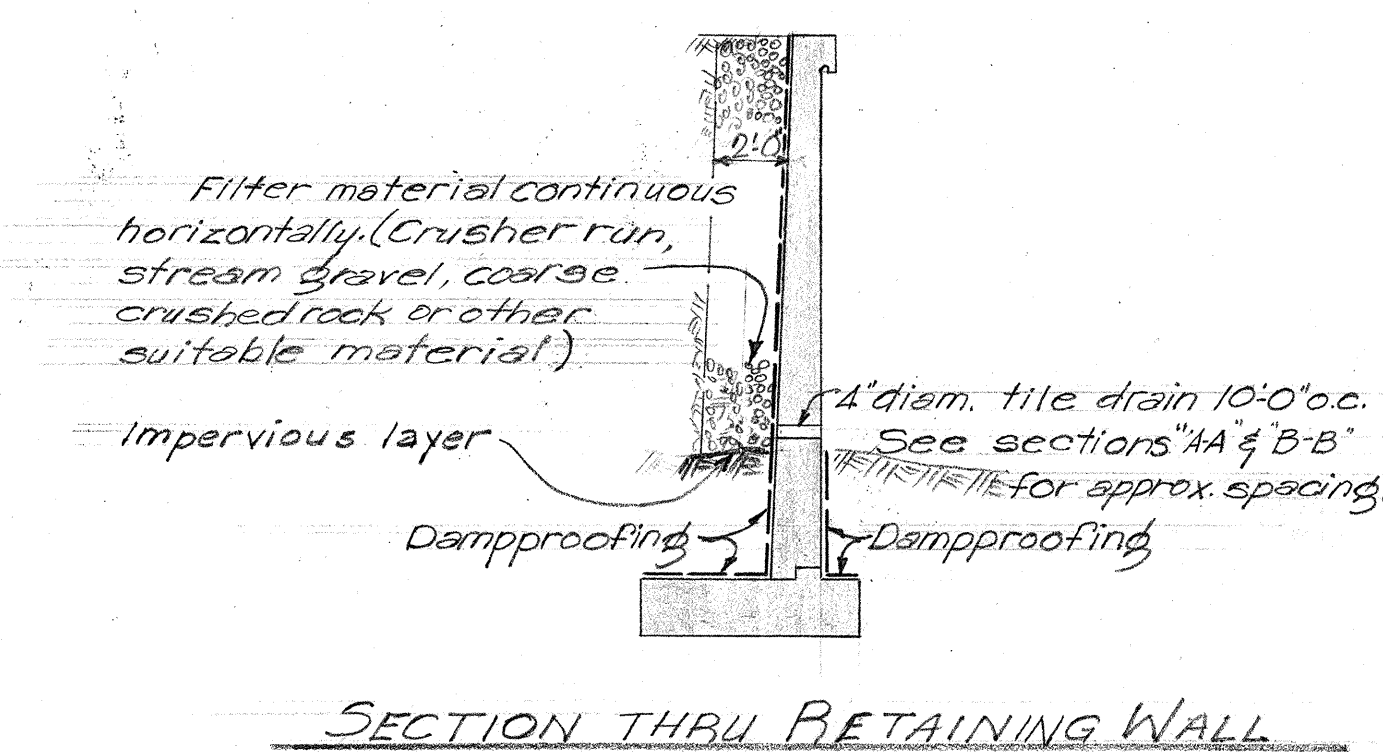
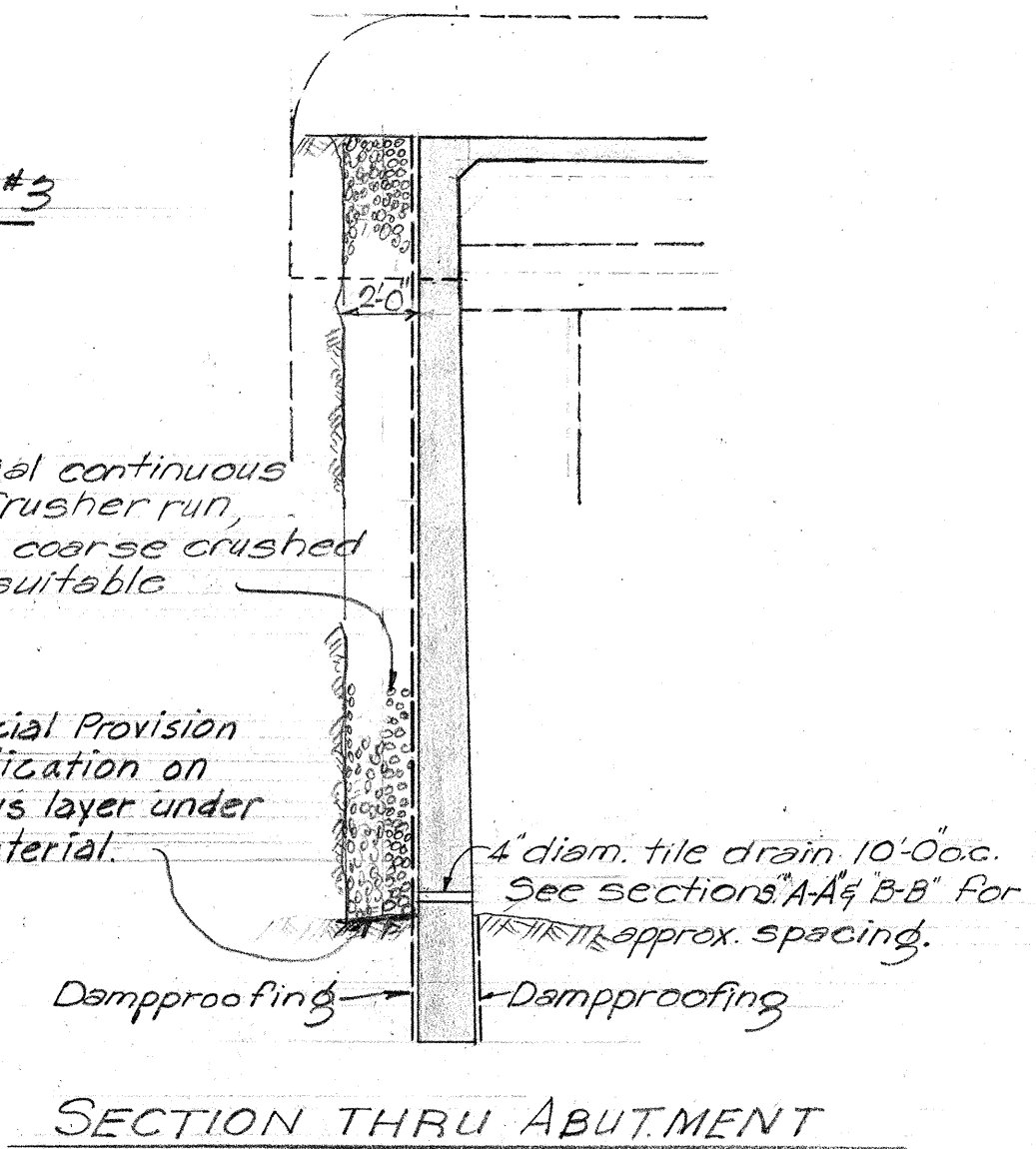
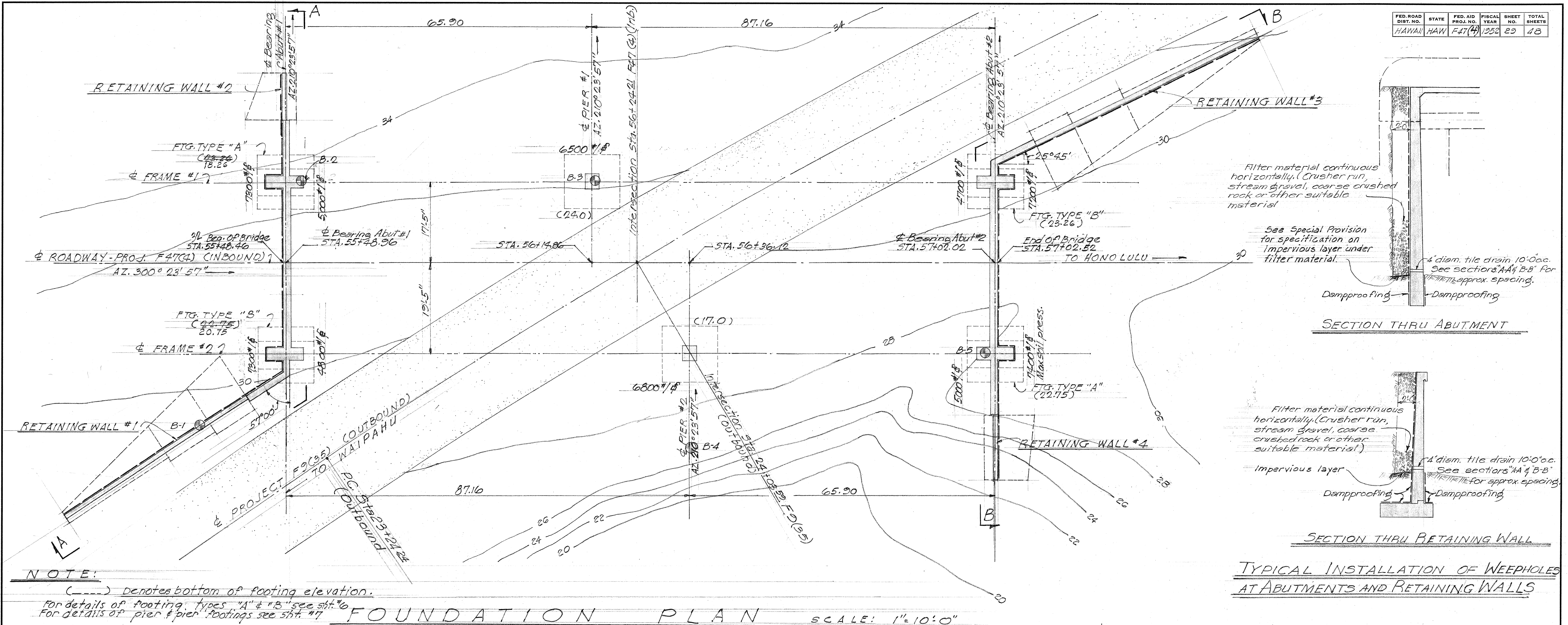
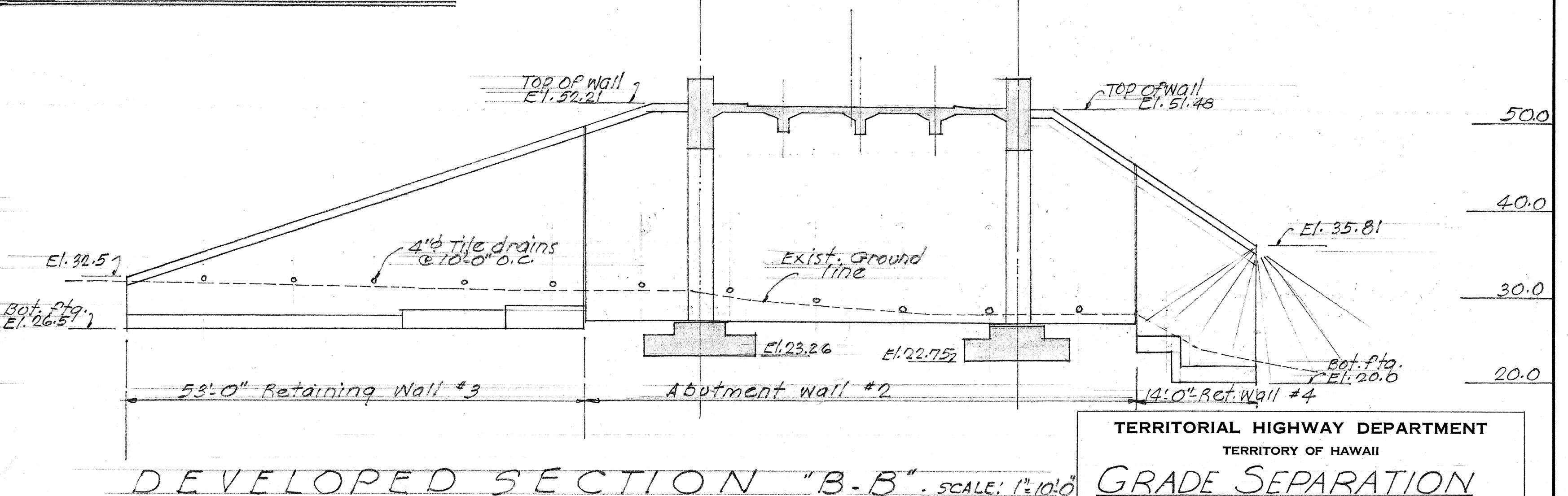
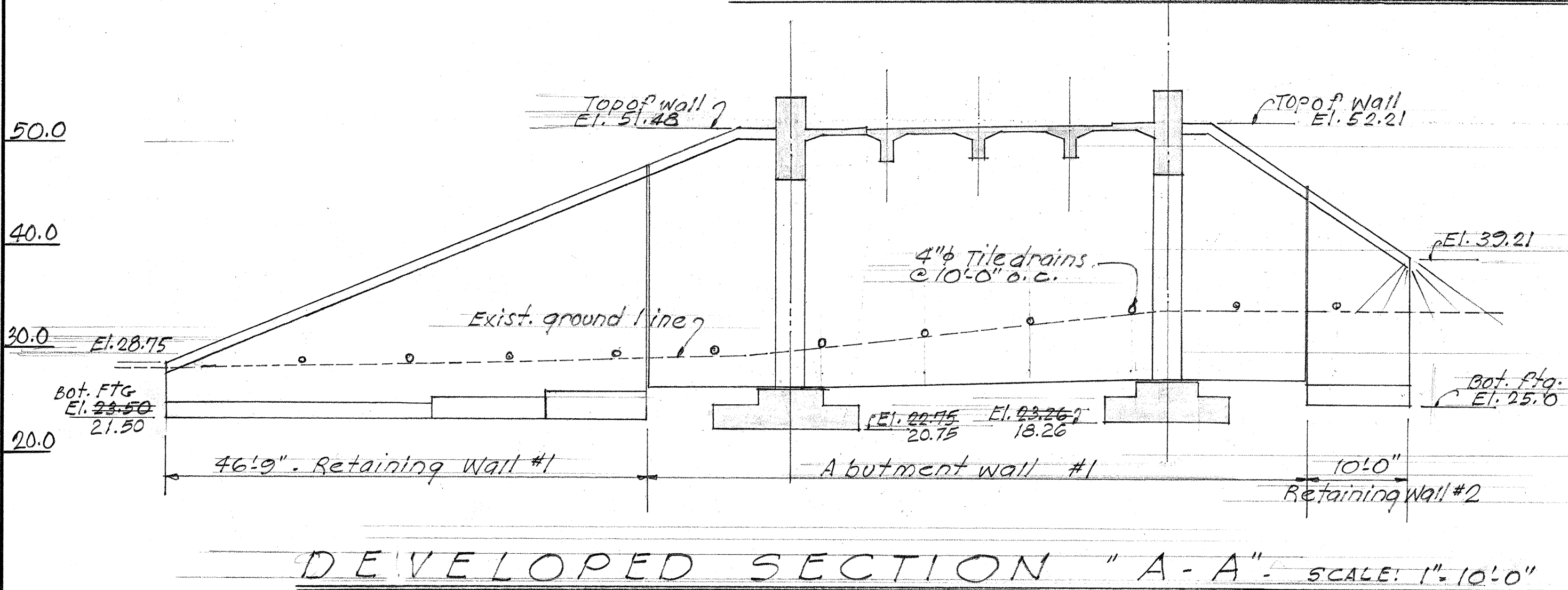
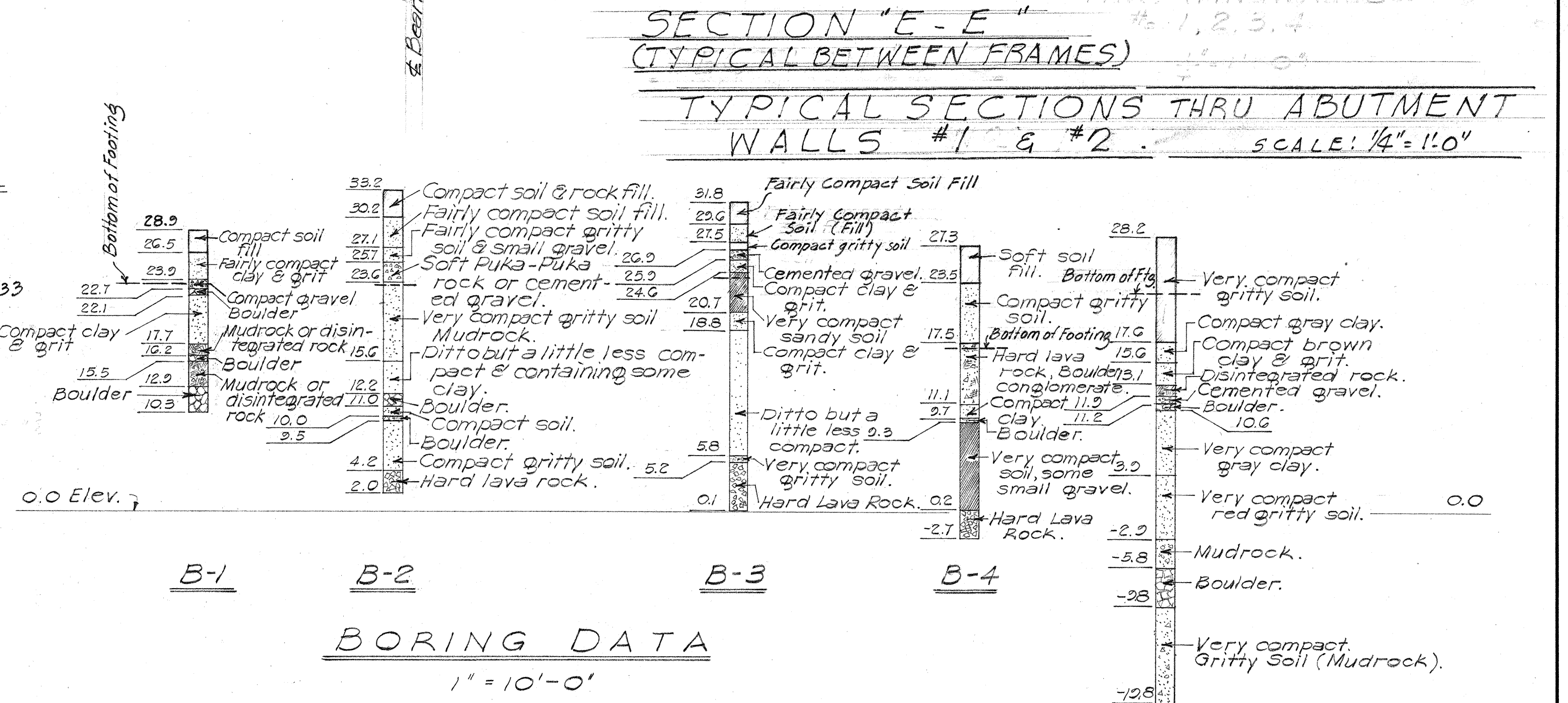
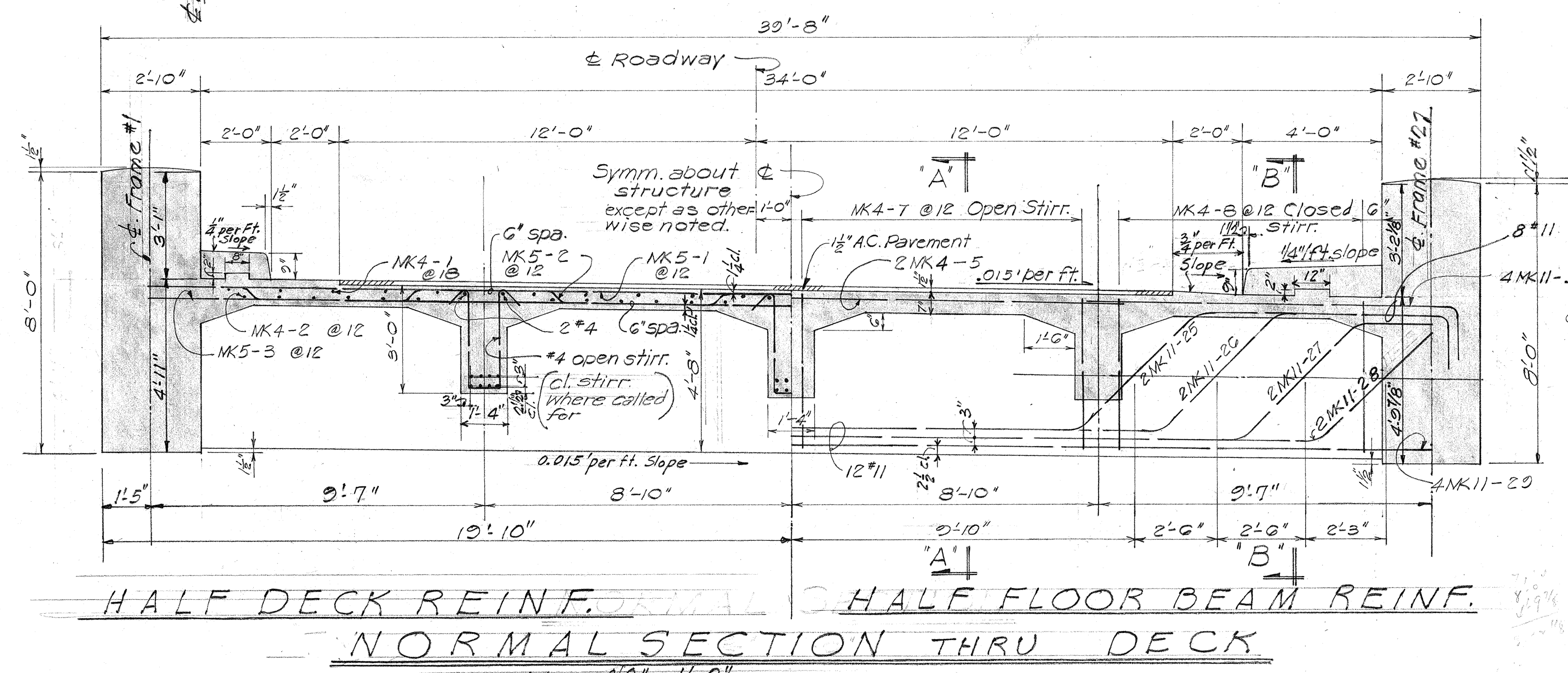
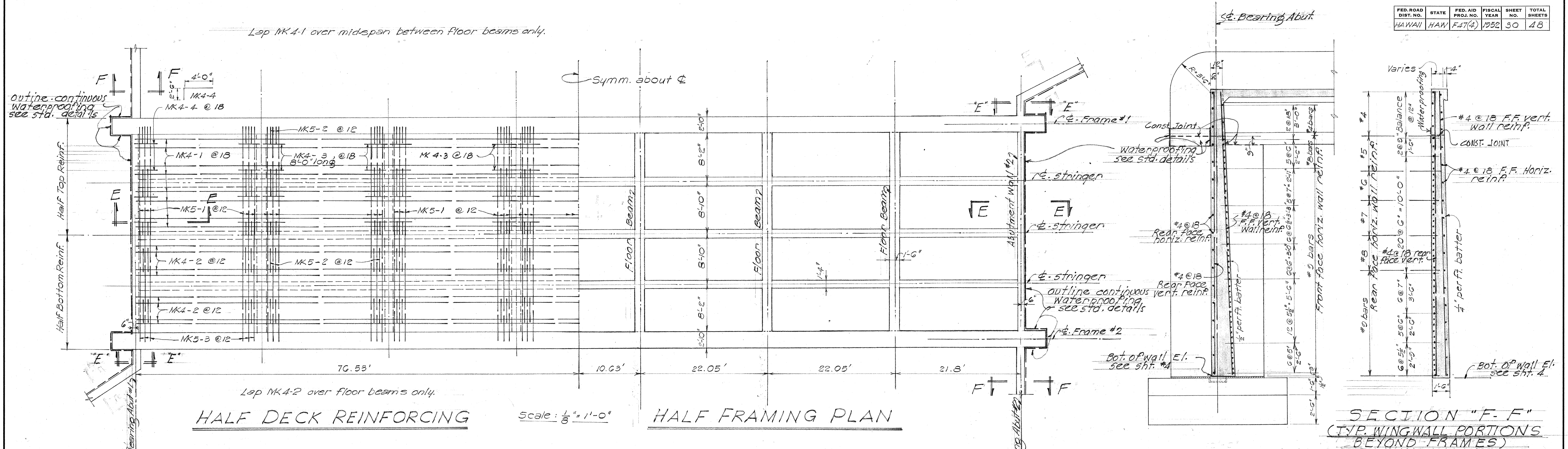




TYPICAL INSTALLATION OF WEEPHOLES AT ABUTMENTS AND RETAINING WALLS



TERRITORIAL HIGHWAY DEPARTMENT
 TERRITORY OF HAWAII
GRADE SEPARATION
 Sta. 55+48.46 to Sta. 57+02.52
 WAIKAWA CUT-OFF F47(4)
 April, 1952



QUANTITIES						
PIER		RETAINING WALL				TOTAL
№1	№2	№1	№2	№3	№4	
22.0	25.0	56.0 53.0	13.0	58.0	22.0	102.0 101.0 cu.yds.
1,008.0	2,670.0	6,426.0 6,050.0	1,609.0	6,468.0	2,544.0	17,115.0 16,651.0 lbs.
31.0 36.0	75.0 53.0	100.0 121.0	40.0 42.0	100.0 84.0	25.0 21.0	348.0 324.0 cu.yds.
25.0	30.0	130.0 127.0	40.0	145.0	50.0	404.0 402.0 sq.yds.
						40.0 36.0 Tons
						100.0 105.0 Gals.
		40.0	10.0	40.0	20.0	340.0 340.0 cu.yds.
6,270.0 6,240.0	6,270.0 6,240.0					12,600.0 12,740.0 lbs.

B-5

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
GRADE SEPARATION
Sta. 55+48.4G to Sta 57+02.52

WAIAWA CUT-OFF _____ F47(4)

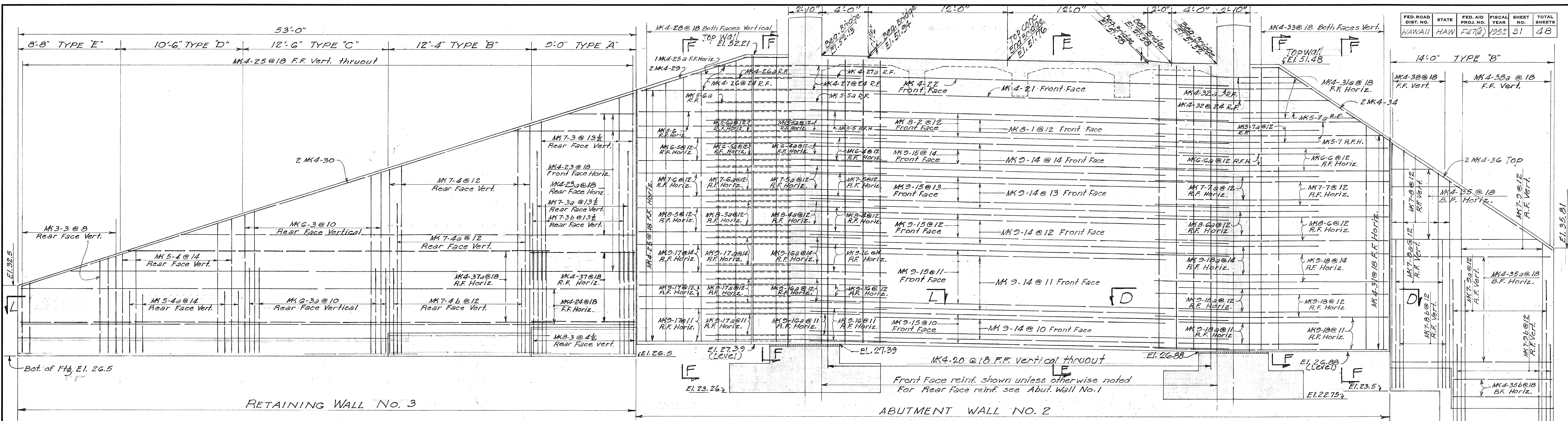
April, 1952

SHEET No. 3 OF 7 SHEETS

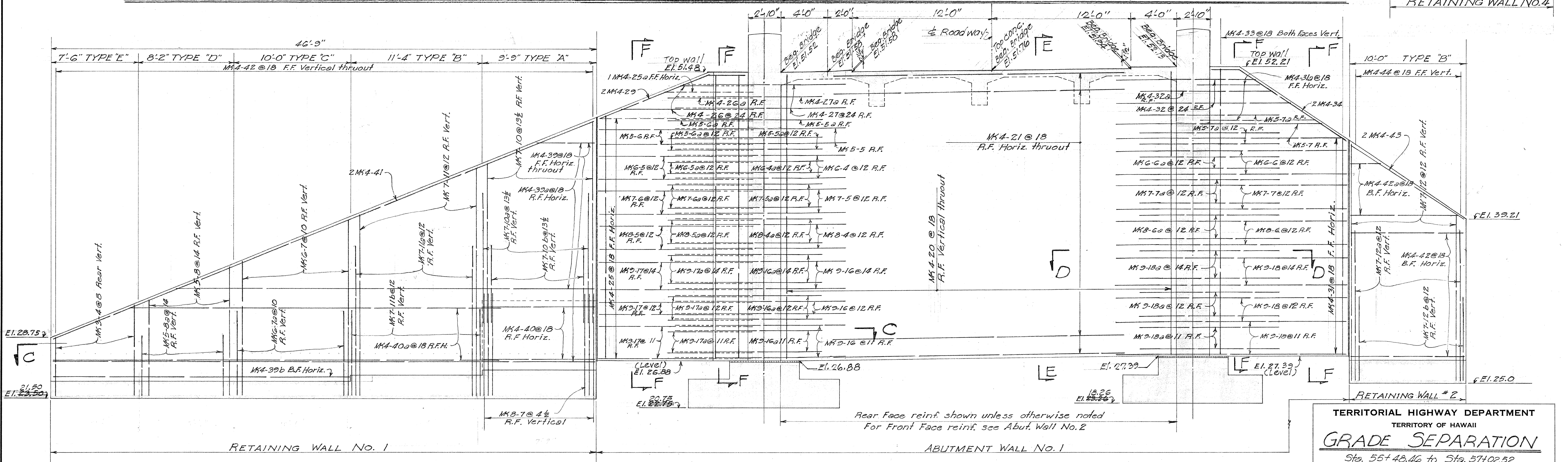
5479.30

DESIGNED BY: M. J. JONES
 CHECKED BY: M. J. JONES
 DATE: 4-1-52
 ORIGINAL PLAN NO. 1
 NOTE BOOK NO. 1

TERRITORIAL HIGHWAY DEPARTMENT
 TERRITORY OF HAWAII
GRADE SEPARATION
 Sta. 55+48.46 to Sta. 57+02.52
 WAIANA CUT-OFF F47(4)
 APRIL, 1952
 SHEET NO. 3 OF 7 SHEETS
5479.30



SECTION "B-B". SHOWING ABUTMENT WALL #2, RETAINING WALLS #3 & #4 REINFORCEMENT



SECTION "A-A". SHOWING ABUTMENT WALL #1, RETAINING WALLS #1 & #2 REINFORCEMENT

REFERENCE NOTES: For location of sections "A-A" & "B-B" see sht. #1.
For details of sections "E-E", "F-F" see sht. #3.
For details of sections "L-L", "C-C", "D-D" see sht. #5.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
GRADE SEPARATION
Sta. 55+48.46 to Sta. 57+02.52
WAIAWA CUT-OFF _____ F-27(4)
April 1952

SHEET No. 4 OF 7 SHEETS

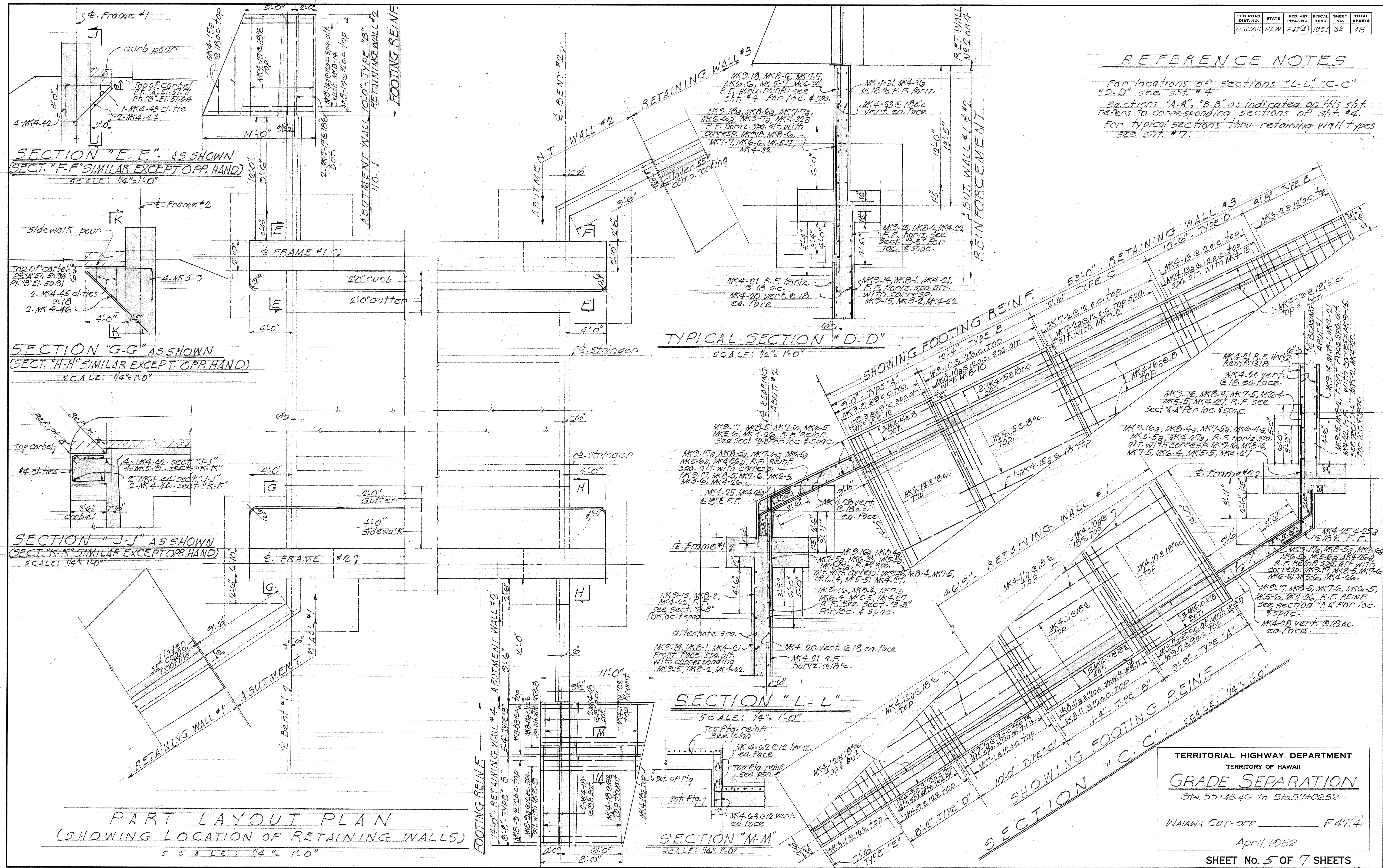
5479.31

DATE: 4-1-52
DESIGNED BY: H. K. BARTLETT
DRAWN BY: L. W. HARRIS
CHECKED BY: J. W. HARRIS
ORIGINAL PLAN
NOTE BOOK
No.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	F47(4)	1952	32	48

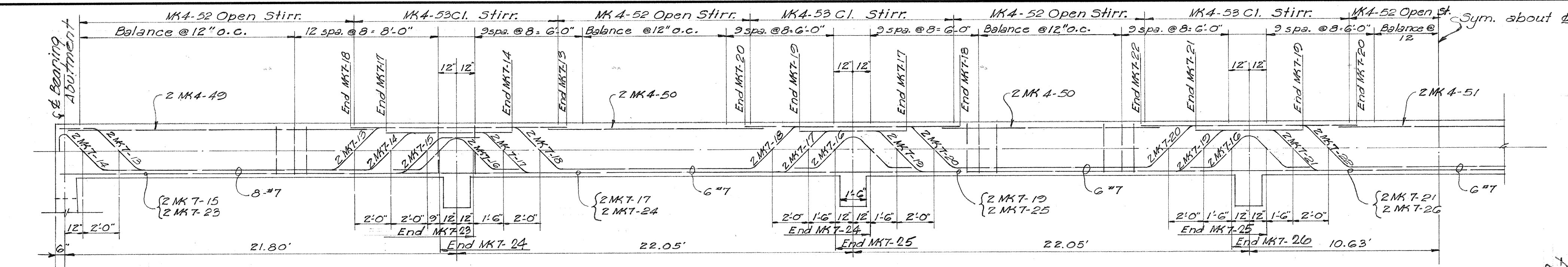
REFERENCE NOTES

For locations of sections "L-L", "C-C"
"D-D" see sht. #4
sections "A-A", "B-B" as indicated on this sht.
refers to corresponding sections of sht. #4.
For typical sections thru retaining wall types
see sht. #7.



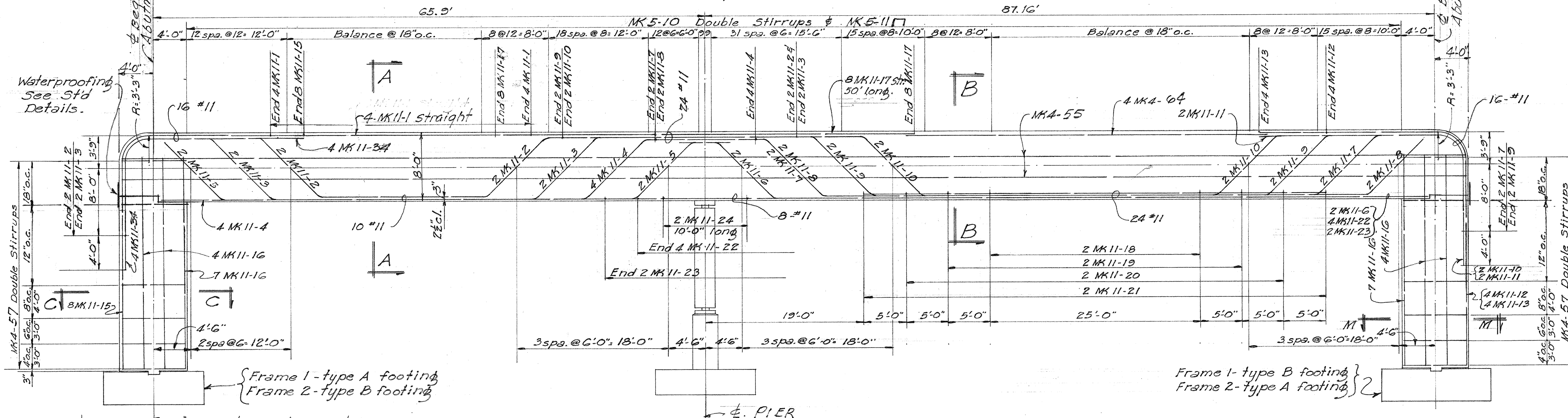
PART LAYOUT PLAN
 (SHOWING LOCATION OF RETAINING WALLS)
 SCALE: 1/4" = 1'-0"

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
GRADE SEPARATION
Sta. 55+48.46 to Sta. 57+02.52
WAIANA CUT-OFF _____ F 47(4)
April, 1952
SHEET No. 5 OF 7 SHEETS



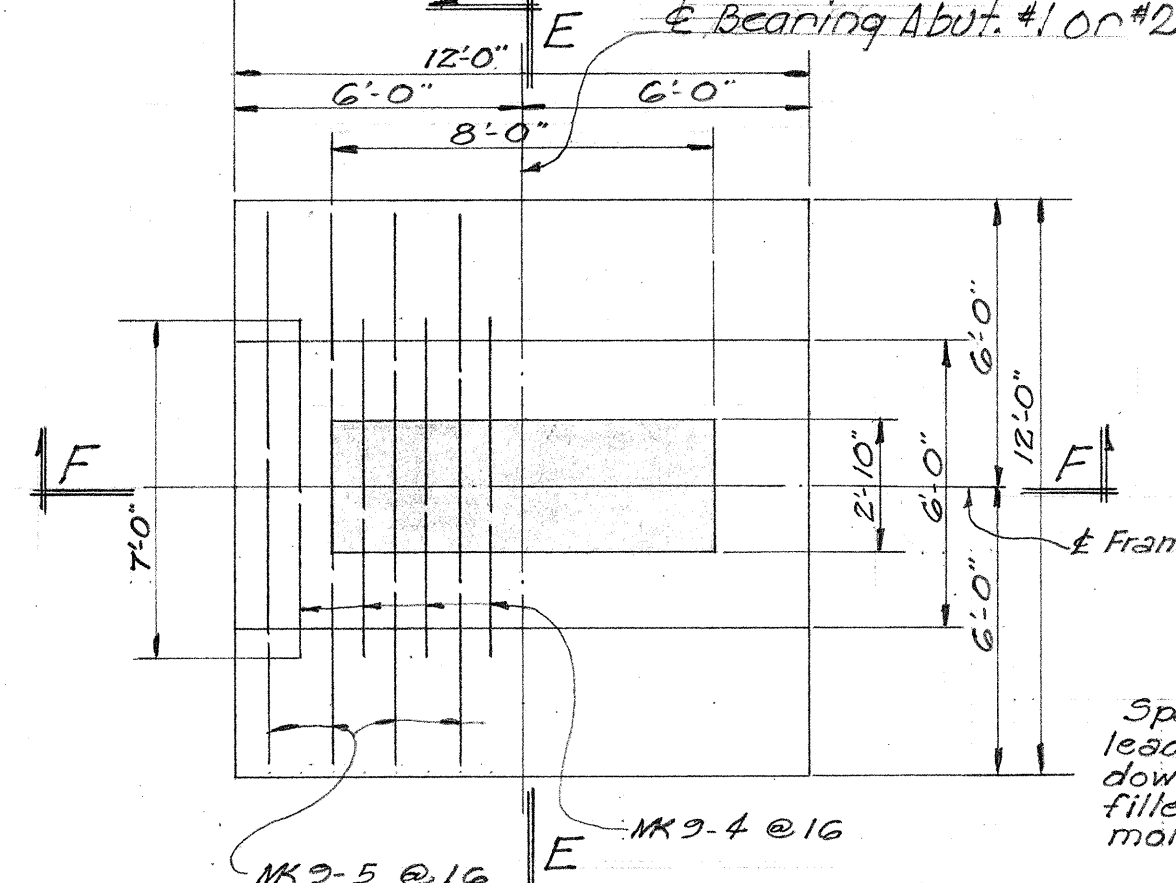
TYPICAL STRINGER REINFORCEMENT

Scale: 1/4" = 1'-0"



FRAME 1 REINFORCEMENT - AS SHOWN
FRAME 2 SIMILAR EXCEPT OPPOSITE HAND

Scale: 1/8" = 1'-0"



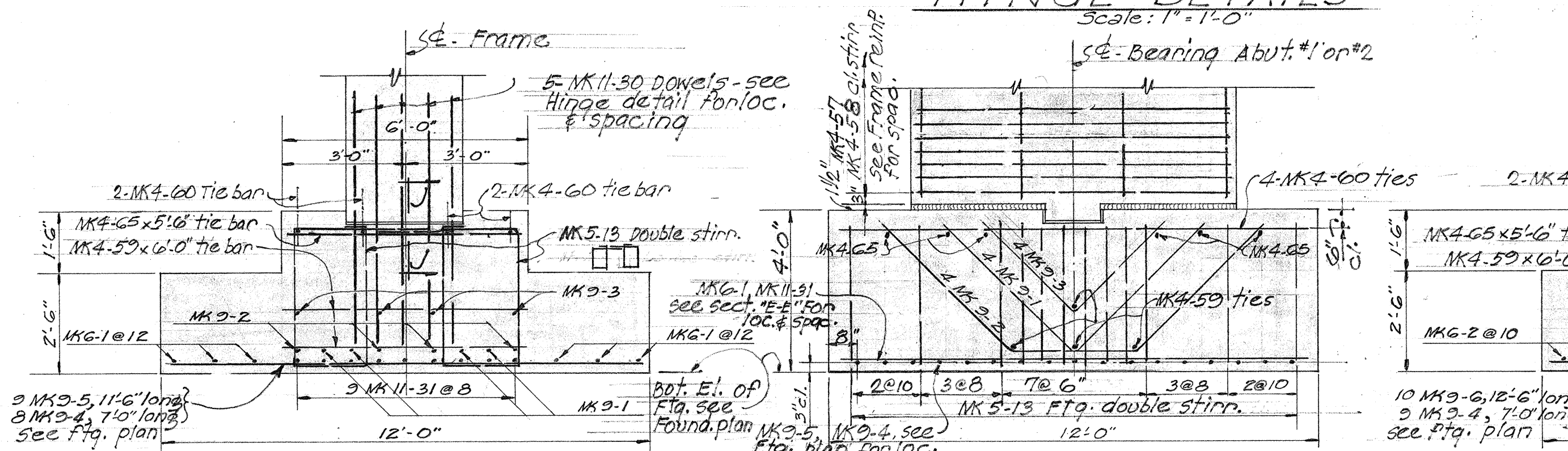
PLAN~FOOTING TYPE "A"

Scale: 1/4" = 1'-0"

SECTION "J-J"

HINGE DETAILS

Scale: 1" = 1'-0"



SECTION "E-E"

DETAILS ~ FOOTING TYPE "A"

Scale: 3/8" = 1'-0"

SECTION "F-F"

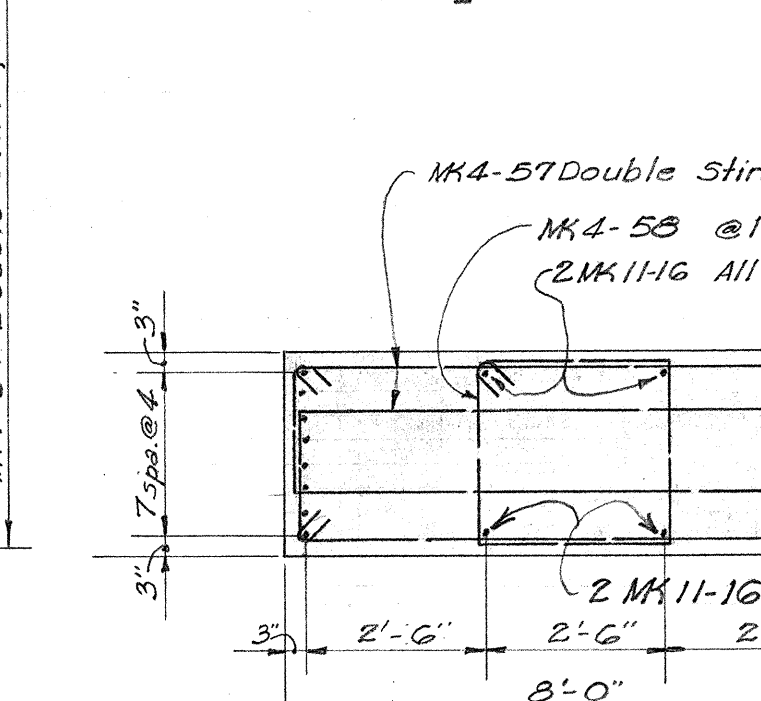
SECTION "G-G"

DETAILS ~ FOOTING TYPE "B"

Scale: 3/8" = 1'-0"

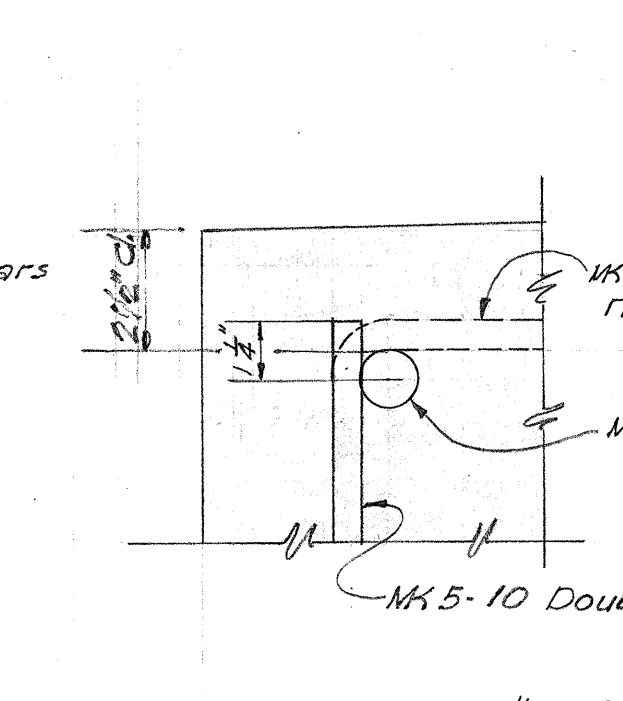
SECTION "A-A"

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



SECTION "B-B"

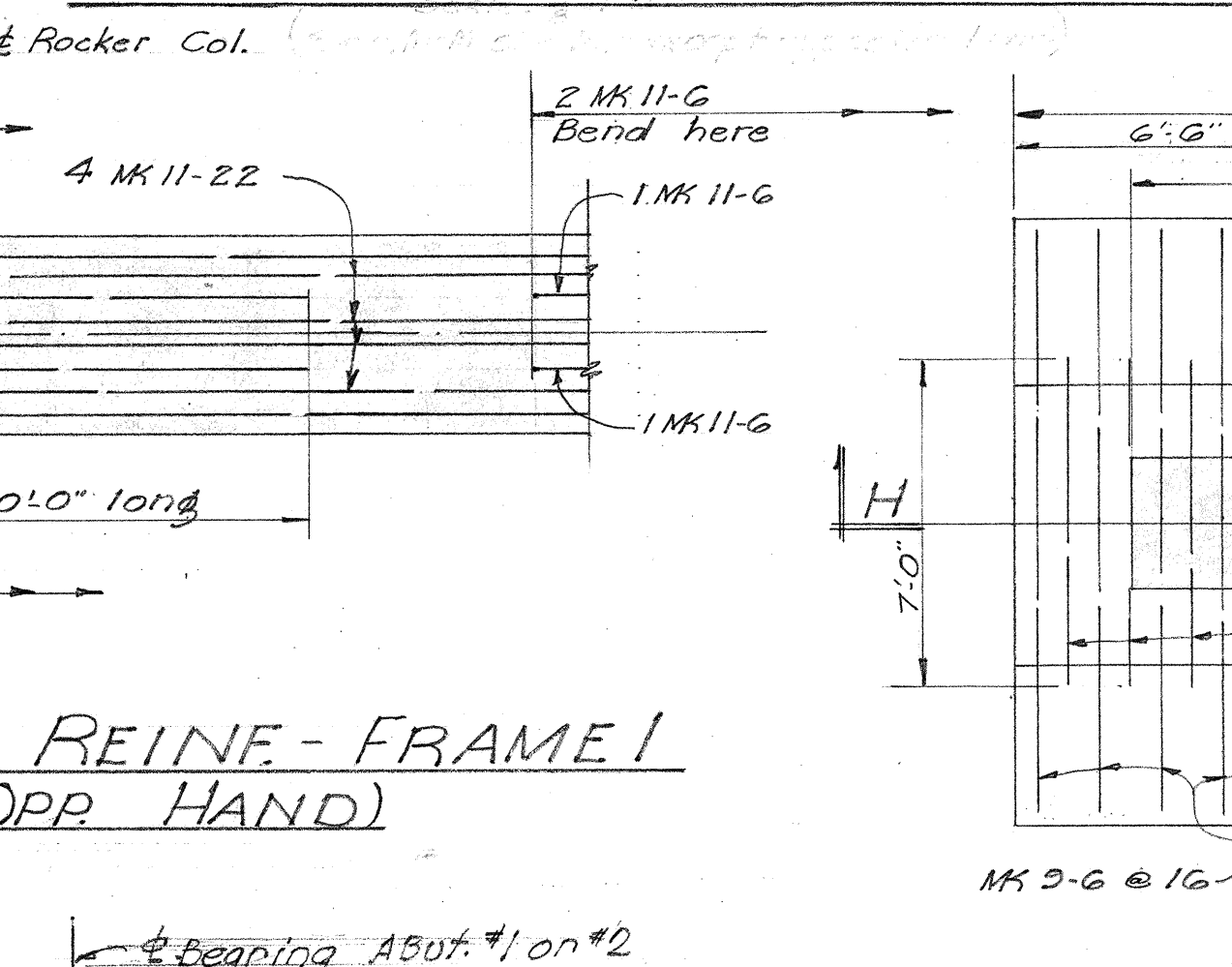
Scale: 1/2" = 1'-0"



SECTION "C-C" - SCALE: 3/8" = 1'-0"
(SECT. "M-M" SIMILAR EXCEPT OPP. HAND)

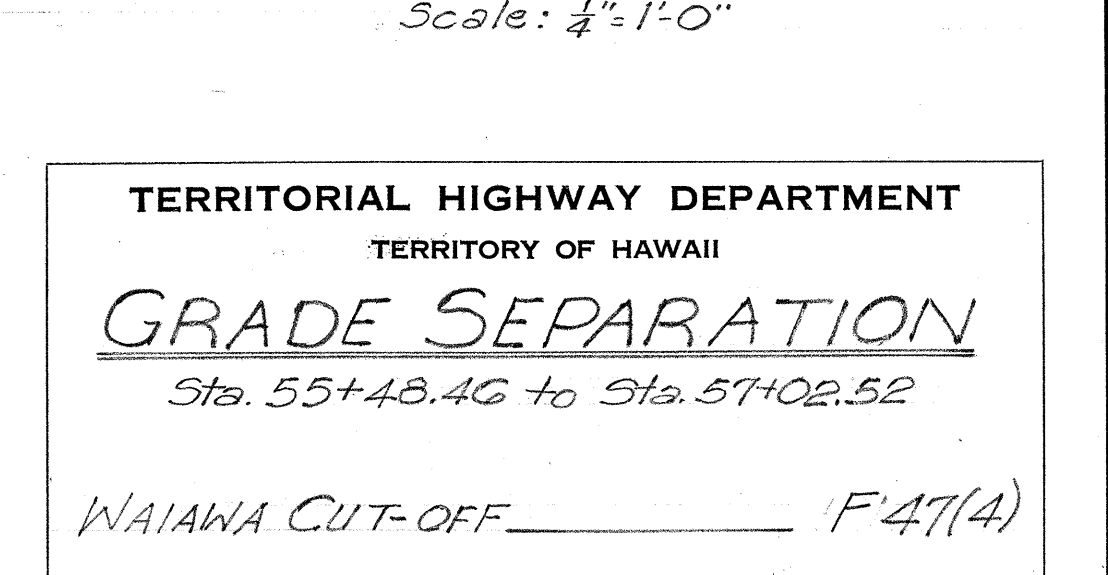
DETAIL "D"

Scale: 3" = 1'-0"



PLAN~FOOTING TYPE "B"

Scale: 1/4" = 1'-0"



TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

GRADE SEPARATION

Sta. 55+48.46 to Sta. 57+02.52

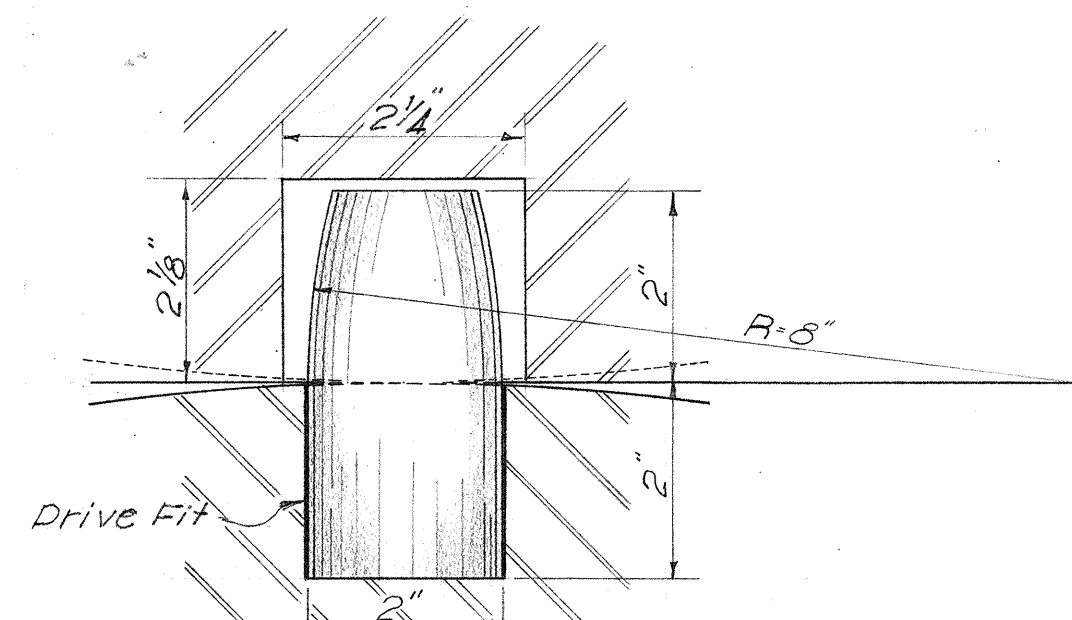
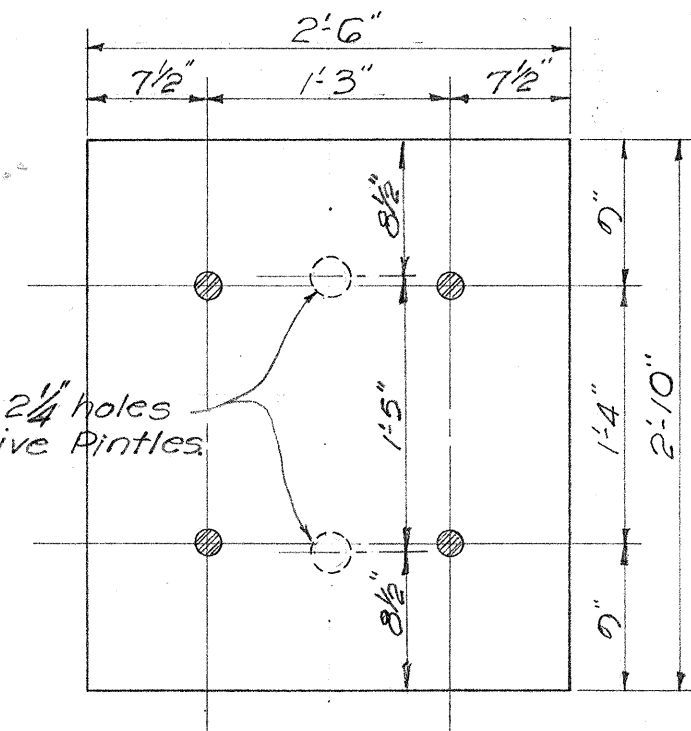
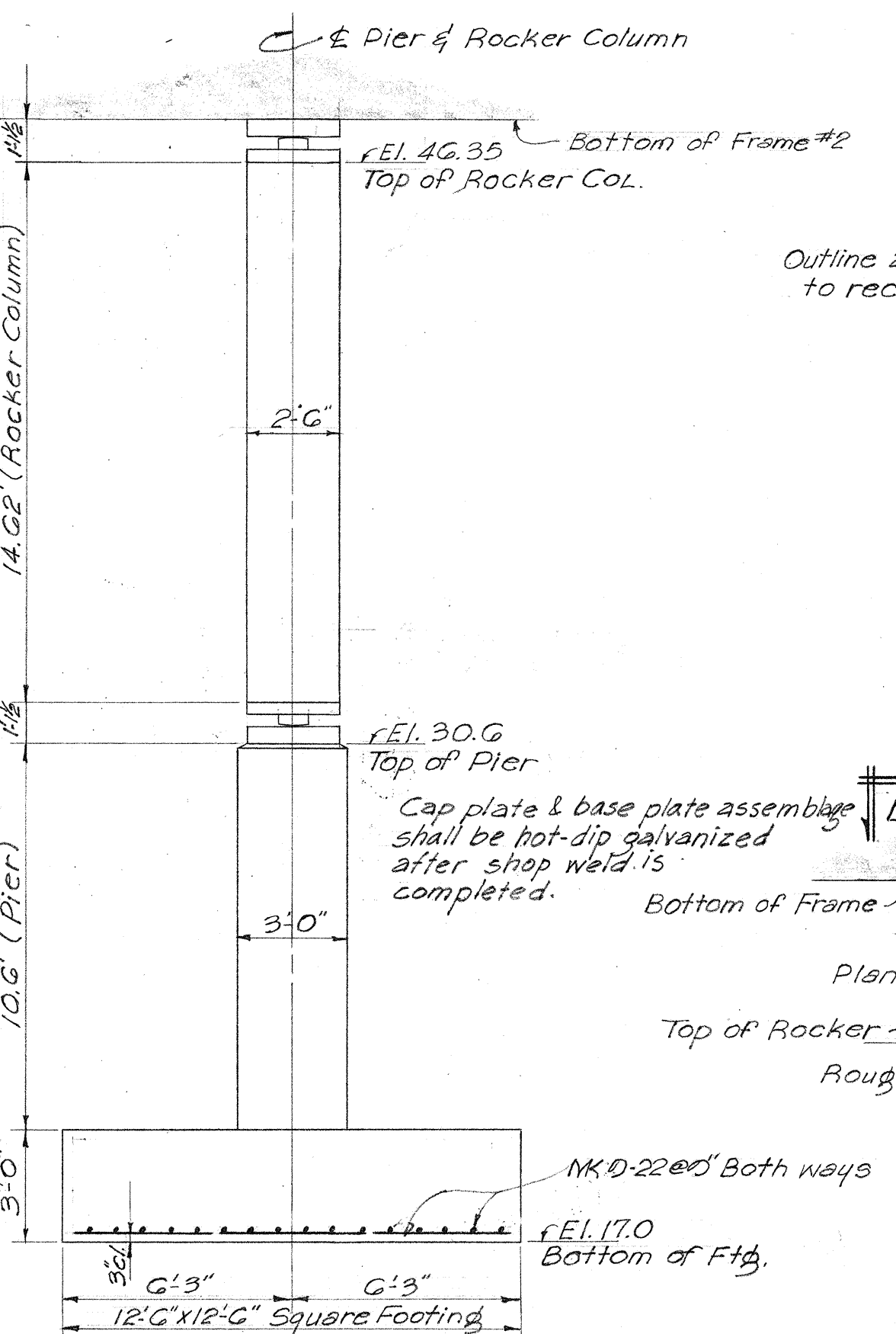
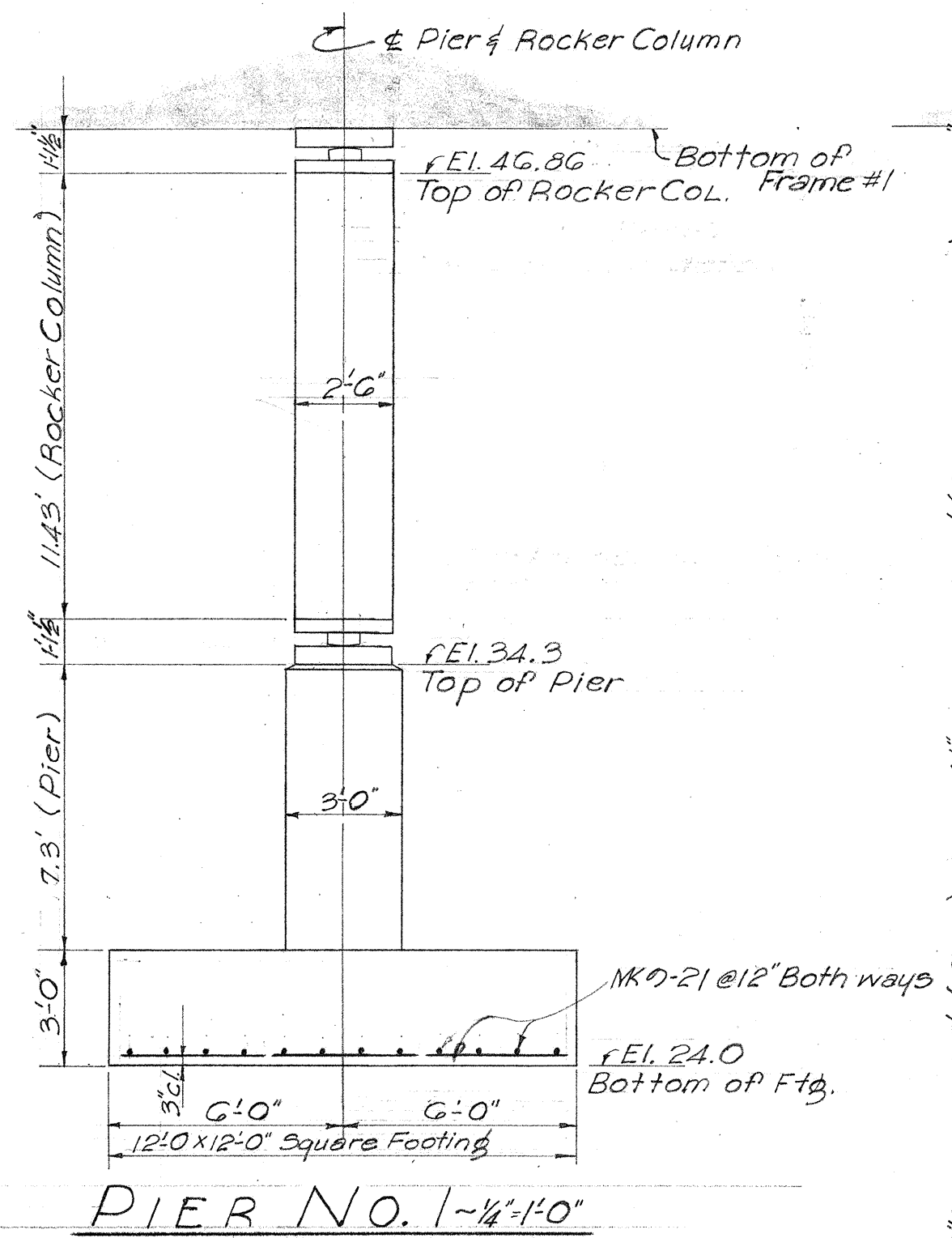
WAIAWA CUT-OFF F47(4)

April, 1952

SHEET NO. 6 OF 7 SHEETS

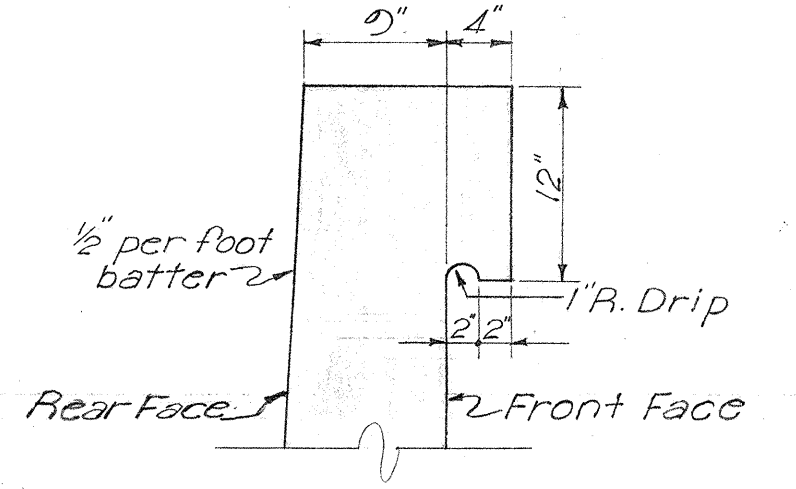
5479.33

SURVEY PLOTTED BY: **W. B. BATES**
DESIGNED BY: **W. B. BATES**
DRAWN BY: **W. B. BATES**
QUANTITIES CHECKED BY: **W. B. BATES**
CHECKED BY: **W. B. BATES**
ORIGINAL PLAN NO. **100**
NOTE BOOK NO. **100**

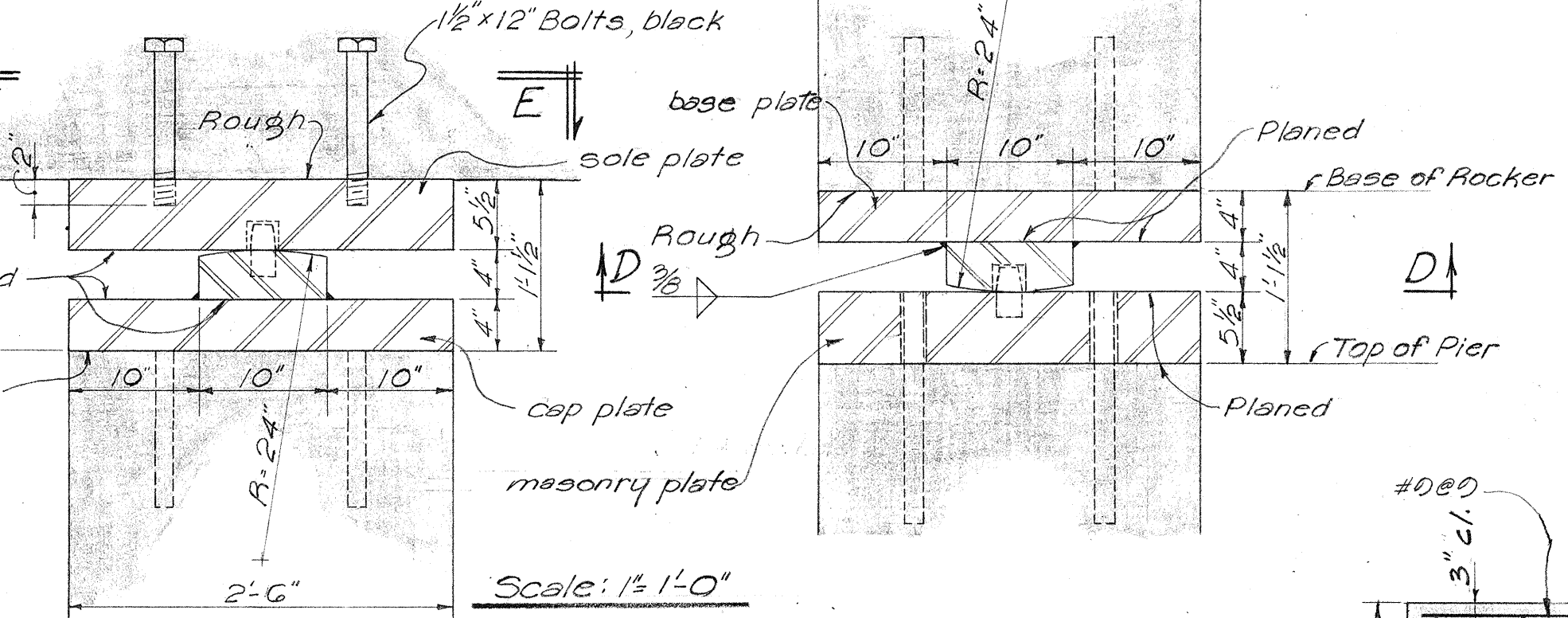


SECTION E-E
(SOLE PLATE)

PINTLE DETAIL



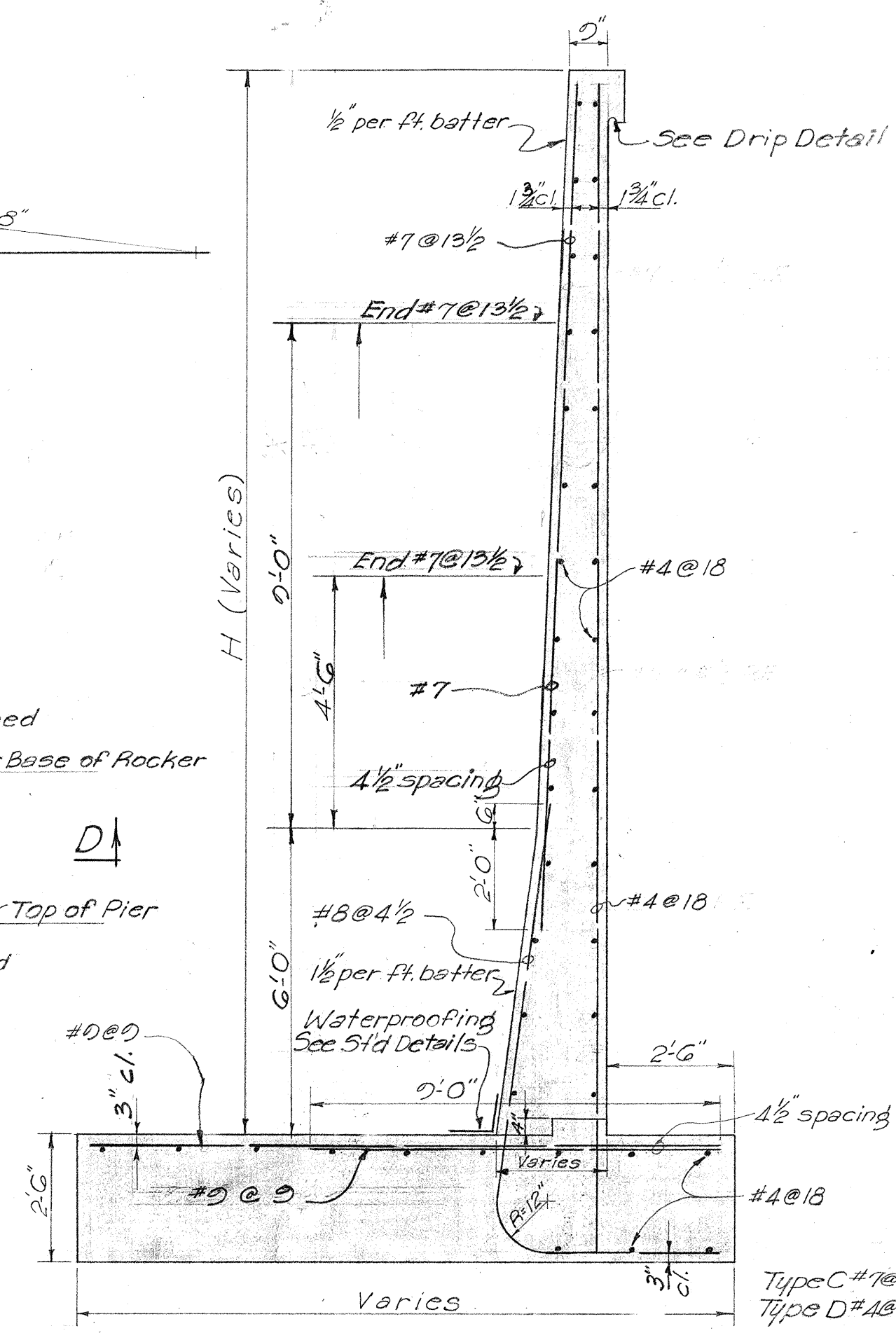
DRIP DETAIL



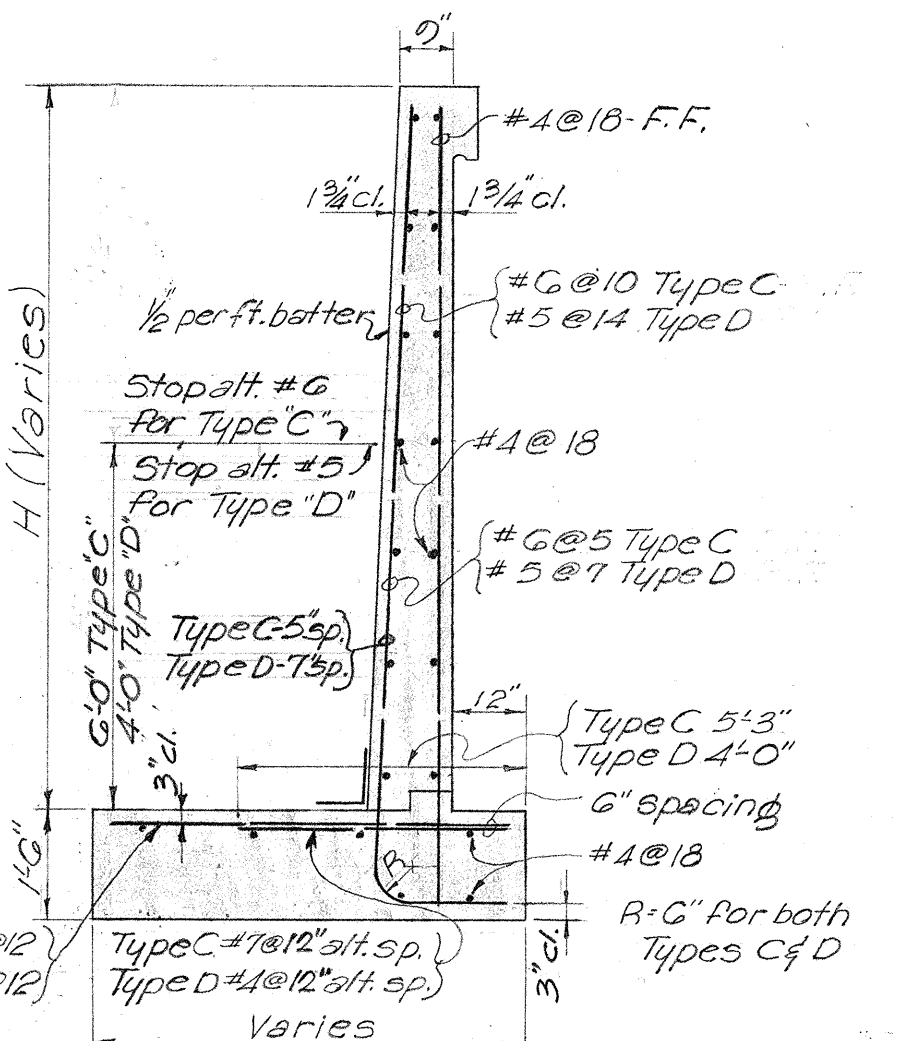
AT TOP OF ROCKER

AT BASE OF ROCKER

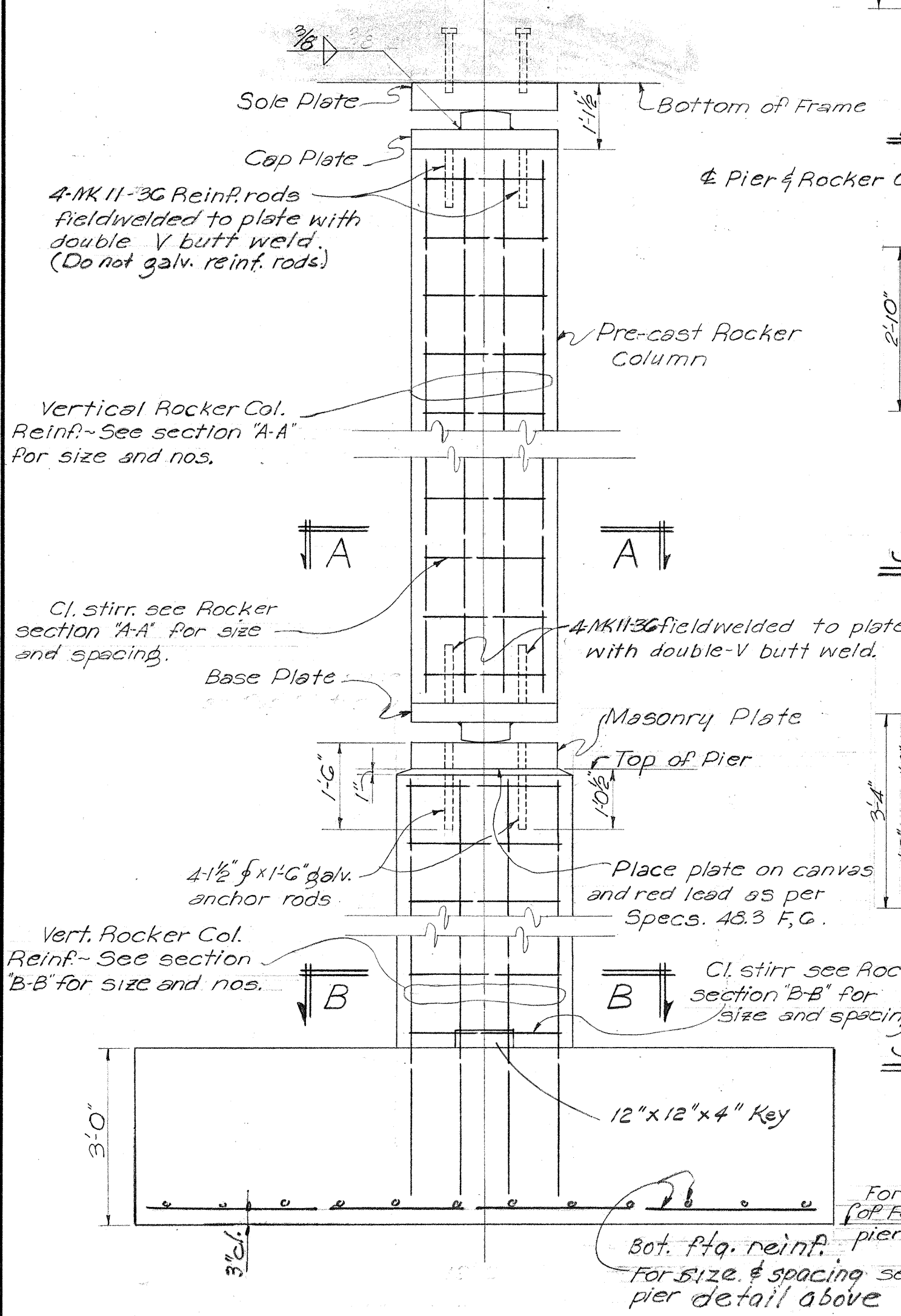
BEARING ASSEMBLY



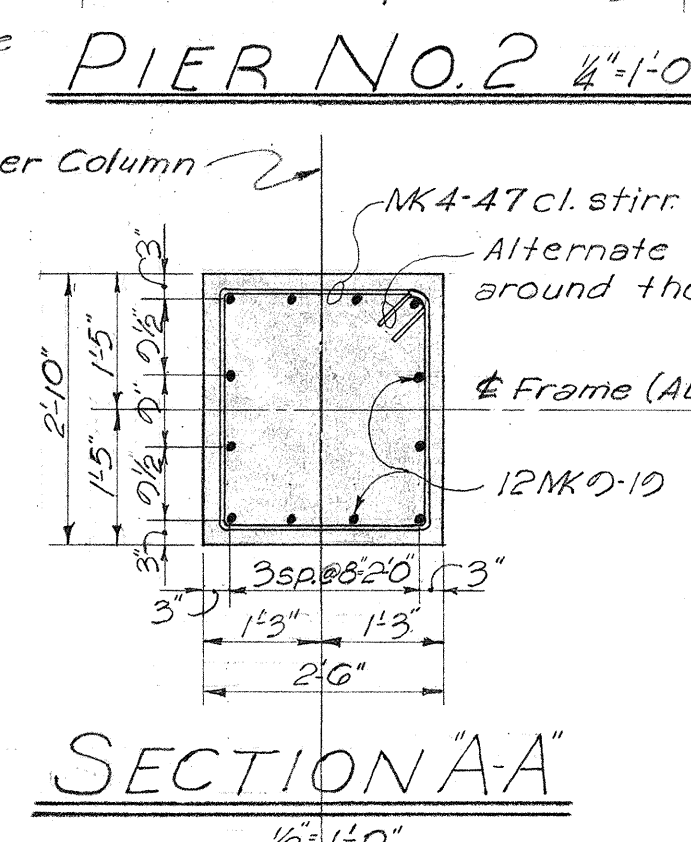
RETAINING WALL TYPE A



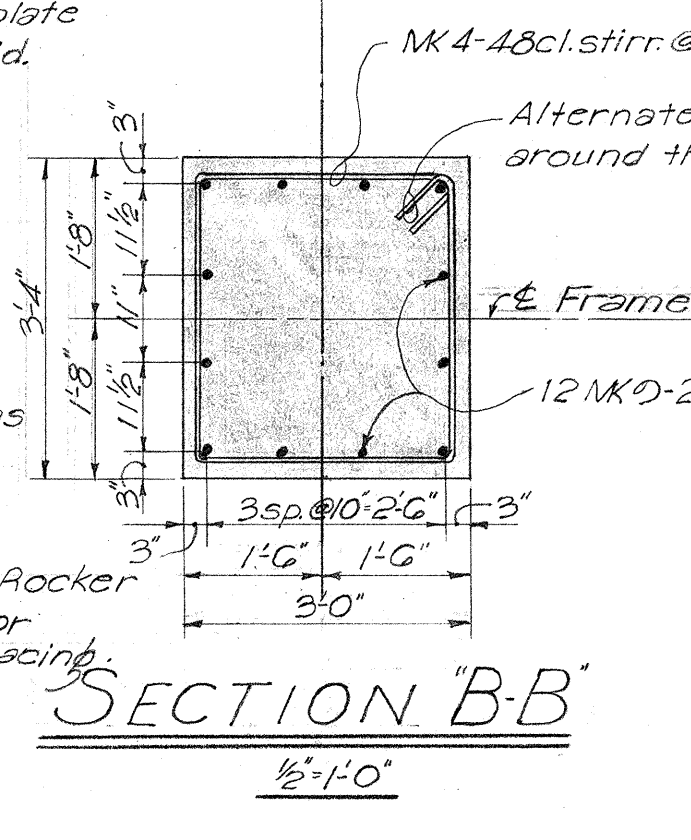
RETAINING WALL TYPE C AND D



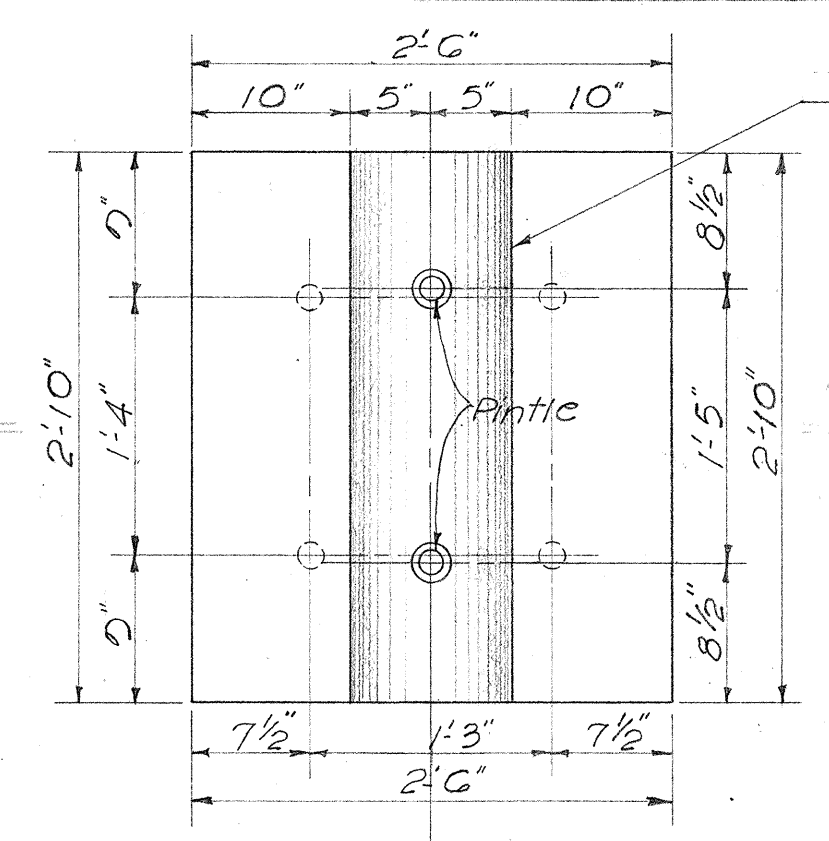
TYPICAL PIER DETAIL



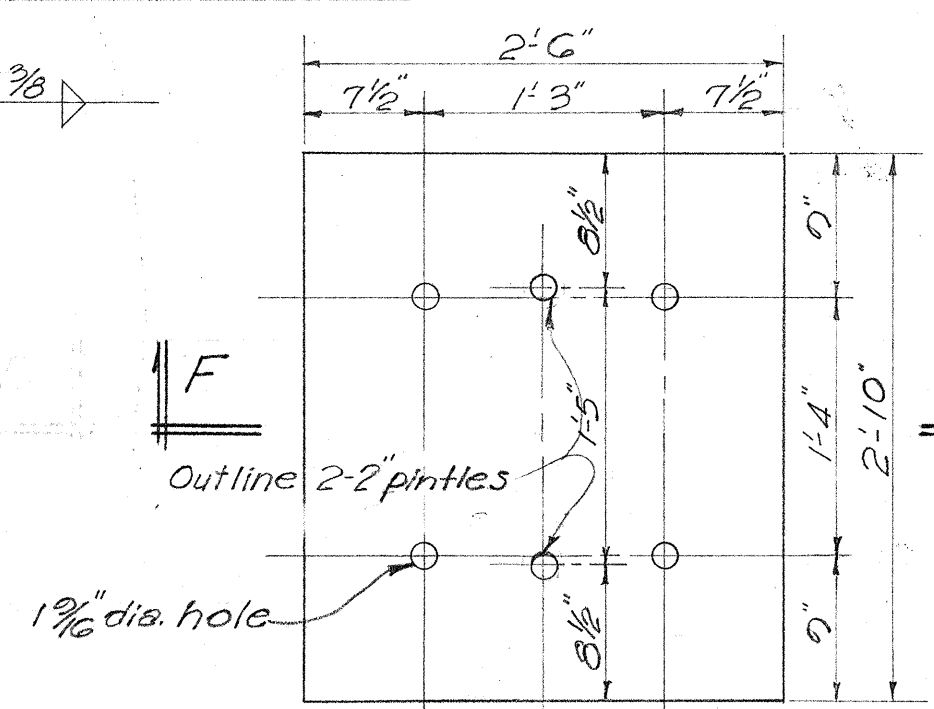
SECTION A-A



SECTION B-B

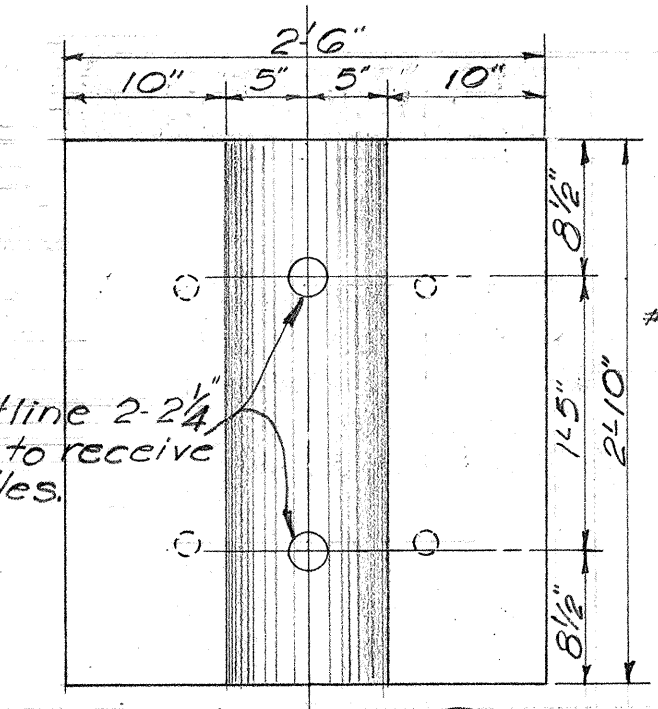


TOP PLAN OF CAP PLATE

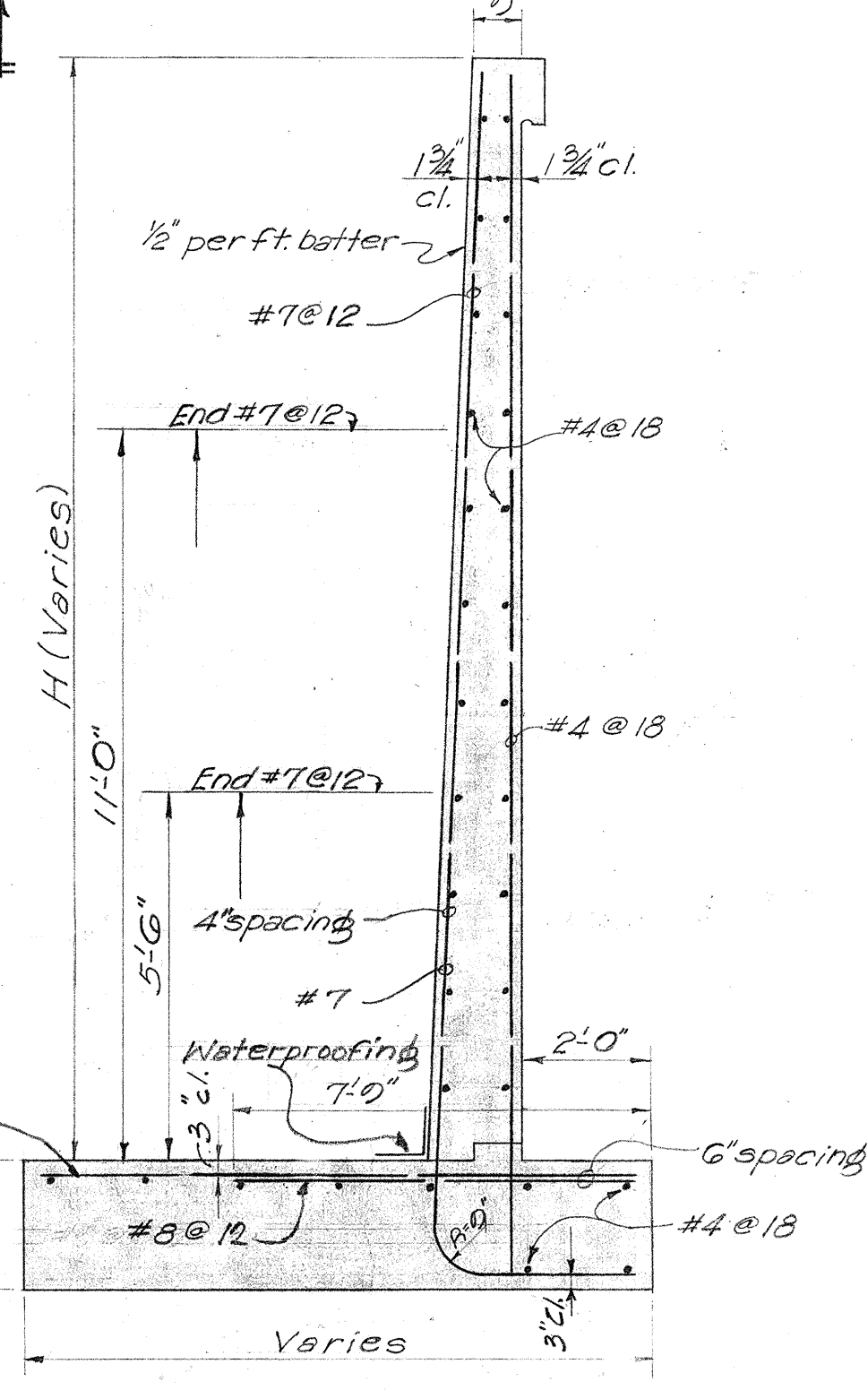


PLAN OF MASONRY PLATE

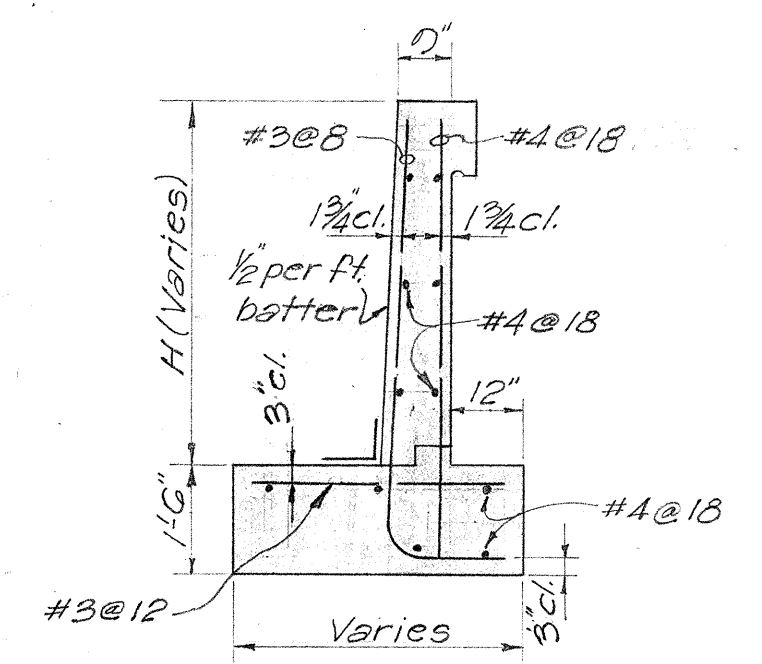
SECTION F-F



PLAN D-D - BASE PLATE



RETAINING WALL TYPE B



RETAINING WALL TYPE E

NOTE:
All material for Bearing Assembly to be hot-dip galvanized except as otherwise noted.
Hot-dip galvanizing shall conform to the current specifications of A.A.S.H.O. Designation M111-40.
All welding shall conform to the current specification for Welded Highway and Railway Bridges of the American Welding Society.

TYPICAL DETAILS OF ROCKER BEARINGS

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
GRADE SEPARATION
Sta. 55+48.46 to Sta. 57+02.52
WAIANA CUT-OFF F47(4)
April, 1952
SHEET NO. 7 OF 7 SHEETS