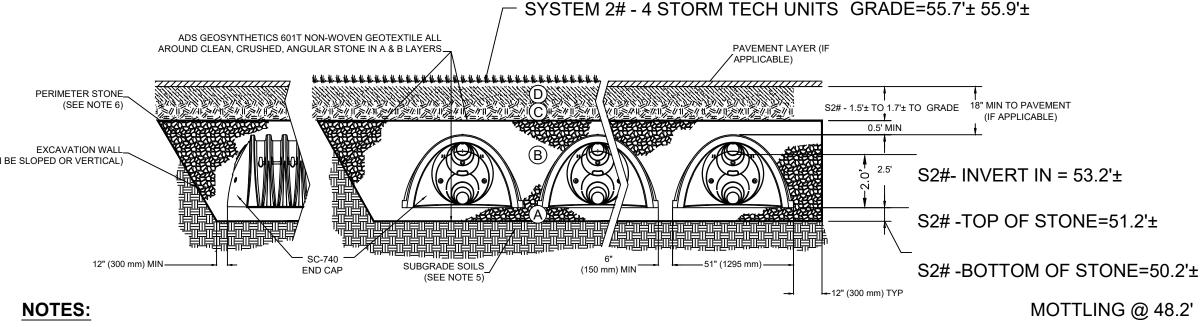


DRAINAGE SYSTEM-2 (REAR)

	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.	
С	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 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).	
В	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.	
А	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M43¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2 3}	



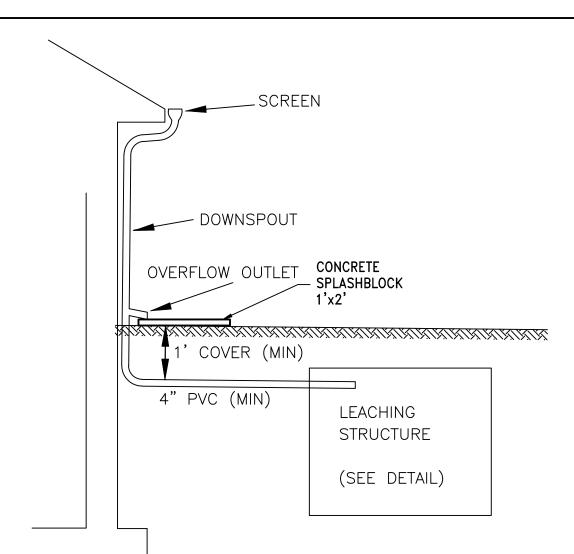
- 1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL
- 4. THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- 7. 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.

				DEEP O	BSERVA	TION HOI	LE LOG				
DEEP OBSERVATION HOLE NUMBER:				BER:	TP-1	GROUND ELEVATION:				52.88	
Depth	Horizon/ Layer	Matrix: Color-Moist	Redoximorphic Features			ragments by Volume)	Structuro	Consistence	Other		
(in)			Depth (in)	Color	Percent	(USDA)	Gravel	Cobbles & Stones	Structure	(Moist)	Other
0-7	Α	10 YR 4/4				LOAMY SAND	<2	<2	MASSIVE	FRIABLE	
7-19	Bw	10 YR 5/6				LOAMY SAND	<2	<2	MASSIVE	FRIABLE	
19-60	C1	7.5 YR 6/4	54	7.5 YR 5/8	15	COBBLEY SAND	5-10	20-25	SINGLE GRAIN	LOOSE	1, 2
60-108	C2	7.5 YR 5/4	-		-	COBBLEY SAND	5-10	20-25	SINGLE GRAIN	LOOSE	

- 1. REDOX OBSERVED @ 54"
- 2. DAMP SAND OBSERVED BELOW REDOX
- 3. LOGGED BY MATTHEW MUI, SE14259 ON 7/01/2022.

STORMTECH GENERAL NOTES

- STORMTECH LLC ("STORMTECH") REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING
- STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 18 INCHES NOT INCLUDING PAVEMENT; MAXIMUM COVER IS 96 INCHES INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 24 INCHES, MAXIMUM COVER IS 96 INCHES.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
- AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.
- STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION
- BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
- THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.
- THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.

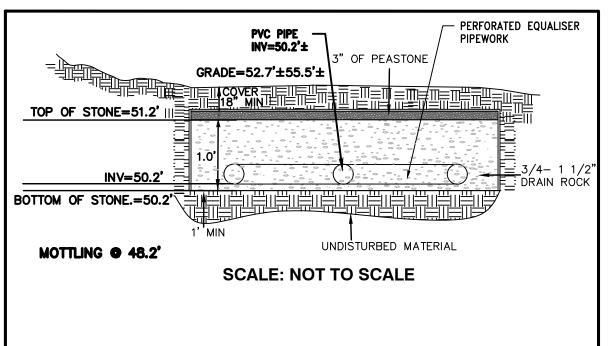


TYPICAL DOWNSPOUT DETAIL

DRAINAGE SYSTEM-1 (FRONT)

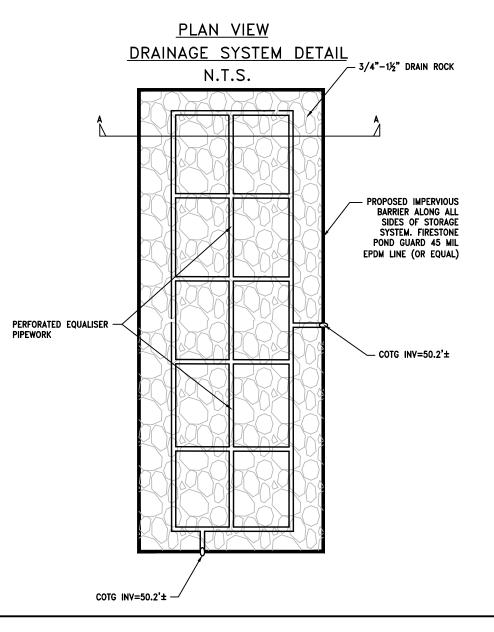
DRIVEWAY

WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.

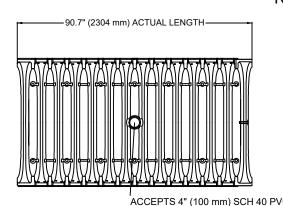


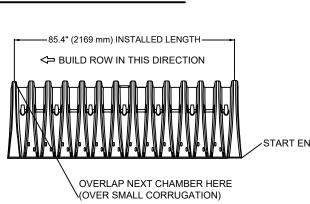
DRAINAGE SYSTEM NOTES:

- 1. TOP OF SYSTEM SHALL BE ENCASED IN FILTER FABRIC.
- 2. LOCATION OF SYSTEM PER PLANS.
- 3. 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.



SC-740 TECHNICAL SPECIFICATION



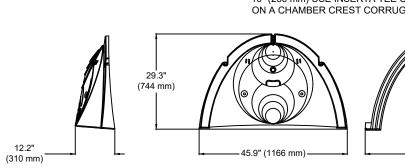


ACCEPTS 4" (100 mm) SCH 40 PVC PIPE FOR INSPECTION PORT. FOR PIPE SIZES LARGER THAN 4" (100 mm) UP TO 10" (250 mm) USE INSERTA TEE CONNECTION CENTERED ON A CHAMBER CREST CORRUGATION

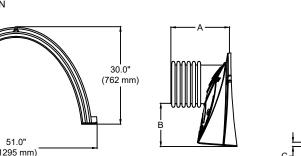
45.9 CUBIC FEET

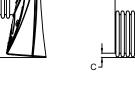
74.9 CUBIC FEET

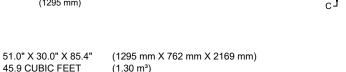
*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS



MINIMUM INSTALLED STORAGE*







19.7" (500 mm) 18" (450 mm)

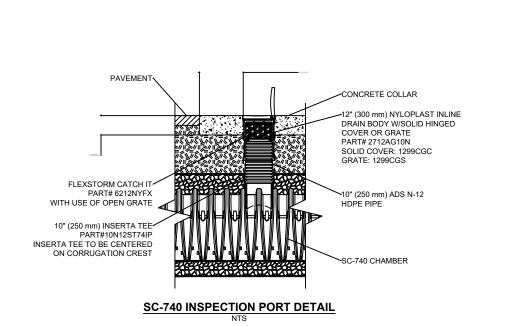
STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"

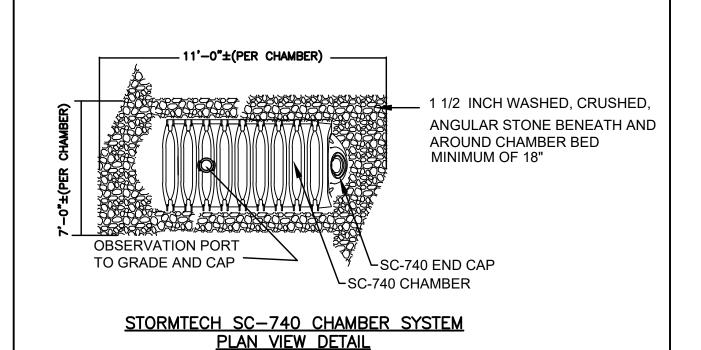
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

6" (150 mm) 10.9" (277 mm) 0.5" (13 mm) SC740EPE06B / SC740EPE06BP 16.5" (419 mm) SC740EPE08T /SC740EPE08TPC 8" (200 mm) SC740EPE08B / SC740EPE08BPC SC740EPE10T / SC740EPE10TPC 0.7" (18 mm) SC740EPE10B / SC740EPE10BPC SC740EPE12T / SC740EPE12TPC 12" (300 mm) 1.2" (30 mm) SC740EPE12B / SC740EPE12BPC SC740EPE15T / SC740EPE15TPC 15" (375 mm) 1.3" (33 mm) 1.6" (41 mm) SC740EPE18B / SC740EPE18BPC 0.1" (3 mm)

* FOR THE SC740EPE24B THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

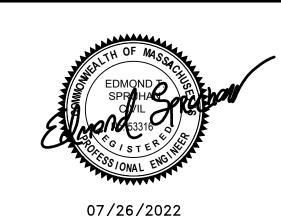
NOTE: ALL DIMENSIONS ARE NOMINAL





NOT TO SCALE

SUMP PUMP MERCURY LEVEL SENSOR GUIDE RAIL (STAINLESS STEEL) FLEXIBLE CONNECTION ▽ GROUND LEVEL **B**→TO WASTEWATER TREATMENT → +1.20 HIGH ALARM LEVEL → +1.00 2nd HIGH LEVEL START PUMP NO. 2 — GATE VALVE (TYP.) → +0.60 1st HIGH LEVEL START PUMP NO. 1 — CHECK VALVE (TYP.) → +0.40 LOW LEVEL STOP → +0.00 BOTTOM OF TANK [†] TYPICAL SUMP PUMP DETAIL



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be used or reused in whole or in part, except in connection with this project,

dimensions on these drawings shall have

Contractors shall verify and be responsible

must be notified of any variation from the

dimensions and conditions shown by these

for all dimensions and conditions on this project, and Spruhan Engineering, P.C.,

of Spruhan Engineering, P.C. They may not

the designs, arrangements and plans

without the prior written consent of Spruhan Engineering, P.C.. Written

precedence over scaled dimensions.

drawings.

Spruhan Engineering, P.C.

80 JEWETT ST, (SUITE 2) NEWTON, MA 02458

Tel: 617-816-0722 Email:edmond@spruhaneng.com

34 BROOKSIDE AVE

NEWTON

MASSACHUSETTS

DETAILS

REVISION BLOCK

NEWTON ISD COMMENTS

DATE

7.26.22

DESCRIPTION

DATE:	07/18/2022
DRAWN BY:	P.S.
CHECKED BY:	E.S.
APPROVED BY:	E.S.

DETAILS

SHEET 2

. ELEVATIONS REFER TO CITY OF NEWTON DATUM.

THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE CONSIDERED APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ANY CROSSINGS OF PROPOSED AND EXISTING UTILITIES.

3. MASSACHUSETTS STATE LAW REQUIRES UTILITY NOTIFICATION AT LEAST THREE BUSINESS DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CALL DIG-SAFE AT 1-888-344-7233 IN ORDER TO COMPLY WITH

4. ALL UTILITY CONSTRUCTION SHALL CONFORM TO THE CITY OF NEWTON GENERAL CONSTRUCTION DETAILS, LATEST EDITION, PREPARED AND ISSUED BY THE NEWTON ENGINEERING DEPARTMENT. COPIES MAY BE OBTAINED AT THE OFFICE OF THE CITY ENGINEER. REFER TO NOTE 29 FOR DETAILS. NOTE: A TRENCH PERMIT MUST BE OBTAINED PRIOR TO ANY EXCAVATION BEING CARRIED OUT.

5. PROPOSED SEWER PIPE SHALL BE 6" PVC SDR 35.

6. PROPOSED WATER SERVICE SHALL BE 1" TYPE K COPPER.

7. THIS PLAN IS THE RESULT OF AN INSTRUMENT SURVEY DONE ON THE GROUND ON MARCH 30TH, 2022.

8. ALL WORK SHALL BE SUBJECT TO THE INSPECTION BY AND APPROVAL OF THE CITY ENGINEER.

9. NO EXCAVATION SHALL BE MADE BY THE CONTRACTOR IN ANY PUBLIC WAY OR UTILITY EASEMENT UNLESS AT LEAST FORTY-EIGHT (48) HOURS, EXCLUSIVE OF SATURDAYS, SUNDAYS, AND HOLIDAYS, BEFORE THE PROPOSED EXCAVATION IS TO BE MADE, HE HAS SUBMITTED, NOTICE OF THE PROPOSED EXCAVATION TO

a. SUCH PUBLIC UTILITY COMPANIES AS SUPPLY GAS, ELECTRICITY, AND TELEPHONE SERVICE IN THE

b. SUCH PRIVATE COMPANIES AS PROVIDE CABLE TELEVISION SERVICE IN THE CITY. c. CITY OF NEWTON WATER & SEWER DEPARTMENT. SUCH NOTICE SHALL SET FORTH THE STREET NAME AND A REASONABLY ACCURATE DESCRIPTION OF THE LOCATION OF THE EXCAVATION.

10. THE CONTRACTOR SHALL PROVIDE CITY OF NEWTON POLICE OFFICERS FOR THE DIRECTION AND CONTROL OF TRAFFIC, AS REQUIRED BY THE CITY ENGINEER.

11. NO WORK SHALL BE PERFORMED UNTIL THE NECESSARY PERMITS ARE OBTAINED FROM THE CITY OF NEWTON PUBLIC WORKS DEPARTMENT.

12. ALL TRENCHES IN PAVED STREETS SHALL BE TEMPORARILY PATCHED WITH PAVEMENT OF EXISTING PAVEMENT THICKNESS OR AS DIRECTED BY THE CITY ENGINEERING INSPECTOR, LAID HOT AND MAINTAINED UNTIL THE PERMANENT PATCH IS INSTALLED.

13. WARNING SIGNS SHALL CONFORM TO PAGE 66 OF THE CITY OF NEWTON GENERAL CONSTRUCTION

14. ALL TOPSOIL, SUBSOIL OR IMPERVIOUS SOIL MUST BE EXCAVATED AND REMOVED BELOW THE LEACHING SYSTEM AND TO A DISTANCE 5' LATERALLY IN ALL DIRECTIONS BEYOND THE SIDES OF THE GALLEYS. BACKFILL AS REQUIRED WITH A CLEAN GRANULAR SAND, FREE FROM ORGANIC MATTER AND DELETERIOUS SUBSTANCES. THE SAND SHALL HAVE A PERCOLATION RATE OF 2 MINUTES PER INCH OR FASTER. 15. IN CASES WHERE LEDGE OR BOULDERS ARE ENCOUNTERED, SPRUHAN ENGINEERING, P.C. WILL NOT BE

RESPONSIBLE FOR THE AMOUNT OF ROCK ENCOUNTERED. 16. IF ANY PART OF THIS DESIGN IS TO BE ALTERED IN ANY WAY, THE DESIGN ENGINEER, AS WELL AS THE

APPROVING AUTHORITIES, SHALL BE NOTIFIED IN WRITING BEFORE CONSTRUCTION. 17.THE ROOF RUNOFF FROM THE ROOF SURFACES SHALL BE COLLECTED BY GUTTERS AND DIRECTED TO THE

18. PRIOR TO AN OCCUPANCY PERMIT BEING ISSUED, AN AS-BUILT PLAN SHOULD BE SUBMITTED TO THE ENGINEERING DIVISION IN BOTH DIGITAL FORMAT AND HARD COPY. THE PLAN SHOULD SHOW ALL UTILITIES AND FINAL GRADES, TIES TO ALL GATES, VALVES, CLEAN-OUTS, CONNECTION POINTS AT MAINS, STRUCTURE ACCESS/MAINTENANCE COVERS, ANY EASEMENTS AND FINAL GRADING.

19. THE APPLICANT WILL HAVE TO APPLY FOR A STREET OPENING & UTILITIES CONNECTION PERMITS AS WELL AS A SIDEWALK CROSSING PERMIT AND A TRENCH PERMIT WITH THE DPW.

20. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE DESIGN ENGINEER FOR INSPECTIONS OR AS-BUILT LOCATIONS. PETER NOLAN & ASSOCIATES, LLC. WILL NOT PROVIDE AS-BUILT CERTIFICATION TO UNINSPECTED BACKFILLED UTILITIES. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED PRIOR TO INSPECTIONS.

21. ANY PROPOSED PVC PIPES UNDER PAVING OR CONCRETE WITH LESS THAN 30" OF COVER MUST MUST BE ENCASED IN CONCRETE. (SEE PAGE 21, CITY OF NEWTON GENERAL CONSTRUCTION DETAILS.)

22 THE EXISTING WATER & SEWER SERVICES SHALL BE CUT AND CAPPED AT THE MAIN AND BE COMPLETELY REMOVED FROM THE SITE, REPLACED AS SPECIFIED AND PROPERLY BACKFILLED. THE ENGINEERING DIVISION MUST INSPECT THIS WORK; FAILURE TO HAVE THIS WORK INSPECTED MAY RESULT IN THE DELAY OF ISSUANCE OF THE UTILITY CONNECTION PERMIT.

23. THE CONTRACTOR SHALL NOTIFY THE ENGINEERING DIVISION 48 HOURS IN ADVANCE AND SCHEDULE AN APPOINTMENT TO HAVE THE DRAINAGE SYSTEM, WATER & SEWER SERVICES INSPECTED. THE SYSTEM & UTILITIES MUST BE FULLY EXPOSED FOR THE INSPECTOR. ONCE THE INSPECTOR IS SATISFIED, THE SYSTEM &

24. THE EXISTING CONTOURS OF THE LAND ARE NOT TO BE ALTERED BY MORE THAN THREE (3) FEET AS A RESULT OF THE PLACEMENT OR REMOVAL OF SOD, LOAM, CLAY, GRAVEL OR STONE, OR OTHER SOLID MATERIAL UNLESS A PROPOSED RETAINING WALL OR SWALE IS INSTALLED AFTER IT IS APPROVED BY BOTH CITY OF NEWTON ENGINEERING DEPARTMENT & CITY OF NEWTON I.S.D.

25. NO WORK IS ALLOWED WITHIN A CITY OF NEWTON RIGHT-OF-WAY BETWEEN NOVEMBER 15TH AND APRIL 15TH. IF AN EMERGENCY EXISTS OR THERE ARE EXTENUATING CIRCUMSTANCES, APPLICANT MAY REQUEST PERMISSION FROM THE CITY ENGINEER. IF ALLOWED, SPECIAL CONSTRUCTION REQUIREMENTS WILL BE REQUIRED. AND AS SUCH IT IS RECOMMENDED THAT THE APPLICANT OR APPLICANT'S REPRESENTATIVE CONTACT THE CITY OF NEWTON ENGINEERING DEPARTMENT PRIOR TO START OF WORK FOR CLARIFICATION.

26. AT THE END OF CONSTRUCTION, ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND

27. DURING CONSTRUCTION, THE EROSION CONTROL MEASURES SHALL BE INSPECTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORM EVENT GENERATING MORE THAN 1/2" OF RAINFALL. THE EROSION CONTROL MEASURES SHALL BE CLEANED REGULARLY AND ADJUSTED IF NECESSARY TO ENSURE THAT NO SILT OR DEBRIS LEAVES THE SITE

28. WITH EXCEPTION OF GAS UTILITY SERVICES, ALL UTILITY TRENCHES WITHIN ANY CITY OF NEWTON RIGHT-OF-WAY WILL BE BACKFILLED WITH TYPE IE (EXCAVATABLE) CONTROLLED DENSITY FILL, AS SPECIFIED BY THE CITY OF NEWTON ENGINEERING SPECIFICATIONS.

29. ALL CONSTRUCTION ACTIVITIES WITHIN THE CITY OF NEWTON RIGHT-OF-WAY MUST FULLY COMPLY WITH ALL OF CITY OF NEWTON CONSTRUCTION SPECIFICATIONS AS WELL AS 521 CMR 21.00 AND 22.00.

30. ALL NEW SEWER SERVICE AND/OR STRUCTURES SHALL BE PRESSURE TESTED OR VIDEOTAPED AFTER FINAL INSTALLATION IS COMPLETE. METHOD OF FINAL INSPECTION SHALL BE DETERMINED SOLELY BY THE CONSTRUCTION INSPECTOR FROM THE CITY ENGINEERING DIVISION. ALL SEWER MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE TO THE CITY'S CONSTRUCTION STANDARDS & SPECIFICATIONS. THE SEWER SERVICE WILL NOT BE ACCEPTED UNTIL ONE OF THE TWO METHODS STATED ABOVE IS COMPLETED. ALL TESTING MUST BE WITHNESSED BY A REPRESENTATIVE OF THE ENGINEERING DIVISION, A CERTIFICATE OF OCCUPANCY WILL NOT BE RECOMMENDED UNTIL THIS TEST IS COMPLETED AND A WRITTEN REPORT IS RECEIVED BY THE CITY ENGINEER.

31. ALL SILTATION CONTROL NEEDS TO BE INSTALLED PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE CITY ENGINEER'S OFFICE FOR APPROVAL PRIOR TO COMMENCEMENT.

32. ALL TRENCH EXCAVATION CONTRACTORS SHALL COMPLY WITH MGL CHAPTER 82A, TRENCH EXCAVATION SAFETY REQUIREMENTS, TO PROTECT THE GENERAL PUBLIC FROM UNAUTHORIZED ACCESS TO UNATTENDED TRENCHES. A TRENCH EXCAVATION PERMIT IS REQUIRED.

33. APPROVAL OF THIS PLAN BY CITY OF NEWTON ENGINEERING DIVISION IMPLIES THAT THE PLAN MEETS THE MINIMAL DESIGN STANDARDS OF THE CITY OF NEWTON. HOWEVER, THE ENGINEERING DIVISION MAKES NO REPRESENTATION AND ASSUMES NO RESPONSIBILITY FOR THE DESIGN(S) IN TERMS OF SUITABILITY FOR THE PARTICULAR SITE CONDITIONS OR OF THE FUNCTIONABILITY OR PERFORMANCE OF ANY ITEMS CONSTRUCTED IN ACCORDANCE WITH THE DESIGN(S). THE CITY OF NEWTON ASSUMES NO LIABILITIES FOR DESIGN ASSUMPTION, ERRORS OR OMISSIONS BY THE ENGINEER OF RECORD.

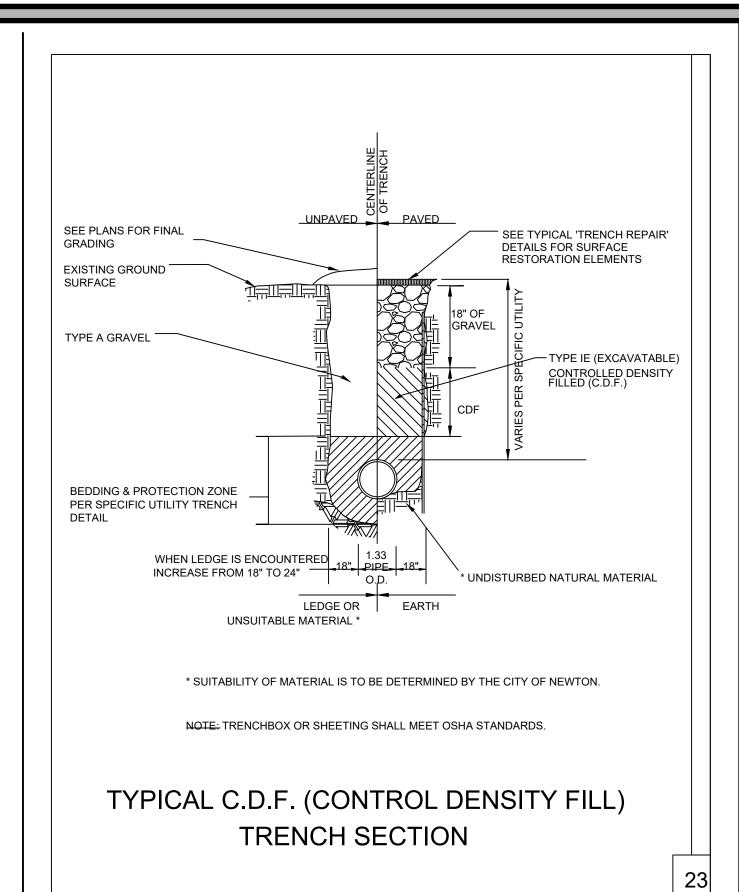
34. PER CITY OF NEWTON ORDINANCE NO.B-42, COUNCIL ITEM #251-19, BUILDING SEWER, WATER SERVICE PIPE & SIDEWALK/CURB REPLACEMENT ORDINANCE. THE APPLICANT IS REQUIRED TO INSTALL/REPLACE SIDEWALK & CURB ALONG THE ENTIRE FRONTAGE. THIS SHALL INCLUDE APPROPRIATE TRANSITION TO ADJOINING CURBING & WALKWAYS, INCLUDING ACCESSIBLE CURB CUTS & OTHER ACCESS AS REQUIRED. THE ENGINEERING CONSTRUCTION INSPECTOR MAKES A DETERMINATION, BASED ON THE MATERIAL & MANNER OF CONSTRUCTION OF THE EXISTING SIDEWALK & CURB, THAT THE EXISTING SIDEWALK & CURB HAS THE ABILITY TO BE RE-SET OR REUSED WITHOUT REPLACEMENT.

35. THE ENGINEER OF RECORD IS RESPONSIBLE FOR THE ON-SITE INSPECTION(S) OF ALL SUBSURFACE STRUCTURES. THIS INCLUDES BUT IS NOT LIMITED TO DRAINAGE, UTILITIES (INCLUDING SEWER PIPE SLOPE), ROOF LEADER COLLECTION SYSTEM, TRENCH DRAINS, MANHOLES ETC. ENGINEER OF RECORD MUST ALSO CONDUCT "BOTTOM OF HOLE" INSPECTION(S) PRIOR TO SUBSURFACE DRAINAGE SYSTEM(S) BEING INSTALLED. CONTRACTOR TO NOTIFY ENGINEER BEFORE BACKFILL OR SIGN OFF CANNOT OCCUR WITHOUT RE-EXCAVATION.

36. PRIOR TO THE ENGINEERING DIVISION RECOMMENDING THAT A CERTIFICATE OF OCCUPANCY BE ISSUED, AN AS-BUILT PLAN MUST BE SUBMITTED. THE AS-BUILT PLAN MUST SHOW DIMENSIONAL TIES FROM FIXED POINTS (FOUNDATION CORNERS) TO ALL SUBSURFACE COMPONENTS AS WELL AS FINAL GRADING. THE AS-BUILT PLAN MUST BE STAMPED, SIGNED & DATED BY THE ENGINEER OF RECORD. THE FOLLOWING STATEMENT MUST BE ON ALL AS-BUILT PLANS SUBMITTED TO THE ENGINEERING DIVISION: I CERTIFY THAT THE CONSTRUCTION SO SHOWN WAS INSPECTED PRIOR TO BACKFILL & THAT ALL WORK CONFORMS WITH THE APPROVED PLAN & MEETS OR EXCEEDS THE CITY OF NEWTON CONSTRUCTION

SIGNATURE:

37. 5 YEAR MORATORIUM - IF AT TIME OF CONSTRUCTION THE ROADWAY IS UNDER A 5 YEAR MORATORIUM, THE ROADWAY MUST BE MILLED & PAVED GUTTER-TO-GUTTER FOR A DISTANCE OF 25 FEET IN EACH DIRECTION FROM THE OUTERMOST TRENCHES OR AS DIRECTED BY THE ENGINEERING



TYPE "A" FRAME AND COVER TO BE

MARKED EITHER "SEWER" OR "DRAIN"-

SEE DETAILS F1-D01 AND F1-D04

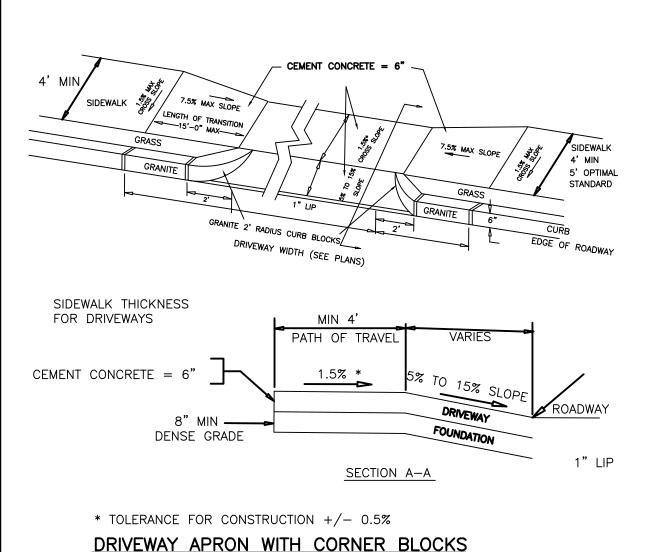
INV.OUT= 46.5'±

H= 10' OR LESS -#4 AT 18 EW MIDDEPTH

H= 10' TO 20' -#4 AT 12 EW MIDDEPTH

H= 20' TO 30' -#5 AT 12 EW MIDDEPTH

IN ADDITION TO WELDED WIRE FABRIC



CONCRETE COLLAR

-SEE DETAIL B-03

PRECAST CONCRETE SECTIONS

CONCRETE OF 4,000 PSI AT 28

TO CONFORM TO ASTM-478.

MASTIC GASKET, TYPICAL ALL

TYPICAL REINFORCEMENT,

WIRE FABRIC 6x6x4Wx4W

FILL LIFTING HOLES WITH CONCRETE

- PRECAST REINFORCED CONCRETE

SHELVE TO BE BRICKS LAID FLAT

AT A SLOPE OF 1" PER FOOT (4)

INVERT TO BE INVERTED ARCH

-6"SCREENED GRAVEL BEDDING

WITH BRICKS LAID AS STRECHERS

MANHOLE JOINTS

WELDED

71NV.IN= 46.7'±

MANHOLE BARRELS

CONCRETE FILL

AND ON EDGE

FINISHED

GRADE

 $RIM = 54.2' \pm$

- POLYPROPYLENE

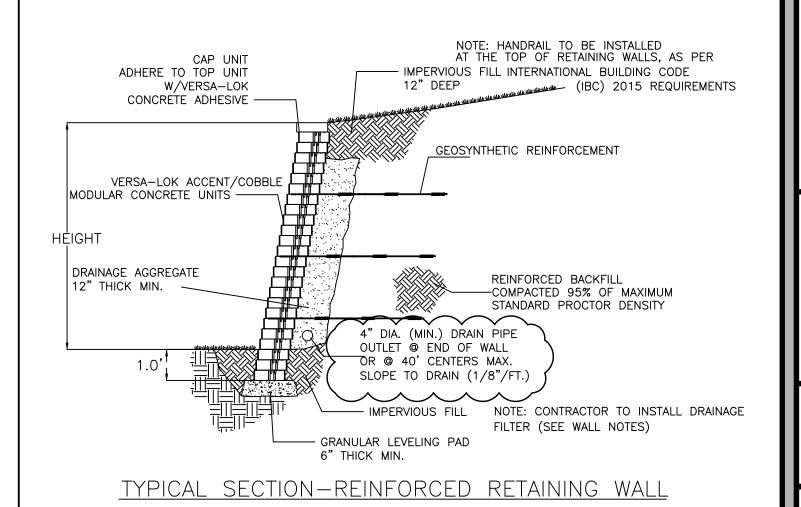
STEPS 12" O.C.

- MULTIPLES OF

2',3',0R4'

SEWER MANHOLE DETAIL

4′-0″MIN. (1)



ELEV. =52.5' TYPICAL INSTALLATION CONFIGURATION DETAIL CATCH BASIN ANTI-SIPHON ∠ DEVICE ANTI-SIPHON -PIPE ADAPTER _SNOUT OIL AND DEBRIS REMOVABLE WATERTIGHT ACCESS \ PORT 6"-10" OIL AND OPENING INV. IN = 50.5'DEBRIS INV. OUT=50.3' OUTLET MOUNTING FLANGE SOLIDS SETTLE FRONT VIEW SIDE VIEW DOWN ON (HIDDEN) BOTTOM

SCALE: NONE

1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY: BEST MANAGEMENT PRODUCTS INC. 53 MT. ARCHER RD. LYME, CT 06371

SNOUT OIL-WATER-DEBRIS SEPARATOR

(860) 434-0277, (860)434-3195 FAX TOLL FREE: (800) 504-8008 OR (888)354-7585 WEB SITE: www.bestmp.com OR PRE-APPROVED EQUAL

0.125" LAMINATE THICKNESS. 3. ALL HOODS SHALL BE EQUIPED WITH A WATERTIGHT ACCESS PORT. A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE

COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM

2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN

CONFIGURATION DETAIL) 4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANFACTURER'S RECOMMENDATION.

5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE

EQUAL TO 1 THE OUTLET PIPE DIAMETER WITH A MINIMUM DISTANCE

OF 6" FOR PIPES <12" I.D. 6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE

7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.

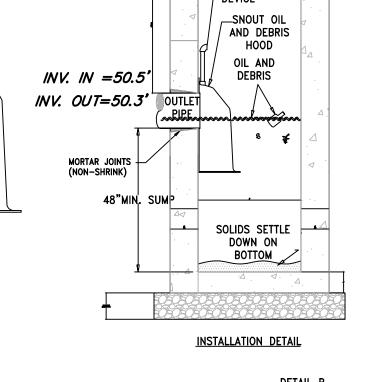
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH

8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8' STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER (SEE INSTALLATION DETAIL)

MANUFACTURER SUPPLIED INSTALLATION KIT. INSTALLATION SHALL INCLUDE: A. INSTALLATION INSTRUCTIONS B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING D. 3/8" STAINLESS STEEL BOLTS E. ANCHOR SHIELDS

US PATENT # 6126817

DEEP SUMP CATCH BASIN WITH DEBRIS COLLECTOR DETAIL N.T.S.



FOAM BASKET W/ PSA BACKING (TRIM TO LENGHT) MOUNTIN ANCHOR W/BOLT (SEE DETAIL A) **INSTALLATION NOTE:** POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 3 OUTLET PIPE DIAMETER (MIN.) BELOW THE PIPE INVERT. GASKET COMPRESSED 12" I.D. IS 6"

BETWEEN HOOD AND DETAIL A

STRUCTURE STRUCTURE (SEE DETAIL B) DRILLED ANCHOR STAINLESS EXPANSION CONE (NARROW END

OIL-DEBRIS HOOD SPECIFICATION AND INSTALLATION

OUT)



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Contractors shall verify and be responsible

must be notified of any variation from the

dimensions and conditions shown by these

except in connection with this project,

without the prior written consent of

precedence over scaled dimensions.

drawings.

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the designs, arrangements and plans

Engineering, P.C.

80 JEWETT ST, (SUITE 2)

NEWTON, MA 02458

Tel: 617-816-0722

Email:edmond@spruhaneng.com

34 BROOKSIDE AVE

NEWTON

MASSACHUSETTS

DETAILS

REVISION BLOCK

NEWTON ISD COMMENTS

DATE

7.26.22

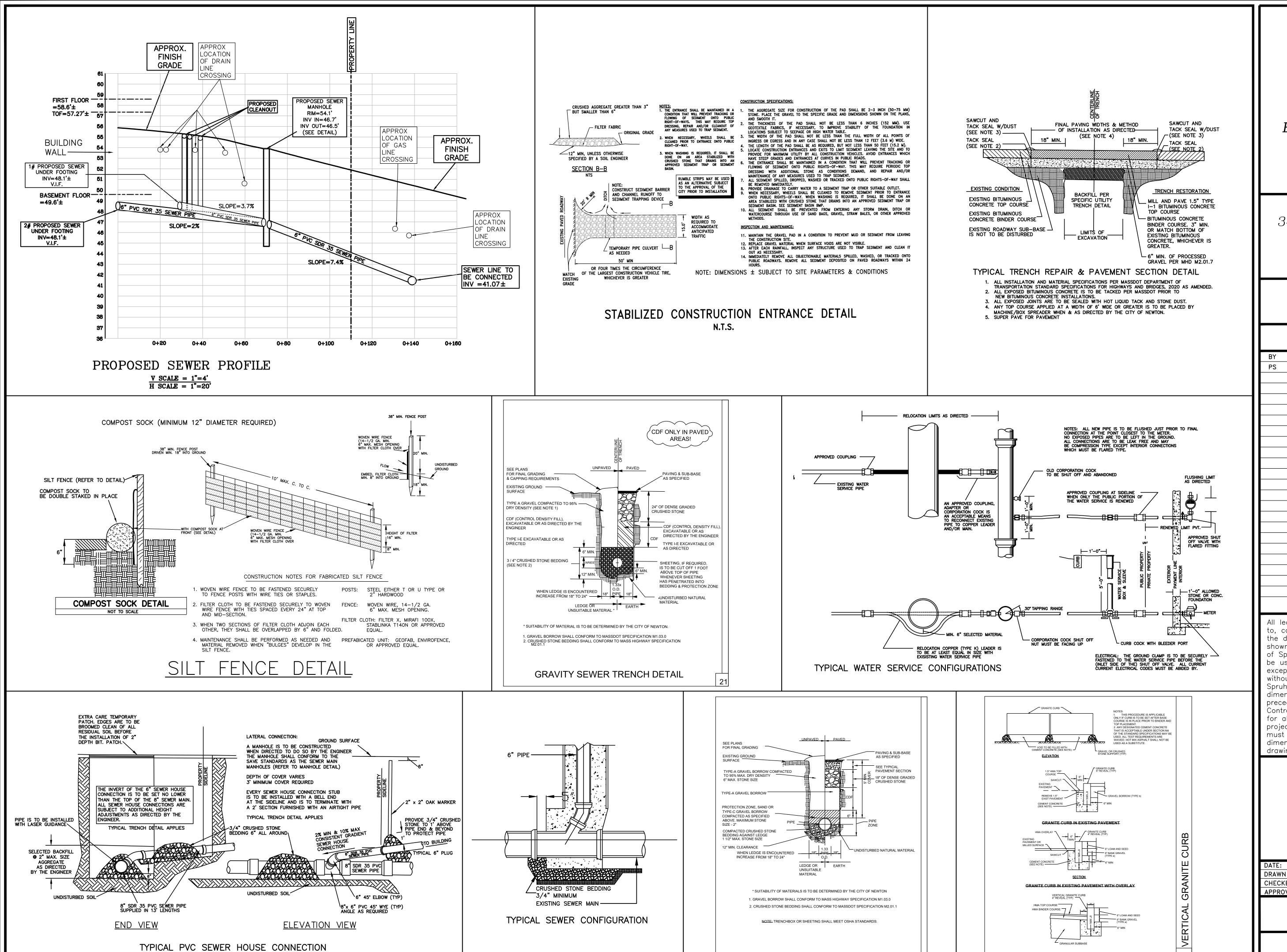
DESCRIPTION

07/26/2022

7/18/2022 DRAWN BY: CHECKED BY APPROVED BY: FS

DETAILS

SHEET 3



TYPICAL WATER TRENCH DETAIL



Spruhan Engineering, P.C.

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Tel: 617-816-0722 Email:edmond@spruhaneng.com

34 BROOKSIDE AVE NEWTON MASSACHUSETTS

DETAILS

REVISION BLOCK

DESCRIPTION

DATE

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PS	NEWTON ISD COMMENTS	7.26.22

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07/26/2022

DATE:	7/18/2022
DRAWN BY:	P.S.
CHECKED BY:	E.S.
APPROVED BY:	E.S.

DETAILS

SHEET 4