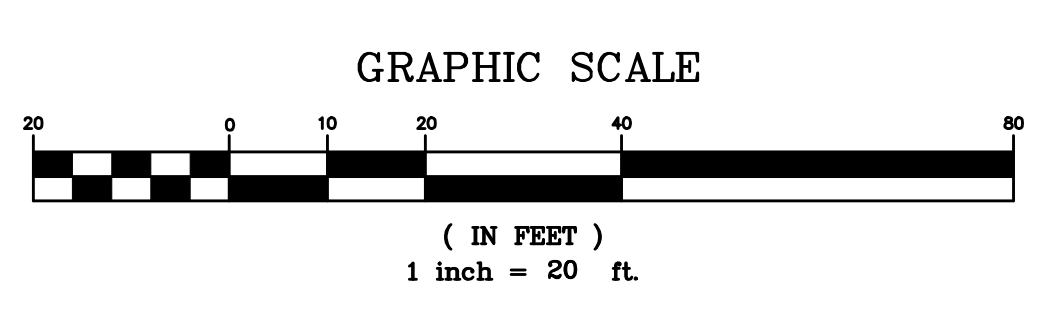
- NOTES:**
1. INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A FIELD SURVEY PERFORMED BY PETER NOLAN & ASSOCIATES LLC AS OF 9/18/2021.
  2. DEED REFERENCE: BOOK 12505, PAGE 463  
DEED REFERENCE: BOOK 19297, PAGE 454  
PLAN REFERENCE 1: PLAN 1142 OF 1988  
PLAN REFERENCE 1: PLAN 645 OF 2000  
LC PLAN 9887-B  
MIDDLESEX COUNTY SOUTH DISTRICT REGISTRY OF DEEDS
  3. THIS PLAN IS NOT INTENDED TO BE RECORDED.
  4. I CERTIFY THAT THE DWELLING SHOWN IS LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE AE, ON FLOOD HAZARD BOUNDARY MAP NUMBER 25017C0551E, IN COMMUNITY NUMBER: 250208, DATED 6/4/2010. ON AND OFF-SITE SURVEY DEMONSTRATE THAT THE 100-YEAR FLOODPLAIN ELEVATION AT THE SITE IS 39 NAVD 88 (45.5 CITY OF NEWTON DATUM). THE HIGHER FLOODPLAIN ELEVATION WOULD PREVAIL.
  5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT USES OF THE LAND; HOWEVER THIS NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
  6. FIRST FLOOR ELEVATIONS ARE TAKEN AT THRESHOLD.
  7. NO RESPONSIBILITY IS TAKEN FOR ZONING TABLE AS PETER NOLAN & ASSOCIATES LLC ARE NOT ZONING EXPERTS. TABLE IS TAKEN FROM TABLE PROVIDED BY LOCAL ZONING ORDINANCE. CLIENT AND/OR ARCHITECT TO VERIFY THE ACCURACY OF ZONING ANALYSIS.
  8. THE ELEVATIONS SHOWN ARE BASED CITY OF NEWTON DATUM.
  9. ZONING DISTRICT: MULTI-RESIDENCE 1, (LOT CREATED AFTER 12/07/1953)
  10. WETLAND RESOURCE AREAS DELINEATED BY LUCAS ENVIRONMENTAL, LLC ON AUGUST 31, 2021.

**PARCEL ID:**  
**31007 0019**  
16,589.4 S.F. ± (M)  
16,806 S.F. (R)



EXTENT OF BORDERING LAND SUBJECT TO FLOODING (45.5' NEWTON DATUM)

**CROSS STREET**  
(PUBLIC WAY)



SCALE	1"=10'		
DATE	8/30/2022		
SHEET	1		
PLAN NO.	1 OF 5		
CLIENT:	27 CROSS STREET NEWTOWN MASSACHUSETTS		
DRAWN BY	DK		
CHKD BY	PJN		
APPD BY	PJN		
REV	DATE	REVISION	BY
<p style="text-align: center;"><b>EXISTING CONDITIONS</b></p>			SHEET NO.
<p style="text-align: center;"><b>1</b></p>			

PETER NOLAN & ASSOCIATES LLC SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES, OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORKING ACCORDANCE WITH THE CONTRACT DOCUMENTS.  
THE EXTENT OF PETER NOLAN & ASSOCIATES LIABILITY FOR THIS PLAN IS LIMITED TO THE EXTENT OF ITS FEE LESS THIRD PARTY COST.  
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**DEEP OBSERVATION HOLE LOG:**

GENERAL SOIL CONDITIONS FOR THE AREA PERFORMED AT 27 CROSS ST, NEWTON, MA. BY MATTHEW MUI, SOIL EVALUATOR #14259 REPRESENTING SPRUHAN ENGINEERING, P.C.

DATED: 7/16/2022  
HOLE NUMBER: TP-1

GENERAL SITE CONDITIONS: BUILDINGS, PAVED/GRASS AREAS.

GRADE AT TEST PIT = 41.0'±  
ESTIMATED SEASONAL HIGH GROUNDWATER TABLE AT 35.3'±.

\* IMPORTANT NOTE: STRUCTURAL ENGINEER/ARCHITECT TO DESIGN WATER PROOFED BASEMENT TO AN ELEVATION OF 2 FT. MINIMUM ABOVE ESHGW.

DEEP OBSERVATION HOLE LOG										
DEEP OBSERVATION HOLE NUMBER:		TP-1		GROUND ELEVATION:						41.0±
Depth (ft)	Horizon/Layer	Metric Color-Moist	Rebathmorphic Features	Texture (USDA)	Consistence (Moist)	Structure	Consistence (Moist)	Other		
0-36	FILL									
36-54	Ap	10 YR		SILT LOAM	5	ABK	VFR			
54-64	Bw	10 YR		SILT LOAM	5	ABK	VFR			
64-78±	C	10 YR	64	SAND		5	GRAN	LOOSE	1.2	

NOTES:  
1. WEPPING OBSERVED AT APPROX 60'  
2. WATER OBSERVED @ BOTTOM OF HOLE  
3. LOGGED BY MATTHEW MUI, SE14259 ON 7/16/2022.

**DEEP OBSERVATION HOLE LOG:**

GENERAL SOIL CONDITIONS FOR THE AREA PERFORMED AT 27 CROSS ST, NEWTON, MA. BY MATTHEW MUI, SOIL EVALUATOR #14259 REPRESENTING SPRUHAN ENGINEERING, P.C.

DATED: 7/16/2022  
HOLE NUMBER: TP-2

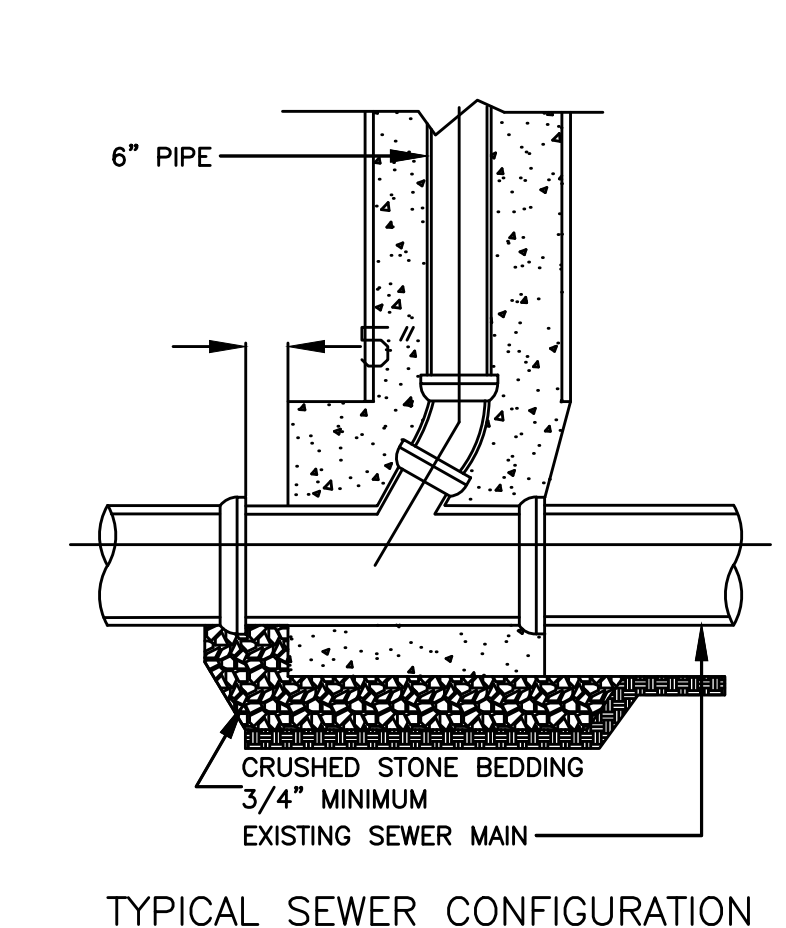
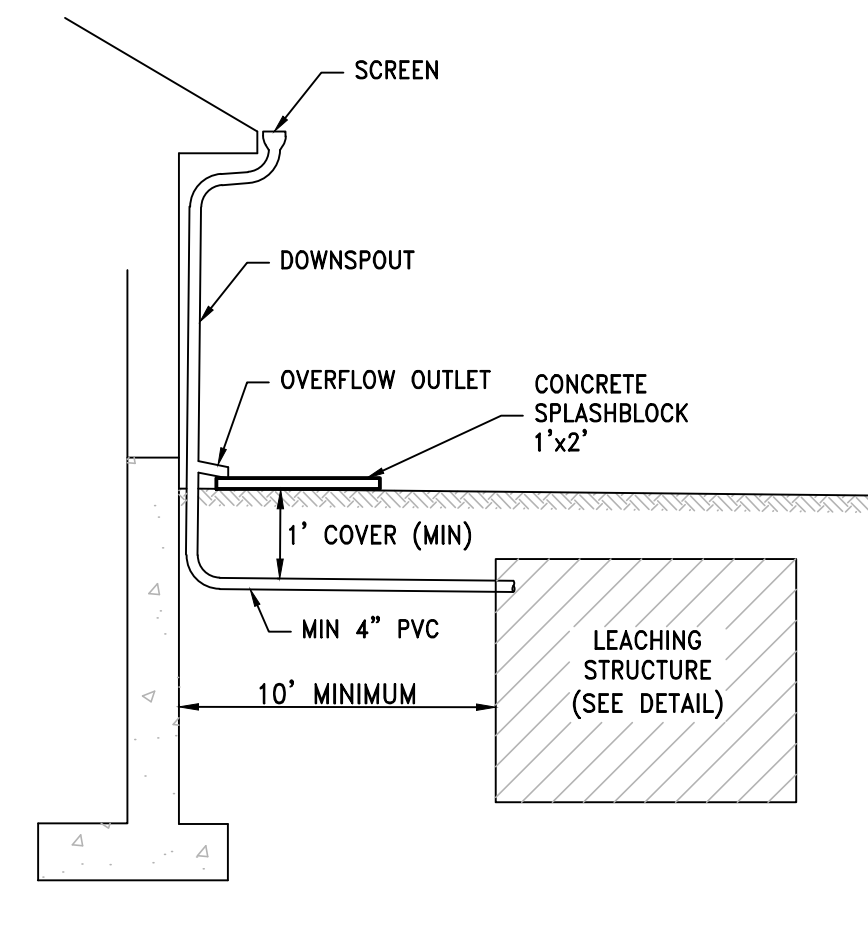
GENERAL SITE CONDITIONS: BUILDINGS, PAVED/GRASS AREAS.

GRADE AT TEST PIT = 43.5'±  
ESTIMATED SEASONAL HIGH GROUNDWATER TABLE AT N/A.

\* IMPORTANT NOTE: STRUCTURAL ENGINEER/ARCHITECT TO DESIGN WATER PROOFED BASEMENT TO AN ELEVATION OF 2 FT. MINIMUM ABOVE ESHGW.

DEEP OBSERVATION HOLE LOG										
DEEP OBSERVATION HOLE NUMBER:		TP-2		GROUND ELEVATION:						43.5±
Depth (ft)	Horizon/Layer	Metric Color-Moist	Rebathmorphic Features	Texture (USDA)	Consistence (Moist)	Structure	Consistence (Moist)	Other		
0-50	FILL									
50-60	Ap	10 YR		SILT LOAM	5	ABK	VFR			
60-72	Bw	10 YR		SILT LOAM	5	ABK	VFR			
72-108±	C	10 YR	102	SAND		5	GRAN	LOOSE		

NOTES:  
1. LOGGED BY MATTHEW MUI, SE14259 ON 7/16/2022.

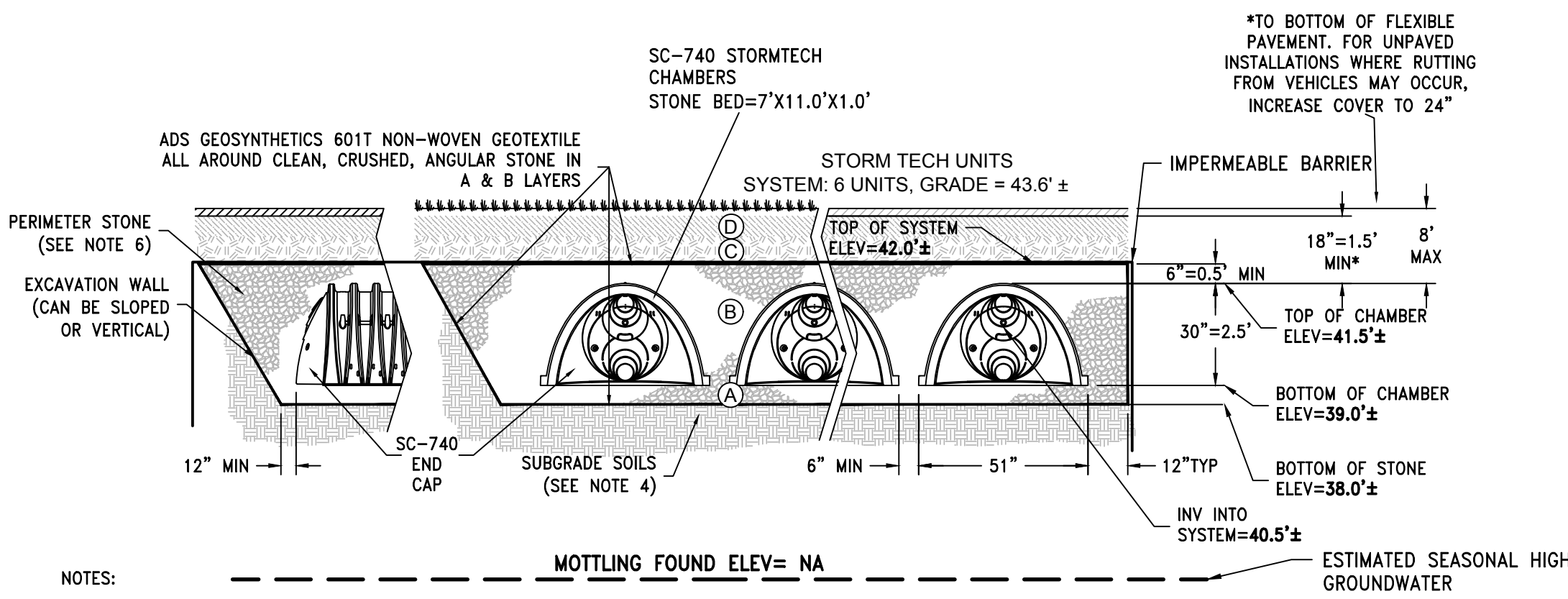


**ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS**

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 A-1, A-2, A-3 OR AASHTO M43 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 76, 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 90% 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 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 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.

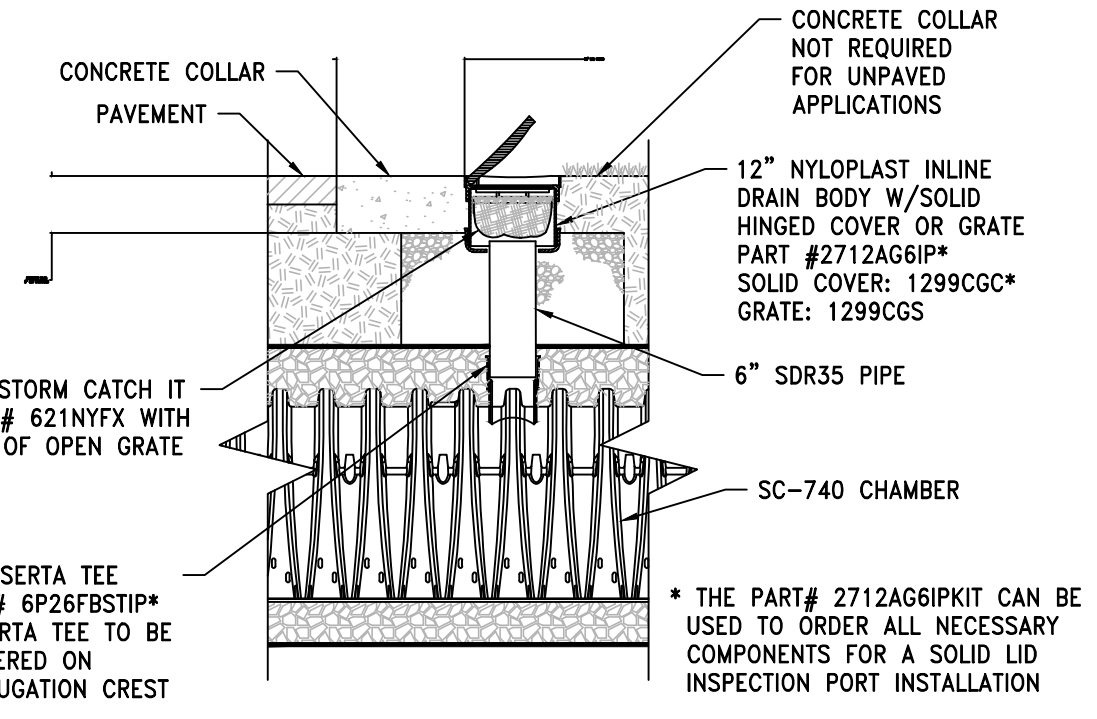
PLEASE NOTE:

- 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 COMPACTIONED 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.

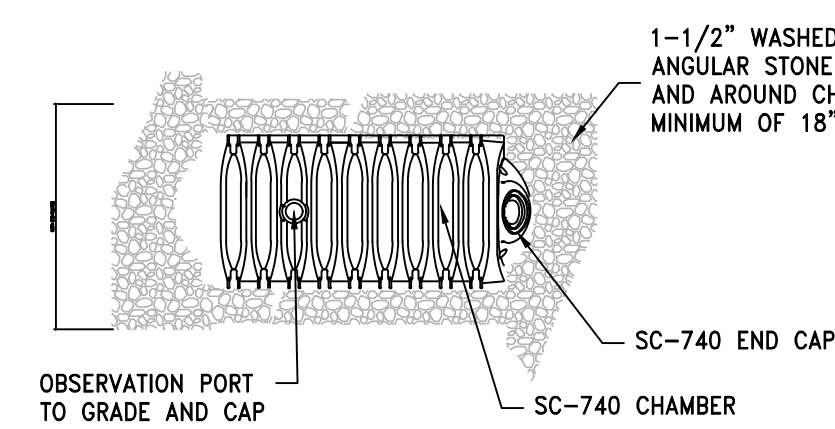


NOTES:

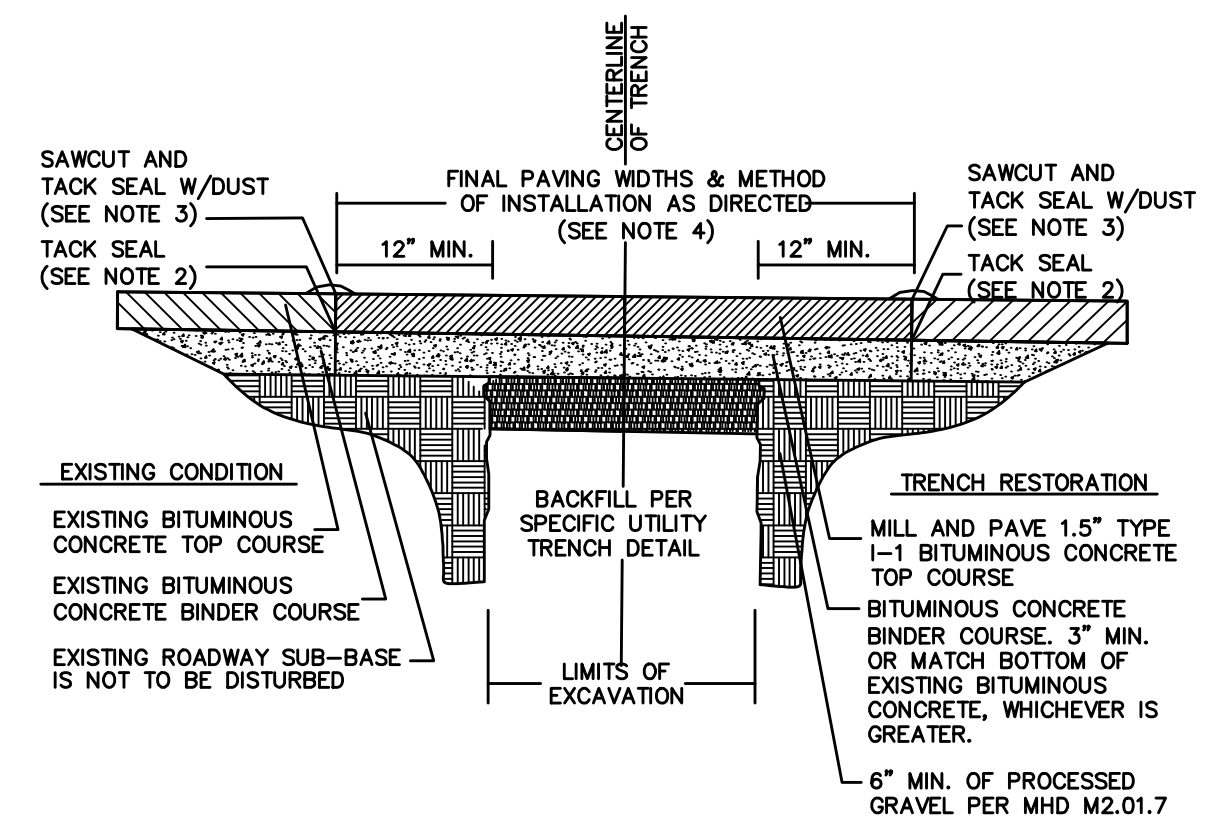
- SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- 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.
- 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.



SC-740 6" INSPECTION PORT DETAIL N.T.S.

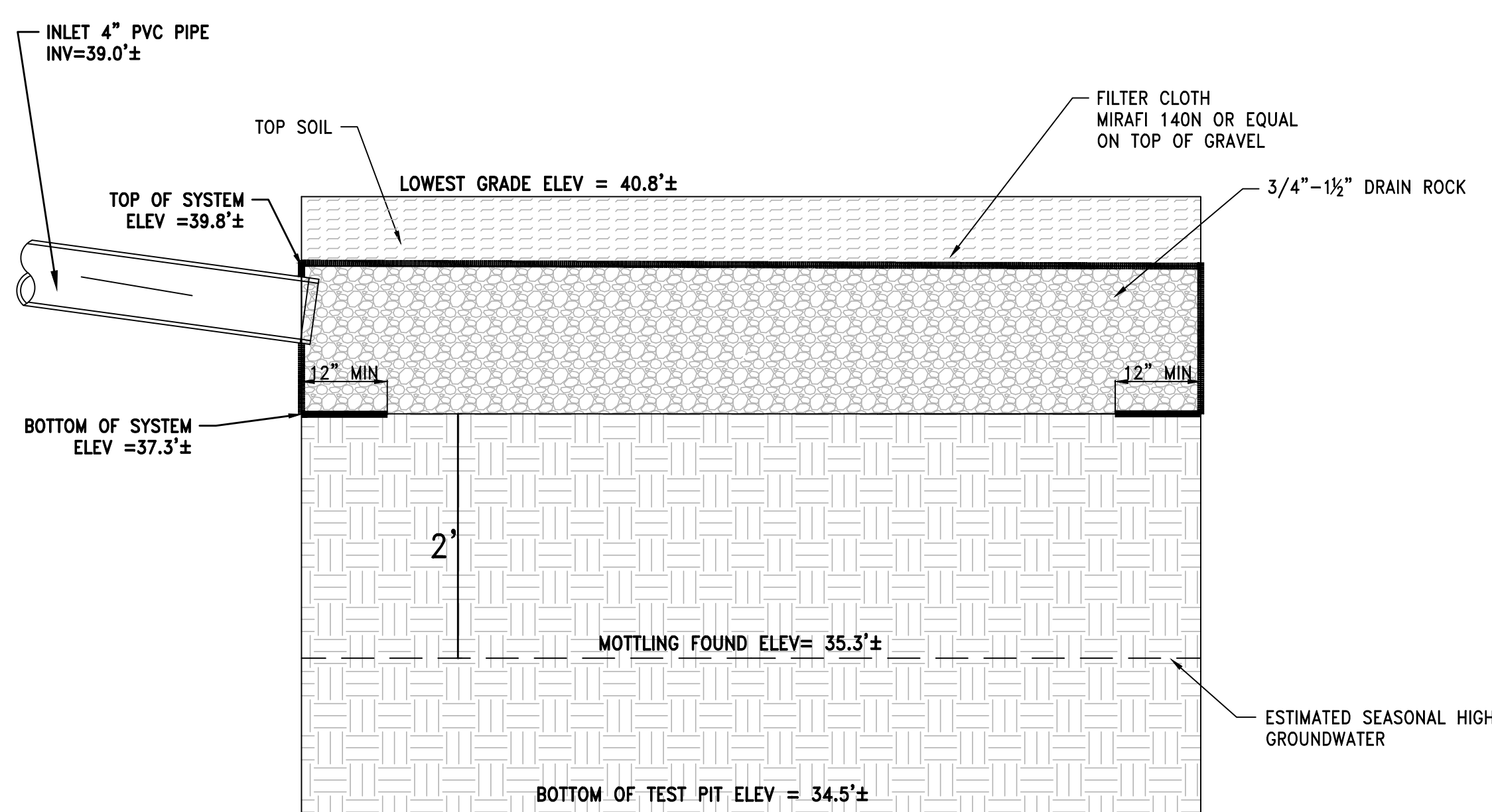


STORMTECH SC-740 CHAMBER SYSTEM PLAN VIEW DETAIL N.T.S.

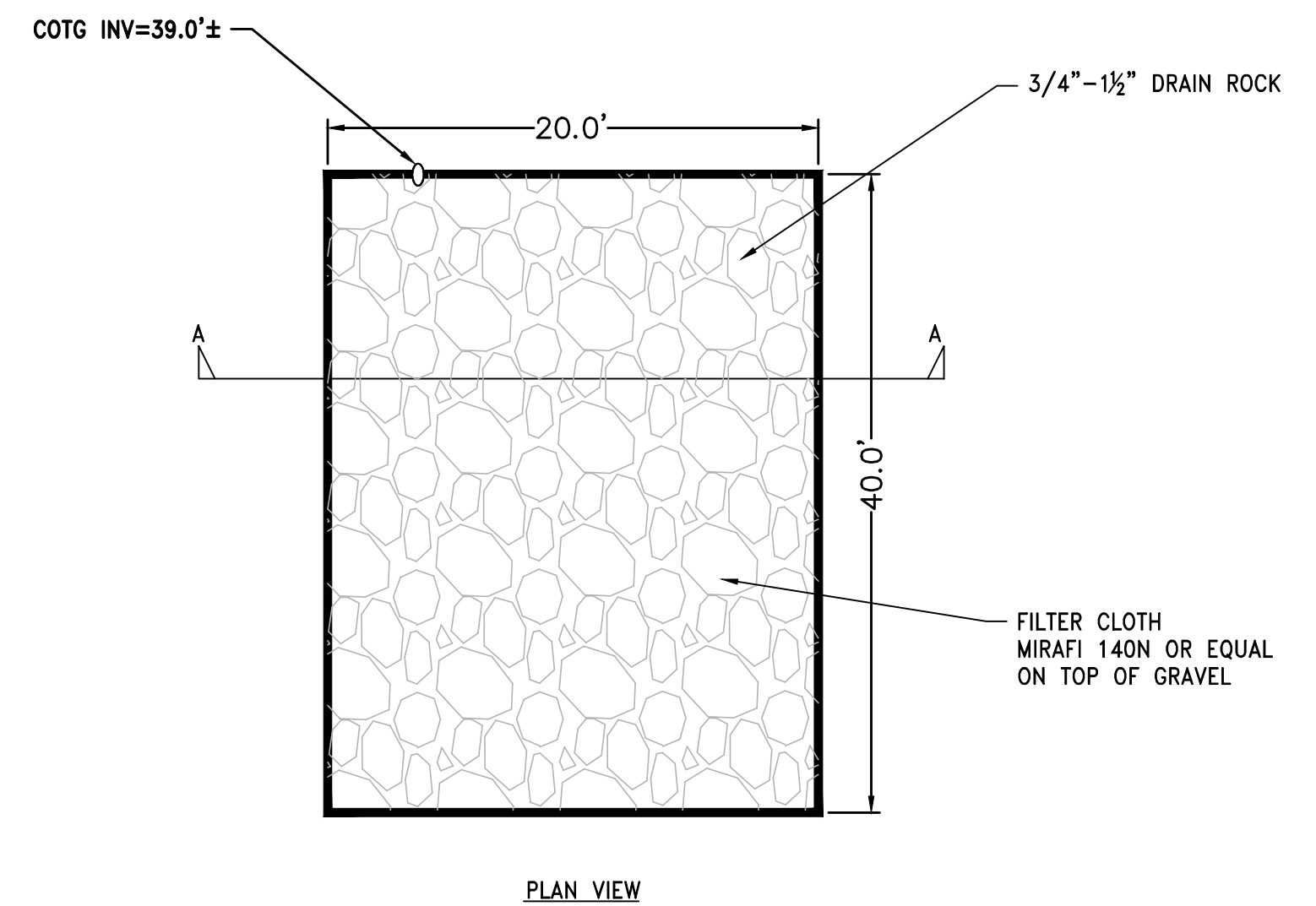


TYPICAL TRENCH REPAIR & PAVEMENT SECTION DETAIL

- ALL INSTALLATION AND MATERIAL SPECIFICATIONS PER MASSDOT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 2020 AS AMENDED.
- ALL EXPOSED BITUMINOUS CONCRETE IS TO BE TACKED PER MASSDOT PRIOR TO NEW BITUMINOUS CONCRETE INSTALLATIONS.
- ALL EXPOSED JOINTS ARE TO BE SEALED WITH TACK AND STONE DUST.
- ANY TOP COURSE APPLIED AT A WIDTH OF 6' WIDE OR GREATER IS TO BE PLACED BY MACHINE/BOX SPREADER WHEN & AS DIRECTED BY THE CITY OF NEWTON.
- SUPER PAVE FOR PAVEMENT



SECTION DETAIL FOR DRAINAGE SYSTEMS N.T.S.



DRAINAGE SYSTEM DETAIL N.T.S.

DRAINAGE SYSTEM NOTES:

- ENTIRE SYSTEM SHALL BE ENCASED IN FILTER FABRIC.
- LOCATION OF SYSTEM PER PLANS.
- DESIGN ENGINEER WILL INSPECT AND CERTIFY IN WRITING THAT ALL DRAINAGE WORK WAS INSTALLED IN ACCORDANCE WITH APPROVED PLANS. CONTRACTOR TO NOTIFY ENGINEER AT LEAST 72 HOURS IN ADVANCE FOR DRAINAGE SYSTEM INSPECTION PRIOR TO BACKFILLING.

**REVISION BLOCK**

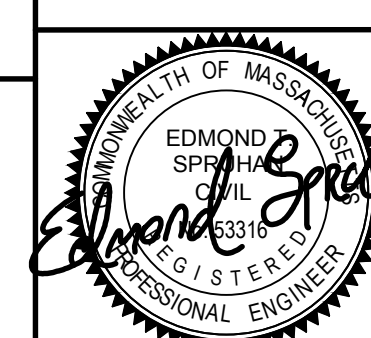
BY	DESCRIPTION	DATE

SCALE	1"=10'
DATE	8/30/2022
DRAWN BY	O.G.
CHECKED BY	P.N.
APPROVED BY	E.S.
SHEET	3
PLAN NO.	3 OF 5
CLIENT:	
SHEET:	<b>3</b>

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27 CROSS STREET,  
NEWTON,  
MASSACHUSETTS

DETAILS



**PETER NOLAN & ASSOCIATES, LLC**  
LAND SURVEYORS/CIVIL ENGINEERING CONSULTANTS  
697 CAMBRIDGE STREET, SUITE 1103  
BRIGHTON, MA 02135  
Tel: 857-891-7678  
617-792-1533  
Fax: 617-2025691

**SPRUHAN ENGINEERING, P.C.**  
80 JEWETT ST., SUITE 21  
NEWTON, MA 02458  
Tel: 617-816-0722  
Email: edmon@spruhaneng.com



