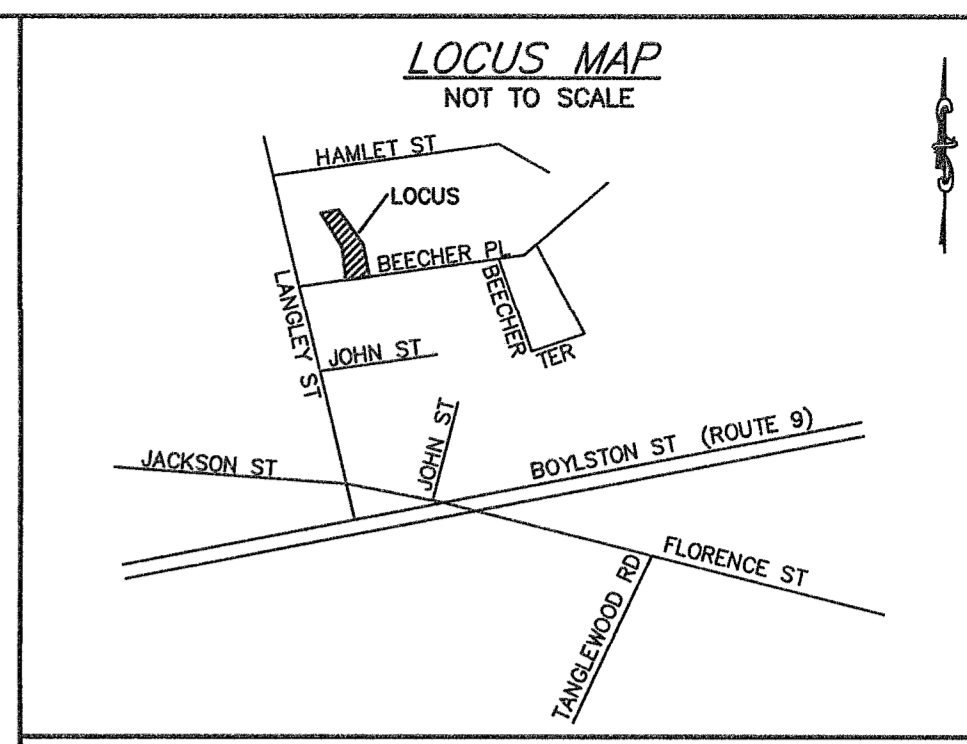


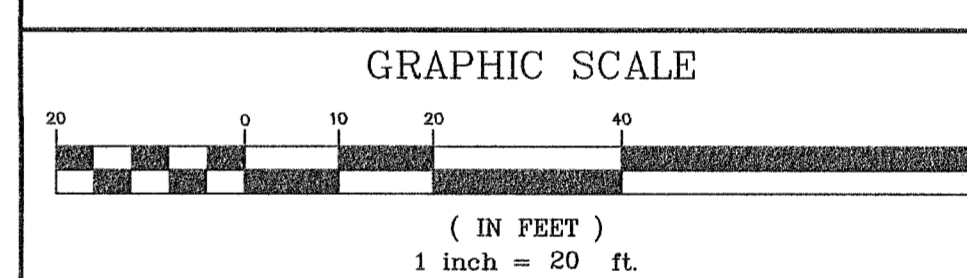
SITE NOTES:

- EXISTING CONDITIONS SURVEY PERFORMED BY FIELD RESOURCES, INC. 281 CHESTNUT STREET NEEDHAM, MA 02492.
- DATUM IS CITY OF NEWTON BASE.
- SITE IS NOT IN A FLOOD PLAIN AS SHOWN ON FIRM MAP PANEL 250208 558E FOR THE CITY OF NEWTON MASSACHUSETTS, MIDDLESEX COUNTY PANEL 558 OF 656, DATED JUNE 4, 2010.



LEGEND:

---	EXISTING PROPERTY LINE
- - - 163 - - -	EXISTING 1' CONTOUR
- - - 165 - - -	EXISTING 5' CONTOUR
---	EXISTING EDGE OF PAVEMENT
---	EXISTING CURB
---	EXISTING DRAIN LINE
---	EXISTING SEWER LINE
---	EXISTING WATER LINE
---	EXISTING GAS LINE



REV. NO.	DATE	REVISION
3	12/11/17	CITY COMMENTS
2	12/5/17	CITY COMMENTS
1	10/27/17	CITY COMMENTS

TEST HOLE DATA

TH 1
ELEV. 161.5
0-6" A/FILL
16-30" C LS SOME SMALL GRAVEL
LEDGE @30"
ESHOW: NONE

TH 2
ELEV. 161.5
0-6" A/FILL
6-30" FILL
LEDGE @30"
ESHOW: NONE

TH 3
ELEV. 161.5
0-24" A/FILL
LEDGE @24"
ESHOW: NONE

*Natasha Khan Dec 15, 2017
Please see approval memo for
conditions*

*J.M. Grenier
12-11-17
SOIL DATA*

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ON THIS PLAN ARE APPROXIMATE ONLY. THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES MAY NOT BE SHOWN HEREON. CONTACT DIG SAFE (1-888-344-7233) AND LOCAL AUTHORITIES PRIOR TO CONSTRUCTION.

SITE DEVELOPMENT PLAN
FOR
22 BEECHER PLACE
MAP 65 BLOCK 8 PARCEL 28
NEWTON, MASSACHUSETTS 02459

PREPARED FOR:
22 BEECHER PLACE REALTY TRUST
19 HOLBROOK AVENUE
HULL, MASSACHUSETTS 02045

PREPARED BY:
J.M. GRENIER ASSOCIATES INC.
787 HARTFORD TURNPIKE
SHREWSBURY, MASSACHUSETTS 01545
TELE NO.: (508) 842-6229 FAX NO.: (508) 842-0800

SCALE: 1" = 20' DATE: OCTOBER 20, 2017

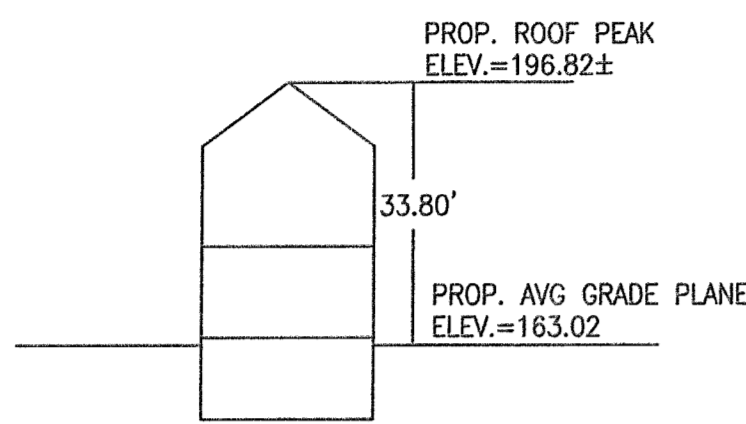
EXISTING CONDITIONS

SHEET NO.: SHEET 1 OF 4 PROJECT NO.: G-494

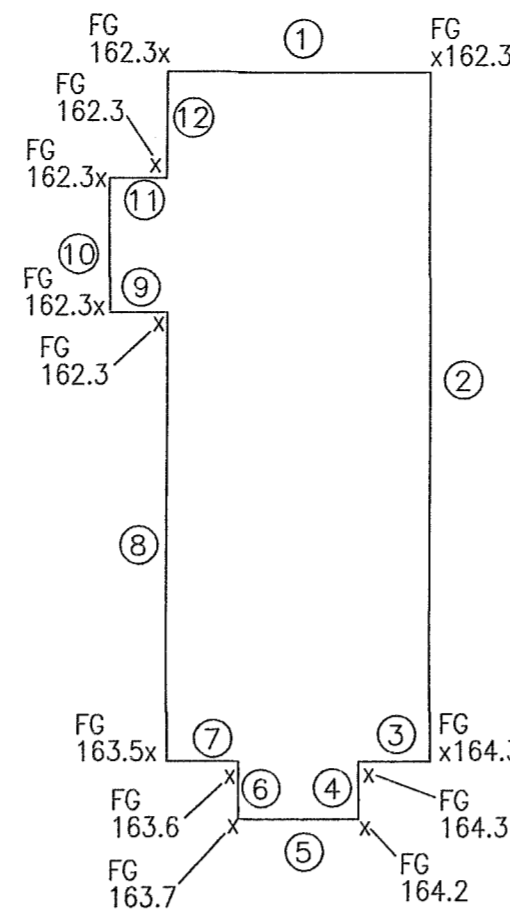
ZONING DISTRICT: MULTI RESIDENCE 1 (MR1)

	REQUIRED	PROPOSED
LOT AREA:	7,000 SQ.FT.**	10,146 SQ.FT.**
LOT AREA/UNIT:	3,500 SQ.FT.**	5,073 SQ.FT.**
FRONTAGE:	70'	45.33'
FRONT YARD SETBACK:	25'	93.5'
SIDE YARD SETBACK:	7.5'	7.5'
REAR YARD SETBACK:	15'	20.2'
BUILDING COVERAGE:	30%	21.2%
BUILDING HEIGHT:	36' / 2.5 STORIES	33.80' / 2.5 STORIES
OPEN SPACE:	50% / 3,500 SQ.FT.	50.3% / 5,106 SQ.FT.
FLOOR AREA RATIO:	0.48	0.45

* PRE-EXISTING NONCONFORMING
 ** LOT IN EXISTENCE ON DECEMBER 7, 1953

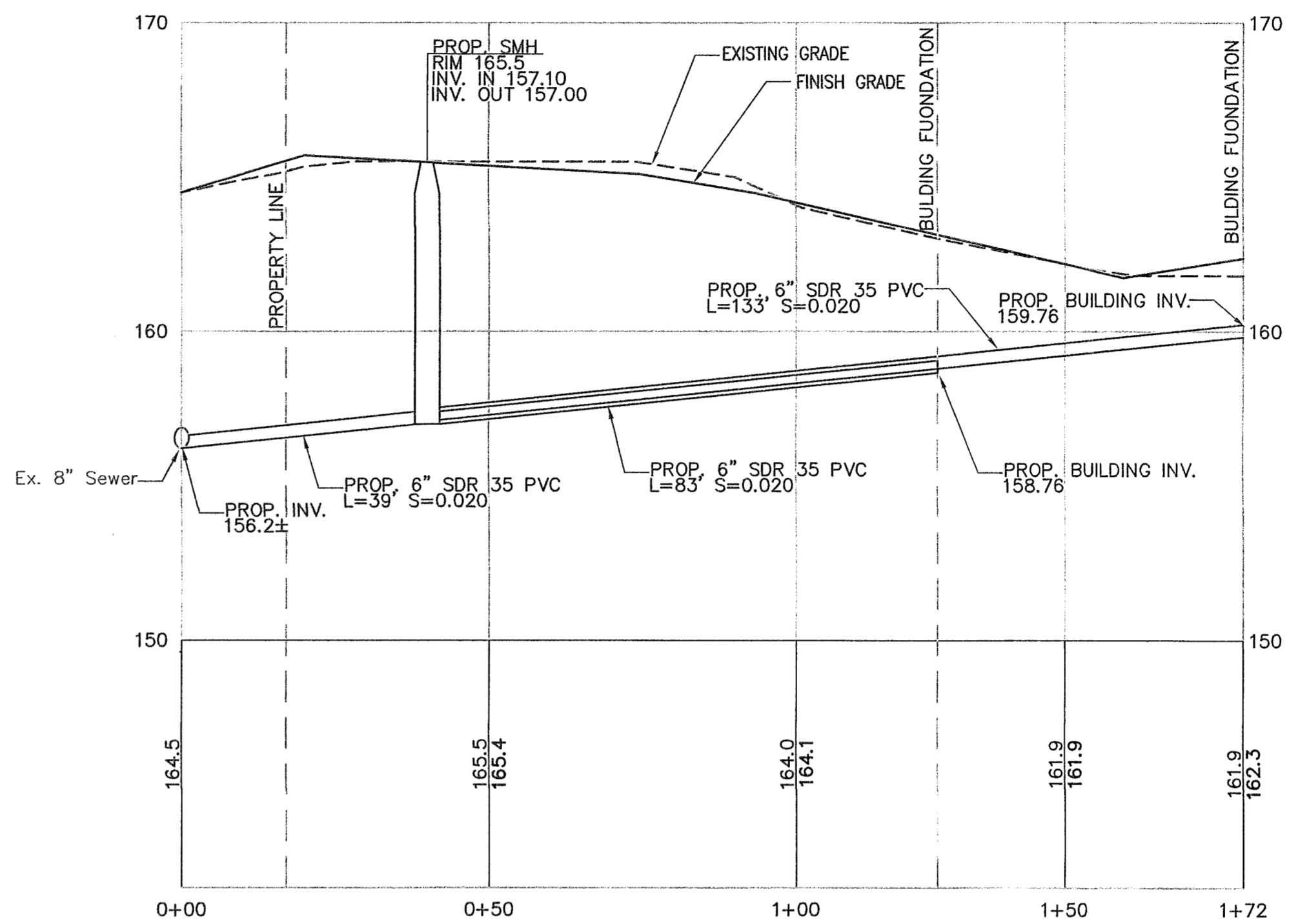


PROPOSED BUILDING PROFILE
 NOT TO SCALE



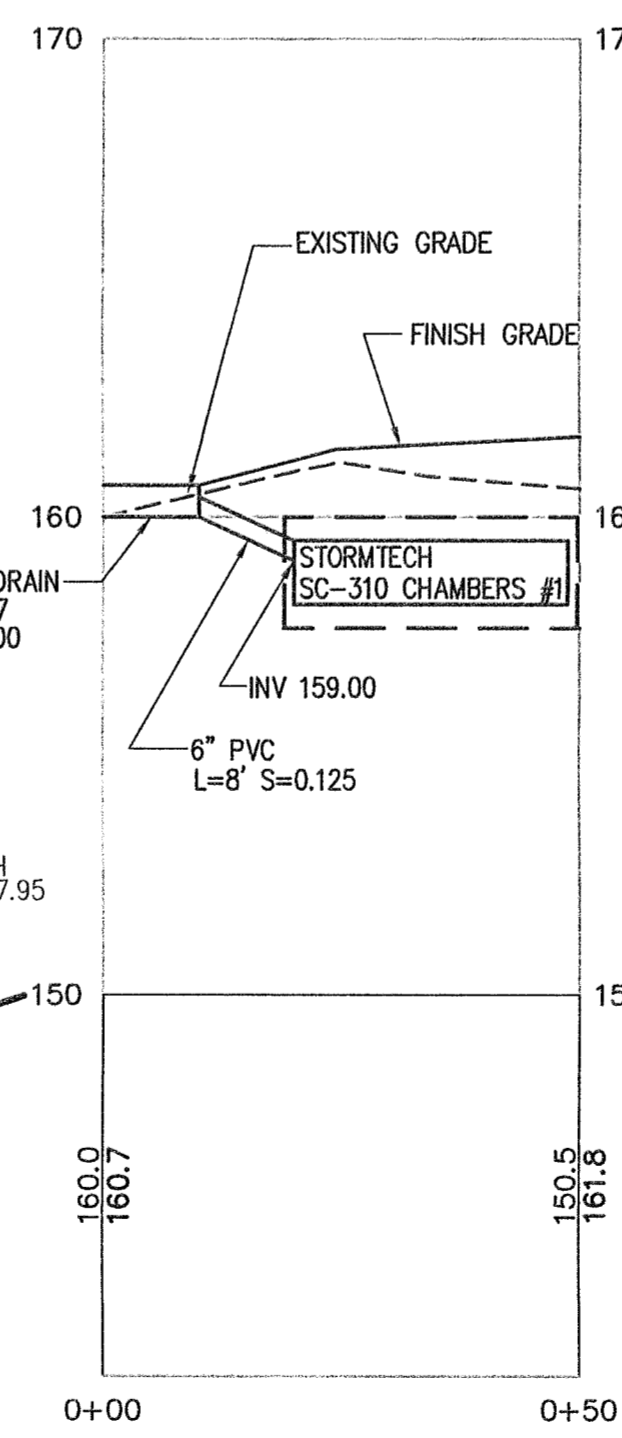
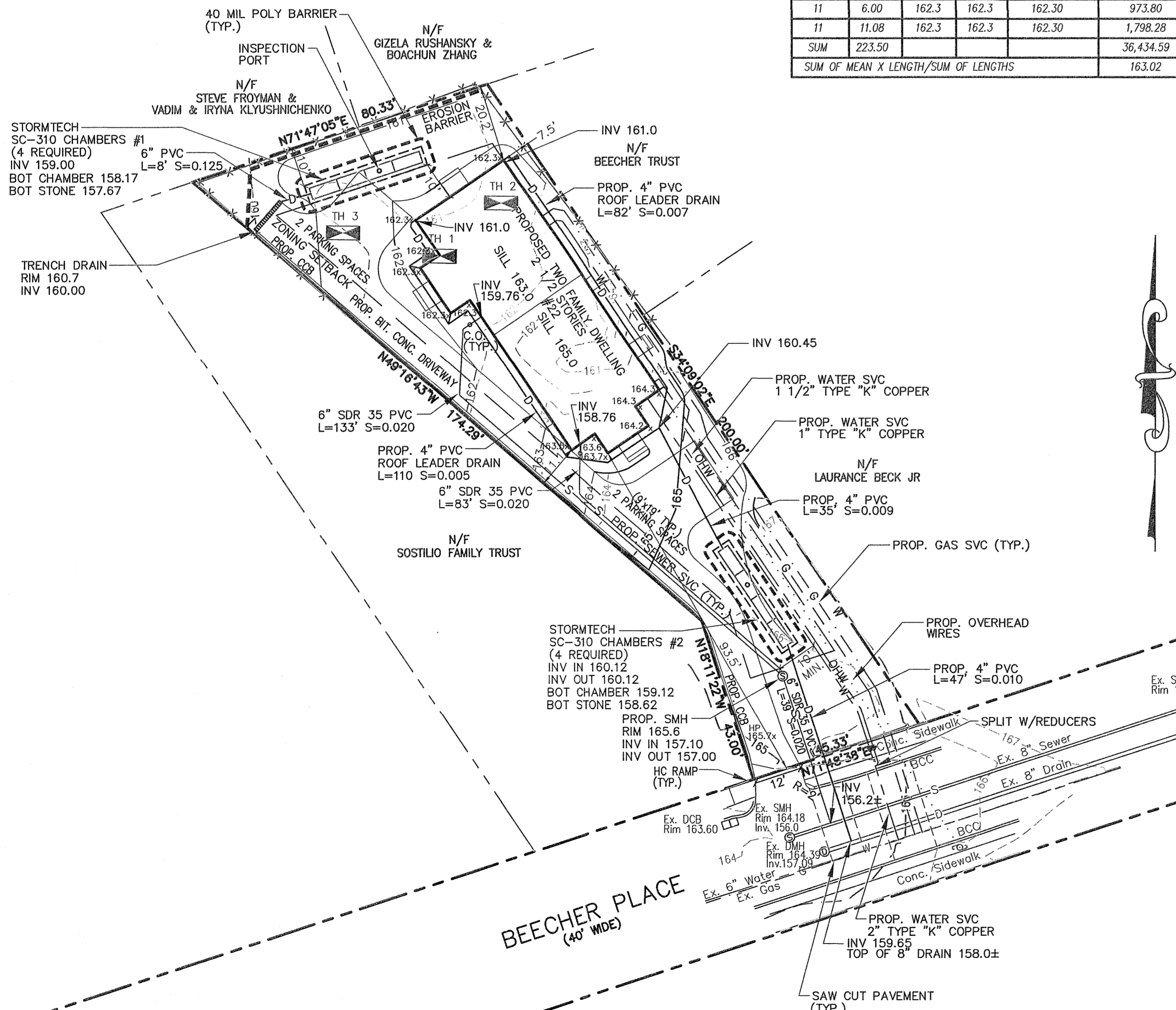
AVERAGE GRADE PLANE (UNITS IN FEET)

SEGMENT	LENGTH	POINT 1	POINT 2	MEAN 1 & 2	MEAN X LENGTH
1	27.67	162.3	162.3	162.30	4,490.84
2	72.08	162.3	164.3	163.30	11,770.66
3	7.50	164.3	164.3	164.30	1,232.25
4	6.00	164.3	164.2	164.25	985.50
5	12.67	164.2	163.7	163.95	2,077.25
6	6.00	163.7	163.6	163.65	981.78
7	7.50	163.6	163.5	163.55	1,226.63
8	47.00	162.3	163.3	162.80	7,651.60
9	6.00	162.3	162.3	162.30	973.80
10	14.00	162.3	162.3	162.30	2,272.20
11	6.00	162.3	162.3	162.30	973.80
11	11.00	162.3	162.3	162.30	1,798.28
SUM	223.50				36,434.59
SUM OF MEAN X LENGTH/SUM OF LENGTHS					163.02



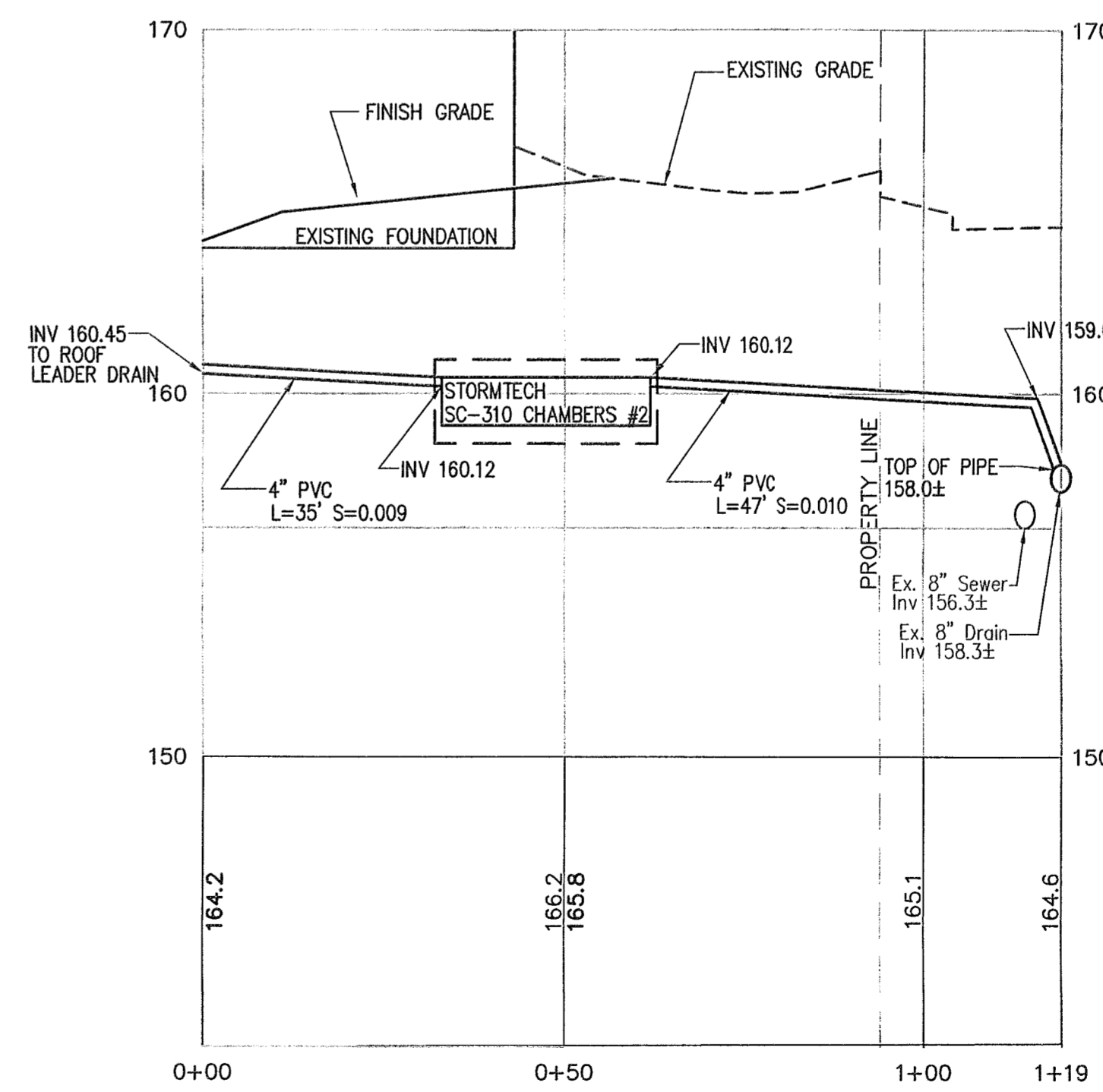
SEWER SERVICE PROFILE

SCALE: HORIZONTAL = 1"=20'
 VERTICAL = 1"=2'



DRAIN PROFILE
 TRENCH DRAIN TO CHAMBERS

SCALE: HORIZONTAL = 1"=20'
 VERTICAL = 1"=2'



DRAIN PROFILE
 ROOF DRAIN TO STREET

SCALE: HORIZONTAL = 1"=20'
 VERTICAL = 1"=2'

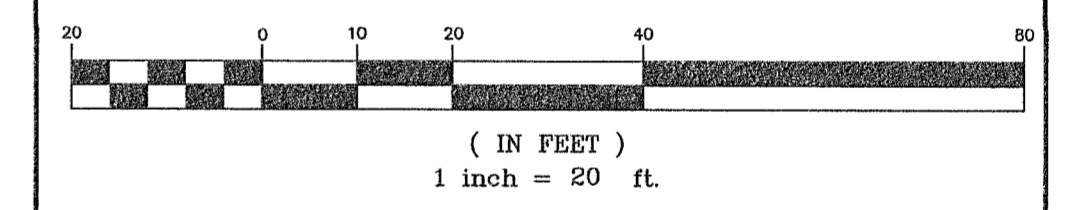
LEGEND:

- EXISTING PROPERTY LINE
- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- EXISTING EDGE OF PAVEMENT
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CAPE COD BERM
- EXISTING CURB
- EXISTING DRAIN LINE
- PROPOSED DRAIN LINE
- EXISTING SEWER LINE
- PROPOSED SEWER SERVICE
- EXISTING WATER LINE
- PROPOSED WATER SERVICE
- EXISTING GAS LINE
- PROPOSED GAS SERVICE
- OHW --- PROPOSED OVERHEAD WIRES

NOTES:

1. LOCATION OF EXISTING UTILITY SERVICES TO BE VERIFIED PRIOR TO CONSTRUCTION AND SHALL BE ABANDONED AS REQUIRED BY THE CITY OF NEWTON OR UTILITY COMPANY.
2. ALL TRENCHES WITHIN BEECHER PLACE SHALL BE BACKFILLED AS REQUIRED BY THE CITY OF NEWTON.
3. SEWER SHALL BE INSTALLED WITH A MINIMUM HORIZONTAL SEPARATION OF 10 FEET FROM ALL WATER SUPPLY LINES. WHEN A 10 FOOT SEPARATION CANNOT BE MAINTAINED THE WATER MAIN SHALL BE INSTALLED IN A SEPARATE TRENCH ABOVE THE SEWER WITH AN 18 INCH VERTICAL SEPARATION BETWEEN THE CROWN OF THE SEWER AND THE INVERT OF THE WATER MAIN.
4. CONTRACTOR SHALL CONTACT DIG SAFE AT 1-888-344-7233 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION.
5. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND CONDITIONS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
6. SEE ARCHITECTURAL PLANS FOR GUTTER AND DOWNSPOUT LOCATIONS.

GRAPHIC SCALE



REV. NO.	DATE	REVISION
3	12/11/17	CITY COMMENTS
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1	10/27/17	CITY COMMENTS

SITE DEVELOPMENT PLAN
 FOR
 22 BEECHER PLACE
 MAP 65 BLOCK 8 PARCEL 28
 NEWTON, MASSACHUSETTS 02459

PREPARED FOR:
 22 BEECHER PLACE REALTY TRUST
 19 HOLBROOK AVENUE
 HULL, MASSACHUSETTS 02045

PREPARED BY:
 J.M. GRENIER ASSOCIATES INC.
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 SHREWSBURY, MASSACHUSETTS 01545

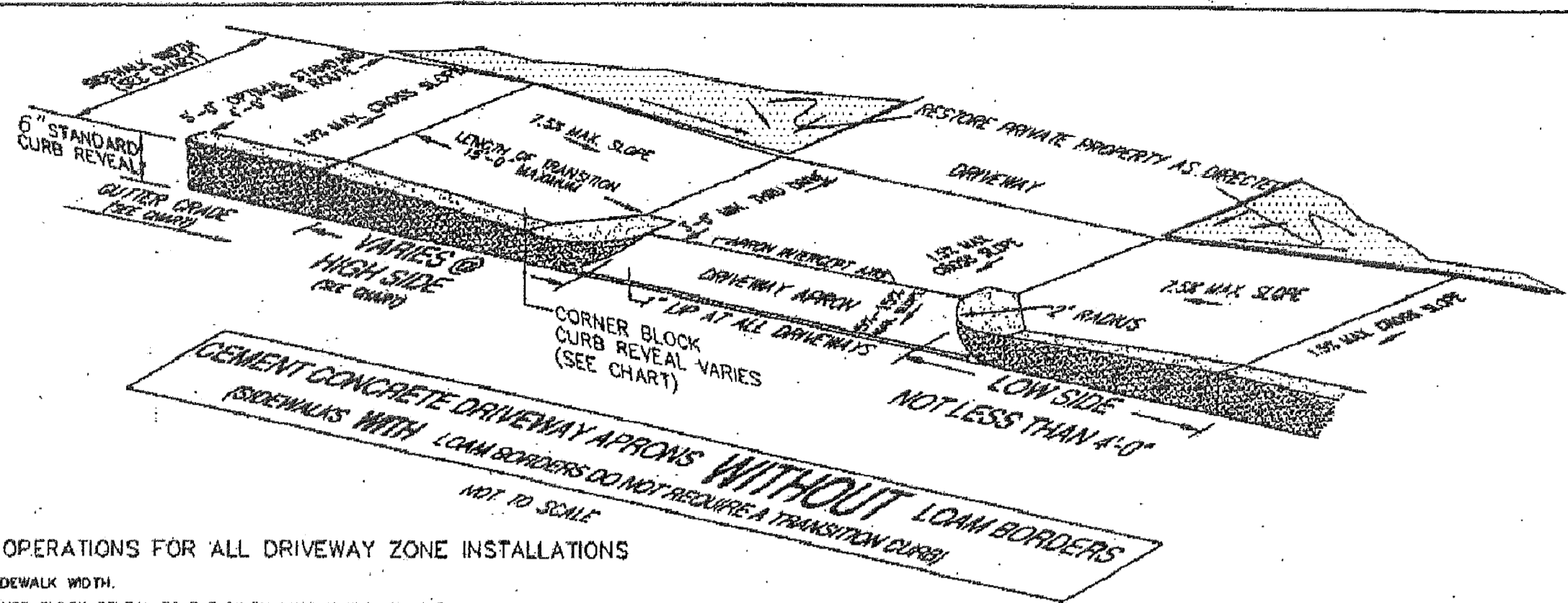
TELE NO.: (508) 842-6229 FAX NO.: (508) 842-0800

SCALE: 1" = 20' DATE: OCTOBER 20, 2017

PROPOSED CONDITIONS

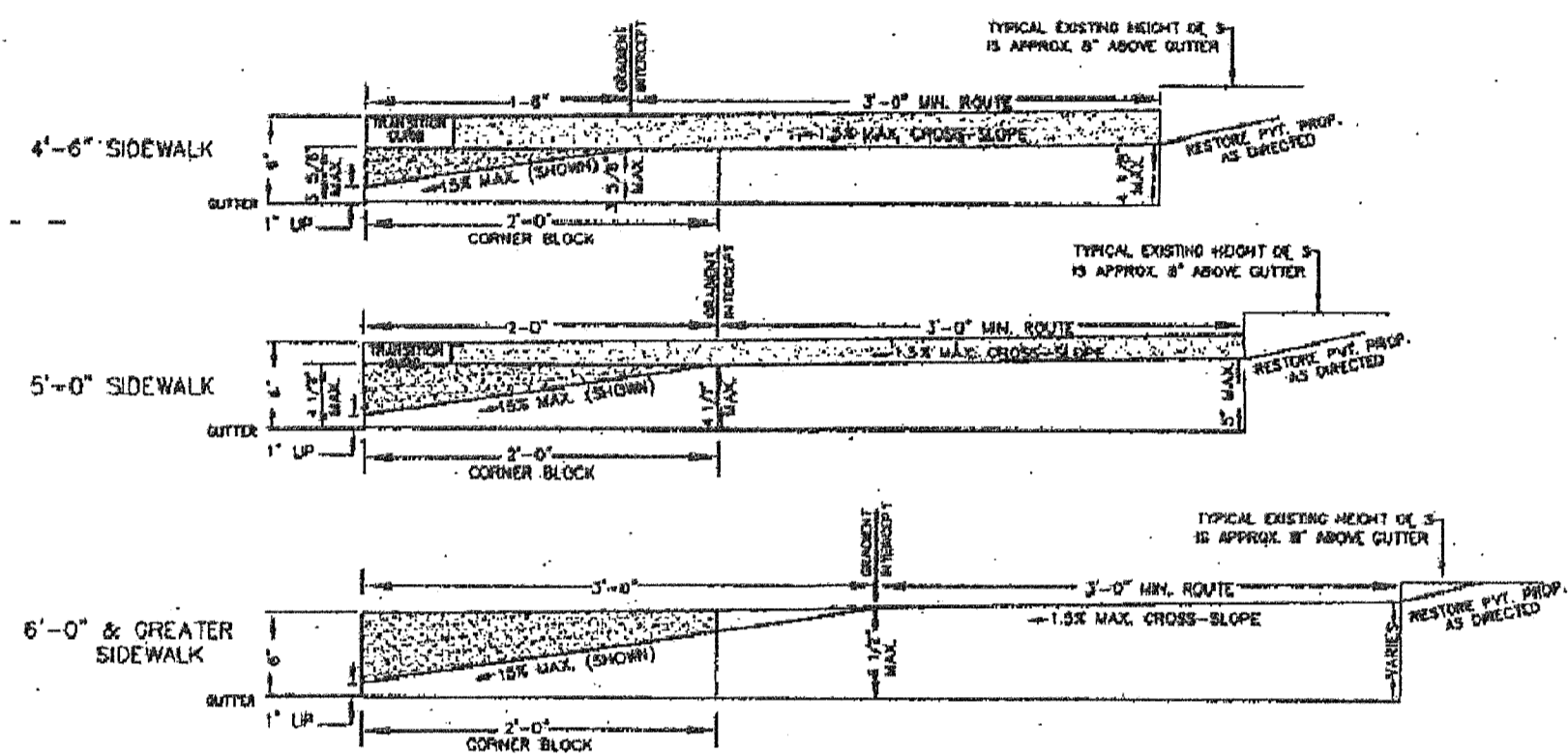
SHEET NO.: SHEET 2 OF 4 PROJECT NO.: G-494

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ORDER OF OPERATIONS FOR ALL DRIVEWAY ZONE INSTALLATIONS

1. DETERMINE SIDEWALK WIDTH.
2. SET THE CORNER BLOCK REVEAL TO THE DIMENSIONS SHOWN ON THE CHART BELOW AND INSTALL THE TRANSITION CURB.
3. LOCATE THE INTERCEPT AXIS AND RE-CHECK FOR THE MINIMUM ACCESSIBLE ROUTE WIDTH.
4. SET THE 1.5% GRADIENT TO THE BACK OF THE WALK WITH A 2' SMART LEVEL AND RIGID STRAIGHTEDGE.
5. FINE GRADE THE APRON AREA WHILE MAINTAINING THE INTERCEPT AXIS AND BACK OF SIDEWALK GRADE POINTS.
6. CHECK THE FORMS. HOWEVER, THE CONTRACTOR MUST USE A 2' SMART LEVEL DURING OPERATIONS TO ENSURE THAT THE FINAL LINE AND GRADE COMPLIES WITH THE NOTED DIMENSIONS AND/OR GRADIENTS.
7. DURING THE FINISHING OPERATIONS OF THE CEMENT CONCRETE, THE CONTRACTOR IS TO CHECK THE FINAL PRODUCT(S) TO ENSURE CONTINUED COMPLIANCE WITH THE NOTED STANDARDS.



SECTION VIEW FOR THE VARIOUS WIDTHS OF DRIVEWAY
NOT TO SCALE

DRIVEWAY TRANSITIONS TO INTERCEPT 6" STD. CURB REVEAL (TARGET VALUES ONLY)

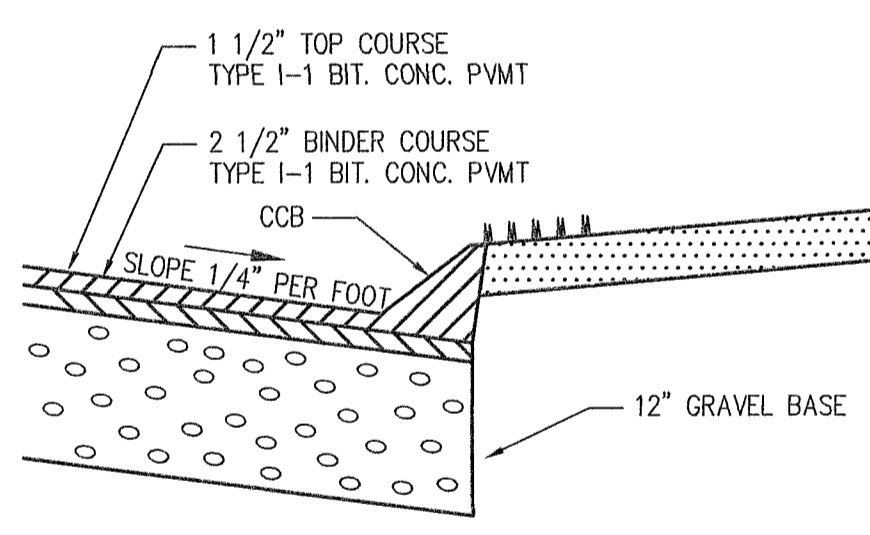
WALK WIDTH	CORNER BLOCK REVEAL	DISTANCE TO APRON INTERCEPT	RISE TO APRON INTERCEPT	CUTTER GRADE	HIGH SIDE LENGTH OF TRANSITION CURB INCLUDING THE 2' RADIUS CURB BLOCK
4'-6"	3 5/8" MAX.	1'-6" FIXED	3 5/8" MAX.	UP TO .5	4'-0"
				1	4'-0"
				2	4'-0"
				3	4'-0"
				4	4'-0"
				5	4'-0"
				6	4'-0"
5'-0"	4 1/2" MAX.	2'-0" FIXED	4 1/2" MAX.	7 & GREATER	15'-0" MAX.
				1	4'-0"
				2	4'-0"
				3	4'-0"
				4	4'-0"
				5	4'-0"
				6	4'-0"
6'-0" & GREATER	6" STANDARD	3'-0" FIXED	6 1/2" MAX.	ALL GRADES	NO TRANSITIONS

1. FINAL PRODUCT(S) MUST NOT EXCEED THE 7.5% GRADIENT OR 1.5% GROSS SLOPE STANDARDS.
2. WHEN THE FACTOR FALLS BETWEEN THE LISTED RANGE, USE THE LESSER GRADIENT FACTOR.
3. THE MAXIMUM REQUIRED TRANSITION LENGTH OF CURB IS 15'-0"
4. SIDEWALKS WITH LOAM BORDERS DO NOT REQUIRE TRANSITION CURBS.

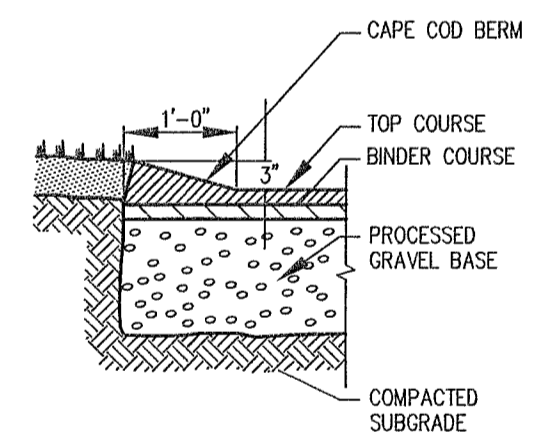
DRIVEWAY APRONS

IMPORTANT NOTE (APPLICABLE TO ALL CURB & DRIVEWAYS)

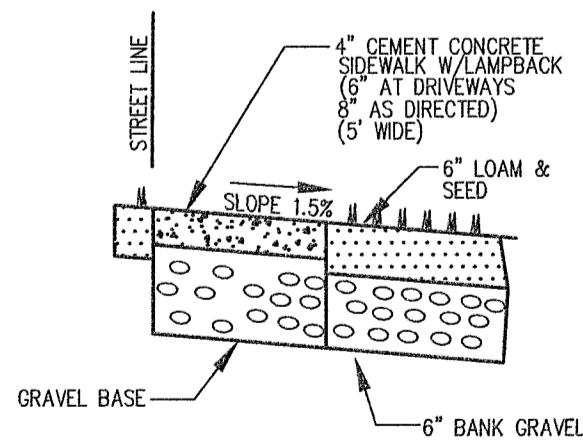
ALL DIMENSIONAL INFORMATION IS FOR GUIDELINES PURPOSES ONLY. THE FINAL PRODUCTS ROUTE CRITERIA PER THE RULES & REGULATIONS OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD AND THE AMERICANS WITH DISABILITIES ACT.



DRIVEWAY PAVEMENT DETAIL
NOT TO SCALE

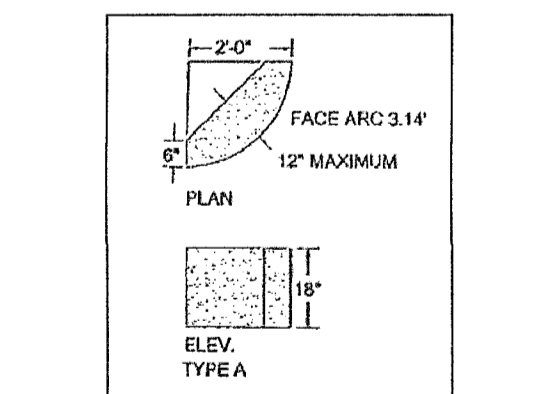


CAPE COD BERM
NOT TO SCALE

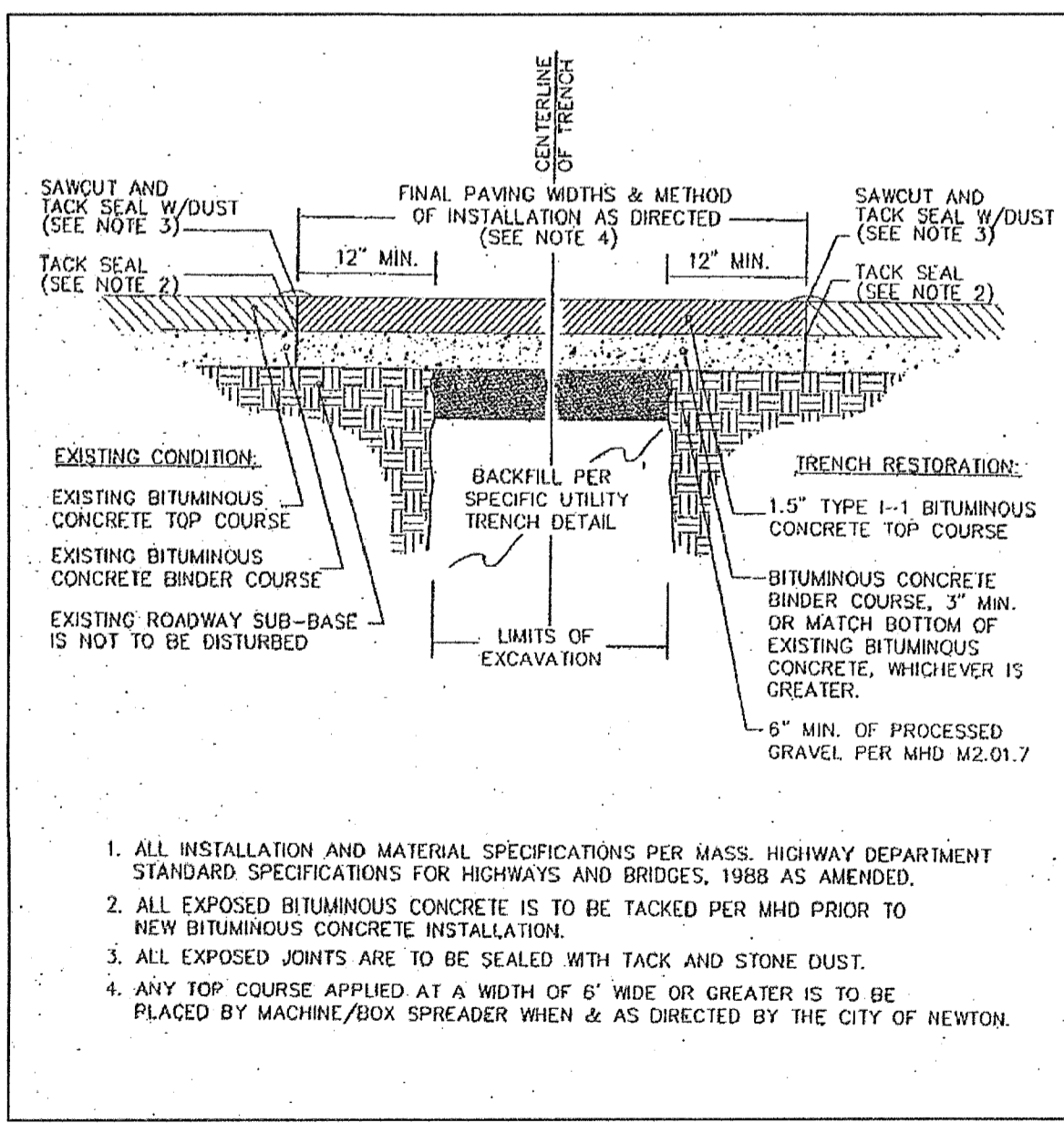


CEMENT CONCRETE SIDEWALK
NOT TO SCALE

NOTE: 6" GRAVEL (6" AT DRIVEWAYS) AND 2" DENSE GRADED CRUSHED STONE TO LEVEL (BANK RUN GRAVEL MUST CONFORM TO M1.03.0 OF THE STANDARD SPECIFICATIONS)

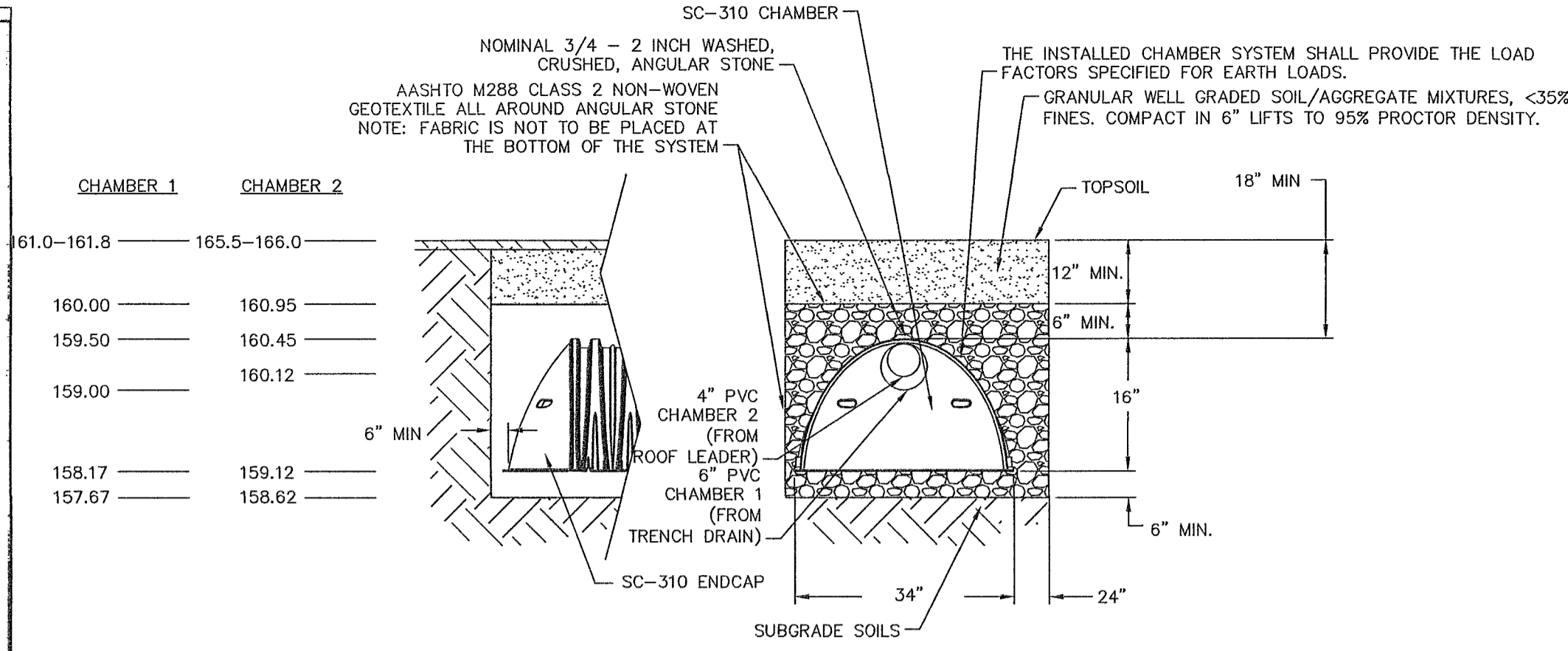


CORNER BLOCK DETAIL
NOT TO SCALE



TRENCH REPAIR DETAIL
NOT TO SCALE

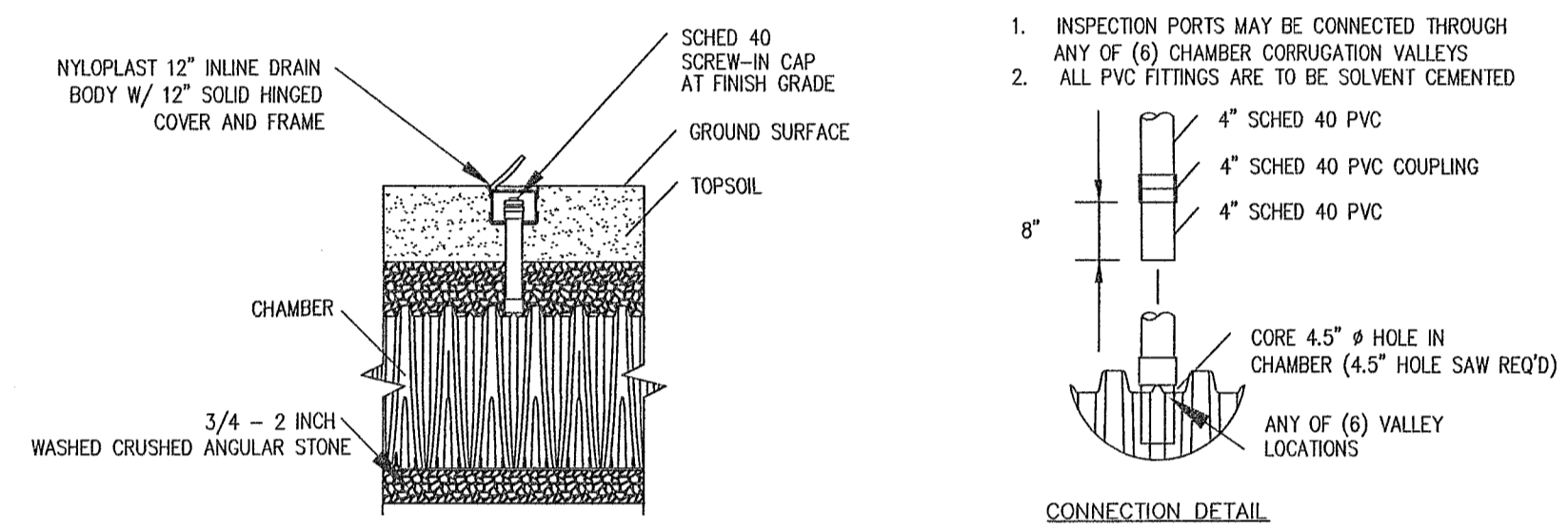
1. ALL INSTALLATION AND MATERIAL SPECIFICATIONS PER MASS. HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1998 AS AMENDED.
2. ALL EXPOSED BITUMINOUS CONCRETE IS TO BE TACKED PER MHD PRIOR TO NEW BITUMINOUS CONCRETE INSTALLATION.
3. ALL EXPOSED JOINTS ARE TO BE SEALED WITH TACK AND 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.



STORMTECH SC-310 CHAMBERS CROSS-SECTION

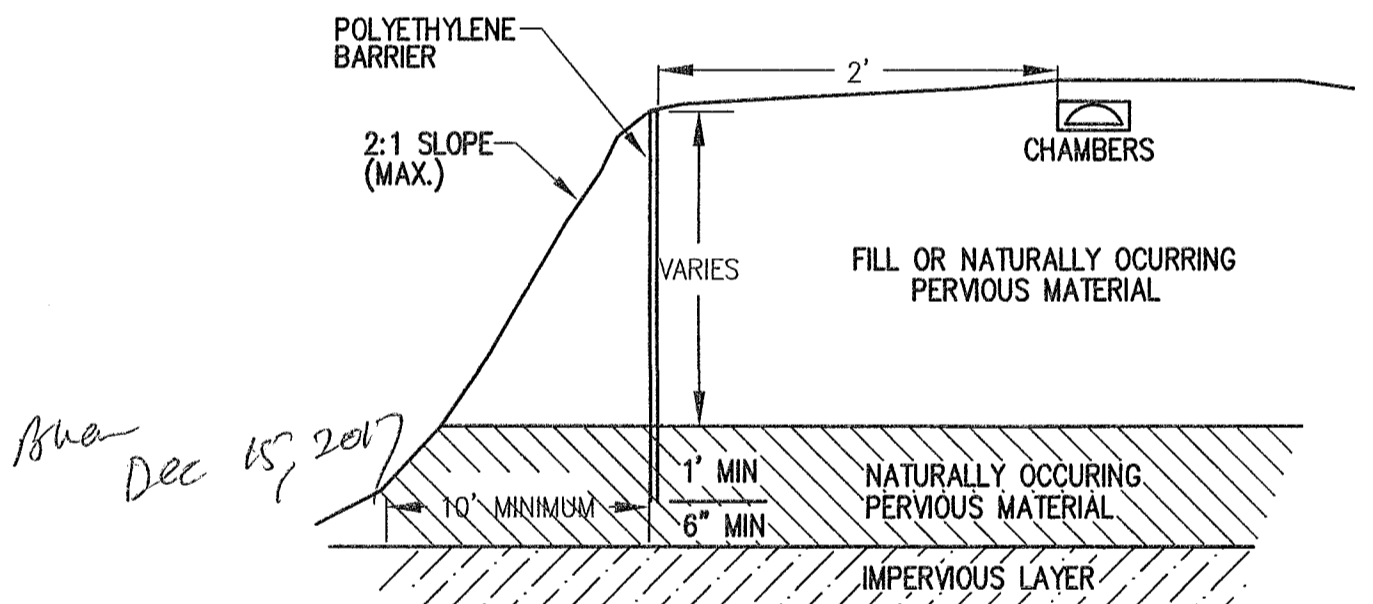
NOT TO SCALE

1. TOP AND SUBSOIL SHALL BE REMOVED
2. CHAMBERS SHALL HAVE A 2' SEPARATION TO GROUNDWATER AND LEDGE.
3. THERE SHALL BE A 2' OVERDIG OF REMOVE AND REPLACE OF UNSUITABLE MATERIALS HORIZONTALLY IN ALL DIRECTIONS, 6" MINIMUM INTO THE G-LAYER, AND REPLACE WITH SUITABLE MATERIAL.



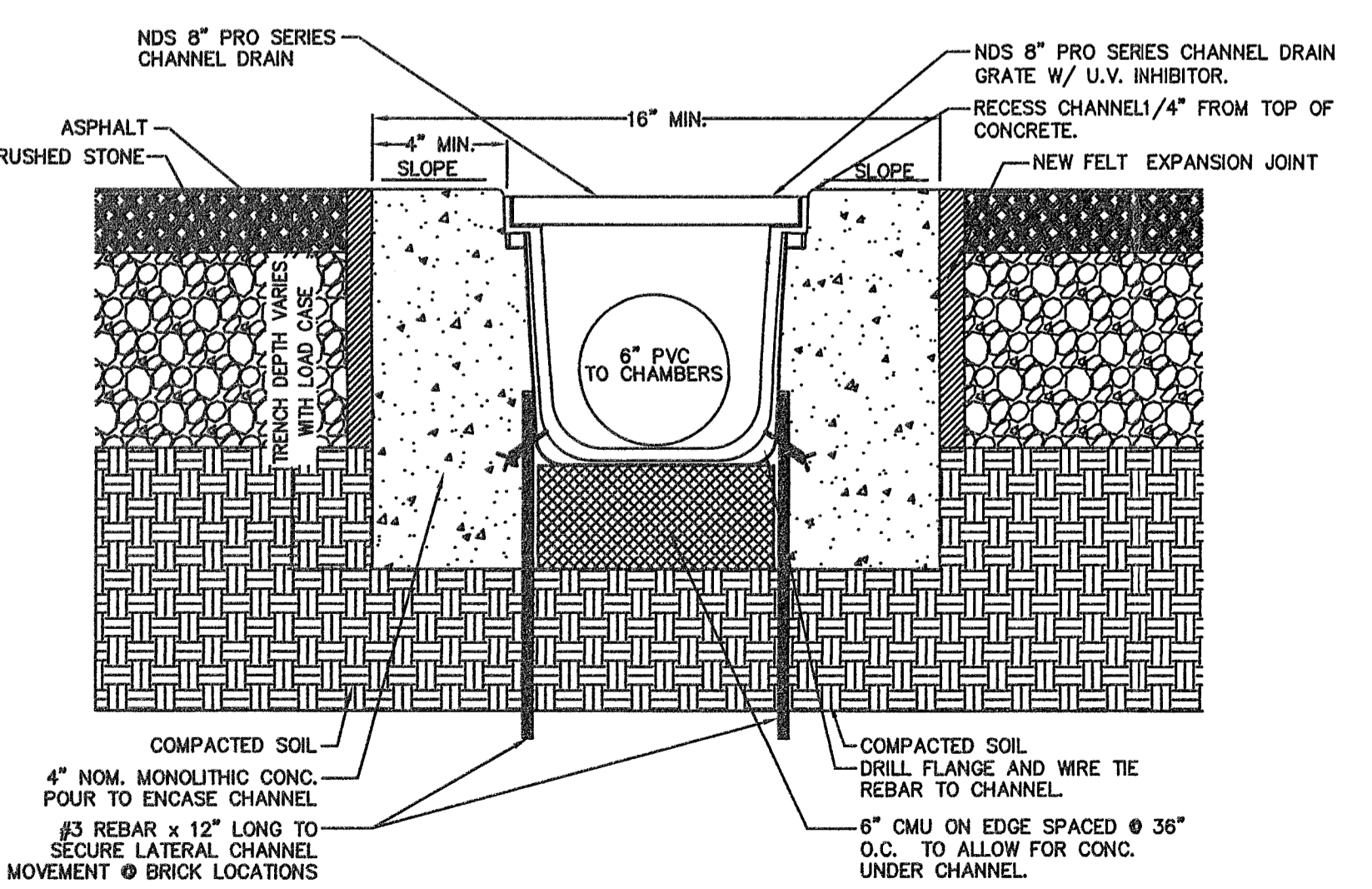
INSPECTION PORT

NOT TO SCALE



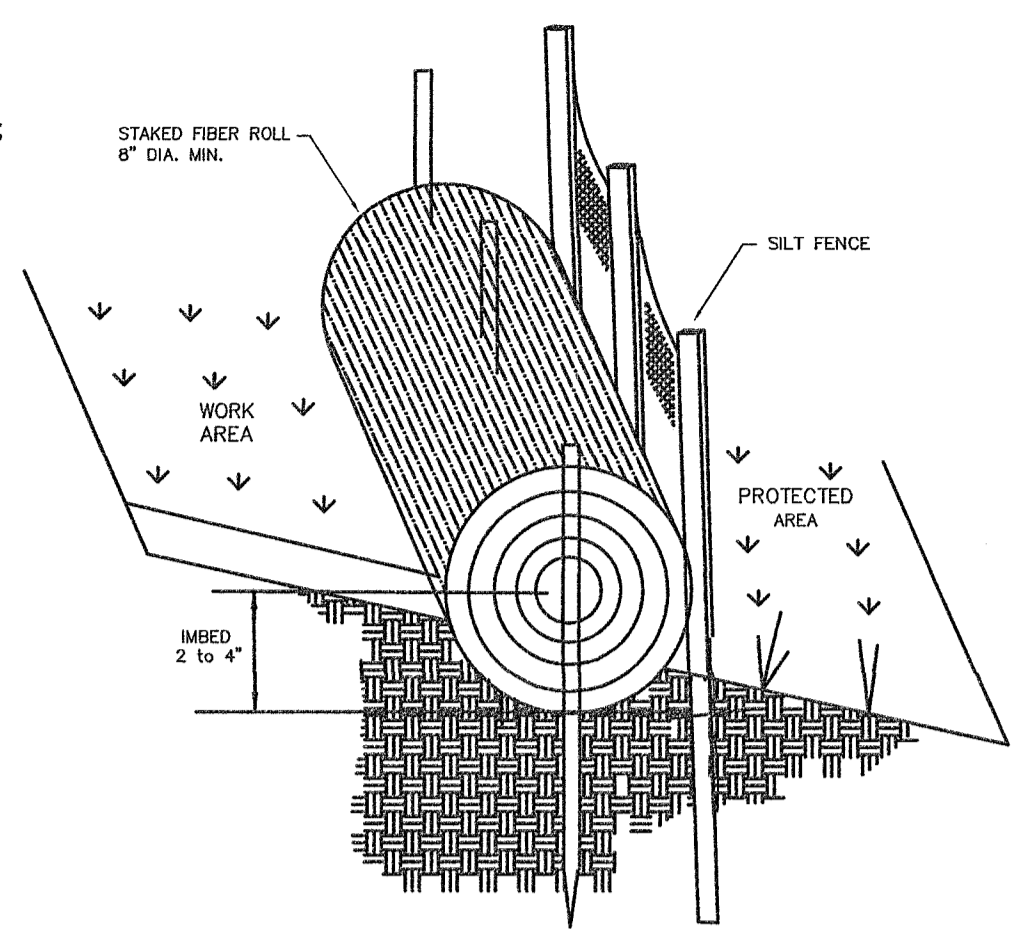
IMPERVIOUS BARRIER DETAIL

NOT TO SCALE



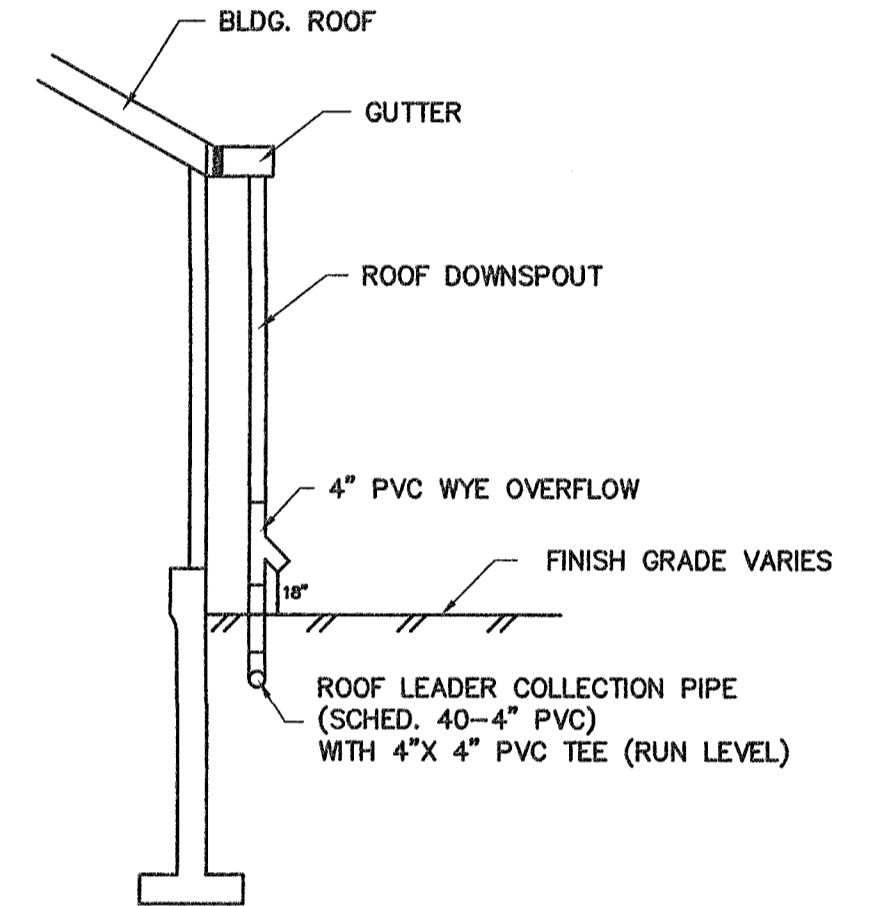
TRENCH DRAIN CROSS-SECTION

NOT TO SCALE



SILT FENCE/STRAW WATTLE BARRIER DETAIL

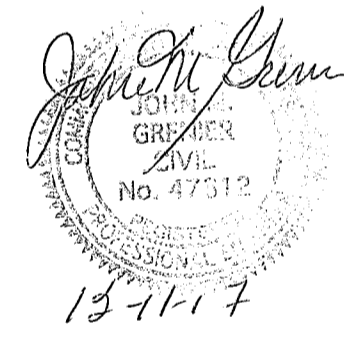
NOT TO SCALE



DOWNSPOUT DETAIL

NOT TO SCALE

Natasha Bwa Dec 15, 2017



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SITE DEVELOPMENT PLAN
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MAP 65 BLOCK 8 PARCEL 28
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PREPARED FOR:
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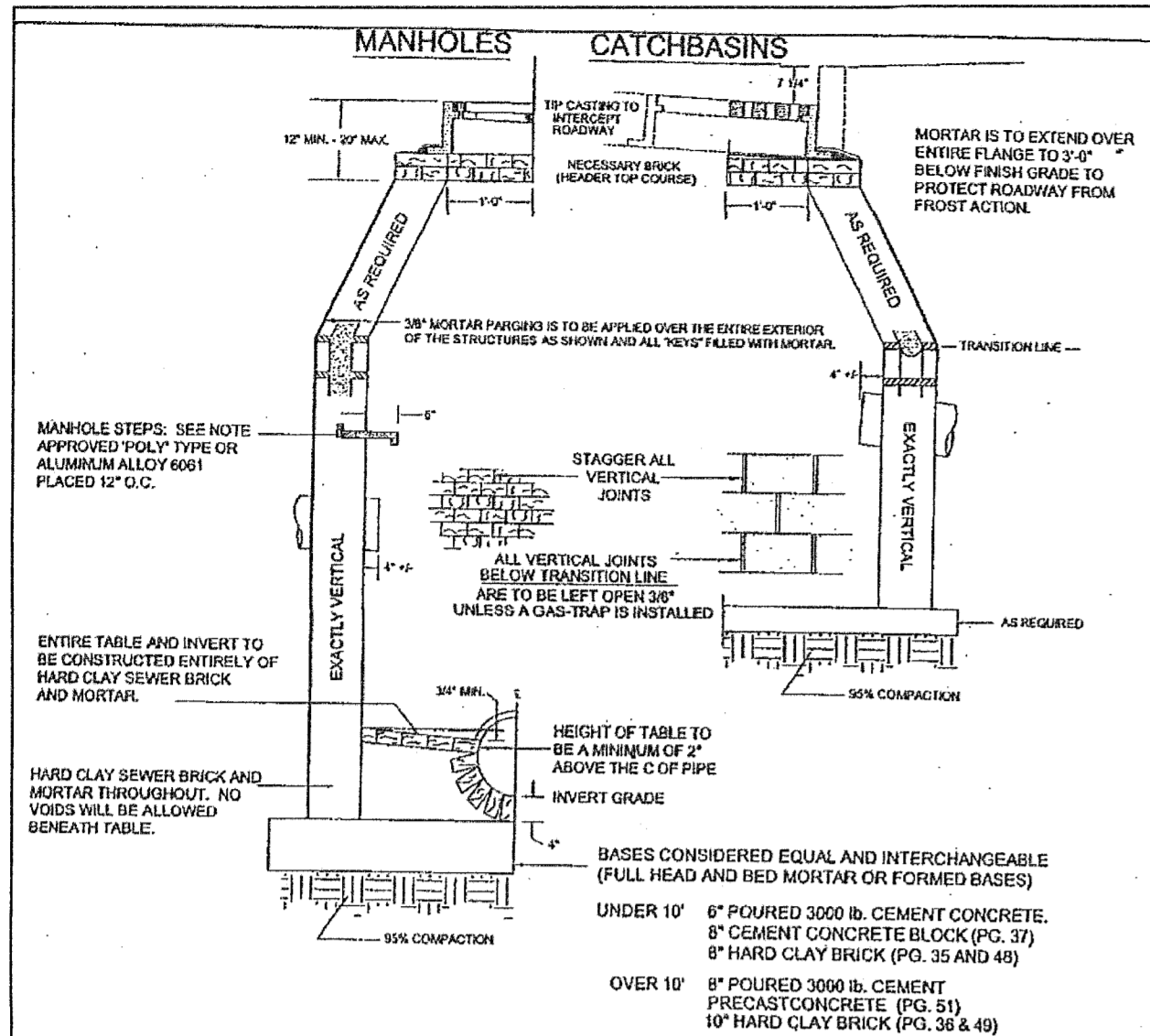
PREPARED BY:
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787 HARTFORD TURNPIKE
SHREWSBURY, MASSACHUSETTS 01545

TELE NO.: (508) 842-6229 FAX NO.: (508) 842-0800

SCALE: 1" = 20' DATE: OCTOBER 20, 2017

SITE DETAILS 1/2

SHEET NO.: SHEET 3 OF 4 PROJECT NO.: G-494



MORTAR: ALL MORTAR TO BE ONE PART CEMENT TO TWO PARTS CLEAN WASHED SAND BY VOLUME.

BLOCK: ALL BLOCK IS TO BE SOLID PRECAST CEMENT CONCRETE.

BRICK: ALL BRICK IS TO BE COILED HARD CLAY TYPE M SEWER BRICK.

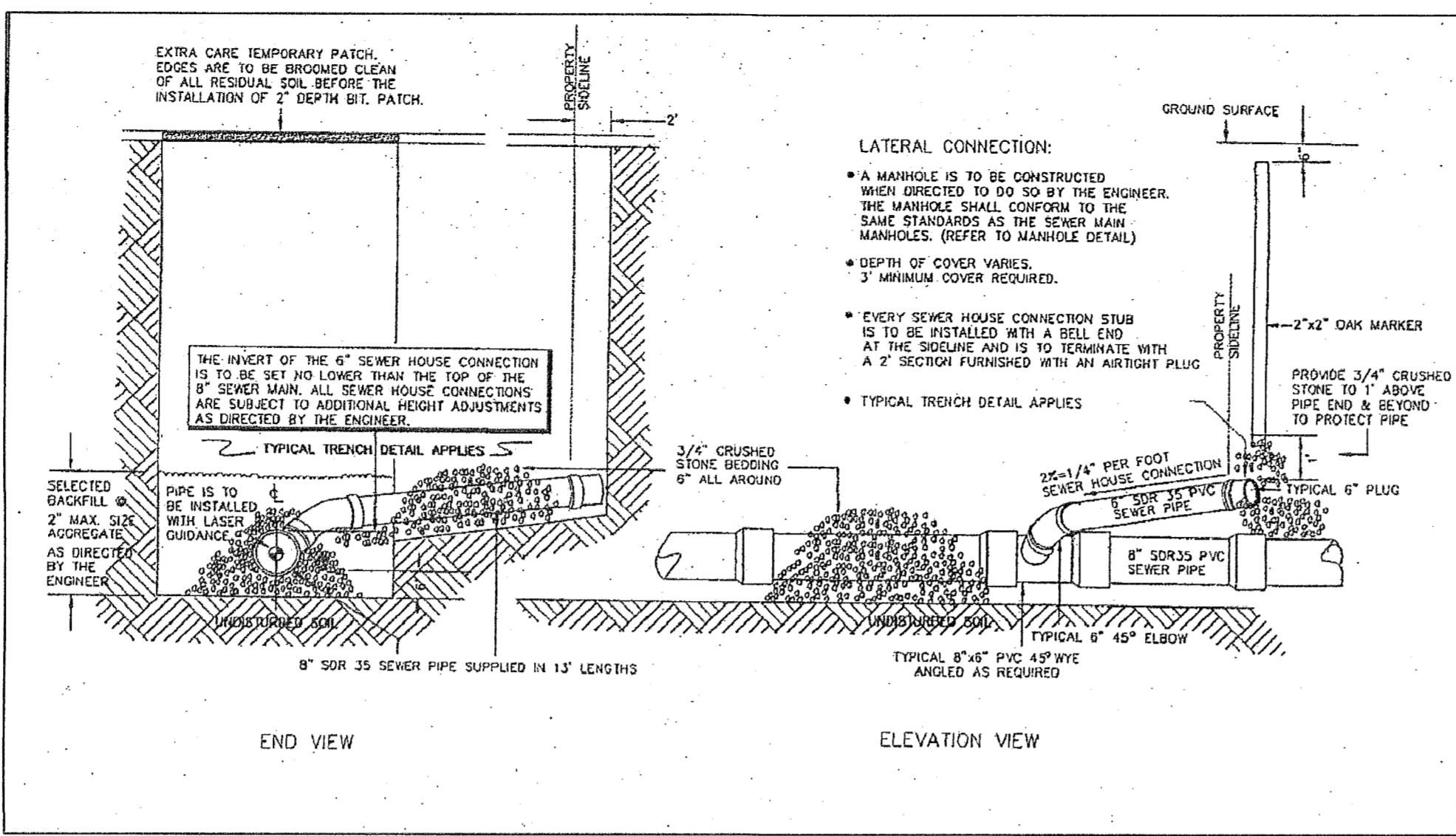
MANHOLE STEPS: ALL MANHOLE STEPS TO BE PLACED WITHIN THE STRUCTURE VERTICALLY ABOVE ONE ANOTHER AND PLACED SO AS NOT TO BE INTERFERED WITH BY MANHOLE STRUCTURAL COMPONENTS OR INFLUENTS. STEPS TO EXTEND INTO CONE SECTION.

COMPACTION AROUND FRAMES: AFTER THE FRAME HAS BEEN SET BOTH THE BACKFILL MATERIAL AND THE SUBSEQUENT BITUMINOUS BINDER ARE TO BE INDEPENDENTLY COMPACTED WITH AN APPROVED PNEUMATIC "HAMMER" AND TAMPING BIT.

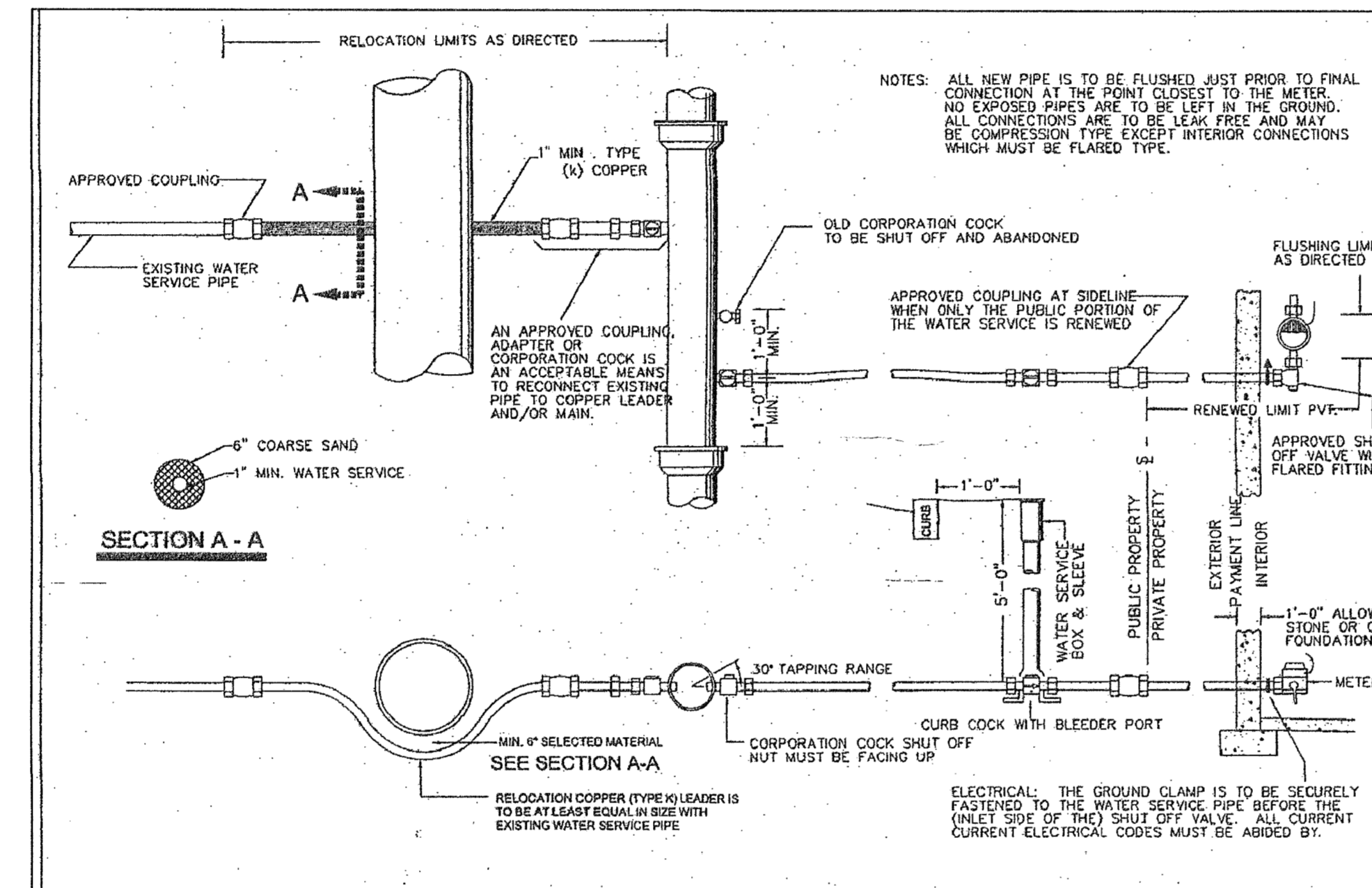
ALL STRUCTURES ARE TO BE BUILT AS SHOWN UNLESS A MODIFICATION IS NECESSARY TO MEET EXISTING FIELD CONDITIONS. NO ADJUSTMENT IN THE BID PRICE WILL BE MADE.

FOR INFORMATION REGARDING SPECIFIC TYPES OF STRUCTURES, REFER TO DRAWING FOUND ELSEWHERE IN THESE DETAILS.

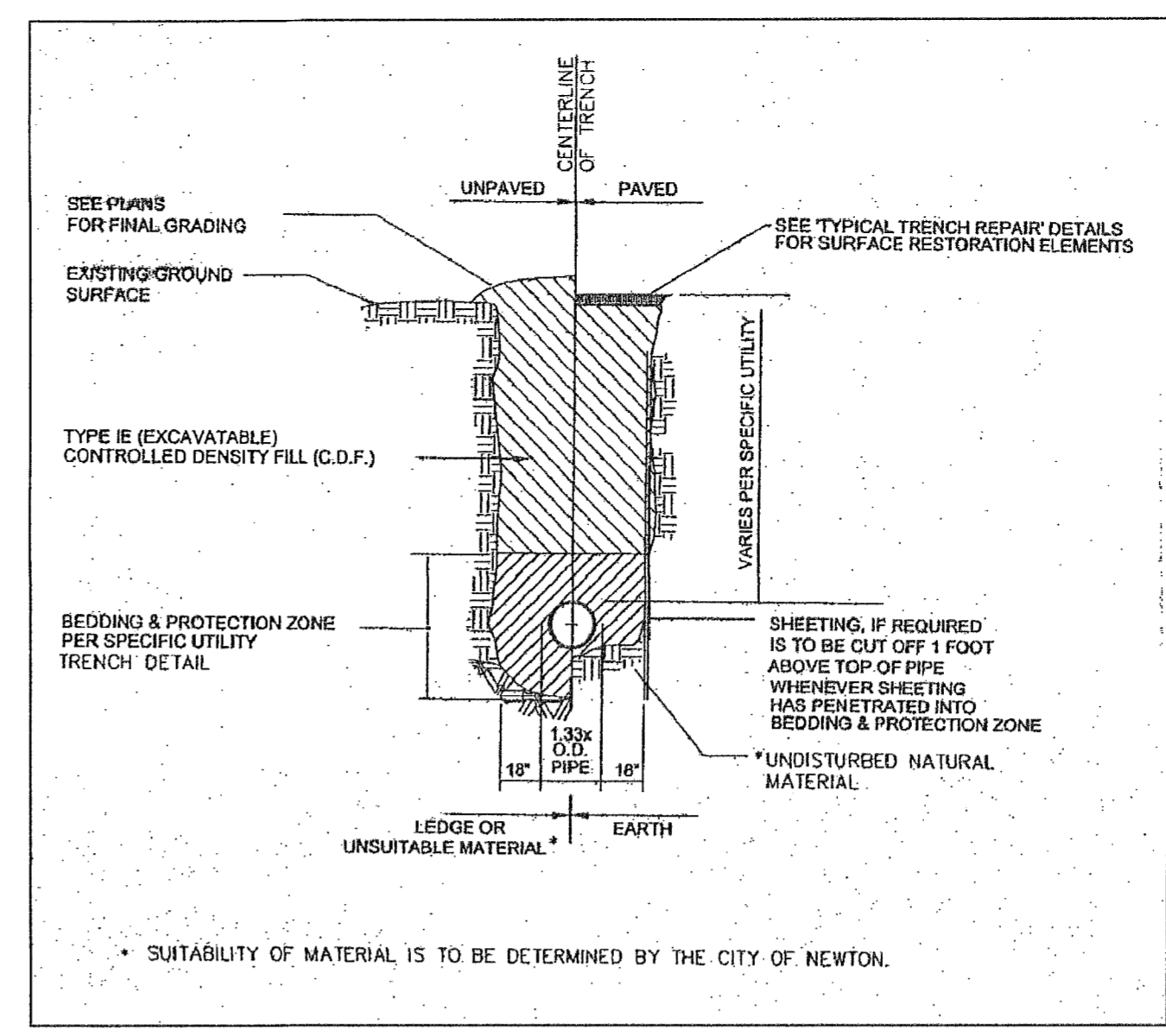
MANHOLE/CATCH BASIN REQUIREMENTS
NOT TO SCALE



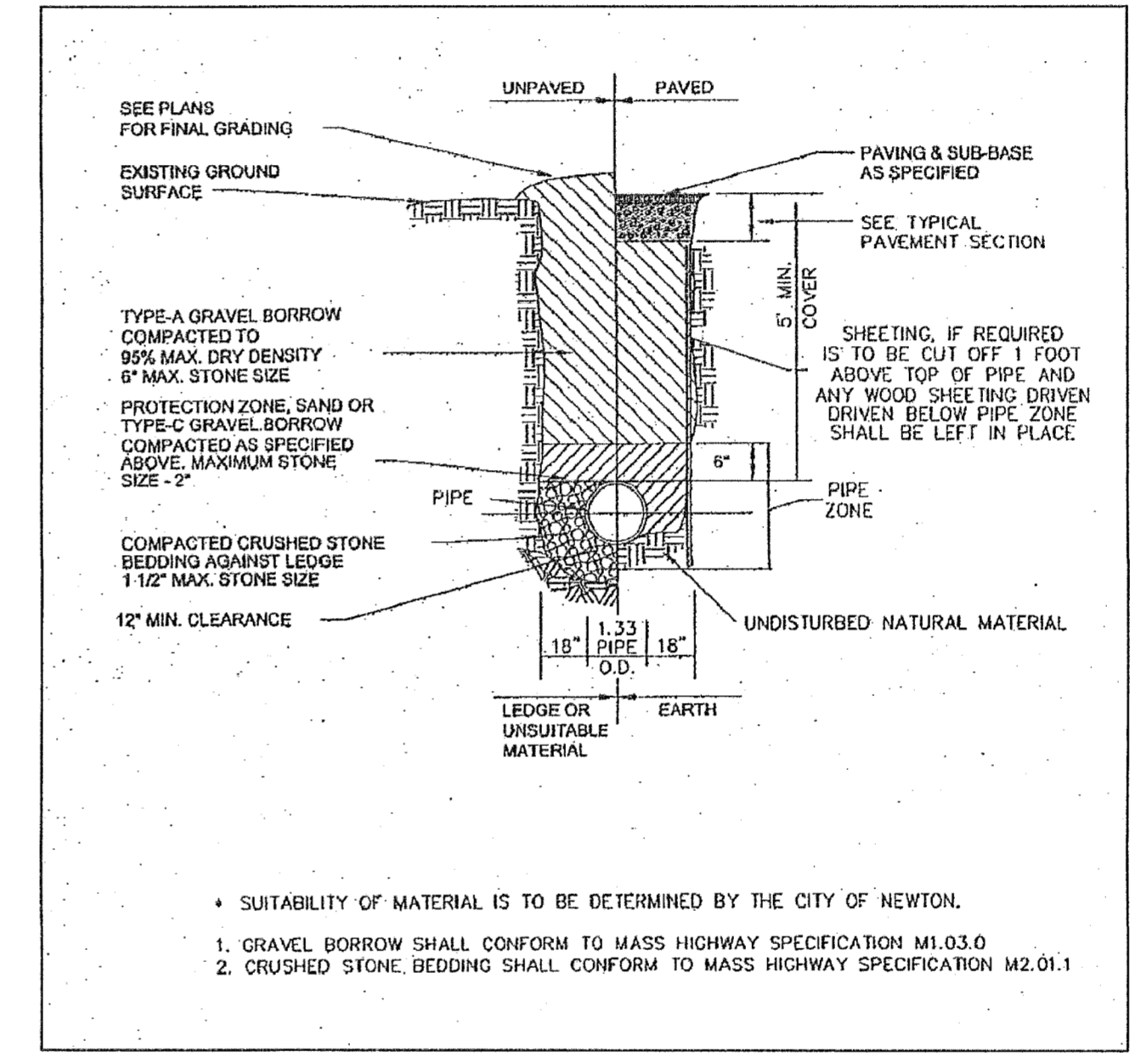
SEWER SERVICE CONNECTION
NOT TO SCALE



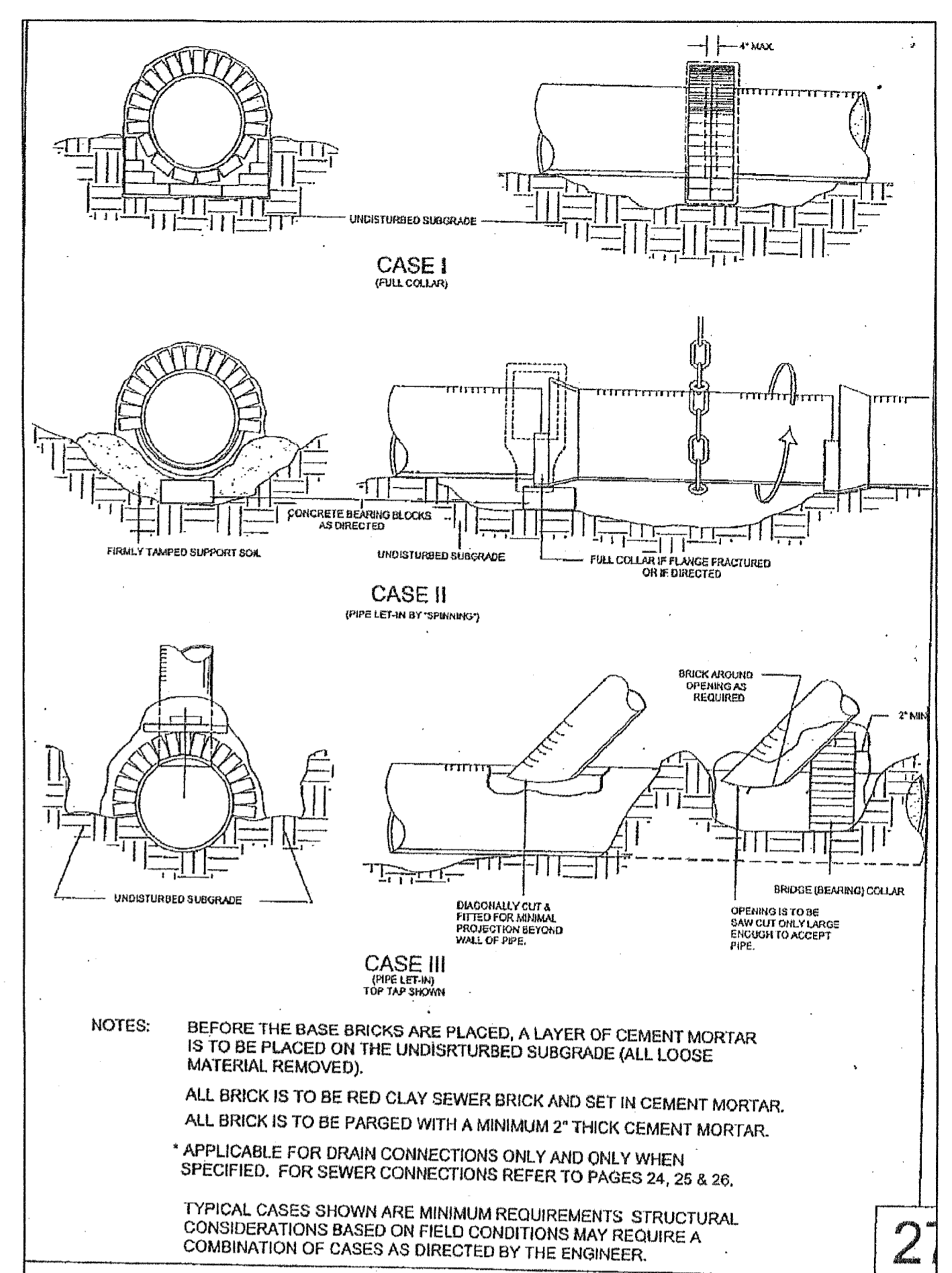
WATER SERVICE CONNECTION
NOT TO SCALE



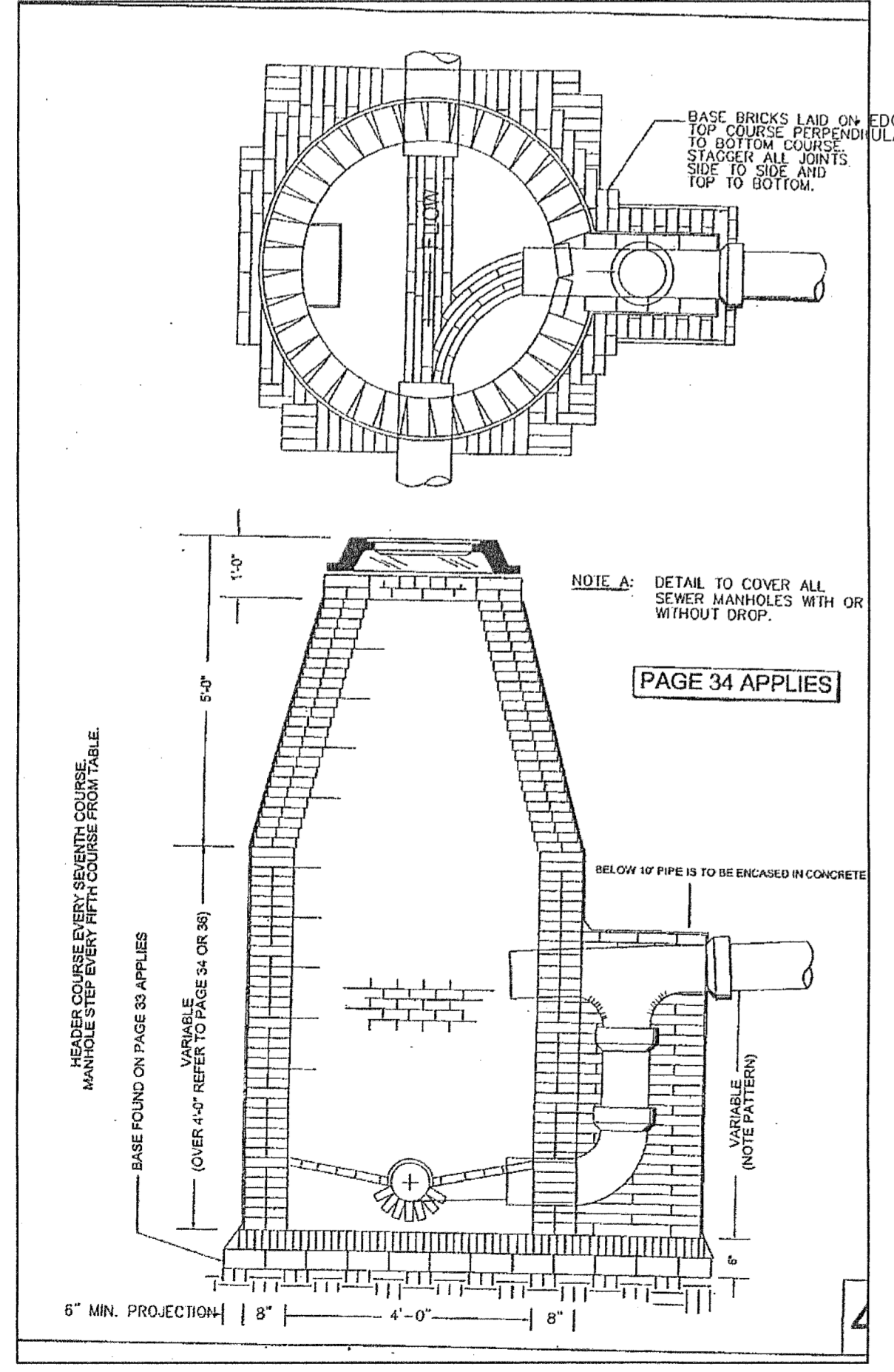
CONTROL DENSITY FILL TRENCH SECTION
NOT TO SCALE



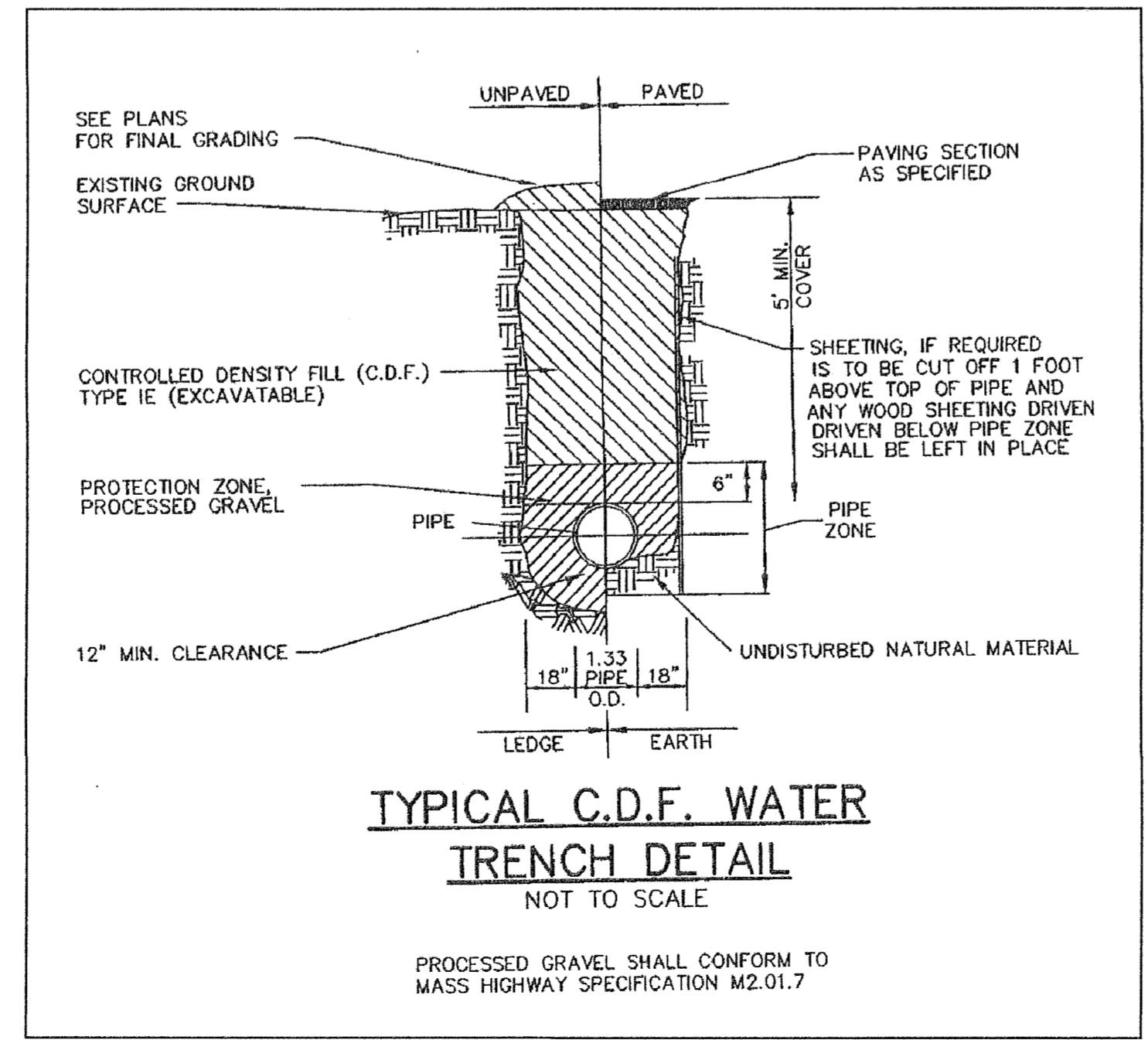
WATER TRENCH
NOT TO SCALE



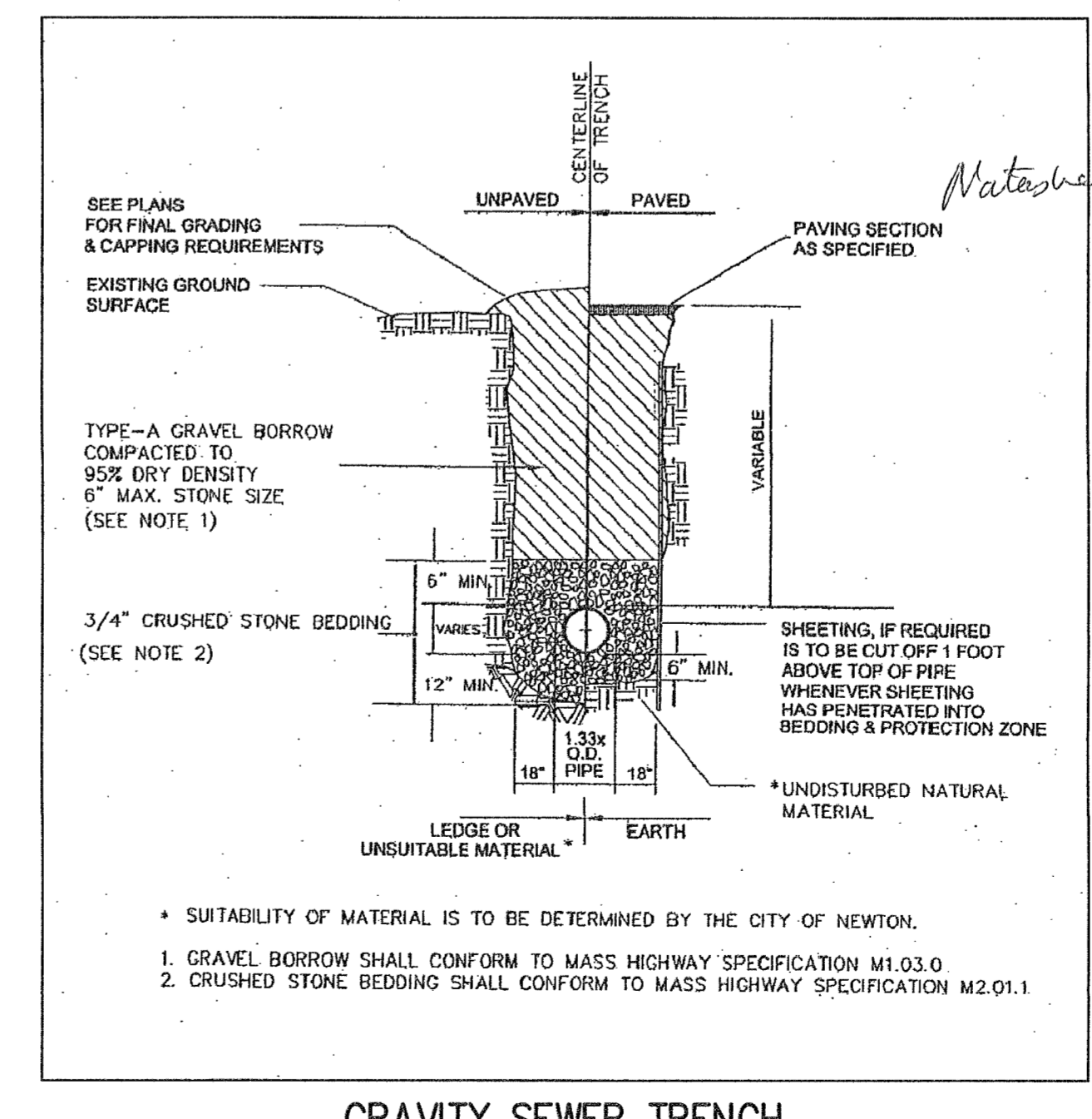
RETROFIT DRAIN CONNECTION DETAIL
NOT TO SCALE



SEWER MANHOLE
NOT TO SCALE



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



GRAVITY SEWER TRENCH
NOT TO SCALE

John Grenier
JOHN GRENIER
No. 134512
13-1-17

REV. NO.	DATE	REVISION
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SCALE: 1" = 20' DATE: OCTOBER 20, 2017

SITE DETAILS 2/2

SHEET NO.: SHEET 4 OF 4 PROJECT NO.: G-494