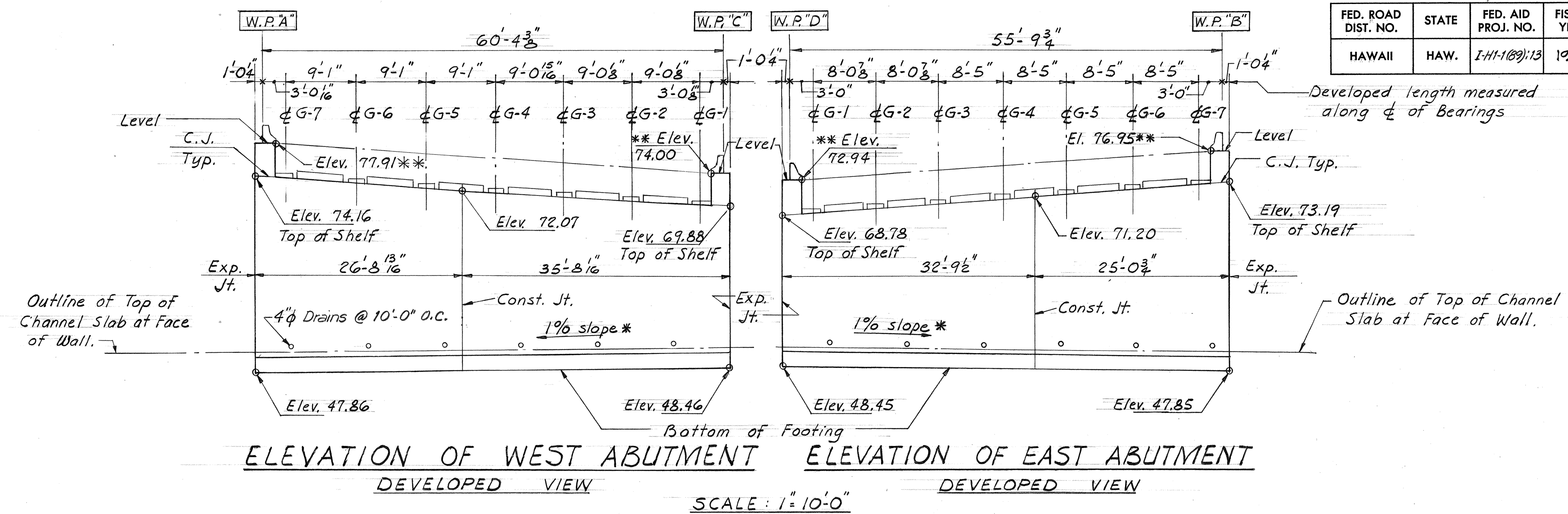
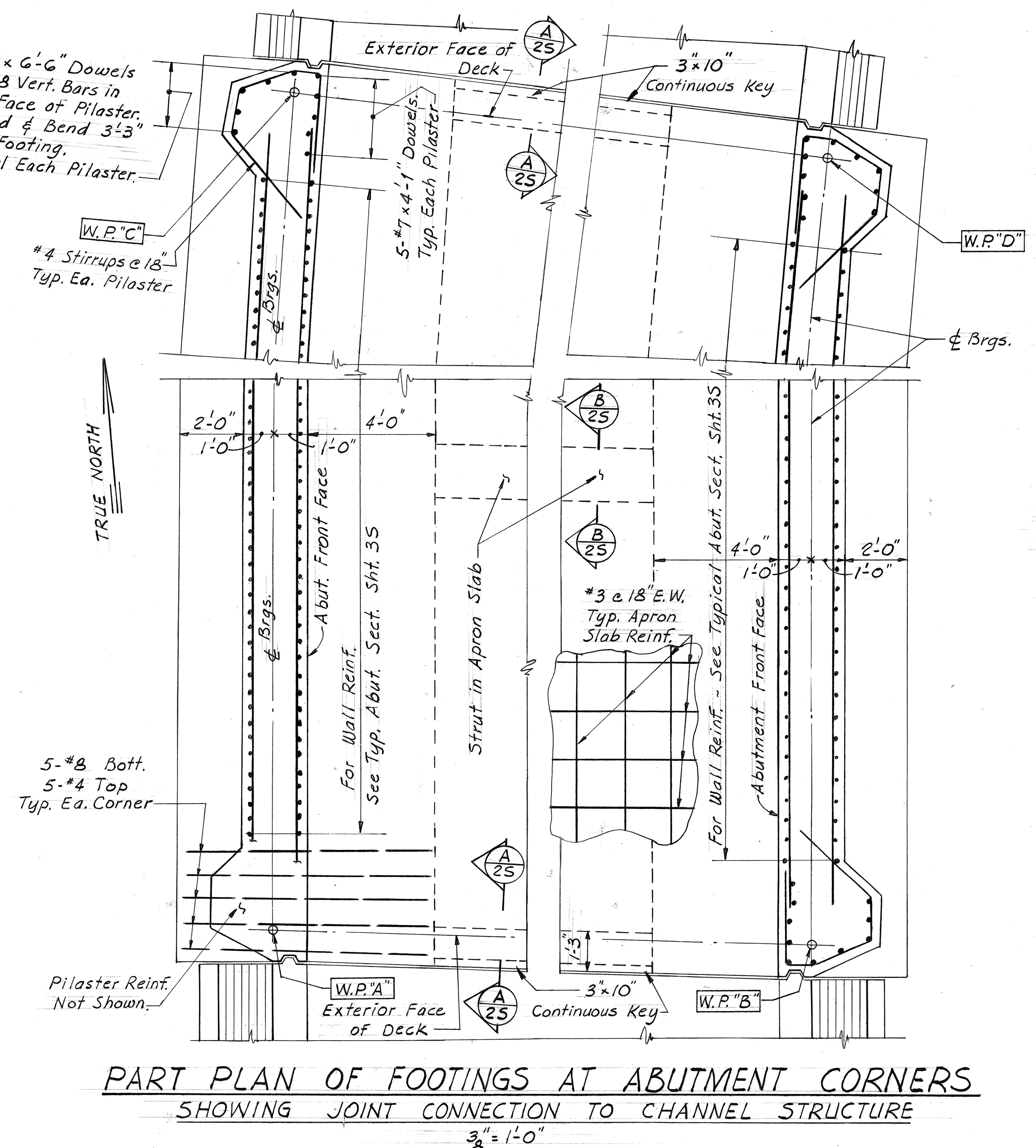
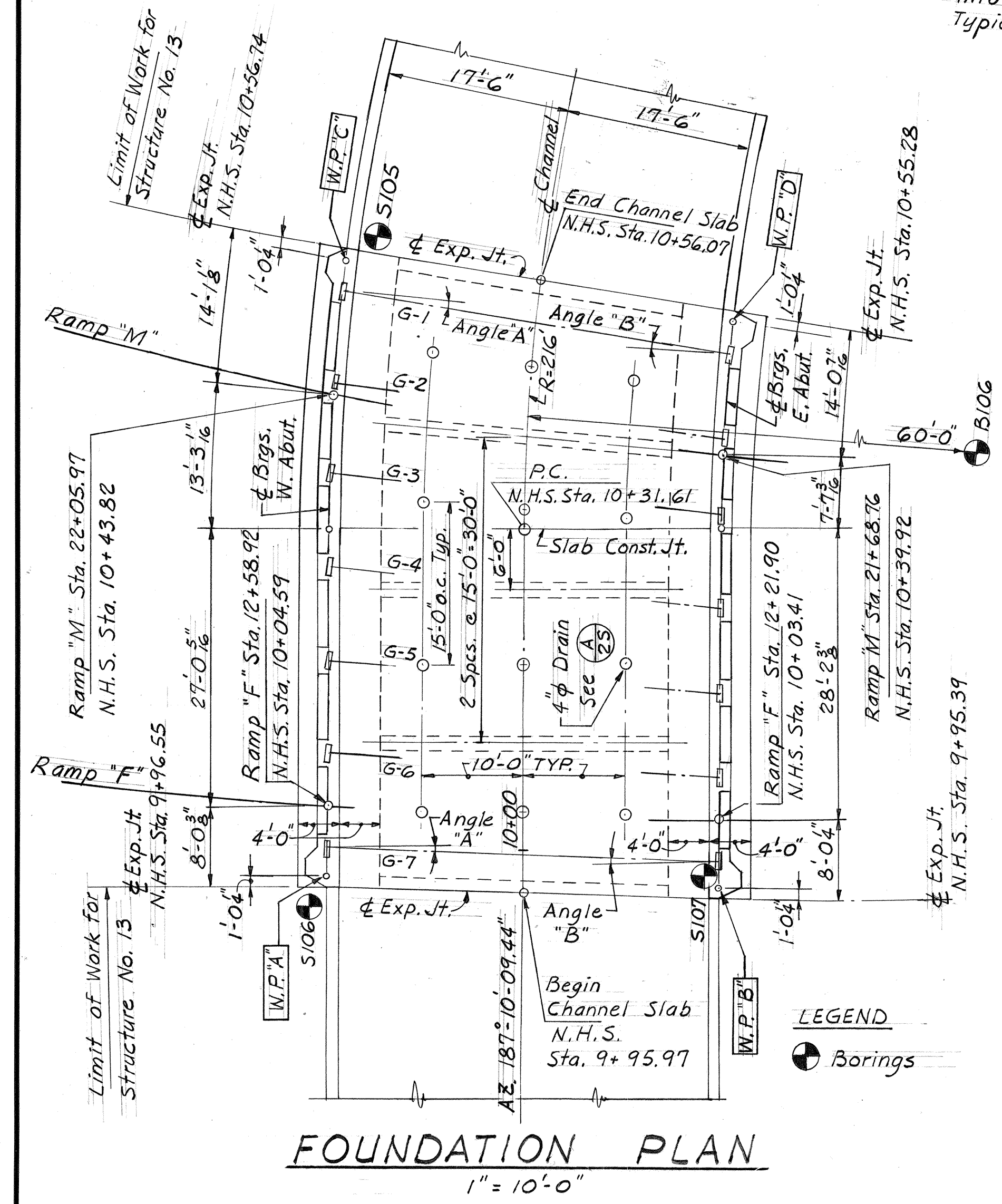


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(89)13	1971	207	362

GIRDER SEAT SCHEDULE					
GIRDER MARK	WEST ABUTMENT ELEV.	ANGLE A	EAST ABUTMENT ELEV.	ANGLE B	
G-1	70.25	3°-8'	69.21	3°-43'	
G-2	70.83	3°-53'	69.80	4°-36'	
G-3	71.40	4°-37'	70.42	5°-29'	
G-4	71.98	4°-53'	71.04	4°-53'	
G-5	72.56	3°-52'	71.67	3°-52'	
G-6	73.27	2°-50'	72.35	2°-50'	
G-7	73.98	1°-48'	73.01	1°-48'	

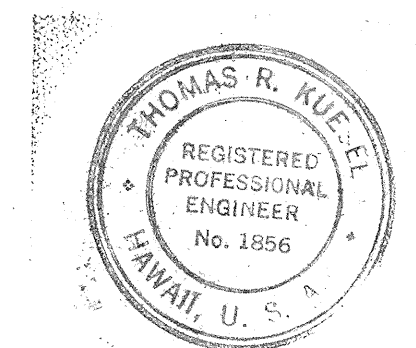
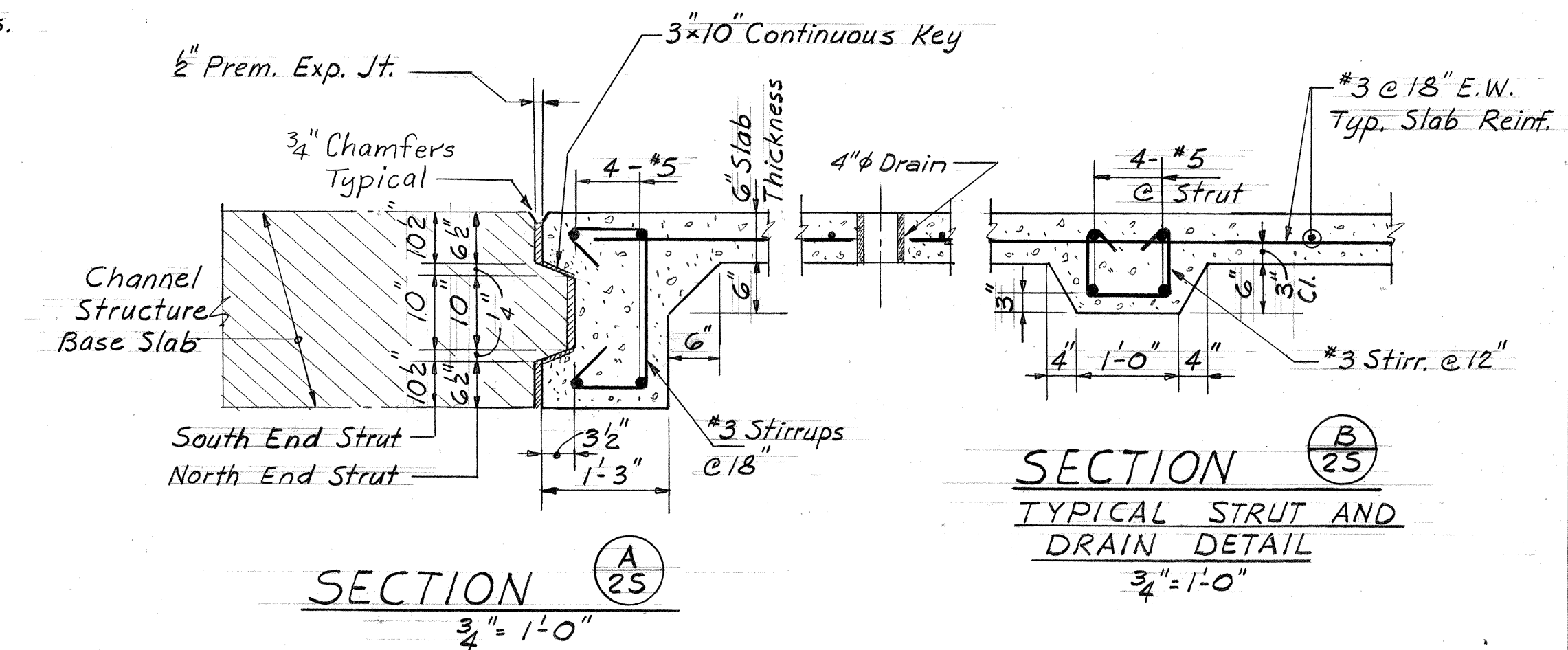


WORK POINTS		
NO.	STATION	OFFSET
W.P."A"	Ramp F 12+58.52	7.00L
W.P."B"	Ramp F 12+21.86	7.00L
W.P."C"	Ramp M 22+07.38	13.00R
W.P."D"	Ramp M 21+69.34	13.00R



NOTES

- * 1% Slope Measured Along ϕ of Channel.
- ** Elevation is Top of Deck at Intersection of Parapet and ϕ of Bearings.



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

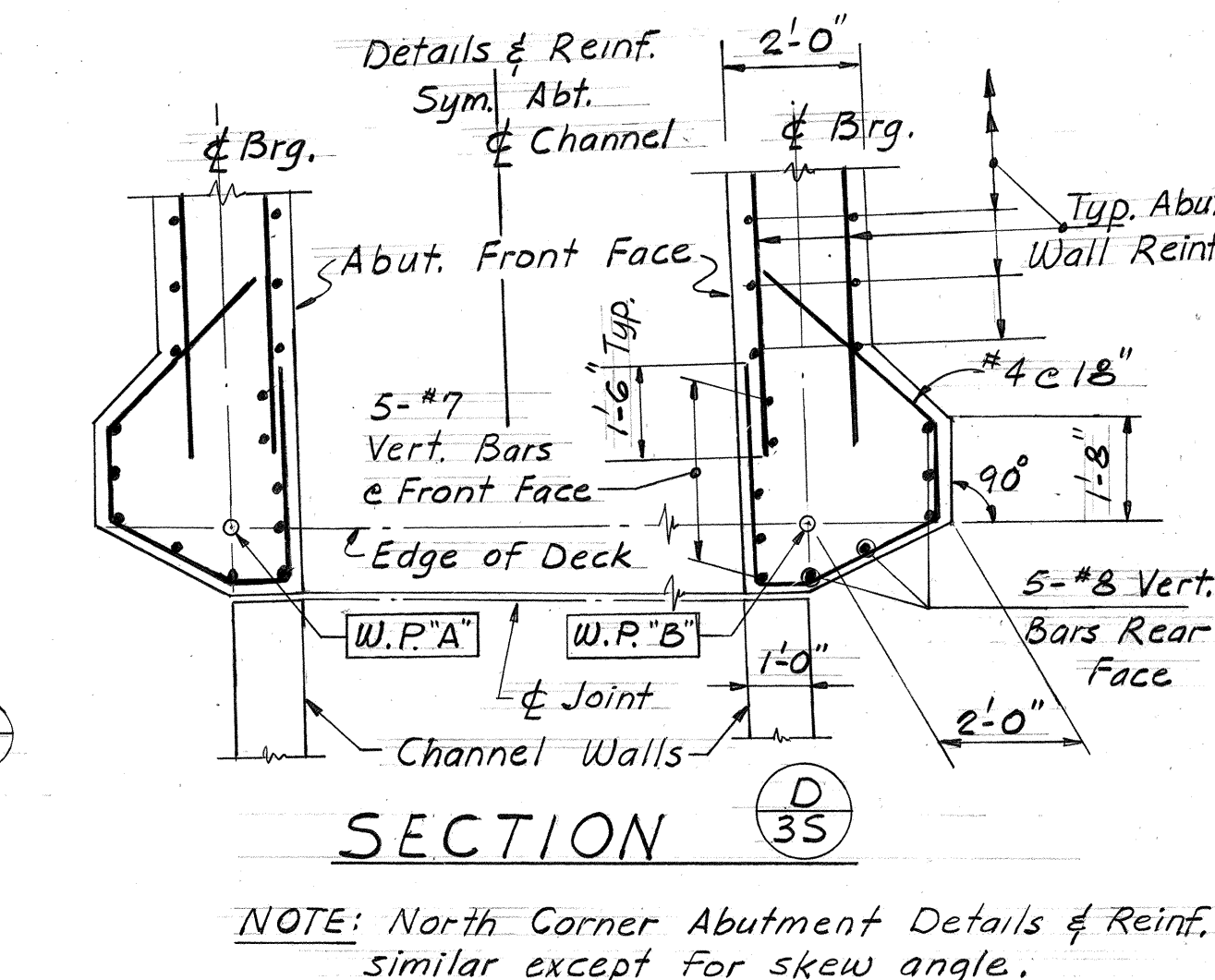
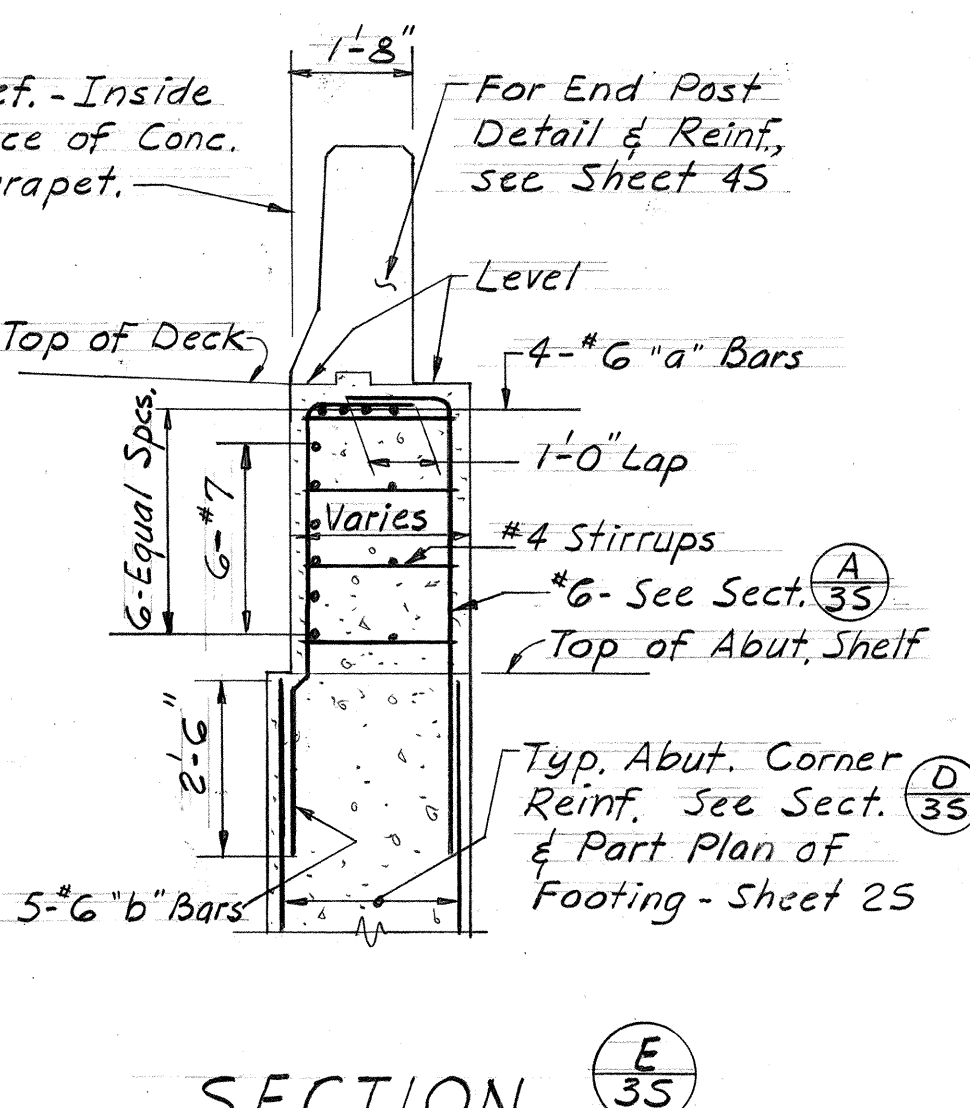
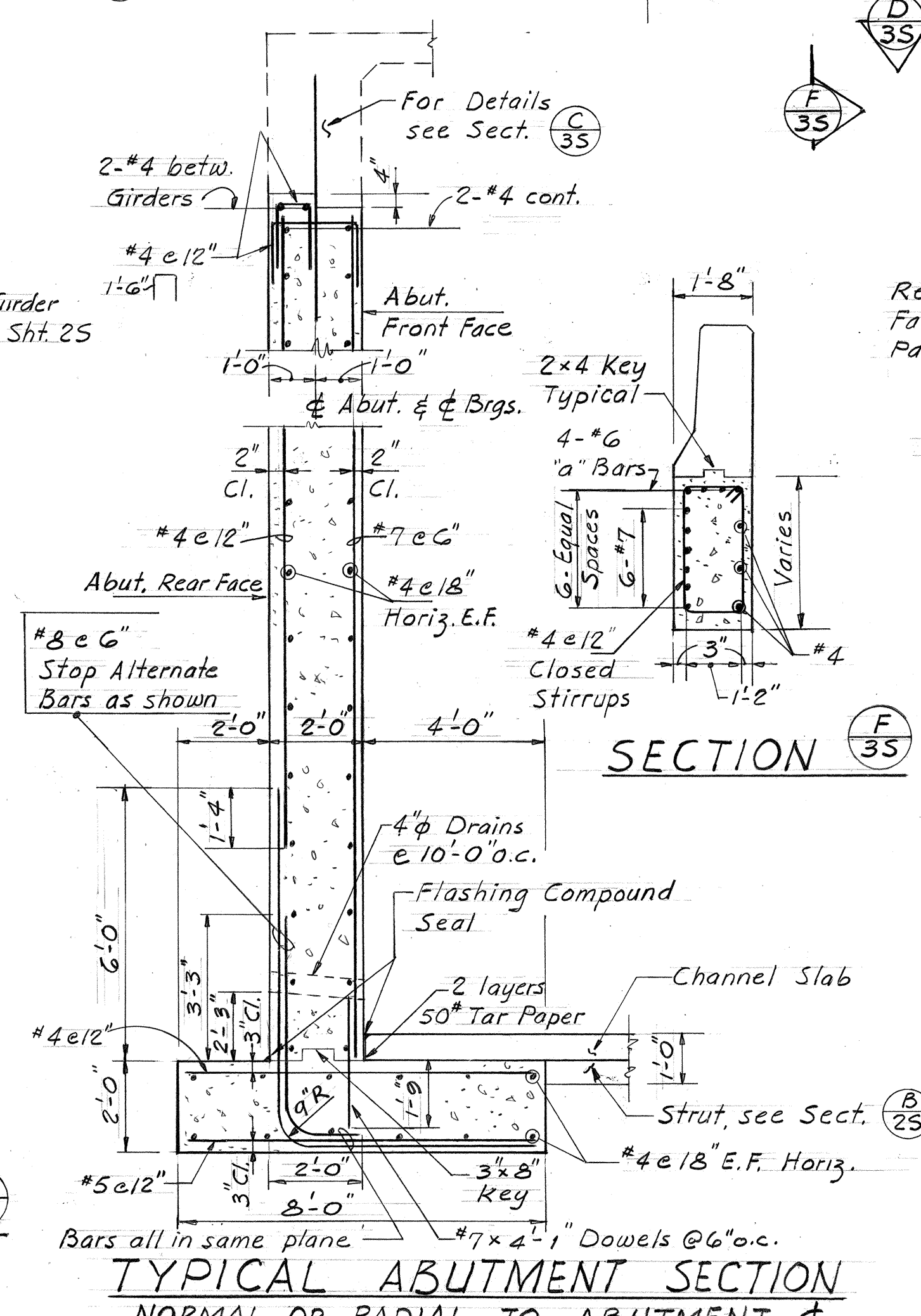
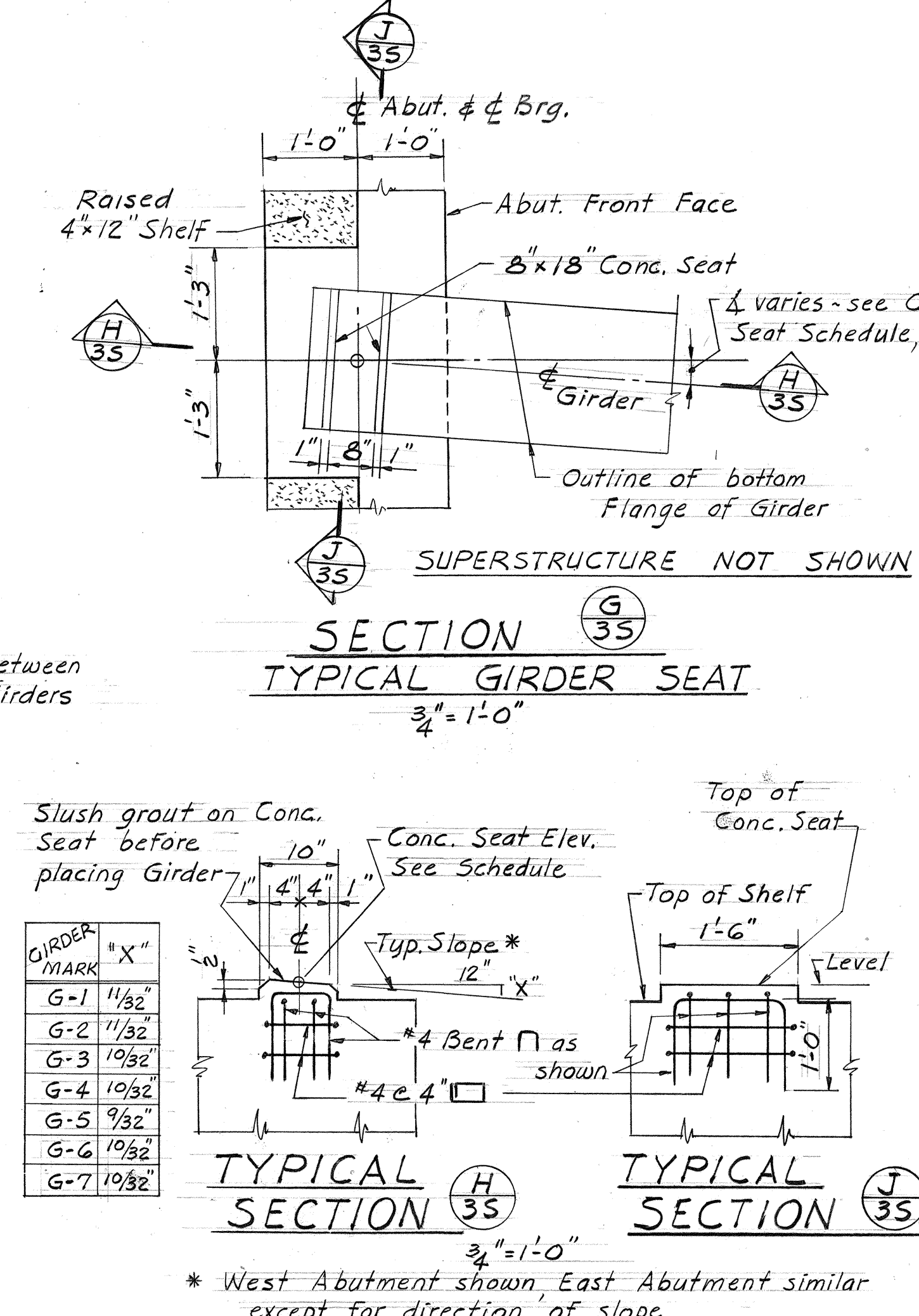
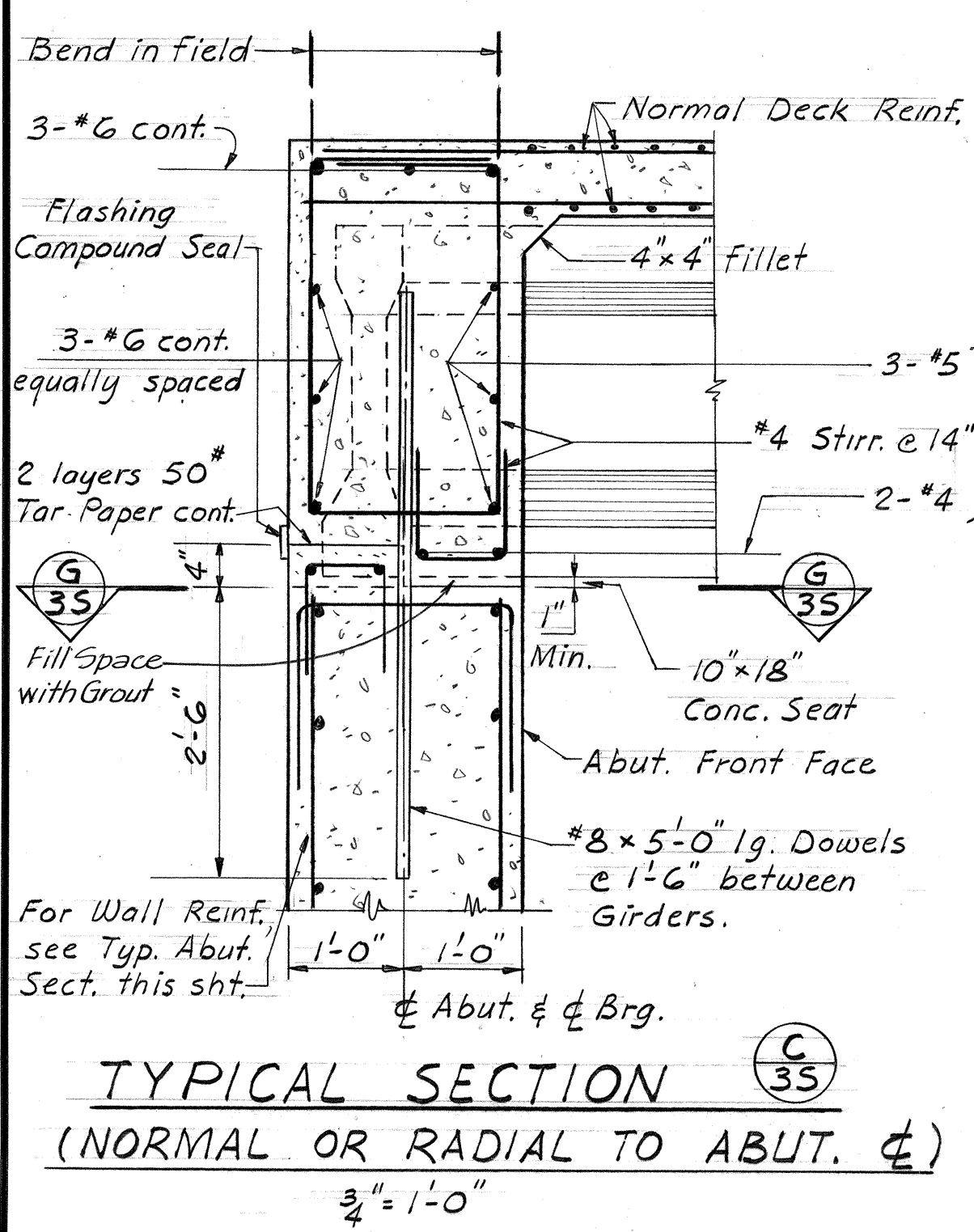
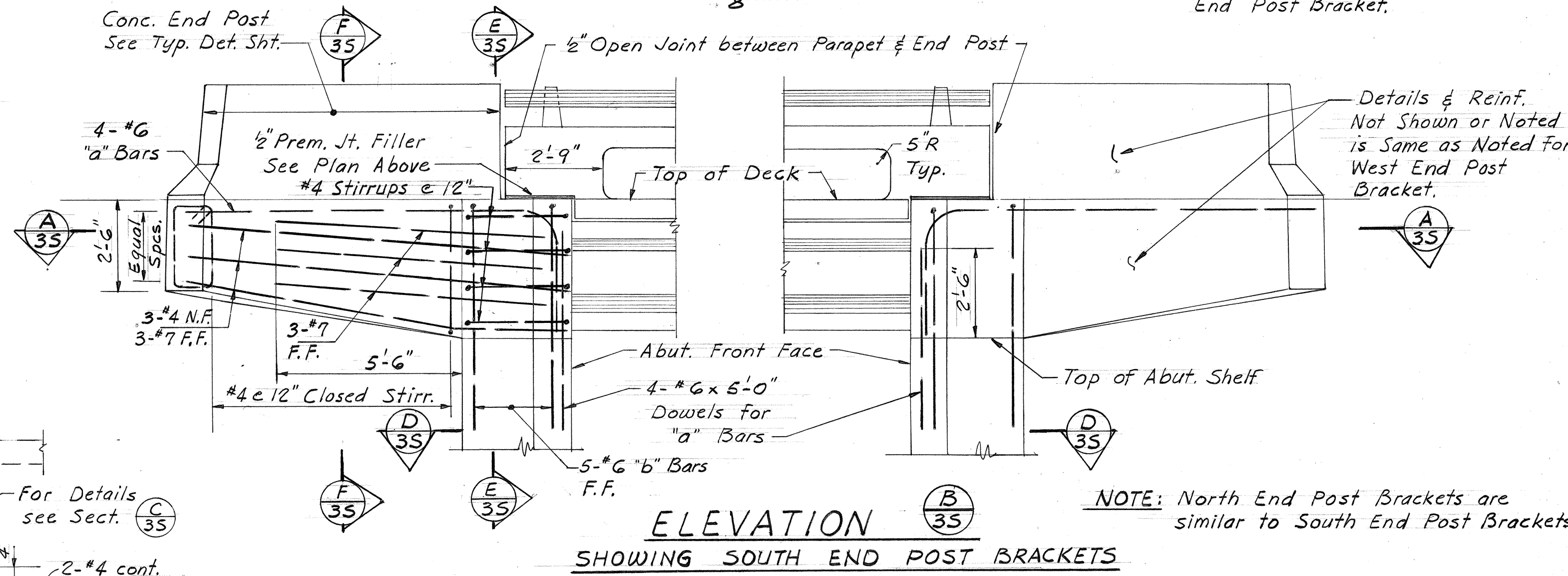
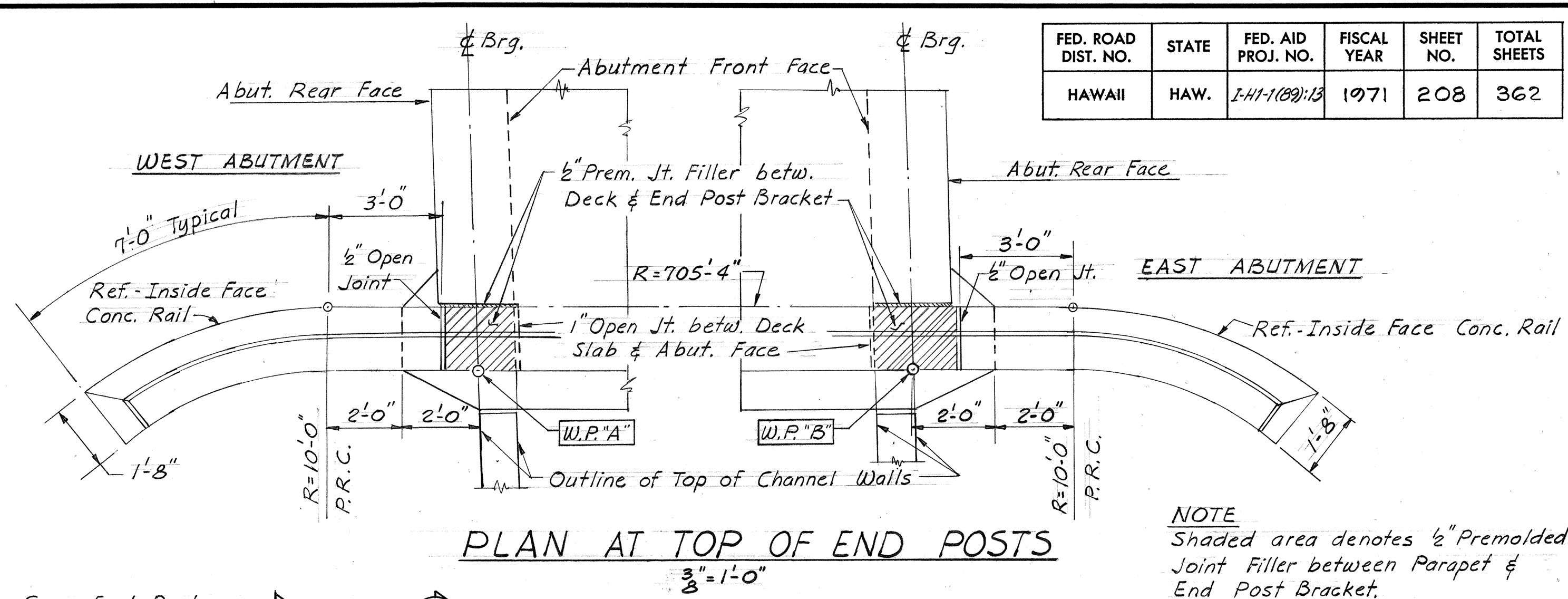
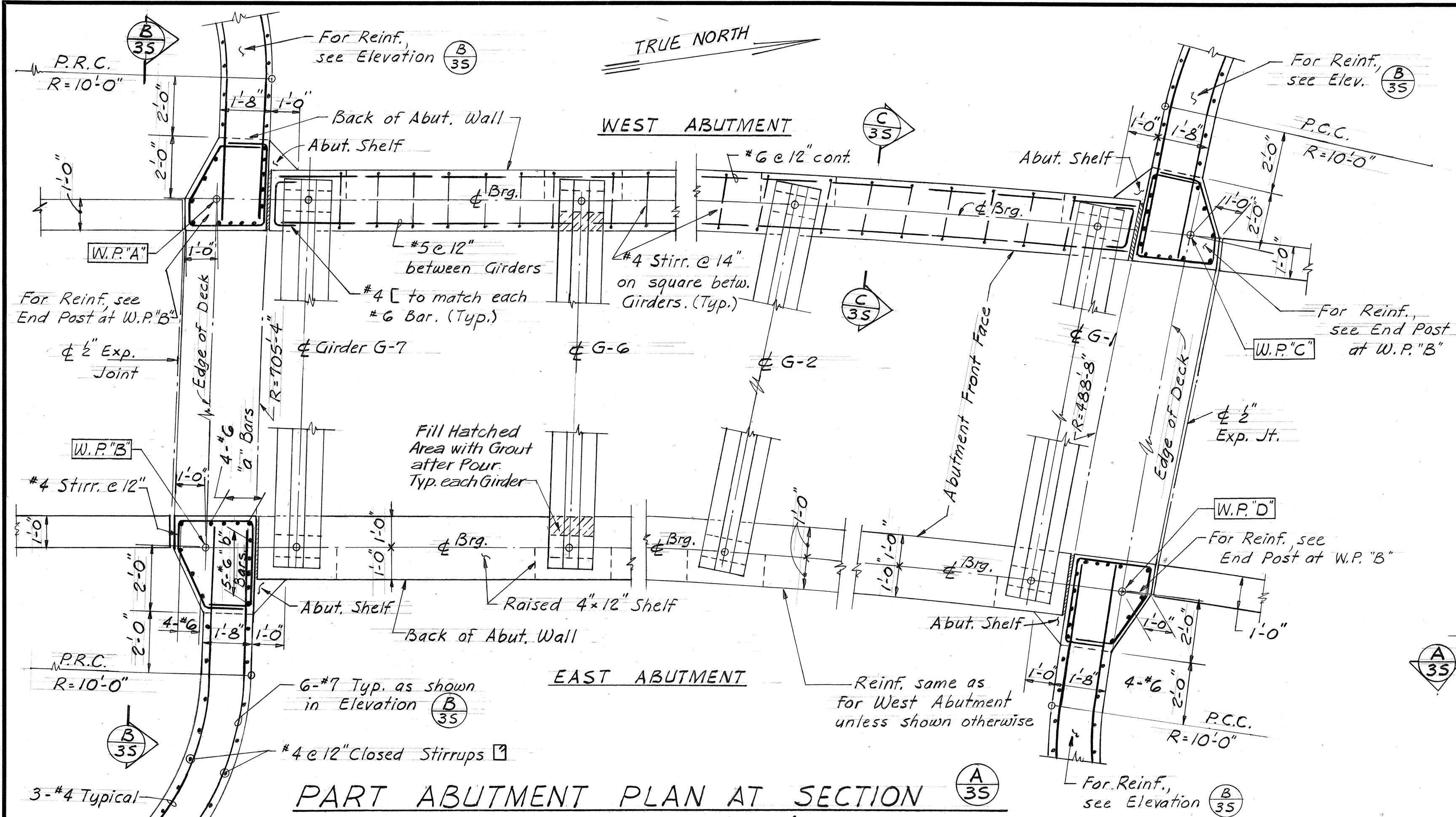
HALAWA INTERCHANGE
STRUCTURE NO. 13
RAMP "F" & "M" OVER NORTH HALAWA STREAM

FOUNDATION PLAN &
ABUTMENT ELEVATIONS

PROJ. No. I-H-1(89)13 DATE: MAY 1971

SHEET No. 25 OF 55 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H1-1(89):13	1971	208	362

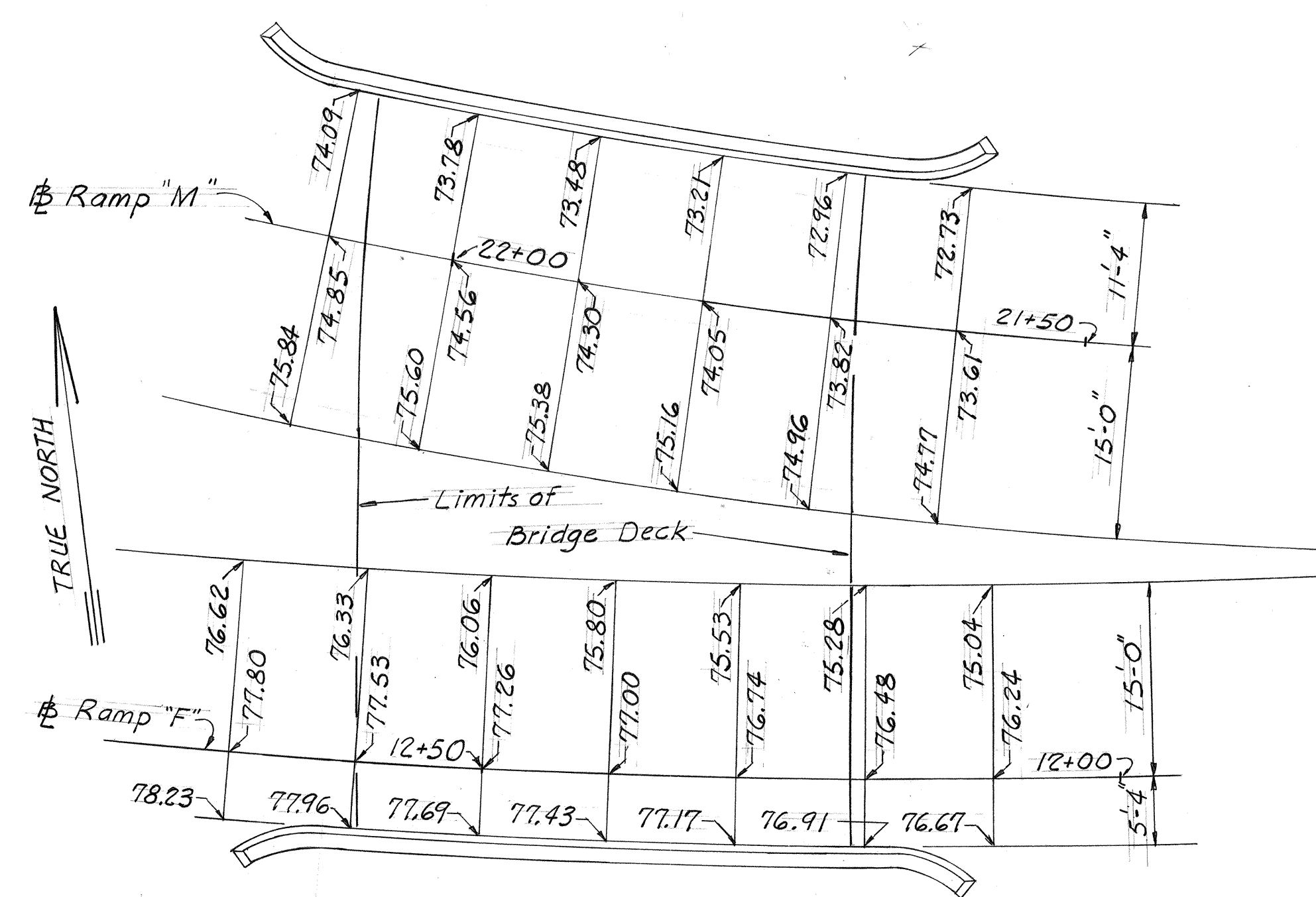


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HALAWA INTERCHANGE
STRUCTURE NO. 13
RAMP 'F' & 'M' OVER NORTH HALAWA STREAM
ABUTMENT DETAILS
PROJ. No. I-H1-1(89):13 DATE: MAY 1971
SHEET No. 35 OF 55 SHEETS

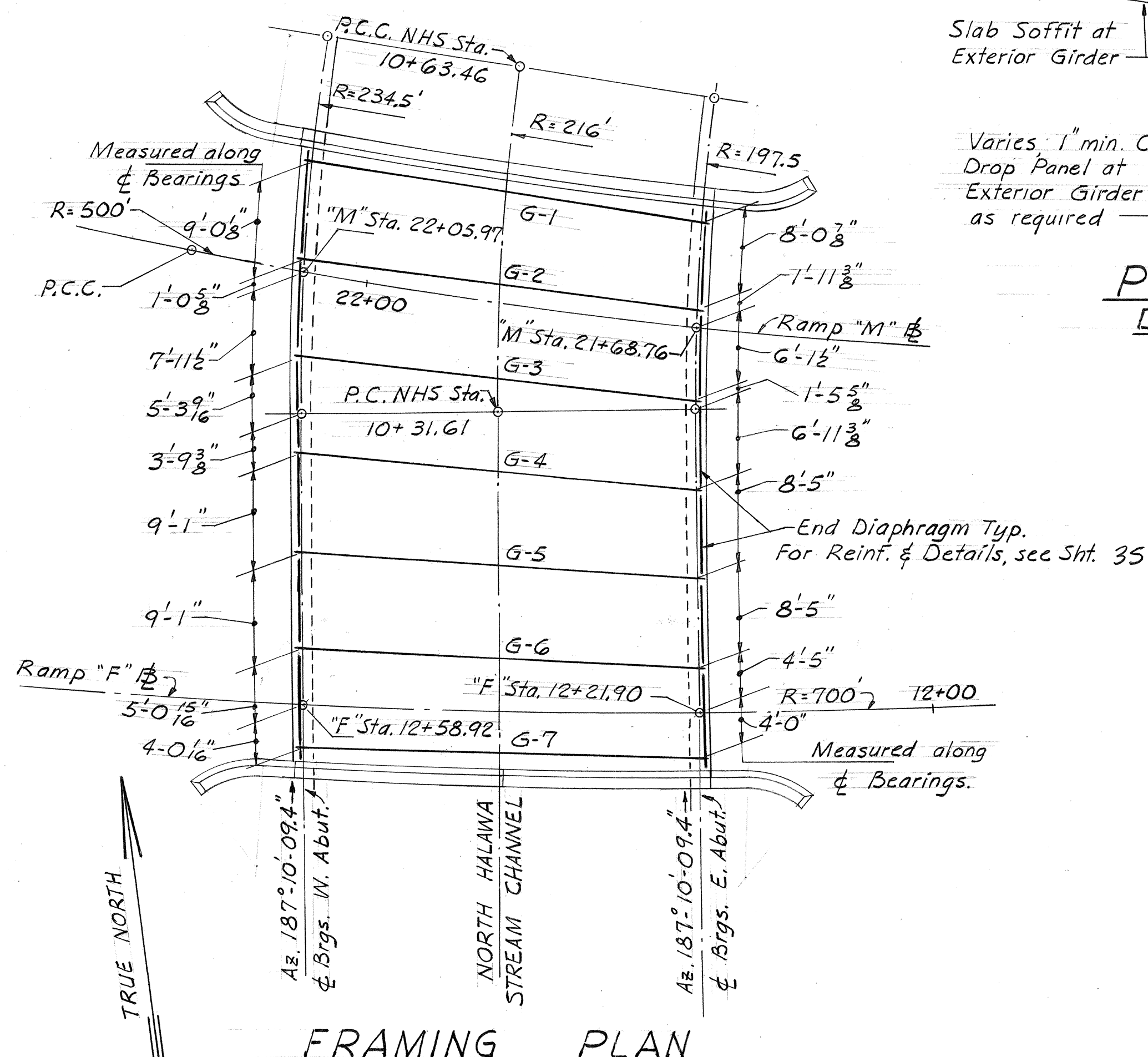
THOMAS R. KUE
REGISTERED PROFESSIONAL ENGINEER
No. 1866
HAWAII, U. S. A.
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Thomas R. Kue

DATE: *****
DESIGNED BY: *****
CHECKED BY: *****
ORIGINAL PLAN: *****
NOTE BOOK: *****

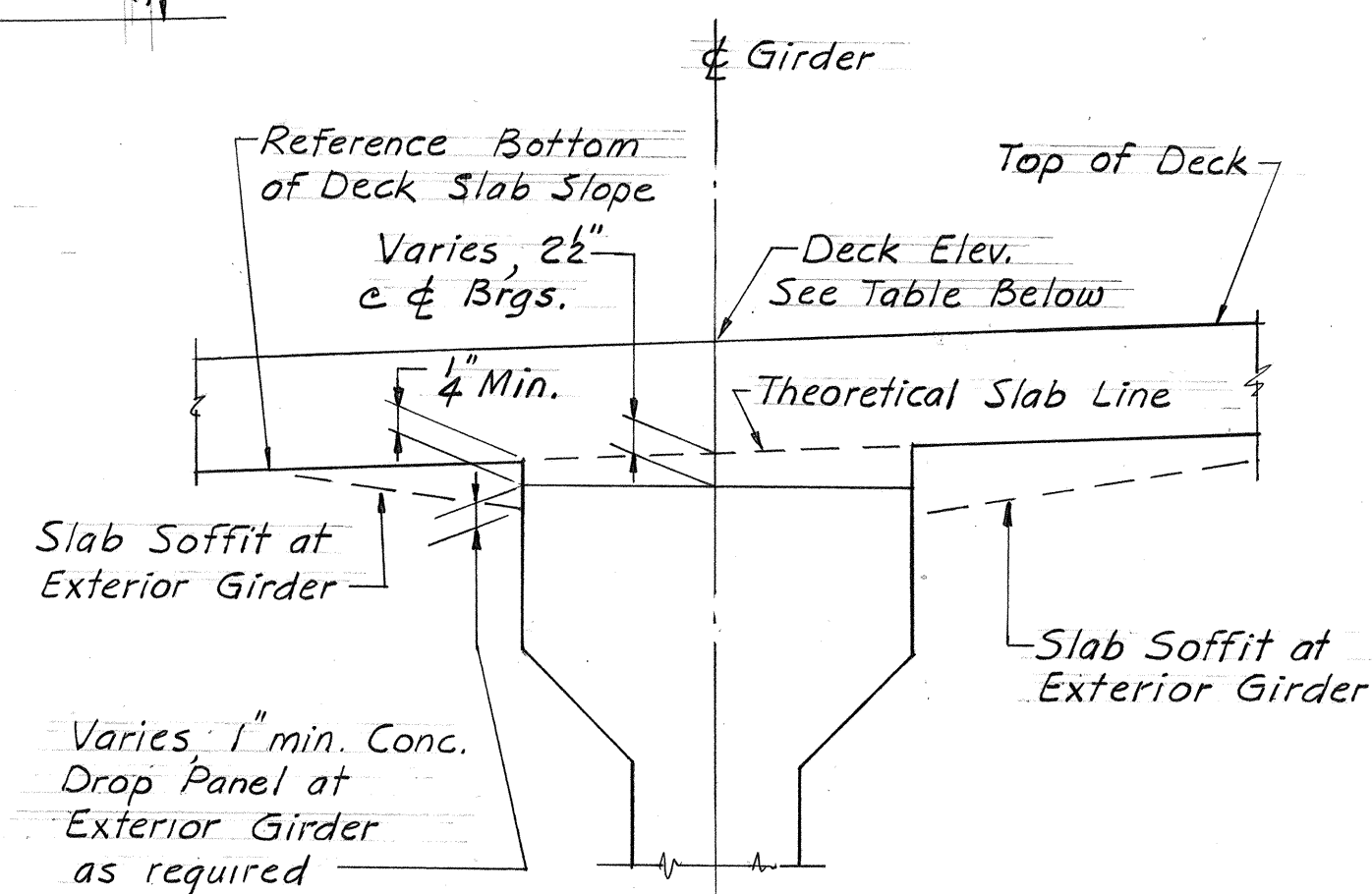
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(89)13	1971	209	362



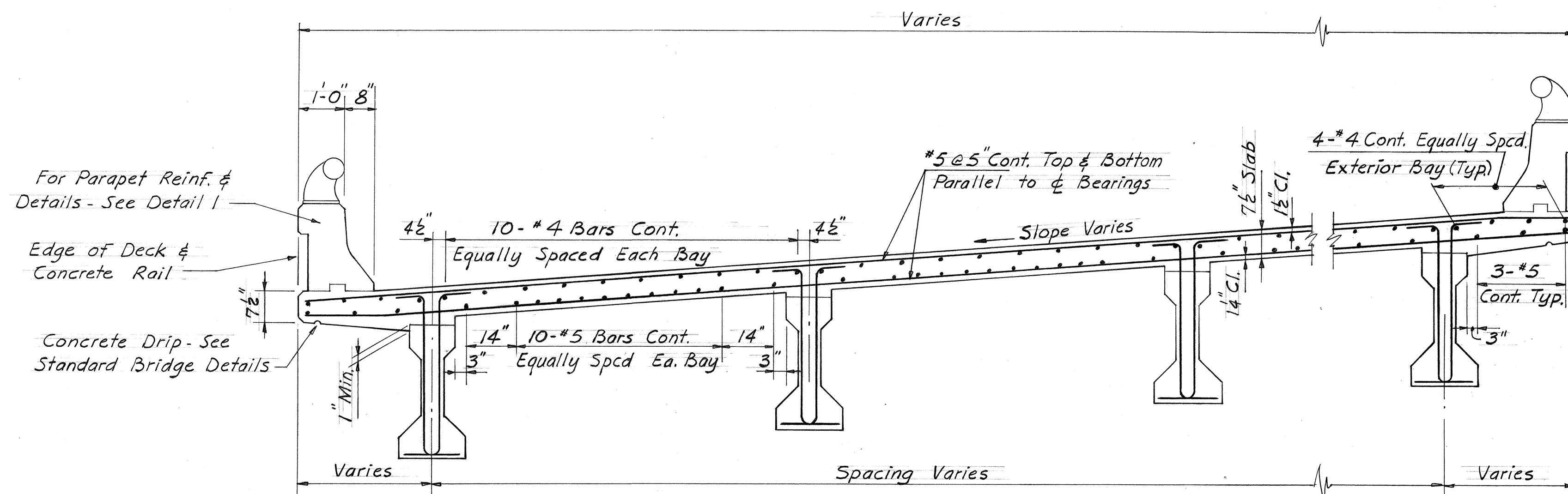
10 FT. GRID GRADES
1" = 10'



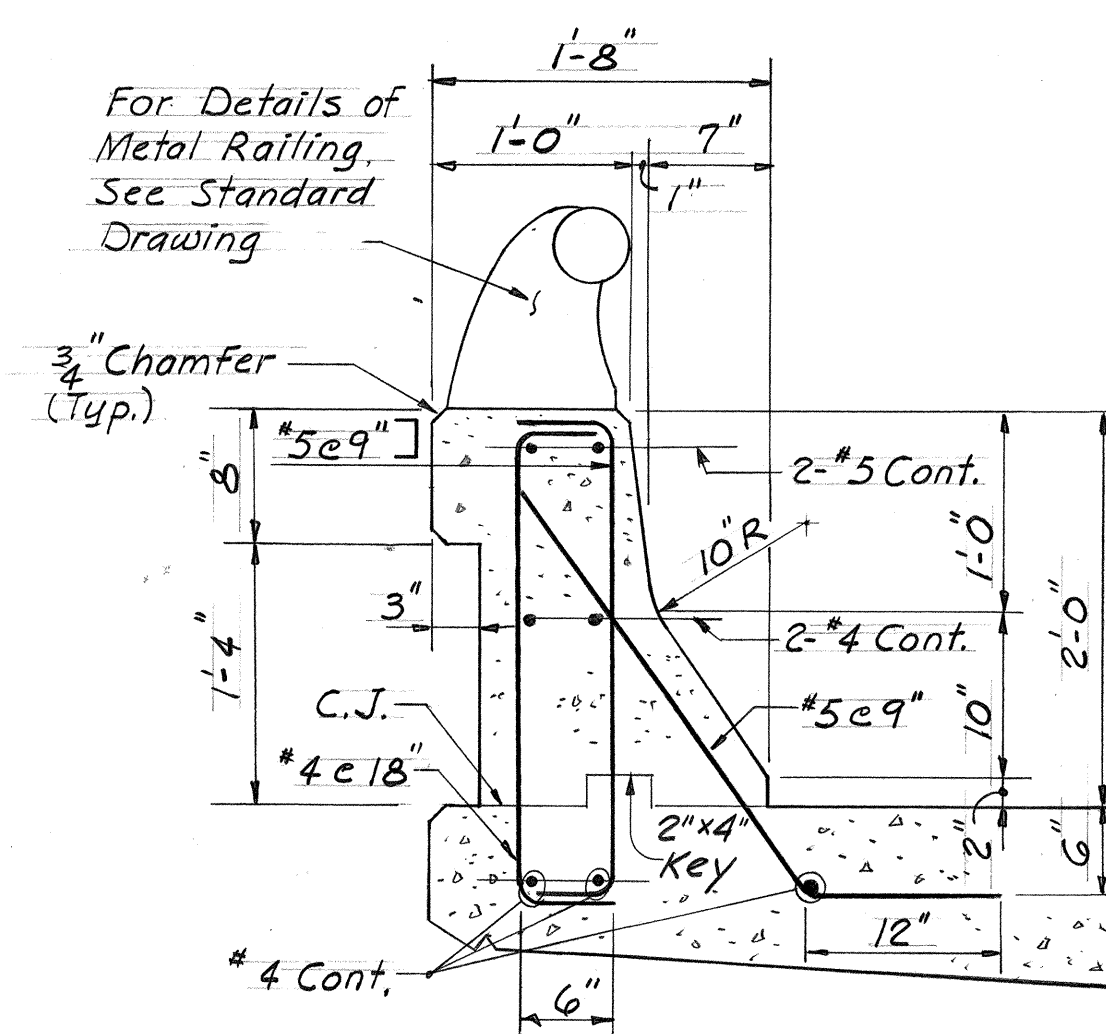
FRAMING PLAN
1" = 1'-0"



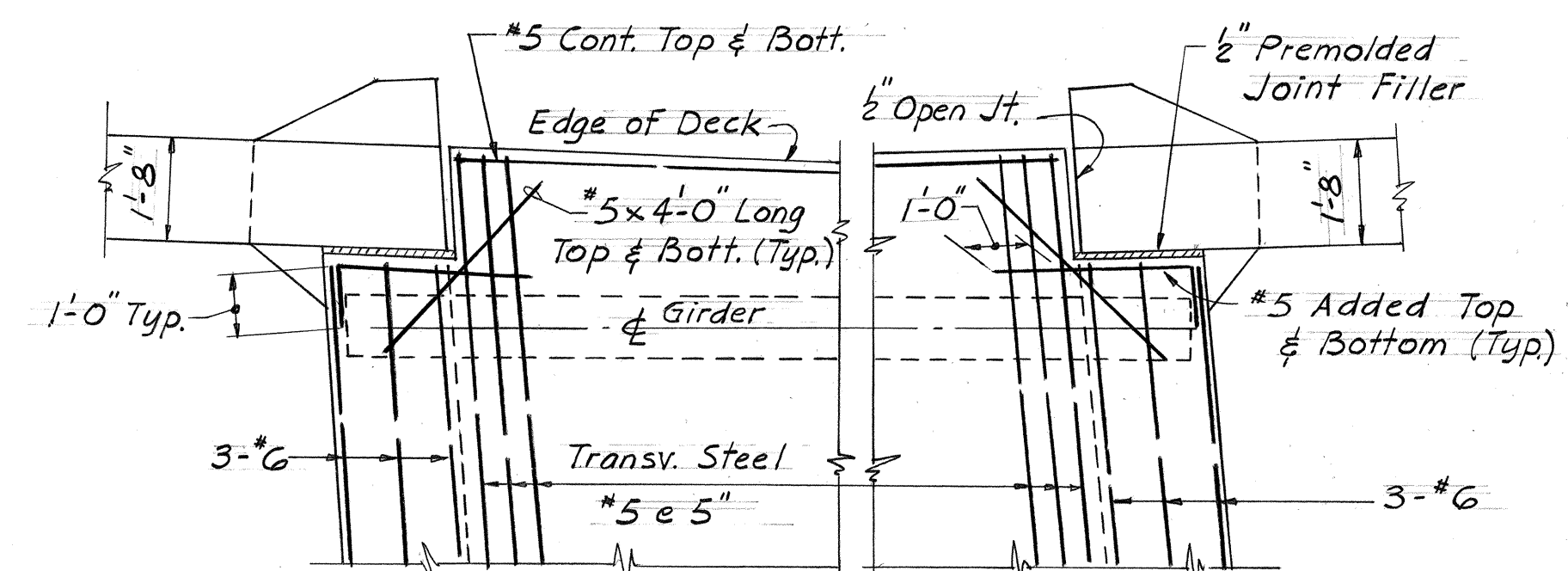
PRESTRESSED GIRDER
DROP PANEL DETAIL
No Scale



BRIDGE DECK SECTION
2" = 1'-0"



DETAIL 1
1" = 1'-0"

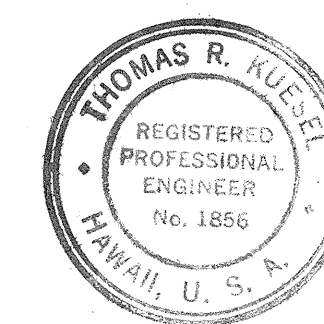


PARTIAL DECK PLAN AT ABUTMENT CORNERS
3/8" = 1'-0"

G I R D E R S C H E D U L E								
GIRDER MARK	TYPE②	HORIZONTAL SPAN LENGTH C. TO C. BRGS.	WEST ABUTMENT			EAST ABUTMENT		
			WORK POINT STA.①	OFFSET	DECK ELEV.	WORK POINT STA.①	OFFSET	DECK ELEV.
G-1	II _A	37.07'	RAMP "M" 22+07.11	10.00R	78.04	RAMP "M" 21+69.28	10.00R	73.04
G-2	↑	37.10'	RAMP "M" 22+06.10	1.05R	74.66	RAMP "M" 21+68.90	1.94R	73.63
G-3		37.14'	RAMP "M" 22+04.80	7.87L	75.23	RAMP "M" 21+68.20	6.10L	74.25
G-4		37.14'	RAMP "M" 22+03.21	16.80L	75.81	RAMP "M" 21+67.27	14.46L	74.87
G-5		37.08'	RAMP "F" 12+59.76	14.14R	76.39	RAMP "F" 12+21.97	12.83R	75.50
G-6	↓	37.05'	RAMP "F" 12+59.22	5.07R	77.10	RAMP "F" 12+21.92	4.42R	76.18
G-7	II _A	37.02'	RAMP "F" 12+58.69	4.00L	77.81	RAMP "F" 12+21.88	4.00L	76.84

① Work point is the intersection of centerline of prestressed girder and centerline of bearings.

② For Details of Girders, see Sheet 55.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

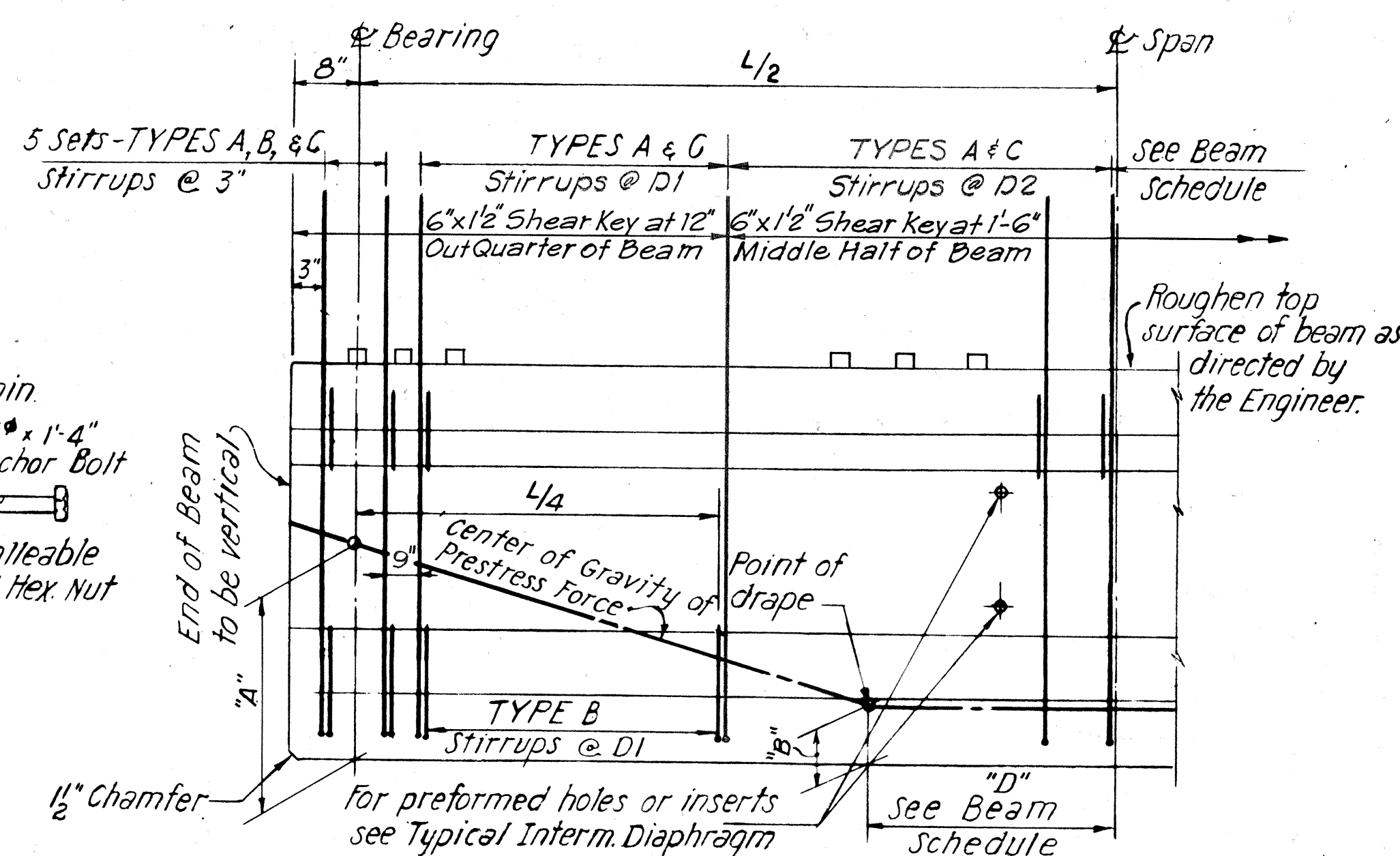
Thomas R. Kuesel

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HALAWA INTERCHANGE
STRUCTURE NO. 13
RAMP "F" & "M" OVER NORTH HALAWA STREAM
FRAMING PLAN, BEAM SCHEDULE,
DECK REINF. & DETAILS
PROJ. No. I-H-1(89)13 DATE: MAY 1971
SHEET No. 45 OF 53 SHEETS

209

NOTES FOR PRESTRESSED BEAMS

-
- Bend bars in field at required level*
- 1'-0"
- 1'-4"
- 2'-4" Cont.
- 1'-2"
- 2'-5" Cont.
- 3'-0"
- 1'-3"
- 6"
- 6"
- 6"
- 6"
- 6"
- 1'-6"
- 36" BEAM
TYPE II
- 1" = 1'-0"
- 1 Pair #4 Stirrups TYPE "C"
- 6"x1 1/2" Shear Key
- #4 Stirrups TYPE "A"
- #4 Stirrups TYPE "B"
- 3" Cont. bottom Chamfer (Typ)



See Deck Plans for Deck Reinforcing Details

Deck Slab

Prestressed Girder

1-#9 Thru Sleeve

2-#4

2-#6

DE & Sleeve

1'-0"

8"

8"

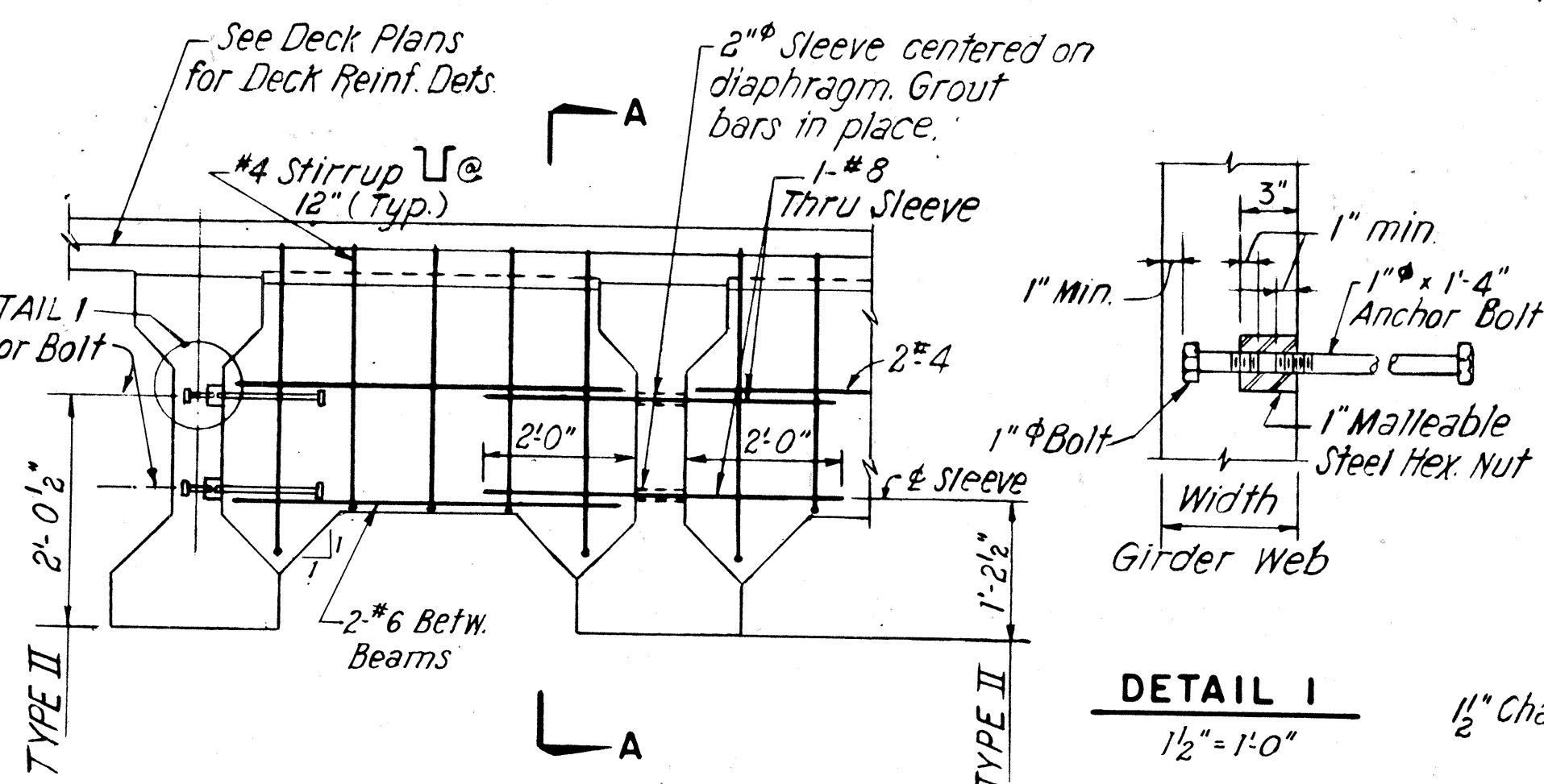
Type II

Constr. Jt.

SECTION A-A

NO SCALE

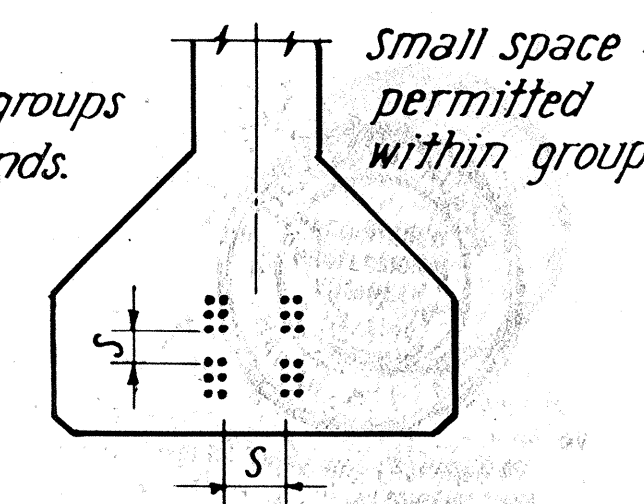
TYPICAL INTERMEDIATE DIAPHRAGM
No Scale



DETAIL
1 1/2" = 1'-0"

BUNDLING OF PRESTRESSING REINFORCEMENT	
ARRANGEMENT AND CLEARANCE FOR POST TENSIONED UNITS	ARRANGEMENT AND CLEARANCE FOR PRETENSIONED STRANDS
1. Horizontal clearance between units equals 2" min. 2. Units may be bundled vertically in groups of 3 maximum. 3. Vertical clearance between bundled units equals 3" min. 4. Approval of the Engineer is required for deviation.	1. Strands may be bundled in groups as shown or in groups consisting of a maximum of 6 strands and separated at the ends. 2. The minimum distance "S" between groups or individual strands is 2" for 2 strands. 3. "S" is measured between centers of adjacent strands. 4. Approval of the Engineer is required for deviation.

BUNDLING OF PRESTRESSING REINFORCEMENT	
ARRANGEMENT AND CLEARANCE FOR POST TENSIONED UNITS	ARRANGEMENT AND CLEARANCE FOR PRETENSIONED STRANDS
1. Horizontal clearance between units equals 2" min. 2. Units may be bundled vertically in groups of 3 maximum. 3. Vertical clearance between bundled units equals 3" min. 4. Approval of the Engineer is required for deviation.	1. Strands may be bundled in groups as shown or in groups consisting of a maximum of 6 strands and separated at the ends. 2. The minimum distance "S" between groups or individual strands is 2" for 2 strands. 3. "S" is measured between centers of adjacent strands. 4. Approval of the Engineer is required for deviation.



THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION

Thomas R. Kuntz

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
HALAWA INTERCHANGE
STRUCTURE NO. 13
RAMP "F" & "M" OVER NORTH HALAWA STREAM
PRESTRESSED BEAMS
PROJ. No. I-H-1(89)-13 DATE: MAY 1971
SHEET No. 53 OF 58 SHEETS