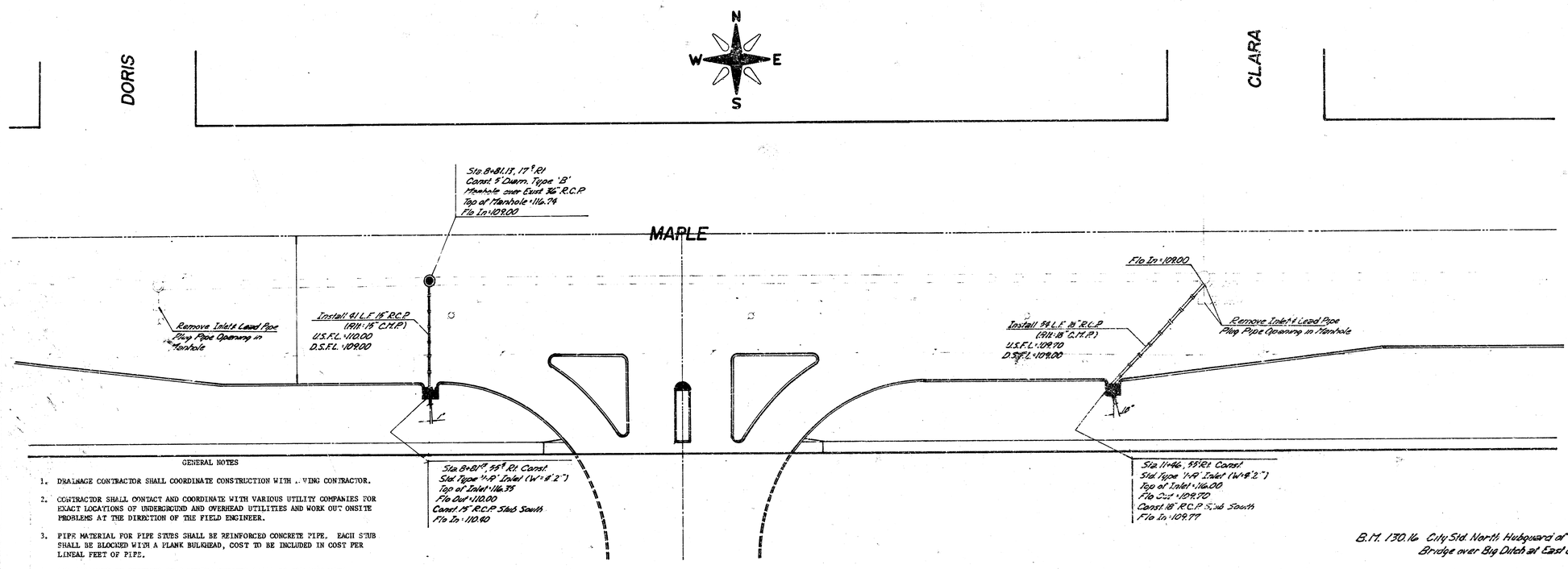


GENERAL NOTES

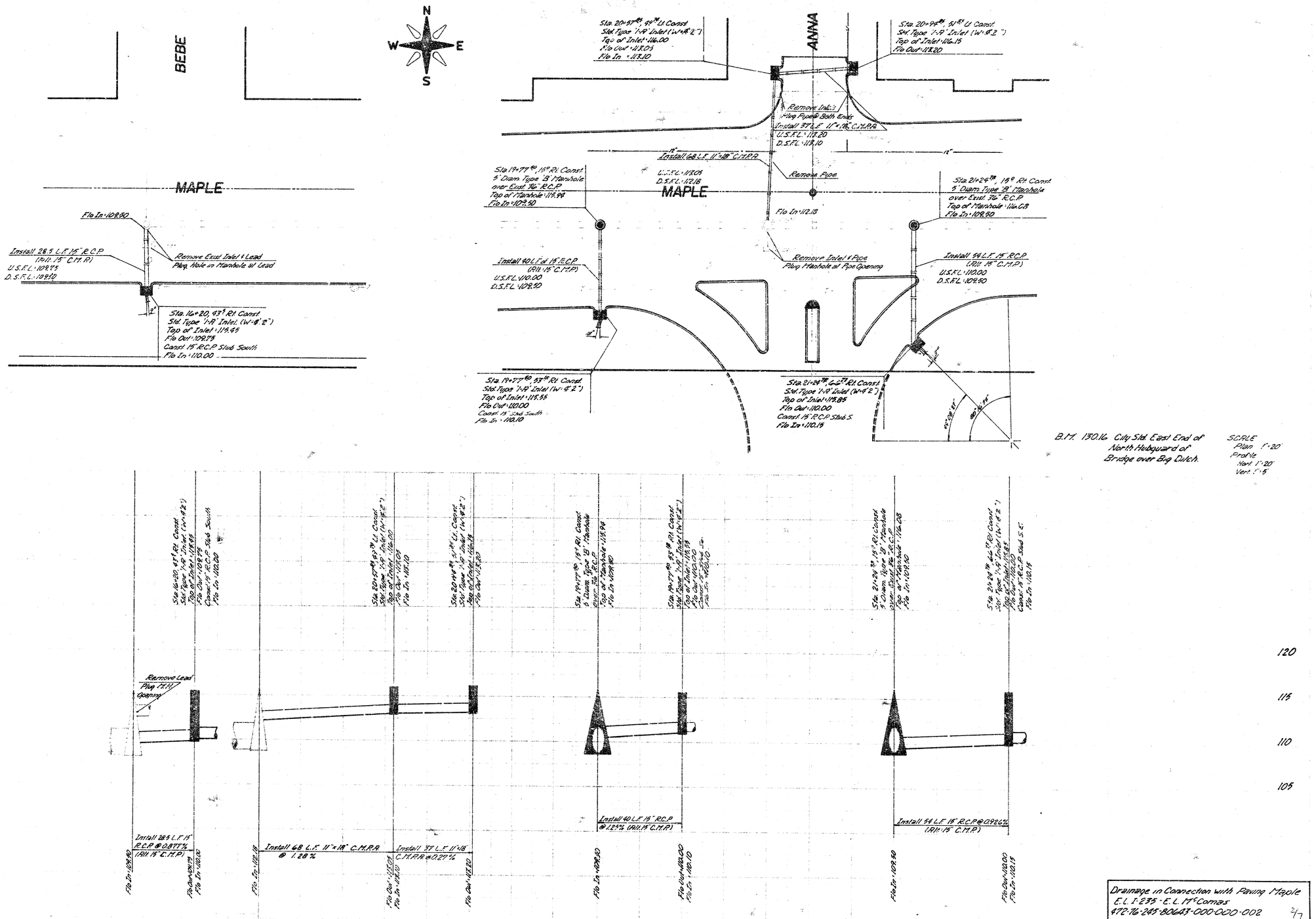
1. DRAINAGE CONTRACTOR SHALL COORDINATE CONSTRUCTION WITH PAVING CONTRACTOR.
2. CONTRACTOR SHALL CONTACT AND COORDINATE WITH VARIOUS UTILITY COMPANIES FOR EXACT LOCATIONS OF UNDERGROUND AND OVERHEAD UTILITIES AND WORK OUT ONSITE PROBLEMS AT THE DIRECTION OF THE FIELD ENGINEER.
3. PIPE MATERIAL FOR PIPE STUBS SHALL BE REINFORCED CONCRETE PIPE. EACH STUB SHALL BE BLOCKED WITH A PLANK BULKHEAD, COST TO BE INCLUDED IN COST PER LINEAL FEET OF PIPE.
4. ANY PAVEMENT OR SECTIONS OF PAVEMENT REMOVED SHALL BE REPLACED WITH TEMPORARY 3" ASPHALT MAT. DRIVES REMOVED SHALL BE REPLACED WITH A TEMPORARY 3" ASPHALT MAT. WALK REMOVED SHALL NOT BE REPLACED, WITH THE EXCEPTION OF THOSE THAT PROVIDE THROUGH ACCESS TO TRAFFIC.

B.M. 130.16 City Std. North Hubguard at Bridge over Big Ditch at East End.

SCALE
Plan 1"=20'
Profile
Horiz. 1"=20'
Vert. 1"=5'

CHRIS J. BREITENSTEIN LICENSED 8206 KANSAS PROFESSIONAL ENGINEER

DRAINAGE in CONNECTION with PAVING MAPLE STREET
E.L. I-233-E.L. McCOMAS
CITY of WICHITA, KANSAS
R.W. LINN-CITY ENGINEER
472-76-248-80643-000-000-002
DATE _____

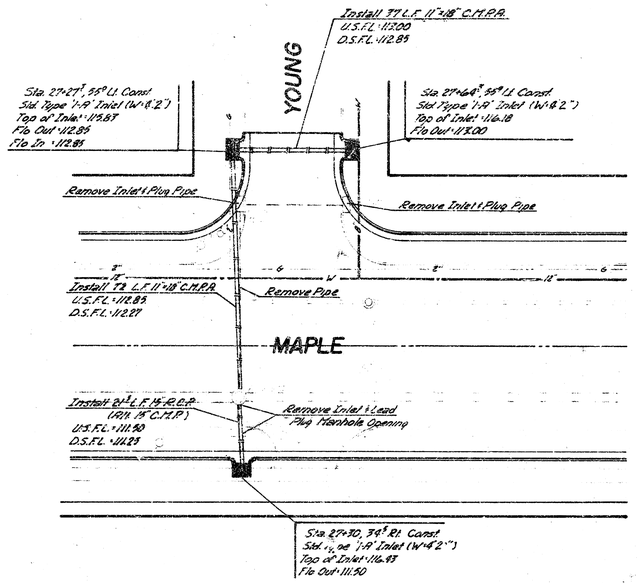


B.M. 130.16 City Std. East End of North Hubguard of Bridge over Big Ditch.

SCALE
Plan 1" = 20'
Profile
Hort. 1" = 20'
Vert. 1" = 5'

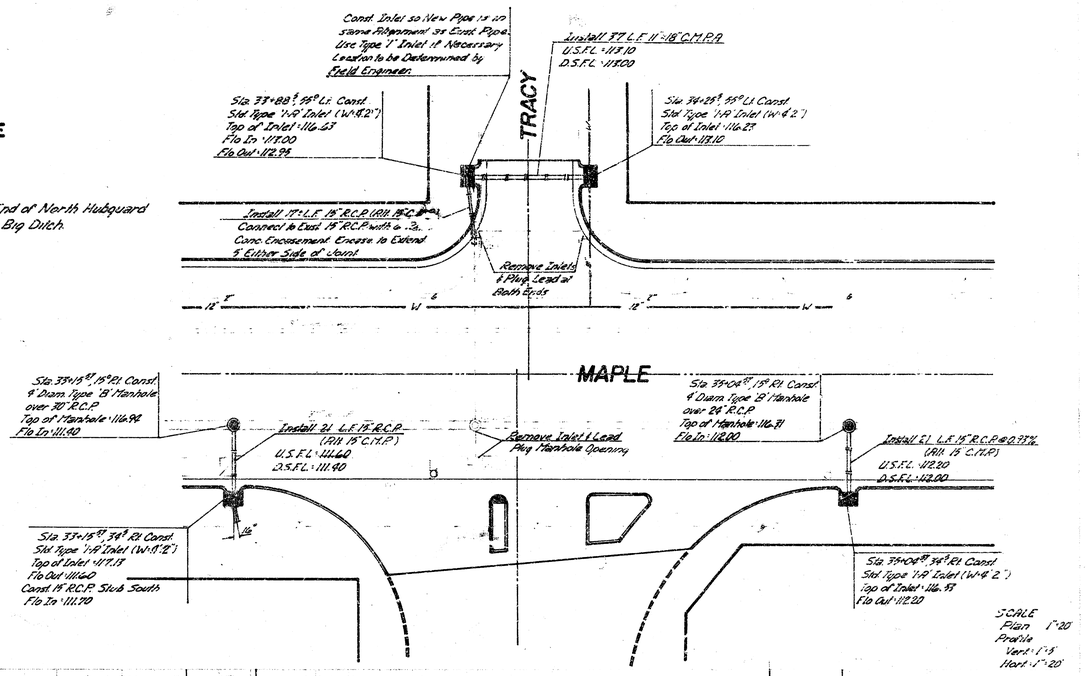
Drainage in Connection with Paving Maple
E.L. I-235 - E.L. McComas
472-76-245-80643-000-000-002

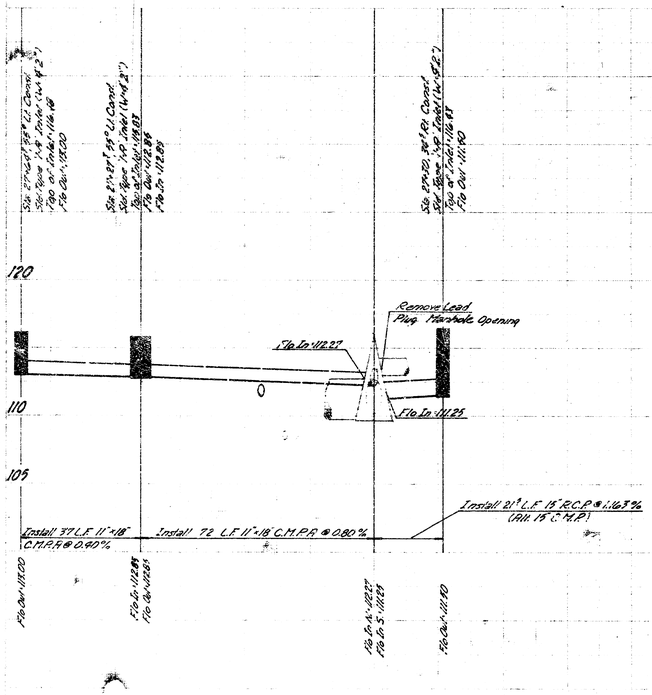
2/7

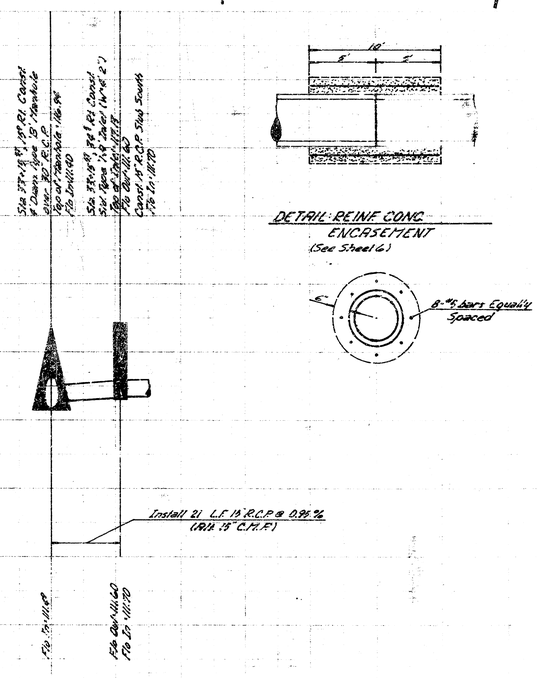


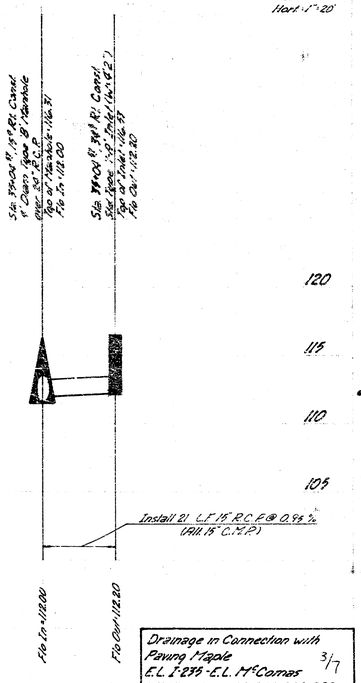


B.M. 130.16 City Std. East End of North Hubguard of Bridge over Big Ditch.









Drainage in Connection with Paving Maple
E.L. 1+87.9 - E.L. 11+60 Comas
3/7
472-116-249-B0A3-000-000-002

PLAN

NEVADA

FLORENCE

MAPLE

N

W E

S

Install 37 L.F. 18" R.C.P. (Alt. 15" C.M.P.)
U.S.F.L. 112.65
D.S.F.L. 112.55

Sta 37+ -9.5° Lt Const.
Std Type 1-A Inlet (W=6'2")
Top of Inlet = 119.98
Flo Out = 112.65

Install 27 L.F. 15" R.C.P. (Alt. 15" C.M.P.)
U.S.F.L. 112.90
D.S.F.L. 112.80

Sta 37+88.9, 9.5° Lt Const.
Std Type 1-A Inlet (W=6'2")
Top of Inlet = 119.98
Flo Out = 112.90
Flo In = 112.79

Sta 37+83.9, 39° Lt Const.
Std Type 1-A Inlet (W=6'2")
Top of Inlet = 119.98
Flo Out = 112.85

Remove Pipe

Remove Inlets
Plug Pipe at Back Slope

Sta 37+79.9, 39° Lt Const.
Std Type 1-A Inlet (W=6'2")
Top of Inlet = 119.98
Flo Out = 112.76
Flo In N.W. = 112.40
Flo In S. = 112.50

Plug Pipe at Back Slope

Remove Inlet & Lead

Install 5 L.F. 15" R.C.P. (Alt. 15" C.M.P.)
U.S.F.L. = 112.45
D.S.F.L. = 112.40

Install 57 L.F. 15" R.C.P. (Alt. 15" C.M.P.)
U.S.F.L. = 112.35
D.S.F.L. = 112.10

Install 34 L.F. 22"-45° C.M.P.A. (Alt. 21"-15" R.C.P.H.E.)
U.S.F.L. = 112.00
D.S.F.L. = 112.00

Remove Pipe
Plug Openings in M.H.

Remove 12" Pipe to New Inlet Location

Remove Inlet & Pipe

Sta 37+81.9, 39° Rt. Const.
Std Type 1-A Inlet (W=6'2")
Top of Inlet = 116.08
Flo Out = 112.20
Flo In = 112.10

Install 9 L.F. 22"-15° C.M.P.A.
U.S.F.L. = 112.13
D.S.F.L. = 112.10

Sta 37+89.9, 39° Rt. Const.
Std Type 1-A Inlet (W=6'2")
Top of Inlet = 116.08
Flo Out = 112.36
Flo In = 112.23

Adjust Pipe Connection into Inlet

Remove 10 L.F. 8" Clay Pipe
Replace with 8" Ductile Iron Pipe

Sta. Sta 40+19, 38° Rt., Sta. 2+26 Line 1
Const Std Type 19' Manhole
Top of Manhole = 116.88
Flo = 112.76

Sta. Sta 42+65.99° Rt., Sta 4+63 Line 1; Sta 0+00 Line 2
Const Std Type 19' Manhole
Top of Manhole = 117.27
Flo Out W. = 113.20
Flo In N.E. = 113.10
Flo In E. = 113.90

Line 2

Line 1

B.M. 130 Ht. City Std. East End of North Hubguard of Bridge over Big Ditch.

SCALE:
Plan 1"=20'
Profile
Horz. 1"=20'
Vert. 1"=5'

Exist. Manhole
Flo In N.C. = 112.10
Flo In S.E. = 112.00

Sta 37+81.9, 39° Rt. Const.
Std Type 1-A Inlet (W=6'2")
Top of Inlet = 116.08
Flo Out = 112.20
Flo In = 112.10

Sta 37+89.9, 39° Rt. Const.
Std Type 1-A Inlet (W=6'2")
Top of Inlet = 116.08
Flo Out = 112.36
Flo In = 112.23

Sta 37+83.9, 39° Lt. Const.
Std Type 1-A Inlet (W=6'2")
Top of Inlet = 119.98
Flo Out = 112.85

Sta 37+88.9, 9.5° Lt. Const.
Std Type 1-A Inlet (W=6'2")
Top of Inlet = 119.98
Flo Out = 112.90
Flo In N.W. = 112.40
Flo In E. = 112.29

Sta 37+79.9, 39° Lt. Const.
Std Type 1-A Inlet (W=6'2")
Top of Inlet = 119.98
Flo Out = 112.76
Flo In N.W. = 112.40
Flo In S. = 112.50

Sta 37+89.9, 39° Lt. Const.
Std Type 1-A Inlet (W=6'2")
Top of Inlet = 119.98
Flo Out = 112.90
Flo In = 112.79

Sta 37+83.9, 39° Lt. Const.
Std Type 1-A Inlet (W=6'2")
Top of Inlet = 119.98
Flo Out = 112.85

Sta 40+19, 38° Lt. Const.
Std Type 19' Manhole
Top of Manhole = 116.88
Flo = 112.76

Sta 42+65.99° Lt. Const.
Std Type 19' Manhole
Top of Manhole = 117.27
Flo Out W. = 113.20
Flo In N.E. = 113.10
Flo In E. = 113.90

Street Sta 42+65 Sta 4+63 Line 1; 0+00 Line 2

115
110

Install 57 L.F. 15" R.C.P. @ 0.44 % (Alt. 15 C.M.P.)

Install 27 L.F. 15" R.C.P. @ 0.37 % (Alt. 15 C.M.P.)

Install 27 L.F. 15" R.C.P. @ 0.27 % (Alt. 15 C.M.P.)

120
115
110

Line 1

Install 74 L.F. 22"-15" C.M.P.A. @ 0.68 % (Alt. 27"-14" R.C.P.H.E.)

Install 226 L.F. 22"-15" C.M.P.A. @ 0.1283 % (Alt. 27"-14" R.C.P.H.E.)

Install 250 L.F. 22"-15" C.M.P.A. @ 0.164 % (Alt. 27"-14" R.C.P.H.E.)

Flo In N.C. = 112.10
Flo In S.E. = 112.00

Flo Out = 112.20
Flo In = 112.10
Flo Out = 112.36
Flo In = 112.23

0

Flo = 112.88

1

Flo = 112.71

2

Flo = 112.76

3

Flo = 113.06

4

Flo Out = 113.20
Flo In N.E. = 113.10
Flo In E. = 113.90

0(L2)

Flo = 113.44

5

4/7

COLORADO

MAPLE

WEST ST.

N
W E
S

Sl. Sta 93+93', 36' Lt.; Sta 1+19 Line 2
Const. Std. Type 1-A Inlet (W=8'2")
Top of Inlet = 116.78
Flo Out = 113.65
Flo In = 113.90

Remove 10 L.F. 8" Clay Pipe
Replace with 8" Ductile Iron Pipe

Install 8 L.F. 22"x13" C.M.P.A.
(RH 23"x16" R.C.P.H.E.)
U.S.F.L. = 114.00
D.S.F.L. = 113.90

Remove 10 L.F. 8" Clay Pipe
Repl. w/ 8" Ductile Iron Pipe

Sl. Sta 95+81.9' 36' Lt.; Sta 3+46' Line 2
Const. & Dem. Type "B" Manhole
Top of Manhole = 116.90
Flo Out = 113.79
Flo In = 113.90

Sl. Sta 95+81.9' 46' Lt.; Sta 3+58' Line 2
Const. Std. Type 1-A Inlet (W=8'2")
Top of Inlet = 116.79
Flo Out = 113.85
Flo In = 113.90

Sta 95+89.9' 46' Lt. Const.
Std. Type 1-A Inlet (W=8'2")
Top of Inlet = 116.79
Flo Out = 114.00

Install 10 L.F. 22"x13" C.M.P.A.
(RH 23"x16" R.C.P.H.E.)
U.S.F.L. = 113.85
D.S.F.L. = 113.80

Remove 10 L.F. 8" Clay Pipe
Replace with 8" Ductile Iron Pipe

Remove 10 L.F. 6" Clay Pipe
Replace with 6" Ductile Iron Pipe

Sl. Sta 95+22' 46' Rt.; Sta 7+32' Line 1
Const. Std. Type 1-A Inlet (W=8'2")
Top of Inlet = 116.60
Flo Out = 114.69

Note: If there is a Conflict Between the Storm Sewer & the San Sewer P.I.H. the Location of the Storm Sewer May be Changed by Changing the Location of the S. W. S. Manhole at 99+98. To be Determined by Field Engineer.

SCALE
Plan 1"=20'
Profile
Vert. 1"=5'
Hort. 1"=20'

B.M. 130.16 City Std. East End of North Hubguard of Bridge over Big Ditch.

1 — Flo 113.65

Sl. Sta 93+93', 36' Lt.; Sta 1+19 Line 2
Const. Std. Type 1-A Inlet (W=8'2")
Top of Inlet = 116.78
Flo Out = 113.65
Flo In = 113.90

2 — Flo 113.79

Sl. Sta 95+81.9' 36' Lt.; Sta 3+46' Line 2
Const. & Dem. Type "B" Manhole
Top of Manhole = 116.90
Flo Out = 113.79
Flo In = 113.80

3 — Flo 113.80

Sl. Sta 95+81.9' 46' Lt.; Sta 3+58' Line 2
Const. Std. Type 1-A Inlet (W=8'2")
Top of Inlet = 116.79
Flo Out = 113.85
Flo In = 113.90

Sta 95+89.9' 46' Lt. Sta 3+68' Line 2
Const. Std. Type 1-A Inlet (W=8'2")
Top of Inlet = 116.79
Flo Out = 114.00
Flo In = 113.90

Sl. Sta 95+81.9' 46' Lt. Sta 3+68' Line 2
Const. Std. Type 1-A Inlet (W=8'2")
Top of Inlet = 116.79
Flo Out = 114.00

Install 119 L.F. 22"x13" C.M.P.A. @ 0.126%

Install 2279 L.F. 22"x13" C.M.P.A. @ 0.11%
(Alt. 23"x16" R.C.P.H.E.)

120
115
110

Line 2

120
115
110

Line 1

Install 2979 L.F. 22"x13" C.M.P.A. @ 0.2136%
(Alt. 23"x16" R.C.P.H.E.)

5 — Flo 115.89

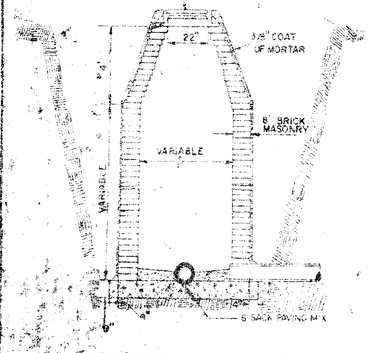
6 — Flo 114.12

7 — Flo 114.88

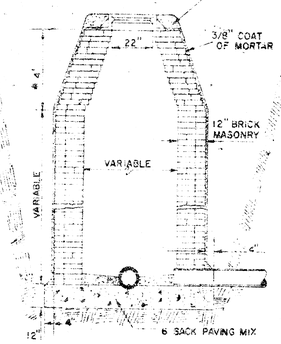
Sl. Sta 99+98.9' 46' Lt.; Sta 7+32' Line 1
Const. Std. Type 1-A Inlet (W=8'2")
Top of Inlet = 116.40
Flo Out = 114.45

Drainage in Connection with Paving Maple
E.L.I. 235 - E.L. McComas
872-76-245-80693-000-000-002

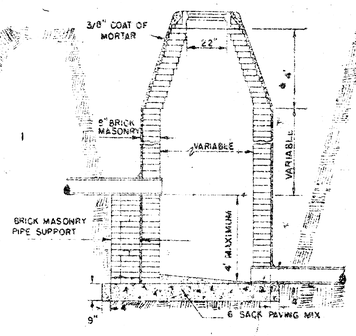
5/7



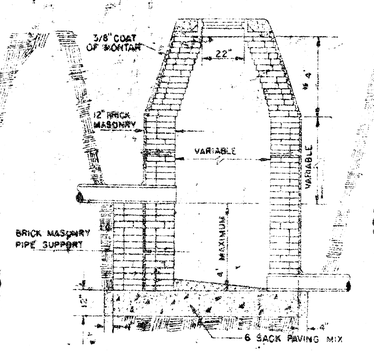
STANDARD MANHOLE
TYPE "A"



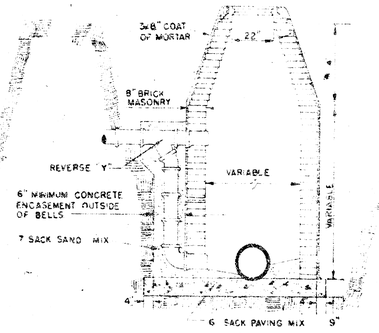
STANDARD MANHOLE
TYPE "B"



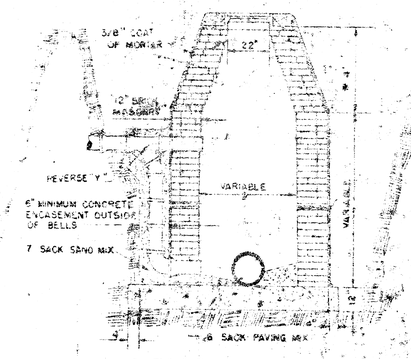
DROP MANHOLE
TYPE "A"



DROP MANHOLE
TYPE "B"

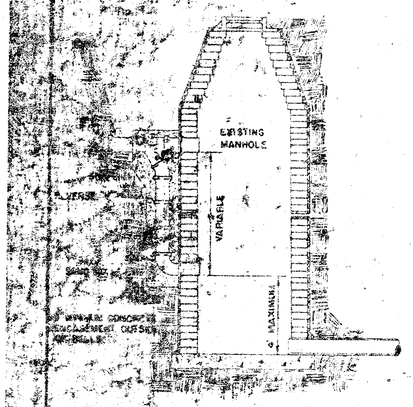


OUTSIDE DROP MANHOLE
TYPE "A"



OUTSIDE DROP MANHOLE
TYPE "B"

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



DETAIL OF DROP STACK

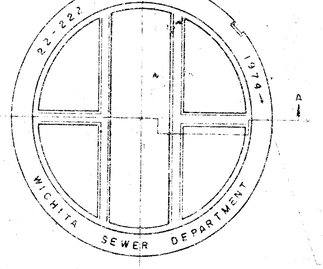
FOR EXISTING MANHOLES IN GROUND WATER

NOTE: REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES 6" ABOVE THE BOTTOM. REINFORCING STEEL SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE COST OF REINFORCING STEEL IS TO BE INCLUDED IN THE PRICE BID FOR THE MANHOLE.

GROUT TO BE PLACED AROUND MANHOLE RING ONLY WHEN MANHOLE IS CONSTRUCTED IN UNPAVED AREAS. (TYPICAL ALL MANHOLES)

GENERAL NOTES

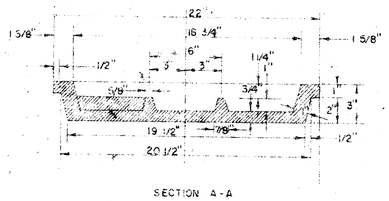
- MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 5 SACKS OF CEMENT PER CUBIC YARD.
- STANDARD MANHOLES TYPE 'A' OR TYPE 'B' AND STANDARD DROP MANHOLES TYPE 'A' OR TYPE 'B' SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE. MANHOLES WITH PIPE SIZES LARGER THAN 24" SHALL BE 5' DIAMETER.
- THE FLOORS OF ALL MANHOLES SHALL BE SHAPED TO INCREASE HYDRAULIC EFFICIENCY USING 6 SACK SAND MIX CONCRETE.
- PIPES INSTALLED WITHIN THE MANHOLE EXCAVATION SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. COST OF CRADLE WITHIN MANHOLE EXCAVATION SHALL BE INCLUDED IN THE PRICE BID FOR THE MANHOLE.



TOP VIEW

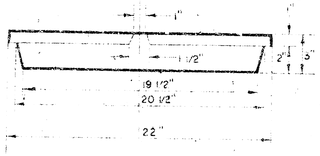
MANHOLE COVER

WEIGHT 110 LBS.



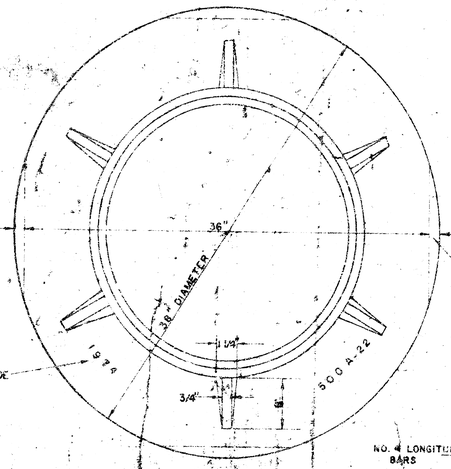
SECTION A-A

MANHOLE COVER



SIDE VIEW

MANHOLE COVER

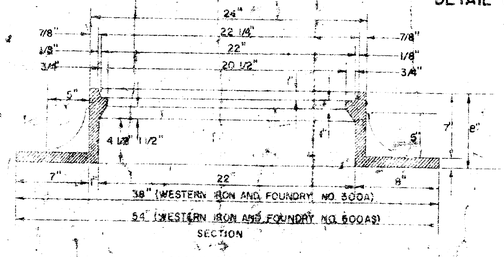


TOP VIEW

MANHOLE RING

WEIGHT 325 LBS. RING NO. 600A

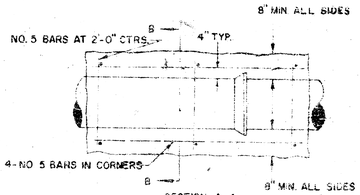
WEIGHT 300 LBS. RING NO. 600AS



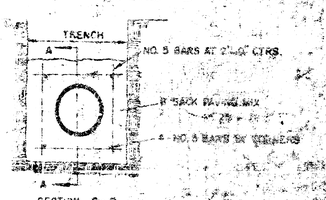
SECTION

MANHOLE RING

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

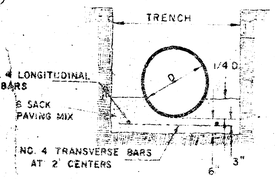


SECTION A-A

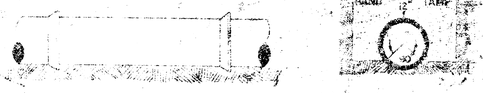


SECTION B-B

REINFORCED CONCRETE ENCASEMENT



DETAIL OF CONCRETE CRADLE



ORDINARY BEDDING METHOD

STORM SEWER PIPE

REVISED 4-13-77

DETAILS OF

SEWER APPURTENANCES

ADOPTED AS STANDARD DESIGN

BY

ENGINEERING DIVISION

CITY OF WICHITA, KANSAS

R. W. LINN CITY ENGINEER

1974

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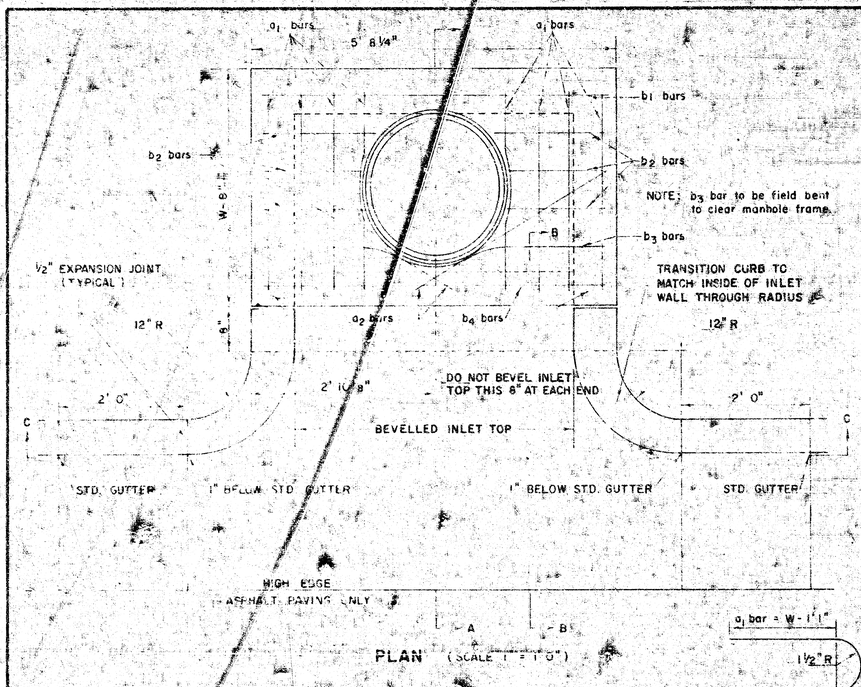
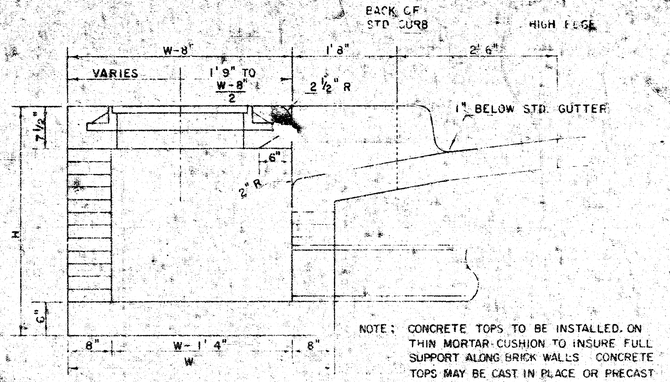


PLAN (SCALE 1" = 1'0")

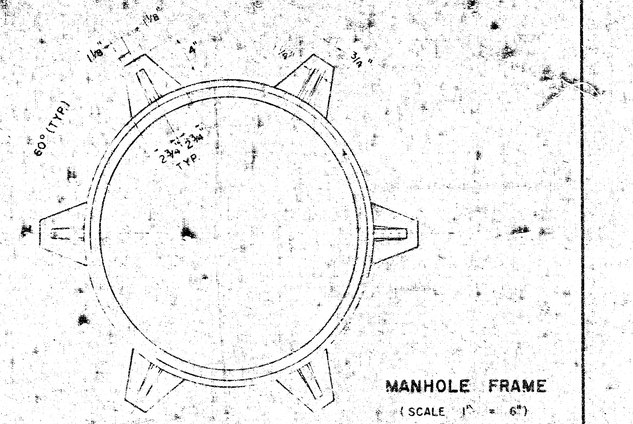
NOTE; b_3 bar to be field bent to clear manhole frame.

TRANSITION CURB TO MATCH INSIDE OF INLET WALL THROUGH RADIUS

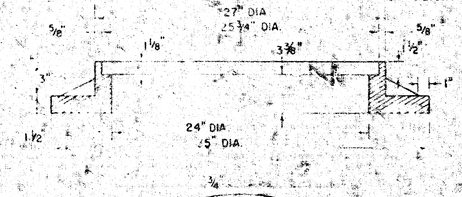


SECTION A-A
(SCALE 1" = 1'0")

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.



MANHOLE FRAME
(SCALE 1" = 6")
WEIGHT = 180 LBS.



STEEL SCHEDULE

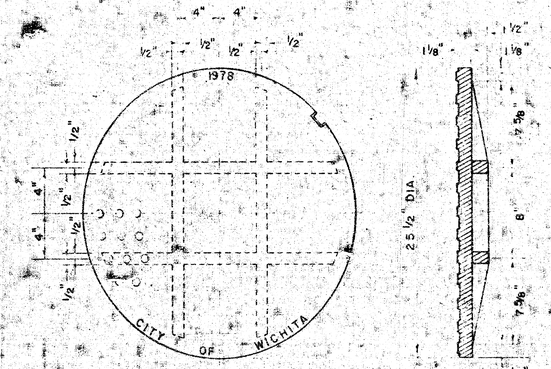
MARK NUMBER	a_1	a_2	b_1 W=4'2"	W=5'0"	W=6'0"	W=7'0"	W=8'0"	b_2	b_3	b_4	WT. LBS.
	8	2	3	5	7	9	6	1	1		
LENGTH	5'-8¼"	4'-4¼"	4'-4"	5'-4"	6'-4"	7'-4"	8'-4"	4"	4"	6"	
W=4'2"	6'5"	3'4"	5'5"	–	–	–	–	1'5"	5'6"	5'5"	60"
W=5'0"	8'1"	4'4"	–	5'5"	–	–	–	1'5"	5'6"	5'5"	72"
W=6'0"	10'1"	5'4"	–	–	5'5"	–	–	1'5"	5'6"	5'5"	97"
W=7'0"	11'1"	6'4"	–	–	–	5'5"	–	1'5"	5'6"	5'5"	111"
W=8'0"	12'1"	7'4"	–	–	–	–	5'5"	1'5"	5'6"	5'5"	124"

NOTE: a_2 BARS TO BE PLACED APPROX. 2" BELOW TOP OF INLET COVER

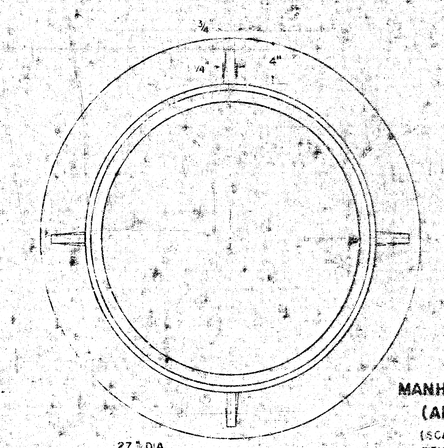
BENDING DIAGRAM

STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CU.YD. CONC.
4'2"	36"x5'8¼"x7½"	21" & SMALLER	0.46 *
5'0"	44"x5'8¼"x7½"	24" & 30"	0.57 *
6'0"	54"x5'8¼"x7½"	36" & 42"	0.71 *
7'0"	64"x5'8¼"x7½"	48" & 54"	0.84 *
8'0"	74"x5'8¼"x7½"	60" & 66"	0.97 *

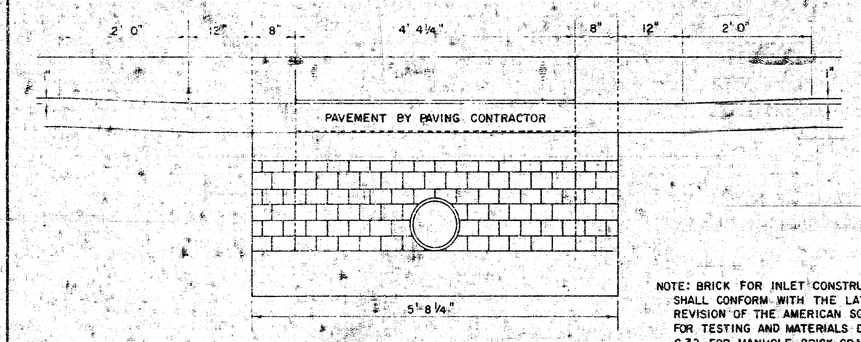
* GROSS VOLUME



MANHOLE COVER
(SCALE 1" = 6")
WEIGHT = 170 LBS.

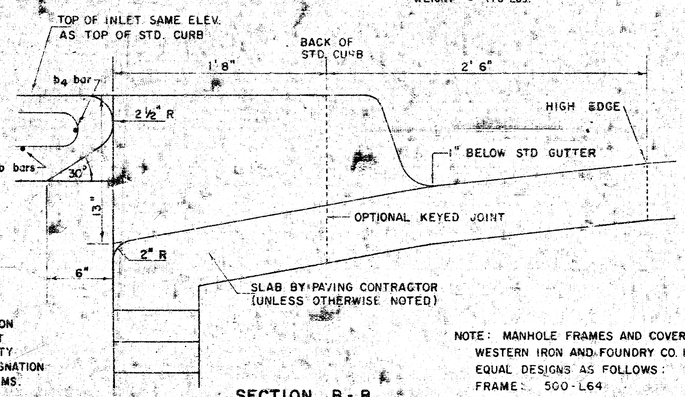


MANHOLE FRAME (ALTERNATE)
(SCALE 1" = 6")
WEIGHT = 180 LBS.



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

NOTE: BRICK FOR INLET CONSTRUCTION SHALL CONFORM WITH THE LATEST REVISION OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS DESIGNATION C-32 FOR MANHOLE BRICK GRADE MS.



SECTION B-B
(SCALE 1" = 6")

NOTE: MANHOLE FRAMES AND COVER ARE WESTERN IRON AND FOUNDRY CO. INC. OR EQUAL DESIGNS AS FOLLOWS:
FRAME: 500-L64
FRAME (ALTERNATE): 500 A4
COVER: 222 S4 "NOBBY"

DETAIL STANDARD TYPE IA CURB INLET

CITY OF WICHITA, KANSAS

R. W. LINN — CITY ENGINEER

OCTOBER 1978

14 3 4 12

FILMED FROM THE BEST