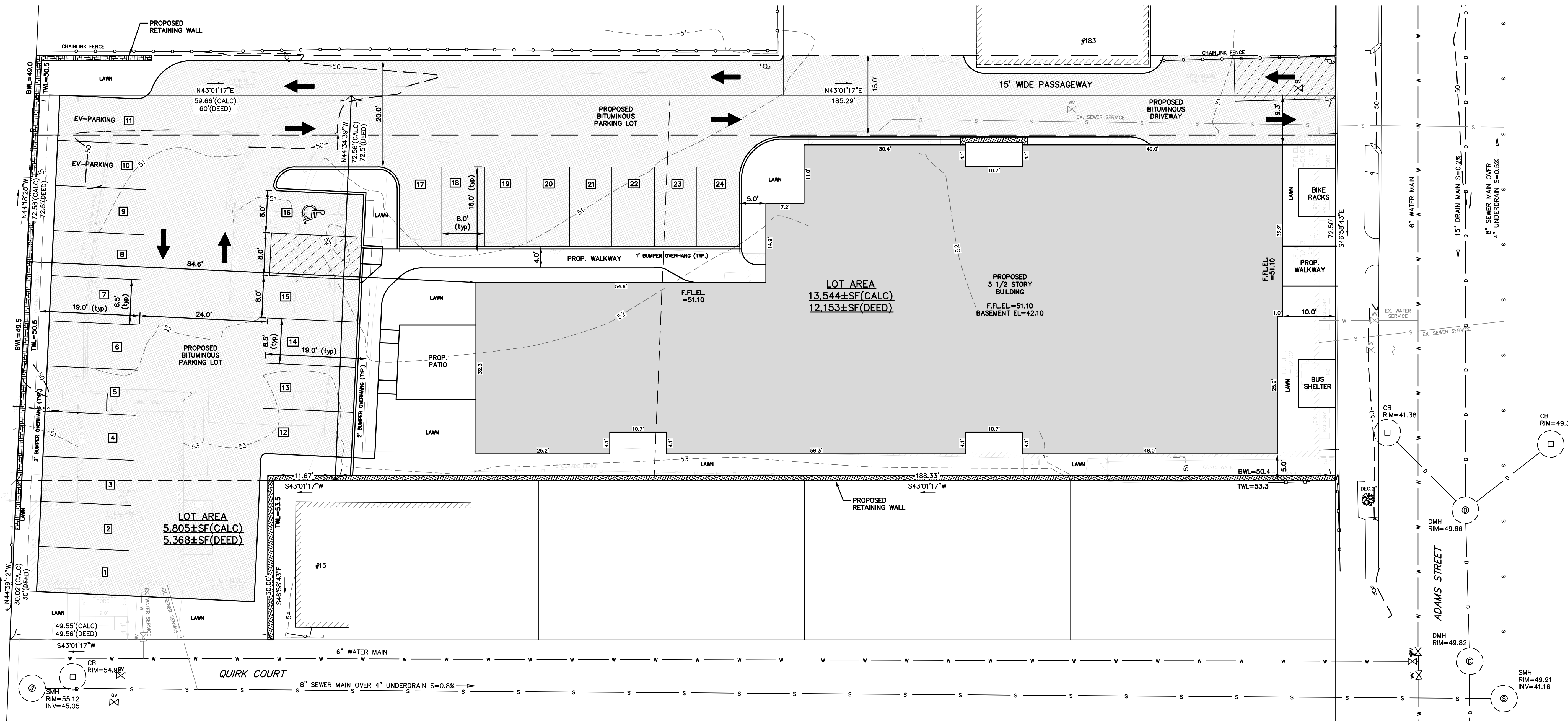
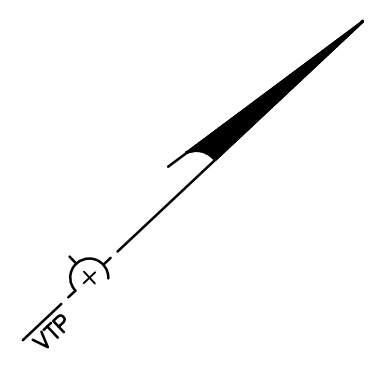


218100_top3.dwg (2-2018)

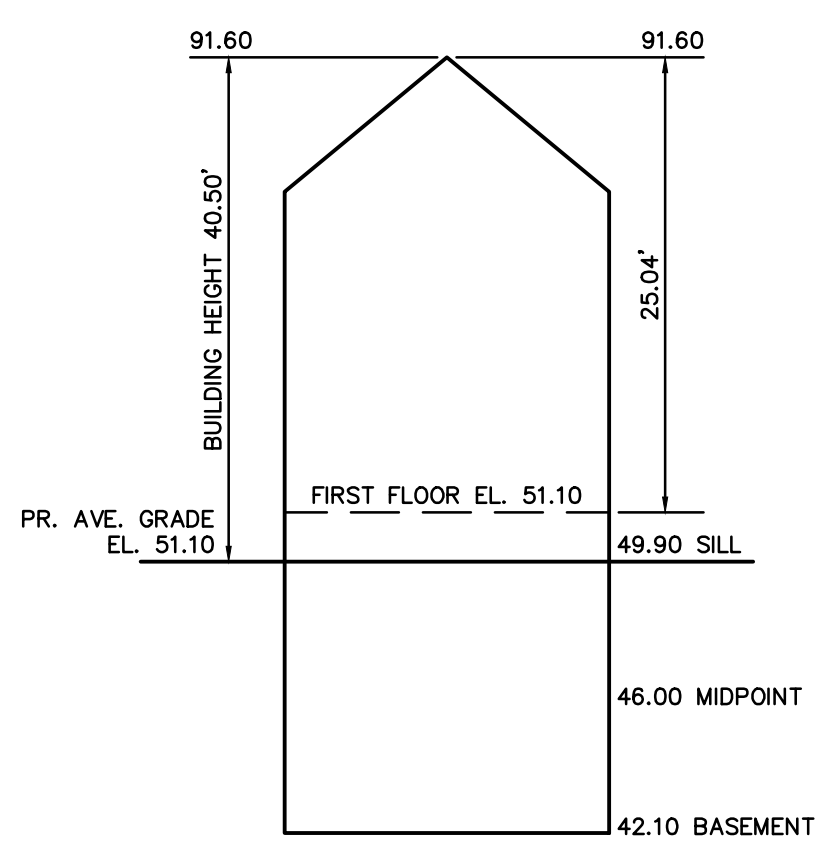


LEGEND

BUILDING	
PROPERTY LINE W/ BEARING DISTANCE	S81°56'34"E 116.23'
CONTOUR	70
STOCKADE FENCE	
CHAINLINK FENCE	
PICKET FENCE	
SEWER LINE	
DRAIN LINE	
WATER LINE	
GAS LINE	
GAS VALVE	
WATER VALVE	
DRAIN MANHOLE	
SEWER MANHOLE	
CATCH BASIN	
UTILITY POLE	
LIGHT POLE	
DECIDUOUS TREE	DEC. 22'
CONIFEROUS TREE	CON. 12'
HYDRANT	



DIG SAFE
EXCAVATORS
BEFORE YOU DIG CONTACT THE DIG SAFE CENTER TO PREVENT DAMAGE TO TELEPHONE, GAS OR ELECTRIC UNDERGROUND FACILITIES OF MEMBER UTILITIES. CALL TOLL FREE 1-888-322-4844. MASSACHUSETTS STATE LAW REQUIRES NOTIFICATION AT LEAST THREE BUSINESS DAYS BEFORE YOU START DIGGING OPERATIONS. IN AN EMERGENCY, CALL IMMEDIATELY



PROPOSED BUILDING HEIGHT
NOT TO SCALE

Address: #189-193 Adams St. & #19 Quirk Ct Newton, MA

Length Weighted Mean
Proposed Average Grade Calculation

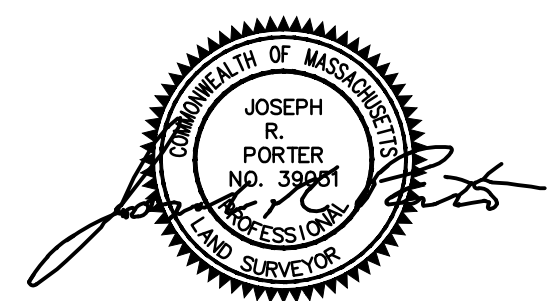
A	B	C	D	E	F
Segment	Length of Segment	High Point of Segment	Height of Low Point of Segment	$E = (C+D)/2$	$F = B \times E$
	in Feet			Average Segment Height	
1	25.19	53.00	51.00	52.00	1309.88 Sq. Ft.
2	10.67	51.00	51.00	51.00	544.17 Sq. Ft.
3	6.33	51.00	50.70	50.85	321.88 Sq. Ft.
4	10.67	50.70	50.70	50.70	540.97 Sq. Ft.
5	49.97	50.70	50.40	50.55	2525.98 Sq. Ft.
6	25.90	50.80	50.40	50.60	1310.54 Sq. Ft.
7	32.24	50.80	50.50	50.65	1632.96 Sq. Ft.
8	12.71	51.00	50.80	50.80	645.67 Sq. Ft.
9	36.27	51.40	51.00	51.20	1857.02 Sq. Ft.
10	10.67	51.00	51.00	51.00	544.17 Sq. Ft.
11	30.44	51.50	51.00	51.25	1560.05 Sq. Ft.
12	10.97	51.40	51.20	51.30	562.76 Sq. Ft.
13	7.17	51.20	51.20	51.20	367.10 Sq. Ft.
14	8.17	50.70	50.60	50.65	413.81 Sq. Ft.
15	6.75	51.10	51.10	51.10	344.93 Sq. Ft.
16	54.58	51.10	51.00	51.05	2786.31 Sq. Ft.
17	8.00	52.20	51.00	51.60	412.80 Sq. Ft.
18	14.00	52.50	52.20	52.35	732.90 Sq. Ft.
19	10.25	53.00	52.50	52.75	540.69 Sq. Ft.
Total	370.95				18954.59 Sq. Ft.

Total Column F / Total Column B = Average Grade
Average Grade: 51.10'

ZONING CHART
#189-193 ADAMS STREET, #19 QUIRK COURT
NEWTON, MASSACHUSETTS

ZONE: BU-2 SUBMISSION: SPECIAL PERMIT

REGULATION	REQUIRED	EXISTING	PROPOSED
Lot Area (min.)	10,000s.f.	13,544s.f.	19,349s.f.
Lot Area Per Unit (min.)	1,200s.f.	N/A	1,074.94s.f.
Front Setback (min.) 2 or 3 stories 4 Stories	Average Lesser of 1/2 bldg ht or Average	3.1'	10'
Side Setback	1/2 bldg ht or equal to abutting side yard setback	4.1'	5'
Rear Setback (min.)	Greater of 1/2 bldg ht or 15'	75.4'	84.6'
Building Height (max.) 3 stories 4 Stories	36' 48'	40.27'	40.50'
Average Grade	-	51.11	51.10
Lot Coverage	none	N/A	N/A
Open Space	none	N/A	N/A

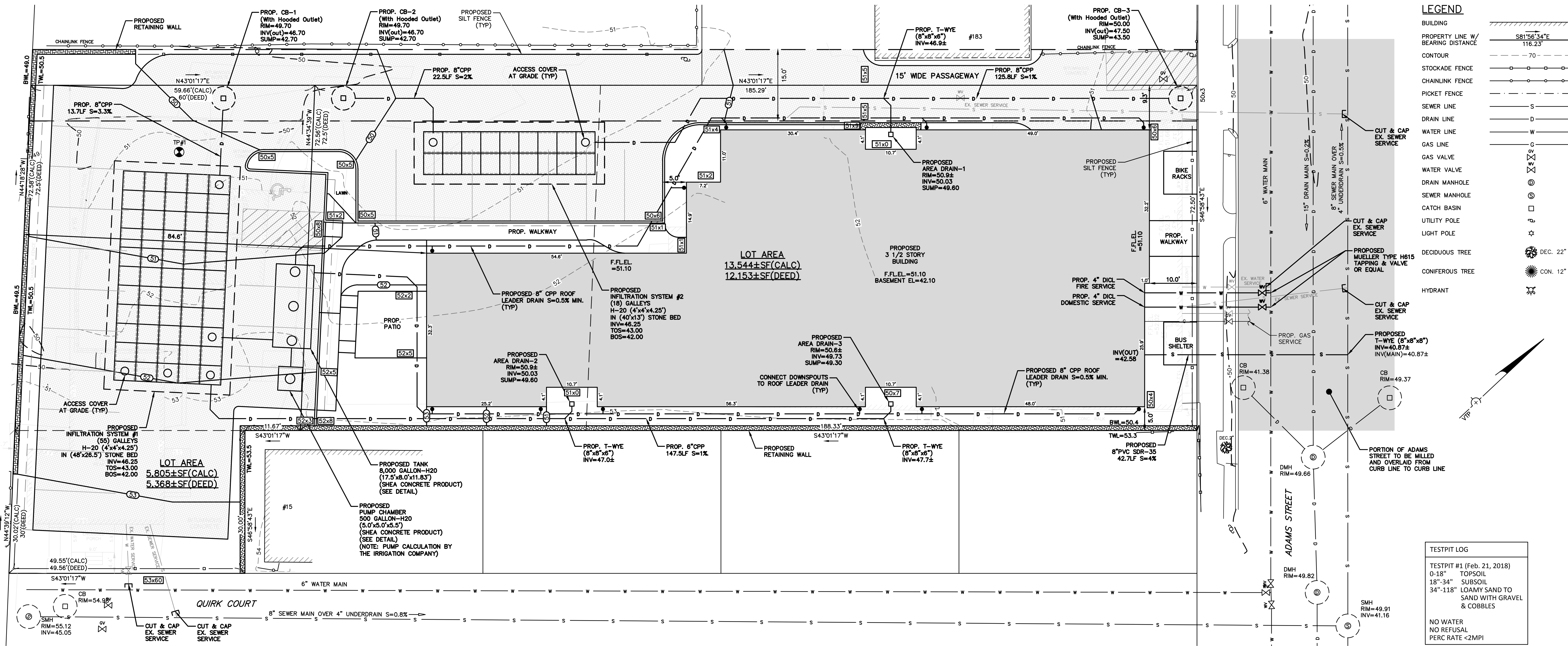


TOPOGRAPHIC SITE PLAN
NEWTON, MASSACHUSETTS
SHOWING PROPOSED CONDITIONS AT
#189-193 ADAMS STREET & 19 QUIRK COURT
SCALE: 1in.=10ft. DATE: FEBRUARY 12, 2018
REVISED: MARCH 7, 2018; MARCH 23, 2018

PROJECT: 218100
VTP
ASSOCIATES
INC.

LAND SURVEYORS - CIVIL ENGINEERS. 132
ADAMS STREET 2ND FLOOR SUITE 3
NEWTON, MA 02458
(617) 332-8271

218100_19p3.dwg (2-2018)



LEGEND

BUILDING	
PROPERTY LINE W/ BEARING DISTANCE	S81°56'34"E 116.23'
CONTOUR	---
STOCKADE FENCE	—○—○—○—
CHAINLINK FENCE	—◇—◇—◇—◇—
PICKET FENCE	— — — — —
SEWER LINE	—S—S—S—S—
DRAIN LINE	—D—D—D—D—
WATER LINE	—W—W—W—W—
GAS LINE	—G—G—G—G—
GAS VALVE	⊕
WATER VALVE	⊕
DRAIN MANHOLE	⊕
SEWER MANHOLE	⊕
CATCH BASIN	⊕
UTILITY POLE	⊕
LIGHT POLE	⊕
DECIDUOUS TREE	⊕ DEC. 22"
CONIFEROUS TREE	⊕ CON. 12"
HYDRANT	⊕

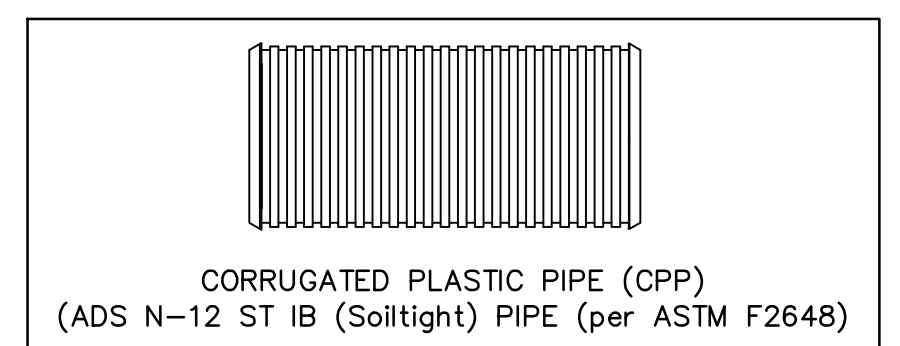
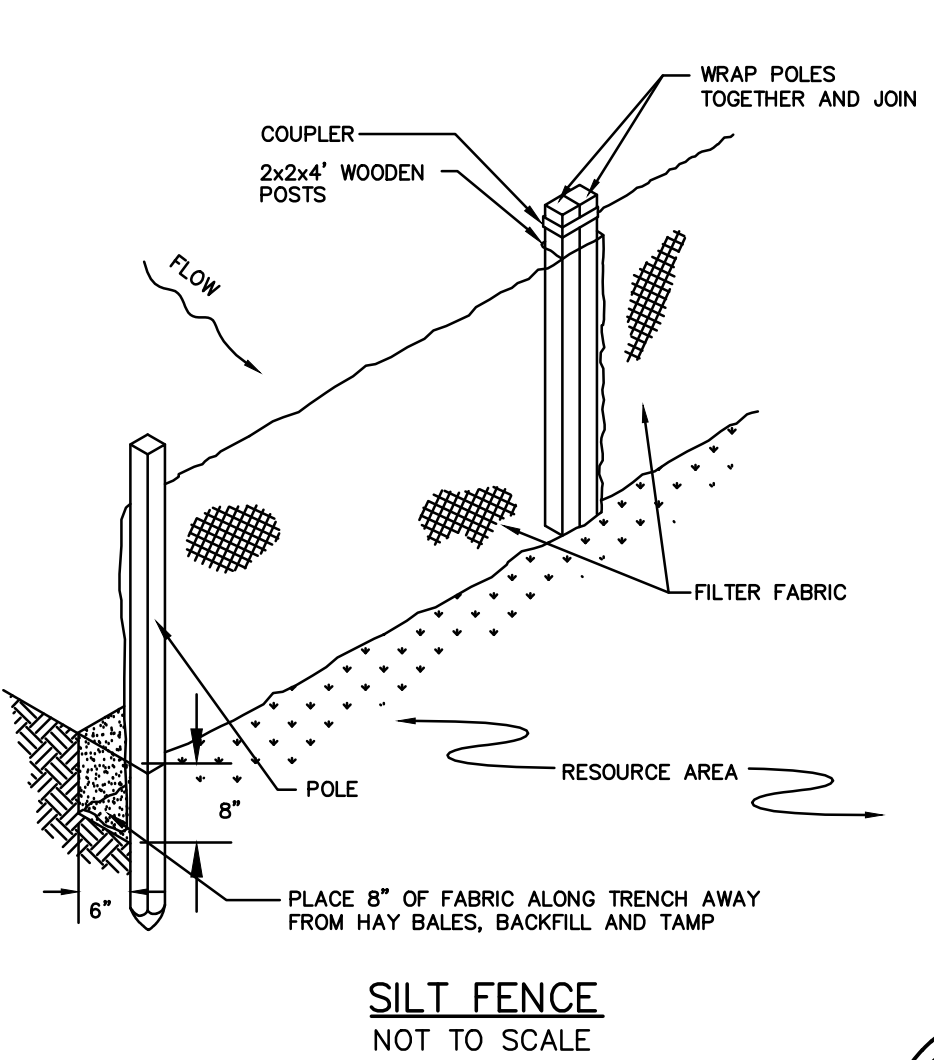
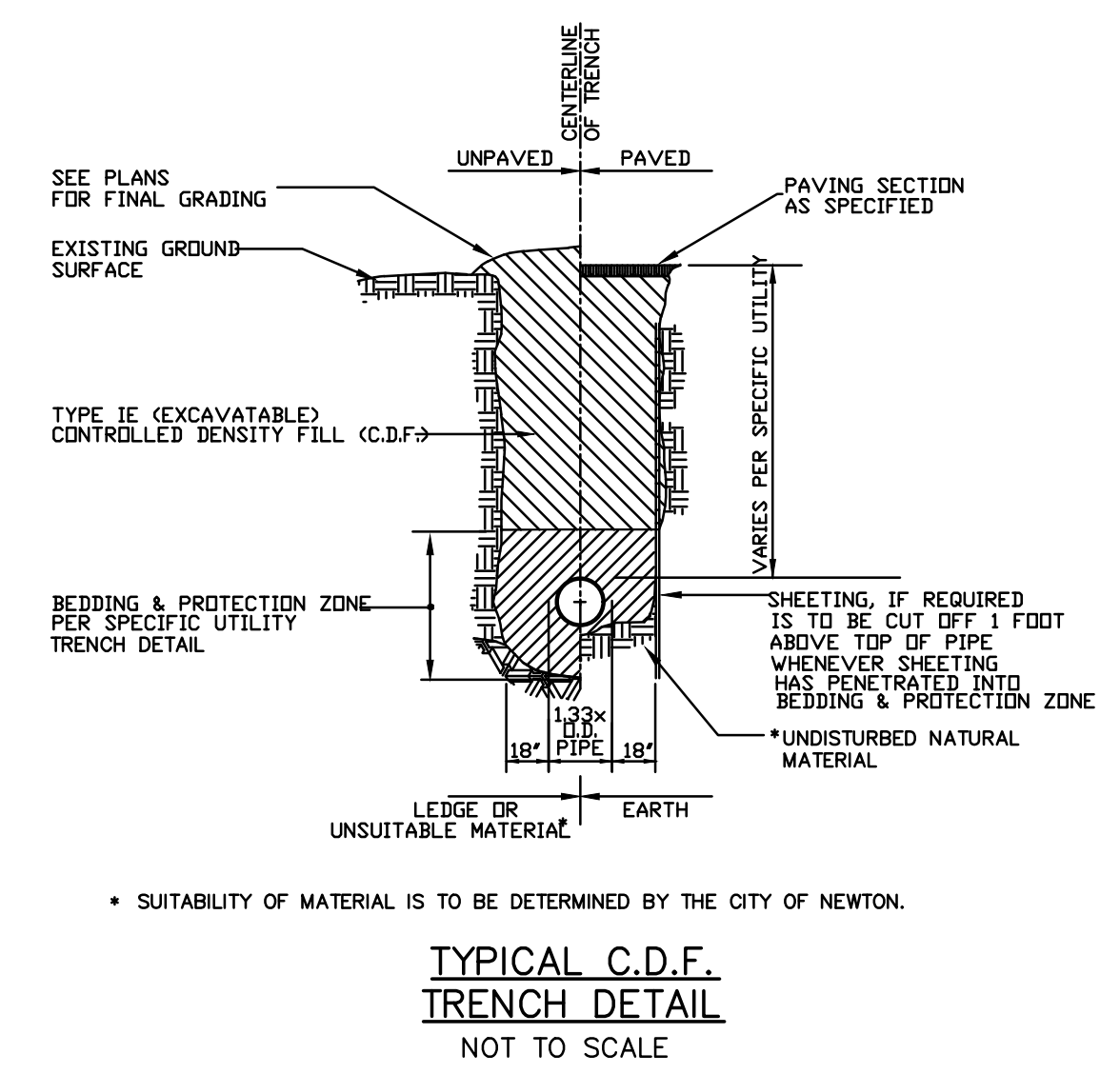
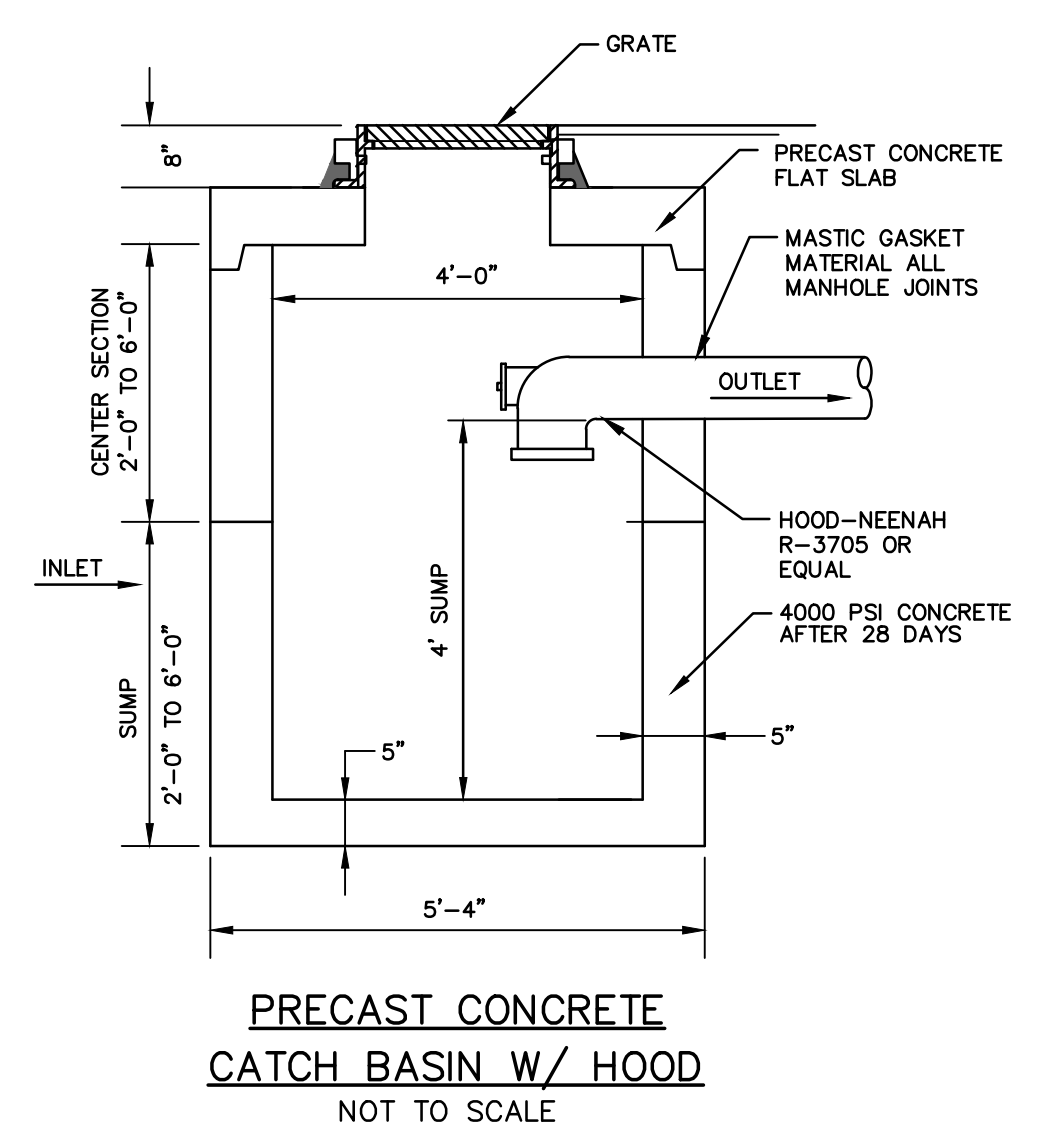
TESTPIT LOG

TESTPIT #1 (Feb. 21, 2018)
0'-18" TOPSOIL
18"-34" SUBSOIL
34"-118" LOAMY SAND TO SAND WITH GRAVEL & COBBLES
NO WATER
NO REFUSAL
PERC RATE <2MPI

- NOTES:**
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THIS PLAN. PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION BEFORE PROCEEDING WITH THE WORK.
 2. THE LOCATION OF ALL UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASE ON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES SUCH AS CATCH BASINS, MANHOLES, WATER GATES, ETC. AND GOVERNMENT AGENCIES.
 3. ALL THE PROPOSED DOWNSPOUT TO CONNECT INTO INSIDE 8,000 GAL. TANK.

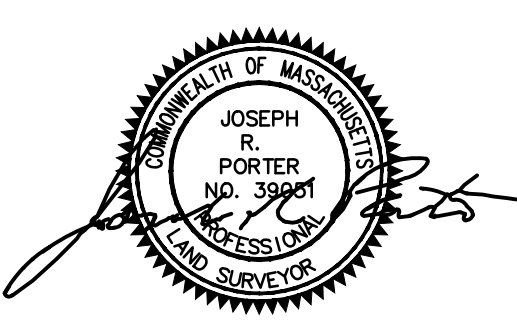
DIG SAFE

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GRADING, DRAINAGE & UTILITY PLAN
NEWTON, MASSACHUSETTS

SHOWING PROPOSED CONDITIONS AT
#189-193 ADAMS STREET & 19 QUIRK COURT
SCALE: 1in.=10ft. DATE: FEBRUARY 12, 2018
REVISED: MARCH 7, 2018; MARCH 23, 2018
PROJECT: 218100



VTP ASSOCIATES
INC.

LAND SURVEYORS - CIVIL ENGINEERS. 132
ADAMS STREET 2ND FLOOR SUITE 3
NEWTON, MA 02458
(617) 332-8271

218100_19p3.dwg (2-2018)

GENERAL & UTILITIES NOTES:

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 WITNESSED 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.

THE SEWER SERVICES AND WATER SERVICES NEED TO BE COMPLETELY REMOVED FROM THE MAINS TO THE EXISTING DWELLING AND PROPERLY BACK-FILLED. THE CONTRACTOR SHALL MAKE ARRANGEMENTS TO HAVE THIS ABANDONMENT INSPECTED BY A REPRESENTATIVE OF THE ENGINEERING DIVISION, FAILING TO HAVE THESE INSPECTIONS MAY RESULT IN THE DELAY OR DENIAL OF ISSUING NEW UTILITY CONNECTION PERMITS.

AS OF MARCH 1, 2009, ALL TRENCH EXCAVATION CONTRACTORS SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82A, TRENCH EXCAVATION SAFETY REQUIREMENTS, TO PROTECT THE GENERAL PUBLIC FROM UNAUTHORIZED ACCESS TO UNATTENDED TRENCHES. TRENCH EXCAVATION PERMIT REQUIRED. THIS APPLIES TO ALL TRENCHES ON PUBLIC AND PRIVATE PROPERTY.

THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ENGINEERING DIVISION AND SCHEDULING AN APPOINTMENT 48 HOURS PRIOR TO THE DATE WHEN THE UTILITIES WILL BE MADE AVAILABLE FOR AN INSPECTION OF WATER SERVICES, SEWER SERVICES, AND DRAINAGE SYSTEM INSTALLATION. THE UTILITY IS QUESTION SHALL BE FULLY EXPOSED FOR THE INSPECTOR TO VIEW; BACKFILLING SHALL ONLY TAKE PLACE WHEN THE CITY'S INSPECTOR HAS GIVEN THEIR APPROVAL.

THE APPLICANT WILL HAVE TO APPLY FOR STREET OPENING, SIDEWALK CROSSING, AND UTILITIES CONNECTING PERMITS WITH THE DEPARTMENT OF PUBLIC WORKS PRIOR TO ANY CONSTRUCTION.

PRIOR TO OCCUPANCY PERMIT BEING ISSUED, AN AS-BUILT PLAN SHALL BE SUBMITTED TO THE ENGINEERING DIVISION IN BOTH DIGITAL FORMAT AND HARD COPY. THE PLAN SHOULD SHOW ALL UTILITIES AND FINAL GRADES, ANY EASEMENTS, AND FINAL GRADING, IMPROVEMENTS AND LIMITS OF RESTORATION WORK. THE PLAN SHALL ALSO INCLUDE PROFILES OF THE VARIOUS NEW UTILITIES, INDICATING RIM & INVERT ELEVATIONS, SLOPES OF PIPES, PIPE MATERIAL, AND SWING TIES FROM PERMANENT BUILDING CORNERS.

IF A CERTIFICATE OF OCCUPANCY IS REQUESTED PRIOR TO ALL SITE WORK BEING COMPLETED, THE APPLICANT WILL BE REQUIRED TO POST A CERTIFIED BANK CHECK IN THE AMOUNT TO COVER THE REMAINING WORK. THE CITY ENGINEER SHALL DETERMINE THE VALUE OF THE UNCOMPLETED WORK.

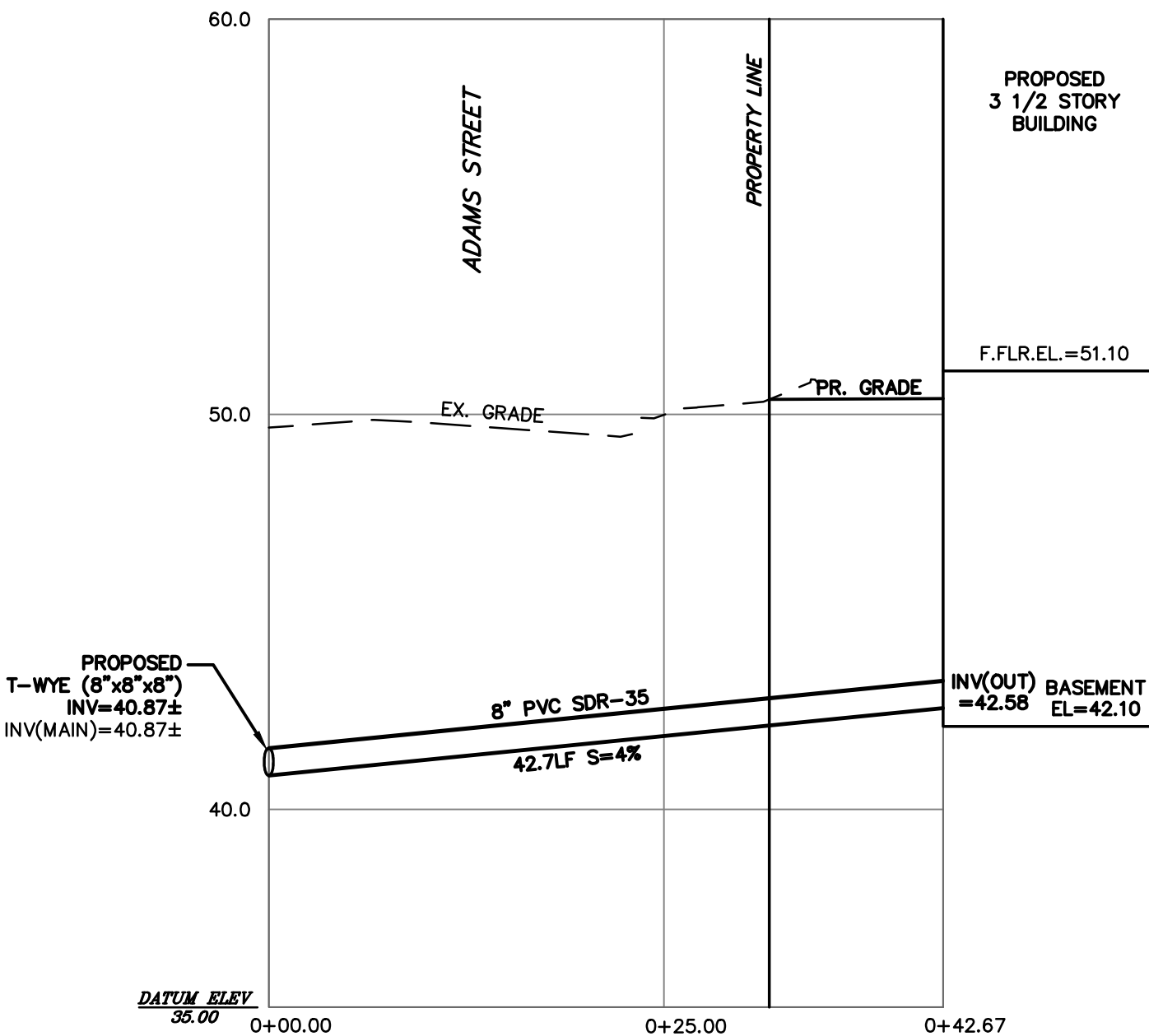
NO EXCAVATION IS ALLOWED WITHIN ANY CITY RIGHT-OF-WAY BETWEEN NOVEMBER 15TH AND APRIL 15TH, IF AN EMERGENCY EXISTS OR THERE ARE EXTENUATING CIRCUMSTANCES, APPLICANT MAY SEEK PERMISSION FOR SUCH WORK FROM THE CITY DPW COMMISSIONER VIA THE CITY ENGINEER. IF PERMISSION IS GRANTED, SPECIAL CONSTRUCTION STANDARDS WILL BE APPLIED. APPLICANT OR APPLICANT'S REPRESENTATIVE MUST CONTACT THE CITY OF NEWTON ENGINEERING DEPARTMENT PRIOR TO START OF WORK FOR CLARIFICATION.

ALL SITE WORK INCLUDING TRENCH RESTORATION MUST BE COMPLETED BEFORE A CERTIFICATION OF OCCUPANCY IS ISSUED.

THE APPLICANT WILL HAVE TO APPLY FOR STREET OPENING, UTILITY CONNECTION AND TRENCH PERMITS AS WELL AS AN INSTALL CURB & SIDEWALK PERMIT WITH THE DPW PRIOR TO START OF WORK.

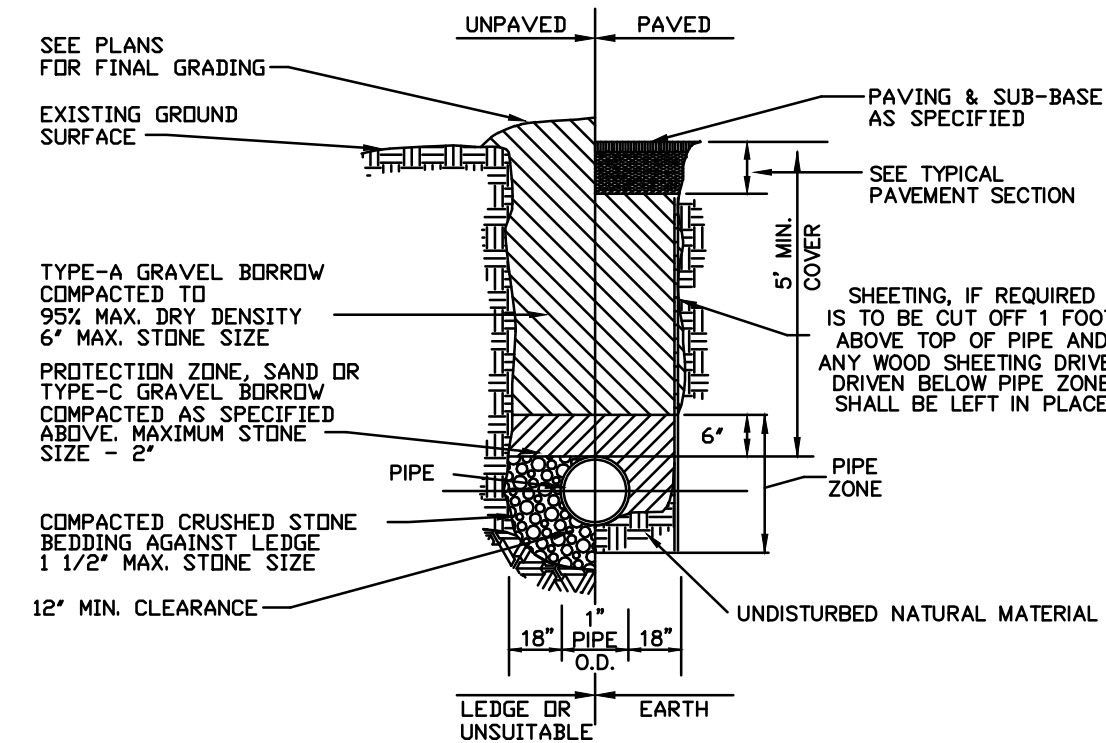
WITH THE EXCEPTION OF GAS SERVICES, ALL UTILITY TRENCHES WITHIN THE CITY OF NEWTON RIGHT-OF-WAY WILL BE BACKFILLED WITH TYPE 1E (EXCAVATABLE) CONTROLLED DENSITY FILL, AS SPECIFIED BY THE CITY OF NEWTON ENGINEERING SPECIFICATIONS.

APPROVAL OF THIS PLAN BY THE 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 REPRESENTATIONS 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.



PROPOSED SEWER PROFILE

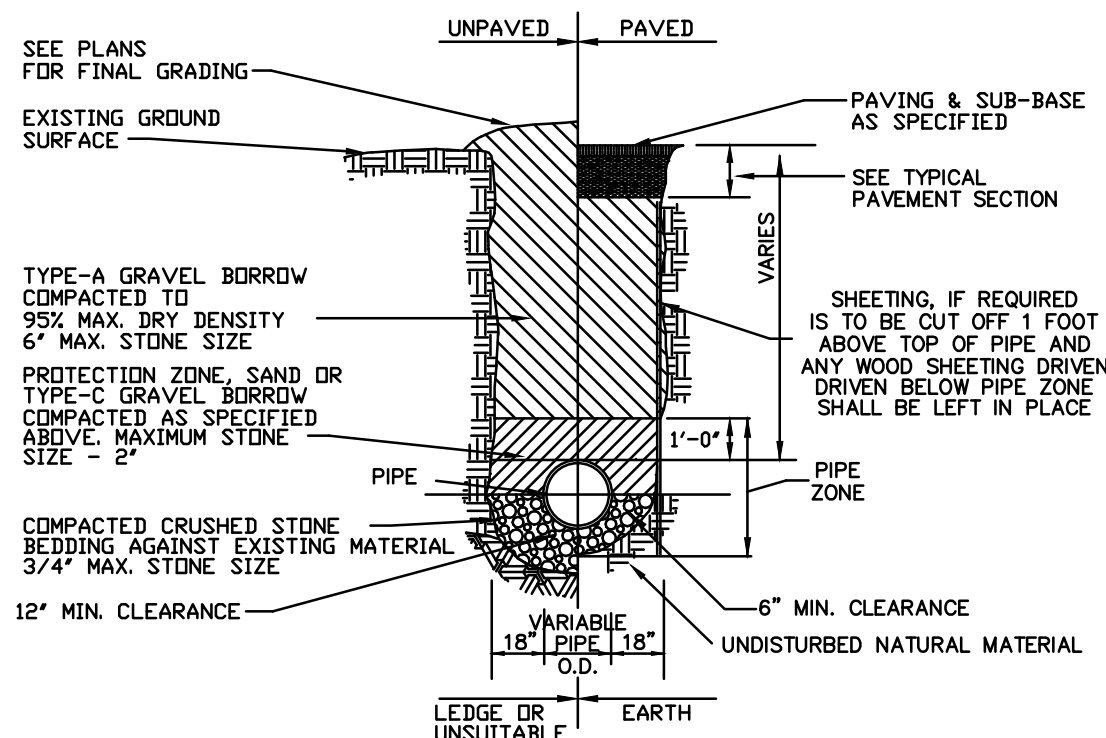
SCALE: 1" = 10' (HORIZONTAL)
SCALE: 1" = 4' (VERTICAL)



TYPICAL WATER TRENCH DETAIL

NOT TO SCALE

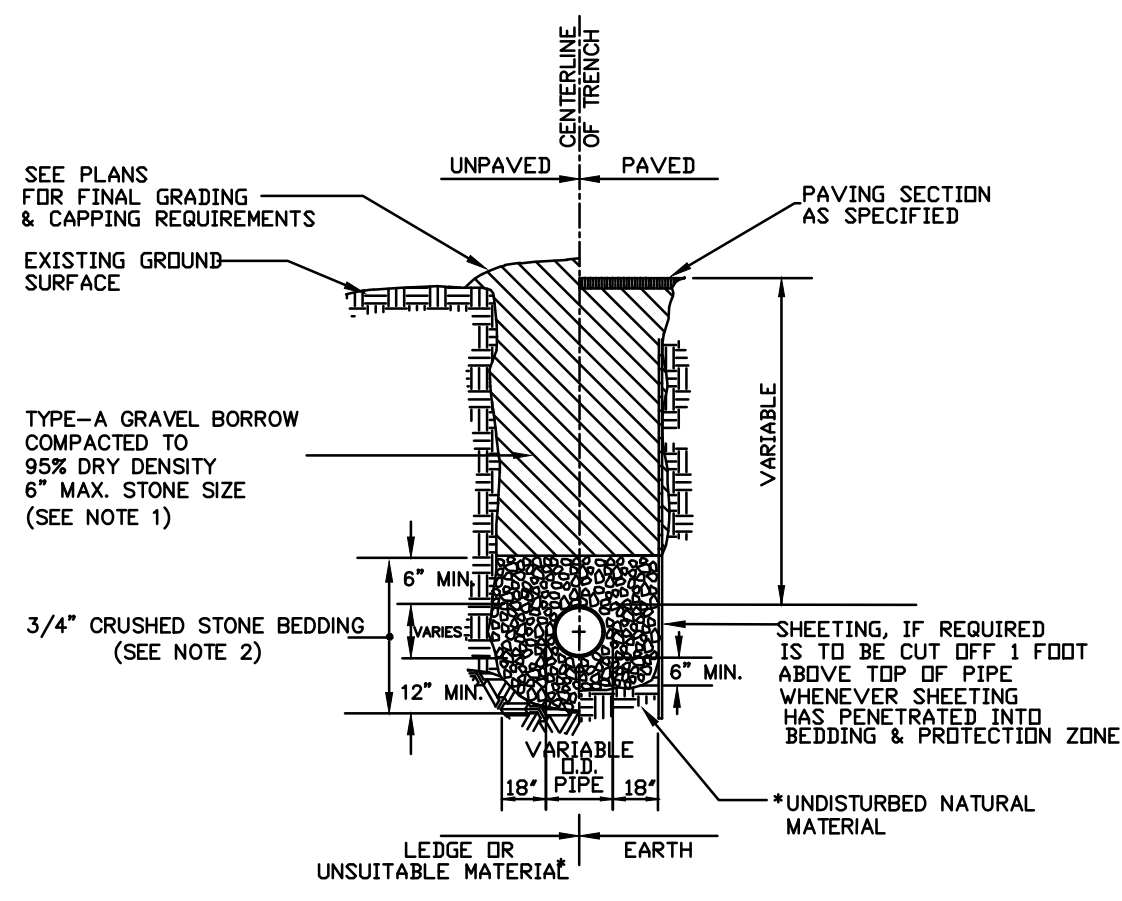
- 1. GRAVEL BORROW SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M1.03.0
- 2. CRUSHED STONE BEDDING SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M2.01.1
- * SUITABILITY OF MATERIAL IS TO BE DETERMINED BY THE CITY OF NEWTON.



TYPICAL P.V.C. DRAIN TRENCH DETAIL

NOT TO SCALE

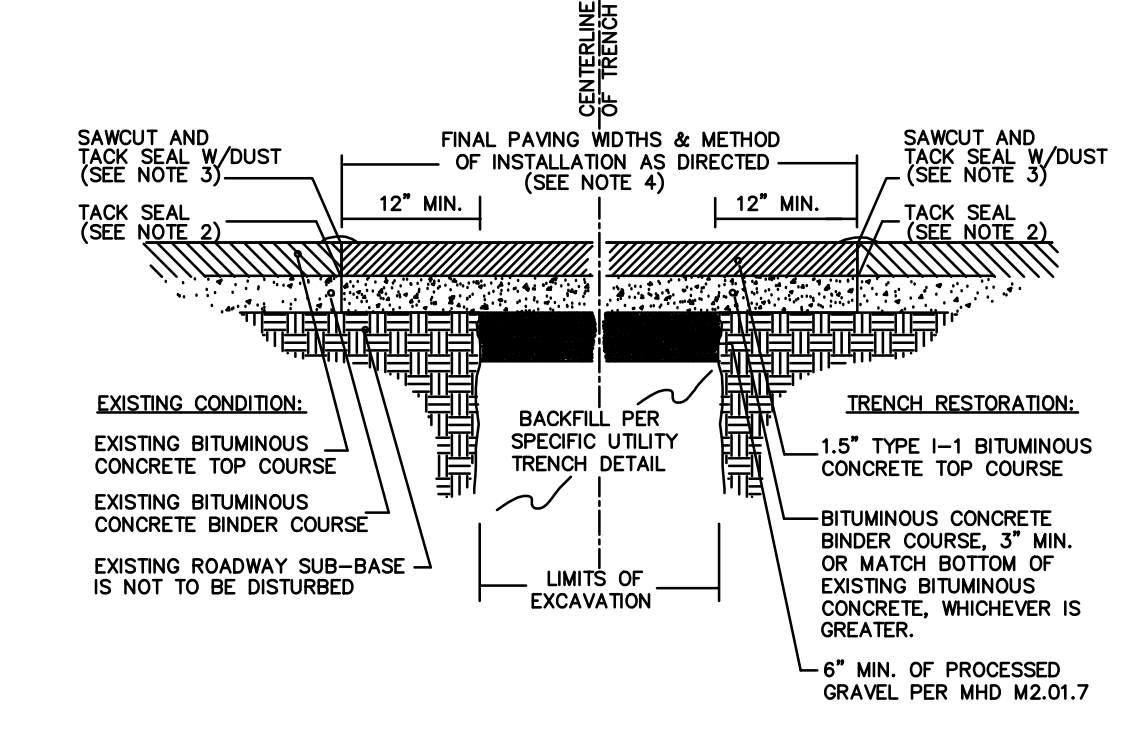
- 1. GRAVEL BORROW SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M1.03.0
- 2. CRUSHED STONE BEDDING SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M2.01.1
- * SUITABILITY OF MATERIALS IS TO BE DETERMINED BY THE CITY OF NEWTON.



GRAVITY SEWER TRENCH DETAIL

NOT TO SCALE

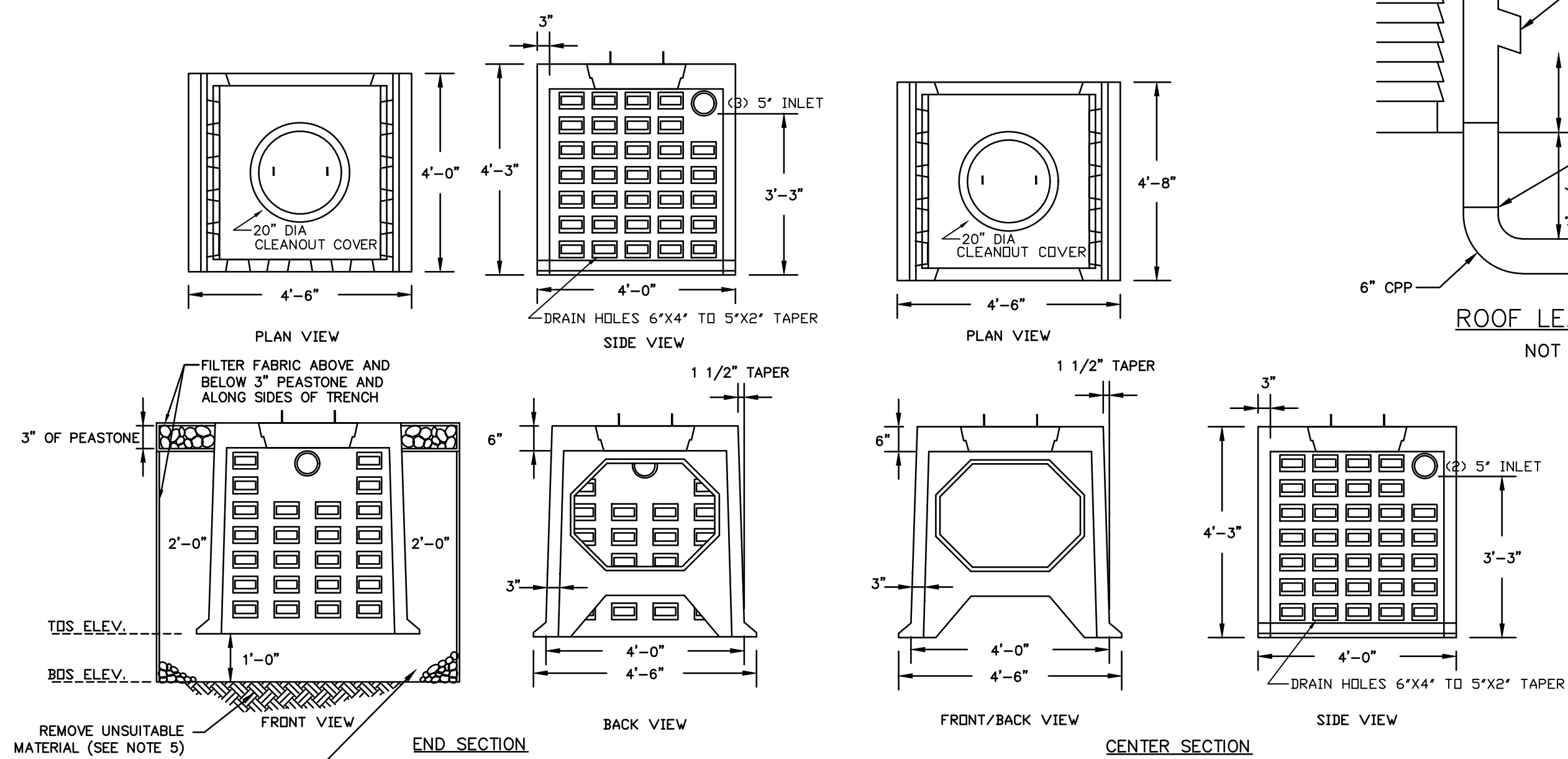
- 1. GRAVEL BORROW SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M1.03.0
- 2. CRUSHED STONE BEDDING SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M2.01.1
- * SUITABILITY OF MATERIAL IS TO BE DETERMINED BY THE CITY OF NEWTON.



TYPICAL TRENCH REPAIR & PAVEMENT SECTION DETAIL (1/2)

NOT TO SCALE

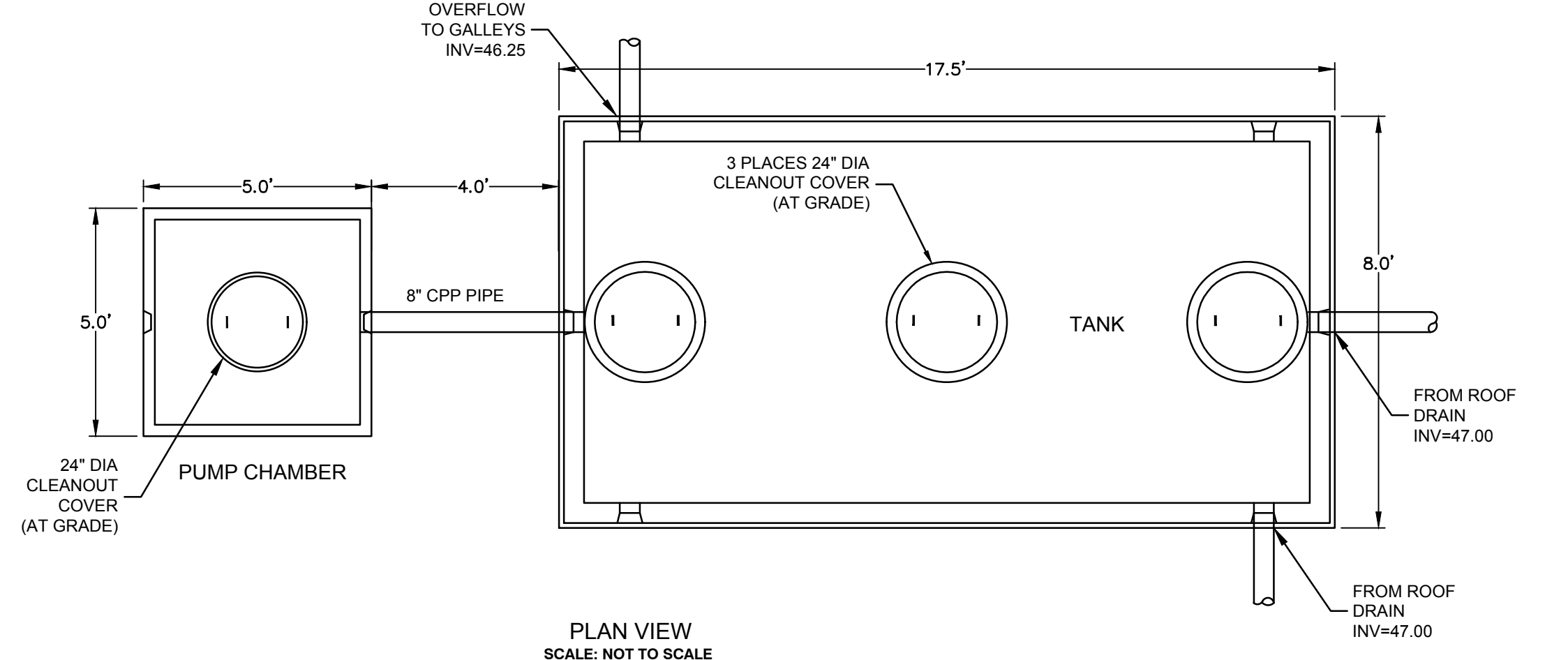
- 1. ALL INSTALLATION AND MATERIAL SPECIFICATIONS PER MASS. HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988 AS AMENDED.
- 2. ALL EXPOSED BITUMINOUS CONCRETE IS TO BE TACKED PER MHD PRIOR TO NEW BITUMINOUS CONCRETE INSTALLATION.
- 3. ALL EXPOSED JOINTS ARE TO BE SEALED WITH TACK AND STONE DUST.
- 4. 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.



GALLEY SECTIONS

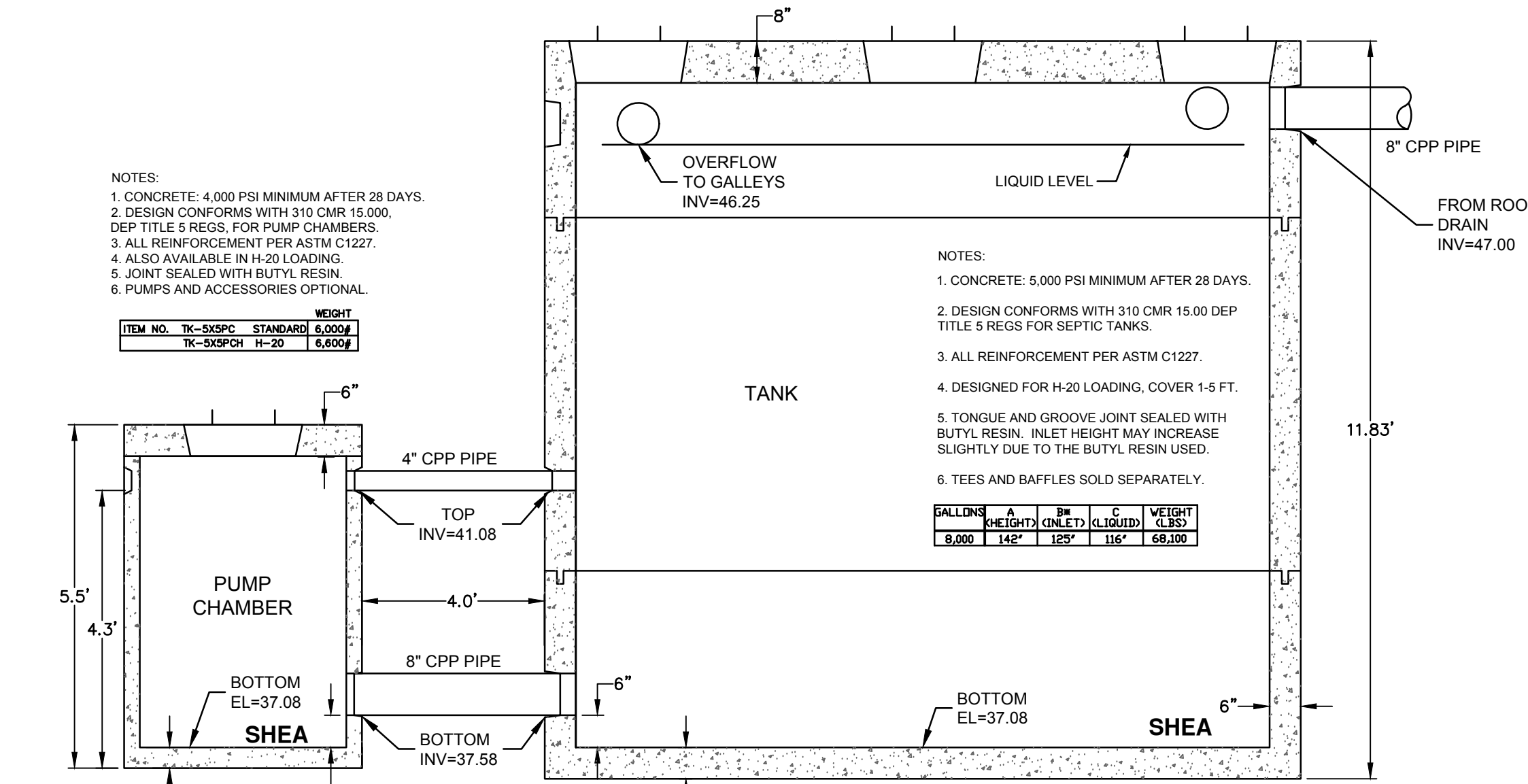
NOT TO SCALE

- 1. MINIMUM OF 1-FOOT OF COVER
- 2. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
- 3. ALSO AVAILABLE IN H-20 LOADING.
- 4. SECTIONS AVAILABLE WITHOUT 20" CLEANOUT.
- 5. EXCAVATION OF UNSUITABLE MATERIAL WILL EXTEND FIVE FEET LATERALLY IN ALL DIRECTIONS BEYOND THE OUTER PERIMETER OF THE GALLEY SECTIONS AND TO A DEPTH OF NATURALLY OCCURRING PERVIOUS MATERIAL. UNSUITABLE MATERIAL WILL BE REPLACED WITH GRAVEL BORROW(MHD M1.03.0 TYPE "B") COMPACTED IN 6" LAYERS.



PLAN VIEW

SCALE: NOT TO SCALE



SECTION VIEW

SCALE: NOT TO SCALE

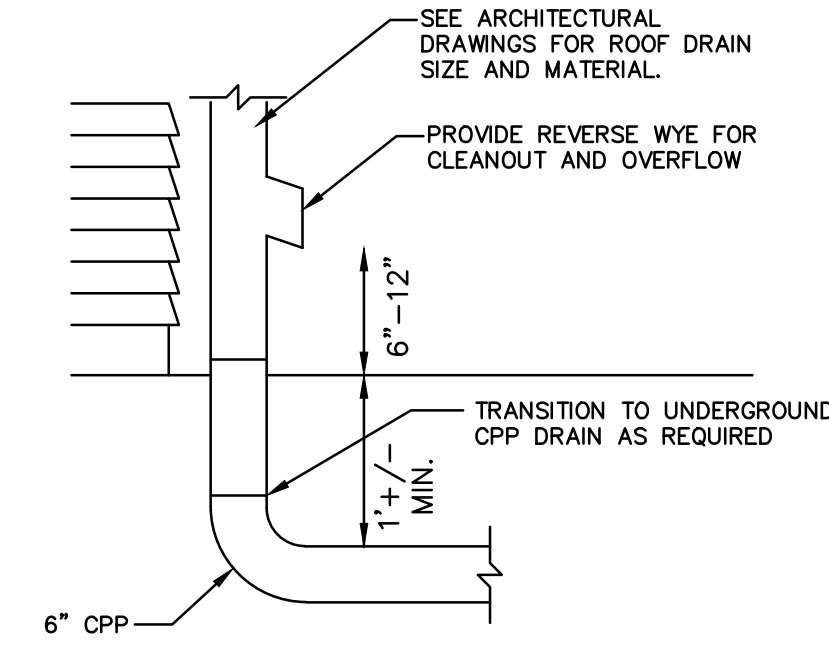
PUMP CHAMBER 500 GALLON
8,000 GALLON TANK

SCALE: NOT TO SCALE

- NOTES:
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. DESIGN CONFORMS WITH 310 CMR 15.000.
3. ALL REINFORCEMENT PER ASTM C1227.
4. ALSO AVAILABLE IN H-20 LOADING.
5. JOINT SEALED WITH BUTYL RESIN.
6. PUMPS AND ACCESSORIES OPTIONAL.

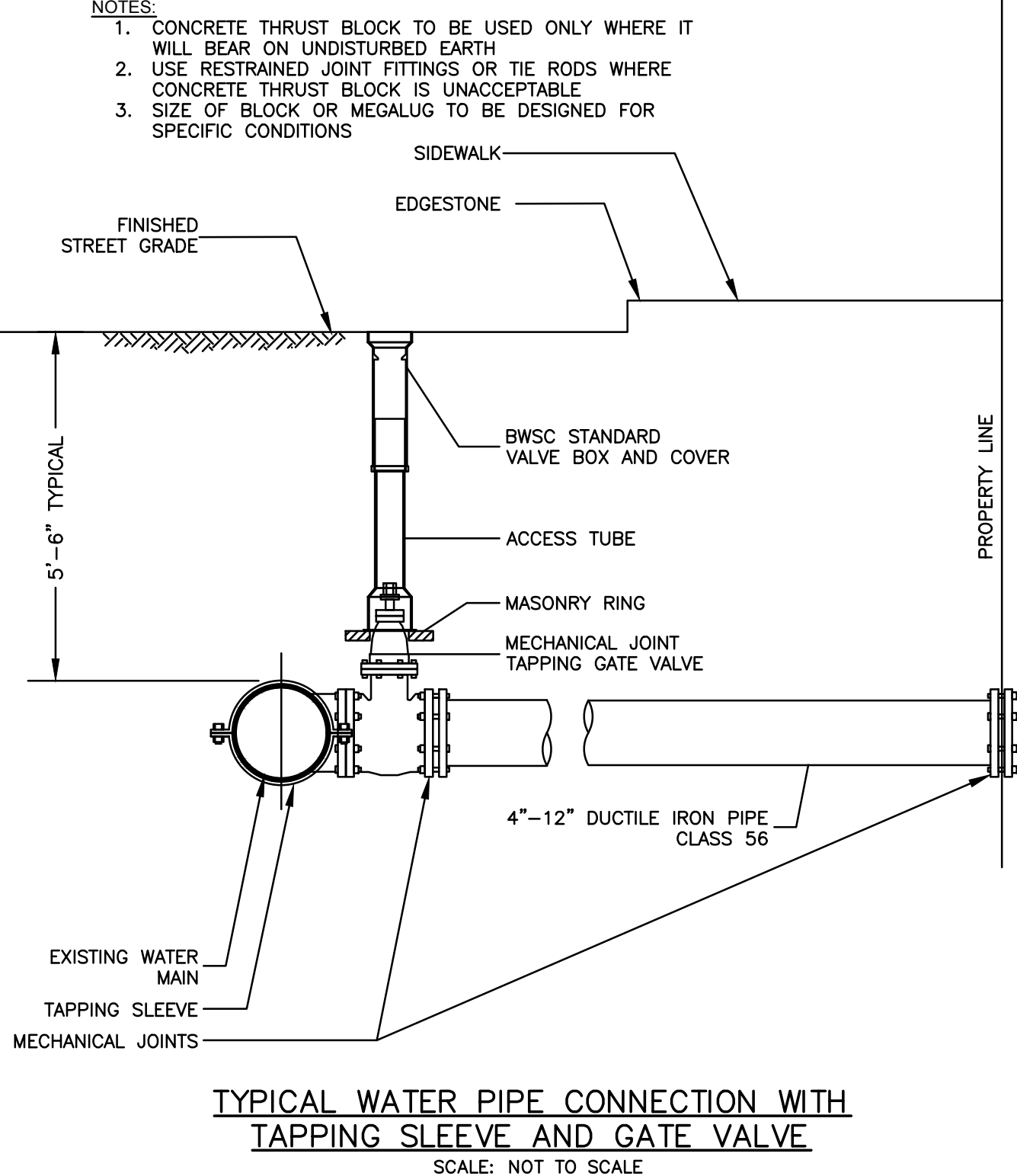
- NOTES:
1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
2. DESIGN CONFORMS WITH 310 CMR 15.00 DEP TITLE 5 REGS FOR SEPTIC TANKS.
3. ALL REINFORCEMENT PER ASTM C1227.
4. DESIGNED FOR H-20 LOADING, COVER 1-5 FT.
5. TONGUE AND GROOVE JOINT SEALED WITH BUTYL RESIN. INLET HEIGHT MAY INCREASE SLIGHTLY DUE TO THE BUTYL RESIN USED.
6. TEES AND BAFFLES SOLD SEPARATELY.

GALLONS	A	B	C	WEIGHT
	HEIGHT	INLET	OUTLET	CL. 502
500	14"	12"	16"	68.00



ROOF LEADER DETAIL

NOT TO SCALE

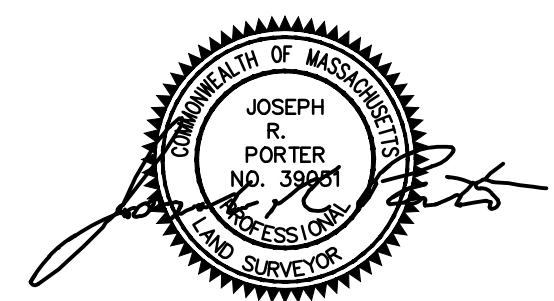


TYPICAL WATER PIPE CONNECTION WITH TAPPING SLEEVE AND GATE VALVE

SCALE: NOT TO SCALE

DIG SAFE

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DETAIL SHEET
NEWTON, MASSACHUSETTS

SHOWING PROPOSED CONDITIONS AT #189-193 ADAMS STREET & 19 QUIRK COURT
SCALE: AS-SHOWN DATE: FEBRUARY 12, 2018
REVISED: MARCH 8, 2018

PROJECT: 218100



LAND SURVEYORS - CIVIL ENGINEERS. 132 ADAMS STREET 2ND FLOOR SUITE 3 NEWTON, MA 02458 (617) 332-8271