

WALDO-HANCOCK BRIDGE

BUCKSPORT, MAINE

LIST OF DRAWINGS

DRAWING NUMBER	TITLE	DRAWING NUMBER	TITLE
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4	WEST VIADUCT - PIERS 9 AND 10	24	MAIN TOWER DETAILS - ELEV. 61.5 TO ELEV. 106.5
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6	WEST ABUTMENT [SUPERSEDED]	26	MAIN TOWER DETAILS - ELEV. 136.5 TO ELEV. 174.5
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14	CABLE BENT SADDLE DETAILS	34	LIGHTING SYSTEM
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16	STIFFENING TRUSS - STRESS SHEET	6A	WEST ABUTMENT
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18	TYPICAL CROSS SECTION OF SUSPENDED SPANS		
19	EXPANSION DETAILS AT MAIN TOWER		
20	CABLE BENT		

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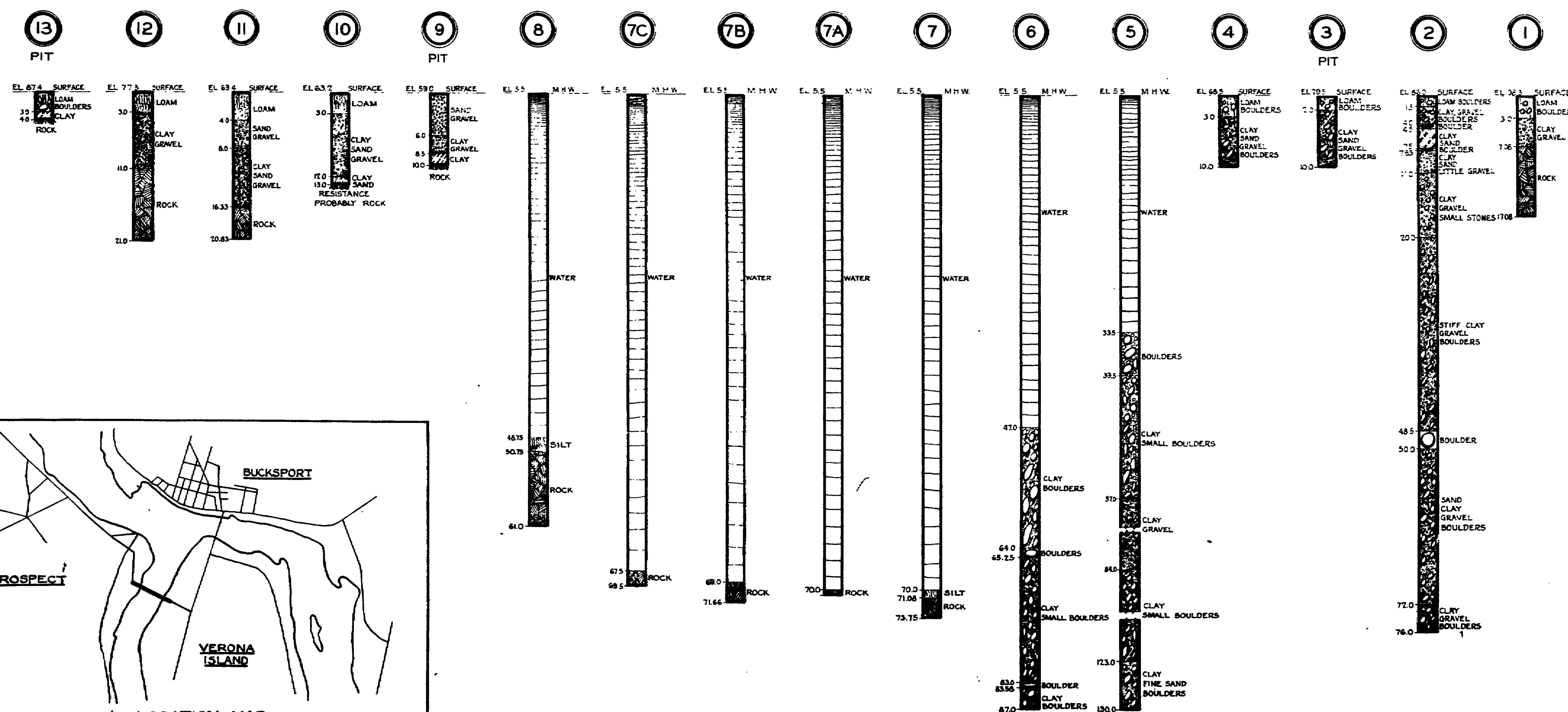
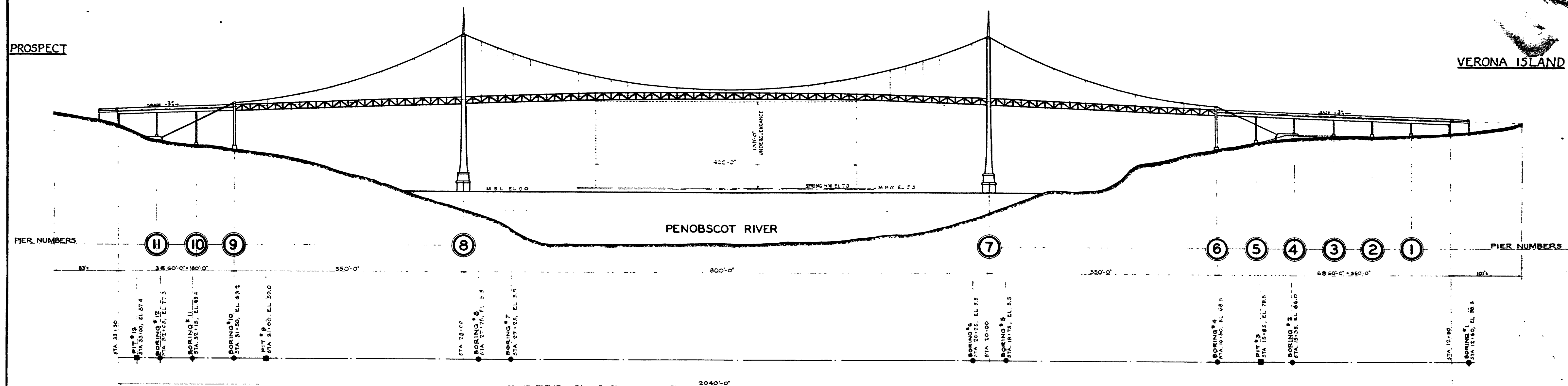
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 NEW YORK CITY

108-108



PROSPECT

VERONA ISLAND



NOTE: THE FORMATIONS ENCOUNTERED IN ALL BORINGS ON LAND AND WATER ARE SO COARSE AND COMPACT AND CONTAIN SO MANY BOULDERS, THAT THE CASING COULD NOT BE ADVANCED UNTIL CORE DRILLING WAS DONE BENEATH IT. IN MOST INSTANCES NO PROGRESS COULD BE MADE, EVEN AFTER CORE DRILL WAS EMPLOYED, UNTIL DYNAMITE WAS USED TO BLOW BOULDERS OUT OF THE WAY. THE BOULDERS RANGE FROM 3" TO 3'-6" IN DIAMETER.

DEPTHS OF BORINGS ARE SHOWN IN FEET BELOW GROUND LINE FOR LAND BORINGS, AND BELOW M.H.W. (EL. +5.5) FOR BORINGS IN WATER.

BORINGS 7A, 7B AND 7C ARE UNCOMPLETED ATTEMPTS TO OBTAIN BORINGS AT THE SITE OF BORING 7.

APPROVED

Robert D. Robinson

D.B. Steinman

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WALDO-HANCOCK BRIDGE

OVER

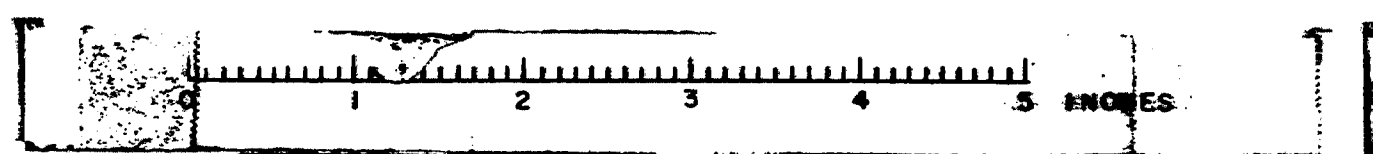
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

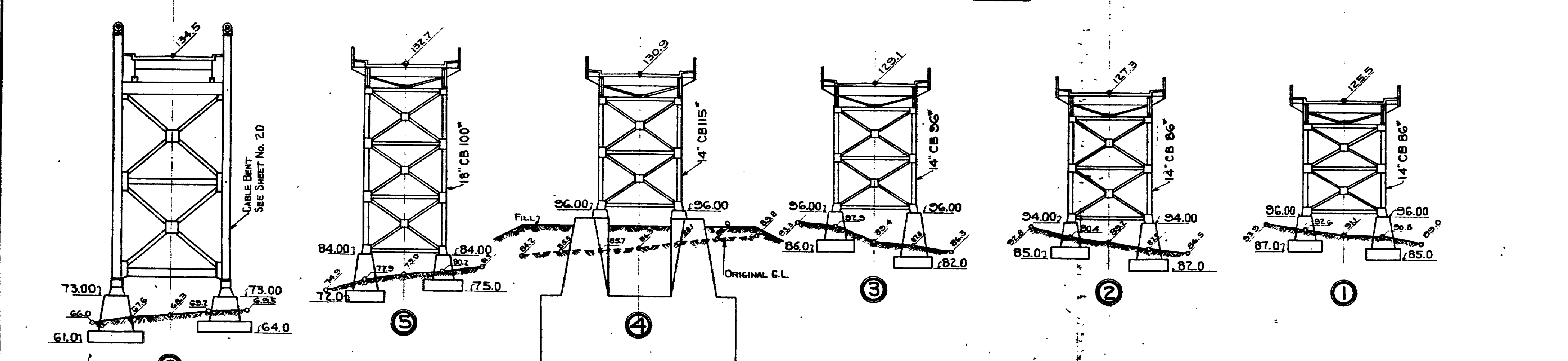
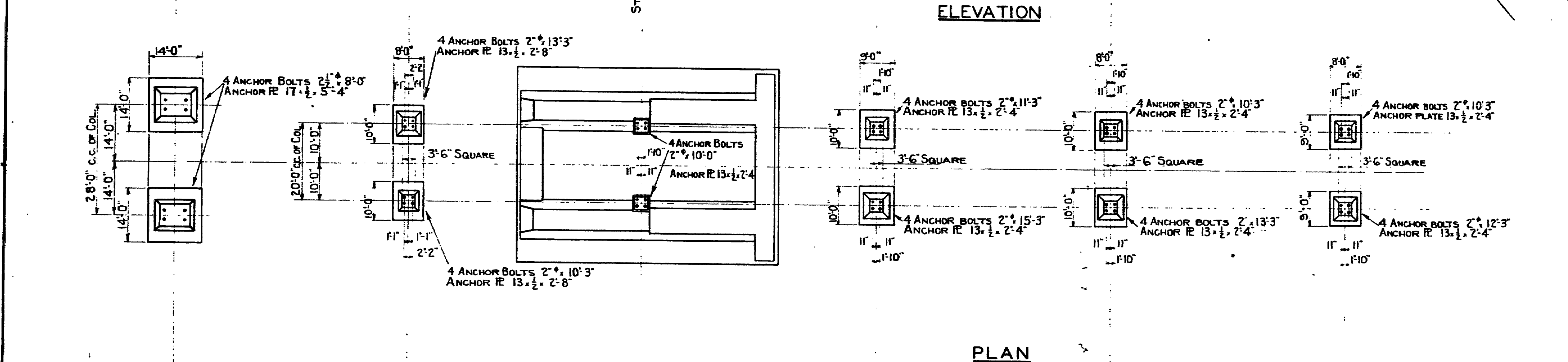
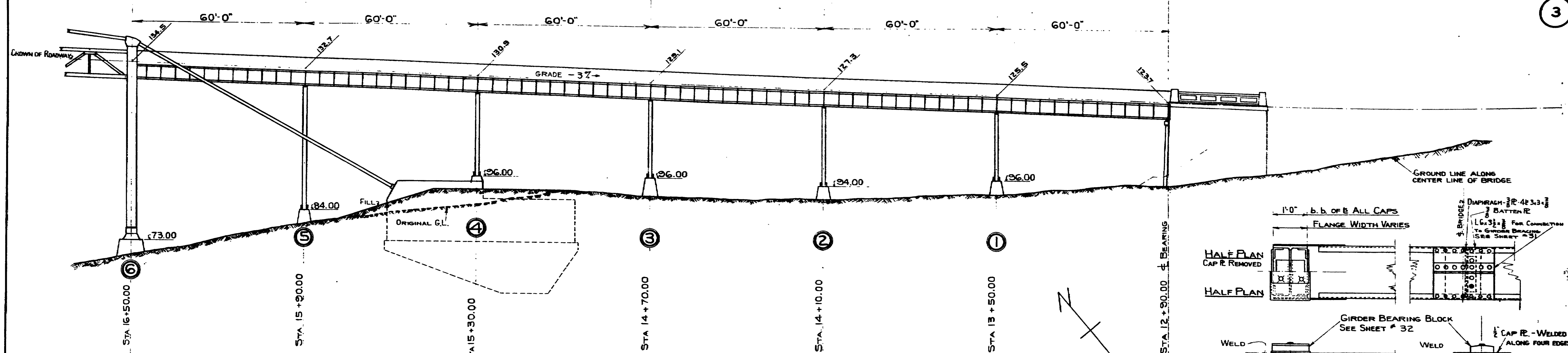
GENERAL PROFILE AND BORINGS

SCALE: 1" = 100'

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DRAWING NUMBER
RS2922-2

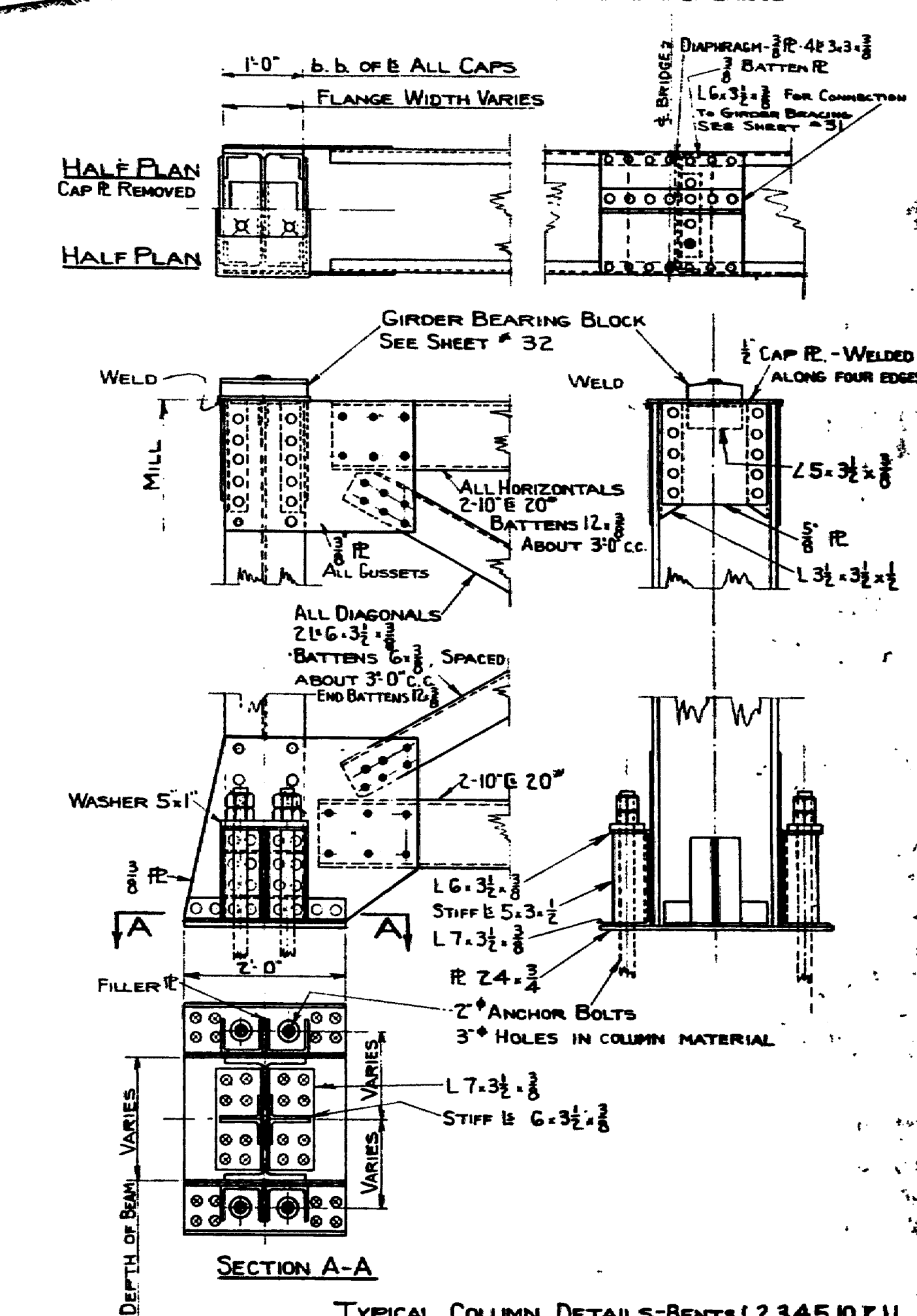




COLUMNS - BENTS 1, 2, 3, 4, 5, 10 AND 11					
BENT No.	DEAD LOAD KIPS	LIVE + IMPACT KIPS	WIND KIPS	TEMP. MOMENT AT BASE INCH-KIPS	SECTION
1	111	+116	± 50	465	14' CB 86"
2	97	+111	± 57	565	14' CB 86"
3	103	+114	± 56	925	14' CB 96"
4	98	+111	± 60	1300	14' CB 115"
5	115	+116	± 89	1025	18' CB 100"
10	119	+116	± 110	566	21' CB 136"
11	115	+116	± 79	257	16' CB 100"

SECTIONS AT BENTS
LOOKING EAST

ESTIMATED QUANTITIES
CONCRETE 203 CU. YD
PIERS 1, 2, 3, 5, 10
REINFORCING STEEL 8300 POUNDS
EARTH EXCAVATION 210 CU. YD



GENERAL NOTES
FOR TYPICAL SECTIONS OF APPROACH FILL, DETAILS AND REINFORCING SCHEDULE FOR PIERS 1, 2, 3, 5 AND 6, SEE SHEET #4
CONCRETE FOR PIERS 1, 2, 3, 5, AND 6 SHALL BE GRADE B
VIADUCT COLUMNS TO BE VERTICAL AT NORMAL TEMPERATURE (50°F)
RIVETS 5/8" EXCEPT IN CHANNEL STEELS 3/4"

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WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

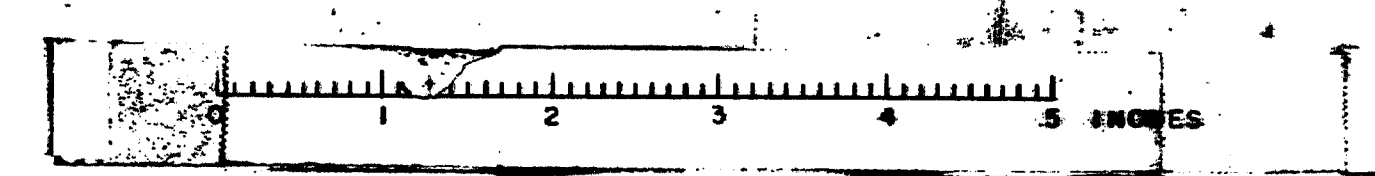
EAST VIADUCT
PIERS 1, 2, 3, 5 AND 6

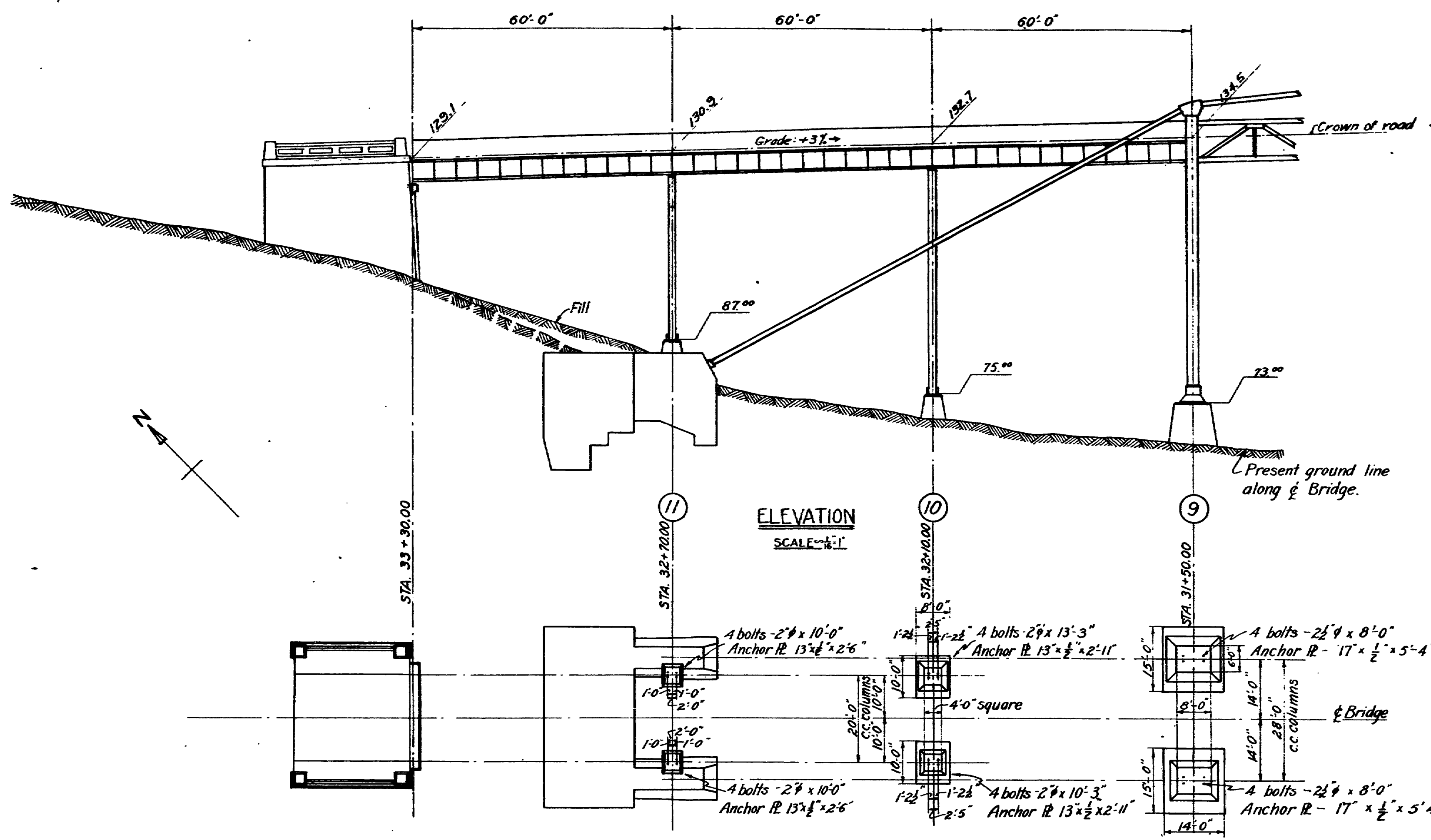
SCALE 1/4" = 1'-0"

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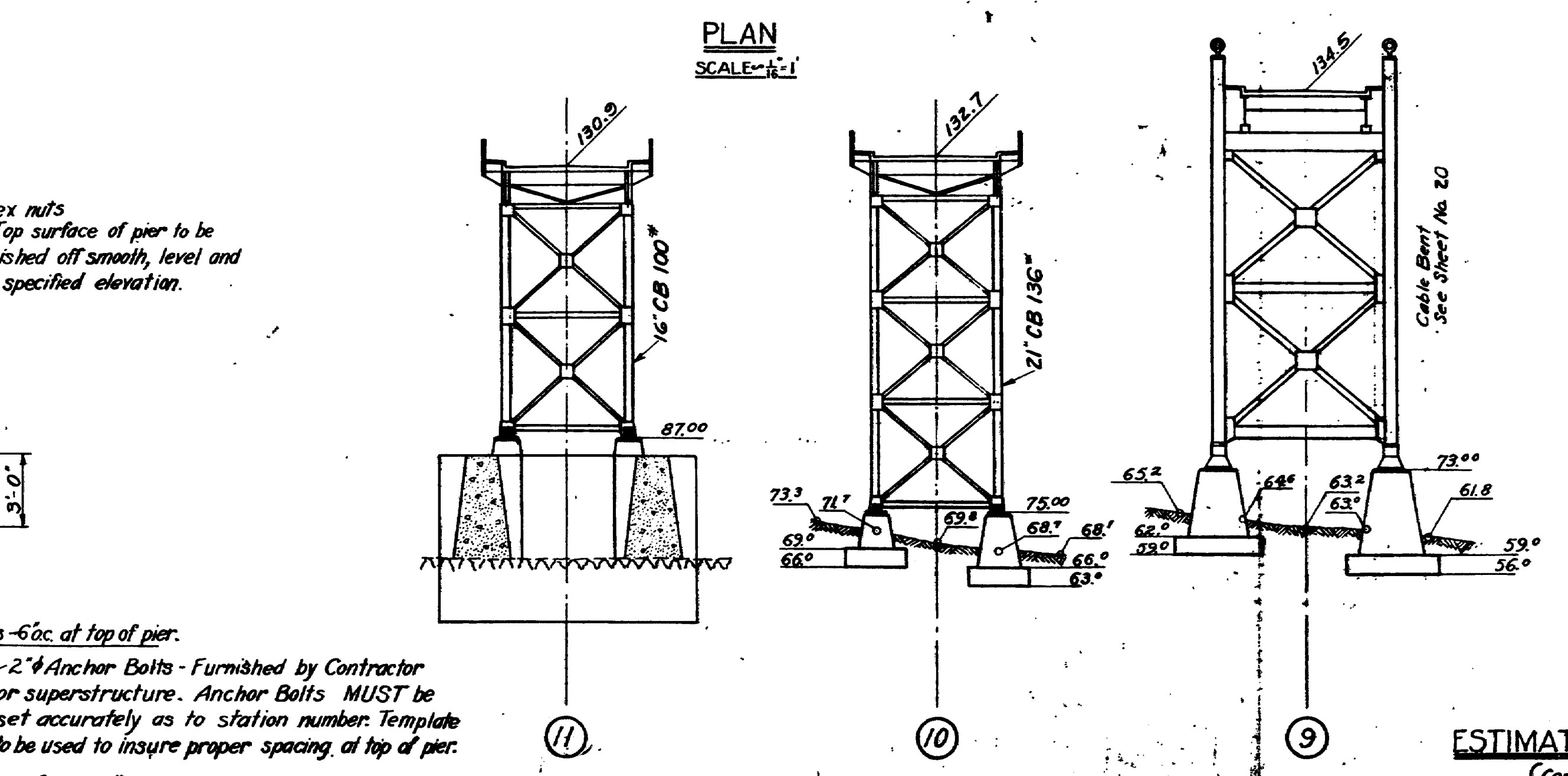
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REVISIONS
REVISED FEB 5, 1931
REVISED SEP 8, 1930
REVISED AUG 3, 1934

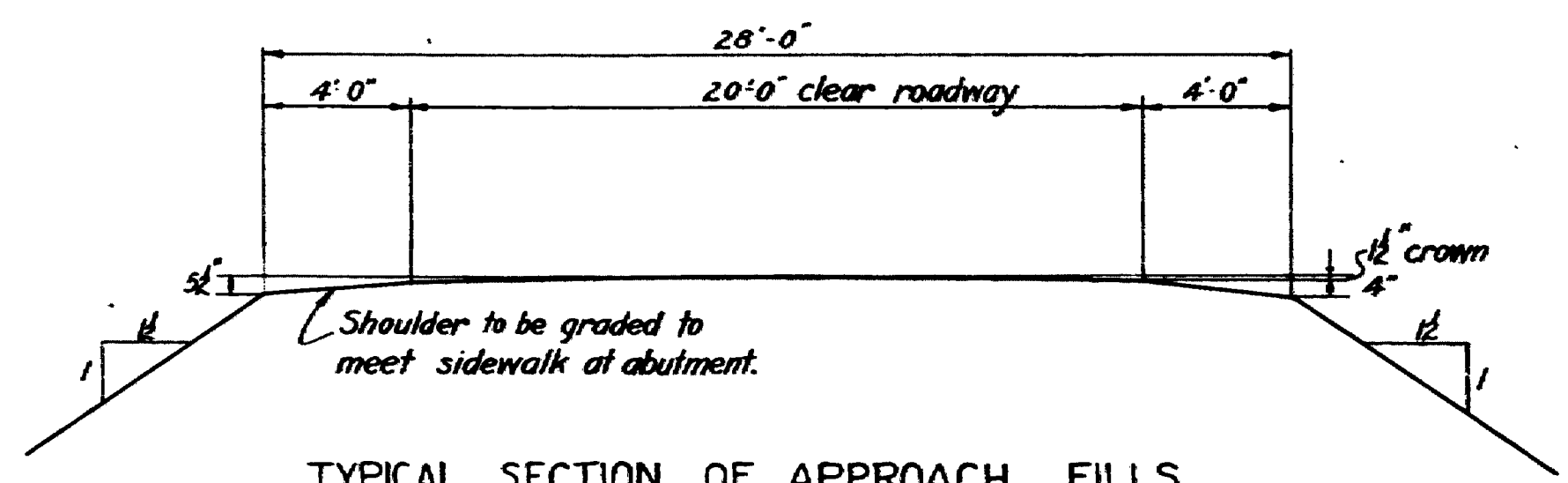




ELEVATION
SCALE: 1/4" = 1'

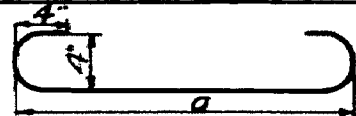
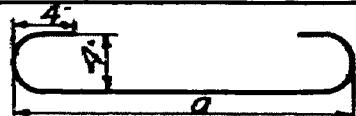
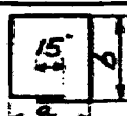


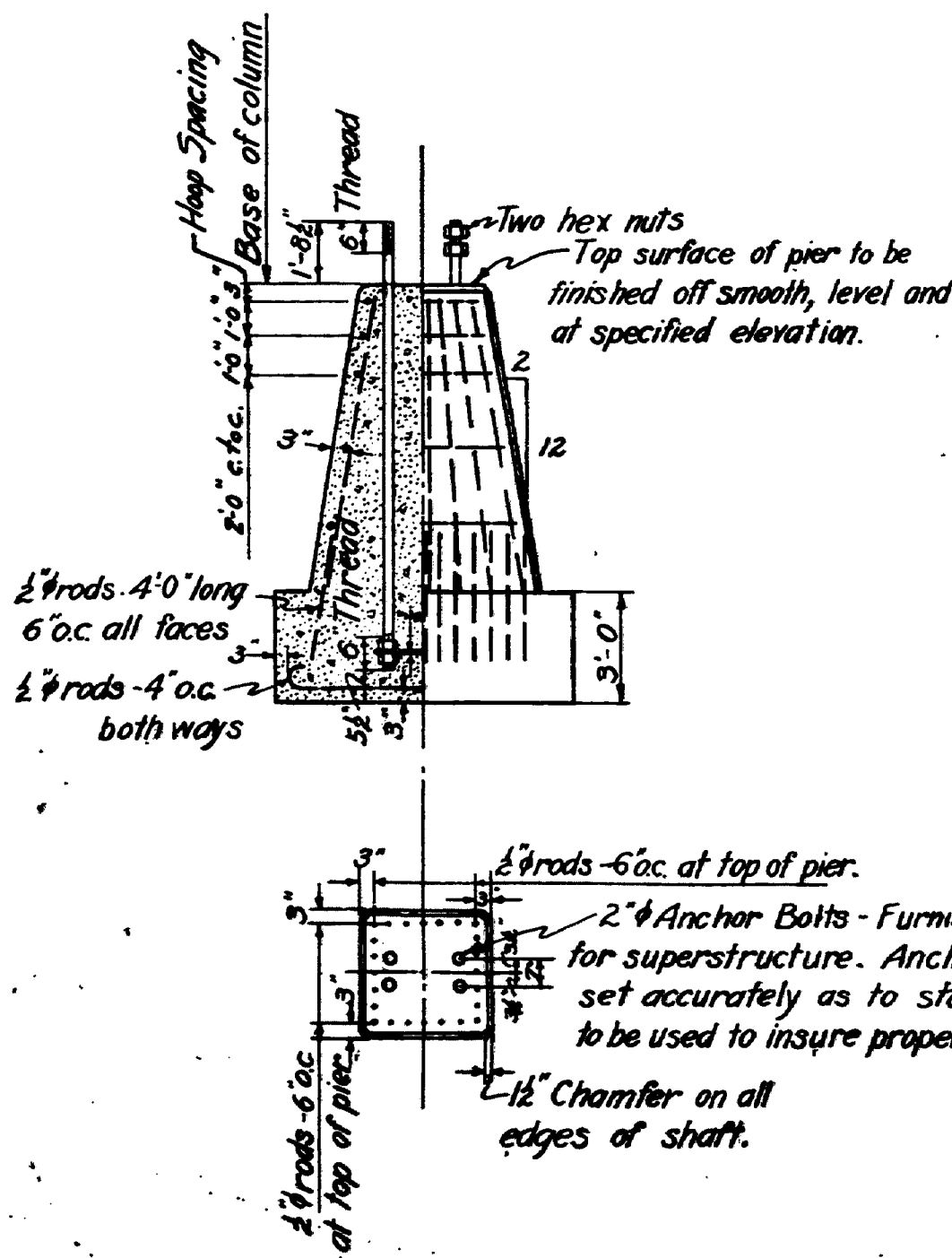
PLAN
SCALE: 1/4" = 1'



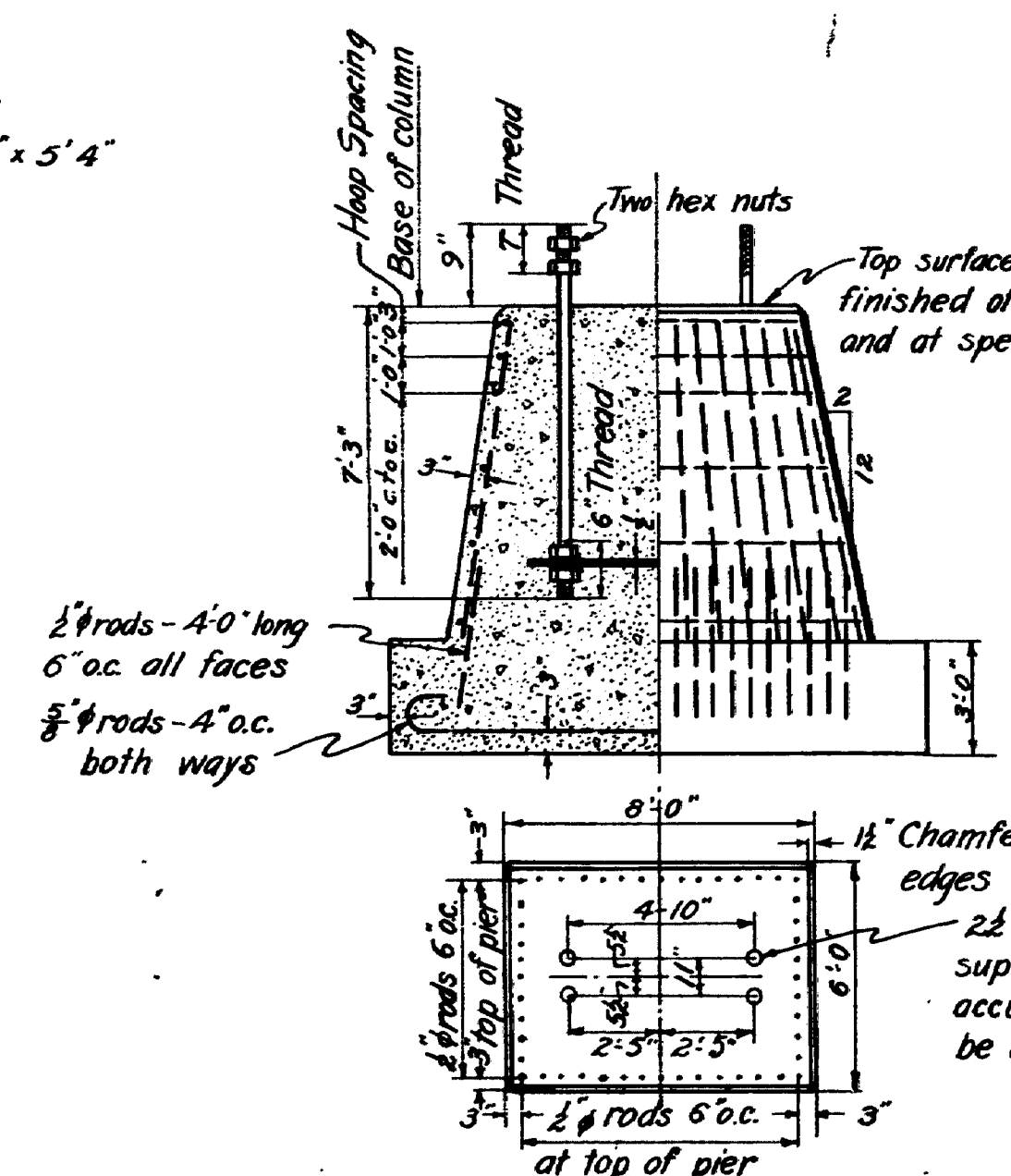
TYPICAL SECTION OF APPROACH FILLS

SCALE: 1/4" = 1'

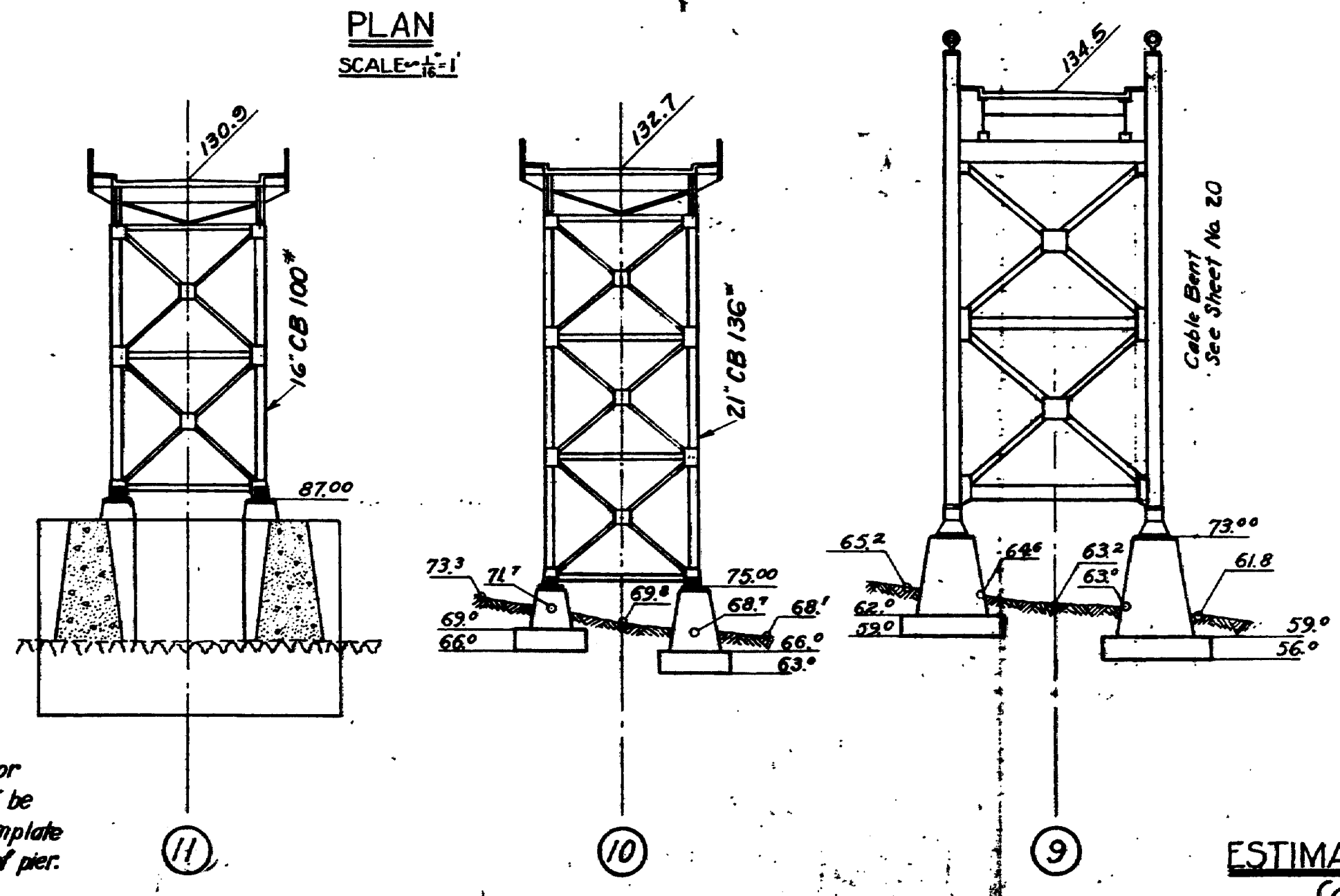
REINFORCING SCHEDULE FOR ALL APPROACH PIERS																	
BENT NO.		BASE				BASE				SHAFT			DOWELS			HOOPS	
										STRAIGHT			STRAIGHT				
		NO.	SIZE	Q	LENGTH	NO.	SIZE	Q	LENGTH	NO.	SIZE	LENGTH	NO.	SIZE	LENGTH	NO.	SIZE
1	NORTH	23	2	8'-6"	9'-6"	26	2	7'-6"	8'-6"	24	2	5'-9"	36	2	4'-0"	4	2
	SOUTH	23	2	8'-6"	9'-6"	26	2	7'-6"	8'-6"	24	2	7'-9"	40	2	4'-0"	5	2
2	NORTH	29	2	7'-6"	8'-6"	23	2	9'-6"	10'-6"	24	2	5'-9"	36	2	4'-0"	4	2
	SOUTH	29	2	7'-6"	8'-6"	23	2	9'-6"	10'-6"	24	2	8'-9"	44	2	4'-0"	6	2
3	NORTH	29	2	8'-6"	9'-6"	26	2	9'-6"	10'-6"	24	2	6'-9"	40	2	4'-0"	5	2
	SOUTH	29	2	8'-6"	9'-6"	26	2	9'-6"	10'-6"	24	2	10'-9"	52	2	4'-0"	7	2
5	NORTH	29	2	7'-6"	8'-6"	23	2	9'-6"	10'-6"	24	2	8'-9"	44	2	4'-0"	6	2
	SOUTH	29	2	7'-6"	8'-6"	23	2	9'-6"	10'-6"	24	2	5'-9"	36	2	4'-0"	4	2
6	NORTH	84	2	13'-6"	14'-6"	—	—	—	—	52	2	8'-9"	76	2	4'-0"	6	2
	SOUTH	84	2	13'-6"	14'-6"	—	—	—	—	52	2	8'-9"	68	2	4'-0"	4	2
9	NORTH	45	2	13'-6"	14'-6"	42	2	14'-6"	15'-6"	52	2	13'-9"	88	2	4'-0"	8	2
	SOUTH	42	2	14'-6"	15'-6"	45	2	13'-6"	14'-6"	52	2	10'-9"	80	2	4'-0"	7	2
10	NORTH	23	2	9'-6"	10'-6"	29	2	7'-6"	8'-6"	28	2	8'-9"	52	2	4'-0"	6	2
	SOUTH	23	2	9'-6"	10'-6"	29	2	7'-6"	8'-6"	28	2	5'-9"	44	2	4'-0"	4	2



TYPICAL PIER FOR BENTS 1, 2, 3, 5 & 10
NOT TO SCALE



TYPICAL PIER FOR BENTS 6 & 9
NOT TO SCALE



**SECTIONS AT BENTS
LOOKING WEST**
SCALE: 1/4" = 1'

ESTIMATED QUANTITIES
PIERS 9 & 10
Concrete — 172 cu. yd.
Reinforcing Steel — 5500 lb.
Earth Excavation — 130 cu. yd.

GENERAL NOTES

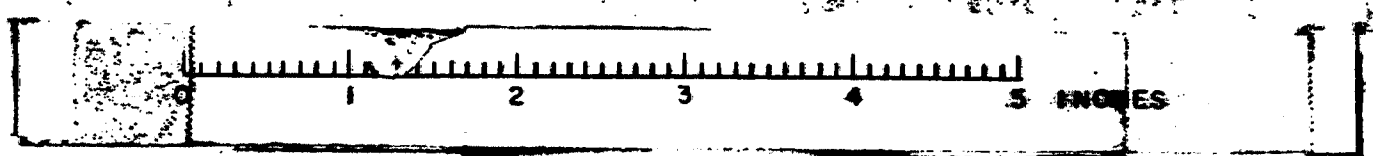
For detail of Anchorage see Sheet 8.
For detail of Abutment see Sheet 6.
Concrete for Piers 9 & 10 shall be grade 4.
For column cap and base details, Bents 10 and 11 see Sheet No. 3.
Viaduct columns to be vertical at Normal temperature.

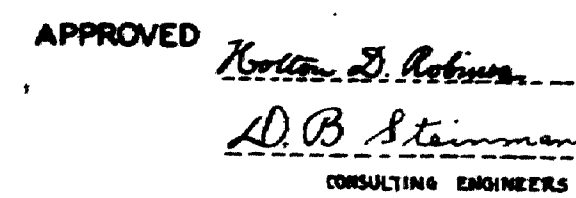
WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

WEST VIADUCT - PIERS 9 & 10

SCALE: As Noted
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CONSULTING ENGINEERS
NEW YORK — BUCKSPORT
DRAWING NUMBER
R92922-4
July 6, 1930

REVISED SEPT. 8, 1930
REVISED AUG. 5, 1930





EAST ABUTMENT

SCALE $\frac{1}{2}''=1'-0''$ UNLESS NOTED

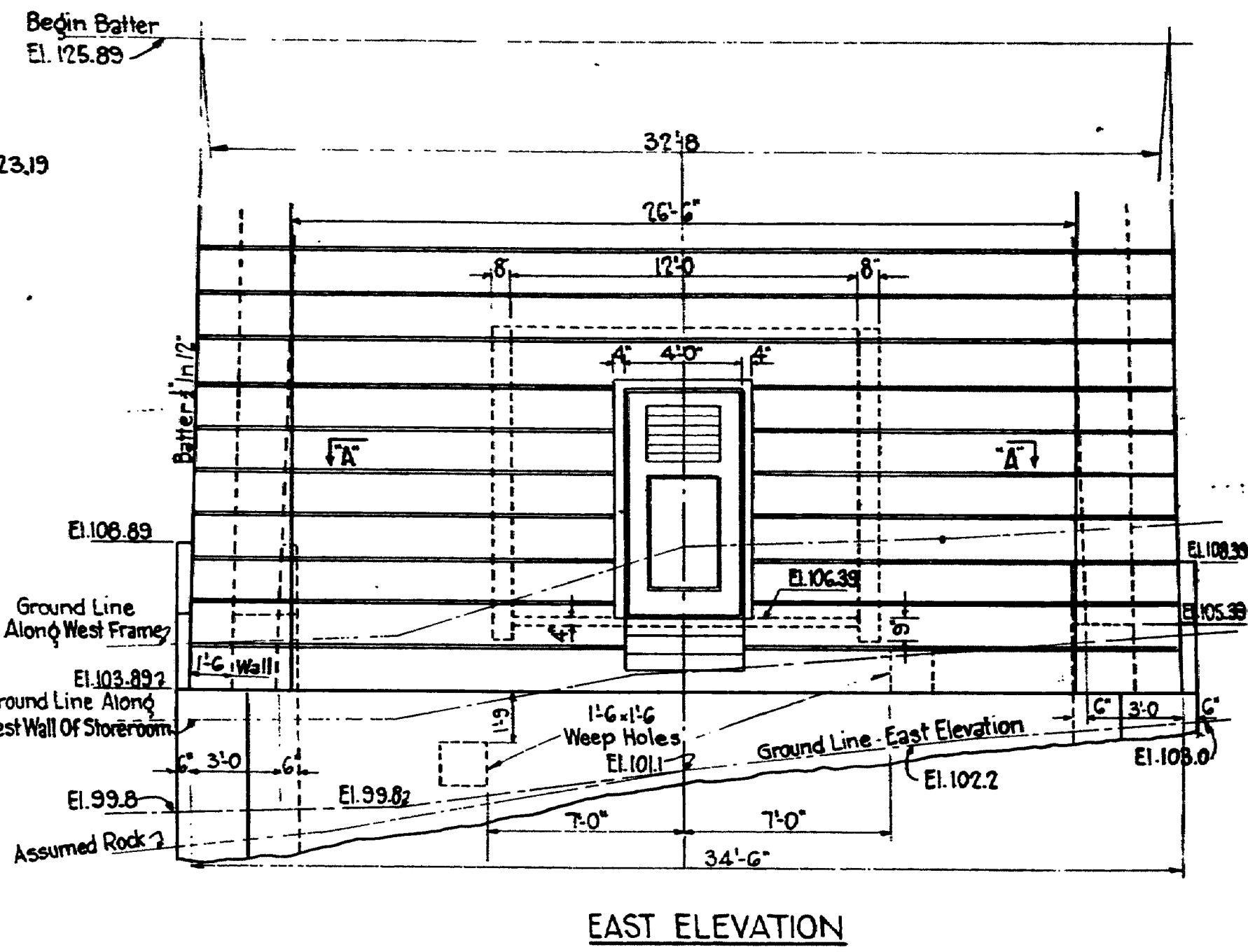
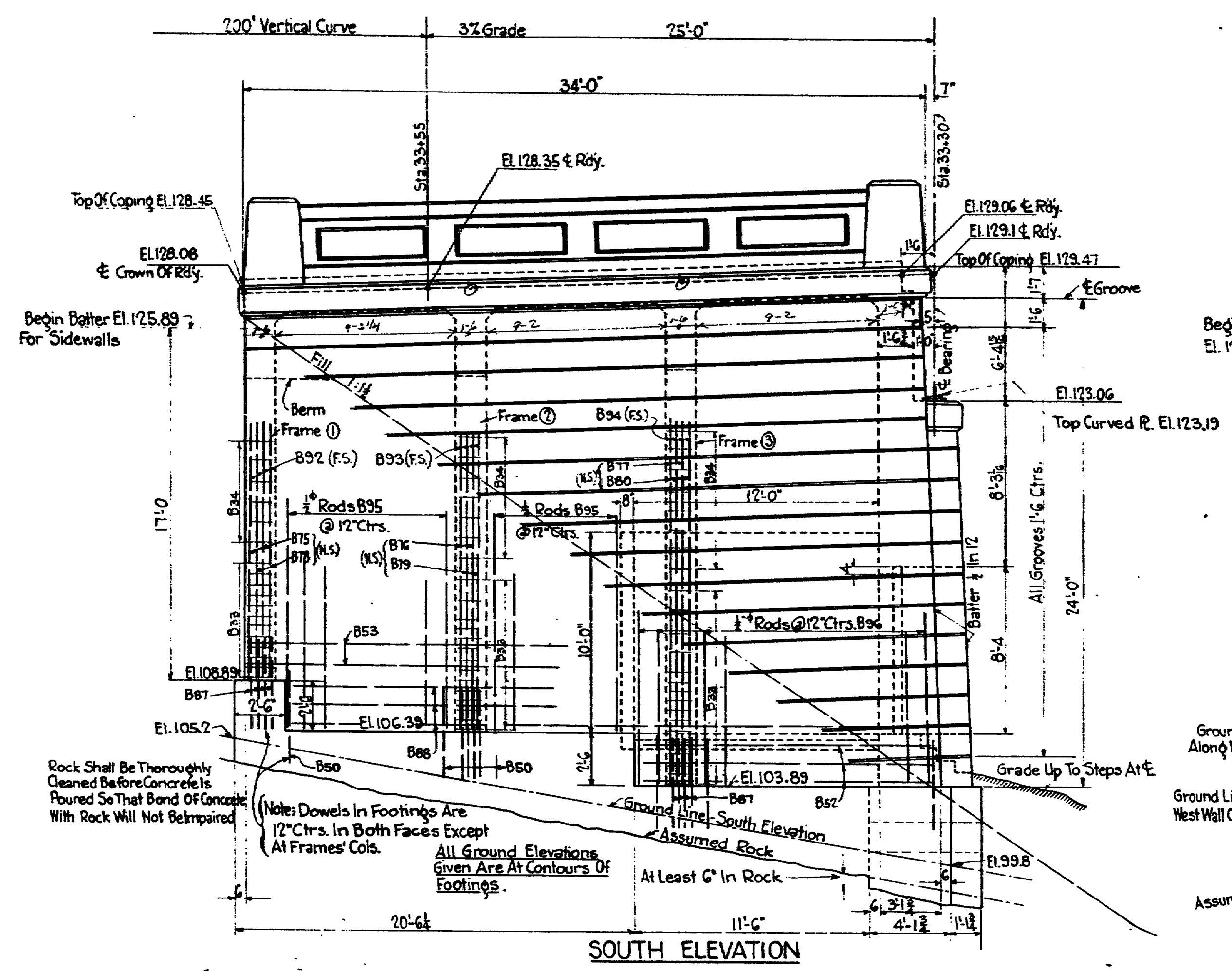
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NEW YORK - BUCKSPORT

DRAWING NUMBER
RS2922 - 5A

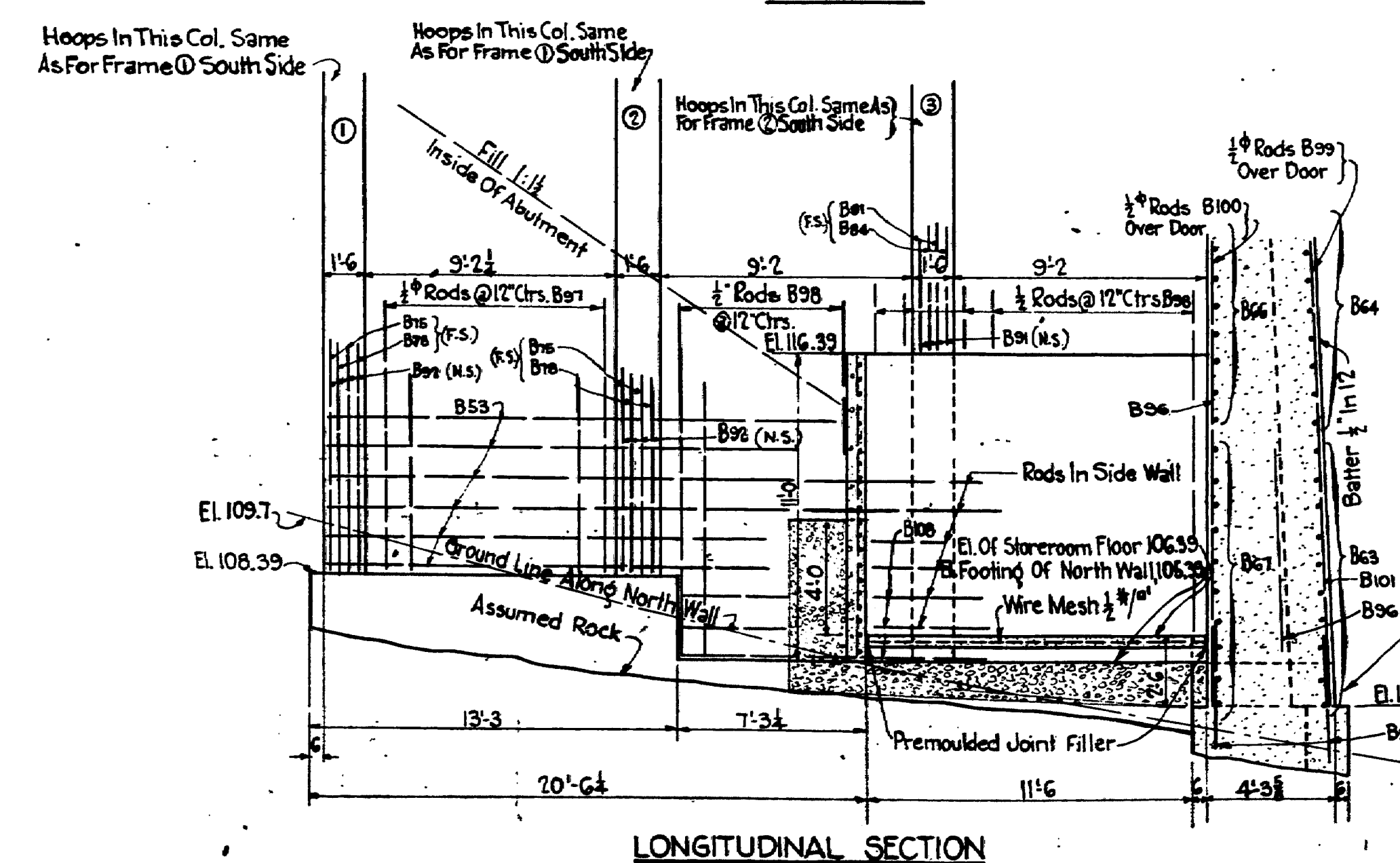
REVISED SEPT. 24, 1930
REVISED SEPT. 2, 1930

108

108-112

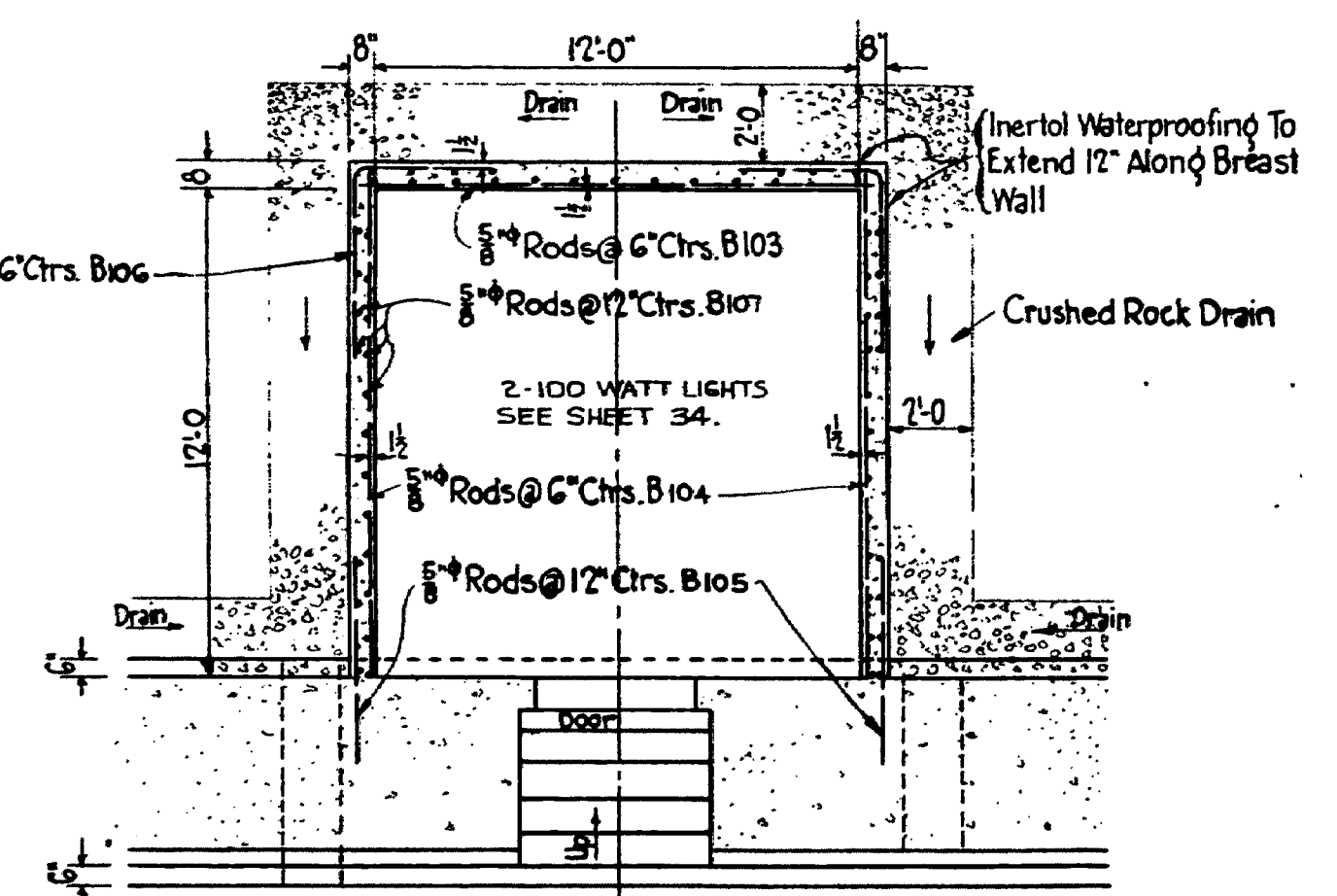


NOTE: THIS ABUTMENT SAME AS EAST ABUTMENT, EXCEPT AS SHOWN AND NOTED



- ESTIMATED QUANTITIES**
- Foundation Concrete
 - Other Concrete
 - Reinforcing Steel
 - Earth Excavation
 - Rock Excavation
 - Waterproofing
 - Hand Rail
 - One Kalamein Steel Door

Note: All Exposed Corners Chamfered 1/2", Except Otherwise Shown.



SECTION A-A

For Bill of Rods See Div. RS 2922-GB
THIS DRAWING SUPERSEDES DRAWING NO. RS 2922-G

WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT MAINE

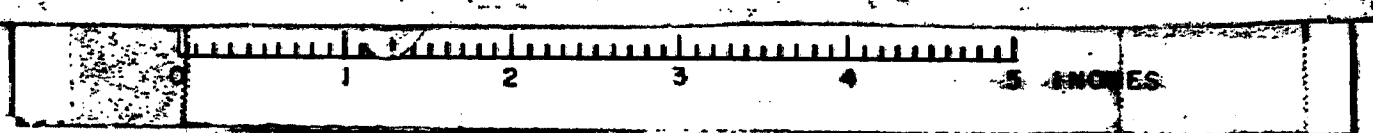
WEST ABUTMENT

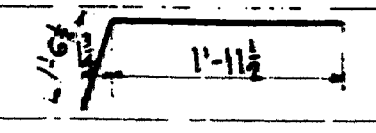
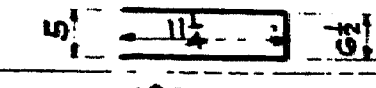
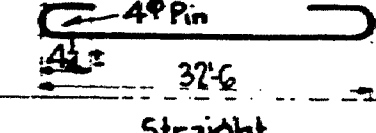
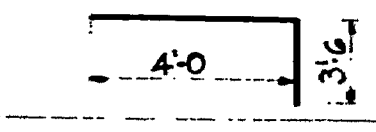
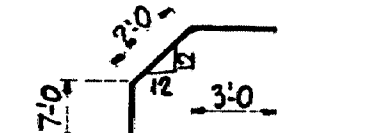
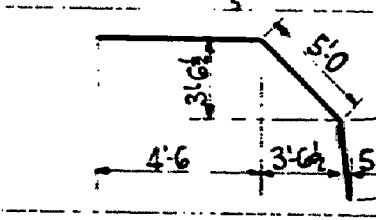
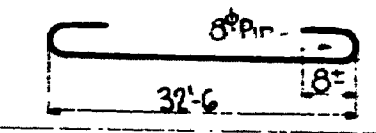
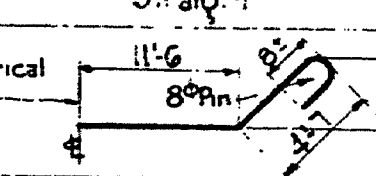
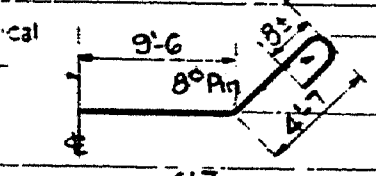
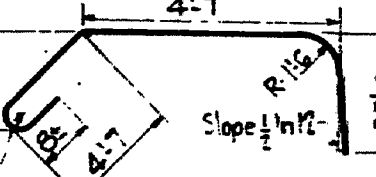
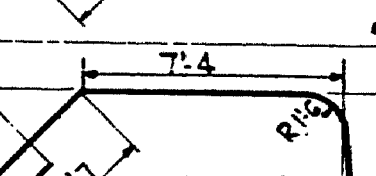
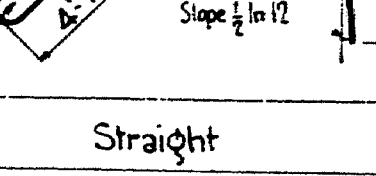
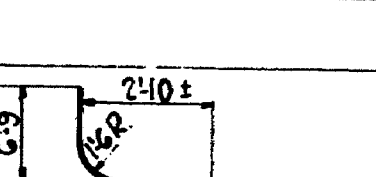

SCALE 1/2"=1'-0"

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CONSULTING ENGINEERS
NEW YORK - BUCKSPORT

DRAWING NUMBER
RS 2922-6A
AUGUST 21, 1930

Revised September 2, 1930



NO. OF RODS					MARK	SIZE	DETAILS	LENGTH	LOCATION	NO. OF RODS					MARK	SIZE	DETAILS	LENGTH	LOCATION
EAST ABUT.	WEST ABUT.	TOTAL	MARK	SIZE						EAST ABUT.	WEST ABUT.	TOTAL	MARK	SIZE					
38	38	76	B1	1/2"			Straight	37'-6"	Handrail Sidewalk Slab, Curb (Long)	196	160	356	B33	1/2"				5'-2"	
33	33	66	B2	1/2"			"	20'-9"	Transverse - Floor (Rdy)	116	82	198	B34	1/2"				5'-10"	
264	264	528	B3	3/8"			"	5'-5"	Transverse - Sidewalk Slab										
760	760	1520	B4	"				3'-6"	Transverse - Sidewalk Slab										
68	68	136	B5	1/2"			Straight	2'-0"	Handrail To Wall (Vertical)										
34	34	68	B6	"				2'-5"	Handrail (Vertical)										
86	86	172	B7	"				33'-8"	Longitudinal - Floor Slab										
176	176	352	B8	"			Straight	7'-0"	Longit. Top Of Floor Slab										
120	120	240	B9	"				7'-6"	Longit. Slab To Frame	72	72	144	B45	1/2"					
120	120	240	B10	"				12'-0"	Longit. Slab To Wall	85	85	170	B47	"					
32	32	64	B11	3/4"			Straight	6'-0"	Post's (Vertical)	42	42	84	B48	"					
6	6	12	B12	1"				10'-6"	Frame - Beam To Col.	75	75	150	B49	3/4"					
12	12	24	B13	"				34'-9"	Frame - Top Of Beam	60	44	104	B51	"					
12	12	24	B14	"			Straight	32'-0"	Frame - Bottom Of Beam	16	6	22	B52	"					
6	6	12	B15	"				34'-5"	Frame - Bottom Of Beam	104	76	180	B53	"					
6	6	12	B16	"				30'-5"	Frame - Bottom Of Beam	76	76	152	B54	"					
8	8	16	B17	"				35'-2"	Frame - Cols. To Beam	70	70	140	B55	"					
4	4	8	B18	"				38'-8"	Frame - Cols. To Beam	18	18	36	B56	"					
8	8	16	B19	"				37'-11"	Frame - Cols. To Beam	5	5	10	B57	"					
4	4	8	B20	"				41'-5"	" " " "	6	6	12	B58	"					
16	16	32	B21	"			Straight	25'-6"	Frame - Vertical In Cols.	5	5	10	B59	"					
8	8	16	B22	"			"	29'-0"	" " " "	3	3	6	B60	"					
48	48	96	B23	"				9'-0"	Dowels - Cols. Of Frame To Footings	4	4	8	B61	"					
24	24	48	B23	1/2"			"	9'-0"	Exterior Corners of Frames	2	2	4	B62	"					
78	78	156	B24	1/2"			"	9'-0"	" " " "	16	20	36	B63	"					
6	6	12	B25	"			"	10'-2"	" " " "	26	14	40	B64	"					
6	6	12	B26	"			"	10'-11"	Beam Of Frame	4	4	8	B65	"					
12	12	24	B27	"			"	11'-8"	Stirrups	36	24	60	B66	"					
6	6	12	B28	"			"	12'-8"	" " " "	2	2	4	B67	"					
6	6	12	B29	"			"	13'-5"	" " " "	2	2	4	B68	"					
6	6	12	B30	"			"	14'-0"	" " " "	2	2	4	B69	"					
12	12	24	B31	"			"	14'-8"	" " " "	2	2	4	B70	"					
6	6	12	B32	"			"	10'-8"	" " " "	2	2	4	B71	"					
6	6	12	B32	"			"	9'-1"	" " " "	2	2	4	B72	"					
										2	2	4	B73	"					

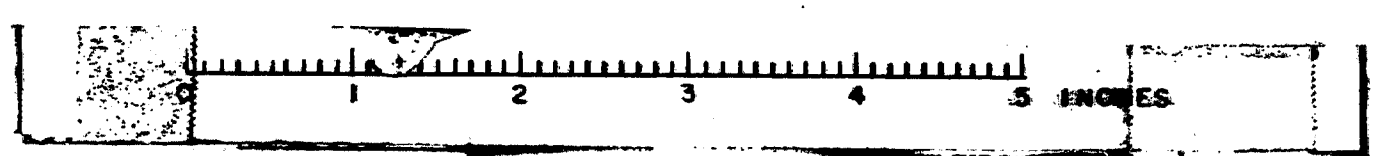
APPROVED *Karlton D. Robinson*
D.B. Steinman
CONSULTING ENGINEERS

WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE.

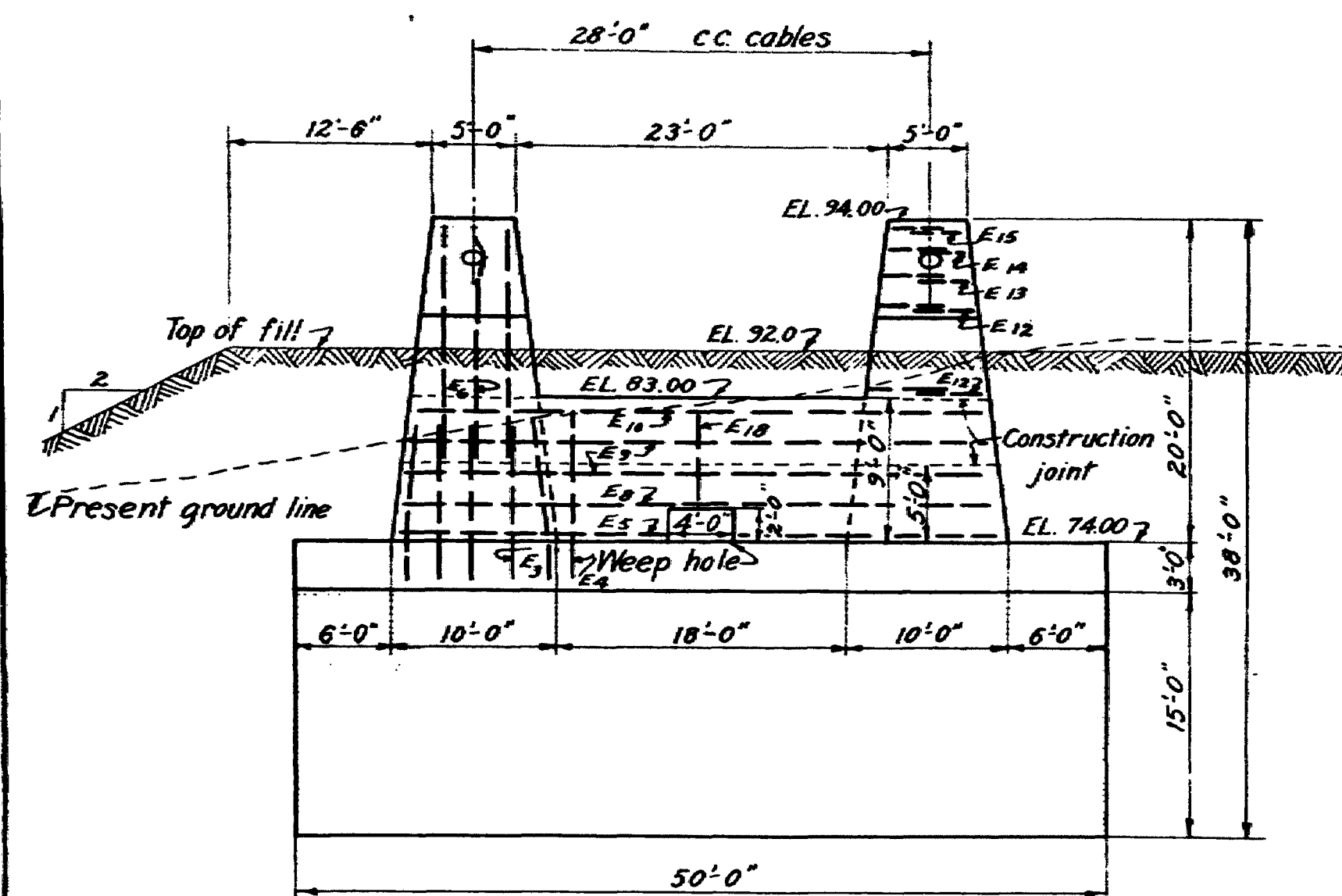
REINFORCING SCHEDULE
FOR EAST AND WEST ABUTMENTS

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CONSULTING ENGINEERS
NEW YORK - BUCKSPORT

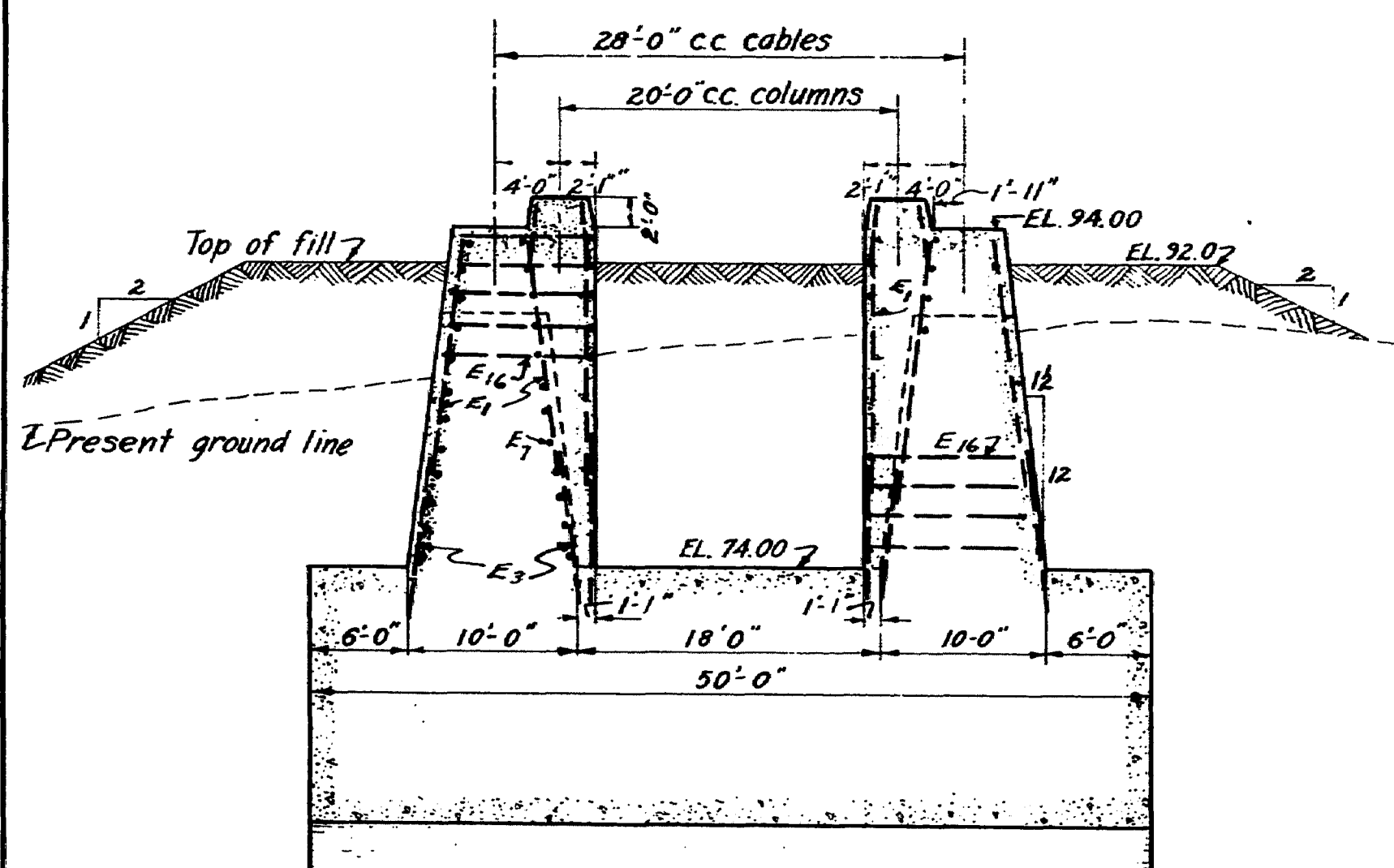
DRAWING NUMBER
RS2922-68
SEPTEMBER 4, 1950



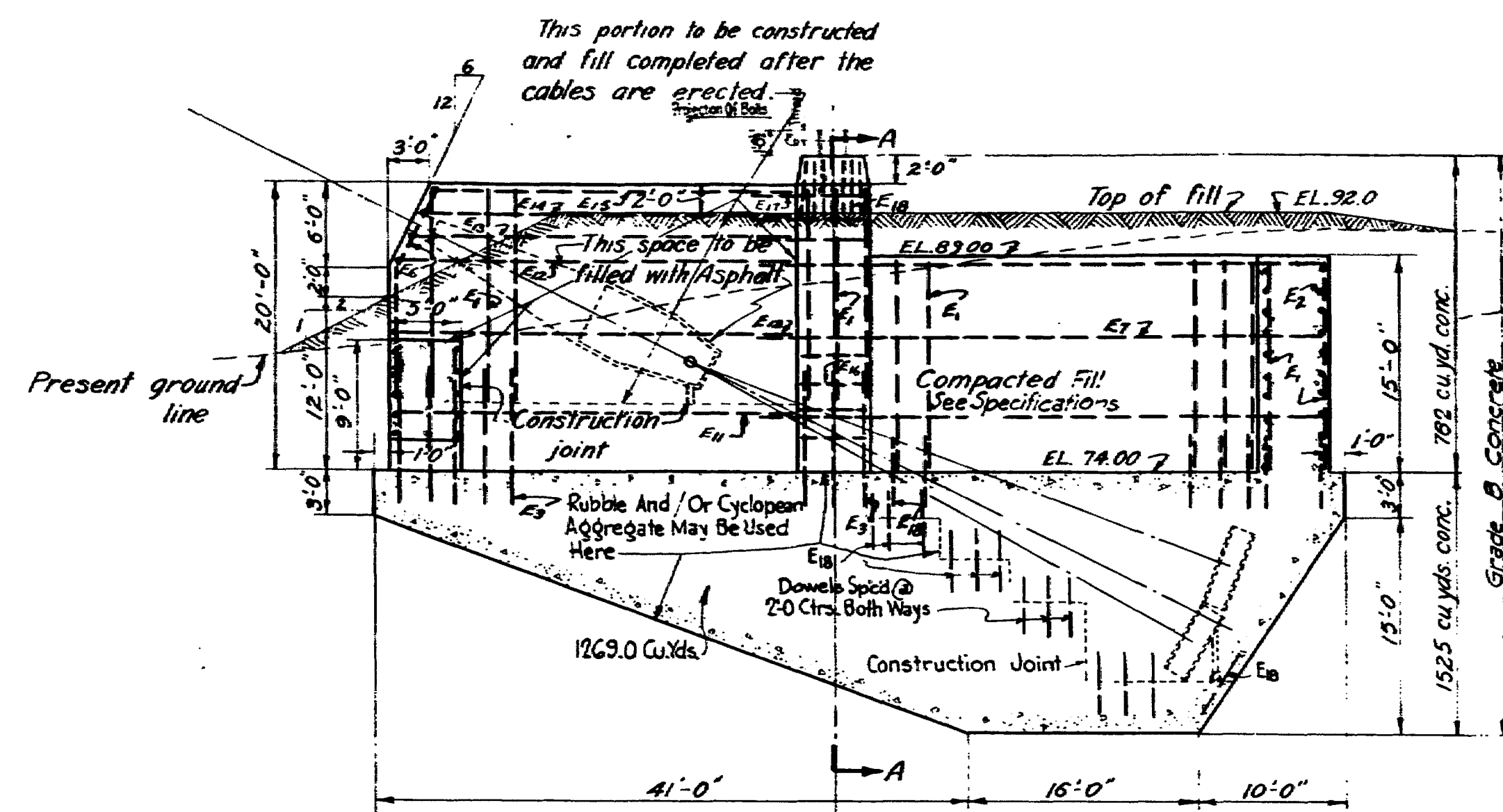
108-114



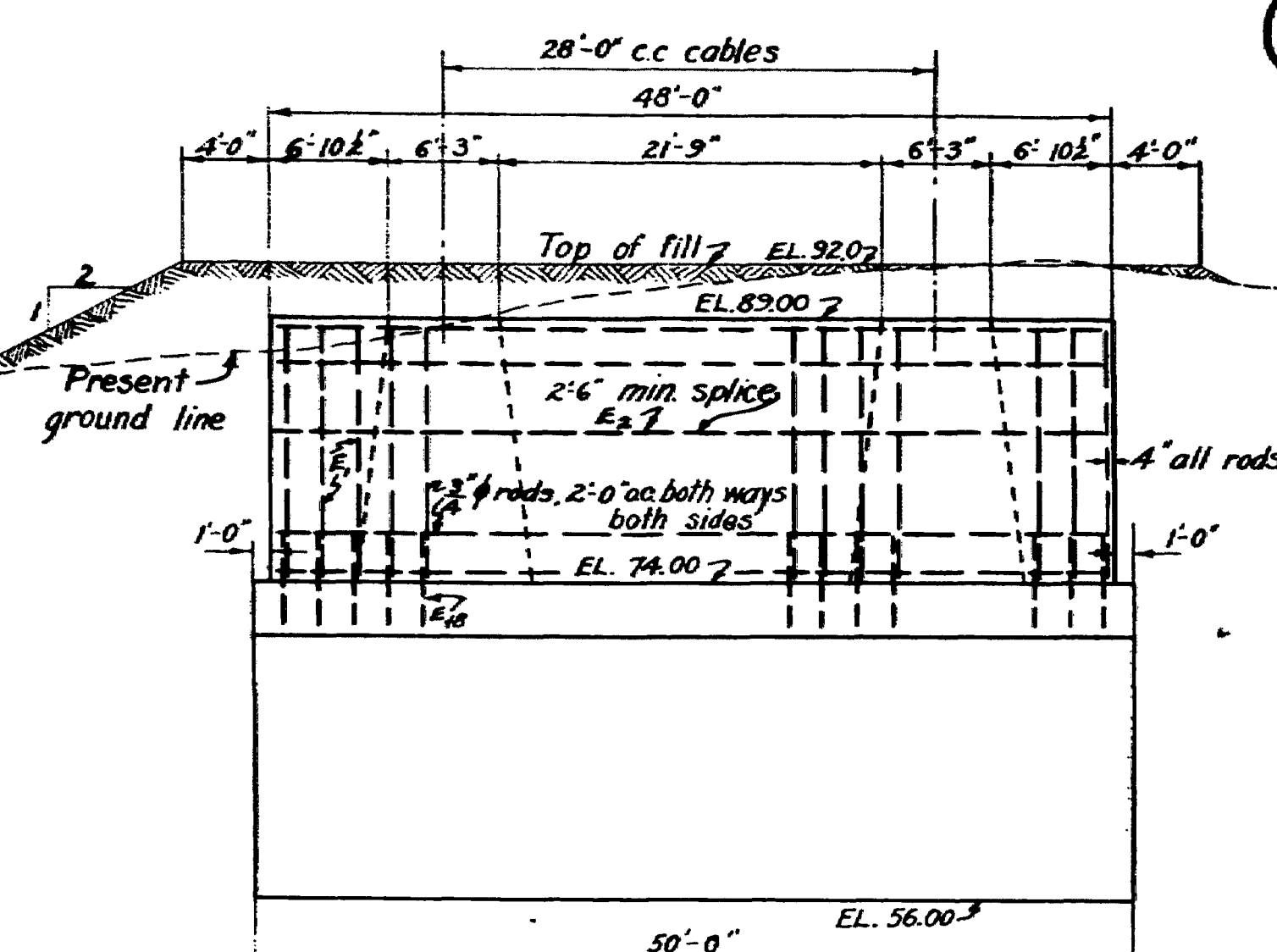
WEST ELEVATION



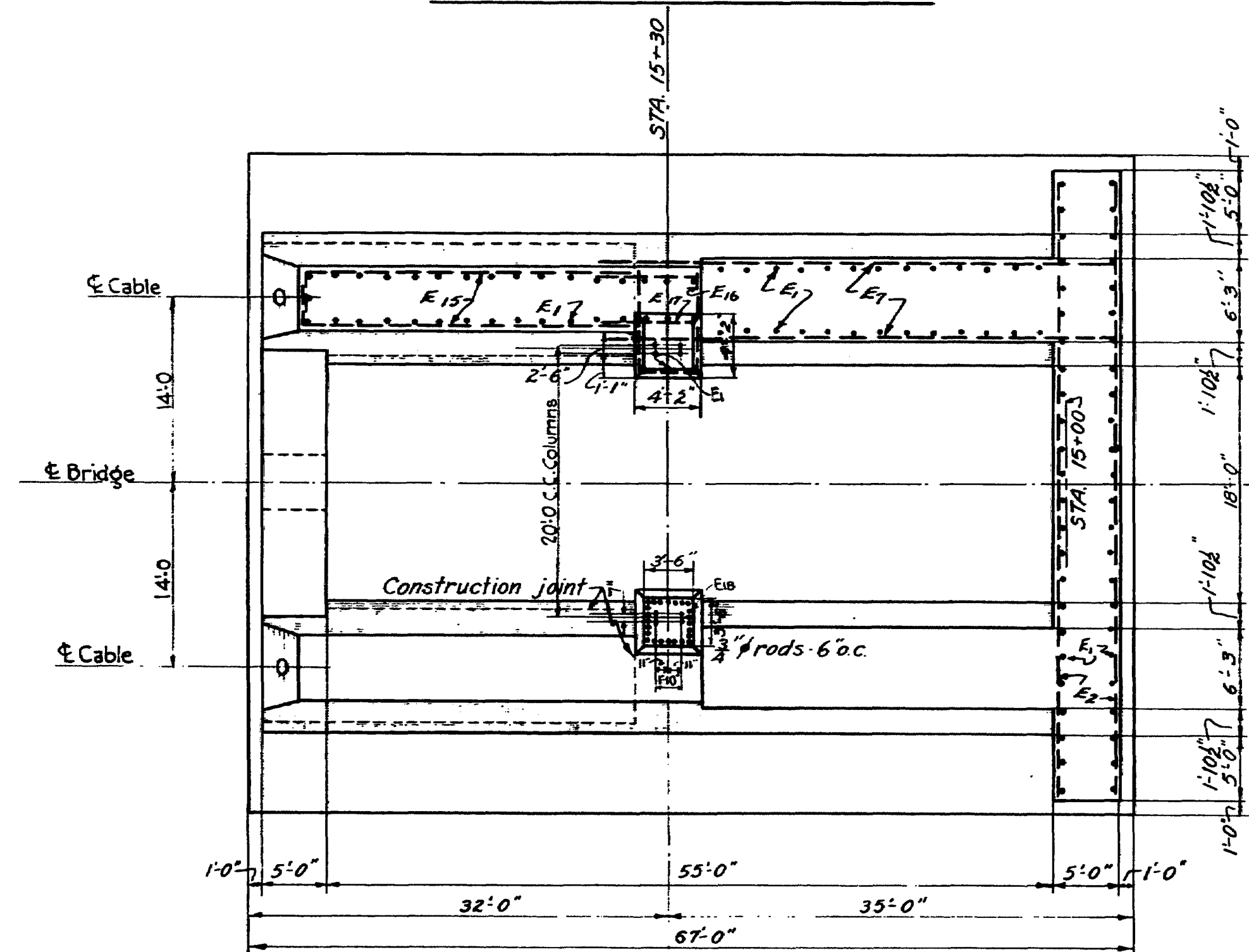
SECTION A-A



LONGITUDINAL SECTION ON C



EAST ELEVATION



PLAN

REINFORCING SCHEDULE				
NO.	MARK	SIZE	DETAIL	LOCATION
170	E1	3"	STRAIGHT	14'-8" SIDE & BACK WALLS
32	E2	"	"	25'-0" BACK WALL
80	E3	"	"	10'-0" SIDE & FRONT WALLS
18	E4	"	"	11'-2" FRONT WALL
4	E5	"	"	16'-4" " "
6	E6	"	"	15'-6" " "
32	E7	"	STRAIGHT	39'-0" SIDE WALLS
2	E8	"	"	37'-2" FRONT WALL
4	E9	"	"	36'-0" " "
2	E10	"	"	35'-3" " "
20	E11	"	"	28'-2" SIDE WALLS
12	E12	"	"	33'-2" " "
4	E13	"	"	31'-0" " "
4	E14	"	"	29'-6" " "
4	E15	"	"	28'-0" " "
20	E16	2"	"	19'-8" COLUMN PEDESTALS
12	E17	3"	STRAIGHT	7'-6" SIDE WALLS
175	E18	"	"	5'-0" SIDE, BACK, FRONT

All rods 2'-0" on centers except as noted.

General Notes:
For Detail Of Anchorage Steel, See Sheet 11.
All Exposed Corners Of Concrete To Be Chamfered 1/2".

ESTIMATED QUANTITIES
Rubble And/Or Cyclopean Concrete: 1269.0 Cu.Yds.
Other Concrete: 1018.0 Cu.Yds.
Reinforcing Steel: 15000 Pounds
Asphalt: 23.0 Cu.Yds.
Earth Excavation: 3130.0 Cu.Yds.
Fill And Grading: 1930.0 Cu.Yds.
Placing Anchorage Steel (Furnished By Others): 70000 Pounds

APPROVED
D. B. Steinman
CONSULTING ENGINEERS

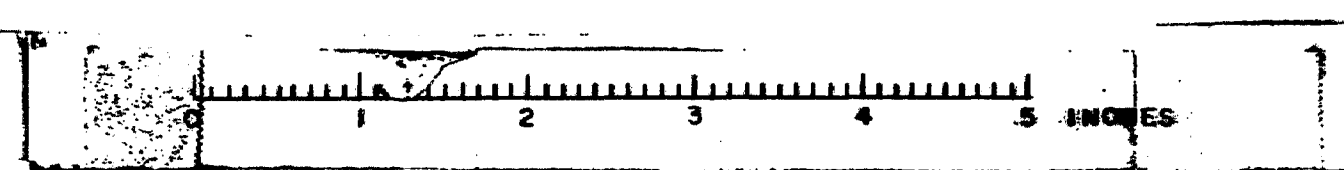
WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

EAST ANCHORAGE - PIER 4

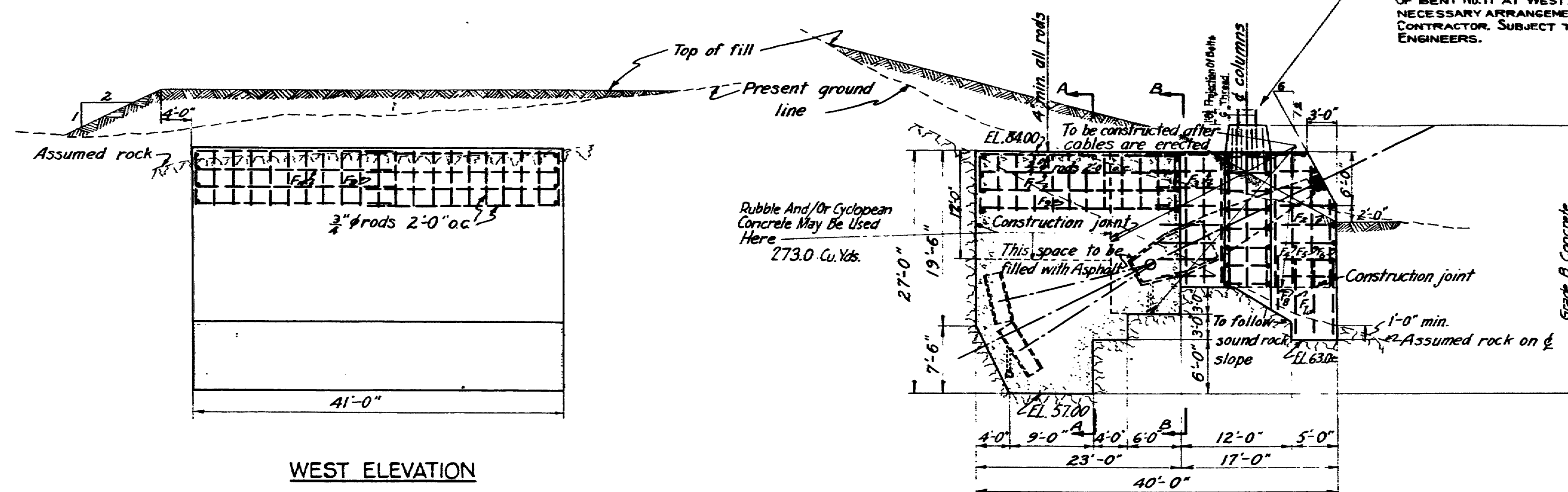
SCALE 1"=1'-0"

ROBINSON AND STEINMAN
CONSULTING ENGINEERS
NEW YORK - BUCKSPORT

DRAWING NUMBER
RS 2922-7
July 8, 1930

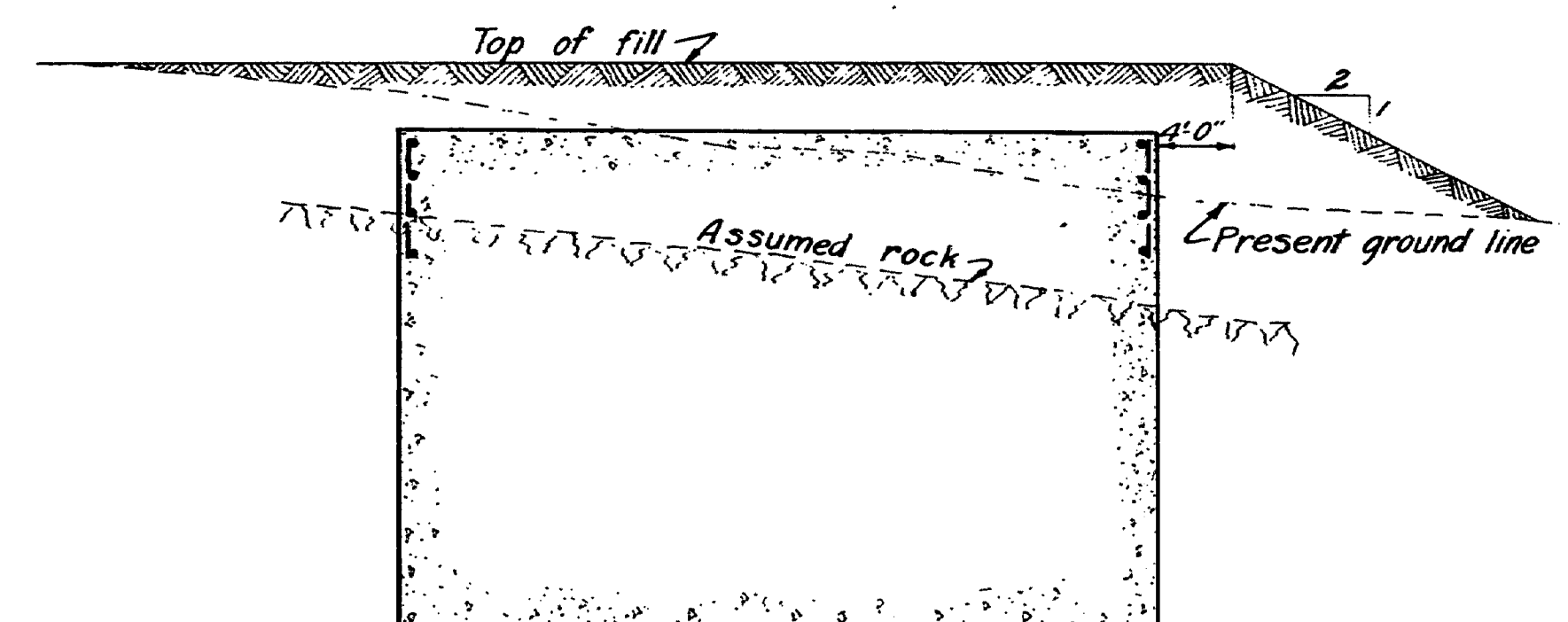


108-145

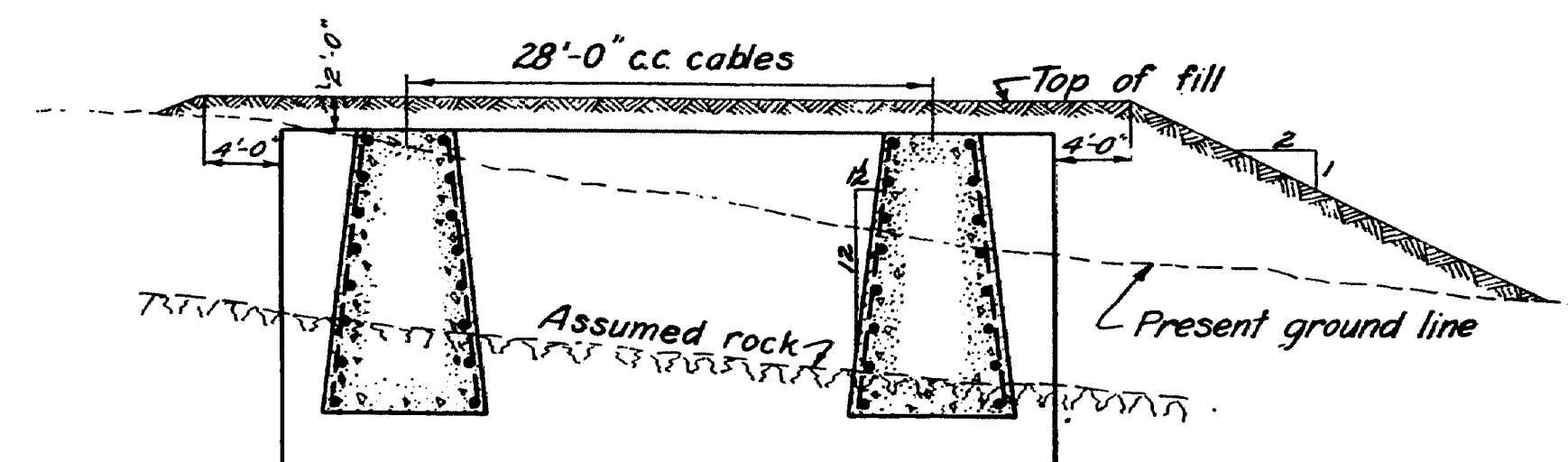


WEST ELEVATION

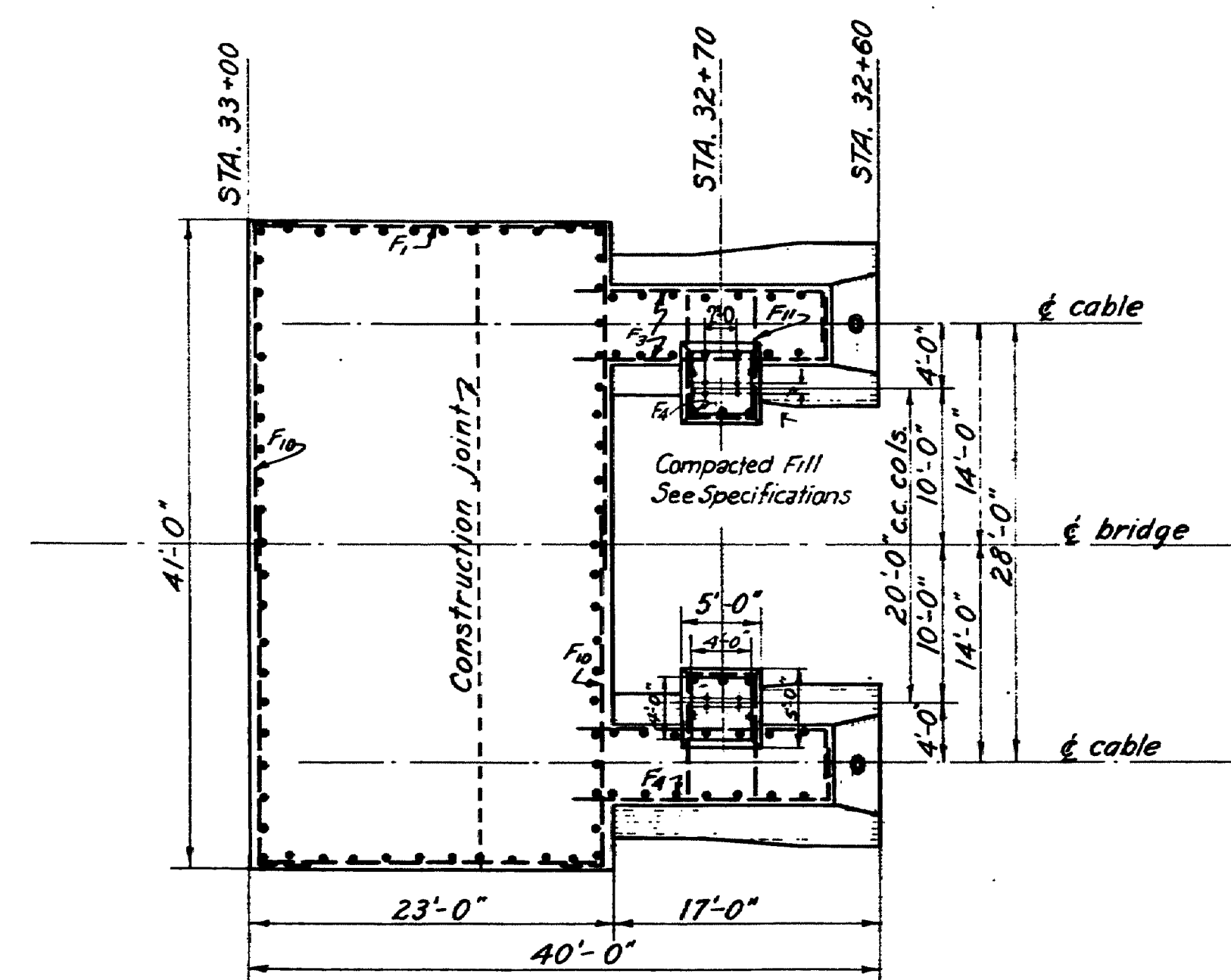
SECTION ON C



SECTION A-A



SECTION B-B

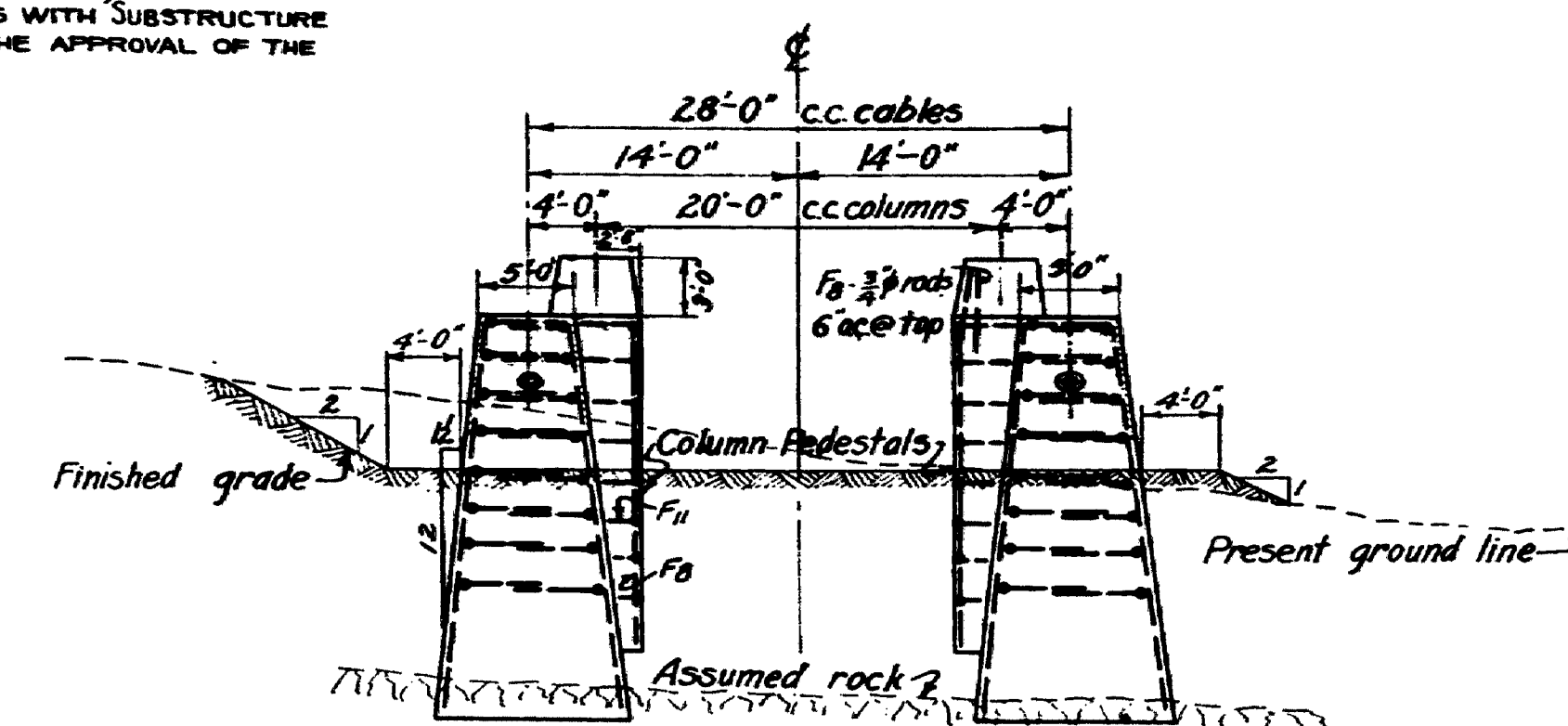


PLAN

ESTIMATED QUANTITIES

Rubble And/Or Cyclopean Concrete:	273.0 Cu.Yds.
Other Concrete:	682.0 Cu.Yds.
Reinforcing Steel:	4280 Pounds
Asphalt:	23.0 Cu.Yds.
Earth Excavation:	280.0 Cu.Yds.
Rock Excavation:	415.0 Cu.Yds.
Fill And Grading:	370.0 Cu.Yds.
Placing Anchorage Steel (Furnished By Others):	46000 Pounds

NOTE TO SUPERSTRUCTURE CONTRACTOR
SUPERSTRUCTURE CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORTS FOR COLUMNS OF BENT NO. II AT WEST ANCHORAGE, BY MAKING NECESSARY ARRANGEMENTS WITH SUBSTRUCTURE CONTRACTOR. SUBJECT TO THE APPROVAL OF THE ENGINEERS.



EAST ELEVATION

REINFORCING SCHEDULE

NO.	MARK	SIZE	DETAIL	UNIT LENGTH	LOCATION
8	F1	3/4"	STRAIGHT	22'-0"	SIDES
20	F2	"	19'-2"	24'-3"	SIDE OF WINGS - HOR.
12	F3	"	18'-0"	22'-0"	" " " - "
34	F4	"	STRAIGHT	14'-8"	" " " - VERT.
4	F5	"	"	13'-8"	" " " - "
4	F6	"	"	9'-6"	" " " - "
12	F7	"	"	8'-0"	" " " - "
68	F8	"	"	5'-0"	" " " - "
62	F9	"	"	6'-0"	WEST FACE & SIDES
16	F10	"	22'-0"	24'-6"	EAST & WEST FACES
16	F11	1/2"	7'-9"	19'-8"	COLUMN PEDESTALS

General Notes :-
For Detail Of Anchorage Steel See Sheet II.
The Anchorage Site Shall Be Excavated Carefully In Order Not To Start Cracks Or Seams.
Before Concrete Is Poured, The Walls Of The Anchorage Shall Be Gone Over With Picks To Remove Any Pieces Of Rock That May Have Cracked Off The Ledge Rock And The Anchorage Pit Shall Be Thoroughly Cleaned Of All Dirt And Loose Rock.
All Exposed Corners Of Concrete To Be Chamfered 1/2".

APPROVED *Robert S. Robinson*
D.B. Steinman
CONSULTING ENGINEERS

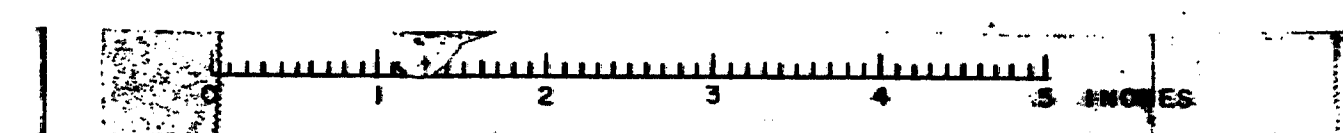
WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

WEST ANCHORAGE- PIER II

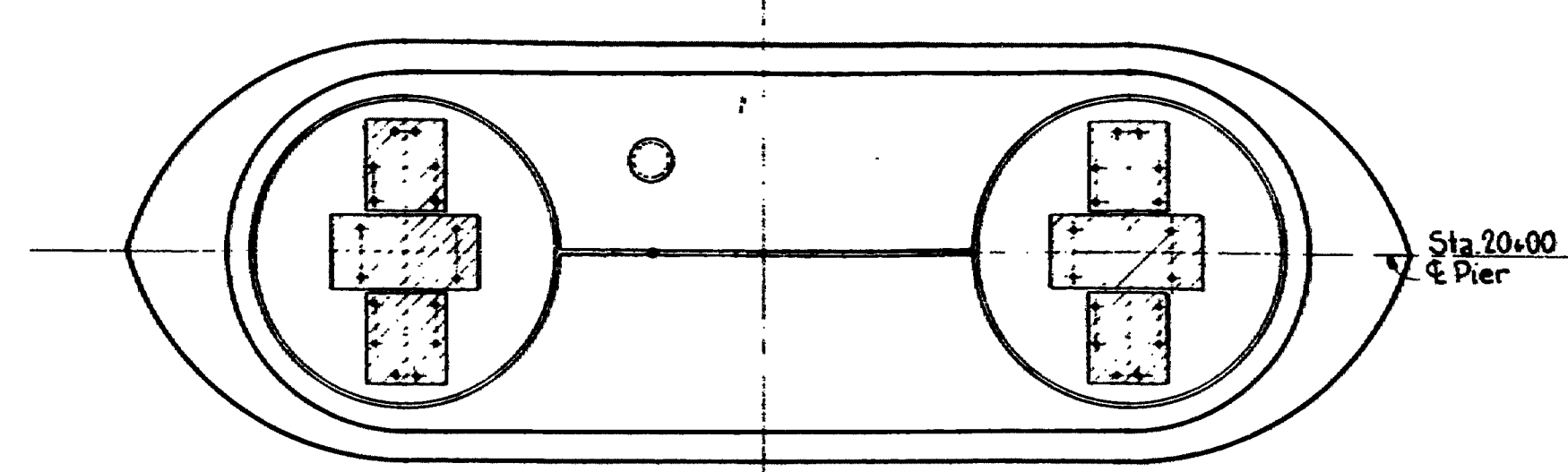
SCALE 1/2"=1'-0"

ROBINSON AND STEINMAN
CONSULTING ENGINEERS
NEW YORK - BUCKSPORT

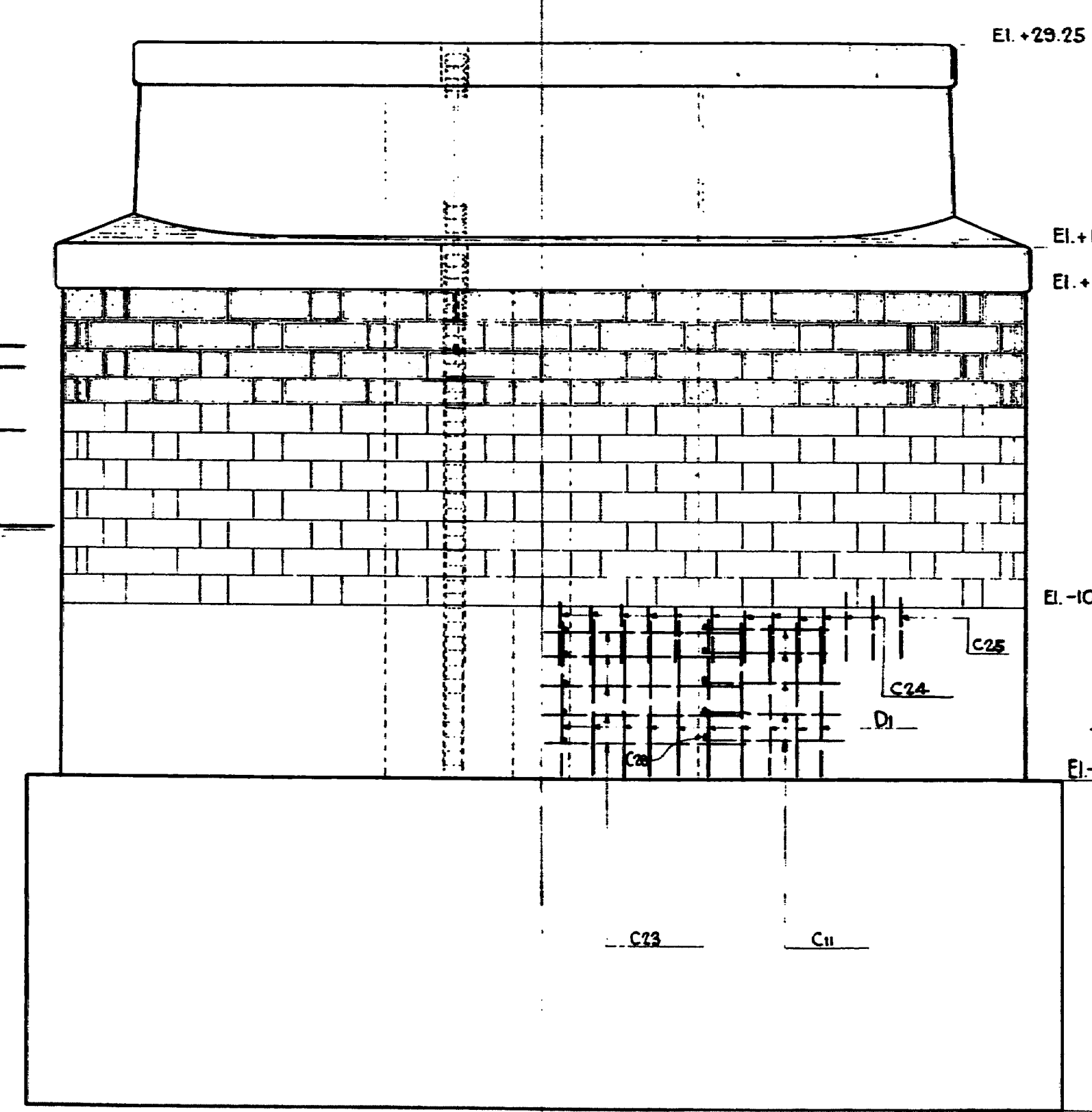
DRAWING NUMBER
RS 2922 - 8
July 8, 1930



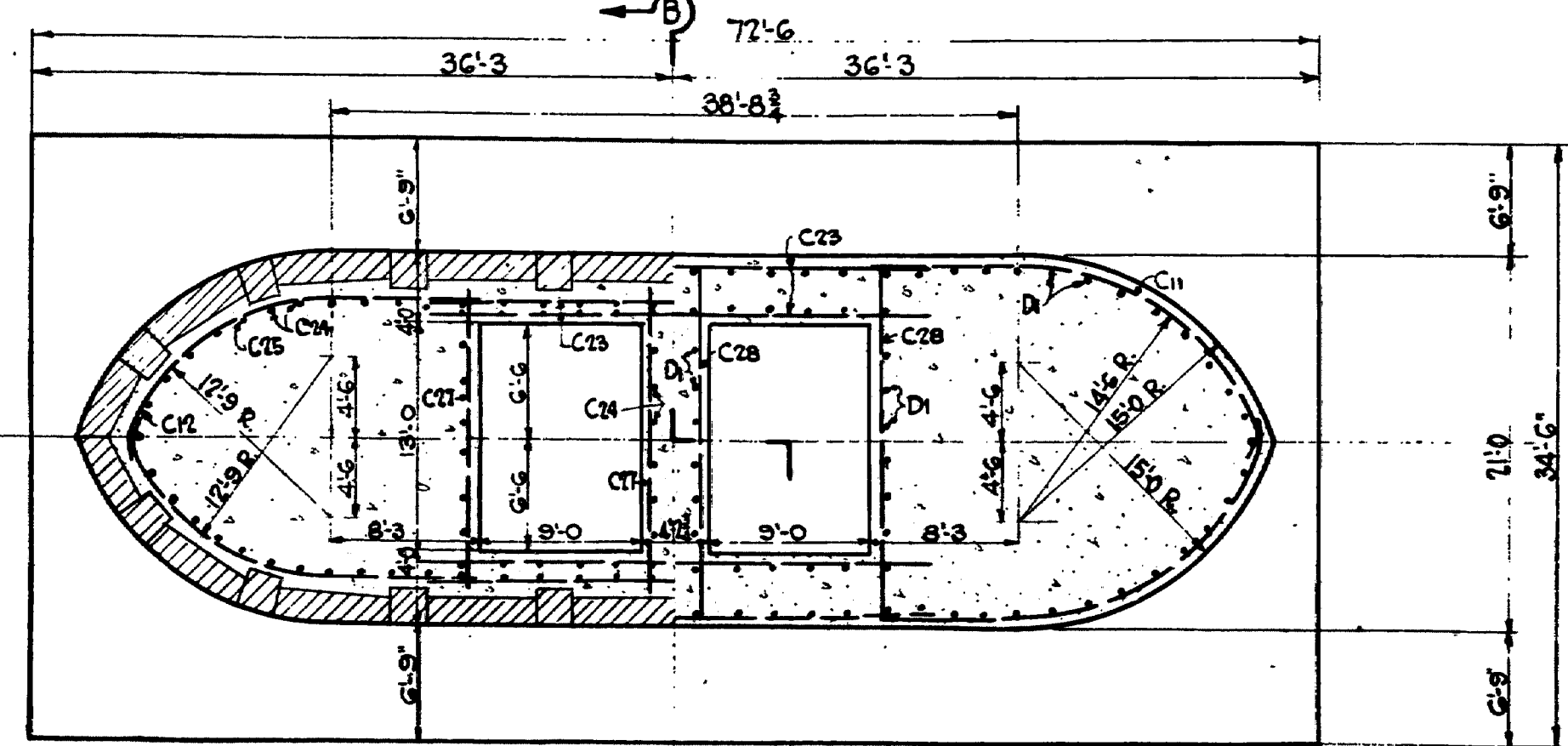
108-116



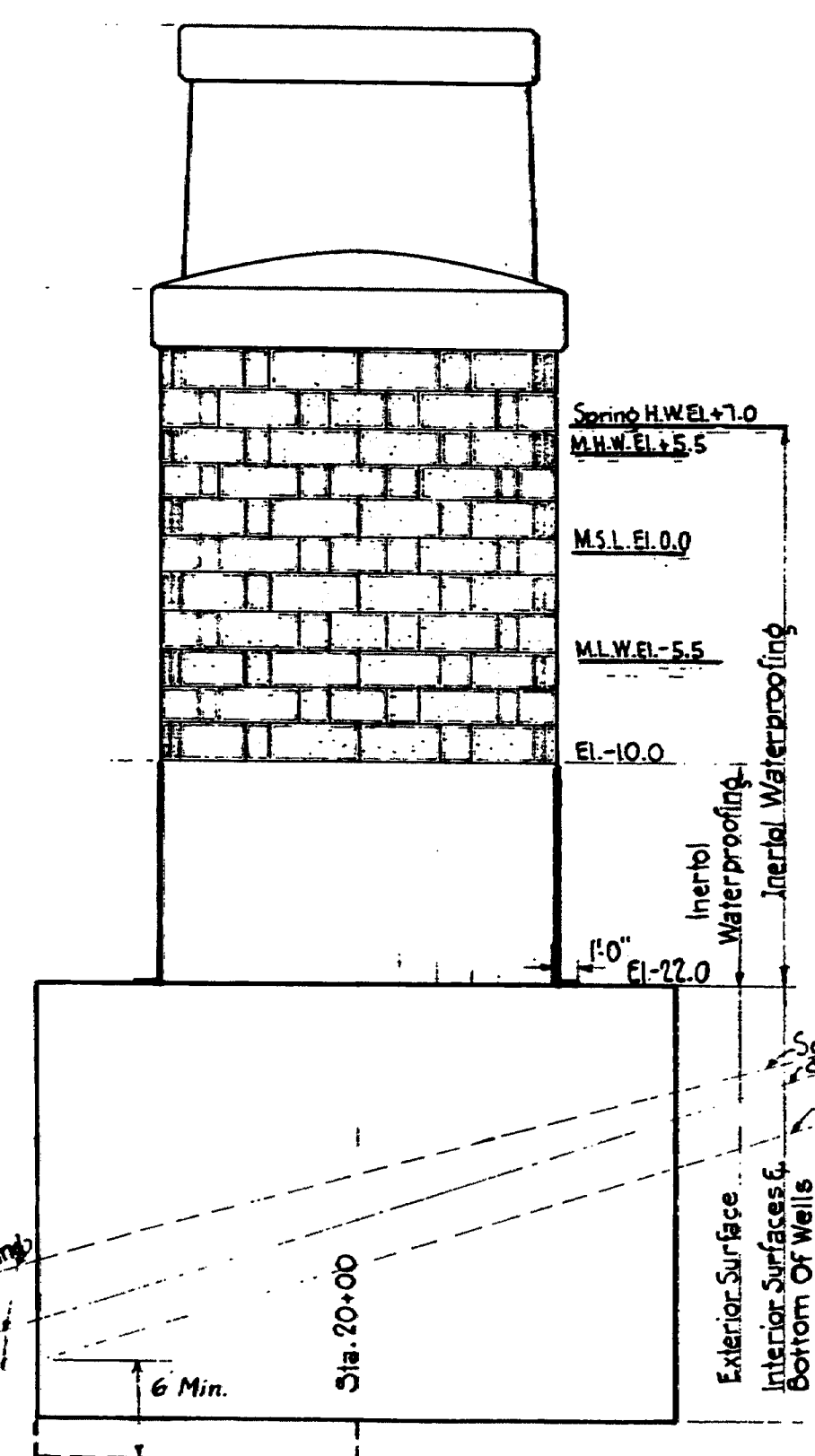
TOP PLAN



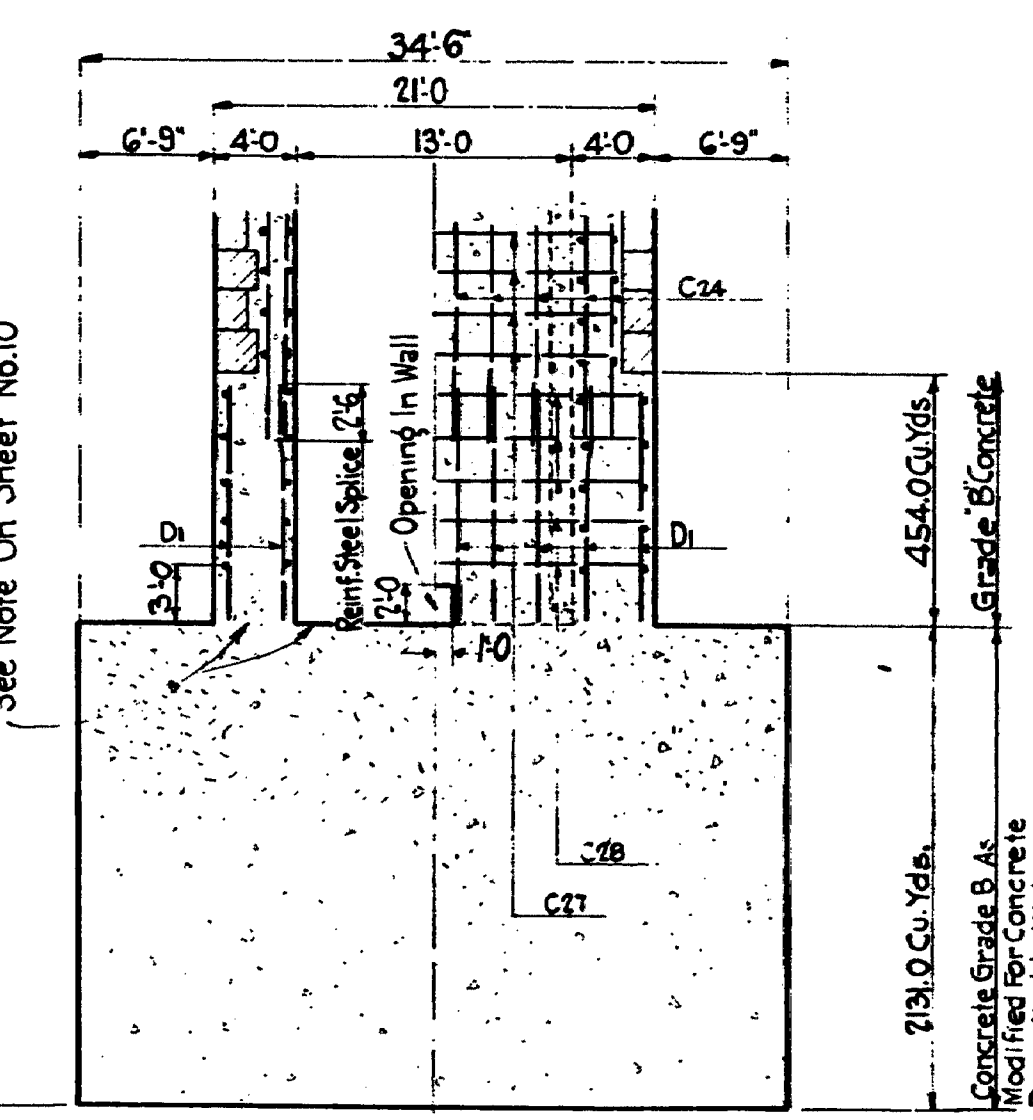
FRONT ELEVATION SHOWING PART REINFORCING



SECTION 'A-A'



END ELEVATION



PART SECTION 'B-B'

ESTIMATED QUANTITIES

Concrete Deposited in Water:	2131.0 Cu.Yds.
Concrete Deposited in Dry:	1656.0 Cu.Yds.
Granite Facing:	197.0 Cu.Yds.
Reinforcing Steel:	29830 Pounds
Earth Excavation:	1156.0 Cu.Yds.
Waterproofing:	4780.0 Sq.Ft.
Manholes:	2
One Ladder:	12 Lin.Ft.
One Ladder:	36 Lin.Ft.
3" C.I. Pipe Drain:	30 Lin.Ft.
Anchor Bolts:	32. To Be Furnished By Superstructure Contractor & Placed By Substructure Contractor.

REINFORCING SCHEDULE FOR EAST AND WEST PIERS

NO. OF RODS	EAST WEST PIER	TOTAL	MARK	SIZE	DETAILS	UNIT LENGTH	LOCATION
40	40	80	C1	3/4"	Straight	28'-0"	Upper Shaft & Upper Cap
44	44	88	C2	"	"	18'-0"	Upper Cap
4	4	8	C3	"	"	16'-6"	"
4	4	8	C4	"	"	14'-0"	"
4	4	8	C5	"	"	9'-6"	"
28	28	56	C6	"		22'-6"	Upper Cap And Upper Shaft
16	16	32	C7	"	Straight	14'-0"	Upper Cap
16	16	32	C8	"	"	16'-6"	"
102	102	204	C9	"	"	13'-6"	Vertical Upper Shaft
14	14	28	C10	"	"	5'-0"	Lower Cap To Upper Shaft
28	8	36	C11	"		28'-3"	Top & Bottom Of Lower Shaft
44	44	88	C12	"		28'-0"	Top Of Lower Shaft
40	40	80	C13	"	Straight	21'-0"	Transverse Lower Cap
8	8	16	C14	"	"	20'-0"	"
8	8	16	C15	"	"	17'-0"	"
4	4	8	C16	"	"	14'-0"	"
4	4	8	C17	"	"	10'-0"	"
24	24	48	C18	"	"	28'-0"	Longitudinal Lower Cap
8	8	16	C19	"	"	15'-0"	"
8	8	16	C20	"	"	18'-0"	"
16	16	32	C21	"	"	19'-6"	"
8	8	16	C22	"	"	27'-0"	"
64	44	108	C23	1"	"	19'-0"	Horizontal Lower Shaft
96	96	192	C24	3/4"	"	30'-9"	Vertical Lower Shaft
22	22	44	C25	"	"	28'-0"	Vertical Top Of Lower Shaft
84	84	168	C26	"	"	27'-3"	Vertical Top Of Lower Shaft
58	54	112	C27	"	"	17'-6"	Transverse Top Of Lower Shaft
20	20	40	C28	"	"	20'-0"	Transverse Bottom Of Lower Shaft
122	122	244	D1	"	"	11'-6"	Vertical Bottom Of Lower Shaft
34	34	68	C29	"	"	25'-0"	Vertical In Wall

Note: For Details Not Shown On This Sheet, See Sheet 10

APPROVED *Robert D. Robinson*
D.B. Steinman
 CONSULTING ENGINEERS

WALDO-HANCOCK BRIDGE
 OVER
 PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

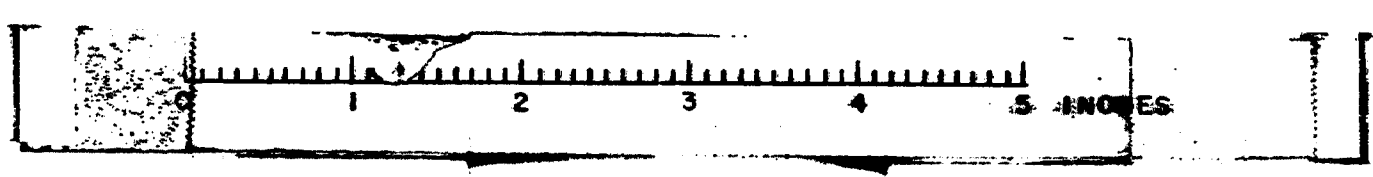
EAST MAIN PIER NO.7

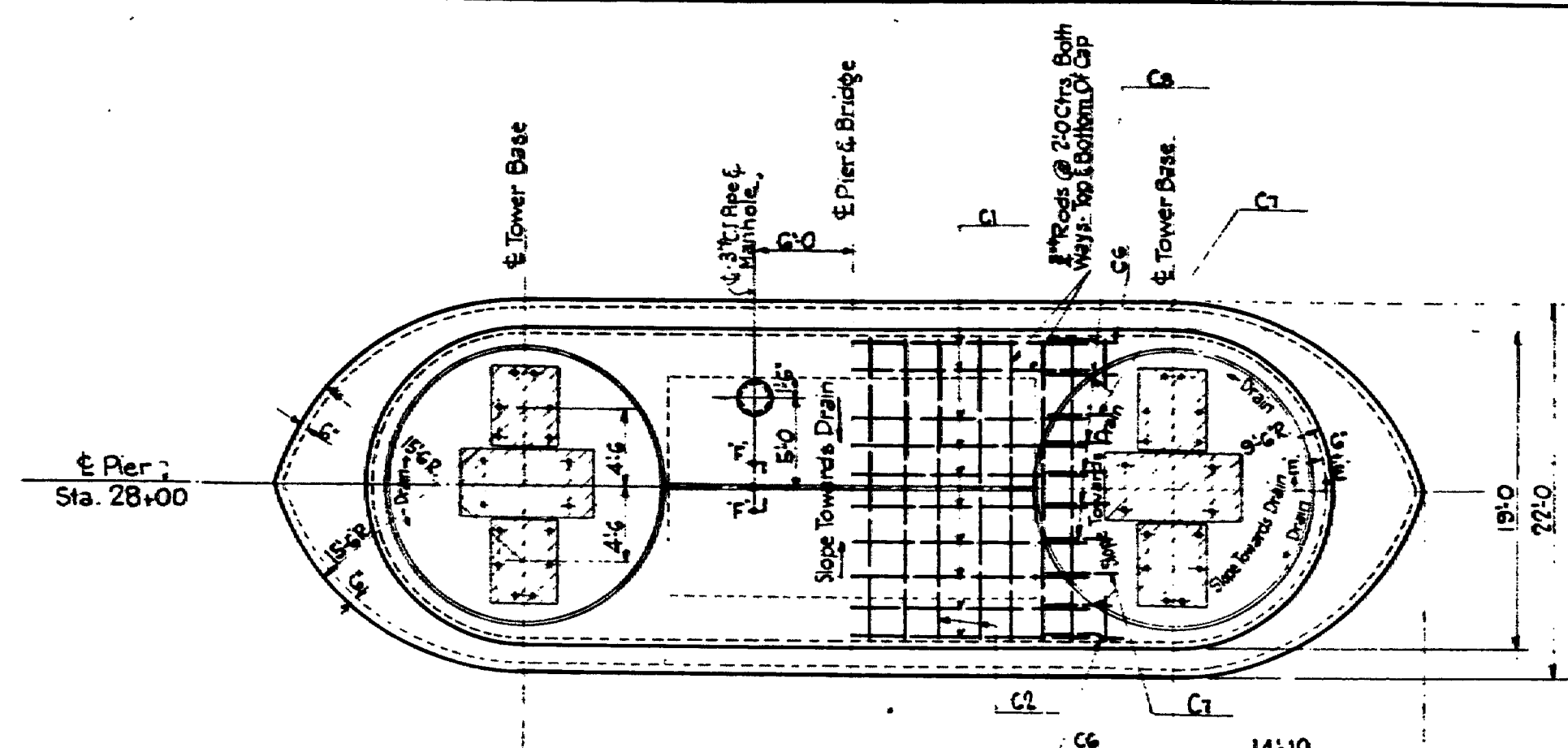
SCALE 1/4" = 1'-0"

ROBINSON AND STEINMAN
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 NEW YORK - BUCKSPORT

DRAWING NUMBER
RS2922-9
 July 9, 1930

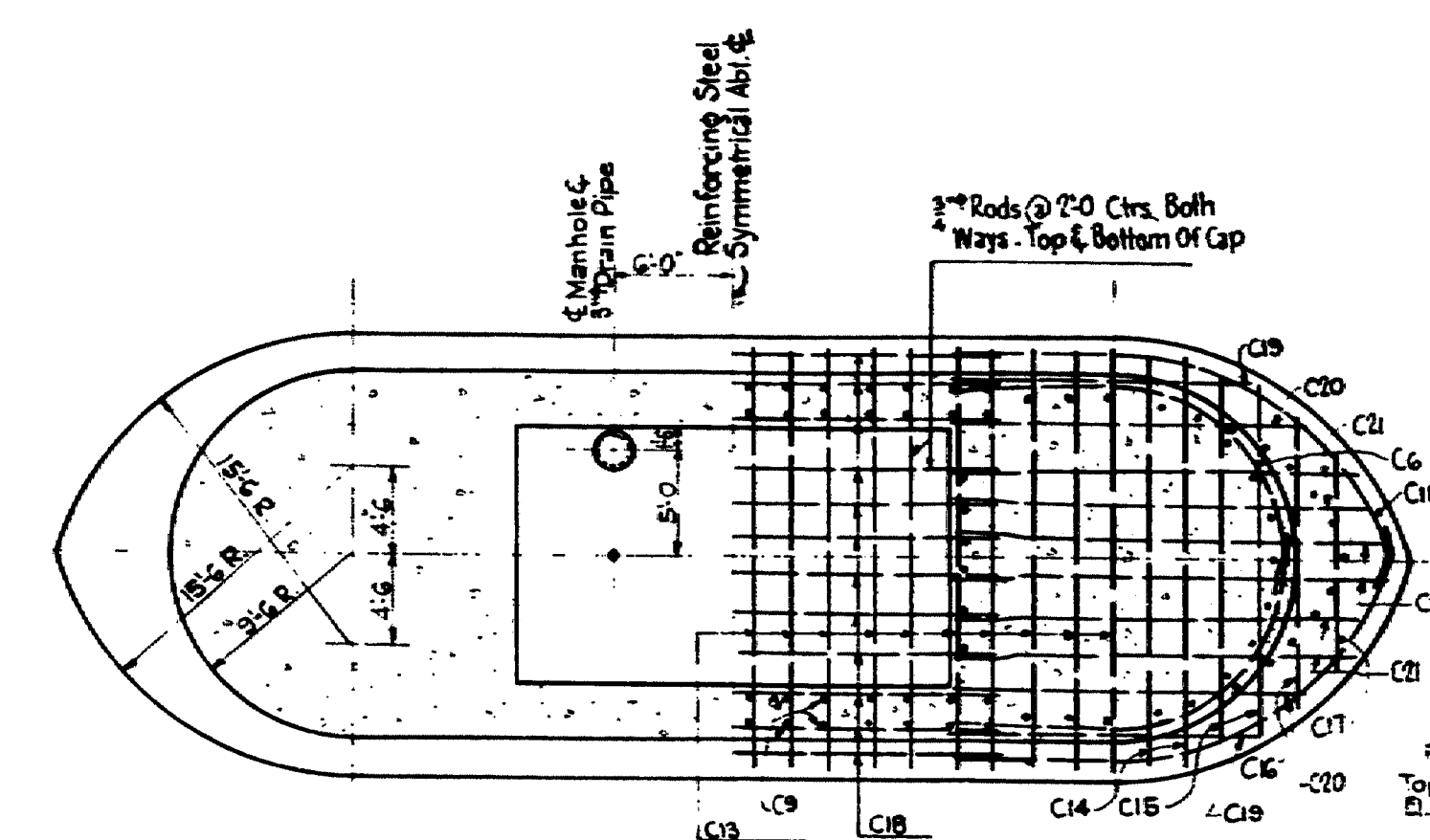
Revised February 5, 1931
 Revised August 19, 1930



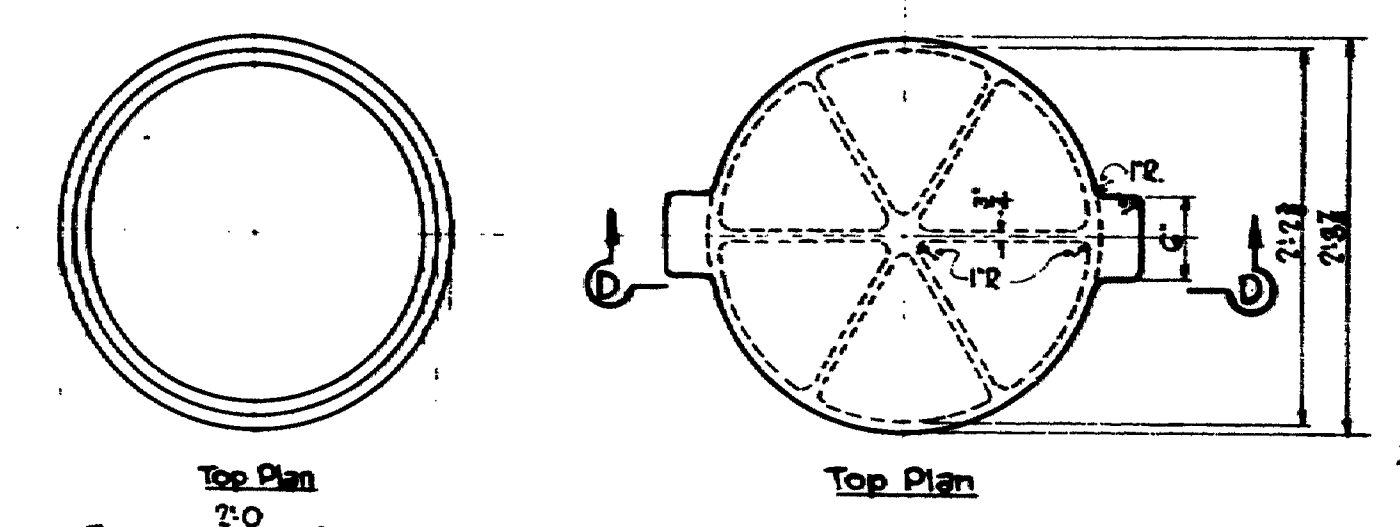


TOP PLAN

SECTIONS 'E-E' & 'F-F'

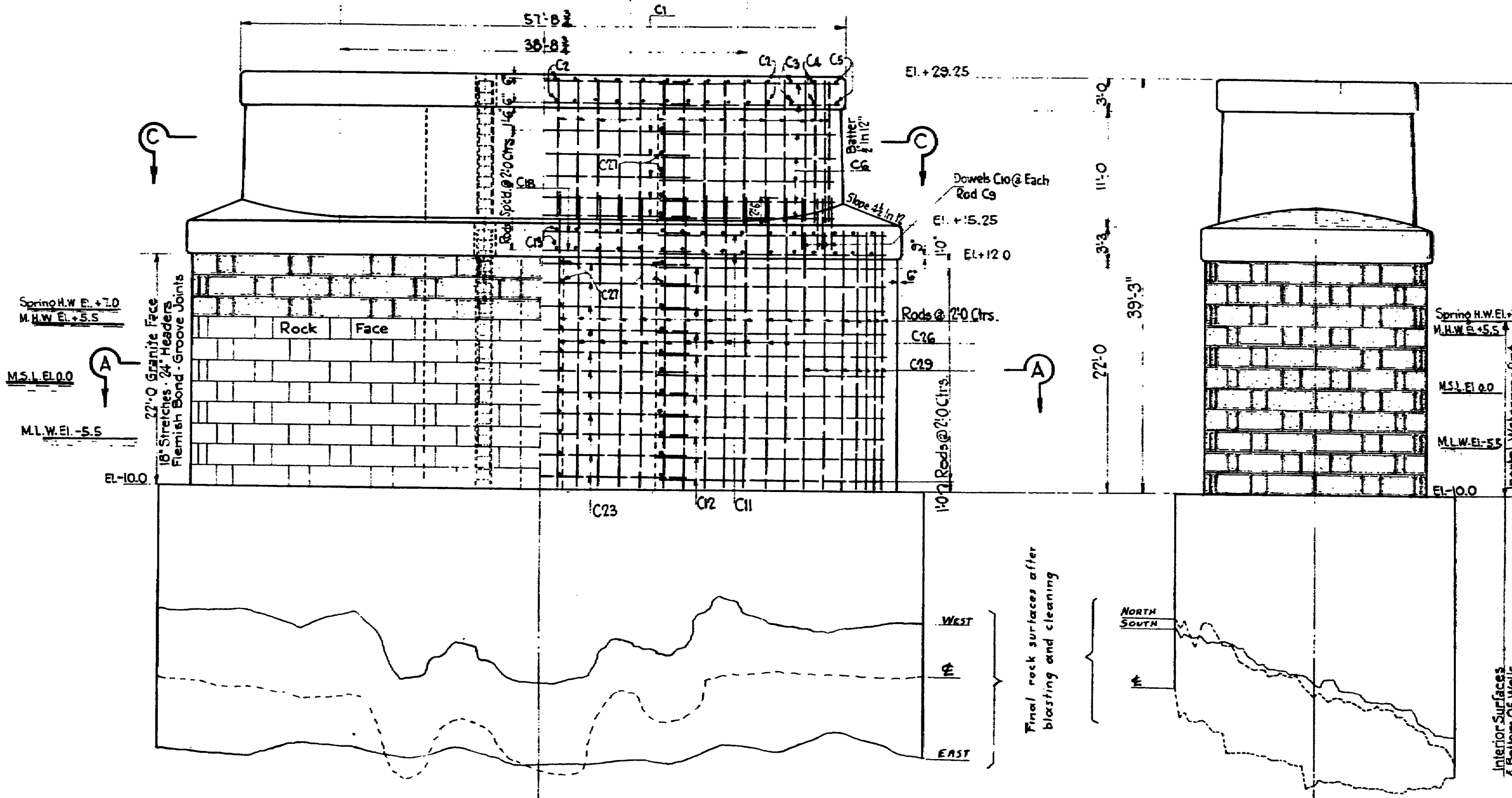


SECTION 'C-C'



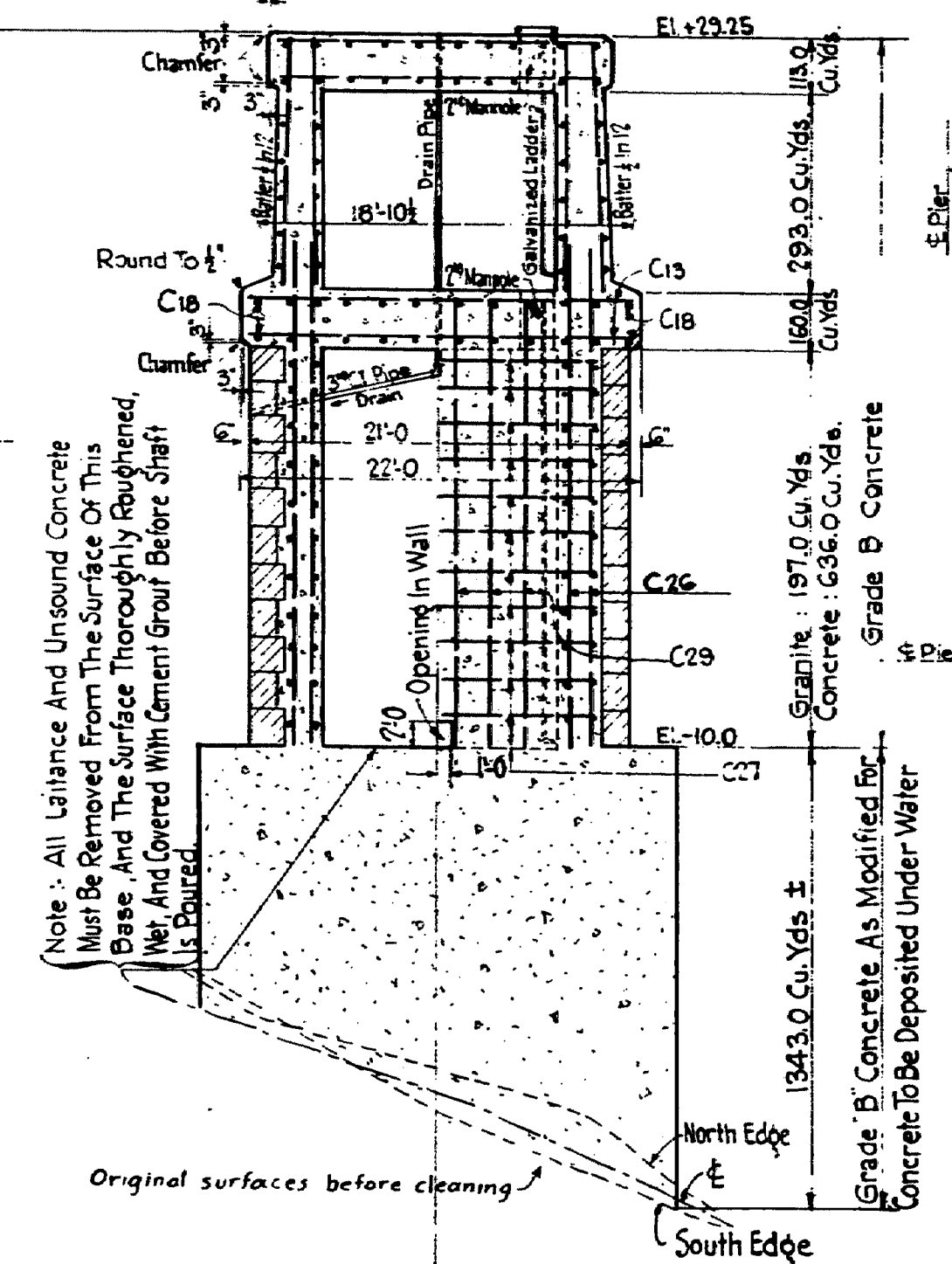
Section 'D-D'

MANHOLE BASE - C.I. Or Approved Equal
2 REQUIRED
MANHOLE COVER - C.I. Or Approved Equal
2 REQUIRED
Scale 1"=1'-0"

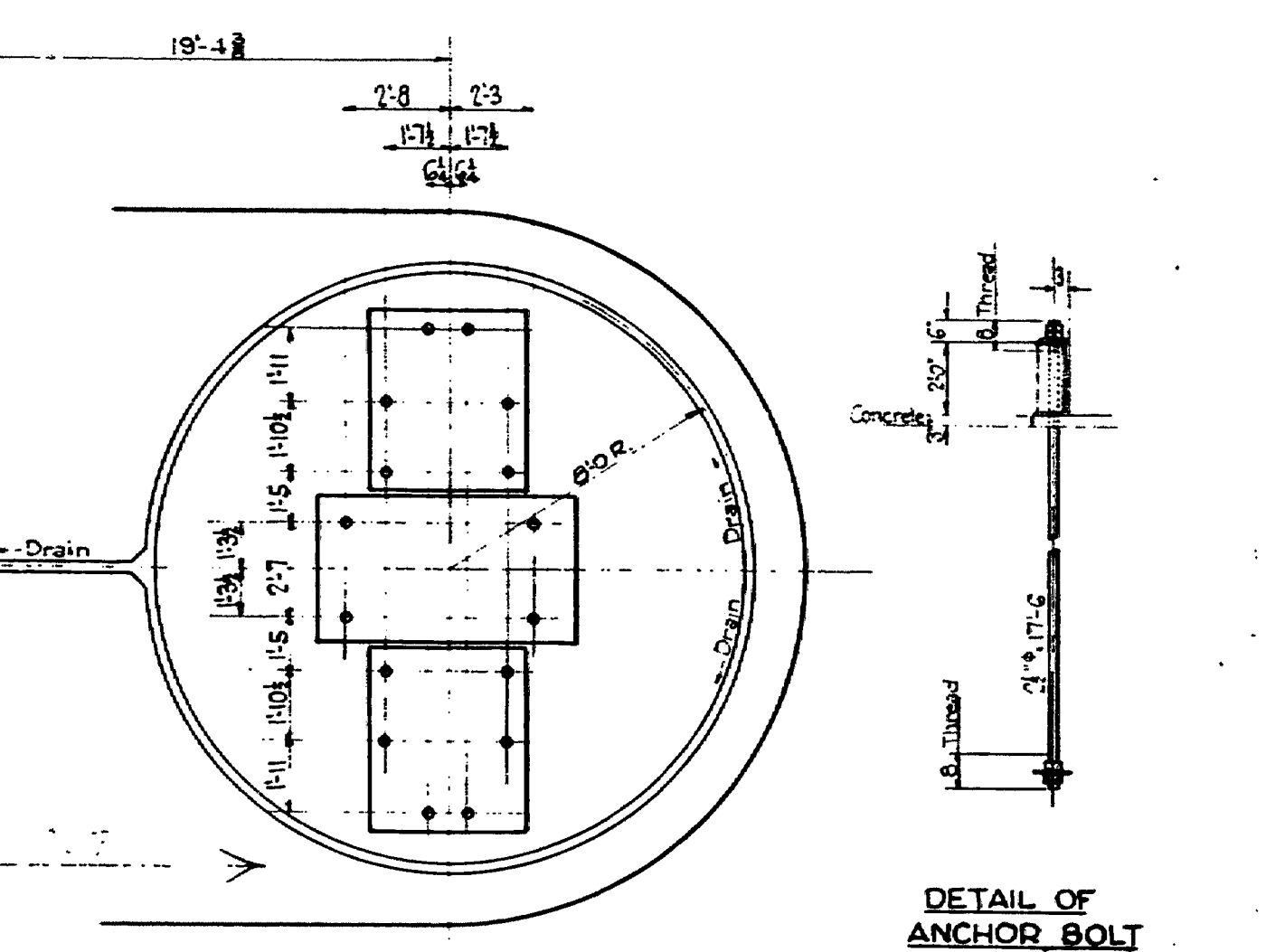


HALF FRONT ELEVATION-GRANITE FACING HALF FRONT ELEVATION-REINFORCING

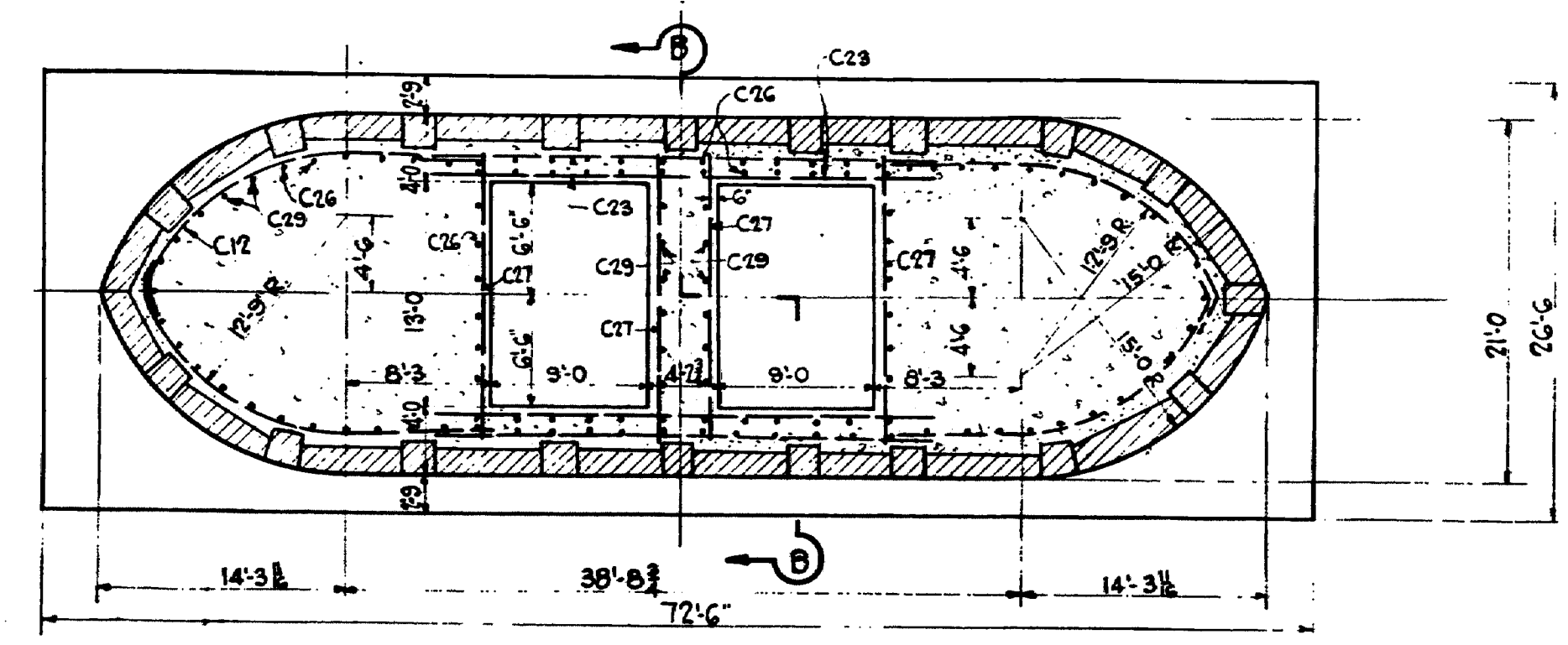
END ELEVATION



SECTION 'B-B'



ENLARGED PART VIEW OF CAP SHOWING LOCATION OF ANCHOR BOLTS
Scale 1/4"=1'-0"



SECTION 'A-A'

ESTIMATED QUANTITIES
Concrete Deposited In Water : 1343.0 Cu.Yds.
Concrete Deposited In Dry : 1202.0 Cu.Yds.
Granite Facing : 197.0 Cu.Yds.
Reinforcing Steel : 23550 Pounds
Earth Excavation : 67.0 Cu.Yds. Rock Excavation : 188.0 Cu.Yds.
Waterproofing : 1740.0 Sq.Ft.
Manholes : 2
One Ladder : 12 Lin. Ft.
One Ladder : 24 Lin. Ft.
3" C.I. Pipe Drain : 30 Lin. Ft.
Anchor Bolts : 32 To Be Furnished By Superstructure Contractor & Placed By Substructure Contractor.

APPROVED
Robert D. Robinson
A.B. Steinman
CONSULTING ENGINEERS

Revised Feb. 5, 1931
Revised August 19, 1930

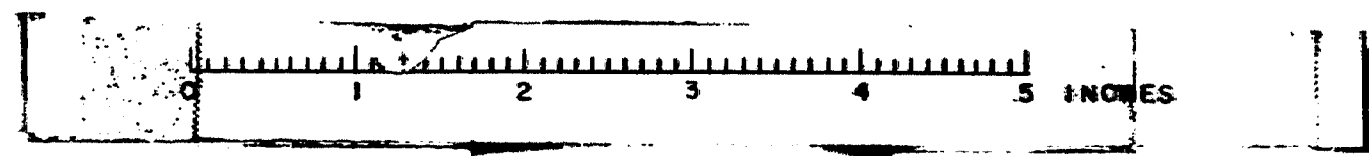
WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

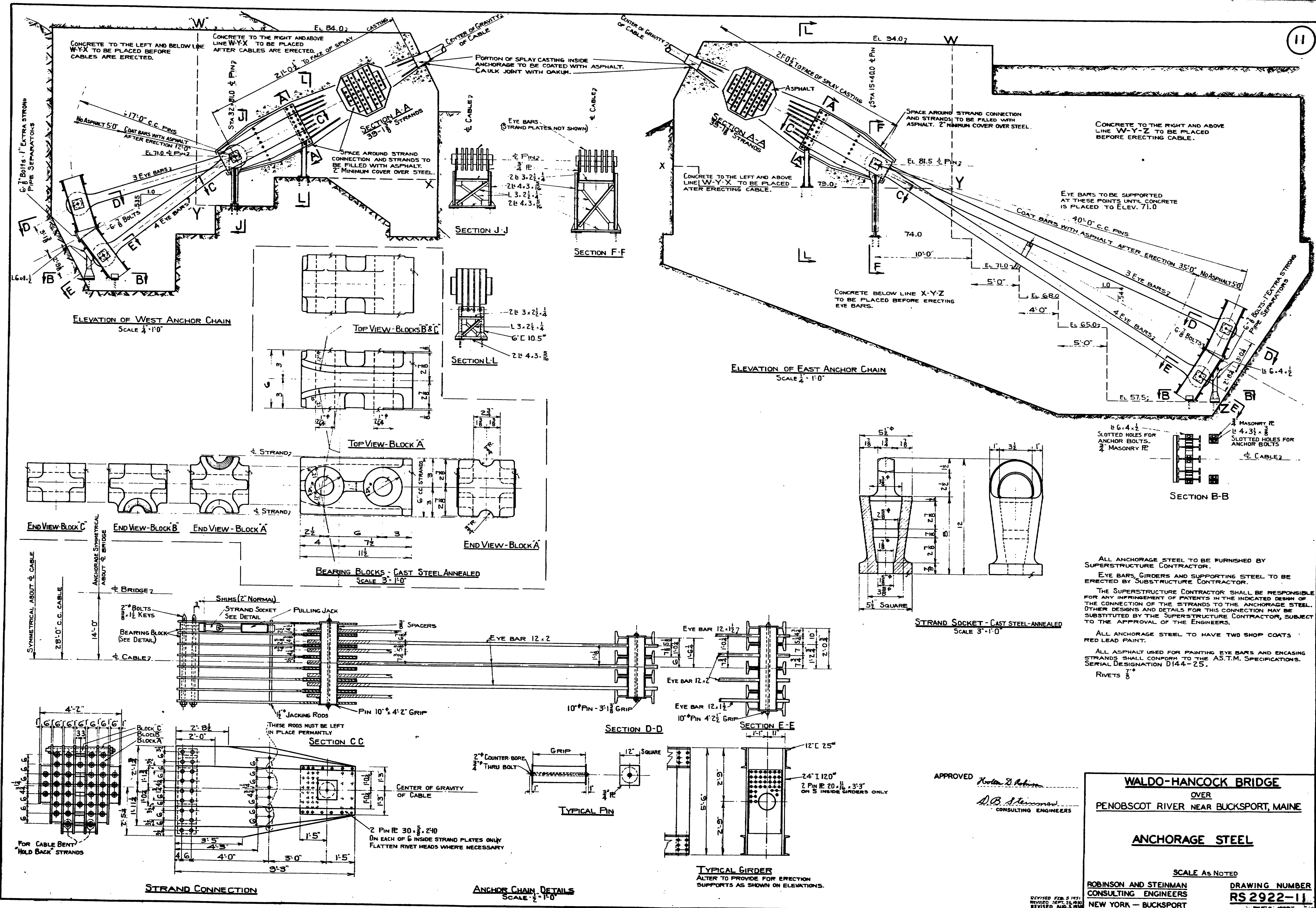
WEST MAIN PIER NO. 8

SCALES 1/4"=1'-0"

ROBINSON AND STEINMAN
CONSULTING ENGINEERS
NEW YORK - BUCKSPORT

DRAWING NUMBER
RS2922-10
July 8, 1930





APPROVED
Horton J. Robinson
A.B. Steinman
CONSULTING ENGINEERS

WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

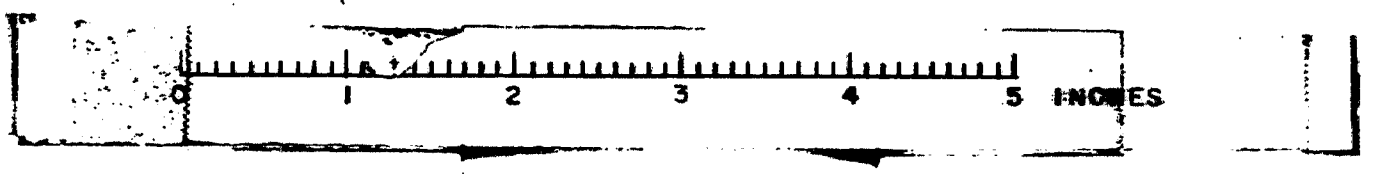
ANCHORAGE STEEL

SCALE AS NOTED

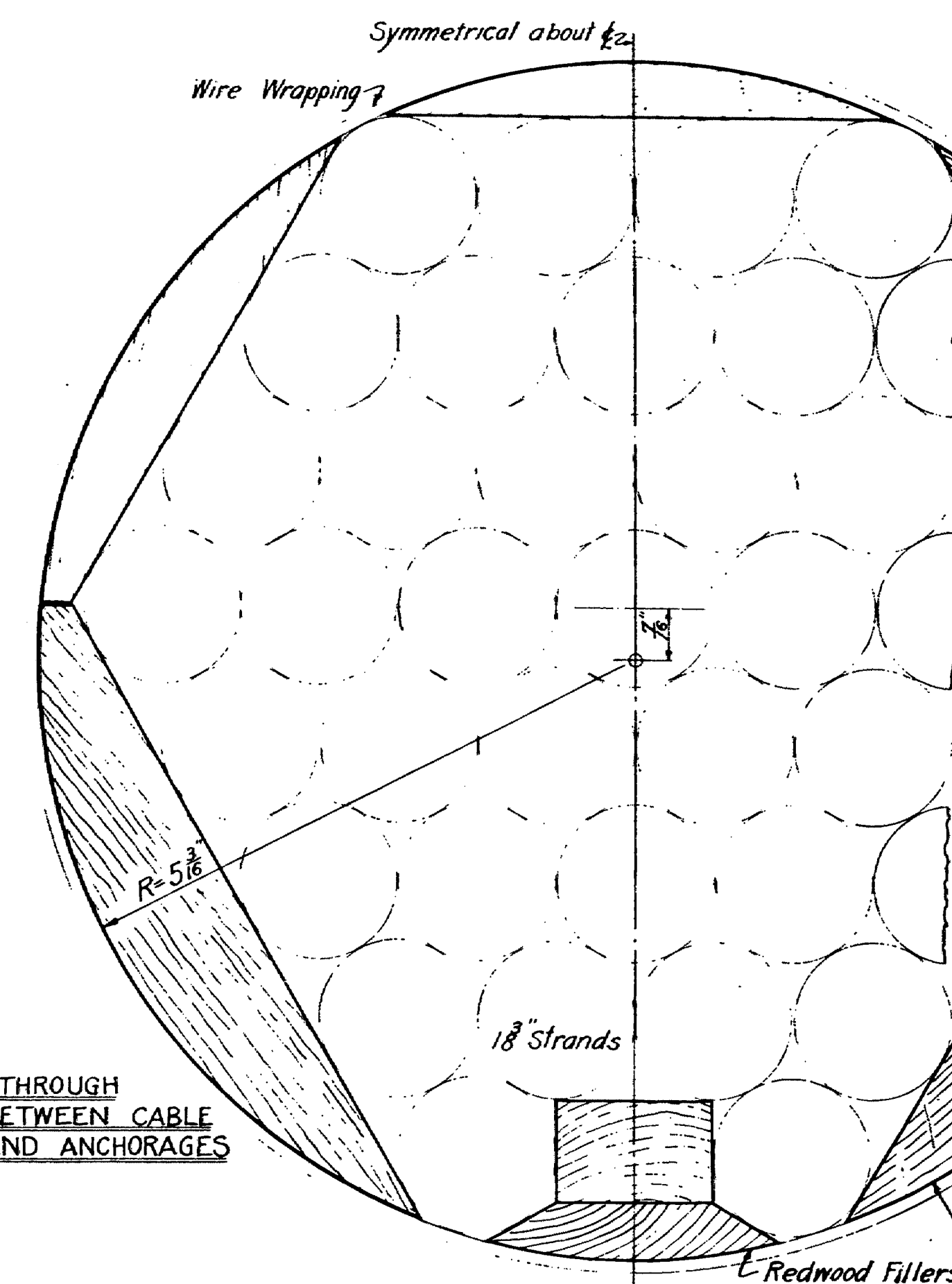
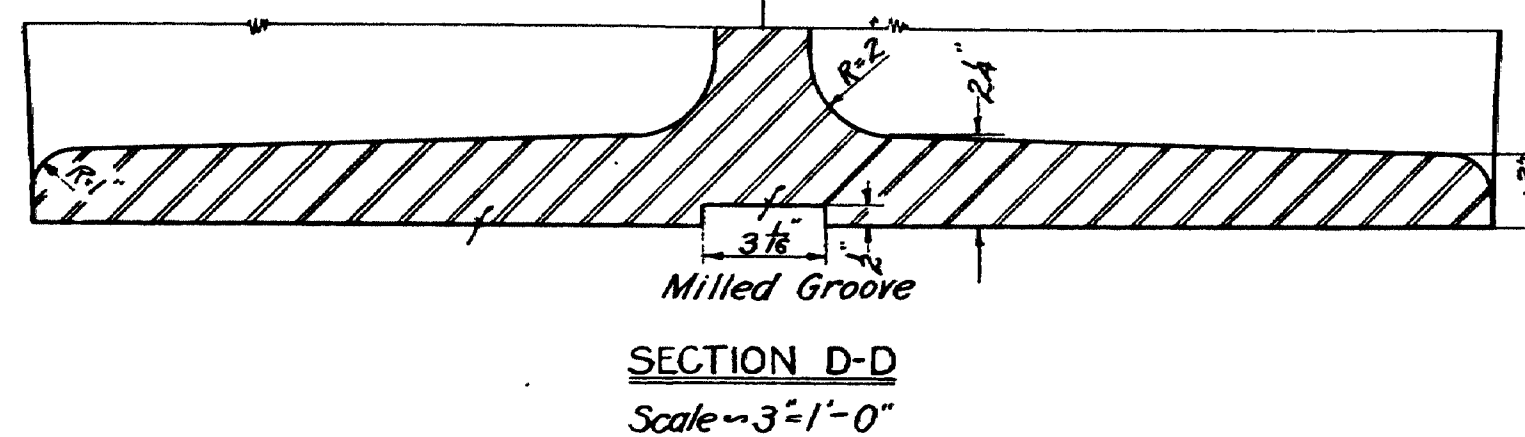
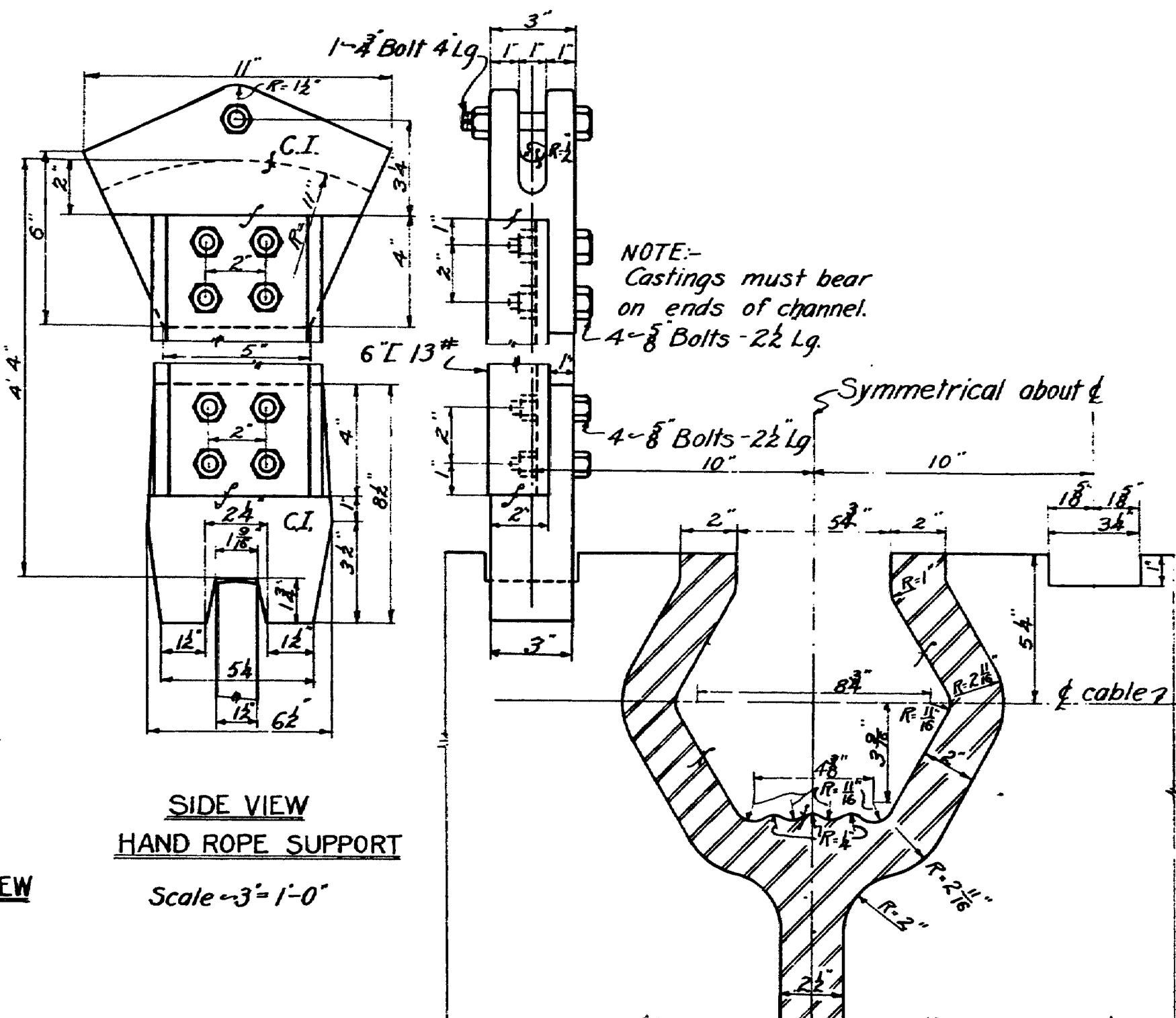
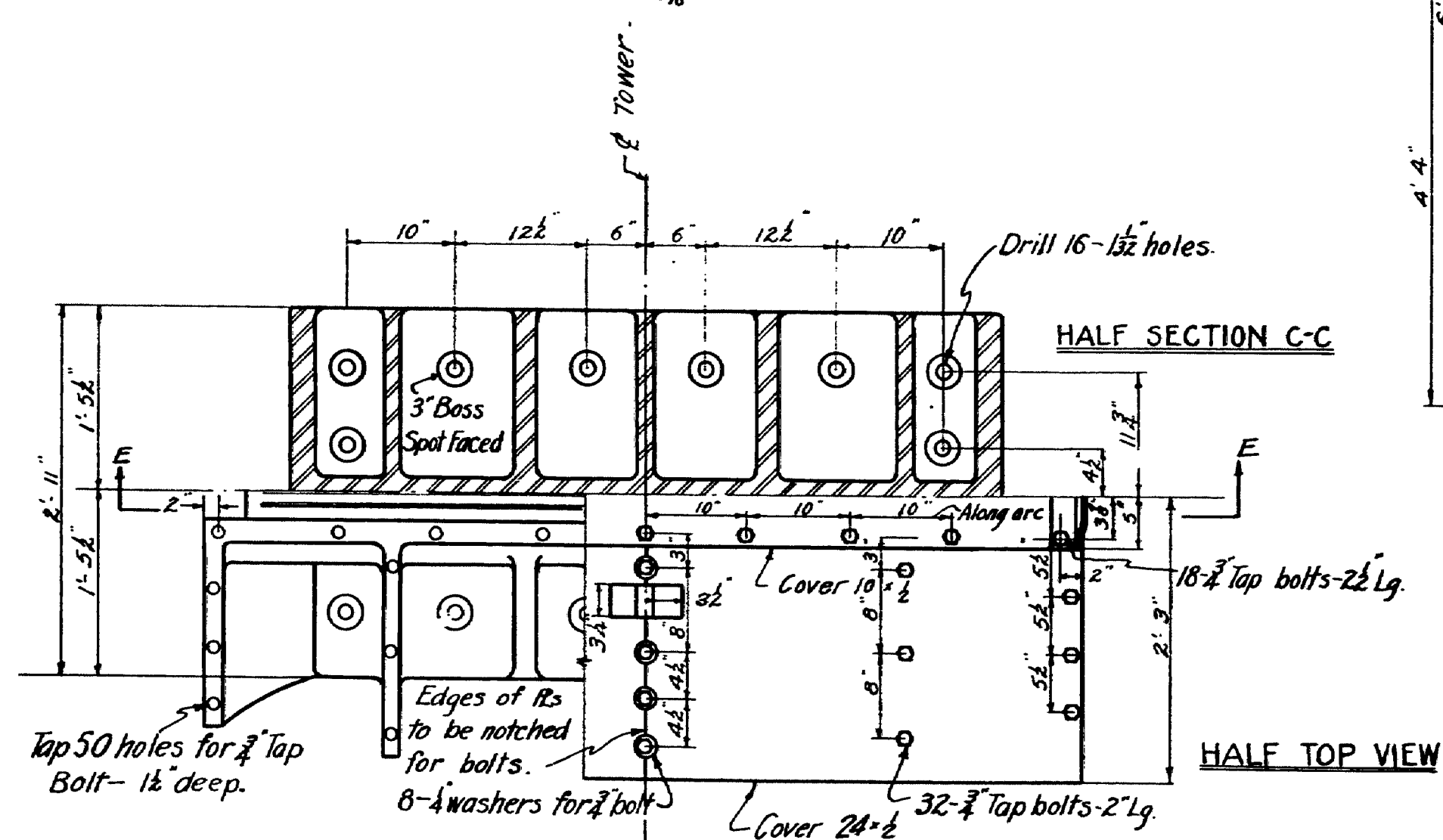
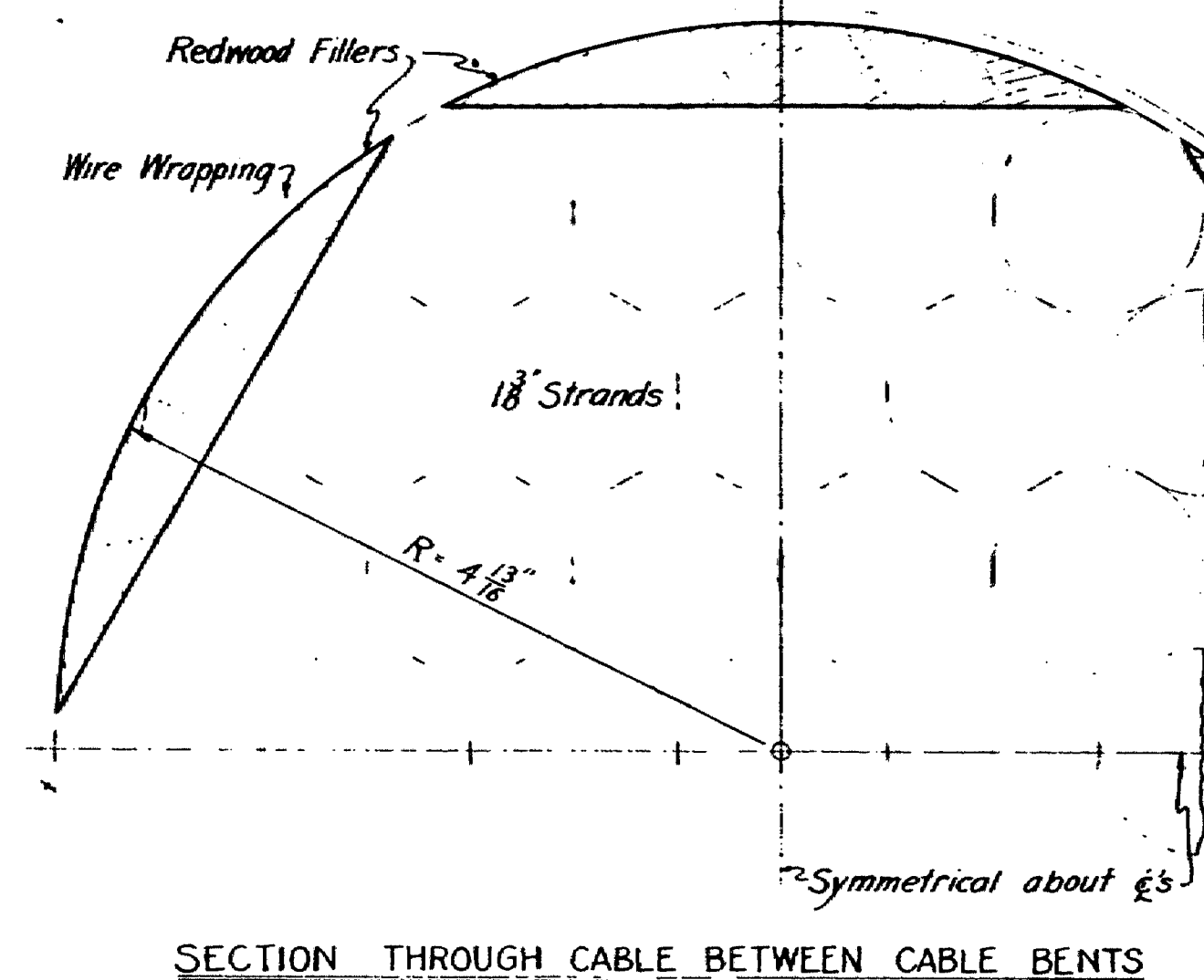
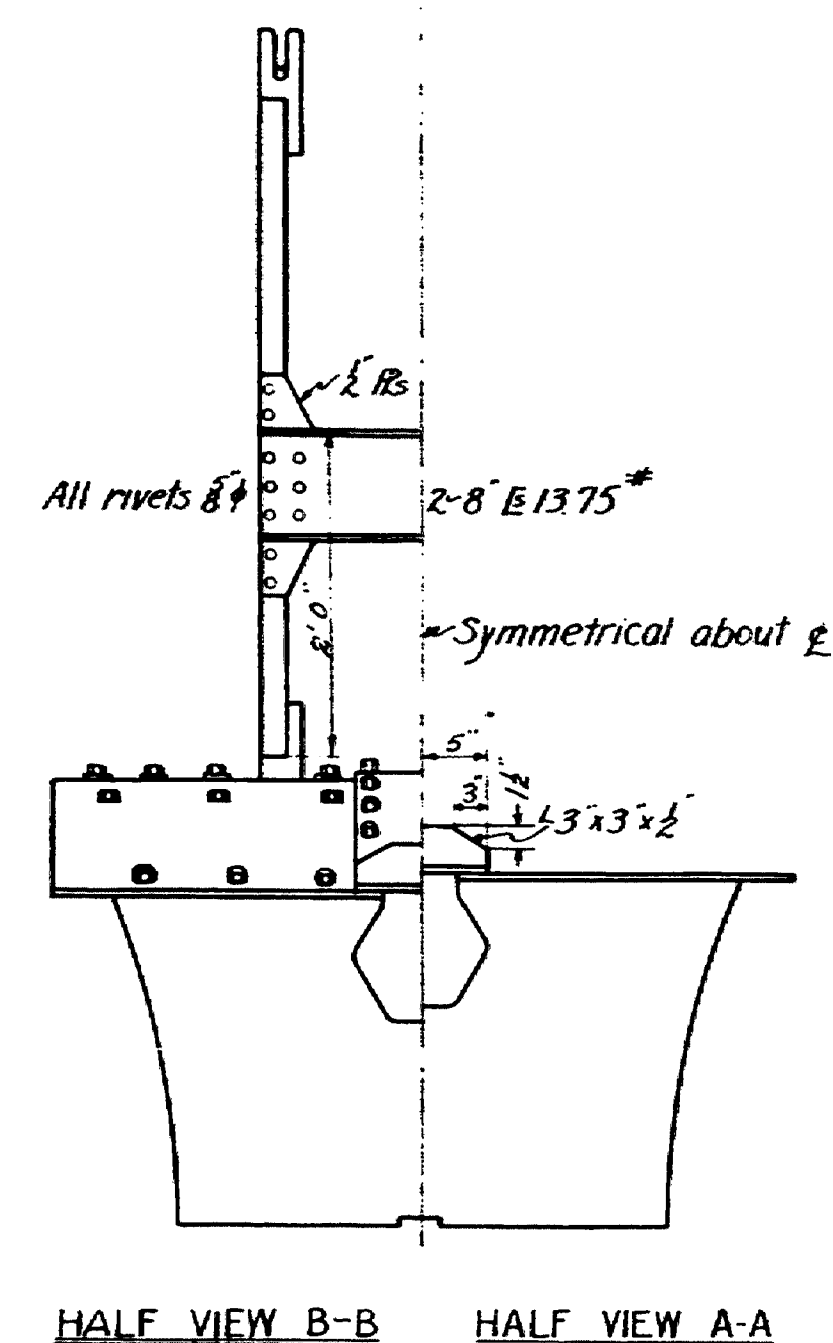
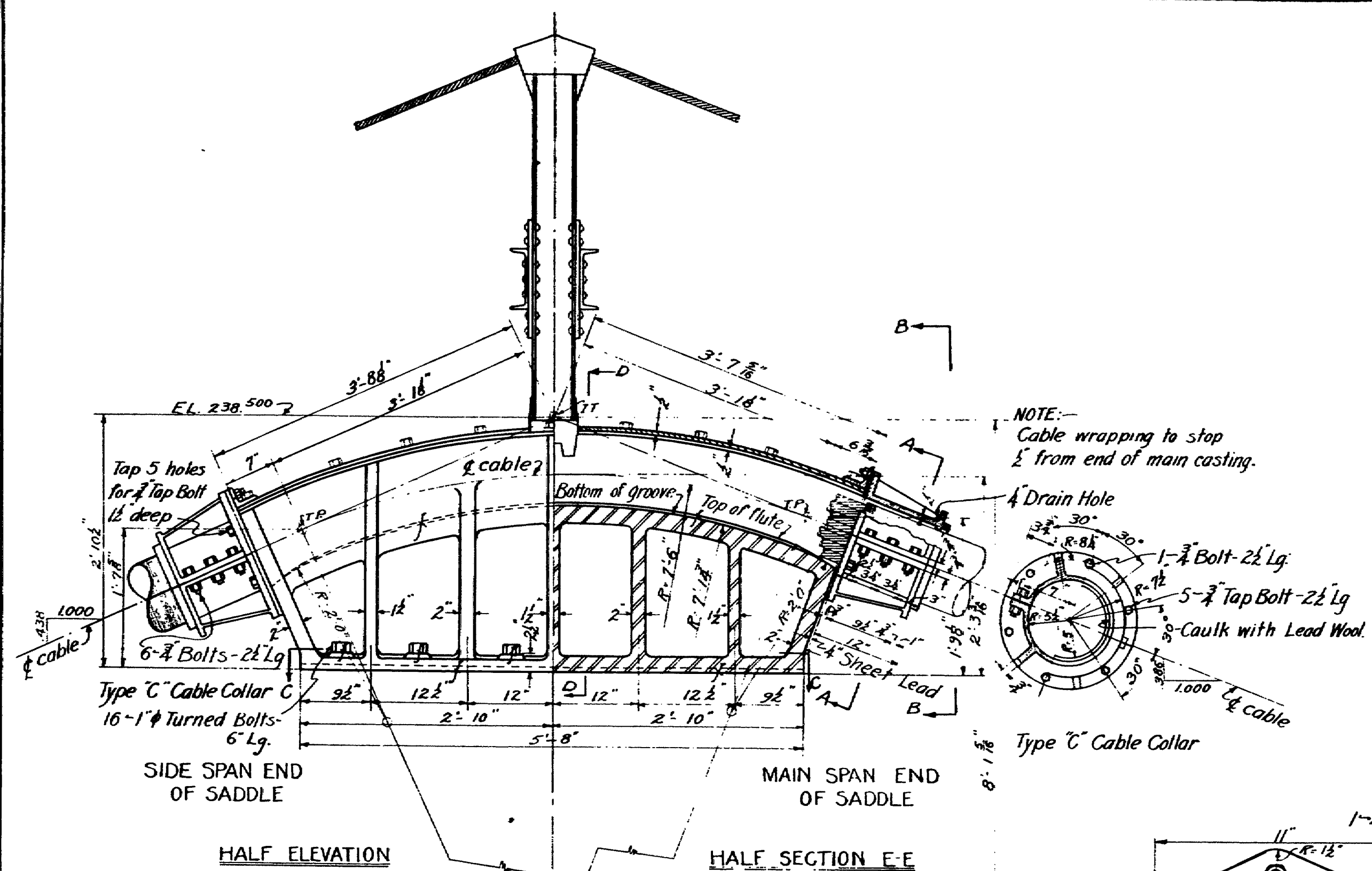
ROBINSON AND STEINMAN
CONSULTING ENGINEERS
NEW YORK - BUCKSPORT

DRAWING NUMBER
RS 2922-11

REVISED FEB. 5, 1931
REVISED MAY 26, 1930
REVISED AUG. 3, 1930



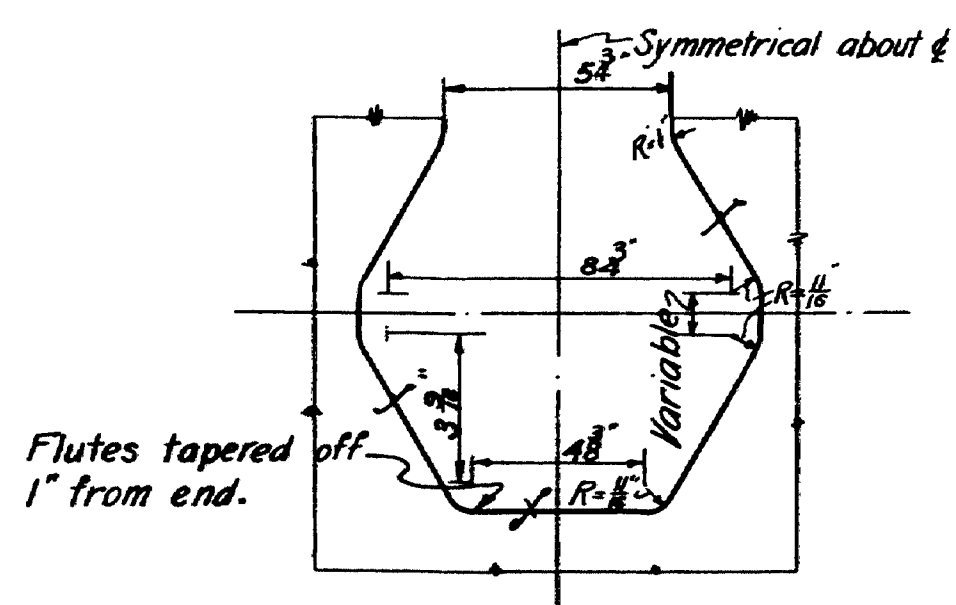
108-119



NOTE:- Inside of casting to be ground smooth and free from all burrs and irregularities of bearing surfaces.

Bolt holes in base to be drilled with saddle assembled to cap plate of tower.

Cable Collars to be placed after the full dead load is on the bridge and the cable is wrapped. The drilled and tapped holes for attaching are to be located under these conditions.



PARTIAL VIEW A-A ENLARGED

Scale $\sim 3'' = 1' - 0''$

REQUIRED

Four Main Tower Saddles (cast steel annealed)
Complete with bolts, hand rope supports and covers.
Eight Type "C" Cable Collars (good quality gray cast
iron) complete with bolts.

APPROVED *Holton J. Robinson*

DB Steinman
CONSULTING ENGINEER

WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

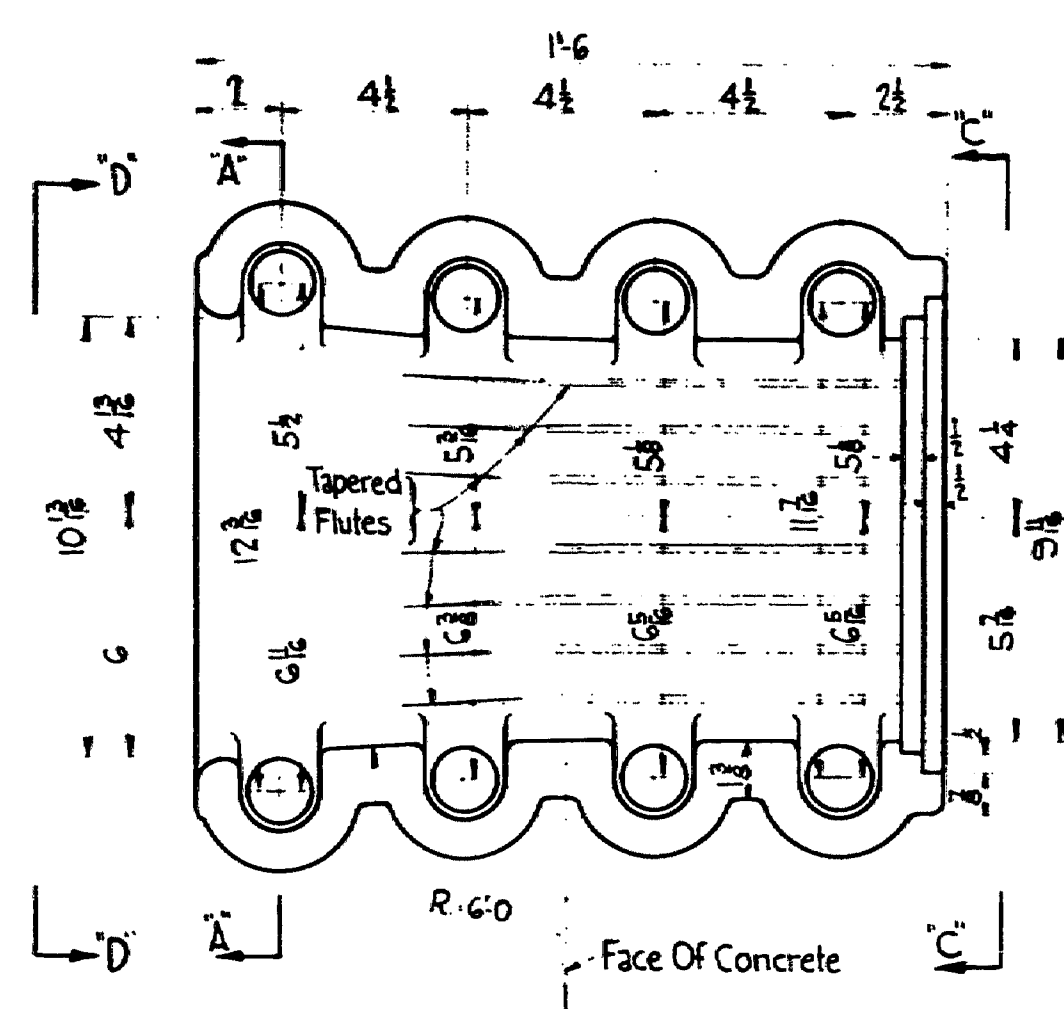
MAIN TOWER SADDLE REDWOOD FILLERS

SCALE 1"=1'-0" UNLESS NOTED

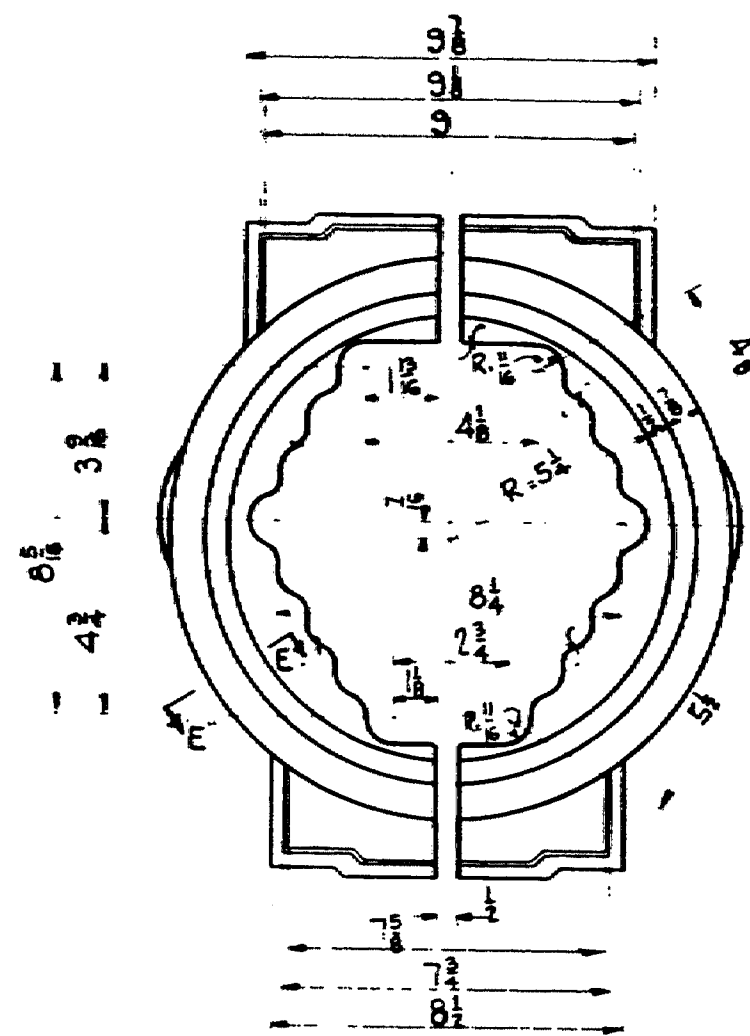
**ROBINSON AND STEINMAN
CONSULTING ENGINEERS
NEW YORK — BUCKSPORT**

DRAWING NUMBER
RS 2922-13
AUGUST 5, 1930

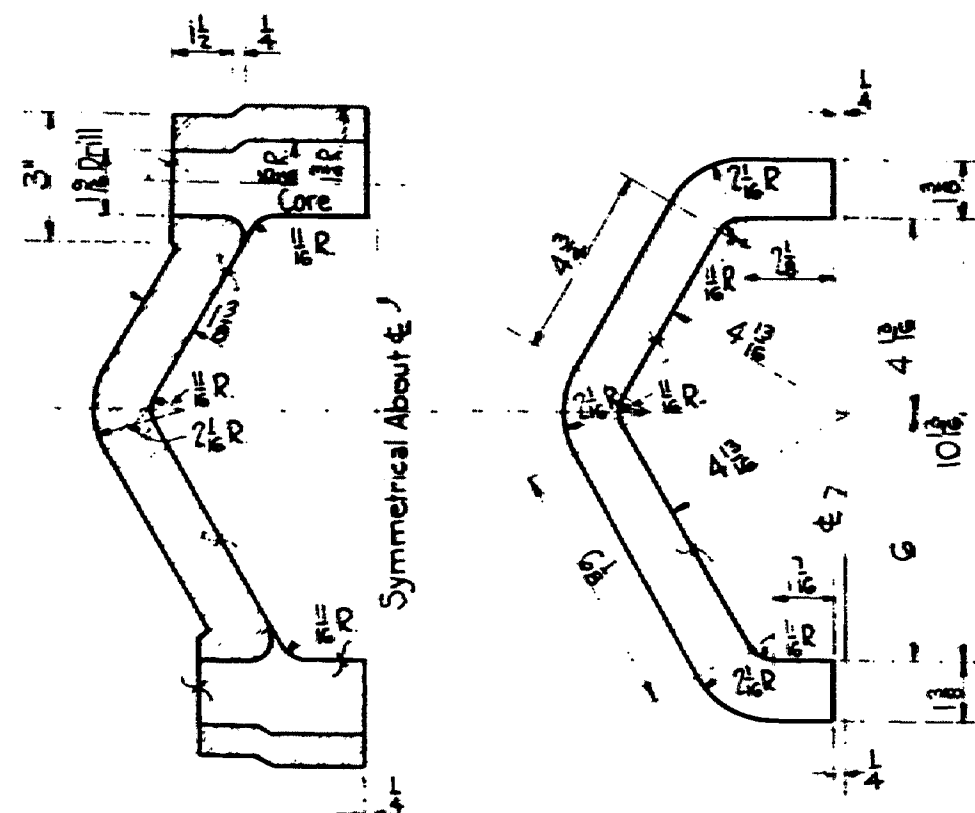
108-126



SECTION "B-B"

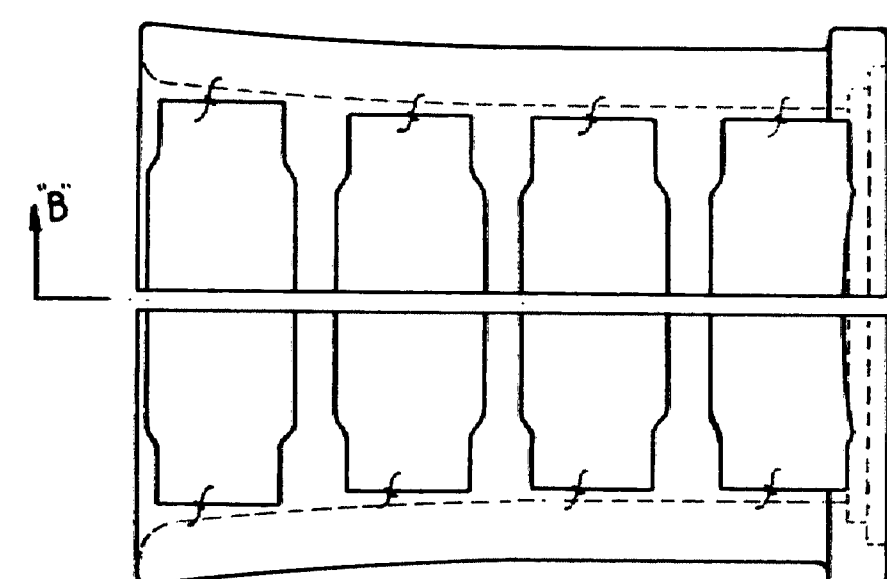


VIEW "C-C"

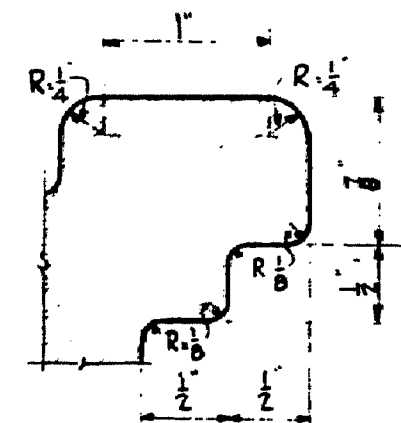


HALF SECTION "A-A"

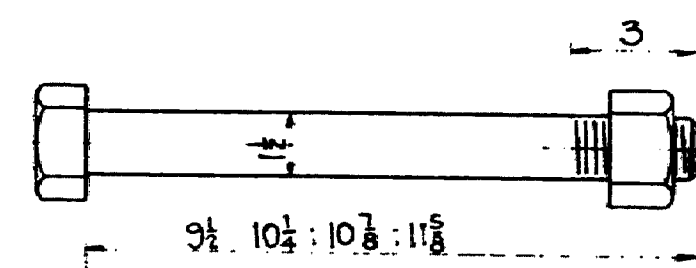
HALF VIEW "D-D"



TOP VIEW

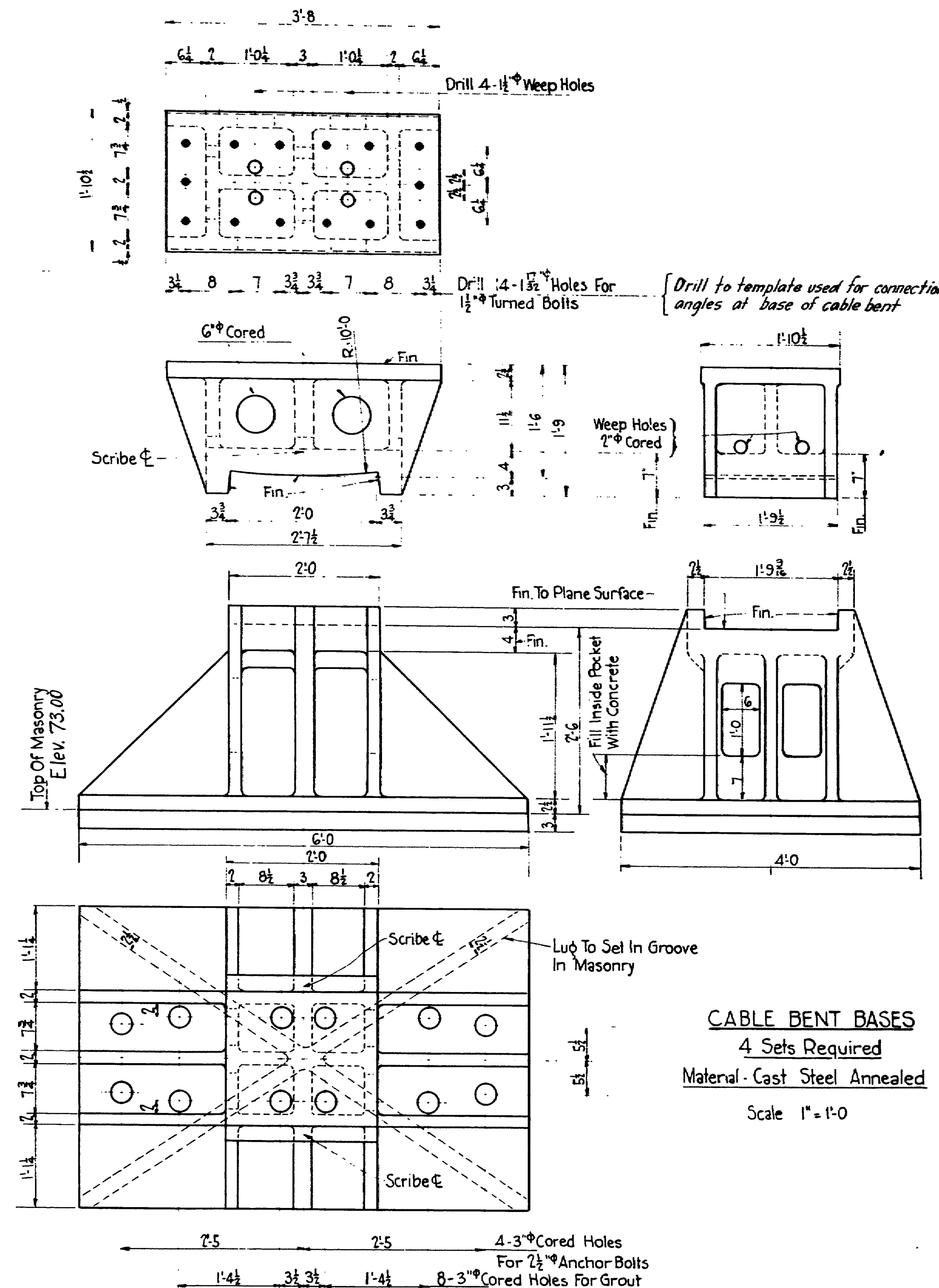


SECTION "E-E"
Scale - Full Size



Flutes Are To Be Tapered
Off - See Section "B-B"

DETAIL OF FLUTES AT FULL SECTION
Scale - Full Size



CABLE BENT BASES
4 Sets Required
Material - Cast Steel Annealed
Scale 1" = 1'-0"

Note :- Inside Of Casting To Be Ground
Smooth And Free From All Burrs And
Irregularities Of Bearing Surface.
All Joints & Openings To Be Caulked
With Lead Wool After Assembly Is Com-
pleted.
A "Dummy" Strand B' Lg. To Be Used In
Straight Part Of Splay Casting Between
Holdback Strands.

SPLAY CASTINGS

4 Required Complete

Material :- Cast Steel Annealed

Scale : 3" = 1'-0"

- Each
Consisting Of
- 2 Castings (As Detailed Above)
 - 3 - 1/2" Heat Treated Bolts - 9 1/2" Long
 - 1 - 1/2" " " " - 10 1/2" Long
 - 3 - 1 1/2" " " " - 10 1/2" Long
 - 1 - 1 1/2" " " " - 11 1/2" Long
 - 8 - 1 1/2" Hexagonal Nuts

APPROVED

Robert J. Robinson

D.B. Steinman
CONSULTING ENGINEERS

WALDO-HANCOCK BRIDGE

OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

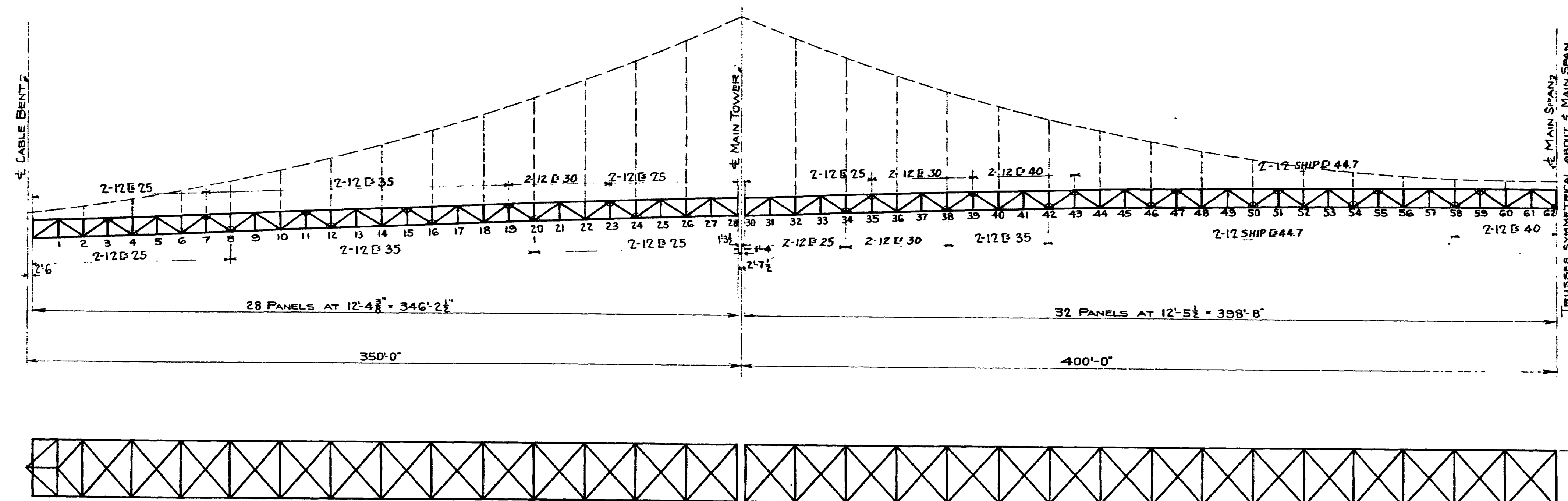
**CABLE BENT ROCKER
AND SPLAY CASTING**

SCALE AS NOTED

ROBINSON AND STEINMAN
CONSULTING ENGINEERS
NEW YORK - BUCKSPORT

DRAWING NUMBER
RS 2922 15
AUGUST 5, 1930

108-123



SIDE SPAN	UPPER CHORD						LOWER CHORD						DIAGONALS						LATERALS									
	MEMBER	STRESSES			SECTION	AREA		MEMBER	STRESSES			SECTION	AREA		MEMBER	STRESSES			SECTION	AREA		PANEL	STRESS	SECTION	AREA			
		L+T	W	L+T+W		GROSS	NET		L+T	W	L+T+W		GROSS	NET		L+T	W	L+T+W		GROSS	NET				GROSS	NET		
	L ₀ U ₁ - U ₁ L ₀	+78 -79	±12	+90 -91	2 1/2 6 × 4 1/2 16	8.36	7.48	L ₀ L ₂	+46 -45	+12 -24	+58 -69	2-12 B 25	14.64	12.64	U ₁ L ₂ - L ₂ U ₁	78 67	79 70	14 13	92 80	93 83	2 1/2 5 × 3 1/2 16	8.00 7.06	7.00 6.18	0 - 2	± 35	2 1/2 5 × 3 1/2 16	6.10	5.35
	U ₁ U ₂ - U ₂ U ₁	+91 -92	±35	+126 -127	2-12 D 25	14.64	12.64	L ₂ L ₂₈	+46 -45	+0 -24	+46 -69	"	"	"	U ₂ L ₂ - L ₂ U ₂	70 67	13 12	80 82	79	"	"	"	26 - 28	± 65	"	"	"	
	U ₁ U ₃ - U ₃ U ₁	+173 -181	±51	+224 -232	"	"	"	L ₂ L ₄ - L ₄ L ₂₈	+136 -133	+24 -43	+160 -176	"	"	"	U ₃ L ₂ - L ₂ U ₃	56 59	11 11	67 67	70	2 1/2 5 × 3 1/2 16	5.72	4.97	2-4	24-26	± 55	"	"	"
	U ₁ U ₄ - U ₄ U ₁	+240 -250	±66	+306 -316	1/5 U ₁ 2-12 B 25 1in U ₂ 3 2-12 D 30	17.58	15.58	L ₄ L ₆ - L ₂₈ L ₂₄	+219 -210	+43 -59	+262 -269	"	"	"	U ₄ L ₂ - L ₂ U ₄	59 48	10 9	69 57	66 58	"	"	"	4-6	22-24	± 47	1L 5 × 3 1/2 1/2	4.00	2.75
	U ₁ U ₅ - U ₅ U ₁	+297 -303	±77	+374 -380	1in U ₂ 1 2-12 B 30 1/2 U ₃ 2-12 B 35	20.52	18.02	L ₆ L ₆ - L ₂₈ L ₂₂	+278 -271	+59 -71	+337 -342	"	"	"	U ₅ L ₂ - L ₂ U ₅	49 39	7 6	56 45	55 45	"	"	"	6-8	20-22	± 39	"	"	"
	U ₁ U ₆ - U ₆ U ₁	+332 -340	±83	+415 -423	2-12 B 35	20.52	18.02	L ₆ L ₁₀ - L ₁₀ L ₂₀	+323 -316	+71 -79	+394 -395	2-12 B 35	20.52	18.02	U ₆ L ₂ - L ₂ U ₆	39 32	5 4	44 36	44 36	"	"	"	8-10	18-20	± 32	1L 5 × 3 1/2 3/8	3.05	2.09
	U ₁ U ₇ - U ₇ U ₁	+353 -361	±87	+440 -448	"	"	"	L ₁₀ L ₁₂ - L ₁₂ L ₁₈	+352 -345	+79 -85	+431 -430	"	"	"	U ₇ L ₂ - L ₂ U ₇	32 26	3 2	35 28	35 28	"	"	"	10-12	16-18	± 26	"	"	"
	U ₁ U ₈	+363 -368	±88	+451 -456	"	"	"	L ₁₂ L ₁₆ - L ₁₆ L ₁₆	+367 -360	+85 -88	+452 -448	"	"	"	U ₈ L ₂ - L ₂ U ₈	26 26	1 1	27 27	27	"	"	"	12-14	14-16	± 20	"	"	"
MAIN SPAN	L ₂₈ U ₁	+64 -71	±22	+86 -93	2 1/2 6 × 4 1/2 16	8.36	7.48																					
	U ₁ U ₂₈	+70 -77	±61	+131 -138	2-12 B 25	14.64	12.64	L ₂₈ L ₂₂	+39 -35	+0 -41	+39 -76	2-12 B 25	14.64	12.64	U ₂₈ L ₂	71 56	64 67	26 25	97 81	90 87	2 1/2 5 × 3 1/2 16	7.06	6.18	30 - 32	± 124	2 1/2 6 × 4 1/2 16	8.36	7.48
	U ₂₈ U ₂	+134 -143	±100	+234 -243	"	"	"	L ₂₂ L ₂₄	+110 -100	+41 -80	+151 -180	"	"	"	U ₂ L ₂₈	62 49	56 54	24 23	86 72	80 77	"	"	"	32 - 34	± 117	"	"	"
	U ₂₈ U ₃	+190 -203	±134	+324 -337	2-12 B 30	17.58	15.58	L ₂₄ L ₂₆	+178 -164	+80 -117	+258 -281	2-12 B 30	17.58	15.58	U ₃ L ₂₈	54 43	49 47	22 22	76 65	71 69	2 1/2 5 × 3 1/2 16	5.72	4.97	34 - 36	± 109	2 1/2 6 × 4 1/2 3/8	7.22	6.47
	U ₂₈ U ₄	+232 -247	±166	+398 -413	"	"	"	L ₂₆ L ₂₈	+228 -211	+117 -150	+345 -361	"	"	"	U ₄ L ₂₈	47 39	43 43	21 20	68 59	64 63	"	"	"	36 - 38	± 102	"	"	"
	U ₂₈ U ₅	+264 -281	±194	+458 -475	2-12 B 40	23.46	20.96	L ₂₈ L ₄₀	+267 -249	+150 -180	+417 -429	2-12 B 35	20.52	18.02	U ₅ L ₂₈	43 36	39 40	19 18	62 54	58 58	"	"	"	38 - 40	± 95	"	"	"
	U ₂₈ U ₆	+286 -306	±222	+508 -528	"	"	"	L ₄₀ L ₄₂	+296 -276	+180 -208	+476 -484	"	"	"	U ₆ L ₂₈	40 34	36 38	17 17	57 51	53 55	"	"	"	40 - 42	± 88	2 1/2 5 × 3 1/2 3/8	6.10	5.35
	U ₂₈ U ₇	+303 -325	±245	+548 -570	2-12 B 44.7	26.10	23.60	L ₄₂ L ₄₄	+317 -295	+208 -233	+525 -528	2-12 B 44.7	26.10	23.60	U ₇ L ₂₈	38 34	34 37	16 15	54 49	50 52	"	"	"	42 - 44	± 82	"	"	"
	U ₂₈ U ₈	+308 -332	±270	+578 -602	"	"	"	L ₄₄ L ₄₆	+329 -306	+233 -258	+562 -564	"	"	"	U ₈ L ₂₈	37 38	34 39	14 13	51 51	48 52	"	"	"	44 - 46	± 75	"	"	"
	U ₂₈ U ₉	+304 -333	±286	+590 -619	"	"	"	L ₄₆ L ₄₈	+332 -307	+258 -278	+590 -585	"	"	"	U ₉ L ₂₈	38 42	39 43	13 12	51 54	52 55	"	"	"	46 - 48	± 69	"	"	"
	U ₂₈ U ₁₀	+294 -325	±303	+597 -628	"	"	"	L ₄₈ L ₅₀	+327 -298	+278 -298	+605 -594	"	"	"	U ₁₀ L ₂₈	43 44	42 45	11 10	54 54	53 55	"	"	"	48 - 50	± 63	"	"	"
	U ₂₈ U ₁₁	+275 -309	±316	+578 -625	"	"	"	L ₅₀ L ₅₂	+319 -281	+296 -310	+615 -597	"	"	"	U ₁₁ L ₂₈	45 47	44 48	9 8	54 55	54 56	"	"	"	50 - 52	± 58	"	"	"
	U ₂₈ U ₁₂	+251 -291	±326	+577 -617	"	"	"	L ₅₂ L ₅₄	+302 -264	+310 -322	+612 -586	"	"	"	U ₁₂ L ₂₈	48 49	47 50	7 7	55 56	54 57	"	"	"	52 - 54	± 53	"	"	"
	U ₂₈ U ₁₃	+278 -266	±337	+565 -603	"	"	"	L ₅₄ L ₅₆	+279 -240	+322 -332	+601 -572	"	"	"	U ₁₃ L ₂₈	50 51	49 52	6 5	56 56	55 57	"	"	"	54 - 56	± 48	1L 5 × 3 1/2 1/2	4.00	2.75
	U ₂₈ U ₁₄	+203 -243	±341	+544 -584	"	"	"	L ₅₆ L ₅₈	+253 -215	+332 -337	+585 -552	"	"	"	U ₁₄ L ₂₈	52 51	51 51	4 3	56 54	55 54	"	"	"	56 - 58	± 43	"	"	"
	U ₂₈ U ₁₅	+186 -228	±343	+529 -571	"	"	"	L ₅₈ L ₆₀	+234 -193	+337 -341	+571 -534	2-12 B 40	23.46	20.96	U ₁₅ L ₂₈	51 52	51 52	2 2	53 54	53 54	"	"	"	58 - 60	± 38	1L 5 × 3 1/2 3/8	3.05	2.09
	U ₂₈ U ₁₆	+181 -223	±344	+525 -567	"	"	"	L ₆₀ L ₆₂	+224 -182	+341 -343	+565 -525	"	"	"	U ₁₆ L ₂₈	52 52	52 52	1 1	53 53	53	"	"	"	60 - 62	± 34	"	"	"

MAIN VERTICALS AT SUSPENDER CONNECTIONS 12CB 50
INTERMEDIATE VERTICALS 2-12 D 30

CHORD SPLICES INDICATED THUS

LOADING ON TRUSSES
LIVE LOAD 50% OF ROADWAY + 500 p.i.f. OF TRUSS
WIND LOAD 360 p.i.f. OF BRIDGE
100 p.i.f. TAKEN BY CABLE
20 p.i.f. TAKEN BY FLOOR
240 p.i.f. TAKEN BY TRUSSES
360 p.i.f. TOTAL
40 p.i.f. TAKEN BY CABLE
20 p.i.f. TAKEN BY FLOOR
300 p.i.f. TAKEN BY TRUSSES
360 p.i.f. TOTAL

APPROVED *Robt. D. Robinson*
A. B. Robinson
CONSULTING ENGINEERS

WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

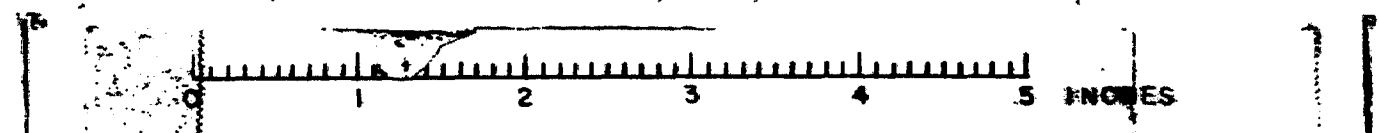
STIFFENING TRUSS
STRESS SHEET

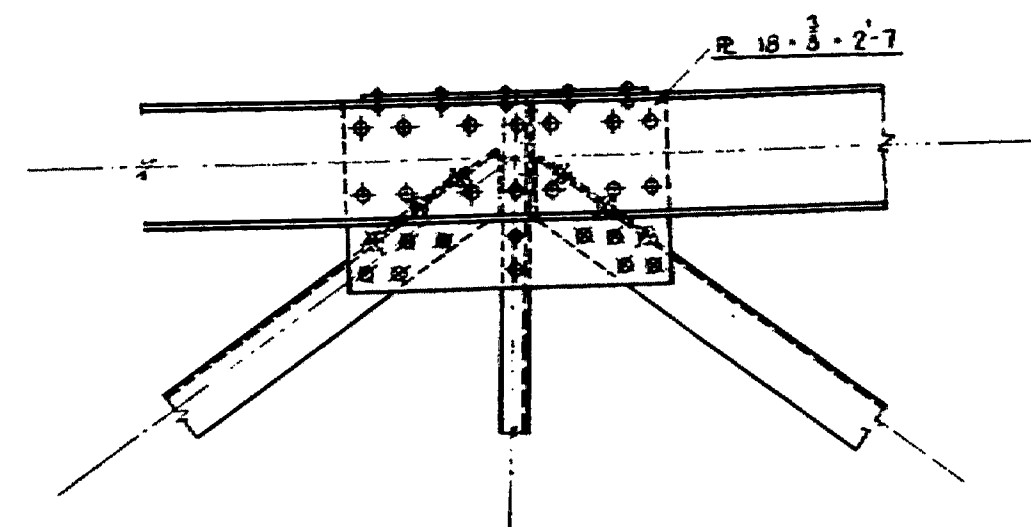
SCALE 1" = 30'

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NEW YORK - BUCKSPORT

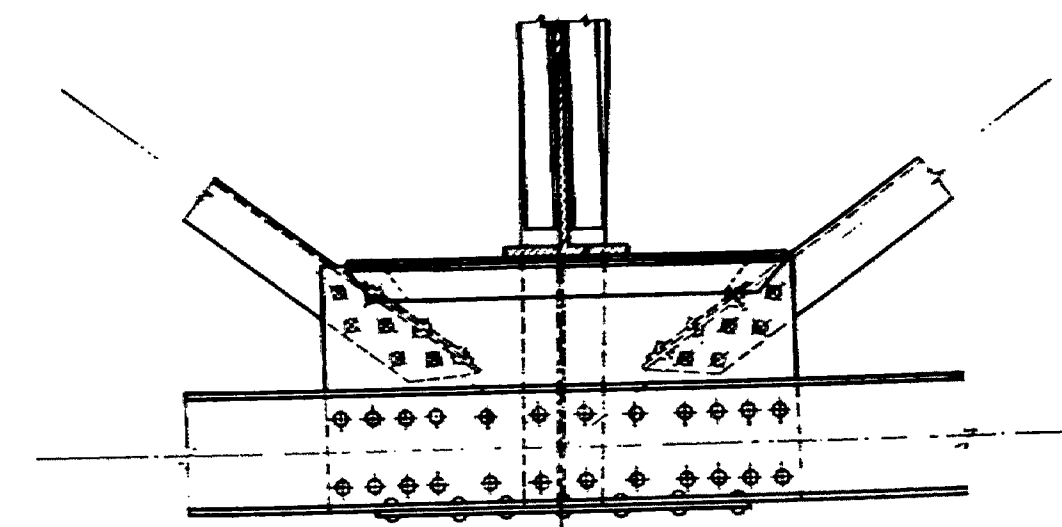
DRAWING NUMBER
RS 2922-16
AUGUST 5, 1930

Revised Feb. 3, 1931
Revised Oct. 15, 1930
Revised Sep. 30, 1930

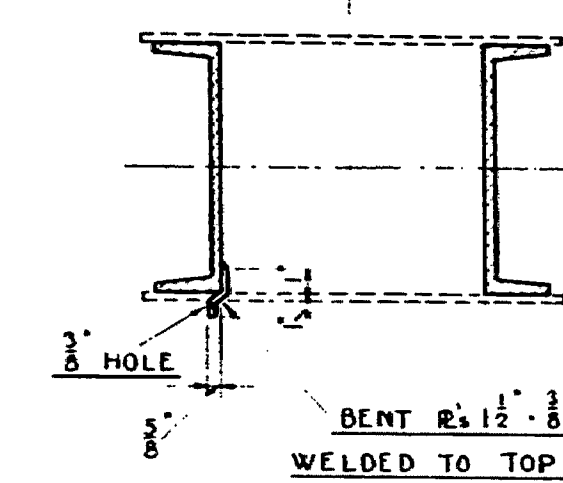




TYPICAL TOP CHORD DETAIL

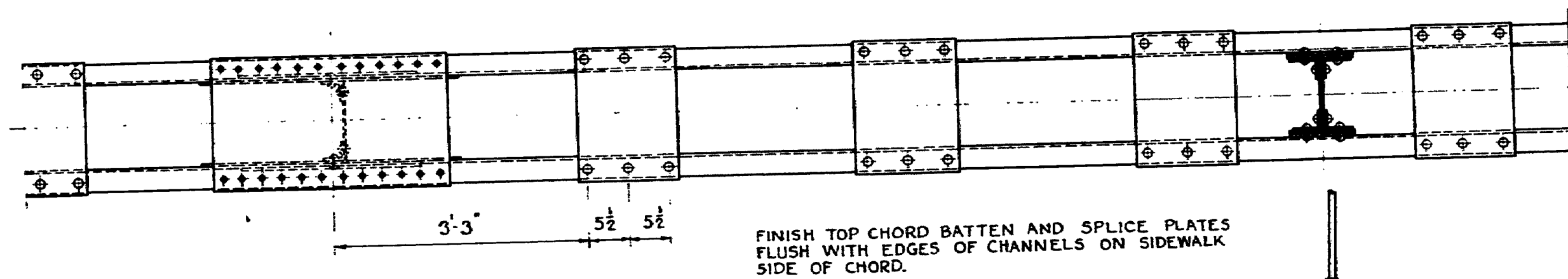


TYPICAL BOTTOM CHORD DETAIL



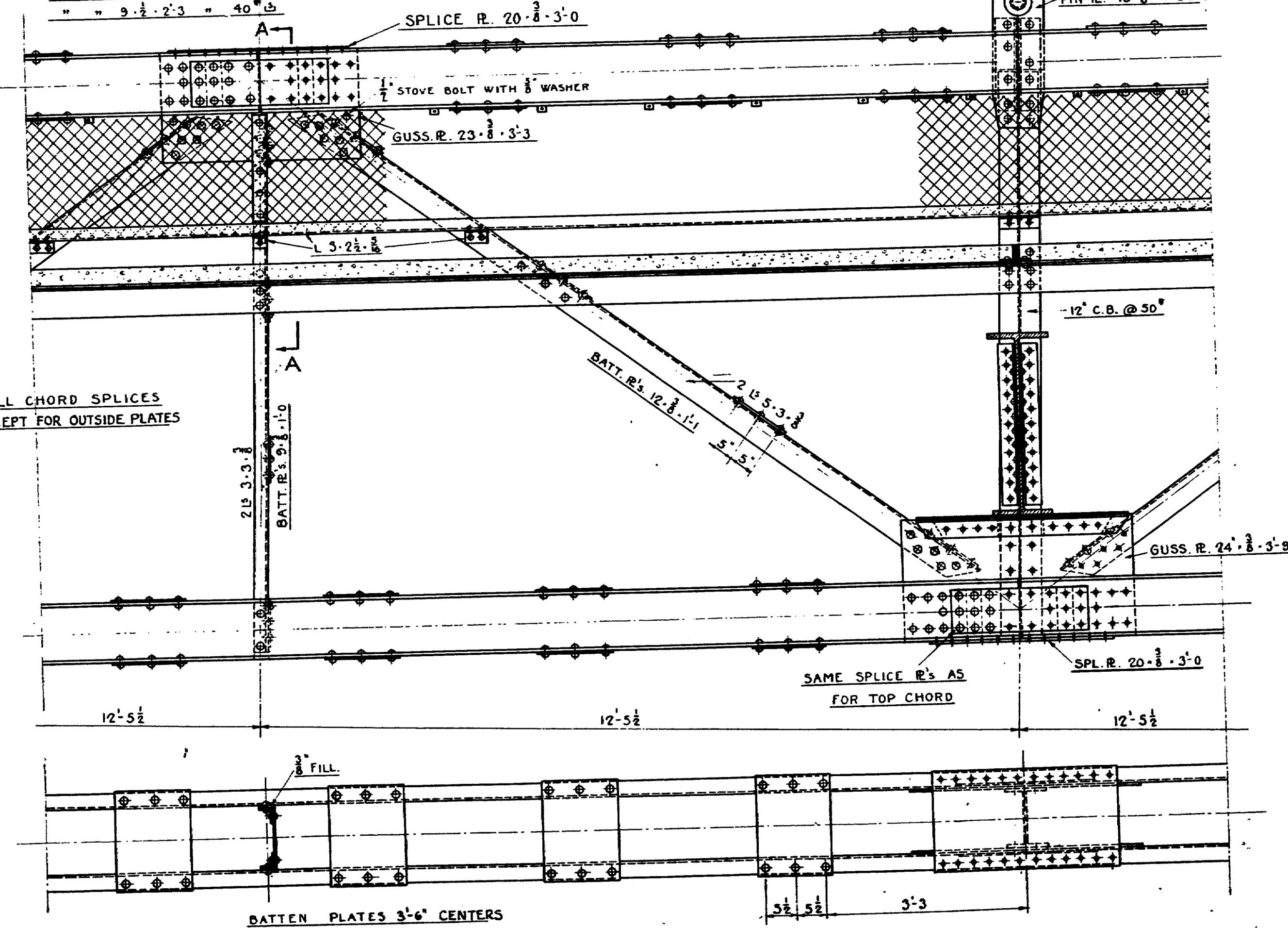
BENT R. 12' 8" 1-9 CNT'RS
WELDED TO TOP CHORD CHANNEL
MESH FASTENED TO THESE PLATES
AND TO HORIZONTAL RAIL WITH #12 WIRE

RAILING DETAIL



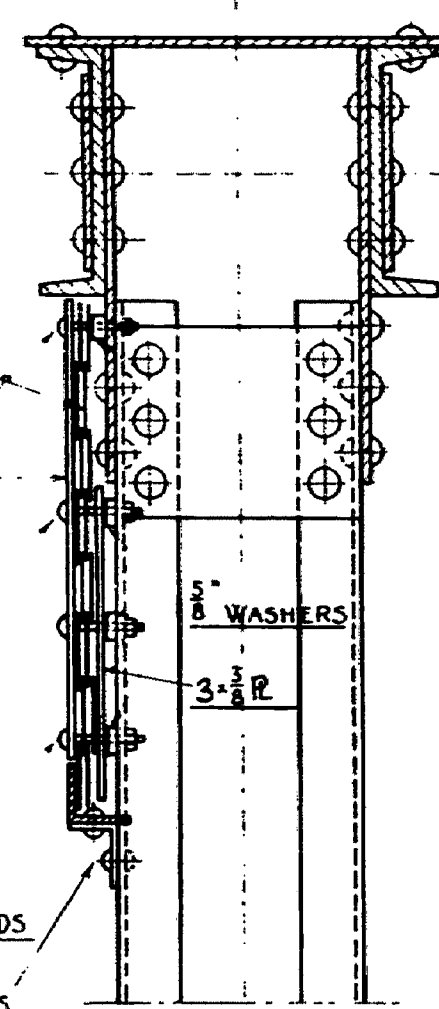
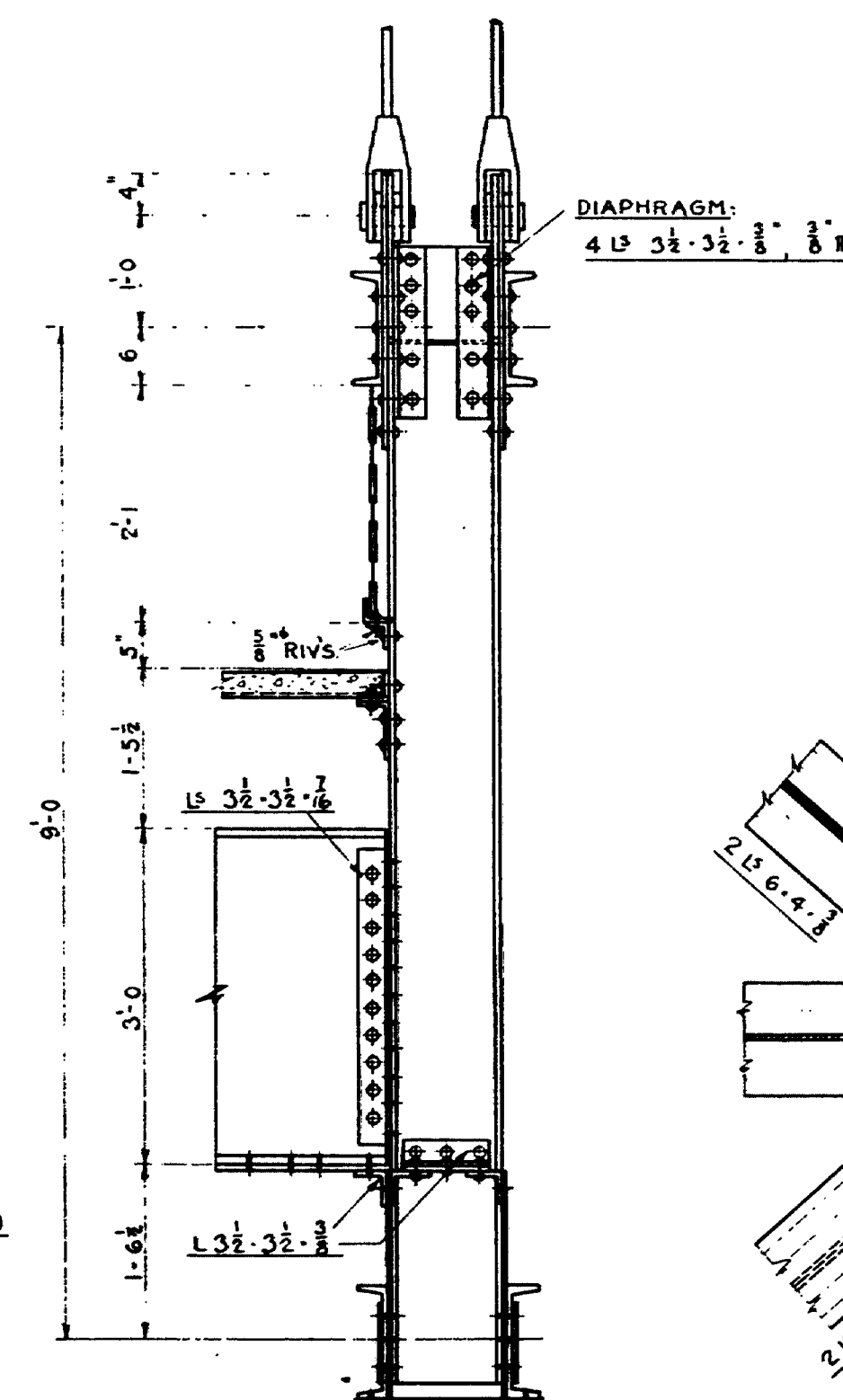
FINISH TOP CHORD BATTEN AND SPLICE PLATES
FLUSH WITH EDGES OF CHANNELS ON SIDEWALK
SIDE OF CHORD.

SPL. R. 9' 8" 1-3 FOR 25' AND 30' @
" " 9' 8" 1-9 " 35' @
" " 9' 8" 2-3 " 40' @

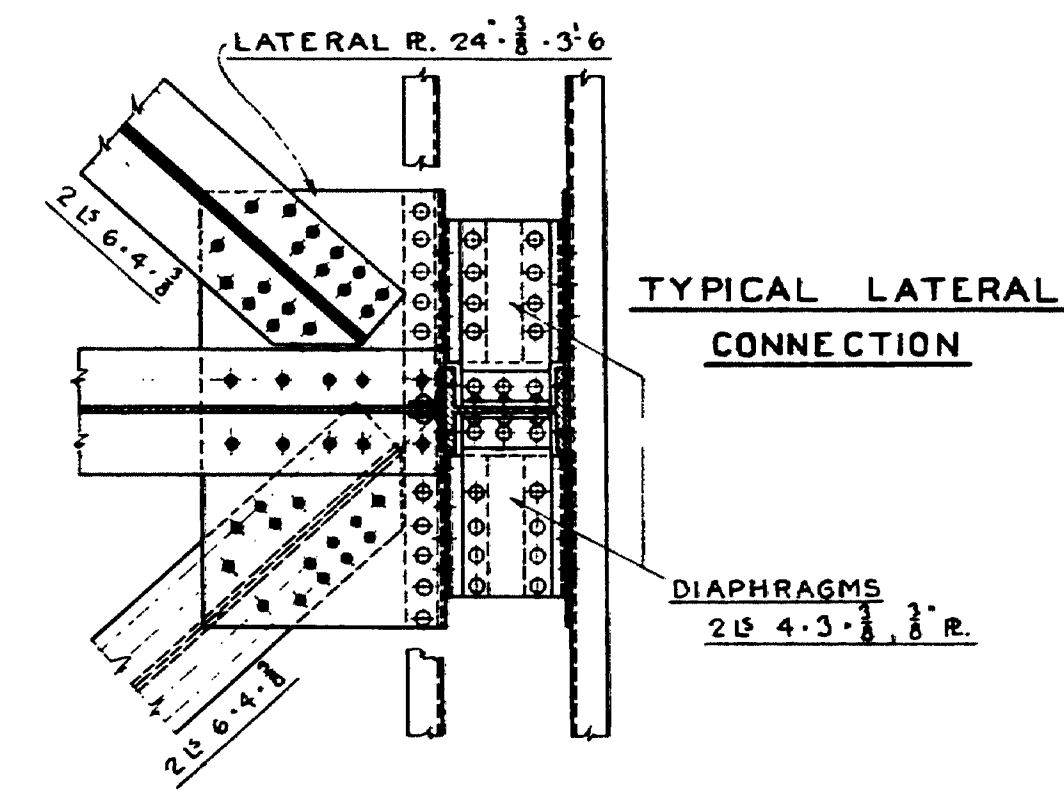


NOTE: ALL CHORD SPLICES
SAME EXCEPT FOR OUTSIDE PLATES

STIFFENING TRUSS DETAILS AT CHORD SPLICES



SECTION A-A
SCALE 1/2" = 1'-0"



TYPICAL LATERAL
CONNECTION

APPROVED *Horton D. Robinson*
D.B. Steinman
CONSULTING ENGINEERS

Rivets 3/8" except as noted

WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

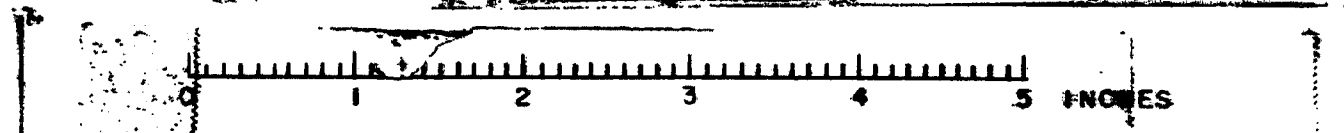
STIFFENING TRUSS
DETAILS AND SPLICES

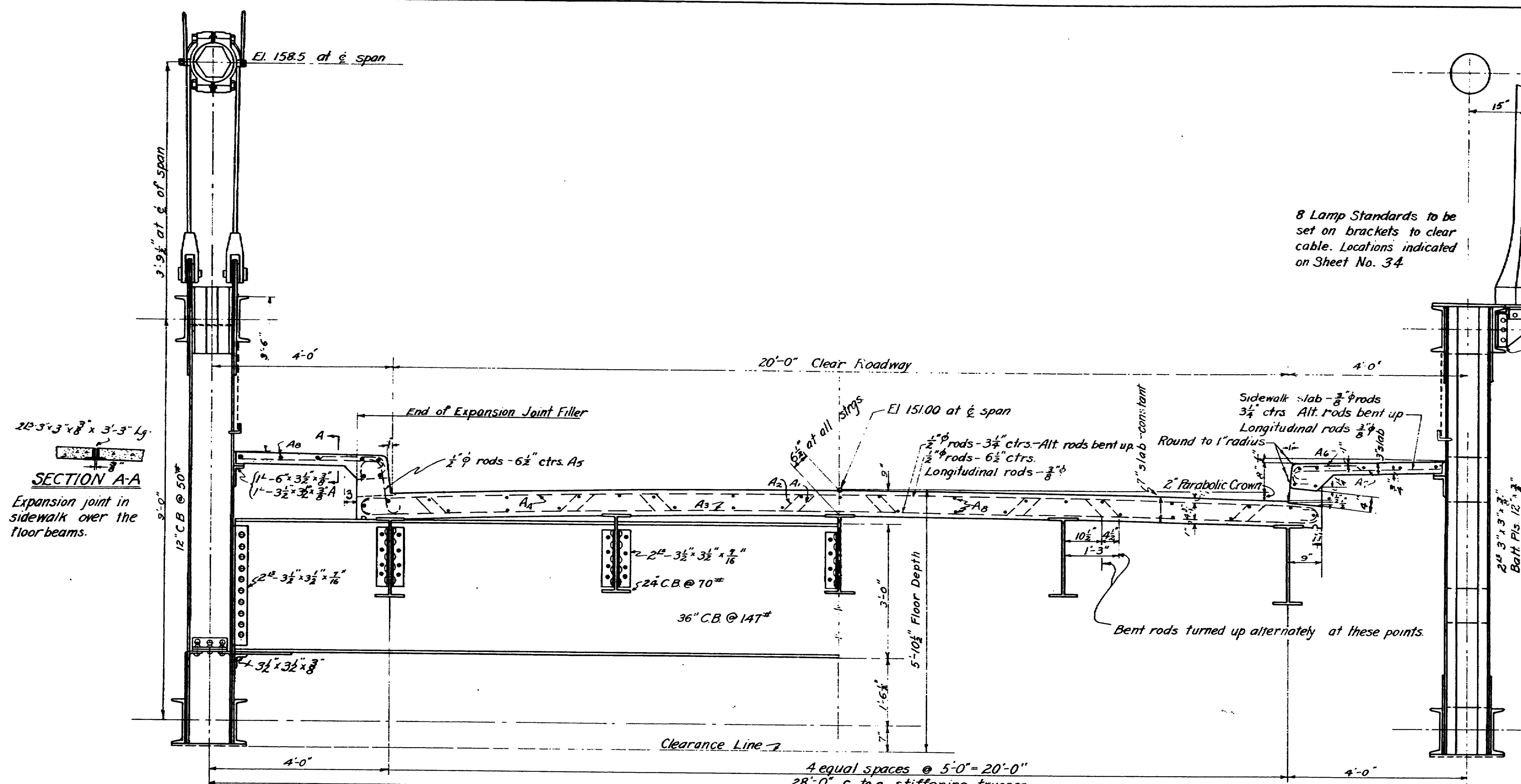
SCALE 3/8" = 1'-0"

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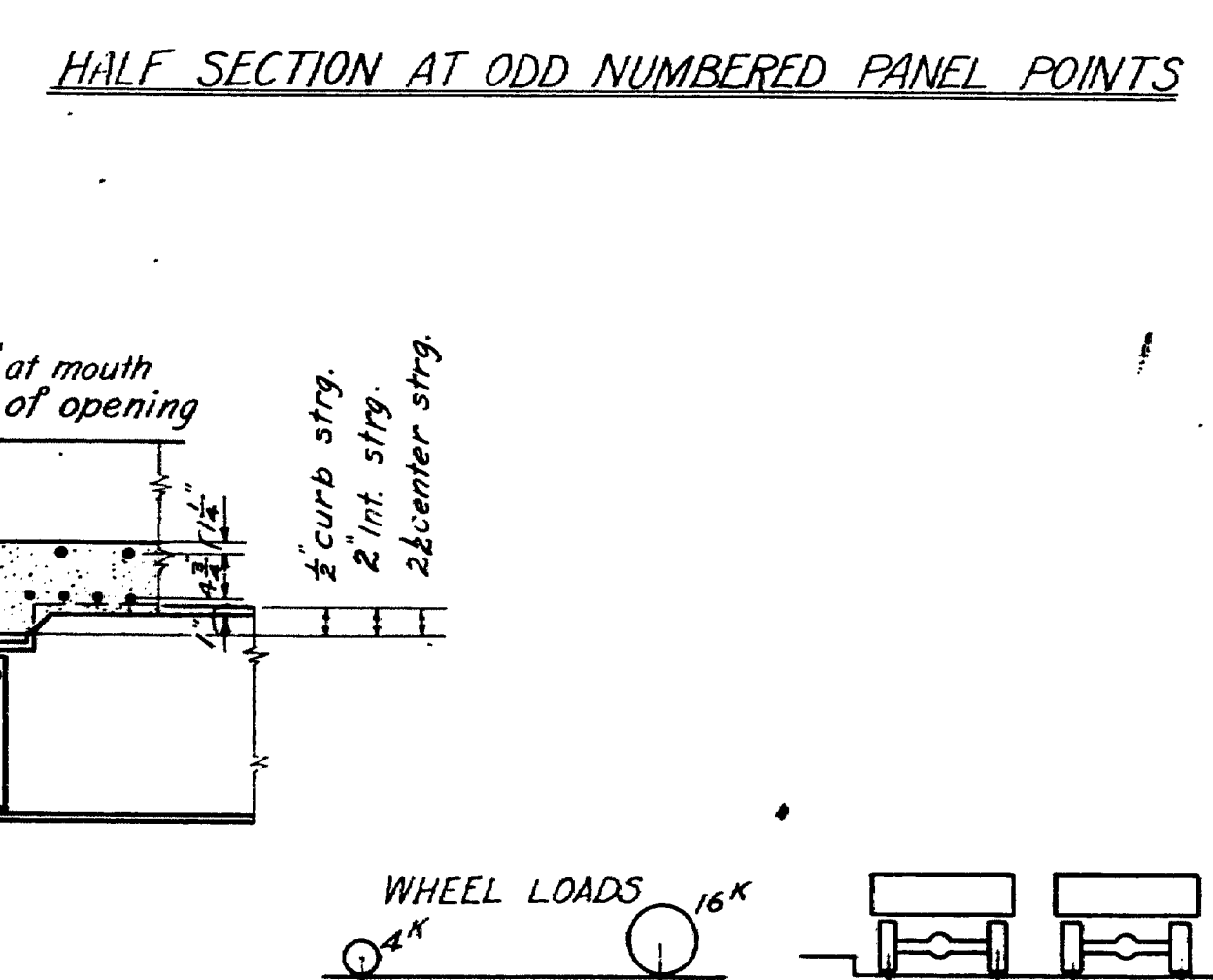
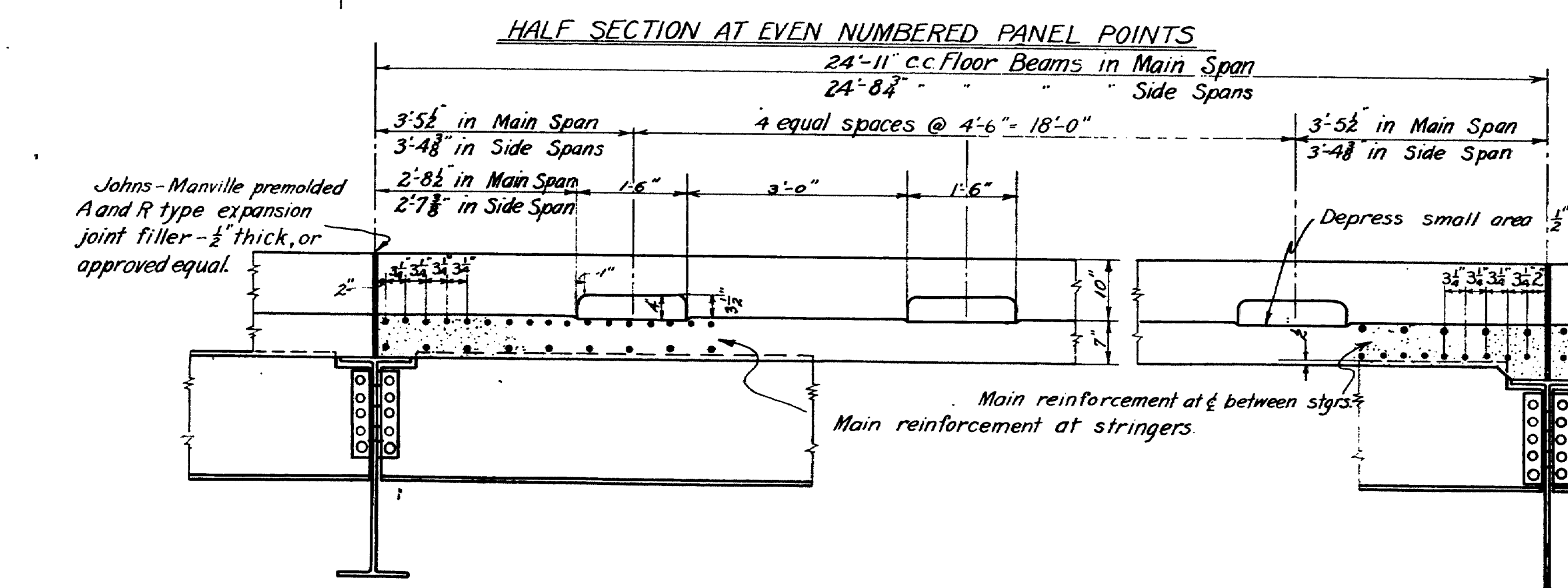
DRAWING NUMBER
RS 2922-17
AUGUST 3, 1930

Revised Feb 5, 1931

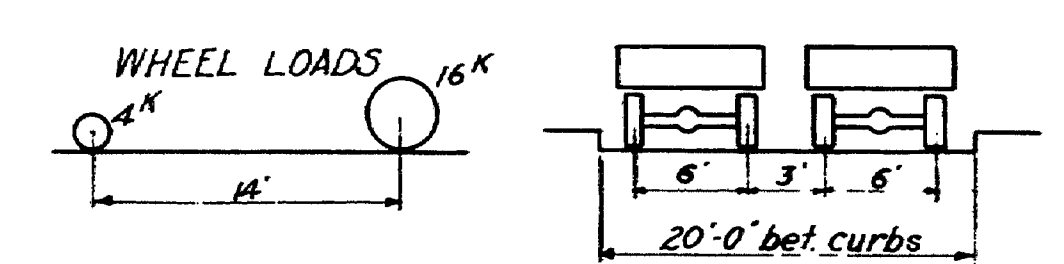




REINFORCING SCHEDULE FOR ONE PANEL				
NO	MARK	SIZE	DETAILS	LOCATION
23	A ₁	1/2"	SYM ABOUT $\frac{1}{2}$	ROADWAY
23	A ₂	"	SYM ABOUT $\frac{1}{2}$	"
46	A ₃	"	21'-2"	"
46	A ₄	"	21'-2"	"
65	A ₅	"	2'-4"	CURB
46	A ₆	3/8"	3'-11"	SIDEWALK
46	A ₇	"	3'-10"	"
45	A ₈	"	STRAIGHT	LONGITUDINAL



LONGITUDINAL SECTION THROUGH FLOOR NEAR CURB



FLOOR LOADING			
INTER. RDWY STRINGER		INTER. FLOORBEAM	
Dead	6.3K 39.5K'	Dead + s.w.	37.4K 281.4K'
Live	23.7 111.0	Live	38.0 338.5
Impact	7.9 37.0	Impact	12.7 112.8
	37.9 187.5		68.1 732.7

$(0.21 \times 21 \times 335.7) \times \frac{1}{16} = 149.0 \text{ in}^3 \text{ Required}$
 Use 24" C.B. 70# (162.82 in³)

$(0.21 \times 21 \times 110.40) \times \frac{1}{16} = 526 \text{ in}^3 \text{ Required}$
 Use 36" C.B. 147# (502.24 in³)

APPROVED *Horatio J. Robinson*
D. B. Steinman
 CONSULTING ENGINEERS

Rivets $\frac{3}{8}$ " except in handrail.

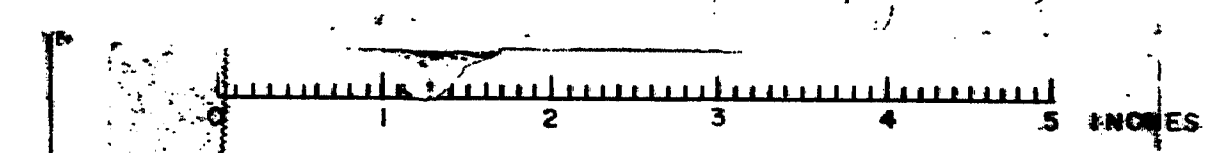
WALDO-HANCOCK BRIDGE
 OVER
 PENOBSCOT RIVER NEAR BUCKSPORT MAINE

TYPICAL CROSS SECTION OF SUSPENDED SPANS

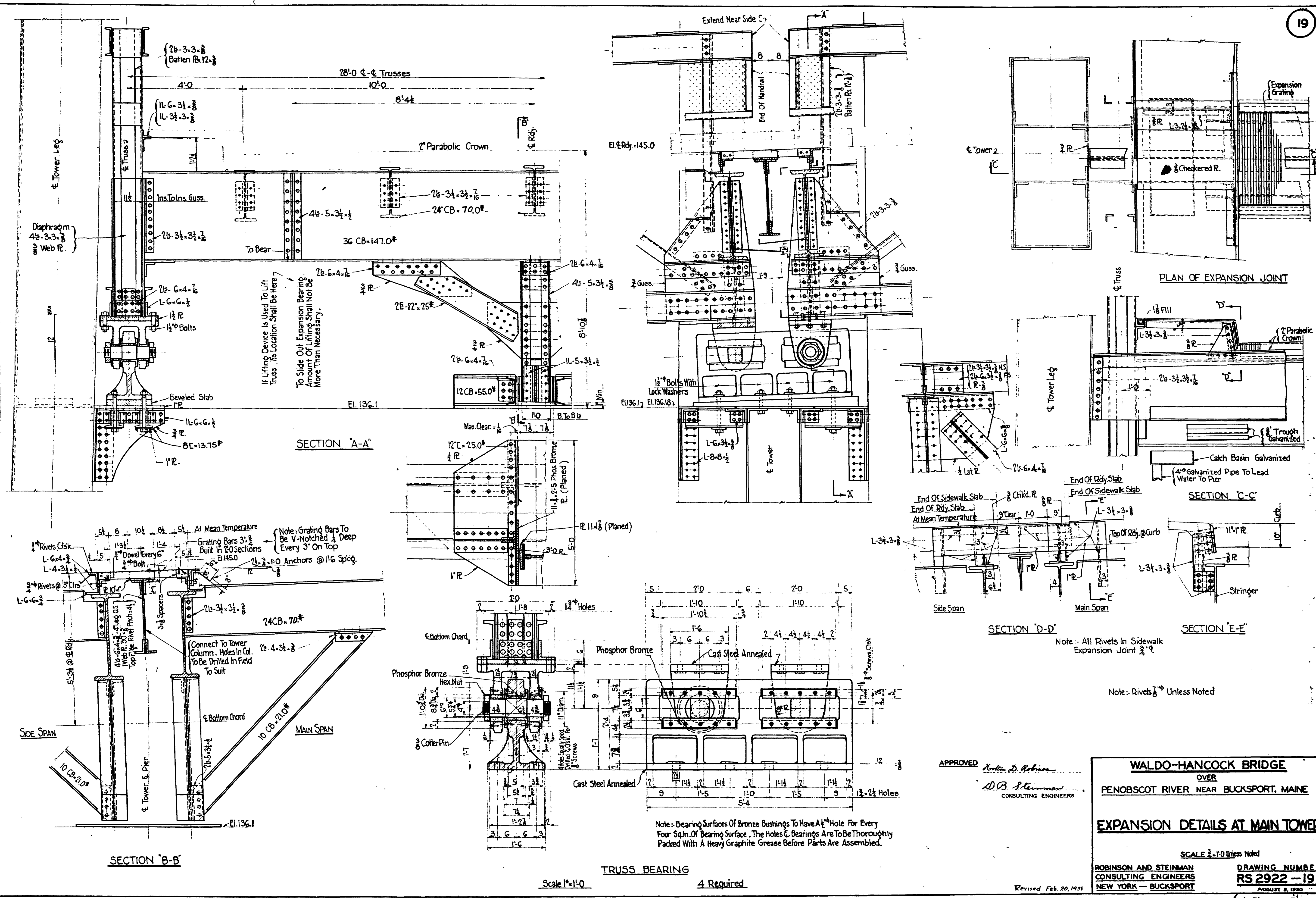
SCALE 3/8"=1'-0"

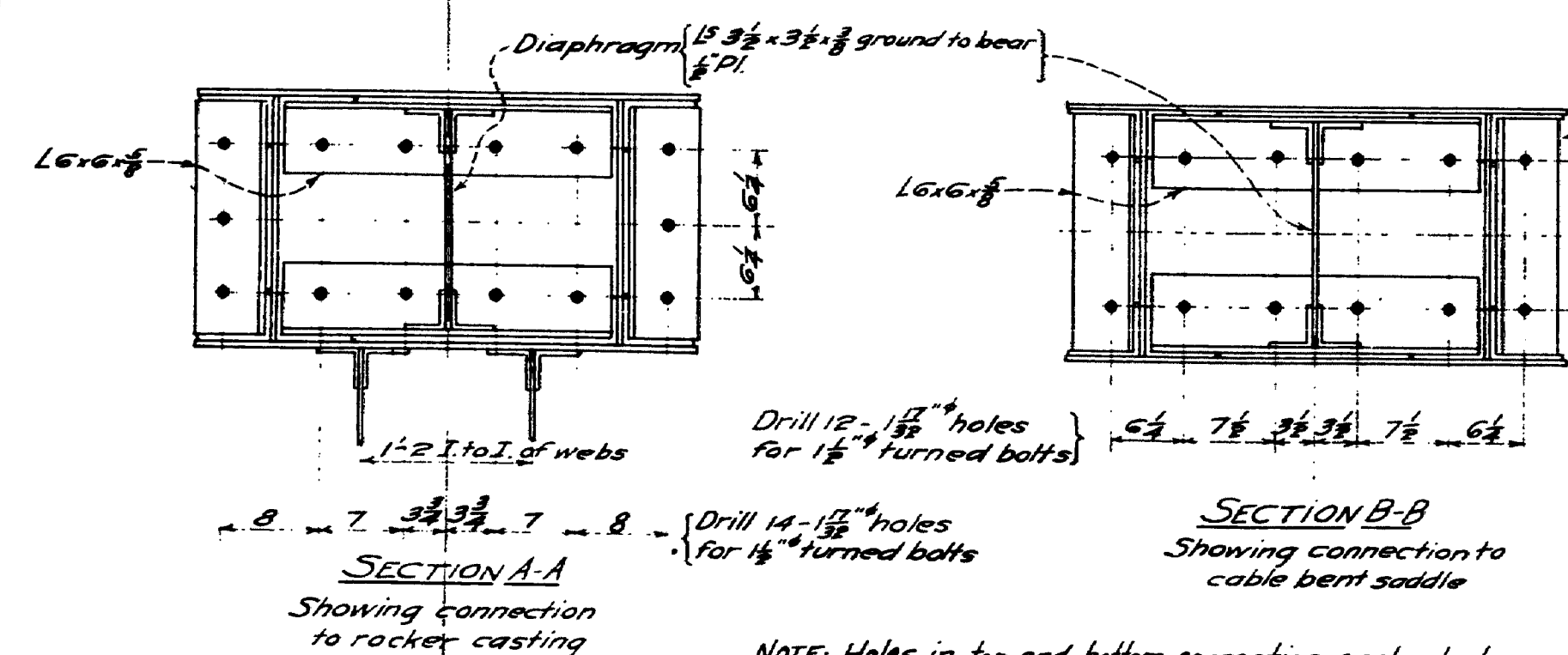
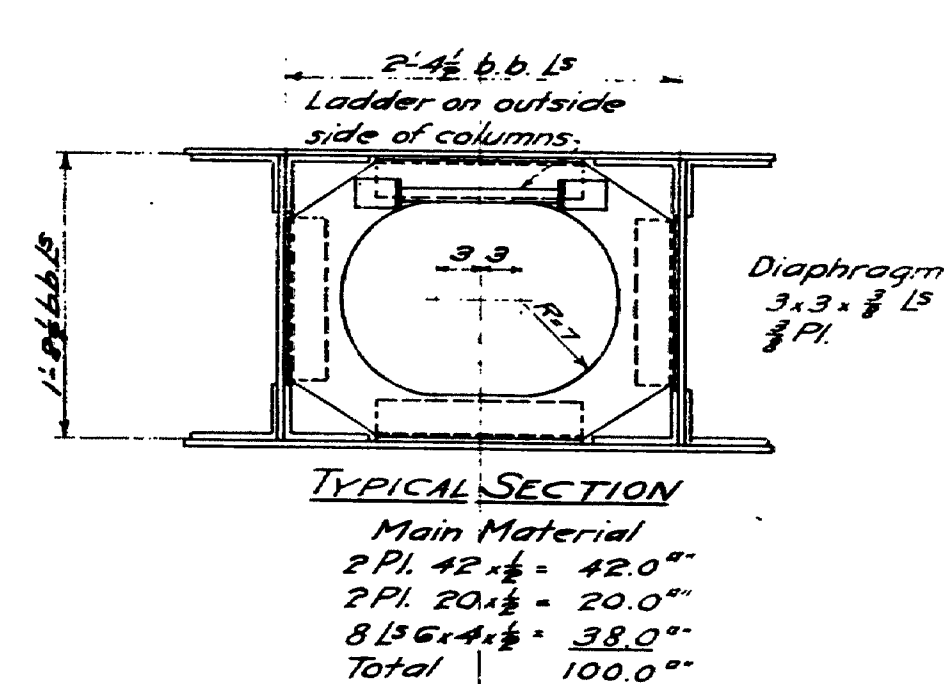
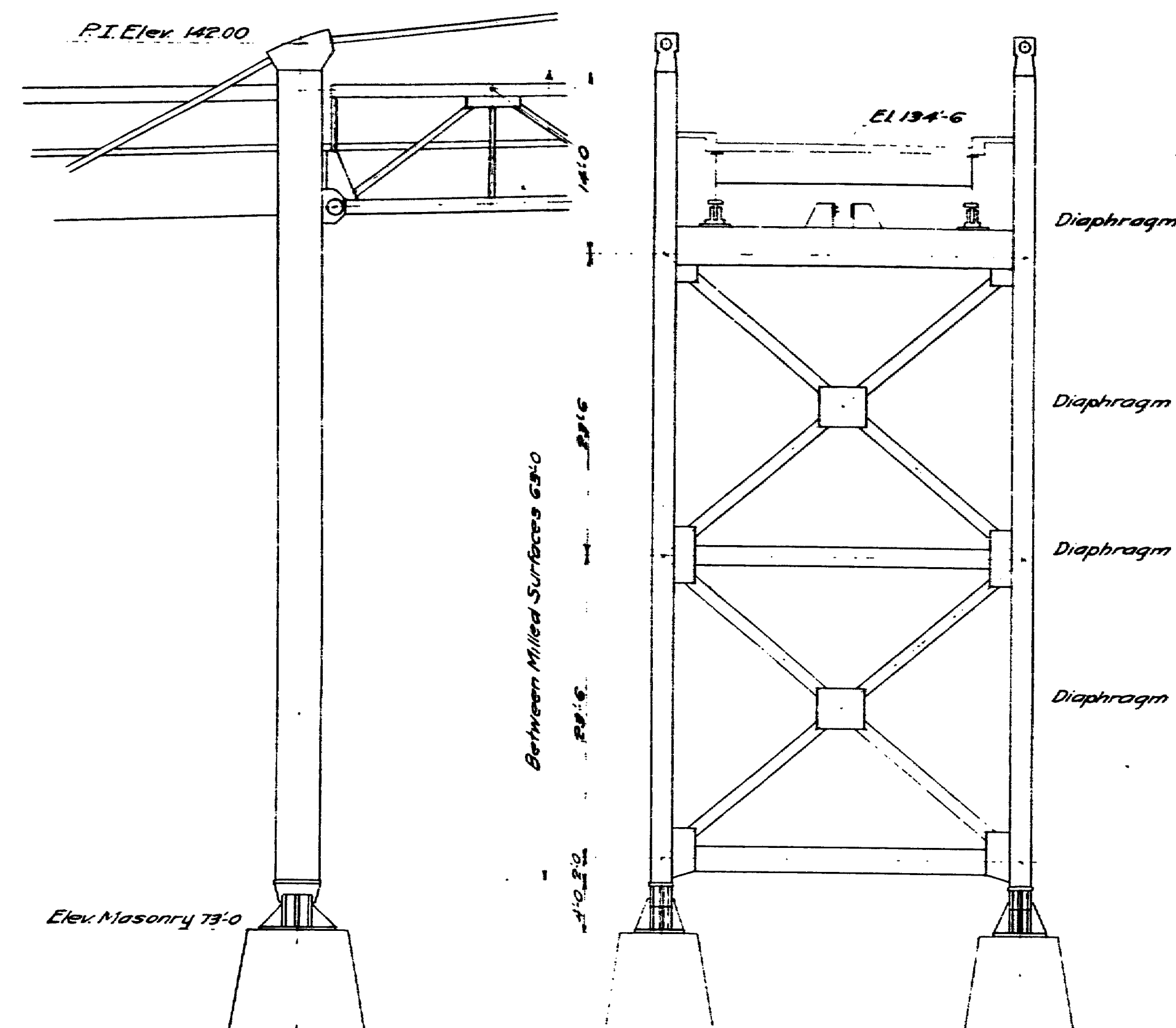
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 NEW YORK - BUCKSPORT

DRAWING NUMBER
RS 2922-18
 AUGUST 5, 1936

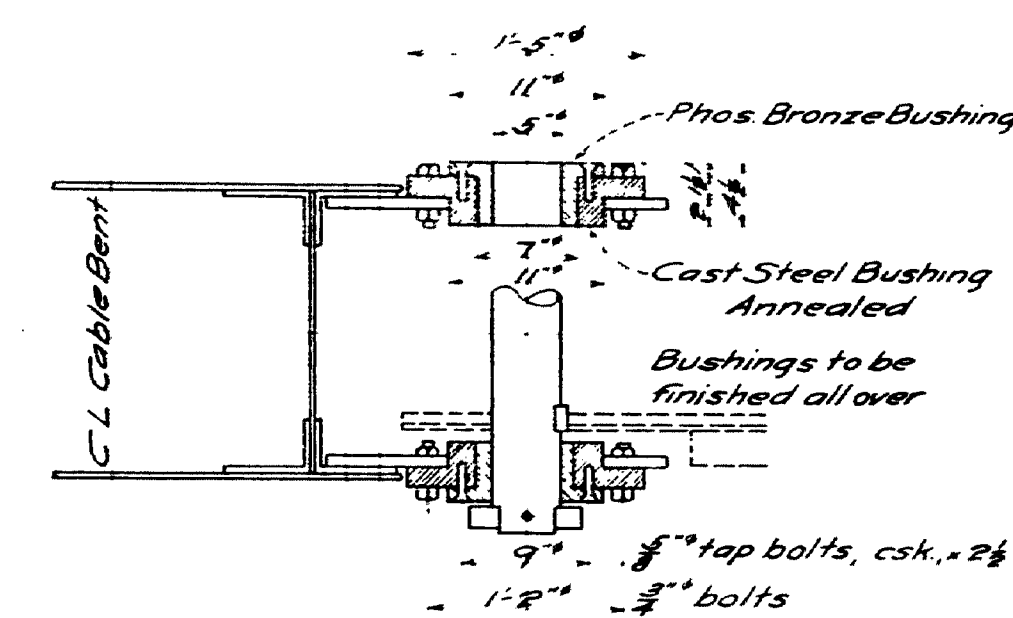
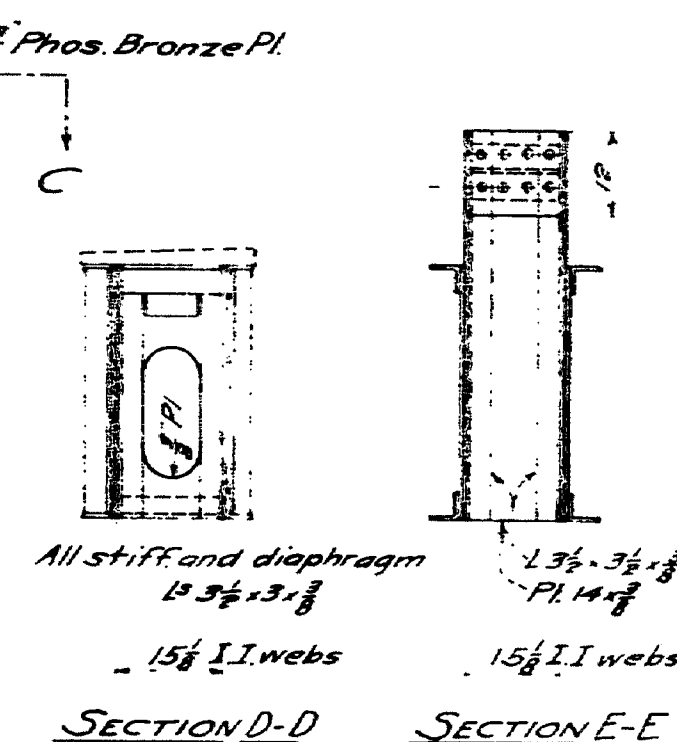
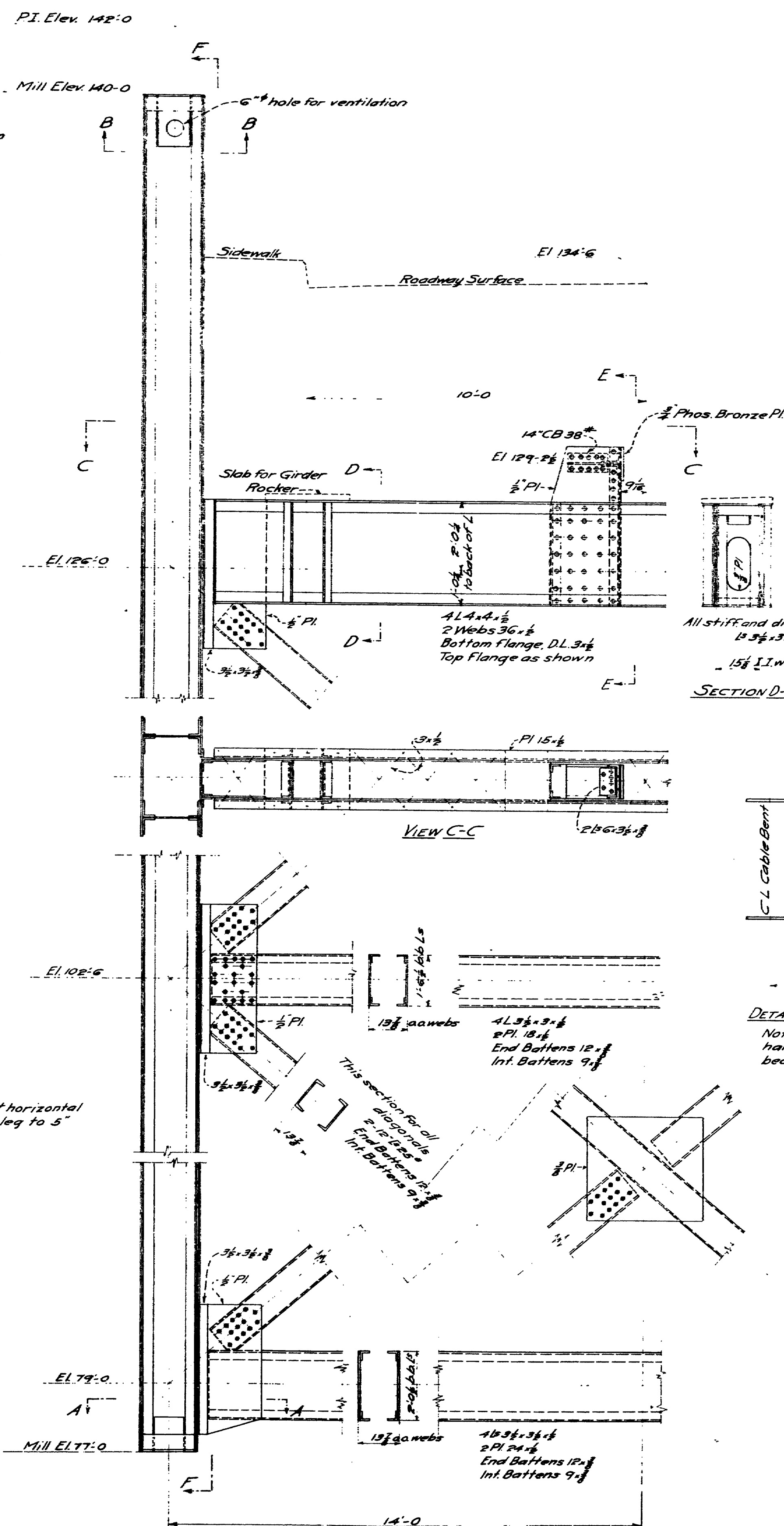


108-12



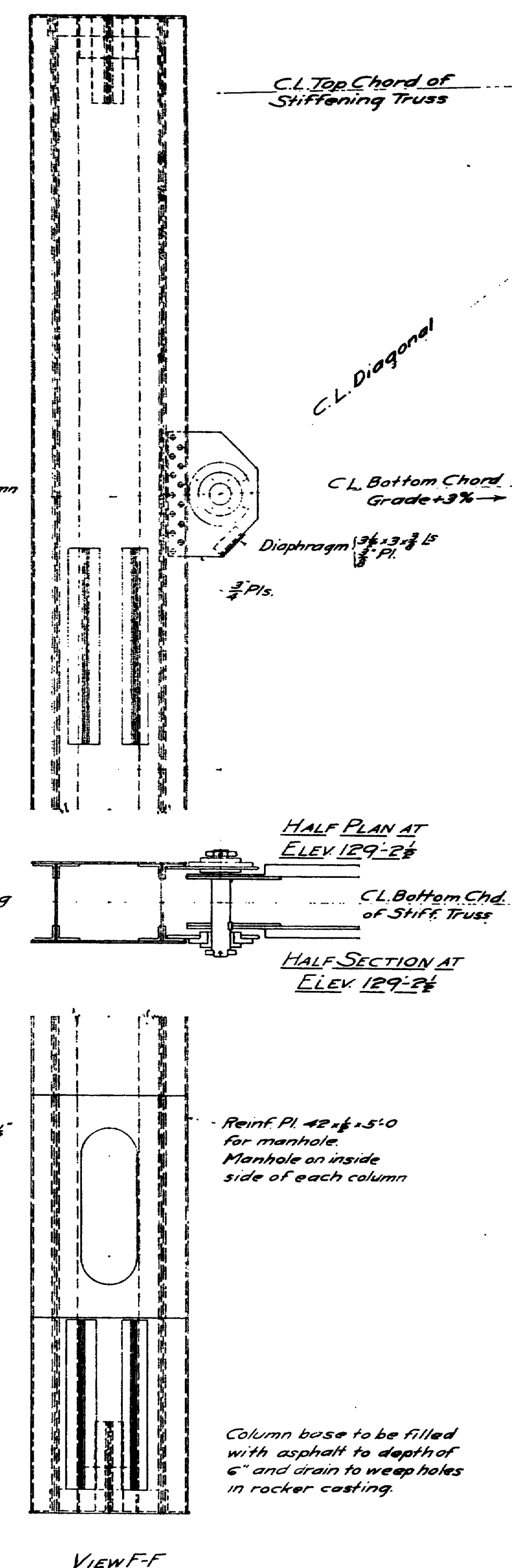


NOTE: Holes in top and bottom connection angles to be drilled to templates used for saddle and rocker castings.



DETAIL OF BEARING AT ELEVATION 129'-2 $\frac{1}{2}$ '

Note:- Phos. Bronze bushings to have a half inch hole for every 4 sq. inches of bearing surface, packed with graphite grease.
All bushings are to be press fit.



APPROVED *Holton D Robinson*

D.B. Stearns
CONSULTING ENGINEER

WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

CABLE BENT

SCALE $\frac{1}{4}$, $\frac{1}{2}$, $1" = 1'-0"$

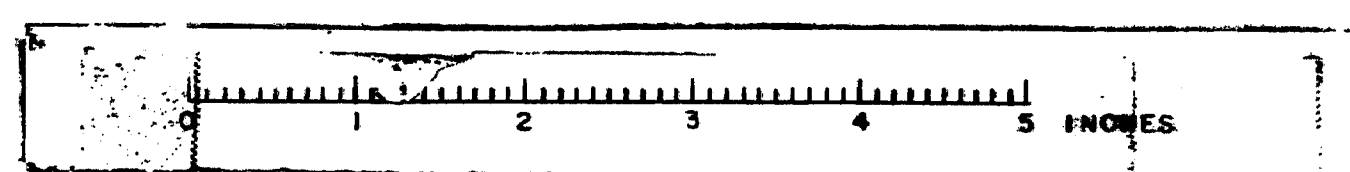
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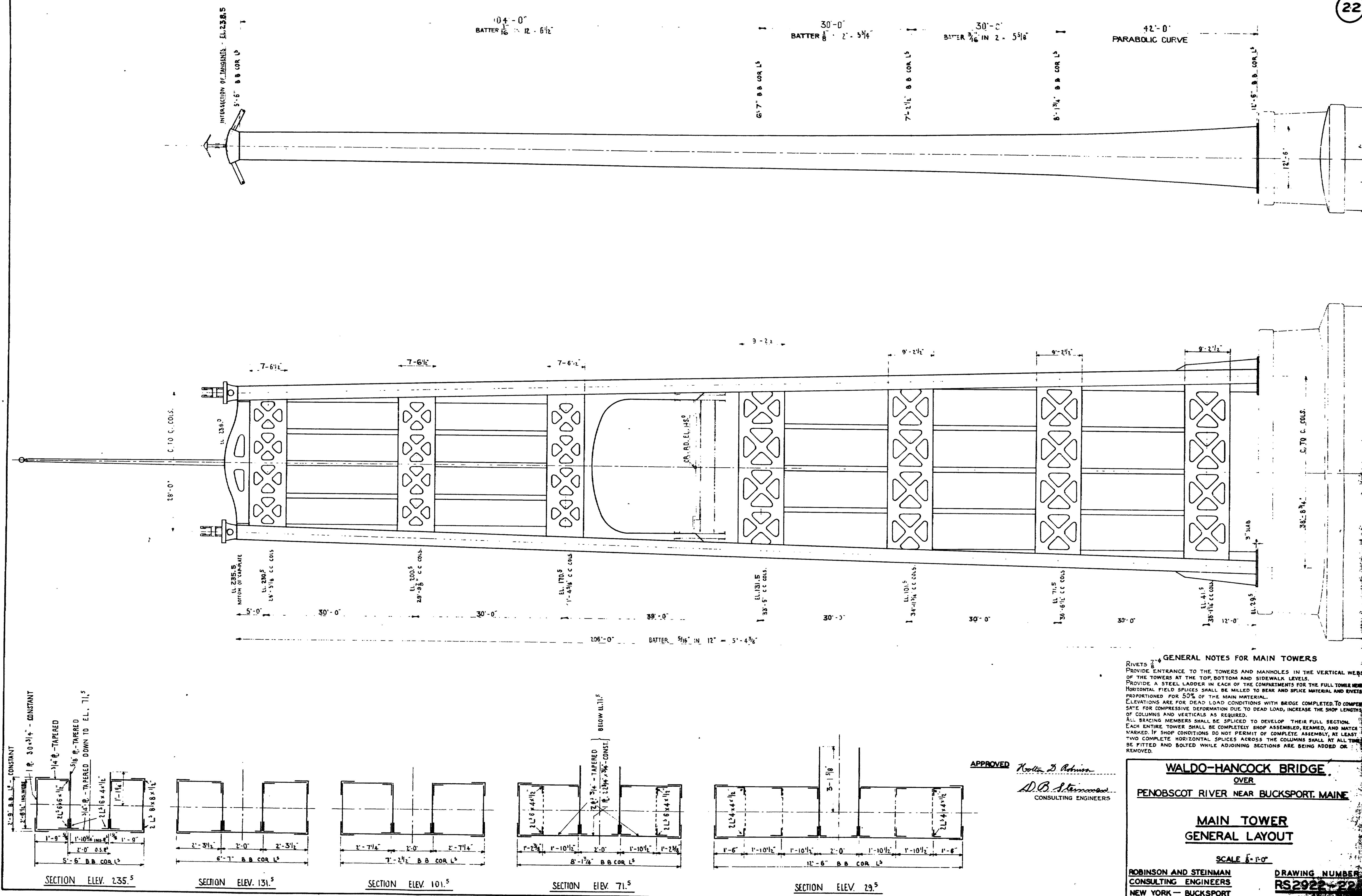
DRAWING NUMBER
RS 2922-20
AUGUST 5, 1939

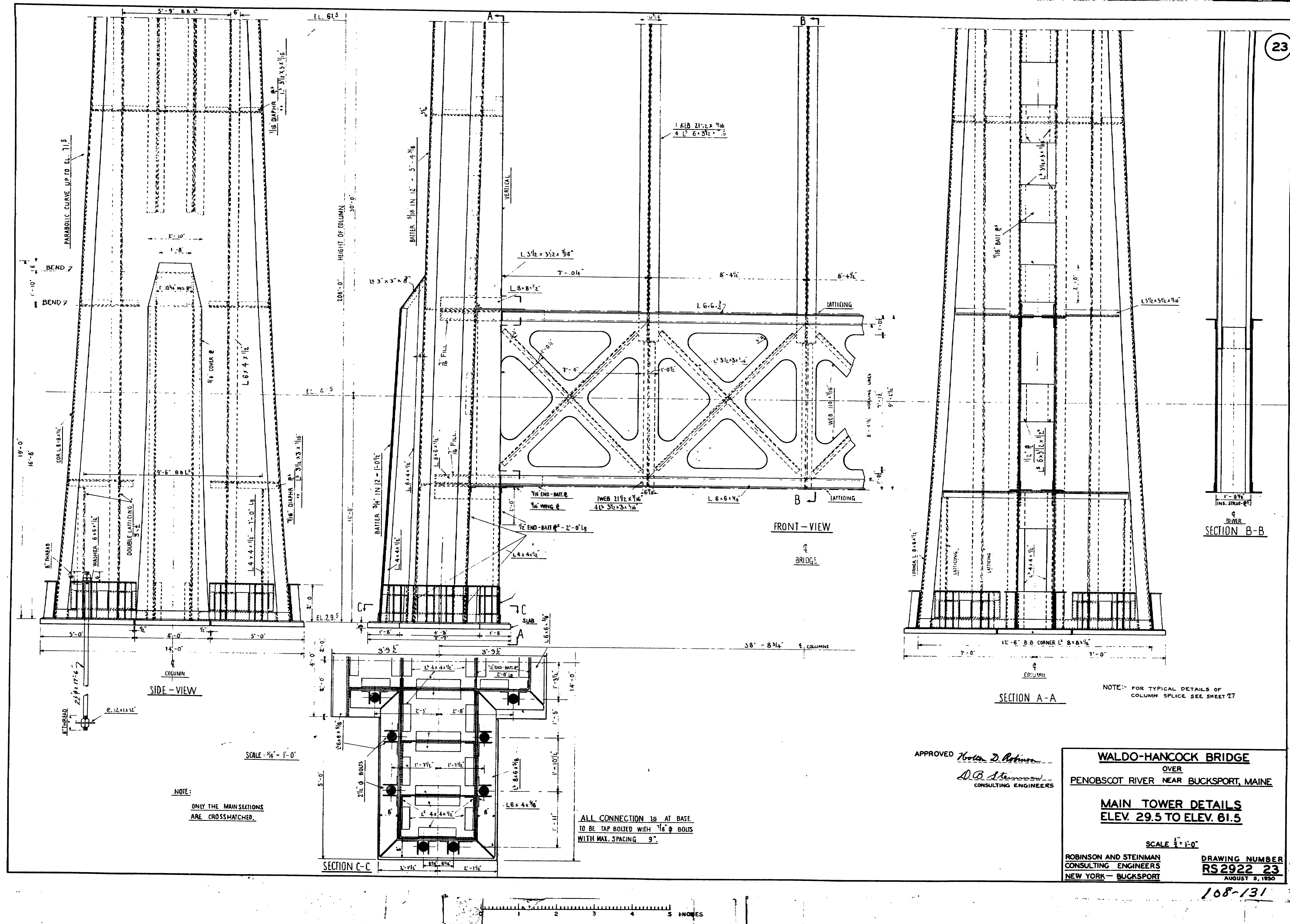
108-128

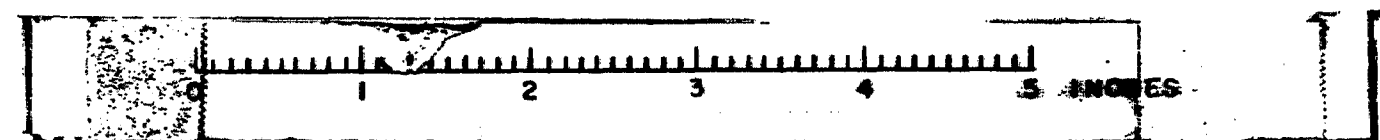
108-128

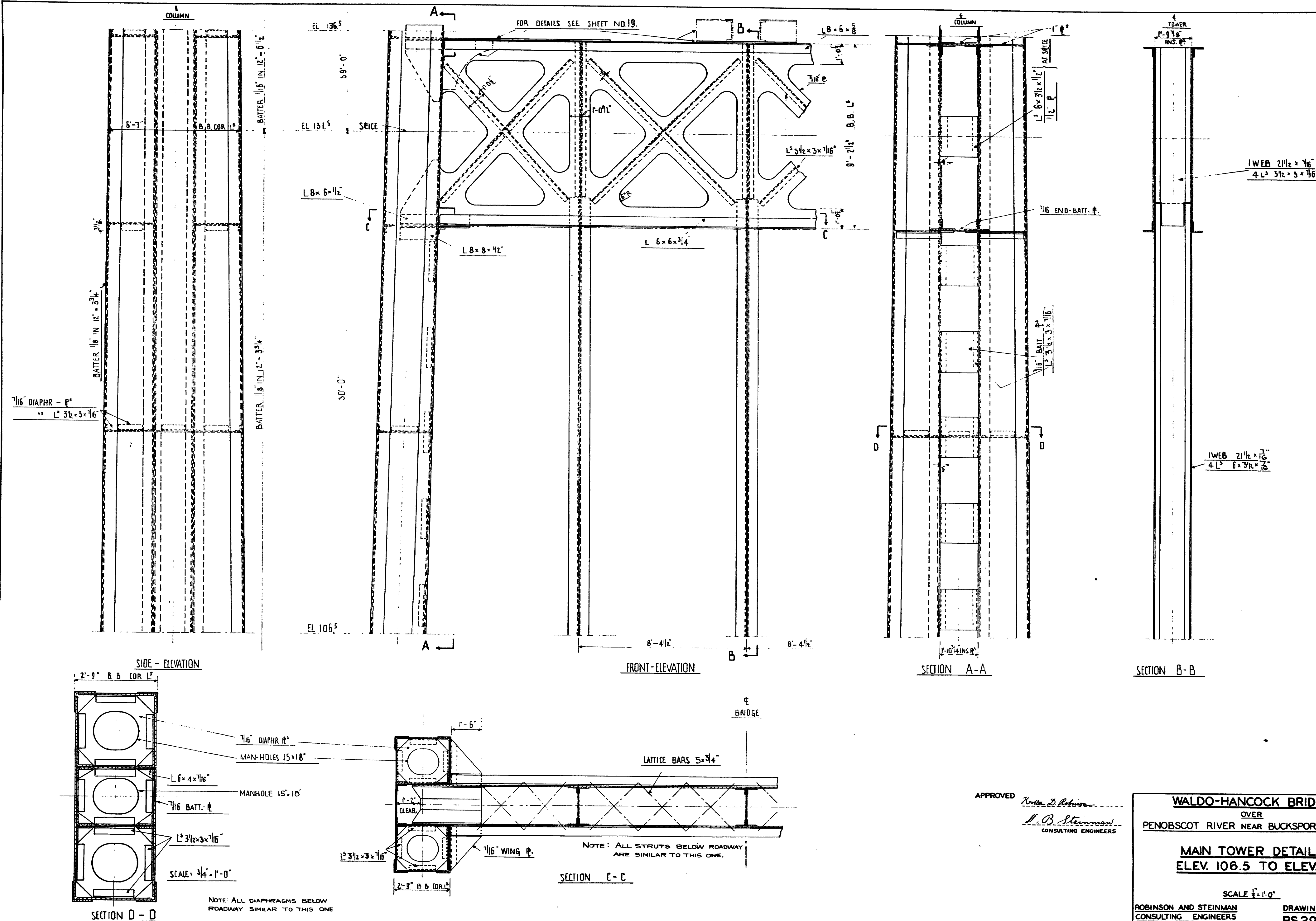
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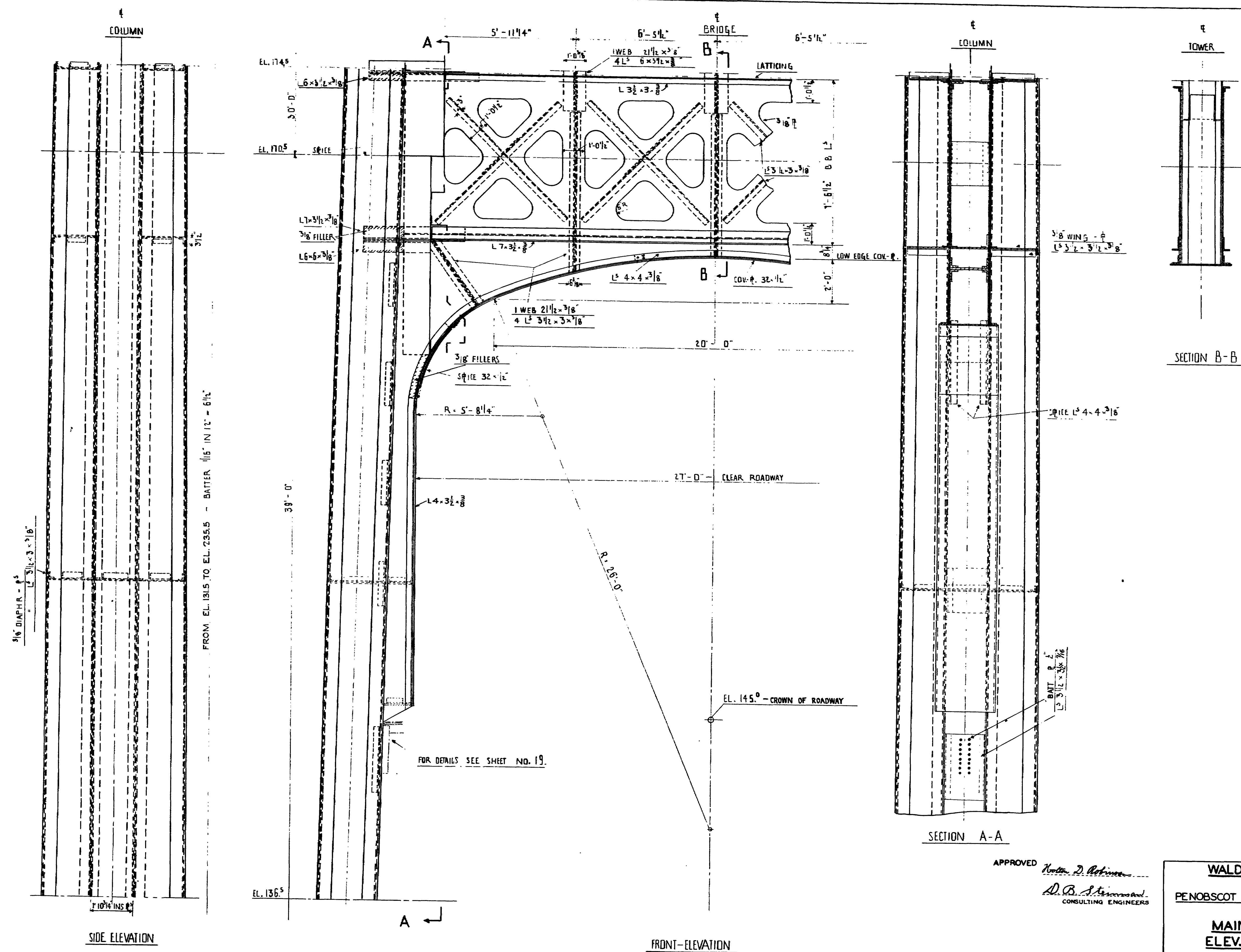




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NEW YORK - BUCKSPORT

108-133

108-133



APPROVED Hotten D. Robinson
D. B. Steinwand
CONSULTING ENGINEER

WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

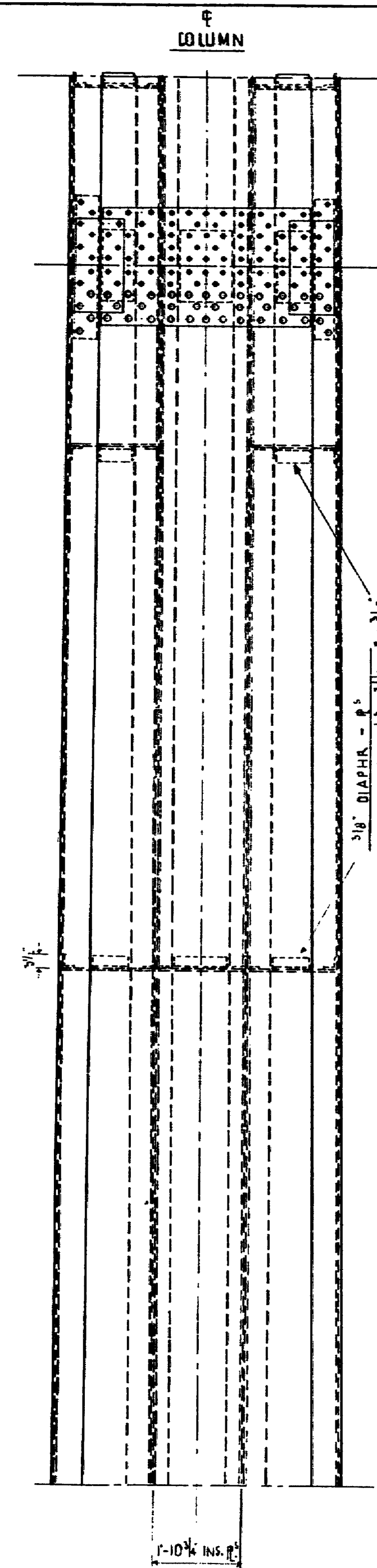
MAIN TOWER DETAILS
ELEV. 136.5 TO ELEV. 174.5

SCALE $\frac{1"}{2} = 1'-0"$

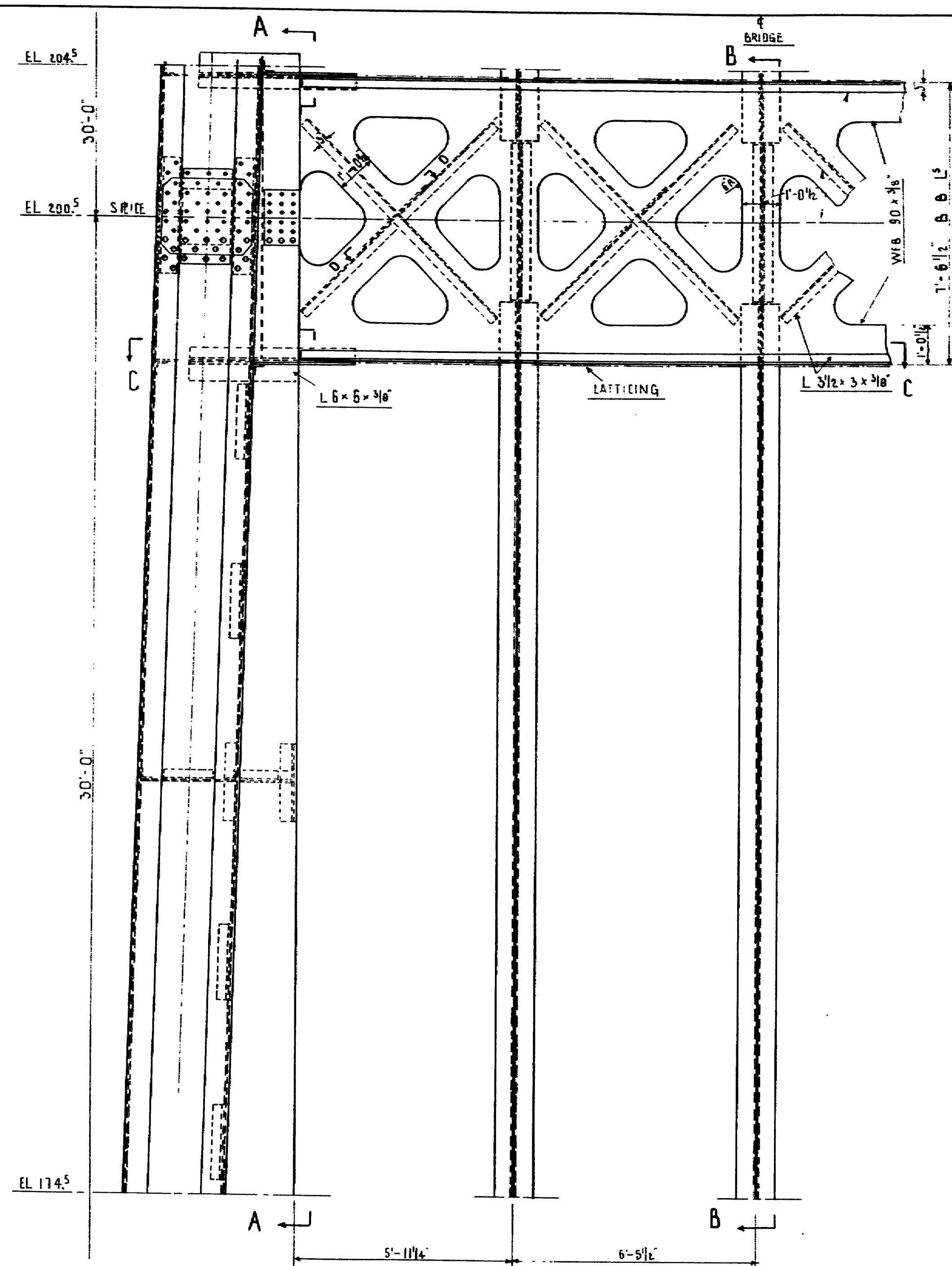
**ROBINSON AND STEINMAN
CONSULTING ENGINEERS
NEW YORK — BUCKSPORT**

DRAWING NUMBER
RS 2922 - 26
AUGUST 5, 1930

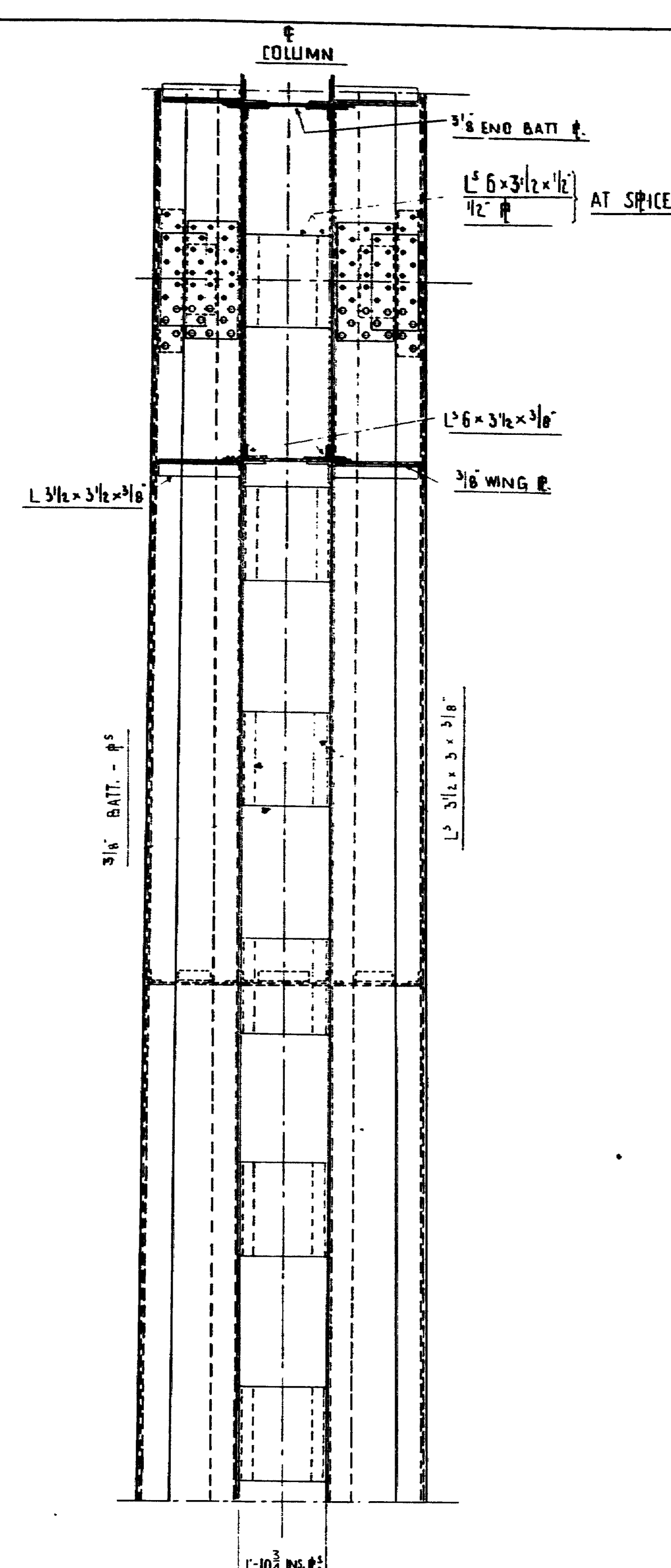
108-134



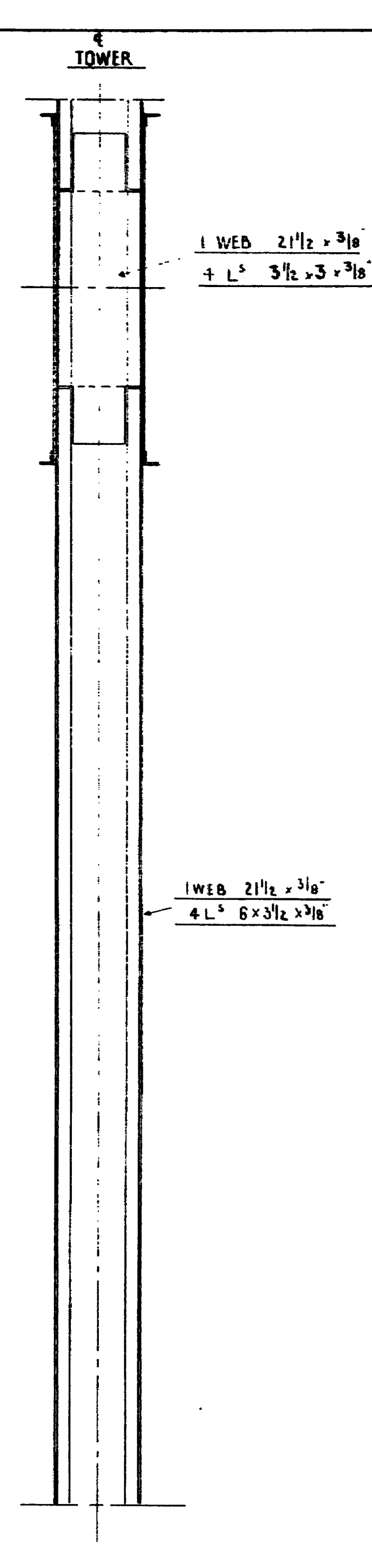
SIDE ELEVATION



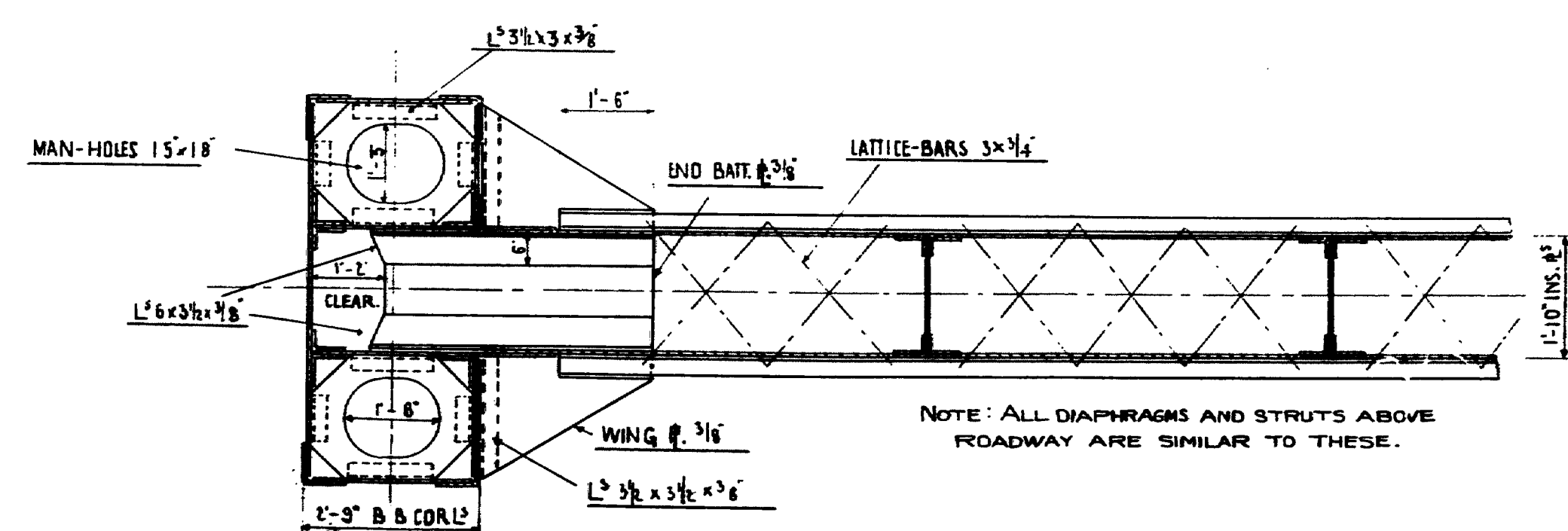
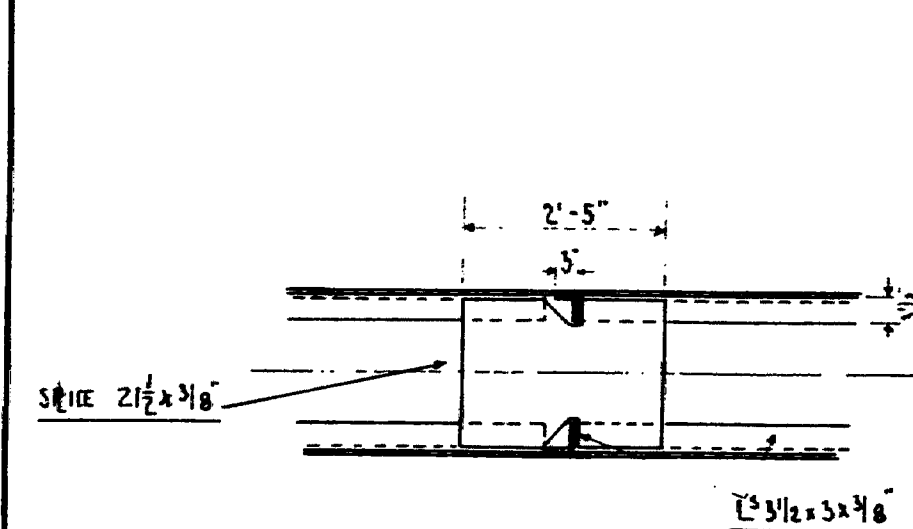
FRONT - ELEVATION



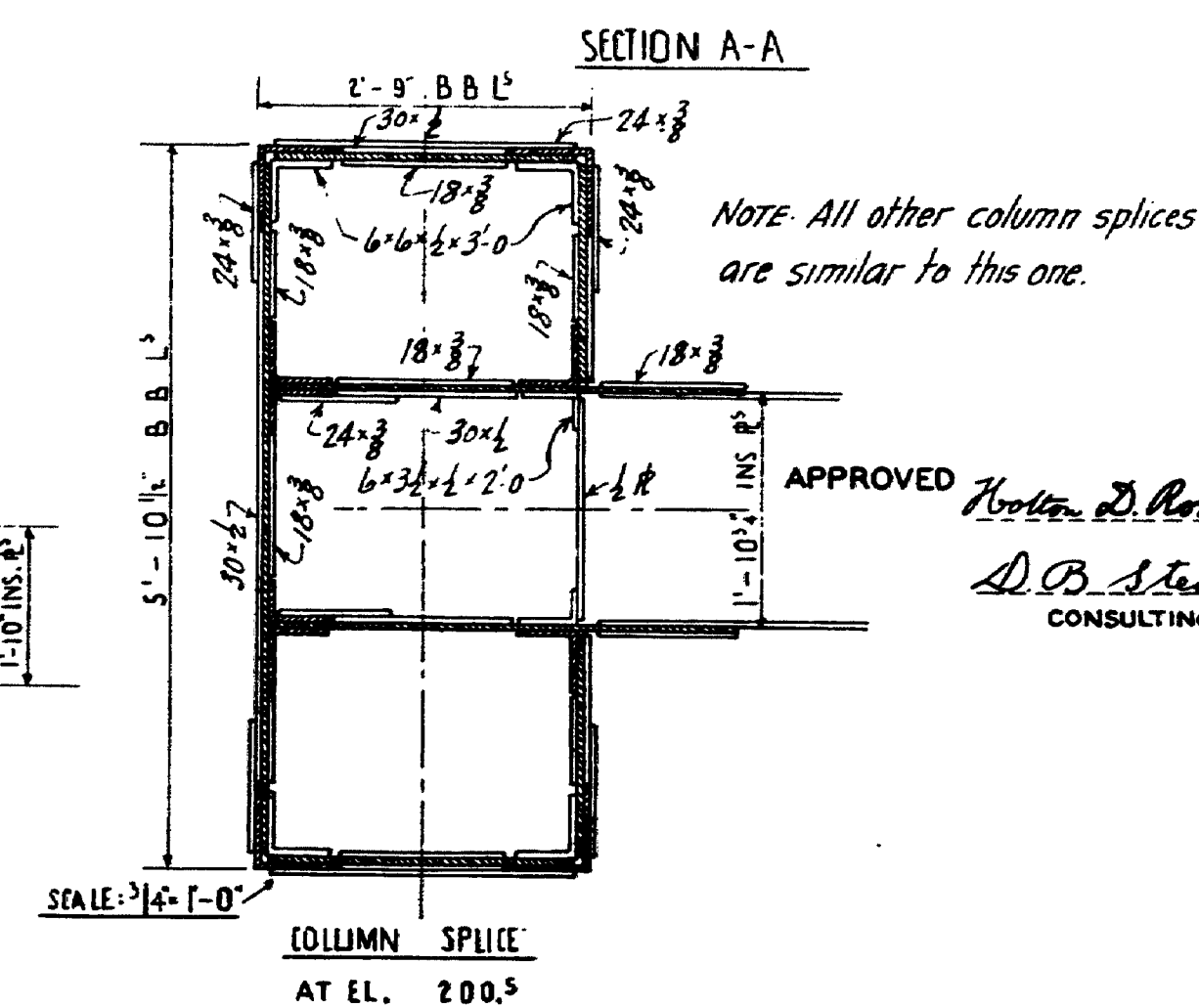
SECTION A-A



SECTION B-B



SECTION C - C



APPROVED Horton D. Robinson
D. B. Steiman
CONSULTING ENGINEER

WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

MAIN TOWER DETAILS

MAIN TOWER DETAILS
ELEV. 174.5 TO ELEV. 204.5

SCALE $\frac{1"}{2} = 1'-0"$

SCALE $\frac{1}{2}'' = 1'-0''$

ROBINSON AND STEINMAN DRAWING NUMBER
CONSULTING ENGINEERS 00000000

CONSULTING ENGINEERS
NEW YORK — BUCKSPORT

RS 2922-2
AUGUST 5, 1930

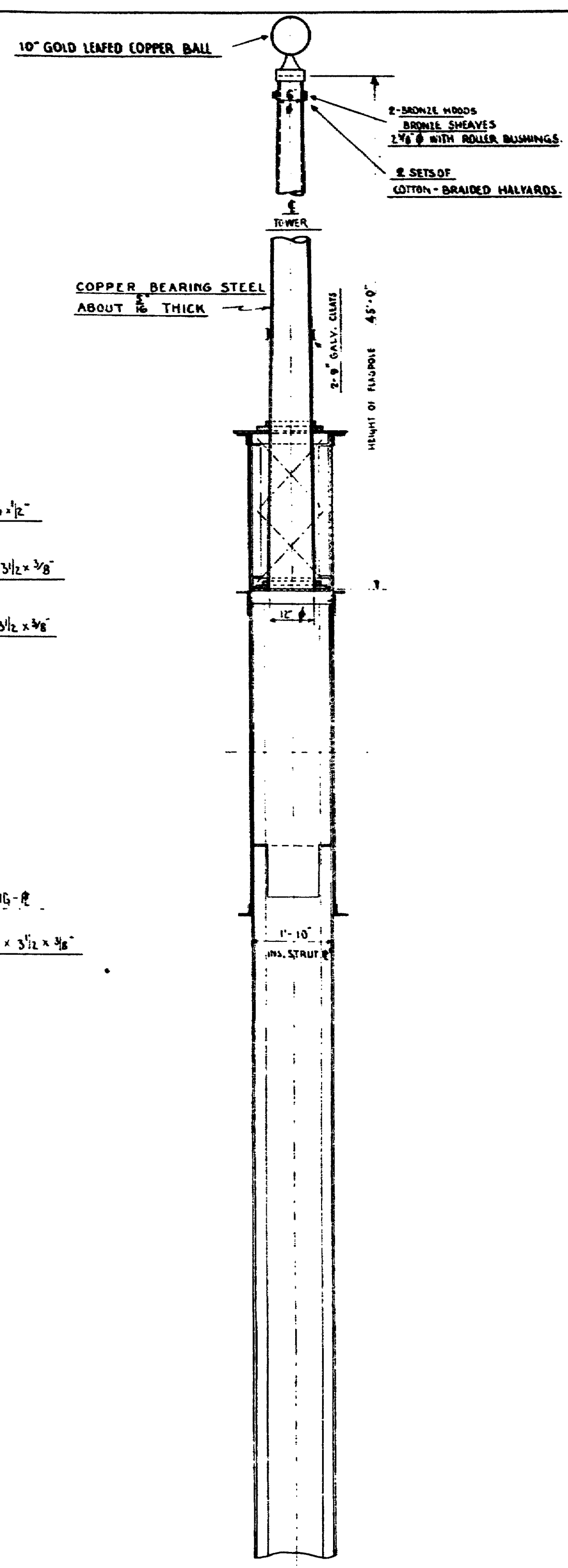
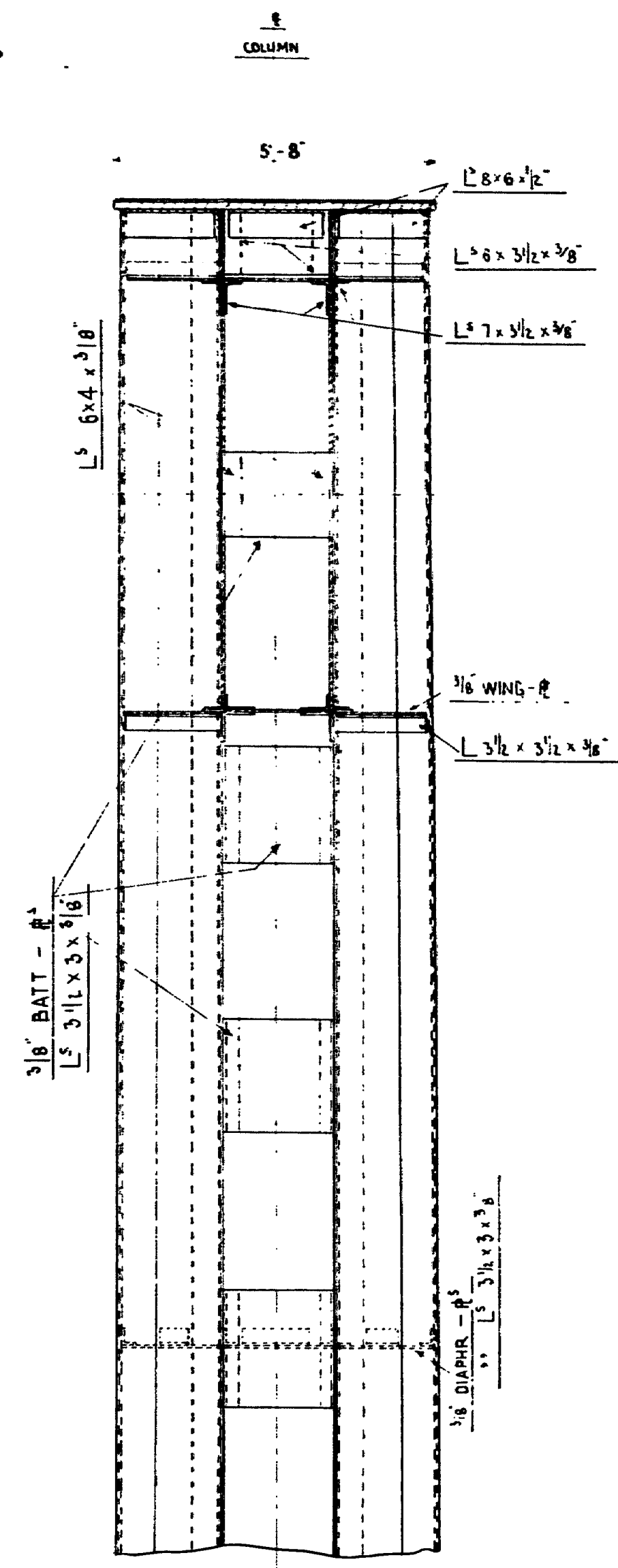
108-135

DRAWING NUMBER

RS 2922-2
AUGUST 5, 1930

108-135

1



APPROVED *Kenton S. Robinson*

D.B. Steinman

CONSULTING ENGINEERS

WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

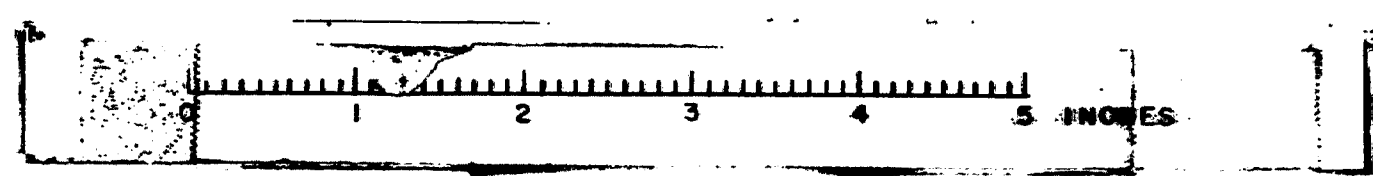
MAIN TOWER DETAILS
ELEV. 204.5 TO TOP

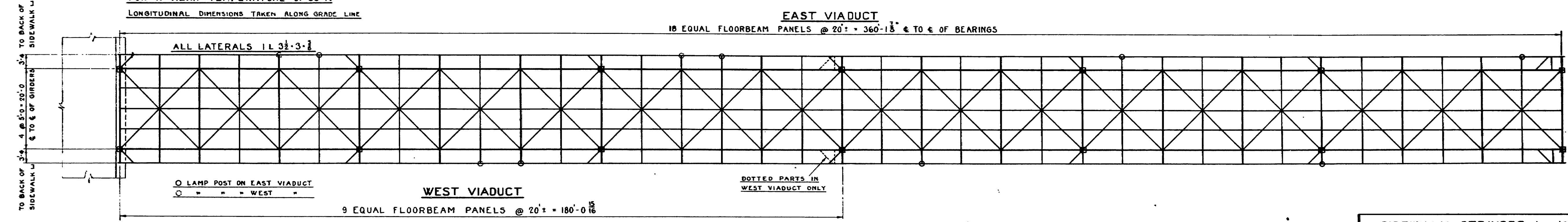
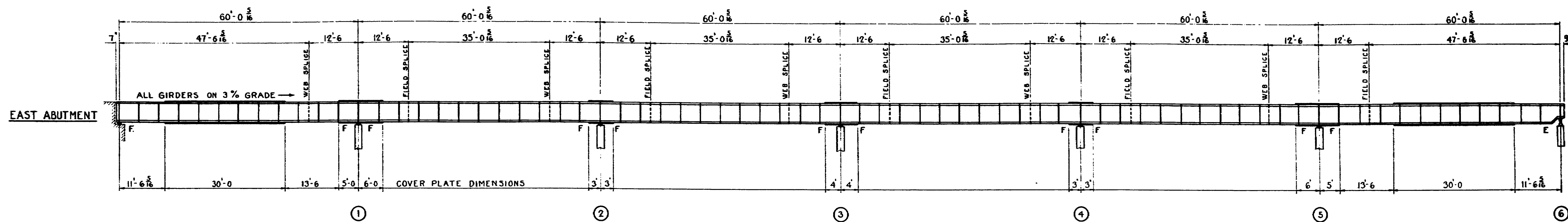
SCALE $\frac{1}{2}'' = 1'-0''$

ROBINSON AND STEINMAN
CONSULTING ENGINEERS
NEW YORK — BUCKSPORT

DRAWING NUMBER
RS 2922-28
AUGUST 5, 1939

108-136





ASSUMED LIVE LOAD

FOR GIRDERS:

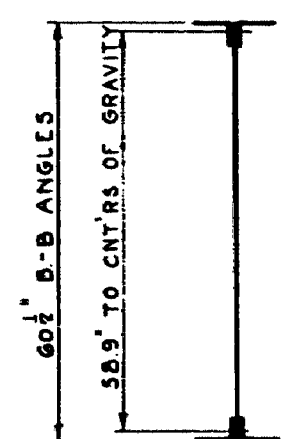
- ON ROADWAY 2 LANES OF 20^T TRUCKS
- EACH LANE: 640[#]/lin.ft. UNIFORM LOAD
- + 18,000[#] CONCENTRATED LOAD FOR MOMENTS
- OR 26,000[#] " " " " " " SHEAR
- ON SIDEWALK 90[#]/sq.ft.

FOR FLOOR:

- ON ROADWAY 2 LANES OF 20^T TRUCKS 44' CTR'S.
- ON SIDEWALK 100[#]/sq.ft. OR 1 FRONT WHEEL

RIVETS: 7/8" EXCEPT AS NOTED

MAIN GIRDERS		
MAX. POSITIVE MOMENT IN END SPANS	MAX. POSITIVE MOMENT IN INT. SPANS	MAX. NEGATIVE MOMENT
DEAD + 460 ^{ft.-kips}	DEAD + 240 ^{ft.-kips}	DEAD - 540 ^{ft.-kips}
LIVE + 500 "	LIVE + 390 "	LIVE - 500 "
IMPACT + 140 "	IMPACT + 100 "	IMPACT - 100 "
TOTAL + 1100 "	TOTAL + 730 "	TOTAL - 1140 "
MAX. END SHEAR ALL SPANS	MAX. REACTION AT INTERM. COLUMNS	MAX. REACTION END SUPPORTS
DEAD 47 ^{kips}	DEAD 107 ^{kips}	DEAD 40 ^{kips}
LIVE 39 "	LIVE 96 "	LIVE 50 "
IMPACT 10 "	IMPACT 20 "	IMPACT 13 "
TOTAL 96 "	TOTAL 223 "	TOTAL 103 "



MAX. MOMENT - $D \cdot 2L \cdot 2I = 1220^{ft.-kips}$

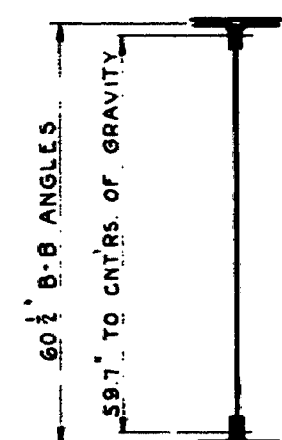
$\frac{1220}{58.5} = 20.9^{kips} \div 27^{kips} = 9.3''$ REQUIRED

USE WEB 60^{3/8} x 22.5^{1/8} x 2.8^{1/8}

" 2 L 6^{3/8} x 7.9^{1/8} = 7.9^{1/8} NET

TOTAL FLANGE AREA = 9.9^{1/8} NET

MOMENT OF INERTIA (GROSS) = 18,600^{in⁴}



MAX. MOMENT - $D \cdot 2L \cdot 2I = 1740^{ft.-kips}$

$\frac{1740}{128} = 13.6^{kips} \div 27^{kips} = 13.0''$ REQUIRED

USE WEB 60^{3/8} x 22.5^{1/8} x 2.8^{1/8}

" 2 L 6^{3/8} x 7.9^{1/8} = 7.9^{1/8} NET

" 1 Cov. R. 13^{3/8} x 4.9^{1/8} = 4.1^{1/8} NET

TOTAL FLANGE AREA 13.1^{1/8} NET

MOMENT OF INERTIA (GROSS) = 27,900^{in⁴}

SIDEWALK STRINGER 1 L 10' @ 20'	
RDWAY. STRINGERS	
SHEAR	MOMENT
DEAD 5.0 ^{kips}	DEAD 25 ⁱⁿ
LIVE 19.1 "	LIVE 89 "
IMPACT 7.7 "	IMPACT 31 "
TOTAL 31.8 ^{kips}	TOTAL 145 ⁱⁿ
$D \cdot 2L \cdot 2I = 265^{in} \div 27^{in} = 118^{in^2}$ Req'd.	
USE 21 ^{1/2} C.B. @ 58 ^{1/2} (120 ^{in^2})	
FLOORBEAMS	
DEAD 15.9 ^{kips}	DEAD 97 ^{ft.-kips}
LIVE 38.4 "	LIVE 176 "
IMPACT 13.2 "	IMPACT 61 "
TOTAL 67.5 "	TOTAL 334 "
$D \cdot 2L \cdot 2I = 571^{in} \div 27^{in} = 254^{in^2}$ Req'd.	
USE 27 ^{1/2} C.B. @ 101 ^{1/2} (265 ^{in^2})	

APPROVED

Robert D. Steinman

D. B. Steinman

CONSULTING ENGINEERS

WALDO-HANCOCK BRIDGE

OVER

PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

VIADUCT SPANS

GENERAL LAYOUT AND STRESS SHEET

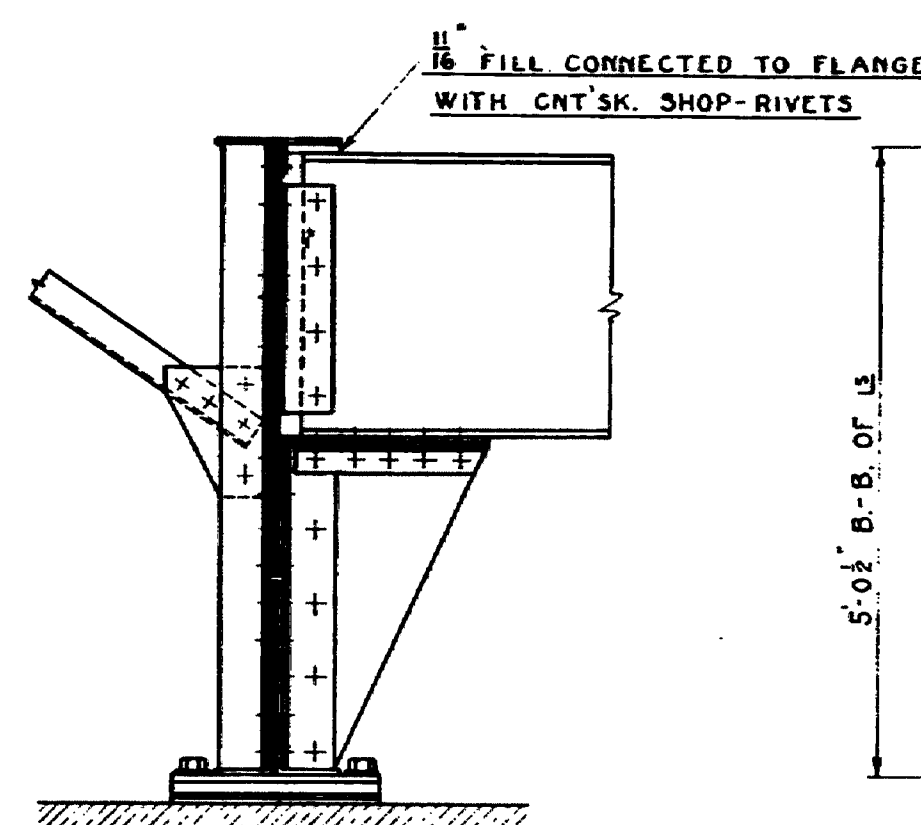
SCALE 1" = 12'

ROBINSON AND STEINMAN
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NEW YORK - BUCKSPORT

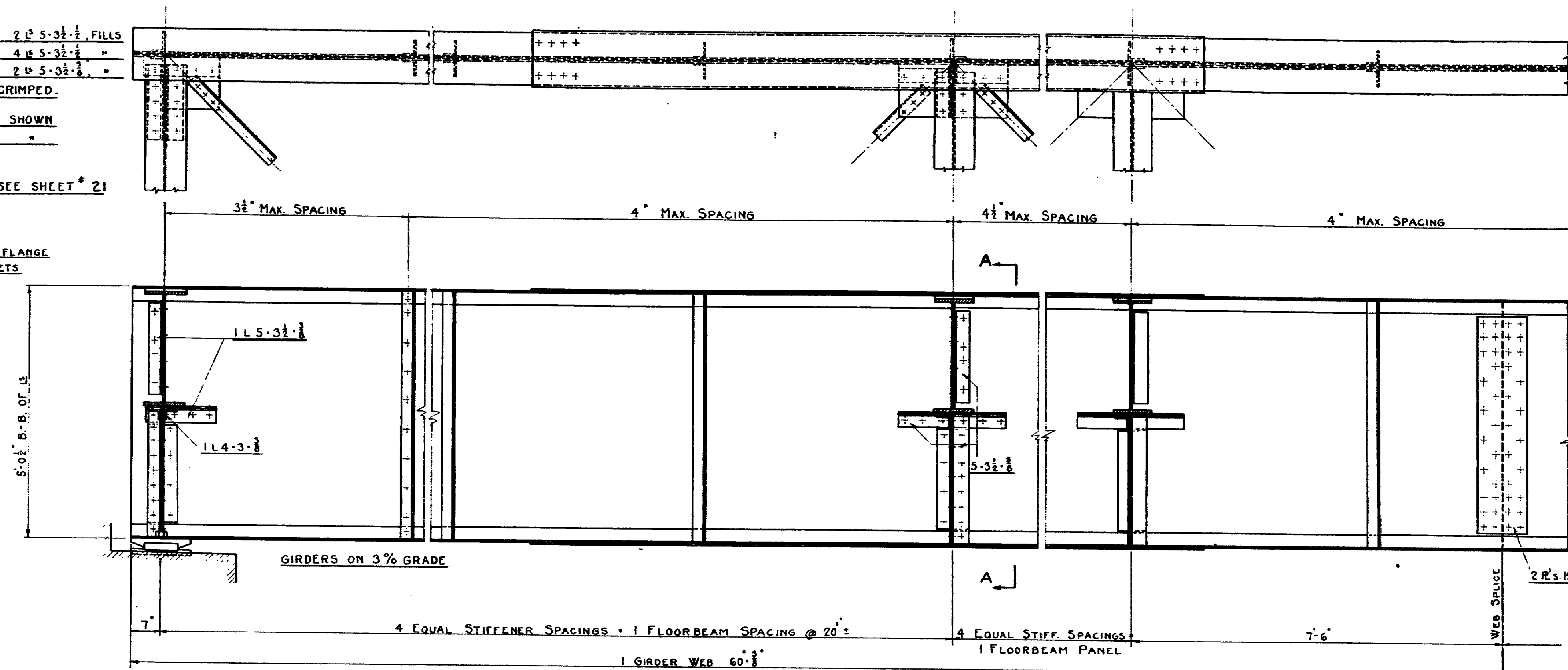
DRAWING NUMBER
RS 2922-29
AUGUST 6, 1931



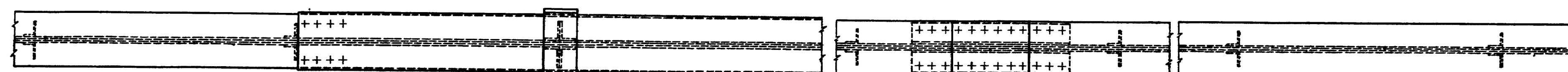
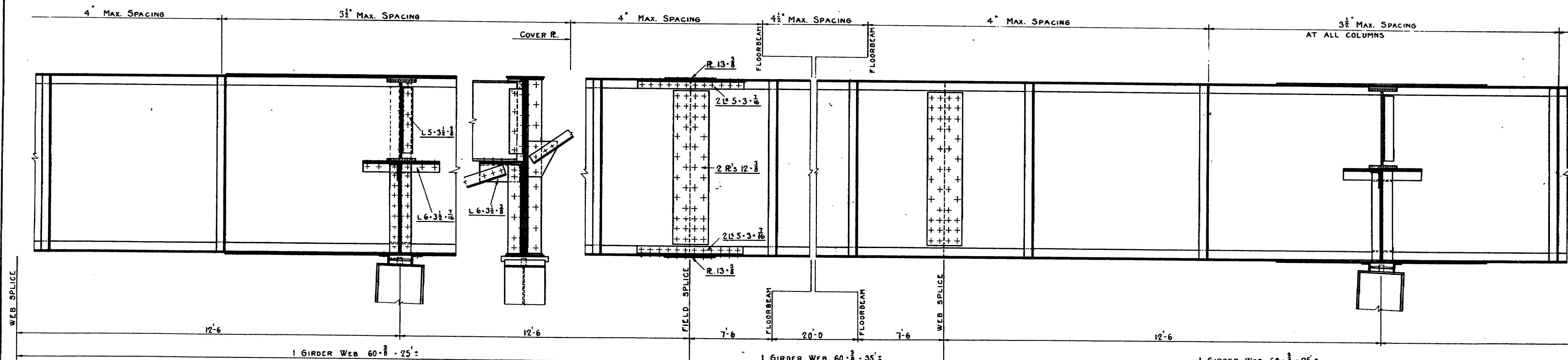
NOTE: END STIFFENERS AT END SUPPORTS 2 L 5-3/8" x 1/2" FILLS
 " " " INT. " 4 L 5-3/8" x 1/2" " "
 STIFFENERS AT INT. FLOORBEAMS 2 L 5-3/8" x 1/2" " "
 OTHER STIFFENERS 2 L 4-3/8" x 1/2" CRIMPED.
 ALL GIRDER SPLICES SAME AS SHOWN
 ALL COVER-PLATE ENDS " " "
 ALL GUSSETS 3/8" PLATES
 FOR DETAILS AT GABLE BENTS SEE SHEET # 21



END VIEW



SECTION A-A



APPROVED *Robinson & Steinman*
D. B. Steinman
 CONSULTING ENGINEERS

WALDO-HANCOCK BRIDGE
 OVER
 PENOBSCOT RIVER NEAR BUCKSPORT MAINE

VIADUCT SPANS
 GIRDER DETAILS

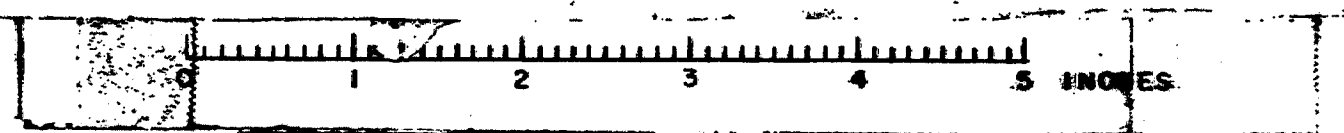
SCALE 3/4" = 1'-0"

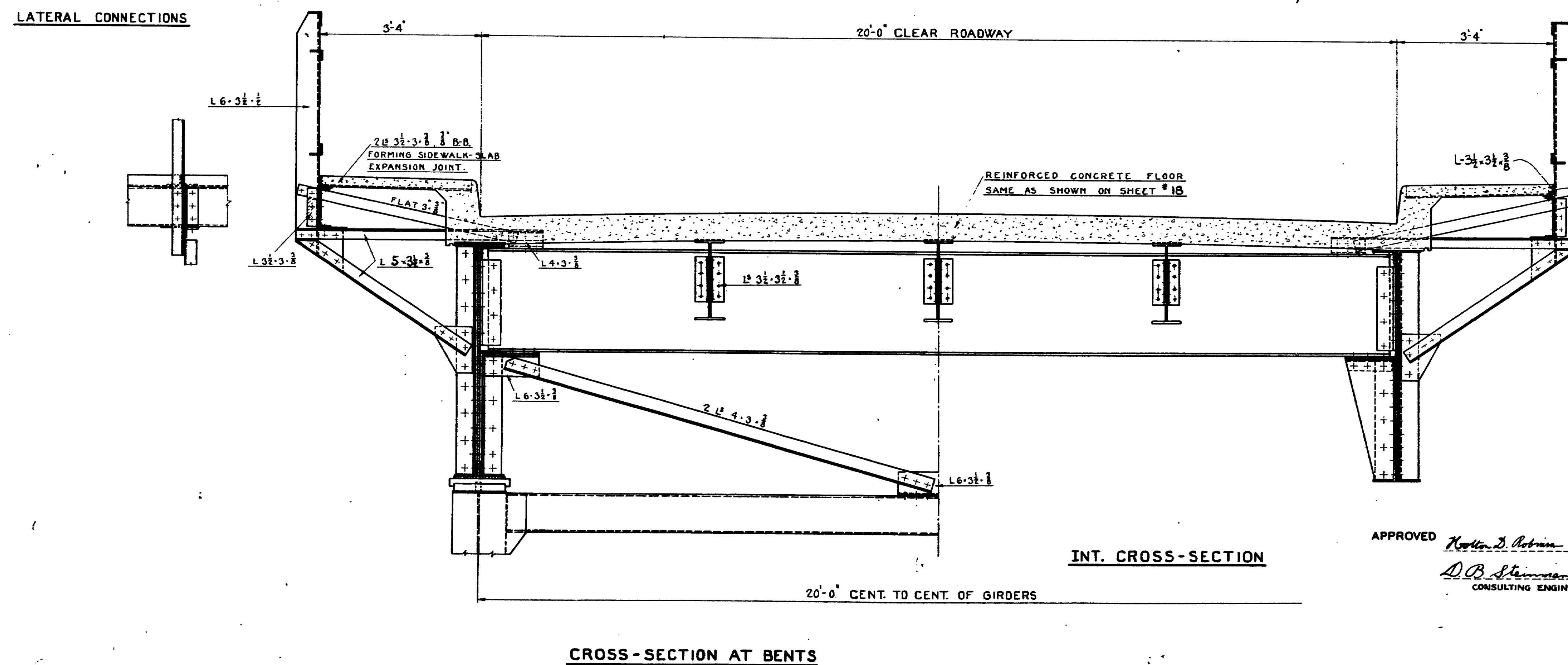
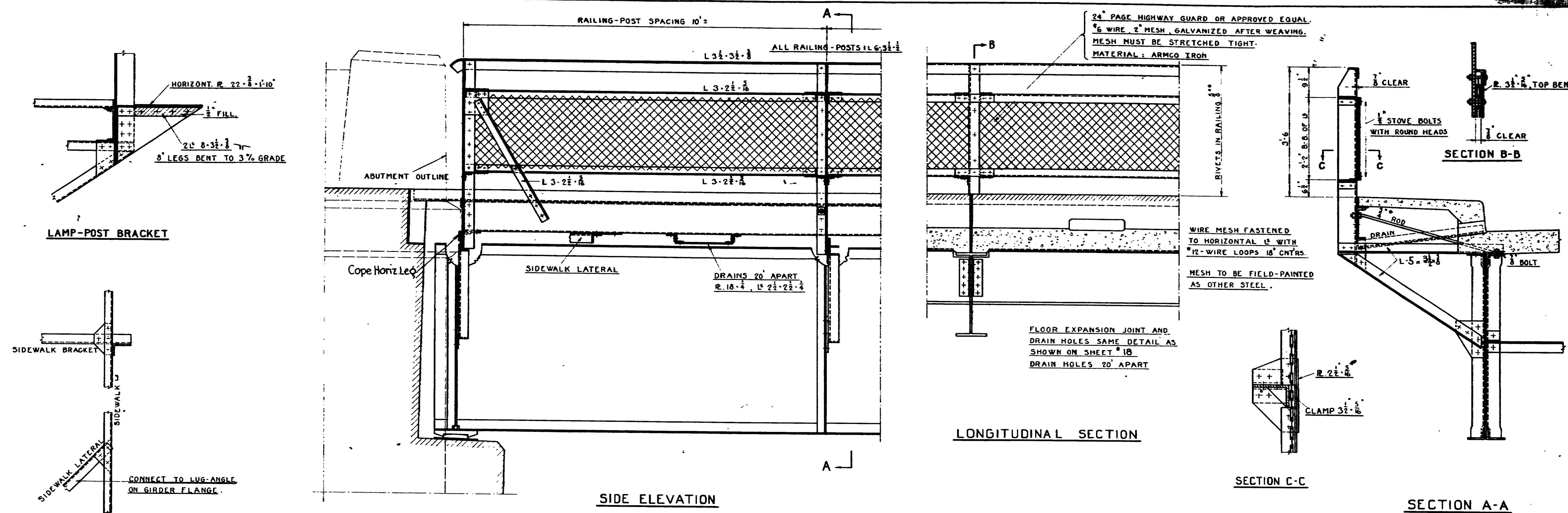
ROBINSON AND STEINMAN
 CONSULTING ENGINEERS
 NEW YORK - BUCKSPORT

DRAWING NUMBER
 RS 2922-30
 AUGUST 5, 1930

Rev. Feb. 5, 1931

108-138





WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

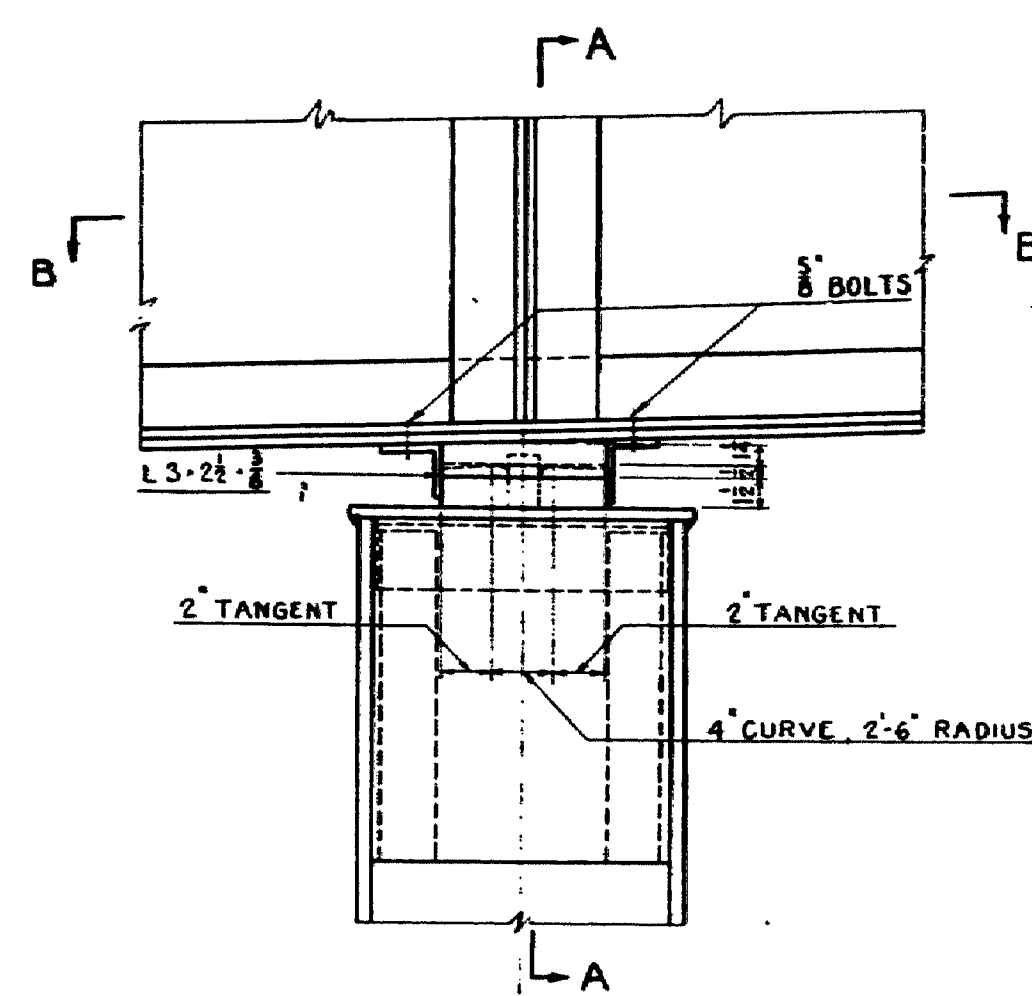
VIADUCT SPANS
CROSS SECTION AND RAILING

SCALE $\frac{3}{4}$ " = 1'-0"

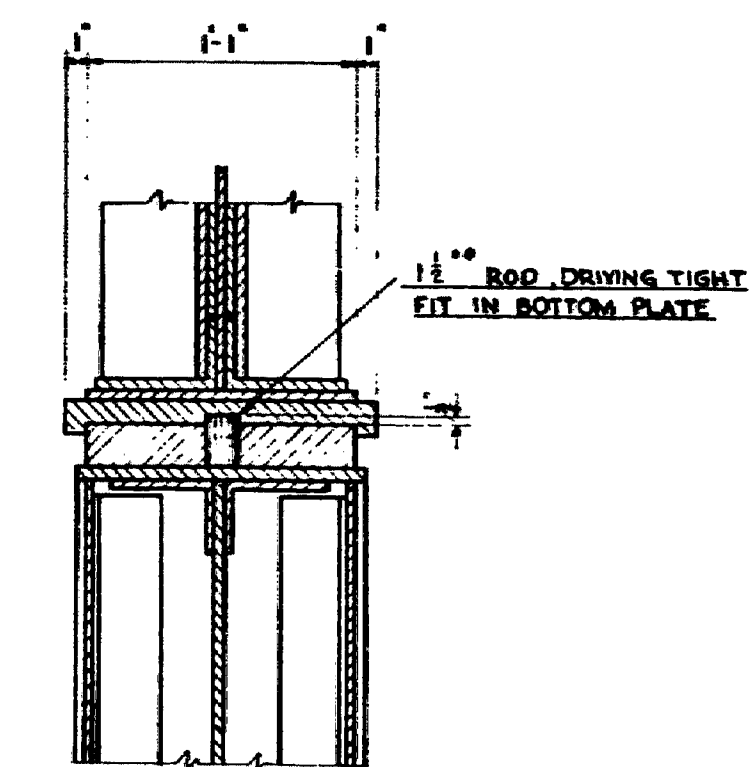
**ROBINSON AND STEINMAN
CONSULTING ENGINEERS
NEW YORK — BUCKSPORT**

DRAWING NUMBER
RS 2922-
AUGUST 1964

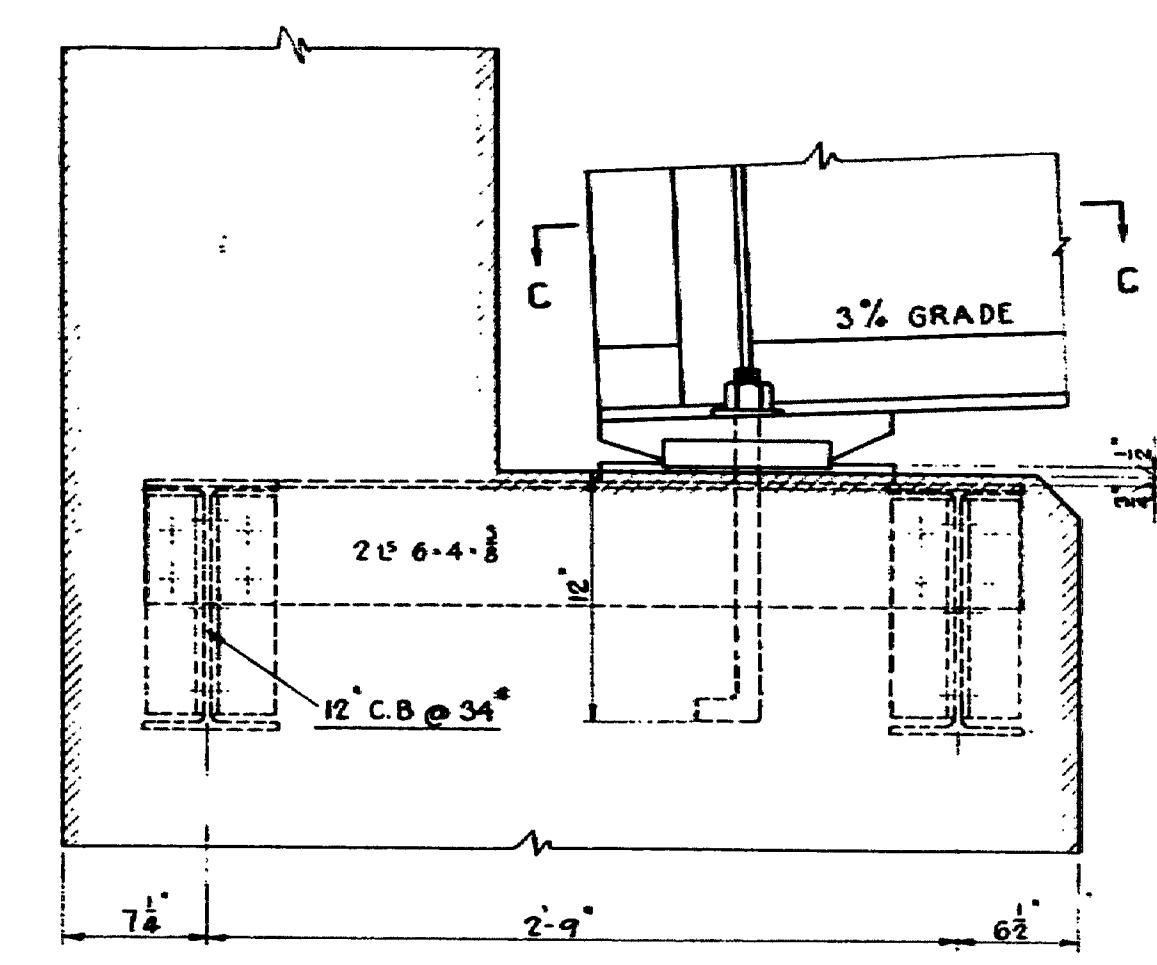
Rev. Feb. 20, 1931
Rev. Feb. 5, 1931



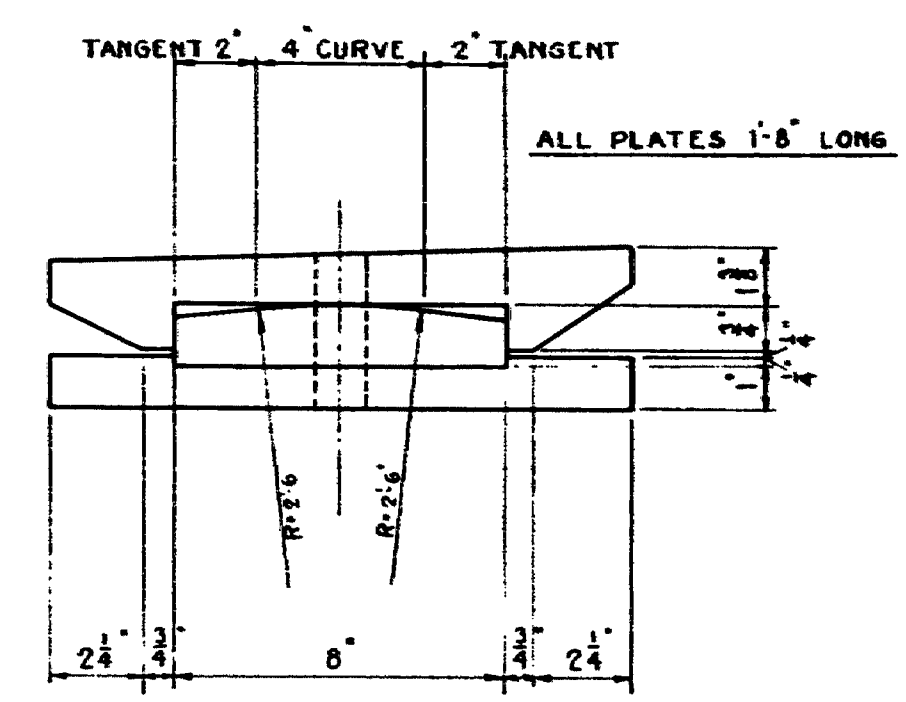
BEARING AT COLUMNS



SECTION A-A

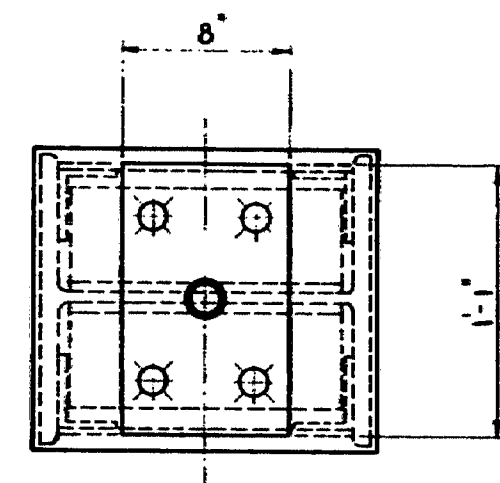


ABUTMENT BEARING

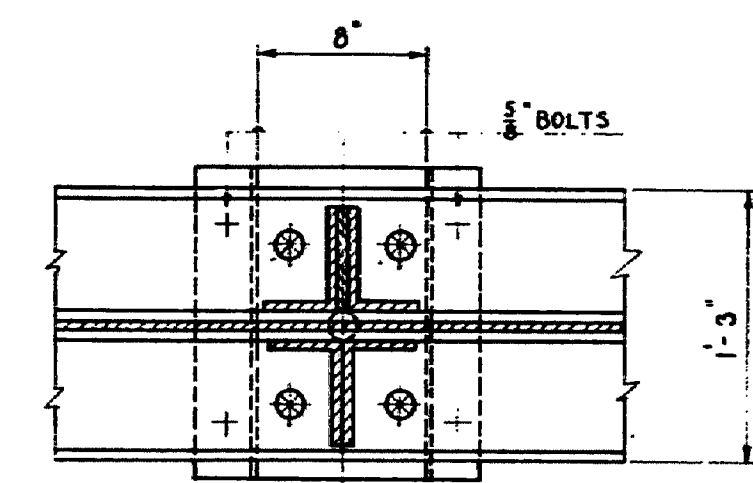


BEARING PLATES

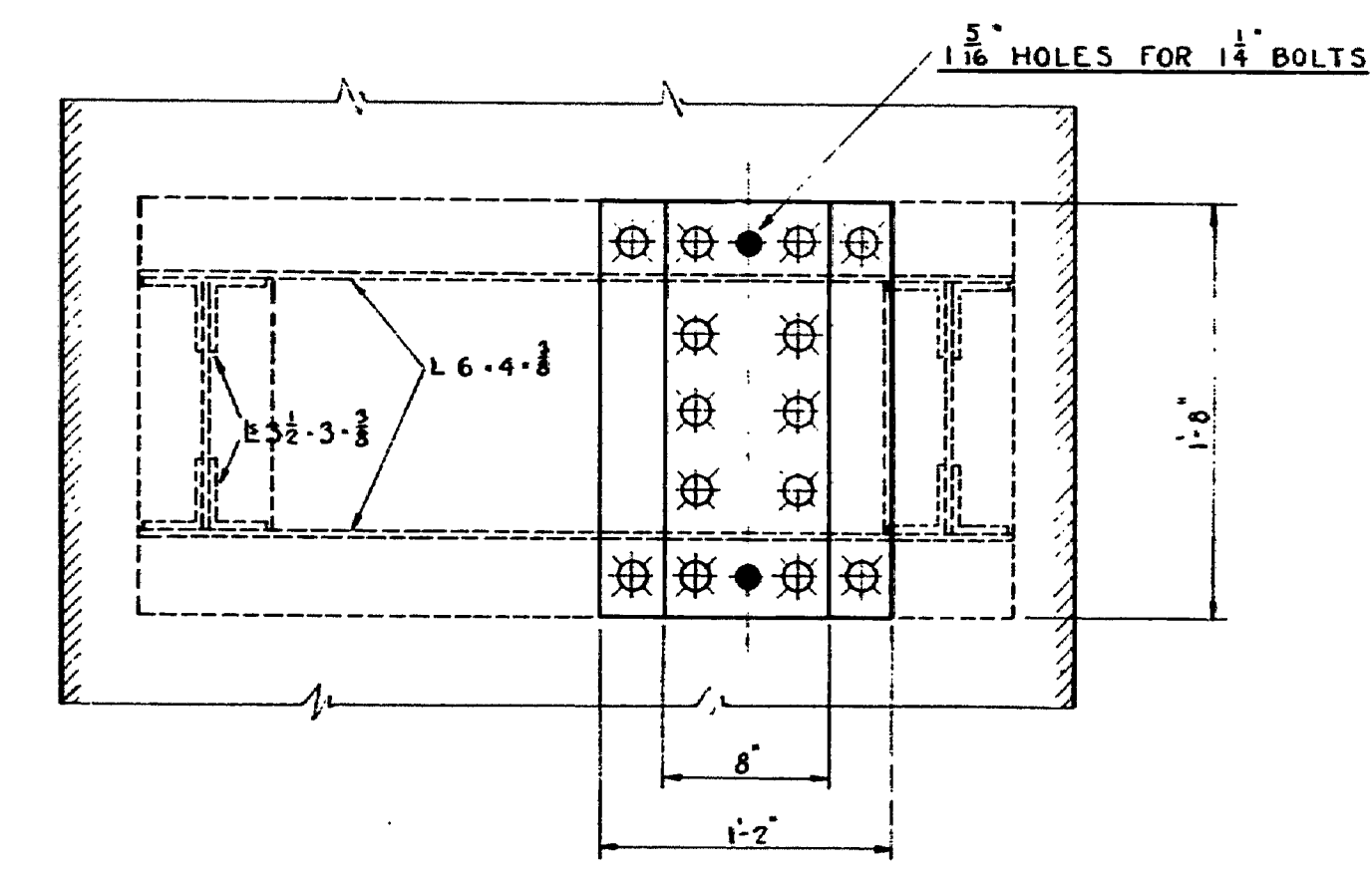
SCALE 3" = 1'-0"



COLUMN CAP
WITH BEARING PLATE

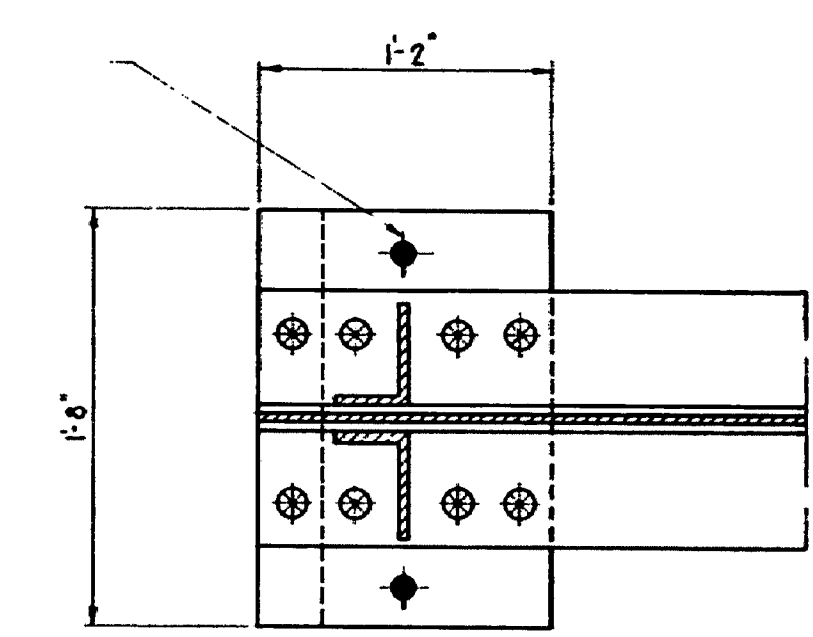


SECTION B-B

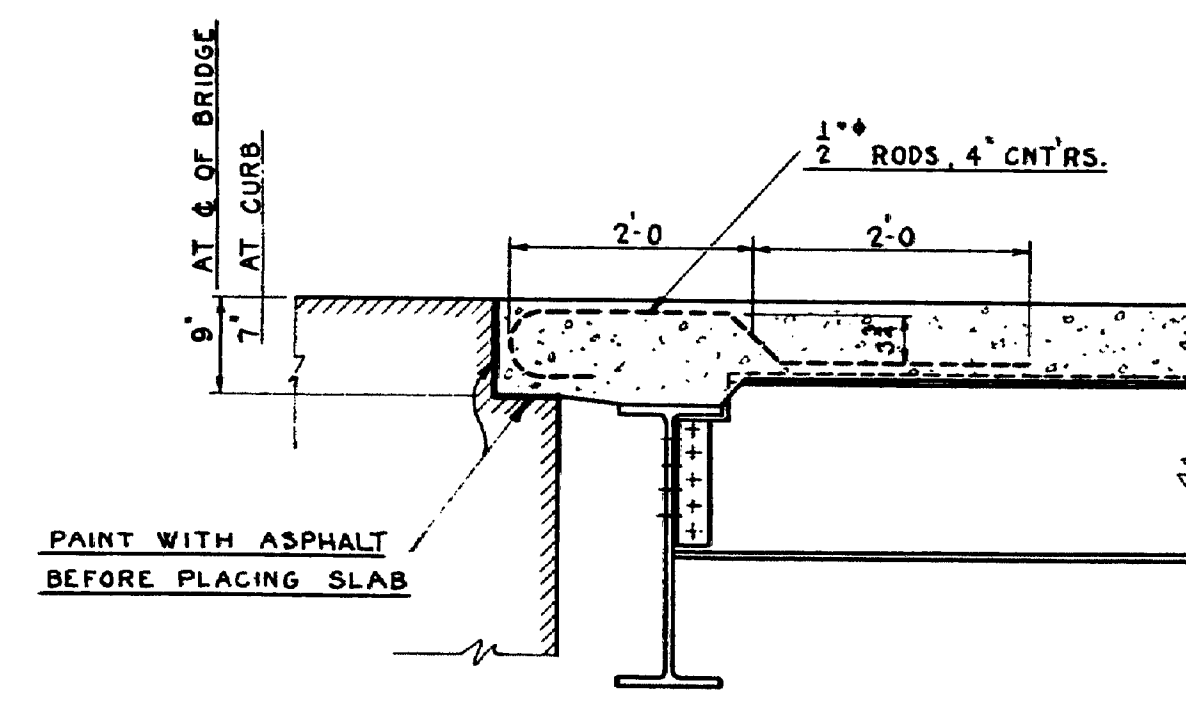


BEARING PLATES AND GRILLAGE STEEL

FURNISHED BY SUPERSTRUCTURE - PLACED BY SUBSTRUCTURE CONTRACTOR



SECTION C-C



ROADWAY SLAB AT ABUTMENT

SCALE 3/4" = 1'-0"

APPROVED *Horton D. Robinson*
D.B. Steinman
CONSULTING ENGINEERS

WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

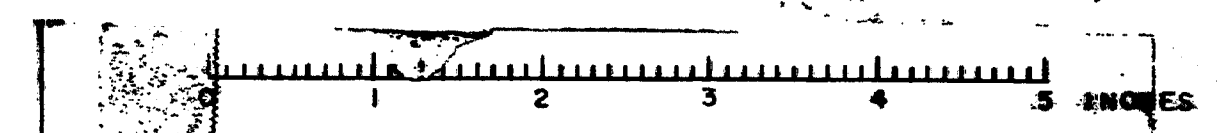
VIADUCT SPANS
MISCELLANEOUS DETAILS

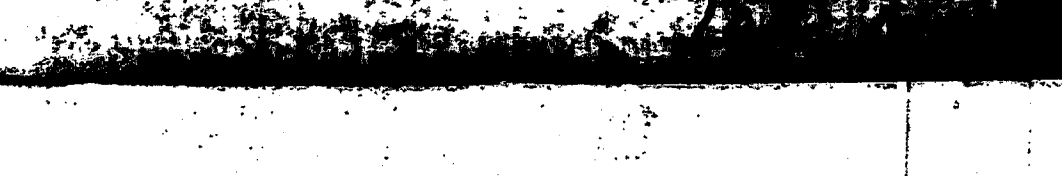
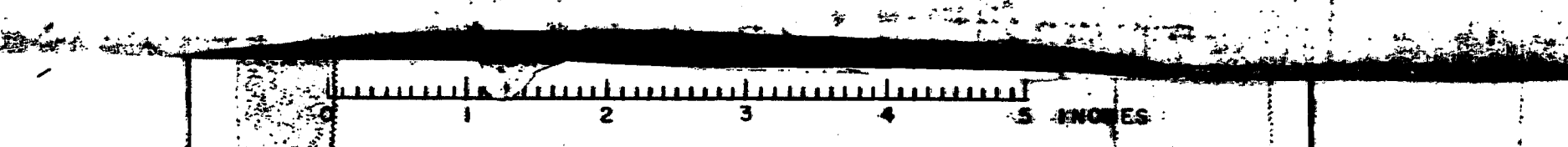
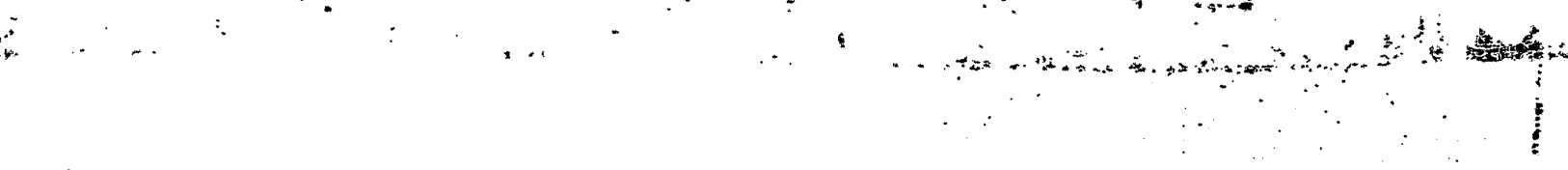
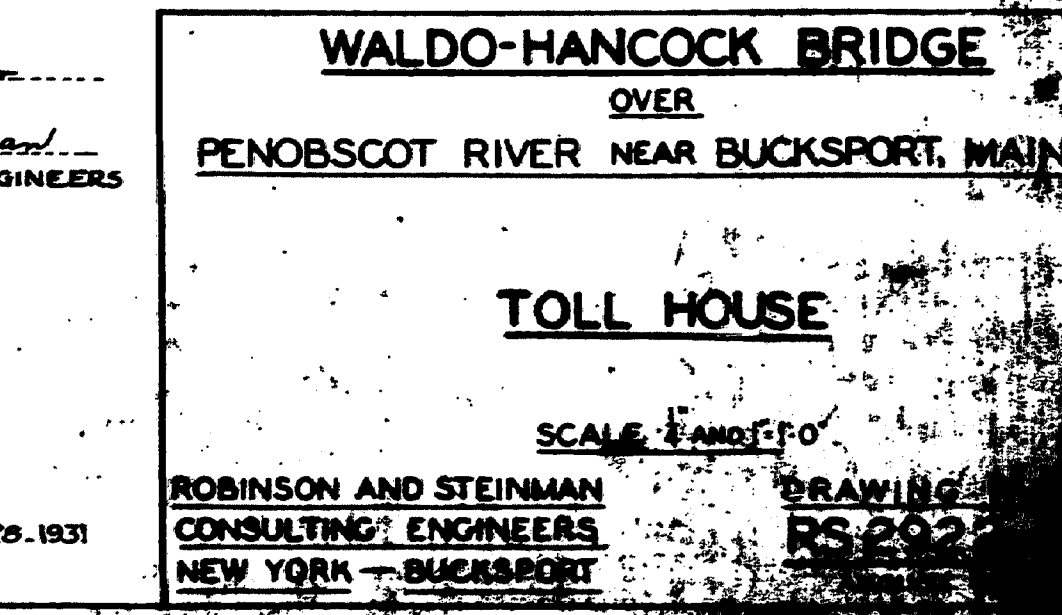
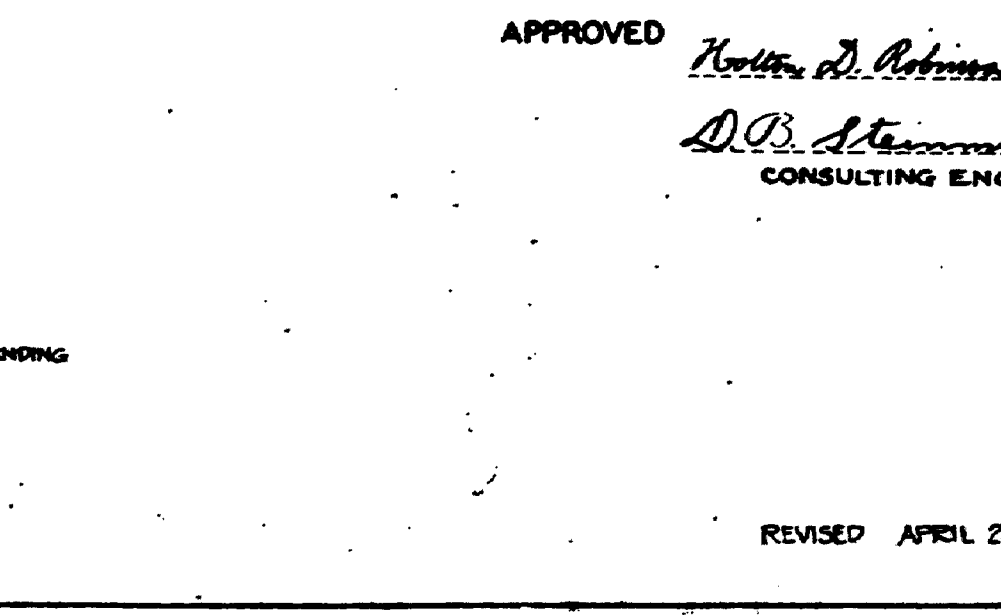
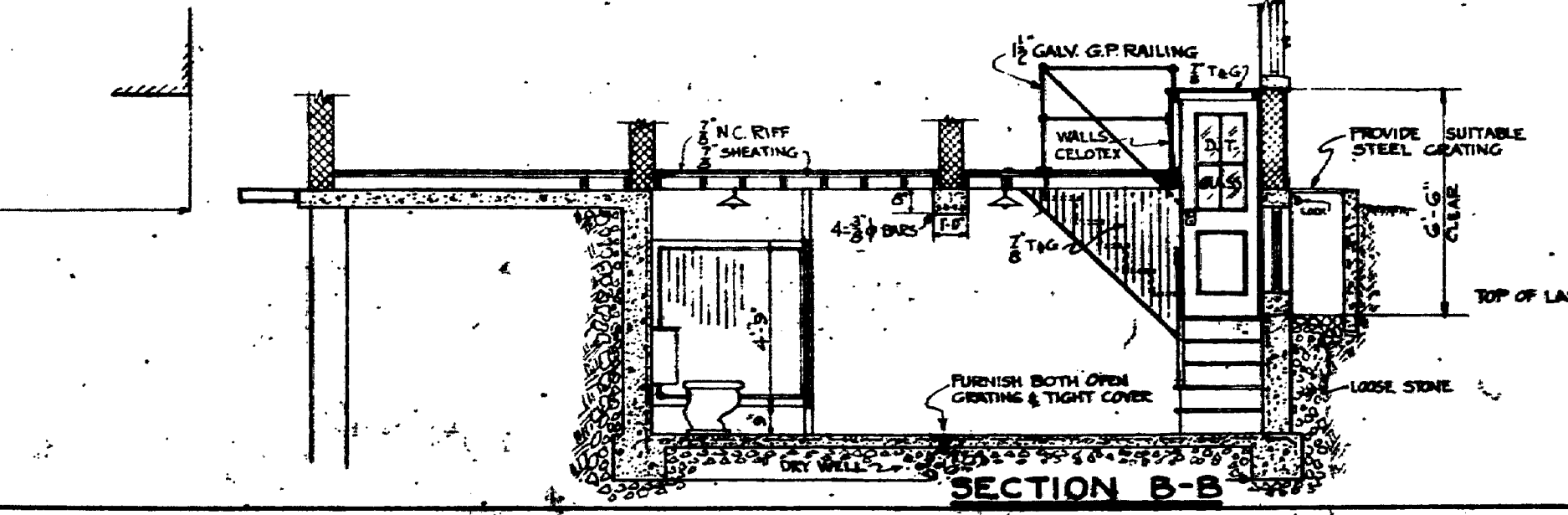
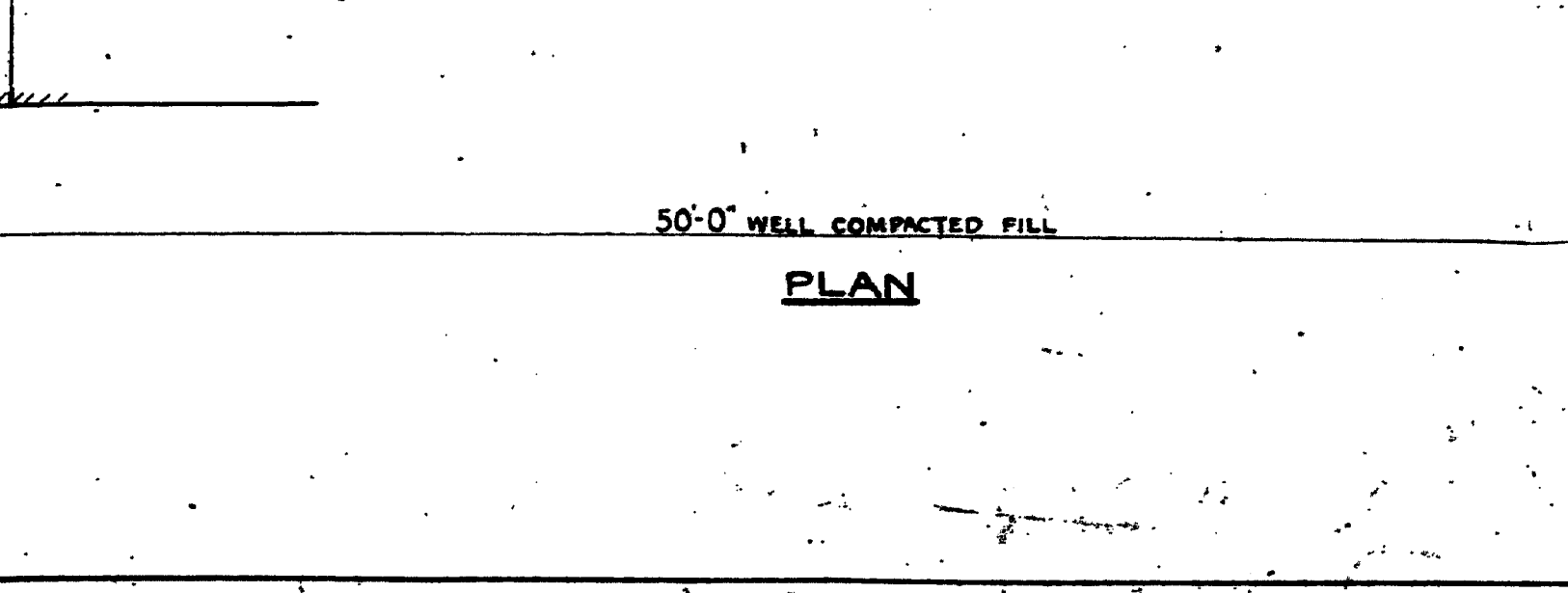
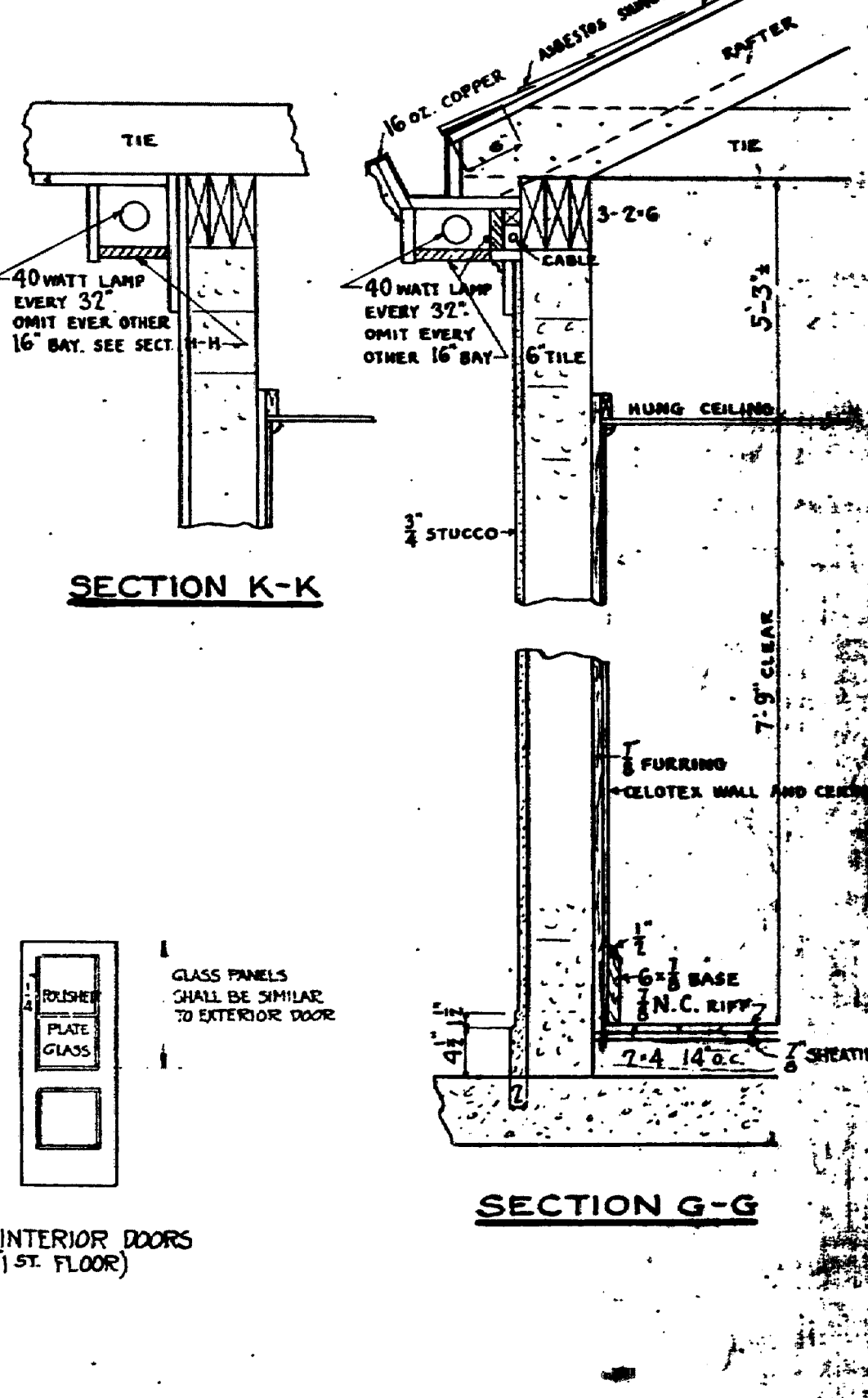
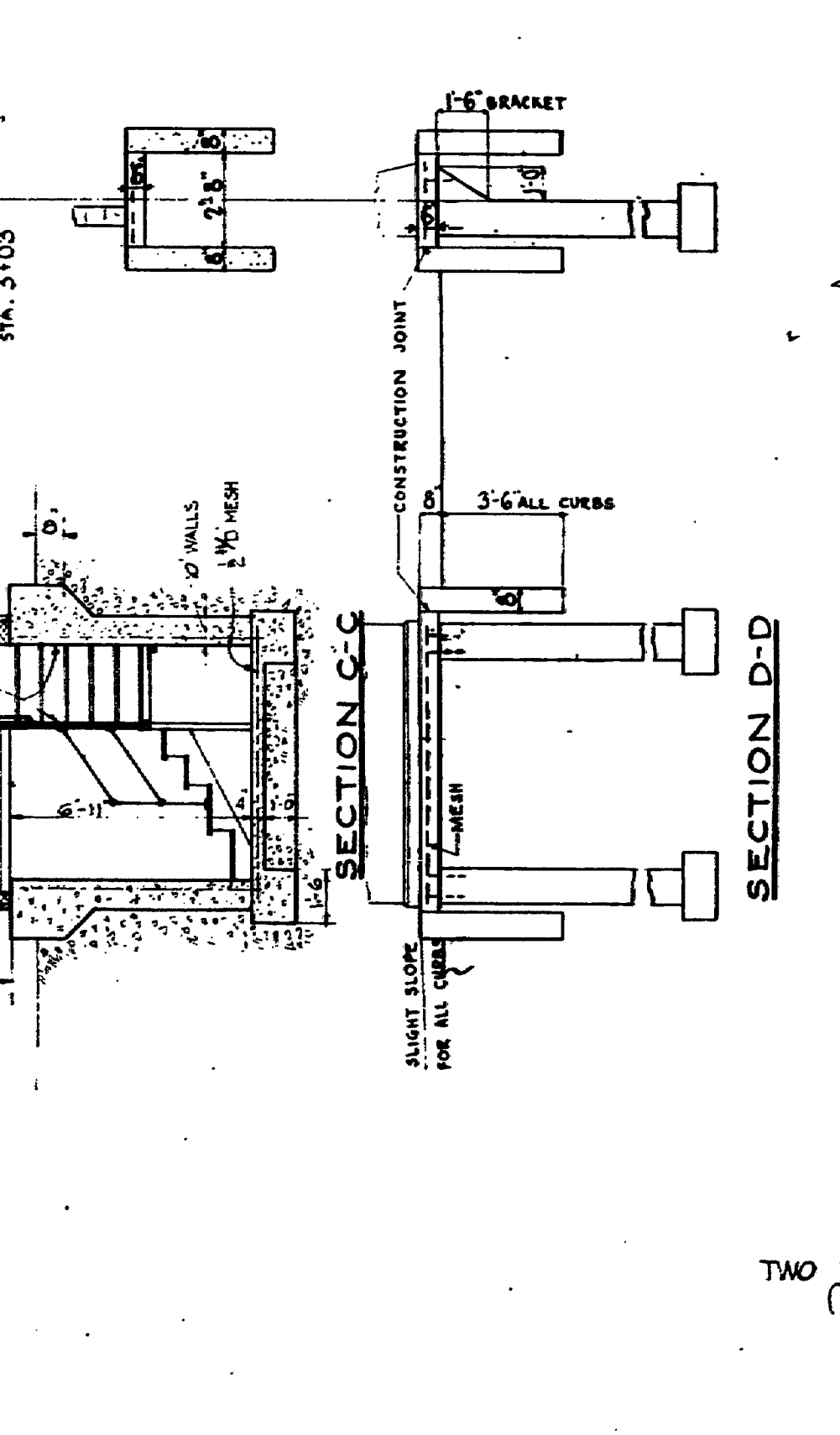
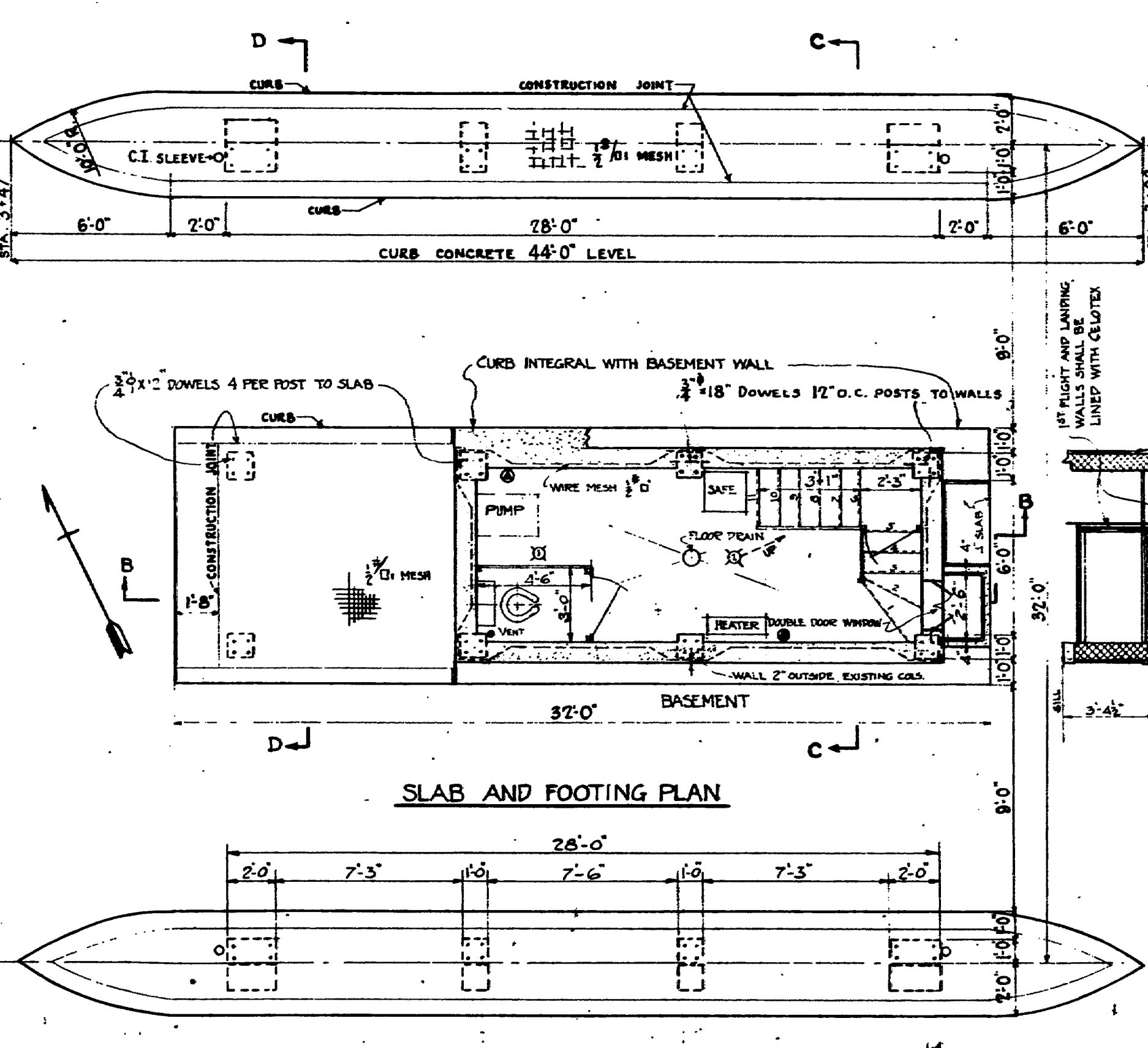
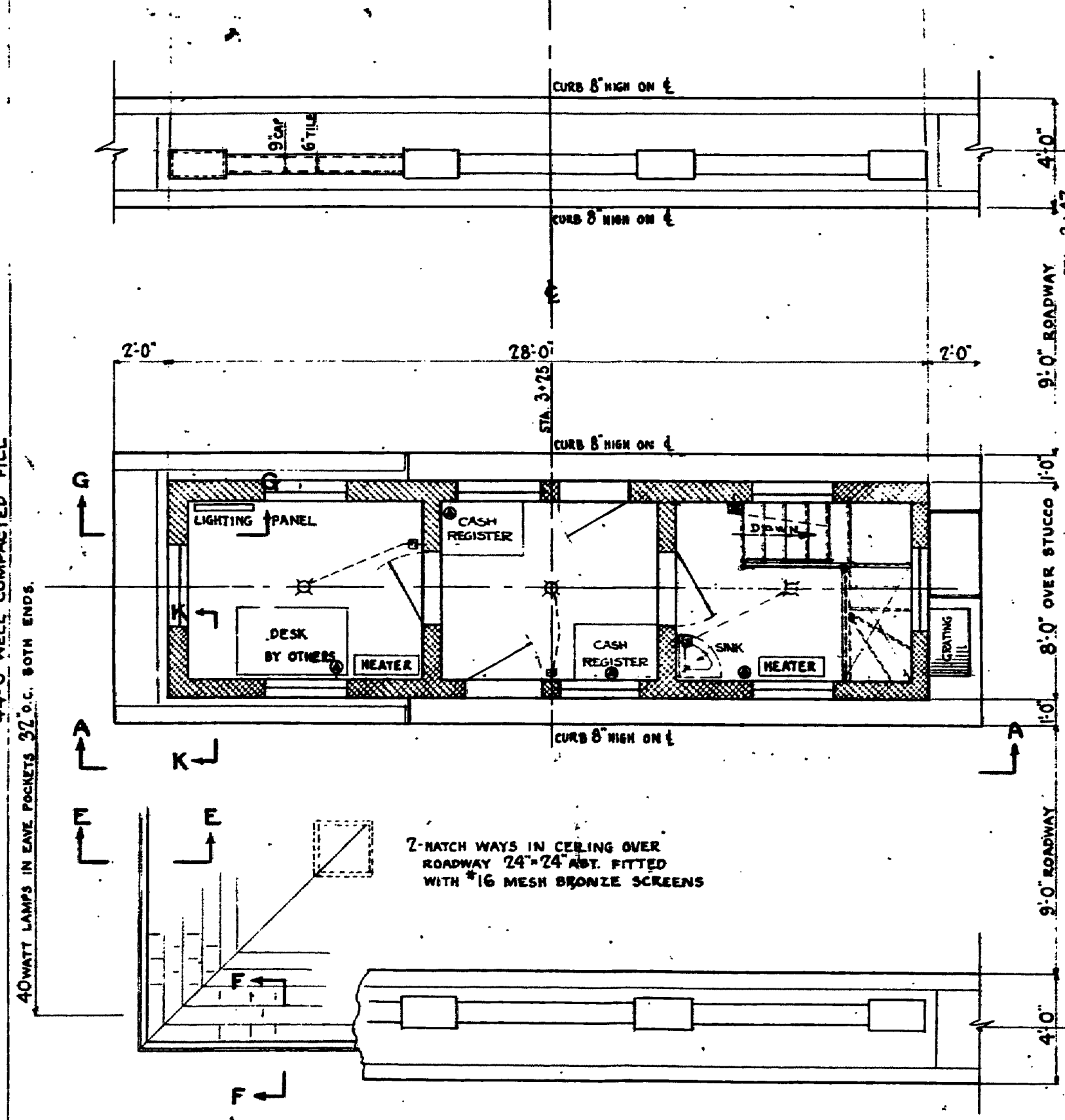
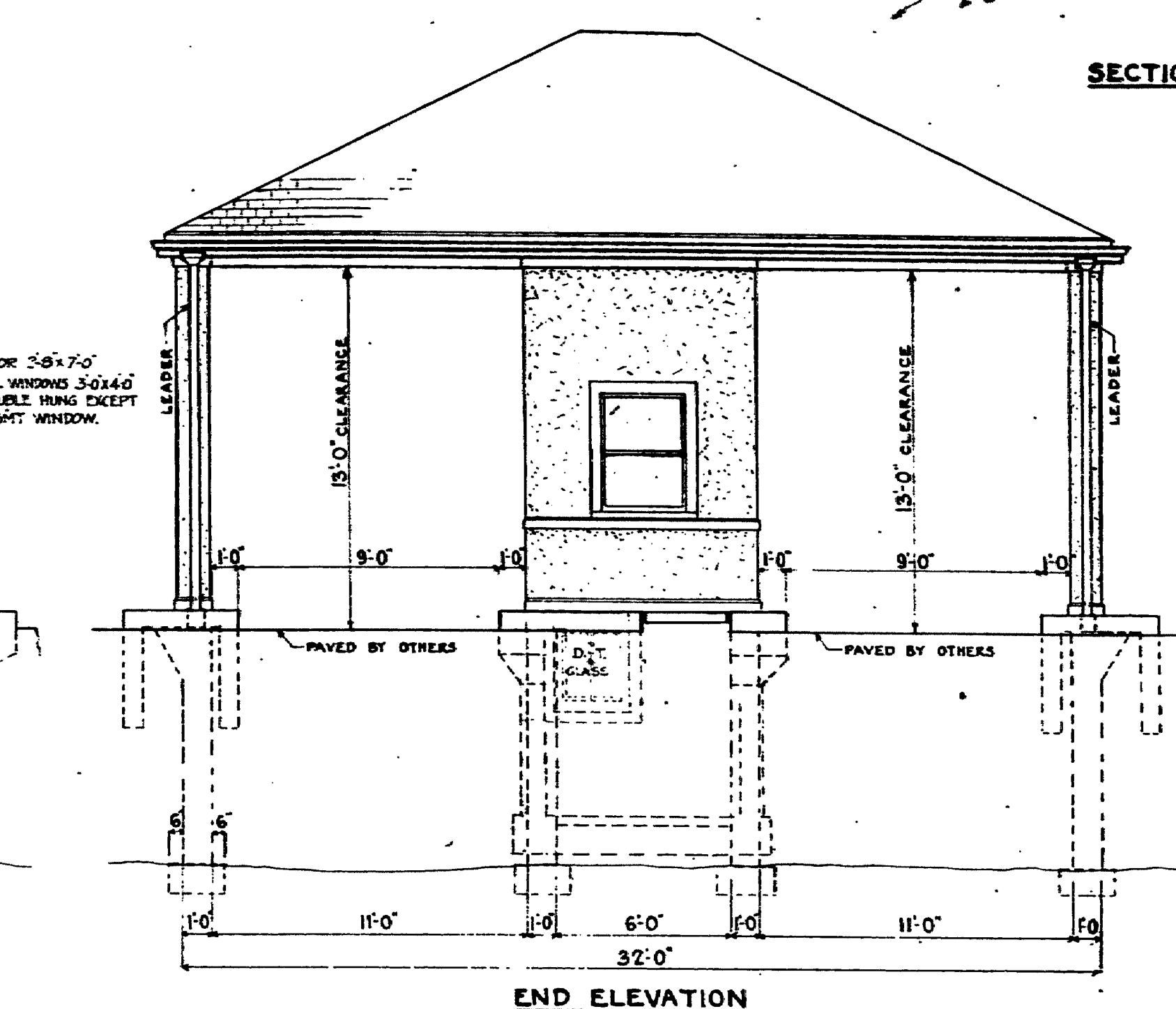
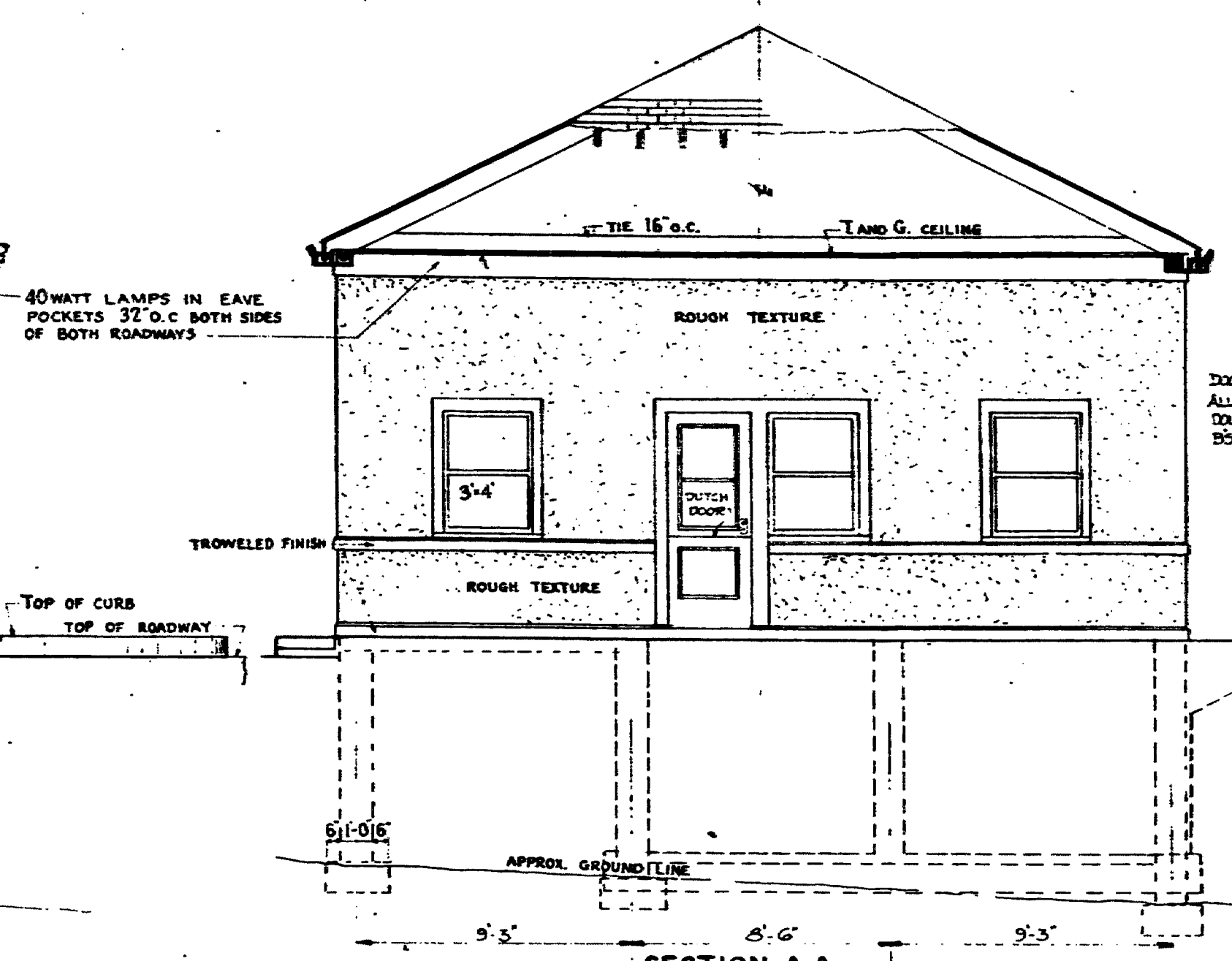
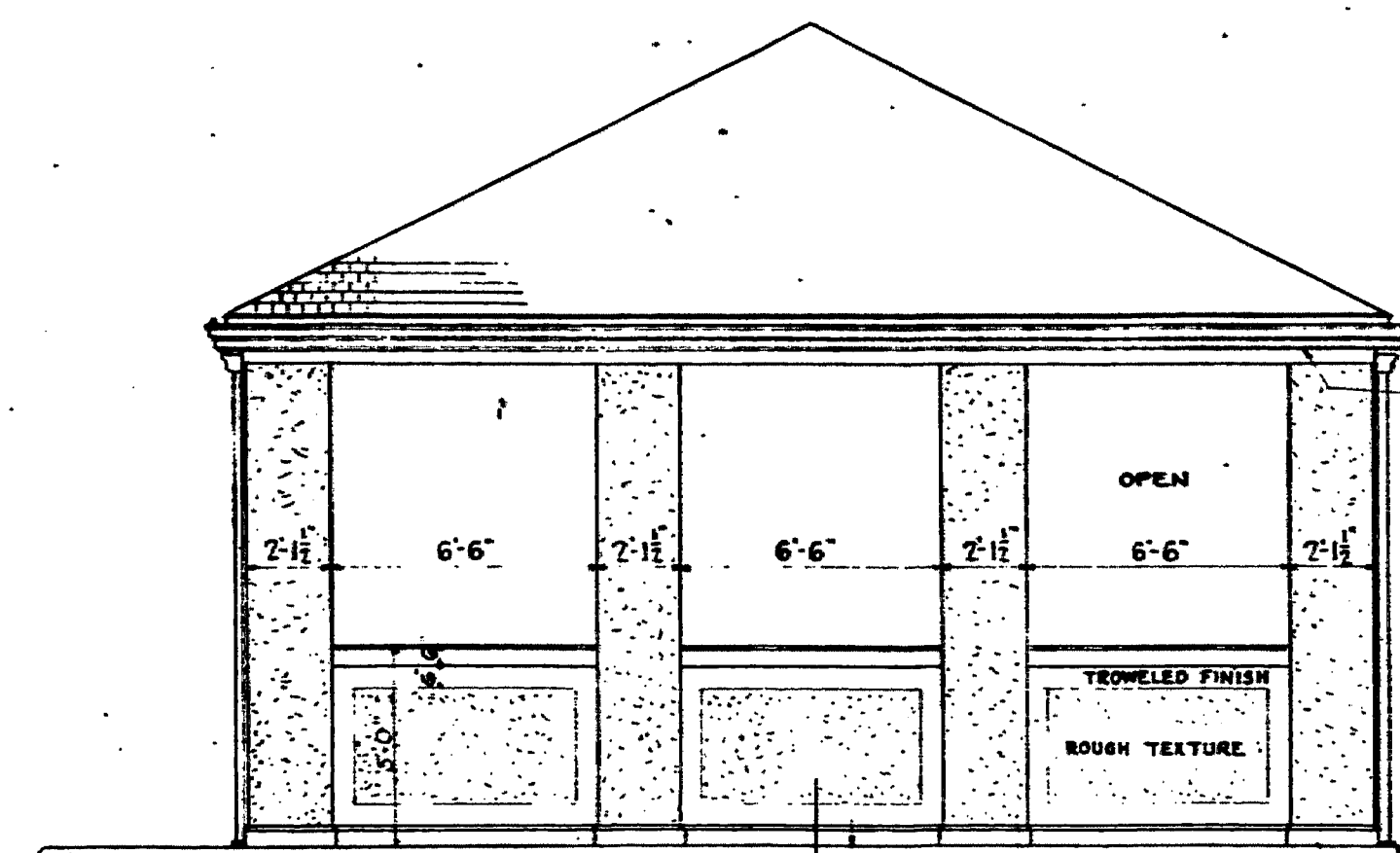
SCALE 1 1/2" = 1'-0" AND NOTED

ROBINSON AND STEINMAN
CONSULTING ENGINEERS
NEW YORK - BUCKSPORT

DRAWING NUMBER
RS 2522-32

REVISED FEB. 20, 1931
REVISED SEPT. 8, 1930





APPROVED *Walter D. Robinson*
D.B. Steinman
 CONSULTING ENGINEERS

WALDO-HANCOCK BRIDGE
 OVER
 PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

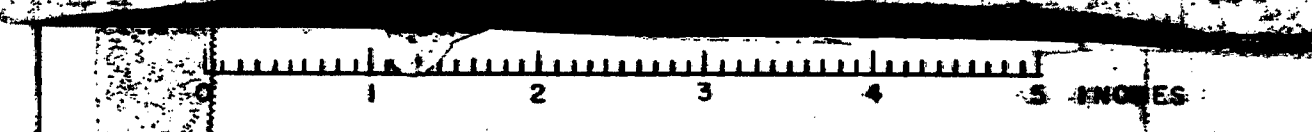
TOLL HOUSE

SCALE: 1" = 4'-0"

ROBINSON AND STEINMAN
 CONSULTING ENGINEERS
 NEW YORK - BUCKSPORT

DRAWING
 RS 202

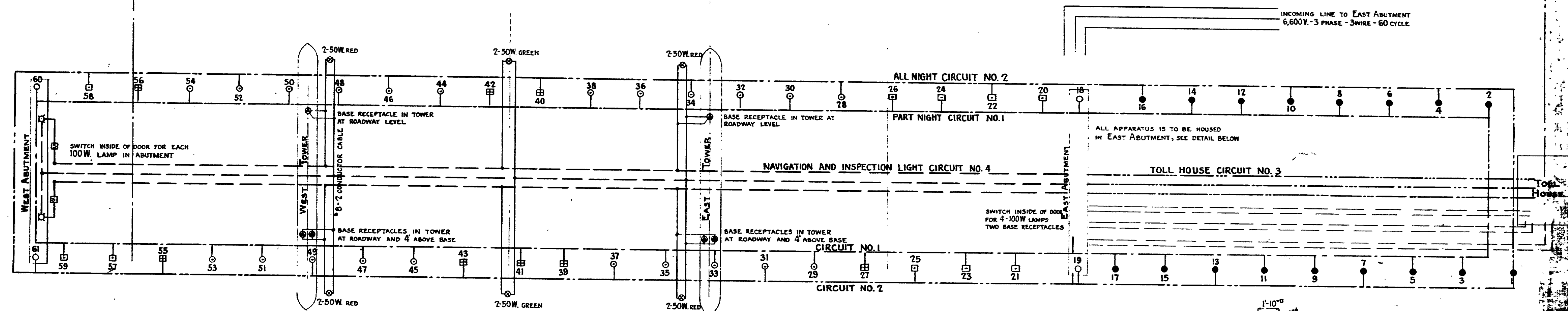
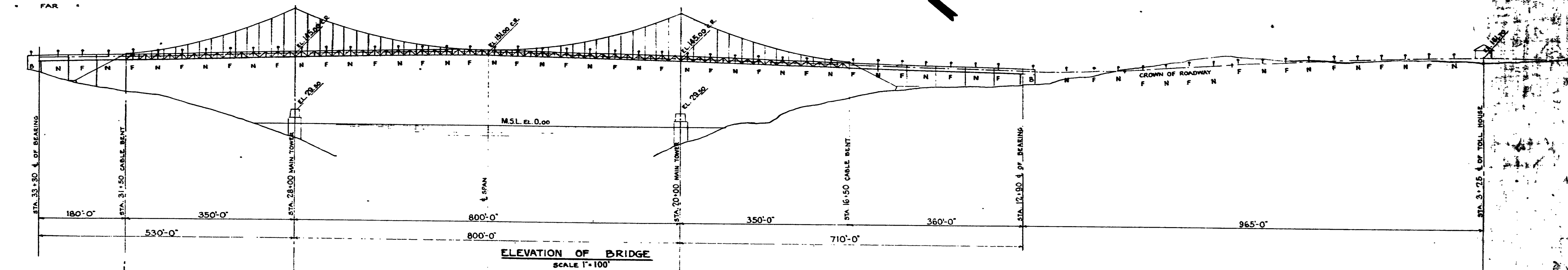
REVISED APRIL 28, 1931



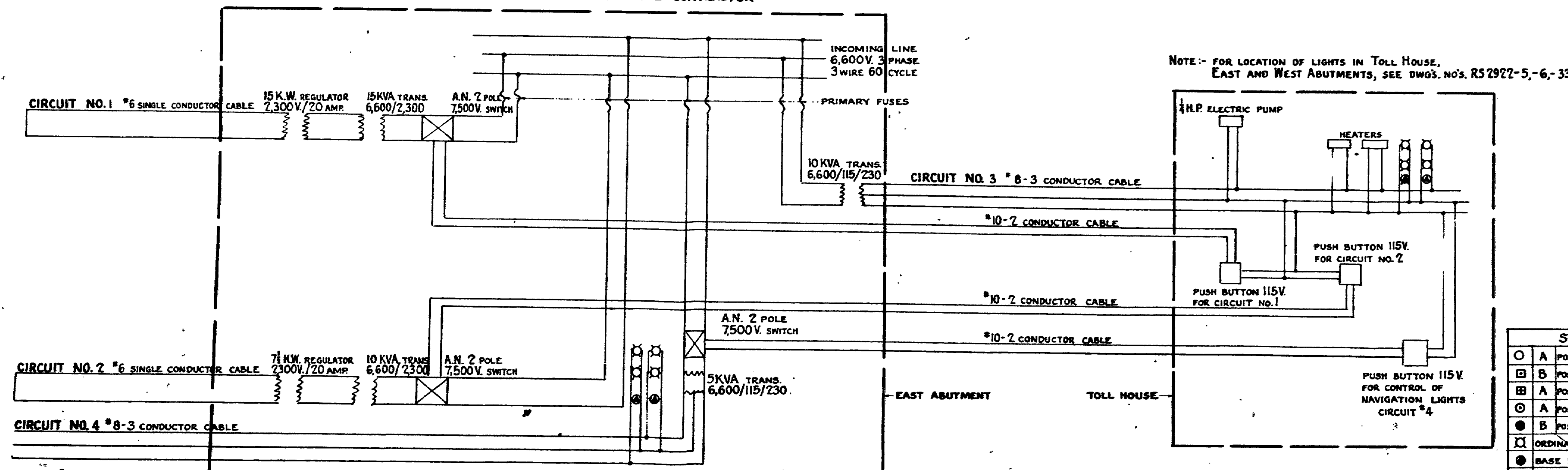
WEST
(PROSPECT)

EAST
(VERONA)

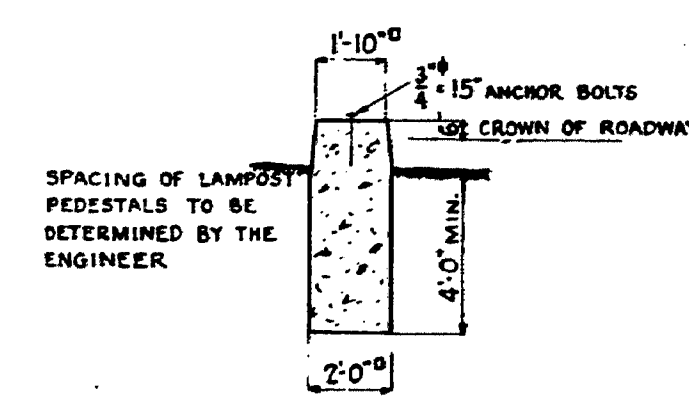
B DENOTES LAMPS BOTH SIDES
N . . . NEAR SIDE
F . . . FAR



NOTE: SUPPORTS AND HOUSING FOR ELECTRICAL EQUIPMENT INSIDE OF ABUTMENT TO BE FURNISHED BY SUPERSTRUCTURE CONTRACTOR



NOTE: FOR LOCATION OF LIGHTS IN TOLL HOUSE, EAST AND WEST ABUTMENTS, SEE DWGS. NOS. R52922-5, -6, -33



APPROVED *Walter D. Robinson*
D.B. Stearns
CONSULTING ENGINEERS

SYMBOLS			
○	A	POST ON CONCRETE PED.	8' 11" 16"
□	B	POST ON 22" SQ. PL. EXTENSION	12' 11" 20"
⊞	A	POST ON 15" SQ. PL. EXTENSION	8' 11" 16"
○	A	POST ON TOP OF STIFF TRUSS	8' 11" 16"
●	B	POST ON CONCRETE FOUND.	12' 11" 20"
×	ORDINARY OUTLETS		
●	BASE RECEPTACLE		
⊙	DOUBLE NAVIGATION LIGHTS		
⊞	SWITCH		

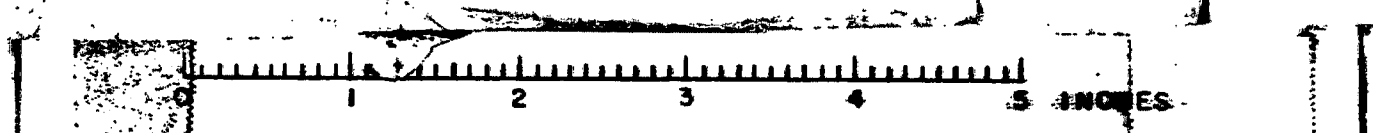
WALDO-HANCOCK BRIDGE
OVER
PENOBSCOT RIVER NEAR BUCKSPORT, MAINE

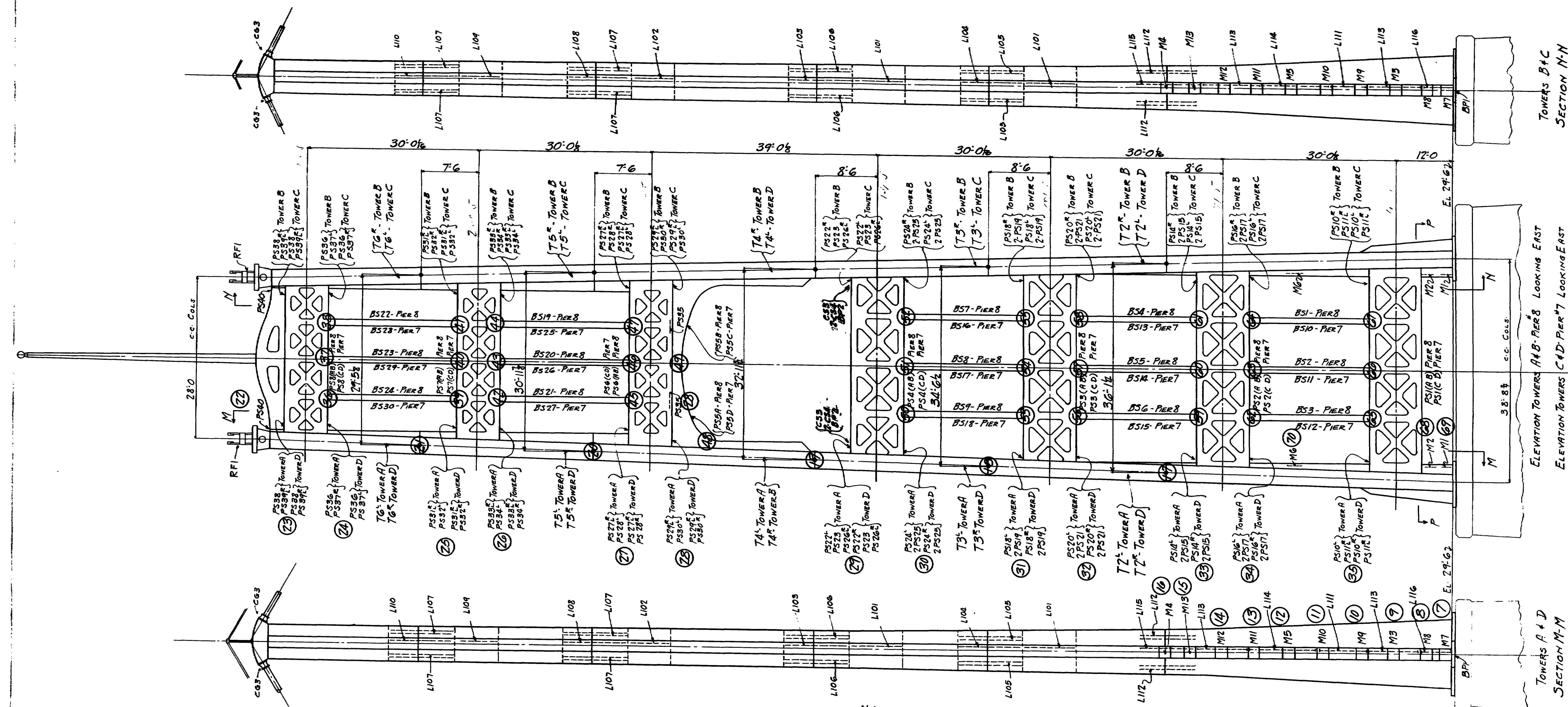
LIGHTING SYSTEM

SCALE AS NOTED

ROBINSON AND STEINMAN
CONSULTING ENGINEERS
NEW YORK - BUCKSPORT

DRAWING NO. 100





Notes:

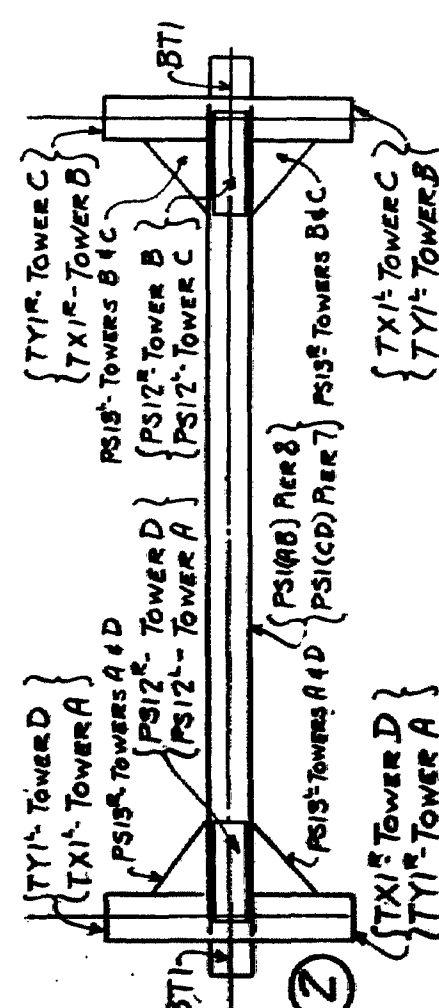
The same numbers are used in match marking all towers, but are prefixed by the respective Tower Letter i.e. "A" Tower numbers will be indicated thus (A5) etc. "B" Tower numbers (B5) etc.

This applies to all numbers except those used for Vertical Bracing all of which will be prefixed by Letter "A" for Pier 8 and Letter "C" for Pier 7

Towers were assembled complete, reamed in position and match marked with paint and steel stamps and "Must" be framed in field "Exactly" as match marked

All members marked "A" are to be assembled to form the Tower Leg "A"

Ends of Portal Struts are to be erected as marked; A,B,C or D indicating the Tower Leg to which it has been assembled & reamed in shop.



Approved
Robinson & Steinman
12/17/30

ERECTOR OF MAIN TOWERS
WALDO-HANCOCK BRIDGE
PENOBSCOT RIVER
BUCKSPORT, MAINE

AMERICAN BRIDGE COMPANY.
DRAWINGS MADE AT TRENTON, N.J.
WORK FABRICATED AT AMBRIDGE, PA.
IN CHARGE OF F.E. FELL
DRAWN BY R.M. G. DATE 12/17/30
CHECKED BY J. DATE 12/17/30
ORDER NO. 63691
SHEET NO. E1

108-143