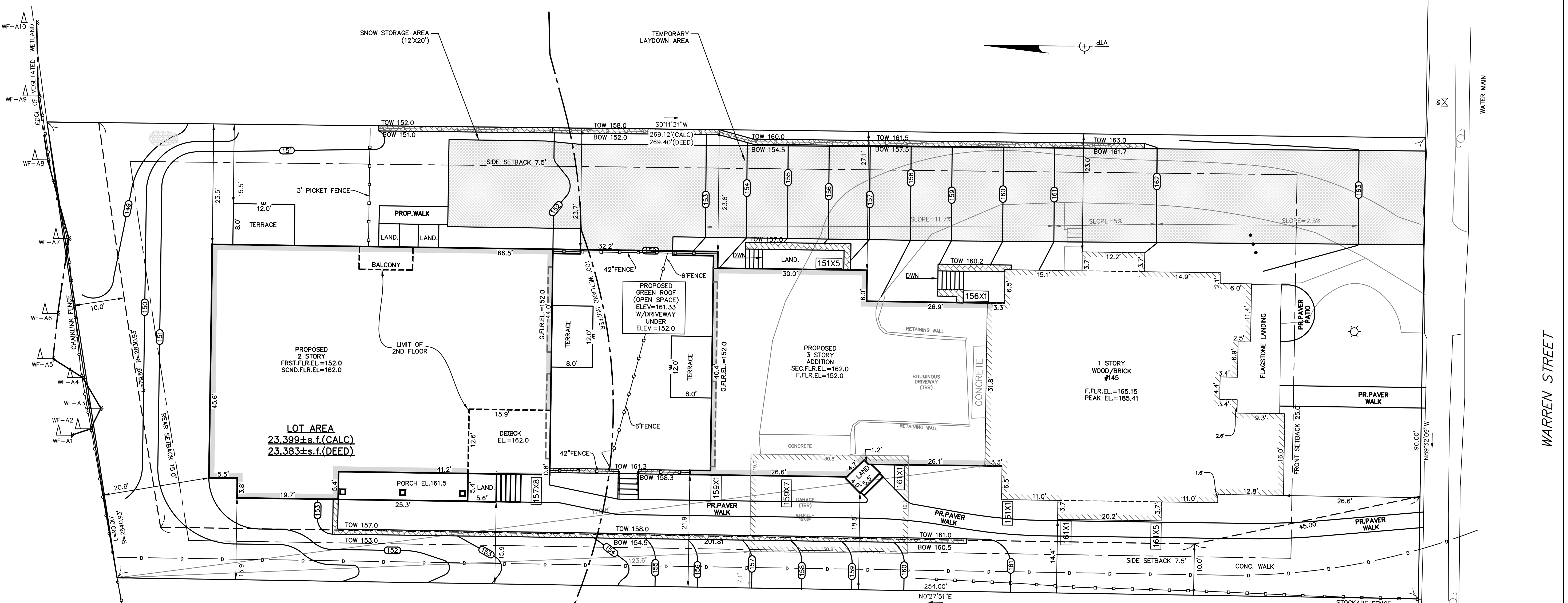


217115_bsp10(A4_one_building).dwg (2-2017)

LEGEND

- BUILDING
- PROPERTY LINE W/ BEARING DISTANCE
- CONTOUR
- STOCKADE FENCE
- CHAINLINK 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
- CONIFEROUS TREE
- HYDRANT



Address: #145 Warren Street, Newton

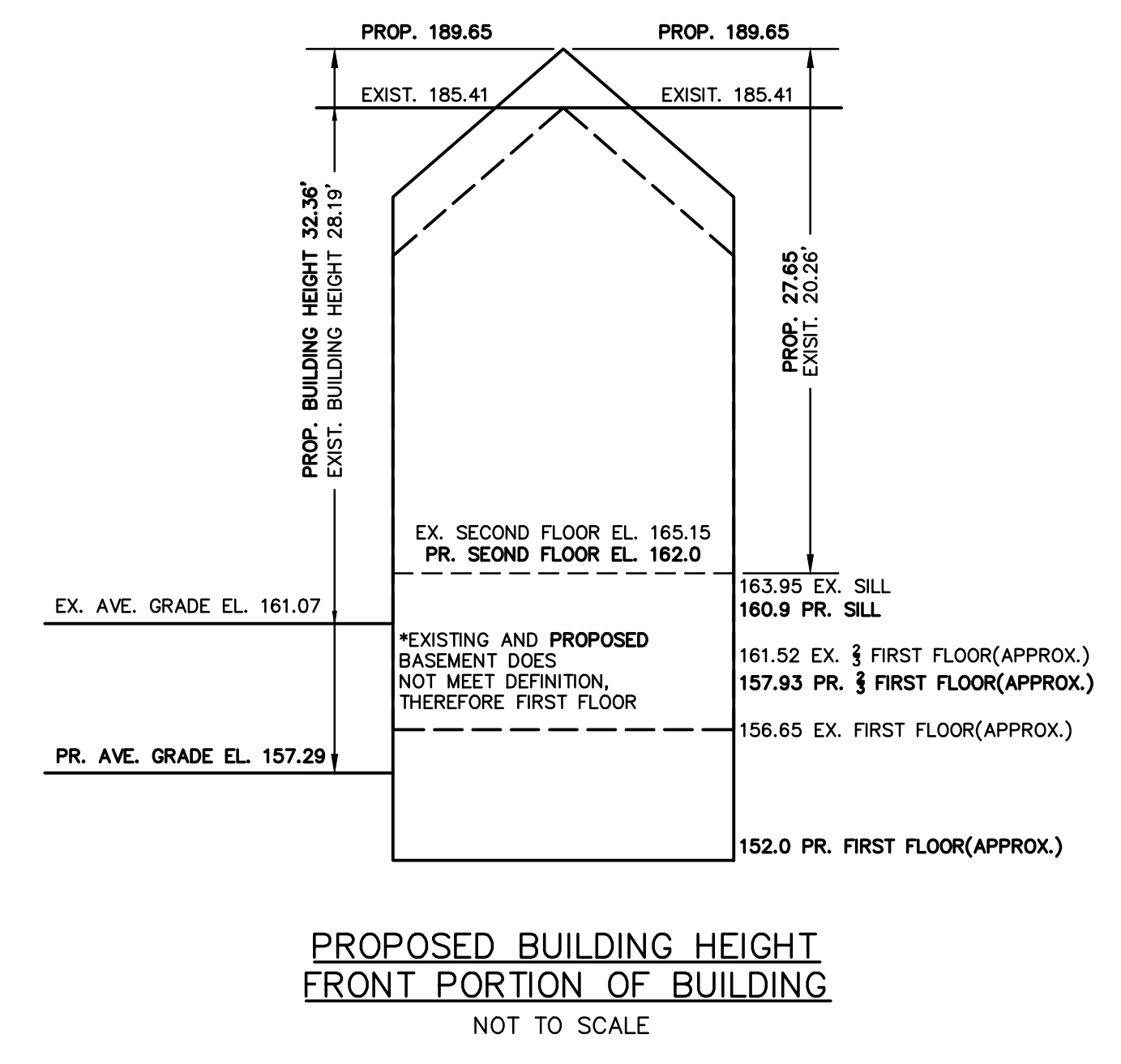
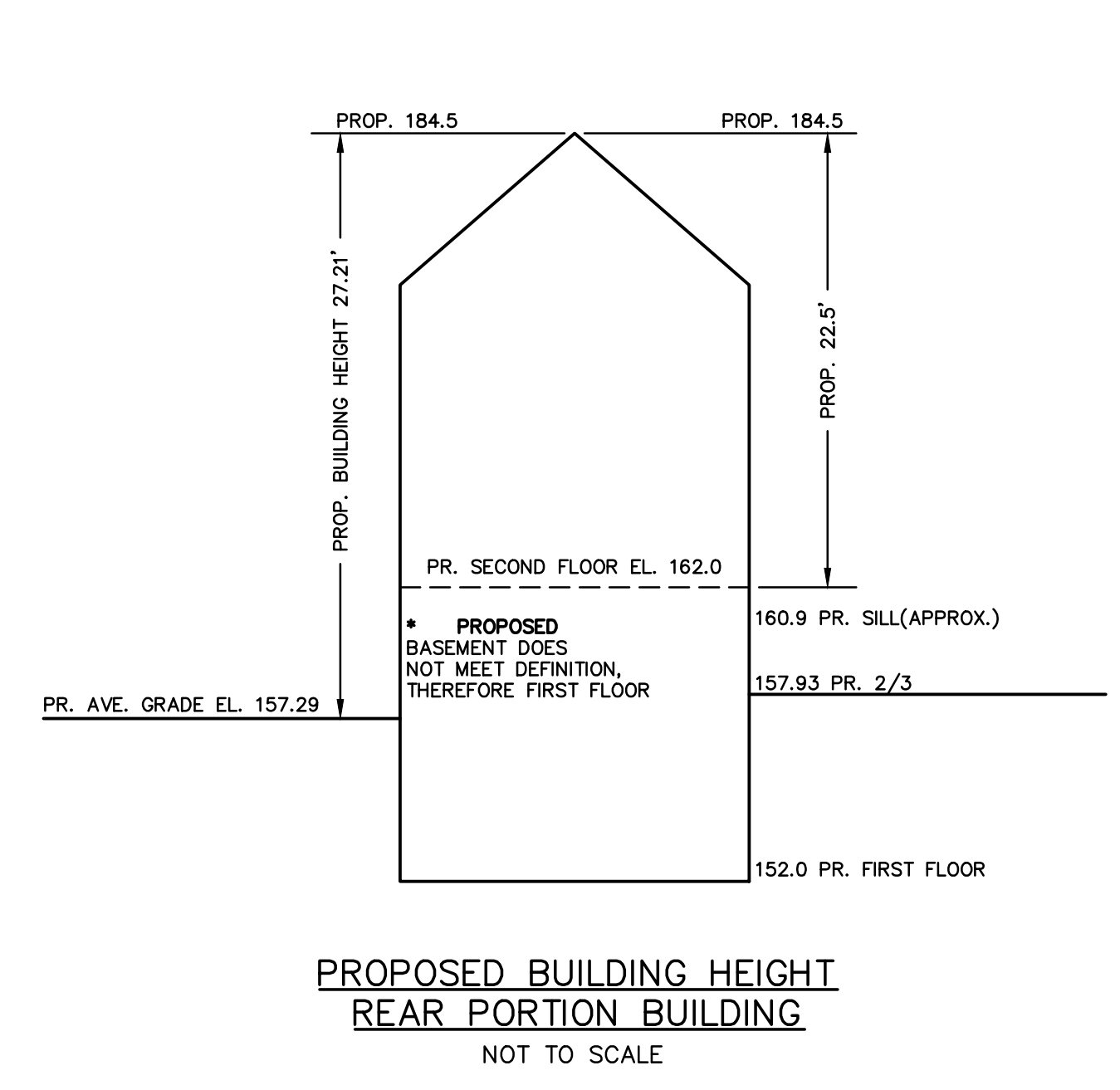
Length Weighted Mean - One Building

Proposed Conditions Average Grade Calculation

A	B	C	D	E	F
Segment	Length Of Segment in Feet	Height of High Point of Segment	Height of Low Point of Segment	$E = (C+D)/2$ Average Segment Height	$F = B \times E$
1	11.36	164.67	163.20	163.94	1862.30 Sq. Ft.
2	6.90	164.54	164.27	164.41	1134.39 Sq. Ft.
3	9.30	164.54	164.45	164.50	1529.80 Sq. Ft.
4	15.95	164.02	163.14	163.58	2609.10 Sq. Ft.
5	12.80	163.05	162.24	162.65	2081.86 Sq. Ft.
6	11.00	162.26	161.50	161.88	1780.68 Sq. Ft.
7	20.20	161.50	161.10	161.30	3258.26 Sq. Ft.
8	11.00	161.00	161.00	161.05	1771.55 Sq. Ft.
9	6.50	161.00	161.00	161.05	1046.83 Sq. Ft.
10	25.50	161.00	161.00	161.05	4106.78 Sq. Ft.
11	0.60	161.50	161.00	161.25	96.75 Sq. Ft.
12	26.60	161.00	159.10	160.05	4257.33 Sq. Ft.
13	14.00	158.30	158.20	158.25	2215.50 Sq. Ft.
14	4.00	161.00	158.10	159.55	638.20 Sq. Ft.
15	13.40	158.30	158.00	158.15	2119.21 Sq. Ft.
16	5.60	157.80	157.70	157.75	883.40 Sq. Ft.
17	4.80	161.00	158.00	159.50	765.60 Sq. Ft.
18	5.60	161.50	157.70	159.60	893.76 Sq. Ft.
19	25.30	157.70	157.00	157.35	3980.96 Sq. Ft.
20	1.00	157.00	157.00	157.00	157.00 Sq. Ft.
21	18.70	153.10	152.20	152.65	2854.56 Sq. Ft.
22	45.60	152.00	151.90	151.95	6928.92 Sq. Ft.
23	66.50	152.00	151.00	151.50	10074.75 Sq. Ft.
24	27.40	153.00	152.00	152.50	4178.50 Sq. Ft.
25	4.80	153.50	153.00	153.25	735.60 Sq. Ft.
26	6.20	154.00	153.50	153.75	953.25 Sq. Ft.
27	3.30	153.50	152.00	152.75	504.08 Sq. Ft.
28	15.90	151.60	151.50	151.55	2409.65 Sq. Ft.
29	1.00	157.00	157.00	157.00	157.00 Sq. Ft.
30	3.20	157.00	156.90	156.95	502.40 Sq. Ft.
31	6.00	158.00	157.20	157.60	945.60 Sq. Ft.
32	13.80	159.00	157.50	158.25	2183.85 Sq. Ft.
33	5.00	158.60	157.50	157.55	787.75 Sq. Ft.
34	8.10	156.10	156.00	156.05	1264.01 Sq. Ft.
35	6.50	156.10	156.00	156.05	1014.33 Sq. Ft.
36	1.00	160.20	160.20	160.20	160.20 Sq. Ft.
37	14.10	160.50	160.00	160.25	2259.53 Sq. Ft.
38	12.20	162.00	161.10	161.55	1970.91 Sq. Ft.
39	14.90	162.30	162.30	162.30	2418.27 Sq. Ft.
40	6.00	162.20	162.30	162.25	976.50 Sq. Ft.
Total	511.61				80468.88 Sq. Ft.

Total Column F / Total Column B = Average Grade

Average Grade: 157.29'



ZONING CHART

NEWTON, MASSACHUSETTS

ZONE: MR-1 (OLD) SUBMISSION: SPECIAL PERMIT

REGULATION	REQUIRED	REQUIRED WITH SPECIAL PERMIT	EXISTING	PROPOSED
LOT AREA	7,000s.f.	15,000s.f.	23,399±s.f.	23,399±s.f.
LOT AREA/PER UNIT	3,500s.f.	4,000s.f./unit	23,399±s.f.	5,849±s.f.
LOT FRONTAGE	70.0'	80.0'	90.0'	90.0'
FRONT SETBACK	25.0'	25.0'	26.6'	26.6'
SIDE SETBACK	7.5'	25.0'	14.4'	14.4' **
REAR SETBACK	15.0'	25.0'	170.8'	20.8' **
BUILDING HEIGHT BUILDING	36.0' / 2.5 STORY	36.0' / 3.0 STORY **	24.34'	32.36' / 3 ** STORY
AVERAGE GRADE	-	-	-	157.29
LOT COVERAGE	30.0% (7,019±sf)	25.0%	12.9%	38.2% *
OPEN SPACE	50.0% (11,699±sf)	50.0%	77.2%	49.9% *
MAX. GROSS FLOOR AREA	9,359.6 SF	9,359.6 SF	-	-

* NON CONFORMING, WAIVER REQUIRED
** SPECIAL PERMIT REQUIRED

FRONT BUILDING: EXISTING AND PROPOSED BASEMENT DOES NOT MEET DEFINITION, THEREFORE FIRST FLOOR AND COUNTS AGAINST F.A.R.

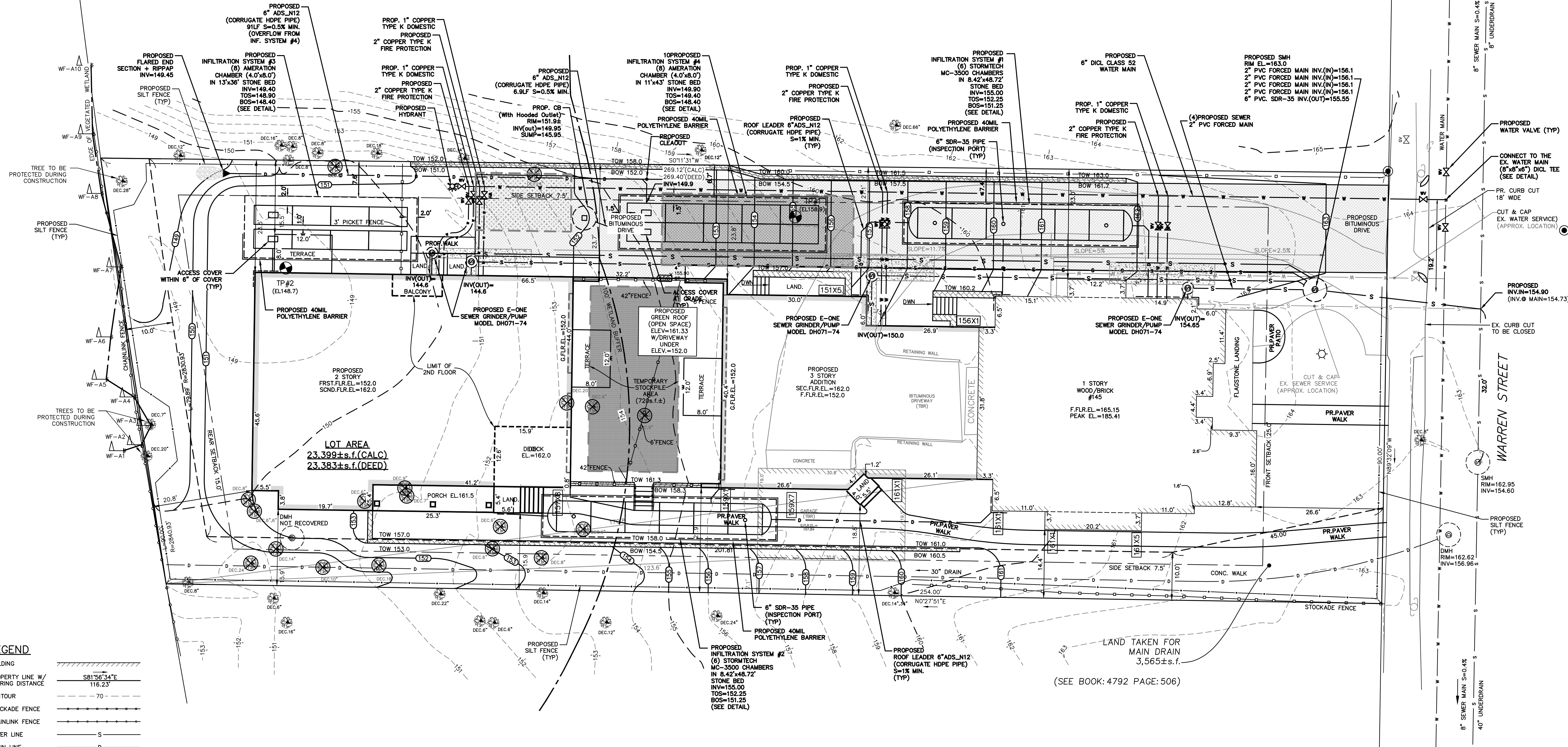
REAR BUILDING: BASEMENT DOES NOT MEET DEFINITION, THEREFORE IT IS THE FIRST FLOOR AND ENTIRE AREA COUNTS AGAINST F.A.R.

ZONING PLAN
NEWTON, MASSACHUSETTS
SHOWING PROPOSED CONDITIONS AT #145 WARREN STREET

SCALE: 1"=10ft. DATE: APRIL 1, 2019
REVISED: APRIL 18, 2019; MAY 2, 2019; JUNE 3, 2019; JUNE 26, 2019
PROJECT: 217115 JULY 11, 2019

VTP ASSOCIATES
INC.

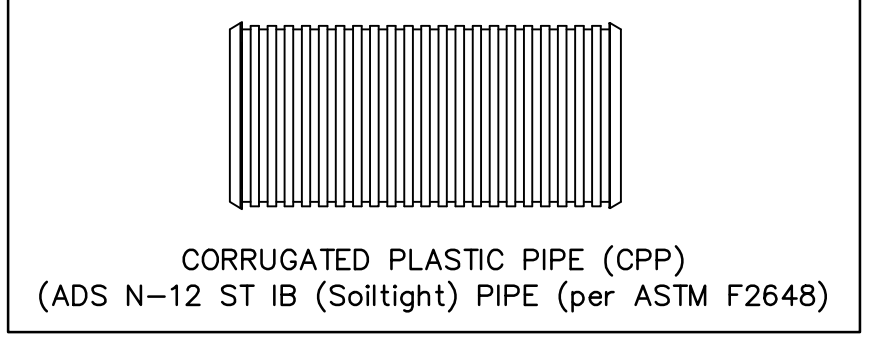
LAND SURVEYORS - CIVIL ENGINEERS. 132 ADAMS STREET 2ND FLOOR SUITE 3 NEWTON, MA 02458 (617) 332-8271



LEGEND

BUILDING	
PROPERTY LINE W/ BEARING DISTANCE	S81°56'34"E 116.23'
CONTOUR	70'
STOCKADE FENCE	
CHAINLINK FENCE	
SEWER LINE	S
DRAIN LINE	D
WATER LINE	W
GAS LINE	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 #1 = 158.9 (JAN 28, 2019)	
0-12" TOP SOIL	
12"-36" SUBSOIL	
36"-114" MEDIUM LOAMY SAND W/GRAVEL	
NO WATER NO REFUSAL NO MOTTLING	
PERC. RATE - <2 mپی	
TESTPIT #2 ELEV=148.7 (JAN 28, 2019)	
0-15" TOP SOIL	
15"-30" SUBSOIL	
30"-44" SANDY LOAM W/GRAVEL	
WATER @ 28" NO REFUSAL	



- 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.

GRADING, DRAINAGE & UTILITY PLAN
NEWTON, MASSACHUSETTS
 SHOWING PROPOSED CONDITIONS AT #145 WARREN STREET

SCALE: 1in.=10ft. DATE: APRIL 1, 2019;
 REVISIONS: APRIL 18, 2019
 MAY 2, 2019; JUNE 26, 2019
 PROJECT: 217115 JULY 11, 2019



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

217115_bp10(A4_one_building).dwg (2-2017)

GENERAL & UTILITIES NOTES:

ALL NEW SEWER SERVICE AND/OR STRUCTURES SHALL BE PRESSURE TESTED OR VIDEO TAPED 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.

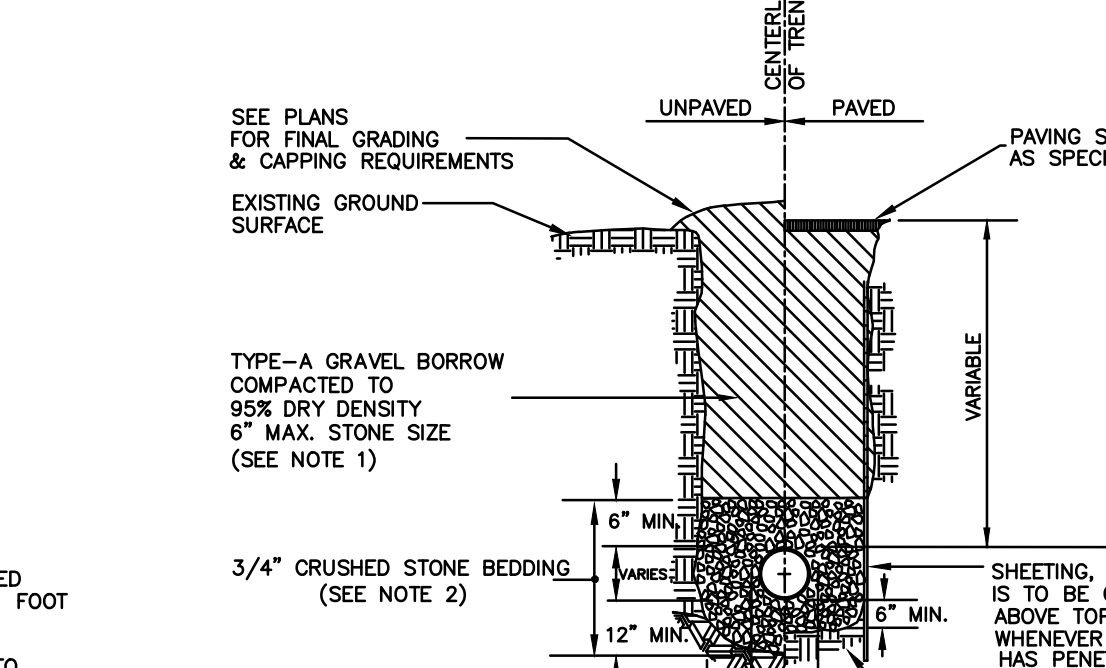
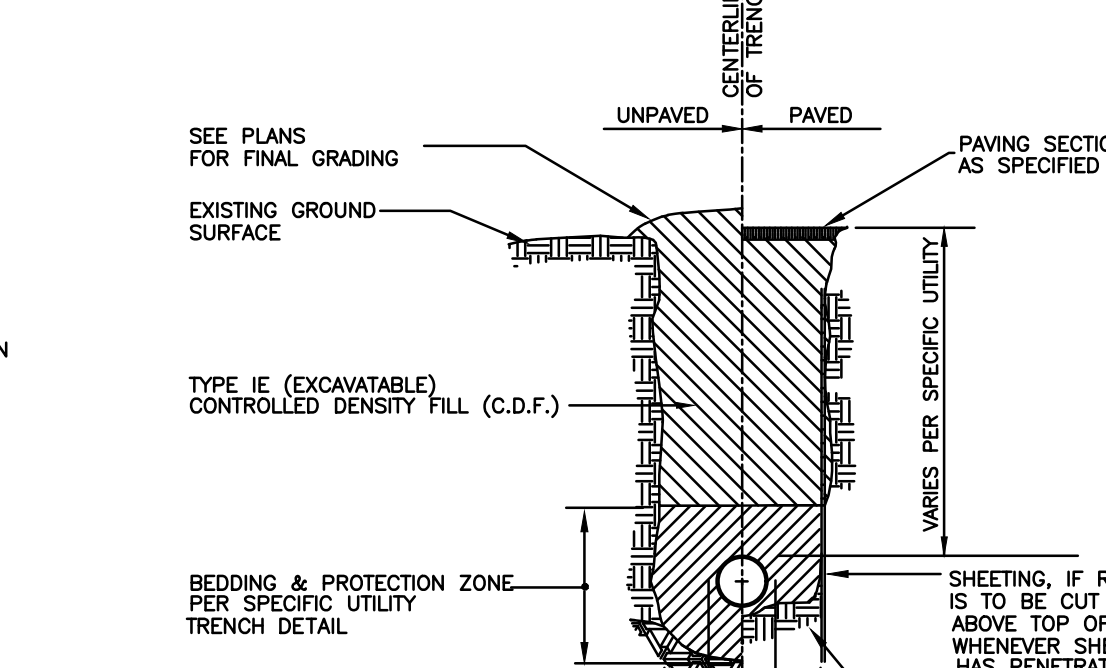
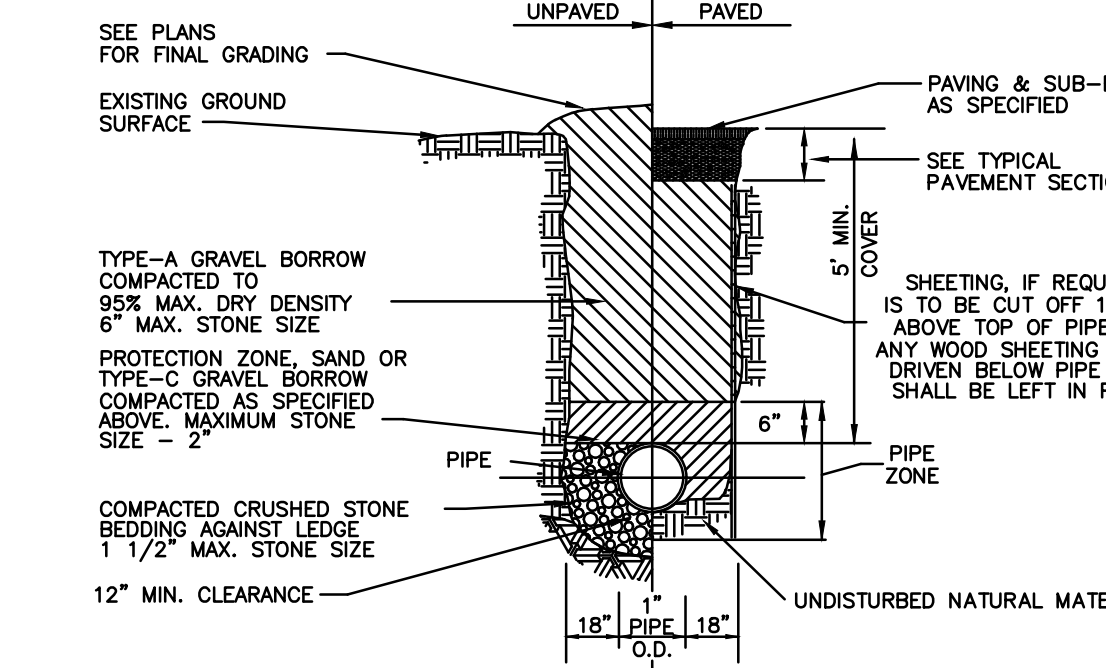
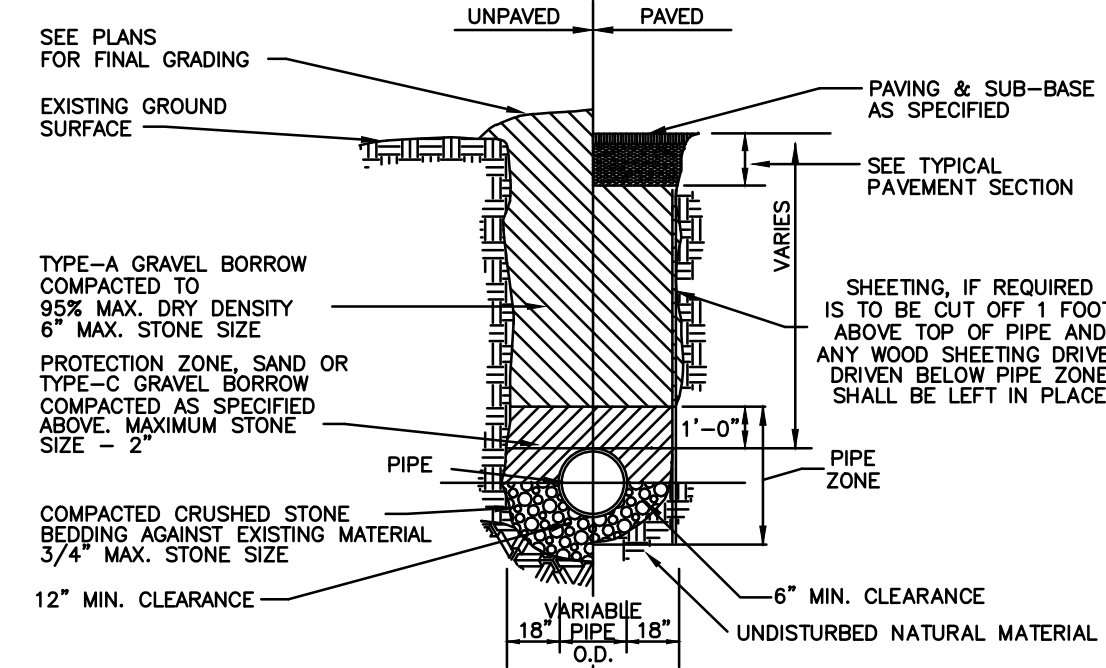
ALL SITE WORK INCLUDING TRENCH RESTORATION MUST BE COMPLETED BEFORE A CERTIFICATION OF OCCUPANCY IS ISSUED.

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 IE (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.

ALL SILTATION CONTROL SYSTEMS SHALL BE INSTALLED AND INSPECTED BY THE CONSERVATION COMMISSION AGENT(S) PRIOR TO ANY CONSTRUCTION.



* SUITABILITY OF MATERIALS IS TO BE DETERMINED BY THE CITY OF NEWTON

TYPICAL P.V.C. DRAIN TRENCH DETAIL
NOT TO SCALE

- GRAVEL BORROW SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M1.03.0
- CRUSHED STONE BEDDING SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M2.01.1

* SUITABILITY OF MATERIAL IS TO BE DETERMINED BY THE CITY OF NEWTON.

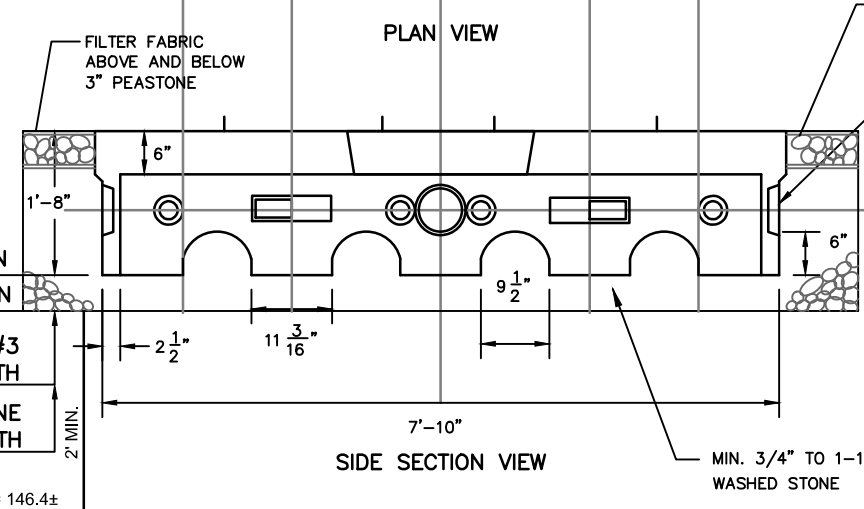
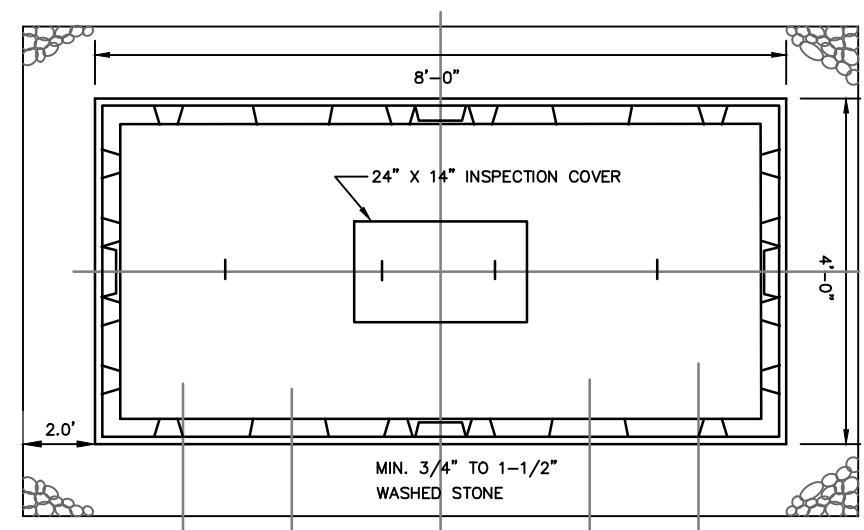
* SUITABILITY OF MATERIAL IS TO BE DETERMINED BY THE CITY OF NEWTON.

TYPICAL C.D.F. TRENCH DETAIL
NOT TO SCALE

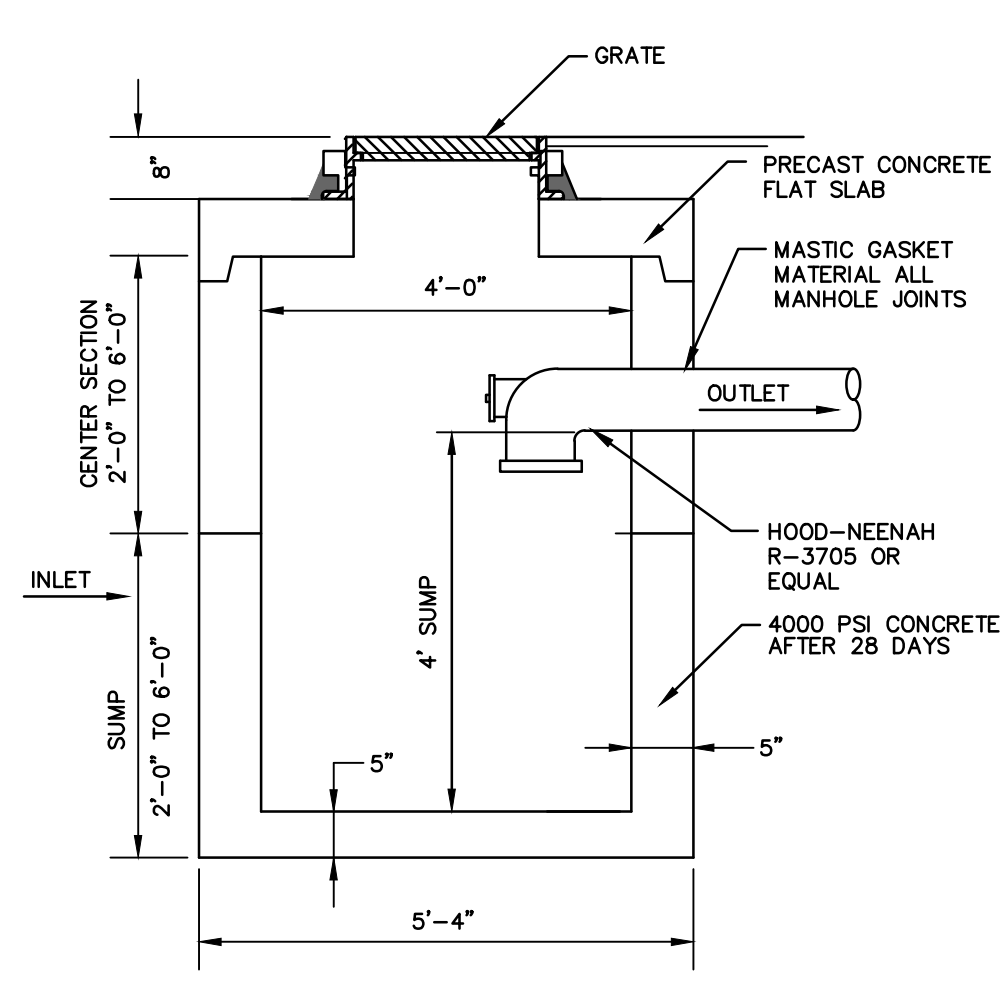
* SUITABILITY OF MATERIAL IS TO BE DETERMINED BY THE CITY OF NEWTON.

- GRAVEL BORROW SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M1.03.0
- CRUSHED STONE BEDDING SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M2.01.1

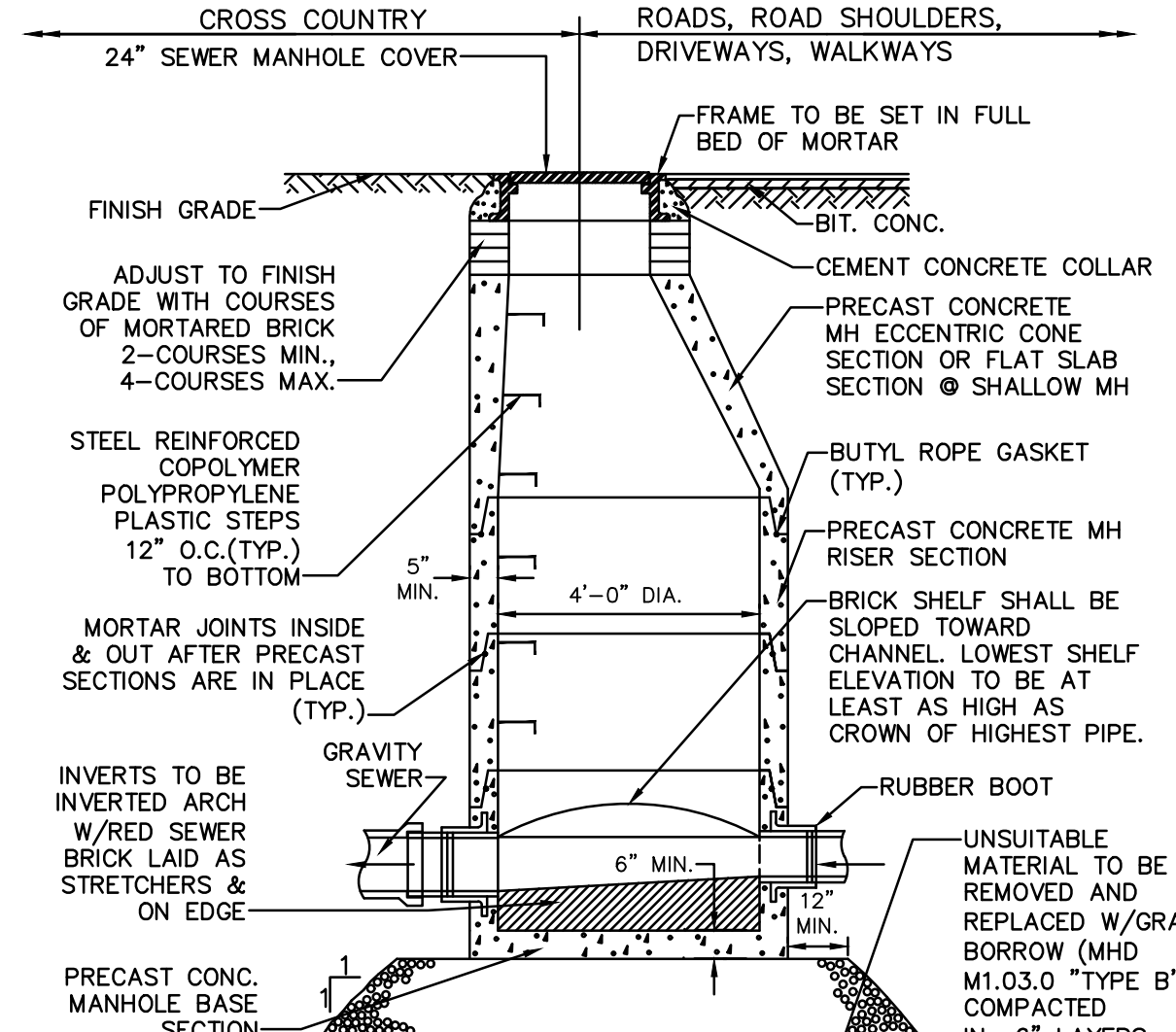
GRAVITY SEWER TRENCH DETAIL
NOT TO SCALE



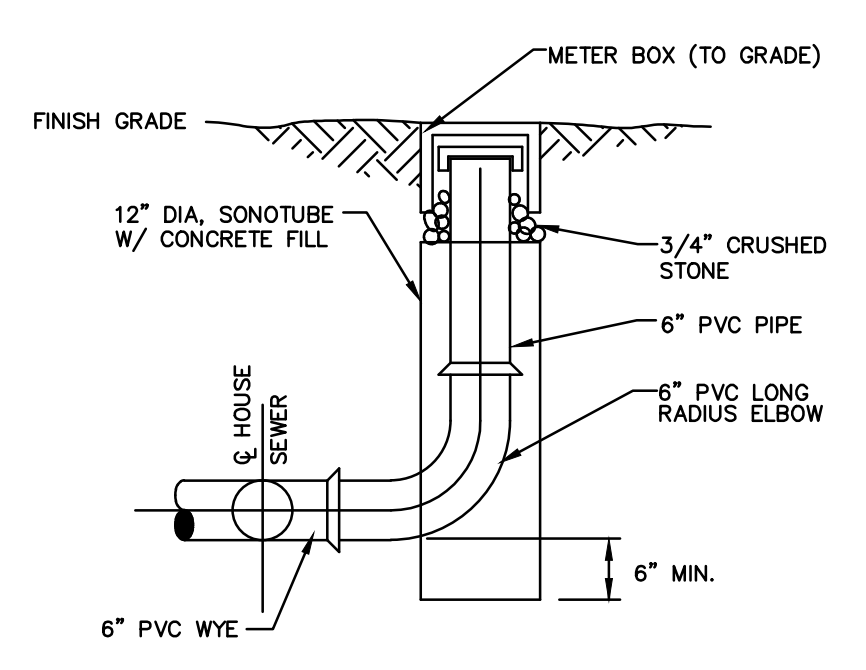
- ITEM NO. LE-AC [WT=3,111#]
- CONCRETE: 4000 PSI MINIMUM AFTER 28 DAYS.
 - DESIGNED FOR H-20 LOADING.



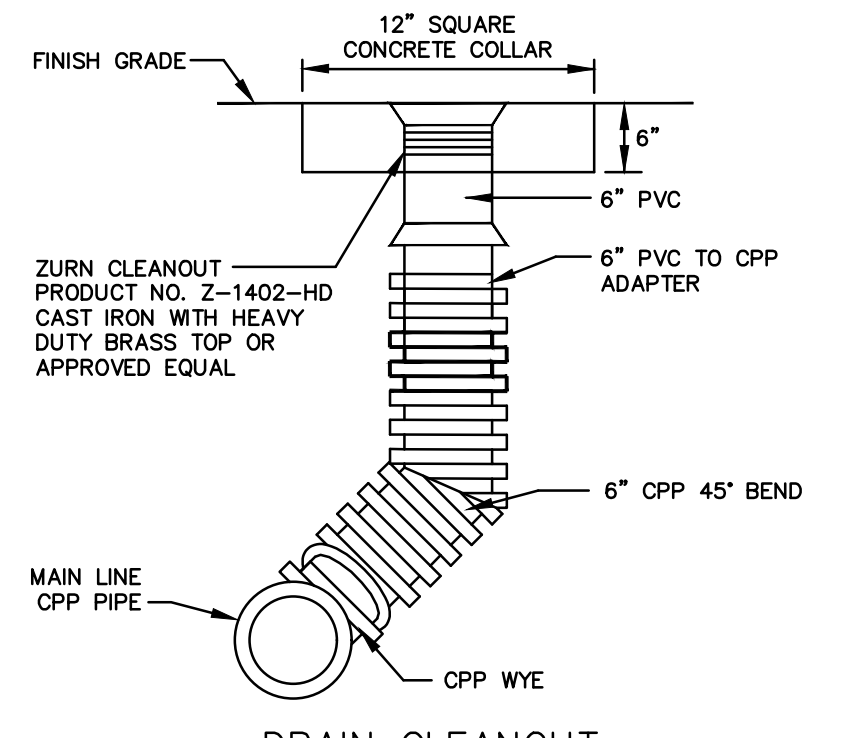
PRECAST CONCRETE CATCH BASIN MANHOLE #1 WITH OIL TRAP OUTLET
NOT TO SCALE



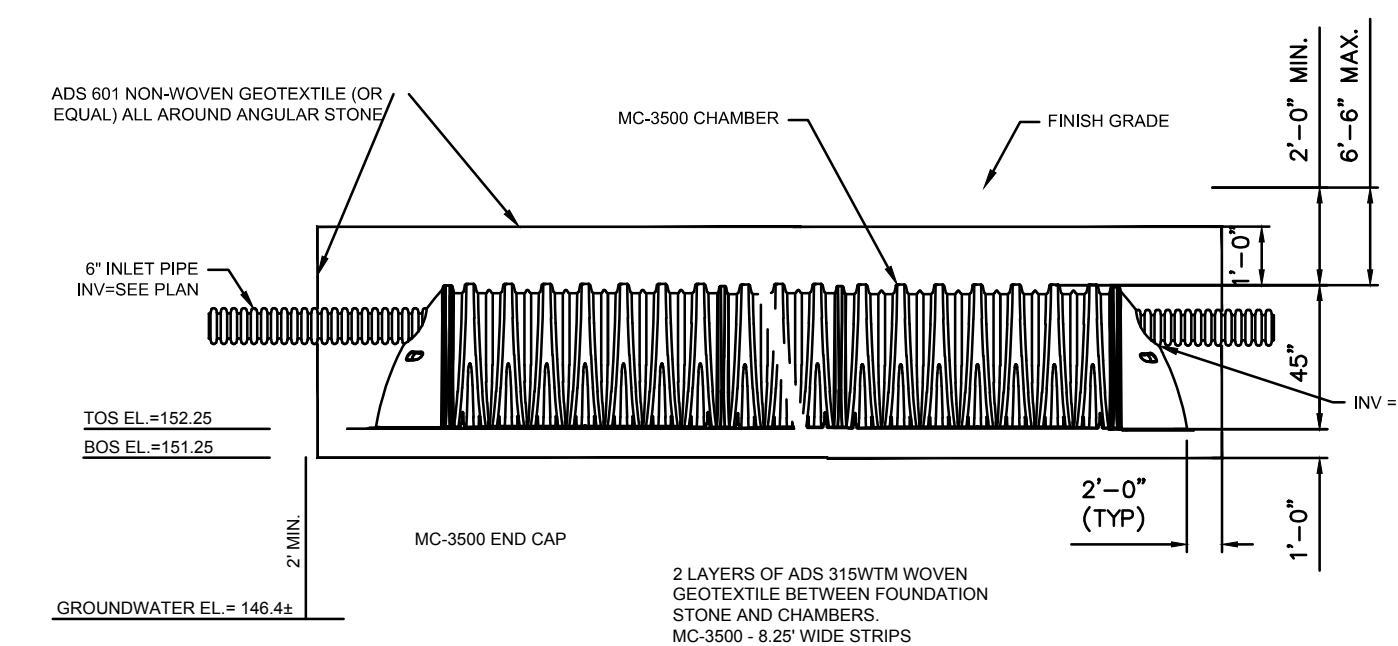
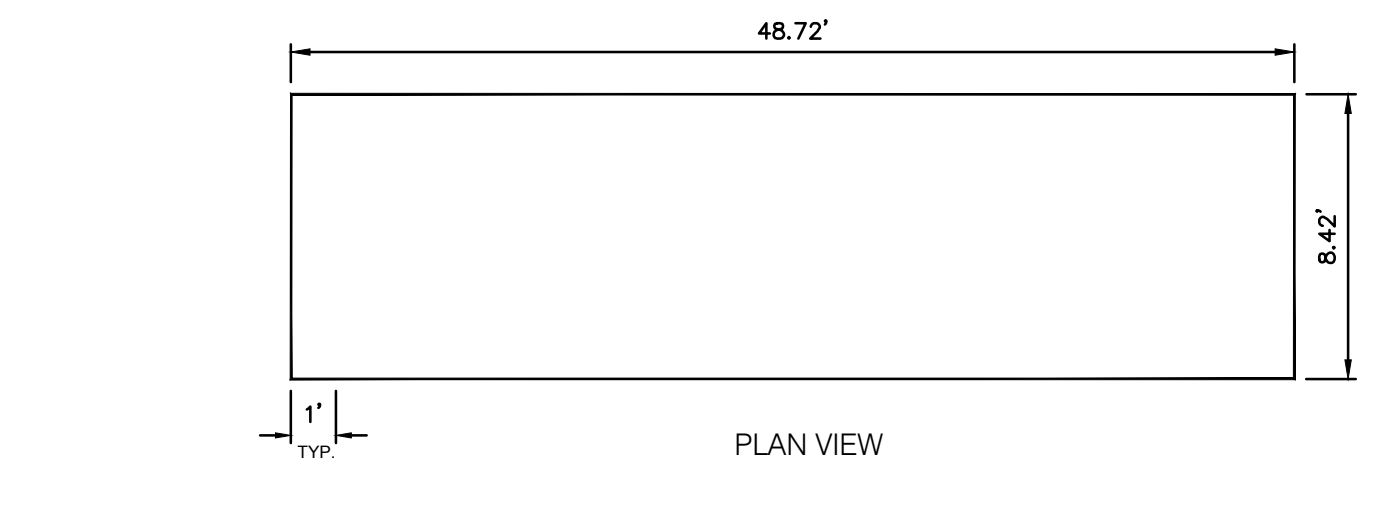
TYPICAL SEWER MANHOLE DETAIL
NOT TO SCALE



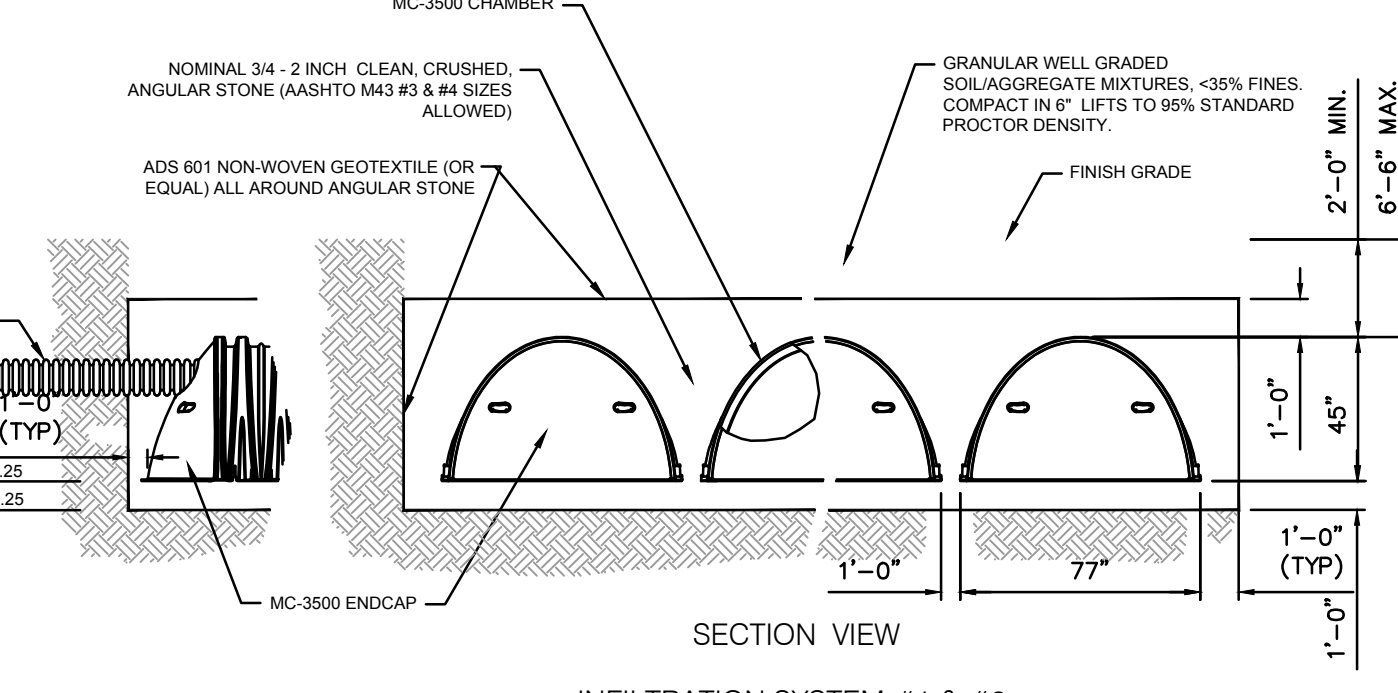
SEWER CLEANOUT
NOT TO SCALE



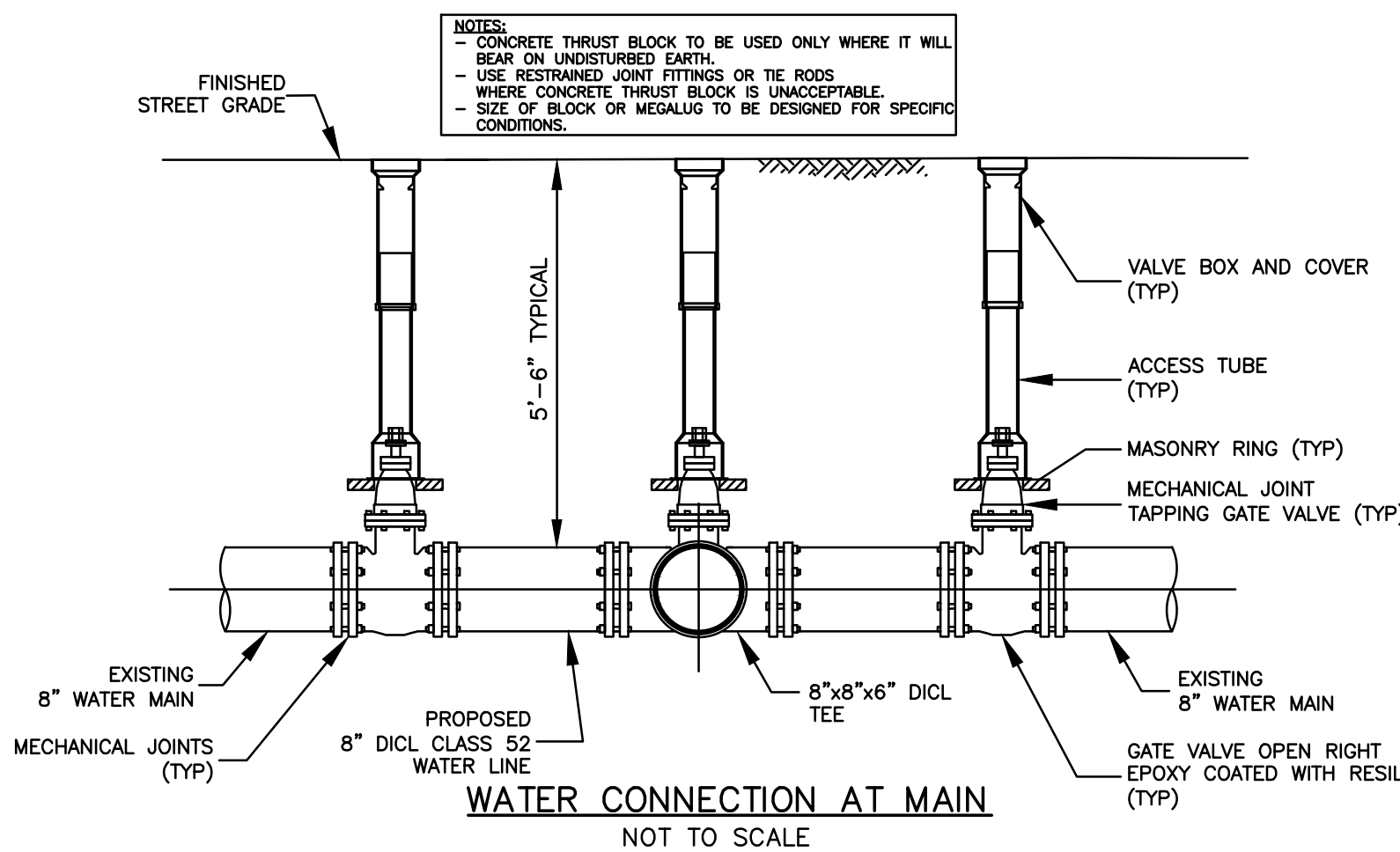
DRAIN CLEANOUT
NOT TO SCALE



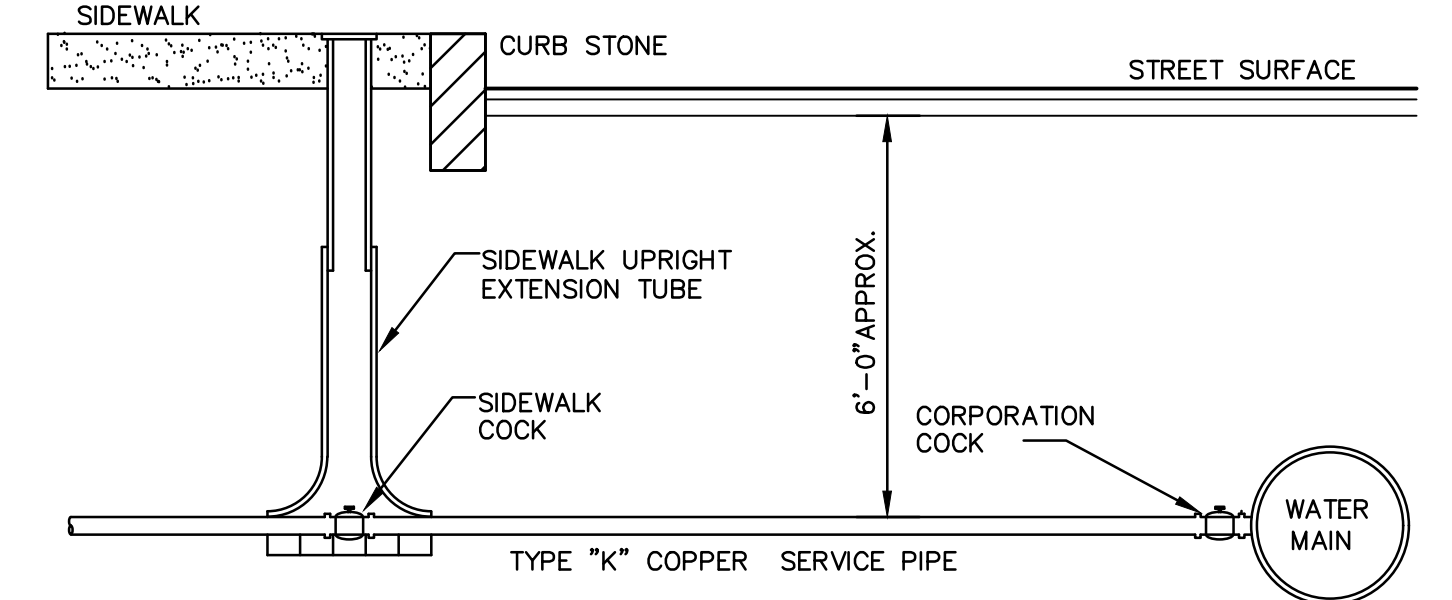
- GENERAL NOTES**
- REFER TO STORMTECH'S CURRENT RECOMMENDED INSTALLATION GUIDELINES.
 - MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 8\"/>



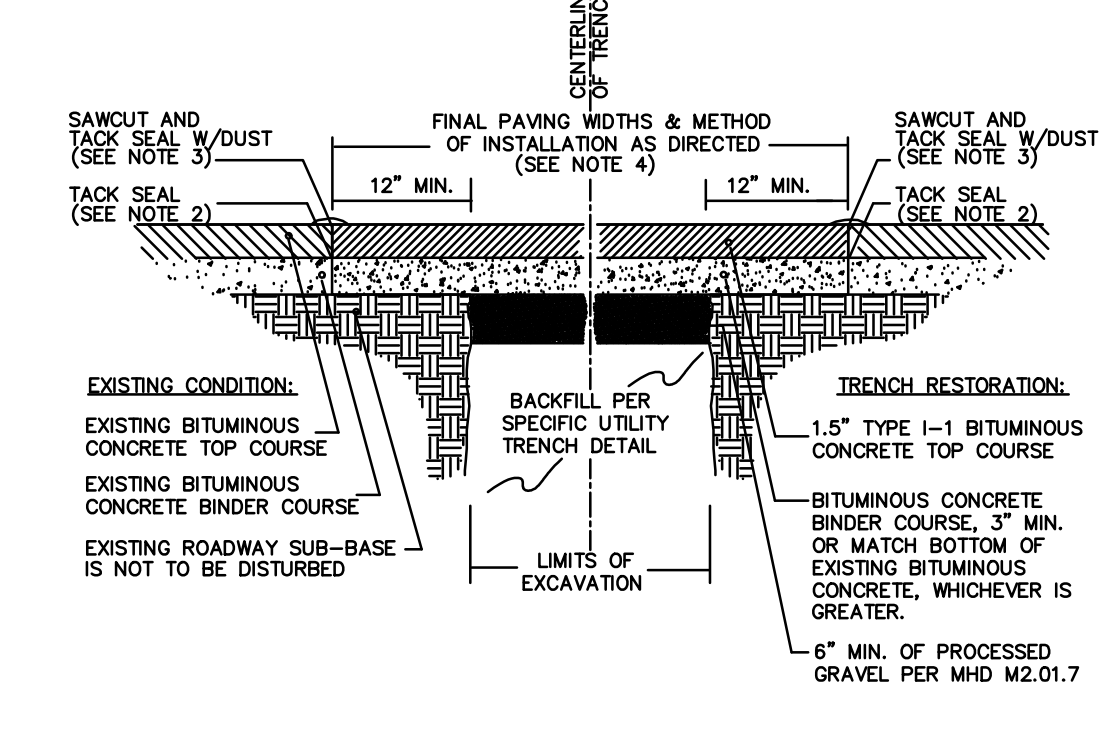
INFILTRATION SYSTEM #1 & #2 STORMTECH MC-3500 CHAMBER
SCALE: NOT TO SCALE



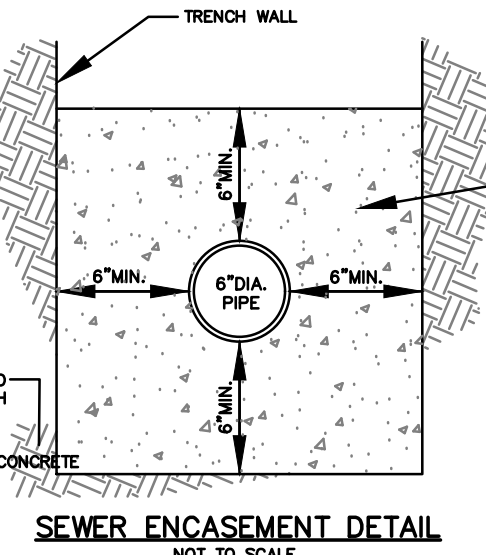
WATER CONNECTION AT MAIN
NOT TO SCALE



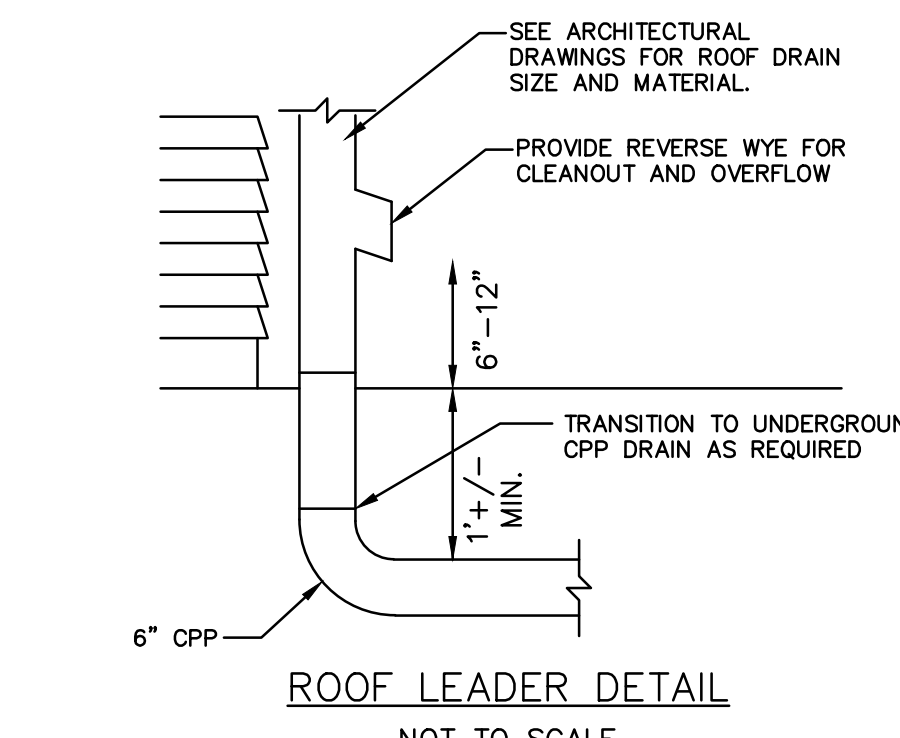
WATER CONNECTION 1\"/>



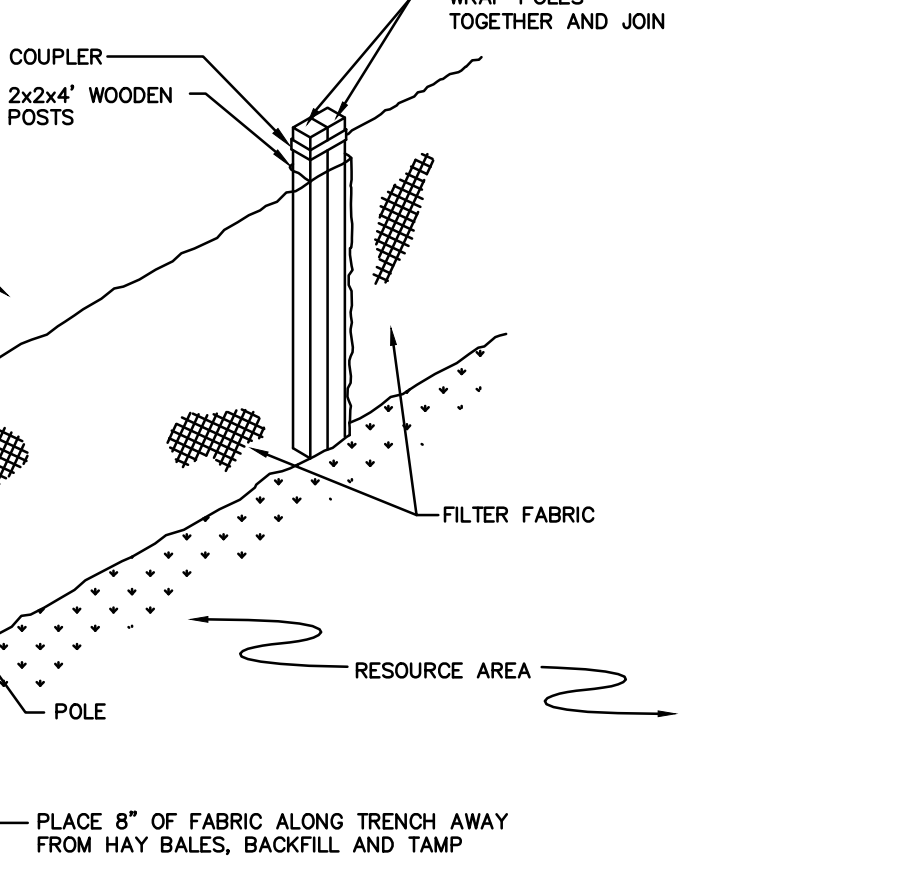
TYPICAL TRENCH REPAIR & PAVEMENT SECTION DETAIL (1/2)
NOT TO SCALE



SEWER ENCASUREMENT DETAIL
NOT TO SCALE



ROOF LEADER DETAIL
NOT TO SCALE



SILT FENCE
NOT TO SCALE

DETAILS-1
NEWTON, MASSACHUSETTS

SHOWING PROPOSED CONDITIONS AT #145 WARREN STREET

SCALE: AS-SHOWN DATE: APRIL 1, 2019
REVISED: APRIL 18, 2019, MAY 2, 2019

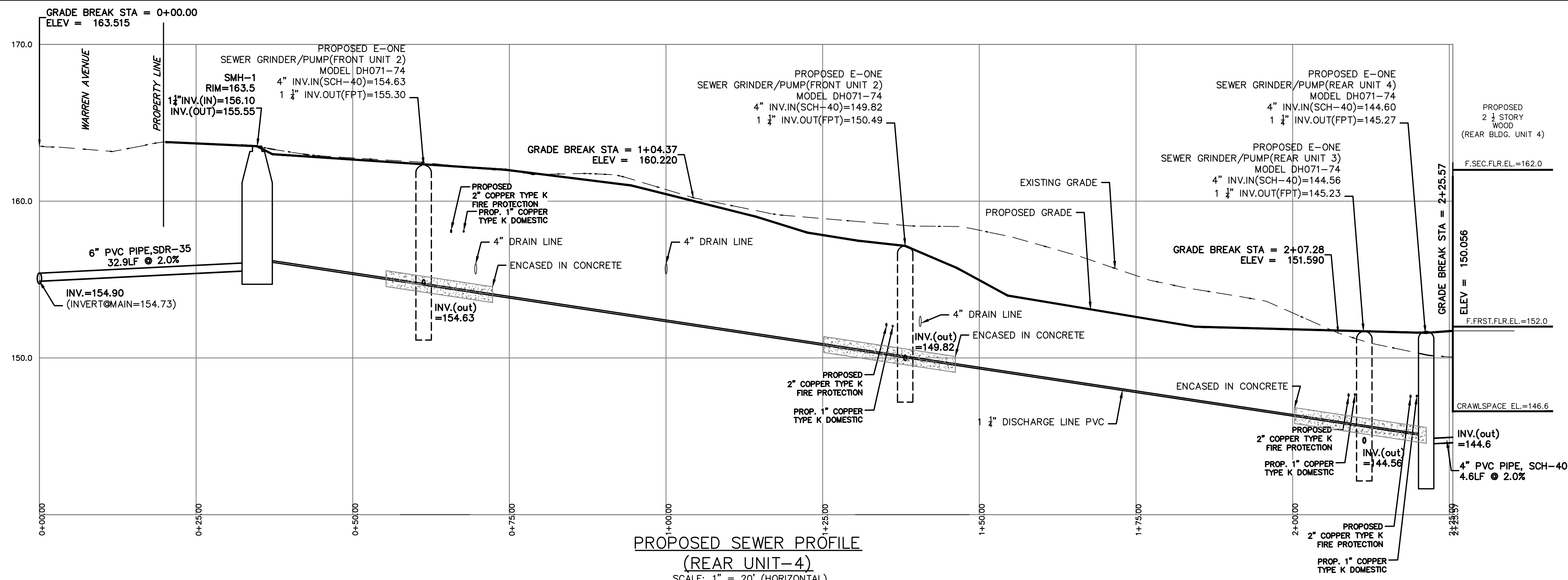
PROJECT: 217115

VTP ASSOCIATES INC.

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

SHEET 3 OF 4

217115_bpo(As_one_building).dwg (2.2017)

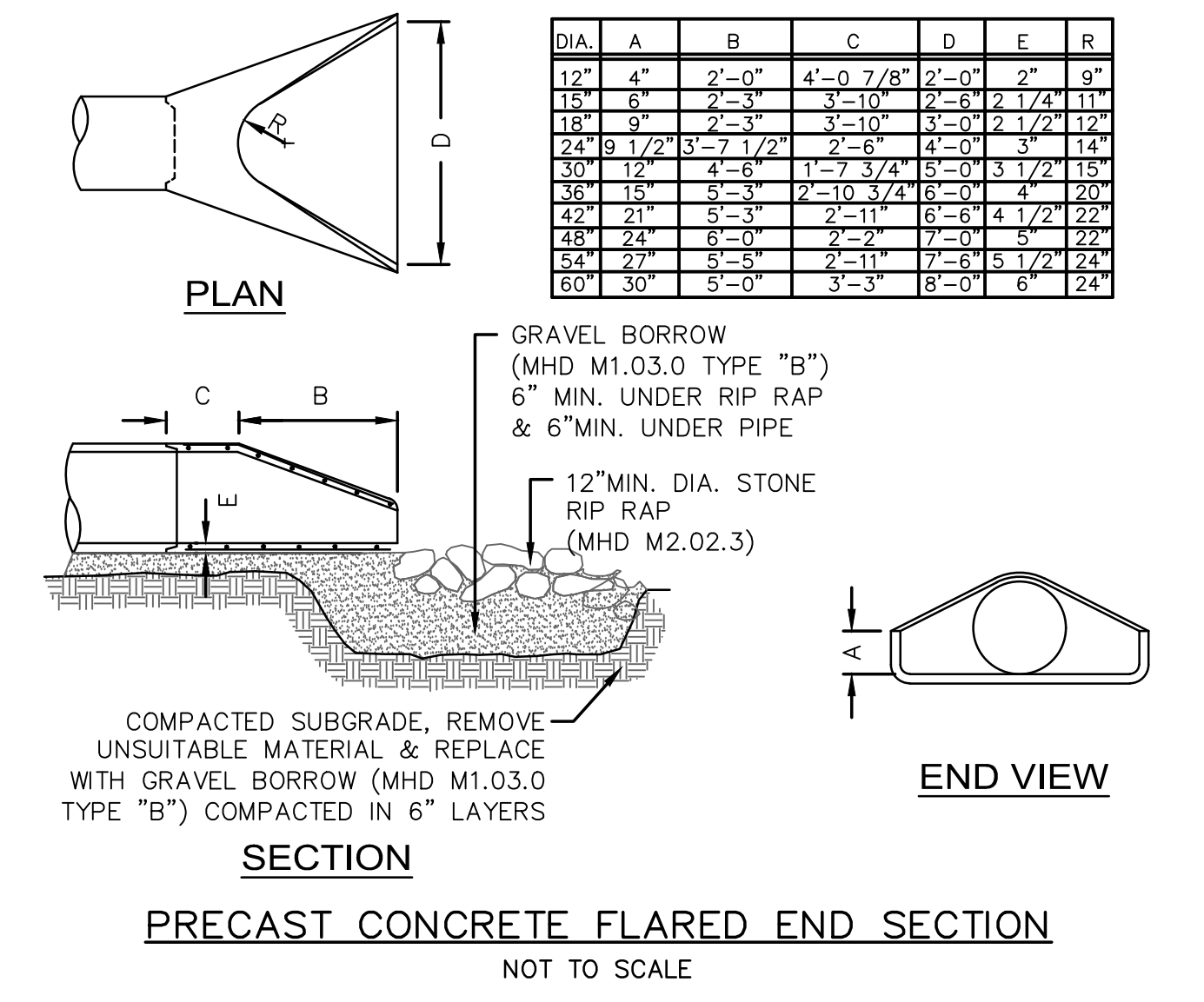
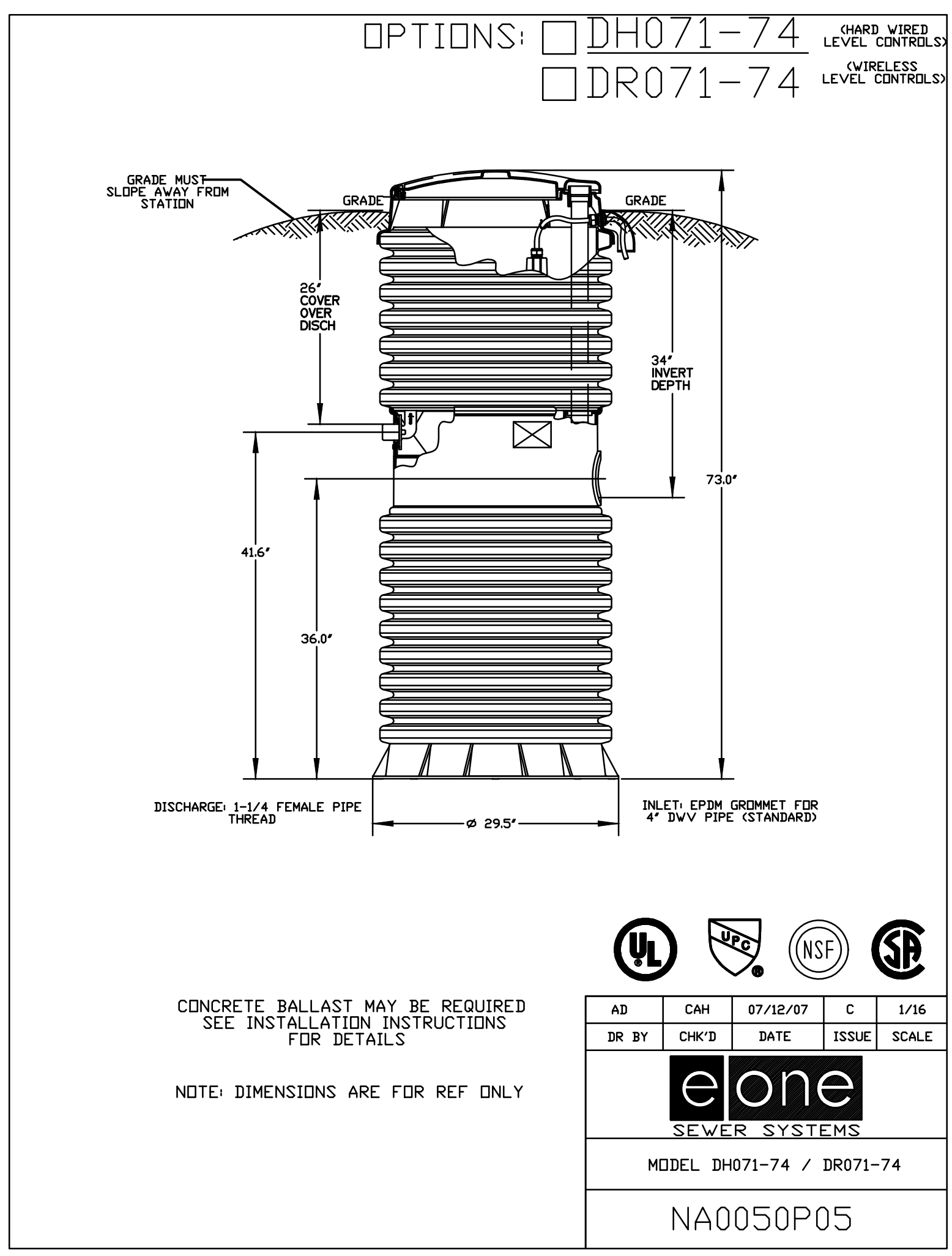
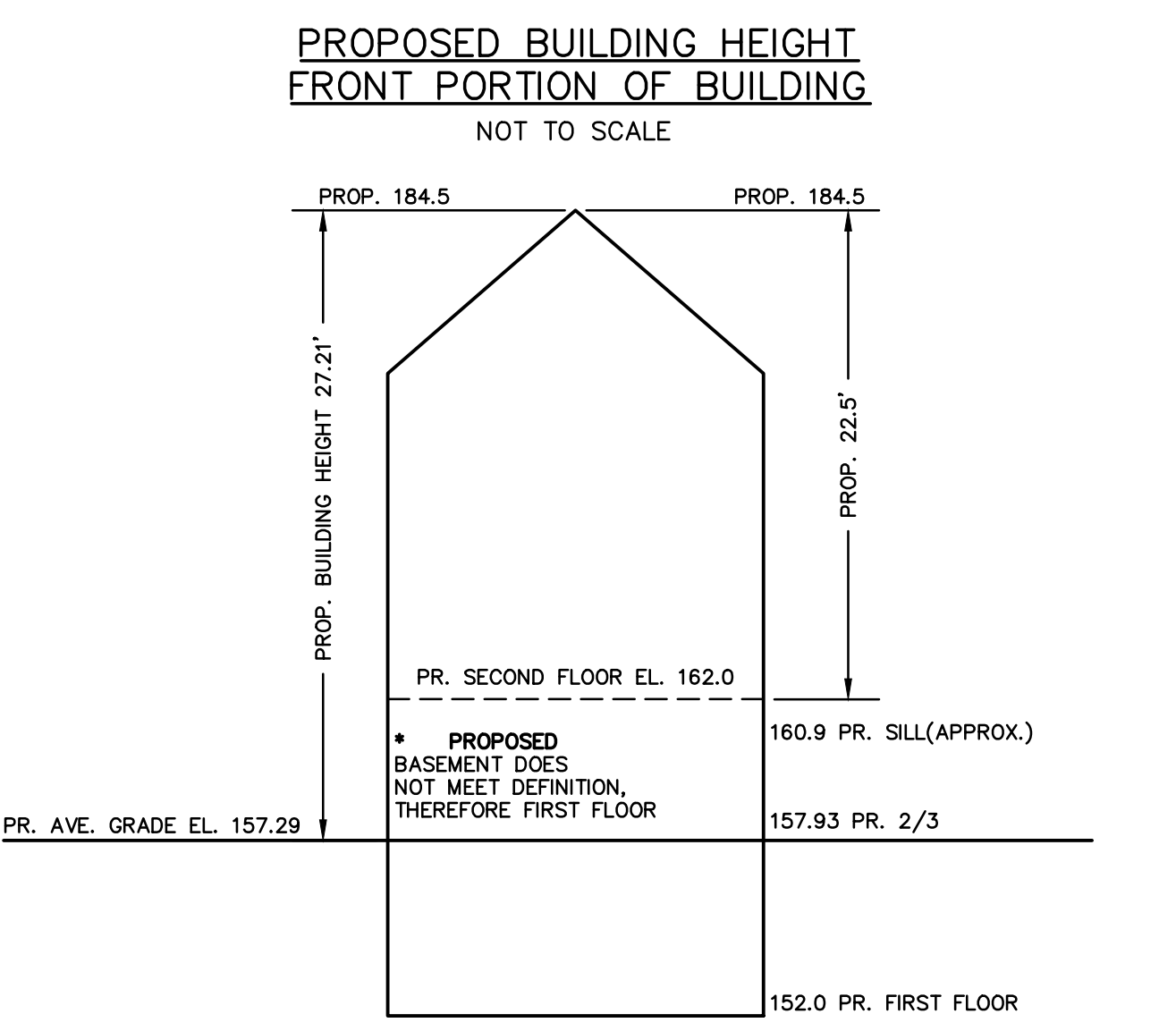
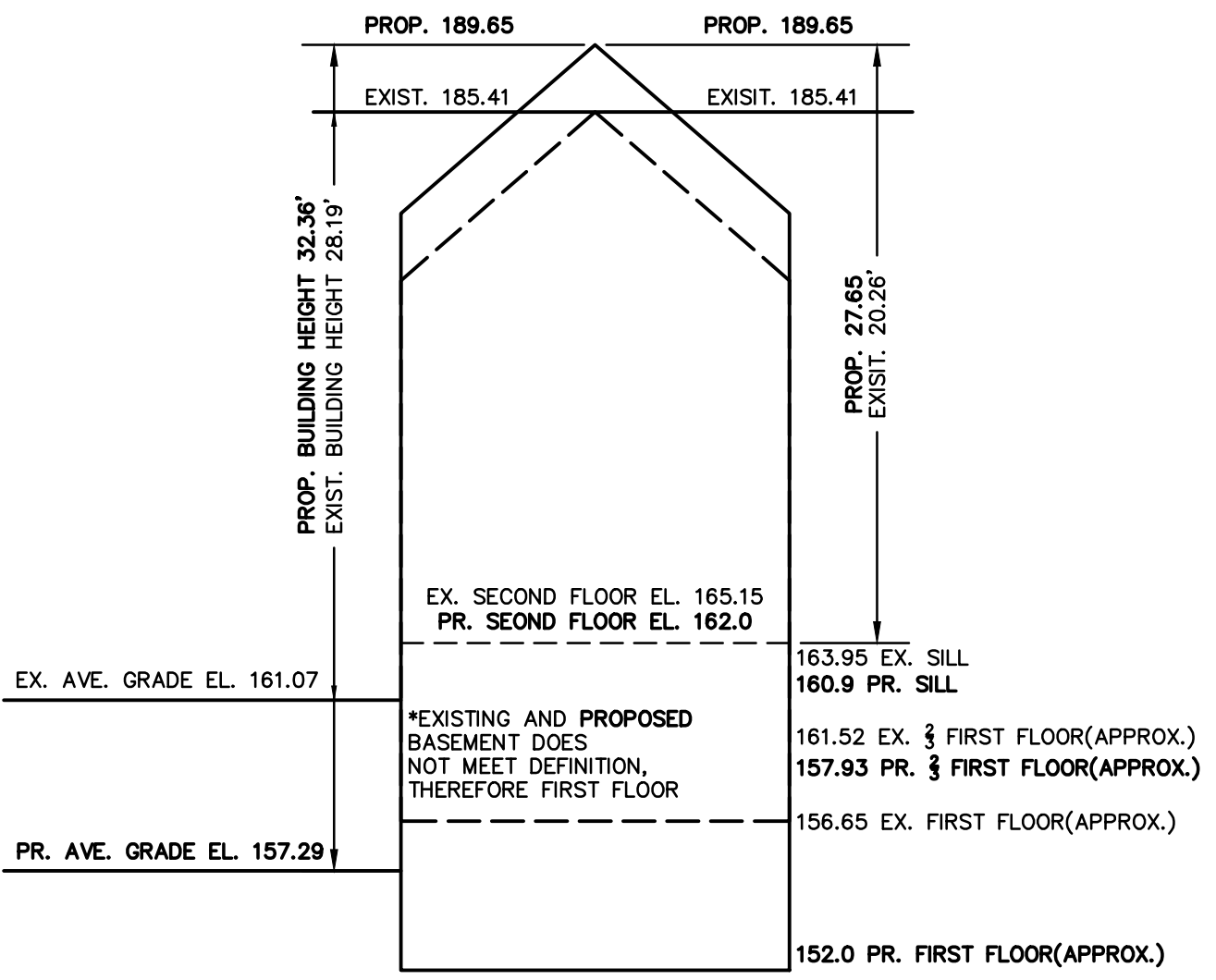


Address: #145 Warren Street, Newton

Length Weighted Mean - One Building

Proposed Conditions Average Grade Calculation

Segment	Length Of Segment in Feet	Height of High Point of Segment	Height of Low Point of Segment	E=(C+D)/2 Average Segment Height	F=BxE
1	11.36	164.67	163.20	163.94	1862.30 Sq. Ft.
2	6.90	164.54	164.27	164.41	1134.39 Sq. Ft.
3	9.30	164.54	164.45	164.50	1529.80 Sq. Ft.
4	15.95	164.02	163.14	163.58	2609.10 Sq. Ft.
5	12.80	163.05	162.24	162.65	2081.86 Sq. Ft.
6	11.00	162.26	161.50	161.88	1780.88 Sq. Ft.
7	20.20	161.50	161.10	161.30	3258.26 Sq. Ft.
8	11.00	161.10	161.00	161.05	1771.55 Sq. Ft.
9	6.50	161.10	161.00	161.05	1046.83 Sq. Ft.
10	25.50	161.10	161.00	161.05	4106.78 Sq. Ft.
11	0.60	161.50	161.00	161.25	96.75 Sq. Ft.
12	26.60	161.00	159.10	160.05	4257.33 Sq. Ft.
13	14.00	158.30	158.20	158.25	2215.50 Sq. Ft.
14	4.00	161.00	158.10	159.55	638.20 Sq. Ft.
15	13.40	158.30	158.00	158.15	2119.21 Sq. Ft.
16	5.60	157.80	157.70	157.75	883.40 Sq. Ft.
17	4.80	161.00	158.00	159.50	765.60 Sq. Ft.
18	5.60	161.50	157.70	159.60	893.76 Sq. Ft.
19	25.30	157.70	157.00	157.35	3980.96 Sq. Ft.
20	1.00	157.00	157.00	157.00	157.00 Sq. Ft.
21	18.70	153.10	152.20	152.65	2854.56 Sq. Ft.
22	45.60	152.00	151.90	151.95	6928.92 Sq. Ft.
23	66.50	152.00	151.00	151.50	10074.75 Sq. Ft.
24	27.40	153.00	152.00	152.50	4178.50 Sq. Ft.
25	4.80	153.50	153.00	153.25	735.60 Sq. Ft.
26	6.20	154.00	153.50	153.75	953.25 Sq. Ft.
27	3.30	153.50	152.00	152.75	504.08 Sq. Ft.
28	15.90	151.60	151.50	151.55	2409.65 Sq. Ft.
29	1.00	157.00	157.00	157.00	157.00 Sq. Ft.
30	3.20	157.10	156.90	157.00	502.40 Sq. Ft.
31	6.00	158.00	157.20	157.60	945.60 Sq. Ft.
32	13.80	159.00	157.50	158.25	2183.85 Sq. Ft.
33	5.00	158.50	156.60	157.55	787.75 Sq. Ft.
34	8.10	156.10	156.00	156.05	1264.01 Sq. Ft.
35	6.50	156.10	156.00	156.05	1014.33 Sq. Ft.
36	1.00	160.20	160.20	160.20	160.20 Sq. Ft.
37	14.10	160.50	160.00	160.25	2259.53 Sq. Ft.
38	12.20	162.00	161.10	161.55	1970.91 Sq. Ft.
39	14.90	162.30	162.30	162.30	2418.27 Sq. Ft.
40	6.00	163.20	162.30	162.75	976.50 Sq. Ft.
Total	511.61				80468.88 Sq. Ft.
Total Column F / Total Column B = Average Grade					Average Grade: 157.29'



DETAIL-2
 NEWTON, MASSACHUSETTS

SHOWING PROPOSED CONDITIONS AT #145 WARREN STREET

SCALE: AS-SHOWN DATE: APRIL 1, 2019
 REVISED: APRIL 18, 2019,
 MAY 2, 2019; JUNE 26, 2019;
 PROJECT: 217115 JULY 11, 2019

VTP ASSOCIATES INC.

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

SHEET 4 OF 4