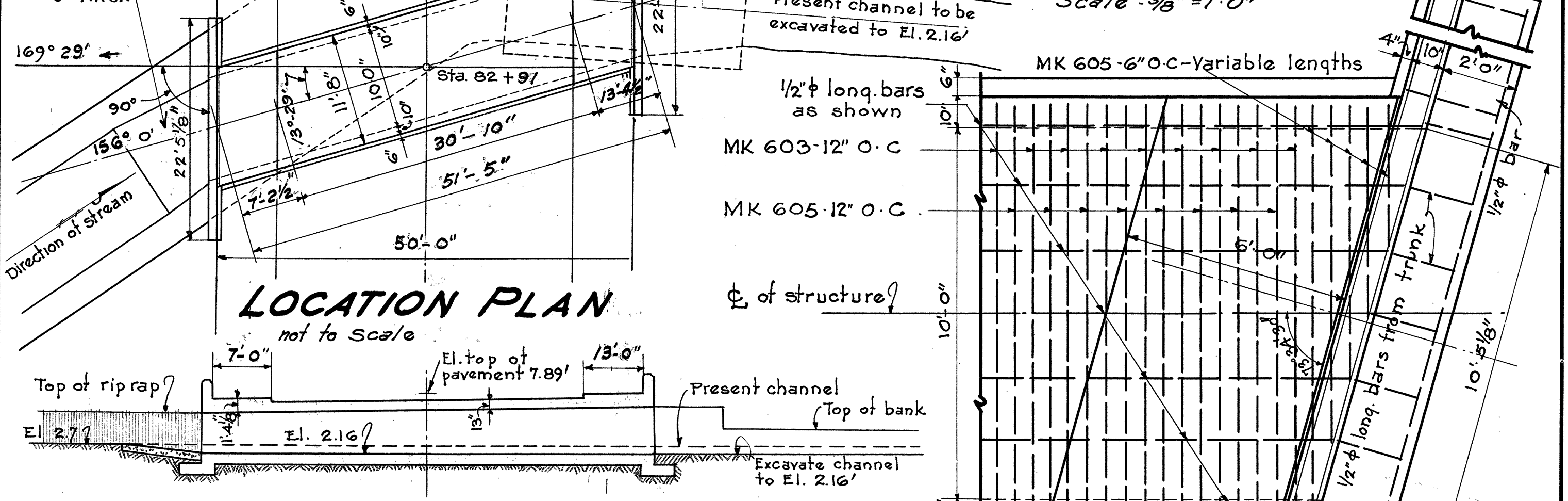
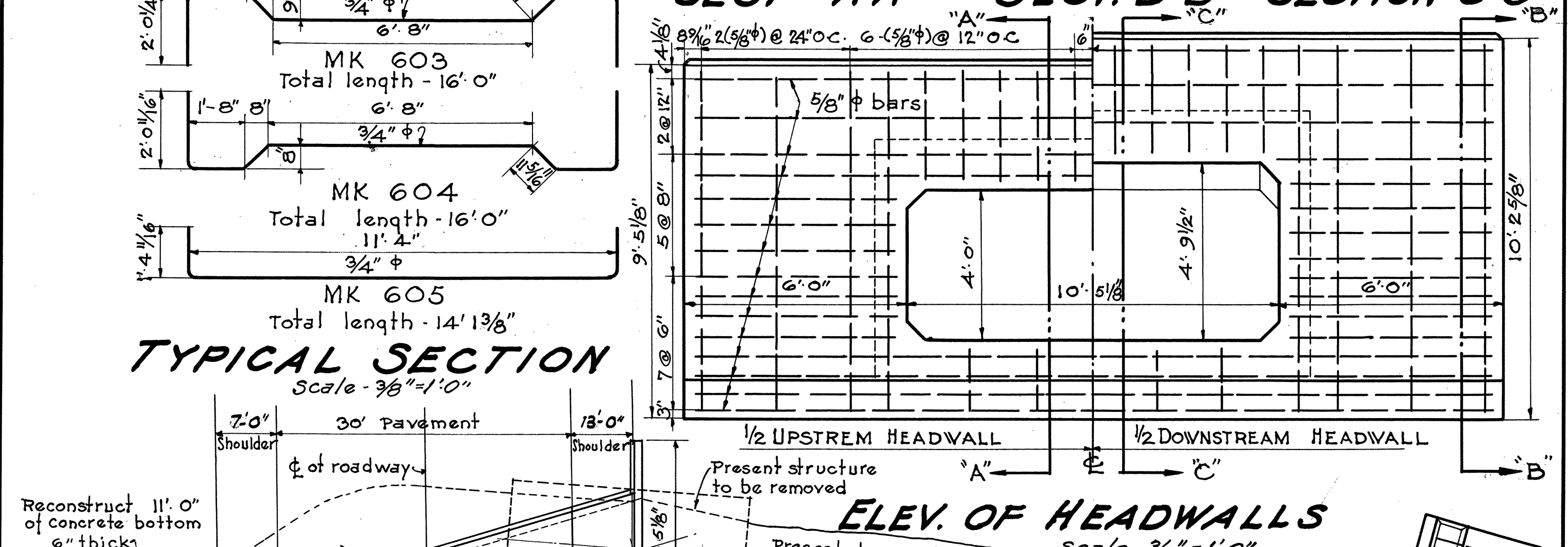
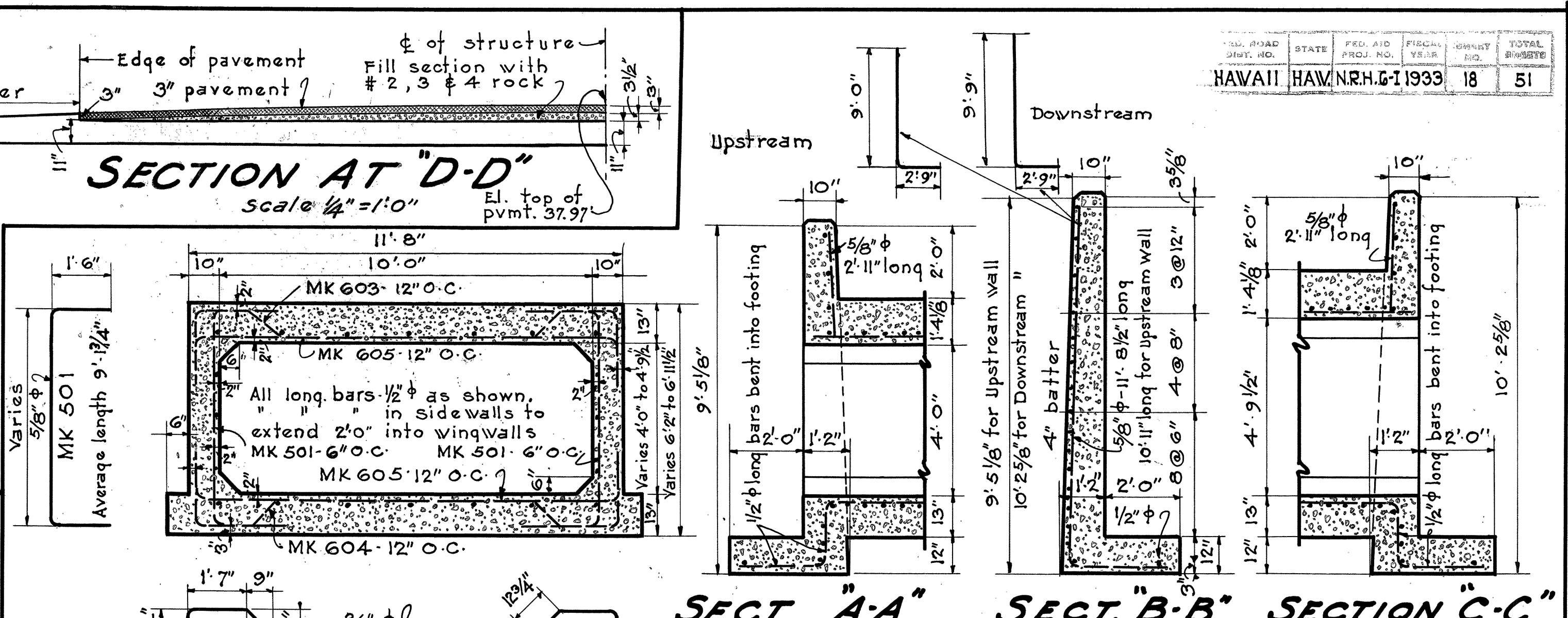
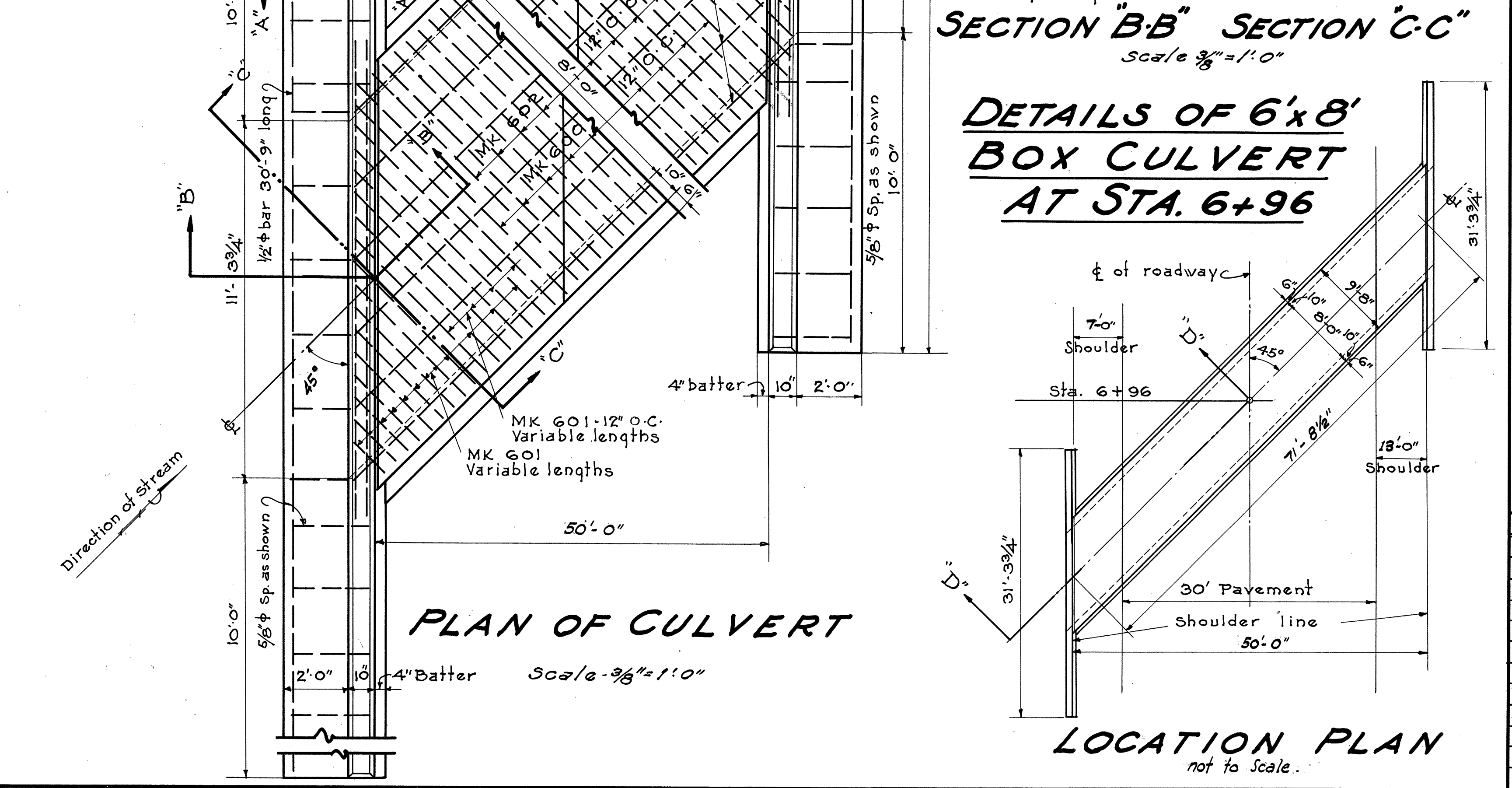
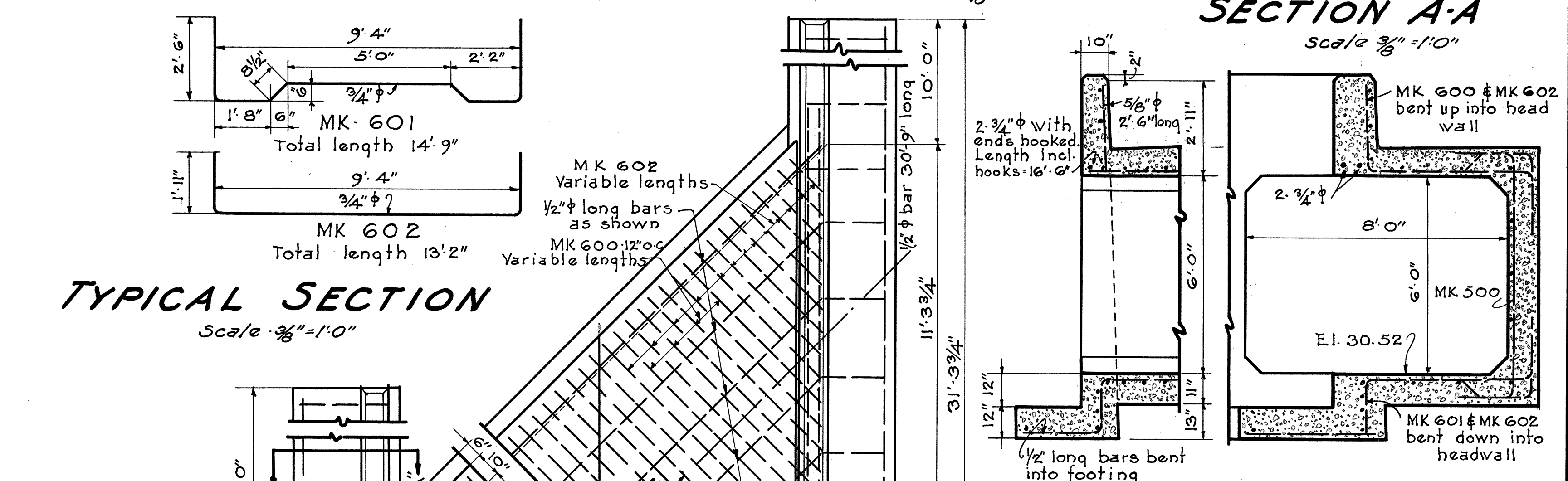
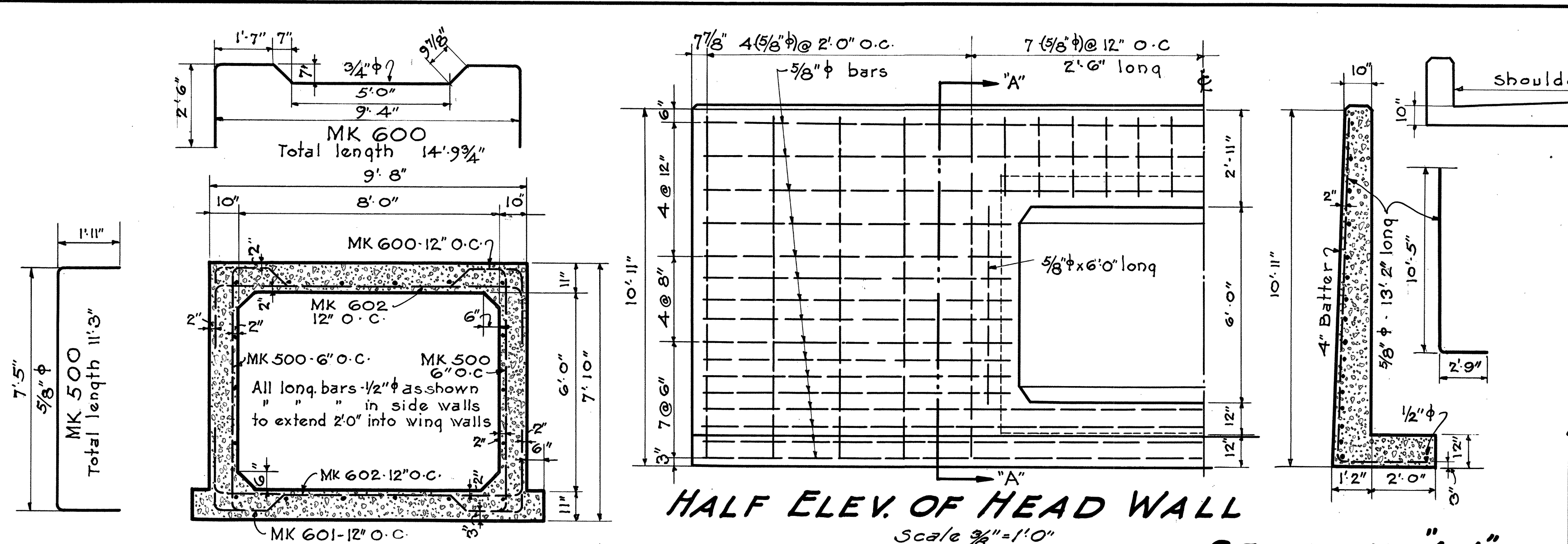




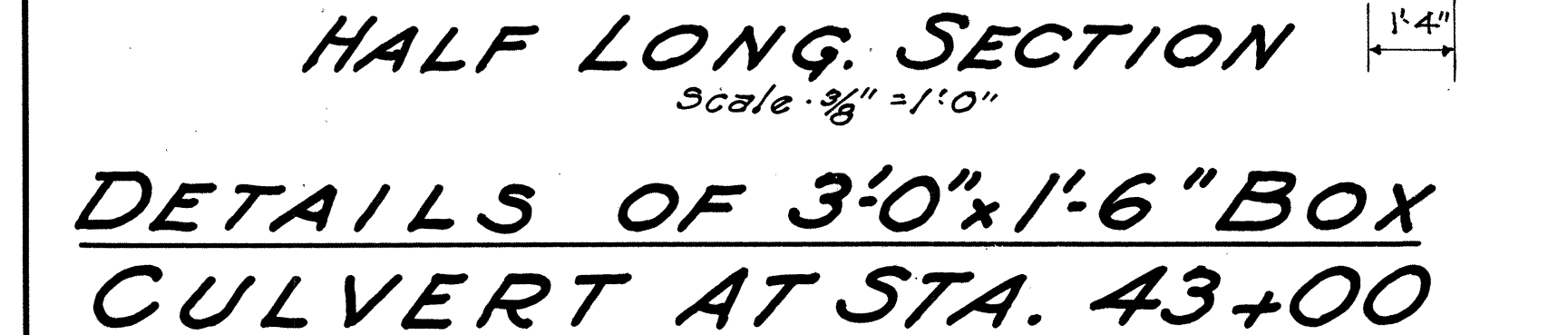
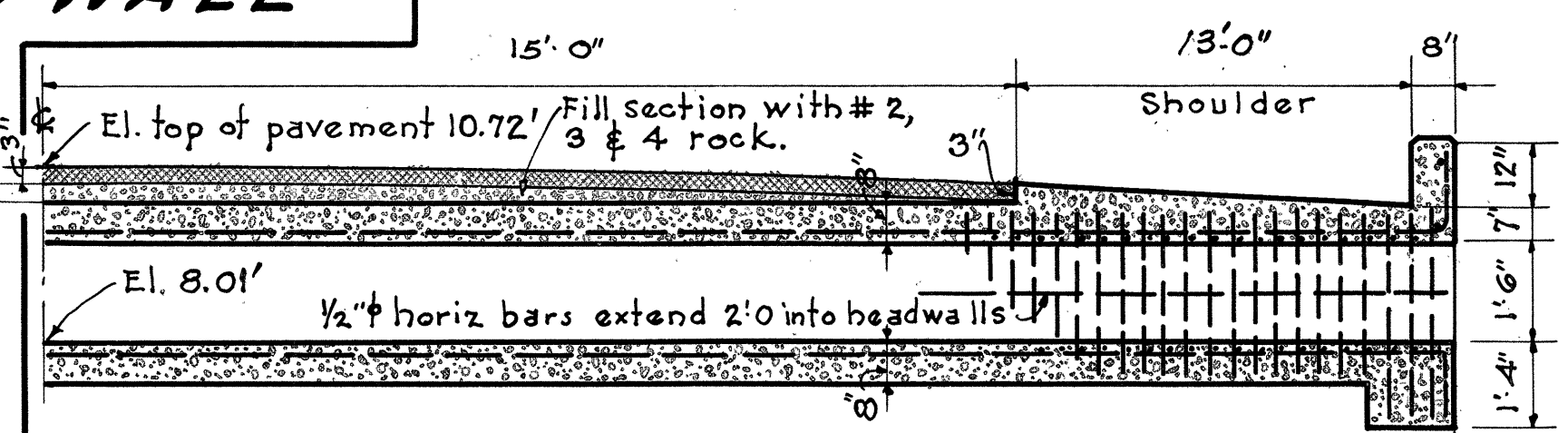
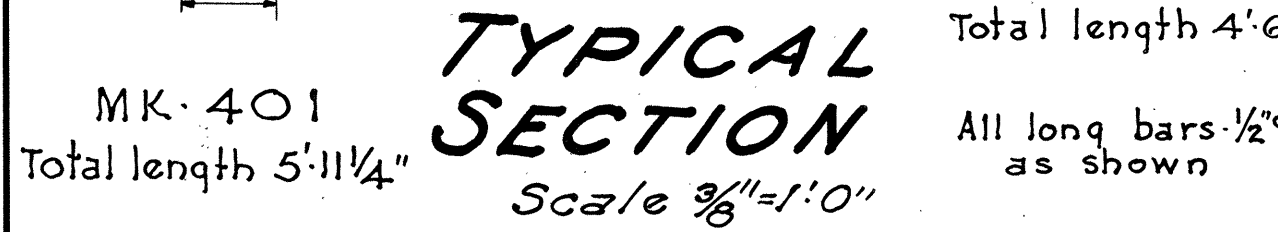
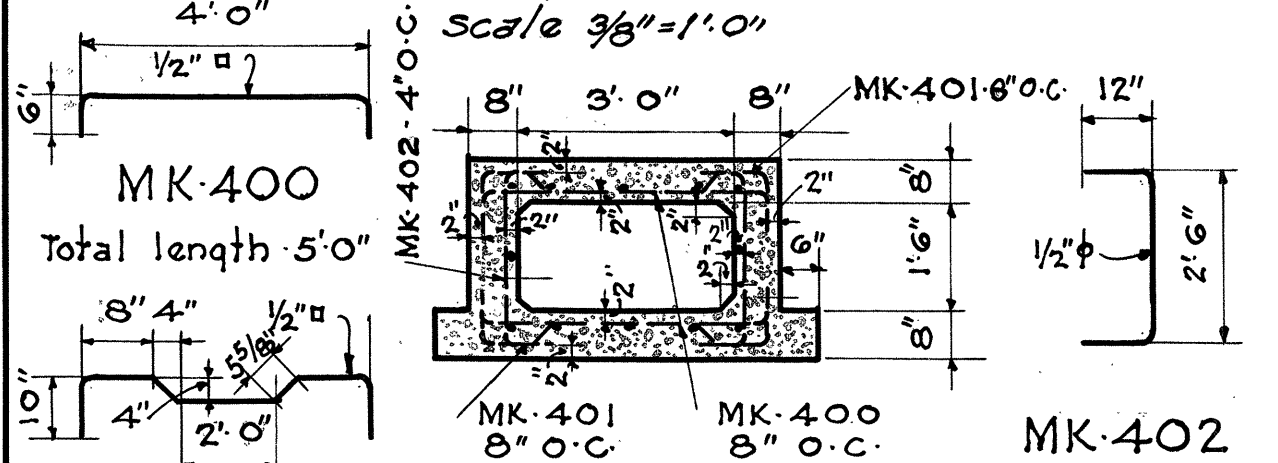
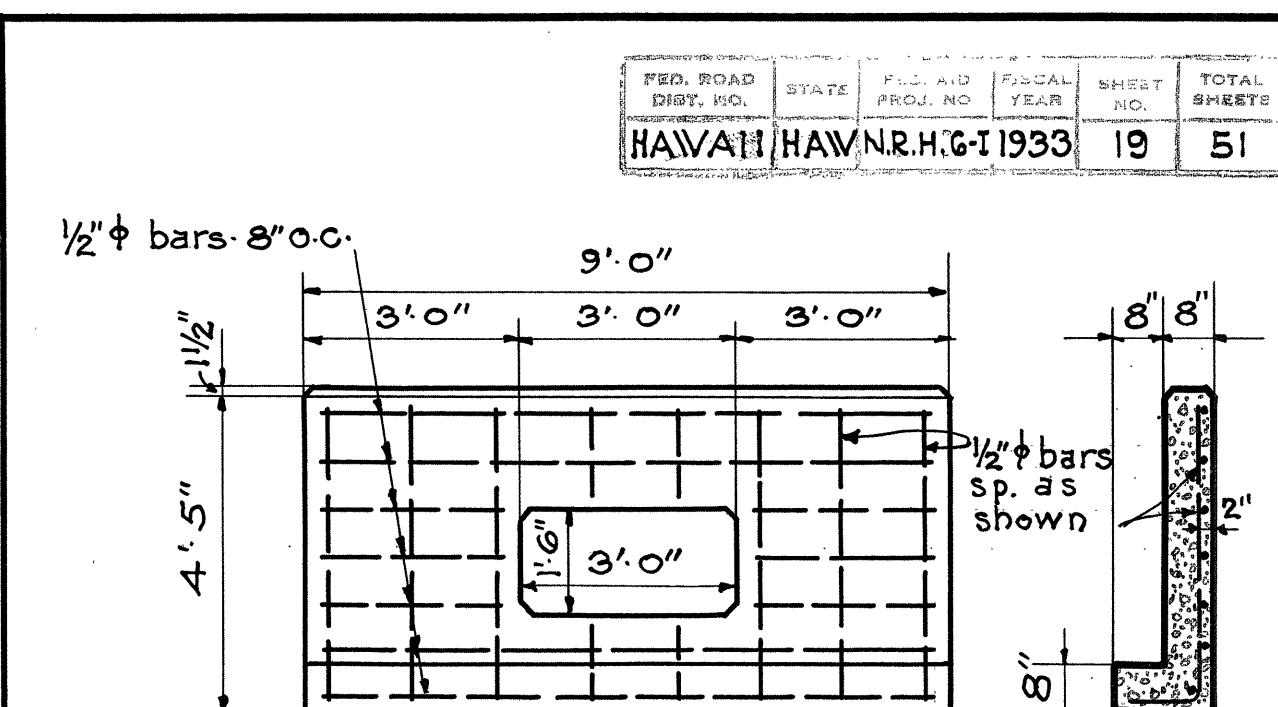
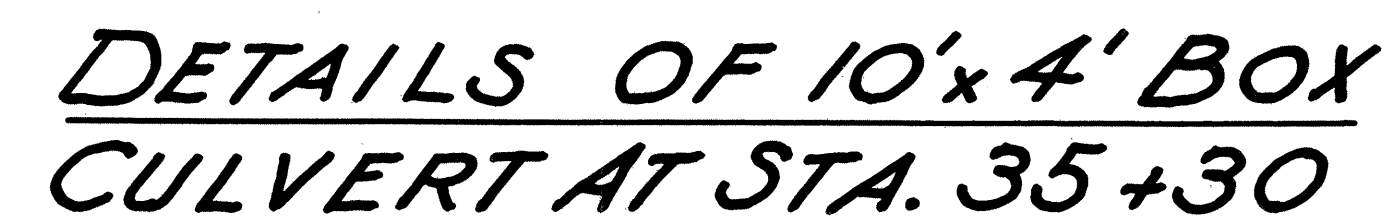
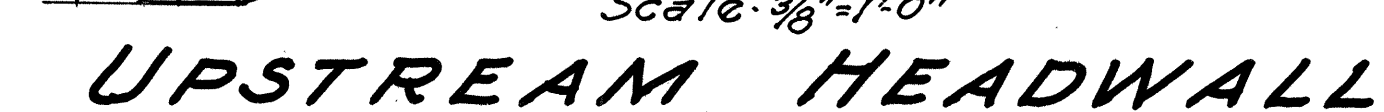
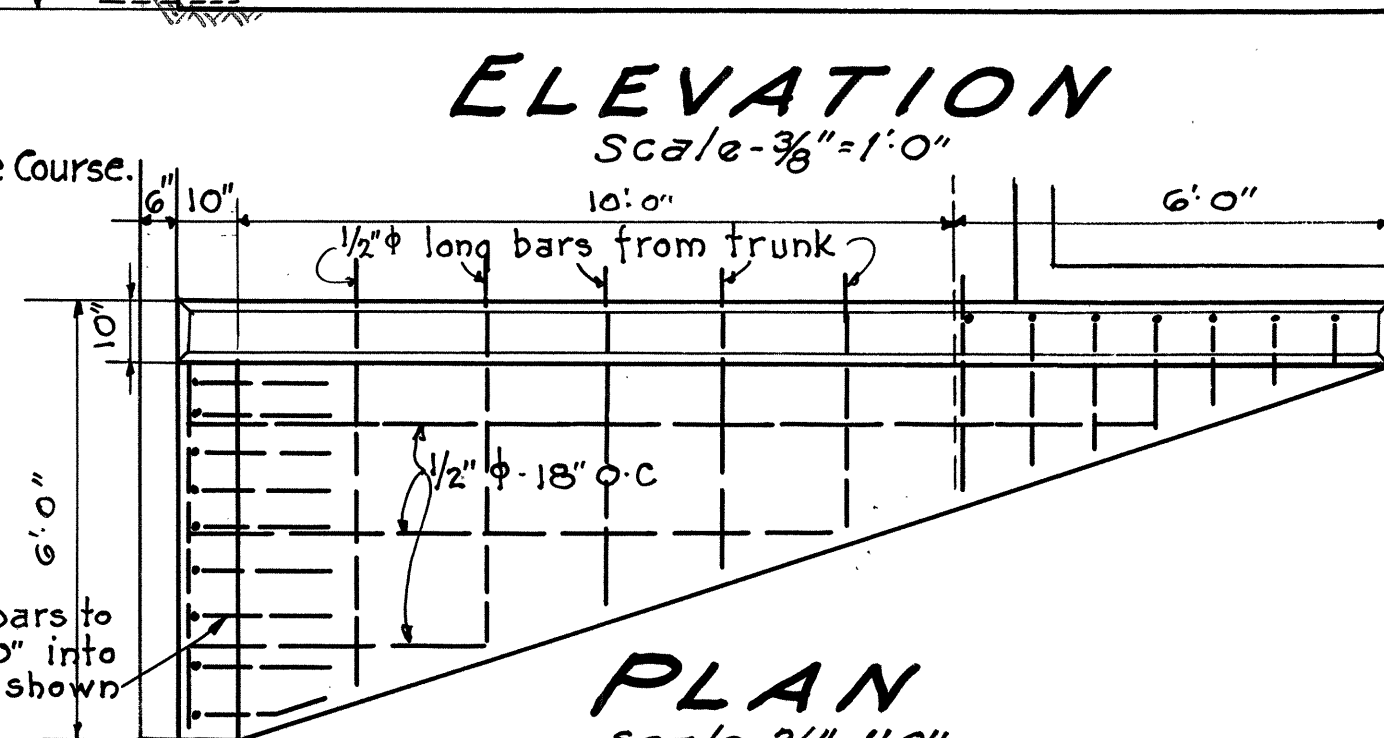
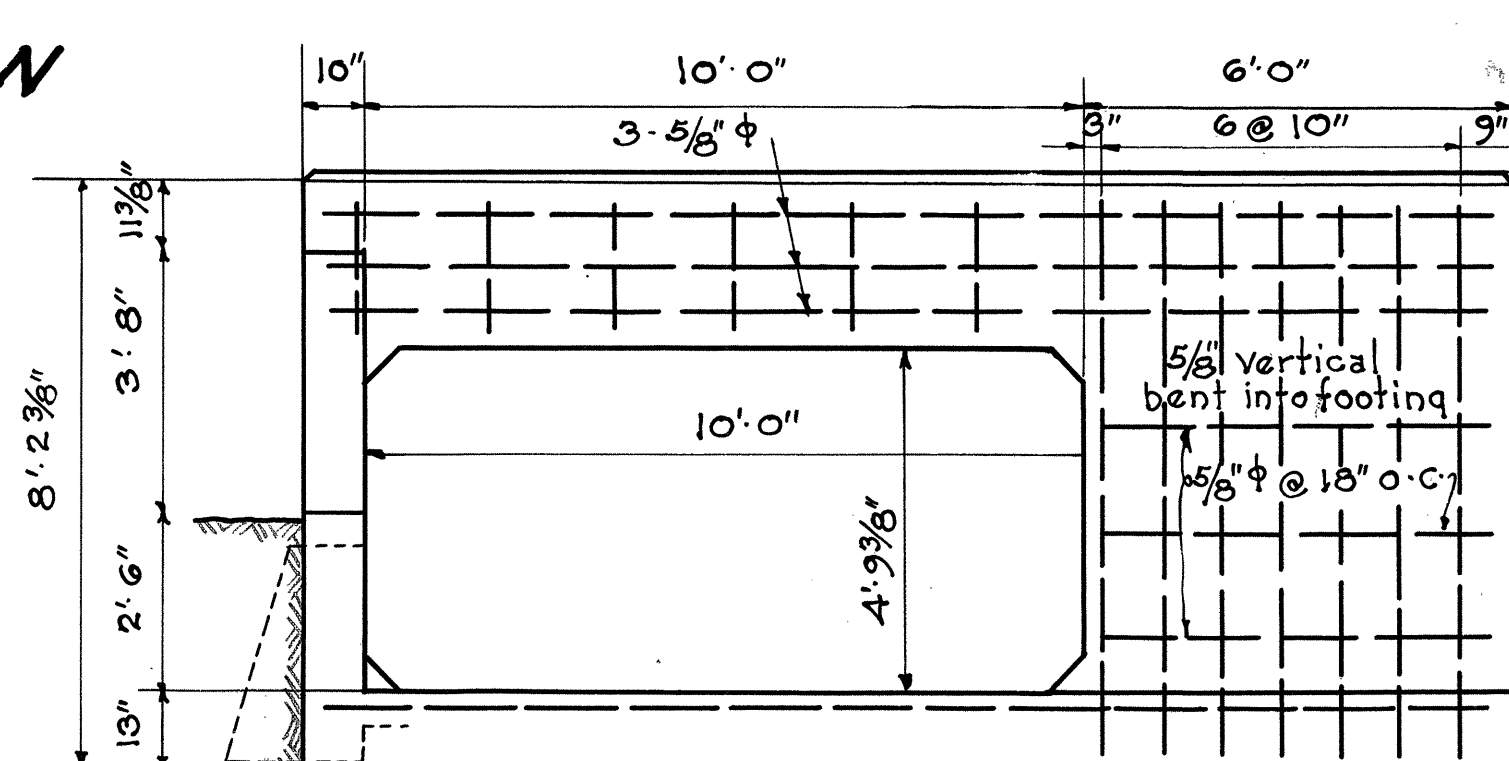
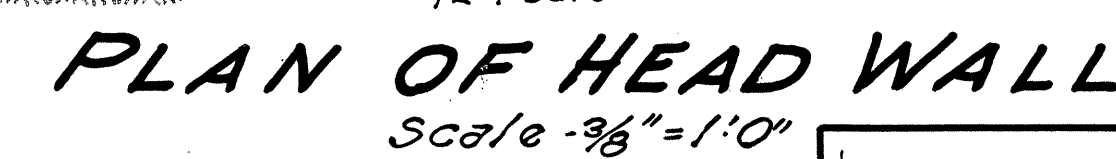
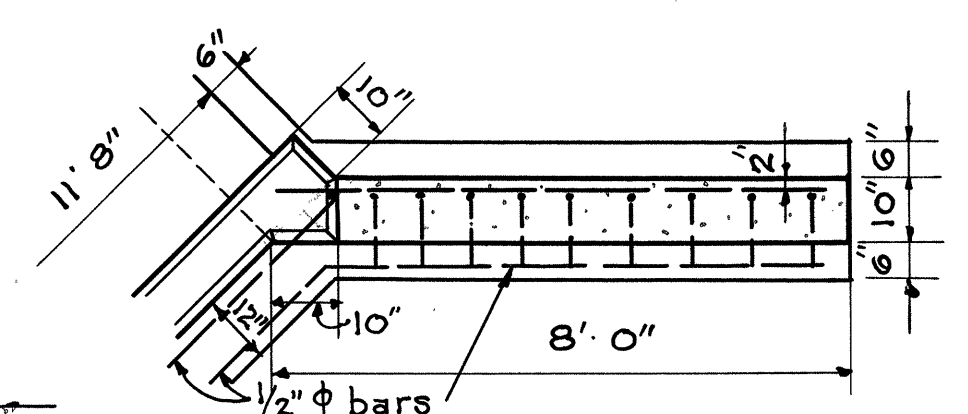
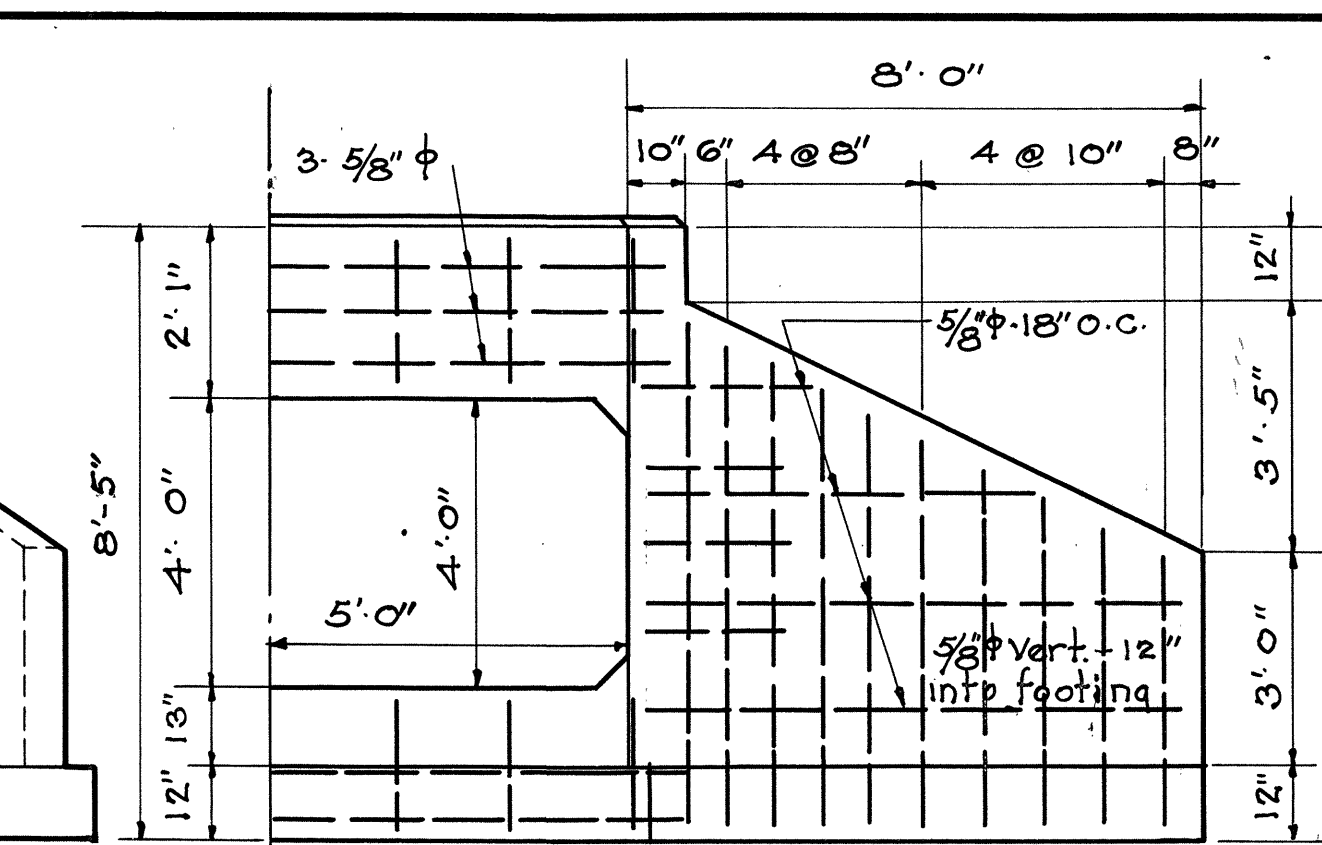
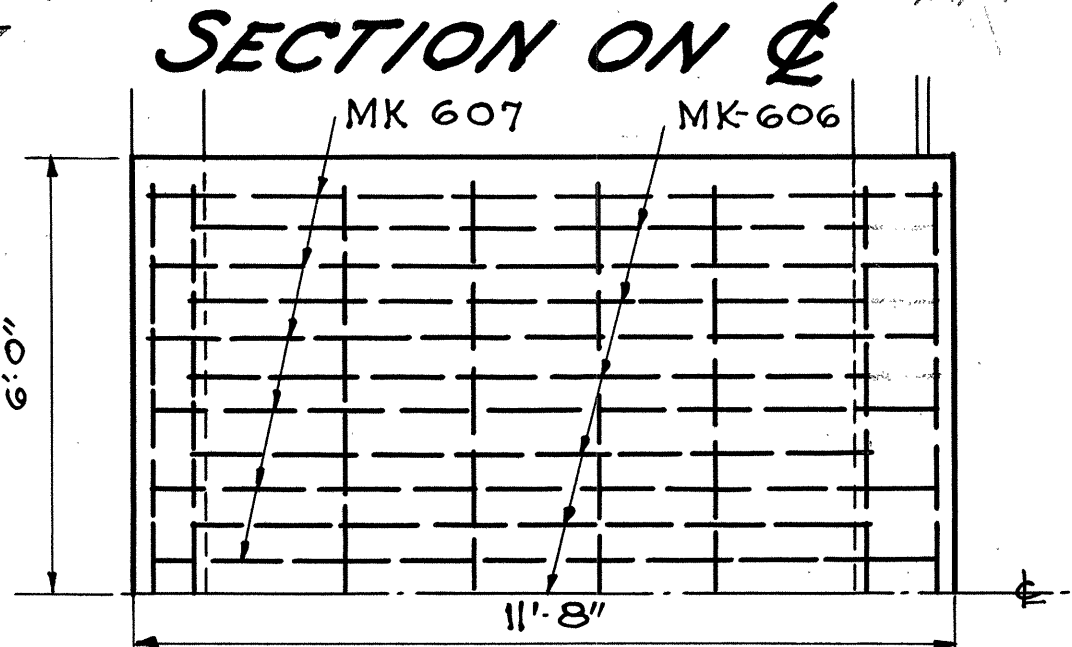
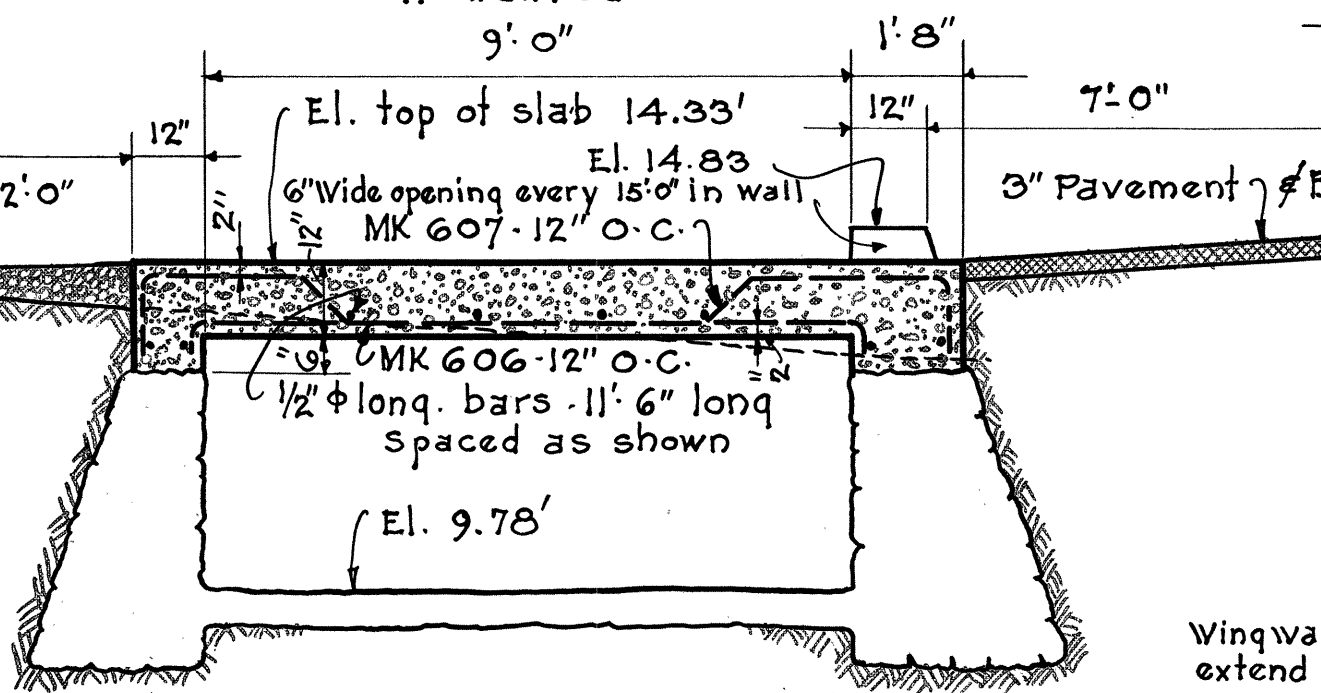
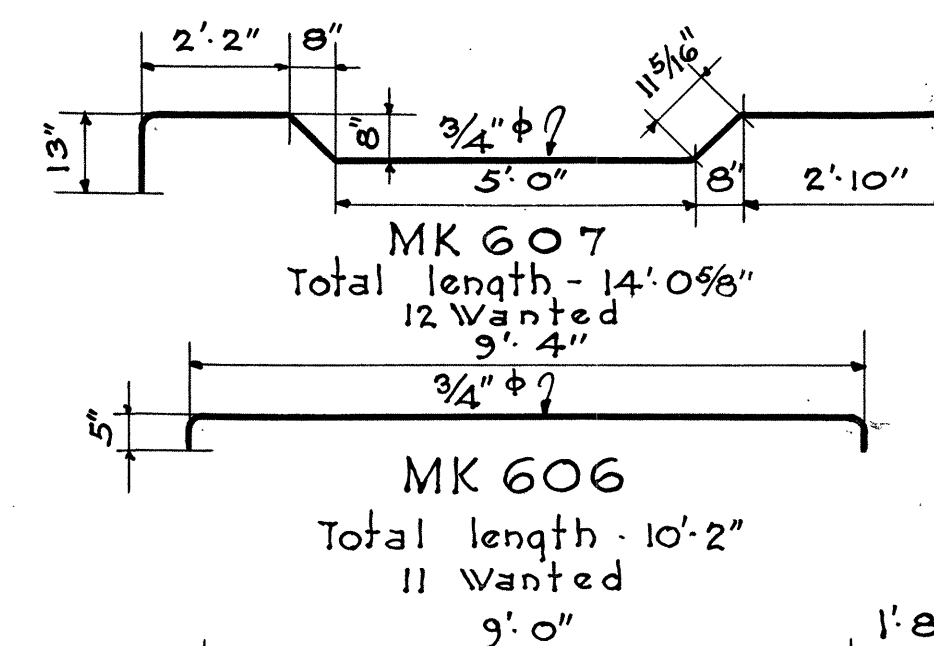
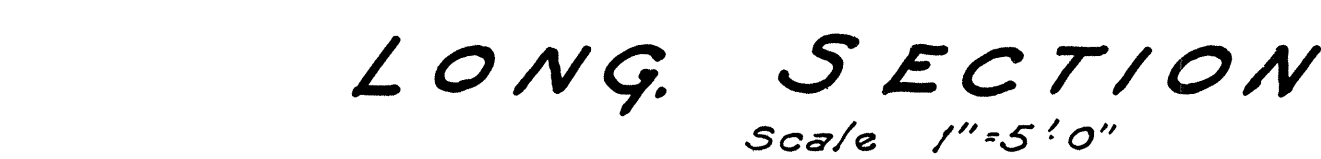
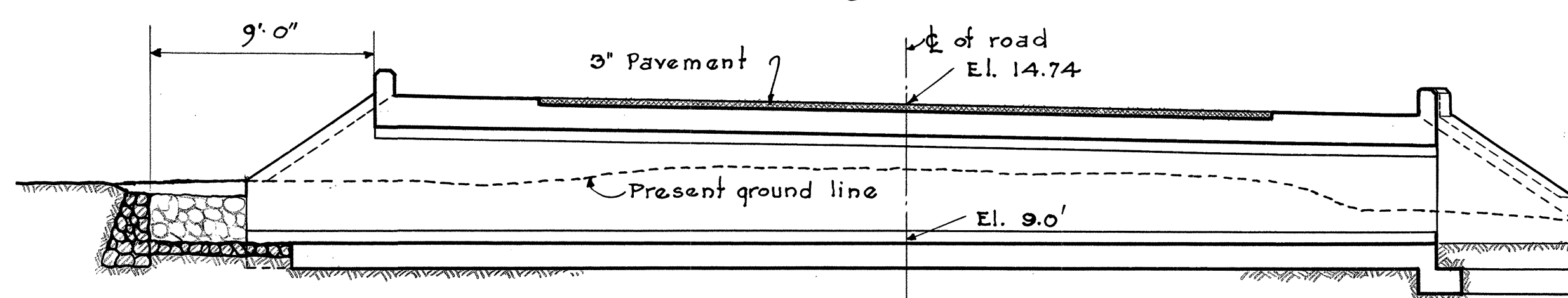
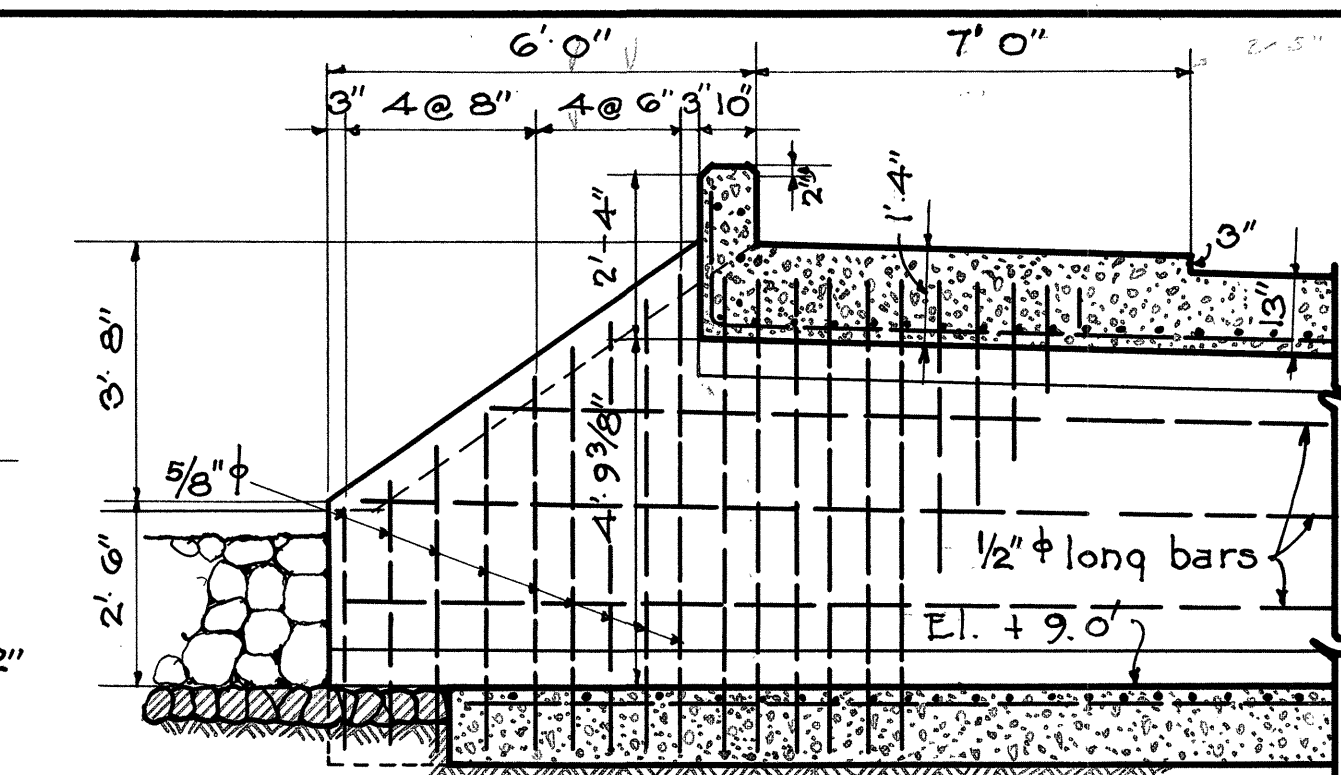
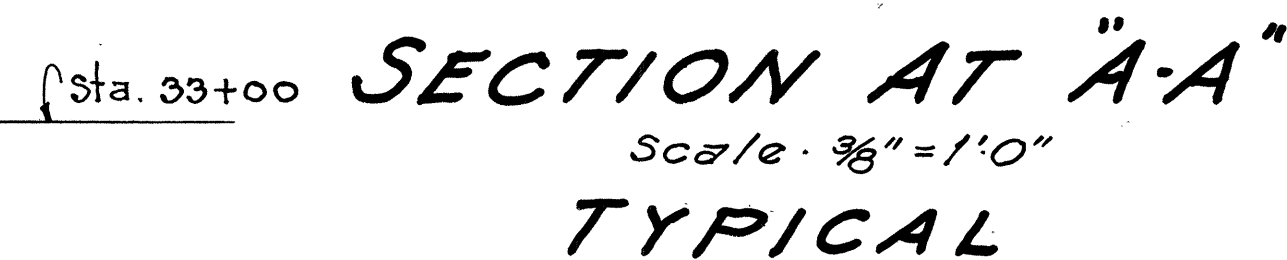
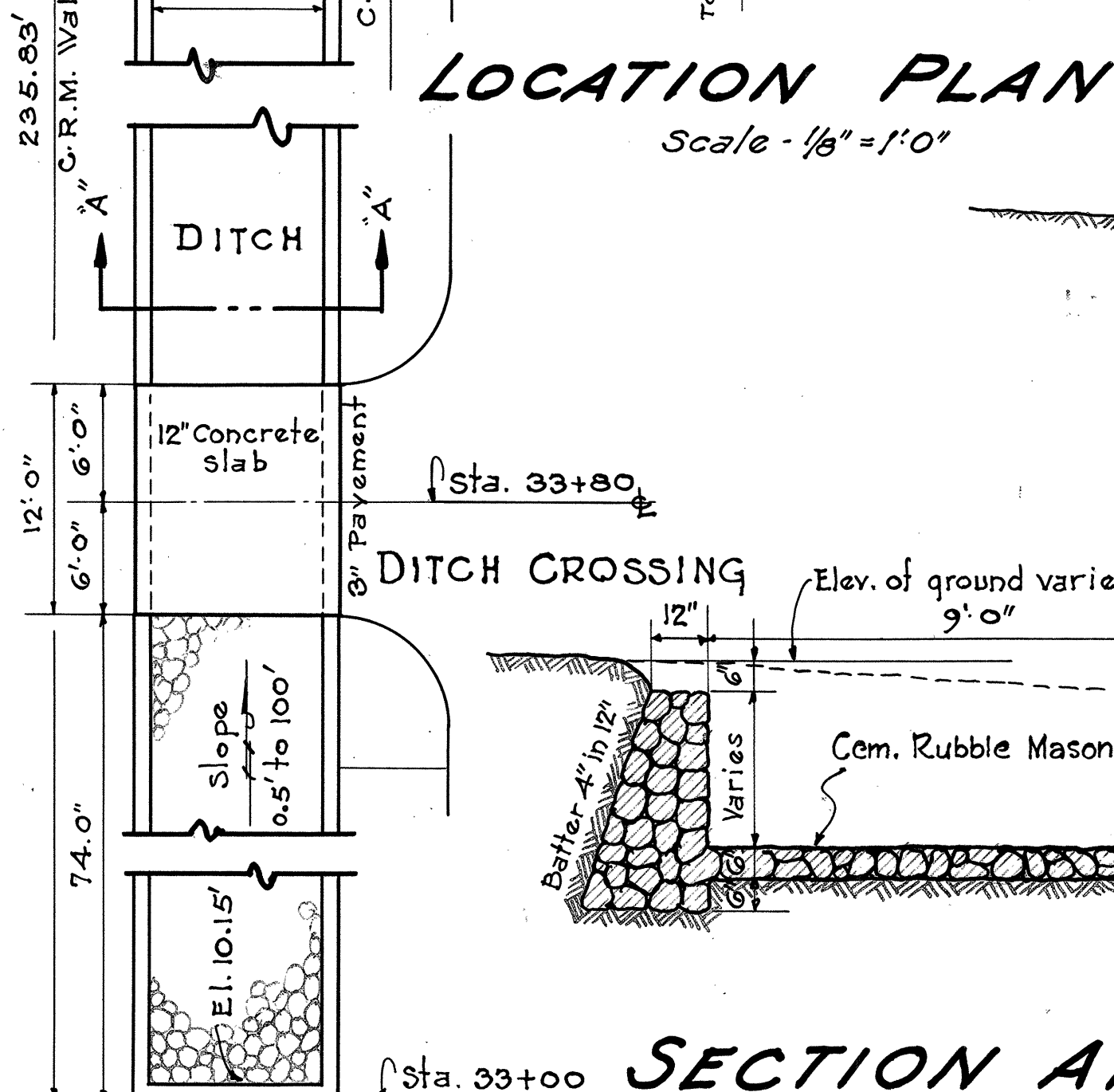
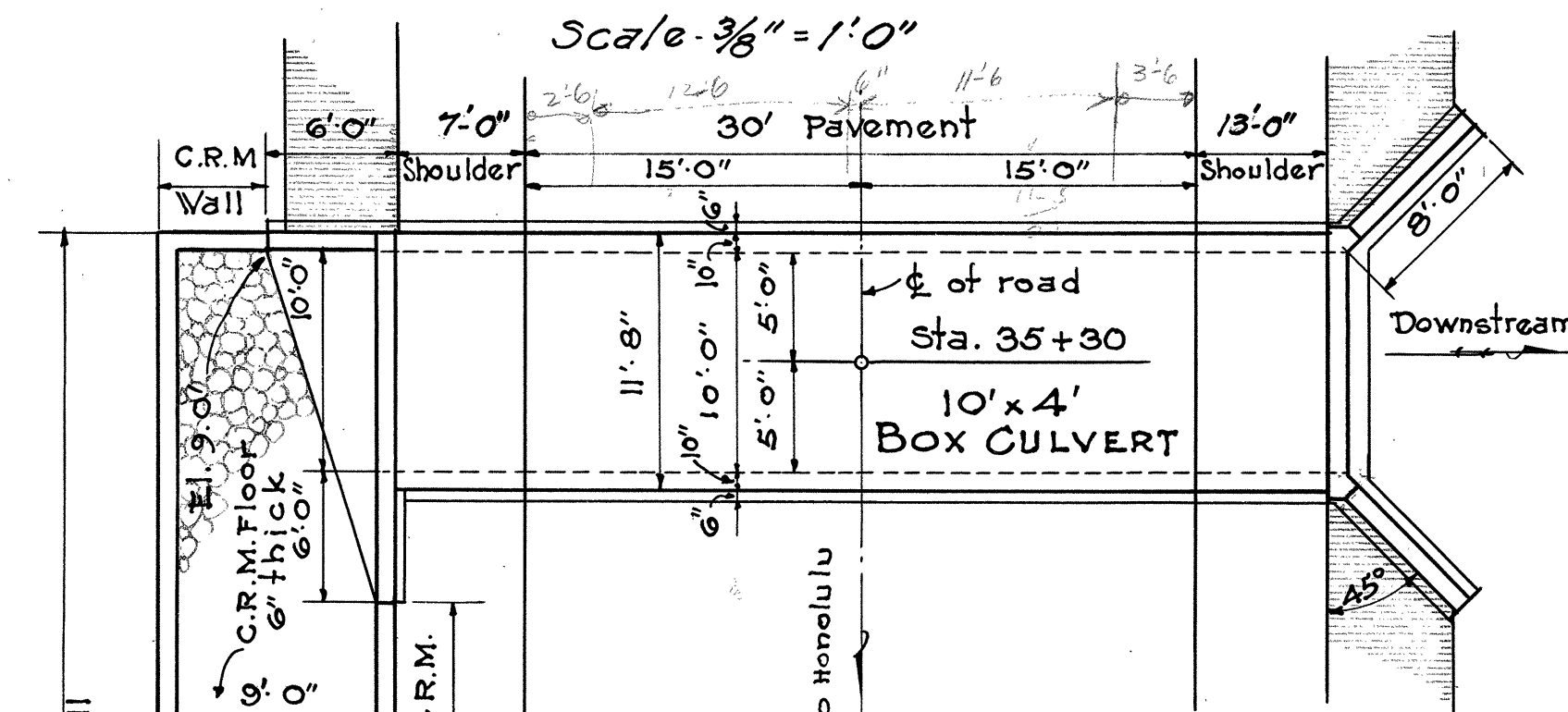
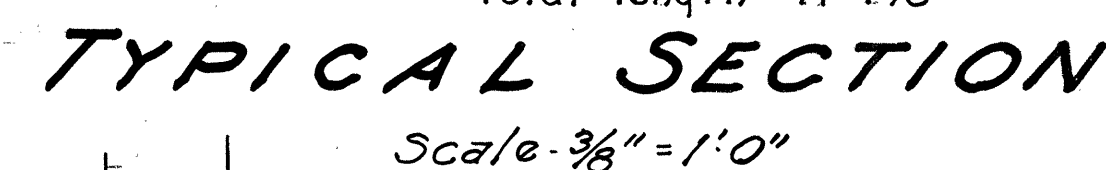
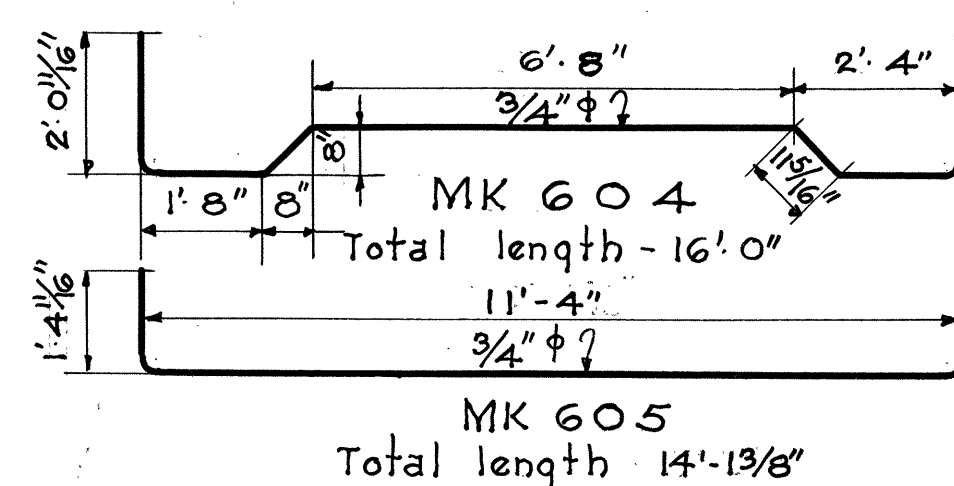
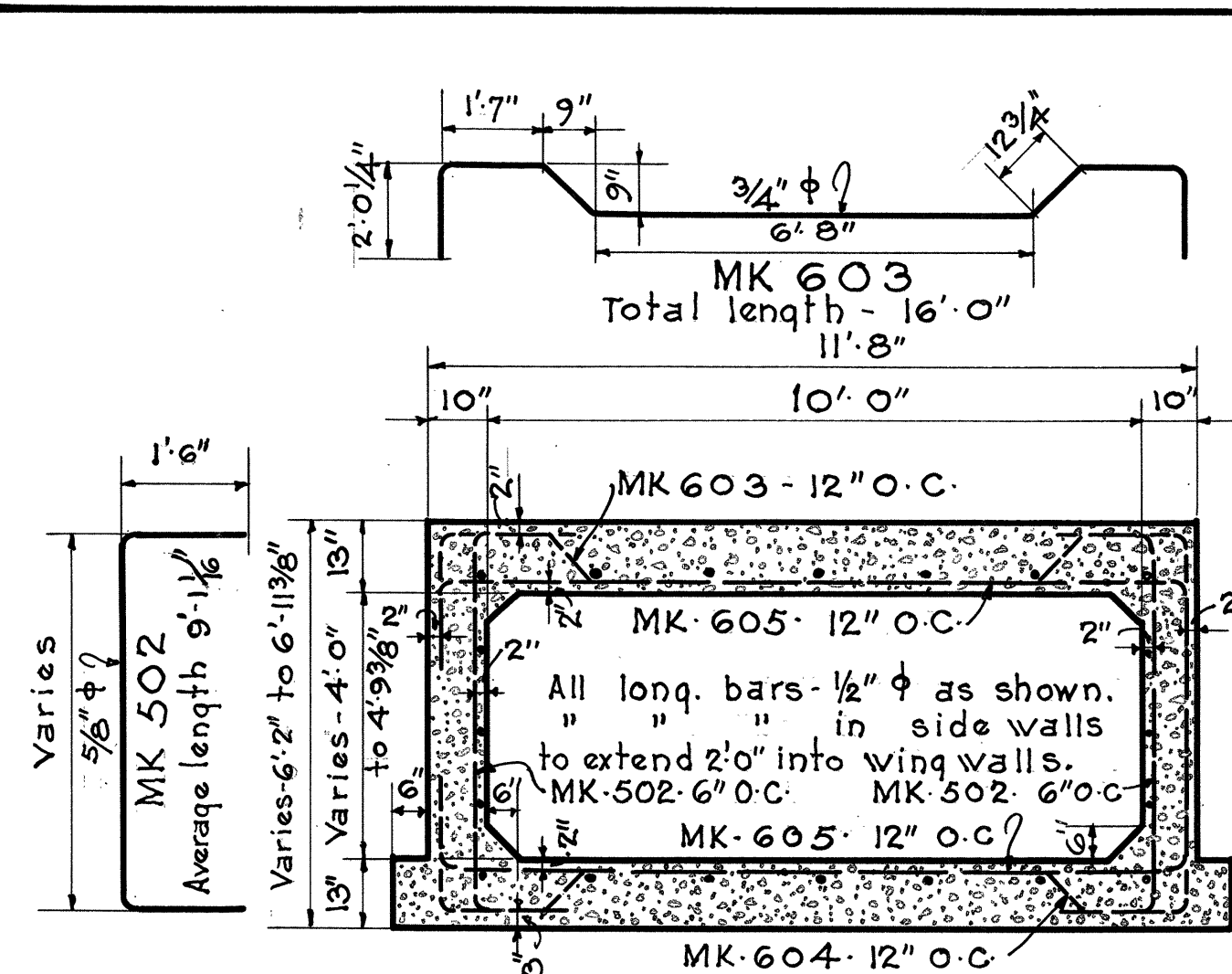
QUANTITY TABLE

AT STATION	6+96	82+92
A Size of trunk	8' x 6'	10' x 4'
B Length	70.71	51'-5"
C Conc. in Upstream headwall	12.5	7.94 C.Y.
D " " Downstream "	12.5	8.48 "
E " per lin. ft. of trunk (Average)		1.06 "
F Total concrete in trunk (B x E)	76.00	68.00 "
G Steel in Upstream headwall	687.00 #	423.00 #
H " " Downstream "	687.00 #	429.00 "
I " per lin. ft. of trunk (Average)	151.13	151.19 "
J Total steel in trunk (B x I)	10,520.0	7380.0 #
K Structural Ex. (Entire structure)	300.0 C.Y.	180.0 C.Y.
L Channel Ex.	10 "	6.0 "

PLAN OF CULVERT
Scale $\frac{3}{8}'' = 1'-0''$

DETAILS OF BOX CULVERT AT STA. 82+92
10' x 4'

DETAILS OF BOX CULVERTS
Sheet 1 of 2 Sheets



QUANTITY TABLE

AT STATION		33+80	35+30	43+00
A	Size of trunk		10' x 4'	3' 0" x 1' 6"
B	Length	12'	50'	50'
C	Conc. in upstream Headwall		5.0 C.Y.	1.00 C.Y.
D	" " Downstream "		6.0 "	1.00 "
E	Conc. per. lin. ft. of trunk (Average)		-1.3 "	-0.32 "
F	Total conc. in trunk (B x E)	Slab-6.0 C.Y.	65.0 "	16.0 "
G	Steel in Upstream Headwall		232.48 #	59.0 : #
H	" " Downstream "		248.35 #	59.0 : #
I	" per. lin. ft. of trunk (Average)		-147.62 "	-33.19 "
J	Total steel in trunk (B x I)	Slab-488.88 #	6407.0 "	2500.0 "
K	Structural Ex.		134.0 C.Y.	23.0 C.Y.
L	Channel Ex.		5.0	7.0

Total Structural Ex. for ditch	490.1	Cu.Yds.
" C.R.M.(inc. floor) "	184.5	" "

" C.R.M. (inc. floor) " " 184.5 " "

DETAILS OF BOX CULVERTS

Sheet 2 of 2 sheets

E.V.S.

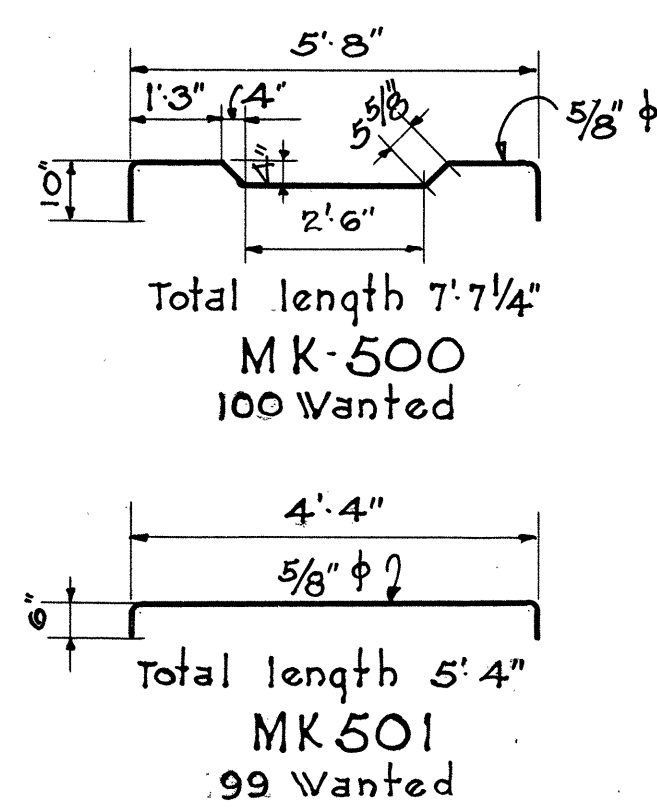
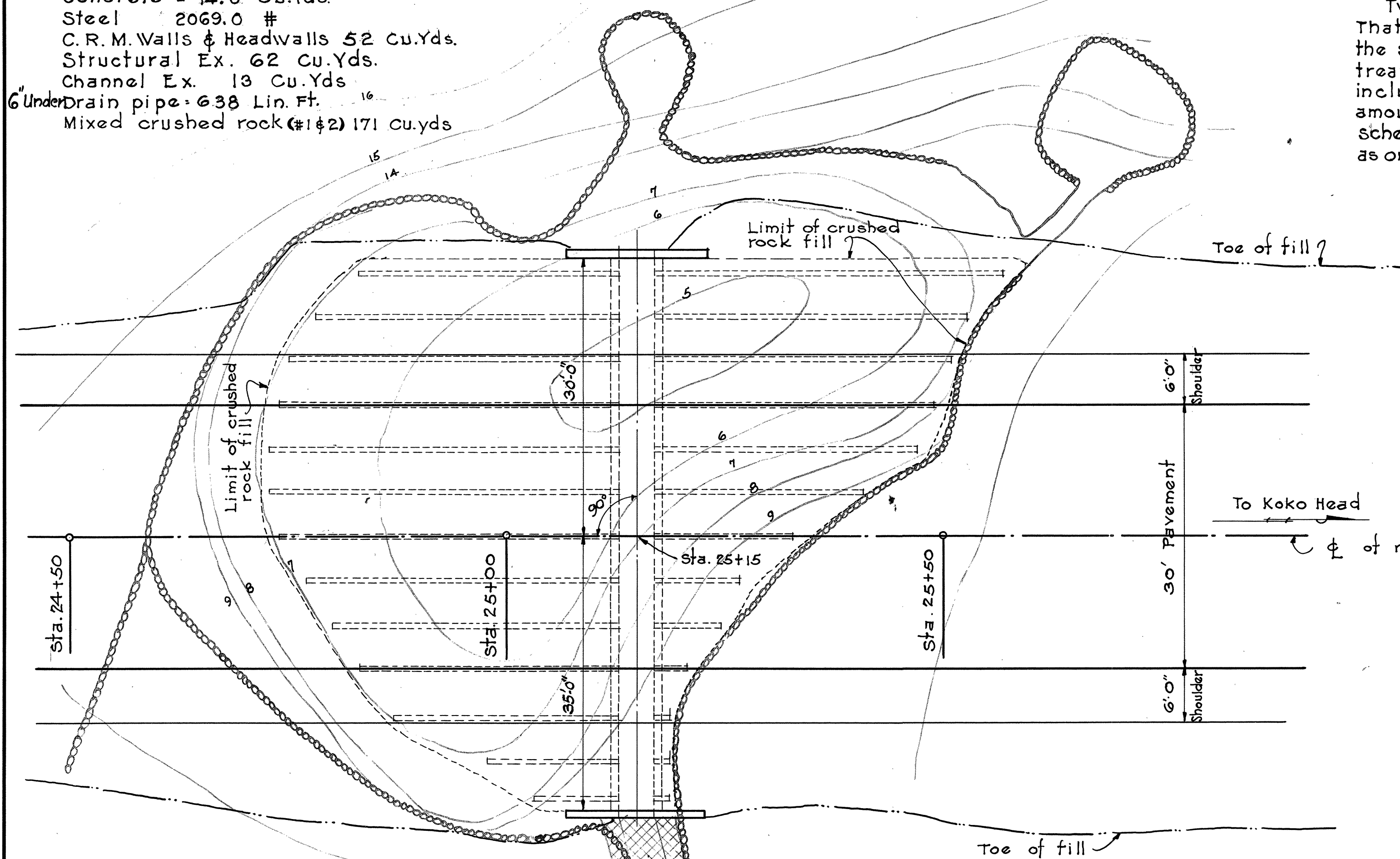
4294.19

MATERIAL ESTIMATE FOR SCHEME "A"

Concrete = 14.0 Cu.Yds.
Steel 2069.0 #
C.R.M. Walls & Headwalls 52 Cu.Yds.
Structural Ex. 62 Cu.Yds.
Channel Ex. 13 Cu.Yds.
Under Drain pipe 638 Lin. Ft.
Mixed crushed rock (#1 & 2) 171 Cu.Yds.

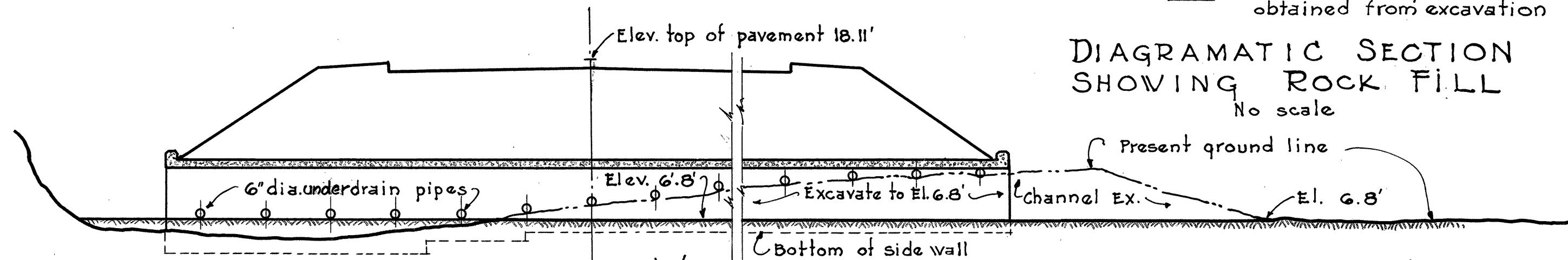
Note/
Two treatments for this spring are shown below - That used will depend upon investigation after pumping the spring. The approximate quantities for both treatments are shown but only those for "A" are included in the Proposal Schedule except a nominal amount of the items special to "B" for prices. However scheme "A" or "B" or someother treatment shall be used as ordered by the Engineer after pumping.

HAWAII HAW.N.R.H. 671933 20 51



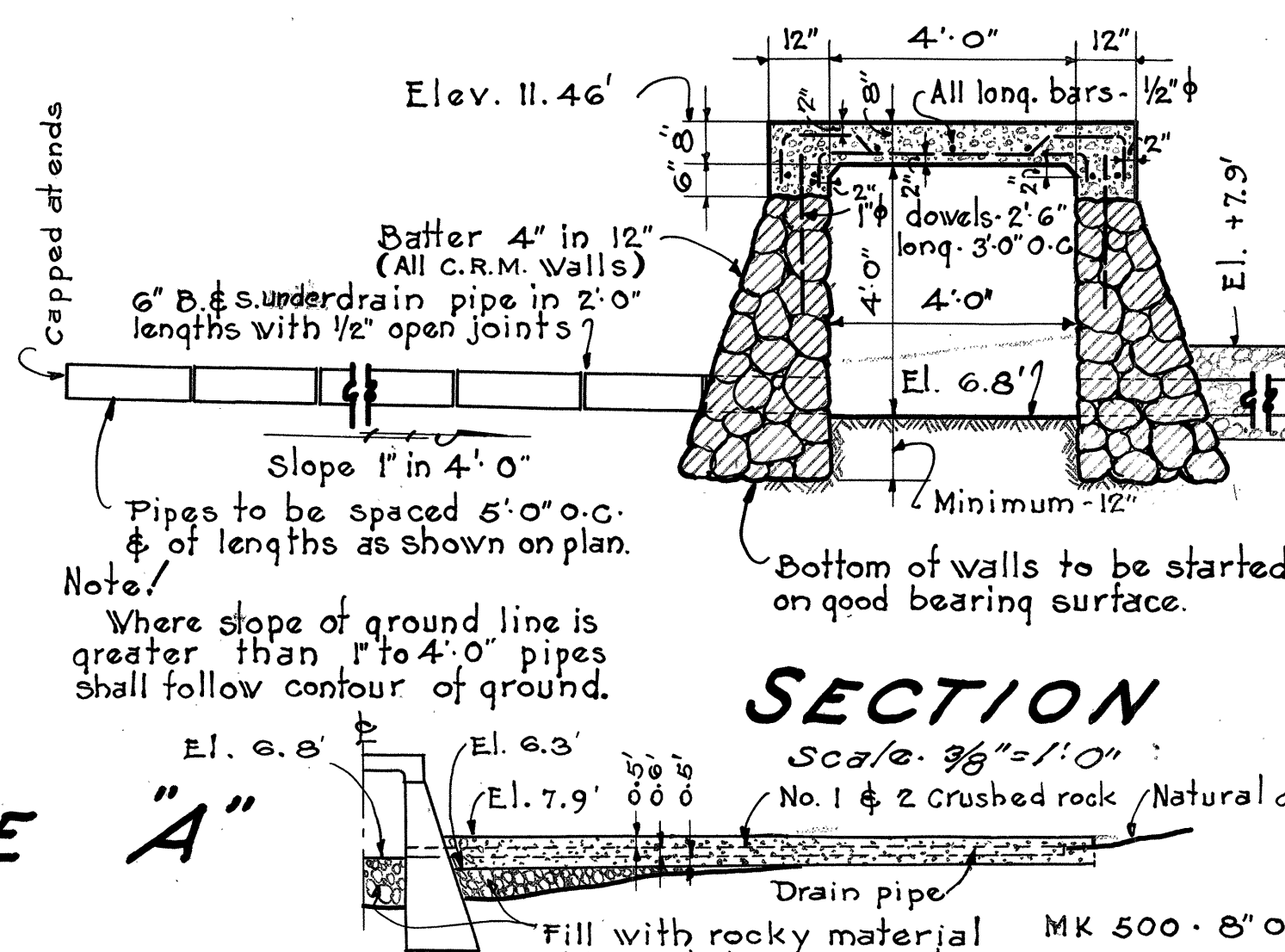
PLAN FOR SCHEME "A"

Scale - 1"=10'



LONGITUDINAL SECTION

Scale - 1/8"=1'0"



DIAGRAMATIC SECTION SHOWING ROCK FILL

No scale

SECTION

Scale - 3/8"=1'0"

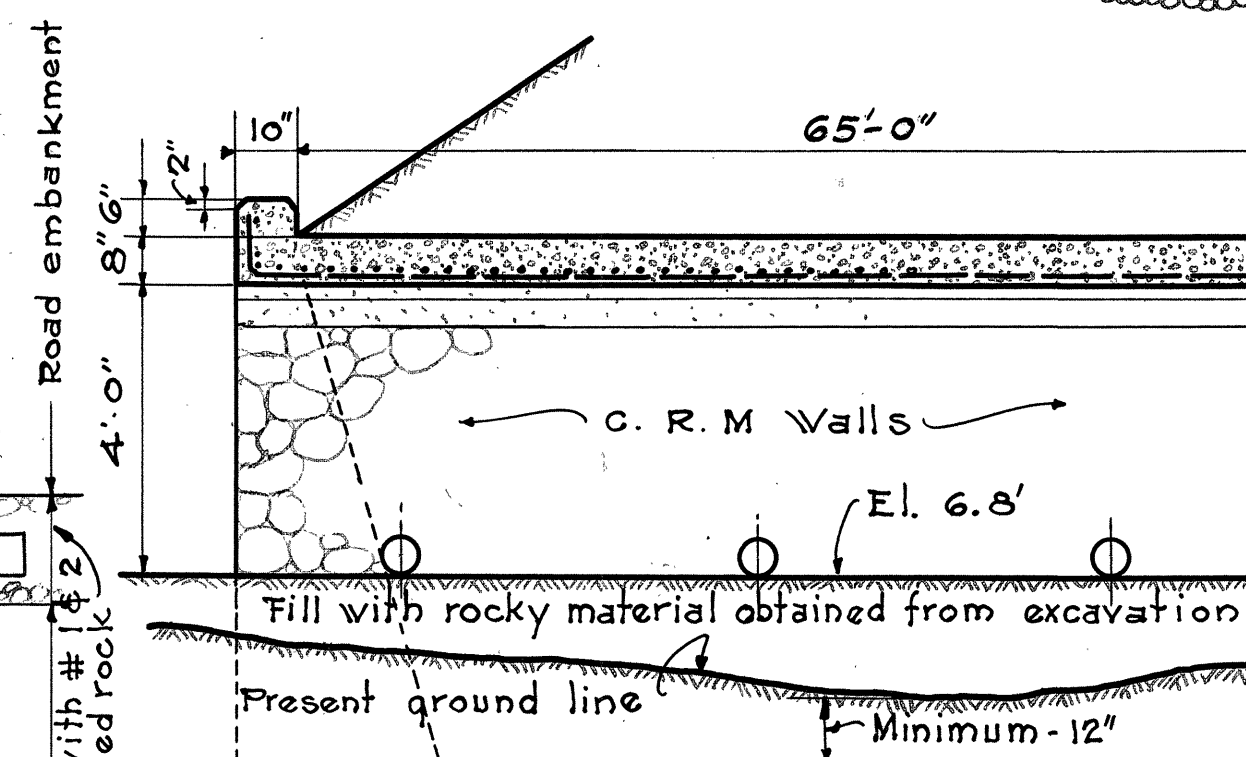
No. 1 & 2 Crushed rock / Natural ground

Drain pipe

Fill with rocky material obtained from excavation

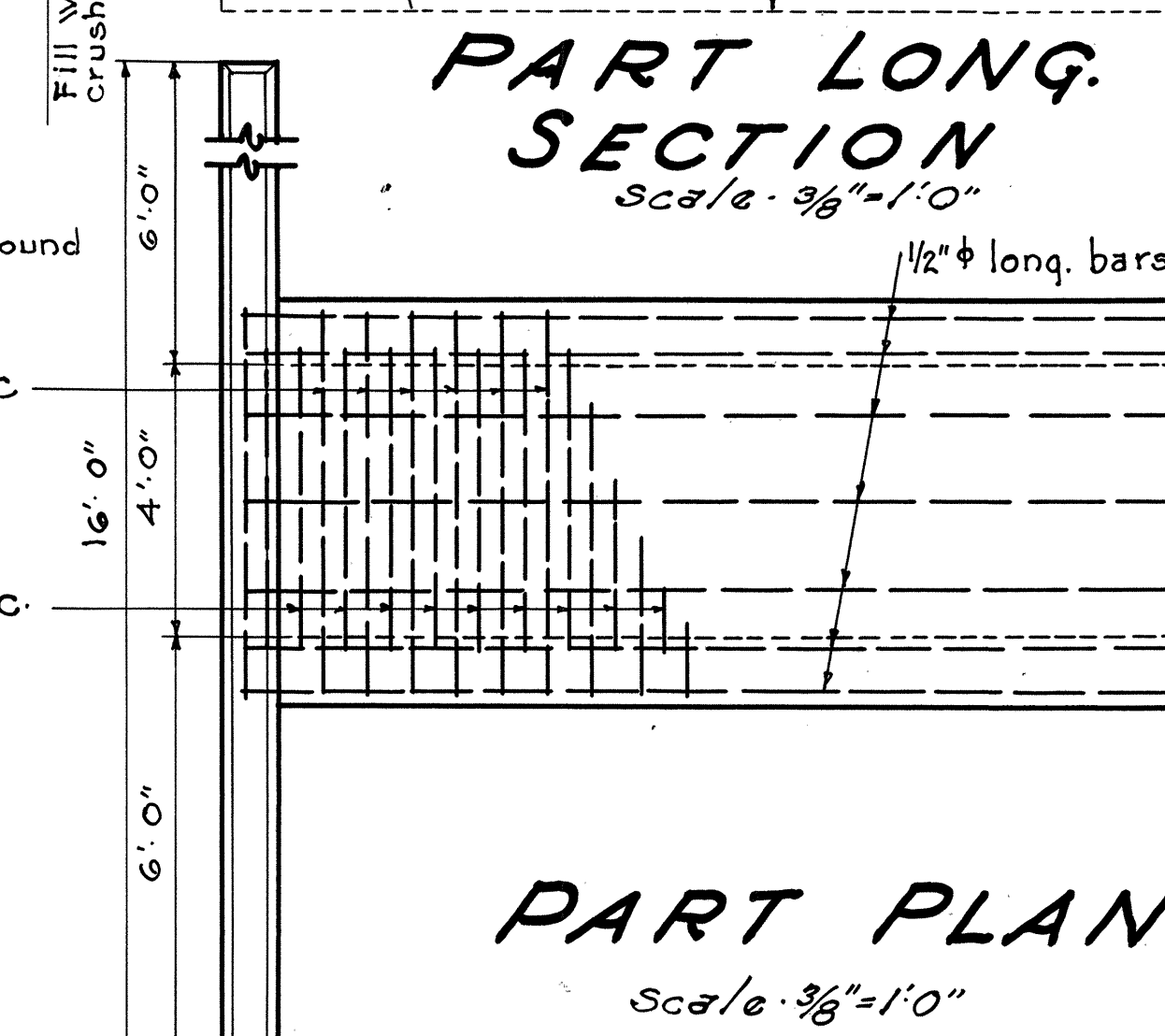
MK 500 - 8" o.c.

MK 501 - 8" o.c.



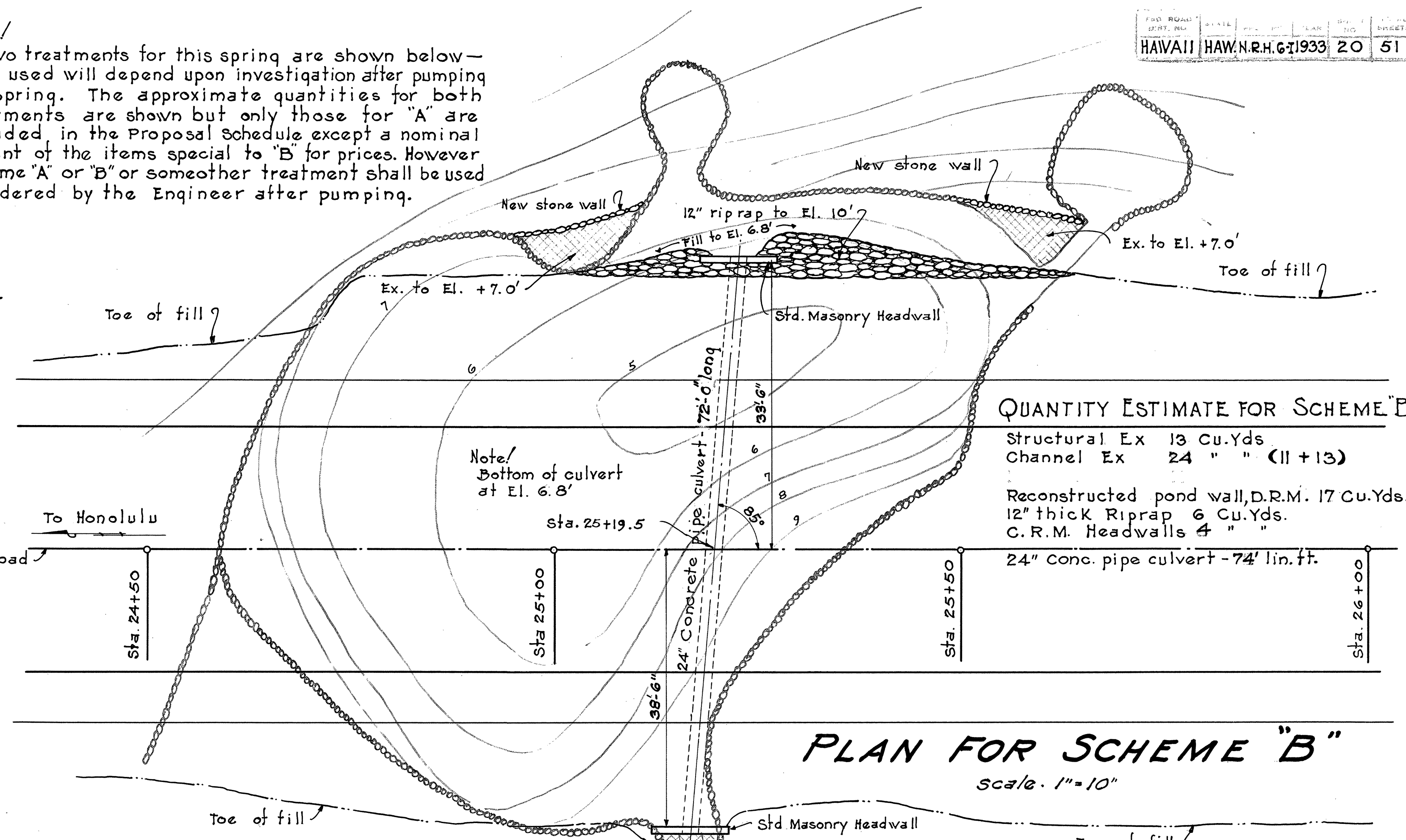
PART LONG. SECTION

Scale - 3/8"=1'0"



PART PLAN

Scale - 3/8"=1'0"

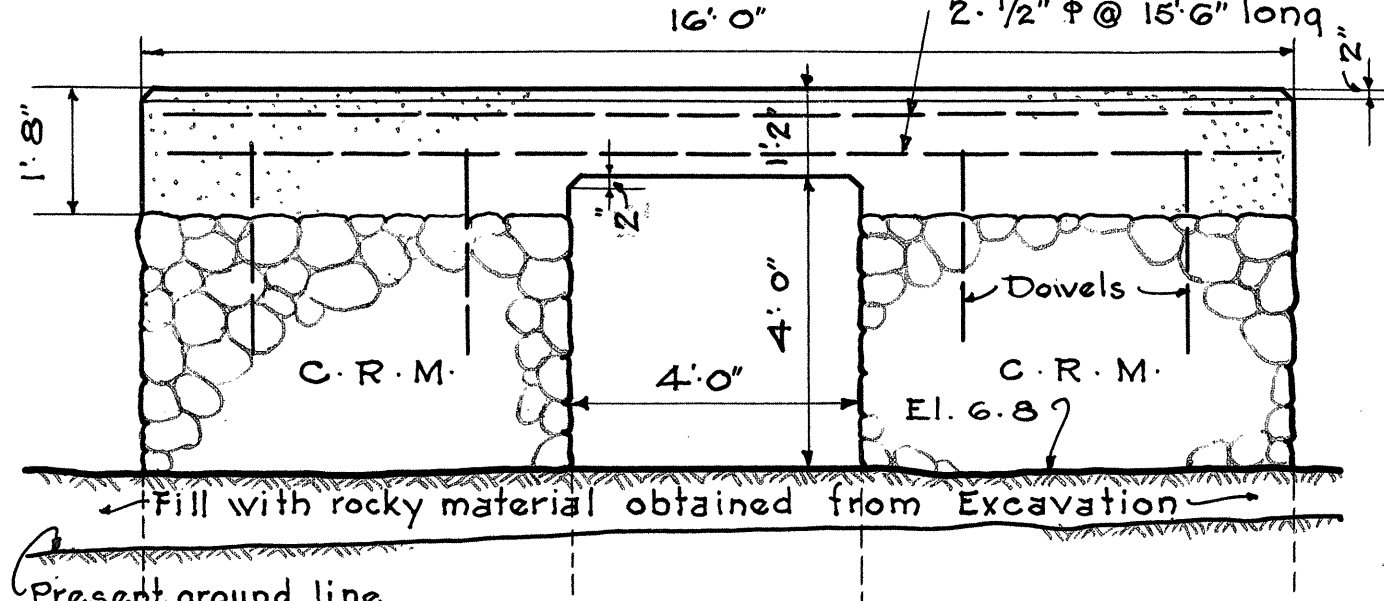


QUANTITY ESTIMATE FOR SCHEME "B"

Structural Ex 13 Cu.Yds.
Channel Ex 24 " " (11 + 13)
Reconstructed pond wall, D.R.M. 17 Cu.Yds.
12" thick Riprap 6 Cu.Yds.
C.R.M. Headwalls 4 " "
24" Conc. pipe culvert - 74' lin. ft.

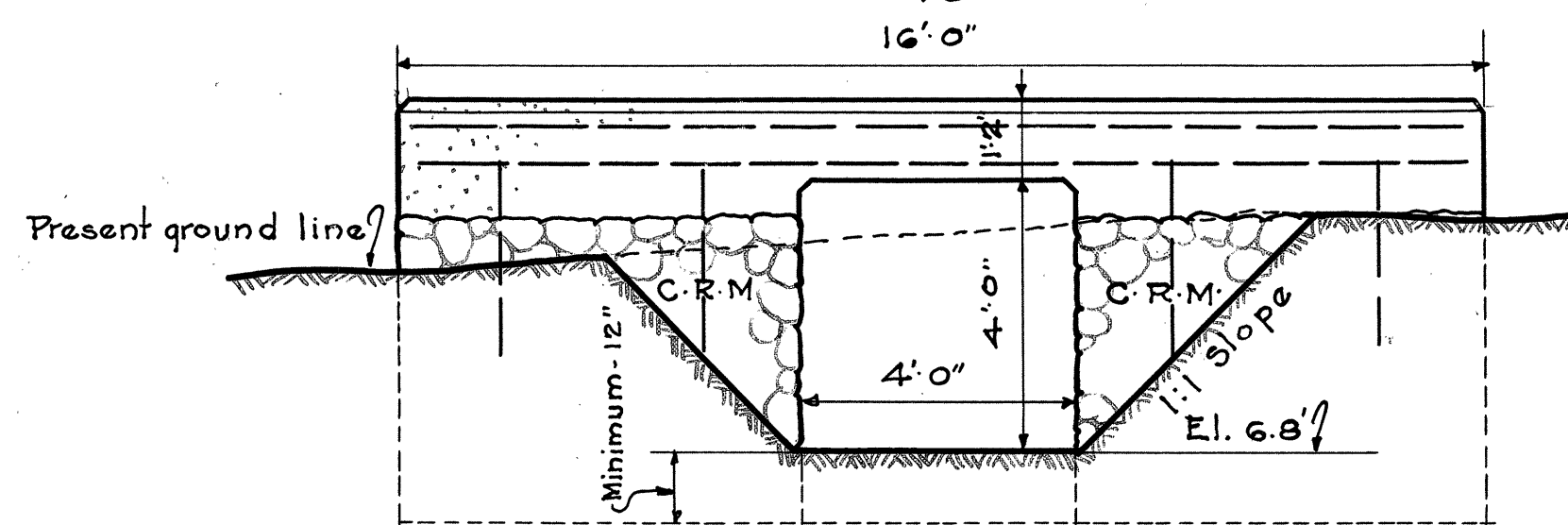
PLAN FOR SCHEME "B"

Scale - 1"=10'



UPSTREAM HEADWALL

Scale - 3/8"=1'0"



DOWNSTREAM HEADWALL

Scale - 3/8"=1'0"

PROPOSED TREATMENT OF SPRINGS AT STA. 25+00

Sheet 1 of 1 sheet