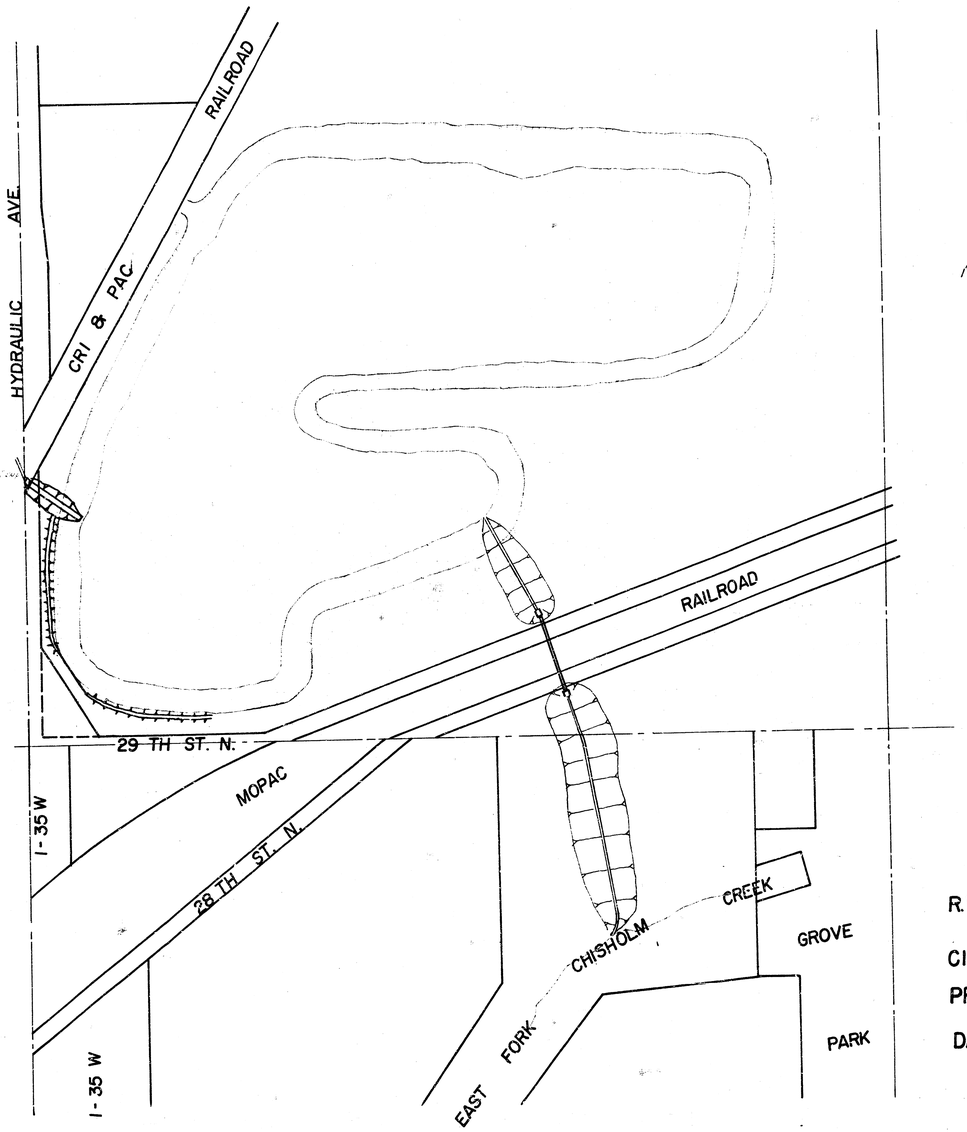
MAIN STORM WATER DRAIN NO. 50



N

1"=200'

GENERAL NOTES

1) PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING PEOPLE:

MR. ELMER E. DARMAN
KANEB PIPELINE CO.
100 N. BROADWAY, SUITE 550
WICHITA, KS 67202
PHONE 262-1408

MR. C. T. OGLESBY
GULF OIL EXPLORATION & PRODUCTION CO.
P. O. BOX 2093
WICHITA, KS 67201
PHONE 265-3169

CITY ARCHEOLOGIST
DEPARTMENT OF ANTHROPOLOGY
WICHITA, KANSAS 67208
PHONE 689-3195

MR. A. L. SMALLWOOD
MISSOURI PACIFIC RAILROAD CO.
OSAWATOMIE, KS 66064
PHONE (913) 755-2133

2) 8" FILTER POINT REVETMENT MAT MAY BE SUBSTITUTED FOR TYPE 4 RIPRAP AND CONCRETE DITCH CHECKS.

3) THE SHADED AREA SHOWN ON SHEET 4 OF THE PLANS SHALL BE SEEDED AT A RATE OF 400 LBS PER ACRE. ALL OTHER AREAS SHALL BE SEEDED AT A RATE OF 250 LBS PER ACRE.

4) CONTRACTOR SHALL VERIFY WATER ELEVATION IN POND PRIOR TO BIDDING PROJECT.

5) BRICK COLLARS WILL NOT BE ACCEPTABLE ON THIS PROJECT.

6) 8" FILTER POINT REVETMENT MAT, IF USED, IS TO BE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.

7) THE TWO GULF OIL LINES ARE TO HAVE BEEN ABANDONED PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR TO REMOVE ABANDONED LINES INCIDENTAL TO PROJECT.

8) FIELD ENGINEER SHALL TAKE CROSS-SECTIONS BEFORE AND AFTER CONSTRUCTION.

9) CONTRACTOR TO CONTACT GENE WATH, DEPARTMENT OF OPERATIONS AND MAINTENANCE, 268-4559, FOR POSSIBLE DISPOSAL SITES FOR EXCESS MATERIAL IN THE AREA.

Sheet No.	Index
1	Cover Sheet
2-4	Plan & Profile of Main Ditch
5	Dike & Emergency Spillway
6	Wash Checks
7	Tunnel Liner
8-9	Headwalls
10-13	X-Sections

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED IN THIS CONSTRUCTION ELEVATION AND CONTROL SURVEYS SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR OR A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH STATE LAWS.

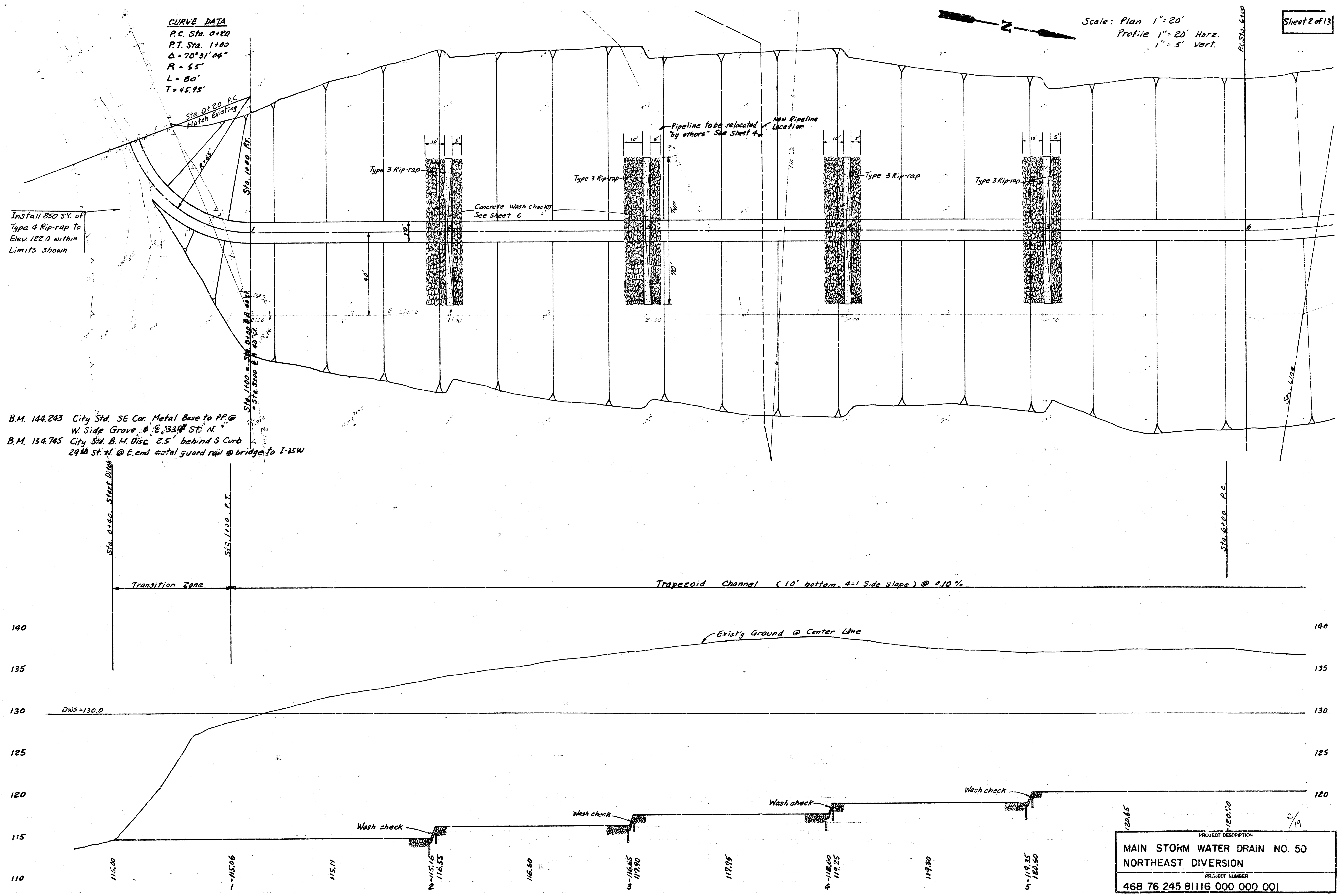
R.W. BRUGGEMAN, DIRECTOR OF ENGINEERING/
CITY ENGINEER
CITY OF WICHITA, KANSAS

PROJECT NO. 468 76 245 81116 000 000 001

DATE: _____

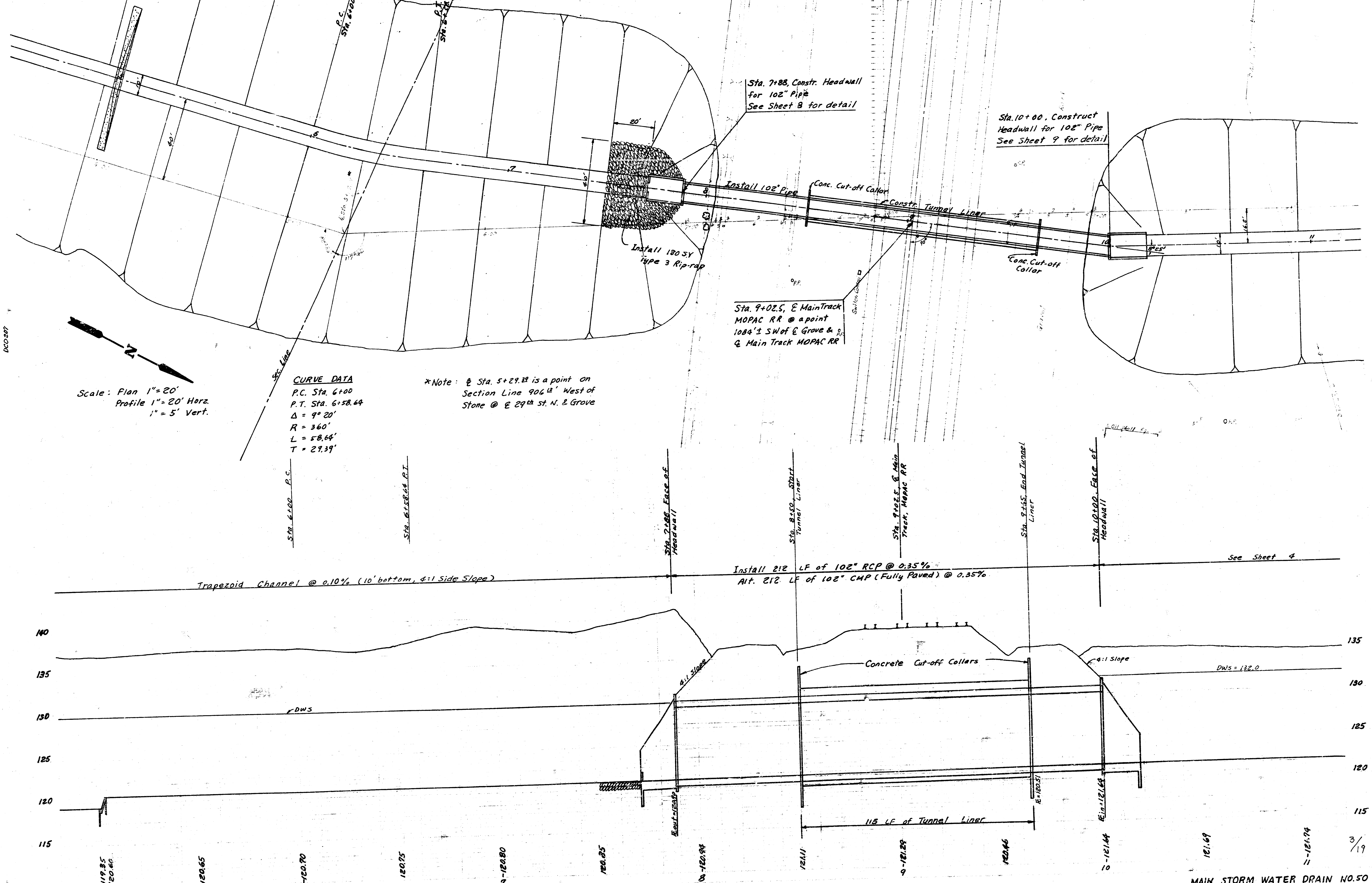
As Built
12/1/83

1/19



MAIN STORM WATER DRAIN NO. 50
NORTHEAST DIVERSION

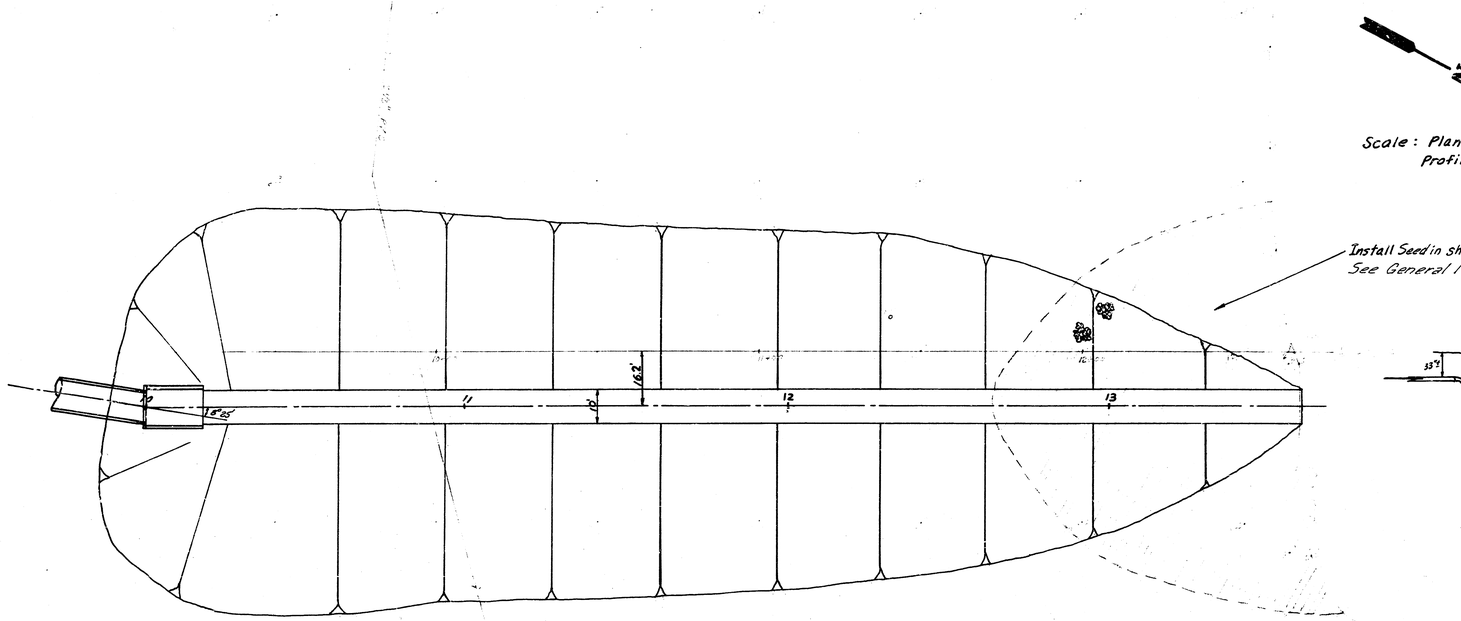
PROJECT NUMBER
468 76 245 81116 000 000 001

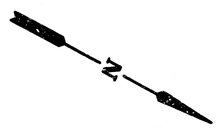


3/19

MAIN STORM WATER DRAIN NO. 50

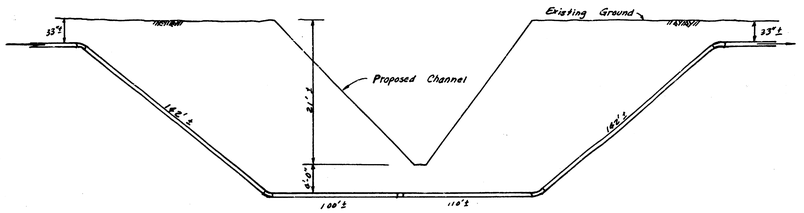
Sheet 4 of 12



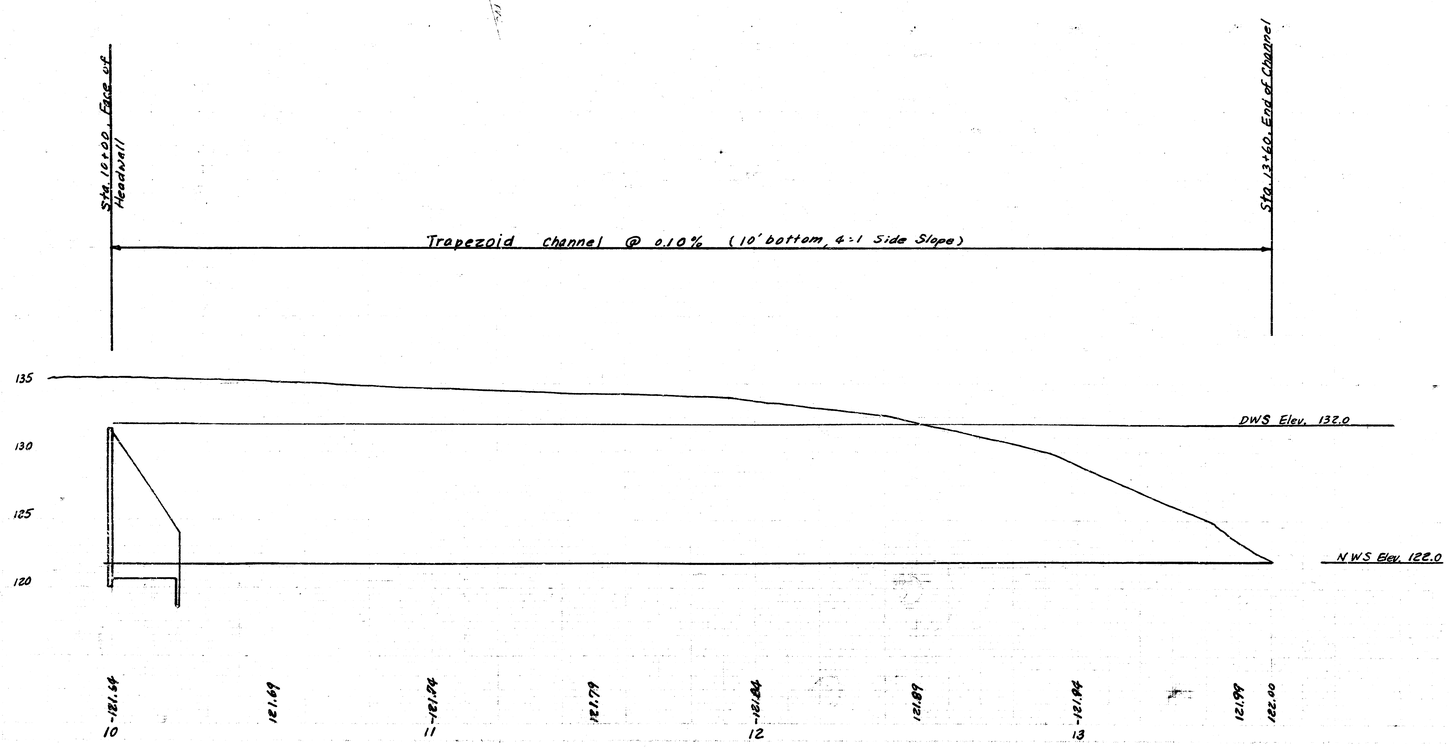


Scale: Plan 1"=20'
Profile 1"=20' Horz.
1"=5' Vert.

Install Seed in shaded area (~900 SY)
See General Note 3

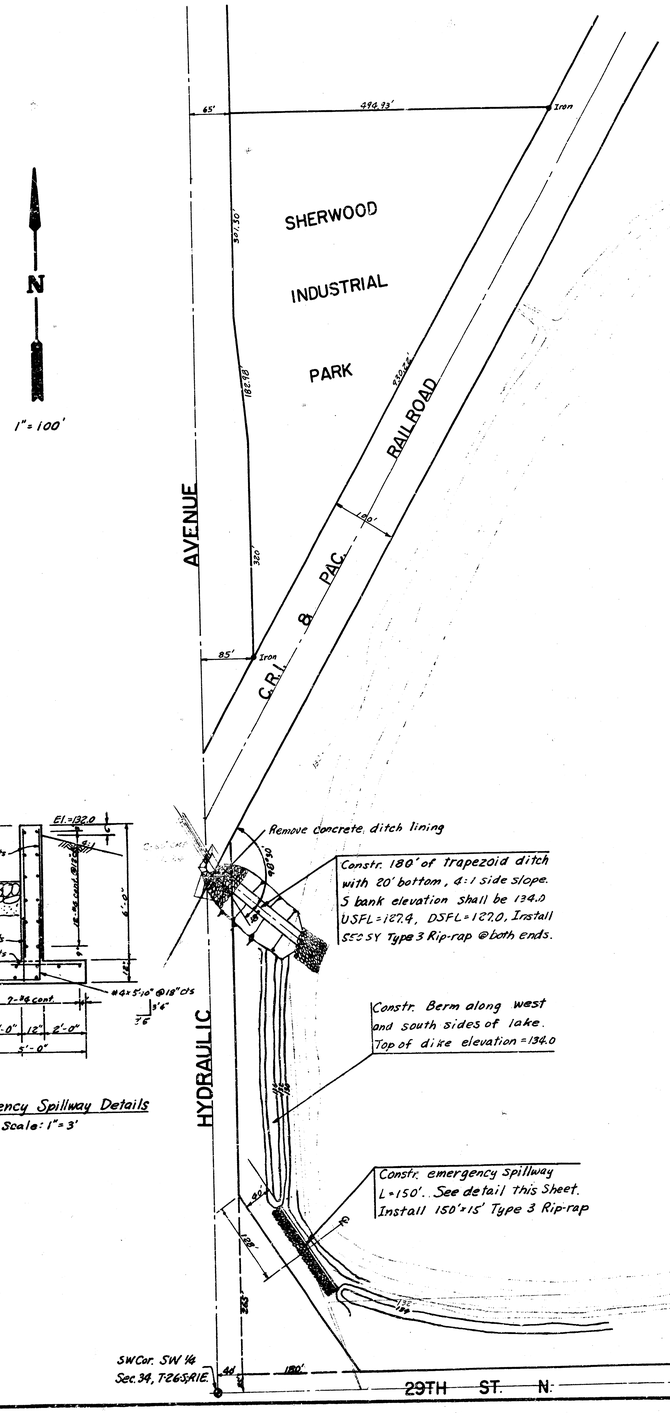


KAMEB 8" OIL PIPELINE RELOCATION
PROFILE
NO SCALE

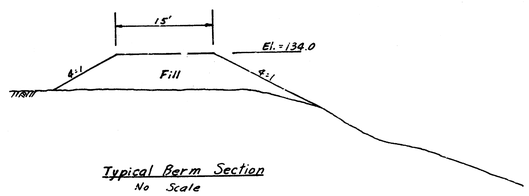


4/19

MAIN STORM WATER DRAIN NO. 50



Elevation	Area	Storage Vol. Ac-ft
122	39.6	0
124	42.8	82.4
126	45.4	170.6
128	47.8	263.8
130	50.0	361.6
132	52.6	464.2



Typical Berm Section
No Scale

PROJECT DESCRIPTION
MAIN STORM WATER DRAIN NO. 50 5/19

PROJECT NUMBER
468 76 245 81116 000 000 001

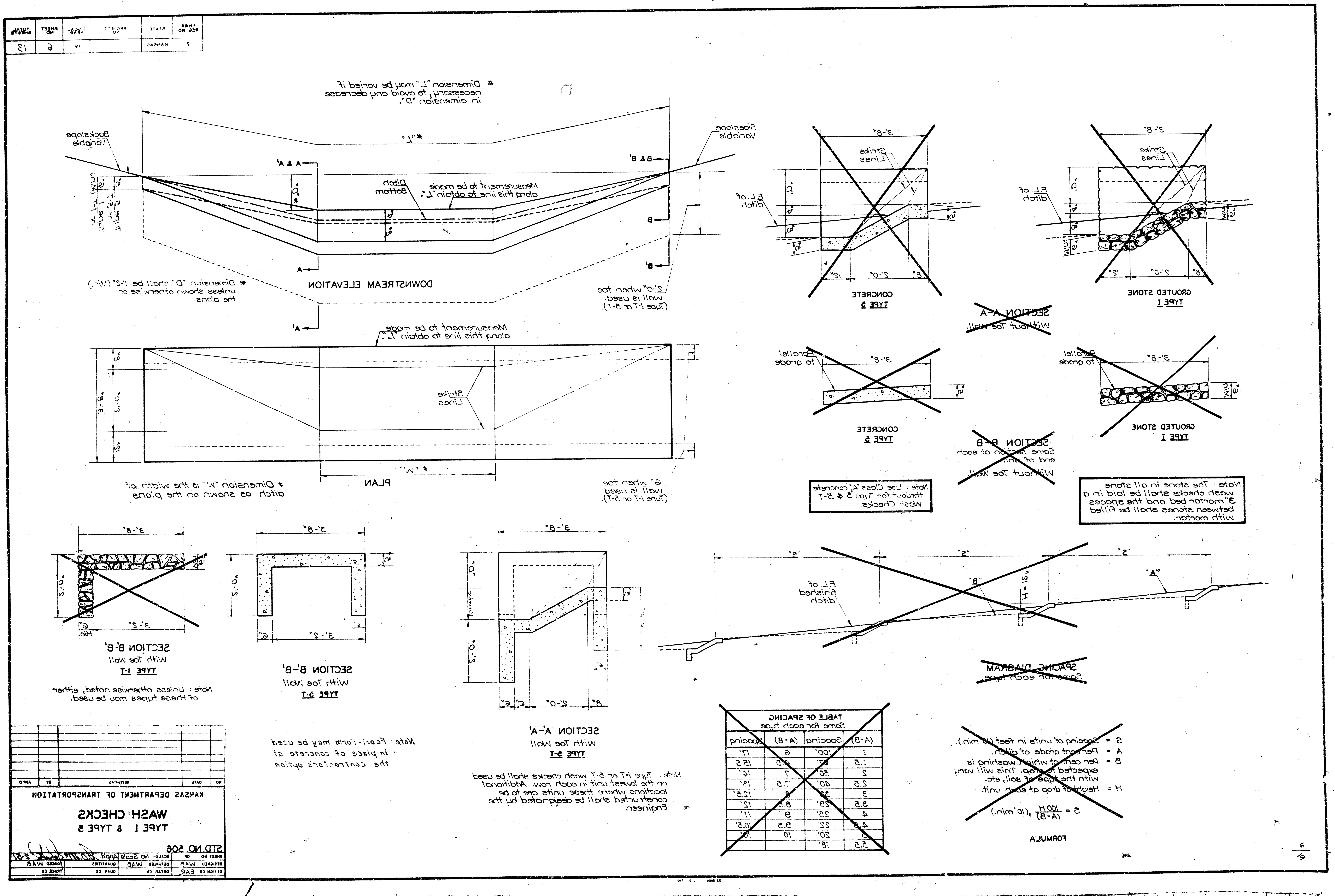
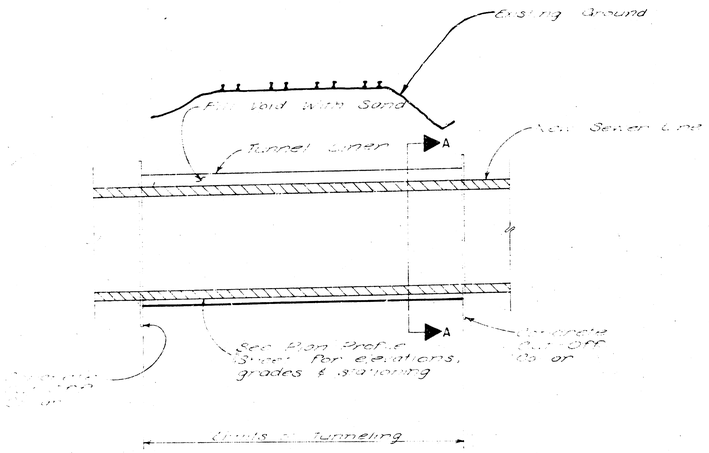
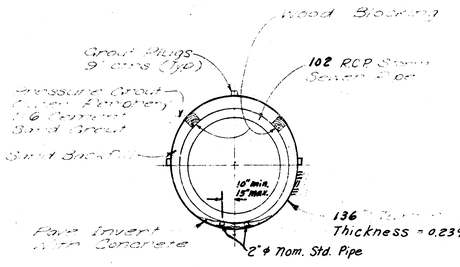


TABLE OF SPACING
Same for each type

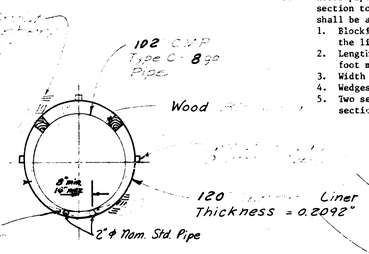
(A-B)	Spacing	(A-B)	Spacing
1	100'	6	17'
1.5	67'	6.5	15.5'
2	50'	7	14'
2.5	40'	7.5	13'
3	33'	8	12.5'
3.5	29'	8.5	12'
4	25'	9	11'
4.5	22'	9.5	10.5'
5	20'	10	10'
5.5	18'		



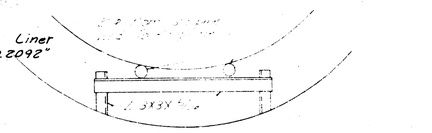
ELEVATION



SECT. A-A
(R.C.P. CLASS III)

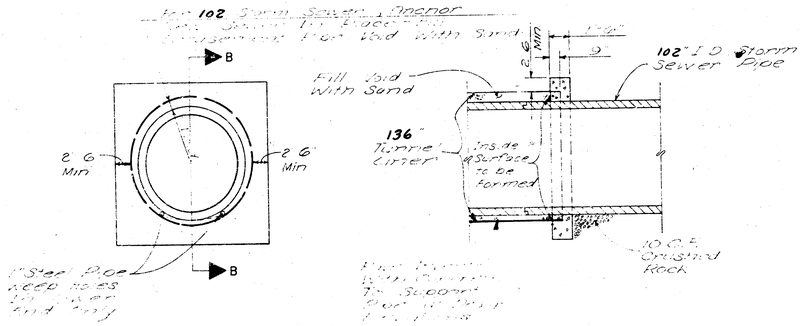


SECT. A-A
(C.M.P. FULLY PAVED)



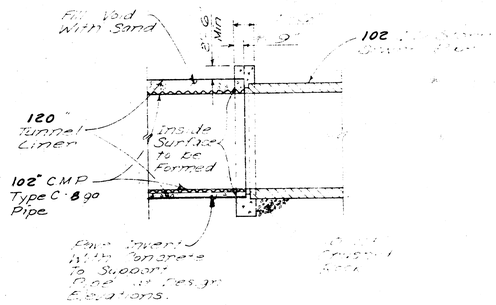
RAIL ASSEMBLY

ENCASEMENT PIPE DETAILS

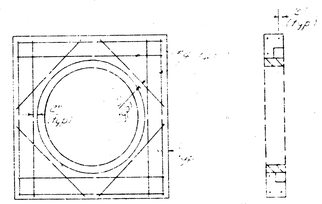


ELEVATION

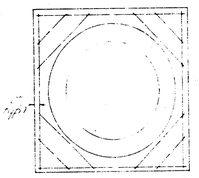
SECT B-B
(R.C.P. CLASS III)
ALTERNATE



SECT B-B
(C.M.P. FULLY PAVED)
ALTERNATE



(OUTSIDE FACE)



(INSIDE FACE)

COLLAR REINFORCING

CONCRETE CUT-OFF COLLAR DETAILS

INSTALLATION

A. Care shall be used to tunnel as neatly as possible to eliminate voids or over-break and thus obtain maximum plate-to-ground contact.

B. Liner plates shall be installed in accordance with manufacturer's instructions.

C. After liner plate rings have been installed, the area between the liner plate and earth shall be grouted to fill all voids. Grouting shall be conducted in a manner to prevent buckling or shifting of the liner ring. Grouting shall be accomplished as quickly as possible behind the tunneling operation. Grout shall be introduced through the bushings provided at a grouting pressure of not less than 5 psi.

D. Before installing sewer pipe into liner, support rails shall be installed at proper height to locate sewer pipe at design elevations. Pave invert with concrete to elevations indicated.

E. Sections of pipe shall be connected one at a time within the liner area in their final position.

F. After pipe is in place and joint completed, blocking shall be installed at each section to prevent vertical and/or horizontal movement of the pipe. Blocking shall be as follows or by other Engineer approved method.
1. Blocking shall be made between the top exterior surface of the pipe and the liner plate with pairs of tapered wood wedges.
2. Length of wedges shall be 20% of the length of the pipe with a one foot minimum length.
3. Width of wedges shall be minimum of 3-1/2 inches.
4. Wedges shall be driven home tight.
5. Two sets of wedges shall be placed at upper quarter points on each concrete section.

TUNNEL LINER MATERIAL

A. Liner plates shall be made from steel sheets conforming to the requirements of ASTM Designation A 569.

B. All plates shall be punched for bolting on both longitudinal and circumferential seams and shall be so fabricated as to permit complete erection from the inside of the tunnel.

C. The fabricated segments shall have flanged circumferential joints. The longitudinal joint shall be of the offset lapped type (flanged longitudinal joints will not be acceptable).

D. The material used for the construction of these plates shall be new and unused and suitable for the purpose intended. Workmanship shall be first-class in every respect. The plates shall be supplied with threaded bushings and plugs as required to permit grouting between liner and surrounding earth material.

E. Liner plates shall be provided with 2 inch standard pipe half couplings welded into a hole in the center corrugation. Couplings shall be fitted with cast iron plugs. Space 3 couplings at nine (9) foot centers. Locate couplings one at top and 2 at each side of liner.

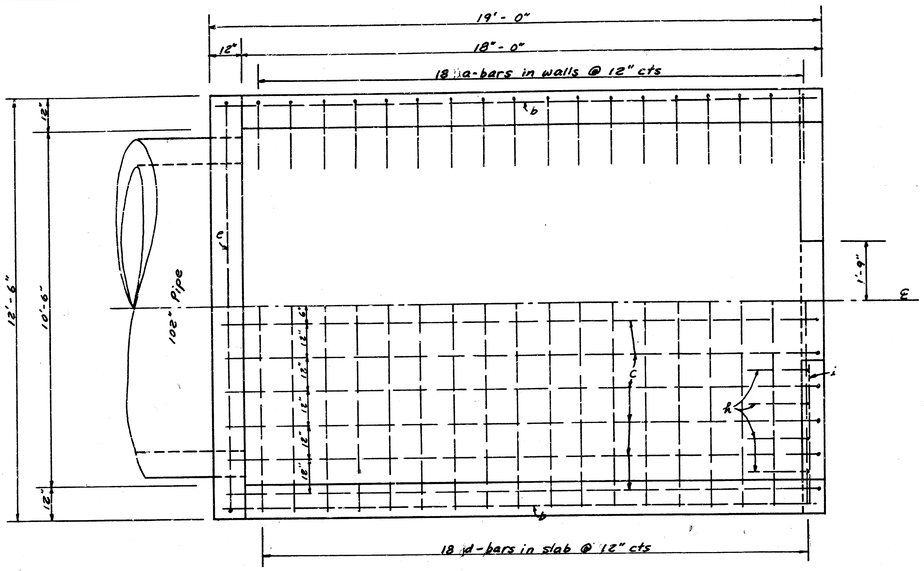
F. Bolts shall be in conformance with ASTM A 307.

MAIN STORM WATER DRAIN NO. 50
CITY OF WICHITA

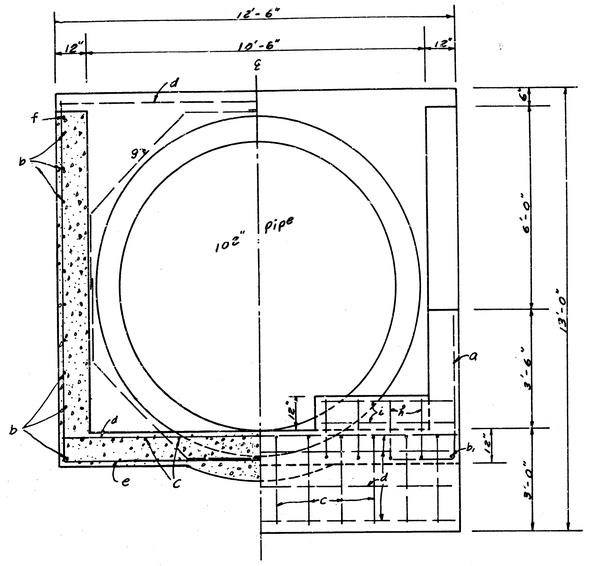
RAILROAD CROSSING DETAILS

PROJECT NO.
468 76 245 81116 000 000 001

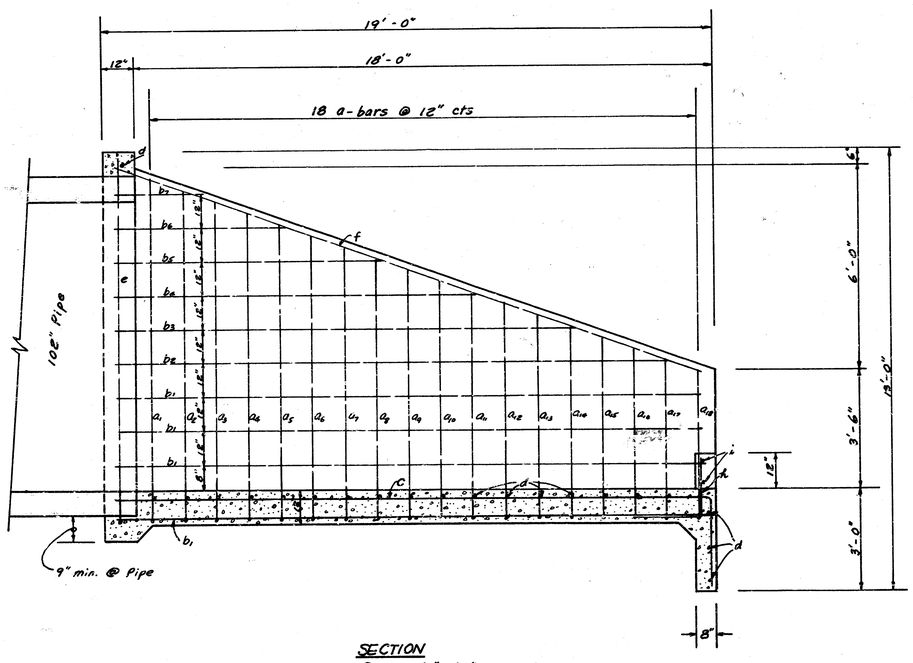
SHEET 7 OF 19



PLAN - Headwall at Sta. 7+88
Scale: 1/2" = 1'0"



SECTION ELEVATION

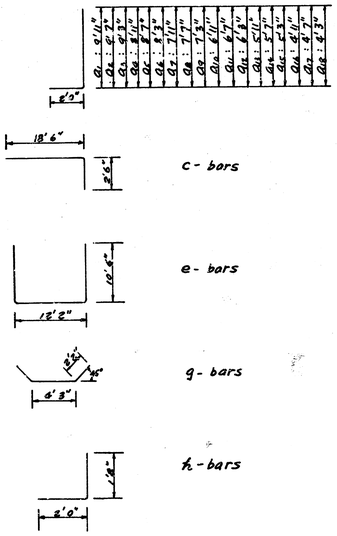


SECTION
Scale: 1/2" = 1'0"

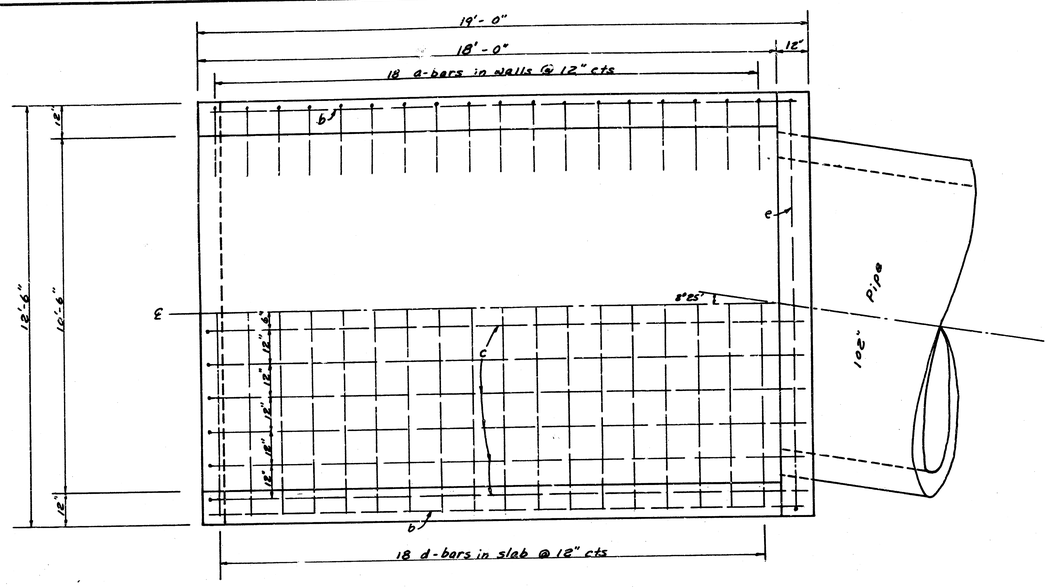
REBAR SCHEDULE

Bar	Shape	No. & Length	Weight
a_1		2 @ 11'1"	15.92
a_2		2 @ 11' 7"	15.48
a_3		2 @ 11' 3"	15.03
a_4		2 @ 10'11"	14.58
a_5		2 @ 10' 7"	14.14
a_6		2 @ 10' 3"	13.69
a_7		2 @ 9'11"	13.25
a_8		2 @ 9' 7"	12.80
a_9		2 @ 9' 3"	12.36
a_{10}		2 @ 8'11"	11.91
a_{11}		2 @ 8' 7"	11.47
a_{12}		2 @ 8' 3"	11.02
a_{13}		2 @ 7'11"	10.58
a_{14}		2 @ 7' 7"	10.13
a_{15}		2 @ 7' 3"	9.69
a_{16}		2 @ 5'11"	9.24
a_{17}		2 @ 4' 7"	8.80
a_{18}		2 @ 6' 3"	8.35
b_1		8 @ 12' 6"	98.86
b_2		2 @ 17' 2"	22.93
b_3		2 @ 16' 2"	19.93
b_4		2 @ 11' 2"	14.92
b_5		2 @ 8' 2"	10.91
b_6		2 @ 5' 2"	6.90
b_7		2 @ 2' 2"	2.89
c		12 @ 21'0"	168.34
d		22 @ 12' 2"	178.80
e		1 @ 33' 2"	22.16
f		2 @ 19'4"	25.83
g		4 @ 8' 7"	22.93
h_1		8 @ 3' 8"	19.59
i		4 @ 4' 1"	10.91
Total Rebars 843 lbs			
Conc. 229 C.Y.			

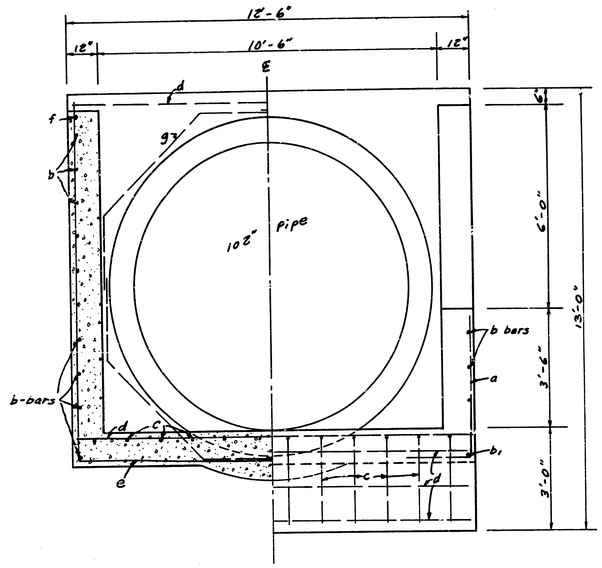
All Conc. Reinforcement to be #4 bars.



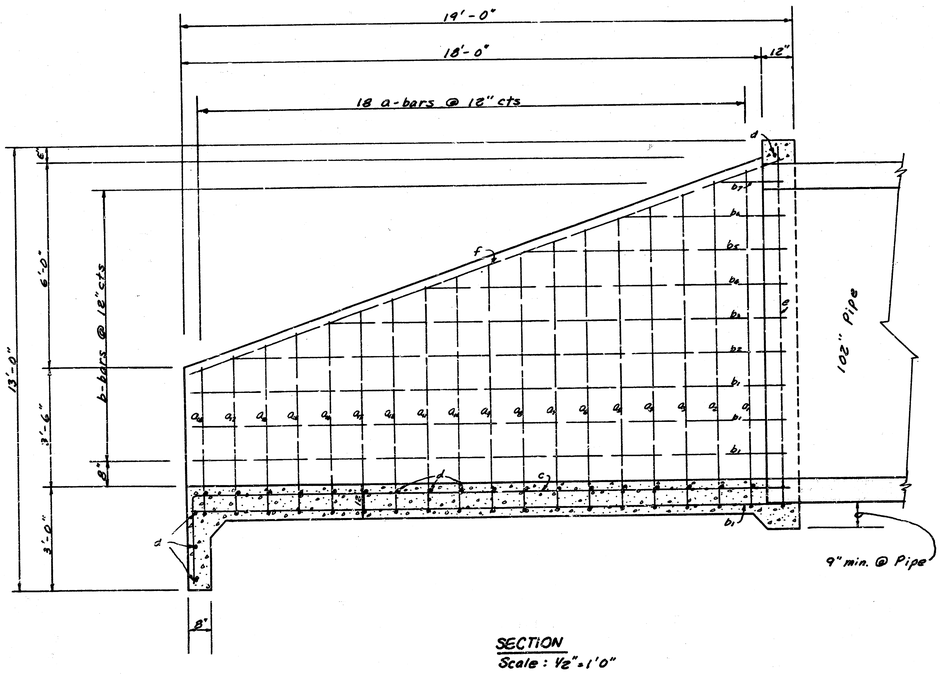
PROJECT DESCRIPTION
MAIN STORM WATER DRAIN NO. 50
Headwall at Sta. 7+88
8/13
PROJECT NUMBER
468 76 245 81116 000 000 001



PLAN - Headwall at Sta. 10+00
Scale: 1/2" = 1'0"



SECTION ELEVATION

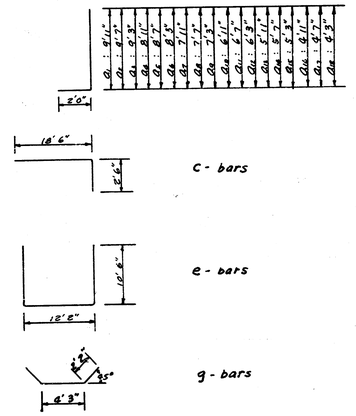


SECTION
Scale: 1/2" = 1'0"

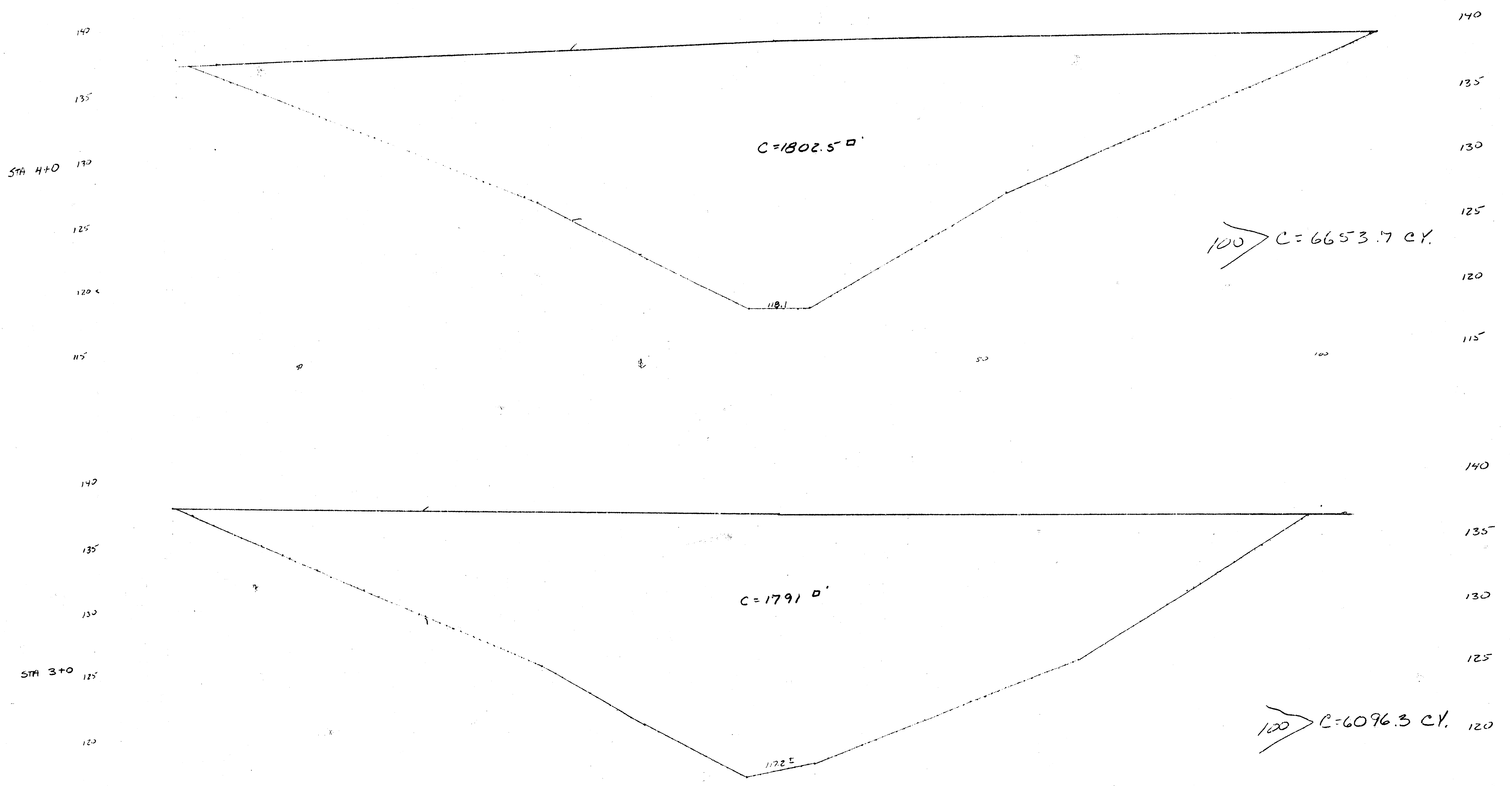
REBAR SCHEDULE

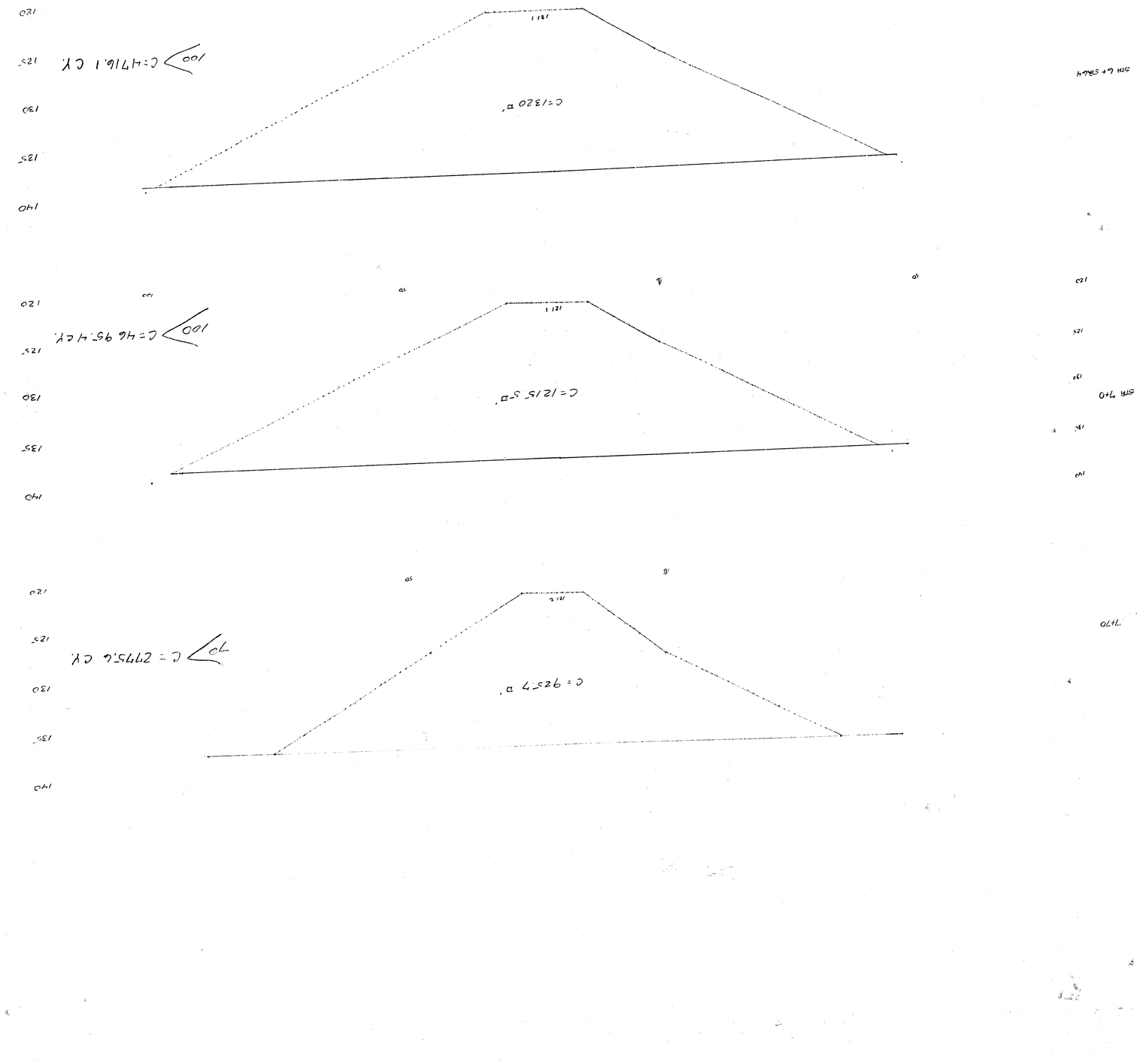
Bar	Shape	No. & Length	Weight
a_1		2 @ 11'11"	15.92
a_2		2 @ 11'7"	15.48
a_3		2 @ 11'3"	15.03
a_4		2 @ 10'11"	14.58
a_5		2 @ 10'7"	14.14
a_6		2 @ 10'3"	13.69
a_7		2 @ 9'11"	13.25
a_8		2 @ 9'7"	12.80
a_9		2 @ 9'3"	12.36
a_{10}		2 @ 8'11"	11.91
a_{11}		2 @ 8'7"	11.47
a_{12}		2 @ 8'3"	11.02
a_{13}		2 @ 7'11"	10.58
a_{14}		2 @ 7'7"	10.13
a_{15}		2 @ 7'3"	9.69
a_{16}		2 @ 6'11"	9.24
a_{17}		2 @ 6'7"	8.80
a_{18}		2 @ 6'3"	8.35
b_1		8 @ 18'6"	98.86
b_2		2 @ 17'2"	22.93
b_3		2 @ 14'2"	18.93
b_4		2 @ 11'2"	14.92
b_5		2 @ 8'2"	10.91
b_6		2 @ 5'2"	6.90
b_7		2 @ 2'2"	2.89
c		12 @ 21'0"	168.34
d		22 @ 12'2"	178.80
e		1 @ 35'2"	22.16
f		2 @ 19'4"	25.83
g		4 @ 8'7"	22.93
Total Rebars 813 lbs.			
Conc. 82.7 C.Y			

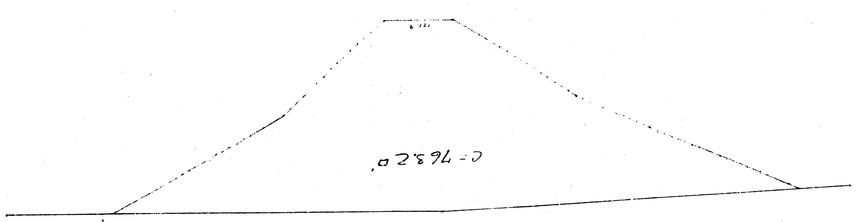
All Conc. Reinforcement to be #4 bars.

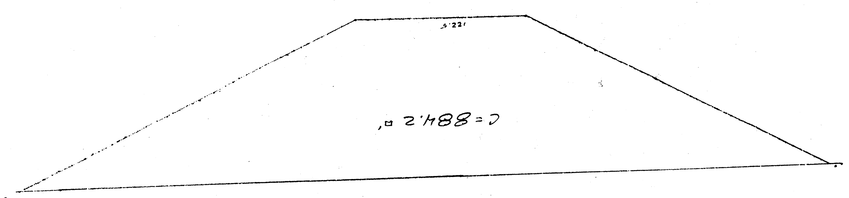


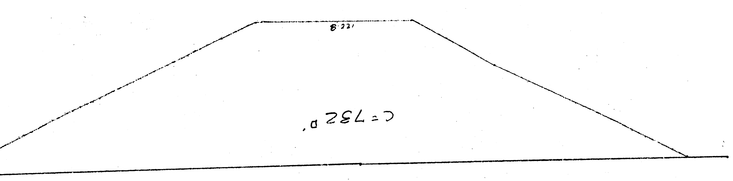
PROJECT DESCRIPTION
MAIN STORM WATER DRAIN NO. 50
Headwall at Sta. 10+00 9/19
PROJECT NUMBER
468 76 245 81116 000 000 001

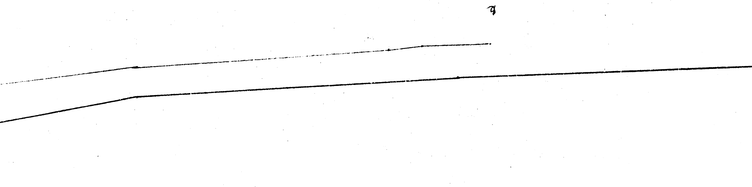

C=1802.50'
STA 4+00
C=6653.7 C.Y.
C=1791.0'
STA 3+00
C=6096.3 C.Y.
C=1501.0'
STA 2+00
C=4470.1 C.Y.
C=913.15'
STA 1+00
C=1966.4 C.Y.
C=414.20'
STA 0+20
TOTAL THIS PAGE:
C=19,186.5 C.Y.
TOTAL:
C=58,381.1 C.Y.


C=1320'
C=H716.1 CY.
C=1226.7'
C=5074.6 CY.
C=1215.5'
C=H6 95.4 CY.
C=925.7'
C=2795.6 CY.


C = 768.2 D'
122.8

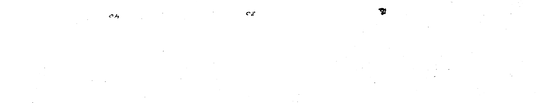

C = 884.2 D'
122.4

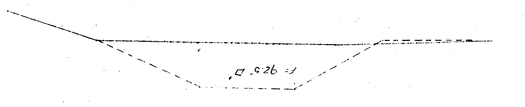

C = 732 D'
122.8

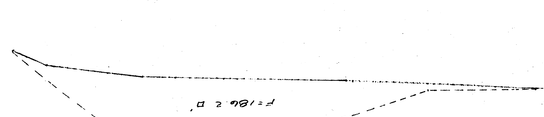

C = 794.40'
122.6

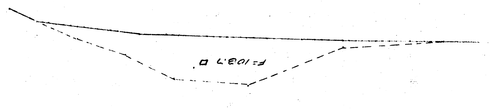
Berm X Secs West Side Lane
From Shulaury North

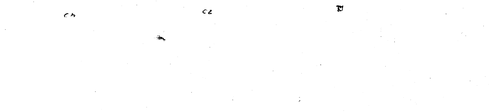
Total This Page:
F- 1289.7

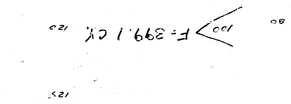


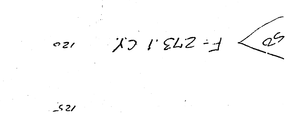


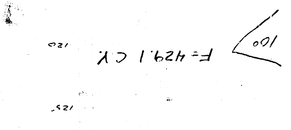


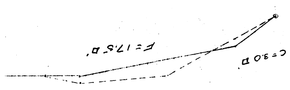




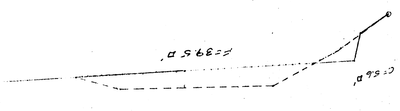


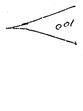




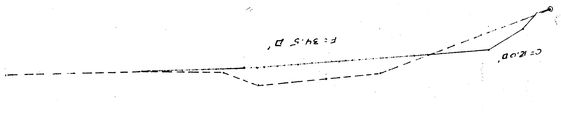


C = 15.9 C.Y.
F = 105.5 C.Y.

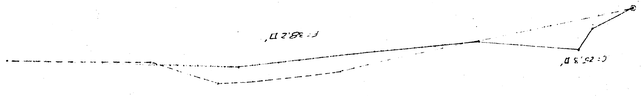




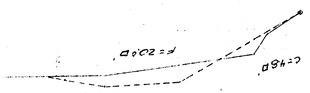
C = 32.6 C.Y.
F = 137.0 C.Y.



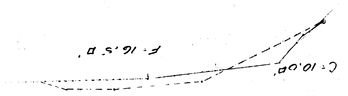
C = 34.5' C.Y.
F = 67.3 C.Y.



Total This Page:
C = 124.8 C.Y.
F = 446.8 C.Y.



C = 14.4 C.Y.
F = 69.4 C.Y.



C = 27.4 C.Y.
F = 69.6 C.Y.

X Secs For Trapezoid Ditch

Total This Page:
C= 1397.8 C.Y.
F= 778.3 C.Y.

OK

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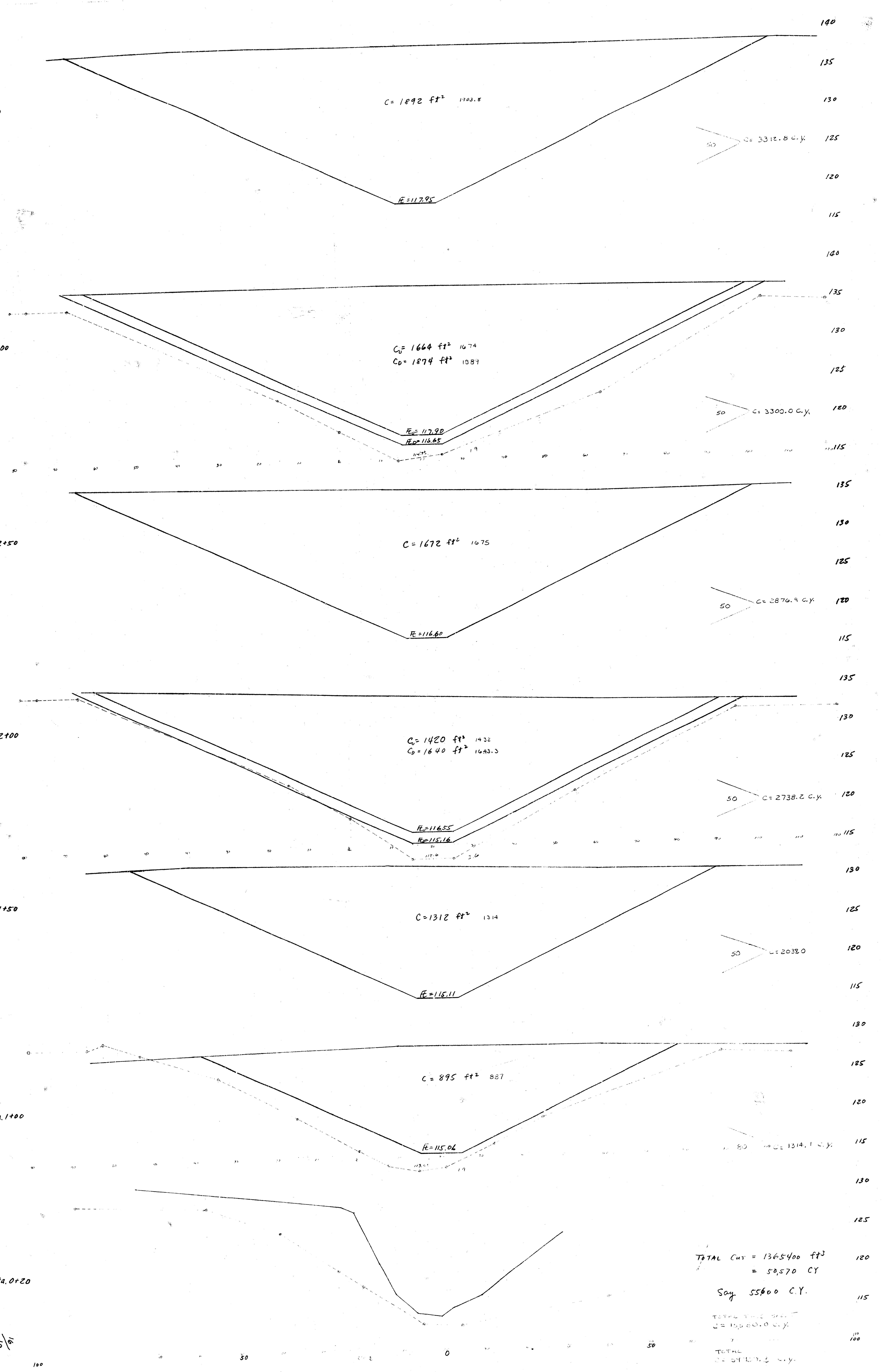
FILMED FROM THE BEST



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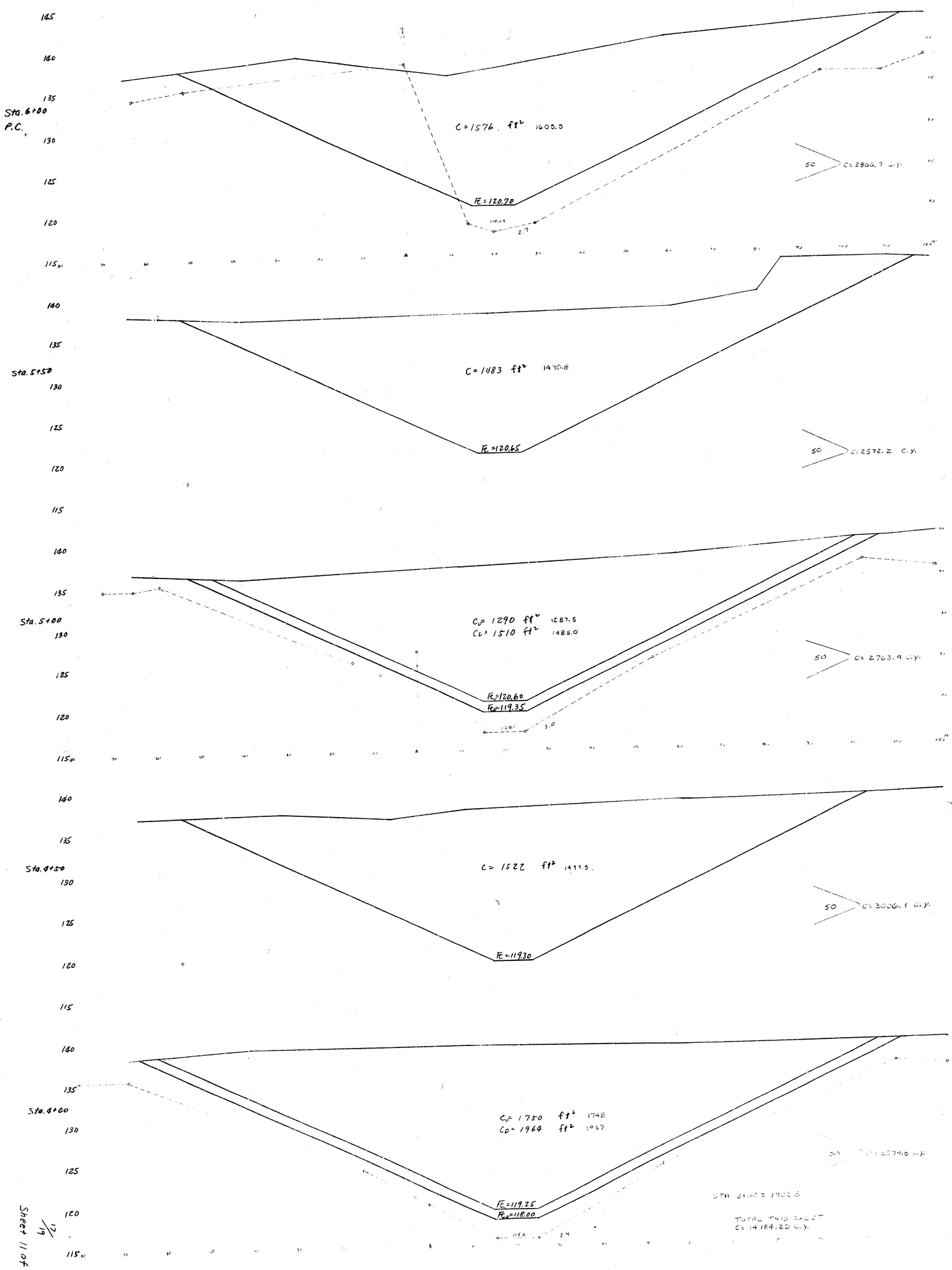
FILMED FROM THE BEST



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