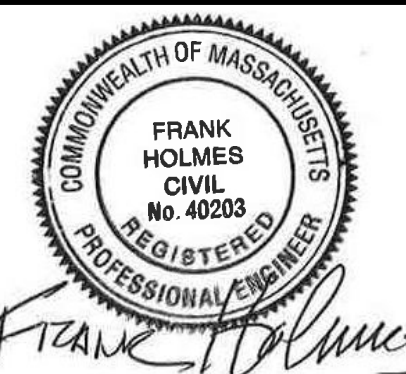
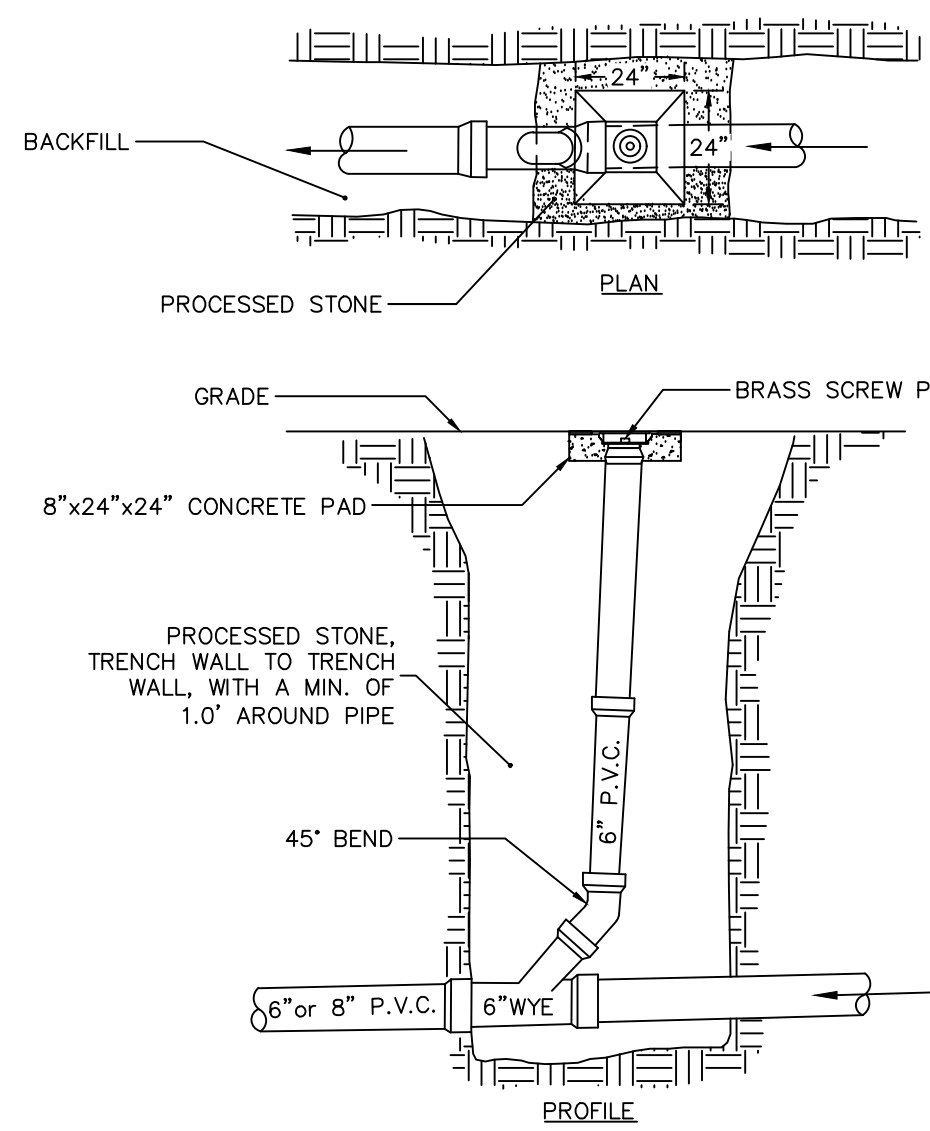
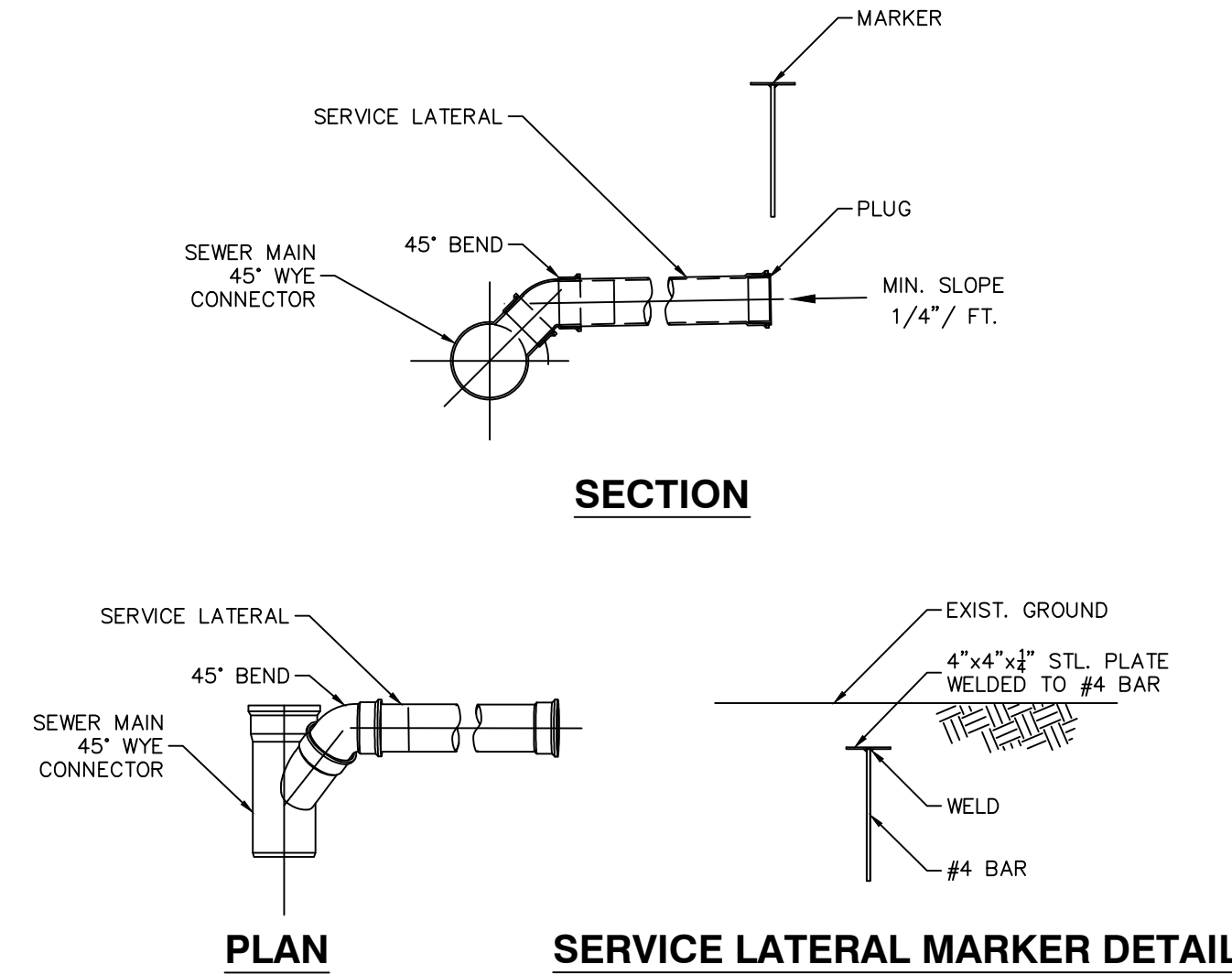


Date	Description	No.
Revisions		
		
LANGAN Langan Engineering and Environmental Services, Inc. 100 Cambridge Street, Suite 1310 Boston, MA 02114 T: 617.824.9100 F: 617.824.9101 www.langan.com		
Project 237 PLEASANT STREET CONCEPT PLANS		
FRANKLIN NORFOLK COUNTY MASSACHUSETTS Drawing Title		
UTILITY PLAN		
Project No. 151019602		CU100
Date 09/10/2022		
Drawn By KH		
Checked By FH		



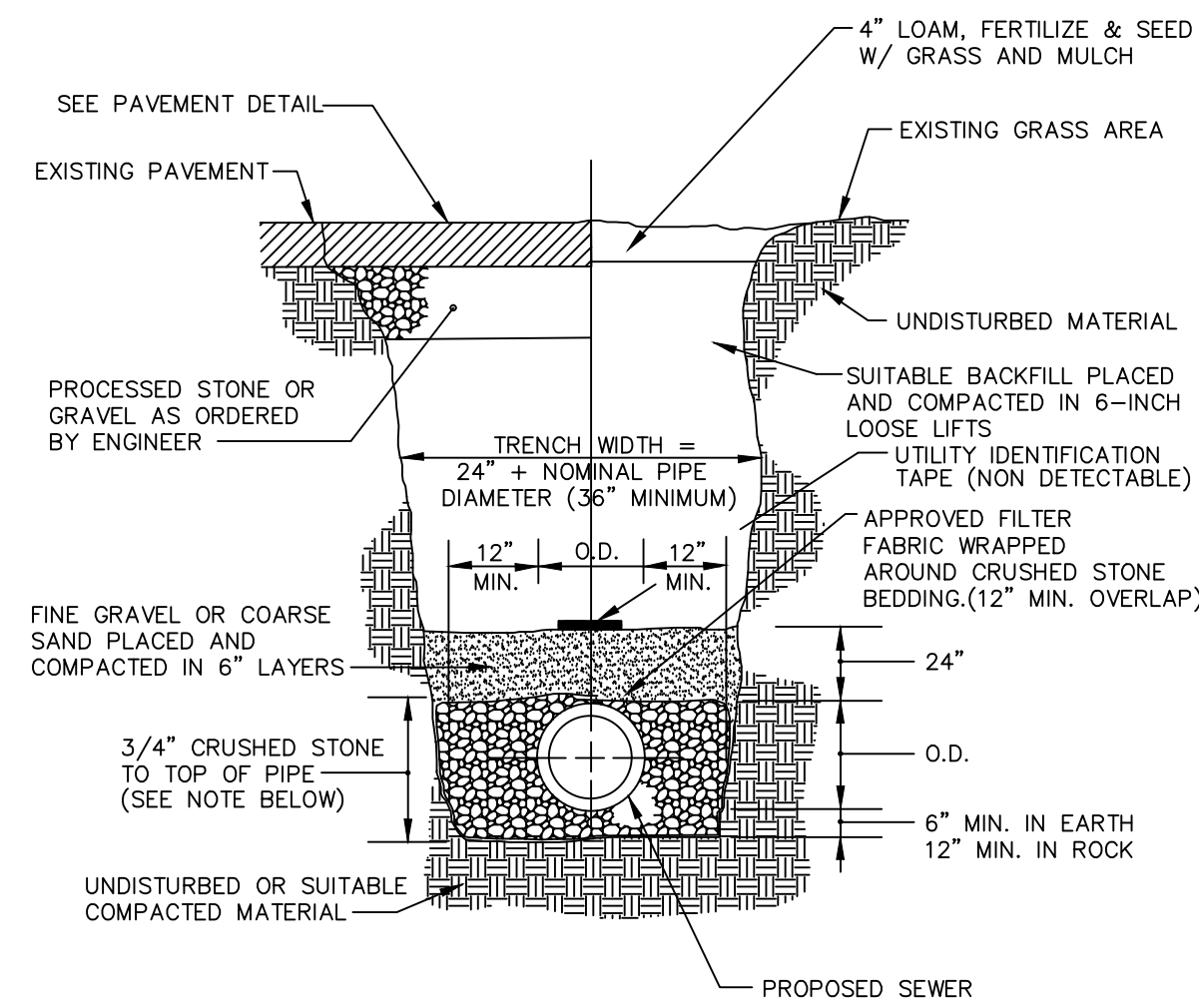
SANITARY SEWER CLEANOUT

N.T.S.



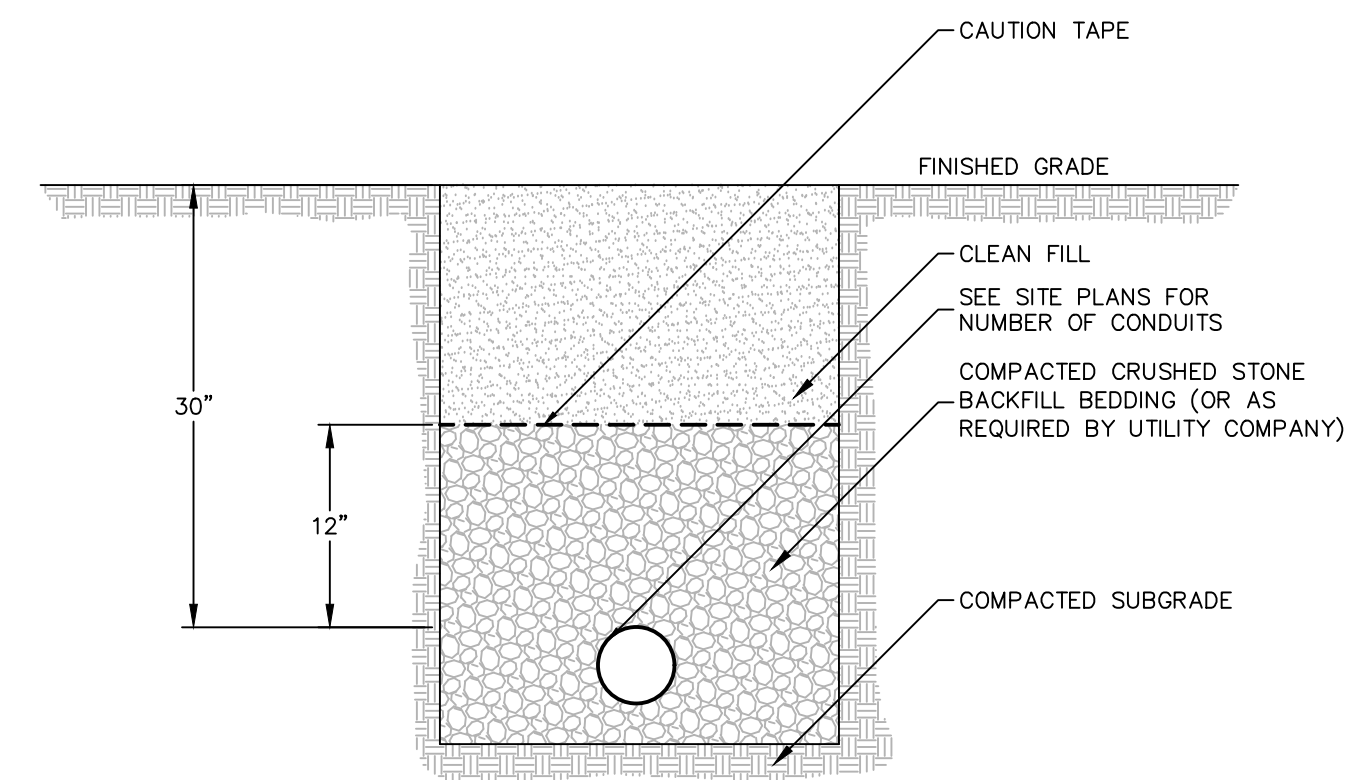
SANITARY SEWER MAIN CONNECTION

N.T.S.



TRENCH - SANITARY SEWER

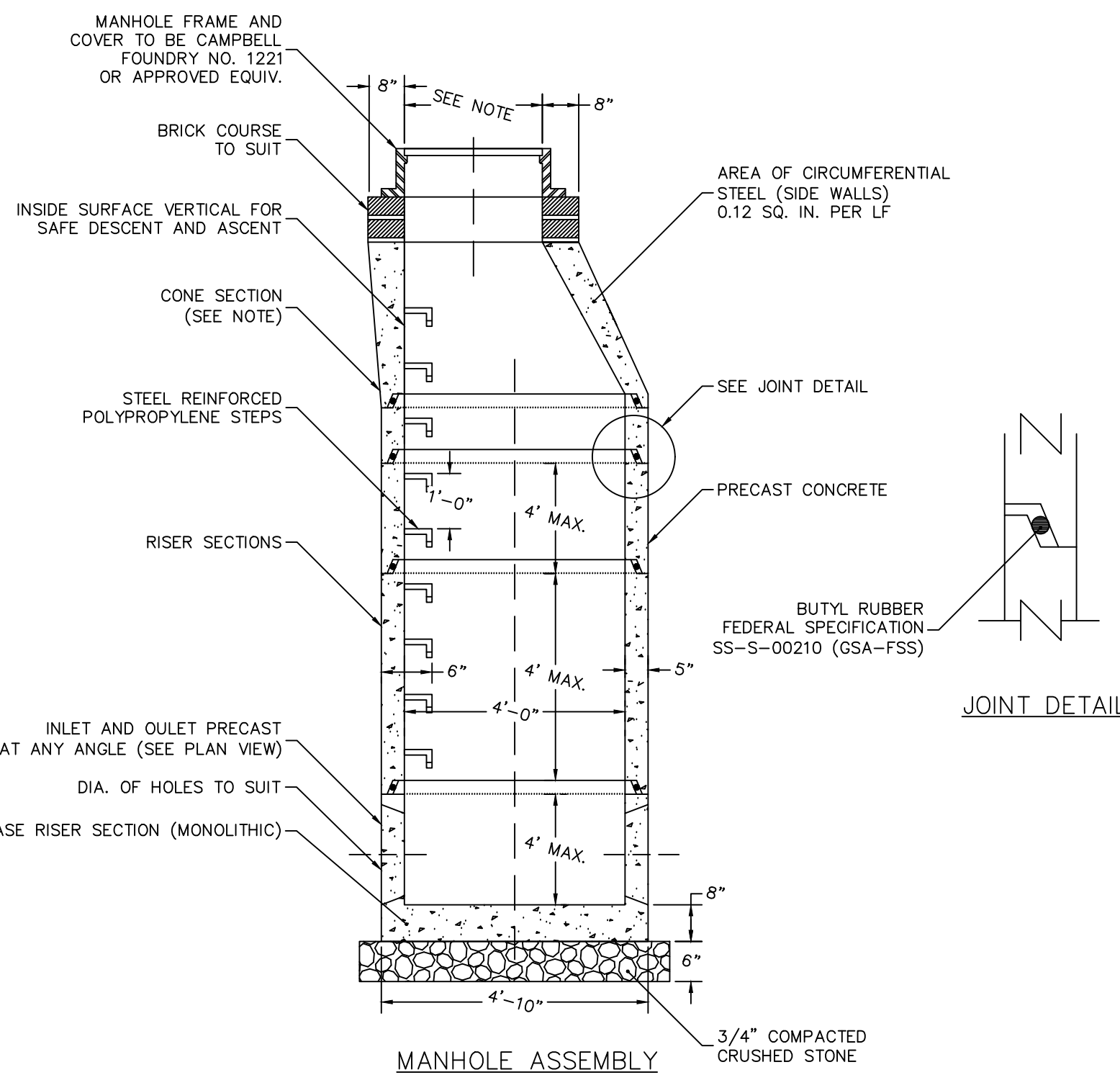
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TRENCH - TELECOM UTILITY

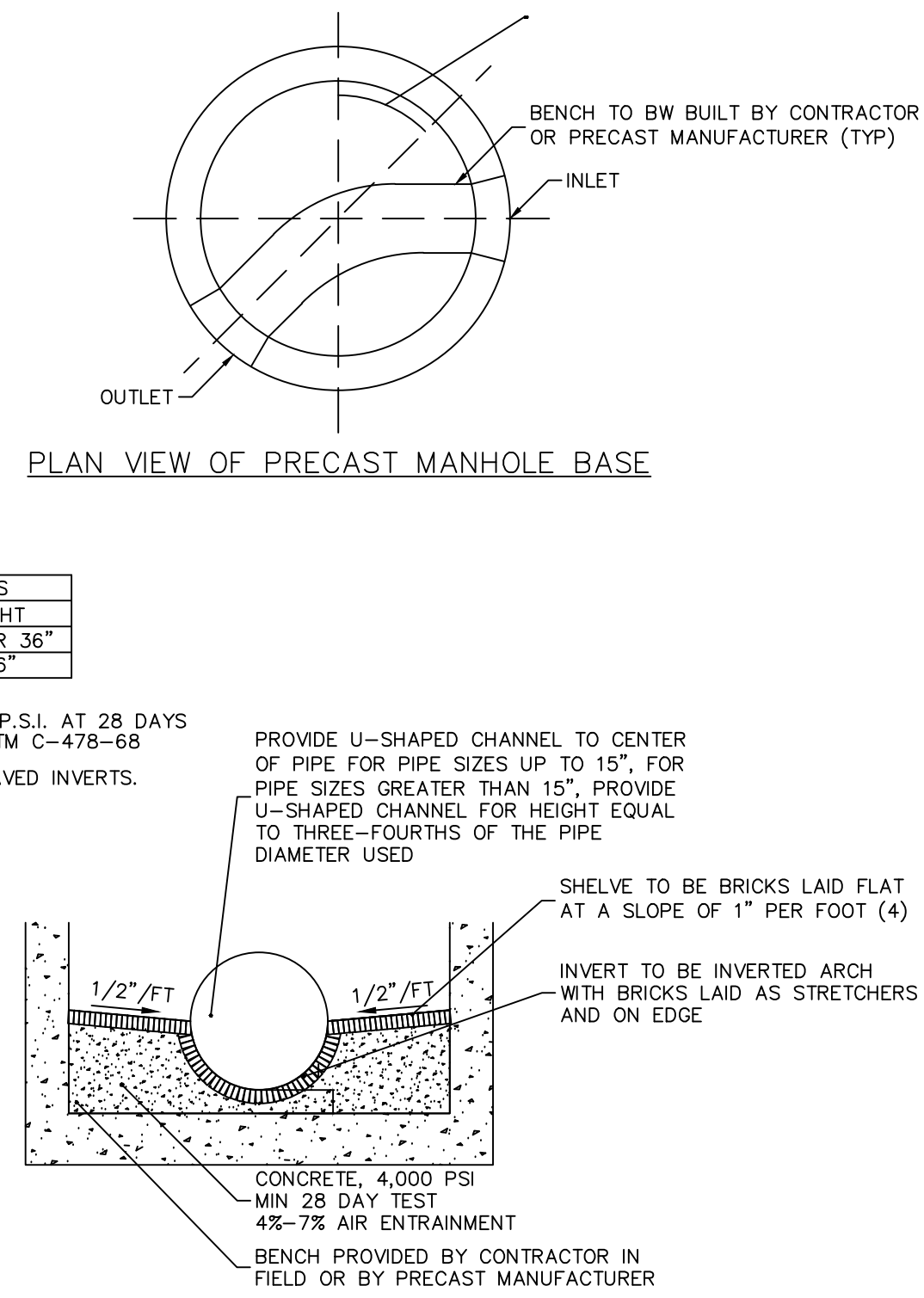
N.T.S.

- NOTES:
1. TRENCHES IN STABLE SOIL OVER 5 FT DEEP SHALL BE REINFORCED BY APPROVED OSHA METHODS.
2. TRENCHES SHALL BE COMPACTED.



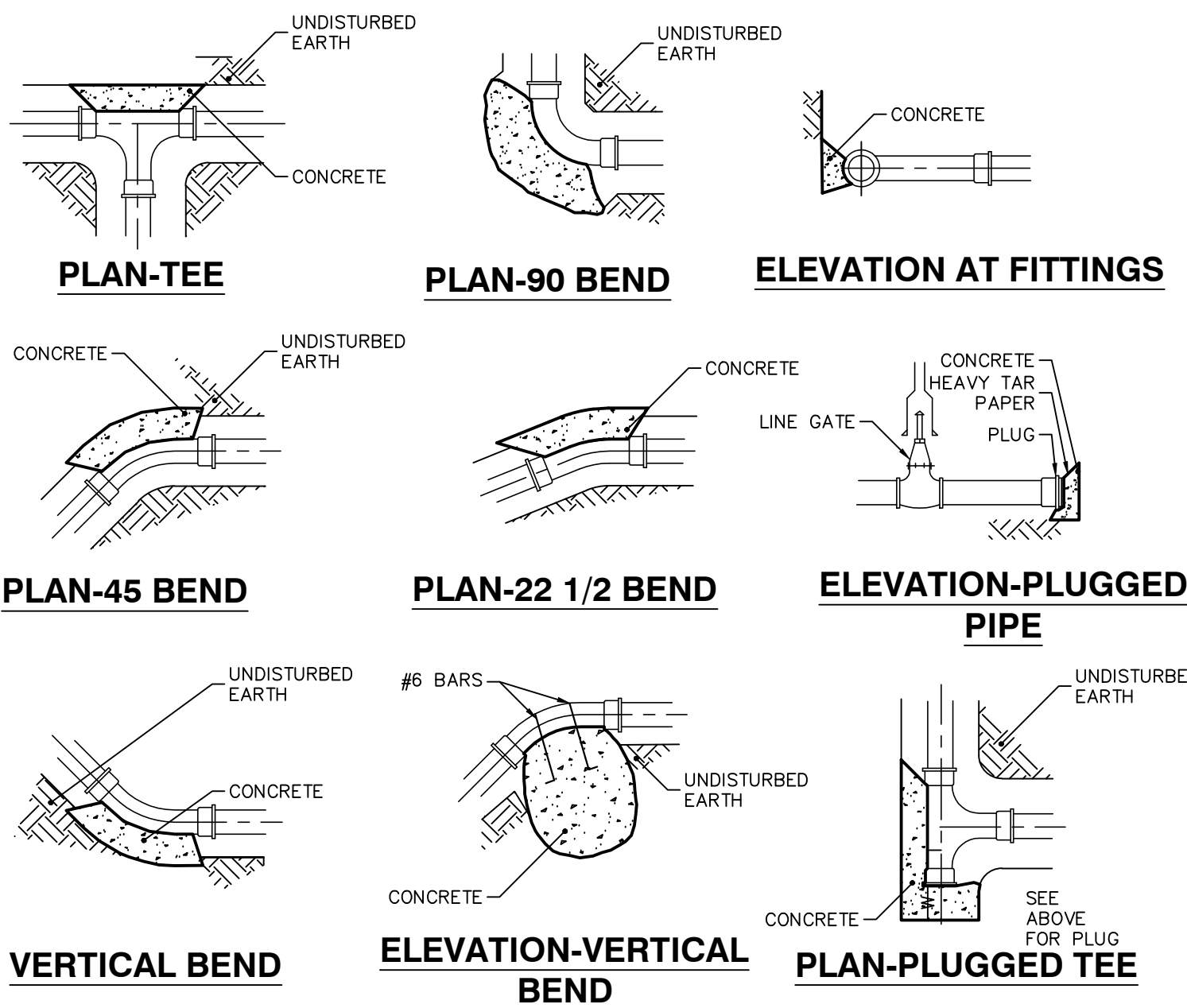
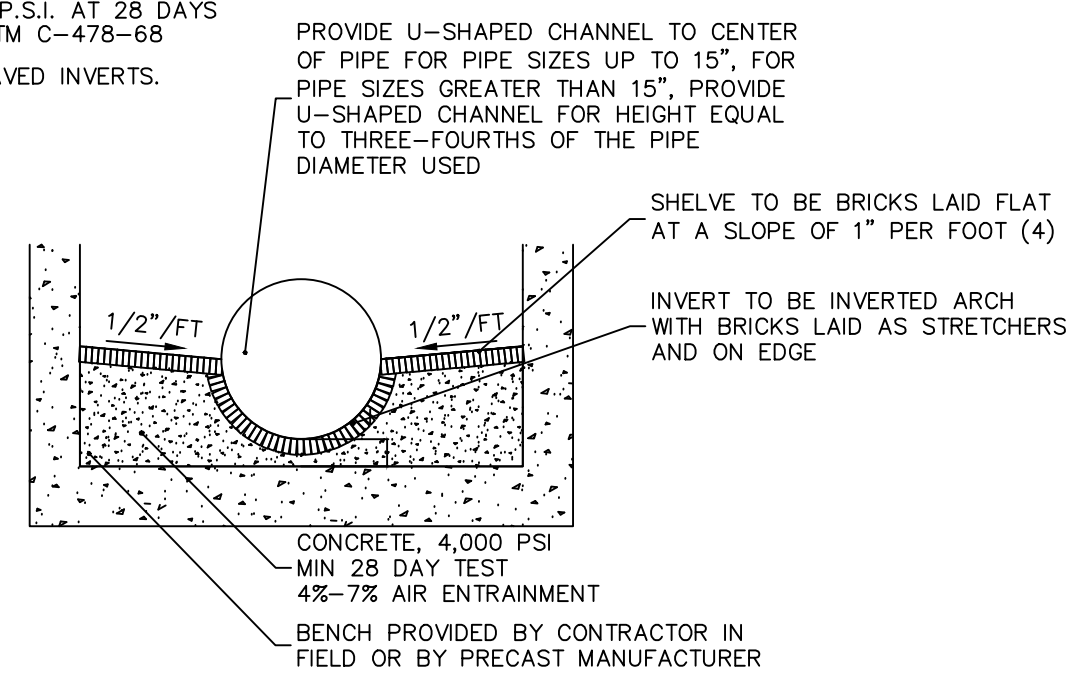
SANITARY SEWER MANHOLE

N.T.S.



NOTE:

CONCRETE TO TEST 4,000 P.S.I. AT 28 DAYS IN CONFORMANCE WITH ASTM C-476-58
MANHOLES SHALL HAVE PAVED INVERTS.
CONCRETE TO TEST 4,000 P.S.I. AT 28 DAYS IN CONFORMANCE WITH ASTM C-476-58
MANHOLES SHALL HAVE PAVED INVERTS.



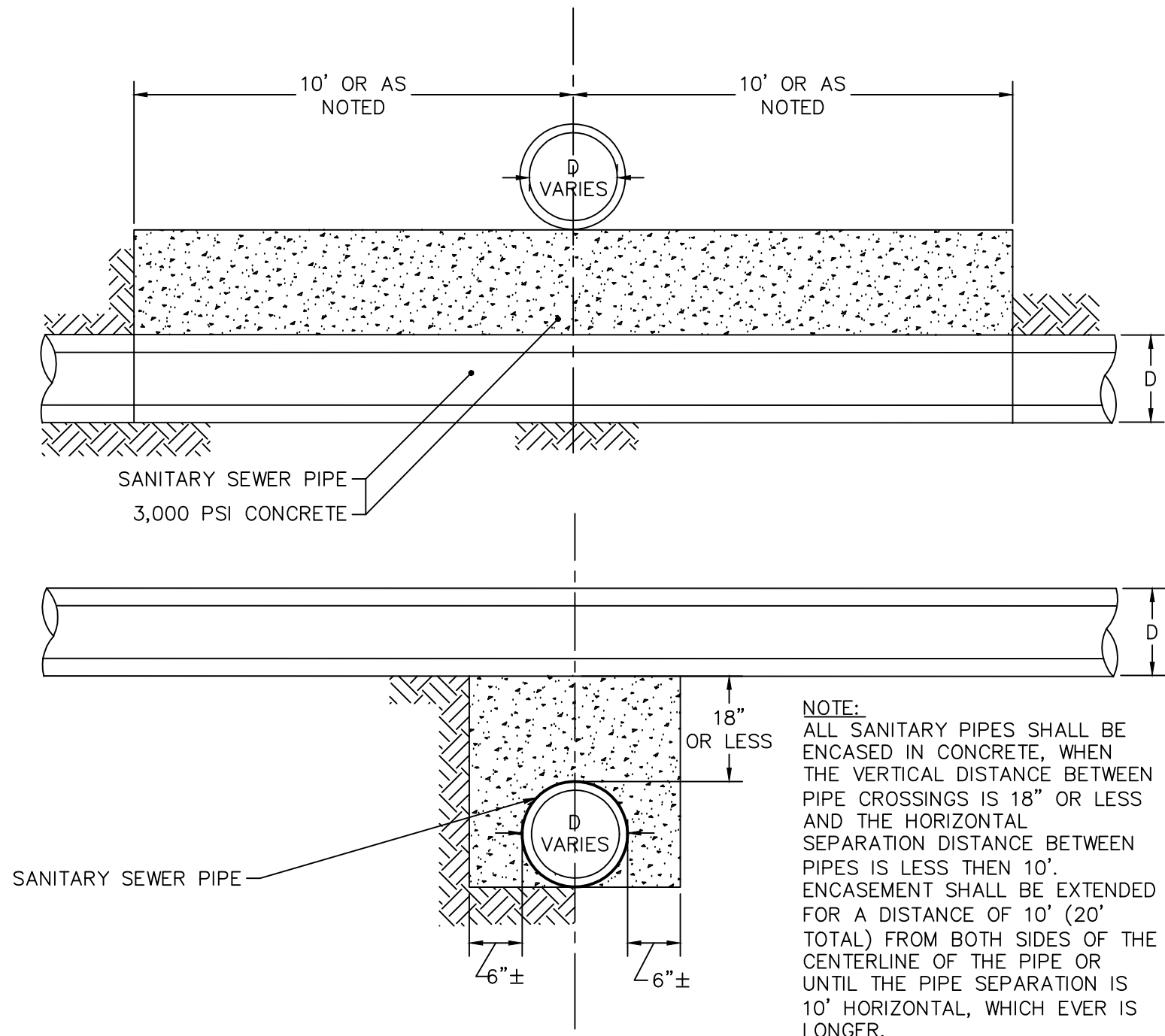
THRUST BLOCKS

N.T.S.

THRUST BLOCK SCHEDULE

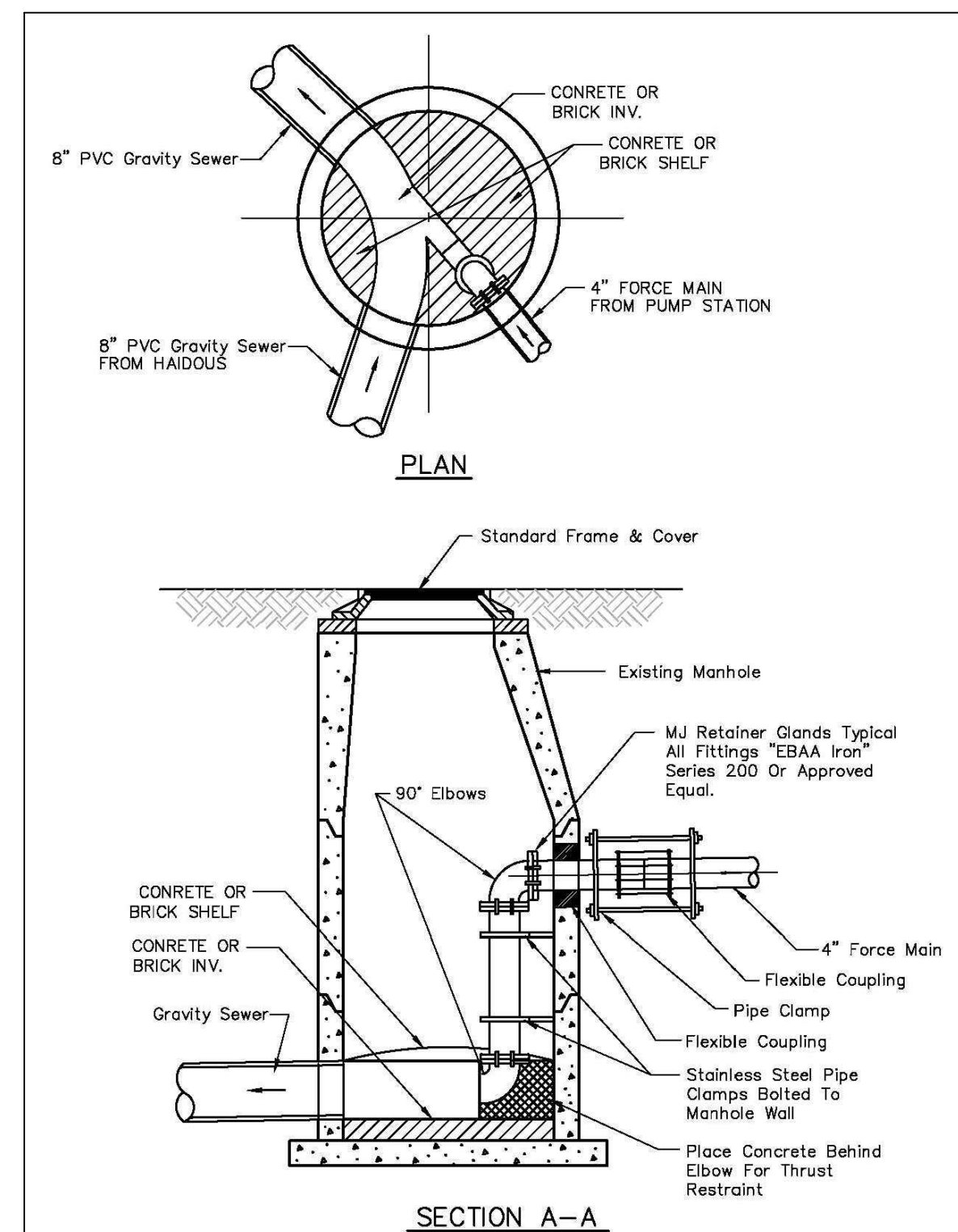
PIPE SIZE	TEE	22 1/2	45	90	W
6"	18"	15"	12"	15"	21"
8"	2'	18"	12"	18"	2'
12"	3'	2'	12"	2'	28"
16"	4'	2.5'	2'	2.33'	31"
20"	5.25'	3'	2'	18"	3'
24"	7.5'	3'	3'	18"	4'

- NOTE:
1. IF SOFT MATERIALS ARE ENCOUNTERED, THE THRUST BLOCKS SIZES SHALL BE ADJUSTED ACCORDINGLY.
2. CONCRETE TO BE 3000 PSI.



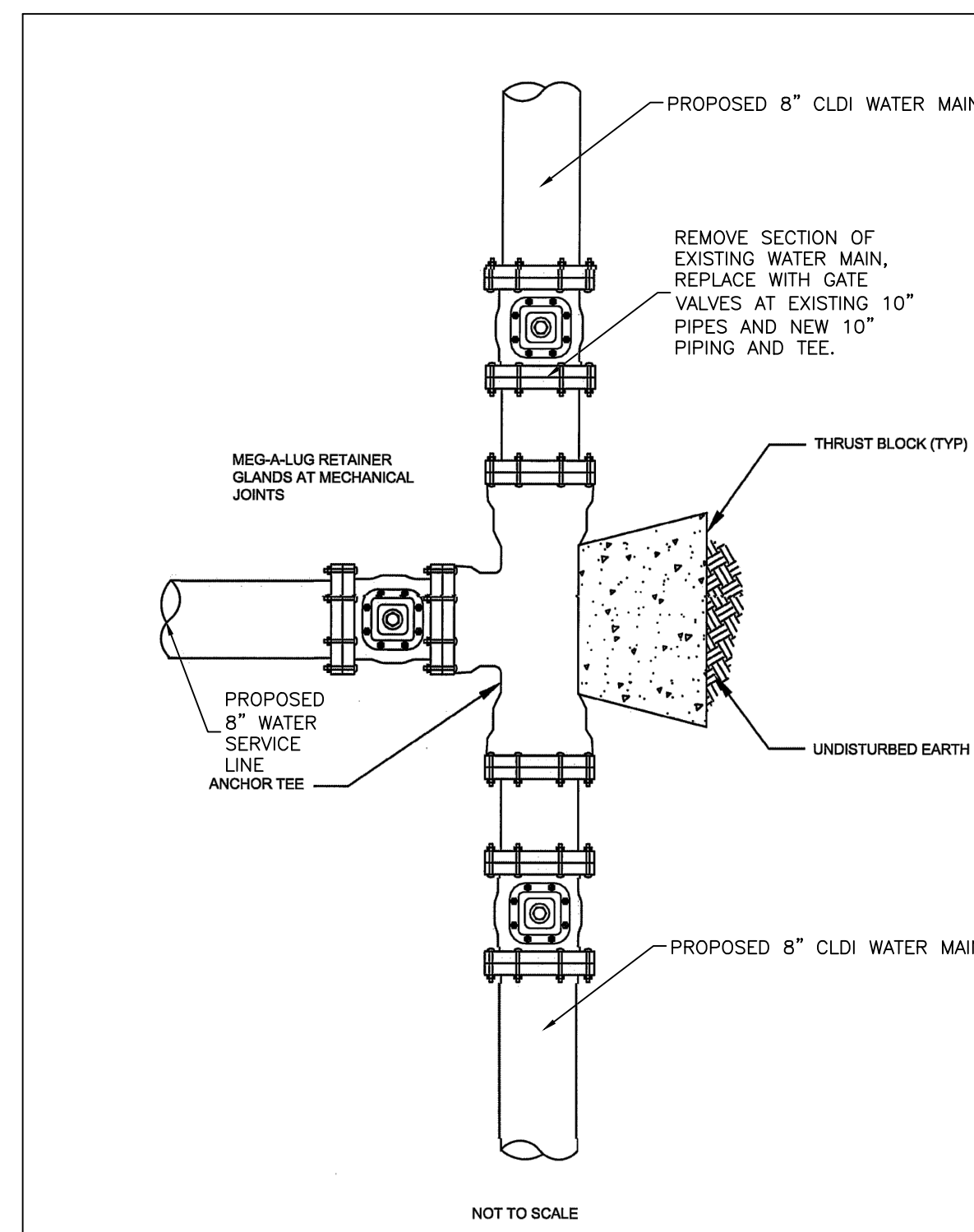
CONCRETE ENCASEMENT FOR SANITARY SEWER

N.T.S.



FORCE MAIN TERMINAL MANHOLE

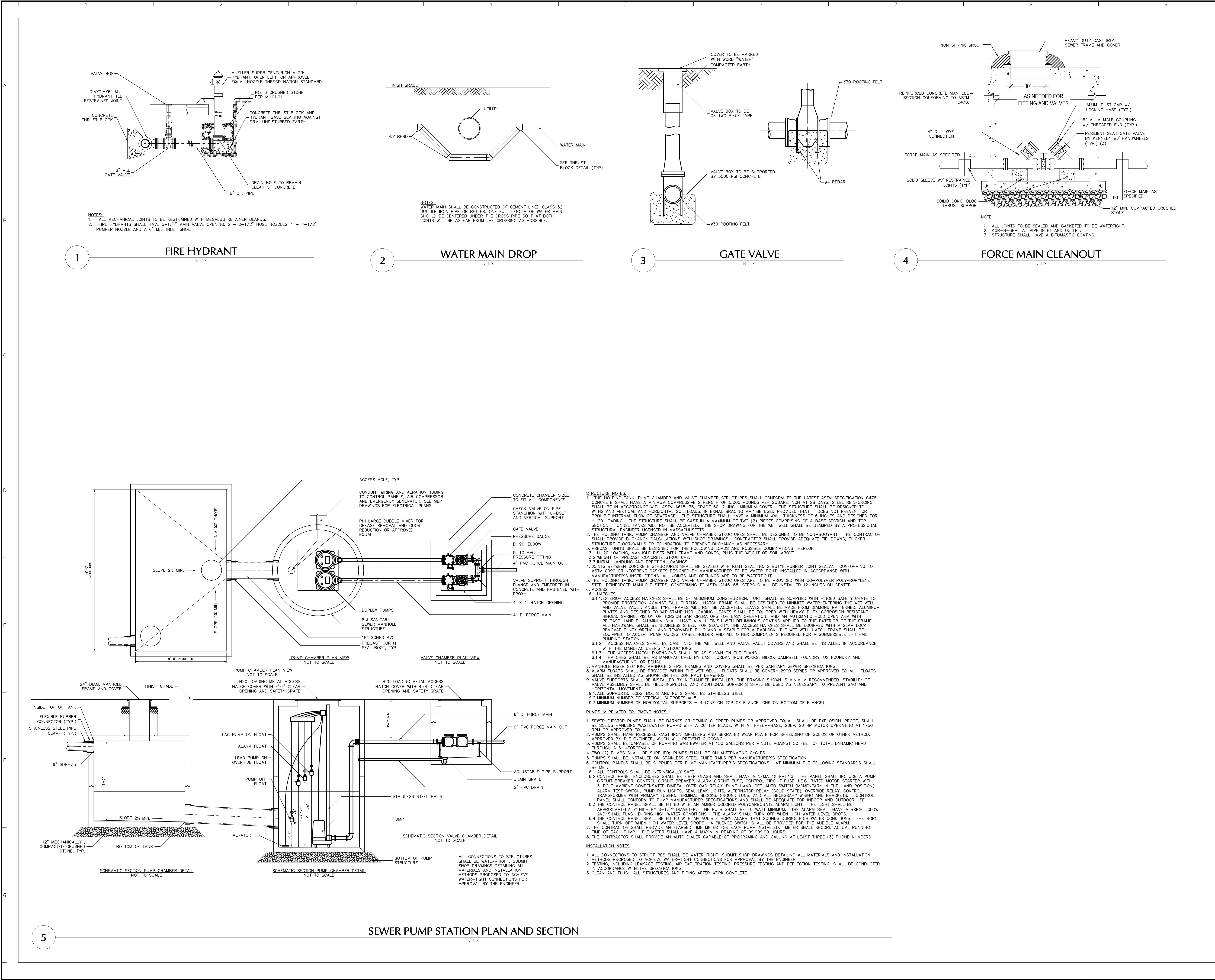
N.T.S.




WATER SERVICE CONNECTION

N.T.S.

Date	Description	No.
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Project		
237 PLEASANT STREET CONCEPT PLANS		
NORFOLK COUNTY FRANKLIN MASSACHUSETTS Drawing Title		
UTILITY DETAILS I		
Project No.		Drawing No.
151019602		CU501
Date		
09/10/2022		
Drawn By		
Checked By		



Date	Description	No.
Revisions		
<div><div><div>COMMONWEALTH OF MASSACHUSETTS</div><div>FRANK HOLMES CIVIL No. 40203 REGISTERED PROFESSIONAL ENGINEER</div><div></div></div><div><div>LANGAN</div><div>Langan Engineering and Environmental Services, Inc. 100 Cambridge Street, Suite 1310 Boston, MA 02114 T: 617.824.9100 F: 617.824.9101 www.langan.com</div></div></div>		
Project		
237 PLEASANT STREET CONCEPT PLANS		
FRANKLIN NORFOLK COUNTY		