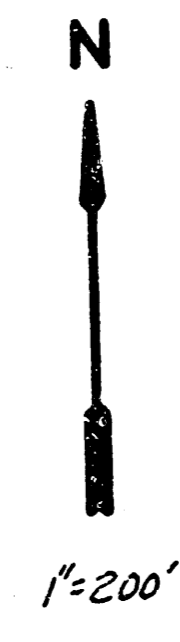
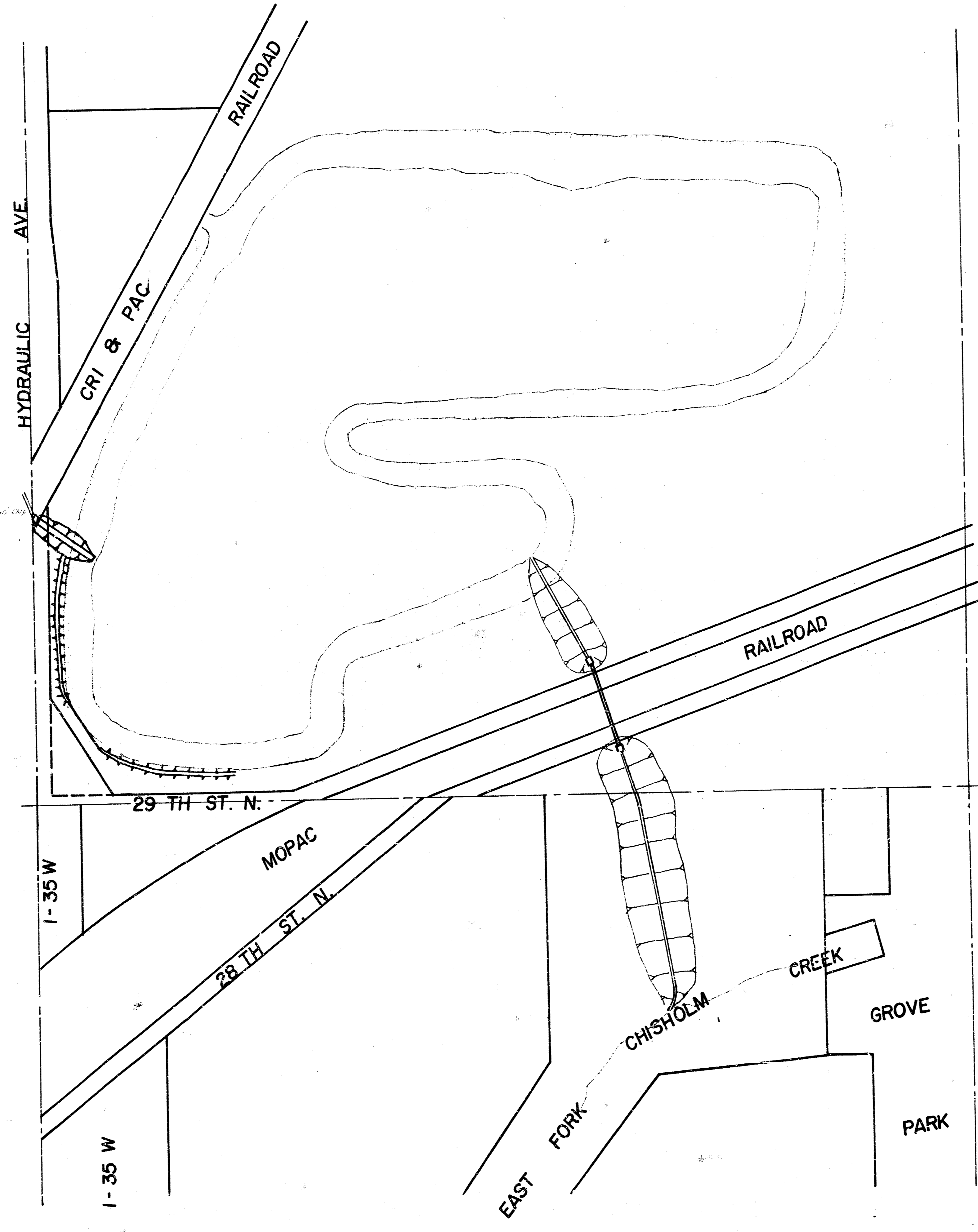


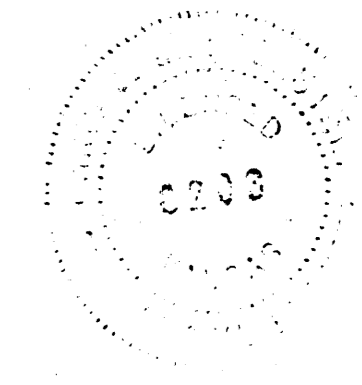
MAIN STORM WATER DRAIN NO. 50

- GENERAL NOTES**
- 1) PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING PEOPLE:
 - MR. ELMER E. OATHMAN
KAMES 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 ARCHAEOLOGIST
DEPARTMENT OF ANTHROPOLOGY
100 W. BROADWAY, SUITE 550
WICHITA, KANSAS 67208
PHONE 689-3195
 - MR. A. L. SMALLWOOD
MISSOURI PACIFIC RAILROAD CO.
OSAWATOMIE, KS 67064
PHONE (913) 755-2133
 - 2) 8" FILTER POINT REINFORCEMENT MAY BE SUBSTITUTED FOR TYPE A RIBBON AND CONCRETE DITCH CHECKS.
 - 3) THE SHADED AREA SHOWN ON SHEET 4 OF THE PLANS SHALL BE SEDED AT A RATE OF 400 LBS PER ACRE. ALL OTHER AREAS SHALL BE SEDED AT A RATE OF 250 LBS PER ACRE.
 - 4) CONTRACTOR SHALL VERIFY WATER ELEVATION IN POND PRIOR TO BEDDING PROJECT.
 - 5) BRICK COLLARS WILL NOT BE ACCEPTABLE ON THIS PROJECT.
 - 6) 8" FILTER POINT REINFORCEMENT 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 HATH, DEPARTMENT OF OPERATIONS AND MAINTENANCE, 268-4599, 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 RIGHTS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY RIGHTS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. CONDITIONS SHALL BE RE-EVALUATED BY A LICENSED LAND SURVEYOR OR A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH STATE LAWS.



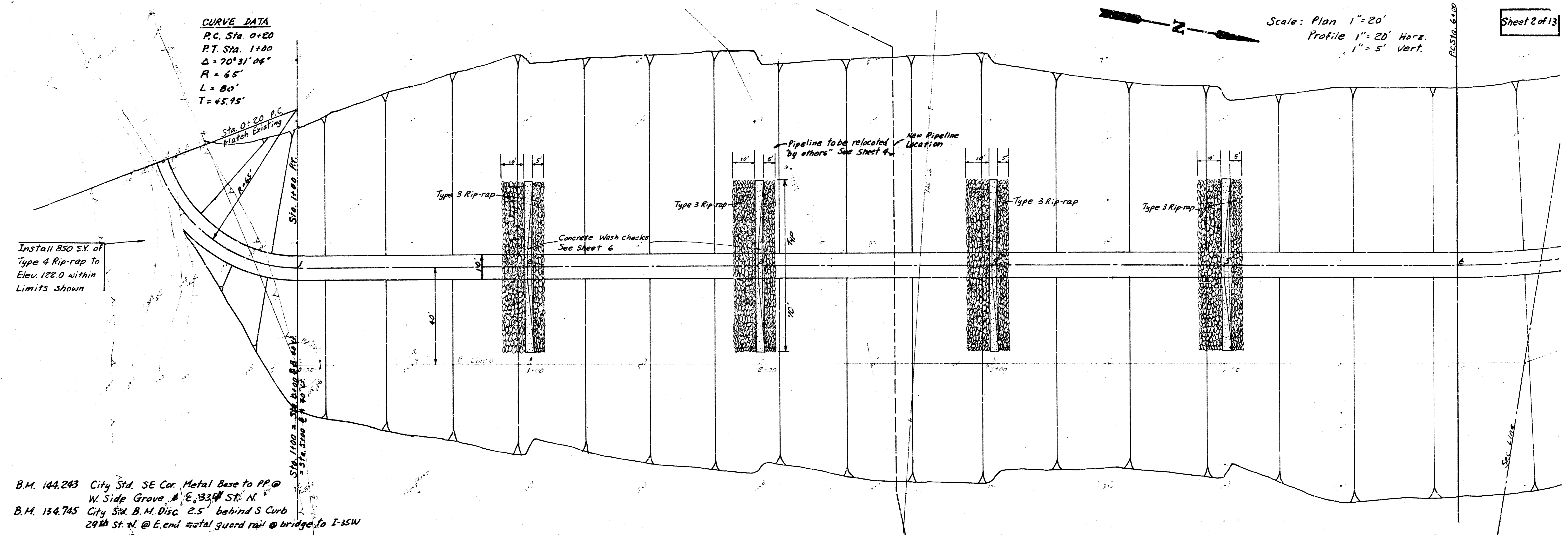
**R.W. BRUGGEMAN, DIRECTOR OF ENGINEERING/
CITY ENGINEER
CITY OF WICHITA, KANSAS
PROJECT NO. 468 76 245 81116 000 000 001
DATE: _____**

*As Built
12/1/83
RWB*

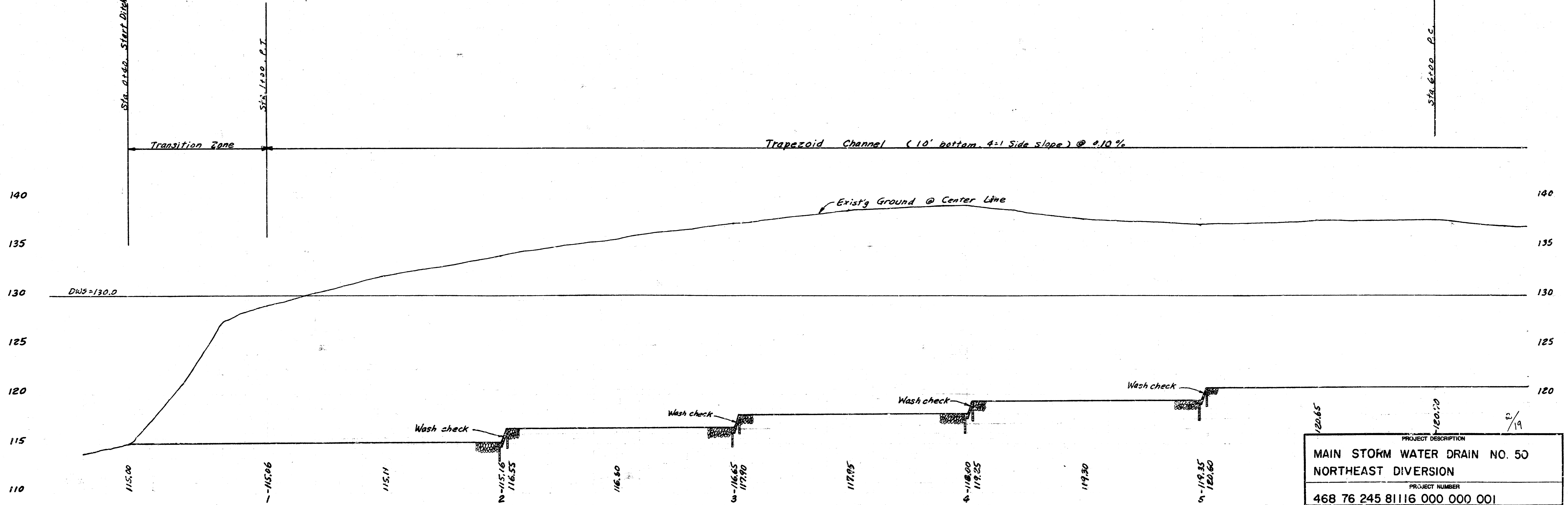
CURVE DATA
 P.C. Sta. 0+20
 P.T. Sta. 1+40
 $\Delta = 70^\circ 31' 04''$
 $R = 65'$
 $L = 80'$
 $T = 45.95'$

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

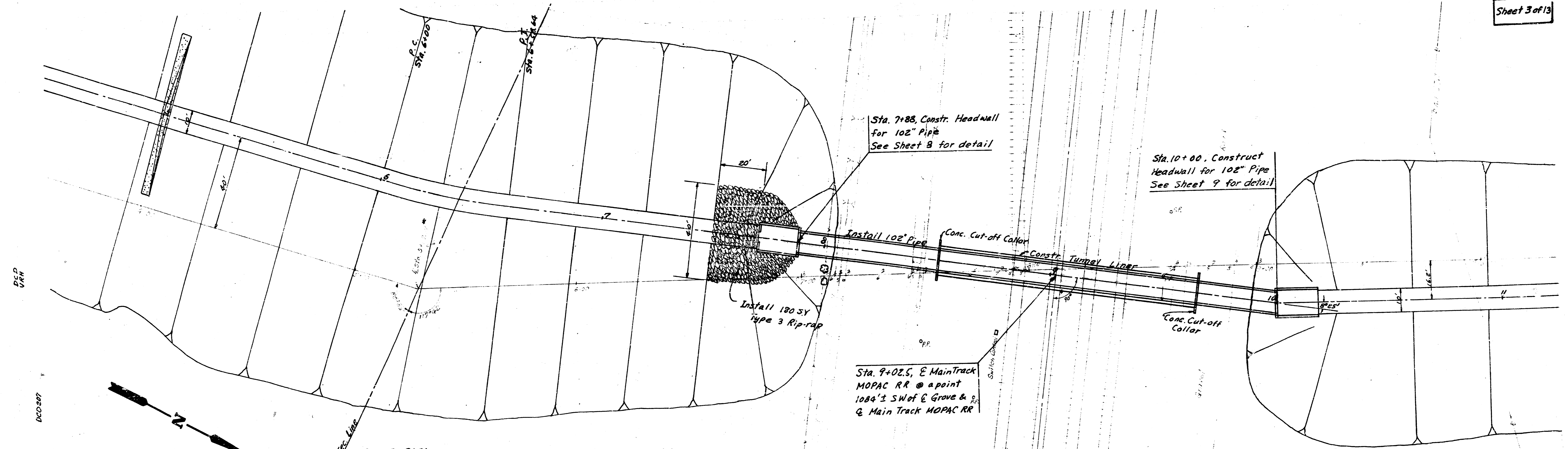
Sheet 2 of 13



B.M. 144.243 City Std. SE Cor. Metal Base to PP @
 W. Side Grove & E. 33rd St. N.
 B.M. 134.745 City Std. B.M. Disc. 2.5' behind S Curb
 29th St. N. @ E. end metal guard rail @ bridge to I-35W



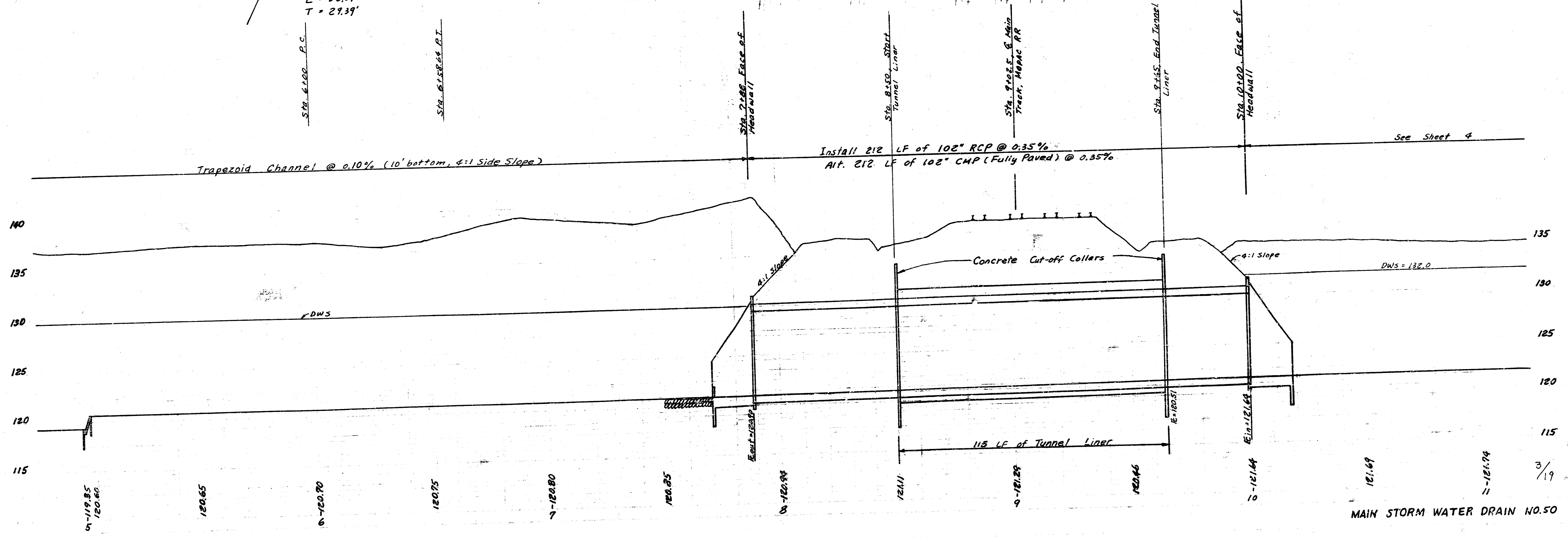
PROJECT DESCRIPTION
MAIN STORM WATER DRAIN NO. 50
NORTHEAST DIVERSION
 PROJECT NUMBER
468 76 245 8116 000 000 001



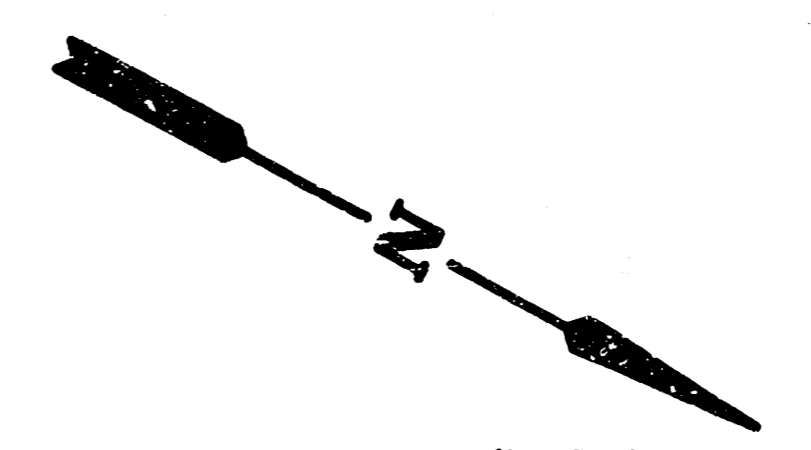
Scale: Plan 1" = 20'
 Profile 1" = 20' Horiz.
 1" = 5' Vert.

CURVE DATA
 P.C. Sta. 6+00
 P.T. Sta. 6+58.64
 $\Delta = 90^\circ 20'$
 $R = 360'$
 $L = 58.64'$
 $T = 29.39'$

* Note: @ Sta. 5+29.21 is a point on Section Line 906^B West of Stone @ E 29th St. N. & Grove

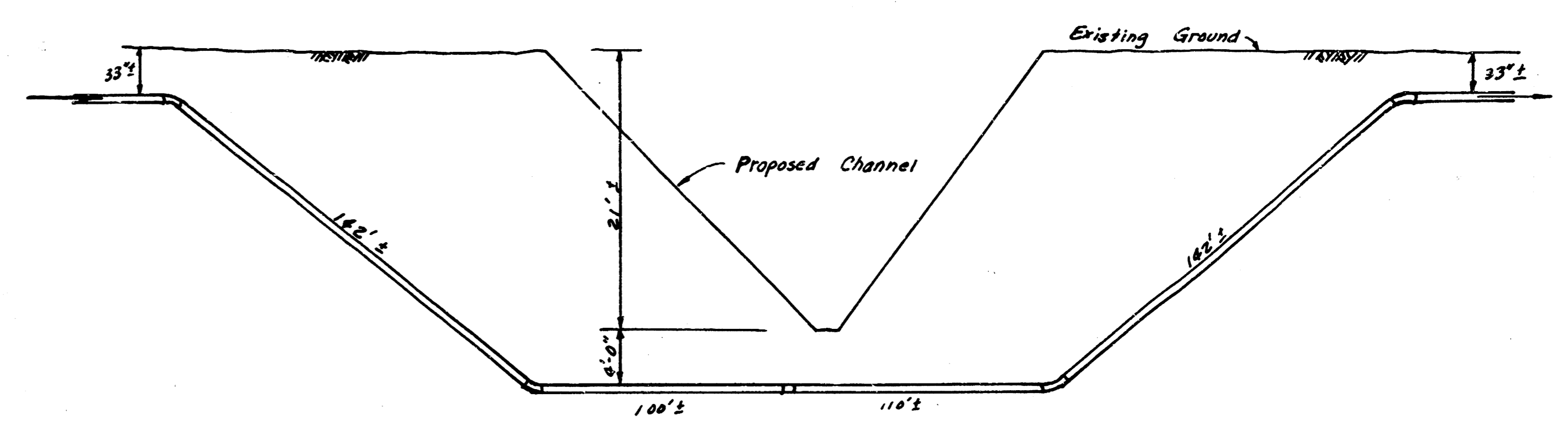
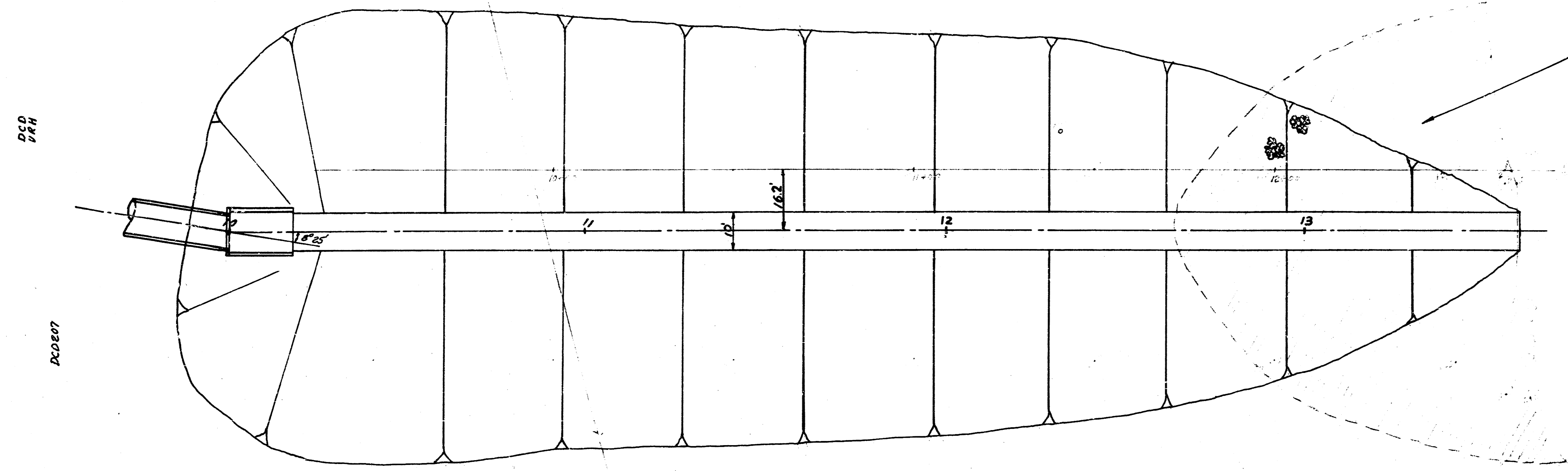


MAIN STORM WATER DRAIN NO. 50

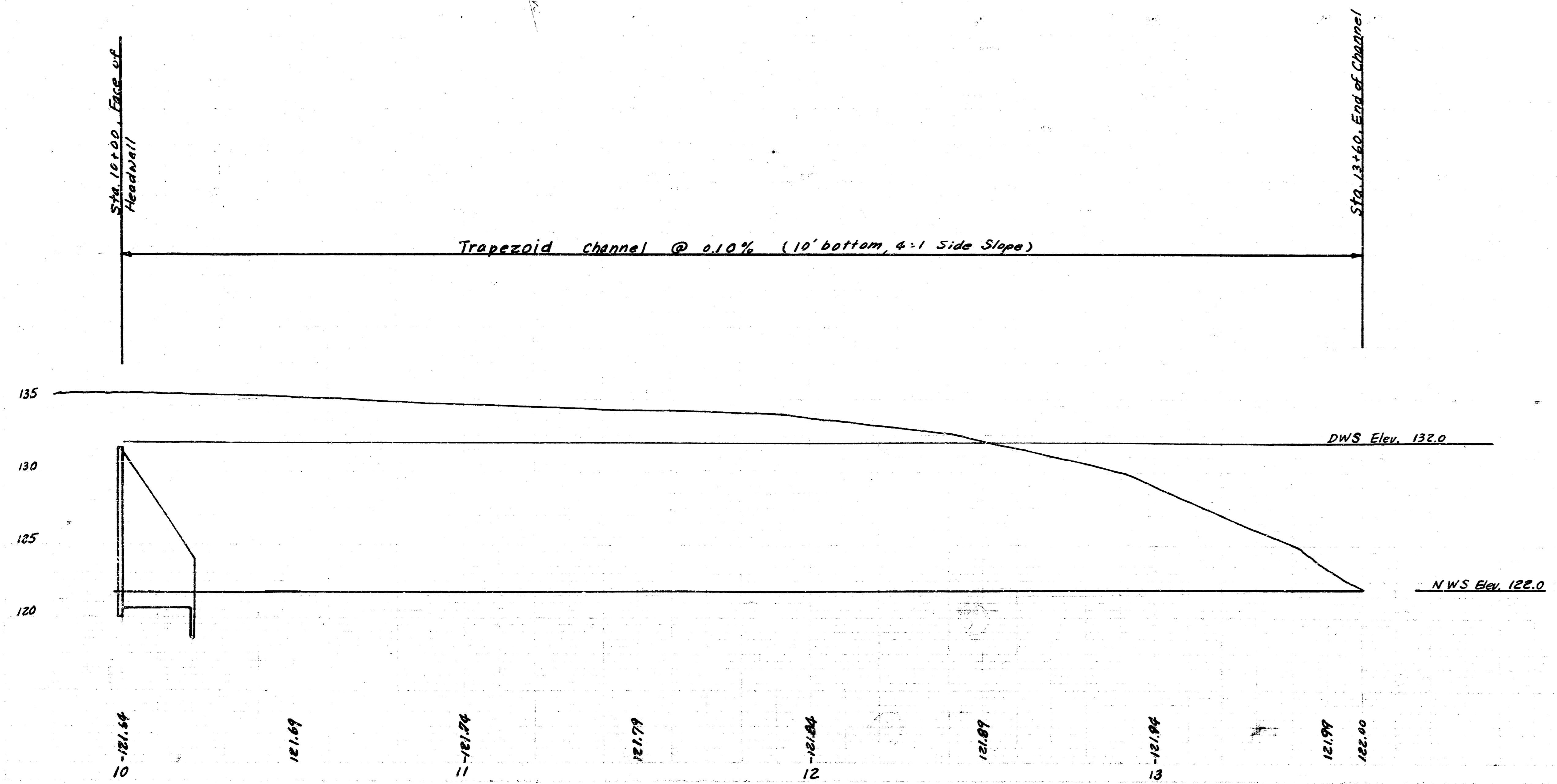


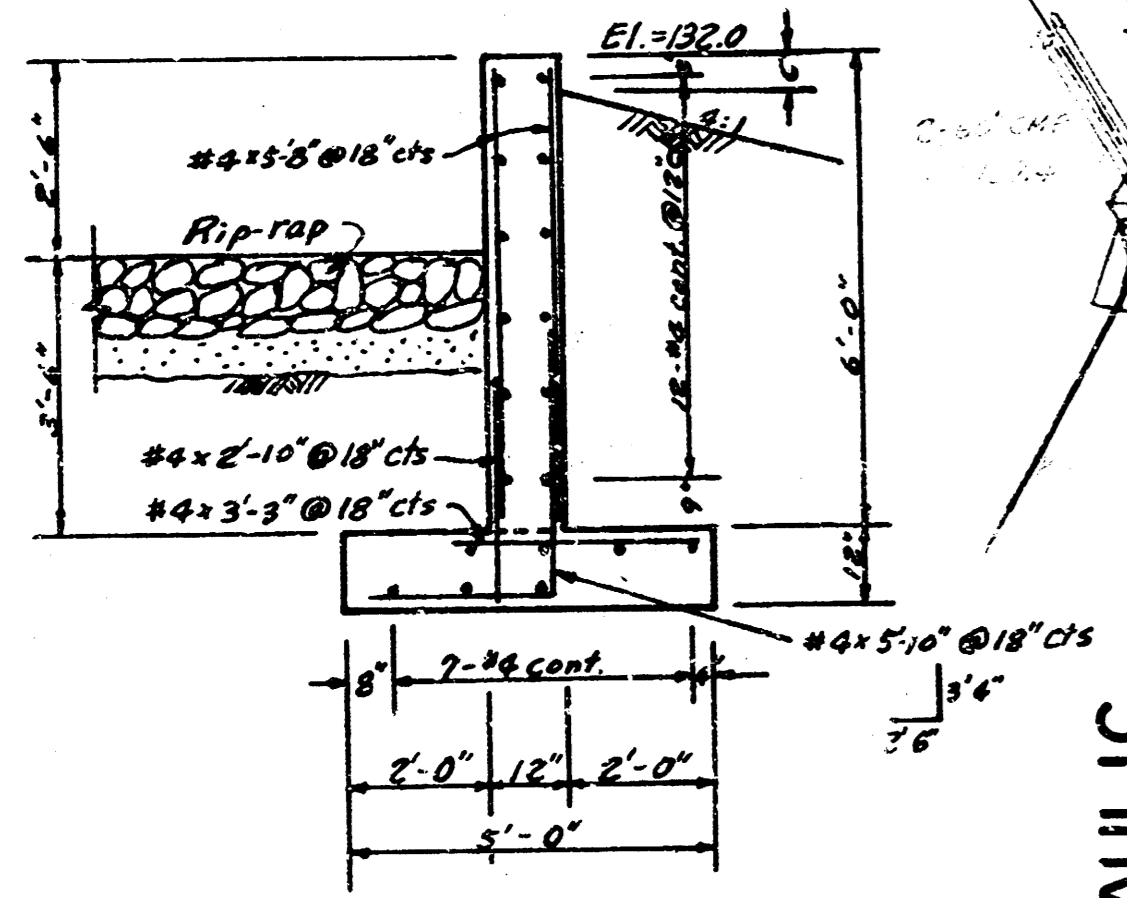
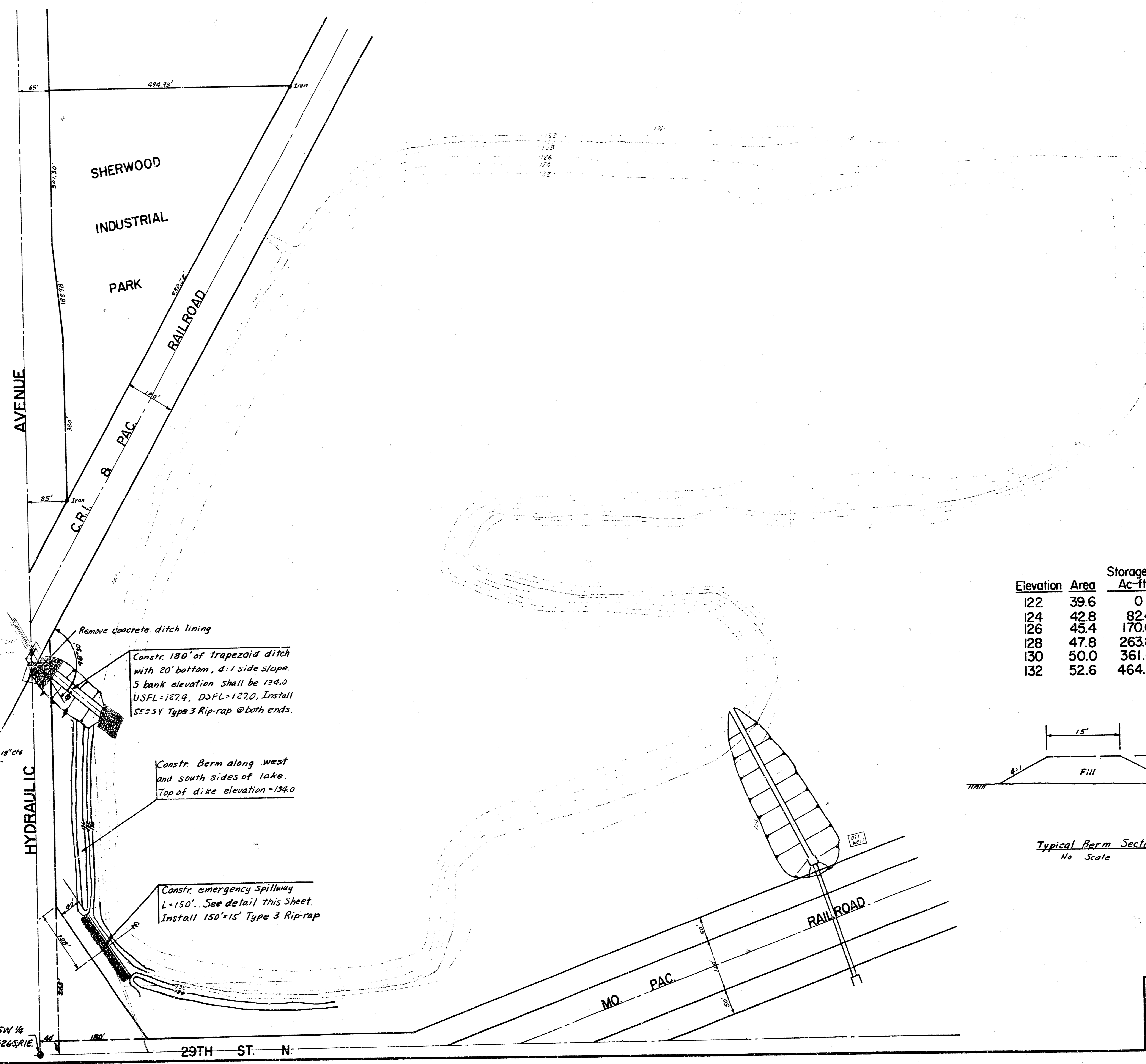
Scale: Plan 1"=20'
 Profile 1"=20' Horiz.
 1"=5' Vert.

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



KAMEB 8" OIL PIPELINE RELOCATION
 PROFILE
 NO SCALE





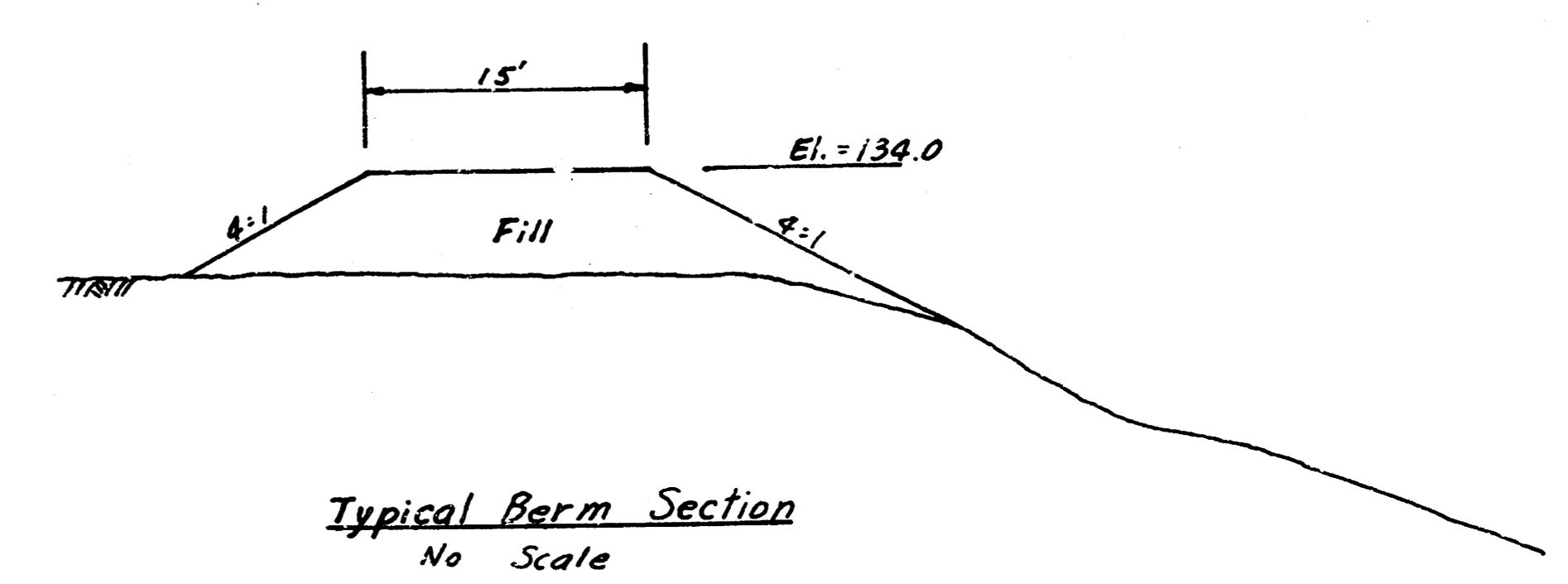
Emergency Spillway Details
Scale: 1" = 3'

Remove concrete ditch lining
Constr. 180' of trapezoid ditch with 20' bottom, 4:1 side slope. S bank elevation shall be 134.0 USFL=127.4, DSFL=127.0. Install 550 SY Type 3 Rip-rap @ both ends.

Constr. Berm along west and south sides of lake. Top of dike elevation = 134.0

Constr. emergency Spillway L=150'. See detail this Sheet. Install 150'x15' Type 3 Rip-rap

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

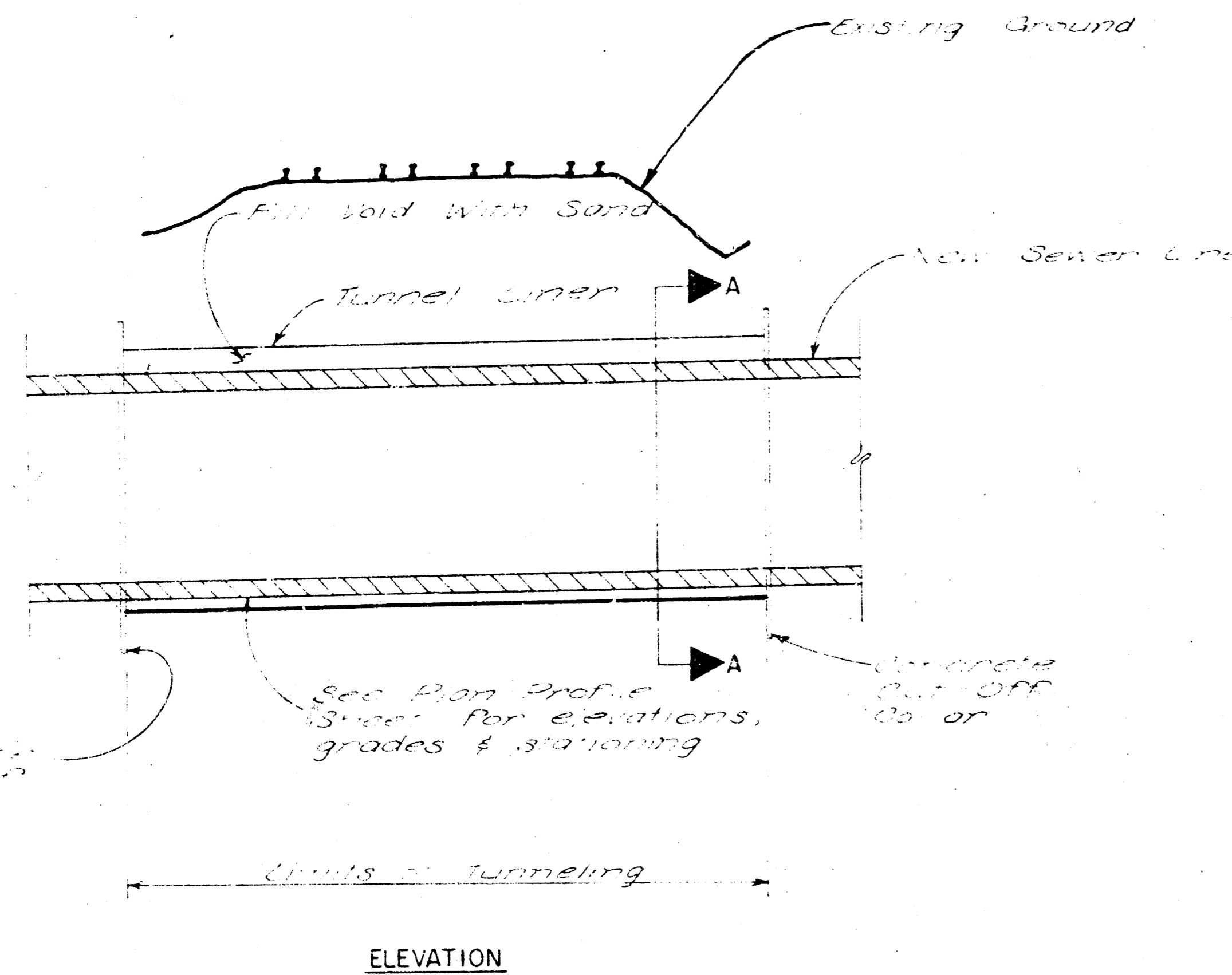


Typical Berm Section
No Scale

SW Cor. SW 1/4
Sec. 34, T265R1E

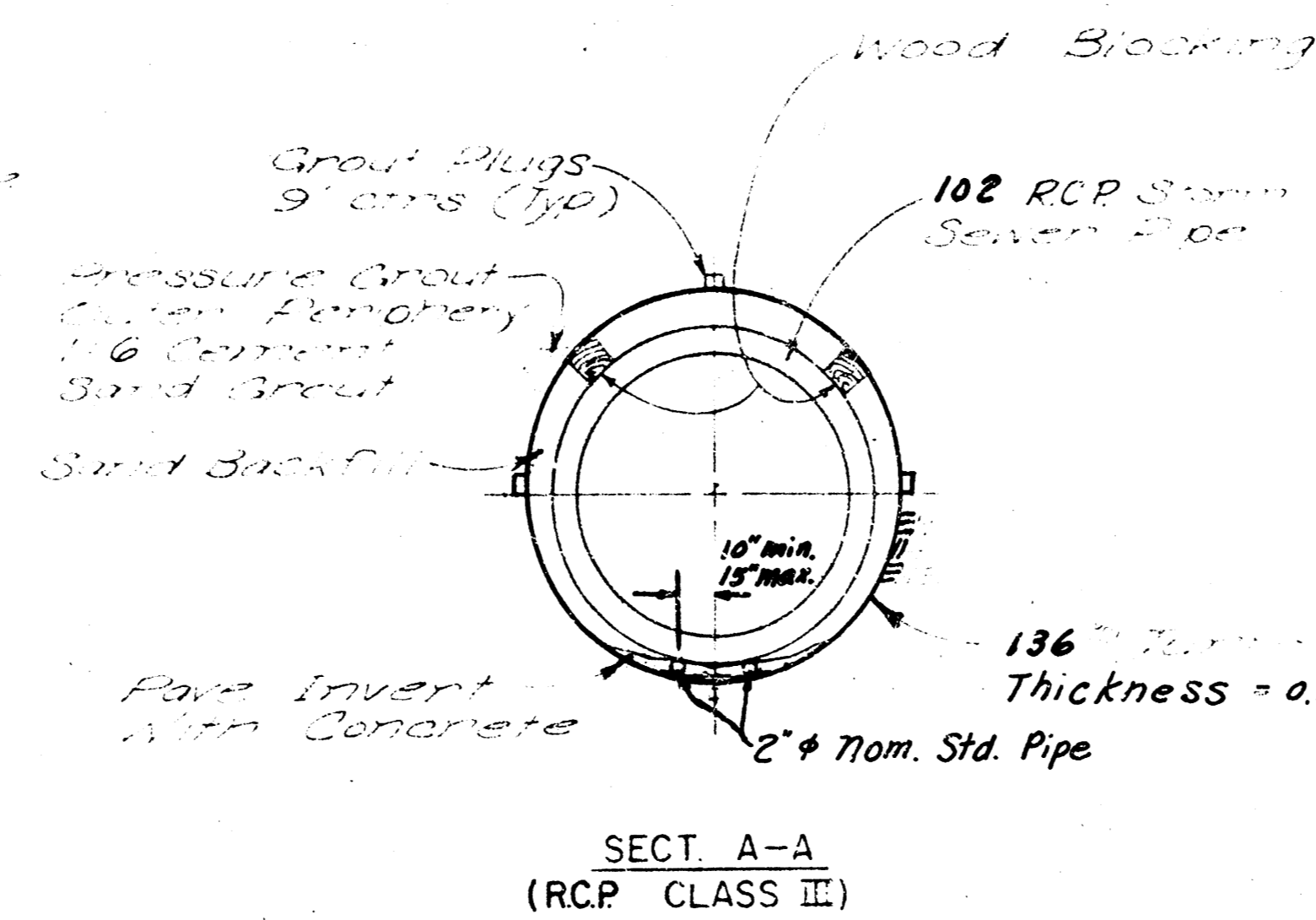
29TH ST. N.

PROJECT DESCRIPTION
MAIN STORM WATER DRAIN NO. 50 5/19
PROJECT NUMBER
468 76 245 8116 000 000 001

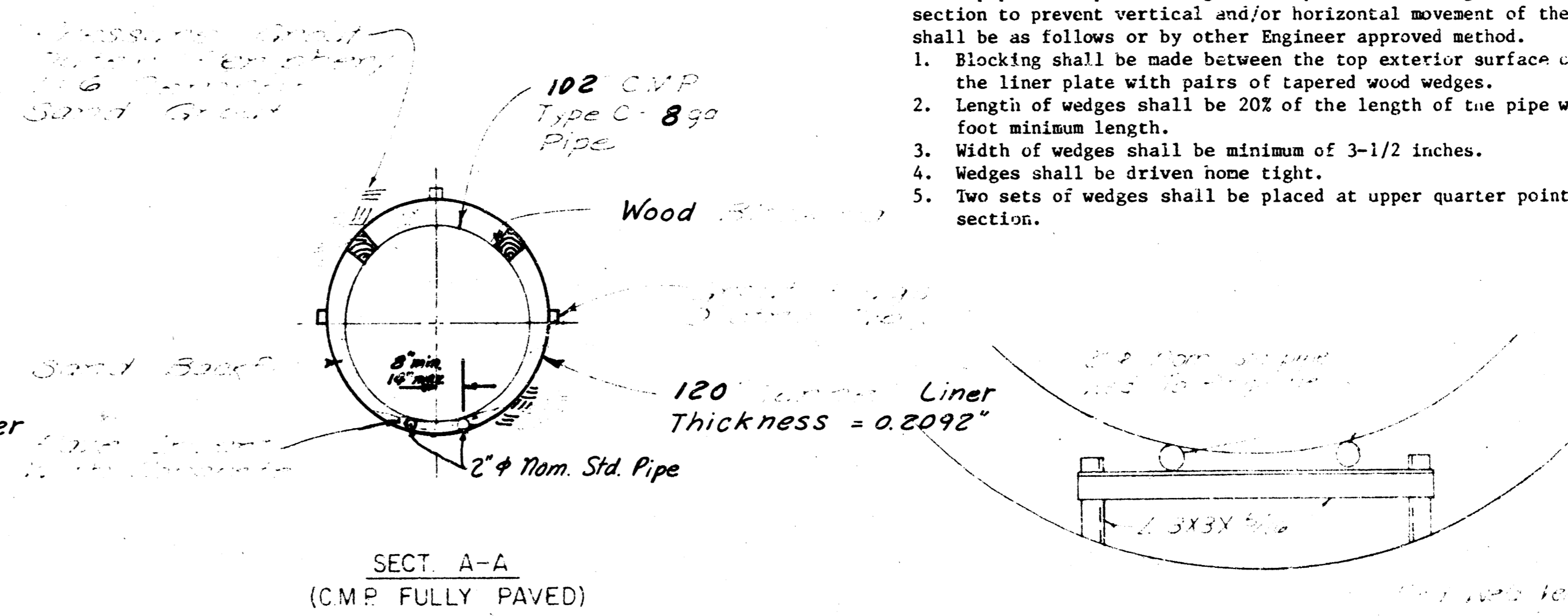


ELEVATION

ENCASEMENT PIPE DETAILS



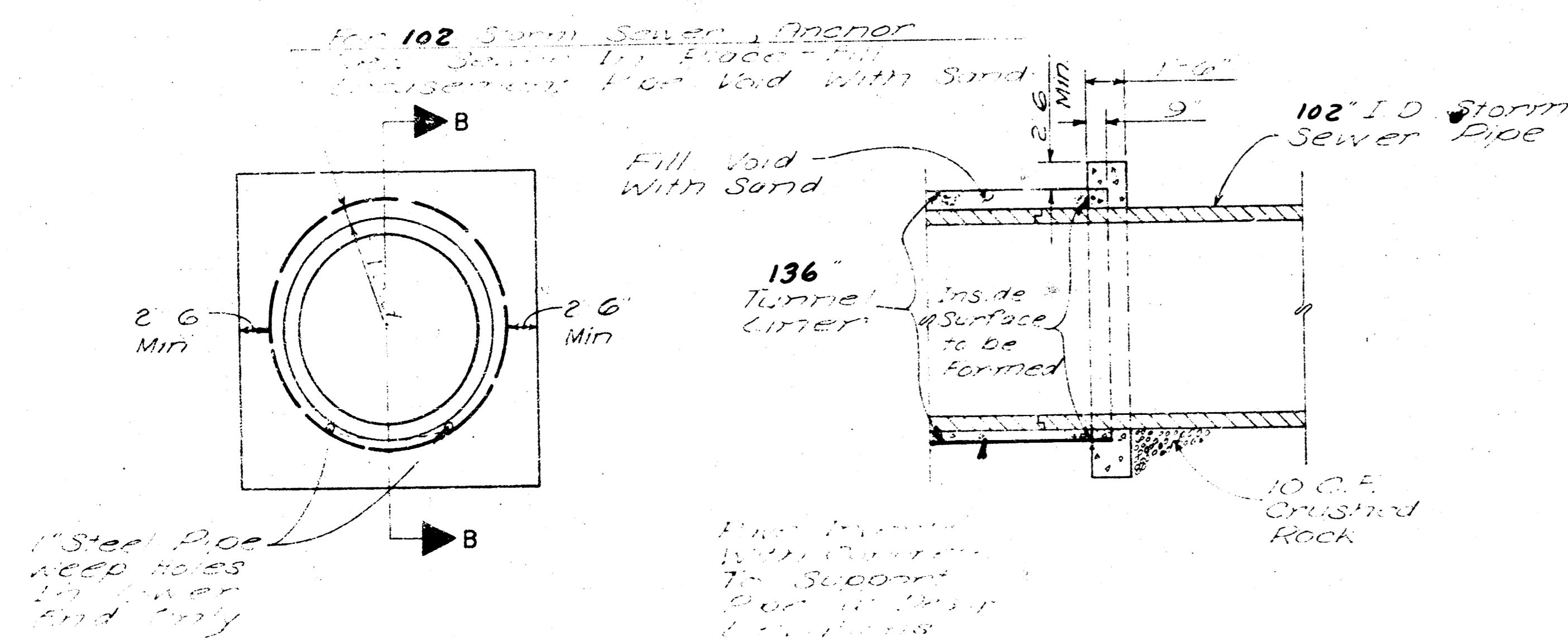
SECT. A-A
(RCP CLASS III)



SECT. A-A
(CMP FULLY PAVED)

RAIL ASSEMBLY

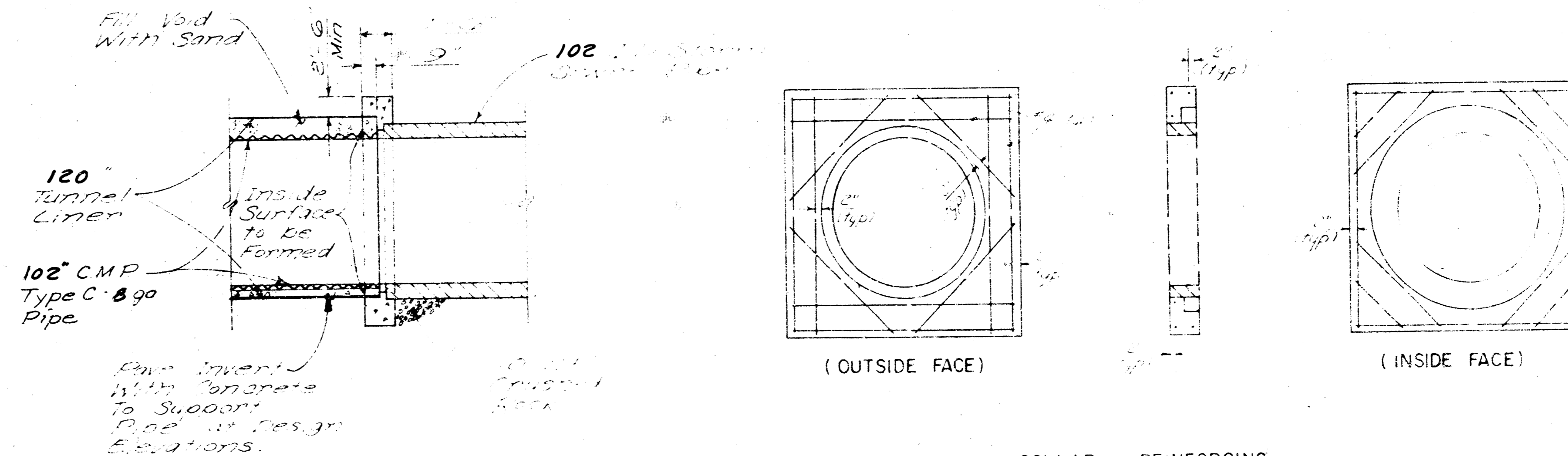
- INSTALLATION
- Care shall be used to tunnel as neatly as possible to eliminate voids or over-break and thus obtain maximum plate-to-ground contact.
 - Liner plates shall be installed in accordance with manufacturer's instructions.
 - After liner plate rings have been installed, the area between the 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.
 - 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.
 - Sections of pipe shall be connected one at a time within the liner area in their final position.
 - 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.
 - Blocking shall be made between the top exterior surface of the pipe and the liner plate with pairs of tapered wood wedges.
 - Length of wedges shall be 20% of the length of the pipe with a one foot minimum length.
 - Width of wedges shall be minimum of 3-1/2 inches.
 - Wedges shall be driven home tight.
 - Two sets of wedges shall be placed at upper quarter points on each concrete section.



ELEVATION

CONCRETE CUT-OFF COLLAR DETAILS

SECT. B-B
(RCP CLASS III)
ALTERNATE



SECT. B-B
(CMP FULLY PAVED)
ALTERNATE

COLLAR REINFORCING

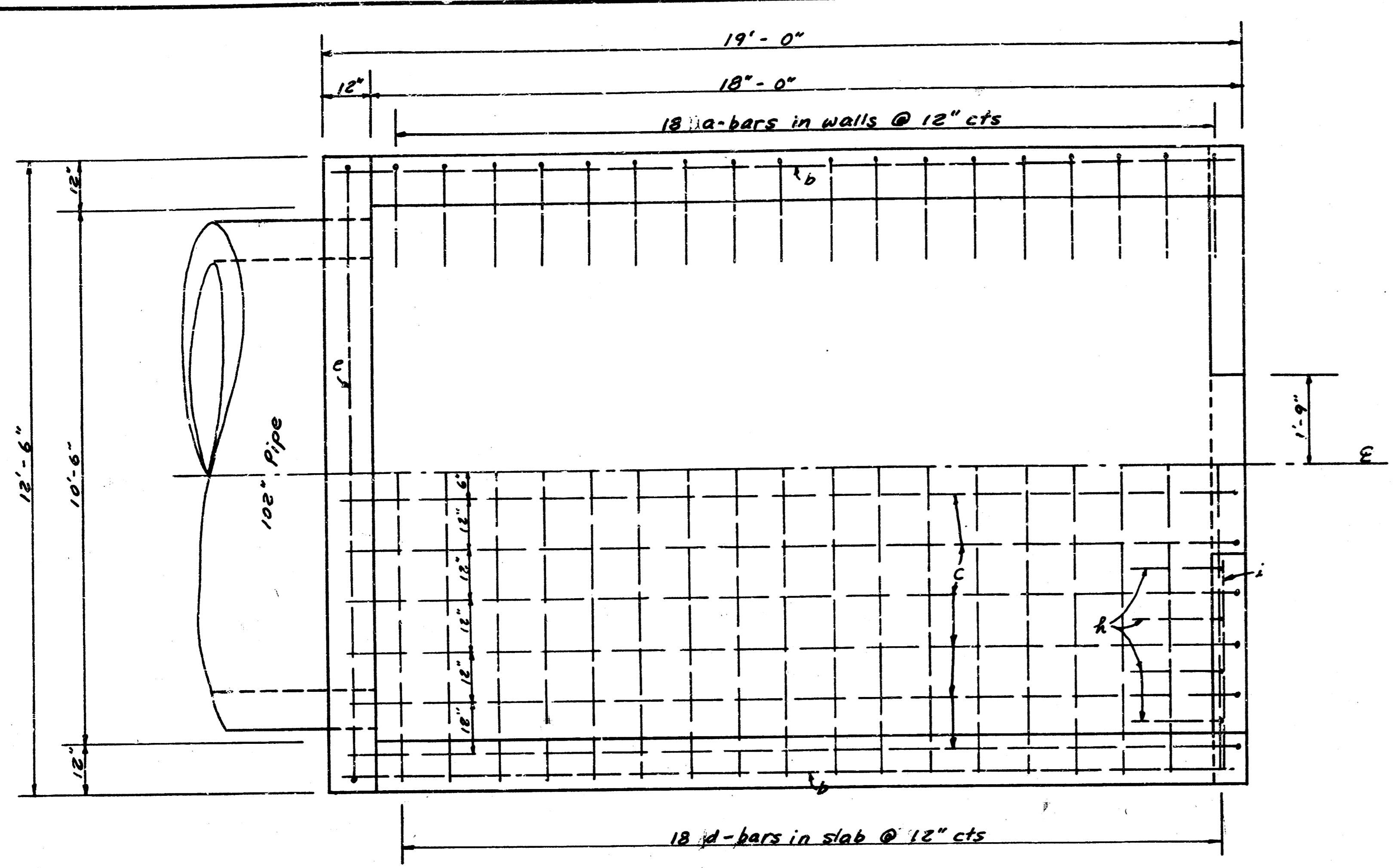
- TUNNEL LINER MATERIAL
- Liner plates shall be made from steel sheets conforming to the requirements of ASTM Designation A 569.
 - All plates shall be punched for bolting on both longitudinal and circumferential seams and shall be so fabricated as to permit complete erection from the inside of the tunnel.
 - 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).
 - 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.
 - 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.
 - Bolts shall be in conformance with ASTM A 307.

MAIN STORM WATER DRAIN NO. 50
CITY OF WICHITA

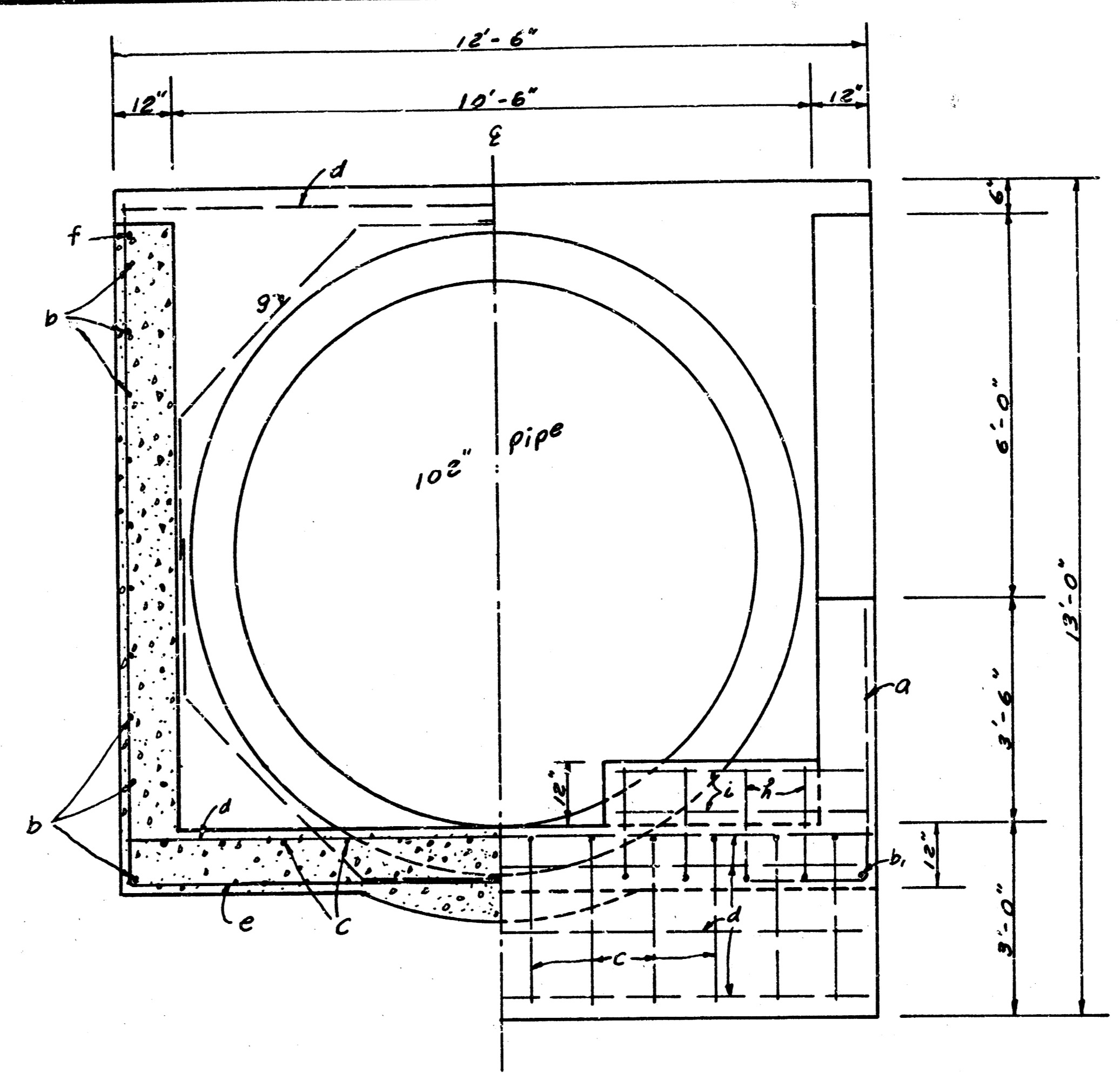
RAILROAD CROSSING DETAILS

PROJECT NO. 468 76 245 8116 000 000 COI

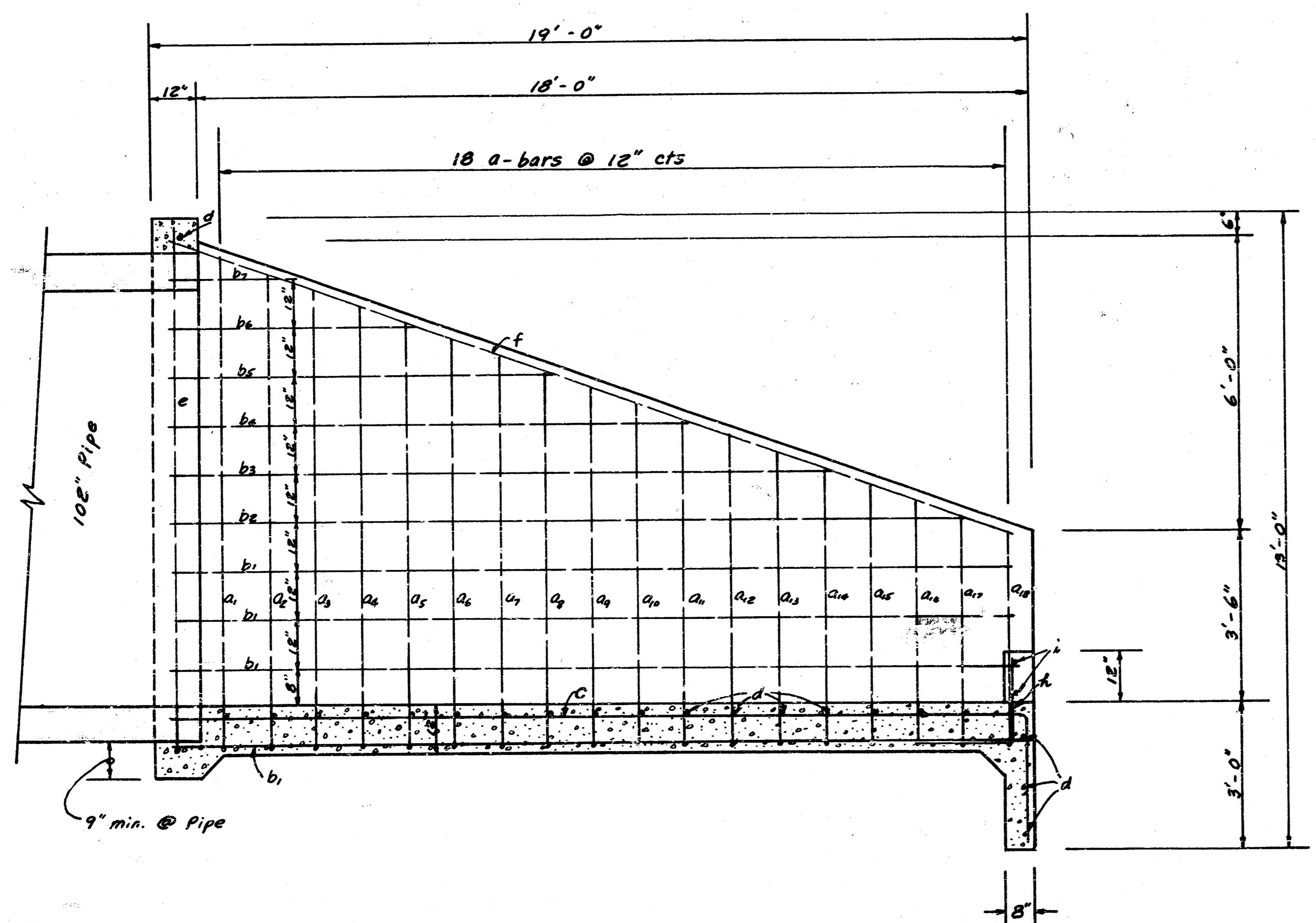
SHEET 7 OF 19



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



SECTION ELEVATION

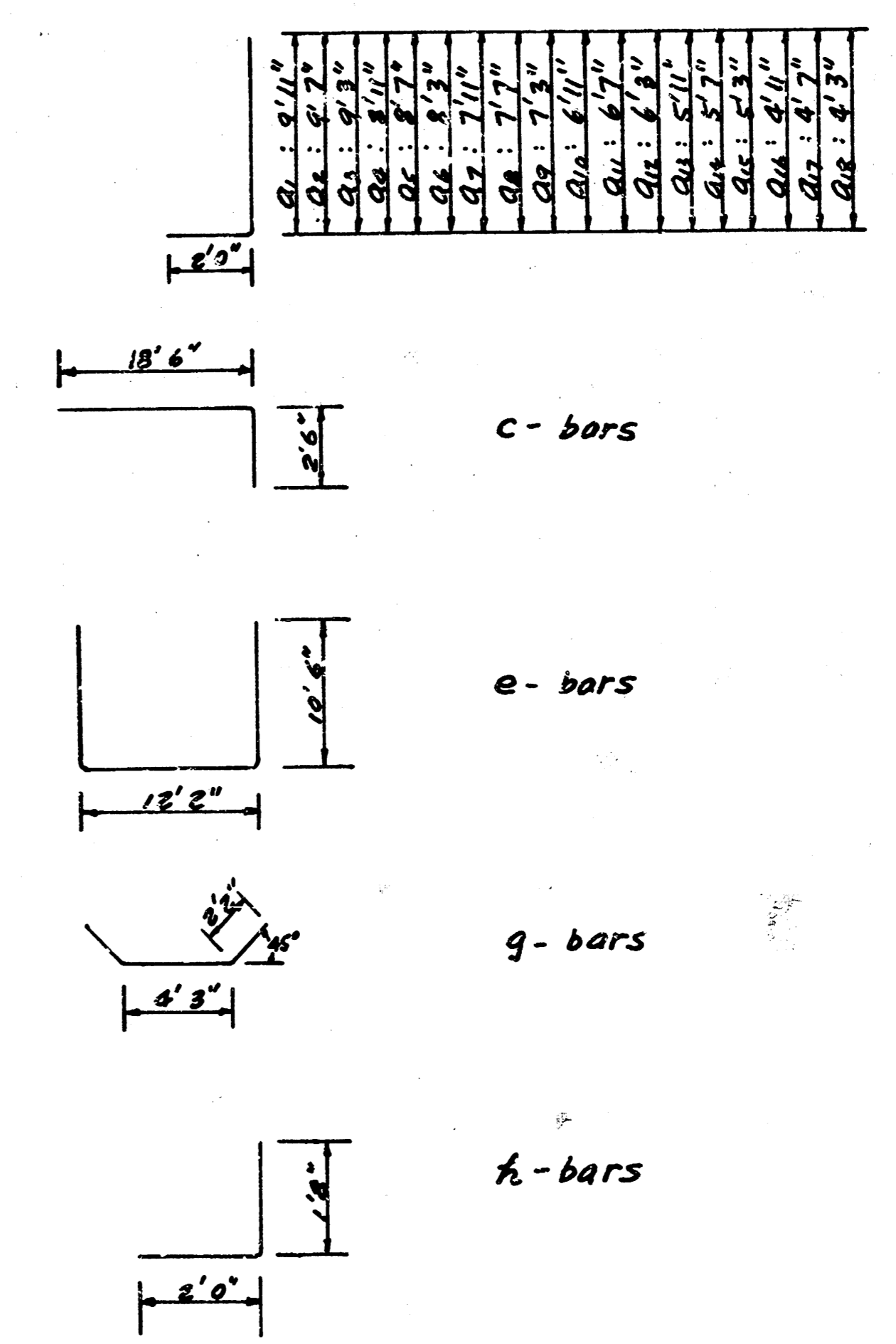


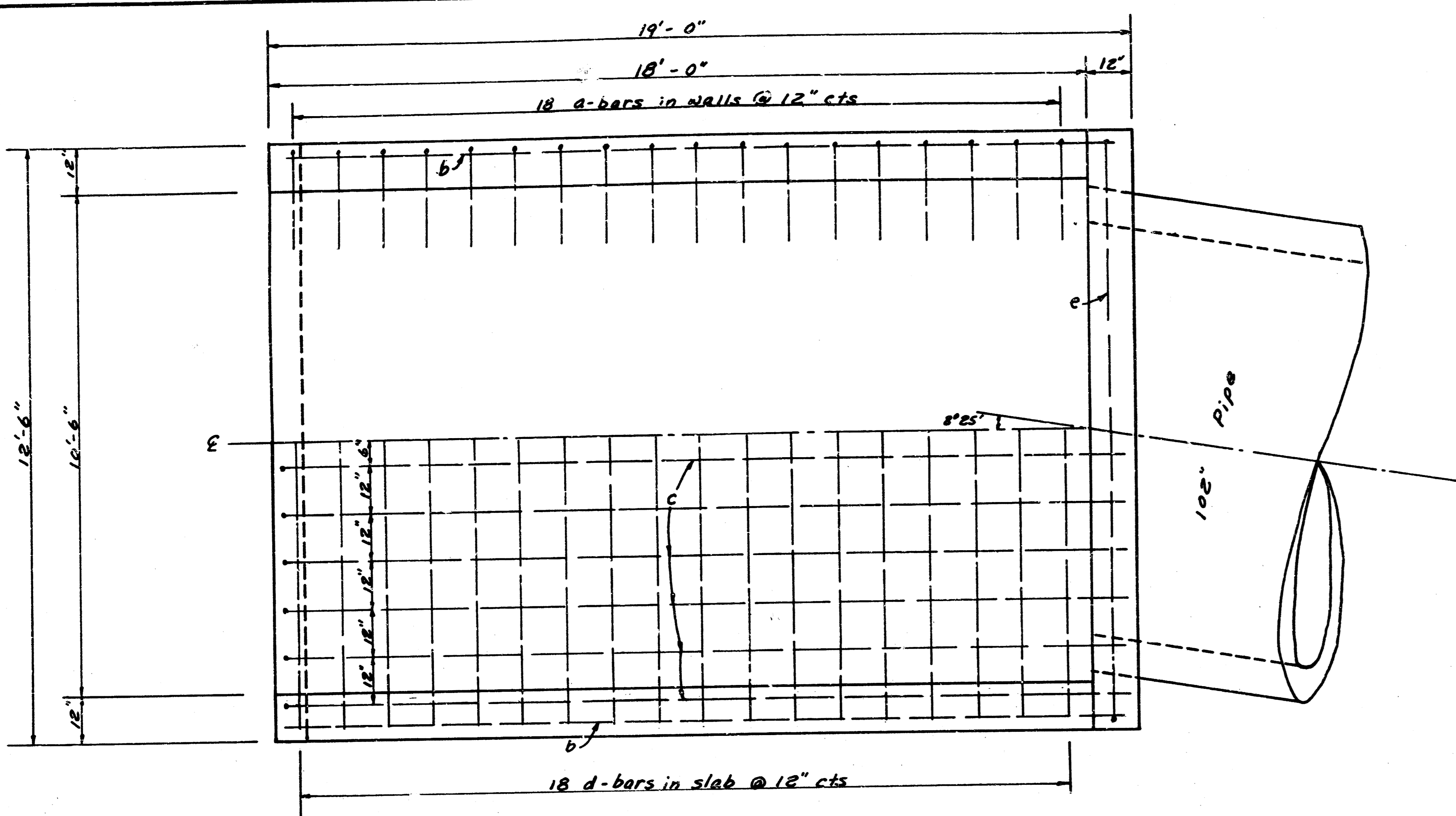
SECTION
Scale: 1/2" = 1'-0"

REBAR SCHEDULE

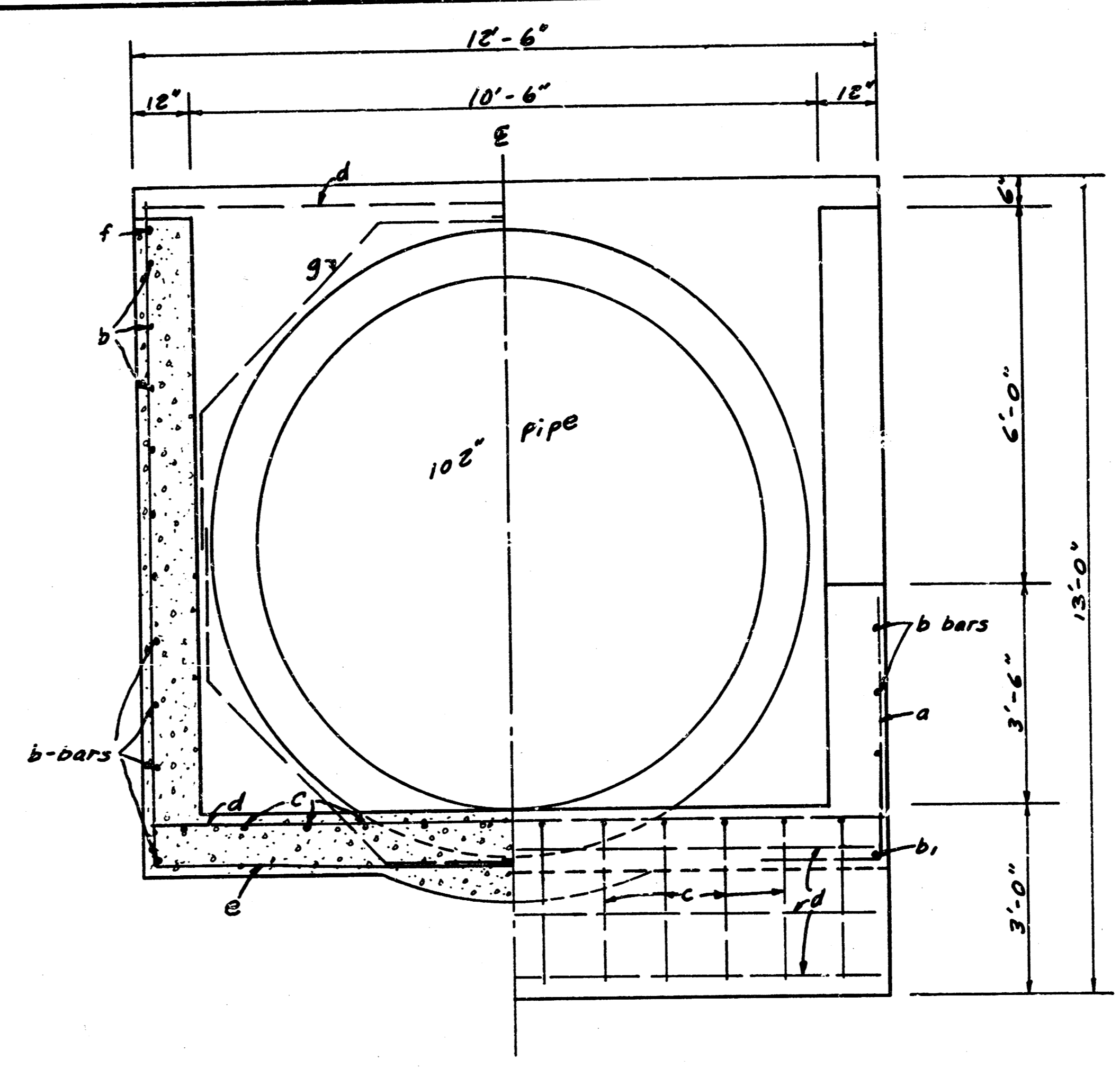
Bar	Shape	No. # Length	Weight
a1		2 @ 11' 1"	15.92
a2		2 @ 11' 7"	15.48
a3		2 @ 11' 3"	15.83
a4		2 @ 10' 11"	16.58
a5		2 @ 10' 7"	19.16
a6		2 @ 10' 3"	13.49
a7		2 @ 9' 11"	13.25
a8		2 @ 9' 7"	12.80
a9		2 @ 9' 3"	12.36
a10		2 @ 8' 11"	11.91
a11		2 @ 8' 7"	11.47
a12		2 @ 8' 3"	11.02
a13		2 @ 7' 11"	10.58
a14		2 @ 7' 7"	10.13
a15		2 @ 7' 3"	9.69
a16		2 @ 5' 11"	9.24
a17		2 @ 4' 7"	8.80
a18		2 @ 6' 3"	8.35
b1		8 @ 15' 6"	98.86
b2		2 @ 17' 2"	22.73
b3		2 @ 14' 2"	18.73
b4		2 @ 11' 2"	14.72
b5		2 @ 8' 2"	10.71
b6		2 @ 5' 2"	6.70
b7		2 @ 2' 2"	2.69
c		12 @ 21' 0"	168.34
d		22 @ 12' 0"	178.80
e		1 @ 33' 2"	22.16
f		2 @ 19' 4"	25.83
g		4 @ 8' 7"	22.73
h		8 @ 5' 8"	19.57
i		4 @ 4' 1"	10.91
Total Rebars 843 lbs			
Conc. 229 C.Y.			

All Conc. Reinforcement to be #4 bars.

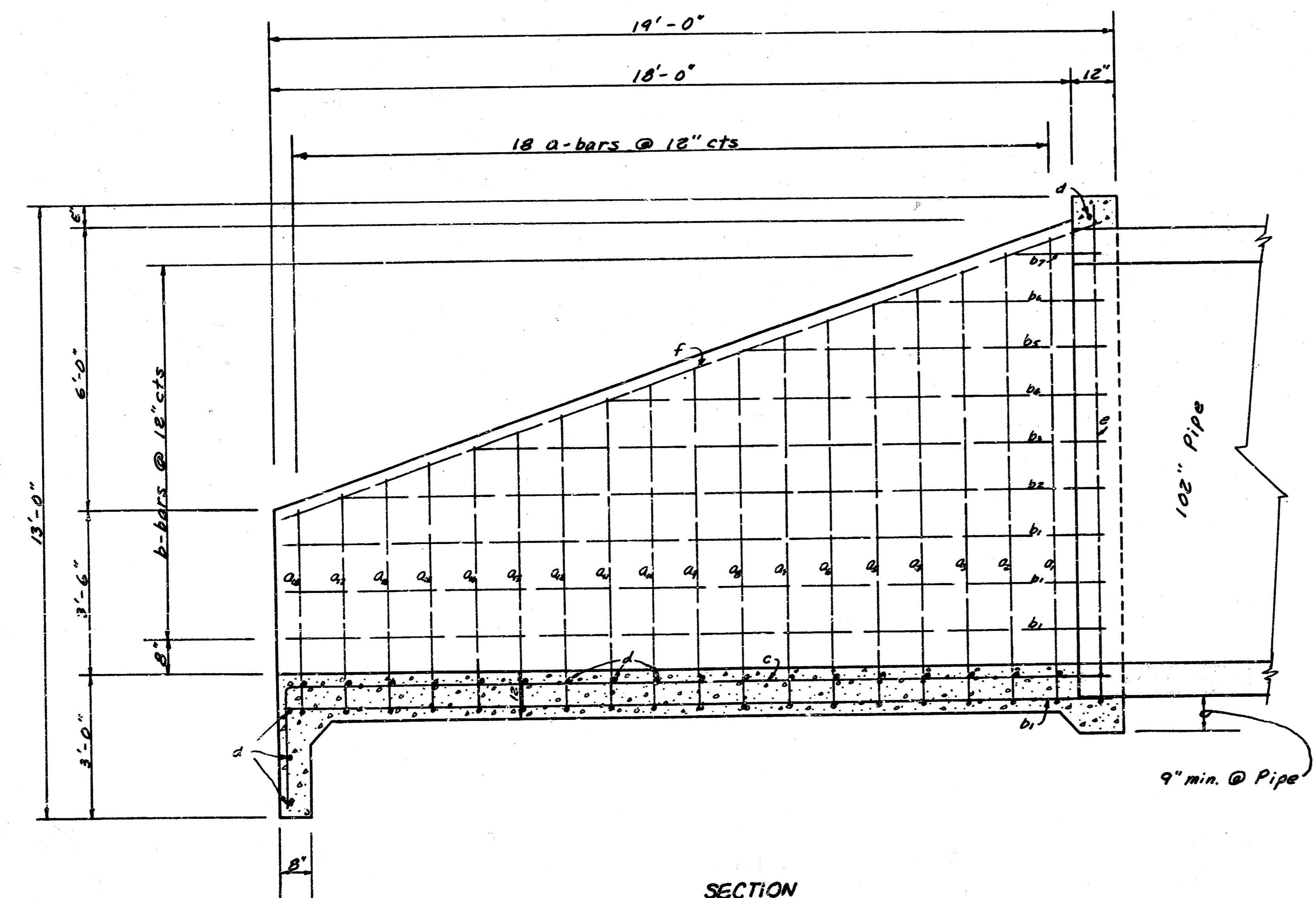




PLAN - Headwall at Sta. 10+00
Scale: 1/2" = 1'-0"



SECTION ELEVATION

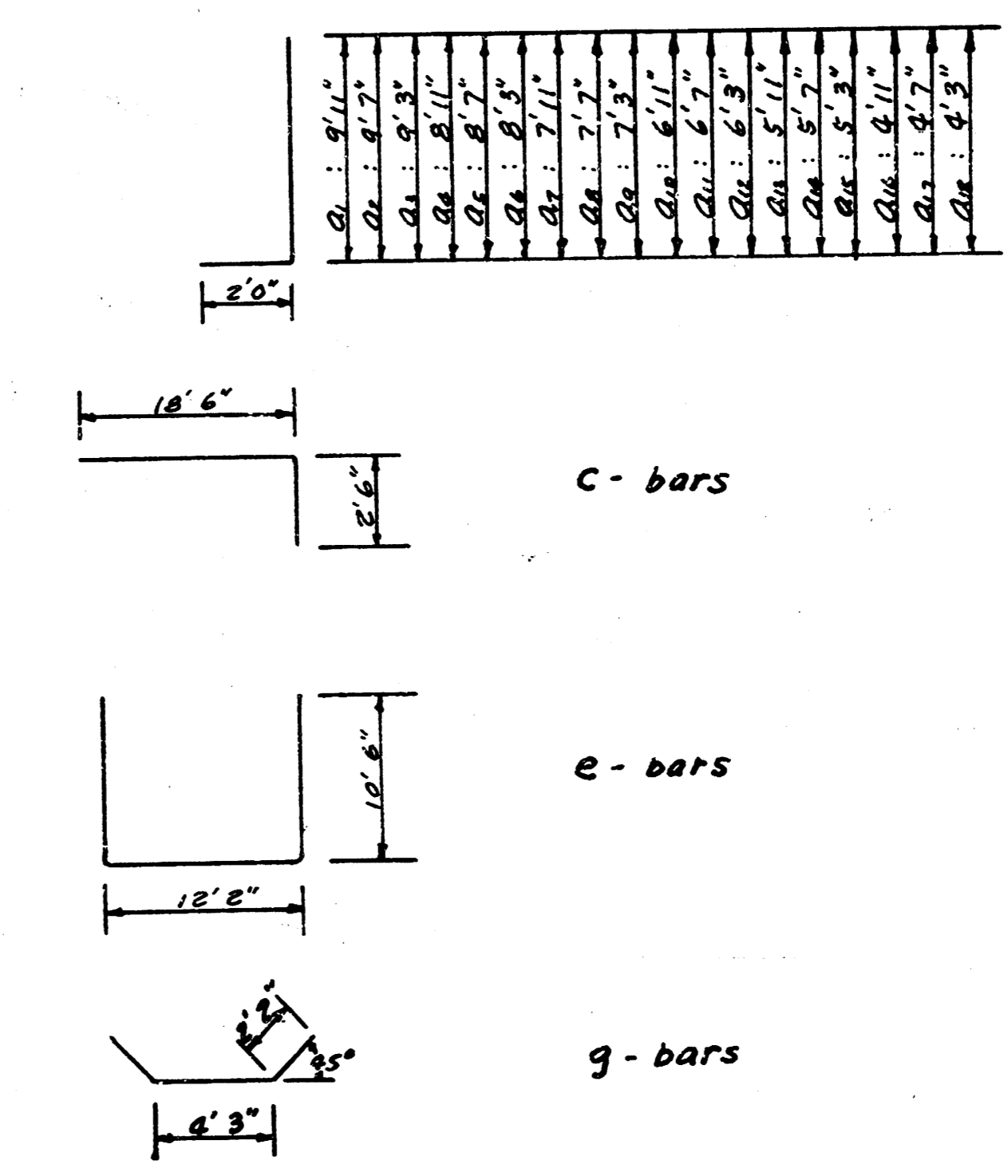


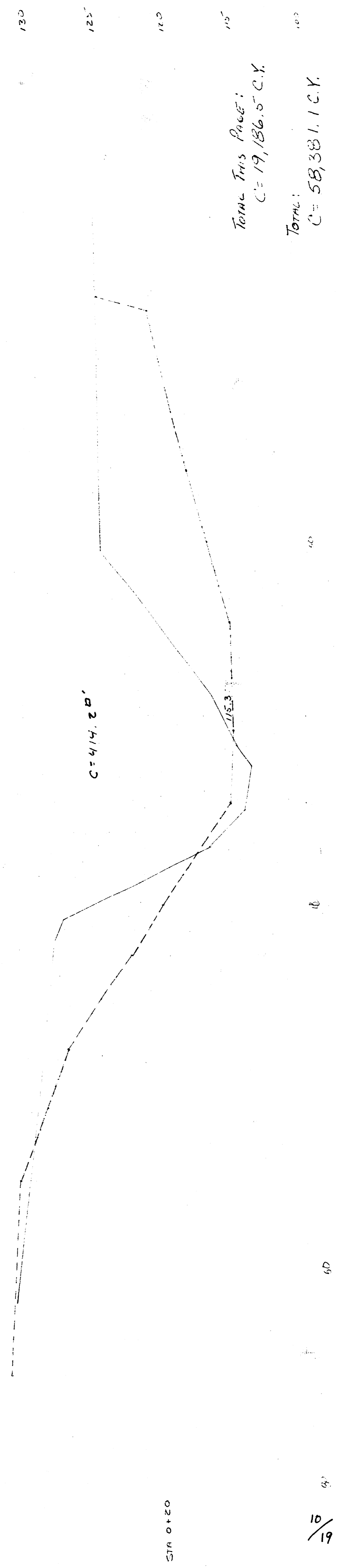
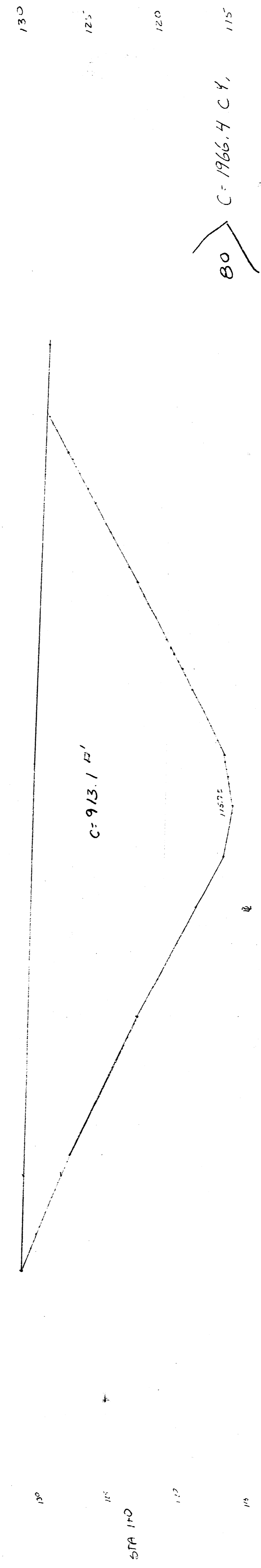
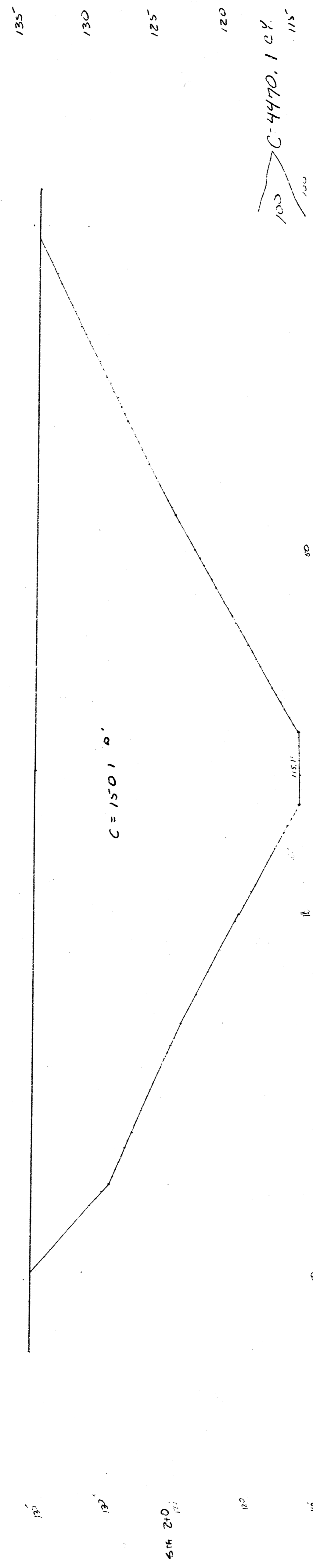
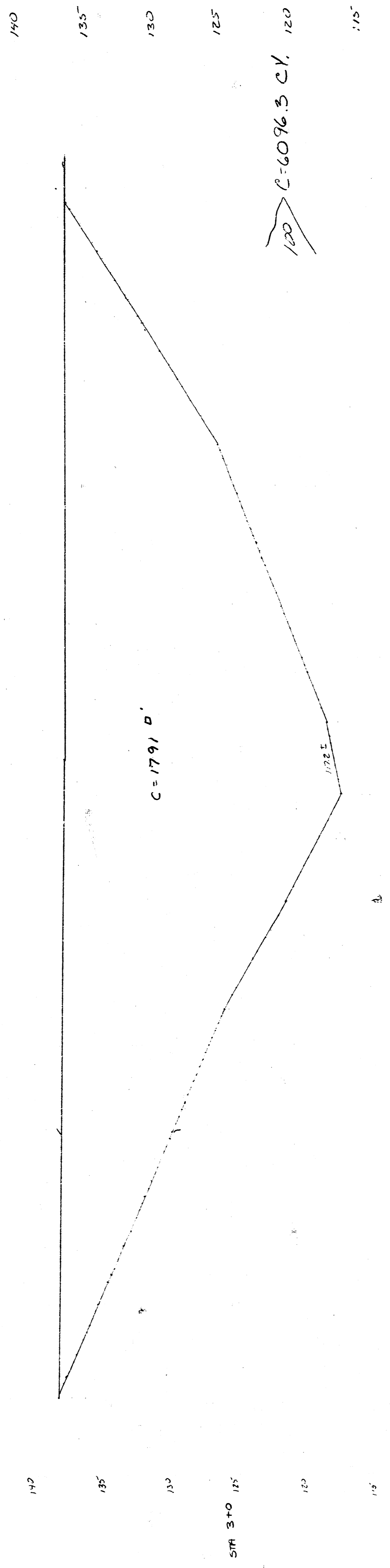
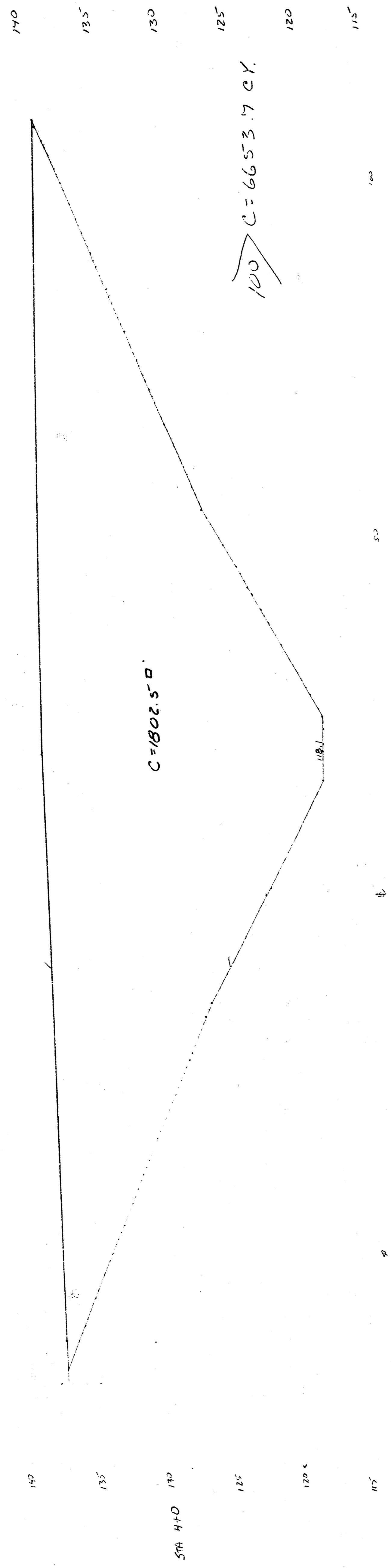
SECTION
Scale: 1/2" = 1'-0"

REBAR SCHEDULE

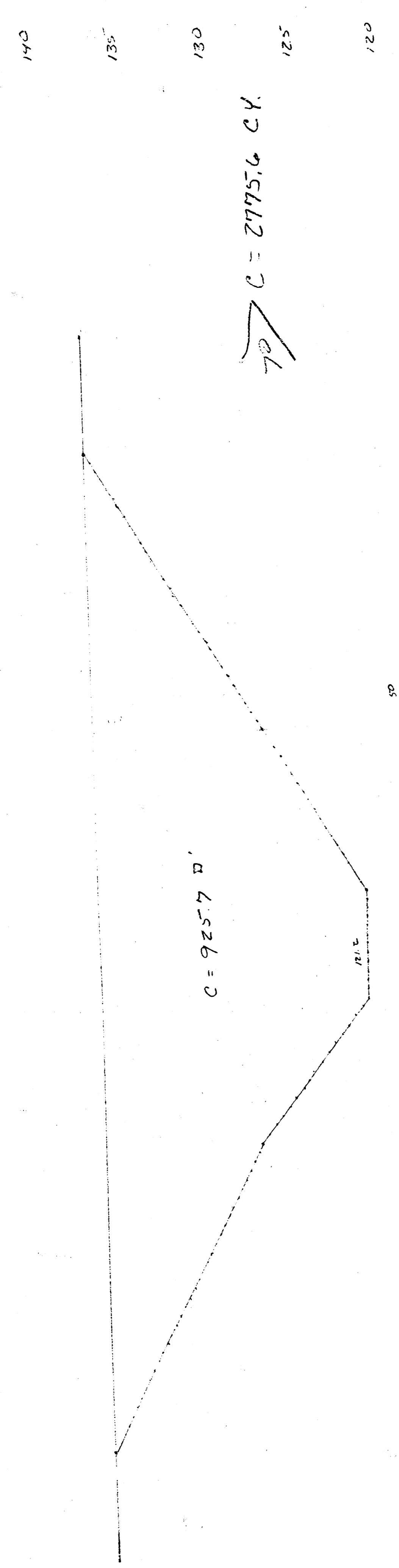
Bar	Shape	No. #	Length	Weight
a1	┌	2 @	11'11"	15.92
a2	┌	2 @	11'7"	15.48
a3	┌	2 @	11'3"	15.03
a4	┌	2 @	10'11"	14.58
a5	┌	2 @	10'7"	14.14
a6	┌	2 @	10'3"	13.69
a7	┌	2 @	9'11"	13.25
a8	┌	2 @	9'7"	12.80
a9	┌	2 @	9'3"	12.36
a10	┌	2 @	8'11"	11.91
a11	┌	2 @	8'7"	11.47
a12	┌	2 @	8'3"	11.02
a13	┌	2 @	7'11"	10.58
a14	┌	2 @	7'7"	10.13
a15	┌	2 @	7'3"	9.69
a16	┌	2 @	6'11"	8.24
a17	┌	2 @	6'7"	8.80
a18	┌	2 @	6'3"	8.35
b1	┌	8 @	18'6"	98.86
b2	┌	2 @	17'2"	22.73
b3	┌	2 @	14'2"	18.73
b4	┌	2 @	11'2"	14.72
b5	┌	2 @	8'2"	10.71
b6	┌	2 @	5'2"	6.70
b7	┌	2 @	2'2"	2.69
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
Total Rebars				813 lbs.
Conc.				227 C.Y.

All Conc. Reinforcement to be #4 bars.

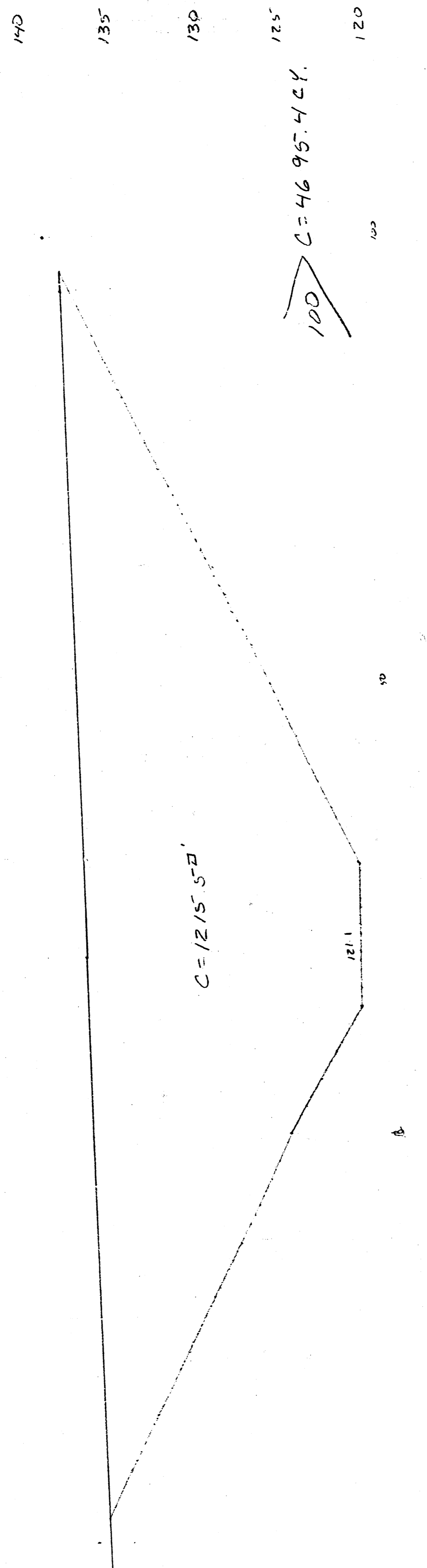




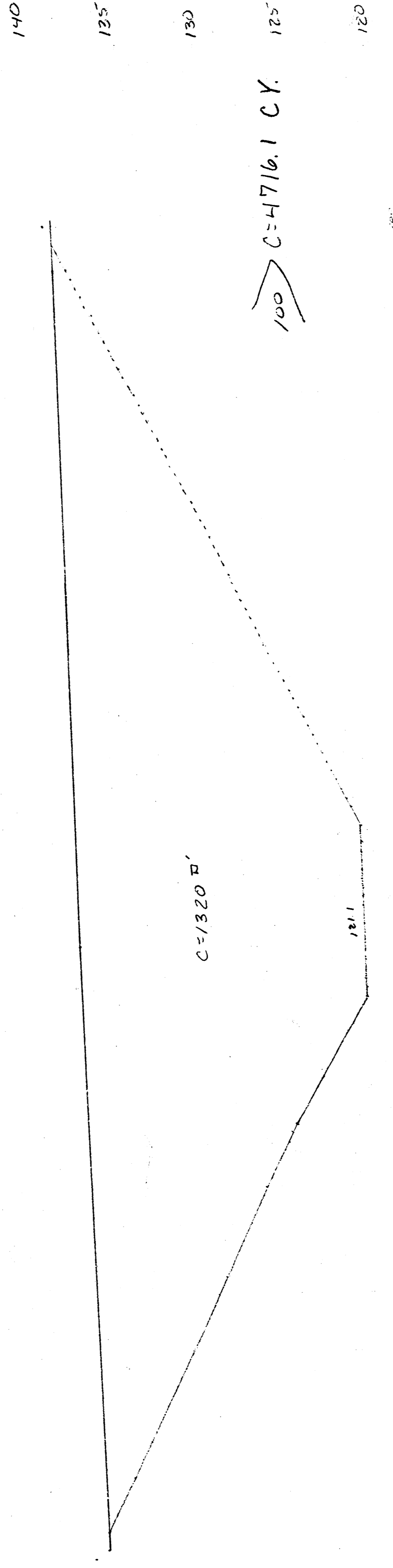
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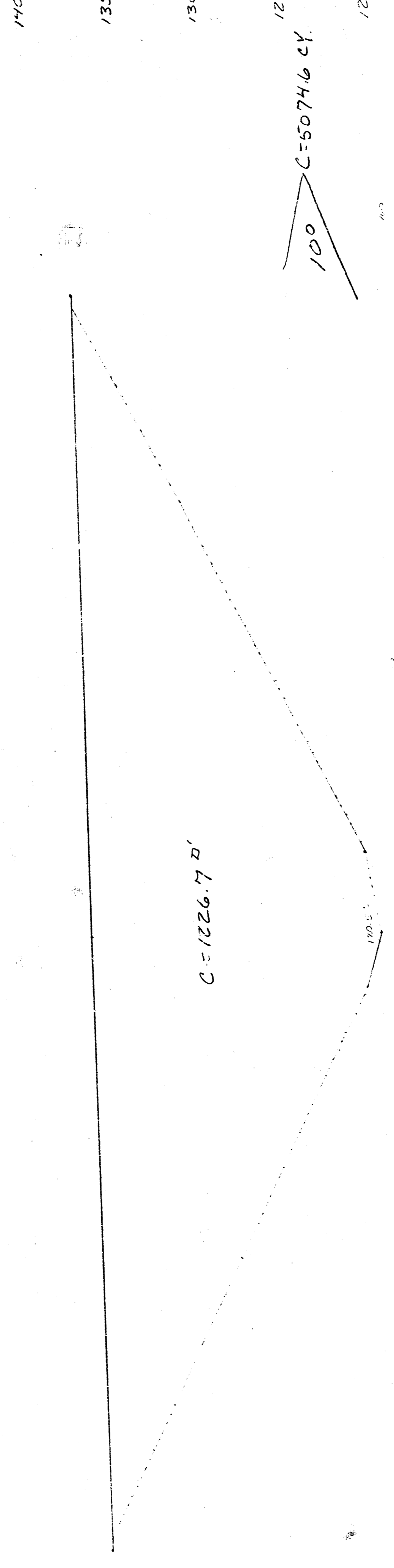
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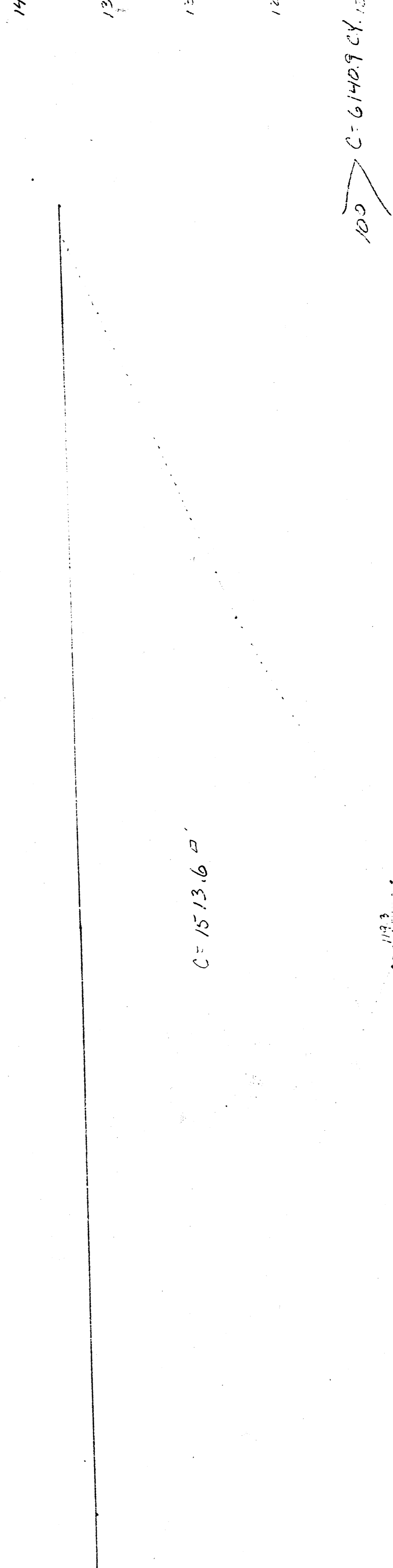
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574 6+ 5844

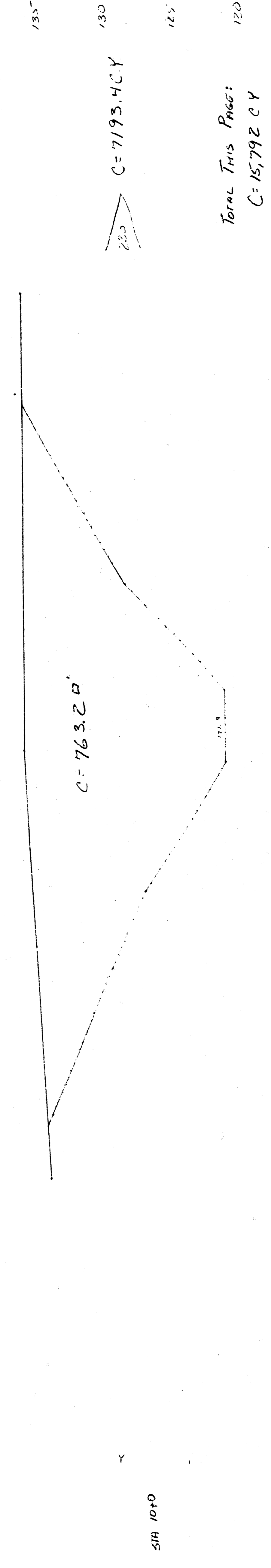
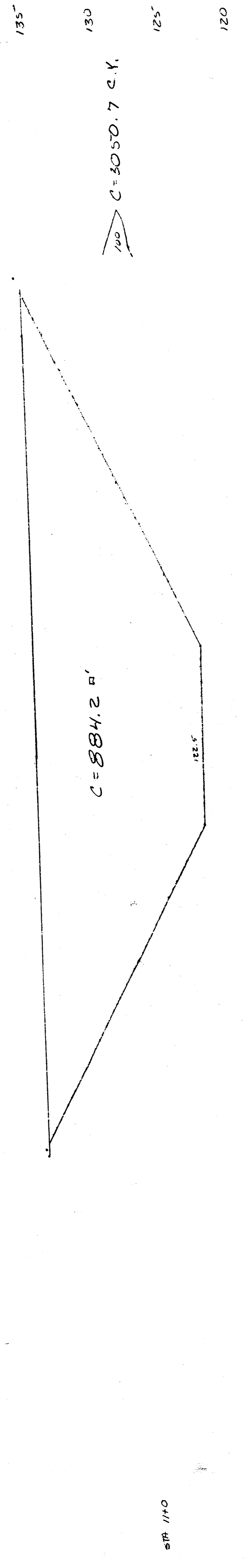
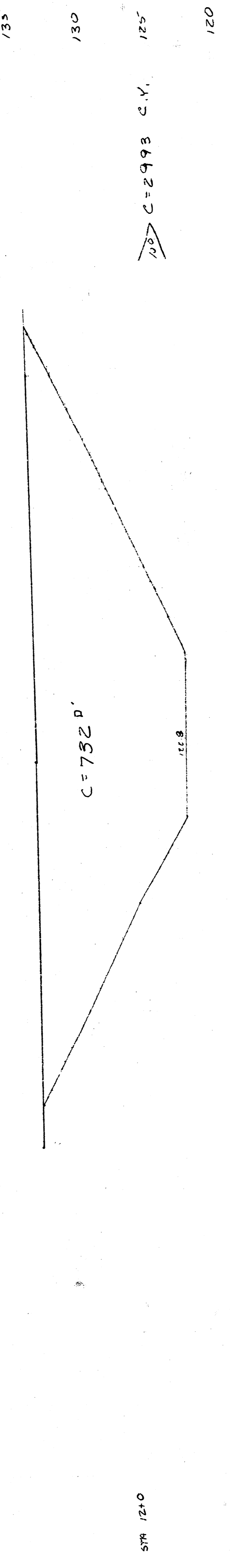
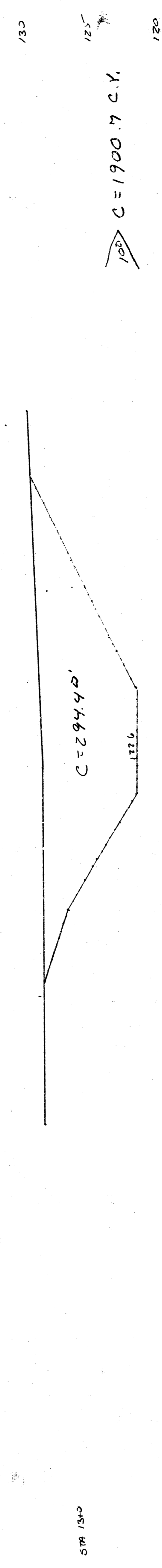
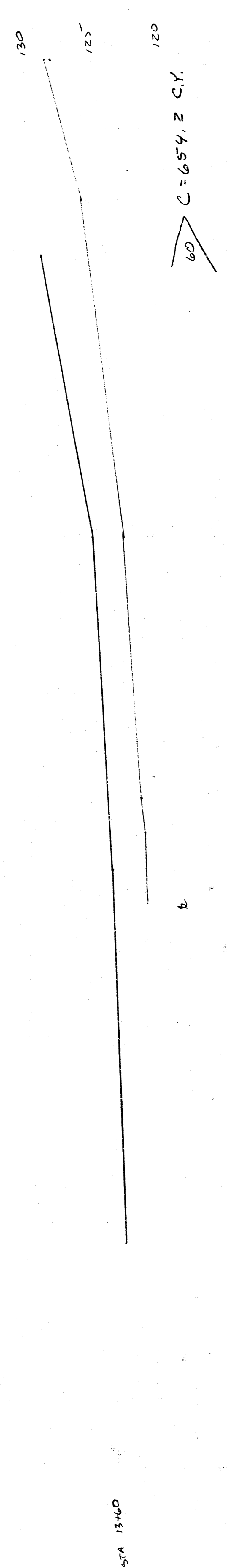


574 6+0

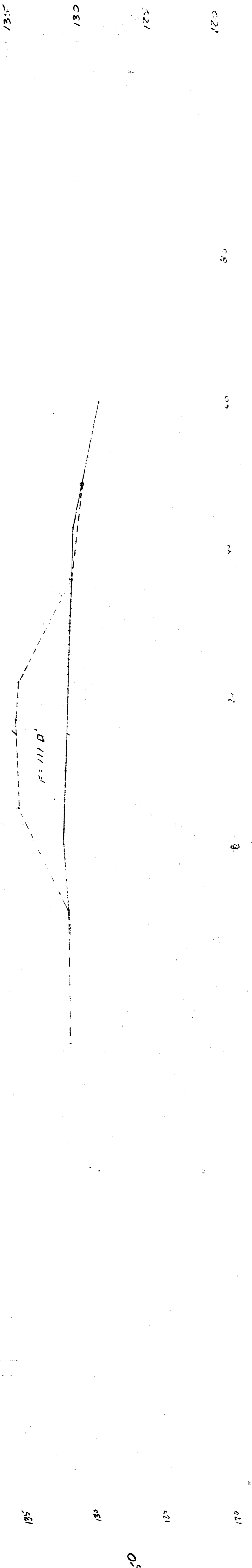
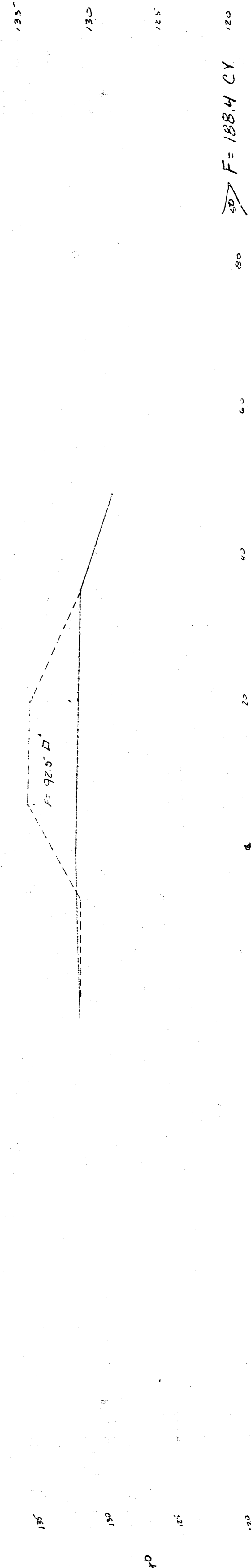
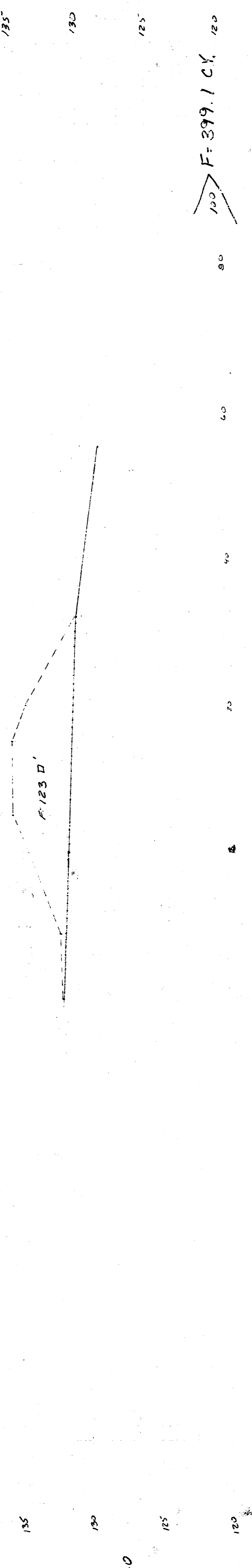
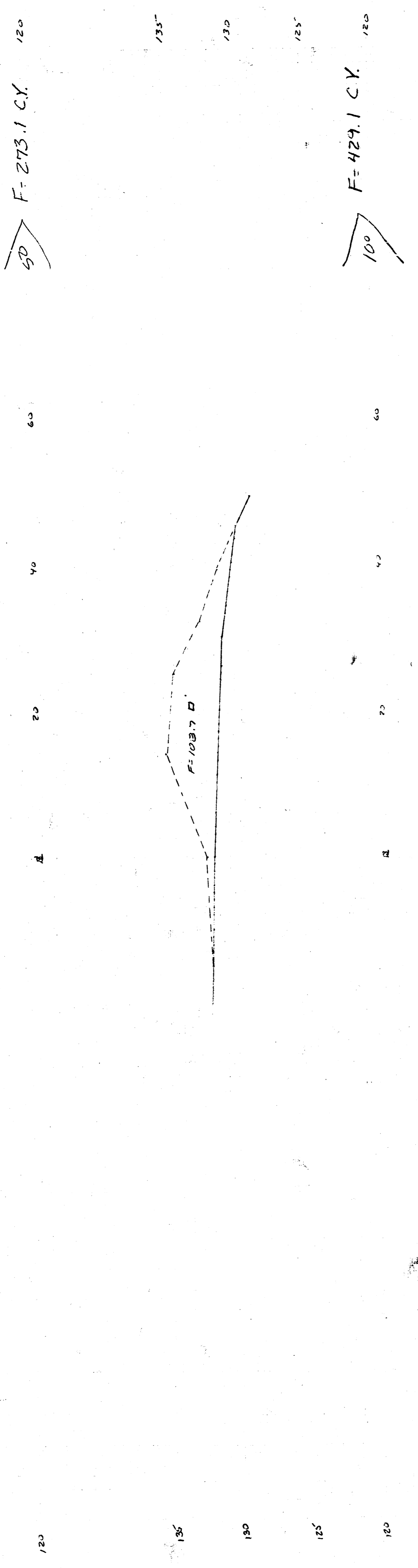
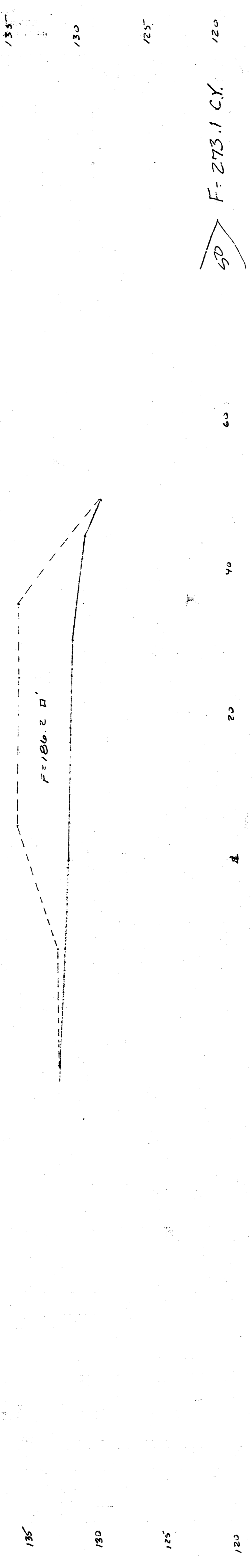


574 5+0

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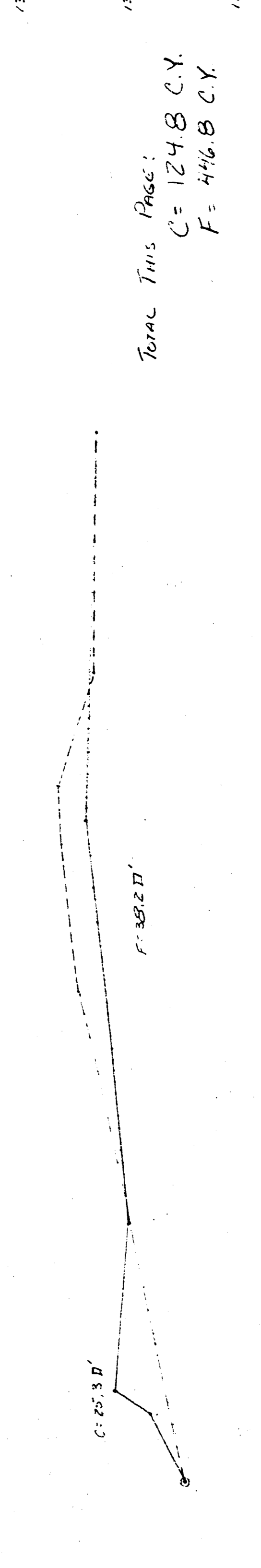
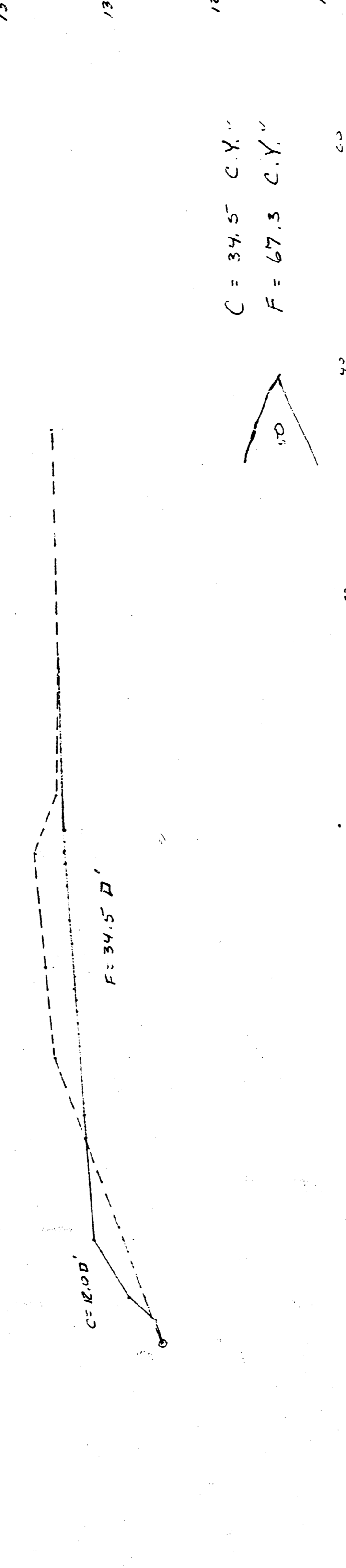
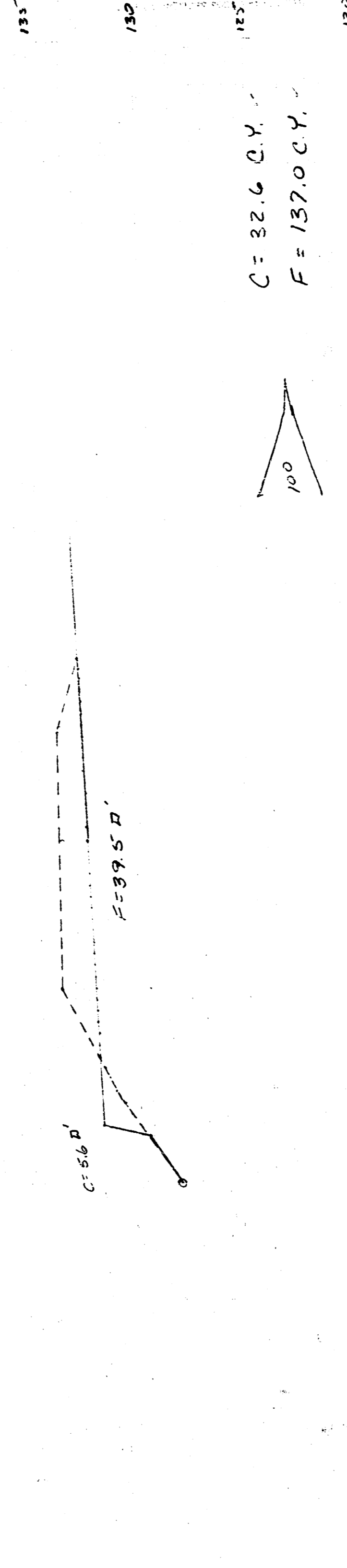
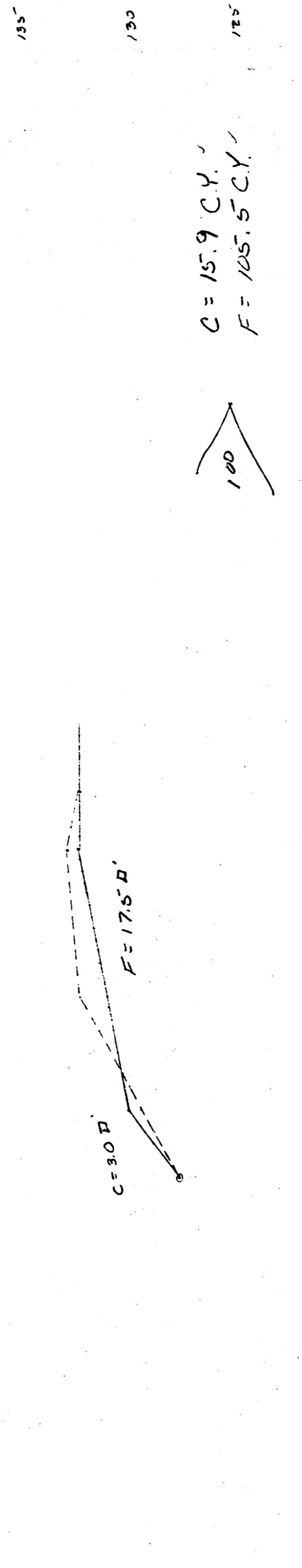
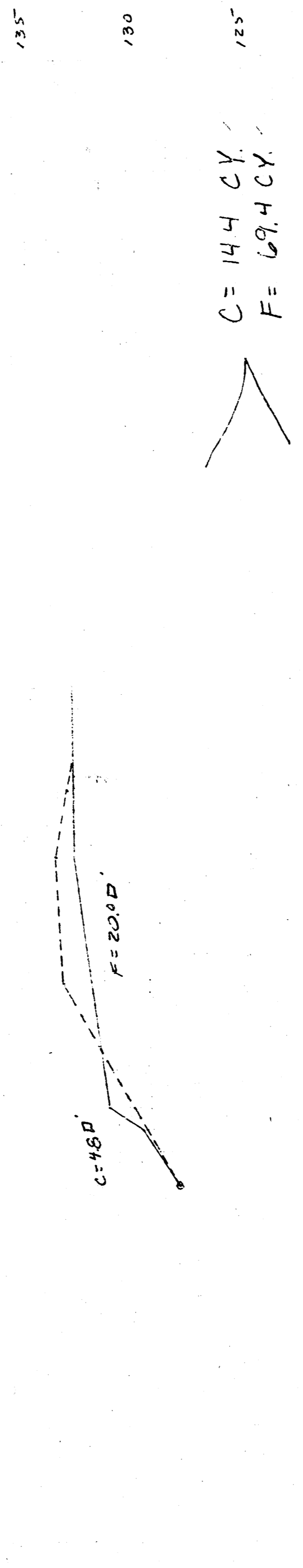
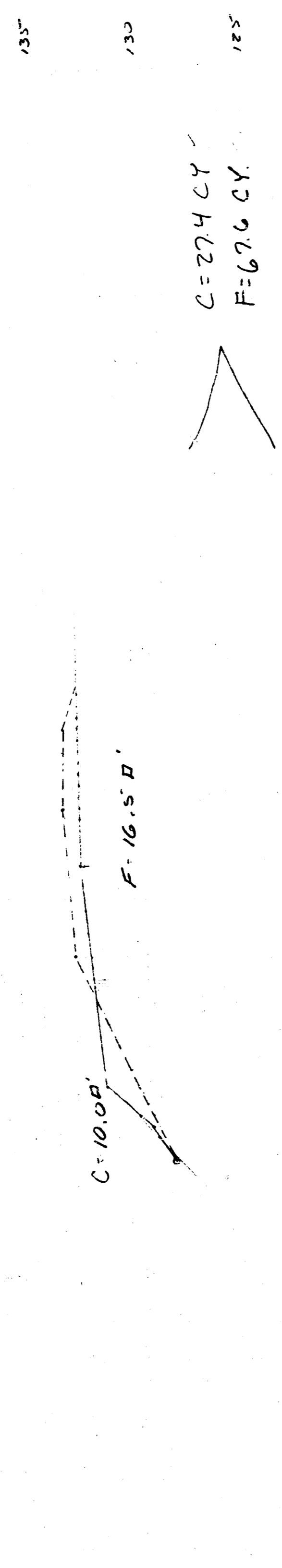


Total This Piece:
 $C = 15,792 \text{ C.Y.}$

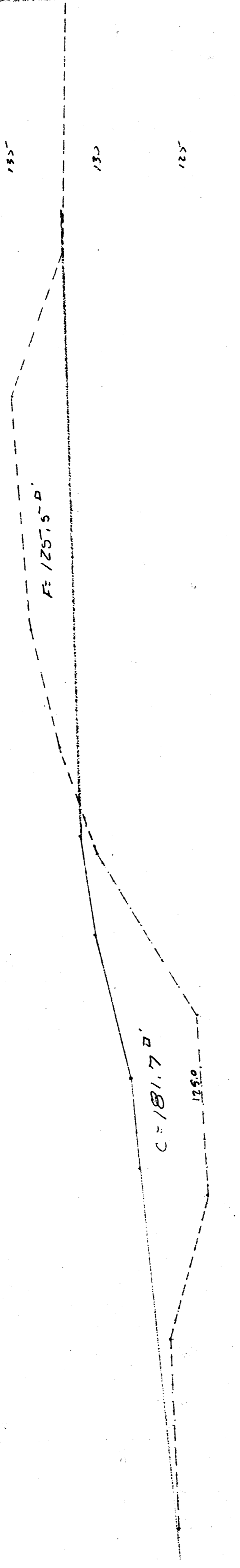


Turn This Page:
F-1289.7

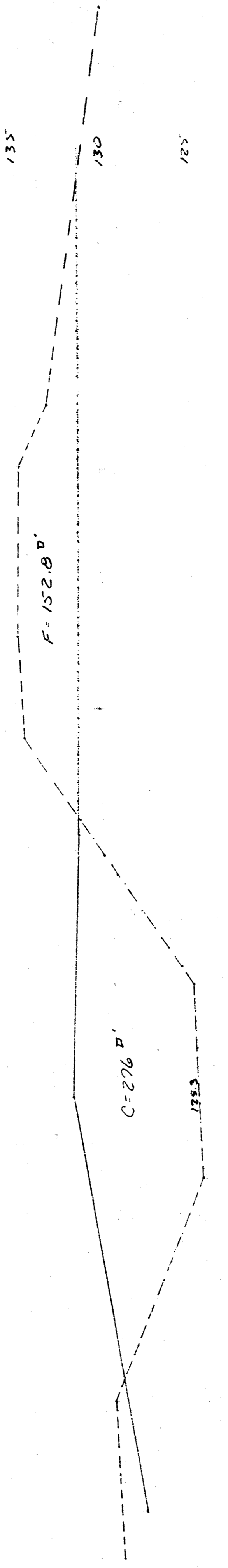
From X Sees West Side Lake
From Station North



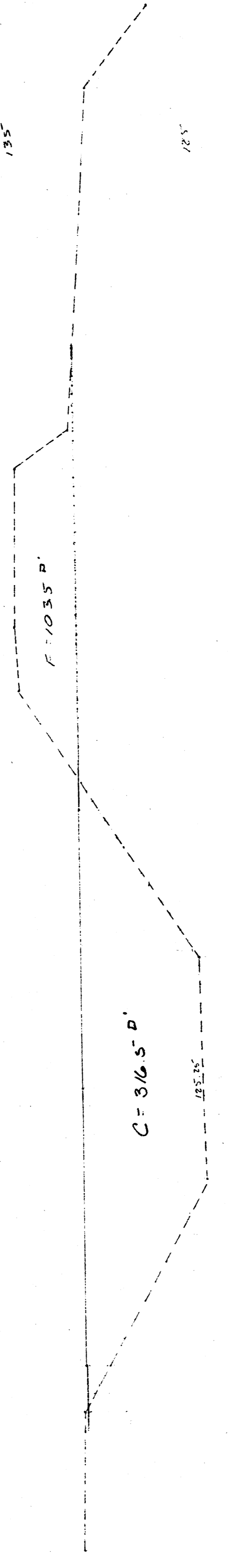
Total This Area:
 $C = 124.8 \text{ C.Y.}$
 $F = 446.8 \text{ C.Y.}$



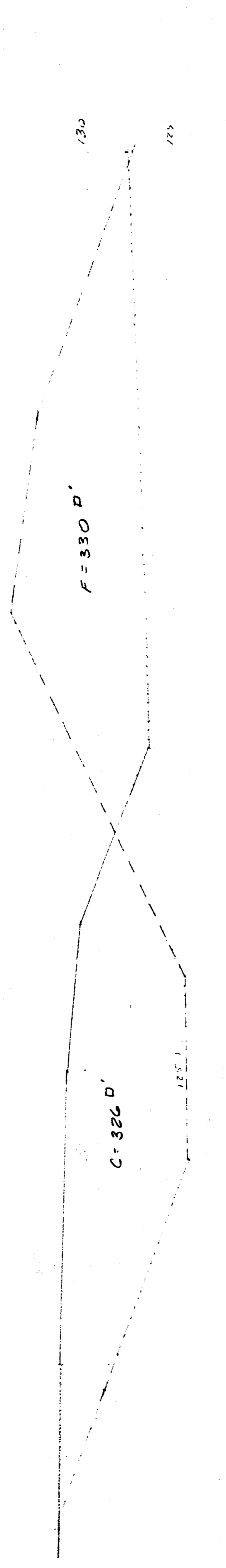
C = 254.3 CY
F = 154.6 CY



C = 548.6 CY
F = 237.3 CY

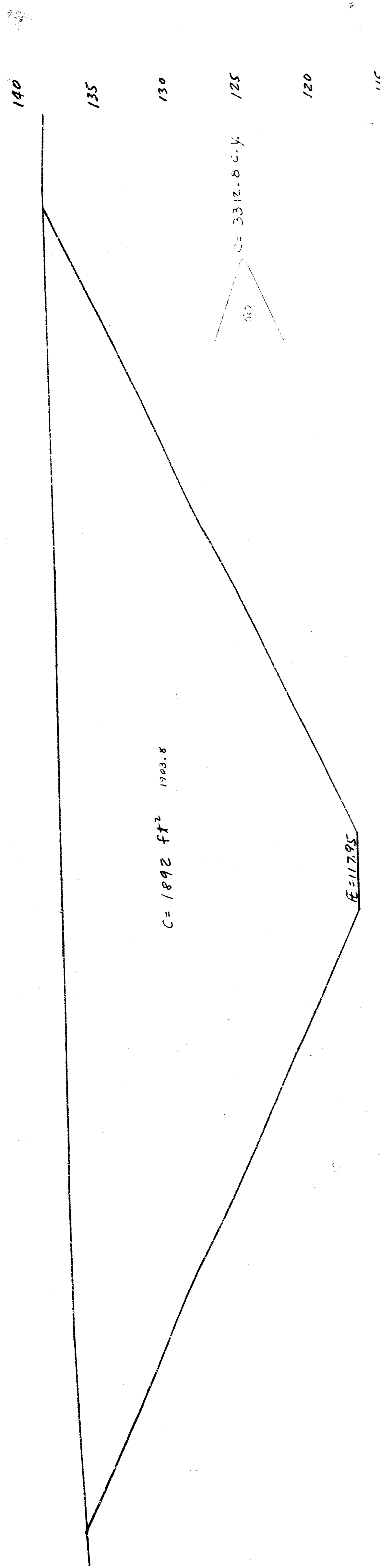


C = 594.9 CY
F = 401.4 CY

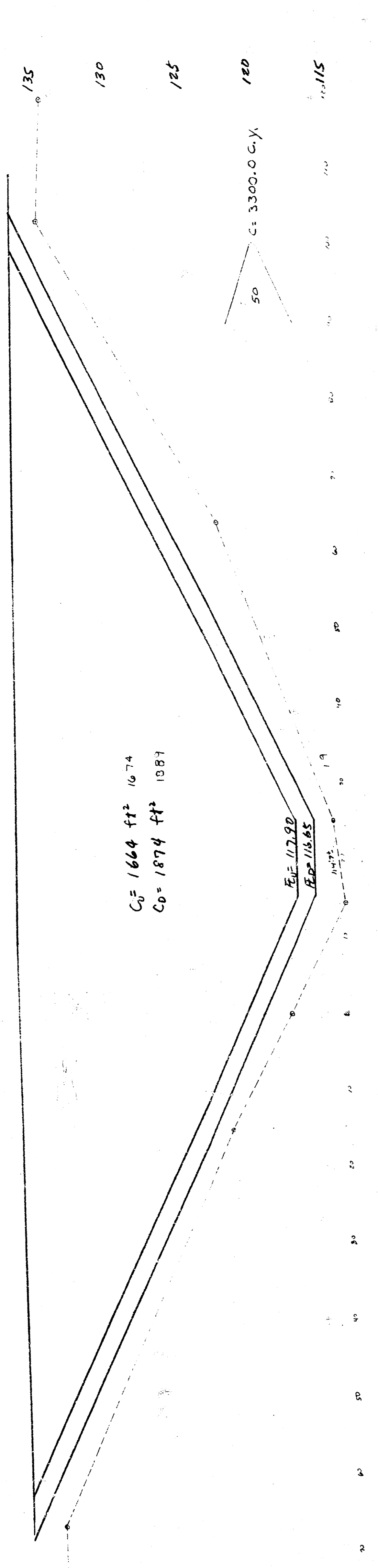


OK
Total This Page:
C = 1397.8 CY
F = 793.3 CY

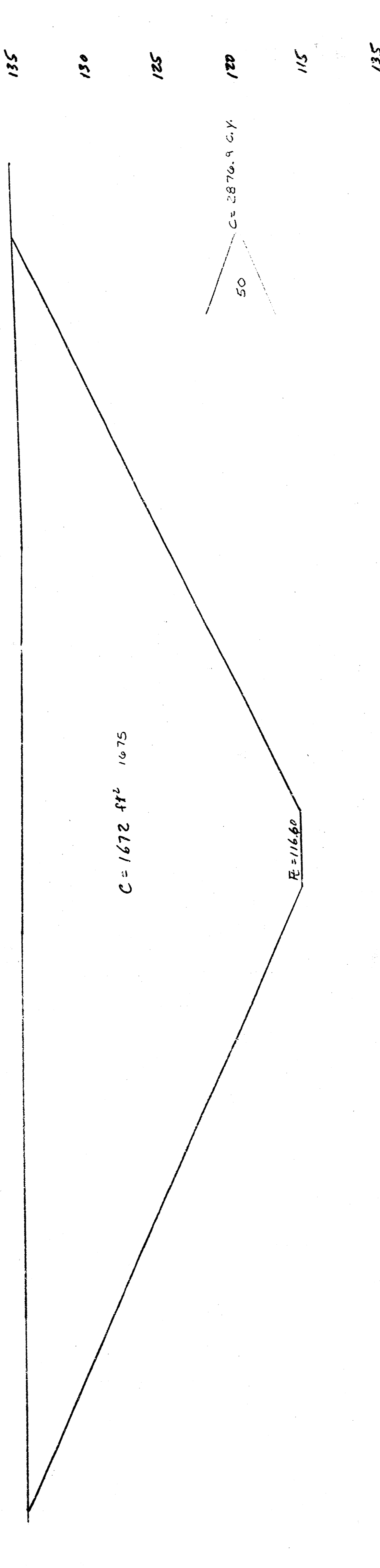
X Secs For Trapezoid Ditch



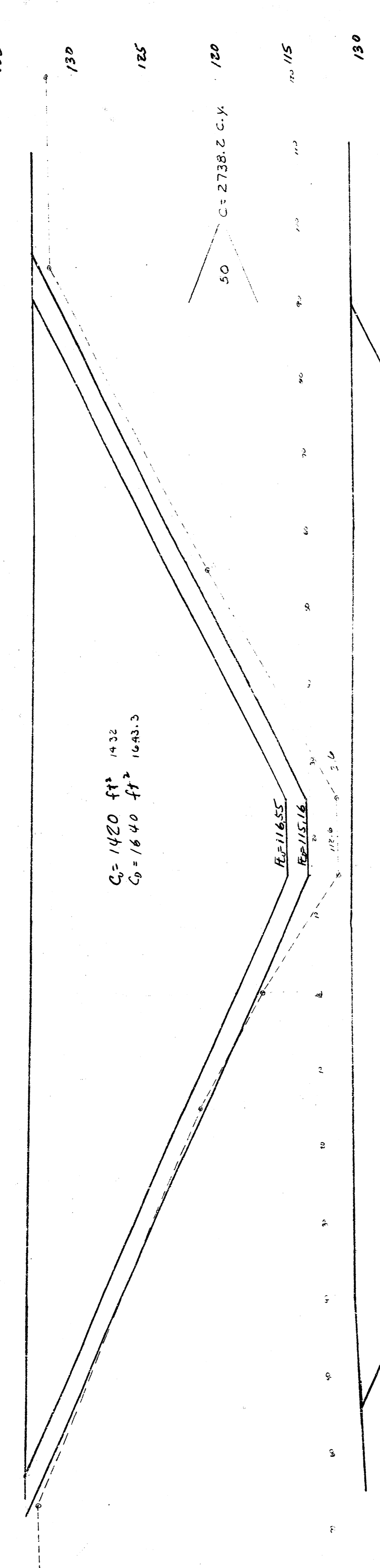
Sta. 3150



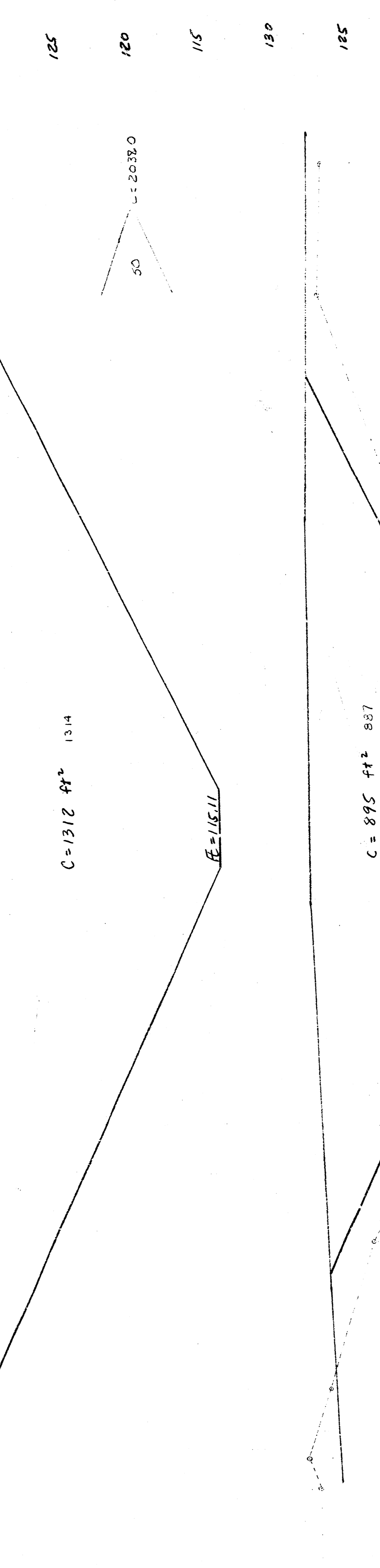
Sta. 3100



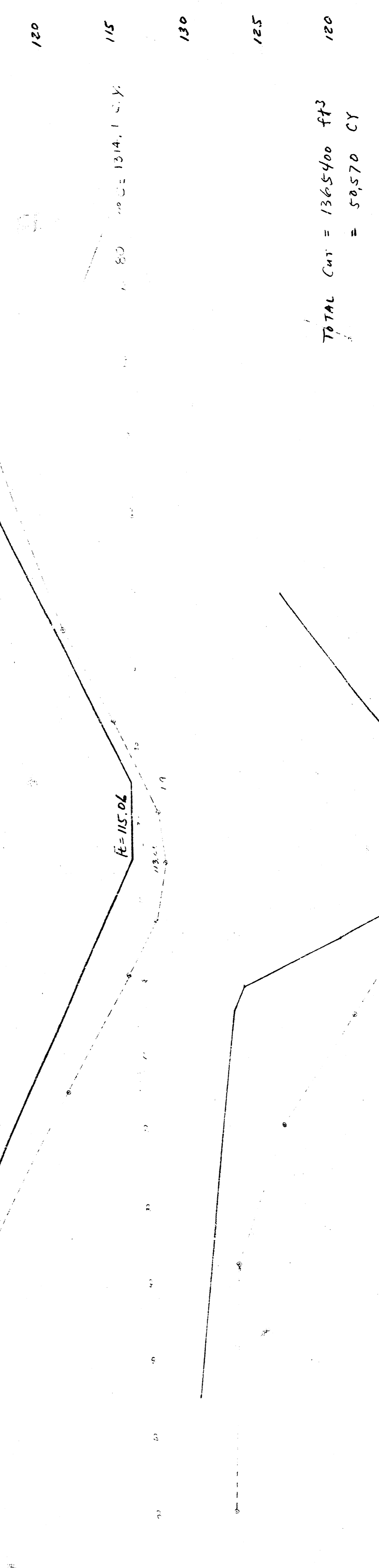
Sta. 2150



Sta. 2100



Sta. 1150

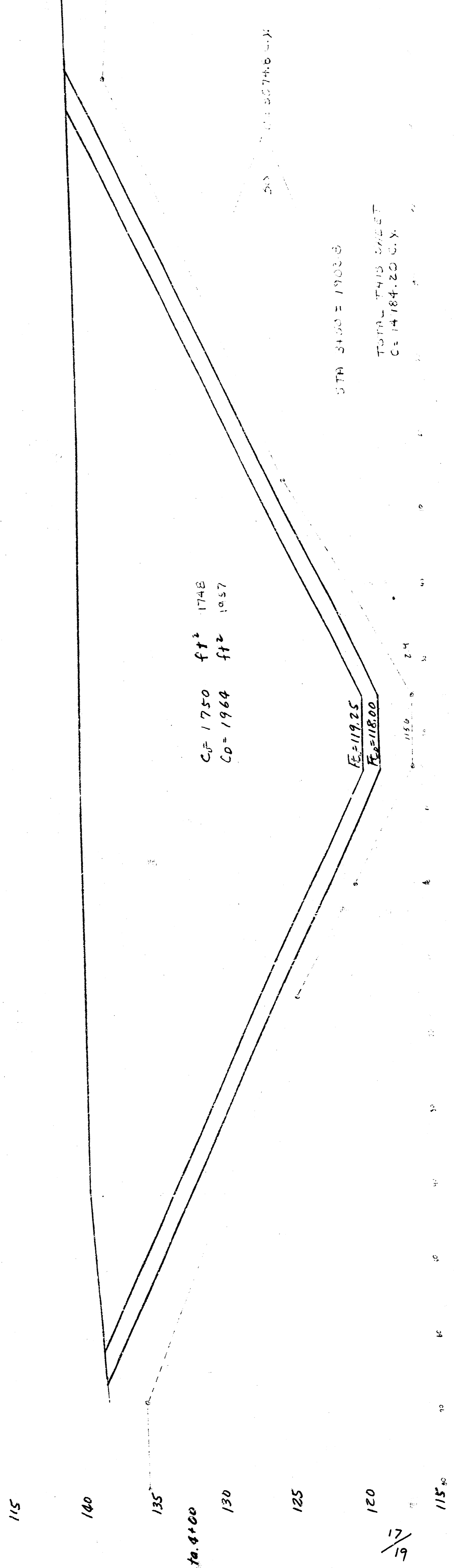
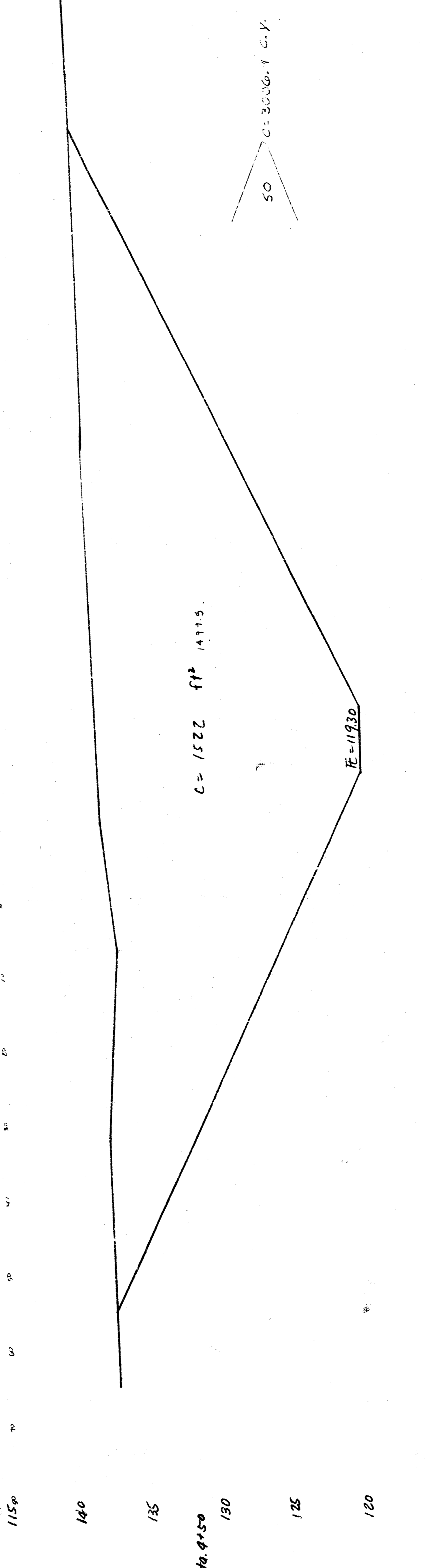
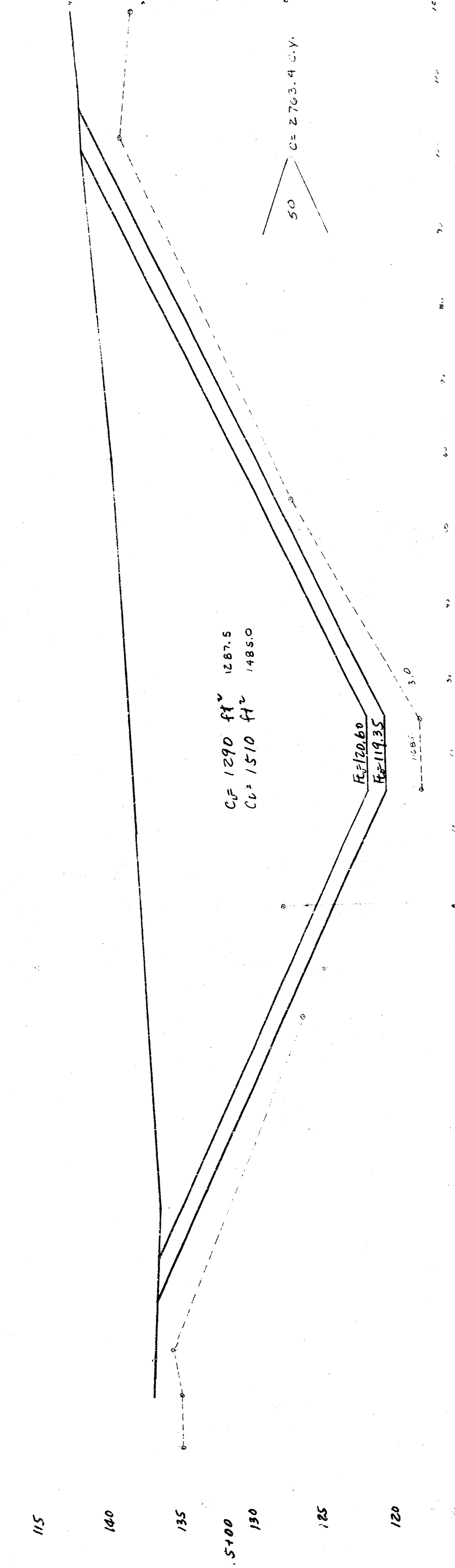
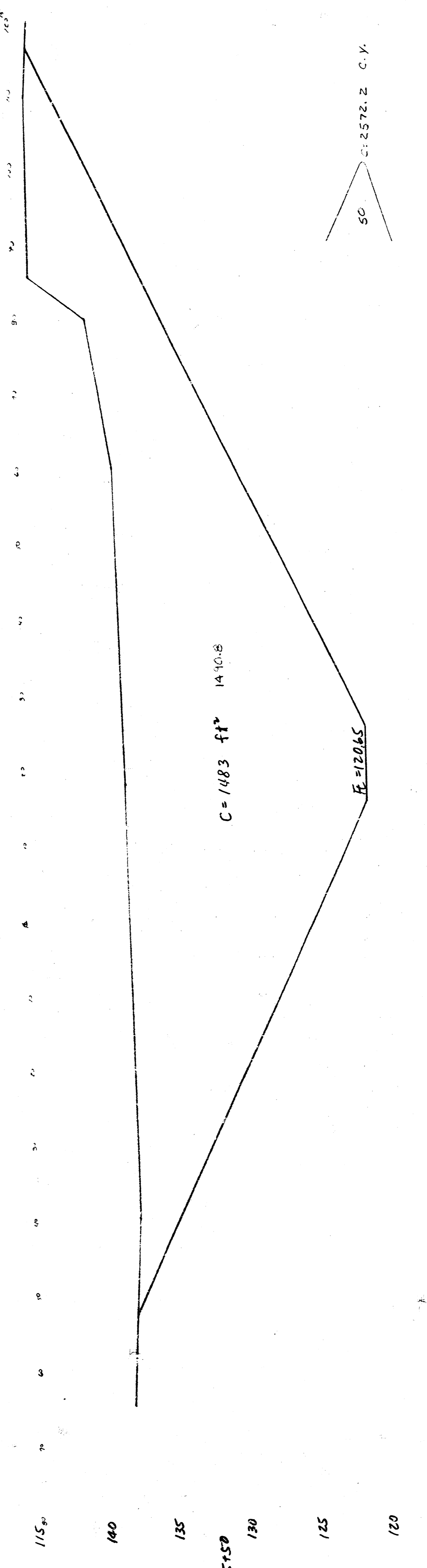
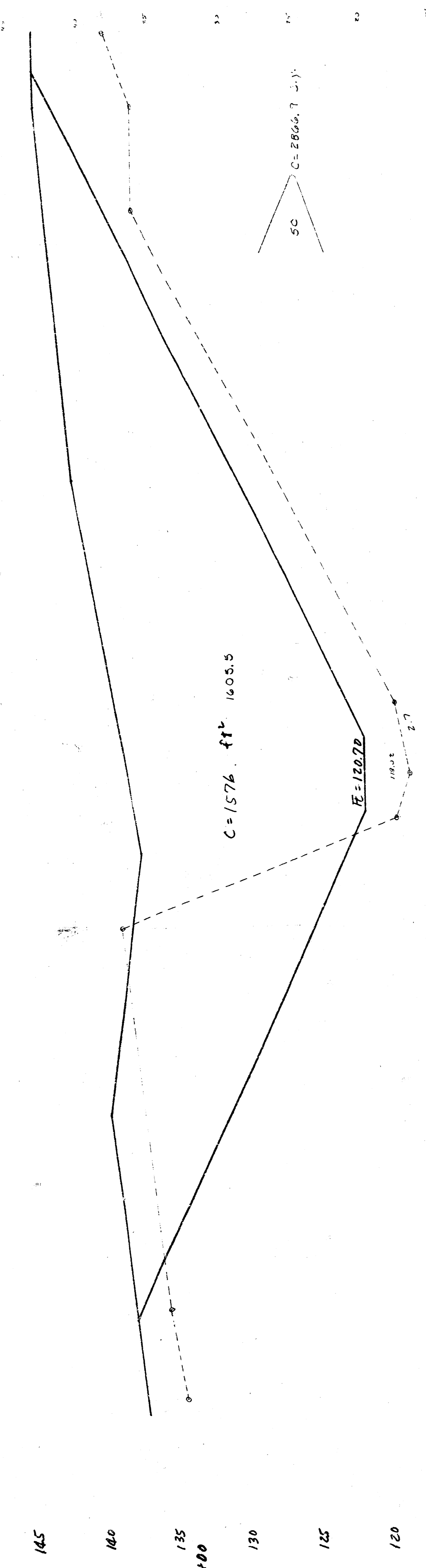


Sta. 1100

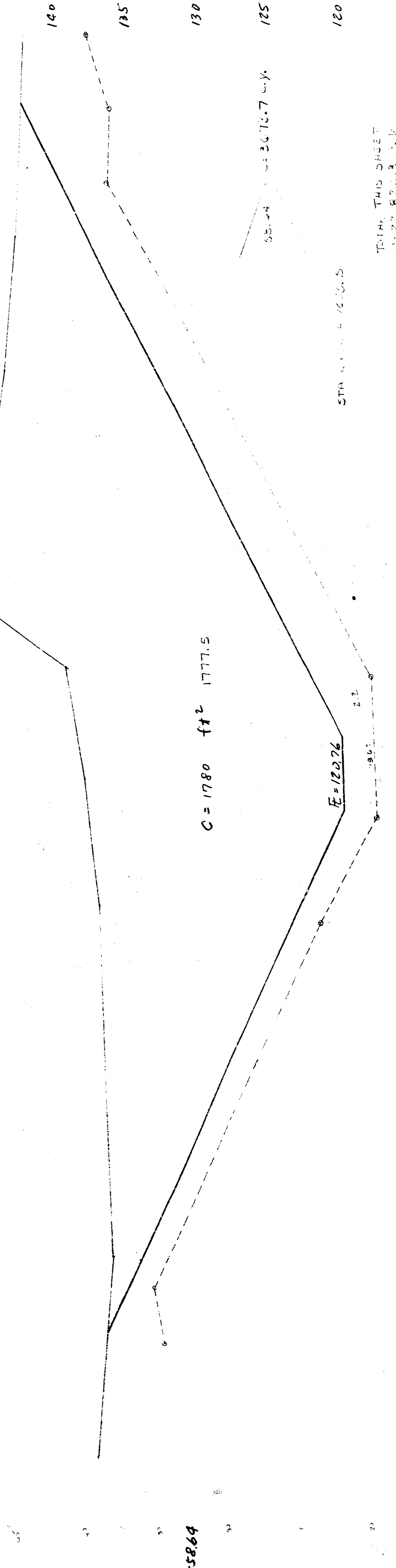
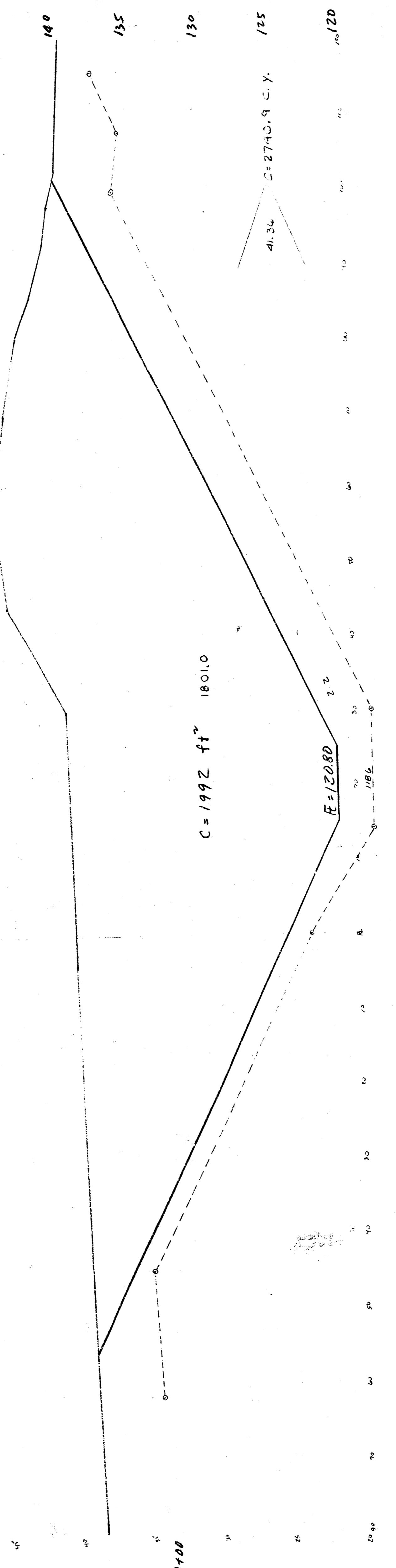
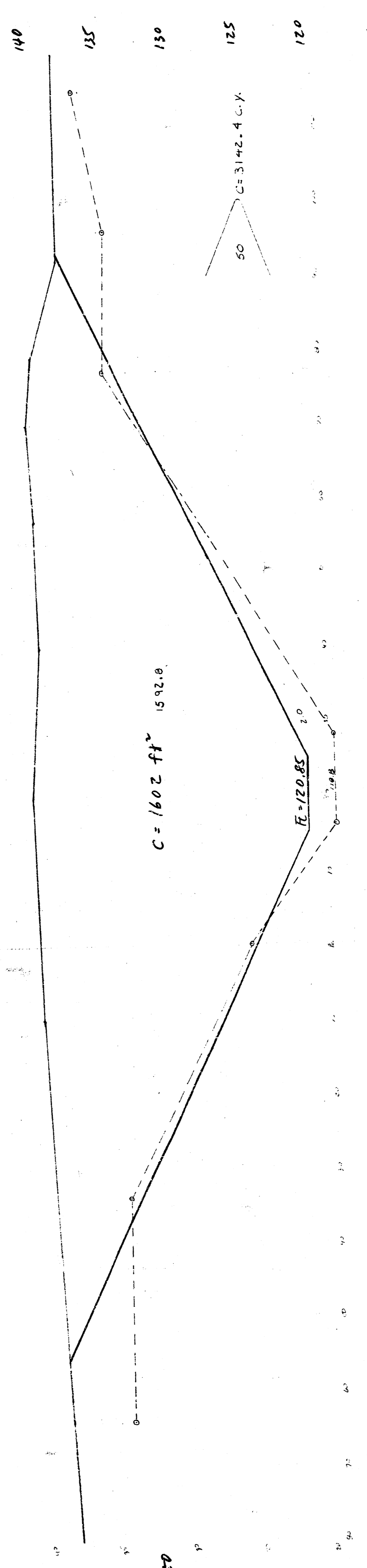
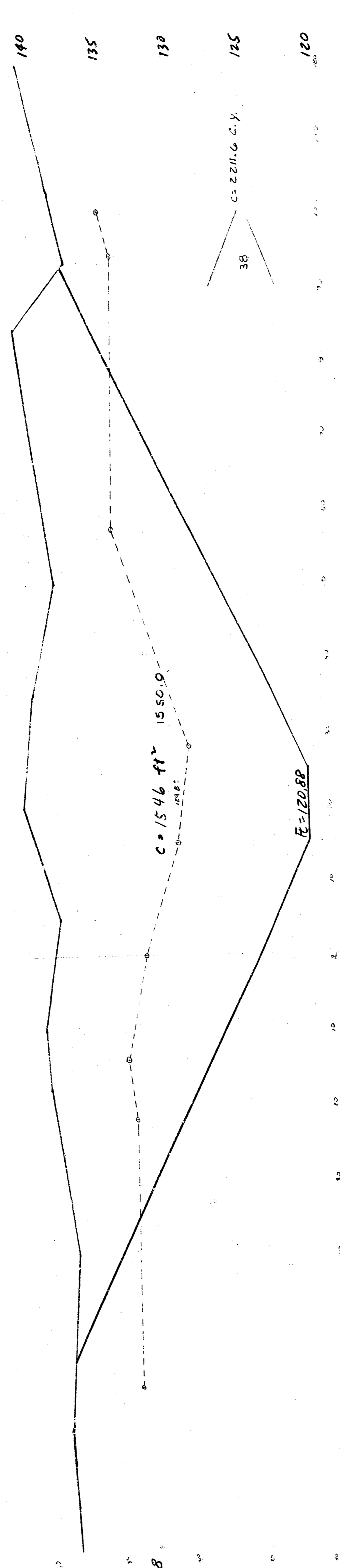
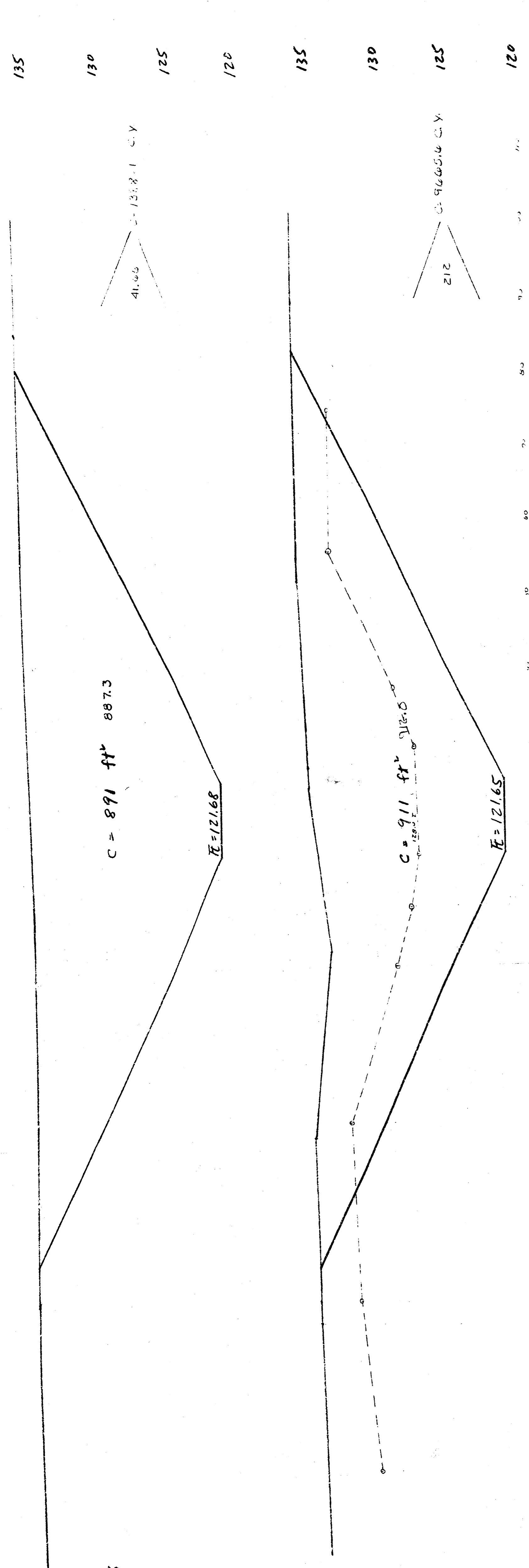
TOTAL CUT = 1365400 ft³
= 50570 CY
Soq 55800 C.Y.

Sta. 0120

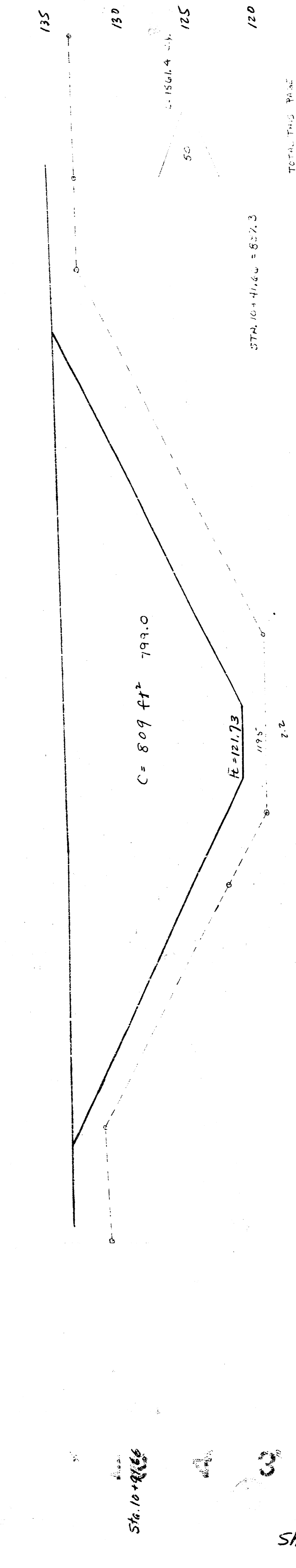
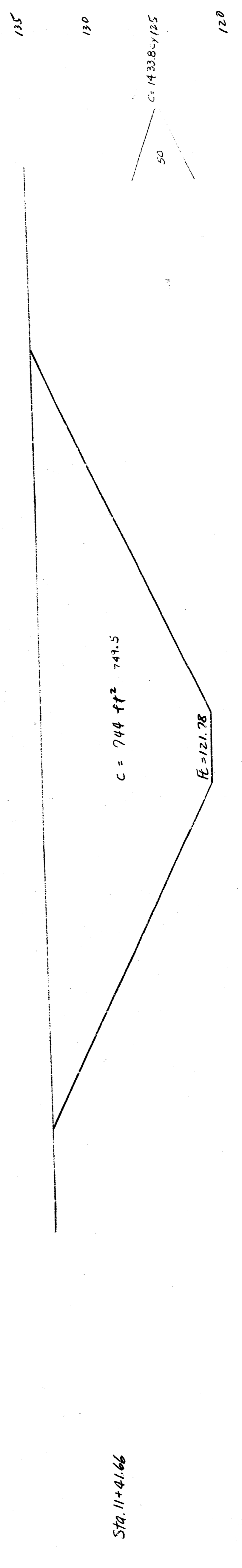
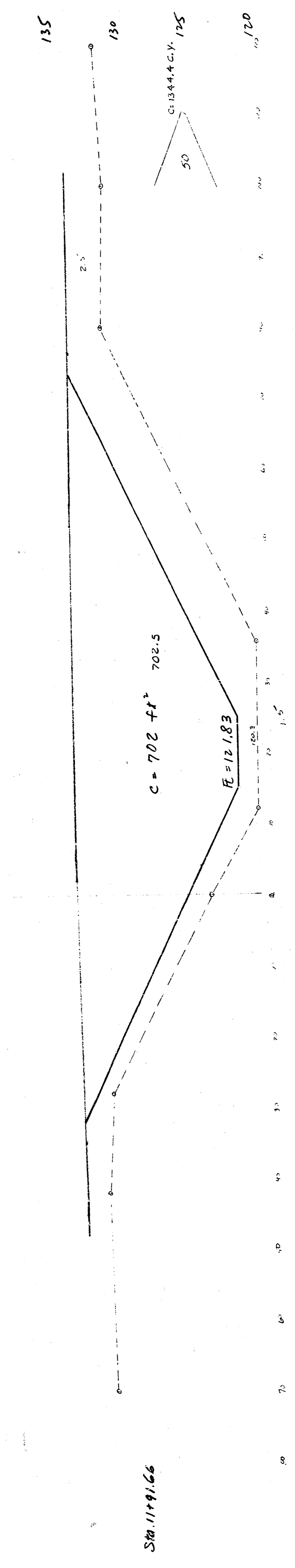
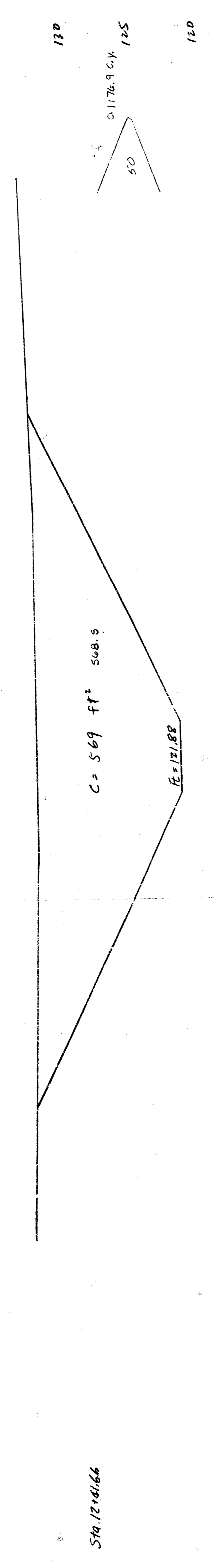
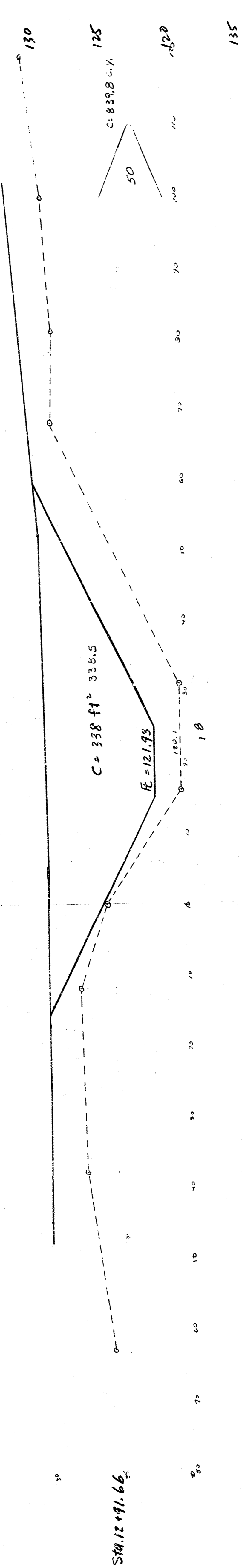
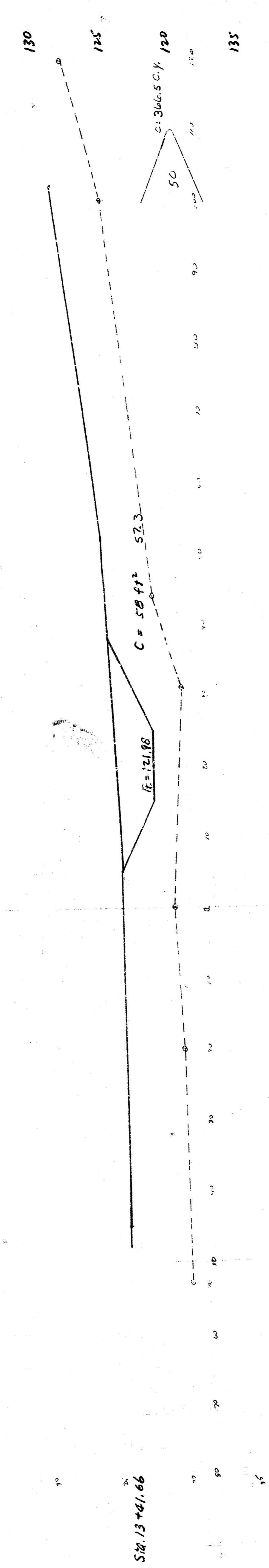
16/19



STA. 3+00 = 1703.5
 TOTAL FILL LEFT
 C = 14784.20 C.Y.



STATION 10+41.66
TOTAL THIS SHEET
C=23,824.3 C.Y.



STATIONING FROM
 C. 5725.6

STA. 10+41.66 = 857.3

Sta. 10+91.66
 4 3 18
 19
 Sheet 13 of 13

FILMED FROM THE BEST