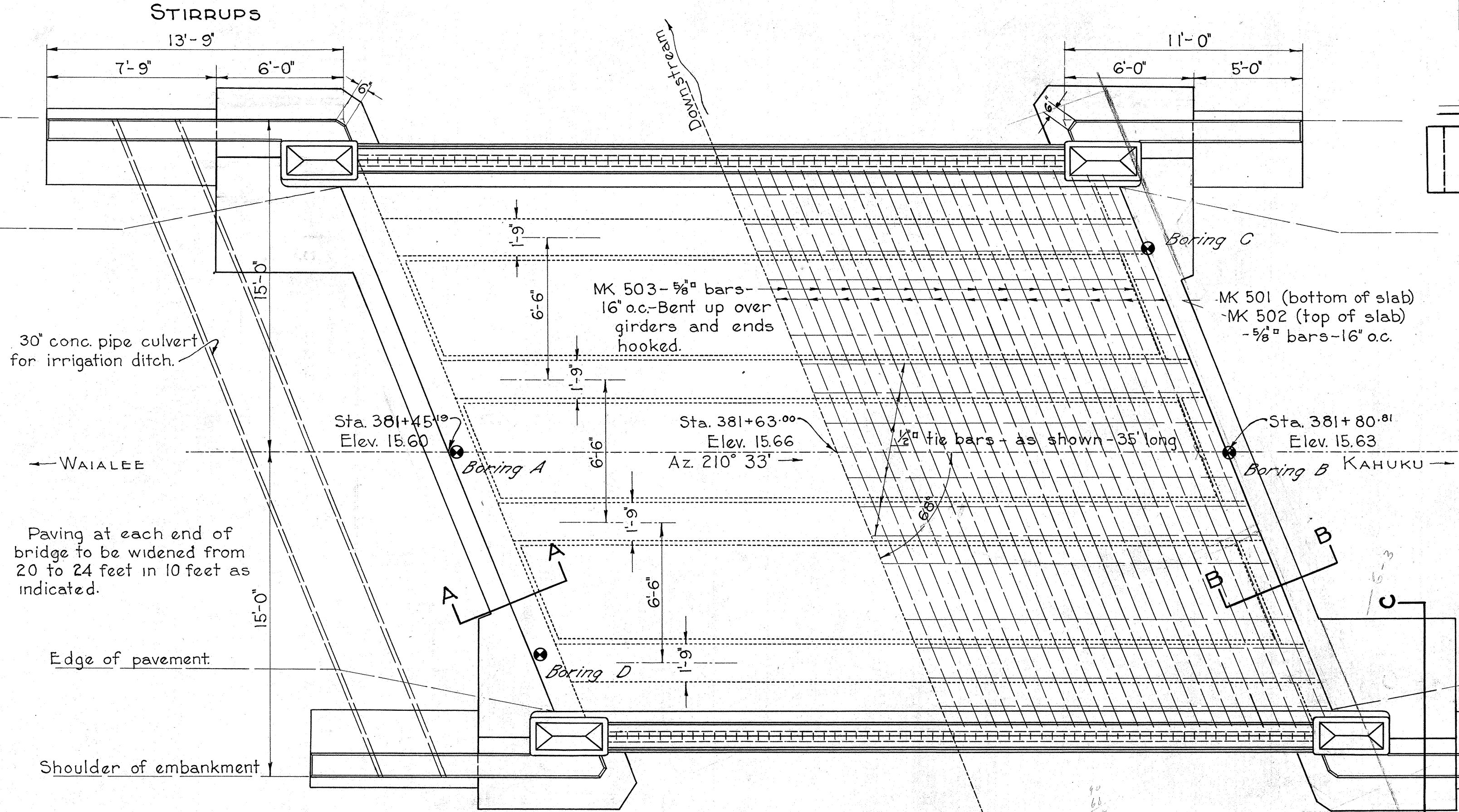
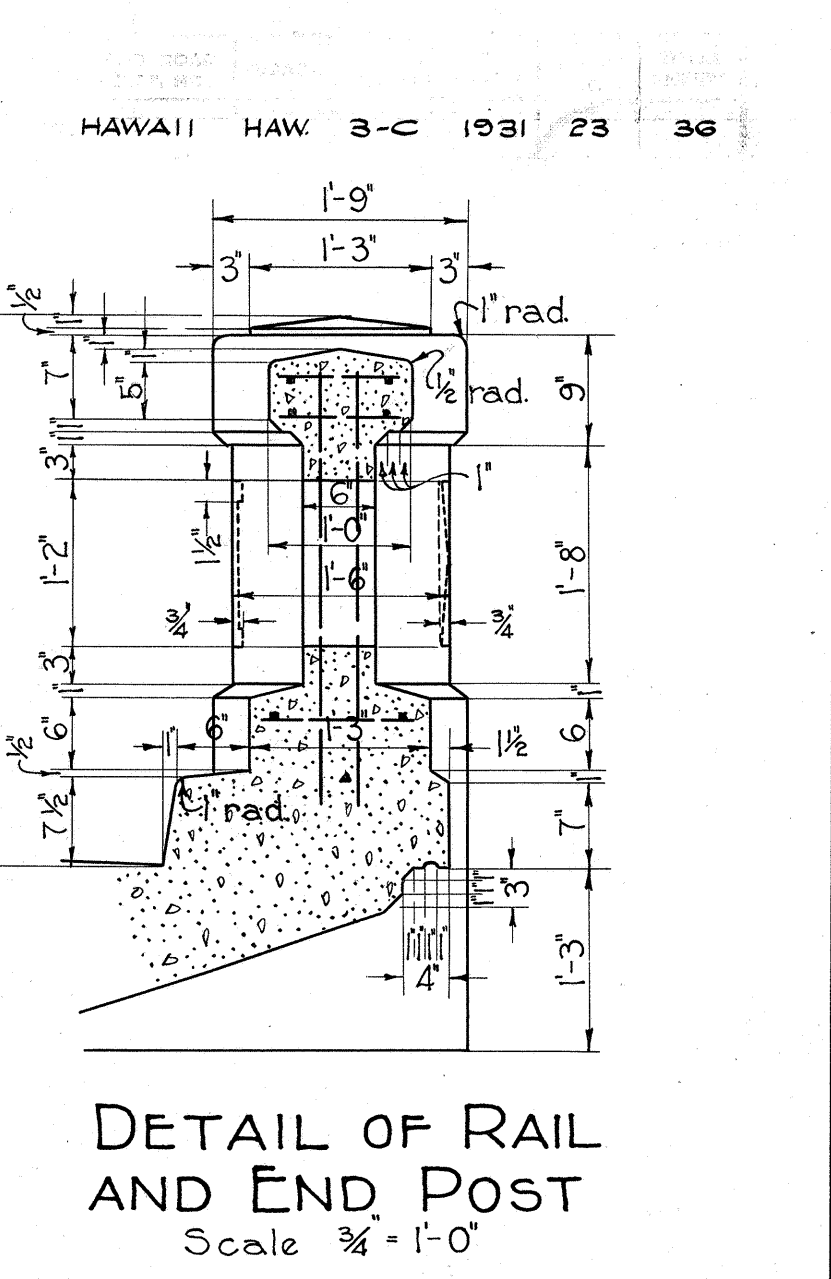
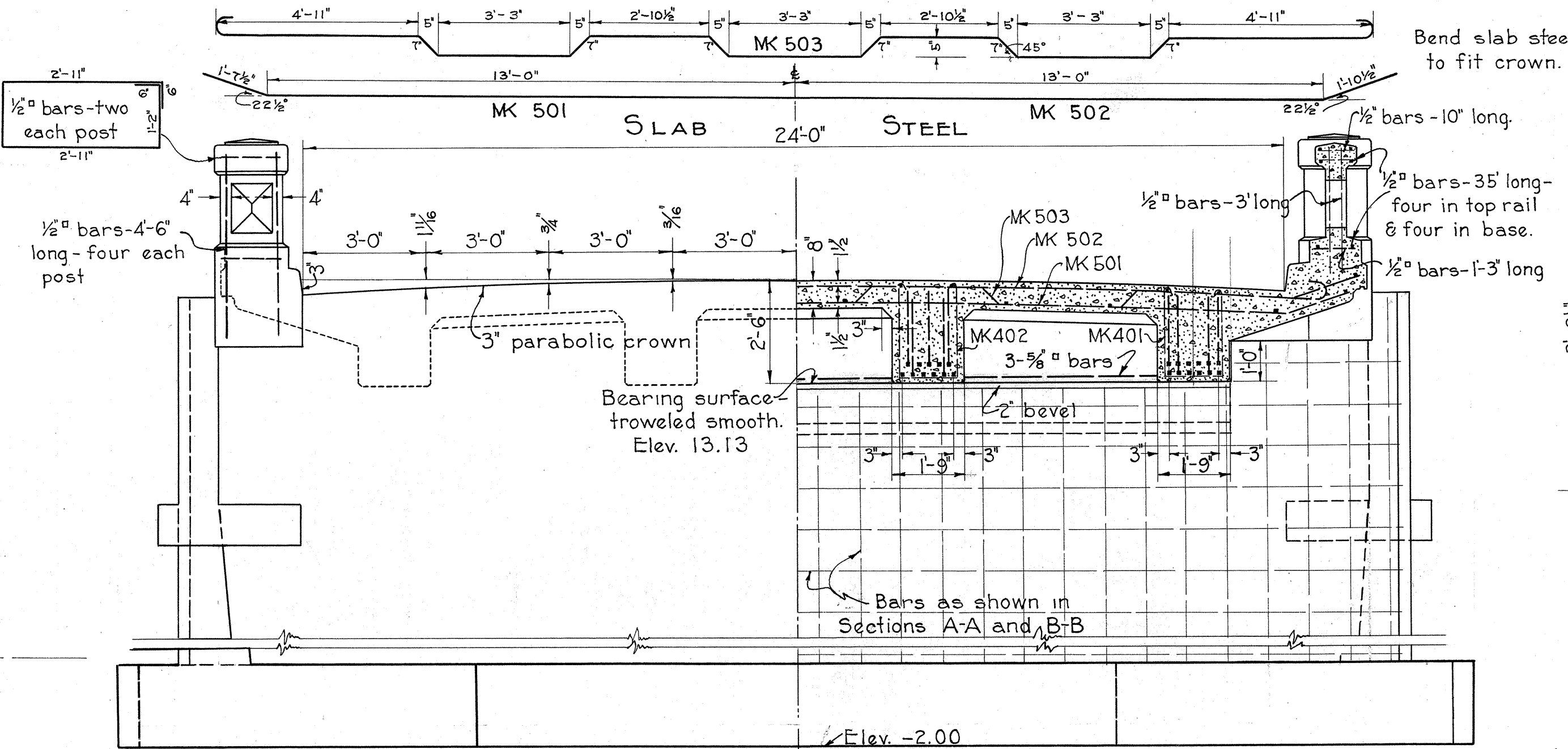
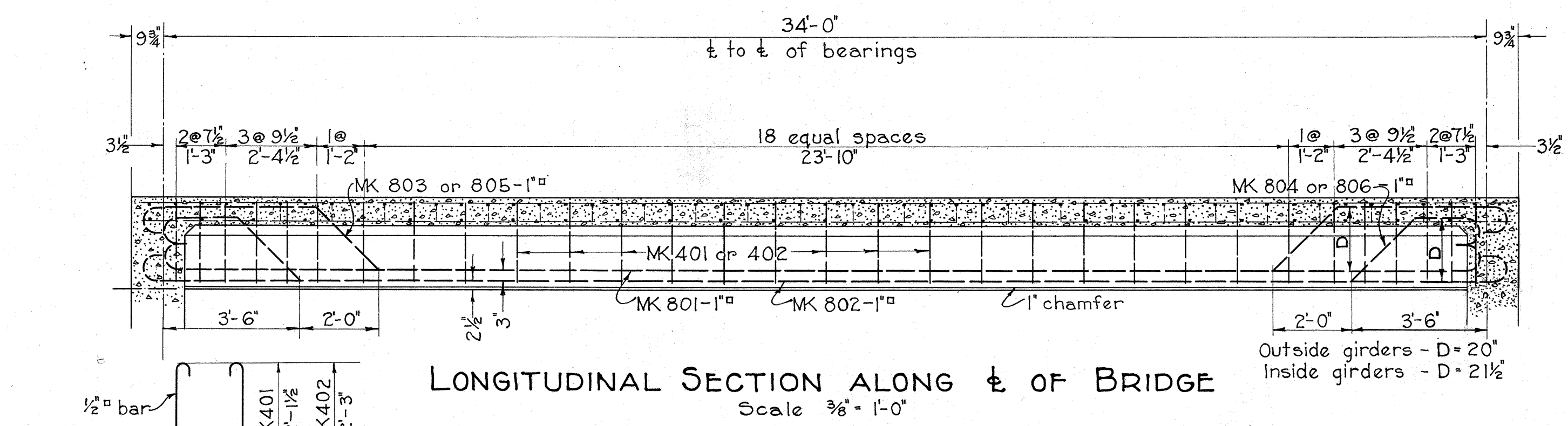
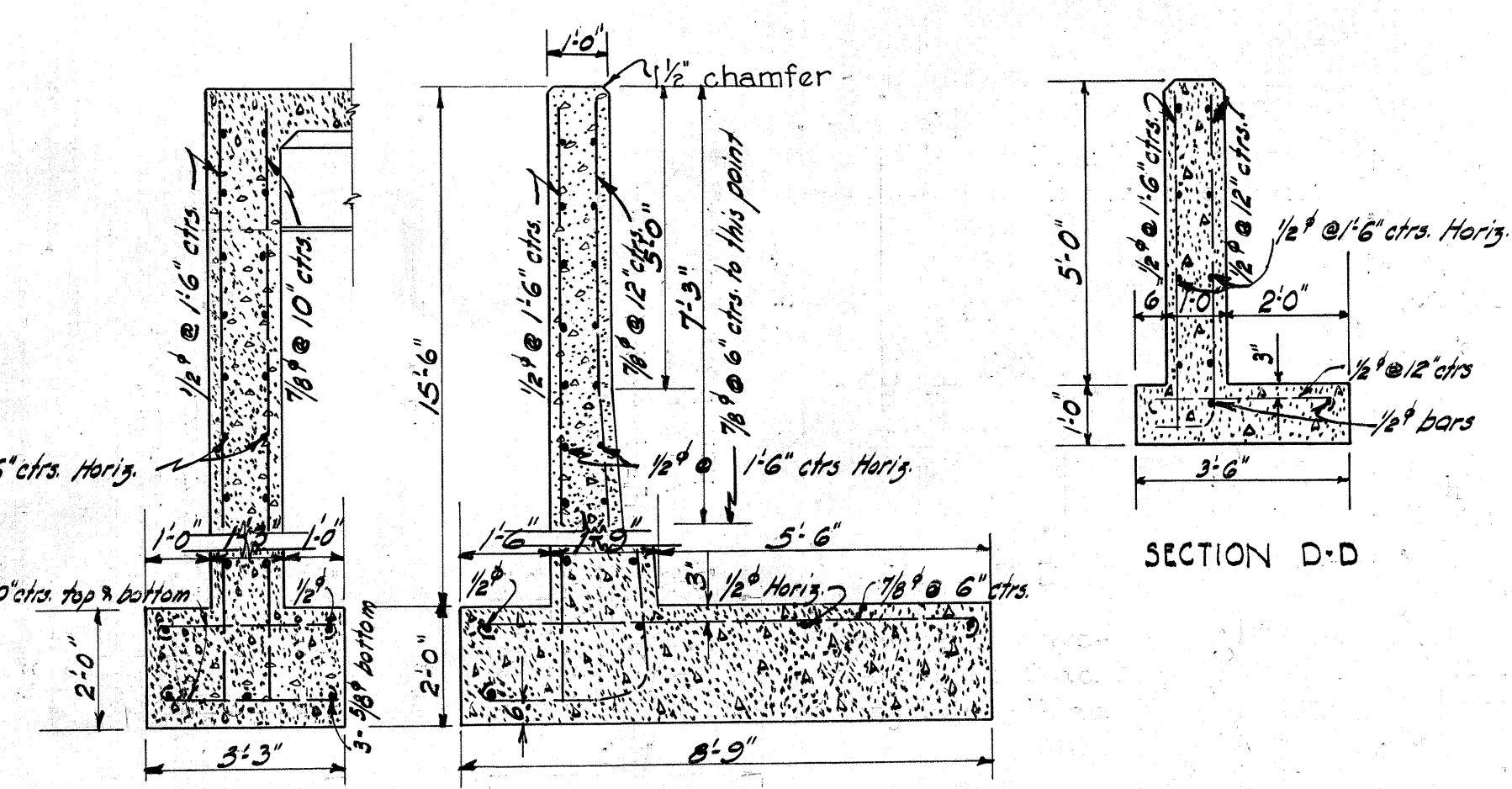
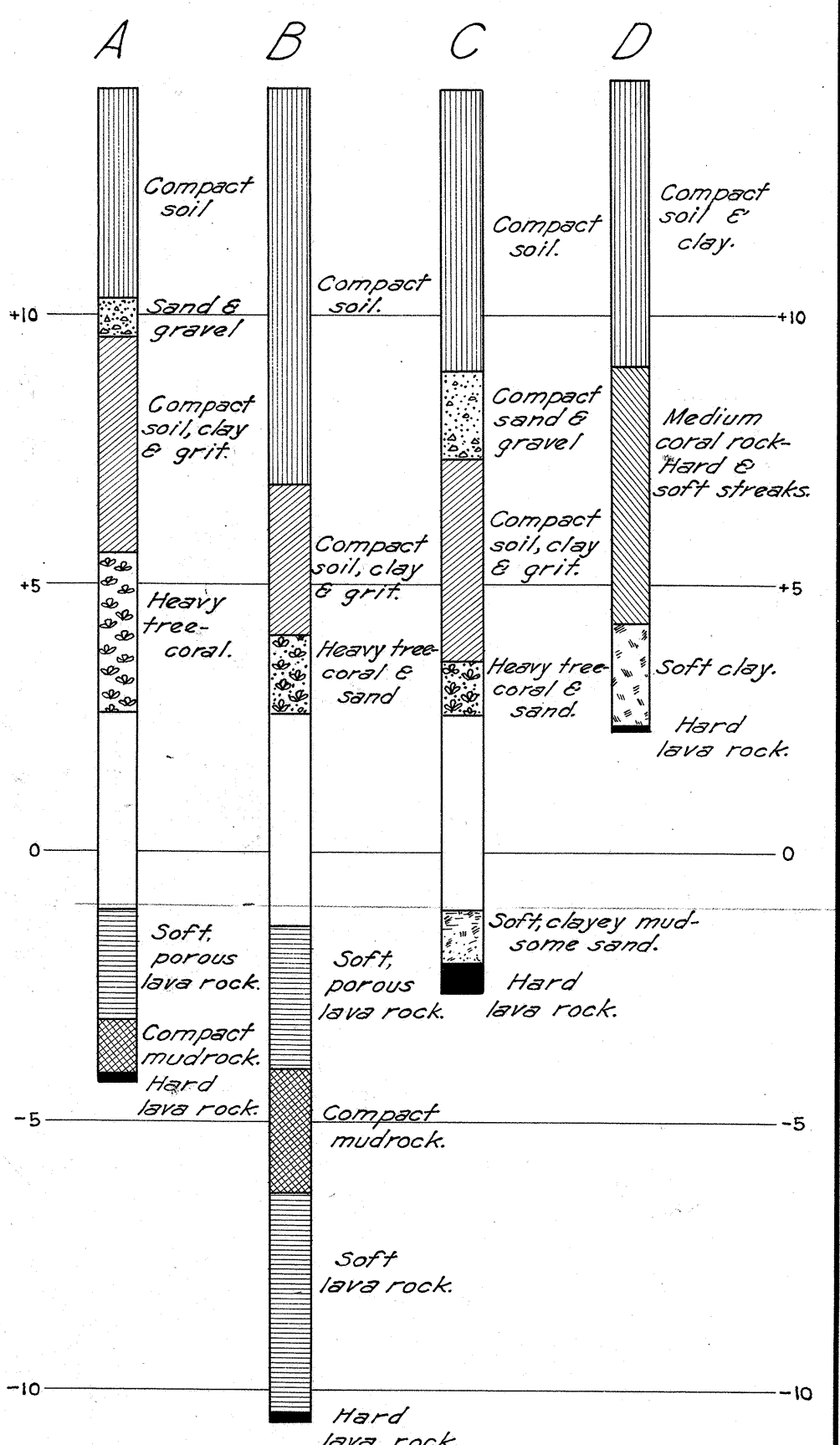




END ELEVATION AND TRANSVERSE SECTION
Scale 3/8"=1'-0"

WASH BORING DATA

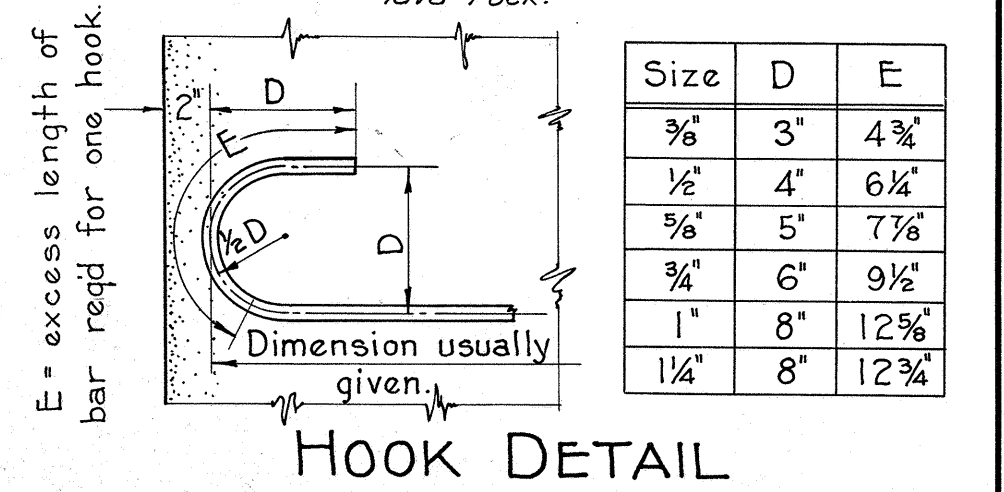


SECTIONS THRU ABUTMENTS AND WING WALLS
Scale 3/8"=1'-0"

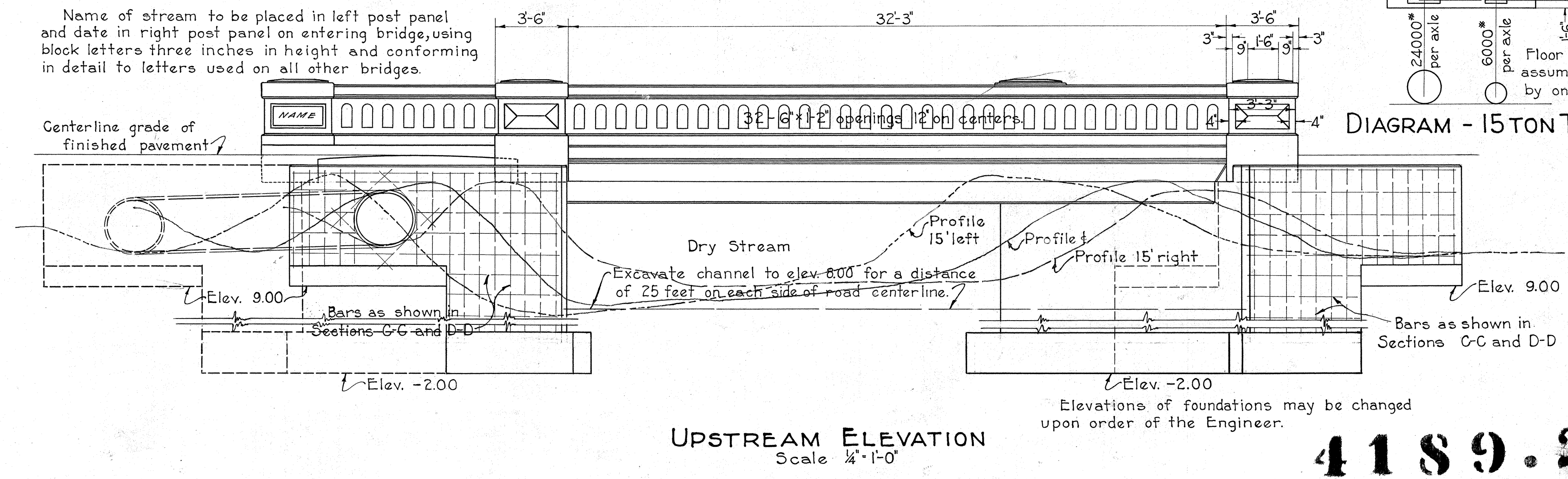
GENERAL NOTES

Dead Load: Concrete at 150⁰ per cubic foot.
Live Load: One 15 ton truck with 30% allowance for impact.
Concrete: All Class 'A' (1:2:4 mix) with all exposed corners chamfered 3/4" unless otherwise noted. Allowable compression 650⁰/in.².
Reinforcing Steel: Allowable tensile stress 16000⁰/in.². All steel to be square deformed bars - square twisted bars not to be considered deformed. All dimensions relating to reinforcement are to centers of bars. Where location of bars is not given they are to be placed 2 inches from adjacent concrete surface. Lengths of all bars unless given, are to be such as to reach a point 2 inches from the concrete face at their ends. Splices must be approved by the Engineer and shall have a lap of 40 diameters with splices staggered. Main longitudinal bars in girders cannot be spliced. No allowance has been made in quantities for extra weight of steel required for splices.

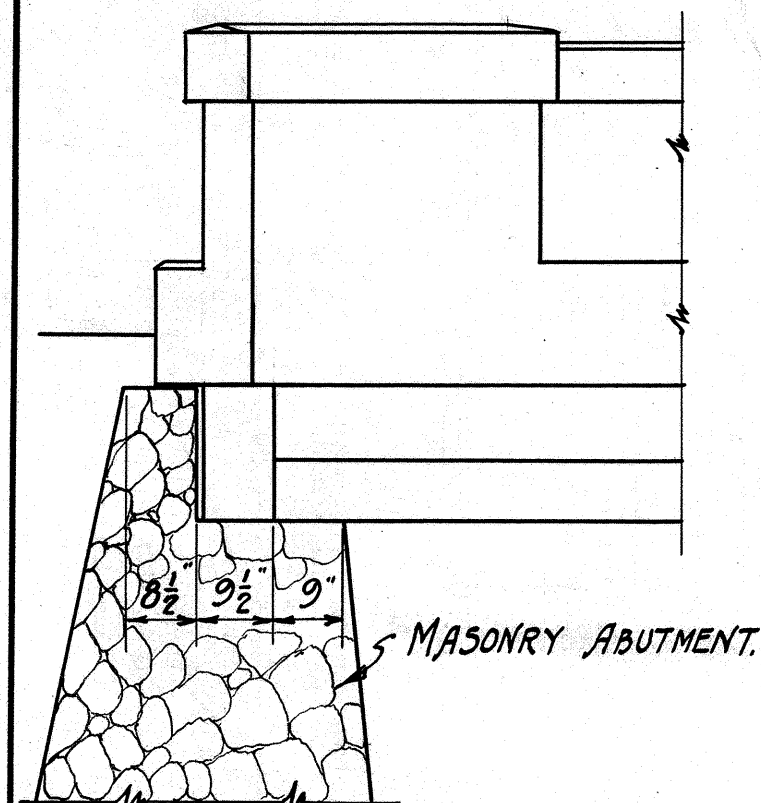
QUANTITIES				
	Class 'A' Concrete	Reinforcing Steel	Structure Excavation	Unclass. Exc. in channel.
Waialea Abutment.	44.88 cu.yd.	3941.0 lbs.	154 cu.yd.	
Kahuku Abutment.	43.16 cu.yd.	4030.0 lbs.	156 cu.yd.	
Superstructure	55.68 cu.yd.	11502 lbs.		
TOTALS	143.72 cu.yd.	19642 lbs.	310 cu.yd.	113 cu.yd.



TERRITORIAL HIGHWAY DEPARTMENT.
TERRITORY OF HAWAII.
BRIDGE No. 2-B
STA. 381+63
KAMEHAMEHA HIGHWAY
January 1931



4189.23



OUTSIDE ELEVATION

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

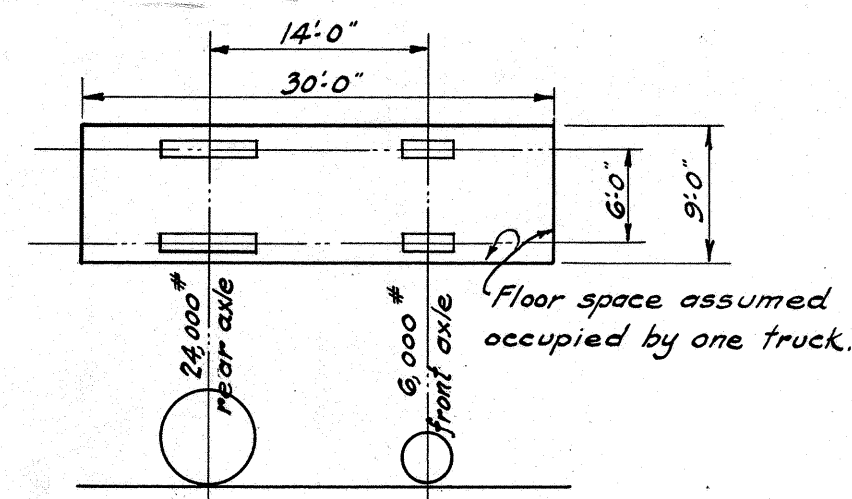
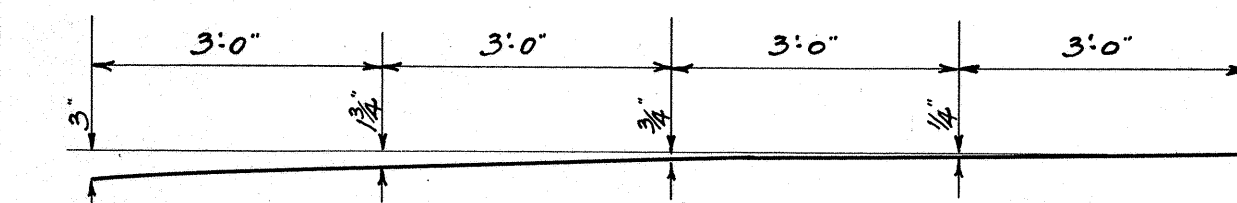


DIAGRAM OF TYPICAL 15 TON TRUCK

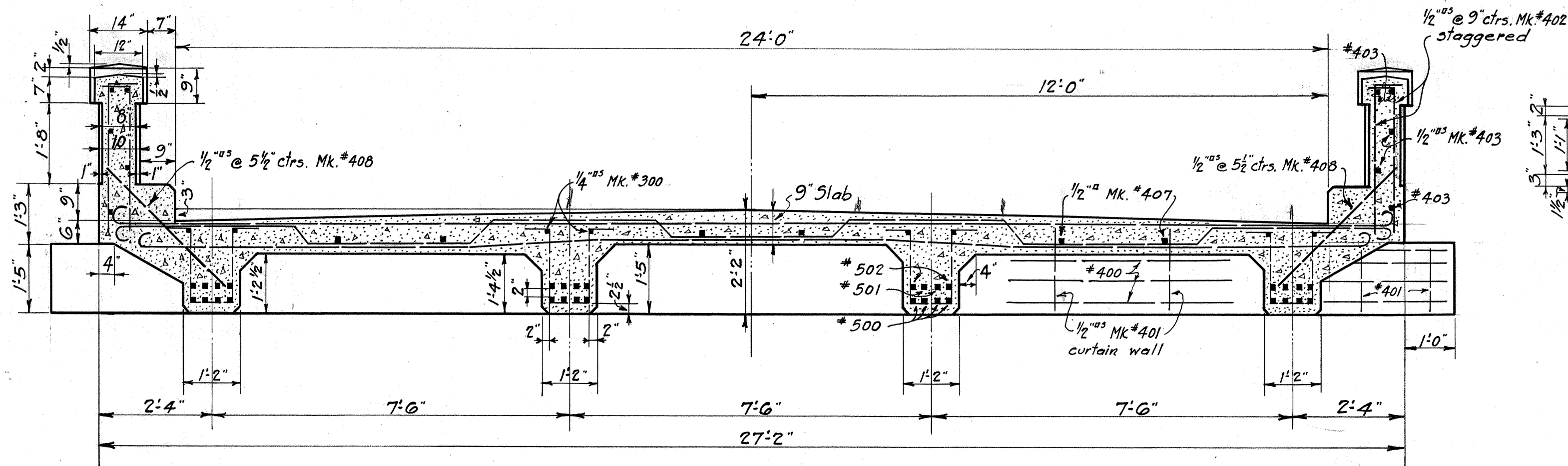
GENERAL NOTES.

Dead Load: Concrete at 150* per cu. ft.
Paving allowance 15* per sq. ft. of Roadway surface.
Live Load: 2-15 Ton Trucks or 120* per sq. ft. of Roadway surface.
Impact 30%
Concrete: Class A, 1-2-4; Allowable Compression 650* per sq. ft.
All exposed corners to be chamfered 3/4".
Reinforcing Steel: Allowable tensile stress 16,000* per sq. inch.
All steel to be square deformed bars square twisted bars not to be considered deformed.
All dimensions relating to reinforcement are to centers of bars.
Where splicing of reinforcement is necessary, bars to be lapped 40 diameters and splices are to be staggered.



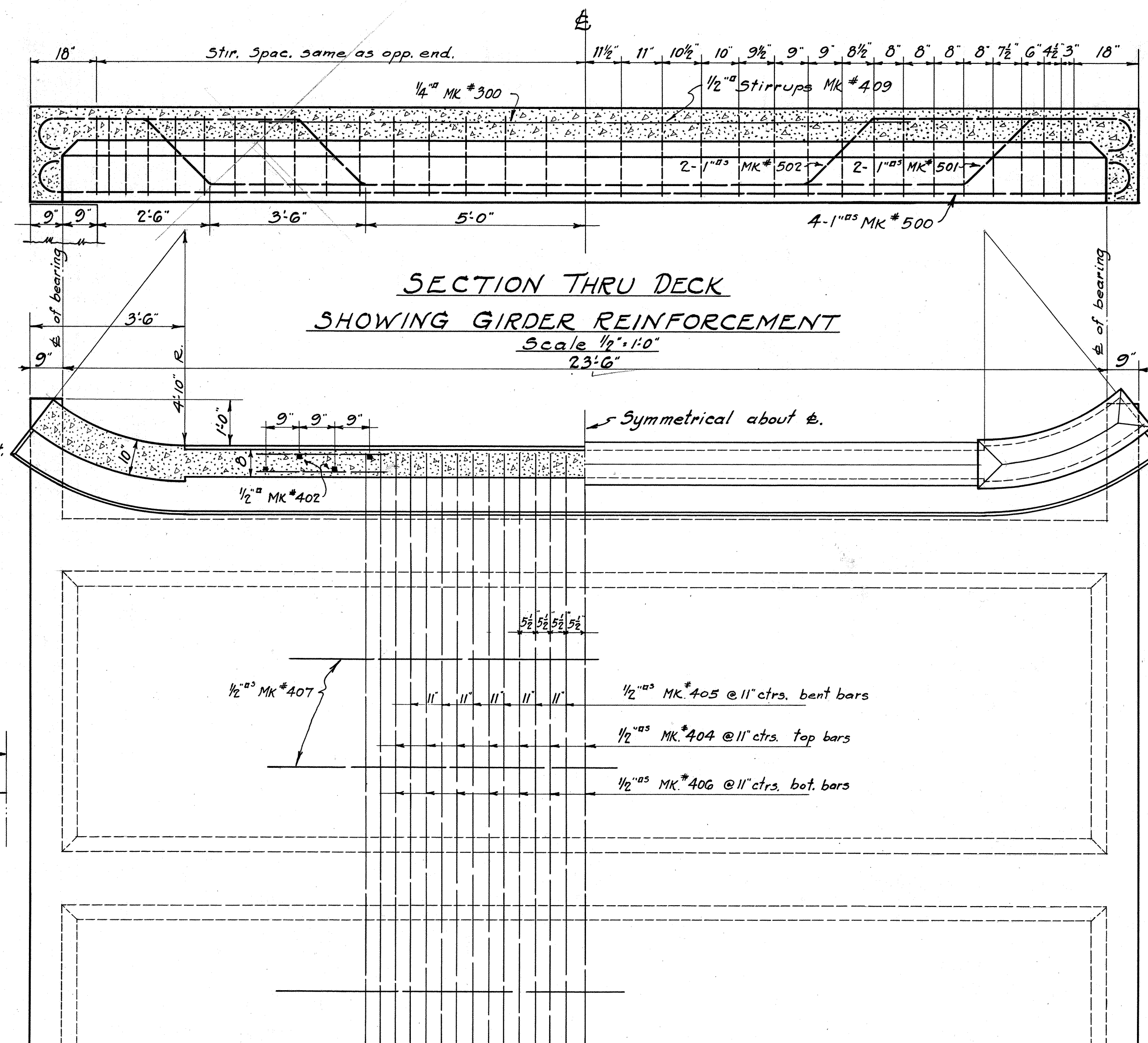
ORDINATES FOR TEMPLATE FOR CROWN OF ROADWAY SLAB

NOTE: Contractor to construct bridges of this general design as per revised details shown on Sheet No. 4189.25



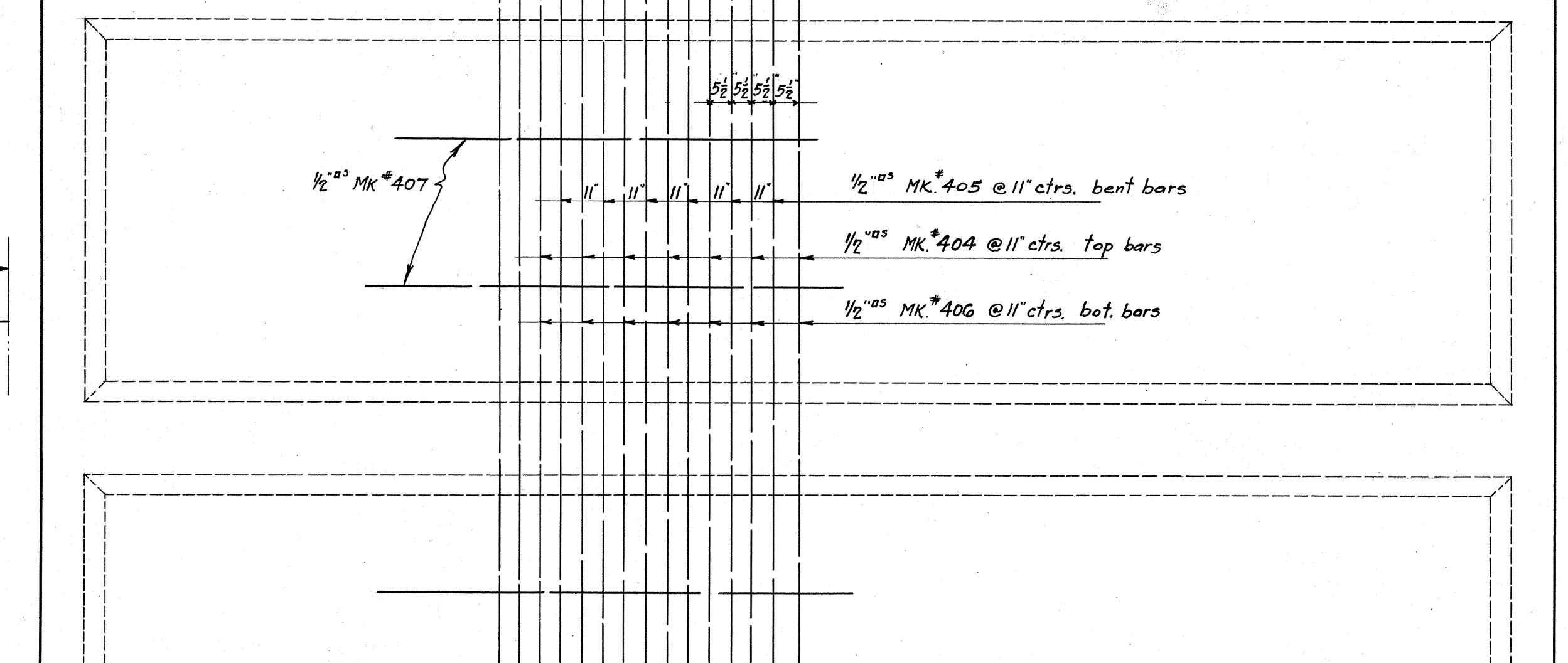
TYPICAL SECTION THRU BRIDGE

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



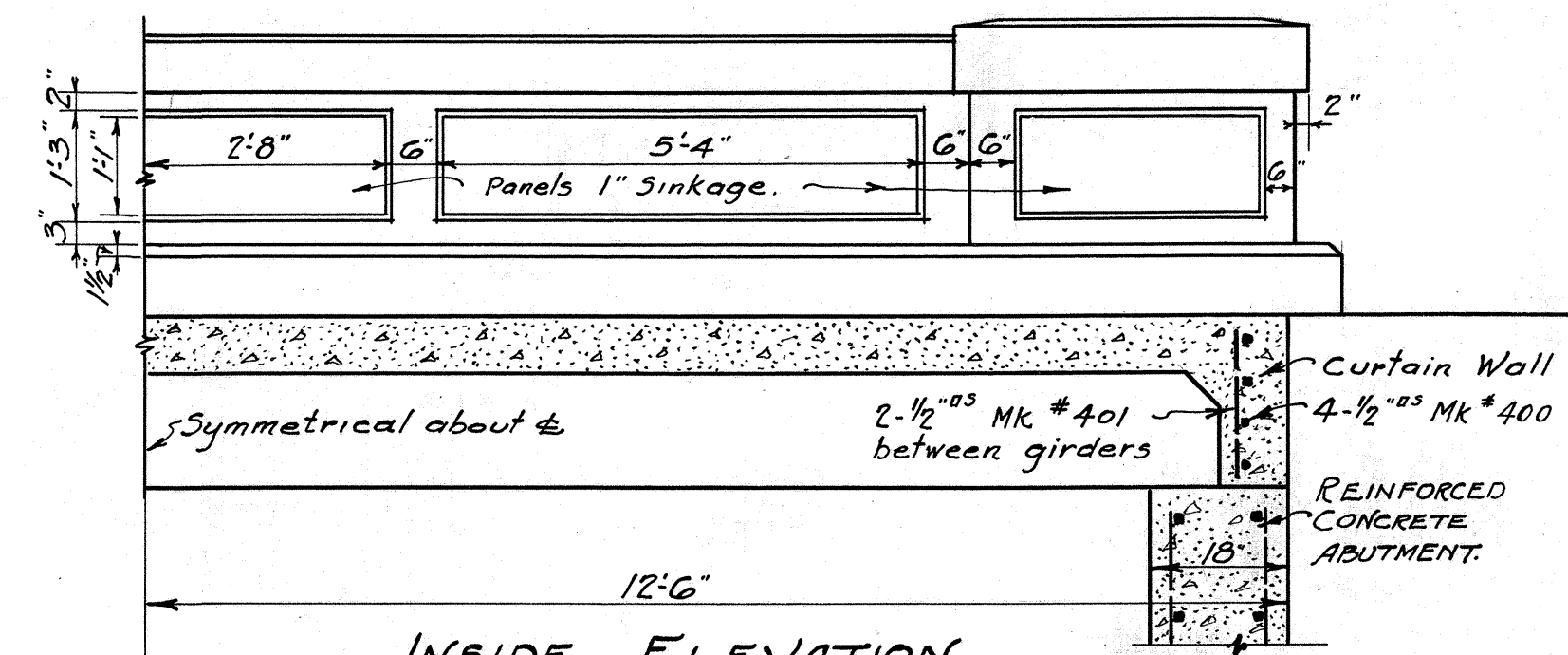
SECTION THRU DECK
SHOWING GIRDER REINFORCEMENT

Scale 1/2" = 1'-0"



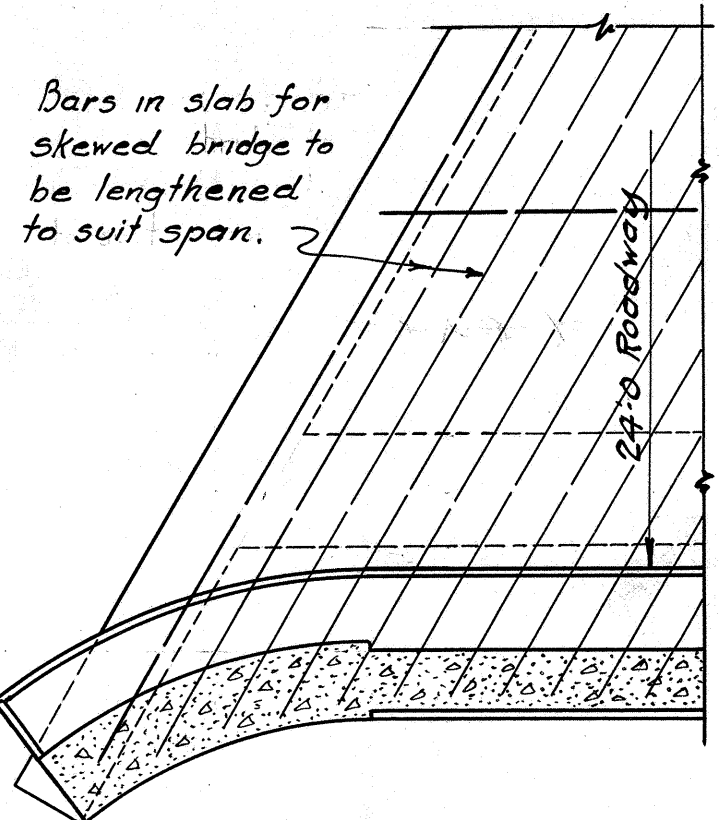
HALF PLAN

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



INSIDE ELEVATION
DETAIL OF PANELS & END POST.

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



SKewed BRIDGE

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

REINFORCING SCHEDULE

MK	SIZE	NO	DESCRIPTION	LOCATION	LGTH	TOTAL LGTH	WT. #FT.	TOTAL WT.
300	1/4"	8	15'-0"	Tie Girder Stirrups	15'-0"	120'-0"	0.21	25.2*
400	1/2"	8	28'-6"	Curtain Walls	28'-6"	228'-0"	0.85	193.8
401	1/2"	20	1'-7"	"	1'-7"	31'-8"	"	26.9
402	1/2"	74	3'-0"	Railing	3'-7"	265'-2"	"	225.4
403	1/2"	10	24'-10"	"	24'-10"	248'-4"	"	211.1
404	1/2"	28	26'-6"	Deck Slab Top Steel	28'-2"	788'-8"	"	670.4
405	1/2"	28	29'-2"	Deck Slab Bent Steel	29'-2"	816'-8"	"	694.2
406	1/2"	28	25'-0"	Deck Slab Bot. Steel	26'-8"	746'-8"	"	634.7
407	1/2"	6	24'-6"	Deck Slab Spacers	24'-6"	147'-0"	"	124.9
408	1/2"	112	3'-6"	Cantilever	3'-6"	392'-0"	"	333.2
409	1/2"	132	4'-10"	Girder Stirrups	4'-10"	638'-0"	"	542.3
500	1"	16	23'-10"	Girder	26'-6"	424'-0"	3.40	1441.6
501	1"	8	17'-0"	Girder	27'-7"	220'-8"	"	750.2
502	1"	8	10'-0"	Girder	27'-7"	220'-8"	"	750.2

Concrete for one Span 32.2 Cu. yds.

Total Wt. 6624.1 lbs. steel

Depressed V Letters 3/8" deep NAME Use correct name of stream.	DATE Date of year built.
Left Hand Side	Right Hand Side

DETAIL LETTERS & FIGURES
Scale 2" = 1'-0"

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII.

STANDARD DECK GIRDER SUPERSTRUCTURE

SPAN - 22'-0"

ROADWAY - 24'-0"

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

Date, Jan. 25, 31.

APPROVED BY *L. H. Bigelow*
TERRITORIAL HIGHWAY ENGINEER

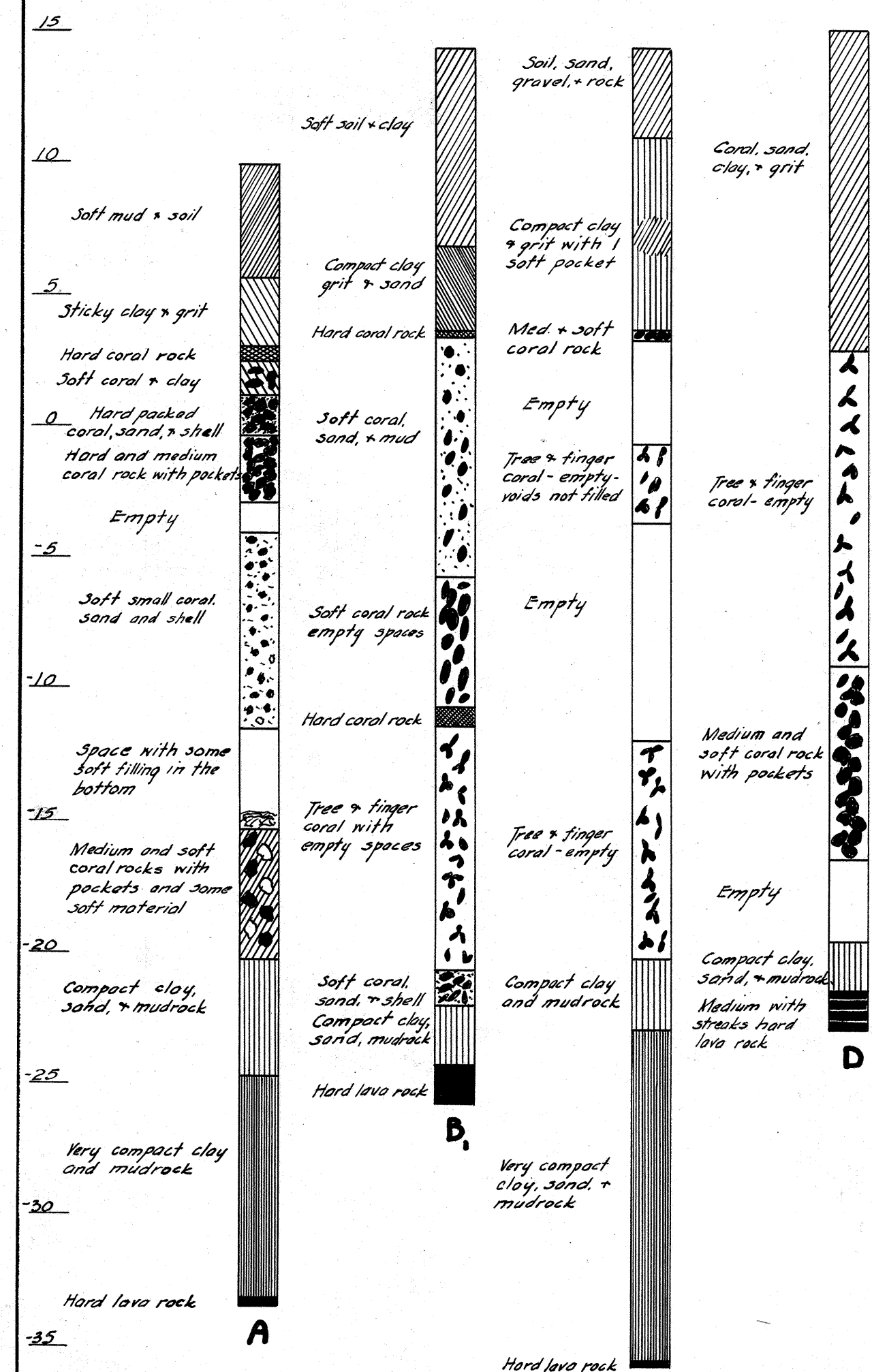
4189.24

6-4-1 6-17-2

Revised May 27th as per
Bus Radio of April 18, 1931

Drawn by *ESG*
Traced by *ESG*
Checked by *ESG*





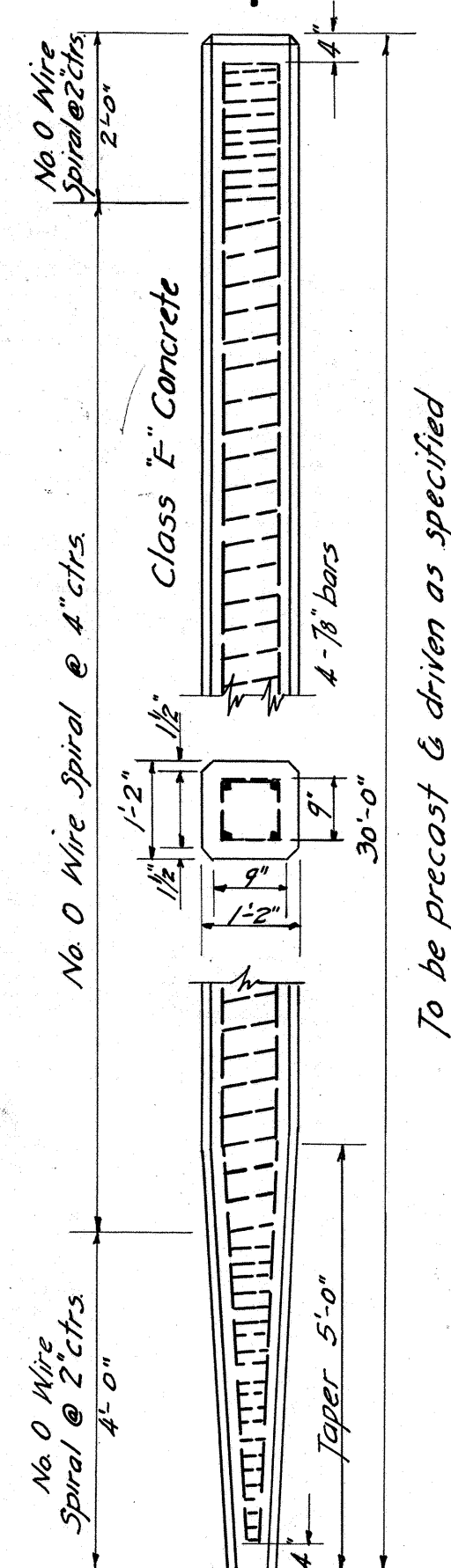
NOTE: If driving to full bearing power leaves less than 12' of steel in cap build up pile as detailed

Max = 1'-8"
Min = 1'-0"

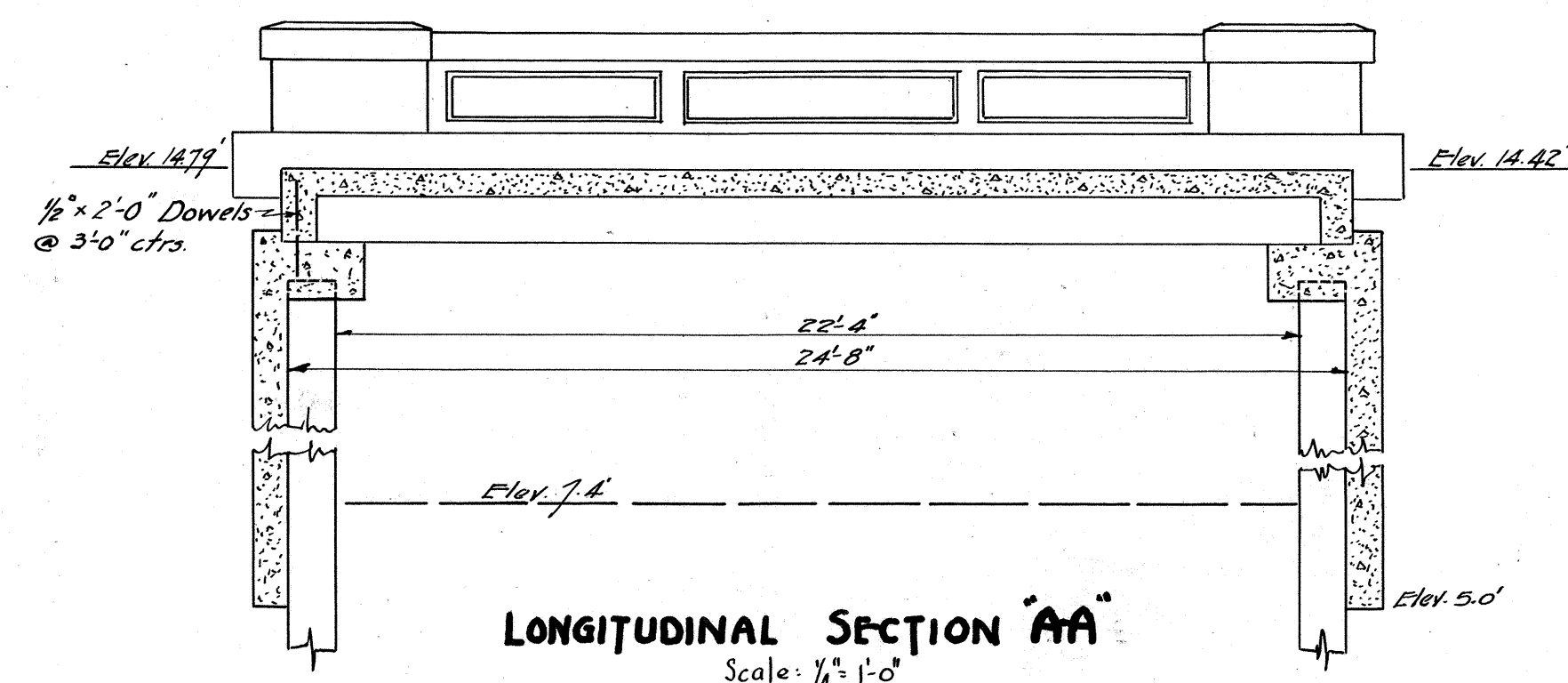
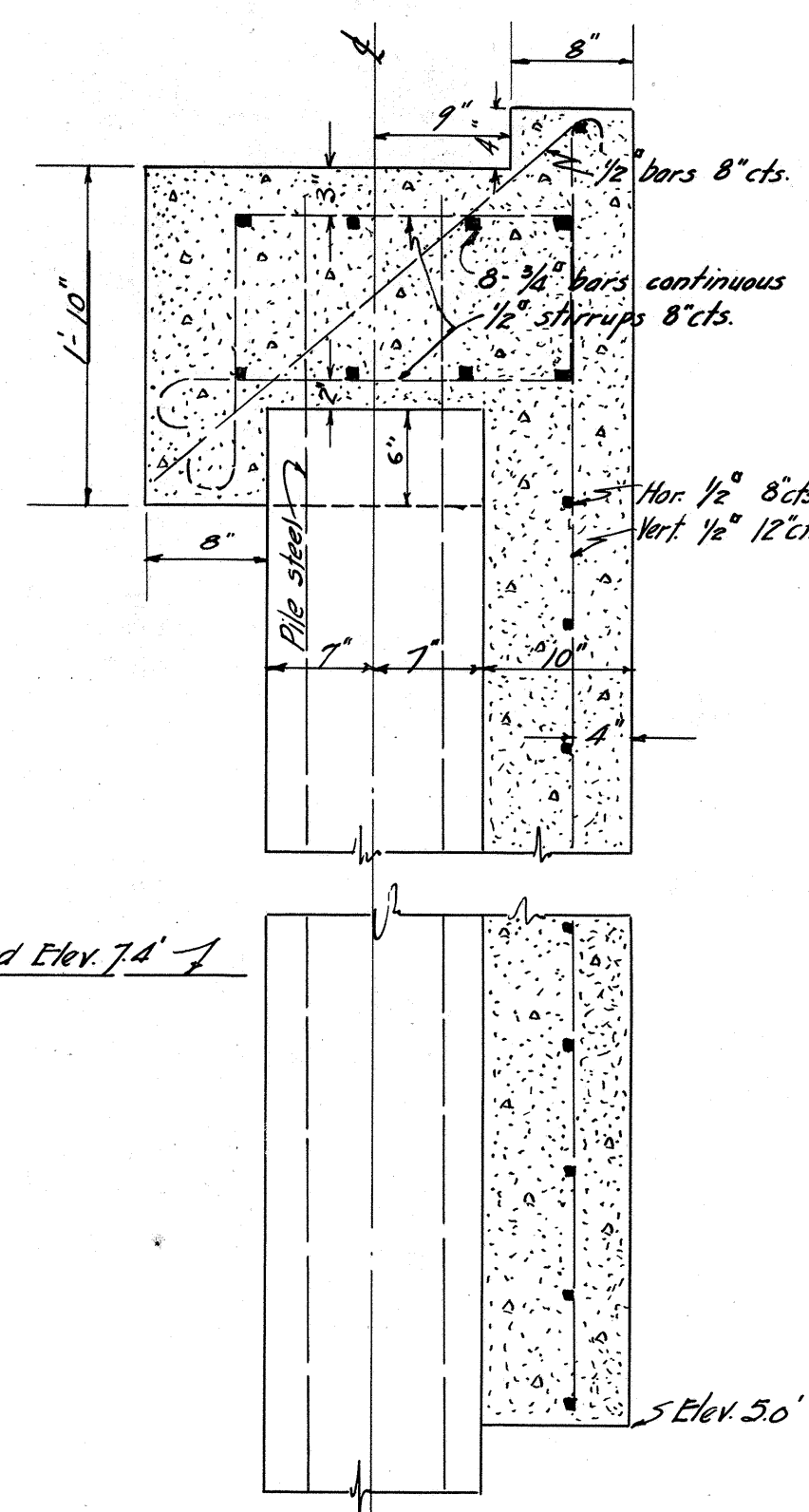
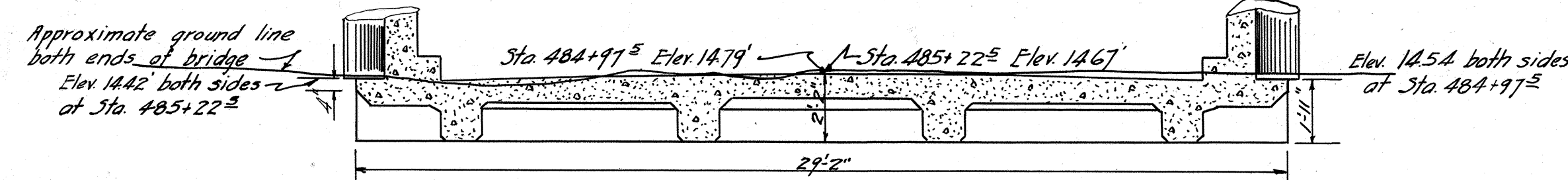
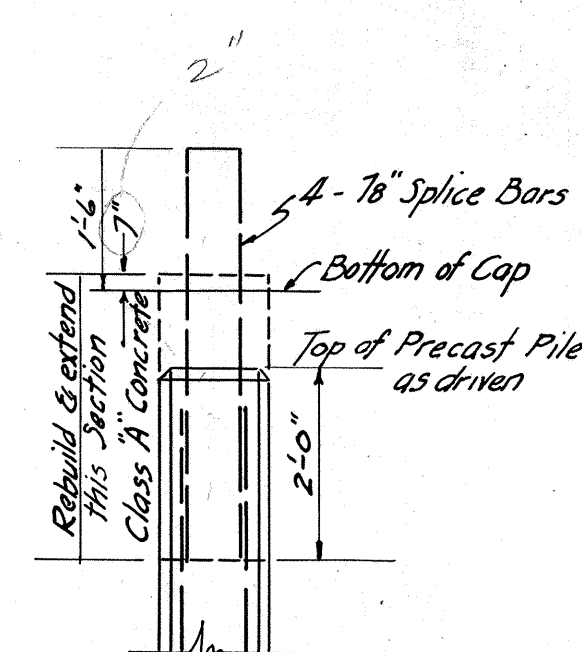
Remove Conc.

Bottom of Cap

DETAIL OF CUT-OFF



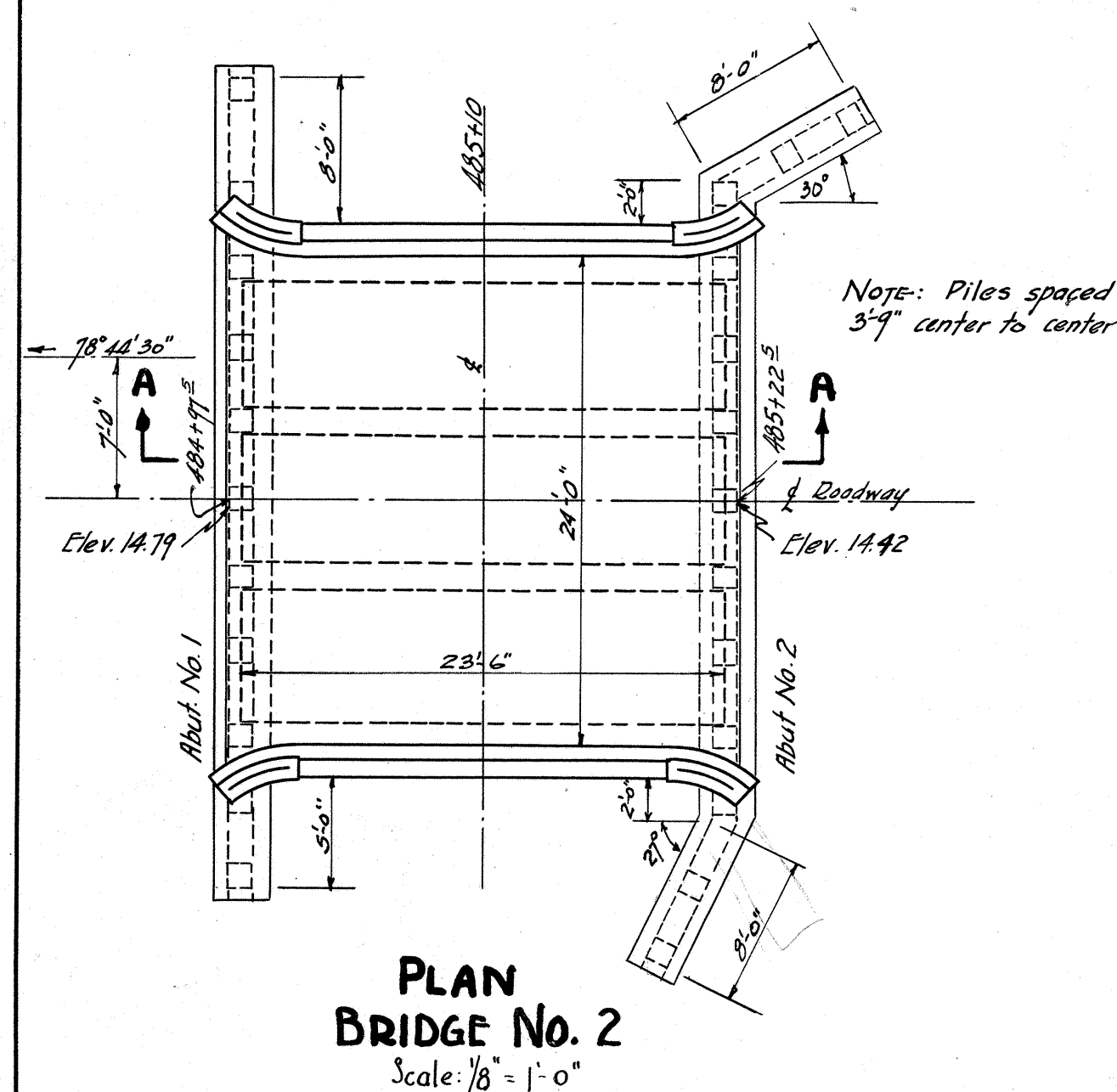
DETAIL OF BUILT-UP PILE



ESTIMATE OF QUANTITIES			
Bridge No. 2	Concrete Class A	Reinforcing Steel	Structure Excavation
Abut. No. 1	15.1 cy.	1922 #	36.9 cy.
Abut. No. 2	17.9 cy.	2261 #	43.5 cy.
Superstructure	32.2 cy.	6632 #	
TOTAL	65.2 cy.	10815 #	80.4 cy.

30 Foot Concrete Piles - 24

GENERAL NOTES:
Superstructure as detailed on Sheet No. 4189.24 applies to this Bridge.
Dead Load, Live Load, Concrete, and Reinforcing Steel same as called for on Sheet No. 4189.24.
Foundations: All elevations shown may be changed upon order of the Engineer. Piles used are of precast concrete. Piles may be changed in number and location upon order of the Engineer. Additional concrete and steel to accommodate piles not driven to exact location shall be provided as required by the Engineer at the Contractor's expense.



DETAIL OF CONCRETE PILES
Scale: 1/2" = 1'-0"

481+22
481+97
25

NANA HUI

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
BRIDGE NO. 2

KAMEHAMEHA HIGHWAY F.A.P. 3C
SHEET No. 26 of 36 SHEETS JANUARY 1931

4189.26

Plan File	Project	Folder	Plan
No. 6	No. 17	No. 2	No.