PAVING - UNIVERSITY GARDENS 2ND ADDITION

CITY OF WICHITA, KANSAS
R.W. LINN CITY ENGINEER
APRIL, 1977

PROJECT NO. DAKS 577013 - EAST SIDE OLIVER AVE. - ℄ 21ST ST. NORTH
TO 525' NORTH ℄ 21ST ST. NORTH.

PROJECT NO. DAKS 577015 - NORTH SIDE 21ST ST. NORTH - ℄ OLIVER AVE.
TO E.L. UNIVERSITY GARDENS 2ND ADDITION

INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
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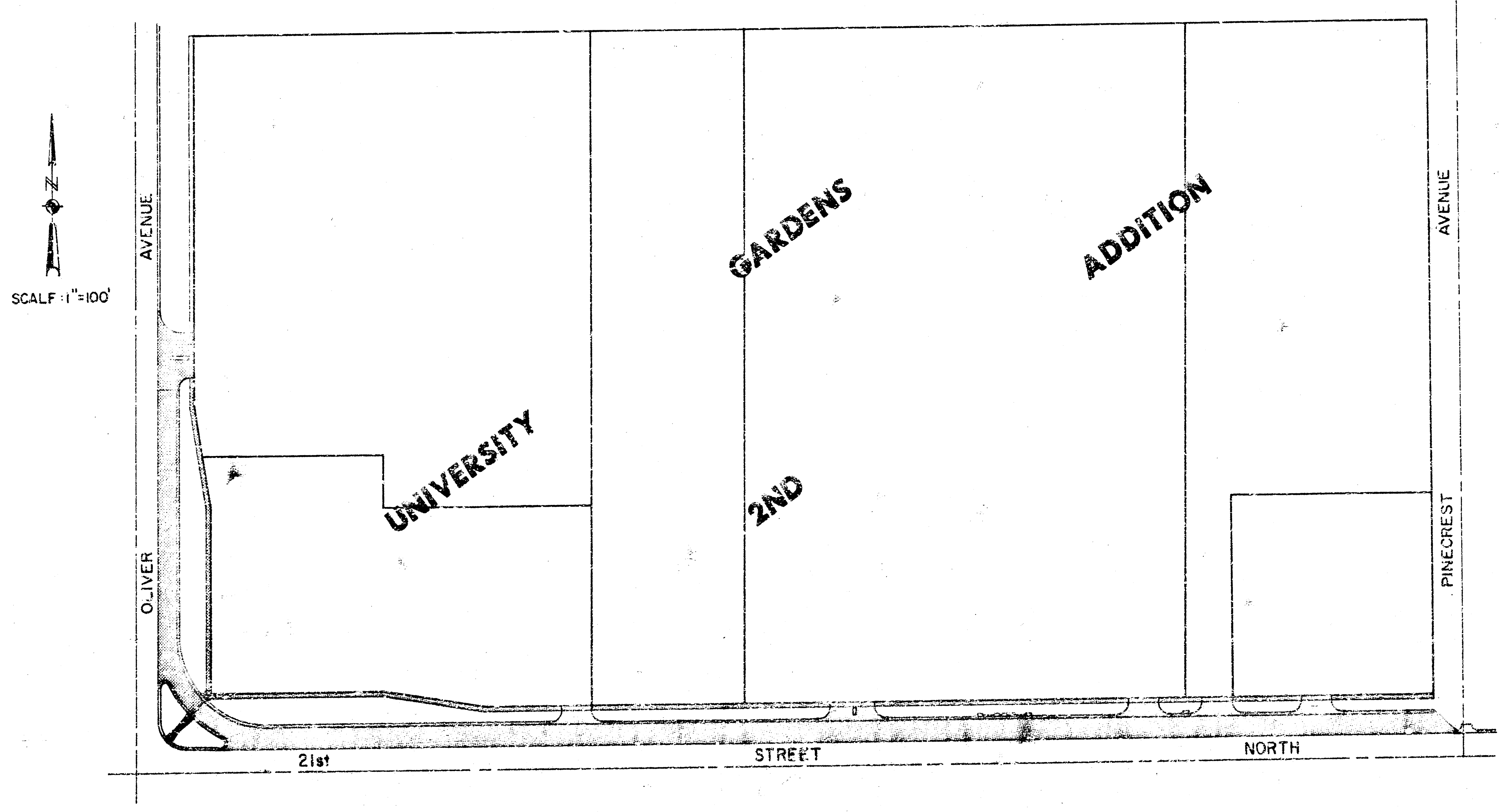
3-5	21st ST. NORTH - PLAN PROFILE
6	PAVING DETAILS
7	TYPE I INLET DETAILS
8	STORM SEWER DETAILS



LOCATION MAP

For 7" Conc. Pavm't & Integral Curb Details See Sht. No. 6

Tree Removal is Marked ... X ; Except that any Tree which in the Opinion of the Field Engineer can be Saved Shall be Saved.

BM - City Disc 33 ft. West of Oliver Ave. & 48 Ft. North of 21st St. N. Elev.=217.86

AVENUE
21
75'
4'
For Details on Right Turn Lane See Sht. No. 2
6" Concrete Drive with 6x6 6/6 Wire Mesh See Sht. 6 For Details.
Sta. 1+00.00 21st St. N. = Sta. 20+00.00 Oliver Ave.
Proj. DAKS577015
Proposed.
Project DAKS577015
89°28'30"
S.W. Cor. of S.W. 1/4 Sect. 1, T27S, R1E
222.02
222.75
223.55
223.60
223.50
Proposed Conc. Sidewalk
R/W
+07.50 T.C. 220.18
Close Existing Drives
75'
22.5'
22'
Sta. 2+07.50 21st St. N. = Sta. 19+74.76 Oliver Ave.
2
3
4
5
21ST
STREET
NORTH
SCALE 1" = 20'
N

OLIVER

B.M. City Disc., 33 Ft. West ℄ Oliver Ave. & 42 Ft. North ℄ 21st St. N. Elev. = 217.82

Trees to be Removed are Marked thus X, Except that any Tree which in the Opinion of the Field Engineer can be Saved Shall be Saved.

B.M. Chiseled "+", Top E. Bolt on F.H., 50 Ft. Rt. Sta. 8+ ... 21st St. N. Elev. = 217.8

225
220
215
P.T. Sta. 2+07.50 21st St. N. = Sta. 19+74.76 Oliver Ave.
Radius Pt. Sta. 4+96.50 T.C. Elev. = 221.53
Radius Pt. Sta. 5+49.50 T.C. Elev. = 220.03
T.C. Elev.
220.18
221.68
222.60
223.20
223.29
222.62
220.02
2
+07.50
3
4
5
+50
6

21ST
STREET
NORTH
N
SCALE: 1" = 20'
Proposed Conc. Sidewalk
R/W
Plug 15" Pipes
Remove E Exist. Inlets
219.80
217.80
216.61
215.98
215.44
214.88
214.37
214.05
60'
22.5'
22'
6
7
8
9
10
Radius Pt. Sta. 7+63.50 T.C. Elev.=215.58
Radius Pt. Sta. 8+30.50 T.C. Elev.=214.83
Sta. 9+26.00 - Const. Std. Type 1A Curb Inlet Top Elev.=213.92
Sta. 9+42.00 - Const. Std. Type 1A Curb Inlet Top Elev.=213.85
Sta. 9+50.00 - Const. Std. Type 1A Curb Inlet Top Elev.=213.80
Sta. 9+58.00 - Const. Std. Type 1A Curb Inlet Top Elev.=213.86
Sta. 9+75.00 - Const. Std. Type 1A Curb Inlet Top Elev.=213.84
6 L.F. 15" R.C.P. @ 4.13 %
16 L.F. 15" R.C.P. @ 4.12 %
6 L.F. 15" R.C.P. @ 3.88 %
12 L.F. 15" R.C.P. @ 3.08 %
℄ 206.44
℄ 205.78
213.80
℄ out (N) = 205.04
℄ in (S) = 205.27
℄ in (E) = 205.57
℄ in (W) = 205.45
℄ 205.83
℄ 206.54
220
215
210
T.C. Elev.
220.04
218.67
217.33
216.37
215.73
214.63
214.12
213.92
214.35

"6" Concrete Drive with 6×6 %/4 Wire Mesh See Sht. 6 for Details.

Sta. 9+42.00 Const. Std. Type 1A Curb Inlet W=3'-10" Install 8 L.F. 15" R.C.P. For Details See Sht. No. 7

Sta. 9+26.00 Const. Std. Type 1A Curb Inlet W=3'-10" Install 16 L.F. 15" R.C.P. For Details See Sht. No. 7

Sta. 9+50.00 Const. Std. Type 1A Curb Inlet W=3'-10" Cut Exist. 30" R.C.P. to Match Inside Face of Inlet. For Details See Sht. No. 7

Sta. 9+58.00 Const. Std. Type 1A Curb Inlet W=3'-10" Install 8 L.F. 15" R.C.P. For Details See Sht. No. 7

Sta. 9+75.00 Const. Std. Type 1A Curb Inlet W=3'-10" Install 12 L.F. 15" R.C.P. For Details See Sht. No. 7

Remove Existing Inlet, Install Section of 30" R.C.P. Construct Concrete Collar around Pipe and a min. of 2' beyond Both Ends. To be Bid as L.F. 30" R.C.P. w/ Conc. Collar.

B.M. - Chiseled "□" Top E. Base [illegible] on F.H. 50 Ft. Rt. Sta. 7+80 [illegible] Elev.=217.28

PINECREST
AVENUE
21ST
STREET
NORTH
SCALE 1" = 20'
214.60
215.10
215.07
215.55
216.22
216.98
217.60
218.24
11.5'R.
11.5'R. Prop.
11.5'R. Conc. Sidewalk
R/W
22.5'
60'
80'
11
12
13
14
Radius Pt. Sta. 10+66.50 T.C. Elev.=214.95
Radius Pt. Sta. 11+15.50 T.C. Elev.=214.89
Radius Pt. Sta. 11+35.14 T.C. Elev.=215.07
Radius Pt. Sta. 11+84.16 T.C. Elev.=215.75
Radius Pt. Sta. 12+35.14 T.C. Elev.=216.42
Radius Pt. Sta. 12+88.14 T.C. Elev.=217.10
T.C. 21
214.55
215.92
217.25
217.83
218.71

6" Concrete Drive With
6x6 6/6 Wire Mesh
See Sht. No. 6

6" Concrete Drive With
6x6 6/6 Wire Mesh
See Sht. No. 6

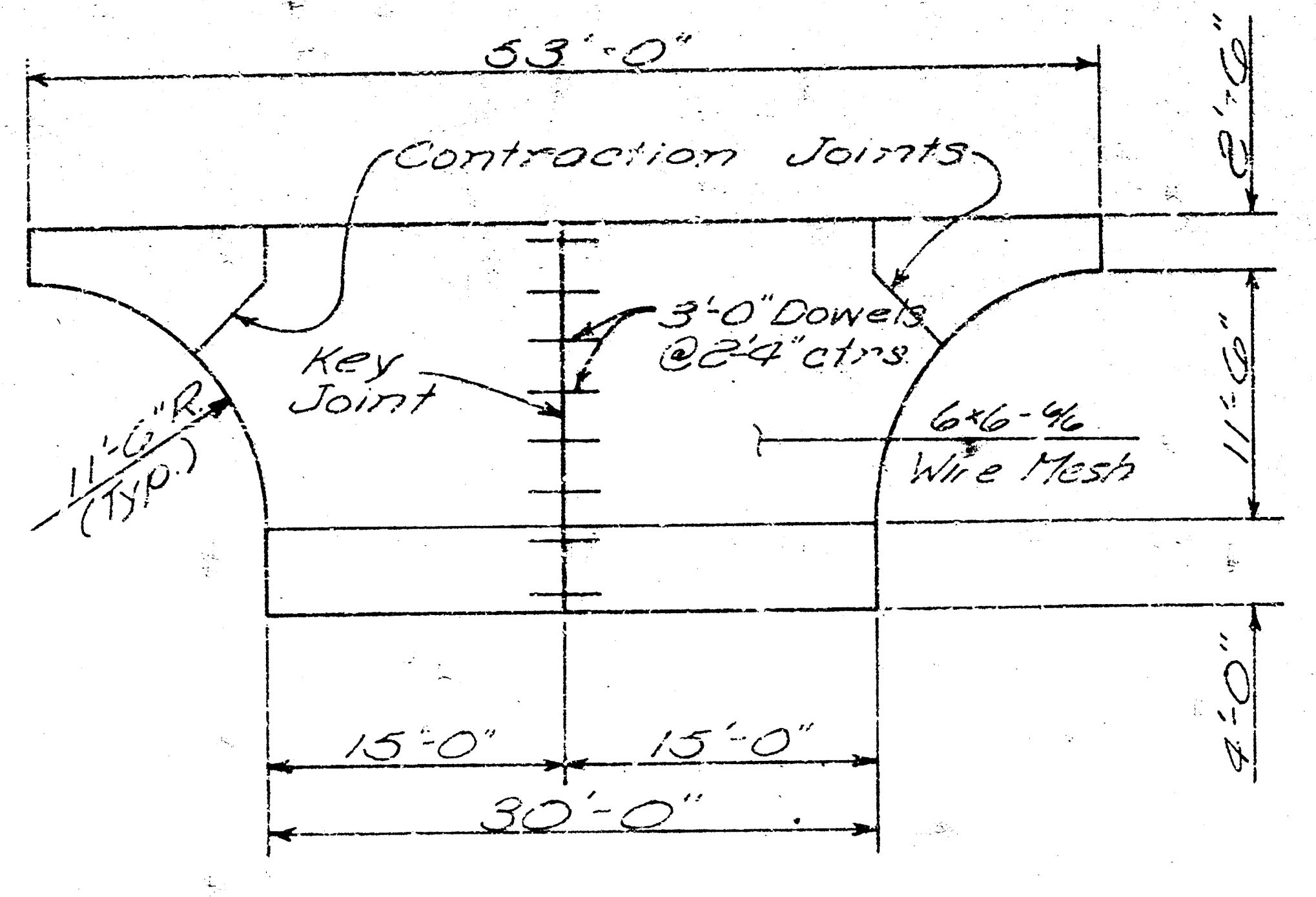
Asphalt Curb
(Incidental to Project)

Street Signing
By Others

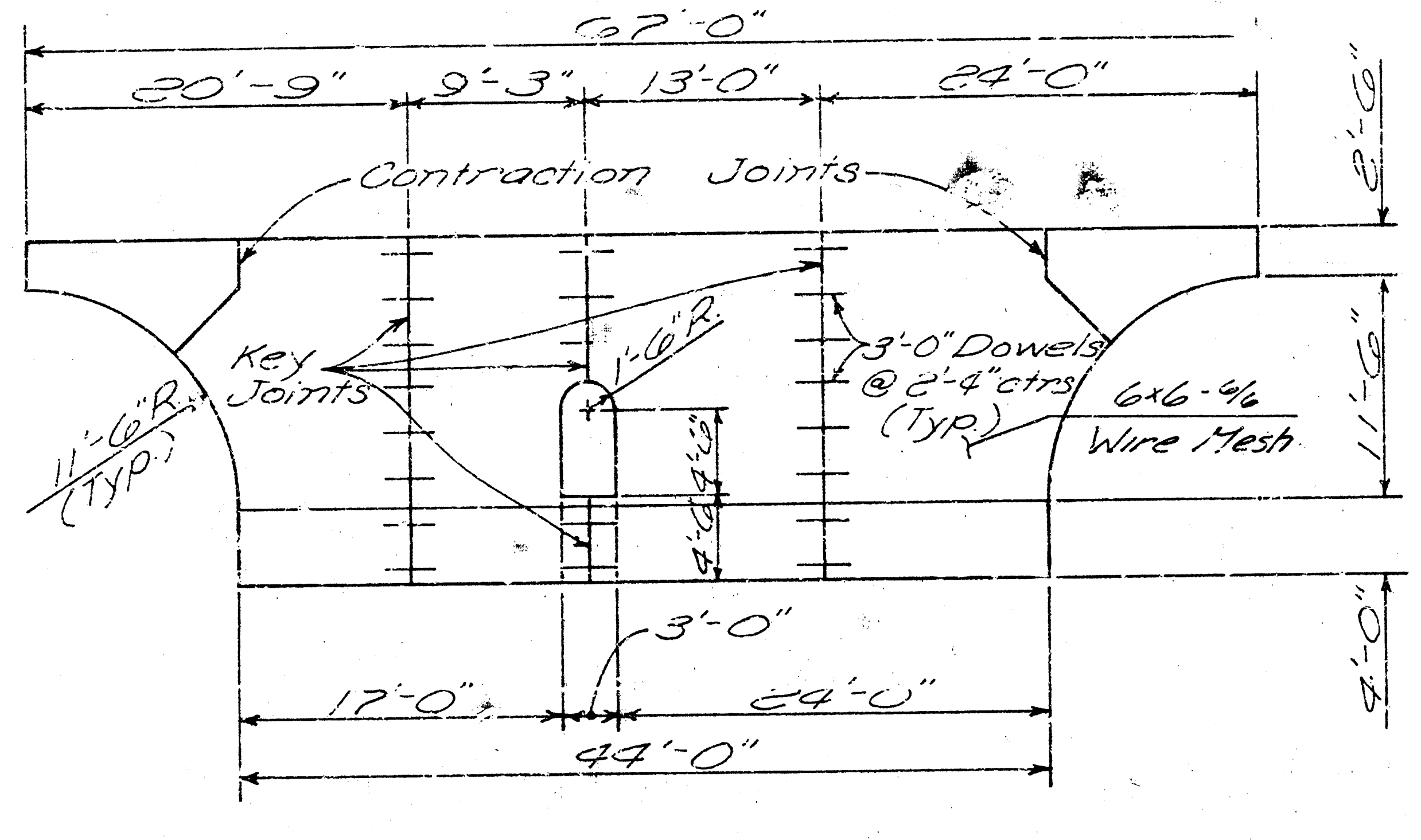
Remove Existing Inlet, Section of
24" R.C.P. Construct Concrete Collar
Around Pipe and Extend Collar a min. of
2' Beyond Both Ends.
To be Bid as L.F. 24" R.C.P. w/ Concrete Collar.

Sta. 11+30.96 Const Std.
Type 1-A Curb Inlet
W = 3'-10" Install 8 L.F.
15" R.C.P. For Details
See Sht. No. 7

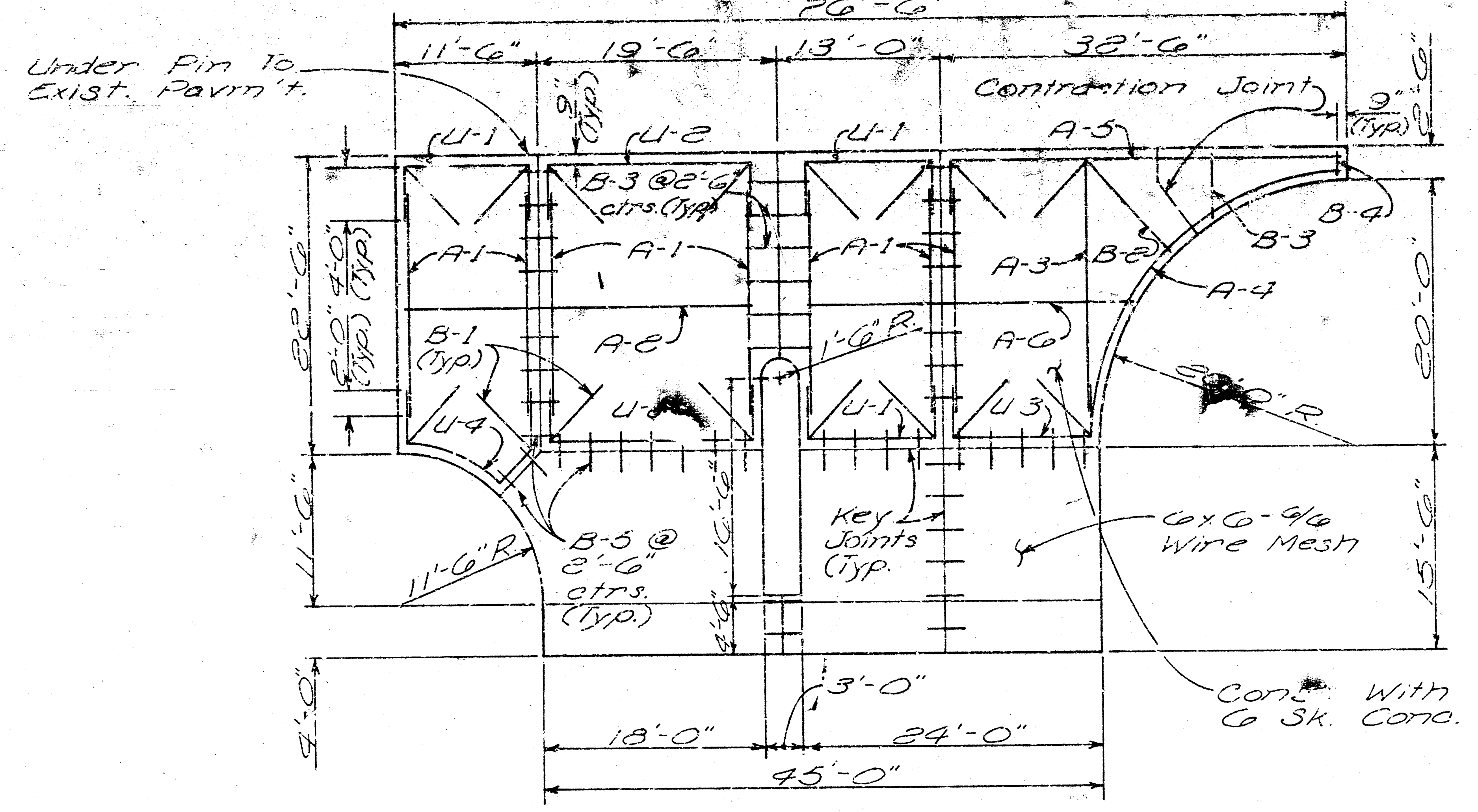
B.M.-Chiseled "+", Top E. Base 3
on F.H., 50ft. Rt. Sta 7+25
21st St. N. -Elev.=217.68



30' DRIVE APPROACH
6" Concrete

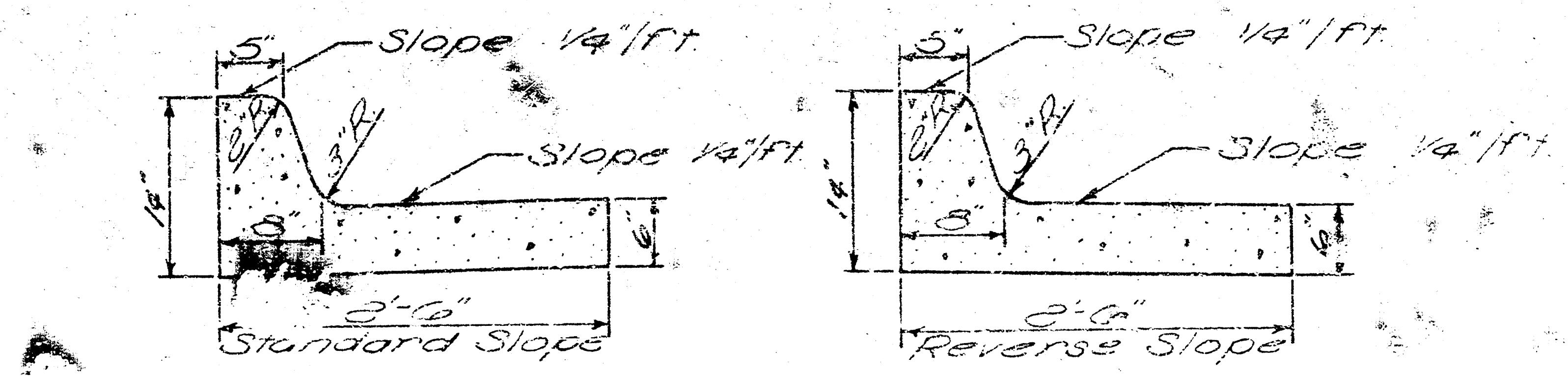


44' DRIVE APPROACH
21st STREET NORTH
6" Concrete

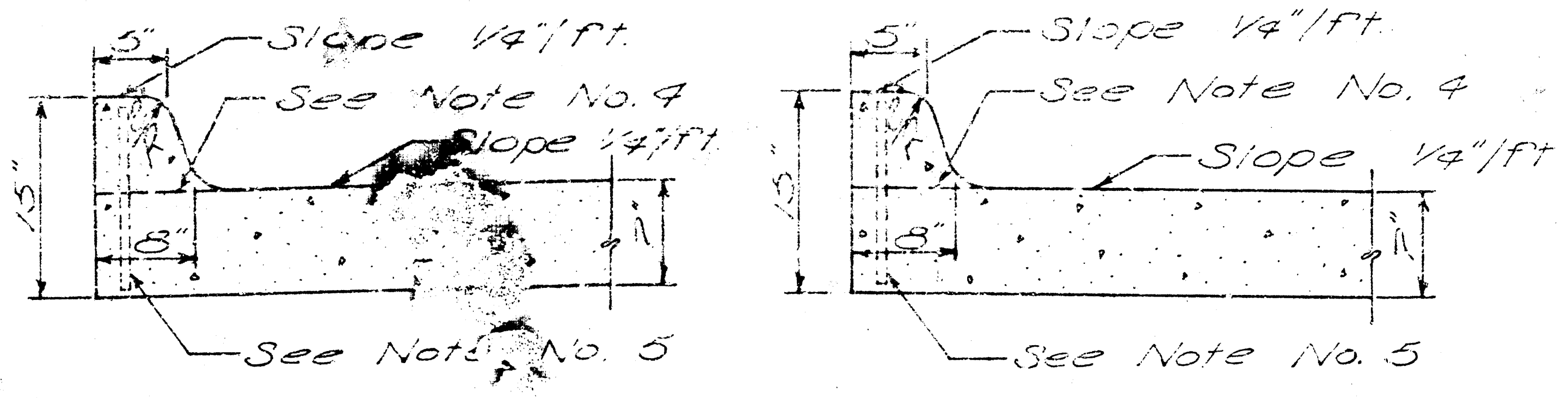


45' DRIVE APPROACH
OLIVER AVENUE

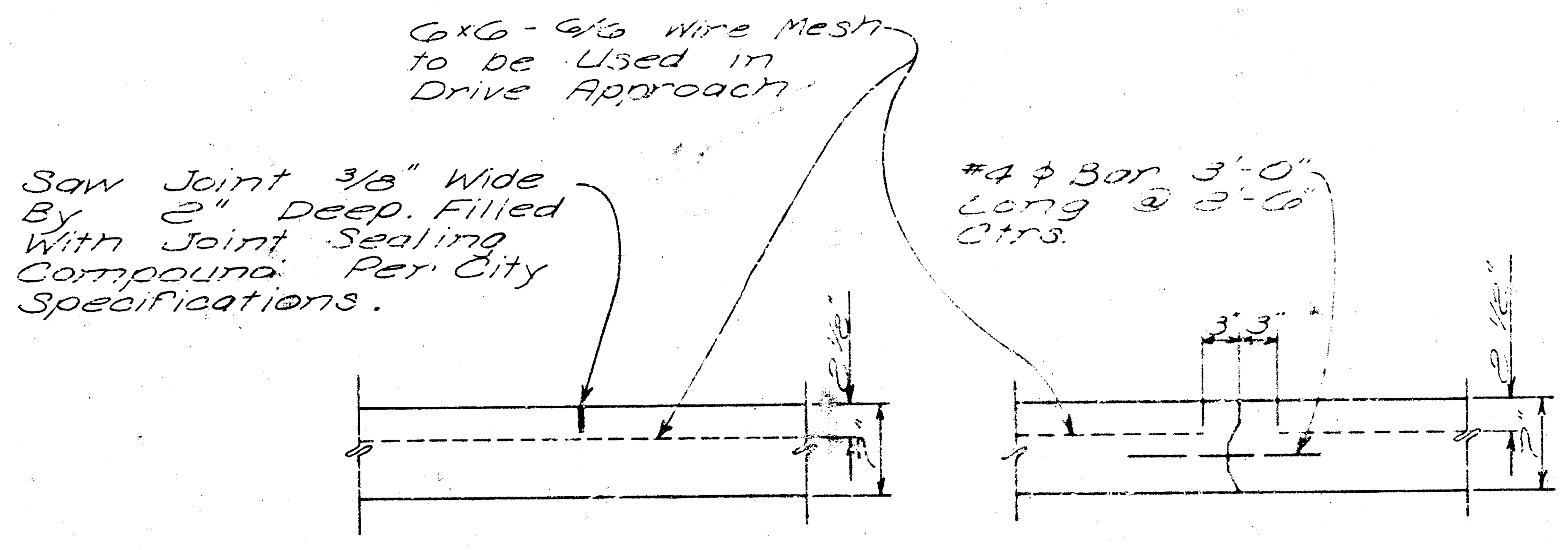
BILL OF MATERIALS				
Mark	No.	Size	Length	Shape
A-1	7	6	17'-0"	—
A-2	1	6	28'-0"	—
A-3	1	6	19'-0"	—
A-4	1	6	30'-0"	⌒
A-5	1	6	35'-0"	┌
A-6	1	6	26'-0"	—
B-1	16	6	6'-0"	—
B-2	1	6	10'-0"	—
B-3	7	6	5'-0"	—
B-4	1	6	2'-0"	—
B-5	41	4	3'-0"	—
U-1	3	6	18'-0"	⊓
U-2	2	6	24'-6"	⊓
U-3	1	6	19'-0"	⊓
U-4	1	6	19'-6"	⊔



COMBINED CURB & GUTTER



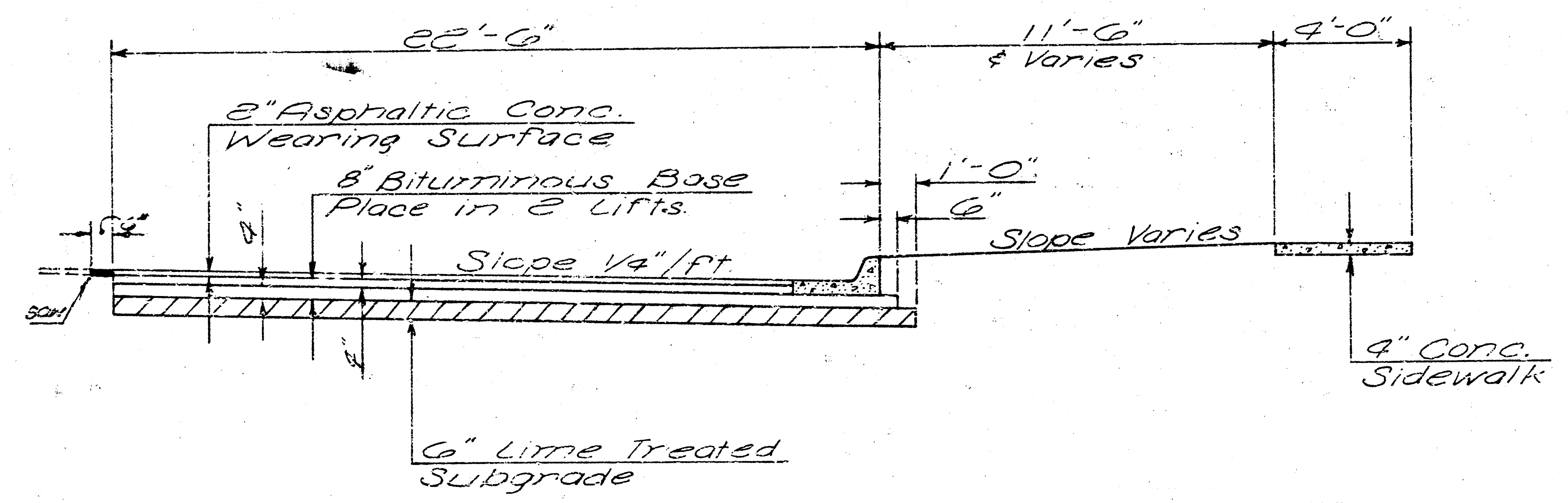
INTEGRAL CURB


6x6 - 6/6 Wire Mesh to be Used in Drive Approach
Saw Joint 3/8" Wide By 2" Deep. Filled With Joint Sealing Compound Per City Specifications.
#4 ϕ Bar 3'-0" Long @ 3'-6" Ctrs.
3"-3"

CONTRACTION

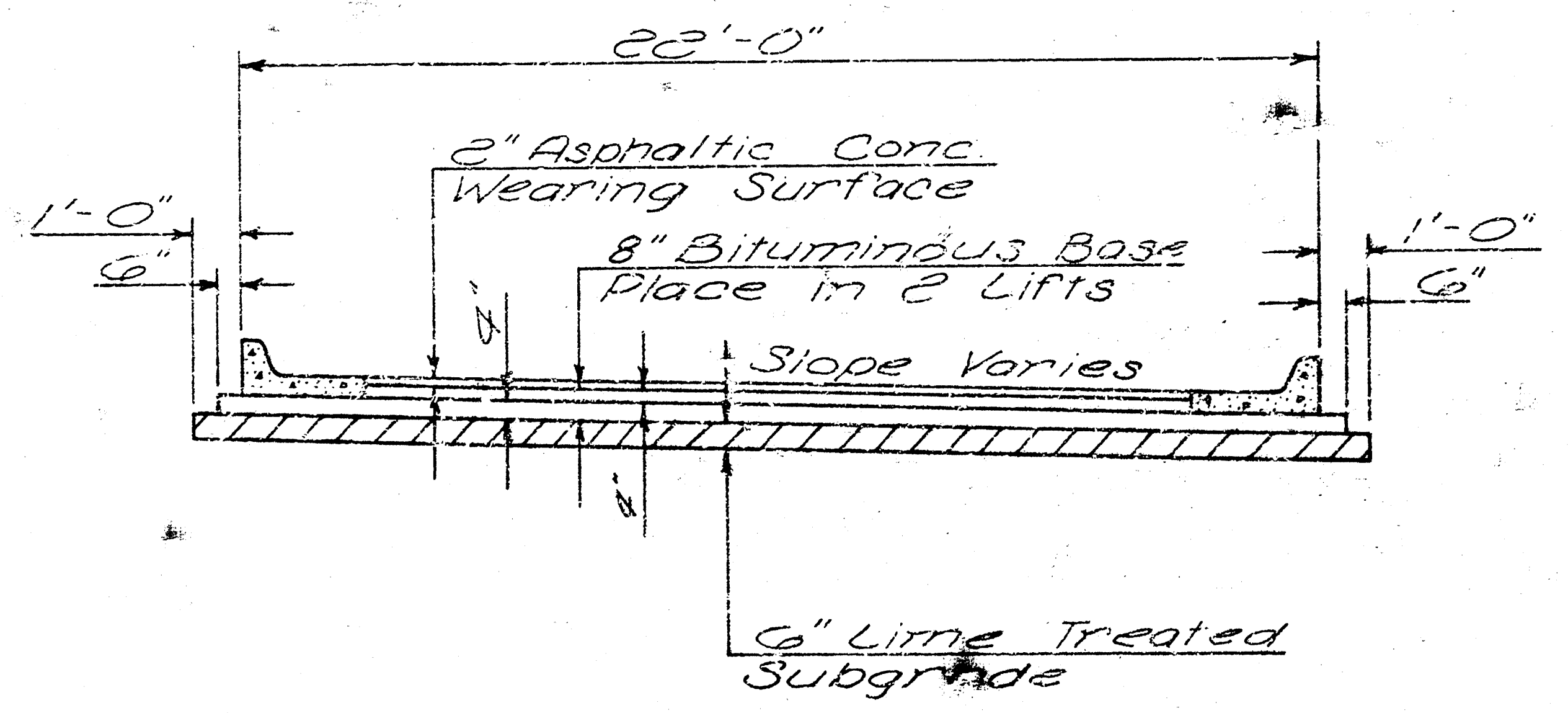
KEY

JOINT DETAILS

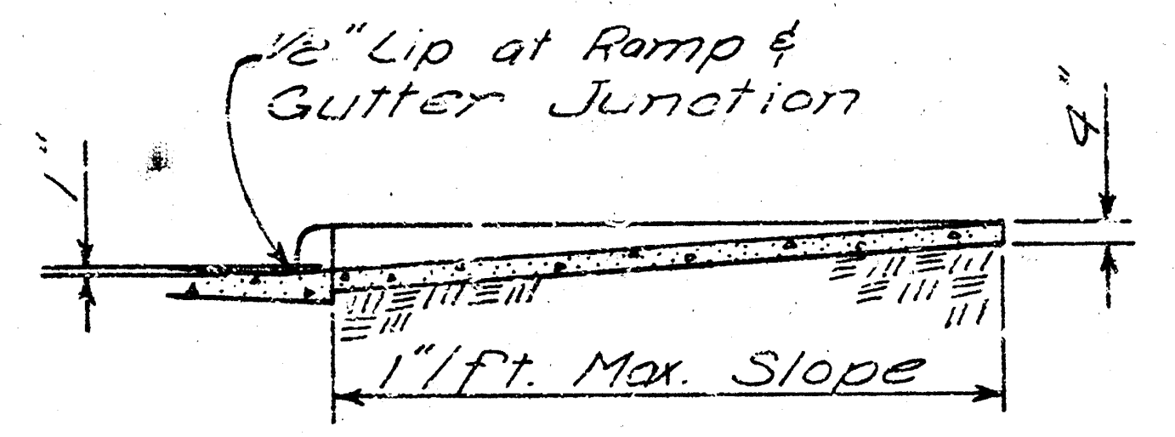


TYPICAL SECTION

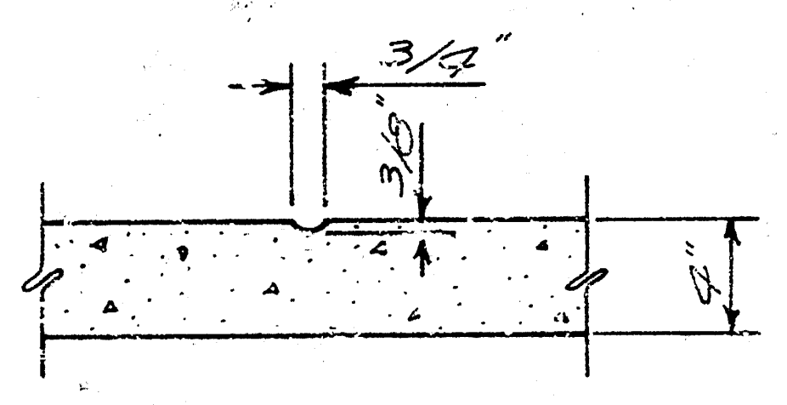
NOTE TO CONTRACTOR - SAW AND REMOVE 6" OF EXISTING ASPHALT SURFACE AFTER NEW 8" BASE HAS BEEN LAID DOWN. SAW JOINT TO BE INCIDENTAL TO PROJECT.


22'-0"
1'-0"
6"
2" Asphaltic Conc. Wearing Surface
8" Bituminous Base Place in 2 Lifts
1'-0"
6"
Slope Varies
6" Lime Treated Subgrade

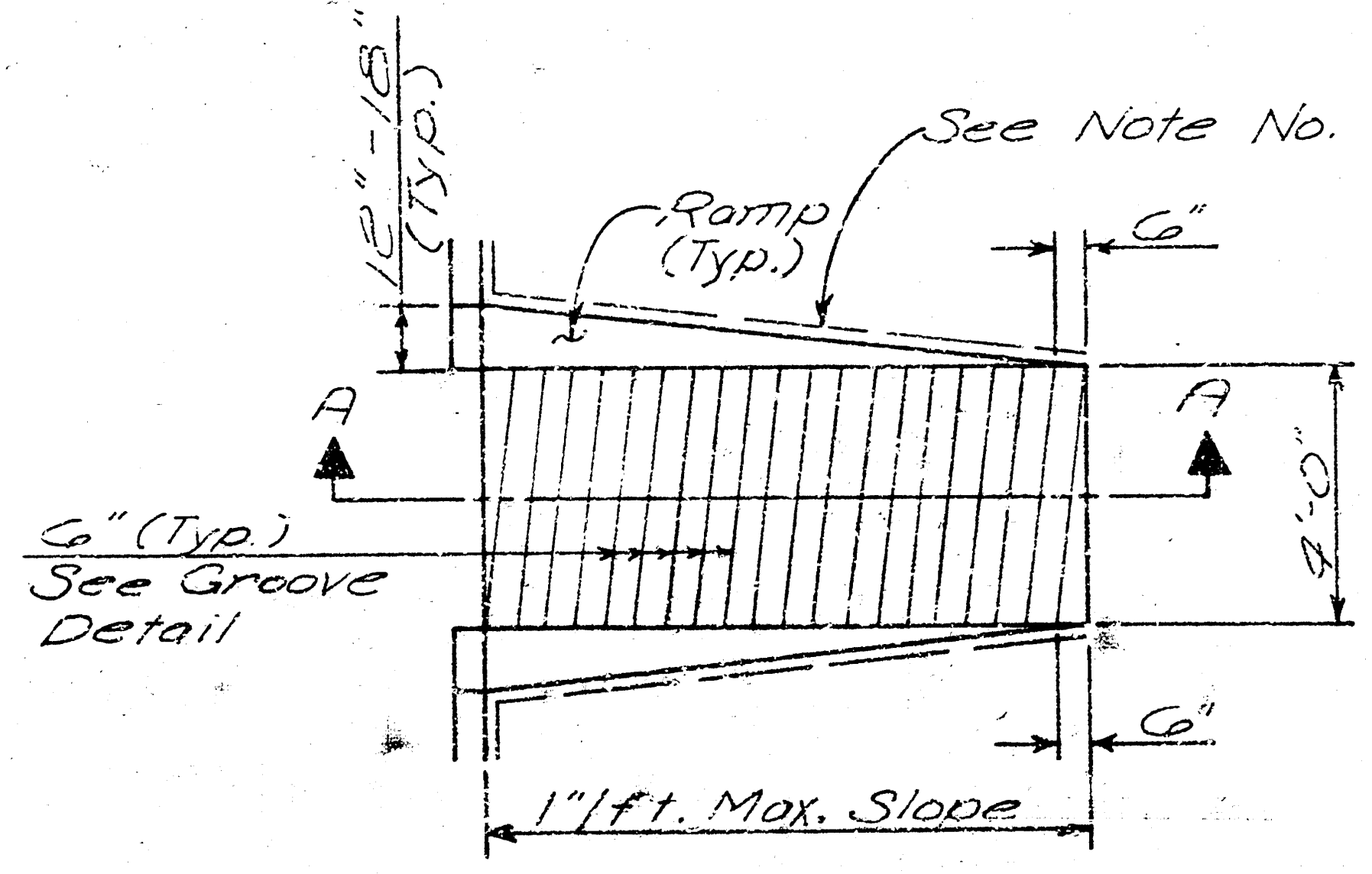
TYPICAL SECTION
RIGHT TURN LANE



SECT. A-A



GROVE DETAIL



PLAN

RAMP DETAILS
Not to be Constructed on this Project.

GENERAL NOTES

1. A tack of Emulsified Asphalt (SS-IH) shall be applied at an approximate rate 0.05 gallons per sq. ft. between lifts of asphaltic materials when ordered by the engineer. Tack coat will not be paid for directly and shall be considered as subsidiary to price bid for Asphaltic Pavement.

   Bituminous Base and Asphaltic Concrete Wearing Surface shall be placed with a laydown machine having automatic electronic controls for grade. Construction Joints in each lift shall be staggered a minimum distance of one foot with joints in preceeding lifts.

2. The A.C. Pavement between existing pavement and curb and gutter shall be paid as sq. yds. 10" A.C. Pavement (8" Bituminous Base). The Bituminous Base under the combined curb and gutter shall be paid as sq. yds. 4" Bituminous Base.

3. Sidewalks indicated on the typical sections are for location on that section. SIDEWALKS SHALL NOT BE CONSTRUCTED ON THIS PROJECT.

4. Contraction Joints may be constructed in Integral Curb by sawing with an approved concrete saw. The saw cut shall extend through the curb to the pavement. Sawed Contraction Joints shall have a maximum spacing of 10'.

5. Integral Curb shall be tied to the pavement base with short deformed Dowel Bars spaced at 2'-6" intervals. These Dowel Bars shall not be less than 1/2" or more than 3/4" in diameter.

6. The ramp shall be either bordered on both sides and the curb lined with a four-inch wide yellow stripe, or the surface treatment on ramp shall have integral coloration.

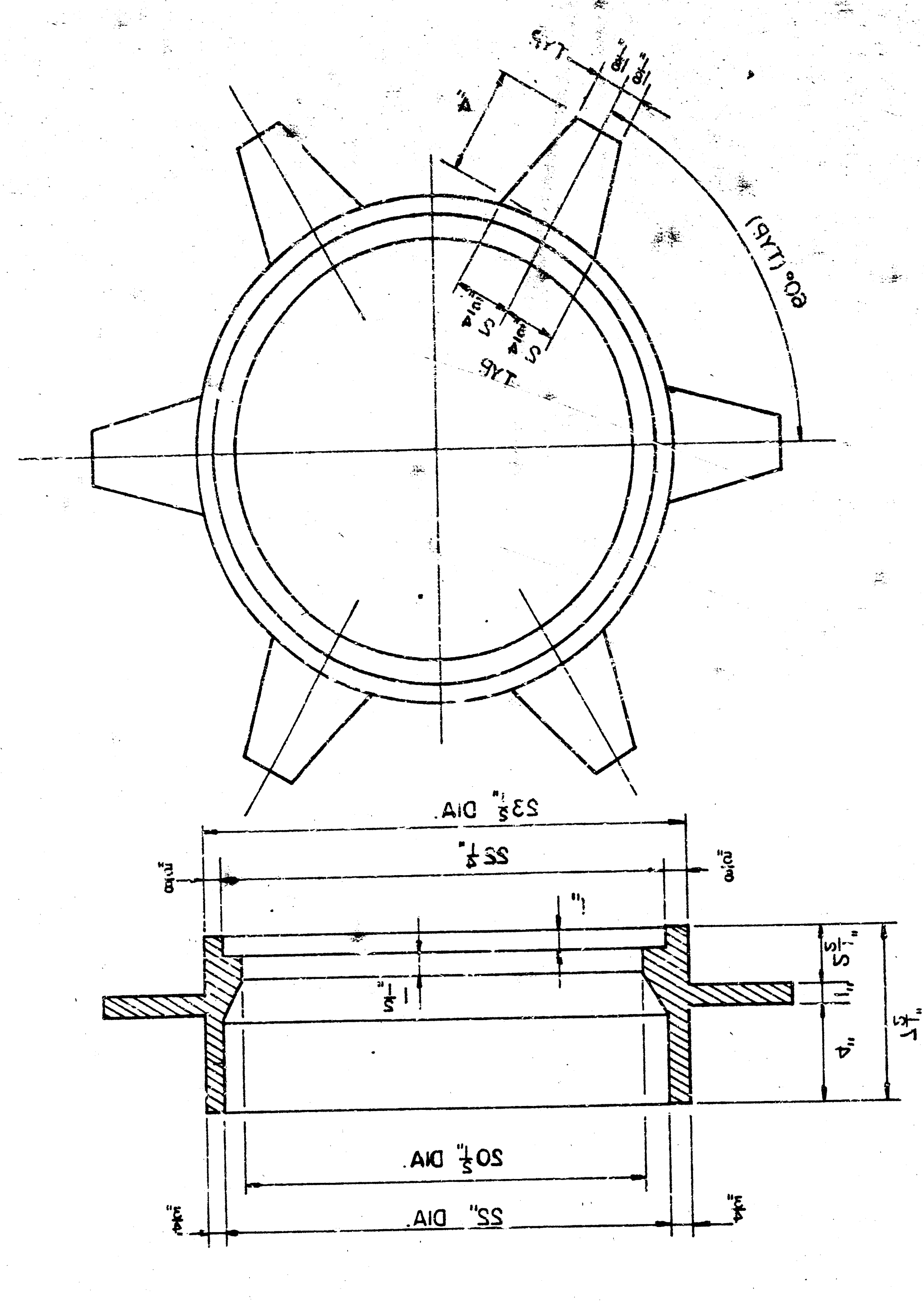
DESIGN KHB
DR. BY RLP
CK. BY KHB
DATE 3-31-77
JOB NO. 4-74-013

UNIVERSITY GARDENS SECOND ADDITION
WICHITA, KANSAS

PAVING DETAILS

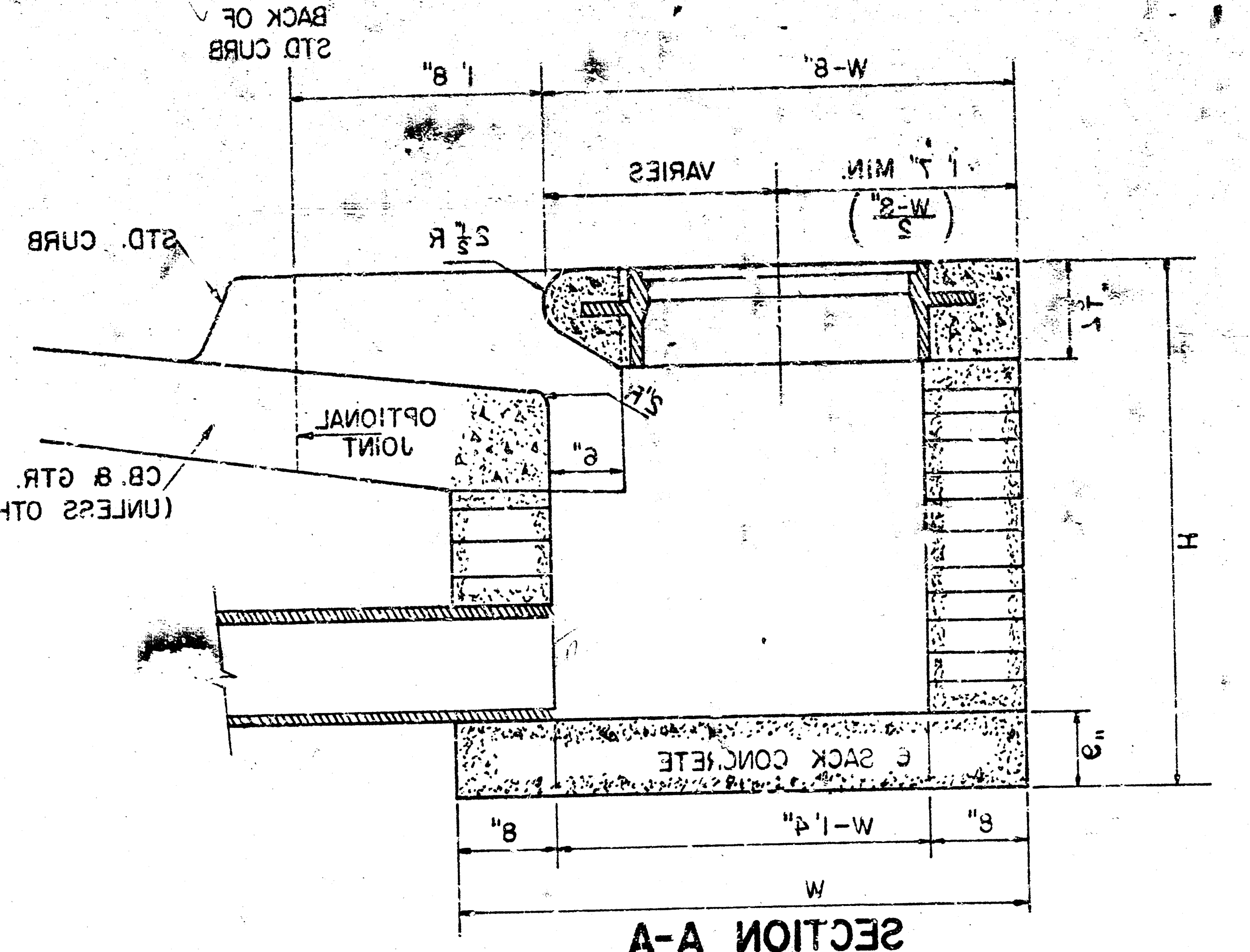
VAN DOREN - HAZARD - STALLINGS
ARCHITECTS-ENGINEERS • • WICH[illegible] KANSAS

SHEET 6 OF 8



MANHOLE RING
SEE SEWER APPURTENANCES DETAIL
SHEET FOR MANHOLE COVER.

THIS TYPE INLET TO BE USED WHEN
PAVEMENT IS ASPHALT PAVEMENT WITH
ASPHALT BASE COURSE AND/OR WHEN
PAVEMENTS HAVE ROLL CURB



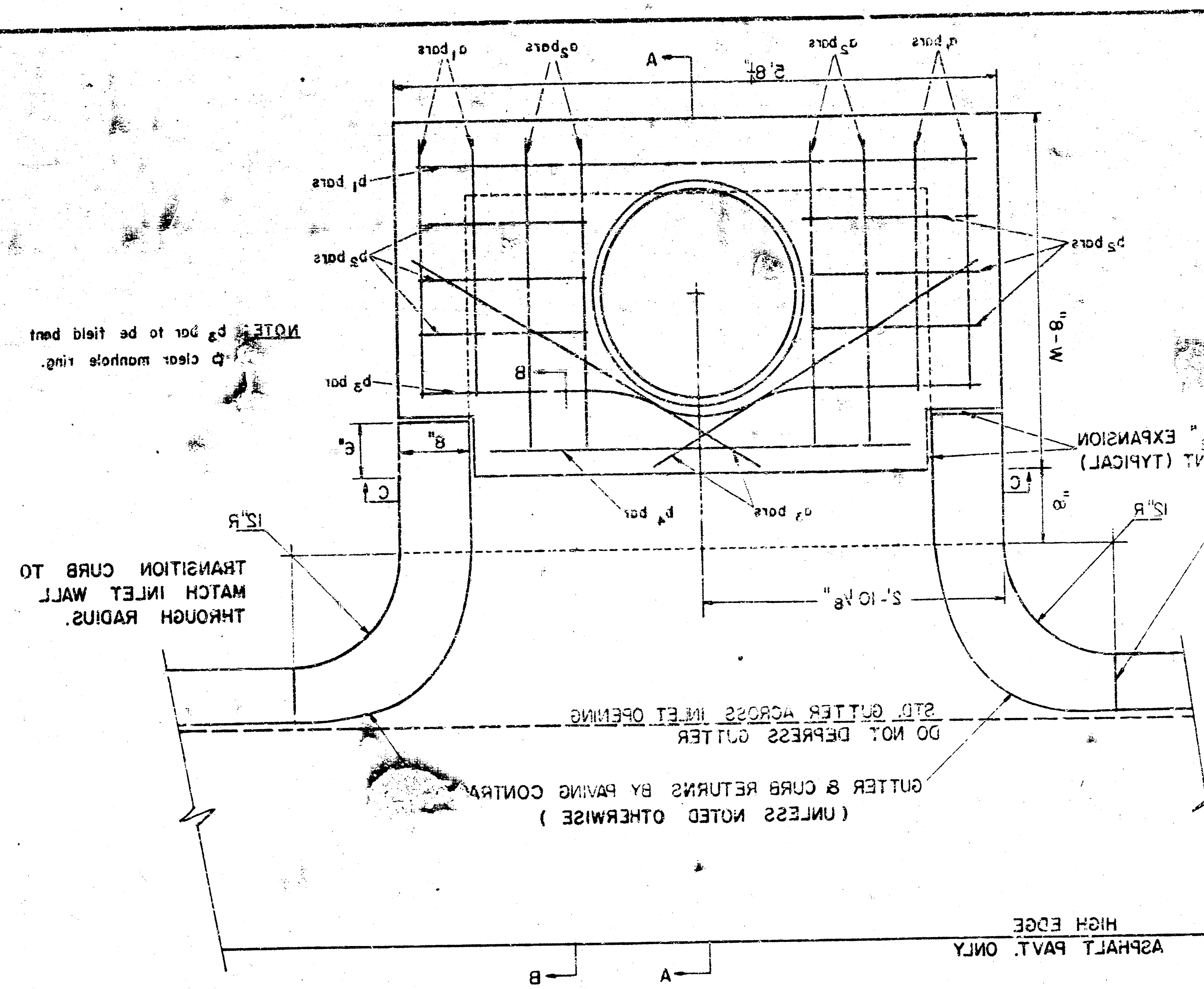
SECTION A-A
(SCALE 1" = 1'0")

STANDARD CURB INLET PRECAST TOPS

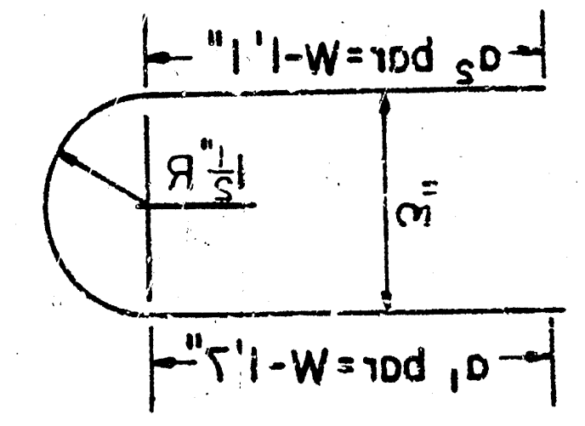
W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
3'10"	3'2"x5'8½"x7½"	24" & SMALLER	0.42*
4'10"	4'2"x5'8½"x7½"	30" & 36"	0.55*
5'10"	5'2"x5'8½"x7½"	42" & 48"	0.68*
6'10"	6'2"x5'8½"x7½"	54" & 60"	0.82*

*GROSS VOLUME

NOTE: CONCRETE TOPS TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK WALLS. CONCRETE TOPS MAY BE CAST IN PLACE OR PRECAST. CONCRETE FOR INLET TOPS AND FLOORS SHALL BE 6-SACK PAVING MIX.


a1 bars
a2 bars
a3 bars
b1 bars
b2 bars
b3 bar
b4 bar
5' 8½"
A
B
W-8"
NOTE: b3 bar to be field bent to clear manhole ring.
1½" EXPANSION JOINT (TYPICAL)
8"
6"
12"R
TRANSITION CURB TO MATCH INLET WALL THROUGH RADIUS.
2'-10⅛"
STD. GUTTER ACROSS INLET OPENING DO NOT DEPRESS GUTTER
GUTTER & CURB RETURNS BY PAVING CONTRACTOR (UNLESS NOTED OTHERWISE)
HIGH EDGE ASPHALT PAVT. ONLY

PLAN (SCALE: 1" = 1'0")

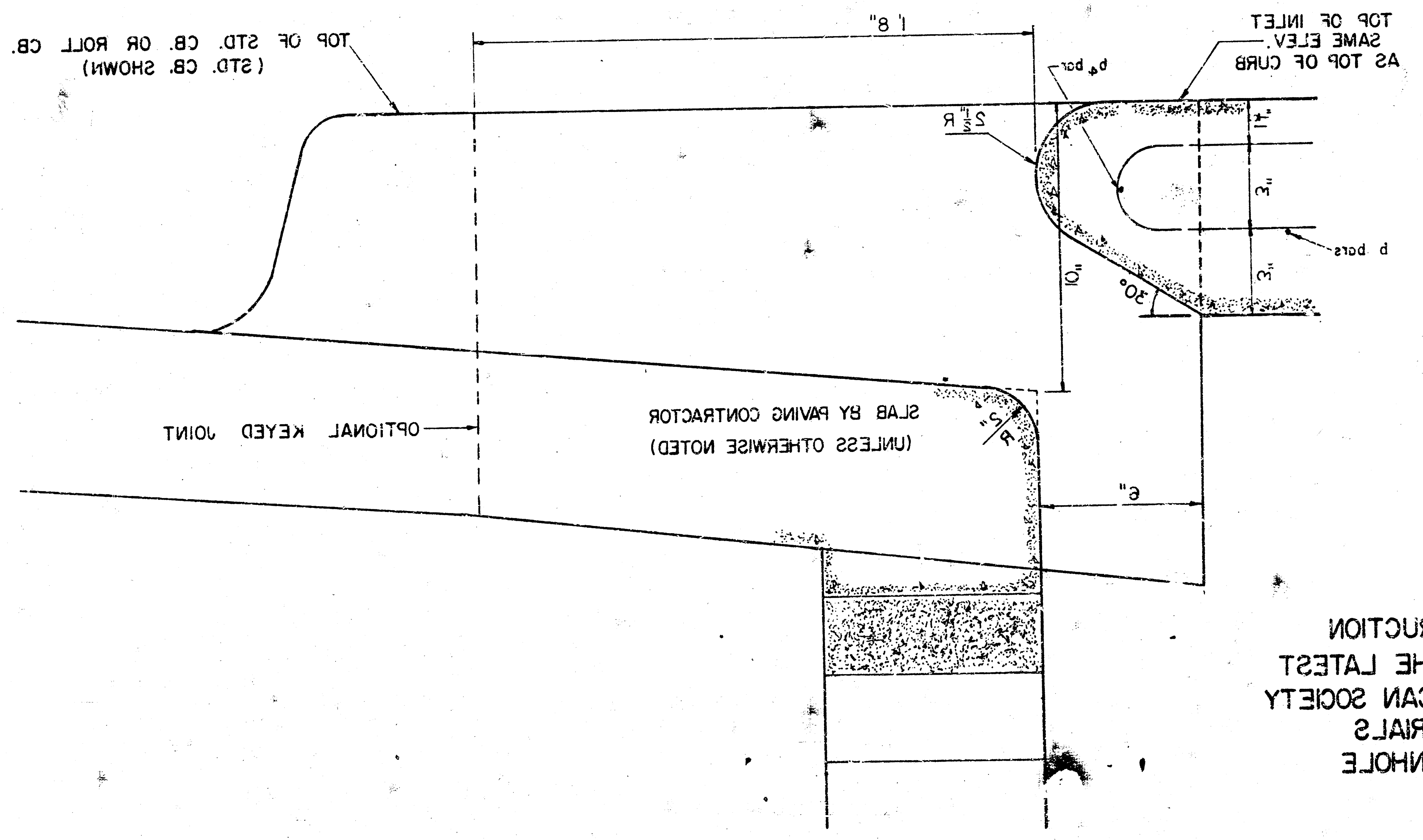


BENDING DIAGRAM

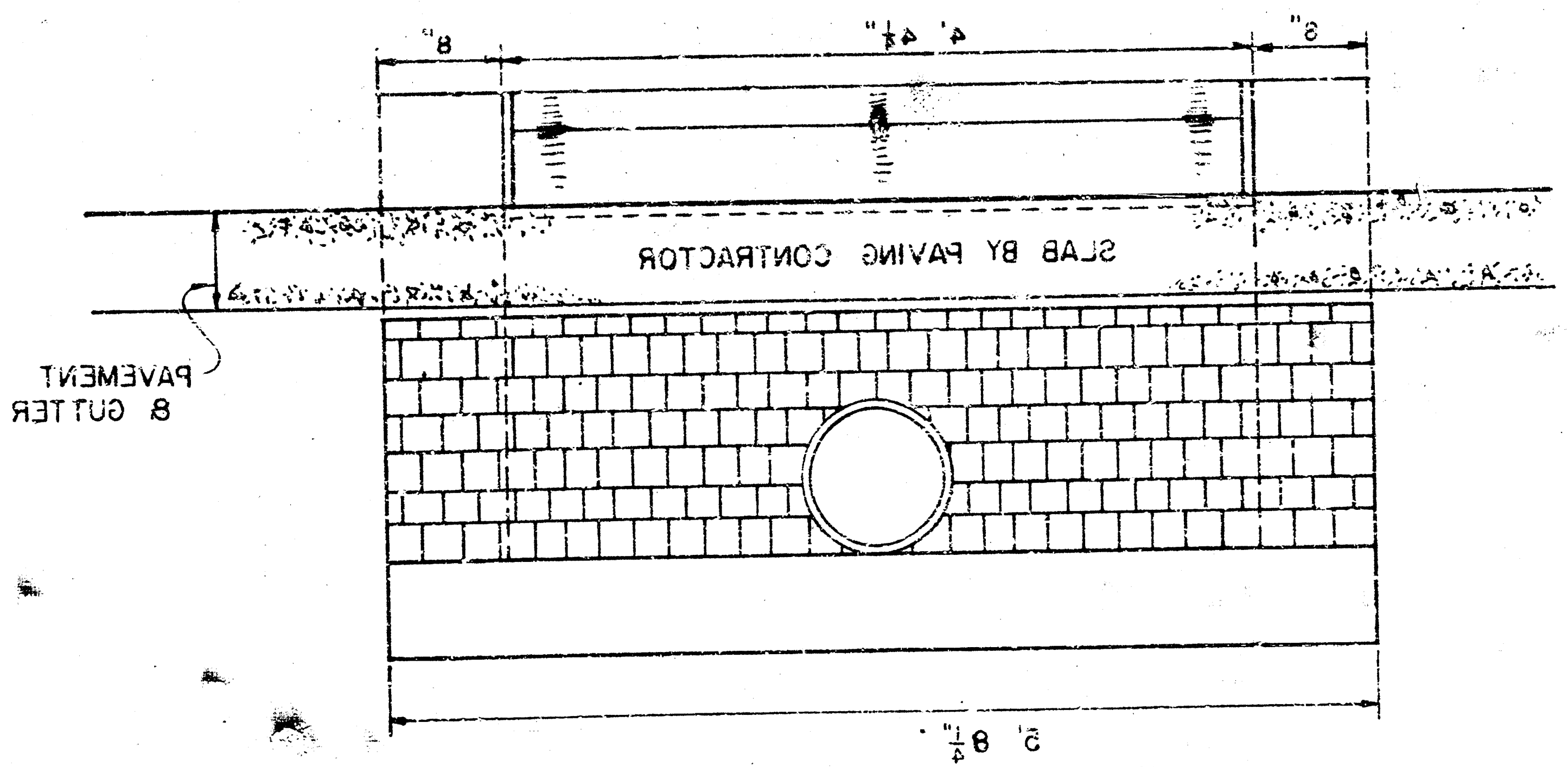
STEEL SCHEDULE

BAR	a1	a2	a3*	b1 W=3'10"	b1 W=4'10"	b1 W=5'10"	b1 W=6'10"	b2	b3	b4	Wt. Lbs.
NUMBER	4	4	2	1	3	5	7	6	1	1	
SIZE	#4	#4	#4	#4	#4	#4	#4	#4	#4	#6	
LENGTH W=3'10"	4'9"	5'9"	3'7"	5'5"	—	—	—	1'7"	5'6"	4'0"	53
LENGTH W=4'10"	6'9"	7'9"	4'7"	—	5'5"	—	—	1'7"	5'6"	4'0"	72
LENGTH W=5'10"	8'9"	9'9"	5'7"	—	—	5'5"	—	1'7"	5'6"	4'0"	91
LENGTH W=6'10"	10'9"	11'9"	6'7"	—	—	—	5'5"	1'7"	5'6"	4'0"	110

* NOTE: a3 BARS TO BE PLACED APPROX. 2" BELOW TOP OF INLET COVER.


1' 8"
TOP OF STD. CB. OR ROLL CB. (STD. CB. SHOWN)
TOP OF INLET SAME ELEV. AS TOP OF CURB
b4 bar
2⅝ R
1½"
3"
b bars
10"
30°
OPTIONAL KEYED JOINT
SLAB BY PAVING CONTRACTOR (UNLESS OTHERWISE NOTED)
2⅝ R
6"

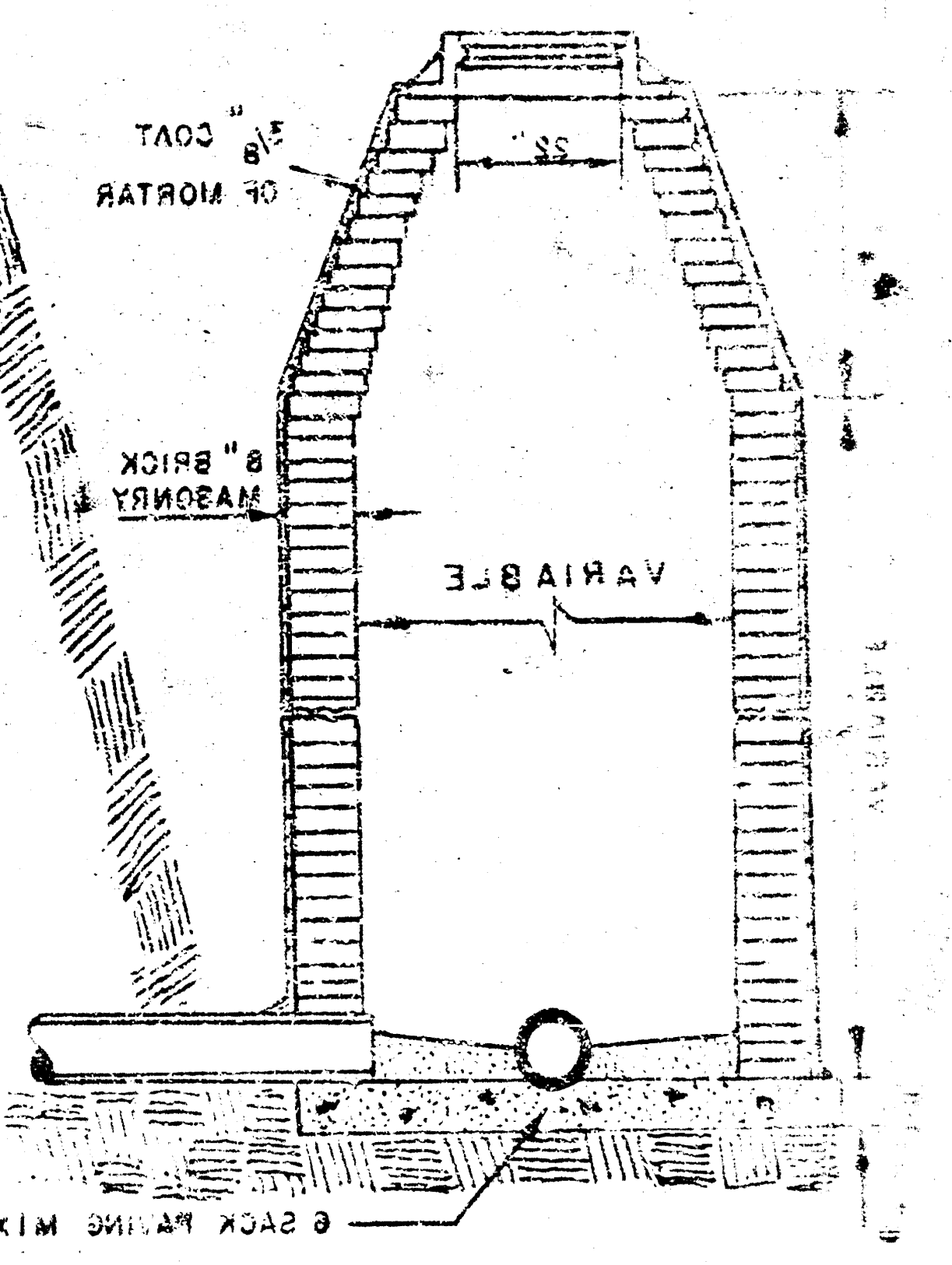
SECTION B-B
(SCALE 3" = 1'0")


8"
4' 4½"
8"
SLAB BY PAVING CONTRACTOR
PAVEMENT OR CURB & GUTTER THICKNESS
5' 8½"

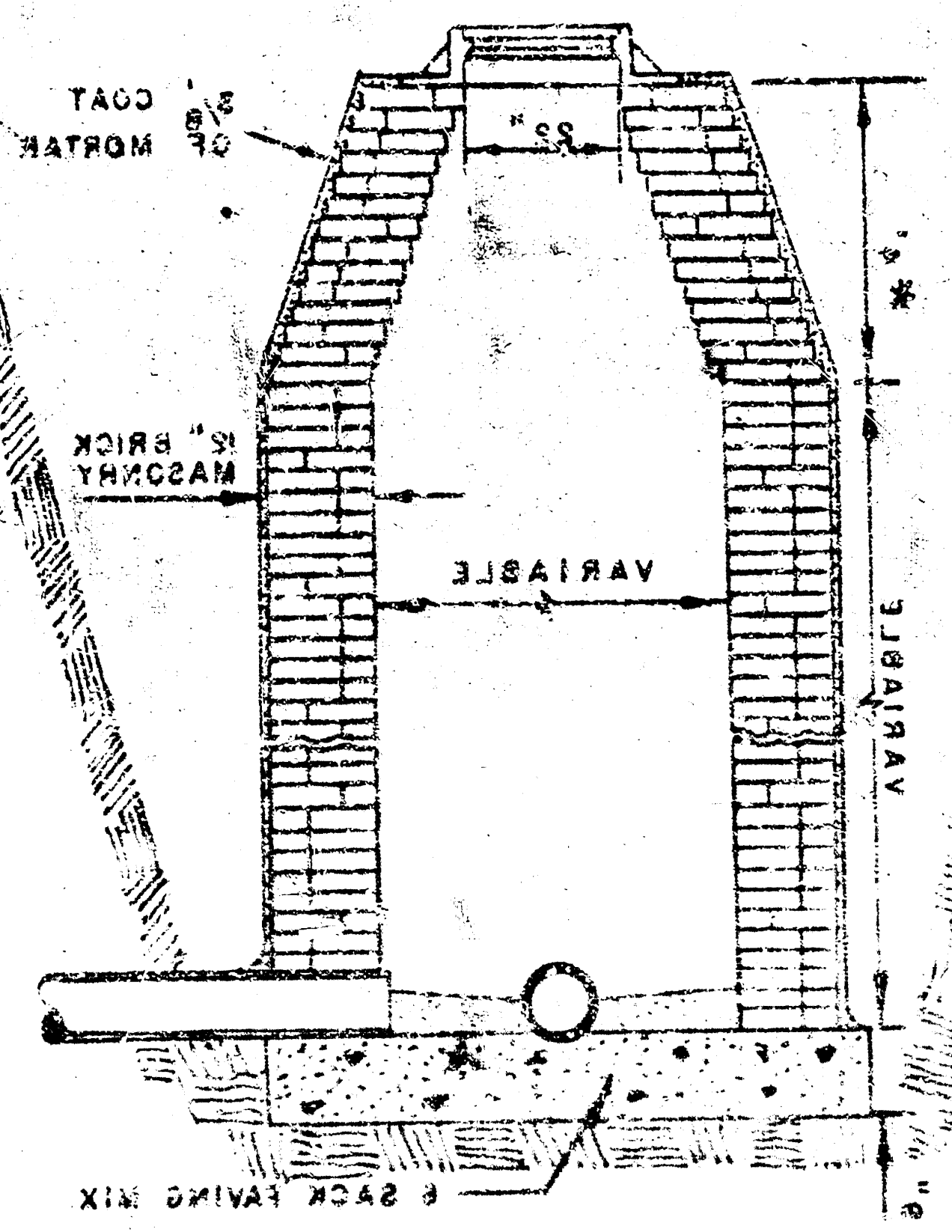
SECTION C-C
(SCALE 1" = 1'0")

BRICK FOR INLET CONSTRUCTION SHALL CONFORM WITH THE LATEST REVISION OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS DESIGNATION C32 FOR MANHOLE BRICK GRADE MS.

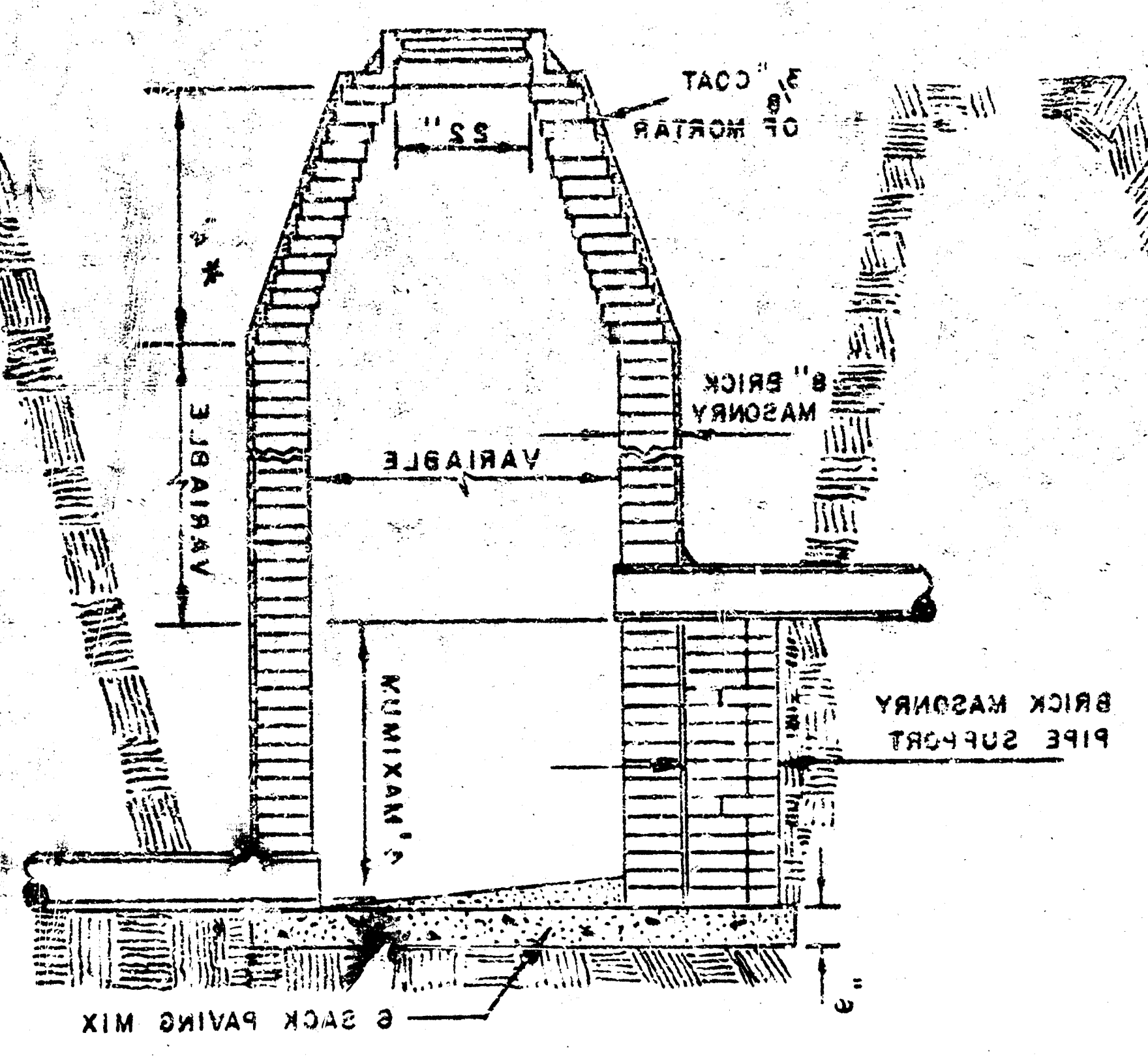
DETAIL
STANDARD TYPE IA CURB INLET
(SET BACK LOCATION)
CITY OF WICHITA, KANSAS
R.W. LINN-CITY ENGINEER
FEBRUARY 1975



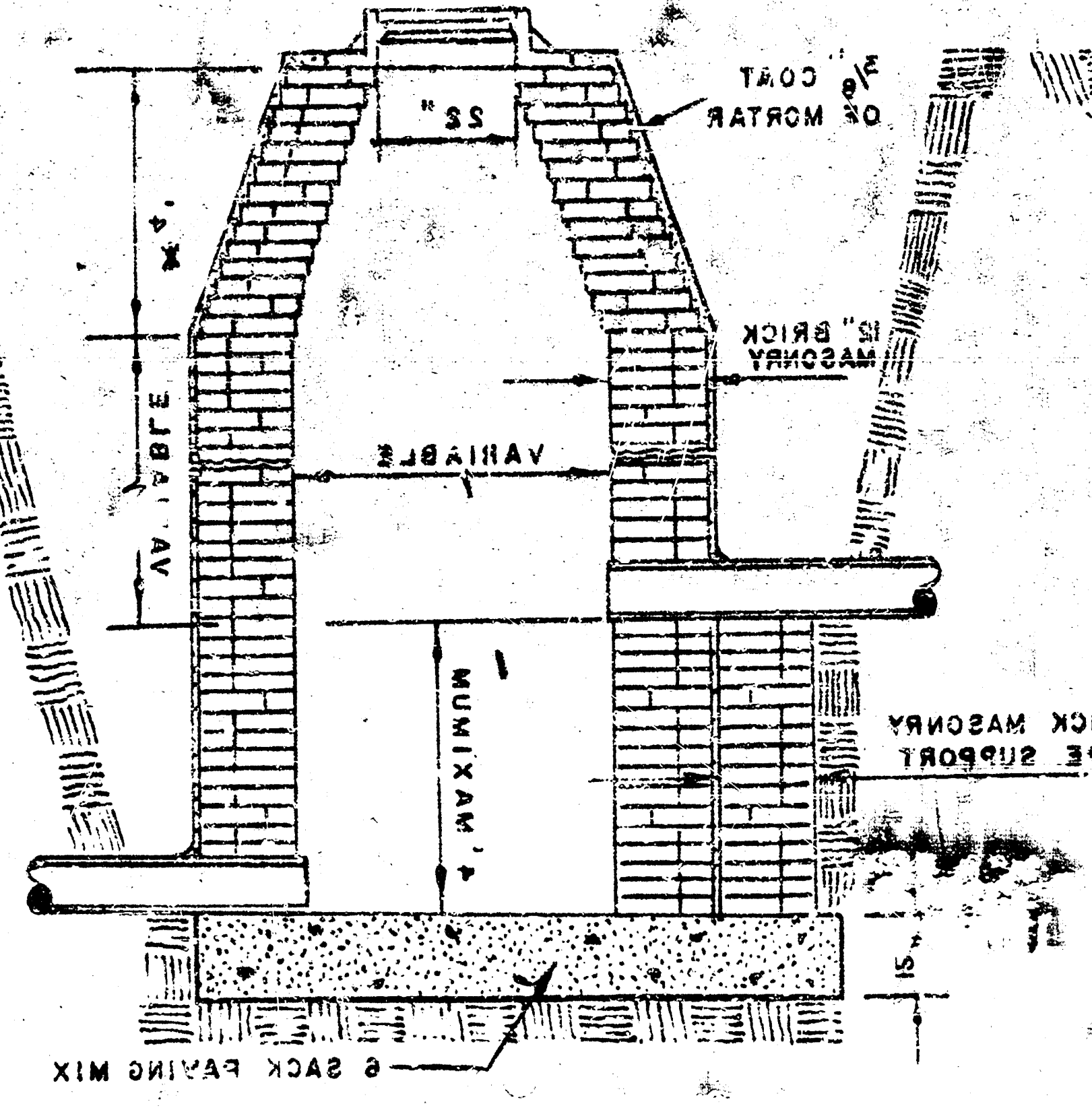
STANDARD MANHOLE
TYPE "A"



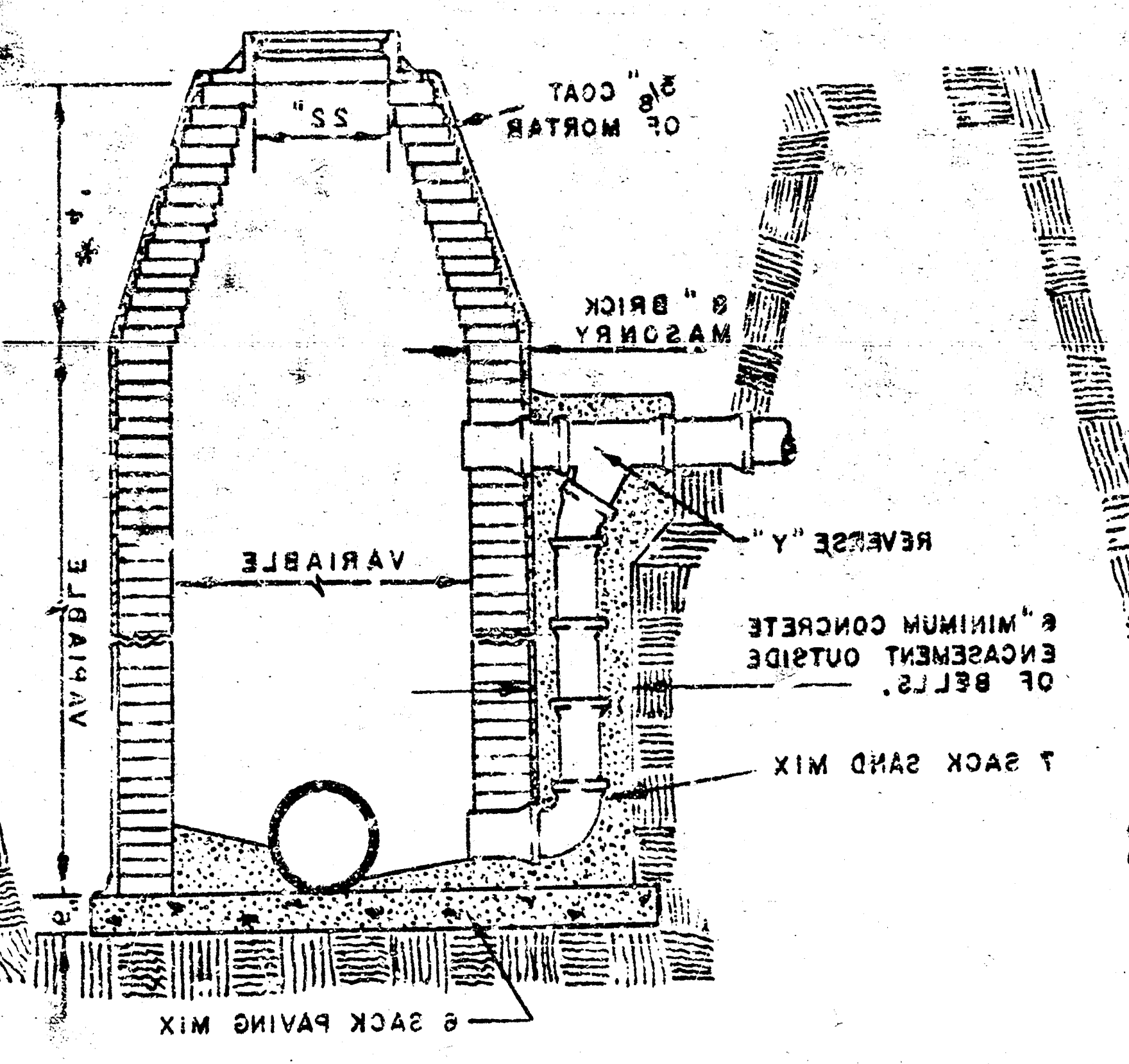
STANDARD MANHOLE
TYPE "B"



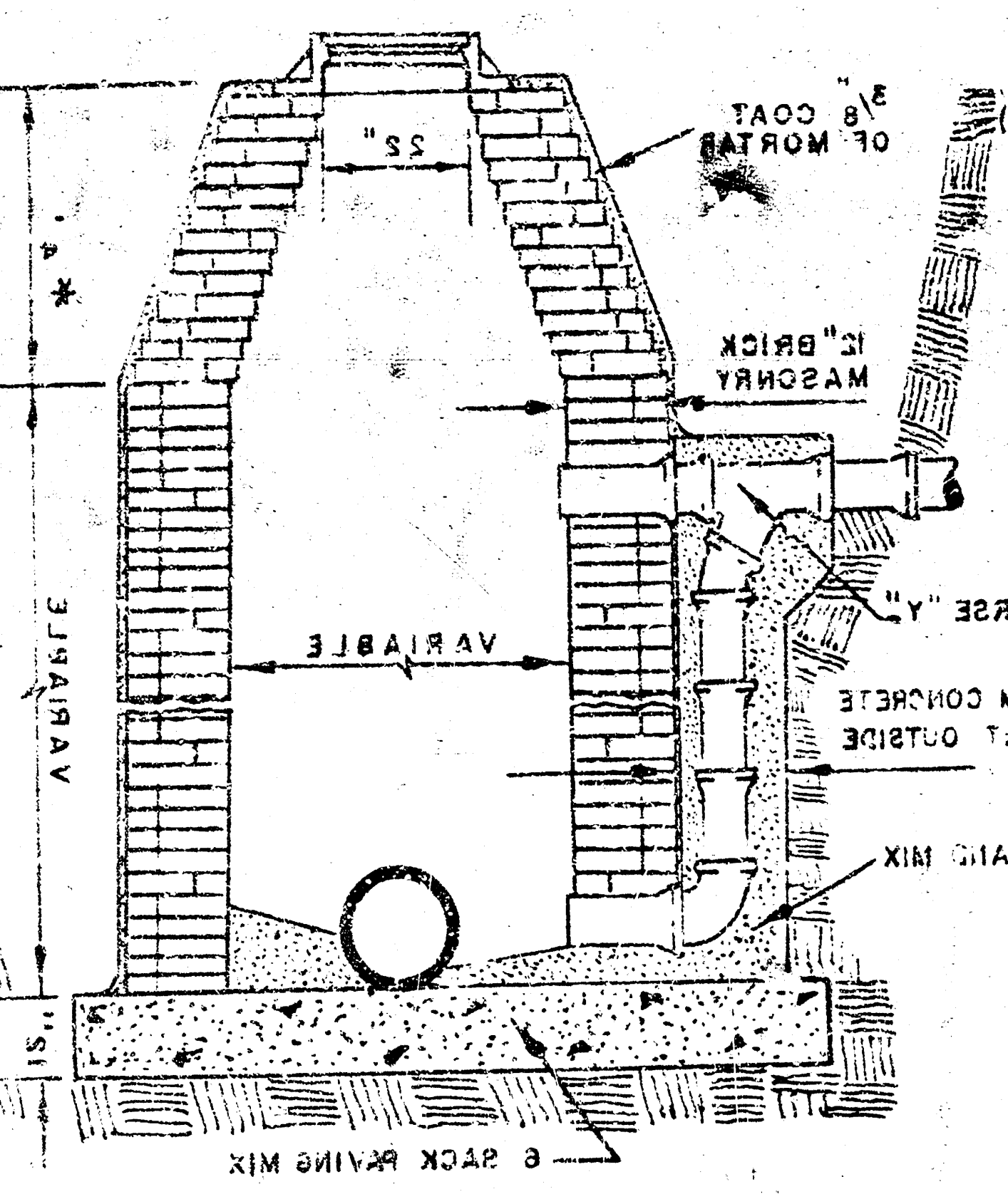
DROP MANHOLE
TYPE "A"



DROP MANHOLE
TYPE "B"

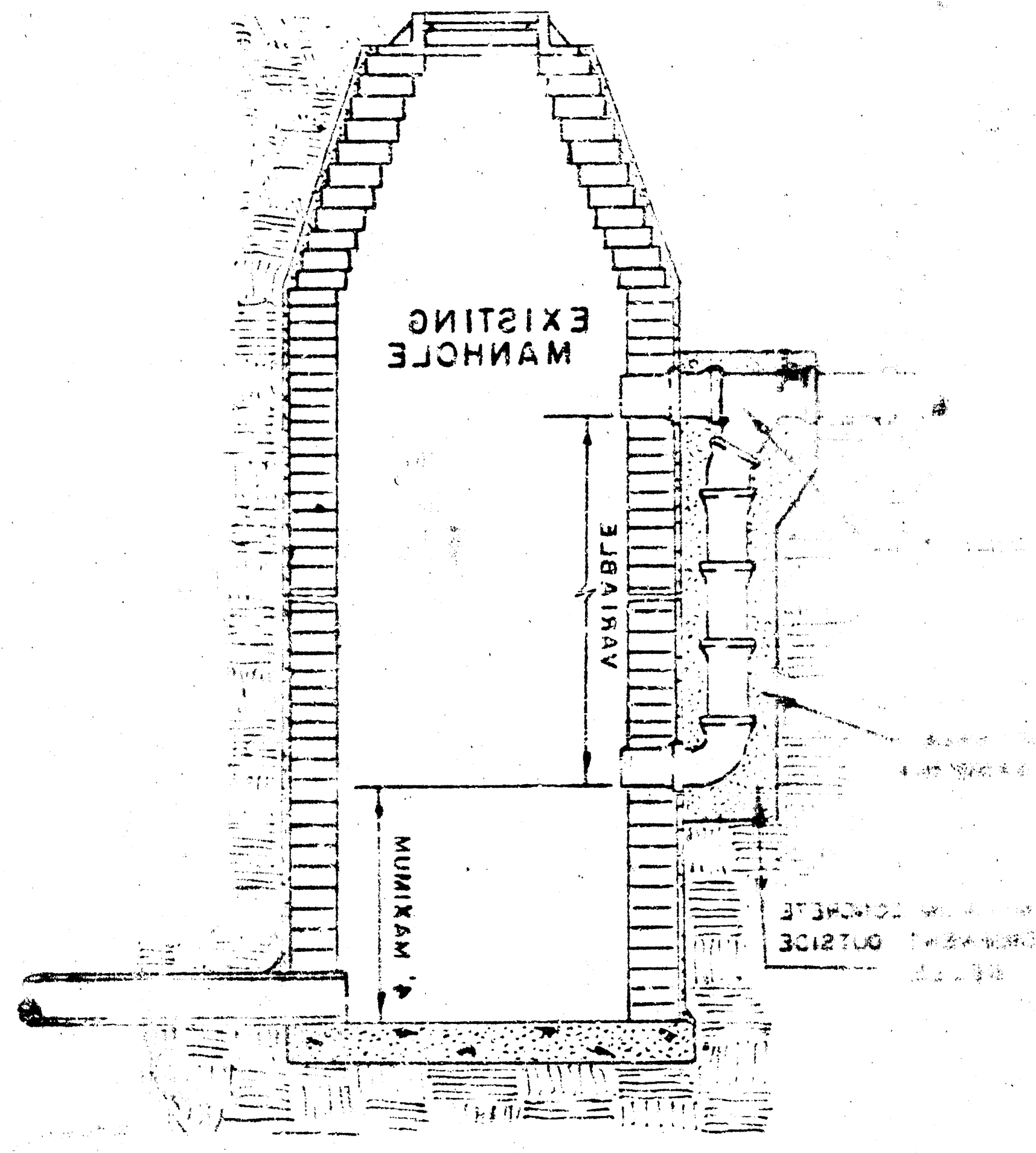


OUTSIDE DROP MANHOLE
TYPE "A"

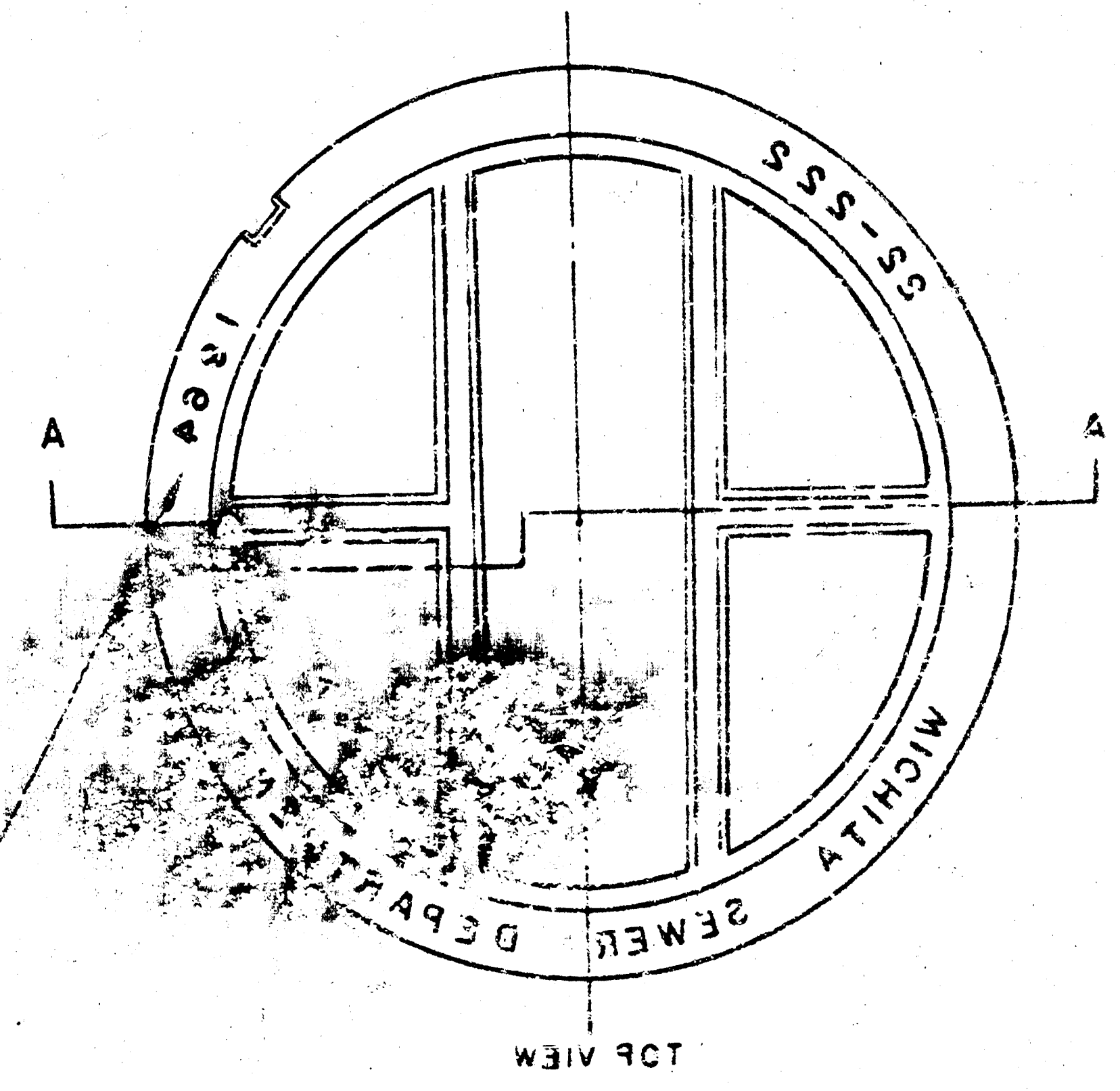


OUTSIDE DROP MANHOLE
TYPE "B"

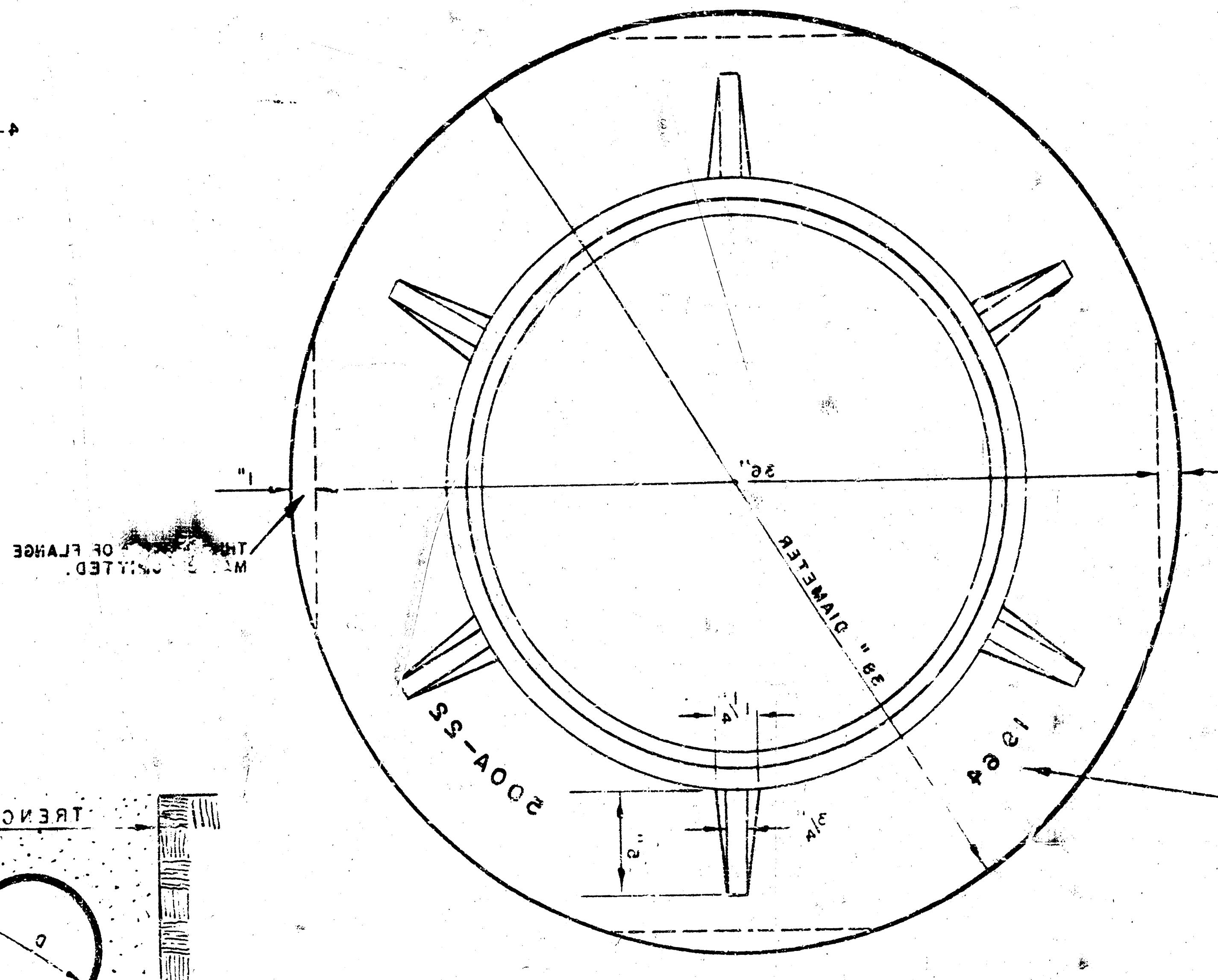
* DRAW = 6' ON 5' DIA. M.H.



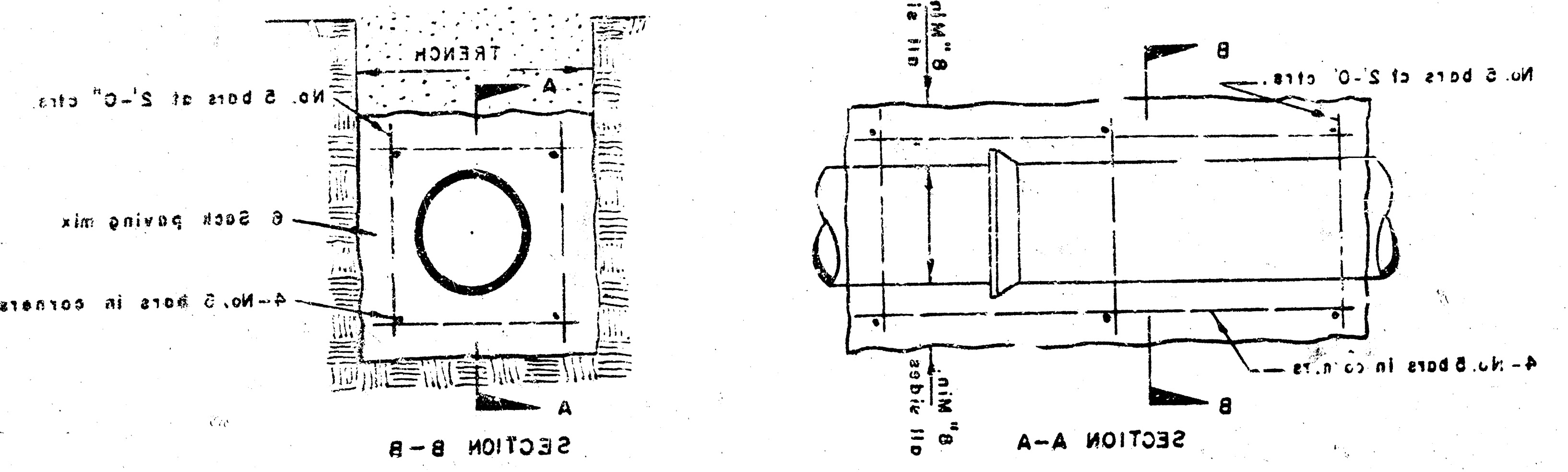
DETAIL OF DROP STACK
OR EXISTING MANHOLES IN GROUND WATER



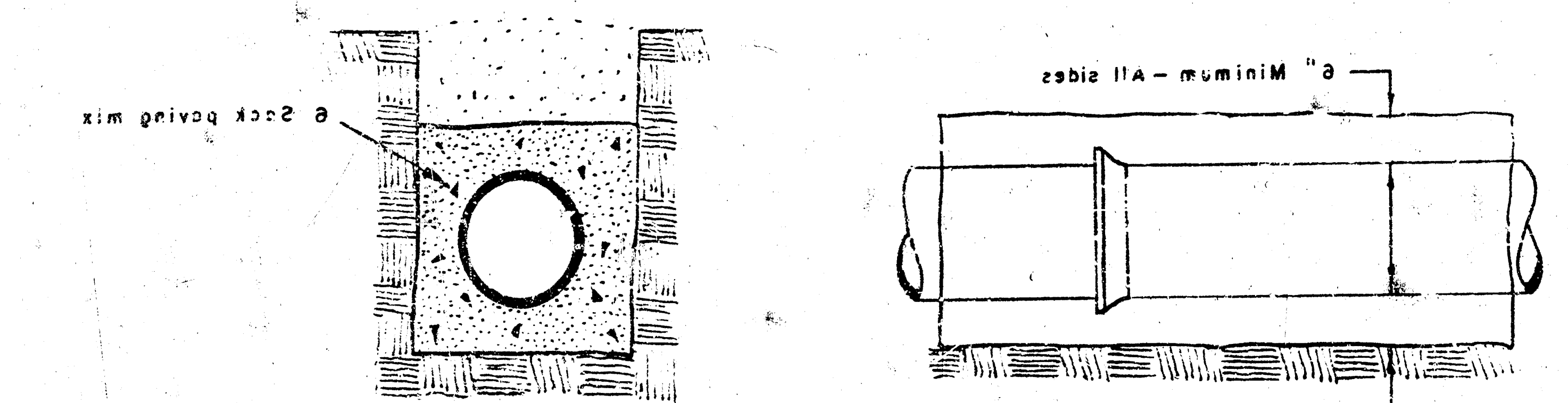
MANHOLE COVER
WEIGHT 110 lbs



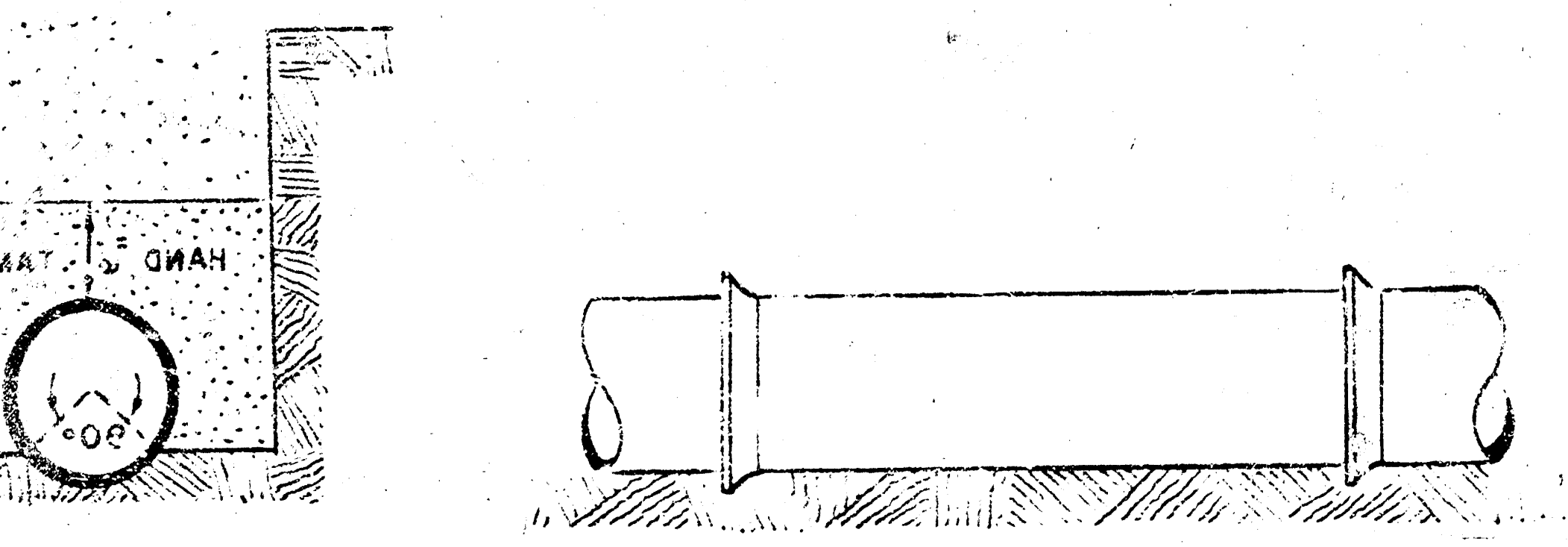
MANHOLE RING
WEIGHT 355 lbs



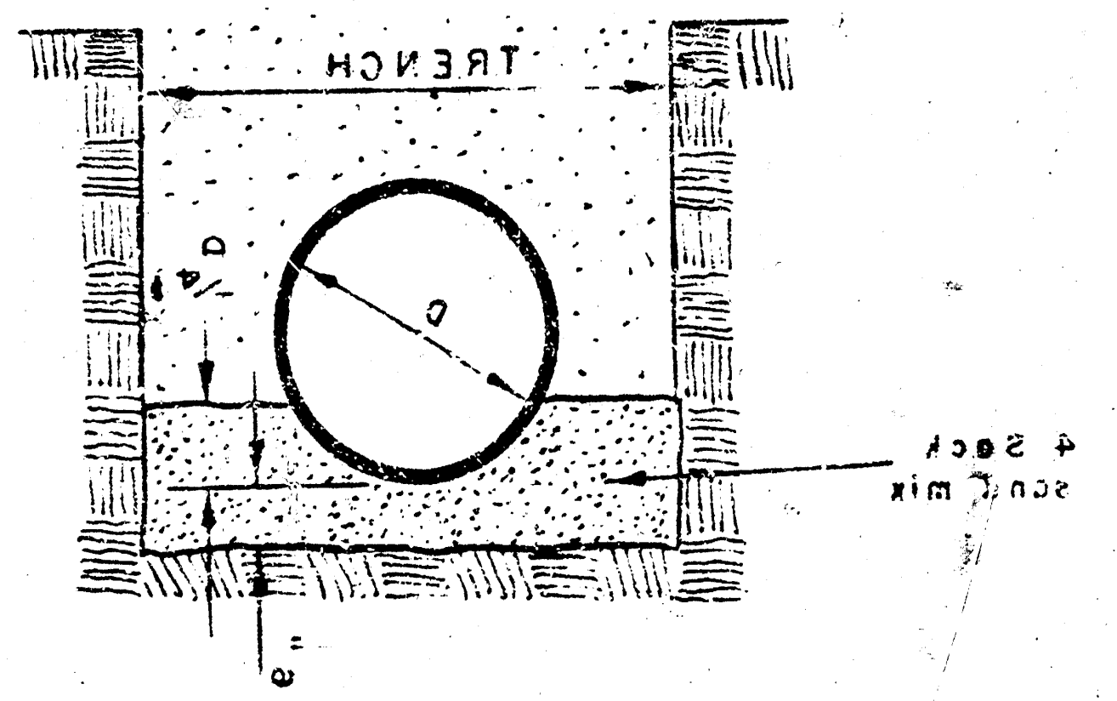
REINFORCED CONCRETE ENCASEMENT
FOR STRENGTH



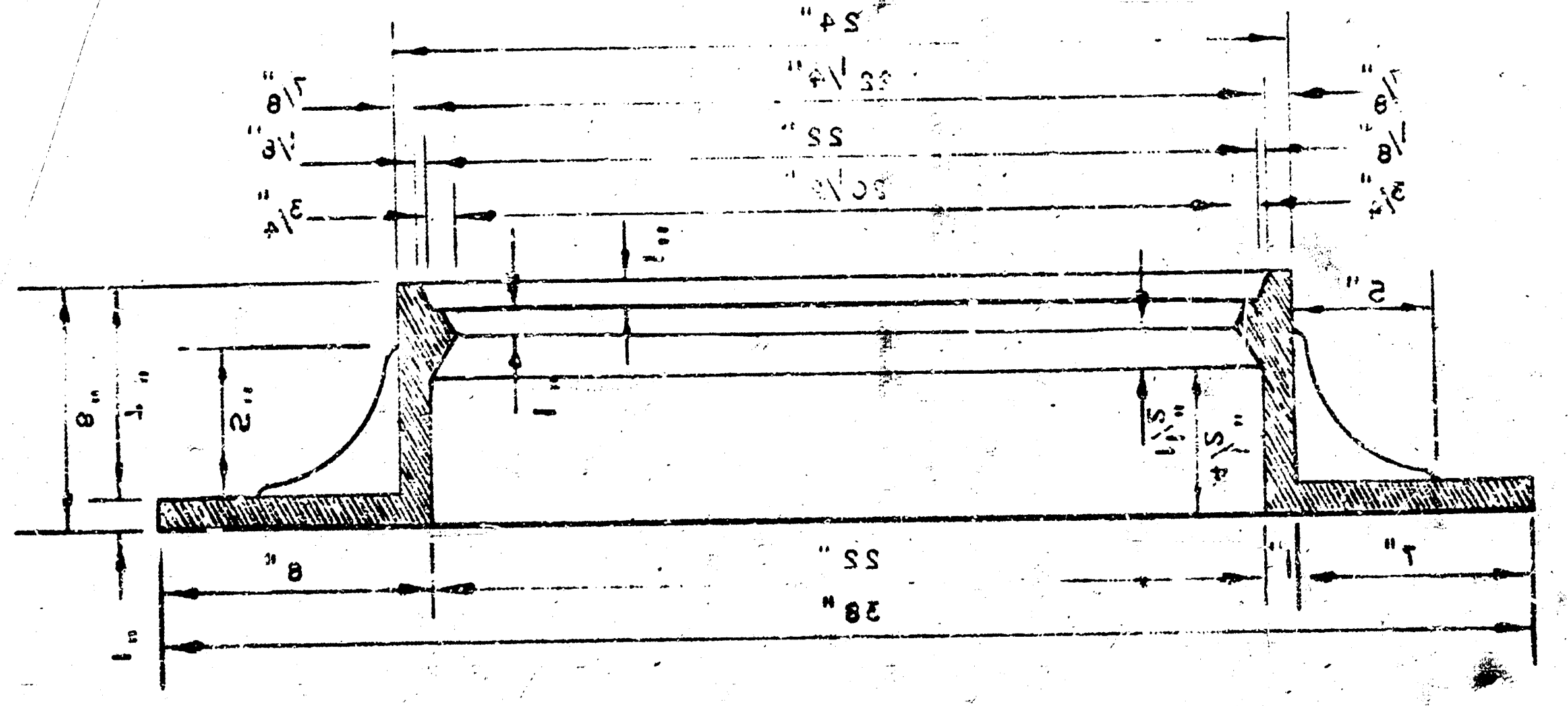
CONCRETE ENCASEMENT
FOR COVER



ORDINARY BEDDING METHOD
FOR CLAY PIPE

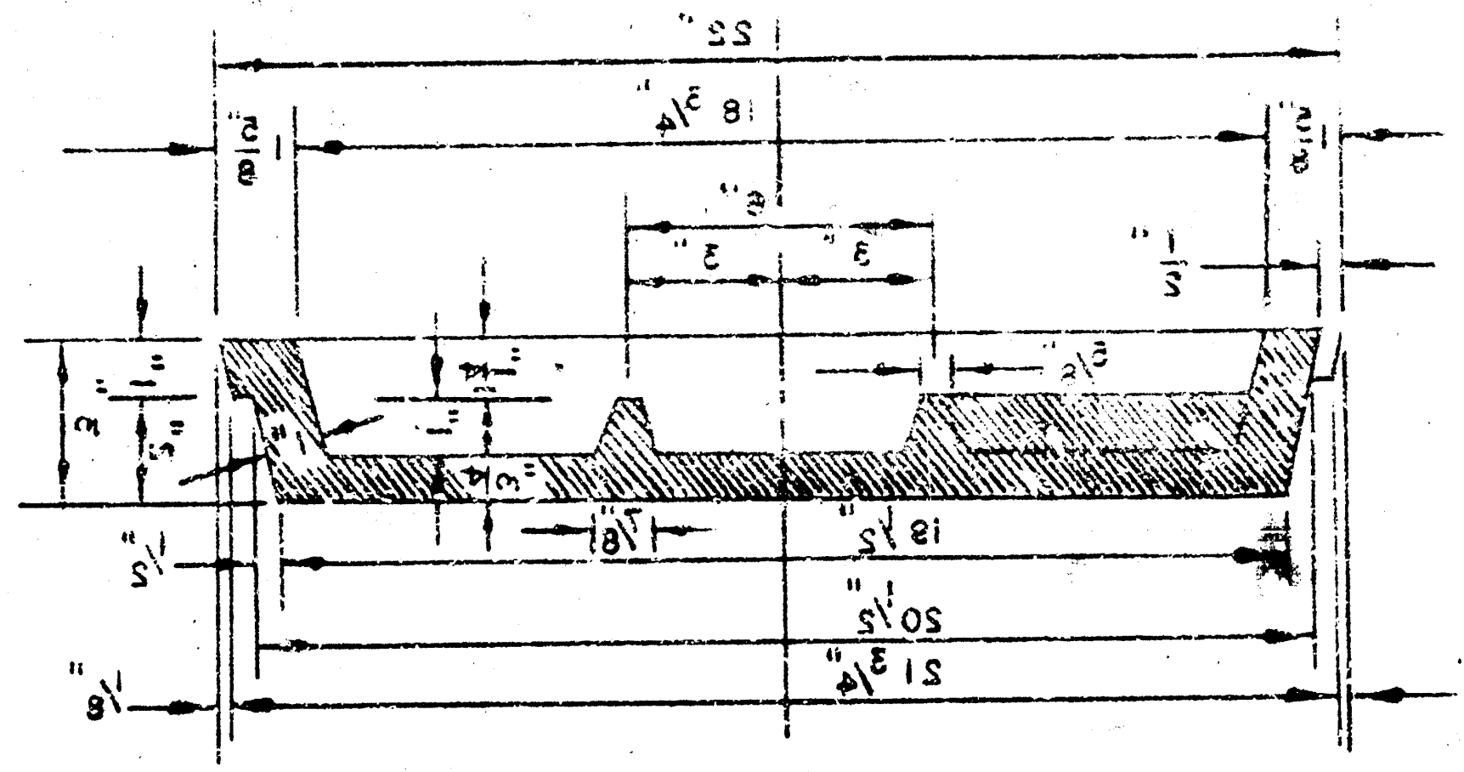


DETAIL OF CONCRETE CRADLE

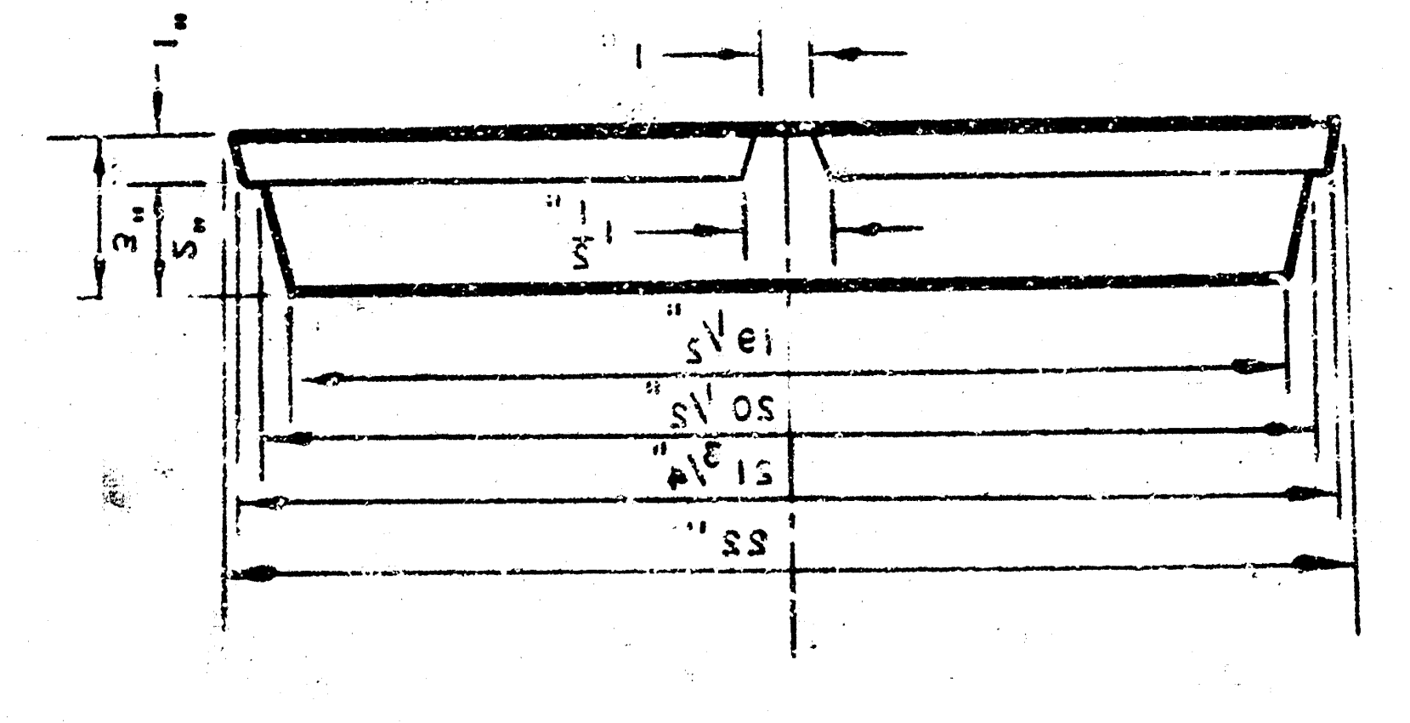


MANHOLE RING

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



MANHOLE COVER



MANHOLE COVER

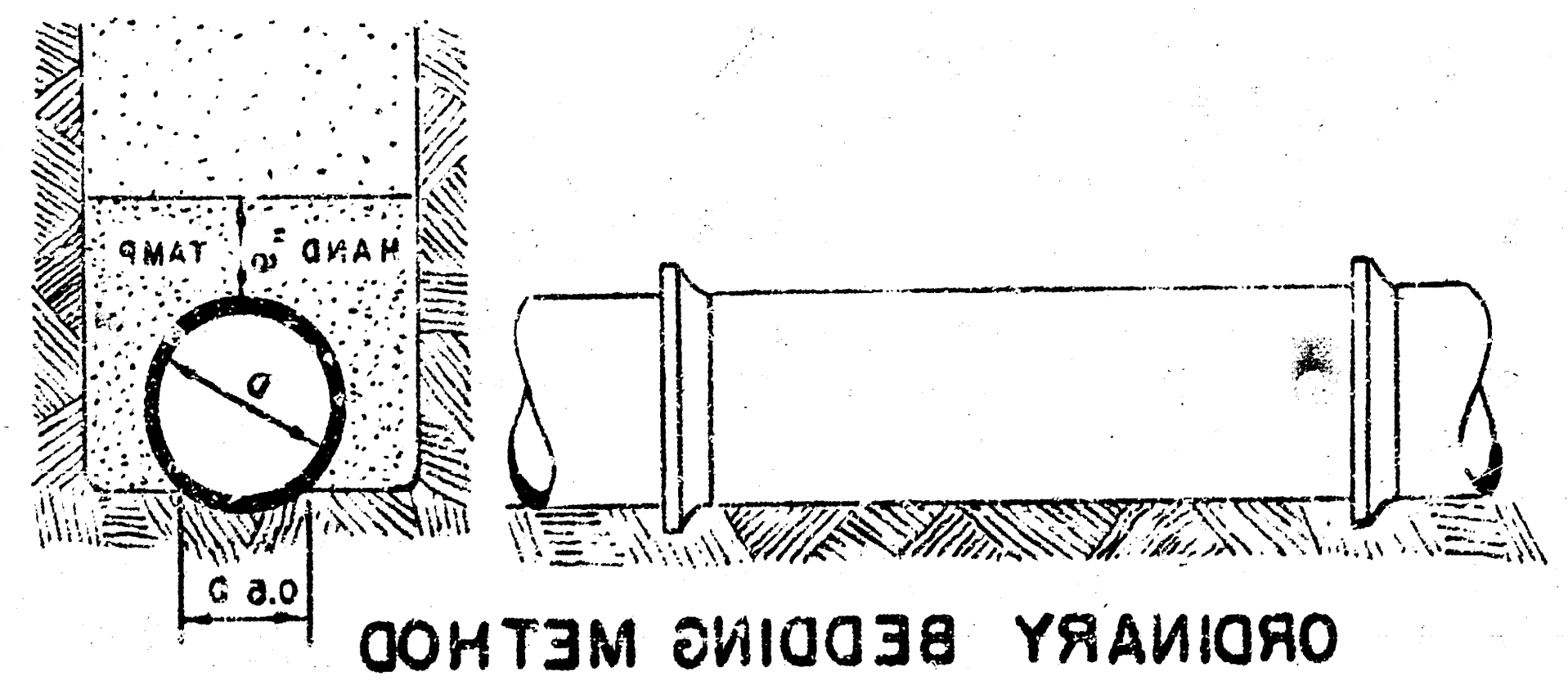
MANHOLES

THE CONCRETE USED FOR MORTAR IN MANHOLES SHALL CONTAIN 6 SACKS OF CEMENT PER CUBIC YARD.

STANDARD MANHOLES AND DROP MANHOLES, REGARDLESS OF DIAMETER, SHALL BE BID AT ONE PRICE AS STANDARD MANHOLES.

SINGLE OR DOUBLE OUTSIDE DROP MANHOLES SHALL BE BID AT ONE PRICE AS OUTSIDE DROP MANHOLES.

ALL MANHOLES WITH PIPES LARGER THAN 24" SHALL BE 5' DIAMETER UNLESS OTHERWISE SPECIFIED ON PLAN, ALL M.H.'S WITH PIPES 24" & SMALLER SHALL BE 4' DIA.



ORDINARY BEDDING METHOD
FOR REINFORCED CONCRETE PIPE

DETAILS OF
SEWER APPURTENANC
ADOPTED AS STANDARD DESIG
BY
ENGINEERING DIVISION
CITY OF WICHITA, KANSAS
R. W. LINN CITY ENGIN