INDEX OF SHEETS

CITY OF WICHITA, KANSAS

STORM WATER DRAIN NO. 64

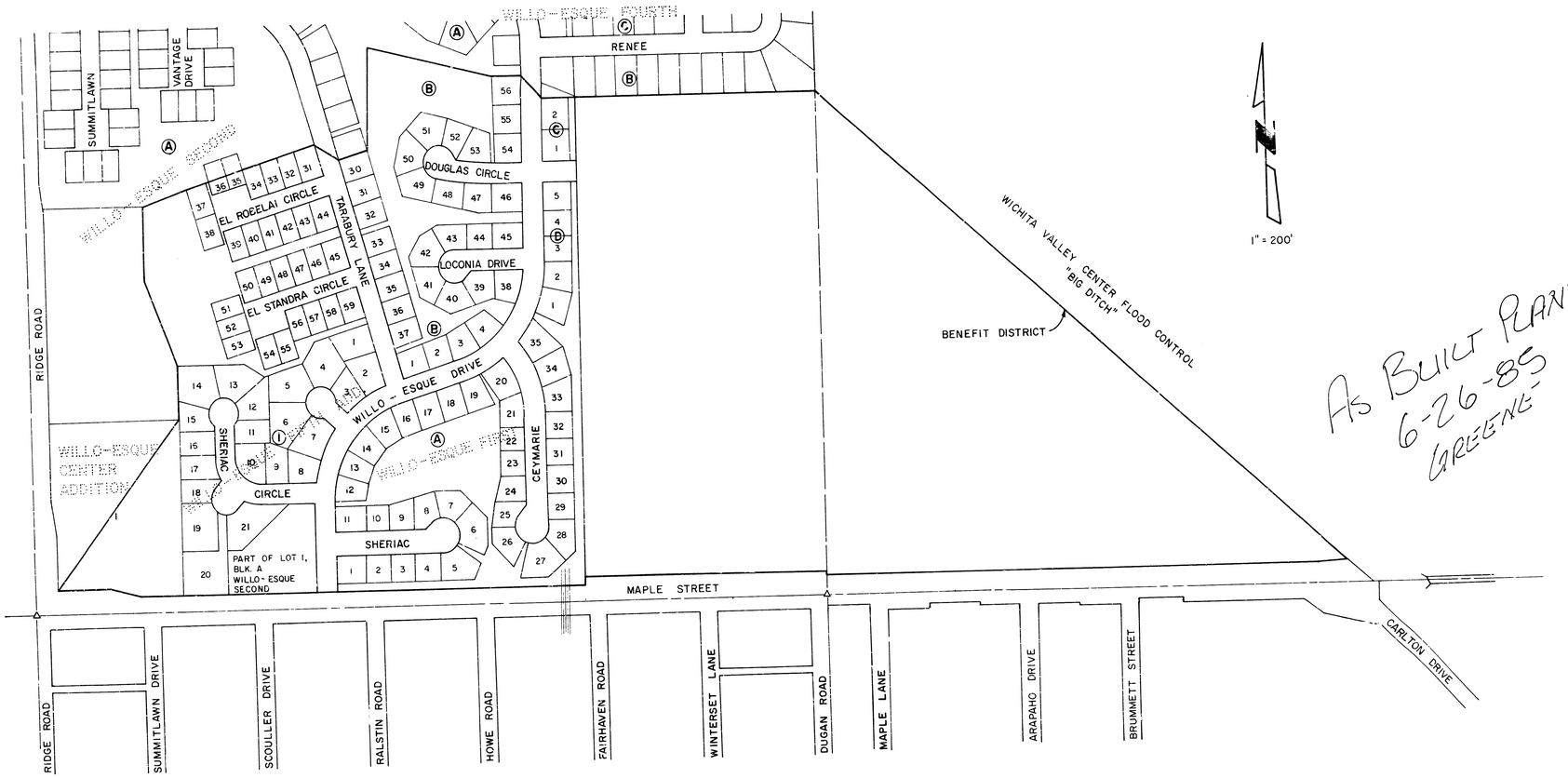
(WEST MAPLE STREET)

RIDGE RD. TO W. END OF FLOODWAY BR.

MICHAEL E. LINDEBAK, CITY ENGINEER

SEPTEMBER, 1984

PROJ. NO. 468-76-245-81373-000-000-001



1" = 200'

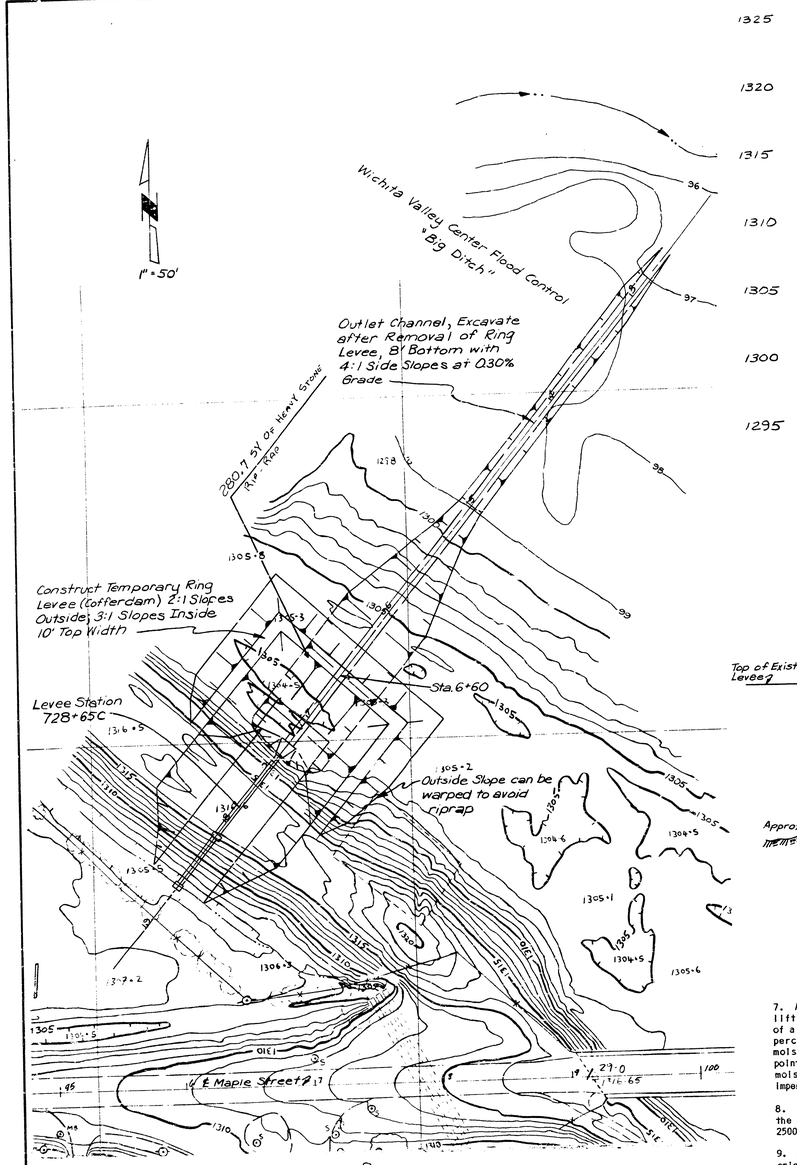
As Built Plans
6-26-85
GREENE

PLANS PREPARED BY

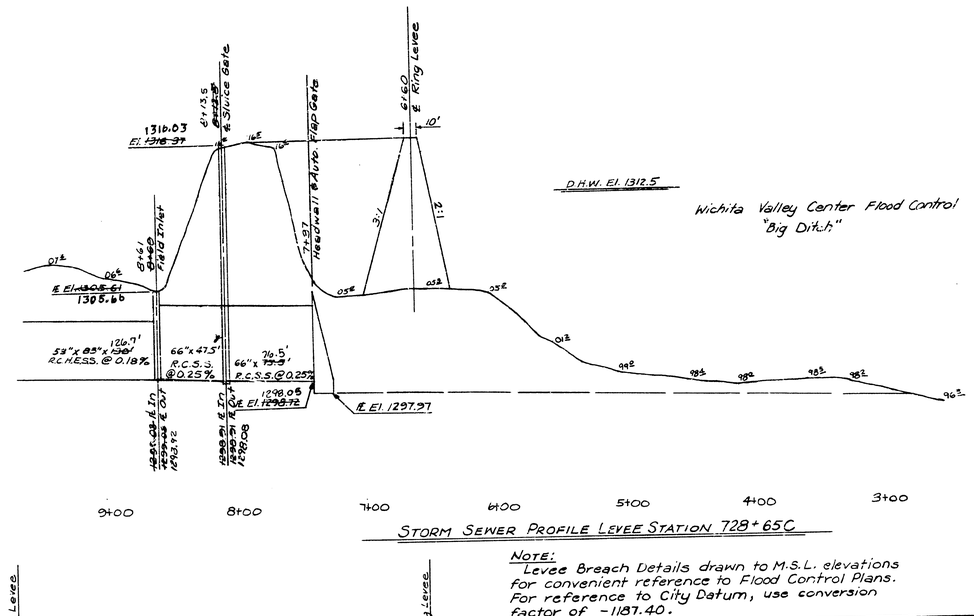
Booker/Freund
Engineers Architects Planners

WICHITA, KANSAS

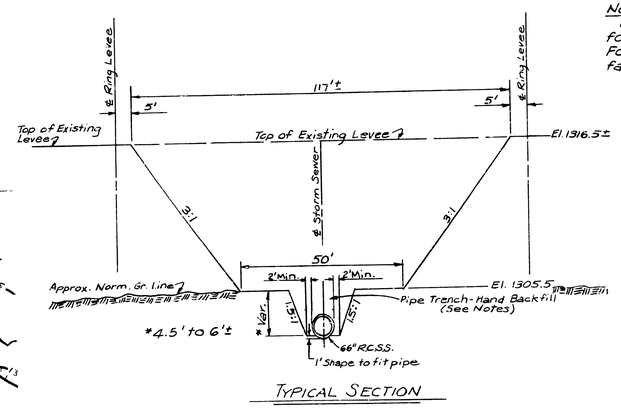
Rev. 12-7-84



PLAN



STORM SEWER PROFILE LEVEE STATION 728+65C



TYPICAL SECTION

NOTES:

1. Provide a temporary ring levee (cofferdam) on the river side of the existing levee at the location of the subject crossing to the same top elevation as the existing levee. Construct the levee of impervious materials in accordance with the provisions specified in paragraph 6.

2. Corners of ring levee may be rounded to facilitate construction.

3. Locate sources for borrow materials a minimum of 500 feet from the land side toe of the existing levee.

4. When the temporary ring levee is complete, excavate the existing levee using 1 vertical on 3 horizontal cut slopes.

5. Backfill of pipe trench and a minimum of 2 feet of fill directly over the pipe from sta. 7+37 to sta. 8+60 shall be compacted to a density as per paragraph 7 by means of hand tamping, or manually directed power tampers or plate vibrators. Heavy equipment shall not be operated within 2 feet of any structure. Vibrating rollers shall not be operated within 5 feet of any structure. Compaction by means of drop weights operating from a crane or hoist will not be permitted.

6. Upon completion of the hand backfill and before placing levee fill, the entire foundation area to be occupied by the levee fill shall be scarified, plowed, and/or harrowed to a depth of 6 inches and then compacted by at least 16 complete passes of the tamping roller.

7. Accomplish levee replacements by placing fill in 6-inch lifts and compacting by not less than eight complete passes of a tamping roller. The fill shall also be equal to 95 percent Standard AASHTO density. After compaction the moisture content shall be within the limits of 3 percentage points above optimum to 2 percentage points below optimum moisture content. All levee backfill shall consist of impervious materials.

8. Determine the in-place moisture content and density of the levee fill on a frequency of about one sample for each 2500 cubic yards of backfill placed.

9. When the breached levee has been reconstructed to its original grade, remove the temporary ring levee and dress and turf the surface areas of the plugged section and outlet channel with 450 lb. per acre mixture of 50 percent brome and 50 percent fescue.

10. Construction of ring levee, excavation of existing levee, compacted backfill of pipe under levee, replacement of compacted fill for levee, removal of ring levee, excavation of outlet channel and reseeding of disturbed areas will be paid for as lump sum bid item of "Levee Breach."

NOTE:
Levee Breach Details drawn to M.S.L. elevations for convenient reference to Flood Control Plans. For reference to City Datum, use conversion factor of -1187.40.

GENERAL NOTES

1. Interurban traffic generated outside the project area and local business or apartment traffic generated within the project area are to be carried through construction.

2. Underground utility service lines and overhead utility pole lines are to be adjusted as necessary by others prior to or during construction unless the plans specifically call for their adjustment by the Contractor. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. Location information has been obtained from the various utility companies and is either from company record drawings or company provided field locations. The plan locations shown are not guaranteed. Additional existing utilities may also be encountered. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

3. A saw cut of at least one-half the depth of existing surface courses or one-fourth the depth of the existing total pavement thickness shall be provided at locations where proposed construction abuts an existing surface course or pavement for which partial removal of that surface or pavement is required. Such saw cuts will not be paid for directly and this cost shall be considered as subsidiary to the removal of the surface or pavement.

4. Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations that, in the opinion of the Engineer, will leave an unsightly appearance will not be approved.

5. The Contractor will notify pipeline companies at least 24 hours in advance of any work being performed across and/or adjacent to pipelines.

6. Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in conflict with proposed new construction shall be saved and protected from damage.

7. The Contractor shall give all property owners and/or tenants of developed property directly affected by the construction of this project a minimum of 24 hours advance notice prior to start of construction.

8. The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or re-destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor or a licensed professional engineer in accordance with state laws.

Rev. 12-7-84

LEVEE BREACH DETAILS AND GENERAL NOTES

2/10

Nov. 1984

2/11

AS BUILT 6-85 GREENE

Sta 9+90 50' N. ℄

6'-9¼"

6'-9¼"

9" typ

7"

9"

10'-1"

89"

7"

10'-1"

89"

7"

4'-0"

MANHOLE STA. 9+90

15'

Slope 2" /ft.

12"

R/W

Maintain present direction of flow in Exist. Ditch

2:1

30" Min. Cover

3:1

Cut Toe Ditch as req'd Subsidiary

Compact to 90% of standard density

Proposed Storm Sewer

TYPICAL SECTION COMPACTED FILL

NOTE:
Slab and Floor thickness, concrete reinforcing steel, size and placement, Manhole Ring and Cover, shall conform to Standard City of Wichita R.C. Manhole.

P.O.T. Sta. 97+81.57 (Paving Proj.)
R.R. Spk. @ P.O.T.
85.64' N. to nail & cap in ℄ post
79.02' S.W. " " " " tel. pole
91.50' S.E. " " " " " "

NOTE:
INLETS AND INLET LEADS ARE SHOWN FOR INFORMATION ONLY AND ARE NOT A PART OF THIS PROJECT. CONTRACTOR SHALL INSTALL ONE-4" JOINT OF PIPE IN THE MANHOLES TO FACILITATE FUTURE CONSTRUCTION.

NOTE:
CONTRACTOR TO COORDINATE CONSTRUCTION WITH RELOCATION OF DERBY PIPELINE. CONTACT BEN ADKINS, 755-1591, PRIOR TO BEGINNING CONSTRUCTION.

P.O.T. Sta. 92+81.48 (Paving Proj.)
R.R. Spk. @ P.O.T.
98.74' N.E. to nail & cap in pwr. pole
62.60' S.W. " " " " tel. pole
102.31' S.E. " " " " " "

Dirt

Exist. 31"x50" C.M.A.C.

℄ 116.9

℄ 116.4

Exist. 6" Oil Line

Asph. Pvt.

Exist. 16" Water Line

Exist. Ungd. Tel. Cable

℄ 115.1

Exist. 15" 36" R.C.P.S.

Exist. 36"

San. S.

℄ 116.0

Sta. 9+90 50' Lt = Sta. 95+09.69 ℄ Paving Proj

CAUTION
10" San. Sewer
Top Pipe El. 110.65

Sta. 12+05
Type I-A Inlet (W=4'-4")
Top of Inlet
El. 120.28

Exist. 4" Gas Line

℄ MAPLE STREET

Exist. 10" San. S.

Exist. 24" Water Line

Exist. Ungd. Tel. Cable

Exist. 6" H.P. Gas Line

Section Line

50' R/W

65' R/W

53"x83"

1-7

1-6

Top of Inlet
El. 120.28

Sta. 9+87.7
Sta. ~~9+90~~ Const. Manhole (See Detail) 50' Rt.
Install 53"x83"x215' R.C.H.E.S.S. W.

CAUTION
24" Water Line
Top Pipe El. 113.1

CAUTION
6" H.P. Gas Line Top Pipe El. 115.2
(~~Exist~~ Abandoned, R/W released, casing in place, line unknown)
Remove Casing & Pipe
Cost to be Incidental to Project

Sta. 12+05 Const. 5'-6" x 10'-1"
Manhole (Sta. Storm) 50' Rt.
Install 18"x4'-0" R.C.S.S.
Install 53"x83"x ~~495'~~ R.C.H.E.S.S. W.

4:1

4:1

8'

TYP. SEC. OUTFLOW DITCH

Sta. 7+37 Const. Conc. Headwall with ~~45°~~ 90° ℄ Auto. Flap Gate
Install 66"x75'S.S. Pipe S.W.
See Sheet 10.

7+00

1-10

66"

Construct Heavy Stone Riprap per Special Provision to City of Wichita Std. St. Sew. Spec.
~~270~~ 280 Sq. Yds. 280.1 SY.

B.M. 130.14 City Std. Disc. on N.E. Cor. Br. 14.6' S. of ℄ Maple

B.M. 129.87 Chiseled "□" on N.W. Cor. Br. 14.4' N. of ℄ Maple

20' Drainage Easement

48"x48" R.C.P.

53"x83"

I.P.

Right

CAUTION
℄ Oil Line
Derby Refining Co.
To be Relocated by Others

LEVEE "C"

1-10

1-9

1-8

1-7

1-6

8+61
Sta. ~~9+50~~ Const 5'-6"x 10'-1"
Field Inlet
Install 53"x83"x130' R.C.H.E.S.S.W.
See Sheet 6.

CAUTION
Bell Tel. Ungd. Conduits
El. 116.5±

CAUTION
30" San. Sewer
Top Pipe El. 105.0

Sta. 12+05
Type I-A Inlet (W=4'-4")

M.H. Ring El. 121.61

I.P.

Top T. Inlets & T.C.
El. 120.28

Exist. Ground Line

8+13.5 ℄ ~~Sluice Gate~~ Structure
Sluice Gate Structure
Install 66"x ~~75'~~ C.S.S. S.W.
See Detail

8+17.5
℄ Sluice Gate

℄ El. ~~113.97~~ 118.65

18"x 52.3' R.C.S.S. @ 0.46%

115.76 ℄ Out

18"x 16.5' R.C.S.S. @ 2.73%

115.62 ℄ Out

115.17 ℄ In

24" Water

9+67.7
℄ Manhole Access MH

Top Manhole
El. ~~123.84~~ 124.27

10" San. S.

12+05.2
℄ Manhole Access MH

Top Manhole
El. 121.61 ±

℄ Profile Prop. Paving

300' V.C.

2.68

1.97

0.78

0.39

0.46

0.62

0.34

Exist. Ground Line

℄ El. 118.26

Oil Line El. 115.2

Tel. Conduit

H.P. Gas Line El. 115.2
(Abandoned)

53"x83"x130' R.C.H.E. S.S. @ 0.18%
7'x4' RCB x 126.7 LF

~~53"x83"x215' R.C.H.E.~~ S.S. @ 0.18%
7'x4' RCB x 217.5 LF

~~53"x83"x495' R.C.H.E.~~ S.S. @ 0.18%
7'x4' RCB x 492.5 LF

Exist. 24" Water Line

D.H.W. El. 125.1

7+37
Headwall & Auto. Flap Gate

℄ El. 110.57

Cut to daylight @ -0.30%

66"x ~~75'~~ 76.5' R.C.S.S. @ 0.25%

66"x 47.5' R.C.S.S. @ 0.25%

℄ El. ~~111.32~~ 110.65

111.48 ~~111.51~~ ℄ Out ~~111.57~~ ℄ In

111.52 ~~111.69~~ ℄ Out ~~111.89~~ ℄ In

5-30" San. Sewer

111.89 ~~111.96~~ ℄ Out ~~111.96~~ ℄ In

112.27 ~~112.25~~ ℄ Out ~~112.25~~ ℄ In

111.70

111.88

112.06

112.24

112.42

112.60

130

120

110

2+00

3+00

4+00

5+00

6+00

7+00

8+00

9+00

10+00

11+00

12+00

13+00

14+00

SCALE
1" = 40' Horiz
1" = 4' Vert.

As Built 12-85
6-26-85
GREENE

Rev. 12-7-84 Rev. 12-26-84
Rev. 12-10-84

NOTE:
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¼ Sec. Cor. Sta. 79+28.23 (Paving Proj.)
1" Iron in Thimble @ Cor.
19.11' S. to nail & washr. in tel. p.
42.26' N.W. to nail & washr. in pwr. pole
62.95' S.E. to 60d nail in top tree stump

€ BRUMMETT STREET
€ ARAPAHO DRIVE
€ MAPLE LANE
DUGAN RD.
€ MAPLE STREET

Prop. R/W
Exist. 4" Gas Line
Exist. 2" Gas Line
Exist. 10" San. S.
Exist. 24" Water Line
Exist. Ungd. Tel. Cable
Section Line
Asp. Flume
Asp. Pavt.

Sta. 22+00
Type I-A Inlet (W=4'-4")

CAUTION
10" San. Sewer
Top Pipe El. 113.21

Top of Inlet
El. 120.27

CAUTION
16" San. Sewer
Top Pipe El. 113.87

Sta. 25+00
Type I-A Inlet (W=4'-4")

Top of Inlet
El. 121.19

Exist. 2-36"x58"x40' C.M.A.C.
To Remain in place

16+97.7
Sta. ~~17+00~~ Const. 5'-6"x10'-1"
Manhole (Std. Storm) 50' Rt.
Install 53"x83"x500' R.C.H.E.S.S. W.

CAUTION
2" Gas Line
Depth Unknown

Cut Toe Ditch to Drain
Subsidiary to other work

Remove Asphalt Flume
Subsidiary to other work

Top of Inlet
El. 120.27

Sta. 22+00
Type I-A Inlet (W=4'-4")

21+95.7
Sta. ~~22+00~~ Const.
Field Inlet
62' Rt.

21+95.7
Sta. ~~22+00~~ Const. 5'-6"x10'-1"
Manhole (Std. Storm) 50' Rt.
Install 18'-4'-0" R.C.S.S. S.
Install 48"x76"x300' R.C.H.E.S.S. W.
Install 18"x6.6' R.C.S.S. N.
Block out 3'-8" opening
from El. 113.5 to El. 119.0
in north wall, seal void
outside 18" S.S. with
brick and mortar.

CAUTION
24" Water Line
Top Pipe El. 114.6

Remove Asphalt Flumes
Subsidiary to other work

Top of Inlet
El. 121.19

Sta 25+00
Type I-A Inlet (W=4'-4")

CAUTION
24" Water Line
Top Pipe El. 113.6

CAUTION
Bell Tel. Ungd. Conduits
Depth Unknown

20+96.2
Sta. ~~25+00~~ Const. 5'-6"x10'-1"
Manhole (Std. Storm) 50' Rt.
Install 18"x4'-0" R.C.S.S. S.
Install 48"x76"x315' R.C.H.E.S.S. N.
Install 18"x6.6' R.C.S.S. N.

Sta. ~~25+00~~ Const.
Field Inlet
62' Rt.

CAUTION
Bell Tel. Ungd. Conduits
El. 119.5±

SCALE:
1" = 40' Horiz.
1" = 4' Vert.

B.M. 120.81 R.R. Spk. in Tel. Pole
25' S. of € Maple & 36' W. of € Arapaho

B.M. 121.99 R.R. Spk. in N. Pwr. Pole
18.6' S. of € Maple & 164' W. of € Maple Lane

I-5A
I-5
I-4

M.H. Ring El. 123.04
I.P.
T.C. El. 121.71
€ Maple
Exist. Ground Line
24" Water
10" San. S.
Top Manhole
El. ~~123.04~~ 123.29
100' V.C.
€ Profile Prop. Paving
Exist. Ground Line
Exist. 24" Water Line
16+97.7
Sta. ~~17+00~~ Const.
Manhole
€ Access MH
113.22
~~113.46~~ € Out
~~113.46~~ € In

M.H. Ring El. 121.72
I.P.
Exist. Ground Line
Top Inlets & T.C.
El. 120.33
€ Maple
Top Field Inlet
El. ~~121.0~~ 121.17
Tel. Conduit
18"x~~66~~ R.C.S.S. @ 10.61%
18"x52.3' R.C.S.S. @ 0.46%
10" San. S.
16.08 € Out
115.74 € In
115.61 € In
117.00 € Out
18"x16.5' R.C.S.S. @ 0.79%
250' V.C.
Top Manhole
El. ~~121.70~~ 121.71
21+95.7
Sta. ~~22+00~~
€ Manhole
Access MH
114.05
~~114.29~~ € Out
~~114.54~~ € In

M.H. Ring El. 122.52
I.P.
Top Inlets & T.C.
El. 121.19
Exist. Ground Line
€ Maple
Top Field Inlet
El. ~~121.0~~ 121.11
Tel. Conduit
18"x~~6.6~~' R.C.S.S. @ 7.58%
18"x52.3' R.C.S.S. @ 0.46%
24" Water
16.08 € Out
116.54 € In
116.41 € In
117.20 € Out
18"x16.5' R.C.S.S. @ 0.79%
10" San. S.
24+96.2
Sta. ~~25+00~~
€ Manhole
Access MH
114.67
~~114.79~~ € Out
~~114.79~~ € In
Top Manhole
El. ~~122.52~~
122.48

~~53"x83"x495'~~ R.C.H.E. S.S. @ 0.18%
7'x4' RCB x 492.5 LF

53"x83"x500' R.C.H.E. S.S. @ 0.18%
7'x4' RCB x 498.0 LF

~~48"x76"x315'~~ R.C.H.E. S.S. @ 0.22%
7'x4' RCB x 300.5 LF

~~48"x76"x315'~~ R.C.H.E. S.S. @ 0.22%
7'x4' RCB x 315.0 LF

Exist. 24" Water Line

112.60 112.78 112.96 113.32 113.50 113.68 113.86 114.26 114.48 114.92

14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00

As Built
6-26-85
Greene

Rev. 12-7-84

NOTE:
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5/11

DUGAN RD. | ℄ INTERSET LANE | ℄ FAIRHAVEN RD. | ℄ HOWE RD. | ℄ MAPLE STREET

Sta. 32+10 Type I-A Inlet (W=4'-4")

Sta. 36+05 Type I-A Inlet (W=4'-4")

CAUTION 10" San. Sewer Top Pipe El. 115.98

Top of Inlet El. 123.62

Top of Inlet El. 127.25

40' R/W

Exist. 4" Gas Line

Exist. Ungd. Tel. Cable

Exist. 10" San. S.

Exist. 24" Water Line

Exist. 48" S.S.

Exist. Ungd. Tel. Cable

Section Line

79 78 77 76 75 73 72 71 70 69 68 67

26 27 28 29 30 31 32 33 34 35 36

48"x76'

50' R/W

24' Fc. CD

48" F.P.

Asp. Flume

I-1 I-2 I-3

Remove Exist. Conc. Riprap Subsidiary to other work

CAUTION 24" Water Line Top Pipe El. 120.5

Top of Inlet El. 125.05

Top of Inlet El. 127.25

Sta. 36+05 S.S. ℄ Sta. 68+95 Paving Proj.

Sta. 36+05 Remove Exist. 18" R.C.P. (S) as required to accommodate the construction of new inlet. Reshape Invert as required.

CAUTION 24" Water Line Top Pipe El. 115.0

Top of Inlet El. ~~122.24~~ 121.86 28+11.2

Sta. ~~28+15~~ Const. Field Inlet 70' Rt. 28+11.2

Sta. 28+15 Const. Type I-A Inlet (W=4'-4")

Cut Toe Ditch to Drain Subsidiary to other work

CAUTION 24" Water Line Top Pipe El. 115.3

32+02.8

Sta. ~~32+10~~ Const. 5'-6"x6'-10" Manhole (Std. Storm) 50' Rt. Install 18"x4'-0" R.C.S.S. S. Install 48"x176' R.C.S.S. W.

Top of Inlet El. ~~123.62~~ 123.62 32+02.8

Sta. ~~32+10~~ 32+02.8 Type I-A Inlet (W=4'-4")

CAUTION 24" Water Line Top Pipe El. 115.5

Sta. 33+86 Type I-A Inlet (W=4'-4")

33+81.1

Sta. ~~33+86~~ Const. 5'-6"x6'-10" Manhole (Std. Storm) over Exist. S.S. Install 18"x4'-0" R.C.S.S. S. Remove Exist. Conc. Hdwll., subsidiary to other work.

Sta. 36+05 Type I-A Inlet (W=4'-4")

CAUTION Bell Tel. Ungd. Conduits Depth Unknown

CAUTION Bell Tel. Ungd. Conduits El. 120.5±

Sta. ~~28+15~~ Const. 5'-6"x10'-1" Manhole (Std. Storm) 50' Rt. Install 18"x 4'-0" R.C.S.S. S. Install 48"x 395' R.C.S.S. W. Install 18"x14.6' R.C.S.S.N Block out 3'-8" opening from El. 114.85 to El. 119.9 in N. wall, seal void outside of 18" pipe with brick and mortar.

Remove Asphalt Flume Subsidiary to other work

Remove Asphalt Flume Subsidiary to other work

B.M. 124.09 Chiseled "a" on N.W. Cor. Conc. Headwall St. Sewer 42.3' N. of ℄ Maple & 55' W. of ℄ Fairhaven

B.M. 133.21 "R" in Ritchie 1972 Top Curb 51.5' N. of Maple ℄ 20' E. of Willo-Esque Dr.

SCALE: 1"=40' Horiz. 1"=4' Vert.

AS BUILT PLAN 6-25-85 GREENE

M.H. Ring El. 123.57 | I.P. | ℄ Maple | Top Inlet & T.C. El. 122.24 | Exist. Ground Line | Top Field Inlet El. ~~121.0~~ 121.86 I-3 | Tel. Conduit

130

18"x 16.5' R.C.S.S. @ 3.15%

18"x ~~14.6'~~ 13.2' R.C.S.S. @ 1.37%

10" San. S. | 118.42 ℄ Out | 117.90 ℄ In | 117.78 ℄ Out | 117.50 ℄ In

Top Manhole El. 123.57 | 24" Water | 25+11.2 ~~30+15~~ ℄ Manhole Access MH

M.H. Ring El. 124.99 | I.P. | ℄ Maple | Top Inlets & T.C. El. ~~128.62~~ | Exist. Ground Line

18"x 52.3' R.C.S.S. @ 0.46%

119.31 ℄ Out

18"x 18.2' R.C.S.S. @ 0.82%

10" San. S. | 119.07 ℄ In | 118.94 ℄ Out | 118.82 ℄ In

24" Water | Top Manhole El. ~~124.99~~ 124.74

M.H. Ping El. 125.50 | Top Inlet & T.C. El. 125.05 | I.P. | Exist. Ground Line | ℄ Maple

I-2 18"x 7.7' R.C.S.S. @ 0.91%

Ex. ℄ El. 113.06

32+02.8 ~~32+10~~ ℄ Manhole Remov. Conc. MH

10" San. S. | 121.55 ℄ Out | 121.49 ℄ In

24" Water | Top Manhole El. ~~125.50~~ 125.47

200' V.C.

33+81.1 ~~33+86~~ ℄ Manhole Remov. Conc. MH

I-1

36+05 ℄ Ex. Manhole

Top Ex. Manhole El. 128.07

I.P.

Exist. Ground Line

8.30 | 9.30

℄ Profile Prop. Paving

120

1.63 1.97 2.30 2.65 2.97 3.30 3.47 3.60 3.97 4.64 5.30 6.30 7.30

Exist. 48" R.C.S.S.

Ex. ℄ El. 120.94

178.3' 48"x ~~118'~~ R.C.S.S. @ 1.45%

~~48"x 76"x 315' R.C.H.E.~~ S.S. @ 0.22%

7' x 4' RCB x 313.0 LF

48"x ~~395'~~ 391.6' R.C.S.S. @ 0.26%

10" San. S.

Exist. 24" Water Line

℄ Maple | M.H. Ring El. 128.07 | Top Inlets & T.C. El. 127.25

110

18"x 52.3' R.C.S.S. @ 0.46%

Ex. M.H.

Ex. 18" Pipe

Ex. ℄ El. 120.94

24" Water

129.44 ℄ Out

Exist. ℄ 129.89

114.92 | 115.14 | 115.36 | 115.61 | 115.87 | 116.13 | 116.39 | 117.73

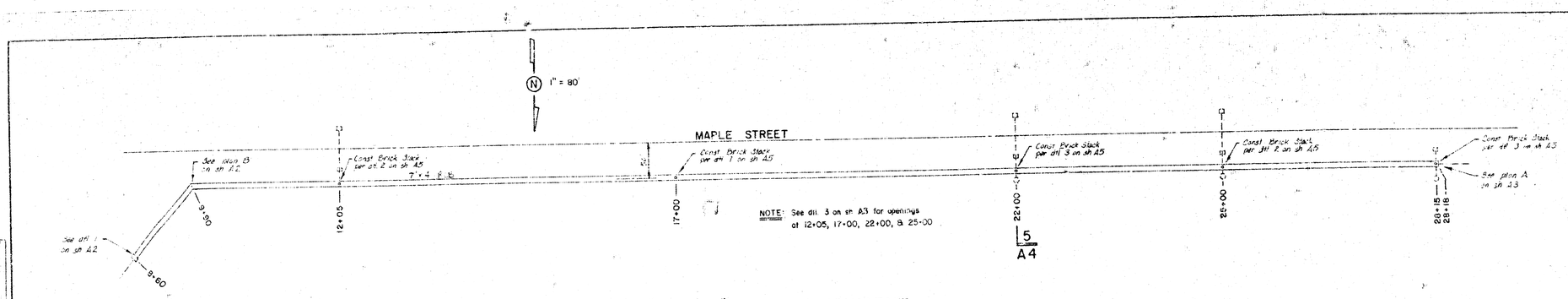
115.39 ℄ Out ~~115.39~~ ℄ In 115.41

116.55 ~~116.42~~ ℄ Out ~~116.42~~ ℄ In

118.49 ~~118.37~~ ℄ Exist. ℄ In 119.06

26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00

Rev. 12-7-84



7'-0" x 4'-C" RCB ALIGNMENT

NOTE: FOR PROFILE & GRADES SEE SHEETS 3 THRU 5 OF ORIGINAL BOOKER/FRESUND PLANS

NOTE: The alternate storm water conveyance system as depicted on sheets A1 thru A5 reflects the original plans of "BOOKER FRESUND ENGINEERS" For Tract ____, which consist of physical preparation, analysis of hydrology, and accuracy of information with regard to pending zoning certificates.
For alignment and grade information not shown for alternate plan, see A1 thru A5, refer to original "BOOKER FRESUND PLANS."

NOTE
UNLESS AND THEY DEPOS ARE SHOWN FOR INFORMATION ONLY AND ARE NOT A PART OF THIS PROJECT. CONTRACTOR SHALL INSTALL UNIFORM JOINT OF PIPE IN THE MANHOLES TO FACILITATE FUTURE CONSTRUCTION.

S.W.D. #64 West Maple St.
RCB ALT PLAN & PROFILE

PROJ. NO. 468-78-245-dr373-000-000-001

Van Doren, Hazard - Stallings
FOR
WILDCAT CONSTRUCTION

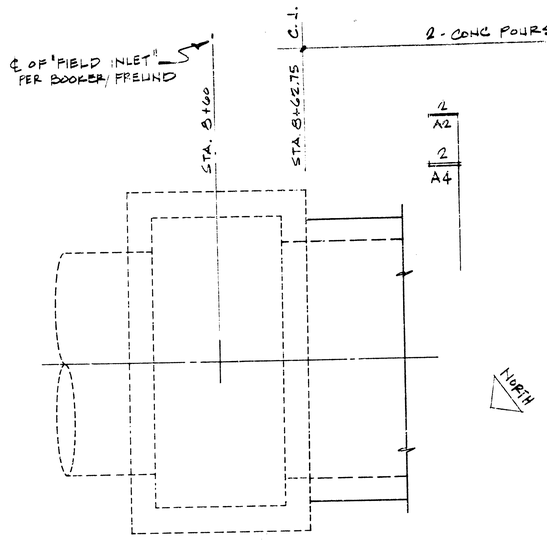
Sheet A1

PLAN

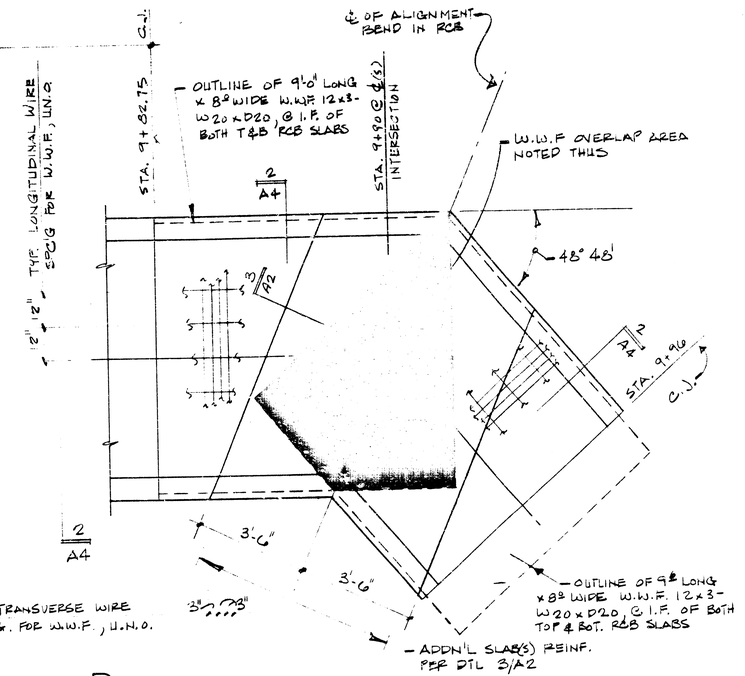
PROFILE

By Others

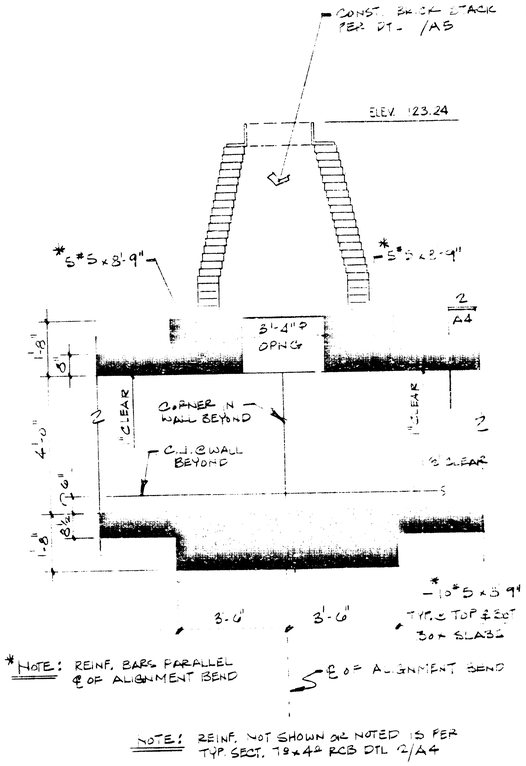
STA 22+00 STA 17+00 STA 12+05



A PLAN VIEW @ "FIELD INLET" BY OTHERS
1/2" = 1'-0"



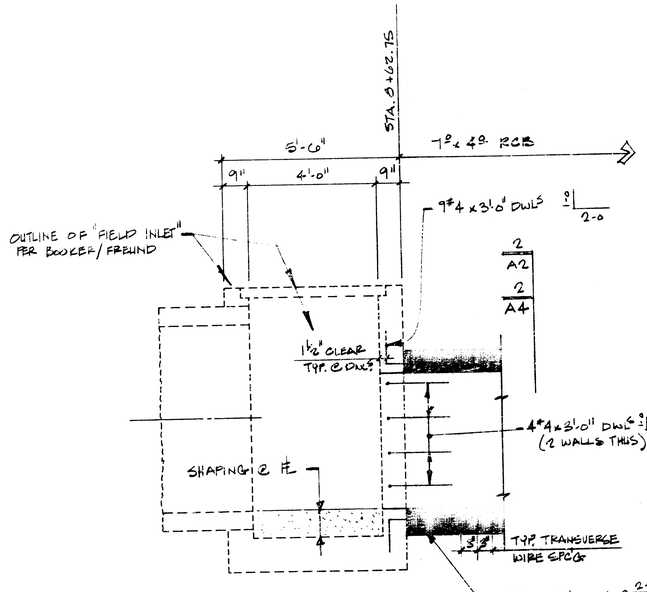
B PLAN VIEW @ ALIGNMENT BEND IN 7'-0" x 4'-0" RCB
1/2" = 1'-0"



*NOTE: REINF. BARS PARALLEL ℄ OF ALIGNMENT BEND

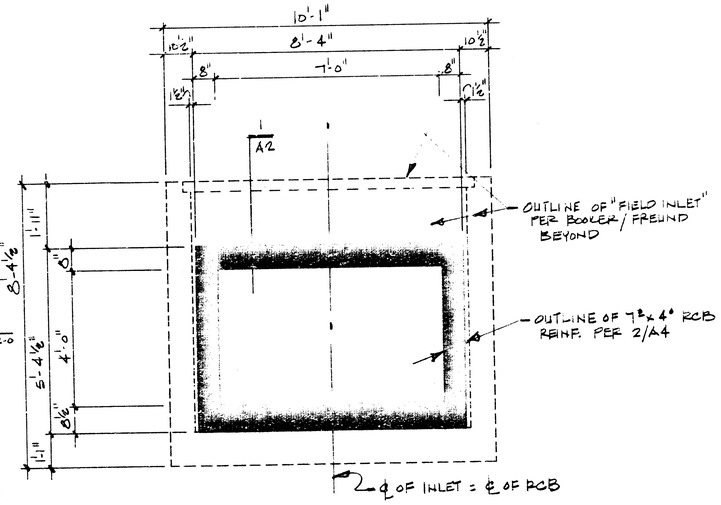
NOTE: REINF. NOT SHOWN OR NOTED IS PER TYP. SECT. 7'x4' RCB DTL 2/A4

3 SECT. SHOWING ADDN'L REINF @ RCB BEND
1/2" = 1'-0"



NOTE: DWL SPC'G BTWN. RCB & "FIELD INLET" SHALL MATCH SPC'G OF CONT. REBAR AS SHOWN IN SLABS & WALLS OF DTL 1/A4

1 CONN. DTL. OF RCB TO FIELD INLET BY OTHERS
1/2" = 1'-0"

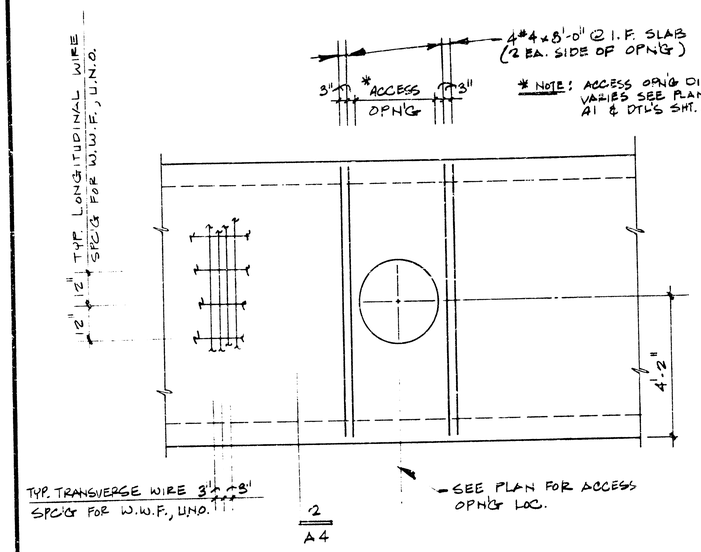


2 NORTH-EAST ELEVATION OF RCB INTO "FIELD INLET"
1/2" = 1'-0"

S.W.D. #64 West Maple St.
RCB CONSTRUCTION DETAILS
STA 8+60 & STA 9+90
PROJ. NO. 468-76-245-81373-000-000-001

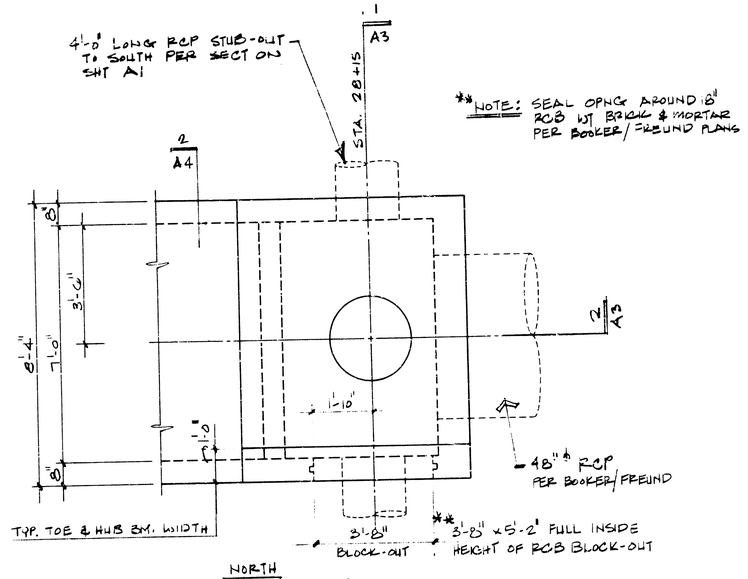
Van Doren Hazard Stallings
FOR
WILDCAT CONSTRUCTION

Design	BB
Drawn by	DJL
Checked by	BB
Date	
Job no	85-203-90
Sheet	A 2
of	

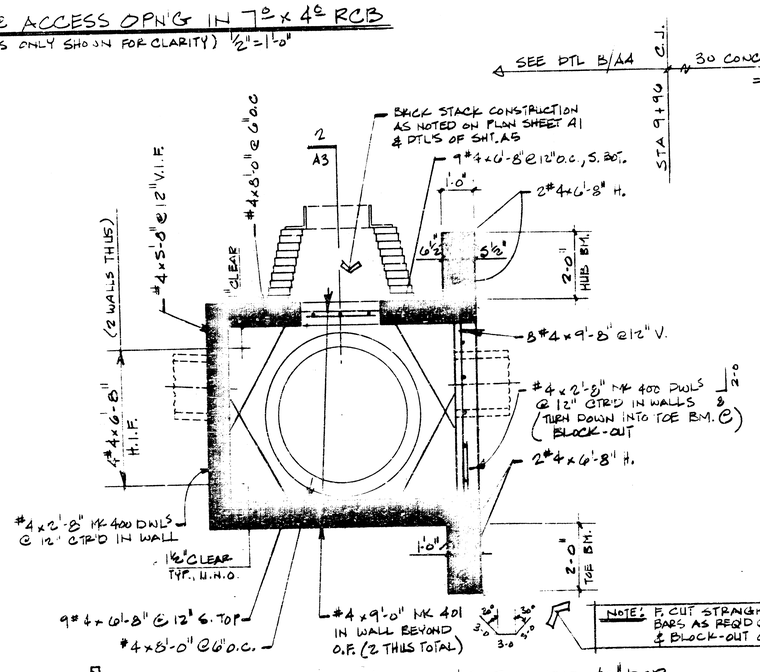


NOTE: FIELD CUT W.W.F. AS REQ'D @ ACCESS OPN'G

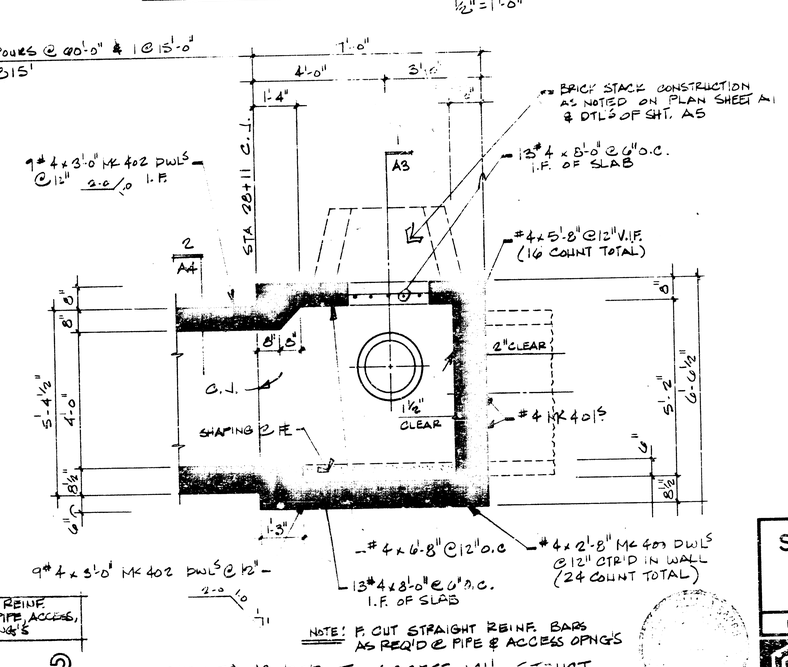
3 TYP REINF. @ ACCESS OPN'G IN 7'o x 4'o RCB
(EXTRA BARS ONLY SHOWN FOR CLARITY) 1/2"=1'-0"



A PLAN OF SPECIAL ACCESS MH. @ STA. 28+15
1/2"=1'-0"



1 SECT THRU ACCESS MH. LOOK'G TOWARD 48" RCP
1/2" = 1'-0"

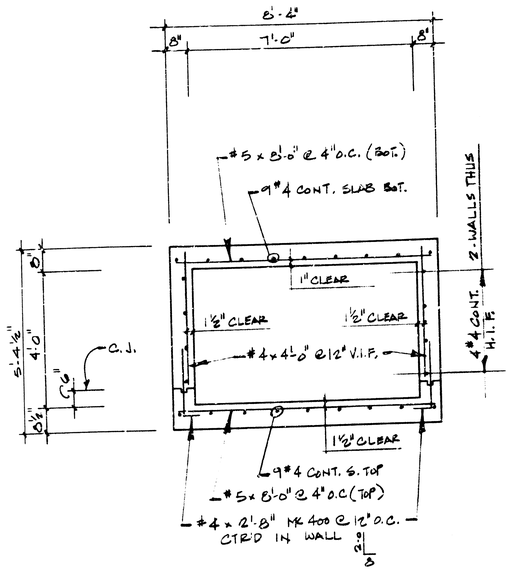


2 SECT THRU T'o x 4'o RCB TO ACCESS MH. STRUCT.
1/2" = 1'-0"

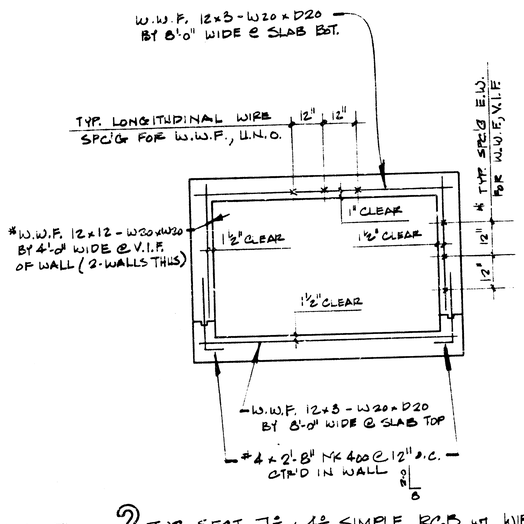
S.W.D. #64 West Maple St.
SPECIAL ACCESS MANHOLE
STA 28+15
PROJ. NO. 468-76-245-81373-000-000-001

Design	BB
Drawn by	DJL
Checked by	BB
Date	
Job no	85-203-S0
Sheet	A3
of	

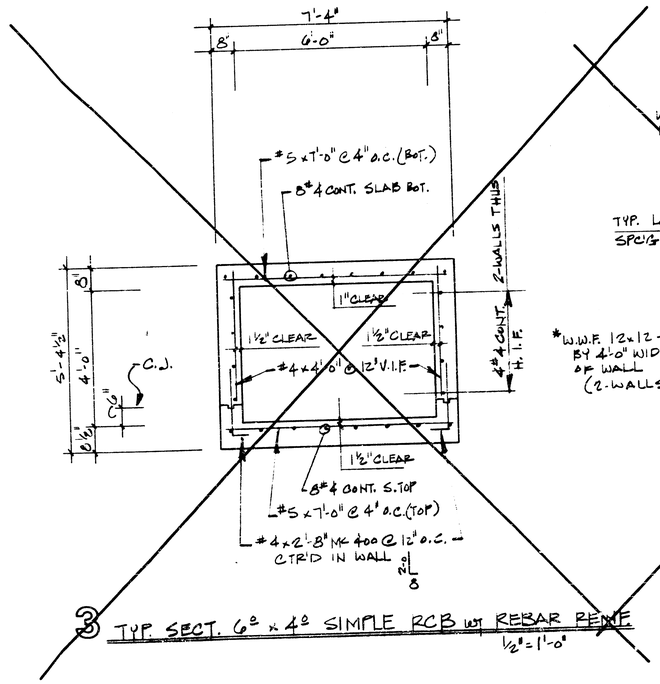
Van Doren Hazard Stallings
FOR
WILDCAT CONSTRUCTION



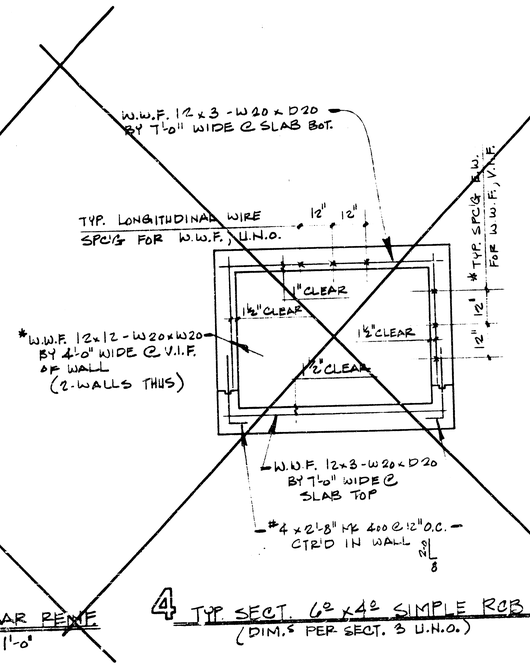
1 TYP. SECT. 7" x 4" SIMPLE RCB w/ REBAR REINF.
½" = 1'-0"



2 TYP. SECT. 7" x 4" SIMPLE RCB w/ WIRE FABRIC REINF. (DIM.'S PER SECT. 1, U.N.O.)
½" = 1'-0"



3 TYP. SECT. 6" x 4" SIMPLE RCB w/ REBAR REINF.
½" = 1'-0"



4 TYP. SECT. 6" x 4" SIMPLE RCB w/ WIRE FABRIC REINF. (DIM.'S PER SECT. 3 U.N.O.)
½" = 1'-0"

REBAR LEGEND

F D	FOOTING DOWEL
C B	CORNER BAR
B	BOTTOM BAR
F	FOOTING BAR
H	HORIZONTAL
V	VERTICAL BAR
R	REINFORCING
T	TOP BAR
O F	OUTSIDE FACE
I F	INSIDE FACE
E F	EACH FACE
N F	NEAR FACE
F F	FAR FACE
E W	EACH WAY
U N O	UNLESS NOTED OTHERWISE

GENERAL NOTES

C 1. Concrete shall be City of Wichita standard paving mix, proportioned and mixed per Pages 21 and 22 of City of Wichita's "Concrete Paving" specification.

C 2. All rebar reinforcing to meet ASTM A615-60,000. Welded Wire fabric shall meet: 1. ASTM A185 smooth (fy=65KSI) 2. ASTM A497 deformed (fy=70KSI)

C 3. Welded Wire fabric reinforcing shall be supplied in 16'-0" long x 8'-0" wide flat sheets.

DESIGNATION KEY: WWF (long spacing)x(transverse spacing)-(long wire)x(transverse wire)

APPROX. WEIGHTS:	#/100 sq.ft.	#/sht.
WWF 12 x 3 - W20 x D20	353	452
WWF 12 x 12- W20 x W20	145	185

C 4. Welded wire fabric splices shall be made with a minimum of 12" lap.

C 5 Concrete protection for reinforcing 1-1/2" unless noted otherwise.

C 6. All concrete exposed edges shall be finished with an edging tool.

C 7 All reinforcing steel shall be detailed and placed in accordance with ACI Detailing Manual SP-66, 1980 edition and ACI 315 Manual of Standard Practice for detailing reinforced concrete structures.

C 8. Provide #308 of ASTM A615, grade 40 extra bars to be used as directed. Include labor for placing same.
SUPPLY: 6 - #4 x 30'-0"
6 - #5 x 30'-0"

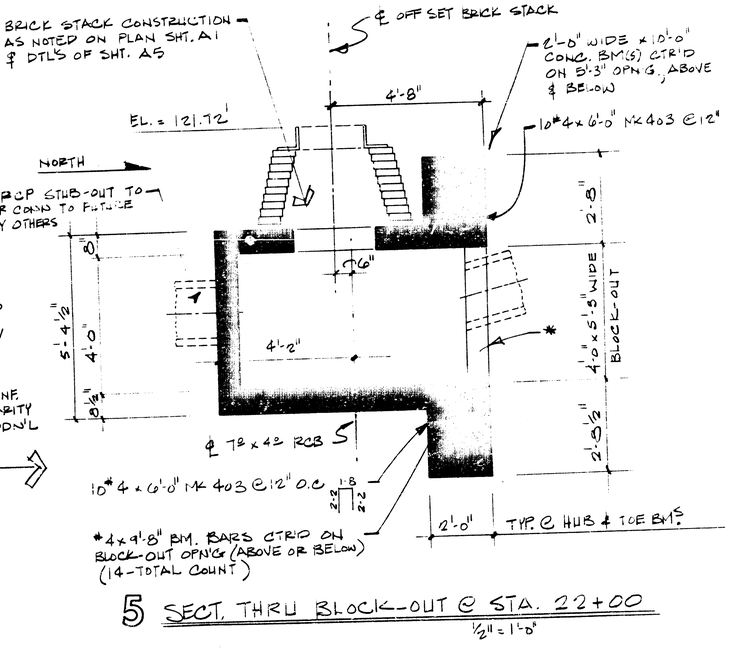
LOADS:

01	AASHTO	HS-20-44

SOILS:

01	Total Load (max.)	1800 psf
02	Lateral on box walls	50 pcf

BRICK STACK CONSTRUCTION AS NOTED ON PLAN SHT. A1 & DTLS OF SHT. A5



NOTE: SEAL OPN'G AROUND 18" RCP W/ BRICK & MORTAR PER BOOKER/FREUND PLANS

NOTE: TYP. 7" x 4" RCB REINF. NOT SHOWN FOR CLARITY REF. 2/A4 FOR ADD'L INFO.

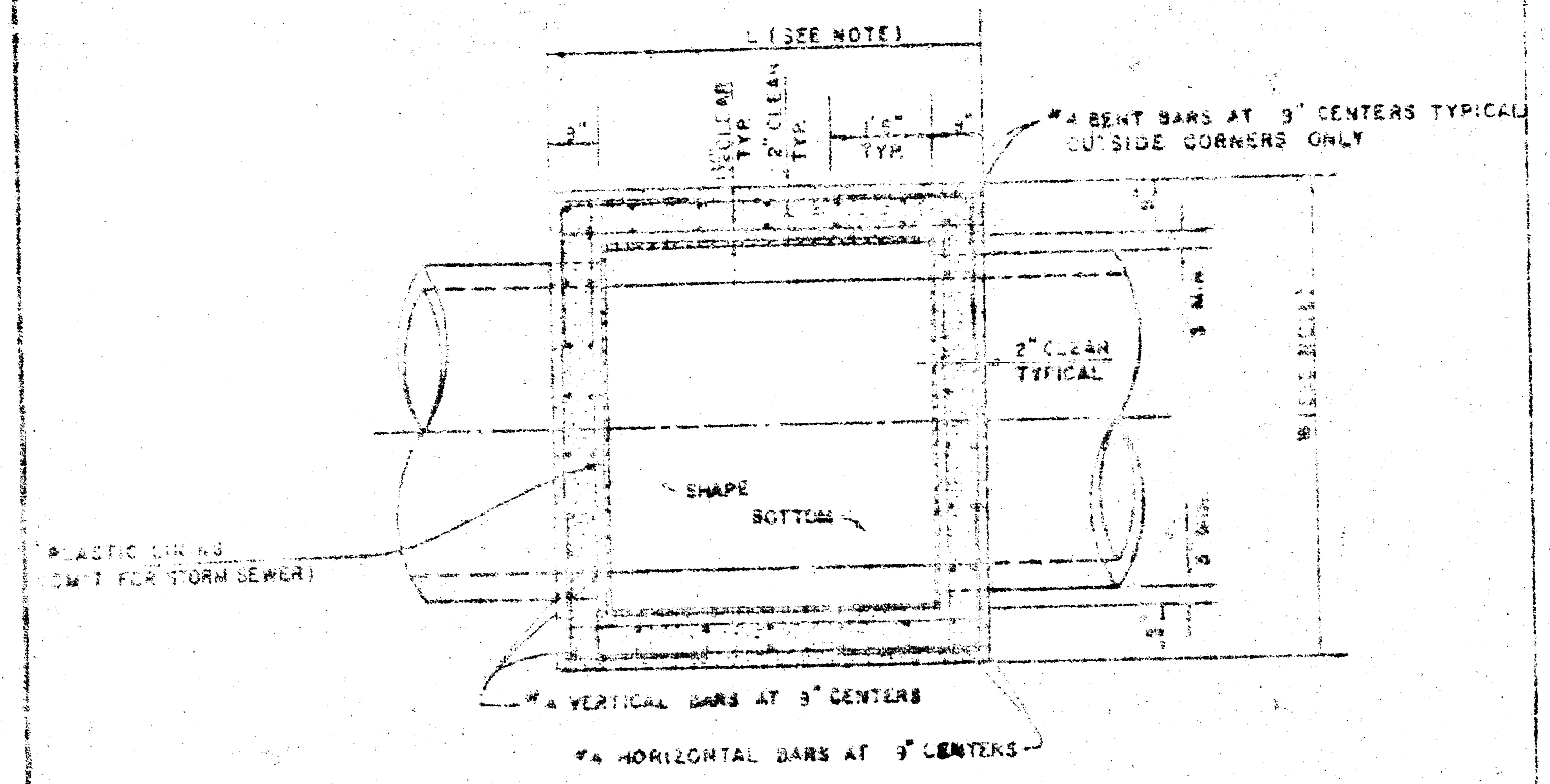
5 SECT. THRU BLOCK-OUT @ STA. 22+00
½" = 1'-0"

BRUCE WILLIAM [illegible]

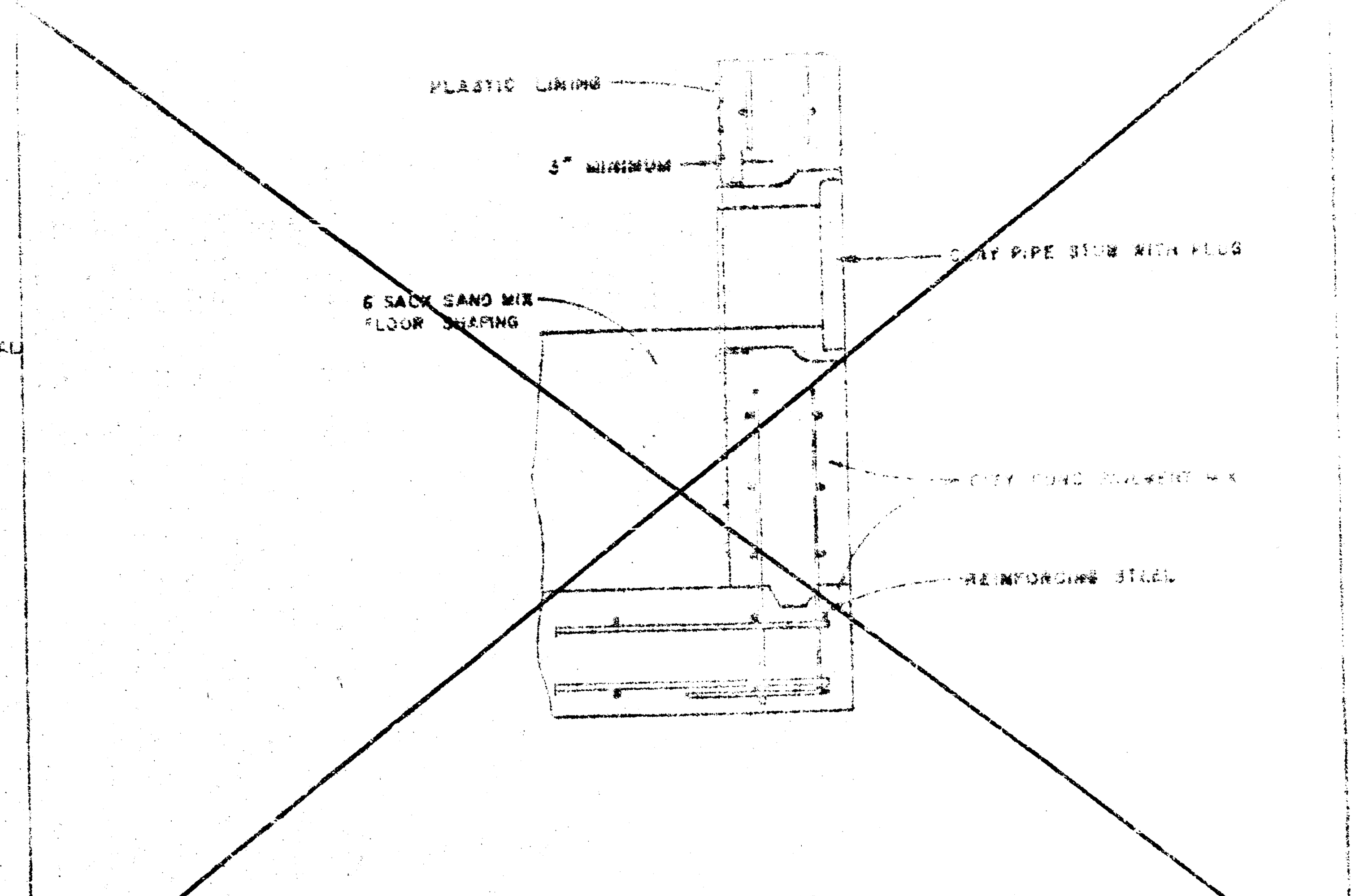
S.W.D. #64 West Maple St.
Simple RCB Alternate
FROM STA 8+60 TO 28+15
PROJ. NO. 468-76-245-81373-000-000-001

Van Doren Hazard Stallings
FOR
WILDCAT CONSTRUCTION

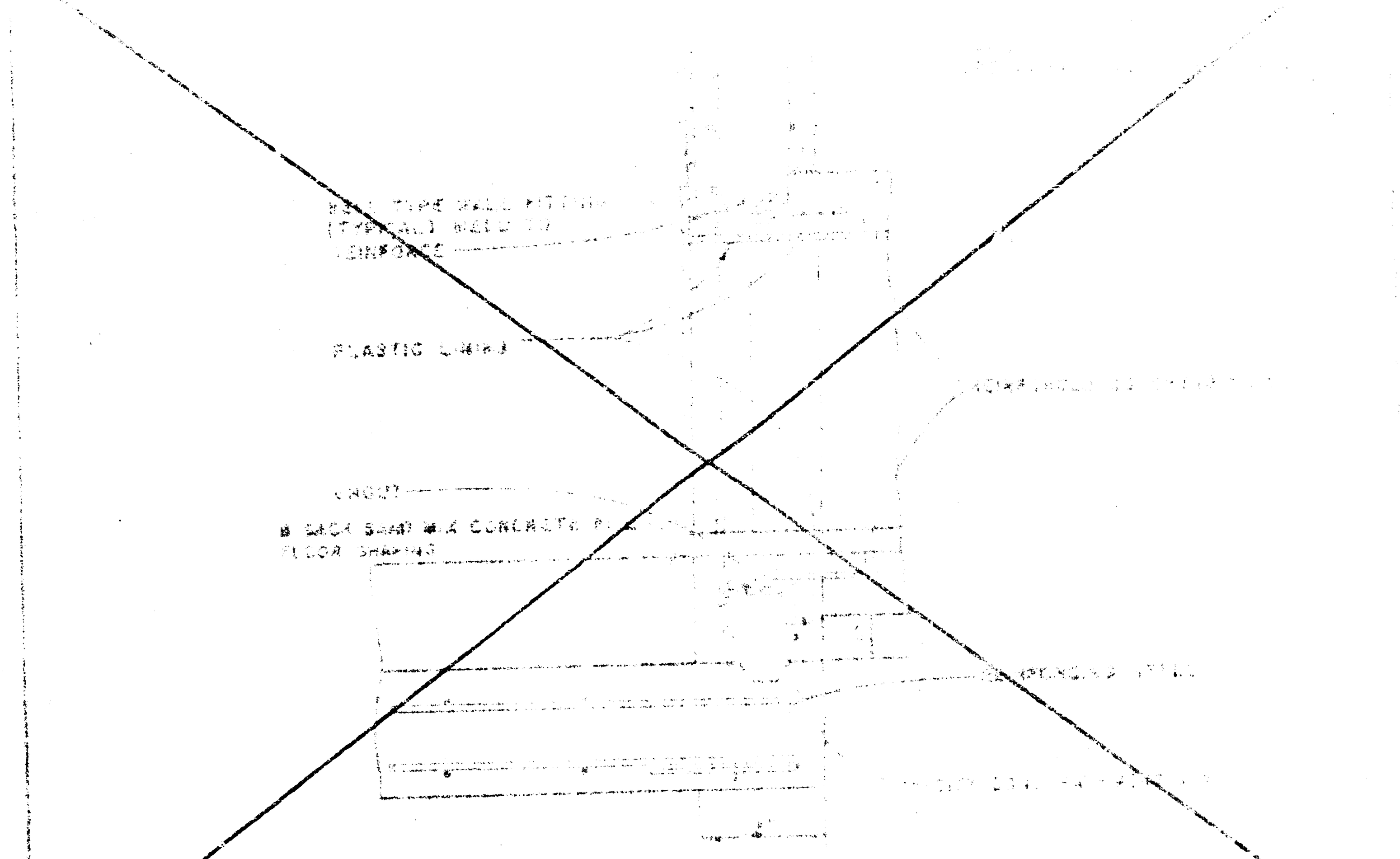
Design	BB
Drawn by	BB
Checked by	BB
Date	1-28-85
Job no.	85-203-50
Sheet	A 4
of	



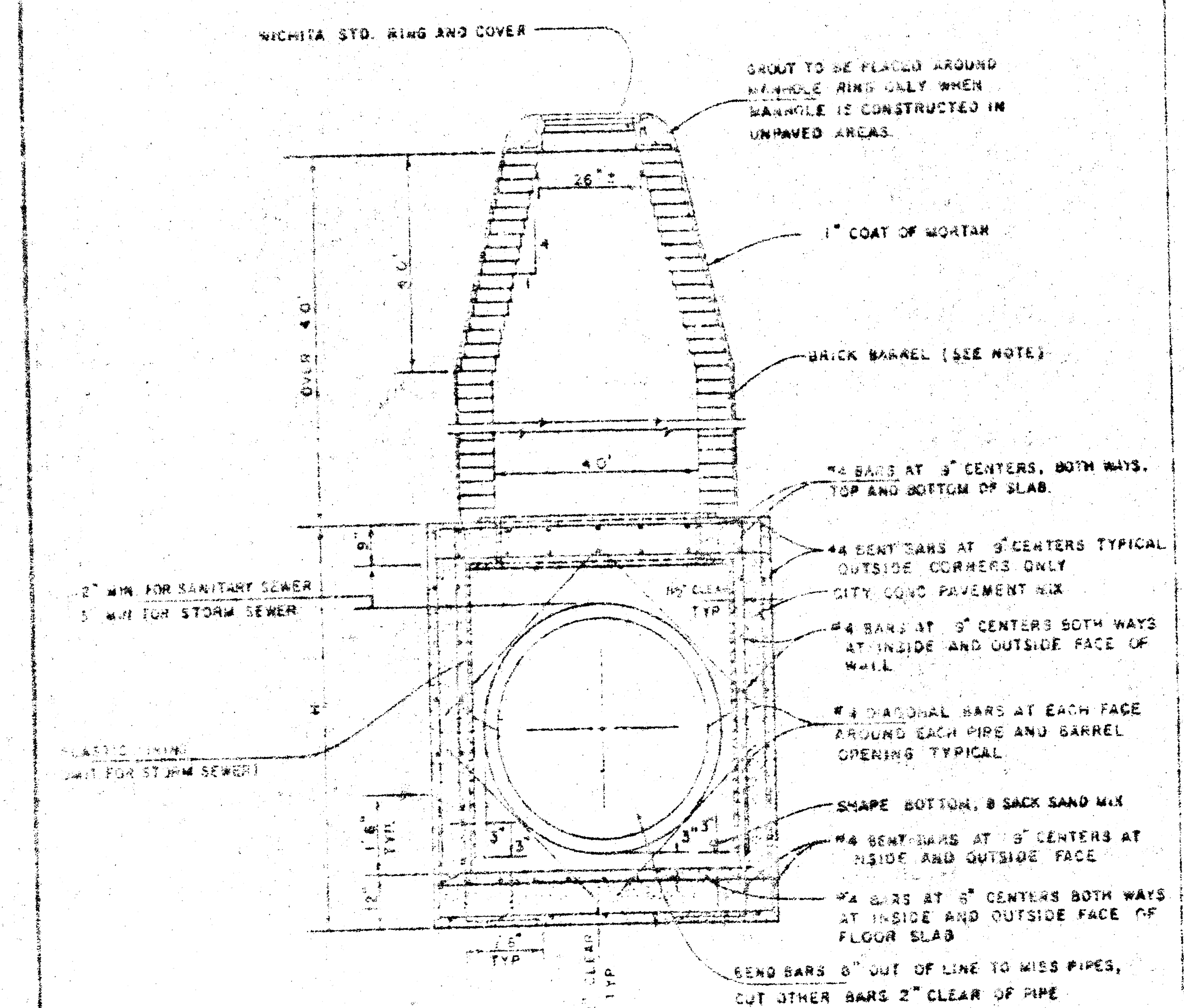
TOP VIEW



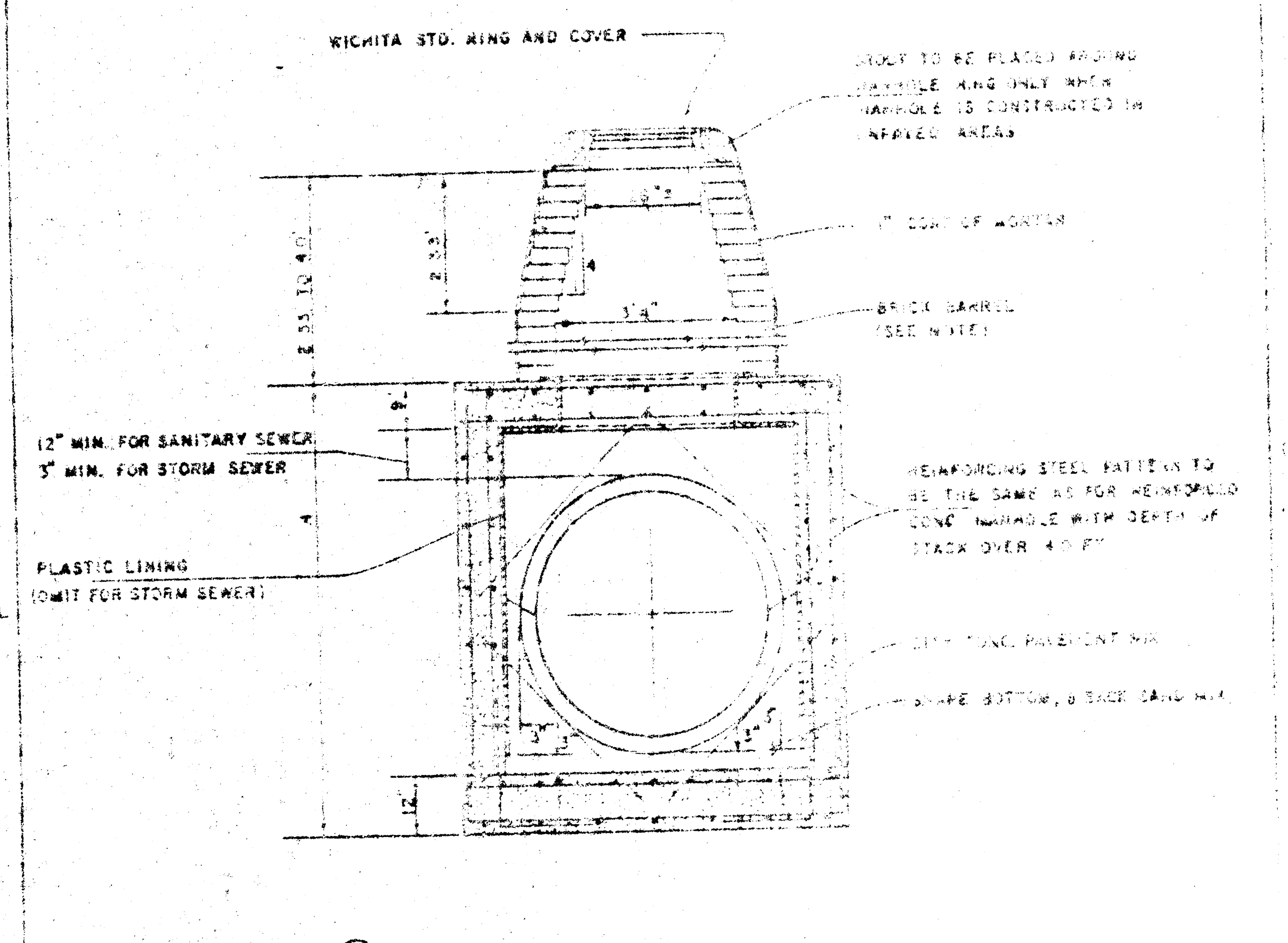
V.C.P. CONNECTION DETAIL
SANITARY SEWER ONLY



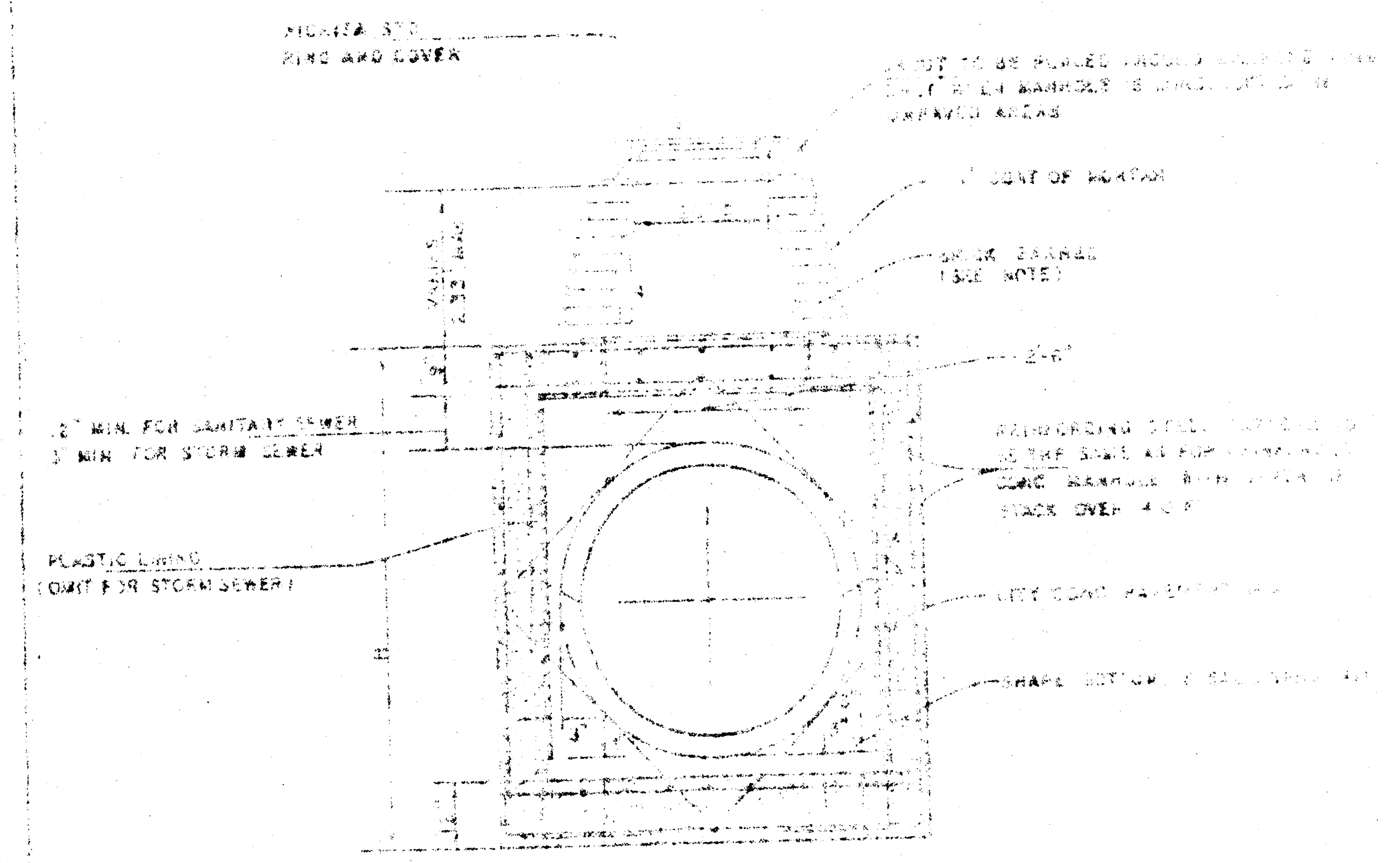
R.C.P. CONNECTION DETAIL
SANITARY SEWER ONLY



1 REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: OVER 4.0'
SCALE 1" = 2'



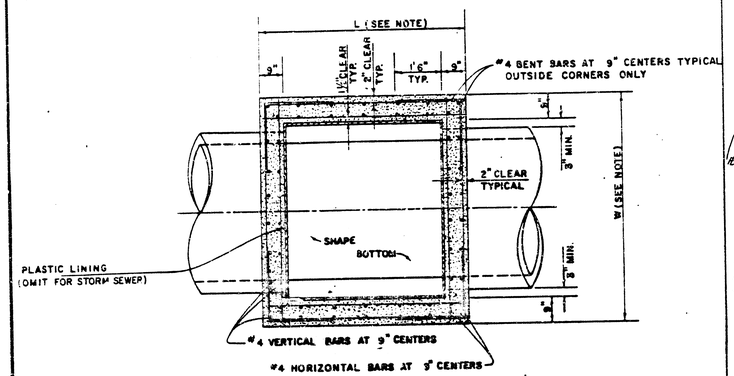
2 REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 2.33' TO 4.0'
SCALE 1" = 2'



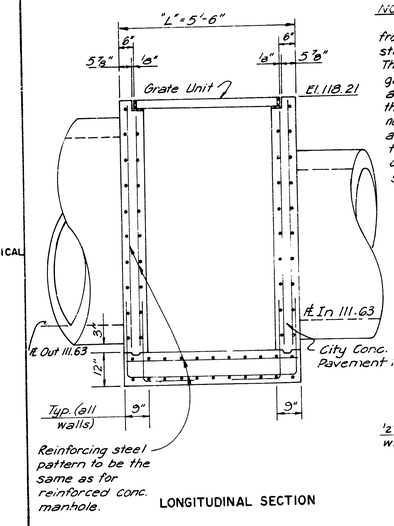
3 REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 0' TO 2.33'
SCALE 1" = 2'

NOTE:
BRICK BARRELS LESS THEN 16' DEEP SHALL HAVE 8" WALLS EXCEPT WHEN LOCATED WITHIN PUBLIC STREET OR ALLEY PAVEMENT THEN THE WALL SHALL BE [illegible] BARRELS MORE THEN 16' DEEP SHALL HAVE 12" WALLS. [illegible] SHALL BE A MINIMUM OF 5'6" FOR BRICK BARRELS WITH 8" WALLS AND [illegible] FOR BRICK BARRELS WITH 12" WALLS WHEN THE BRICK BARRELS ARE OVER [illegible] IN HEIGHT.

STANDARD DETAILS
REINFORCED CONCRETE MANHOLES
CITY OF WICHITA
A5

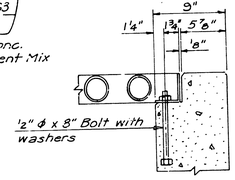


TOP VIEW

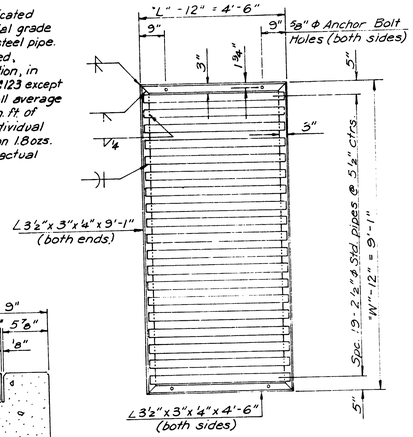


LONGITUDINAL SECTION

NOTE:
The grate shall be fabricated from standard or commercial grade structural steel and black steel pipe. The unit shall be hot dipped, galvanized after fabrication, in accordance with ASTM A123 except the weight of coating shall average not less than 2.0ozs. per sq. ft. of actual surface and no individual test shall show less than 1.8ozs. of coating per sq. ft. of actual surface area.

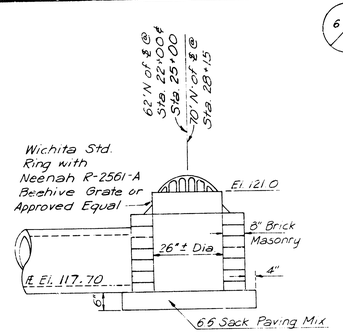


ANCHOR BOLT LAYOUT DETAIL



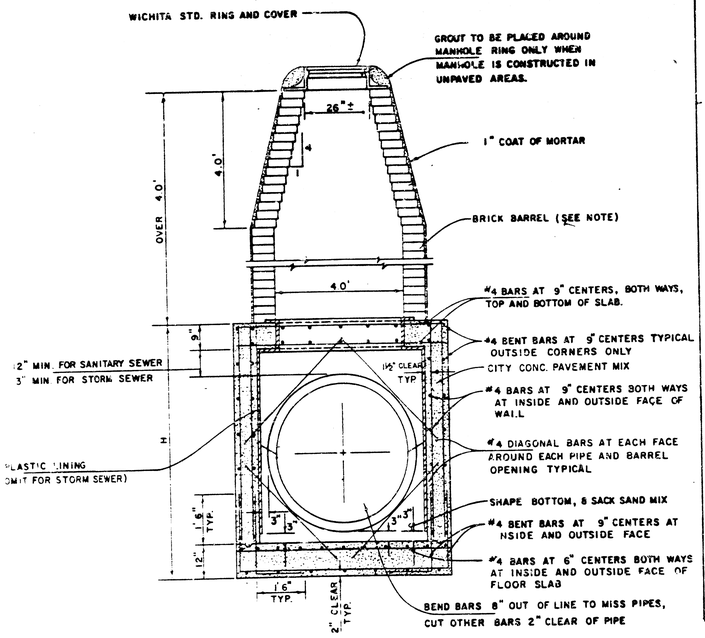
GRATE UNIT DETAILS

REINFORCED CONCRETE FIELD INLET
STA. 8+60 ("L" = 5'-6" "W" = 10'-1")

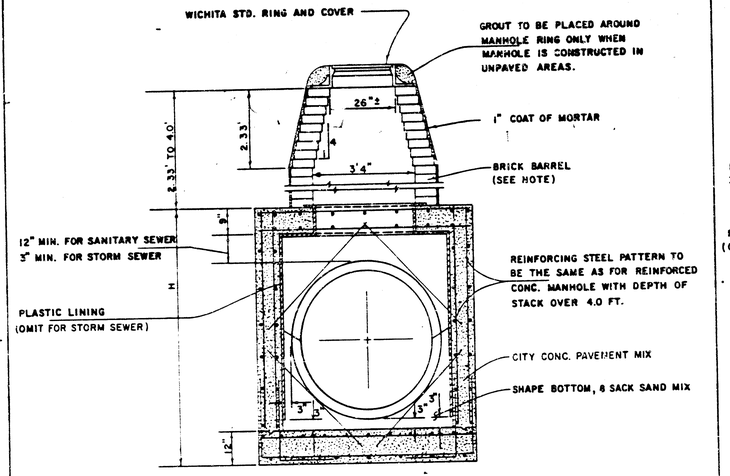


NOTE:
Construction and material requirements shall conform to the same requirements as specified for Type A or B Manhole Construction.

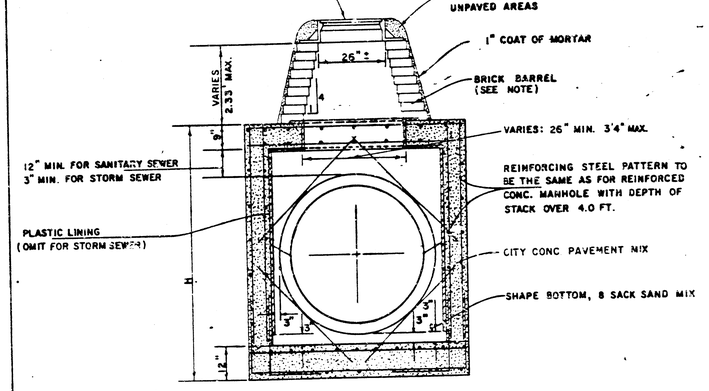
FIELD INLET
STA. 22+00
STA. 25+00
STA. 28+15



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: OVER 4.0'
SCALE 1" = 2'



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 2.33' TO 4.0'
SCALE 1" = 2'



REINFORCED CONCRETE MANHOLE
DEPTH OF STACK: 0' TO 2.33'
SCALE 1" = 2'

NOTE:
BRICK BARRELS LESS THEN 16' DEEP SHALL HAVE 8" WALLS EXCEPT WHEN LOCATED WITHIN PUBLIC STREET OR ALLEY PAVEMENT THEN THE WALL SHALL BE 12". BRICK BARRELS MORE THEN 16' DEEP SHALL HAVE 12" WALLS. THE "L" AND "W" DIMENSIONS SHALL BE A MINIMUM OF 5'6" FOR BRICK BARRELS WITH 8" WALLS AND 6'2" FOR BRICK BARRELS WITH 12" WALLS WHEN THE BRICK BARRELS ARE OVER 4 FT. IN HEIGHT.

Rev. 12-7-84

Nov. 1984

STANDARD DETAILS
REINFORCED CONCRETE MANHOLES
CITY OF WICHITA

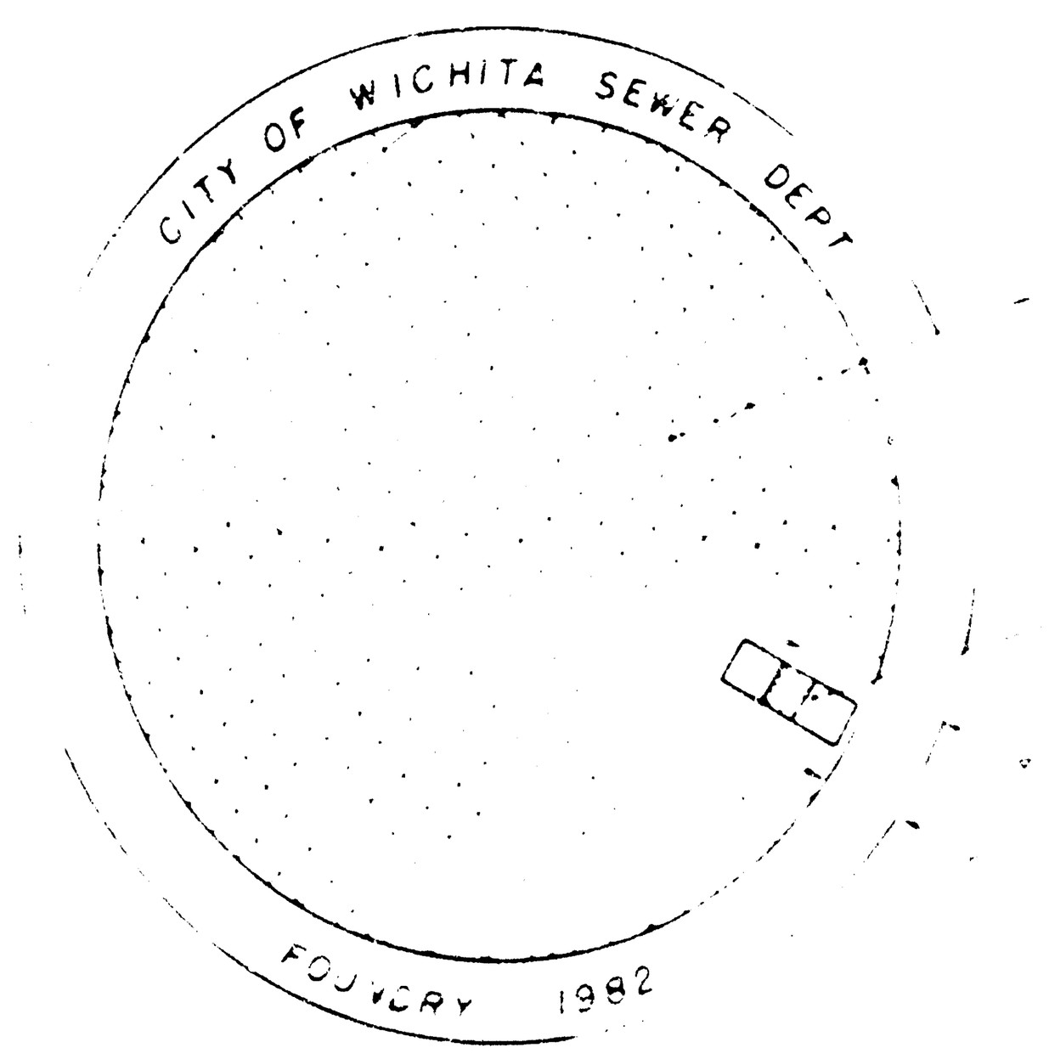
FEB. 1984

FEBRUARY 1984

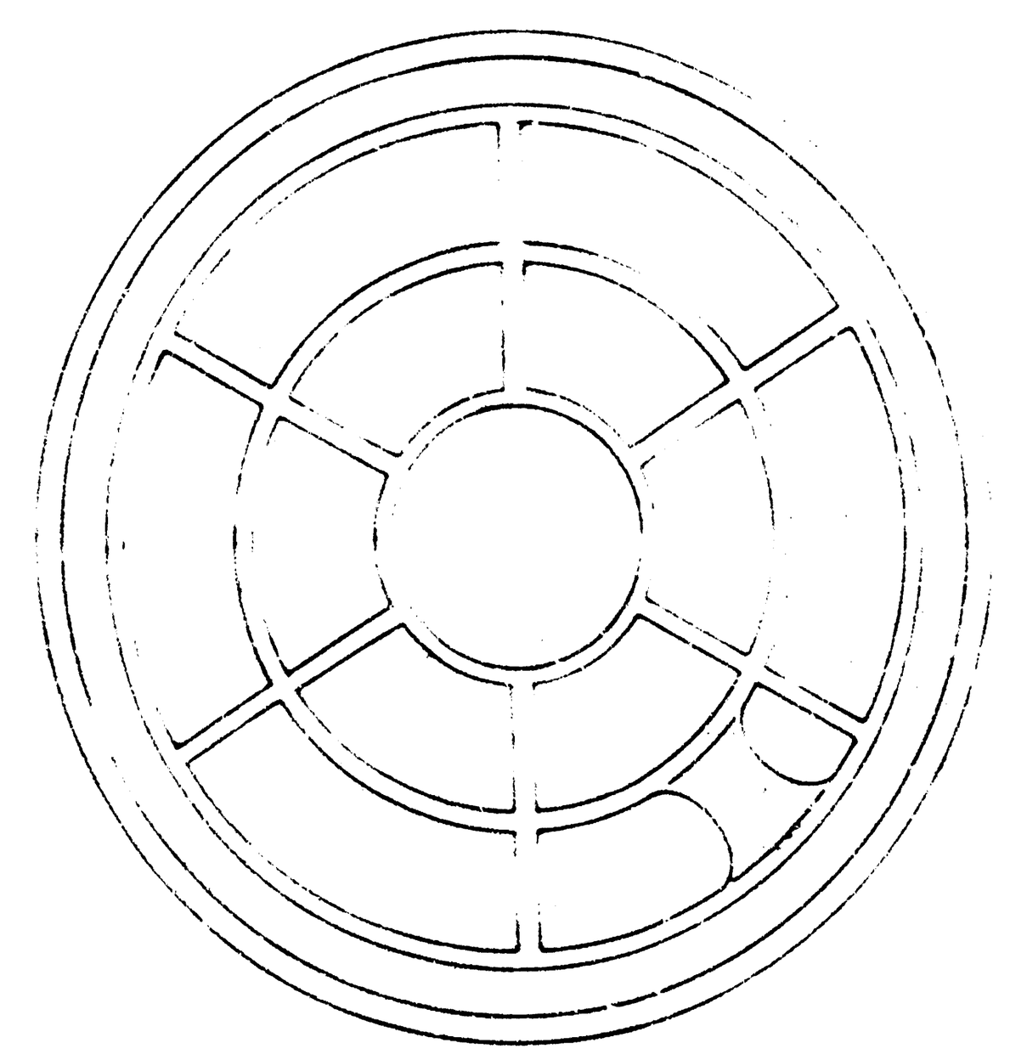
MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN
BY
City of Wichita, Kansas

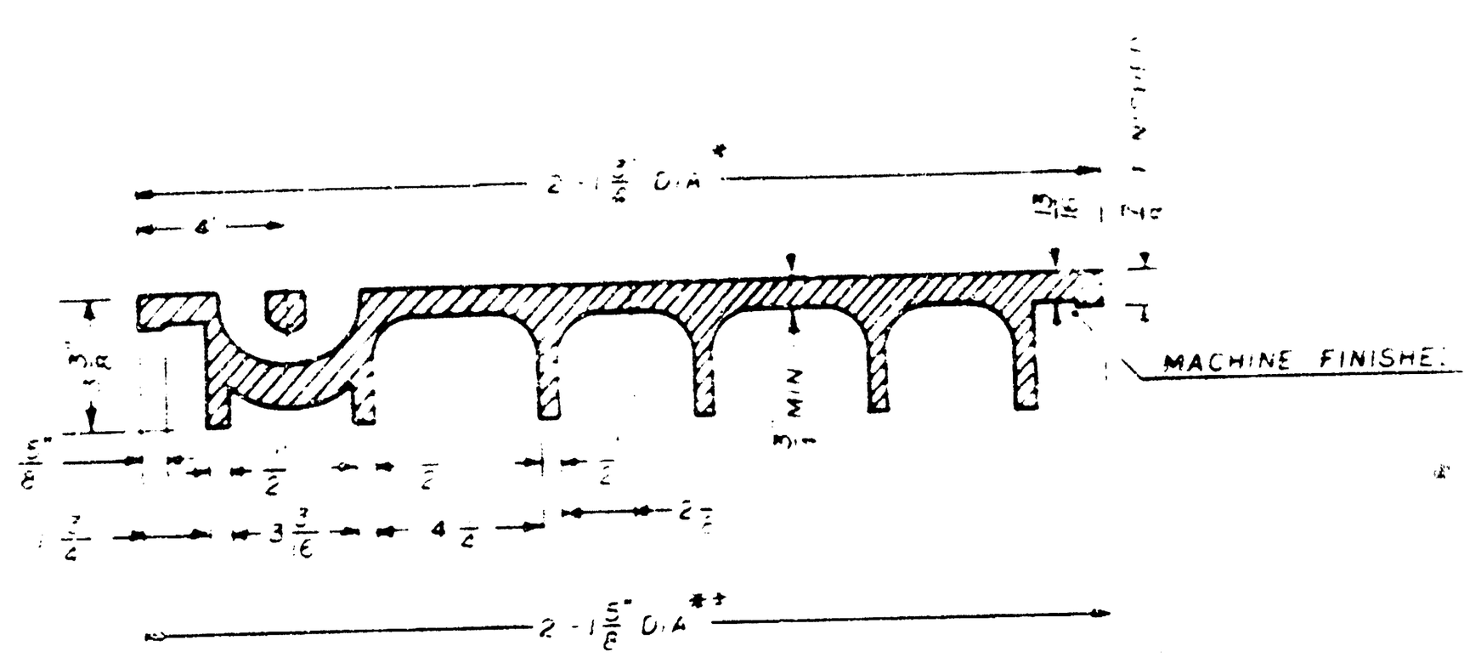
MANHOLE COVER
Weight: 180 Lbs



TOP VIEW



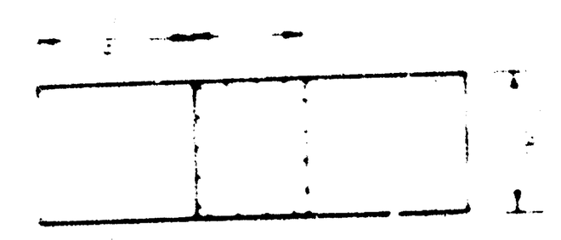
BOTTOM VIEW



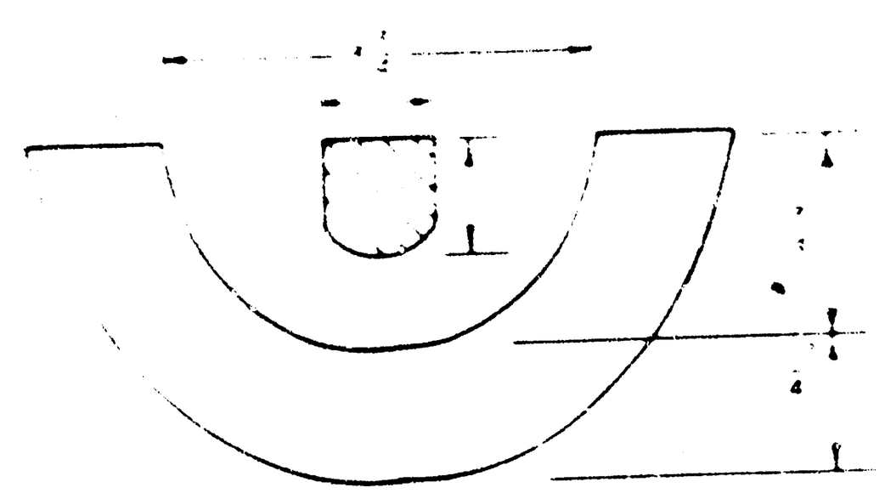
SECTION VIEW

* OUTSIDE DIA. TOP OF COVER
** OUTSIDE DIA. BOTTOM OF COVER

PICKHOLE DETAIL

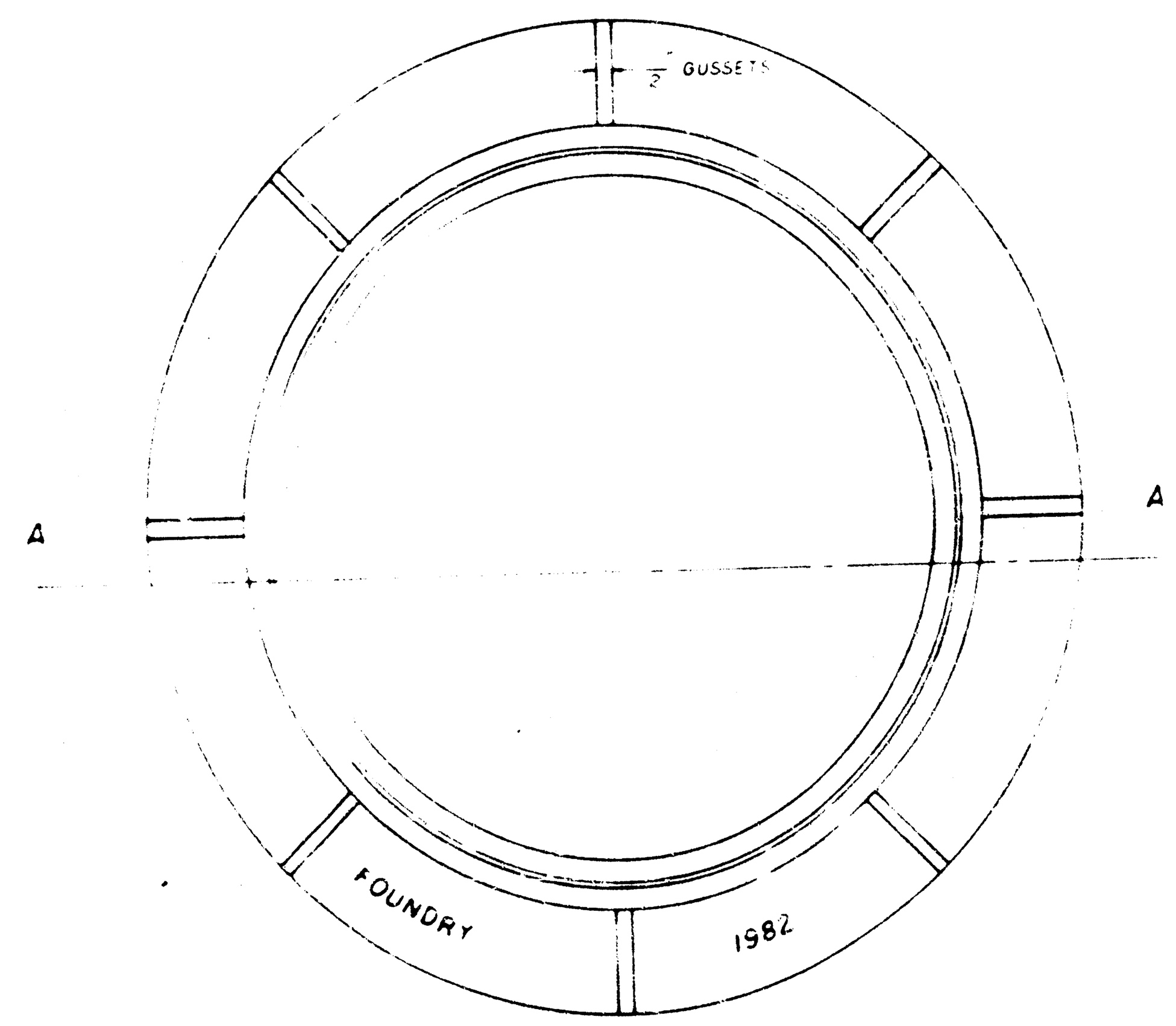


TOP VIEW

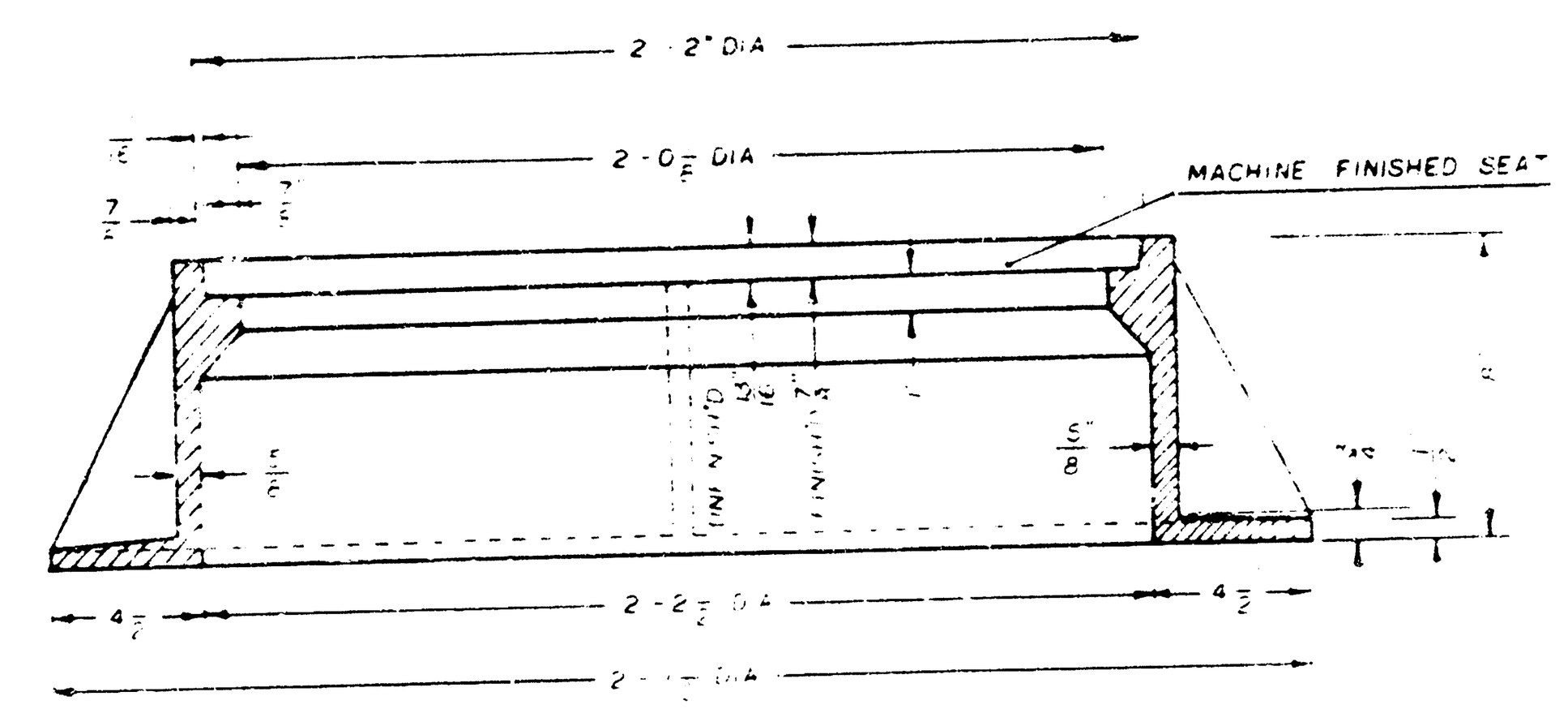


SECTION VIEW

MANHOLE FRAME
Weight: 240 Lbs



TOP VIEW



SECTION A-A

[illegible]

1. MANHOLE CASTINGS SHALL BE MANUFACTURED [illegible] GRAY IRON [illegible] CLASS [illegible] AND WILL [illegible] TAILED DRAWING [illegible] MINIMUM REQUIREMENT [illegible] THE DIMENSIONS SHOWN MUST BE [illegible] OF UNIFORM [illegible] FREE FROM [illegible] OR OTHER DEFECTS.

2. MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESULTING IN A SMOOTH [illegible] AND TENACIOUS COATING WHICH IS NOT BRITTLE OR TACKY.

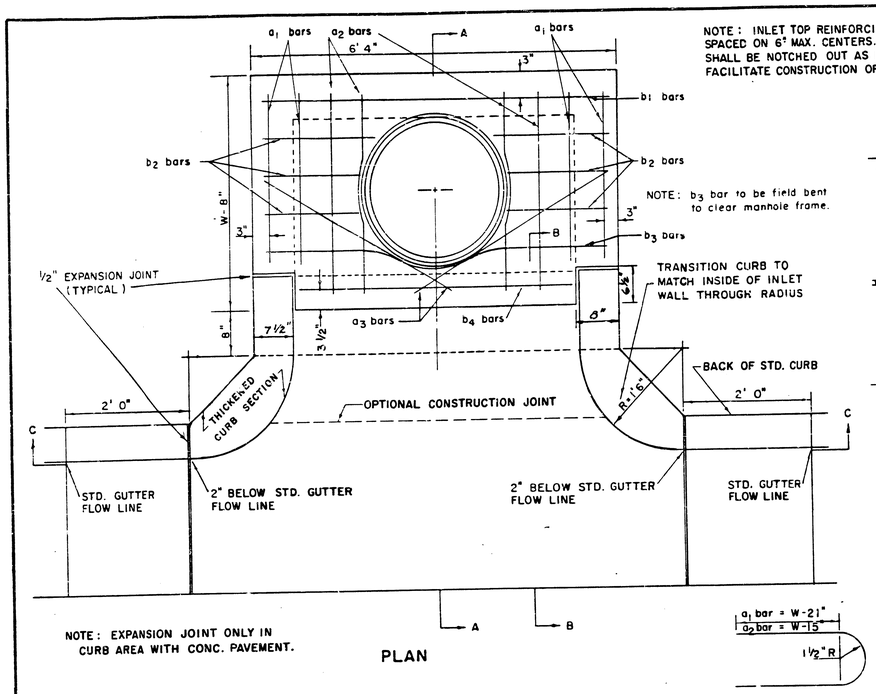
3. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY [illegible] FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY [illegible] STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.

4. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SURFACES SHALL MAKE FULL CONTACT FOR THE FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

5. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1" IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD DEPARTMENT MAY BE ABBREVIATED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

MANHOLE FRAME
&
COVER DETAIL
CITY OF WICHITA, KANSAS

DEC. 1981

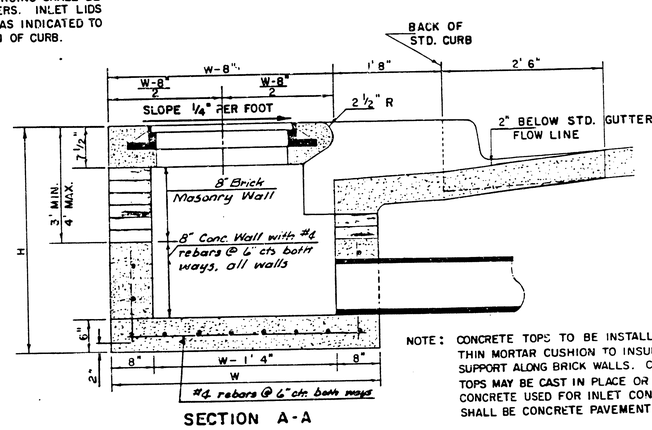


NOTE: EXPANSION JOINT ONLY IN CURB AREA WITH CONC. PAVEMENT.

PLAN

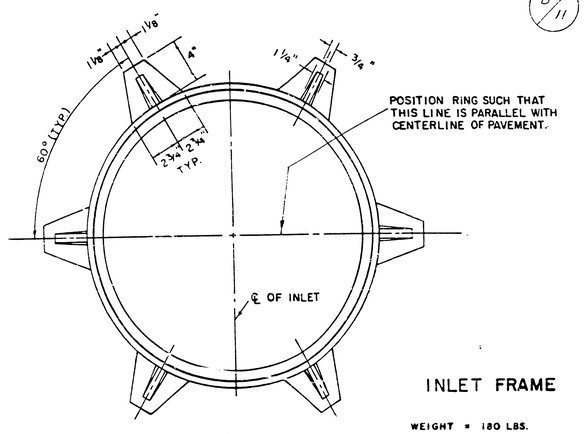
NOTE: INLET TOP REINFORCING SHALL BE SPACED ON 6' MAX. CENTERS. INLET LIDS SHALL BE NOTCHED OUT AS INDICATED TO FACILITATE CONSTRUCTION OF CURB.

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



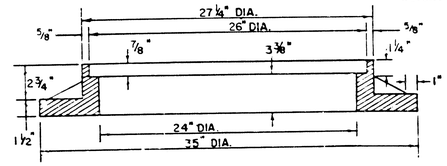
SECTION A-A

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 USED FOR INLET CONSTRUCTION SHALL BE CONCRETE PAVEMENT MIX.



INLET FRAME

WEIGHT = 180 LBS.



SEE CITY OF WICHITA STANDARD MANHOLE FRAME AND COVER DETAIL SHEET FOR COVER DETAILS TO BE USED WITH INLET FRAME.

BENDING DIAGRAM

NOTE: CONTRACTOR SHALL HAVE THE OPTION OF CONSTRUCTING 8" BRICK MASONRY WALLS BETWEEN THE CONCRETE INLET BASE AND TOP ON THIS INLET WHEN W = 4'4" AND H = 6'6" OR LESS.

ADDITIONAL CURB AND GUTTER CONSTRUCTION NECESSARY TO CONNECT SET-BACK INLET TO PAVEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR EACH INLET HOOKUP.

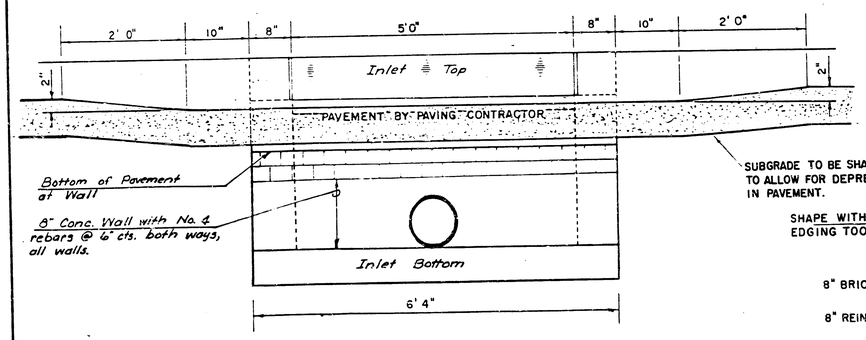
INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.

STEEL SCHEDULE

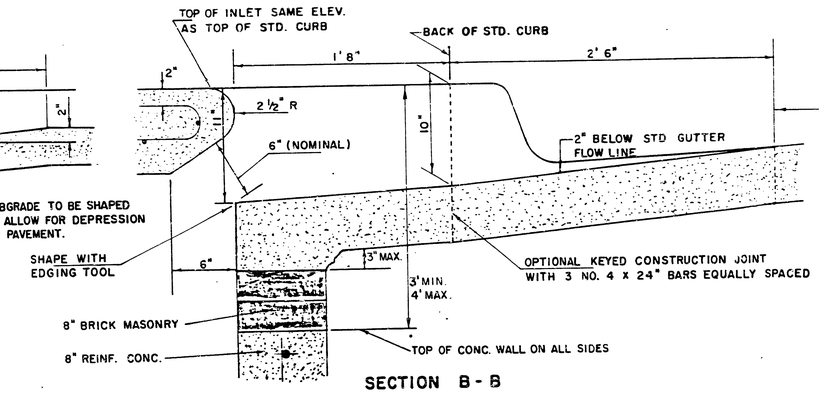
BAR	a_1	a_2	a_3*	b_1 W=4'4"	b_1 W=5'4"	b_1 W=6'4"	b_1 W=7'4"	b_1 W=8'4"	b_2	b_3	b_4	WT. LBS.
NUMBER	4	4	2	1	3	5	7	9	6	1	1	
SIZE	#4	#4	#4	#4	#4	#4	#4	#4	#4	#4	#6	
LENGTH W=4'4"	5'7"	6'7"	4'0"	6'1"	–	–	–	–	1'9"	6'2"	4'8"	60±
LENGTH W=5'4"	7'7"	8'7"	5'0"	–	6'1"	–	–	–	1'9"	6'2"	4'8"	81±
LENGTH W=6'4"	9'7"	10'7"	6'0"	–	–	6'1"	–	–	1'9"	6'2"	4'8"	101±
LENGTH W=7'4"	11'7"	12'7"	7'0"	–	–	–	6'1"	–	1'9"	6'2"	4'8"	121±
LENGTH W=8'4"	13'7"	14'7"	8'0"	–	–	–	–	6'1"	1'9"	6'2"	4'8"	141±

* NOTE: a_3 BARS TO BE PLACED APPROX. 2" BELOW TOP OF INLET COVER

STANDARD CURB INLET PRECAST TOPS			
W	PRE-CAST TOP SIZE	PIPE SIZE	CU. YD. CONC.
4' 4"	3'8"x 6'4" x7 1/2"	21" & SMALLER	0.38 ±
5' 4"	4'8"x 6'4" x7 1/2"	24" & 30"	0.51 ±
6' 4"	5'8"x 6'4" x7 1/2"	36" & 42"	0.64 ±
7' 4"	6'8"x 6'4" x7 1/2"	48" & 54"	0.77 ±
8' 4"	7'8"x 6'4" x7 1/2"	60" & 66"	0.90 ±



SECTION C-C



SECTION B-B

NOTE:

INLETS AND INLET LEADS ARE SHOWN FOR INFORMATION ONLY AND ARE NOT A PART OF THIS PROJECT. CONTRACTOR SHALL INSTALL ONE-4' JOINT OF PIPE IN THE MANHOLES TO FACILITATE FUTURE CONSTRUCTION.

13/16

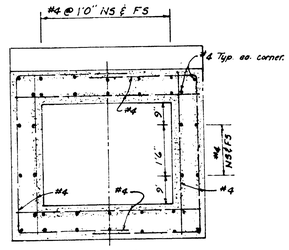
Rev. 12-7-84

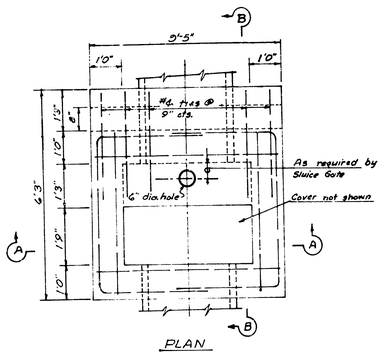
DETAIL STANDARD TYPE IA CURB INLET

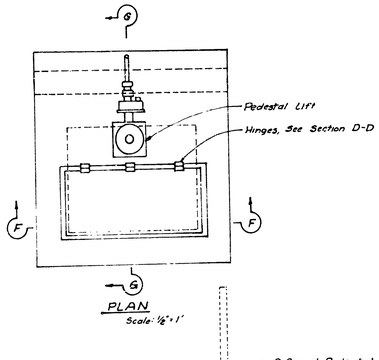
CITY OF WICHITA, KANSAS

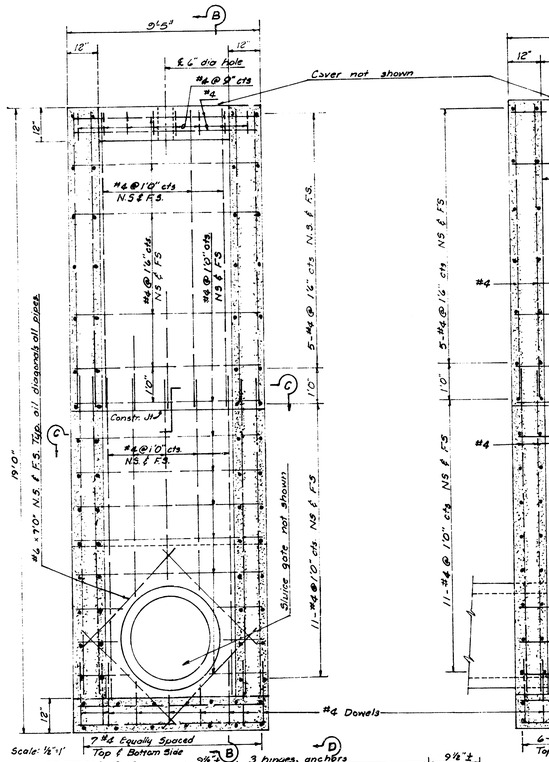
INLET OPENING = 6" × 5' 0"

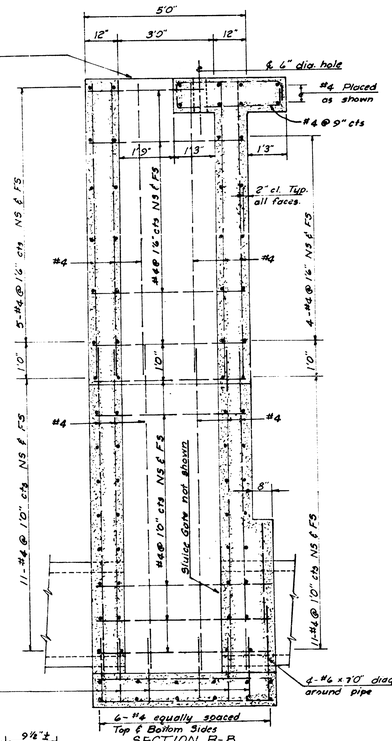
JUNE 1984

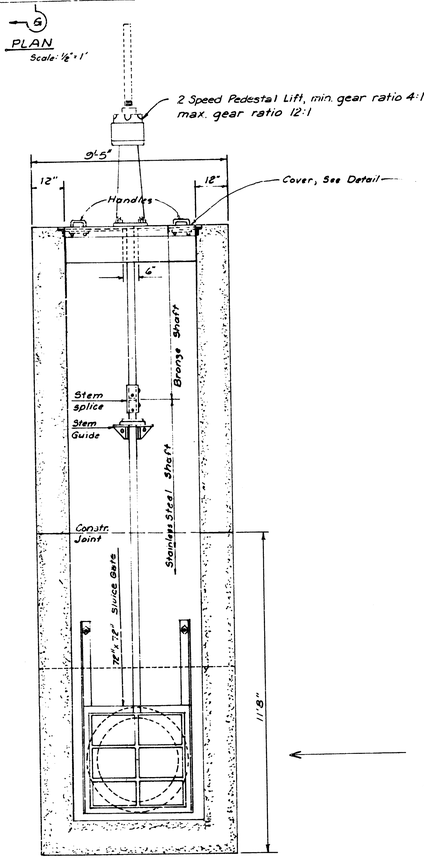


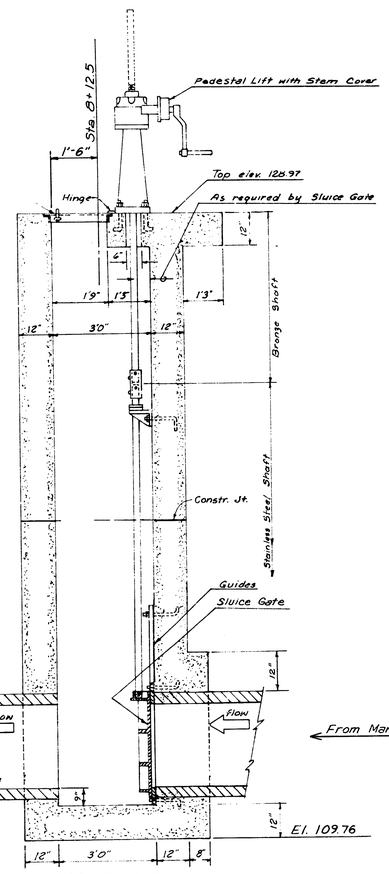












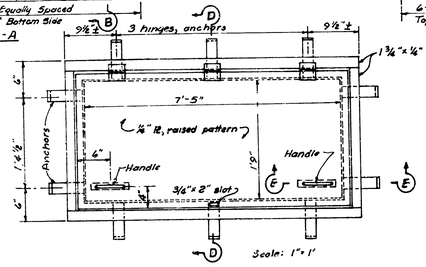
NOTE:

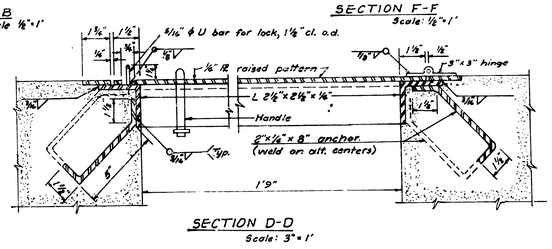
Sluice Gates to be installed as directed by the manufactor.

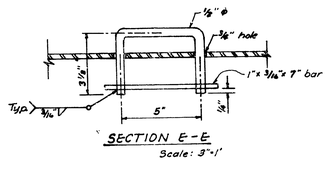
Furnish anchor bolts, washers, and nuts conforming to manufactors recommendations.

The illustrations shown are for Hydro Lift CPE-12 Pedestal Lift and Hydro Gate Medium Duty Model 50-10 Sluice Gate, however, other approved make may be used. Contractor shall submit catalog cuts for approval.

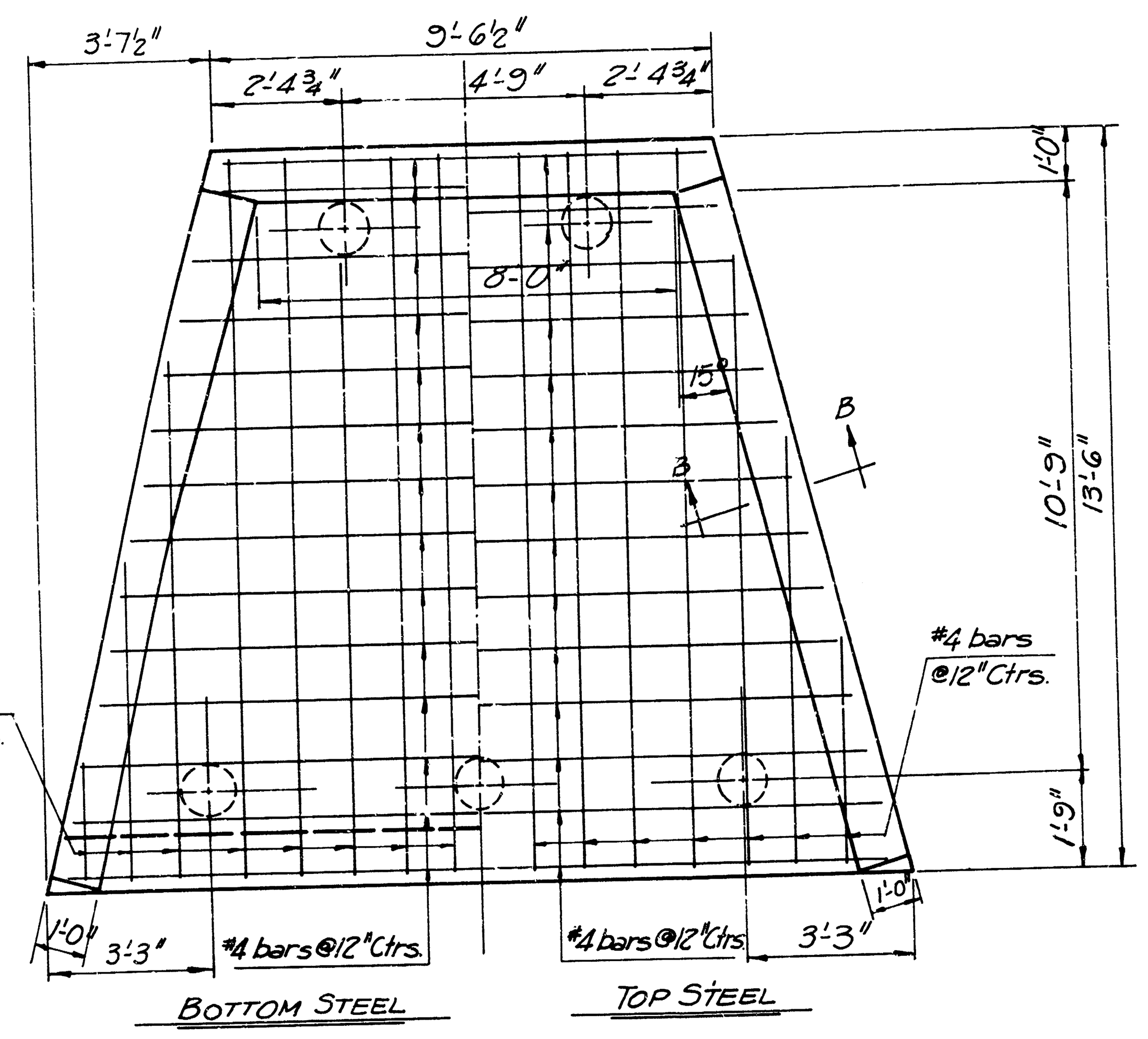
City Concrete Pavement Mix (6.6 Sack) shall be used in constructing the Sluice Gate Structure. Concrete and reinforcing steel will not be paid for directly, but shall be subsidiary to the "Sluice Gate Structure."



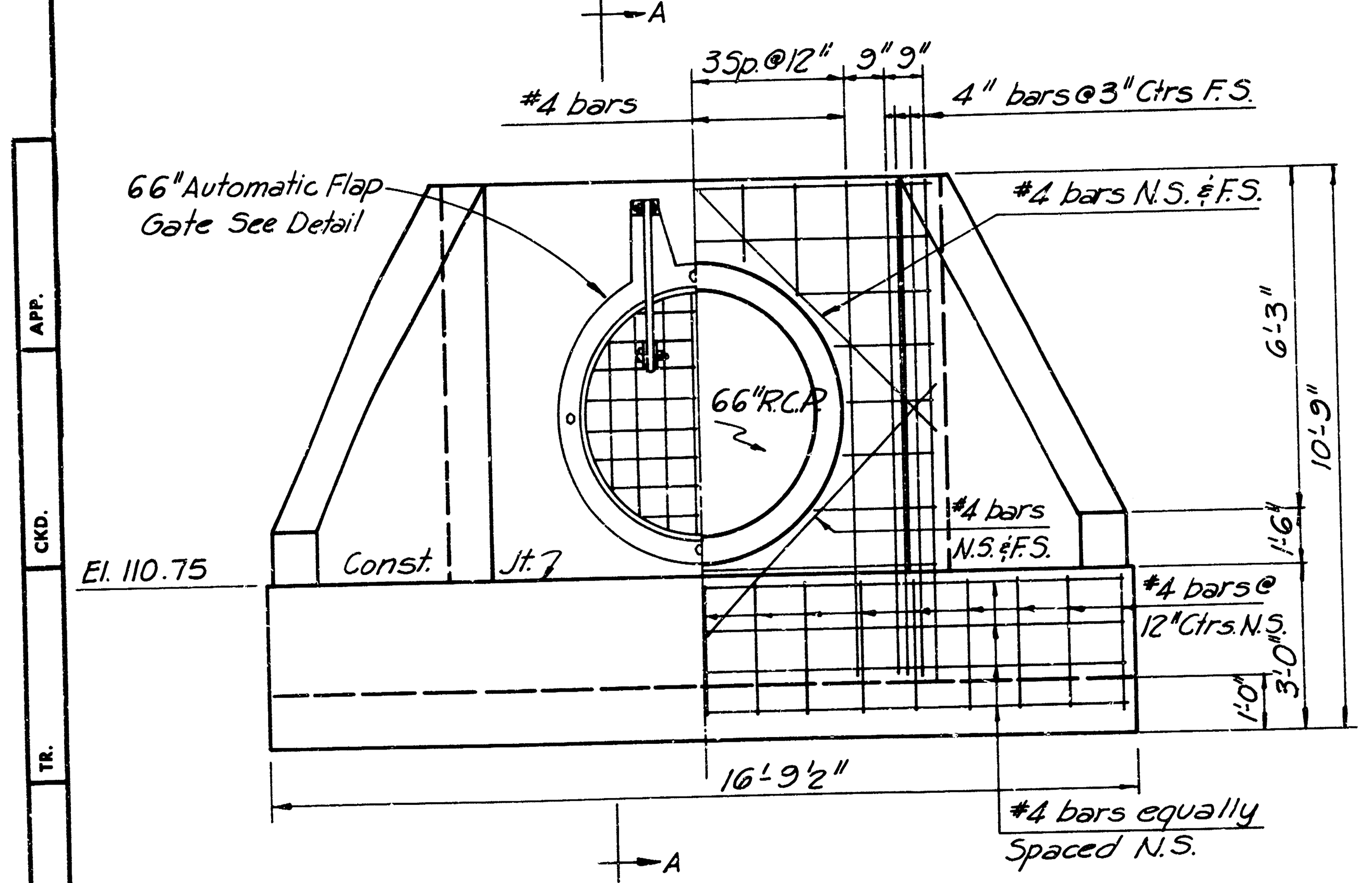




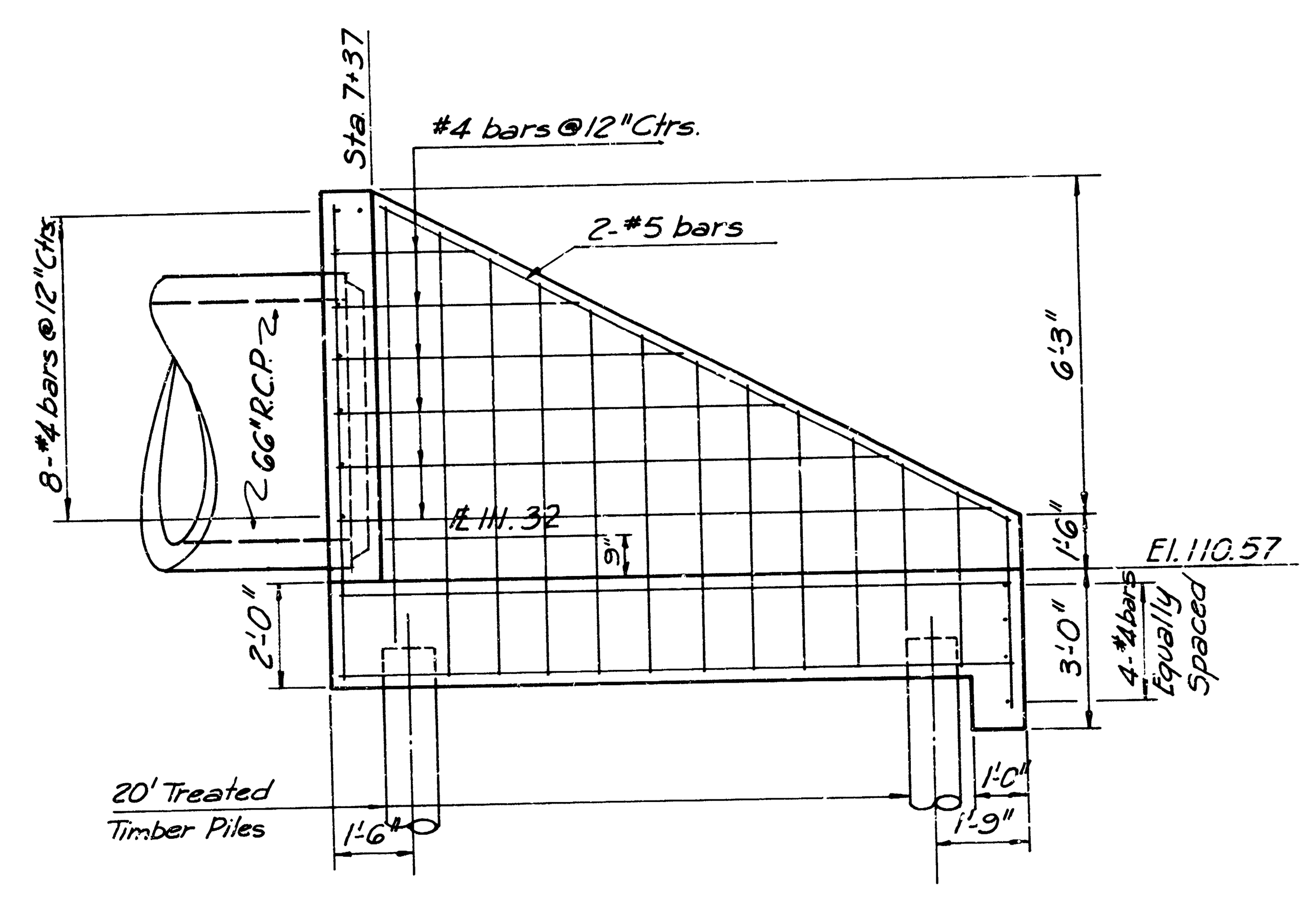
CITY OF WICHITA	
MAPLE STREET	
SLUICE GATE STRUCTURE	
CITY OF WICHITA PROJ. NO. 468-76-245-81373-000-000-001	
Booker/Freund Engineers Architects Planners	14/10
SCALE ___	DATE Nov. 1984
	DWG. NO. K-9130



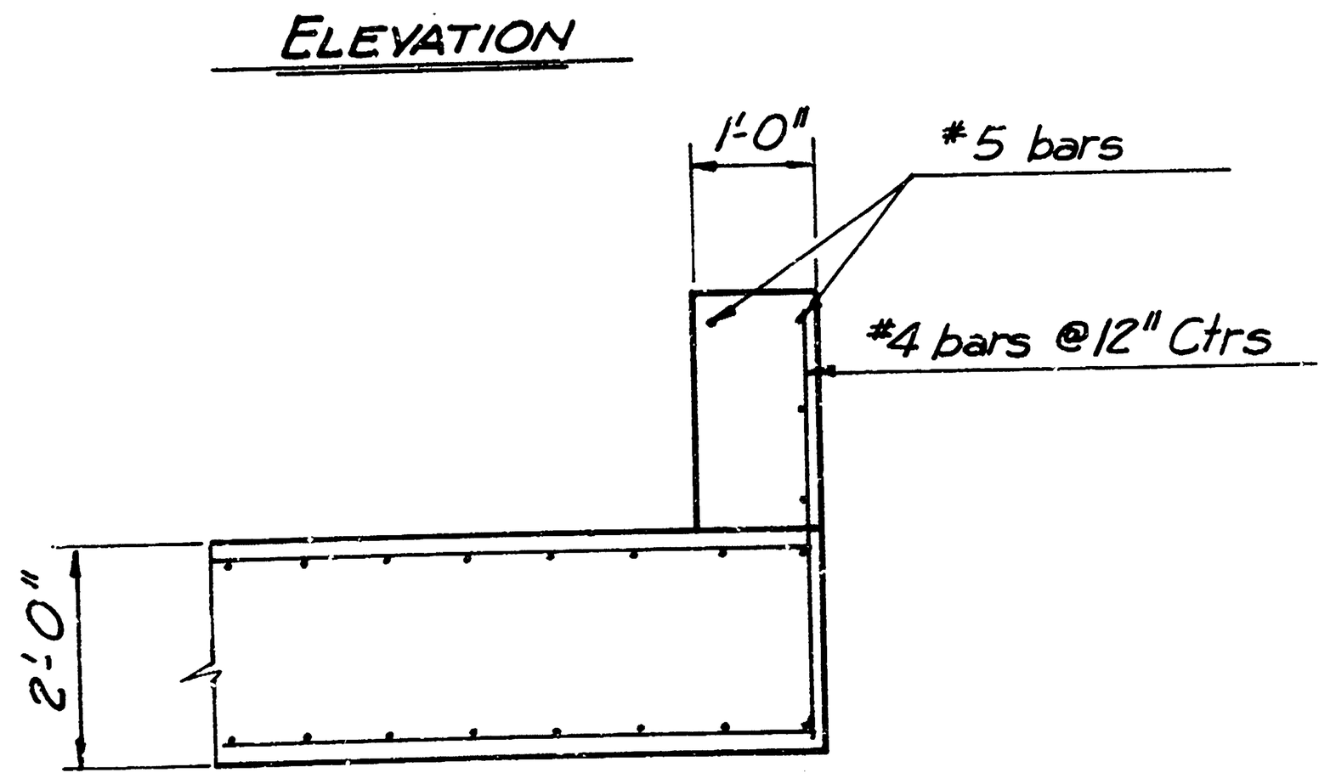
PLAN



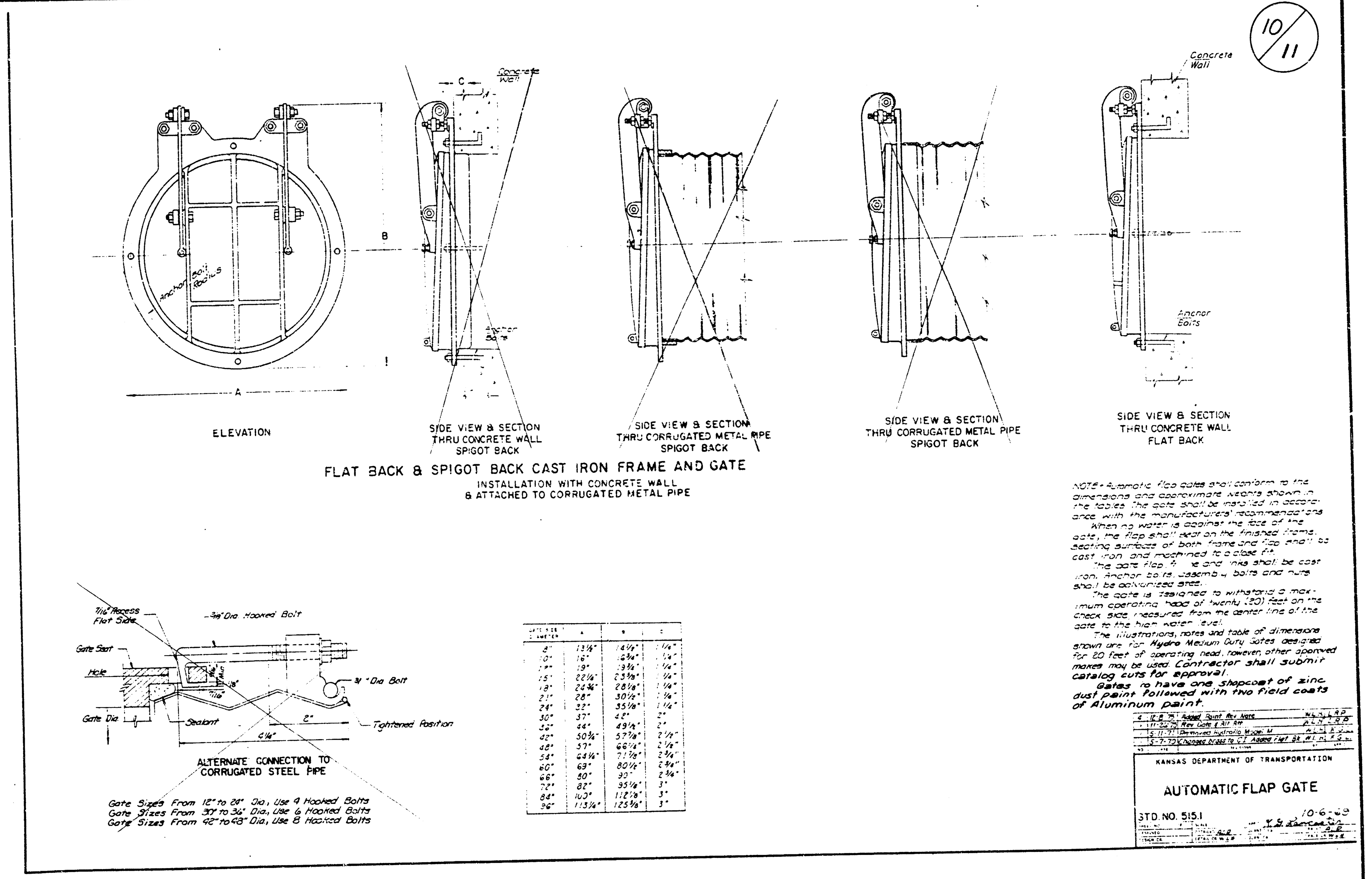
ELEVATION



SECTION A-A



SECTION B-B



NOTE:

City Concrete Pavement Mix (6.6 Sack) shall be used throughout. Bevel all exposed edges with ¾" triangular molding.

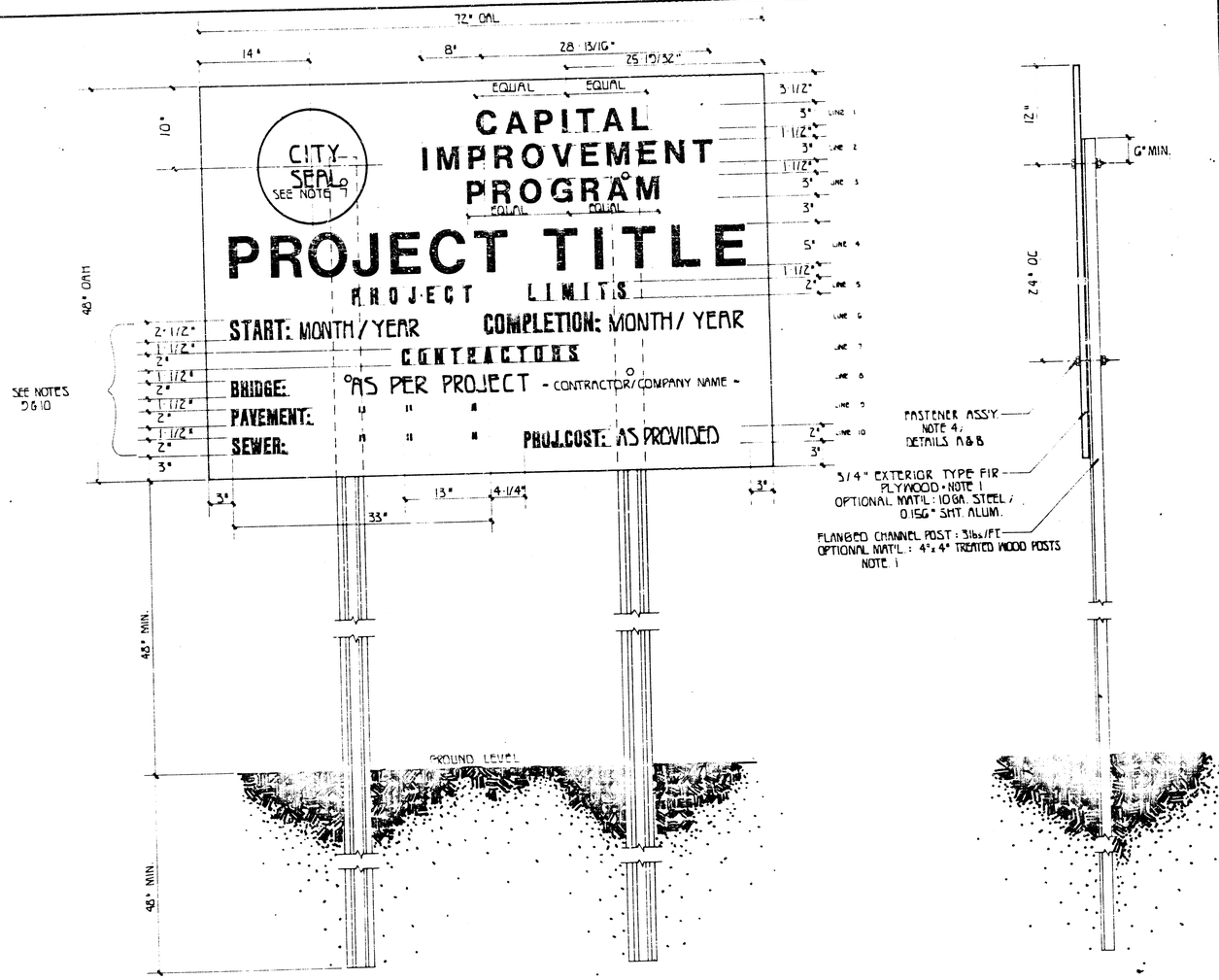
All dimensions are to centerline of bar unless otherwise noted.

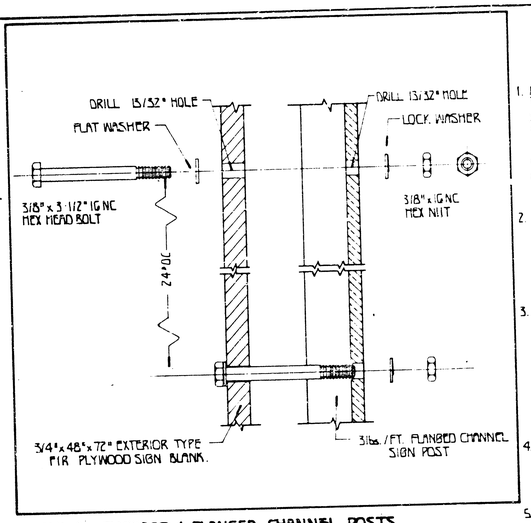
Concrete and reinforcing steel will not be paid for directly, but shall be subsidiary to the item "Concrete Headwall Structure."

CITY OF WICHITA		
MAPLE STREET **CONCRETE HEADWALL AND FLAP GATE** CITY OF WICHITA PROJ. NO. 468-76-245-81375-000-000-001		
Booker/Freund Engineers Architects Planners		15/16
SCALE —	DATE Nov. 1984	DWG. NO. K-9130

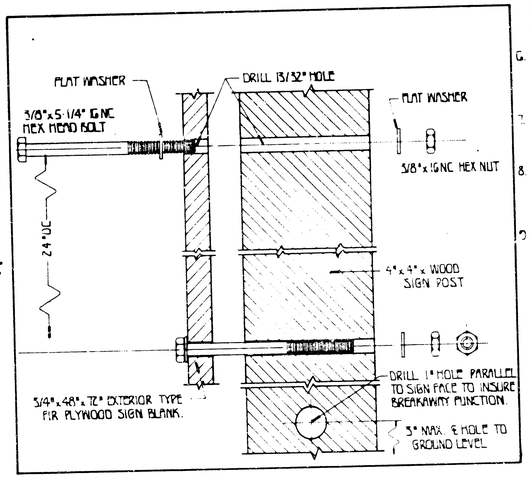
SURV. PLOT. DES. DR. TR. CKD. APP.

FILMED FROM THE BEST AVAILABLE COPY





DETAIL-A- PLYWOOD / FLANGED CHANNEL POSTS



DETAIL-B- PLYWOOD / 4"x4" WOOD POSTS

NOTES

1. MATERIALS: THE SIGN SHALL BE MANUFACTURED FROM BACKING MATERIALS COMPOSED OF (1.) METAL - 10GA. STEEL OR 0.135" THK. FLAT SHEET ALUMINUM; (2.) 5/4" EXTERIOR TYPE FIR PLYWOOD.

   THE SIGN POSTS SHALL BE (1.) FLANGED CHANNEL POSTS - 3lbs. PER FOOT OR; (2.) 4"x 4" COMMERCIAL GRADE, TREATED WOOD SIGN POSTS.

2. COLOR: THE FRONT, BACK, AND ALL EDGES OF THE SIGN SHALL BE PAINTED ONE COAT OF WHITE PRIMER TO BE FOLLOWED BY TWO COATS OF SEMI-GLOSS WHITE ENAMEL. ALL ENAMEL PAINTS SHALL BE OPAQUE AND OF EXTERIOR QUALITY. WHITE SIGN BLANK; BLACK- LEGEND

3. LEGEND AND INTERLINE SPACING: ALL LEGEND SHALL BE SERIES 'C' ALPHABET AS IS SPECIFIED IN THE STANDARD ALPHABETS FOR HIGHWAY SIGNS PUBLICATION. INTERLINE SPACING SHALL BE AS SPECIFIED ON THE LAY-OUT WITH EXCEPTION OF LINES 4 & 5. USE APPROPRIATE LETTER SERIES TO CENTER VARIABLE LENGTH PROJECT TITLE AND PROJECT LIMITS DISCRIPTION ON LINES 4 & 5 RESPECTIVELY. LEGEND SHALL BE BLACK ENAMEL.

4. HARDWARE: ALL BOLTS, NUTS, AND WASHERS SHALL BE ELECTROPLATED WITH ZINC OR CADMIUM. SEE DETAIL 'A' AND 'B'.

5. LOCATION OF SIGNS: SIGNS SHALL BE ERECTED WITHIN THE STREET RIGHT OF WAY AT LOCATIONS AS DESIGNATED ON THIS SHEET OR, AS DIRECTED BY THE FIELD ENGINEER. THE SIGN SHALL FACE APPROACHING TRAFFIC AND BE LOCATED SO AS NOT TO OBSCURE OR DETRACT FROM THE EFFECTIVENESS OF OTHER OFFICIAL STREET SIGNING AND MARKERS OR OBSTRUCT THE VISION OF MOTORISTS. SIGNS SHALL BE ERECTED IN ADVANCE OF ISSUING WORK ORDER.

6. THE CONTRACTOR SHALL SUPPLY ALL SIGN CONSTRUCTION MATERIALS AND SHALL BE RESPONSIBLE FOR ITS FABRICATION, INSTALLATION, MAINTENANCE, AND REMOVAL.

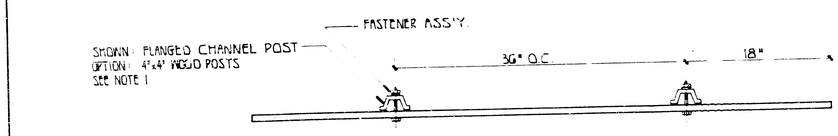
7. THE 14" DIA. CITY SEAL MAY BE PURCHASED FROM THE DEPARTMENT OF ENGINEERING, CITY OF WICHITA.

8. PRIOR TO SIGN FABRICATION, THE CONTRACTOR SHALL CONTACT THE CHIEF ENGINEER, DEPT. OF ENG., TO OBTAIN THE REQUIRED INFORMATION FOR SIGN LEGEND.

9. ONLY THE TYPE(S) OF WORK CONTRACTED WILL APPEAR ON INDIVIDUAL PROJECT SIGNS. ALL OTHER TYPES OF CONSTRUCTION NOTED ON LAYOUT WILL BE OMITTED. THE CONSTRUCTION CONTRACTED WILL BE POSITIONED ON LINE 3 VERTICALLY, AND HORIZONTALLY AS DIMENSIONED ON LAYOUT.

   EXAMPLE: IF THE PROJECT IS FOR PAVING ONLY, THE WORD - PAVEMENT - AND CONTRACTOR'S NAME ARE ALL THAT ARE PRINTED AS DESCRIBED ABOVE. THE WORDS - BRIDGE - AND - SEWER - ARE OMITTED FROM THE SIGN.

   WHERE TWO TYPES OF WORK ARE CONTRACTED, THEY SHALL BE POSITIONED ON LINES 3 & 2 VERTICALLY, AND AS DIMENSIONED ON LAYOUT HORIZONTALLY.
   - PROJ. COST - AND DOLLER AMOUNT WILL BE POSITIONED AS SHOWN ON LAYOUT.



LINE 4: CENTER AND ADJUST TO FIT (VARIABLE PROJECT TITLE) 5" UC
LINE 5: " " " " (VARIABLE PROJECT LIMITS DISCRIPTION) 2" UC

| | | |