B.M. "18.44 '0' Cut N. end conc. M.H. on S.W. cor. Sheridan & 33rd St. So.

Note: Existing walk is to remain in place, and Contractor shall replace walk damaged while constructing R.C.B.C.

Channel & Curve Data
Δ = 15°
R = 200'
T = 26.53'
C = 52.21'
Lare = 52.36'

N

Scale: 1" = 20'-0"

Sta. 0+25.15 (Channel)
Sta. 0+30.30 (Pvt.)
3-9.5'x6.0' RCBC

P.C. 0+84.03 (Channel Sta.)

P.T. 0+31.67 (Channel Sta.)

Remove RCP

Inlets & pipe by others

Constr. 2-2'x5' Std. Curb Inlets on RCBC

Remove CMP

P.C. 1+57.09 (Channel Sta.)

P.T. 2+11.45 (Pvt. & Channel Sta.)

60'

50'

31.3' Bk to Bk

ST.

Exist. Iron

Iron 0+56.21 FL. 90.40

0-5.91 FL. 90.30

f/o.

& New Channel

½ Sec. Line

SHERIDAN AVE.

Remove Posts

Tacked Stake

31' Bk to Bk

W

G

Iron

Remove CMPA

Inlets & pipe by others

60'

0+00

0+60

33rd

Note: Contractors for the R.C.B.C., Paving, and Sewers shall coordinate work efforts.

LOCATION MAP

BILL OF MATERIALS			
	ITEM	QUANTITY	UNIT
Lump Sum Bid	Class A AE Concrete	201	C.Y.
	Reinforcing Steel	27163	LBS
	Hand Excavation	16.3	C.Y.
	Concrete Handrail	65.2	L.F.
Bid Items	Common Excavation	782.9	C.Y.
	Compacted Fill	75.7	C.Y.
	Class A Concrete - Seal Course	21.4	C.Y.
	2'x5' Inlets	2	Ea.
	Pipe Removed	100	L.F.
	Posts Removed	5	Ea.

GENERAL NOTES

1. CLASS A AE CONCRETE SHALL BE USED THROUGHOUT THIS PROJECT. ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. SPECIFICATIONS.

2. EARTHWORK ALL EARTHWORK SHALL BE CONSIDERED AS "COMMON EXCAVATION" EXCEPT FOR THE TOEWALL. TOEWALL EXCAVATION SHALL BE INCLUDED IN "LUMP SUM BID".

3. BACKFILL ALL BACKFILL AND EXCAVATION TO EXTEND TO (2') BEYOND SIDES OF BOX AND WING WALLS.

4. BEVEL ALL EXPOSED EDGES OF CONCRETE WITH 3/4" TRIANGULAR MOULDING.

5. WEEPHOLES COARSE AGGREGATE SHALL BE DEPOSITED BEHIND EACH WEEPHOLE TO OCCUPY A SPACE EXTENDING (15") IN ALL DIRECTIONS ABOVE WEEPHOLE FLOW LINE. THIS WORK SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED A PART OF THE EXCAVATION WORK.

6. SEAL COURSE A SEAL COURSE CONSISTING OF 3" CLASS "A" CONCRETE SHALL BE CONSTRUCTED ONLY WHERE SPECIFIED ON THE PLANS OR BY THE ENGINEER. NO REINFORCING SHALL BE PLACED UNTIL THE SEAL COURSE HAS GAINED SUFFICIENT STRENGTH TO PERMIT WORKING UPON IT WITHOUT DAMAGE.

7. BIDDING OF CULVERT THE CULVERT SHALL BE BID AS A "LUMP SUM BID" EXCEPT FOR THE FOLLOWING ITEMS: CU. YDS. COMMON EXCAVATION, CU. YDS. COMPACTED FILL, CU. YDS. CLASS "A" CONCRETE, 2-2' x 5' CURB INLETS, LIN. FT. PIPE REMOVED, AND POSTS REMOVED.

8. THE QUANTITIES SHOWN IN THE "BILL OF MATERIALS" OR ITEMS WHICH ARE INCLUDED IN THE "LUMP SUM BID" OF THE CULVERT ARE FOR "INFORMATION PURPOSES ONLY". THE CONTRACTOR MUST SATISFY HIMSELF TO THE "QUANTITIES" AND THE ENGINEER ASSUMES NO RESPONSIBILITIES FOR THEIR ACCURACY. THE CONTRACTOR WILL HAVE THE FULL RESPONSIBILITY FOR PROVIDING ALL MATERIALS ON THE DETAILED PLANS NECESSARY TO COMPLETE THE PROJECT.

Survey L.F.G.
Plan C.E.C.
Ex. C.E.C.
Checked

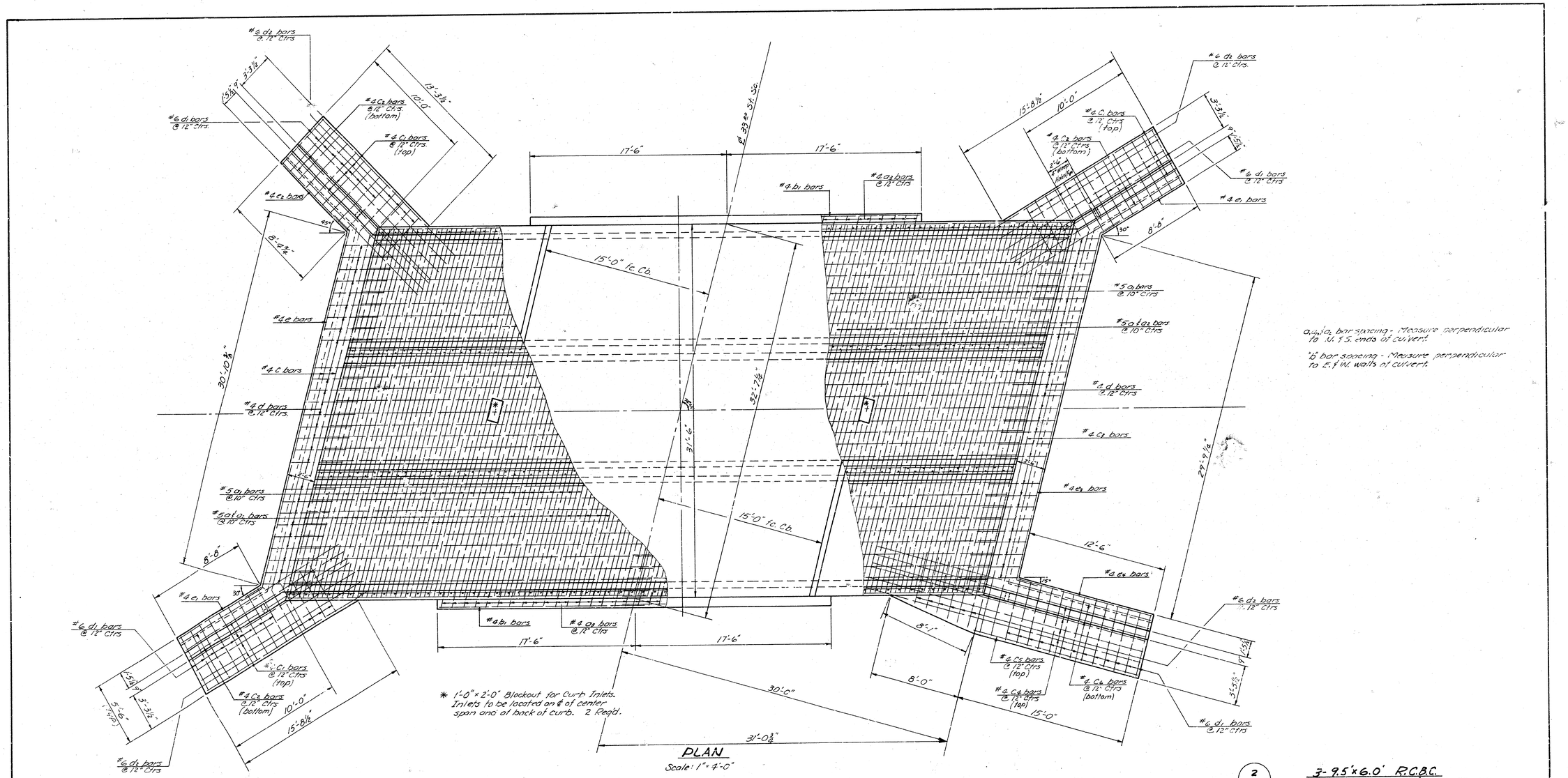
3-9.5'×6.0' REINFORCED CONCRETE BOX CULVERT IN CONNECTION WITH PAVING OF SHERIDAN AVE. FROM S.L. 31ST ST. SO. TO S.L. 33RD ST. SO. CITY OF WICHITA, KANSAS

R.W. LINN CITY ENGINEER

DATE PROJ. NO. DAKS 574130

1/5

1/6



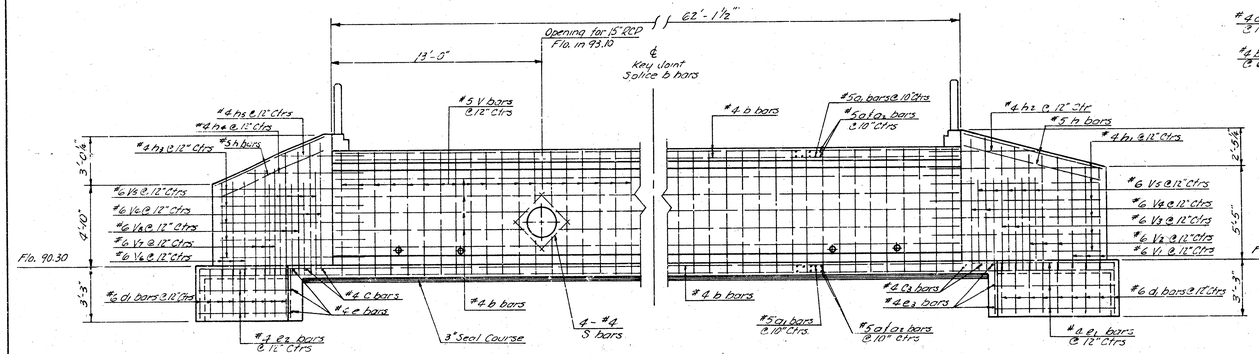
PLAN

Scale: 1" = 4'-0"

2/6

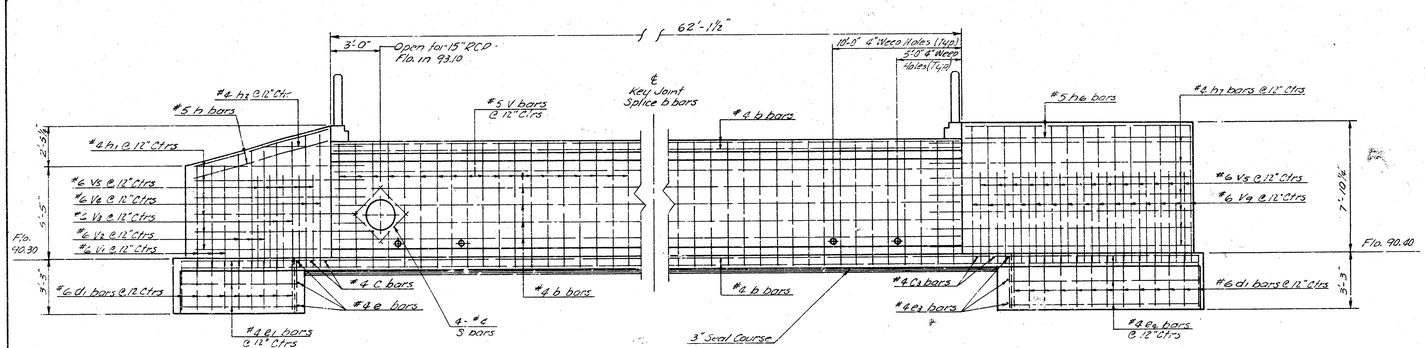
3-9.5'x6.0' R.C.B.C.
SHERIDAN AVE. F 33RD ST. SO.
DAKS 5761/30

2/5



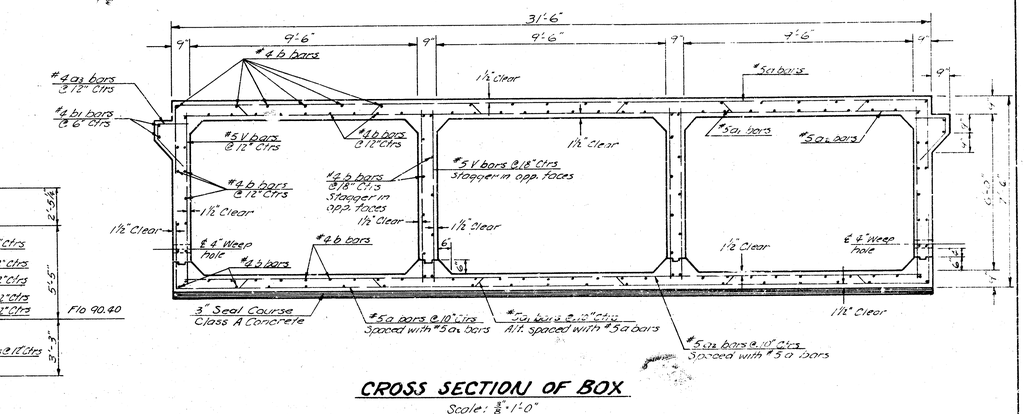
SECTION OF WEST WALL

Scale: 1"=4'-0"



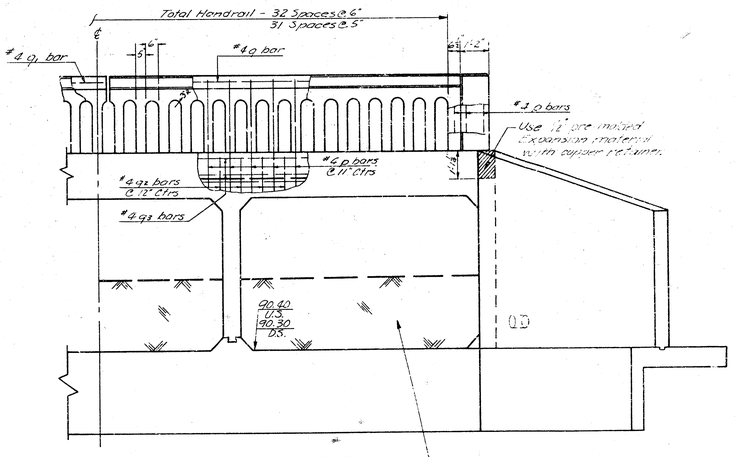
SECTION OF EAST WALL

Scale: 1"=4'-0"



CROSS SECTION OF BOX

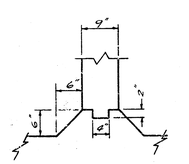
Scale: ⅜"=1'-0"



HALF END SECTION

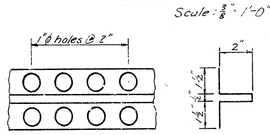
Scale: ⅜"=1'-0"

Culvert Contractor: To replace excavated material from R.C.B.C. (Top fill to match Fl. grade of the new channel) No. 1 So. of 33rd St.



CONSTRUCTION JOINT DETAIL

No Scale



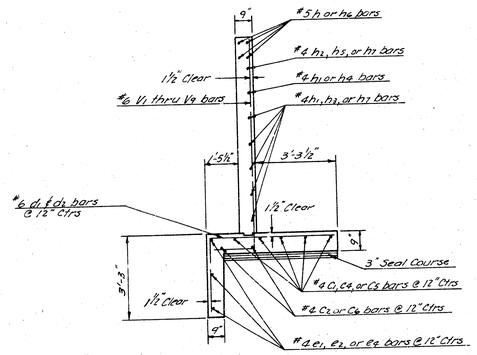
12 OZ. SHEET COPPER RETAINER

No Scale

3/6

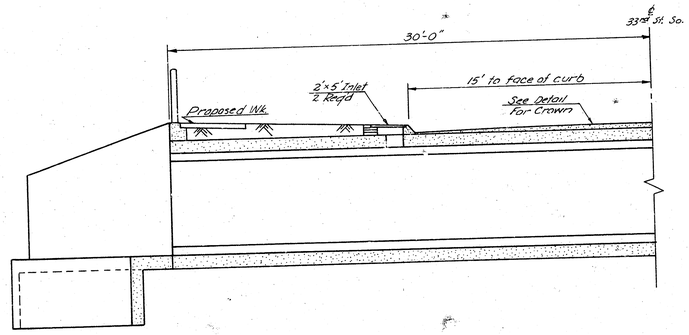
3-9.5'x6.0' R.C.B.C.
SHERIDAN AVE. & 33RD ST. SO.
DAKS 574130

3/15



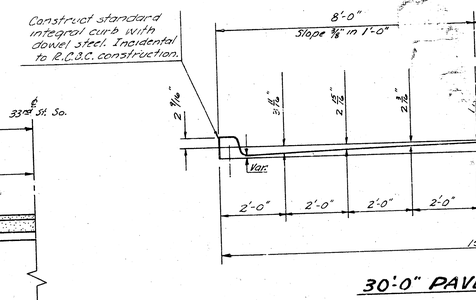
SECTION THRU WING WALL

Scale: $\frac{3}{8}$" = 1'-0"



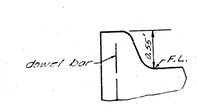
CROSS SECTION-BOX & PIT

Scale: 1" = 4'-0"

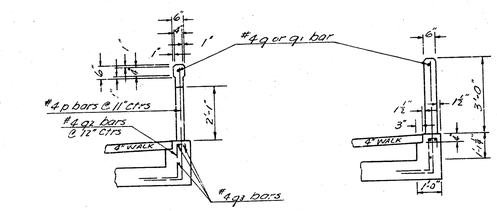


30'-0" PAVEMENT CROWN

Scale: 1" = 2'-0"

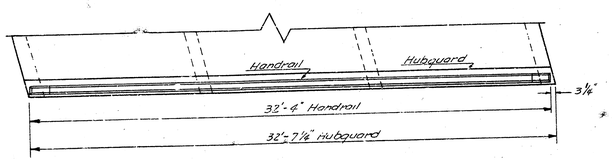


CURB DETAIL



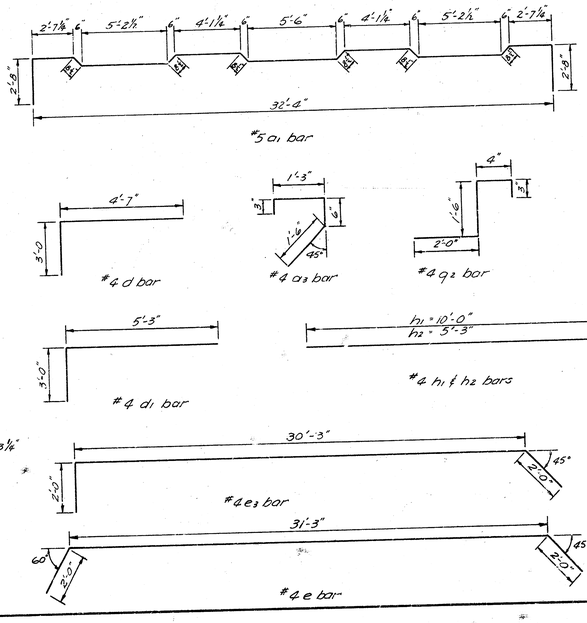
HANDRAIL DETAIL

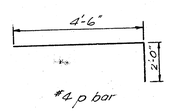
Scale: $\frac{3}{8}$" = 1'-0"



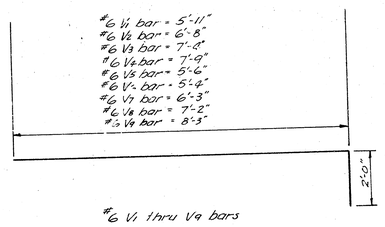
HANDRAIL LOCATION

Scale: 1" = 4'-0"

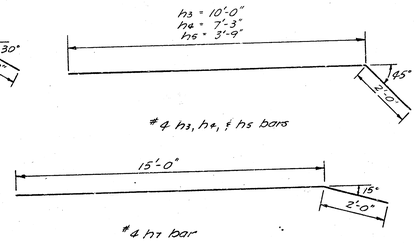




#4 p bar



#6 V1 thru V9 bars



#4 h3, h4, & h5 bars

#4 h7 bar

BENDING DIAGRAMS No Scale

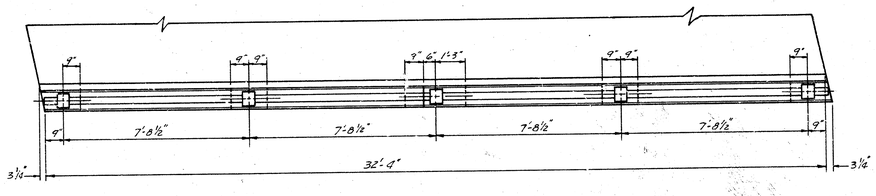
BAR	SIZE	LENGTH	NO.	LOCATION	SHAPE	SPACING	WEIGHT
a	#5	32'-4"	144	BOX		10"	2815.71
a_1	#5	38'-11"	144	BOX		10"	3385.47
a_2	#5	32'-4"	144	BOX		10"	2835.71
a_3	#4	3'-6"	68	PIT SEAT		12"	158.98
b	#4	31'-11"	264	BOX		12" & 18"	5621.16
b_1	#4	18'-5"	8	PIT SEAT		6"	98.42
c	#4	31'-3"	2	So. APRON		12"	41.75
c_1	#4	16'-6"	15	WING WALL-SE, SW, NW		12"	165.33
c_2	#4	16'-6"	6	WING WALL-SE, SW, NW		12"	66.7
c_3	#4	35'-0"	2	No. APRON		12"	46.76
c_4	#4	25'-0"	4	WING WALL-N.E.		12"	44.80
c_5	#4	15'-0"	1	WING WALL-N.E.		12"	10.02
c_6	#4	25'-0"	2	WING WALL-N.E.		12"	33.20
d	#4	7'-7"	54	No. & So. APRON		12"	273.25
d_1	#6	8'-3"	90	ALL WING WALLS		12"	455.61
d_2	#6	9'-6"	20	ALL WING WALLS		12"	135.18
e	#6	35'-3"	3	So. APRON		12"	70.04
e_1	#4	8'-8"	6	WING WALL-SE, NW		12"	34.76
e_2	#4	8'-5"	3	WING WALL-SW.		12"	16.87
e_3	#4	34'-3"	3	No. APRON		12"	68.64
e_4	#4	12'-6"	3	WING WALL-NE.		12"	25.05
g	#4	18'-5"	2	HANDRAIL		-	19.37
g_1	#4	15'-8"	2	HANDRAIL		-	20.98
g_2	#4	9'-2"	65	HUB GUARD		12"	181.06
g_3	#4	32'-3"	6	HUB GUARD		9"	129.26
h	#5	10'-0"	12	WING WALL-SE, SW, NW		9"	125.16
h_1	#4	12'-0"	12	WING WALL-SE, NW		12"	476.17
h_2	#4	7'-3"	2	WING WALL-SE, NW		12"	1.69
h_3	#4	12'-0"	5	WING WALL-S.W.		12"	20.08
h_4	#4	9'-3"	1	WING WALL-S.W.		12"	6.18
h_5	#4	5'-9"	1	WING WALL-S.W.		12"	3.82
h_6	#4	4'-9"	4	WING WALL-NE.		12"	39.41
h_7	#4	17'-0"	7	WING WALL-N.E.		12"	79.89
p	#4	6'-6"	74	HANDRAIL		11"	321.37
s	#4	3'-0"	8	DIKE ENTRANCE		-	16.32
V	#5	7'-0"	292	BOX		12" & 18"	2131.89
V_1	#6	7'-11"	6	WING WALL-SE, NW		12"	71.37
V_2	#6	8'-8"	6	WING WALL-SE, NW		12"	78.22
V_3	#6	9'-4"	4	WING WALL-SE, NW		12"	56.05
V_4	#6	9'-9"	6	WING WALL-SE, NW		12"	87.87
V_5	#6	7'-6"	29	ALL WING WALLS		12"	326.67
V_6	#6	7'-9"	3	WING WALL-SW		12"	51.03
V_7	#6	8'-3"	3	WING WALL-SW		12"	57.17
V_8	#6	9'-2"	2	WING WALL-SW		12"	27.55
V_9	#6	10'-3"	15	WING WALL-NE		12"	230.93

BAR SCHEDULE

4/6

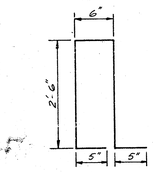
3-9.5'x6.0' R.C.B.C.
SHERIDAN AVE. & 33RD ST. SO.
DAK'S 57+130

4/5

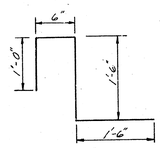


PLAN OF RAILING

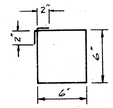
3/8" = 1'-0"



n bar



f bar



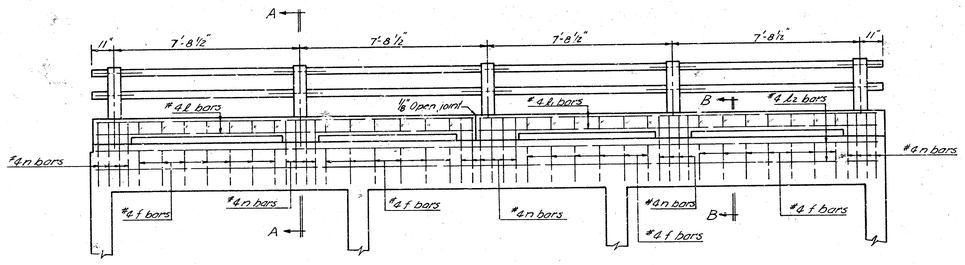
k bar

BENDING DIAGRAMS

No Scale

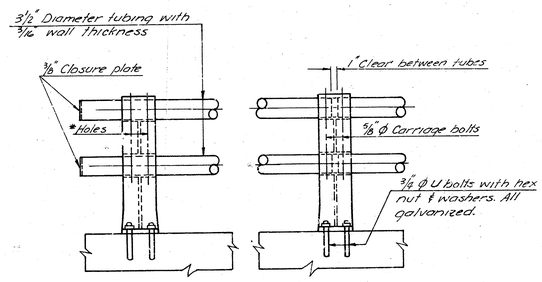
BAR SCHEDULE					
BAR	SIZE	LENGTH	NO.	SHAPE	WEIGHT*
* ℓ	#4	15'-5"	8	——	82.40
* ℓ_1	#4	16'-5"	8	——	87.75
* ℓ_2	#4	32'-1"	8	——	171.44
* n	#4	6'-4"	44	⊐	186.05
* f	#4	4'-6"	52	⊐	156.31
* k	#4	2'-4"	52	□	80.93

* These bars replace the p, g_1, g_1, g_2, & g_3 bars used for the concrete handrail & hubguard.



END SECTION OF RAILING

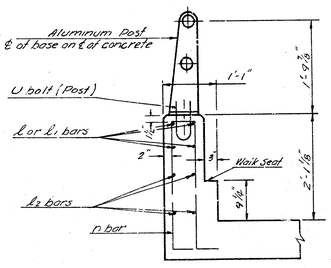
3/8" = 1'-0"



Holes: 11/16" square holes in post under head and 11/16" round holes under nuts for 5/8" ϕ × 5½" carriage bolts with hex nuts.

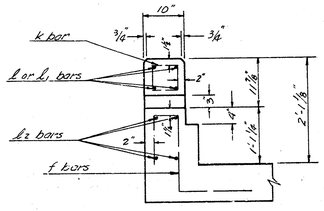
RAIL & POST CONNECTIONS

No Scale



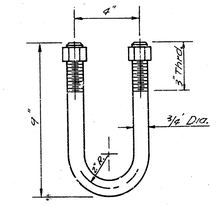
SECTION A-A

3/4" = 1'-0"



SECTION B-B

3/4" = 1'-0"



GALVANIZED U-BOLT DETAIL

No Scale

Notes: Aluminum Handrail.

Aluminum posts shall be Reynolds Aluminum Highway Products Bridge Railing System 1.19 2R19A or equal.

Top & bottom rails shall be 3½" O.D. × 3/16" wall tube of 6063-T6 Aluminum.

Aluminum shims between concrete and post base may be used. The space below posts shall be thoroughly caulked with Alumilastic compound or other approved material.

NOTE:

Substitution of the aluminum handrail for the concrete handrail, and the changes in dimensions and quantities as a result of the substitution, shall be considered a part of the original lump-sum bid price for the culvert, and no additional cost shall be added for the material substitution or quantity changes.

REVISED HANDRAIL 10-31-75
3-9.5'×6.0' R.C.B.C.
SHERIDAN AVE. & 33RD ST. SO.
DAKS 574130

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