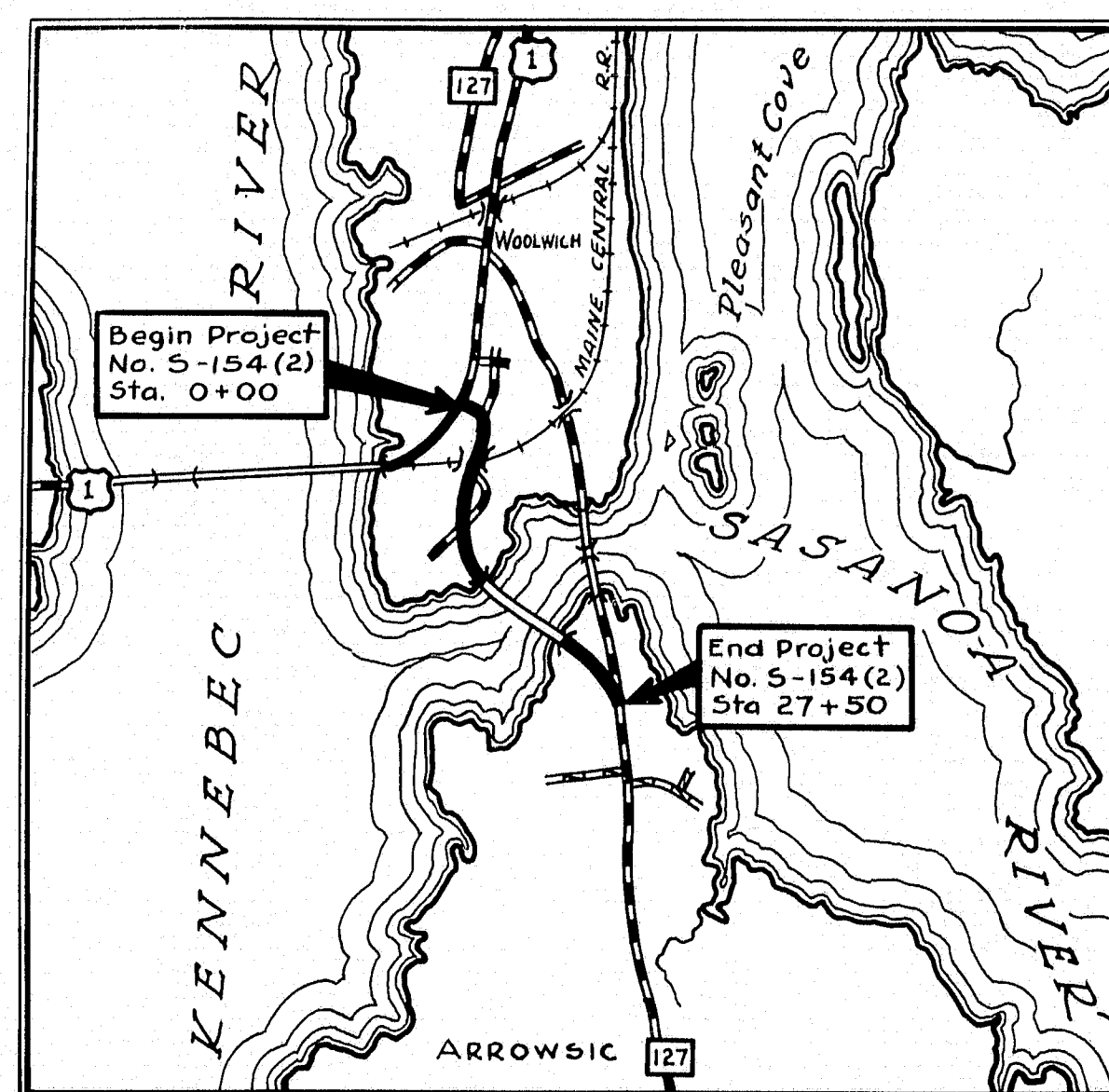


STATE OF MAINE
STATE HIGHWAY COMMISSION



ARROWSIC BRIDGE
OVER THE
SASANOA RIVER
BETWEEN THE TOWNS OF
ARROWSIC AND WOOLWICH
SAGadahoc COUNTY
FEDERAL AID SECONDARY PROJECT
NO. S-154(2)
TOTAL LENGTH 0.521 MILES



LOCATION MAP
SCALE 1/15,000

General Specifications

Payment for any necessary unwatering of foundation pits shall be included in the contract unit price for excavation, except piers 3 and 4 of the bridge where cofferdams are covered under items 4A and 4B.

Concrete Classification

Overpass abutment No.1 class B, piers 1 & 2 and abutment No.2 class A. Bridge abutment No.1 and piers 1 & 6 class A. Piers 2 & 5 and abutment No.2 class B. In piers 3 and 4 the seal concrete is class S and the remainder is class B. All superstructure concrete and rail on abutment No.2 is class A.

Loading - H 20-44

INDEX OF SHEETS

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| 2 | TYPICAL SECTIONS |
| 3-4 | PLAN AND PROFILE |
| 5-11 | CROSS SECTIONS |
| <u>OVERPASS</u> | |
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| 33 | ABUTMENT NO. 2 |
| 34 | FLOOR PLAN - SPANS 1 & 2 |
| 35 | FLOOR PLAN - SPANS 3,4,&5 |
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| 36A | NAVIGATION LIGHTING |

APPROVED:
MAINE STATE HIGHWAY COMMISSION

Harley B. Martin
CHAIRMAN

Harley B. Martin
CHIEF ENGINEER

RECOMMENDED FOR APPROVAL DATE
DISTRICT ENGINEER
BUREAU OF PUBLIC ROADS
GENERAL SERVICES ADMINISTRATION

APPROVED DATE
DIVISION ENGINEER
BUREAU OF PUBLIC ROADS
GENERAL SERVICES ADMINISTRATION

48-60

10'-0"

6'-10"

SHOULDER GRADE AT CURB

TRANSITIONAL SHOULDER WARPING 4'-0"±

BAFFLE WALLS

2" PREMIXED GRAVEL SURFACE

2'X10" PLANK CURB

2'X4'X36" HEMLOCK OR SPRUCE POSTS. DO NOT FASTEN TO SLUICE IN ANY WAY.

5'-0" MAX.

1'X8"X30" BOARD TO OVERLAP SECTION JOINTS ON SIDES 16"

2'X10"X40" HEMLOCK OR SPRUCE PLANK TO OVERLAP SECTION JOINTS 5"

6'-0"

1'X6" PLANK

10'-0"

2'X10" HEMLOCK OR SPRUCE PLANK BAFFLE WALL

2'X4" BRACE

SHOULDER GRADE AT CURB

16'X6"-10' #28 GALVANIZED IRON BENT OVER UPPER SIDE OF BAFFLE WALL 6" AND EXTENDING OVER APRON 8"

8'X24" #28 GALVANIZED IRON NAILED TO OUTLET OF APRON AND OVERLAPPING 6"

2'X4" BRACES

1" AIR SPACE MIN.

PLANK CURB & PLANK APRON

NO SECTION SHALL BE LESS THAN 8 FEET LONG, WHERE TOTAL LENGTH OF SLUICE IS 15 FEET OR LESS, IT SHALL BE CONSTRUCTED IN ONE PIECE. APRON, SLUICE AND POSTS TO BE CREOSOTED. MATCHED LUMBER TO BE USED ON BOTTOM OF APRON AND SLUICE.

[illegible]

9' MAINE S-154 (2) 1A 36

PLATE WASHER "C"

ANCHOR ROD ASSEMBLY

CHANNEL ANCHOR

REINFORCED CONCRETE ANCHOR 30"X30"X9" WITH 4 #8 BARS EACH WAY, OR A GRANITE BLOCK 30X30X9"

PLATE WASHER "A"

OFFSET BRACKET

GROUND LINE

16'-0"

16'-8"

SIDE VIEW INTERMEDIATE POST

10"

16'-0"

5'-0"

1'-0"

6'-0"

5'-0"

4'-5"

GROUND LINE

5'-0"

4'-0"

2'-0"

3'-5"

SIDE VIEW ANCHOR POST

FRONT VIEW INTERMEDIATE POST

FRONT VIEW ANCHOR POST

HEX NUT

2" R.H.T.H.D.

5" L.H.

4" R.H.

22 R.H.

22 L.H.

1'-0"

8"

DETAIL OF CABLE END AT BRIDGE.

3" X 3 3/8" BLACK MACHINE BOLTS

18"

16"

4"

2 1/4" HOLES

9"

9"

FRONT VIEW

CHIO AT IS3LB

SIDE VIEW

GUARD RAIL BRIDGE CONNECTION

STEEL POSTS (PAINTED)

3/8" HOLES EXCEPT AS NOTED.

CHANNEL ANCHOR (PAINTED)

2'X10' PLANK CURB
SHOULDER GRADE AT CURB
TRANSITION 7'-0"

2'X4'X2'-6" WOOD STAKES

2'X10' HEMLLOCK OR SPRUCE PLANK BAFFLE WALL.

BOTH FLANGES TO BE PUNCHED WITH 2-5" HOLES, 3'-0" TO C IN THE CENTER OF EACH 2'-0" SECTION.

SLUICE CONNECTION AT PLANK CURB.

SECTION A-A

BITUMINOUS COATED HALF CIRCLE SLUICE, 18"

10"

1/2" GAP

2'X4'X2'-6" WOOD STAKES

5" SPIKES

SLUICE TO BE IN MULTIPLES OF 2'-0" ELEVATION

AREA = 0.71 SQ. YDS. PER LIN. FT.

AREA = 0.44 SQ. YDS. PER LIN. FT.

AREA = 0.67 SQ. YDS. PER LIN. FT.

AREA = 0.50 SQ. YDS. PER LIN. FT.

GRAVEL BED FOR GROUTED STONE GUTTER ONLY.

	4-0" GUTTER	6-0" GUTTER
2" SOD PER 100 LIN. FT.	4.444 SQ. YDS.	66.6669 YDS.
4" LOAM PER 100 LIN. FT.	4.944 QY.YDS.	7.41 QY.YDS.

[illegible]

The image contains three technical drawings of concrete curb and gutter cross-sections. The leftmost drawing is labeled 'STANDARD' and shows a curb with a top width of 6 inches, a base width of 12 inches, and a height of 18 inches. It includes dimensions for the curb's slope (1/2 inch per foot), the gutter's depth (4 inches), and the location of dowels (3 inches from the curb face and 6 inches from the gutter edge). The middle drawing is a side view showing the curb's profile with a height of 6 inches and a base width of 12 inches. It includes dimensions for the curb's slope (1/2 inch per foot), the gutter's depth (4 inches), and the location of dowels (3 inches from the curb face and 6 inches from the gutter edge). The rightmost drawing is labeled 'DRIVEWAY' and shows a curb with a top width of 6 inches, a base width of 12 inches, and a height of 18 inches. It includes dimensions for the curb's slope (1/2 inch per foot), the gutter's depth (4 inches), and the location of dowels (3 inches from the curb face and 6 inches from the gutter edge).

STANDARD

CONSTRUCTION & EXPANSION JOINTS, THE SAME AS FOR CONCRETE CURB & GUTTER.

DOWELS $\frac{3}{4} \times 2'-0"$ LONG.
REINFORCING STEEL $\frac{1}{2} \times 19'-0"$ LONG.

DRIVEWAY

Technical drawing of a concrete curb and gutter section. The drawing shows a cross-section of a curb with a top width of 12 inches and a base width of 24 inches. The curb height is 6 inches. The gutter is 18 inches wide at the top and 10 inches wide at the base. The gutter is reinforced with 'A' BARS and 'B' BARS. The drawing also shows a plan view of the curb and gutter section, indicating a 2-foot wide curb and a 10-foot wide gutter. The drawing is labeled with dimensions and reinforcement details.

CONSTRUCTED IN 2'-0" SECTIONS. CONSTRUCTION JOINTS TO BE PAINTED WITH MATERIAL. EXPOSITION JOINTS EVERY 4'-0" THICK PREMO. SHALL BE PLACED IN EACH EXPOSITION JOINT.

1. 11'-0" LONG. 'B' BARS 3'-4" 6'-0" LONG. PLACE 4'-0" BARS 1'-3" FROM THE SECTION AND THEN SPACE THEM 3'-6" O.C. THE REST OF THE 11'-0" LONG, SPACED 1'-0" O.C. O.C.

1. ASS 3" CONCRETE 5.49 CUYDS. PER 100 LIN. FT.

TEEL 339.33 LBS. PER 100 LIN. FT.

The image contains two technical drawings of curb and channel layouts. The left drawing is labeled 'STANDARD' and shows a cross-section of a concrete pavement with a curb on the right side. Dimensions include a total width of 7" for the curb, with 3" and 4" segments. A channel is shown with a depth of 1/4" and a width of 1/2". A note states: 'UNLESS OTHERWISE NOTED ON PLAN.' The right drawing is labeled 'DRIVEWAY' and shows a similar cross-section but with a different curb profile. Dimensions include a total width of 7" for the curb, with 3" and 4" segments. A channel is shown with a depth of 1/4" and a width of 1/2". A note states: 'UNLESS OTHERWISE NOTED ON PLAN.'

STANDARD

DRIVEWAY

CONCRETE PAVEMENT

CONCRETE PAVEMENT

UNLESS OTHERWISE NOTED ON PLAN.

UNLESS OTHERWISE NOTED ON PLAN.

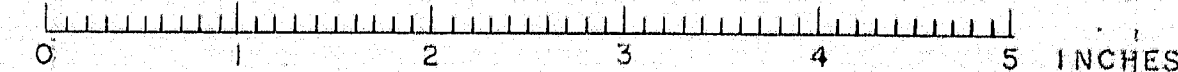
EXPANSION & DUMMY JOINTS IN CURB SHALL BE LOCATED AT SAME LOCATION AS EXPANSION & DUMMY JOINTS IN CONCRETE PAVEMENT.

DOWELS SHALL BE SPACED 1'-0" O.C. FIRST DOWEL TO BE PLACED 6" FROM END OF JOINT.

CONCRETE (STANDARD) 117 C.Y./S. PER 100 LIN. FT.

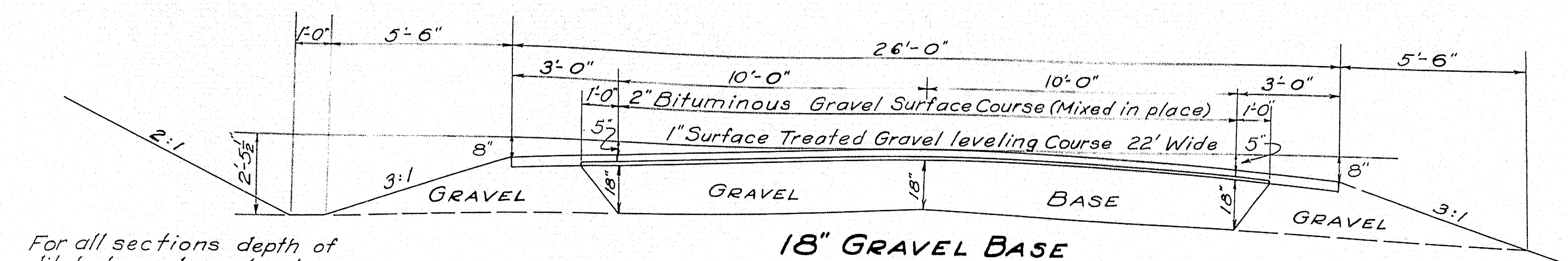
STEEL (STANDARD) 55.5 LBS. PER 100 LIN. FT.

The image contains two technical drawings. The left drawing is a cross-section of a plank, showing a 12:1 slope on the left side. The plank has a minimum width of 6 inches and a thickness of 1/2 inch. The right drawing is a side view of the connection between an intermediate panel and an end panel. It shows a 6-inch x 8-inch x 16-inch plank with a 1/2-inch chamfer. The dimensions include 8'-0" for the intermediate panel, 7'-6" for the end panel, and 6" for the plank width. The drawings are labeled "INTERMEDIATE PANEL" and "END PANEL".



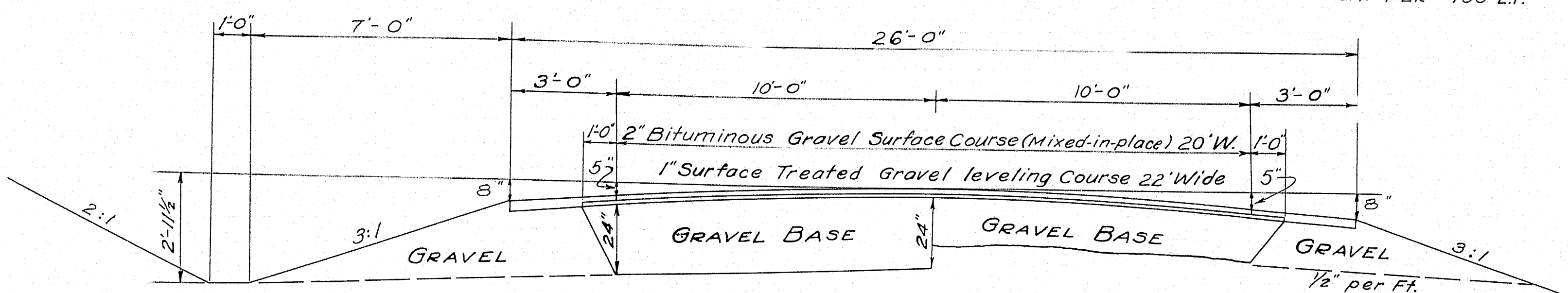
STANDARD SECTIONS FOR PROJECT No S-154(2) BITUMINOUS GRAVEL SURFACE

DIV. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	S-154(2)	2	32



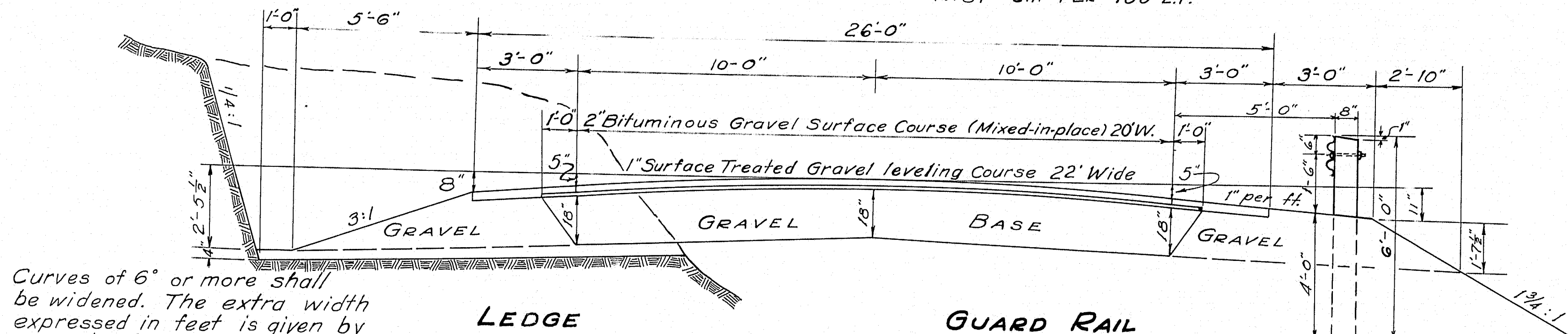
For all sections depth of ditch depends on local conditions. Depth of bases as shown may be changed to meet local conditions.

2" Bituminous Gravel Surface Course 20' Wide Mixed-in-place Method	12.35	C.Y. PER 100 L.F.
1" Surface Treated Gravel leveling Course 22' Wide	6.79	C.Y. PER 100 L.F.
18" Gravel Base Course	102.06	C.Y. PER 100 L.F.
24" Gravel Base Course	121.50	C.Y. PER 100 L.F.
1-3" Gravel Surface Shoulder	160.39	C.Y. PER 100 L.F.
	2.47	C.Y. PER 100 L.F.

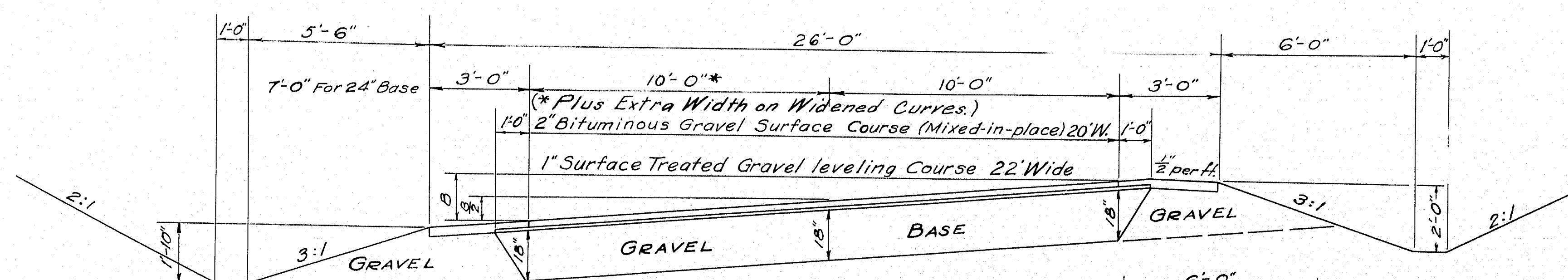


Where a 2:1 back slope is not practicable use a suitable slope.

15" Gravel Shoulder One Side	26.31	C.Y. PER 100 L.F.
18" Gravel Shoulder One Side	29.73	C.Y. PER 100 L.F.
24" Gravel Shoulder One Side	47.84	C.Y. PER 100 L.F.



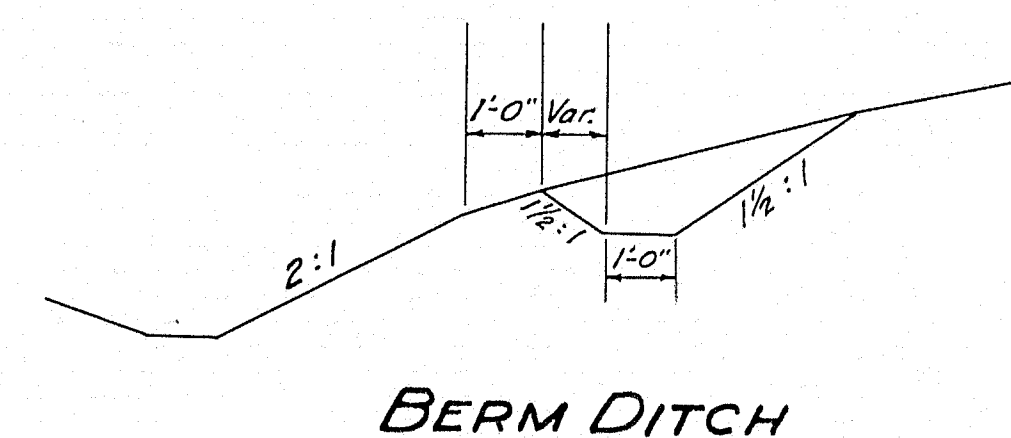
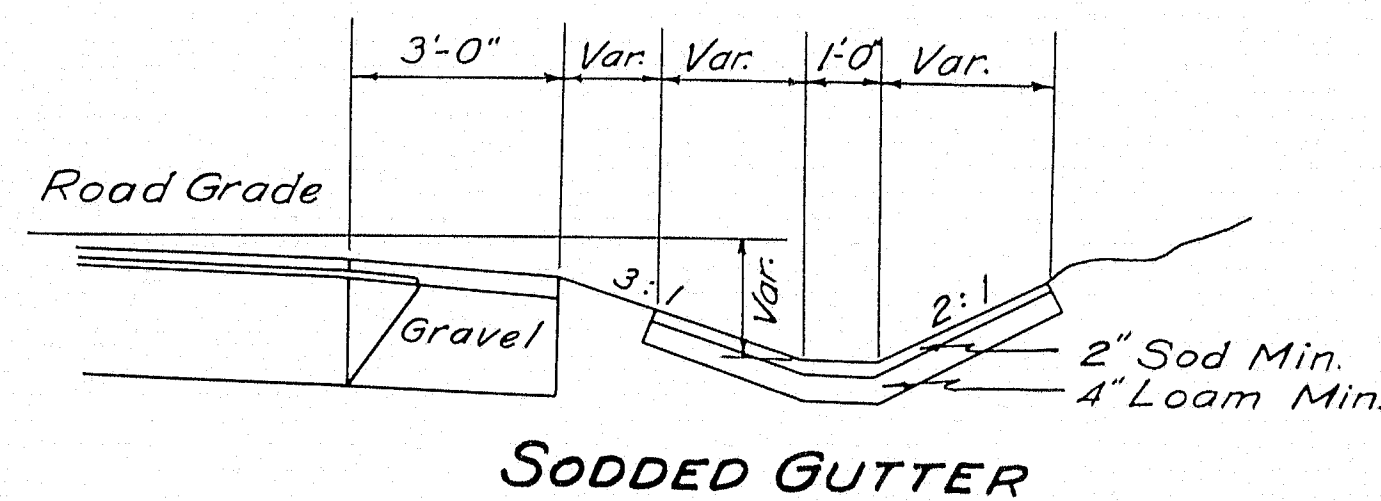
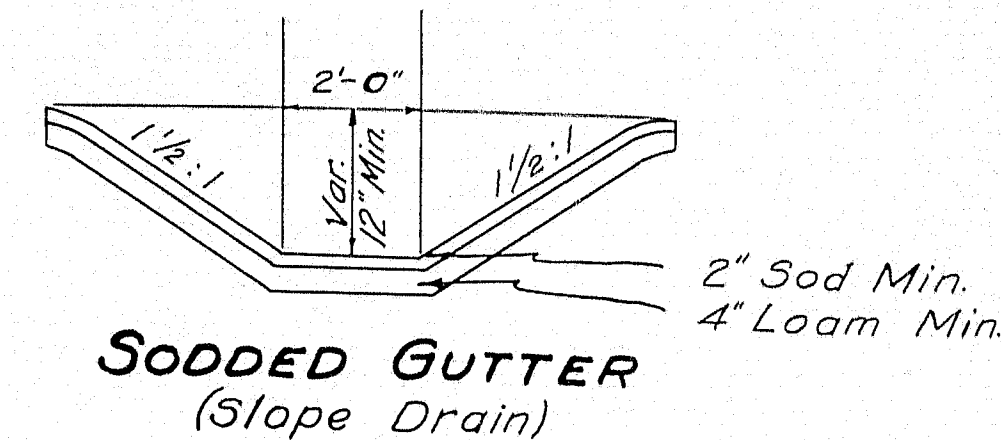
Curves of 6° or more shall be widened. The extra width expressed in feet is given by Formula $\frac{R}{10} + 2$.



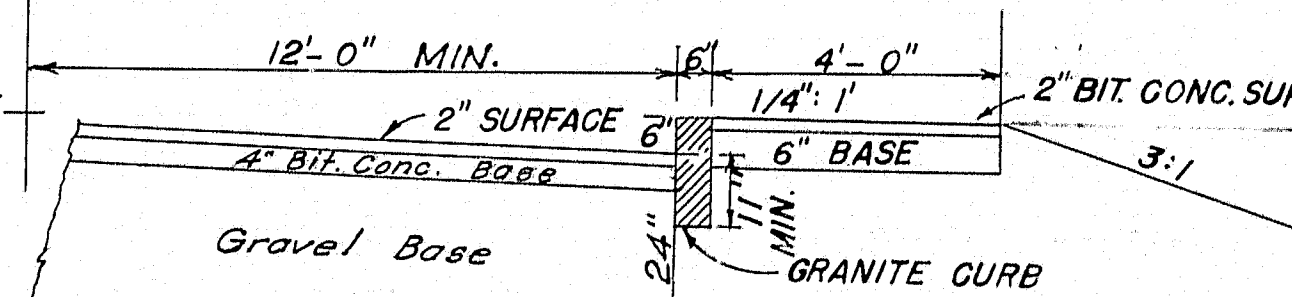
2" Bituminous Gravel Surface Course 18' Wide Mixed-in-place Method	12.35	C.Y. PER 100 L.F.
1" Surface Treated Gravel leveling Course 20' Wide	6.79	C.Y. PER 100 L.F.
15" Gravel Base Course	97.22	C.Y. PER 100 L.F.
18" Gravel Base Course	116.67	C.Y. PER 100 L.F.
24" Gravel Base Course	155.56	C.Y. PER 100 L.F.
1-3" Gravel Surface Shoulder	2.47	C.Y. PER 100 L.F.

Curves of 1° or more shall be superelevated. 5° equals degree of curve x3 with a minimum of 10° super-elevation. Maximum super-elevation equals 1" per foot width of pavement. All curves to have full super-elevation at approximately 50' onto curve from P.C. and P.T. with a runoff of 150' unless otherwise specified.

GUARD RAIL ON OUTSIDE OF SUPERELEVATED CURVE



GRANITE EDGING



SIDEWALK & GRANITE CURB
6" BASE COURSE 4' WIDE = 7.41 C.Y. PER 100 L.F.
2" BIT. CONC. 4' WIDE = 4.52 TONS PER 100 L.F.

ROADWAY
STA. 0+00 to 1+00
2" BIT. CONCRETE SURFACE
4" BIT. CONCRETE BASE

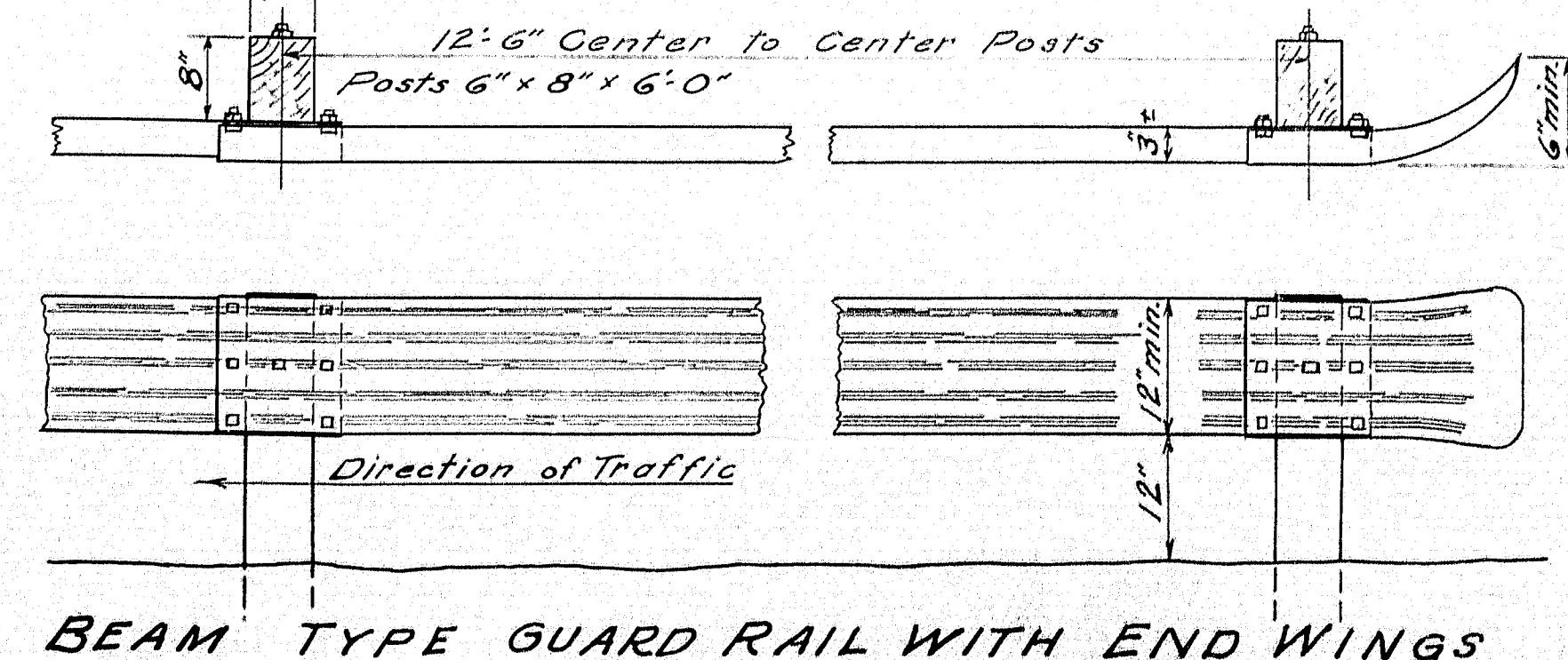
Station	Station	Type
0+00	2+50	24"
2+50	3+30	18"
3+30	4+40	18"
4+40	5+35	18"
5+35	6+25	18"
6+25	7+50	24"

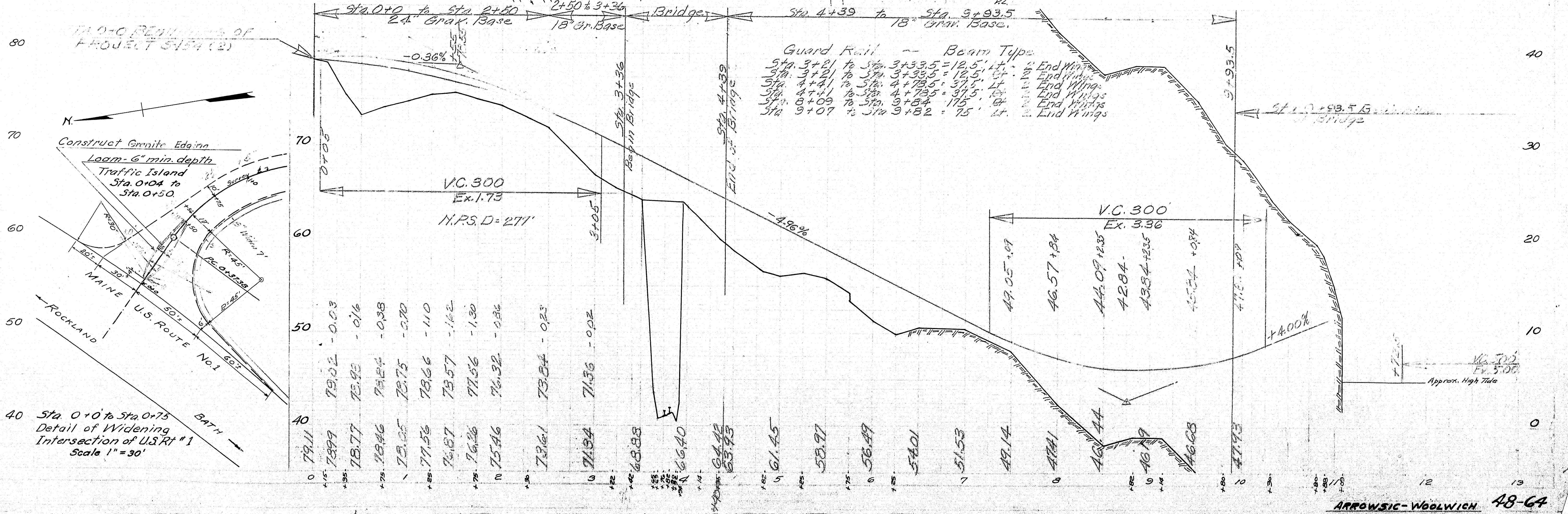
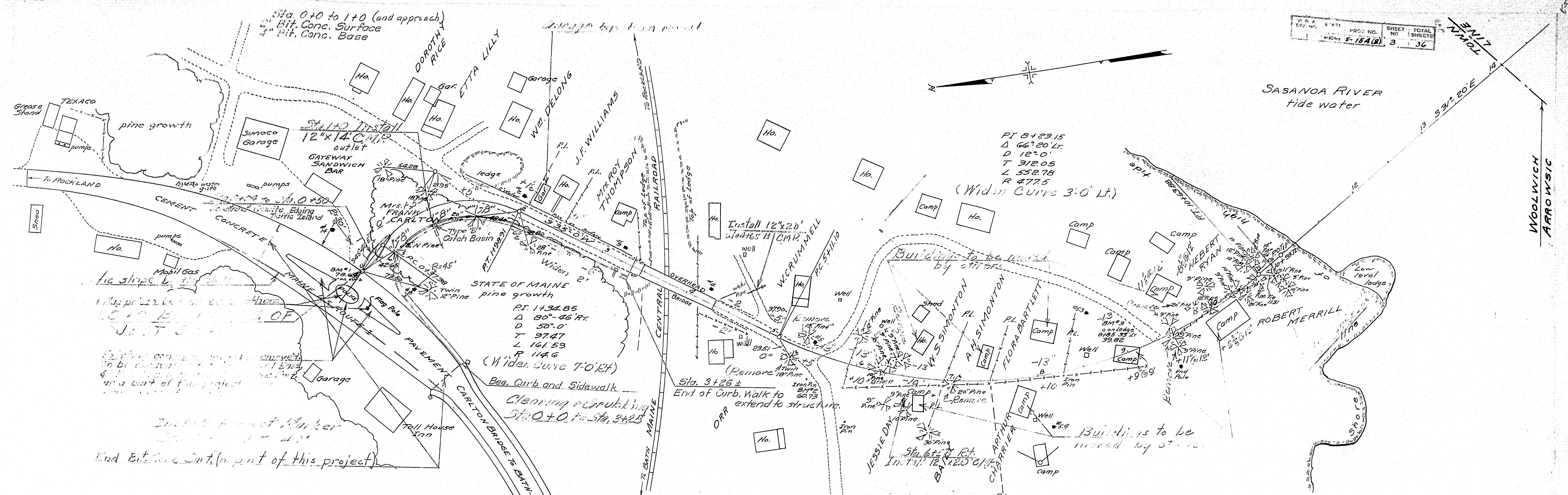
ESTIMATED HIGHWAY QUANTITIES

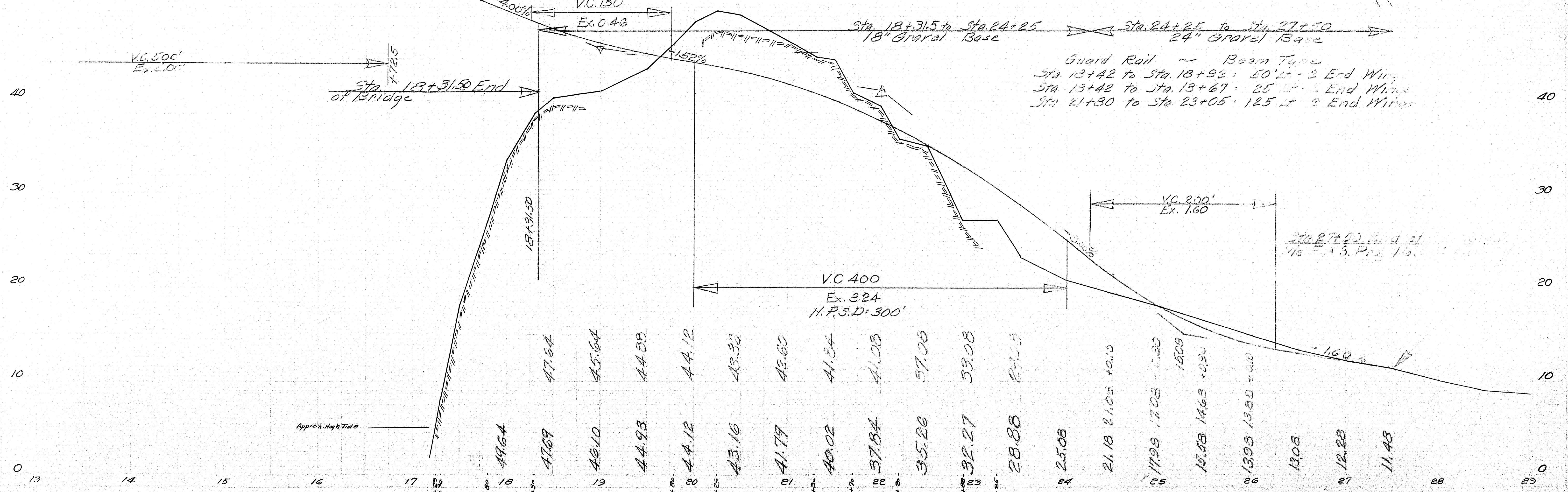
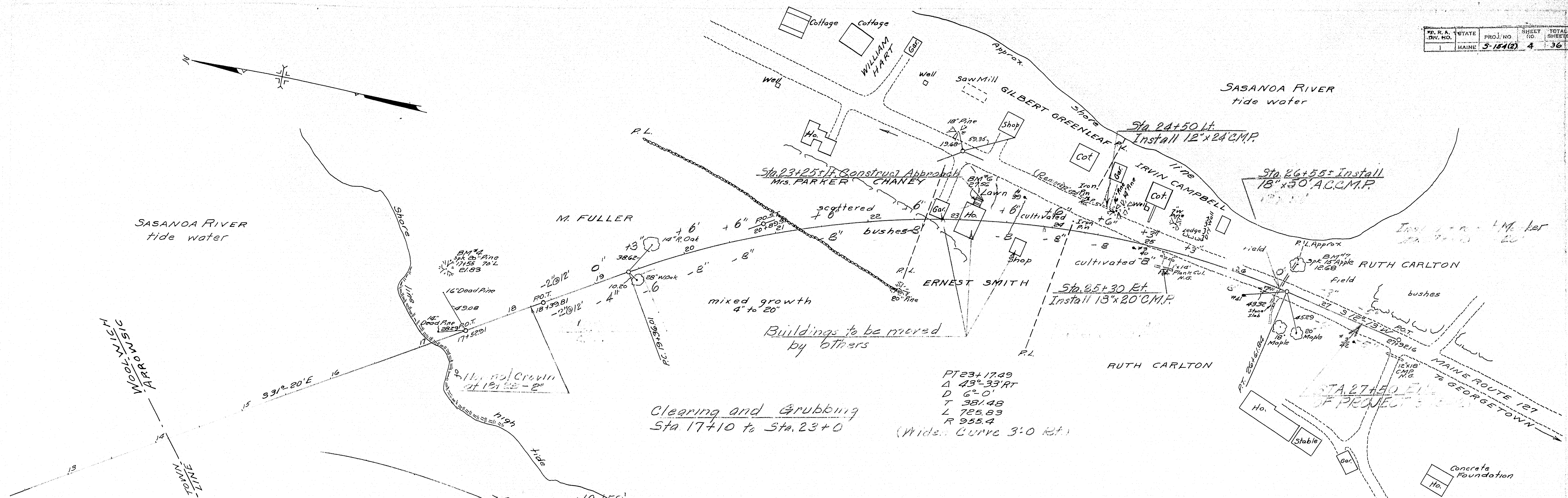
ITEM	DESCRIPTION	QUANTITY	UNIT
11	Cleaning and Grubbing	1	Acre
12-A	Earth Excavation	3000	C.Y.
12-B	Rock Excavation	3750	C.Y.
12-E	Trees Removed	12	Each
13	Excavation for Structures	40	C.Y.
14	Rock Excav. for Structure	10	C.Y.
17-A	Common Borrow	38.5	C.Y.
17-B	Gravel Borrow	3,200	C.Y.
27	Bit. Conc. Base Cs.	120	Tons
28-A	Leveling Mixture	15	Tons
33-A	Surface Treated Gravel	250	C.Y.
33-B	Bituminous Material	200	Gals.
34-A	Bit. Gravel Surface	250	C.Y.
34-B	Bituminous Material	150	Gals.
37-A	Bituminous Conc. Surface	45	Tons
47C	12" Gravel Base	78	L.F.
47-E	12" Gravel Base	78	L.F.
47-F	12" Gravel Base	78	L.F.
47-G	12" Gravel Base	78	L.F.
47-H	12" Gravel Base	78	L.F.
47-I	12" Gravel Base	78	L.F.
47-J	12" Gravel Base	78	L.F.
47-K	12" Gravel Base	78	L.F.
47-L	12" Gravel Base	78	L.F.
47-M	12" Gravel Base	78	L.F.
47-N	12" Gravel Base	78	L.F.
47-O	12" Gravel Base	78	L.F.
47-P	12" Gravel Base	78	L.F.
47-Q	12" Gravel Base	78	L.F.
47-R	12" Gravel Base	78	L.F.
47-S	12" Gravel Base	78	L.F.
47-T	12" Gravel Base	78	L.F.
47-U	12" Gravel Base	78	L.F.
47-V	12" Gravel Base	78	L.F.
47-W	12" Gravel Base	78	L.F.
47-X	12" Gravel Base	78	L.F.
47-Y	12" Gravel Base	78	L.F.
47-Z	12" Gravel Base	78	L.F.

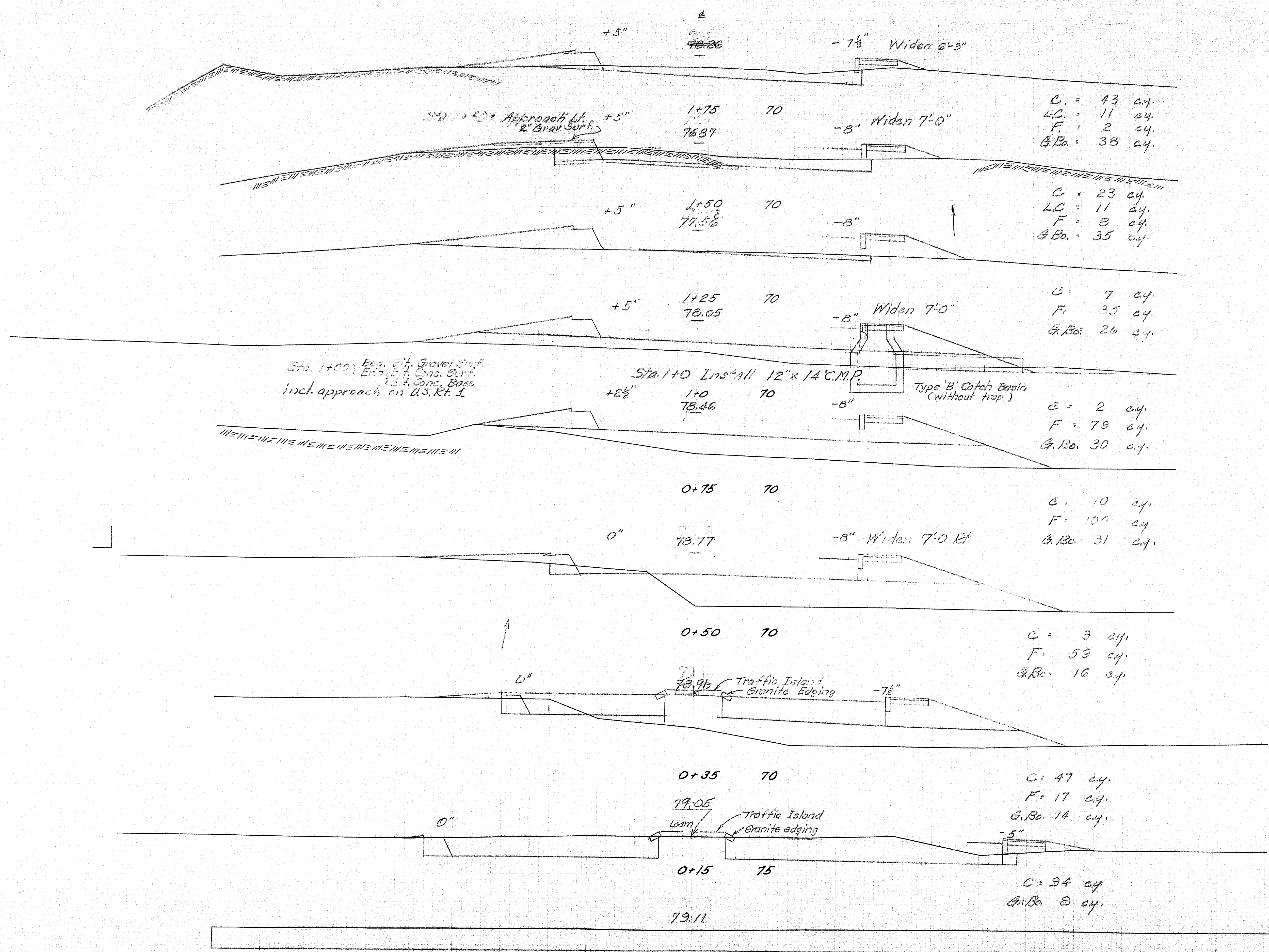
CULVERT SCHEDULE

STATION	SIZE	TYPE	REMARKS
1+00	12" x 14"	C.M.P.	See Note
4+65	12" x 20"	C.M.P.	See Note
24+50	12"		
13			







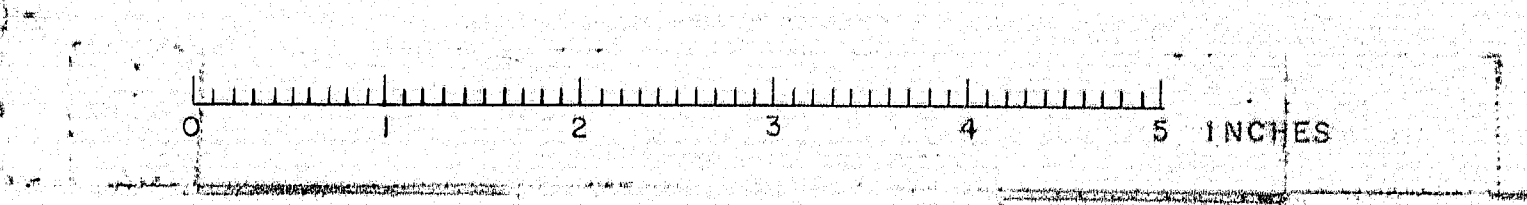


Sta. 0+0 Beg. Bit. Conc. Surf. 4" Bit. Conc. Base

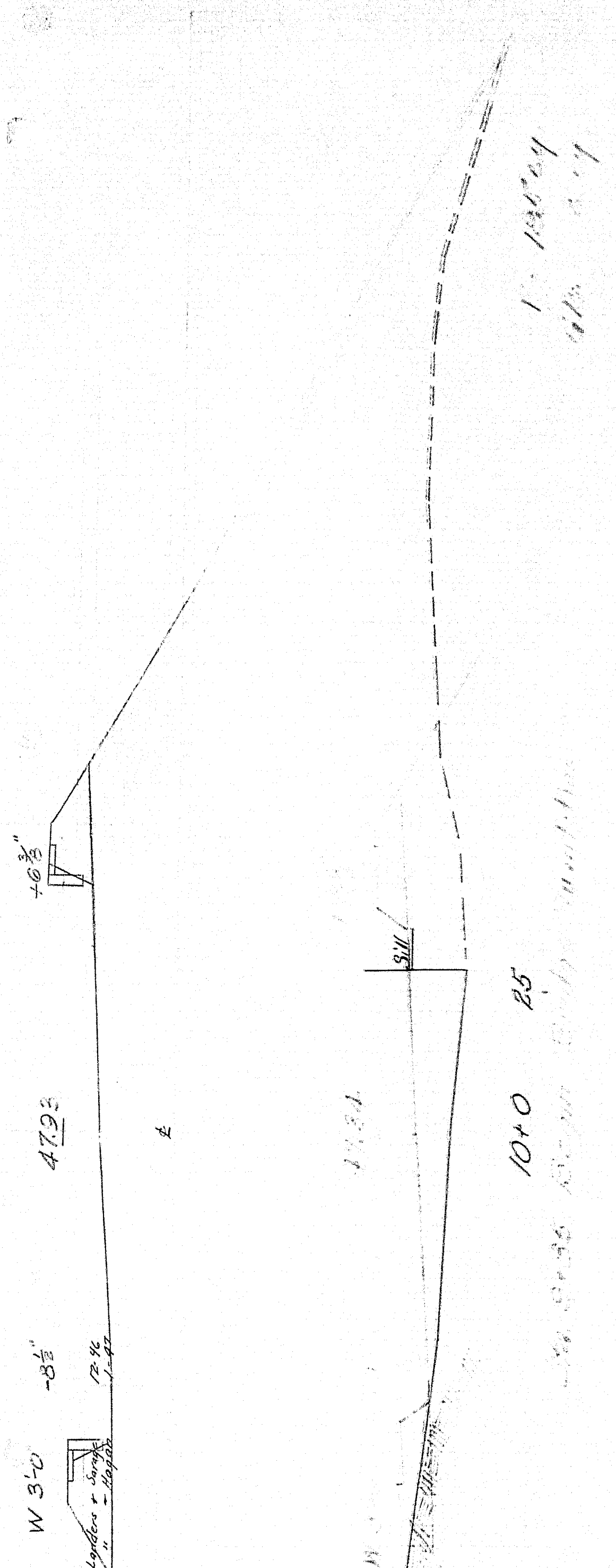
Sta. 0+0 Begin 24" Gravel Base
Sta. 0+0 Beginning of Proposed Me. F.A.S. Proj. S-154(2)

Begin Sidewalk and Granite Curb at end of Sidewalk on Carlton Bridge

12-46
1-67
Landscape & Grange
" " " " " "



Atlantic - Woolwich



Sta. 9+82 Lt. End
Guard Rail - Beam Type

Sta. 9+84 Rt. End
Guard Rail - Beam Type

F: 836 cy
G.B.: 17 cy.

F: 611 cy.
G.B.: 20 cy.

F: 353 cy.
G.B.: 18 cy.

F: 356 cy.
G.B.: 18 cy.

Sta. 8+09 Rt. Begin
Guard Rail - Beam Type

F: 456 cy.
G.B.: 26 cy.

LC: 20 cy.
F: 178 cy.
G.B.: 28 cy.

LC: 62 cy.
F: 25 cy.
G.B.: 29 cy.

LC: 21 cy.
F: 84 cy.
G.B.: 27 cy.

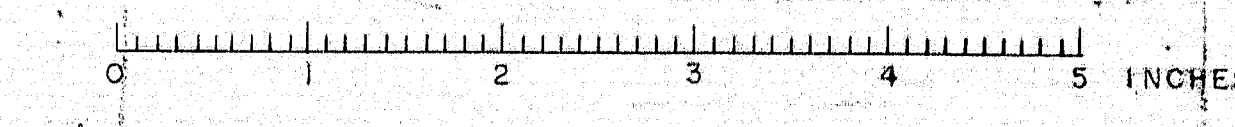
F: 118 cy.
G.B.: 13 cy.

F: 113 cy.
G.B.: 13 cy.

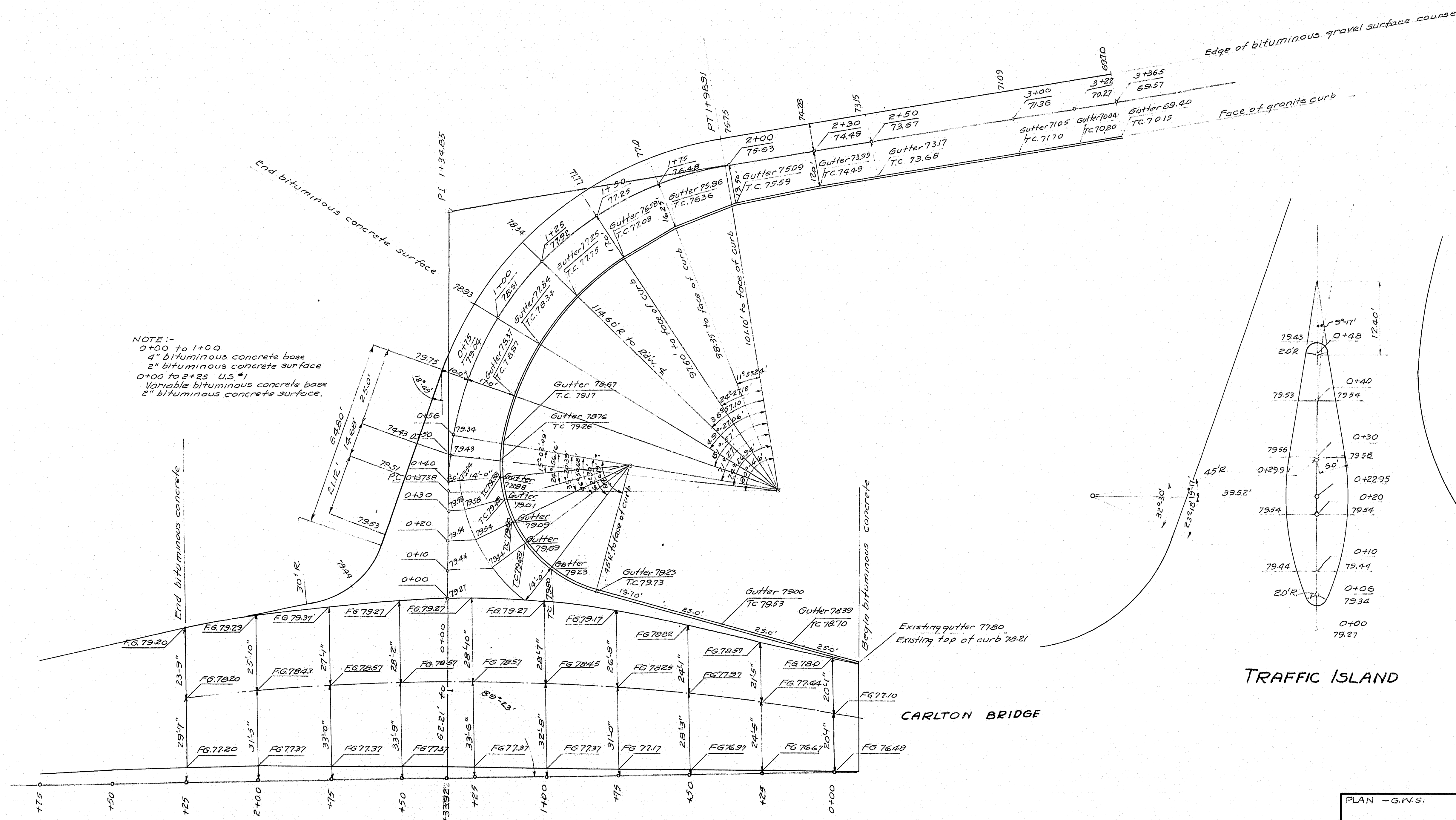
F: 142 cy.
G.B.: 13 cy.

F: 121 cy.
G.B.: 13 cy.

F: 113 cy.
G.B.: 14 cy.



U.S. 1 TO WISCASSET



TRAFFIC ISLAND

CARLTON BRIDGE

PLAN - G.K.S.
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
ARROWSIC BRIDGE
OVER
SASANOA RIVER
BETWEEN THE TOWNS OF
ARROWSIC & WOOLWICH
SAGadahoc COUNTY
FIELD PLAN OF INTERSECTION 0+00
SHEET 78 OF 36 AUGUSTA, MAINE SEPT. 1950.

London - 8 days 12-45
London - 8 days 1-45

P. R. A.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	5-1546	8	36

11+0 10

10+88 15

10+80 15

10+50 20

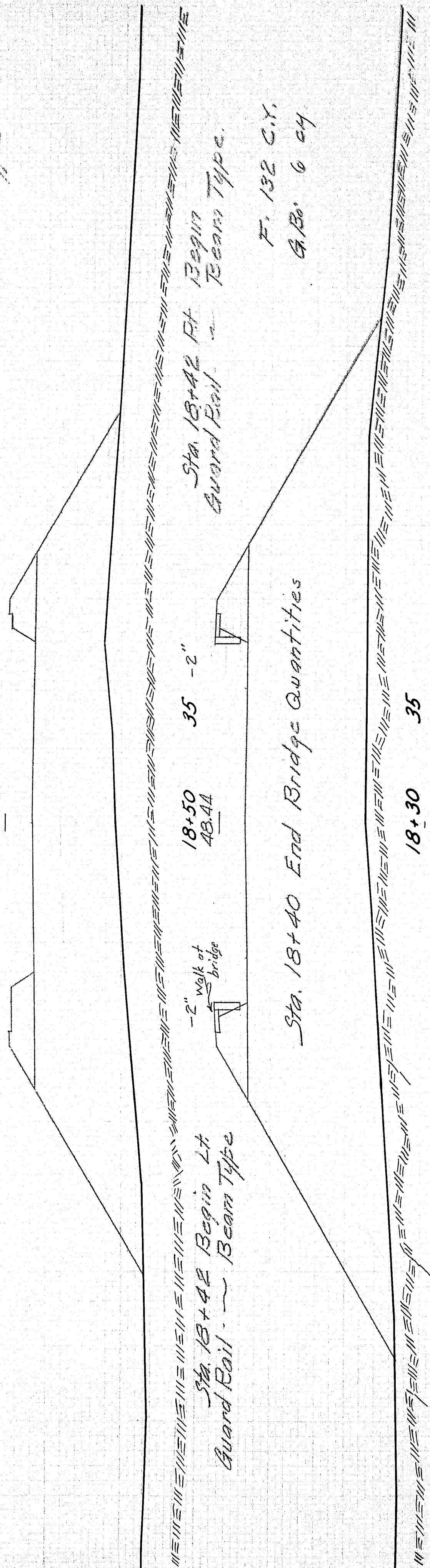
10+30 20

Arrowsic - Woolwich 48-71

0 1 2 3 4 5 INCHES

47.59

47.59



18+50 43.44

35' - 2"

-2' width of bridge

Sta. 18+40 End Bridge Quantities

F. 132 C.Y.
G.B. 6 cy

18+0 30

17+80 25

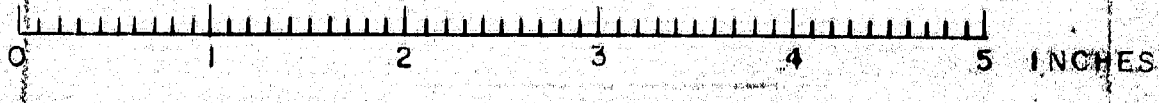
17+50 13

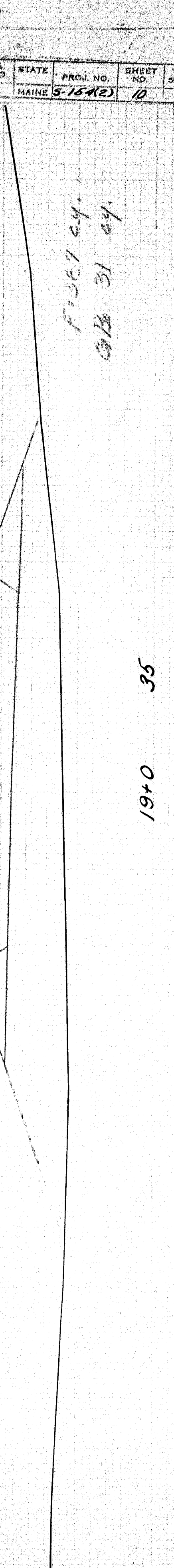
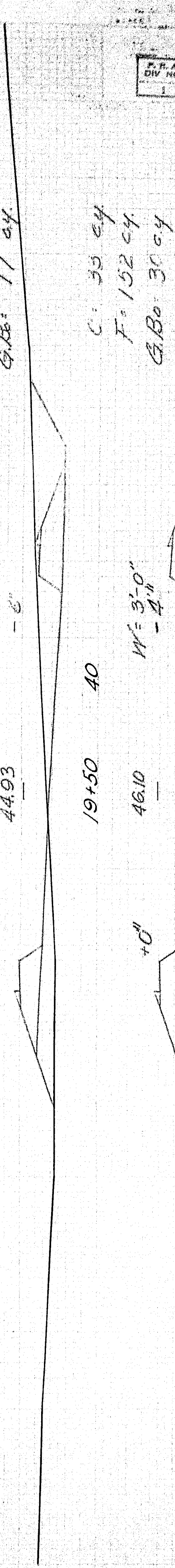
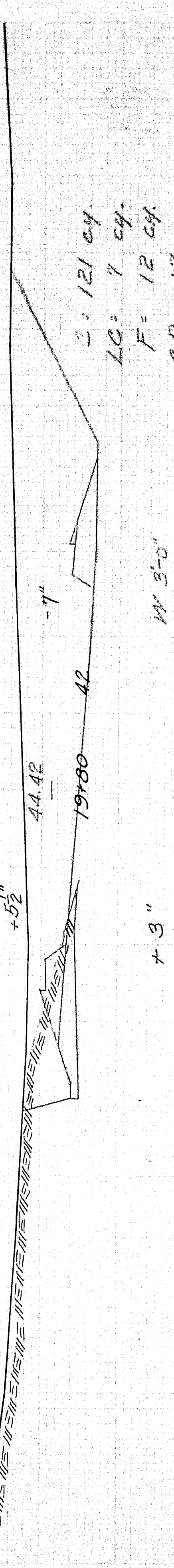
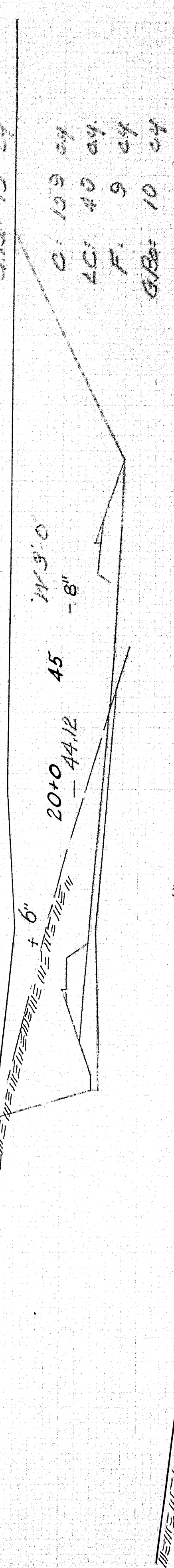
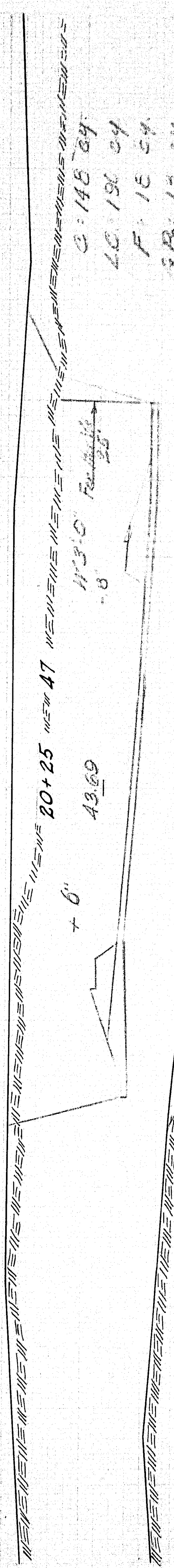
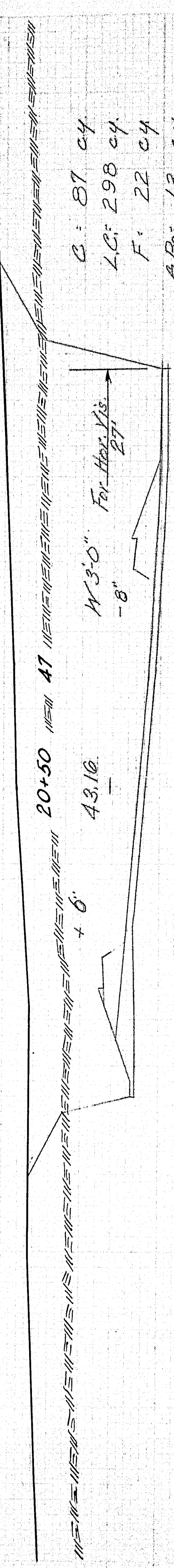
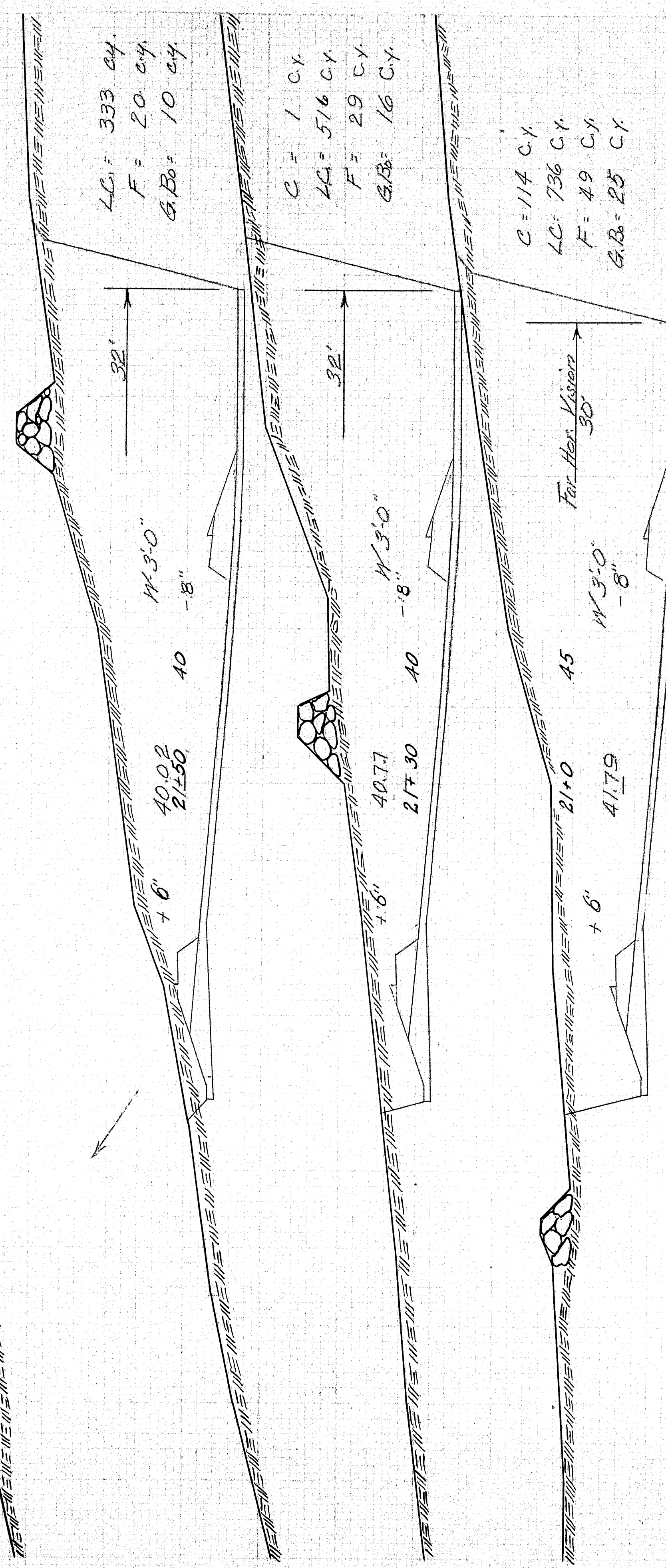
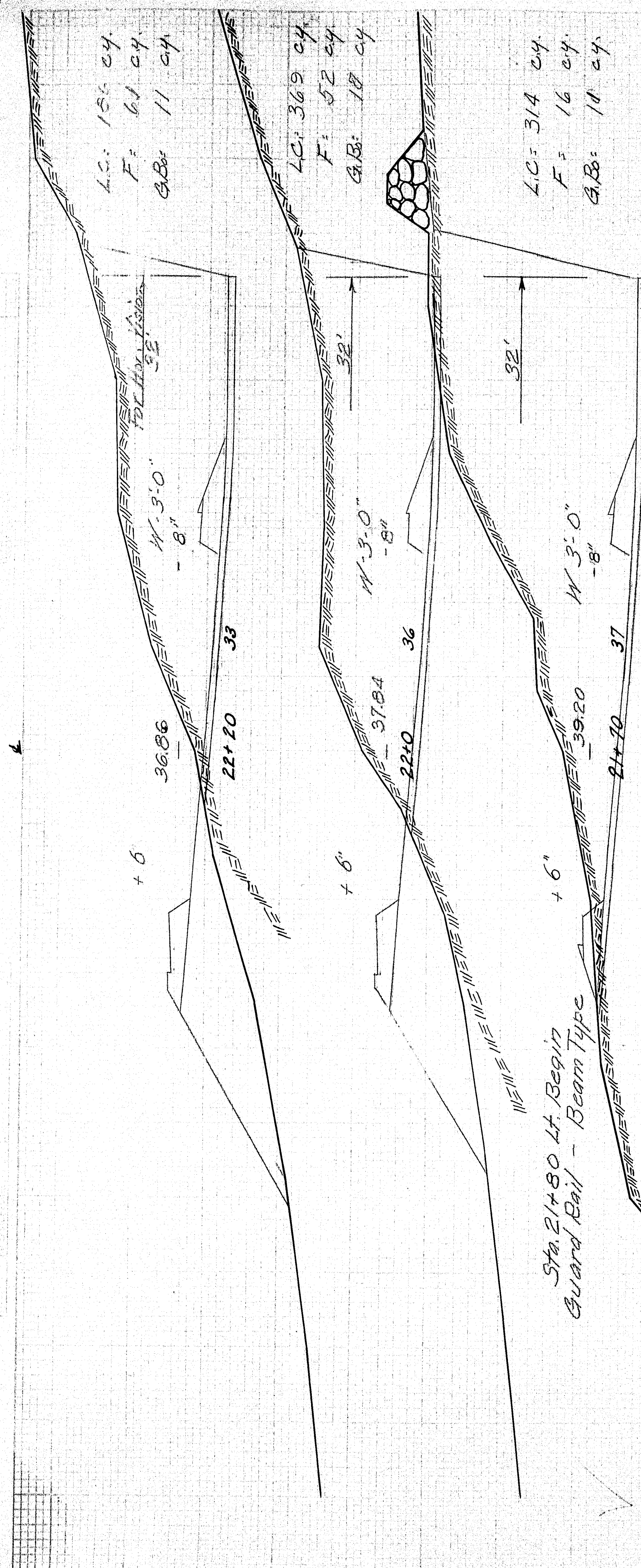
17+30 5

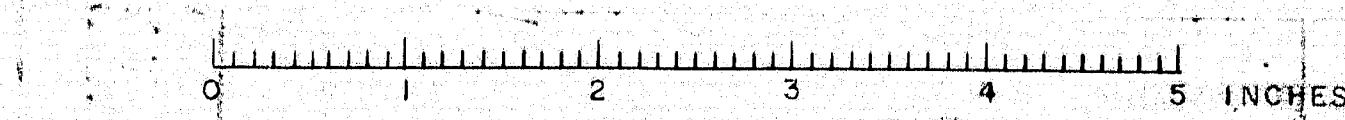
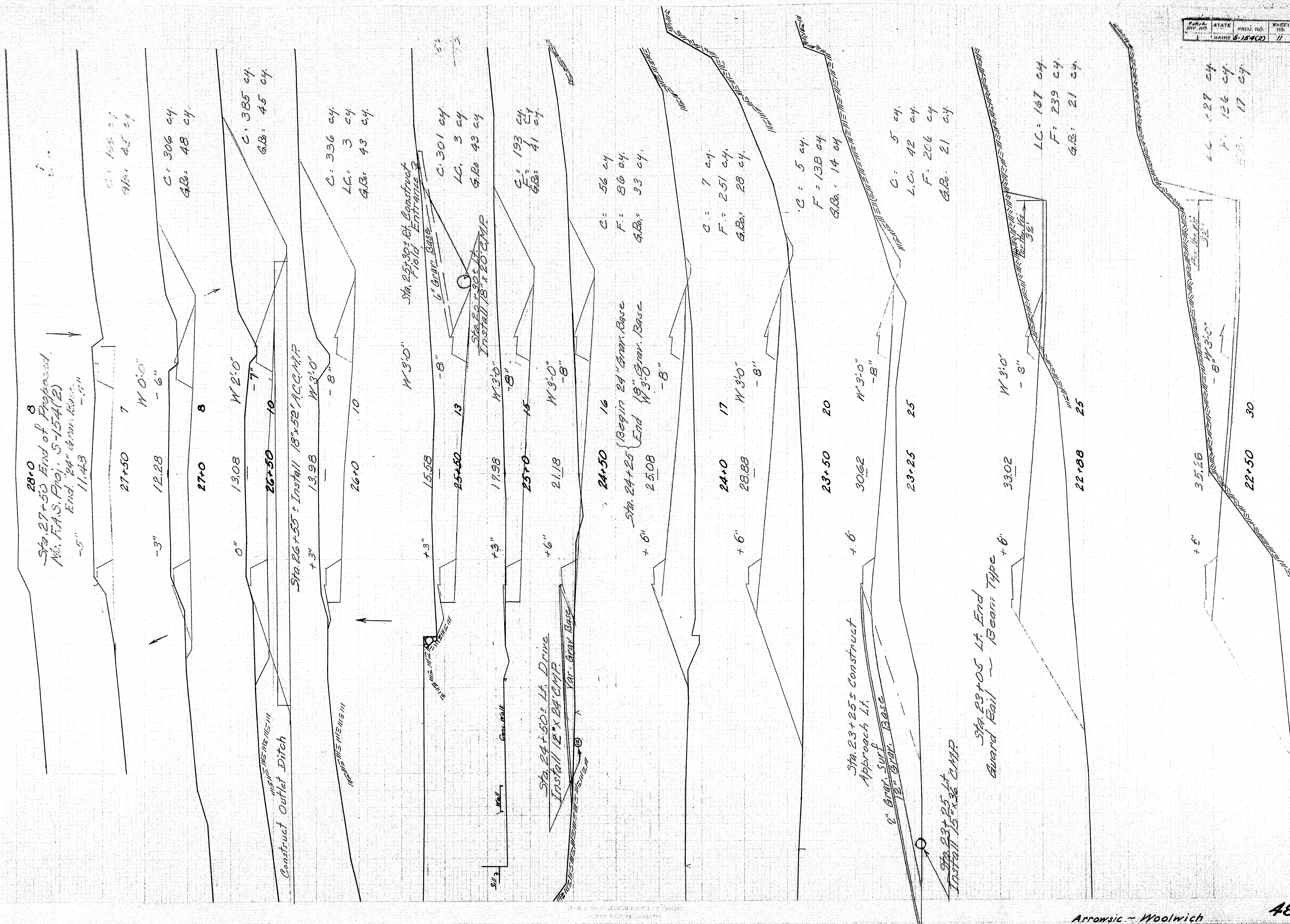
P. & A. DIV. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
MAINE	5-1418	9	36	

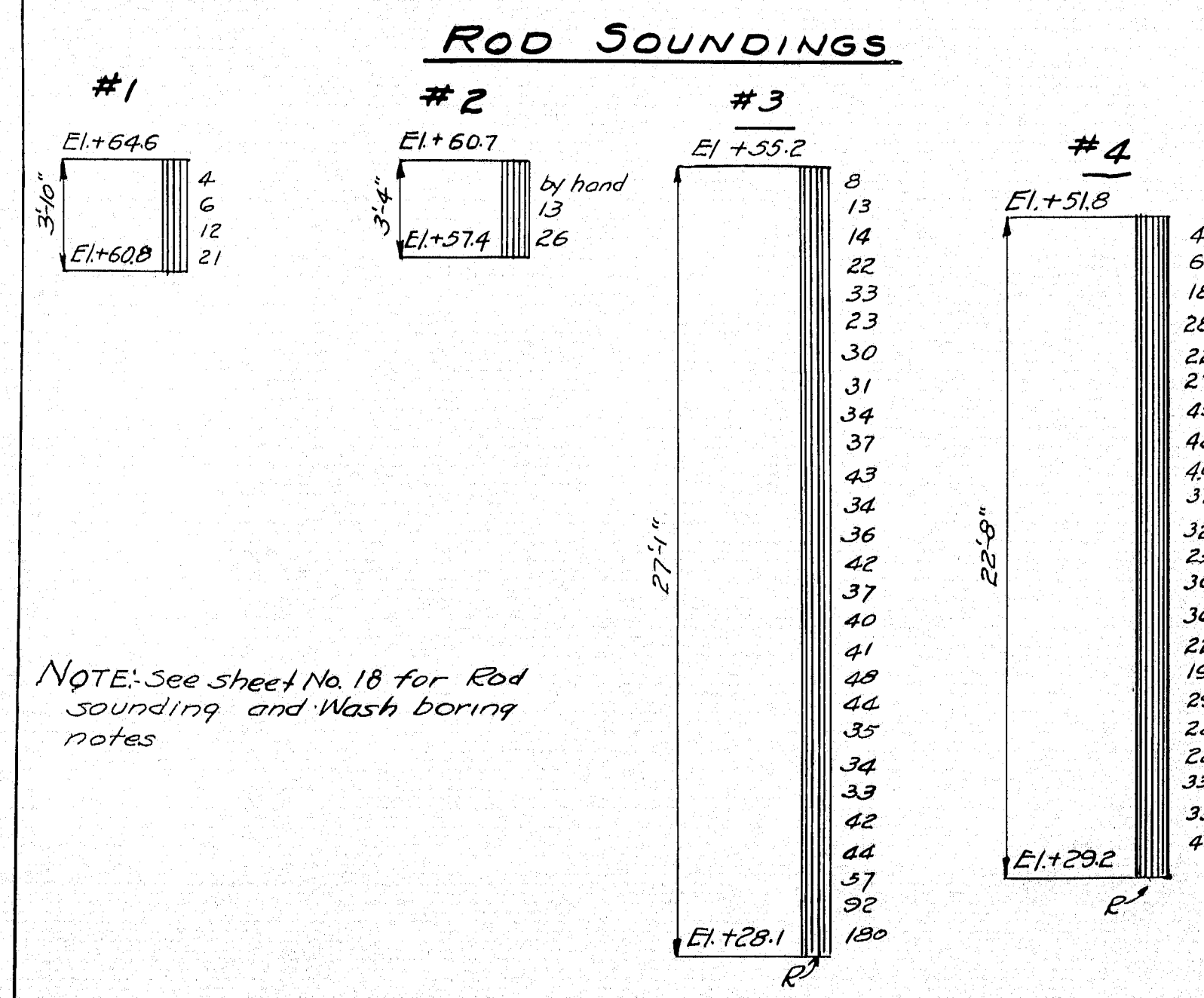
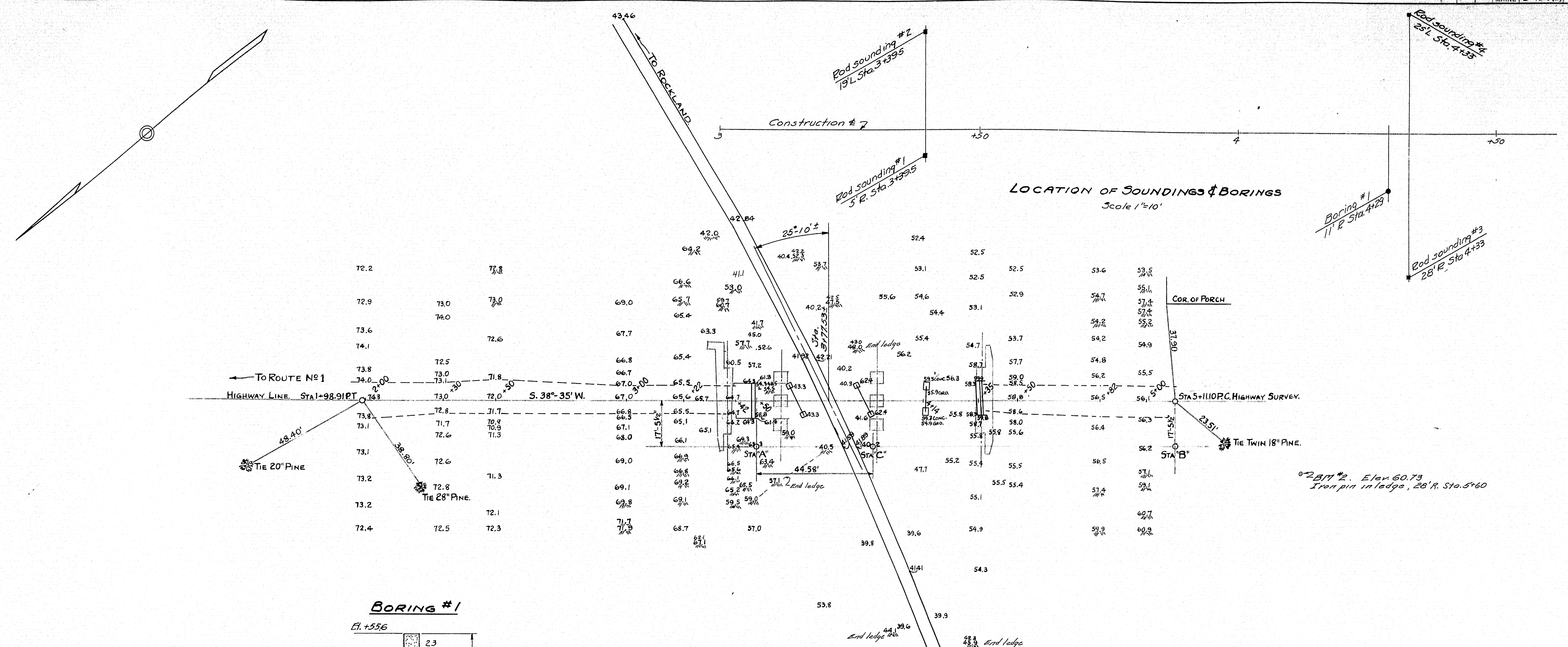
Arrowsic - Wadwich

48-72

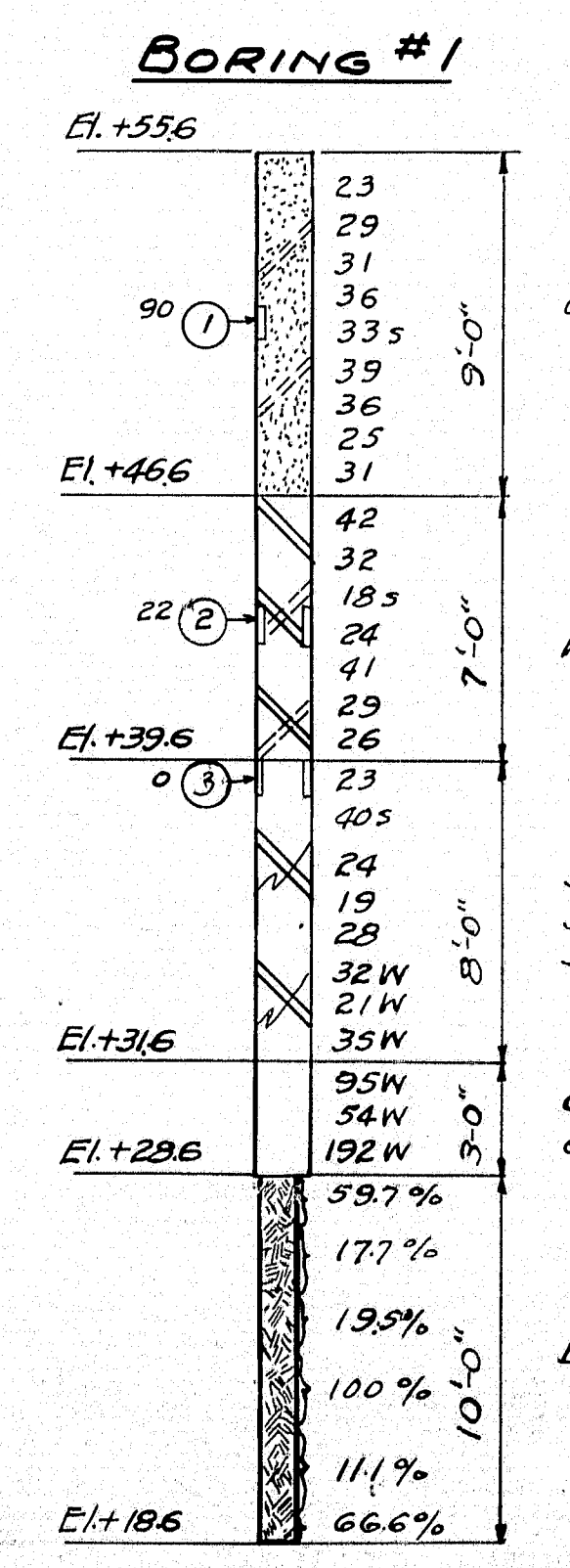




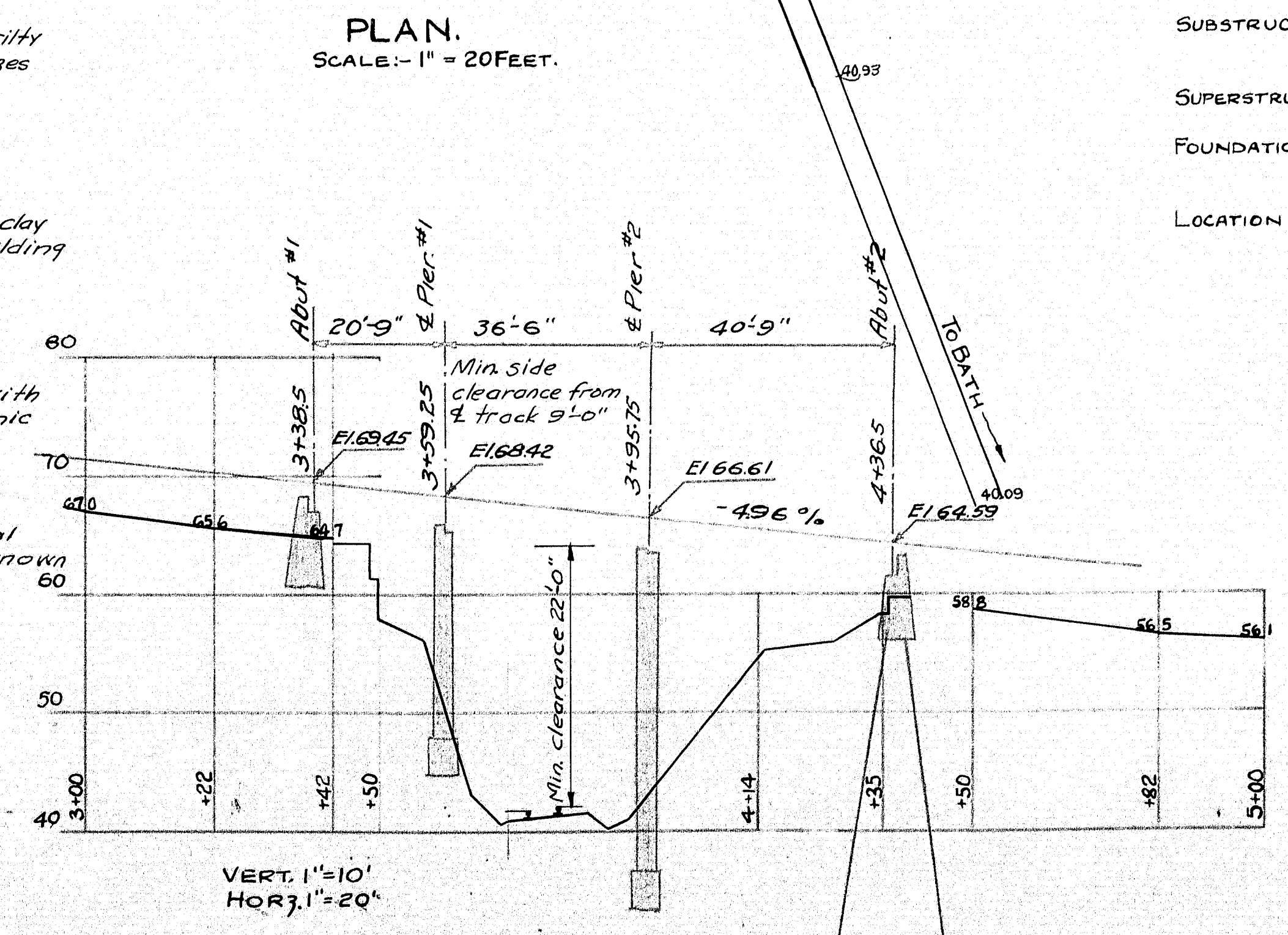




NOTE: See sheet No. 18 for Rod sounding and Wash boring notes

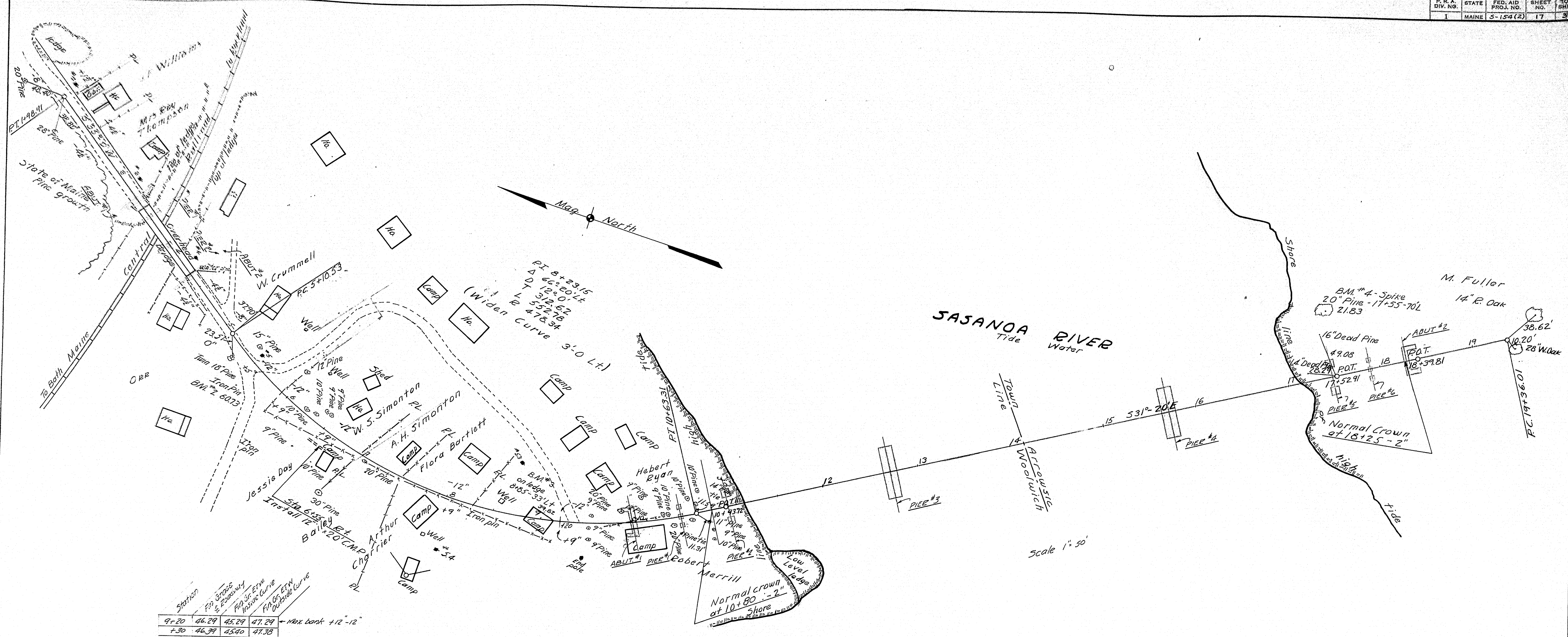


PLAN.
SCALE: 1" = 20 FEET.



— NOTES —
SUBSTRUCTURE:— ABUTMENT NO. 1. CONCRETE IN POOR CONDITION. PIERS NO. 1 AND NO. 2. STEEL BENTS IN POOR CONDITION. PIER NO. 3. CONCRETE PEDESTALS WITH 2-12" x 12" CAPS. CONCRETE IN POOR CONDITION. ABUTMENT NO. 2. OF SQUARED TIMBERS.
SUPERSTRUCTURE:— THREE TOP CHORD TRUSS MEMBERS AS STRINGERS IN ALL SPANS. GOOD CONDITION. 3" TRANSVERSE PLANKING. FAIR CONDITION. 11'-0" CLEAR ROADWAY BETWEEN CURBS.
FOUNDATION:— APPROACH NO. 1, SEAMY LEDGE. APPROACH NO. 2, SEE SOUNDING.
— SOUNDING —
LOCATION IN PLAN ABOVE. ① GROUND ELEVATION 55.8. LEDGE ELEVATION 36.1. AVE. PENETRATION 1/2" BLOW.

PLOTTED. FERGUSON. BRIDGE.
STATE HIGHWAY COMMISSION.
BRIDGE DIVISION.
ARROWSIC ROAD OVERPASS.
OVER
MAINE CENTRAL RAILROAD TRACKS.
IN THE TOWN OF
WOOLWICH. SAGADAHOC CO.
SURVEY
SHEET 12 OF 36 AUGUSTA, ME. JANUARY 1947.



Station	Fin. Grade & Roadway	Fin. Grade & Roadway	Fin. Grade & Roadway	Notes
9+20	46.29	45.29	47.29	Max bank +12'-12"
+30	46.39	45.40	47.39	
+40	46.39	45.39	47.39	
+50	46.69	45.72	47.60	
+60	46.87	45.93	47.74	
+70	47.09	46.19	47.99	
+80	47.34	46.50	48.06	
+90	47.62	46.85	48.25	
10+0	47.93	47.23	48.46	
+10	48.27	47.64	48.63	
+20	48.64	48.06	48.78	
+30	49.04	48.53	49.10	
+40	49.40	49.01	49.48	
+50	49.84	49.51	49.78	
+60	50.24	49.93	50.13	
+70	50.64	50.23	50.48	
+80	51.04	50.87	50.87	Normal Crown -2'-2"

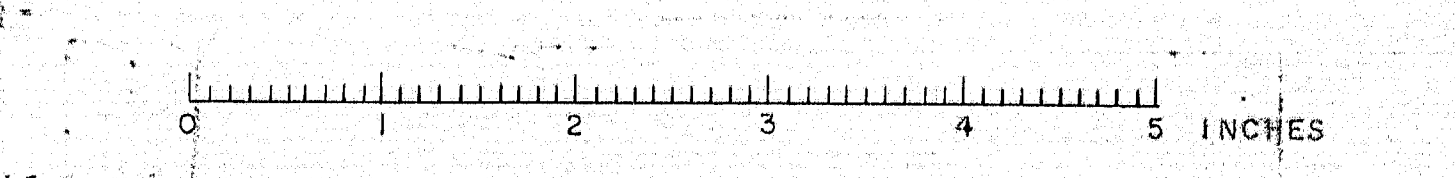
FINISH GRADE ELEVATIONS
AT E ROADWAY AND FACE OF CURBS
ROADWAY WIDTH 24'0"

TRACED FROM HIGHWAY SURVEY
DANFORTH ✓

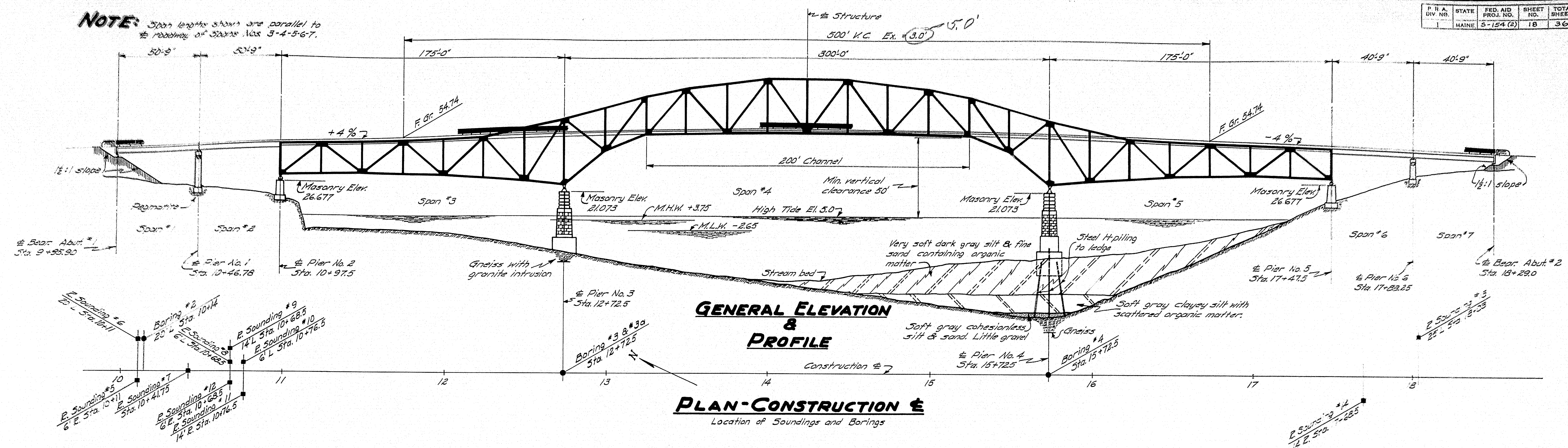
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

ARROWSIC BRIDGE
OVER
SASANOA RIVER
BETWEEN THE TOWNS OF
ARROWSIC & WOOLWICH
SAGadahoc COUNTY
SURVEY

SHEET 17 OF 36 AUGUSTA, MAINE. JAN. 1949



NOTE: Span lengths shown are parallel to roadway of spans Nos 3-4-5-6-7.

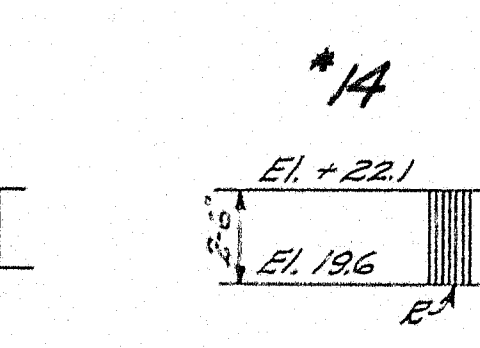
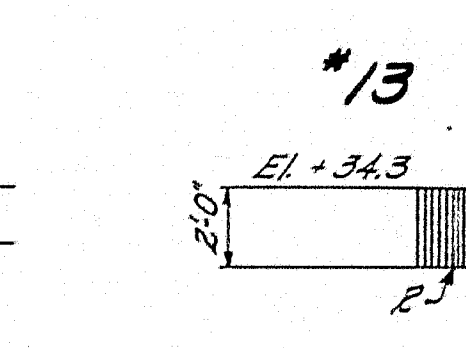
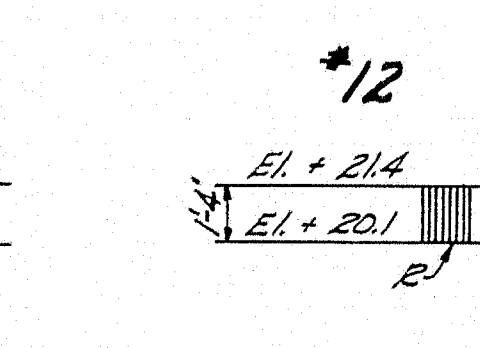
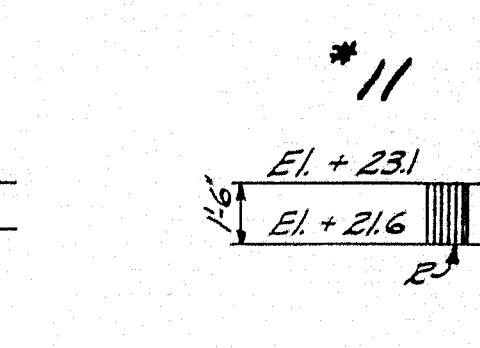
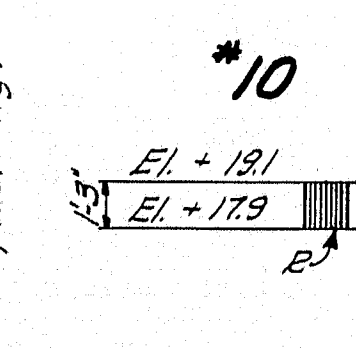
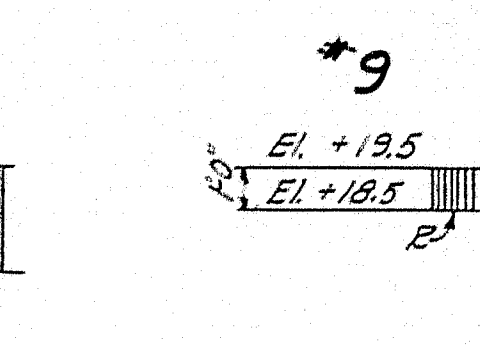
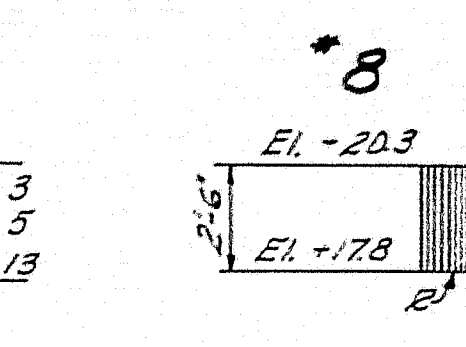
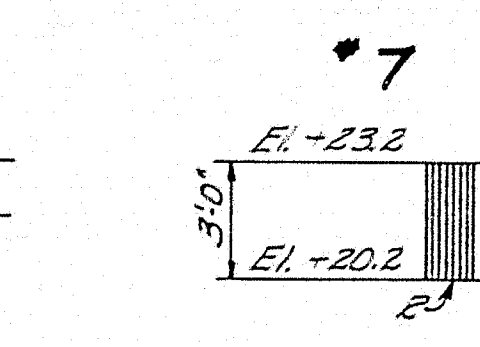
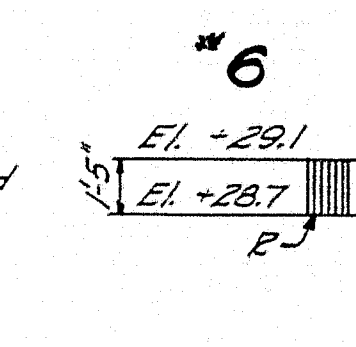
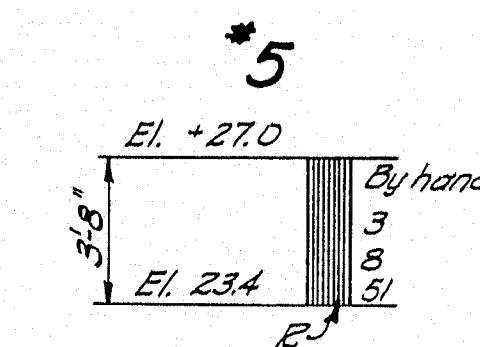
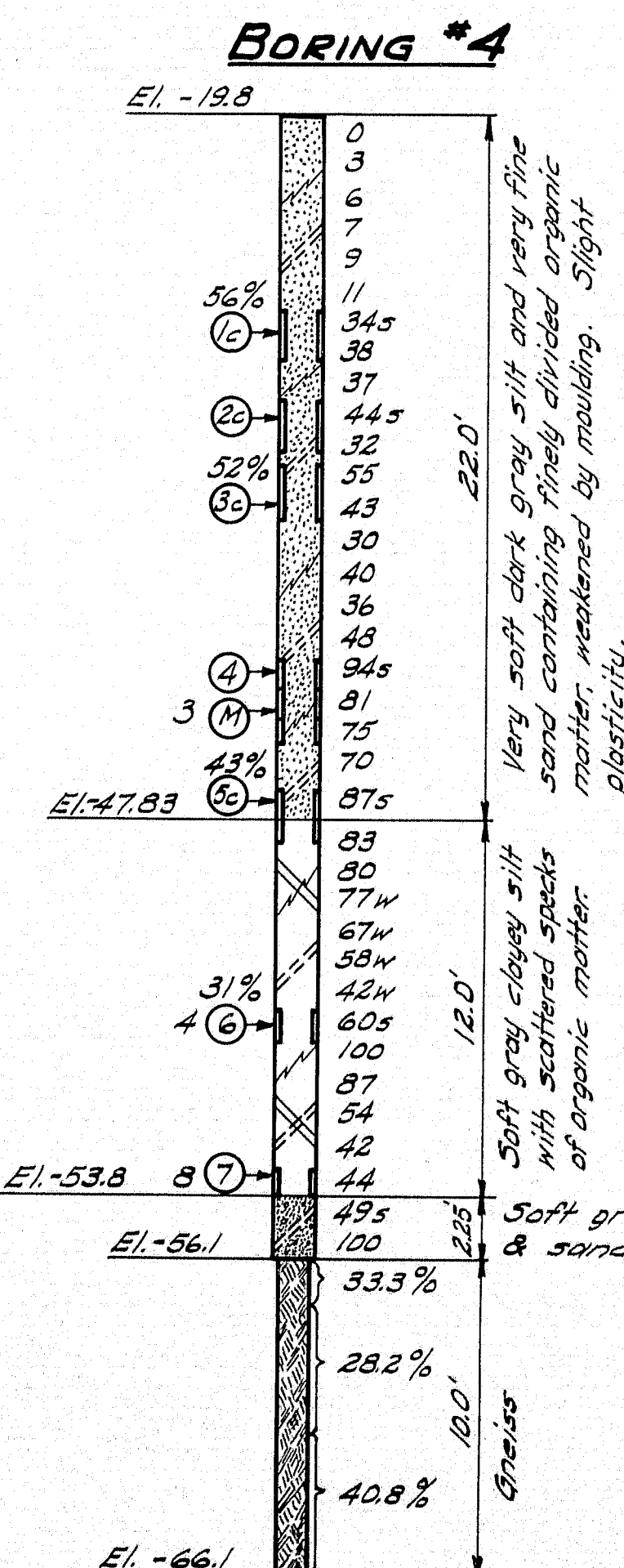
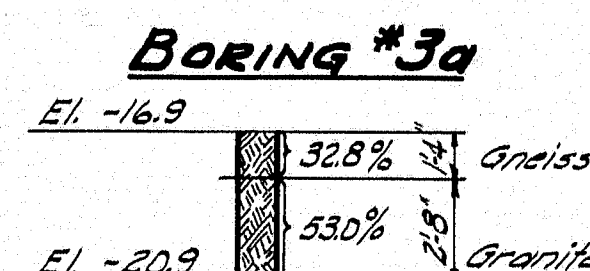
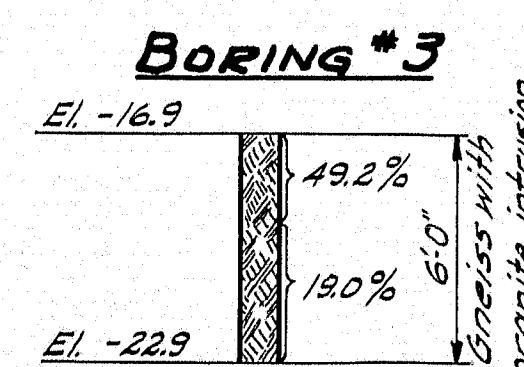
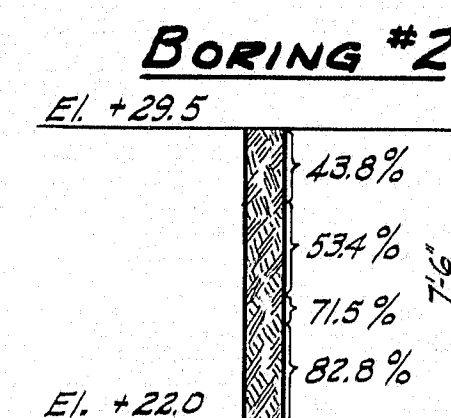


WASH BORING NOTES

- Scale: 1" = 5.0'
- Location & Designation of Dry Samples indicated thusly: ①
- Location & Designation of 2" Shelby Tube Sample indicated thusly: ②
- Unsuccessful attempt to secure Dry Sample indicated thusly: ③
- Figures to left of Sample Markers number of 6' drops of 275 lb. hammer required to drive S & H Split Barrel Sampling Spoon, or 2" 18-gauge tubing, one foot.
- When no figure appears to left of marker, penetration was produced by static weight of rods and drive head.
- "H" to the left of Sample Markers indicate that penetration was produced by static weight of rods, drive head and 275 lb hammer.
- Number of 6' drops of 275 lb. hammer required to drive 3" extra heavy casing one foot indicated thusly: ④
- "W" or "S" indicate that hole washed or sampled ahead of casing.
- Natural water contents, express as % of dry weight, are given above Sample Markers.
- Ground water table indicated thusly: ⑤
- Recovery of rock core by diamond bit indicated thusly: ⑥ 32%
- "R" denotes refusal of casing or rod.

ROD SOUNDING NOTES

- Refusal of casing or rod indicated thusly: R
- Figures to right of ruled columns indicate number of 2.0 drops of 50 lb. hammer required to drive rods one foot.
- Sounding Rods are 1" diameter solid.
- Scale: 1" = 5.0'

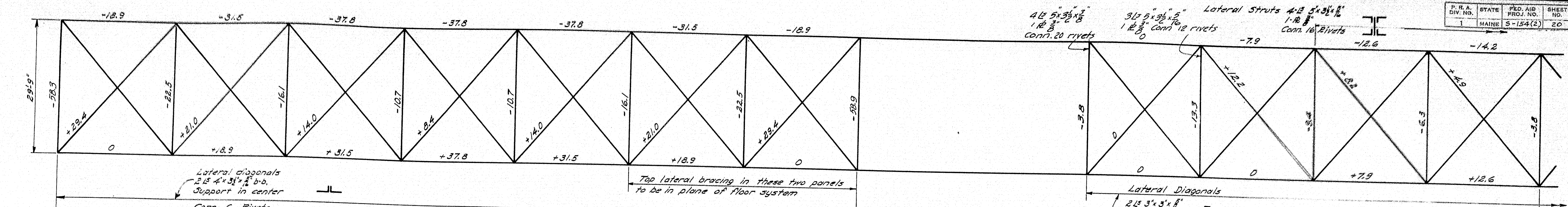


DESIGN - EVERETT
TRACE - CLARK
CHECK - CLARK

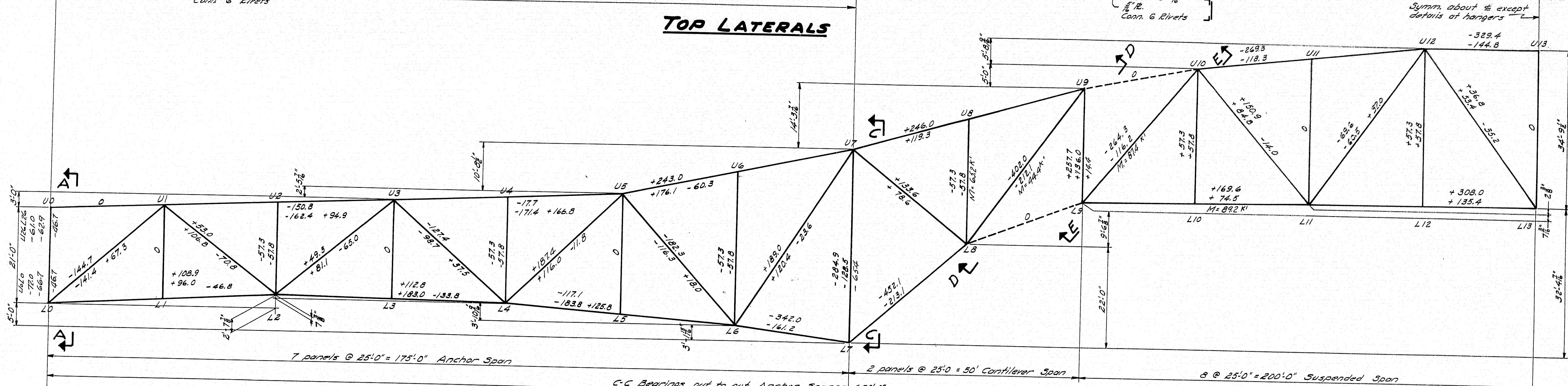
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

ARROWSIC BRIDGE
OVER
SASANO RIVER
BETWEEN THE TOWNS OF
ARROWSIC & WOOLWICH
SAGadahoc COUNTY
GENERAL ELEVATION AND BORINGS

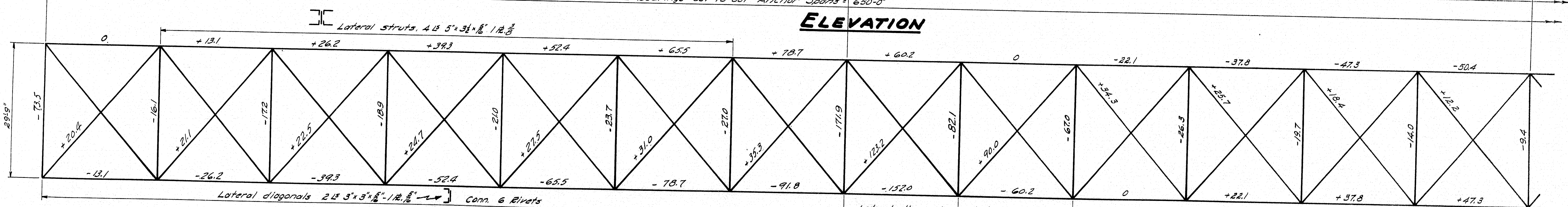
SHEET 18 OF 36 AUGUSTA, MAINE FEB. 1949



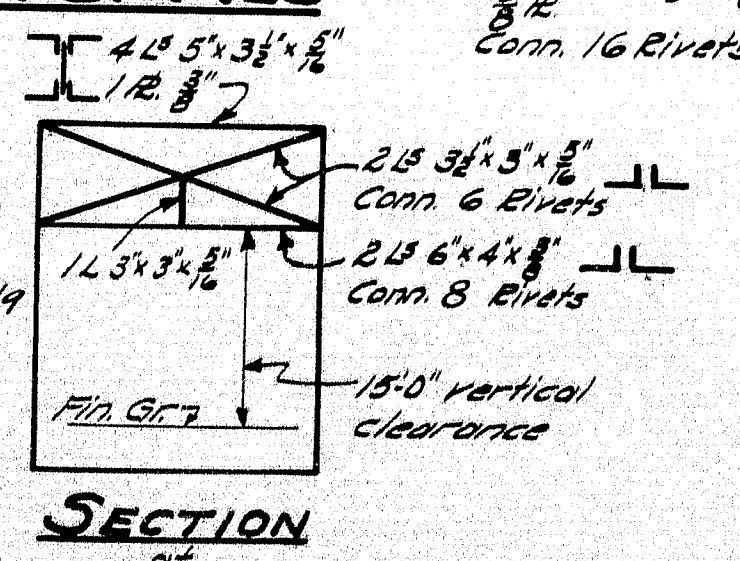
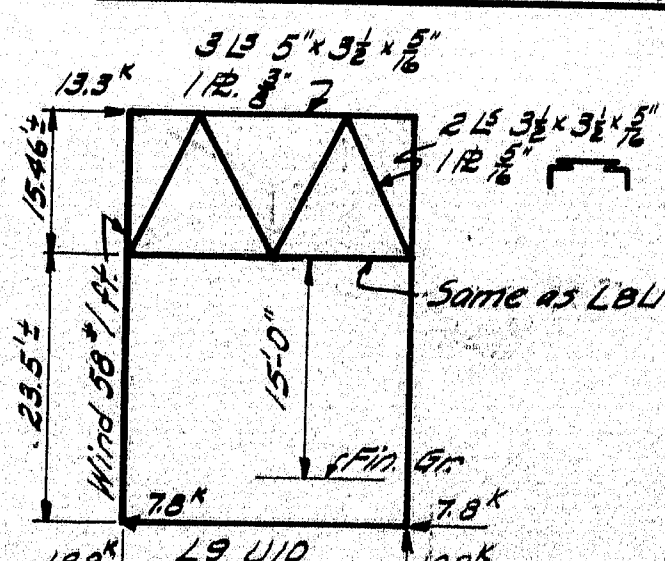
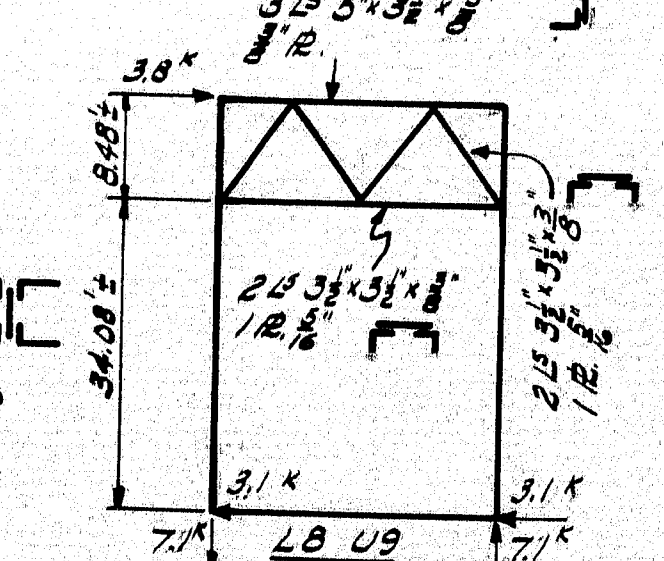
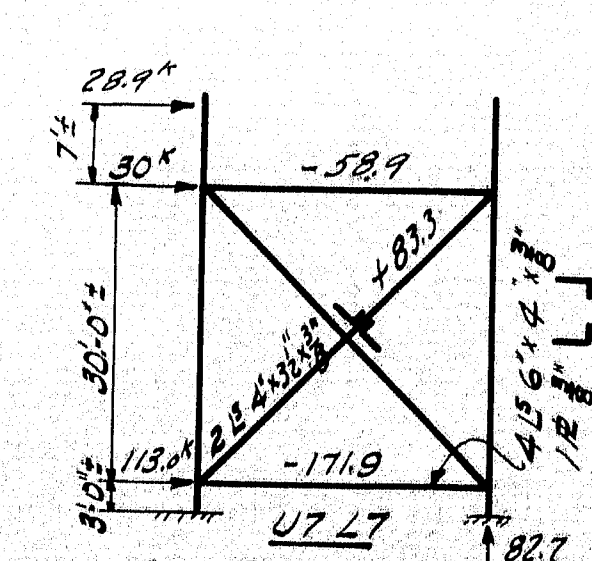
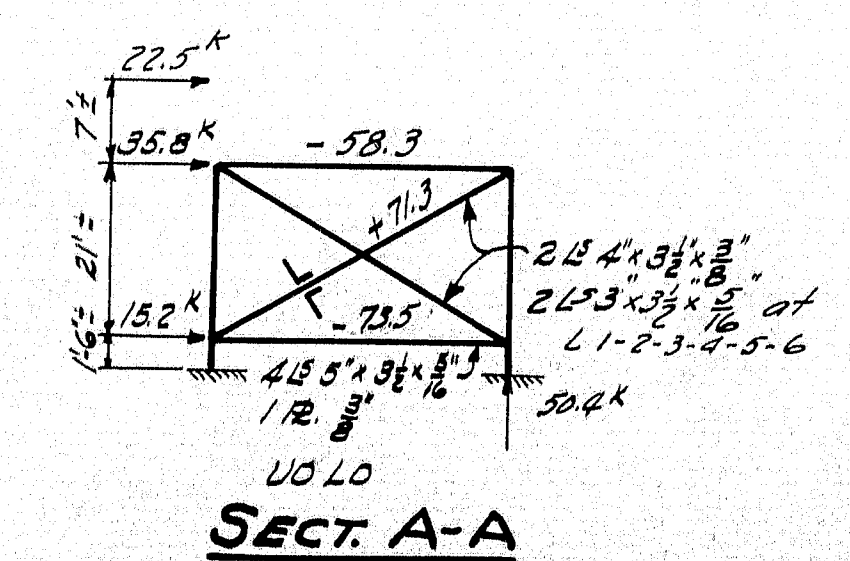
TOP LATERALS



ELEVATION



BOTTOM LATERALS



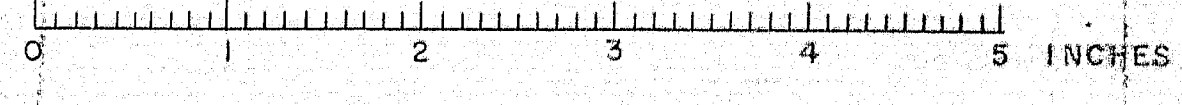
NOTE:
 Stresses shown in kips in following sequence: 1. Dead Load
 2. Live Load + Impact
 3. Wind
 Lateral stresses shown on lateral diagrams.
 Tension = (+)
 Compression = (-)
 Vertical truss members to be vertical in final position.

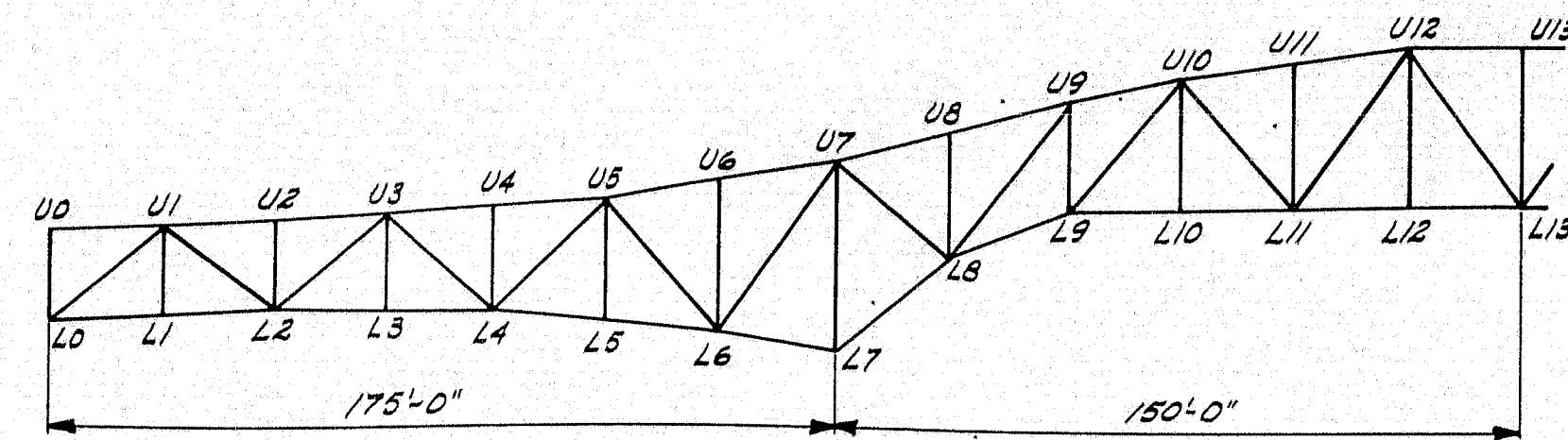
DESIGN - EVERETT
 TRADE - CLARK
 CHECK - ABP-CPS

STATE HIGHWAY COMMISSION
 BRIDGE DIVISION

ARROWSIC BRIDGE
 OVER
SASANOA RIVER
 BETWEEN THE TOWNS OF
ARROWSIC & WOOLWICH
SAGadahoc COUNTY
 STRESSES

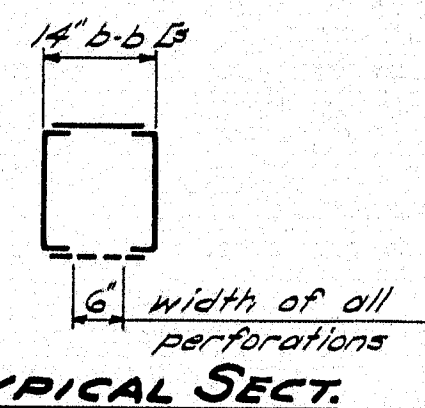
SHEET 20 OF 36 AUGUSTA, MAINE FEB. 1949





HALF ELEV.

MAKE-UP OF MEMBERS		
U0U1 0	L0L1 +204.9 Net regd. = 11.38" Gross = 17.76" 2 C 15" x 33.9" - 1/2" x 13" x 1/2" 1 p. 12" x 13" x 1/2"	L0U1 -206.1 Gross regd. = 11.13" Gross = 21.96" 2 C 12" x 30" - 2 p. 12" x 13" x 1/2"
U1U2 -313.2 Gross regd. = 21.62" Gross = 26.05" 2 C 15" x 33.9" - 1/2" x 13" x 1/2" 1 p. 12" x 13" x 1/2"	L1L2 +323.2 -82.2 Net regd. = 17.95" Net = 18.37" 2 C 15" x 33.9" - 1/2" x 13" x 1/2" 2 p. 12" x 13" x 1/2"	U1L2 +176.7 -50.6 Net regd. = 9.82" Net = 11.91" 2 C 12" x 20.7" - 2 p. 12" x 13" x 1/2"
U2U3 -266.3 +231.6 Gross regd. = 18.38" Gross = 26.05" Net regd. = 12.87" 2 p. 12" x 13" x 1/2" Net = 13.62 1/2" x 13" x 1/2" 1 p. 12" x 13" x 1/2"	L1L3 -322.8 +65.7 Gross regd. = 22.30" Gross = 24.18" 2 C 15" x 33.9" - 1/2" x 13" x 1/2" 2 p. 12" x 13" x 1/2"	L2U3 +143.7 -45.8 Gross regd. = 8.09" Net = 11.91" 2 C 12" x 20.7" - 2 p. 12" x 13" x 1/2"
U3U4 +419.1 Net regd. = 23.28" Net = 24.39" 2 C 15" x 40" - 1/2" x 13" x 1/2" 1 p. 12" x 13" x 1/2"	L2L3 -503.2 Gross regd. = 34.55" Gross = 34.53" 2 C 15" x 50" - 2 p. 12" x 13" x 1/2"	U3L4 -226.1 Gross regd. = 16.57" Gross = 19.02" 2 C 12" x 25" - 2 p. 12" x 13" x 1/2"
U4U5 +365.3 Net regd. = 20.29" Net = 22.39" 2 C 15" x 40" - 1/2" x 13" x 1/2" 1 p. 12" x 13" x 1/2"	L2L4 -665.2 Gross regd. = 47.63" Gross = 47.91" 2 C 15" x 50" - 2 p. 12" x 13" x 1/2" 2 p. 12" x 13" x 1/2"	L4U5 +303.4 Net regd. = 16.86" Net = 17.76" 2 C 15" x 33.9" - 2 p. 12" x 13" x 1/2"
U5U6 0	L3L4 0	U5L6 -298.3 Gross regd. = 22.82" Gross = 22.88" 2 C 12" x 30" - 2 p. 12" x 13" x 1/2"
U6U7 -387.6 Gross regd. = 21.02" Gross = 22.65" 2 C 15" x 40" - 1/2" x 13" x 1/2" 1 p. 12" x 13" x 1/2"	L3L5 +244.1 M = 892" Net = 25.02" 2 C 15" x 50" - 2 p. 12" x 13" x 1/2"	L6U7 +309.4 Net regd. = 17.19" Net = 17.76" 2 C 15" x 33.9" - 2 p. 12" x 13" x 1/2"
U7U8 -474.2 Gross regd. = 33.13" Gross = 35.53" 2 C 15" x 50" - 1/2" x 13" x 1/2" 1 p. 12" x 13" x 1/2"	L4L5 +443.4 Net regd. = 34.63" Net = 25.02" 2 C 15" x 50" - 2 p. 12" x 13" x 1/2"	U7L8 +212.2 Net regd. = 11.79" Net = 11.91" 2 C 12" x 20.7" - 2 p. 12" x 13" x 1/2"
L8U9 -614.1 M = 44.4" Gross = 48.78" 2 C 15" x 50" - 2 p. 12" x 13" x 1/2" 2 p. 12" x 13" x 1/2"	L5U10 -580.5 M = 87.4" Gross = 38.03" 2 C 15" x 50" - 2 p. 12" x 13" x 1/2"	U8L11 +235.7 Net regd. = 13.09" Net = 13.95" 2 C 12" x 25" - 2 p. 12" x 13" x 1/2"
L11U12 -130.1 Gross regd. = 10.49" Gross = 16.44" 2 C 12" x 20.7" - 2 p. 12" x 13" x 1/2"	U12L13 +94.9 -1/4" Net regd. = 5.27" Net = 11.91" 2 C 12" x 20.7" - 2 p. 12" x 13" x 1/2"	
U9L10 -188.3 Gross regd. = 13.17" Gross = 15.59" 1/4" x 1/2" x 43"	U5L5 0 1/4" x 1/2" x 43"	U10L11 +15.1 Net regd. = 6.39" Net = 10.54" 1/4" x 1/2" x 43"
U1L1 0 1/4" x 1/2" x 43"	U6L6 -115.1 Gross regd. = 9.54" Gross = 12.86" 1/4" x 1/2" x 61"	U11L11 0 1/4" x 1/2" x 43"
U2L2 -115.1 Gross regd. = 9.52" Gross = 12.66" 1/4" x 1/2" x 43"	U7L7 -413.4 Gross regd. = 24.45" Gross = 33.66" 2 C 15" x 50" - 2 p. 12" x 13" x 1/2"	U12L12 +115.1 Net regd. = 6.39" Net = 10.54" 1/4" x 1/2" x 43"
U3L3 0 1/4" x 1/2" x 43"	U8L8 -115.1 M = 65.2" Gross = 15.59" 1/4" x 1/2" x 53"	U13L13 0 1/4" x 1/2" x 43"
U4L4 -115.1 Gross regd. = 9.36" Gross = 9.52" 1/4" x 1/2" x 45"	U9L9 +393.9 Net regd. = 21.88" Net = 25.64" 2 C 15" x 50" - 2 p. 12" x 13" x 1/2"	



TYPICAL SECT.

NOTE:

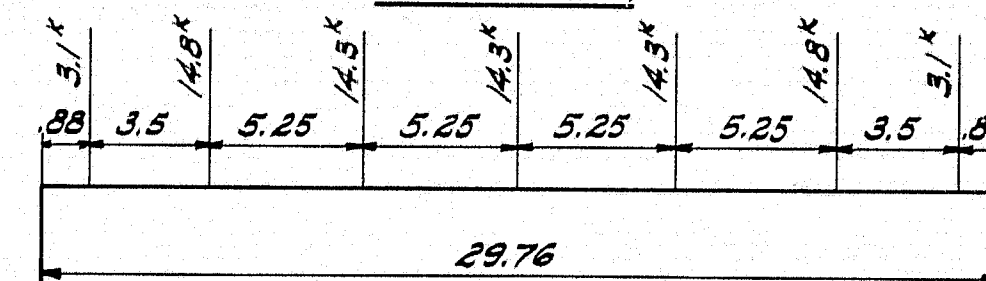
Members figured for the following allowable unit stresses: Tension - 18,000 psi
Compression - 15,000 psi (L₂/r₂)
Gross areas include area of perforated plates less area of perforation. (p = Perforated)
Minimum stagger 1 1/2" for net section.
Stresses shown in Kips.

DESIGN DATA

TRUSS SPANS

INT. STEINERS	EXT. STEINERS	S.W. STEINERS
M = 181" Regd. S = 120.7 21" x 62" S = 126.4	M = 163.8" Regd. S = 109.1 21" x 62" S = 126.4	M = 9.8" Regd. S = 6.5 10" x 20" S = 15.7

FLOOR BEAM



M = 789.9"
Regd. S = 526.9
36" x 160" S = 541.0

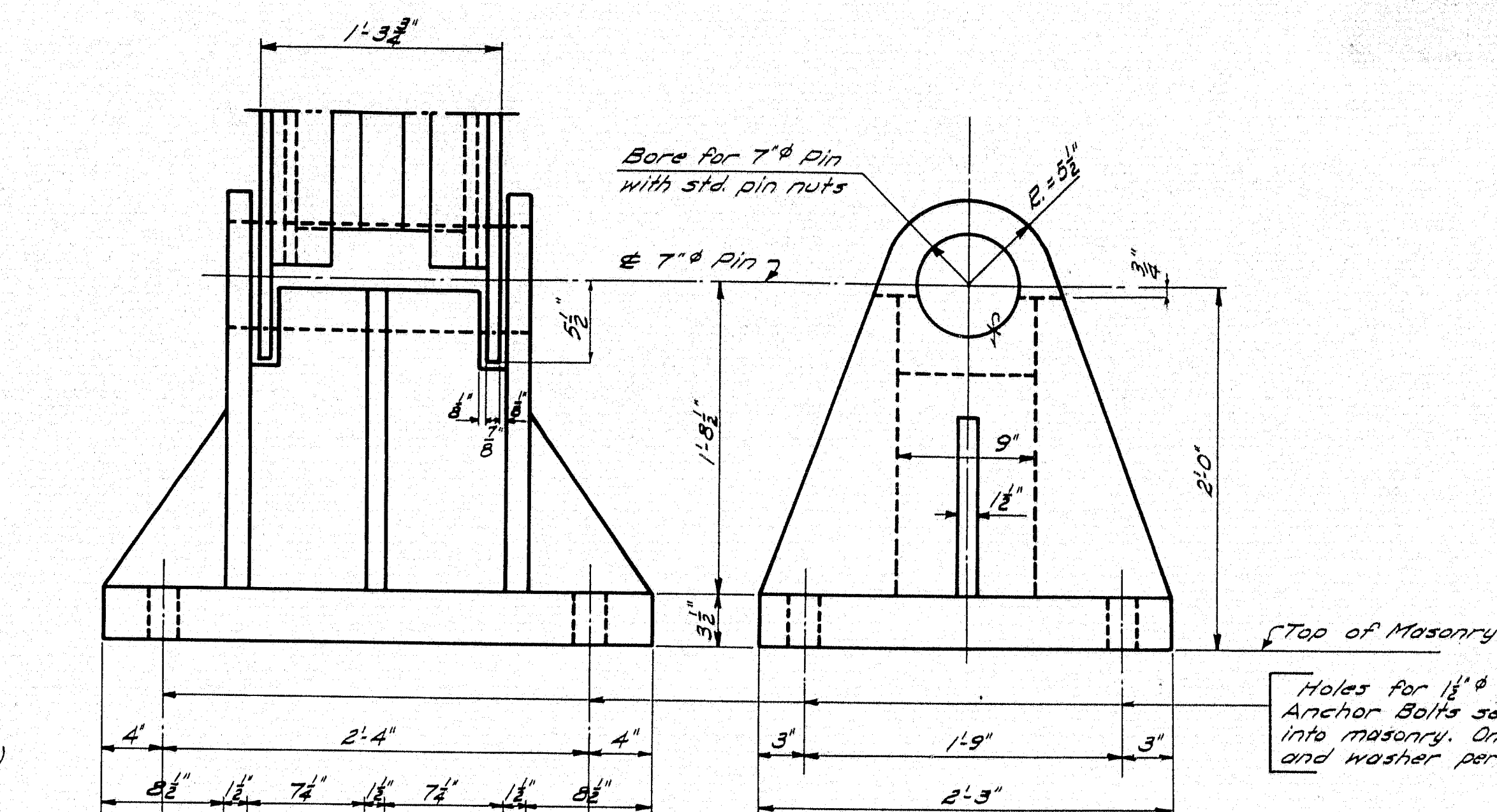
SPANS 1-2

INT. STEINERS	EXT. STEINERS
M = 345.4" Regd. S = 363.8 33" x 130" S = 404.8	M = 498.7" Regd. S = 332.6 30" x 124" S = 354.6

SPANS 6-7

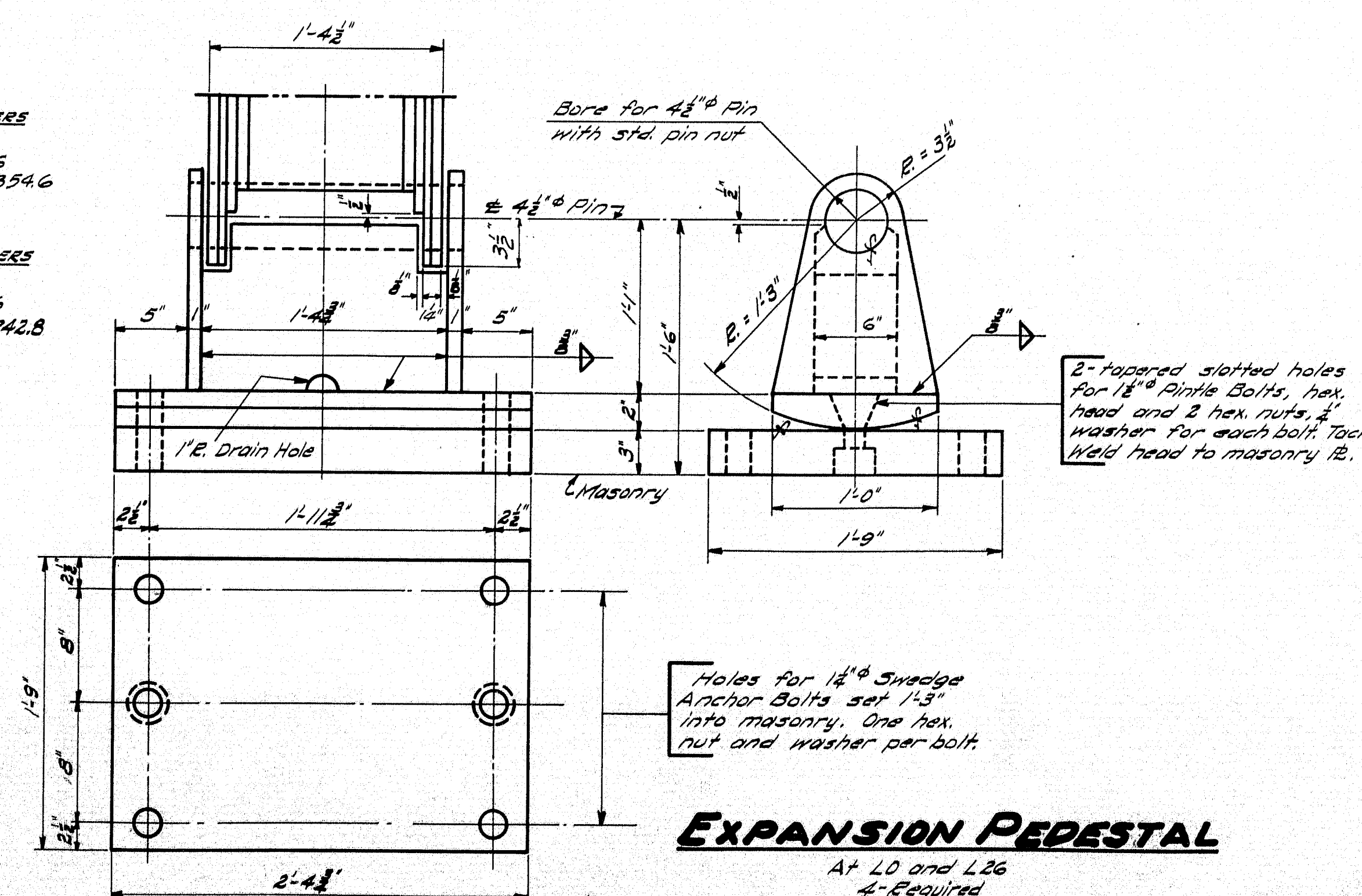
INT. STEINERS	EXT. STEINERS
M = 394.9" Regd. S = 263.4 27" x 102" S = 266.3	M = 345.8" Regd. S = 230.6 27" x 94" S = 242.8

Wgt. of trusses per foot 625'



FIXED PEDESTAL

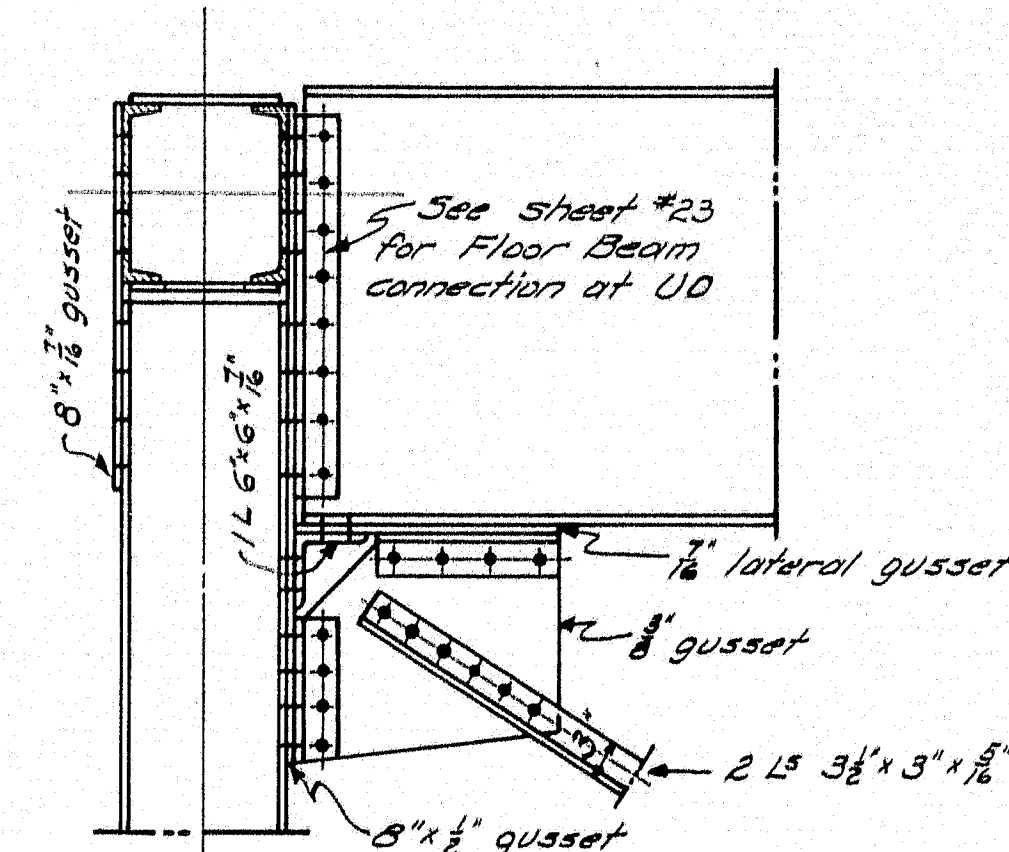
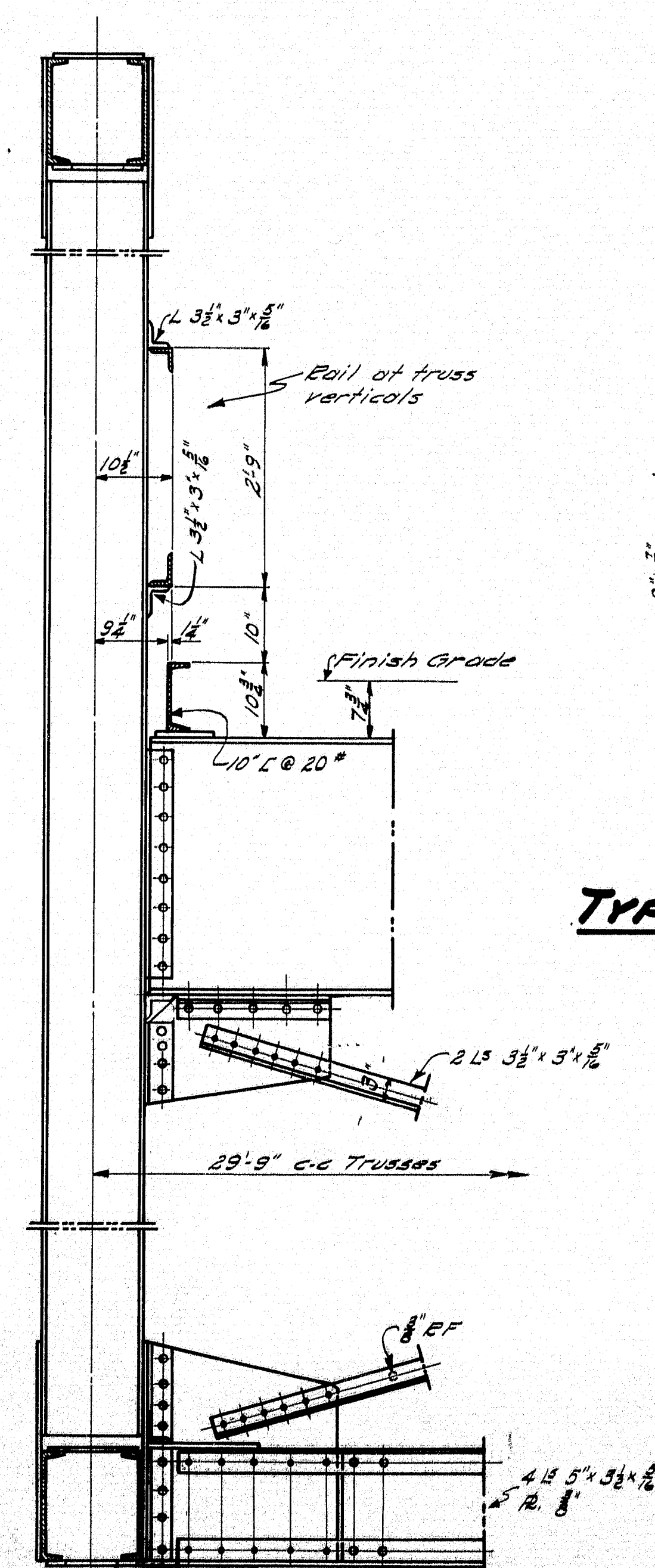
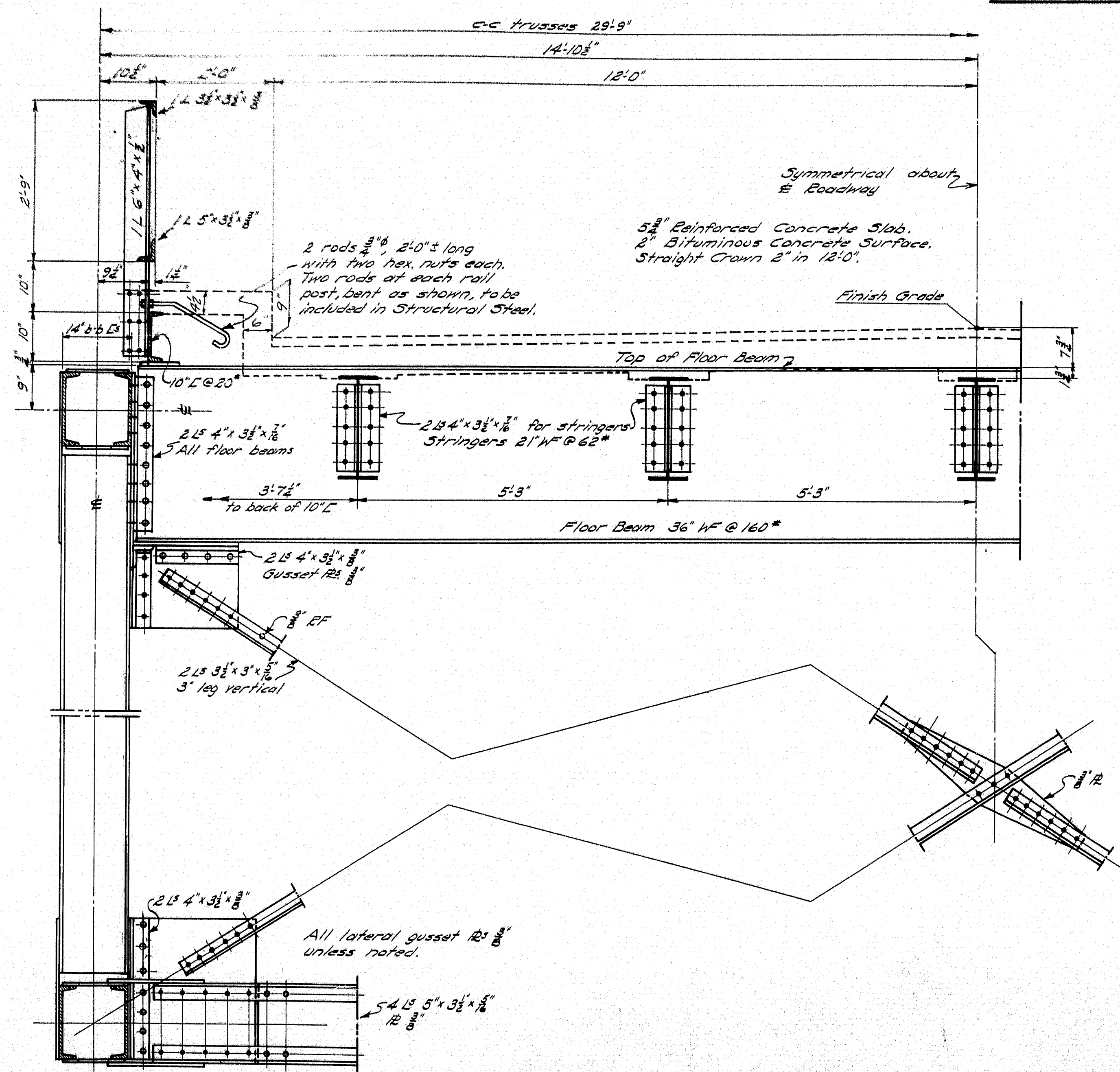
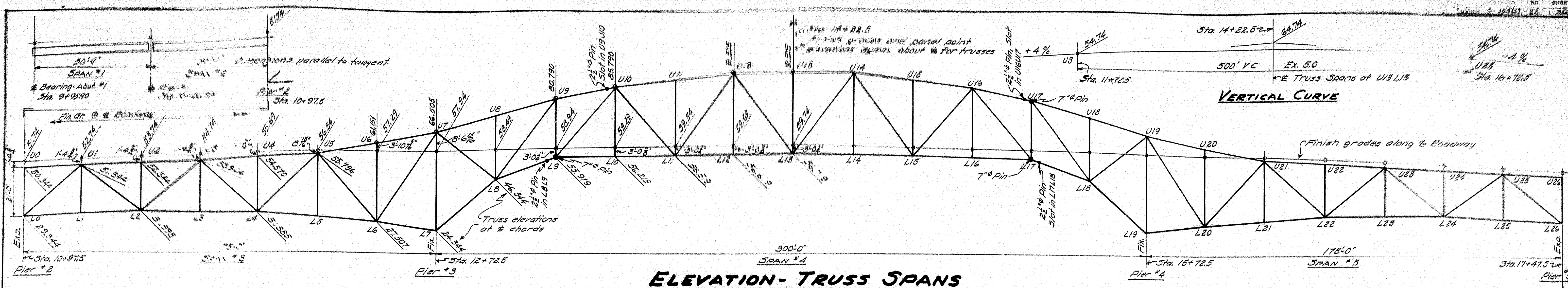
At L7 and L13 - 4 regd.
Material Cast Steel



EXPANSION PEDESTAL

At L0 and L26
4-Required

DESIGN - EVERETT
TRACE - CLARK
CHECK - A.B.P.
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
ARROWSIC BRIDGE
OVER
SASANO RIVER
BETWEEN THE TOWNS OF
ARROWSIC & WOLWICH
SAGadahoc COUNTY
PEDESTALS & MAKE-UP OF MEMBERS
SHEET 21 OF 36 AUGUSTA, MAINE FEB. 1949



SPECIFICATIONS

State of Maine, State Highway Commission,
Bridge Division, Specifications Steel Highway
Bridges, November 1945.

Structural carbon steel shall conform to A.A.S.H.O. Specifications for Highway Materials, designation M 94, and ASTM designation A 7.

Rivets $\frac{7}{8}"$ ϕ , open holes $\frac{15}{16}"$ ϕ unless noted.
See Rail Details.

Holes for field connections and field splices of main members shall be sub-punched and reamed to a steel template, or reamed while assembled.

Loading H2O-44.

DESIGN — EVERETT
TRACE — CLARK
CHECK — *A.B.P. — C.A.B.*

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

ARROWSIC BRIDGE
OVER
SASANOA RIVER
BETWEEN THE TOWNS OF
ARROWSIC & WOOLWICH
SAGadahoc COUNTY

TRUSS DETAILS

SHEET 22 OF 36 AUGUSTA, MAINE FEB. 1941

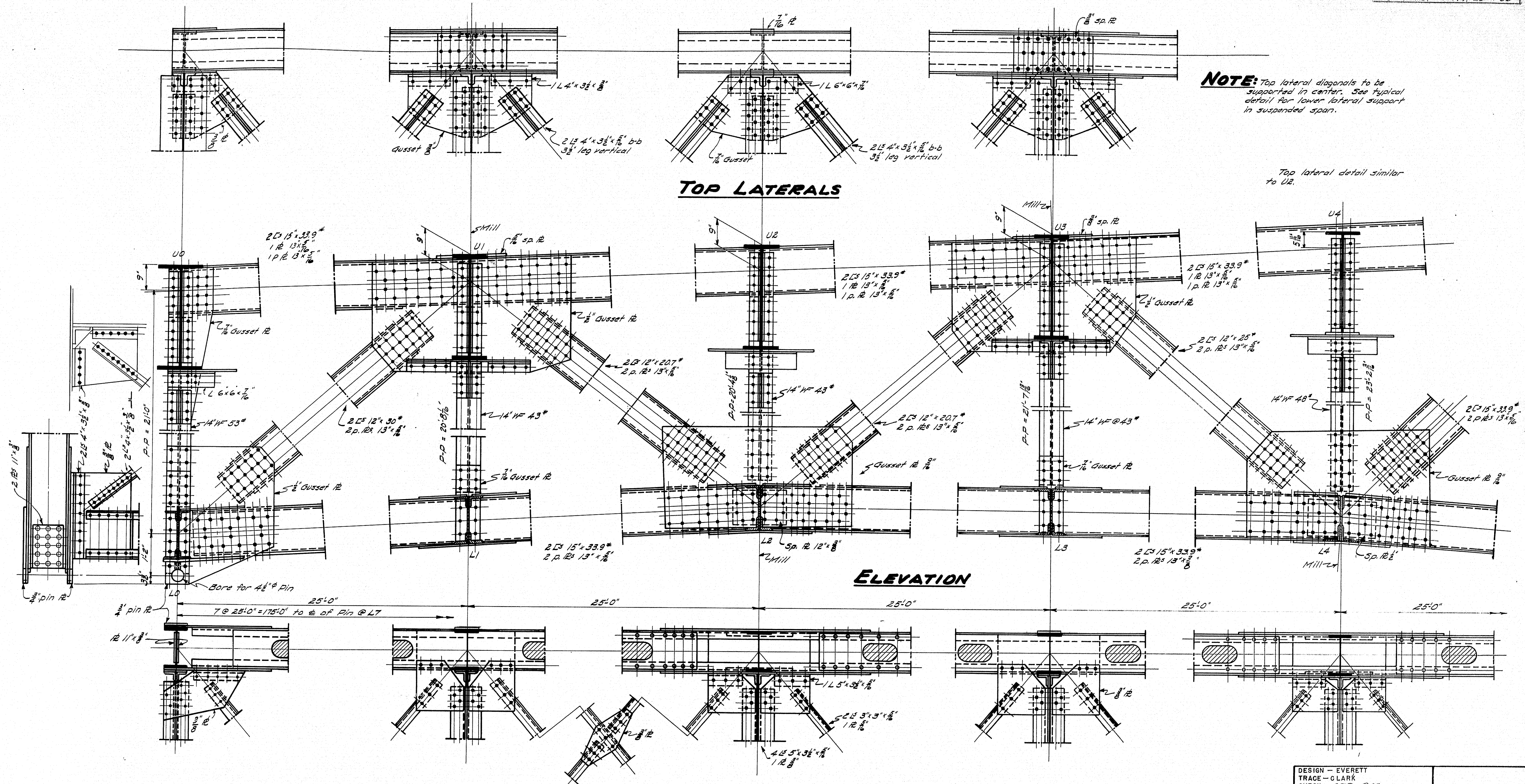
NOTE: Top lateral diagonals to be supported in center. See typical detail for lower lateral support in suspended span.

Top lateral detail similar to U2.

TOP LATERALS

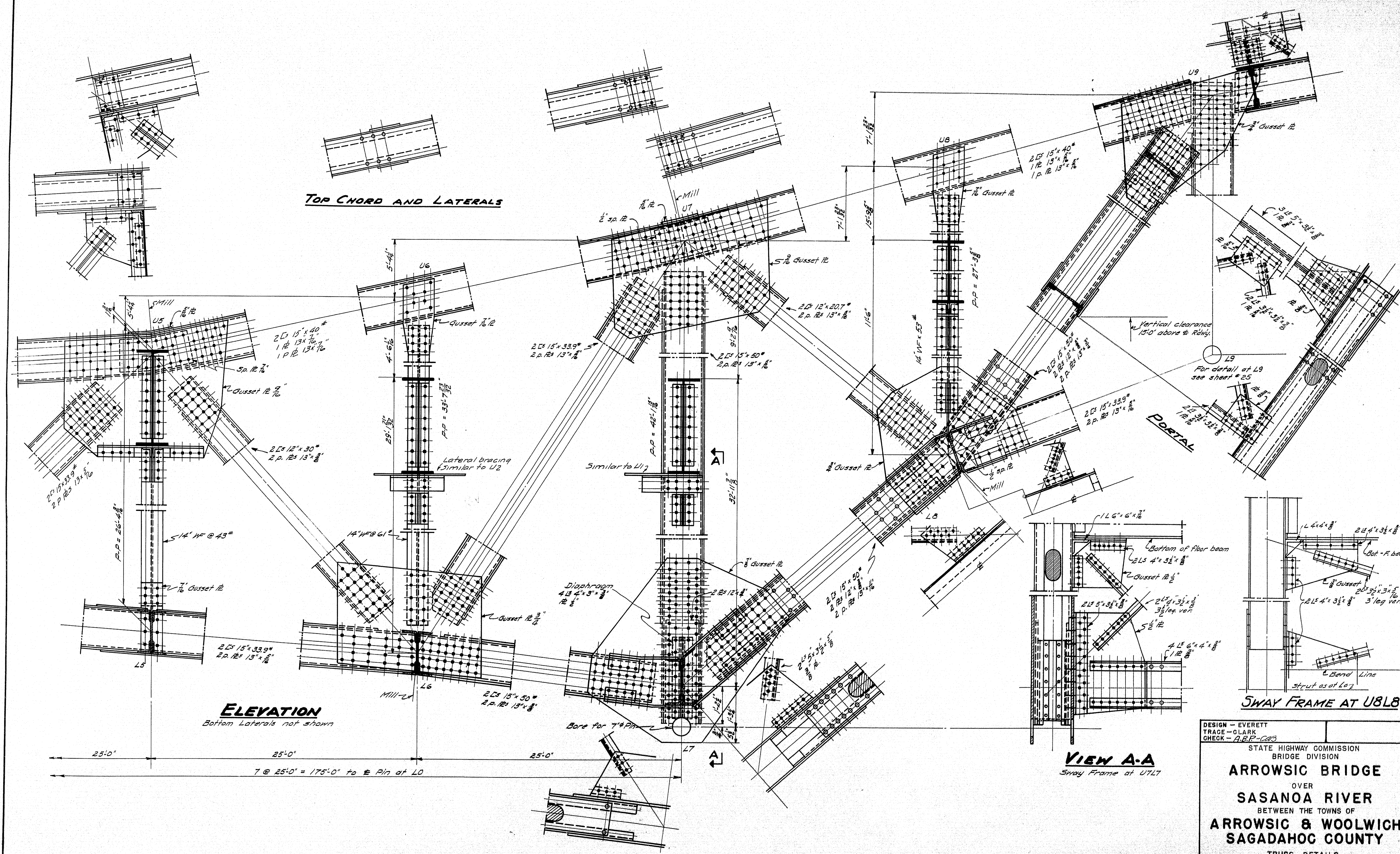
ELEVATION

BOTTOM LATERALS



DESIGN - EVERETT
TRACE - CLARK
CHECK - H.B. 1-10-43
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
ARROWSIC BRIDGE
OVER
SASANOA RIVER
BETWEEN THE TOWNS OF
ARROWSIC & WOOLWICH
SAGadahoc COUNTY
TRUSS DETAILS
SHEET 23 OF 36 AUGUSTA, MAINE FEB. 1949

48-86



ELEVATION
Bottom Laterals not shown

VIEW A-A
Sway Frame at U7L7

SWAY FRAME AT U8L8

DESIGN - EVERETT
TRACE - CLARK
CHECK - *H.E.P. - CCB*

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

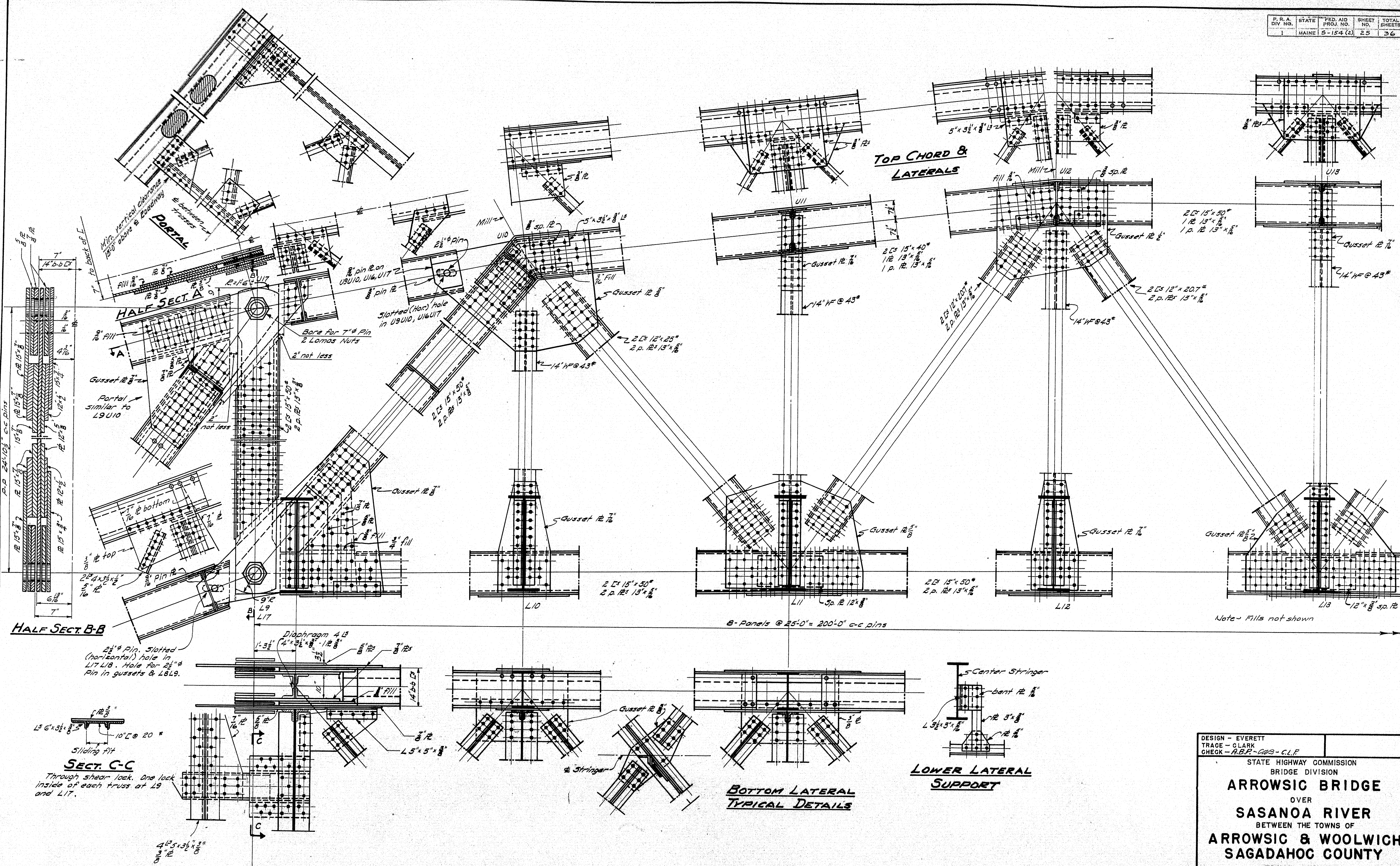
ARROWSIC BRIDGE

OVER
SASANOVA RIVER

BETWEEN THE TOWNS OF
ARROWSIC & WOOLWICH
SAGadahoc COUNTY

TRUSS DETAILS

SHEET 24 OF 36 AUGUSTA, MAINE FEB. 1945

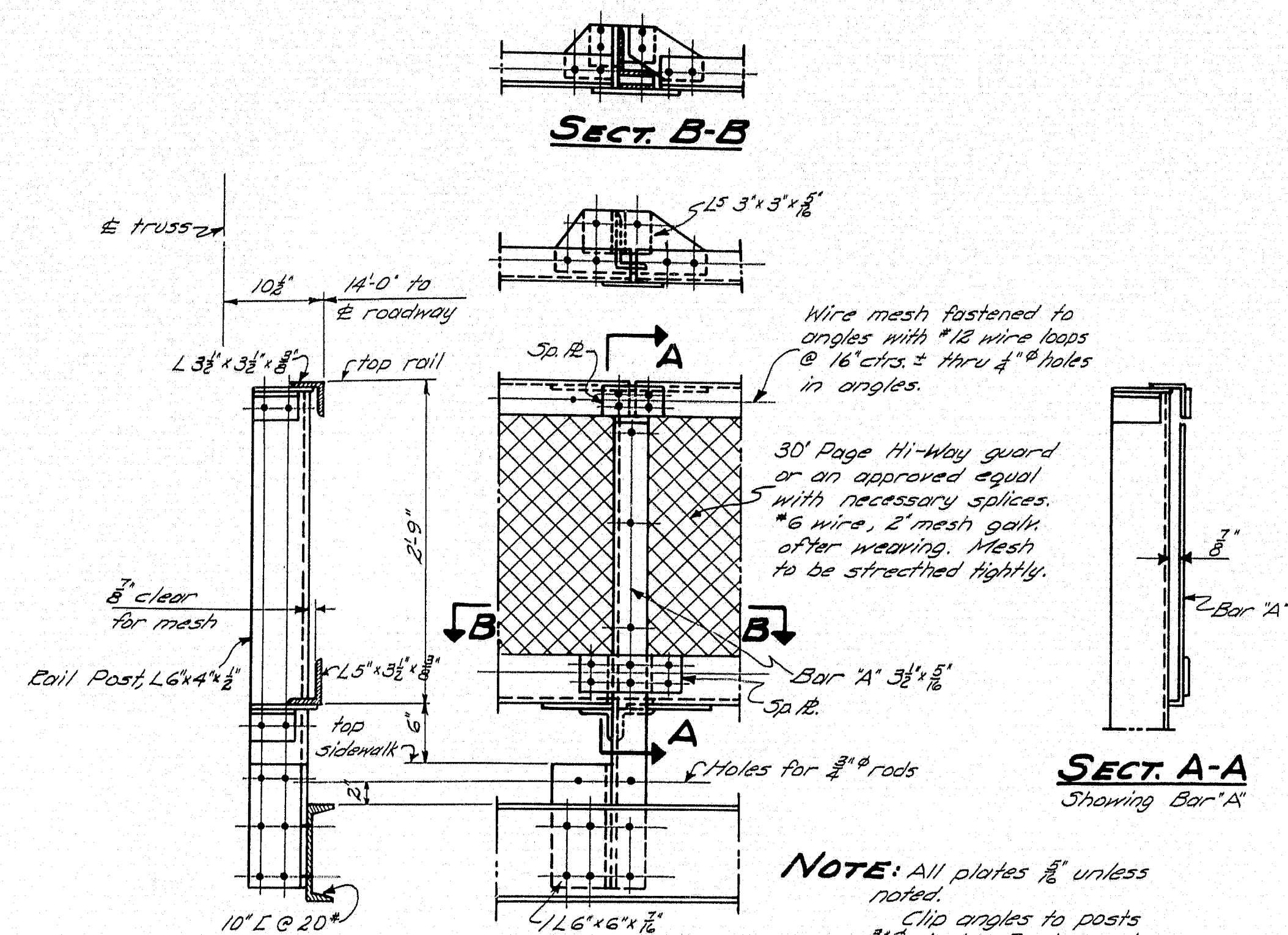


DESIGN - EVERETT
TRACE - CLARK
CHECK - A.B.P. - C.L.P.

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

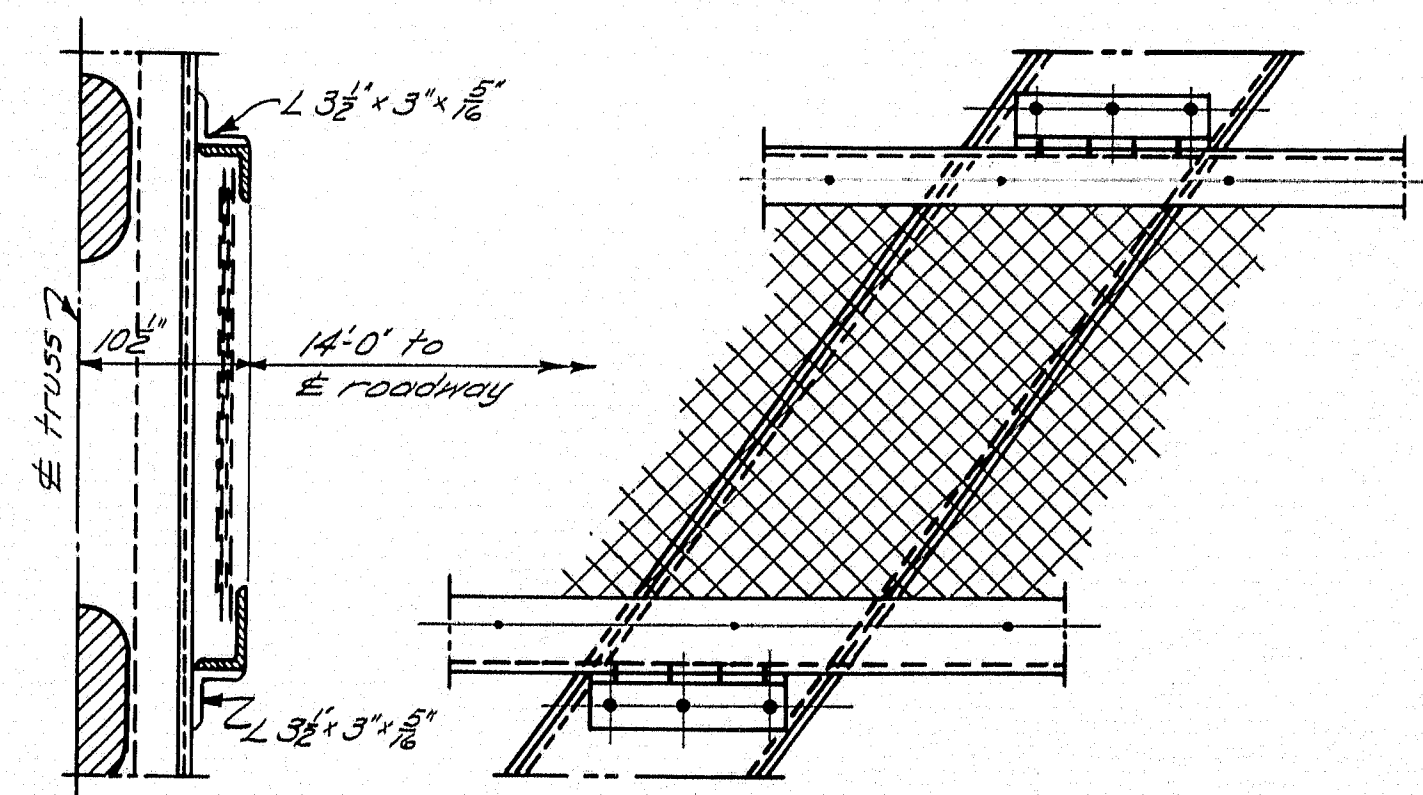
ARROWSIC BRIDGE
OVER
SASANOVA RIVER
BETWEEN THE TOWNS OF
ARROWSIC & WOOLWICH
SAGadahoc COUNTY

TRUSS DETAILS
SHEET 25 OF 36 AUGUSTA, MAINE FEB. 1949

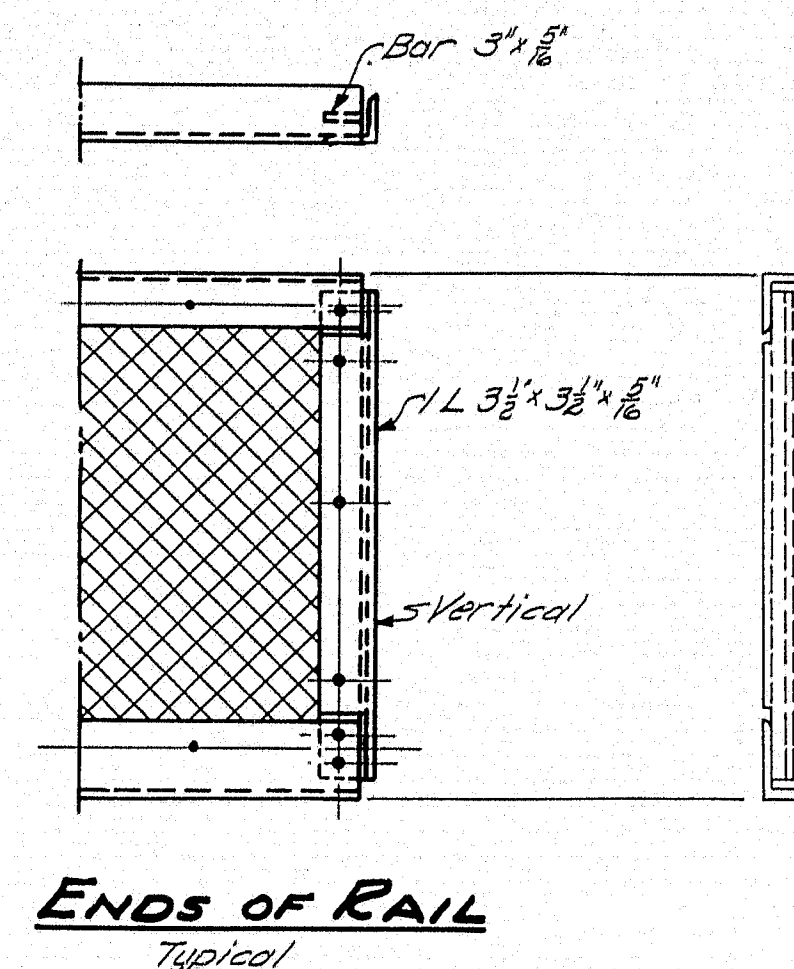


RAIL - STANDARD POST - TRUSS SPANS

Max. post spacing or support for rail angles is 6'-3". Joint in rail at L9 and between spans 2-3 & 3-6. Min. of 4" open joint in rail at all floor expansion plates. All posts to be vertical.

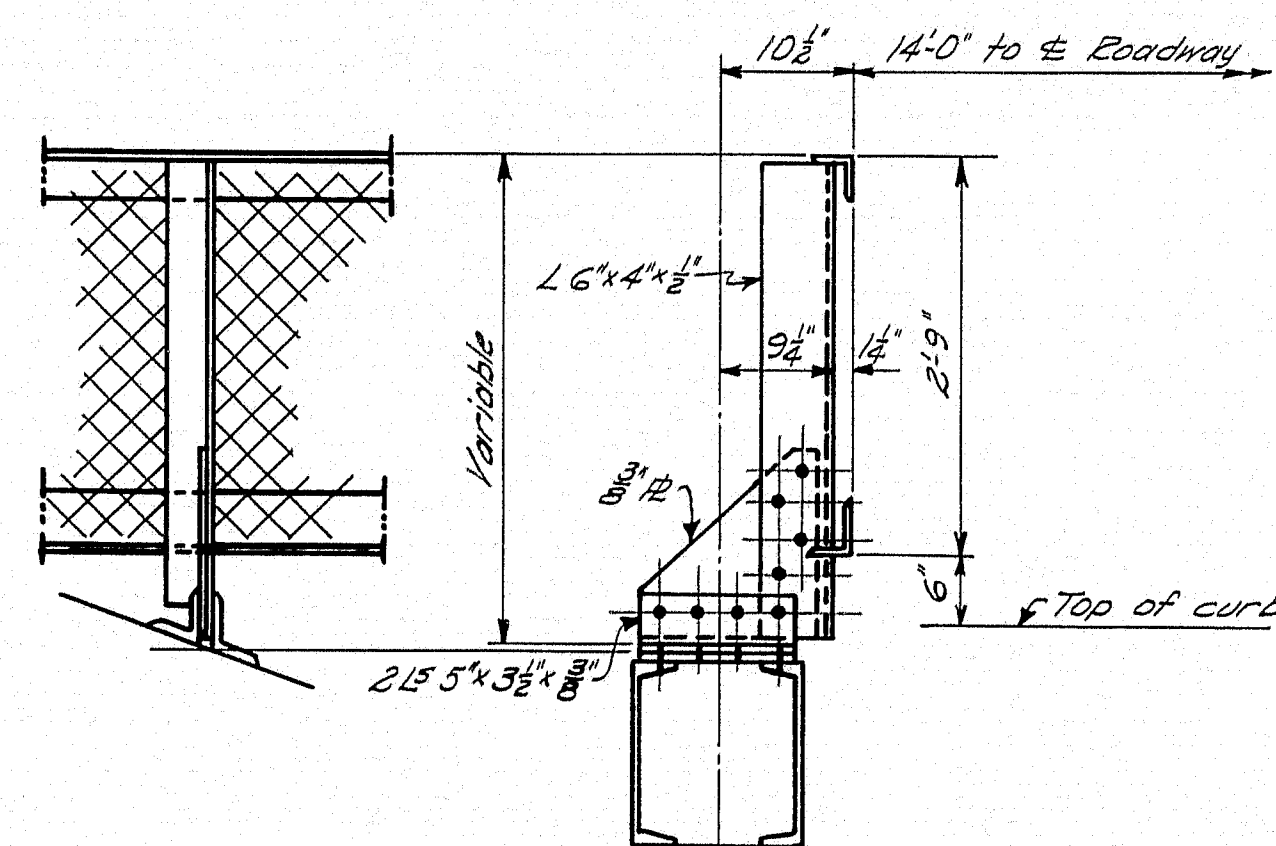


TYPICAL DETAIL AT DIAGONALS



ENDS OF RAIL
Typical

NOTE: All plates 1/2" unless noted.
Clip angles to posts with 3/4" rivets. Posts and connection to L 5" x 3 1/2" x 5/8" rivets. All other connections (rail) 3/4" bolts, hex. hd & nuts.

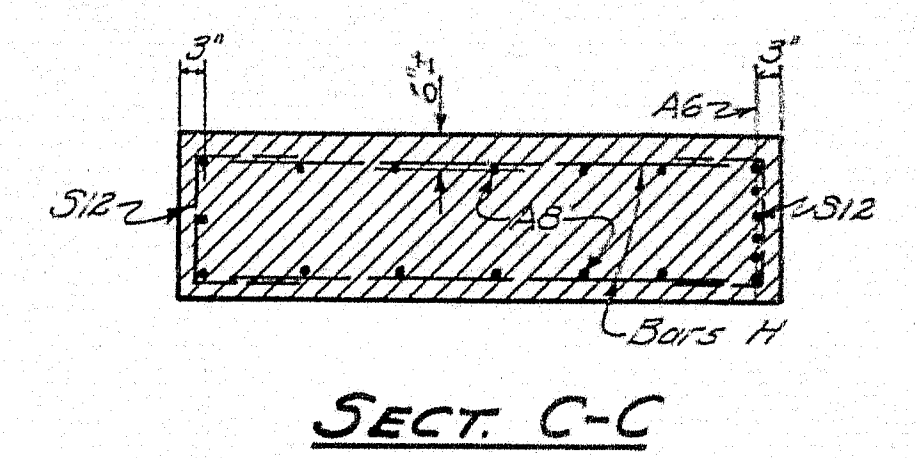
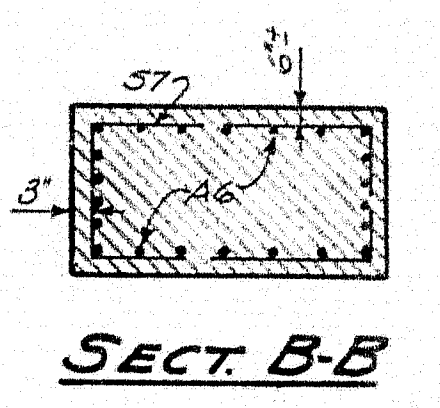
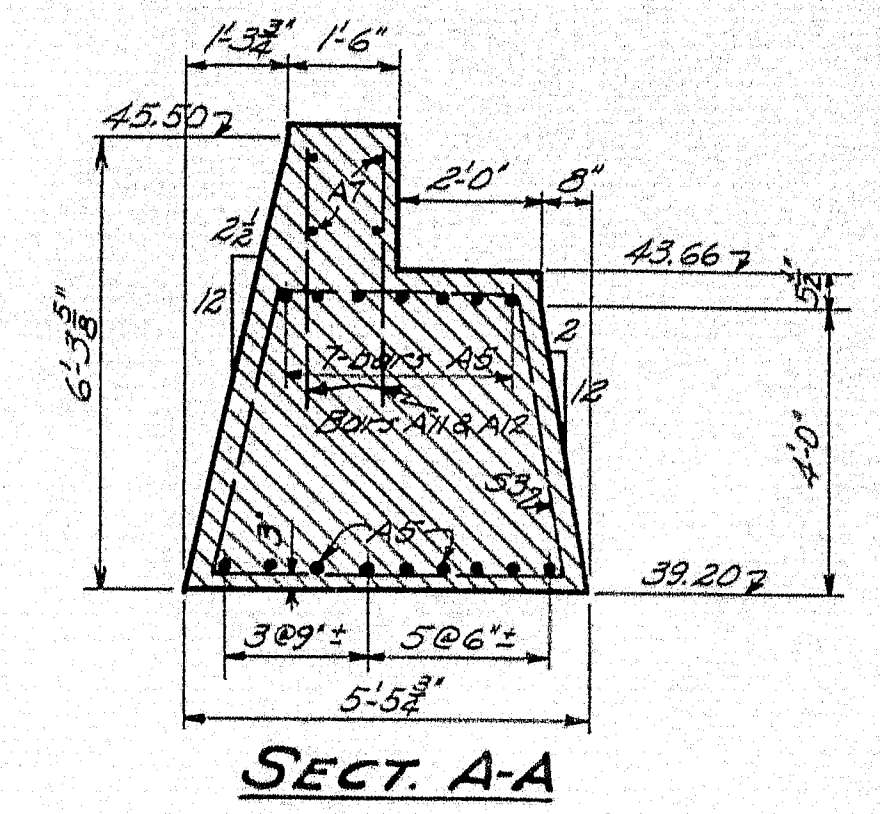
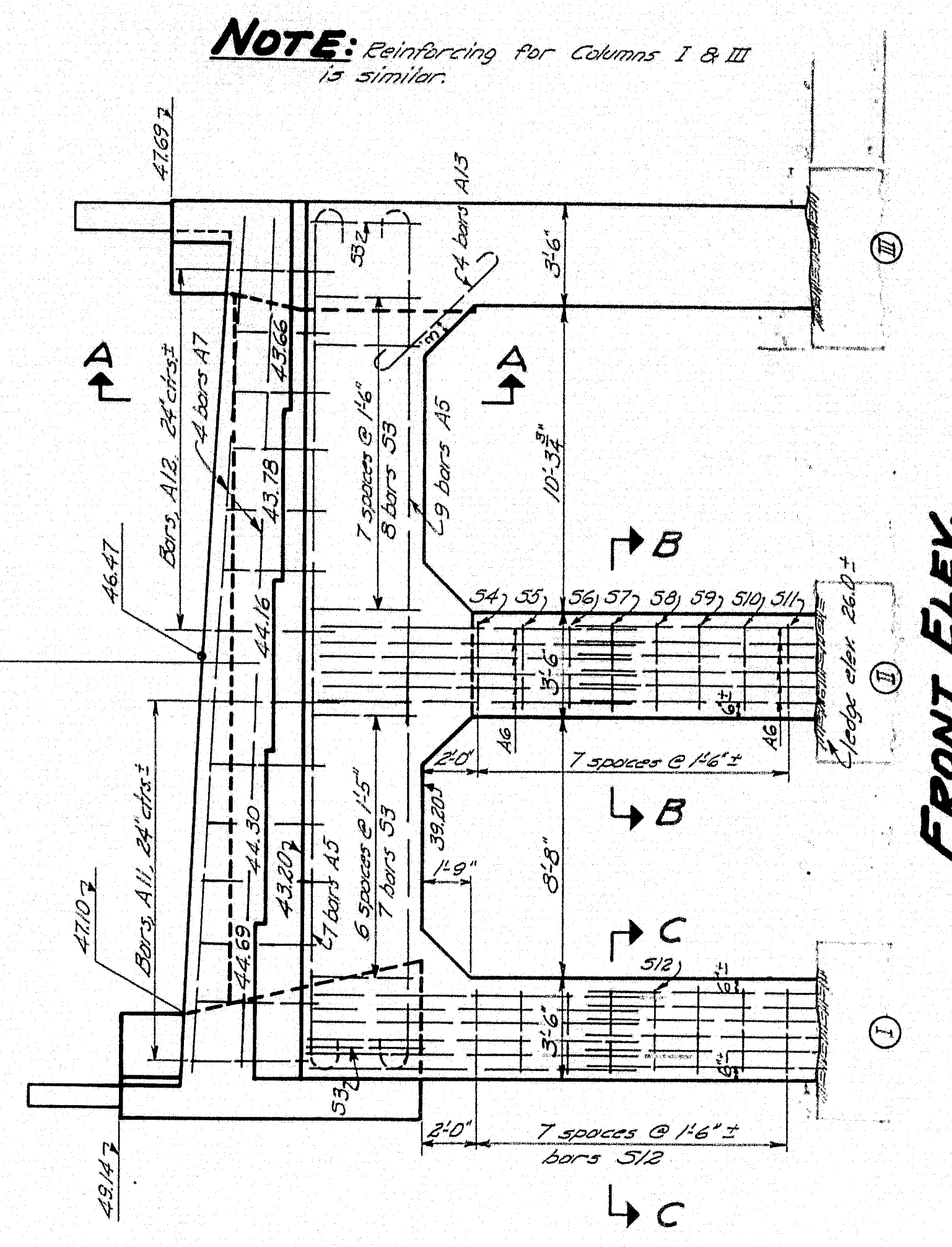
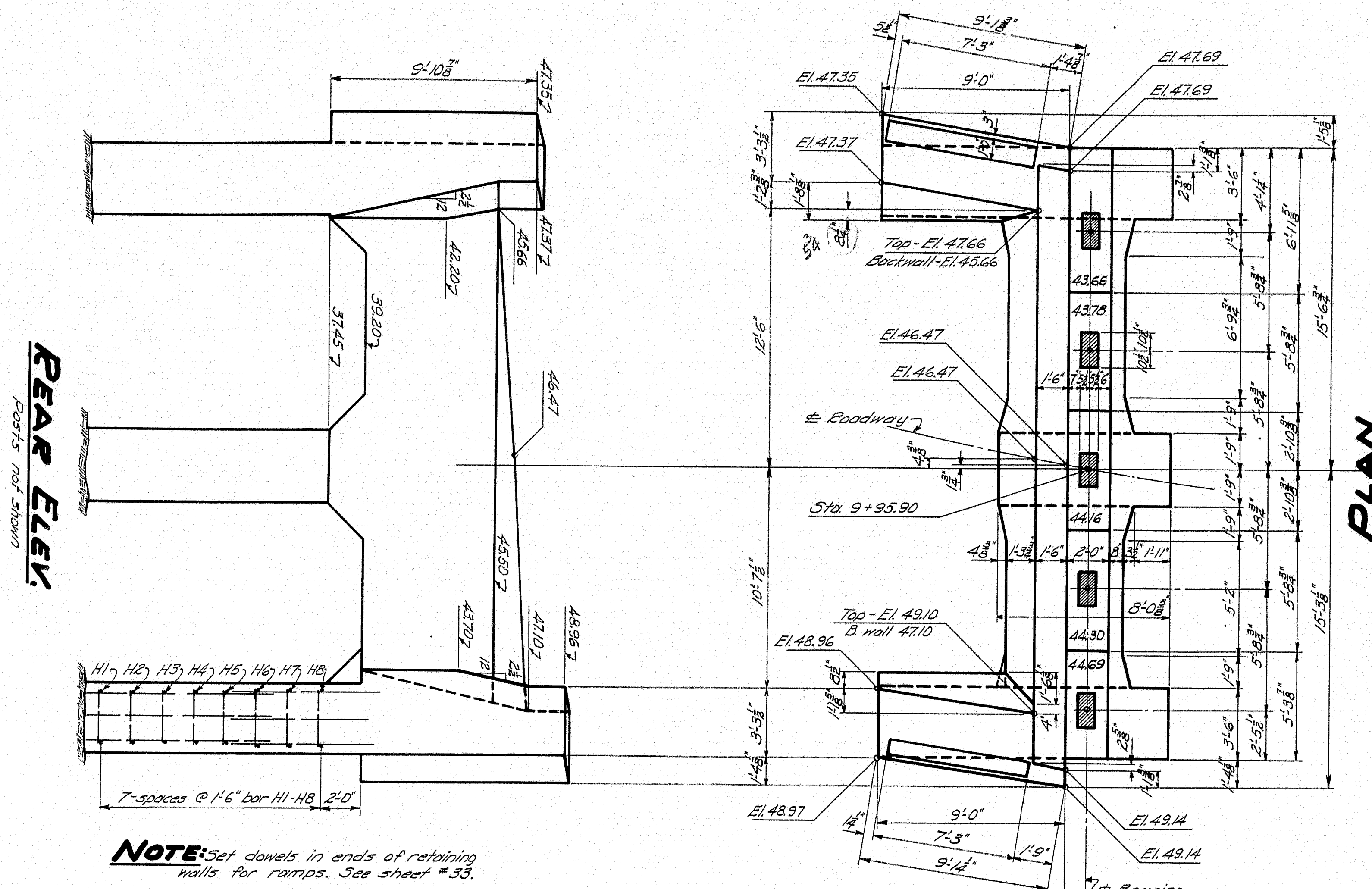


TYPICAL DETAIL

At points where rail posts are shortened so as not to interfere with top chord.

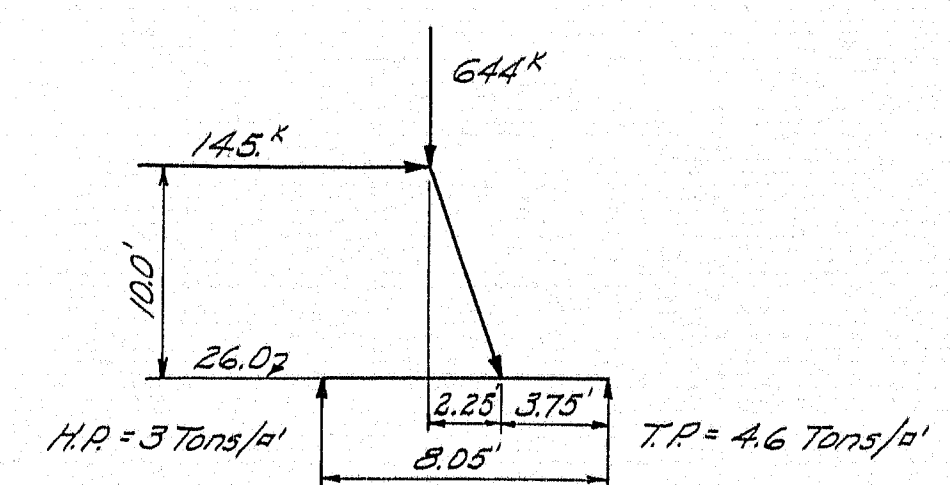
RAIL DETAILS

DESIGN - EVERETT	
TRACE - OLARK	
CHECK - <i>W. J. B.</i>	
STATE HIGHWAY COMMISSION BRIDGE DIVISION	
ARROWSIC BRIDGE	
OVER	
SASANOA RIVER	
BETWEEN THE TOWNS OF	
ARROWSIC & WOOLWICH	
SAGadahoc COUNTY	
RAIL DETAILS	
SHEET 27 OF 36	AUGUSTA MAINE FEB. 1949

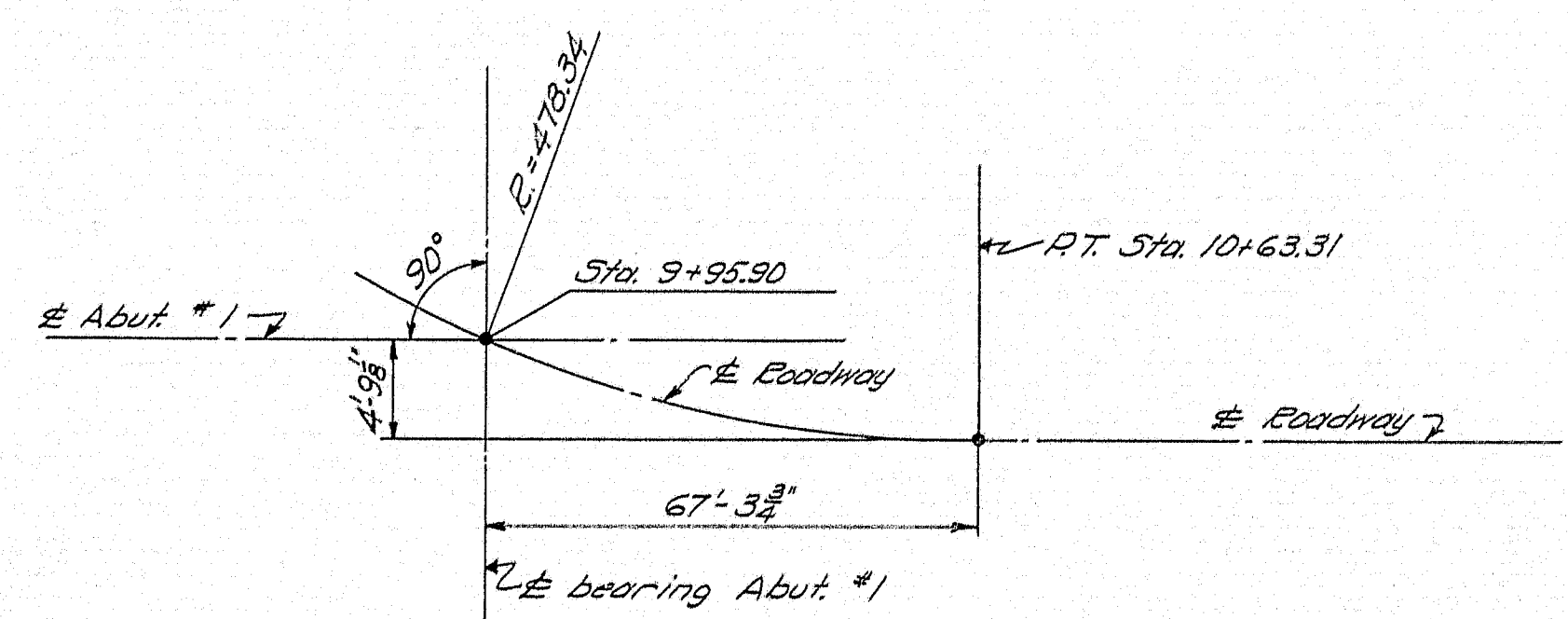
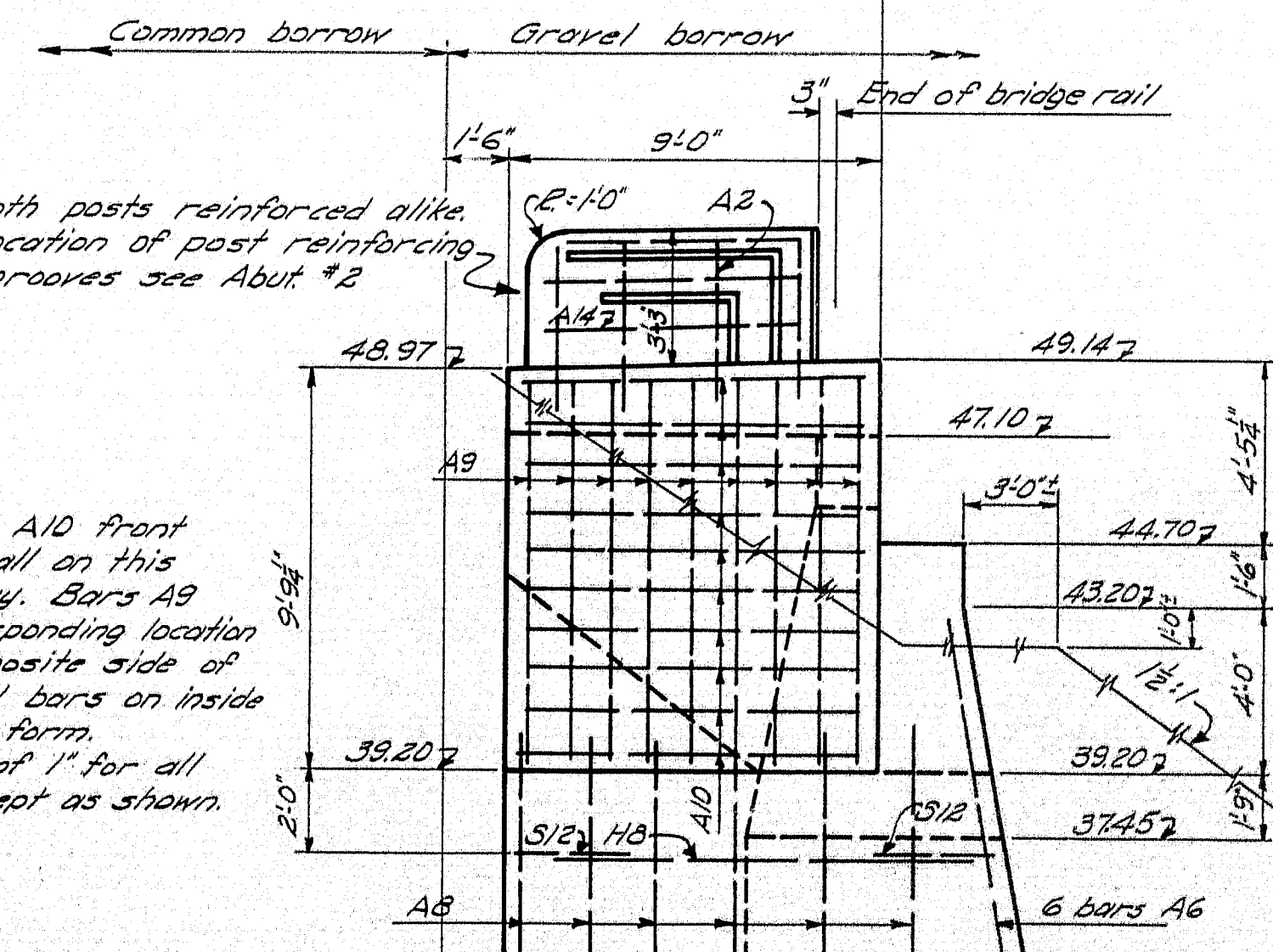


NOTE: Dress shaded bearing areas to exact elevations.
Dimensions assume an elevation of 26.0 at base of columns.

NOTE: Place reinforcing steel in the bridge seats to clear Anchor Bolts.



NOTE: Bars A9 & A10 front and back of wall on this side of roadway. Bars A9 & A10 in corresponding location in wall on opposite side of roadway. Bend bars on inside of walls to fit form.
Min. cover of 1" for all reinforcing except as shown.

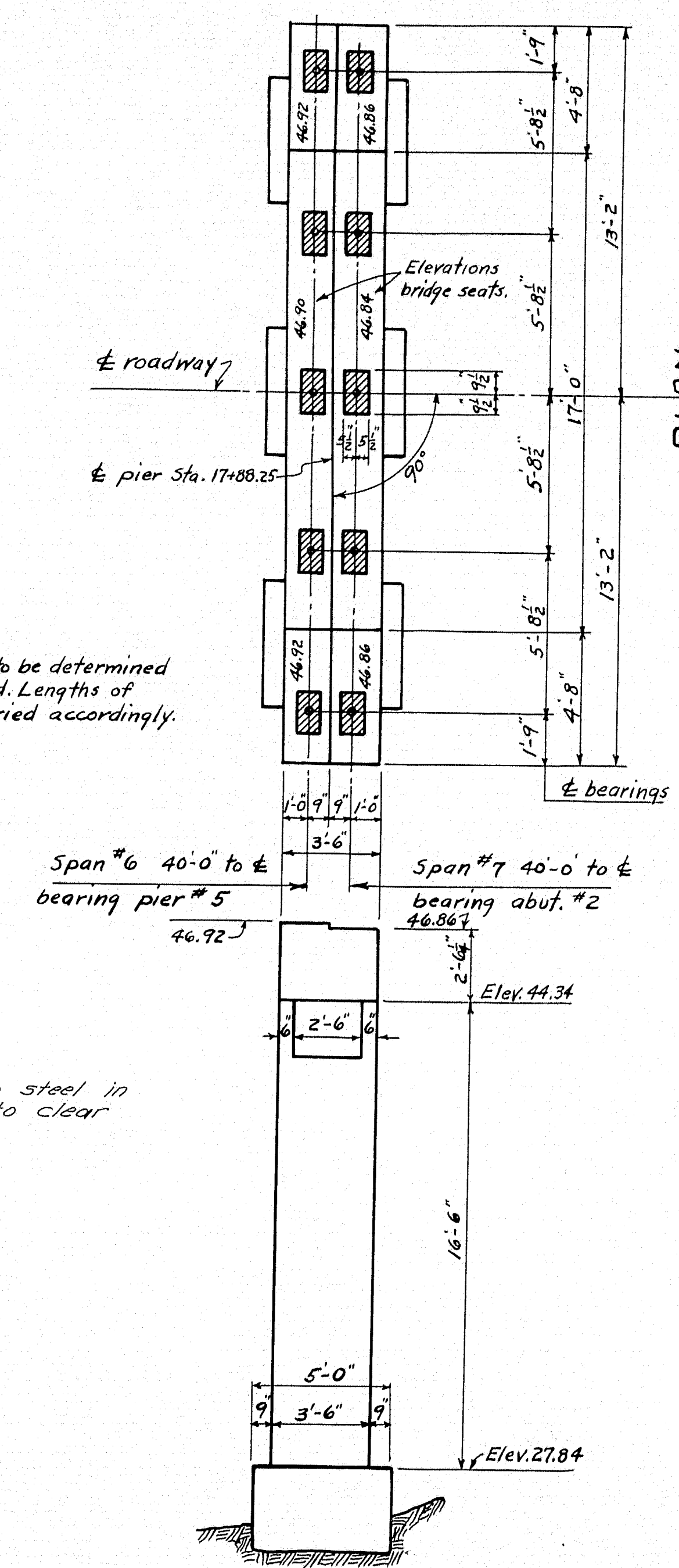
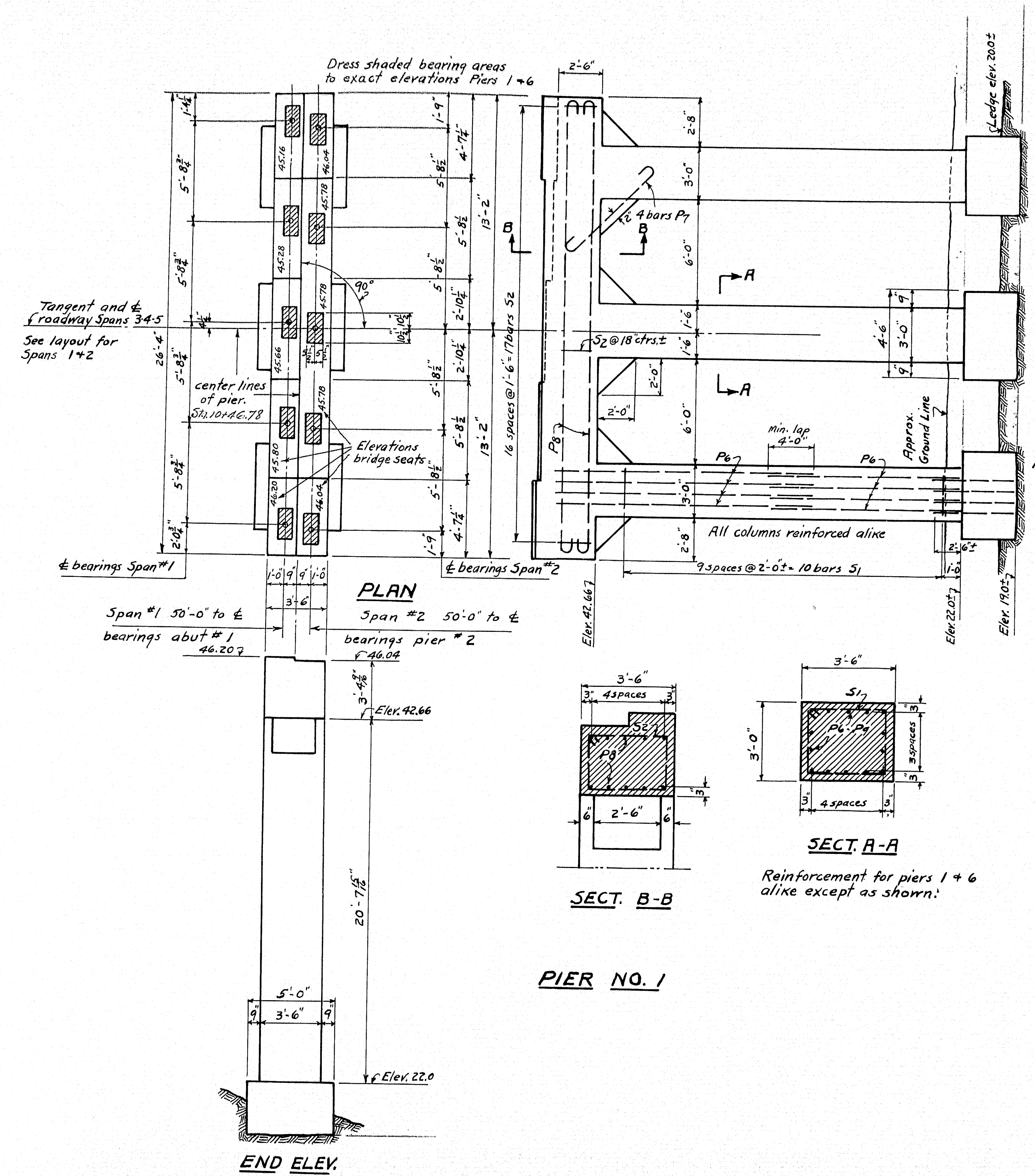


DESIGN - EVERETT
TRACE - CLARK
CHECK - [Signature]

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

ARROWSIC BRIDGE
OVER
SASANOVA RIVER
BETWEEN THE TOWNS OF
ARROWSIC & WOOLWICH
SAGadahoc COUNTY
ABUTMENT NO. 1

SHEET 28 OF 36 AUGUSTA, MAINE FEB. 1949

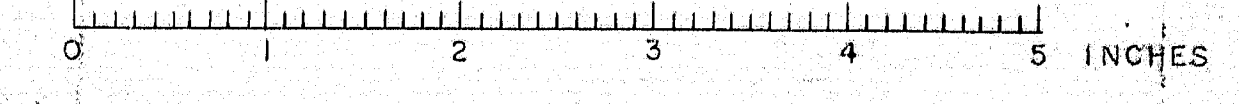


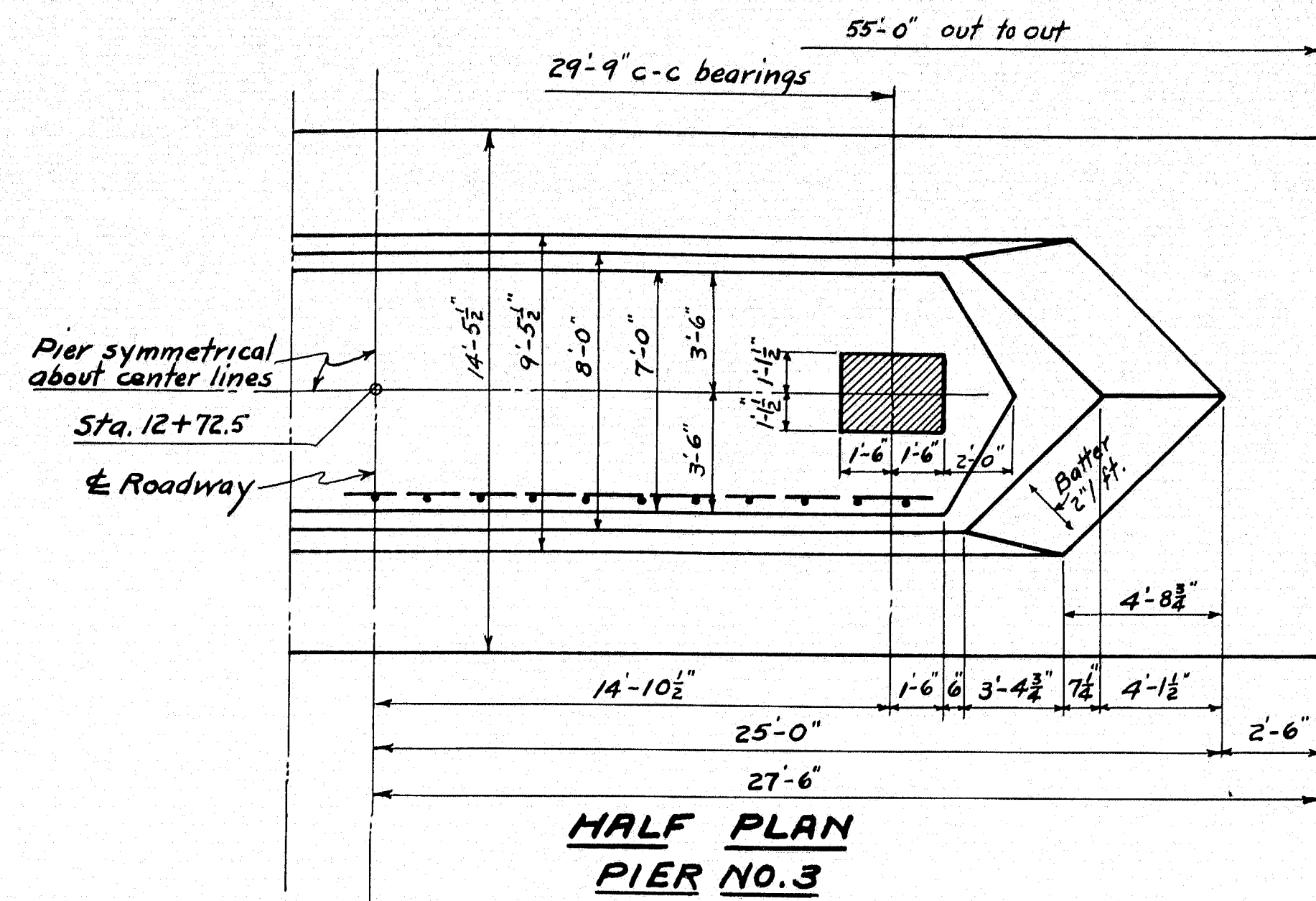
DESIGN - EVERETT
TRACE - WELSH
CHECK - J. J. H.

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

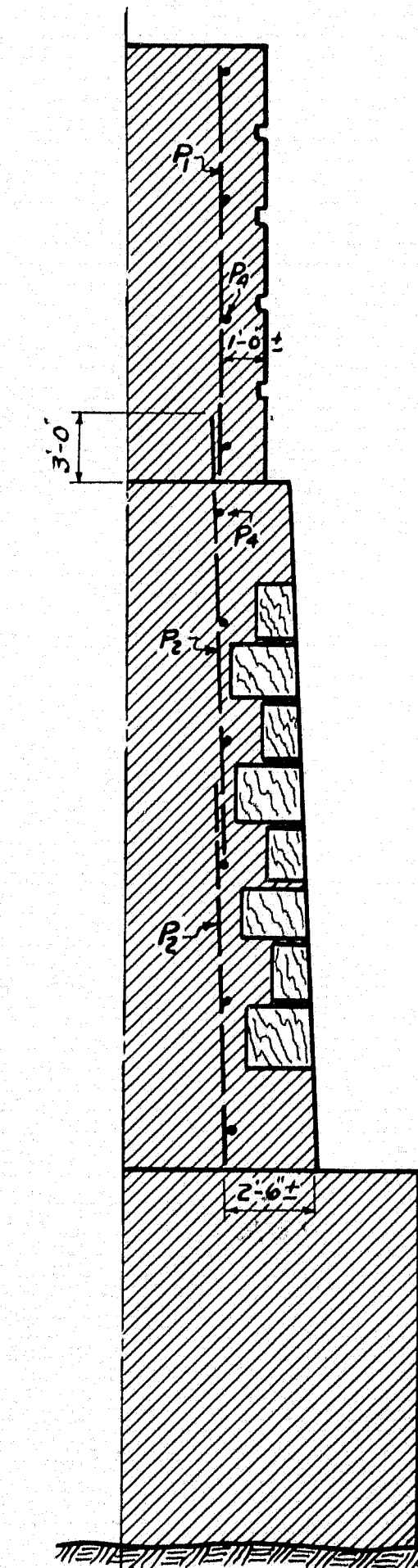
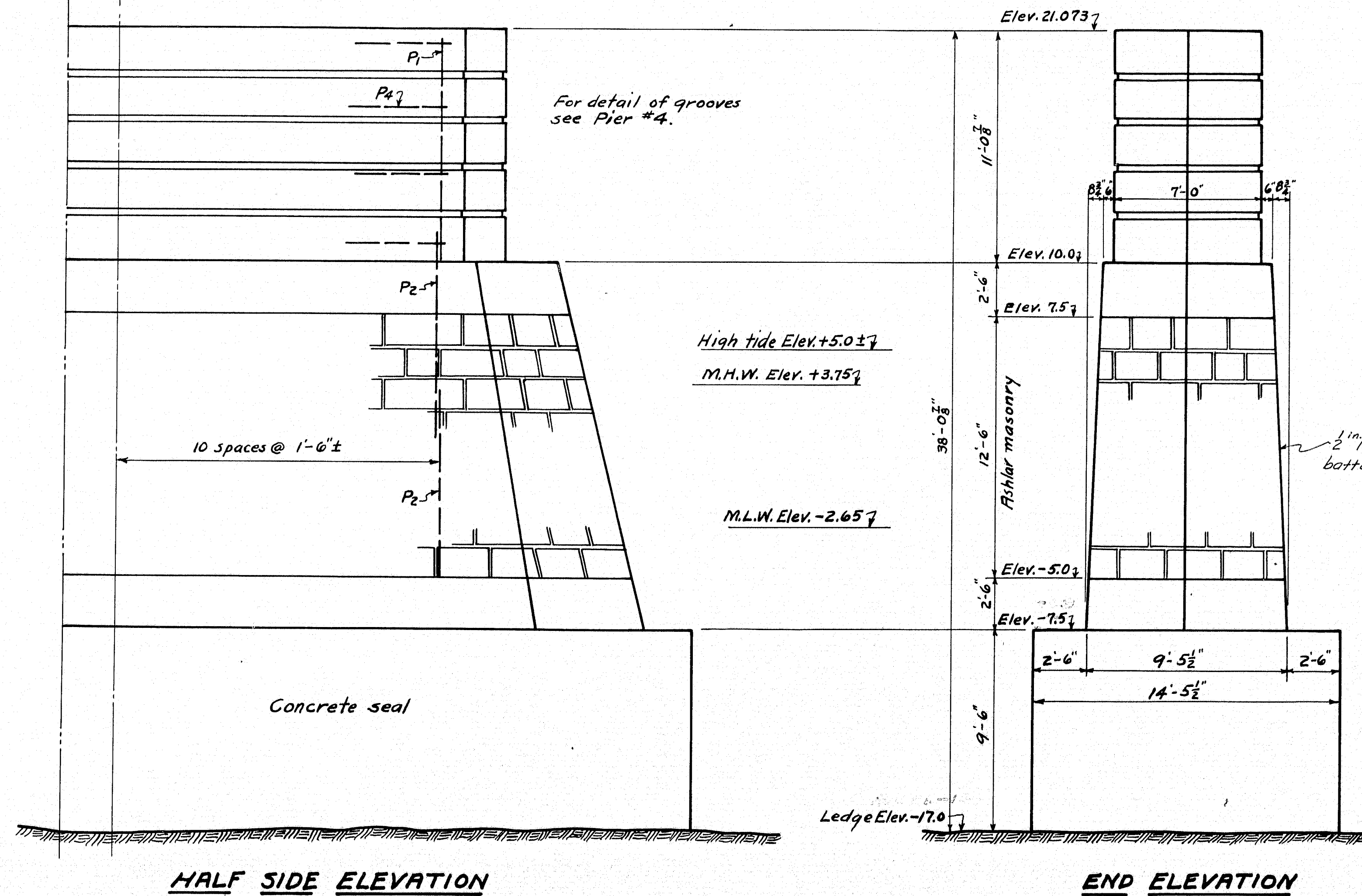
ARROWSIC BRIDGE
OVER
SASANO RIVER
BETWEEN THE TOWNS OF
ARROWSIC & WOOLWICH
SAGadahoc COUNTY
PIERS NO. 1 & 6

SHEET 29 OF 36 AUGUSTA, MAINE FEB. 1949





Dress shaded bearing areas
plus one inch all around to
exact elevation.



NOTE: - Substructure contractor before construction will submit details
of Ashlar masonry for Piers #3 & #4 to the Engineer for approval.

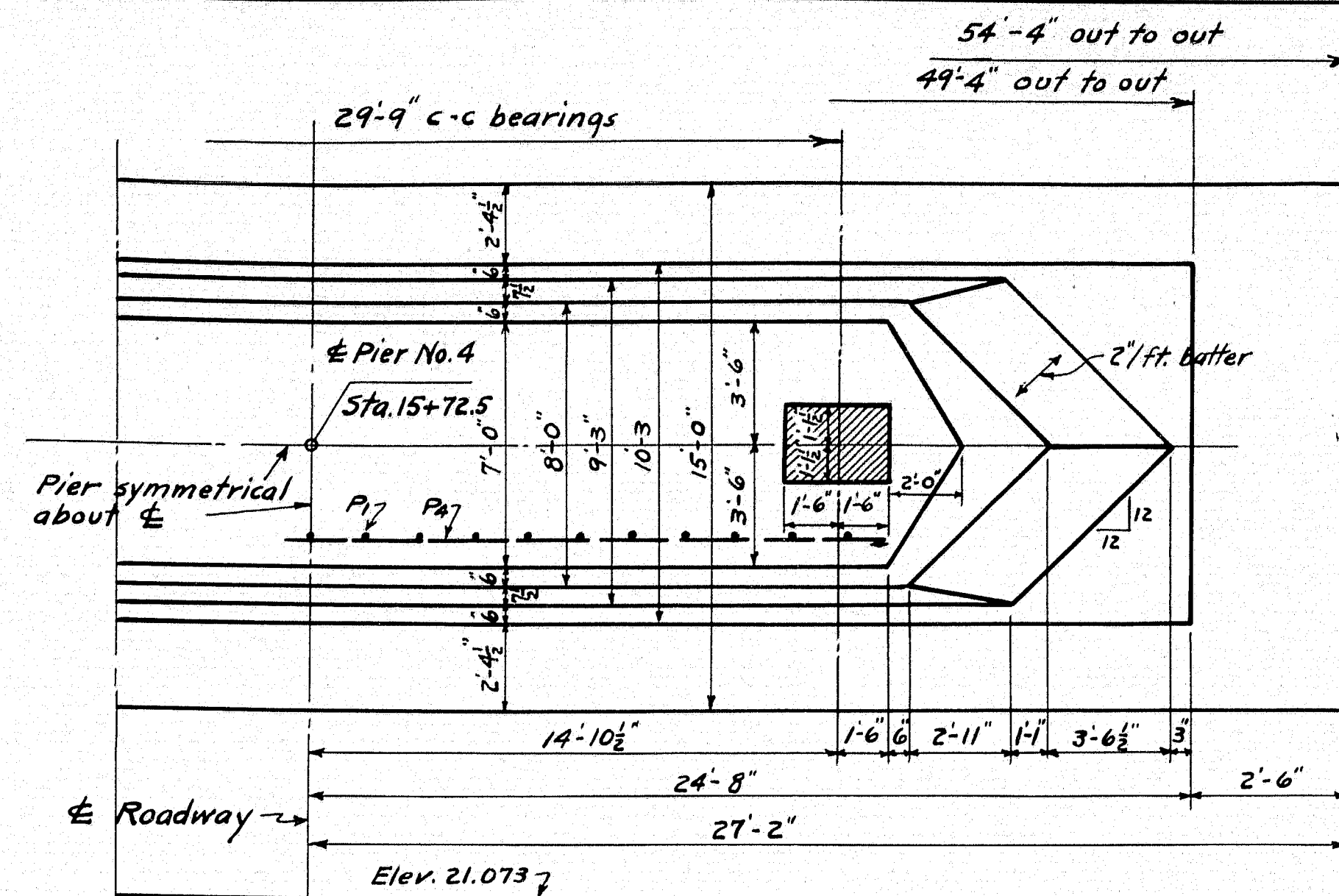
DESIGN - EVERETT
TRACE - WELCH
CHECK - *[Signature]*

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

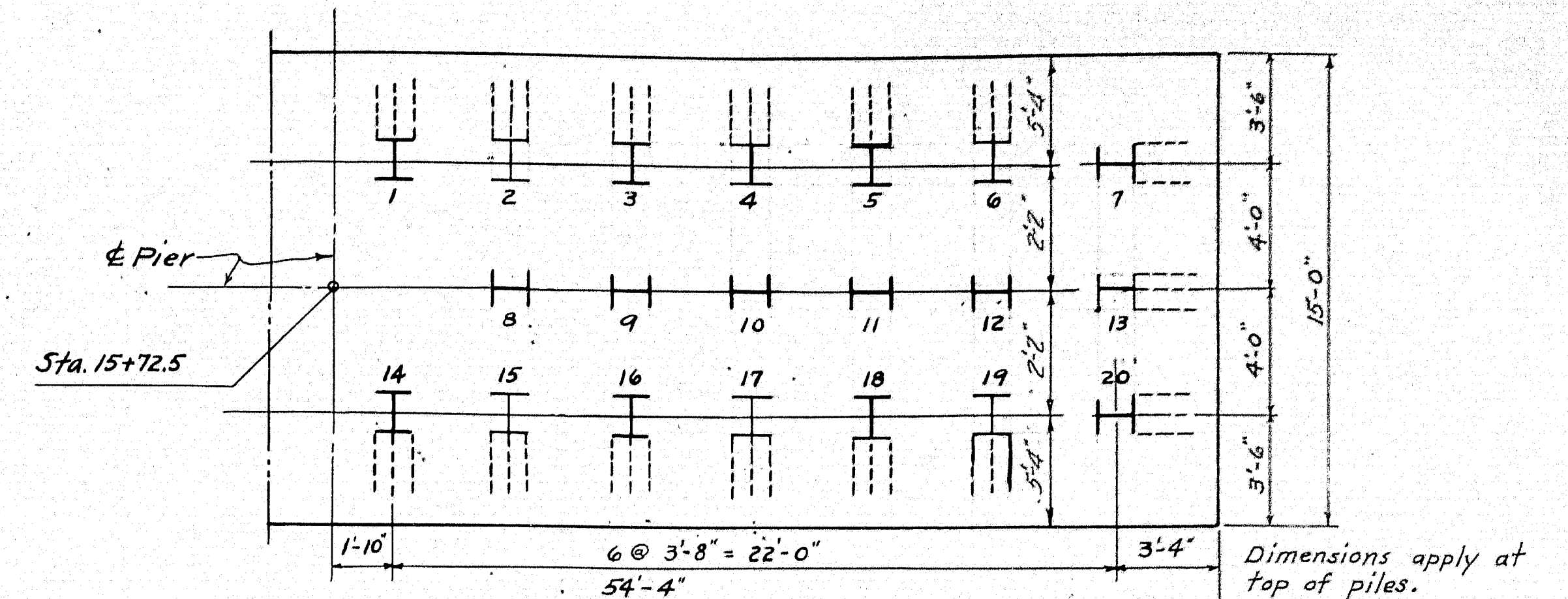
ARROWSIC BRIDGE
OVER
SASANOA RIVER
BETWEEN THE TOWNS OF
ARROWSIC & WOOLWICH
SAGadahoc COUNTY
PIER NO. 3

SHEET 31 OF 36 AUGUSTA, MAINE FEB. 1949

48-94

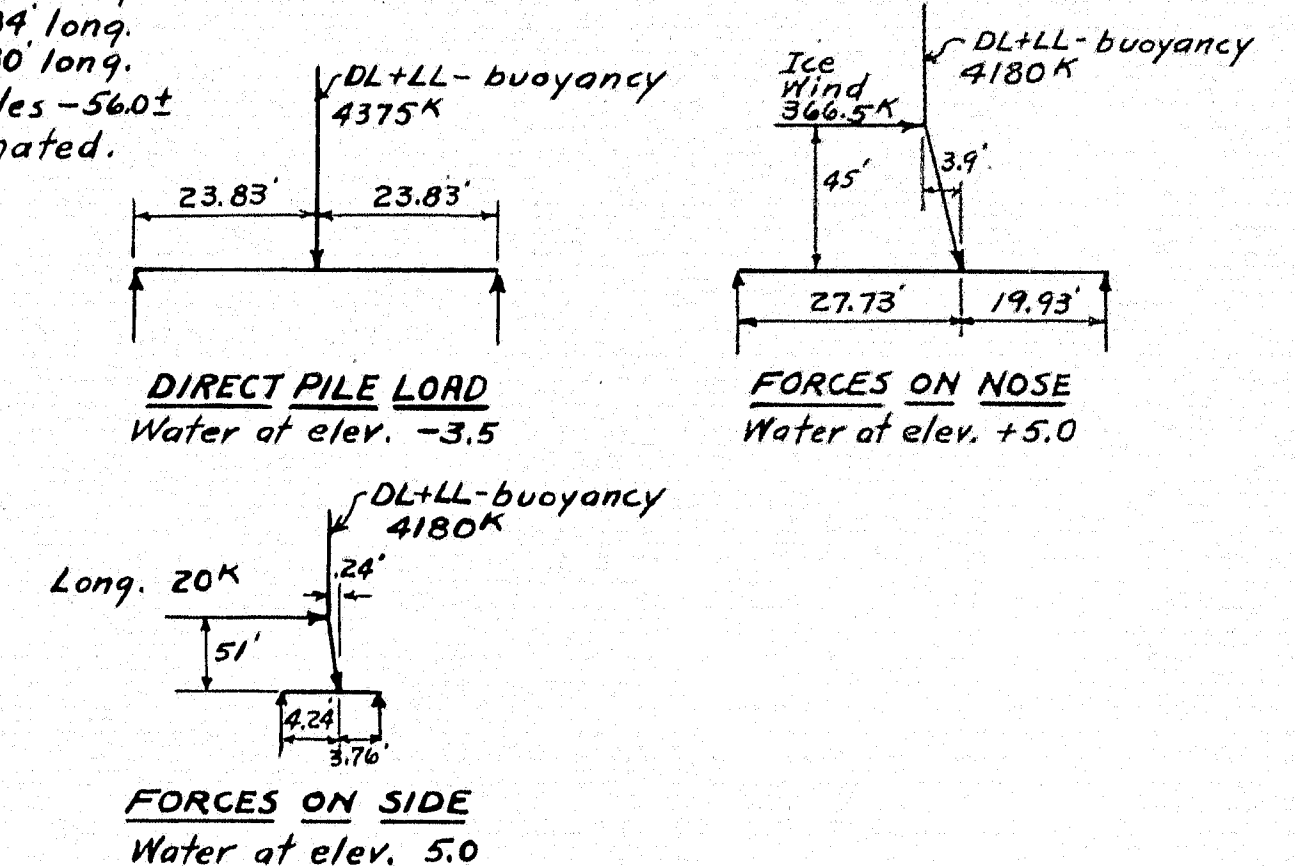


Dress shaded bearing areas plus one inch all around to exact elevation.

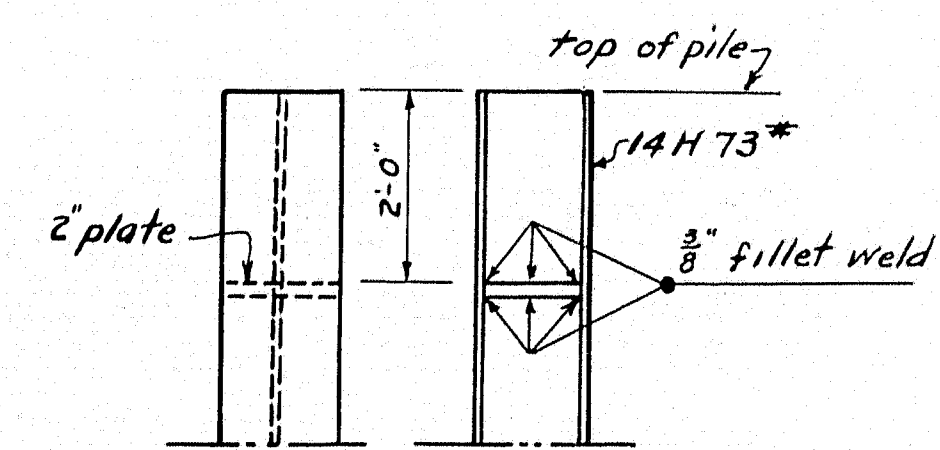


HALF PILE PLAN
Reqd 40 piles 14H 73lb.
All outside piles to be battered as shown 2' in 12"
Reqd 24 piles 46 long.
6 piles 34 long.
10 piles 30 long.
Elev. bottom of piles -56.0±
Lengths estimated.

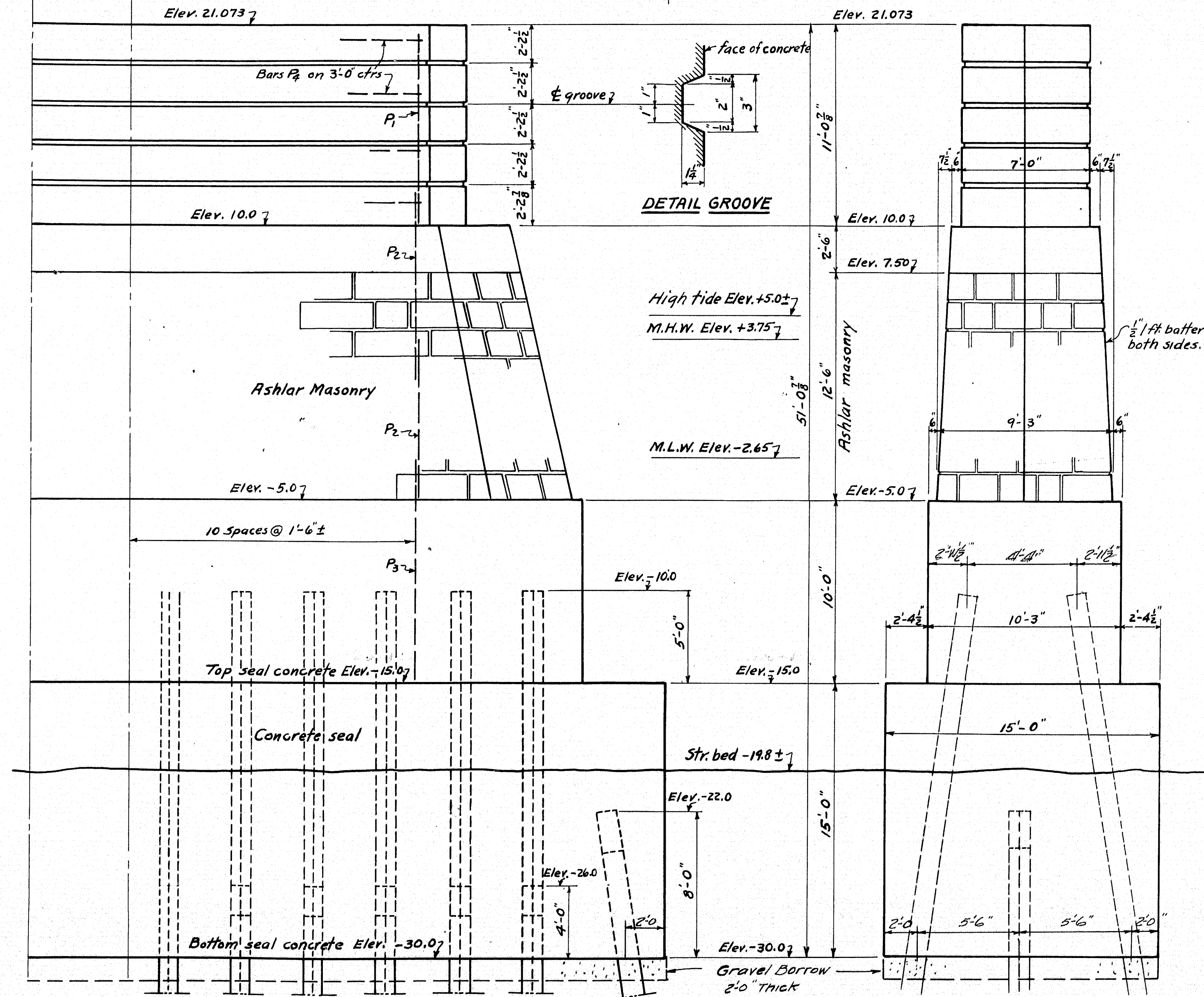
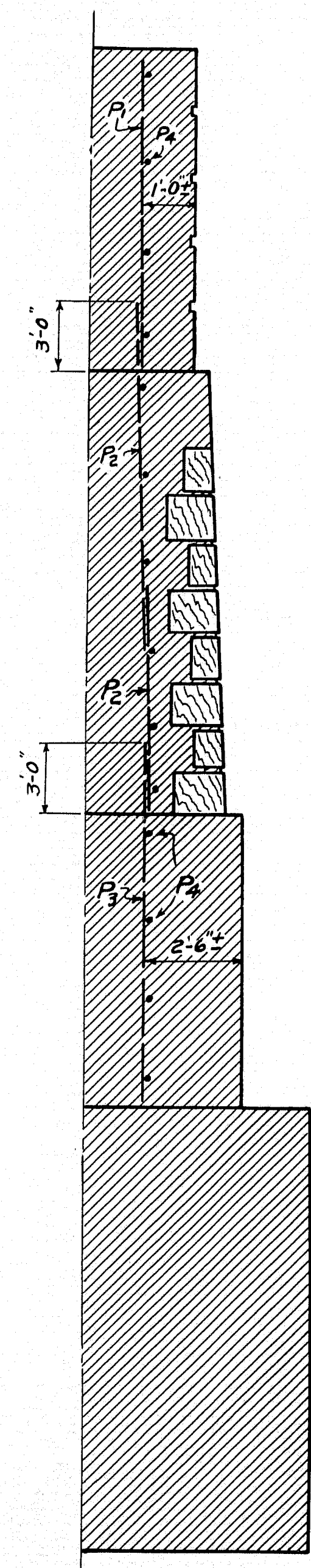
Elevations tops of piles
Elev. - 10 piles 1-2-3-4-5-6-14-15-16-17-18-19
Elev. - 22 piles 7-13-20
Elev. - 26 piles 8-9-10-11-12



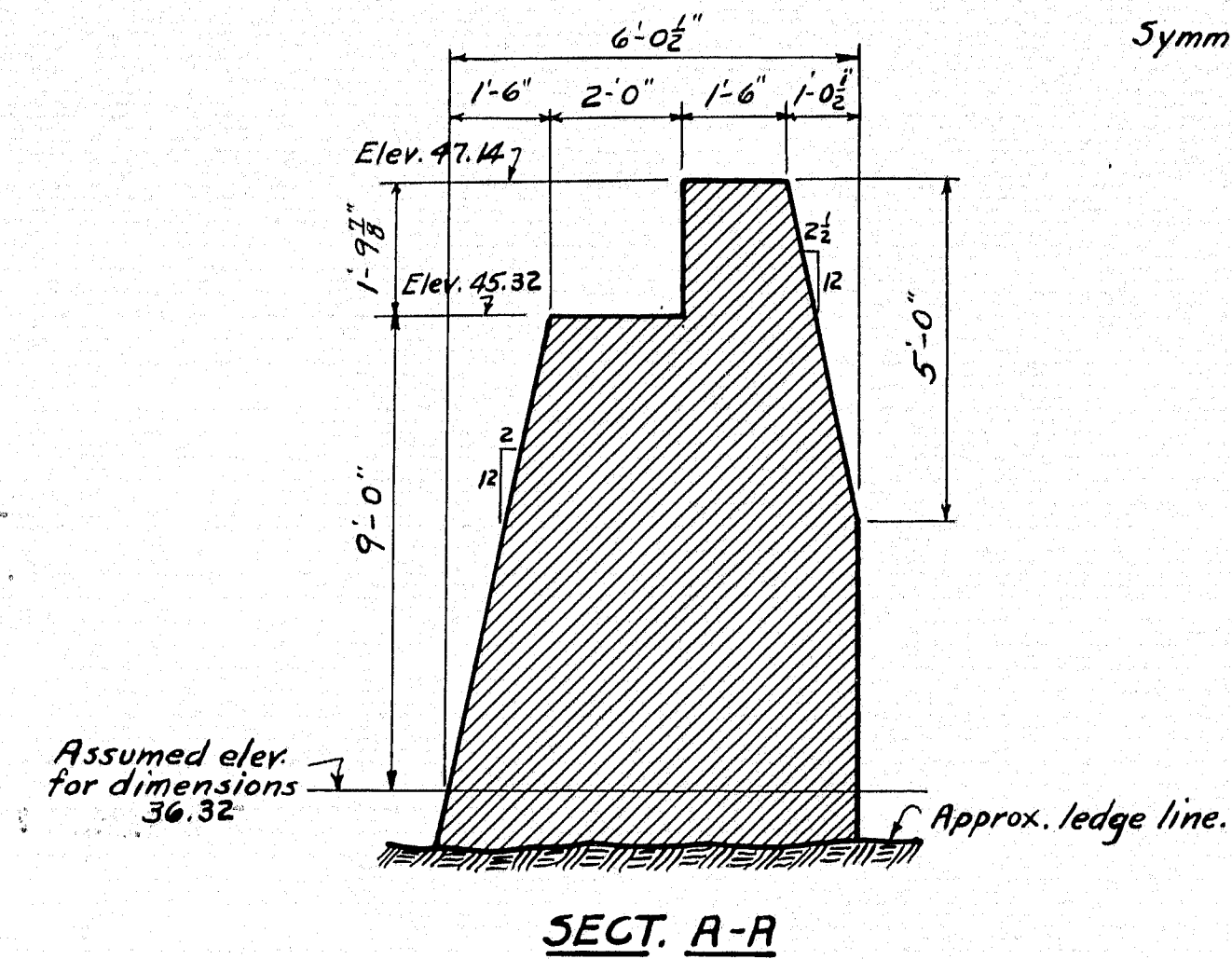
SUMMARY
Direct Load 54.7 Tons
Combination Direct 52.3 Tons.
On nose 21.2 " On side 4.5 "
Allowable 64 Tons
40 piles 14H 73#



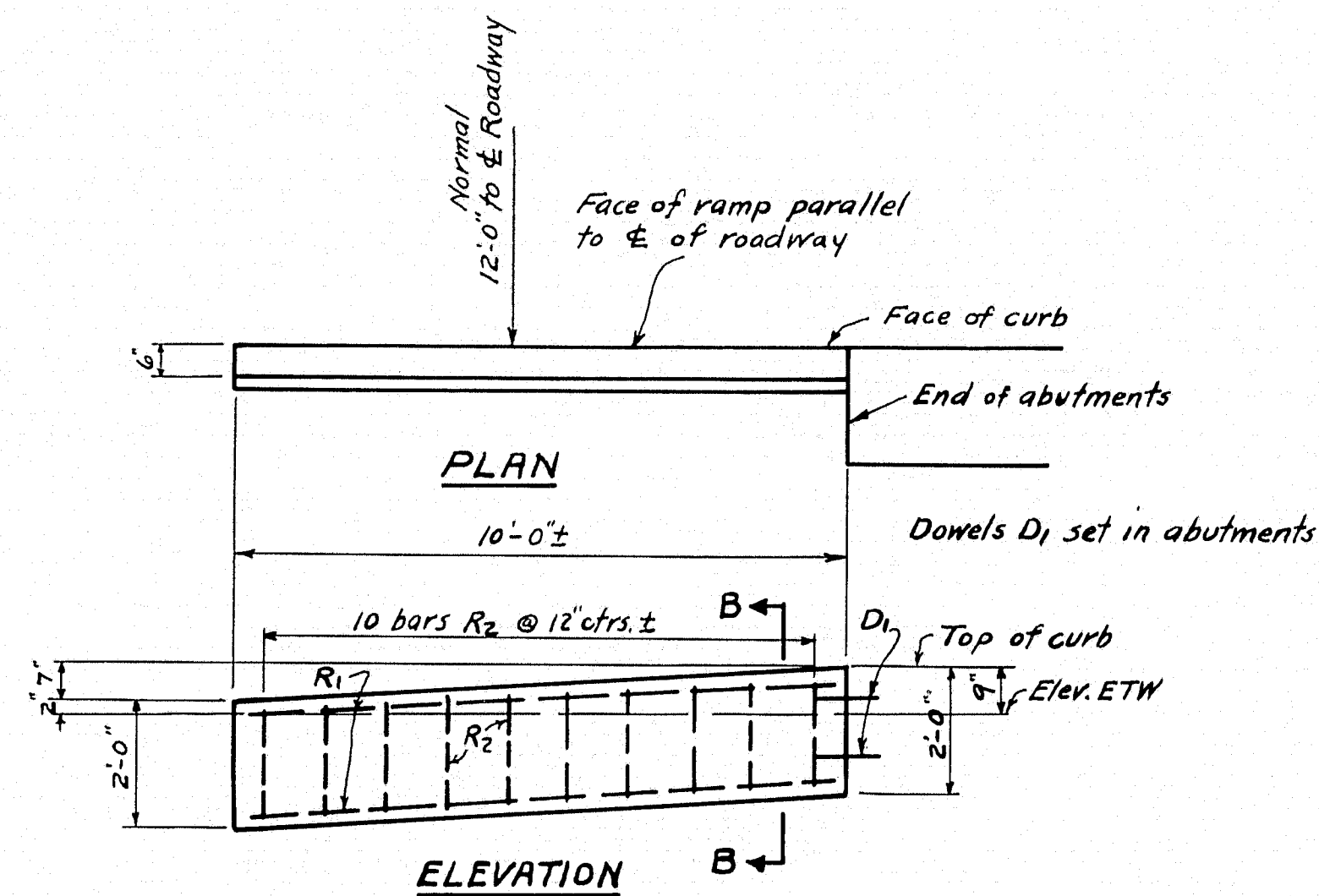
DESIGN - EVERETT
TRACE - WELCH
CHECK - [Signature]
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
ARROWSIC BRIDGE
OVER
SASANO RIVER
BETWEEN THE TOWNS OF
ARROWSIC & WOOLWICH
SAGadahoc COUNTY
PIER NO. 4
SHEET 32 OF 36 AUGUSTA, MAINE FEB. 1949



END ELEVATION

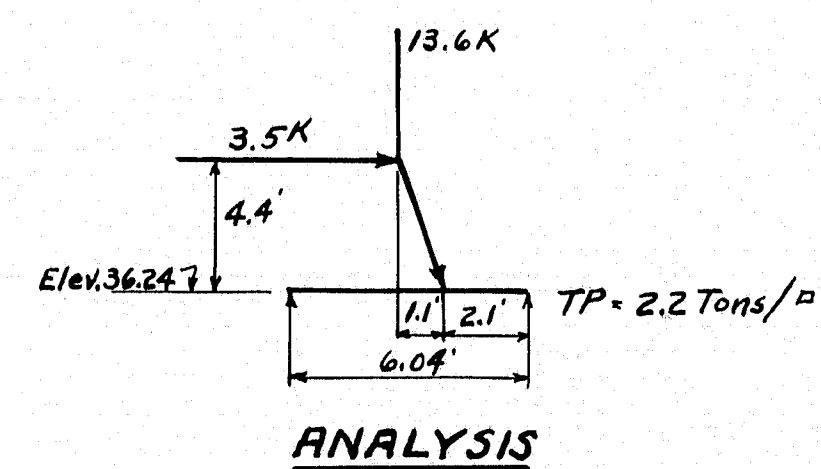


NOTE:
Dress shaded bearing
areas to exact elevation.

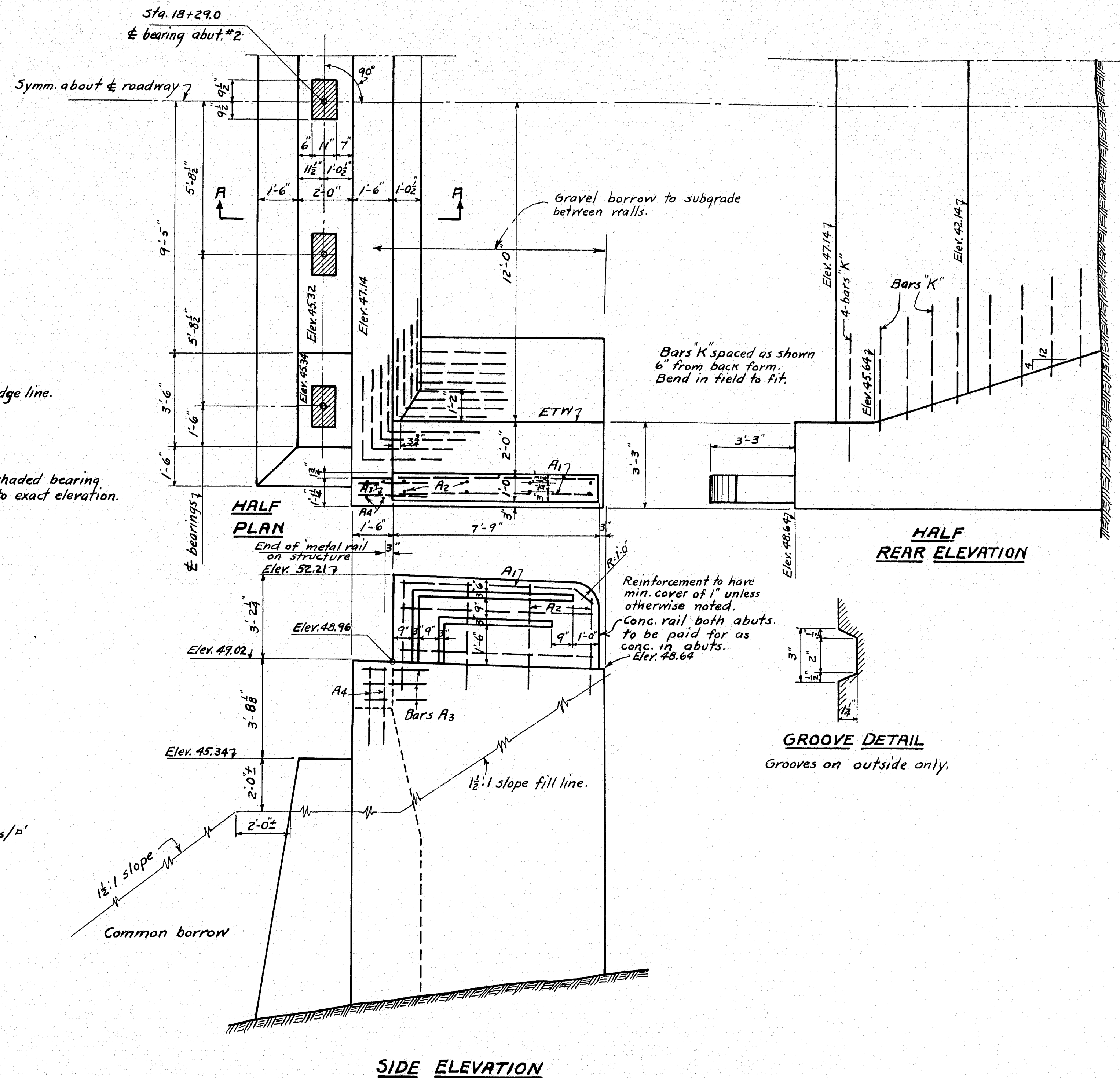


NOTE: Ramp as detailed to be constructed at corners of both abutments to provide transition from sidewalk on bridge to approaches. 4 ramps required.
Ramps to be paid for as concrete in roadway slabs.

SECT. B-B
RAMP DETAIL



ABUT. NO. 2



GROOVE DETAIL
Grooves on outside only.

DESIGN - EVERETT
TRACE - WELCH
CHECK - *WELCH*

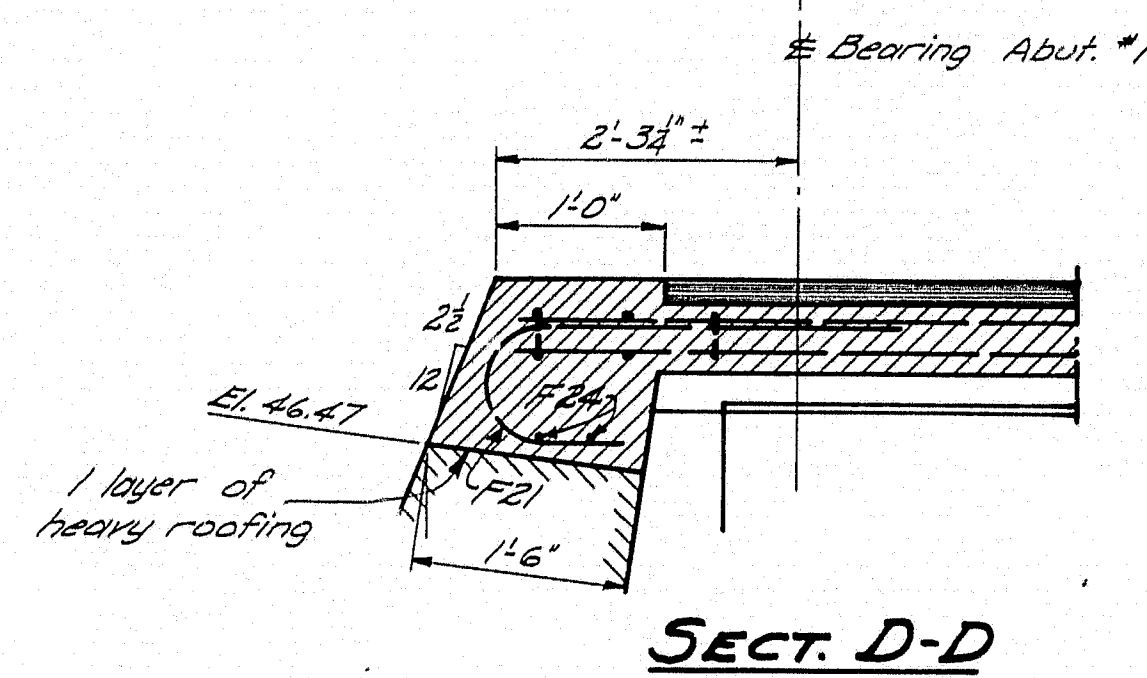
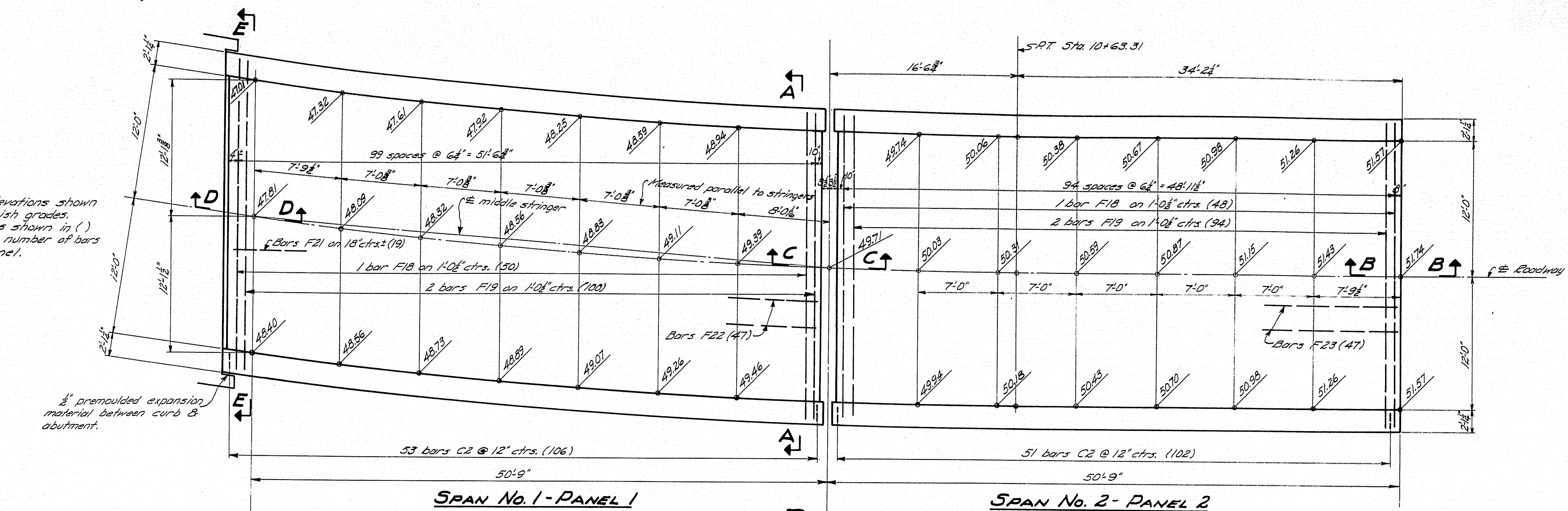
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

ARROWSIC BRIDGE
OVER
SASANO RIVER
BETWEEN THE TOWNS OF
ARROWSIC & WOOLWICH
SAGadahoc COUNTY
ABUTMENT NO. 2

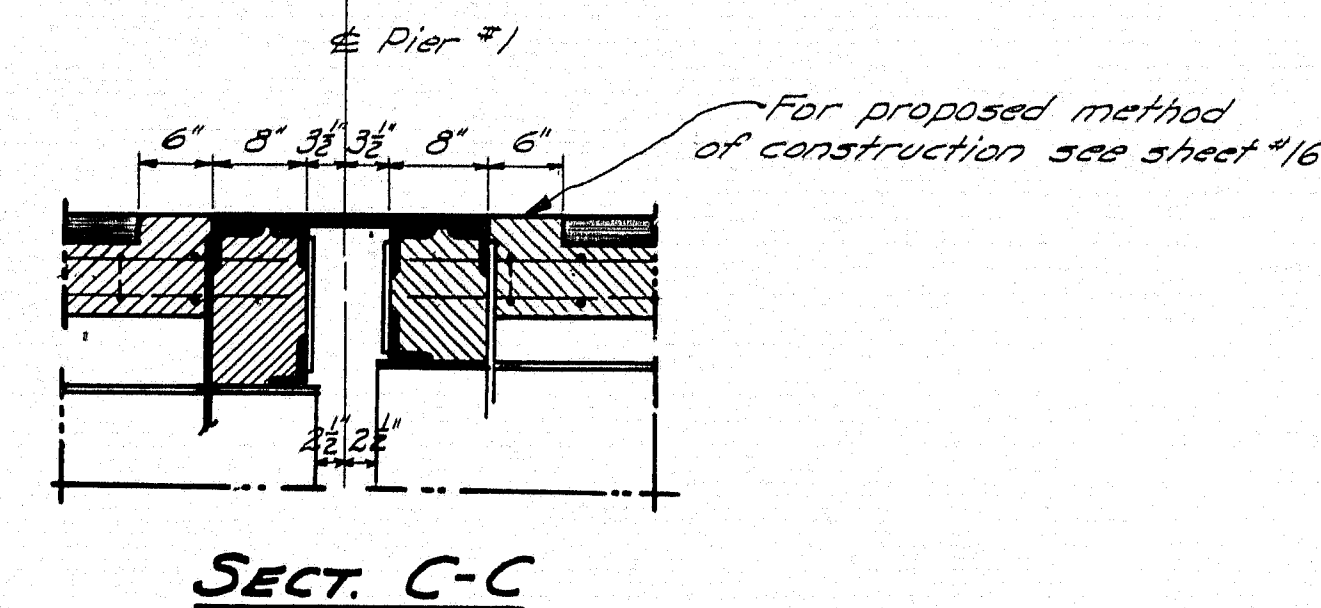
SHEET 33 OF 36 AUGUSTA, MAINE FEB. 1949

48-96

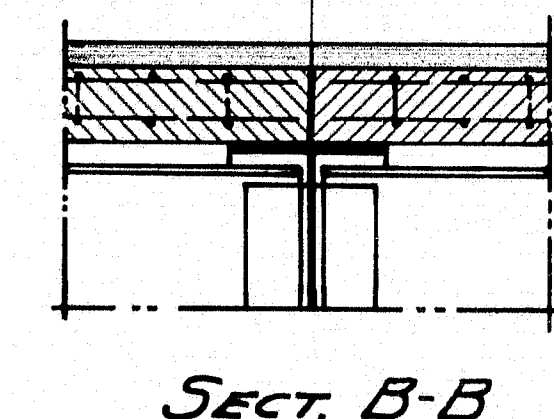
NOTE: All elevations shown are finish grades. Figures shown in () indicate number of bars per panel.



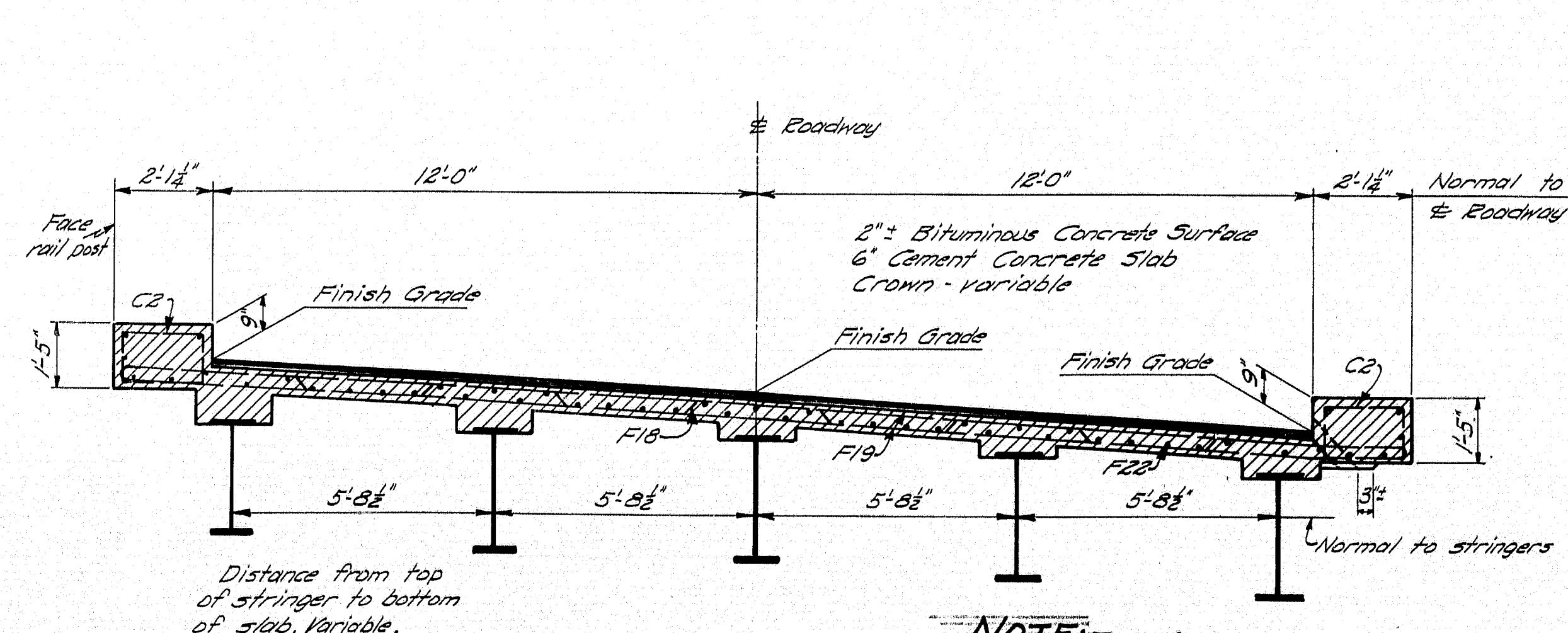
SECT. D-D



SECT. C-C

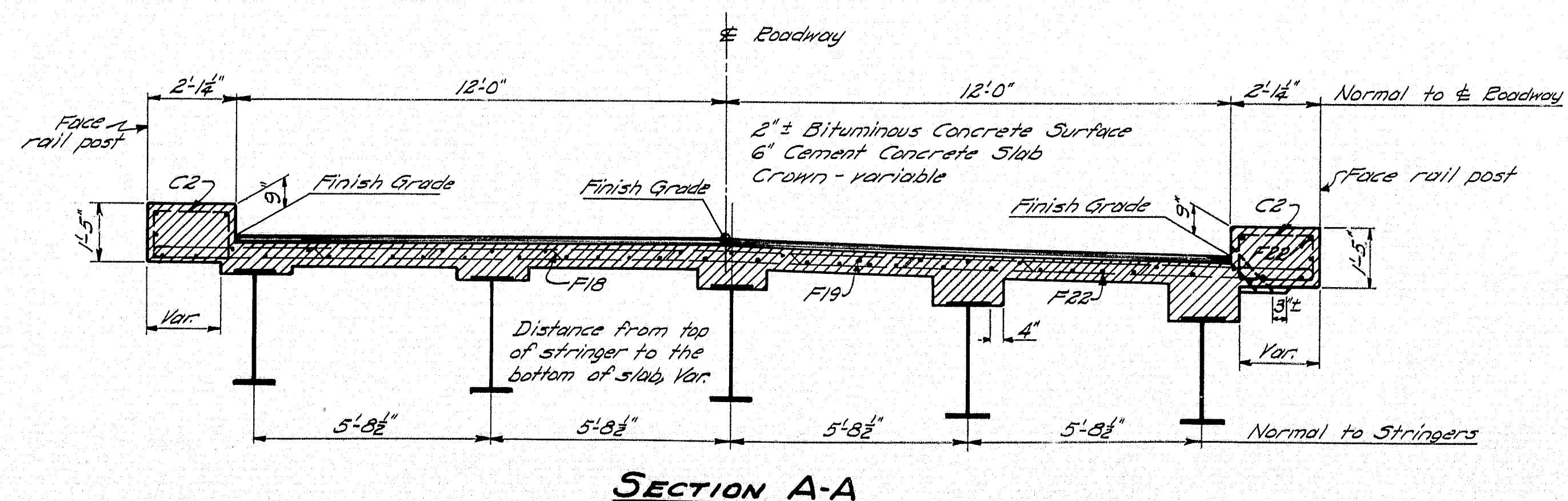


SECT. B-B



SECTION E-E

NOTE: Top of slab shall be finished so that no portion shows more than 4" high under a 10-foot straight edge radially.



SECTION A-A

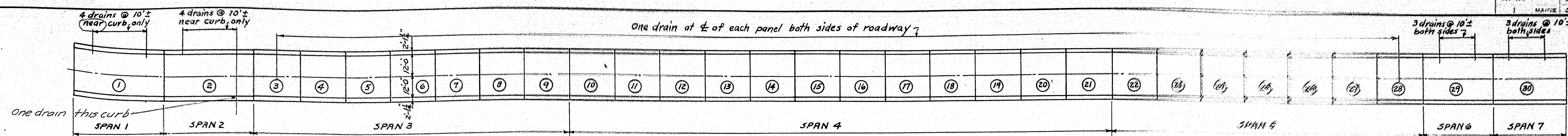
DESIGN - EVERETT
TRACE - CLARK
CHECK - *[Signature]*

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

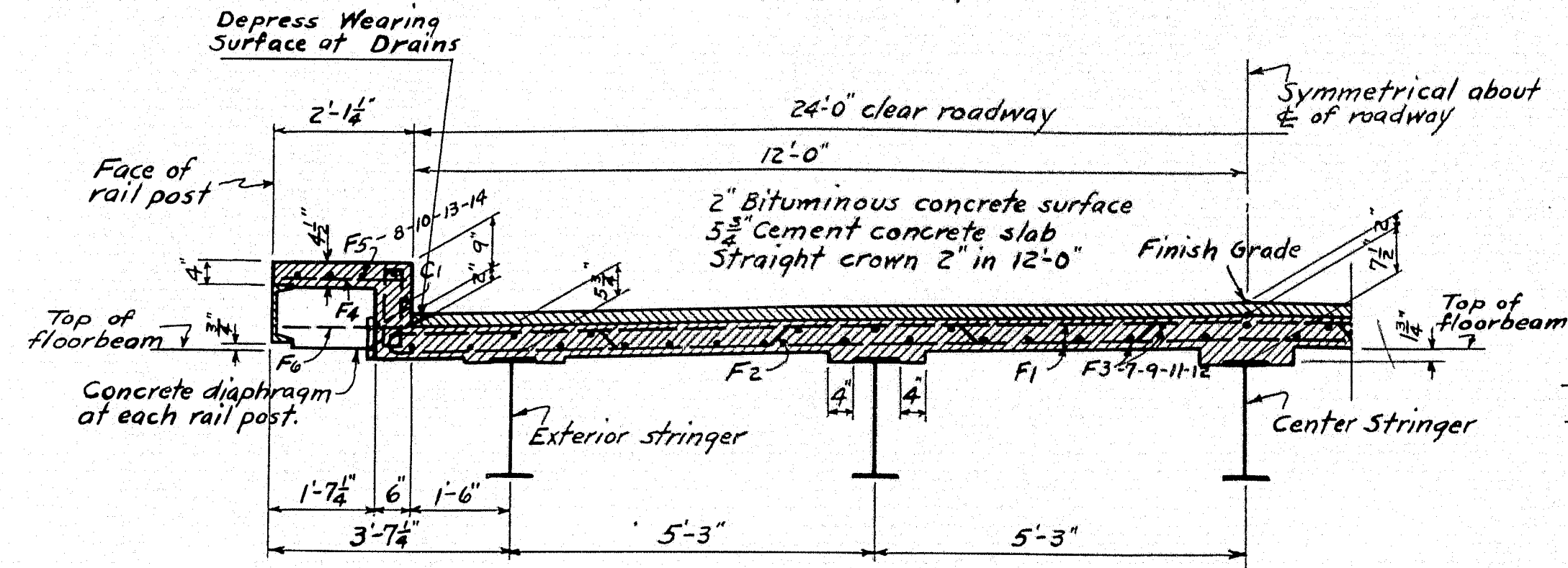
ARROWSIC BRIDGE
OVER
SASANOA RIVER
BETWEEN THE TOWNS OF
ARROWSIC & WOOLWICH
SAGadahoc COUNTY

FLOOR PLAN - SPANS NO. 1 & 2
SHEET 34 OF 36 AUGUSTA, MAINE FEB.

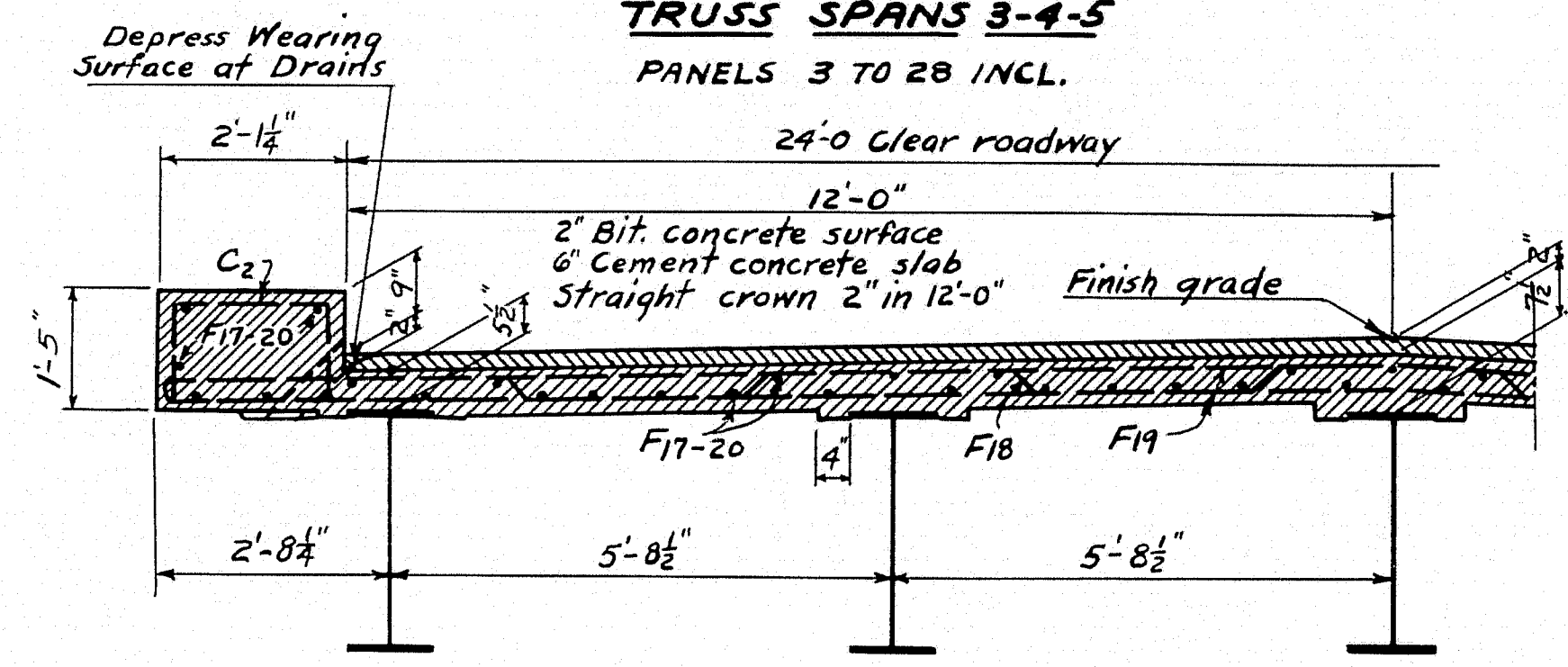
48-97



NOTE: Concrete diaphragms to be 1'-3" wide and constructed at each rail post. Diaphragms to be located so that 3/8" rods from rail posts will be centered in diaphragm. In panels 8 to 23 inclusive, 3 diaphragms per panel each side of roadway have been assumed. In panels 3 to 7 and 24 to 28 incl., 5 diaphragms each side are assumed. Final structural steel details will determine number and exact location of rail posts.



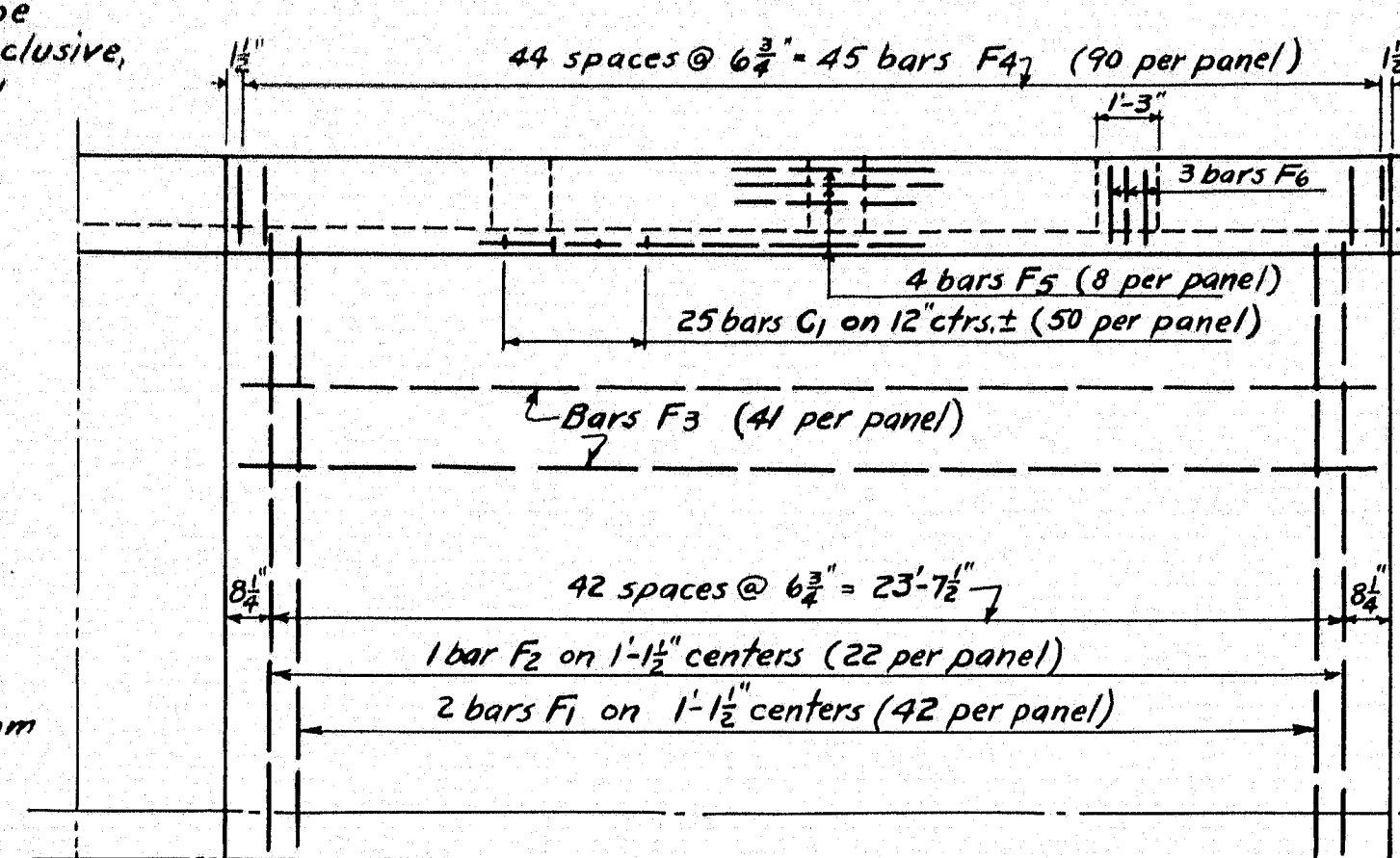
HALF TRANS. SECT.
SLAB AND SURFACE
TRUSS SPANS 3-4-5
 PANELS 3 TO 28 INCL.



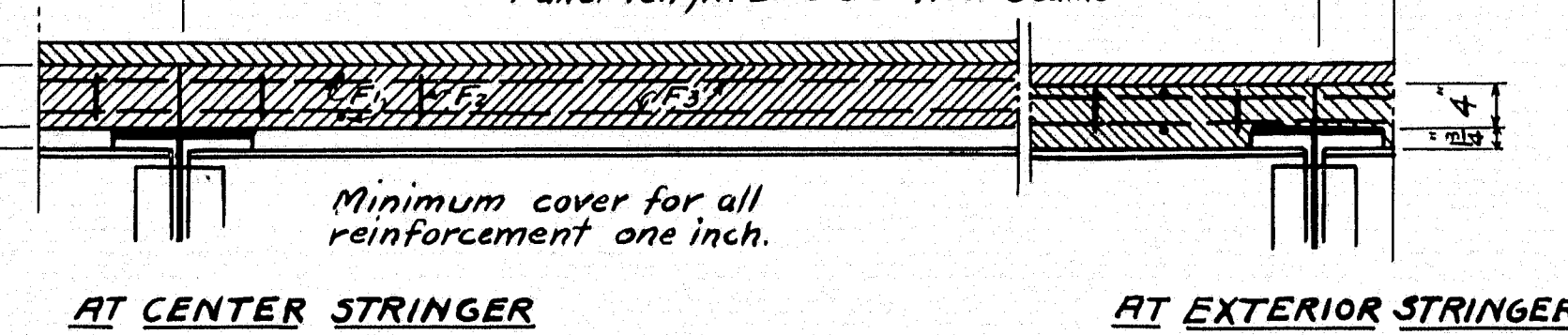
SPANS 6 AND 7
HALF TRANS. SECT.

NOTE: Top of slab shall be finished so that no portion shows more than 4-inch under a 10-foot straight edge longitudinally or transversely.

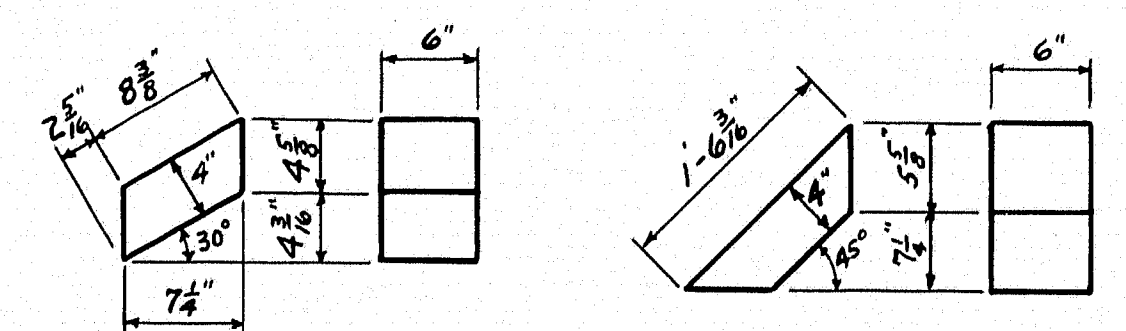
FLOOR PLAN
 Spans 3-4-5 are truss spans.



HALF PLAN
 Panel length 25'-0" c-c floor beams



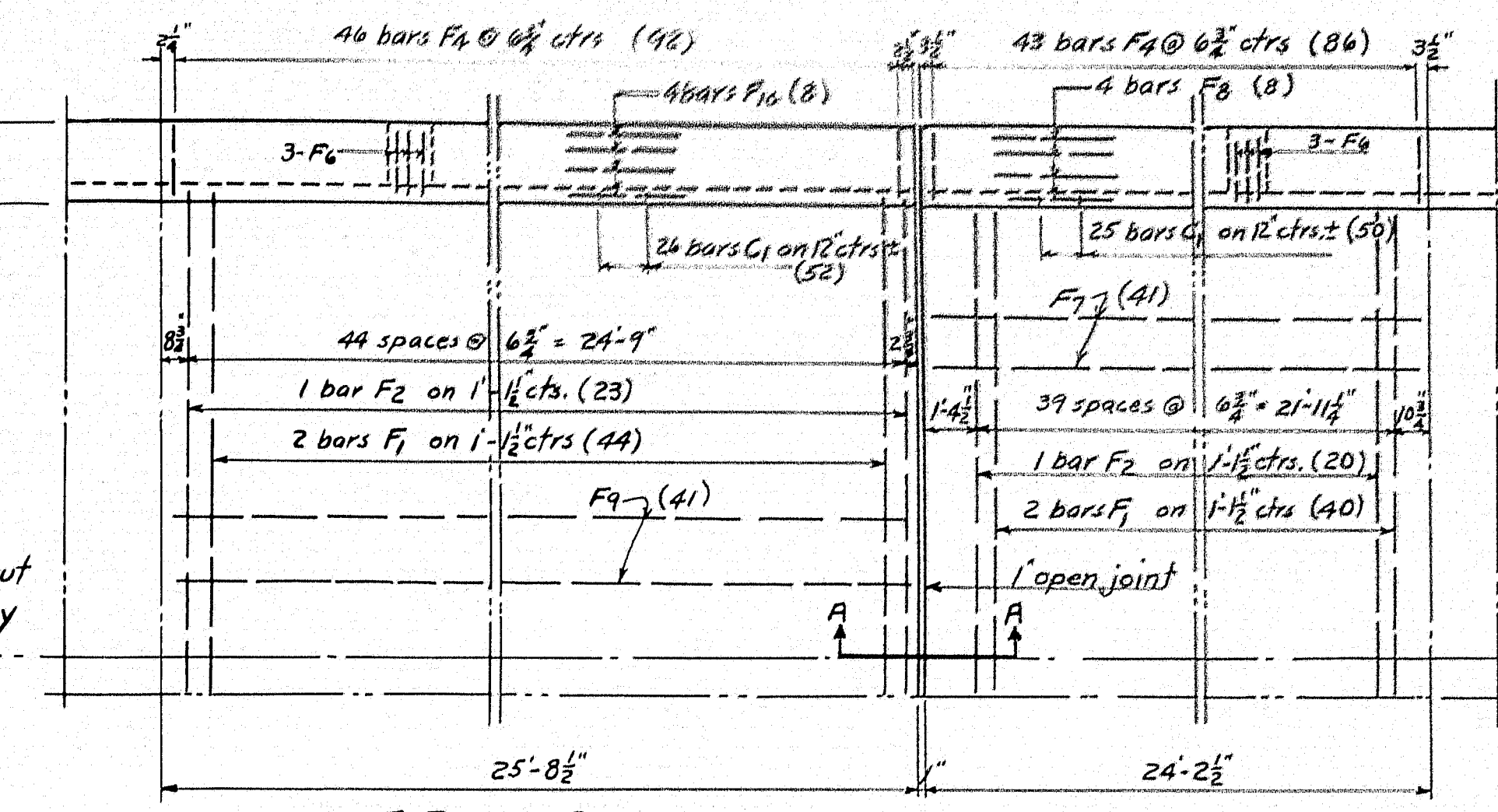
LONGITUDINAL SECTION
DETAIL FLOOR SLAB PANELS 3 to 10 inclusive
 13 to 18
 21 to 28



FOR TRUSS SPANS
 52-Reqd.

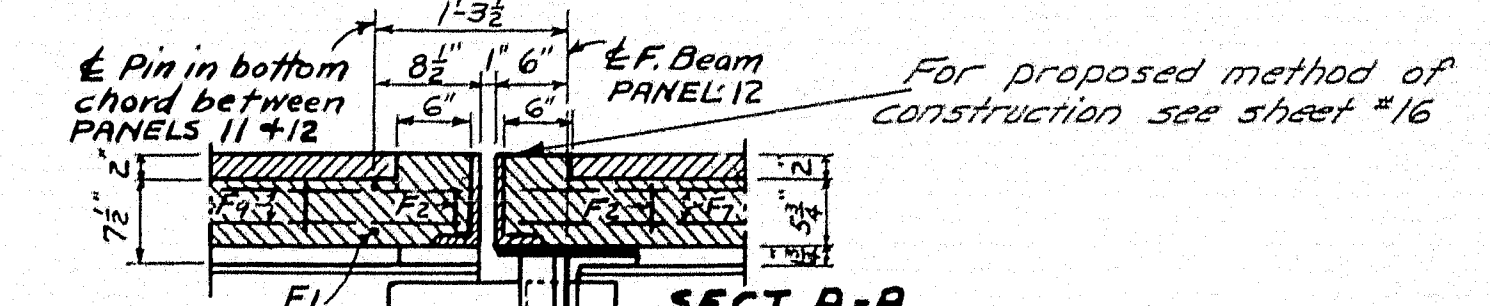
FOR SPANS 1-2-6-7
 21-Reqd.

DRAIN FORM DETAILS
 Material #24 gage galv. iron.

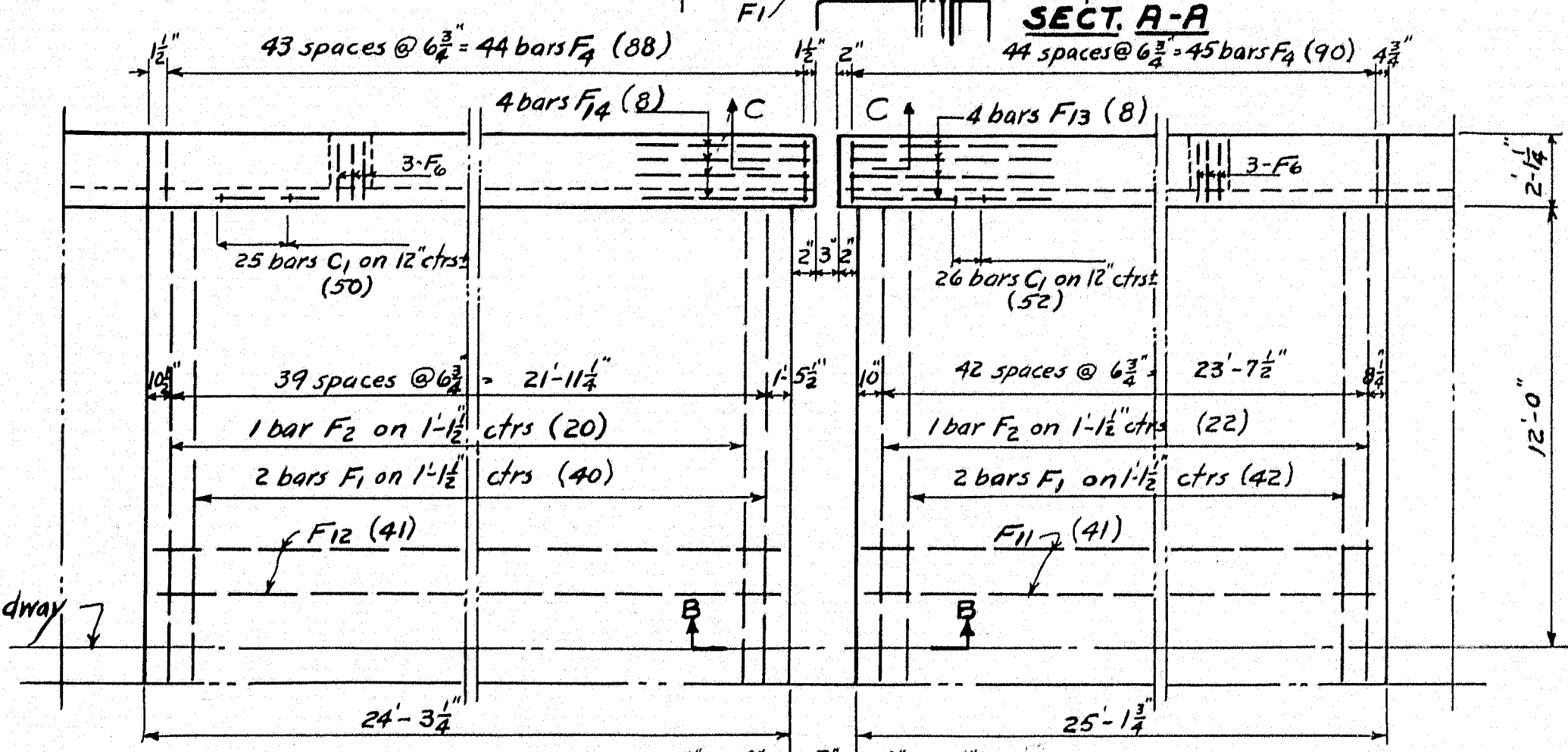


HALF PLAN - PANEL 11

HALF PLAN - PANEL 12

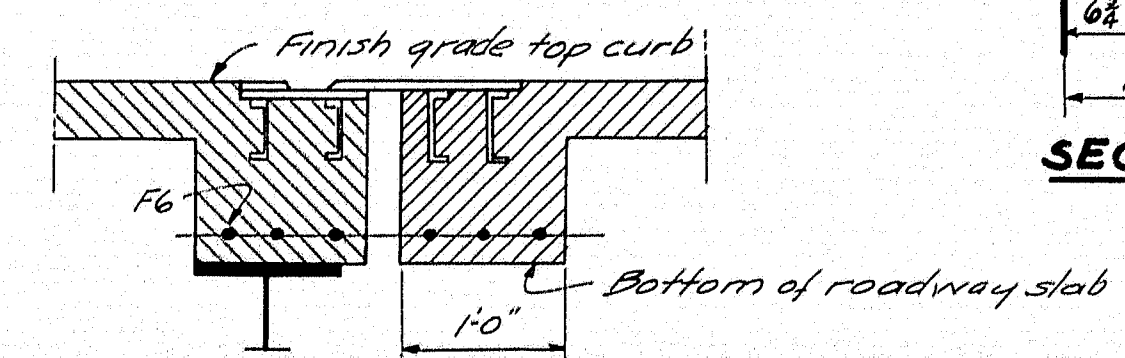


SECT. A-A

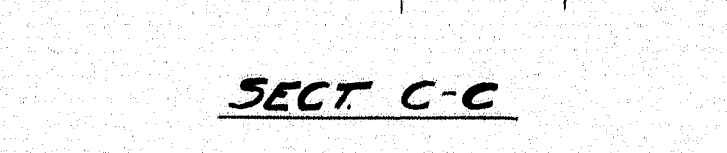


HALF PLAN
PANEL 19

HALF PLAN
PANEL 20

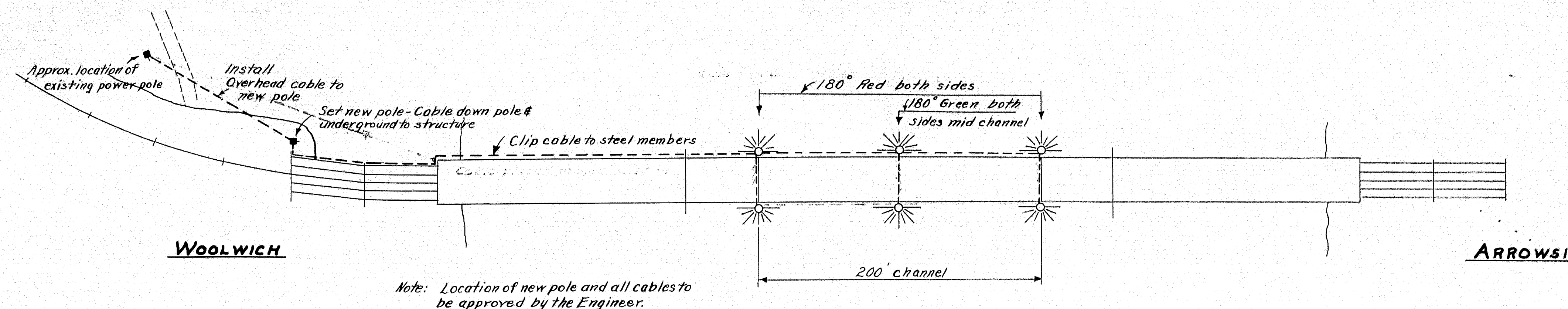


SECT. B-B

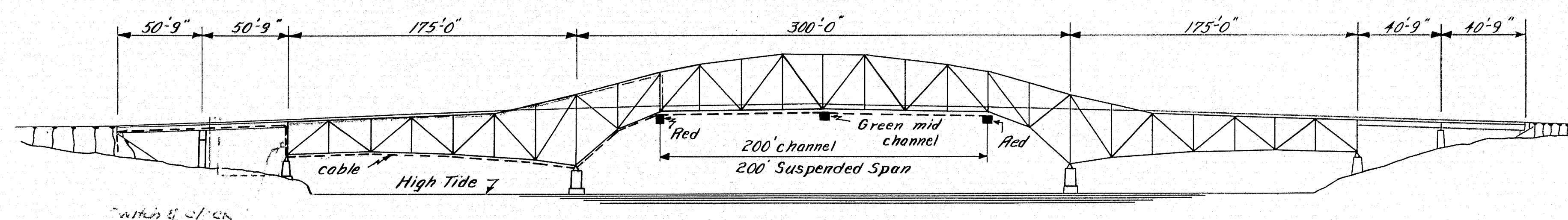


SECT. C-C

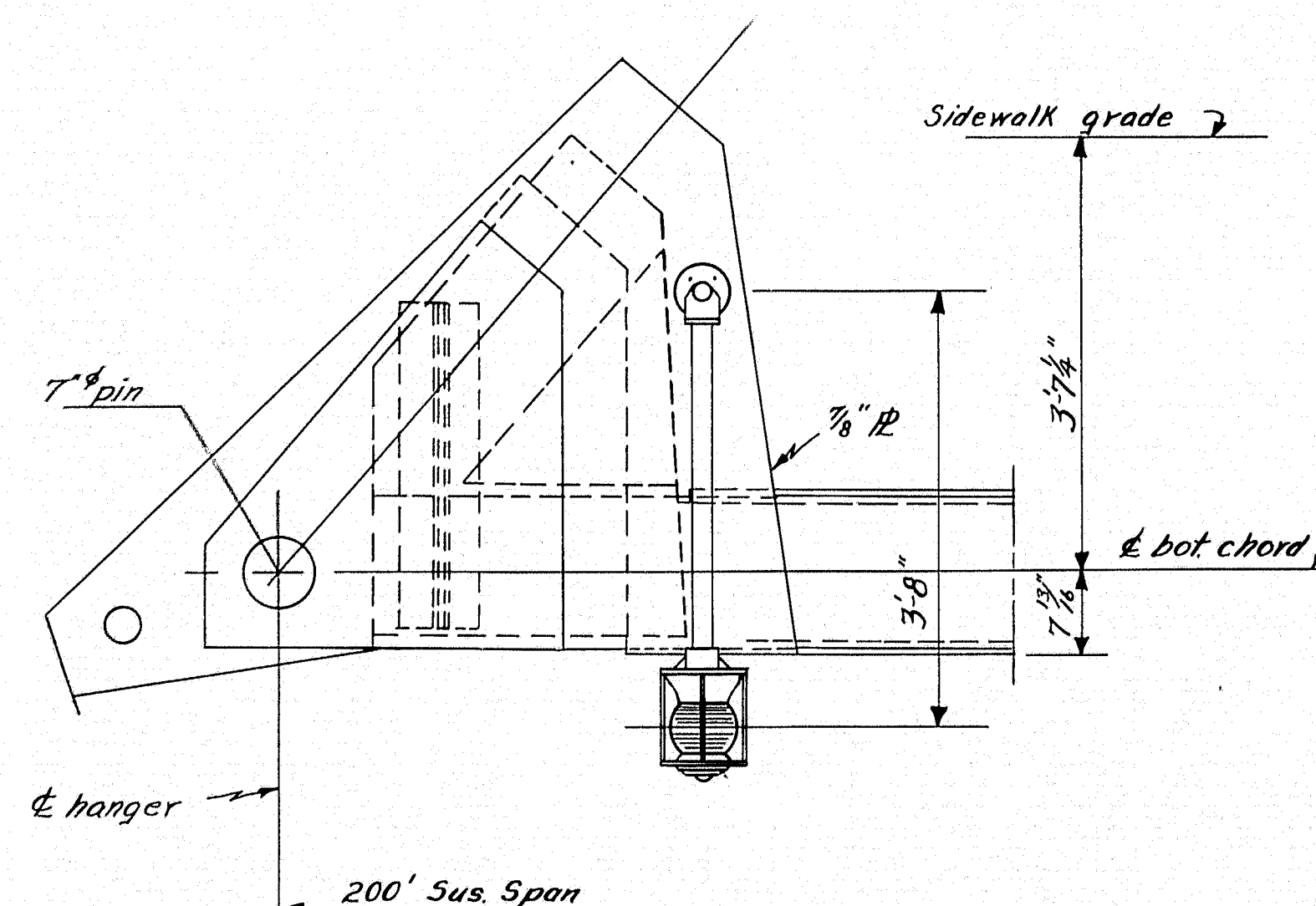
DESIGN - EVERETT
 TRACE - WELCH
 CHECK - [Signature]
 STATE HIGHWAY COMMISSION
 BRIDGE DIVISION
ARROWSIC BRIDGE
 OVER
SASANOA RIVER
 BETWEEN THE TOWNS OF
ARROWSIC & WOOLWICH
SAGadahoc COUNTY
 FLOOR PLAN - SPANS NO. 3, 4 & 5
 SHEET 35 OF 36 AUGUSTA, MAINE FEB. 1928



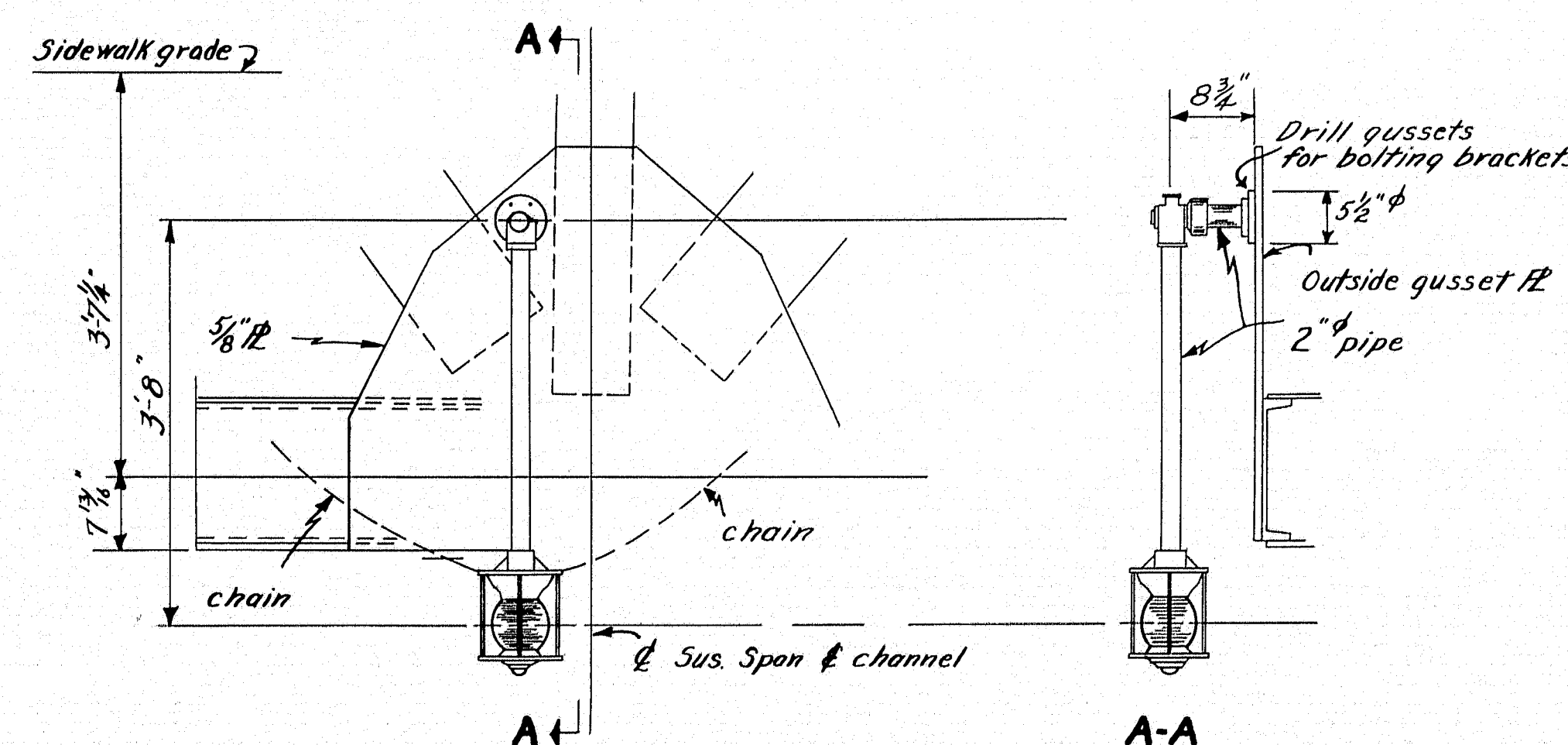
PLAN



ELEVATION



**TYPICAL DETAIL
CHANNEL SIDE LIGHT**



**TYPICAL DETAIL
MID-CHANNEL SPAN LIGHT**

NOTE: Two chains to be attached to each light. Chains will be suitable for pivoting light into an upright position to permit routine maintenance and also to keep light in proper position at other times. One end of each chain to be permanently attached to the sidewalk rail bar or post, while the opposite end of the other chain will be attached to rail bar or post and fastened with a suitable lock. Lock to be provided with two keys. Exact location of lights, lengths of chains and methods of attaching same to be approved by the Engineer.

REQUIRED TO INSTALL:

2 Mid-Channel Span lights, 180° green spheroidal lens, suspension pivot attachment dimensions as shown.
4-Channel side lights, same as above, except 180° Red.
Above to be cast aluminum spheroidal lens electric navigation lights to conform to U.S. Dept. of Commerce. Lights and fixtures to be ARMSPEAR or equivalent.
1-Heavy duty time switch with astronomic dial (latitude 45°) to automatically turn lights on at sunset and off at sunrise. To be Westinghouse or equivalent.

DESIGN - EVERETT	STATE HIGHWAY COMMISSION
CHECK - HAMILTON	BRIDGE DIVISION
TRACE - BACHELDER	
ARROWSIC BRIDGE	
OVER	
SASANOA RIVER	
BETWEEN THE TOWNS OF	
ARROWSIC & WOOLWICH	
SAGadahoc COUNTY	
PROPOSED DETAILS NAVIGATION LIGHTS	
SHEET 36A OF 36 AUGUSTA, MAINE JULY	

Field changes in green

48-100