CITY OF WICHITA, KANSAS

STORM WATER SEWER NO. 191

(BRIARWOOD ESTATES PHASE I)

PROJECT NO. 468-76-245-80955-000-000-001

BENCH MARKS

BM-C.O.W. Std. Brass Cup in Conc. on N side 13th St. at N ¼ Cor Sec. 18 T27S, R1W Elev.=1580.00

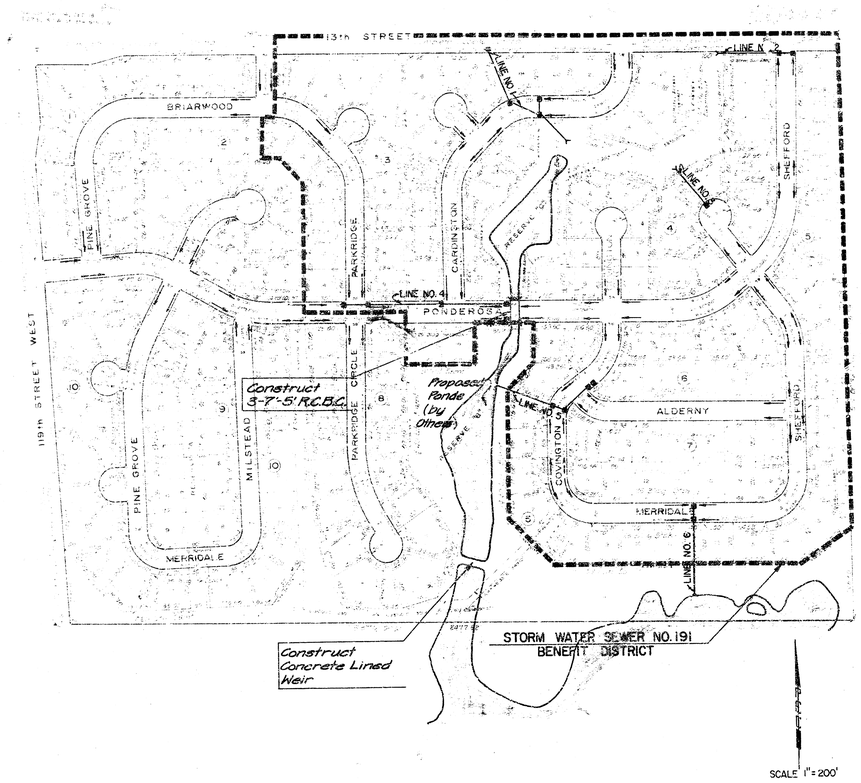
BM-R.R. Spike in 1st H.L.P. W. of Jaax prop. Elev.=1587.79

BM-R.R. Spike in 2nd H.L.P. W. of Jaax prop. Elev.=1566.60

BM-R.R. Spike in Hedge Tree in N-S Hedge Row N. Line Ponderosa. Sta. 20+10 Elev.=1466.52

BM-R.R. Spike in 9" Elm Tree along east side of creek near Lot 2, Block 5 Elev.=1425.6

BM-R.R. Spike in Elm Tree 650'± W. of N.S. Hedge Row along S. Line Merridale Elev.=1420.6



LEGEND

- BENEFIT DISTRICT BOUNDARY
- DRAINAGE FLOW DIRECTION
- PROPOSED INLET
- PROPOSED MANHOLE

INDEX OF SHEETS

1. TITLE SHEET
2-6. PLAN & PROFILES
7. INLET SHAPING & HEADWALL DETAILS
8-10. 3-7'x5' R.C.B.C.
11. DETAIL STANDARD TYPE IA CURB INLET
12. DETAIL PRECAST TYPE IA CURB INLET
13. DETAILS OF SEWER APPURTENANCES
14. STANDARD DETAILS REINFORCED CONCRETE MANHOLES
15. WEIR LAYCUT
16. WEIR DETAILS

GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE WORK WITH PAVING AND SANITARY CONTRACTORS, AND CONTACT RELEVANT UTILITY COMPANIES AND OTHER AGENCIES INVOLVED WITH THIS PROJECT SITE DEVELOPMENT.
2. FIELD ENGINEER SHALL TAKE TIES TO ALL IRONS AND THIMBLES IN THE PROJECT AREA BEFORE CONSTRUCTION BEGINS. FIELD ENGINEER SHALL REPLACE ALL SUCH IRONS AND THIMBLES DISTURBED DURING CONSTRUCTION.
3. THE TOPS OF INLETS AND MANHOLES AS NOTED ON THE PLANS MAY VARY SO AS TO MEET PROPOSED TOP OF CURB ELEVATIONS OR PAVEMENT ELEVATIONS. THE FIELD ENGINEER SHALL LOCATE INLETS AND MANHOLES WITH REFERENCE TO PROPOSED PAVING PLANS OF THE PERTINENT STREETS.
4. ALL METAL PIPES SHALL BE HELICALLY CORRUGATED PIPE, AND SHALL BE SMOOTH FLOW PIPES FOR SIZES 24" DIAMETER OR LARGER. ALL CONNECTIONS FOR THESE PIPES SHALL BE FAIRLY WATERTIGHT CONSTRUCTED USING HUGGER TYPE COUPLER OR EQUAL.
5. ALL CONCRETE SHALL BE "6-SACK CONCRETE" UNLESS OTHERWISE NOTED.
6. THE RIPRAP FOR THIS PROJECT SHALL BE TYPE IV. THE TYPE IV RIPRAP SHALL BE 12" RIPRAP ON 6" SAND AND GRAVEL BEDDING. THE ROCK FOR RIPRAP AND GRAVEL PROTECTION SHALL BE HARD, DENSE, DURABLE, AND SHALL BE REASONABLY WELL GRADED. THE SIZE RANGE OF ROCK USED SHALL BE A MAXIMUM OF ONE CUBIC FOOT AND A MINIMUM OF 1 1/2". THE 6 INCH SAND AND GRAVEL BEDDING FOR RIPRAP SHALL BE A CONTINUOUS LAYER OF SAND AND GRAVEL OR SAND AND CRUSHED ROCK, REASONABLY WELL GRADED TO A MAXIMUM OF 1 1/2 INCHES IN SIZE.
7. CONTRACTOR SHALL AVOID UNCOVERING EXISTING WATERLINES UNLESS ABSOLUTELY NECESSARY. UNCOVERING SHALL BE DONE ONLY IN THE PRESENCE OF A WATER DEPT. ENGINEER.
8. FOR TYPE 1A CURB INLETS CONTRACTOR SHALL HAVE THE OPTION TO INSTALL PRE-CAST INLETS IN LIEU OF BRICK CONSTRUCTION FOR TYPE 1A CURB INLETS.
9. EXCESS TRENCH MATERIAL SHALL BE WASTED AS DIRECTED BY CITY ENGINEER. THIS WORK SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.
10. CHANNEL AND/OR POND SHAPING AT RCBC SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER AND SHALL BE SUBSIDIARY.

SEPTEMBER, 1980

CHARLES S. BROWN LICENSED 7581 KANSAS PROFESSIONAL ENGINEER

No.	Revision	By	Date

CITY OF WICHITA, KANSAS

TITLE SHEET

STORM WATER SEWER NO. 191

PROJ NO. 468-76-245-80955-000-000-001

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS

WICHITA, KANSAS

Designed by CSB	Job No. 80214-2	Sht. 1	of 16
Drawn by GH	Date Sept 1980		

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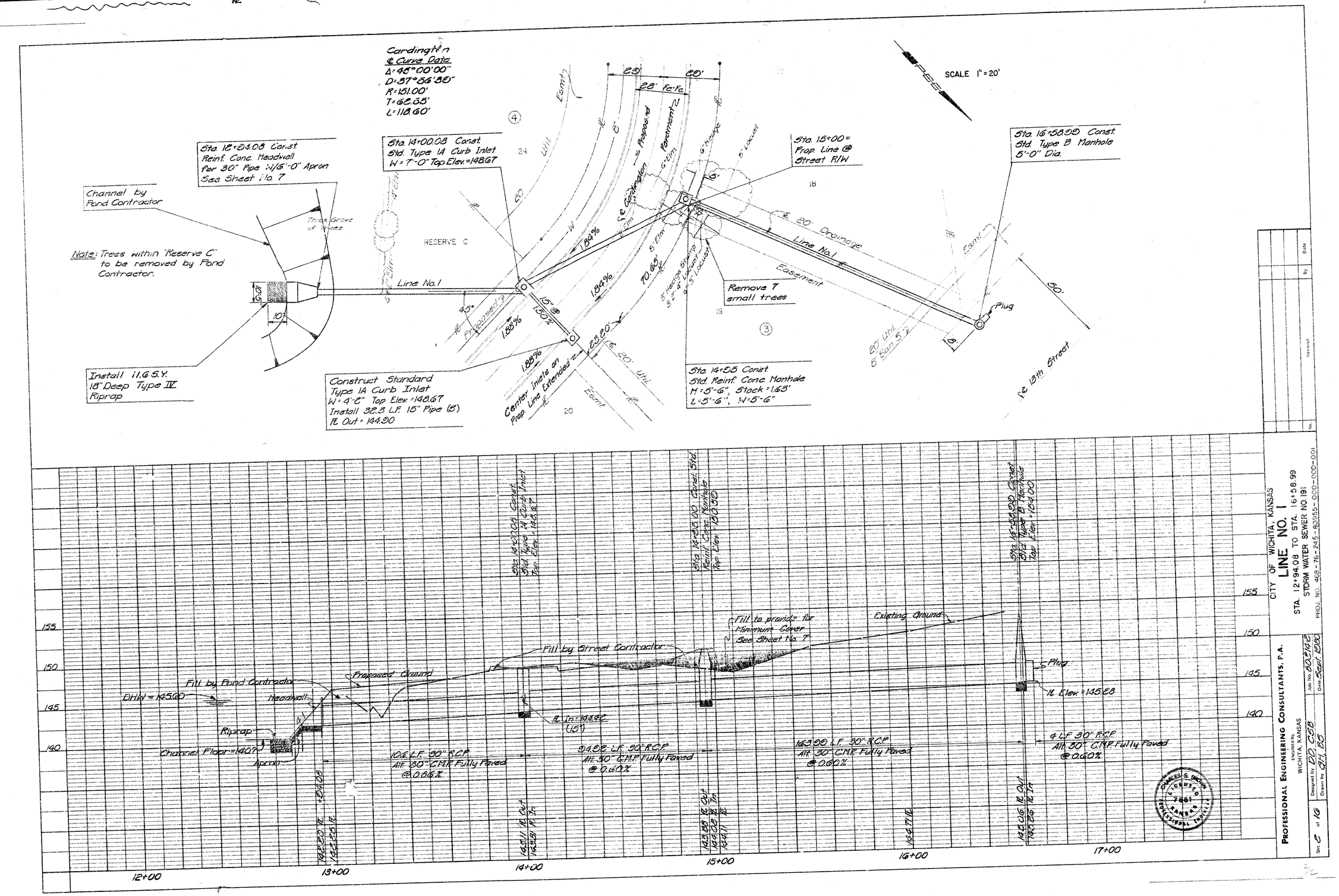

CITY OF WICHITA, KANSAS
LINE NO. 1
STA. 12+94.08 TO STA. 16+58.99
STORM WATER SEWER NO. 191
PROJ. NO. 468-76-245-80955-000-000-001

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

Designed by DD, CSB
Drawn by GH, BS
Job No. 80,514.2
Date Sept. 1980
Sht. 2 of 16

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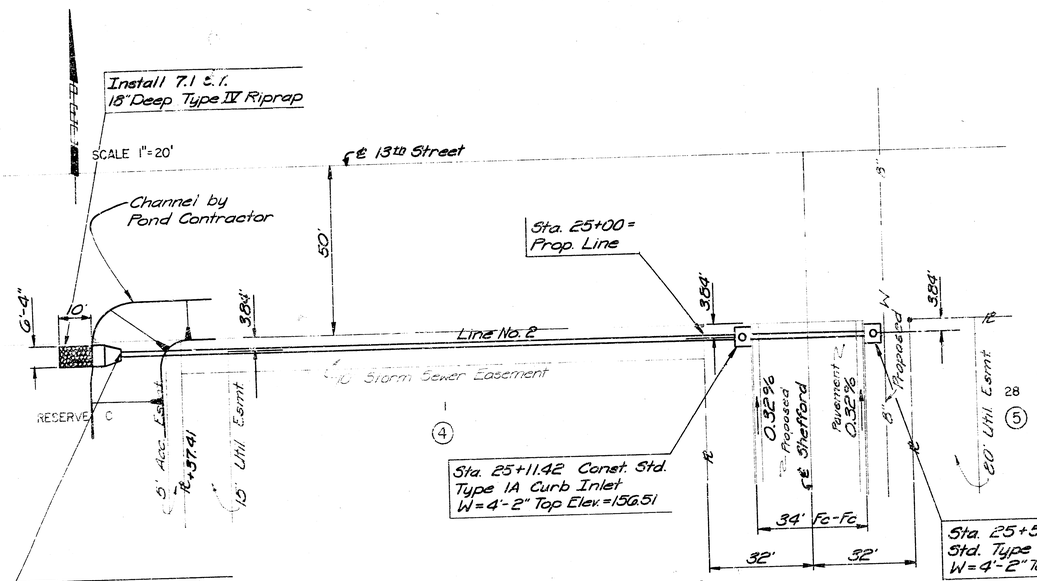

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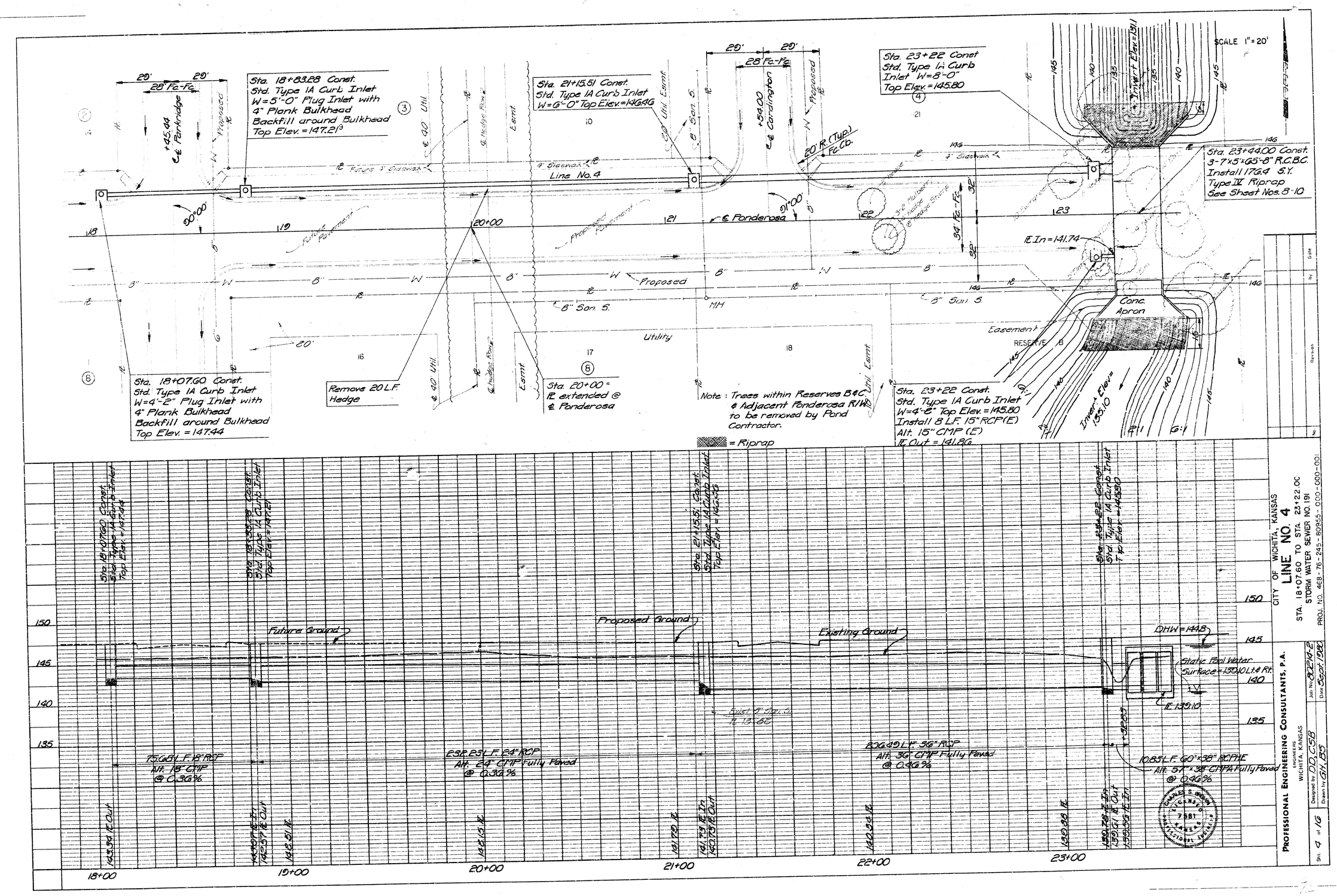

CITY OF WICHITA, KANSAS
LINE NO. 4
STA. 18+07.60 TO STA. 23+22.00
STORM WATER SEWER NO. 191
PROJ. NO. 468-76-245-80955-000-000-001

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

Designed by DD, CSB
Drawn by GH, BS
Job No. 80214-2
Date Sept. 1980

Sht. 4 of 16

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Note: Trees within "Reserve C" to be removed by Pond Contractor.

Sta. 55+11.42 Const.
Std. Type 1A Curb Inlet
W = 4'-2" Top Elev. = 145.60

Sta. 55+00 = Prop. Line @ R/W Line

℄ 20' Storm Sewer Esmt.

Line No. 5

Center Inlets on ℄ Extended

4 Covington
℄ Curve Data
Δ = 53°30'00"
D = 67°38.15"
R = 84.71'
T = 42.70'
L = 79.10'

Waters Edge

Reserve B

Sta. 53+21.00 Const.
Reinf. Conc. Headwall
for 24" pipe W/4'-0" Apron

Channel by Pond Contractor

℄ 20' Util Esmt.

Sta. 56+59.37 Const.
Std. Type 1A Curb Inlet
W = 4'-2" Top Elev. = 146.02

Sta. 56+51.02 Const.
Std. Type 1A Curb Inlet
W = 4'-2" Top Elev. = 145.99

Alderny
℄ Curve Data
Δ = 53°30'00"
D = 52°42'36"
R = 108.70'
T = 54.70'
L = 101.50'

Proposed ℄ Covington

Proposed ℄ Alderny

Sta. 55+46.58 Const.
Std. Type 1A Curb Inlet
W = 4'-2" Top Elev. = 145.60

Note: Contractor shall provide for minimum cover over storm sewer pipes as shown on Sheet No. 7

SCALE 1" = 20'

Fill by Storm Sewer Contractor
Dtwtr = 144.00
Headwall
Apron
Static Pond Water Surface = 139.00
Proposed Ground
Fill by Pond Contractor
Fill by Street Contractor
Existing Ground
Exist. 18" SWTS
to be Used

190.42 L.F. 24" RCP
Alt. 24" CMP Fully Paved
@ 0.93%

35.16 L.F. 18" RCP
Alt. 18" CMP
@ 1.50%

104.44 L.F. 18" RCP
Alt. 18" CMP
@ 0.66%

8.35 L.F. 18" RCP
Alt. 18" CMP
@ 1.50%

52+00 53+00 54+00 55+00 56+00 57+00

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

CITY OF WICHITA, KANSAS
LINE NO. 5
STA. 53+21.00 TO STA. 56+59.37
STORM WATER SEWER NO. 191
PROJ. NO. 468-76-245-80955-000-000-001

Job No. 80274-2
Date Sept. 1980
Designed by DD, CSB
Drawn by GH, BS
Sht. 5 of 16

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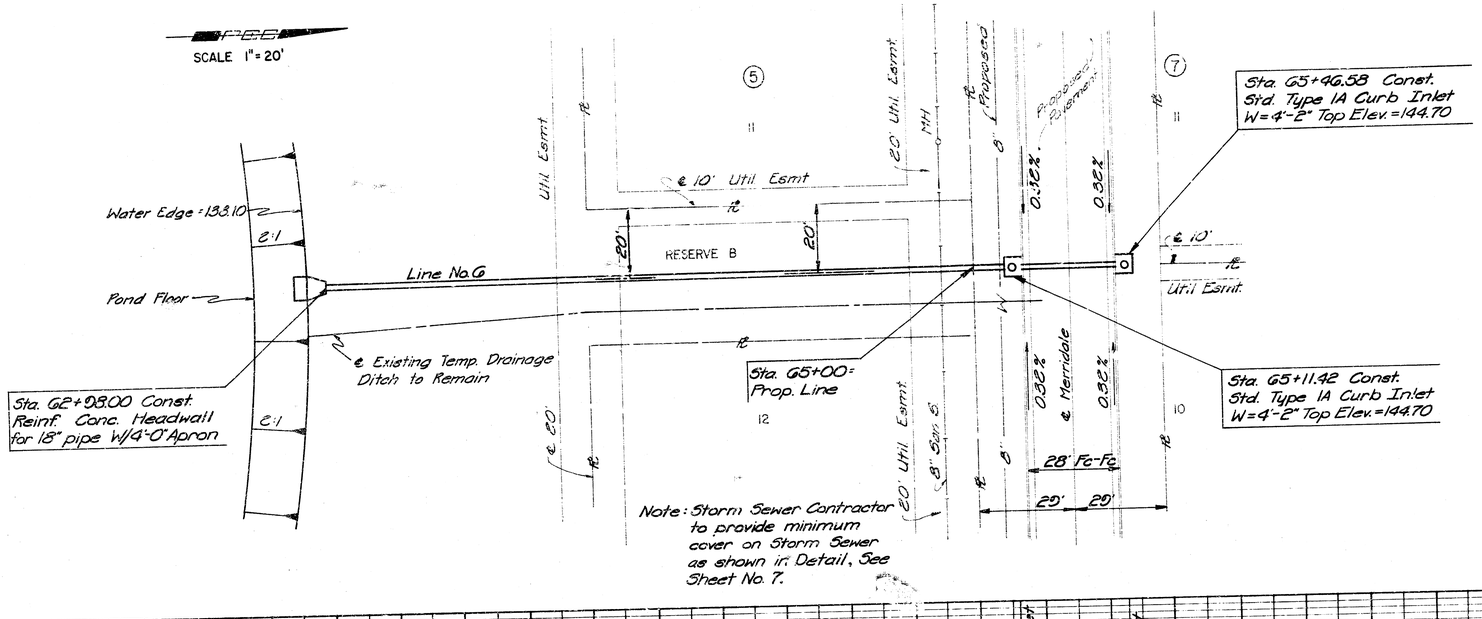
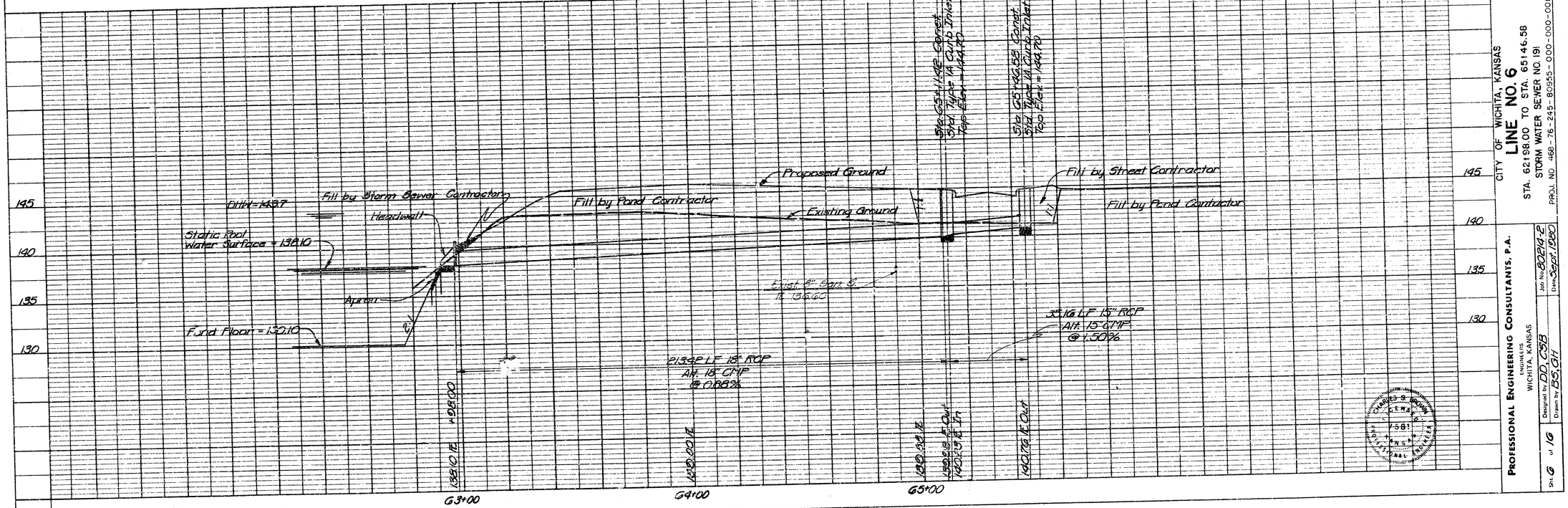
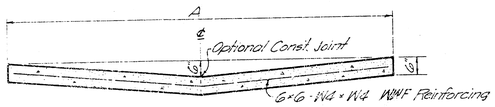
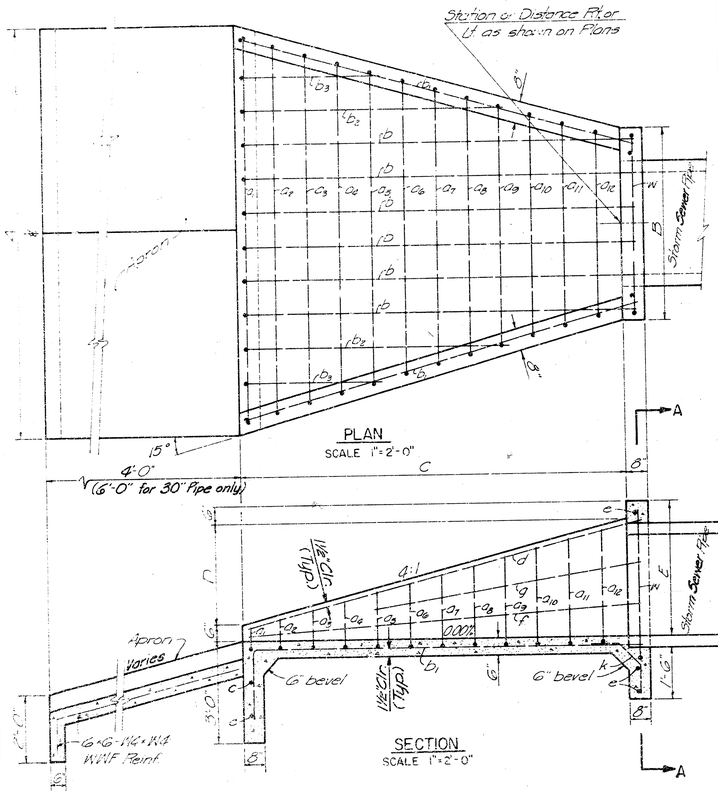
SCALE 1" = 20'




Proposed Ground
Existing Ground
Fill by Street Contractor
Fill by Pond Contractor
Fill by Storm Sewer Contractor
Headwall
Apron
Static Pool
Water Surface = 138.10
Pond Floor = 132.10
Pond Floor = 132.10
Pond Floor = 132



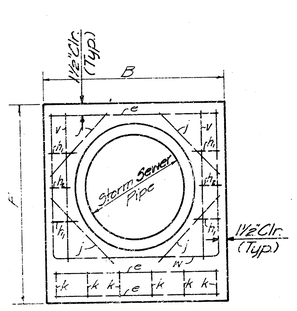
TYPICAL APRON SECTION
SCALE 1"=2'-0"



PIPING ALTERNATIVES			
RCP N=0.013	RCPHE N=0.013	CMP* N=0.013	CMPA* N=0.013
15"	———	15"	17"x13"
18"	23"x14"	18"	21"x15"
24"	30"x19"	24"	28"x20"
30"	38"x24"	30"	35"x24"
36"	45"x29"	36"	42"x29"
42"	53"x34"	42"	49"x33"
48"	60"x38"	48"	57"x38"
54"	68"x43"	54"	64"x43"
60"	76"x48"	60"	71"x47"

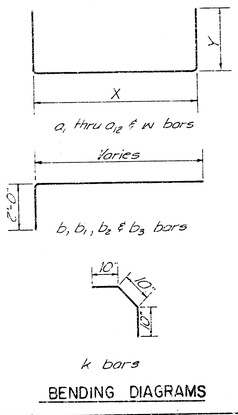
*Fully Paved except 15" & 18" and their equivalent CMPA which shall be Helically Corrugated.

NOTE
1. All Plan and Bid Items refer to Reinforced Concrete Pipe. Corrugated Metal Pipe Fully Paved may be substituted for RCP as shown in Schedule above.
2. All pipe furnished for this project shall be of the same material.

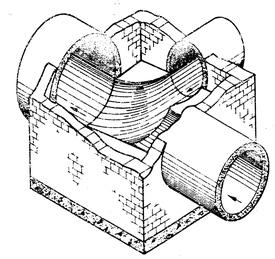


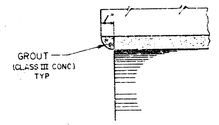
BAR LIST

bar	Shape	Headwall for 36" Pipe Length X	Y	Total	Headwall for 30" Pipe Length X	Y	Total	Headwall for 24" Pipe Length X	Y	Total	Headwall for 18" Pipe Length X	Y	Total	Headwall for 15" Pipe Length X	Y	Total
a		1'-4"	11'-8"		3'-7"	7'-10"	10'-9"	8'-0"	1'-7"	9'-7"	6'-4"	1'-7"	7'-11"	5'-6"	1'-7"	7'-1"
a_1		10'-9½"	10'-2"	20'-11½"	3'-1½"	7'-10"	10'-11½"	7'-5½"	10"	9'-1½"	5'-9½"	10"	7'-5½"	4'-11½"	10"	6'-7½"
a_2		10'-3"	1'-1"	11'-4"	8'-6"	1'-1"	10'-8"	6'-11"	1'-1"	9'-1"	5'-5"	1'-1"	7'-5"	4'-5"	1'-1"	6'-7"
a_3		3'-10½"	1'-4"	5'-2½"	7'-11½"	1'-4"	10'-1½"	6'-4½"	1'-4"	9'-1½"	4'-8½"	1'-4"	7'-4½"	3'-10½"	1'-2"	6'-6½"
a_4		3'-10½"	1'-7"	5'-5½"	7'-5"	1'-7"	10'-1"	5'-10"	1'-7"	9'-0"	4'-2"	1'-7"	7'-4"	3'-4"	1'-7"	6'-6"
a_5		8'-7"	1'-10"	10'-3½"	6'-10½"	1'-10"	10'-6½"	5'-3½"	1'-10"	8'-1½"	3'-7½"	1'-10"	7'-3½"	—	—	—
a_6		3'-1"	2'-1"	5'-2"	6'-8"	2'-1"	10'-6"	4'-9"	2'-1"	8'-11"	—	—	—	—	—	—
a_7		7'-6½"	2'-4"	9'-10½"	5'-9½"	2'-4"	10'-3½"	4'-2½"	2'-4"	8'-10½"	—	—	—	—	—	—
a_8		7'-0"	2'-7"	9'-7"	5'-3"	2'-7"	10'-5"	—	—	—	—	—	—	—	—	—
a_9		6'-5½"	3'-10"	10'-3½"	4'-8½"	2'-10"	10'-4½"	—	—	—	—	—	—	—	—	—
a_{10}		5'-11"	4'-3"	10'-2"	—	—	—	—	—	—	—	—	—	—	—	—
a_{11}		5'-4½"	4'-8"	10'-0½"	—	—	—	—	—	—	—	—	—	—	—	—
a_{12}		5'-2"	4'-8"	9'-10"	—	—	—	—	—	—	—	—	—	—	—	—
w		15'-2"	6'-8"	21'-10"	13'-8"	4'-7"	18'-3"	12'-1"	—'-0"	12'-1"	3'-3"	10'-6"	13'-9"	3'-5"	2'-9"	6'-2"
bar	Shape	Number	Length		Number	Length		Number	Length		Number	Length		Number	Length	
c		6	2'-8"		8	19'-2"		5	10'-2"		4	8'-2"		4	7'-2"	
b_1		2	14'-7"		2	12'-5"		2	10'-4"		2	8'-3"		2	7'-4"	
b_2		2	10'-3"		2	8'-7"		2	6'-2"		2	4'-8"		—	—	
b_3		2	6'-5"		2	5'-1"		—	—		—	—		—	—	
e		2	11'-6"		2	9'-10"		2	8'-5"		2	6'-7"		2	5'-9"	
d		2	10'-10"		2	10'-8"		2	8'-7"		2	6'-5"		2	5'-4"	
f		3	5'-3"		3	4'-8"		3	4'-1"		3	3'-6"		3	3'-3"	
g		2	12'-7"		2	8'-6"		2	5'-6"		2	4'-4"		—	—	
h		2	8'-0"		—	—		—	—		—	—		—	—	
i		4	11"		4	1'-1"		4	9"		4	9"		4	10"	
h_1		2	8"		2	9"		—	—		—	—		—	—	
h_2		4	2'-9"		4	2'-8"		4	2'-5"		4	2'-3"		4	2'-2"	
j		6	2'-6"		5	2'-6"		5	2'-6"		4	2'-6"		4	2'-6"	
k		2	1'-5"		2	3'-11"		2	3'-5"		2	2'-11"		2	2'-8"	

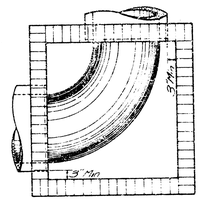


BENDING DIAGRAMS

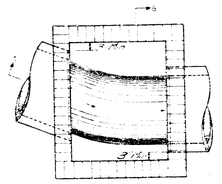

SECTIONAL VIEW (EXAMPLE I)
Showing Floor Shaping



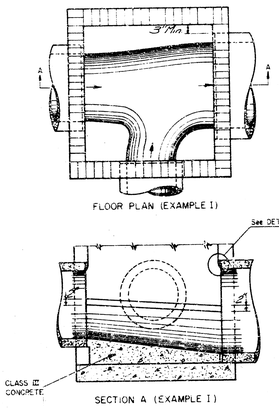
DETAIL A



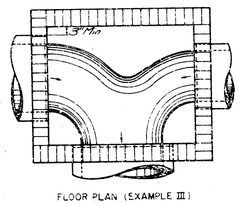
FLOOR PLAN (EXAMPLE II)



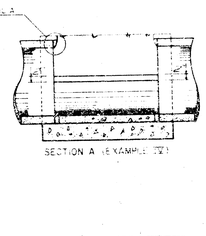
FLOOR PLAN (EXAMPLE IV)



FLOOR PLAN (EXAMPLE I)

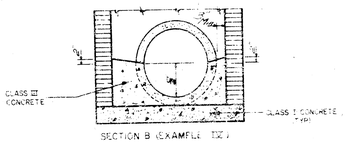


FLOOR PLAN (EXAMPLE III)



SECTION A (EXAMPLE IV)

SECTION A (EXAMPLE I)



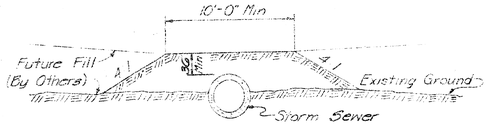
SECTION B (EXAMPLE IV)

REQUIRED INLET FLOWLINE SHAPING FOR VARIOUS PIPE COMBINATIONS
Showing method of shaping floor of Inlet to provide increased hydraulic efficiency.

Headwall for Letter	36" Pipe Dimension	30" Pipe Dimension	24" Pipe Dimension	18" Pipe Dimension	15" Pipe Dimension
A	12'-1"	10'-5"	8'-10"	7'-2"	6'-4"
B	5'-8"	5'-1"	4'-6"	3'-11"	3'-8"
C	12'-0"	10'-0"	8'-0"	6'-0"	5'-0"
D	3'-0"	2'-6"	2'-0"	1'-6"	1'-3"
E	4'-0"	3'-6"	3'-0"	2'-6"	2'-3"
F	5'-10"	5'-3½"	4'-9"	4'-2½"	3'-11¼"
Class I Conc.	8.67 CY	5.08 CY	3.59 CY	2.61 CY	2.16 CY
Reinf. Steel	380 Lbs	320 Lbs	195 Lbs	145 Lbs	110 Lbs

Note: Concrete & Reinf. Steel Quantities include Apron quantities.

GENERAL NOTES
- All rebars shall be #4 bars and all concrete shall be 6-Sack Concrete.
- Bevel all exposed edges with a ¾" triangular molding.
- All headwalls require only one each of all a and w rebars. All rebar spacing is 12" ctr. to ctr. unless otherwise noted.
- Concrete quantities make no deduction for storm sewer pipe through headwall.
- All headwalls shall be constructed with apron.
- Welded wire fabric in apron shall be 6"x6"-W4xW4 weighing 58 # per 100 square feet. Bend reinforcing into apron toe.



MINIMUM STORM SEWER COVER DETAIL

CHARLES S. HOUN LICENSED 7581 KANSAS PROFESSIONAL ENGINEER

CITY OF WICHITA, KANSAS
INLET SHAPING & HEADWALL DETAILS
PIPING ALTERNATIVES
STORM WATER SEWER NO. 191
PROJ. NO. 468-76-245-80955-000-000-001
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS
Designed by MH/JBT/D Job No. 80214-2 Sht. 7 of 16
Checked by CWK/DD Date Sept. 1980

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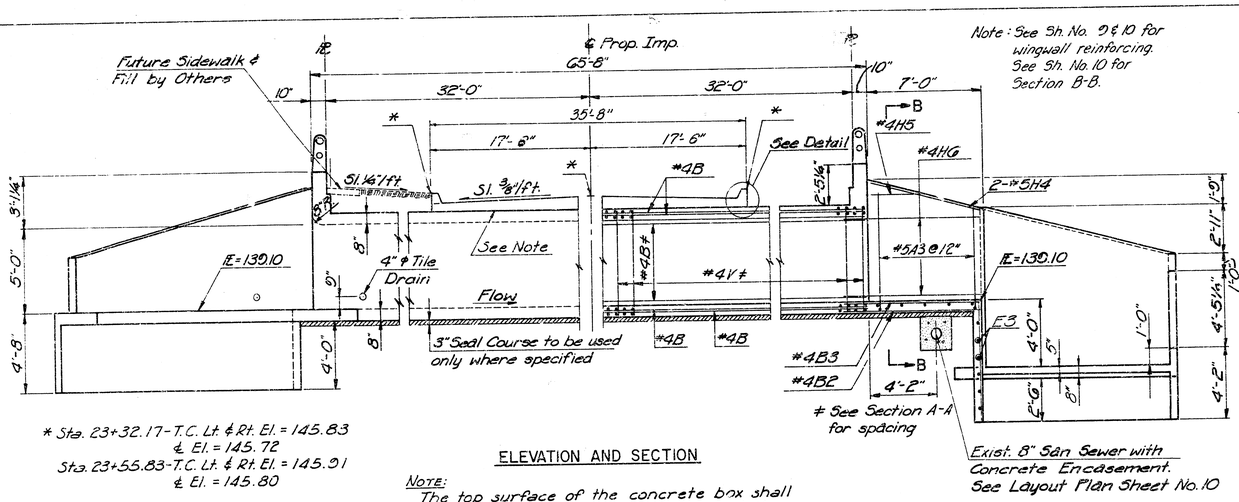
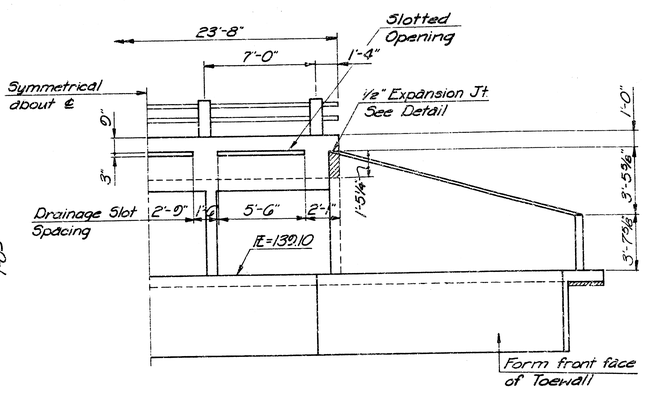
SHEET NO.	TOTAL SHEETS
8	16

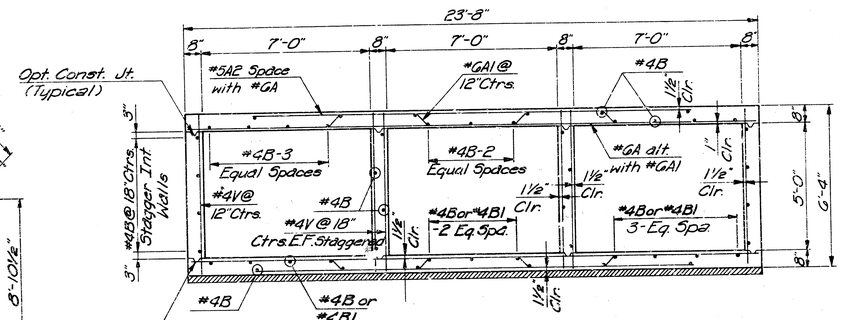


ELEVATION AND SECTION

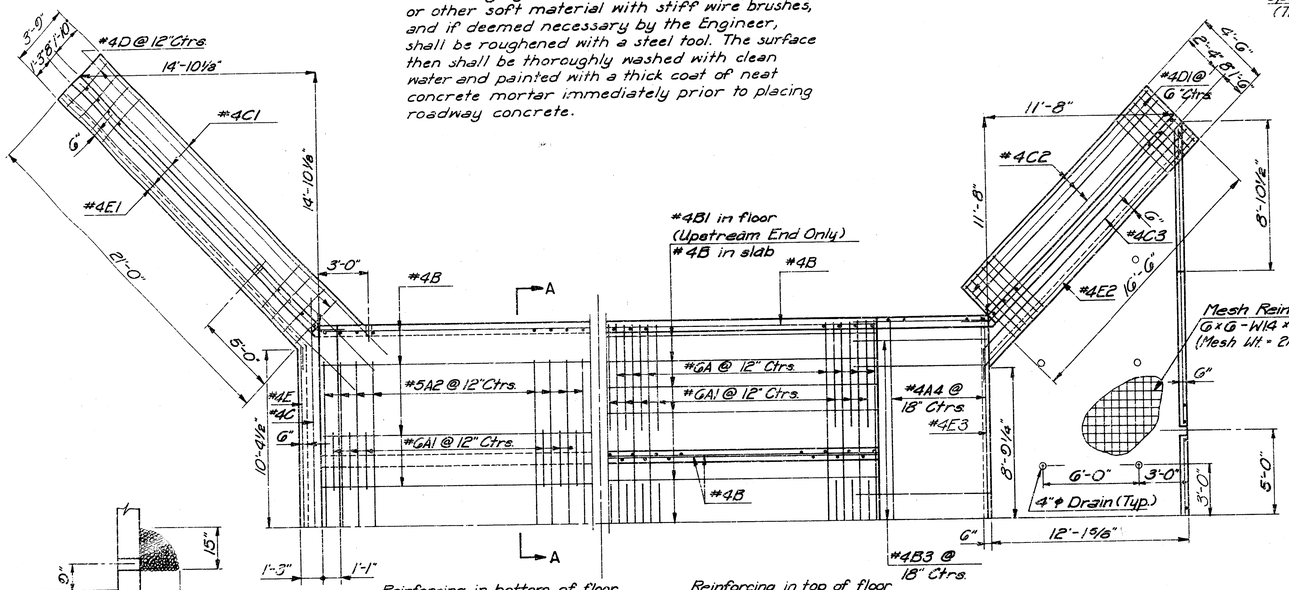
NOTE:
The top surface of the concrete box shall be thoroughly cleaned of dirt, scum, laitance or other soft material with stiff wire brushes, and if deemed necessary by the Engineer, shall be roughened with a steel tool. The surface then shall be thoroughly washed with clean water and painted with a thick coat of neat concrete mortar immediately prior to placing roadway concrete.



HALF END ELEVATION - UPSTREAM



SECTION A-A

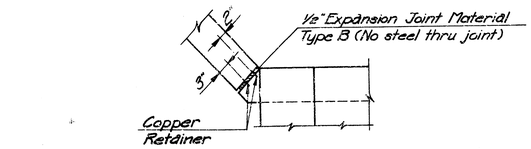


Reinforcing in bottom of floor and top of slab.

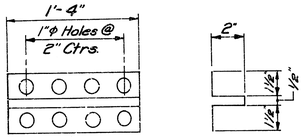
Reinforcing in top of floor and bottom of slab.

WEEPHOLE DETAIL

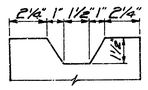
HALF PLAN AND SECTION



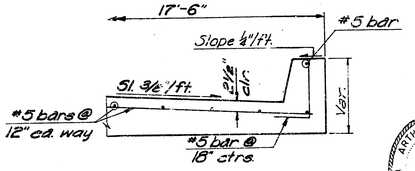
WINGWALL EXPANSION JOINT DETAIL



12 OZ. SHEET COPPER RETAINER (8 Required)



CONSTRUCTION JOINT DETAIL



CURB DETAIL

ARTHUR G. LATHAM LICENSED 637 KANSAS PROFESSIONAL ENGINEER

CITY OF WICHITA, KANSAS

3-7'x5' R.C.B.C.

STORM WATER SEWER NO. 191

PROJ. NO 468-76-245-80955-000-000-001

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

Designed by	AGL	Checked by	WJK, MDH
Drawn by	GRH	Date	Sept. 1980 Job No. 80214-2

Sheet No. 8 of 16

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SHEET NO.	TOTAL SHEETS
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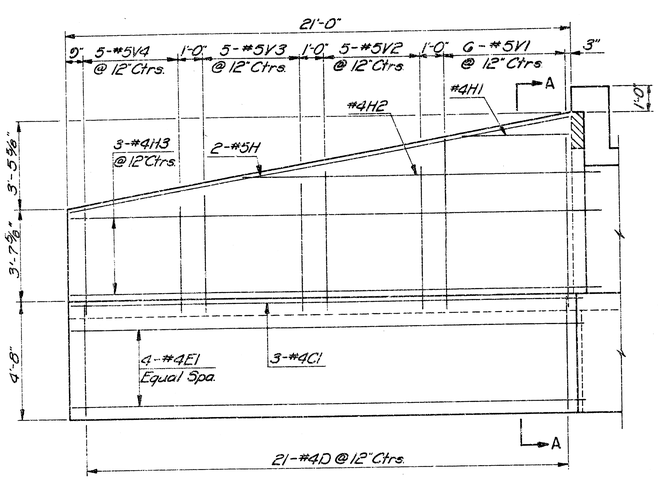
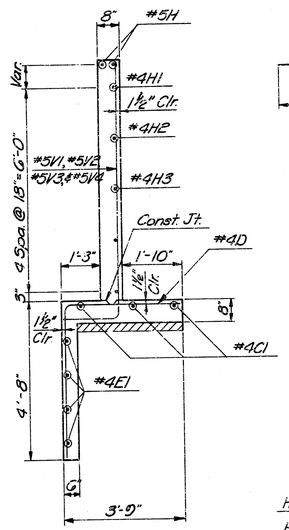
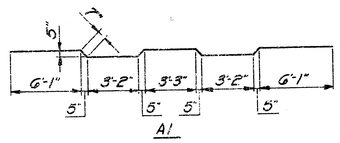
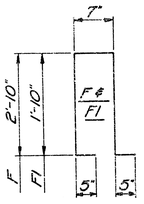


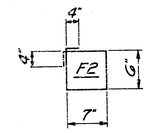
TYPICAL UPSTREAM WINGWALL ELEVATION

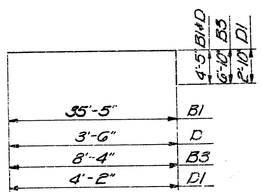


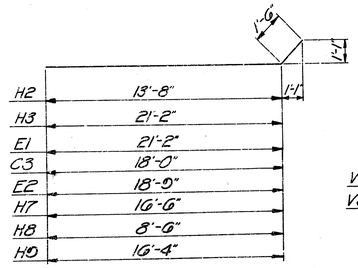
SECTION A-A

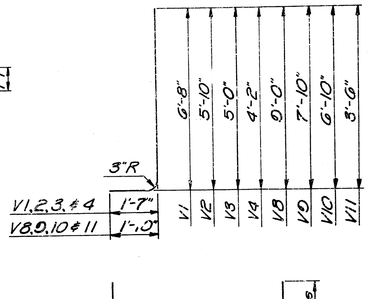


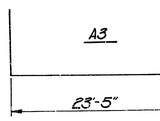








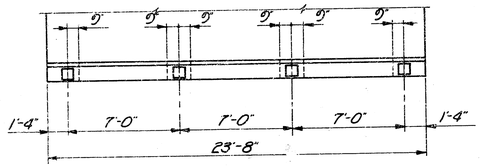




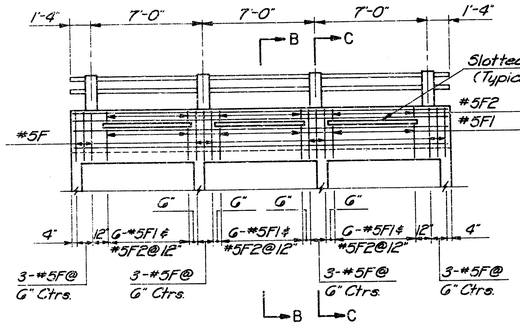
REINFORCING STEEL

Straight Bars				Bent Bars			
Mark	No.	Size	Length	Mark	No.	Size	Length
A	132	#6	23'-5"	A1	130	#6	24'-1"
A2	132	#5	18'-0"	A3	7	#5	*
A4	5	#4	23'-5"				
				B	11	#4	30'-10"
B	89	#4	33'-6"	B3	14	#4	15'-2"
B2	15	#4	8'-4"				
				C3	2	#4	10'-3"
C	1	#4	25'-8"				
C1	6	#4	24'-10"	D	42	#4	7'-11"
C2	6	#4	16'-2"	D1	66	#4	7'-0"
E	4	#4	20'-0"	E1	8	#4	22'-8"
E3	6	#4	17'-6"	E2	6	#4	20'-1"
H	4	#5	21'-1"	F	24	#5	7'-1"
H1	2	#4	4'-0"	F1	36	#5	5'-1"
H4	4	#5	7'-0"	F2	36	#5	2'-10"
H5	2	#4	3'-6"				
H6	8	#4	8'-6"	H2	2	#4	15'-2"
H10	1	#4	0'-2"	H3	6	#4	22'-8"
H11	2	#4	17'-3"	H7	2	#5	18'-0"
H12	2	#4	10'-6"	H8	2	#4	10'-0"
H13	6	#4	*	H9	10	#4	17'-10"
L	16	#5	23'-5"	V1	12	#5	8'-2"
				V2	10	#5	7'-4"
V	308	#4	6'-1"	V3	10	#5	6'-6"
V5	28	#4	3'-10"	V4	10	#5	5'-8"
V6	16	#4	*	V8	10	#5	10'-9"
V7	2	#4	5'-0"	V9	12	#5	0'-7"
				V10	12	#5	8'-7"
X	2	#4	5'-3"	V11	32	#5	5'-3"
X1	2	#4	4'-0"				
X2	4	#4	2'-6"				

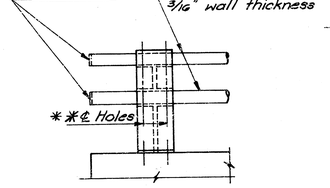
* See Bending Diagrams



PLAN



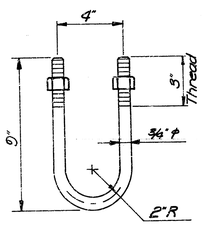
ELEVATION



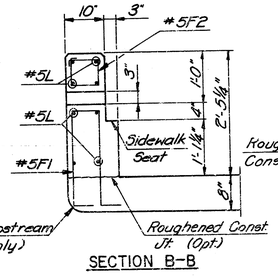
END POST

INTERIOR POST

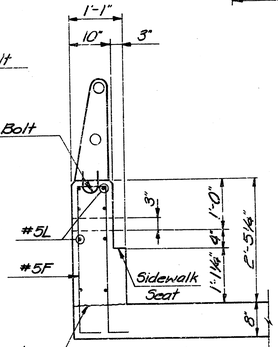
** Holes: 1⅛" square holes in post under head and 1⅛" round holes under nuts for ⅝" ϕ x 5½" carriage bolts with hex nuts.



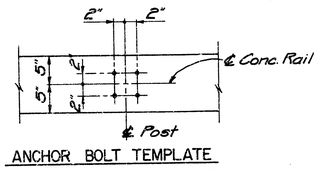
U-BOLT DETAIL



SECTION B-B



SECTION C-C



ANCHOR BOLT TEMPLATE

BAR BENDING DIAGRAMS

All dimensions are out to out of bars.

H13 & V6

H13 Varies from 3'-0" to 7'-0" by 2'-0" Incr. Cut 2 ea. len.
V6 Varies from 4'-0" to 7'-6" by 6" Incr. Cut 2 ea. len.

SUMMARY OF QUANTITIES

Lump Sum Bid	Class A-AE Concrete	177.8 Cu. Yds.
	Δ Reinforcing Steel	21,309 Lbs.
	Hand Excavation	31.0 Cu. Yds.
	Aluminum Handrail	47.3 L in. Ft.
Bid Items	ϕ Class A Concrete Seal Course	16.0 Cu. Yds.
	Excavation	253.8 Cu. Yds.
	Compacted Fill	68.1 Cu. Yds.

ϕ Payment for Excavation resulting from including Seal Course as a change in the original plans shall be considered subsidiary to the unit price bid for Class A Concrete Seal Course.

Δ Reinforcing Steel weight includes 8 Lbs. for mesh reinforcing and 1881 Lbs. for pavement reinforcing.

HANDRAIL DETAILS

NOTE: ALUMINUM HANDRAIL

ALUMINUM POSTS SHALL BE REYNOLDS ALUMINUM HIGHWAY PRODUCTS BRIDGE RAILING SYSTEM No. 2R19A OR APPROVED EQUAL.

TOP AND BOTTOM RAILS SHALL BE 3 1/2" O.D. X 3/16" WALL TUBE OF 3063-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.

ARTHUR G. LATHAM LICENSED 637 KANSAS PROFESSIONAL ENGINEER

CITY OF WICHITA, KANSAS

3-7'x5' R.C.B.C.

STORM WATER SEWER NO. 191

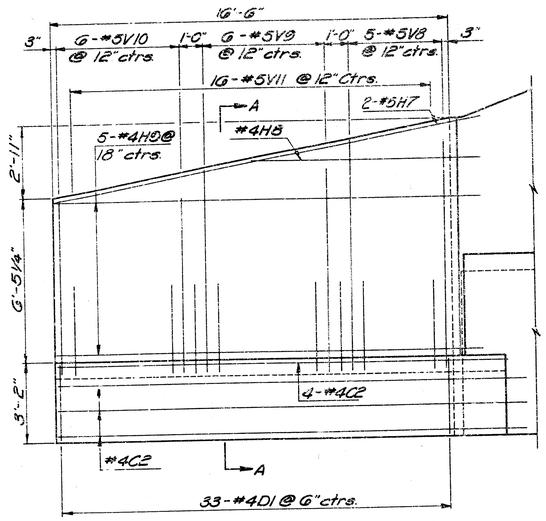
PROJ. NO. 468-76-245-80955-000-000-001

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

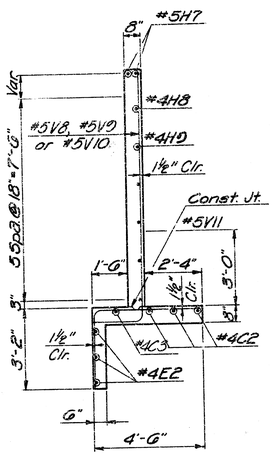
Designed by	AGL	Checked by	VJK, MDH
Drawn by	GRH	Date	Sept. 1980 Job No. 80214-2

Sheet No. 0 of 16

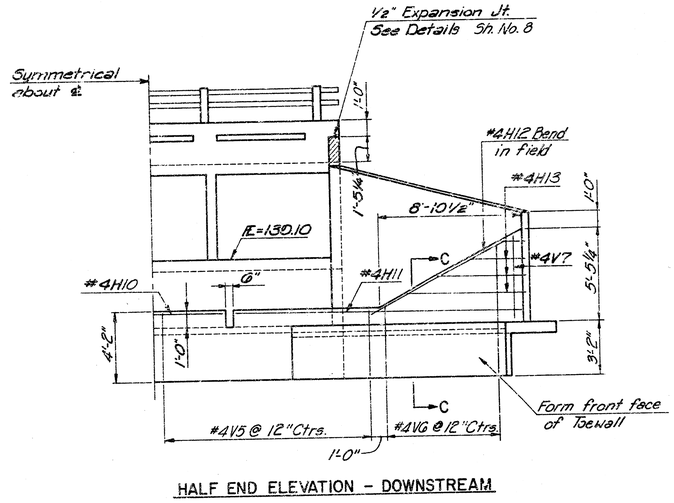
SHEET NO	TOTAL SHEETS
10	16



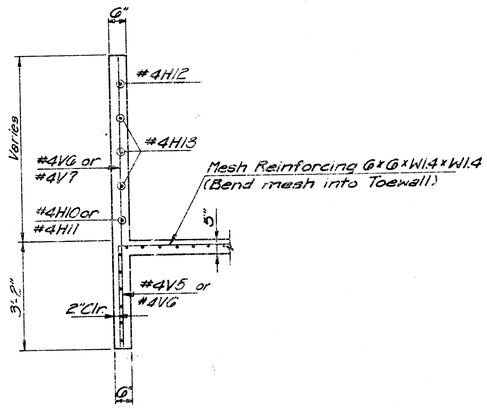
TYPICAL DOWNSTREAM WINGWALL ELEVATION



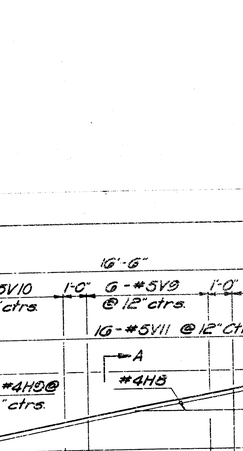
SECTION A-A



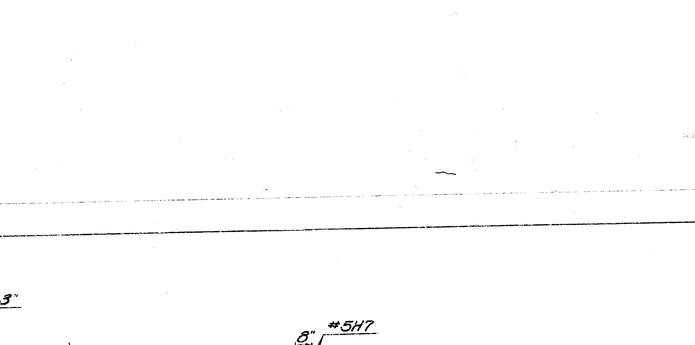
HALF END ELEVATION - DOWNSTREAM



SECTION C-C



LAYOUT PLAN

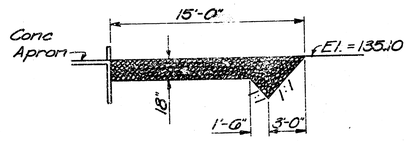


SECTION B-B

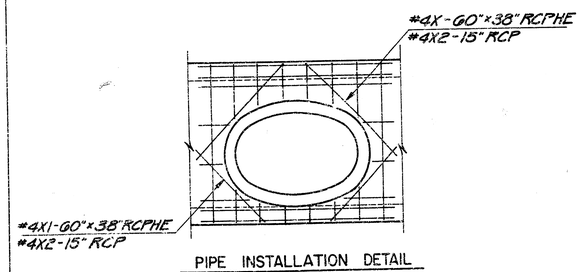
See Sheet No. 8 for Location of Section B-B.



UPSTREAM SECTION



DOWNSTREAM SECTION



PIPE INSTALLATION DETAIL

RIPRAP DETAILS

Note: Extra riprap in toe shall not be paid for directly but shall be subsidiary.

ARTHUR G. LATHAM LICENSED 637 KANSAS PROFESSIONAL ENGINEER

CITY OF WICHITA, KANSAS

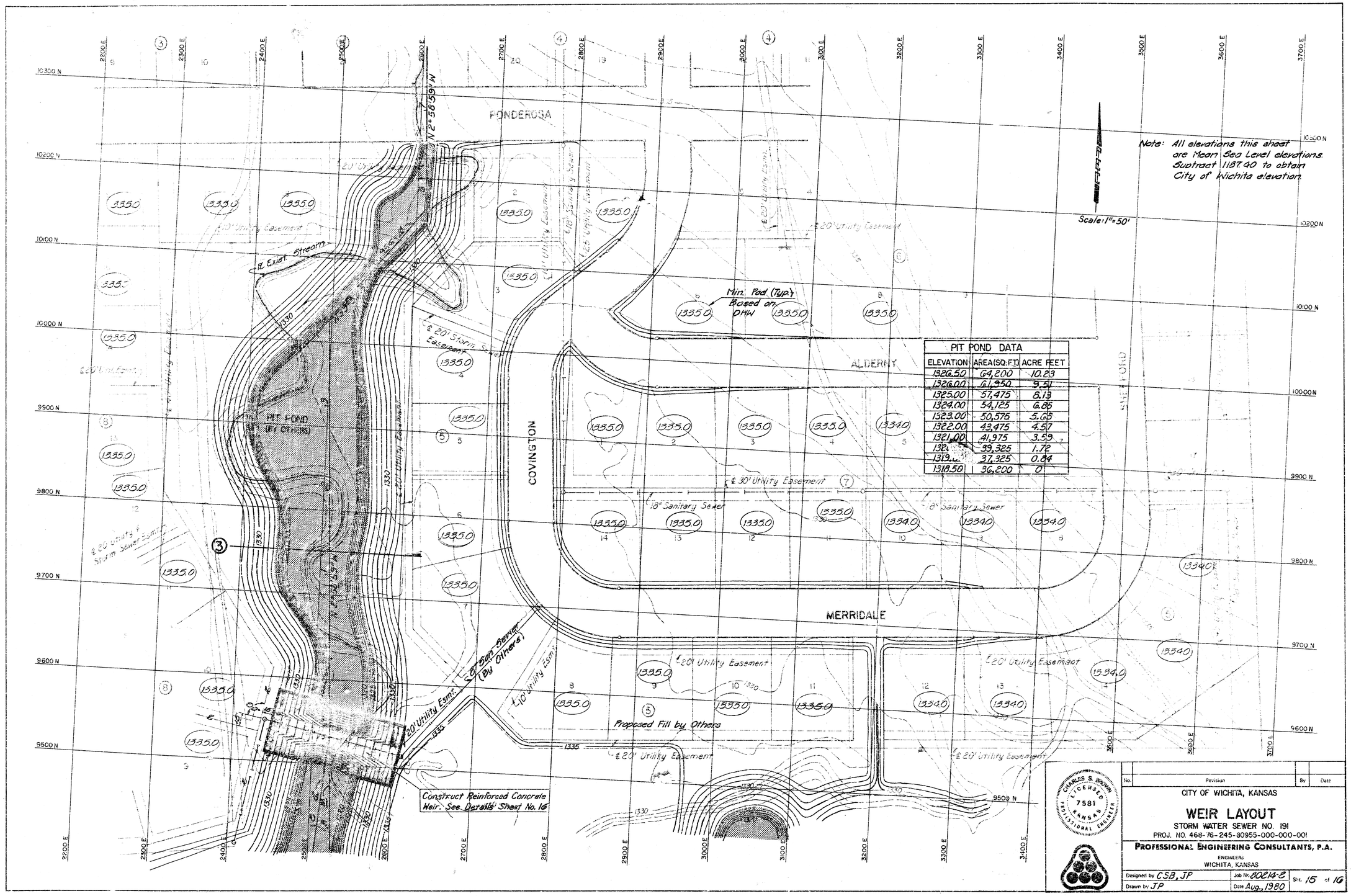
3-7'x5' R.C.B.C.

STORM WATER SEWER NO. 191

PROJ. NO. 468-76-245-80535-000-000-001

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

Designed by	AGL	Checked by	VJK
Drawn by		Date	Sept. 1980 Job No. 80214-3



PIT POND DATA		
ELEVATION	AREA (SQ.FT.)	ACRE FEET
1326.50	64,200	10.23
1326.00	61,950	9.51
1325.00	57,475	8.13
1324.00	54,125	6.85
1323.00	50,575	5.65
1322.00	43,475	4.57
1321.00	41,975	3.59
132[illegible]	39,325	1.72
1319.[illegible]	37,325	0.84
1318.50	36,200	0

CHARLES S. BROWN LICENSED 7581 KANSAS PROFESSIONAL ENGINEER

No.	Revision	By	Date

CITY OF WICHITA, KANSAS

WEIR LAYOUT

STORM WATER SEWER NO. 191

PROJ. NO. 468-76-245-80955-000-000-001

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS

WICHITA, KANSAS

Designed by CSB, JP | Job No. 80214-2 | Sht. 15 of 16

Drawn by JP | Date Aug., 1980

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SHEET NO.	TOTAL SHEETS
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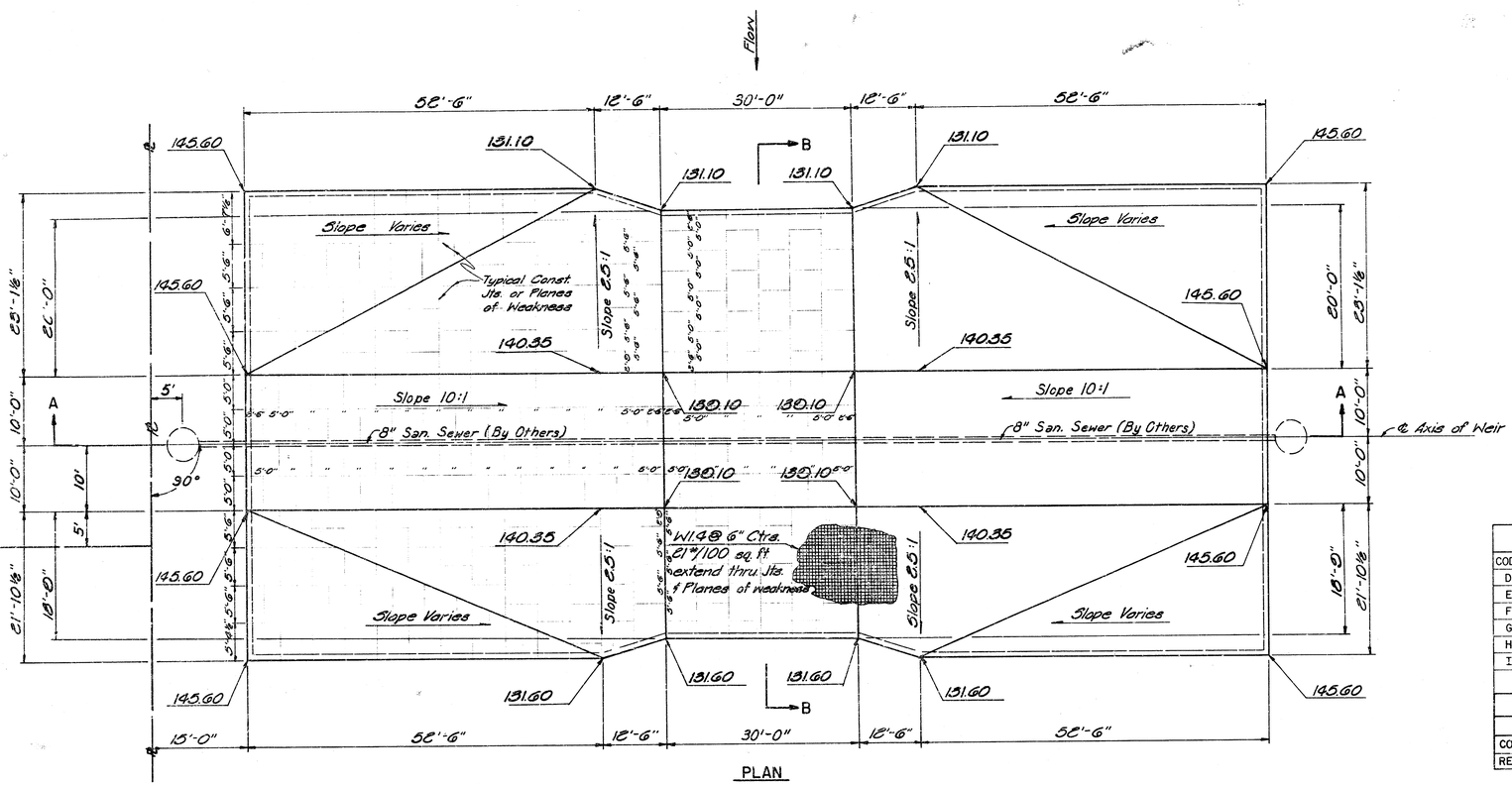
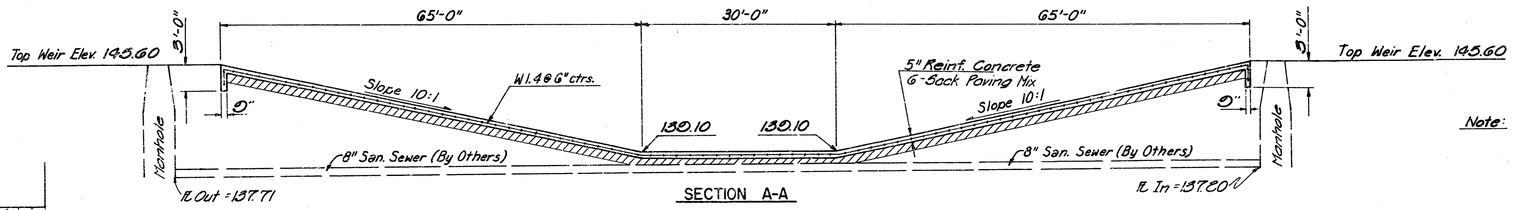
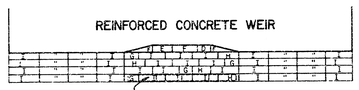


PLAN



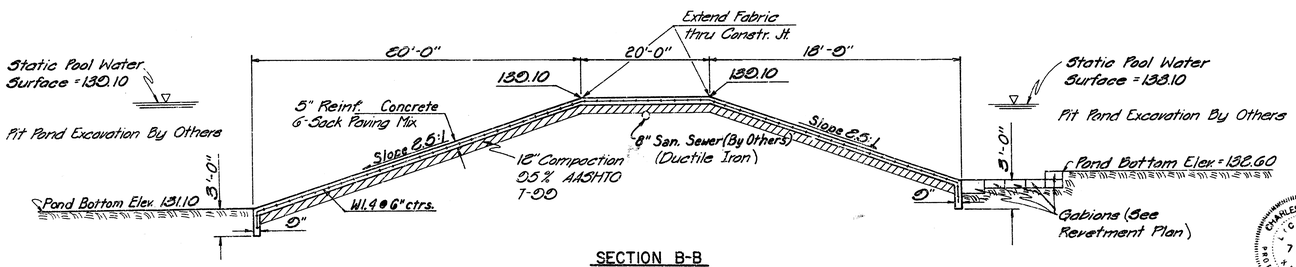
SECTION A-A



Place 9 Code I Gabions centered on top of last row Gabions shown

GABION REVETMENT PLAN

Gabion's shall not be bid separately but shall be included in Lump Sum Bid for "Reinforced Concrete Weir."



SECTION B-B

GABION QUANTITIES			
CODE	NO.	VOL. EA	TOTAL
D	1	1.308 C.Y.	1.31 C.Y.
E	1	1.962 C.Y.	1.96 C.Y.
F	3	2.616 C.Y.	7.85 C.Y.
G	2	0.785 C.Y.	1.57 C.Y.
H	2	1.177 C.Y.	2.35 C.Y.
I	42	1.570 C.Y.	65.94 C.Y.
TOTAL			80.98 C.Y.

WEIR QUANTITIES	
ITEM	QUANTITY
CONCRETE	190 C.Y.
REINFORCING	2,372 C.Y.

Note: Gabion Code Letters refer to Maccaferri River Type Gabions and the sizes are as follows:
Code D - 3'-3" x 6'-6" x 1'-8"
Code E - 3'-3" x 9'-0" x 1'-8"
Code F - 3'-3" x 13'-1" x 1'-8"
Code G - 3'-3" x 6'-6" x 1'-0"
Code H - 3'-3" x 9'-0" x 1'-0"
Code I - 3'-3" x 13'-1" x 1'-0"

CHARLES S. BROWN LICENSED 7581 KANSAS PROFESSIONAL ENGINEER

CITY OF WICHITA, KANSAS

WEIR DETAILS

STORM WATER SEWER NO. 191

PROJ. NO. 468-76-245-80955-000-000-001

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

Designed by	CSB, JP	Checked by	
Drawn by	JP, BS	Date	Sept. 1980

Job No. 00616-E

Sheet 16 of 16

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