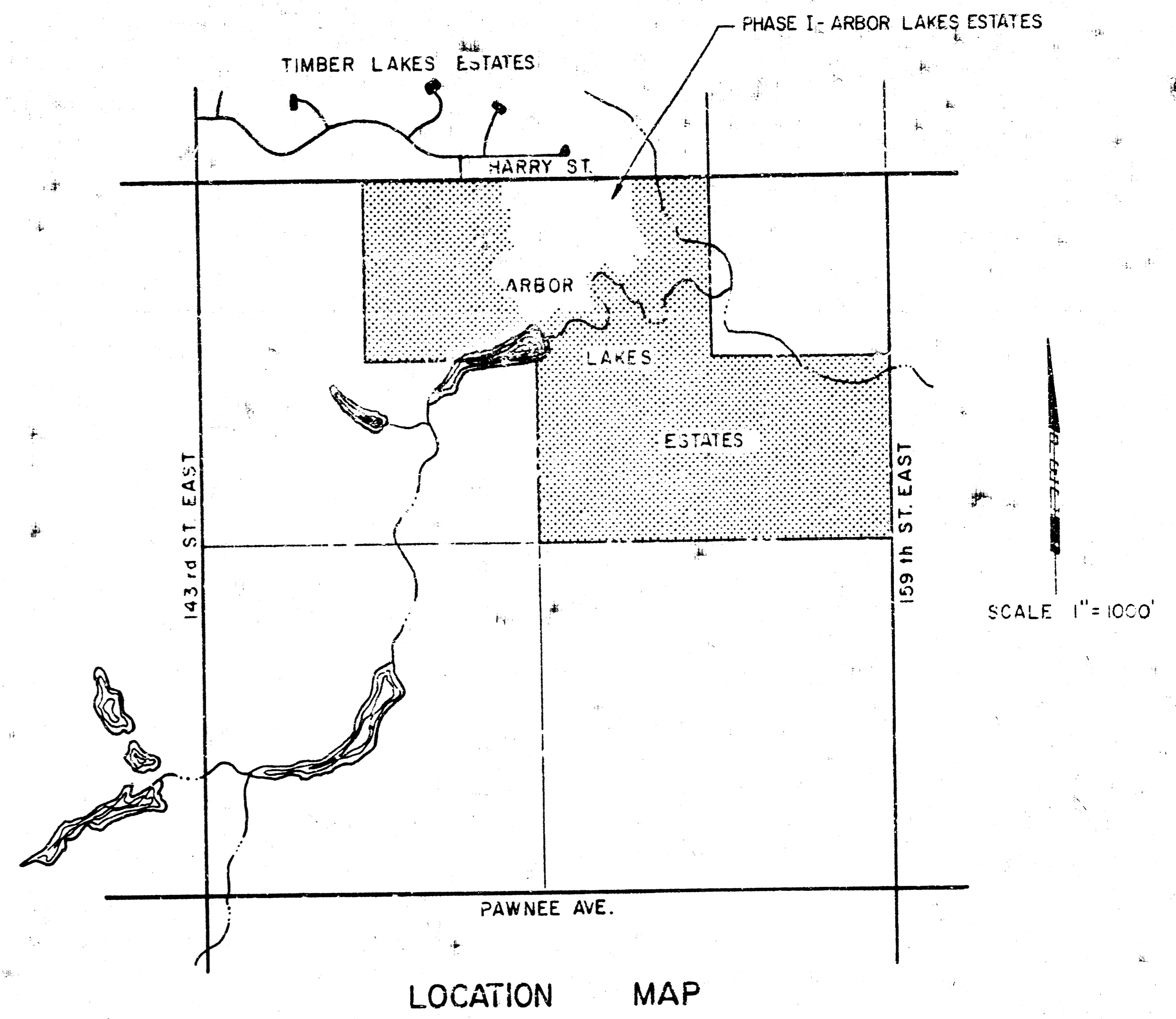


INDEX OF SHEETS

SHEET NO. 1	TITLE SHEET
SHEET NO. 2	KEY MAP & SCHEDULE
SHEET NO. 3-4	SANITARY SEWER DETAILS
SHEET NO. 5-7	PLAN PROFILES



CONSTRUCTION PLANS FOR
SANITARY SEWER IMPROVEMENTS
 IN
ARBOR LAKES ESTATES
 TO SEDGWICK COUNTY, KANSAS

PHASE I

JAN. 1977

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
 ENGINEERS
 WICHITA, KANSAS

PROJECT NO. 30-76303-2-024

APPROVED
[Signature]
 CITY ENGINEER OF WICHITA, KANSAS
 DATE 1/5/78

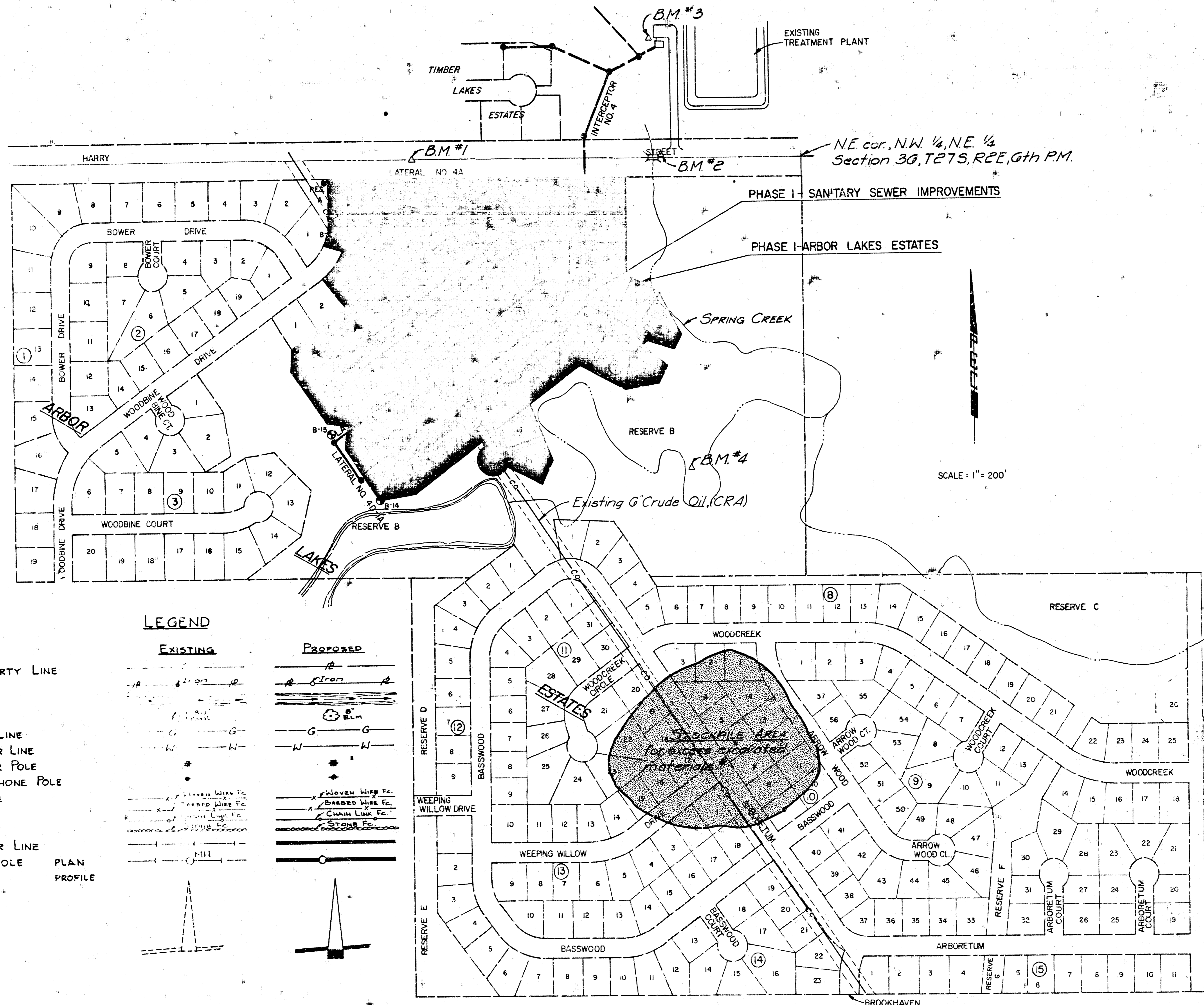
FILED
 THE SEDGWICK COUNTY CLERK
[Signature] 1-12-78
 COUNTY CLERK DATE

APPROVED
[Signature]
 COUNTY ENGINEER/DIRECTOR OF PUBLIC WORKS
 DATE 1-15-78

APPROVED DATE
[Signature]
 CHAIRMAN
 BOARD OF COUNTY COMMISSIONERS

APPROVED DATE
 WICHITA SEDGWICK COUNTY,
 DEPARTMENT OF COMMUNITY HEALTH

8/6/81 NVP
 JAN 12 1978



NE. cor., N.W. 1/4, N.E. 1/4
Section 36, T27S, R2E, 6th P.M.

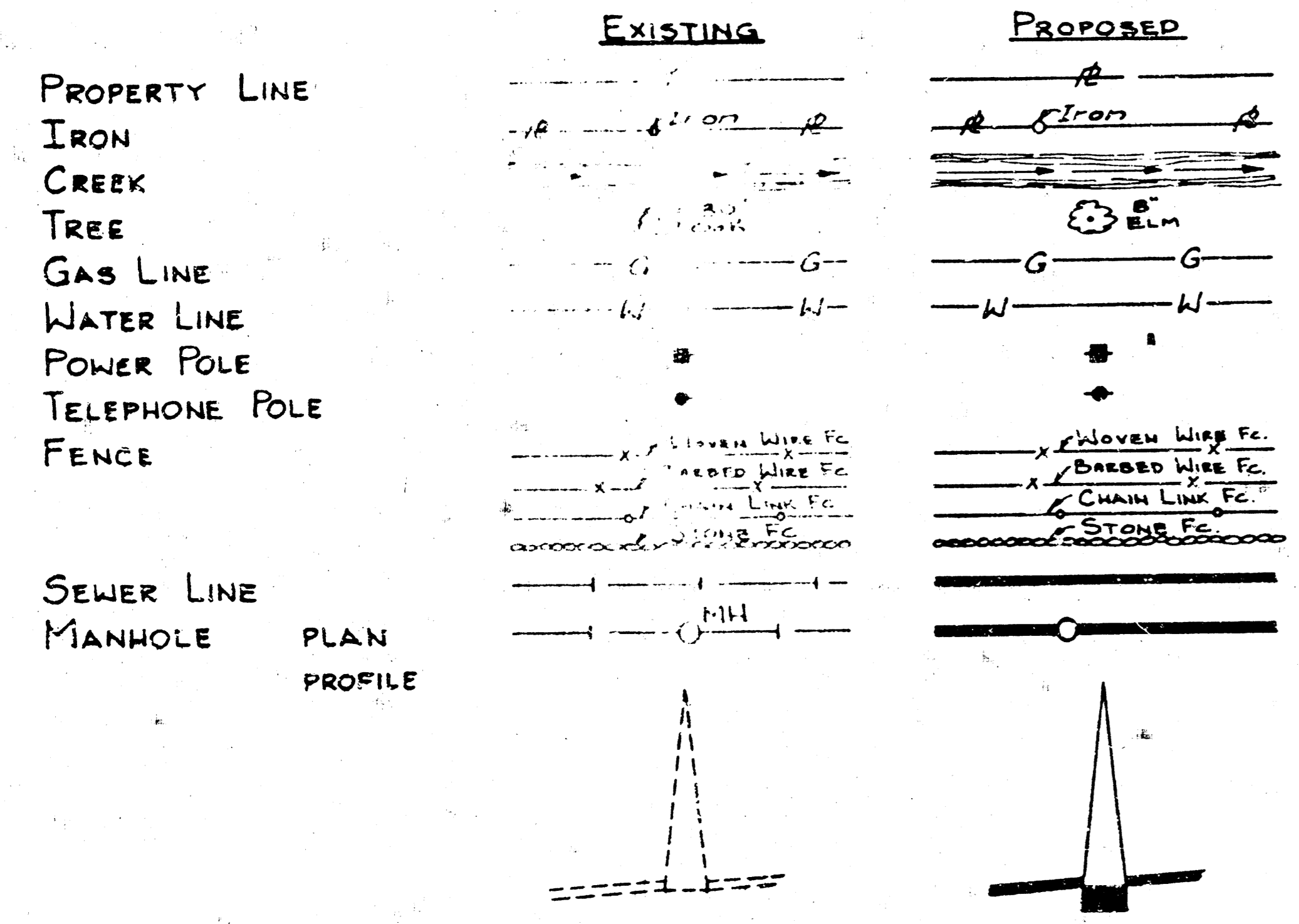
PHASE I - SANITARY SEWER IMPROVEMENTS

PHASE I - ARBOR LAKES ESTATES

SCALE: 1" = 200'

SEWER LINE SCHEDULE	
LINE NO.	SHEET NO.
INTERCEPTOR NO. 4D	5
LATERAL NO. 4A	6
LATERAL NO. 4A-1	6
LATERAL NO. 4A-2	6
LATERAL NO. 4B	6
LATERAL NO. 4C	7
LATERAL NO. 4D	7
LATERAL NO. 4D-1	7
LATERAL NO. 4D-1A	7

LEGEND



BENCH MARK LIST

- B.M. #1 - TOP OF PIPE IN THIMBLE AT THE N.W. CORNER OF THE N.E. 1/4 OF SECTION 36, T27S, R2E OF THE 6TH P.M. ELEV. 1295.10 (MSL)
- B.M. #2 - S.E. CORNER OF N. WHEEL GUARD OF BRIDGE ON HARRY STREET OVER SPRING CREEK. ELEV. 1288.75 (MSL)
- B.M. #3 - R.R. SPIKE IN ROOT OF THE NORTHEASTERLY SIDE 42" DIA. CO. WOOD TREE AT THE W. SIDE TREATMENT PLANT AREA, 60' ± W.N.W. OF LIFT STATION. ELEV. 1289.24 (MSL)
- B.M. #4 - TOP OF PICNIC TABLE, MOST SOUTHERLY CORNER IMMEDIATELY NORTH OF E. END OF BRIDGE AT CONCESSION STAND. ELEV. 1284.48 (MSL)

* Stockpile area shall provide for positive drainage as directed by the engineer.

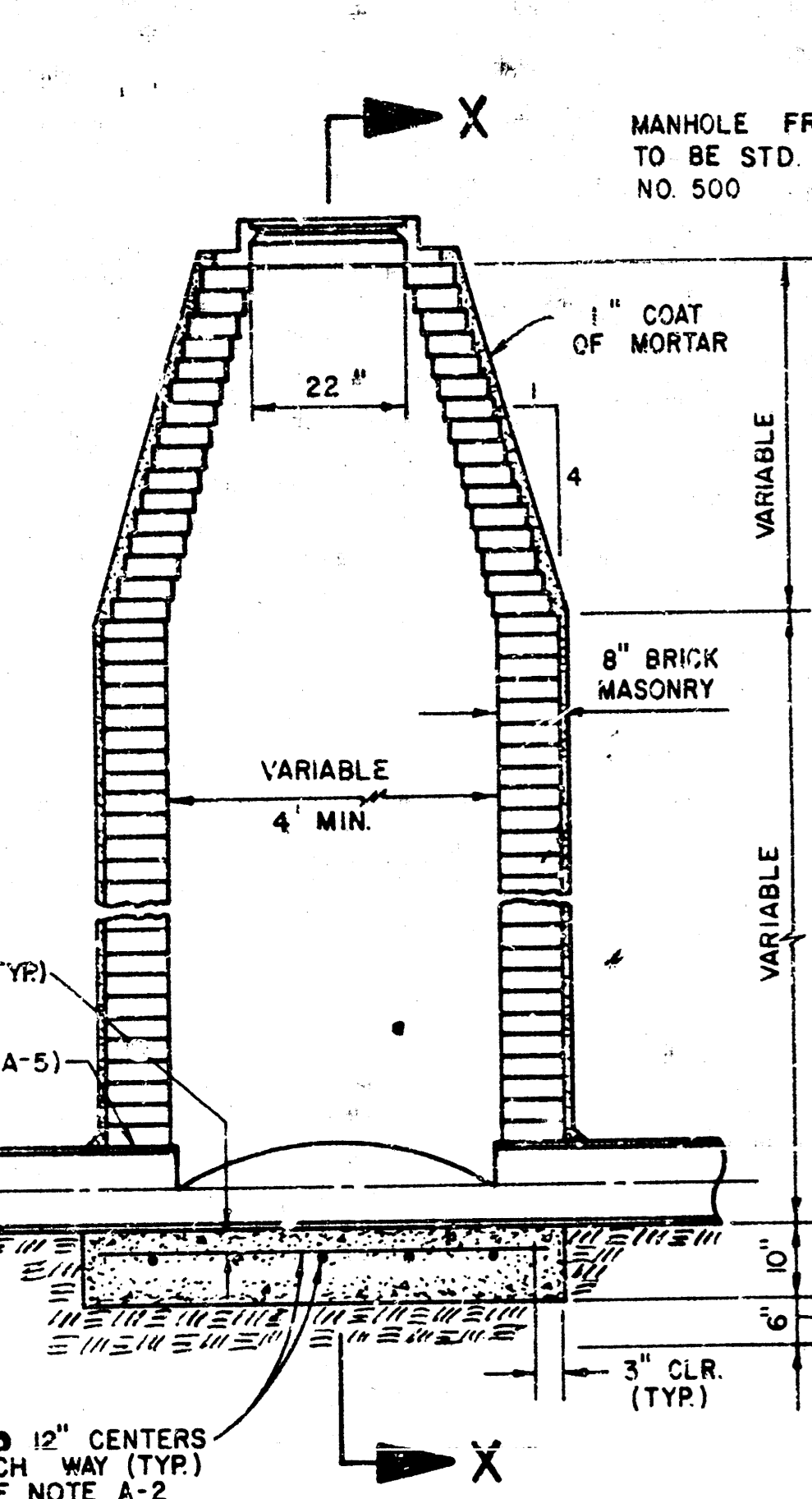
GENERAL NOTES

- THE CONTRACTOR SHALL CONTAIN HIS OPERATIONS TO PERMIT TRAFFIC THROUGH AND ACROSS CONSTRUCTION ON HARRY AT ALL TIMES. THE CONTRACTOR SHALL ERECT WARNING SIGNS, FLASHING LIGHTS, AND BARRICADES TO ENSURE SAFETY AS DIRECTED IN ARTICLE 18 OF THE GENERAL CONDITIONS. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
- THE CONTRACTOR WILL BE REQUIRED TO NOTIFY EACH OF THE FOLLOWING UTILITY COMPANIES PRIOR TO THE BEGINNING OF CONSTRUCTION AND SHOULD REQUEST THAT ANY EXISTING LINES BE FLAGGED.

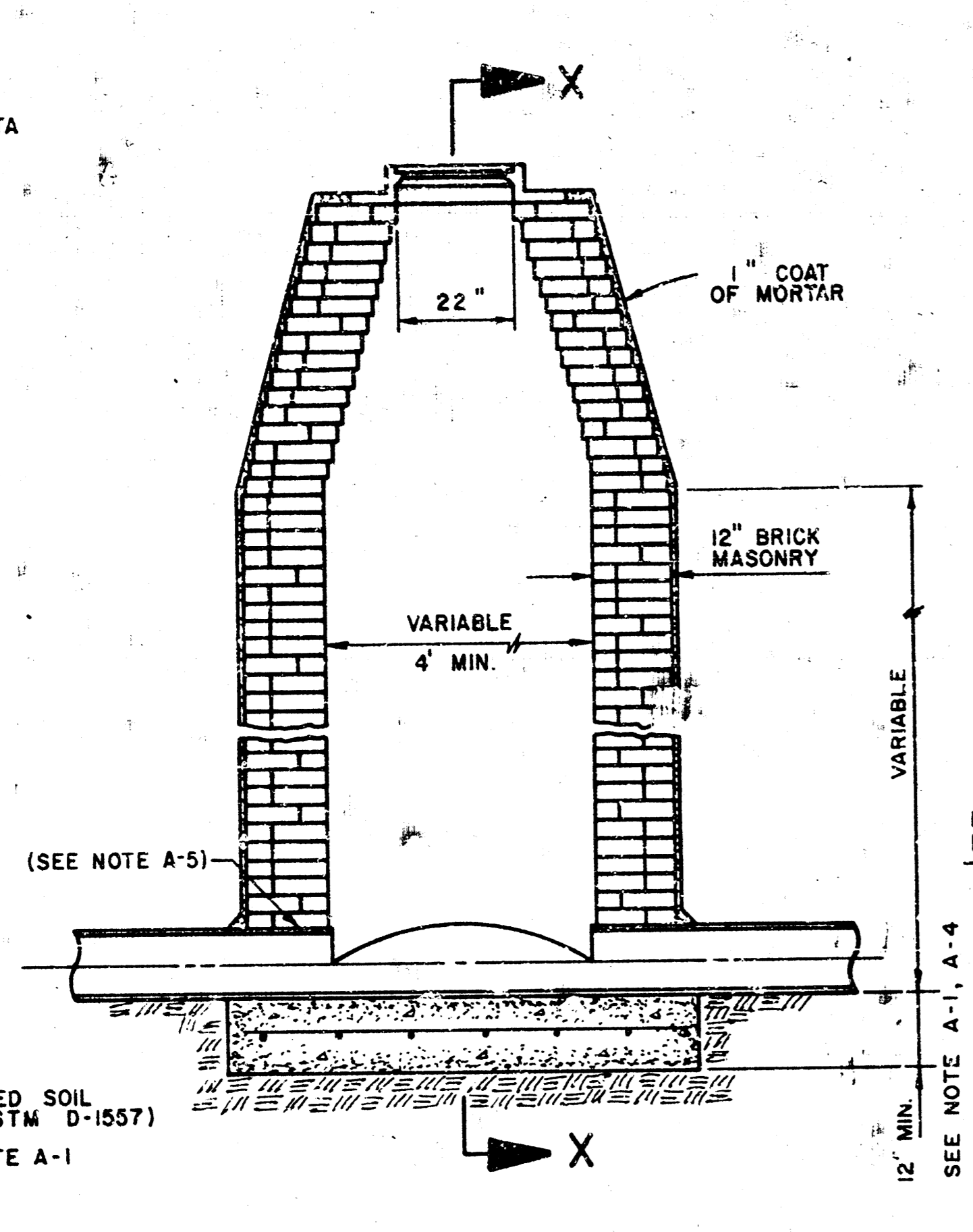
- KANSAS GAS & ELECTRIC COMPANY
1900 EAST CENTRAL
264-1111 (Ext. 248) JERRY LAKE
- GAS SERVICE COMPANY
1021 EAST 20TH STREET NORTH
263-7511 ENGINEERING DEPARTMENT
- CITY OF WICHITA WATER DEPARTMENT
455 NORTH MAIN STREET
268-4557 BENNY GEGEN
- SOUTHWESTERN BELL TELEPHONE COMPANY
154 NORTH BROADWAY
262-5500
- C.R.A., INC.
UNION CENTER BLDG.
276-4211 CASKELL STALLARD

- THE CONTRACTOR MUST ALSO NOTIFY THE TELEPHONE COMPANY 24 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION WORK NEAR BURIED TELEPHONE LINES.
- WHERE REMOVAL OF EXISTING FENCES PARALLEL TO THE CONSTRUCTION IS DEEMED NECESSARY BY THE CONTRACTOR, THE CONTRACTOR SHALL COORDINATE REMOVAL WITH ADJACENT PROPERTY OWNERS. ALL REMOVAL AND RESITTING OF FENCES WILL NOT BE PAID FOR SEPARATELY AND SHALL BE CONSIDERED SUBSIDIARY TO THE INSTALLATION OF THE PIPE.

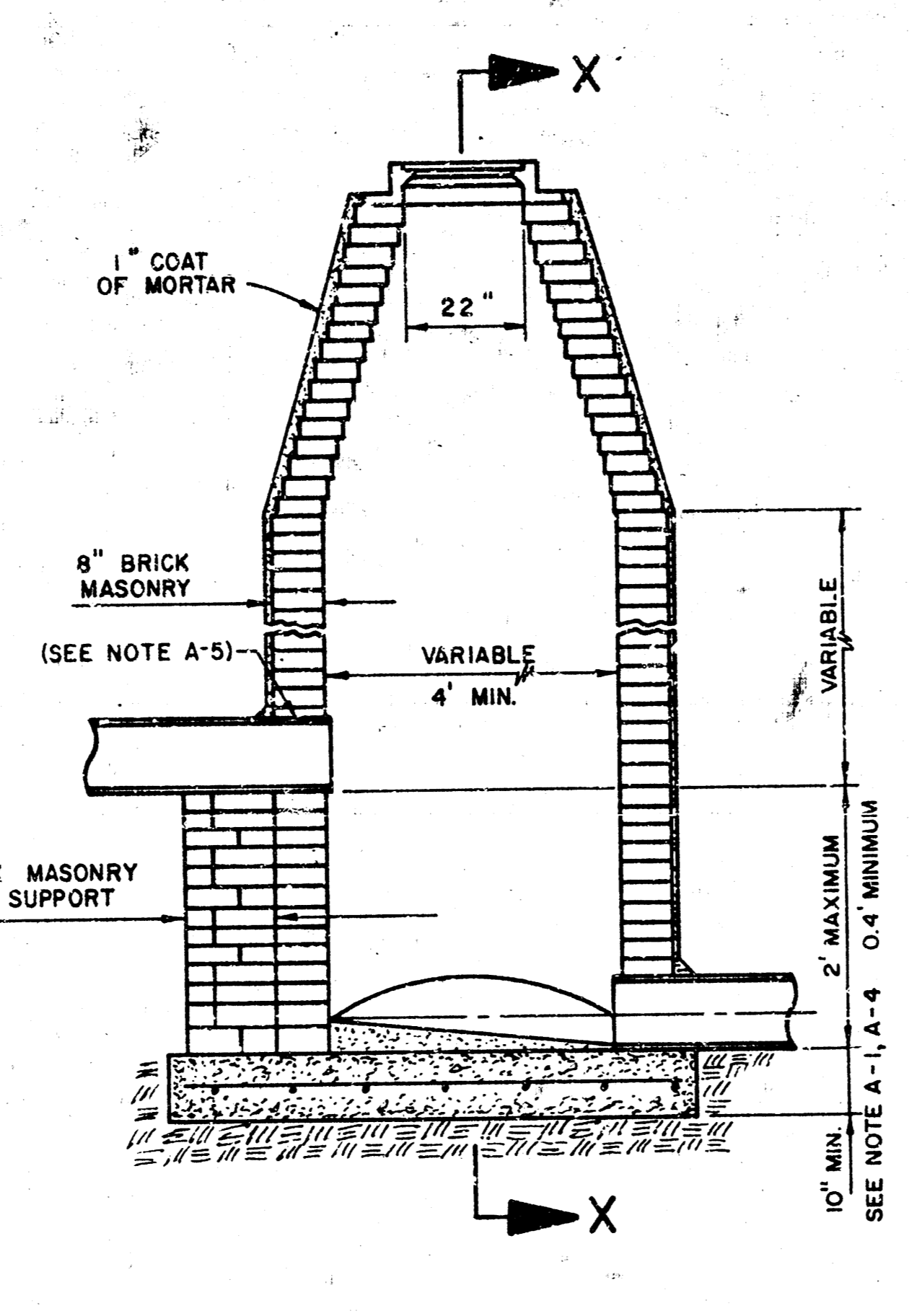
No.	Revision	By	Date
SEDGWICK COUNTY DEPARTMENT OF PUBLIC WORKS G.C. MCLURE, JR., P.E. DIRECTOR & COUNTY ENGINEER			
KEY MAP & SCHEDULE SANITARY SEWER IMPROVEMENTS ARBOR LAKES ESTATES TO SEDGWICK COUNTY, KANSAS PROFESSIONAL ENGINEERING CONSULTANTS, P.A. ENGINEERS WICHITA, KANSAS			
Designed by	MHK, MDS	Job No.	30-76303E
Drawn by	TS	Date	Oct. 1977
			Sht. 2 of 7



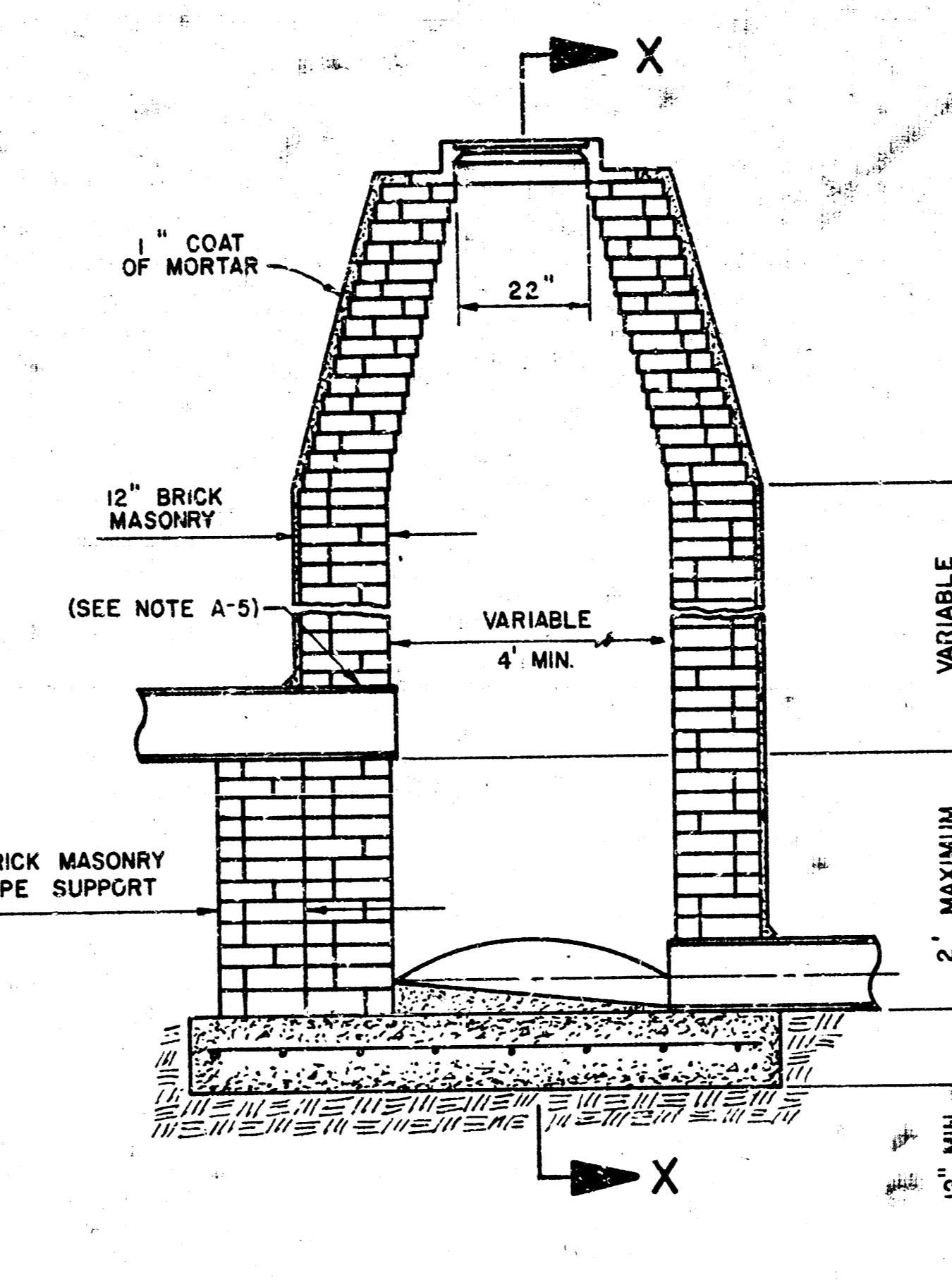
STANDARD MANHOLE TYPE A



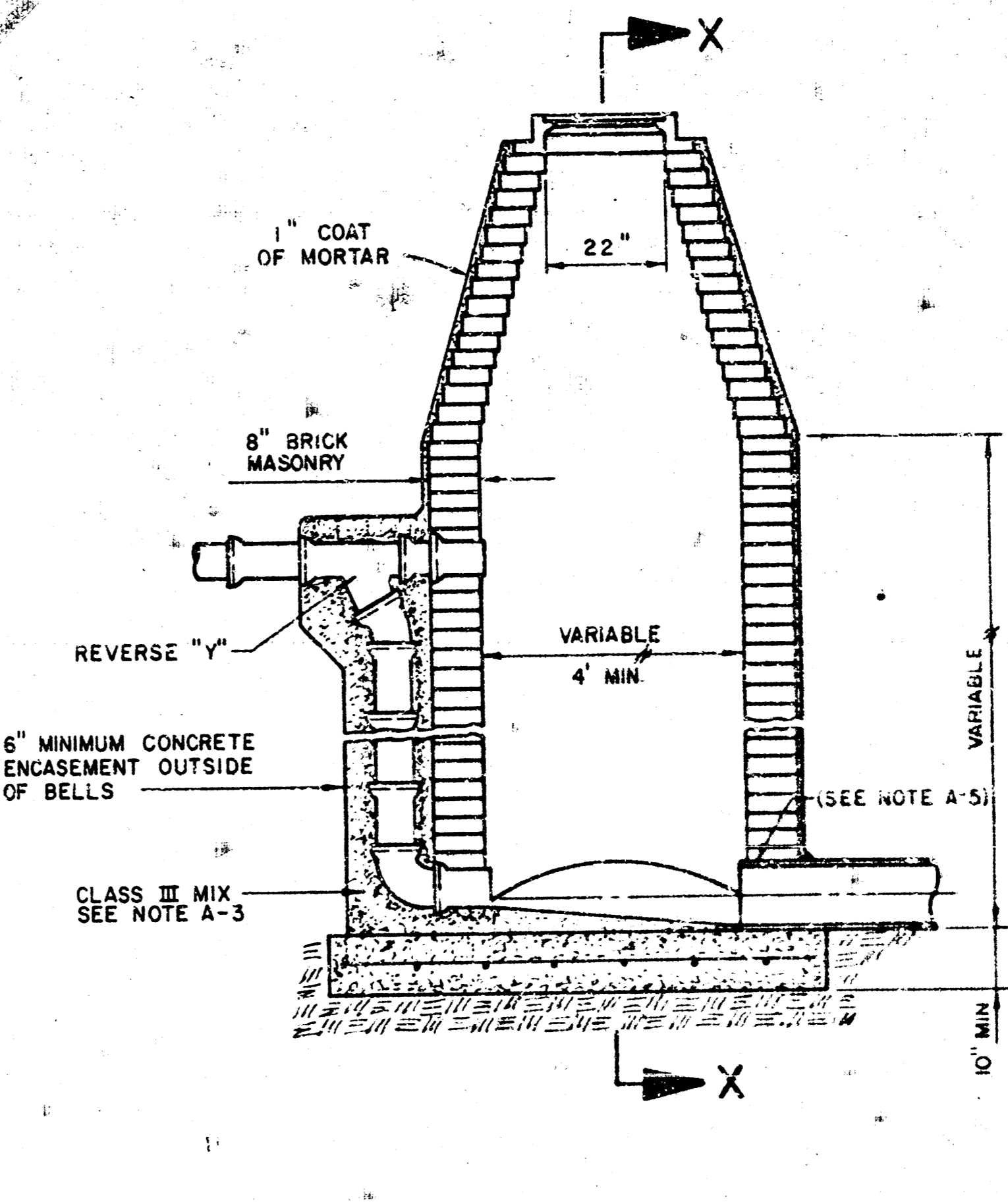
STANDARD MANHOLE TYPE AA



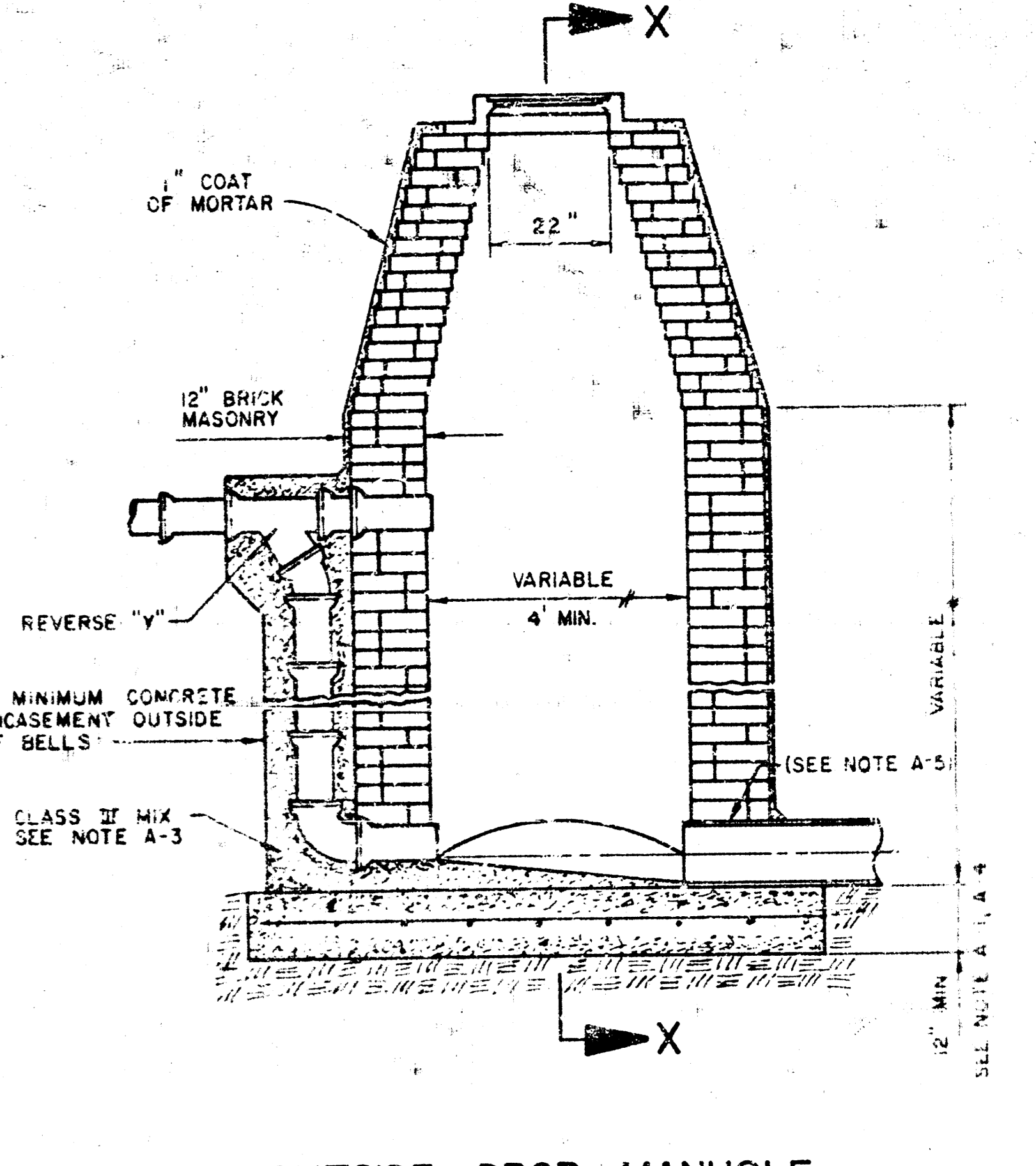
DROP MANHOLE TYPE B



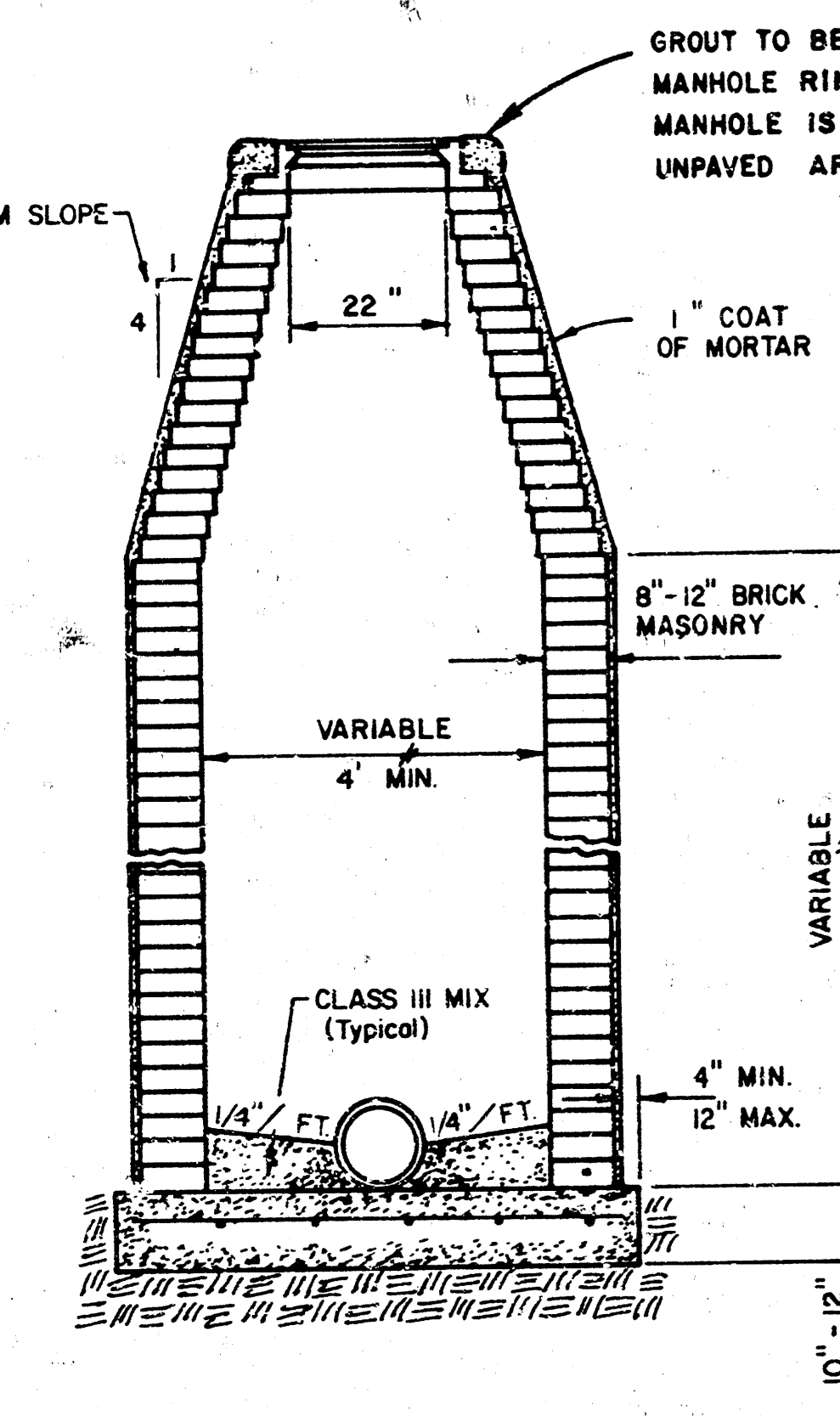
DROP MANHOLE TYPE BB



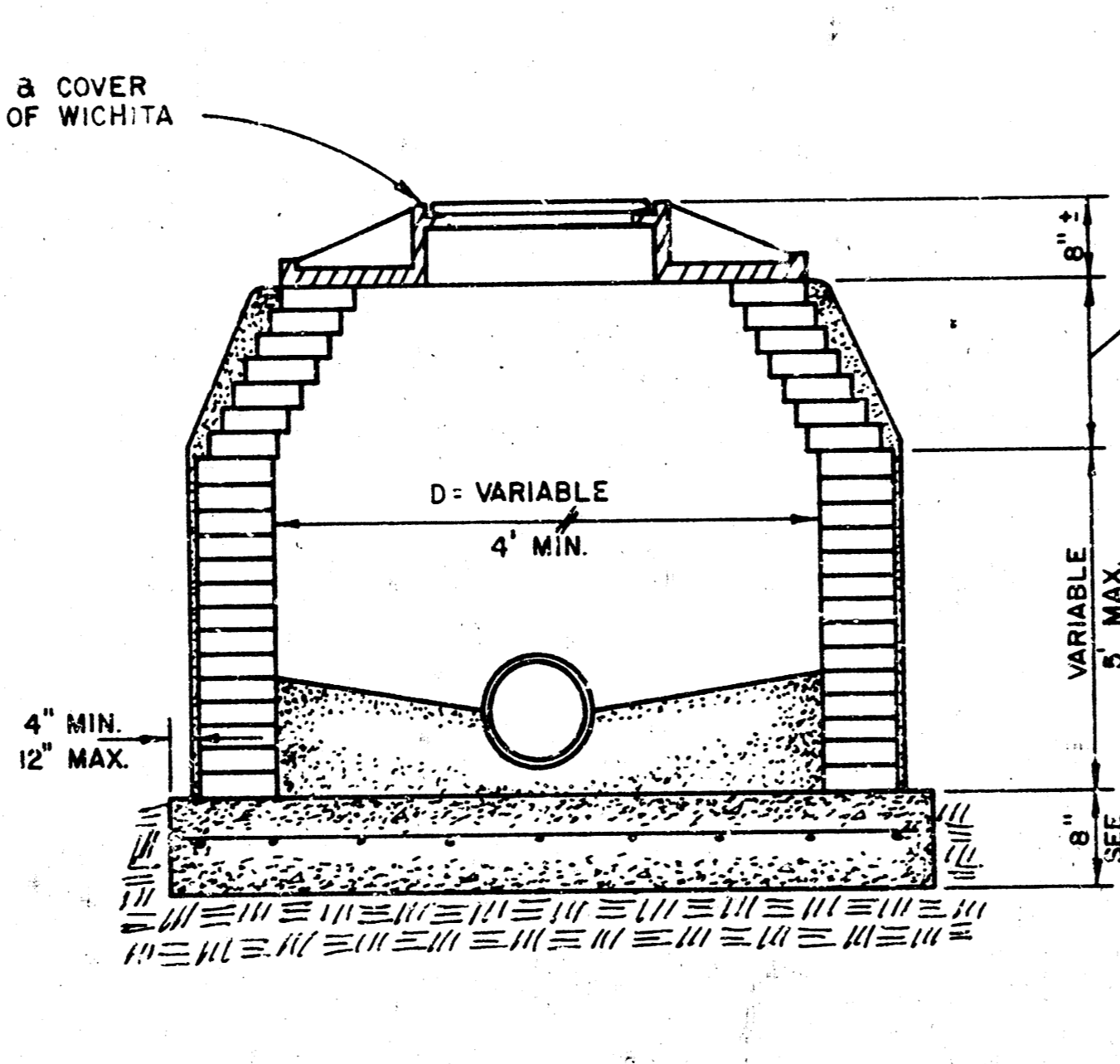
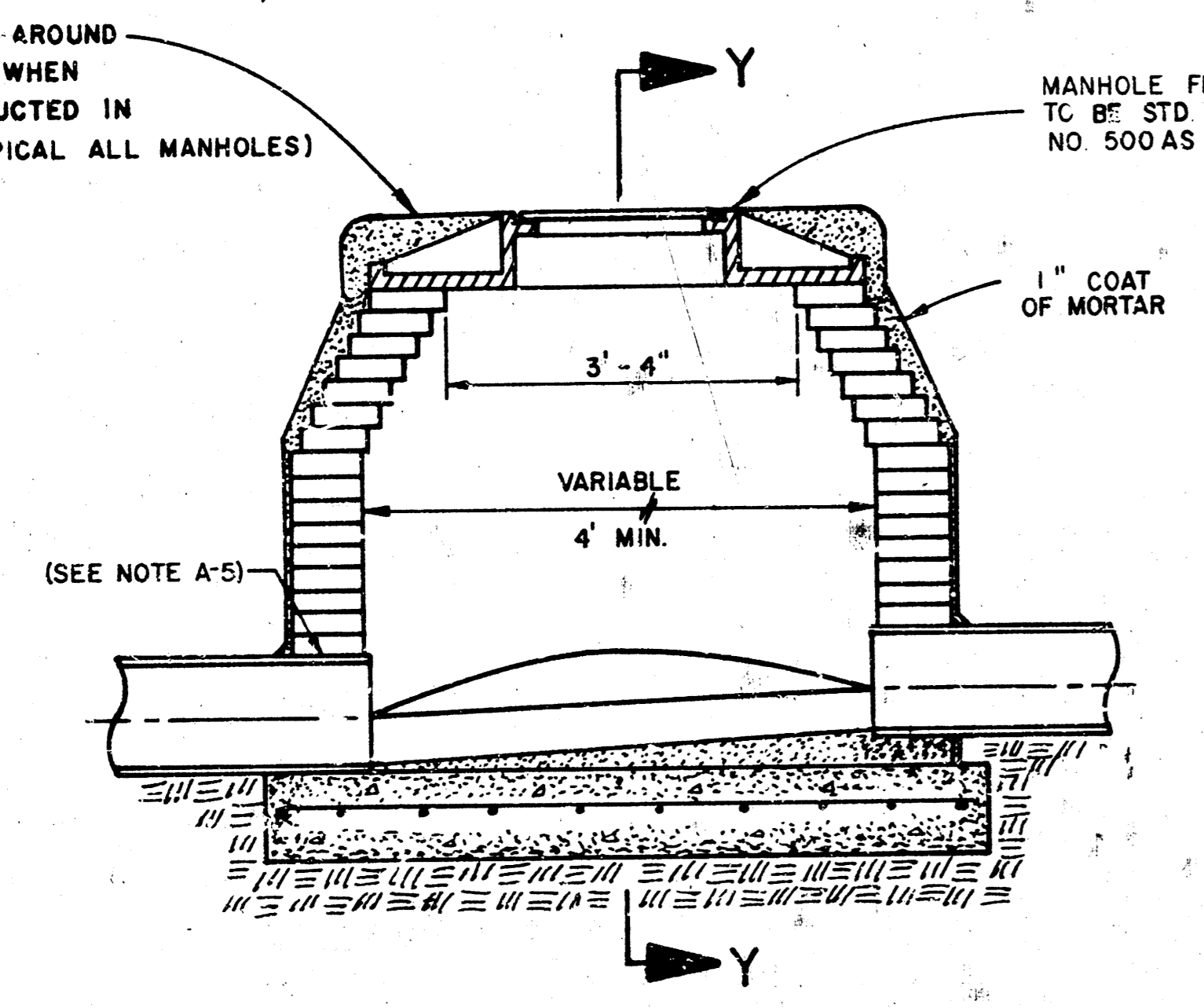
OUTSIDE DROP MANHOLE TYPE C



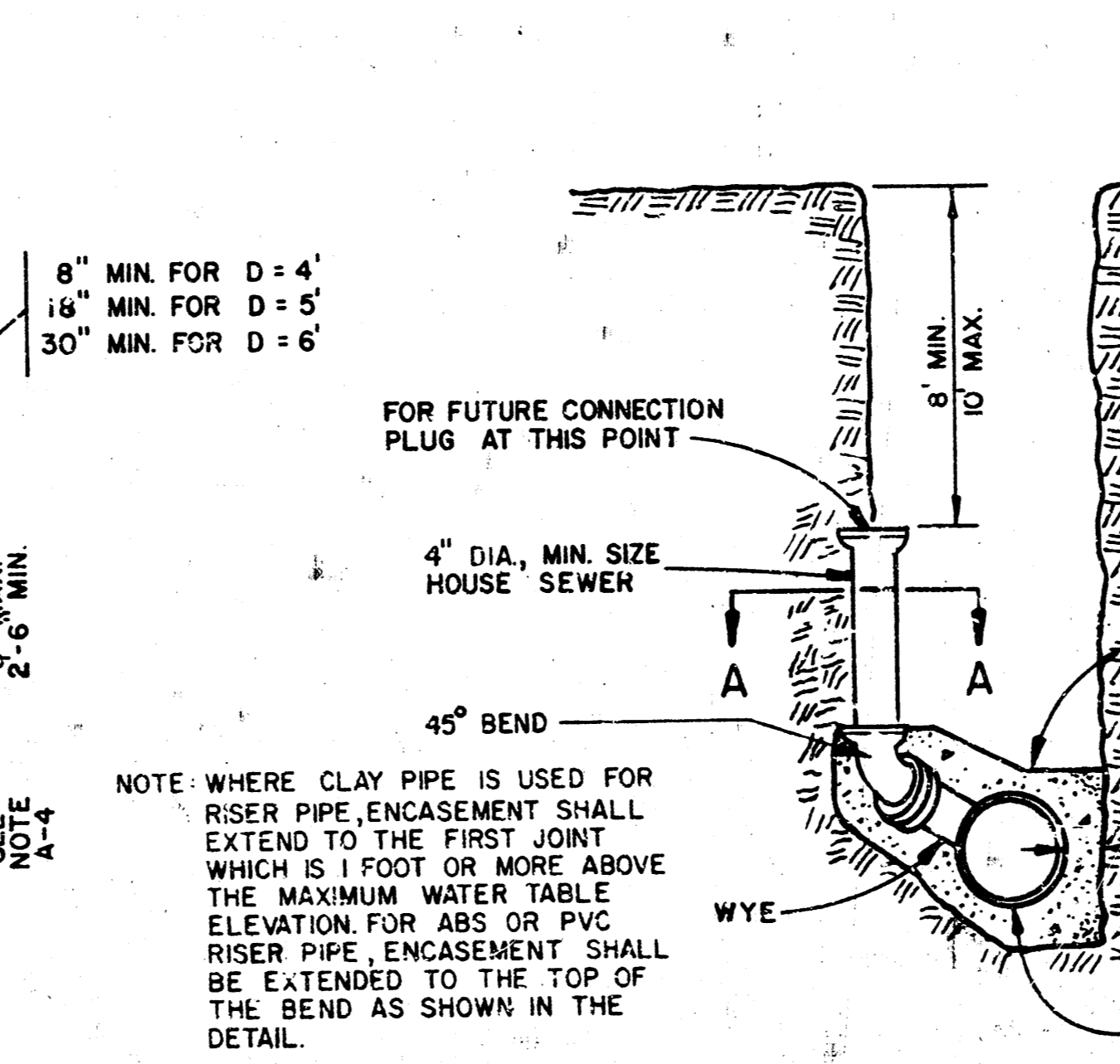
OUTSIDE DROP MANHOLE TYPE CC



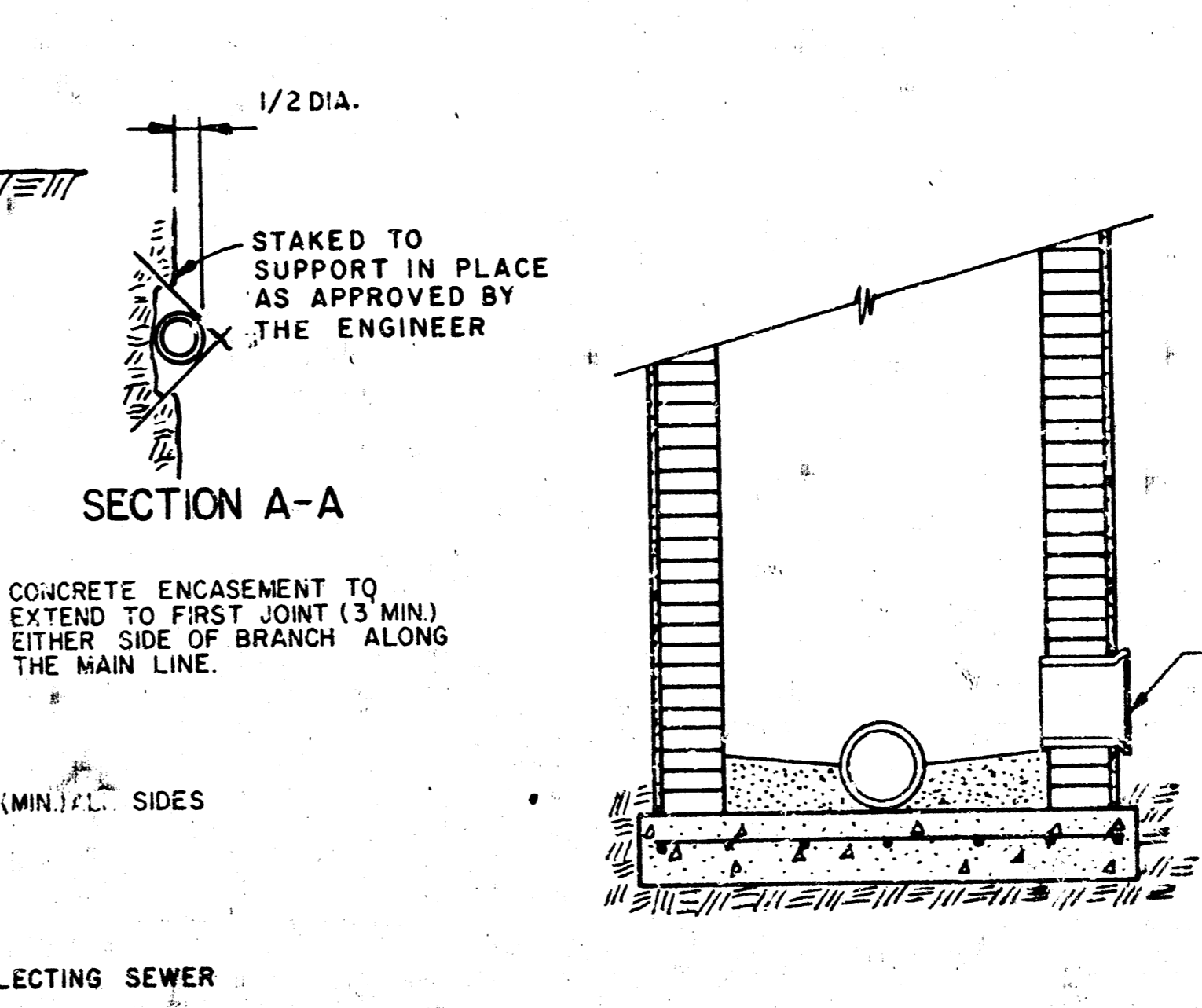
SHALLOW MANHOLE TYPE D



SECTION Y



RISER DETAIL



STUB DETAIL

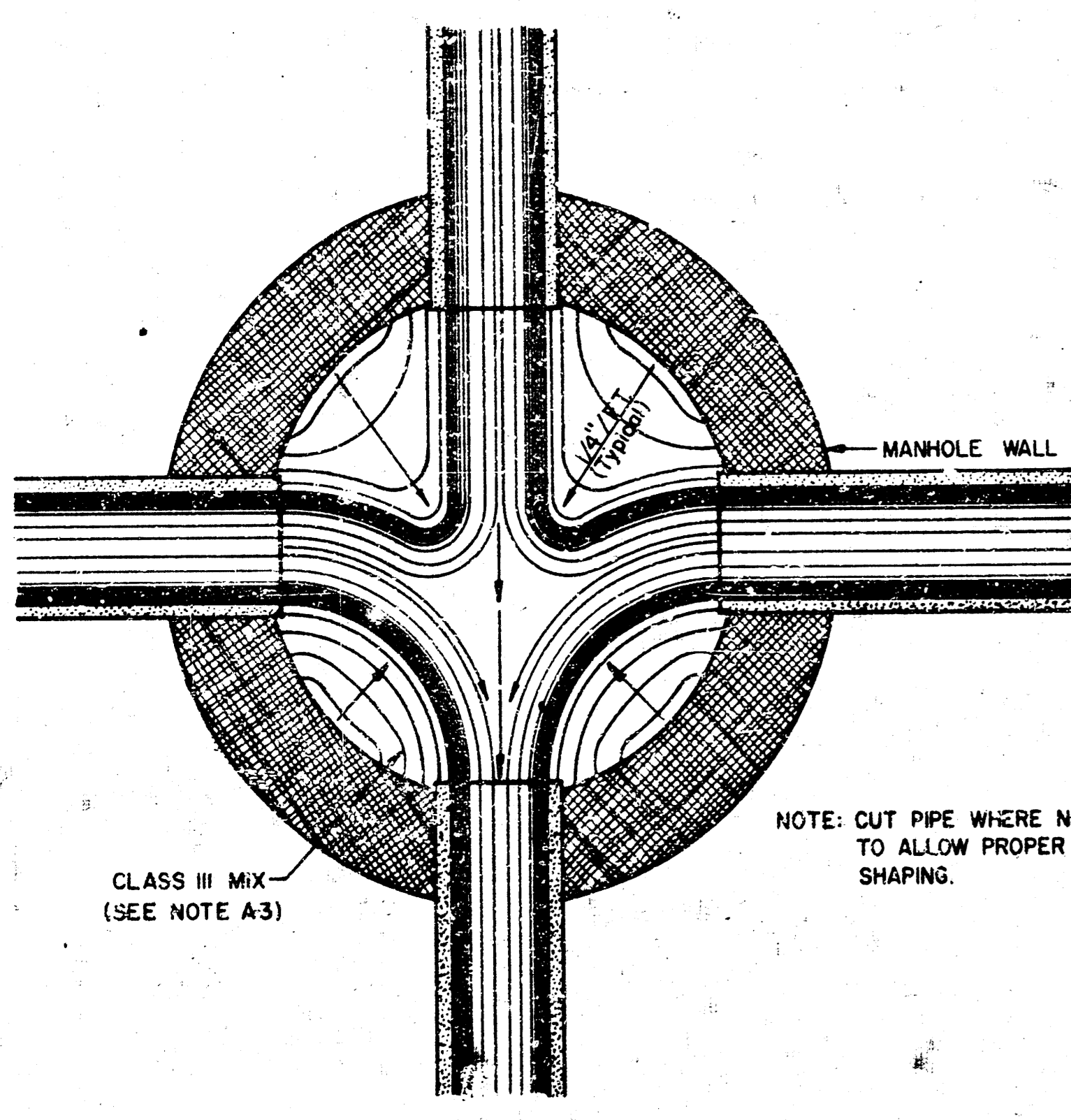
NOTES

- MANHOLES
- IF, IN THE OPINION OF THE ENGINEER, THE MANHOLE SUBGRADE APPEARS UNSTABLE, THE CONTRACTOR HAS THE OPTION TO COMPACT SUBGRADE AS SHOWN OR INCREASE THE THICKNESS OF THE MANHOLE BASE AS DIRECTED BY THE ENGINEER.
- STEEL REINFORCING IS REQUIRED IN ALL MANHOLE BASES.
- MORTAR USED IN MASONRY CONSTRUCTION TO BE CLASS III MIX.
- ALL MANHOLE GASES TO BE CLASS I MIX.
- APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE, POLYETHYLENE PIPE, OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER EXTENDING FROM MANHOLES SHALL BE SUPPORTED WITH CONCRETE TO THE FIRST JOINT OF PIPE FROM THE MANHOLE WALL. CONCRETE SUPPORTS MAY BE DELETED PROVIDED AN APPROVED FLEXIBLE WATERSTOP GASKET IS INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL.
- PIPE PLUGS SHALL BE AS MANUFACTURED BY PIPE SUPPLIER WHEN AVAILABLE.

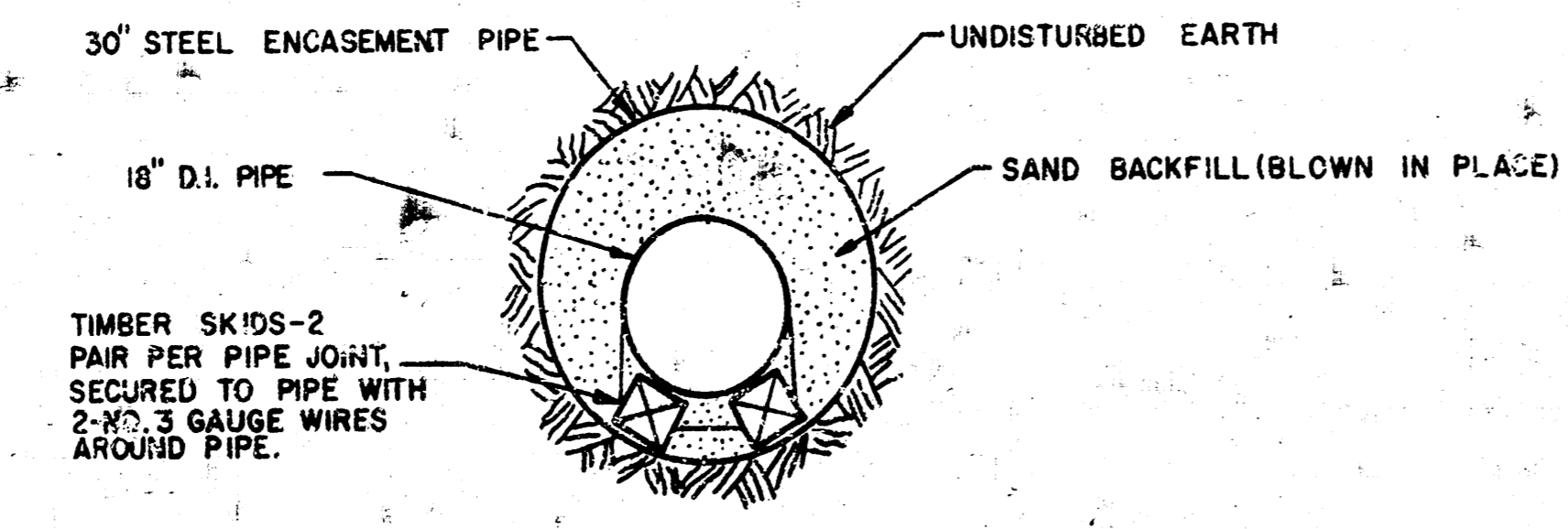
RISER LOCATION TABLE

WYE NO.*	LOCATION			PIPE RISER (L.F.)	DISTANCE FROM MANHOLE**	
	LAT. NO.	STATION	DIRECTION		UPSTREAM	DOWNSTREAM
1	4C	1+10±	LEFT	5.0		
2	4D	0+80±	LEFT	10.0		
3	4D	2+65±	LEFT	7.0		
4	4D	2+70±	RIGHT	7.0		
5	4D	3+90±	LEFT	11.0		
6	4D	3+95±	RIGHT	8.0		
7	4D	5+70±	LEFT	6.0		
8	4D	5+75±	RIGHT	6.0		
9	4D-1	1+35±	LEFT	6.0		
10	4D-1	1+40±	RIGHT	11.0		

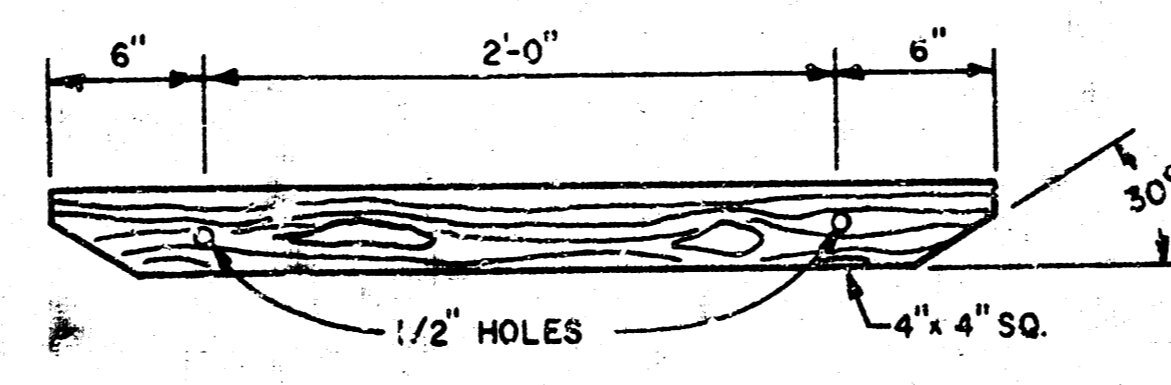
*ALL WYES SHALL BE 4" x 8" UNLESS OTHERWISE NOTED.
 **THIS ITEM TO BE COMPLETED BY THE RESIDENT INSPECTOR AT TIME OF INSTALLATION.



TYPICAL MANHOLE FLOOR SHAPING



BORING ENCASEMENT DETAIL



TIMBER SKID DETAIL

Revision By Date

SEDGWICK COUNTY DEPARTMENT OF PUBLIC WORKS
 G.C. McLURE, JR., P.E. DIRECTOR & COUNTY ENGINEER

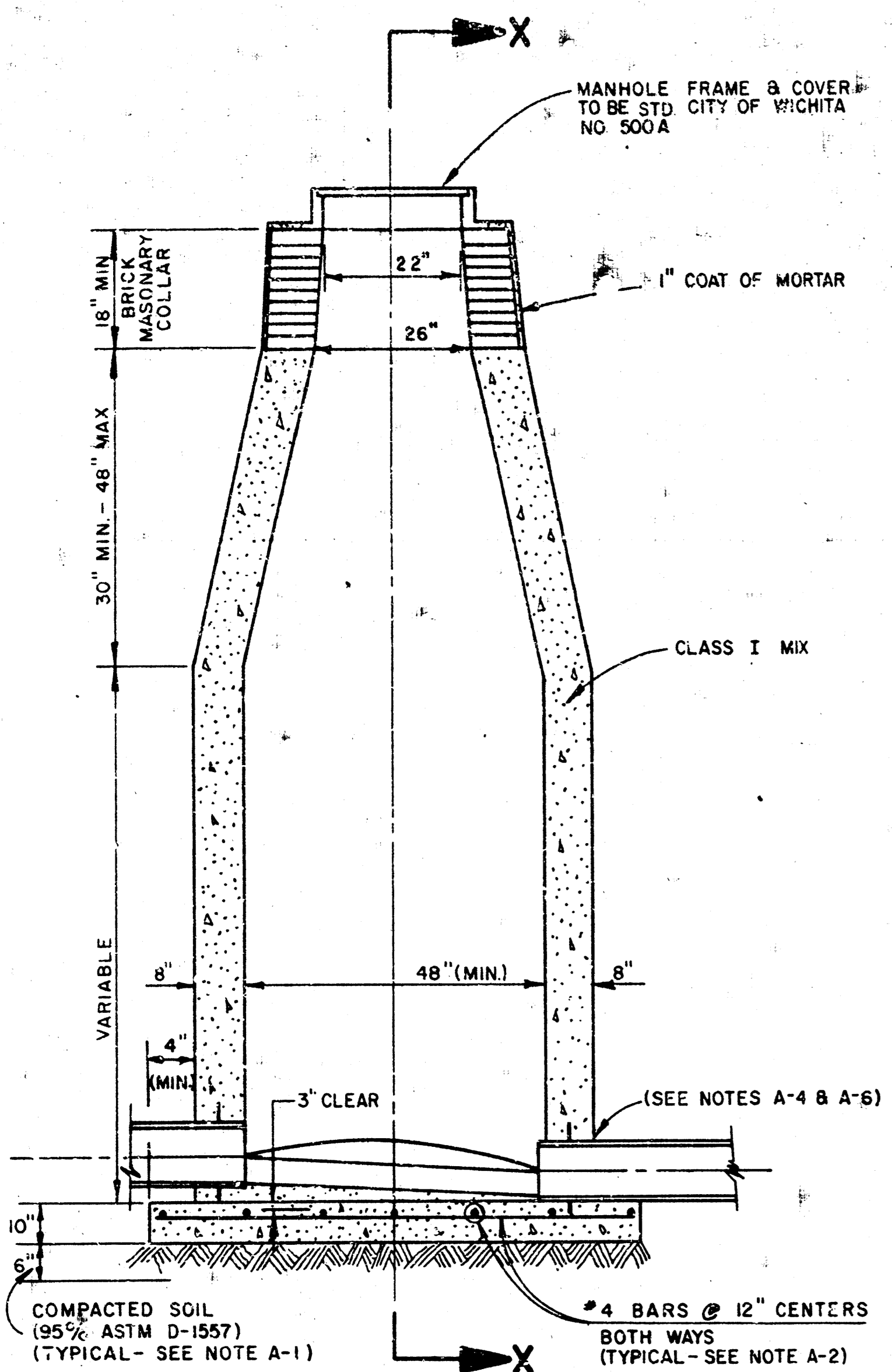
SANITARY SEWER DETAILS

SANITARY SEWER IMPROVEMENTS
 ARBOR LAKES ESTATES TO SEDGWICK COUNTY, KANSAS

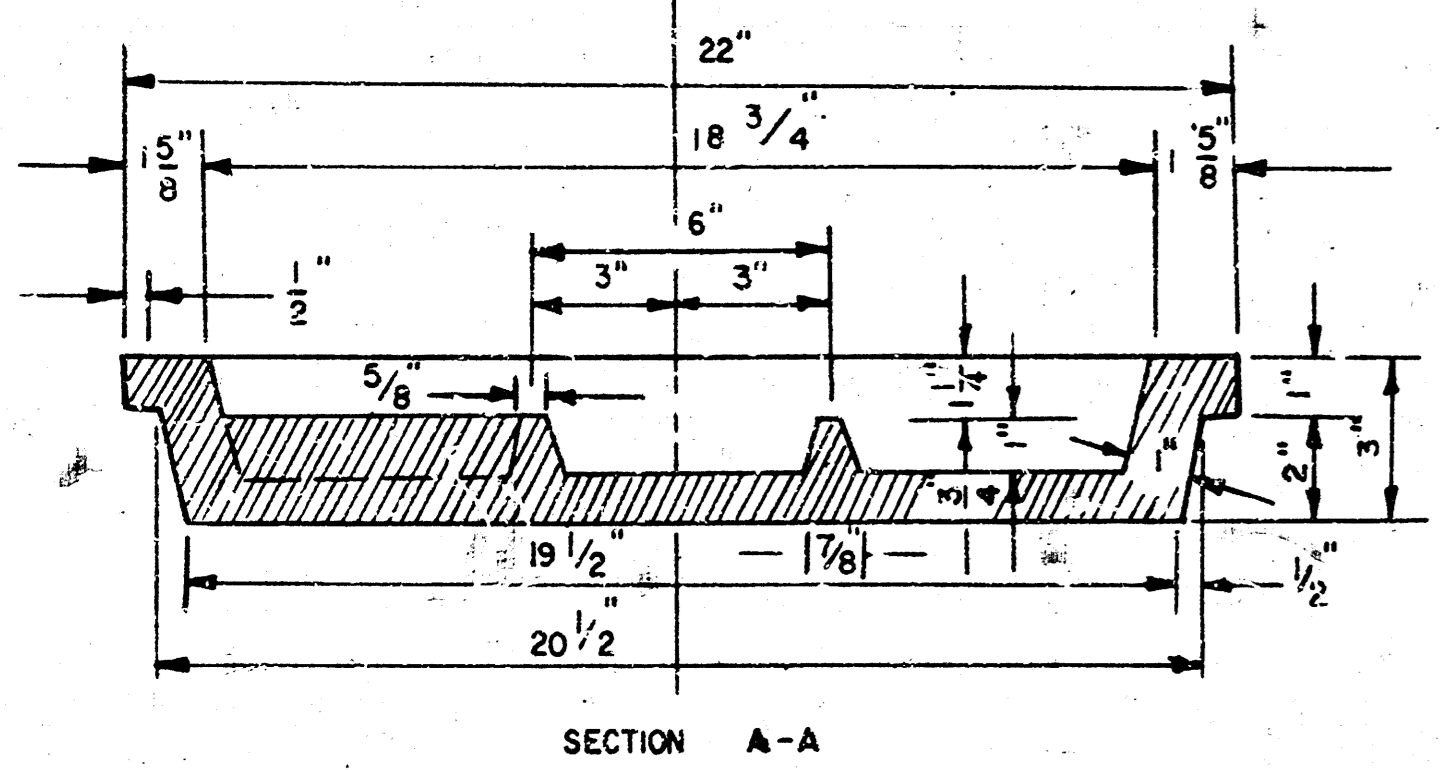
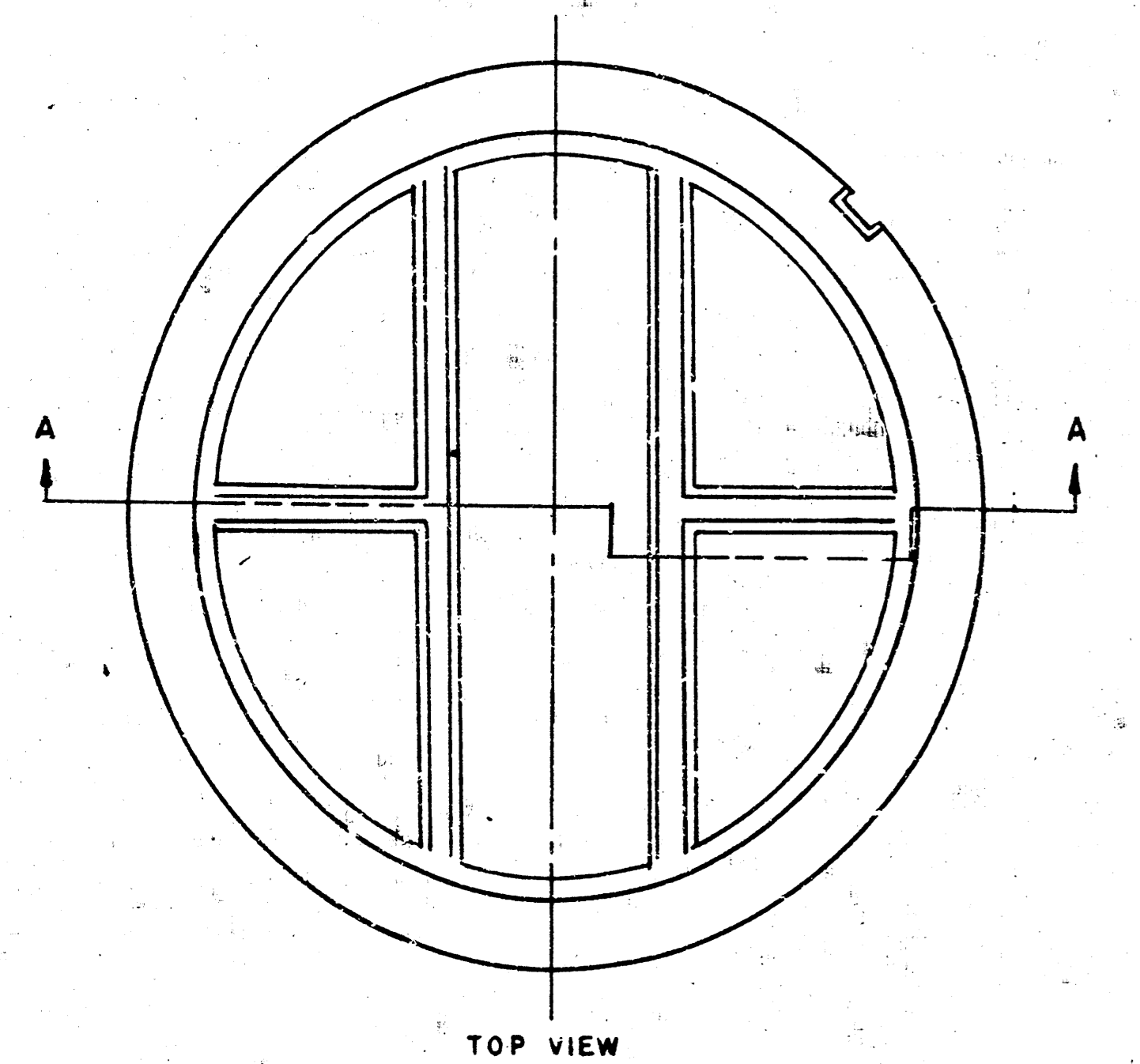
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS
 WICHITA, KANSAS

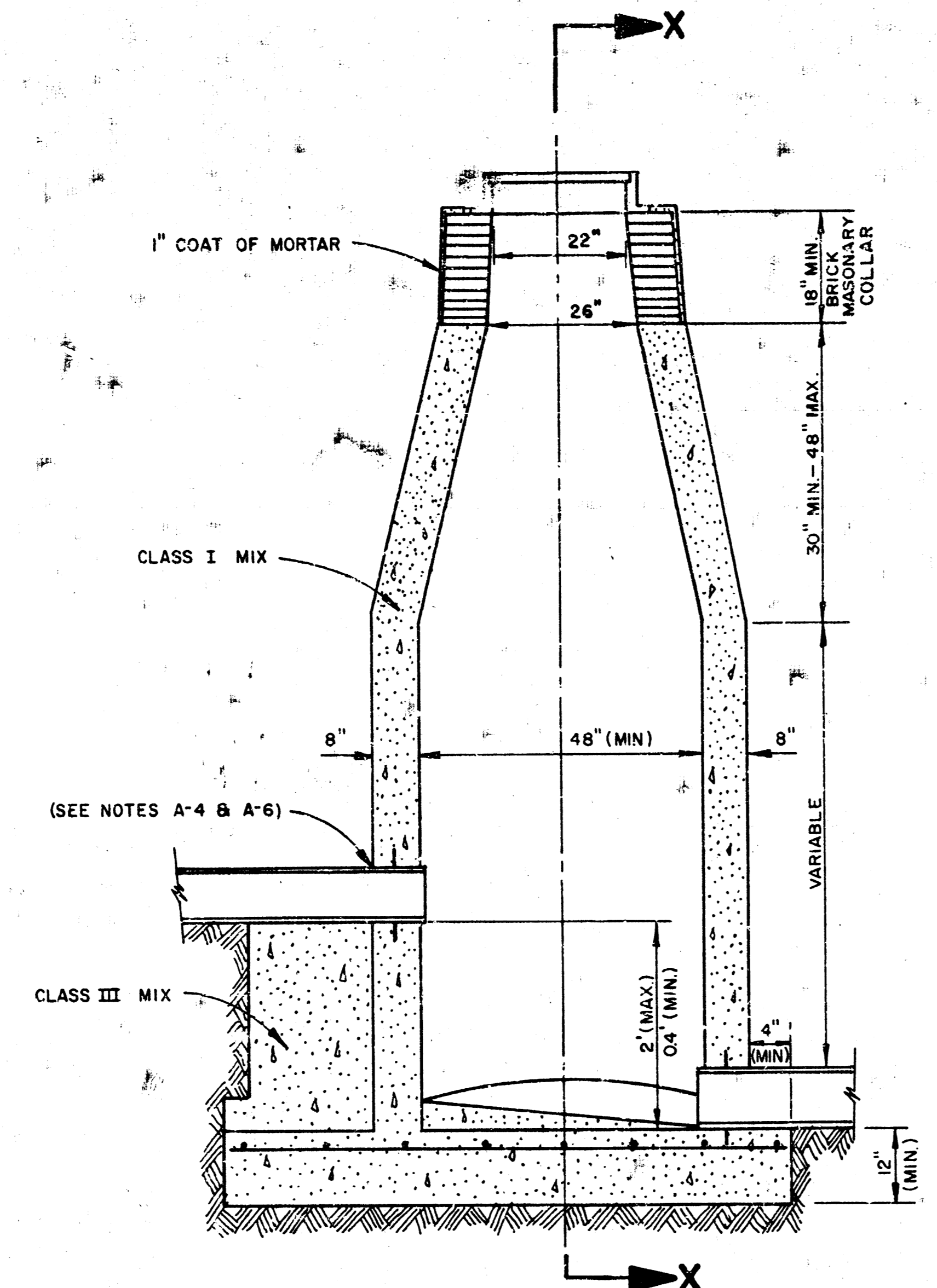
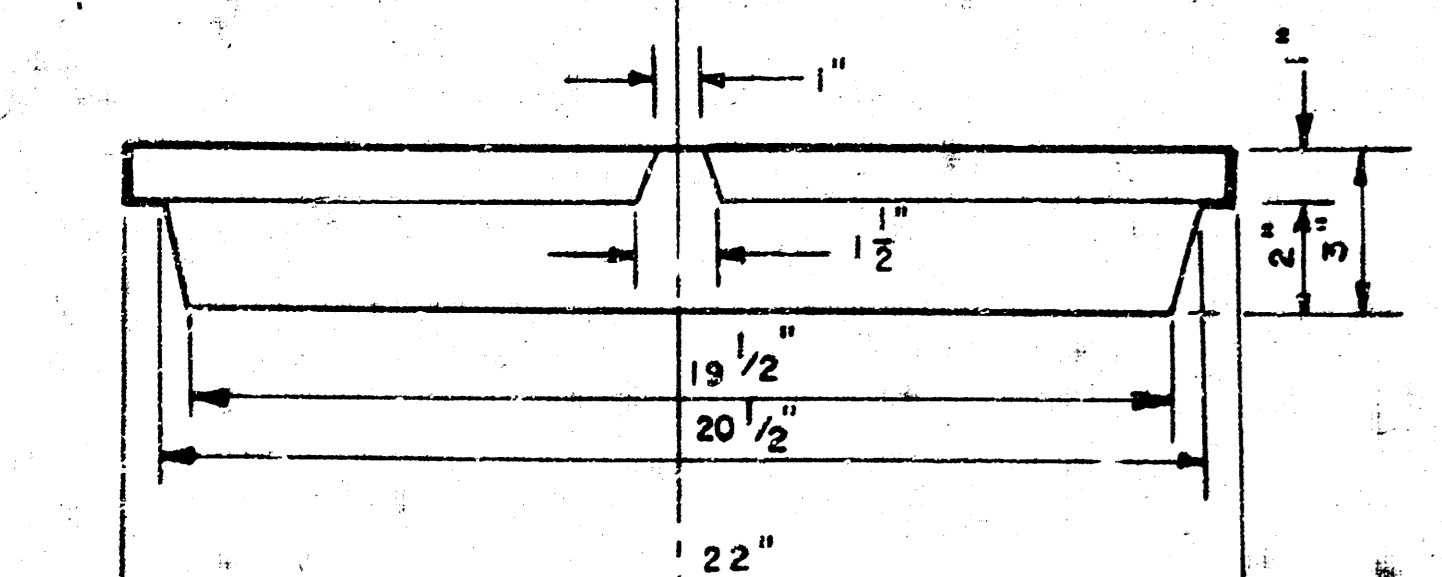
Designed by WJK, MDS Job No. 30-76303-2 Sht. 3 of 7



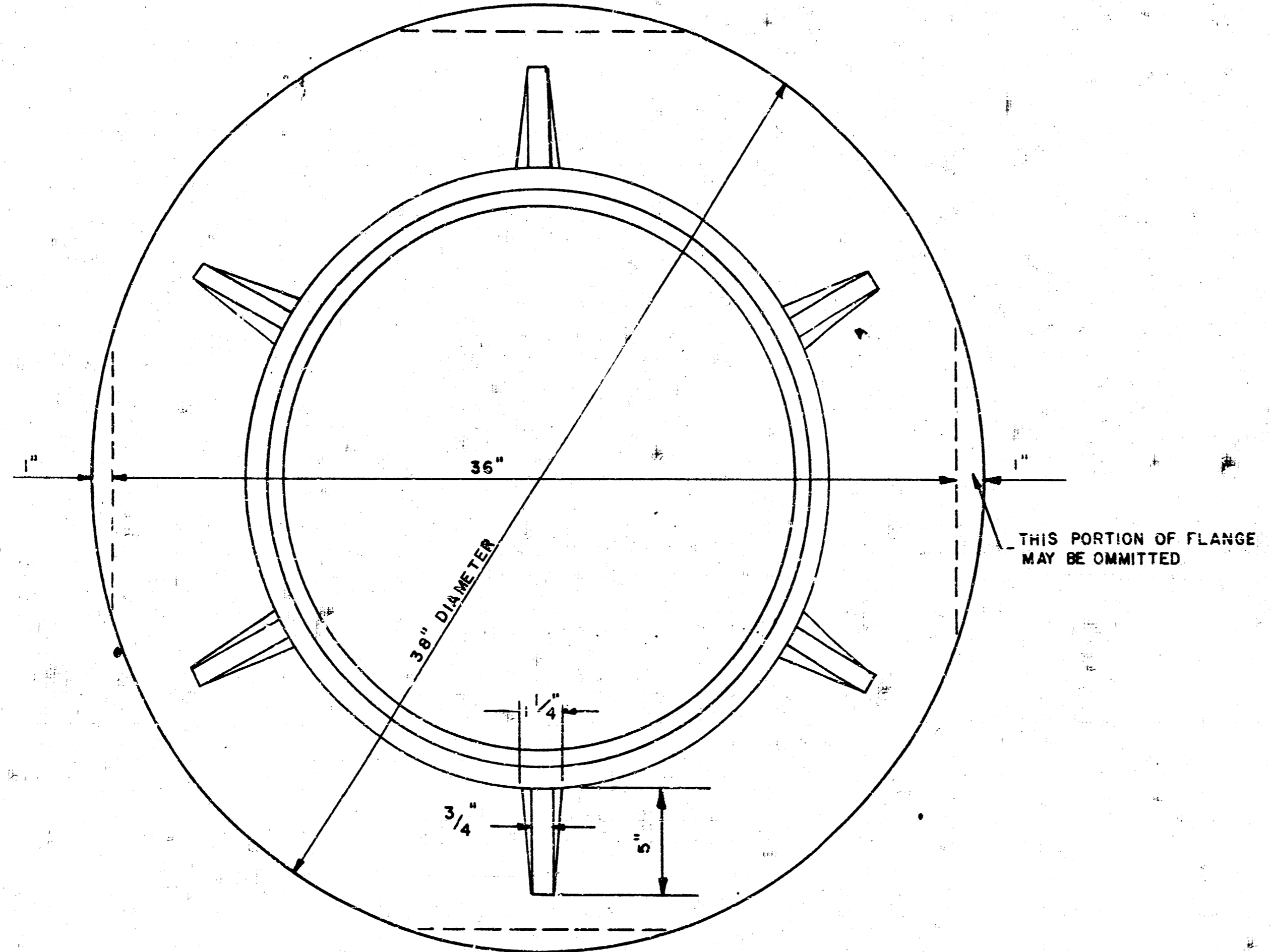
CAST IN PLACE
STANDARD MANHOLE
TYPE "E-A"



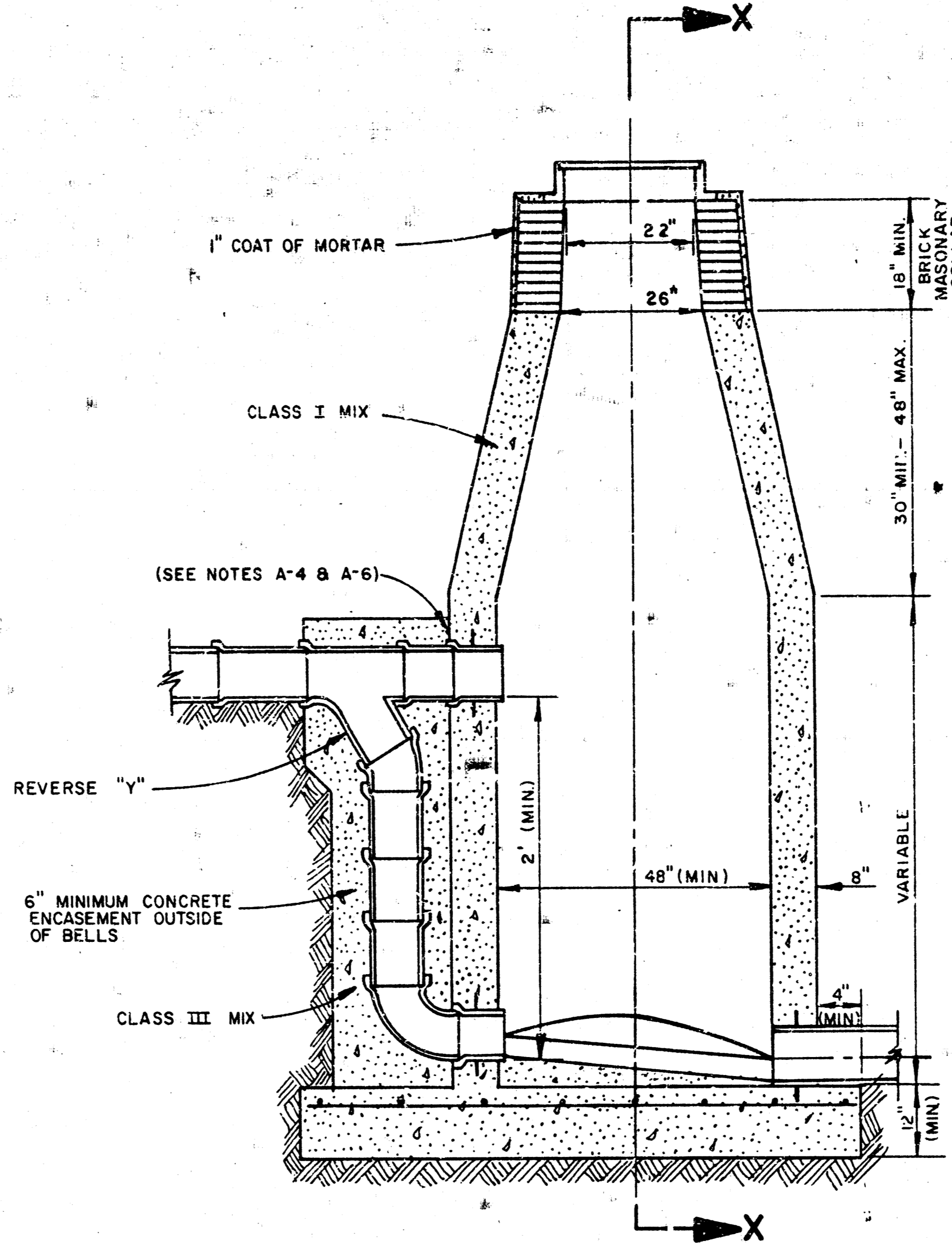
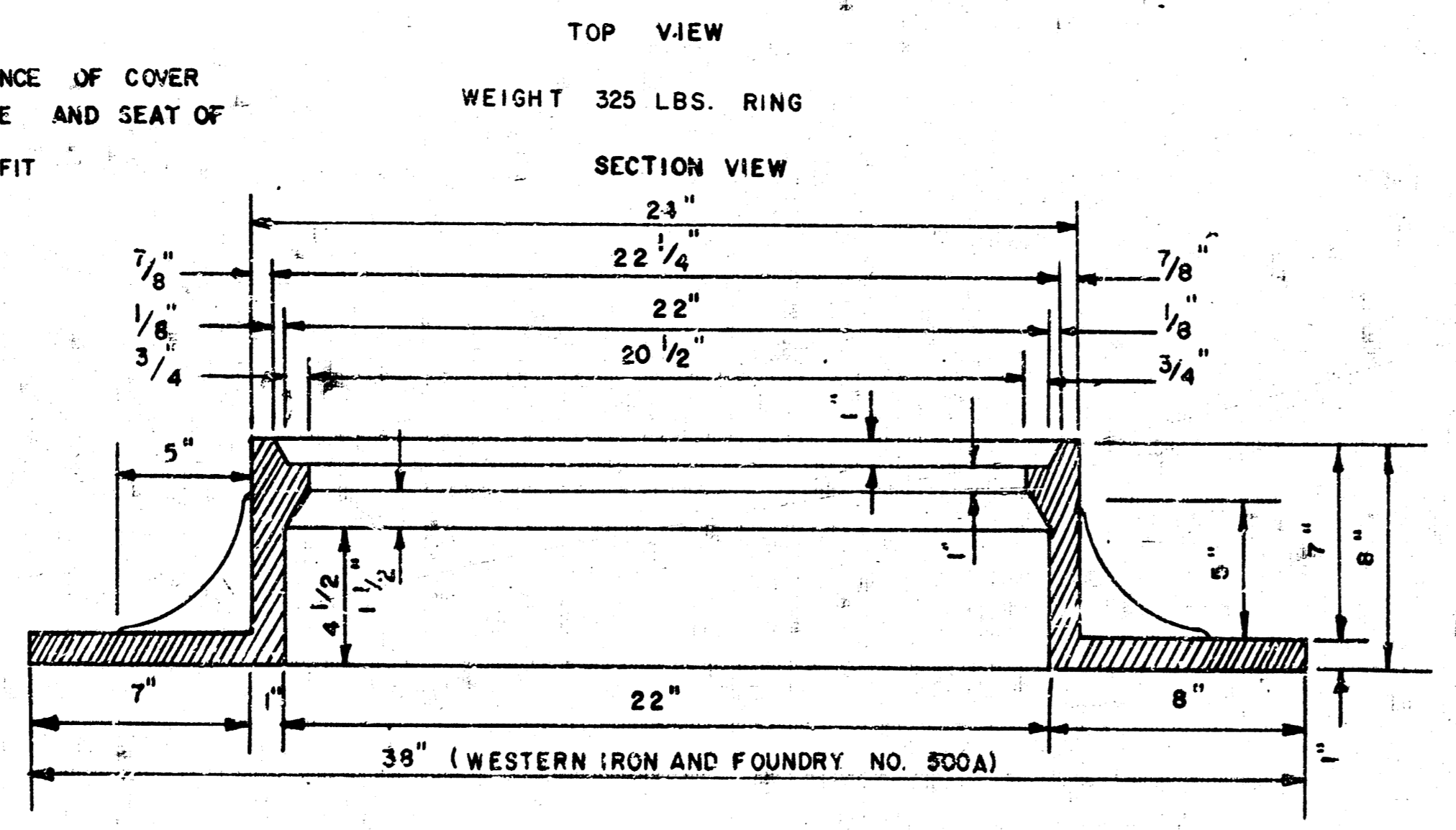
MANHOLE COVER
WEIGHT 110 LBS.
SIDE VIEW



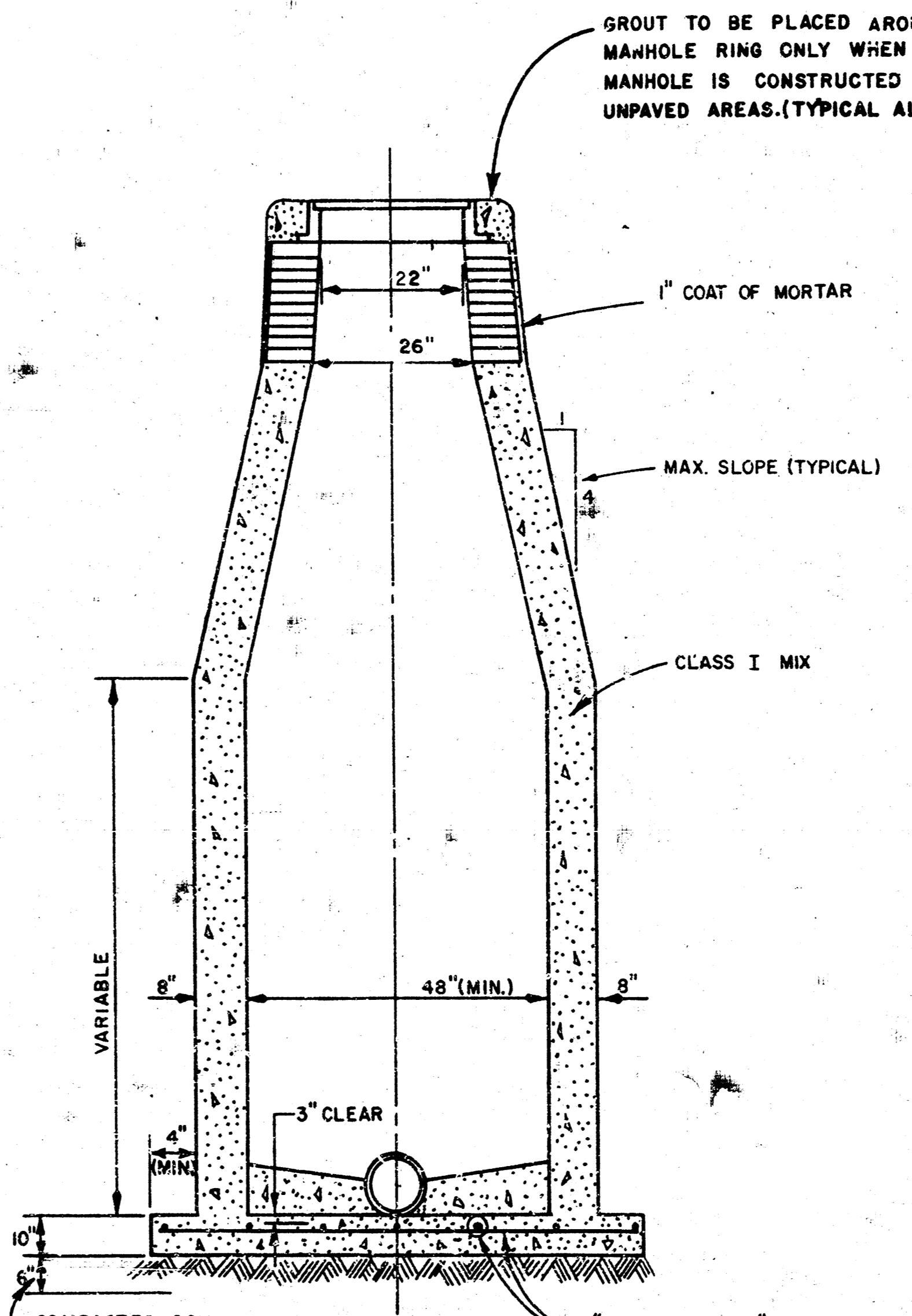
CAST IN PLACE
DROP MANHOLE
TYPE "E-B"



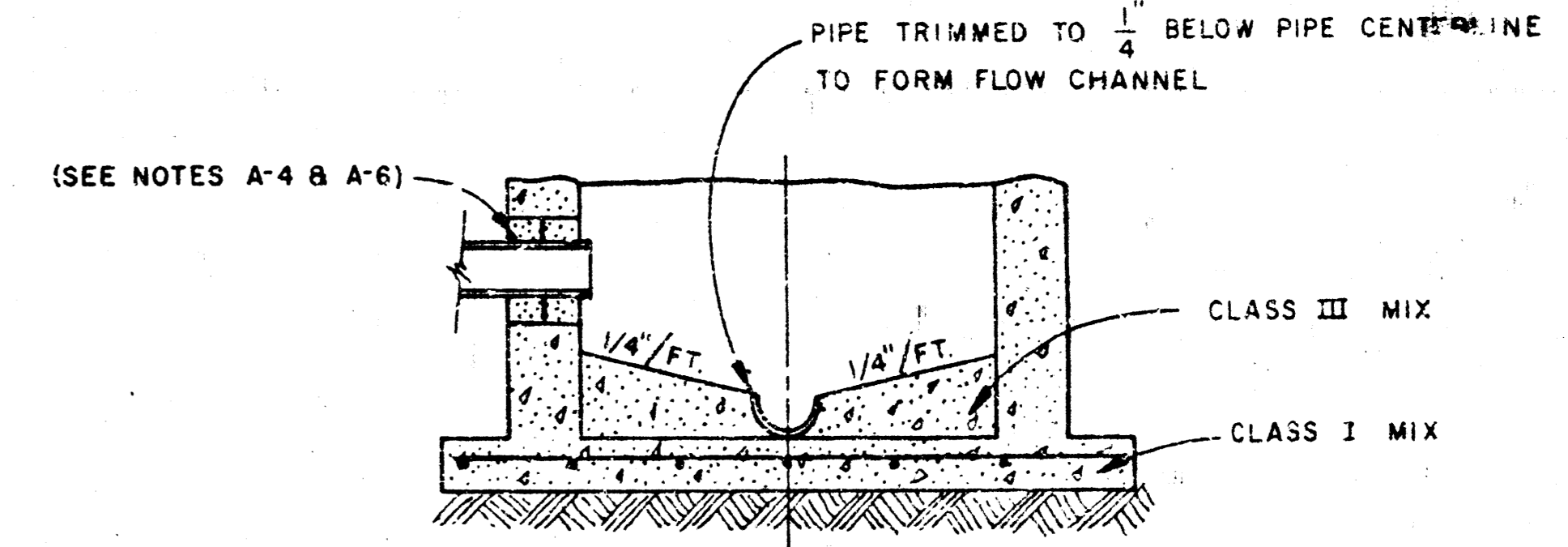
OUTSIDE CIRCUMFERENCE OF COVER
AND THE INNER FACE AND SEAT OF
RING TO BE MACHINE FIT



CAST IN PLACE
OUTSIDE DROP MANHOLE
TYPE "E-C"



SECTION X



SECTIONAL ELEVATION-INVERT

PRECAST MANHOLES

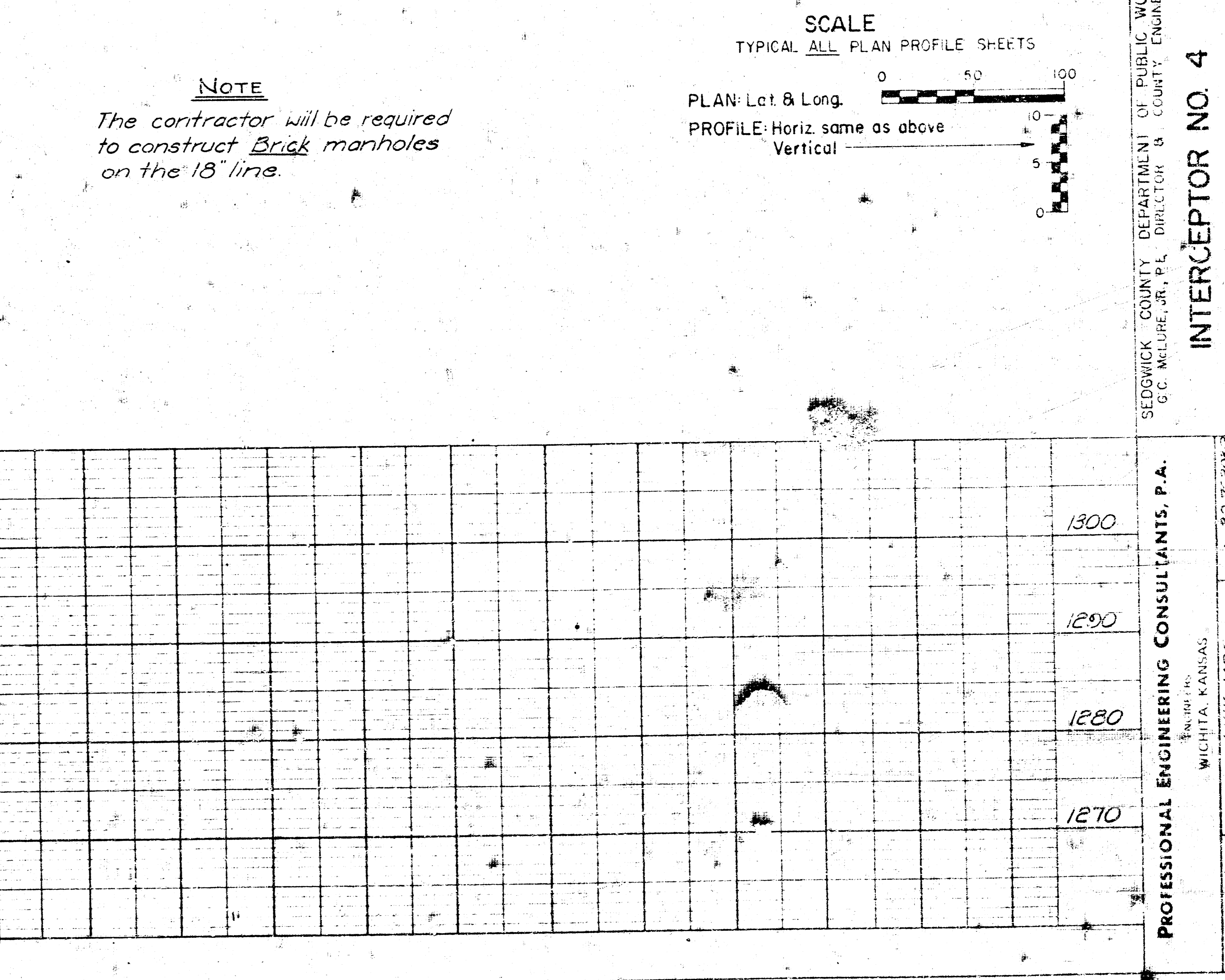
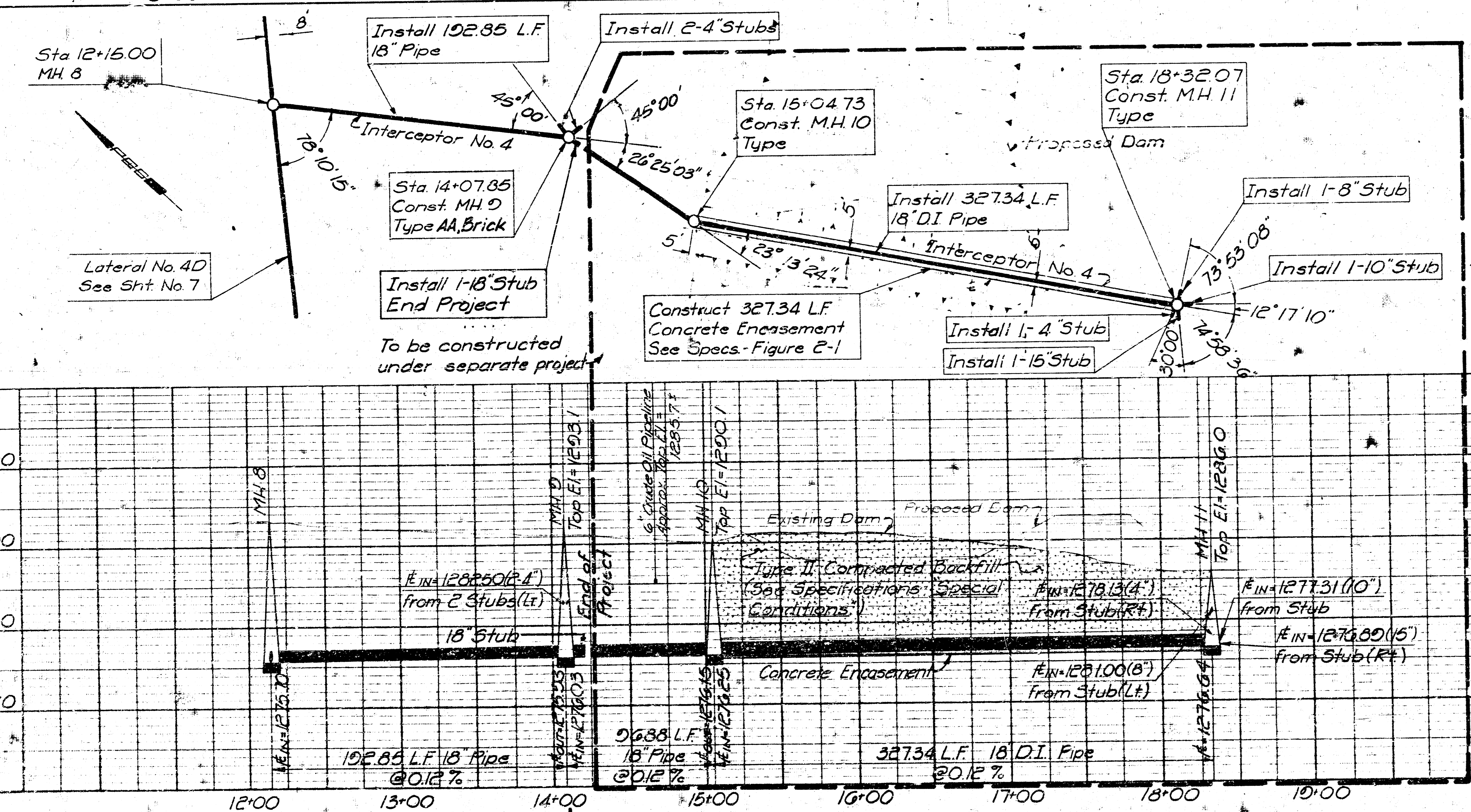
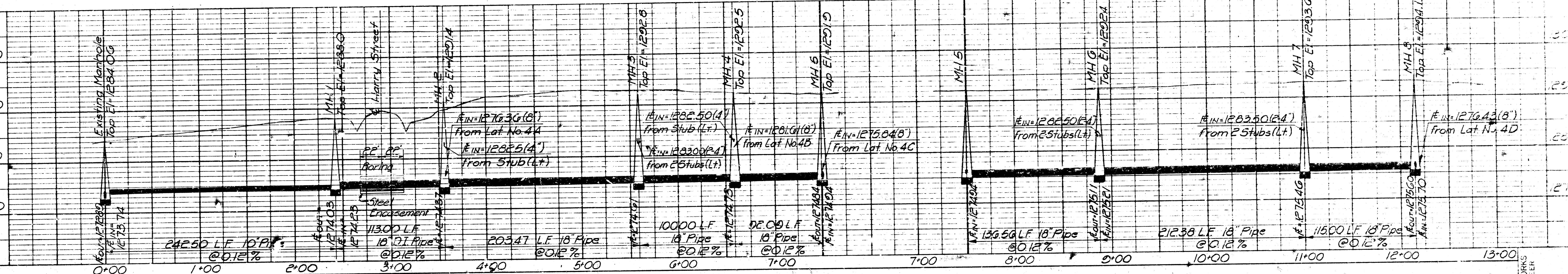
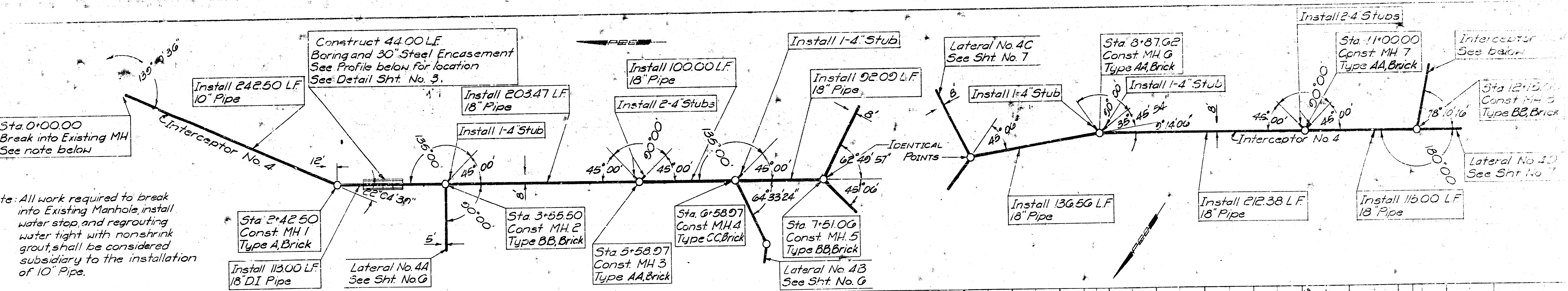
PRECAST MANHOLES MAY BE SUBSTITUTED FOR THE 8" THICK CAST-IN-PLACE MANHOLES. THE MANHOLE BASE AND OUTSIDE MANHOLE PIPE SUPPORTS FOR PRECAST MANHOLES WILL BE THE SAME AS SHOWN FOR CAST-IN-PLACE MANHOLES.

NOTES

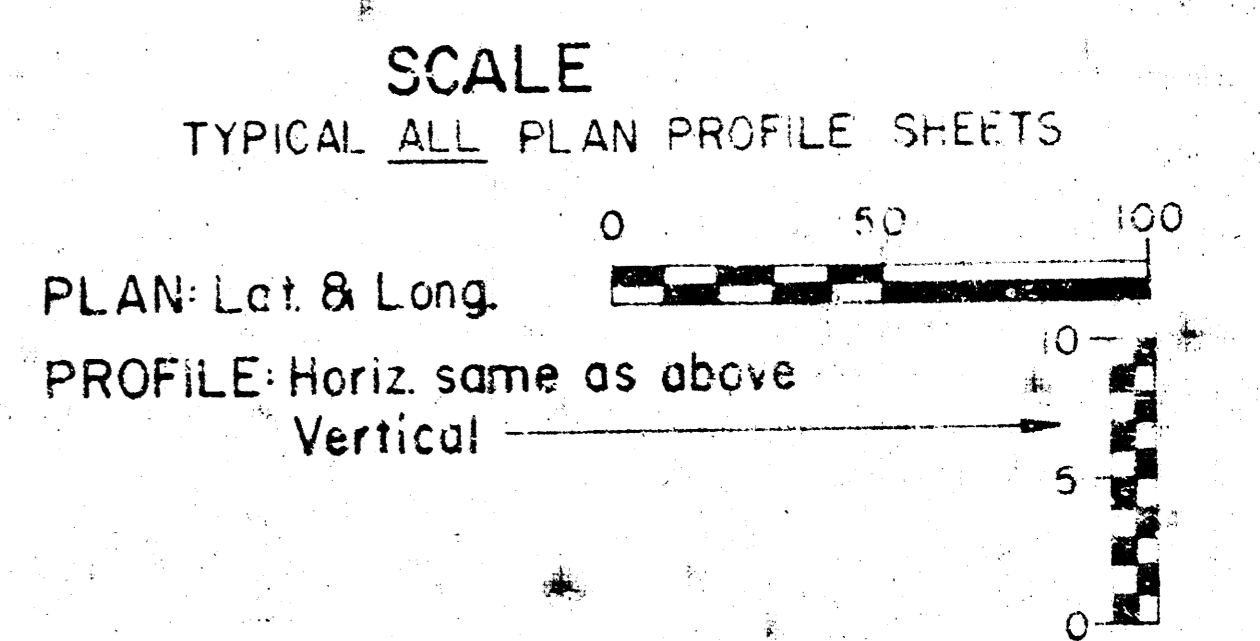
1. IF, IN THE OPINION OF THE ENGINEER, THE MANHOLE SUBGRADE APPEARS UNSTABLE, THE CONTRACTOR HAS THE OPTION TO COMPACT SUBGRADE AS SHOWN OR INCREASE THE THICKNESS OF THE MANHOLE BASE AS DIRECTED BY THE ENGINEER.
2. STEEL REINFORCING WILL BE REQUIRED IN ALL MANHOLE BASES.
3. MORTAR USED IN MASONRY CONSTRUCTION TO BE CLASS III MIX.
4. WHEN OPENINGS ARE CUT IN MANHOLE WALL FOR PIPE, THE PIPE WILL BE GROUTED IN PLACE WITH NON-SHRINKING GROUT. EXTERIOR OF COMPLETED CONNECTION TO BE SEALED WITH APPROVED COUPLINGS.
5. CAST-IN-PLACE CIRCULAR CONCRETE MANHOLES ARE TO BE CONSTRUCTED ONLY ON SEWERS NOT SUBJECT TO DETERIORATION DUE TO FORMATION OF HYDROGEN SULFIDE GAS AND IN LOCATIONS WHERE IT IS OBVIOUS THAT ANY ADJUSTMENT OF THE MANHOLE TOP ELEVATION WHICH MAY BE NECESSARY WILL NOT REQUIRE MODIFICATION OF THE CONCRETE BARS.
6. APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A. B. S. COMPOSITE PIPE, POLYETHYLENE PIPE, OR P. V. C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER EXTENDING FROM MANHOLES SHALL BE SUPPORTED WITH CONCRETE TO THE FIRST JOINT OF PIPE FROM THE MANHOLE WALL. CONCRETE SUPPORTS MAY BE DELETED PROVIDED AN APPROVED FLEXIBLE WATERSTOP GASKET IS INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL.
7. PRECAST MANHOLES SHALL BE SET 4 INCHES INTO THE MANHOLE BASE.

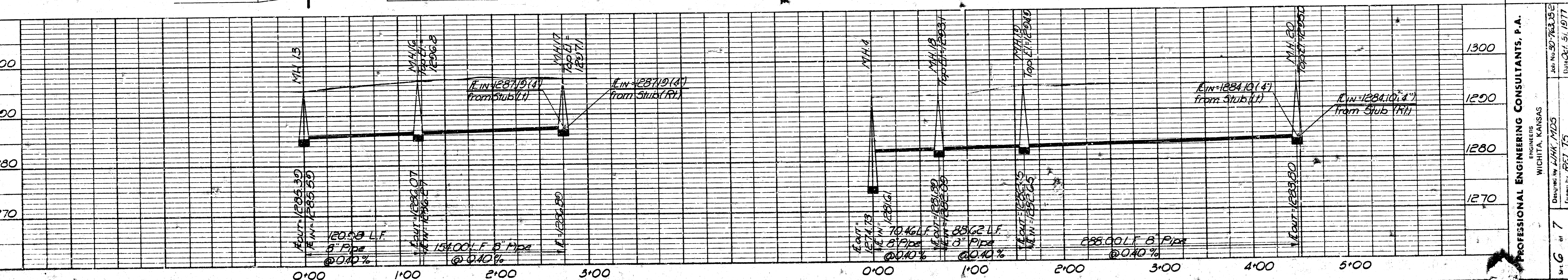
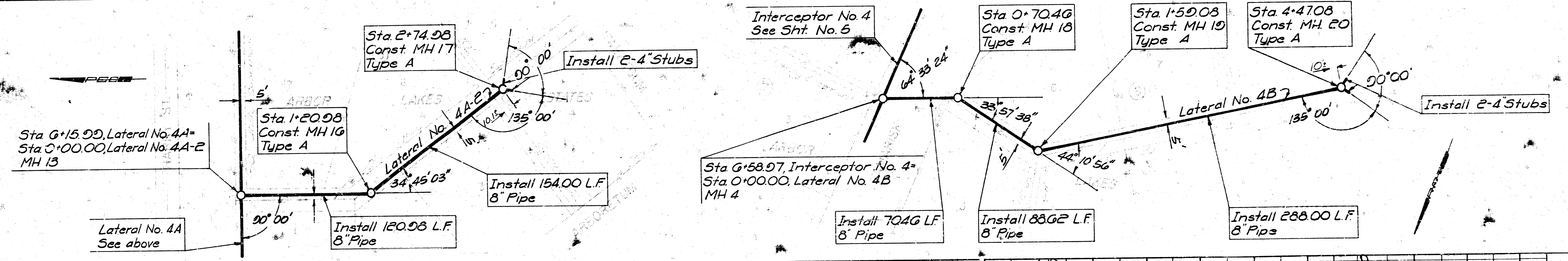
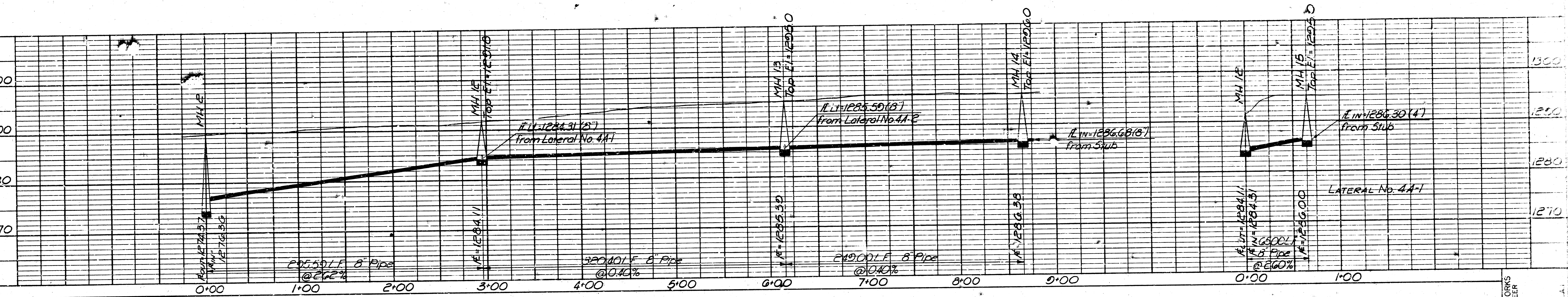
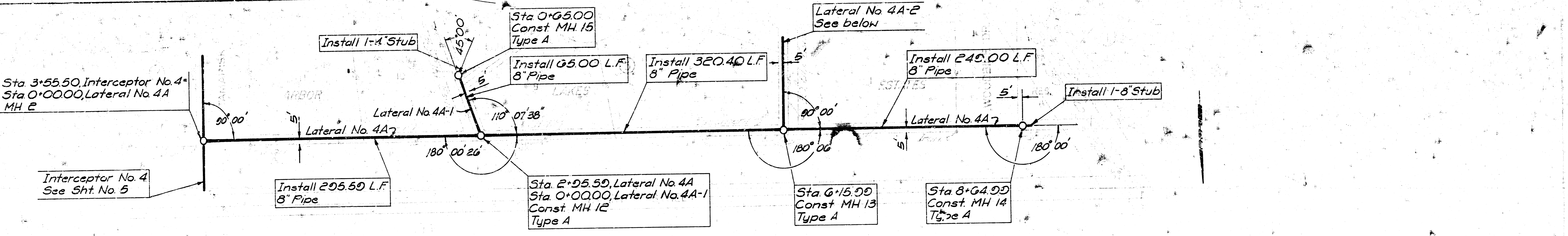
STANDARD MANHOLES TYPE "E-A", "E-B", AND "E-C" MAY BE BID IN LIEU OF STANDARD MANHOLES "A and AA", "B and BB", AND "C and CC", RESPECTIVELY.

No.	Revision	By	Date
SEDGWICK COUNTY DEPARTMENT OF PUBLIC WORKS G. C. McLURE, JR., P.E. DIRECTOR & COUNTY ENGINEER SANITARY SEWER DETAILS SANITARY SEWER IMPROVEMENTS ARBOR LAKES ESTATES TO SEDGWICK COUNTY, KANSAS PROFESSIONAL ENGINEERING CONSULTANTS, P.A. ENGINEERS WICHITA, KANSAS			



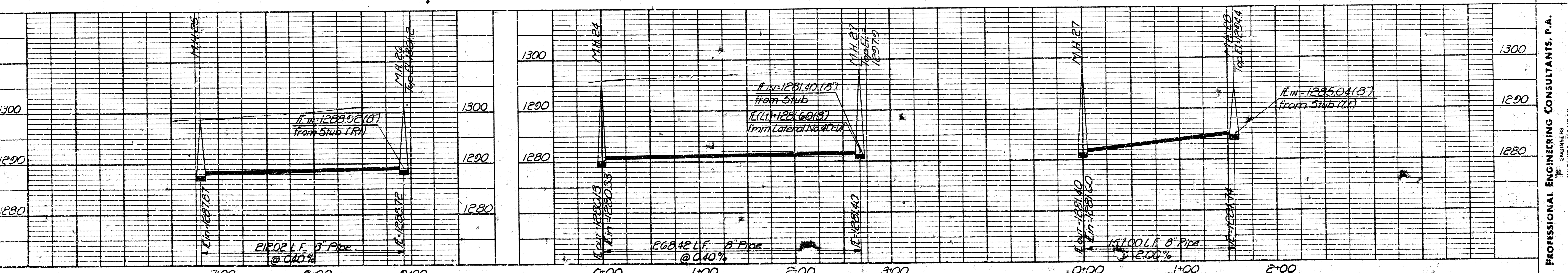
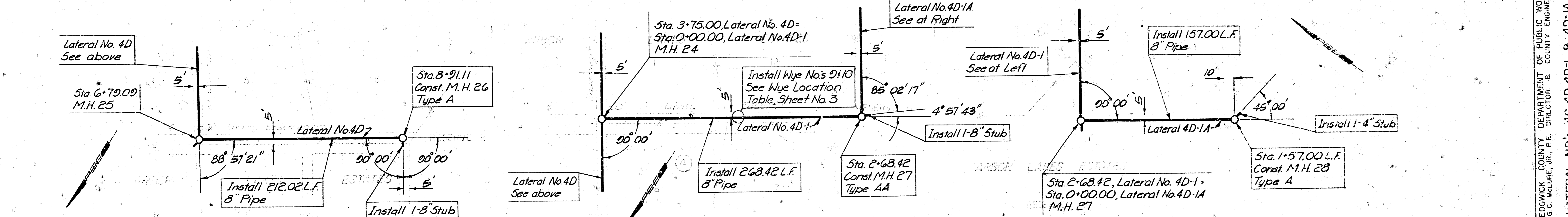
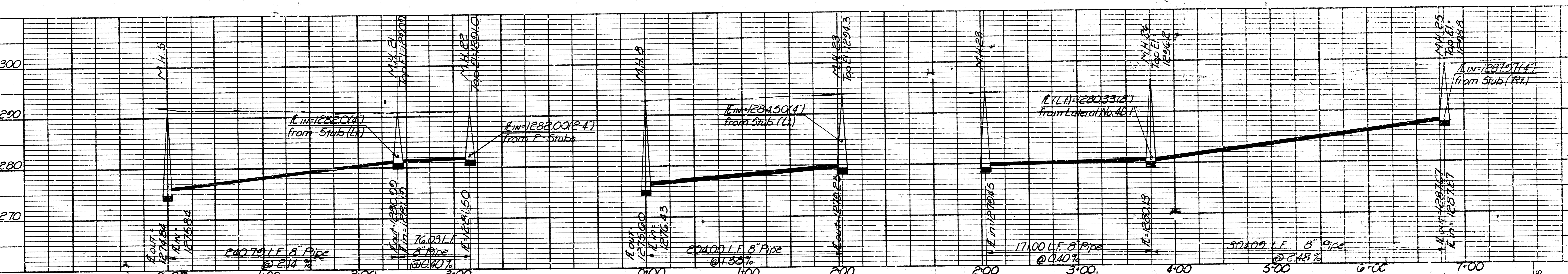
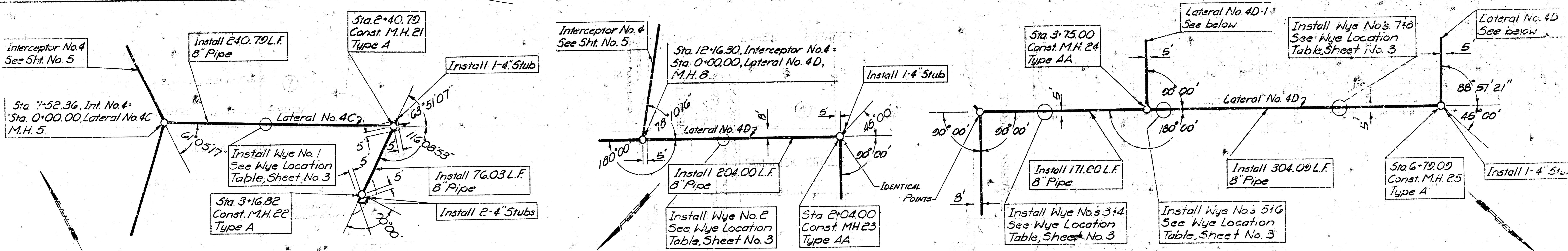
NOTE
The contractor will be required to construct Brick manholes on the 18" line.





SEDGWICK COUNTY DEPARTMENT OF PUBLIC WORKS
 G.C. McLEURE, JR., P.E. DIRECTOR & COUNTY ENGINEER
 LATERAL NO. 4A, 4A-1, 4A-2, 4B, 4B

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
 ENGINEERS
 WICHITA, KANSAS
 Designed by JWH, MDS
 Drawn by REJ, TS
 Date: Oct. 5, 1977
 Sheet 6 of 7



SEDGWICK COUNTY DEPARTMENT OF PUBLIC WORKS
 G.C. MCLURE, JR., P.E. DIRECTOR & COUNTY ENGINEER
 LATERAL NO'S 4C, 4D, 4D-1, & 4D-1A
 PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
 ENGINEERS
 WICHITA, KANSAS
 Designed by LHK/MDS
 Drawn by RCT/TS
 Job No. 207-303-2
 Date: 04-21-77
 7 of 7