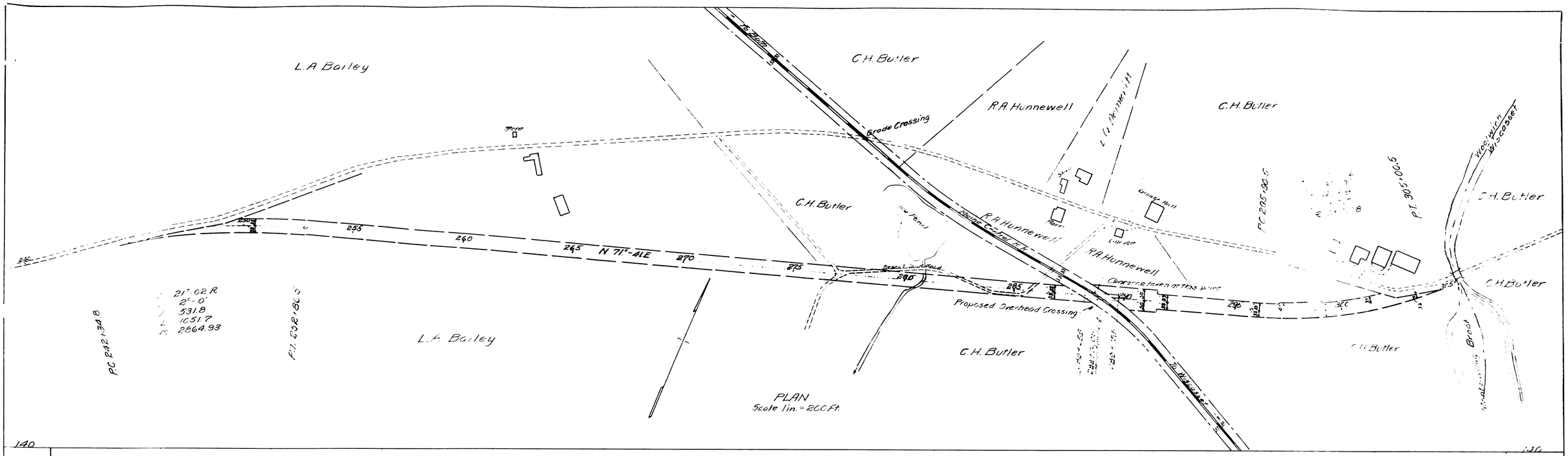


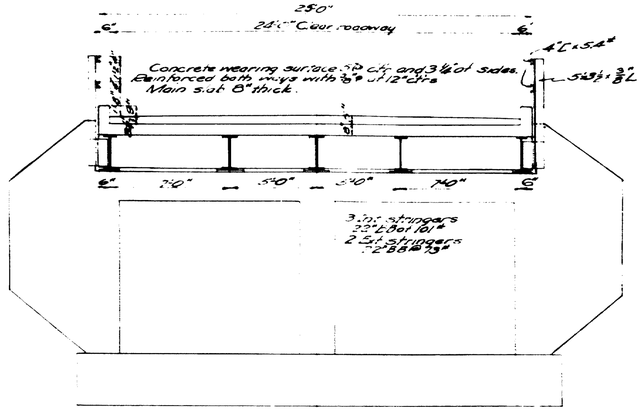
Approved
MAINE STATE HIGHWAY COMMISSION
Francis J. Peaslee Chairman
Leonard E. Hammond
Otis J. Hannigan
Ellwood L. Barrows
Chief Engineer

MAINE STATE HIGHWAY COMMISSION
Plan showing proposed relocation of Highway "D" Woolwich for overhead crossing of the Maine Central Rail Road.

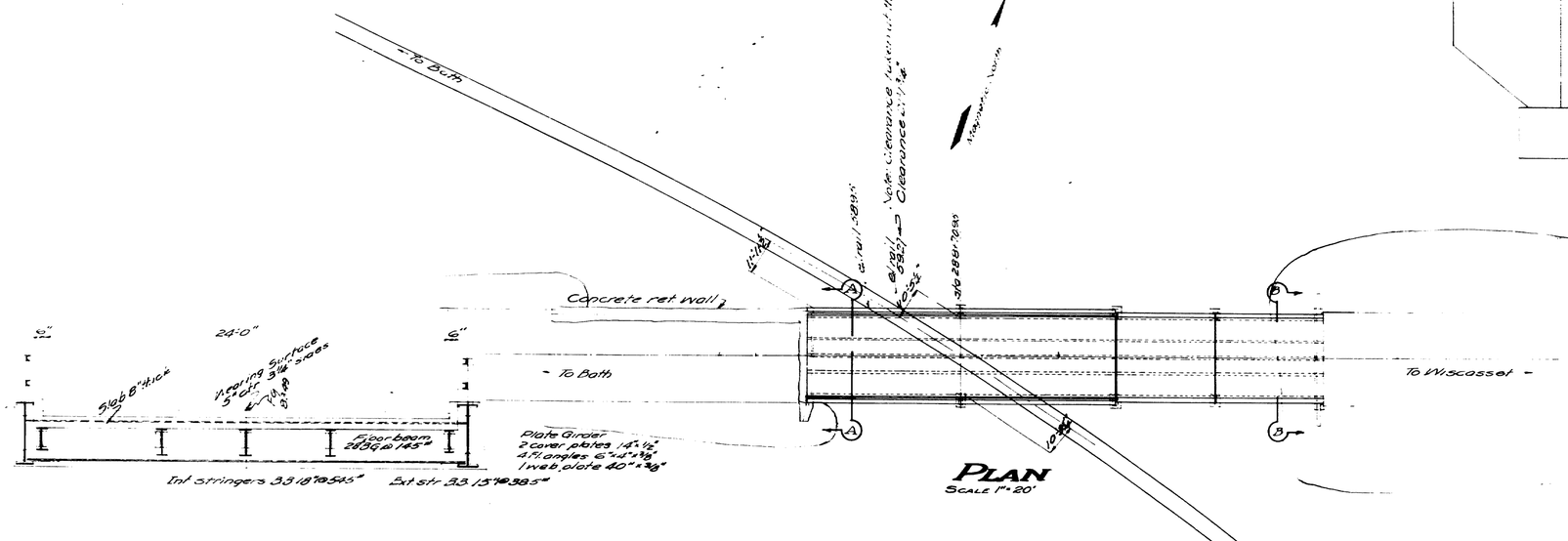
December 1930

15-142

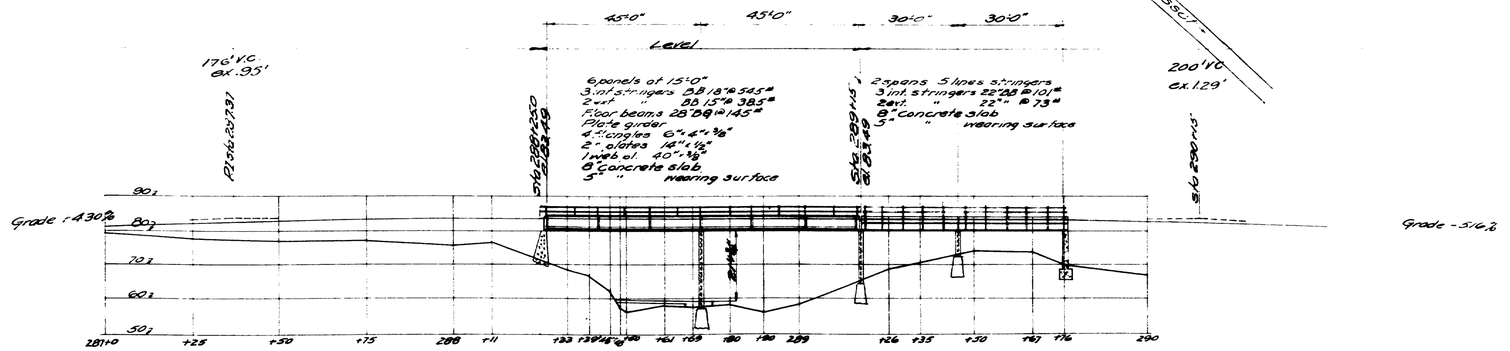
0 1 2 3 4 5 INCHES



SECTION B-B



SECTION A-A



SECTION ALONG ℄

SCALE: HORIZ. 1"=20'

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION

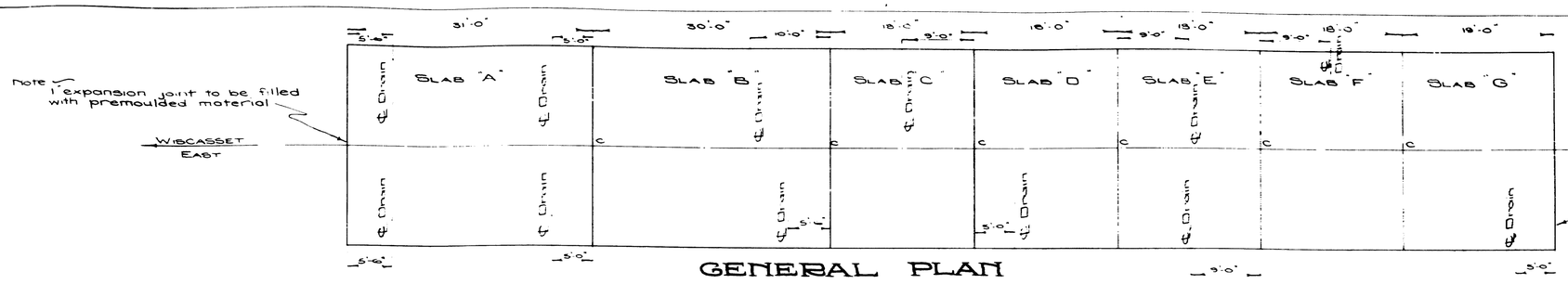
PROPOSED OVERPASS
HIGHWAY "D"
WOOLWICH

GENERAL PLAN

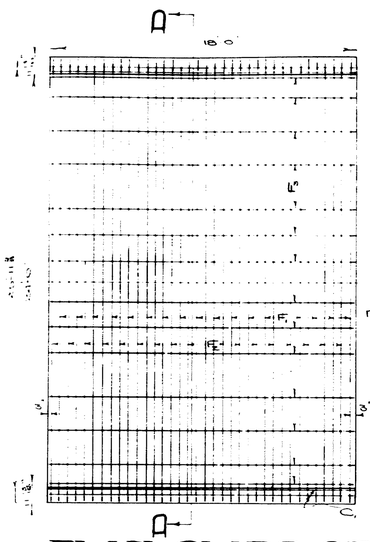
AUGUSTA, ME. DEC. 26, '30

15-145

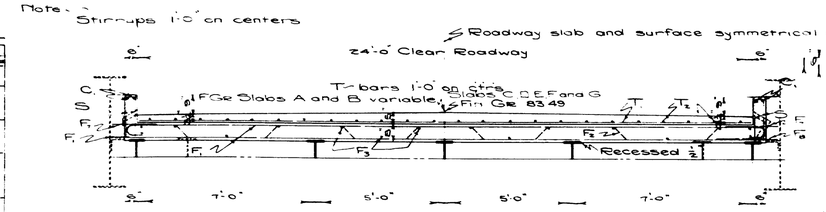
0 1 2 3 4 5 INCHES



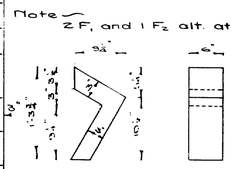
GENERAL PLAN

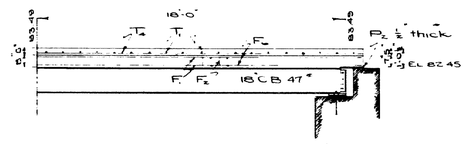


PLAN SLABS C,D,E, AND F

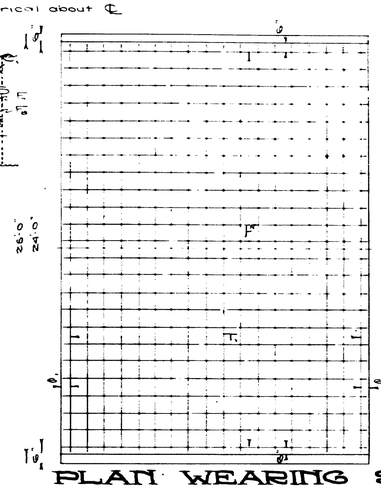


SECTION A-A
AND
SECTION D-D
(See dotted lines)



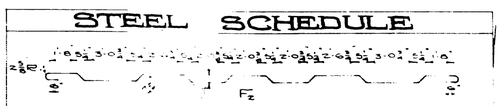


SECTION C-C



PLAN WEARING SUR.
SLABS C,D,E, AND F

STEEL SCHEDULE



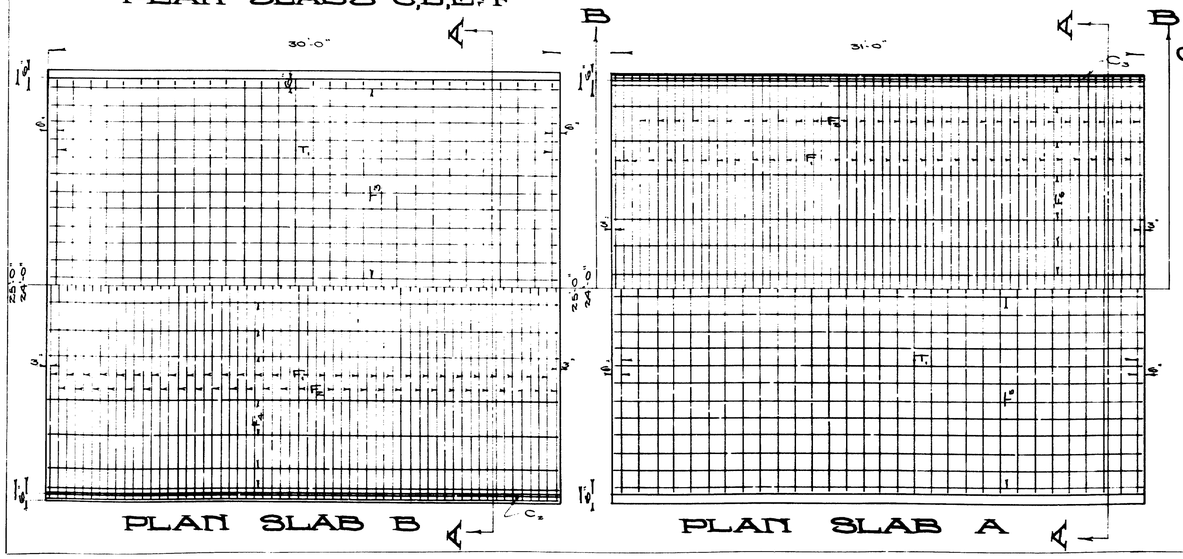
F2 — ⅝ ℄ 150 bars required 28'-1½" long

S

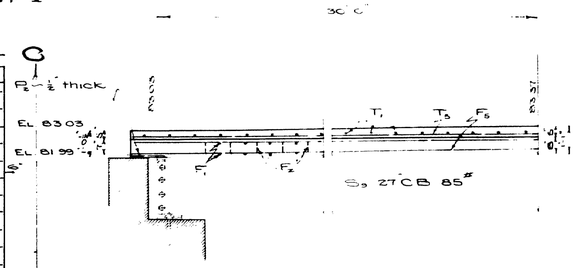
MARK	SIZE	No REQD	LENGTH	LOCATION
S	⅝ ℄	304	3'-1½"	All Curbs 12" o.c.
F1	⅝ ℄	300	24'-9½"	All Slabs
F3	⅝ ℄	64	17'-9½"	Slabs C,D,E & F Str.
T1	⅝ ℄	152	23'-9½"	W.S. slabs A,B,C,D,E,F & G
T2	⅝ ℄	96	17'-9½"	C,D,E & F
C1	⅝ ℄	16	17'-9½"	Curbs on slabs C to F
C2	⅝ ℄	4	29'-9½"	" " slab B
C3	⅝ ℄	4	30'-9½"	" " " A
C4	⅝ ℄	4	18'-9½"	" " " G
T3	⅝ ℄	24	29'-9½"	W.S. over slab B
T4	⅝ ℄	24	18'-9½"	" " " G
T5	⅝ ℄	24	30'-9½"	" " " A
F4	⅝ ℄	16	29'-9½"	Slab B
F6	⅝ ℄	16	30'-9½"	" A
F2	⅝ ℄	16	18'-9½"	" G

Note — All steel to be plain bars of structural grade. All dimensions are to centers of bars

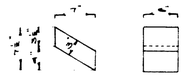
F1	⅝ ℄	180 Req	3'-2" long	Slabs C,D,E,F and G
F6	⅝ ℄	184 "	3'-8" "	" " " "



PLAN SLAB B — PLAN SLAB A — PLAN SLAB G



PART SECTION B-B



DRAIN DETAILS
(Approach Spans)
6 Req.

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION

PROPOSED OVERPASS
HIGHWAY "D"
WOOLWICH

FLOOR PLAN

Sheet of Augusta, Me. July 24, 1951

Design by — EFP
Traced by — EFP
Checked by — Jam Mc

15-146

0 1 2 3 4 5 INCHES

Fed. Road Dist. No.	State	Fed. Aid Proj. No.	Fiscal Year	Sheet No.	Total Sheets
1	Maine	79-A-63			24

STATE OF MAINE
STATE HIGHWAY COMMISSION

PLAN AND PROFILE
STATE HIGHWAY "D"
WOOLWICH
SAGADAHOC COUNTY

FEDERAL AID PROJECT NO. N.R.H. 116-B.

TOTAL LENGTH 0.153 MILES

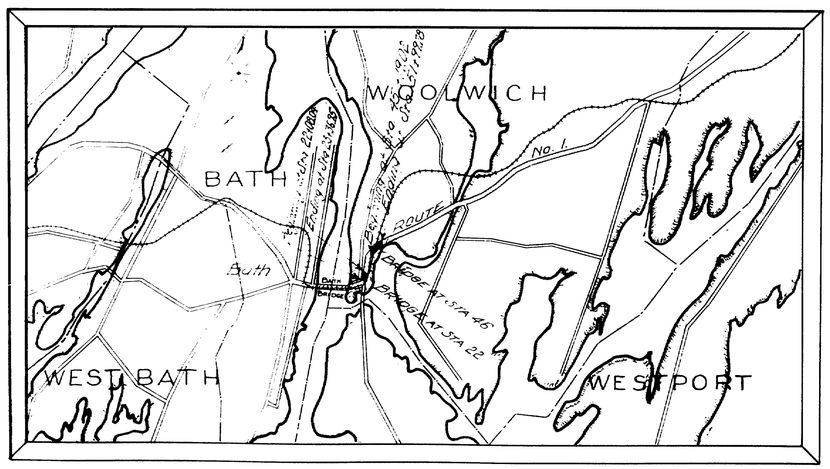
CONVENTIONAL SIGNS

State or National Line		Survey Line	
County Line		Culvert	
Town Line		Drop Inlet	
Unfenced Property		Trolley Pole	
Fence		Power Pole	
Right of Way Line		Tel. Pole	
Traveled Way		Marsh	
Railroad		Trees	
Retaining Wall		Stone Wall	

INDEX OF SHEETS

Sheet No. 1 - Title Sheet

Bridge at Sta. 46		Bridge at Sta. 22.	
Sh. #2	General Plan and Layout	Sh. #18	Survey Plan
" #3	Detail of Abutment No. 1	" #19	General Plan
" #4	" " " " 2	" #20	Beam Details
" #5	Pier Detail	" #21	Plate "
" #6	Detail of Collision Walls for Piers #8, 9.	" #22	Substructure Details - Abutment No. 1 - Pier No. 1
" #7	Slab - Tower Span	" #23	Substructure Details - Abutment No. 2 Pier No. 2
" #8	Floor - Spans #1-2	" #24	Slab and Rails Details
" #9	" " #3		
" #10	" " #4,5,6-7		
" #11	" " #8-9		
" #12	Design Sheet		
" #13	Tower #1 - Bents #1-2.		
" #14	" #2 - " #3-4.		
" #15	" #3 - " #5-6		
" #16	Bents #7,8,9,10,11-12		
" #17	Tower #7-8, Bents #13,14,15 16		



PORTION OF SAGADAHOC COUNTY
SCALE 1" = 1 MILE

All work to be performed on this contract shall be governed by, and in conformity with, the specifications adopted by these States.

CONCRETE CLASSIFICATION
A. Rail, wearing surface
B. Superstructure, slab
C. Substructure

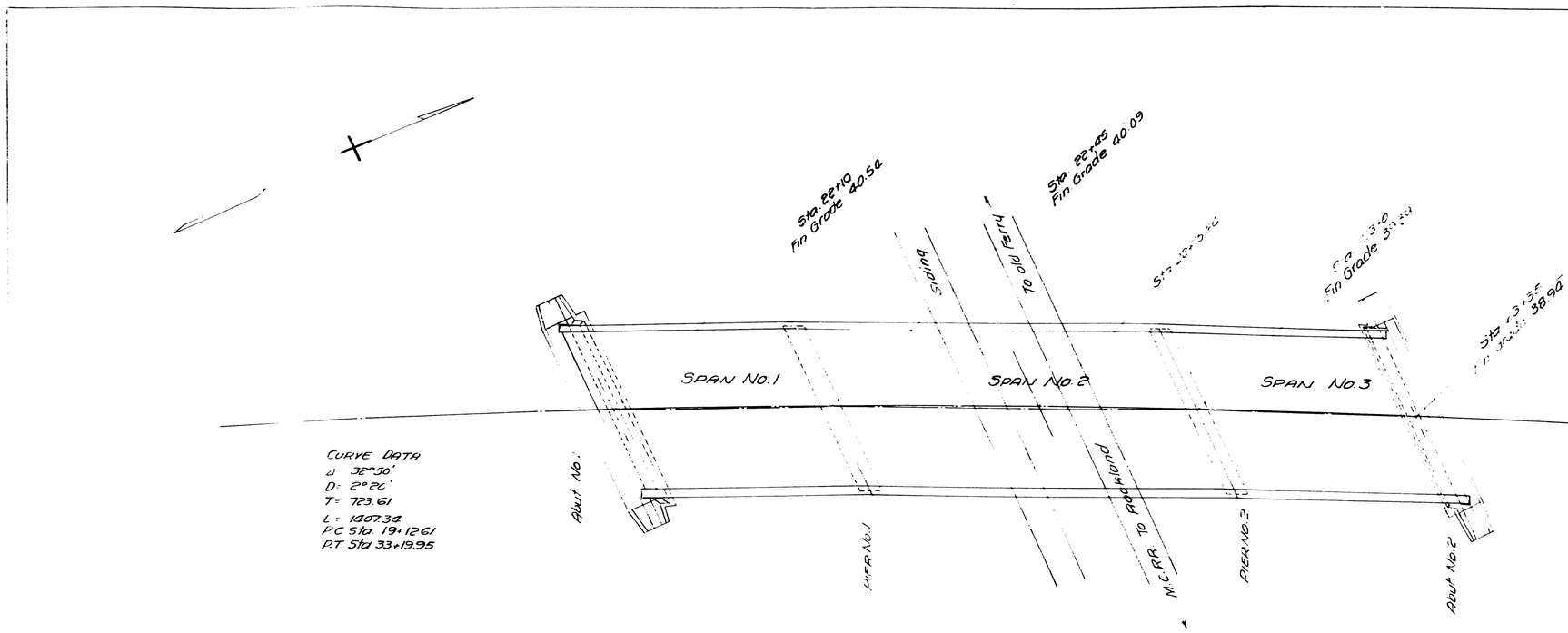
"The above specifications comply with, and in conformity with the Federal Government's Rules and Regulations for work done under the National Industrial Recovery Act relative to the furnishing of all materials by the contractor, or otherwise, and in conformity therewith, are hereby amended to meet such Rules and Regulations of the Federal Government."

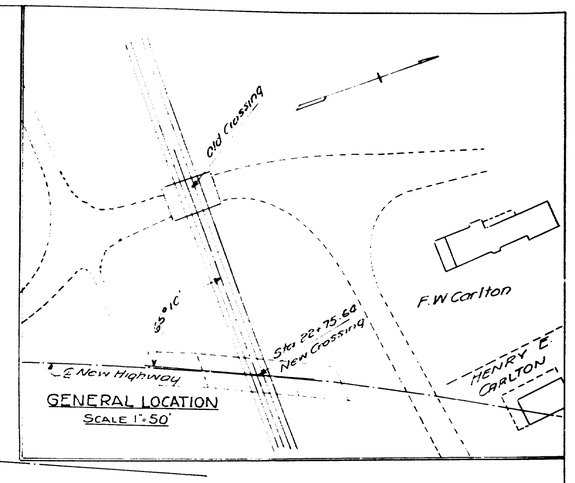
APPROVED.
MAINE STATE HIGHWAY COMMISSION
Frank G. Peabody
CHAIRMAN
Edward W. Hammond
Paul C. Thurston
Clarence O. Sherrill
CHIEF ENGINEER.

APPROVED:
U. S. BUREAU OF PUBLIC ROADS
[redacted]
DISTRICT ENGINEER
[redacted]
CHIEF ENGINEER
[redacted]
DIRECTOR

0 1 2 3 4 5 INCHES

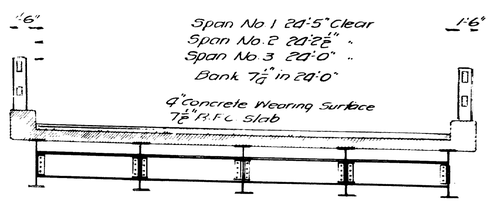
22-44





New Right of Way to be acquired by the State Highway Commission

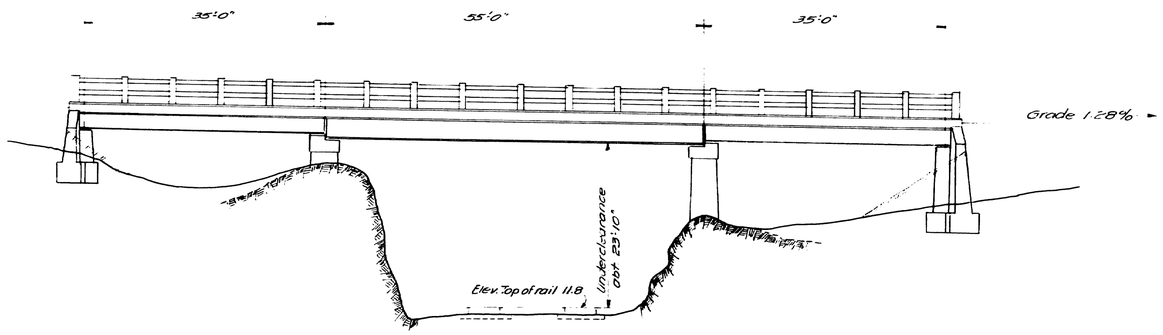
LAND OF MAINE CENTRAL R.R. CO.



SPAN	INTERIOR	EXTERIOR
No. 1	B 28 . 37"	B 24" x 81"
No 2	B 33" x 152"	B 33" x 125"
No 3	B 28" x 97"	B 24" x 81"

Diaphragms Spans Nos. 1-3 C 15" x 33.9"
" " No. 2 B 18" x 47"

TYPICAL CROSS-SECTION



STATE HIGHWAY COMMISSION
BRIDGE DIVISION
BRIDGE OVER THE TRACKS OF
MAINE CENTRAL R.R. CO.
AT
STA. 23+0 - STATE HIGHWAY "D"
IN THE TOWN OF
WOOLWICH - SAGADAHOC CO. ME.
PLAN TO ACCOMPANY P.U. COMMISSION PETITION
AUGUSTA, MAINE SCALE 1"=10' AUGUST, 1933.

22-45

0 1 2 3 4 5 INCHES

[illegible] DAILY RE[illegible]

CONTRACT REC[illegible] OVERHEAD BRIDG[illegible] Sheet 1

[illegible]

Sheet 2

[illegible]

Sheet 3

[illegible]

Date		Day No.	Description of Work Done and Remarks
Sat.	" 31	54	[illegible]
Sun. Apr.	1		
Mon.	2		[illegible]
[illegible]	" 3	55	[illegible]
[illegible]	4		[illegible]
Thu.	" 5	57	[illegible]
Fri.	6		[illegible]
[illegible]	7	59	[illegible] Abut #2 [illegible]
[illegible]	8		
[illegible]	" 9		[illegible]
[illegible]	" 10		[illegible]

[illegible]

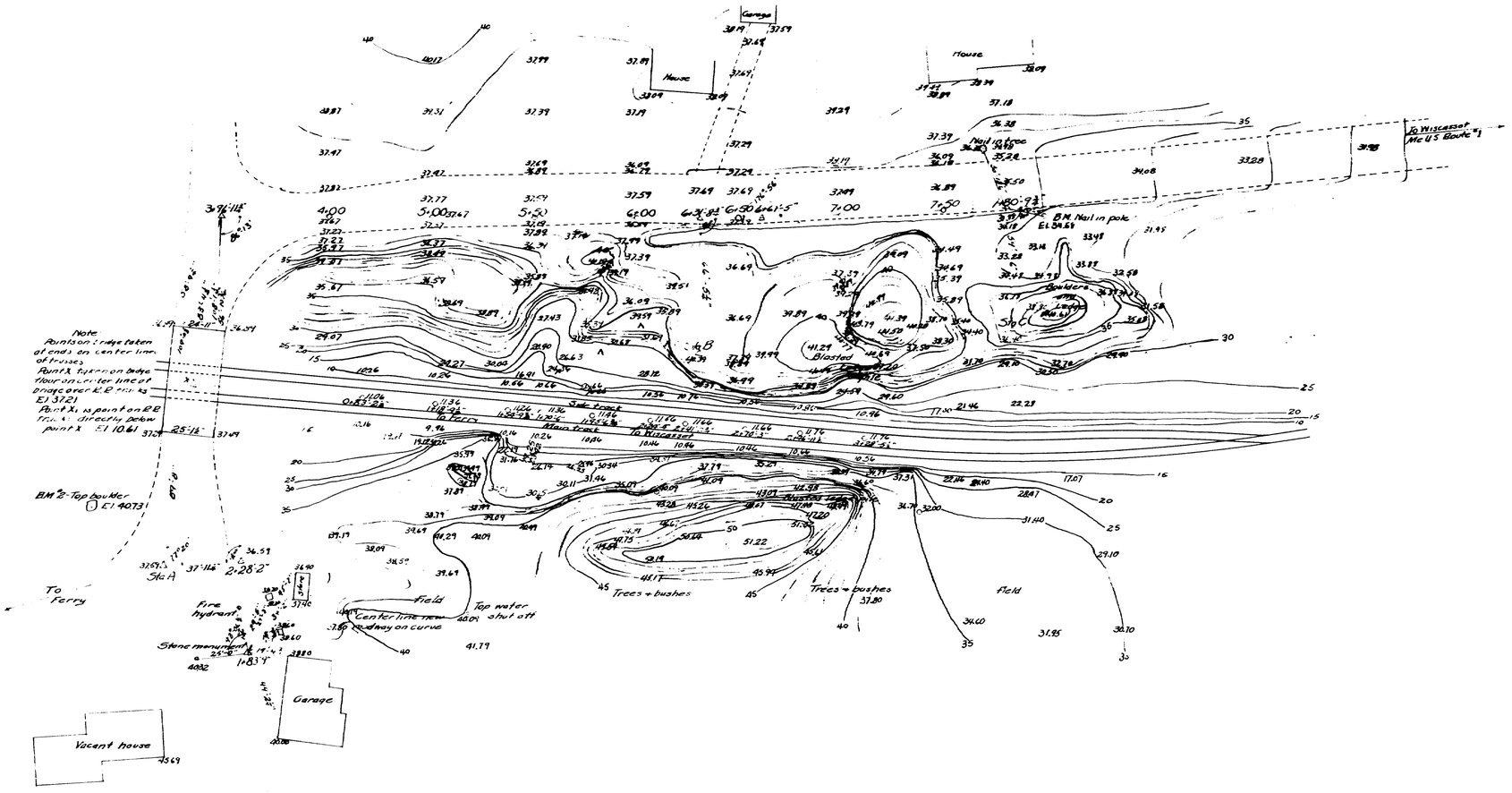
Sheet 4

Date 1934		Day No.	Description of Work Done and Remarks
Sun.	Apr. 29		
Mon.	" 30	72	Concrete Abut #1-23. Screen & hauling gravel. Cutting Piles
Tue	May 1	73	Conc. Abut #1-22 Cutting piles. Rip-rap Abut #2 (Extra work)
Wed.	2	74	Hauling [illegible]. Screen & hauling gravel. Excav. ledge
Thu.	3		Rain, all day - No work.
Fri.	4		[illegible] and rain - No work.
Sat.	" 5	75	Concrete Abut #1-23. Exc. ledge [illegible]
Sun.	6		
Mon.	" 7	76	Rem. form Abut [illegible] Exc. [illegible]
Tue.	" 8	77	Exc. ledge Pier #1-23. Stone & rip-rap Abut #1-23
Wed.	9	78	Ledge Exc. & rip-rap. Work on water [illegible]
Thu.	[illegible]		[illegible] work [illegible] ledge excav. & rip-rap.
Fri.	[illegible]	79	Conc. Abut #2-23. Exc. ledge & [illegible]
Sat.	[illegible]	80	Conc. Abut #2-23. Exc. ledge & [illegible]

[illegible]

0 1 2 3 4 5 INCHES

22-46



Note: At points marked X penetration about 3'-0" to ledge.
At points marked A penetration about 3'-0".
At point marked @ penetration about 6'-0" thru clay, struck hard bottom but could not go further.
Ledge 15'-0" on both sides.

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION

HIGHWAY "D" WOOLWICH
SURVEY FOR
MAINE CENTRAL RAILROAD
OVERHEAD BRIDGE
WOOLWICH - SAGADAHOC CO.

Sheet 1 of

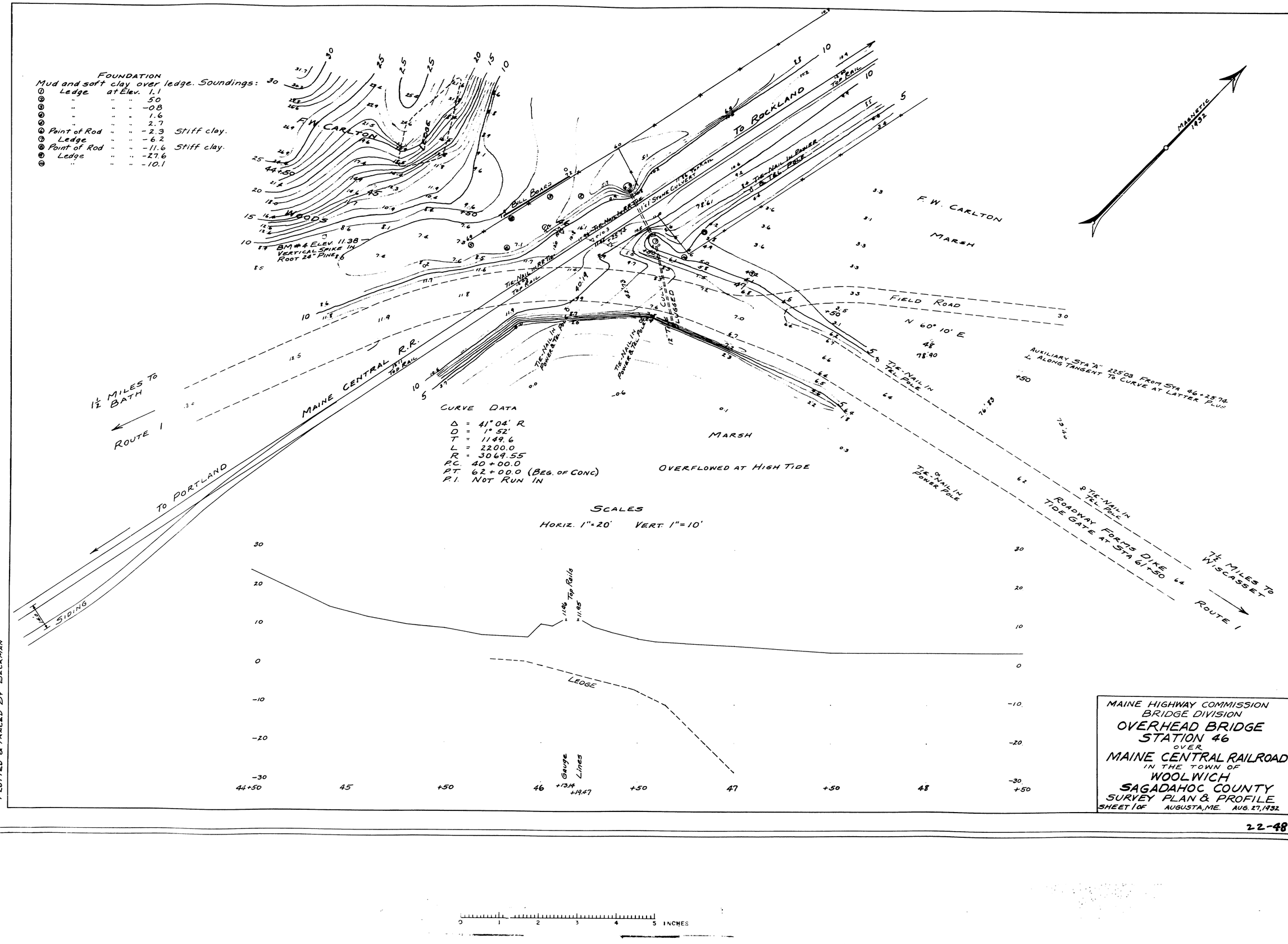
Augusta, Me. Aug 16, 1927

22-47

FOUNDATION

Mud and soft clay over ledge. Soundings:

①	Ledge	at Elev.	1.1	
②	"	" "	50	
③	"	" "	-0.8	
④	"	" "	1.6	
⑤	"	" "	2.7	
⑥	Point of Rod	" "	-2.3	Stiff clay.
⑦	Ledge	" "	-6.2	
⑧	Point of Rod	" "	-11.6	Stiff clay.
⑨	Ledge	" "	-27.6	
⑩	"	" "	-10.1	



CURVE DATA

Δ = 41° 04' R
D = 1° 52'
T = 1149.6
L = 2200.0
R = 3069.55
P.C. 40 + 00.0
P.T. 62 + 00.0 (Beg. of Conc)
P.I. Not Run In

SCALES

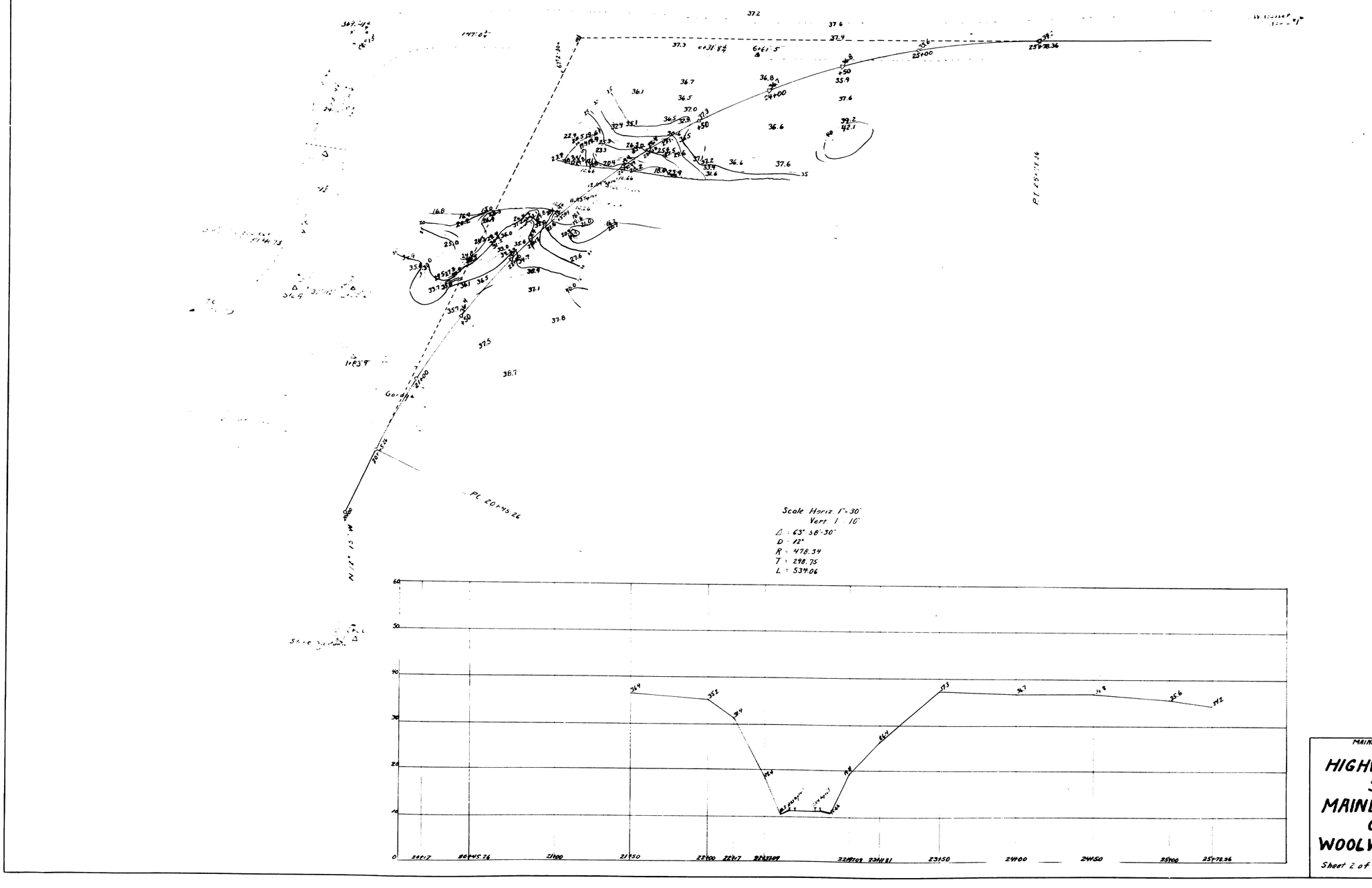
Horiz. 1" = 20' Vert. 1" = 10'

Surveyed By Beckman Aug 20, 1931
Plotted & Traced By Beckman

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION
OVERHEAD BRIDGE
STATION 46
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
SURVEY PLAN & PROFILE
SHEET 1 OF AUGUSTA, ME. AUG. 27, 1932

22-48

0 1 2 3 4 5 INCHES



Survey by V&E
Plotted & Traced by C.H.H

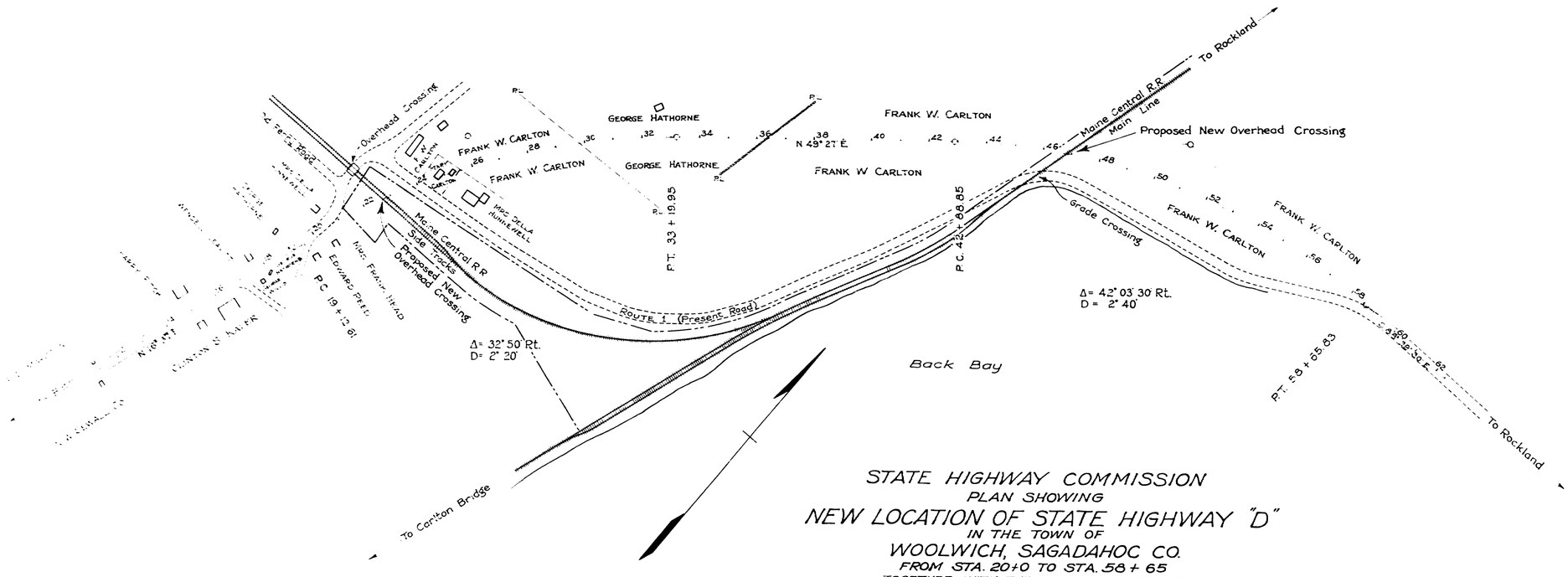
MAINE HIGHWAY COMMISSION
BRIDGE DIVISION

HIGHWAY "D" WOOLWICH
SURVEY FOR
MAINE CENTRAL RAILROAD
OVERHEAD BRIDGE
WOOLWICH-SAGADAHOC CO.

Sheet 2 of

Augusta, Me. Dec. 21, 1922

22-49



STATE HIGHWAY COMMISSION

PLAN SHOWING

NEW LOCATION OF STATE HIGHWAY "D"

IN THE TOWN OF

WOOLWICH, SAGADAHOC CO.

FROM STA. 20+0 TO STA. 58+65

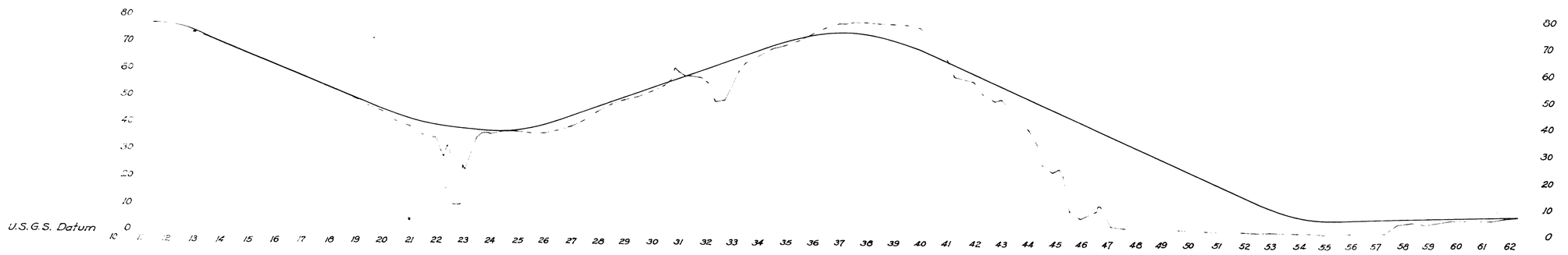
TOGETHER WITH THE GENERAL LOCATION OF

PROPOSED CROSSINGS OVER THE MAINE CENTRAL R.R. AT STA. 23+0 AND STA. 46+0

TO ACCOMPANY PETITION TO THE

PUBLIC UTILITIES COMMISSION

SCALE PLAN 1 IN.= 200 FT. AUGUSTA, MAINE AUG. 1933

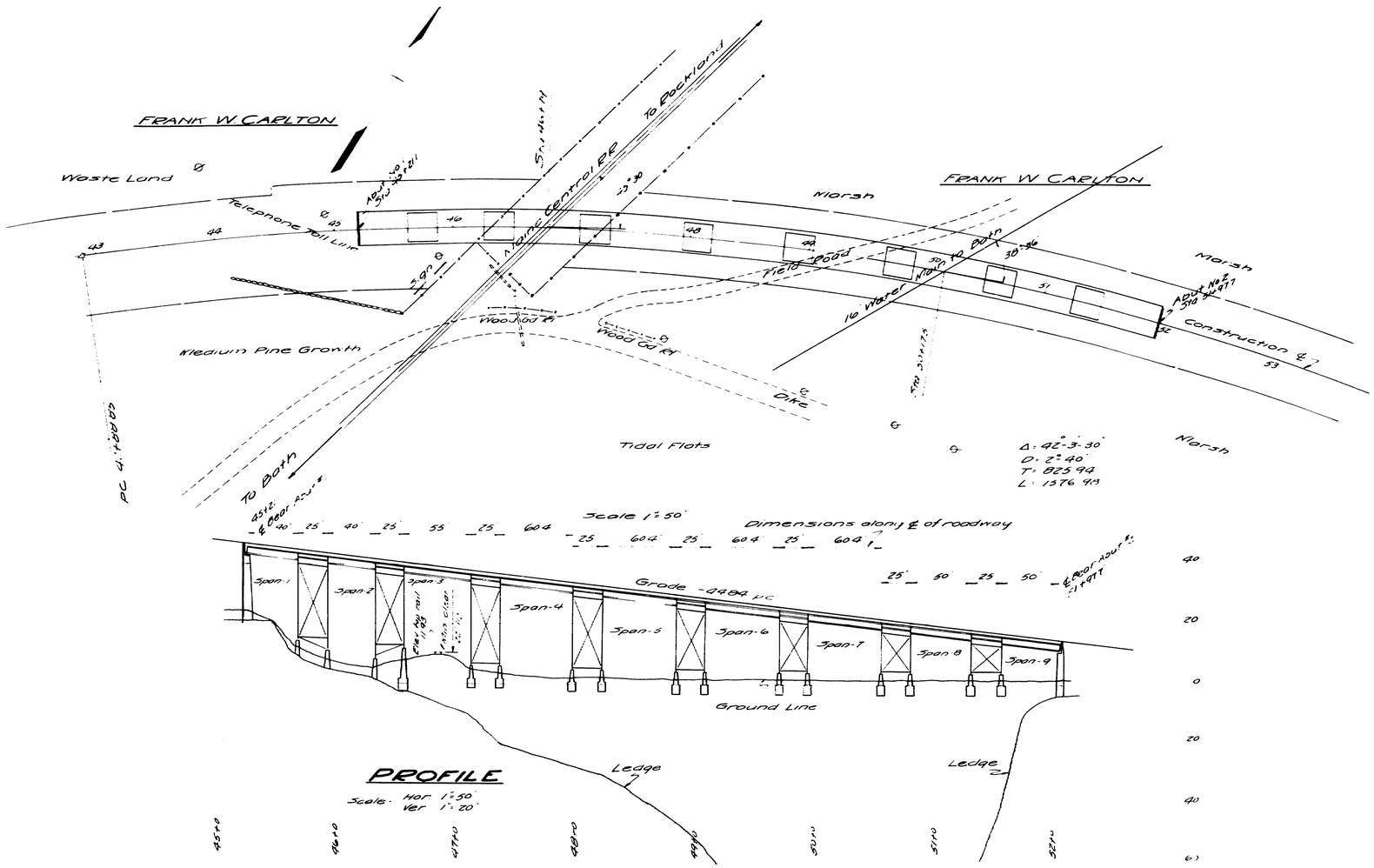


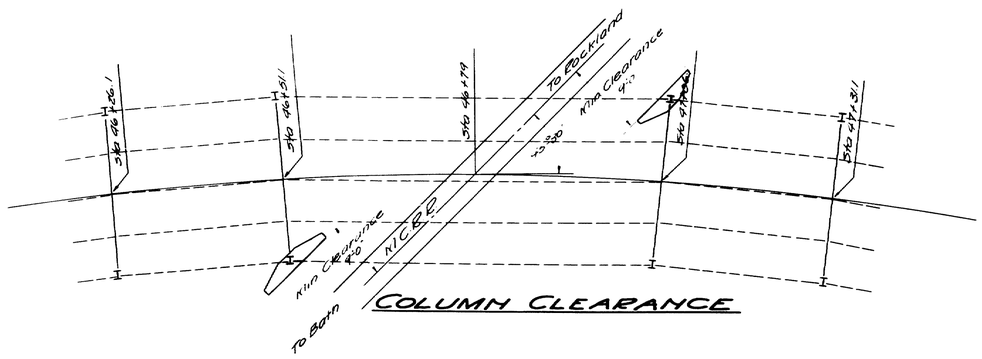
PROFILE

SCALES { HOR. 1 IN = 200 FT. VERT. 1 IN. = 20 FT.

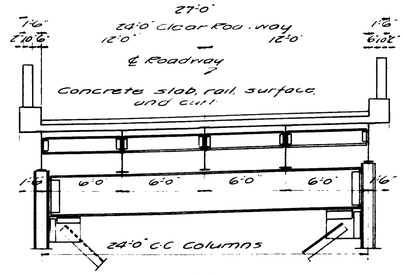
22-50

0 1 2 3 4 5 INCHES





COLUMN CLEARANCE



TYPICAL SECTION

Town 12-11
Bridge 3389

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION

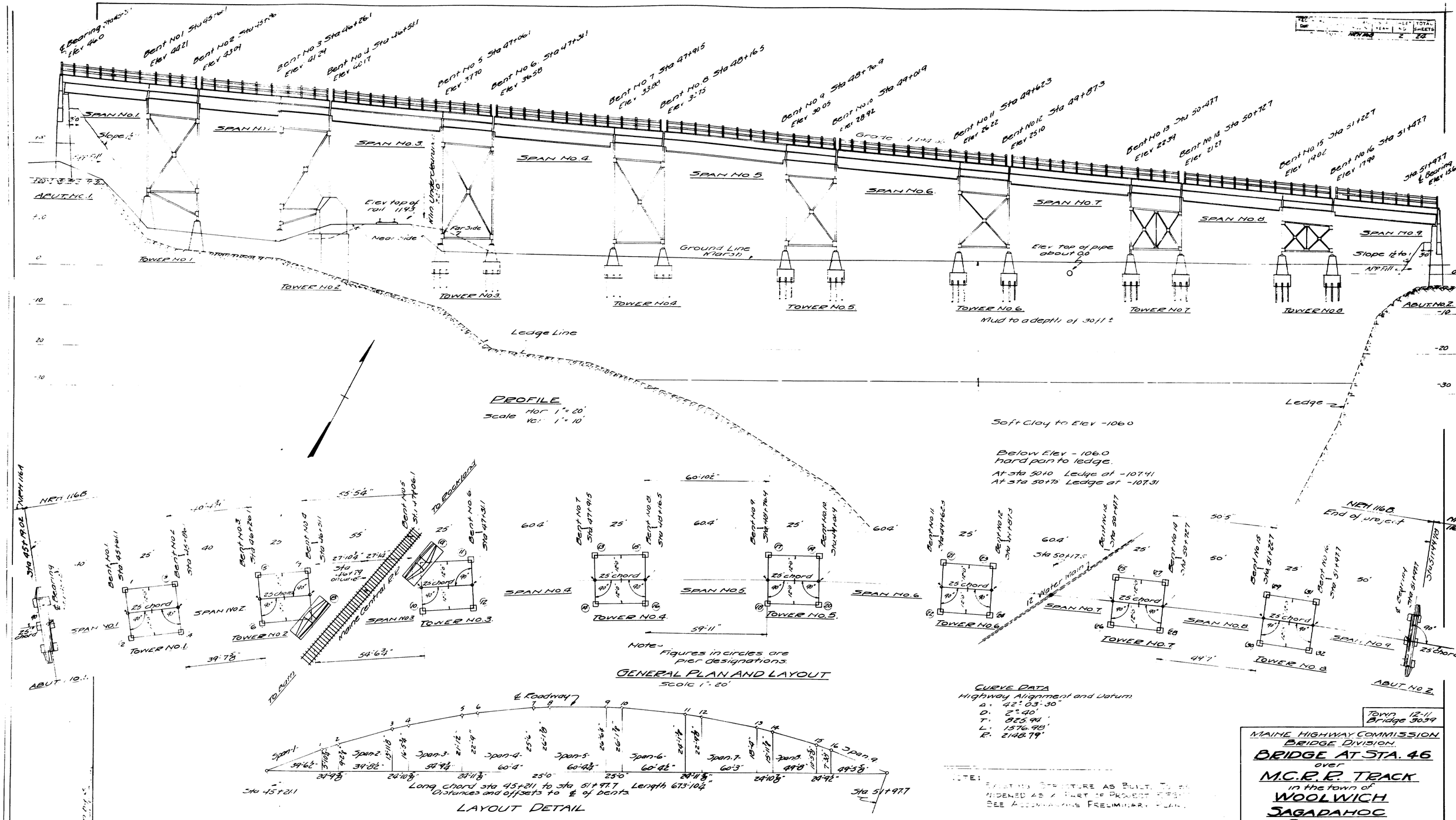
BRIDGE AT STA. 46
over
M.C.R.R. TRACKS
in the town of
WOOLWICH
SAGADAHOC
COUNTY

GENERAL PLAN OF GRADE ELIMINATION

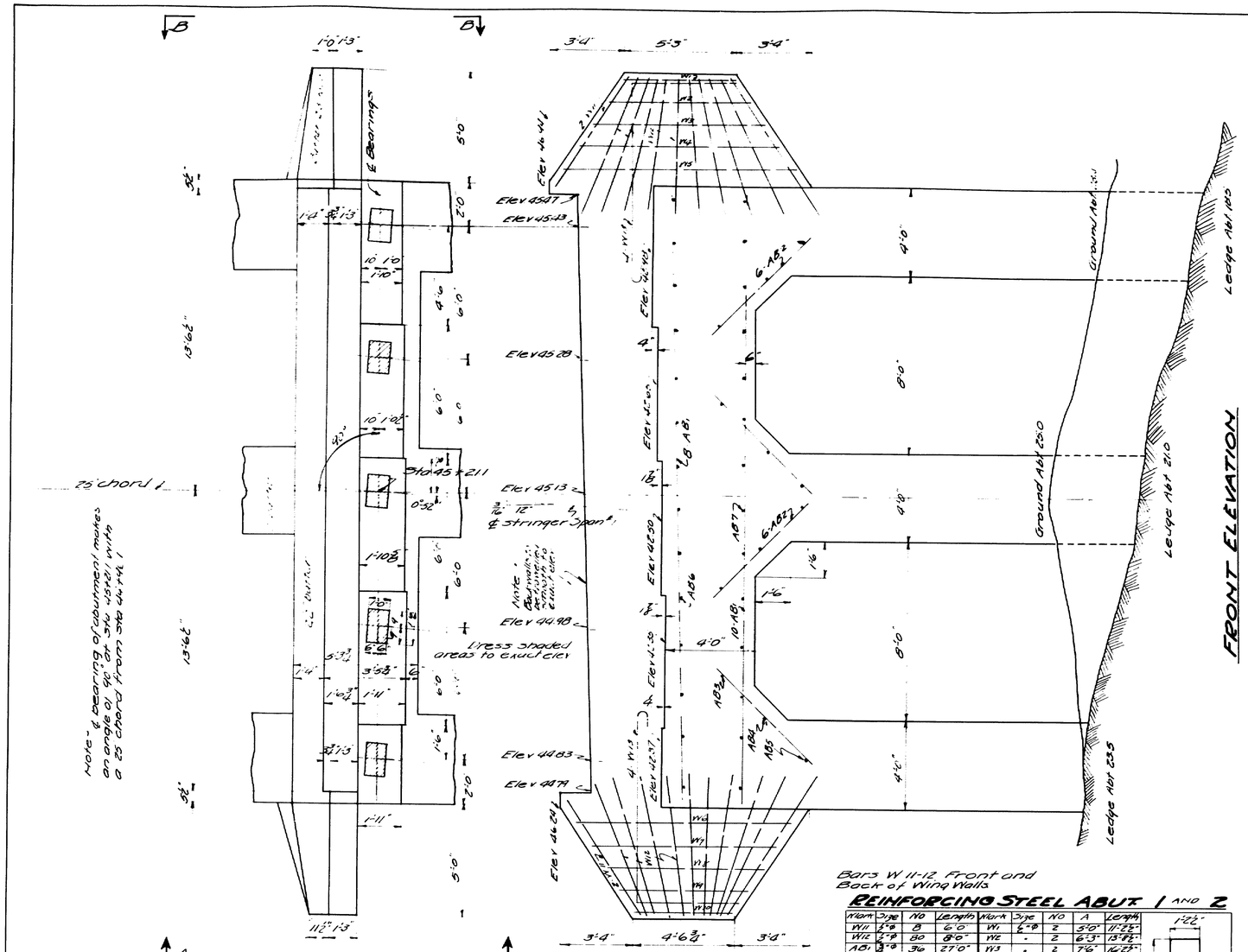
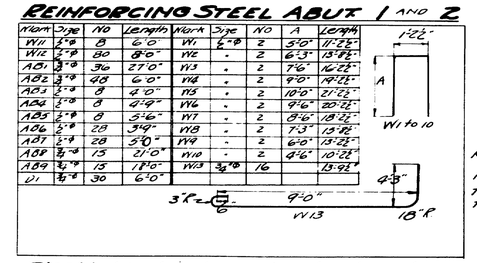
Sheet 1 of 1 Augusta Me. July 29-33

22-51

0 1 2 3 4 5 INCHES

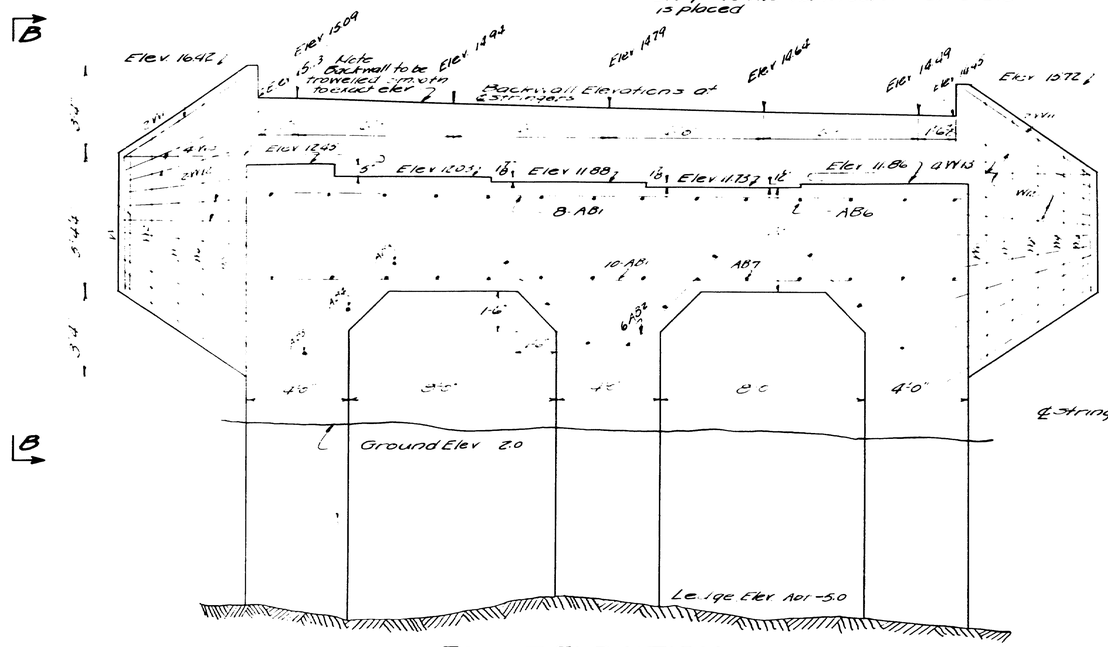

℄ Bearing, Sta 45+21
Elev 46.0
Bent No.1 Sta 45+41
Elev 40.21
Bent No.2 Sta 45+70
Elev 33.91
Bent No.3 Sta 46+26.1
Elev 21.24
Bent No.4 Sta 46+51.1
Elev 40.17
Bent No.5 Sta 47+06.1
Elev 37.70
Bent No.6 Sta 47+31
Elev 36.58
Bent No.7 Sta 47+91.5
Elev 33.83
Bent No.8 Sta 48+16.5
Elev 31.75
Bent No.9 Sta 48+76.9
Elev 30.05
Bent No.10 Sta 49+01.9
Elev 28.92
Bent No.11 Sta 49+62.3
Elev 26.22
Bent No.12 Sta 49+87.3
Elev 25.10
Bent No.13 Sta 50+47.7
Elev 22.91
Bent No.14 Sta 50+72.7
Elev 21.27
Bent No.15 Sta 51+22.7
Elev 19.02
Bent No.16 Sta 51+47.7
Elev 17.90
Sta 51+47.7
℄ Bearing
Elev 13.66
SPAN No.1
SPAN No.2
SPAN No.3
SPAN No.4
SPAN No.5
SPAN No.6
SPAN No.7
SPAN No.8
SPAN No.9
Slope 1½:1
ABUT. No.1
Elev top of rail 11.93
Near side
Far side
Water Line
Ground Line
Marsh
Elev top of pipe about 2.0
Slope 1½:1
App. Fill
ABUT. No.2
TOWER No.1
TOWER No.2
TOWER No.3
TOWER No.4
TOWER No.5
TOWER No.6
TOWER No.7
TOWER No.8
Mud to a depth of 30'±
Ledge Line
Ledge
Soft Clay to Elev -106.0
Below Elev -106.0
hard pan to ledge.
At Sta 50+0 Ledge at -107.41
At Sta 50+75 Ledge at -107.31
PROFILE
Scale Hor 1" = 20'
Ver 1" = 10'
NRH 1168
Sta 45+19.02
℄ Bearing
Elev 13.66
Bent No.1
Sta 45+41
Bent No.2
Sta 45+70
Bent No.3
Sta 46+26.1
Bent No.4
Sta 46+51.1
Bent No.5
Sta 47+06.1
Bent No.6
Sta 47+31
25 chord
SPAN No.1
SPAN No.2
SPAN No.3
TOWER No.1
TOWER No.2
TOWER No.3
ABUT. No.1
39'-7⅞"
40'-4¾"
55'-5¼"
27'-10¾"
27'-4¼"
Sta 46+79 on line
Maine Central R.R.
To Rockland
To Rumford
54'-6¾"
Bent No.7
Sta 47+91.5
Bent No.8
Sta 48+16.5
Bent No.9
Sta 48+76.9
Bent No.10
Sta 49+01.9
SPAN No.4
SPAN No.5
SPAN No.6
TOWER No.4
TOWER No.5
59'-11"
60'-10¿"
60.4'
Note- Figures in circles are pier designations.
GENERAL PLAN AND LAYOUT
Scale 1" = 20'
Bent No.11
Sta 49+62.3
Bent No.12
Sta 49+87.3
Bent No.13
Sta 50+47.7
Bent No.14
Sta 50+72.7
Bent No.15
Sta 51+22.7
Bent No.16
Sta 51+47.7
Sta 50+17.5
12" Water Main
SPAN No.7
SPAN No.8
SPAN No.9
TOWER No.6
TOWER No.7
TOWER No.8
44'-7"
NRH 1168
End of project
NRH 1167A
Sta 51+97.7
℄ Bearing
Elev 13.66
ABUT. No.2
Roadway
Span-1
Span-2
Span-3
Span-4
Span-5
Span-6
Span-7
Span-8
Span-9
Sta 45+21.1
Sta 51+97.7
Long chord sta 45+21.1 to sta 51+97.7 Length 673'-10¿"
Distances and offsets to ℄ of bents
LAYOUT DETAIL
CURVE DATA
Highway Alignment and Datum
Δ: 42°-03'-30"
D: 2°-40'
T: 825.94'
L: 1576.98'
R: 2148.79'
NOTE:
FOR FINAL STRUCTURE AS BUILT, TO BE WIDENED AS A PART OF PROJECT #1951
SEE ACCOMPANYING PRELIMINARY PLANS
Town 12-1-4
Bridge 3039
MAINE HIGHWAY COMMISSION
BRIDGE DIVISION
BRIDGE AT STA. 46
over
M.C.R.R. TRACK
in the town of
WOOLWICH
SAGADAHOC
COUNTY
GENERAL PLAN AND LAYOUT
Sheet 2 of 24 Augusta, Me. 1933.
0 1 2 3 4 5 INCHES

22-52

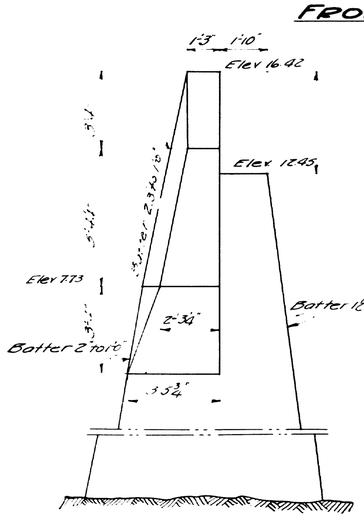

B
B
1'-0 1/2"
3'-4"
5'-3"
3'-4"
Elev 46.94
Elev 45.47
Elev 45.13
Elev 45.28
Sta 45+21.1
Elev 45.13
3/4" ø Stringer Span
Note: Abutment to remain to this elev.
Elev 44.98
Dress sloped areas to this elev.
Elev 44.83
Elev 44.79
Elev 46.24
Elev 42.37
Elev 41.50
Elev 41.30
Ground Abt 23.0
Ledge Abt 23.5
Ledge Abt 21.0
Ledge Abt 18.5
4'-10"
6'-0"
8'-0"
4'-2"
6-AB2
6-AB1
AB7
AB6
10-AB5
14"
18"
4'-0"
18'-3"
18'-5"
25' chord
Slope of roadway 2.0 to 1.0 to square with skew
Slope of roadway 2.0 to 1.0 to square with skew
32°
13'-6 1/2"
13'-6 1/2"
2'-0"
6'-0"
4'-0"
6'-0"
6'-0"
6'-0"
5'-0"
2'-0"
1'-6"
1'-11"
5'-3 1/2"
3'-5 1/2"
1'-10 1/2"
1'-11"
1'-6"
5'-0"
11'-2 1/2"
1'-3"
A
A
PLAN
Bars W.11-12 Front and Back of Wing Walls
3'-4"
4'-6 1/2"
3'-4"
Cover the 1/2" slot between wings and curb on the back side with 2 layers of roofing felt coat concrete and back of each layer as applied with hot tar or asphalt. Felt to be 10" wide. Area covered by felt is to be recessed 1/4" by nailing thin strips to the form before concrete is placed.
REINFORCING STEEL ABUT. 1 AND 2
Work	Type	No	Length	Work	Type	No	A	Length
W11	3/4"ø	8	6'-0"	W1	5/8"ø	2	8'-0"	11'-2 1/2"
W12	3/4"ø	80	8'-0"	W2	"	2	6'-3"	13'-8 1/2"
AB1	3/4"ø	36	27'-0"	W3	"	2	7'-6"	16'-2 1/2"
AB2	3/4"ø	48	6'-0"	W4	"	2	9'-0"	19'-2 1/2"
AB3	3/4"ø	8	4'-0"	W5	"	2	10'-0"	21'-2 1/2"
AB4	3/4"ø	8	4'-9"	W6	"	2	9'-6"	20'-2 1/2"
AB5	3/4"ø	8	5'-6"	W7	"	2	8'-6"	18'-2 1/2"
AB6	5/8"ø	28	3'-9"	W8	"	2	7'-3"	13'-8"
AB7	5/8"ø	28	5'-0"	W9	"	2	6'-0"	13'-2 1/2"
AB8	3/4"ø	13	21'-0"	W10	"	2	4'-6"	10'-2 1/2"
AB9	3/4"ø	13	11'-0"	W13	3/4"ø	16		13'-9 1/2"
U1	3/4"ø	30	6'-0"					

1'-2 1/2"
A
W1 to 10
4'-3"
3"R
9'-0"
W13
18"R
Steel to be plain bars structural grade Dimensions are to ℄ of bars. All steel to have 2" cover
Note: Bend vertical leg of bars W1-10, AB8-9 in field to fit back of form.
FRONT ELEVATION
1'-3" 1'-11"
Elev 46.24
Elev 42.37
Elev 38.35
3'-4"
4'-10 1/2"
3'-10 1/2"
2'-2 1/2"
3'-5 1/2"
Front Batter 1/2 to 1.0
Batter 2 to 1.0
4'-8 1/2"
4'-8"
3'-0"
3'-0"
3@10.0 o.c.
AB8-9
ADT Elev 23.5
Grout in ledge
VIEW A-A
1'-10" 1'-3"
Elev 46.94
Elev 42.83
Elev 38.36
3'-4"
5'-3"
3'-4"
2'-3"
3'-5 1/2"
Batter 2 to 1.0
Elev Abt 18.5
VIEW B-B
Elev 46.96
Elev 45.47
Elev 44.79
Elev 46.24
Elev 44.79
Backwall vertical above this point
Elev 38.35
PART REAR ELEV.
Designed by:
Traced By:
Checked by:
Town 12-11
Bridge 3039
MAINE HIGHWAY COMMISSION
BRIDGE DIVISION
BRIDGE AT STA. 46
over
M.C.R.R. TRACK
in the town of
WOOLWICH
SAGADAHOC COUNTY
DETAIL ABUT NO. 1.
Sheet 3 of 24 Augusta, 1933
Revised 3/1/34 E. Sum
22-53
0 1 2 3 4 5 INCHES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SCALE	SHEET NO.	TOTAL SHEETS
				4	22

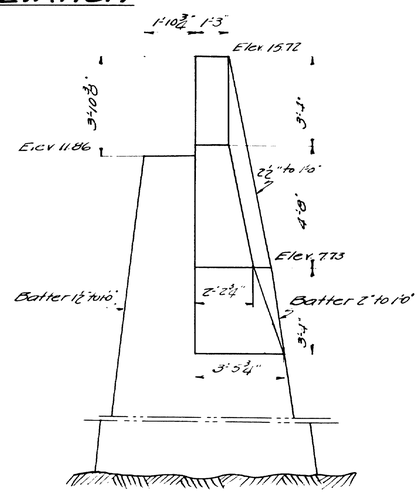
Cover the ½" slots between parapets and curb on the back side with two layers of heavy roofing felt Coat concrete and back of each layer as applied with hot tar or asphalt felt to be 10" wide Area to be covered by felt to be recessed ½" by nailing thin strips to the form before concrete is placed



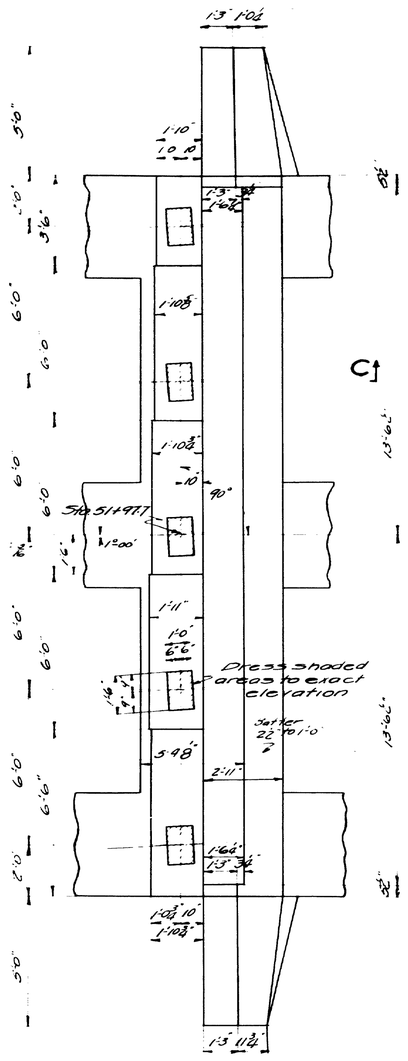
FRONT ELEVATION



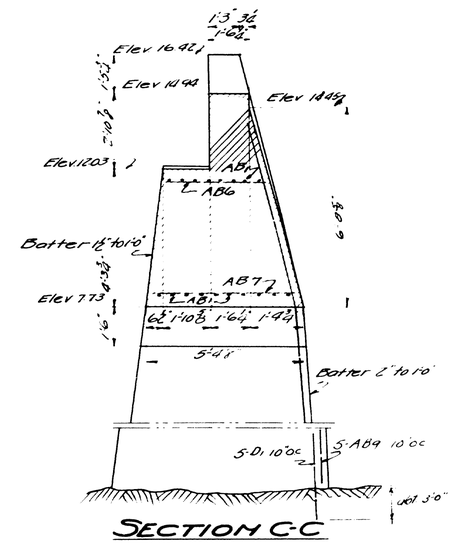
VIEW B-B



VIEW A-A



PLAN



SECTION C-C

Designed by KBF
Checked by TJM
Traced by BMH

Town 12-11
Bridge 3039

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STA. 46
over
M.C.R.R. TRACK
in the town of
WOOLWICH
SAGADAHOC CO.

DETAIL ABUT. NO. 2.

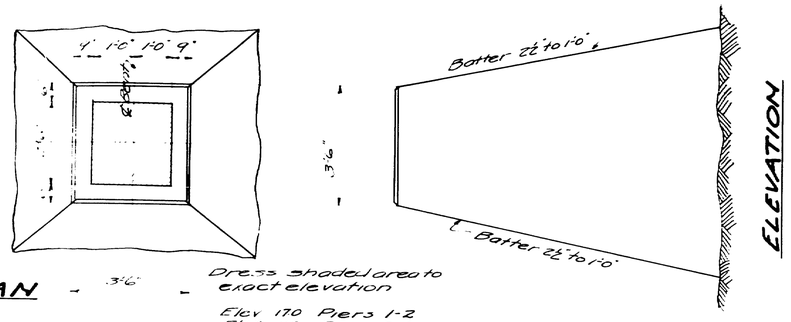
Sheet 4 of 22 Augusta, Me. 1933

Revised 4/41 C. L. J.

22-54

0 1 2 3 4 5 INCHES

FED. AID DIST. NO.	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	Me.	1933	5	24

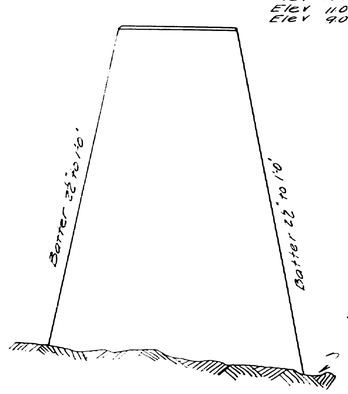


ELEVATION

PLAN

Dress shaded area to exact elevation

Elev 170 Piers 1-2
Elev 110 Piers 3-4
Elev 90 Piers 5-6-7



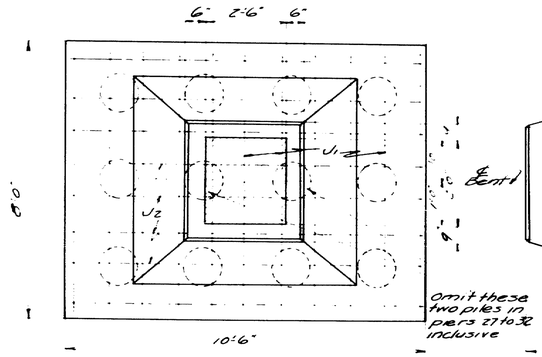
Elev. About 6.0 Piers 2-4
" " 0.0 " 3
" " 1.8 " 5
" " 2.5 " 6
" " -4.0 " 7
" " 11.0 " 1

ELEVATION
DETAIL OF PIERS 1 TO 7

Chamfer exposed edges of concrete one inch.

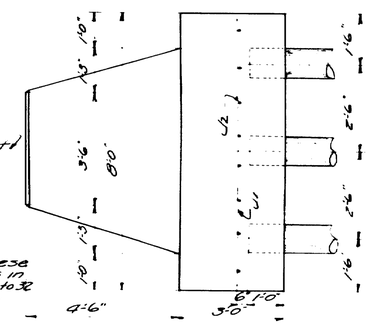
REINFORCING STEEL			
Mark	Size	No	Length	Location
J1	¾"	253	7'-6"	Piers 10 to 32
J2	¾"	184	10'-0"	" 10 to 32

Steel to be plain bars structural grade



PLAN

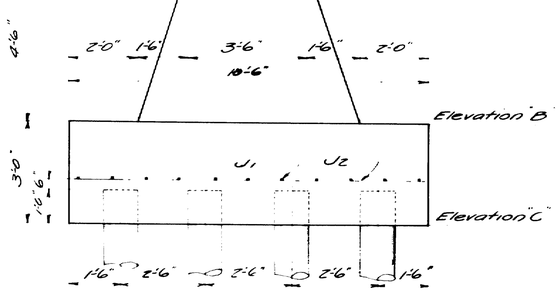
Shaded area to be dressed to exact elevation



ELEVATION

Elevation "A"

Bars J 12" on centers



ELEVATION
DETAIL OF PIERS 10 TO 32

Chamfer exposed edges of concrete one inch.

Load per pile 12 Tons

Pier Elevations				Pile List	
Pier	Elev Bks	Elev Ahs	No per Pier	Length
10	+6.0	+1.5	-1.5	12	25'
11	+6.0	+1.5	-1.5	12	25'
12	+6.0	+1.5	-1.5	12	25'
13	+3.0	+0.5	-2.5	12	30'
14	+3.0	+0.5	-2.5	12	30'
15	+3.0	+0.5	-2.5	12	35'
16	+3.0	+0.5	-2.5	12	35'
17	+4.5	0	-3.0	12	50'
18	+4.5	0	-3.0	12	50'
19	+4.5	0	-3.0	12	60'
20	+4.5	0	-3.0	12	60'
21	+4.0	-0.5	-3.5	12	90'
22	+4.0	-0.5	-3.5	12	90'
23	+4.0	-0.5	-3.5	12	105'
24	+4.0	-0.5	-3.5	12	105'
25	+4.0	-0.5	-3.5	12	110'
26	+4.0	-0.5	-3.5	12	110'
27	+4.0	-0.5	-3.5	10	110'
28	+4.0	-0.5	-3.5	10	110'
29	+4.0	-0.5	-3.5	10	65'
30	+4.0	-0.5	-3.5	10	65'
31	+4.0	-0.5	-3.5	10	40'
32	+4.0	-0.5	-3.5	10	40'

Pile lengths shown are for estimate purposes only. Exact lengths to be determined in field by contractor.

Designed by: Traced by: Blake Checked by: [illegible]

Town 12-11
Bridge 3039

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION

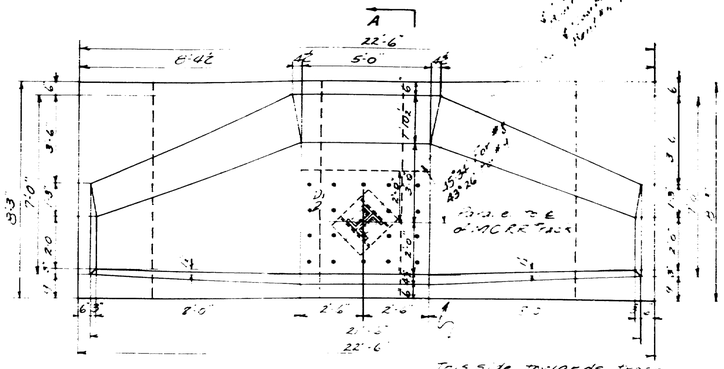
BRIDGE AT STA. 46
over
M.C.R.R. TRACK
in the town of
WOOLWICH
SAGADAHOC COUNTY

PIER DETAILS

Sheet 5 of 24 Augusta, Me. 1933

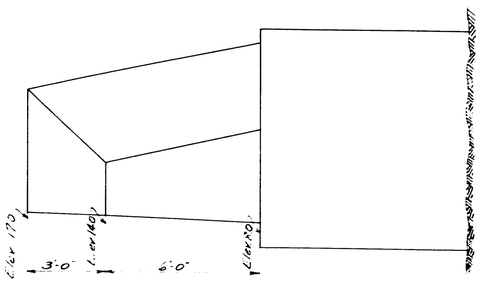
22-55

0 1 2 3 4 5 INCHES



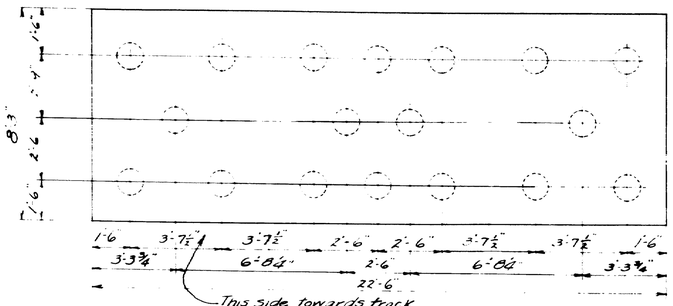
PLAN PIER NO 8.

Pier No 9 - Same except as noted

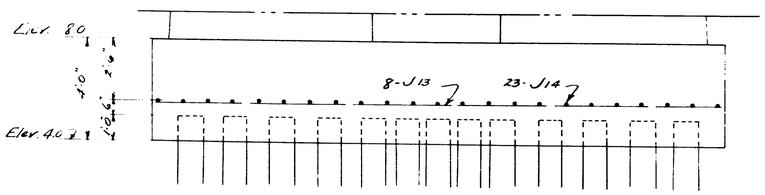


END ELEVATION

Note - Minimum clearance center line between rails to face of concrete 9'-0" at top of rail elev



FOOTING PLAN PIER No.9.

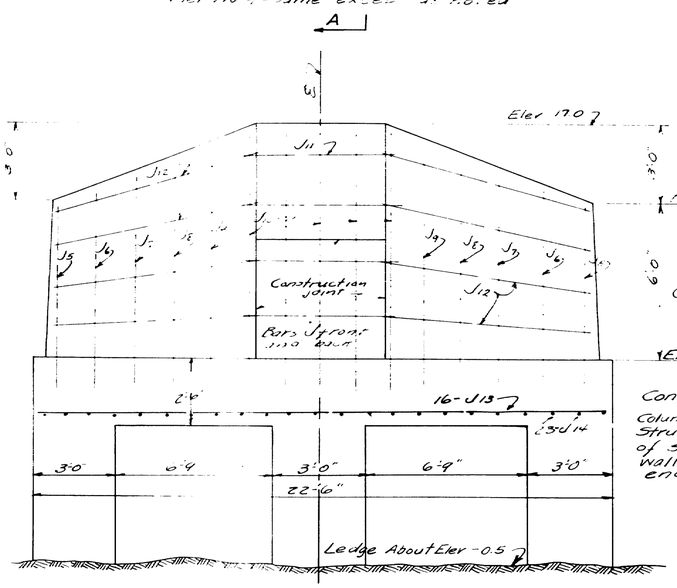


FRONT ELEVATION FOOTING FOR PIER NO. 9.

Detail of pier no 9 same as no 8 except footing

Pile Loading 12 tons

Required 18 piles 20' long

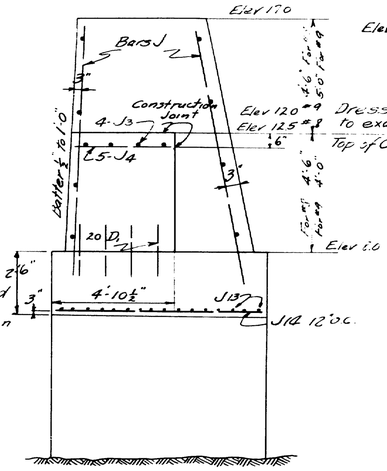


FRONT ELEV. FROM R.R. TRACK PIER NO. 8.

Ground Line about Elev 10.4 for #8

" " " 9.6 " #9

Construction Note. Concrete footing and column pedestal to be placed before Structural Steel is erected. After erection of steel, construct remainder of collision wall. Steel column and bracing to be encased in concrete



SECTION A-A

REINFORCING STEEL.

Mark	Size	No	Length	Mark	Size	No	Length
D1	¾"ϕ	40	1'-6"	J11	⅝"ϕ	16	9'-0"
J3	"	8	4'-9"	J12	"	32	7'-9"
J4	"	10	3'-9"	J13	"	24	22'-6"
J5	"	8	7'-3"	J14	"	46	8'-0"
J6	"	8	7'-9"				
J7	"	8	8'-6"				
J8	"	8	9'-0"				
J9	"	8	9'-6"				
J10	"	20	10'-0"				

Bond lengths as above

All steel to be plain bars, structural grade.

Designed V.B.E.

TOWN 12-11
BRIDGE 3039

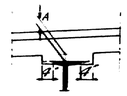
MAINE HIGHWAY COMMISSION
BRIDGE DIVISION
BRIDGE AT STA. 46
OVER
M.C.R.R. TRACKS
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
DETAILS OF COLLISION WALLS
FOR PIERS # 8 & 9
SHEET 6 OF 24 AUGUSTA, ME AUGUST, 1933

22-56

0 1 2 3 4 5 INCHES

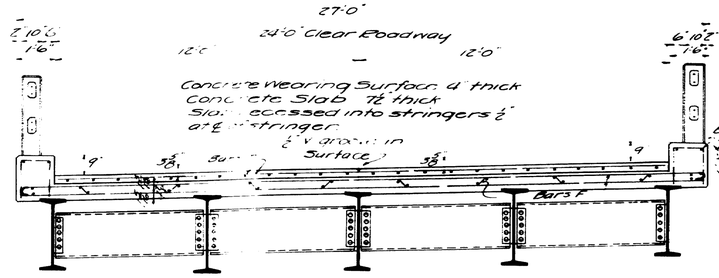
No	Length	Location	No	Length	Location
20	5'-11½"	Span-1 Tower-1	22	6'-1⅝"	Span 8 Towers
20	5'-10½"	" 1 " 1	22	6'-0⅜"	" 8 " 8
18	6'-6¾"	" 2 " 2	16	5'-9"	Span 9
18	6'-5¾"	" 2 " 2	16	5'-7⅝"	"
24	6'-0"	" 3 " 3			
24	5'-11"	" 3 " 3			
96	6'-3½"	" 4-5-6-7 " 4-5-6-7			
96	" "	" 4-5-6-7 " 4-5-6-7			

CONCRETE RAIL BARS



INTERIOR STRINGERS
Dimension A at ℄ span

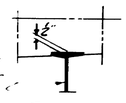
A	Span
½"	Tower spans
⅝"	Spans 1-2
¾"	" 3
1"	" 4-5-6-7
⅞"	" 8-9



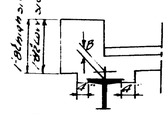
For main slab steel 2-straight and 1-bent bar alternate on 6½" ctrs

TYPICAL SLAB SECTION

All girders to be recessed into slab 2" at ℄ of girder over all bearings

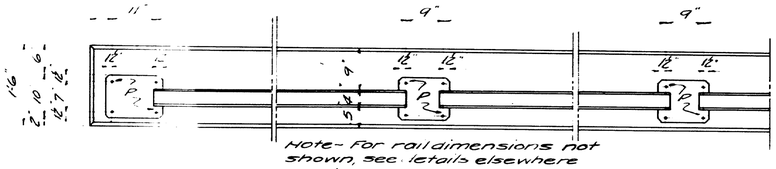


DETAIL AT BEARINGS

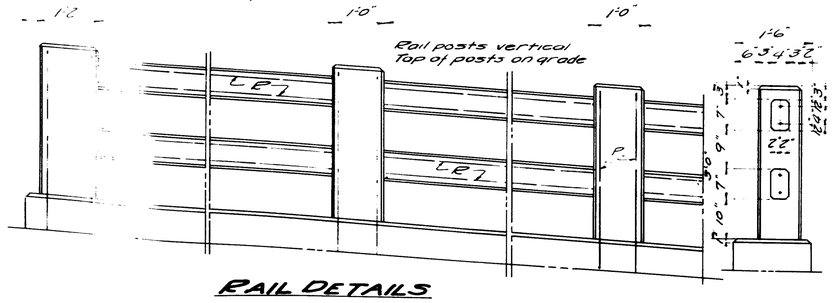


EXTERIOR STRINGERS
Dimension B at ℄ span

B	Span
4"	Tower Spans
⅝"	Span 1-2
18"	" 3
14"	" 4-5-6-7
1"	" 8-9



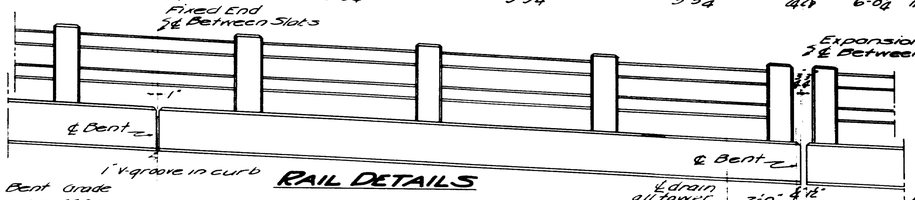
Note- For rail dimensions not shown, see details elsewhere on plans.



RAIL DETAILS

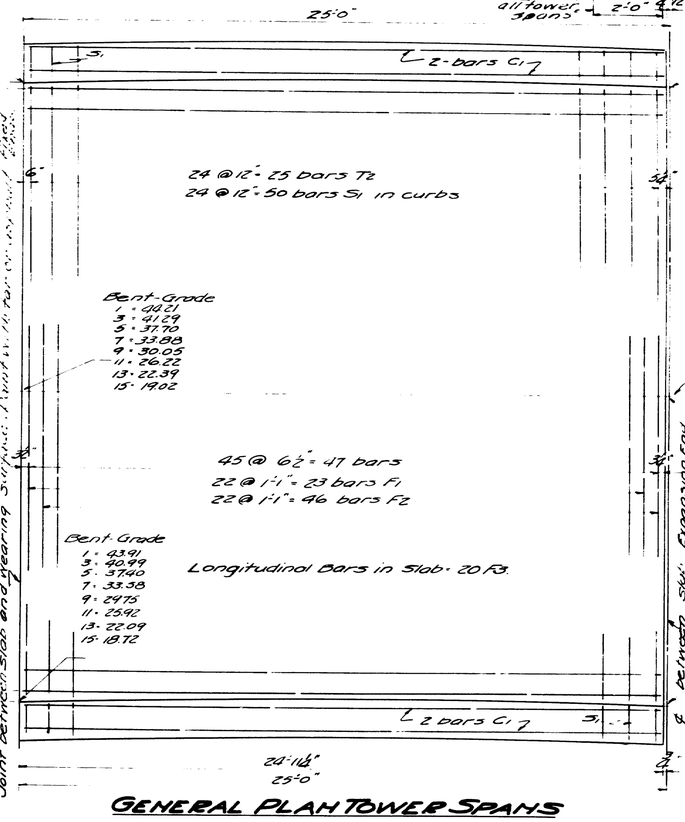
Note:
Curb and slab to be cast together. Steel for posts to be set in curb. Precast rail bars. Place bars in position with ends projecting into posts 2½". Wrap the end 6" of each rail with two thicknesses of heavy roofing felt. Fold in ends and cast posts. When post forms are removed cut away all exposed felt. Chamfer all edges of concrete ½" unless otherwise indicated.
For lengths of rail bars see table.

5'-8¾"	1'-0"	5'-8¾"	1'-0"	5'-8¾"	1'-0"	5'-8¾"	1'-0"	5'-8¾"	1'-0"	2'-6"+2'-6"+1'-0"	5'-4"	Outside Curve	TOWER NO. 8
5'-7½"		5'-7½"		5'-7½"		5'-7½"		5'-7½"		2'-2⅝"	5'-2½"	Inside Curve	
										2'-6"+1'-0"	5'-8¾"	For Span #8	
6'-0¾"	1'-0"	6'-0¾"	1'-0"	6'-0¾"	1'-0"	6'-0¾"	1'-0"	6'-0¾"	1'-0"	2'-2⅝"+1'-0"	6'-0¾"	Outside Curve	TOWERS 4-5-6-7
5'-11½"		5'-11½"		5'-11½"		5'-11½"		5'-11½"		2'-2⅝"	5'-11½"	Inside Curve	
										2'-2⅝"+1'-0"	5'-7⅝"	For Span #9	
5'-7"	1'-0"	5'-7"	1'-0"	5'-7"	1'-0"	5'-7"	1'-0"	5'-7"	1'-0"	1'-0"+2'-2⅝"+1'-0"	6'-0¾"	Outside Curve	TOWER NO 3.
5'-6"		5'-6"		5'-6"		5'-6"		5'-6"		2'-2⅝"	5'-11½"	Inside Curve	
6'-1⅞"	1'-0"	6'-1⅞"	1'-0"	6'-1⅞"	1'-0"	6'-1⅞"	1'-0"	6'-1⅞"	1'-0"	1'-0"+2'-3¼"+1'-0"	5'-7"	Outside Curve	TOWER NO. 2.
6'-0¼"		6'-0¼"		6'-0¼"		6'-0¼"		6'-0¼"		2'-3¼"	5'-6"	Inside Curve	
5'-6¾"	1'-0"	5'-6¾"	1'-0"	5'-6¾"	1'-0"	5'-6¾"	1'-0"	5'-6¾"	1'-0"	1'-0"+2'-2⅝"+1'-0"	6'-1⅞"	Outside Curve	TOWER NO. 1.
5'-5¾"		5'-5¾"		5'-5¾"		5'-5¾"		5'-5¾"		2'-2⅝"	6'-0¼"	Inside Curve	

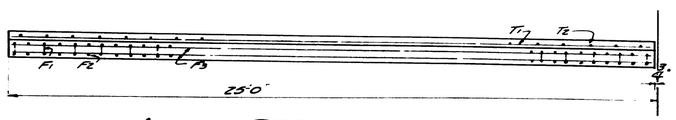


RAIL DETAILS

Bent	Grade
1	49.21
3	41.29
5	38.00
7	34.18
9	30.35
11	26.52
13	22.69
15	18.92

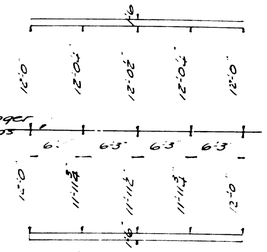


GENERAL PLAN TOWER SPANS



LONG. SECTION

Bent	Grade
2	43.59
4	40.17
6	36.88
8	33.05
10	29.22
12	25.40
14	21.57
16	18.80



Bent	Grade
2	43.09
4	40.17
6	36.38
8	32.75
10	28.92
12	25.10
14	21.27
16	17.90

Bent	Grade
2	42.79
4	39.87
6	36.08
8	32.45
10	28.62
12	24.80
14	20.97
16	17.60

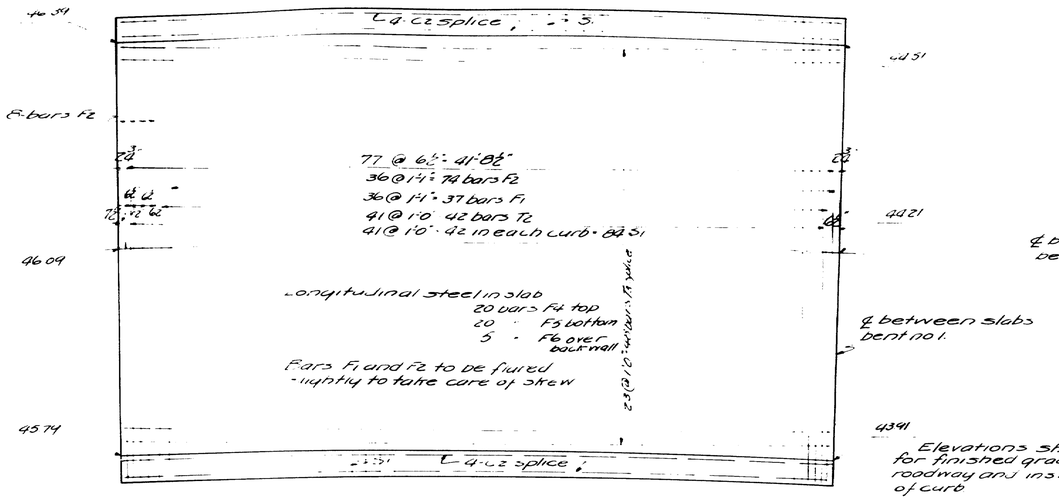
LAYOUT TOWER SPANS

Town 12-11
Bridge 3039

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION
BRIDGE AT STA. 46
over
M.C.R.R. TRACK
in the town of
WOOLWICH
SAGADAHOC COUNTY
SLAB-TOWER SPANS
Sheet 7 of 24 Augusta, 1933

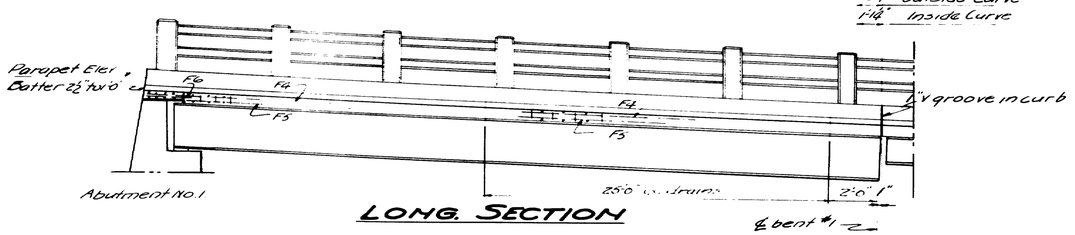
22-57

Item	Total Sheets	Sheet No.
Title, Indexes, Layout	8	22

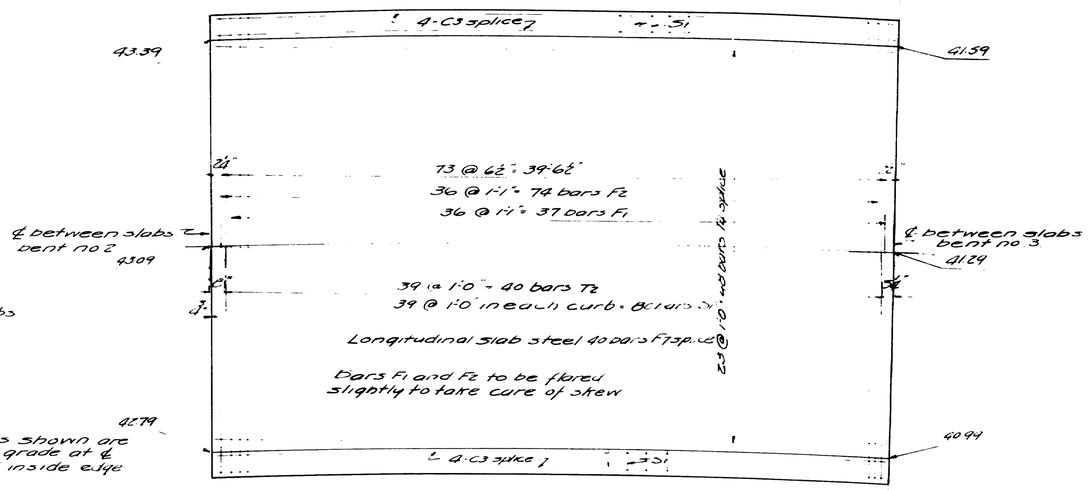


FLOOR PLAN SPAN NO. 1.

7'-1½" 5'-6¾" 1'-0" 5'-6¾" 1'-0" 5'-6¾" 1'-0" 5'-6¾" 1'-0" 5'-6¾" 1'-0" 5'-6¾" 1'-0" 5'-6¾" Outside Curve
7'-0" 5'-5¾" 5'-5¾" 5'-5¾" 5'-5¾" 5'-5¾" 5'-5¾" Inside Curve
1'-5¾" Outside Curve
1'-1¾" Inside Curve



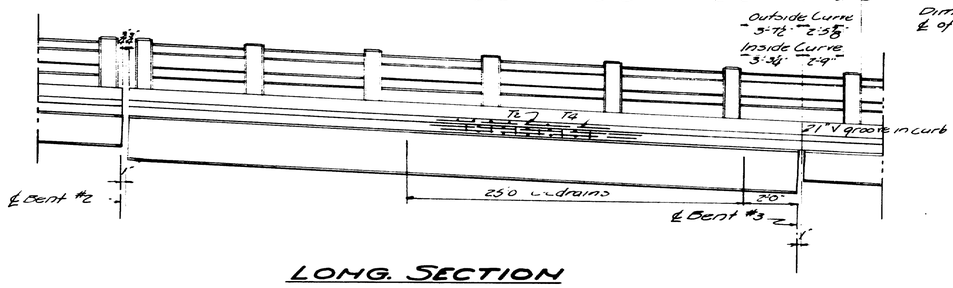
LONG. SECTION



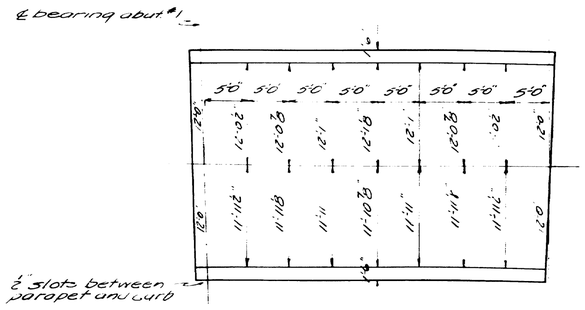
FLOOR PLAN SPAN NO. 2.

5'-6¾" 1'-0" 6'-1⅜" 1'-0" 6'-1⅜" 1'-0" 6'-1⅜" 1'-0" 6'-1⅜" 1'-0" 6'-1⅜" 1'-0" 6'-1⅜" 1'-0" 6'-1⅜" Outside Curve
5'-5¾" 6'-0¼" 6'-0¼" 6'-0¼" 6'-0¼" 6'-0¼" 6'-0¼" 6'-0¼" Inside Curve

Outside Curve 3'-7½" 2'-5½"
Inside Curve 3'-3½" 2'-9"
Dimensions along ℄ of rail



LONG. SECTION



SLAB LAYOUT SPAN - 1.

Span 2 similar

Design by MDF
Traced by PMF
Checked by PMF

Town 12-11
Bridge 3039

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION

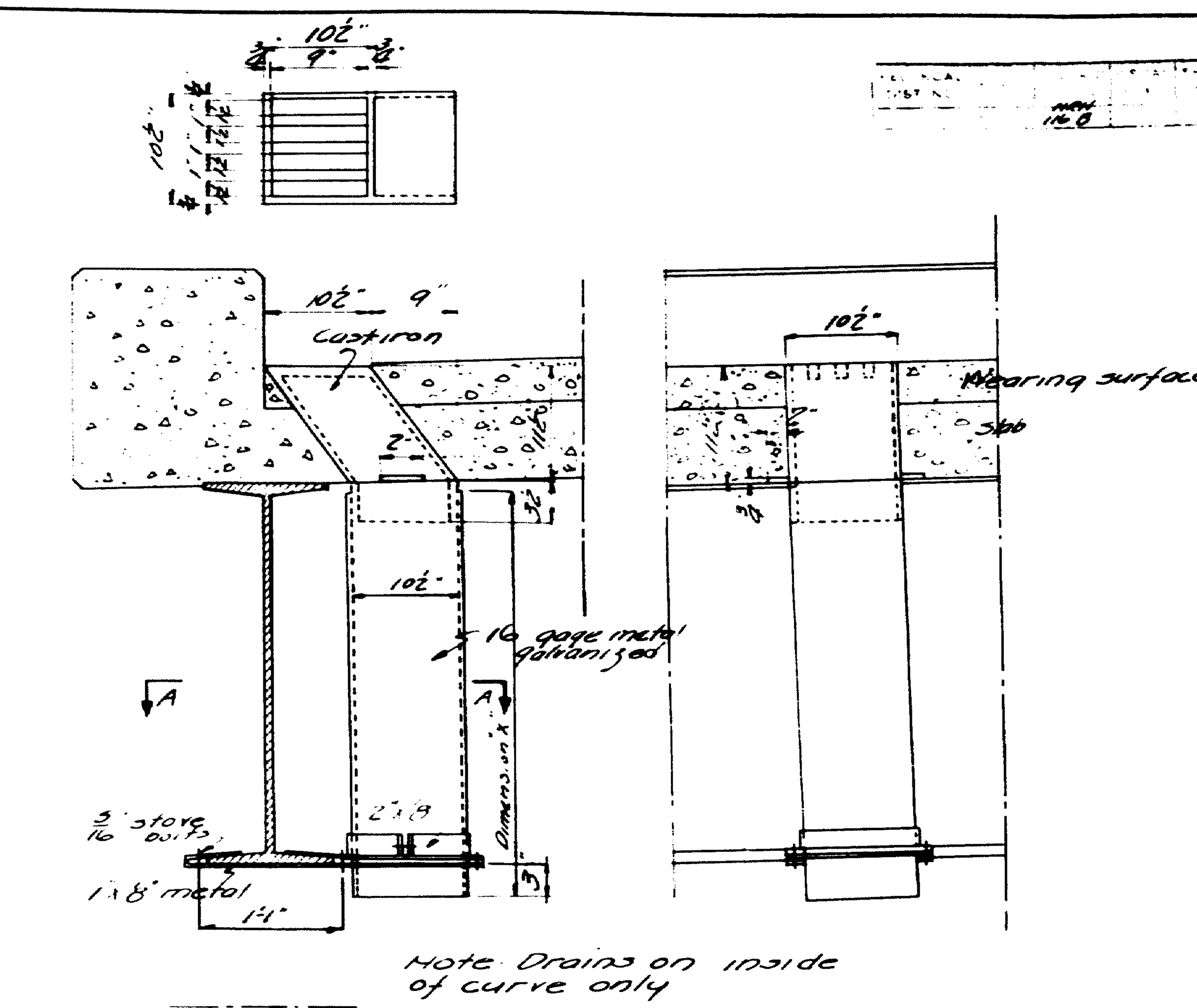
BRIDGE AT STA. 46
over
M.C.R.R. TRACK
in the town of
WOOLWICH
SAGADAHOC COUNTY

FLOOR - SPANS 1-2

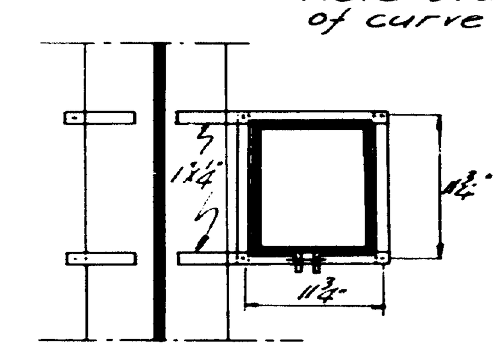
Sheet 8 of 24 Augusta Me. 1933

22-58

0 1 2 3 4 5 INCHES



Note Drains on inside of curve only



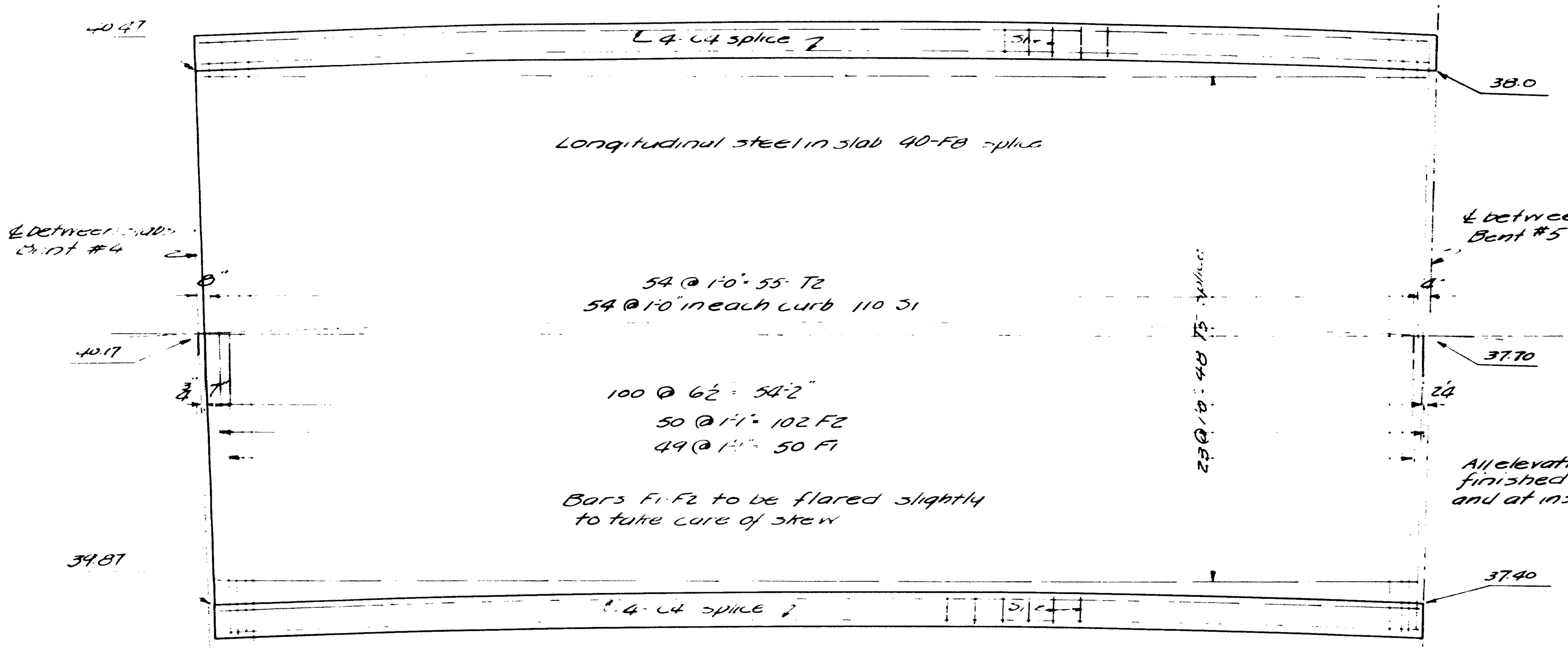
VIEW A-A

DRAIN DETAIL

Required – 32 Cast iron drains

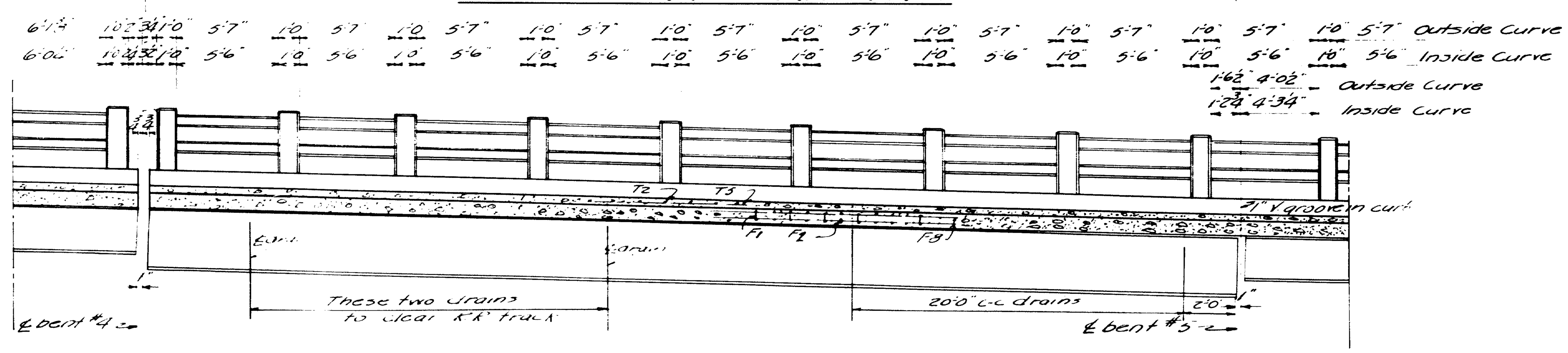
Dimensions for galv metal drains

No.	Dimension "X"	Location
4	2'-7"	Spans 1-2
16	3'-0"	" 3-4-5-6-7
4	2'-9"	" 8-9
8	2'-1"	Tower Spans

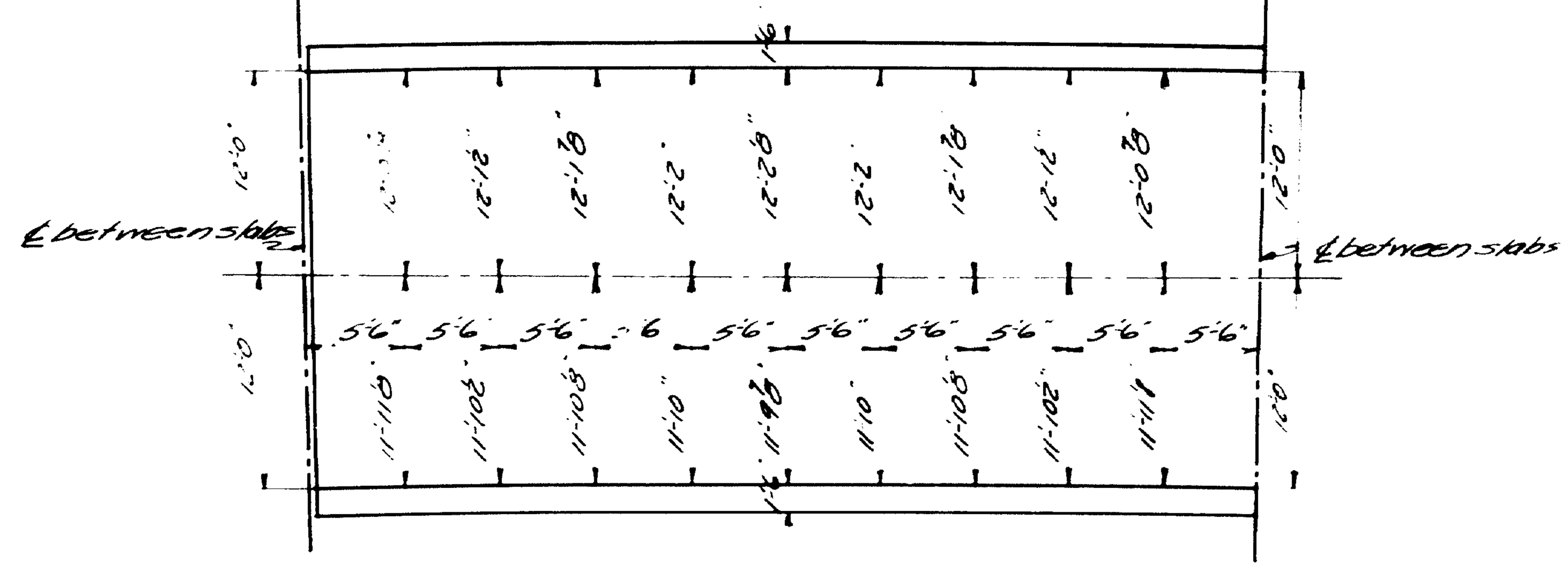


All elevations shown are finished grades at ℄ roadway and at inside edge of curbs.

FLOOR PLAN SPAN NO. 3.



LONGITUDINAL SECTION



SLAB LAYOUT

Town 12-11
Bridge 3039

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STA. 46
over
M.C.R.R. TRACK
in the town of
WOOLWICH
SAGADAHOC CO.

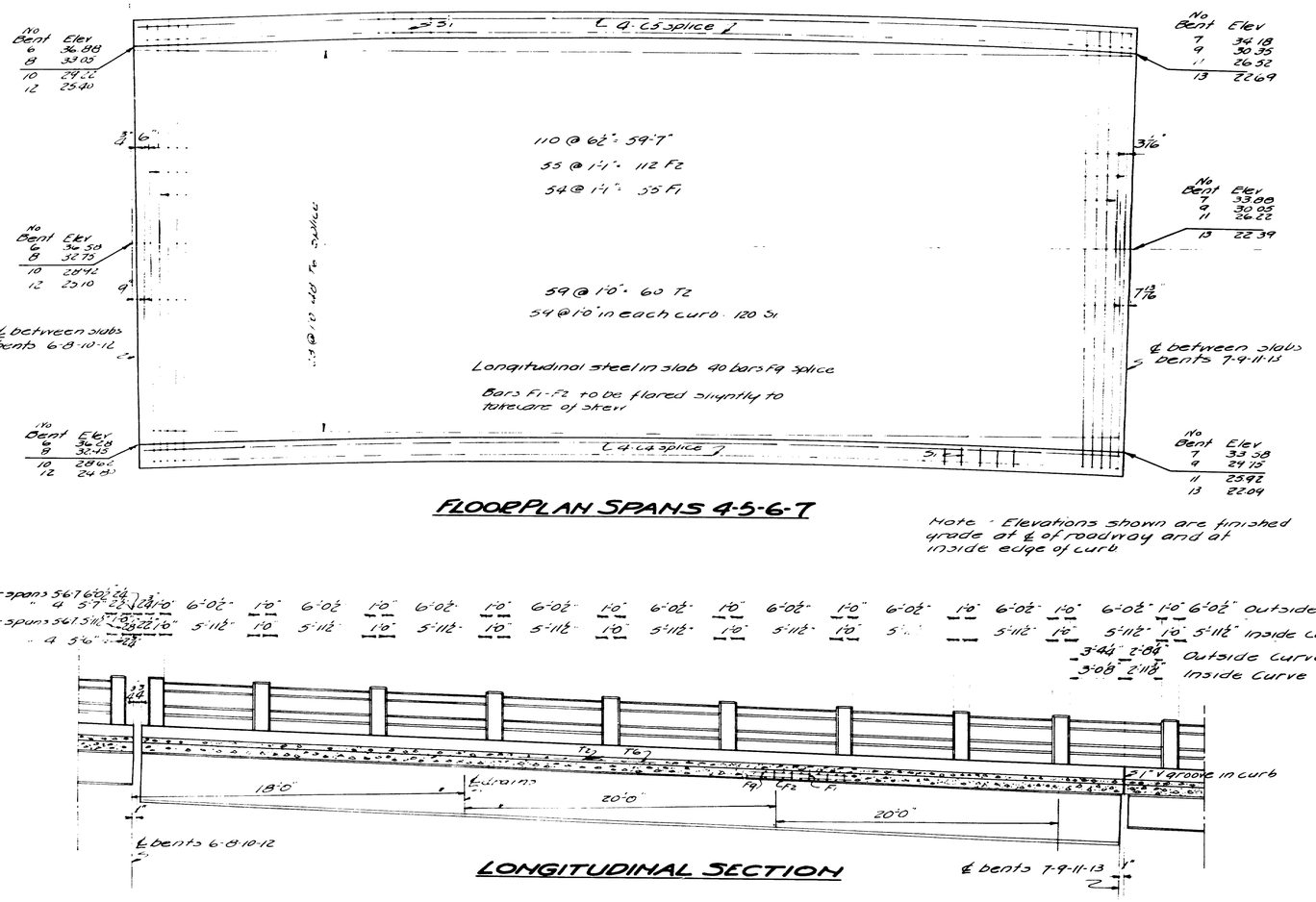
FLOOR SPAN NO 3.
Sheet 9 of 24 Augusta 1933

Design
Traced Blake
Checked

22-59

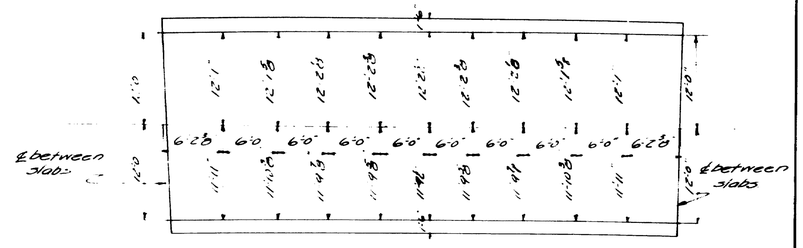
0 1 2 3 4 5 INCHES

FED. ROAD DIST. No.	STATE	FED. AID PROJ.		SHEET No.	TOTAL SHEETS
—	—	—	—	10	24



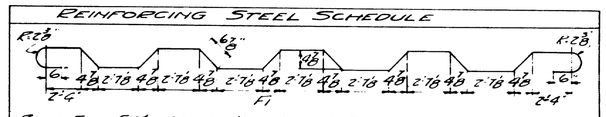
FLOOR PLAN SPANS 4-5-6-7

Note - Elevations shown are finished grade at ℄ of roadway and at inside edge of curb



SLAB LAYOUT SPANS 4-5-6-7

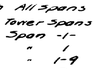
REINFORCING STEEL SCHEDULE



Bars Fi, ⅝"ϕ 619 reqd Length 29'-7½" All Spans

Mark	Size	No	Length	Remarks
Fz	⅝"ϕ	1266	26'9	3100 All spans
F3	⅝"ϕ	160	24'8"	" Tower Spans
F4	"	20	22'0"	" Span -1-
F5	"	20	21'0"	" " 1
F6	"	10	5'0"	" " 1-9
F7	"	40	21'0"	" " 2
F8	"	40	20'6"	" " 3
F9	"	160	31'0"	" " 4-5-6-7
F10	"	40	26'0"	" " 8
F11	"	20	26'0"	" " 9
F12	"	20	27'0"	" " 9
P	½"ϕ	856	4'0"	All rail posts
P1	⅝"ϕ	40	5'10½"	Rails Span-1 Tower-1
P2	"	80	5'9½"	" " 1 " 1
P3	"	36	6'3½"	" " 2 " 2
R8	"	36	6'0½"	" " 2 " 2
R3	"	48	5'11"	" " 3 " 3
R6	"	48	5'10"	" " 3 " 3
R7	"	192	6'4½"	" Spans Tower 4-5-6-7
R8	"	192	6'3½"	" " " 4-5-6-7
R9	"	44	6'0½"	" " " 8
R10	"	44	5'11½"	" " " 8

Bars Si, ½"ϕ Reqd 1350 Length 4'-0½" Curb of all spans



Mark	Size	No	Length	Remarks
R11	⅝"ϕ	32	5'8"	Span 9
R12	"	32	5'6½"	" "
T1	⅜"ϕ	192	24'8"	Surface Tower Spans
T2	"	679	23'9"	" All "
T3	"	48	22'0"	W Surf Span-1-
T4	"	48	21'0"	" " 2
T5	"	48	20'9"	" " 3
T6	"	192	31'0"	" " 4-5-6-7
T7	"	48	26'0"	" " 8
T8	"	48	26'6"	" " 9
C1	½"ϕ	32	24'8"	Curbs Tower Spans
C2	"	8	22'0"	" Span -1-
C3	"	8	21'0"	" " 2
C4	"	8	20'6"	" " 3
C5	"	32	31'0"	" " 4-5-6-7
C6	"	8	26'0"	" " 8
C7	"	8	27'0"	" " 9

All steel to be plain bars structural grade Dimensions are to center lines of bars

For spans 5-6-7 6@6½" = 3'-0" 6'-0½" 1'-0" 6'-0½" 1'-0" 6'-0½" 1'-0" 6'-0½" 1'-0" 6'-0½" 1'-0" 6'-0½" 1'-0" 6'-0½" 1'-0" 6'-0½" 1'-0" 6'-0½" 1'-0" 6'-0½" Outside Curve

For spans 5-6-7-8 5@6½" = 2'-7½" 5'-11½" 1'-0" 5'-11½" 1'-0" 5'-11½" 1'-0" 5'-11½" 1'-0" 5'-11½" 1'-0" 5'-11½" 1'-0" 5'-11½" 1'-0" 5'-11½" 1'-0" 5'-11½" 1'-0" 5'-11½" Inside Curve

3'-4½" 2'-8½" Outside Curve

3'-0⅝" 2'-11½" Inside Curve

LONGITUDINAL SECTION

Town 12-11
Bridge 3039

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STA. 46
over
M.C.R.R. TRACK
in the town of
WOOLWICH
SAGADAHOC CO.

FLOOR SPANS 4-5-6-7

Sheet 10 of 24 Augusta 1933

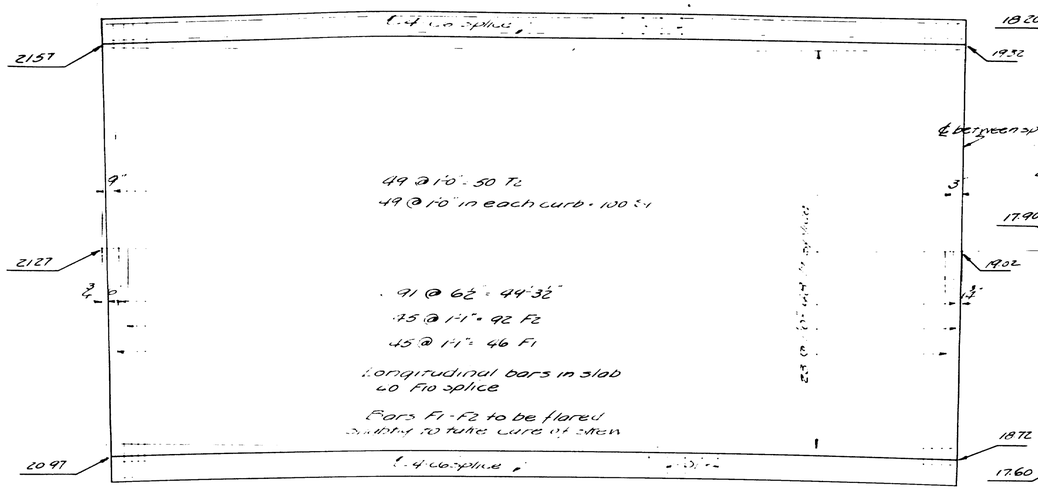
Design by:
Traced Blake
Checked

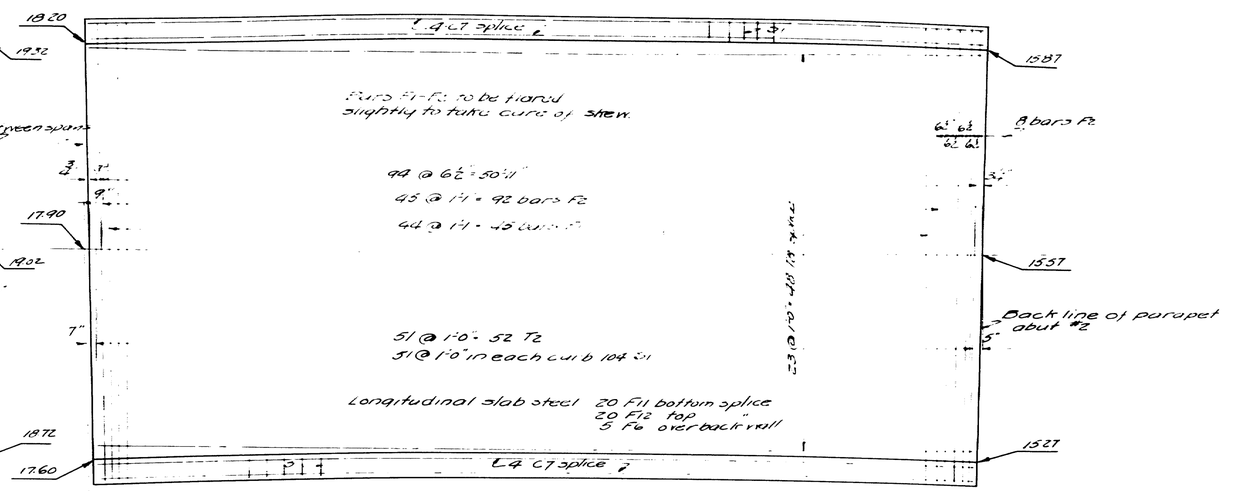
22-60

0 1 2 3 4 5 INCHES

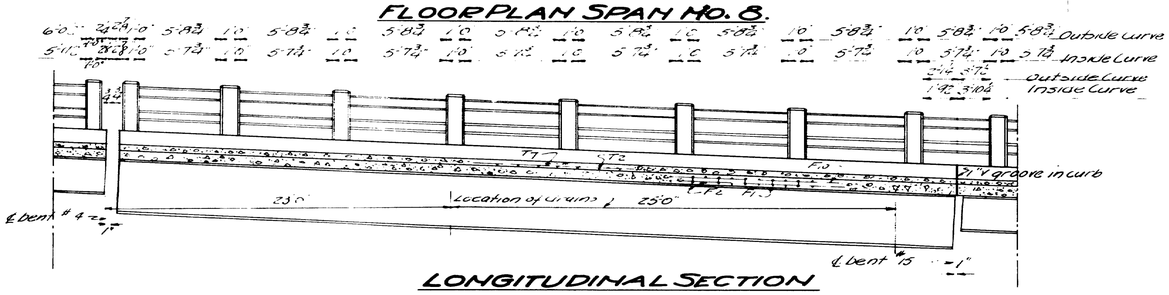
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
			11	24

All elevations shown are finished grade at ℄ roadway and inside edge of curb

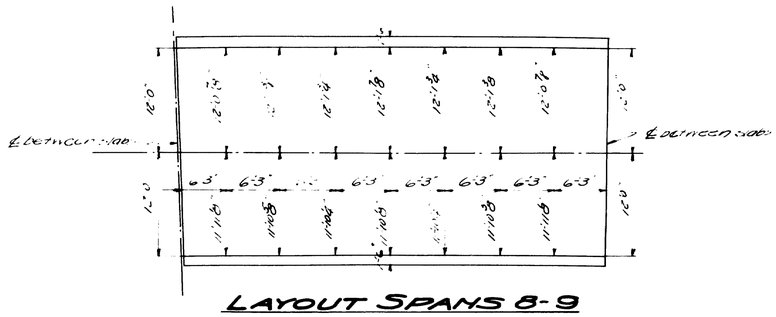




FLOOR PLAN SPAN NO. 8.

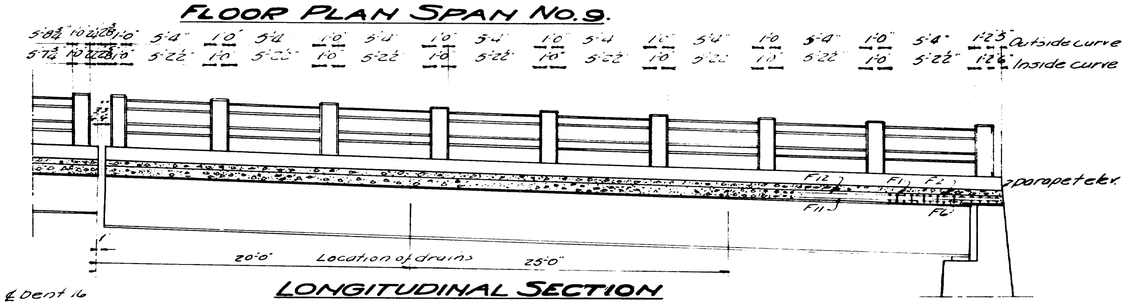


LONGITUDINAL SECTION



LAYOUT SPANS 8-9

FLOOR PLAN SPAN NO. 9.



LONGITUDINAL SECTION

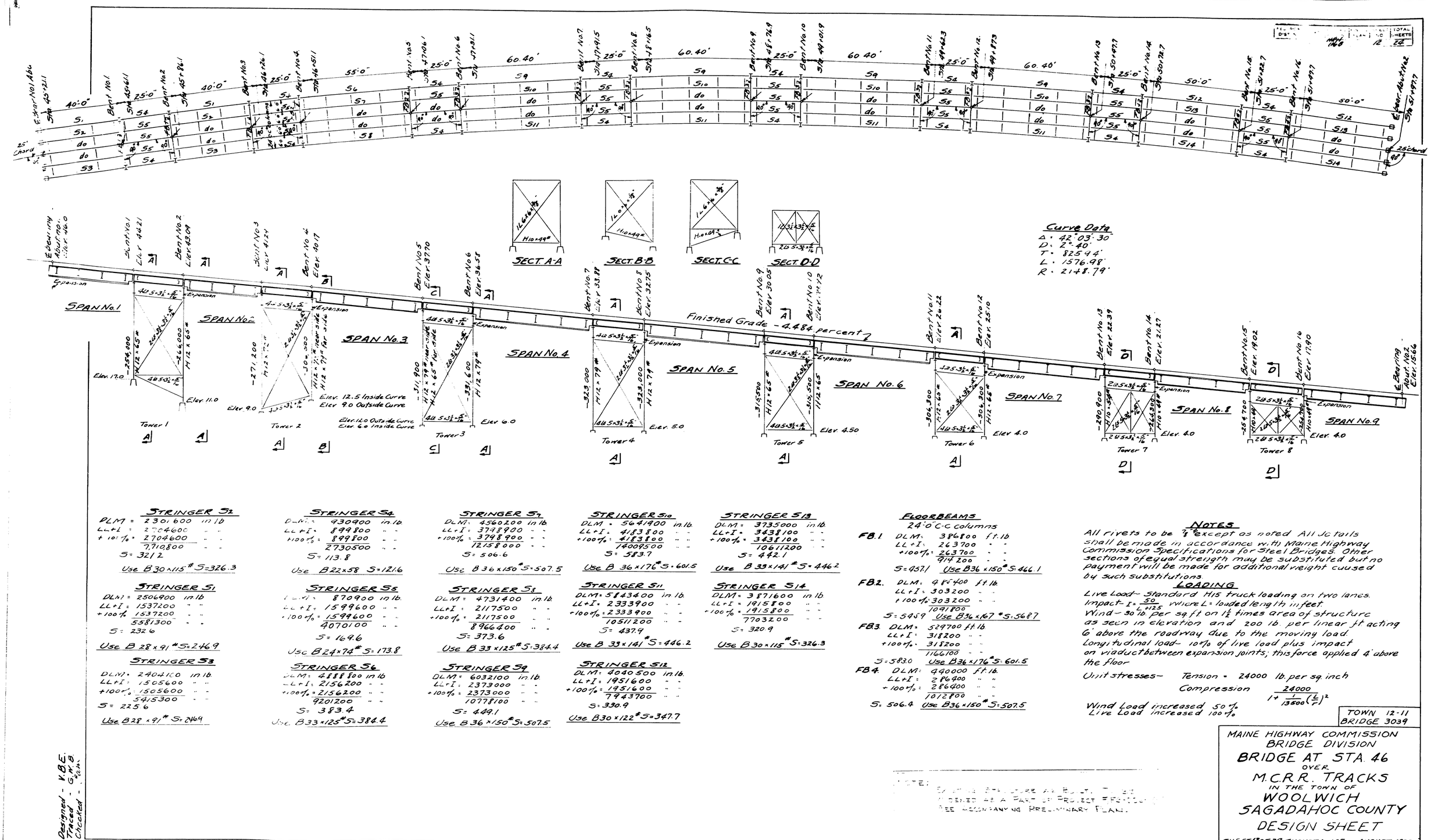
ABUT. NO. 2.

Design by
Traced Blake
Checked Bain

Town 12-11
Bridge 3039

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION
BRIDGE AT STA. 46
over
M.C.R.R. TRACK
in the town of
WOOLWICH
SAGADAHOC CO.
FLOOR SPANS 8 & 9
Sheet 11 of 24 Augusta 1933

22-61



STRINGER S1

DLM = 2301600 in lb
LL+I = 2704600 " "
+ 10% = 2704600 " "
7710800 " "
S = 321.2
Use B 30×115# S=326.3

STRINGER S2

DLM = 2506900 in lb
LL+I = 1537200 " "
+100% 1537200 " "
5581300 " "
S = 232.6
Use B 28×91# S=246.9

STRINGER S3

DLM = 2404100 in lb
LL+I = 1505600 " "
+100% 1505600 " "
5415300 " "
S = 225.6
Use B 28×91# S=246.9

STRINGER S4

DLM = 930900 in lb
LL+I = 899800 " "
+100% = 899800 " "
2730500 " "
S = 113.8
Use B 22×58 S=121.6

STRINGER S5

DLM = 870900 in lb
LL+I = 1599600 " "
+100% = 1599600 " "
4070100 " "
S = 169.6
Use B 24×74# S=173.8

STRINGER S6

DLM = 4888800 in lb
LL+I = 2156200 " "
+100% = 2156200 " "
9201200 " "
S = 383.4
Use B 33×125# S=384.4

STRINGER S7

DLM = 4560200 in lb
LL+I = 3798900 " "
+100% = 3798900 " "
12158000 " "
S = 506.6
Use B 36×150# S=507.5

STRINGER S8

DLM = 4731400 in lb
LL+I = 2117500 " "
+100% = 2117500 " "
8966400 " "
S = 373.6
Use B 33×125# S=384.4

STRINGER S9

DLM = 6032100 in lb
LL+I = 2373000 " "
+100% = 2373000 " "
10778100 " "
S = 449.1
Use B 36×150# S=507.5

STRINGER S10

DLM = 5641900 in lb
LL+I = 4183800 " "
+100% = 4183800 " "
14009500 " "
S = 583.7
Use B 36×176# S=601.5

STRINGER S11

DLM = 5843400 in lb
LL+I = 2333900 " "
+100% = 2333900 " "
10511200 " "
S = 437.9
Use B 33×141# S=446.2

STRINGER S12

DLM = 4040500 in lb
LL+I = 1951600 " "
+100% = 1951600 " "
7943700 " "
S = 330.9
Use B 30×122# S=347.7

STRINGER S13

DLM = 3735000 in lb
LL+I = 3438100 " "
+100% = 3438100 " "
10611200 " "
S = 442.1
Use B 33×141# S=446.2

STRINGER S14

DLM = 3871600 in lb
LL+I = 1915800 " "
+100% = 1915800 " "
7703200 " "
S = 320.9
Use B 30×115# S=326.3

FLOORBEAMS

24'0" C-C columns

FB.1
DLM = 386800 ft lb
LL+I = 263700 " "
+100% = 263700 " "
914200 " "
S = 93.1 Use B 36×150# S=466.1

FB.2.
DLM = 485400 ft lb
LL+I = 303200 " "
+100% 303200 " "
1091800 " "
S = 545.9 Use B 36×167# S=568.7

FB.3
DLM = 529700 ft lb
LL+I = 318200 " "
+100% = 318200 " "
1166100 " "
S = 583.0 Use B 36×176# S=601.5

FB.4
DLM = 990000 ft lb
LL+I = 296900 " "
+100% = 296900 " "
1012800 " "
S = 506.4 Use B 36×150# S=507.5

NOTES

All rivets to be ⅞" except as noted. All details shall be made in accordance with Maine Highway Commission Specifications for Steel Bridges. Other sections of equal strength may be substituted but no payment will be made for additional weight caused by such substitutions.

LOADING

Live Load – Standard H15 truck loading on two lanes.
Impact – $I = \frac{50}{L+125}$ where L = loaded length in feet.
Wind – 30 lb. per sq ft on 1½ times area of structure as seen in elevation and 200 lb. per linear ft acting 6' above the roadway due to the moving load
Longitudinal load – 10% of live load plus impact on viaduct between expansion joints; this force applied 4' above the floor

Unit stresses – Tension = 24000 lb. per sq inch
Compression $\frac{24000}{1+\frac{1}{13600}\left(\frac{L}{r}\right)^2}$

Wind Load increased 50%
Live Load increased 100%

NOTE:
[illegible] STRUCTURE AS PART OF PROJECT [illegible]
INDEXED AS A PART OF PROJECT [illegible]
SEE ACCOMPANYING PRELIMINARY PLAN.

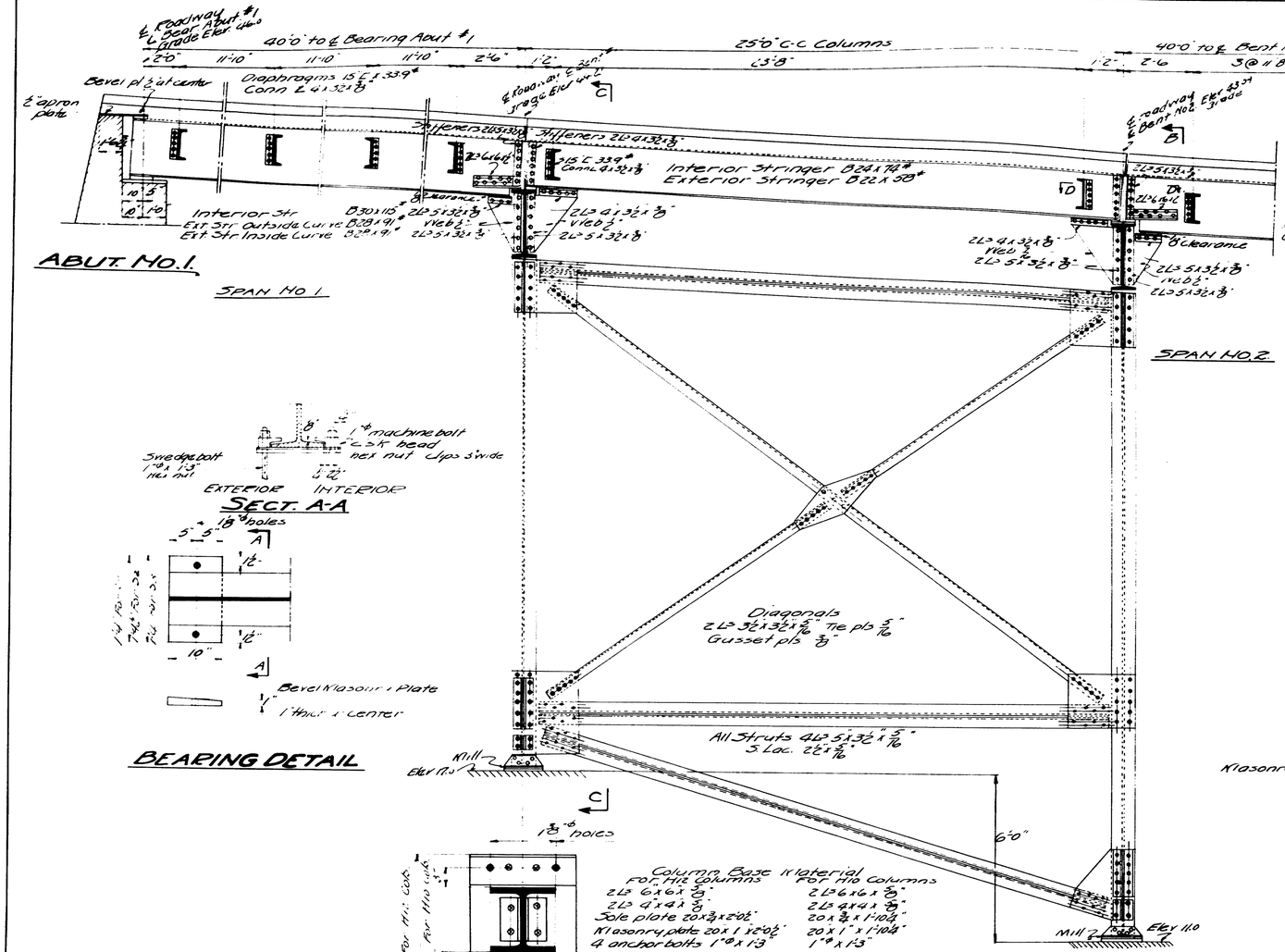
Designed - V.B.E.
Traced - G.W.B.
Checked - [illegible]

TOWN 12-11
BRIDGE 3039

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION
BRIDGE AT STA. 46
OVER
M.C.R.R. TRACKS
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
DESIGN SHEET
SHEET 12 OF 24 AUGUSTA, ME. AUGUST, 1933

22-62

0 1 2 3 4 5 INCHES



Town 12-11
Bridge 3034

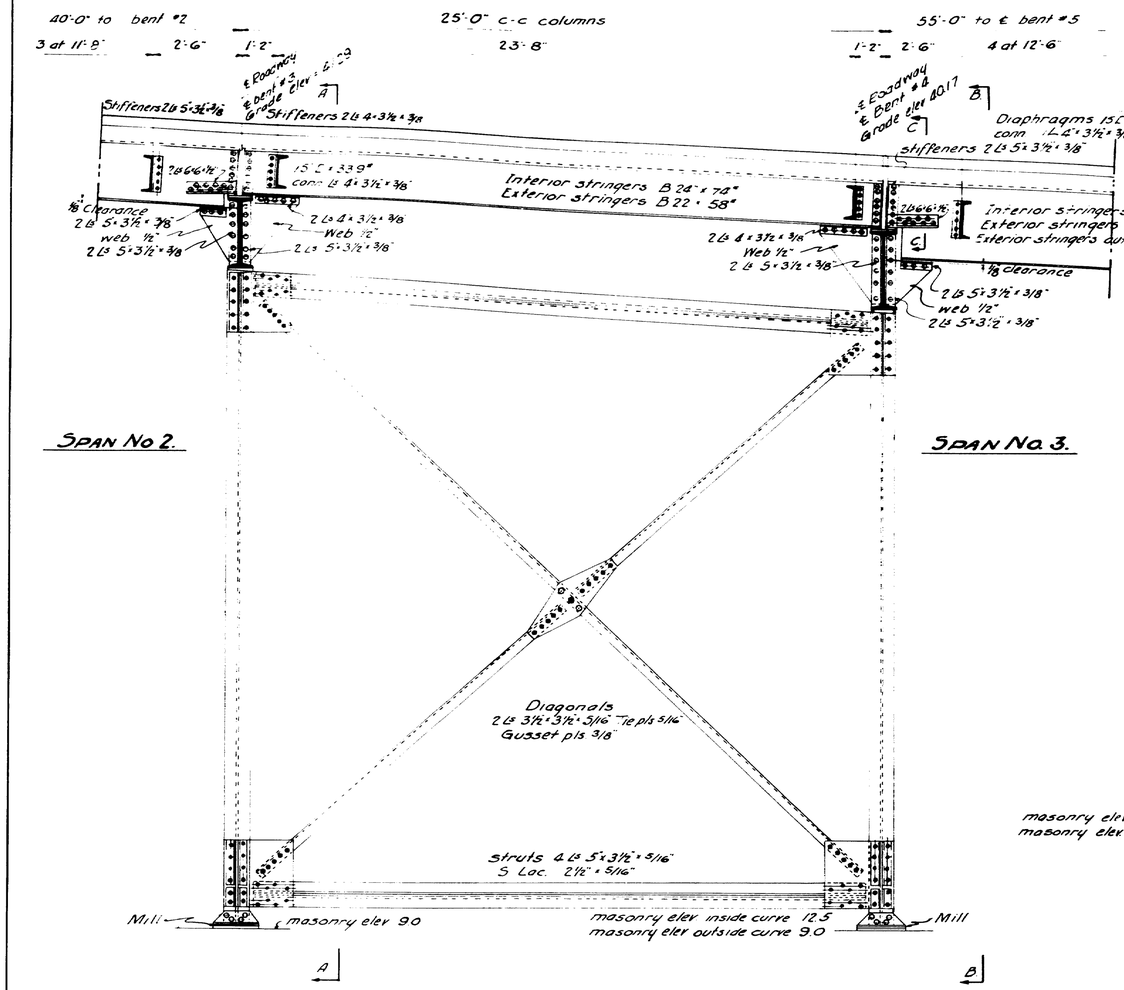
MAINE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STA. 46
over
M.C.R.R. TRACK
in the town of
WOOLWICH
SAGADAHOC CO.

TOWER NO 1: BENTS 1 and 2

Sheet 13 of 24 Augusta 1933

22-63

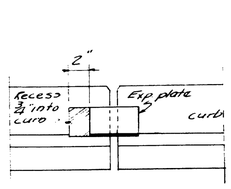


LONGITUDINAL SECTION
TOWER No. 2.

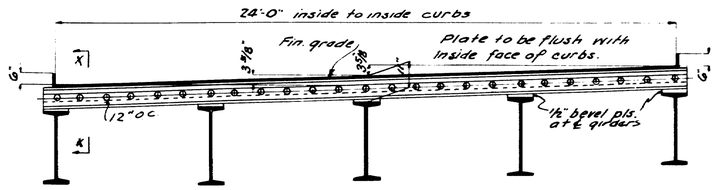
For typical details see sheet No. 13

HALF SECT. B-B.

HALF SECT. A-A.

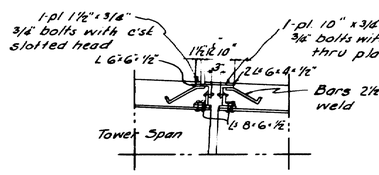


VIEW X-X



SECTION C.-C. SHOWING EXPANSION DAM

Expansion dams req'd at bents 2-4-6-8-10-12-14-16.



TRANS. SECT. EXPANSION DAM

Town 12-11
Bridge 3039

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION

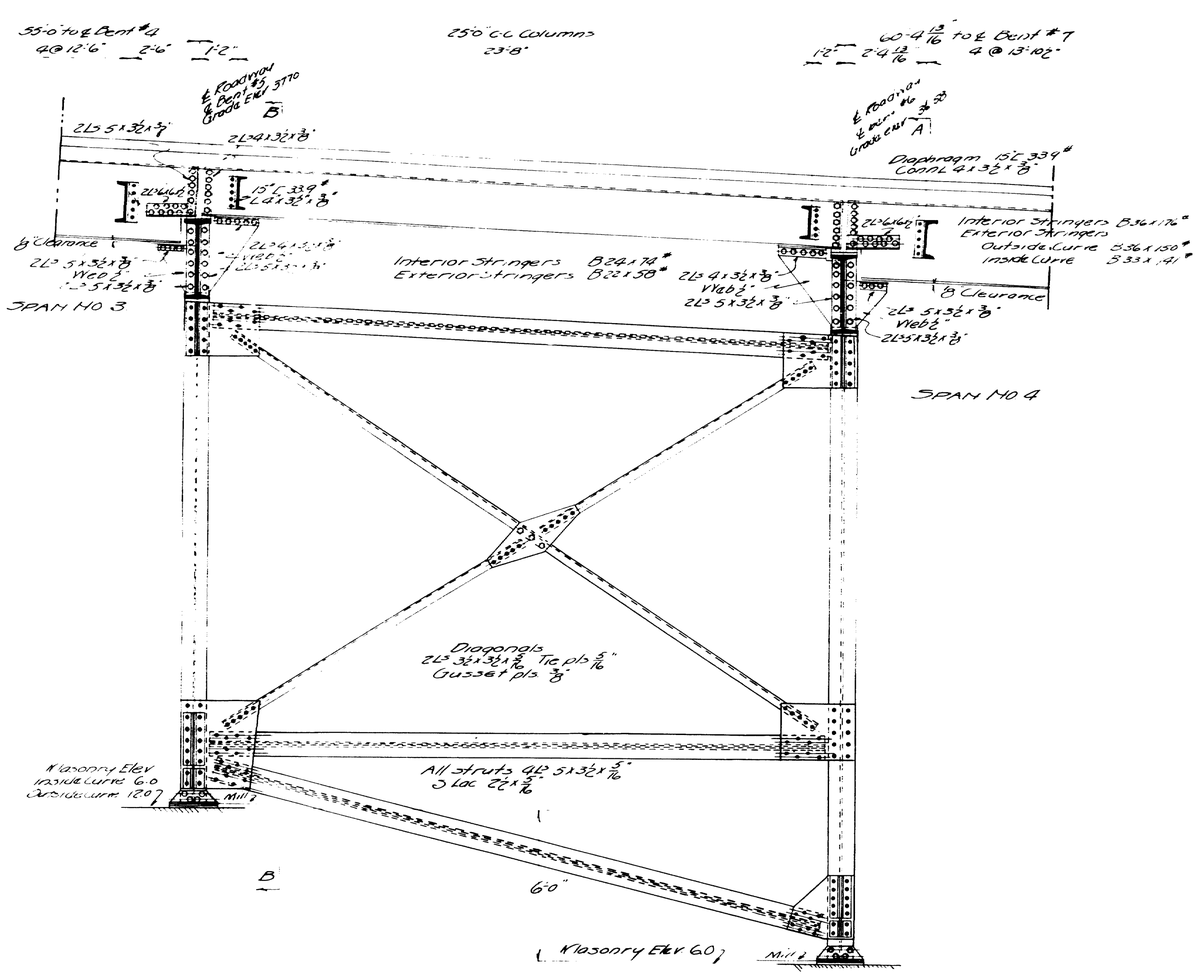
BRIDGE AT STA. 46
over
M.C.R.R. TRACK
in the town of
WOOLWICH
SAGADAHOC CO.

TOWER No. 2. BENTS 3-4

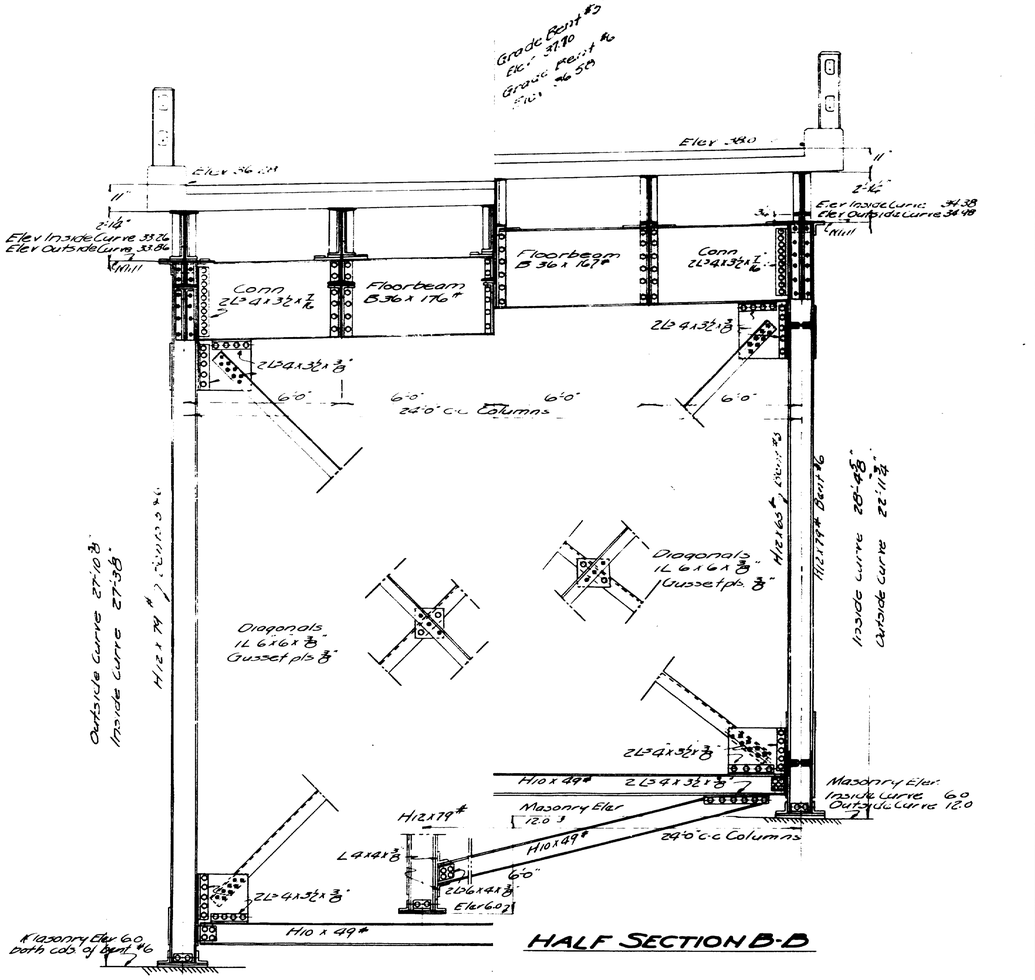
Sheet 14 of 24 Augusta 1933

Design by EC
Checked by [illegible]
Tracing by [illegible]

22-64



LONGITUDINAL SECTION TOWER NO. 3.



HALF SECTION B-B

HALF SECTION A-A

Designed by
Traced by
Checked by

Town 12-11
Bridge 3039

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION

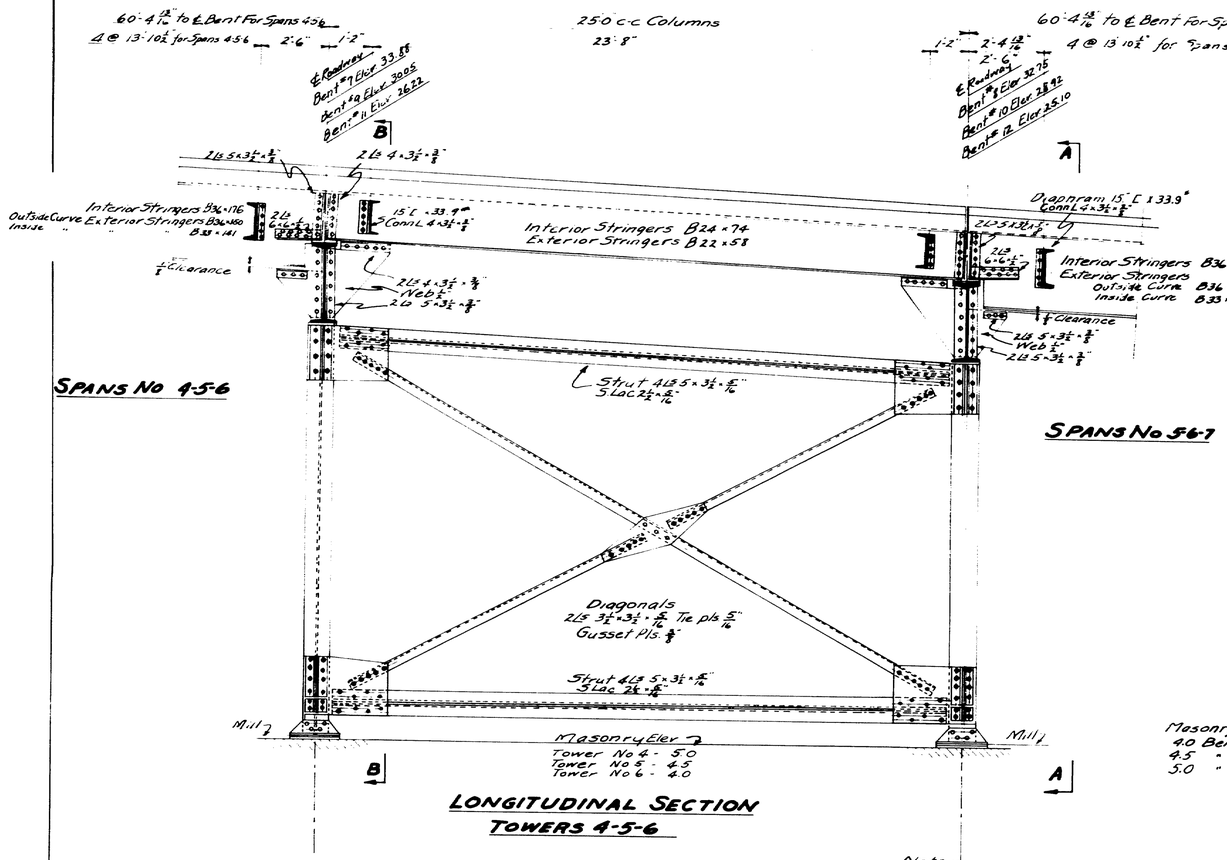
BRIDGE AT STA. 46
over
M.C.R.R. TRACK
in the town of
WOOLWICH
SAGADAHOC CO.

TOWER 3 BENTS 5 & 6

Sheet 15 of 24 Augusta 1933

22-65

0 1 2 3 4 5 INCHES



Note For Typical Details see Sheet No. 13

Town 12-11
Bridge 3039

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STA. 46
over
M.C.R.R. TRACK
in the town of
WOOLWICH
SAGADAHOC COUNTY
BENTS 7-8-9-10-11-12

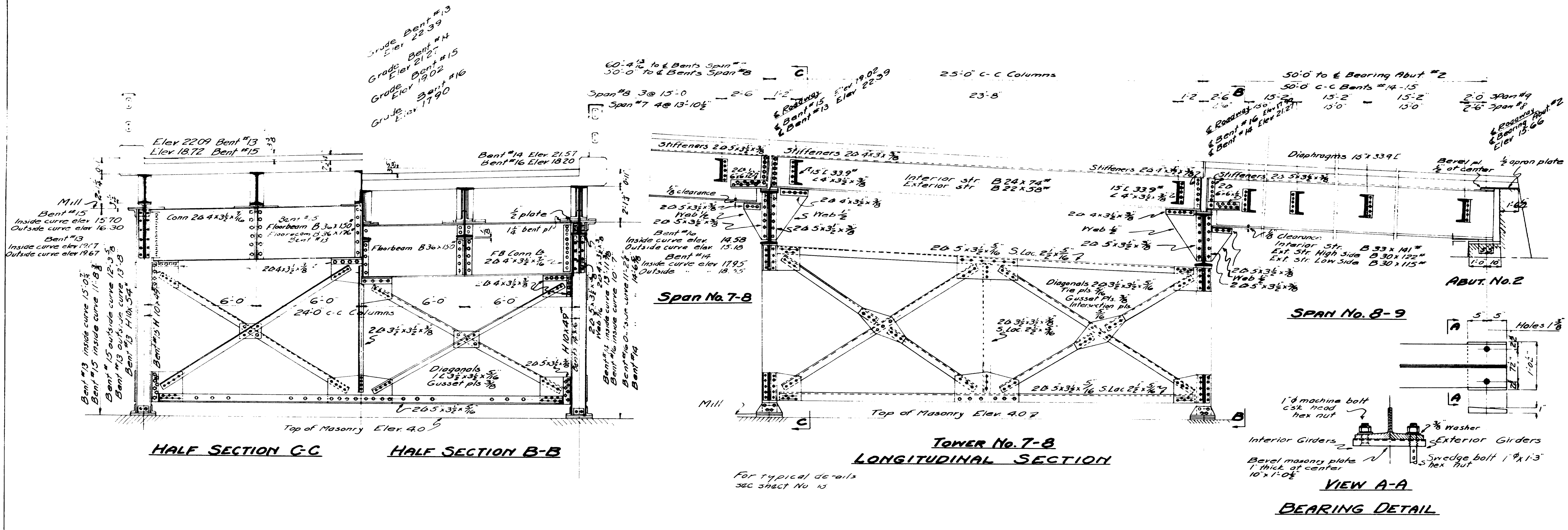
Sheet 16 of 24 Augusta 1933

22-66

Dennard Vol
Traced by
Checked by

0 1 2 3 4 5 INCHES

FED ROAD DIST NO	STATE			SHEET NO	TOTAL SHEETS
		N.R.H. 116 B		17	24



Drawn by B.E.
Traced by W.B. & P.W.

Town 12-11
Bridge 3039

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STA. 46

OVER

M.C.R.R. TRACK

in the town of

WOOLWICH
SAGADAHOC CO.

TOWERS 7-8. BENTS 13-14-15-16

Sheet 17 of 24 Augusta, Me. Sept. 1933

22-67

0 1 2 3 4 5 INCHES

FED. AID PROJ. | STATE AID PROJ. | SHEET NO. | TOTAL SHEETS
DIST. | | MAIN 11&B | 18 | 24

TIE: NAIL IN 10" PLUM

TO BATH ROUTE NO. 1

STA 19+12.7 PC

TIE: NAIL IN POWER POLE

TIE: NAIL IN 20" MAPLE

TO GEORGETOWN

TIE: TOP CENTER OF HYDRANT

TIE: NAIL IN END GD. RAIL POST

STA 21+00

STA 21+62.7 POST

TIE: VERT. SPIKE IN ROOT OF 24" MAPLE. B.M. #2.

TIE: NAIL IN TEL. POLE

TIE: NAIL IN TWIN 6" APPLE

TO PORTLAND RR (FORMER)

TIE: NAIL IN POST

STA 22+00

STA 22-50

STA 22-75.64

STA 23+00

STA 23-50

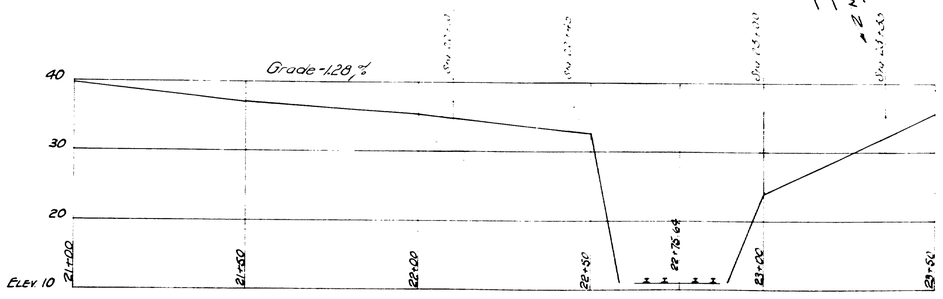
TIE: NAIL IN POWER POLE

TIE: NAIL IN POST

TO WISCASSET ROUTE NO. 1

TO ROCKLAND DIVISION M.C.R.R.

SCALES — HORIZONTAL. 1" = 20 FEET.
VERTICAL. 1" = 10 FEET.



SURVEY BY BECKMAN, ROTTIER & PARADIS, C.E. & L.S.

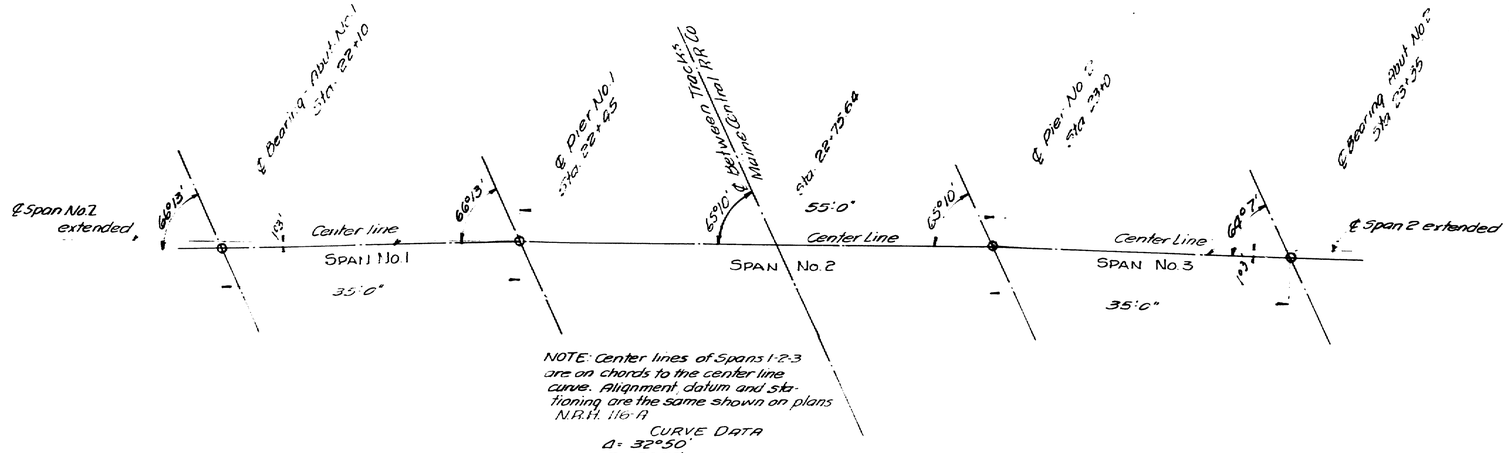
TOWN 12-11.
BRIDGE 3038.

MAINE HIGHWAY COMMISSION
BRIDGE DIVISION
OVERHEAD BRIDGE
OVER
MAINE CENTRAL R.R. TRACKS
IN THE TOWN OF
WOOLWICH. SAGADAHOC CO.
SURVEY PLAN.

SHEET 18 OF 24 AUGUSTA ME. SEPT. 1938

22-68

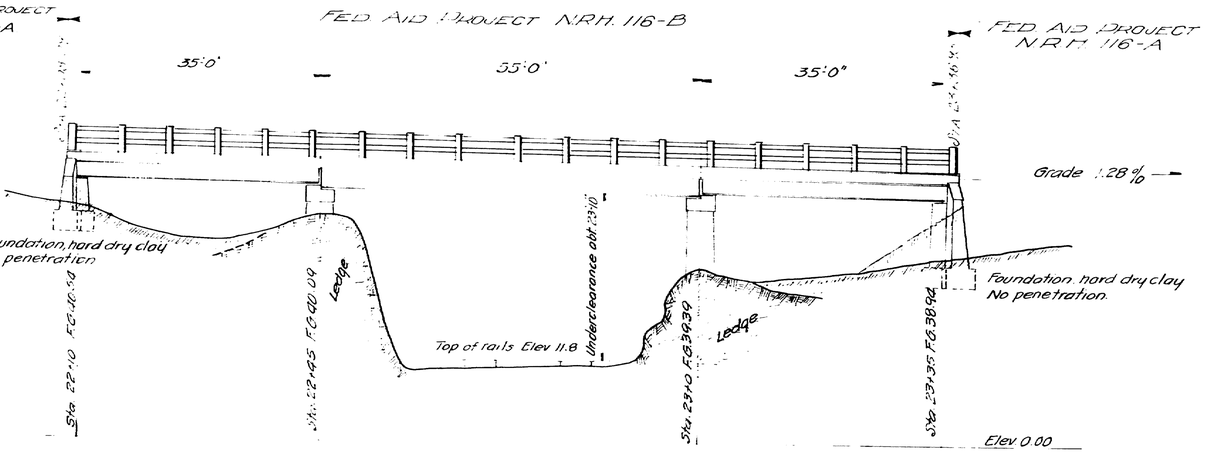
0 1 2 3 4 5 INCHES



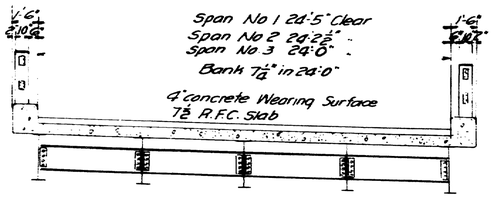
NOTE: Center lines of Spans 1-2-3 are on chords to the center line curve. Alignment, datum and stationing are the same shown on plans N.R.H. 116-A

CURVE DATA
Δ = 32°50'
D = 2°20'
T = 723.61
L = 1407.34
P.C. = Sta. 19+12.61
P.T. = Sta. 33+19.95

LAYOUT



ELEVATION



SPAN	INTERIOR	EXTERIOR
No. 1	B 28", 97#	B 24", 81#
No. 2	B 33", 152#	B 33", 135#
No. 3	B 28", 97#	B 24", 81#

Diaphragms Spans Nos. 1-3 C 15", 33.9#
" " No. 2 B 18", 47#

TYPICAL CROSS-SECTION

SPANS NOS. 1-3

INTERIOR STRINGERS		EXTERIOR STRINGERS	
Dead Load Moment	1673550""	Dead Load Moment	1783900
L.L. Moment	1728400	L.L. Moment	972200
Impact .315	544400	Impact .315	306200
100% Live + Impact	2272800	100% Live + Impact	1278400
	6219150		4340700
S = 259.1 Use B 28" 97#	S = 265.1	S = 180.9 Use B 24" 81#	S = 189.8

SPAN NO. 2

INTERIOR STRINGERS		EXTERIOR STRINGERS	
Dead Load Moment	4312000	Dead Load Moment	4602300
L.L. Moment	2873800	L.L. Moment	1616500
Impact .280	804700	Impact .280	452600
100% Live + Impact	3678500	100% Live + Impact	2069100
	11669000		8740500
S = 486.2 Use B 33" 152#	S = 485.7	S = 364.2 Use B 33" 135#	S = 384.4

See note regarding substition on Sheet No.

LOADING: H 15
Designed for Dead Load, Live Load and impact with 100% overload.
Unit stress = 24000#/" Impact = $\frac{50}{L+125}$

In accordance with STATE HIGHWAY COMMISSIONS SPECIFICATIONS FOR STEEL BRIDGES.

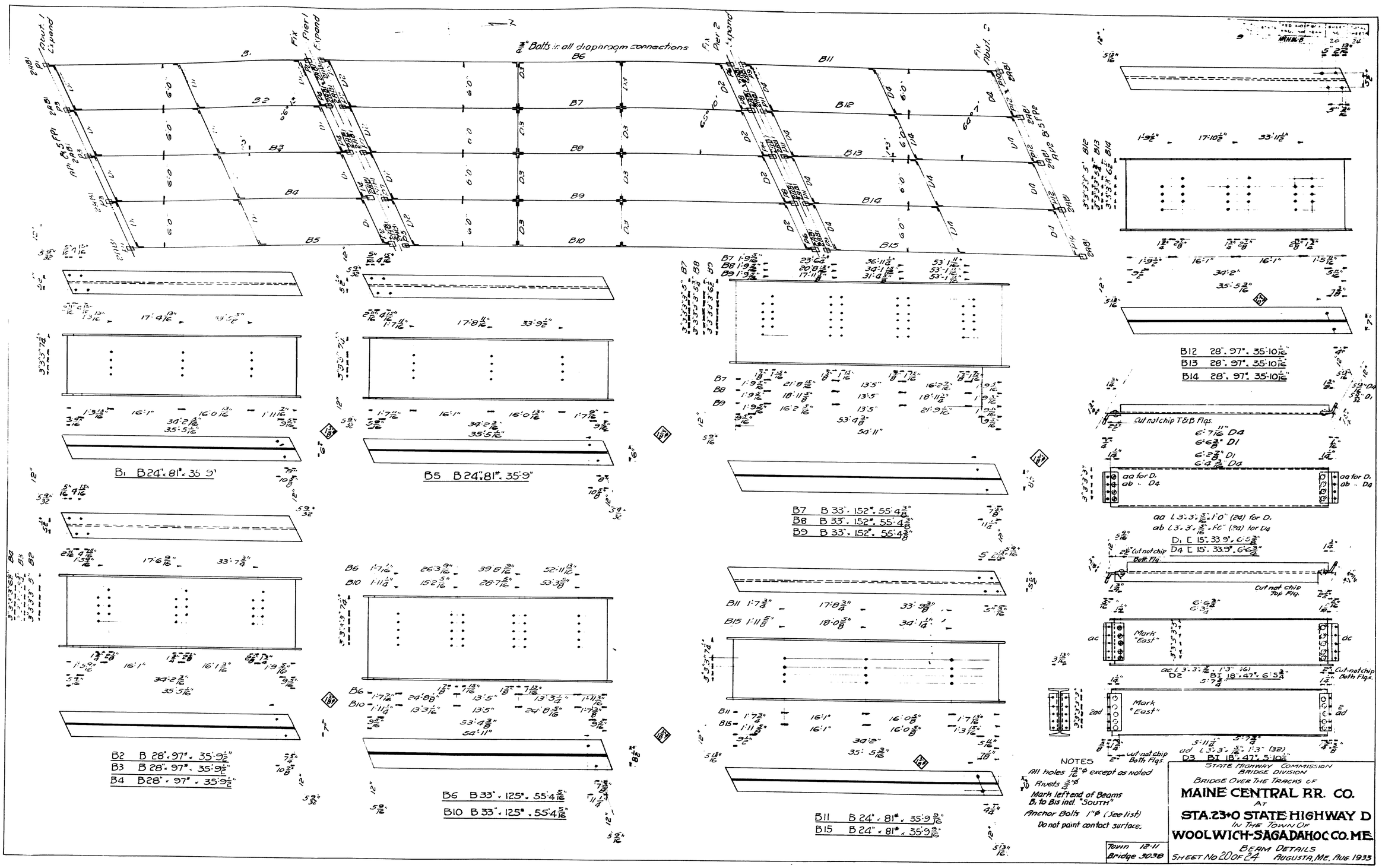
Town 12-11
Bridge 3038

STATE HIGHWAY COMMISSION
BRIDGE DIVISION
BRIDGE OVER THE TRACKS OF
MAINE CENTRAL RR. CO.
AT
STA. 23+0 STATE HIGHWAY D
IN THE TOWN OF
WOOLWICH-SAGADAHOC CO. ME
GENERAL PLAN
SHEET NO. 9 OF 24 AUGUSTA, MAINE, AUGUST 1933

Drawn by C.B.
Traced by L.A.R.

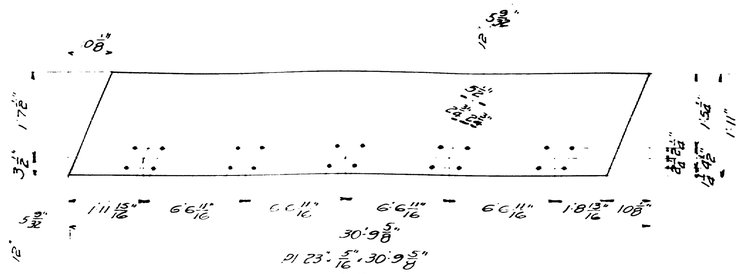
0 1 2 3 4 5 INCHES

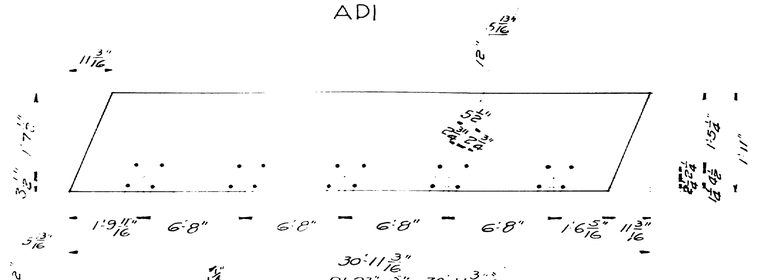
22-69

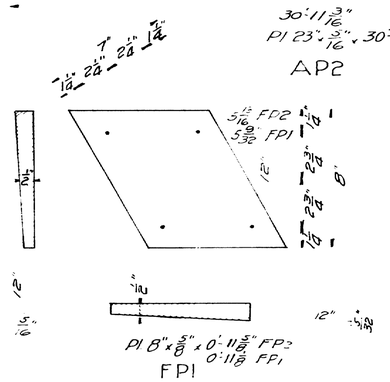

Fix Pier 1 Expand
Fix Pier 2 Expand
Fix Abut. 1 Expand
Fix Abut. 2 Expand
¾" Bolts in all diaphragm connections
B1 B24"×81"×35'9"
B5 B24"×81"×35'9"
B2 B 28"×97"×35'9½"
B3 B 28"×97"×35'9½"
B4 B28"×97"×35'9½"
B6 B 33"×125"×55'4 5/16"
B10 B 33"×125"×55'4 5/16"
B7 B 33"×152"×55'4 3/8"
B8 B 33"×152"×55'4 3/8"
B9 B 33"×152"×55'4 3/8"
B11 B 24"×81"×35'9 9/16"
B15 B 24"×81"×35'9 9/16"
B12 28"×97"×35'10 1/16"
B13 28"×97"×35'10 1/16"
B14 28"×97"×35'10 1/16"
Cut notchip T&B Flgs.
D1 L 15'-33 9/16" 6'-6 3/8"
D4 L 15'-33 9/16" 6'-6 3/8"
aa L 3"×3"×5/16"×1'-0" (24) for D1
ab L 3"×3"×5/16"×1'-0" (24) for D4
D2 L 18'-47" 6'-5 3/4"
D3 B1 18'-47" 5'-10 3/4"
Cut notchip Top Flg.
Mark "East"
Mark "East"
NOTES
All holes 13/16"ø except as noted
Rivets ¾"ø
Mark left end of Beams B, to B8 incl. "SOUTH"
Anchor Bolts 1"ø (See list)
Do not paint contact surface.
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
BRIDGE OVER THE TRACKS OF
MAINE CENTRAL RR. CO.
AT
STA. 23+0 STATE HIGHWAY D
IN THE TOWN OF
WOOLWICH-SAGADAHOC CO. ME.
BEAM DETAILS
SHEET No 20 OF 24
AUGUSTA, ME. AUG. 1935
Town 12-11
Bridge 3038
Chec'd by E.B.
0 1 2 3 4 5 INCHES

22-70

TO FOLLOW SHEET NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		BRI NH 46-B		21	24

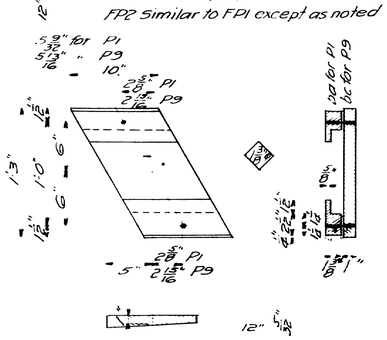


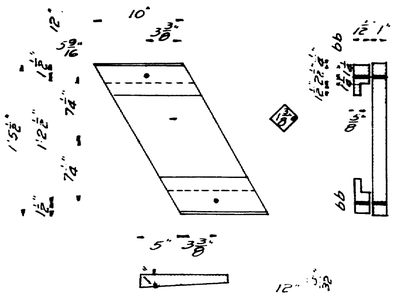


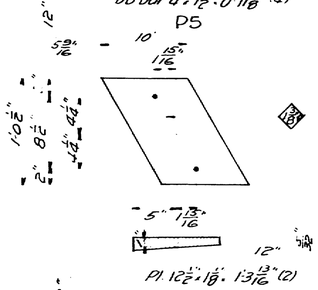


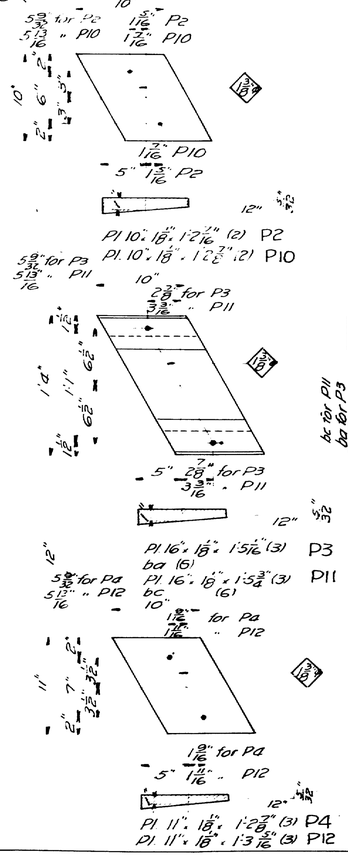
FP2

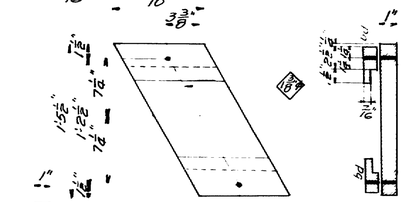
FP2 Similar to FP1 except as noted

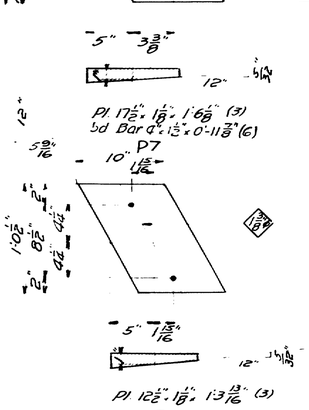












MATERIAL LIST

Mark	No Required
B1	1
B2	1
B3	1
B4	1
B5	1
B6	1
B7	1
B8	1
B9	1
B10	1
B11	1
B12	1
B13	1
B14	1
B15	1
D1	12
D2	8
D3	8
D4	12
AP1	1
AP2	1
FP1	5
FP2	5
P1	2
P2	3
P3	3
P4	3
P5	2
P6	2
P7	3
P8	3
P9	2
P10	3
P11	2
P12	3

BOLT LIST

Mark	Size	No	Type	Remarks
BB1	1"ø x 1'-3"	60	Swedge Bolts	Thread end 4"

All holes $\frac{13}{16}$"ø except as noted

Other sections of equal strength and depth may be substituted for those shown, But no allowance for extra weight caused thereby will be allowed.

Town 12-11
Bridge 3038

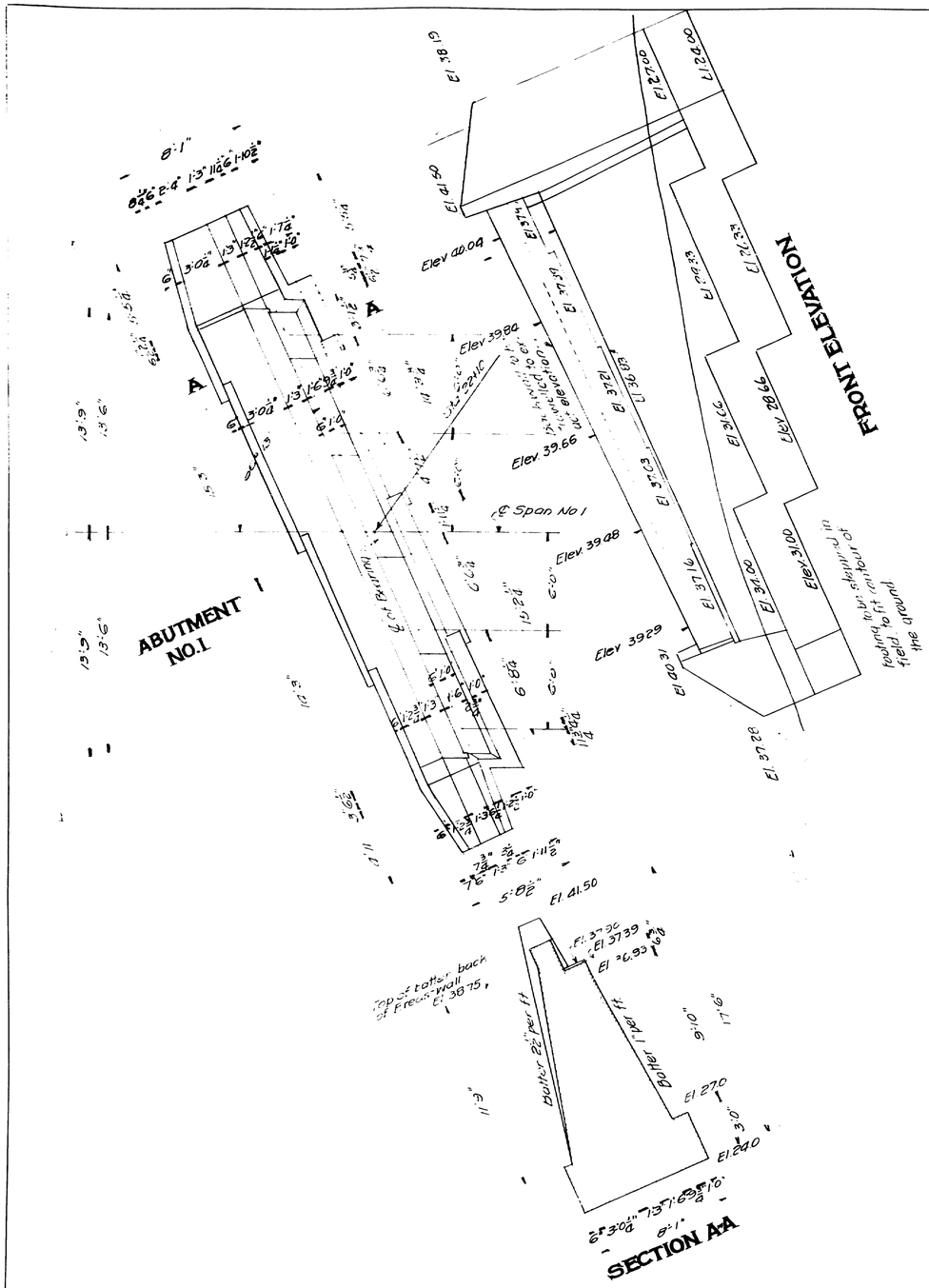
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
BRIDGE OVER THE TRACKS OF
MAINE CENTRAL RR. CO.
AT
STA. 23+0 STATE HIGHWAY D
IN THE TOWN OF
WOOLWICH SAGADAHOC CO ME
PLATE DETAILS
SHEET 21 OF 24 AUGUSTA, ME. AUGUST 1933

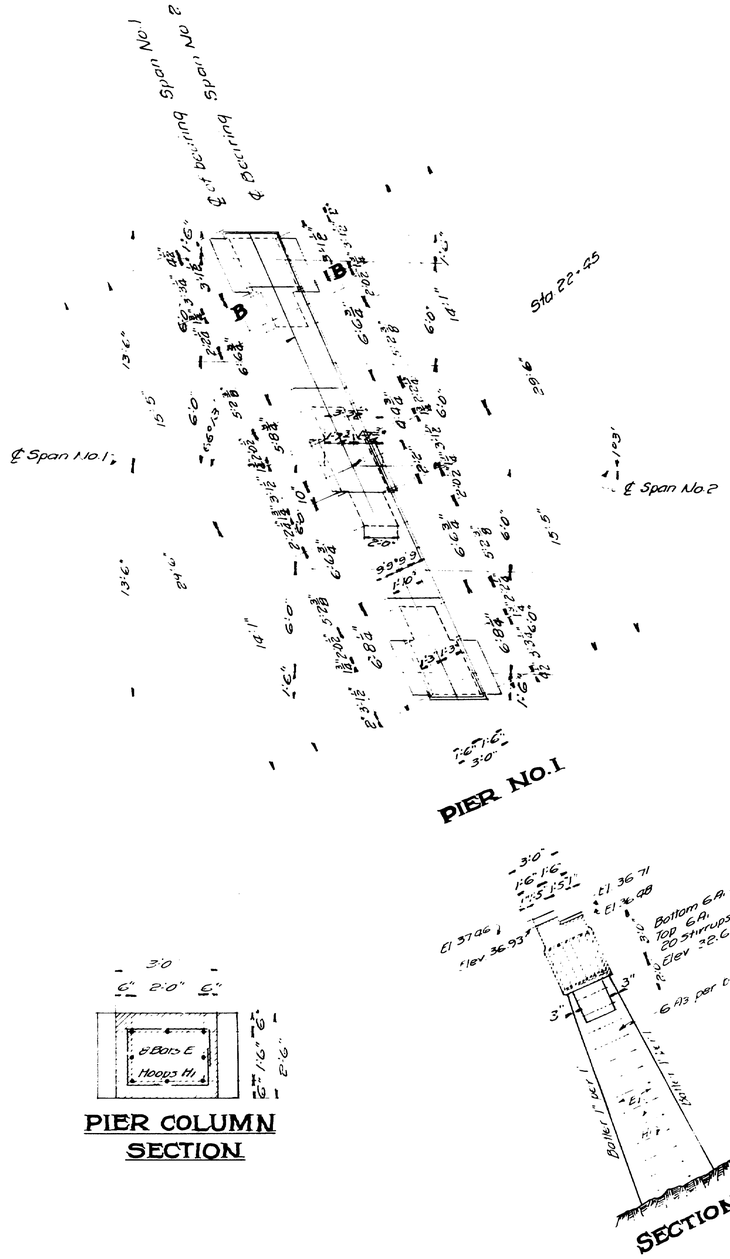
22-71

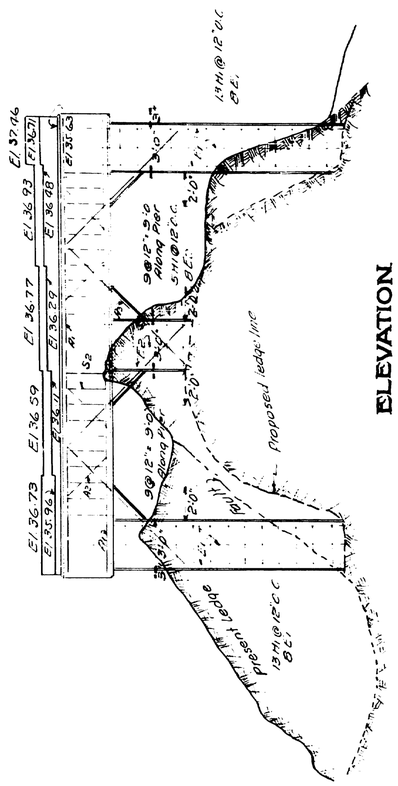
Drawn by G.C.
Checked by C.B.

0 1 2 3 4 5 INCHES

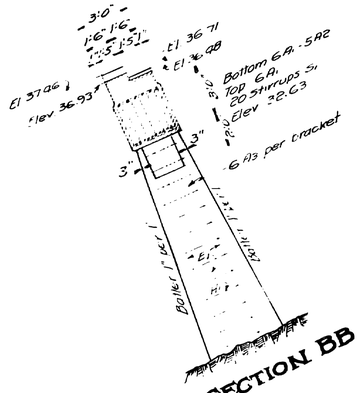
STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
ME.			22	22







PIER COLUMN SECTION



SECTION BB

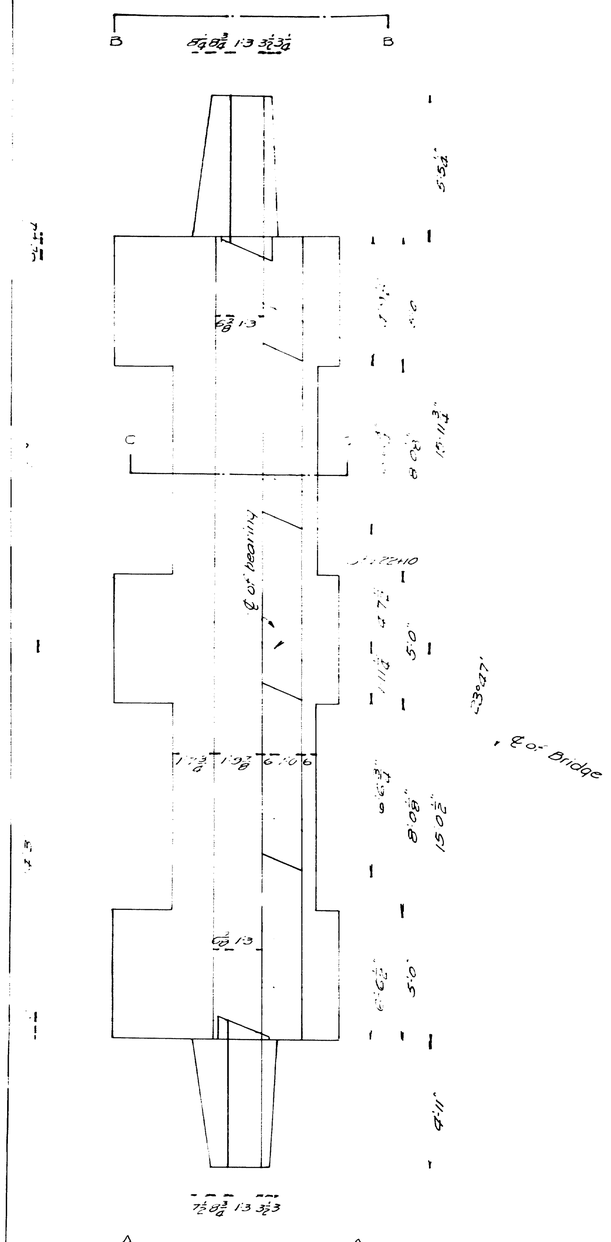
Town 12-11
Bridge 3038

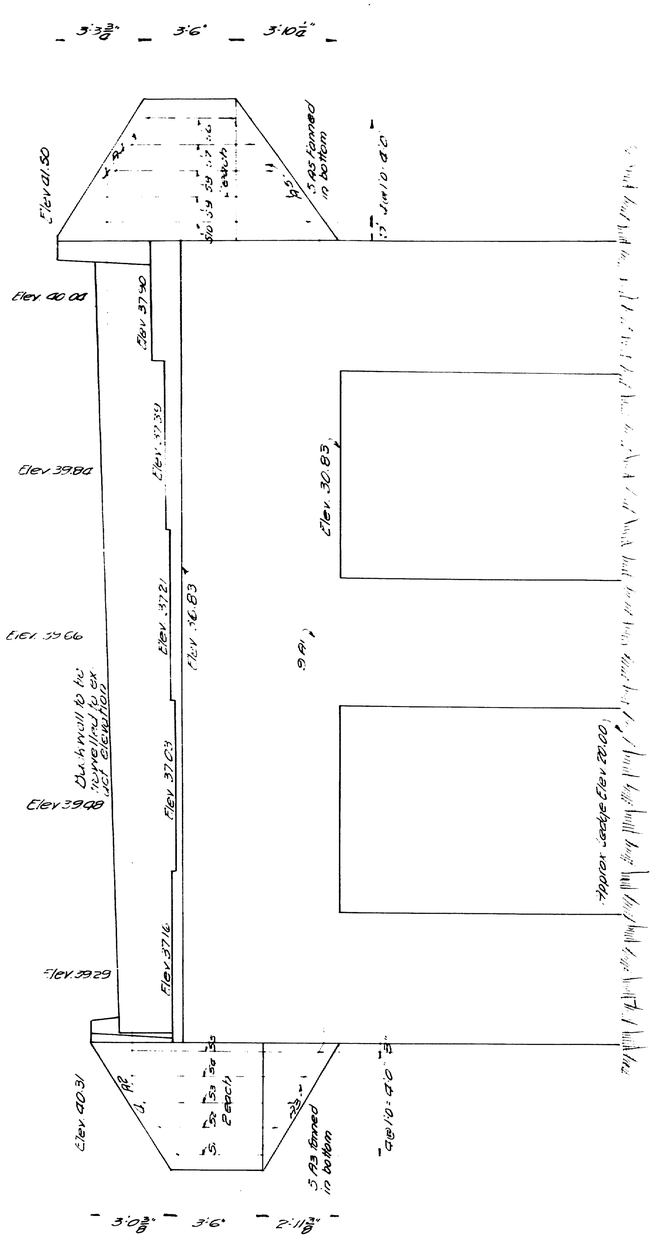
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
BRIDGE OVER THE TRACKS OF
MAINE CENTRAL RR. CO.
AT
STA. 23+0 - STATE HIGHWAY 'D'
IN THE TOWN OF
WOOLWICH-SAGADAHOC CO. ME
SUBSTRUCTURE DETAILS ABUT. 1 - PIER 1
SHEET No. 22 OF 24 AUGUSTA, ME. AUGUST 1933.

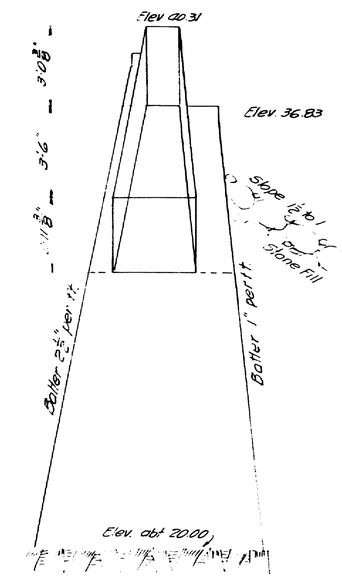
22-72

Plans by C.P.
Checked by E.D.

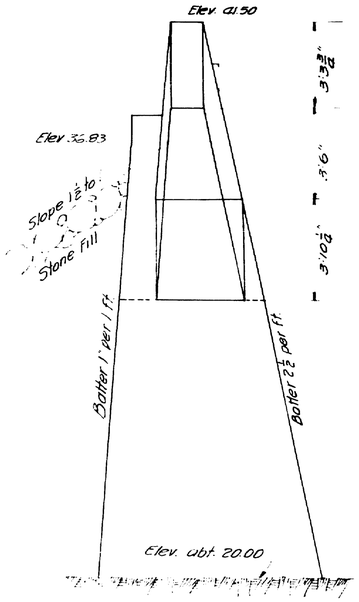
0 1 2 3 4 5 INCHES



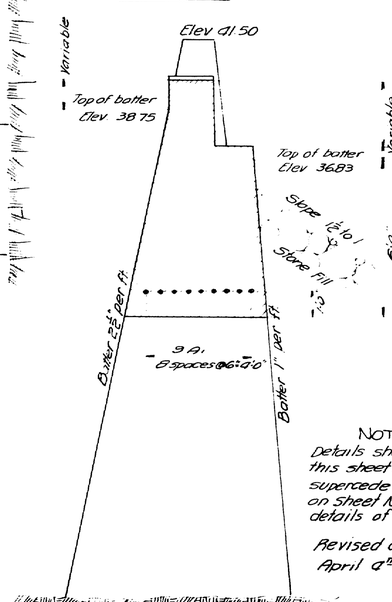




VIEW A-A



VIEW B-B



SECTION C-C

NOTE
Details shown on this sheet are to supercede those shown on Sheet No. 22 for details of Abut. No. 1

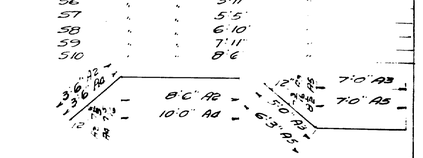
Revised and added April 6th 1934

NOTE
All reinforcing steel to be plain rounds Structural Grade. All dimensions are given on ℄ of bar.

STEEL SCHEDULE

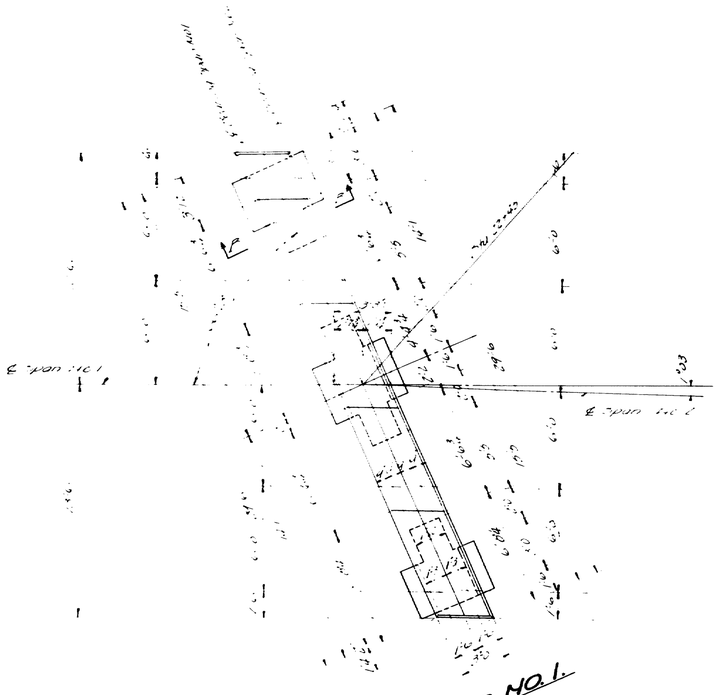
STRAIGHT BARS

Mark	Size	No	Length	Location
A1	1" ⌀	9	30'6"	Breast Wall
S1	½" ⌀	2	3'11"	Wing
S2	"	"	5'2"	"
S3	"	"	6'3"	"
S4	"	"	7'6"	"
S5	"	"	8'0"	"
S6	"	"	3'11"	"
S7	"	"	5'5"	"
S8	"	"	6'10"	"
S9	"	"	7'11"	"
S10	"	"	8'6"	"

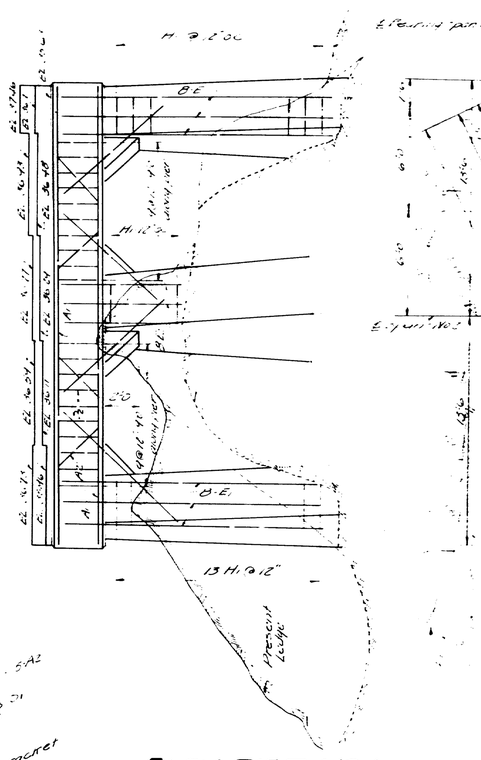


STATE HIGHWAY COMMISSION
BRIDGE DIVISION
BRIDGE OVER THE TRACKS OF
MAINE CENTRAL RR CO.
AT
STA. 23+0 - STATE HIGHWAY D
IN THE TOWN OF
WOOLWICH - SAGADAHOC CO., ME.
Substructure Details - Abut. No. 1
Sheet No. 22-A of 24 Augusta, Me. 4-1-34

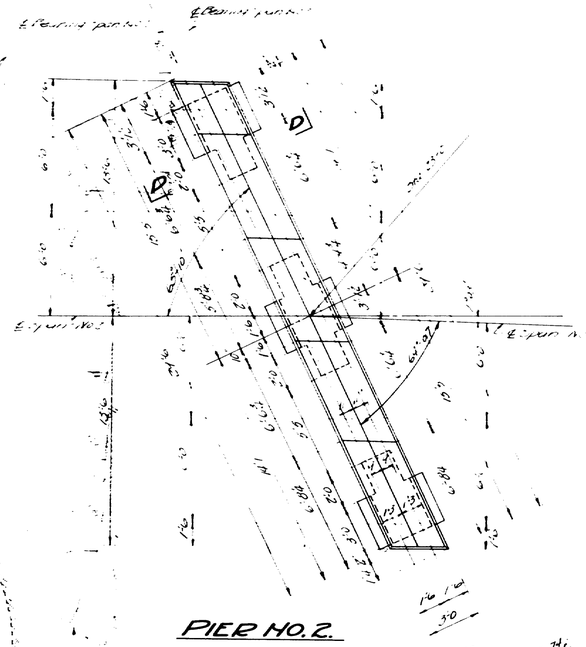
Town 12:11
Bridge 3038



PIER NO. 1.



ELEV. PIER NO. 1.



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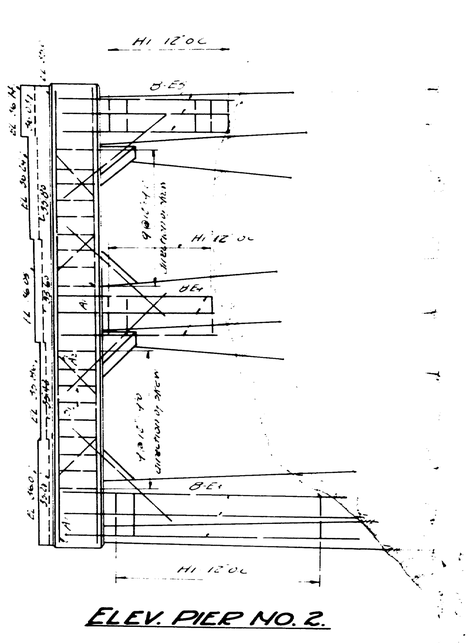

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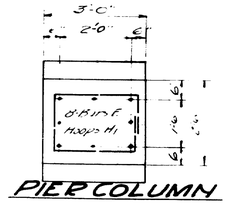
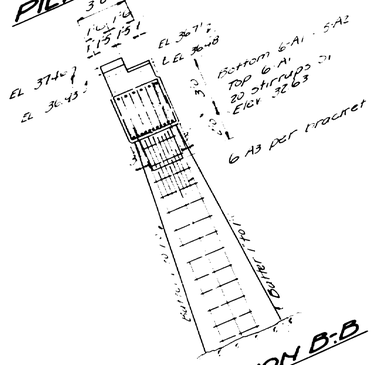
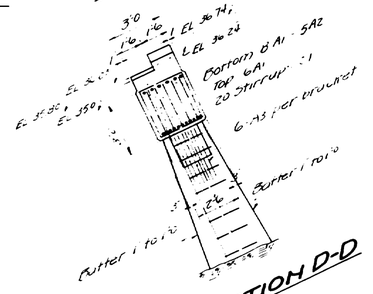


PIER COLUMN SECTION



SECTION B-B



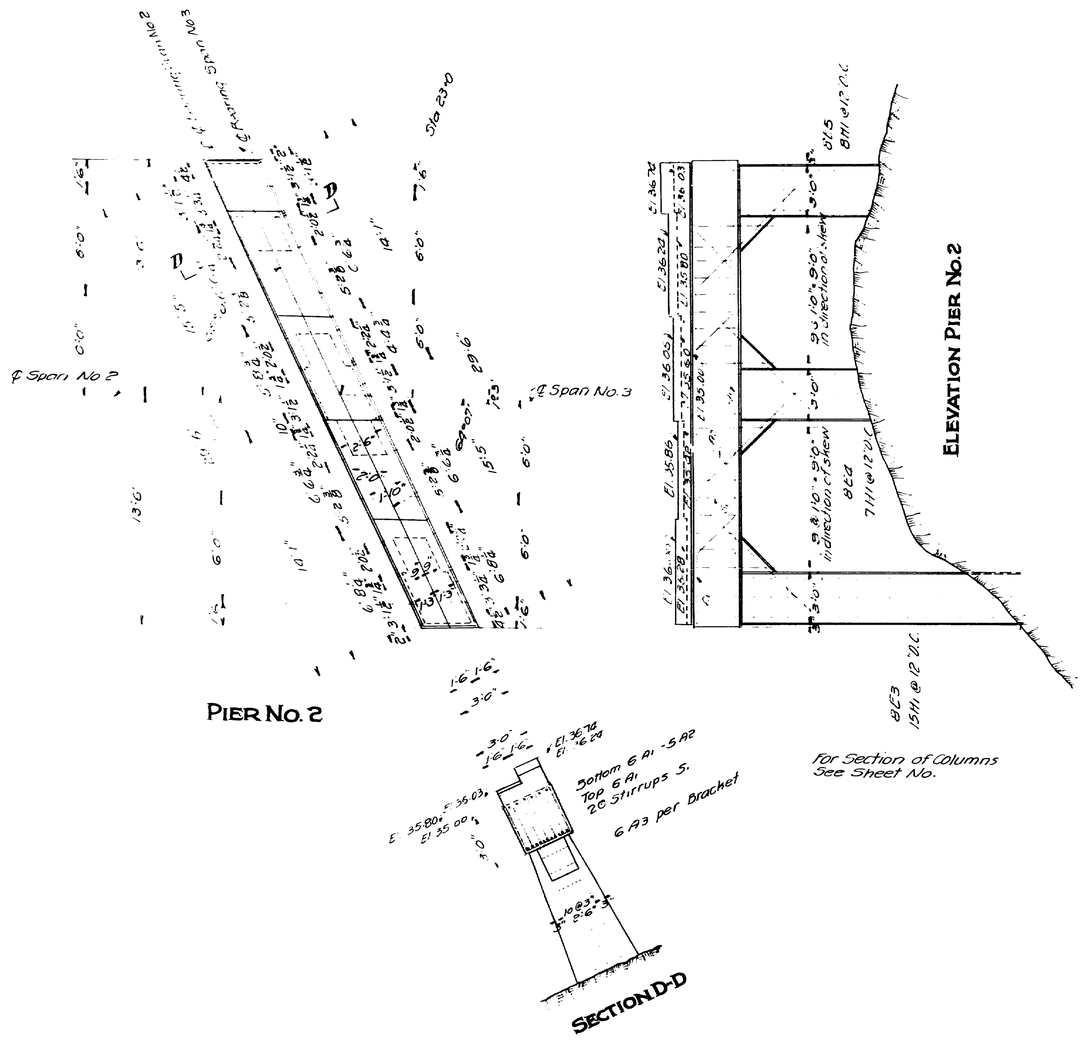
SECTION D-D

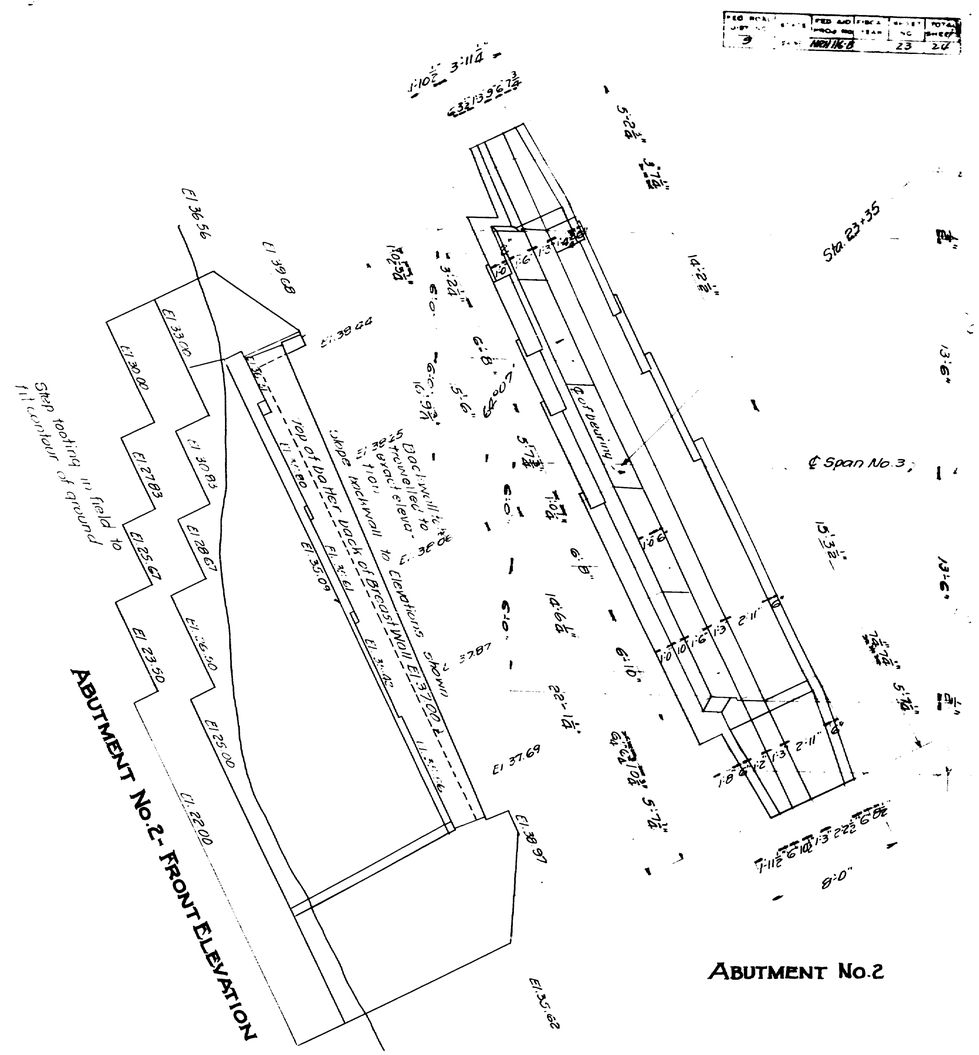
Revised by ES
Checked by ES

Town 121
Bridge 3038

STATE HIGHWAY COMMISSION
BRIDGE DIVISION
BRIDGE OVER THE TRACKS OF
MAINE CENTRAL R.R. CO.
AT
STA. 23+0 HIGHWAY "D"
in the town of
WOOLWICH
SAGADAHOC COUNTY
DETAIL OF PIERS 1 AND 2
Sheet 22B of 24. Augusta, Me. May, 1938.

22-74





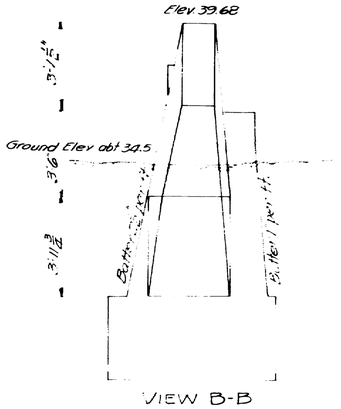
Town 12-11
Bridge 3038

STATE HIGHWAY COMMISSION
BRIDGE DIVISION
BRIDGE OVER THE TRACKS OF
MAINE CENTRAL RR. CO.
AT
STA. 23+0 - STATE HIGHWAY D
IN THE TOWN OF
WOOLWICH - SAGADAHOC CO. - ME
SUBSTRUCTURE DETAILS - PIER 2 - ABUT 2
SHEET No. 23 OF 24 AUGUSTA, ME AUGUST 1933

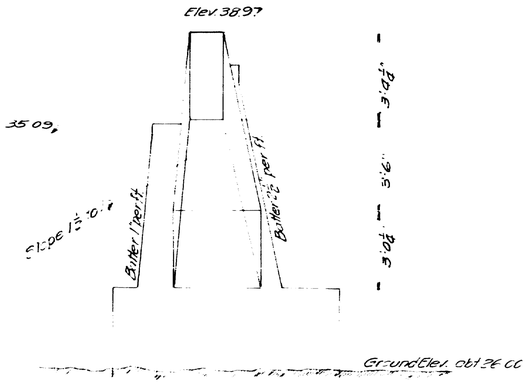
22-75

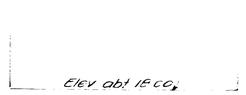
Lined by GB
Checked by J.E.R.

0 1 2 3 4 5 INCHES

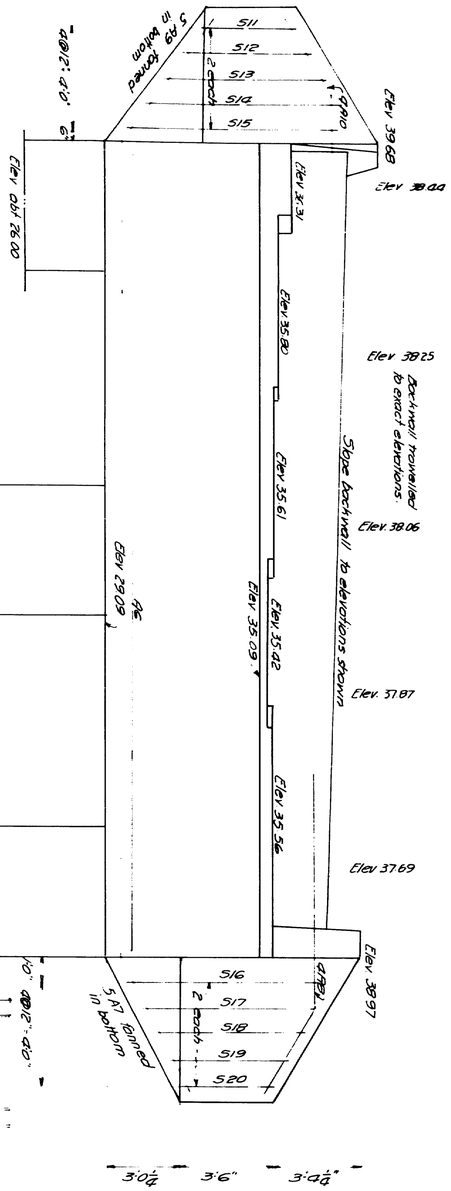


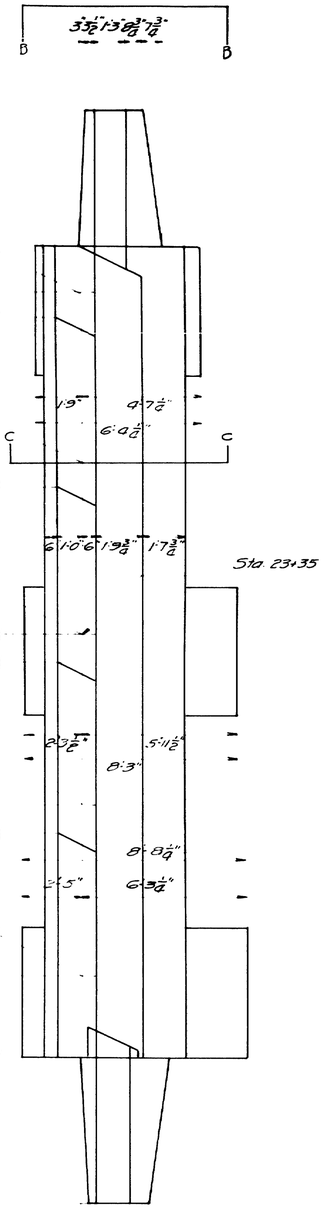
VIEW B-B

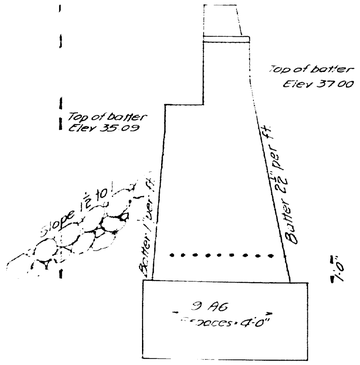




VIEW A-A







SECTION C-C

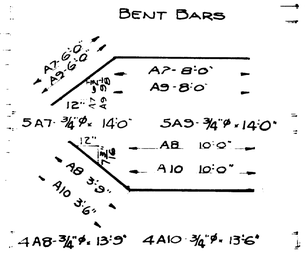
STEEL SCHEDULE

STRAIGHT BARS

Mark	Size	No	Length	Remarks
A6	1"ϕ	8	31'-3"	
S11	½"ϕ	2	3'-7"	
S12	"	"	4'-10"	
S13	"	"	6'-3"	
S14	"	"	7'-3"	
S15	"	"	8'-1"	
S16	"	"	7'-4"	
S17	"	"	6'-10"	
S18	"	"	5'-10"	
S19	"	"	4'-7"	
S20	"	"	3'-6"	

All steel to be plain rounds of structural grade
All dimensions are on ℄ of bar

BENT BARS



NOTE
Details shown on this sheet are to supercede those shown on Sheet No. 23 for details of Abut. No. 2.
Revised and added April 17, 1934.

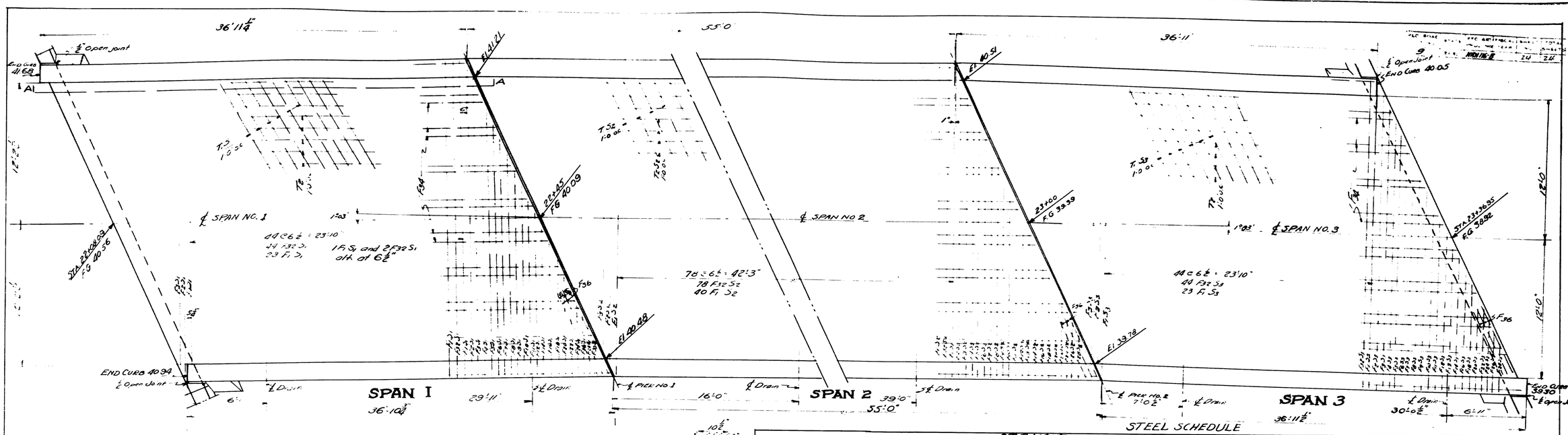
TOWN 12-11
BRIDGE 3038

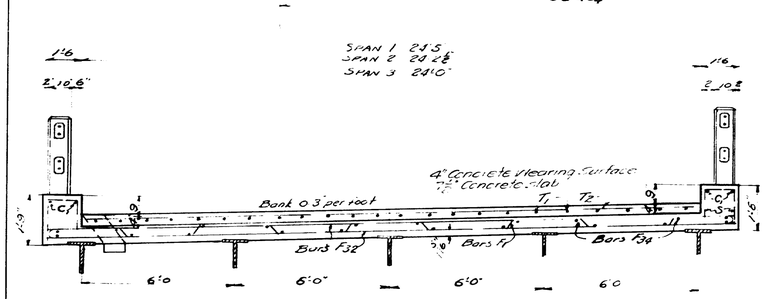
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
BRIDGE OVER THE TRACKS OF
MAINE CENTRAL RR. CO.
AT
STA. 23+0 - STATE HIGHWAY D
IN THE TOWN OF
WOOLWICH-SAGADAHOC CO. ME
SUBSTRUCTURE DETAILS: ABUT. No. 2
SHEET No. 23A OF 29 AUGUSTA, ME. 4-17-34

Design G.B.
Check E.F.

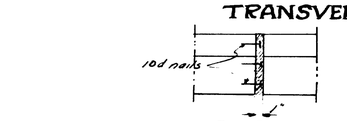
22-76

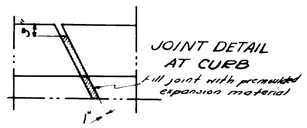
0 1 2 3 4 5 INCHES

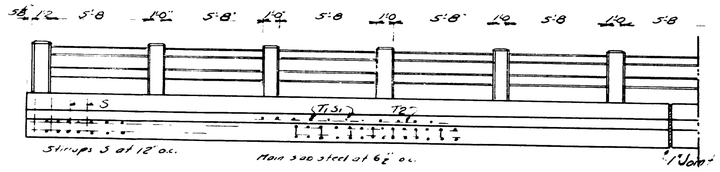




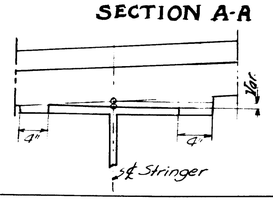
TRANSVERSE SECTION





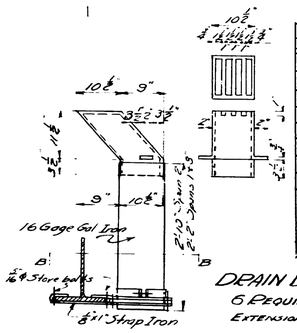


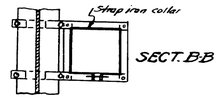
SECTION A-A

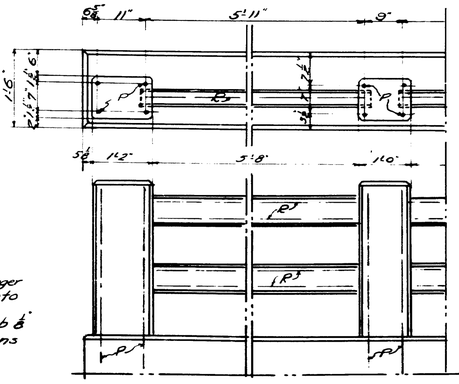


CAMBER NOTE

Note: Slab 2 above top stringer at ℄ 55' Span and recessed into slab ½" at end.
Stringer recessed into slab ½" at ℄ and ½" at end of 35' spans







STEEL SCHEDULE

STRAIGHT

Mark	Size	No	Length	Remarks
E1	¾	16	16'-0"	Pier 1
E2	"	8	7'-0"	" "
E3	"	8	17'-0"	" 2
E4	"	8	9'-0"	" "
E5	"	8	10'-0"	" "
A1	1⅛	12	29'-0"	Piers
A3	"	48	9'-0"	"
F36	⅝	36	6'-0"	All Spans
C1	"	8	36'-8"	Span 1 & 3
F32 S2	⅞	78	27'-0"	Span 2
F34 S2	⅞	40	28'-6"	"
F2 S2	⅞	4	25'-10½"	"
F4 S2	"	"	23'-6½"	"
F4 S2	"	"	21'-2½"	"
F8 S2	"	"	18'-10½"	"
F16 S2	"	"	16'-6½"	"
F12 S2	"	"	14'-2½"	"
F14 S2	"	"	11'-10½"	"
F16 S2	"	"	10'-8½"	"
F18 S2	"	"	9'-6½"	"

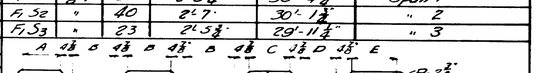
Mark	Size	No	Length	Remarks
F36	⅝	40	36'-8"	Spans 1 & 3
F32 S1	⅞	44	27'-2½"	Span 1
F2 S1	"	4	27'-0"	"
F4 S1	"	"	24'-6"	"
F6 S1	"	"	22'-1"	"
F8 S1	"	"	19'-7"	"
F10 S1	"	"	17'-2"	"
F12 S1	"	"	14'-8"	"
F14 S1	"	"	13'-3½"	"
F16 S1	"	"	12'-3"	"
F18 S1	"	"	11'-0"	"
F20 S1	"	"	9'-9"	"
F22 S1	"	"	8'-6½"	"
F8 S1	"	"	7'-4"	"
F26 S1	"	"	6'-1"	"
F28 S1	"	"	4'-10"	"
F30 S1	"	"	3'-7½"	"

Mark	Size	No	Length	Remarks
F32 S3	⅞	4	8'-4½"	Span 2
F2 S3	"	"	7'-2½"	"
F4 S3	"	"	6'-6½"	"
F6 S3	"	"	4'-10½"	"
F8 S3	"	"	3'-8½"	"
G S2	⅝	8	28'-6"	"
F32 S3	⅞	40	26'-9½"	Span 3
F2 S3	"	4	25'-6½"	"
F4 S3	"	"	23'-4"	"
F6 S3	"	"	21'-1"	"
F10 S3	"	"	18'-10½"	"
F12 S3	"	"	16'-7½"	"
F22 S3	"	"	10'-5"	"
F8 S3	"	"	12'-2"	"
F14 S3	"	"	11'-0½"	"
H8 S3	"	"	9'-11½"	"
F2 S3	"	"	8'-10"	"
F22 S3	"	"	7'-8½"	"
F20 S3	"	"	6'-7½"	"
F26 S3	"	"	5'-6"	"
F28 S3	"	"	4'-4½"	"
T1 S1	⅞	30	26'-6"	Span 1
T1 S2	"	50	26'-5"	" 2
T1 S3	"	30	26'-4"	" 3
T2	"	48	36'-8"	" M3
T2 S2	"	48	28'-6"	" 2
R	⅞	152	6'-0"	All Spans
P	⅞	160	4'-0"	" "

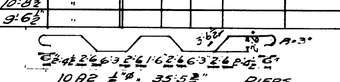
BENT

F1 Bars

Mark	Size	No	Length A	Tot Length	Remarks
F1 S1	⅞	23	2'-10⅞"	30'-4½"	Span 1
F1 S2	"	40	2'-7"	30'-1¾"	" 2
F1 S3	"	23	2'-5⅜"	29'-11⅝"	" 3

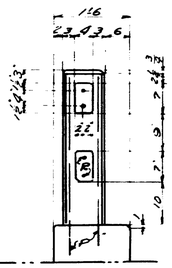


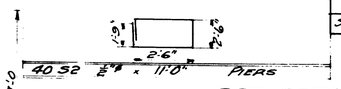
Mark	Size	No	Length A	B	C	D	E	Tot Length	Remarks
F3 S1	⅞	2	2'-0⅝"	2'-7⅞	2'-7⅞	2'-7⅞		7'-9⅞	28'-7½" Span 1
F3 S1	"	"	"	"	"	"		4'-9⅞	26'-1⅞ "
F7 S1	"	"	"	"	"	"		2'-4⅞	23'-8½" "
F9 S1	"	"	"	"	——	——		5'-10⅞	20'-10⅞ "
F11 S1	"	"	"	"	——	——		3'-5⅞	18'-5⅞ "
F3 S2	"	"	2'-7	2'-7⅞	2'-7⅞	2'-7⅞		6'-4	27'-6⅞ Span 2
F5 S2	"	"	"	"	"	"		4'-0	25'-2⅞ "
F1 S2	"	"	"	"	"	"		1'-8	22'-10⅞ "
F9 S2	"	"	"	"	——	——		5'-4	20'-2⅝ "
F11 S2	"	"	"	"	——	——		3'-10	17'-10⅝ "
F13 S2	"	"	"	"	——	——		2'-8	15'-6⅝ "
F3 S3	"	"	2'-5⅜	2'-7⅞	2'-7⅞	2'-7⅞		6'-9	27'-3½ Span 3
F5 S3	"	"	"	"	"	"		3'-11⅛	23'-0⅝ "
F7 S3	"	"	"	"	"	"		1'-8⅝	22'-10 "
F9 S3	"	"	"	"	——	——		5'-5⅜	20'-3⅛ "
F11 S3	"	"	"	"	——	——		3'-3	18'-0⅛ "
F13 S3	"	"	"	"	——	——		1'-0⅞	15'-9⅜ "



5 ⅝"ø x 0'-1" 258 Kg.

All steel to be plain rounds of structural grade.
Dimensions are to centers of bars.





RAIL DETAILS

Note: Curb and slab to be cast together. Steel for posts to be set in curb. Precast rail bars in lengths of 6'-4". Place rail bars in position with ends projecting into post forms 2½". Wrap end 6" with two thicknesses of heavy roofing felt. Fold in ends and when post forms are removed cut away all exposed felt. Chamfer all exposed edges of concrete ½" unless otherwise indicated.

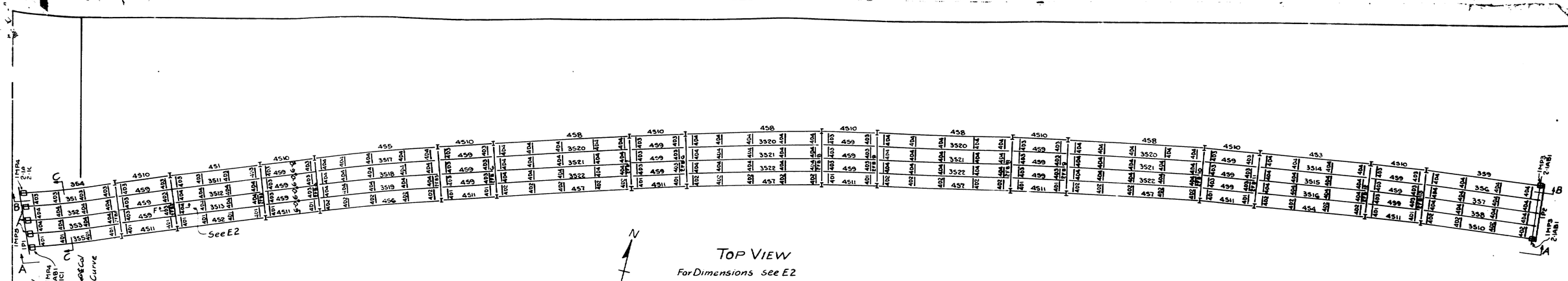
Town 12-11
Bridge 3038

STATE HIGHWAY COMMISSION
BRIDGE DIVISION
BRIDGE OVER THE TRACKS OF
MAINE CENTRAL RR CO
AT
STA. 23+0 - STATE HIGHWAY "D"
IN THE TOWN OF
WOOLWICH - SAGADAHOC CO.
SLAB AND RAIL DETAILS
SHEET No. 24 of 24 AUGUSTA, ME. AUGUST 1933

Drawn by E.H.
Check G.B.

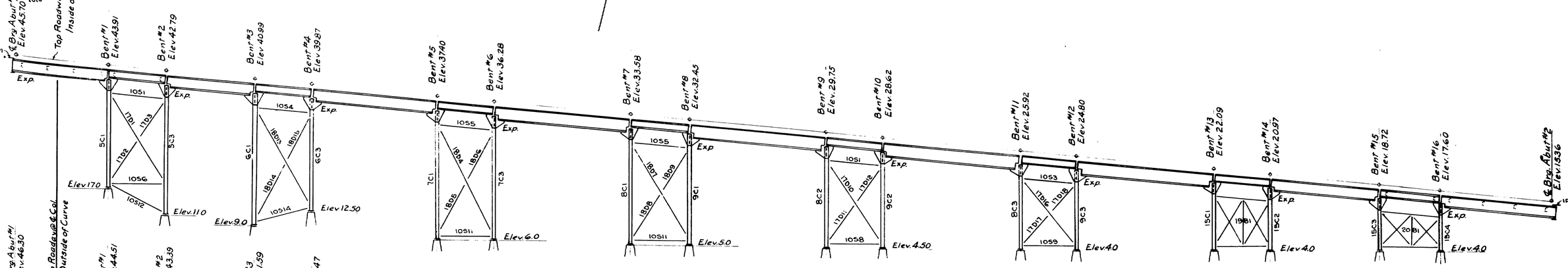
22-77

0 1 2 3 4 5 INCHES



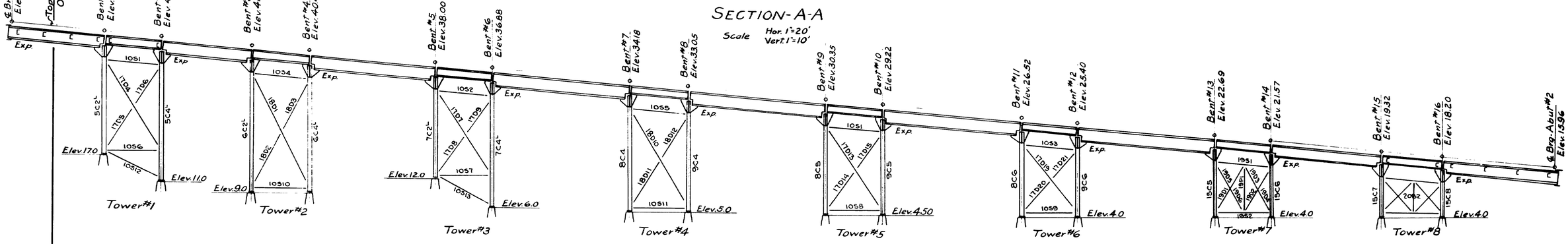
TOP VIEW

For Dimensions see E2

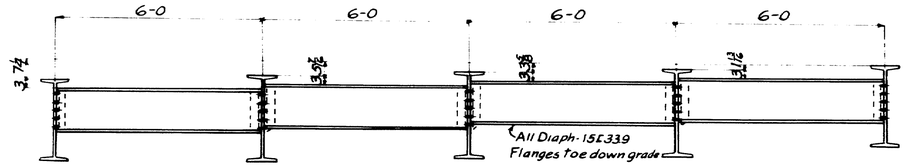


SECTION-A-A

Scale Hor. 1"=20' Vert. 1"=10'

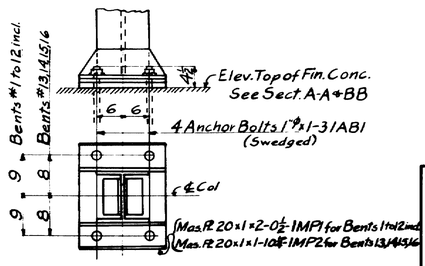


SECTION-B-B



SECTION C-C

Typical for Diaphragms



TYPICAL COLUMN BASE

ERECTOR'S NOTE

In order to rivet bottom flange of Stringers 4510 to Brackets, diaphragms 4D3 connecting to 4510 must be shifted. All connections riveted except ends of stringers in main spans bolted with 1" ø Bolts.

TOWN 12-11 BRIDGE 3039

BRIDGE AT STA. 46

OVER

MAINE CENTRAL R.R.

WOOLWICH-SAGADAHOC CO.

INSPECTION	SHOP RIVETS	WEIGHT
RIVETS	OPEN HOLES	UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

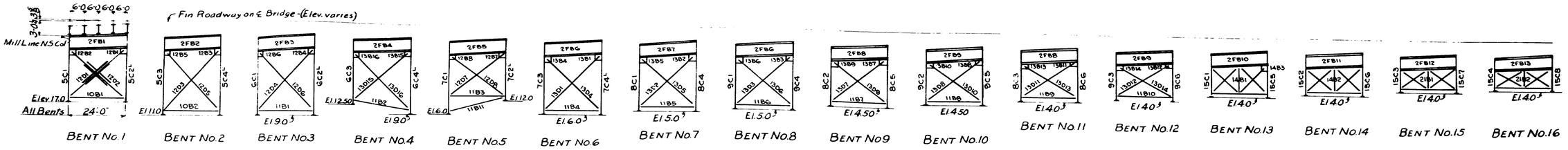
STRUCTURE 676' Viaduct
FOR State of Maine
DETAILS OF Erection Diagram
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT
FIELD PAINT

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
APL	12-12-38	P	12-20-38	

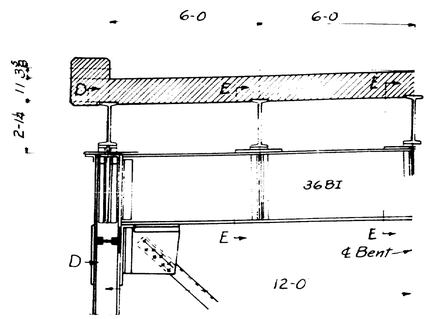
REVISIONS	NO	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

CONTRACT NO 2594 SHEET NO. E1

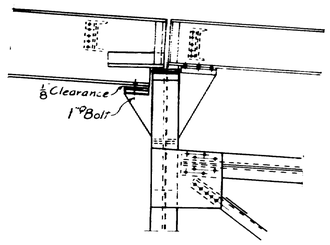
0 1 2 3 4 5 INCHES



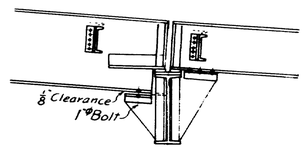
ELEVATION OF BENTS - LOOKING WEST



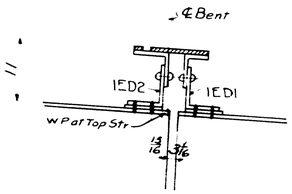
ENLARGED VIEW - BENT No.1
TYPICAL



SECTION D-D

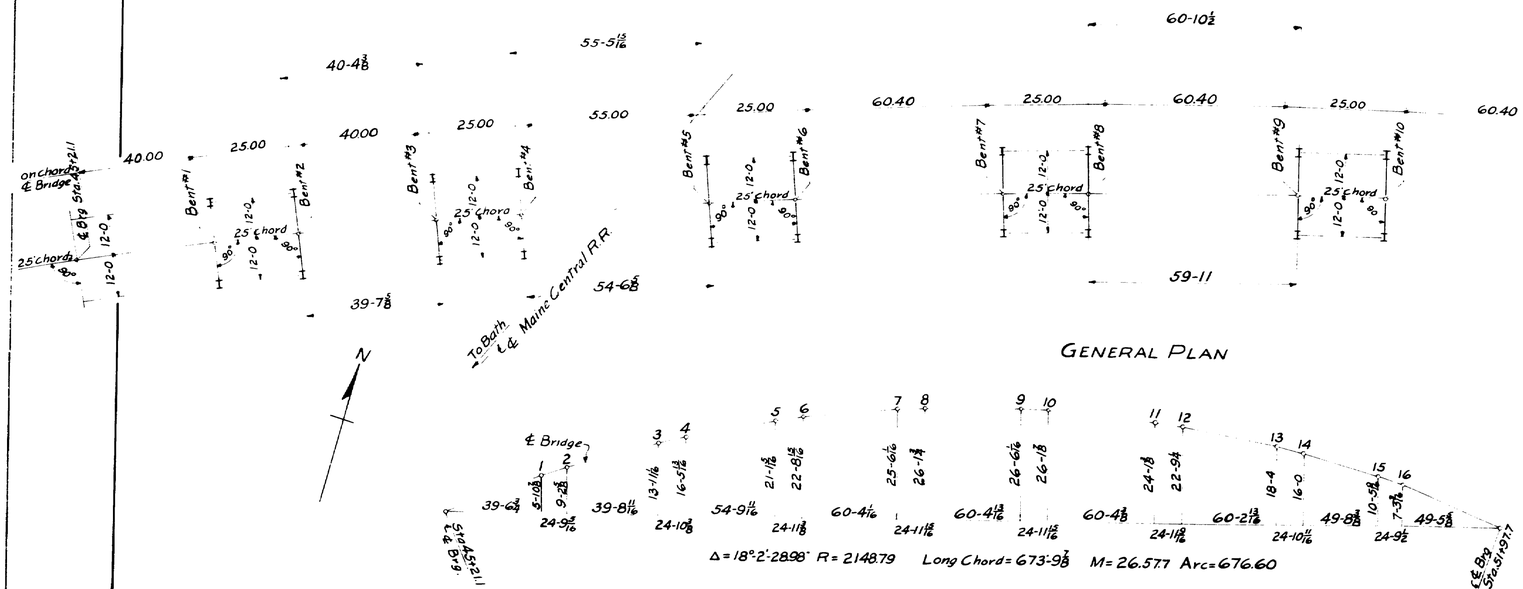


SECTION E-E



SECTION F-F

Showing Expansion Dams at Bents # 2,4,6,8,10,12,14,16



GENERAL PLAN

DISTANCES AND OFFSETS TO CENTER LINE OF BENTS

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS — OPEN HOLES — UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N.Y.

STRUCTURE 676' Viaduct
FOR State of Maine
DETAILS OF Erection Diagram
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT
FIELD PAINT

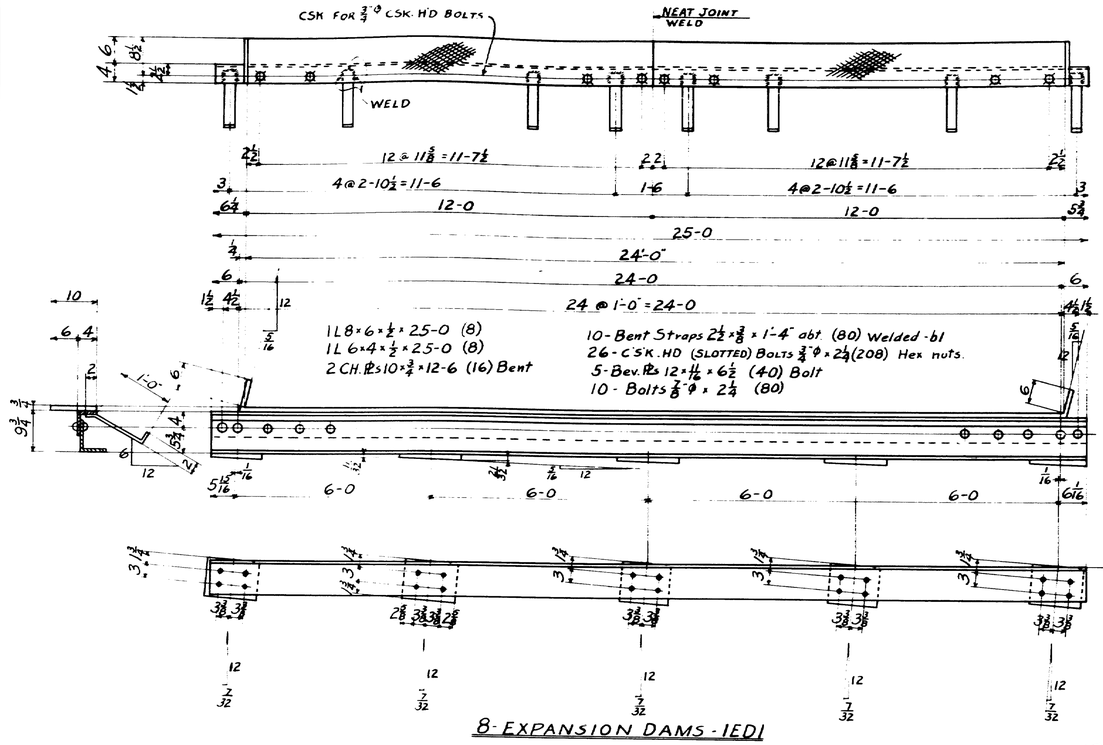
DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
APL	12-13-33	P	12-20-33	

REVISIONS	NO.	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

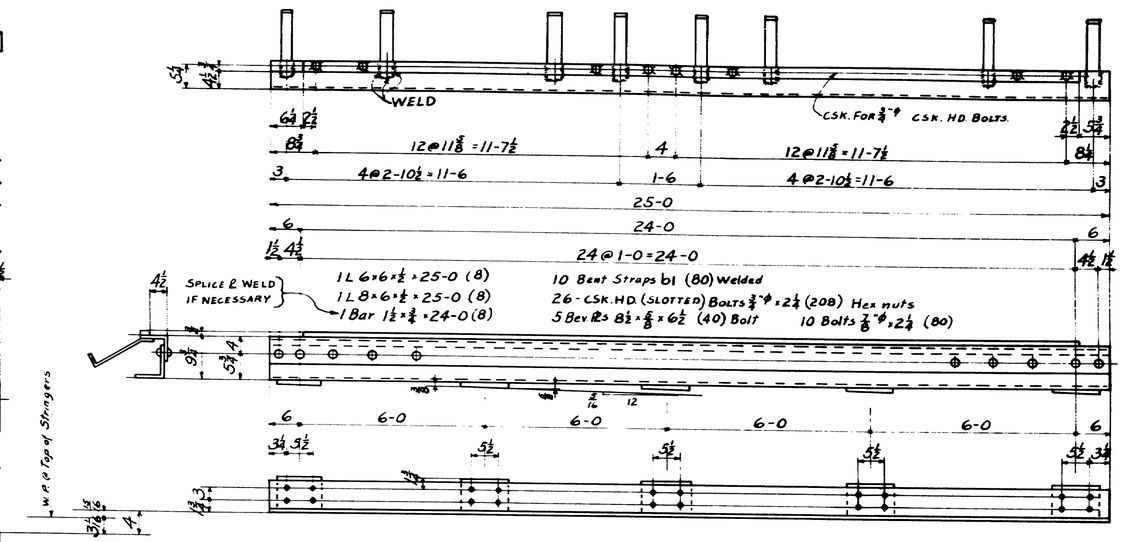
CONTRACT No. 2594 SHEET No. E2

TOWN 12-11 BRIDGE 3039
BRIDGE AT STA. 46
OVER
MAINE CENTRAL R.R.
WOOLWICH - SAGADAHOC CO.

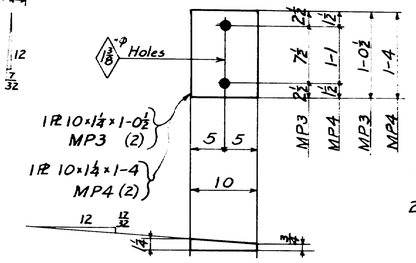
No. 10 - B. & P. Co.
22-79



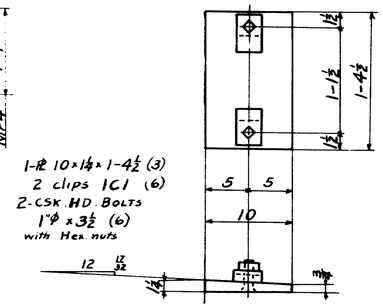
8 - EXPANSION DAMS - 1ED1



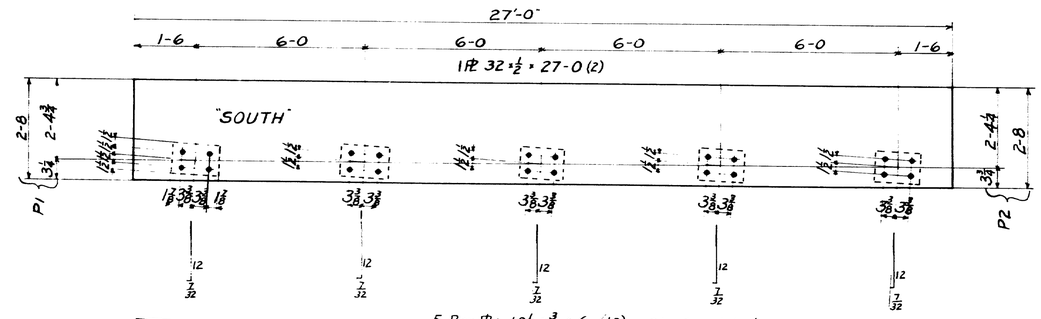
8 - EXPANSION DAMS - 1ED2



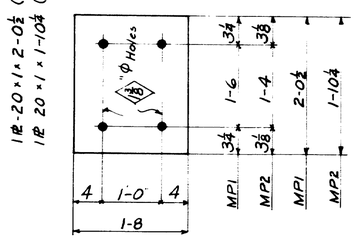
2 - MASONRY PLATES - 1MP3
2 do do 1MP4



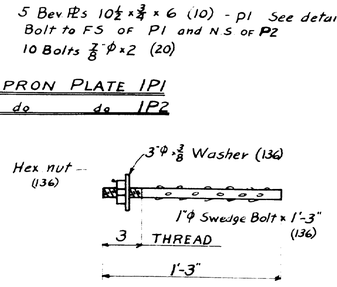
3 - MASONRY PLATES - 1MP5



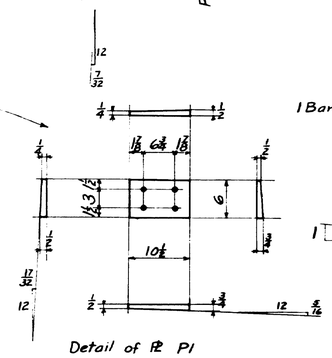
ONE - APRON PLATE 1P1
ONE do do 1P2



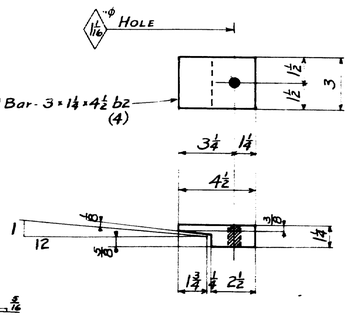
24 - MASONRY PLATES - 1MP1
8 - do do 1MP2



136 - ANCHOR BOLTS - 1AB1



Detail of Pl P1



4 - CLIPS - 1C1

NOTE:
DO NOT PAINT SHOP OR FIELD CONTACT SURFACES.
HOLES IN METAL MORE THAN 7/8" THICK TO BE DRILLED.

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS 7/8"φ OPEN HOLES 15/16"φ UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

STRUCTURE 676' VIADUCT
FOR STATE OF MAINE
DETAILS OF EXP. DAMS & MISC.
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 CT RED LEAD & OIL. See Note.
FIELD PAINT

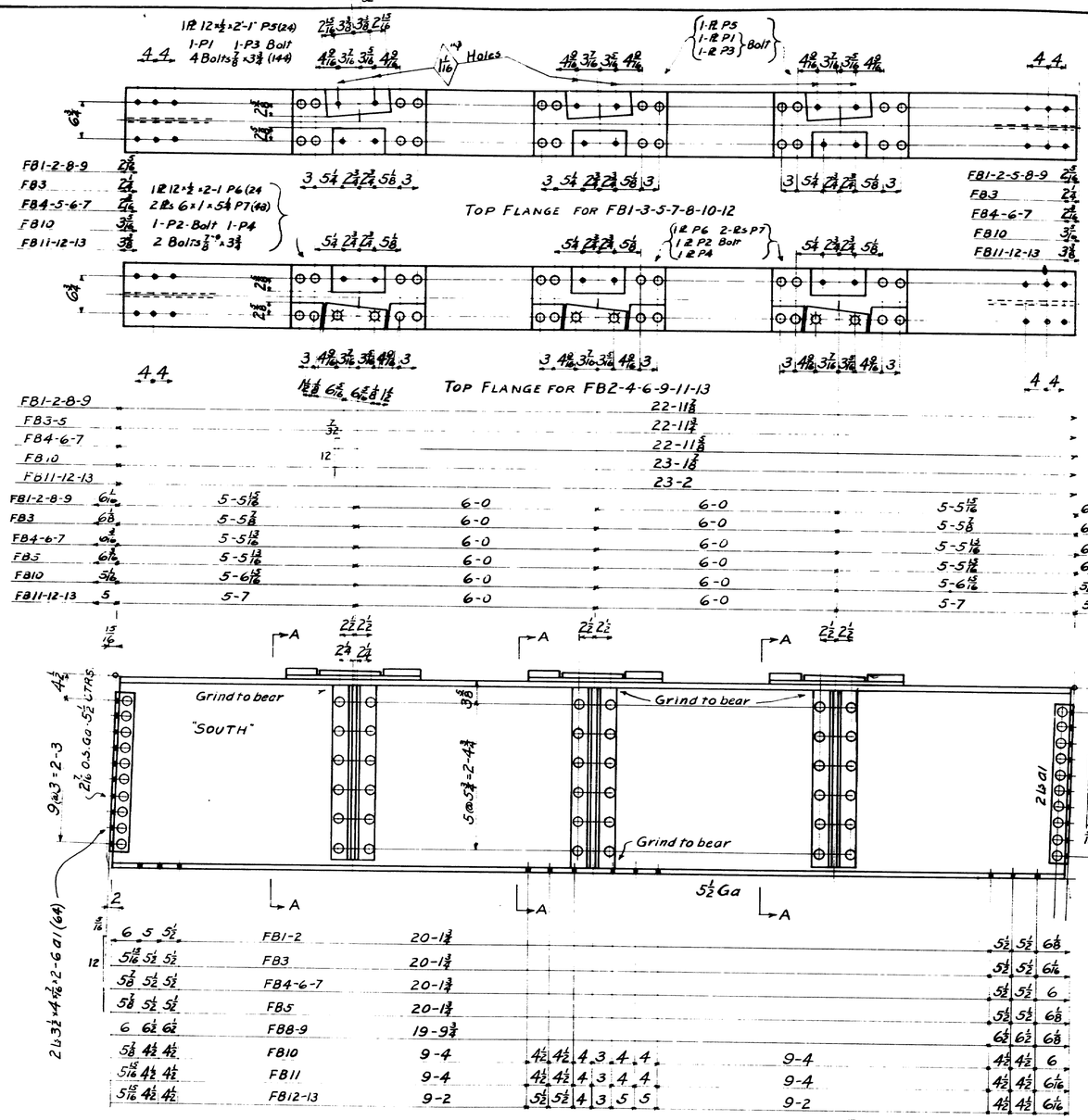
DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
CHW	12-14-33	APL	12-15-33	

REVISIONS	NO.	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

CONTRACT No. 2594 SHEET No. 1

TOWN 12-11 BRIDGE 3039
BRIDGE AT STA. 46
OVER
MAINE CENTRAL R.R.
WOOLWICH-SAGADAHOC CO.

0 1 2 3 4 5 INCHES



NOTE: DO NOT PAINT SHOP OR FIELD CONTACT SURFACES.
HOLES IN METAL MORE THAN ⅞" THICK SHALL BE DRILLED.

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS ⅞" OPEN HOLES 15/16" UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

STRUCTURE 676' VIADUCT
FOR STATE OF MAINE
DETAILS OF FLOOR BEAMS
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 CT. RED LEAD & OIL. SEE NOTE.
FIELD PAINT

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
CHW	12-6-33	A.P.L.	12-11-33	

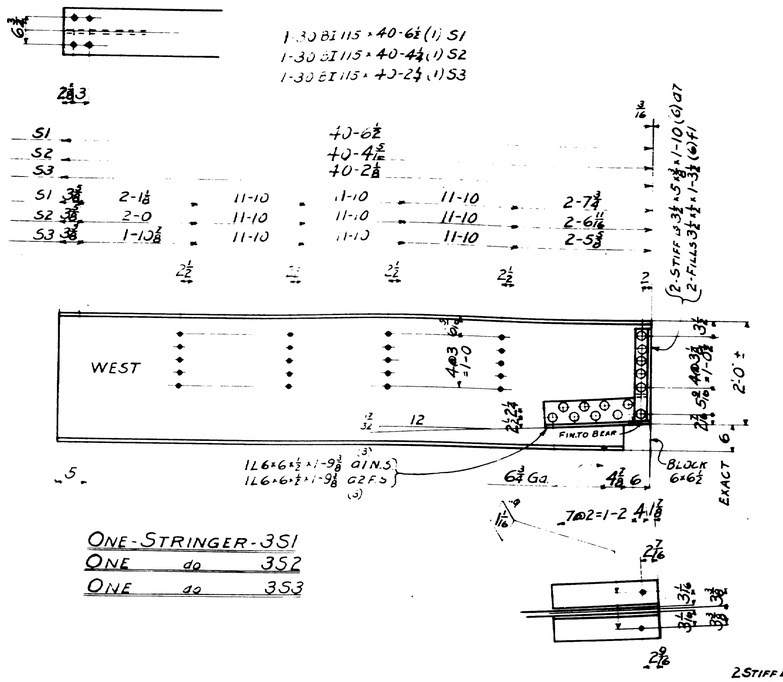
REVISIONS	NO.	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

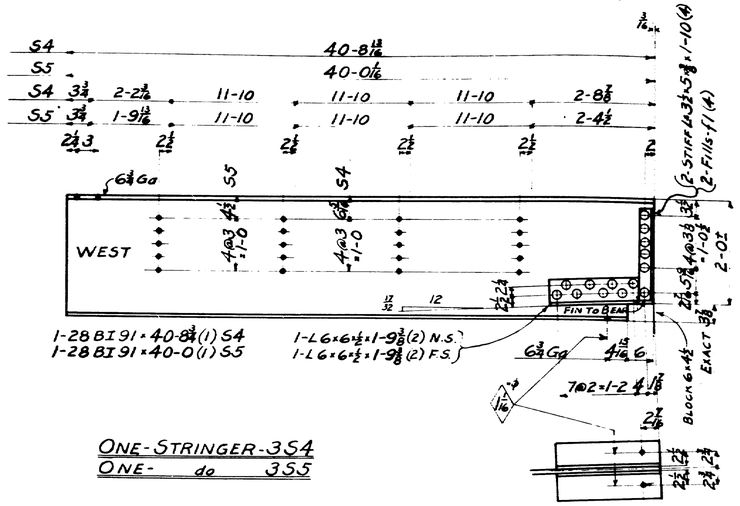
TOWN 12-11. BRIDGE 3039
BRIDGE AT STA. 46
OVER
MAINE CENTRAL R.R.
WOOLWICH-SAGADAHOC CO.

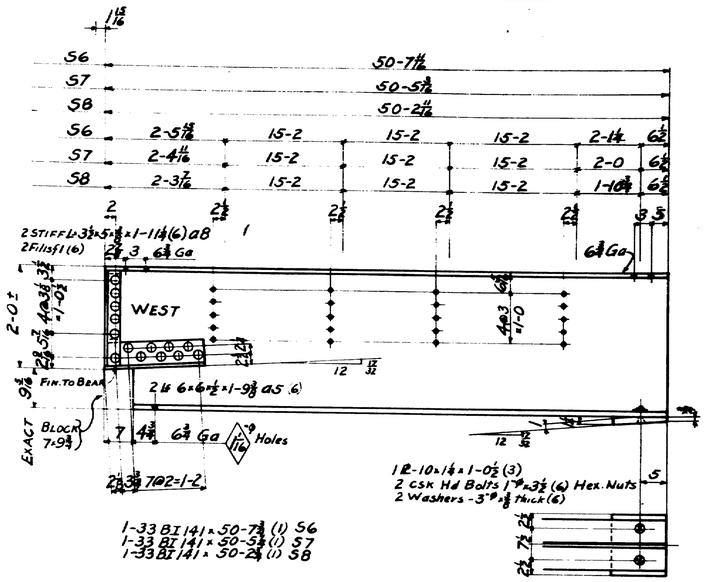
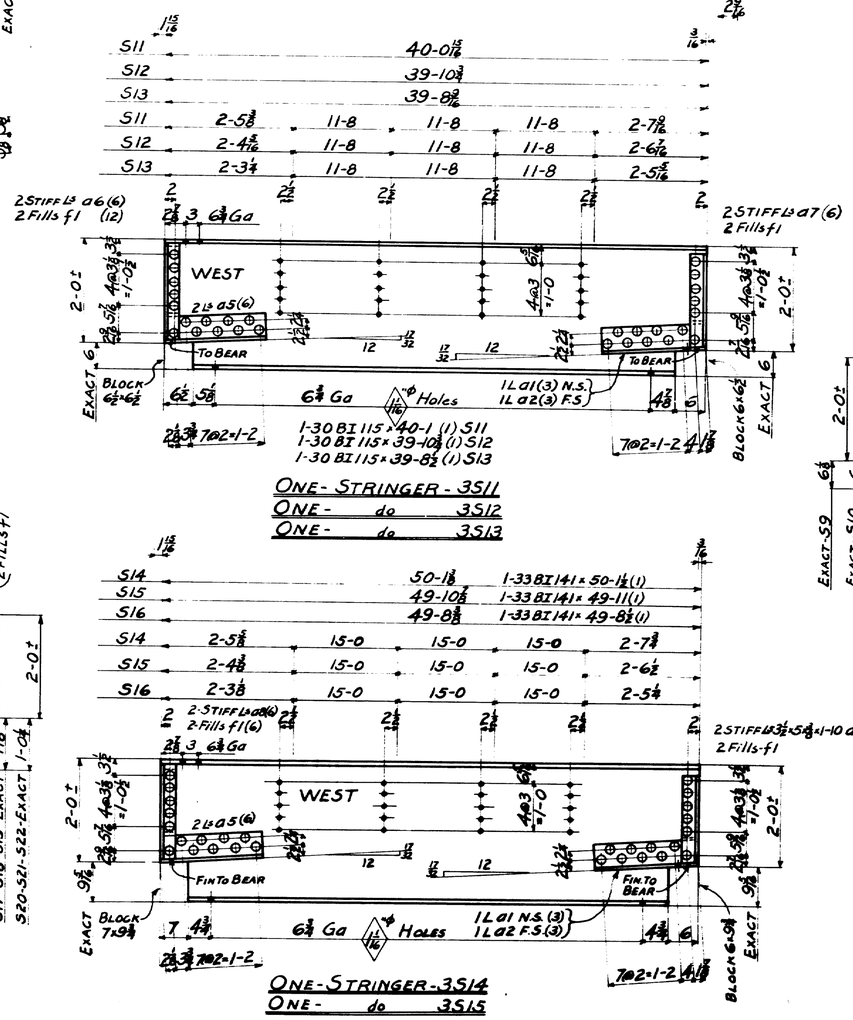
CONTRACT No. 2594 SHEET No. 2

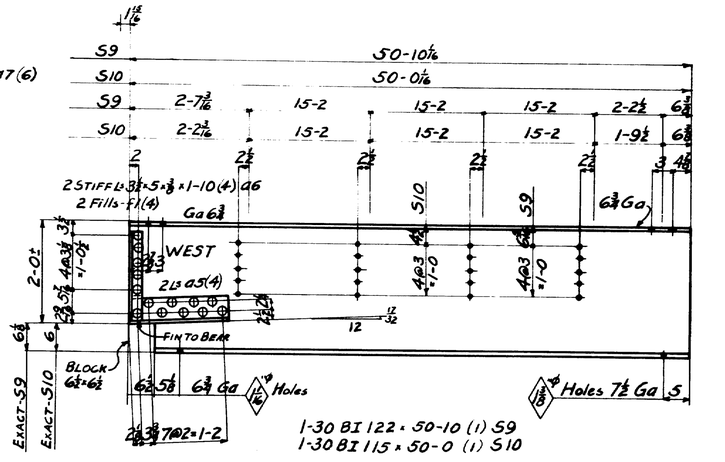
No. 90—A. S. P. Co.

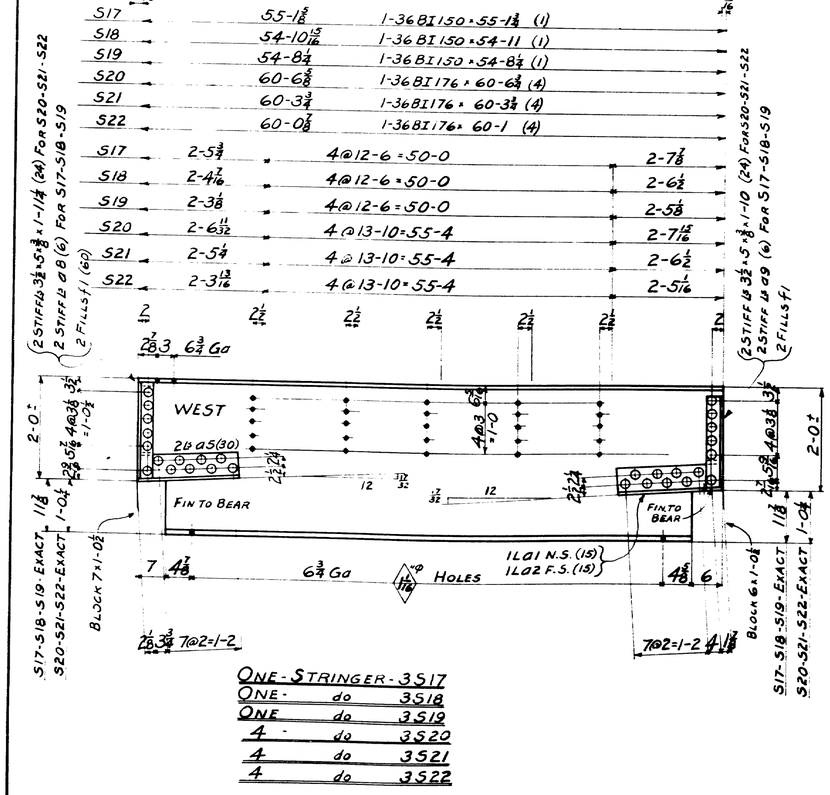
0 1 2 3 4 5 INCHES











NOTE:
DO NOT PAINT SHOP OR FIELD CONTACT SURFACES.
MARK WEIGHTS FOR PIECES EXCEEDING 3 TONS.
HOLES IN METAL ¾" TO ⅞" THICK INCL. TO BE SUBPUNCHED 1/16" & REAMED TO SIZE.
HOLES IN METAL MORE THAN ⅞" THICK TO BE DRILLED.

TOWN 12-11. BRIDGE 3039
BRIDGE AT STA. 46
OVER
MAINE CENTRAL R.R.
WOOLWICH - SAGADAHOC CO.

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS ⅞" Ø OPEN HOLES 15/16" UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

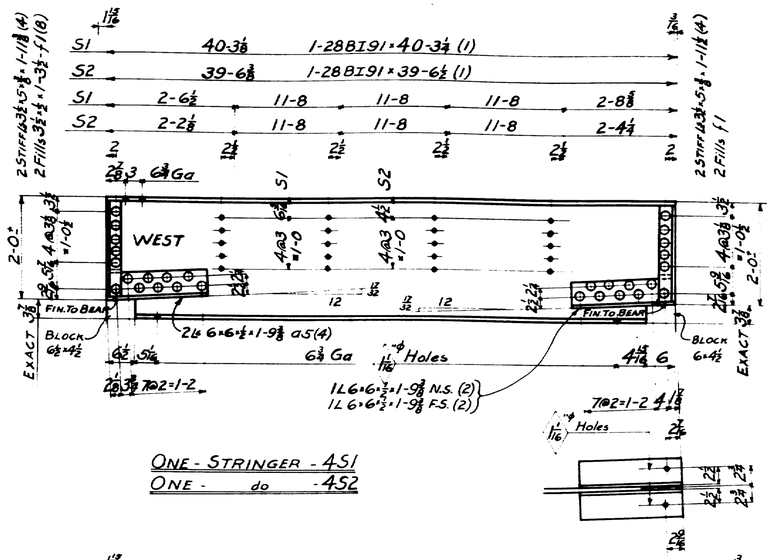
STRUCTURE 676' VIADUCT
FOR STATE OF MAINE
DETAILS OF STRINGERS
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 Ct RED LEAD Z OIL See Note
FIELD PAINT

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
C.H.W.	12-12-38	APL	12-13-38	

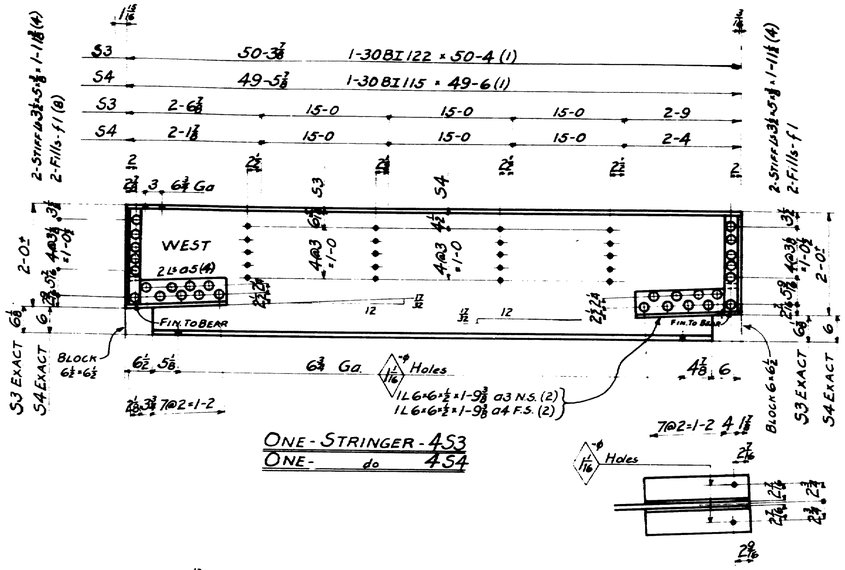
REVISIONS	NO.	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

CONTRACT NO. 2594 SHEET NO. 3

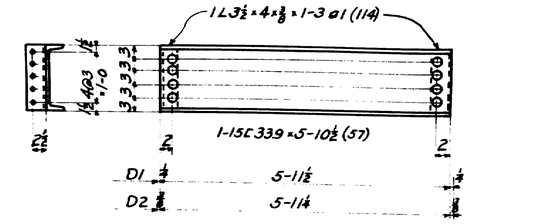
0 1 2 3 4 5 INCHES



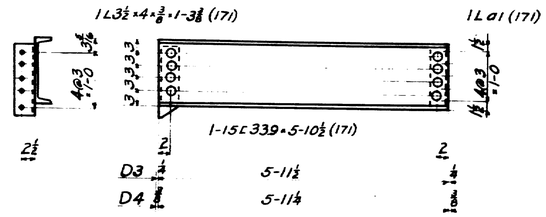
ONE - STRINGER - 451
ONE - do - 452



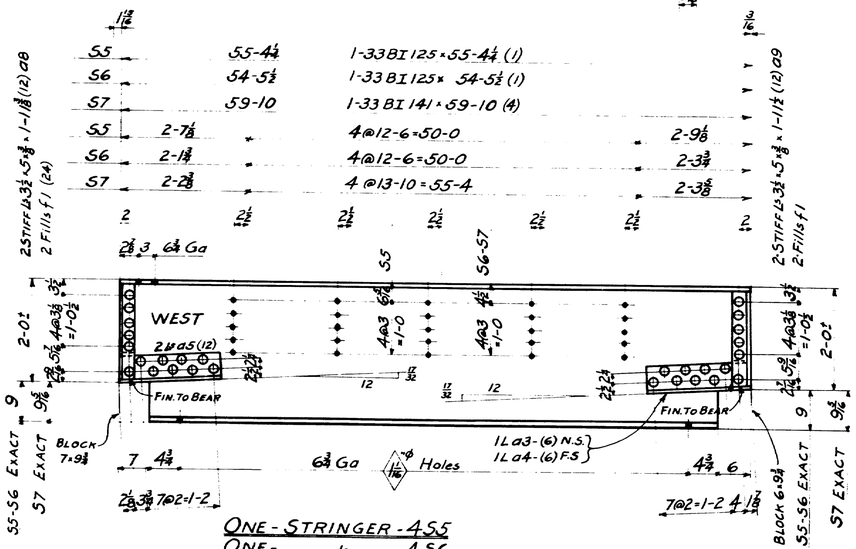
ONE - STRINGER - 453
ONE - do - 454



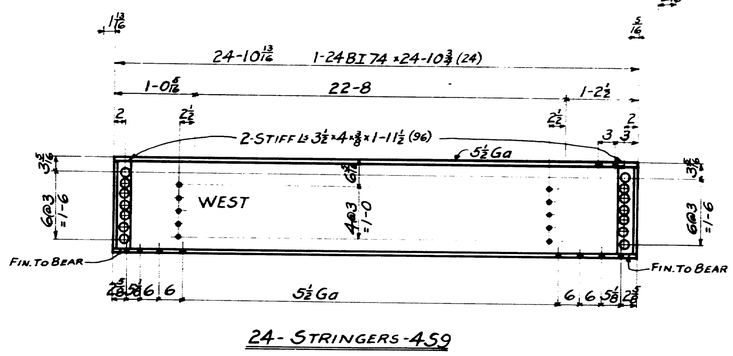
24 - DIAPHRAGMS - 4D1
33 - do - 4D2



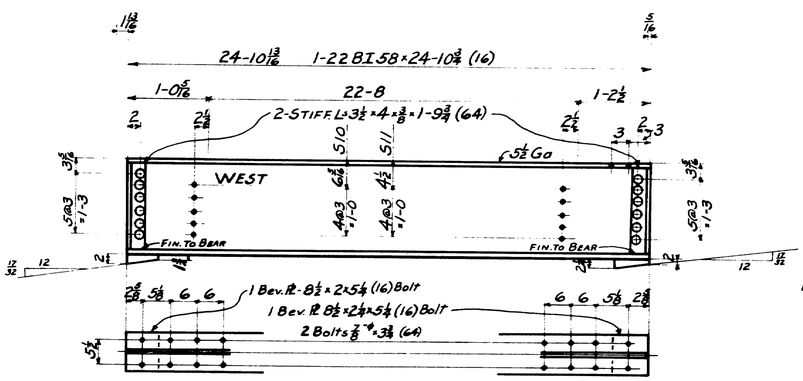
56 - DIAPHRAGMS - 4D3
115 - do - 4D4



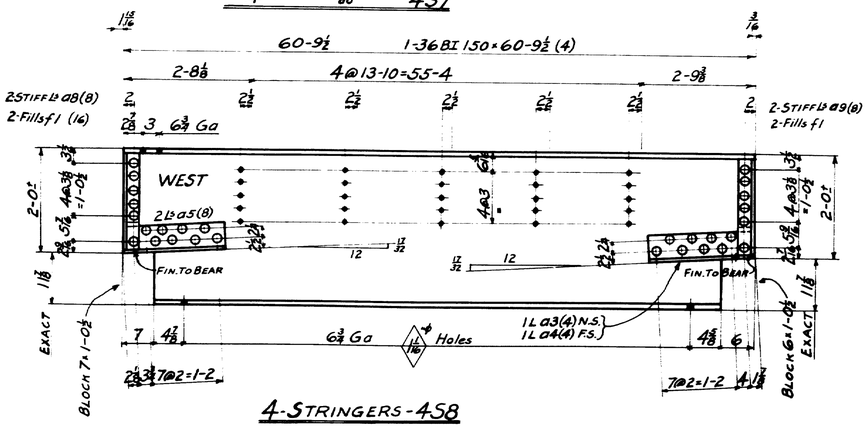
ONE - STRINGER - 455
ONE - do - 456
4 - do - 457



24 - STRINGERS - 459



8 - STRINGERS - 4510
8 - do - 4511



4 - STRINGERS - 458

NOTE: DO NOT PAINT SHOP OR FIELD CONTACT SURFACES.
MARK WEIGHTS FOR PIECES EXCEEDING 3 TONS.
HOLES IN METAL ¾" TO ⅞" THICK INCL. TO BE SUBPUNCHED 11/16" & REAMED TO SIZE.
HOLES IN METAL MORE THAN ⅞" THICK TO BE DRILLED.

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS ⅞" OPEN HOLES 15/16" UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

STRUCTURE 676' VIADUCT
FOR STATE OF MAINE
DETAILS OF STRINGERS
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 Ct. RED LEAD & OIL. See Note
FIELD PAINT

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
CHW	12-13-33	APL	12-14-33	

REVISIONS	NO	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

CONTRACT No. 2594 SHEET No. 4

TOWN 12-11 BRIDGE 3039
BRIDGE AT STA. 46
OVER
MAINE CENTRAL R.R.
WOOLWICH-SAGADAHOC CO.

0 1 2 3 4 5 INCHES

Shown Developed
1 Bt. Pl. 12×1¼×2-5¼ (1) P2 for C1
1 Bt. Pl. do ×2-5¼ (1) P3 " C2
1 L -5×3½×⅞ × 9" (2) a3 Bolt
1 L - do × 9" (2) a4 "
1 L - do ×1-0 (2) a5
2-Bolts ⅞"-φ×2¼ (4)

Holes for 1"-φ Bolts

Bend Line on Bott of Pl.

Bend Pl. for C1

Bend Pl. for C2

Bracket-1681-N.S. " -1683-F.S. Shop

Rivet in Shop

1-12" B.H. 65# × {23-9½ (1) for C1 / 24-4¾ (1) " C2}

2-Fills 7½×⅜×2-9 (4) f1

For C1 - 1 pl. P4
For C2 - 1 pl. P5

8¹¹⁄₁₆ for C1
8¹⁄₁₆ " C2

1 Pl. - 35×⅜×2-7 (2) P1

2 Bolts 7"-φ Bolted

1 Pl. - 20×¾×2-0½ (2) P1
2 L's - 6×6×⅝×1-8 (4) a1
2 L's - 4×4×⅝×0-9 (4) a2

ONE COLUMN 5C1

ONE " 5C2½ LEFT OF SK.

Shown Developed
1 Bt. Pl. 12×1¼×2-5¼ (1) P8 - C3
1 Bt. " do 2-5¼ (1) P9 - C4
2 L's - a3 (4) Bolt 1
1 L - a5 (2)
1 Bar 5×1×6 (1) b1 for C3
1 " do ×7½ (1) b2 " C3 Bolt
2 Bolts ⅞"-φ×2¼ (4)
2 " ⅞"-φ×3¼ (4)

1 Bar - 5×1×6 (1) b3 for C4
1 Bar - do ×7½ (1) b4 for C4 Bolt
2 Bolts

TOP VIEW FOR C4
Make Left of Sk.

Location Plan.

Bend Line on Bott. of Pl.

Bend Pl for C3

Bend Pl. for C4

Bracket-1689-N.S. " -1682-F.S. Shop

Rivet in Shop

1-12" B.H. 65# × {28-8 (1) for C3 / 29-3¾ (1) for C4}

1 Pl. - 23×⅜×2-6 (2) P32 - C3
do ×2-6 (2) P33 - C4

1 Pl. - 22½×⅜×2-4¼ (2) P6 - C3
1 Pl. do ×2-4¼ (2) P7 - C4

1 Pl. - P32 - C3
1 Pl. P33 - C4
Bolted 2 Bolts

1 Pl. - 27½×⅜×2-8½ (2)
Bolted 2 Bolts ⅞"-φ×2¼ (12)

1 Pl. P1 (2)
2 L's a1 (4)
2 L's a2 (4)

Base Same as for C1

ONE-COLUMN 5C3

ONE- 5C4½ LEFT OF SK.

Note:
Holes in metal more than ⅞" thick shall be drilled.
Do not paint shop or field contact surfaces.
Work Sheets 5-6-7-8-9-15-16 together.
Rivet brackets, detailed on Sh 16 to columns as noted.

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS ⅞"-φ OPEN HOLES 15/16"-φ UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N.Y.

STRUCTURE 676' Viaduct
FOR State of Maine
DETAILS OF Cols - Tower #1
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 Ct. red lead & oil - See note.
FIELD PAINT

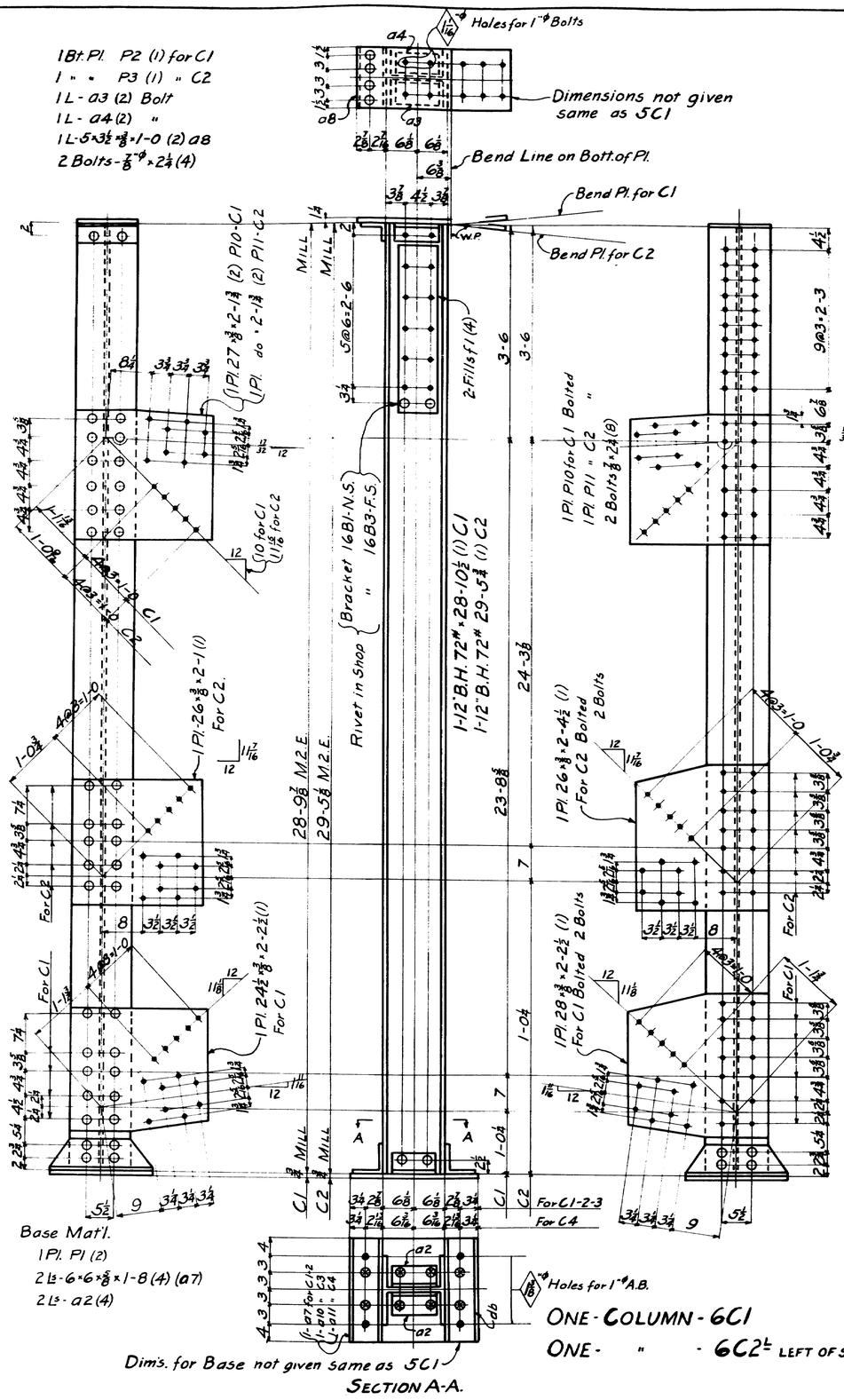
DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
F.W.H.	12-7-33	A.P.L.	12-8-33	

REVISIONS NO.	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			

CONTRACT No. 2594 SHEET No. 5

TOWN 12-11. BRIDGE 3039
BRIDGE AT STA. 46.
OVER
MAINE CENTRAL R.R.
WOOLWICH - SAGADAHOC CO.

0 1 2 3 4 5 INCHES



INSPECTION	SHOP RIVETS	WEIGHT

RIVETS ⅞"φ OPEN HOLES 13/16"φ UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

STRUCTURE 676' Viaduct
FOR State of Maine
DETAILS OF Columns - Tower #2
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 Ct Red Lead & Oil - See Note
FIELD PAINT

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
F.W.H.	12-11-35	A.P.L.	12-12-35	

REVISIONS	NO	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

TOWN 12-11. BRIDGE 3039.
BRIDGE AT STA. 46.
OVER
MAINE CENTRAL R.R.
WOOLWICH - SAGADAHOC CO.

CONTRACT No. 2594 SHEET No. 6

1 Bt. Pl. p2 for C1 (1)
1 " " p3 " C2 (1)
1 L - a9 " C1 (1)
1 L - a5 " C2 (1)
1 L - a3 (2) Bolt
1 L - a4 (2) "
2 Bolts - $\frac{7}{8}$"ϕ x 2¼ (4)

Holes for 1"ϕ Bolts

Dimensions not given, same as 5C1

Bend Line on Bott. of Pl.

Bend Pl. for C1
" " " C2

W.P.

2-fills-f (14)

1-12" B.H. 79# x 28'-3¼" (1) C1
1-12" B.H. 65# x 22'-10½" (1) C2

Bracket 16B1-N.S. 16B6-F.S.

Rivet in Shop

M.2.E.

28'-2¾" M.2.E.
22'-10" M.2.E.

(1) Pl. 24 x ⅜ x 2'-3 (2) p15-C1
(1) Pl. 23 x ⅜ x 2'-6½ (2) p16-C2

(1) Pl. p15 for C1 Bolted
(1) Pl. p16 " C2 "
2 Bolts

(1) Pl. 3½ x ½ x 2'-9¾ (1) For C2 Bolted
2-Bolts

(1) Pl. p14 For C1 Bolted
2-Bolts ⅞ x 2¼ (8)

For C1
For C2
For C1-2
For C1-3-4

Base Mat'l.
1 Pl p1 (2)
2 Ls - a11 (2) for C1
2 Ls - a1 (2) for C2
2 Ls a2 (4)

Dim's for Base not given, same as 5C1

SECTION B-B.

ONE COLUMN - 7C1
ONE " - 7C2L LEFT OF SK.

Cap Mat'l for C3
1 Bt Pl p8 (1)
2 Ls - a3 (4) Bolt (1)
1 L a9 (2)
1 Bar b1 (1)
1 Bar b2 (1) Bolted
2 Bolts ⅞" x 2¼ (4)
2 " ⅞ x 3¼ (4)

(1) Pl. 24 x ⅜ x 2-3 (2) p18-C3
(1) Pl. 22½ x ⅜ x 2-6 (2) p19-C4

(Bracket 16B13-N.S. C3
" 16B14-N.S. C4
" 16B2 - F.S. C3-4

1-12" B.H. 79# x 27'-2" (1) C3
do x 27'-9½" (1) C4

Rivet in Shop

M.2.E.

27'-1⅜" M.2.E.
27'-8⅝" M.2.E.

(1) Pl. 24 x ⅜ x 2-2 (1) C3
(1) Pl. 22 x ⅜ x 2-5 (2) p17 C4

(1) Pl. p18 - C3 Bolted
(1) Pl. p19 - C4 "
2 Bolts ⅞ x 2¼ (10)

(1) Pl. 26 x ⅜ x 2-8 (1) For C4 Bolted - 2 Bolts

(1) Pl. 22 x ⅜ x 2-8 (1) for C4

Cut Pl here for C4

(1) Pl. p17 - C4 Bolted

For C3
For C4

Base Mat'l.
1 Pl p1 (2)
2 Ls a11 (4)
2 Ls a2 (4)

ONE COLUMN - 7C3
ONE " - 7C4L LEFT OF SK.

View of Cap for 7C3. Dim's not given - Same as 5C1

Cap for 7C4 Same as 6C4

Cap Mat'l for C4
1 Bt Pl p9 (1)
2 Ls a3 Bolt 1
1 L - a9
1 Bar b3 (1)
1 " b4 (1) Bolt
2 - Bolts ⅞ x 2¼
2 - " ⅞ x 3¼

Location Plan
16B6 16B1 C2L C4L 16B2 16B14
24-0
25-0
Tower #3
C1 C3
16B6 16B1 16B2 16B13

Note:
Work with Sheets #5,6,8,9,15,16.
For Notes - see Sheet #5

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS ⅞"ϕ OPEN HOLES 15/16"ϕ UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

STRUCTURE 676' Viaduct
FOR ... State of Maine
DETAILS OF Col's - Tower #3
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 ct red Lead & Oil - See Note.
FIELD PAINT

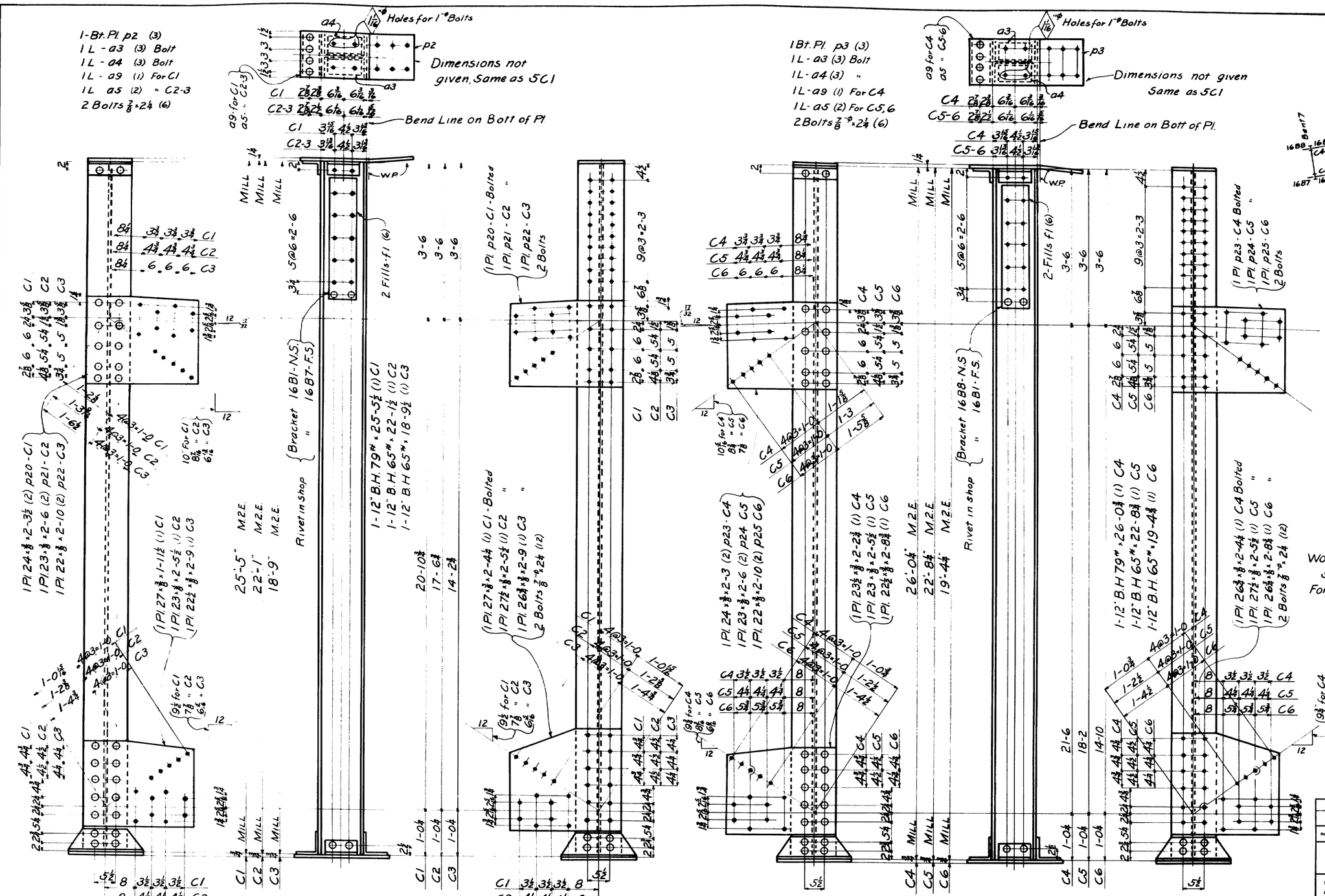
DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
F.W.H.	12-12-33	A.P.L.	12-15-33	

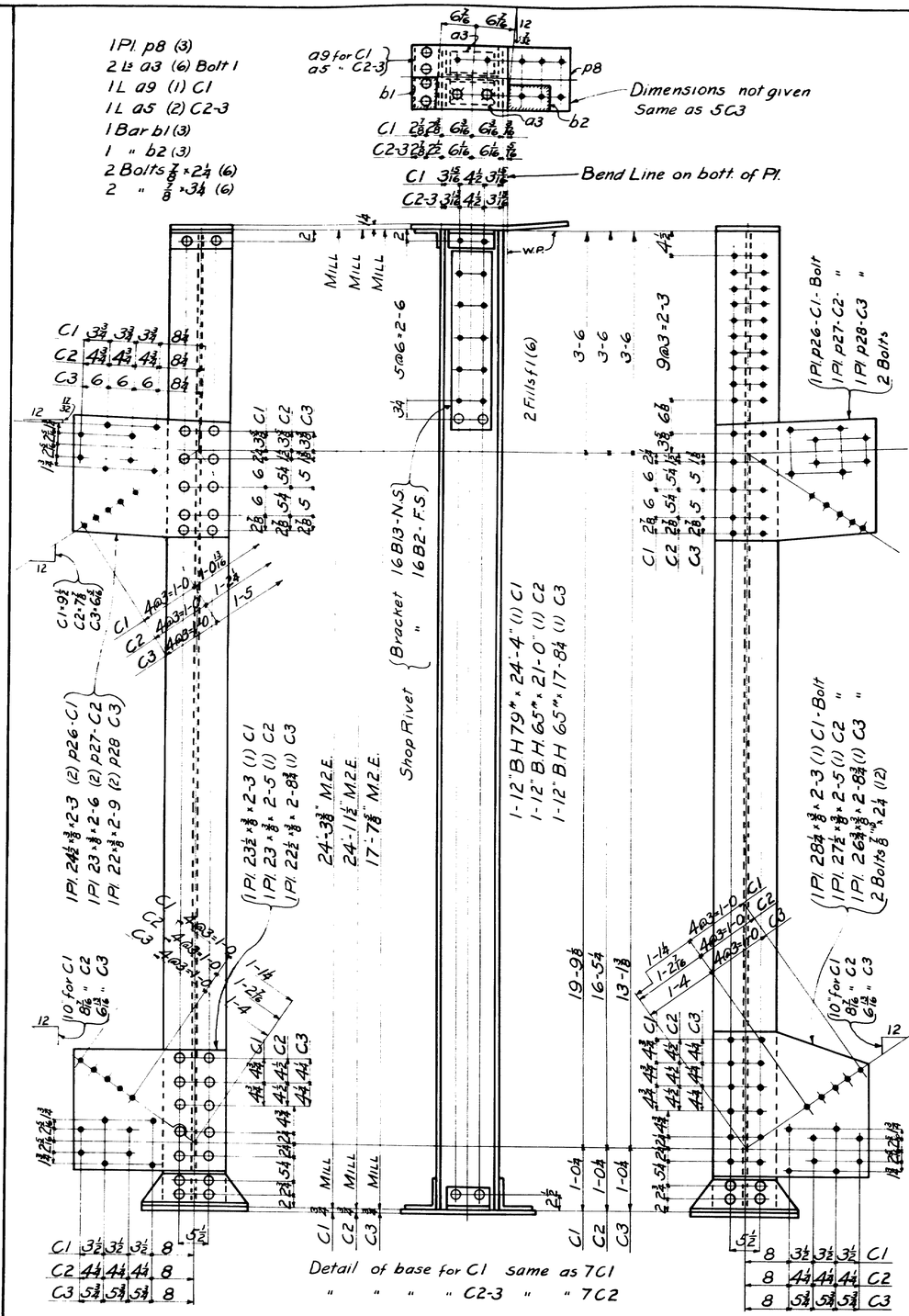
REVISIONS	NO.	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

TOWN 12-11. BRIDGE 3039.
BRIDGE AT STA. 46.
OVER
MAINE CENTRAL R.R.
WOOLWICH - SAGADAHOC CO.

CONTRACT No. 2594 SHEET No. 7

0 1 2 3 4 5 INCHES


1-Bt. Pl. p2 (3)
1 L - a3 (3) Bolt
1 L - a4 (3) Bolt
1 L - a9 (1) For C1
1 L a5 (2) " C2-3
2 Bolts 7/8 x 2 1/4 (6)
Holes for 1" Bolts
Dimensions not given, Same as 5C1
Bend Line on Bott of Pl
a9 for C1
a5 " C2-3
C1 2 2 2 6 3/16 6 3/16
C2-3 2 2 2 6 1/16 6 1/16
C1 3 15/16 4 1/2 3 15/16
C2-3 3 15/16 4 1/2 3 15/16
MILL
W.P.
2 Fills f1 (6)
5@6=2-6
9@3=2-3
3-6
Bracket 16B1-N.S
" 16B7-F.S
Rivet in Shop
1-12" B.H. 79# x 25-5 1/2 (1) C1
1-12" B.H. 65# x 22-1 1/2 (1) C2
1-12" B.H. 65# x 18-9 1/2 (1) C3
1Pl. p20-C1-Bolted
1Pl. p21 - C2 "
1Pl. p22 - C3 "
2 Bolts
25'-5" M.E.E.
22'-1" M.E.E.
18'-9" M.E.E.
20-10 3/4
17-6 1/4
14-2 1/4
1Pl. 24 x 3/8 x 2-3 1/2 (2) p20-C1
1Pl. 23 x 3/8 x 2-6 (2) p21-C2
1Pl. 22 x 3/8 x 2-10 (2) p22-C3
1Pl. 27 x 3/8 x 1-11 1/2 (1) C1
1Pl. 23 x 3/8 x 2-5 1/2 (1) C2
1Pl. 22 1/2 x 3/8 x 2-9 (1) C3
1Pl. 27 x 3/8 x 2-4 1/4 (1) C1 - Bolted
1Pl. 27 1/2 x 3/8 x 2-5 1/2 (1) C2 "
1Pl. 26 3/4 x 3/8 x 2-9 (1) C3 "
2 Bolts 7/8" x 2 1/4 (12)
4@3=1-0
1-0 15/16
1-2 5/8
1-4 3/4
9 1/2 for C1
7/8 " C2
6 1/16 " C3
12
1Pl. p1 (3)
2 Ls a2 (6)
2 Ls a11 (2) for C1
2 Ls a1 (4) " C2-3
Detail of base for C1 same as 7C1
" " " " C2-3 " " 7C2
ONE COLUMN - 8C1
ONE " - 8C2
ONE " - 8C3
1Bt. Pl p3 (3)
1 L - a3 (3) Bolt
1 L - a4 (3) "
1 L - a9 (1) For C4
1 L - a5 (2) For C5,6
2 Bolts 7/8 x 2 1/4 (6)
a9 for C4
a5 " C5-6
C4 2 2 2 6 3/16 6 3/16
C5-6 2 2 2 6 1/16 6 1/16
C4 3 15/16 4 1/2 3 15/16
C5-6 3 15/16 4 1/2 3 15/16
2-Fills f1 (6)
1Pl. p23 - C4 Bolted
1Pl. p24 - C5 "
1Pl. p25 - C6 "
2 Bolts
1-12" B.H. 79# x 26-0 3/4 (1) C4
1-12" B.H. 65# x 22-8 3/4 (1) C5
1-12" B.H. 65# x 19-4 3/4 (1) C6
26'-04" M.E.E.
22'-8 3/4" M.E.E.
19'-4 3/4" M.E.E.
1Pl. 24 x 3/8 x 2-3 (2) p23 - C4
1Pl. 23 x 3/8 x 2-6 (2) p24 C5
1Pl. 22 x 3/8 x 2-10 (2) p25 C6
1Pl. 23 1/2 x 3/8 x 2-2 3/4 (1) C4
1Pl. 23 x 3/8 x 2-5 1/2 (1) C5
1Pl. 22 1/2 x 3/8 x 2-8 3/4 (1) C6
1Pl. 26 3/4 x 3/8 x 2-4 1/4 (1) C4 Bolted
1Pl. 27 1/2 x 3/8 x 2-5 1/2 (1) C5 "
1Pl. 26 3/4 x 3/8 x 2-8 3/4 (1) C6 "
2 Bolts 7/8" x 2 1/4 (12)
9 3/4 for C4
8 7/8 " C5
6 7/8 " C6
1Pl. p1 (3)
2 Ls a2 (6)
2 Ls a11 (2) for C4
2 Ls a1 (4) " C5-6
Detail of base for C4 same as 7C1
" " " " C5-6 " " 7C2
ONE COLUMN - 8C4
ONE " - 8C5
ONE " - 8C6
Bent 7
Bent 9
Bent 11
Tower 4
Tower 5
Tower 6
Location Plan
Note:
Work with Sheets
5, 6, 7, 9, 15, 16
For notes see Sheet #5
INSPECTION
SHOP RIVETS
WEIGHT
RIVETS 7/8"
OPEN HOLES 15/16"
UNLESS NOTED
LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.
STRUCTURE 676' Viaduct
FOR State of Maine
DETAILS OF Cols. - Towers 4-5-6
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 ct. red lead & oil, see note
FIELD PAINT
DRAWN BY F.W.H
DATE 12-14-38
CHECKED BY A.P.L.
DATE 12-15-38
SQUAD FOREMAN
REVISIONS
NO. DATE BY DESCRIPTION
TOWN 12-11 BRIDGE 3039
BRIDGE AT STA. 46
OVER
MAINE CENTRAL R.R.
WOOLWICH - SAGADAHOC CO.
CONTRACT NO. 2594 SHEET NO. 8
No. 208-B.S.R.C.
22-8
5 1 2 3 4 5 INCHES



INSPECTION	SHOP RIVETS	WEIGHT

RIVETS 7/8 OPEN HOLES 15/16 UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

STRUCTURE 676' Viaduct
FOR State of Maine
DETAILS OF Cols - Towers - 4-5-6
SPECIFICATIONS Maine State Highway Comm
SHOP PAINT 1 ct red lead & oil - See note.
FIELD PAINT

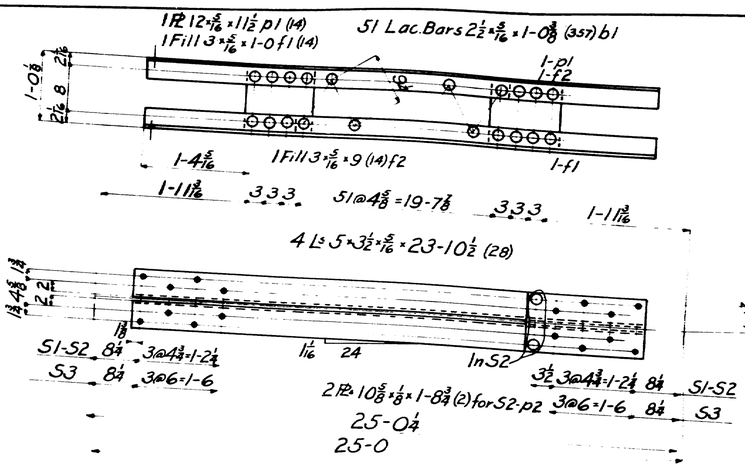
DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
F.W.H.	12-15-33	A.P.L.	12-18-33	

REVISIONS	NO.	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

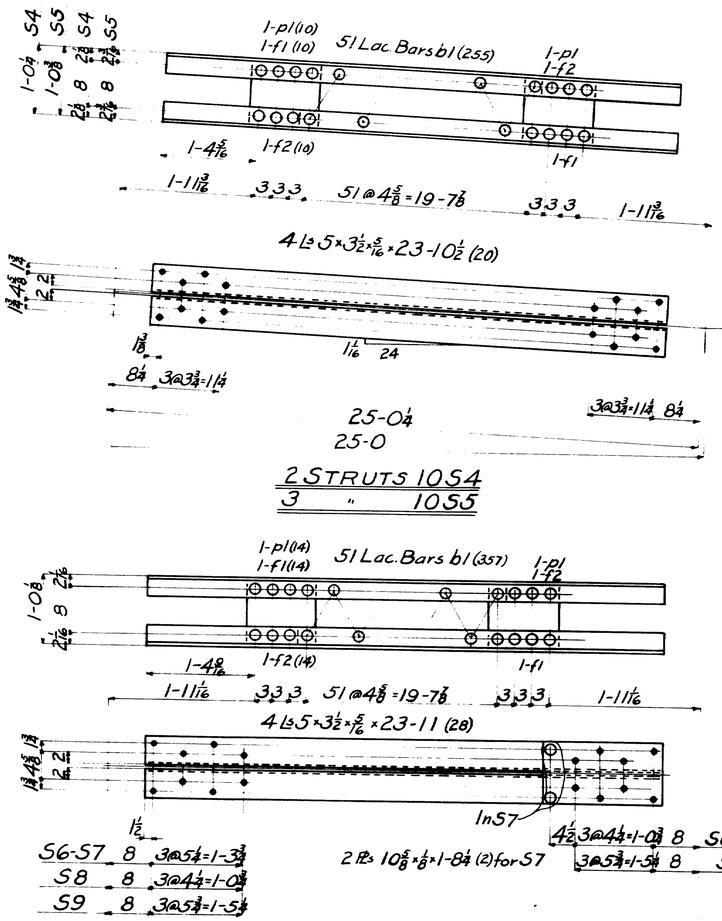
CONTRACT No. 2594 SHEET No. 9

TOWN 12-11 BRIDGE 3039
BRIDGE AT STA 46
OVER
MAINE CENTRAL R.R.
WOOLWICH - SAGADAHOC CO.

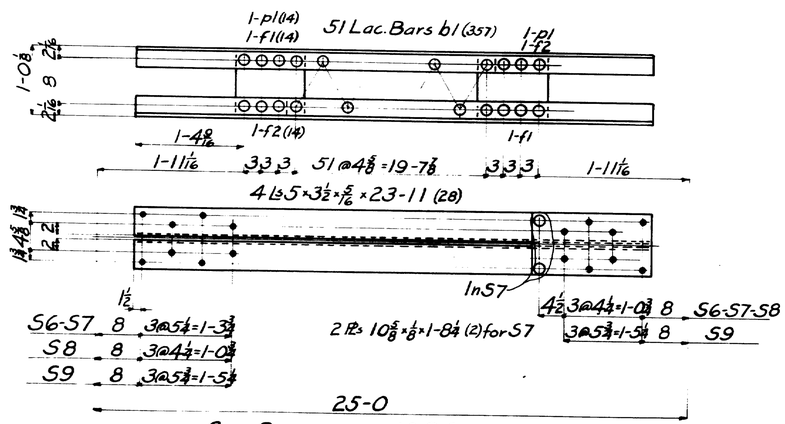
No. 111—B. P. R. C.
22-



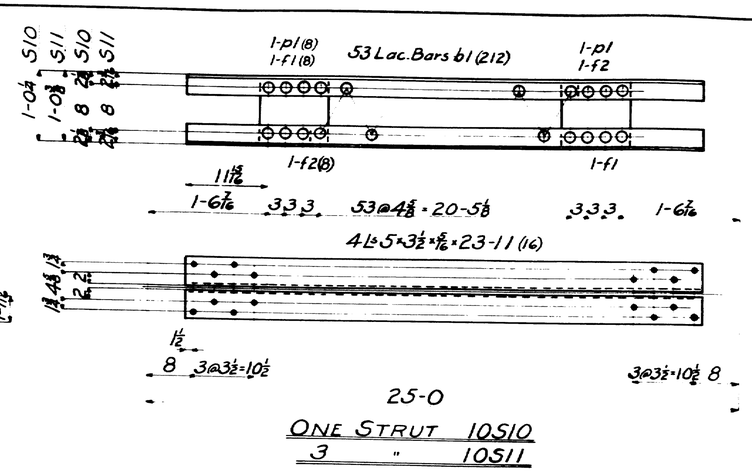
4 STRUTS 10S1
ONE " 10S2
2 " 10S3



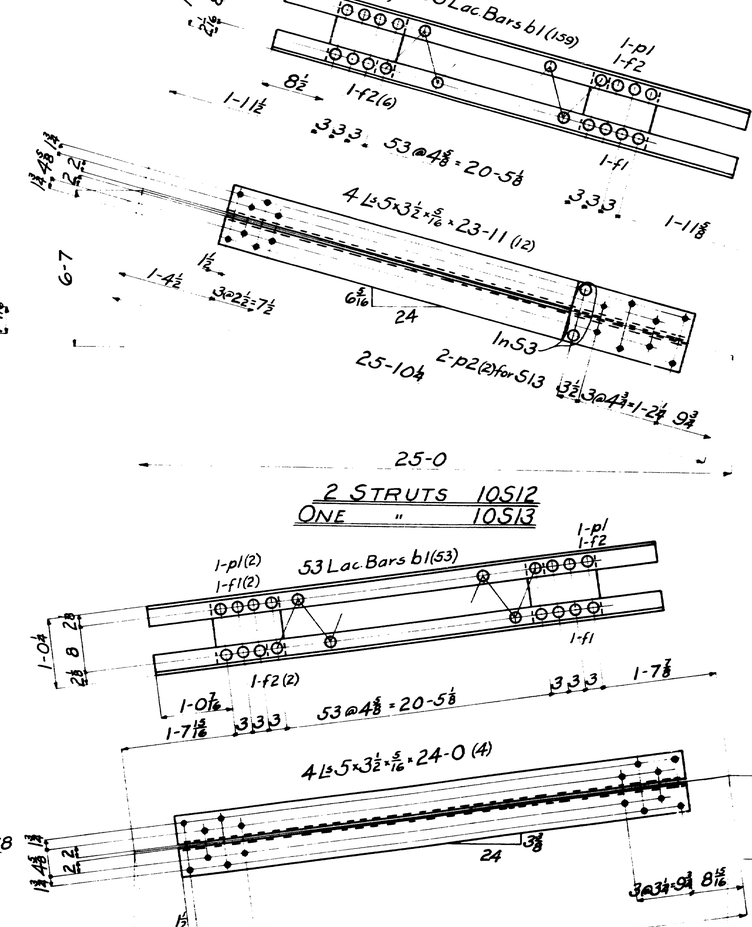
2 STRUTS 10S4
3 " 10S5



2 STRUTS 10S6
ONE " 10S7
2 " 10S8
2 " 10S9

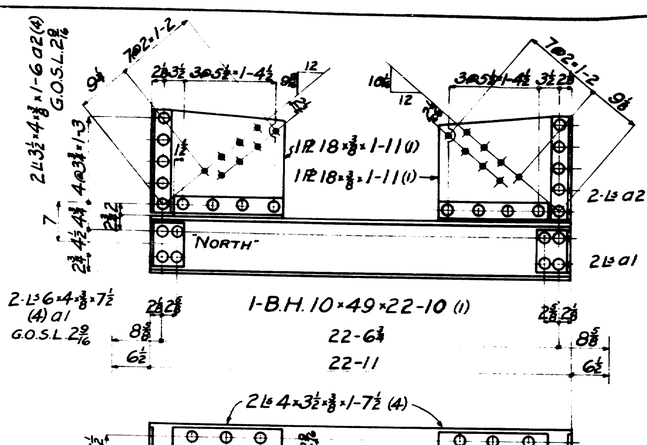


ONE STRUT 10S10
3 " 10S11

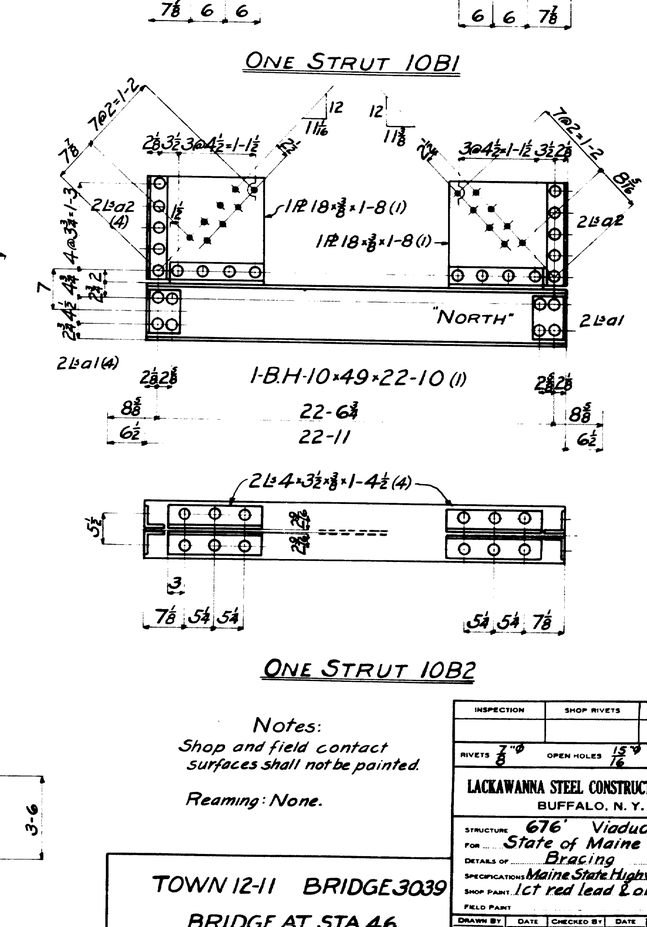


2 STRUTS 10S12
ONE " 10S13

ONE STRUT 10S14



ONE STRUT 10B1



ONE STRUT 10B2

Notes:
Shop and field contact surfaces shall not be painted.
Reaming: None.

TOWN 12-11 BRIDGE 3039
BRIDGE AT STA. 46.
OVER
MAINE CENTRAL R.R.
WOOLWICH SAGADAHOCCO

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS 7/8" ø OPEN HOLES 15/16" UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

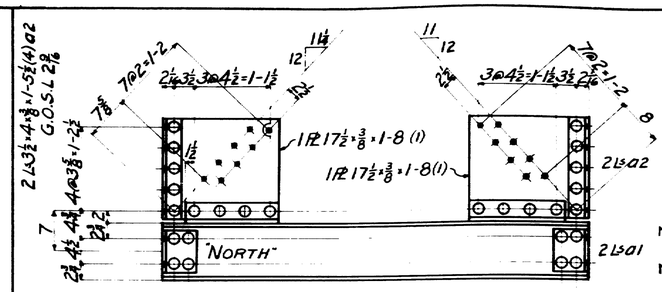
STRUCTURE 676' Viaduct
FOR State of Maine
DETAILS OF Bracing
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 ct red lead & oil - See note
FIELD PAINT

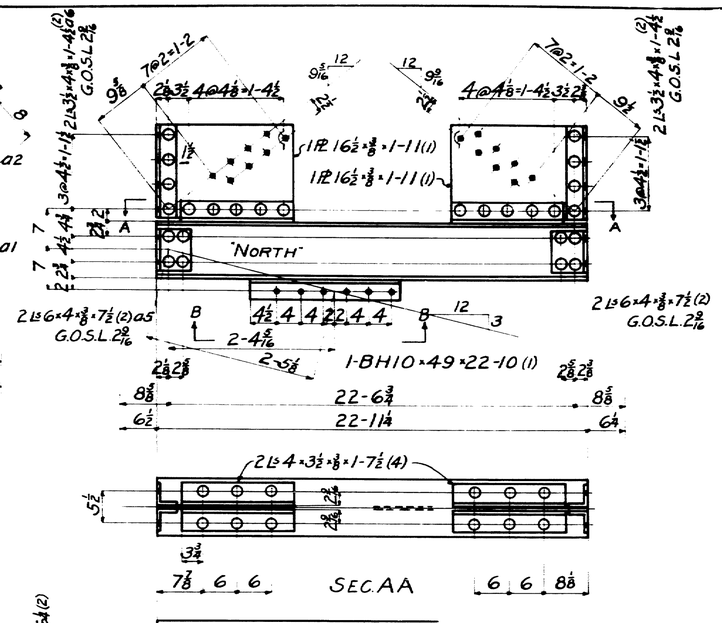
DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
P	12-8-33	APL	12-12-33	

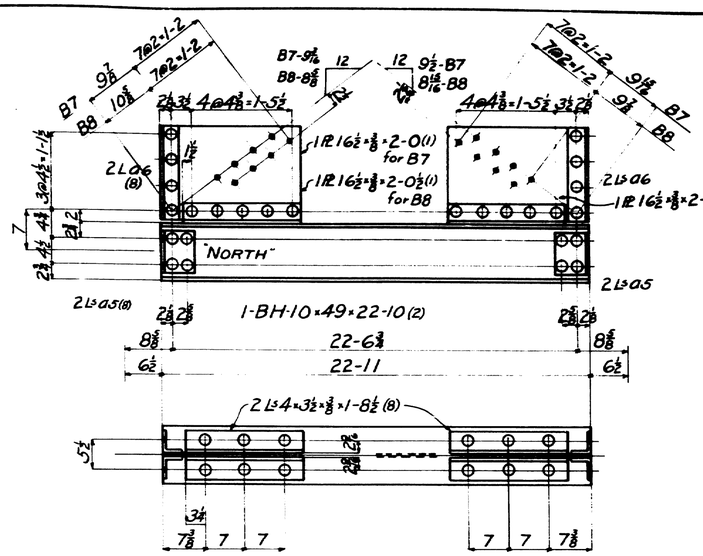
REVISIONS	No.	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

CONTRACT No. 2594 SHEET No. 10

0 1 2 3 4 5 INCHES







Notes:
Shop and field surfaces shall not be painted.
Reaming - None.

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS 7/8" ⌀ OPEN HOLES 15/16" ⌀ UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

STRUCTURE 676' Viaduct
FOR State of Maine
DETAILS OF Bracing
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT Ict red lead & oil - See note
FIELD PAINT

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
P	12-1-33	APL	12-12-33	

REVISIONS	NO.	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

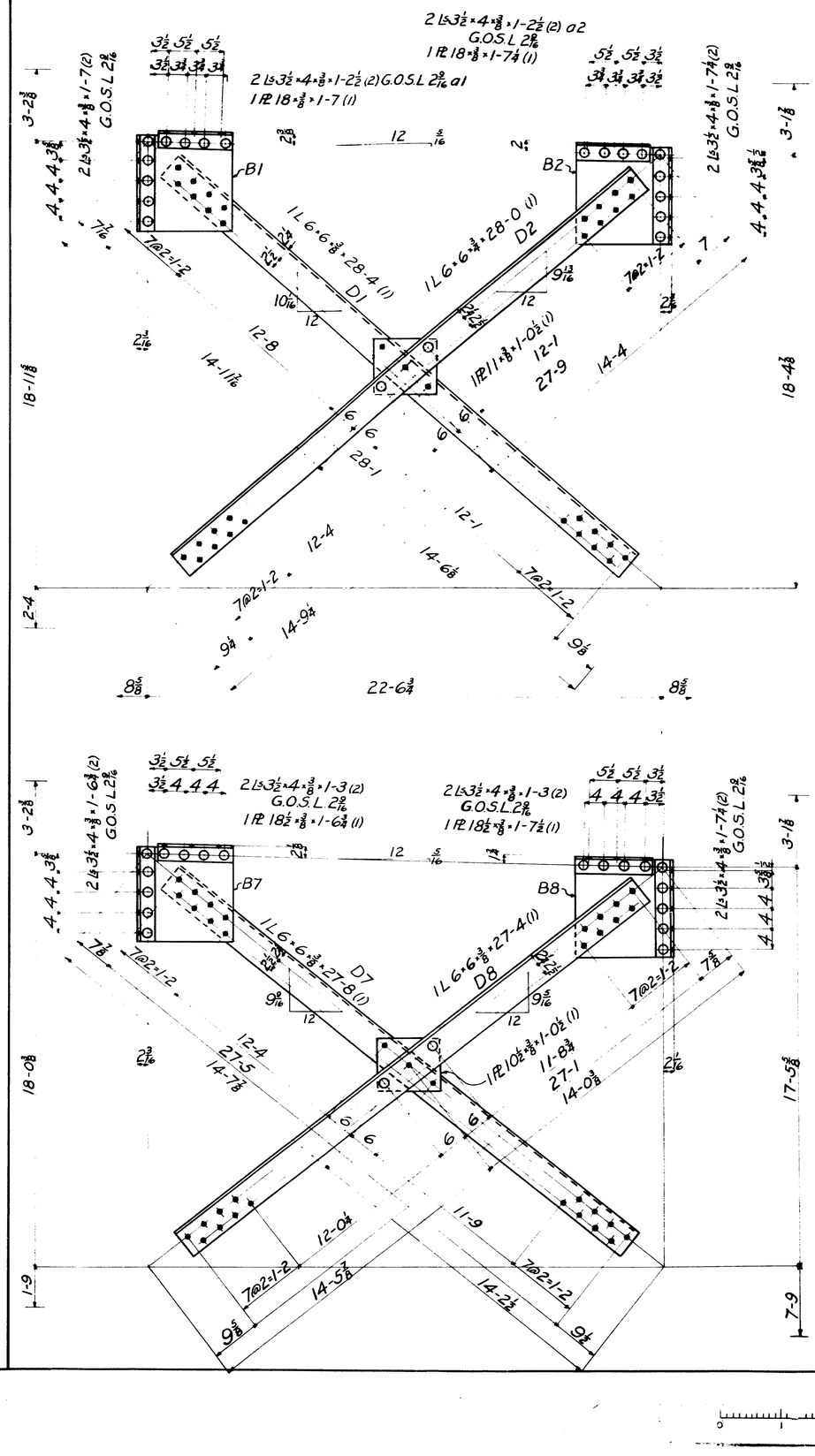
CONTRACT No. 2594 SHEET No. 11

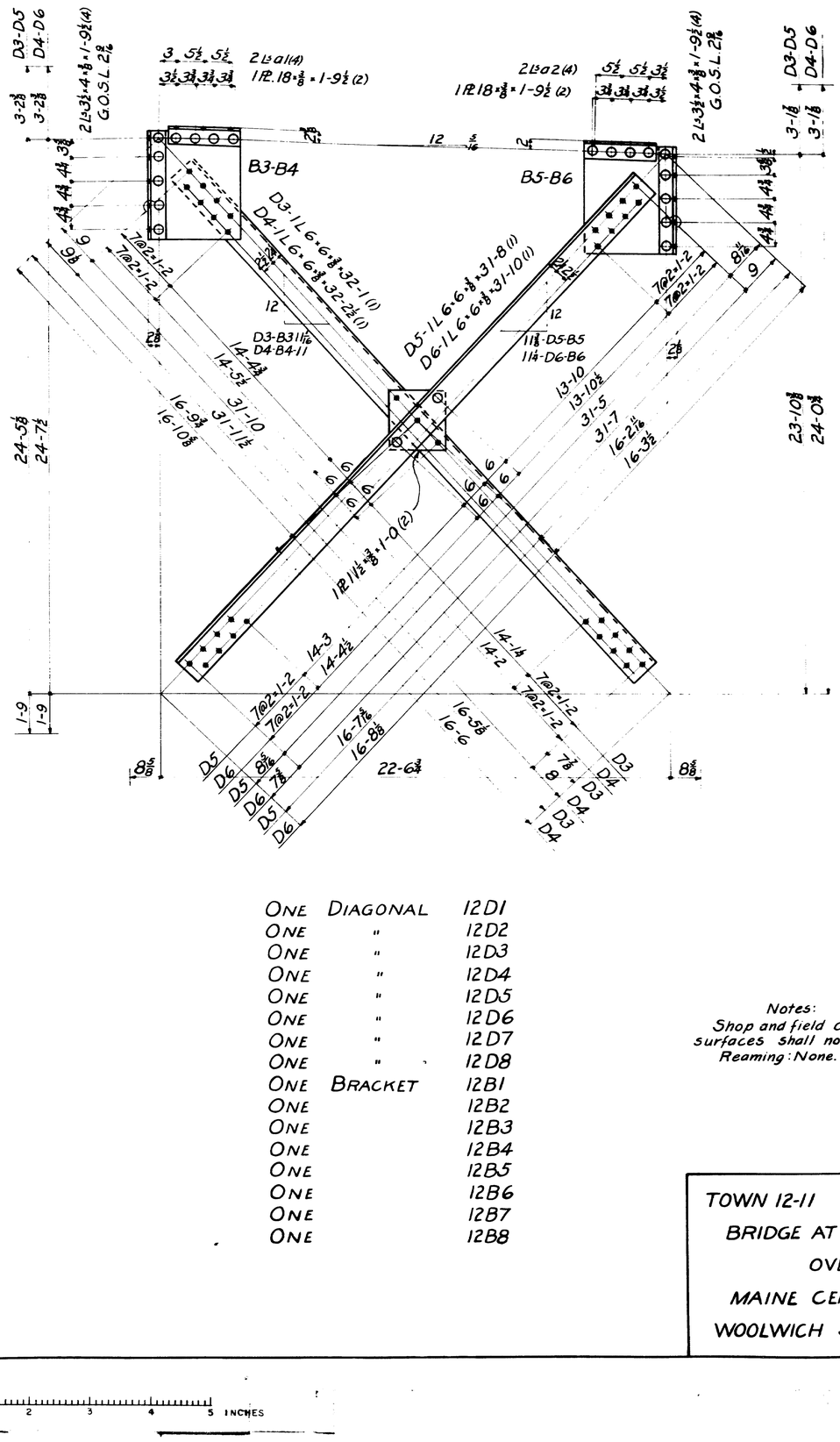
TOWN 12-11 BRIDGE 3039
BRIDGE AT STA. 46.
OVER
MAINE CENTRAL R.R.
WOOLWICH SAGADAHOC CO.

No. 110 - B. B. P. Co.

22-80

0 1 2 3 4 5 INCHES





ONE	DIAGONAL	12D1
ONE	"	12D2
ONE	"	12D3
ONE	"	12D4
ONE	"	12D5
ONE	"	12D6
ONE	"	12D7
ONE	"	12D8
ONE	BRACKET	12B1
ONE		12B2
ONE		12B3
ONE		12B4
ONE		12B5
ONE		12B6
ONE		12B7
ONE		12B8

Notes:
Shop and field contact surfaces shall not be painted.
Reaming: None.

TOWN 12-11 BRIDGE 3039
BRIDGE AT STA 46.
OVER
MAINE CENTRAL R.R.
WOOLWICH SAGADAHOC CO.

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS 7/8 OPEN HOLES 15/16 UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

STRUCTURE 676' Viaduct
FOR State of Maine
DETAILS OF Bracing
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 ct red lead & oil. See note.
FIELD PAINT

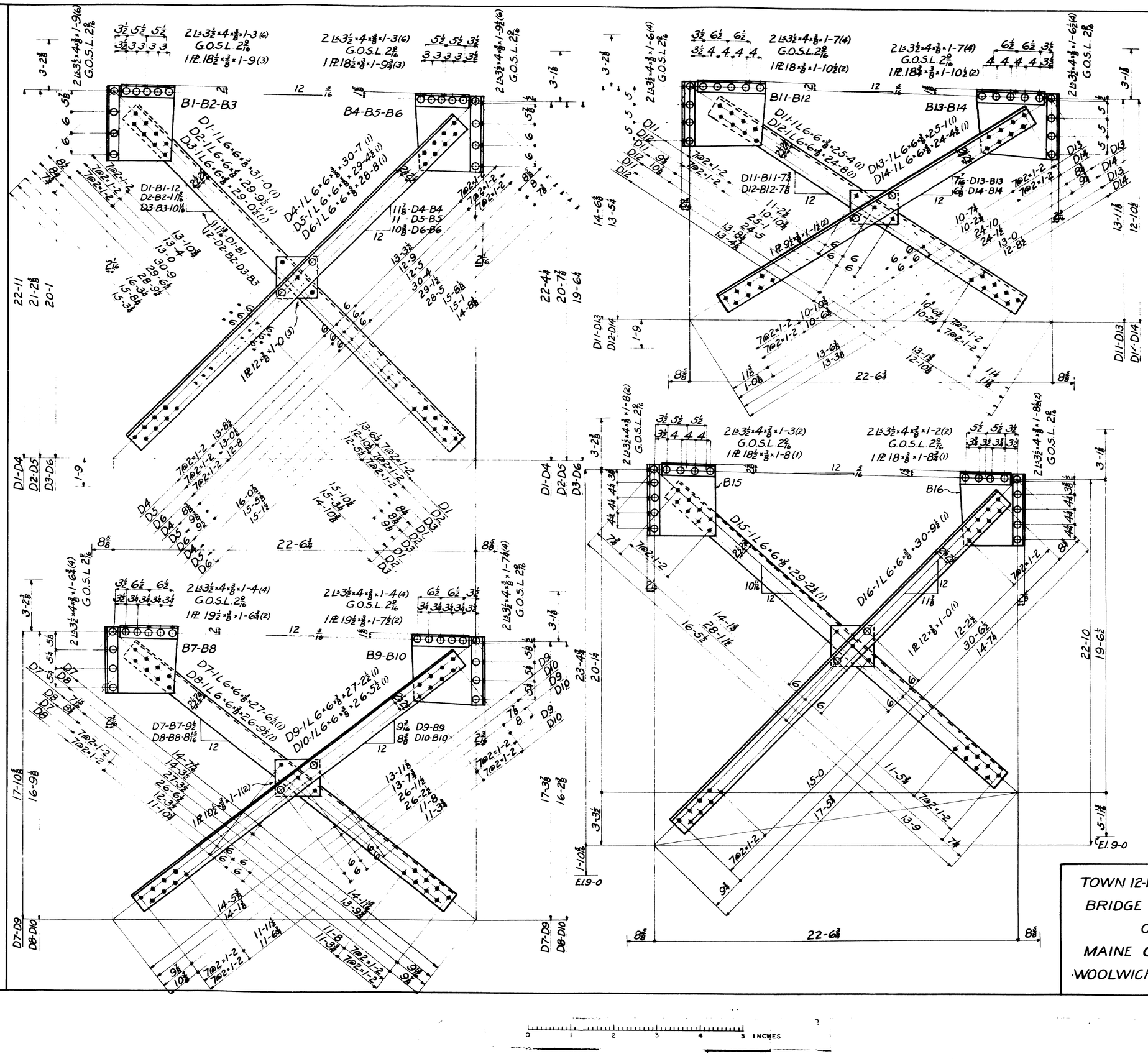
DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
P	12-12-33	ARL	12-15-33	

REVISIONS	No.	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

CONTRACT No. 2594 SHEET No. 12

No. 115-2.5.R.O.
22-91

0 1 2 3 4 5 INCHES



ONE	DIAGONAL	13D1
ONE	"	13D2
ONE	"	13D3
ONE	"	13D4
ONE	"	13D5
ONE	"	13D6
ONE	"	13D7
ONE	"	13D8
ONE	"	13D9
ONE	"	13D10
ONE	"	13D11
ONE	"	13D12
ONE	"	13D13
ONE	"	13D14
ONE	"	13D15
ONE	"	13D16
ONE	BRACKET	13B1
ONE	"	13B2
ONE	"	13B3
ONE	"	13B4
ONE	"	13B5
ONE	"	13B6
ONE	"	13B7
ONE	"	13B8
ONE	"	13B9
ONE	"	13B10
ONE	"	13B11
ONE	"	13B12
ONE	"	13B13
ONE	"	13B14
ONE	"	13B15
ONE	"	13B16

Notes:
Shop and field contact surfaces shall not be painted.
Reaming: None.

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS $\frac{7}{8}$" ø OPEN HOLES $\frac{15}{16}$" ø UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

STRUCTURE 676' Viaduct
FOR State of Maine
DETAILS OF Bracing
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 ct. red lead & oil - See note
FIELD PAINT

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
P	12-13-33	APL	12-15-33	

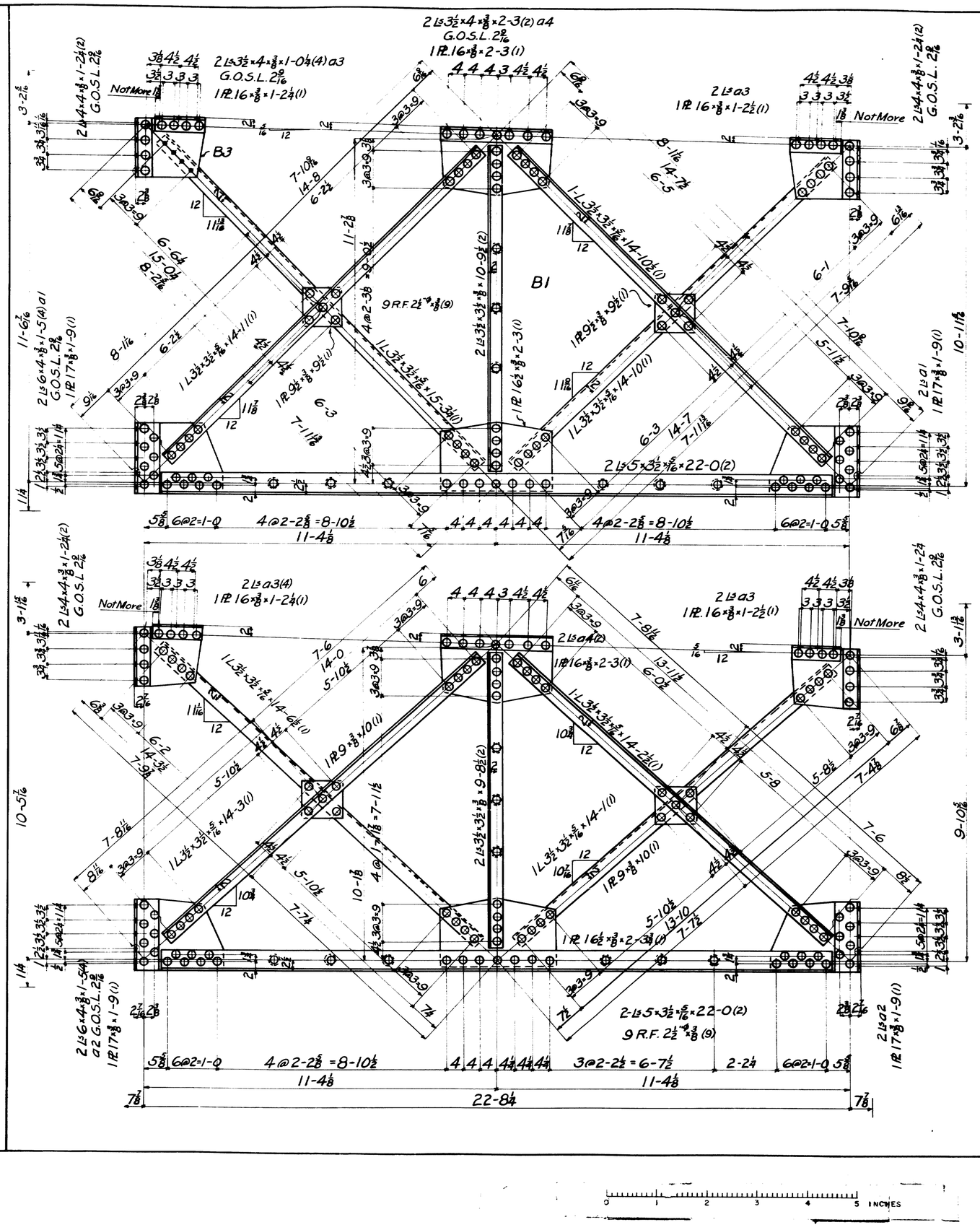
REVISIONS	No.	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

TOWN 12-11 BRIDGE 3039
BRIDGE AT STA. 46.
OVER
MAINE CENTRAL R.R.
WOOLWICH SAGADAHOC CO.

CONTRACT No. 2594 SHEET No. 13

No. 101-B. B. P. Co.
22-92

0 1 2 3 4 5 INCHES



ONE BENT 14B1

ONE BRACKET 14B3

ONE BENT 14B2

Shop and field contact surfaces shall not be painted.
Reaming: None.

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS 7/8" ø OPEN HOLES 15/16" ø UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

STRUCTURE 676' Viaduct
FOR ... State of Maine
DETAILS OF ... Bracing. Bents 13 & 14.
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT Ictred lead & oil - See note.
FIELD PAINT

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
P	12-18-33	APL	12-19-33	

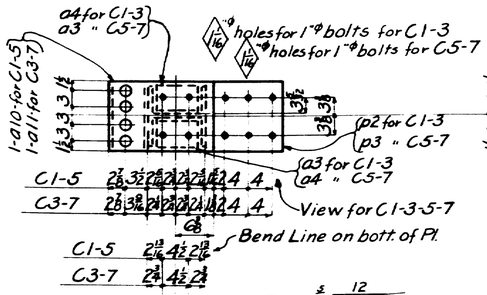
REVISIONS	No.	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

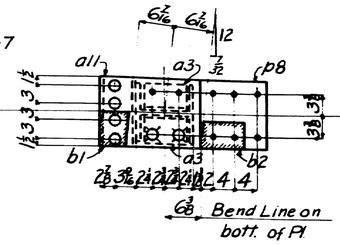
CONTRACT No. 2594 SHEET No. 14

TOWN 12-11 BRIDGE 3039
BRIDGE AT STA. 46
OVER
MAINE CENTRAL R.R.
WOOLWICH SAGADAHOC CO.

Cap Mat'l for C1-C3-5-7.

1 Pl. p2 (2) for C1-3
1 Pl. p3 (2) " C5-7
1 L-a3 (4) Bolt
1 L-a4 (4) "
1 L-6"×3½"×⅜"×1'-0 (2) a10 for C1-5.
1 L " (2) a11 " C3-7.
2 Bolts ⅞"-⅁ ×2¼ (8)

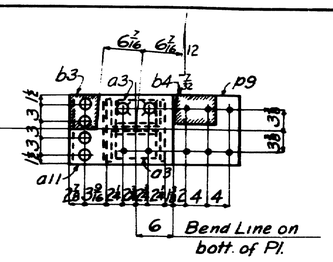




View for C2-C4

Cap Mat'l for C2-4

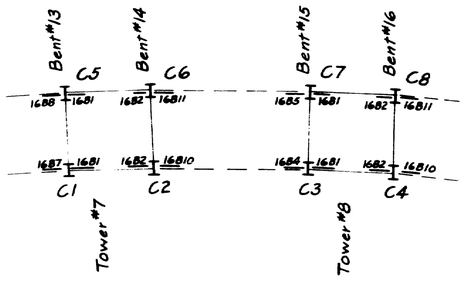
1 Pl. p8 (2)
2 Ls-a3 (4) bolt 1
1 L-a11 (2)
1 Bar b1 (2)
1 " b2 (2) Bolt
2 Bolts ⅞"-⅁×2¼ (4)
2 " ⅞"-⅁×3¼ (4)



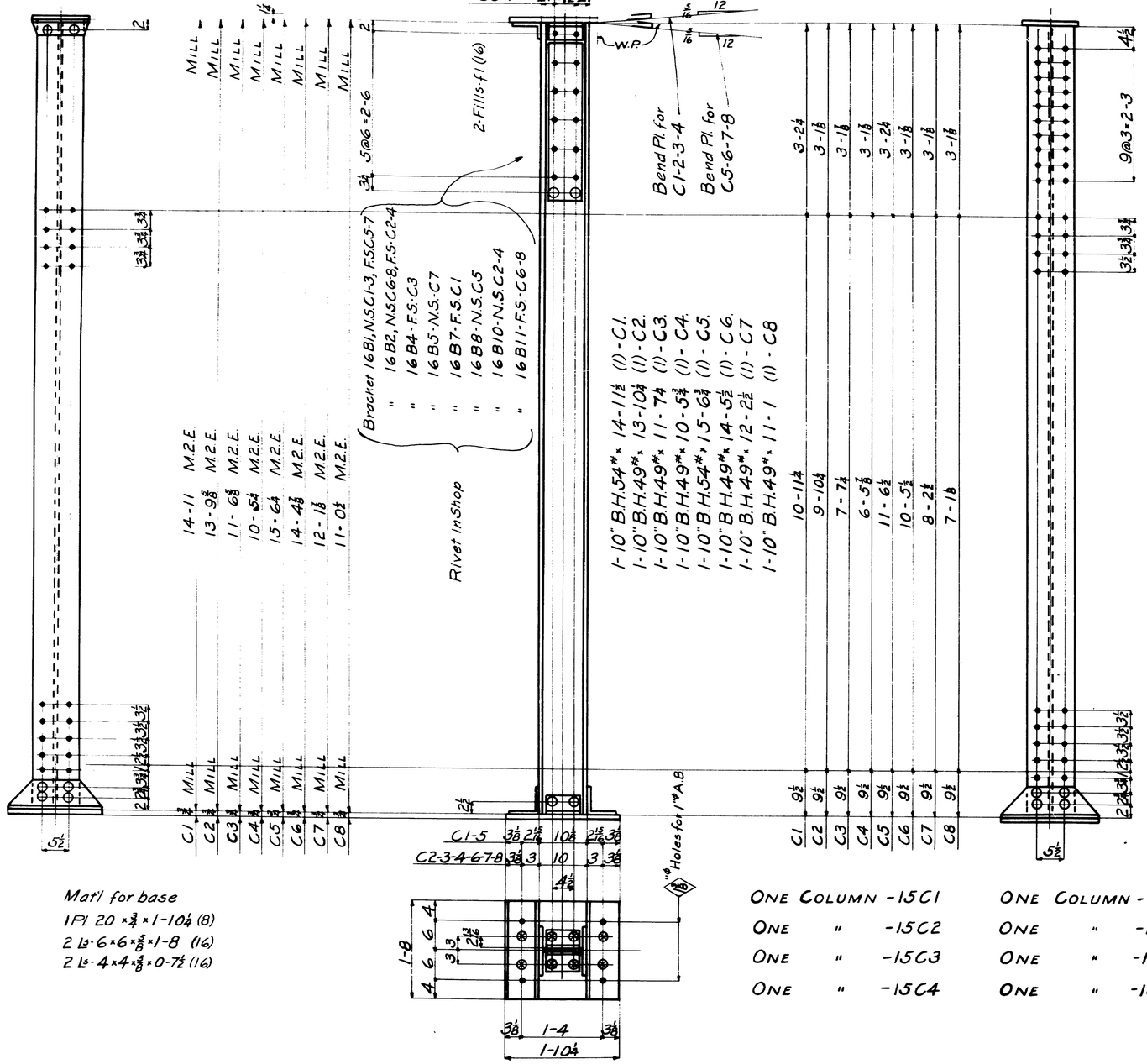
View for C6-8.

Cap Mat'l. for C6-8.

1 Pl. p9 (2)
2 Ls-a3 (4) Bolt 1
1 L-a11 (2)
1 Bar b3 (2)
1 " b4 (2)
2 Bolts ⅞"-⅁×2¼ (4)
2 " ⅞"-⅁×2¼ (4)



Location Plan



Mat'l for base

1 Pl. 20"×¾"×1'-10¼" (8)
2 Ls-6"×6"×⅞"×1'-8" (16)
2 Ls-4"×4"×⅞"×0'-7½" (16)

One Column - 15 C1	One " - 15 C4
One " - 15 C2	One " - 15 C5
One " - 15 C3	One " - 15 C6
One " - 15 C4	One " - 15 C7

Note:
Work with Sheets
5, 6, 7, 8, 9, 16.
For notes, see sh.#5

TOWN 12-11. BRIDGE 3039.
BRIDGE AT STA. 46.
OVER
MAINE CENTRAL R.R.
WOOLWICH-SAGADAHOC CO.

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS ⅞"⁁ OPEN HOLES 15/16"⁁ UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

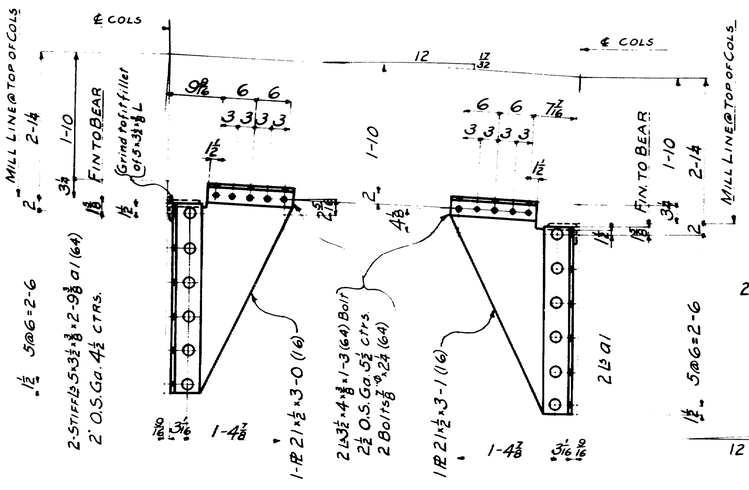
STRUCTURE 676' Viaduct
FOR State of Maine
DETAILS OF Cols.-Towers #7-8
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 Ct. red lead & oil - See note.
FIELD PAINT

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
F.W.H.	12-18-33	A.P.L.	12-20-33	

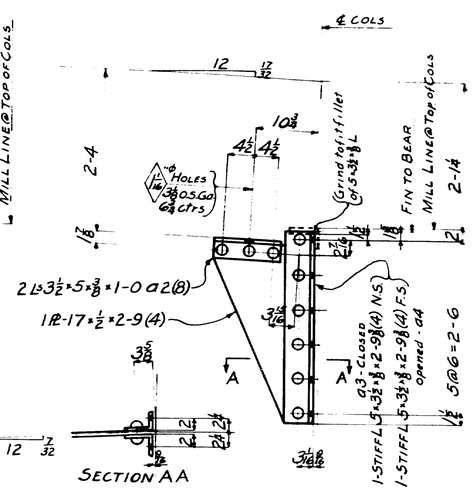
REVISIONS	No.	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

CONTRACT No. 2594 SHEET No. 15

0 1 2 3 4 5 INCHES

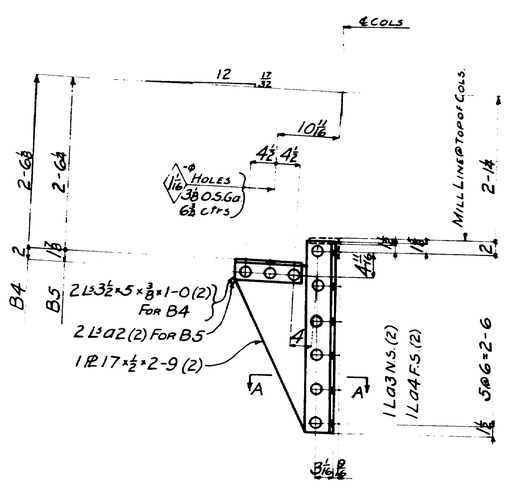


16-BRACKETS-16B1
RIVET IN SHOP TO COLS. 5C1-5C2L-6C1-6C2L 7C1-7C2L-8C1-8C2-8C3-8C4-8C5-8C6 15C1-15C3-15C5-15C7.

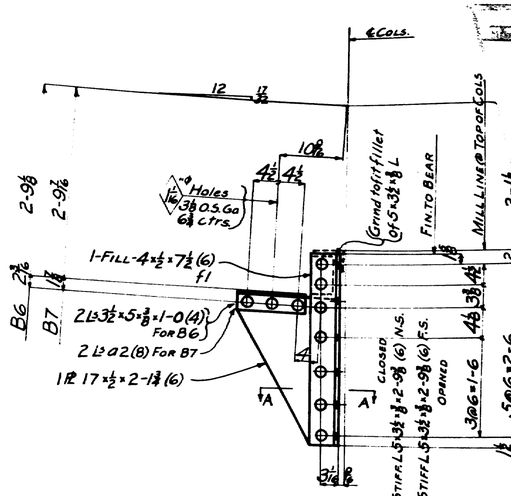


16-BRACKETS-16B2
RIVET IN SHOP TO COLS. 5C3-5C4L-6C3-6C4L 7C3-7C4L-9C1-9C2-9C3-9C4-9C5-9C6 15C2-15C4-15C6-15C8.

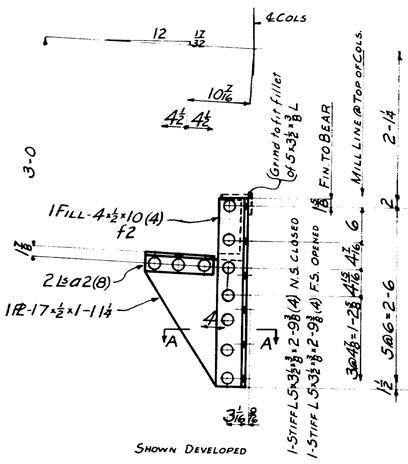
SHOWN DEVELOPED
4-BRACKETS-16B3
RIVET IN SHOP TO COLS. 5C1-5C2L-6C1-6C2L.



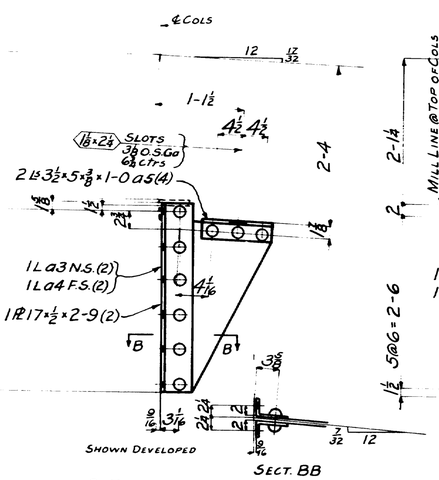
SHOWN DEVELOPED
ONE BRACKET-16B4
RIVET IN SHOP TO COL. 15C3
ONE BRACKET-16B5
RIVET IN SHOP TO COL 15C7



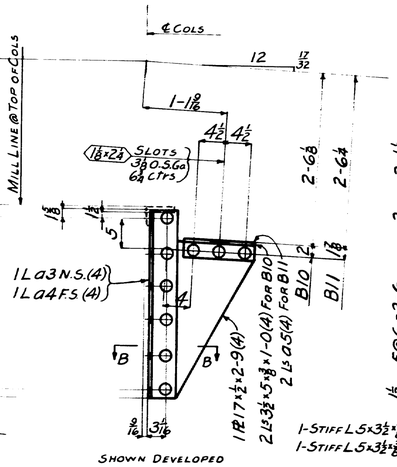
SHOWN DEVELOPED
2-BRACKETS-16B6
RIVET IN SHOP TO COLS. 7C1-7C2L
4-BRACKETS-16B7
RIVET IN SHOP TO COLS 8C1-8C2-8C3-15C1



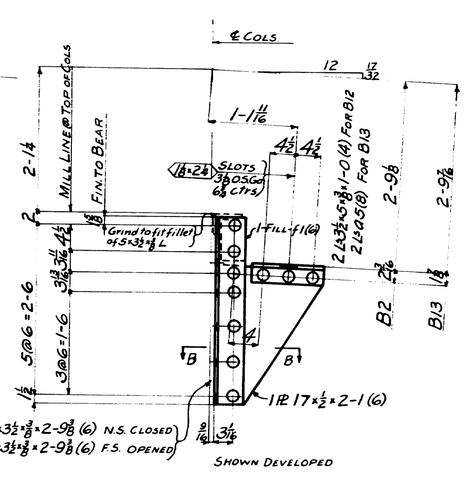
SHOWN DEVELOPED
4 BRACKETS-16B8
RIVET IN SHOP TO COLS. 8C4-8C5-8C6-15C5



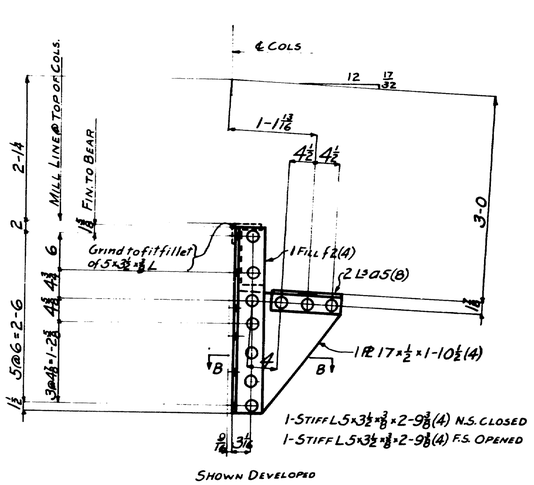
SHOWN DEVELOPED
SECT. BB
2-BRACKETS-16B9
RIVET IN SHOP TO COLS. 5C3-5C4L



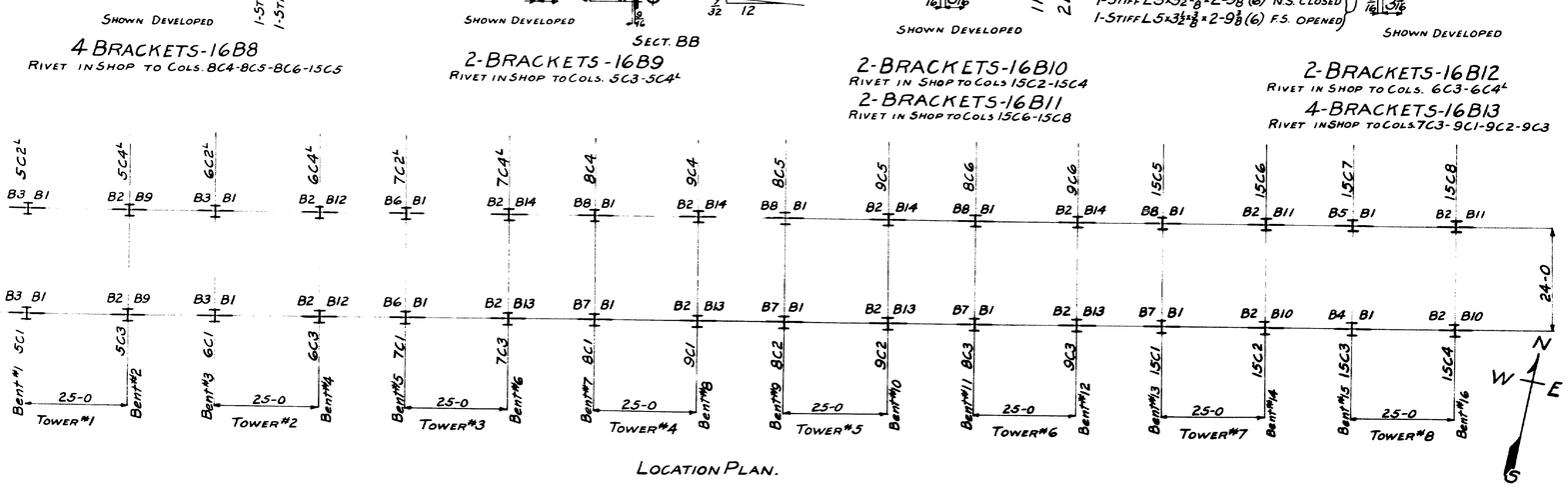
SHOWN DEVELOPED
2-BRACKETS-16B10
RIVET IN SHOP TO COLS 15C2-15C4
2-BRACKETS-16B11
RIVET IN SHOP TO COLS 15C6-15C8



SHOWN DEVELOPED
2-BRACKETS-16B12
RIVET IN SHOP TO COLS. 6C3-6C4L
4-BRACKETS-16B13
RIVET IN SHOP TO COLS. 7C3-9C1-9C2-9C3



SHOWN DEVELOPED
4 BRACKETS-16B14
RIVET IN SHOP TO COLS. 7C4L-9C4-9C5-9C6



LOCATION PLAN.

NOTE: DO NOT PAINT SHOP OR FIELD CONTACT SURFACES. WORK THIS SHEET WITH SHEETS-5-6-7-8-9-15.

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS 7/8 OPEN HOLES 15/16 UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

STRUCTURE 676' VIADUCT
FOR STATE OF MAINE
DETAILS OF COLUMN BRACKETS
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 ct Red Lead & oil. See Note
FIELD PAINT

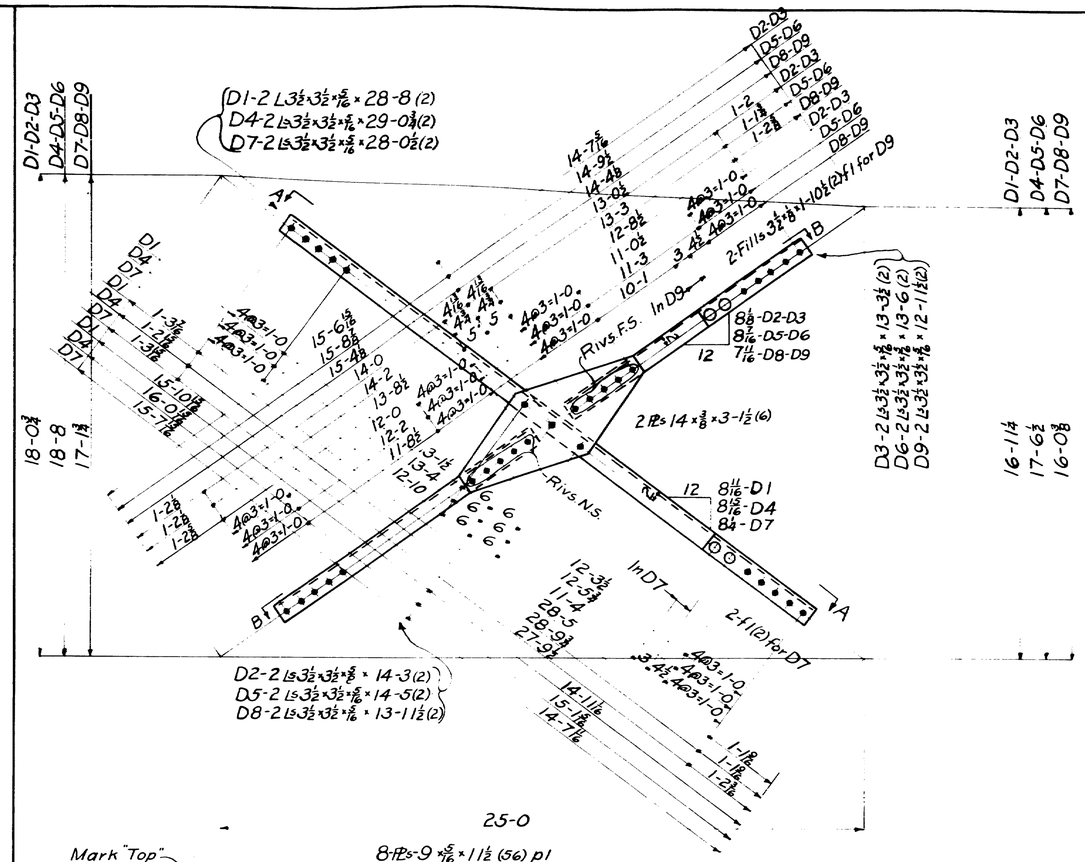
DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
C.H.W.	12-15-33	A.P.L.	12-18-33	

REVISIONS	NO.	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

CONTRACT No. 2594 SHEET No. 16

TOWN 12-11 BRIDGE 3039
BRIDGE AT STA. 46
OVER
MAINE CENTRAL R.R.
WOOLWICH-SAGADAHOC CO.

0 1 2 3 4 5 INCHES



ONE DIAGONAL 17D1
ONE " 17D2
ONE " 17D3
ONE " 17D4
ONE " 17D5
ONE " 17D6
ONE " 17D7
ONE " 17D8
ONE " 17D9
ONE " 17D10
ONE " 17D11
ONE " 17D12
ONE " 17D13
ONE " 17D14
ONE " 17D15
ONE " 17D16
ONE " 17D17
ONE " 17D18
ONE " 17D19
ONE " 17D20
ONE " 17D21

Notes:
Shop and field contact surfaces shall not be painted.
Reaming: None.

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS ⅞ ø OPEN HOLES 15/16 ø UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

STRUCTURE 676' Viaduct
FOR State of Maine
DETAILS OF Bracing
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT Ict. red lead & oil - See note.
FIELD PAINT

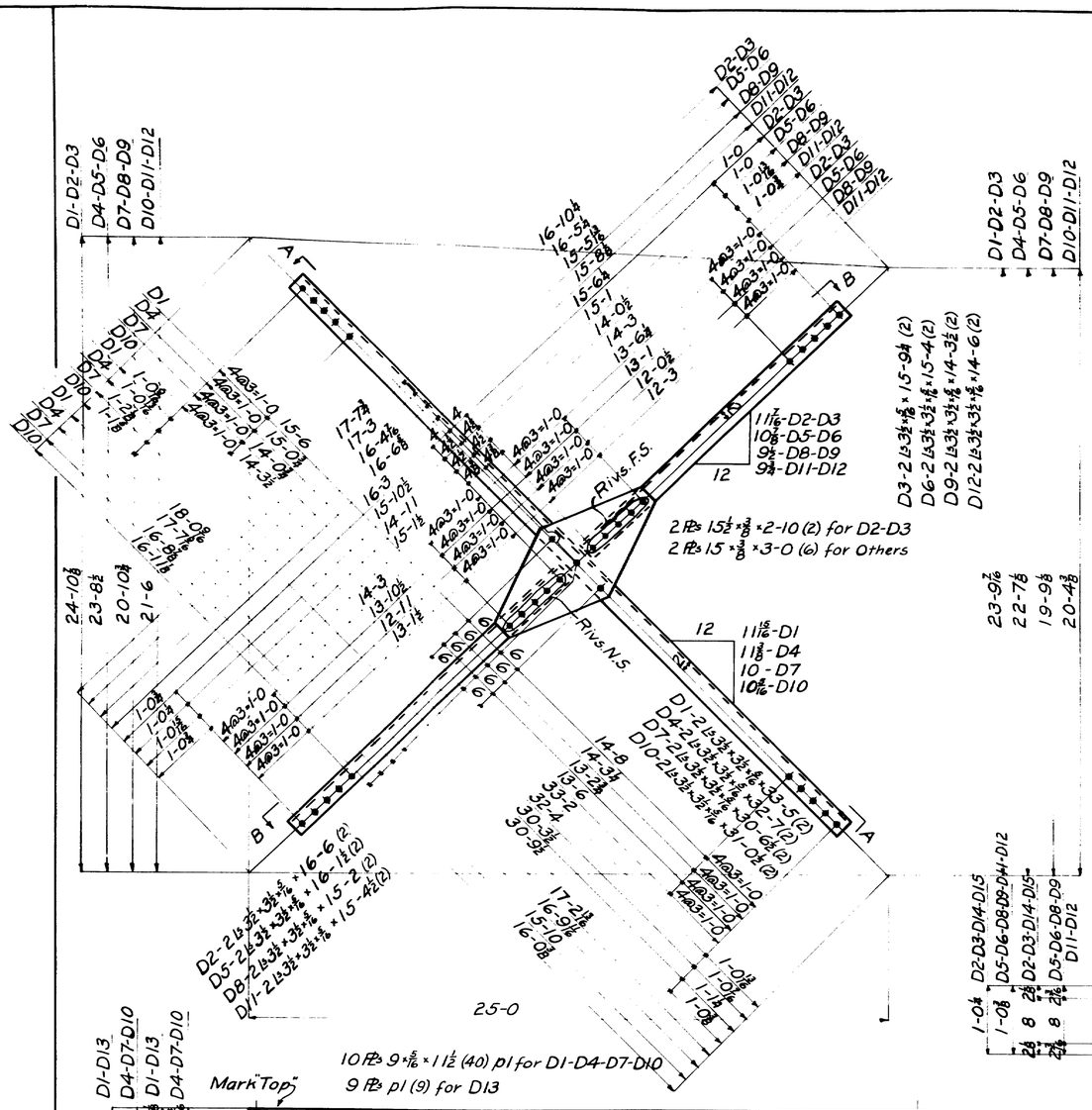
DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
P	2-14-33	APL	2-15-33	

REVISIONS	NO	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

CONTRACT NO. 2594 SHEET NO. 17

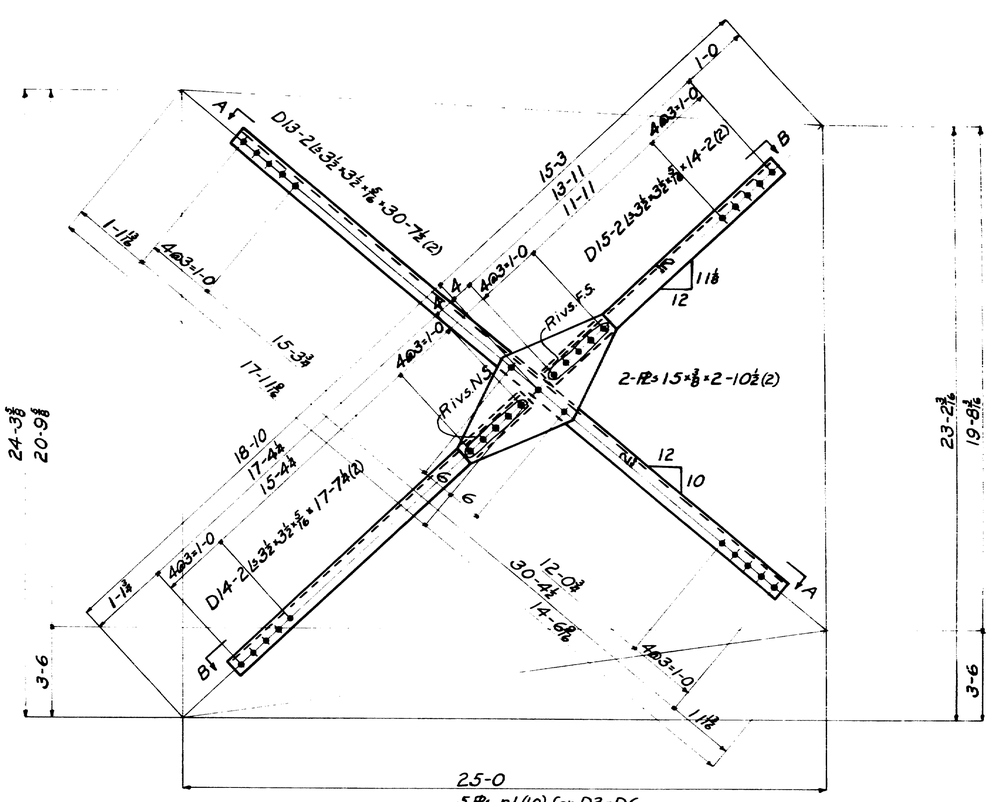
TOWN 12-11 BRIDGE 3039
BRIDGE AT STA. 46
OVER
MAINE CENTRAL R.R.
WOOLWICH SAGADAHOC CO.

0 1 2 3 4 5 INCHES



D1	1-6	4@3-6 = 14-0	3-3	3-0	3-3	4@3-3½ = 13-2	3-3	1-6
D4	1-6	4@3-4½ = 13-6		3-0		4@3-2½ = 12-10		1-6
D7	1-6	4@3-1½ = 12-6		2-11⅛		4@2-11½ = 11-10		1-6
D10	1-6	4@3-0½ = 12-10		2-11⅛		4@3-0 = 12-0		1-6
D13	1-6	4@3-5½ = 13-10		3-0½		3@3-6 = 10-6		1-6

SECTION AA.



D2	1-6½	4@3-3½ = 13-2	3-3	1-6½		
D5	1-6¼	4@3-2½ = 12-10		1-6¼		
D8	1-6½	4@2-11½ = 11-10		1-6½		
D11	1-5⅜	4@3-0½ = 12-2		1-5⅜		
D14	1-6⅛	4@3-7 = 14-4		1-6⅛		

1-6⅛	4@3-1½ = 12-6	3-3	1-6⅛	D3		
1-6½	4@3-0 = 12-0		1-6½	D6		
1-6¼	3@3-8 = 11-0		1-6¼	D9		
1-6	3@3-9 = 11-3		1-6	D12		
1-5½	3@3-8 = 11-0		1-5½	D15		

SECTION BB

ONE DIAGONAL 18D1
ONE " 18D2
ONE " 18D3
ONE " 18D4
ONE " 18D5
ONE " 18D6
ONE " 18D7
ONE DIAGONAL 18D8
ONE " 18D9
ONE " 18D10
ONE " 18D11
ONE " 18D12
ONE " 18D13
ONE " 18D14
ONE DIAGONAL 18D15

Notes:
Shop and field contact surfaces shall not be painted.
Reaming: None.

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS ⅞" OPEN HOLES 15/16" UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

STRUCTURE 676' Viaduct
FOR State of Maine
DETAILS OF Bracing
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 ct. red lead & oil - See note.
FIELD PAINT

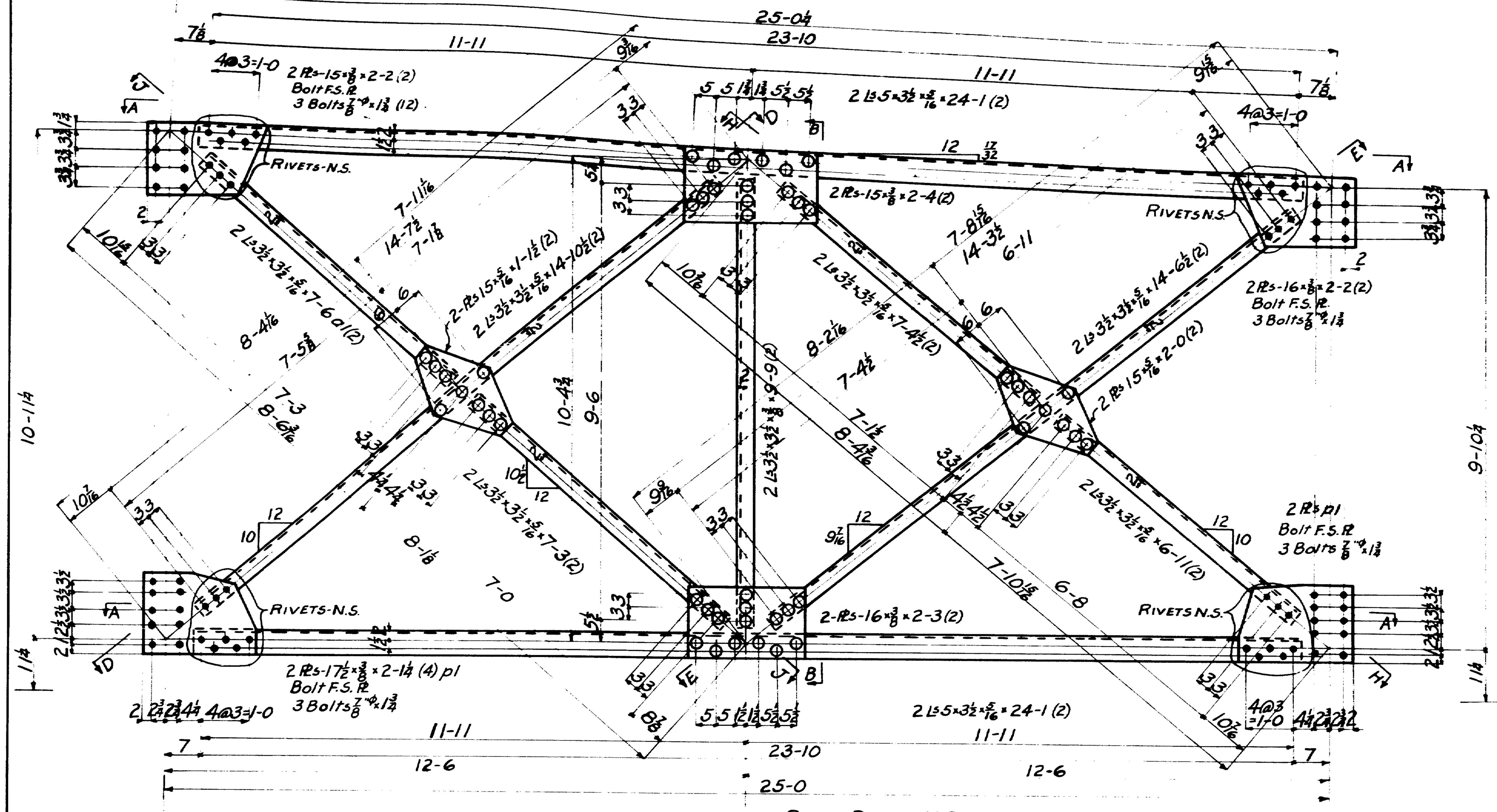
DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
P	12-15-33	APL	12-18-33	

REVISIONS	NO.	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

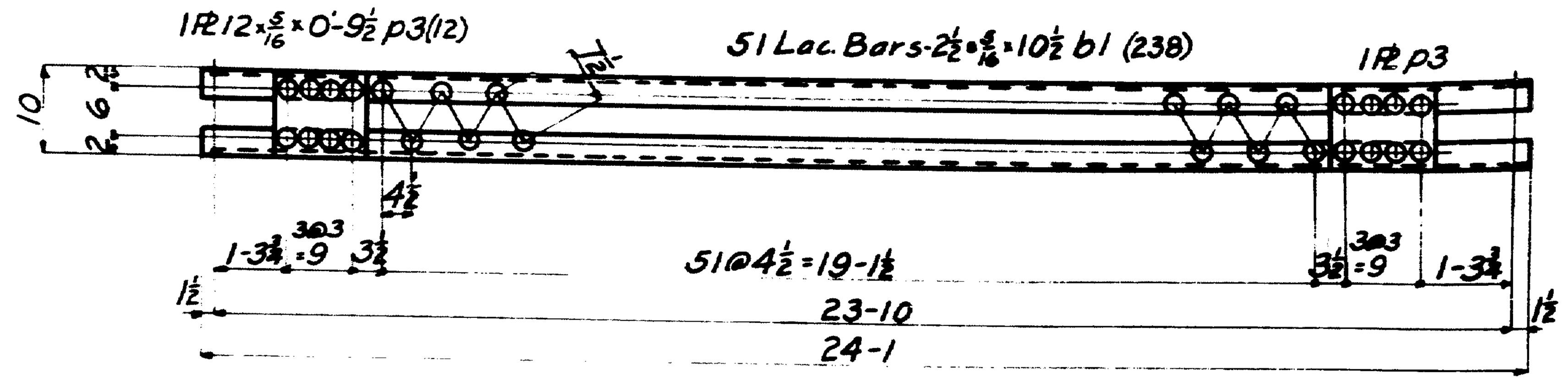
TOWN 12-11 BRIDGE 3039
BRIDGE AT STA. 46
OVER
MAINE CENTRAL R.R.
WOOLWICH SAGADAHOC CO.

CONTRACT NO. 2594 SHEET NO. 18

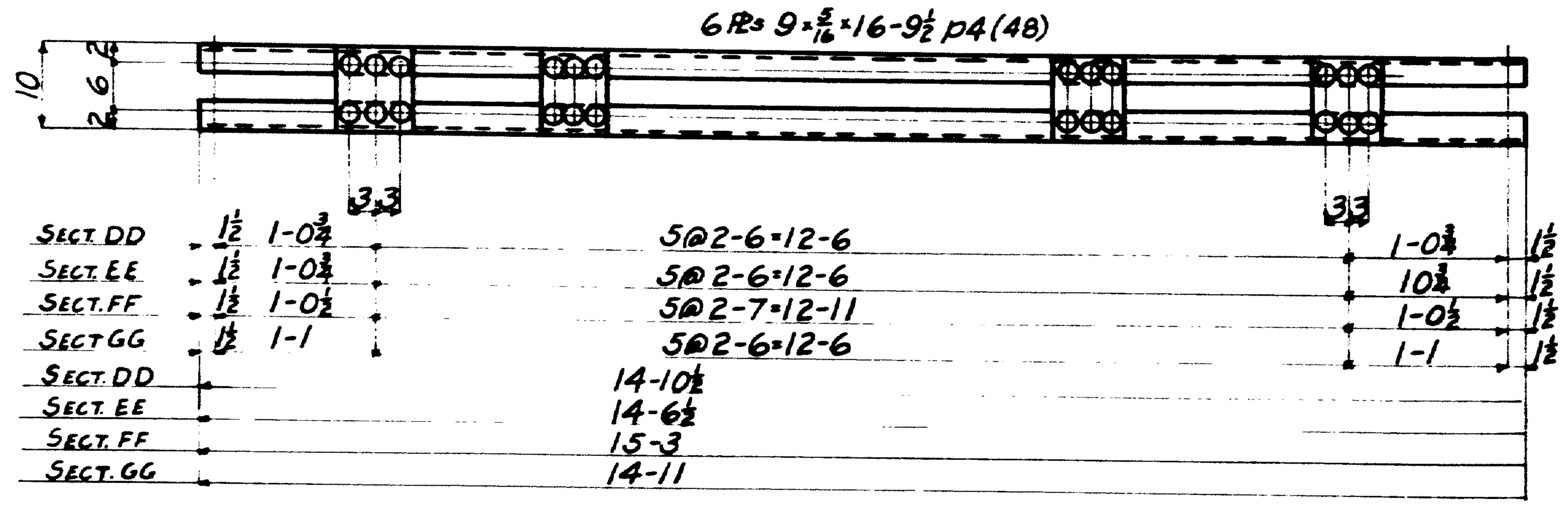
0 1 2 3 4 5 INCHES



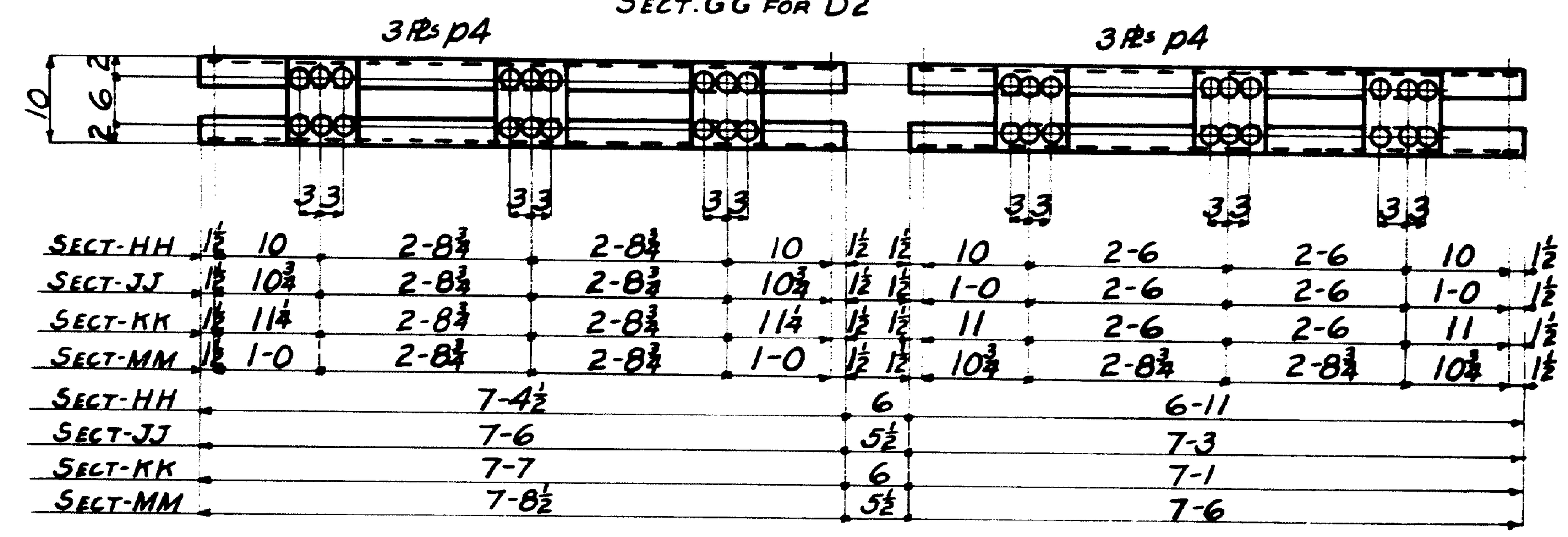
One-Bent-19B1



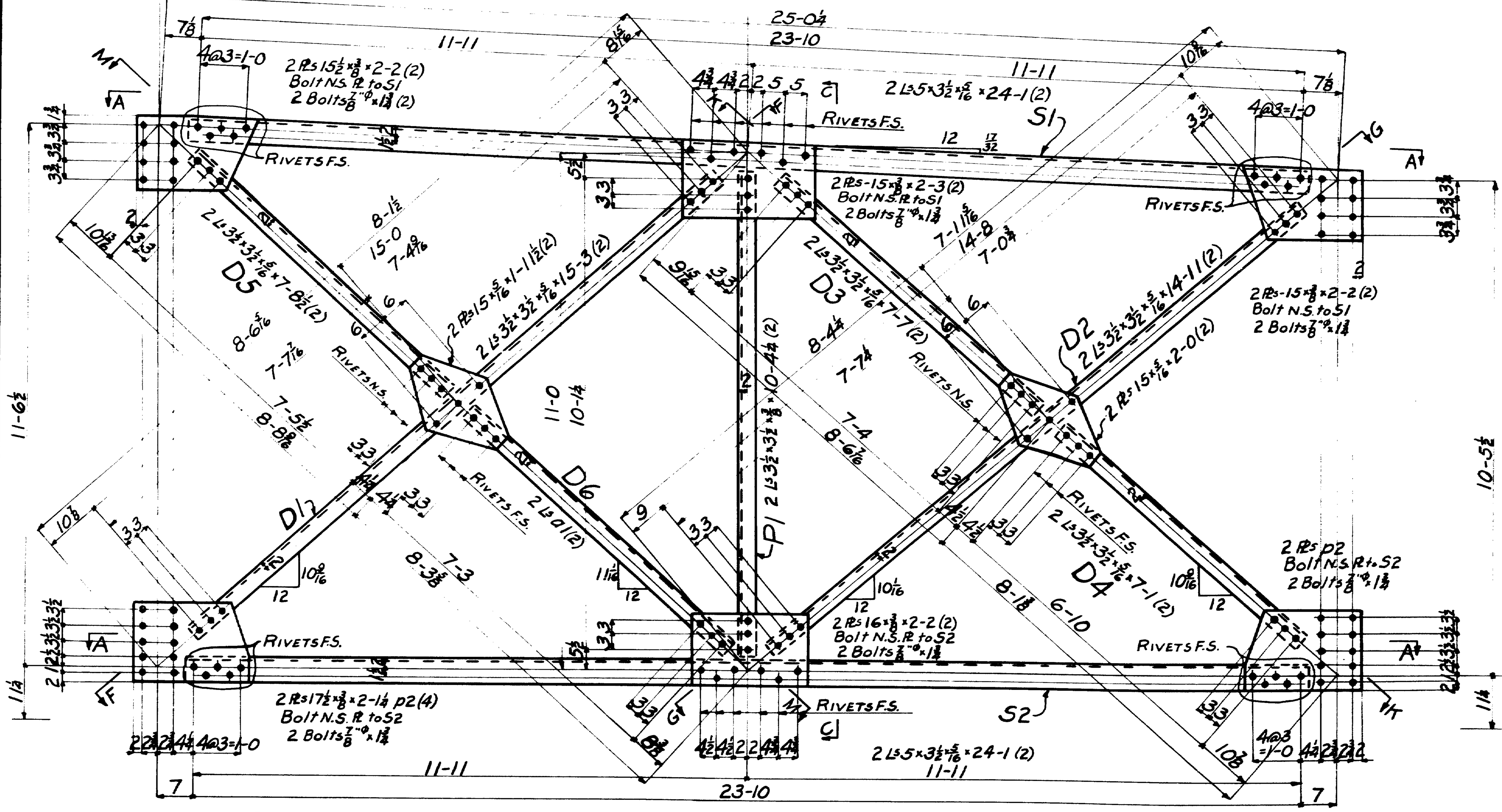
Section-AA



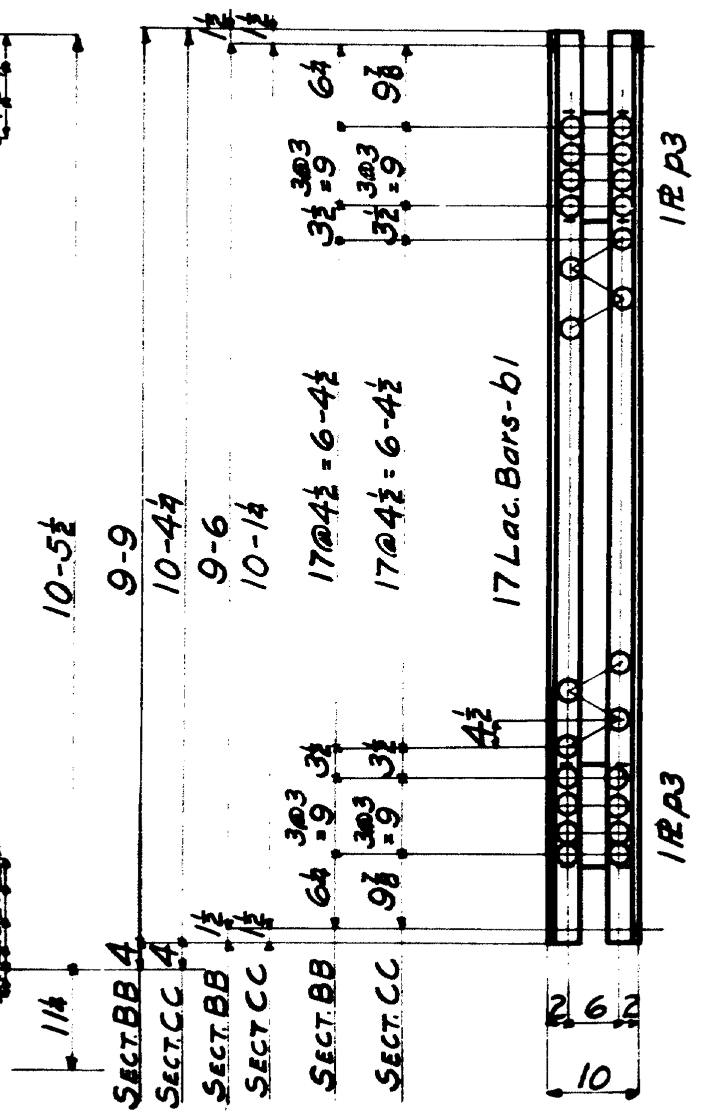
Sect. DD for B1
Sect. EE for B1
Sect. FF for D1
Sect. GG for D2



Sect. HH for B1
Sect. JJ for B1
Sect. KK for D3-D4
Sect. MM for D5-D6



ONE-POST 19P1
ONE-STRUT 19S1
ONE- " 19S2
ONE DIAGONAL 19D1
ONE " 19D2
ONE " 19D3
ONE-DIAGONAL 19D4
ONE- " 19D5
ONE " 19D6



Sect. BB for B1
Sect. CC for P1

NOTE: DO NOT PAINT SHOP OR FIELD CONTACT SURFACES.
REAMING-NONE.

TOWN 12-11 BRIDGE 3039
BRIDGE AT STA. 46
OVER
MAINE CENTRAL R.R.
WOOLWICH-SAGADAHOC CO.

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS 7/8"φ OPEN HOLES 15/16"φ UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

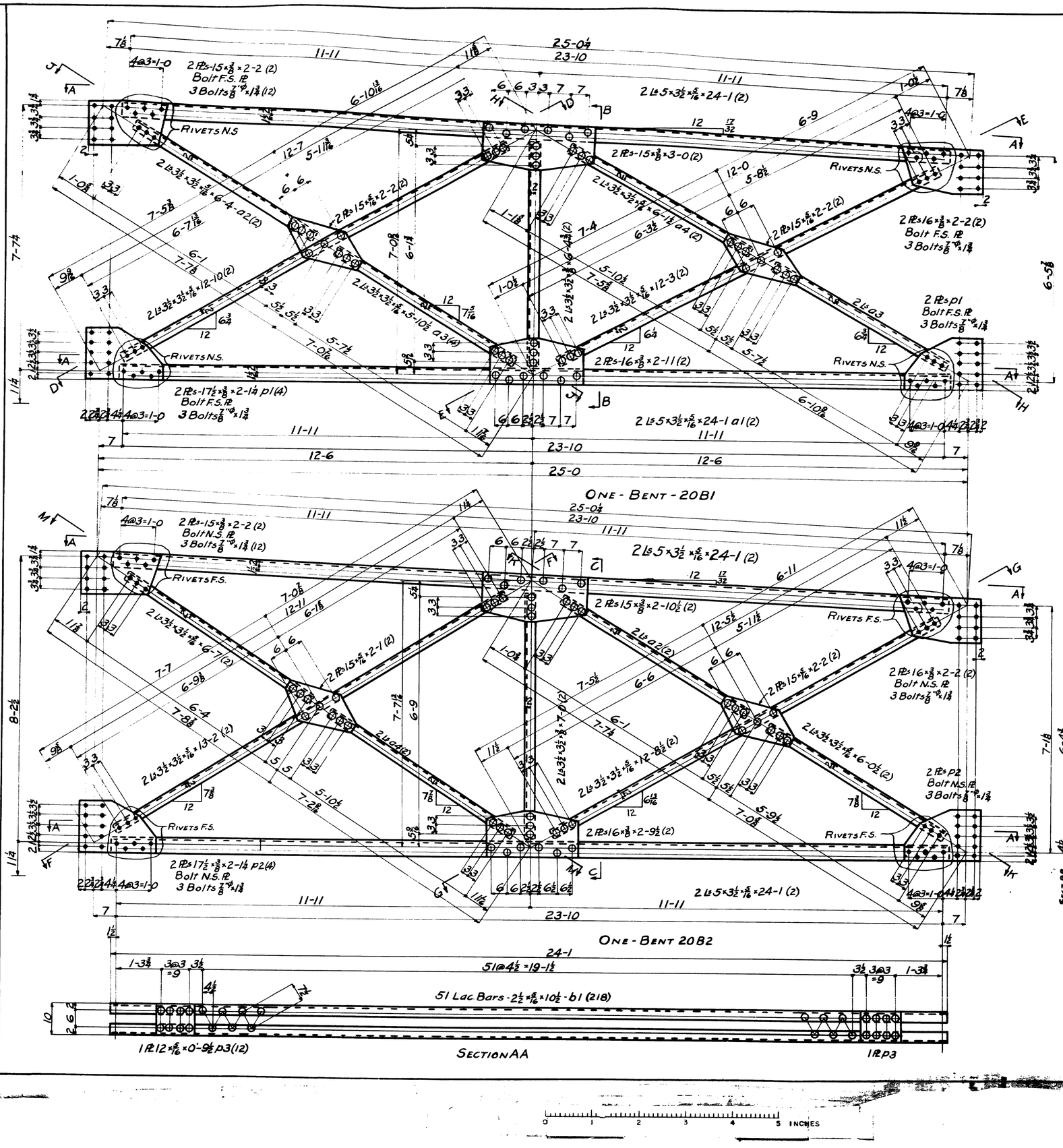
STRUCTURE 676' VIADUCT
FOR STATE OF MAINE
DETAILS OF BRACING TOWER #7
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 ct. Red Lead & Oil See Note.
FIELD PAINT

DRAWN BY	DATE	CHECKED BY	DATE	SQUAD FOREMAN
CHW	12-18-33	APL	12-19-33	

REVISIONS NO.	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			

CONTRACT No. 2594 SHEET No. 19

0 1 2 3 4 5 INCHES



NOTE: DO NOT PAINT SHOP OR FIELD CONTACT SURFACES. REAMING-NONE.

INSPECTION	SHOP RIVETS	WEIGHT

RIVETS ⅞" ø OPEN HOLES 15/16" ø UNLESS NOTED

LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.

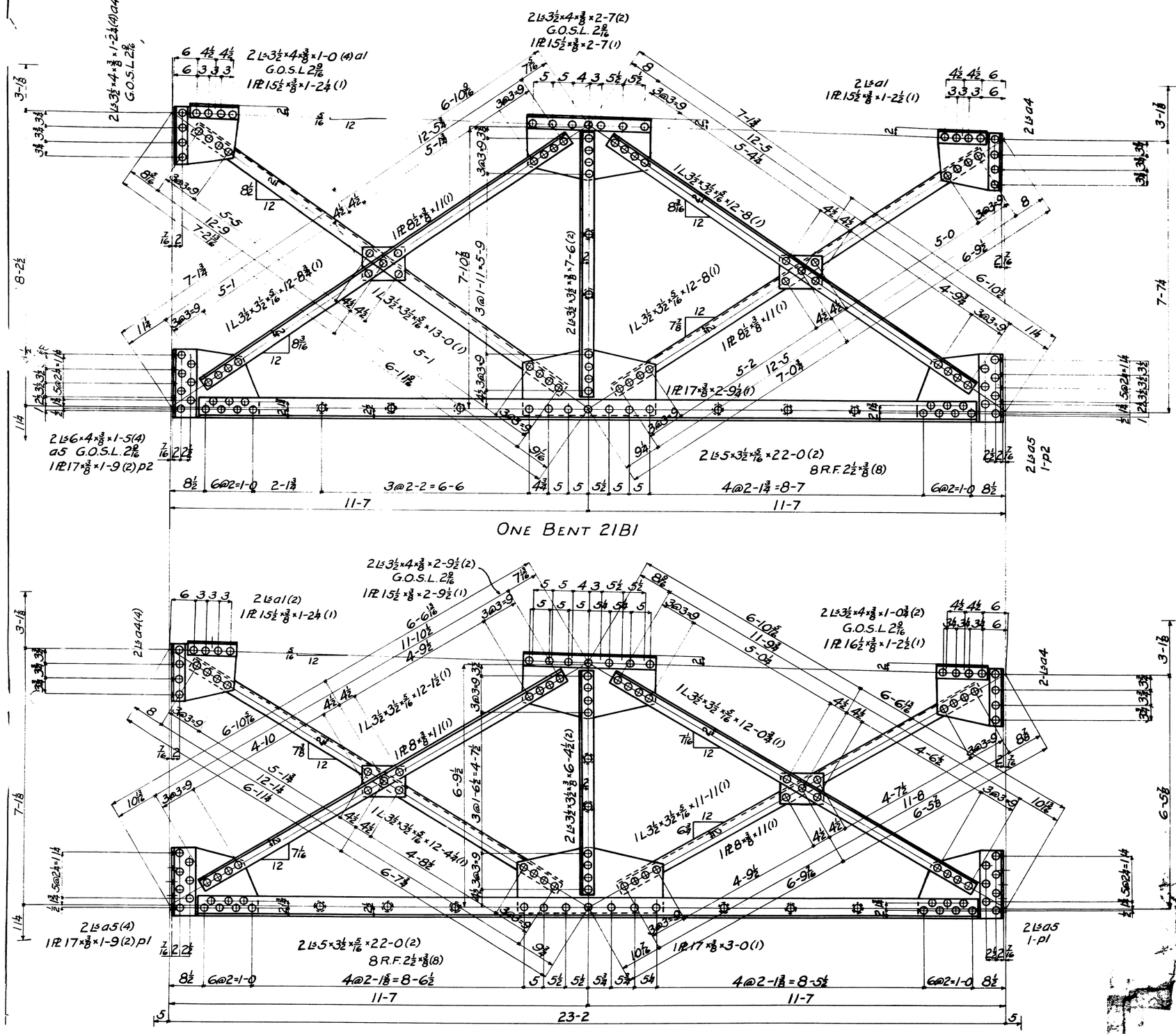
STRUCTURE 676' VIADUCT
FOR STATE OF MAINE
DETAILS OF BRACING TOWER #8
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 Ct. Red Lead & Oil See Note
FIELD PAINT

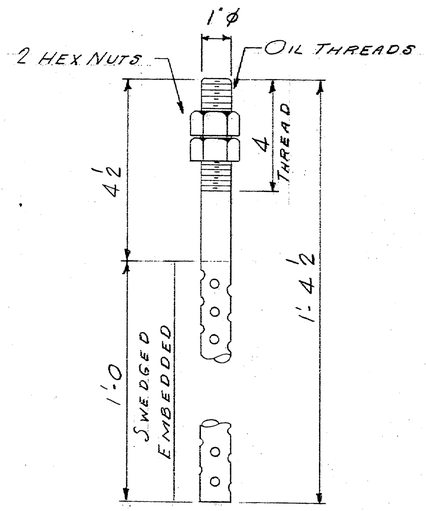
DRAWN BY	DATE	CHECKED BY	DATE	SQUARED THAN
C.H.W.	12-19-33	A.P.L.	12-20-33	

REVISIONS	NO.	DATE	BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

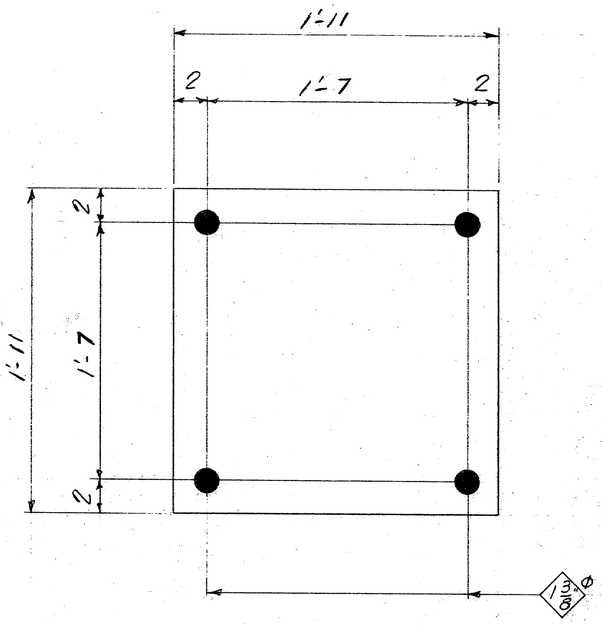
CONTRACT NO. 2594 SHEET NO. 20

TOWN 12-11 BRIDGE 3039
BRIDGE AT STA. 46
OVER
MAINE CENTRAL R.R.
WOOLWICH - SAGADAHOCCO


2 Ls 3½×4×⅜×1-0 (4) a1
G.O.S.L 2⅛
1 PL 15½×⅜×1-2¼ (1)
2 Ls 3½×4×⅜×2-7 (2)
G.O.S.L. 2⅛
1 PL 15½×⅜×2-7 (1)
2 Ls a1
1 PL 15½×⅜×1-2½ (1)
2 Ls a4
1 PL 8½×⅜×11 (1)
1 L 3½×3½×⅝×12-8¾ (1)
1 L 3½×3½×⅝×13-0 (1)
2 Ls 3½×3½×⅜×7-6 (2)
1 L 3½×3½×⅝×12-8 (1)
1 PL 8½×⅜×11 (1)
2 Ls 6×4×⅜×1-5 (4)
a5 G.O.S.L. 2⅛
1 PL 17×⅜×1-9 (2) p2
1 PL 17×⅜×2-9½ (1)
2 Ls 5×3½×⅝×22-0 (2)
8 R.F. 2½×⅜ (8)
2 Ls a5
1-p2
ONE BENT 21B1
2 Ls 3½×4×⅜×2-9½ (2)
G.O.S.L. 2⅛
1 PL 15½×⅜×2-9½ (1)
2 Ls a1 (2)
1 PL 15½×⅜×1-2¼ (1)
2 Ls a4 (4)
2 Ls 3½×4×⅜×1-0⅜ (2)
G.O.S.L. 2⅛
1 PL 16½×⅜×1-2½ (1)
2 Ls a4
1 L 3½×3½×⅝×12-12½ (1)
1 L 3½×3½×⅝×12-0⅜ (1)
1 PL 8×⅜×11 (1)
2 Ls 3½×3½×⅜×6-4½ (2)
1 L 3½×3½×⅝×12-4¼ (1)
1 L 3½×3½×⅝×11-11 (1)
2 Ls a5 (4)
1 PL 17×⅜×1-9 (2) p1
2 Ls 5×3½×⅝×22-0 (2)
8 R.F. 2½×⅜ (8)
1 PL 17×⅜×3-0 (1)
2 Ls a5
1-p1
ONE BENT 21B2
Notes:
Shop and field contact surfaces shall not be painted.
Reaming: None.
INSPECTION
SHOP RIVETS
WEIGHT
RIVETS ⅞
OPEN HOLES 15/16
UNLESS NOTED
LACKAWANNA STEEL CONSTRUCTION CORP'N
BUFFALO, N. Y.
STRUCTURE 676' Viaduct
FOR State of Maine
DETAILS OF Bracing - Bents #15, 16
SPECIFICATIONS Maine State Highway Comm.
SHOP PAINT 1 ct. red lead & oil. See note
FIELD PAINT
DRAWN BY P
DATE 12-19-33
CHECKED BY APL
DATE 12-20-33
SQUAD FOREMAN
REVISIONS
NO. DATE BY DESCRIPTION
TOWN 12-11 BRIDGE 3039
BRIDGE AT STA. 46.
OVER
MAINE CENTRAL R.R.
WOOLWICH-SAGADAHOC CO.
CONTRACT NO. 2594
SHEET NO. 21
0 1 2 3 4 5 INCHES



ANCHOR BOLTS AB1
4 REQ'D



1" PREFORMED PAD
PP1 - ONE REQ'D

1½" BASE PLATE
BP1 - ONE REQ'D

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
AB1	4		BAR 1"Ø	1 4½		A36
W1	4		1" WASHER	—		A325
	8	SHOP	1" HEX NUT	—		A325
PP1	1		PAD ⅜x23	1 11		PREFORMED PAD
BP1	1		PL 1½x23	1 11		A36

BILL OF MATERIAL JOB NO. J220 DWG. NO. S31

PROJECT NO. ROS. FG-026-1[501]
ITEM NO. 504.70
EXTRA BASE PL & ANCHOR BOLTS @ BENT 15
CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: SH 10 & 11
HOLES: AS NOTED
FIELD CONN:
PAINT: NONE-OIL BOLT THREADS

FINAL

COLUMN ANCHOR BOLTS & PREFORMED PAD & BASE PLATE

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

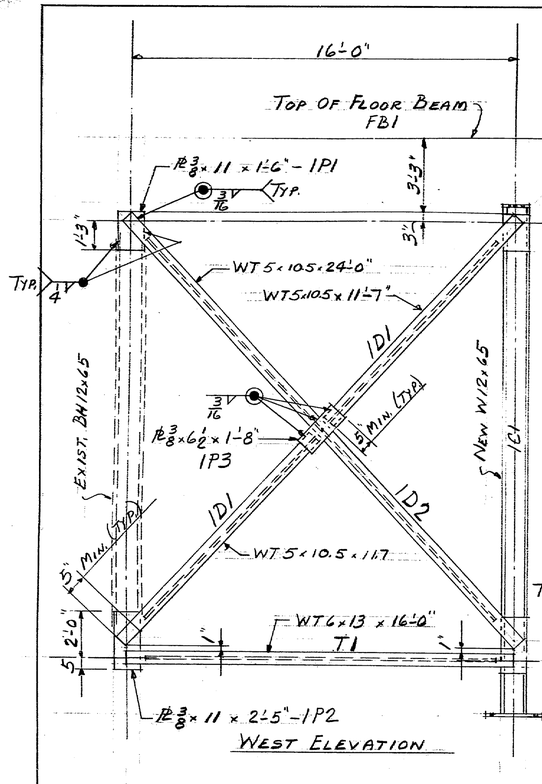
CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

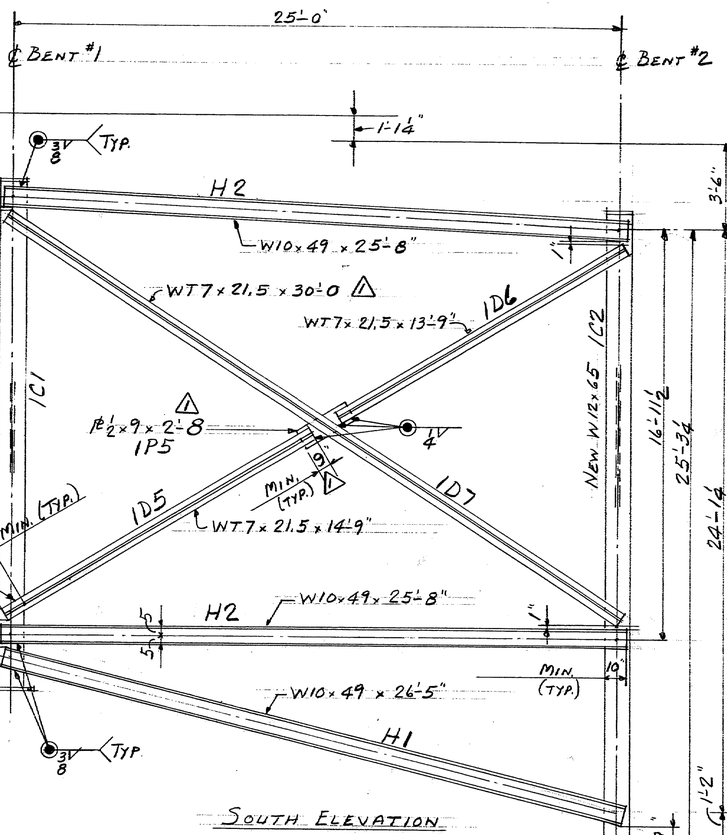
JOB NO. J220 DWG. NO. S31

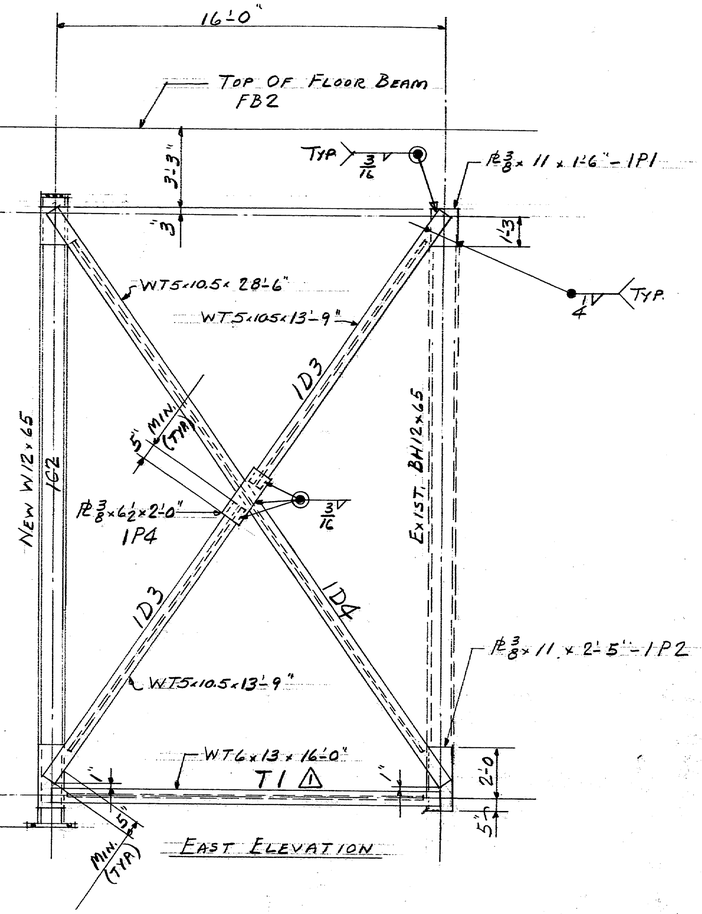
APPR.		
APPR.		
SHOP		12.11.79
F. & O.		
DRAWN	P.L.F.	12.11.79
CHECKED		
REVISION		
REVISION		
REVISION		

[redacted]

Boston Blue Print 7019







FIELD CONNECTIONS: WELD WITH E70xx ELECTRODE.

PROJECT 026-1(50)
ITEM 504.70

FINAL

APPR.		AUG 23 1979	
APPR.			
SHOP		10-5-79	
F. & O.	12/12/79	10-19-79	
DRAWN	8-7-79	D.R.	
CHECKED		P.W.F.	
1 REVISION	10-8-79	R.L.F.	
REVISION	11-19-79		
REVISION			

BRACING FOR TOWER #1

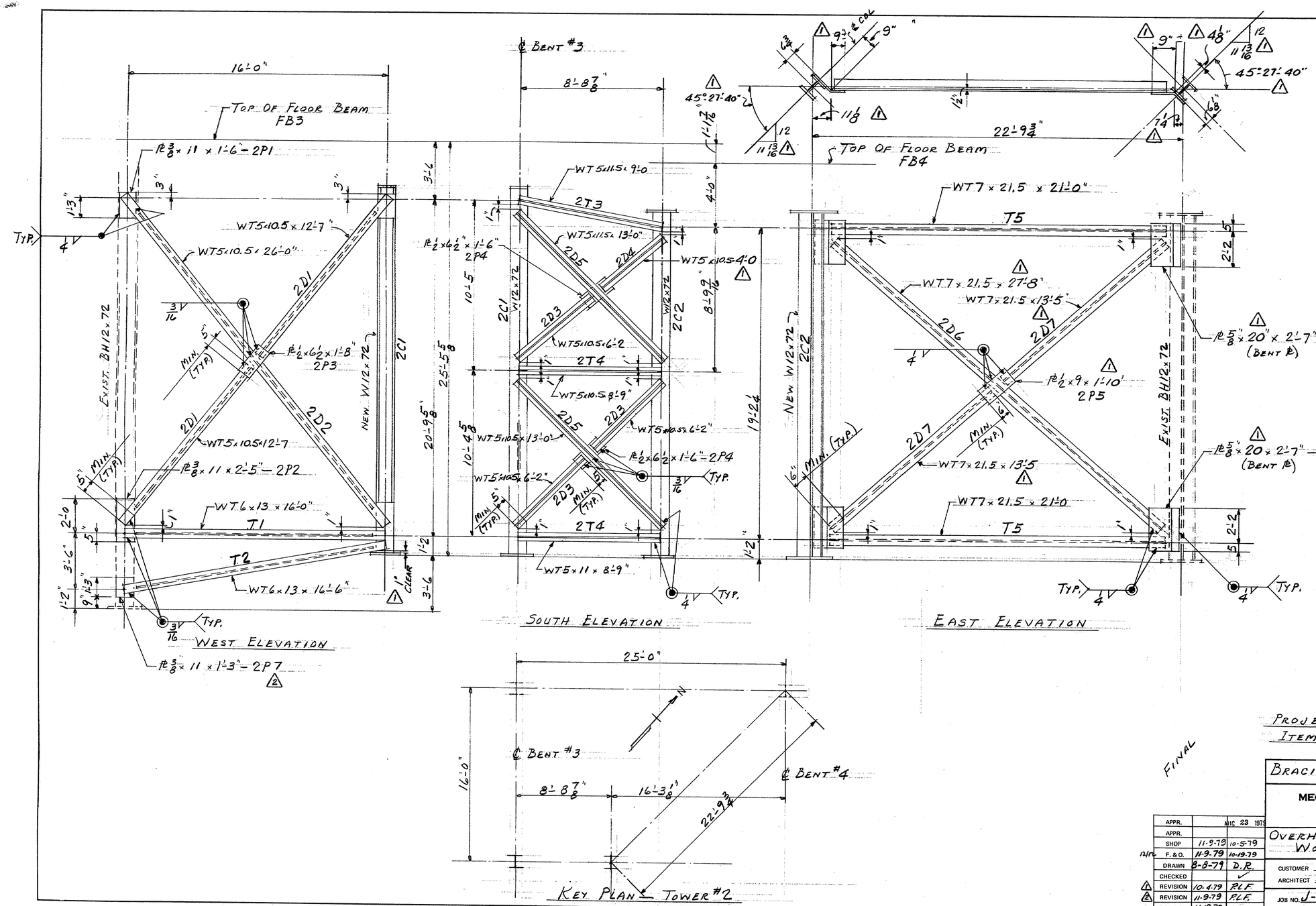
MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. E-1

161-37



PROJECT 026-1 (50)
ITEM 504.70

FINAL

BRACING FOR TOWER #2

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 | DWG. NO. E-2

	APPR.		AUG 23 1979
	APPR.		
	SHOP	11-9-79	10-5-79
12/10	F. & O.	11-9-79	10-19-79
	DRAWN	8-8-79	D.R.
	CHECKED		✓
1	REVISION	10-4-79	PLF
2	REVISION	11-9-79	PLF
	REVISION	11-19-79	

161-38

WEST ELEVATION

SOUTH ELEVATION

EAST ELEVATION

PROJECT 026-1 (50)
ITEM 504.70

FINAL

BRACING FOR TOWER #3

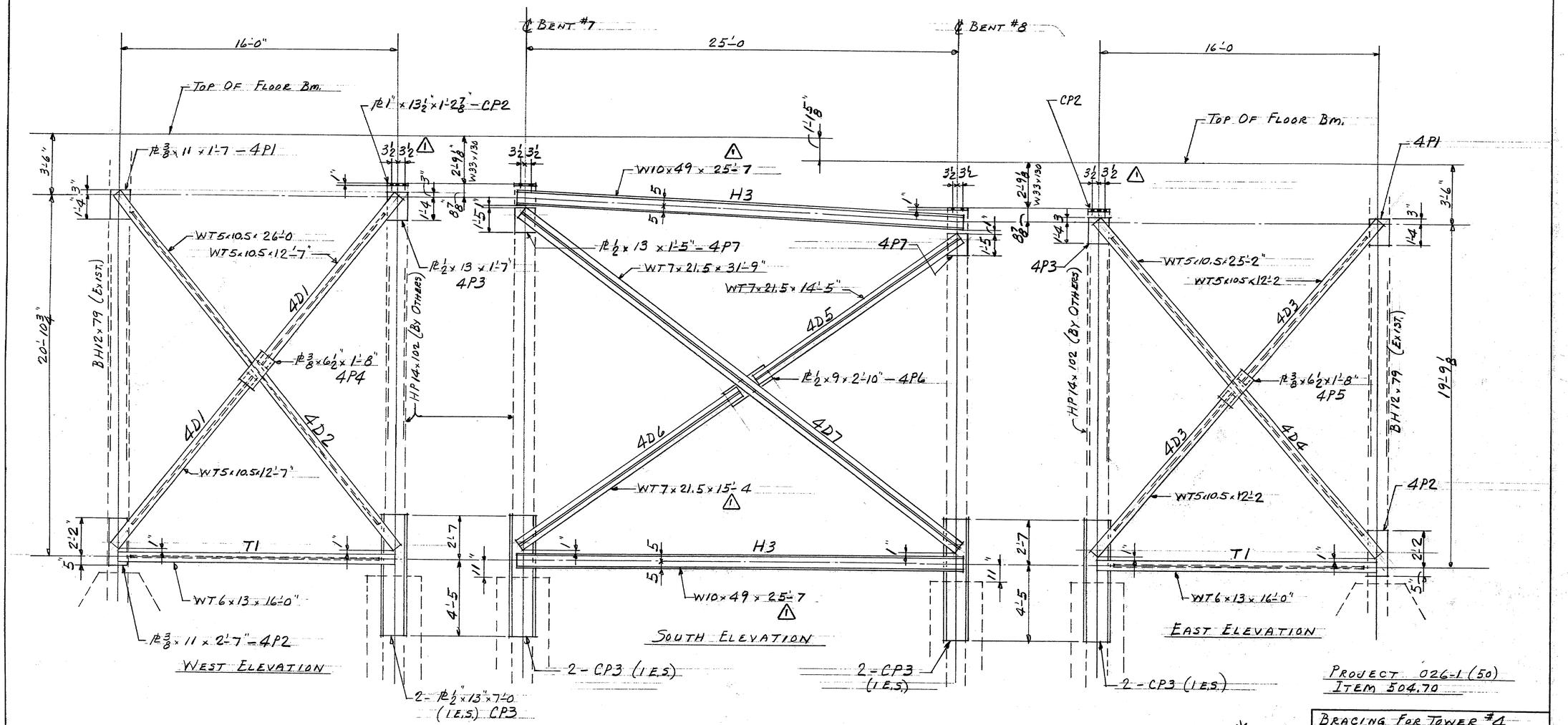
MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.
JOB NO. J-220 DWG. NO. E-3

APPR.		NOV 23 1979
APPR.		
SHOP		10-5-79
F. & O.	12-12-79	10-19-79
DRAWN	8-8-79	D.R.
CHECKED		V
⚠ REVISION	10-4-79	P.L.F.
REVISION	11-19-79	
REVISION		

161-39



WELDING DETAILS SAME AS FOR TOWER #3 (DWG. E-3)

PROJECT 026-1 (50)
ITEM 504.70

FINAL

APPR.		AUG 23 1979
APPR.		
SHOP		10-5-79
F. & O.	12-12-79	10-19-79
DRAWN	8-9-79	D.R.
CHECKED		
⚠ REVISION	10-4-79	P.L.F.
REVISION	11-19-79	
REVISION		

BRACING FOR TOWER #4

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. E-4

161-40

℄ BENT #9

℄ BENT #10

16'-0

25'-0"

16'-0

PL 1"×13½"×1'-2⅞" — CP2

TOP OF FLOOR Bm.

PL ⅜×11×1'-5" — 5P1

W10×49×25'-7

H3

WT5×10.5×23'-6

WT5×10.5×11'-5

5D1

PL ½×13×1'-5 5P3

WT7×21.5×30'-0

WT7×21.5×13'-6"

5D5

PL ½×13×1'-2" — 5P7

PL ½×9×3'-0" — 5P6

PL ⅜×6½×1'-7" 5P4

5D2

5D6

5D7

WT7×21.5×14'-6"

WT5×10.5×11'-5

T1

H3

WT6×13×16'-0"

W10×49×25'-7

PL ⅜×11×2'-5" — 5P2

2-CP3 (I.E.S.)

2-PL ½"×13"×7'-0" (I.E.S.) CP3

2-CP3 (I.E.S.)

2-CP3 (I.E.S.)

CP2

5P3

WT5×10.5×22'-9

WT5×10.5×11'-0"

5P1

5D3

5D4

PL ⅜×6½×1'-7" 5P4

WT5×10.5×11'-0"

5P2

T1

WT6×13×16'-0"

17'-6¾

BH12×65 (EXIST.)

HP14×102 (BY OTHERS)

16'-5¼

2'-0

4'-5"

2'-7"

SOUTH ELEVATION

WEST ELEVATION

EAST ELEVATION

WELDING DETAILS SAME AS FOR TOWER #3 (DWG. E-3)

PROJECT 026-1 (50)
ITEM 504.70

FINAL

BRACING FOR TOWER #5

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

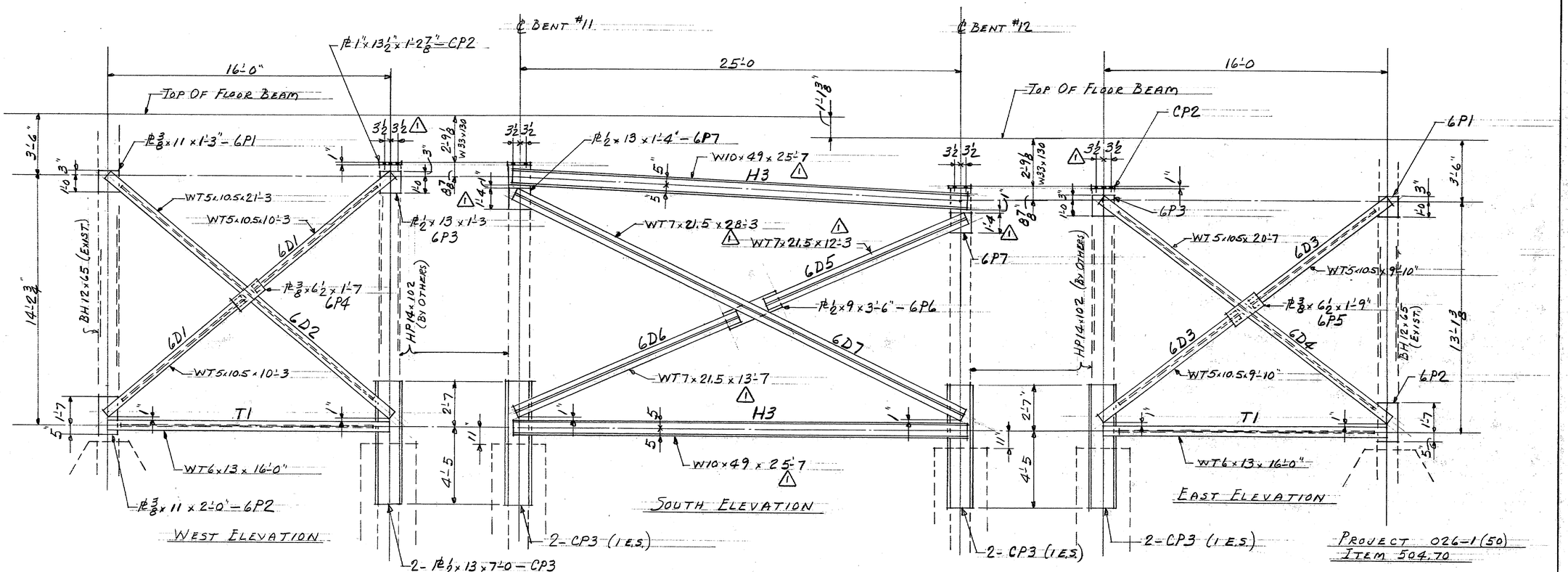
CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220

DWG. NO. E-5

APPR.		DEC 23 1979
APPR.		
SHOP		10-5-79
F. & O.	12-12-79	10-19-79
DRAWN	8-9-79	D.R.
CHECKED		✓
REVISION	10-4-79	P.L.F.
REVISION	11-19-79	
REVISION		

161-41



PROJECT 026-1(50)
ITEM 504.70

WELDING DETAILS SAME AS FOR TOWER #3 (DWG. E-3)

FINAL

APPR.		NOV 23 1979
APPR.		
SHOP		10-5-79
F. & O.	12-12-79	10-19-79
DRAWN	8-9-79	D.R.
CHECKED		✓
⚠1 REVISION	10-4-79	PLF
REVISION	11-13-79	
REVISION		

BRACING FOR TOWER #6

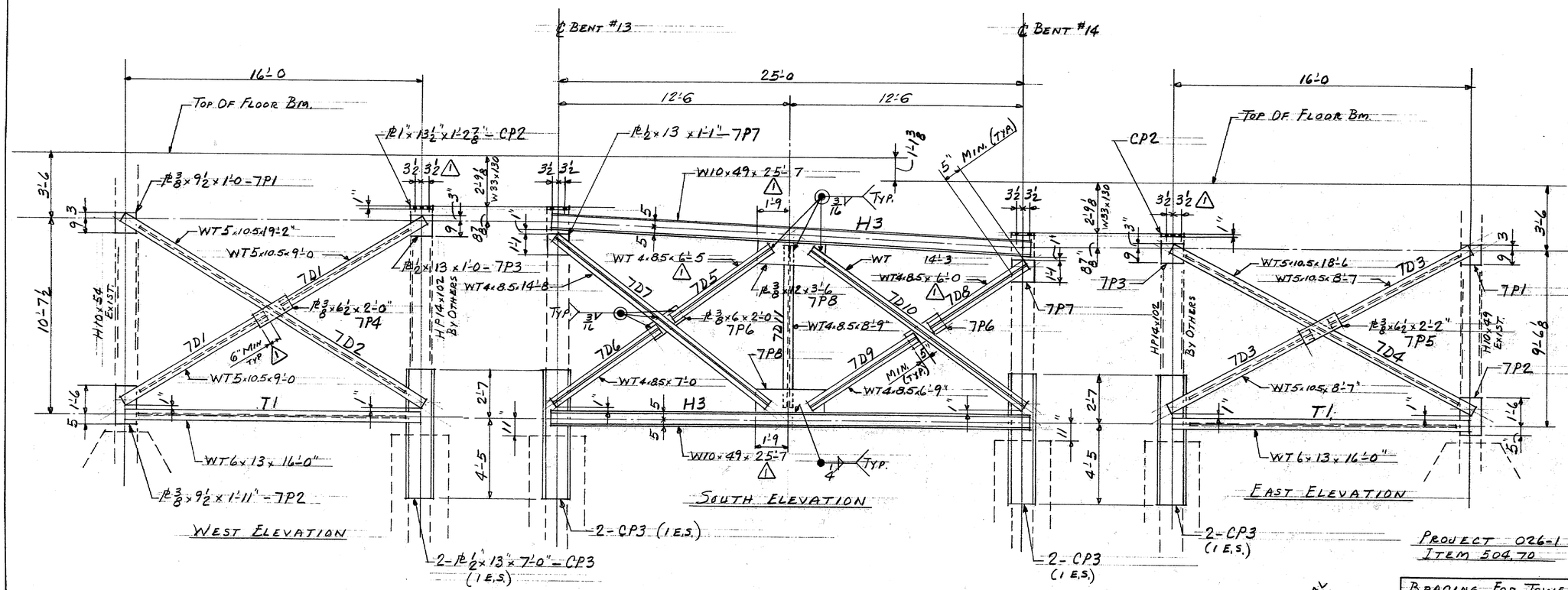
MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. E-6

161-42



WELDING DETAILS SAME AS FOR TOWER #3 (DWG. E-3) EXCEPT FOR DIAGONALS ON SOUTH ELEVATION.

FINAL

APPR.		AUG 23 1979
APPR.		
SHOP		10-5-79
F. & O.	12-12-79	10-19-79
DRAWN	8-10-79	D.R.
CHECKED		✓
⚠ REVISION	10-5-79	P.L.F.
REVISION	11-19-79	
REVISION		

BRACING FOR TOWER #7

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

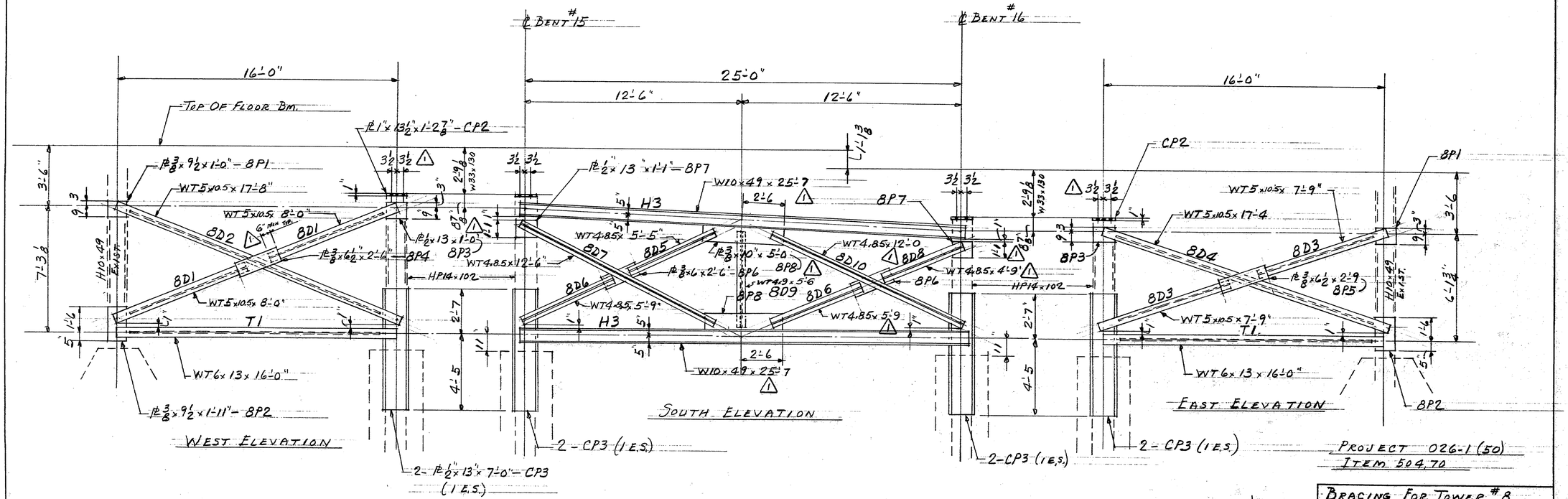
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

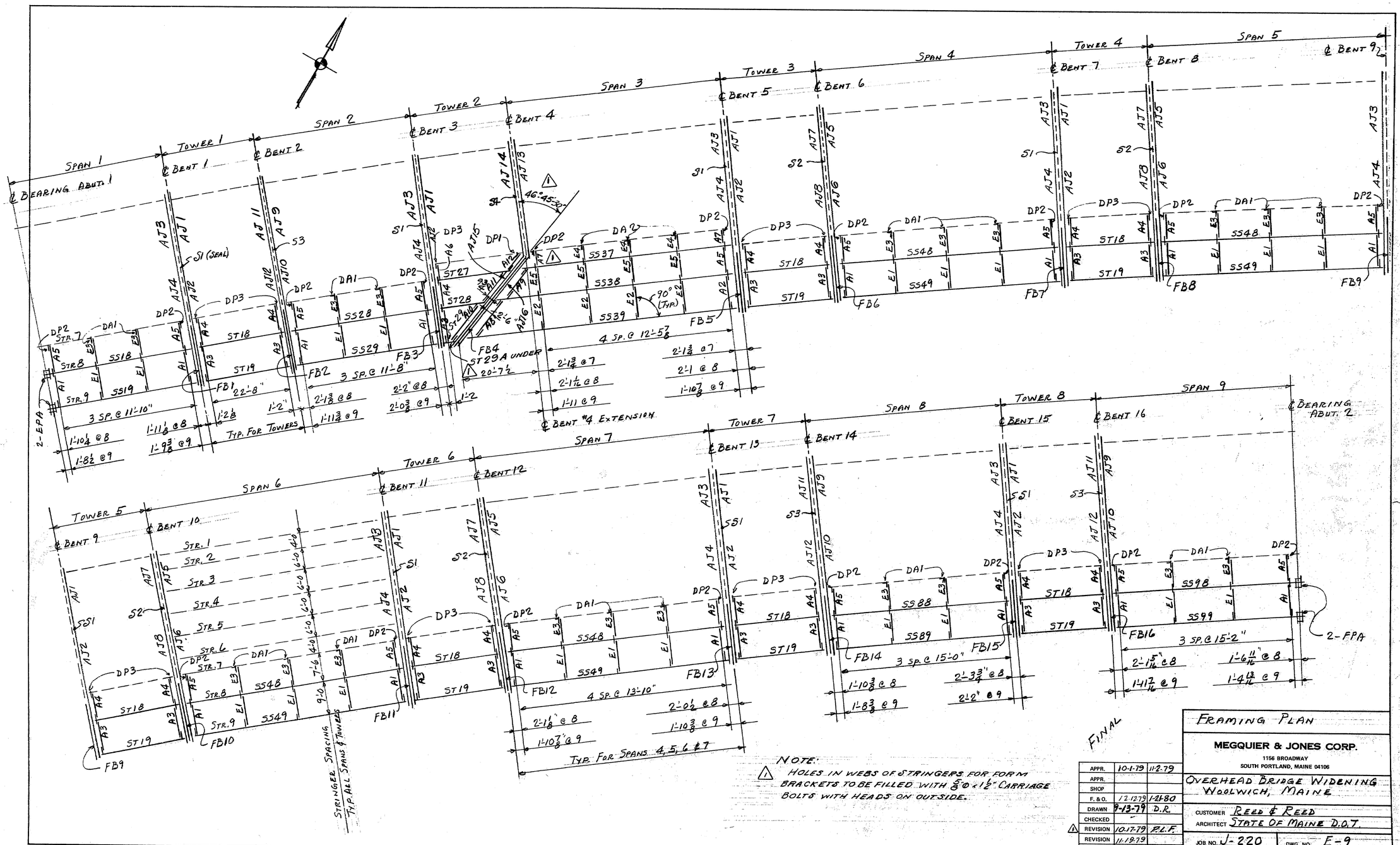
JOB NO. J-220 DWG. NO. E-7

PROJECT 026-1 (50)
ITEM 504.70

161-43



APPR.		AUG 23 1979
APPR.		
SHOP		10-5-79
F. & O.	12-12-79	10-19-79
DRAWN	8-10-79	D.R.
CHECKED		✓
⚠1 REVISION	10-5-79	R.L.F.
REVISION	11-19-79	
REVISION		



NOTE:

⚠1 HOLES IN WEBS OF STRINGERS FOR FORM BRACKETS TO BE FILLED WITH 3/8" Ø x 1½" CARRIAGE BOLTS WITH HEADS ON OUTSIDE.

FINAL

APPR.	10-1-79	11-2-79
APPR.		
SHOP		
F. & O.	12-1979	1-21-80
DRAWN	9-13-79	D.R.
CHECKED		
⚠1 REVISION	10-17-79	R.L.F.
REVISION	11-19-79	
REVISION		

FRAMING PLAN

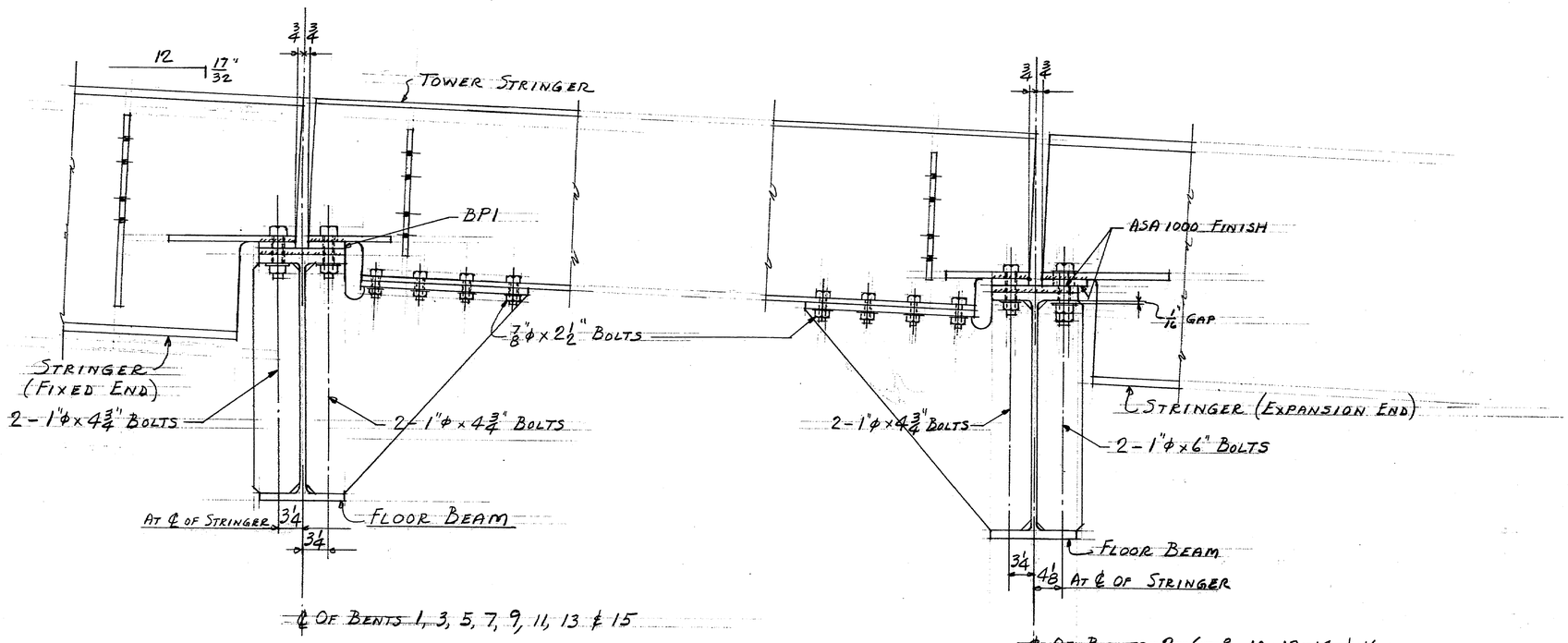
MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. E-9

161-45



A325 BOLTS & WASHERS

APPR.	10-1-79	11-2-79
APPR.		
SHOP		
F. & O.		
DRAWN	9-14-79	D.R.
CHECKED		
REVISION		
REVISION		
REVISION		

FIELD CONNECTION DETAILS

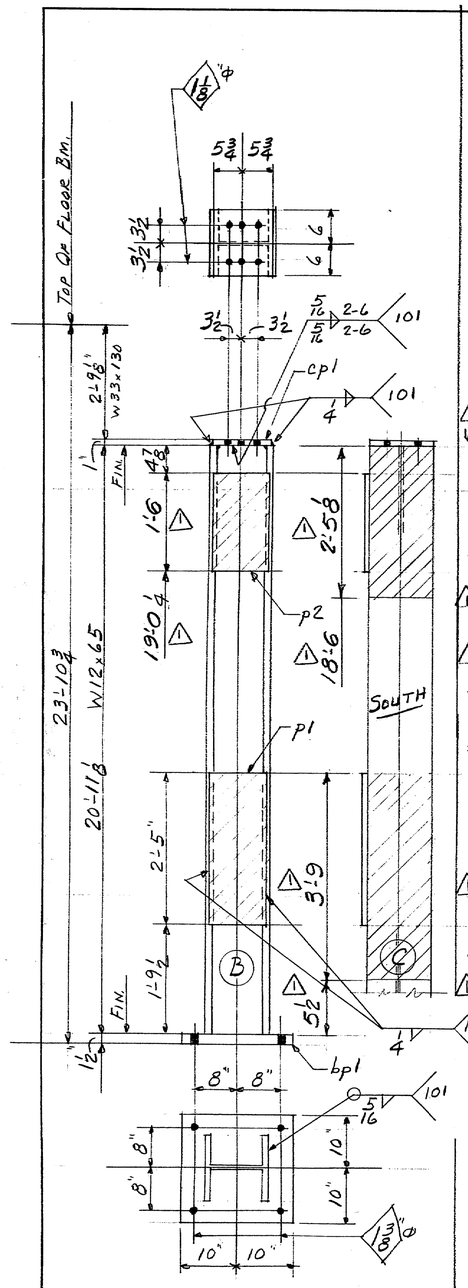
MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

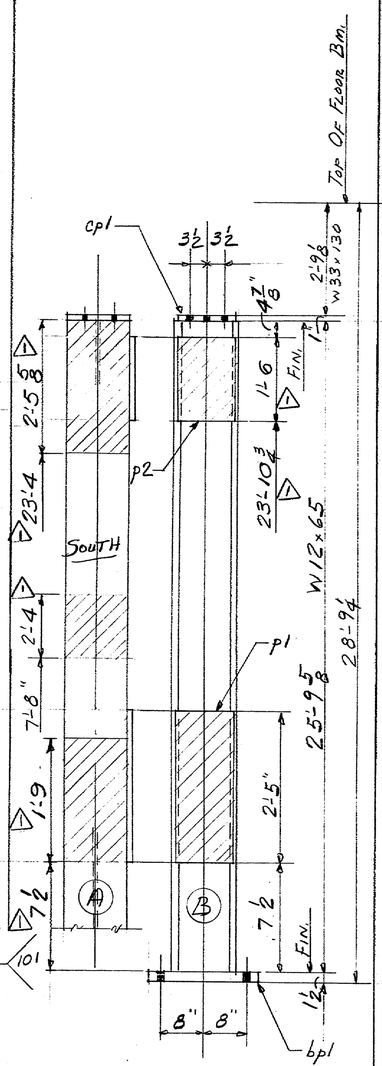
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

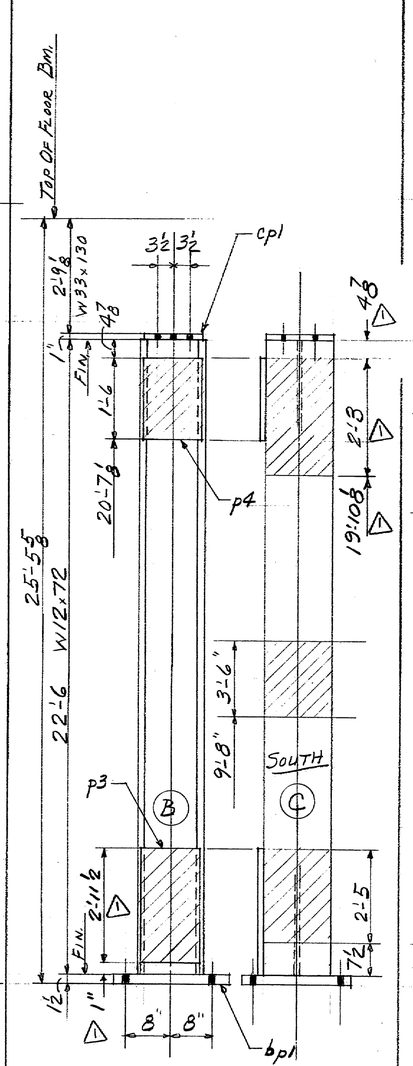
CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

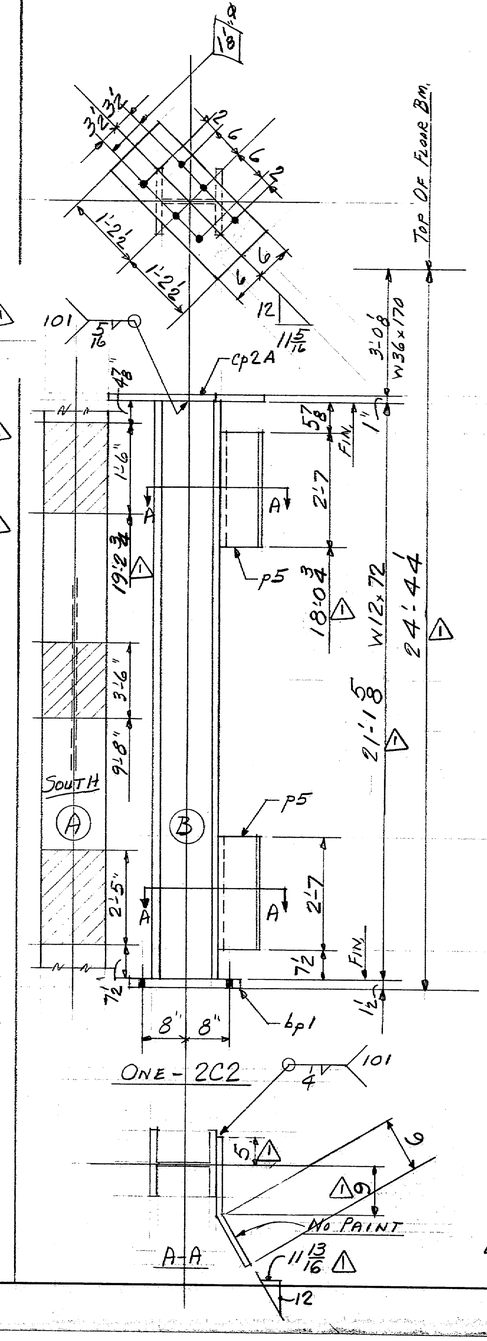
JOB NO. J-220 DWG. NO. E-10

161-96









SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
2C1	1		W12x72	22 6		
2C2	1		Do.	21 1⅞		F2E
1C1	1		W12x65	20 11⅛		
1C2	1		Do.	25 9⅝		
	4	bp1	PL 1½ x 20	1 8		
	3	cp1	PL 1 x 12	0 11½		
	1	cp2A	Do.	2 5		
	2	p1	PL ⅜ x 11½	2 5		
	2	p2	Do.	1 6		
	1	p3	Do.	2 11½		
	1	p4	Do.	1 6		
	2	p5	PL ⅝ x 23	2 7		BEND

TTP-615 D - TYPE II
1 ORANGE - 4 MILS (WET)

PAINT NOTE:
SSPC SPEC. #6 "COMMERCIAL BLAST CLEANING, ONE COAT ORANGE. (STATE OF MAINE SPEC.)
NO PAINT ON CROSS-HATCHED SURFACES OR WHERE INDICATED BY "NO PAINT".

A36 STEEL

PROJ. 026-1 (50) ITEM 504.70

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: 10 & 11
HOLES: AS NOTED.
FIELD CONN: WELD. 1"ϕ A325 FL. BM. TO CAP PL.
PAINT: SEE NOTE ABOVE

FINAL

COLUMNS FOR TOWERS #1 & #2

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

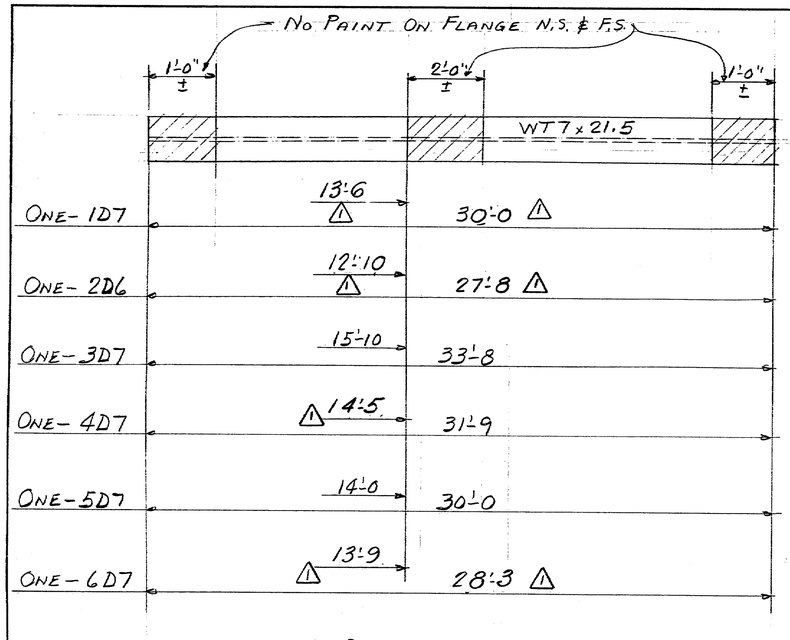
CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

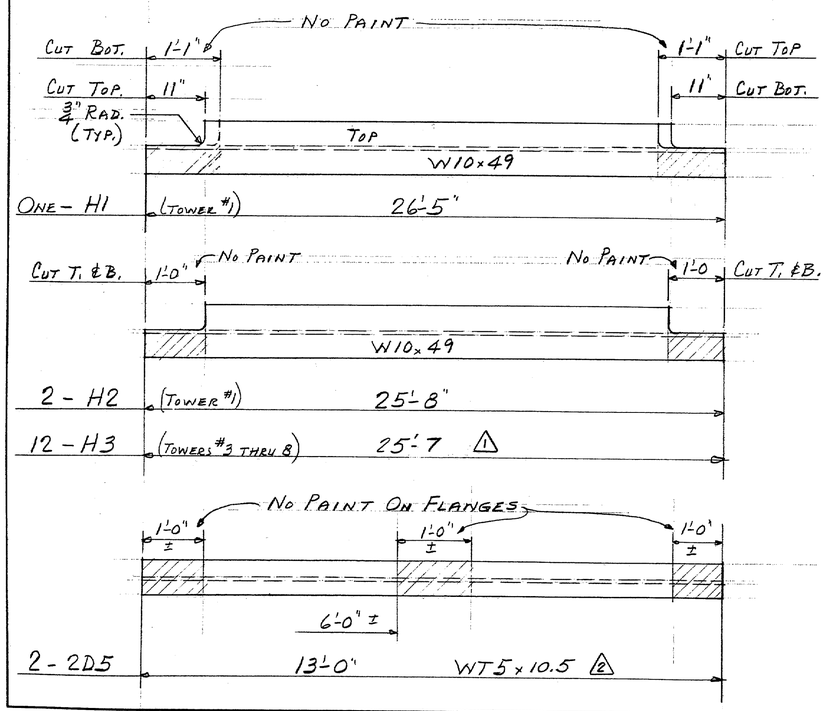
JOB NO. J-220 DWG. NO. S-1

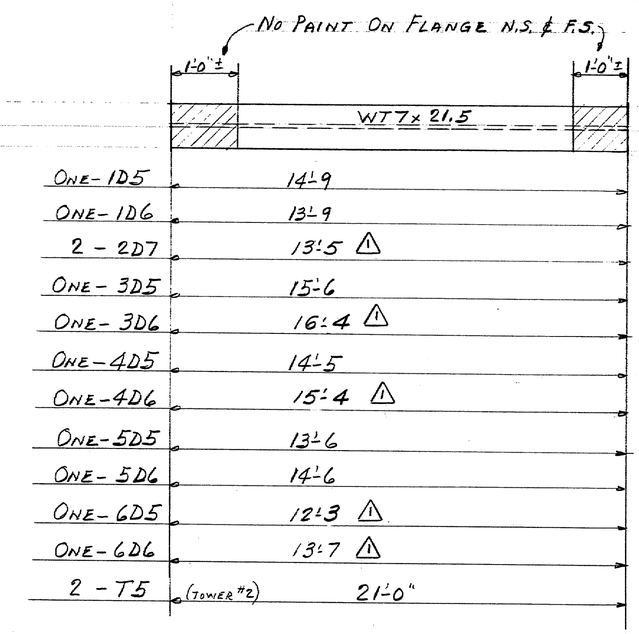
APPR.	11-2-79	ENG. 23 '379
APPR.		
SHOP		10-4-79
F. & O.		10-19-79
DRAWN	8-8-79	D.R.
CHECKED	10-3-79	P.L.F.
REVISION	10-3-79	P.L.F.
REVISION		
REVISION		

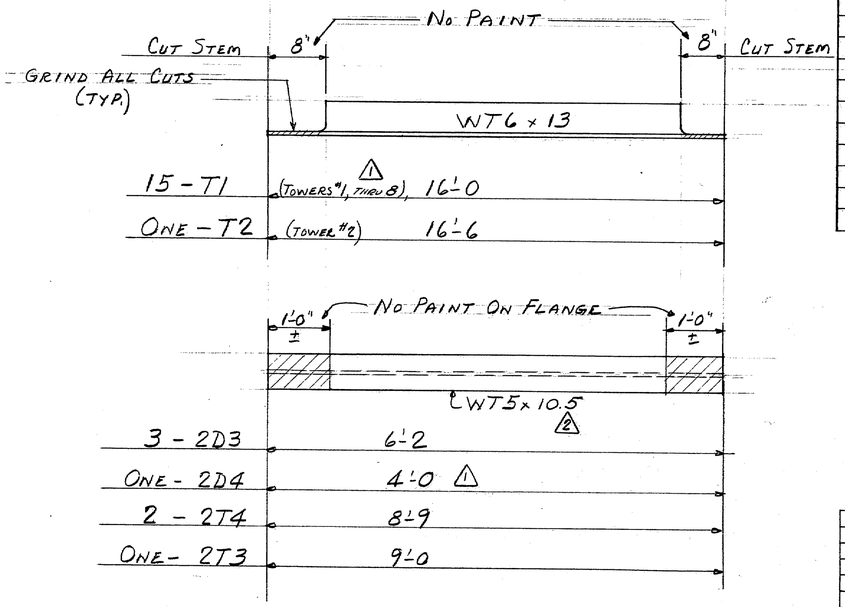
Boston Blue Print 7910

161-47









SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
H1	1		W10x49	26 5		
H2	2		DO.	25 8		
H3	12		DO.	25 7		
1D7	1		WT7x21.5	30 0		
2D6	1		DO.	27 8		
3D7	1		DO.	33 8		
4D7	1		DO.	31 9		
5D7	1		DO.	30 0		
6D7	1		DO.	28 3		
1D5	1		DO.	14 9		
1D6	1		DO.	13 9		
2D7	2		DO.	13 5		
3D5	1		DO	15 6		
3D6	1		DO.	16 4		
4D5	1		DO	14 5		
4D6	1		DO.	15 4		
5D5	1		DO.	13 6		
5D6	1		DO.	14 6		
6D5	1		DO.	12 3		
6D6	1		DO.	13 7		
T5	2		DO.	21 0		
T1	15		WT6x13	16 0		
T2	1		DO.	16 6		
2D5	2		WT5x10.5 △2	13 0		
2D3	3		DO.	6 2		
2D4	1		DO.	4 0		
2T4	2		DO.	8 9		
2T3	1		DO.	9 0		

BILL OF MATERIAL JOB NO. J-220 DWG. NO. S-2

A36 STEEL

PROJ. 026-1(50) ITEM 504.70

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: 10, 11, 12, 13
HOLES: NONE
FIELD CONN: WELD,
PAINT: SEE NOTE ON DWG. S-1,

FINAL

APPR.	11-20-79	AUG 23 1979
APPR.		
SHOP		10-5-79
F. & O.	12-12-79	10-19-79
DRAWN	8-14-79	D.R.
CHECKED		V
△1 REVISION	10-5-79	P.L.F.
△2 REVISION	11-19-79	P.L.F.
REVISION		

TOWER BRACES (60)

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

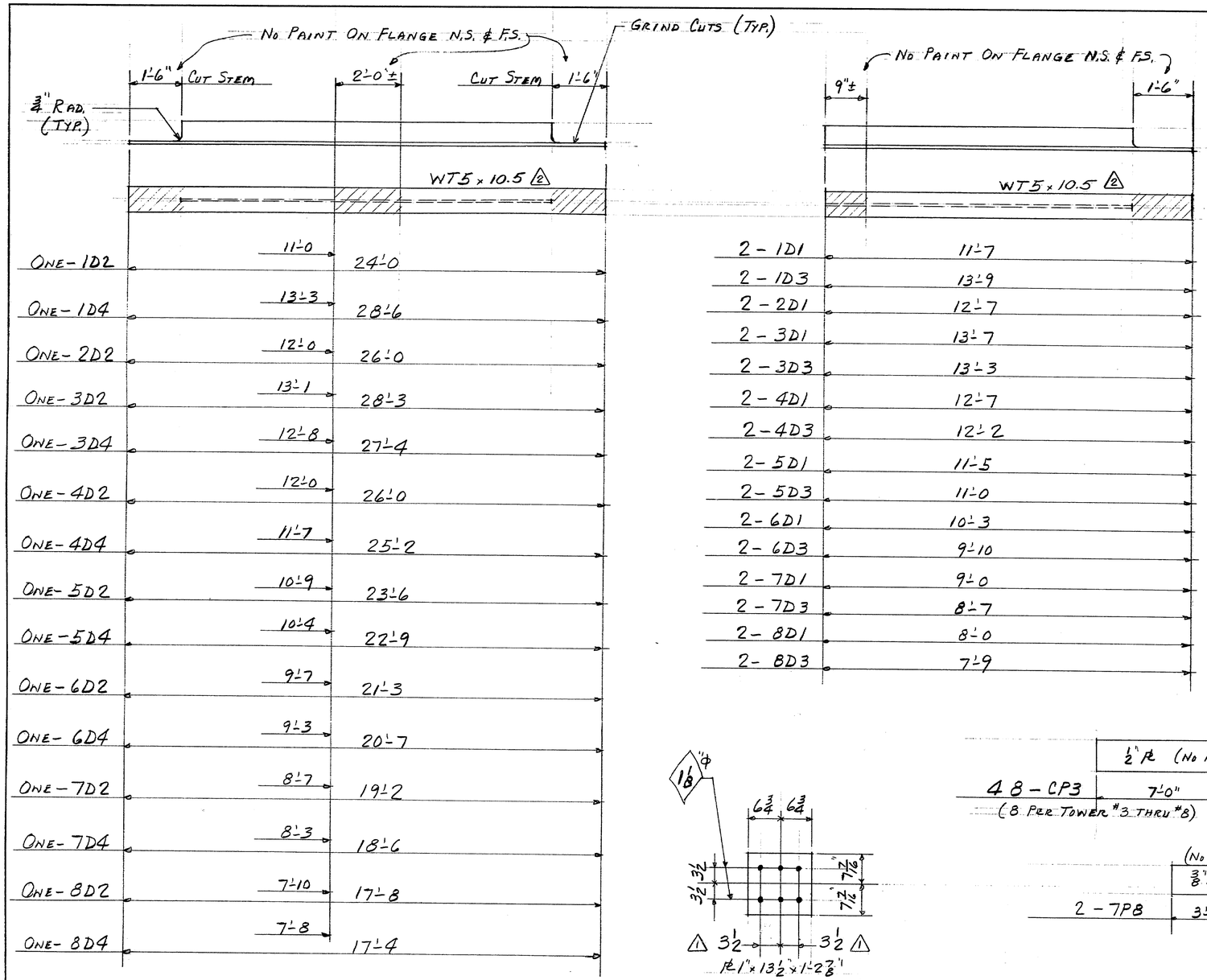
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

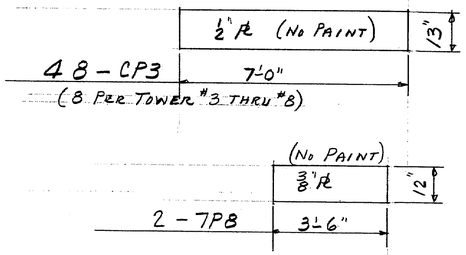
CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-2

161-48

Boston Blue Print 7029





SHIP MARK	NO.	MARK	SHAPE (2)	LENGTH	WT.	REMARKS
1D2	1		WT 5 x 10.5	24 0		
1D4	1		DO.	28 6		
2D2	1		DO.	26 0		
3D2	1		DO.	28 3		
3D4	1		DO.	27 4		
4D2	1		DO.	26 0		
4D4	1		DO.	25 2		
5D2	1		DO.	23 6		
5D4	1		DO.	22 9		
6D2	1		DO.	21 3		
6D4	1		DO.	20 7		
7D2	1		DO.	19 2		
7D4	1		DO.	18 6		
8D2	1		DO.	17 8		
8D4	1		DO.	17 4		
1D1	2		DO.	11 7		
1D3	2		DO.	13 9		
2D1	2		DO.	12 7		
3D1	2		DO.	13 7		
3D3	2		DO.	13 3		
4D1	2		DO.	12 7		
4D3	2		DO.	12 2		
5D1	2		DO.	11 5		
5D3	2		DO.	11 0		
6D1	2		DO.	10 3		
6D3	2		DO.	9 10		
7D1	2		DO.	9 0		
7D3	2		DO.	8 7		
8D1	2		DO.	8 0		
8D3	2		DO.	7 9		
CP2	12		PL 1" x 13½"	1 2⅞		
CP3	48		PL ½" x 13"	7 0		
7P8	2		PL ⅜ x 12"	3 6		
8P8	2		PL ⅜ x 10	5 0		

BILL OF MATERIAL JOB NO. J-220 DWG. NO. S-3

A36 STEEL

PROJ. 026-1 (50) ITEM 504.70

CUSTOMER ORDER NO.: 2738

REFERENCE DRAWINGS: 10, 11, 12, 13

HOLES: AS NOTED.

FIELD CONN: WELD.

PAINT: SEE NOTE ON DWG. S-1, TOWER BRACES & PLATES 45 64

FINAL

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

APPR.	11-20-79	DEC 23 1979
APPR.		
SHOP		10-5-79
F. & O.	12-17-79	10-19-79
DRAWN	8-14-79	D.R.
CHECKED		✓
(1) REVISION	10-5-79	P.L.F.
(2) REVISION	11-19-79	P.L.F.
REVISION		

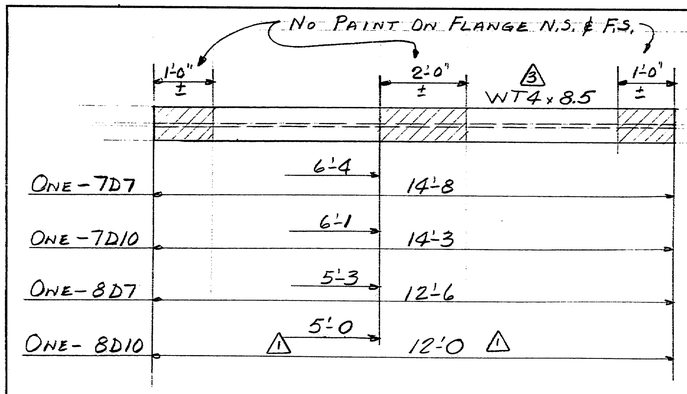
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

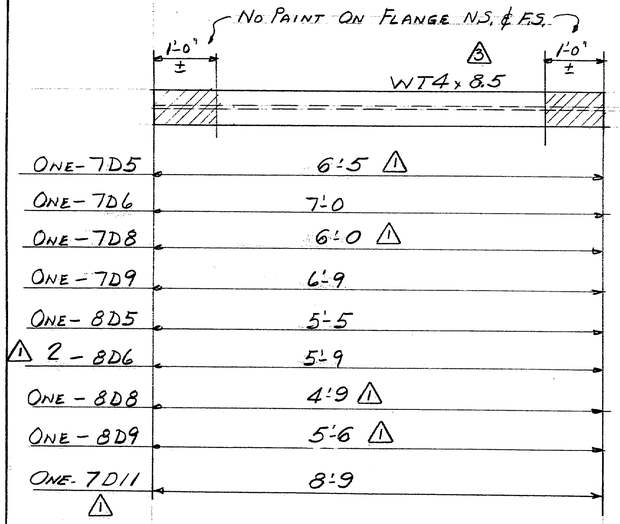
CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

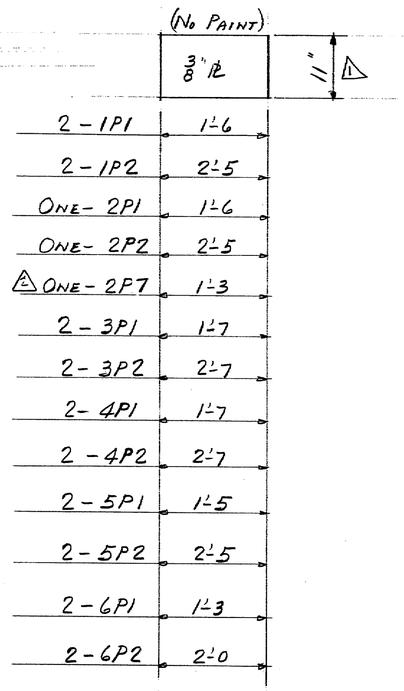
JOB NO. J-220 DWG. NO. S-3

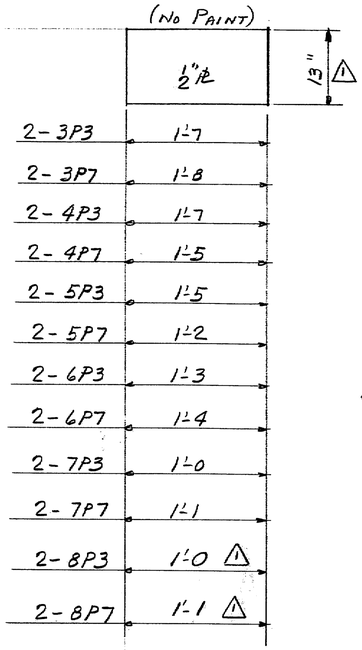
Boston Blue Print 7039

161-99









SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
			3			
7D7	1		WT 4x8.5	14 8		
7D10	1		Do.	14 3		
8D7	1		Do.	12 6		
8D10	1		Do.	12 0		
7D5	1		Do.	6 5		
7D6	1		Do	7 0		
7D8	1		Do.	6 0		
7D9	1		Do.	6 9		
8D5	1		Do.	5 5		
8D6	2		Do.	5 9		
8D8	1		Do.	4 9		
8D9	1		Do	5 6		
7D11	1		WT4.8.5	8 9		
1P1	2		℄ 3/8 x 11	1 6		
1P2	2		Do.	2 5		
2P1	1		Do.	1 6		
2P2	1		Do.	2 5		
2 2P7	1		Do.	1 3		
3P1	2		Do.	1 7		
3P2	2		Do.	2 7		1
4P1	2		Do.	1 7		
4P2	2		Do.	2 7		
5P1	2		Do.	1 5		
5P2	2		Do.	2 5		
6P1	2		Do.	1 3		
6P2	2		D1.	2 0		
3P3	2		℄ 1/2 x 13	1 7		
3P7	2		Do.	1 8		
4P3	2		Do.	1 7		
4P7	2		Do.	1 5		
5P3	2		Do.	1 5		
5P7	2		Do.	1 2		
6P3	2		Do.	1 3		1
6P7	2		Do.	1 4		
7P3	2		Do.	1 0		
7P7	2		Do.	1 1		
8P3	2		Do.	1 0		
8P7	2		Do.	1 1		

BILL OF MATERIAL JOB NO. J-220 DWG. NO. S-4

A36 STEEL

PROJ. 026-1 (50) ITEM 504.70

CUSTOMER ORDER NO.: 2738

REFERENCE DRAWINGS: 10, 11, 12, 13

HOLES: NONE

FIELD CONN: WELD

PAINT: SEE NOTE ON DWG. S-1.

TOWER BRACES & PLATES (14) (47)

FINAL

MEGQUIER & JONES CORP.

1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED

ARCHITECT STATE OF MAINE D.O.T.

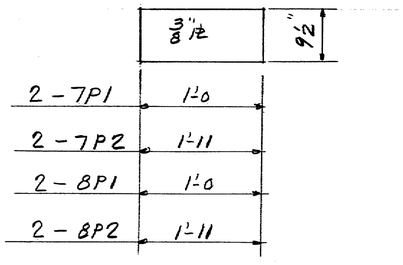
JOB NO. J-220 DWG. NO. S-4

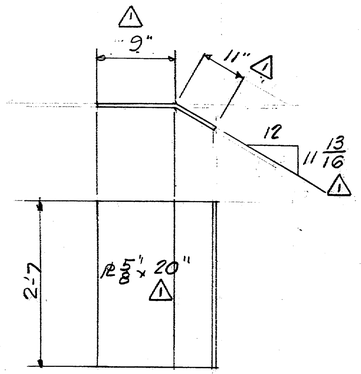
APPR.	11-20-79	AUG 23 1979
APPR.		
SHOP	11-9-79	10-8-79
F. & O.	11-9-79	10-19-79
DRAWN	8-14-79	D.R.
CHECKED		✓
1 REVISION	10-8-79	P.L.F.
2 REVISION	11-9-79	P.L.F.
3 REVISION	11-13-79	P.L.F.

12/m

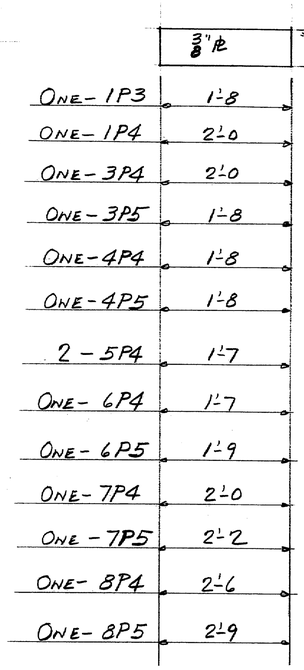
Boston Blue Print 70109

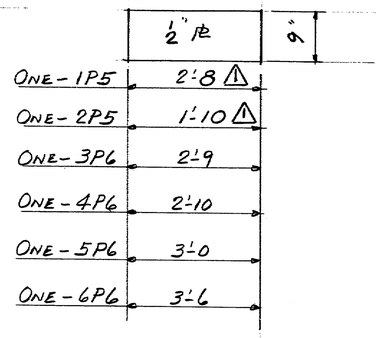
161-50

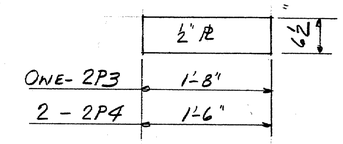


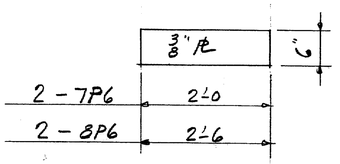


2 - 2P6









SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
7P1	2		PL 3/8 x 9 1/2	1 0		
7P2	2		Do.	1 11		
8P1	2		Do.	1 0		
8P2	2		Do.	1 11		
7P6	2		BAR 6 x 3/8	2 0		
8P6	2		Do.	2 6		
1P3	1		PL 3/8 x 6 1/2	1 8		
1P4	1		Do	2 0		
3P4	1		Do.	2 0		
3P5	1		Do.	1 8		
4P4	1		Do	1 8		
4P5	1		Do.	1 8		
5P4	2		Do.	1 7		
6P4	1		Do.	1 7		
6P5	1		Do.	1 9		
7P4	1		Do.	2 0		
7P5	1		Do	2 2		
8P4	1		Do.	2 6		
8P5	1		Do.	2 9		
1P5	1		PL 1/2 x 9	2 8		
2P5	1		Do.	1 10		
3P6	1		Do.	2 9		
4P6	1		Do.	2 10		
5P6	1		Do.	3 0		
6P6	1		Do.	3 6		
2P3	1		PL 1/2 x 6 1/2	1 8		
2P4	2		Do.	1 6		
2P6	2		PL 5/8 x 20	2 7		BEND

PROD. 026-1 (50) ITEM 504.70

A36 STEEL

CUSTOMER ORDER NO.: 2738

REFERENCE DRAWINGS: 10, 11, 12, 13

HOLES: NONE.

FIELD CONN: WELD

PAINT: NONE.

TOWER PLATES (37)

FINAL

APPR.		AUG 23 1979	
APPR.			
SHOP		10-5-79	
F. & O.		10-19-79	
DRAWN	8-14-79	D.R.	
CHECKED		✓	
⚠ REVISION	10-5-79	P.L.F.	
REVISION			
REVISION			

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

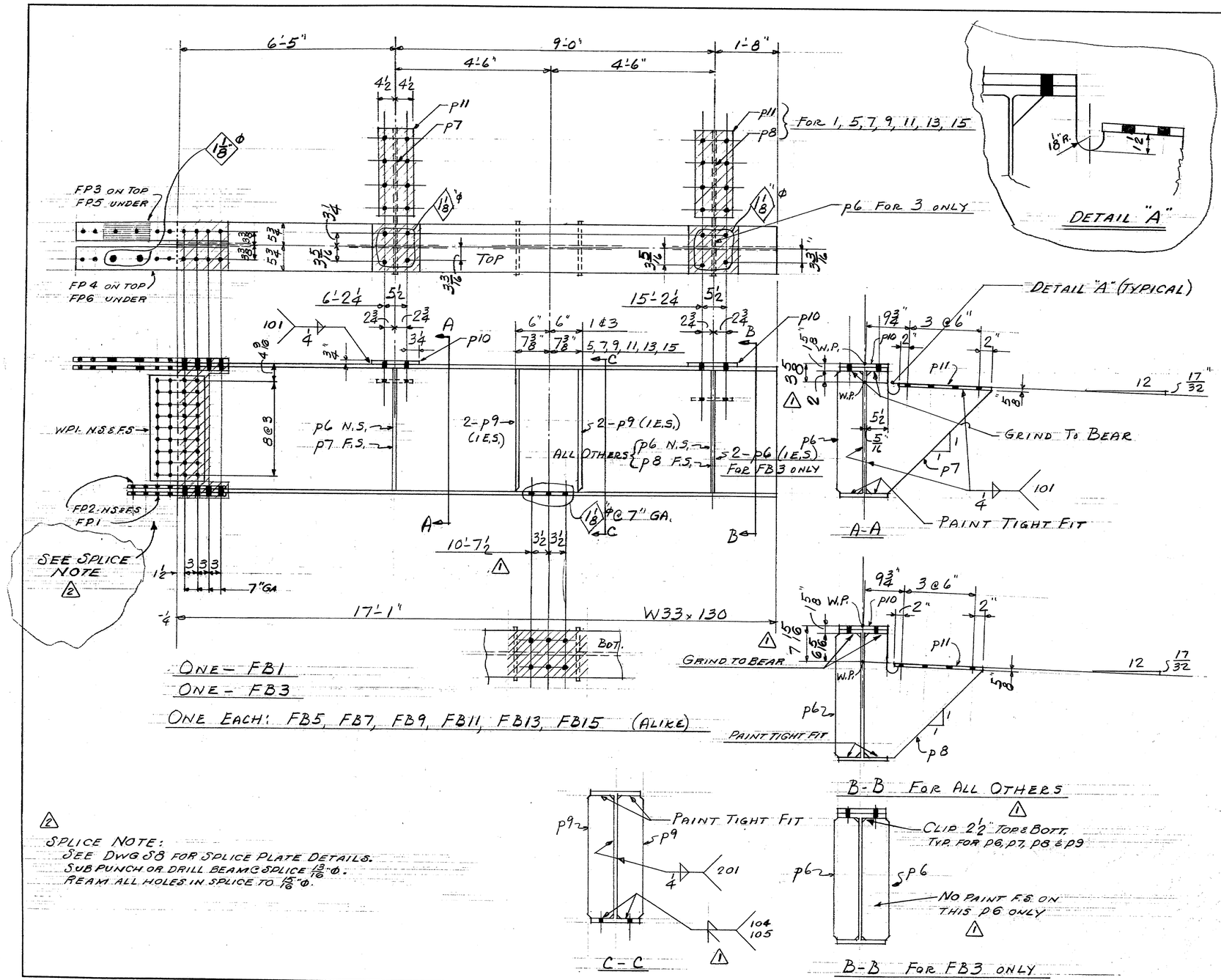
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-5

Boston Blue Print 7039

161-51



2 SPLICE NOTE:
SEE DWG S8 FOR SPLICE PLATE DETAILS.
SUB PUNCH OR DRILL BEAM & SPLICE 13/16" Φ.
REAM ALL HOLES IN SPLICE TO 15/16" Φ.

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
FB1	1		W33x130	17 1		CHARPY V-NOTCH REQ'D
FB3	1		Do.	17 1		Do
FB5	1		Do.	17 1		Do
FB7	1		Do.	17 1		Do
FB9	1		Do.	17 1		Do
FB11	1		Do.	17 1		Do
FB13	1		Do.	17 1		Do
FB15	1		Do.	17 1		CHARPY V-NOTCH - REQ'D
	17	P6	BAR 6 x ¾	2 7⅜		FIT
	32	P9	Do.	2 7⅞		FIT
	8	P7	PL ⅝ x 3⅛	2 5½		FIT
	7	P8	Do.	2 5½		FIT
	16	P10	PL ¾ x 12	0 11½		
	15	P11	PL ⅝ x 9	1 10		
	8	FP1				
	16	FP2				
	8	FP3				
2	8	FP4				SEE S8 FOR DETAILS
	8	FP5				
	8	FP6				
	16	WP1				
2	16	SHOP	⅞Φ BOLT	0 2½		A307 SHIPPING
	64	SHOP	⅞Φ BOLT	0 3½		A307 BOLTS

JOB NO. J-220 DWG. NO. S-6

PROJ. 026-1 (50) ITEM 504.70

A36 STEEL 1

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: 17
2 HOLES: 15/16Φ UNLESS NOTED (SEE SPLICE NOTE)
FIELD CONN: ⅞Φ H.S. BOLTS
PAINT: SEE NOTE ON DWG. S-1

FINAL

APPR.	10-1-79	11-2-79
APPR.	11-20-79	
SHOP	11-20-79	11-2-79
F. & O.	12-12-79	
DRAWN	8-14-79	D.R.
CHECKED	-	
1 REVISION	10-17-79	P.L.F.
2 REVISION	11-13-79	P.L.F.
REVISION		

FLOOR BEAMS (8)

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

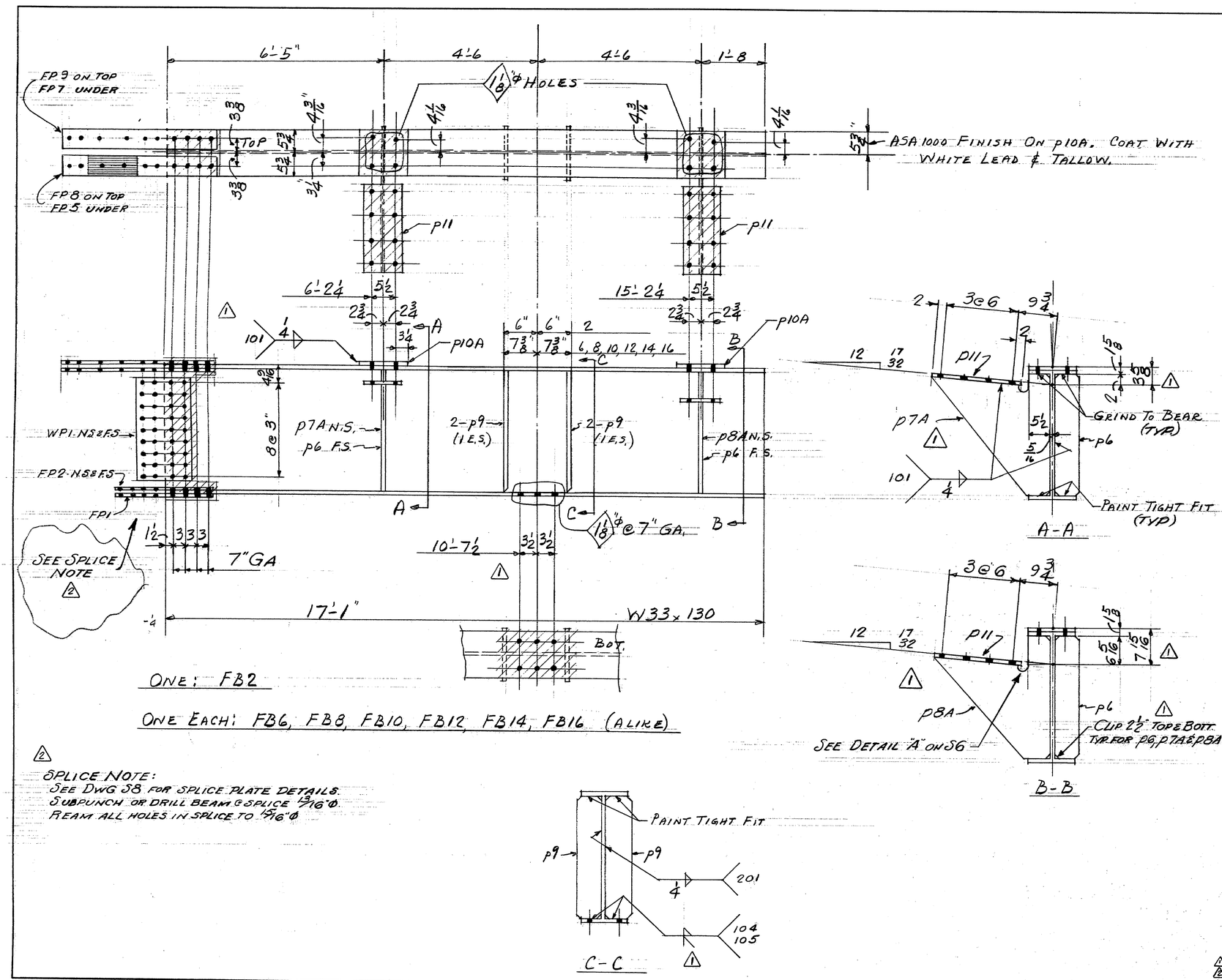
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-6

161-52

Boston Blue Print



SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
FB2	1		W33x130	17 1		CHARPY V NOTCH REQD
FB6	1		Do.	17 1		Do
FB8	1		Do.	17 1		Do
FB10	1		Do.	17 1		Do
FB12	1		Do.	17 1		Do
FB14	1		Do.	17 1		Do
FB16	1		Do.	17 1		CHARPY V NOTCH REQD
	14	p6	BAR 6x 3/4	2 7 3/8		FIT
	28	p9	Do.	2 7 3/8		FIT
	7	p7A	PL 5/8 x 31 3/8	2 5 1/2		FIT
	7	p8A	Do.	2 5 1/2		FIT
	14	p10A	PL 3/4 x 12	0 11 1/2		A5A 1000 FINISH ON ONE SURFACE
	14	p11	PL 5/8 x 9	1 10		
2	14	SHOP	3/4ϕ BOLT	0 2 1/2		A307 SHIPPING BOLTS
	56	SHOP	3/4ϕ BOLT	0 3 1/2		A307
S7A	92		1"ϕ BOLT	0 3 1/2		A325 TYPE 1
S7B	92		1" WASHER	~		A325 TYPE 1
	7	FP1				SEE S8 FOR DETAILS
	14	FP2				SEE S8 FOR DETAILS
2	7	FP5				SEE S8 FOR DETAILS
	7	FP7				SEE S8 FOR DETAILS
	7	FP8				SEE S8 FOR DETAILS
	7	FP9				SEE S8 FOR DETAILS
	14	WP1				SEE S8 FOR DETAILS

BILL OF MATERIAL — JOB NO. J-220 DWG. NO. S-7

PROD. 026-1 (50) ITEM 504.70

A36 STEEL

CUSTOMER ORDER NO.: 2738

REFERENCE DRAWINGS: 17

2 HOLES: 15/16"ϕ UNLESS NOTED (SEE SPLICE NOTE)

FIELD CONN: 3/4"ϕ H.S. BOLTS

PAINT: SEE NOTE ON DWG. S-1,

FINAL

APPR.	10-1-79	11-2-79
APPR.	11-20-79	
SHOP	11-20-79	11-2-79
F. & O.	12-12-79	
DRAWN	8-15-79	D.R.
CHECKED		
1 REVISION	10-17-79	P.L.F.
2 REVISION	11-13-79	P.L.F.
REVISION		

FLOOR BEAMS (7)

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

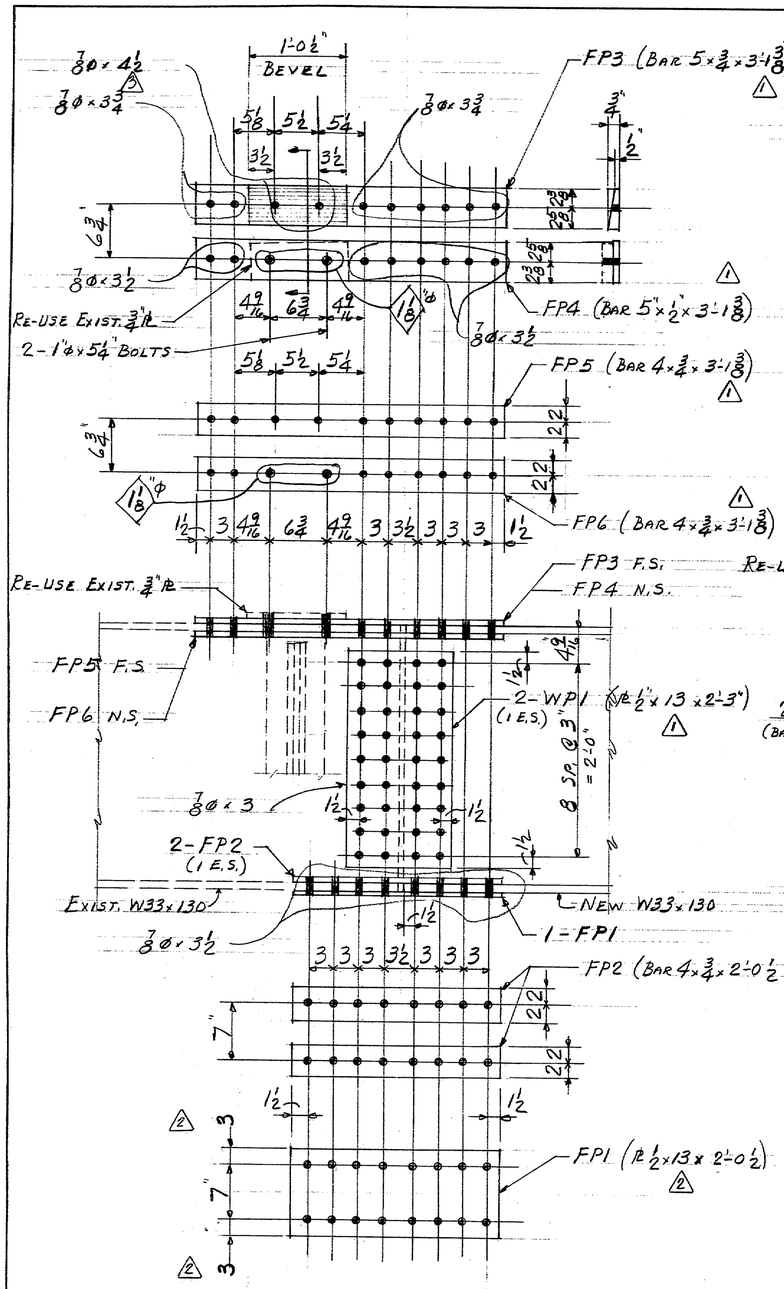
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-7

Boston Blue Print 7019

161-453



SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
	30	WP1	Ø 1/2 x 13	2 3		CHARPY V-NOTCH REQ'D
	15	FP1	Ø 1/2 x 13	2 0 1/2		CHARPY V-NOTCH REQ'D
	30	FP2	BAR 4 x 3/4	2 0 1/2		CHARPY V-NOTCH REQ'D
	15	FP5	DO.	3 1 3/8		DO
	8	FP6	DO.	3 1 3/8		DO
3	7	FP7	DO.	3 1 3/8		CHARPY V-NOTCH REQ'D
	8	FP3	BAR 5 x 3/4	3 1 3/8	pp.1076	MACHINE CHARPY V-NOTCH REQD
	7	FP8	DO.	3 1 3/8	pp.1076	MACHINE CHARPY V-NOTCH REQD
	8	FP4	BAR 5 x 1/2	3 1 3/8		CHARPY V-NOTCH REQ'D
	7	FP9	DO.	3 1 3/8		CHARPY V-NOTCH REQ'D
FP10	7		BAR 5 x 3/4	1 10 5/8		
SP1	14		BAR 2 x 1/2	0 4		
S8A	16		1"Ø BOLT	0 5 1/4		A325 - TYPE 1
S8B	16		1"Ø WASHER			
S8C	570		7/8"Ø BOLT	0 3		TAPPED HOLES @ WEB CONN.
S8D	360		DO.	0 3 1/2		
S8E	122		DO.	0 3 3/4		A325 FLANGE CONN. TYPE 1
S8F	30		DO.	0 4 1/2		
S8G	1082		7/8"Ø WASHER			

BILL OF MATERIAL — JOB NO. J-220 DWG. NO. S-8

A36 STEEL

PROJ. 026-1 (50) ITEM 504.70

CUSTOMER ORDER NO.: 2738

REFERENCE DRAWINGS: 15

3 HOLES: 13/16 Ø UNLESS NOTED.

FIELD CONN: 7/8"Ø A325 U.N. WELD SPL

PAINT: NONE

FINAL

APPR.	10-1-79	11-2-79
APPR.	11-20-79	
SHOP	11-20-79	11-2-79
F. & O.	12-12-79	
DRAWN	8-15-79	D.R.
CHECKED	✓	
1 REVISION	10-18-79	R.L.F.
2 REVISION	10-29-79	R.L.F.
3 REVISION	11-13-79	R.L.F.

FLOOR BEAM SPLICES (15)

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

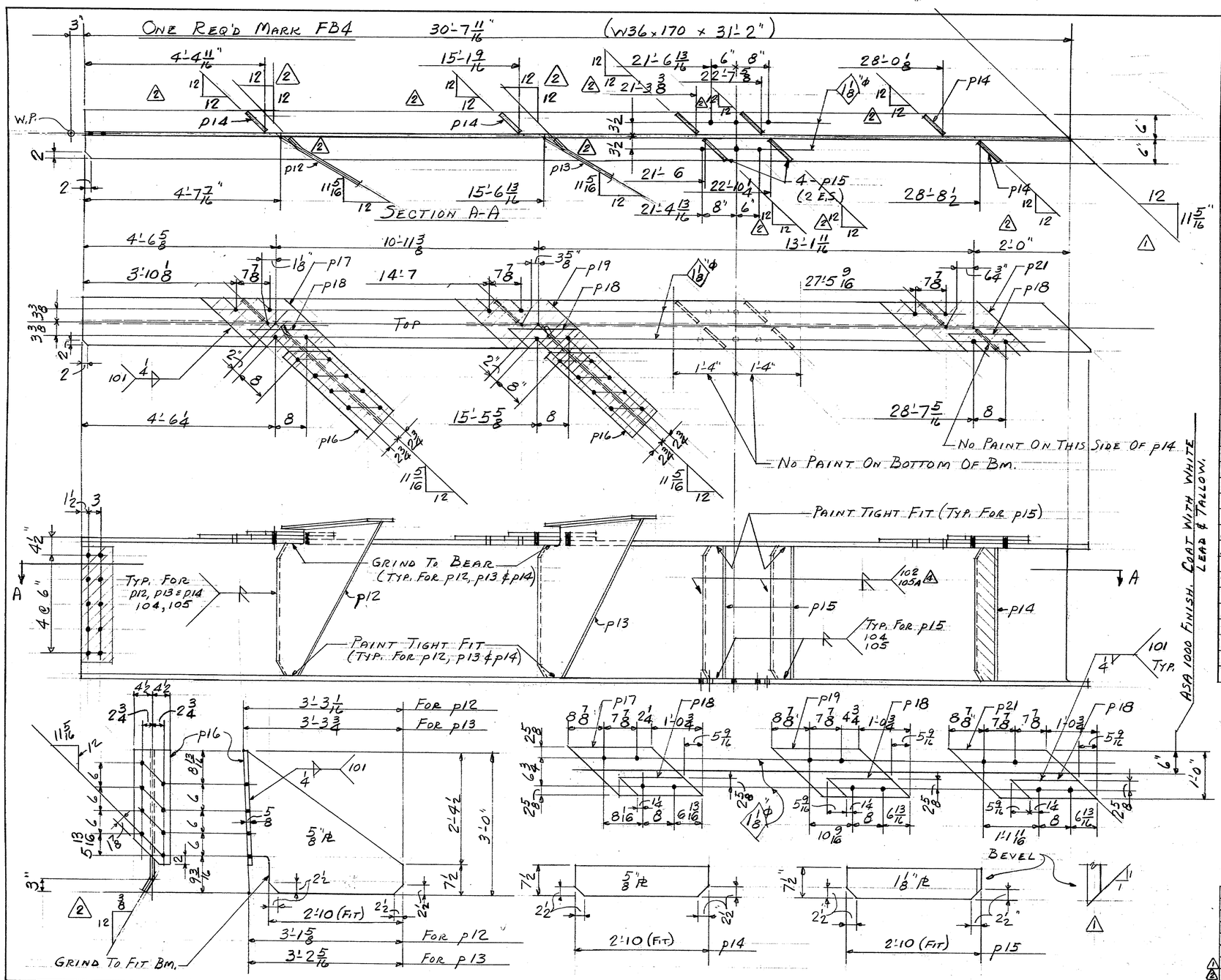
CUSTOMER REED & REED

ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-8

Boston Blue Print 7919

161-54



SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
FB4	1		W36x170	31 2		CHARPY V-NOTCH - REQ'D
	4	p14	PL 5/8 x 7 1/2	2 10		FIT
	1	p12	PL 5/8 x 36"	3 2 7/16		FIT 2 BEND
	1	p13	Do.	3 3 1/8		FIT 2 BEND
	4	p15	PL 1 1/8 x 7 1/2	2 10		FIT
	2	p16	PL 5/8 x 9	2 4 13/16		
	1	p17	PL 3/4 x 12	2 7 3/4		ASA 1000 FINISH ONE SIDE
	1	p19	Do.	2 10 1/4		Do
	1	p21	Do.	3 1 3/8		Do
	3	p18	PL 3/4 x 5 1/4	1 9 5/8		
S9A	10		7/8" Bolt	0 3 1/2		A325 - TYPE 1
S9B	18		Do.	0 2 3/4		
S9C	28		7/8" WASHER			
S9D	6		1" Bolt	0 3 3/4		A325 - TYPE 1
S9E	6		1" WASHER	—		

SEE S-10 FOR CONNECTION TO EXIST. COL. AT LEFT END.

SHOP NOTE:
1 SKEW ANGLE VARIES ON PLATES.

A36 STEEL
PROJ. 026-1 (50) ITEM 504.70

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: 18
HOLES: 15/16" ϕ UNLESS NOTED,
FIELD CONN: 7/8" ϕ & 1" ϕ A325
PAINT: SEE NOTE ON DWG. S-1.

FINAL

1-7-80
12-28-79

APPR.	10-1-79	11-2-79
APPR.	11-20-79	
SHOP	11-20-79	11-2-79
F. & O.	12-12-79	
DRAWN	8-16-79	D.R.
CHECKED	✓	
1 REVISION	10-18-79	P.L.F.
2 REVISION	11-8-79	P.L.F.
3 REVISION	12-28-79	P.L.F.
1	1-7-80	P.L.F.

FLOOR BEAM FB4

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

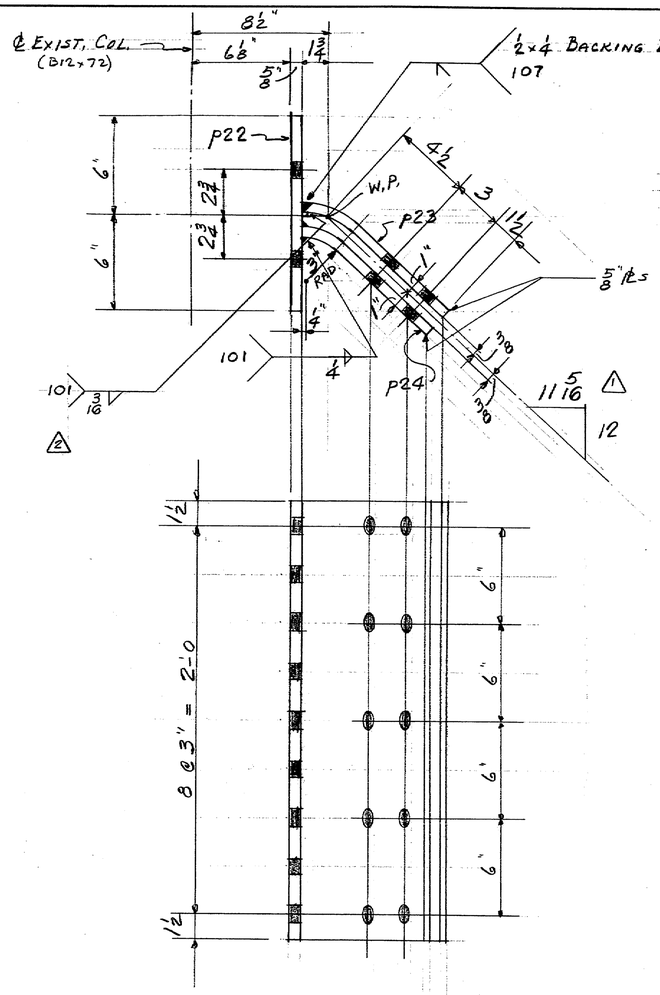
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-9

161-55

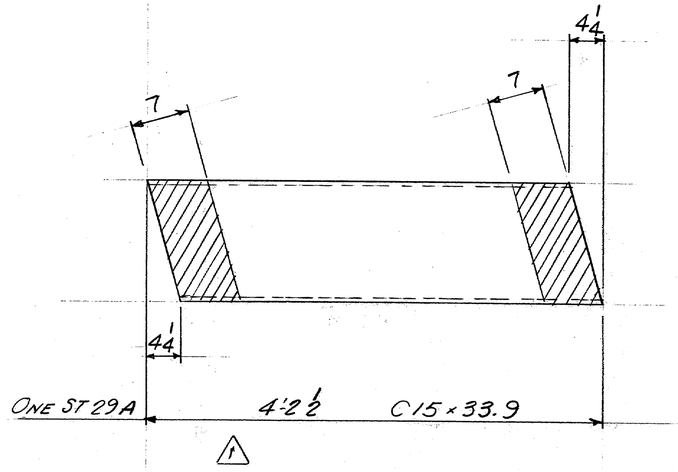
Boston Blue Print 7019



ONE REQ'D — ATTACH TO FB4 (DWG. S-9) FOR SHIPPING, WITH 2-⅞"ϕ x 3½" BOLTS (A325)

NO PAINT

△2 WELDING SEQUENCE
1. WELD BACKING BAR p23a IN PLACE
2. WELD p24
3. WELD p23



ONE ST29A 4'-2½ C15x33.9 △1

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
ST29A	1		C15x33.9	4 2½		
	1	p22	PL ⅝x12	2 3		
	1	p23	DO.	2 3		BEND & TRIM
	1	p24	DO.	2 3		
	2	SHOP	⅞" BOLT	0 3½		A325 - TYPE 1
	2	SHOP	⅞" WASHER	—		A325 - TYPE 1
	1	p23a	BAR ½x4	2 3		

JOB NO. J-220 DWG. NO. S-10

A36 STEEL
PROJ. 026-1 (50) △1 ITEM 504.70

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: 16
HOLES: 15/16"ϕ
FIELD CONN: ⅞"ϕ A325
PAINT: SEE PAINT NOTE ON DWG. S1

FINAL

APPR.	10-1-79	11-2-79
APPR.		
SHOP	11-21-79	11-2-79
F. & O.	12-12-79	
DRAWN	8-17-79	D.R.
CHECKED	✓	
△1 REVISION	10-18-79	P.L.F.
△2 REVISION	11-21-79	P.L.F.
REVISION		

CONNECTION FOR FB-4 & ST29A

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

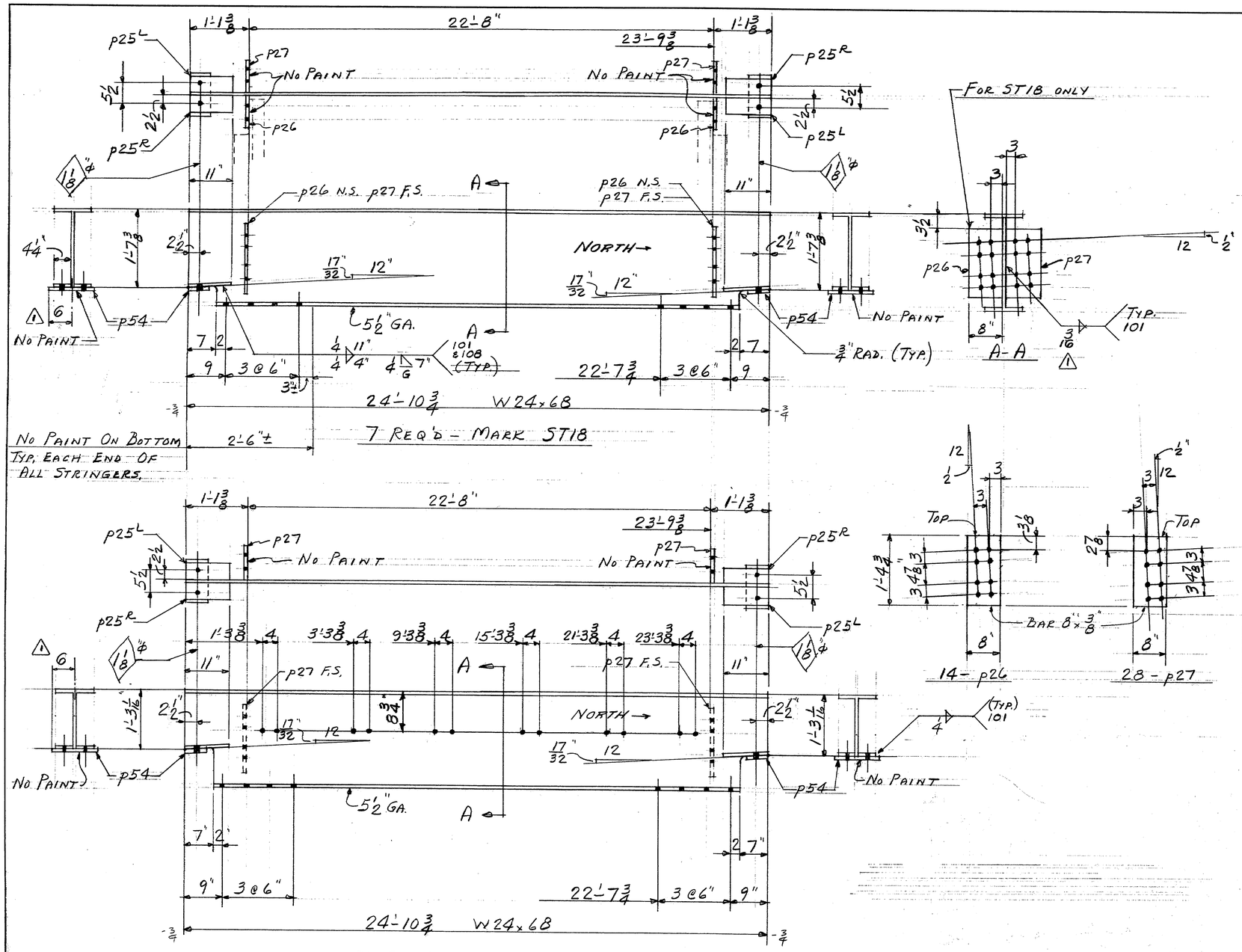
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-10

Boston Blue Print

161-56



SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
ST18	7		W24x68	24 10 3/4		Charpy V-Notch Req'd
ST19	7		Do.	24 10 3/4		Charpy V-Notch Req'd
	56	p25 PL 1/2 x 4 1/4		0 11		28-R 28-L
	14	p26	Bar 8 x 3/8	1 4 3/4		
	28	p27	Do.	1 4 3/4		
	28	p54	PL 3/4 x 12	0 5		
S11A	58		1" ϕ Bolt	0 4 3/4		A325 - Type 1 @ Ends
S11B	58		1" ϕ Washer			
S11C	458		7/8" ϕ Bolt	0 2		A325 - Type 1
S11D	458		7/8" ϕ Washer			
S11E	230		7/8" ϕ Bolt	0 2 1/2		A325 - Type 1 @ Bot't Flg.
S11F	230		7/8" ϕ Washer			

NOTE:
NO PAINT TOP & EDGES OF TOP FLGS.

A36 Steel
Proj. 026-1 (50 Item 504.70

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: 19
HOLES: 15/16" ϕ Unless Noted
FIELD CONN: 7/8" ϕ 1" ϕ A325
PAINT: See Note On Dwg. S-1

FINAL

APPR.	10-1-79	11-2-79
APPR.		
SHOP		11-2-79
F. & O.	12-12-79	
DRAWN	8-20-79	D.R.
CHECKED		
1 REVISION	10-18-79	P.L.F.
REVISION		
REVISION		

Tower Stringers (14)

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

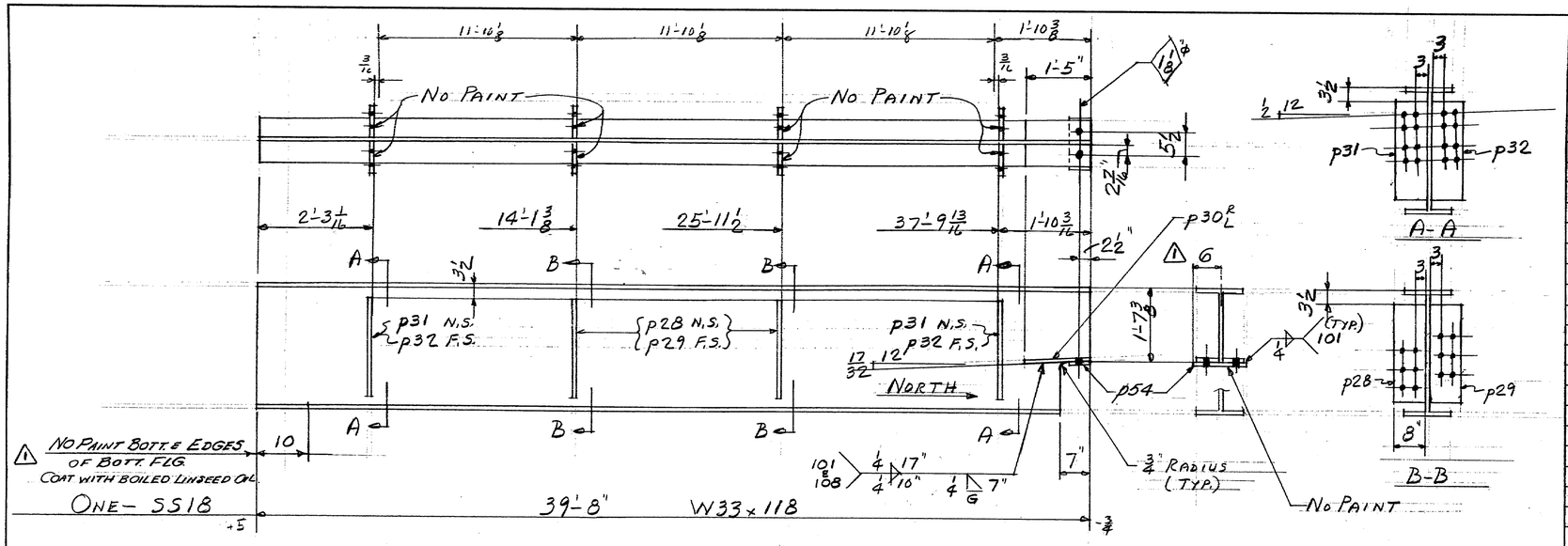
Overhead Bridge Widening
Woolwich, Maine

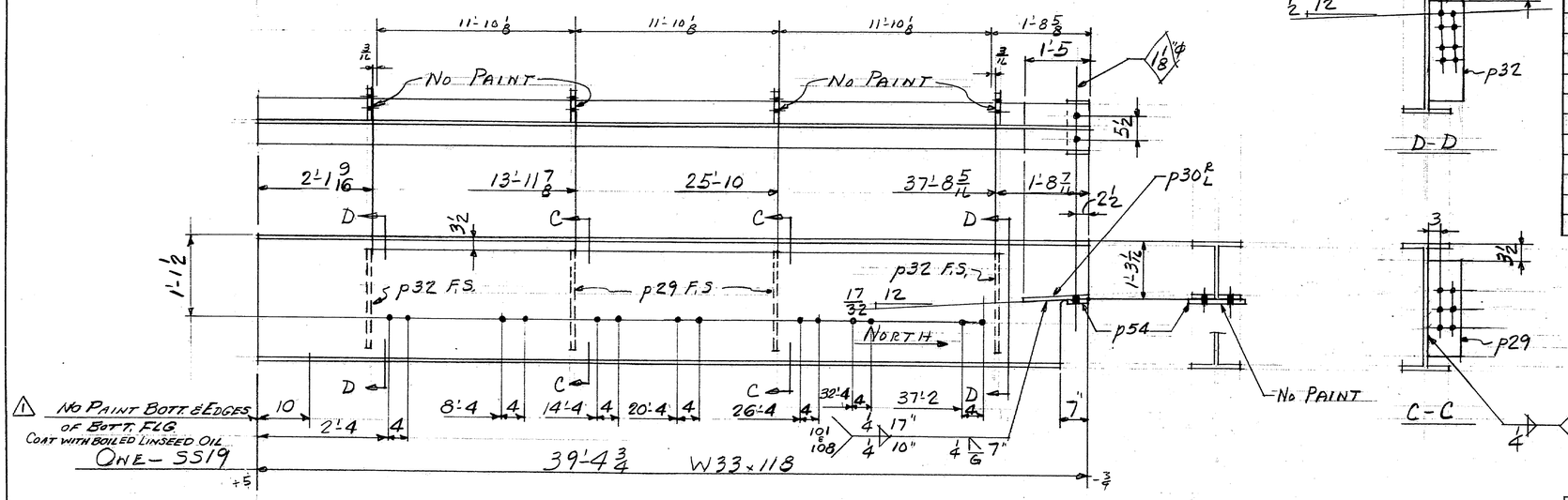
CUSTOMER Reed & Reed
ARCHITECT State Of Maine D.O.T.

JOB NO. J-220 DWG. NO. S-11

Boston Blue Print 70129

161-57





SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
SS18	1		W33x118	39 8		CHARPY V-NOTCH REQ'D
SS19	1		DO.	39 4 3/4		CHARPY V-NOTCH REQ'D
	4	p30 L R	BAR 5 1/2 x 3/4	1 5		2-R 2-L
	2	p28	BAR 8 x 3/8	2 2		DET. ON S-13
	4	p29	DO	2 2		
	2	p31	DO.	2 2		
	4	p32	DO.	2 2		
	2	p54	PL 3/4 x 12	0 5		

NOTE:
NO PAINT TOP & EDGES OF TOP FLANGES

A36 STEEL
PROD. 026-1(60)

1 ITEM 504.70

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: 19
HOLES: 15/16" ø UNLESS NOTED.
FIELD CONN: 7/8" ø ± 1" ø A325-F
PAINT: SEE NOTE ON DWG. S-1
STRINGERS (SPAN 1) (2)

FINAL

APPR.	10-1-79	11-2-79
APPR.		
SHOP		11-2-79
F. & O.	12-12-79	
DRAWN	9-13-79	D.R.
CHECKED	—	
1 REVISION	10-18-79	P.L.F.
REVISION		
REVISION		

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

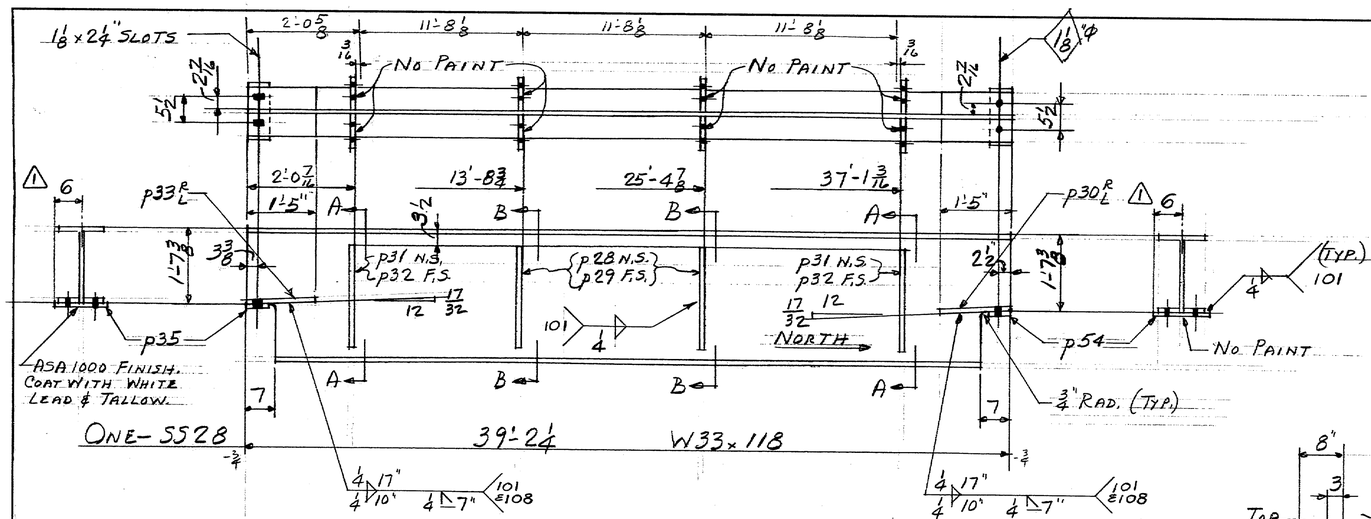
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

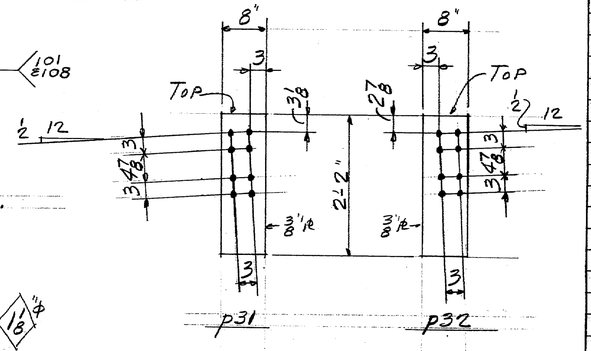
CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-12

Boston Blue Print 7019

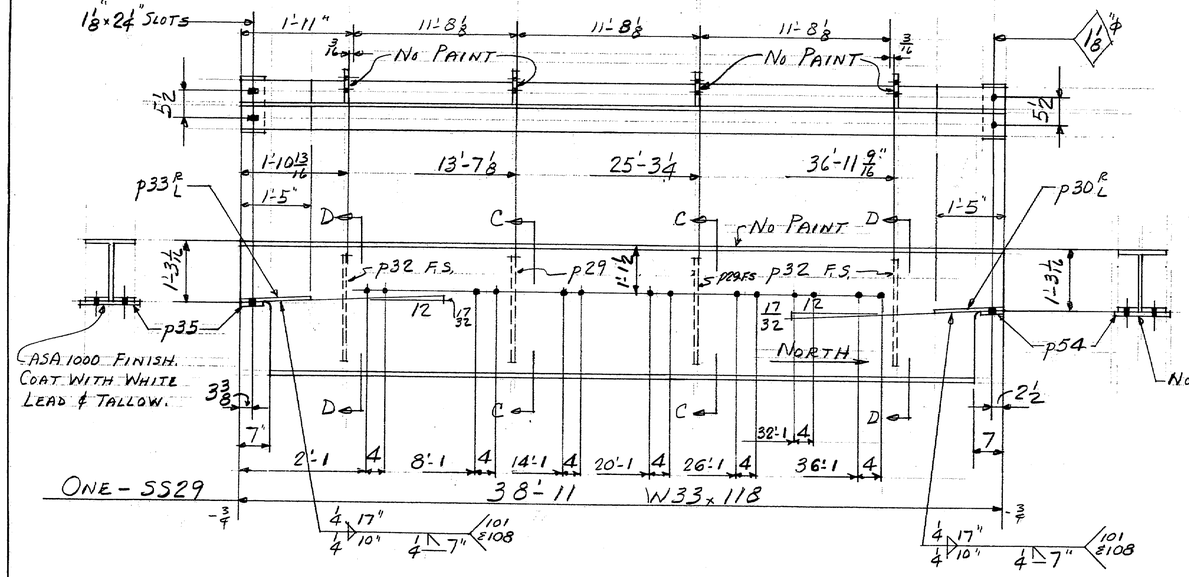
161-58

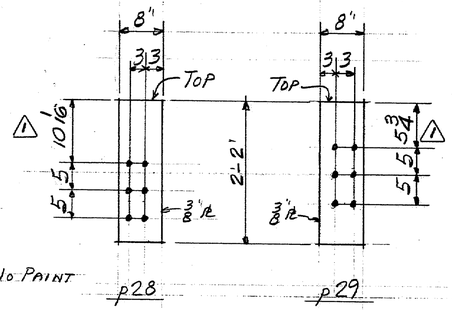




FOR SECTIONS A-A, B-B, C-C & D-D SEE DWG S-12.

PLACE ANY NATURAL CAMBER UP.





SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
5528	1		W33 x 118	39 2¼		CHARPY V-NOTCH REQD
5529	1		DO.	38 11		CHARPY V-NOTCH REQD
	4	p30 R L	BAR 5½ x ¾	1 5		2-R 2-L
	4	p33 R L	DO.	1 5		2-R 2-L
	2	p31	BAR 8 x ⅜	2 2		
	4	p32	DO.	2 2		
	2	p28	DO.	2 2		
	4	p29	DO.	2 2		
	2	p54	PL ¾ x 12	0 5		
	2	p35	BAR 6 x ¾	1 0		ASA 1000 FINISH ON ONE SIDE

BILL OF MATERIAL JOB NO. J-220 DWG. NO. S-13

NOTE:
NO PAINT TOP EDGES OF TOP FLANGES

A36 STEEL
PROJ. 026-1 (50) ITEM 504.70

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: 19
HOLES: 15/16" ϕ UNLESS NOTED.
FIELD CONN: ⅞" ϕ & 1" ϕ A325-F
PAINT: SEE NOTE ON DWG. S-1.

FINAL

APPR.	10-1-79	11-2-79
APPR.		
SHOP		11-2-79
F. & O.	12-12-79	
DRAWN	9-13-79	D.R.
CHECKED	—	
⚠1 REVISION	10-18-79	P.L.F.
REVISION		
REVISION		

STRINGERS (SPAN 2) (2)

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

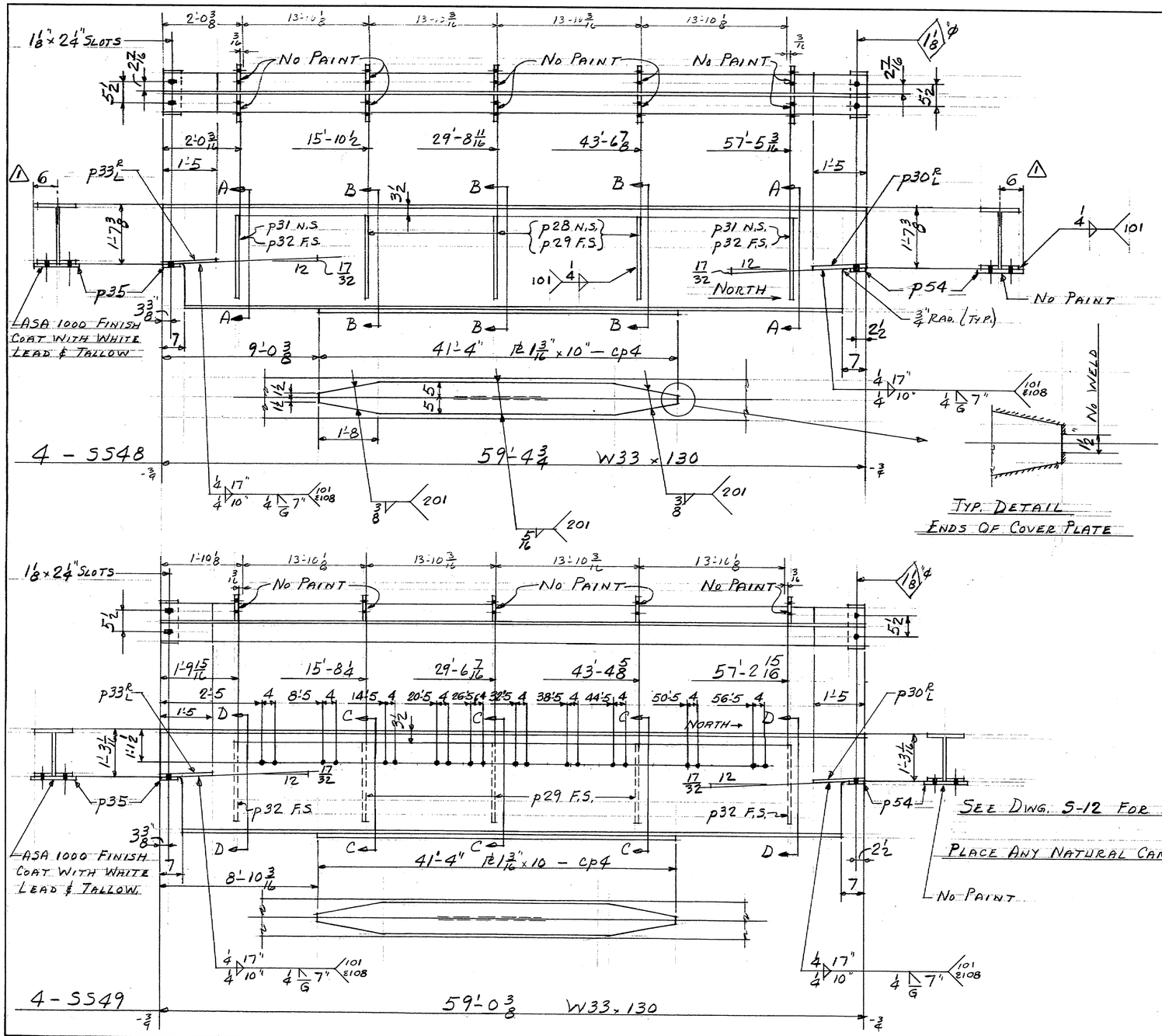
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-13

161-59

Boston Blue Print 7/69



SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
S548	4		W33 x 130	59 4¾		CHARPY V-NOTCH REQD
S549	4		DO.	59 0⅜		CHARPY V-NOTCH REQD
	8	cp4	PL 1 3/16 x 10	41 4		CHARPY V-NOTCH REQD
	16	p30 R L	BAR 5½ x ¾	1 5		8-R 8-L
	16	p33 R L	DO.	1 5		8-R 8-L
	8	p31	BAR 8 x ⅜	2 2		DET. ON S-13
	16	p32	DO.	2 2		
	12	p28	DO.	2 2		
	24	p29	DO.	2 2		
	8	p54	PL ¾ x 12	0 5		
	8	p35	BAR 6 x ¾	1 0		ASA 1000 FIN. ONE SIDE

NOTE:
NO PAINT TOP & EDGES OF TOP FLANGES.

A36 STEEL
PROJ. 026-1 (50) ITEM 504.70

APPR.	10-1-79	11-2-79
APPR.		
SHOP		11-2-79
F. & O.	12-12-79	
DRAWN	9-14-79	D.R.
CHECKED	—	
1 REVISION	10-18-79	P.L.F.
REVISION		
REVISION		

FINAL

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: 19
HOLES: 15/16 ϕ UNLESS NOTED.
FIELD CONN: ⅞ ϕ 1" ϕ A325-F
PAINT: SEE NOTE ON DWG. S-1
STRINGERS (SPANS 4, 5, 6, 7) (8)

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

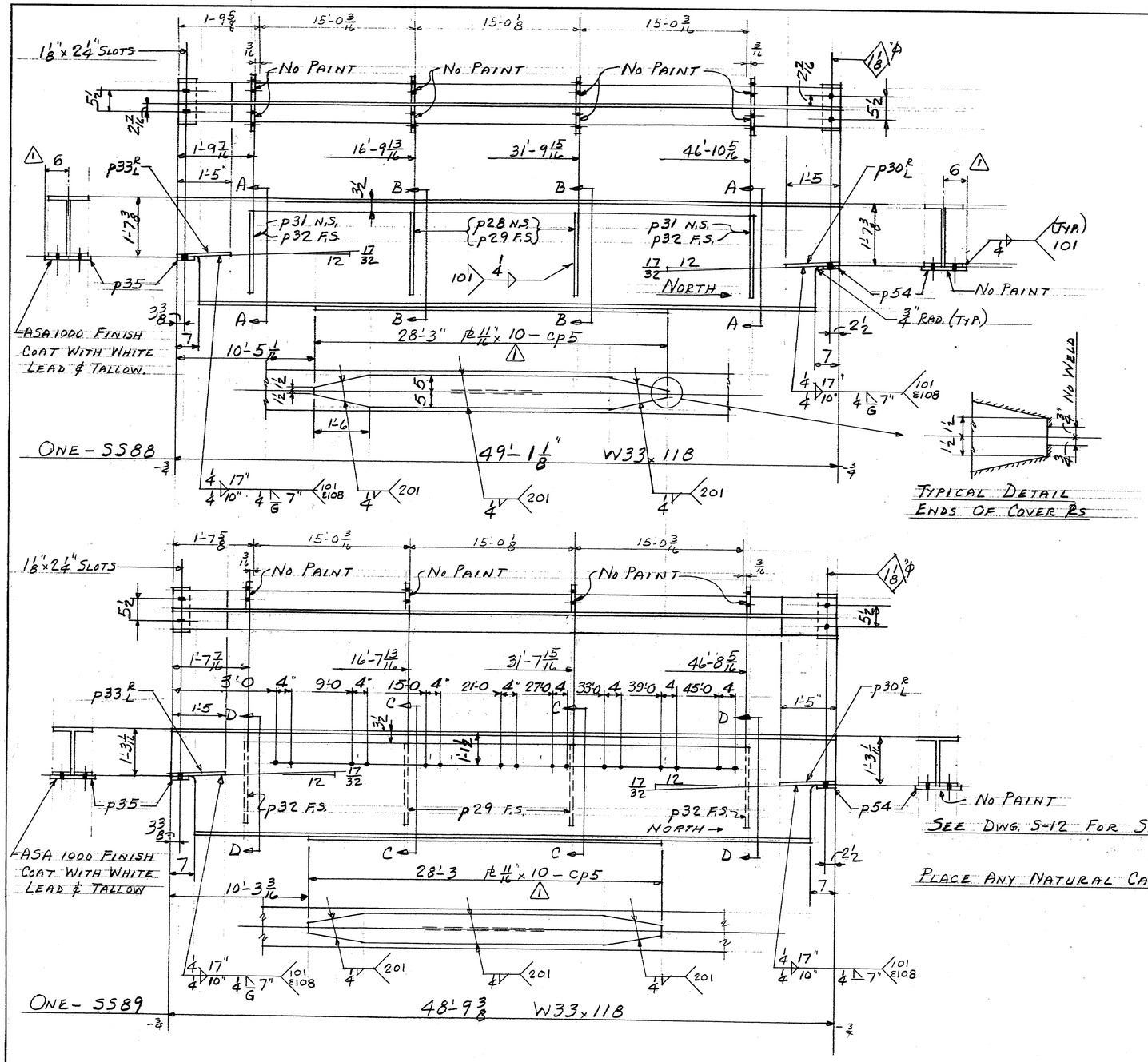
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-14

Boston Blue Print 7109

161-60



SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
SS88	1		W33x118	49 1 1/8		CHARPY V NOTCH REQ'D
SS89	1		DO.	48 9 3/8		CHARPY V NOTCH REQ'D
	2	CP5	PL 11/16 x 10	28 3		CHARPY V NOTCH REQ'D
	4	P30 R L	BAR 5 1/2 x 3/4	1 5		2-R 2-L
	4	P33 R L	DO.	1 5		2-R 2-L
	2	P31	BAR 8 x 3/8	2 2		DET. ON S-13.
	4	P32	DO.	2 2		
	2	P28	DO.	2 2		
	4	P29	DO.	2 2		
	2	P54	PL 3/4 x 12	0 5		
	2	P35	BAR 6 x 3/4	1 0		ASA 1000 FINISH. 1 SIDE

NOTE:
NO PAINT TOP EDGES
OF TOP FLANGES

A36 STEEL

PROJ. 026-1 (50) ITEM 504.70

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: 19
HOLES: 13/16" ϕ UNLESS NOTED.
FIELD CONN: 7/8" ϕ ℓ 1" ϕ A325-F
PAINT: SEE NOTE ON DWG. S-1.

STRINGERS (SPAN 8) (2)

FINAL

APPR.	10-1-79	11-2-79
APPR.		
SHOP		11-2-79
F. & O.	12/27/79	
DRAWN	9-19-79	D.R.
CHECKED	✓	
⚠1 REVISION	10-18-79	P.L.F.
REVISION		
REVISION		

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

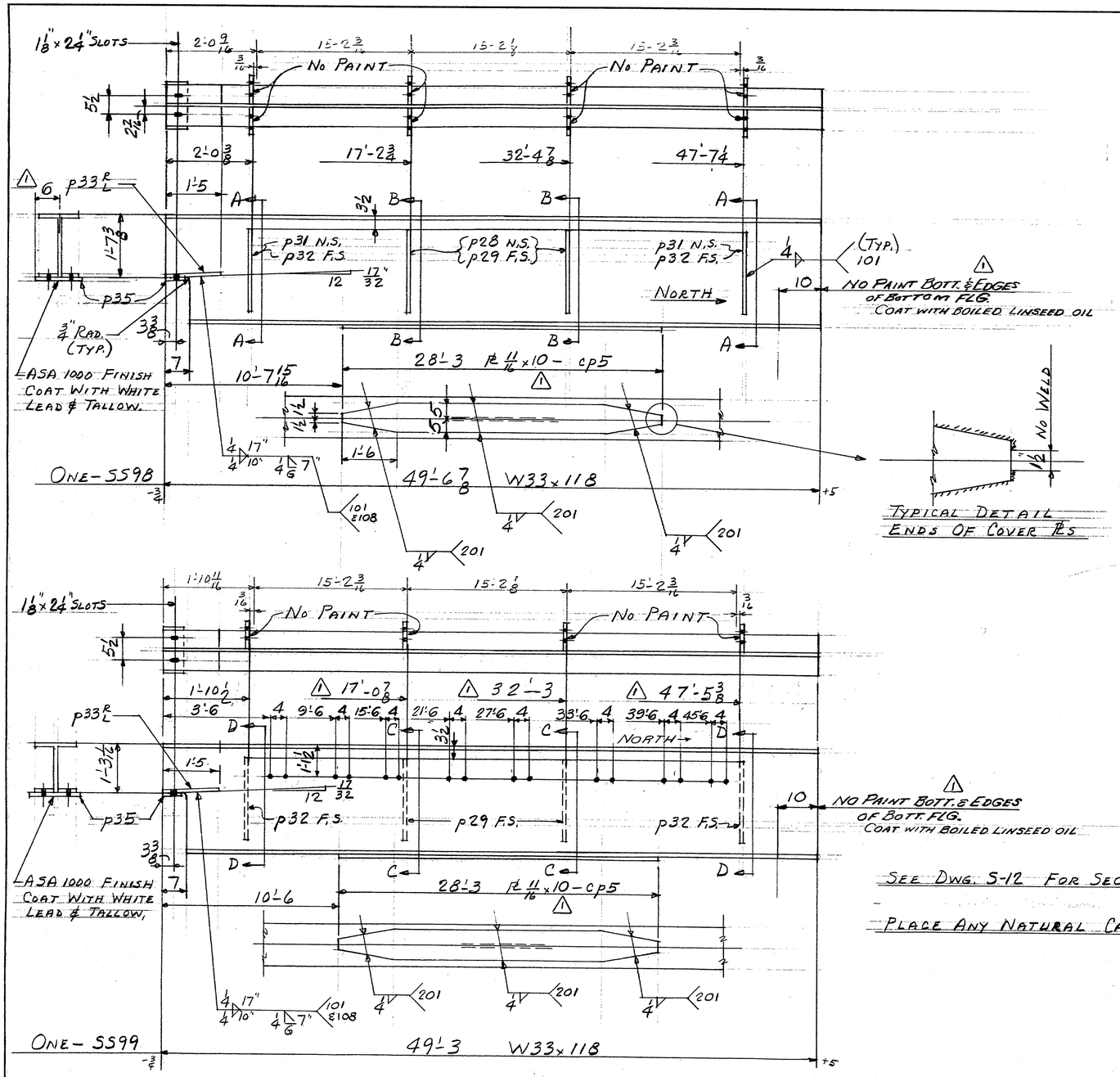
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-15

161-61

Boston Blue Print 70109



SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
S598	1		W33x118	49 6⅞		CHARPY V-NOTCH REQ'D
S599	1		DO.	49 3		CHARPY V-NOTCH REQ'D
	2	cp5	PL 11/16" x 10	28 3		CHARPY V-NOTCH REQ'D
	4	p33	BAR 5½ x ¾	1 5		2R, 2-L
	2	p31	BAR 8 x ⅜	2 2		DET. ON S13.
	4	p32	DO.	2 2		
	2	p28	DO.	2 2		
	4	p29	DO.	2 2		
	2	p35	BAR 6 x ¾	1 0		ASA 1000 FINISH 1 SIDE
	NOTE:- 6" LONG BOLTS TO HAVE 2½" OF THREAD					
FIELD BOLTS FOR SPAN STRINGERS:						
S-16A	36		1"ϕ BOLT	0 4¾		A325
S-16B	36		DO.	0 6		DOUBLE-NUTS
S-16C	108		1"ϕ WASHER			
FIELD BOLTS FOR DIAPHRAGMS:						
S-16D	710		⅞"ϕ BOLTS	0 2¼		A325 - TYPE 1
S-16E	1100		⅞"ϕ BOLT	0 2		
S16F	1810		⅞" WASHER	~		
	NOTE: NO PAINT TO BE EDGES OF TOP FLANGES.					

A36 STEEL
PROJ. 026-1 (50) ITEM 504.70

SEE DWG. S-12 FOR SECTIONS.

PLACE ANY NATURAL CAMBER UP.

FINAL

APPR.	10-1-79	11-2-79
APPR.		
SHOP		11-2-79
F. & O.	12-12-79	
DRAWN	9-14-79	D.R
CHECKED		
Δ REVISION	10-18-79	P.L.F.
REVISION		
REVISION		

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: 19
HOLES: 15/16" ϕ UNLESS NOTED
FIELD CONN: ⅞" ϕ & 1" ϕ A325-F
PAINT: SEE NOTE ON DWG. S-1.
STRINGERS (SPAN 9) (2)

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

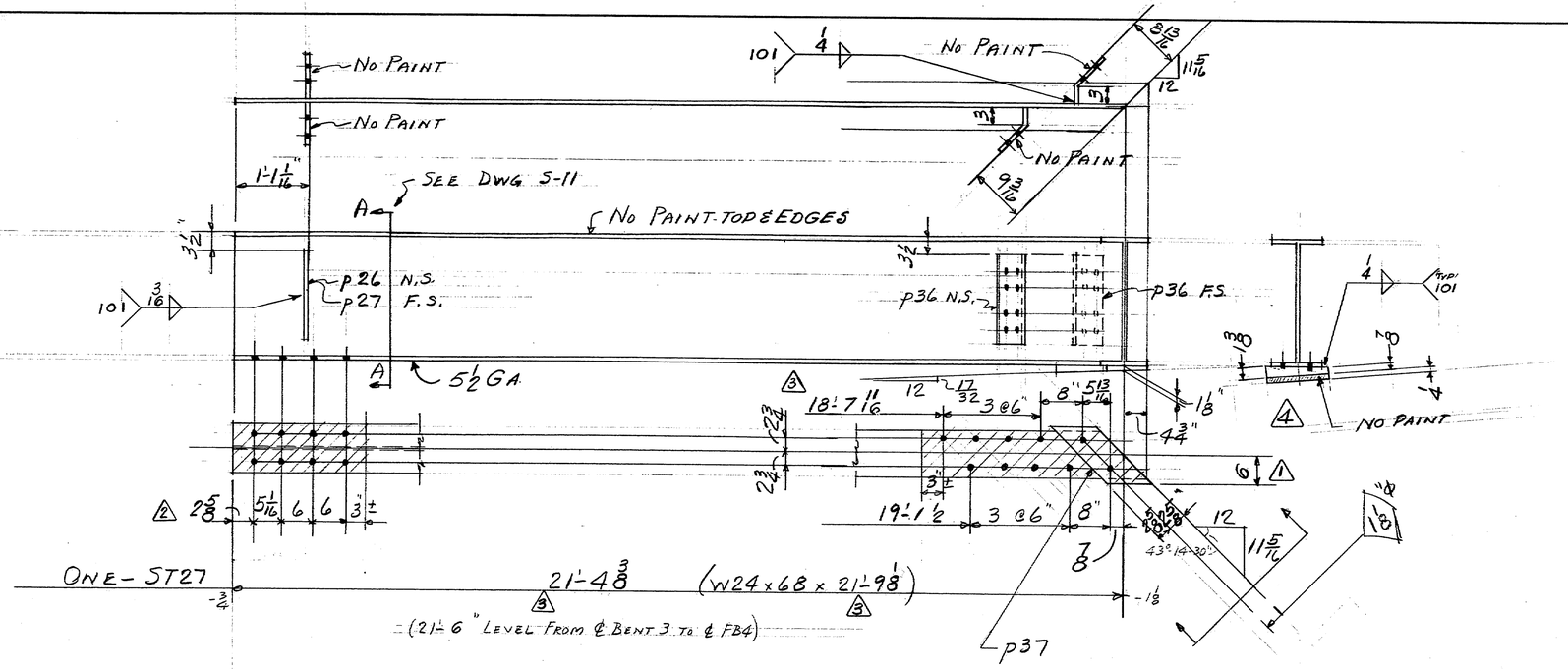
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

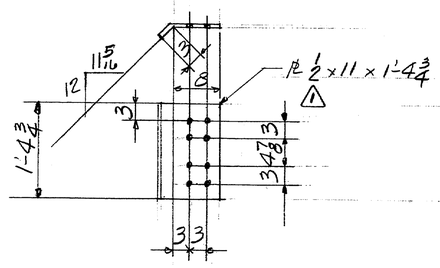
CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-16

Boston Blue Print 7109

161-62





SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
ST27	1		W24x68	21 9⅛		CHARPY V-NOTCH REQ'D
	1	p26	BAR 8x⅜	1 4¾		DETAIL ON S-11.
	1	p27	DO.	1 4¾		
	2	p36	PL ½x11	1 4¾		BEND
	1	p37	PL 13⅝x12	1 11		BEVEL, MACHINE P.O.10Z6
S-17A	2		1"ϕ BOLT	0 6		A325 TYPE 1
S-17B	2		1"ϕ WASHER			
			BOLTS FOR EXIST. STRINGERS TO FLOOR BMS.			
S17C	16		1"ϕ BOLT	0 4		WITH 2 NUTS, RETHREAD-2½"
S17D	16		1"ϕ BOLT	0 4¼		
S17E	48		1" WASHER	—		
S17F	8		⅞ϕ BOLT	0 2¼		A325 TYPE 1
S17G	86		DO	0 2½		
S17H	44		DO	0 2¾		
S17J	3		DO	0 3		
S17K	5		DO	0 4¼		
S17M	30		⅞ϕ BOLT	0 4½		
S17N	176		⅞" WASHER	—		

A36 STEEL
PROJ. 026-1 (50) ITEM 504.70

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: 20
HOLES: 15/16" ϕ UNLESS NOTED,
FIELD CONN: ⅞" ϕ F 1" ϕ A325
PAINT: SEE NOTE ON DWG. S-1

FINAL

STRINGER (TOWER #2)

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

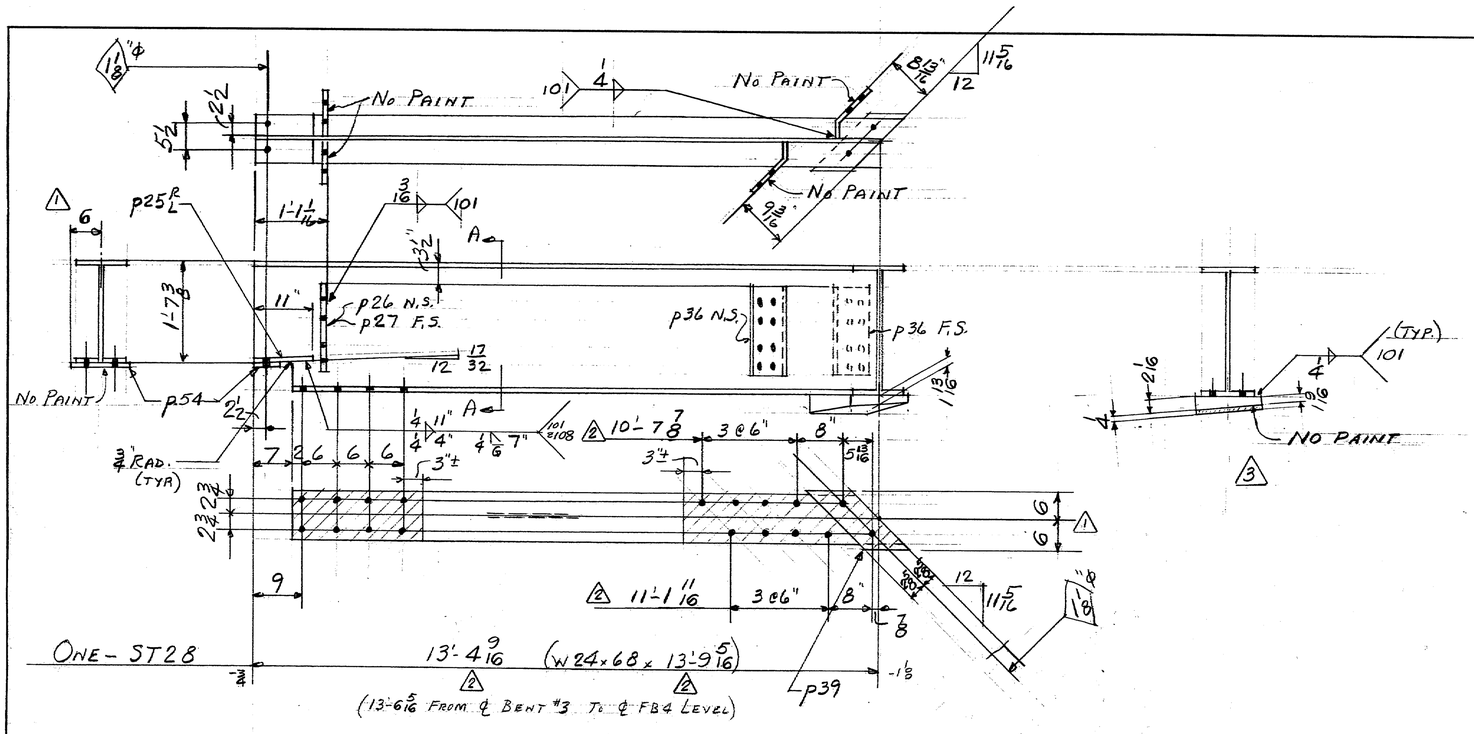
CUSTOMER REED & REED,
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-17

APPR.	10-1-79	11-2-79	
APPR.	11-20-79		
SHOP	11-20-79	11-2-79	
F. & O.	12-12-79		
DRAWN	9-17-79	D.R.	
CHECKED	—		
1 REVISION	10-18-79	P.L.F.	
2 REVISION	10-29-79	P.L.F.	
3 REVISION	11-2-79	P.L.F.	
4	11-8-79	P.L.F.	

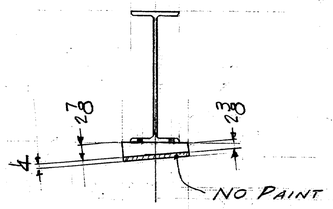
161-63

Boston Blue Print 7009



SEE DWG. S-11 FOR SECTION AA.

PLACE ANY NATURAL CAMBER UP.



SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
ST28	1		W24x68	13 9 5/16		CHARPY V-NOTCH REQ'D
ST29	1		DO.	4 2 5/16		CHARPY V-NOTCH REQ'D
	1	p26	BAR 8x 3/8	1 4 3/4		DET. ON S-11,
	2	p27	DO.	1 4 3/4		
	3	p36	PL 1/2 x 11	1 4 3/4		BEND - DET. ON S-17
3	1	p39	PL 2 5/16 x 12	1 11		BEVEL, MACHINE PO.1026
3	1	p40	PL 3 1/8 x 12	1 11		BEVEL, MACHINE PO.1026
	4	p25 L R	PL 3/4 x 4 1/2	0 11		2R, 2L
	2	p54	PL 3/4 x 12	0 5		
S-18A	2		1"ϕ BOLT	0 6 3/4		A325 - TYPE 1
S-18B	2		DO.	0 7 1/2		
	4		1"ϕ WASHER			

NOTE:
NO PAINT TOP & EDGES OF TOP FLANGES.

A36 STEEL

PROJ. 026-1 (50) ITEM 504.70

CUSTOMER ORDER NO.: 2738

REFERENCE DRAWINGS: 20

HOLES: 15/16" ϕ UNLESS NOTED.

FIELD CONN: 7/8" ϕ F 1" ϕ A325

PAINT: SEE NOTE ON DWG. S-1

FINAL

STRINGERS (TOWER #2) (2)

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

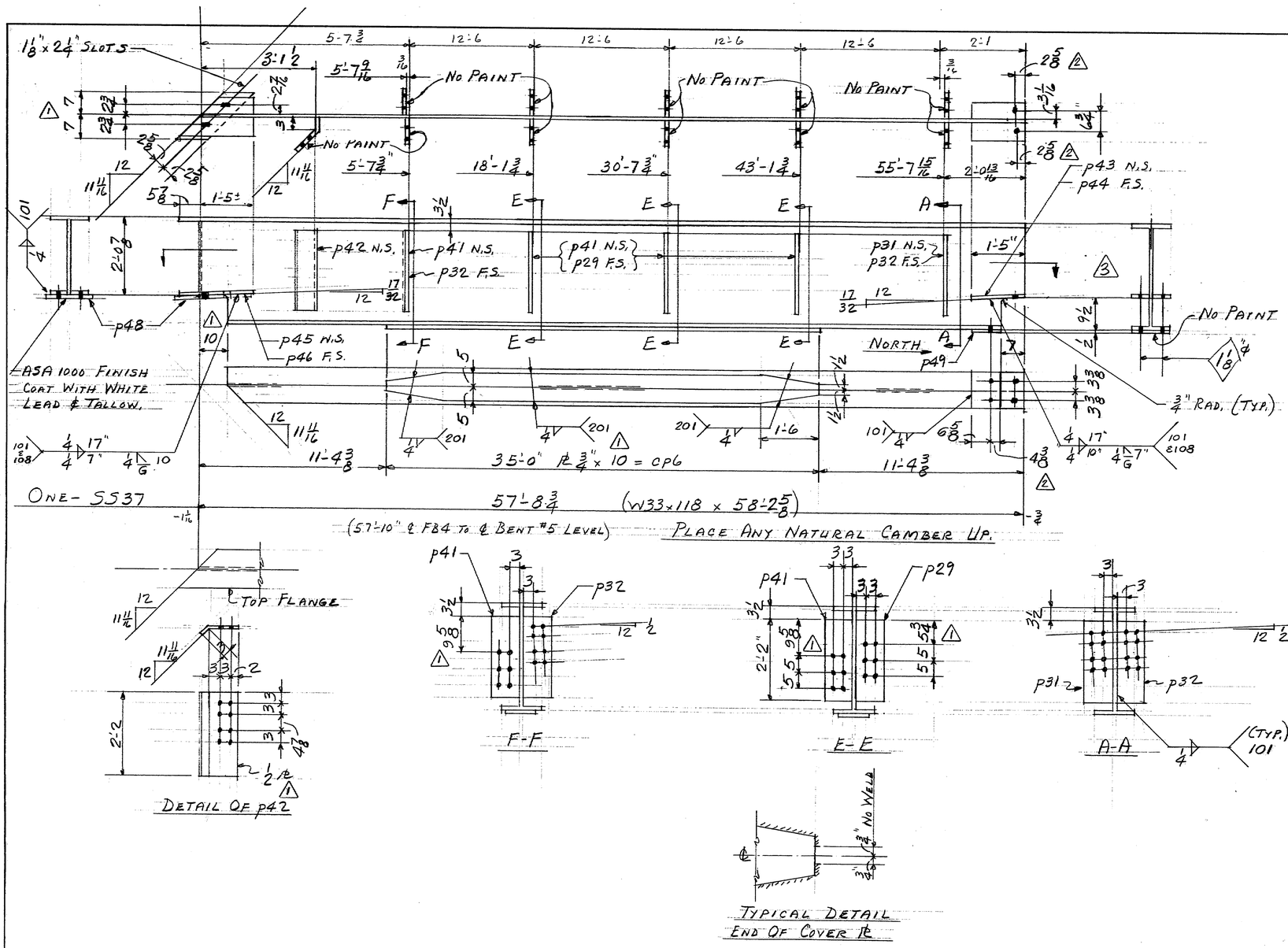
CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-18

APPR.	10-1-79	11-2-79	
APPR.	11-20-79		
SHOP	11-20-79	11-2-79	
F. & O.	12-12-79		
DRAWN	9-17-79	D.R.	
CHECKED			
1 REVISION	10-18-79	P.L.F.	
2 REVISION	11-2-79	P.L.F.	
3 REVISION	11-8-79	P.L.F.	

161-64

Boston Blue Print 7929



SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
S537	1		W33x118	58	2 5/8		Charpy V-Notch Req'd
	1	cp6	PL 3/4 x 10	35	0		Charpy V-Notch Req'd
	3	p29	Bar 8 x 3/8	2	2		
	2	p32	Do.	2	2		Det. On S-13
	1	p31	Do.	2	2		
	4	p41	Do.	2	2		
	1	p42	PL 1/2 x 11	2	2		Bend
	1	p49	PL 1/2 x 1'-0	0	11		
	1	p48	Bar 54 x 3/4	2	1 7/16		ASA 1000 Finish on 1 Side
	1	p43	Bar 5 1/2 x 3/4	1	5		
	1	p44	Do.	1	5		
	1	p45	Do.	1	10 3/8		
	1	p46	Do.	1	5		

BILL OF MATERIAL — JOB NO. J-220 DWG. NO. S-19

NOTE:
NO PAINT TOP & EDGES OF TOP FLANGE.

A36 Steel
Proj. 026-1 (50) Item 504.70

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: 20
HOLES: 15/16" ϕ Unless Noted.
FIELD CONN: 7/8" ϕ F1" ϕ A325-F
PAINT: See Note On Dwg. S-1

FINAL

APPR.	10-1-79	11-2-79
APPR.		
SHOP		11-2-79
F. & O.	12-12-79	
DRAWN	9-18-79	D.R
CHECKED	✓	
1 REVISION	10-18-79	P.L.F.
2 REVISION	10-29-79	P.L.F.
3 REVISION	11-7-79	P.L.F.

STRINGER (SPAN 3)

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

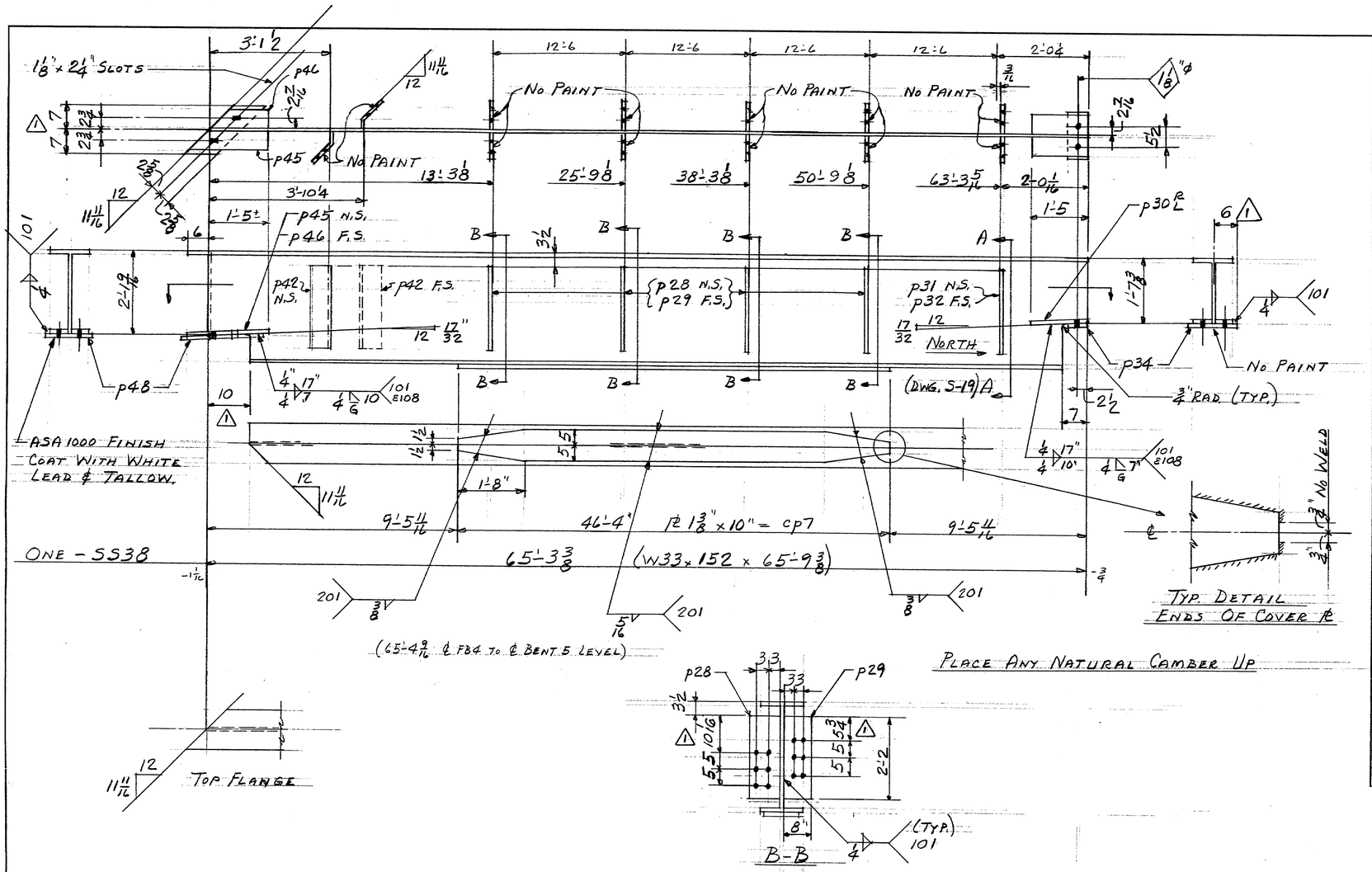
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER Reed & Reed
ARCHITECT State of Maine D.O.T.

JOB NO. J-220 DWG. NO. S-19

Boston Blue Print 7109

161-65



SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
S538	1		W33x152	65 9⅜		CHARPY V-NOTCH REQ'D
	1	cp7	℄ 1⅜x10	46 4		CHARPY V-NOTCH REQ'D
	4	p28	BAR 8x⅜	2 2		
	4	p29	DO.	2 2		
	1	p31	DO.	2 2		DETAIL ON S-13
	1	p32	DO.	2 2		
	2	p42	℄ ½x11	2 2		BEND (DET. ON S-19)
	1	p34	℄ ¾x12	0 5		
	1	p48	BAR 5¼x¾	2 1 7/16		ASA 1000 FINISH ON 1 SIDE
	2	p30 ℄	BAR 5½x¾	1 5		1-R 1-L
	1	p45	DO.	1 10⅝		
	1	p46	DO.	1 5		

NOTE:
NO PAINT TOP & EDGES OF TOP FLANGE

BILL OF MATERIAL JOB NO. J-220 DWG. NO. S-20

A36 STEEL
PROJ. 026-1 (50) ITEM 504.70

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: 20
HOLES: 15/16" ϕ UNLESS NOTED.
FIELD CONN: ⅞ ϕ 1" ϕ A325-F
PAINT: SEE NOTE ON DWG. S-1

FINAL

APPR.	10-1-79	11-2-79
APPR.		
SHOP		11-2-79
F. & O.	12-12-79	
DRAWN	9-18-79	D.R.
CHECKED	✓	
⚠1 REVISION	10-18-79	P.L.F.
REVISION		
REVISION		

STRINGER (SPAN 3)

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

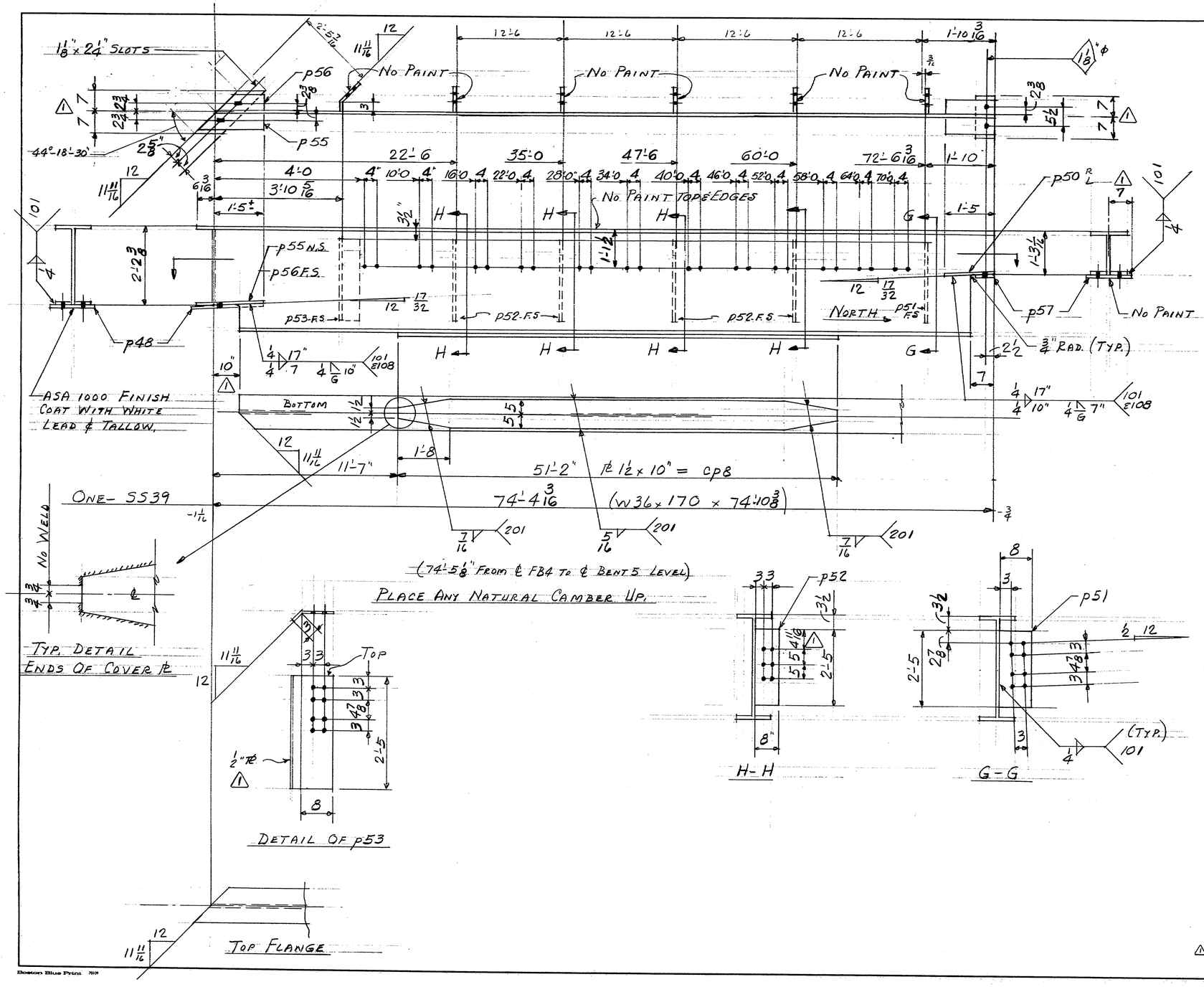
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-20

Boston Blue Print

161-66



SHIP MARK	BILL OF MATERIAL NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
5539	1		W36x170	74 10 3/8		CHARPY V-NOTCH REQ'D
	1	CP8	PL 1/2 x 10	51	2	CHARPY V-NOTCH REQ'D
	1	p51	BAR 8 x 3/8	2	5	
	4	p52	Do.	2	5	
	1	p53	PL 1/2 x 11	2	5	BEND
	2	p50 ℄	BAR 5 1/2 x 3/4	1	5	L-R L-L
	1	p55	Do.	1	10 5/8	
	1	p56	Do.	1	5	
	1	p57	BAR 5 x 3/4	1	2	
	1	p48	BAR 54 x 3/4	2	1.6	ASA 1000 FINISH - 1 SIDE
S21A	300		5/8 Carriage Bolt	0	1/2	A307

A36 Steel
Proj. 026-1 (50) Item 504.70

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: 20
HOLES: 15/16" ϕ Unless Noted.
FIELD CONN: 7/8" ϕ 1" ϕ A325-F
PAINT: See Note On Dwg. S-1

Stringer (Span 3)

FINAL

APPR.	10-1-79	11-2-79
APPR.		
SHOP		11-2-79
F. & O.	12/2/79	
DRAWN	9-19-79	D.R.
CHECKED	✓	
⚠ REVISION	10-12-79	P.L.F
REVISION		
REVISION		

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

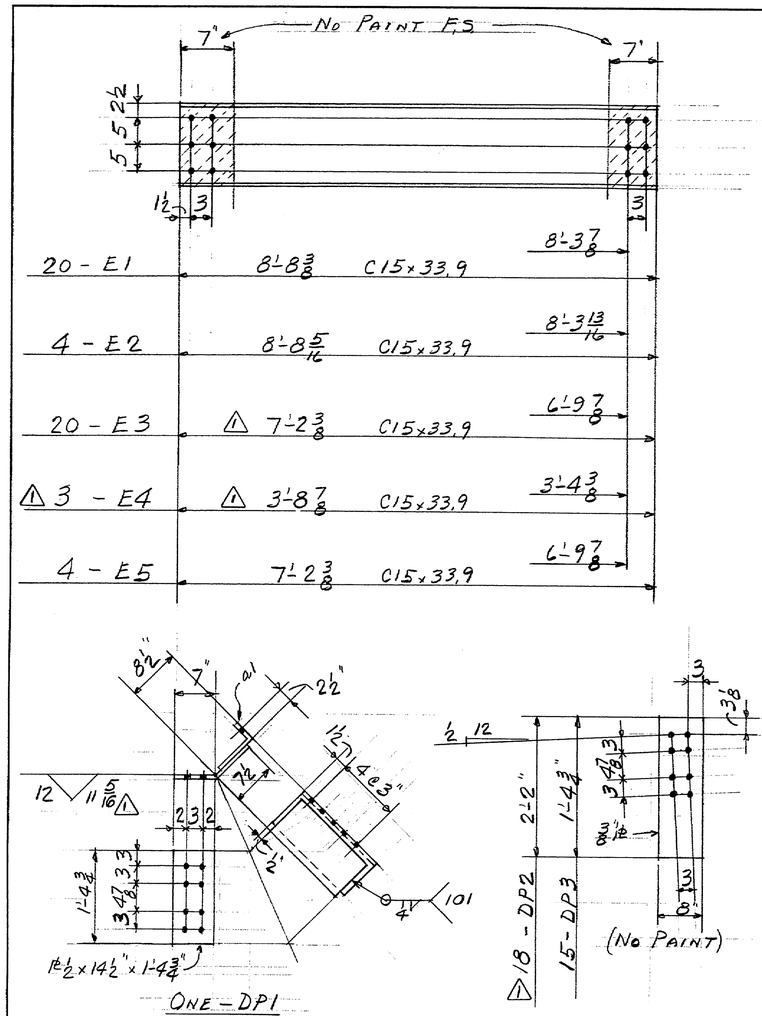
Overhead Bridge Widening
Woolwich, Maine

CUSTOMER Reed & Reed
ARCHITECT State Of Maine D.O.T.

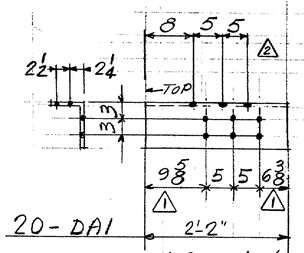
JOB NO. J-220 DWG. NO. S-21

161-67

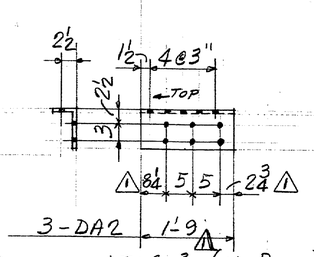
Boston Blue Print 7910



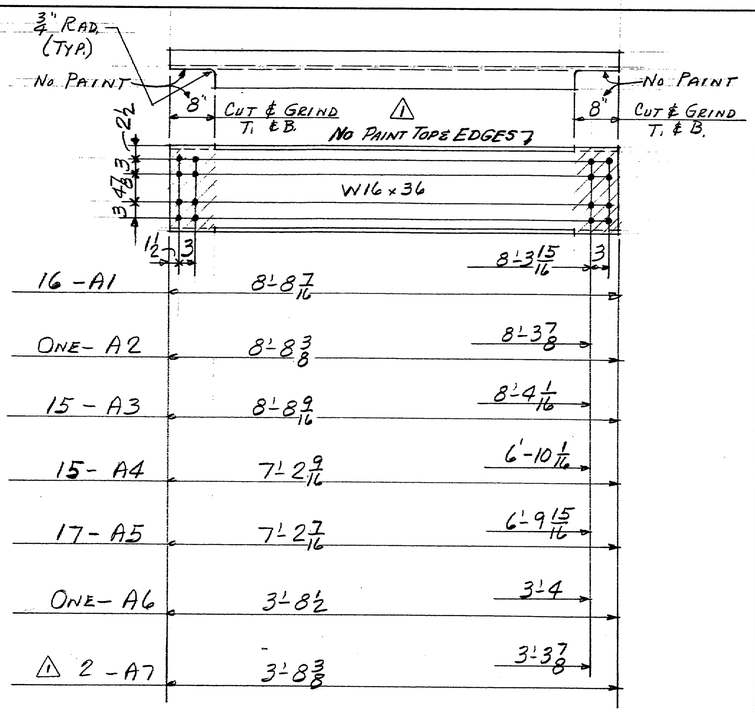
ONE - DP1
(NO PAINT)

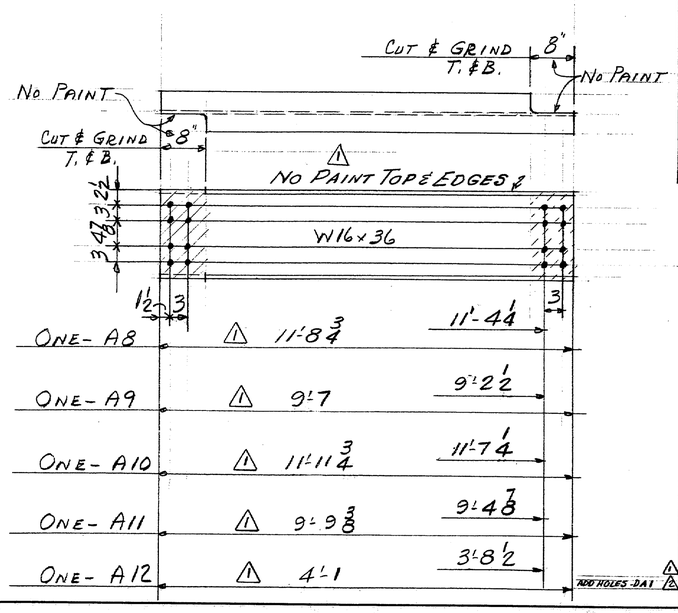


L8x6x½ (NO PAINT)



L7x4x⅜ (NO PAINT)





SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
E1	20		C15x33.9	8 8 3/8		
E2	4		DO.	8 8 5/16		
E3	20		DO.	7 2 3/8		
E4	3		DO.	3 8 7/8		
E5	4		DO.	7 2 3/8		
A1	16		W16x36	8 8 7/16		
A2	1		DO.	8 8 3/8		
A3	15		DO.	8 8 9/16		
A4	15		DO	7 2 9/16		
A5	17		DO.	7 2 7/16		
A6	1		DO.	3 8½		
A7	2		DO.	3 8 3/8		
A8	1		DO.	11 8 3/4		
A9	1		DO.	9 7		
A10	1		DO.	11 11 3/4		
A11	1		DO	9 9 3/8		
A12	1		DO.	4 1		
DP1	1		PL½x14½	1 4 3/4		BEND
DP2	18		BAR 8x⅜	2 2		
DP3	15		DO.	1 4 3/4		
DA1	20		L8x6x½	2 2		
DA2	3		L7x4x⅜	1 9		
	1	a1	L8x4x½	1 5 3/4		
S22A	5		⅞ BOLT	0 3		DP1
S22B	16		DO.	0 2 3/4		DA2 } A325-TYPE 1
S22C	21		⅞ WASHER	—		
S22D	122		⅞ BOLT	0 2½		DA1 } A325-TYPE 1
S22E	122		⅞ WASHER	—		

BILL OF MATERIAL JOB NO. J-220 DWG. NO. S-22

A36 STEEL

PROJ. 026-1(50) ITEM 504.70

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: 21
HOLES: 15/16" ϕ
FIELD CONN: ⅞" ϕ A325-F
PAINT: SEE NOTES ON DWG. S-1

DIAPHRAGMS

FINAL

APPR.	10-1-79	11-2-79
APPR.		
SHOP	1-16-80	11-2-79
F. & O.	12-1279	
DRAWN	9-20-79	D.R.
CHECKED	✓	
REVISION	10-18-79	P.L.F.
REVISION	1-16-80	P.L.F.
REVISION		

⚠2 ADD HOLES - DA1

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

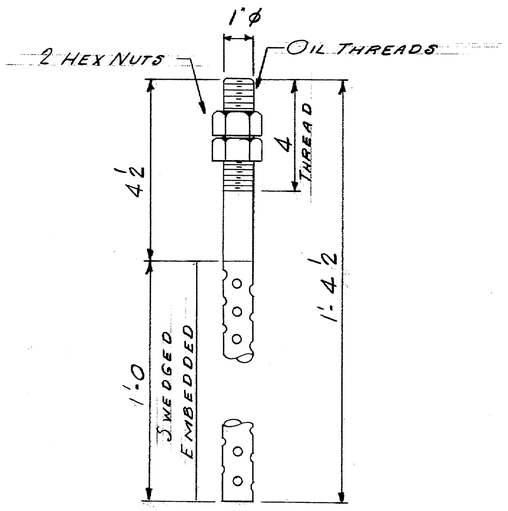
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

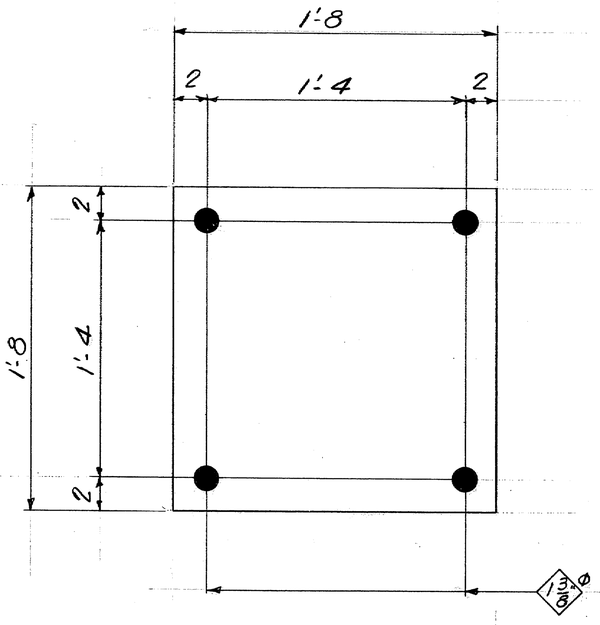
JOB NO. J-220 DWG. NO. S-22

161-68

Boston Blue Print 70109



ANCHOR BOLTS-AB1
16 REQ'D



1" PREFORMED PAD
PP1 - 4 REQ'D

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
AB1	16		BAR 1"ϕ	1 4½		A36
W1	16		1" WASHER	—		A325
	32	SHOP	1" HEX NUT	—		A325
PP1	4		PAD ⅜x20	1 8		PREFORMED PAD

BILL OF MATERIAL JOB NO. J220 DWG. NO. S23

PROJECT NO. ROS-FG-026-1[50]
ITEM NO. 504.70

CUSTOMER ORDER NO. 2738
REFERENCE DRAWINGS: SH 10 & 11
HOLES: AS NOTED
FIELD CONN:
PAINT: NONE OIL BOLT THREADS

FINAL

COLUMN ANCHOR BOLTS & PREFORMED PADS

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

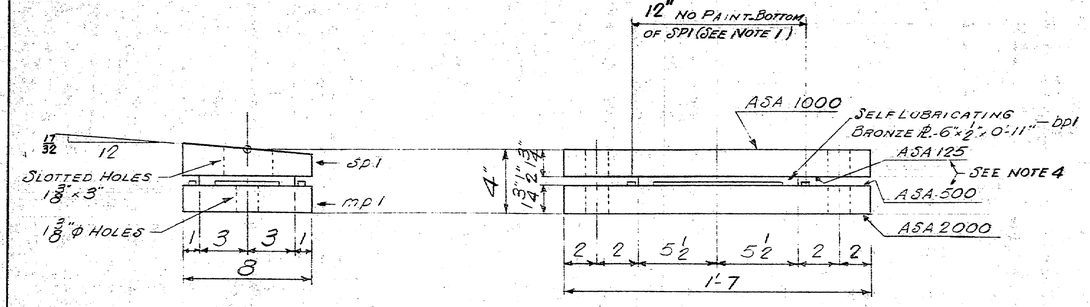
CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J220 DWG. NO. S23

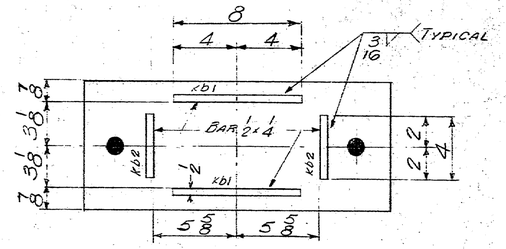
APPR.	11-2-79	10-3-79
APPR.		
SHOP		11-2-79
F. & O.	12-12-79	
DRAWN	P.L.F.	10-3-79
CHECKED	E.E.S.	10-31-79
REVISION		
REVISION		
REVISION		

161-69

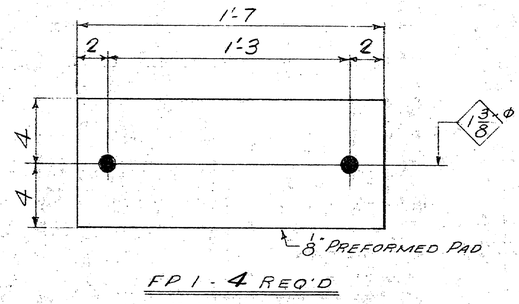
Boston Blue Print 78109



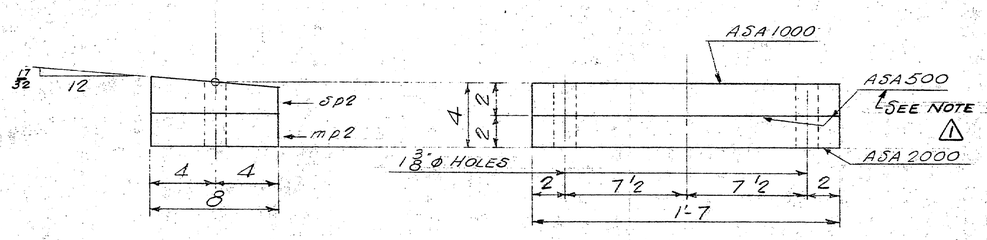
EXPANSION PEDESTAL - EPA
TWO - REQ'D



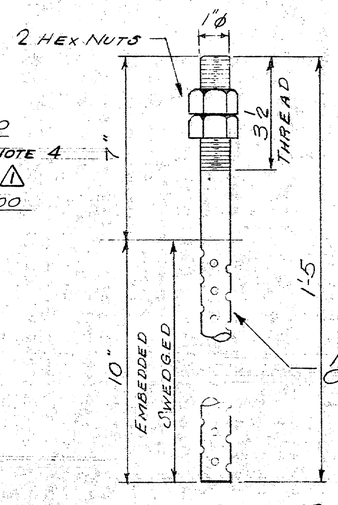
MASONRY PLATE - mp1



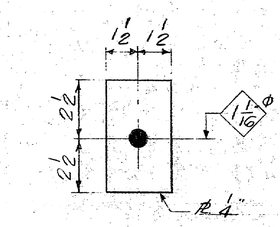
FP1 - 4 REQ'D



FIXED PEDESTAL - FPA
TWO - REQ'D



ANCHOR BOLTS - AB1
8 REQ'D



℄ WASHER 4 REQ'D

NOTE:
1. COAT UNPAINTED SURFACES ASA 125 WITH LUBRICANT SUPPLIED WITH SELF LUBRICATING PLATE.
2. ANY MARKING REQUIRED SHALL BE APPLIED TO BOTTOM OF mp1 & mp2 ONLY.
3. SHIP ASSEMBLED.
4. SURFACES INACCESSIBLE AFTER ERECTION TO BE PAINTED THREE COATS OF SHOP PAINT.

SHIP: BILL OF MATERIAL JOB NO. J220 DWG. NO. S24

MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
EPA	2		EXPANSION PEDESTAL			
FPA	2		FIXED PEDESTAL			
AB1	8		BAR 1"Ø	1 5		
℄ WASHER	4		℄ ¼ x 3	0 5		
STD. WASHER	4		1" STD. WASHER	—		A325 - TYPE 1
	2	mp1	℄ 1¾ x 8	1 7		
	2	mp2	℄ 2 x 8	1 7		
	2	sp1	℄ 1 15/16 x 8	1 7		
	2	sp2	℄ 2 3/16 x 8	1 7		
	4	kb1	℄ ¼ x ½	0 8		
	4	kb2	℄ ¼ x ½	0 4		
		SHOP	1" HEX NUT	—		A325 - TYPE 1
	2	bp1	℄ 6 x ½	0 11		SELF LUBRICATING BRONZE P.O.#
FP1	4		8 x ⅛	1 7		PREFORMED PAD P.O.#
						P.O. 1026

PROJECT NO. RO3-FG-026-1[501]
ITEM NO. 504.70 STRUCTURAL STEEL

STEEL ASTM A36
BLAST CLEAN - S.S. P.C. SP10 (NEAR WHITE)
DO NOT PAINT TOP SURFACE AND 1" DOWN ON SIDES OF SP1 & SP2; COAT WITH BOILED LINSEED OIL.

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS:
HOLES: AS NOTED
FIELD CONN: WELDED
PAINT: TTP 615 D TYPE II

FINAL

EXPANSION PEDESTAL - EPA
FIXED PEDESTAL - FPA

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

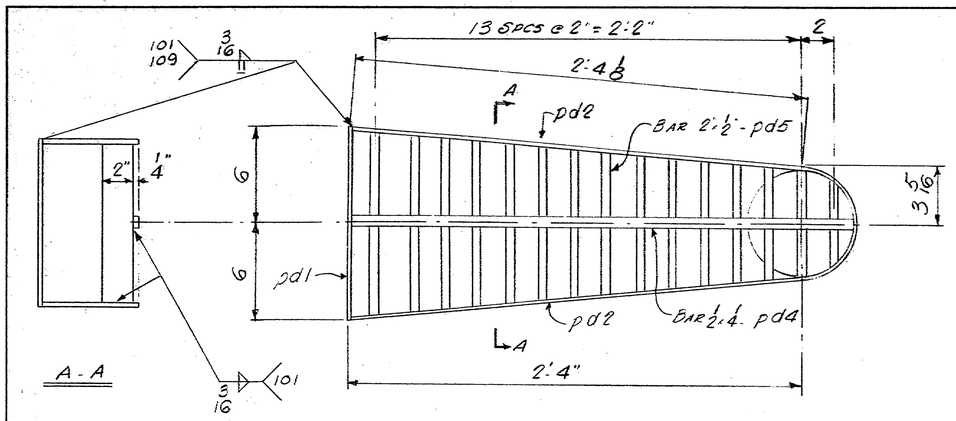
CUSTOMER REED & REED
ARCHITECT MAINE DEPT. OF TRANSPORTATION

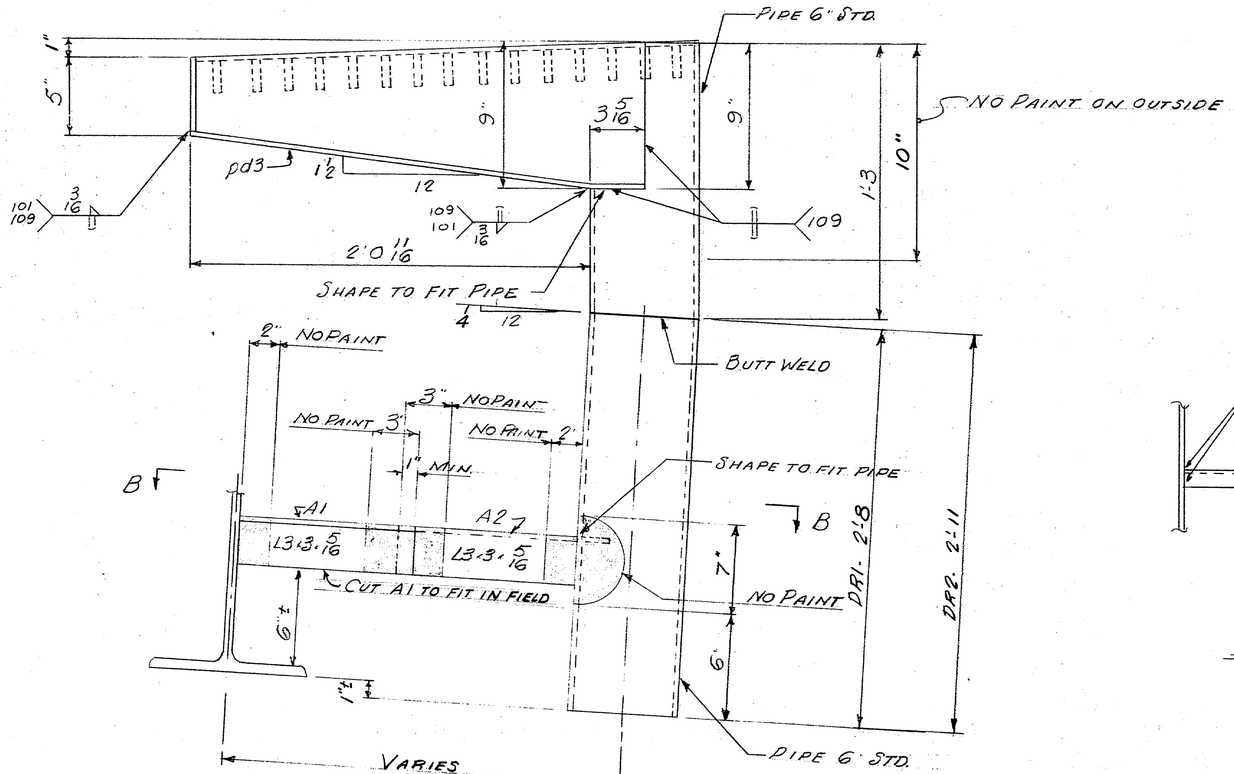
JOB NO. J220 DWG. NO. S24

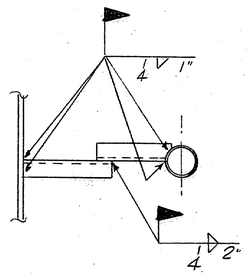
APPR.	11-5-79	10-19-79	
APPR.			
SHOP	11-21-79	11-5-79	
F. & O.	12-17-79		
DRAWN	P.L.F.	10-19-79	
CHECKED	✓		
1 REVISION	P.L.F.	11-21-79	
REVISION			
REVISION			

161-79

Boston Blue Print 7019







B - B

SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
DR1	15		SHOP ASSEMBLY				
DR2	1		DO				
	16	pd1	PL 1/2 x 4 3/4	0	11 1/2		
	32	pd2	PL 1/4 x 9	2	4 1/2		
	16	pd3	PL 1/4 x 12	2	4 1/2		BEND & FIT
	16	pd4	BAR 1/2 x 1/4	2	6 3/4		
	16	pd5	BAR 2 x 1/2	12	0		CUT TO FIT
	16	SHOP	PIPE 6" STD	1	3		ASTM A53 GRADE B
	15	SHOP	PIPE 6" STD	2	8		ASTM A53 GRADE B
	1	SHOP	PIPE 6" STD	2	11		ASTM A53 GRADE B
A1	16		L 3 x 3 x 5/16	1	0		
A2	16		L 3 x 3 x 5/16	3	0		

DRAIN

MAKE 15 MARK "DR1" } (SPANS 1, 2, 4, 5, 6, 7, 8 & 9)

MAKE ONE MARK "DR2" } (SPAN 3)

ITEM NO 502.20

PROJECT NO. ROS. FG-026-1 [50]

A36 STEEL EXCEPT AS NOTED

BLAST CLEAN SPG. (COMMERCIAL BLAST)

CUSTOMER ORDER NO.: 2738

REFERENCE DRAWINGS: B.D 104-77

HOLES: NONE

FIELD CONN: WELD

PAINT: TT P-615 D TYPE II

FINAL

DRAINS

MEGQUIER & JONES CORP.

1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

APPR.	11-6-79	10-19-79
APPR.		
SHOP		11-5-79
F. & O.	12-12-79	
DRAWN	P.L.F.	10-19-79
CHECKED		
REVISION		
REVISION		
REVISION		

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

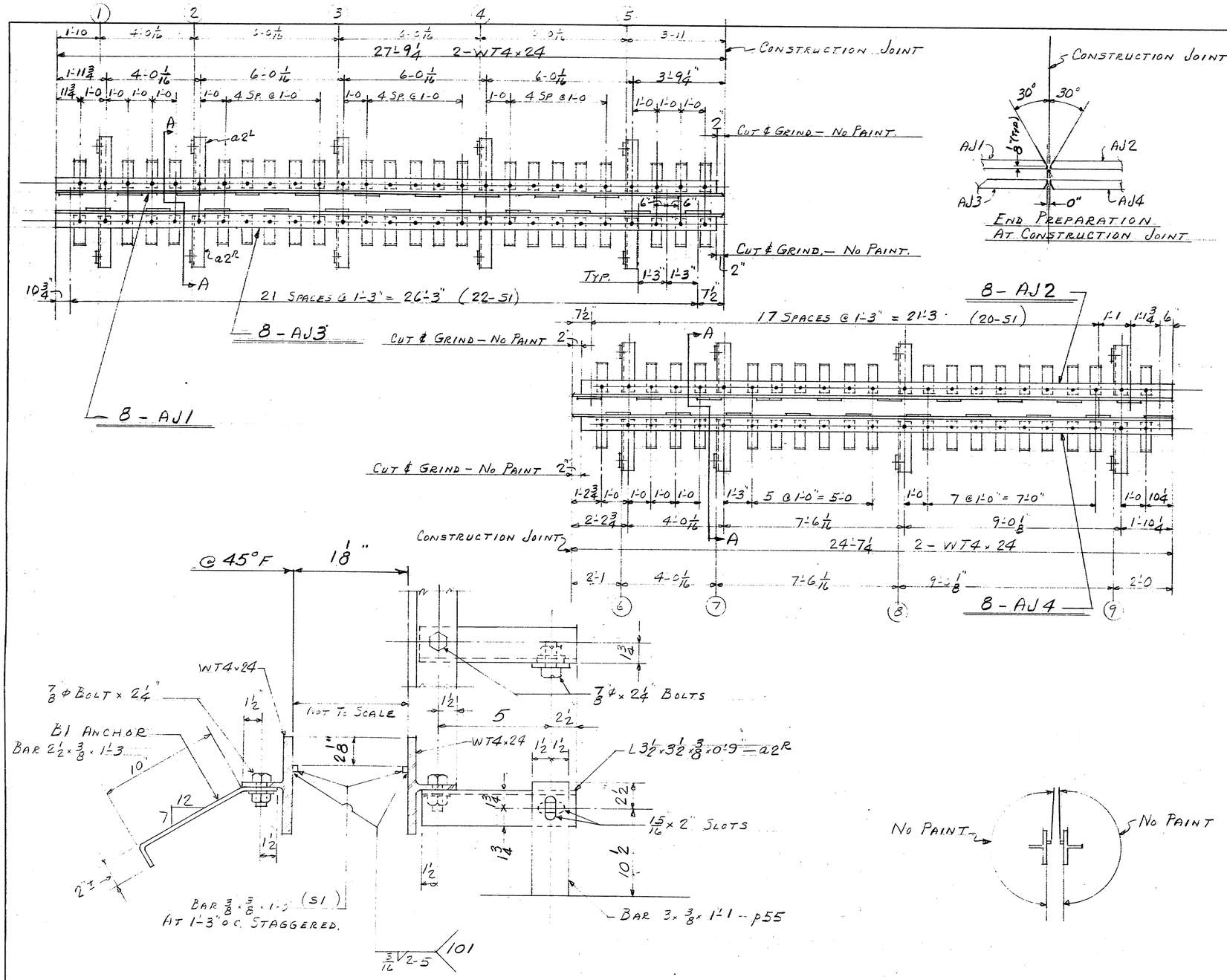
CUSTOMER REED & REED

ARCHITECT MAINE DEPT OF TRANSPORTATION

JOB NO. J 220 DWG. NO. S25

161-71

Boston Blue Print 7/39



SHIP MARK	NO	MARK	SHAPE	LENGTH	WT.	REMARKS
AJ1	8		WT4x24	27 9¼		
AJ2	8		Do.	24 7¼		
AJ3	8		Do.	27 9¼		
AJ4	8		Do.	24 7¼		
	336	S1	BAR ⅜ x ⅜	1 0		
	144	a2L/a2R	L 3½ x 3½ x ⅜	0 9		72-R 72-L
	656	B1	BAR 2½ x ⅜	1 3		BEND
	144	p55	BAR 3 x ⅜	1 1		
	944	SHOP	⅞ ϕ BOLT	0 2¼		A325-TYPE 1
	1088	Do	⅞ ϕ WASHER			
S1	8		PREFORMED JOINT SEAL x 53'-0" ± ACMASEAL J 162			P.O.# 1200

(AT BENTS 1, 3, 5, 7, 9, 11, 13 & 15.

ITEM 504.70 PROJ 026-1(50)

A36 STEEL

APPR.	12.26.79	1-11-80
APPR.		
SHOP	1-11-80	
F. & O.		1.21.80
DRAWN	11-21-79	D.R.
CHECKED	12.13.79	P.L.F.
REVISION	1-9-80	P.L.F.
REVISION		
REVISION		

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: BD-104-77
HOLES: 15/16" ϕ UNLESS NOTED.
FIELD CONN: WELD.
PAINT: SEE NOTE ON DWG. S-1.

ARMORED JOINTS (32)

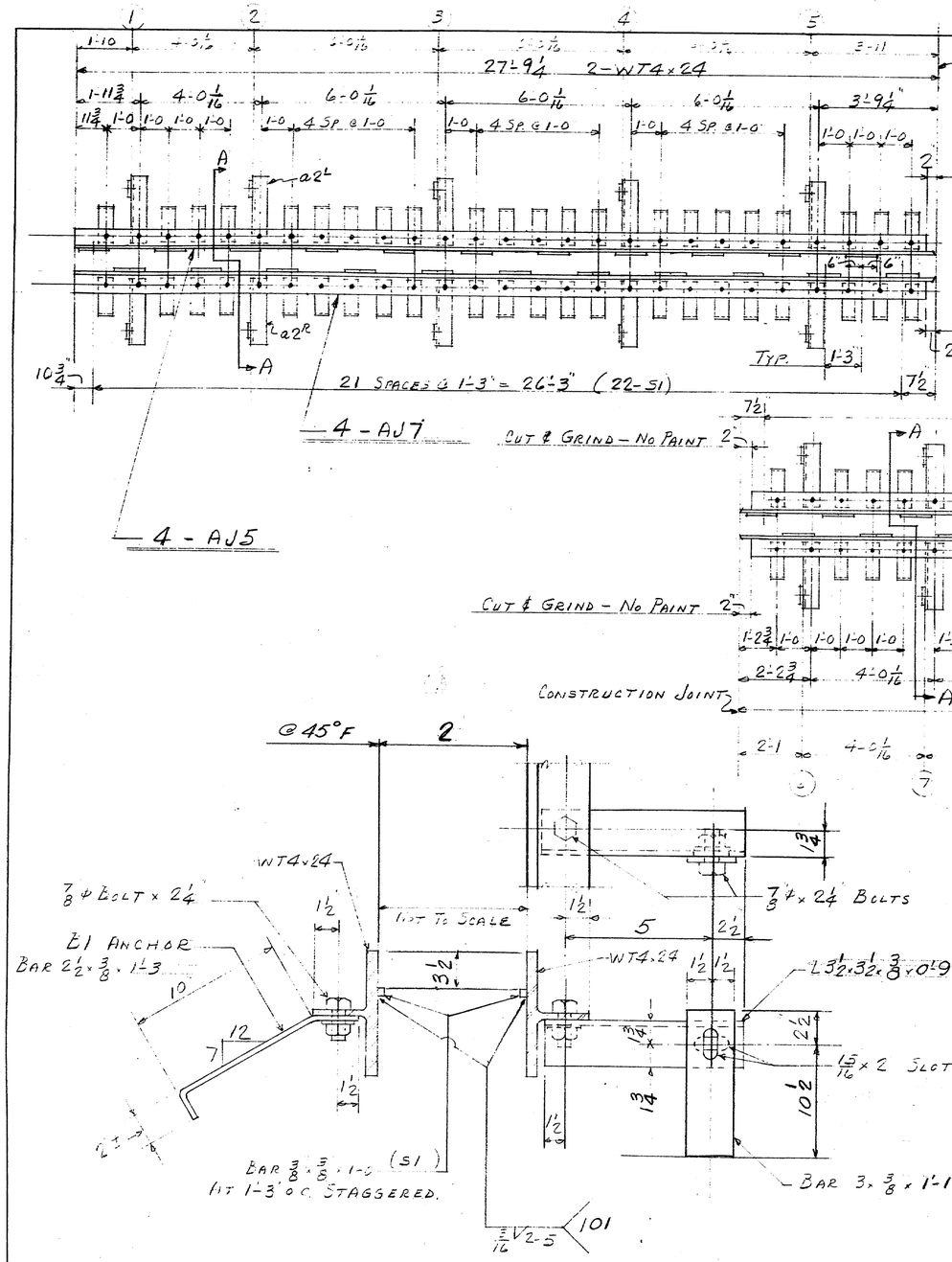
MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

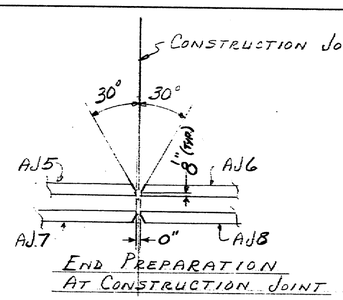
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

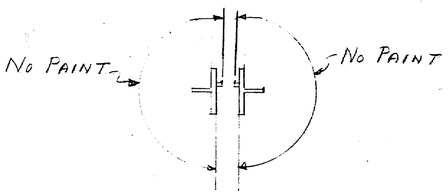
JOB NO J-220 DWG. NO. S-26

161-72





END PREPARATION AT CONSTRUCTION JOINT



SHIP MARK	NO	MARK	SHAPE	LENGTH	WT.	REMARKS
AJ5	4		WT4 x 24	27 9¼		
AJ6	4		Do.	24 7¼		
AJ7	4		Do.	27 9¼		
AJ8	4		Do.	24 7¼		
	168	S1	BAR ⅜ x ⅜	1 0		
	72	a2 R/L	L3½x3½x⅜	0 9		36 - R 36 - L
	328	B1	BAR 2½ x ⅜	1 3		BEND
	72	P55	BAR 3 x ⅜	1 1		
	472	SHOP	⅞ ϕ BOLT	0 2¼		A325 - TYPE 1
	544	Do	⅞ ϕ WASHER			
S2	4		PREFORMED JOINT SEAL x 53'-0" ± ACMASEAL "J300			P.O.# 1200
			(AT BENTS 6, 8, 10 & 12)			
			ITEM 504.70 PROJ 026-1(50)			

BILL OF MATERIAL — JOB NO. J-220 DWG. NO. S-27

A36 STEEL

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: BD-104-77
HOLES: 15/16 ϕ UNLESS NOTED.
FIELD CONN: WELD.
PAINT: SEE NOTE ON DWG. S-1.

FINAL

APPR	12-26-79	1-11-80
APPR		
SHOP	1-11-80	
F. & O.		1-21-80
DRAWN	11-21-79	L.R.
CHECKED	12-13-79	P.L.F.
REVISION	1-10-80	P.L.F.
REVISION		
REVISION		

ARMORED JOINTS (16)

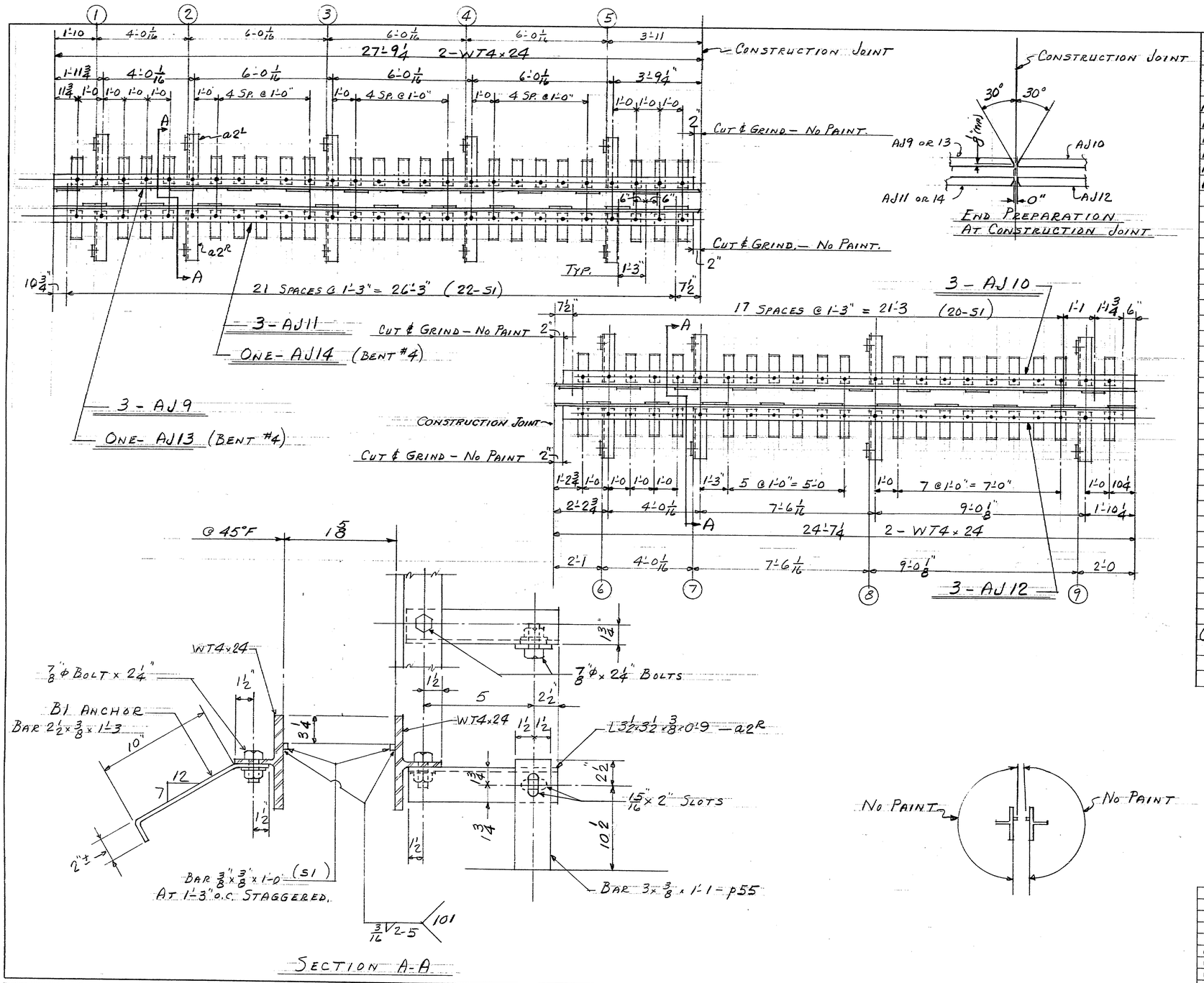
MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER: REED & REED
ARCHITECT: STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-27

161-73



SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
AJ9	3		WT4 x 24	27 9 1/4		
AJ10	3		Do.	24 7 1/4		
AJ11	3		Do.	27 9 1/4		
AJ12	3		Do.	24 7 1/4		
AJ13	1		Do.	27 9 1/4		
AJ14	1		Do.	27 9 1/4		
	148	S1	BAR 3/8 x 3/8	1 0		
	64	a2 L R	L3 1/2 x 3 1/2 x 3/8	0 9		32-R 32-L
	290	B1	BAR 2 1/2 x 3/8	1 3		BEND
	64	p55	BAR 3 x 3/8	1 1		
	418	SHOP	7/8" ϕ BOLT	0 2 1/4		A325-TYPE 1
	482	Do.	7/8" ϕ WASHER			
53	3		PREFORMED JOINT SEAL x 53'-0" I ACMASEAL J250 P.O.# 1200			
(AT BENTS: 2, 4, 14 & 16)						
ITEM 504.70			PROJ. 026-1(50)			

A36 STEEL

FINAL

APPR.	12-26-79	1-11-80
APPR.		
SHOP	1-11-80	
F. & O.		1-21-80
DRAWN	11-21-79	D.R.
CHECKED	"	P.L.F.
REVISION	1-10-80	P.L.F.
REVISION		
REVISION		

CUSTOMER ORDER NO.: 2738
REFERENCE DRAWINGS: BD-104-77
HOLES: 15/16" ϕ UNLESS NOTED.
FIELD CONN: WELD.
PAINT: SEE NOTE ON DWG. S-1.
ARMORED JOINTS (14)

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

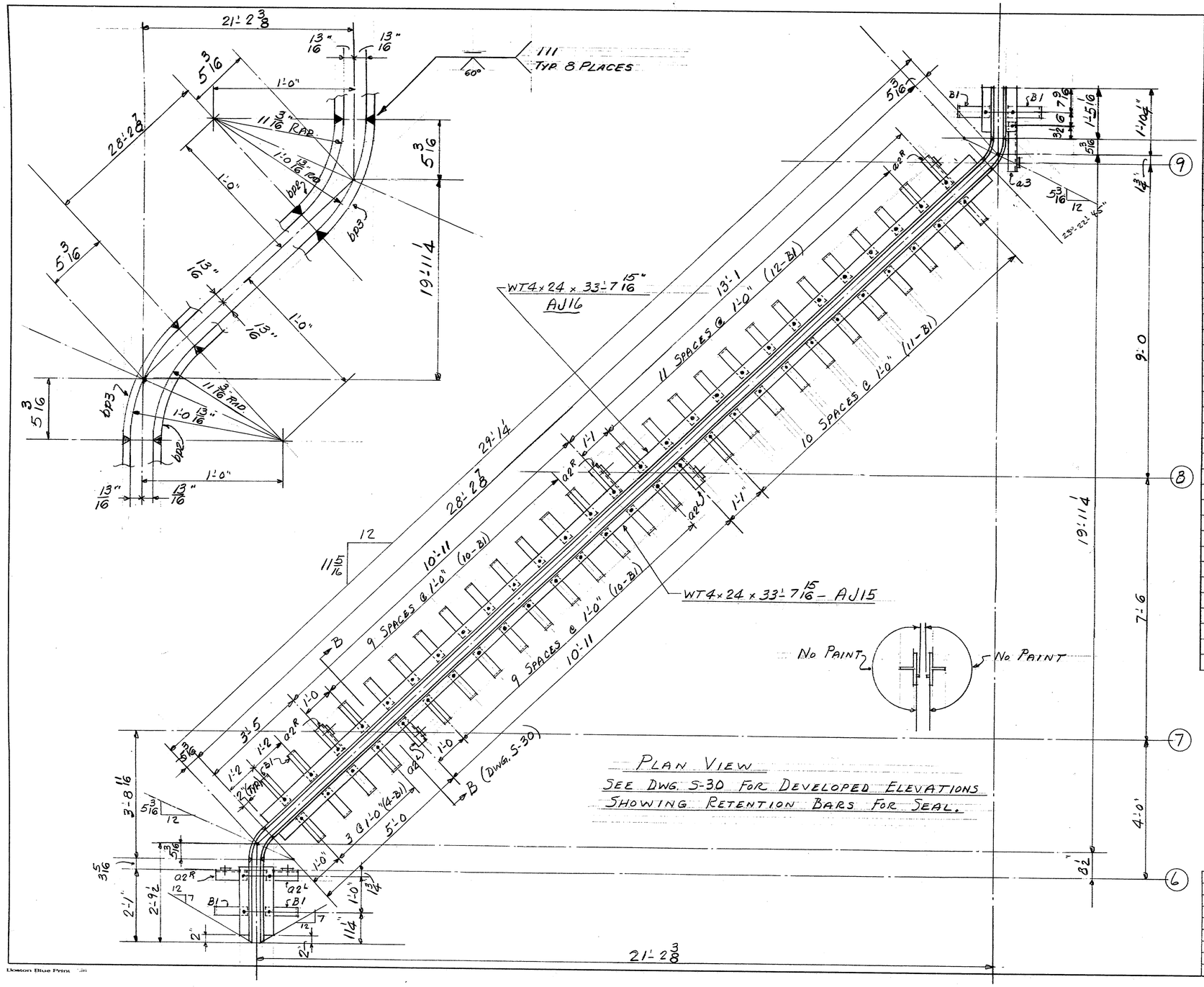
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-28

Boston Blue Print

161-74



PLAN VIEW

SEE DWG. S-30 FOR DEVELOPED ELEVATIONS SHOWING RETENTION BARS FOR SEAL.

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
AJ15	1		WT4x24	33 9 ±		
AJ16	1		DO.	33 9 ±		
	27	S1	BAR 3/8 x 3/8	1 0		
	9	p57	BAR 2 x 1	1 9		
	7	a2R	L3 1/2 x 3 1/2 x 3/8	0 9		4R. 3L
	1	a3	L3 1/2 x 3 1/2 x 3/8	1 8 1/2		
	53	B1	BAR 2 1/2 x 3/8	1 3		BEND
	8	p55	BAR 3 x 3/8	1 1		
	1	p58	PL 5/8 x 2	14 0		
	1	p59	DO.	10 6		
	2	bp2	PL 3/4 x 12	1 0		ROLLED
	2	bp3	PL 3/4 x 12	0 10		ROLLED
	69	SHOP	7/8" ϕ BOLT	0 2 1/2		A325-TYPE 1
	77	DO.	7/8" ϕ WASHER			A325-TYPE 1
	18	DO.	3/4"-10 SCREW	0 1 1/2		HEX
54	1		PREFORMED JOINT SEAL x 62'-0" I			
			ACMA SEAL J250 P.O. # 1200			

ITEM 504.70 PROJ. 026-1 (50)

A36 STEEL

CUSTOMER ORDER NO.: 2738

REFERENCE DRAWINGS: 23

HOLES: 15/16" ϕ UNLESS NOTED.

FIELD CONN: WELD.

PAINT: SEE NOTE ON DWG. S-1

ARMORED JOINT (BENT #4) (2)

FINAL

APPR.	12-26-79	1-11-80
APPR.		
SHOP	1-11-80	
F. & O.		1-21-80
DRAWN	11-23-79	D.R.
CHECKED	12-14-79	P.L.F.
REVISION	1-10-80	P.L.F.
REVISION		
REVISION		

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

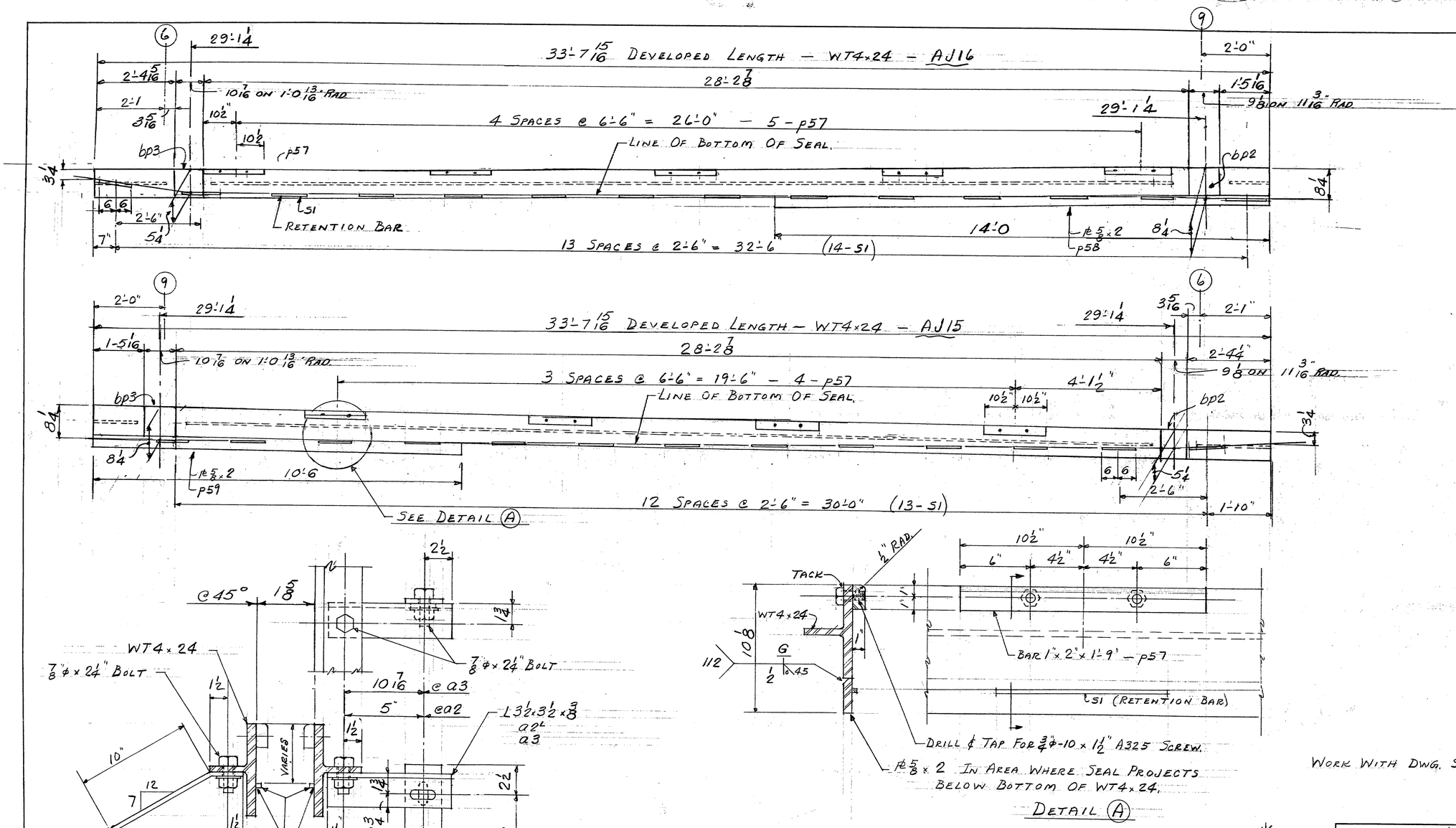
OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

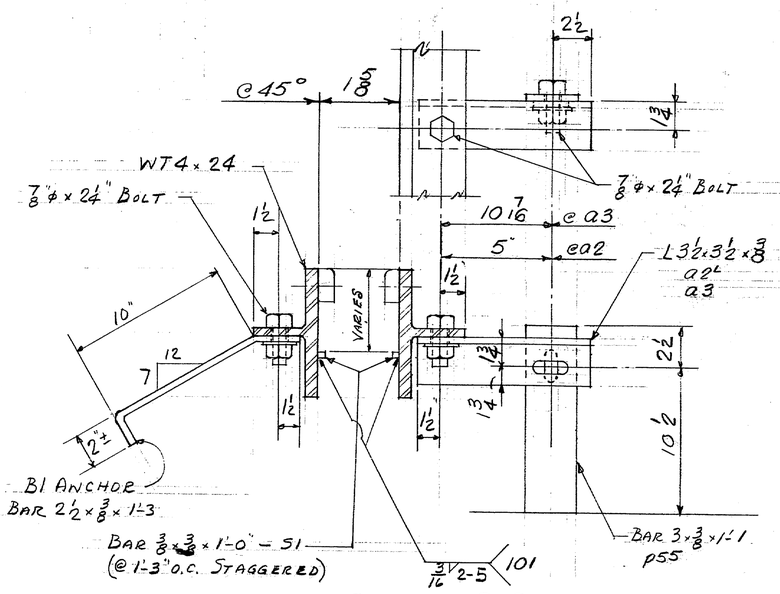
CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-29

Boston Blue Print

161-75





SECTION B-B

DETAIL (A)

WORK WITH DWG. S-29.

FINAL

1-18-80

APPR.	12-26-79	1-11-80
APPR.		
SHOP	1-11-80	1-18-80
F. & O.		1-21-80
DRAWN	11-26-79	D.R.
CHECKED	12-14-79	A.L.F.
REVISION	1-11-80	A.L.F.
REVISION	1-17-80	A.L.F.
REVISION		

ARMORED JOINT (BENT #4)

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

OVERHEAD BRIDGE WIDENING
WOOLWICH, MAINE

CUSTOMER REED & REED
ARCHITECT STATE OF MAINE D.O.T.

JOB NO. J-220 DWG. NO. S-30

161-76

REEL #94
PP. 204
TO
300

F.A.N.A. REGL. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-FS026-1150	1	60
		F-FS026-1148		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAYS

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
PROJECT NO. ROS-FG-026-1150
AND F-FG-026-1148
PROJECT LENGTH 0.379 MILES

1981

SPECIFICATIONS

DESIGN: AASHTO, Specifications for Highway Bridges, 1977; with Interim Specifications, 1978

CONTRACT: State of Maine, State Highway Commission, Standard Specifications, Highway and Bridges, Revision of June 1968.

DESIGN LOADING

LIVE LOAD ---------- HS20-44

MATERIALS

CONCRETE	Wearing Surface	Latex Modified
	Structural Concrete Pile Casing	Class Y
	All Other	Class A
REINFORCING STEEL		ASTM A615, Grade 60
STRUCTURAL STEEL	Existing	Unknown
	New Steel	A.S.T.M. A36
	High Strength Bolts	A.S.T.M. A325

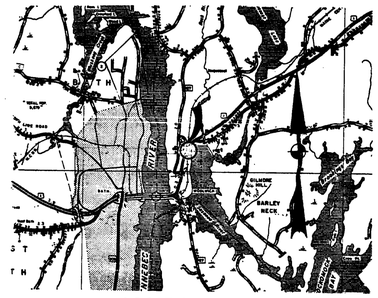
BASIC ALLOWABLE STRESSES

CONCRETE	f_c =	1200 psi ..... n = 9
REINFORCING STEEL	f_s =	24,000 psi
STRUCTURAL STEEL A.S.T.M. A36	f_s =	20,000 psi
A.S.T.M. A325	f_v =	25,000 psi

Plans of the existing bridge are available for the Contractor's reference at the Bridge Design Office in Augusta. The plans are reproductions of original drawings as prepared for the construction of the bridge and it is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.

NOTE

ALL WORK CONTEMPLATED UNDER THIS CONTRACT SHALL BE GOVERNED BY AND IN CONFORMITY WITH THE STANDARD SPECIFICATIONS (REVISION OF JUNE 1968) AND SUPPLEMENTS THERETO, EXCEPT AS MODIFIED ON THE PLANS AND IN THE SPECIAL PROVISIONS.



LOCATION MAP

SCALE IN MILES 1 0 1 2

TRAFFIC DATA

A.D.T. 8940 1978	
A.D.T. 13410 1998	
D.H.V. 1877	
T. (%) 8	
D. (%) 60	
V. 50	
P.S.D. (%)	
18 KIPS (Equiv. P25) 452	

STATE OF MAINE — RICHARD A. LUETTICH, SR. — 17.3

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HIGHWAY STANDARDS

AUG 1969	REV 7-31-78	(1)	CATCH BASINS
AUG 1969	REV 10-14-75	(2)	UNDERDRAINS CULVERT INLET GRATE
AUG 1969	REV 7-31-78	(3)	CURB
AUG 1969	REV 11-3-77	(5)	GUARD RAIL and EROSION CONTROL
AUG 1969	REV 8-17-76	(6)	GUARD RAIL
AUG 1969	REV 10-14-75	(9)	OFFSET BRACKET
AUG 1969	REV 3-22-77	(11)	PROJECT MARKERS
AUG 1969	REV 3-16-73	(12)	DRIVEWAY DETAILS, FIELD OFFICE, TESTING LABORATORY

BRIDGE STANDARDS

BD 101-74	REV 3-1-77	BEARING PEDESTALS
BD 104-77	REV 3-1-77	ARMORED JOINT, DRAIN, SHEAR CONNECTORS
BD 113-78		DIAPHRAGMS
BD 114-77		ALUMINUM BRIDGE RAILING, 2-BAR (SEMI-ELLIPSE) TYPE A

APPROVED:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

COMMISSIONER — DATE 5-4-79

BUREAU DIRECTOR AND CHIEF ENGINEER — DATE 5-4-79

Δ Revised 11-6-79

UNITED STATES
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION 1

APPROVED:

DIVISION ADMINISTRATOR — DATE

R94-204

F.A.H.S. PROJ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	025-1(30)	2	4
		025-1(33)		

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.10	Removal of Existing Superstructure (Property of Contractor)	Nec.	L.S.
202.12	Removal of Existing Structural Concrete	9	C.Y.
203.20	Common Excavation	290	C.Y.
203.24	Common Borrow	1900	C.Y.
203.26	Gravel Borrow	170	C.Y.
206.07	Str. Rock Excav - Drainage & Minor Structures	164	C.Y.
206.081	Str. Earth Excav. - Abuts., Ret. Walls, Box Culverts & Str. Plate Units	96	C.Y.
206.10	Str. Earth Excav. - Piers	189	C.Y.
301.09	Plant Mix Bituminous Base Course, Grading B	350	Ton
304.10	Aggregate Subbase Course-Gravel	780	C.Y.
403.07	Hot Bit. Pavement, Grading B	1045	Ton
403.08	Hot Bit. Pavement, Grading C	655	Ton
403.101	Hot Bit. Pavement, Grading D (Sidewalk, Drives, Etc.)	60	Ton
403.121	Hot Bit. Pavement, Grading E (Shimming)	13	Ton
410.15	Emulsified Asphalt, Applied	420	Gal.
501.212	Steel H-beam Piles 42 lbs./ft.	182	L.F.
501.218	Steel Hbeam Piles 102 lbs./ft.	955	L.F.
502.21	Structural Concrete, Abuts & Retaining Walls	64	C.Y.
502.23	Structural Concrete, Piers	185	C.Y.
502.26	Structural Concrete, Roadway & Sidewalk Slabs on St. Brs.	Nec.	L.S.
502.31	Structural Concrete, Approach Slabs	Nec.	L.S.
502.35	Structural Concrete, Pile Casings	240	L.F.
503.12	Reinforcing Steel, Fab. & Delivered	242730	Lb.
503.13	Reinforcing Steel, Placing	242730	Lb.
504.70	Structural Steel, Fab. & Delivered	Nec.	L.S.
504.71	Structural Steel, Erection	Nec.	L.S.
505.08	Shear Connectors	Nec.	L.S.
506.141	Field Painting, New Structural Steel	Nec.	L.S.
506.142	Field Painting, Existing Structural Steel	Nec.	L.S.
506.16	Surface Preparation of Existing Structural Steel	2000	M.Hr.
507.141	Aluminum Bridge Railing, Type "A"	1335	L.F.
512.07	French Drains (Stones Only)	7	C.Y.
514.06	Curing Box for Concrete Cylinders	1	Each
515.20	Protective Coating for Concrete Surfaces	462	S.Y.
516.21	Latex Modified Concrete for Concrete Wearing Surfaces	Nec.	L.S.
516.23	Preparation of New Concrete Surfaces	Nec.	L.S.
526.30	Temporary Concrete Barrier, Type I	100	L.F.
526.40	Resetting Temporary Concrete Barrier, Type I	100	L.F.
603.15	12 Inch Culvert Pipe, Option I	58	L.F.
603.158	12 Inch Culvert Pipe, Option II	20	L.F.
603.76	12 Inch Inlet Grate Unit	2	Each
604.092	Catch Basins Type BI-C	3	Each
605.09	6 Inch Underdrain Type "B"	270	L.F.
605.11	12 Inch Underdrain Type "C"	415	L.F.
606.26	Terminal Ends - Single Rail	4	Each

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
606.35	Guard Rail Delineator Posts	6	Each
606.55	Guard Rail Type 3-Single Rail	525	L.F.
606.60	Guard Rail Type 3-Circular-Greater than 15 foot Radius	50	L.F.
609.11	Vertical Curb - Type 3	24	L.F.
609.13	Vertical Bridge Curb - Type 1	1355	L.F.
609.31	Curb Type 3	1450	L.F.
610.08	Plain Riprap	66	C.Y.
610.12	Portland Cement for Riprap Grout	7	Bbl.
612.06	Bituminous Hand Sealing - Black	174	S.Y.
615.07	Loam	224	C.Y.
616.08	Sodding	155	S.Y.
618.14	Seeding, Method Number 2	36	Unit
618.15	Temporary Seeding	27	Lb.
619.12	Mulch	42	Unit
622.06	Project Markers	2	Each
629.05	Labor, Straight Time	500	M.Hr.
X	Traffic Officers	140	M.Hr.
631.10	Air Compressor (inc. operator)	10	Hour
631.11	Air Tool (inc. op.)	10	Hour
631.12	All Purpose Excavator (inc. op.)	10	Hour
631.19	Grader (inc. op.)	10	Hour
631.171	Truck - Small (inc. op.)	10	Hour
631.22	Front End Loader (inc. op.)	10	Hour
632.08	Warning Lights	2	Grp.
637.07	Sprinkling	78	M.G.
637.08	Calcium Chloride	8	Ton
639.08	Field Office, Type A	1	Each
639.12	Testing Facilities, Bit. Mixes	Nec.	L.S.
645.61	4" Solid White Pavement Marking Lines	1800	L.F.
645.62	4" Broken White Pavement Marking Line	3000	L.F.
645.63	4" Solid Yellow Pavement Marking Lines	16000	L.F.
645.66	Removing 4" inch Pavement Marking Line	12000	L.F.
652.25	Maintenance of Traffic	Nec.	L.S.
656.50	Baled Hay, in place	25	Each
656.51	Sandbags, in place	25	Each
657.201	Seed and Application, Method A	6	Unit
659.10	Mobilization	Nec.	L.S.
660.21	On-the-job Training (Bid)	2000	M.Hr.

Estimate of Lump Sum Quantities

502.26	Structural Concrete, Roadway & Sidewalk Slabs on Steel Bridges	1050	C.Y.
502.31	Structural Concrete, Approach Slabs	37	C.Y.
504.70	Structural Steel, Fab. & Delivered	367,260	Lbs.
504.71	Structural Steel, Erection	367,260	Lbs.
505.08	Shear Connectors	14634	Each
506.141	Field Painting, New Structural Steel	367,260	Lbs.
506.142	Field Painting, Existing Structural Steel	801,250	Lbs.
516.21	Latex Modified Concrete for Concrete Wearing Surface	3696	S.Y.
516.23	Preparation of New Concrete Surfaces	3696	S.Y.

GENERAL NOTES

1. The Utilities involved in this contract are:
   A. Central Maine Power Co.
   B. New England Tel. & Tel Co.
   C. Maine Central Railroad Co.
   D. Bath Water District
   All utility facilities shall be adjusted by the respective utilities unless noted.

2. Unpaved entrances shall be constructed with 12 inches Aggregate Subbase Course - Gravel.

3. Driveway fill slopes shall be the same as the guardrail fill slopes unless otherwise shown on the plans.

4. Loam shall be placed as shown on the plans or as designated by the Engineer.

5. Loam depths are as follows:
   A. Under sod 4"
   B. Seed area Method #2 2"
   Depths shown are nominal.

6. All slopes shall be seeded with Seeding Method No. 2 unless otherwise noted.

7. Mulch shall be applied in all areas seeded

8. One guardrail delineator post and one terminal end section shall be installed at each guardrail end.

9. For easements, construction limits and Right of Way lines refer to Right of Way Map.

10. A 3 ft. square riprap pad shall be constructed at all culvert outlets.

11. Curb type 3 to be installed with mortar and sealed with Bituminous Hand Sealing Black.

12. Place sod strip 1 ft. wide behind curbs in box sections.

13. One guardrail delineator post shall be installed at each underdrain outlet.

CONSTRUCTION NOTES

1. The contractor shall saw the longitudinal joint the entire length of the existing superstructure, located 3 in. to the left of construction, to facilitate the removal of the existing superstructure. The method of sawing shall be approved by the Engineer. Payment will be included in the lump sum price for Item 202.10, Removal of Existing Superstructure (Property of Contractor). See Existing Expansion Dam Detail Sh. # 14.

2. Remove the eight existing expansion dams located at Bents 2, 4, 6, 8, 10, 12, 14, and 16 as directed by the Engineer. Payment will be included in the lump sum price for Item 202.10, Removal of Existing Superstructure (Prop. of Contractor) see Detail Sh. # 14.

3. The entire existing structural steel shall be cleaned and painted in accordance with Supplemental Specifications Section 506, Painting Structural Steel.

4. All work required on the existing structural steel, such as, but not necessarily limited to drilling holes, welding, clipping, removing, or redoing of the existing structural steel will be considered to be included in the lump sum price for Item 504.71, Structural Steel Erection.

5. The two steel stringers to be removed from Tower 2 and Span 3 (Stringer 7) shall become the property of the Department. The two stringers shall be loaded on trucks furnished by the Department or carefully stored within the right-of-way at the bridge site, as directed by the Engineer. Payment will be considered to be included in the lump sum price for Item 504.71 Structural Steel Erection.

6. Payment for removal of all material on and above the superstructure will be included in the contract lump sum payment for Removal of Existing Superstructure.

PROJECT DESIGN ENGINEER — BY M.E.R. DATE 5-79
PLANS DESIGN - DETAILED
CHECKED
REVISIONS
FIELD CHANGES

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

ESTIMATE OF QUANTITIES

AUGUSTA, MAINE MAY 1979

R94-205

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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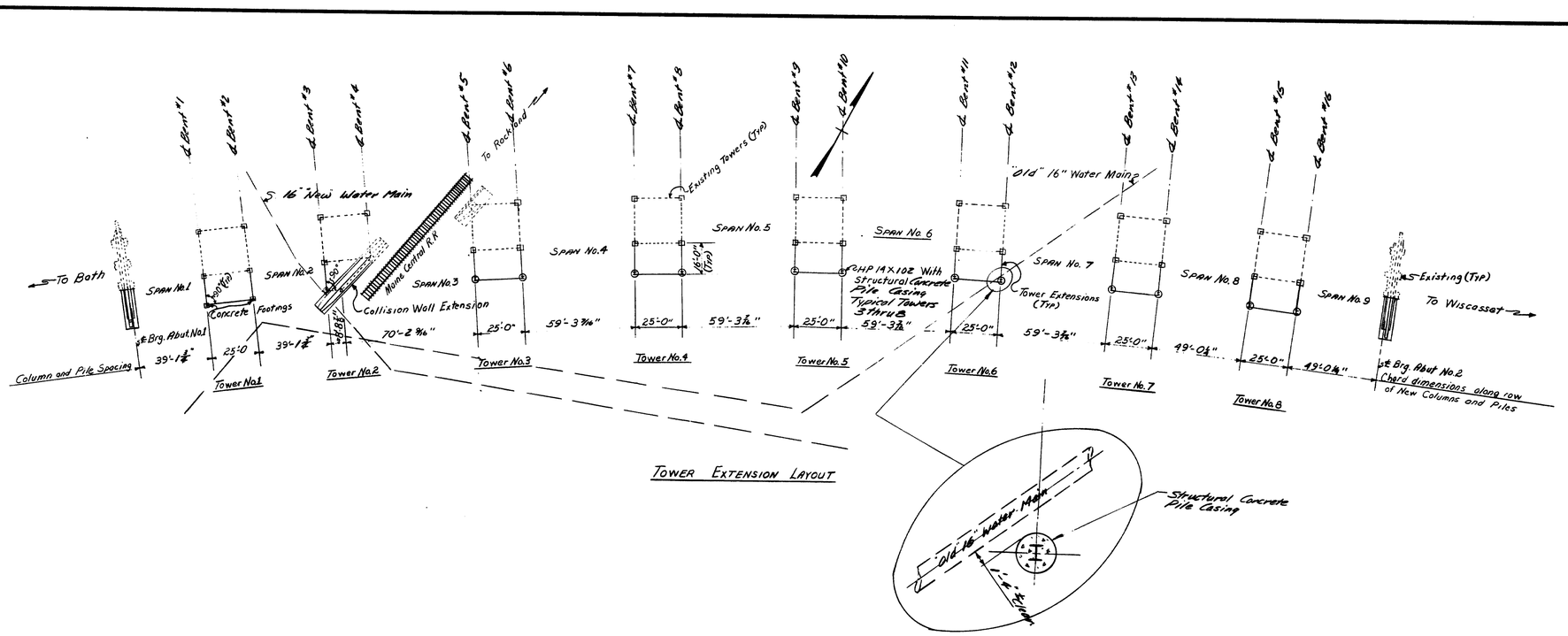
		025-1(48)		



TOWER EXTENSION LAYOUT

PROFILE

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN - DETAILED	WCR	3-77
CHECKED -	TDEB	Rev. 79
REVISIONS -	PEP	
FIELD CHANGES		

R94-206

Revised 11/6/79

Bridge Code No. 3039

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

GENERAL PLAN and TOWER LAYOUT

AUGUSTA, MAINE May 1979

F.A.B.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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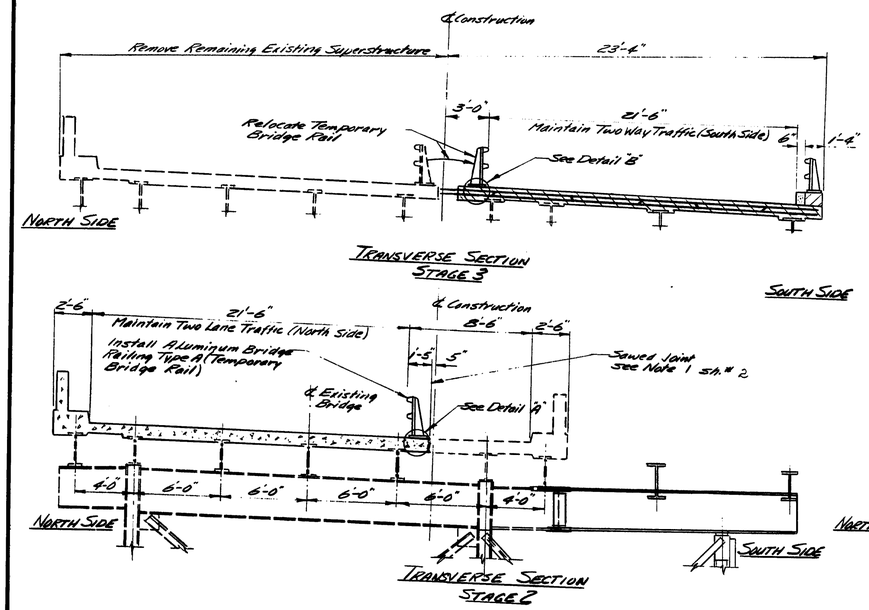
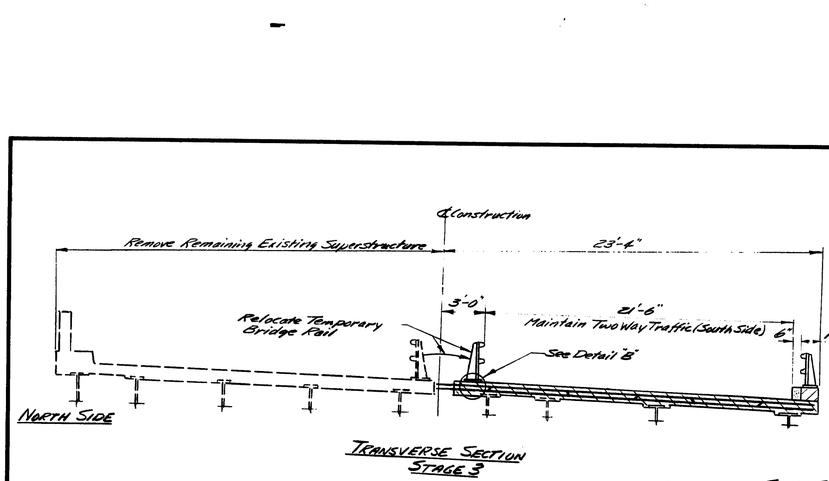
		026-1(116)		

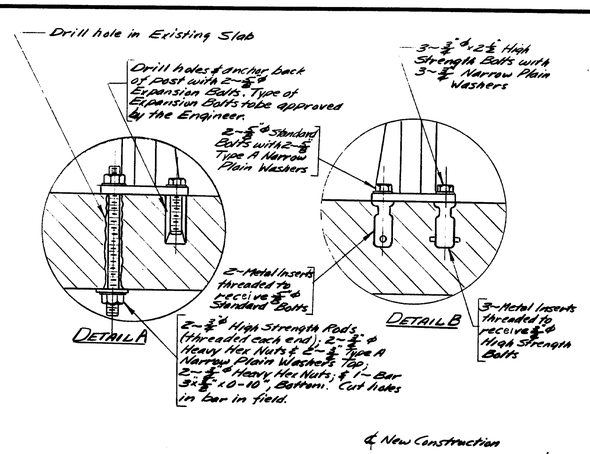


TRANSVERSE SECTION
STAGE 3

TRANSVERSE SECTION
STAGE 2



TRANSVERSE SECTION
STAGE 1



SEQUENCE OF CONSTRUCTION

Stage 1 — Maintain Two Way Traffic on 30' width of the Existing Bridge. Extend Towers, Abutments, & Four Beams, except for Floor Beam #4 on Tower #2. Erect Stringers 8 & 9 except for Span #3 & Tower #2.

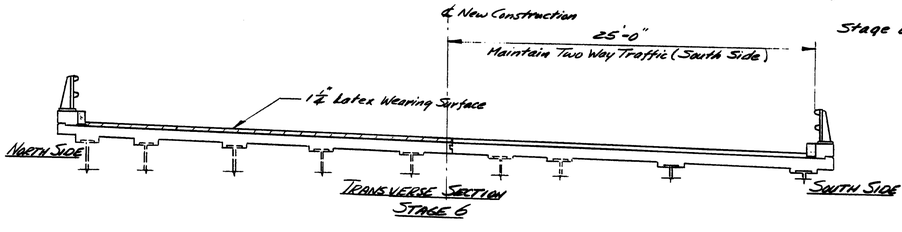
Stage 2 — Install Temporary Bridge Rail as shown, and maintain Two Way Traffic on North Side. Remove South Side of Superstructure Slab, rail, wearing surface, & remove Stringer #7 from Tower #2 & Span #3. Erect Floor Beam #4, and Stringers 7, 8, & 9 on Tower #2 & Span #2.

Stage 3 — Construct South Side of Superstructure slab and curb. Install the Southerly Bridge Rail and End Posts. Relocate Temporary Bridge Rail to North Side of the new concrete Superstructure Slab. Maintain Two Way Traffic on the new concrete superstructure slab. Remove remaining North Side of existing Superstructure (Slab, rail, & wearing surface).

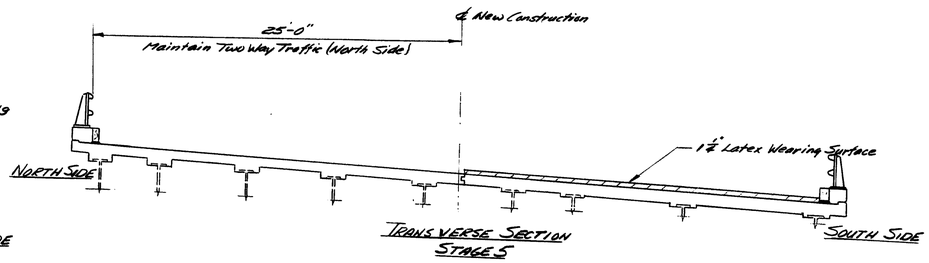
Stage 4 — Construct North Side of concrete superstructure slab and curb. Move Temporary Bridge Rail to it's Permanent Position on the North Curb.

Stage 5 — Maintain Two Way Traffic on one half of the new concrete superstructure slab and apply Latex Wearing Surface on the other half of the bridge.

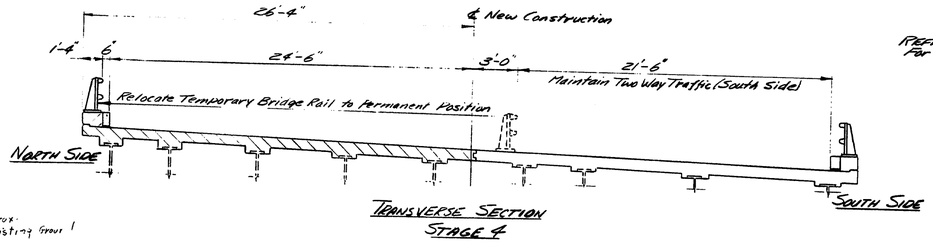
Stage 6 — Maintain Two Way Traffic on the new Latex Wearing Surface and apply Latex Wearing Surface on the remaining half of the Bridge.



TRANSVERSE SECTION
STAGE 6



TRANSVERSE SECTION
STAGE 5



TRANSVERSE SECTION
STAGE 4

NOTES

1. — The metal inserts for ¾" ℄ bolts, shown in Detail "B" shall have a minimum ultimate strength of 9000 pounds.
2. — Other configurations of metal inserts may be used if approved by the Engineer.
3. — The contractor may substitute an other system of temporary rail of similar strength as approved by the Engineer.

REFERENCE:
For Signing see Shts. # 45 & 46

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	N.E.R.	5-79
CHECKED	M.L.H.	5-79
REVISIONS		
FIELD CHANGES		

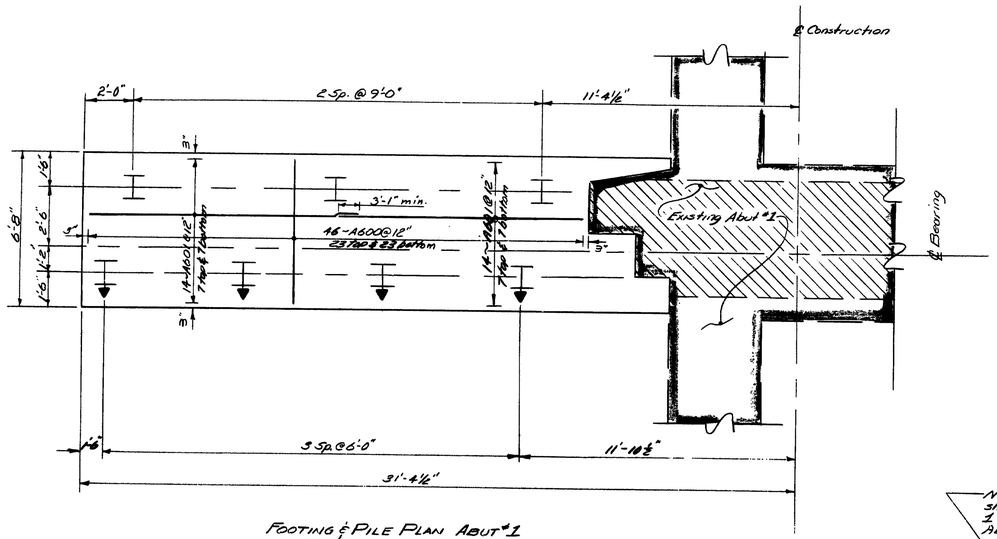
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
SEQUENCE OF CONSTRUCTION

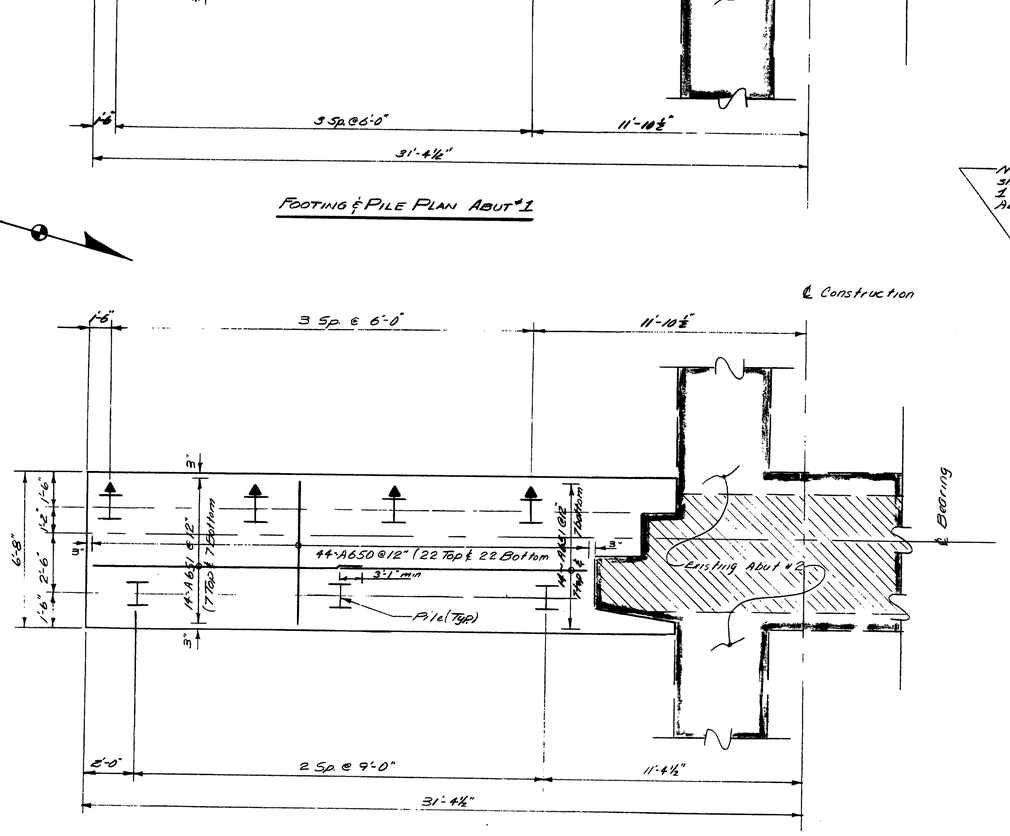
AUGUSTA, MAINE May 1979

R94-207

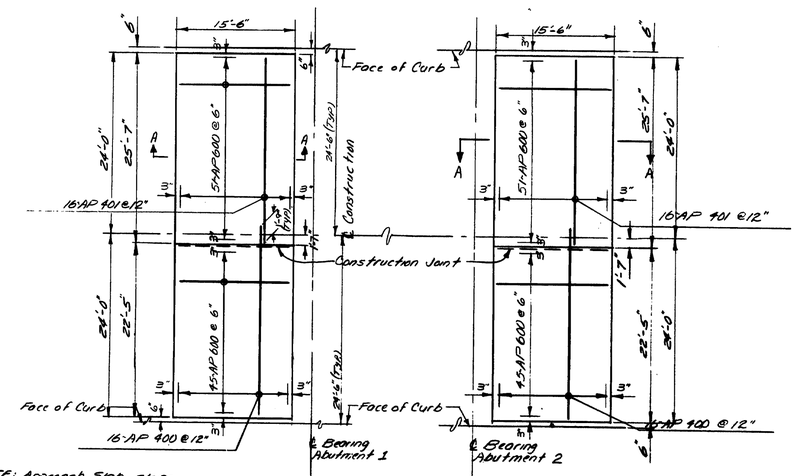
F.A. R.S.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	026-1(50) 026-1(48)	5	60



FOOTING & PILE PLAN ABUT #1

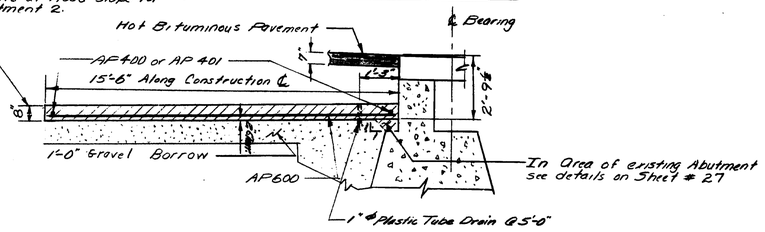


FOOTING & PILE PLAN ABUT #2



PLAN - APPROACH SLAB

NOTE: Approach Slab slope shall be 3" in 15'-6" for Abutment 1 and at Flood slope for Abutment 2.



SECTION A-A

ABUTMENT PILE NOTES

1. Piles shall be driven to ledge or practical refusal.
2. All piles shall have Pointed Reinforced Pile tips as shown on Standard Detail BD 104-77.
3. Alternate types of Pointed Reinforced Pile Tips may be used if they have at least the cross-sectional area of the Pointed Reinforced Pile Tip shown on the plans and are approved by the Engineer.
4. Estimated driven lengths of piles are determined from available soils information with no allowance for uncertain pile penetration.
5. Embedment of piles in footings may very between 1'-0" and 2'-0" and the actual embedment length up to a maximum of 1'-6" will be included in the measurement for payment.
6. Piles marked thus H$_P$ shall be battered 3 inches per foot in the direction of the arrow.
7. **Maximum calculated pile loads : 33 tons**
8. Following are pile locations, number of piles required, size of piles and estimated driven lengths :

   Abutment Number 1 — 7-HP10X42 @ 13 feet
   Abutment Number 2 — 7-HP10X42 @ 13 feet

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	W.E.R. Jr. ITE	5-77
CHECKED	PHJ	
REVISIONS		
FIELD CHANGES		

PLANS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

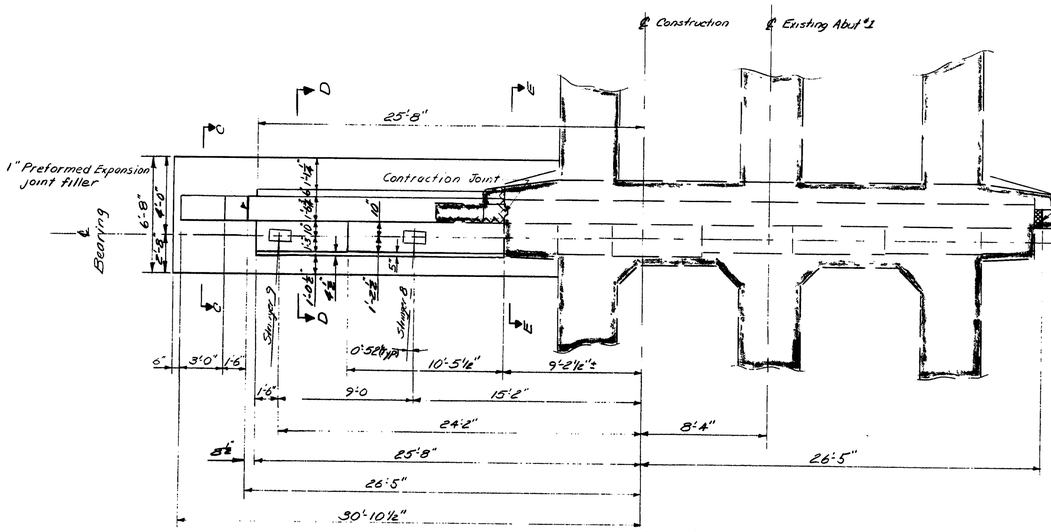
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

FOOTING and PILE PLAN ABUTMENTS 1 and 2
APPROACH SLABS

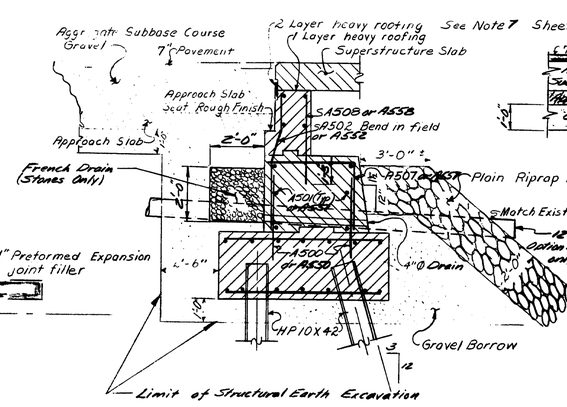
AUGUSTA, MAINE May 1979

R94-208

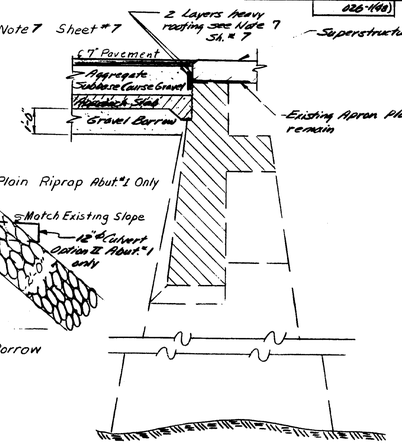
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	025-1(15D)	6	60
		025-1(16a)		



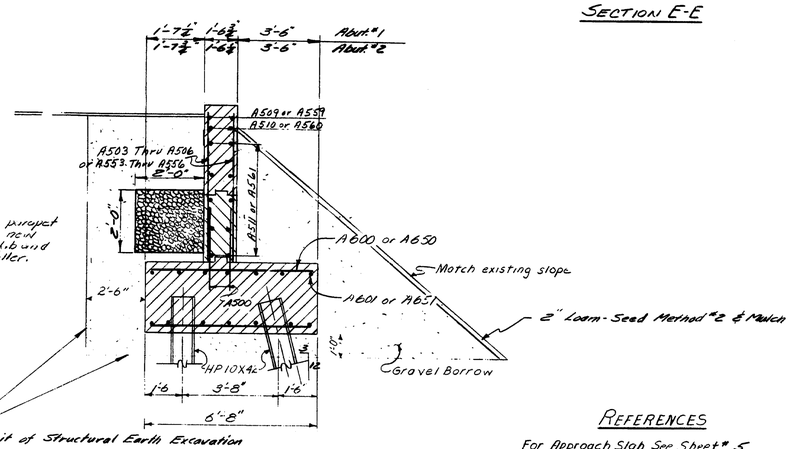
PLAN



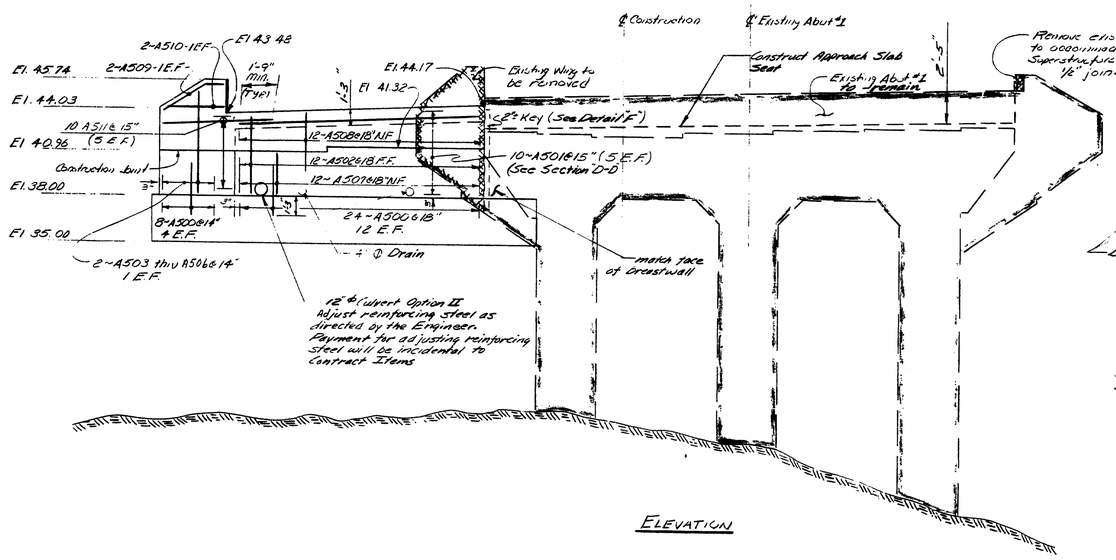
SECTION D-D



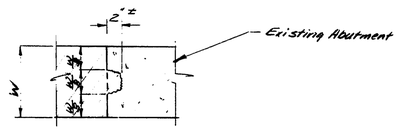
SECTION E-E



SECTION C-C



ELEVATION



DETAIL F
2"± KEY

REFERENCES

For Approach Slab See Sheet # 5
For Abutment Notes See Sheet # 7
For Footing and Pile details see Sheet # 5

LEGEND
N.F. - new face
F.F. - full face
E.F. - each face

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN - DETAILED	M.E.B.	4/79
CHECKED	M.L.H.	5/79
REVISIONS		
FIELD CHANGES		

R94-209

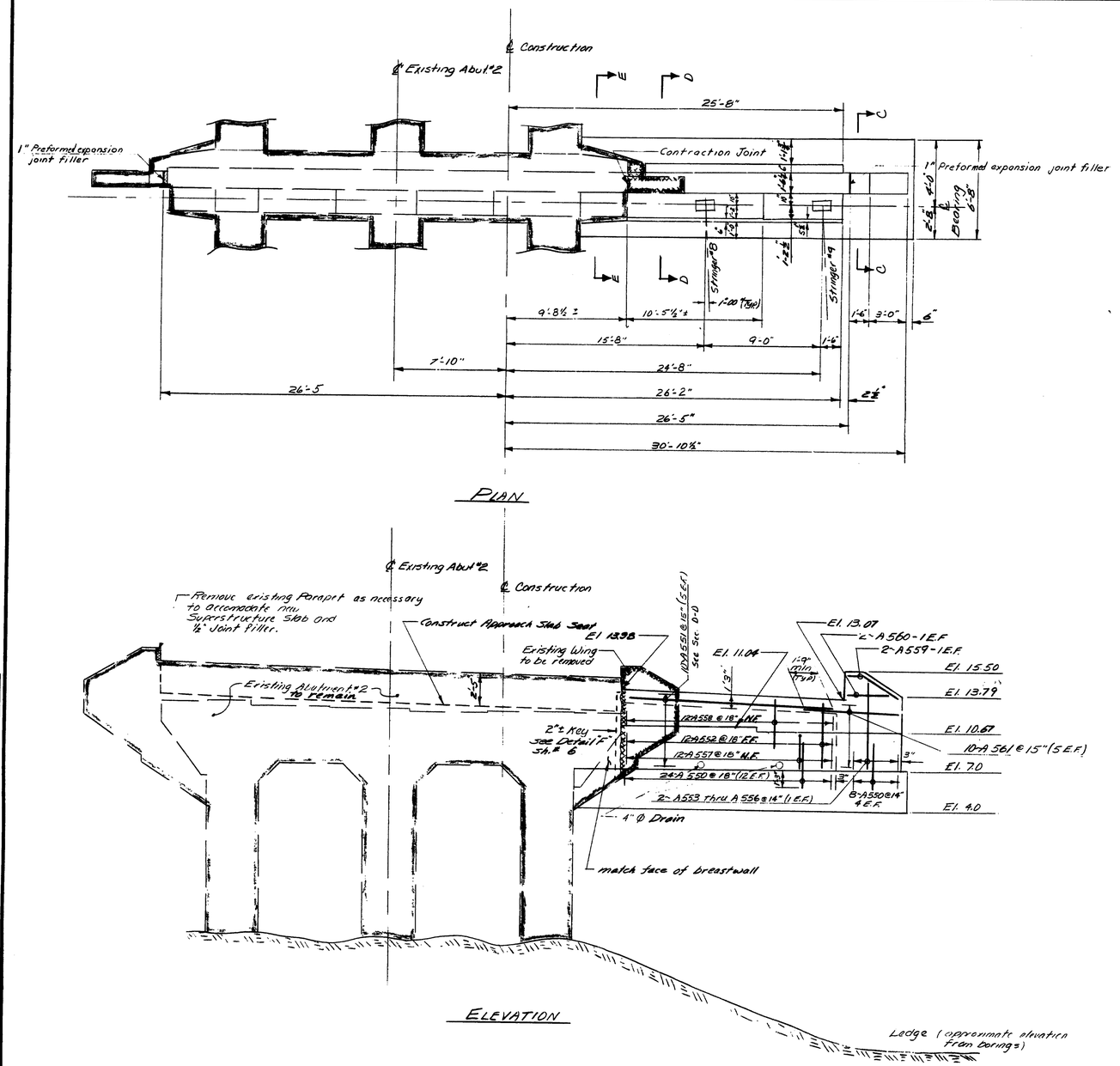
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

ABUTMENT I

AUGUSTA, MAINE May 1979

F.A. U.S.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	025-1(30)	7	60
		025-1(40)		



ABUTMENT NOTES

1. Chamfer all exposed edges of concrete a consistent dimension between ½" and ¾" inclusive, unless otherwise indicated.
2. Reinforcing steel shall have 2 inches cover unless otherwise indicated.
3. Place reinforcing steel in bridge seats to clear anchor bolts.
4. Break bond at vertical contraction joints by a method approved by the Engineer.
5. Waterstops are not required in horizontal or vertical joints.
6. Place 4" diameter drains in breastwall and wings at 20 foot maximum spacing. Exact location to be determined by the Engineer in the field.
7. On the back of the Abutments cover the vertical and horizontal joints between the abutment and slab with 2 layers of heavy roofing 10" wide. Recess the area to be covered ¼". Coat the concrete and back of each layer as applied with an approved asphalt flashing cement. Omit the ¼" recess in the area of existing backwall.
8. Payment for removing the existing concrete wings as shown on the abutment plans will be made under Item 502.12 Removal of Existing Structural Concrete.

REFERENCES

For Approach slab details see sheet # 5
For Footing and Pile details see sheet # 5
For sections C-C, D-D, and E-E see sheet # 6

LEGEND
N.F. - near face
F.F. - far face
E.F. each face

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	M.E.R. Jr.	3/77
CHECKED	M.L.H.	5/77
REVISIONS		
FIELD CHANGES		

R94-210

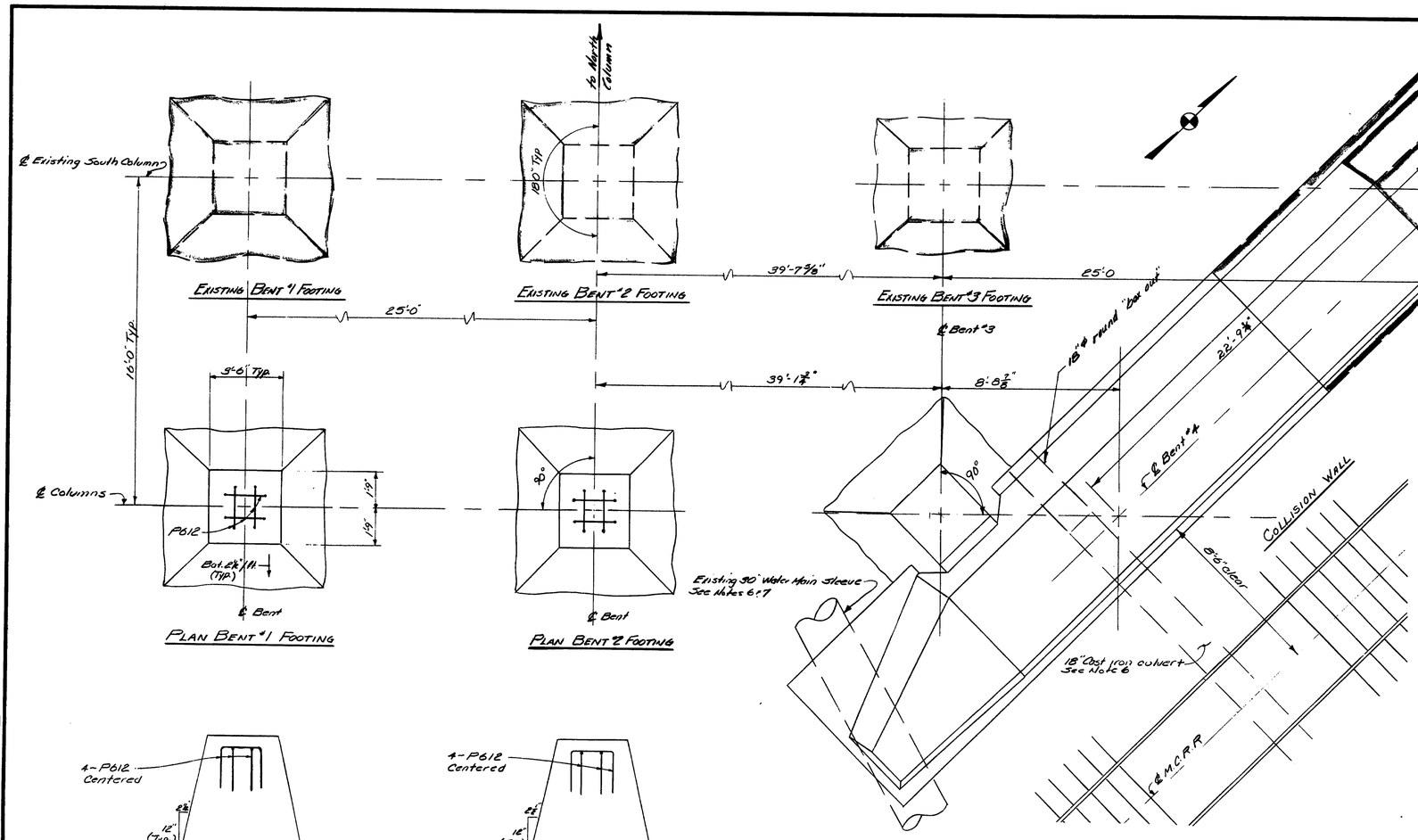
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

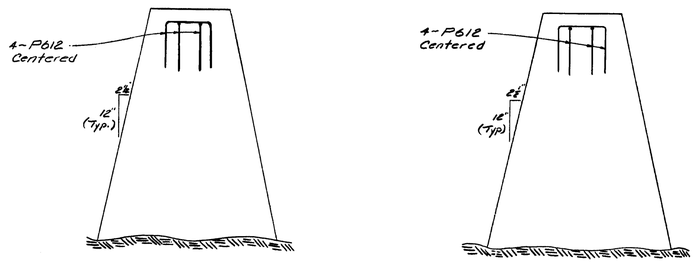
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

ABUTMENT 2

AUGUSTA, MAINE May 1979

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-4(30)	9	60
		026-HOO		





Elevation Bent #1 Footing

Elevation Bent #2 Footing

Collision Wall Construction Notes

1. Chamfer all exposed edges of concrete a consistant dimension between ¾" and 1" inclusive, unless otherwise indicated.

2. Reinforcing steel shall have 3 inches cover unless otherwise indicated.

3. Place reinforcing steel in bearing areas to clear anchor bolts.

4. The collision wall footing and column pedestals shall be placed before the structural steel is erected. After erection of steel, construct remainder of collision wall. Steel column and bracing shall be encased in the concrete. (See details on Sh. # 9.)

5. Remove existing concrete as shown on plans of collision wall, Sheet 9, to facilitate installation of the tower bracing. Also remove existing concrete from the face and back of existing south wing of the collision wall so as to maintain a 150 mm thickness of new concrete. Payment will be made under Item 502.12 Removal of Existing Structural Concrete.

6. Encase 30" water main sleeve in collision wall footing, and embed the end of the 18" cast iron culvert in the collision wall footing and construct an 18" ϕ round "Bot Out" in the footing to match the existing culvert under M.C.R.R. as directed by the Engineer. Payment will be considered incidental to related contract items.

7. Batter on the south face of pedestal Bent 3 may be varied to clear the 30" water main sleeve, but in no case shall be varied more than 1" per foot.

8. Grout for anchor bolts and reinforcing steel shall contain an approved non-shrink additive.

9. The elevations of the bearing areas will be set in the field by the Engineer using the distance shown on the tower plans, from the top of the floor beam to the top of the footing or pedestal, see Sheets 10 & 11

10. At the location of the base plate the concrete bearing area shall be dressed one inch larger, all around, than the size of the base plates and to the exact elevation set by the Engineer.

11. Payment for structural concrete in the collision wall and column footings will be made under Item 502.23 Structural Concrete - Piers.

12. Clean Structural Steel before embedding in concrete. See Note #6 sh. # 21.

13. Earth sidewalls of trench on the side of the railroad tract shall be adequately retained to support railroad traffic during structural excavation for and construction of the Collision Wall. The support system shall be designed in accordance with The American Railroad Engineering Association Specifications for E80 loading, and shall be designed by a Registered Professional Engineer. The Contractor shall submit design computations and plans of the support system to the Engineer for approval. Approval of the Support System by the Maine Central Railroad Co. shall be required prior to start of work. The Maine Central Railroad Co. will require a period of two weeks to evaluate the Contractors proposal. Cost of all material, labor, and equipment required to complete the Job shall be included in the contract price for Item No. 502.23, Structural Concrete Piers.

References

For Collision wall details: see Sh. 9
For column base plates see Sh. 10

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	H.E.R.	6-79
	CHECKED	M.L.P.	6-79
	REVISIONS		
	FIELD CHANGES		

R94-211

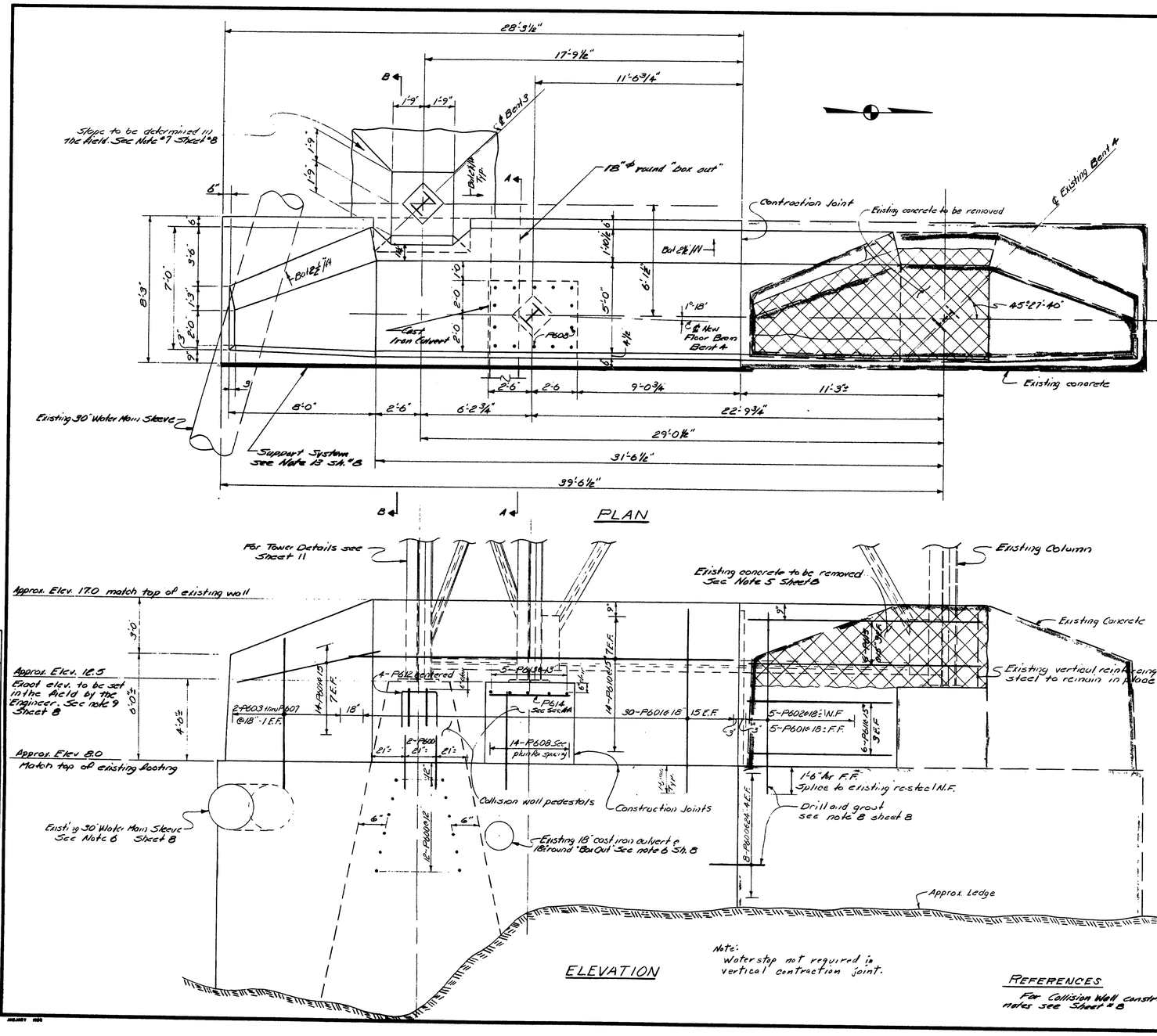
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

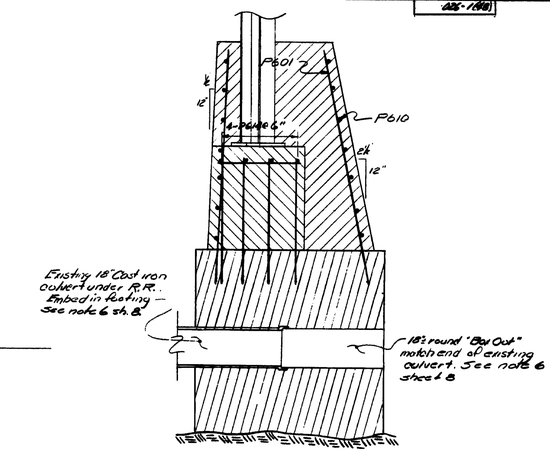
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

FOOTING and COLLISION WALL LAYOUT

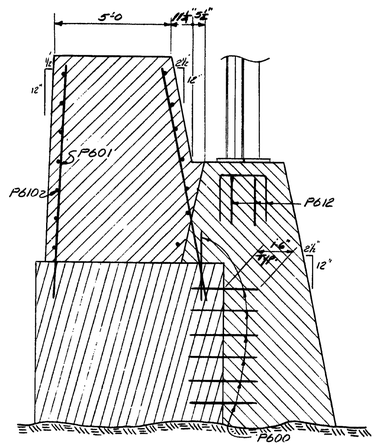
AUGUSTA, MAINE May 1979

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	025-1(58)	9	60
		025-1(59)		





SECTION A-A



SECTION B-B

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	M.L.H.	5-79
	CHECKED	M.L.H.	5-79
	REVISIONS		
	FIELD CHANGES		

LEGEND

N.F. - near face
F.F. - far page
E.F. - each face

REFERENCES

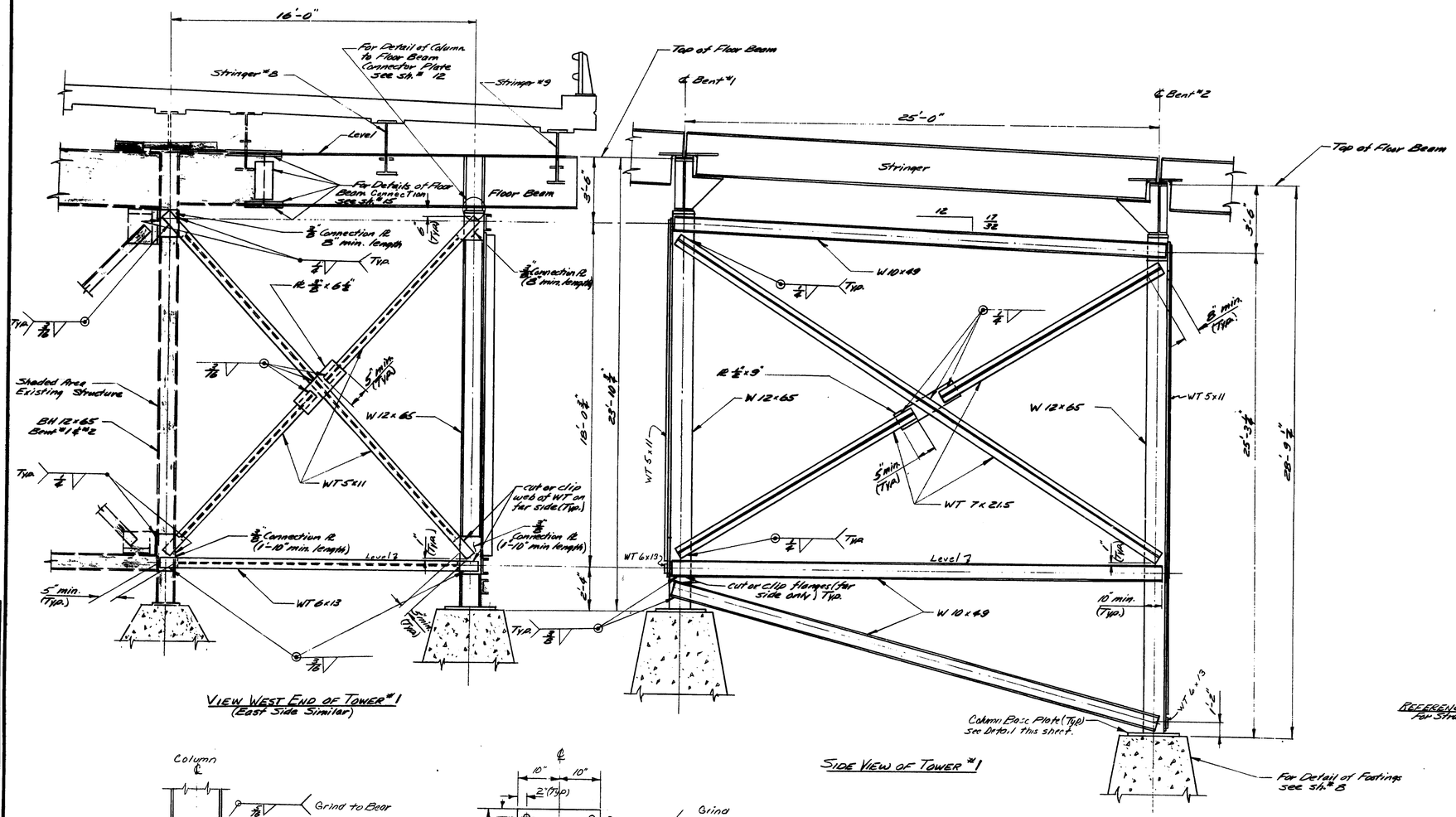
For Collision Wall construction notes see Sheet #8

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
TOWER 2 PEDESTALS and COLLISION WALL
AUGUSTA, MAINE May 1979

R94-212

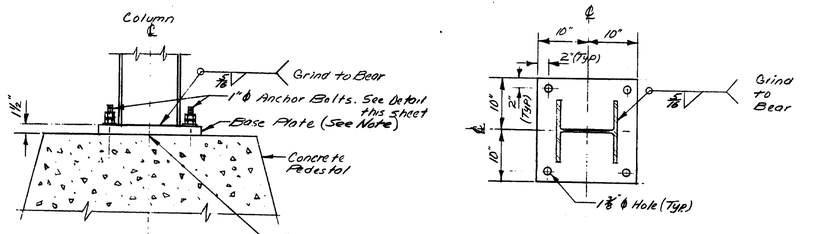
F.H.W.A. DOC. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	025-1(30) 025-A(90)	10	60



VIEW WEST END OF TOWER #1
(East Side Similar)

SIDE VIEW OF TOWER #1

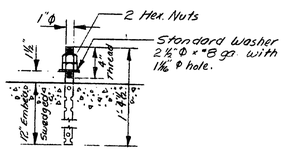
REFERENCES:
For Structural Steel Notes see sh.# 21.



ELEVATION VIEW

PLAN VIEW

DETAIL
Column Base Plate



ANCHOR BOLT DETAIL

NOTE:
The base plate shall set level in exact position and shall have a full and even bearing upon the substructure. The base plate shall be placed on a preformed pad. The same size and shape as the base plate and with holes accurately punched to match the holes in the plate, for the accommodation of the anchor bolts. The preformed pads shall meet the requirements specified in Subsection 713.03.

R94-213

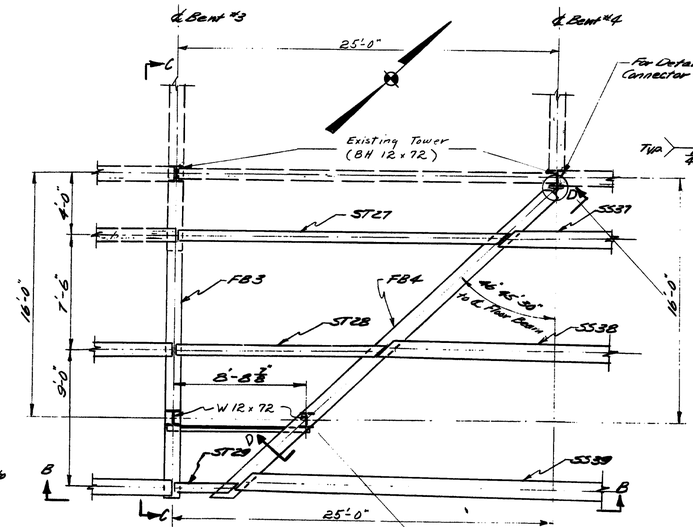
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

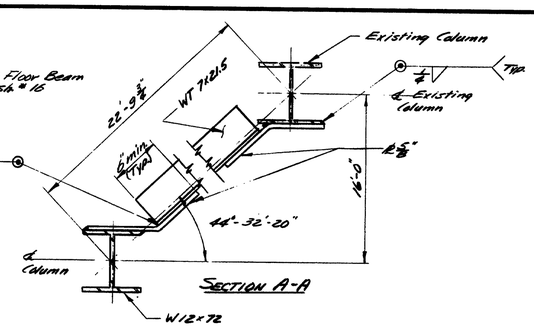
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
TOWER I

AUGUSTA, MAINE May 1979

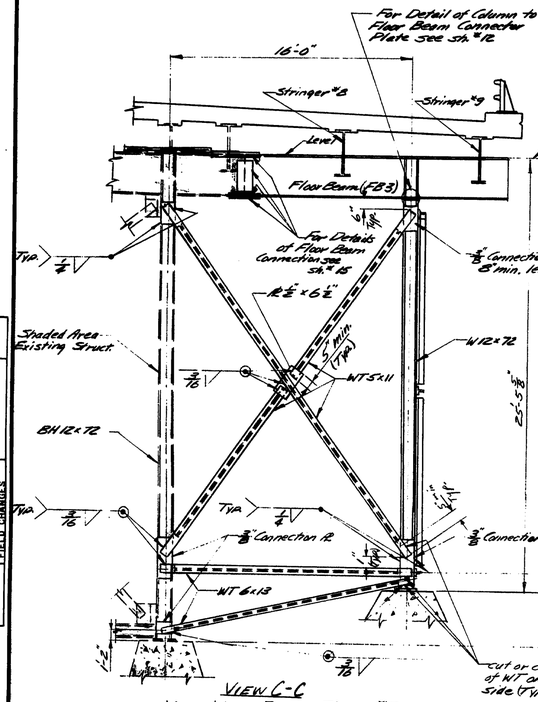
PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	K.E.A.	3-27
	CHECKED	Hall	3-79
	RECOMMENDED		
	FIELD CHANGES		

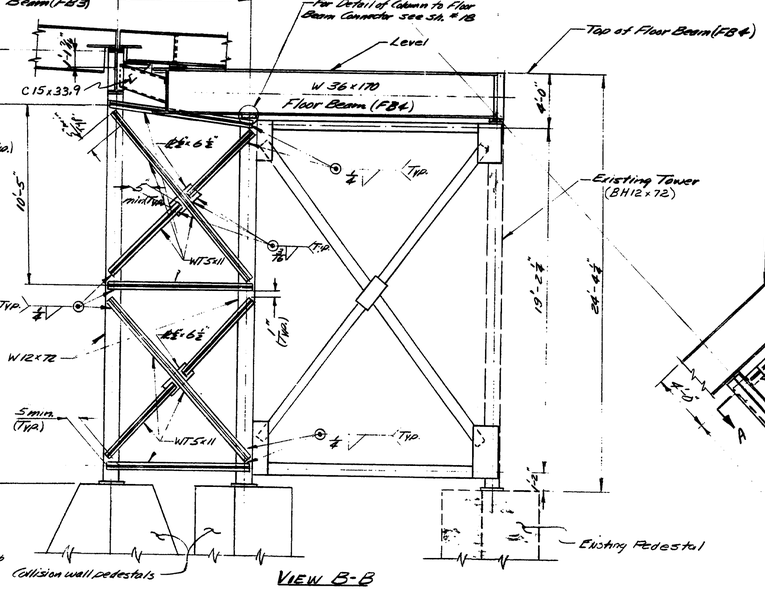
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	025-1(52) 025-1(90)	11	60

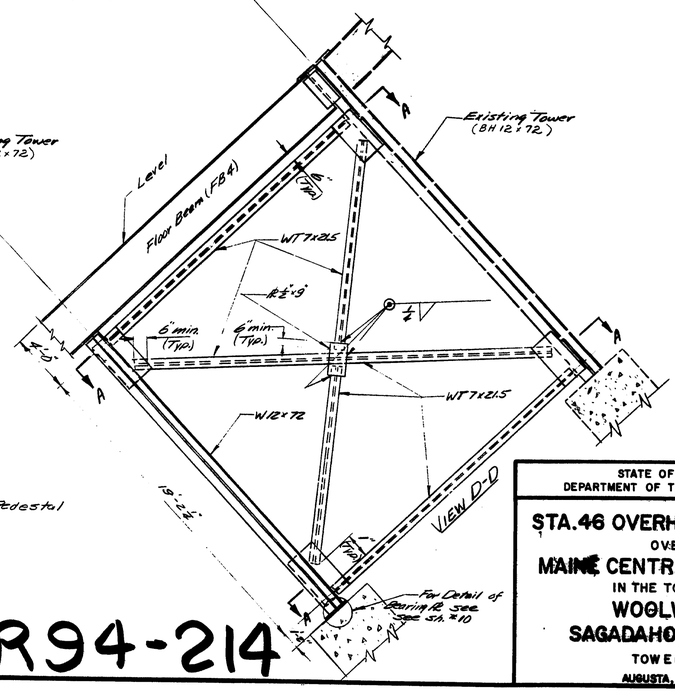




REFERENCES:
For Floor Beam (FB3) Details see sh.#17
For Floor Beam (FB4) Details see sh.# 18
For Floor Beam Connector Details see sh.# 15 & 16
For Stringer Details see sh.# 19 & sh.# 20
For Collision Wall Details see sh. 9
For Structural Steel Notes see sh.# 21







PROJECT DESIGN ENGINEER
PLANS
DESIGN - DETAILED — BY: M.E.A.T. — DATE: 5-79
CHECKED — M.E.A.T. — 5-79
REVISIONS
FIELD CHANGES

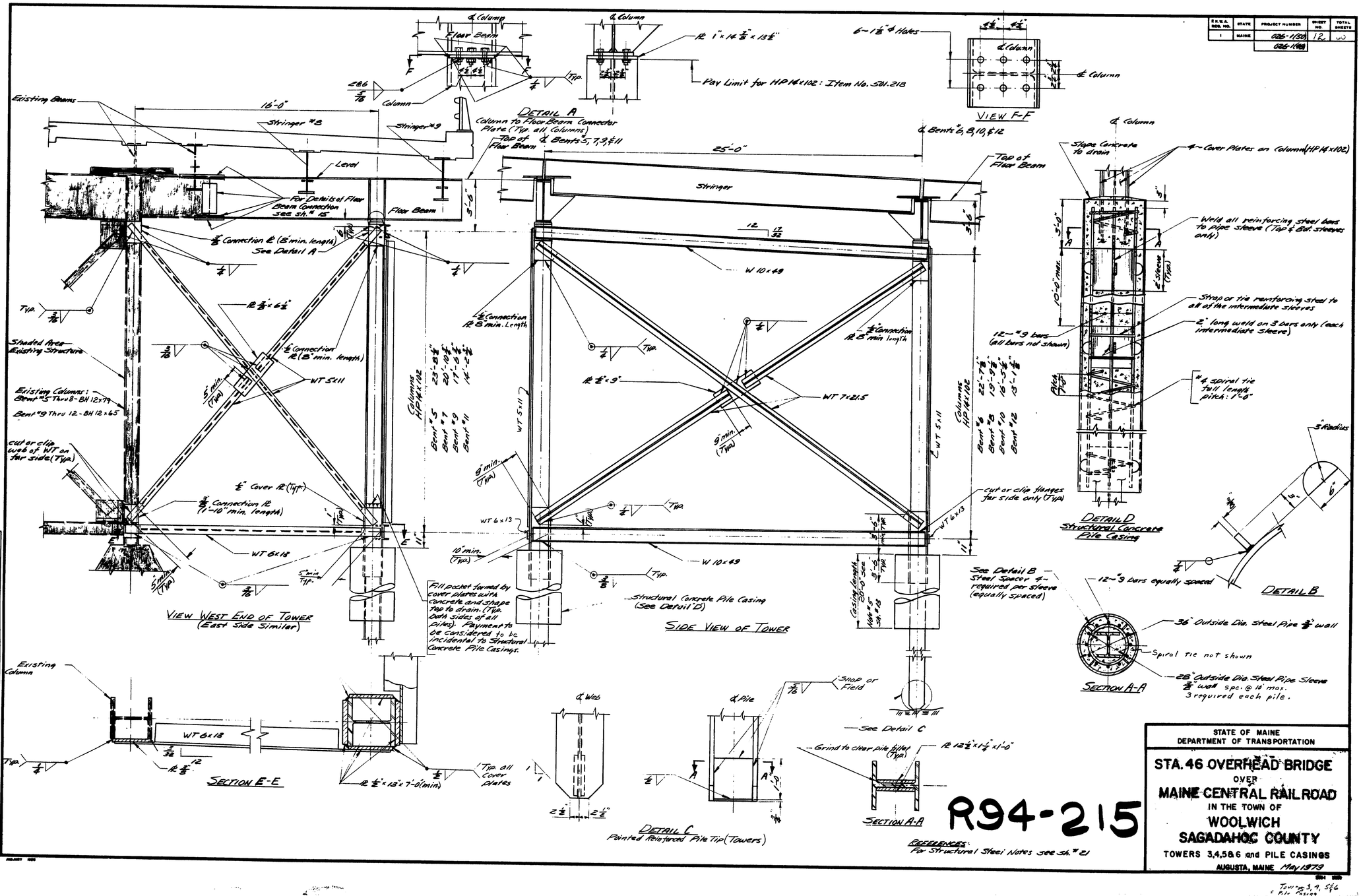
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA.46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
TOWER 2
AUGUSTA, MAINE May 1979

R94-214

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	025-1(50)	12	33
		025-1(46)		

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	H.E. Allen	4-29
CHECKED		5-29
PLANS REVISIONS		
FIELD CHANGES		



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

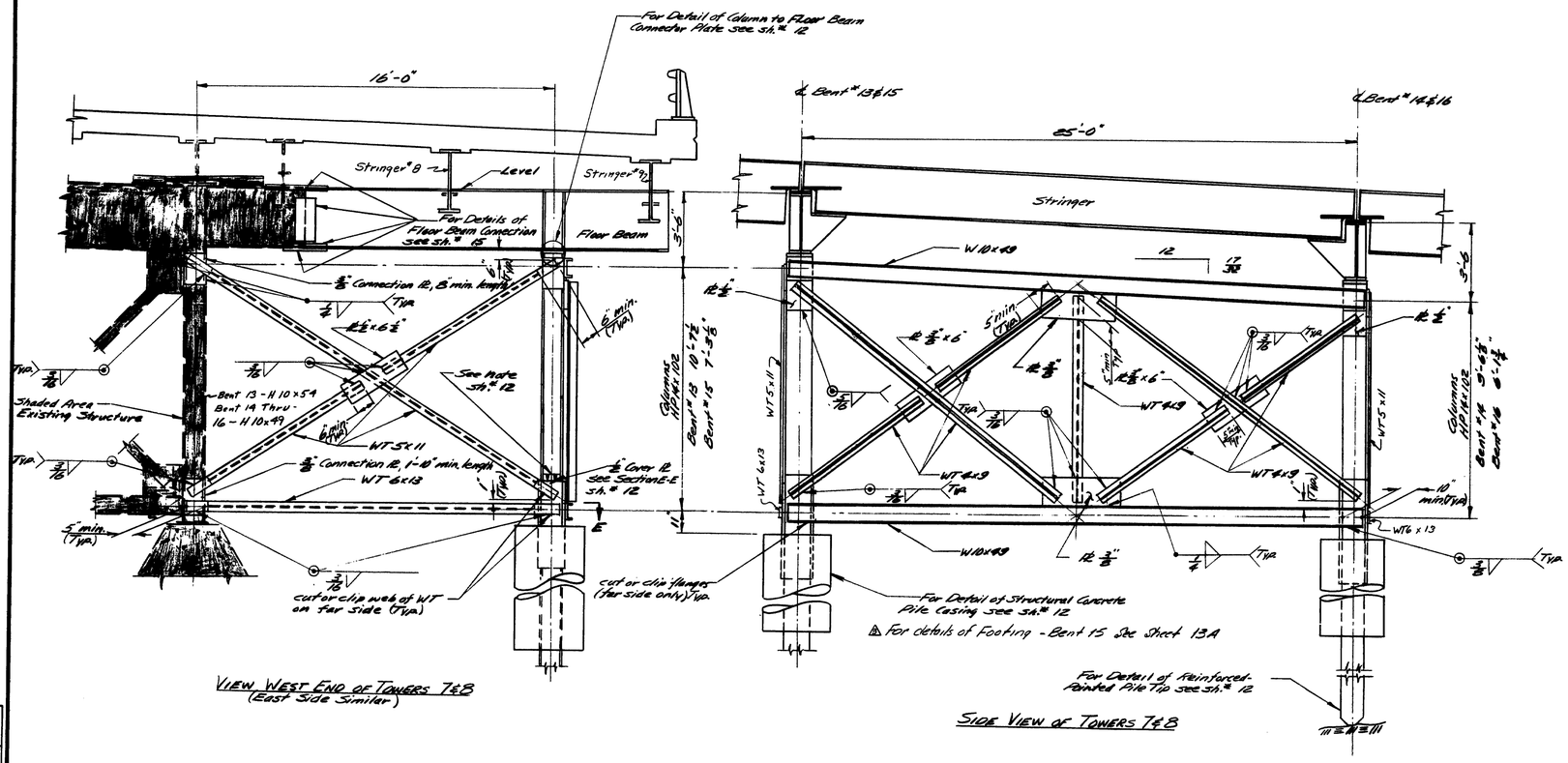
TOWERS 3,4,5&6 and PILE CASINGS

AUGUSTA, MAINE May 1979

R94-215

Towers 3, 4, 5&6
Pile Casings

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-1(59)	13	60
		026-1(60)		



VIEW WEST END OF TOWERS 7&8
(East Side Similar)

SIDE VIEW OF TOWERS 7&8

△ For details of Footing - Bent 15 See Sheet 13A

TOWER PILE NOTES

1. — Piles shall be driven to ledge or practical refusal.

2. — All piles shall have Painted Reinforced pile tips as shown on Sh.# 12.

3. — Alternate types of Painted Pile Tips may be used if they have at least the cross-sectional area of the Painted Reinforced Pile Tip shown on the plans and are approved by the Engineer.

4. — Estimated driven lengths of piles are determined from available soils information with no allowance for uncertain pile penetration.

5. — The Structural Concrete Pile casing shall be 20' in length except in areas where the HP 14x102 pile is driven less than 20'. In the areas where the HP 14x102 piles are driven less than 20', the Structural Concrete Pile Casing shall be driven down to ledge.

6. — Maximum calculated pile loads: 135 tons.

7. — Following are pile locations, number of piles required, size of piles, and estimated driven lengths including calcrin length:
Tower piles - HP 14x102 one each bent.
Bent #5 - - - 45'
Bent #6 - - - 55'
Bent #7 - - - 55'
Bent #8 - - - 60'
Bent #9 - - - 70'
Bent #10 - - - 75'
Bent #11 - - - 115'
Bent #12 - - - 125'
Bent #13 - - - 125'
Bent #14 - - - 115'
~~Bent #15 - - - 75'~~ △ Bent 15 HP 10x42 1-50' 2-100'
Bent #16 - - - 40'

8. — Omitted

9. — For pay limit of tower piles (HP14x102) see detail 19 Sh.# 12.

10. — The tower bracing & floor beams shall be attached to the tower piles (HP14x102) sufficiently, as determined by the Engineer, to maintain the Tower Pile (HP14x102) columns in their final position before the concrete is placed in the Structural Concrete Pile casings.

11. — No splicing of the HP 14x102 pile will be allowed within the distance 5' above to 5' below the top of the Structural Concrete Pile Casing.

12. — The cutting of the HP 14x102 piles to required length shall be done with the use of a mechanical guide. No "free hand" cutting will be allowed. The Engineer may require the end of the HP 14x102 pile to be ground to a true level plane. Payment for cutting & grinding will be included in the lump sum payment for Item 524.71 Structural Steel, Erection.

REFERENCES:
For Section E-E see Sh.# 12.
For Structural Steel Notes see Sh.# 21.

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	M.E.R.	3-79
	CHECKED	JMcC	5-79
	REVISIONS	MLH	
	FIELD CHANGES		

R94-216

△ Revised 11-6-79

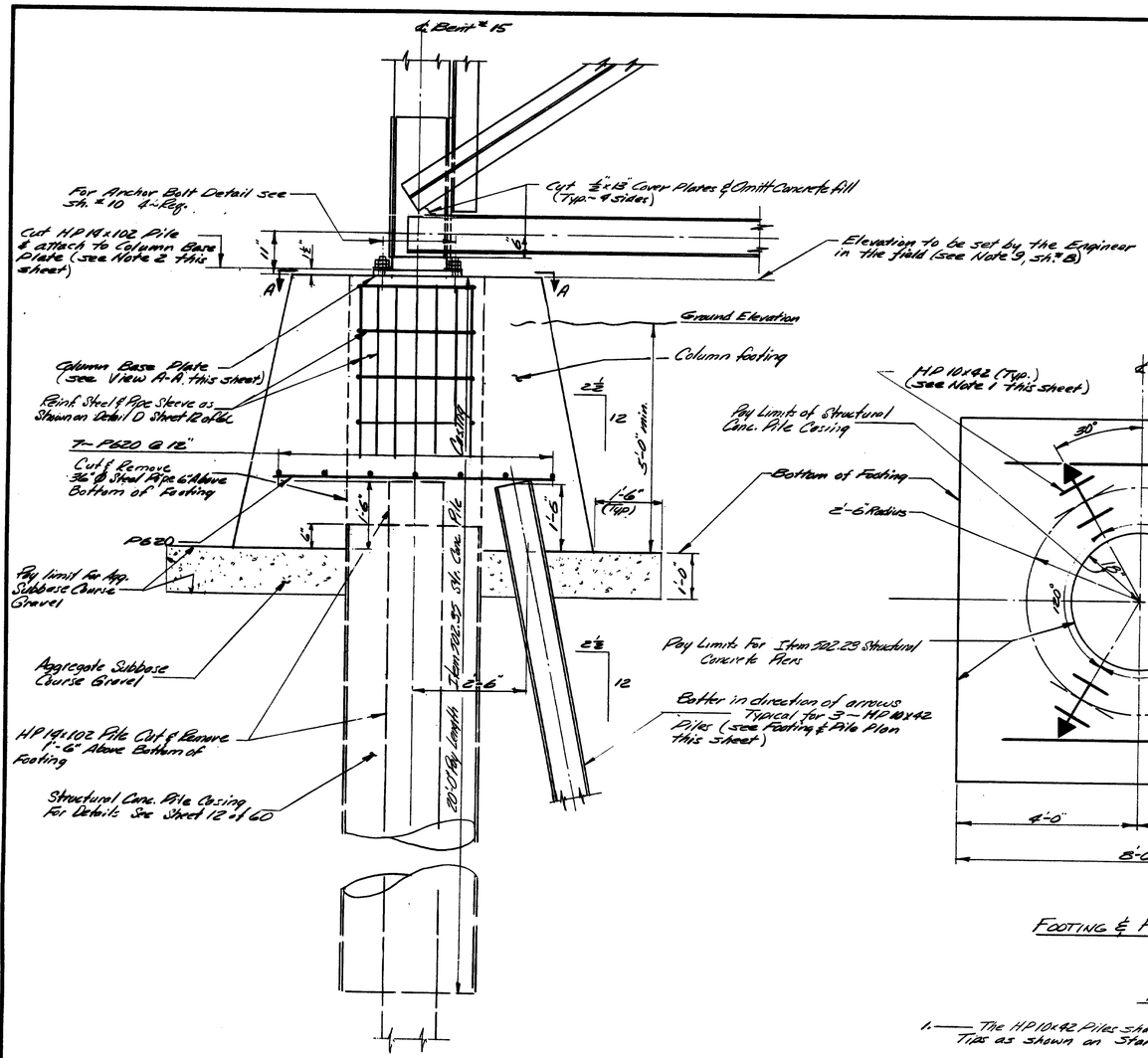
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

TOWERS 7&8

AUGUSTA, MAINE May 1979

F.A.S.S. RDS. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	025-1(20)	139	160
		025-1(16)		



FOOTING & PILE PLAN

REINFORCING STEEL

P620 – 14 req'd. Length 6'-0"

NOTES

1. The HP10x42 Piles shall have Painted Reinforced Pile Tips as shown on Standard Details BD 106-77.
2. The cutting of the HP 14x102 Piles and the attaching of the Piles to the Column Base Plate shall be done with the use of a mechanical guide. No "free hand" cutting will be allowed. The Engineer may require that the end of the HP 14x102 Pile be ground to a true level plane.
3. The reinforcing steel will be paid for under Item 503.12 Reinforcing Steel, Fab. and Delivered
4. Any dewatering of the footing excavation, the 4-1¾ anchor bolts, the column base plate, Cutting off the HP14x102 pile and the 16"x13" cover plates, Welding the base plate to the HP14x102 pile, and installing the anchor bolts will be made in accordance with subsection 109.04.
5. Payment for Structural Concrete in the column footing will be made under Item 502.23 Structural Concrete Piers

REFERENCE: See Notes 1, 2, 3, 5, & 10 of 11 Sh's

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	M.E.R.	11/79
CHECKED		
REVISIONS		
FIELD CHANGES		

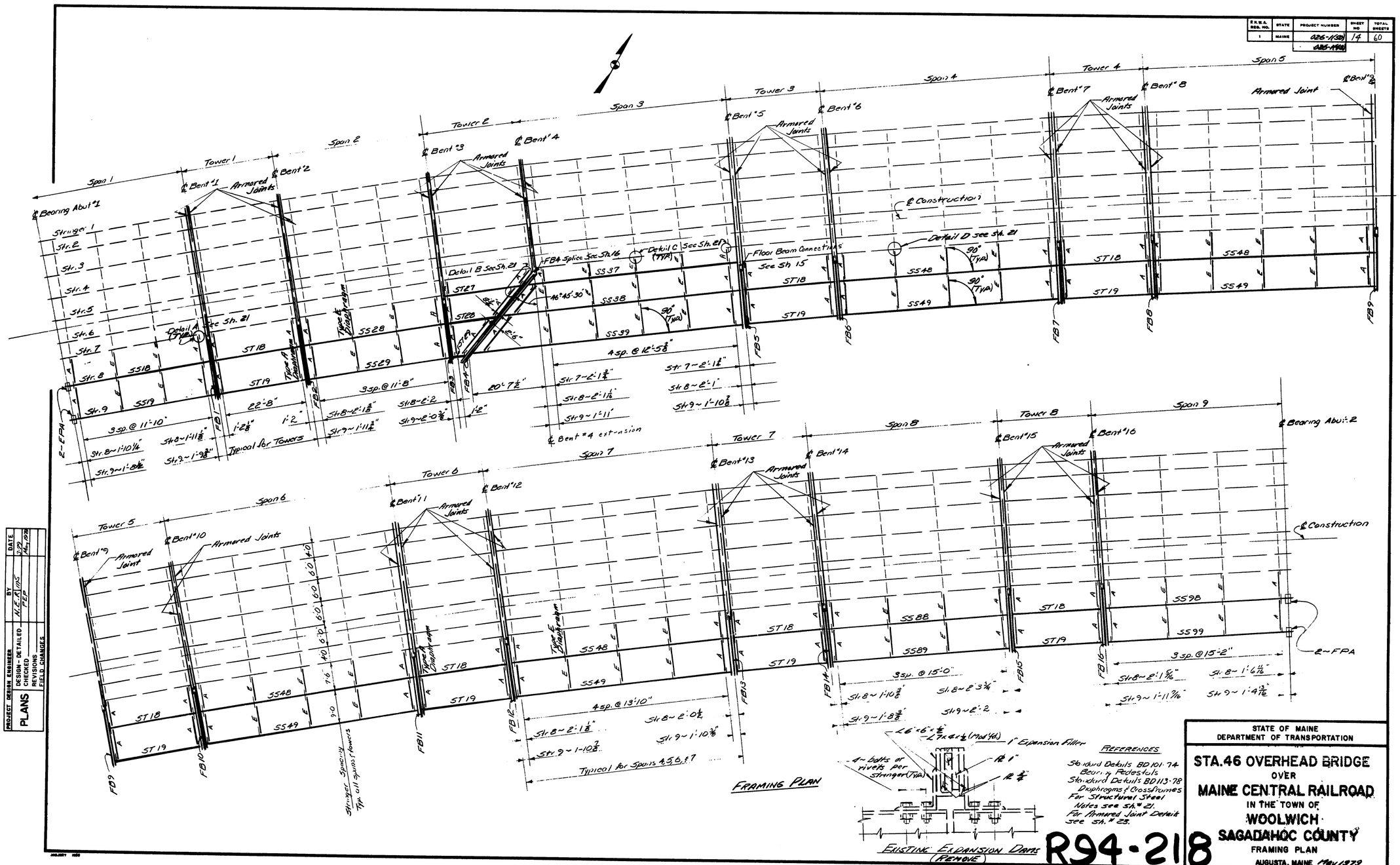
R94-217

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
FOOTING-BENT 15

AUGUSTA, MAINE Nov. 1979

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	025-1(32)	14	60
		025-1(44)		



PROJECT DESIGN ENGINEER: H.F. FUNK
DESIGN - DETAILED: F.E.P.
CHECKED:
REVISIONS
FIELD CHANGES
DATE: 1-29-79, May 1979

PLANS

REFERENCES

Standard Details BD 101.74
Bearing Pedestals
Standard Details BD 113.78
Diaphragms & Cross Frames
For Structural Steel
Notes see Sh. # 21
For Armored Joint Detail
see Sh. # 23.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
FRAMING PLAN
AUGUSTA, MAINE May 1979

R94-218

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	025-1(19)	15	61
		025-1(49)		

Install 10-$\frac{7}{8}$"ϕ H.S. Bolts

Install H.S. Bolts as shown on typ flange of splice detail Bents 2, 6, 8, 10, 12, 14, & 16

Install PL $\frac{7}{16}$"x4"x1'-2" bolt sides of the stiffener, expansion ends only. Grind to bear against PL $\frac{7}{16}$"x4"x3'-1$\frac{5}{8}$" as directed by the Engineer.

FIXED

EXPANSION

Install 6-$\frac{7}{8}$"ϕ H.S. Bolts

Install 2-1"ϕ H.S. Bolts

2"

Remove end of stiffeners by a method approved by the Engineer sufficiently to allow installation of the $\frac{7}{16}$"x4"x3'-1$\frac{5}{8}$" splice PL (Typ)

Install 2-$\frac{7}{16}$"x6"x3'-1$\frac{5}{8}$" splice PLS

Install 2-$\frac{7}{8}$"ϕ H.S. Bolts (see Detail C)

STRINGER & FLOOR BEAM MODIFICATIONS AT STRINGER #7 (See Existing below)

10-$\frac{15}{16}$"ϕ holes @ $\frac{15}{16}$" holes

8-$\frac{15}{16}$"ϕ holes bottom $\frac{7}{8}$" PL

2-$\frac{7}{8}$"-9 UNC tapped holes (see Detail C)

2-$\frac{15}{16}$"ϕ holes bottom $\frac{7}{8}$" PL

Replace with PL shown in Detail B

PL $\frac{7}{8}$"

SECTION Z-Z

New Floor Beam Existing Floor Beam 33WF130 see sh. #17

Remove & Discard $\frac{7}{8}$"x$\frac{7}{8}$" beveled PL Replace with beveled PL $\frac{7}{8}$"x15"x3'-1$\frac{5}{8}$" (see Section Z-Z)

SECTION A-A

Remove & Save 2-6"x1" PL Return them to original positions

Remove & Discard PL $\frac{7}{16}$"x12"x0'-8" Replace with PL $\frac{7}{16}$"x15"x3'-1$\frac{5}{8}$"

DETAIL B

Remove 6- bolts

Remove 2-1"ϕ bolts

Remove 2- bolts

Remove 4- rivets

Remove 6- rivets including 2- countersunk rivets

℄ Bent 2, 6, 8, 10, 12, 14, & 16

EXISTING STRINGER & FLOOR BEAM MODIFICATIONS AT STRINGER #7 (See "Modifications" above)

DETAIL C

PL $\frac{7}{16}$"x5"x3'-1$\frac{5}{8}$"

Beam Flange (Existing)

PL $\frac{7}{16}$"x4"x3'-1$\frac{5}{8}$"

Tack Weld

Tighten as directed by the Engineer

Install 2-$\frac{7}{8}$"ϕ H.S. Bolts & 2-1"ϕ H.S. Bolts

Install 6-$\frac{7}{8}$"ϕ H.S. Bolts

FIXED

FIXED

Install 10-$\frac{7}{8}$"ϕ H.S. Bolts

STRINGER & FLOOR BEAM MODIFICATIONS AT STRINGER #7 (See Existing below)

Remove end of stiffener angles by a method approved by the Engineer sufficiently to allow installation of the $\frac{7}{16}$"x4"x3'-1$\frac{5}{8}$" splice PL (Typ)

Install 8-$\frac{7}{8}$"ϕ H.S. Bolts

See Detail B & Detail C

Stringer #7

Y

℄ Floor Beam

2-PL $\frac{7}{16}$"x4"x3'-1$\frac{5}{8}$"

8-$\frac{15}{16}$"ϕ holes bottom $\frac{7}{8}$" PL

For Floor Beam Details see sh. #17

2-PL $\frac{7}{8}$"x1'-0$\frac{1}{2}$"x2'-3"

Existing Floor Beam 33WF130

8x20 @ 3"

2-$1\frac{5}{16}$"ϕ holes top & bottom PL

See note B sh. #21

2-PL $\frac{7}{8}$"x4"x2'-0$\frac{1}{2}$"

1-PL $\frac{7}{8}$"x11"x2'-0$\frac{1}{2}$"

Remove & Discard $\frac{7}{8}$" PL Replace with PL $\frac{7}{16}$"x15"x3'-1$\frac{5}{8}$"

℄ Floor Beam

SPLICE DETAIL Bents 2, 6, 8, 10, 12, 14, & 16

℄ Stringer #7

Remove 6- bolts

Existing Floor Beam 33 WF 130

8x20 @ 3"

See Note B sh. #21

Drill $\frac{15}{16}$"ϕ holes in existing floor beams

SECTION B-B

SECTION Y-Y

℄ Bent

2-$\frac{7}{8}$" 3-$\frac{7}{8}$" 3-$\frac{7}{8}$" 2-$\frac{7}{8}$"

10-$\frac{15}{16}$"ϕ holes

Beam web splice PL & beam bottom flg. splice PL same as Bents 2 thru 16

See note B sh. #21

SECTION X-X

New Floor Beam 33WF130 see sh. #17

SECTION E-E

Remove 5"x$\frac{7}{8}$" PL Save & Return to original position

Remove & Discard $\frac{7}{8}$" beveled PL Replace with beveled PL $\frac{7}{8}$"x15"x3'-1$\frac{5}{8}$"

Remove 6- bolts

Remove 4- rivets

Remove 2- bolts

Remove 2- bolts

Remove 4- rivets

SECTION F-F

Drill $\frac{15}{16}$"ϕ holes as shown in Section B-B

SECTION D-D

NOTE: Release Diaphragms as necessary to install Floor Beam Splice

℄ Bents 1, 3, 5, 7, 9, 11, 13, & 15

EXISTING STRINGER & FLOOR BEAM MODIFICATIONS AT STRINGER #7 (See "Modification" above)

REFERENCES: For Structural Steel Notes see sh. #21.

R94-219

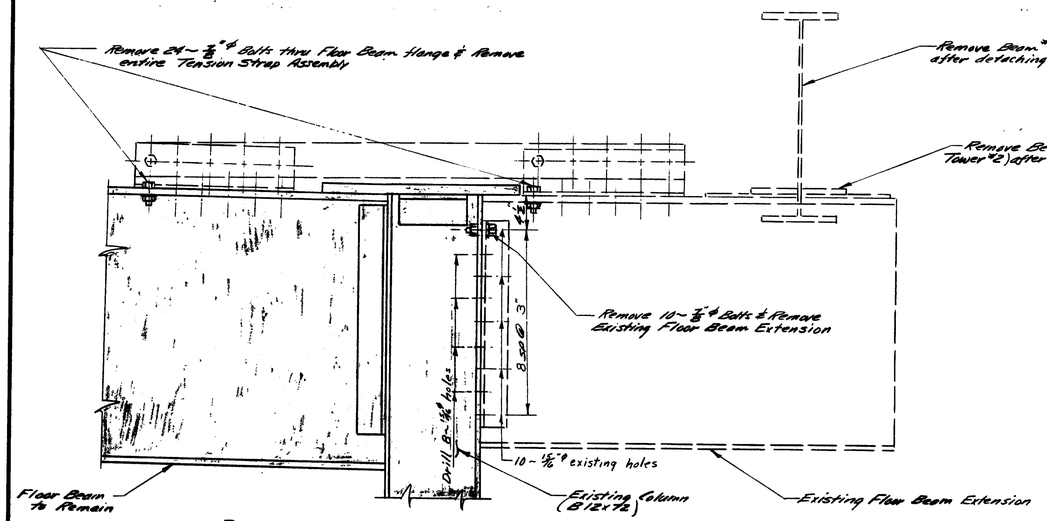
PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	M.E.R. Assoc	5-79
	CHECKED	MHF	5-79
	REVISIONS		
	FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

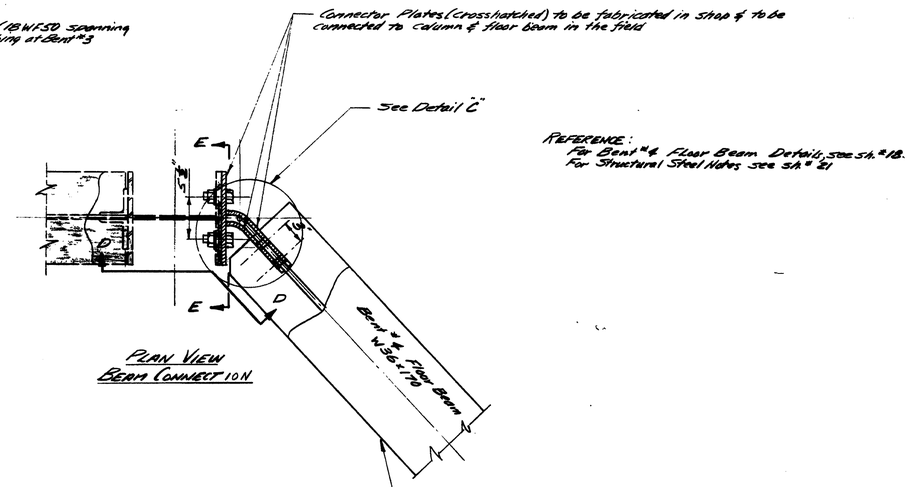
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

FLOOR BEAM CONNECTIONS
BENTS 1, 2, 3 & 5 THRU 16
AUGUSTA, MAINE May 1979

F.A. U.S.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-1(30)	16	60
		026-1(40)		

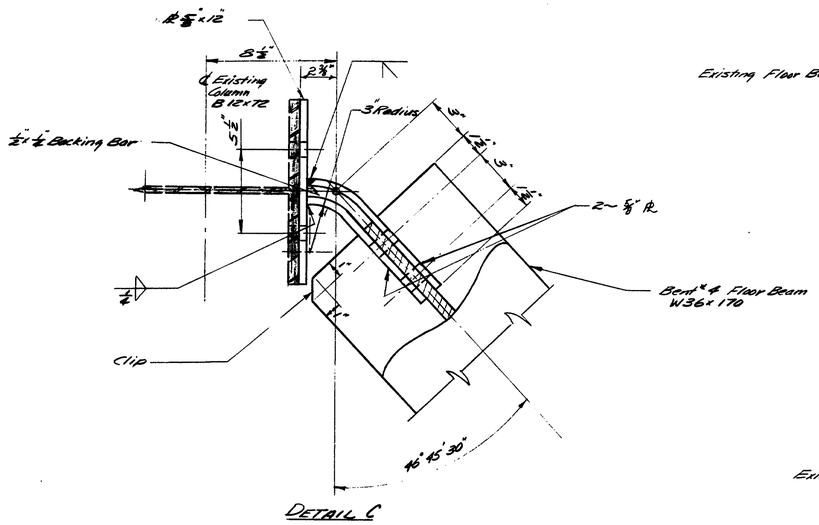


REMOVAL OF EXISTING TENSION STRAP & FLOOR BEAM AT BENT "4

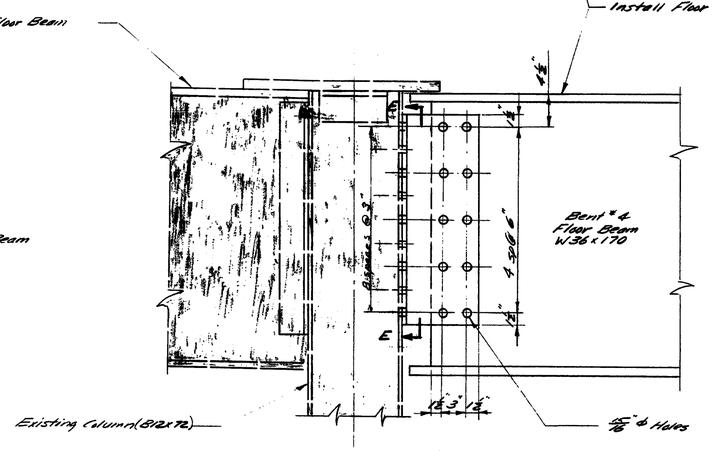


PLAN VIEW
BEAM CONNECTION

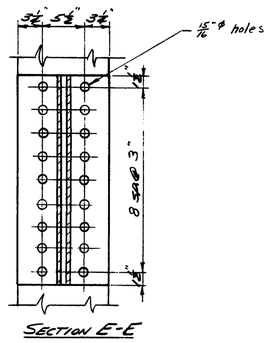
REFERENCE:
For Bent "4 Floor Beam Details, see sh. "18.
For Structural Steel Notes see sh. "21



DETAIL C



ELEVATION VIEW D-D



SECTION E-E

PROJECT DESIGN ENGINEER	BY	DATE
PLANS	DESIGN – DETAILED	H.E.R.I. Asst 3-79
	CHECKED	M.L.H. 5-79
	REVISIONS	
	FIELD CHANGES	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

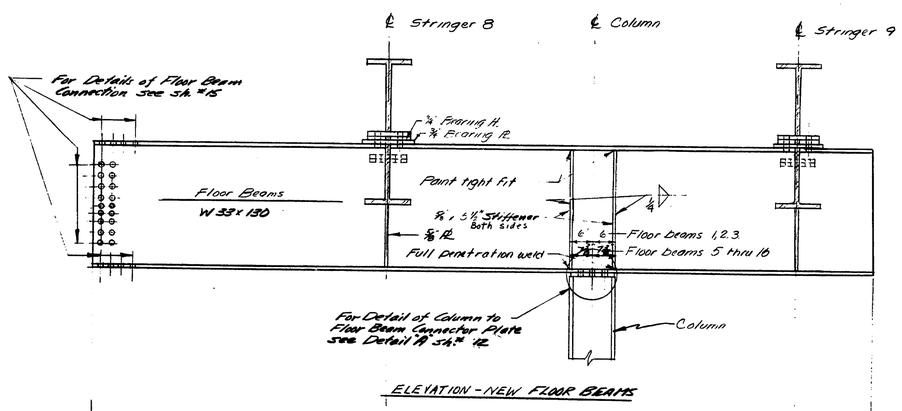
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

FLOOR BEAM CONNECTION BENT 4

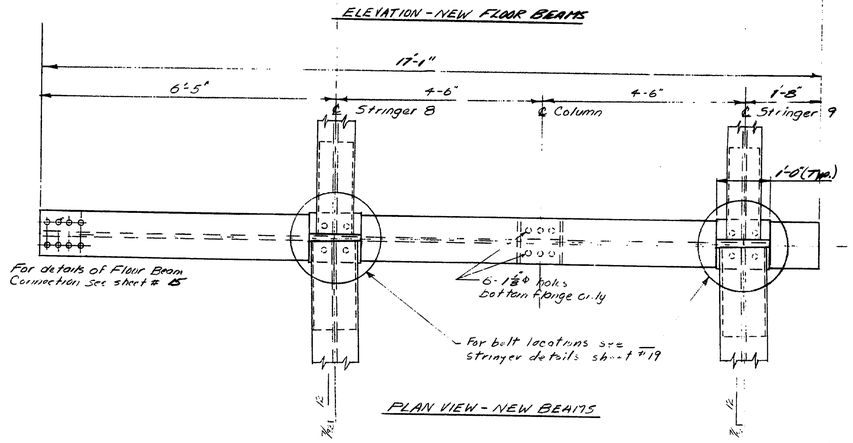
AUGUSTA, MAINE May 1979

R94-220

F.H.W.A. DES. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-1(50)	17	60
		026-1(58)		

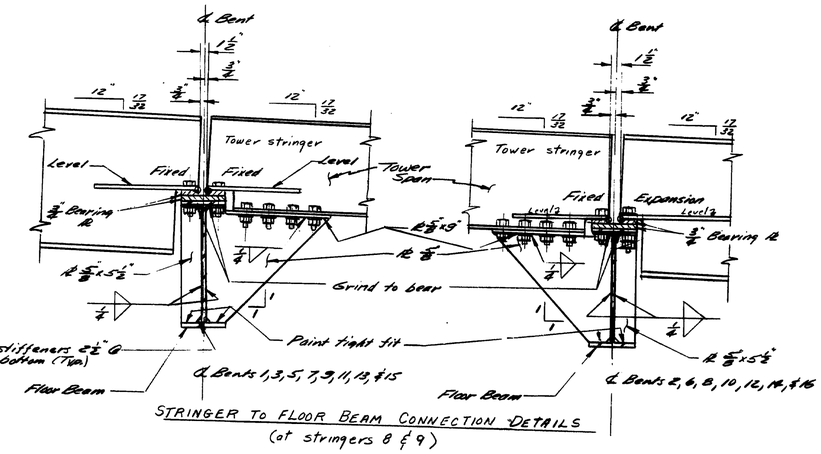


ELEVATION - NEW FLOOR BEAMS

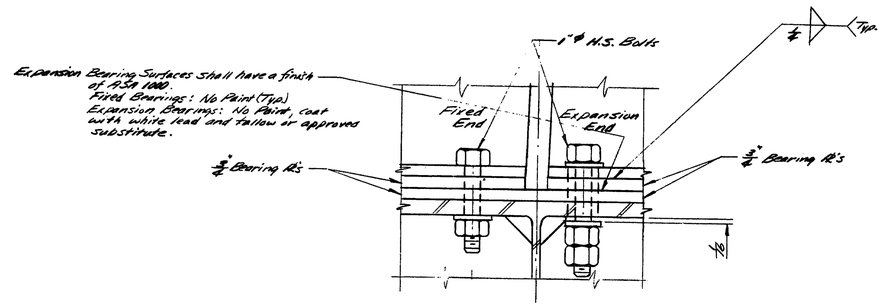


PLAN VIEW - NEW BEAMS

FLOOR BEAMS 1.3.5.7.9.11.13.15 SHOWN
Floor Beams 2.6.8.10.12.14.16 Similar



STRINGER TO FLOOR BEAM CONNECTION DETAILS
(at stringers 8 & 9)



Bolts Fixed & Expansion Ends of Stringers

REFERENCES:
For Structural Steel Notes see Sh.# 21.

PROJECT DESIGN ENGINEER

	BY	DATE
DESIGN - DETAILED	W.E.S.	12-93
CHECKED	M.L.H.	5-79
REVISIONS		
FIELD CHANGES		

PLANS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

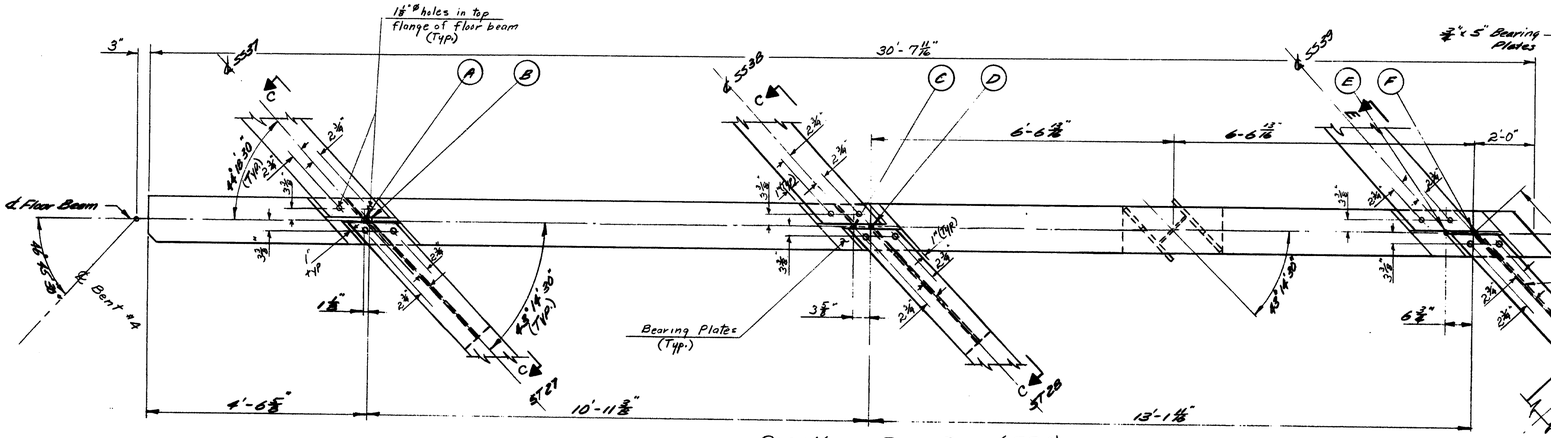
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

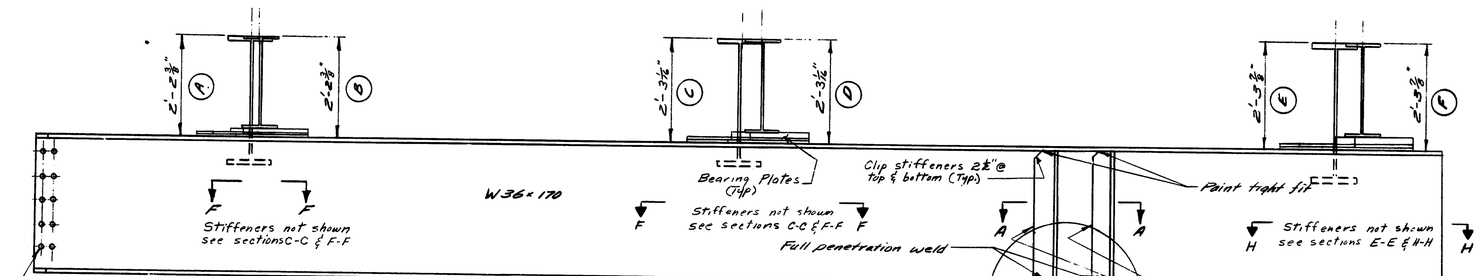
FLOOR BEAMS 1 THRU 3 and 5 THRU 16

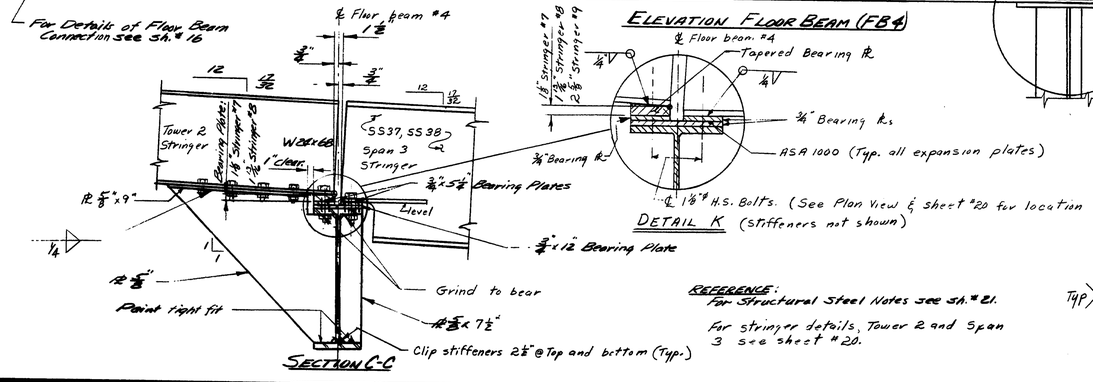
AUGUSTA, MAINE May 1979

R94-221

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	026-1(52)	18	60
		026-1(48)		

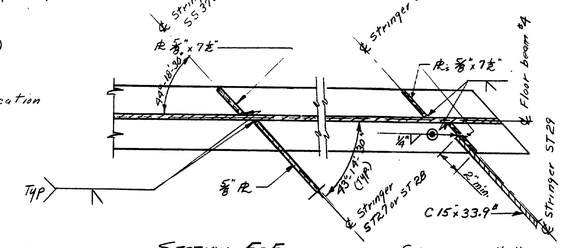






REFERENCE:
For Structural Steel Notes see Sh. # 21.

For stringer details, Tower 2 and Span 3 see sheet # 20.



PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	M.E.D.	2-79
CHECKED	M.L.H.	5-79
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

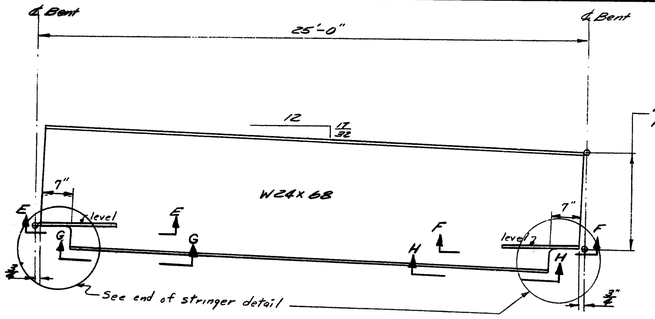
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

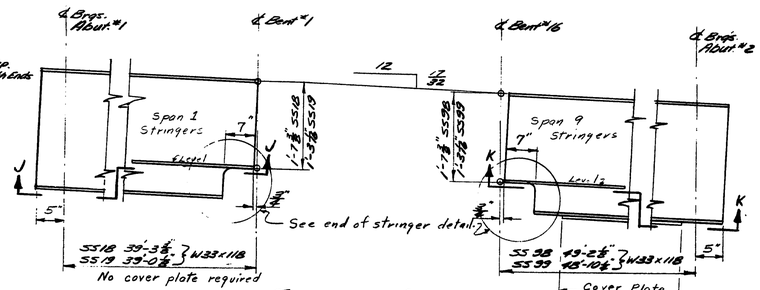
FLOOR BEAM 4

AUGUSTA, MAINE May 1979

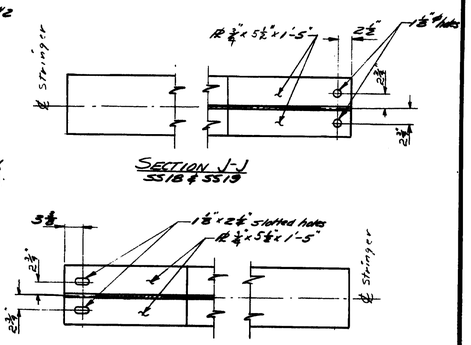
R94-222

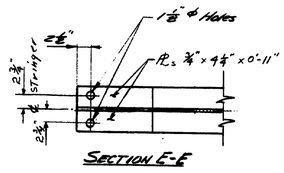
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-1(30)	19	60
		~~020-1(10)~~		

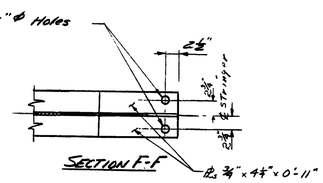


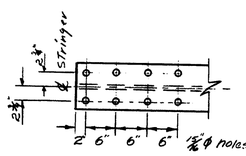


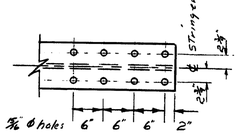
STRINGERS AT ABUTMENTS

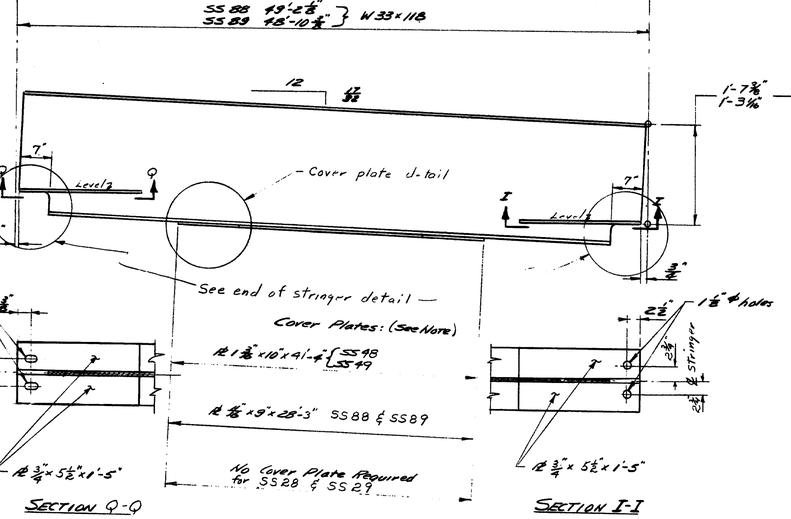








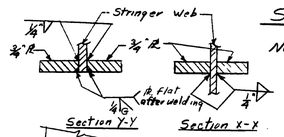




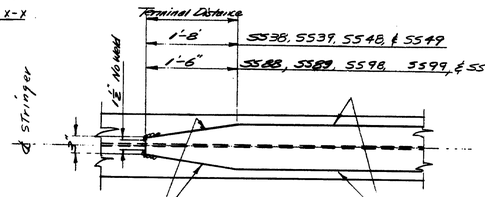
STRINGERS AT SPANS 1, 2 & 4 THRU 8

Total Stringers Required = 36	
Stringer	No. Required
SS18	1
SS19	1
SS28	1
SS29	1
SS37	1
SS38	1
SS39	1
SS48	4
SS49	4
SS88	1
SS89	1
SS98	1
SS99	1
ST18	7
ST19	7
ST27	1
ST28	1
ST29	1

REFERENCE,
For Stringers SS37, SS38, SS39, ST27, ST28, & ST29 see Sh. # 20.



End of Stringer Detail
Typ. except at Abutments and ST27



Cover Plate Detail

Note:
All cover plates spaced equidistant from both ends of stringers.

REFERENCES:
For Diaphragm details see Standard Detail BD 113-78 & Sh. # 16.
For Structural Steel Notes see Sh. # 21.

R94-223

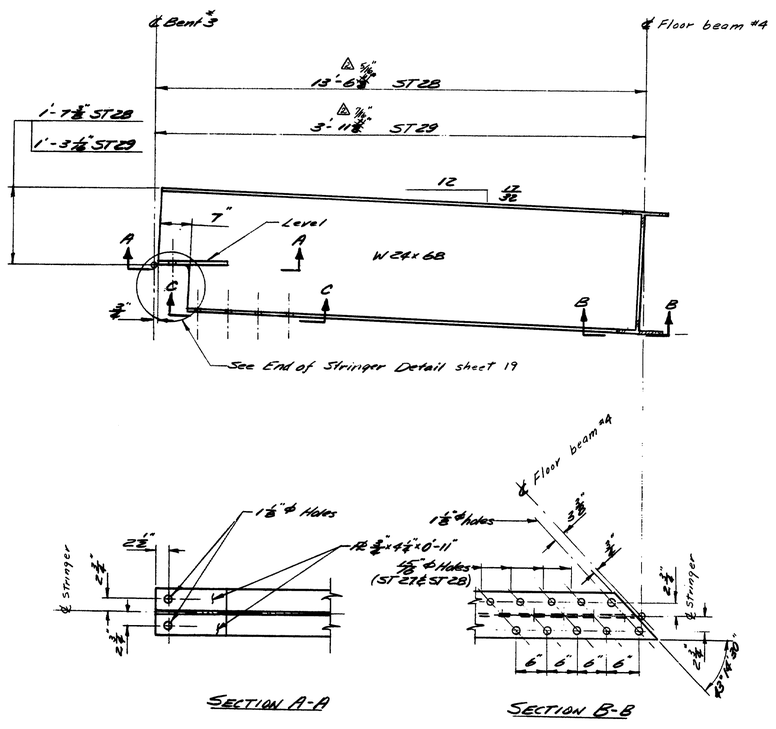
PROJECT DESIGN REMINDER	BY	DATE
PLANS	DESIGN - DETAILED: N.E.R./Parr	5-76
	CHECKED: MLH	5-77
	REVISIONS	
	FIELD CHANGES	

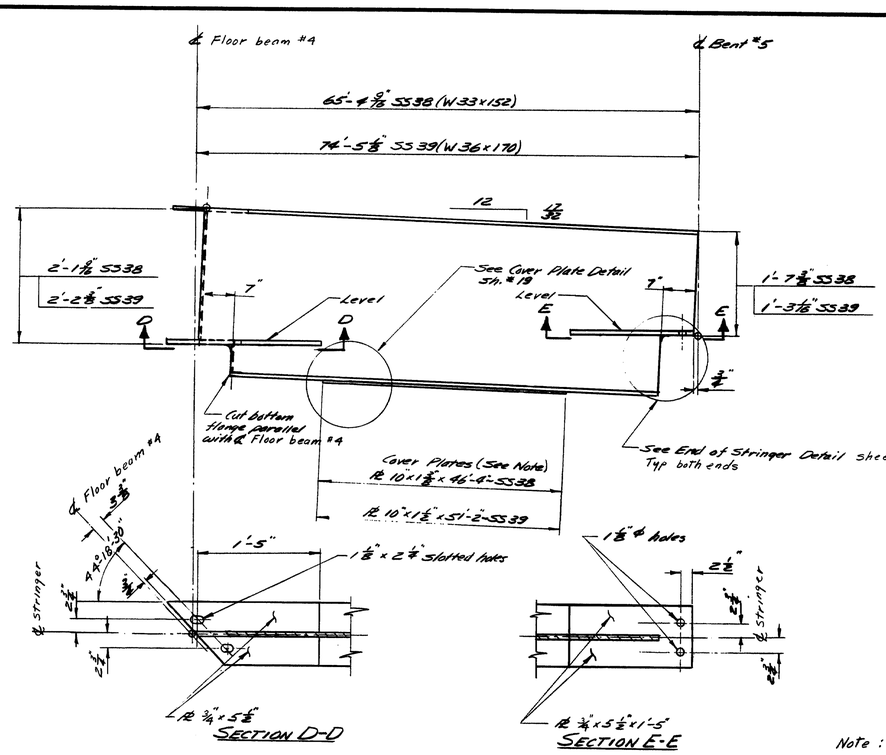
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

STRINGER DETAIL SPANS 1, 2 & 4 THRU 9
TOWERS 1 & 3 THRU 8
AUGUSTA, MAINE MAY 1979

F.H.W.A. ROG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	~~026-1(50)~~	20	60
		~~026-1(46)~~		





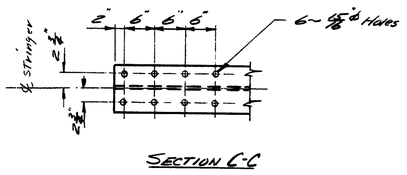
SECTION A-A

SECTION B-B

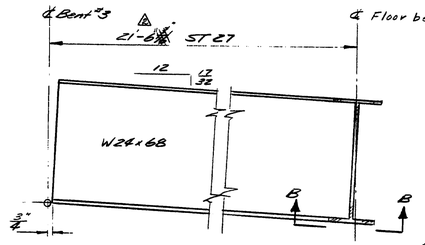
SECTION D-D

SECTION E-E

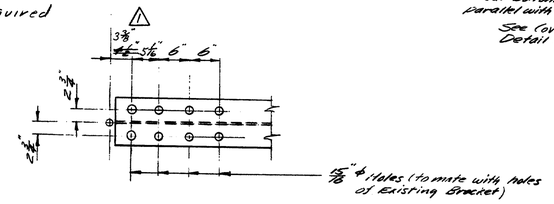
Note :
ALL holes 15/16" ϕ unless noted.



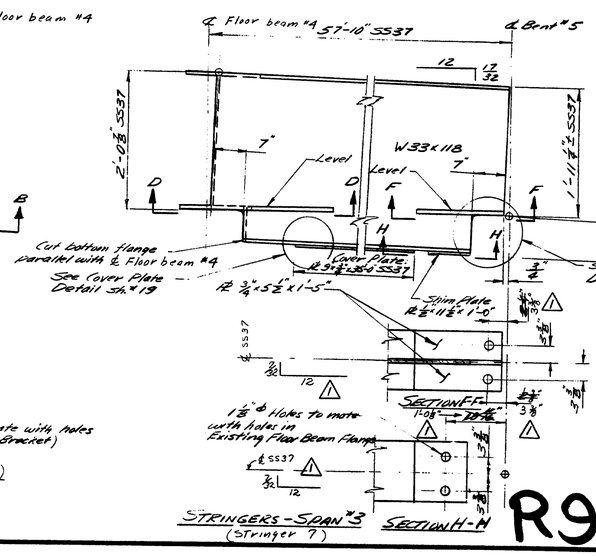
SECTION C-C



STRINGERS - TOWER #2
(Stringers 8 & 9)
No Cover Plates Required



STRINGER - TOWER #2 (Stringer 7)
No Cover Plate Required



STRINGERS - SPAN #3
(Stringer 7)

REFERENCES:
For Diaphragm Details see Standard Detail BD 102-78 & Sh. # 16.
For Floor Beam Details see Sh. # 17 & Sh. # 18
For Structural Steel Notes see Sh. # 21.
For End of Stringer Detail see Sh. # 19

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN - DETAILED	N.E.R	5-79
CHECKED	M.L.H	5-79
REVISIONS		
FIELD CHANGES		

⚠ revised lengths of stringers ST 27, ST 28 & ST 29

REVISIONS

⚠ revised stringers ST 27 & SS 37 10-17-79 N.E.R

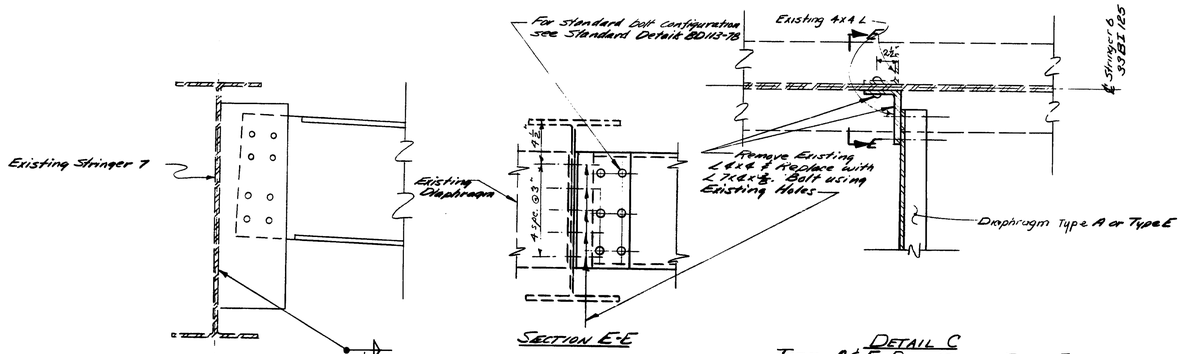
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

STRINGER DETAIL
TOWER 2 and SPAN 3
AUGUSTA, MAINE MAY 1979

R94-224

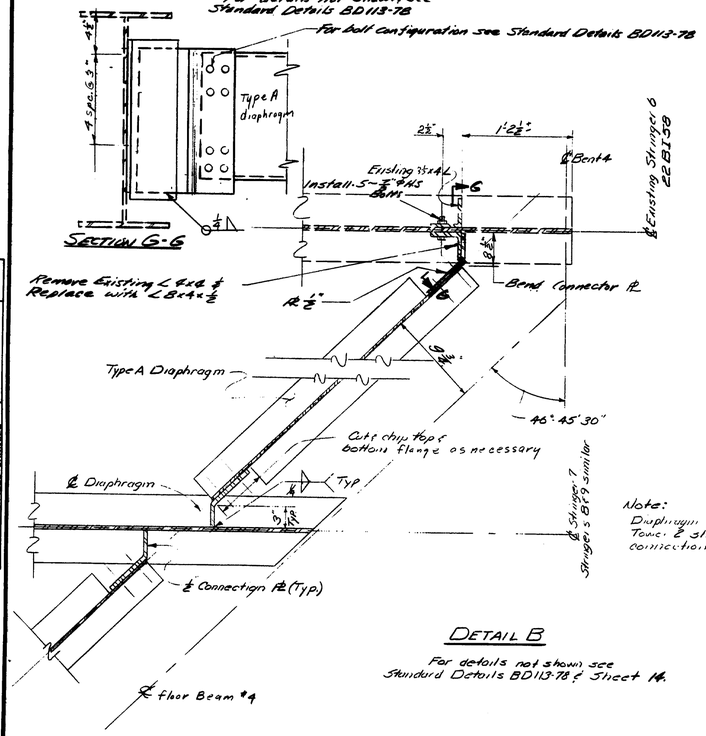
F.A.U.S. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-1(6)X	21	60
		026-1(6)Z		



SECTION E-E

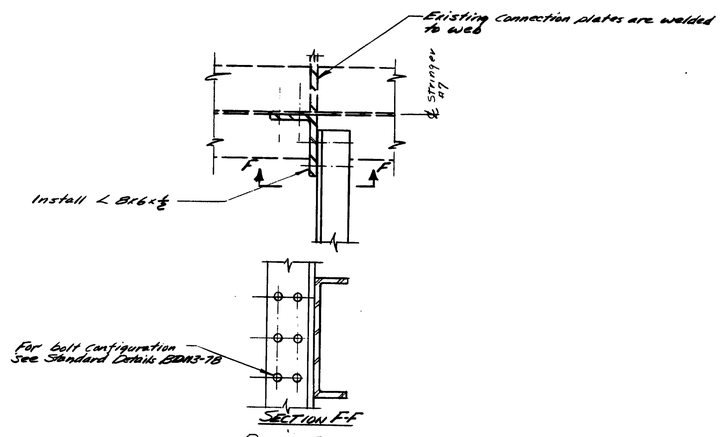
DETAIL C
TYPE A & E DIAPHRAGM - SPAN 3 ONLY
For details not shown see Standard Details BD113-78

DETAIL A
TYPE A DIAPHRAGM
ALL SPANS EXCEPT SPAN 3
For details not shown see Standard Details BD113-78



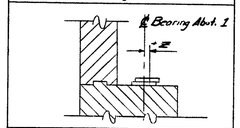
DETAIL B
For details not shown see Standard Details BD113-78 & Sheet 14.

Note:
Diaphragm connection plates in Tower 2 stations, diaphragm connection plates in Span 3 similar.



DETAIL D
TYPE E DIAPHRAGM
ALL SPANS EXCEPT SPAN 3

BEARING SETTING DATA
After erecting structural steel and other placing concrete slab.



Temperature of Setting °F

Temp °F	Z, in.
30	+ ¼
5	+ ⅛
20	+ 1/16
45	0
70	- 1/16
95	- ⅛
120	- ¼

No adjustment will be required to compensate for dead load deflection.

STRUCTURAL STEEL NOTES

1. Diaphragm connection plates shall be normal to the top flange.
2. All bolts shall be ⅞" ϕ H.S. ASTM A325 unless otherwise noted.
3. Bolt holes shall be 15/16" ϕ unless otherwise noted.
4. Dimensions are horizontal or vertical.
5. Stringers shall be erected with natural camber up.
6. All of the existing structural steel to be embedded in new concrete, shall be cleaned of all paint, rust, and other foreign matter before placing concrete. Payment will be under Item 506.16 Surface Preparation of Existing Structural Steel.
7. All existing structural steel shall be cleaned and painted in accordance with supplemental specifications section 506, Painting Structural Steel.
8. Set gap between Existing Floor Beam & New Floor Beam to maintain space between Stringers 7&8 at 7'-6" as shown on Framing Plan.
9. All contact surfaces within friction-Type joints shall be blast cleaned in accordance with SSPC Surface Preparation Specifications No. 6 Commercial Blast Cleaning.

MATERIALS	BASIC ALLOWABLE STRESSES
New Structural Steel - - - ASTM A36 - - -	fs = 20,000 p.s.i.
High Strength Bolts - - - ASTM A325 - - -	fv = 25,000 p.s.i.

REFERENCES:
For location of Details A, B, C, & D see sh. # 14.

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	M.E.P.	5/79
CHECKED	M.L.F.	5/79
REVISIONS		
FIELD CHANGES		

PLANS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

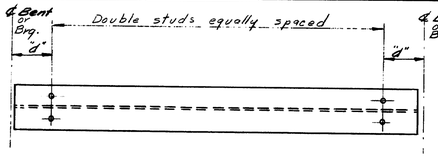
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

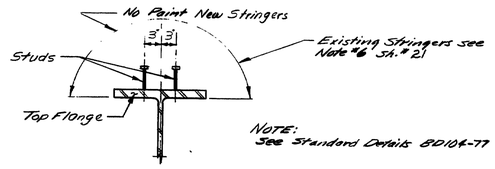
STRUCTURAL STEEL DETAILS

AUGUSTA, MAINE May 1979

R94-225

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	~~026-1(30)~~	22	60
		~~026-1(40)~~		





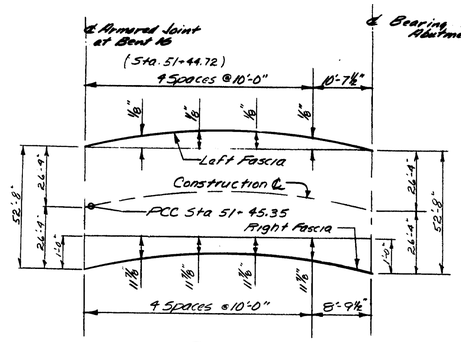
NOTE:
See Standard Details SD10t-77 for Stud Details.

TYPICAL SECTION

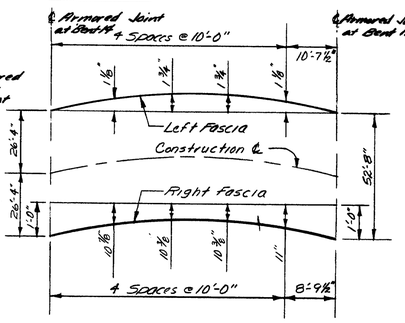
Stringer No.	SPAN # 1 & 2 No. of 9" Sp.	SPAN # 1 & 2 d	SPAN # 3 No. of 10" Sp.	SPAN # 3 d	SPAN # 4, 5, 6, & 7 No. of 10" Sp.	SPAN # 4, 5, 6, & 7 d	SPAN # 8 & 9 No. of 10" Sp.	SPAN # 8 & 9 d	SPAN TOWER # 2 No. of 8" Sp.	SPAN TOWER # 2 d	SPAN ALL OTHER TOWERS No. of 8" Sp.	SPAN ALL OTHER TOWERS d	NUMBER STUDS PER STRINGER
1	53	4 3/8"	66	3 3/4"	72	6 3/8"	60	3 3/8"	Studs Existing		(See Note)	——	1178
2	53	3 5/8"	66	3"	72	5 3/8"	59	7 5/8"	36	6"	36	6"	1766
3	53	2"	65	6 1/8"	72	4"	59	6 3/8"	↓	↓	↓	↓	1764
4	52	5"	65	5 5/8"	71	7 5/8"	59	5"	↓	↓	↓	↓	1752
5	52	4 3/8"	65	3 3/4"	71	6 3/8"	59	3 3/8"	↓	↓	↓	↓	1752
6	52	3 3/4"	65	2 5/8"	71	4 5/8"	58	7 5/8"	↓	↓	↓	↓	1748
7	52	3"	68	7"	71	3 3/4"	58	6 3/8"	31	5 3/4"	Studs Exist (See Note)		1226
8	51	6 3/4"	78	2 1/4"	70	7"	58	5"	19	5 1/2"	36	6"	1728
9	51	4 3/8"	88	6 1/2"	70	4 3/4"	58	3 3/4"	5	3 3/8"	36	6"	1720
											TOTAL STUDS REQ'D.		14,634

SHEAR CONNECTOR DIAGRAM

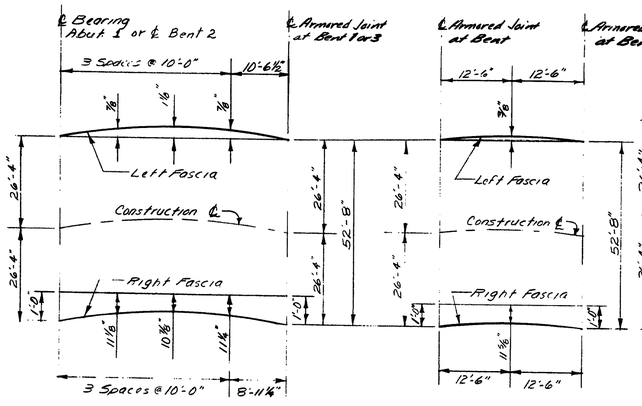
NOTE:
Studs exist on stringers #1 and #7 of all tower spans.



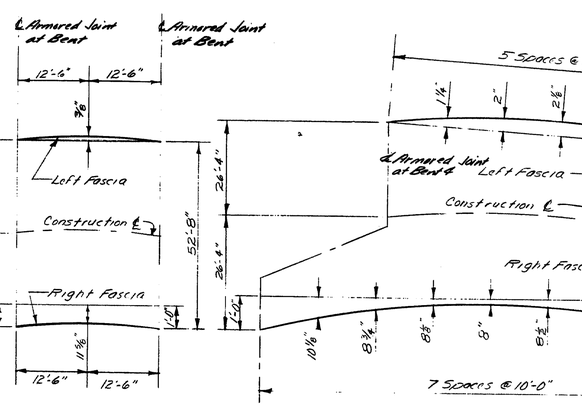
SPAN 9



SPAN 8

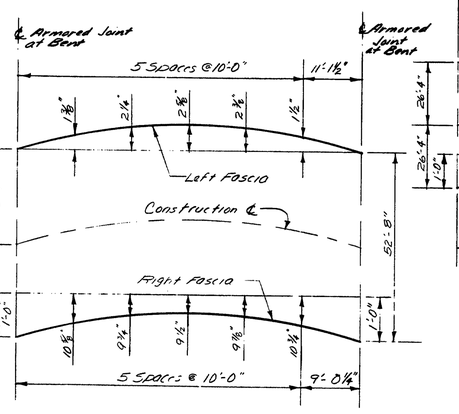


SPAN 1 & 2



TOWER 1 Thru TOWER 8
(Except Tower 2 Right Fascia)

SPAN 3



SPAN 4, 5, 6, & 7

FASCIA OFFSETS

REFERENCE:
For Structural Steel Notes see Sh.# 21.

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN - DETAILED	M.E.K.	3/79
CHECKED	JTCH	May 79
REVISIONS	Eap & MEK	May 79
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

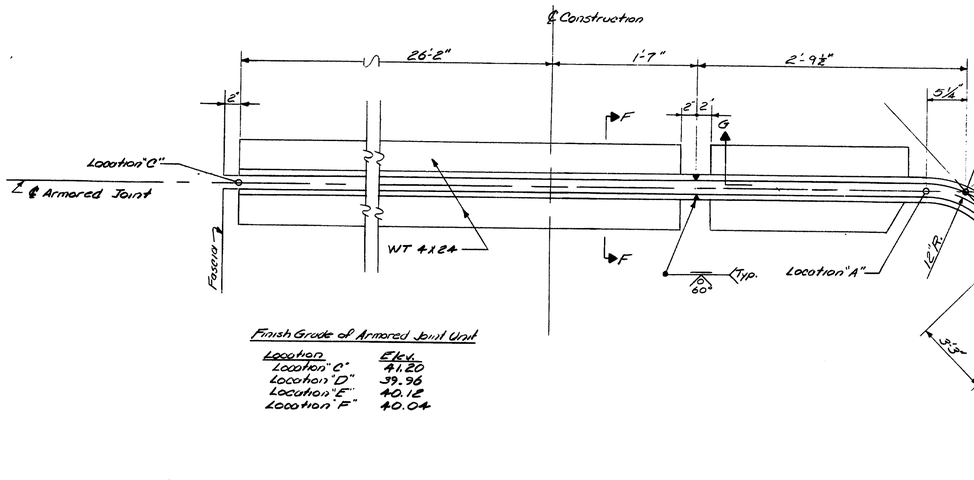
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

SHEAR CONNECTORS and FASCIA OFFSETS

AUGUSTA, MAINE MAY 1979

R94-226

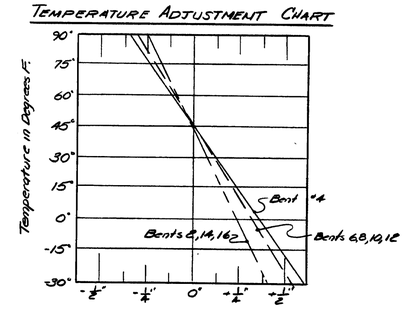
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	~~025-1(52)~~	23	60
		~~025-1(49)~~		



Minimum Movement Rating Chart

Bent No.	Movement Rating
1, 3, 5, 7, 9, 11, 13, & 15	½" (Fixed)
4	1"
6, 8, 10, & 12	1½"
2, 14, & 16	2"

Temperature Adjustment Chart

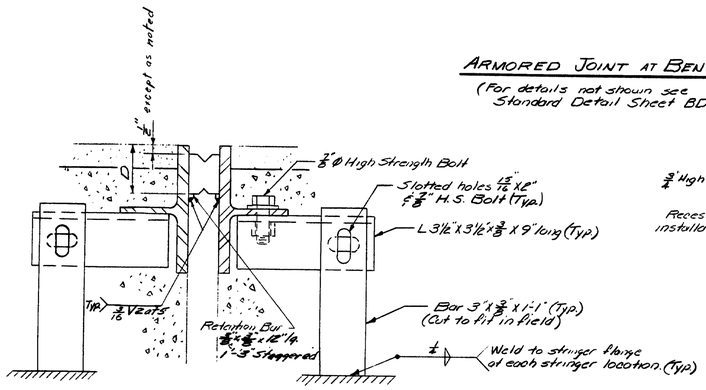


Finish Grade of Armored Joint Unit

Location	Elev.
Location "C"	41.20
Location "D"	39.98
Location "E"	40.12
Location "F"	40.04

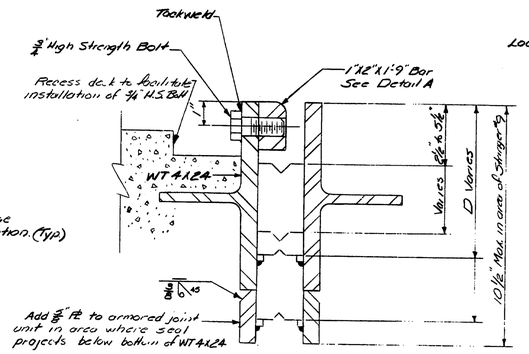
Armored Joint at Bent #4

(For details not shown see Standard Detail Sheet BD 104-77)

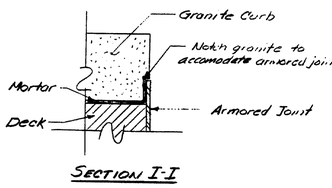


Section F-F

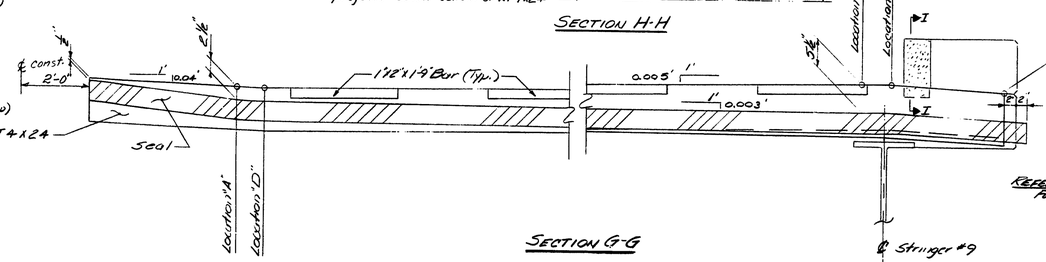
(Showing support system located at each stringer)



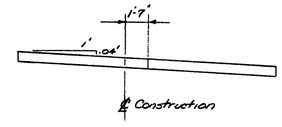
Section H-H



Section I-I



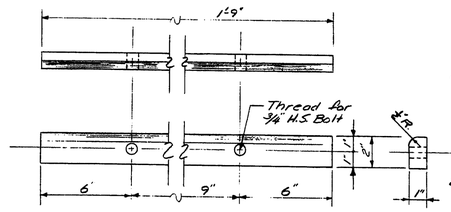
Section G-G



Superelevated Armored Joint

(at Bents 1 thru 3 & 5 thru 16)

For details not shown see Standard Detail Sheet BD 104-77



Detail A

Armored Joint Notes

1. The joint opening will vary depending on the dimension of the seal selected by the Contractor. The joint opening shall be set according to the opening shown on the approved "Armored Joint" shop detail drawings.
2. The seal shall be approved by the Engineer prior to fabrication of the armored joint.
3. Center Armored Joints on the opening between ends of stringers at Bents.
4. Total Armored Joints required - 16

Reference: For Structural Steel Notes see sh. # 21.

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	M.E.A.I. Inc.	4-79
CHECKED	R.J. Graham	5-79
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

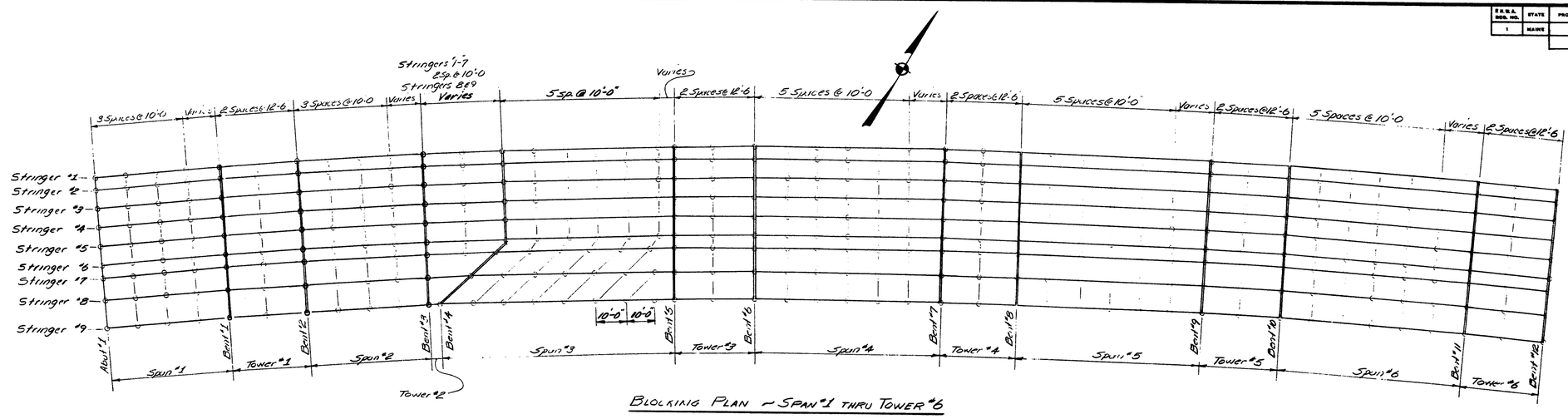
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

ARMORED JOINTS

AUGUSTA, MAINE May 1979

R94-227

F.A.H.S.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	-026-(43)	24	60
		-026-A(48)		



BLOCKING PLAN ~ SPAN #1 THRU TOWER #6

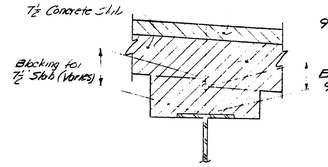
BOTTOM OF SLAB ELEVATIONS

Stringer	Point	Abut #1	10'-0	20'-0	30'-0	Bent #2	12'-6	Bent #2	10'-0	20'-0	30'-0	Bent #3	12'-6	Bent #4	10'-0	20'-0	30'-0	40'-0	50'-0	60'-0	70'-0	Bent #5	12'-6	Bent #6	10'-0	20'-0	30'-0	40'-0	50'-0	Bent #7
		SPAN #1				TOWER #1		SPAN #2				TOWER #2		SPAN #3								TOWER #3		SPAN #4						
Stringer #1	7½" Slab	46.19	45.76	45.33	44.88	44.40	43.85	43.29	42.86	42.43	41.98	41.50	40.95	40.39	39.96	39.53	39.09	38.64	38.19			37.92	37.38	36.81	36.40	35.99	35.55	35.10	34.63	34.11
Stringer #2		46.02	45.60	45.16	44.71	44.24	43.69	43.13	42.70	42.26	41.81	41.34	40.79	40.23	39.80	39.36	38.93	38.48	38.03			37.77	37.22	36.66	36.24	35.82	35.39	34.93	34.46	33.96
Stringer #3		45.79	45.36	44.92	44.47	44.00	43.45	42.89	42.46	42.02	41.57	41.10	40.55	39.99	39.57	39.13	38.69	38.24	37.78			37.53	36.98	36.42	35.99	35.58	35.13	34.69	34.21	33.72
Stringer #4		45.53	45.12	44.68	44.22	43.76	43.21	42.65	42.22	41.78	41.32	40.86	40.31	39.75	39.32	38.89	38.45	37.98	37.51			37.29	36.74	36.19	35.78	35.34	34.89	34.44	33.96	33.46
Stringer #5		45.30	44.87	44.42	43.98	43.52	42.97	42.40	41.97	41.54	41.08	40.62	40.07	39.50	39.08	38.64	38.20	37.74	37.28			37.05	36.50	35.93	35.50	35.09	34.64	34.20	33.71	33.24
Stringer #6		45.06	44.63	44.18	43.73	43.28	42.73	42.16	41.73	41.28	40.83	40.38	39.83	39.26	38.83	38.39	37.95	37.49	37.04			36.81	36.28	35.69	35.26	34.83	34.39	33.95	33.46	33.00
Stringer #7	7½" Slab	44.90	44.47	44.03	43.57	43.13	42.57	42.00	41.57	41.13	40.67	40.23	39.75	39.26	38.83	38.43	37.98	37.53	37.03			36.66	36.10	35.53	35.10	34.67	34.23	33.78	33.30	32.85
Stringer #8	9" Slab	44.78	44.35	43.91	43.45	43.01	42.45	41.88	41.45	41.01	40.55	40.11	39.63	39.14	38.71	38.31	37.86	37.41	36.91			36.34	35.99	35.41	34.98	34.55	34.11	33.67	33.18	32.73
Stringer #9	9" Slab	44.48	44.05	43.61	43.14	42.71	42.16	41.58	41.15	40.71	40.24	39.81		39.20	38.79	38.34	37.92	37.50	37.06	36.54		36.04	35.69	35.11	34.69	34.29	33.85	33.39	32.89	32.43
Stringer #9	9" Slab	44.12	43.68	43.24	42.78	42.35	41.80	41.22	40.78	40.35	39.88	39.45		39.27	38.87	38.42	38.02	37.58	37.12	36.64	36.16	35.88	35.33	34.75	34.33	33.92	33.48	33.02	32.52	32.07

BOTTOM OF SLAB ELEVATIONS

Stringer	Point	Bent #7	12'-6	Bent #8	10'-0	20'-0	30'-0	40'-0	50'-0	Bent #9	12'-6	Bent #10	10'-0	20'-0	30'-0	40'-0	50'-0	Bent #11	12'-6	Bent #12
		TOWER #4		SPAN #5						TOWER #5		SPAN #6						TOWER #6		
Stringer #1	7½" Slab	34.11	33.37	33.01	32.58	32.15	31.70	31.24	30.75	30.22	29.66	29.08	28.65	28.22	27.78	27.31	26.83	26.30	25.74	25.16
Stringer #2		33.96	33.41	32.85	32.42	31.99	31.54	31.07	30.59	30.07	29.50	28.92	28.49	28.06	27.61	27.15	26.66	26.14	25.58	25.00
Stringer #3		33.72	33.17	32.61	32.16	31.74	31.28	30.83	30.33	29.83	29.26	28.68	28.24	27.82	27.36	26.90	26.41	25.90	25.34	24.76
Stringer #4		33.48	32.93	32.36	31.92	31.50	31.04	30.58	30.08	29.59	29.02	28.44	28.00	27.57	27.11	26.65	26.16	25.66	25.10	24.51
Stringer #5		33.24	32.69	32.12	31.68	31.25	30.79	30.33	29.84	29.35	28.78	28.20	27.75	27.33	26.87	26.41	25.91	25.43	24.86	24.27
Stringer #6		33.00	32.45	31.88	31.44	30.99	30.54	30.07	29.59	29.11	28.55	27.96	27.51	27.07	26.61	26.14	25.66	25.19	24.62	24.03
Stringer #7	7½" Slab	32.85	32.29	31.72	31.27	30.83	30.37	29.90	29.42	28.95	28.38	27.80	27.35	26.90	26.45	25.98	25.50	25.03	24.46	23.87
Stringer #7	9" Slab	32.73	32.17	31.60	31.15	30.71	30.25	29.78	29.30	28.83	28.26	27.68	27.23	26.78	26.33	25.86	25.38	24.91	24.34	23.75
Stringer #8	9" Slab	32.43	31.93	31.30	30.87	30.44	30.00	29.52	29.01	28.54	27.97	27.38	26.95	26.53	26.07	25.60	25.09	24.61	24.05	23.45
Stringer #9	9" Slab	32.07	31.56	30.94	30.61	30.09	29.63	29.13	28.64	28.18	27.61	27.01	26.58	26.16	25.71	25.21	24.72	24.26	23.69	23.09

1½" Latex Modified Concrete Wearing Surface



BLOCKING DETAIL FOR STRINGER #7

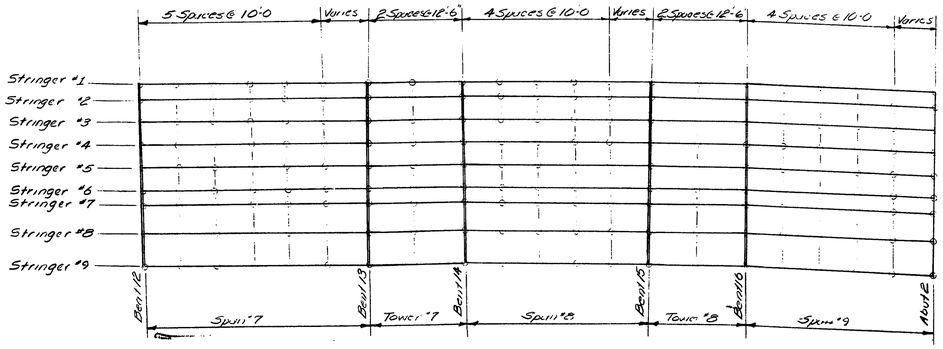
R94-228

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	M.L.K. Jr.	1/79
CHECKED	Paperchalleman	May '79
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
BOTTOM OF SLAB ELEVATIONS
SPANS 1 THRU TOWER 6
AUGUSTA, MAINE May 1979

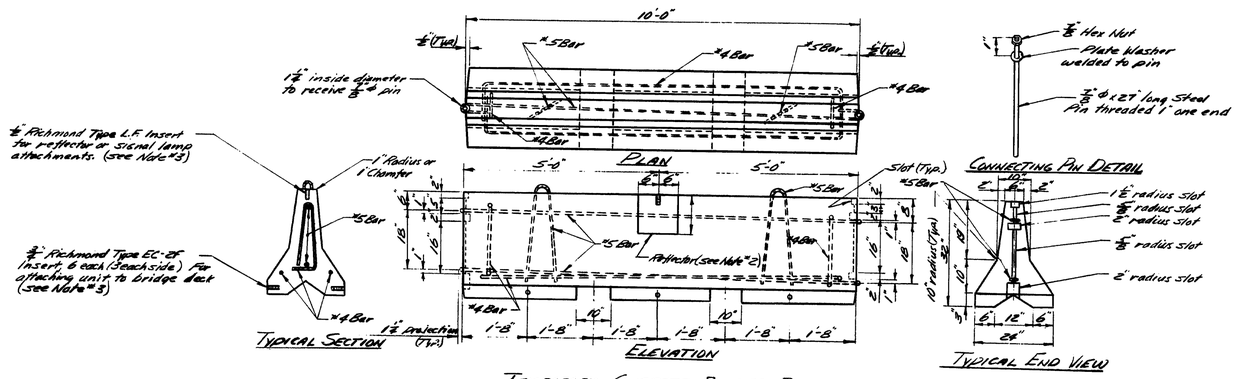
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	~~025-1(5)~~	25	60
		~~025-1(6)~~		



Blocking Plan ~ Span #7 thru Span #9

Bottom of Slab Elevations

	Span #7						Tower #7		Span #8					Tower #8		Span #9				
Stringer / Point	Bent #12	10'-0	20'-0	30'-0	40'-0	50'-0	Bent #13	12'-6	Bent #14	10'-0	20'-0	30'-0	40'-0	Bent #15	12'-6	Bent #16	10'-0	20'-0	30'-0	40'-0	Abut #2
Stringer #1 7½" Slab	25.16	24.73	24.30	23.85	23.39	22.90	22.38	21.85	21.30	20.89	20.47	20.04	19.60	19.13	18.60	18.06	17.60	17.07	16.54	15.99	15.41
Stringer #2	25.00	24.57	24.14	23.69	23.22	22.74	22.22	21.69	21.14	20.73	20.31	19.88	19.44	18.97	18.44	17.90	17.44	16.93	16.41	15.89	15.33
Stringer #3	24.75	24.31	23.89	23.43	22.98	22.48	21.98	21.45	20.90	20.50	20.07	19.64	19.19	18.73	18.20	17.66	17.22	16.74	16.24	15.74	15.21
Stringer #4	24.54	24.07	23.65	23.19	22.73	22.23	21.74	21.21	20.66	20.25	19.83	19.40	18.97	18.50	17.96	17.42	16.99	16.53	16.06	15.08	13.08
Stringer #5	24.27	23.83	23.41	22.94	22.48	21.98	21.50	20.97	20.42	20.01	19.59	19.13	18.70	18.26	17.72	17.17	16.76	16.32	15.88	15.41	14.96
Stringer #6	24.03	23.59	23.14	22.69	22.22	21.74	21.26	20.73	20.17	19.76	19.33	18.90	18.44	18.02	17.49	16.93	16.52	16.09	15.66	15.20	14.78
Stringer #7 9½" Slab	23.87	23.42	22.98	22.53	22.03	21.57	21.11	20.57	20.02	19.60	19.17	18.73	18.28	17.86	17.33	16.77	16.36	15.94	15.51	15.06	14.63
Stringer #8 9" Slab	23.75	23.30	22.86	22.41	21.93	21.45	20.99	20.45	19.90	19.48	19.05	18.61	18.16	17.74	17.21	16.68	16.24	15.82	15.39	14.94	14.53
Stringer #9 9" Slab	23.45	23.02	22.60	22.15	21.68	21.16	20.69	20.13	19.59	19.18	18.76	18.33	17.86	17.44	16.91	16.38	15.95	15.53	15.13	14.69	14.28
	23.09	22.66	22.24	21.78	21.31	20.79	20.33	19.78	19.23	18.82	18.40	17.96	17.50	17.09	16.54	15.99	15.59	15.21	14.80	14.37	13.98



Temporary Concrete Barrier Panel Type 1

Concrete Barrier Notes

1. — Other reinforcing details and panel connection arrangements may be used, if approved by the Engineer, for Temporary Concrete Barrier Type 1.
2. — Install Yellow Reflectorized Plastic Pavement Marking Material on temporary concrete barrier panels at 20-0 max. spacing. Material to be considered incidental to Item 526.30.
3. — The Richmond Inserts will not be required under this contract but recommended if the temporary barrier is to be used in the future.

References: For location of Temporary Concrete Barriers see Sheets #45 & #46.

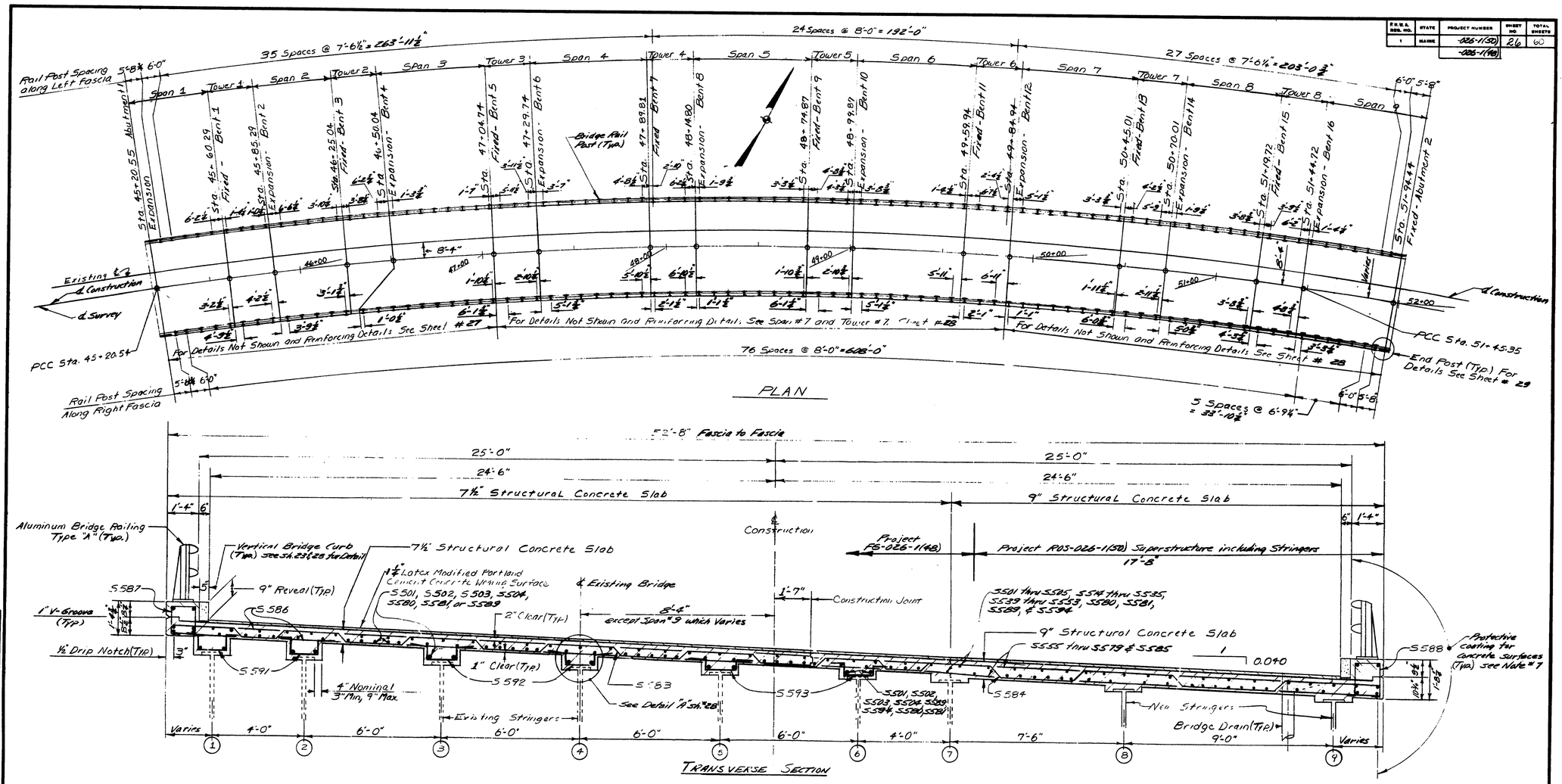
R94-229

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	W.E.A. Lodi	1/22
CHECKED	Pgaudette	May '79
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
BOTTOM OF SLAB ELEVATIONS
SPANS 7 THRU SPAN 9
AUGUSTA, MAINE May 1979

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-1(30)	26	60
		026-1(98)		



SUPERSTRUCTURE NOTES:

1. Chamfer all exposed edges of concrete a consistent dimension between ½" and ¾" inclusive, unless otherwise indicated.
2. Form a 1 inch V-groove on the fascias, at each horizontal construction joint between the curb and slab.
3. Do not break the bond in construction joints in the superstructure slab.
4. Reinforcing steel shall have a minimum cover of 2 inches unless otherwise indicated.
5. Mortar for bedding and for joints in the granite curb shall contain an approved non-shrink additive.
6. Adjust reinforcing steel to fit around drains in a manner approved by the Engineer. Do not cut transverse bars.
7. Protective coating for concrete surfaces shall be applied to the following areas:
   a) Top of concrete curb and the fascia down to the drip notch.
   b) Entire exposed areas on the end post prior to connecting guard rail

PROJECT DESIGN ENGINEER	BY	DATE
PLANS	DESIGN - DETAILED	A.E. AUTTI	3-22
	CHECKED	NEP	5-29
	REVISIONS		
	FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

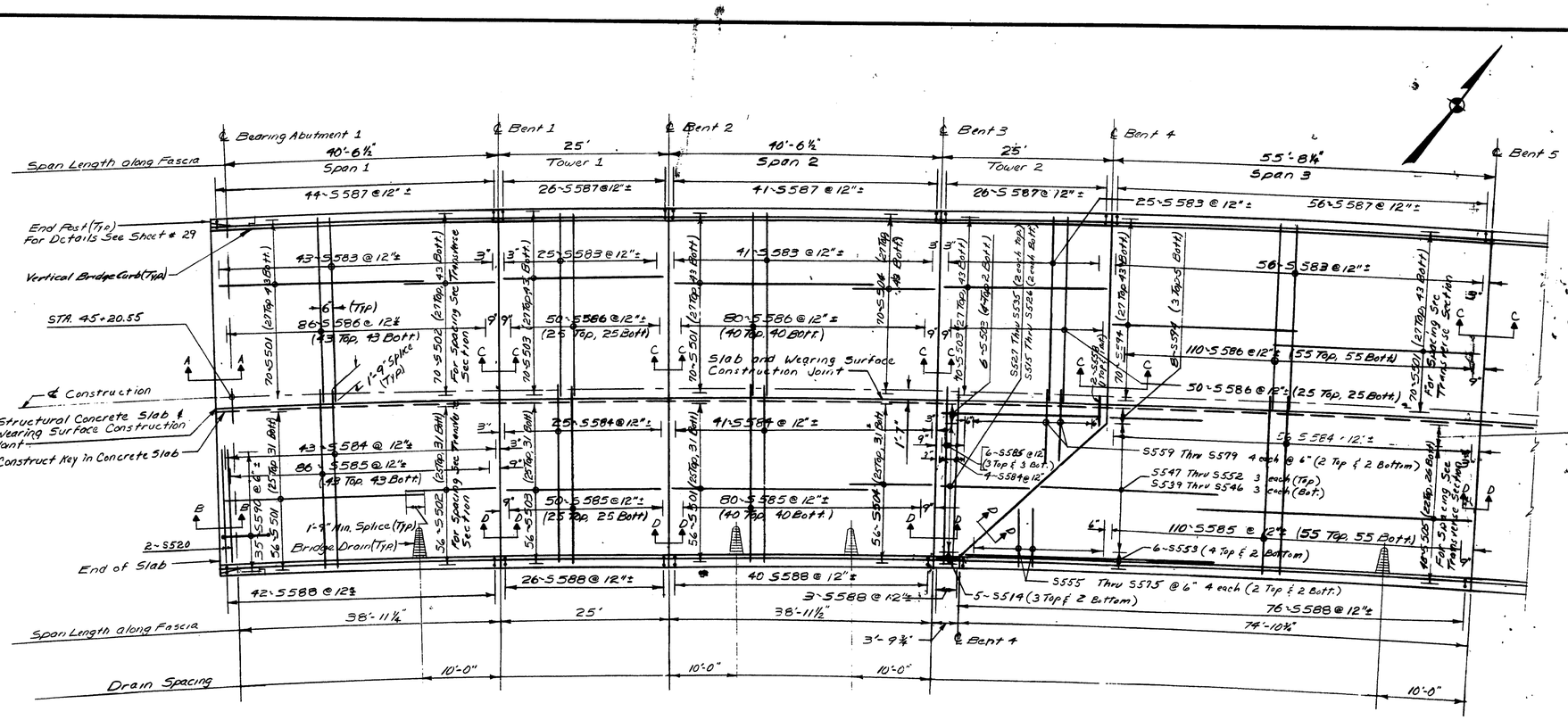
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

SUPERSTRUCTURE PLAN and TRANSVERSE SECTIONS

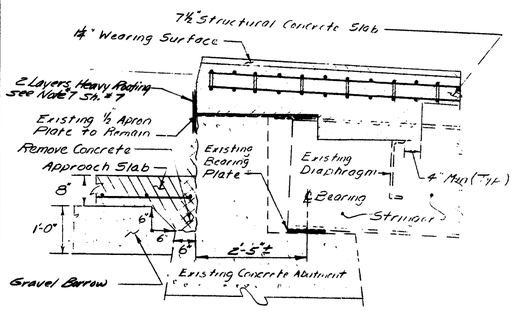
AUGUSTA, MAINE May 1979

R94-230

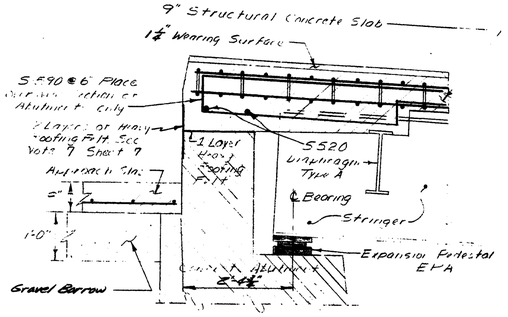
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-1(50)	27	60
		026-1(49)		



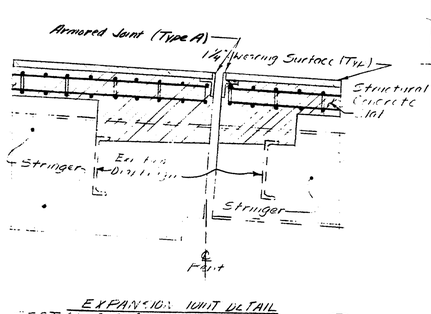
SUPERSTRUCTURE SLAB PLAN
Spans 1 & 3 Towers 1 & 2



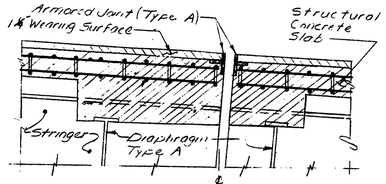
ABUTMENT 1 (Abutment 2 Similar)
SECTION A-A (Area of Existing Stringers)



ABUTMENT 1 (Abutment 2 Similar)
SECTION B-B (Area of New Steel)



EXPANSION JOINT DETAIL
SECTION C-C (Area of Existing Steel)



CONSTRUCTION JOINT
SECTION D-D (Area of New Steel)

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	M.E.A.	1/79
CHECKED	M.E.P.	4/79
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

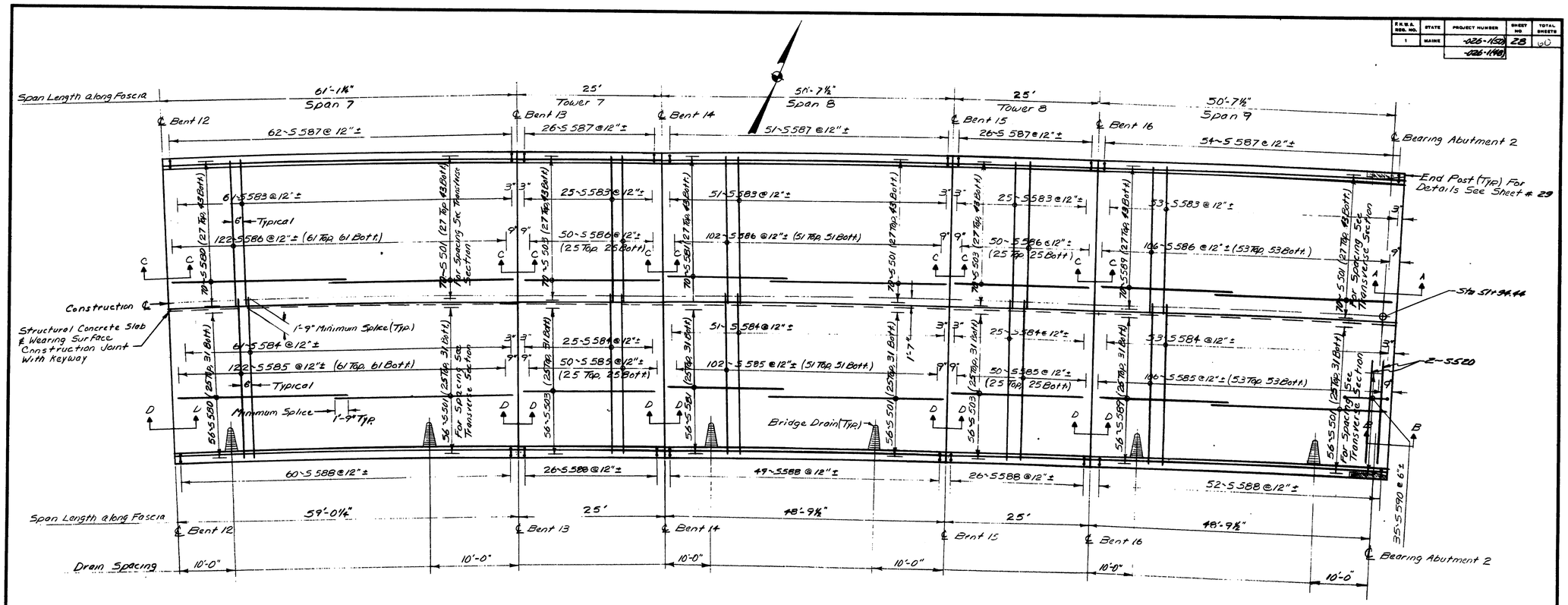
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

SUPERSTRUCTURE DETAILS

AUGUSTA, MAINE May 1979

R94-231

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	~~025-1(52)~~	28	60
		~~025-1(46)~~		

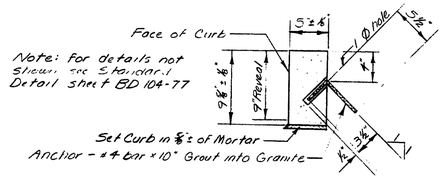


SUPERSTRUCTURE SLAB PLAN
SPANS 7, 8, & 9 TOWERS 7 & 8.

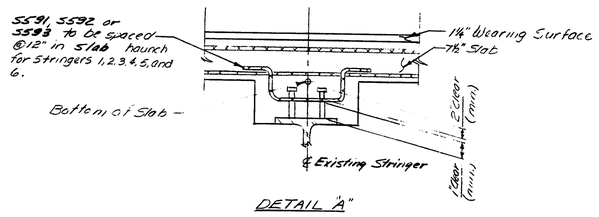
NOTE: Use Details of Span 7 for Spans 4, 5, & 6
Use Details of Tower 7 for Towers 3, 4, 5, & 6

PROJECT DRAIN ENGINEER	BY	DATE
DESIGN - DETAILED	KRC	1/1977
CHECKED	MEP	WTE 2-77
QUANTITIES		
REVISIONS		
FIELD CHANGES		

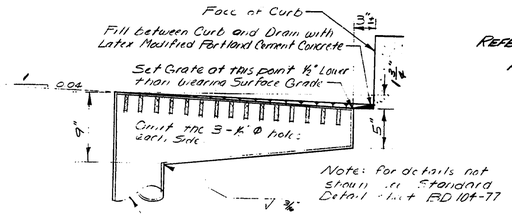
PLANS



VERTICAL BRIDGE CURB DETAIL



DETAIL "A"



DRAIN DETAIL

REFERENCES:
For Sections A-A, B-B, CC, & D-D see sh.# 27

R94-232

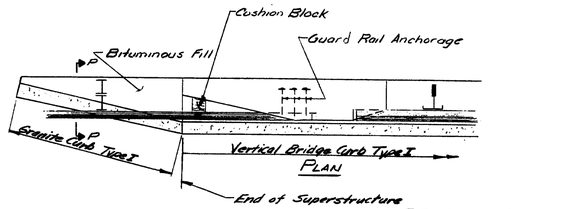
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

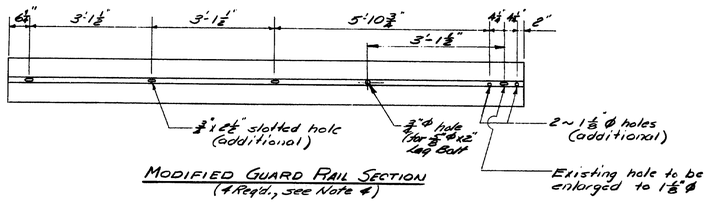
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

SUPERSTRUCTURE DETAILS

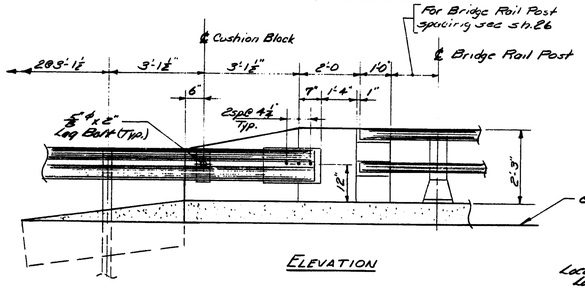
AUGUSTA, MAINE May 1979

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	025-1(58)	29	63
		-025-1(62)		

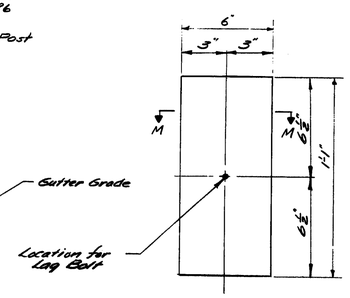




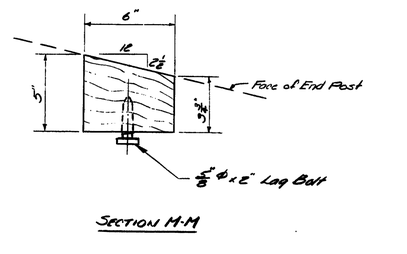
MODIFIED GUARD RAIL SECTION
(4 Req'd., see Note 4)



ELEVATION



CUSHION BLOCK DETAIL
(4 Req'd., see Note 5)



SECTION M-M

END POST NOTES

1.) — For location of end posts on the structure see design drawings (4 required).

2.) — Chamfer all exposed edges of concrete a consistent dimension between ½" and ¾" inclusive unless otherwise indicated.

3.) — Reinforcing steel shall have a minimum cover of 2 inches unless otherwise indicated.

4.) — Additional holes in the Modified Guard Rail Section shall be made by drilling, punching, or any other method that produces a neat clean hole of the required size. Burning of holes will not be allowed.

5.) — Cushion Block material shall be as specified in subsection 710.07 paragraph b & c and treated in accordance with the provisions of subsection 606.03(b) of the Standard Specifications.

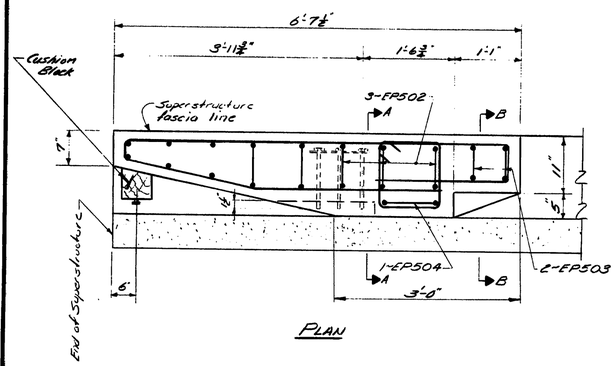
6.) — After installation of guard rail is complete, upset the thread on the anchor bolts in three places around each bolt at the junction of the nut and the exposed thread, with a center punch or similar tool.

7.) — Payment for the "Guard Rail Anchorage" imbedded in the end post will be included in the Lump Sum Price for Item 502.26 Structural Concrete, Roadway and Sidewalk Slab on Steel Bridges.

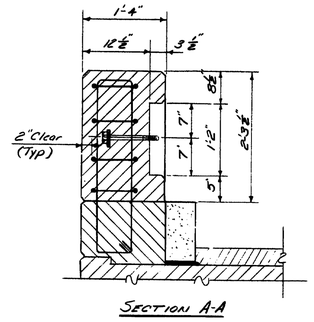
8.) — Nuts and washers for the 1"ϕ anchor bolts, the wood blocks, the ⅞"ϕ lag bolts, and the additional holes in the Modified Guard Rail Section will be considered incidental to the guard rail items. Nuts shall conform to ASTM-A563, Grade DH and shall be galvanized in accordance with the provisions of A.S.T.M.-A153.

9.) — Reinforcing steel will be paid under Item 503.12 & 503.13.

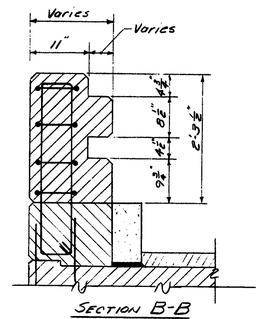
10.) — Payment for all end post concrete will be included in the Lump Sum price for Item 16, 502.26 Structural Concrete, Roadway and Sidewalk Slab on Steel Bridges.



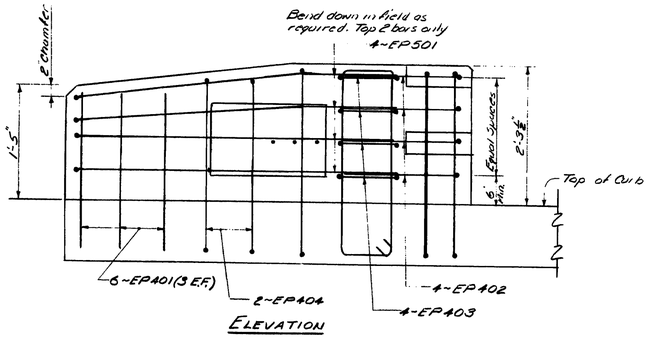
PLAN



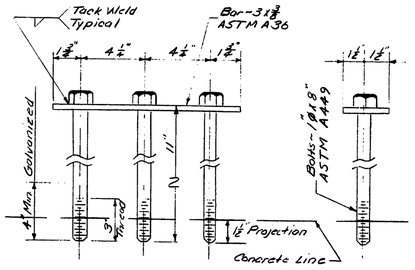
SECTION A-A



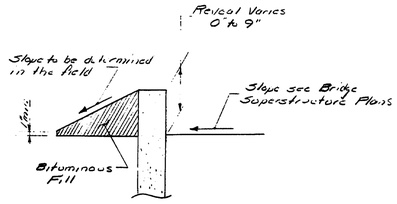
SECTION B-B



ELEVATION



GUARD RAIL ANCHORAGE



SECTION P-P

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	ACC	3-79
CHECKED	DAS	3-79
REVISIONS	ACC	
FIELD CHANGES		

R94-233

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA.46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

END POSTS

AUGUSTA, MAINE May 1979

REINFORCING STEEL SCHEDULE

STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
		Abutment #1	
A500	32	3'-8"	Dowel
A501	10	16'-0"	Horiz. Wall E.F.
A502	12	5'-3"	Vert. Wall F.F.
A503	2	5'-3"	Wing E.F.
A504	2	6'-5"	↕
A505	2	7'-1"	
A506	2	7'-9"	Wing E.F.
A508	12	4'-0"	Backwall
A510	2	4'-0"	Wing
A511	10	7'-0"	Horiz. Wall E.F.
A600	46	6'-2"	Footing
A601	28	15'-0"	Footing
		Abutment #2	
A550	32	3'-8"	Dowel
A551	10	16'-0"	Horiz. Wall E.F.
A552	12	5'-11"	Vert. Wall F.F.
A553	2	8'-4"	Wing E.F.
A554	2	8'-1"	↕
A555	2	7'-5"	
A556	2	6'-9"	Wing E.F.
A558	12	4'-0"	Backwall
A560	2	4'-0"	Wing
A561	10	7'-0"	Horiz Wall E.F.
A650	44	6'-2"	Footing
A651	28	15'-0"	Footing
		Approach Slab	
AP400	32	24'-2"	Approach Slab
AP401	32	25'-1"	Approach Slab
AP600	192	±5'-0"	Approach Slab

MARK	NO.	LENGTH	LOCATION
		Collision Wall & Bent Footing	
P600	22	3'-0"	Dowels
P601	35	10'-3"	Wall
P602	5	8'-9"	Wall
P603	2	7'-6	↕
P604	2	8'-1"	
P605	2	6'-8"	
P606	2	9'-3"	
P607	2	9'-10"	Wall
P608	14	5'-6"	Pedestal
P609	14	10'-0"	Wall
P610	14	20'-0"	Horiz. Wall
P611	6	8'-0"	Horiz. Wall
P613	5	3'-6"	Pedestal
P614	4	4'-6"	Pedestal
P615	6	13'-0"	Horiz. Wall

MARK	NO.	LENGTH	LOCATION

BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
						Abutment #1								
A507	12	6'-6"	L	3'-8"	2'-9"									Breastwall
A509	2	4'-7"	V				3'-5"	1'-2"			1'-8½"			Wing
						Abutment #2								
A557	12	7'-2"	L	3'-8"	3'-6"									Breastwall
A559	2	4'-7"	V				3'-5"	1'-2"			1'-8½"			Wing
						Bent Footings & Pedestal								
P612	12	6'-0	S	-	2'-0"	2'-0"	2'-0"			—				Bent Footings and Collision Wall Ped.'s

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

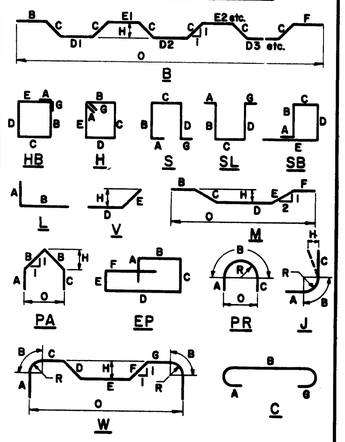
R94-234

PLANS

	BY	DATE
DESIGN - DETAIL	MCR	10-77
CHECKED	AST	5-78
REVISIONS	MLH	
FIELD CHANGES		

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-1(52)	30	60
		026-1(46)		

TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar

Bending details and hooks shall conform to the recommendations of ACI Standard 315-65.

Reinforcing Bar: ASTM A615 Grade 60

GENERAL NOTES

1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
   - Mark (A502) bar size - #5
   - Mark (P1001) bar size - #10
   - Mark (S603) bar size - #6
2. Letter of Marks A, P & S locates bars of Abutments, Piers, and Superstructure parts respectively.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

REINFORCING STEEL SCHEDULE

AUGUSTA, MAINE May 1979

REINFORCING STEEL SCHEDULE

STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
		Superstructure Slab	
S501	1086	30'-0"	Long, All Spans
S502	126	11'-4"	Long, Span #1
S503	958	28'-6"	Long, Towers
S504	126	11'-9"	Long, Span #2
S505	56	40'-0"	Long, Span #3
S514	5	3'-3"	Long., Tower #2
S515	2	4'-0"	
S516		6'-6"	
S517		8'-6"	
S518		9'-7"	
S519		11'-5"	
S520		13'-9"	
S521		15'-7"	
S522		17'-0"	
S523		18'-2"	
S524		20'-2"	
S525		22'-7"	
S526	2	23'-11"	Long., Tower #2
S527		4'-10"	
S528		7'-2"	
S529		9'-9"	
S530		12'-1"	
S531		14'-2"	
S532		16'-1"	
S533		18'-4"	
S534		20'-9"	
S535	2	23'-4"	Long., Tower #2
S539	3	36'-0"	Long., Span #3
S540		32'-6"	
S541		31'-0"	
S542		28'-6"	
S543		25'-3"	
S544		23'-0"	
S545		21'-3"	
S546		17'-6"	
S547		36'-0	
S548	3	32'-8"	Long., Span #3

MARK	NO.	LENGTH	LOCATION
		Superstructure Slab	
S549	3	29'-4"	Long., Span #3
S550	↑	26'-0"	↑
S551	↓	22'-7"	
S552	3	19'-3"	
S553	6	36'-6"	Long., Span #3
S555	4	2'-2"	Trans., Span #3
S556	4	3'-1"	Trans., Span #3
S557	4	4'-0"	Trans., Span #3
S558	6	4'-11"	Trans, Tower #2, Span #3
S559	8	5'-10"	↑
S560	↑	6'-9"	
S561		7'-7"	
S562		8'-6"	
S563		9'-5"	
S564		10'-4"	
S565		11'-3"	
S566		12'-2"	
S567		13'-1"	
S568		14'-0"	
S569		14'-11"	
S570		15'-10"	
S571		16'-9"	
S572		17'-8"	
S573		18'-7"	
S574	↓	19'-6"	↓
S575	8	20'-5"	Trans, Tower #2, Span #3
S576	4	21'-4"	Trans., Tower #2
S577	↕	22'-3"	↕
S578	↓	23'-2"	
S579	4	24'-2"	Trans., Tower #2
S580	504	32'-6"	Long., Spans #4,5,6 & 7
S581	126	22'-0"	Long., Span #8
S585	1328	26'-6"	Trans., All Spans & Towers South side
S586	1372	27'-8"	Trans, All Spans & Towers North side
S589	126	24'-5"	Long., Span #9
S594	78	27'-0"	Long., Span #3

MARK	NO.	LENGTH	LOCATION
		End Post	
EP401	24	2'-0"	End Post

BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
							Superstructure Slab							
S583	688	29'-2"	BN	—	2'-10"	6½"	2'-5" x3	2'-10" x3	1'-11"	—	4½"	27'-8"	—	Trans, All Spans & Towers North side
S584	667	27'-10"	BS	—	2'-3"		—	—	4'-0"	—	—	26'-6"	—	Trans, All Spans & Towers South side
S587	702	4'-3"	S	6"	1'-1"	1'-1"	1'-1"	—	—	6"	—	—	—	Curb, North side
S588	684	4'-10"	S	6"	1'-5"	1'-1"	1'-4"			6"				Curb, South side
S590	70	13'-0"	MSB	6'-0"	9"	4'-0"	3"	2'-0"						Trans. over new Bents:
S591	1404	3'-3"	SL	6"	9"	9"	9"			6"				Blocking, Str. "1&2
S592	1404	3'-1"	SL	6"	8"	9"	8"			6"				Blocking, Str. "3&4
S593	1404	2'-9"	SL	6"	6"	9"	6"			6"				Blocking, Str. "5&6
							End Post							
EP402	16	5'-1"	S	—	2'-3"	7"	2'-3"			—				End Post
EP403	16	4'-11"	H	5½"	1'-0"	1'-6"	1'-0"	1'-0"		5½"				
EP404	8	6'-11"	H	5½"	8"	2'-4"	8"	2'-4"		5½"				
EP501	16	11'-7"	Y		5'-3"	3"	2'-4"	3'-0"	9"					End Post
EP502	12	7'-9"	H	5½"	8"	2'-9"	8"	2'-9"		5½"				
EP503	8	7'-5"	H	5½"	6"	2'-9"	6"	2'-9"		5½"				
EP504	4	8'-1"	H	5½"	10"	2'-9"	1'-0"	2'-9"		5½"				End Post

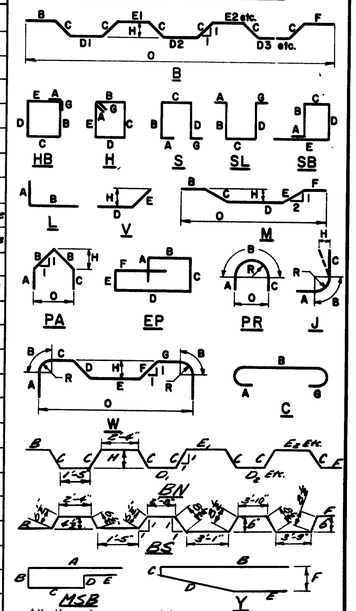
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

R94-235

PLANS — DESIGN - DETAIL — BY — DATE
CHECKED — M.E.I. Mar. 79
REVISIONS — MEP — 5-79
FIELD CHANGES

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-1(520) 026-1(460)	31	60

TYPE-BENDING DIAGRAMS



Bending details and hooks shall conform to the recommendations of ACI Standard 315-65.

Reinforcing Bar: ASTM A615 Grade 60

GENERAL NOTES

1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
   - Mark (A502) bar size - #5
   - Mark (P1001) bar size - #10
   - Mark (S603) bar size - #6
2. Letter of Marks A, P & S locates bars of Abutments, Piers, and Superstructure parts respectively.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

REINFORCING STEEL SCHEDULE

AUGUSTA, MAINE May 1979

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	026-1(50)	32	60
		026-1(48)		

BEGIN PROJECT F-026-1(48) STA 37+00 (Note Existing Alignment)

End Project F-026-1(48) STA 43+00

Begin Project F-026-1(48) STA 43+00

BM #42 H/S in 24-18" Twin Oak STA. 42+85 57' Lt. ELEV. 59.825'

BM #39 H/S in Chiseled Sq. in ledge STA. 39+05, 98' Rt. Elev. 71.47'

Construct Paved Downspout

Install Bituminous Curb Type 3

Install Underdrain Type C 15" Ø Pipe

Install Underdrain Type C 12" Ø Pipe

Install Underdrain Type B

Install 12" Culvert Pipe Optional & 12" Inlet Grate

Install Catch Basin, Type B1C

Match Existing Pavement

12' Paved Shoulder (Typ.)

Install Catch Basin Type B3C

"Installed" Culvert Pipe Section 1 @ 18" Inlet Grate

Vent Pipes (Approx. Location)

Existing P.C. 41+34.91 ℄ Survey & ℄ Construction

Existing P.T. 41+84.80 ℄ Survey & ℄ Construction

Water Gate

Paved Sidewalk

Paved Area

Gravel Drive

Woods Mixed Growth

Stone Wall

Ledge

Boulders

Large Pines

Bushes

Shrubs

Wood Rail Fence

Pipe Fence

Chain Link Fence

Granite Curb

6" Water Main

16" Water Main

Existing ℄

℄ Survey & ℄ Construction

Project

Arrowic

Island

Curve Data

℄ Survey & ℄ Construction
PI = Sta 43+27.92
PC = Sta 41+34.91
PCC = Sta 45+20.54
Δ = 6°-11'-32.8" Rt.
D = 1°-36'-22"
L = 385.63
R = 3567.14
T = 193.01

Traffic Data

ADT 1978	8940
ADT 1998	13410
DHV	1877
T (%)	8
D (%)	60
18 Kip Equiv. ADT	452

Plan
25 0 25 50
Scale of Feet

Utilities:
Aerial:
Central Maine Power Co.
New England Tel. & Tel. Co.
Maine Central Railroad Co.
Underground:
New England Tel. & Tel. Co.
Bath Water Dist.

Reference:
State of Maine D.O.T. Field Survey
Bridge Code No 3039

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN - DETAILED	WCR / DET	1-77
CHECKED	C.D.T.	3-7
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
SURVEY PLAN

AUGUSTA, MAINE Nov 1978

R94-236

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	026-1(30)	33	60
		026-1(40)		

Hardwoods

Gravel Drive

Existing Metal Guard Rail

Curb

Existing ℄

℄ Bearing Abut. #1 Sta. 45+21.1 (Existing ℄)

"New" 16" Water Main

Tower #1

Tower #2

Tower #3

Existing Tower #4

Tower #5

Tower #6

Tower #7

Tower #8

Old 16" Water Main C.I. - B.S. Pipe

B.M. #57 1/5 in Corner Bridge Abut. (Chisled Square) Sta. 51+98.28' Lt. Elev. 16.275

Old 16" Water Main C.I. - B.S. Pipe

Extend Towers (Typ.)

Approx. area to be fenced off by others

16' Gate (Typ.)

6' Blow Off

8'-6" min. Clear (Exist. & Proposed)

8'-6" min. Clear Existing & Proposed

Abut. #1

Abut. #2

1/5 in concrete Bridge Coping

Install Rip-Rap Slope

Install Cold Basin Trap

12" ϕ Outlet

CMP NET

CMP 3+46

Pole (No. Number)

℄ Survey & ℄ Construction

New Concrete Collar

18" C.I. Culverts

Old 16" Water Main C.I. - B.S. Pipe

Relay 16" Water Main Ductile - Tyton joint pipe

10" C.I. Culvert

Gravel Area

Shore Line

Old Rte. 1 (Abandoned)

Match Line

4' Sodded Gutter

Rte. 127 ℄ Survey & ℄ Construction

PI Sta. 45+35.18

Δ = 16°-18'-35" Rt

D = 2°-10'-37"

T = 316.64

L = 628.81

R = 2640.28

PT Sta. 51+87.12

① Curve Data

℄ Survey & ℄ Construction

PI = Sta 43+27.92

PC = Sta 41+34.91

PCC = Sta 45+20.54

Δ = 6°-11'-38.8" Rt

D = 1°-36'-22"

L = 385.63

R = 3587.14

T = 193.01'

② Curve Data

℄ Survey & ℄ Construction

PI = Sta 35.18

Δ = 16°-18'-35" Rt

D = 2°-10'-37"

T = 316.64

L = 628.81

R = 2640.28

Section View

Plan View

Section A-A Grouted Gutter

Slope Protection (Abut. #1 only)

Plan

25 0 25 50

Scale of Feet

Ref. For limits of Project R.O.S.-026-1(30) see sheet No. 26.

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN - DETAILED	M.E.R.	1-79
CHECKED	C.O.T.	3-79
REVISIONS		
FIELD CHANGES		

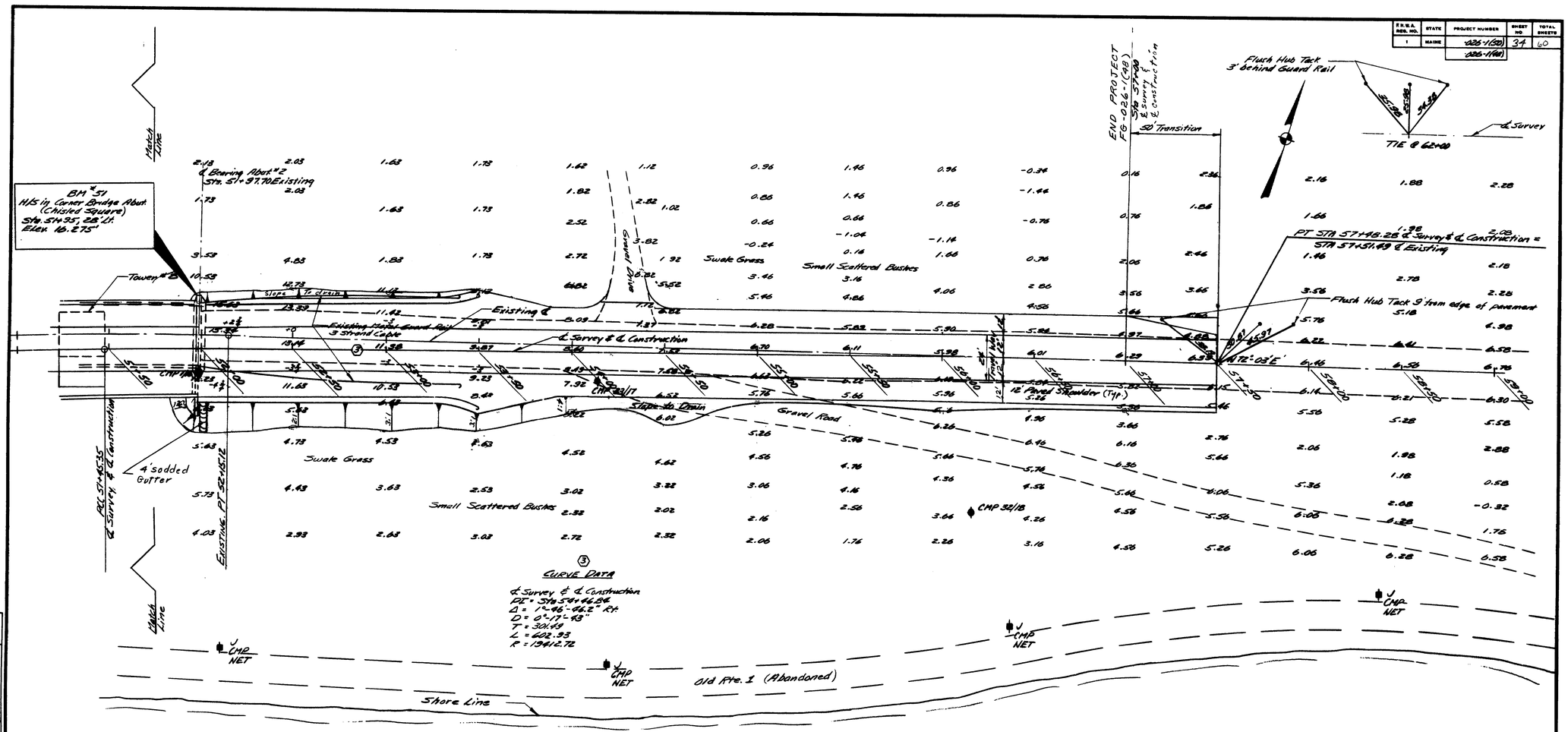
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
SURVEY PLAN

AUGUSTA, MAINE Nov. 1978

R94-237

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	X025-1(50)	34	60
		X025-1(60)		



CURVE DATA

℄ Survey & ℄ Construction
PI = Sta 54+46.84
Δ = 1°-46'-46.2" Rt.
D = 0°-17'-43"
T = 301.49
L = 602.93
R = 19412.72

PLAN
25 0 25 50
Scale of Feet

PROJECT DESIGN ENGINEER	BY	DATE
PLANS	DESIGN - DETAILED	M.E.A.
	CHECKED	C.O.T.
	REVISIONS	
	FIELD CHANGES	

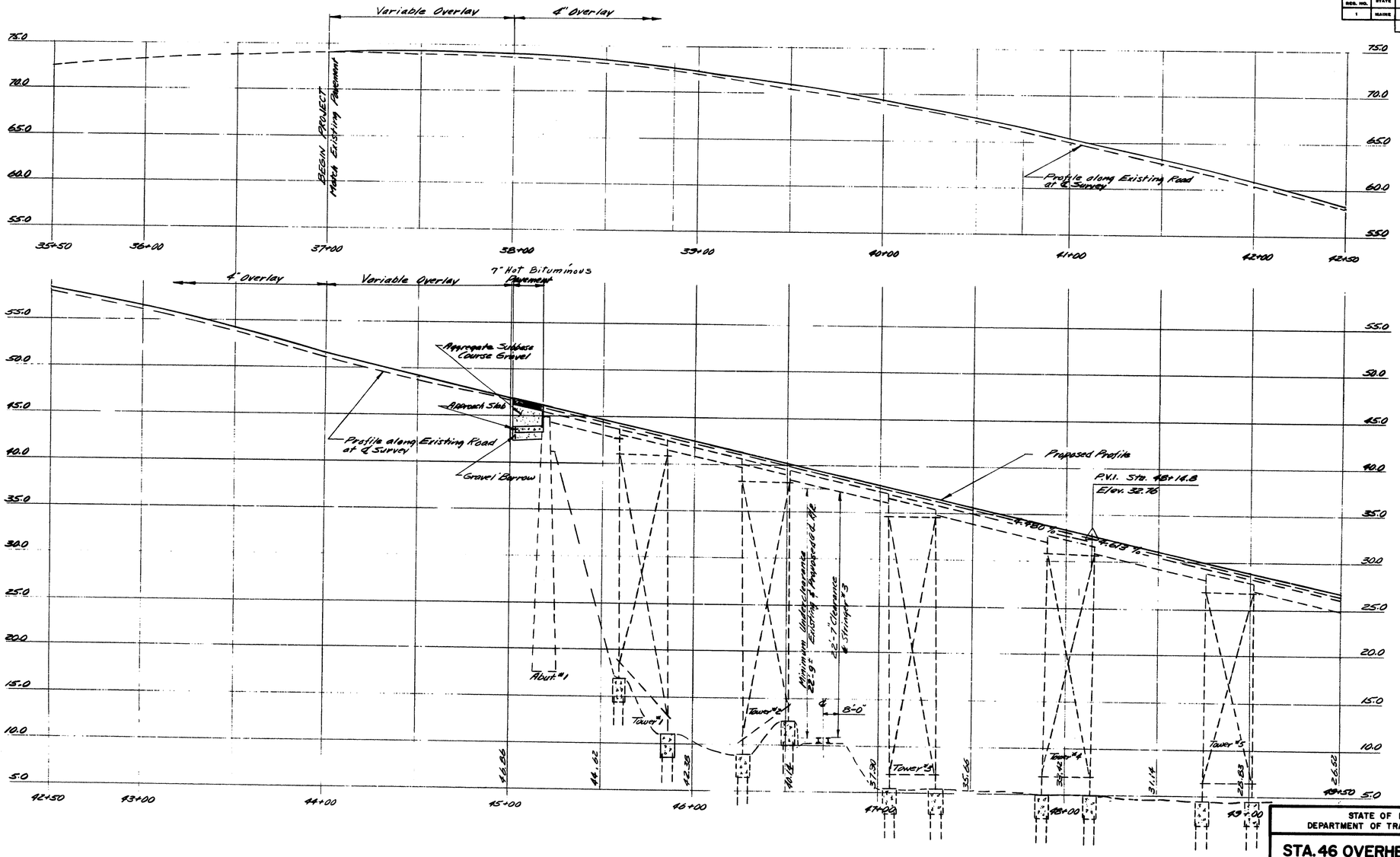
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
SURVEY PLAN

AUGUSTA, MAINE Nov. 1976

R94-238

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	025-1(52) 025-1(48)	35	60



PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	M.E.B.	12-77
	CHECKED	C.G.T.	2-78
	REVISIONS		
	FIELD CHANGES		

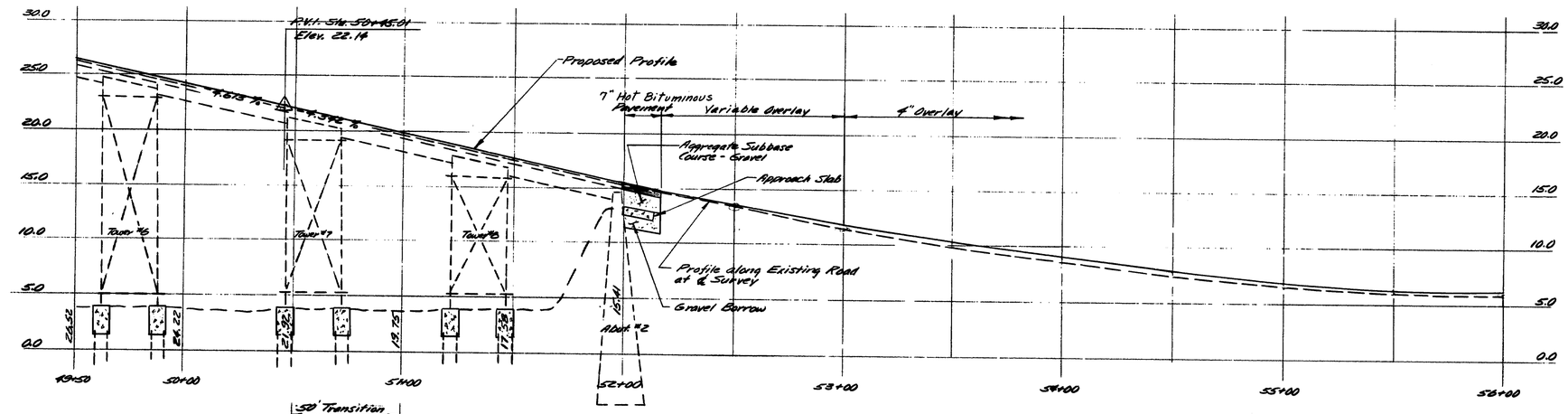
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

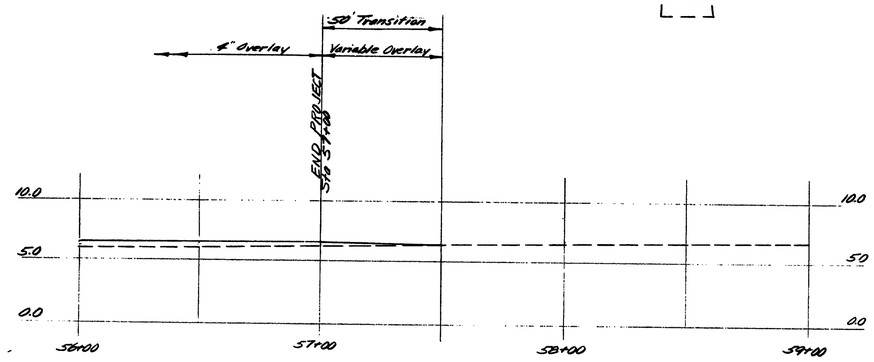
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
PROFILE

AUGUSTA, MAINE Nov. 1978

R94-239

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	-026-1(50)	36	60
		-026-1(48)		





PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	W.E.B. Lage	1/79
	CHECKED	G.O.T.	3-79
	REVISIONS		
	FIELD CHANGES		

R94-240

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

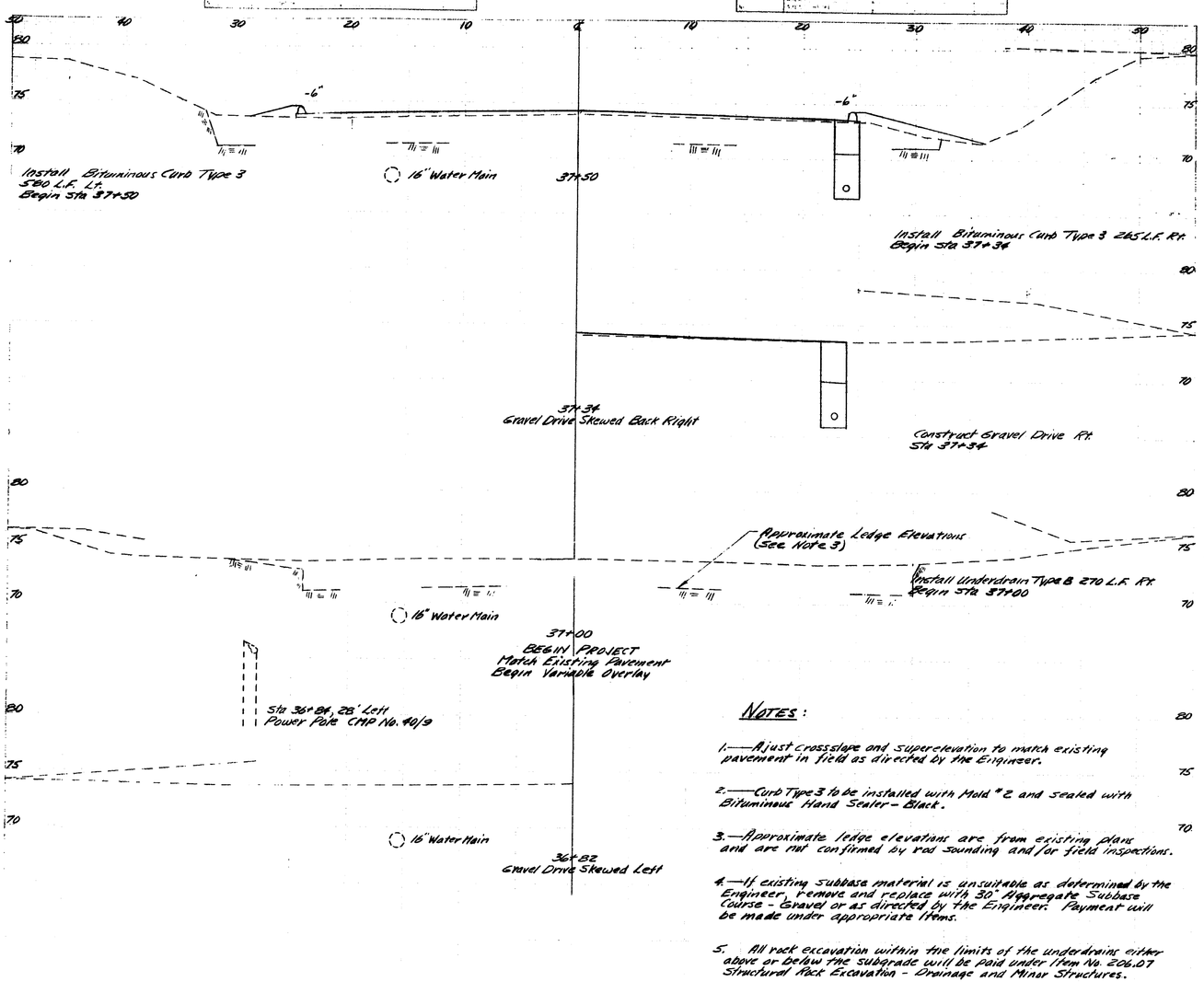
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
PROFILE

AUGUSTA, MAINE Nov. 1978

I.G.O.T. 3-74

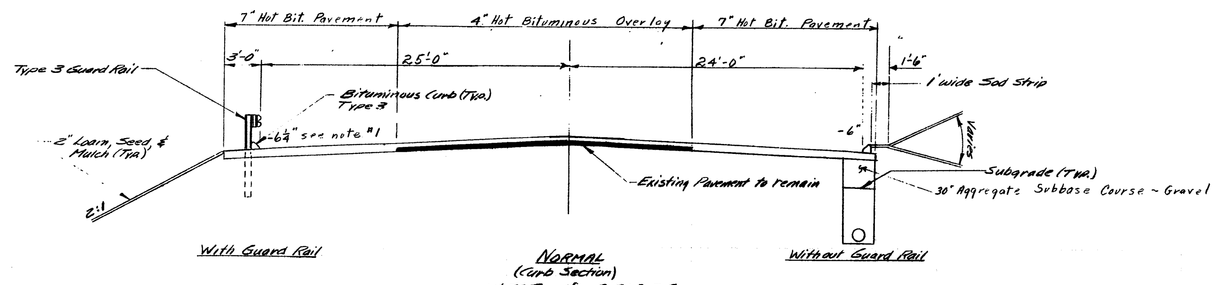
ORIGINAL SURVEY		BY	DATE

FINAL SURVEY		BY	DATE
	Design Unit CHECK	N.L.A.	3-77

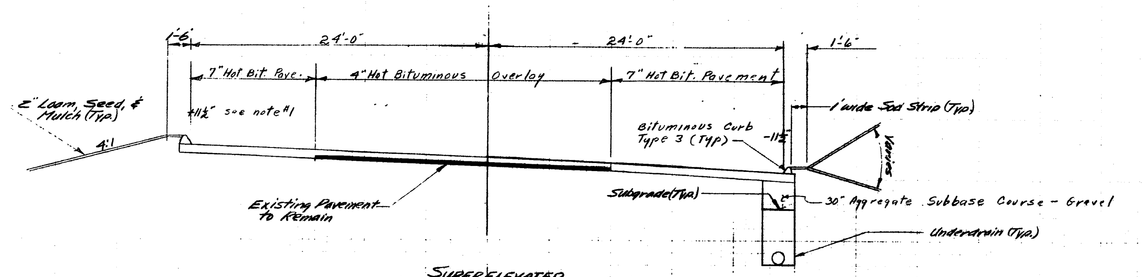


NOTES:

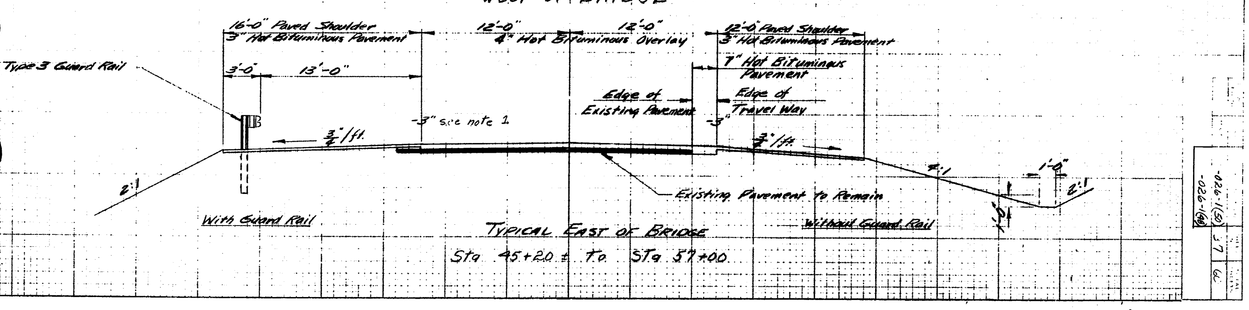
1. Ajust crossslope and superelevation to match existing pavement in field as directed by the Engineer.
2. Curb Type 3 to be installed with Mold #2 and sealed with Bituminous Hand Sealer - Black.
3. Approximate ledge elevations are from existing plans and are not confirmed by rod sounding and/or field inspections.
4. If existing subbase material is unsuitable as determined by the Engineer, remove and replace with 30" Aggregate Subbase Course - Gravel or as directed by the Engineer. Payment will be made under appropriate Items.
5. All rock excavation within the limits of the underdrains either above or below the subgrade will be paid under Item No. 206.07 Structural Rock Excavation - Drainage and Minor Structures.



NORMAL
(Curb Section)
WEST of BRIDGE



SUPERELEVATED
(Without Guard Rail)
WEST of BRIDGE



TYPICAL EAST OF BRIDGE
Sta 45+20 ± To Sta 57+00

R94-241

R94-242

Sta 38+60 to 40+20

Sta 38+80 to 39+20

Repair & Overlay

38+00

16" Water Main

Sta 38+80 45 Knox Flower Pole CMP No. 39205/0

38+50

16" Water Main

Sta 38+65 #7 Left Power Pole CMP No. 39.1

39+00

16" Water Main

House Still

39+50

16" Water Main

Sta 39+70 Install 12"CA Culvert Pipe Option 1

Install 12" Inlet Grate

Sta 39+70 Install Catch Basin Type B.L.F

40+00

16" Water Main

Install Underdrain Type C 12" ϕ Pipe 180 L.F. Sta. 39+70

Sta 40+40 Paved Drive & Parking Area Right

Curb Inlet Paved Surface Ex. Sta 40+40

Match Existing Drive Ex. Sta 40+40

40+50

16" Water Main

Install Continuous Curb Type 3 155.6' Ex. Begin Sta 40+37

Sta 40+00 46 Knox Power Pole CMP No. 39.1

FINAL SURVEY
DESIGN
AS BUILT
DATE 3-79

R94-243

Sta 42+90 Asphalt Pvd Curb NEC

Install Hdr Extruded Curb Type 3 315 L.F. Rt Sta 42+20

Install Underdrain Type C 12" ø Pipe 225 L.F. Rt

12" Inlet Curve

Sta 41+80 Install 12 inch Culvert Pipe Option 1

Sta 41+60 Install Catch Basin Type 81C

Paved Parking Lot

Match Existing Drive Rt Sta 42+00

Paved Drive & Parking Area Right

Approach Sub base & Course - Gravel (TYP)

16" Water Main

Construct Ryvd Down Spout Sta 40+75 ± LT

Install 12" Underdrain Type C 12" ø Pipe 225 L.F. Rt

Begin Sta. 45+85

Install 12" ø Culvert 25' L.F. Rt

Install 12.5 L.F. Guard Rail Type 3 Curved 30' radius Begin at Sta 43+30 Rt.

End Guard Rail Type 3 Curved 30' radius at Sta 43+32

Install 1875 ± L.F. Guard Rail Type 3 Single Rail Begin at Sta 43+33 Rt.

Gravel Drive Skewed Ahead Left

Begin Valvaole Overlay

Install High Brightness Curb Type 3 555 L.F. Lt Begin Sta. 43+60 Lt

16" Water Main

Survey

Date: 7/27/94
Checked: MER
Plot: 3:79

Vert. 3"=1'

R94-244

7" Hot Bit. Pavement

Aggregate Subbase Course Gravel

Existing Abut. 2

Abut. #2 (Proposed)

Abut. 2 STA 51+94.4±

Install 137.5± L.F. Guard Rail Type 3 Single Rail Begin at Concrete Post Lt. Sta 52+00

Install 137.5± L.F. Guard Rail Type 3 Begin at Concrete End Post Sta 51+97±

Sta 52+00, 11' Right Power Pole CMP No. 1/16

Install 12"ø Outlet 25± L.F. Rt. Begin Sta 44+70

Sta 46+78, 70' Lt. J Pole CMP NET

BRIDGE

Sta 45+68, 20.5' Right Power Pole CMP No. 37/13

+50 62' 16" Water Main

For pole locations between Sta. 46+78 & Sta. 52+00 See sheet #33

Install 12"ø Outlet Culvert Option II from Catch Basin thru Abut. #1 (see sh. #6)

End Guard Rail Type 3 Single Rail at Concrete End Post STA 45+21±

End Guard Rail Type 3 Single Rail at Concrete End Post: Sta. 45+21±

Sta 45+10 Install Catch Basin Type B.C.

+11½" -11½"

Aggregate Subbase Course Gravel

Existing Abut 1

Abut #1 (Proposed)

Abut. 1 STA 45+20.5±

±00 66' 16" Water Main

45+00

End Guard Rail Type 3 Circular 30' Radius at Sta 44+57.5

Install 62.5 L.F. Guard Rail Type 3 single Rail Begin at Sta 44+57.5

Sta 44+58, 41' Lt. J Pole CMP NET

+10½" -10½"

Aggregate Subbase Course Gravel

30" CMP

-4%/ft → (Typ)

16" Water Main

Sta 44+47, 41 Rt. J Pole CMP NET

Install Bituminous Curb Type 3 75±L.F. Lt. Begin at Sta. 44+45±

44+50

Install 12.5 L.F. Guard Rail Type 3 Circular 30' Radius Begin at Sta 44+45

16" Water Main

44+43 Grated Drive Skewed Back Left

12'-1" (12'-0" Min.)

40' 62'

Survey

R94-245

End Guard Rail Type 3 Simple Rail Sta 53+35 Lt.
Install 12.5 L.F. Guard Rail Type 3 Circular 30' Radius Begin at Sta 53+35
End Guard Rail Type 3 Circular Sta 53+47

End Guard Rail Type 3 Simple Rail Sta 53+35 Lt.
Install 12.5 L.F. Guard Rail Type 3 Circular 30' Radius Begin at Sta 53+35
End Guard Rail Type 3 Circular Sta 53+47

7" Hot Bit Pavement
Appropriate Subbase Course Gravel
3:1
54+00
7" Hot Bit Pavement
Appropriate Subbase Course Gravel
3:1
Sta 54+46 Power Pole CMP No. 33/17
54+50
7" Hot Bit Pavement
Slope to Drain
55+00
Survey
10 20 30 40 50

I G.U.T. 3-79

Design Drft. Check N.E.R 11-81 3-79

50 40 30 20 10 0 10 20 30 40 50

5 0 5 0

59+00

10 5 0 10 5 0

58+50

10 5 0 10 5 0

Gravel Drive

58+00

10 5 0 10 5 0

Gravel Drive

57+50
END TRANSITION
Match Existing Pavement

10 5 0 10 5 0

Slope to Drain

Gravel Drive

57+00
END PROJECT
BEGIN TRANSITION
Begin Variable Overlay

10 5 0 10 5 0

Slope to Drain

Gravel Drive

R94-246

56+50

10 5 0 10 5 0

Sta 56+16, 81' Right
Power Pole CMP No. 32/18

Slope to Drain

Gravel Drive

56+00

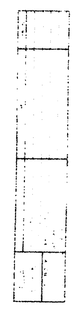
10 5 0 10 5 0

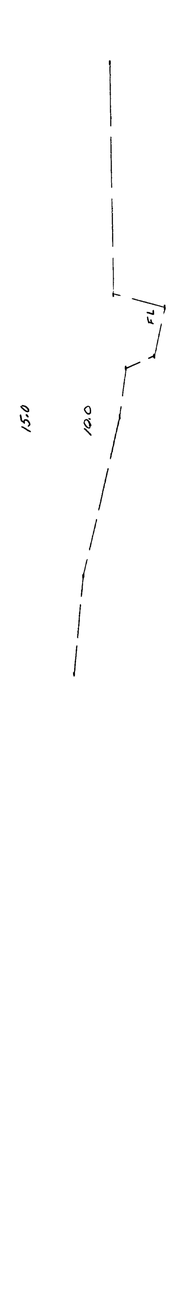
55+50

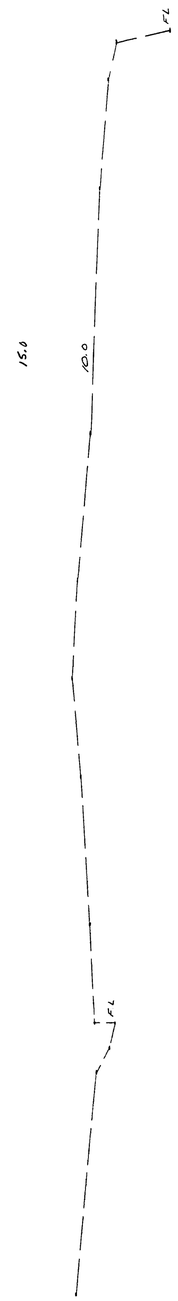
50 40 30 20 10 0 Survey 10 20 30 40 50

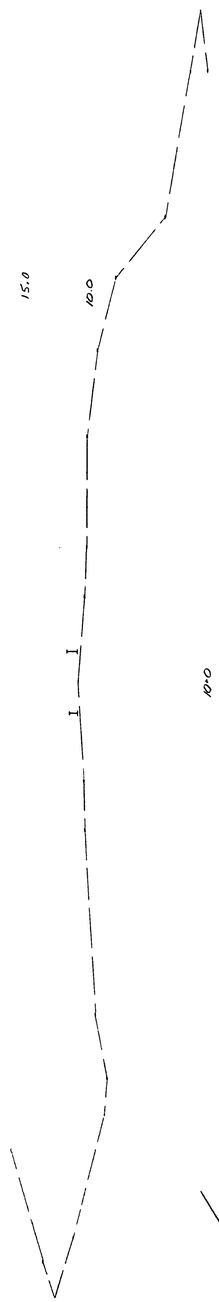
226-1(20) 226-1(19) 42 60

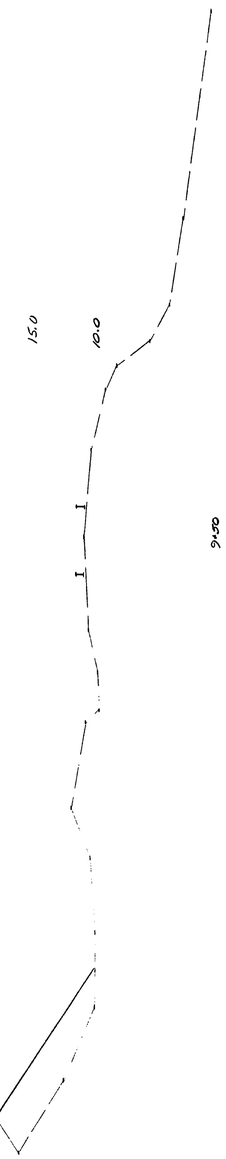
026-152
026-1(98) 43 60

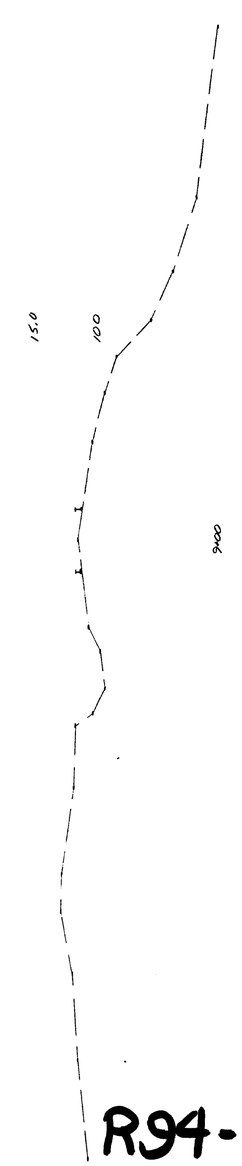






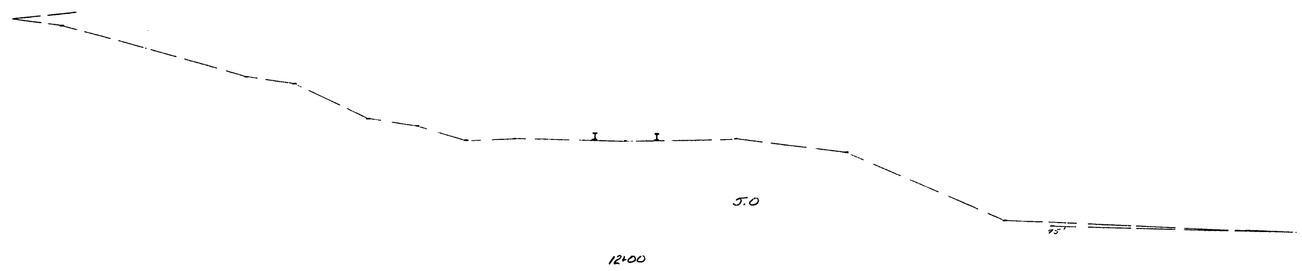


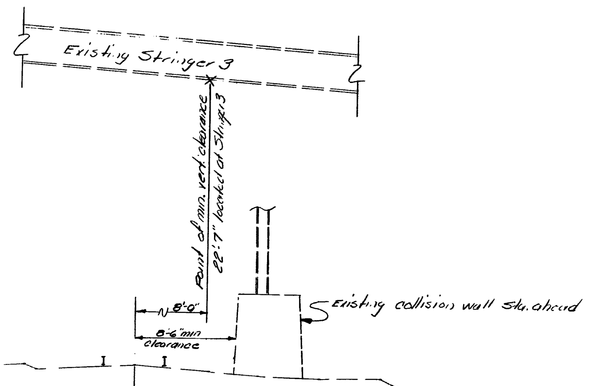


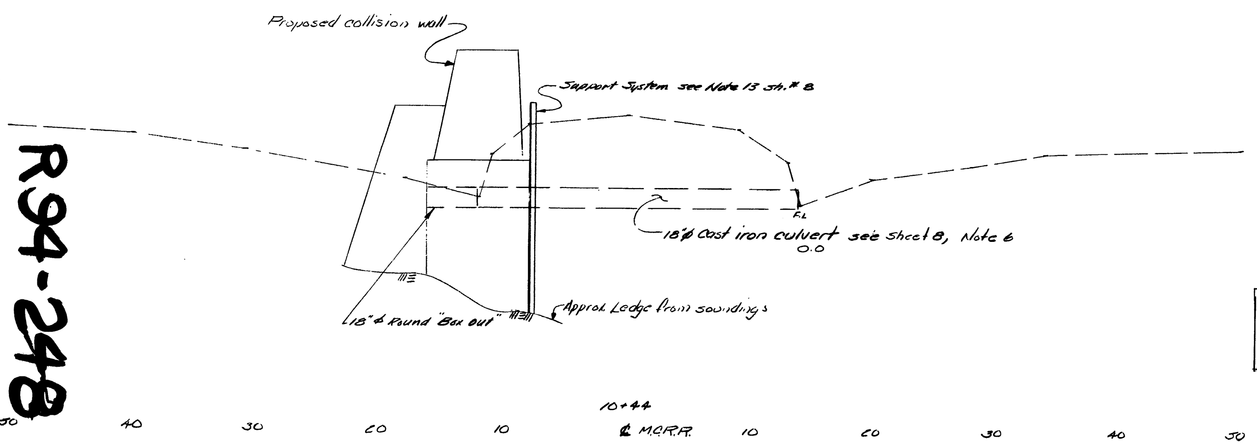


R94-247

R/R x-section Woolwich sta. 46 overhead



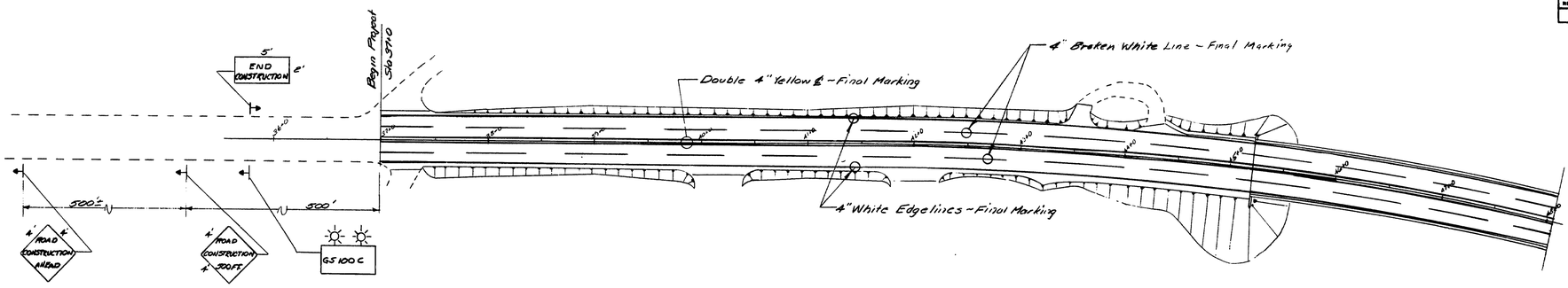




R94-248

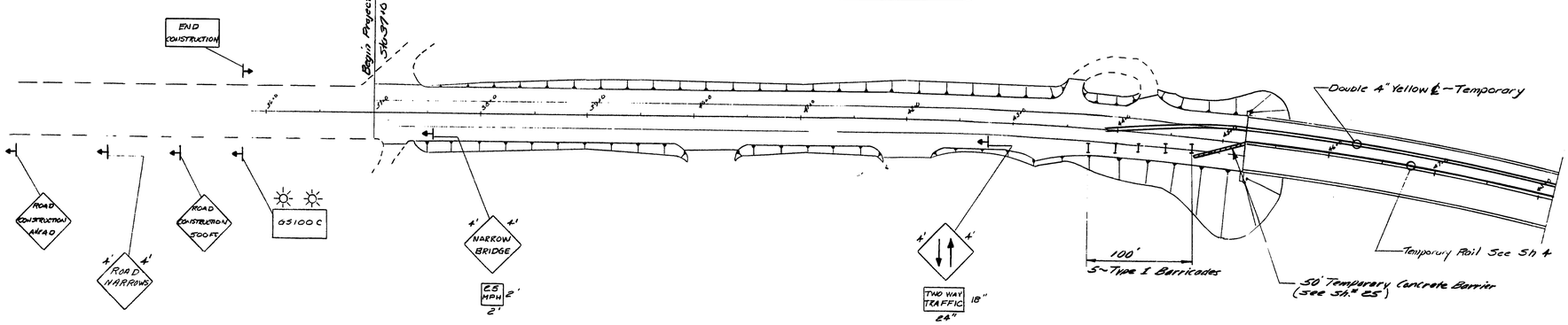
F/R X-section working STA 46 overhead

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	~~025-430~~	45	60
		025440		

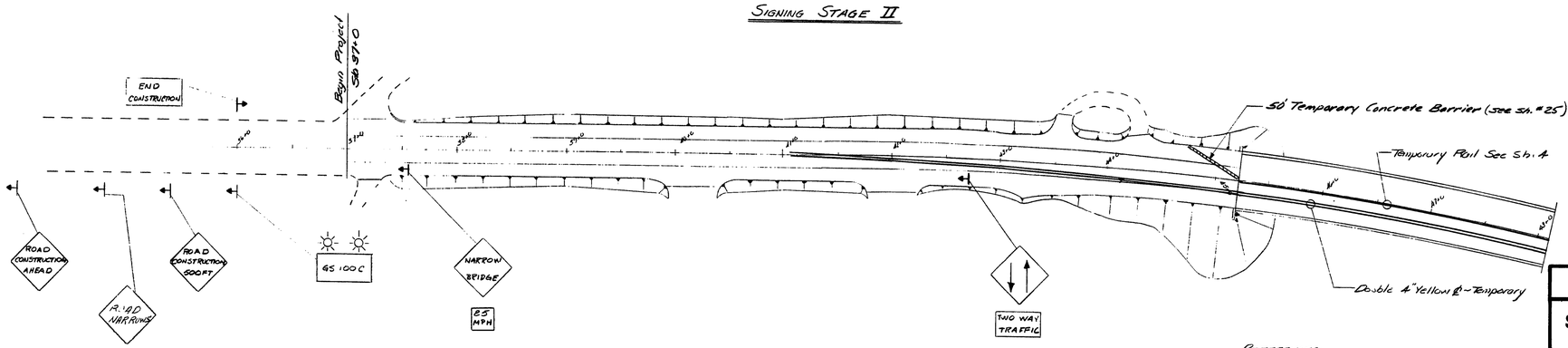


SIGNING STAGE I & FINAL PAVEMENT MARKINGS

NOTE: Consultation with Division Traffic Engineer is advised prior to placement of final pavement markings to assure conformity with M.D.O.T policy.



SIGNING STAGE II



SIGNING STAGE III & IV

REFERENCES:
For Construction Sign Notes see sh. # 46

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	JAS	5/79
CHECKED		
REVISIONS		
FIELD CHANGES		

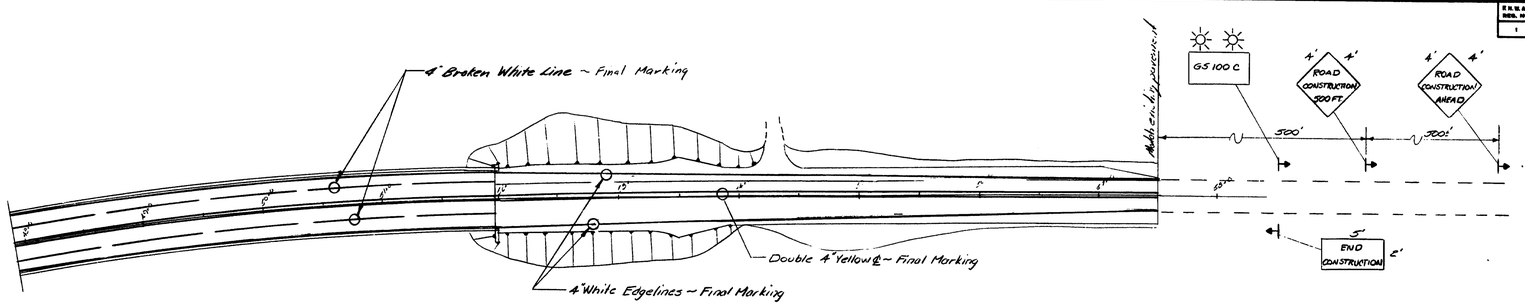
R94-249

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

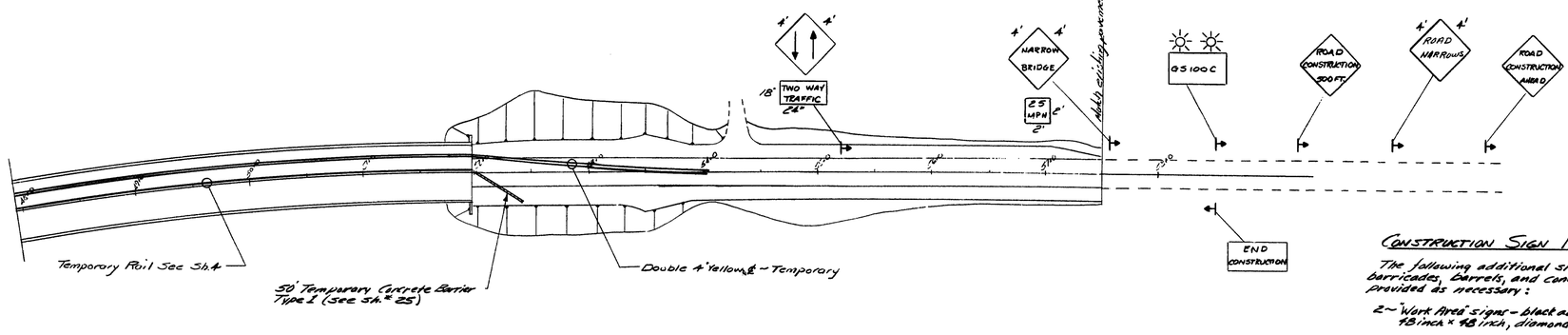
STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
CONSTRUCTION SIGNING

AUGUSTA, MAINE MAY 1979

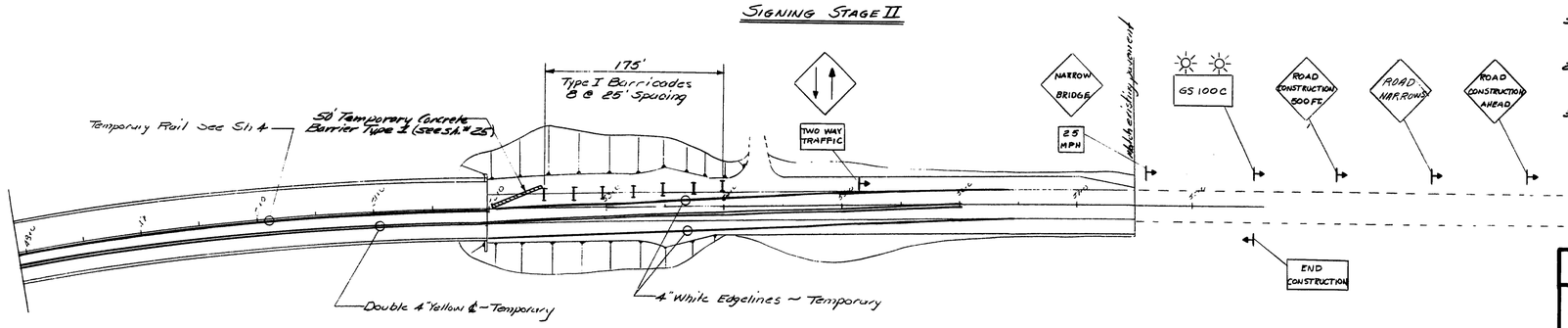
F.A.H.S. SEQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	~~025-1(20)~~	46	60
		025-1(19)		



Signing Stage I & Final Pavement Markings



Signing Stage II



Signing Stage III & IV

Construction Sign Notes

The following additional signs, Type I barricades, barrels, and cones shall be provided as necessary:

2~ "Work Area" signs - black and orange - 48 inch x 48 inch, diamond shaped.

8~ Directional Arrows - black and orange - 48 inch x 24 inch.

50~ Reflectorized barrels - orange and white - or cones, min. height 24 inches.

30~ Type I Barricades - orange and white striped plank - 8 inches min. width x min. of 8 ft. long, nominal sizes.

2~ "Flagmen Ahead" signs - black and orange - 48 inch x 48 inch, diamond shaped.

30~ Vertical Panel Markers - orange and white striped 6 inch x 24 inch.

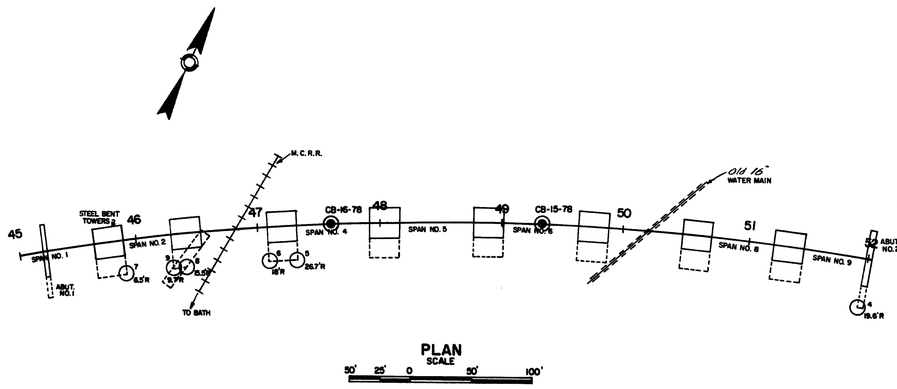
PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED		
CHECKED		
REVISIONS	CMS	5/79
FIELD CHANGES		

R94-250

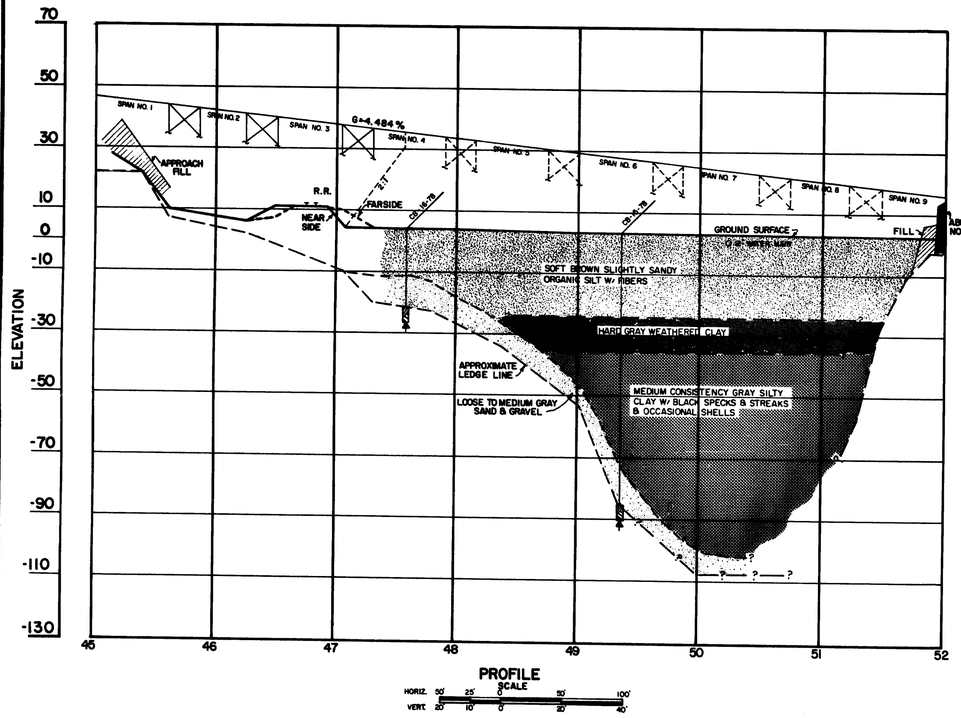
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STA. 46 OVERHEAD BRIDGE
OVER
MAINE CENTRAL RAILROAD
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
CONSTRUCTION SIGNING

AUGUSTA, MAINE May 1979



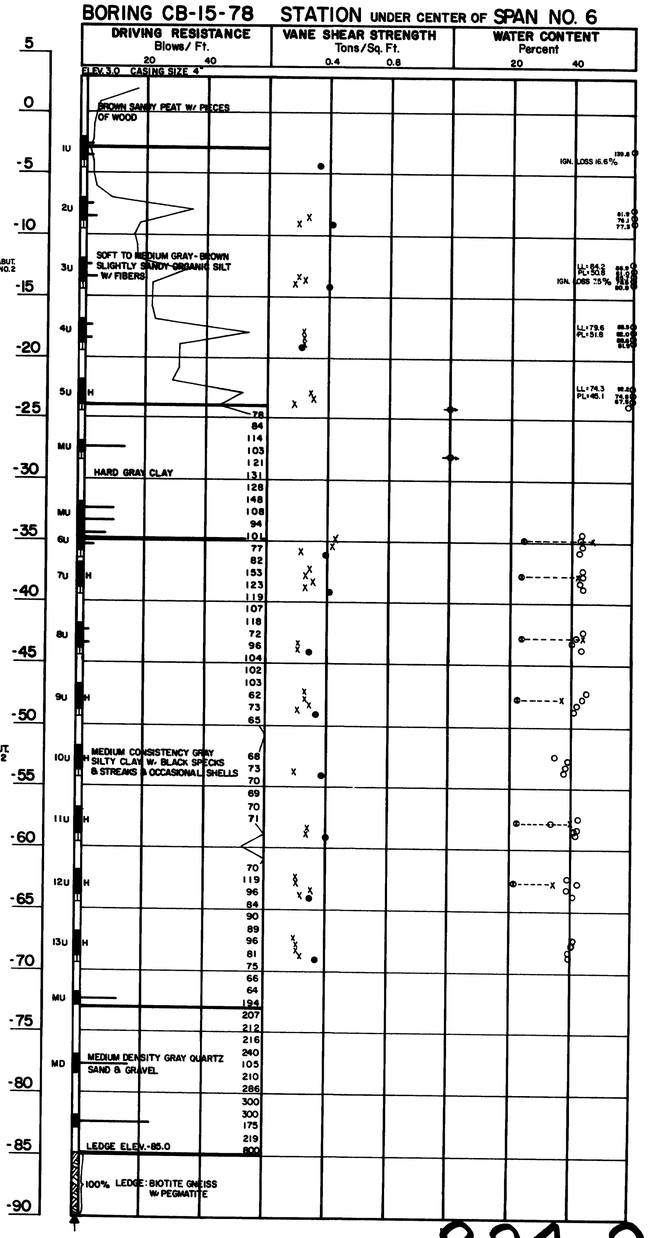
PLAN
SCALE 50' 25' 0 50' 100'



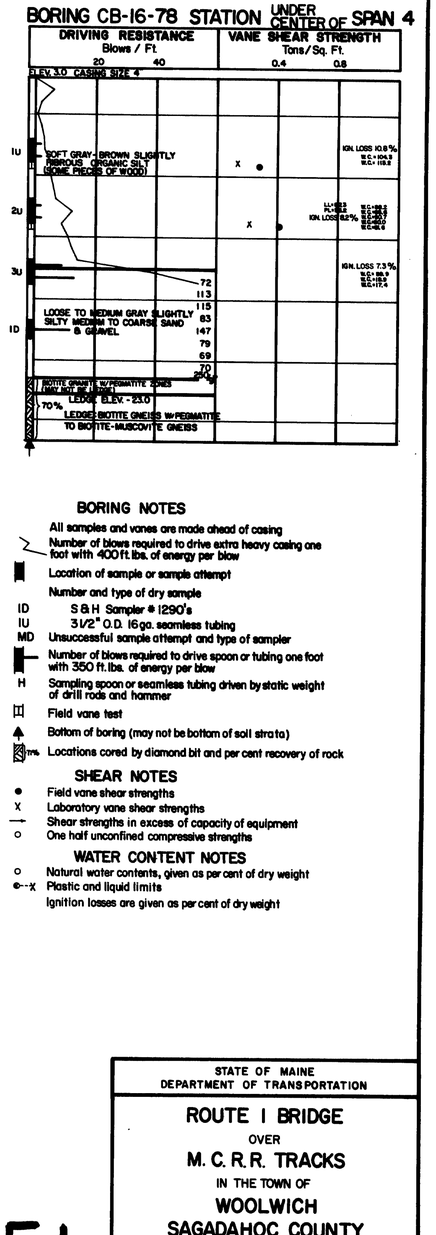
PROFILE
SCALE HORIZ. 50' 25' 0 50' 100'
VERT. 20' 10' 0 20' 40'

PROJECT DESIGN ENGINEER
DESIGN - DETAILED
CHECKED
REVISIONS
FIELD CHANGES
BY
DATE
PLANS

BORING CB-15-78 STATION UNDER CENTER OF SPAN NO. 6



BORING CB-16-78 STATION UNDER CENTER OF SPAN 4



BORING NOTES

All samples and vanes are made ahead of casing

Number of blows required to drive extra heavy casing one foot with 400 ft. lbs. of energy per blow

Location of sample or sample attempt

Number and type of dry sample
- ID S & H Sampler # 1290's
- IU 3 1/2" O.D. 16 ga. seamless tubing
- MD Unsuccessful sample attempt and type of sampler

Number of blows required to drive spoon or tubing one foot with 350 ft. lbs. of energy per blow

H Sampling spoon or seamless tubing driven by static weight of drill rods and hammer

Field vane test

Bottom of boring (may not be bottom of soil strata)

Locations cored by diamond bit and per cent recovery of rock

SHEAR NOTES

- Field vane shear strengths
- X Laboratory vane shear strengths
- Shear strengths in excess of capacity of equipment
- One half unconfined compressive strengths

WATER CONTENT NOTES

- Natural water contents, given as per cent of dry weight
- Plastic and liquid limits

Ignition losses are given as per cent of dry weight

R94-251

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

ROUTE 1 BRIDGE
OVER
M. C. R. R. TRACKS
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
FOUNDATION SURVEY
AUGUSTA, MAINE JAN. 1979

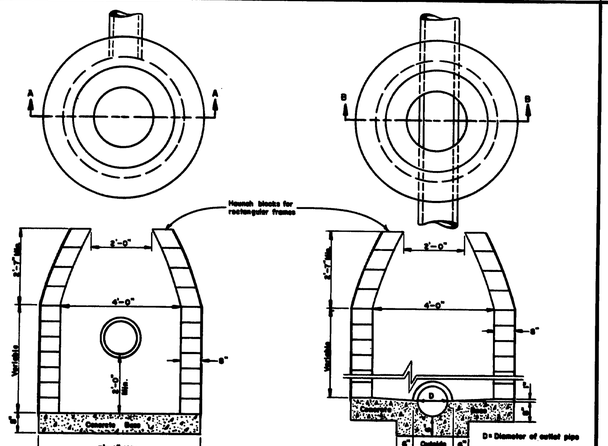
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-H(50)	48	60
		026-I(80)		

GENERAL NOTES — ALL CATCH BASINS AND MANHOLES

1. Any Catch Basin in excess of 8' in depth shall, if directed be provided with steps similar to those detailed for Manholes.
2. Frames, Grates & Covers shall be considered as part of the structure, and no separate payment shall be made.

GENERAL NOTES — PRECAST CATCH BASINS AND MANHOLES

1. Drain holes in precast sumps to be not over 3" in diameter, and shall be plugged with mortar when constructed.
2. All precast sections of less than 8" wall thickness shall have tongue and groove joints.
3. Cone and Ring sections wall thickness min. 4", max. 8"
4. Minimum wall thickness of sump may be 4" as specified in A.S.T.M. C-478, however, if concrete blocks are used around the inlet and outlet pipes, the wall thickness of sump shall be 8".
5. Wall around inlet and outlet pipes may be built of 8" concrete blocks or a precast ring with an opening 2" larger than the outside diameter of the pipe may be used.
6. Lift Holes shall be provided.



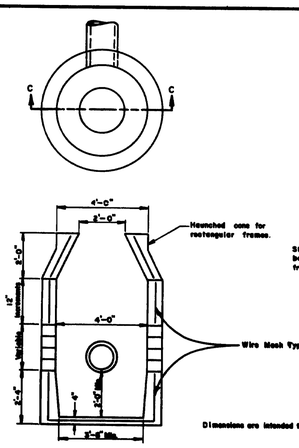
SECTION A-A
SHAPE "1"

SECTION B-B
SHAPE "2"

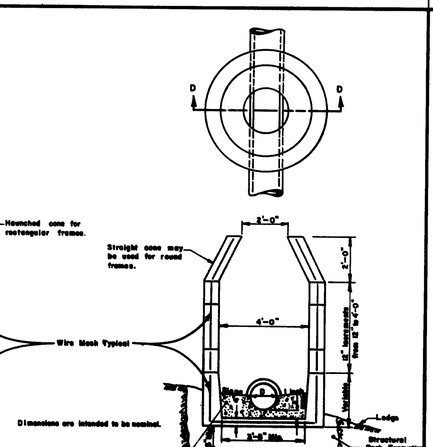
Dimensions are intended to be nominal.

CATCH BASINS
(Concrete Blocks or Bricks)

A



SECTION C-C
SHAPE "3"

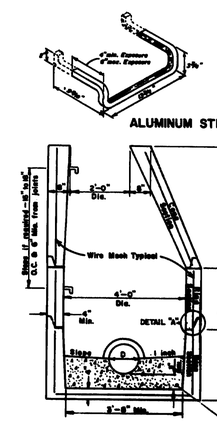


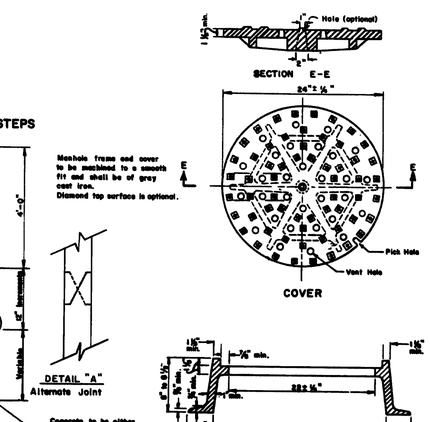
SECTION D-D
SHAPE "4"

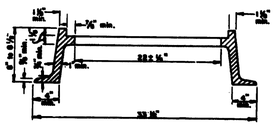
Dimensions are intended to be nominal.
Concrete to be either field placed or precast.

CATCH BASINS
(Precast Units)

B



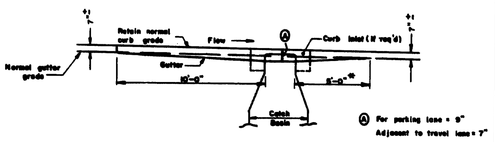




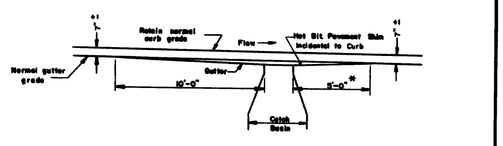
MANHOLE TOP "D"
FRAME

MANHOLE

C



AT CURB INLETS



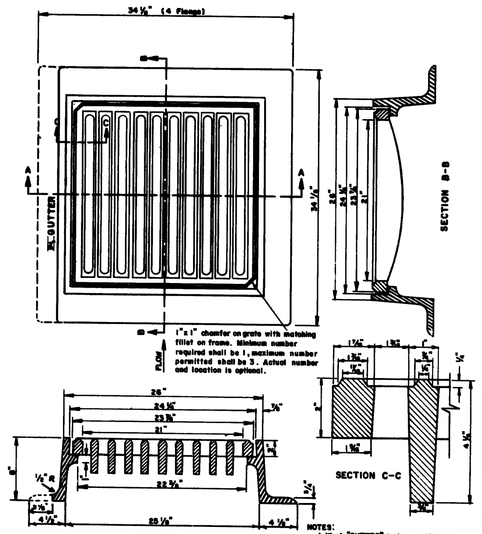
AT CURB WITHOUT INLET STONES

* If at bottom of sag, this dimension to be 10'-0"

NOTE: PARALLEL BAR GRATES SHALL BE INSTALLED ON A LEVEL GRADIENT. CASCADE GRATES SHALL BE INSTALLED ON GRADIENT OF THE GUTTER. THE GRATES SHALL BE DEPRESSED 3" BELOW THE NORMAL GUTTER GRADE UNLESS THIS DEPRESSION INTERFERES WITH TRAFFIC. DIMENSIONS ARE INTENDED TO BE NOMINAL.

GUTTER GRADE TRANSITION AT CATCH BASIN

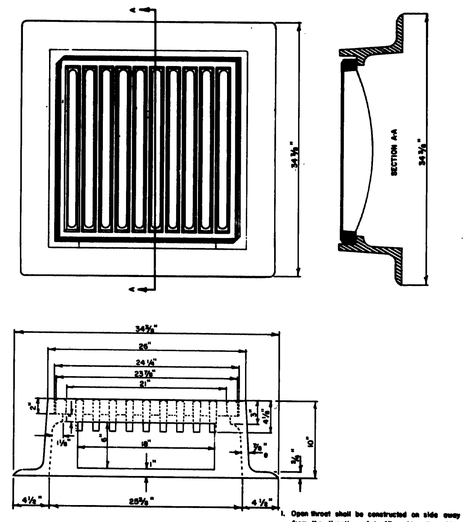
4D



NOTES:
1. Word "GUTTER" to be moulded into back flange - Type "B" top only.
2. Type "A" grate to have 3 flanges.
3. Type "B" grate to have 4 flanges.
4. Frame and grate to be of gray cast iron.
5. Dimensions are intended to be nominal.

TYPE "A" & "B" CATCH BASIN TOPS
(PARALLEL BAR GRATES)

E



1. Open throat shall be constructed on side away from the direction of traffic. All other sides shall be graded flush with the top of C.B. grate.
2. Frame shall be gray cast iron.
3. Grate shall be same as type "A" and "B".
4. Dimensions are intended to be nominal.
5. When volume of water warrants, 6" opening may be increased.

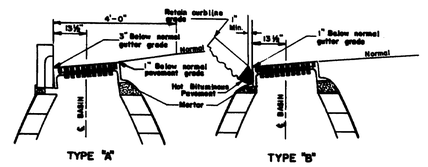
TYPE "C" CATCH BASIN TOPS

F

STRUCTURE	TOP				SHAPE				
CATCH BASIN	A	B	C	D	1	2	3	4	5
Type A-1	X				X		X		
Type A-2	X					X		X	
Type B-1		X			X		X		
Type B-2		X				X		X	
Type C-1			X		X		X		
Type C-2			X			X		X	
MANHOLE				X		X		X	X

TABLE OF CATCH BASIN TYPES
(COMBINATION OF TOPS AND SHAPES)

For Type "E" & Type "F" C.B. See Sheet No. 3



Dimension are intended to be nominal.

CATCH BASIN TOP INSTALLATION

4C

REVISIONS	
CATCH BASINS TYPE A-1 & A-2	10-21-69
PLATE 'E'	4-21-71
PLATE 'D-E'	8-26-75
PLATE 'C'	10-14-75
PLATE 'D-C'	7/31/78

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

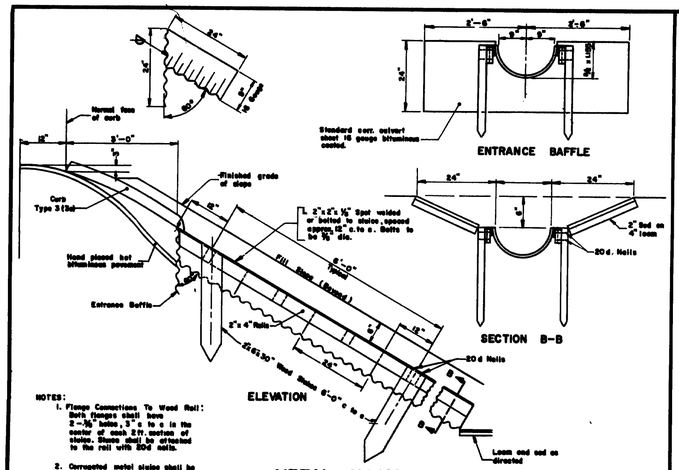
STANDARD DETAILS

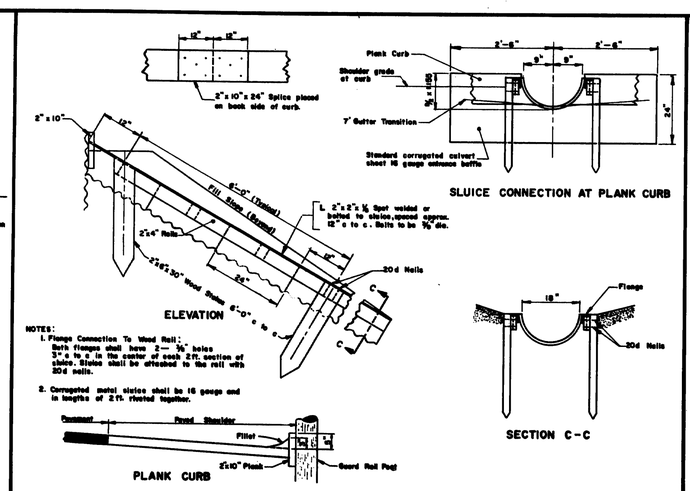
CATCH BASINS AND MANHOLES

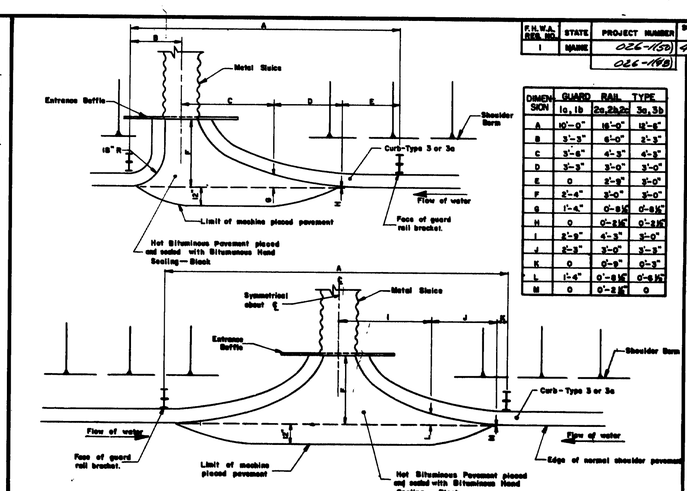
AUG. 1969 (1)

R94-252

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-1(30)	59	60
		026-1(49)		







DIMENSION	GUARD RAIL 1a, 1b	GUARD RAIL 2a,2b,2c	TYPE 3a, 3b
A	10'-0"	10'-0"	12'-6"
B	3'-3"	6'-0"	2'-3"
C	3'-6"	4'-3"	4'-3"
D	3'-3"	3'-0"	3'-0"
E	0	2'-9"	3'-0"
F	2'-4"	3'-0"	3'-0"
G	1'-4"	0'-8 1/2"	0'-8 1/2"
H	0	0'-2 1/2"	0'-2 1/2"
I	2'-9"	4'-3"	3'-0"
J	2'-3"	3'-0"	3'-3"
K	0	0'-9"	0'-3"
L	1'-4"	0'-8 1/2"	0'-8 1/2"
M	0	0'-2 1/2"	0

SLUICE ENTRANCE DETAIL
C

CIRCULAR

NOMINAL INSIDE DIAMETER	THICKNESS In INCHES CMP or BCCMP	THICKNESS In INCHES CAP	CLASS and WALL RCP	CLASS ASBESTOS CEMENT PIPE
6 inch	.064	.060		
10 "	.064	.060		
12 "	.064	.060		
15 "	.064	.060	B	
18 "	.064	.060	A	
21 "	.064	.060	Wall	
24 "	.064	.060		
30 "	.079	.075		III
36 "	.079	.075		
42 "	.109	.105	III	
48 "	.109	.105		
54 "	.109	.105	Class	CLASS
60	.138	.135		
66	.138	.135		
72	.168	.164		
84	.168	.164		

PIPE ARCH

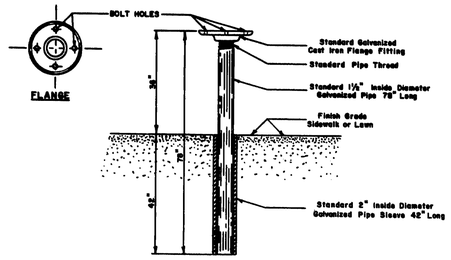
NOMINAL SIZES	GAUGE BCCMPA-CMPA	THICKNESS (Inches) CAPA
18" span x 11" rise	16	.060
22" " x 13" "	16	.060
25" " x 16" "	16	.060
29" " x 18" "	14	.075
36" " x 22" "	14	.075
43" " x 27" "	12	.105
50" " x 31" "	12	.105
58" " x 36" "	10	.135
65" " x 40" "	10	.135
72" " x 44" "	8	.164

CMP = Corrugated Metal Pipe
BCCMP = Bituminous Coated Corrugated Metal Pipe
CAP = Corrugated Aluminum Pipe

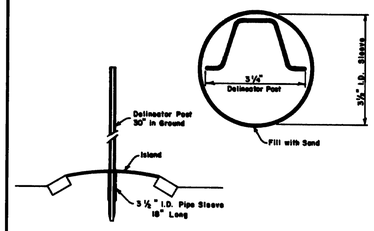
RCP = Reinforced Concrete Pipe

Above abbreviations followed by "A" indicate "Arch"
All RCPA shall be class III
Minimum thickness, class, and wall types for culvert pipe, unless otherwise designated.

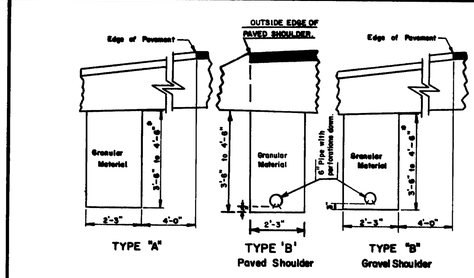
CULVERT PIPE DATA
D

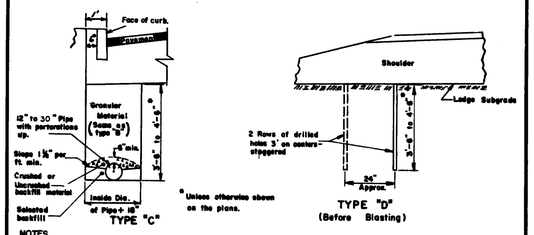


SINGLE POST TYPE 1C



PIPE SLEEVE FOR DELINEATOR POST
E



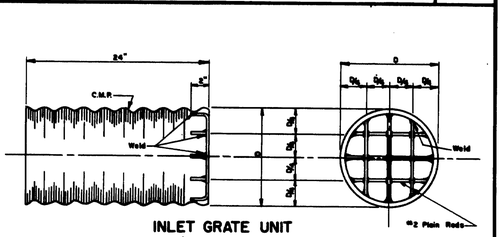


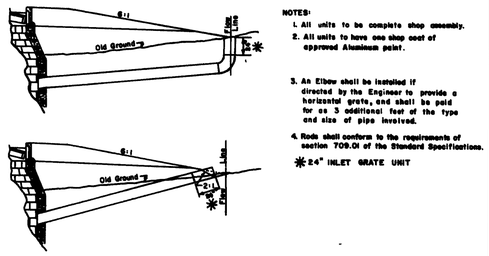
* Unless otherwise shown on the plans.

NOTES

1. The maximum vertical measurement of depth for payment of Structural Rock Excavation will be to a horizontal plane located 1 foot below the bottom of the invert of the pipe for Underdrain Type "B" and Underdrain Type "C".
2. The material for Ells, Tees and Wyes for Underdrain Types "B" and "C" shall be at least as thick as the largest size pipe being connected.
3. Width of the trench for underdrain outlet will be the same as the underdrain trench.
4. No allowance for payment will be made for excavating or material excavated beyond the horizontal dimensions shown for Types A, B, or C Underdrain.
5. In "Box Sections" the edge of trench shall be in line with edge of box section.

UNDERDRAIN
F





INLET UNITS IN FILL AREAS

NOTES:
1. All units to be complete shop assembly.
2. All units to have one shop coat of approved Aluminum paint.
3. An Elbow shall be installed if directed by the Engineer to provide a horizontal grate, and shall be paid for as 3 additional feet of the type and size of pipe involved.
4. Rods shall conform to the requirements of section 709.01 of the Standard Specifications.

*24" INLET GRATE UNIT
G

REVISIONS	
PLATE 'F'	9-17-70
PLATE 'G'	8-15-71
PLATE 'D'	12-20-71
PLATE 'F'	10-14-75

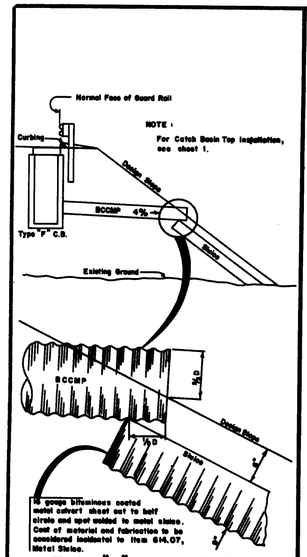
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

STANDARD DETAILS

METAL SLUICE — UNDERDRAIN — CULVERT PIPE DATA CULVERT INLET GRATE

AUG. 1969 (2)

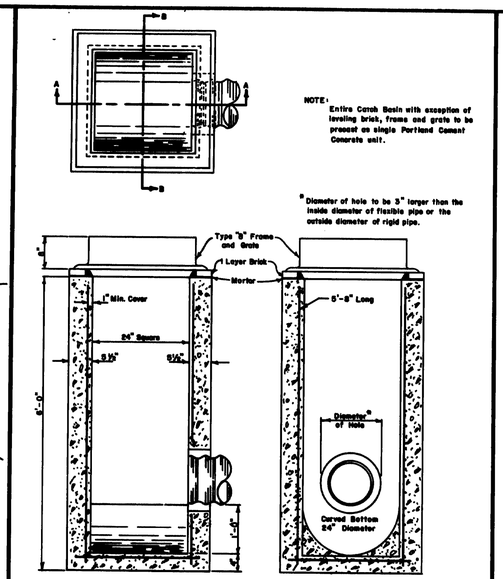
R94-253



TYPE "F" CATCH BASIN WITH OUTLET PIPE (SLUICE OPTIONAL)

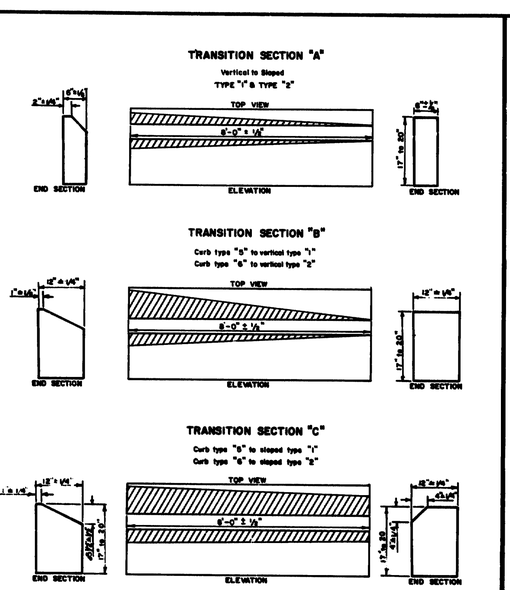
(SEE SHEET NO. 2 FOR STANDARD SLUICE DRAWING)

3-A



CATCH BASIN TYPE "F"

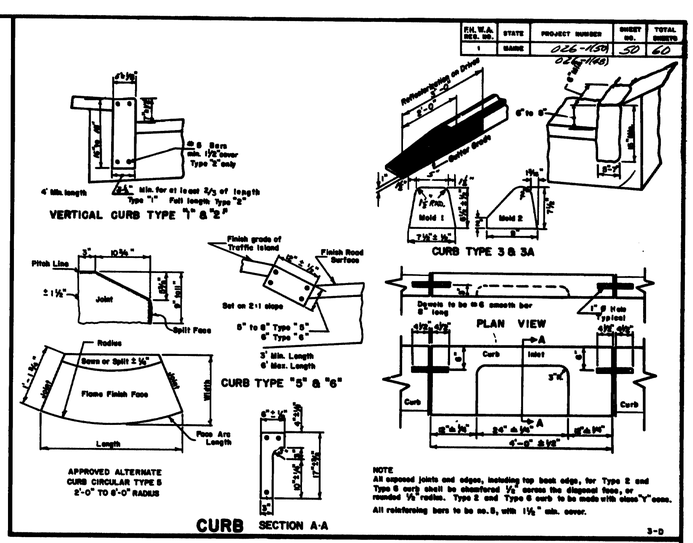
3-B



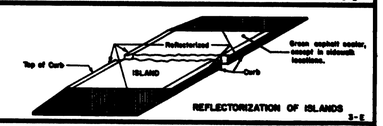
CURB TRANSITION

NOTE - TYPE 2 CURB
Precast concrete curb to be made with class "A" concrete.
All reinf. bars to be #5 @ 1½" min. cover.

3-C

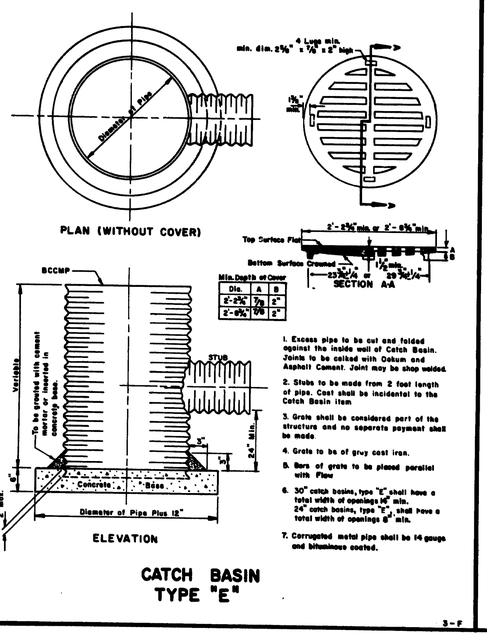


3-D



REFLECTORIZATION OF ISLANDS

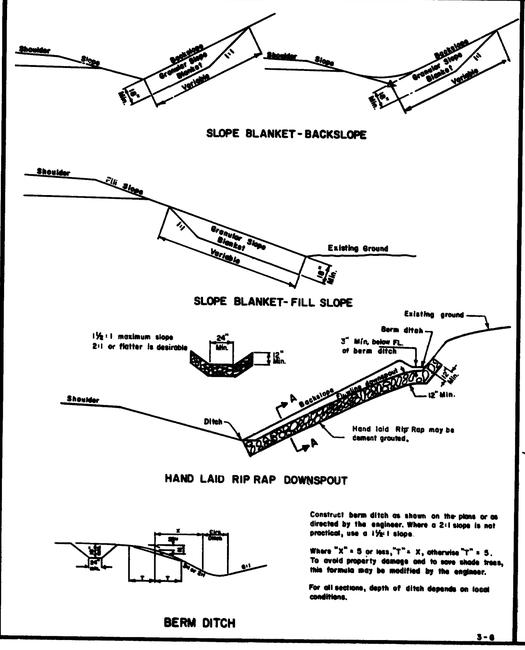
3-E



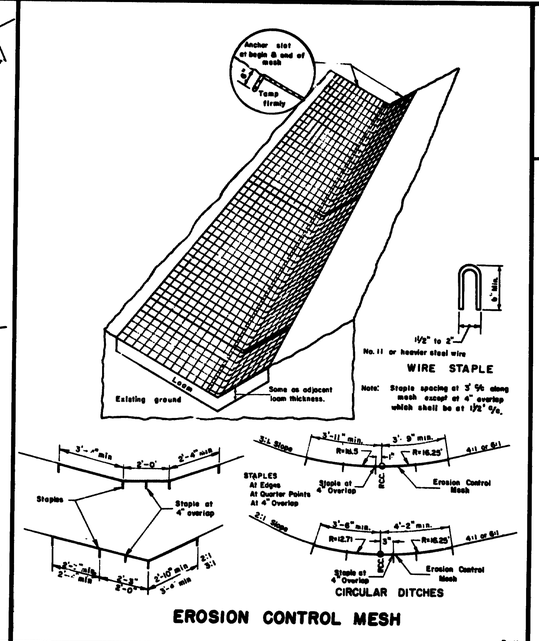
CATCH BASIN TYPE "E"

1. Excess pipe to be cut and folded against the inside wall of Catch Basin. Joints to be caulked with Coburn and Asphalt Cement. Joint may be shop welded.
2. Stubs to be made from 2 foot length of pipe. Cost shall be incidental to the Catch Basin item
3. Grate shall be considered part of the structure and no seperate payment shall be made.
4. Grate to be of grey cast iron.
5. Bars of grate to be placed parallel with Flow
6. 30" catch basins, type "E" shall have a total width of openings 16" min. 24" catch basins, type "E", shall have a total width of openings 8" min.
7. Corrugated metal pipe shall be 14 gauge and bituminous coated.

3-F



3-G

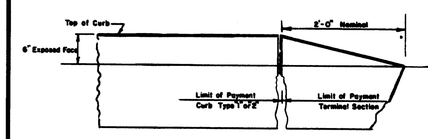


3-H

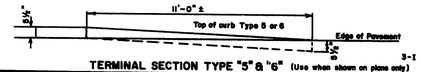
CURB TYPES (1&2),(5&6) ON CURVES				
	RADIUS OF CURVE	LENGTH	PAID FOR AS	STONE IS CUT OR CAST
1 & 2	0' To 60' Incl.	4' Min.	Circular	±½ To F.F Curve
	Over 60' To 180'	4' To 8'	Straight	Straight Pieces
5 & 6	0' To 8' Incl.	2' Max	Circular	To Fit Curve
	Over 8' To 30' Incl.	12" Min. Chord	Circular	Straight Pieces, Radial Ends
	Over 30' And Under 180'	2' To 3'	Straight	Straight Pieces
	180' And Over	3' To 8'	Straight	Straight Pieces

3-J

TERMINAL CURB SECTION



TERMINAL SECTION TYPE "1" & "2"



TERMINAL SECTION TYPE "5" & "6" (Use when shown on plans only)

3-I

REVISIONS	
Plate 3-B	12-23-69
Plate 3-F	5-27-70
Plate 3J	7-15-70
PLATE 3G	3-4-71
PLATE 3H	8-28-73
PLATE 3H	6-26-75
PLATE D	2-9-76
PLATE D&I	11-24-75
PLATE 3D	7/31/78

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

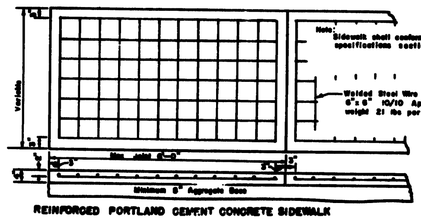
STANDARD DETAILS

CURB, DITCHES AND SLOPES, AND CATCH BASINS TYPE "E"

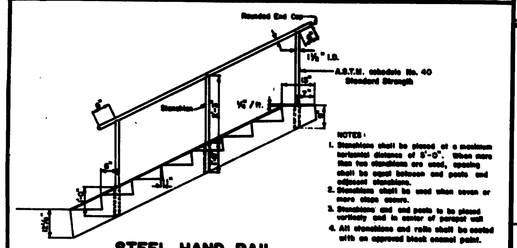
AUG. 1969

3

R94-254



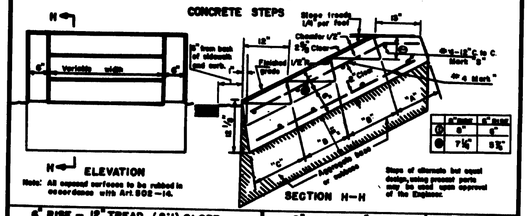
REINFORCED PORTLAND CEMENT CONCRETE SIDEWALK



STEEL HAND RAIL

S-A

CONCRETE STEPS



Mark	Size	Number	Length (feet)
R	as a .668 lbs. per ft.	2 Each parapet 1 Each ft. of Width	11'-0" For "R" +10.6 Per each "S" +14" Per "C"
S	as a .668 lbs. per ft.	1 For "A" 1 For each "B" 2 For "C"	4 Each parapet + 12 per ft. of width

8" RISE — 12" TREAD (2:1) SLOPE

Mark	Size	Number	Length (feet)
R	as a .668 lbs. per ft.	2 Each parapet 1 Each ft. of Width	11'-0" For "R" +10.6 Per each "S" +14" Per "C"
S	as a .668 lbs. per ft.	1 For "A" 1 For each "B" 2 For "C"	4 Each parapet + 12 per ft. of width

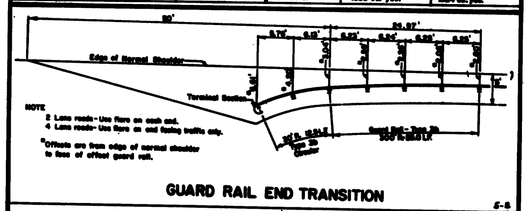
8" RISE — 12" TREAD (1½:1) SLOPE

REINFORCING STEEL

Section	Slope per ft. of width	Parapet each wall
"A" Header	.030 cu. yds.	.098 cu. yds.
"B" Each bike step	.030 cu. yds.	.020 cu. yds.
"C" Footer	.050 cu. yds.	.030 cu. yds.

Section	Slope per ft. of width	Parapet each wall
"A" Header	.030 cu. yds.	.098 cu. yds.
"B" Each bike step	.030 cu. yds.	.020 cu. yds.
"C" Footer	.050 cu. yds.	.030 cu. yds.

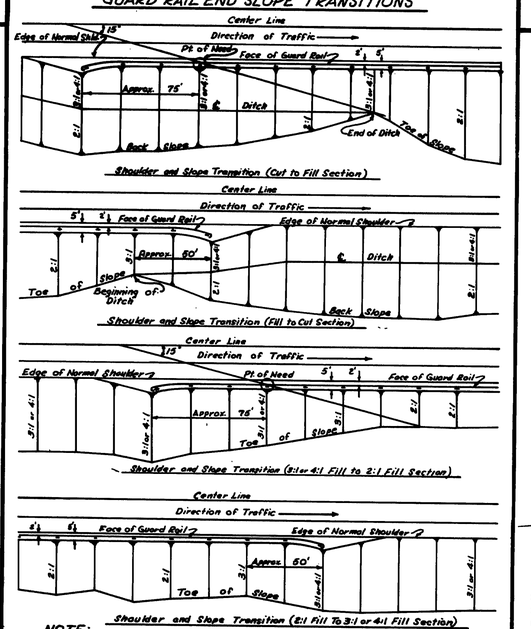
CONCRETE CLASS A



GUARD RAIL END TRANSITION

S-B

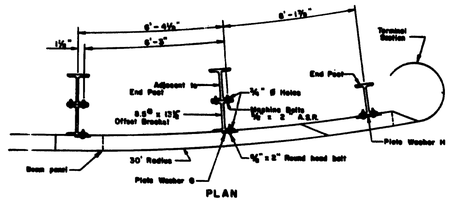
GUARD RAIL END SLOPE TRANSITIONS



NOTE:
The Transitions are a design guide only.
These slope Transitions shall be used with Beam Type Guard Rail.

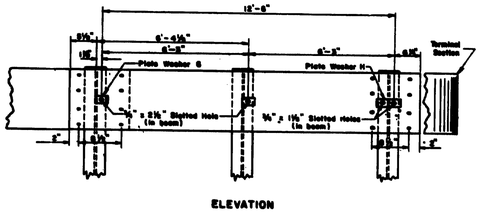
S-F

END BEAM ASSEMBLY - SPACING OF POSTS GUARD RAIL TYPE 3a and 3b



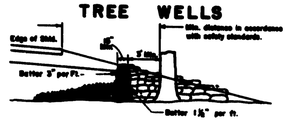
To be used in all locations except on the end away from traffic on 4 lane divided.

NOTE:
Offset Bracket shall be installed on all posts, except end post.

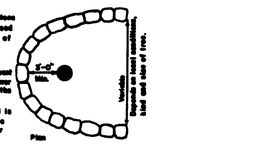


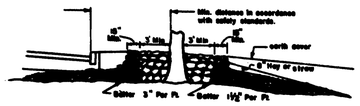
S-C

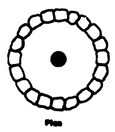
TREE WELLS



NOTES:
1. Selected ledge excavation, crushed stone or other porous material shall be used to fill around the old ground area of the tree from the tree well to the perimeter of the branches.
2. An 8" layer of hay or straw to prevent infiltration of fines shall be placed over the rock fill except in areas under the roadway and shoulders.
3. If drainage away from the tree well is necessary, underdrain outlet pipe shall be used, and will be paid for under item 605.10.

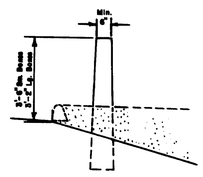


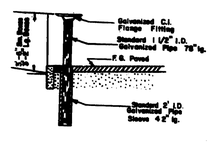


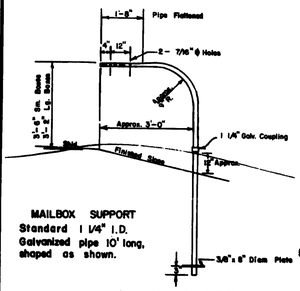


To be paid for under item 609.09 Hand laid riprap.
609.10 6" Underdrain Outlet

S-E





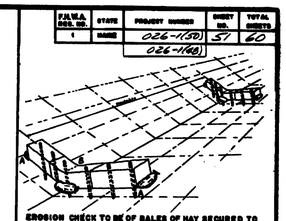


MAILBOX SUPPORT
Standard 1 1/4" I.D. Galvanized pipe 10' long, shaped as shown.

SUPPORTS FOR MAILBOXES

SG

R94-255



EROSION CHECK for DITCH

TEMPORARY BERM and SLOPE DRAIN

TEMPORARY EROSION CONTROL

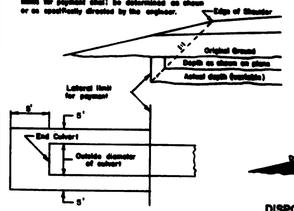
S-D

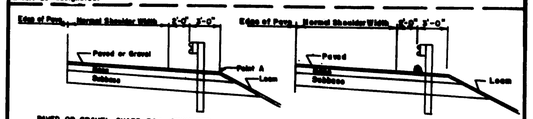
MUCK EXCAVATION

PAYMENT LIMITS

NOTE:
When muck is encountered to a depth greater or less than what is shown on the plans, the vertical limits for payment shall be determined on sheet or as specifically directed by the engineer.

When directed by the engineer, waste material shall be used in this area, except that waste shall not be placed in fills designed with slopes of 2:1 or less. No additional payment will be made for this work.





LOCATION OF GUARD RAIL

S-H

PLATE H	11-3-77
PLATE G-H	6-1-76

REVISIONS	
Plate S-A	12-24-69
PLATE SB	1-27-71
PLATE S H	8-12-71
PLATE S B	1-19-72
PLATE SG	6-7-72
PLATE SD	6-7-72
PLATE SD-C	10-22-74
PLATE A & H	3-18-76
PLATE S H	6-26-75
PLATE G	10-14-75

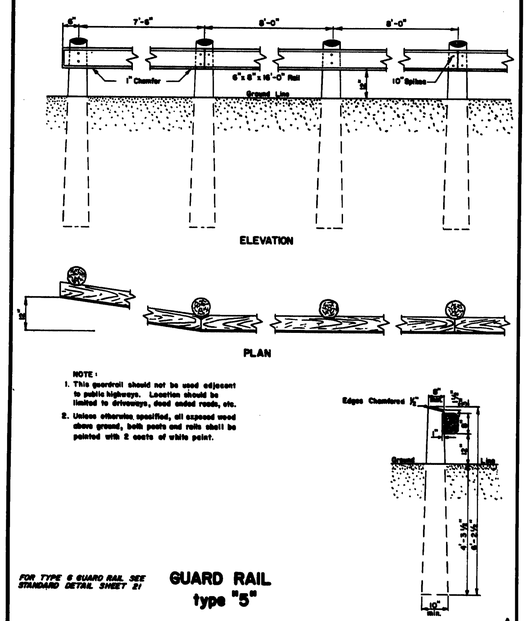
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

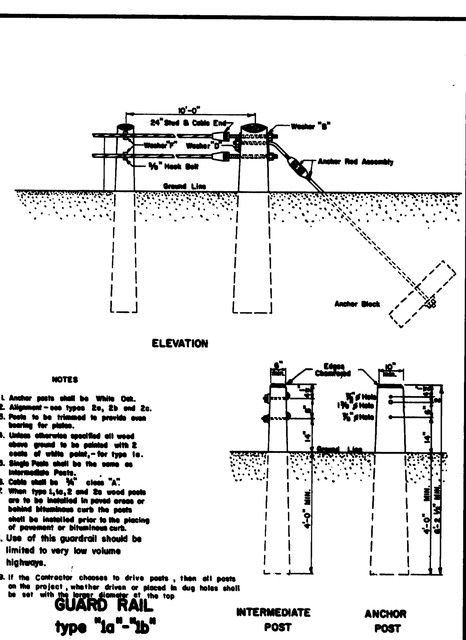
STANDARD DETAILS

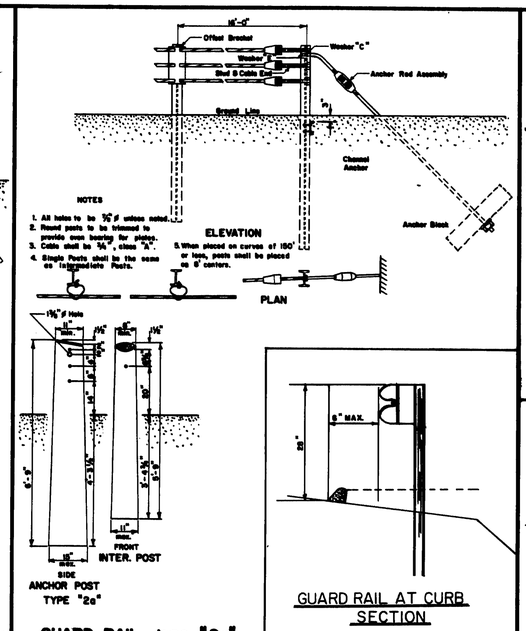
GUARD RAIL, MUCK EXCAVATION
CONCRETE STEPS & SIDEWALK
GUYING TREES
TREE WELLS, EROSION CONTROL,
MAILBOX SUPPORTS.

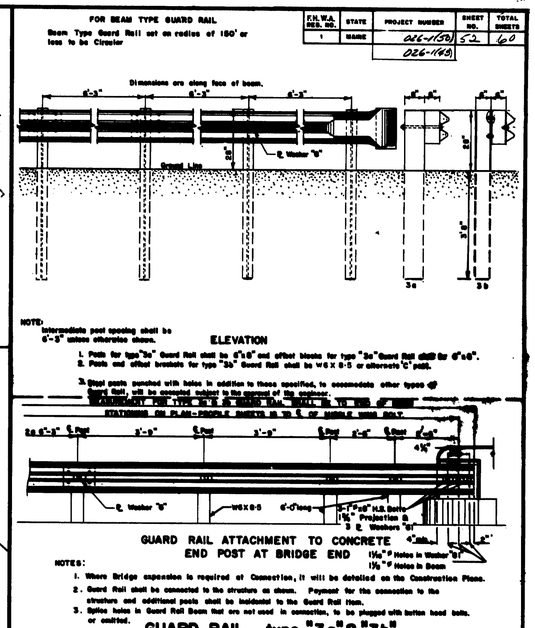
AUG. 1989

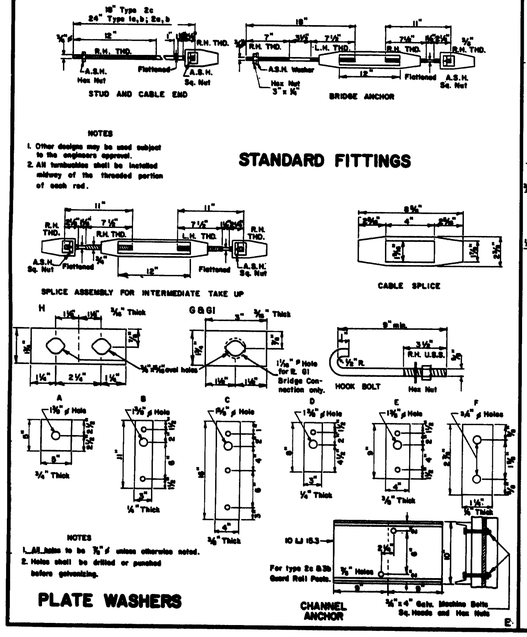
FAP, A, BRZ, NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-1(50)	57	60
		026-1(60)		

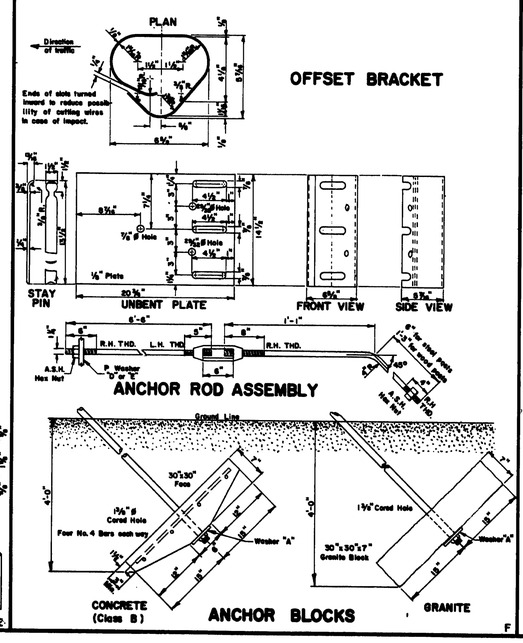


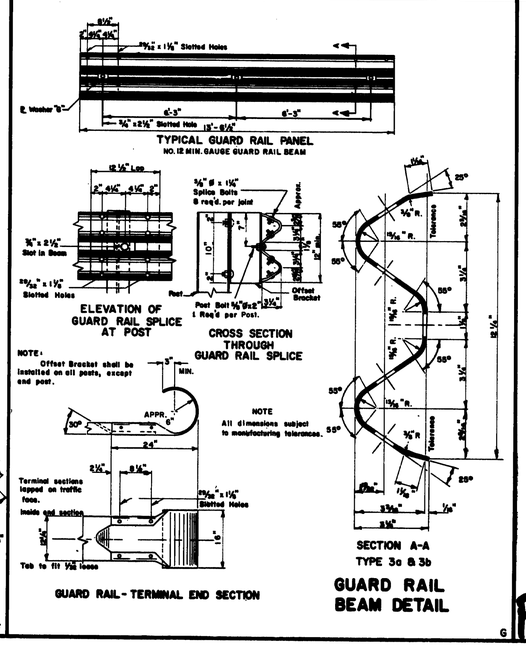


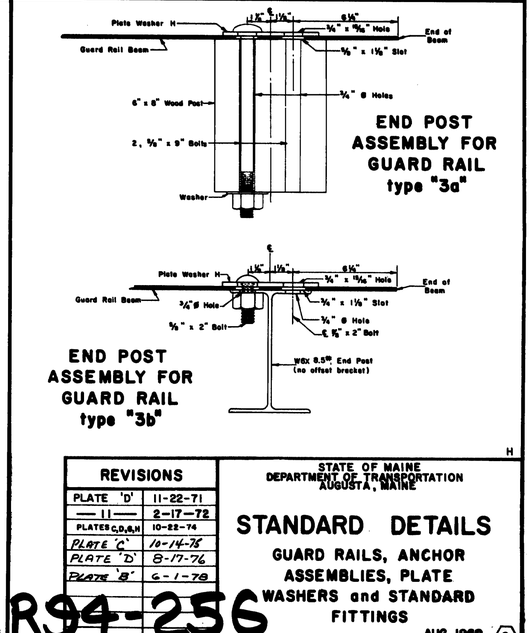












REVISIONS	
PLATE 'D'	11-22-71
— 11 —	2-17-72
PLATES C,D,E,H	10-22-74
PLATE 'C'	10-14-76
PLATE 'D'	8-17-76
PLATE 'B'	6-1-78

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

STANDARD DETAILS

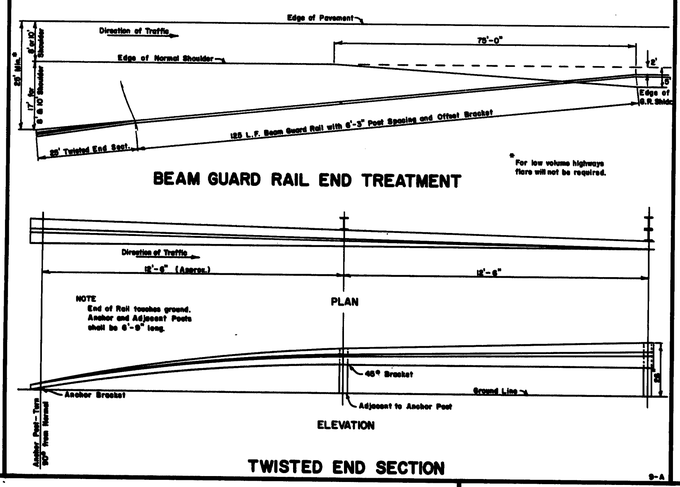
GUARD RAILS, ANCHOR ASSEMBLIES, PLATE WASHERS and STANDARD FITTINGS

AUG. 1969

6

R94-256

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-1(50)	53	60
		026-1(48)		

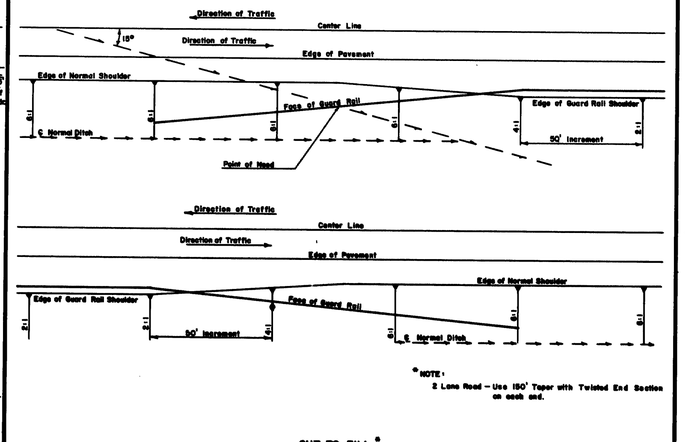


BEAM GUARD RAIL END TREATMENT

*For low volume highways flare will not be required.

TWISTED END SECTION

9-A

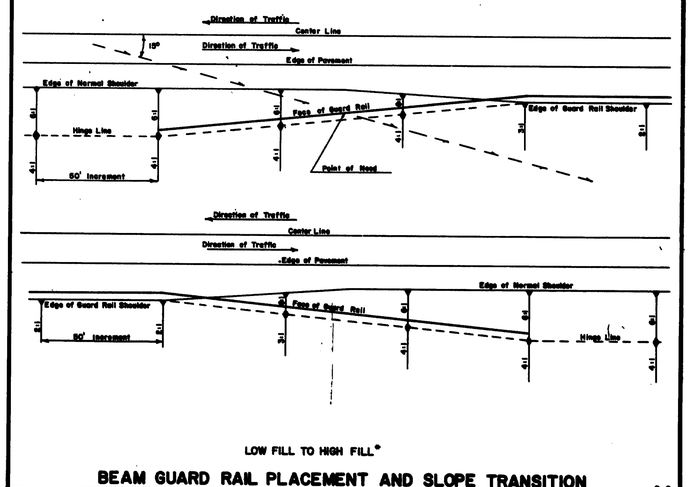


*NOTE:
2 Lane Road – Use 150' Taper with Twisted End Section on each end.

CUT TO FILL*

BEAM GUARD RAIL PLACEMENT AND SLOPE TRANSITION

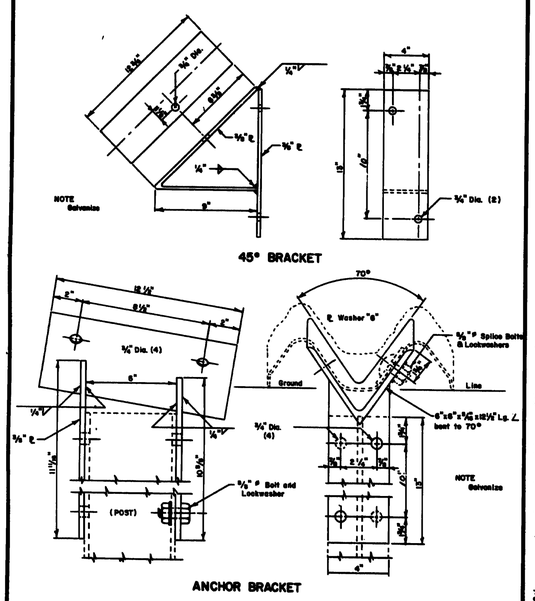
9-B



LOW FILL TO HIGH FILL*

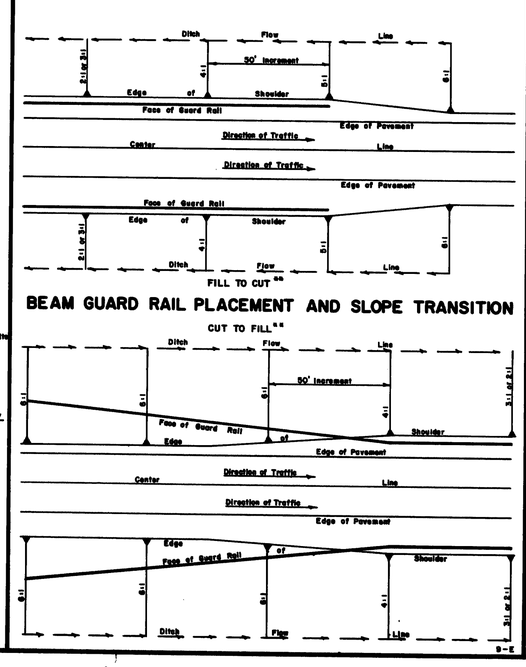
BEAM GUARD RAIL PLACEMENT AND SLOPE TRANSITION

9-C

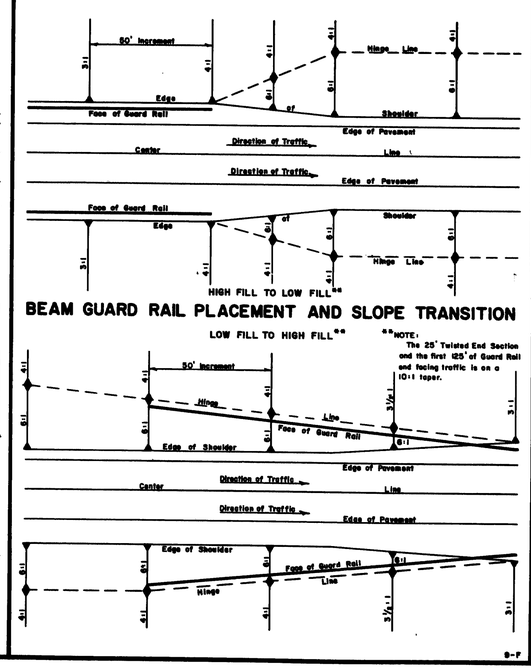


TWISTED END SECTION ANCHOR DETAIL

9-D

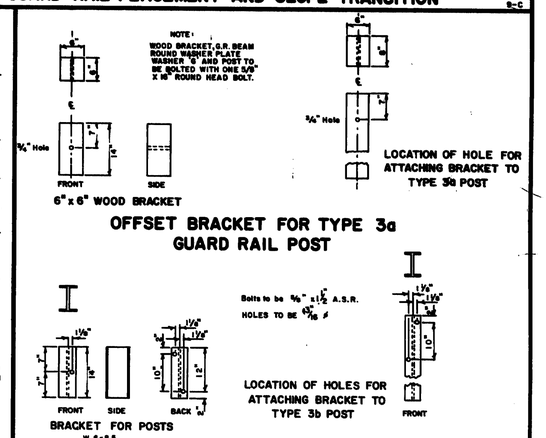


9-E



**NOTE:
The 25' Twisted End Section and the first 125' of Guard Rail and facing traffic is on a 10:1 taper.

9-F



9-G

REVISIONS	
Added Prefix DE & DP	NOV. 1969
PLATE 9B	12-20-71
PLATE 9B	1-19-72
PLATE 9B	10-22-74
PLATE D	10-14-75

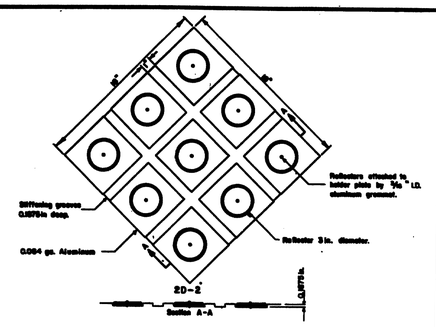
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

STANDARD DETAILS

BEAM GUARD RAIL END TREATMENT

AUG. 1969 (9)

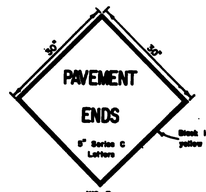
R94-257



HAZARD MARKER

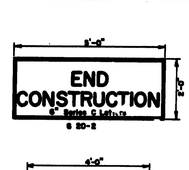
NOTE

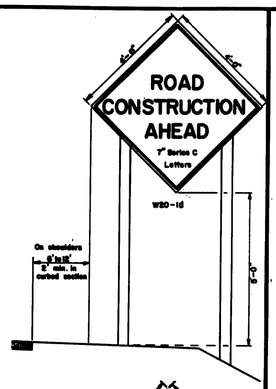
SIGNING IN AN AREA WHERE BLASTING IS NECESSARY SHALL BE PLACED AS OUTLINED IN THE "MANUAL", AND THE PRECAUTIONS OF SUBSECTION 107.12 OF THE STANDARD SPECIFICATIONS SHALL BE OBSERVED.

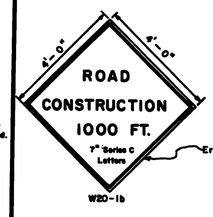


GENERAL NOTE
Construction Signs
1. Sign Borders: All signs shall have borders conforming to the sizes and spacing as shown below:
a. 36" x 36" Sign - 3/4" Border, 1/2" Space from sign edge.
b. 2' x 2' Sign - 1/2" Border, 3/4" Space from sign edge.
c. 3' x 4' Sign - 1/2" Border, 1/2" Space from sign edge.
d. 4' x 4' Sign - 1/2" Border, 3/4" Space from sign edge.

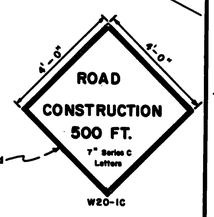
A







Erected in the same manner as W20-1d



CONSTRUCTION SIGNS

B

GENERAL NOTES - BARRICADES

1. Unless otherwise designated, sign designation letters shall refer to the "Manual of Uniform Traffic Control Devices for Street and Highways," published by the U. S. Department of Transportation, Federal Highway Administration, 1971.
2. White stripes shall be of silver reflective sheeting bonded to 0.019 minimum gauge aluminum, 16 minimum gauge galvanized steel, or 1/4" plywood. Individual white sheets may be attached to an orange reflectorized background to form the orange and white stripes. At the Contractor's option the reflective sheeting and backing may extend the full width of the barricade with an opaque film or paint applied to form the stripes.
3. All signs shall be of reflective sheeting on 5/8" thick plywood. The plywood shall conform to subsection 712.25, Standard Specifications, June 1968.
4. Pressure sensitive reflective sheeting will be an acceptable alternate to the reflective sheeting required by Standard Specifications.

NOTES - PORTABLE BARRICADES
1. Lumber sizes for portable barricades shall be 2" x 8" except posts which shall be 4" x 4" (nominal sizes).
2. The detour sign shall be an oversized M4-10 sign with a demountable "DETOUR" message which shall be made of screened reflective sheeting on 1/4" plywood, masonite, sheet steel or sheet aluminum.
3. Hazard markers shall be attached to the barricade with a bolt assembly of steel cadmium plated 5/16" bolt, lock washer and vandal resistant nuts.
4. When two W1-6 signs are required, R11-2, R11-3, or R11-4 signs shall be omitted.
5. Flashing lights housings shall be mounted to permit rotating in a vertical axis to allow for adjustment to face oncoming traffic.
6. Location of electric service and meter to be determined after the power source has been located.

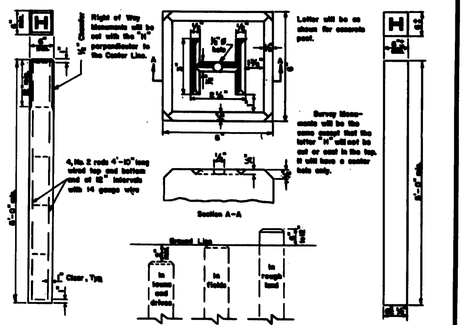
NOTES-WING BARRICADES
1. Lumber sizes for wing barricades shall be 1" x 8" except posts which shall be 4" x 4" (nominal sizes).
2. Wing barricades will not be required unless specifically called for in the special provisions.
3. Location of signs and barricades will be determined by the Engineer.

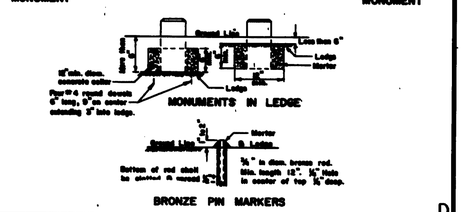
WING BARRICADES

C

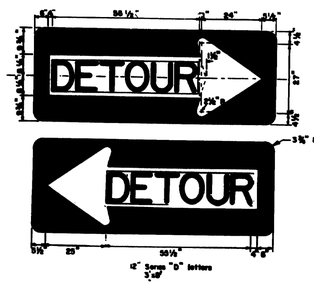
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	025-1(5)	58	60
		025-1(20)		

RIGHT OF WAY & SURVEY MONUMENTS

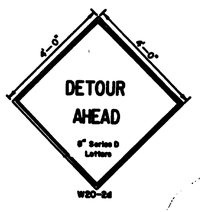




D

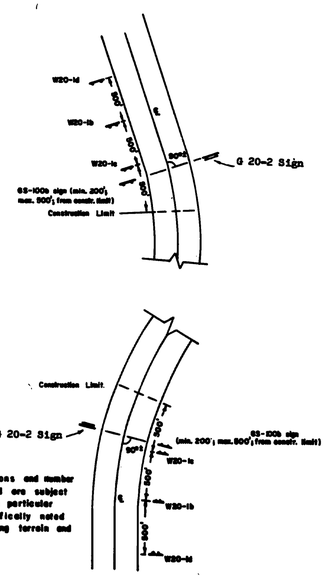


DETOUR SIGN
M 4-(I)



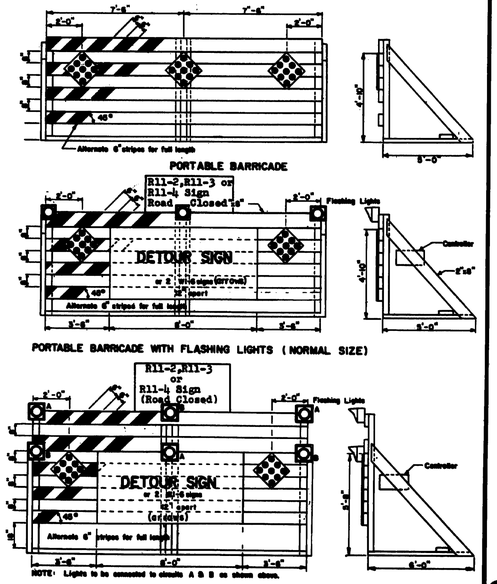
E

STANDARD SIGN LOCATIONS



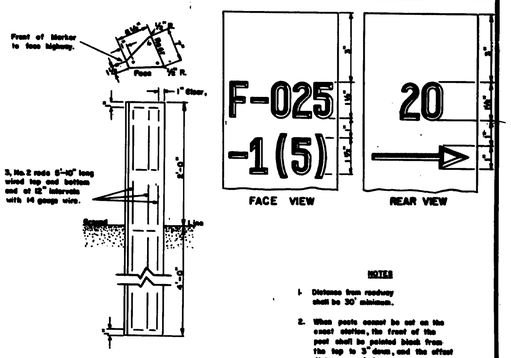
NOTE:
Standard locations and number of signs required are subject to variation on particular projects if specifically noted due to surrounding terrain and land use.

F



BARRICADES

G



NOTES
1. Distance from roadway shall be 30' minimum.
2. When posts cannot be set on the exact station, the front of the post shall be painted black from the top to 3" down, and the offset distance marked on rear with an arrow pointing in direction of beginning or end of project.
3. All markings to be 1/2" deep and 3/4" wide.

PROJECT MARKERS

H

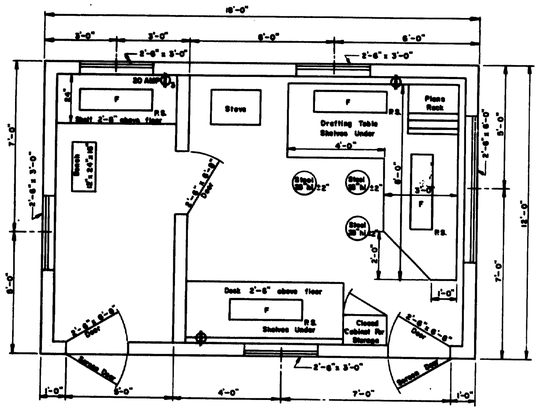
REVISION	
PLATE B	12-21-70
NOTES A, C, & F&G	12-15-71
PLATE C	10-12-72
PLATES C&G	3-25-76

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

BARRICADES
WARNING SIGNS
MONUMENTS
PROJECT MARKERS

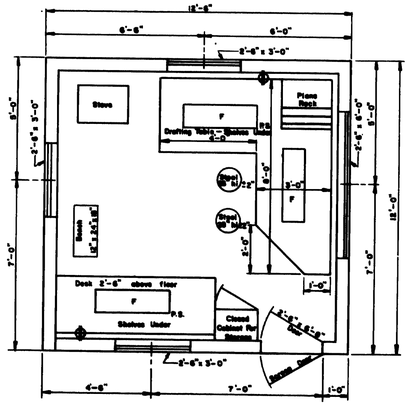
AUG. 1969

R94-258



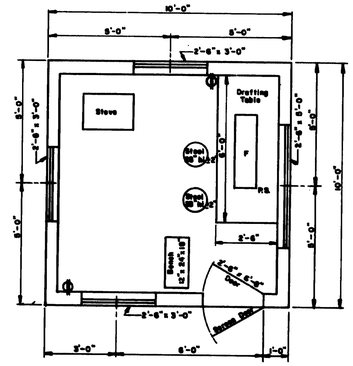
FLOOR PLAN
TYPE "A"

A



FLOOR PLAN
TYPE "B"

B



FLOOR PLAN
TYPE "C"

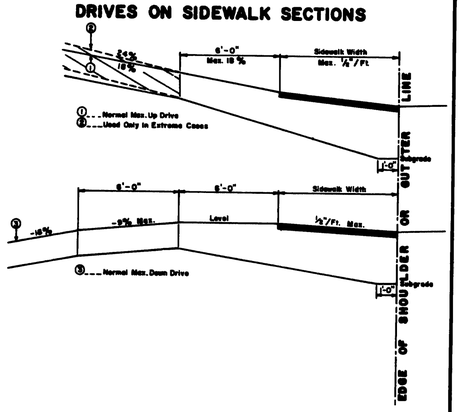
C

P.H.W.A. RES. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-1(50)	55	60
		026-1(60)		

GENERAL NOTES

1. Drafting table shall be 3'-4" high at front edge and placed 2" from studs to allow prints to hang down behind table when in use.
2. Shelves under desk shall be constructed to received 11¼" x 14" x 20" transfiles.
3. Windows shall be double hung.
4. Stovepipe shall not be in direct contact with combustible material ; the pipe shall be surrounded with at least 6" of fireproof material.
5. Continuous 110 volt 60 cycle electric service shall be supplied.
6. The engineer may rearrange the items shown on the plan views during construction of the field office.
7. FURNISHINGS TO BE SUPPLIED :
   - 2 Straight back chairs for types A and B
   - 1 Bench for types A, B & C
   - 3 Stool for type A
   - 2 Stools for types B & C
8. SYMBOLS :
   - F Florescent lights (2 light , rapid start 48" strips and 40 watt bulbs.)
   - S.S. Pull switch
   - Duplex wall outlet — 15 amp unless otherwise noted.
   - Triplex Wall Outlet
9. For the Type "A" Field Office one clean 55 gal. drum shall be supplied , installed on a suitable rack and equipped with a spigot suitable for drawing off water. The drum shall be furished with water at all times.

DRIVES ON SIDEWALK SECTIONS

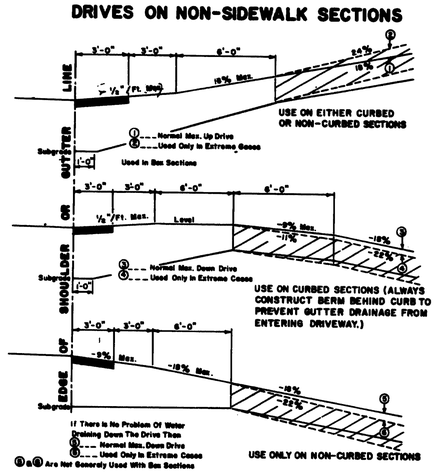


GENERAL NOTES
1. The sidewalk width shall be paved in all cases.
2. All residential or commercial drives 10 % and over shall be paved.

NOTES ON MAXIMUM DRIVEWAY PROFILES
1. These profiles are a guide for the majority of cases, but should be field checked when the main line grade is steep (4% to 6% or greater) or the angle of approach to the drive is unusual.
2. Generally the majority of drives on a project will be built with flatter profiles than those maximum cases.
3. When grading drives which are flatter than the maximum profiles the following rule of thumb should be used, do not exceed a grade % change of more than 9% in a 6 foot increment of driveway length. This applies to both up and down profiles.

D

DRIVES ON NON-SIDEWALK SECTIONS

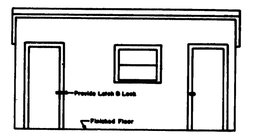


②&③ Are Not Generally Used With Box Sections

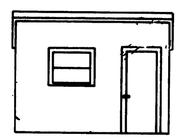
GENERAL NOTES
1. The first 3' shown as pavement shall be paved only when abutting a paved area.
2. All residential or commercial drives 10 % and over shall be paved.

NOTES ON MAXIMUM DRIVEWAY PROFILES
1. These profiles are a guide for the majority of cases, but should be field checked when the main line grade is steep (4% to 6% or greater) or the angle of approach to the drive is unusual.
2. Generally the majority of drives on a project will be built with flatter profiles than those maximum cases.
3. When grading drives which are flatter than the maximum profiles the following rule of thumb should be used, do not exceed a grade % change of more than 9% in a 6 foot increment of driveway length. This applies to both up and down profiles.

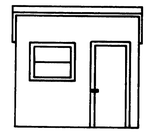
E



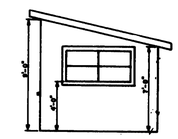
FRONT ELEVATION
TYPE "A"



FRONT ELEVATION
TYPE "B"



FRONT ELEVATION
TYPE "C"



SIDE ELEVATION
TYPES "A" "B" & "C"

F

REVISIONS	
PLATE 'D' 'E'	3-16-73

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

STANDARD DETAILS

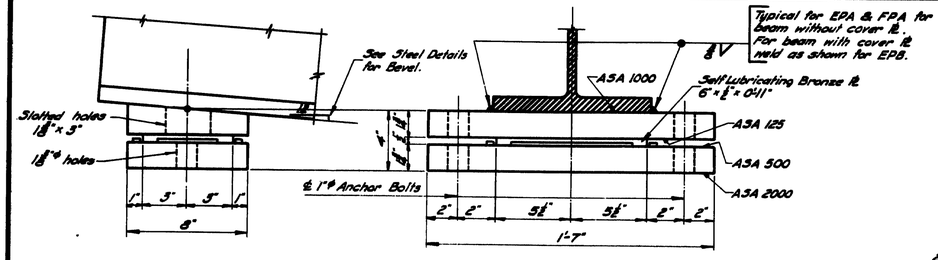
DRIVEWAY DETAILS
FIELD OFFICES
TESTING LABORATORY

AUG. 1969

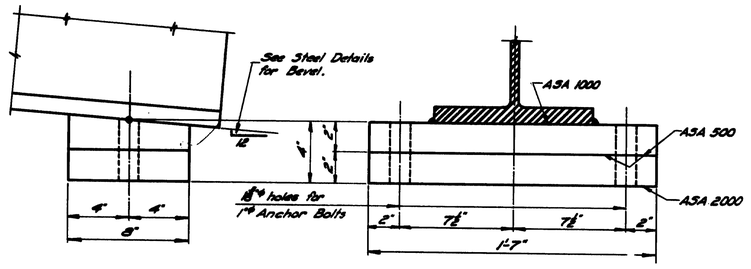
12

R94-259

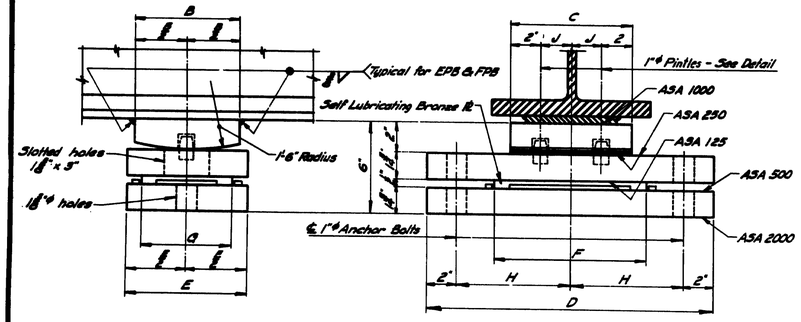
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
I	MAINE	026-1(50)	56	60
		026-1(48)		



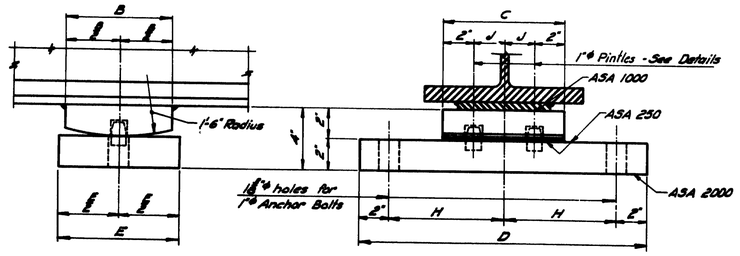
EXPANSION PEDESTAL – EPA



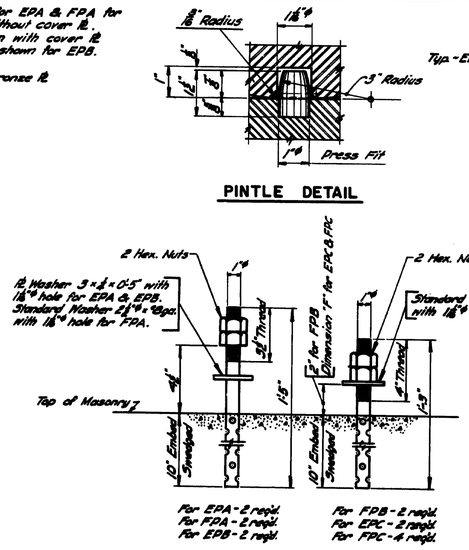
FIXED PEDESTAL – FPA



EXPANSION PEDESTAL – EPB

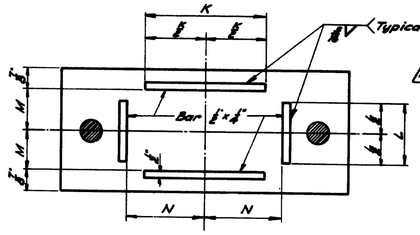


FIXED PEDESTAL – FPB



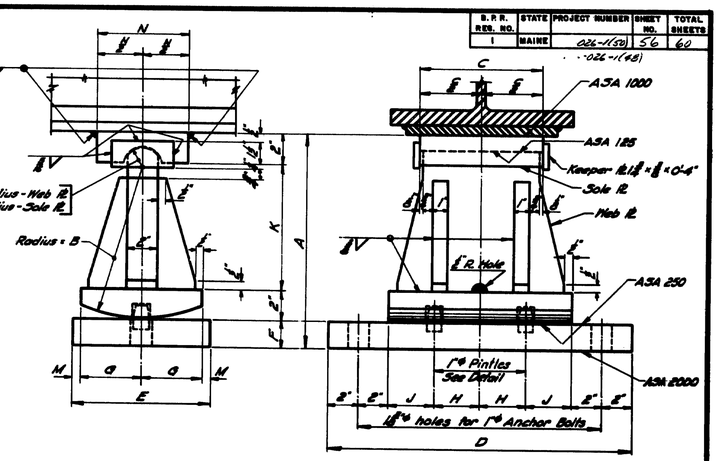
PINTLE DETAIL

ANCHOR BOLT DETAIL

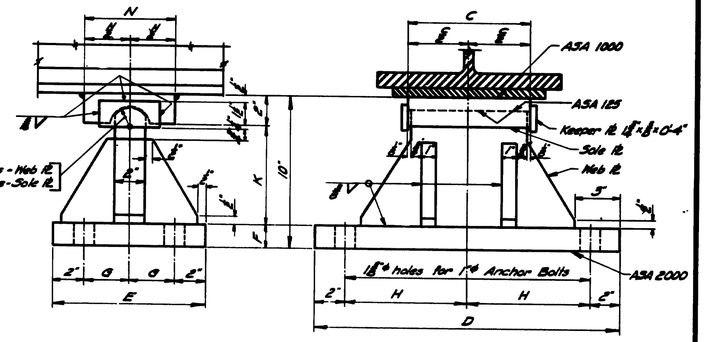


For EPA & EPB

MASONRY PLATE



EXPANSION PEDESTAL – EPC



FIXED PEDESTAL – FPC

PEDESTALS – ALLOWABLE LOADS & DIMENSIONS														
Pedestal	Load	A	B	C	D	E	F	G	H	J	K	L	M	N
EPA	132ᵏ	–	–	–	–	–	–	–	–	–	8"	4"	3½"	5⅝"
FPA	190ᵏ	–	–	–	–	–	–	–	–	–	–	–	–	–
EPB-1	120ᵏ	–	6"	8"	1'-7"	8"	10"	6"	7½"	2"	8"	4"	3½"	5⅝"
EPB-2	165ᵏ	–	7"	10"	1'-8"	9"	1'-0"	7"	8"	3"	10"	5"	3½"	6¾"
EPB-3	224ᵏ	–	8"	1'-1"	2'-0"	10"	1'-4"	8"	10"	4½"	1'-2"	5"	4½"	8¼"
FPB-1	120ᵏ	–	6"	8"	1'-7"	8"	–	–	–	7½"	2"	–	–	–
FPB-2	165ᵏ	–	7"	10"	1'-8"	9"	–	–	–	8"	5"	–	–	–
FPB-3	224ᵏ	–	8"	1'-2"	2'-0"	10"	–	–	–	10"	5"	–	–	–
EPC-1	70ᵏ	9½"	6"	8"	1'-8"	8"	1½"	3½"	5"	5"	4½"	–	½"	6"
EPC-2	100ᵏ	11½"	8"	8"	1'-8"	8"	1½"	3½"	5"	5"	6¾"	–	½"	6"
EPC-3	130ᵏ	1'-2"	10"	8"	1'-8"	9"	1½"	4"	5"	5"	8¼"	–	½"	7"
EPC-4	160ᵏ	1'-2"	10"	8"	1'-10"	9"	1½"	4"	4"	5"	8¼"	–	½"	7"
EPC-5	190ᵏ	1'-2½"	10"	9"	2'-0"	10"	2"	4½"	5"	5"	9¾"	–	½"	8"
EPC-6	220ᵏ	1'-4½"	1'-0"	10"	2'-0"	1'-0"	2½"	5"	5"	5"	10½"	–	1"	8"
EPC-7	250ᵏ	1'-4½"	1'-0"	10"	2'-2"	1'-0"	2½"	5"	5"	4"	10½"	–	1"	8"
FPC-1	100ᵏ	–	–	8"	1'-8"	9"	1½"	2½"	8"	–	6¾"	–	–	6"
FPC-2	160ᵏ	–	–	8"	1'-8"	10"	1½"	3"	8"	–	6¾"	–	–	7"
FPC-3	180ᵏ	–	–	9"	2'-0"	10"	1½"	3"	10"	–	6¾"	–	–	8"
FPC-4	220ᵏ	–	–	10"	2'-0"	1'-0"	1½"	4"	10"	–	6¾"	–	–	8"
FPC-5	250ᵏ	–	–	1'-0"	2'-0"	1'-0"	2"	4"	10"	–	6"	–	–	8"

NOTE: At the location of bearing pedestals the concrete bridge seats shall be dressed at one inch larger all around than size of masonry plates and to exact elevations shown on the plans. If dressed areas are below the surface of the surrounding bridge seat a small channel shall be cut to the edge of the bridge seat for drainage where required by the Engineer. Channels shall have a min. width of 2" and min. slope of ¼ inch per foot. No separate payment for this work will be made as it shall be considered incidental to contract items.

A DESIGN SPECIFICATIONS

AASHTO, Standard Specifications for Highway Bridges 1973, Interims thru 1977

A A.S.T.M. STEEL CLASSIFICATION

(When structural steel is specified to be unpainted) All structural steel including anchor bolts shall be A588 unpainted.
(When structural steel is specified to be painted) All structural steel including anchor bolts shall be A36.

R94-260

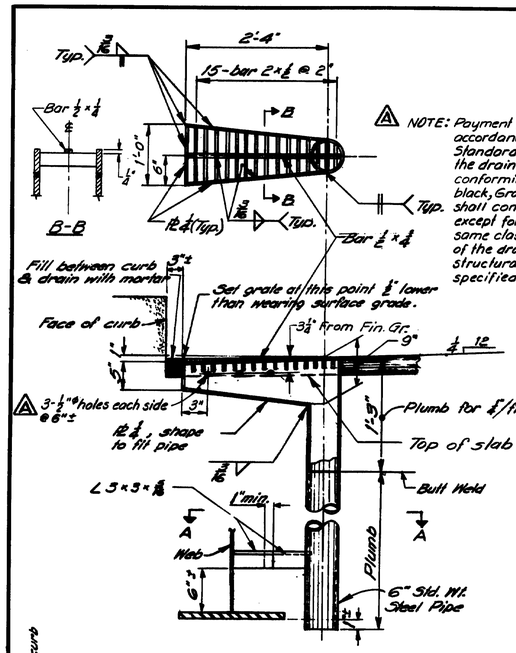
REVISIONS	DATE
B Delete Std. Washer size & change radius	6-14-78
A Change Specifications & Steel Classification	3-1-77

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

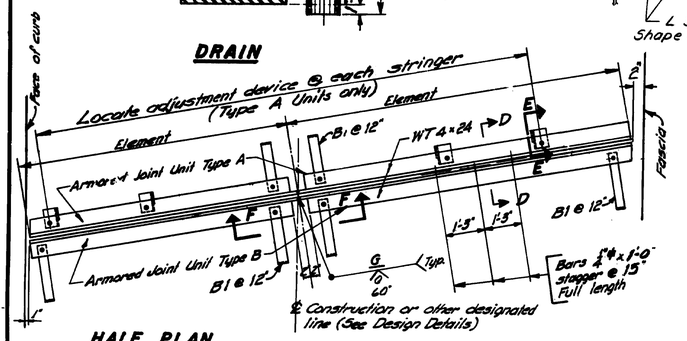
STANDARD DETAILS
(BD 101 – 74)

BEARING PEDESTALS

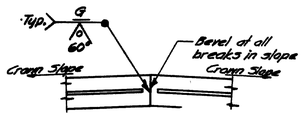
SHEET OF AUGUSTA, ME. APRIL, 1974



DRAIN



HALF PLAN
Curb to curb



SECTION F-F

Note: See design details for Constr. ℄ to curb dimensions, skew, cross slope, slab thickness, other dimensions necessary to complete the fabrication details, and location.

HALF PLAN
Fascia to fascia

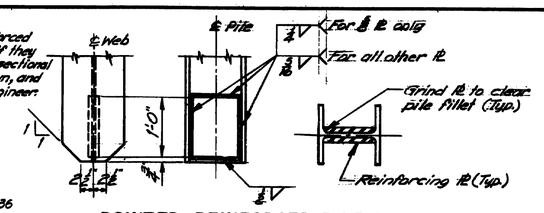
NOTE

1. Type A Armored Joint Units are intended to be used for attachment to superstructures. Type B Armored Joint Units are intended to be used for attachment to abutments. At armored joints over piers, two (2) Type A Armored Joint Units shall be used.
2. When more elements than two (2) are required by the design details, the elements of both units shall be field welded together in the same manner as shown in Section F-F.
3. Armored Joints to be paid for as Structural Steel.
4. All structural steel shall be A36. When structural steel is specified to be unpainted, the armored joint shall receive three coats of shop paint, on exposed areas of flanges below seal retention bars.

ARMORED JOINT

An armored joint consists of two armored joint units. See note 1.

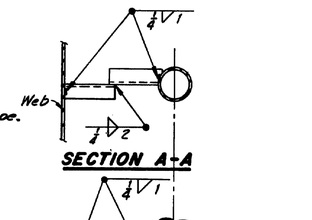
NOTE: *Alternate pointed reinforced pile tips may be used if they have at least the cross-sectional area of the pile tip shown, and are approved by the Engineer.*



POINTED REINFORCED PILE TIP

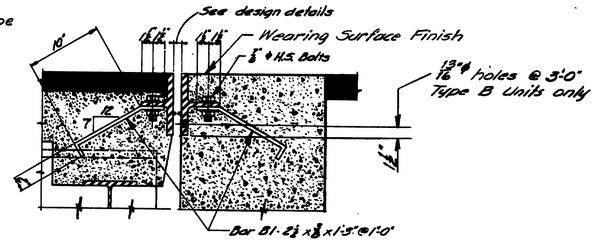
Note: Plates may be shop or field welded

STEEL HP BEARING PILES	
PILE SIZE	REINF. lb. SIZE
HP 10×42	8⅜×⅝×1'-0"
HP 10×57	8⅜×⅝×1'-0"
HP 12×53	10⅜×⅝×1'-0"
HP 12×74	10⅜×⅝×1'-0"
HP 14×73	12½×⅞×1'-0"
HP 14×89	12½×1×1'-0"



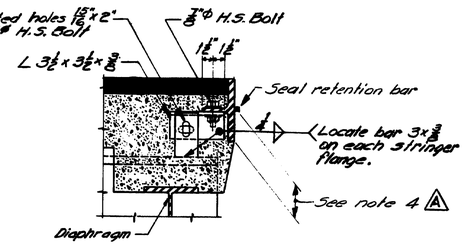
SECTION A-A

POLYVINYLCHLORIDE WATERSTOP



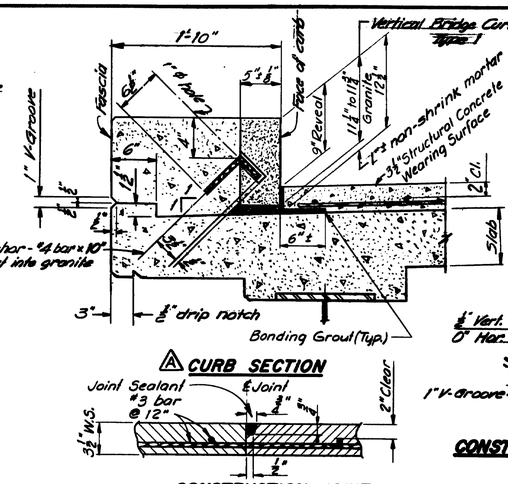
ARMORED JOINT UNIT TYPE A **ARMORED JOINT UNIT TYPE B**

SECTION D-D



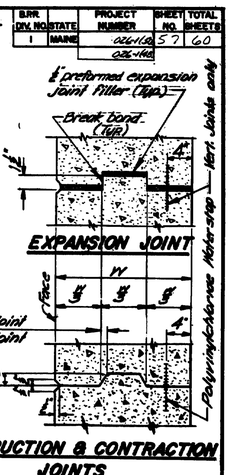
SECTION E-E

Showing Adjustment Device Armored Joint Unit Type A only. After Unit is in final position weld ⅜ bar to angle with ½ fillet



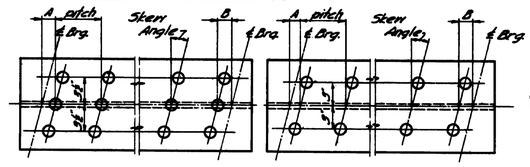
Δ CURB SECTION

CONSTRUCTION JOINT

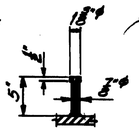


EXPANSION JOINT

CONSTRUCTION & CONTRACTION JOINTS



TRIPLE STUDS **DOUBLE STUDS**



STUD DETAIL

NOTE

1. Studs shall be granular or solid flux filled and automatically end welded to top flange in the shop or field.
2. See the design details for Dimensions "A" & "B", stud pitch and skew angle for studs.

SHEAR CONNECTORS

NOTE *Use only those items called for on design details. In case of conflict between these Standard Details and design details, the requirements of the design details shall be followed.*

Δ	REVISIONS	DATE
	Added holes and note to roadway drain.	3-1-77
	Add Note 4 to Armored Joint notes.	
	Eliminate Hot Bit. Pavt.	
	Change curb and granite widths and added a concrete wearing surface	

R94-26

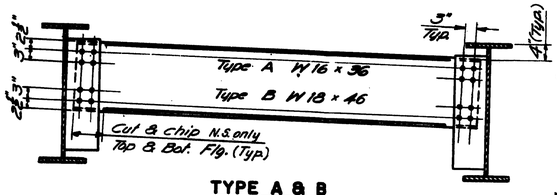
BUR. DIV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-112 026-146	57	60

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

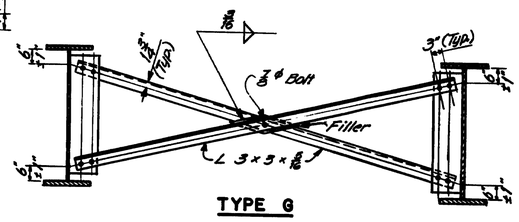
STANDARD DETAILS
(BD 104-77)
ARMORED JOINT, DRAIN
SHEAR CONNECTORS
MISC. STRUCTURAL DETAILS

SHEET OF AUGUSTA, ME. FEB. 1977

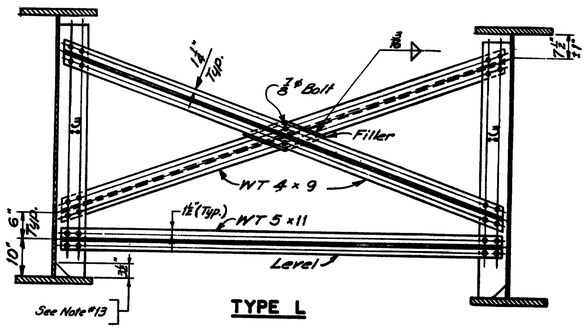
F.A.H.S. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-1(60)	58	60
		026-1(48)		



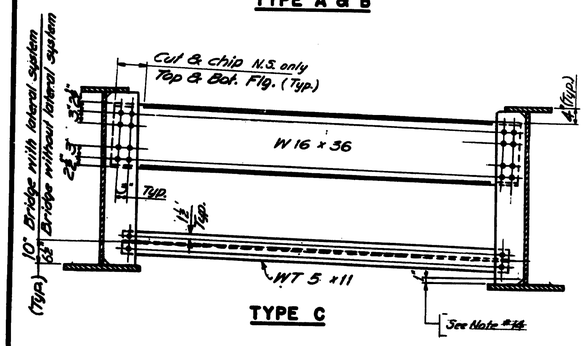
TYPE A & B



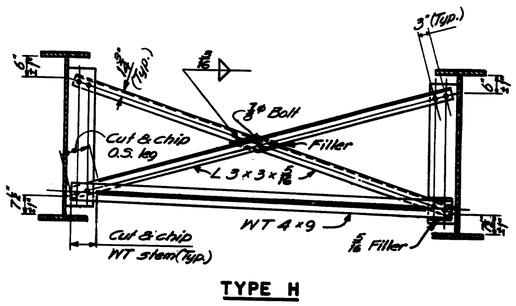
TYPE G



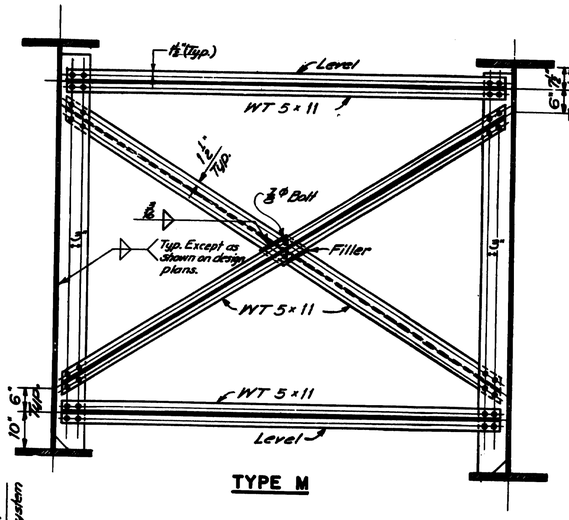
TYPE L



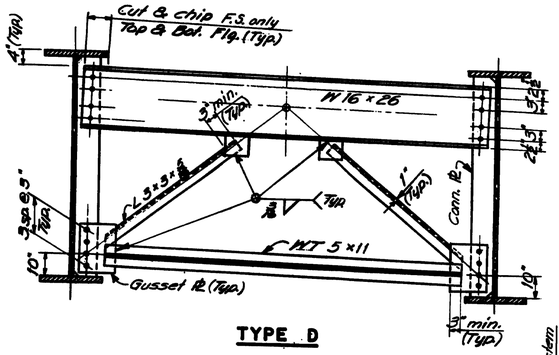
TYPE C



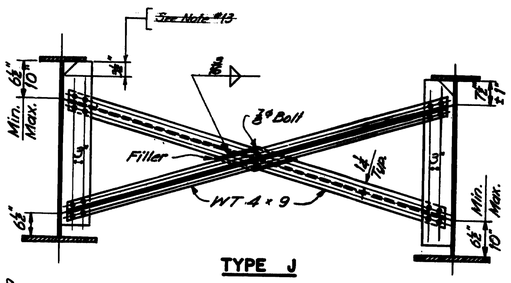
TYPE H



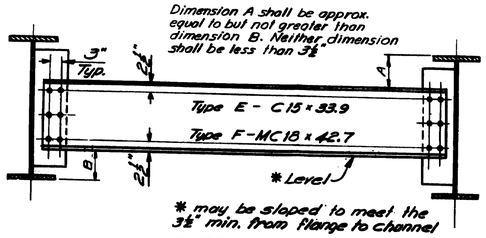
TYPE M



TYPE D

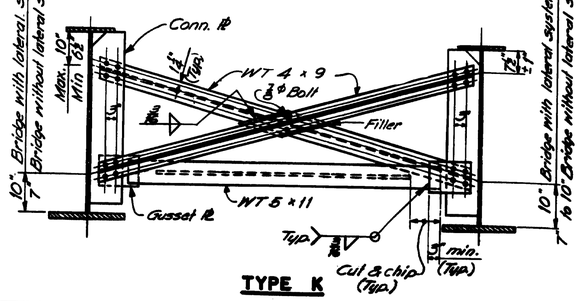


TYPE J



* may be sloped to meet the 3½" min. from flange to channel

TYPE E & F



TYPE K

FABRICATION NOTES

1.) All bolts shall be 7/8" Ø H.S. Bolts. Holes for bolts shall be 15/16" Ø and edge-distances shall be 1 1/4" min. unless otherwise shown.

2.) Connection Plates and gusset plates shall have a minimum thickness of 3/8" and shall have sufficient width to provide erection clearances. For bearing stiffeners or intermediate stiffeners and for bent connection plates the plate size will be given on the design details.

3.) Connection Plates shall be fastened to web plates by fillet welds as shown. All fillet welds shall be the minimum size as specified in A.A.S.H.T.O. Standard Specifications for Highway Bridges, Art. 1.7.26, unless otherwise shown on design plans.

4.) Connection Plates shall be 3 1/2" clear from flanges, except as indicated by notes 5 & 6.

5.) Connection Plates on welded beams and girders shall extend to the top flange in areas where the top flange is always in compression.

6.) Connection Plates shall extend to the bottom flange at points where lateral bracing is attached and on welded beams and girders in areas where the bottom flange is always in compression.

7.) When a connection plate is extended to a flange it shall fit within 1/16" except if the design details show it is to be welded.

8.) Bearing Stiffeners at end bearings shall extend to both top and bottom flanges and shall be welded to both flanges. Weld at bottom flange shall be a full penetration weld. Weld at top flange shall be a fillet weld both sides (see Note 3).

9.) Bearing Stiffeners at other than end bearings shall extend to both top and bottom flanges, shall be welded to the bottom flange with a full penetration weld and shall fit within 1/16" at top flange.

10.) Intermediate Stiffeners shall extend to both top and bottom flanges, shall be welded to the compression flange with a fillet weld on both sides (see Note 3) and shall fit within 1/16" at the tension flange.

11.) Use only those items called for on the design details. In case of conflict between these standard details and design details, the design details shall be followed.

12.) All dimensions shown as "__±1" are variable in order to allow a series of crossframes to have the same slopes and/or dimensions.

13.) All connection plates and stiffeners that are extended to a flange shall be clipped 3/4", except as indicated by note 14.

14.) Bearing stiffeners at end bearings shall be clipped 1" at top and bottom. Bearing stiffeners at all other bearings and intermediate stiffeners shall be clipped 1" at the compression flange.

15.) For unpainted applications all steel for diaphragms and crossframes shall be A.S.T.M.-A588. ⚠ 1
For bridges specified to be painted the steel for diaphragms and connection plates shall be A.S.T.M.-A36, except other steel classifications may be used subject to the approval of the Engineer.

DATE
DESIGN - DETAILED
CHECKED
QUANTITIES
FIELD CHANGES

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS
(SD 113 - 78)
DIAPHRAGMS & CROSSFRAMES

R94-262

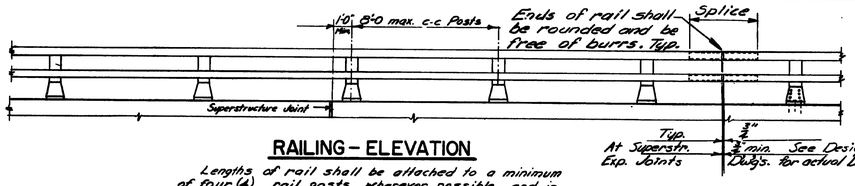
⚠ 1 ELIMINATED - A242 G.R.W. 5-24-79

SHEET OF AUGUSTA, MAINE June 1978

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	026-4501	59	60
		026-4(198)		

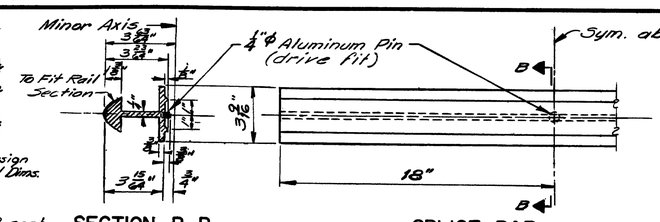
DESIGN SPECIFICATIONS

AASHTO Standard Specifications for Highway Bridges 1973, and Interims 1974, '75, '76, '77



RAILING – ELEVATION

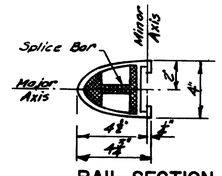
Lengths of rail shall be attached to a minimum of four (4) rail posts wherever possible, and in any case never less than two (2). Rail posts are to be set normal to grade unless otherwise shown on the Bridge Plans.



SECTION B-B

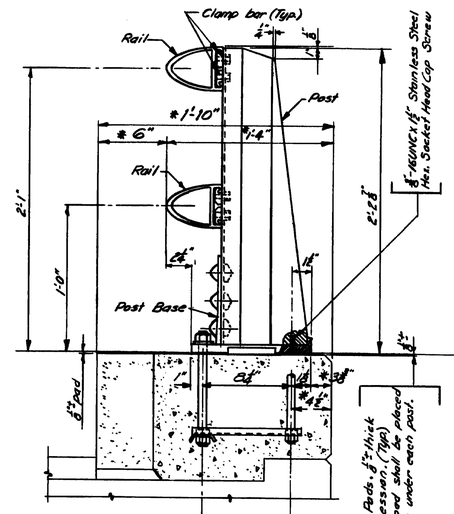
SPLICE BAR

Alternate splice bars may be substituted if approved by the Engineer



RAIL SECTION

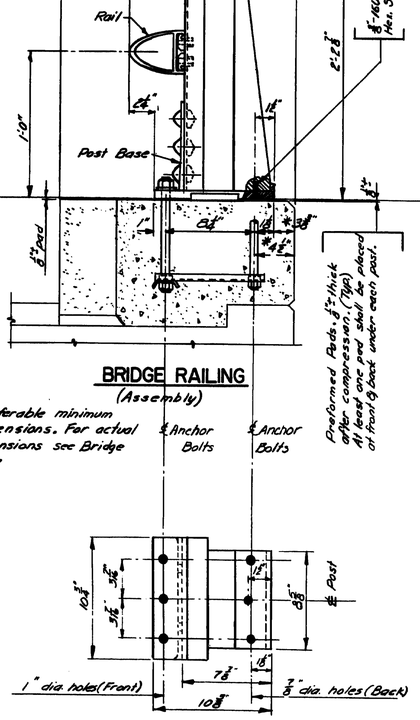
See "Rail Detail"



BRIDGE RAILING

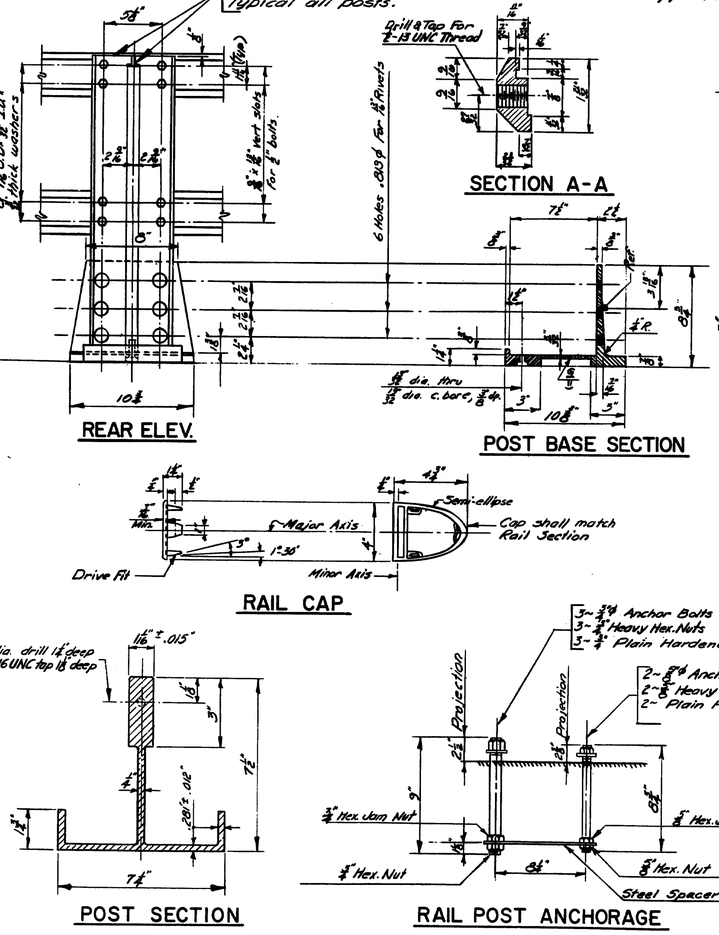
(Assembly)

* Preferable minimum dimensions. For actual dimensions see Bridge Plan.



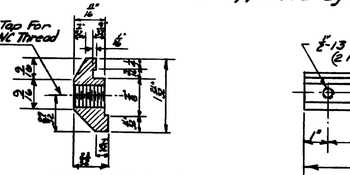
POST BASE

(Bottom View)

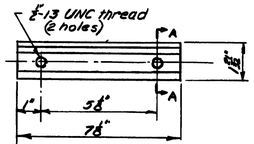


REAR ELEV.

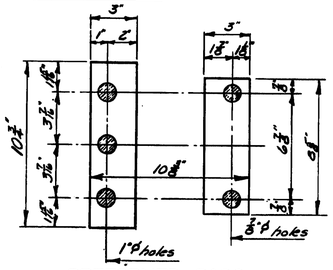
POST BASE SECTION



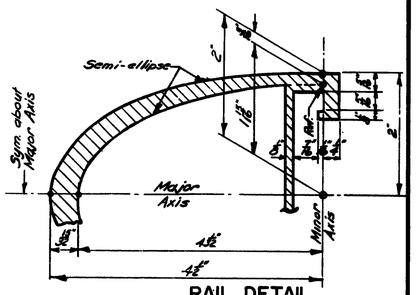
SECTION A-A



CLAMP BAR

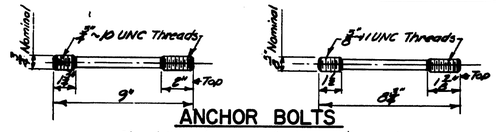


PREFORMED PADS



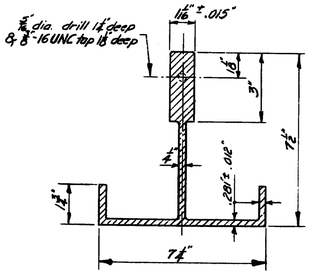
RAIL DETAIL

RAIL CAP

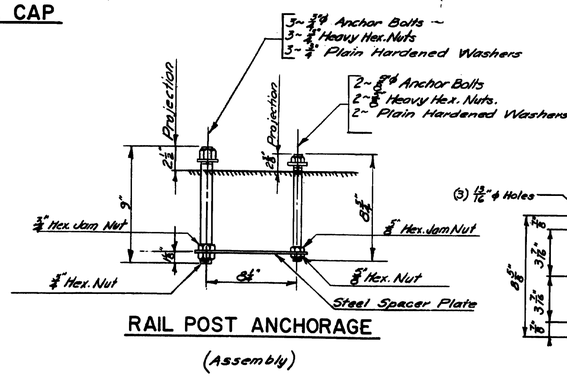


ANCHOR BOLTS

If cut threads are used, body diameter shall be not less than nominal diameter. If rolled threads are used, body diameter shall be not less than root diameter of the threads.

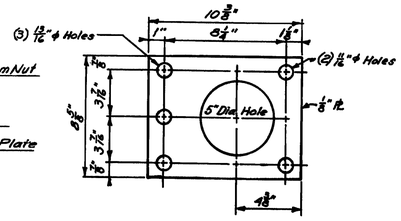


POST SECTION



RAIL POST ANCHORAGE

(Assembly)



STEEL SPACER PLATE

(For Anchorage)

PLANS	DESIGN - DETAILED	BY	DATE
	CHECKED	K. Lewis / C. Lewis	Jan. 1978
	REVISIONS	W. Peterson	March 1978
	FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS

(BD 114 - 77)

ALUMINUM BRIDGE RAILING

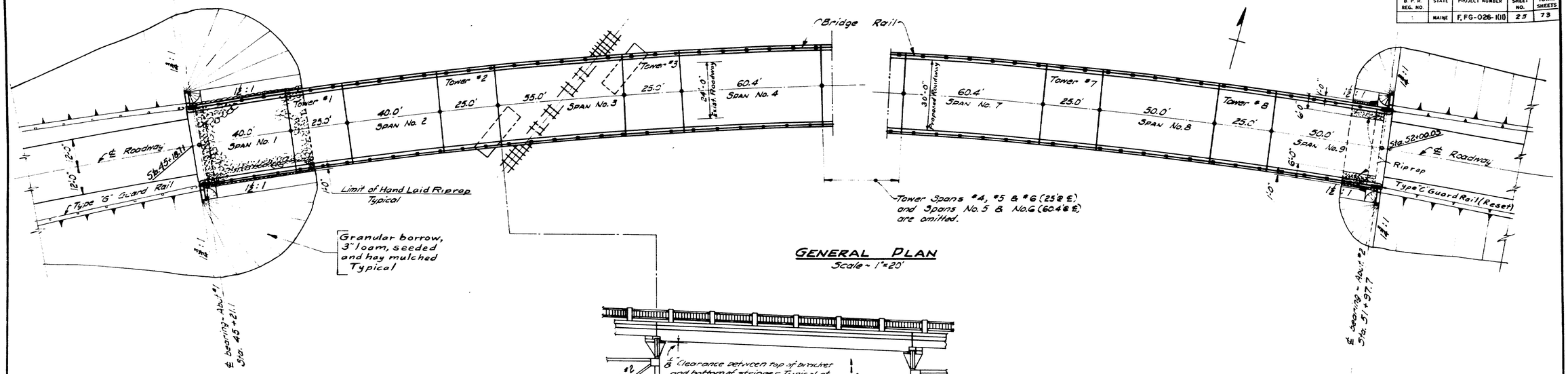
2 - BAR (SEMI-ELLIPSE)

TYPE "A"

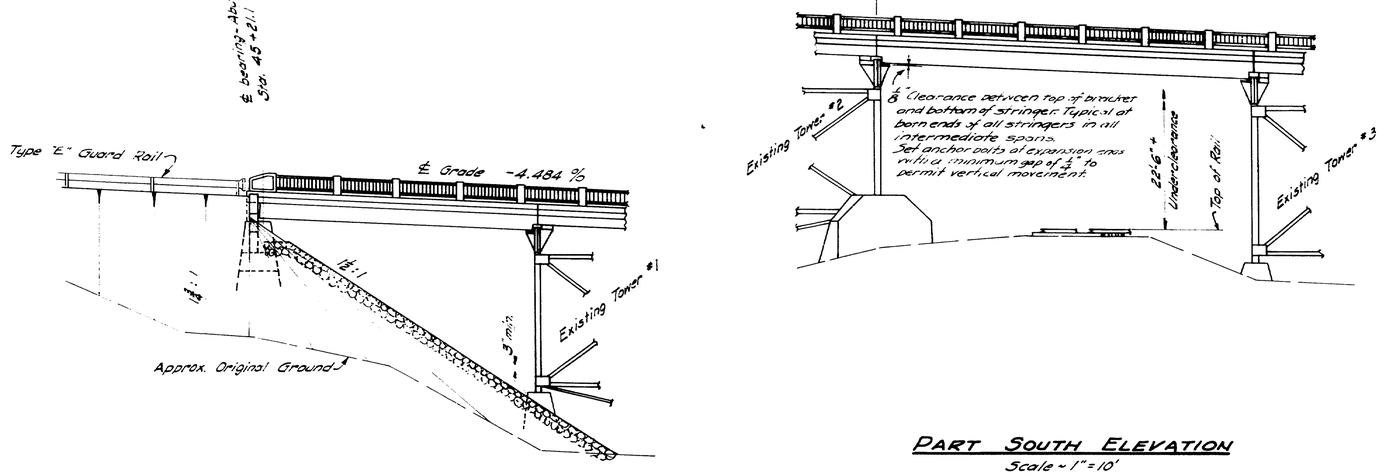
SHEET OF AUGUSTA, MAINE DEC. 1977

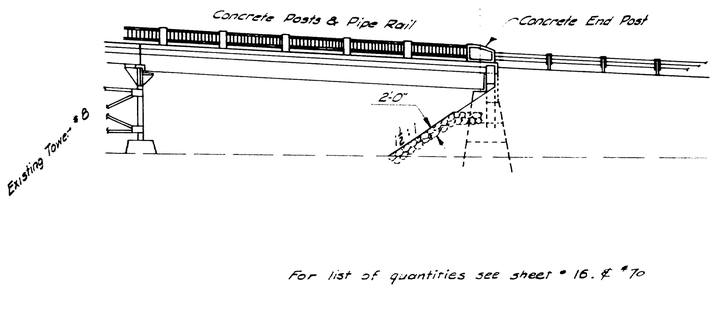
R94-263

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
	MAINE	F, FG-026-1(10)	23	73



GENERAL PLAN
Scale - 1"=20'





PART SOUTH ELEVATION
Scale - 1"=10'

For list of quantities see sheet # 16. & #70

GENERAL CONSTRUCTION NOTES

1. Widening shall be accomplished on one side of the structure at a time, in any one span.

2. Before any widening operation or steel alteration shall commence on one side of a span, the Rail & Curb on the side being widened, and the full width of the wearing surface shall be first removed.

3. The existing wearing surface shall be so removed that the existing expansion dams may be partially dismantled as required by the plans without interrupting one way traffic. Protection of these joints during construction shall be provided by the Contractor in a manner satisfactory to the Engineer. Payment for such protection shall be considered incidental to the contract items.

4. Preliminary field measurements indicate that some existing exterior stringers may have to be jacked apart to enter the tension tie plate detailed on sheet (9). A method for achieving the opening must be submitted by the Contractor to the Engineer and approved prior to starting this operation.

5. During the times elapsed in (a) strengthening the existing floor beam column connection and welding cover plates to the original exterior stringers and (b) a seven (7) day curing period for concrete in the slab extension, no live load shall be allowed on the half of the roadway being widened within the subject span. No objection to parking concrete trucks on the subject span during placement of concrete in this slab extension is inferred by the above. (1)

6. The inside diaphragm connection to the original exterior stringer shall be made finger tight prior to placing concrete in the slab extension. At the conclusion of the seven (7) day curing period, all such connections in any span shall be backed off then brought to the specified torque value before any live load, wearing surface, curbs or rails are allowed on its one half of the span. (2)

7. In widening one side of the bridge, the concrete floor slab shall be placed for the tower before it is placed in either adjacent span but not until the structural steel has been erected in the adjacent spans.

(1) Normal live loads were permitted on spans during welding on column bracing and cover plates.
(2) Diaphragm connections were tightened immediately after placing slab due to excessive vibration. Loads were excluded for 7 days on that side of span.

DESIGN DATA

Specifications ~ A.A.S.H.O. 1957 as modified by Maine State Highway Commission

Loading ~ H20-S16-44 fs = 18,000 p.s.i. fc = 1200 p.s.i. n = 10

Existing Interior Stringers ~ 20,500 p.s.i.
Existing Exterior Stringers ~ 20,700 p.s.i. (No Strengthening) *
" " " ~ 17,700 p.s.i. Comp. (Strengthened) ✱
18,000 p.s.i. Tens.
New Exterior Stringers ~ 17,900 p.s.i.

Pile Loading ~ Original Pile Design Load = 12.0 Tons
Existing Structure Pile Load = 8.5 Tons (H15-44)
" " " " = 10.0 Tons* (H20-S16-44)
Max. Pile Load with widening = 11.5 Tons

* This applies to Existing North Exterior Stringers, Spans No. 4, 5, 6, & 7.

✱ This applies to all Existing Exterior Stringers not covered by above note. Tower Stringers, no strengthening. The stress in Existing Exterior Tower Stringers is 17,500 p.s.i.

The stress in all Existing Stringers under the Standard Overload Provision of the A.A.S.H.O. Specifications Extended to include H20-S16-44 Loading is equal to or less than 27,000 p.s.i.

Field changes - N.W.T. 7-2-62

CONCRETE CLASSIFICATION

Rail Posts ..... Class "Y"
All other concrete ..... Class "A"

CONSTRUCTION SPECIFICATIONS

State of Maine, State Highway Commission Standard Specifications, Highways and Bridges, Revision of January 1956.

PLAN - G W C.	BRIDGE NO.
TRACE -	SURVEY -
CHECK - HRD ABP	PLOT -

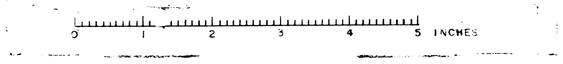
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46
OVER
MCRR TRACK
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
GEN. PLAN & ELEVATION

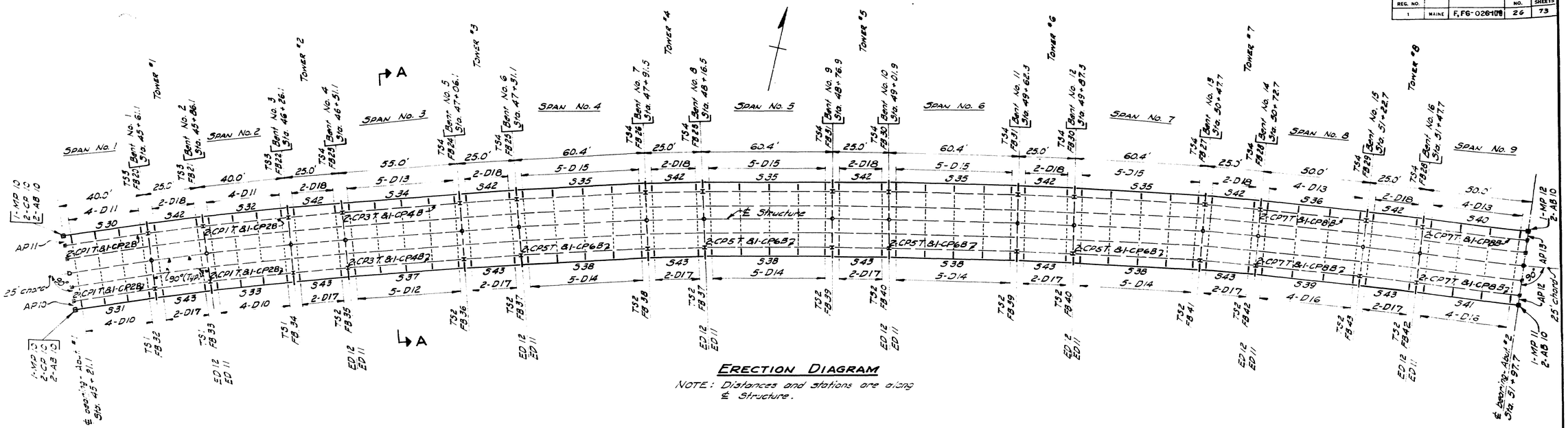
SHEET 1 OF 17 AUGUSTA, MAINE APRIL, 1959

81-98

C. H. CO. NO. 378 ----

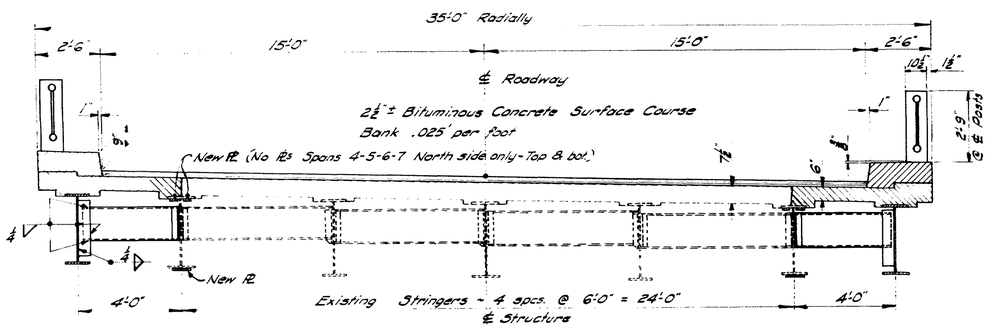


B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F, FG-026-1(7)	26	73



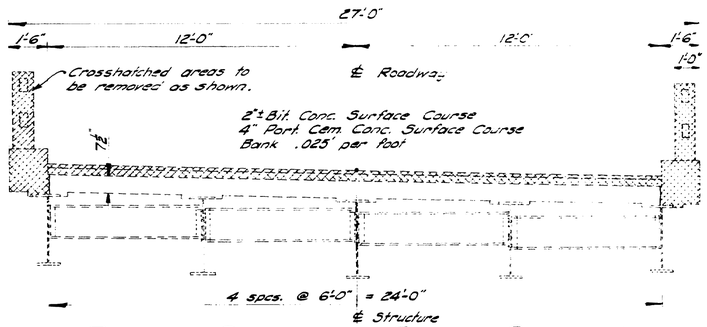
ERECTION DIAGRAM

NOTE: Distances and stations are along ℄ Structure.

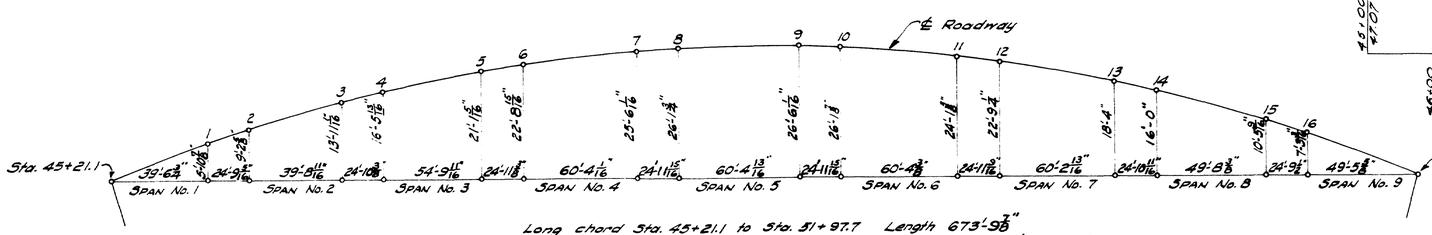


SECTION A-A

Typical except as shown
No Cover Plates for Tower Spans

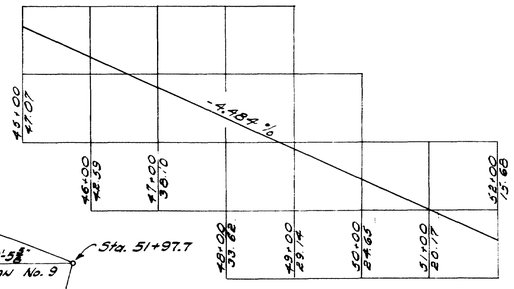


TYPICAL SECTION THRU EXISTING STRUCTURE



Long chord Sta. 45+21.1 to Sta. 51+97.7 Length 673'-9⅞"
Distances and offsets to ℄ bents Δ = 18°-2'-28.98"
D = 2°-40' R = 2148.79' M = 26.577
Arc = 676.60

LAYOUT DETAIL



PROFILE ALONG CONSTR. ℄

Note: Bench Mark = Highway BM #5, Vertical
Spike in 30" Oak @ Sta. 42+85, 35' Left
Elev. 60.00
Profile adjusted for settlement of structure.
See blocking table Sheet #15

Field changes - KMT 7-2-62

GENERAL NOTES

All shop connections shall be ⅞" ø rivets unless otherwise noted.
All field connections shall be ⅞" ø High Tensile Strength Bolts unless otherwise noted.
All holes shall be 15/16" ø except as noted.

The strengthening of the existing stringers and of the existing floor beam column connections shall be completed on any side of a span before placing concrete on subject side.

Expansion Dams: Dimensions for spacer plates and for cutting the angle will be determined in the field after the removal of the existing wearing surface. See Sheet 11.

Paint: One shop coat unless otherwise noted.

See Sheet #17 for bolt schedule.

DESIGN - VERRILL DET. C.F.W
TRACE - CLARK
CHECK - A.B.P.
BRIDGE NO.
SURVEY -
PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46
OVER
MCRR TRACK
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

ERECTION DIAGRAM, GEN. SECTIONS & LAYOUT

SHEET 2 OF 17 AUGUSTA, MAINE APRIL, 1959

B-99

C. B. CO., NO. 379

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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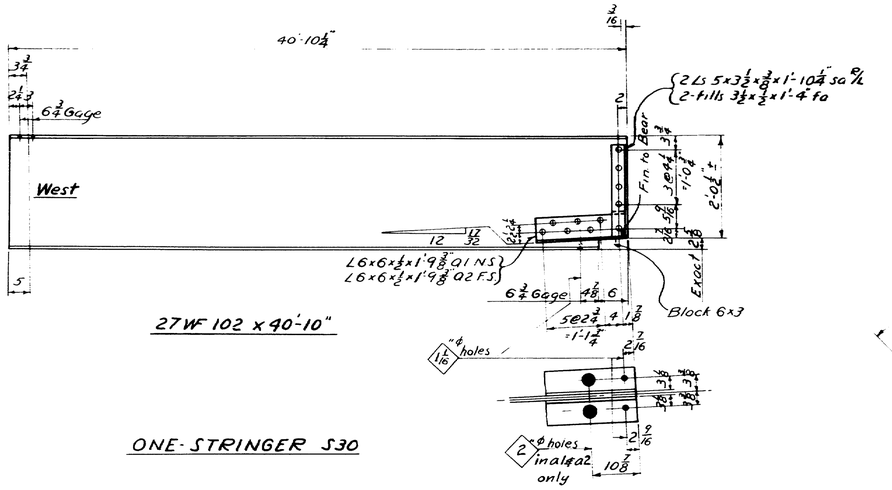
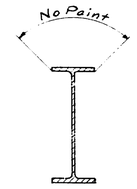
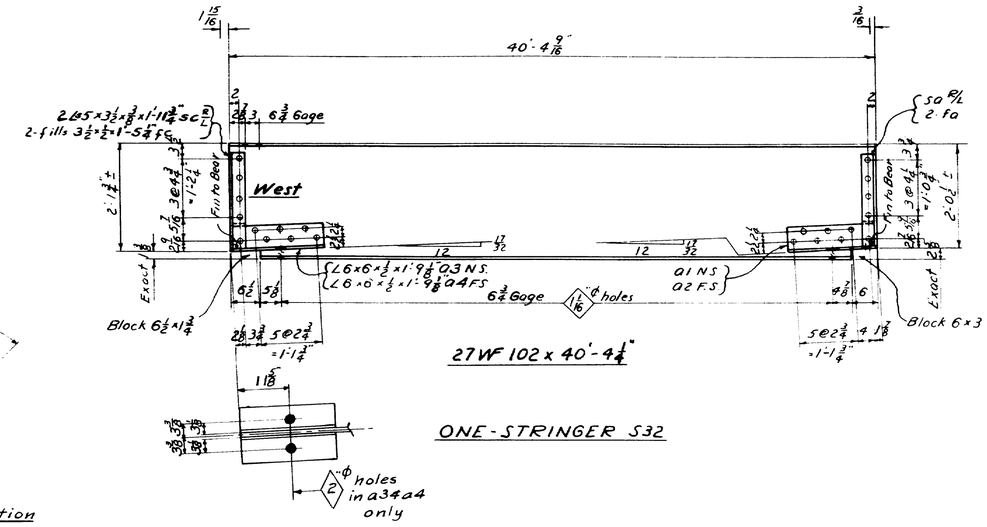


27WF 102 x 40'-10"

ONE-STRINGER S30

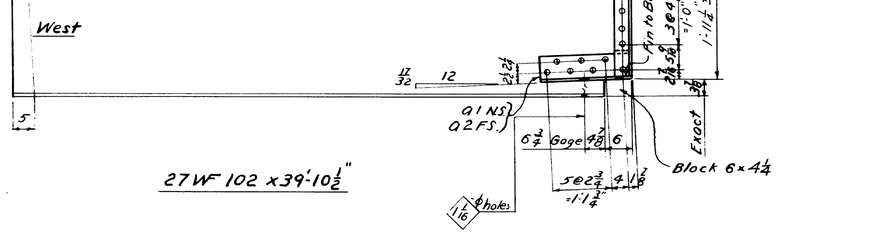


Stringer Section Typical



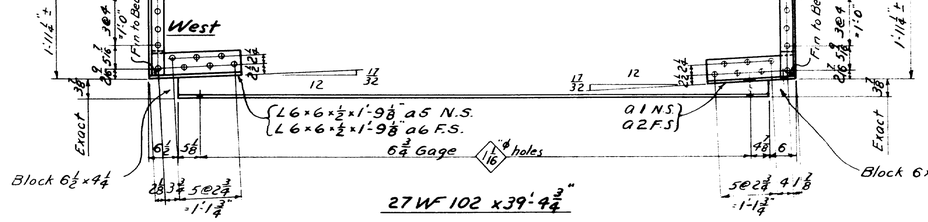
27WF 102 x 40'-4¼"

ONE-STRINGER S32



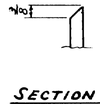
27WF 102 x 39'-10½"

ONE-STRINGER S31



27WF 102 x 39'-4¾"

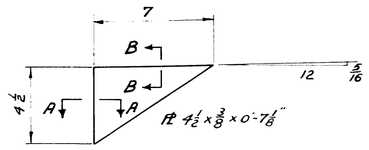
ONE-STRINGER S33



Section B-B

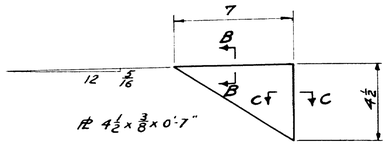
Section C-C

Section A-A



Reinforcing Plate P1R as Shown 16 Req'd.
Reinforcing Plate P1L opp hand 16 Req'd.

See Sheet (10) for Location



Reinforcing Plate P2R as Shown 16 Req'd.
Reinforcing Plate P2L opp hand 16 Req'd.

See Sheet (10) for Location

Note. Reinforcing plate P1 Rh. & P2 Rh. to be Structural Weldable Steel A.S.T.M Designation A 373.

Rivets ⅞" ⌀
Holes 15/16" ⌀ Unless Noted.

DESIGN – WJV DET – WHITE TRACE – E.V. SMITH CHECK – ABF	BRIDGE NO. SURVEY – PLOT –

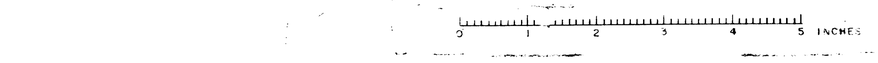
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46
OVER
MCRR TRACK
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

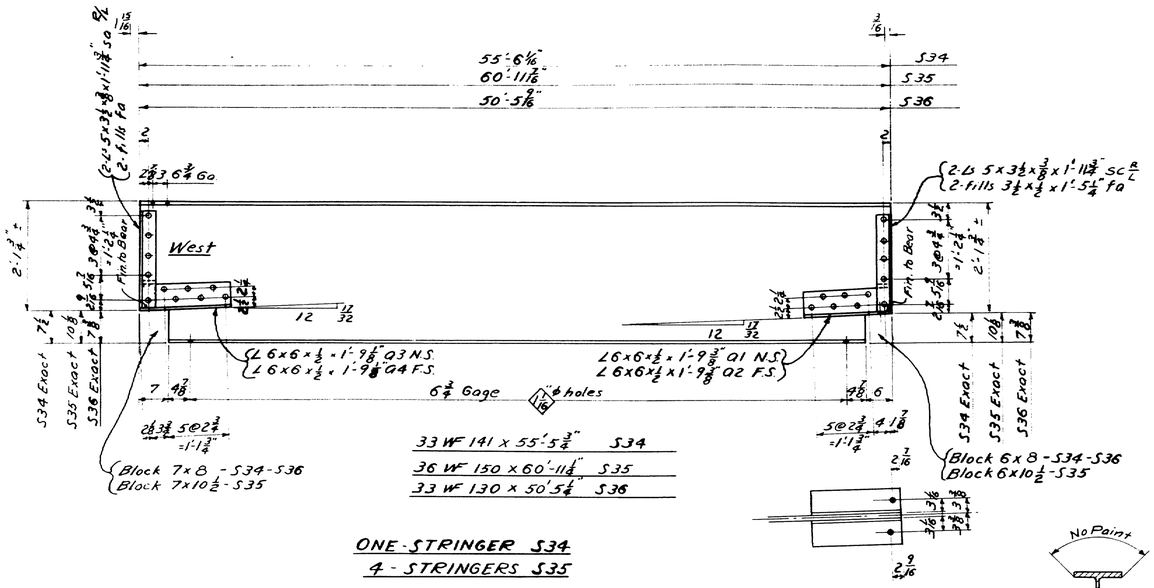
NEW STRINGERS & REINF. PLATES

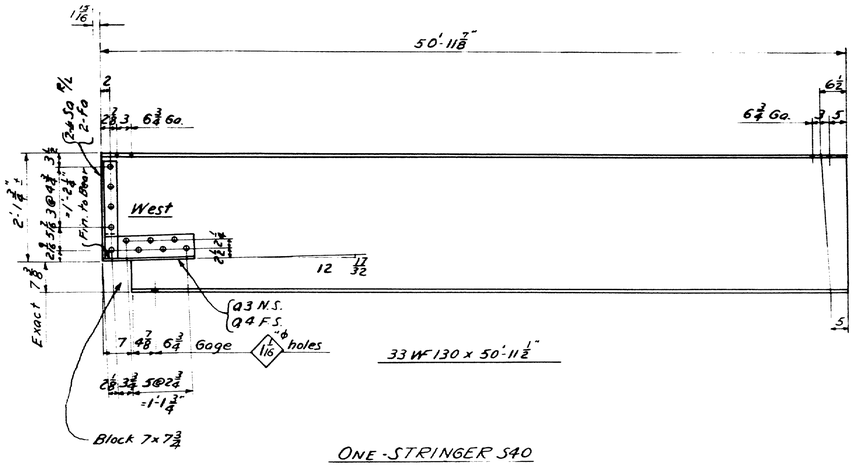
SHEET 3 OF 17 AUGUSTA, MAINE APRIL, 1959

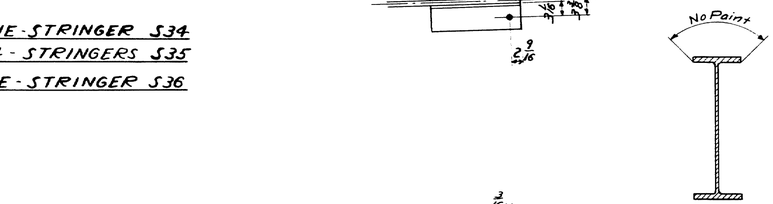
8N-50

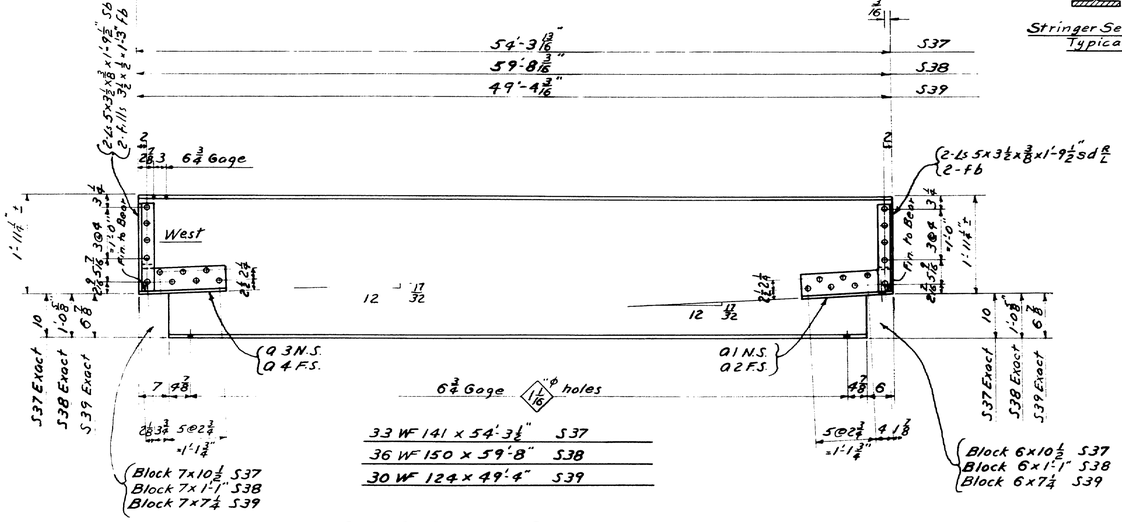


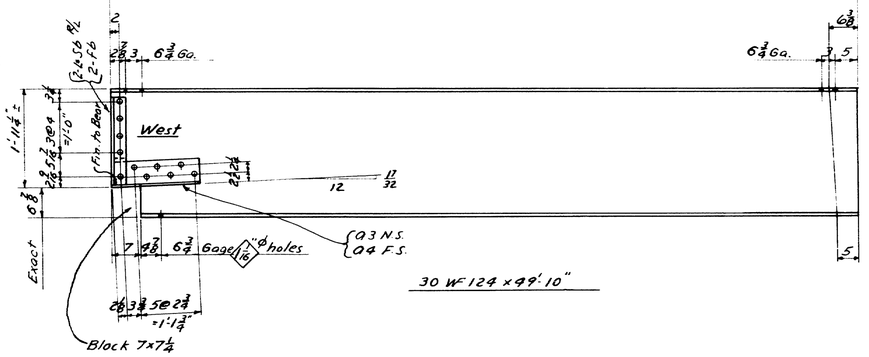
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-FB-026-1(11)	28	73











Rivets ⅞ϕ
Holes 15/16 unless Noted

DESIGN - WJV DET.- WHITE TRACE - E.V. SMITH CHECK - ABF PLOT -	BRIDGE NO. SURVEY -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46
OVER
MCRR TRACK
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
NEW STRINGERS

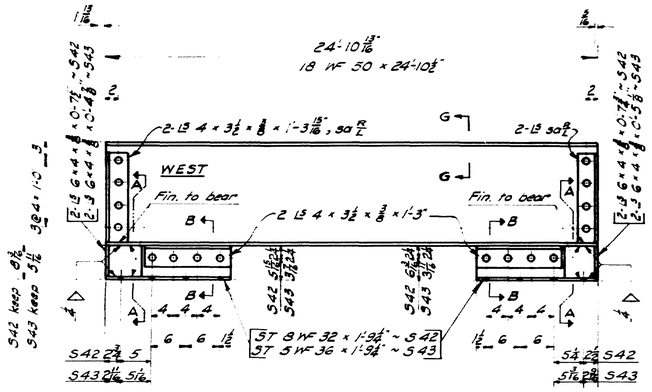
SHEET 4 OF 17 AUGUSTA, MAINE APRIL 1959

81-51

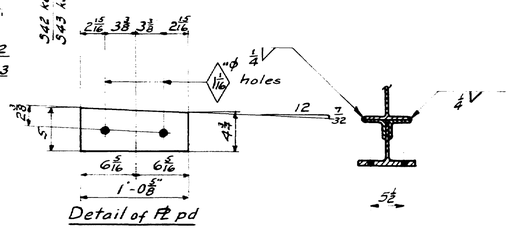
C.E. CO. NO. 379 WHITE

0 1 2 3 4 5 INCHES

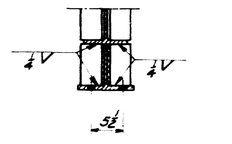
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	EFG-026-1(11)	29	73



8- STRINGERS S42
8- do S43

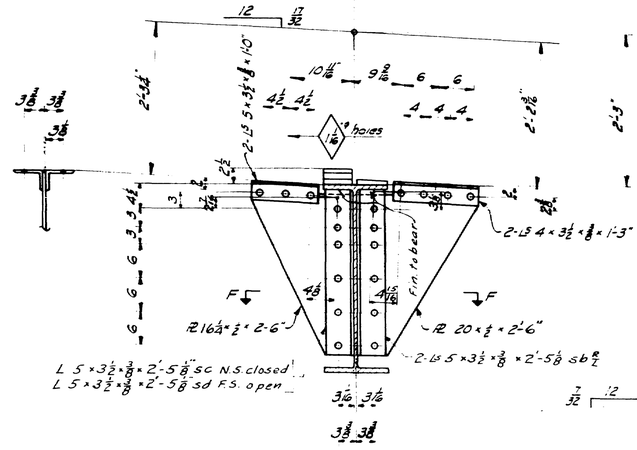


Detail of Pl pd

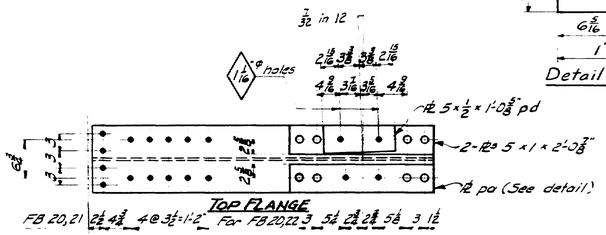


SECTION A-A

SECTION G-G



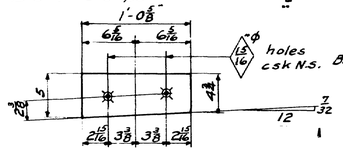
SECTION B-B



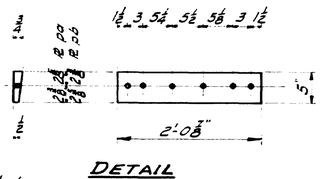
TOP FLANGE
For FB 21

1 1/2 6 1/16 6 1/16 1 1/2

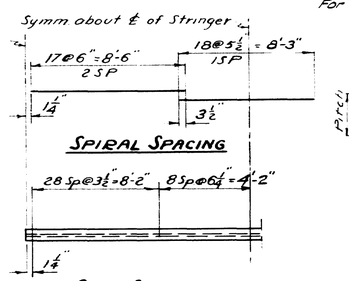
-6 1/16 - FB 20,21
-6 5/8 - FB 22



Detail of Pl pe



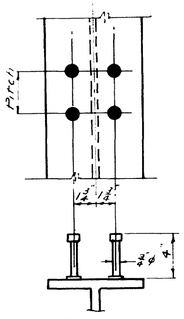
DETAIL



SPIRAL SPACING

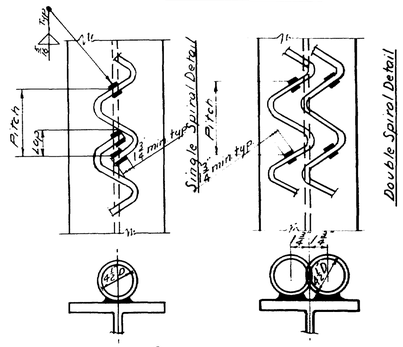
STUD SPACING

SECTION C-C
For FB 20 & FB 22

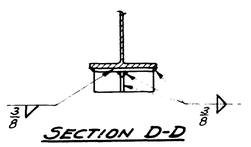


STUDS
3/4 x 4

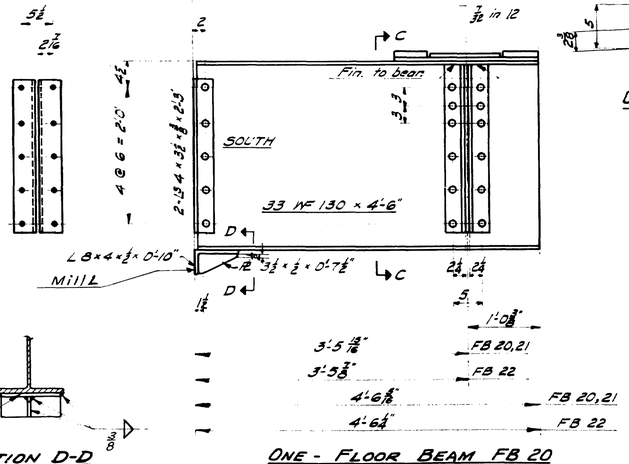
SECTION F-F



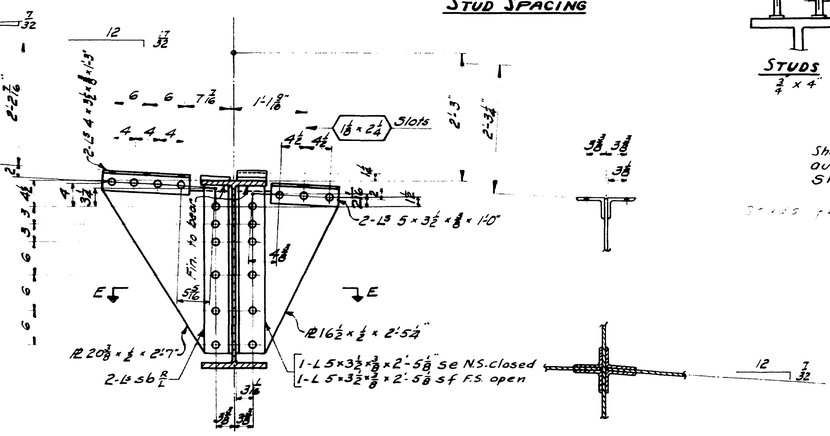
SPIRALS
5/8" ϕ



SECTION D-D



ONE - FLOOR BEAM FB 20
ONE - do do FB 21
ONE - do do FB 22



SECTION C-C
For FB 21

SECTION E-E

SHEAR CONNECTORS

Shear connectors may be either welded spirals or automatically end welded studs.
Shear connectors for S42 and S43 only

Rivets - 7/8 ϕ

Holes - 15/16 ϕ unless noted

Studs furnished

DESIGN - VERRILL	DET. WHITE	BRIDGE NO.
TRACE - CLARK		S IRVEY -
CHECK - ABP	CFW	PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46
OVER
MCRR TRACK
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

NEW STRINGERS, FLOOR BEAMS & SHEAR CONN.

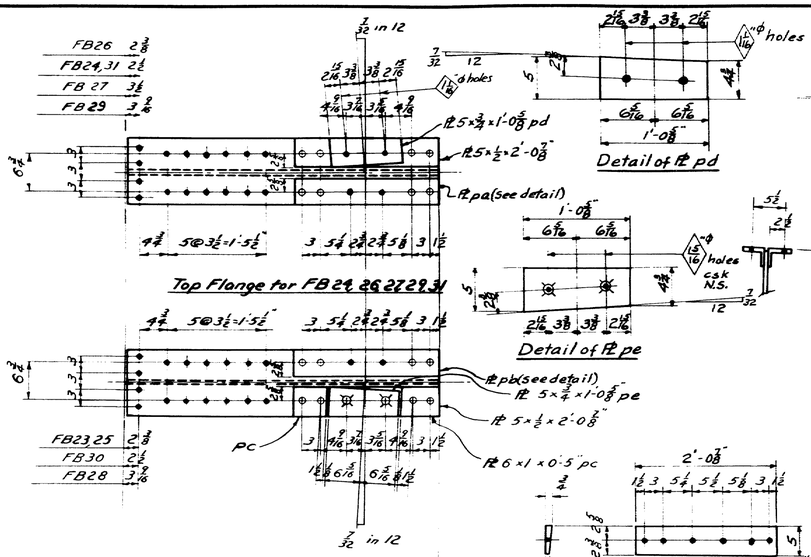
SHEET 5 OF 17 AUGUSTA, MAINE APRIL, 1959.

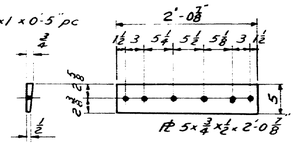
81-52

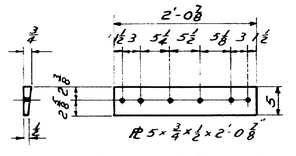
C. B. CO., NO. 378

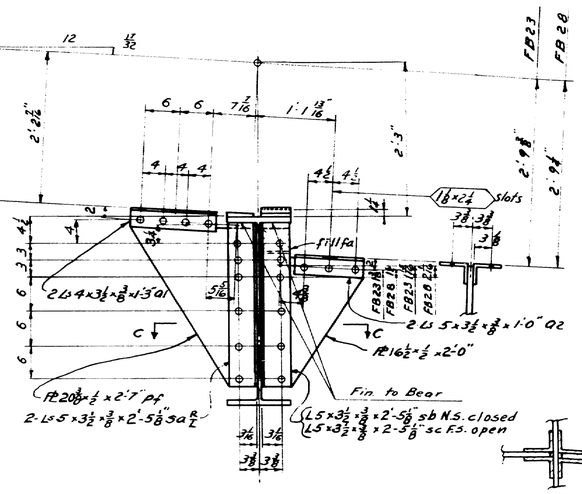
0 1 2 3 4 5 INCHES

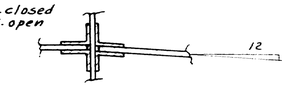
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	EFG-026-1(11)	30	75

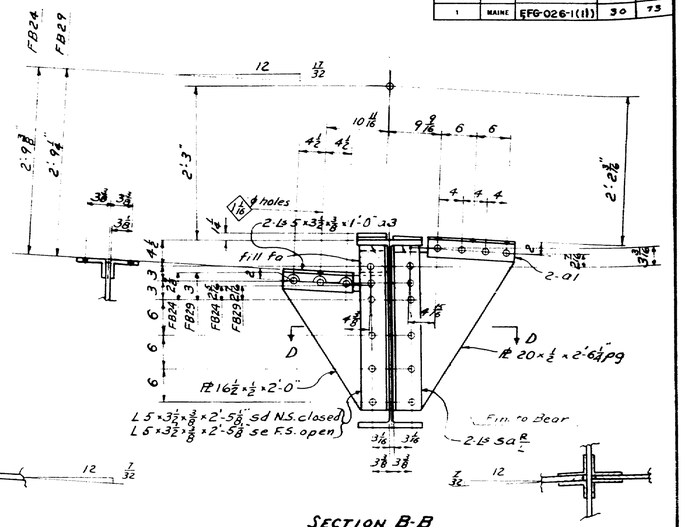


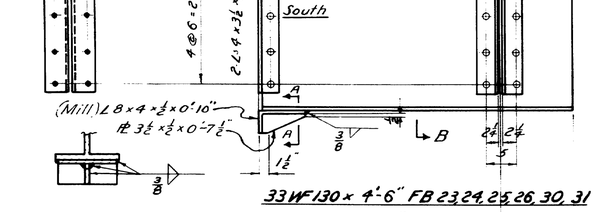








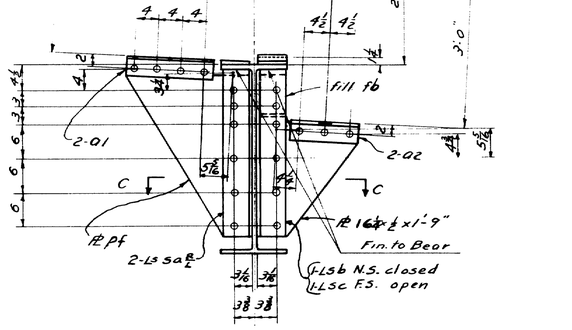


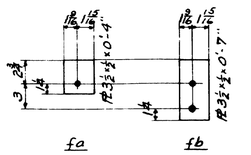


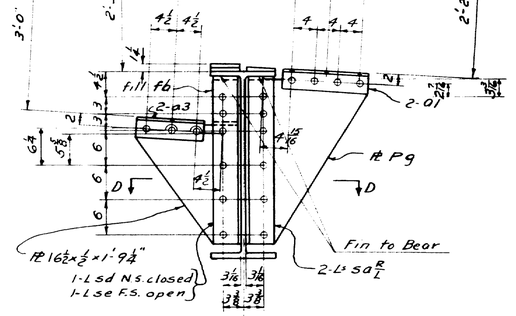
3'-5 13/16"	FB 23, 25, 26
3'-5 15/16"	FB 24, 30, 31
3'-6 1/16"	FB 27
3'-7"	FB 28, 29

4'-6 3/16"	FB 23,25,26
4'-6 5/16"	FB 24,30,31
4'-7 1/16"	FB 27
4'-7 3/8"	FB 28,29

ONE-	FLOOR	BEAM	FB23
ONE-	FLOOR	BEAM	FB24
2	"	"	FB25
ONE	"	"	FB26
ONE	"	"	FB27
2	"	"	FB28
ONE	"	"	FB29
2	"	"	FB30
2	"	"	FB31







Rivets ⅞" ϕ
Holes 15/16" unless Noted

DESIGN – VERRILL DET. WHITE
TRACE – V.S.SMITH
CHECK – A.B.C.

BRIDGE NO.
SURVEY –
PLOT –

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46
OVER
MCRR TRACK
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

FLOOR BEAMS

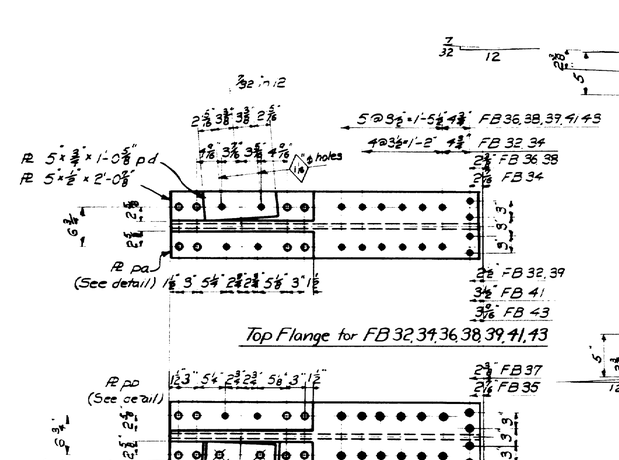
SHEET 6 OF 17 AUGUSTA, MAINE APRIL, 1959.

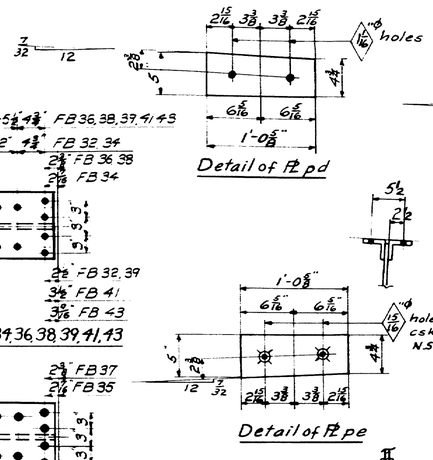
81-53

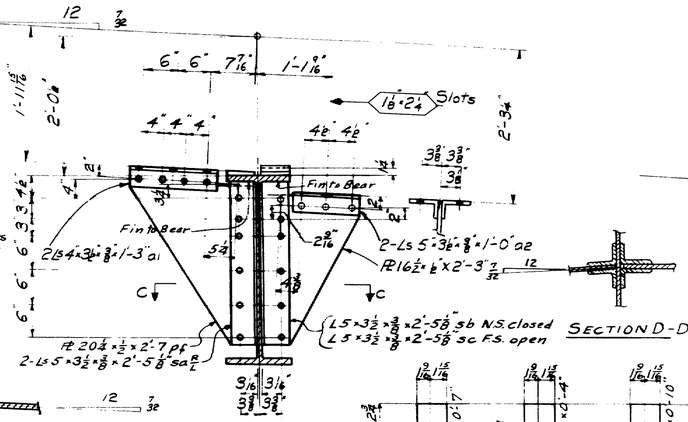
C. E. CO. NO. 379 40977

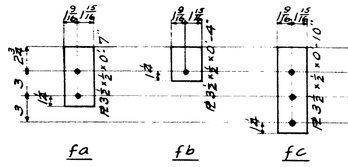
0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	FFG-026-1(11)	31	79

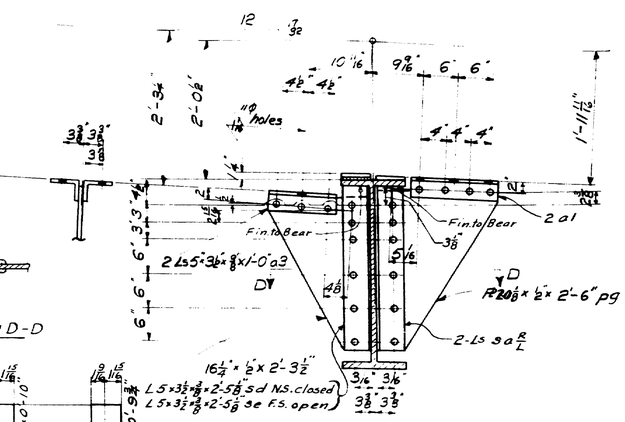


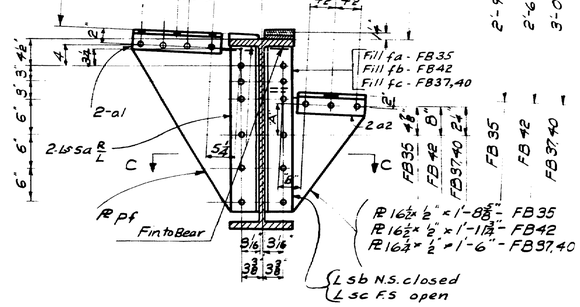


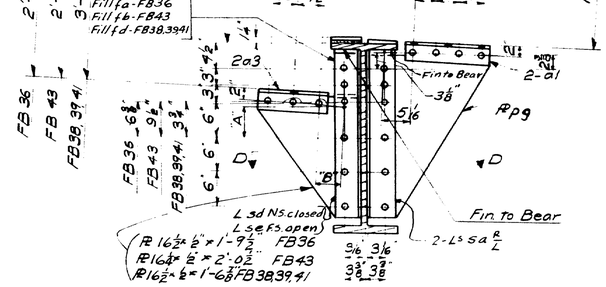




Detail of fills fa, fb, fc and fd



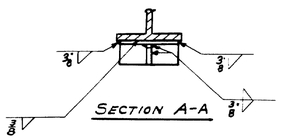


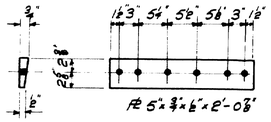


Note:
Rivets 7/8"ϕ
Holes 15/16" unless noted

1'-02"	3'-5 13/16"		FB 36, 37, 38
	3'-5 7/8"		FB 34, 35
	3'-5 15/16"		FB 32, 33, 39, 40
	3'-6 15/16"		FB 41
	3'-7"		FB 42, 43
	4'-6 5/16"		FB 36, 37, 38
	4'-6 3/8"		FB 34, 35
	4'-6 15/16"		FB 32, 33, 39, 40
	4'-7 1/16"		FB 41
	4'-7 1/8"		FB 42, 43

One	Floor	Beam	FB 32
One	do	do	FB 33
One	do	do	FB 34
One	do	do	FB 35
One	do	do	FB 36
Two	do	do	FB 37
One	do	do	FB 38
Two	do	do	FB 39
Two	do	do	FB 40
One	do	do	FB 41
Two	do	do	FB 42
One	do	do	FB 43





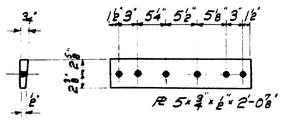


Table of Distances Rivet to Working Point		
Fl. Bm. Mark	Dim "A"	Dim. "B"
FB35	5 7/16	4 3/8
FB36	5 13/16	4 3/8
FB37	2 13/16	4 1/4
FB38	3 1/8	4 1/2
FB39	3 1/2	4 1/2
FB40	2 13/16	4 1/4
FB41	3 1/8	4 1/2
FB42	8 5/8	4 1/2
FB43	8 13/16	4 1/4

DESIGN - VERRILL DET. WHITE
TRACE - HOXIE
CHECK - ABP
BRIDGE NO.
SURVEY -
PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46
OVER
MCRR TRACK
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

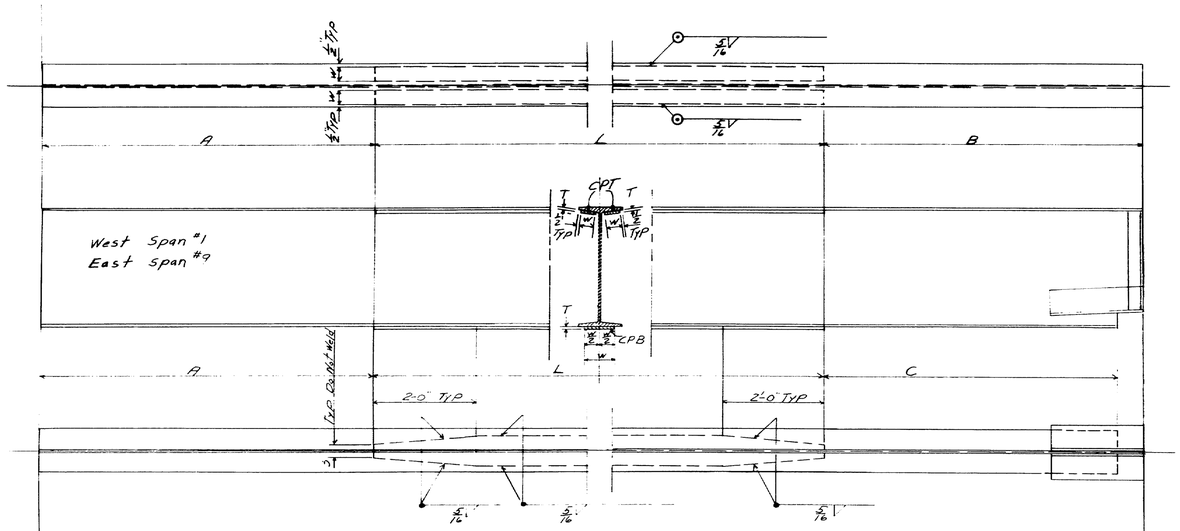
FLOOR BEAMS

SHEET 7 OF 17 AUGUSTA, MAINE APRIL, 1959.

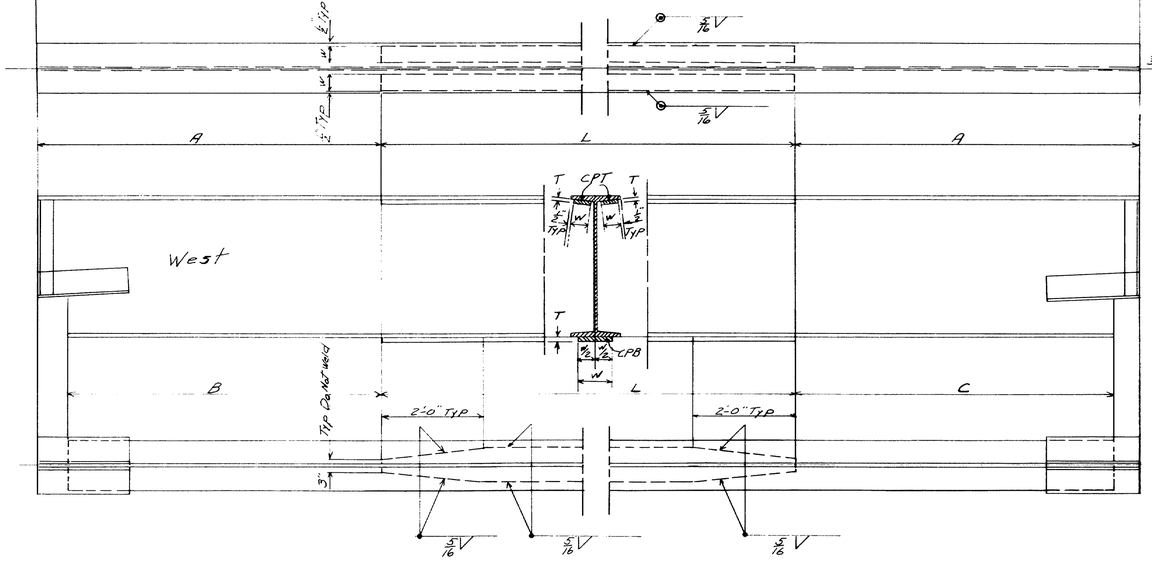
81-54

C. & G. CO. NO. 378

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F-F6-026-1(11)	32	73



END SPANS — SPANS 1-9



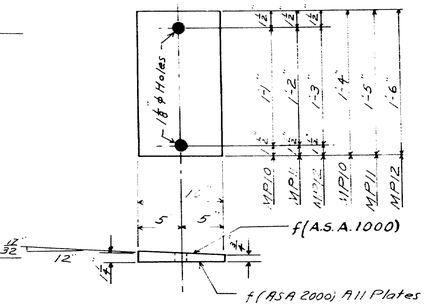
INTERIOR SPANS — SPANS 2-3-4-5-6-7&8

		TOP COVER PLATES						BOTTOM COVER PLATE						
Span	Side	Mark	W	T	L	A	B	Mark	W	T	L	A	B	C
1	North	CP1T	3½	5/16	28'-0"	6'-5 5/8"	6'-2 15/16"	CP2B	6 3/4	5/16	28'-0"	6'-5 5/8"		5'-8 15/16"
	South	CP1T	3½	1/4	28'-0"	6'-1 1/2"	5'-10 9/16"	CP2B	6 3/4	3/8	28'-0"	6'-1 1/2"		5'-4 7/16"
2	North	CP1T	3½	3/8	28'-0"	6'-1 5/8"		CP2B	6 3/4	1/2	28'-0"		5'-7 1/8"	5'-7 3/8"
	South	CP1T	3½	3/8	28'-0"	5'-9 1/2"		CP2B	6 3/4	3/8	28'-0"		5'-2 3/4"	5'-3 1/2"
3	North	CP3T	4	3/4	40'-0"	7'-2 5/8"		CP4B	8	3/4	40'-0"		7'-1 5/8"	7'-2 5/8"
	South	CP3T	4	3/4	40'-0"	7'-2 3/4"		CP4B	8	3/4	40'-0"		6'-7 3/4"	6'-8 3/4"
4	South	CP5T	4	5/8	43'-0"	8'-5"		CP6B	7 3/4	5/8	43'-0"		7'-10"	7'-11"
5	South	CP5T	4	5/8	43'-0"	8'-5"		CP6B	7 3/4	5/8	43'-0"		7'-10"	7'-11"
6	South	CP5T	4	5/8	43'-0"	8'-5"		CP6B	7 3/4	5/8	43'-0"		7'-10"	7'-11"
7	South	CP5T	4	5/8	43'-0"	8'-5"		CP6B	7 3/4	5/8	43'-0"		7'-10"	7'-11"
8	North	CP7T	4	5/8	36'-0"	7'-2"		CP8B	8	5/8	36'-0"		6'-7 1/2"	6'-8"
	South	CP7T	4	5/8	36'-0"	6'-9"		CP8B	8	5/8	36'-0"		6'-2 1/2"	6'-3"
9	North	CP7T	4	5/8	36'-0"	7'-6 1/2"	7'-3 3/4"	CP8B	8	5/8	36'-0"	7'-6 1/2"		6'-9 7/16"
	South	CP7T	4	5/8	36'-0"	7'-1 1/2"	6'-10 9/16"	CP8B	8	5/8	36'-0"	7'-1 1/2"		6'-4 7/16"

All cover plates to be of structural Weldable Steel A.S.T.M. Designation A-373.

Cover plates for existing exterior stringers only (Spans 1 thru 9)

SUMMARY OF COVER PLATES				
Mark	No Req'd	W	T	Length
CP1T	8	3½	5/16	28'-0"
CP3T	4	4	3/4	40'-0"
CP5T	8	4	5/8	43'-0"
CP7T	8	4	5/8	36'-0"
CP2B	4	6 3/4	5/16	28'-0"
CP4B	2	8	3/4	40'-0"
CP6B	4	7 3/4	5/8	43'-0"
CP8B	4	8	5/8	36'-0"

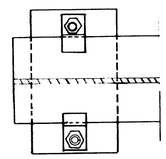


MP10-2 Req'd. Span 1 North & South

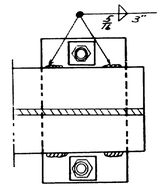
MP11-1 Req'd. Span 9 South

MP12-1 Req'd. Span 9 North

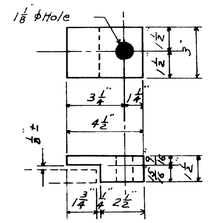
MASONRY PLATE



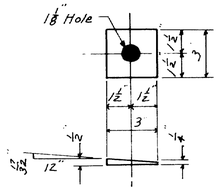
DETAIL AT EXPANSION END



DETAIL AT FIXED END

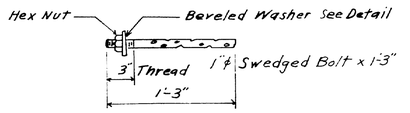


CLIP PLATES CP10-4 Req'd.



BEVELED WASHERS - 8 Req'd.

Note: Coat surfaces finished ASA1000 and ASA2000 with white lead and tallow.



ANCHOR BOLTS AB10 8 Req'd.

DESIGN - ESC DEP RBP & CFW.
TRACE - F. MORRISON
CHECK - ABP & HRD.

BRIDGE NO.
SURVEY -
PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46
OVER
MCRR TRACK
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

COVER PLATE, BEARINGS

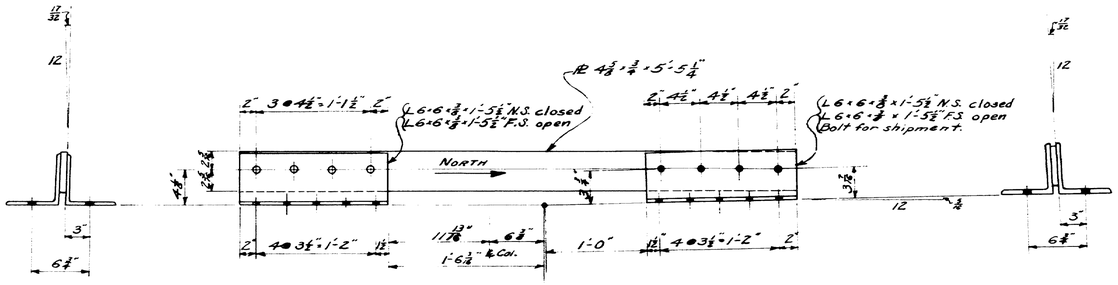
SHEET 8 OF 17 AUGUSTA, MAINE MAY, 1959

C. B. CO. NO. 378 10-57

8'-55"

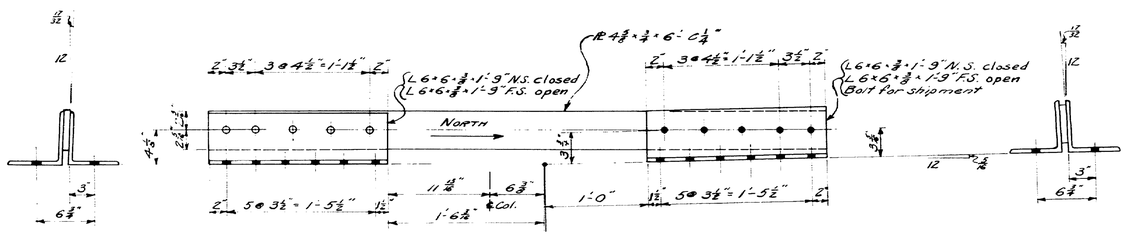
0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F.FG-026-I(11)	33	73



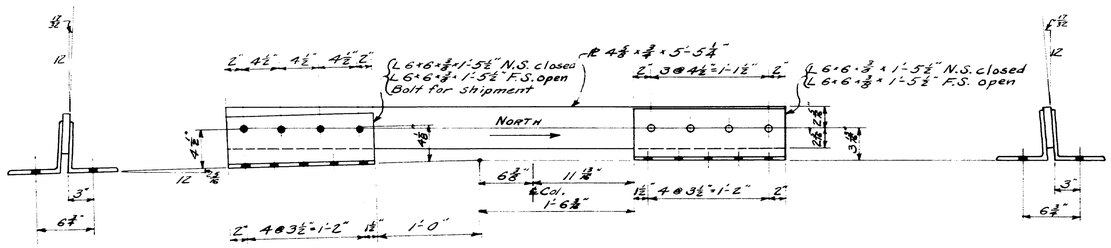
TENSION STRAP - TS1

3 REQUIRED



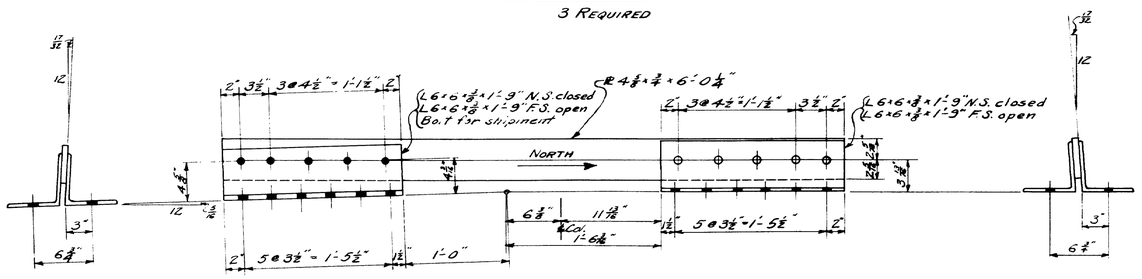
TENSION STRAP - TS2

13 REQUIRED



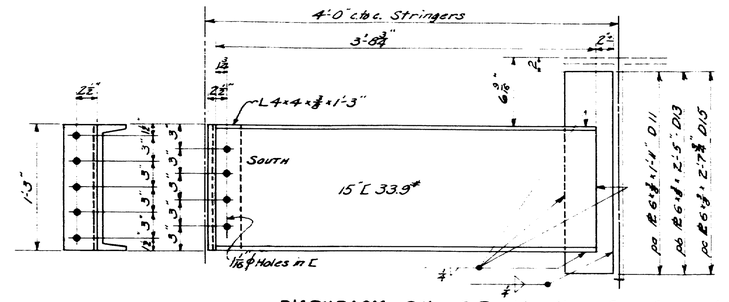
TENSION STRAP - TS3

3 REQUIRED

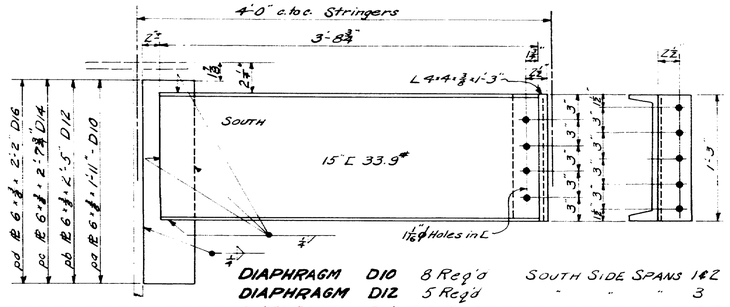


TENSION STRAP - TS4

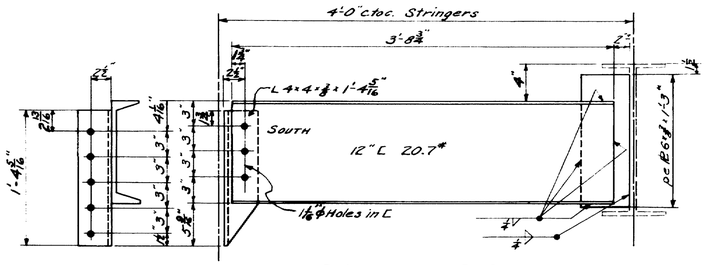
13 REQUIRED



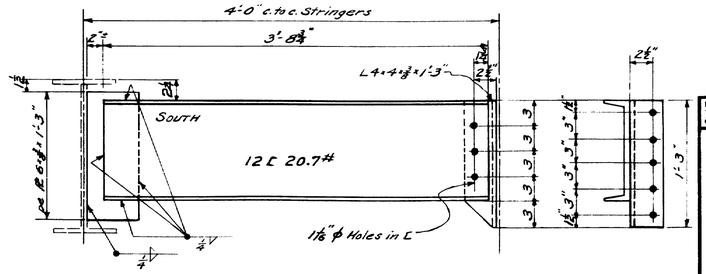
DIAPHRAGM D11 8 Req'd NORTH SIDE SPANS 1 & 2
DIAPHRAGM D13 13 Req'd " " " 3, 8, 9
DIAPHRAGM D15 20 Req'd " " " 4, 5, 6 & 7



DIAPHRAGM D10 8 Req'd SOUTH SIDE SPANS 1 & 2
DIAPHRAGM D12 5 Req'd " " " 3
DIAPHRAGM D14 20 Req'd " " " 4, 5, 6 & 7
DIAPHRAGM D16 8 Req'd " " " 8 & 9



DIAPHRAGM D18 16 Req'd NORTH SIDE ALL TOWER SPANS



DIAPHRAGM D17 16 Req'd SOUTH SIDE ALL TOWER SPANS

Bolts ⅞" ϕ
Rivets ⅞" ϕ
Holes 15/16" ϕ unless noted

DESIGN - VERRILL DET WHITE
TRACE - HICKS CFW
CHECK - ABP

BRIDGE NO.
SURVEY -
PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46
OVER
MCRR TRACK
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY

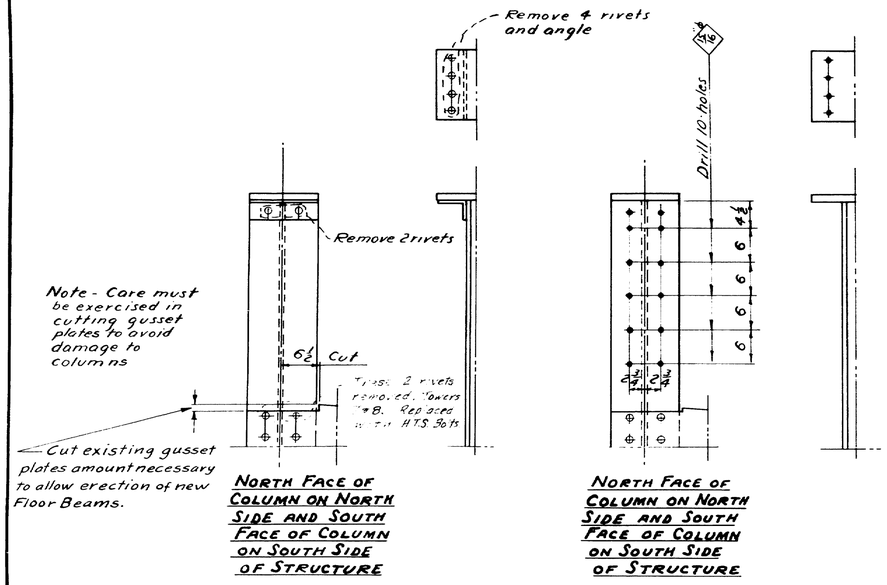
TENSION STRAPS, DIAPHRAMS

SHEET 9 OF 17 AUGUSTA, MAINE APRIL, 1959.

C. E. CO. NO. 378 61677

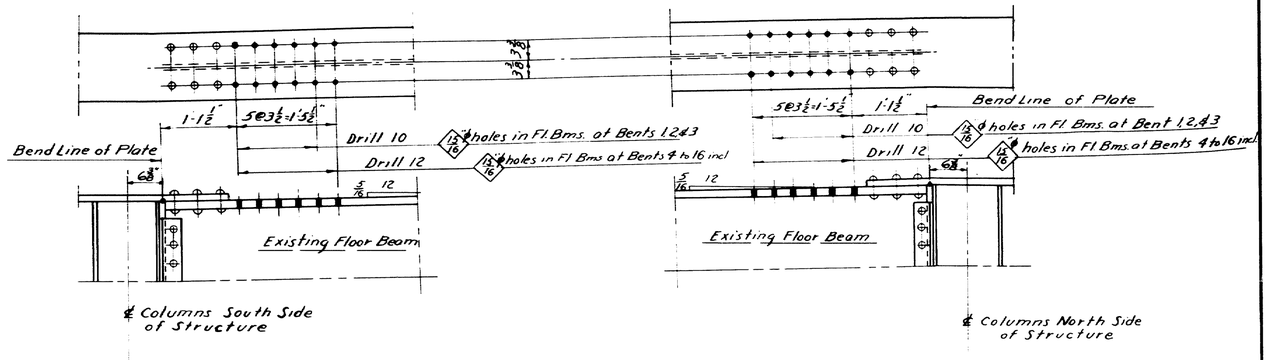
0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F. FG-026-K(10)	34	73



NORTH FACE OF COLUMN ON NORTH SIDE AND SOUTH FACE OF COLUMN ON SOUTH SIDE OF STRUCTURE

NORTH FACE OF COLUMN ON NORTH SIDE AND SOUTH FACE OF COLUMN ON SOUTH SIDE OF STRUCTURE

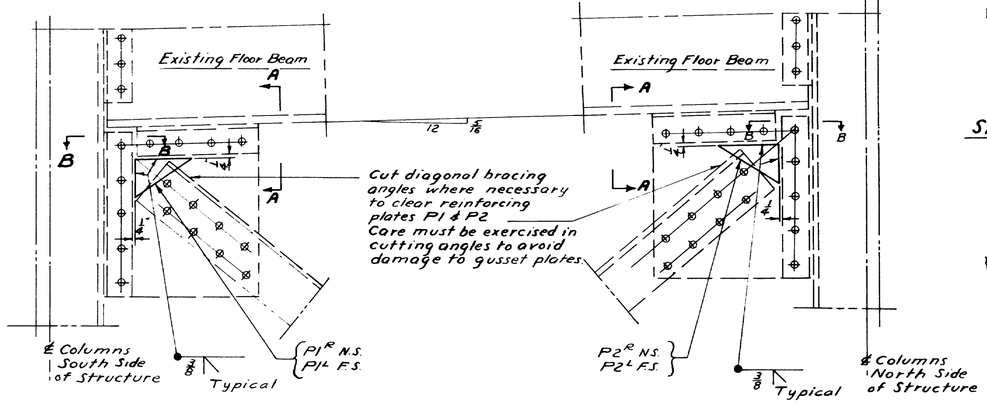


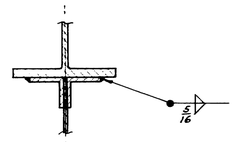
Stringers and connection angles not shown in this view

Stringers and connection angles not shown in this view

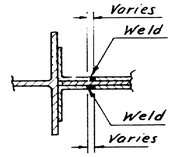
FIELD WORK REQUIRED ON EXISTING FLOOR BEAMS 16 FLOOR BEAMS

FIELD WORK REQUIRED ON EXISTING COLUMNS 32 COLUMNS





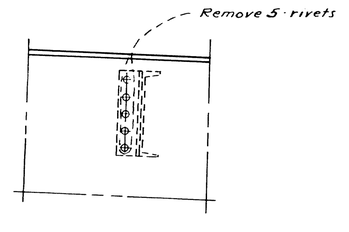
SECTION A-A



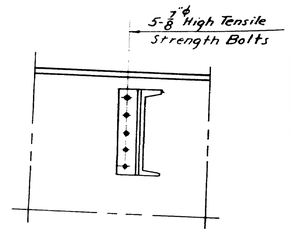
SECTION B-B

FIELD WORK REQUIRED FOR ERECTION OF REINFORCING PLATES P1R/L AND P2R/L

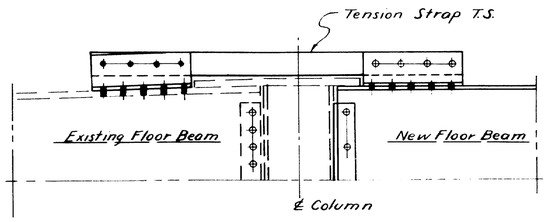
EXISTING TRANSVERSE BRACING SHOWN TYPICAL



FIELD WORK REQUIRED ON EXISTING DIAPHRAGM CONNECTION TO EXISTING EXTERIOR STRINGER TYPICAL



VIEW SHOWING NEW DIAPHRAGMS IN POSITION TYPICAL



CONNECTION OF TENSION STRAP T.S. TO FLOOR BEAMS TYPICAL

T53 Shown

— NOTES —

Payment for all detailed field alterations on existing steel will be considered incidental to Item No 702-104, Structual Steel Erection.

Payment for any necessary but unforseen field alterations not detailed in these plans shall be made as Extra Work.

Field changes - VWT 7-2-62

DESIGN - VERRILL DET. WHITE	BRIDGE NO.
TRACE - V. SMITH	SURVEY -
CHECK - JBC	PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46
OVER
MCRR TRACK
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
FIELD ALTERATIONS

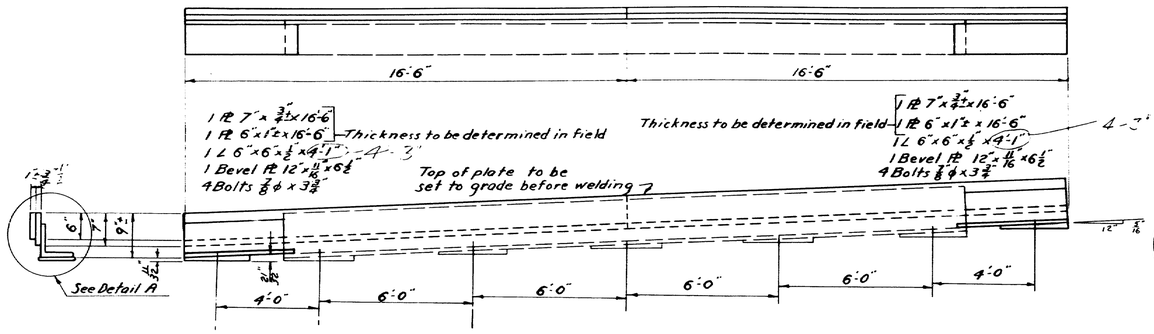
SHEET 10 OF 17 AUGUSTA, MAINE APRIL, 1959.

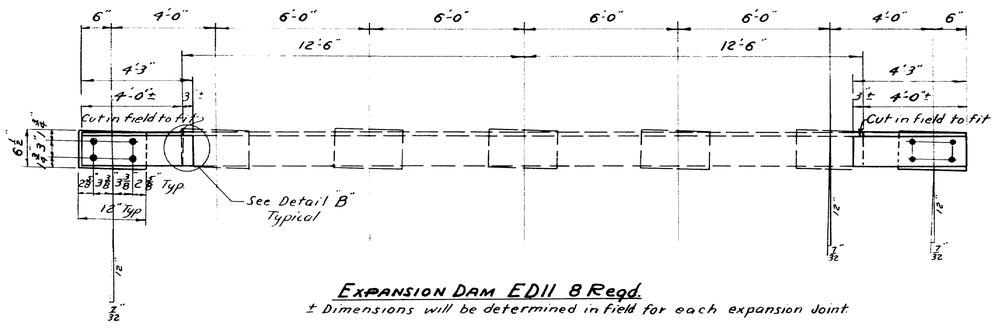
A-56

C. B. CO. NO. 378 41877

0 1 2 3 4 5 INCHES

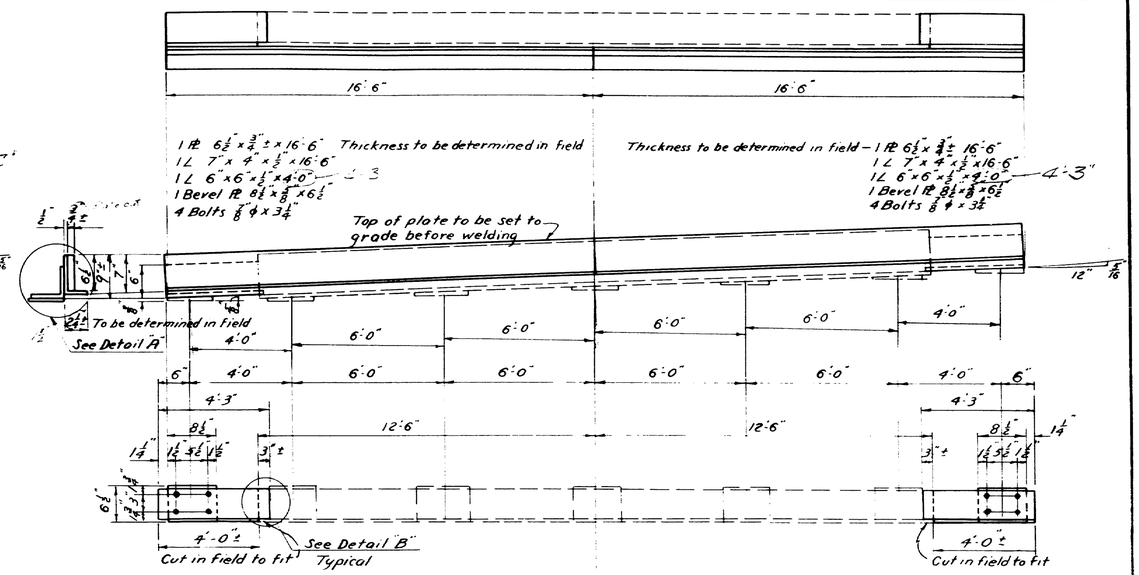
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F. FG-026-K(11)	33	73





EXPANSION DAM ED11 8 Req'd.

± Dimensions will be determined in field for each expansion joint.

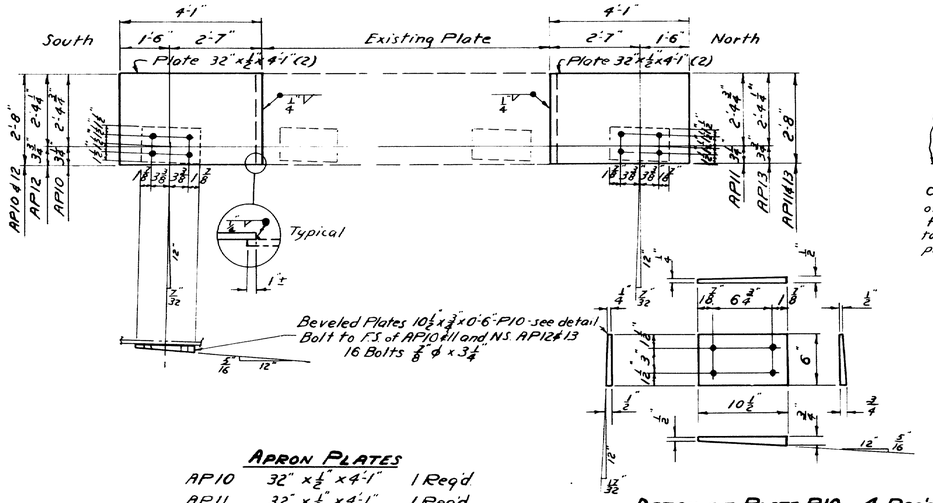


EXPANSION DAM ED12 8 Req'd.

± Dimensions will be determined in the field for each Exp Joint

Expansion Dams at Bents No 2, 4, 6, 8, 10, 12, 14, & 16

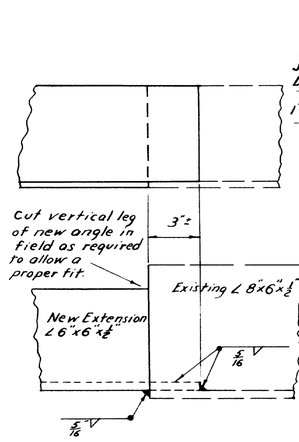
Remove shaded members of expansion dams by removing rivets and cutting anchor straps at top of existing slab. Cross hatched angles are to remain in place. Chip out existing slab as required to permit cutting off heads and removing rivets [illegible] of outside face.



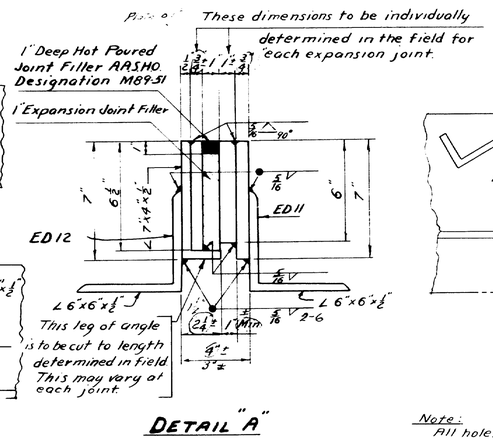
APRON PLATES

AP10	32" x 1/2" x 4'-1"	1 Req'd
AP11	32" x 1/2" x 4'-1"	1 Req'd
AP12	32" x 1/2" x 4'-1"	1 Req'd
AP13	32" x 1/2" x 4'-1"	1 Req'd

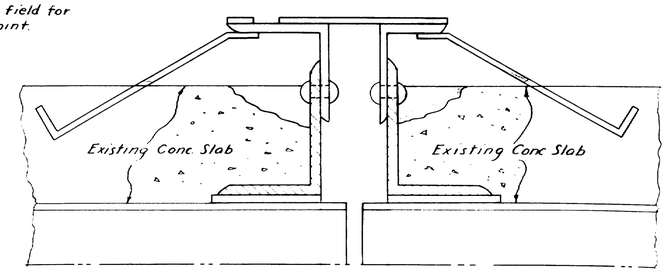
DETAIL OF PLATE P10 4 Req'd.



DETAIL "B"



DETAIL "A"



SECTION THRU EXISTING EXPANSION DAM

Note: All holes 15/16" unless otherwise noted.

DESIGN – VERRILL DET. WISWELL
TRACE – V. SMITH
CHECK – DOTEN
BRIDGE NO.
SURVEY –
PLOT –

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46
OVER
MCRR TRACK
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
EXPANSION DAMS, APRON PLATES

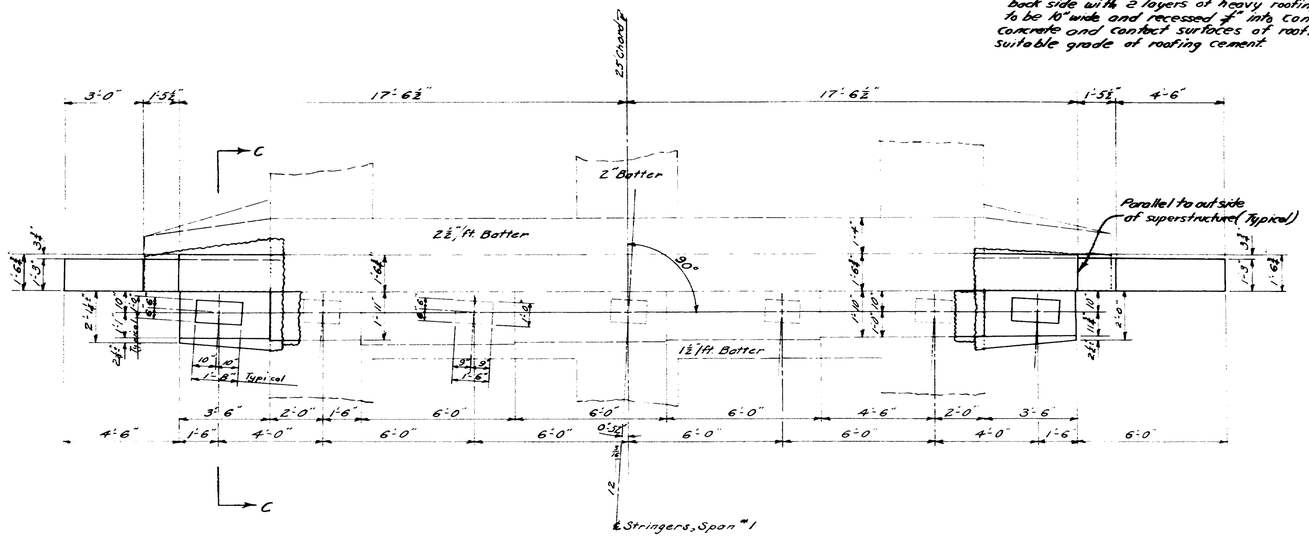
SHEET 11 OF 17 AUGUSTA, MAINE APRIL, 1959.

FIELD CK: 22725 · W.W.T. 7-2-62
C.D. CO. NO 378

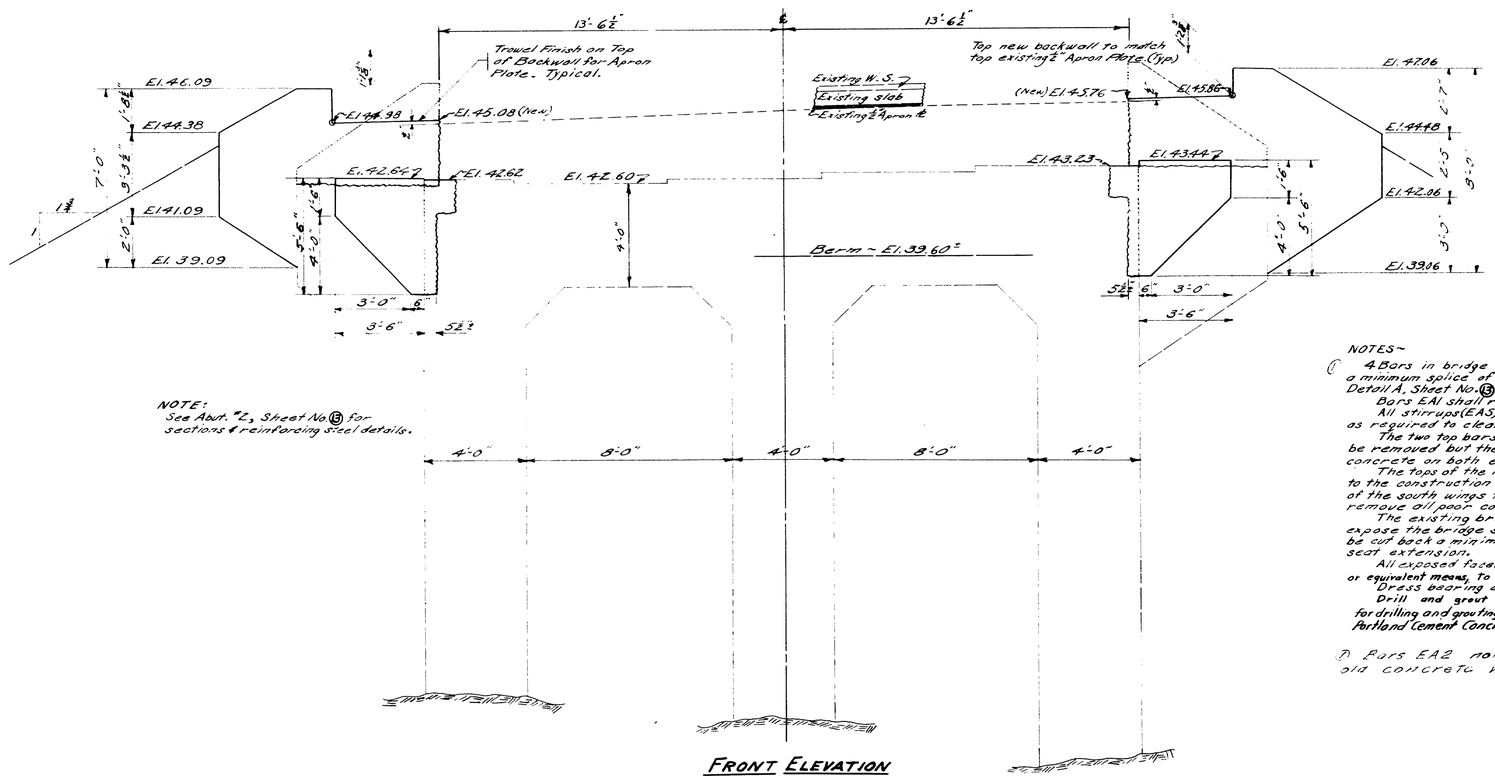
0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F, FG-026-100	36	79

Note: Cover the ½" slot between wing and curb on the back side with 2 layers of heavy roofing. Roofing to be 10" wide and recessed ½" into concrete. Coat concrete and contact surfaces of roofing with a suitable grade of roofing cement.



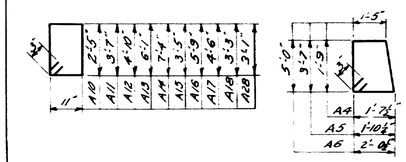
PLAN



NOTE:
See Abut. "2, Sheet No. 13 for sections & reinforcing steel details.

FRONT ELEVATION

REINFORCING STEEL SCHEDULE



All dimensions to ℄ bars.

BENT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
A4	#4	4	7'-0½"	Extension of Bridge Seats
A5		4	10'-11½"	" " "
A6		4	13'-11½"	" " "
A10		2	7'-2"	New Wings A"1 & A"2
A11		2	9'-6"	" " "
A12		2	12'-0"	" " "
A13		2	14'-6"	" " "
A14		2	17'-0"	" " "
A15		2	9'-2"	" " "
A16		2	13'-10"	" " "
A17		2	11'-4"	" " "
A18		2	8'-10"	" " "
A28		4	8'-6"	" " "

STRAIGHT BARS

A1	#6	16	4'-6"	Extension of Bridge Seats
A2	#4	8	4'-0"	" " " "
A3		8	5'-6"	Extension Br. Seats - Bend in Field
A19		12	8'-2"	New Wings A"1 & A"2
A20		4	9'-5"	" " "
A21		4	4'-2"	" " "
A22		8	2'-8"	" " "
A23		4	6'-1"	" Bend in Field
A24		4	5'-0"	" " A"1 & A"2
A25		4	4'-6"	" Bend in Field
A26		4	3'-2"	" " A"1 & A"2
A27		16	1'-6"	Extension of Bridge Seats
D1	#6	24	2'-0"	" " " "

NOTES~

(1) 4 Bars in bridge seats marked EA2 shall be exposed for a minimum splice of 8" and new bars A1 welded to them. See Detail A, Sheet No. 13.
Bars EA1 shall remain in place.
All stirrups (EA3) in wings shall remain in place and be bent as required to clear forms for new work.
The two top bars (EA3) of longitudinal steel in the wings shall be removed but the third bar (EA5) which will be locked in the concrete on both ends shall remain in place.
The tops of the north wings on Abuts. 1 & 2 shall be removed to the construction joint at bridge seat elevation and the tops of the south wings to 1'-2" below the construction joint to remove all poor concrete.
The existing bridge seat shall be cut back as shown to expose the bridge seat steel and the face of the column shall be cut back a minimum of 5½" to provide a bearing for the bridge seat extension.
All exposed faces shall be scored to 1" ± with a masonry saw, or equivalent means, to give a neat line at the joint.
Dress bearing areas to exact elevations shown.
Drill and grout D1 dowels 1'-0" into face existing concrete. Payment for drilling and grouting to be included in unit price bid for contract Item 701-33, Portland Cement Concrete, Abuts and Retaining Walls.

(2) Bars EA2 not found. 4 - #6 bars grouted 3ft. into old concrete with non-shrinking mortar.

For wings - SWT 12-62

DESIGN - BDET - WJV & CFW	BRIDGE NO.
TRACE - HICKS	SURVEY -
CHECK - MOLLICONE	PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46
OVER
MCRR TRACK
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
ABUTMENT NO 1

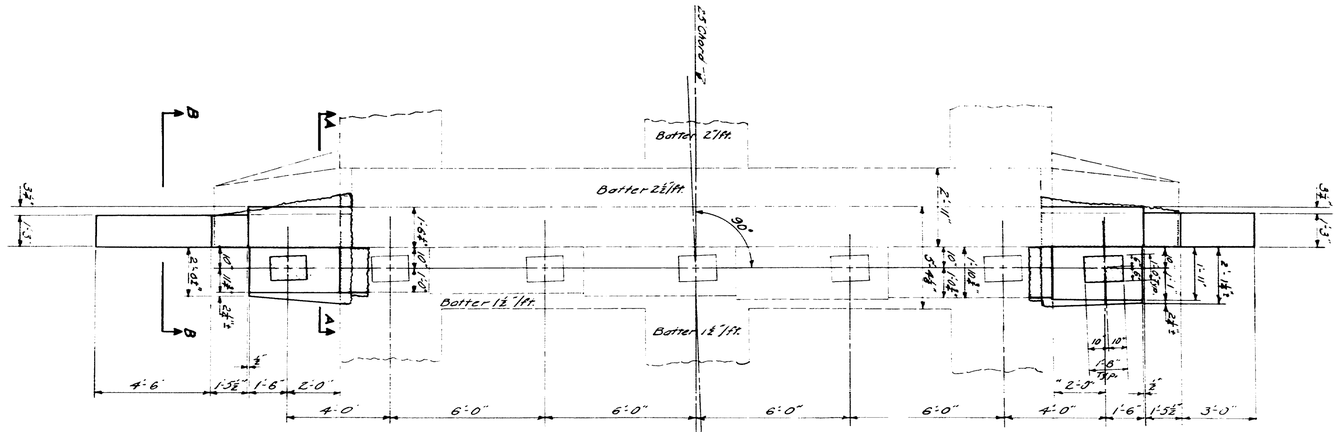
SHEET 12 OF 17 AUGUSTA, MAINE APRIL, 1959

81-58

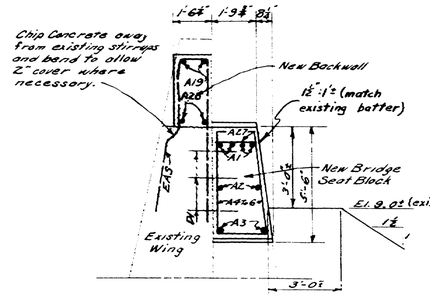
C. B. CO. NO. 379 41477

0 1 2 3 4 5 INCHES

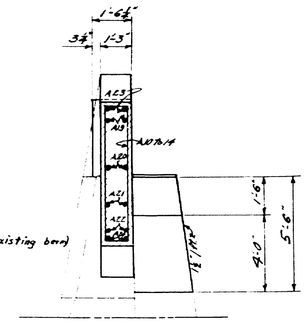
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F, FG-026-1(11)	37	73



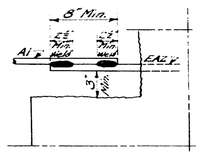
PLAN



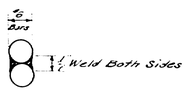
SECTION A-A

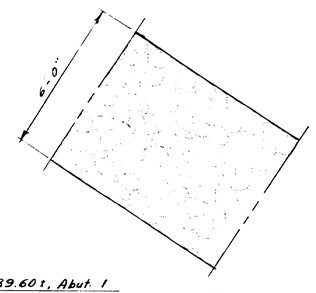


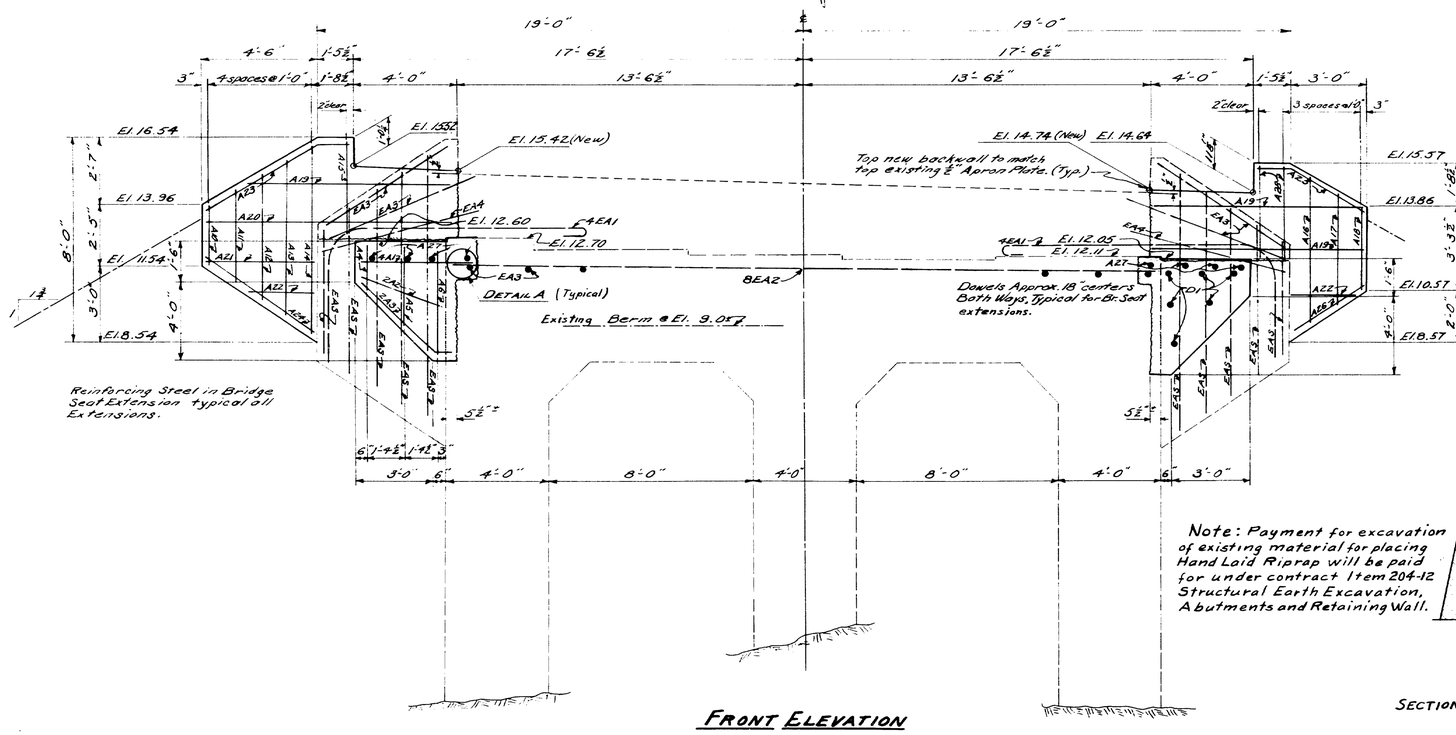
SECTION B-B



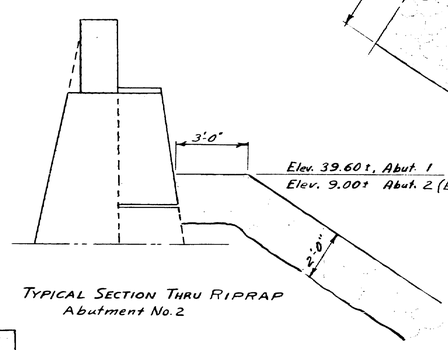
DETAIL "A"



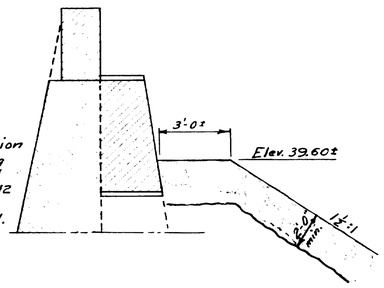




FRONT ELEVATION



TYPICAL SECTION THRU RIPRAP
Abutment No. 2



SECTION CC - Hand Laid Rip-rap (Typical)
Abutment #1)

Note: Payment for excavation of existing material for placing Hand Laid Riprap will be paid for under contract Item 204-12 Structural Earth Excavation, Abutments and Retaining Wall.

See Sheet No (12) for Notes.

DESIGN - CFW & WJV DET-CFW TRACE - HICKS CHECK - MOLLICONE	BRIDGE NO. SURVEY - PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46
OVER
MCRR TRACK
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
ABUTMENT NO 2

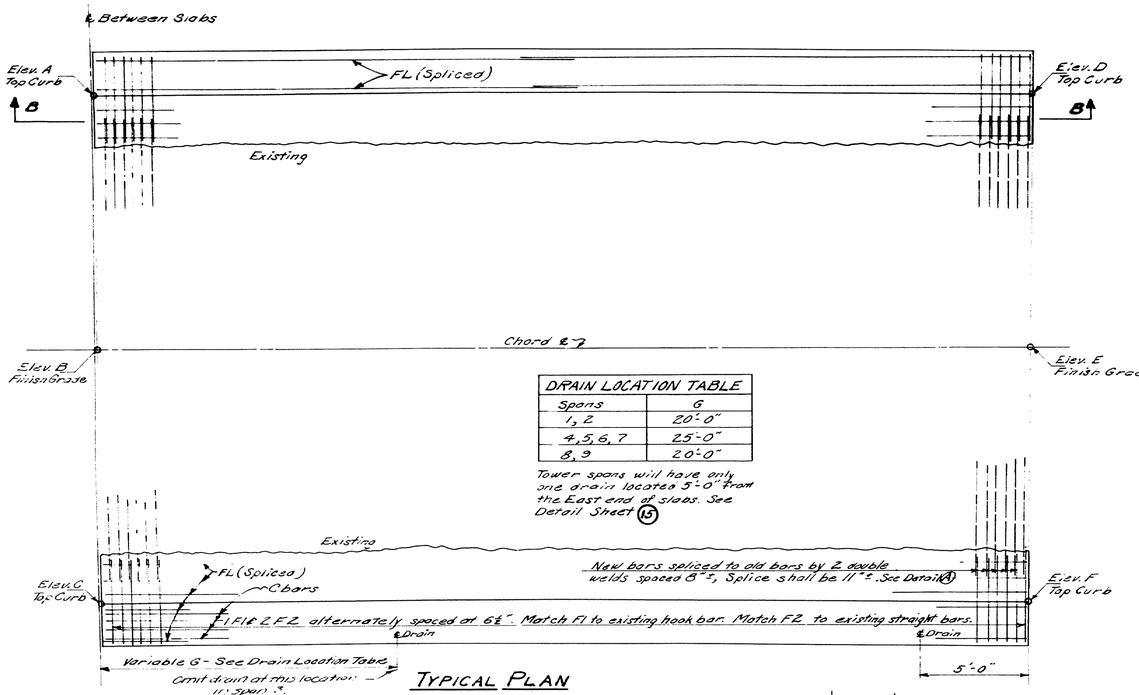
SHEET 13 OF 17 AUGUSTA, MAINE APRIL, 1959

81-59

C. E. CO. NO. 379 4/1957

0 1 2 3 4 5 INCHES

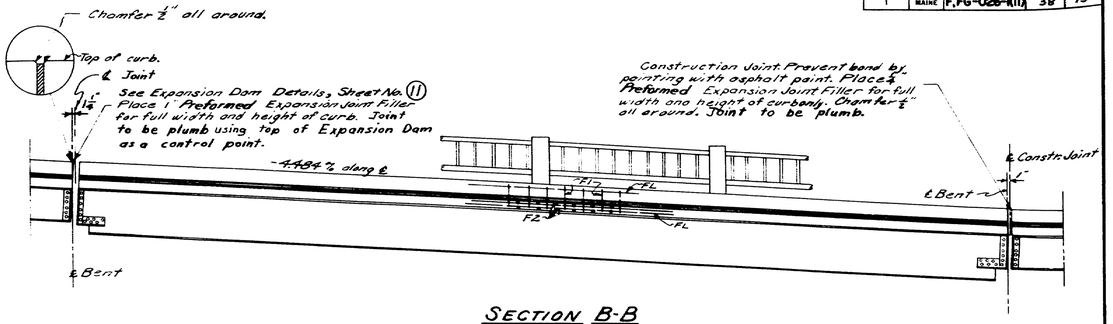
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F.FG-026-K(11)	38	75



TYPICAL PLAN

DRAIN LOCATION TABLE	
Spans	G
1, 2	20'-0"
4, 5, 6, 7	25'-0"
8, 9	20'-0"

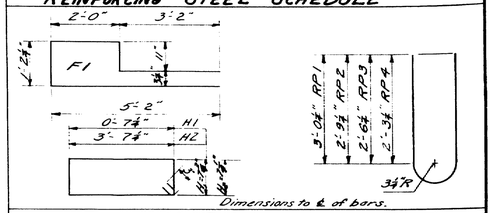
Tower spans will have only one drain located 5'-0" from the East end of slabs. See Detail Sheet (15)



SECTION B-B

GRADE TABLE						
Span	A	B	C	D	E	F
1	47.35	46.22	46.53	45.46	44.33	44.70
Tower 1	45.46	44.33	44.70	44.34	43.21	43.58
2	44.34	43.21	43.58	42.54	41.41	41.78
Tower 2	42.54	41.41	41.78	41.42	40.29	40.66
3	41.42	40.29	40.66	38.96	37.83	38.20
Tower 3	38.96	37.83	38.20	37.84	36.71	37.08
4	37.84	36.71	37.08	35.13	34.00	34.37
Tower 4	35.13	34.00	34.37	34.01	32.88	33.25
5	34.01	32.88	33.25	31.30	30.17	30.54
Tower 5	31.30	30.17	30.54	30.18	29.05	29.42
6	30.18	29.05	29.42	27.47	26.34	26.71
Tower 6	27.47	26.34	26.71	26.35	25.22	25.59
7	26.35	25.22	25.59	23.64	22.51	22.88
Tower 7	23.64	22.51	22.88	22.52	21.39	21.76
8	22.52	21.39	21.76	20.28	19.15	19.52
Tower 8	20.28	19.15	19.52	19.15	18.02	18.39
9	19.15	18.02	18.39	16.82	15.69	16.06

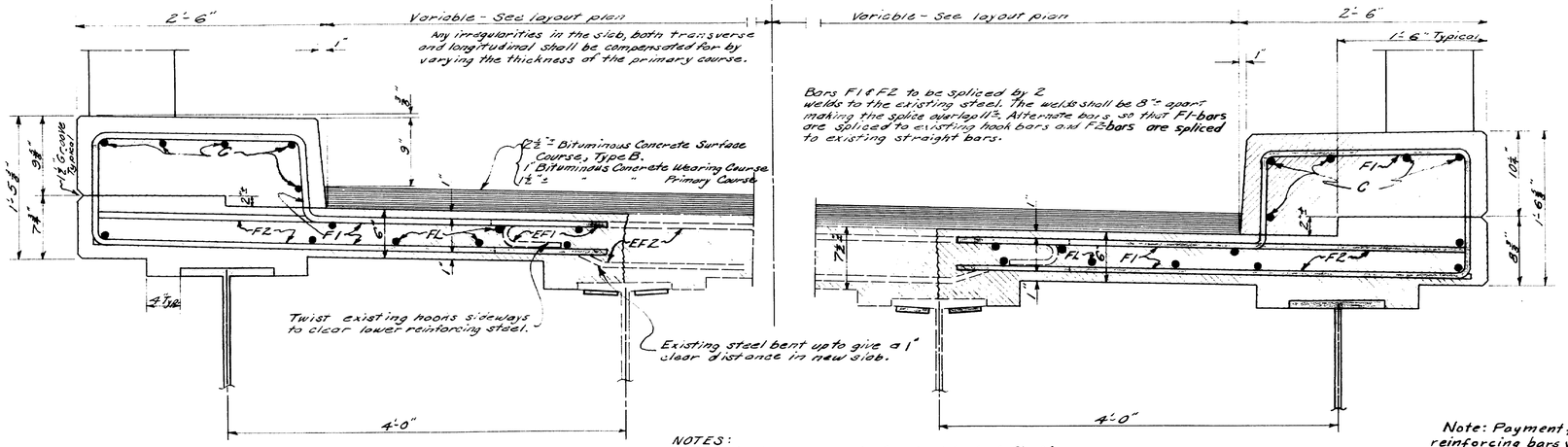
SUPERSTRUCTURE
REINFORCING STEEL SCHEDULE



BENT BARS

Mark	Size	Number	Length	Remarks
F1	#5	1230	12'-5"	Slabs, both sides, all spans
RP1	#6	284	6'-11"	All Rail Posts
RP2	"	4	6'-5"	End Rail Posts
RP3	"	4	5'-11"	" " "
RP4	"	4	5'-5"	" " "
H1	#3	560	3'-0"	All Rail Posts
H2	"	12	8'-11"	End Rail Posts
STRAIGHT BARS				
F2	#5	2532	5'-2"	Slabs, both sides, all spans
FL1	#4	128	24'-7"	Slab, Long., tower spans
FL2	"	32	21'-4"	Slab, Long., splice, Span #1
FL3	"	32	20'-4"	" " " " #2
FL4	"	32	27'-11"	" " " " #3
FL5	"	128	30'-8"	" " " " #4,5,6,7
FL6	"	32	25'-5"	" " " " #8
FL7	"	32	26'-5"	" " " " #9
C1	"	80	24'-7"	Curbs, Long.; Tower Spans
* C2	"	10	20'-9"	" " Trestle Spans
* C3	"	5	21'-5"	" " "
* C4	"	5	20'-5"	" " "
* C5	"	80	20'-0"	" " "
* C6	"	70	19'-6"	" " "
* C7	"	25	17'-5"	" " "
* C8	"	10	17'-0"	" " "
* C9	"	15	16'-7"	" " "
* C10	"	20	16'-3"	" " "
* C11	"	10	16'-10"	" " "
RP5	#3	8	3'-4"	End rail posts

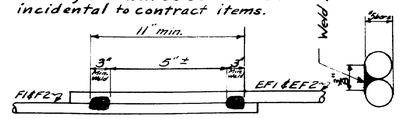
* See Curb Steel Schedule - Sheet (16)



TYPICAL CROSS SECTION

NOTES:
In order to compensate for dead load deflection and any irregularities in the steel, elevations from the "Bottom of the Slab Grade Table" shall be set at the points indicated for the construction of slab forms. See Sheet (15)
Concrete for curbs shall not be placed until concrete in superstructure slab has been in place for a minimum period of seven days. During this period form work for curbs may proceed but one way traffic will be maintained and only hand equipment shall be allowed on the slab. Chamfer all exposed edges of concrete ¾" unless otherwise indicated. Rail posts will be chamfered ½".

Note: Payment for welding reinforcing bars will not be made directly but will be considered incidental to contract items.



WELDING DETAIL "A"

DESIGN - VERRILL DET. DOTEN	BRIDGE NO.
TRACE - HICKS	SURVEY -
CHECK - WISWELL	PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46

OVER

MCRR TRACK

IN THE TOWN OF

WOOLWICH

SAGADAHOC COUNTY

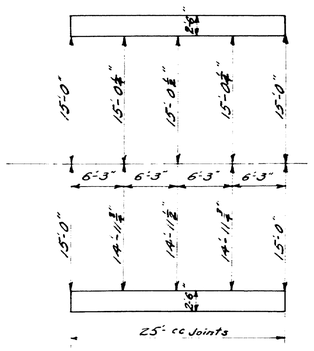
SUPERSTRUCTURE SLAB, GENERAL

SHEET 14 OF 17 AUGUSTA, MAINE APRIL, 1959.

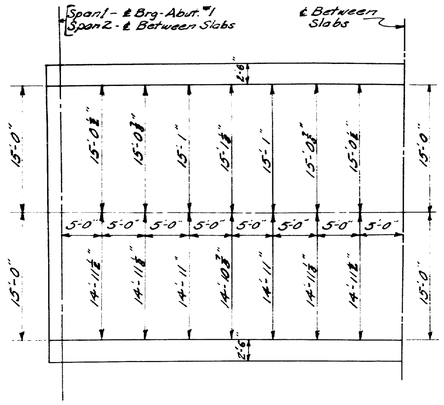
81-60

C. H. CO. NO. 379

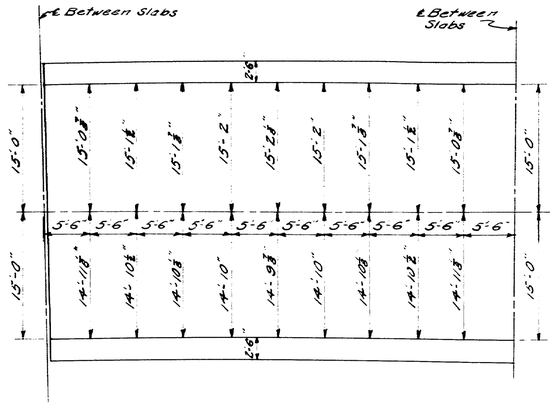
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	FG-026-1(1)	39	73



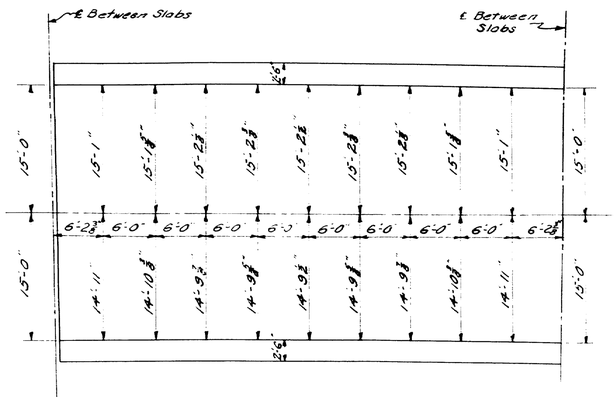
LAYOUT - TOWERS



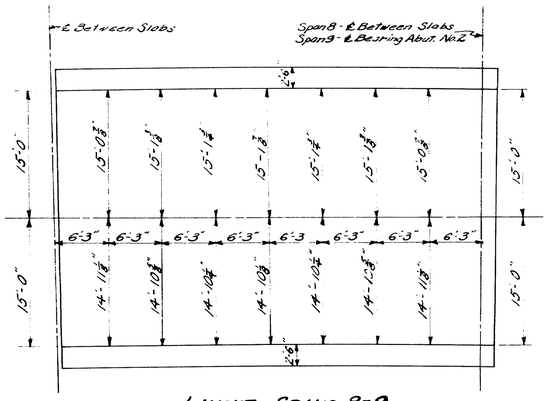
LAYOUT - SPANS 1-2



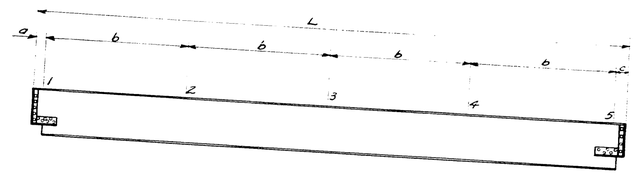
LAYOUT - SPAN 3



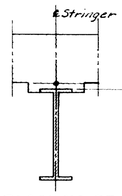
LAYOUT - SPANS 4-5-6-7



LAYOUT - SPANS 8-9



TYPICAL STRINGER



Bottom of slab Elev.
Typ. of Stringer
2" Nominal blocking @ Abut. & Bents; not to be used in setting forms

BLOCKING DETAIL

NOTE:
Elevations for the bottom of slab shall be set at the points given in the accompanying table before slab forms are started. Elevations given have been calculated to compensate for dead load deflection.

BOTTOM OF SLAB GRADE TABLE

	NORTH STRINGER								SOUTH STRINGER							
Span	L	a	b	c	1	2	3	4	5	Span	L	a	b	c	1	2	3	4	5
1	40'-10 3/8"	5"	10'-1"	1 1/8"	45.81'	45.44'	45.01'	44.54'	44.02'	1	39'-10 1/2"	2"	9'-11"	1/2"	45.02'	44.64'	44.21'	43.74'	43.23'
Tower 1	24'-10 1/2"	1"	6'-2"	1 1/2"	44.01'	43.78'	43.52'	43.23'	42.91'	Tower 1	24'-10 1/2"	1"	6'-2"	1 1/2"	43.21'	42.98'	42.72'	42.43'	42.10'
2	40'-4 3/4"	3/4"	10'-0 3/8"	1 1/8"	42.89'	42.51'	42.09'	41.62'	41.11'	2	39'-4 3/4"	3/4"	9'-10"	1/2"	42.09'	41.71'	41.28'	40.82'	40.31'
Tower 2	24'-10 1/2"	1"	6'-2"	1 1/2"	41.09'	40.86'	40.60'	40.31'	39.99'	Tower 2	24'-10 1/2"	1"	6'-2"	1 1/2"	40.30'	40.07'	39.81'	39.52'	39.19'
3	55'-5 3/4"	1/2"	13'-10"	1 1/4"	39.98'	39.45'	38.86'	38.22'	37.52'	3	54'-3 1/4"	3/4"	13'-6 1/2"	3/4"	39.17'	38.65'	38.06'	37.42'	36.73'
Tower 3	24'-10 1/2"	1"	6'-2"	1 1/2"	37.50'	37.22'	37.02'	36.73'	36.41'	Tower 3	24'-10 1/2"	1"	6'-2"	1 1/2"	36.71'	36.48'	36.22'	35.93'	35.60'
4	60'-11 1/4"	1/4"	15'-2 1/2"	1"	36.39'	35.82'	35.17'	34.46'	33.69'	4	59'-8"	0	14'-11"	0	35.59'	35.01'	34.36'	33.66'	32.89'
Tower 4	24'-10 1/2"	1"	6'-2"	1 1/2"	33.68'	33.45'	33.19'	32.90'	32.58'	Tower 4	24'-10 1/2"	1"	6'-2"	1 1/2"	32.88'	32.65'	32.39'	32.10'	31.77'
5	60'-11 1/4"	1/4"	15'-2 1/2"	1"	32.57'	31.99'	31.34'	30.63'	29.86'	5	59'-8"	0	14'-11"	0	31.76'	31.18'	30.53'	29.83'	29.06'
Tower 5	24'-10 1/2"	1"	6'-2"	1 1/2"	29.85'	29.62'	29.36'	29.07'	28.75'	Tower 5	24'-10 1/2"	1"	6'-2"	1 1/2"	29.05'	28.82'	28.56'	28.27'	27.94'
6	60'-11 1/4"	1/4"	15'-2 1/2"	1"	28.74'	28.16'	27.52'	26.81'	26.03'	6	59'-8"	0	14'-11"	0	27.93'	27.35'	26.70'	26.00'	25.24'
Tower 6	24'-10 1/2"	1"	6'-2"	1 1/2"	26.02'	25.73'	25.39'	25.24'	24.92'	Tower 6	24'-10 1/2"	1"	6'-2"	1 1/2"	25.22'	24.99'	24.73'	22.44'	24.11'
7	60'-11 1/4"	1/4"	15'-2 1/2"	1"	24.91'	24.33'	23.68'	22.98'	22.20'	7	59'-8"	0	14'-11"	0	24.10'	23.52'	22.87'	22.17'	21.41'
Tower 7	24'-10 1/2"	1"	6'-2"	1 1/2"	22.19'	21.96'	21.70'	21.41'	21.09'	Tower 7	24'-10 1/2"	1"	6'-2"	1 1/2"	21.40'	21.17'	20.90'	20.61'	20.29'
8	50'-5 1/4"	1/4"	12'-7"	1"	21.08'	20.60'	20.06'	19.48'	18.84'	8	49'-4"	0	12'-4"	0	20.27'	19.79'	19.26'	18.68'	18.04'
Tower 8	24'-10 1/2"	1"	6'-2"	1 1/2"	18.82'	18.60'	18.34'	18.05'	17.73'	Tower 8	24'-10 1/2"	1"	6'-2"	1 1/2"	18.05'	17.80'	17.54'	17.25'	16.92'
9	50'-11 1/4"	1/4"	12'-7"	1 1/4"	17.71'	17.24'	16.70'	16.12'	15.48'	9	49'-10"	1/2"	12'-4"	1 1/2"	16.90'	16.43'	15.90'	15.32'	14.69'

The above blocking elevations were adjusted to conform to existing structure. Adjustments shown in hundredths of feet. The same adjustments applied to corresponding points on south stringers. The elevation of existing north exterior bearing at Abutment-2 was taken as correct and used as a datum.

STAY PLATE DETAIL

DRAIN LENGTHS		
SPAN	H	Required
Tower	2'-3"	8
1 & 2	3'-2"	4
3	3'-8"	1
4, 5, 6 & 7	3'-10"	8
8 & 9	3'-5"	4

NOTE:
Adjust reinforcing steel to clear drains. For Section A-A drain locations see Typical Plan. Sheet 14.

SECTION A-A

SECTION B-B

DRAIN DETAILS

Field changes - N.W.T. 7-2-62

DESIGN - VERRILL DET. DOTEN
TRACE - HICKS
CHECK - CFW
BRIDGE NO.
SURVEY -
PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46
OVER
MCRR TRACK
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
SLAB LAYOUTS, BLOCKING & DRAINS

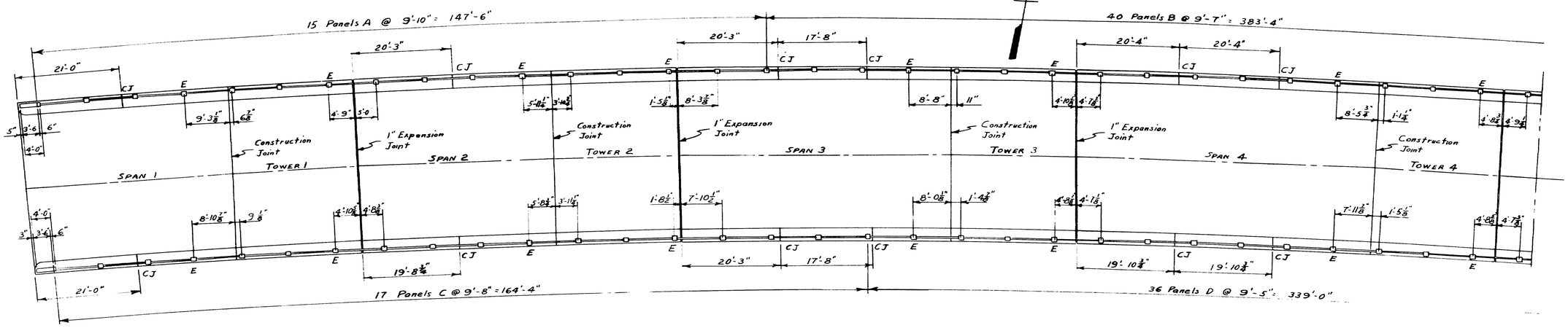
SHEET 15 OF 17 AUGUSTA, MAINE APRIL, 1959.

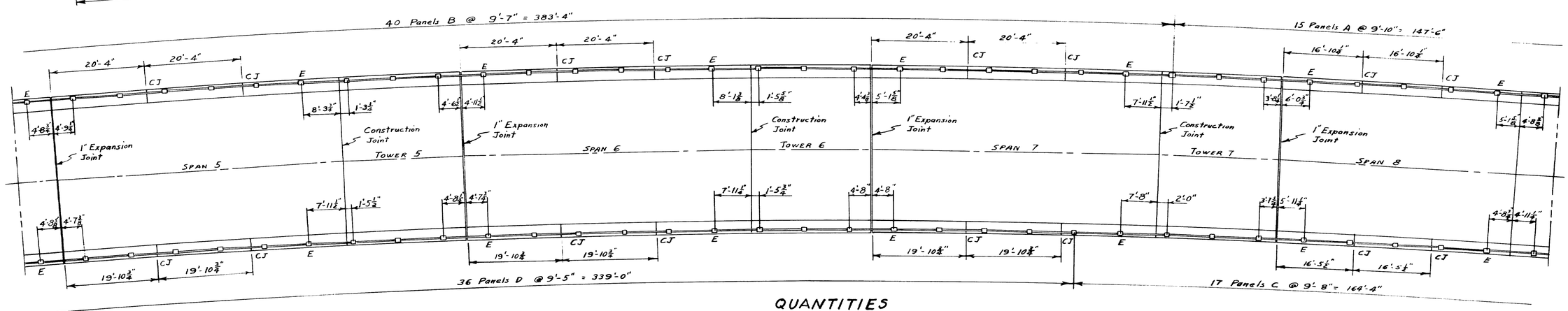
81-61

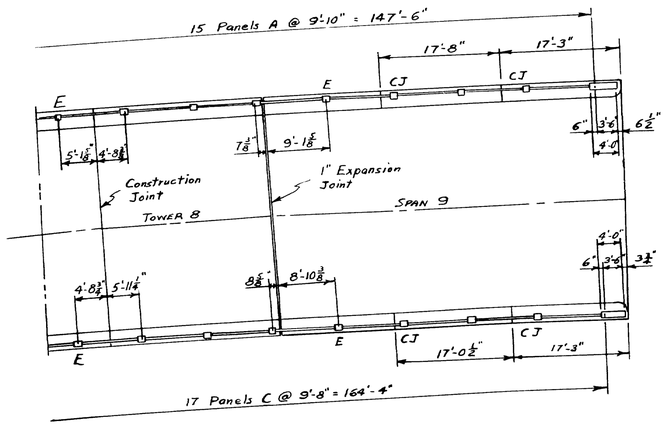
C. E. CO. NO. 378 40877

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F.FG-026-1(10)	40	73







C BAR LOCATION TABLE			
BAR	SPAN	Side	Panel
C2	#1	Both	1st
C3	#1	North	2nd
C4	#1	South	2nd
C5	#2	North	Both
	#3	Both	1st
	#4 to #7	North	All Three
C6	#2	South	Both
	#4 to #7	South	All Three
C7	#3	North	2nd & 3rd
	#3	South	2nd
	#9	North	1st & 2nd
C8	#9	Both	3rd
C9	#8	North	All Three
C10	#8	South	All Three
	#3	South	3rd
C11	#9	South	1st, 2nd

Panels are numbered from the West end of each span.

QUANTITIES
BRIDGE AT STATION 46

ITEM	DESCRIPTION	QUANTITY
204-12	Structural Earth Excavation, Abutments and Retaining Walls	30 c.y.
205-9	Granular Borrow	430 c.y.
308-6	Overhaul - Pit Measure -	2580 Y.M.
404-29	Bituminous Concrete Surface Course Type "B"	320 tons
506-6	Tack Coat	340 gals.
701-33	Portland Cement Concrete, Abutments and Retaining Walls.	12 c.y.
701-40	Portland Cement Concrete, Roadway and Sidewalk Slabs on Steel Bridges	277 c.y.
701-47	Portland Cement	460 bbls.
702-103	Structural Steel, Fabricated and Delivered	251,500 lbs.
702-104	Structural Steel, Erection	251,500 lbs.
705-13	Reinforcing Steel, Delivered	45,900 lbs.
705-14	Reinforcing Steel, Placing	45,900 lbs
705-17	Shear Connectors	Lump Sum
801-8	Removal of Existing Concrete	135 c.y.
801-9	Removal of Existing Concrete Rail	1,950 L.F.
801-10	Removal of Existing Surface Course	1,815 s.y.
805-8	Bridge Rail, Delivered and Erected	1,360 L.F.
905-32	Anchorages for Type "C Guard Rail	2 each
907-10	Hand Laid Rip-Rap	210 c.y.
908-9	Loam Borrow	40 c.y.
910-13	Seeding, Method No. 1	4.5 units
912-7	Hay Mulch	0.25 Tons
917-6	Traffic Officers	6,000 M.hrs.
913-7	Asphalt Mulch Binder	25 Gals.

NOTES:
The symbol C.J. shows locations of Curb Contraction Joints. Dimensions shown are measured along the outside of curb. Break bond in curb contraction joints with Asphalt Paint. Construct ½" V-groove all around curb. Joints to be plumb. Dimensions given from Expansion and Construction Joints to ℄ Rail Posts are to be used for setting Rail Post Steel only. All dimensions given for rail are measured along ℄ of Rail.
See sheet No 17 for details of Post E.
Dimensions at Expansion Joints are to near edge of joints.

DESIGN - VERRILL DET. H. DOTEN
TRACE - DOTEN
CHECK - C.F.W.
BRIDGE NO.
SURVEY -
PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46
OVER
MCRR TRACK
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
LAYOUT, CONTRACTION JOINTS, RAIL

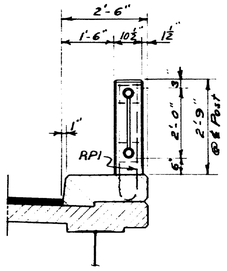
SHEET 16 OF 17 AUGUSTA, MAINE APRIL, 1959.

81-62

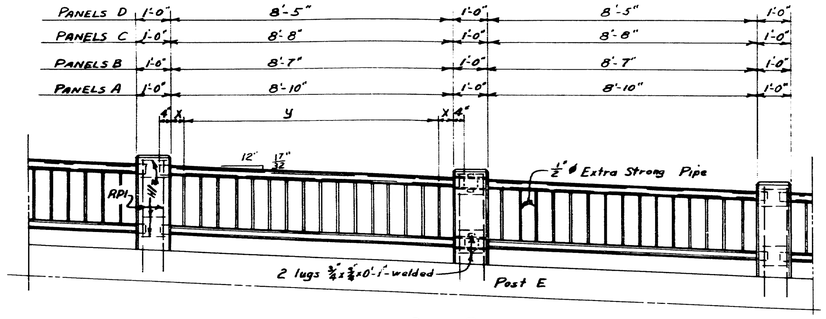
C. B. CO. NO 378 4-57

0 1 2 3 4 5 INCHES

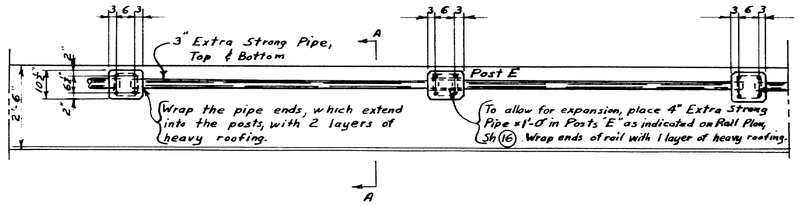
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	F.FG-026-1(10)	41	73



SECTION AA



PART ELEVATION



PART PLAN

NOTES

Tops of posts to be level. Rails to be constructed to the grade shown. Posts and pales to be plumb.

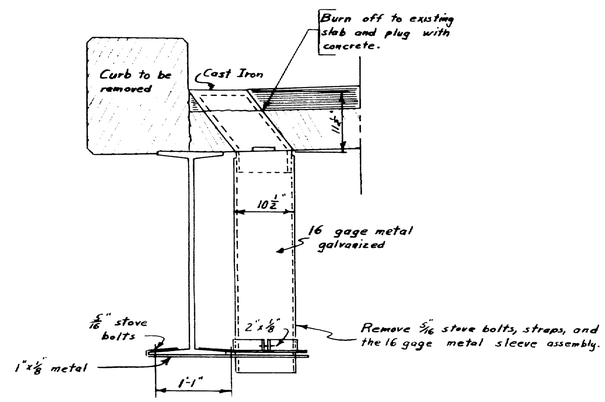
Drill 7/8 holes for the 1/2" pipe in the 3" pipe so that the pales will extend through the wall into the 3" pipe rail. Weld the pales to the 3" pipe, top and bottom. All exposed joints are to be finished by grinding or filling to give a neat appearing job.

All exposed edges of concrete of the rail posts to be chamfered 1/2".

Rail details shall be submitted to the Engineer for approval before fabrication is started.

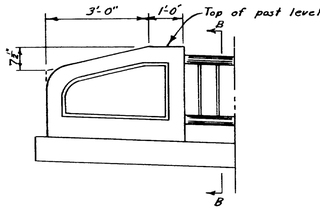
RAIL DETAILS

RAIL TABLE			
	X	y	No Req'd
PANEL A	5"	17 Poles @ 6" cc	30
PANEL B	3½"	17 Poles @ 6" cc.	40
PANEL C	4"	17 Poles @ 6" cc.	34
PANEL D	5½"	16 Poles @ 6" cc.	36

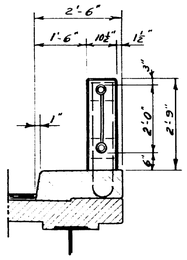


DRAIN REMOVAL DETAIL

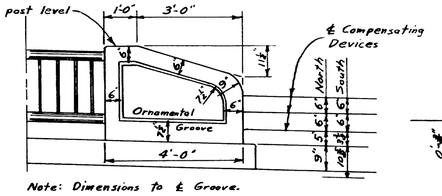
All work done in the removal and revision of the existing drains shall not be paid for directly but shall be considered incidental to Item 801-8 "Removal Existing Concrete."



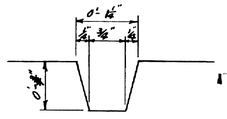
END POST, SPAN 1



SECTION BB

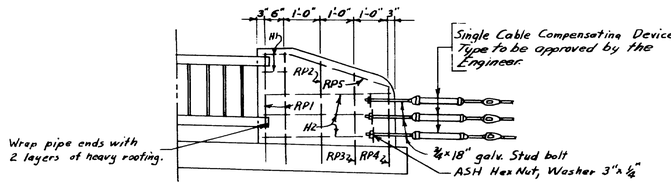


END POST, SPAN 9

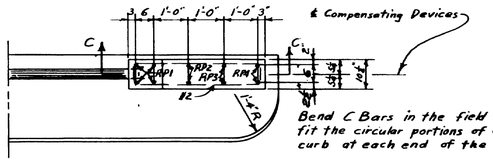


GROOVE DETAIL

Groove on inside face only



SECTION CC



PART PLAN

Note: Anchorages and compensating devices to be installed at Abutment, Span 9 only. Payment for the compensating devices to be included in the contract unit price for Item 905-32, Anchorages for Type "C" Guard Rail.

END POST DETAILS

1) All flat washers used except at existing floor beams. (83% beveled)
2) No holes provided in stringers. No bolts used. Welded to stringers.
3) 7/8 ø High tensile bolts.
4) Bethlehem shapes furnished.

Field changes - N.W.T. 7-2-62

BOLT SCHEDULE

LOCATION OF 7/8" MACHINE BOLTS							LOCATION OF 7/8" HIGH TENSILE STR. BOLTS					
Location	Position	No. of Bolts	Length Bolts	No. Nuts	Remarks		Location	Position	No. of Bolts	Length Bolts	Flat Washers	5% Bevel Washers (1)
Int Stringers to New Floor Bms. & Brackets	Exp. End to Bracket :Span "2	4	3½"	8	1/4" Gap		New Fl. Bms. to Columns	Bents "3,4,6,7,& 8 and Bent "5S only	110	2¾"	220	None
	:Span "3 thru "9	28	3¾"	56	1/4" Gap			All others	210	2½"	420	None
	Fixed End to Bracket :Span "1 & "2	8	3½"	16	Tight		New Fl. Bms to Existing 14" Plate	At all Columns	128	3¾"	128	128
	Fixed Ends to Fl. Bms. :Span "1 thru "8	24	3½"	48	Tight		Tension Strap to Angles	At all Columns	154	3"	308	None
	:Span "1 & "2 N	4	6½"	4	Tight, Burred		T.S. Angles to New Fl. Beams	At all Columns	372	3" (2)	372	372
	:Span "1 & "2 S & Span "3 thru "8	28	4"	28	Tight, Burred		T.S. Angles to Exist. Fl. Bms.	At bents 1,2,3,14,15,& 16	132	3"	132	132
Apron Pls to New Stringers	All	16	3½"	16	See Sh. 11			All others	240	3¼"	240	240
Exp. Dams to New Stringers	ED11 to Int. Strs.	64	3¾"	64	See Sh. 11		Tower Stringers to New Fl. Bms. & Brackets	Thru ST @ Bearing N	32	4" (2)	None	64
(2)	ED12 to Tower Strs.	64	3¾"	64	See Sh. 11			Thru ST @ Bearing S	32	4½" (2)	None	64
(3)	Exist. Tower Strs. to Exist. Floor Beams, Joints 7 & 11	16	3/4"	16				Thru ST to Bracket N	96	2¾"	96	96
								Thru ST to Bracket S	96	3" (2)	96	96
							New Diaphragms to Old Stringers	Angles to Channels, Tower Sp.	96	2¼"	192	None
								Angles to Channels, Int. Sp.	328	2½"	656	None
								Angles thru Ex. Strs., Spans: 1,2 & all Towers	240	2¾"	480	None
								All other Spans	330	3"	660	None

1. Replace by flat washers if Carnegie shapes used.
(4) 2. Use 1/4" shorter bolts if Carnegie shapes used.

SUMMARY OF 7/8" BOLTS						
MACHINE BOLTS			HIGH TENSILE STR. BOLTS			
Length	No. of Bolts	No. of Nuts	Length	No. of Bolts	Flat Washers	5% Bevel Washers
3½"	88		2¼"	96		
3½"	28		2½"	538		
3¾"	92		2¾"	448		
4"	28		3"	1084		
5½"	4		3¼"	240		
			3¾"	128		
			4"	32		
			4¼"	32		
TOTALS	240	304	TOTALS	2,596	4,000	1,192

DESIGN - WJV, DETAIL HRD
TRACE - HRD
CHECK - C.F.W.

BRIDGE NO.
SURVEY -
PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE AT STATION 46
OVER
MCRR TRACK
IN THE TOWN OF
WOOLWICH
SAGADAHOC COUNTY
RAIL DETAILS

SHEET 17 OF 17 AUGUSTA, MAINE APRIL, 1959

81-63

C.E. CO. NO. 378 10077

0 1 2 3 4 5 INCHES

APPROACH QUANTITIES

ITEM	DESCRIPTION	QUANTITIES
203-9	Earth Excavation	100 C.Y.
205-8	Common Borrow	50 C.Y.
302-7	Gravel Base-In Place Measure	50 C.Y.
308-5	Overhaul-In Place Measure	390 yd.mi.
401-11	Gravel Surface Course	15 C.Y.
404-29	Bit. Concrete Surface Course, Type B	30 Tons
905-46	Guide Rail Removed and Reset	200 L.F.

F-FG-026-1(11) 70 73

Sta. 51+99.78

End of Bridge Sta 51+99.78

Field Ent. on Left

+50

+25

+50

+50

52

53

54

50

51

52

53

54

5

5

5

5

10

10

10

C 34

30 20 10 0

30 20 10 0

0 1 2 3 4 5 INCHES

STATION 46
WOOLWICH
CROSS SECTIONS

81-64

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

Design: AASHTO LRFD Bridge Design Specifications, Fourth Edition 2009 and Interim Specifications through 2011.

DESIGN LOADING

Live Load ..... HL - 93 Modified

TRAFFIC DATA

Current (2010) AADT	17,550
Future (2030) AADT	22,850
DHV - % of AADT	12
Design Hour Volume	2,738
% Heavy Trucks (AADT)	7
% Heavy Trucks (DHV)	6
Directional Distribution (DHV)	58%
18 kip Equivalent P 2.0	749
18 kip Equivalent P 2.5	714
Design Speed (mph)	55

MATERIALS

Concrete:	
Deck Joints	Class "LP"
All Other	Class "A"
Reinforcing Steel	ASTM A615/A615M, Grade 60
Structural Steel:	
All Material (except as noted)	ASTM A709/A709M, Grade 50W
High Strength Bolts	ASTM A325, Type 3

BASIC DESIGN STRESSES

Concrete	f 'c = 4,350 psi
Reinforcing Steel	f y = 60,000 psi
Structural Steel:	
ASTM A 709/A 709M, Grade 50W	F y = 50,000 psi
ASTM A 709/A 709M, Grade 36	F y = 36,000 psi
ASTM A 325	F μ = 120,000 psi

UTILITIES

Central Maine Power Company
New England Telephone
Maine Eastern Railroad
Water Main to Bath

MAINTENANCE OF TRAFFIC

Maintain two-way traffic on existing bridge at all times utilizing staged construction. Minimum travelway shall be 22 feet.

WOOLWICH
SAGADAHOC COUNTY
STATION 46 BRIDGE
OVER
MAINE EASTERN RAILROAD
US ROUTE 1
PROJECT NO. WIN 17084.00
FEDERAL PROJECT NO. BR-1708(400)X
PROJECT LENGTH 0.167 mi.
BRIDGE NO. 3039

LIST OF DRAWINGS

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ERDMAN ANTHONY

PROJECT LOCATION:	U.S. Route 1 (Bridge 3039) over Maine Eastern Railroad & Tidal Marshland
PROGRAM AREA:	Bridge
OUTLINE OF WORK:	Replacement of the existing wearing surface, expansion joints, removal of all fixed joints, replacement and refurbishing of the bridge bearings, miscellaneous steel repairs and recoating, concrete repairs to the deck, abutments and substructure foundations, and limited approach work.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
APPROVED — DATE 12/31/12
COMMISSIONER:
CHIEF ENGINEER: 12/31/12

STATE OF MAINE — EDWIN S. ANTHONY No. 7617 — LICENSED PROFESSIONAL ENGINEER

Edwin S. Anthony
SIGNATURE
7617
P.E. NUMBER
12/20/2012
DATE

PROJECT INFORMATION		
PROGRAM	BRIDGE	
PROJECT MANAGER	BEN CONDON	
DESIGNER	J. RODEMS	
CONSULTANT	ERDMAN ANTHONY	
PROJECT RESIDENT		
CONTRACTOR		
PROJECT COMPLETION DATE		

WOOLWICH
STATION 46 BRIDGE

TITLE SHEET

SHEET NUMBER
1
OF 28

WIN 17084
WIN 17084.00

Date:12/20/2012
Username: LindoT
Division: BRIDGE
Filename:\00\Bridge\MSTA\001_Title.dgn

Filename: ...\BRIDGE\MSTA\002_Estimate.dgn Division: BRIDGE Username: coy.williams Date:12/26/2012

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.17	REMOVING EXISTING STRUCTURAL CONCRETE (135 CY)	1	LS
202.202	REMOVING PAVEMENT SURFACE	824	SY
202.30	REMOVING CONCRETE WEARING SURFACE (3,700SY)	1	LS
203.61	CONSTRUCT TEMPORARY ACCESS ROAD	1	LS
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES	40	CY
403.102	HOT MIX ASPHALT FOR SPECIAL AREAS	4	T
403.2081	12.5 mm POLYMER MOD. HOT MIX ASPHALT SURFACE	435	T
403.2111	9.5 mm POLYMER MOD. HOT MIX ASPHALT SHIM	57	T
403.2131	12.5 mm POLYMER MOD. HOT MIX ASPHALT BASE	335	T
409.15	BITUMINOUS TACK COAT, APPLIED	200	GAL
502.41	STRUCTURAL CONCRETE SUPERSTRUCTURE SLAB	135	CY
503.12	REINFORCING STEEL, FABRICATED & DELIVERED	21000	LB
503.13	REINFORCING STEEL, PLACING	21000	LB
503.171	MECHANICAL SPLICE FOR REINFORCING STEEL (208 EA)	1	LS
506.144	FIELD PAINTING OF EXISTING AND NEW STRUCTURAL STEEL (4,400 SF)	1	LS
506.17	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL (4,400 SF)	1	LS
506.18	CONTAINMENT AND POLLUTION CONTROL MEASURES	1	LS
506.191	DISPOSAL OF SPECIAL WASTE MATERIAL	1	LS
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE (3,800 SY)	1	LS
511.07	COFFERDAM: TOWER PEDESTAL 1	1	LS
511.07	COFFERDAM: TOWER PEDESTAL 10	1	LS
511.07	COFFERDAM: TOWER PEDESTAL 11	1	LS
511.07	COFFERDAM: TOWER PEDESTAL 13	1	LS
511.07	COFFERDAM: TOWER PEDESTAL 14	1	LS
511.07	COFFERDAM: TOWER PEDESTAL 15	1	LS
511.07	COFFERDAM: TOWER PEDESTAL 16	1	LS
511.07	COFFERDAM: TOWER PEDESTAL 17	1	LS
511.07	COFFERDAM: TOWER PEDESTAL 21	1	LS
511.07	COFFERDAM: TOWER PEDESTAL 24	1	LS
511.07	COFFERDAM: TOWER PEDESTAL 25	1	LS
511.07	COFFERDAM: TOWER PEDESTAL 32	1	LS
514.06	CURING BOX FOR CONCRETE CYLINDERS	1	EA
518.50	REPAIR OF UPWARD FACING SURFACES TO REINFORCING STEEL (<7.9in)	3400	SF
518.52	REPAIR OF UPWARD FACING SURFACES (>7.9in)	12	CY
518.60	REPAIR OF VERTICAL SURFACES (<7.9in)	60	SF
520.22	EXPANSION DEVICE - COMPRESSION SEAL	8	EA
523.30	REALIGN & REFURBISH FIXED BEARINGS (IN PLACE) (2 EA)	1	LS
523.31	REALIGN & REFURBISH EXPANSION BEARINGS (IN PLACE) (2 EA)	1	LS
523.52	BEARING INSTALLATION	14	EA
523.5301	STEEL BEARINGS, FIXED, SLIDING PLATE (NEW)	7	EA
523.5302	STEEL BEARINGS, EXPANSION, SLIDING PLATE (NEW)	7	EA
524.30	TEMPORARY STRUCTUAL SUPPORT	18	EA
524.40	TEMPORARY STRUCTUAL SUPPORT (PROTECTIVE SHIELD)	1	LS
526.301	TEMPORARY CONCRETE BARRIER, TYPE I (1200 LF)	1	LS
527.34	WORK ZONE CRASH CUSHIONS	2	UN
627.51	6 INCH TEMPORARY PAVEMENT TAPE, YELLOW OR WHITE	13500	LF
627.57	12 INCH REMOVABLE BLACK LINE MASKING TAPE	5150	LF
627.71	4 INCH WHITE PAVEMENT MARKING LINE	4050	LF
627.73	4 INCH YELLOW PAVEMENT MARKING LINE	6550	LF
627.75	WHITE OR YELLOW PAVEMENT AND CURB MARKING	210	SF
629.05	HAND LABOR, STRAIGHT TIME	40	HR
631.172	TRUCK-LARGE (INCLUDING OPERATOR)	40	HR
637.071	DUST CONTROL	1	LS
639.18	FIELD OFFICE, TYPE A	1	EA
652.30	FLASHING ARROW BOARD	2	EA
652.33	DRUM	90	EA
652.35	CONSTRUCTION SIGNS	177	SF
652.38	FLAGGERS	540	HR
652.39	WORK ZONE TRAFFIC CONTROL (70 CD)	1	LS
652.41	PORTABLE CHANGEABLE MESSAGE SIGN	2	EA

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
656.75	TEMPORARY SOIL EROSION AND POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL CONSTRUCTION NOTES

1. NO utility adjustments are anticipated, however, if encountered, all utility facilities shall be adjusted by the respective utilities unless otherwise noted.

2. Geotechnical information furnished or referred to in this plan set is for the use of the Bidders and the Contractor. No assurance is given that the information or interpretations will be representative of actual subsurface conditions at the construction site. MaineDOT will not be responsible for the Bidders' or Contractor's interpretations of, or conclusions drawn from, the geotechnical information.

3. The Contractor shall submit a Bridge Demolition Plan to the Resident at least 10 business days prior to the start of demolition work. The plan shall outline the methods and equipment to be used to remove and dispose of all materials indicated on the plans to be removed. No work related to existing demolition shall be undertaken by the Contractor until MaineDOT has reviewed the Bridge Demolition Plan for appropriateness and completeness. Payment for all work necessary for developing, submitting and finalizing the Demolition Plan will be considered incidental to the structural concrete removal pay item.

4. Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction in payment to the Contractor if the actual final quantities are different from the MaineDOT provided estimated quantities, except as follows:

   a) If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.

   b) If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.

   c) If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation.

5. Project information referred to below may be accessed at the following MaineDOT web address: http://www.maine.gov/mdot/comprehensive-list-projects/project-information.php.

6. The existing bridge plans may be accessed at the MaineDOT web address. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.

7. No work is allowed outside the State of Maine Right-of-Way, including existing Easements.

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

BRIDGE PLANS
WIN 17084
BRIDGE NO. 3039

SIGNATURE
P.E. NUMBER
DATE

	BY	DATE
PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	F. DAHAR	T. LINDO	NOV. 2012
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

STATION 46 BRIDGE
WOOLWICH SAGADAHOC

ESTIMATED QUANTITIES & GENERAL NOTES

SHEET NUMBER
2
OF 28

Filename: ...\00\Bridge\MSTA\003_Plan.dgn Division: BRIDGE Username: LindoT Date:11/30/2012

TAX MAP R-3
LOT 3

STA. 44+20.00
BEGIN PROJECT BR-3039(700)X
(MATCH EXISTING PAVEMENT)

EXISTING DRAINAGE EASEMENT
S.H.C. FILE NO. 12-50

EASEMENT LIMITS

EXISTING SLOPE

SEE S.H.C. FILE NO. 12-50

℄ BEARINGS-
ABUTMENT NO. 1
STA. 45+21.10

℄ BENT NO. 1 FIXED BRG.
℄ BENT NO. 2 EXP. BRG.
℄ BENT NO. 3 FIXED BRG.
℄ BENT NO. 4 EXP. BRG.
℄ BENT NO. 5 FIXED BRG.
℄ BENT NO. 6 EXP. BRG.
℄ BENT NO. 7 FIXED BRG.
℄ BENT NO. 8 EXP. BRG.
℄ BENT NO. 9 FIXED BRG.
℄ BENT NO. 10 EXP. BRG.

℄ CONSTRUCTION

Tower Pedestal To Be Repaired (Typ.)
See Sheet #18 for Details

Temporary Access Road
(See Special Provision
203.61 for Details)

TO BATH

U.S. ROUTE 1

43+00
44+00
45+00
46+00
47+00
48+00
49+00

MARSH
M.E.R.R.
MATCH LINE
EXISTING
WET AREA
ABANDONED
ROAD FLOODED WHEN FLASHING
CMP/7.1/13S ELECTRIC
CMP/18 CMP
CMP/36/14 ELECTRIC
ELECTRIC
MERGE
U-CHANNEL
STONE WHEEL
OSPREY TOWER

PCC = STA. 45+20.55

S.H.C. FILE NO. 12-50
EXISTING SLOPE
EASEMENT LIMITS
EXISTING DRAINAGE EASEMENT
S.H.C. FILE NO. 12-50
S.H.C. FILE NO. 12-78
S.H.C. FILE NO. 12-78

STATE OF MAINE
SEE D.O.T. FILE NO. 12-104

PLEASANT COVE

CURVE DATA #1
PI = 43+27.92
D = 1°36'22"
Δ = 6°11'39" Rt.
R = 3567.14'
L = 385.64'
T = 193.01'
E = 5.22'

CURVE DATA #2
PI = 48+35.19
D = 2°40'37"
Δ = 16°43'35" Rt.
R = 2140.26'
L = 624.81'
T = 314.64'
E = 23.00'

PLAN
25 0 25 50
Scale of Feet

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084
BRIDGE NO. 3039 BRIDGE PLANS

	BY	DATE
PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	T. LINDO	NOV. 2012
CHECKED-REVIEWED	F. DAHAR	
DESIGN2-DETAILED2	WED	
DESIGN3-DETAILED3	E02	
REVISIONS 1	E03	
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

STATION 46 BRIDGE
WOOLWICH SAGADAHOC

PLANS

SHEET NUMBER
3
OF 28

Filename: ...\00\Bridge\MSTA\004_Plan.dgn Division: BRIDGE Username: LindoT Date:11/30/2012

STATE OF MAINE
TO
BATH IRON WORKS CORPORATION
CONSTRUCTION
&
MAINTENANCE
EASEMENT
SEE SAGADAHOC COUNTY REGISTRY OF DEEDS
VOL. 1663 PAGE 44
STATE OF MAINE
TAX MAP R-3
LOT 5
AREA
WET AREA
BERM BY BATH IRON WORKS
MARSH
LIMITS
Tower Pedestal To Be Repaired (Typ.)
See Sheet #18 for Details
SEE S.H.C. FILE NO. 12-38
℄ BENT NO.11
FIXED BRG.
℄ BENT NO.12
EXP. BRG
℄ BENT NO.13
FIXED BRG.
℄ BENT NO.14
EXP. BRG
℄ BENT NO.15
FIXED BRG.
℄ BENT NO.16
EXP. BRG
℄ BEARINGS
ABUTMENT NO. 2
STA. 51+97.70
STA. 53+00.00
END PROJECT BR-3039(700)X
(MATCH EXISTING PAVEMENT)
R/W
MATCH LINE
50+00
51+00
52+00
53+00
54+00
55+00
U.S. ROUTE 1
N 52°21'04.51" E
N 54°09'49.28" E
SPEED LIMIT 35
RIGHT LANE MUST TURN RIGHT
℄ CONSTRUCTION
TO WISCASSET
GEORGE WRIGHT RD.
Temporary Access Road
(See Special Provision
203.61 for Details)
PT = STA. 51+45.35
PC = STA. 52+57.86
PT = STA. 55+42.56
35/205/15 ELECTRIC
SEE S.H.C. FILE NO. 12-38
WET AREA
TAX MAP R-3
LOT 4 ?
CMP/34/16 ELECTRIC
STATE OF MAINE
PLEASANT COVE
ABANDONED
LINCOLN COUNTY COMMISSIONERS RECORDS
VOL. 6 PAGE 240 (1838) + AS RELOCATED
VOL. 6 PAGE 413 (1840)
4 RODS (66')
CMP/33/17 ELECTRIC

CURVE DATA #3
PI = 54+00.22
D = 0°38'12"
Δ = 1°48'45" Rt.
R = 9000.00
L = 284.70'
T = 142.36'
E = 1.13'

PLAN

25 0 25 50
Scale of Feet

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

BRIDGE NO. 3039 | WIN 17084 | BRIDGE PLANS

	BY	DATE
PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	T. LINDO	NOV. 2012
CHECKED-REVIEWED	F. DAHAR	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

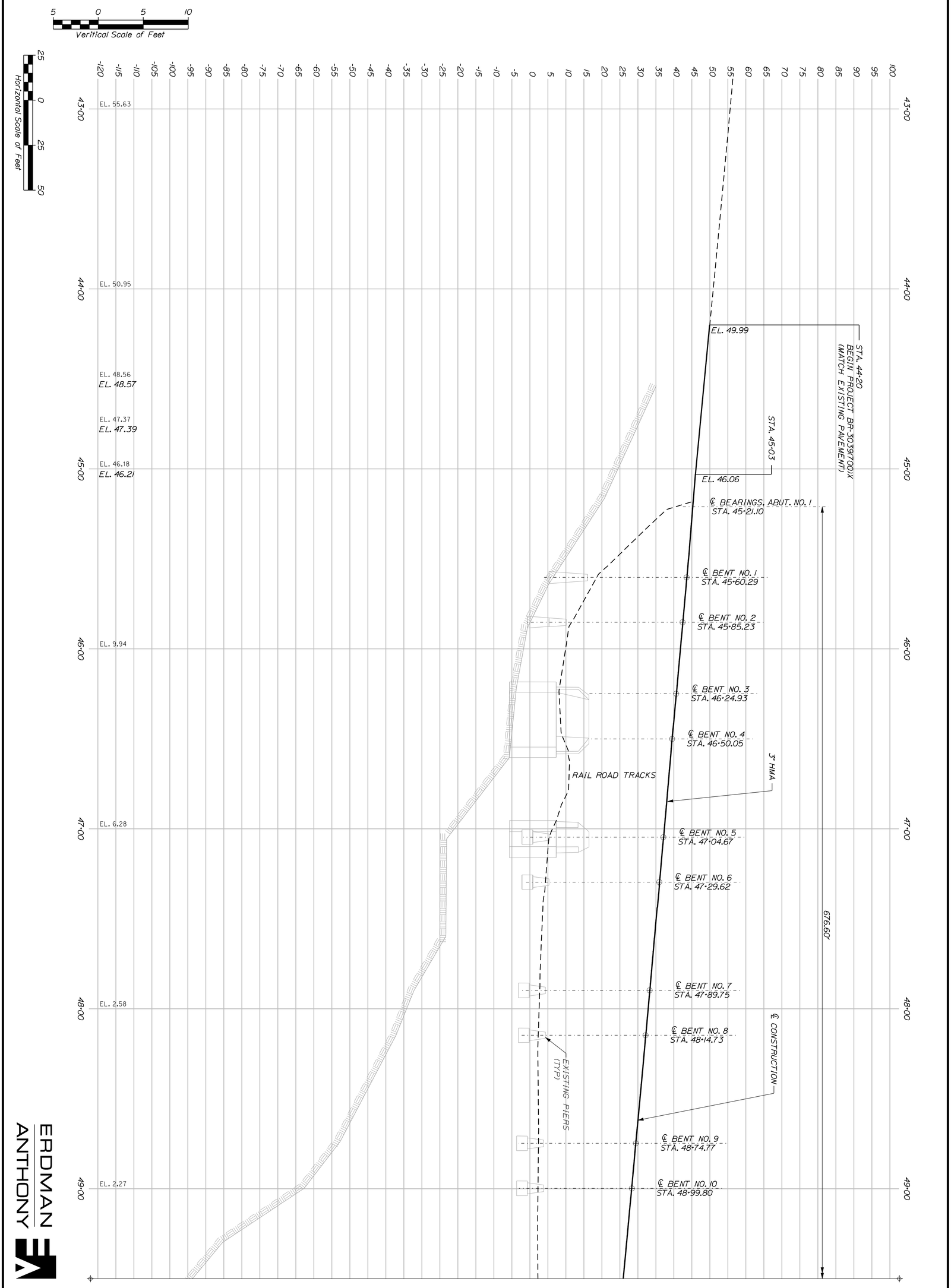
DATE

STATION 46 BRIDGE
WOOLWICH SAGADAHOC

PLANS

SHEET NUMBER
4
OF 28

Filename: ...\00\Bridge\MSTA\005_Profile.dgn Division: BRIDGE Username: LindoT Date:11/30/2012



ERDMAN ANTHONY

SHEET NUMBER 5 OF 28

STATION 46 BRIDGE

WOOLWICH SAGADAHOC

PROFILE

PROJ. MANAGER DEVIN ANDERSON		BY	DATE
DESIGN-DETAILED	F. DAHAR	T. LINDO	NOV. 2012
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

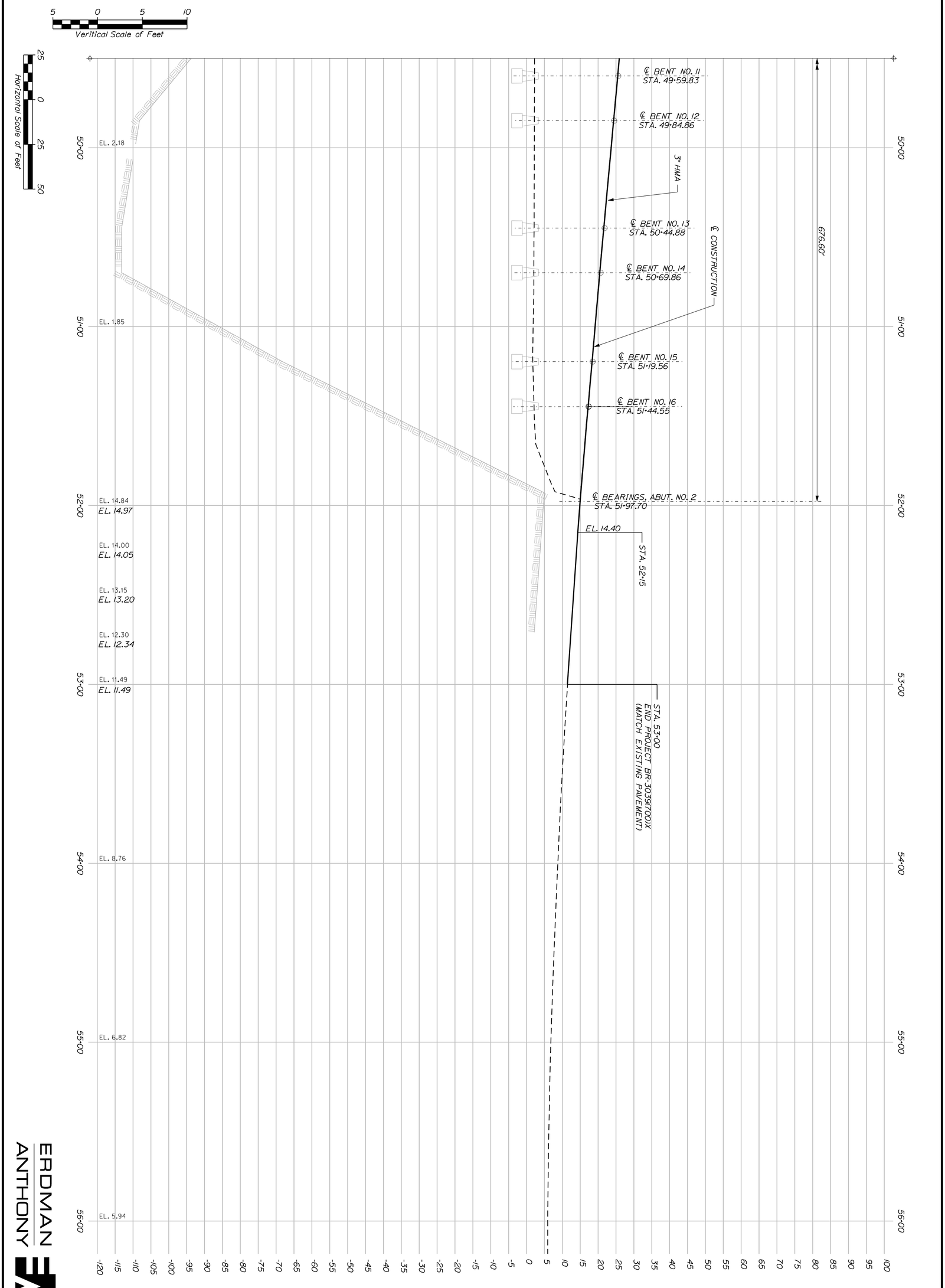
P.E. NUMBER

DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

BRIDGE NO. 3039 WIN 17084 BRIDGE PLANS



ERDMAN ANTHONY

SHEET NUMBER 6 OF 28

STATION 46 BRIDGE

WOOLWICH SAGADAHOC

PROFILE

		BY	DATE
PROJ. MANAGER DEVIN ANDERSON			
DESIGN-DETAILED	F. DAHAR	T. LINDO	NOV. 2012
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

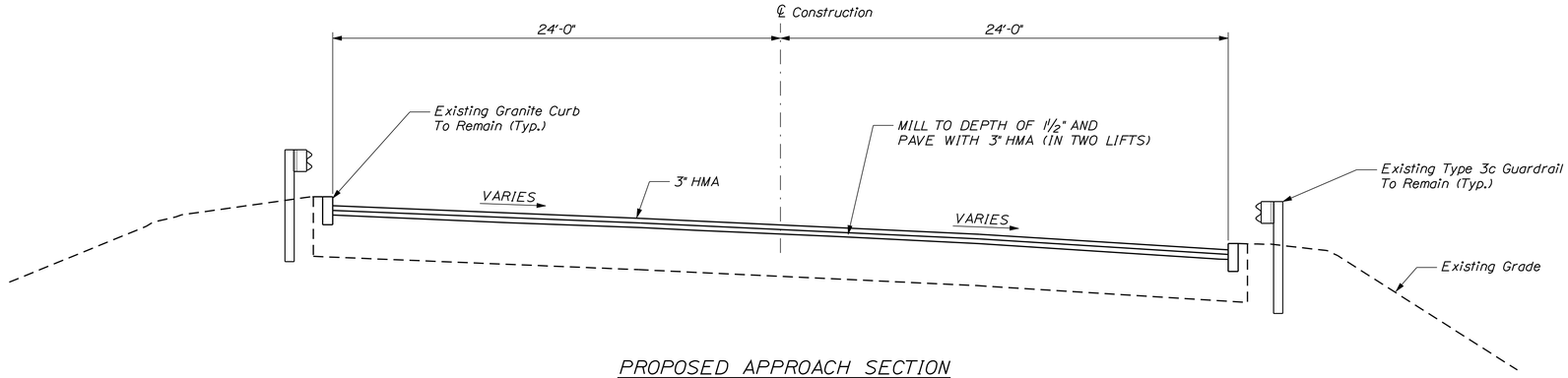
P.E. NUMBER

DATE

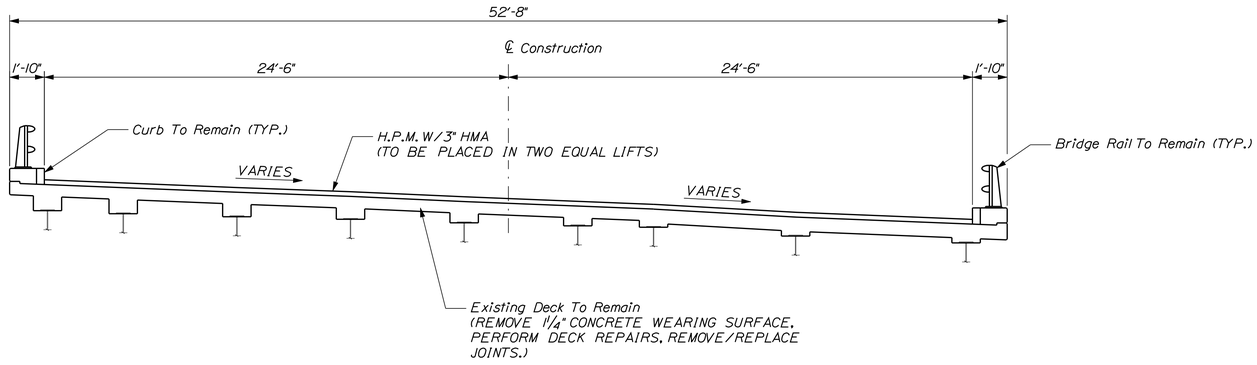
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

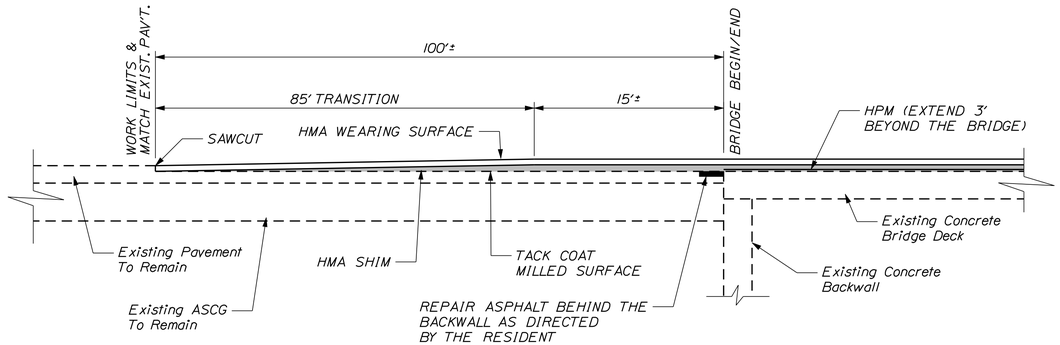
BRIDGE NO. 3039 WIN 17084 BRIDGE PLANS



PROPOSED APPROACH SECTION
(MILL AND FILL)



PROPOSED BRIDGE
TRANSVERSE SECTION



NOTES:

1. Mill approach pavement to a depth of 1½", apply tack coat and place the first lift of HMA, shim depth varies from 1½" to zero.
2. Apply second lift of HMA to a depth of 1½"

TRANSITION DETAIL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

BRIDGE NO. 3039 — WIN 17084 — BRIDGE PLANS

	SIGNATURE
P.E. NUMBER	
DATE	

	BY	DATE
PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	T.LINDO	NOV. 2012
CHECKED-REVIEWED	F.DAMAR	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

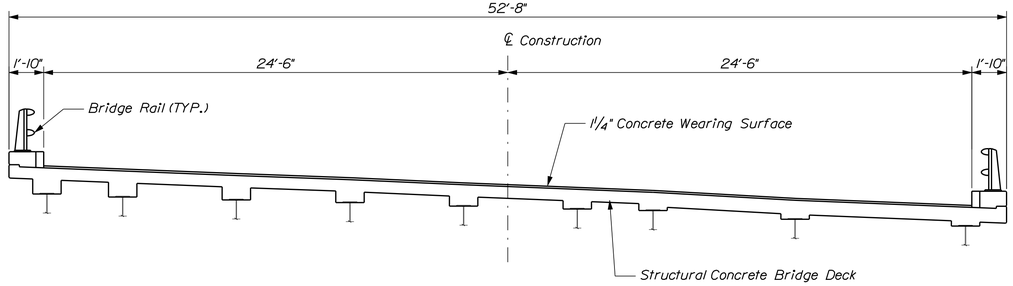
STATION 46 BRIDGE
SAGADAHOC
WOOLWICH

TYPICAL SECTIONS

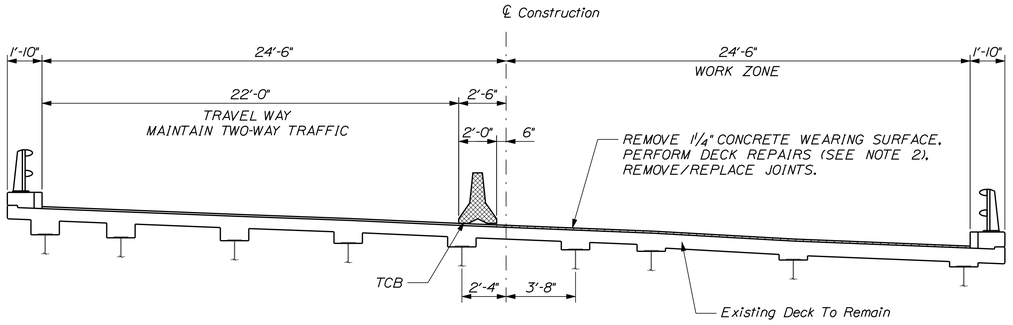
SHEET NUMBER
7
OF 28

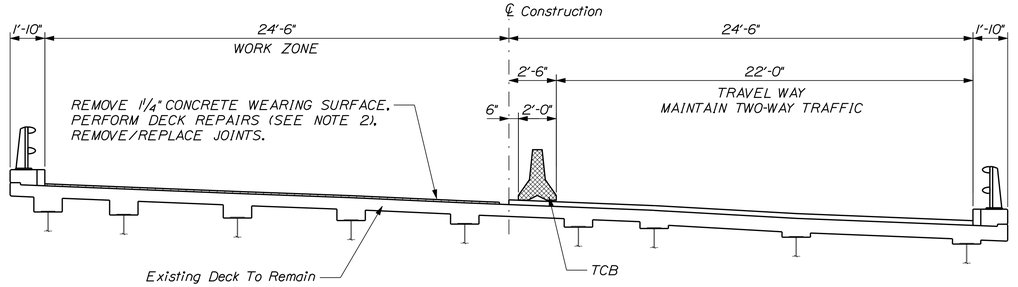
ERDMAN ANTHONY

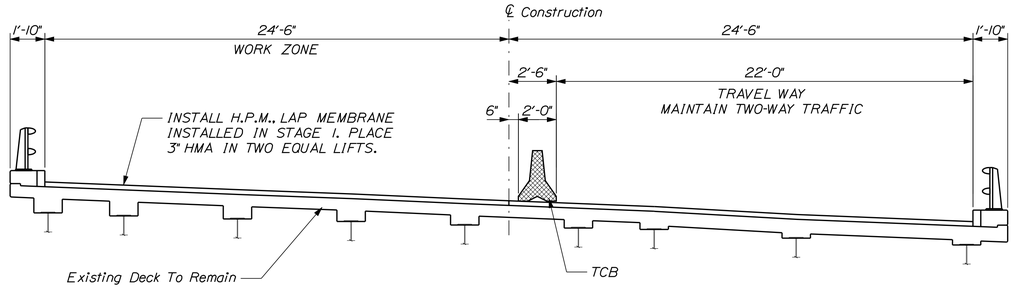
Filename: ...\Bridge\WSTA\007_BTypicol.dgn Division: BRIDGE Username: LindoT Date:11/30/2012



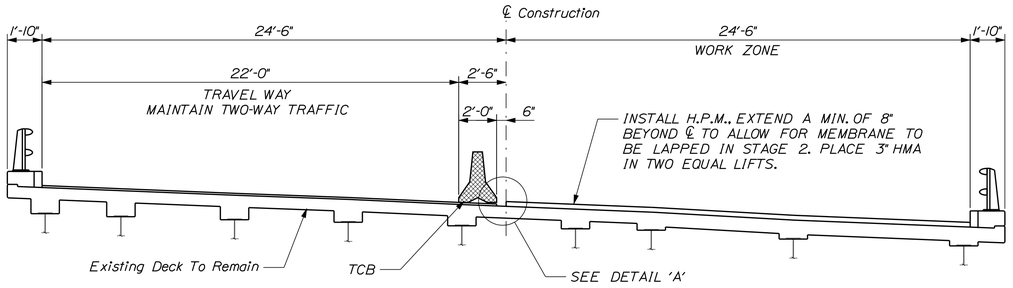
EXISTING BRIDGE
TRANSVERSE SECTION



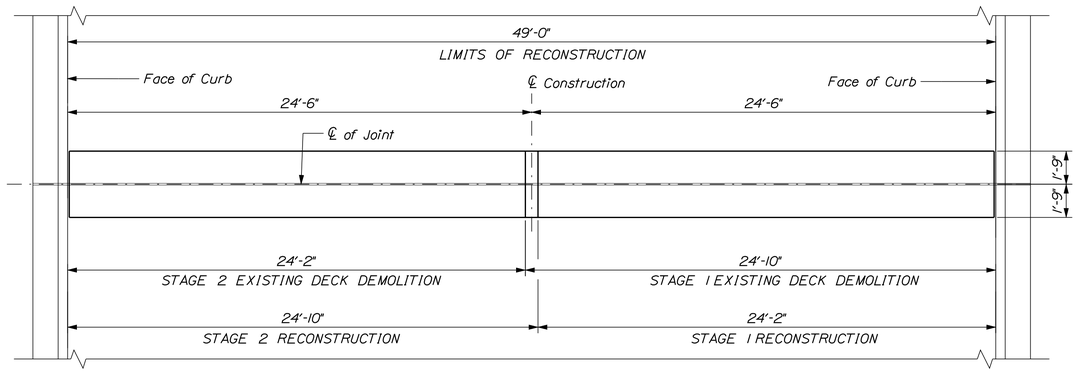




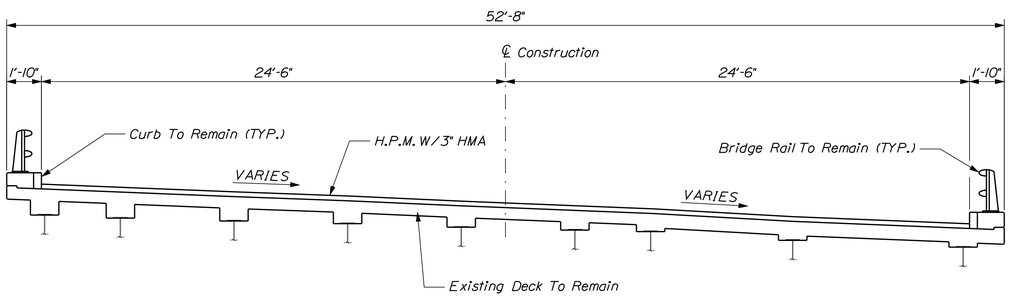
STAGE 2



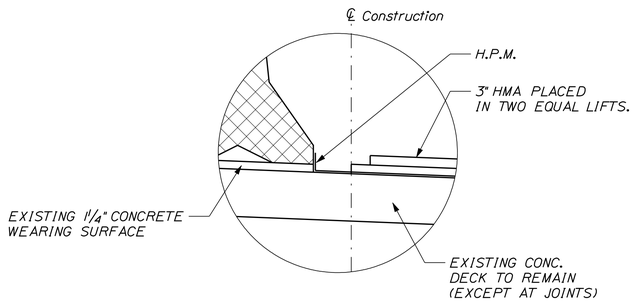
STAGE 1



TYPICAL DECK JOINT PLAN FOR STAGED CONSTRUCTION



PROPOSED BRIDGE
TRANSVERSE SECTION



DETAIL 'A'

NOTES:

1. Rehabilitate the bridge in two (2) stages utilizing staged construction. Maintain two-way traffic at all times. Minimum travel way width shall be 22'-0".

2. After wearing surface is removed, the MaineDOT Resident Engineer will inspect the deck and indicate areas requiring surface repairs. 10% of deck area is estimated for repair. All deck repairs shall be paid for under Item 518.50 - Repair of Upward Facing Surfaces to Reinforcing Steel (<7.9 in.)

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084
BRIDGE NO. 3039
BRIDGE PLANS

	BY	DATE
PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	T. LINDO	NOV. 2012
CHECKED-REVIEWED	F. DAHAR	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

STATION 46 BRIDGE
SAGADAHOC
WOOLWICH

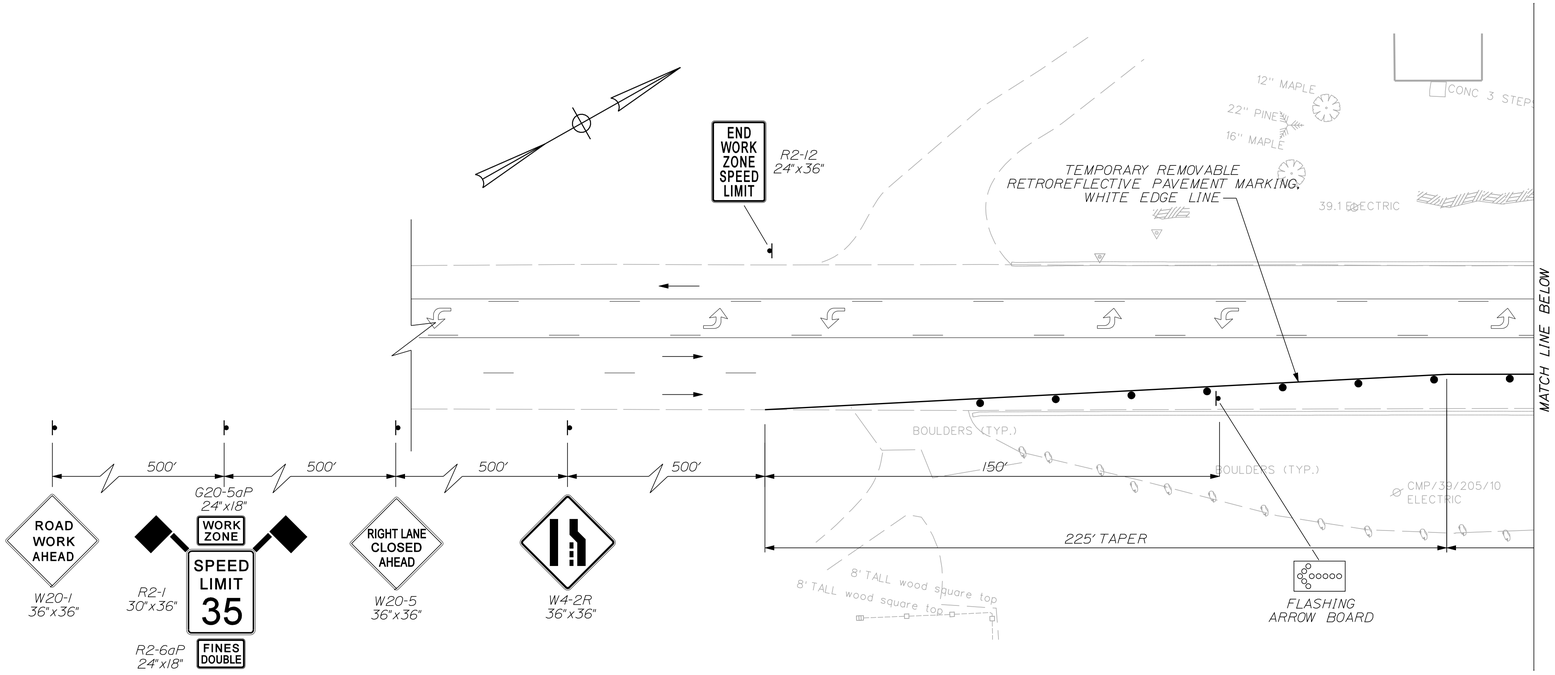
STAGED CONSTRUCTION

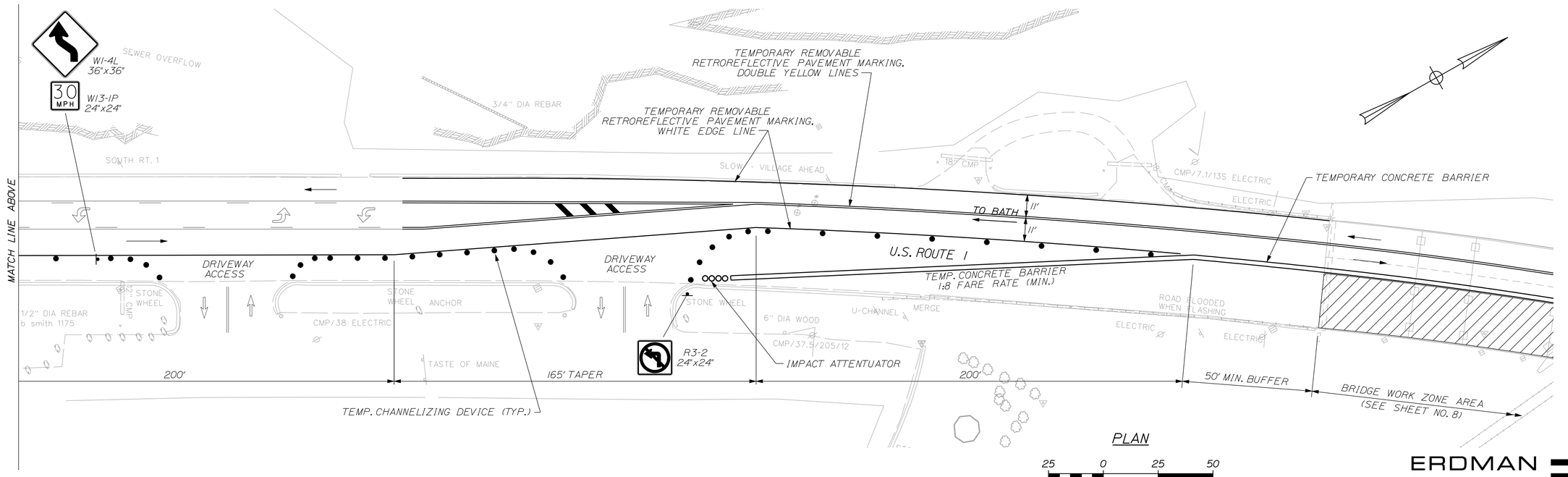
SHEET NUMBER
8
OF 28

Filename: ...\MSTA\008_StageConstr.dgn Division: BRIDGE Username: LindoT Date:11/30/2012

TRAFFIC CONTROL NOTES:

1. The Traffic Control Plan shall conform to Section 652 - Maintenance of Traffic and all special provisions of the contract.
2. Stage 1 shown, Stage 2 similar. Substitute left lane closure signs for right lane closure signs as necessary.
3. Install black temporary removable line masking tape over all existing pavement markings that are in conflict with the temporary removable retroreflective pavement marking tape. Payment for temporary pavement marking lines and installation of the black temporary removable line masking tape will be made under the respective pay item in Section 627 - Pavement Markings.
4. All existing roadside and overhead signs in conflict with the construction approach signs shall be covered.
5. Temporary Concrete Barrier shall be placed in accordance with the Third Edition of the AASHTO Roadside Design Guide, dated 2006. Terminate Temporary Concrete Barrier ends outside the clear zone or protect the ends with an impact attenuator.
6. All construction signs shall be mounted at a height of 7 feet above the edge of the travelway.
7. Minimum travelway width shall be 22 feet.
8. The spacing of all construction signs and channelizing devices shall conform to Special Provision 652 of the contract. Final placement of signs and devices may be changed to fit field conditions as approved by the Engineer.
9. A portable-changeable message sign shall be placed a minimum of 2 weeks prior to the start of work to notify the motorists of the intended work. the display message shall be approved by the Regional Traffic Engineer.
10. All vehicles, equipment and materials shall be stored behind the temporary concrete barrier or outside the clear zone.
11. Public ingress and egress to "The Taste of Maine" and all private entrances within the construction zone shall be maintained at all times.
12. Construction signs and traffic control devices as shown are the minimum required. Additional signs and/or traffic control devices maybe required at the sole discretion of the Engineer.





PLAN

25 0 25 50
Scale of Feet

STAGE 1

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084
BRIDGE NO. 3039
BRIDGE PLANS

	BY	DATE
PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	F. DAHAR	NOV. 2012
CHECKED-REVIEWED	T. LINDO	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

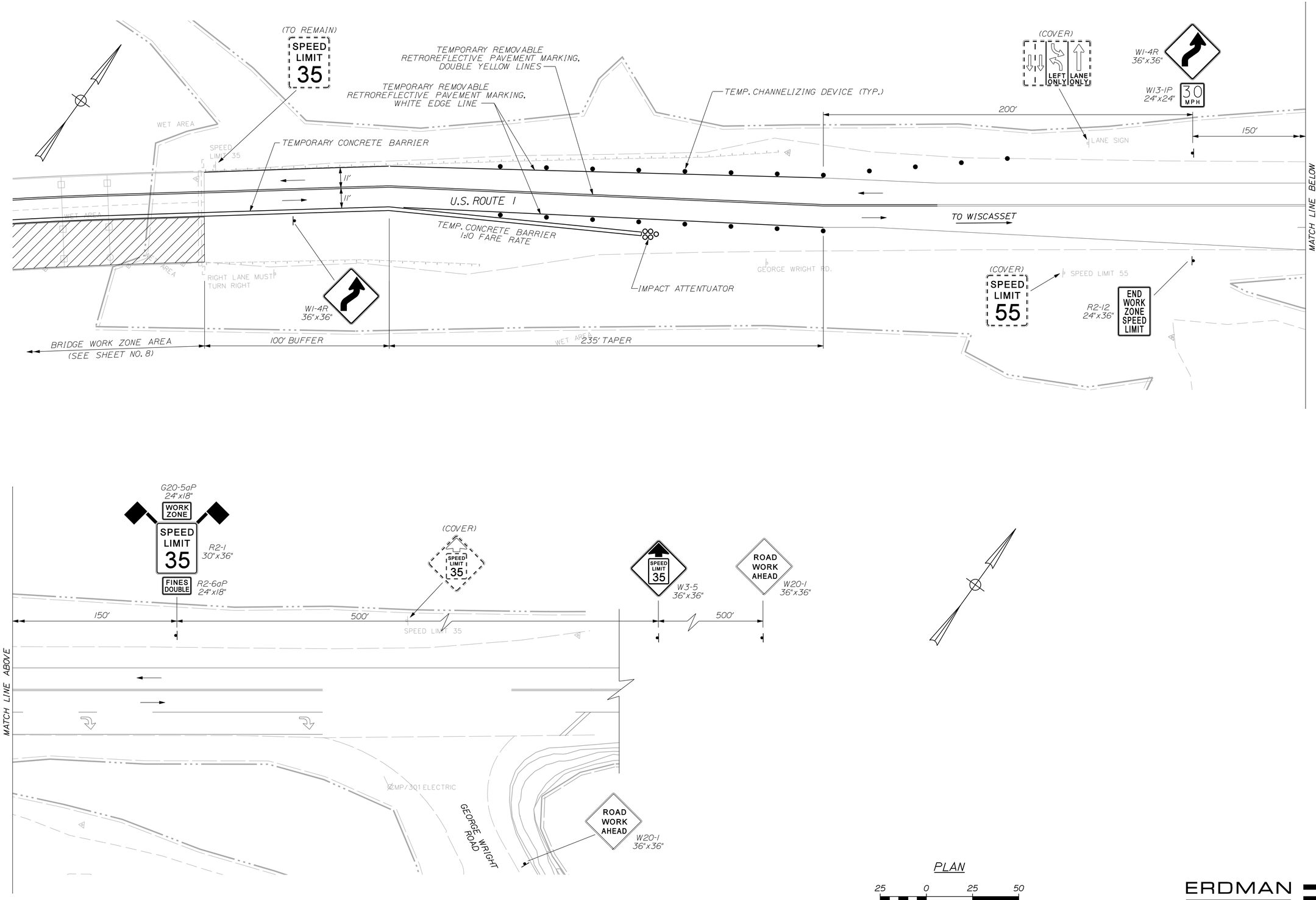
DATE

STATION 46 BRIDGE
WOOLWICH SAGADAHOC

TRAFFIC CONTROL PLAN

SHEET NUMBER
9
OF 28

Filename: ...\Bridge\MSTA\009_TC-1_Plan.dgn Division: BRIDGE Username: LindoT Date:11/30/2012



PLAN

25 0 25 50

Scale of Feet

STAGE 1

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084 BRIDGE NO. 3039

BRIDGE PLANS

PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	F. DAHAR	NOV. 2012
CHECKED-REVIEWED	T. LINDO	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
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FIELD CHANGES		

SIGNATURE

P.E. NUMBER

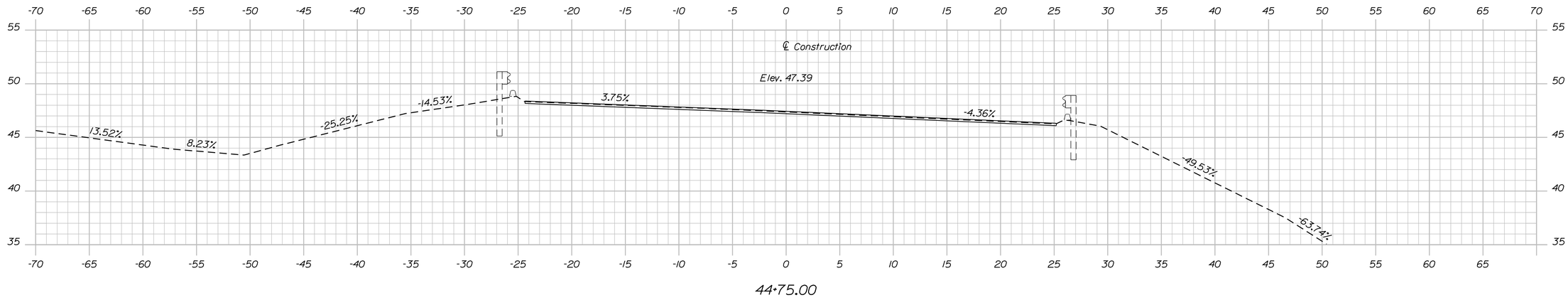
DATE

STATION 46 BRIDGE
WOOLWICH SAGADAHOC

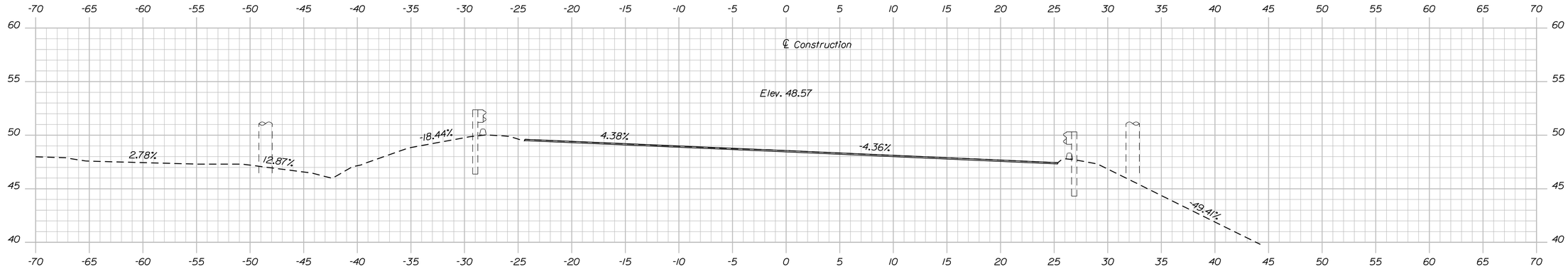
TRAFFIC CONTROL PLAN

SHEET NUMBER
10
OF 28

Filename: ...\Bridge\MSTA\010_TC-1_Plan.dgn Division: BRIDGE Username: LindoT Date:11/30/2012



44+75.00



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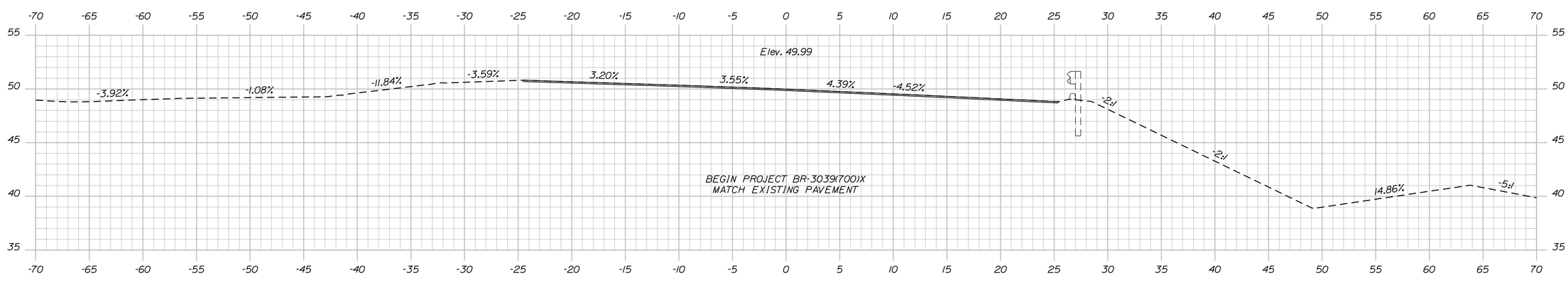


44+20.00

Sta. 44+20.00 to Sta. 44+75.00

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084
BRIDGE NO. 3039

BRIDGE PLANS

PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	F. DAHAR	NOV 2012
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BY: T. LINDO

SIGNATURE

P.E. NUMBER

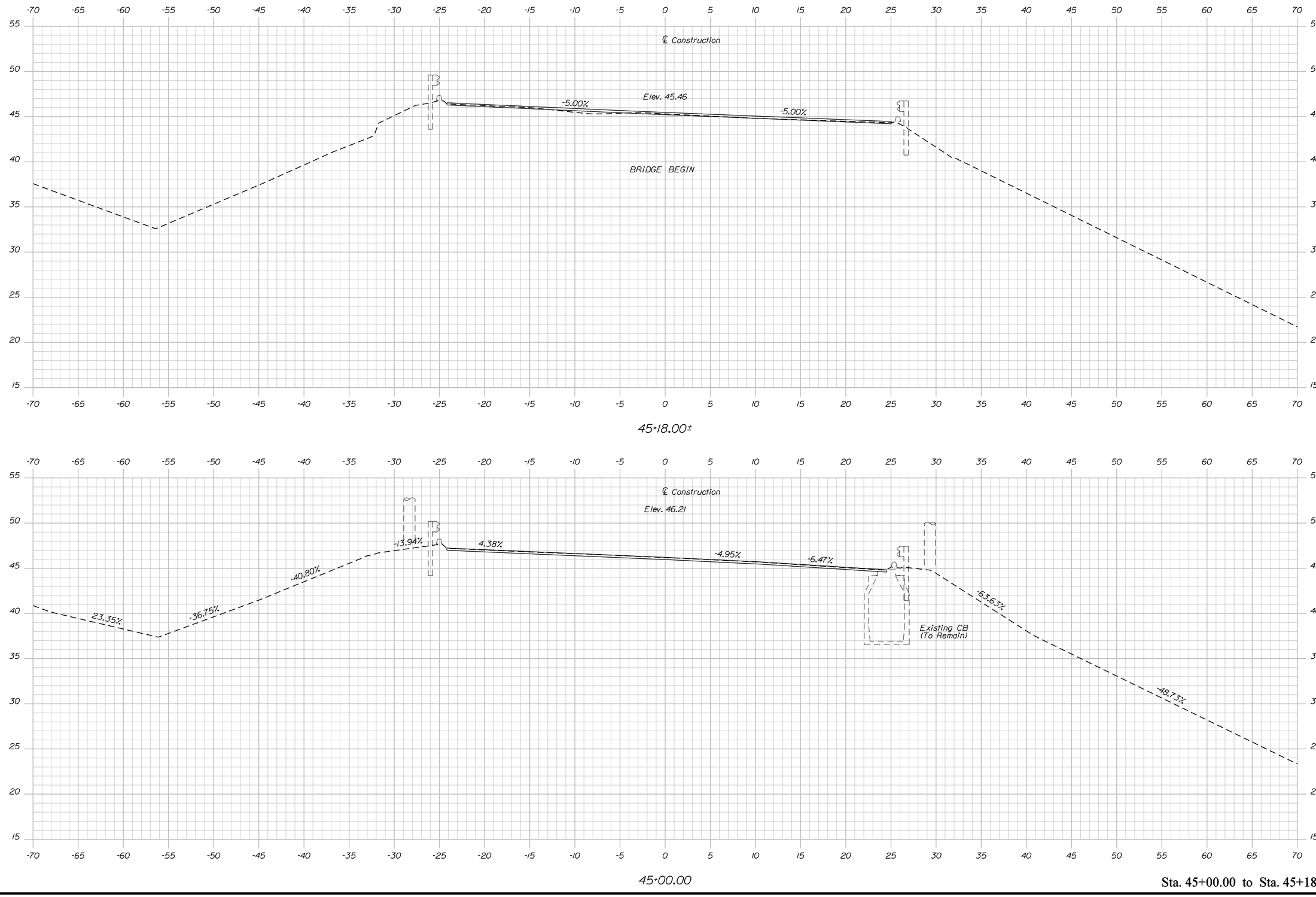
DATE

STATION 46 BRIDGE
WOOLWICH SAGADAHOC

CROSS SECTIONS

SHEET NUMBER
11
OF 28

Filename: ...\00\Bridge\MSTA\011_Xsect.dgn Username: LindoT Division: BRIDGE Date:11/30/2012



Sta. 45+00.00 to Sta. 45+18.00

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084
BRIDGE NO. 3039

BRIDGE PLANS

PROJ. MANAGER	DEVIN ANDERSON	DATE	
DESIGN-DETAILED	F. DAHAR	BY	T. LINDO
CHECKED-REVIEWED		DATE	NOV. 2012
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

STATION 46 BRIDGE
WOOLWICH
SAGADAHOC

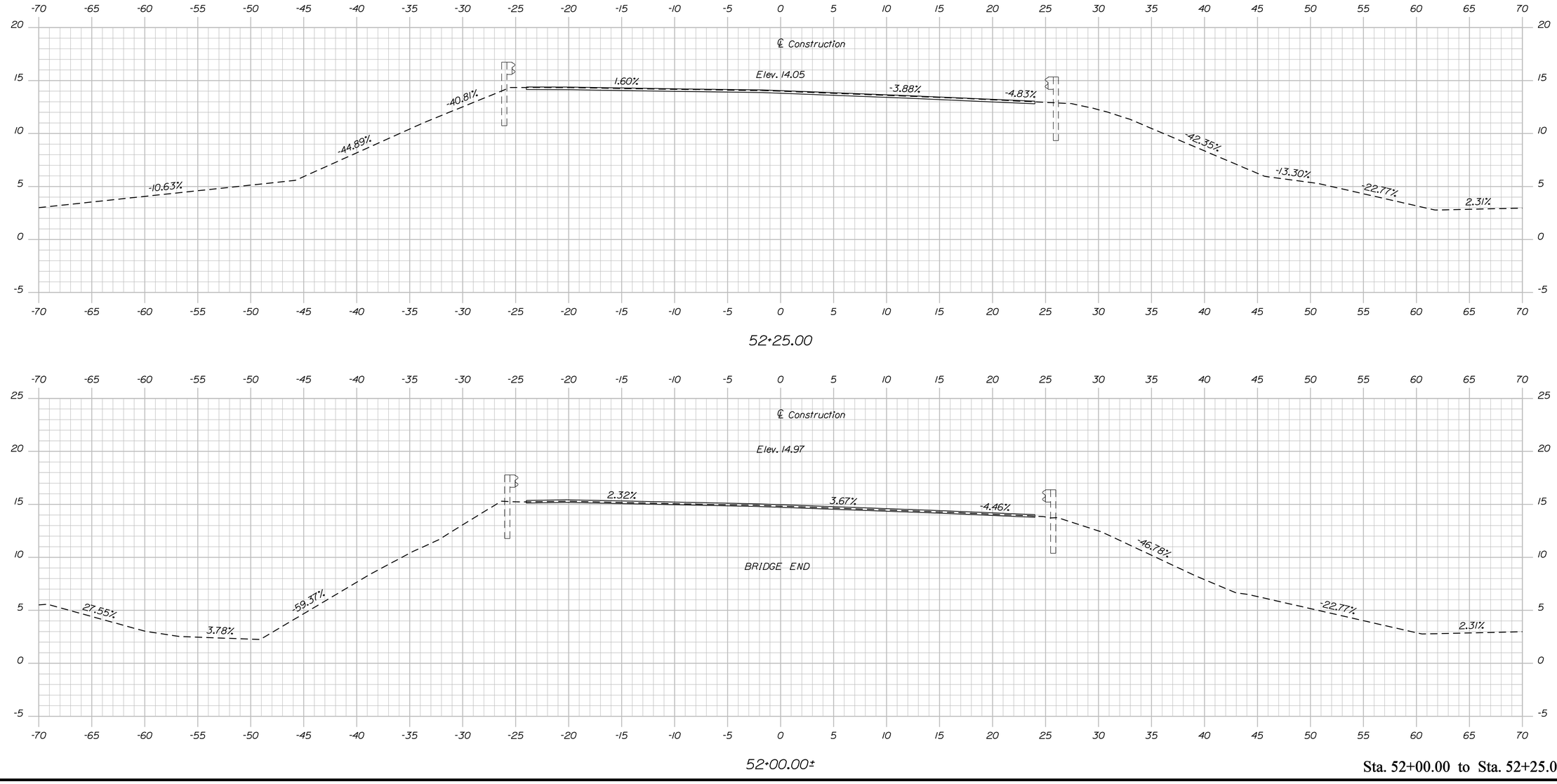
CROSS SECTIONS

SHEET NUMBER

12

OF 28

Filename: ...\00\Bridge\MSTA\012_Xsect.dgn Division: BRIDGE Username: LindoT Date:11/30/2012



Sta. 52+00.00 to Sta. 52+25.00

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084
BRIDGE NO. 3039
BRIDGE PLANS

PROJ. MANAGER DEVIN ANDERSON			
DESIGN-DETAILED	F. DAHAR	NOV. 2012	
CHECKED-REVIEWED	T. LINDO	NOV. 2012	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

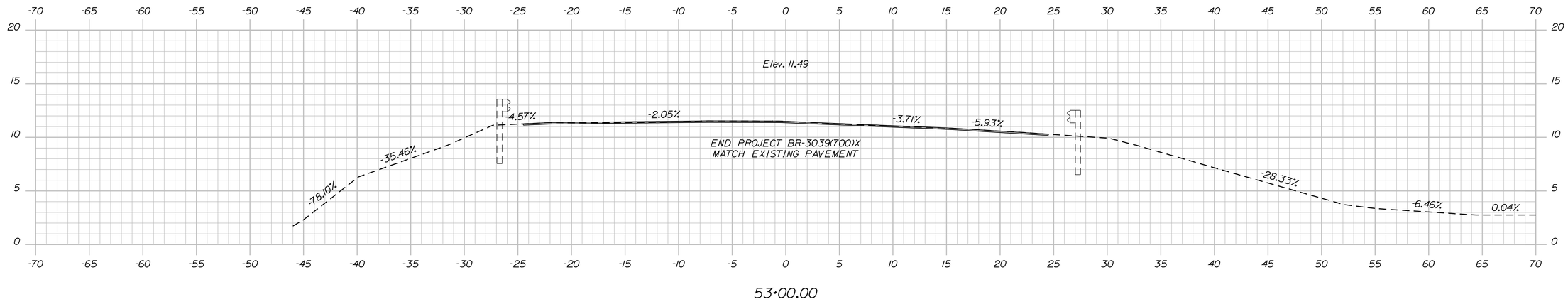
DATE

STATION 46 BRIDGE
SAGADAHOC
WOOLWICH

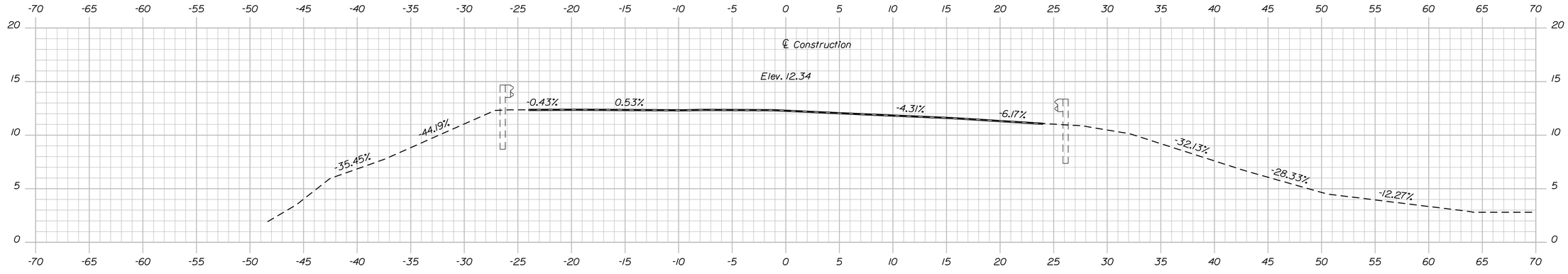
CROSS SECTIONS

SHEET NUMBER
13
OF 28

Username: LindoT Date:11/30/2012
Division: BRIDGE
Filename: ...\00\Bridge\MSTA\013_Xsect.dgn



53+00.00



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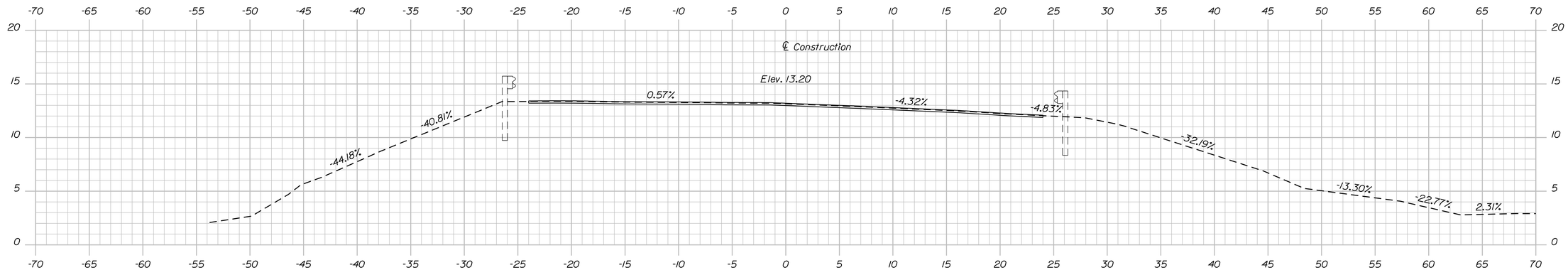


52+50.00

Sta. 52+50.00 to Sta. 53+00.00

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084
BRIDGE NO. 3039
BRIDGE PLANS

	BY	DATE
PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	T. LINDO	NOV. 2012
CHECKED-REVIEWED	F. DAHAR	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

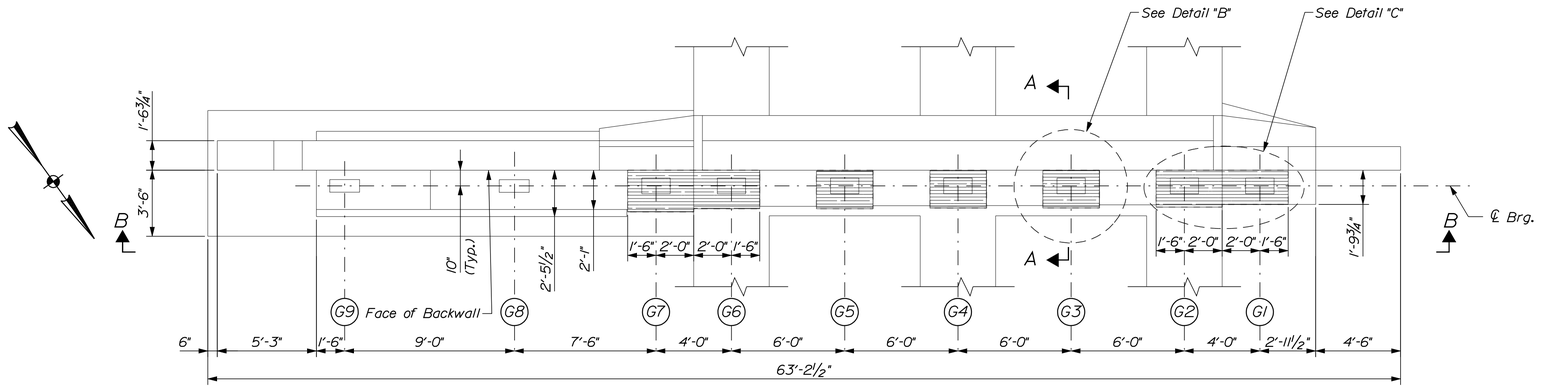
DATE

STATION 46 BRIDGE
WOOLWICH
SAGADAHOC

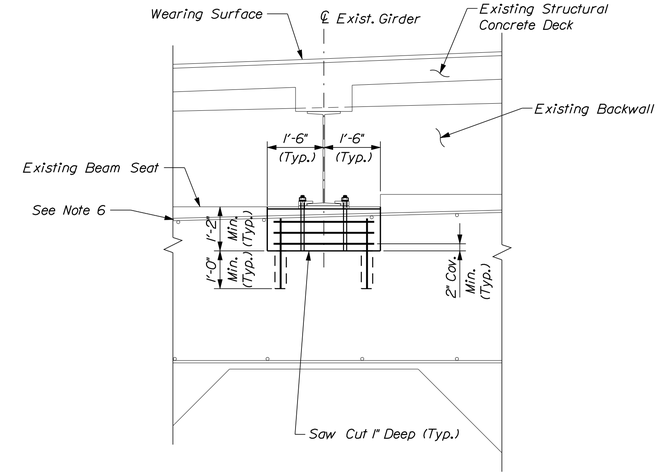
CROSS SECTIONS

SHEET NUMBER
14
OF 28

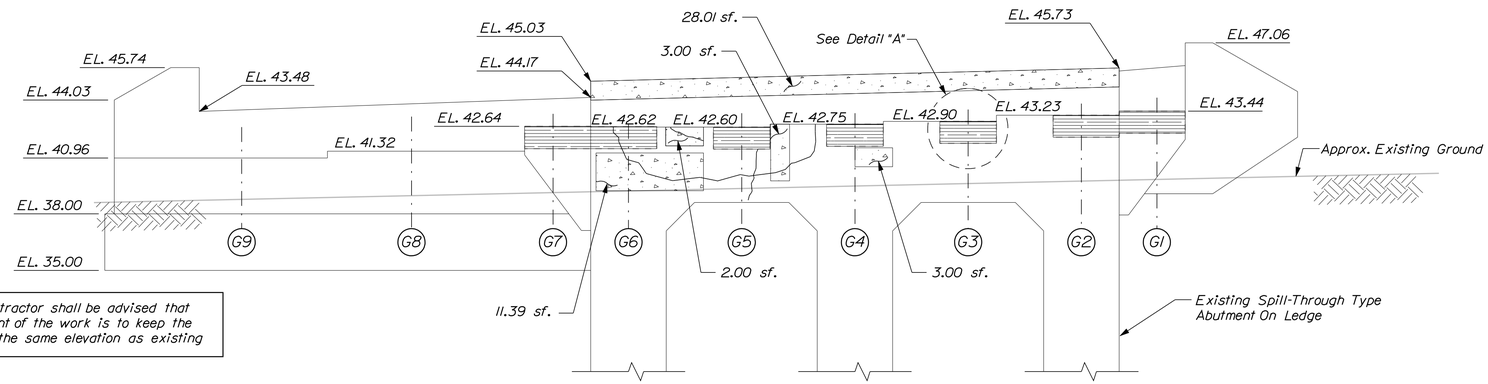
Filename: ...\00\Bridge\MSTA\014_Xsect.dgn Division: BRIDGE Username: LindoT Date:11/30/2012



PLAN
Scale: ¼" = 1'-0"



DETAIL "A"
Scale: ½" = 1'-0"

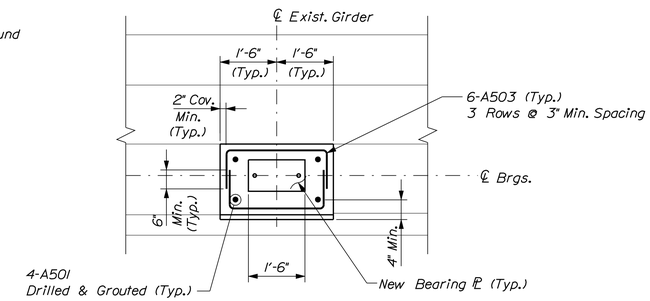


The Contractor shall be advised that the intent of the work is to keep the steel at the same elevation as existing

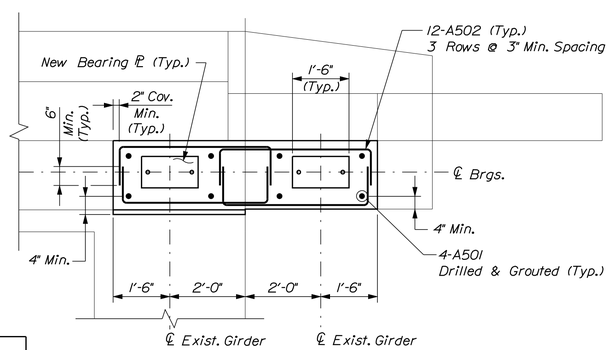
ELEVATION B-B
Scale: ¼" = 1'-0"

ABUTMENT NOTES

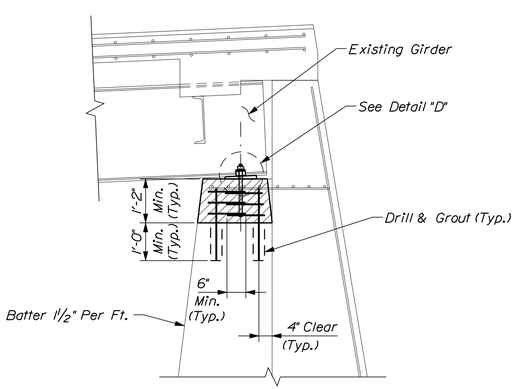
1. Live Load to be present on bridge during all phases of work.
2. Temporary shoring is required at each bearing during rehab work.
3. Refer to Bearing Details Sheet No. 17 for details.
4. Saw Cut 1" deep min. at limits of Structural Concrete Removal prior to demolition where ever possible.
5. Bottom of steel elevation to match existing upon completion of repair work.
6. Existing reinforcing steel in abutments to remain in place. Replace if damaged during construction.
7. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.
8. Minimum embedded depth for anchor bolts is 12".
9. Areas of vertical facing concrete repairs are approximate. All abutment concrete shall be evaluated by the Resident Engineer and repaired as necessary.



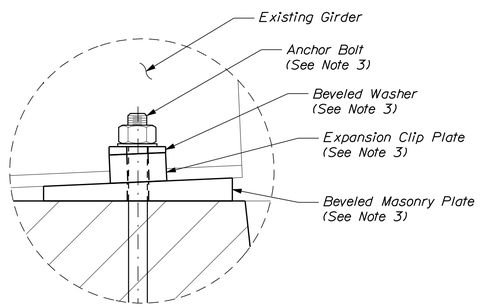
DETAIL "B" (Girders 3-5)
Scale: ½" = 1'-0"



DETAIL "C" (Girders 1-2 & 6-7)
Scale: ½" = 1'-0"



SECTION A-A
Scale: ½" = 1'-0"



DETAIL "D"
NOT TO SCALE

LEGEND:

- Repair of Upward Facing Concrete Surfaces Below Reinforcing Steel (<7.9 in.)
- Repair of Vertical Facing Concrete Surfaces Above Reinforcing Steel (<7.9 in.)
- Denotes Cracking

REACTION TABLE	
GIRDER	END REACTION (k)
G1	81.34
G2	112.83
G3	126.32
G4	126.32
G5	126.32
G6	112.83
G7	122.74
G8	159.53
G9	107.69

Note: Girder reactions include factored Dead Load plus factored Live Load with additional 33% impact.

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084
BRIDGE NO. 3039
BRIDGE PLANS

	SIGNATURE	P.E. NUMBER	DATE
PROJ. MANAGER DEVIN ANDERSON			
DESIGN-DETAILED F. DAHAR			
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

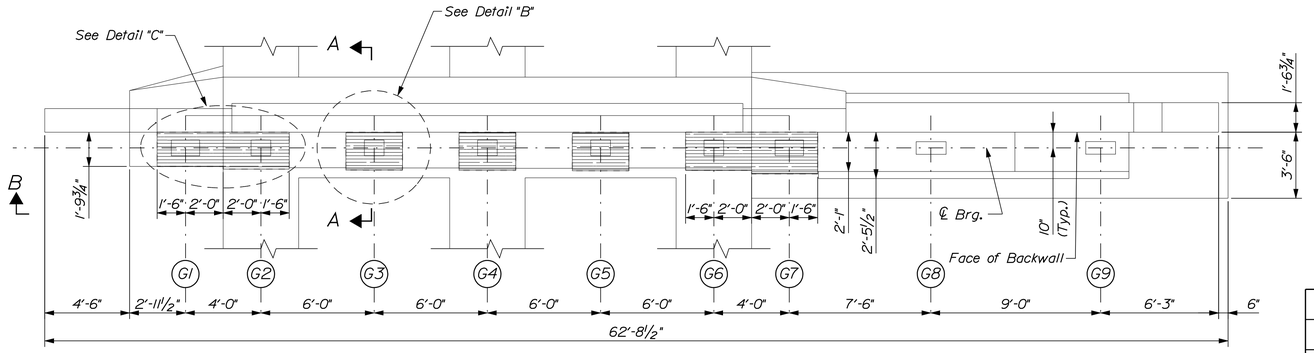
DATE	BY
NOV 2012	T. LINDO

STATION 46 BRIDGE SAGADAHOC
WOOLWICH

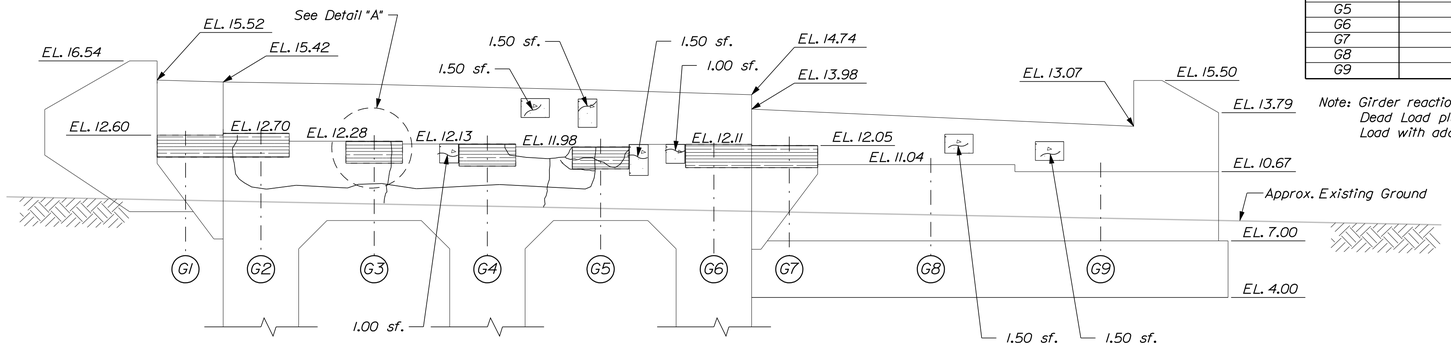
ABUTMENT NO. 1 EXPANSION END

SHEET NUMBER
15
OF 28

Filename: ...\Bridge\MSTA\015_Abutment1.dgn Username: LindoT Division: BRIDGE Date:11/30/2012



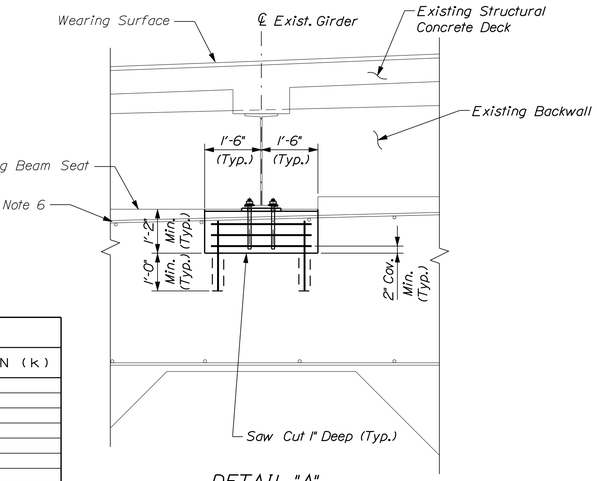
PLAN
Scale: ¼" = 1'-0"



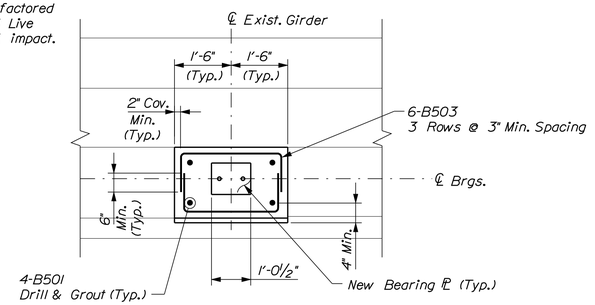
ELEVATION B-B
Scale: ¼" = 1'-0"

REACTION TABLE	
GIRDER	END REACTION (k)
G1	93.65
G2	126.56
G3	142.03
G4	142.03
G5	142.03
G6	125.01
G7	137.89
G8	179.28
G9	121.50

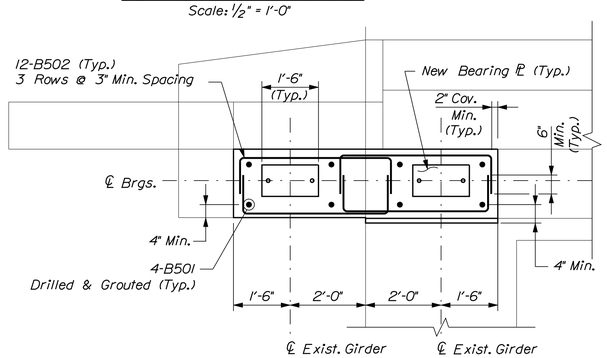
Note: Girder reactions include factored Dead Load plus factored Live Load with additional 33% impact.



DETAIL "A"
Scale: ½" = 1'-0"



DETAIL "B" (Girders 3-5)
Scale: ½" = 1'-0"

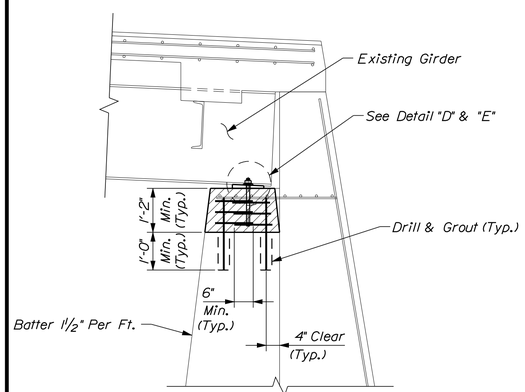


DETAIL "C" (Girders 1-2 & 6-7)
Scale: ½" = 1'-0"

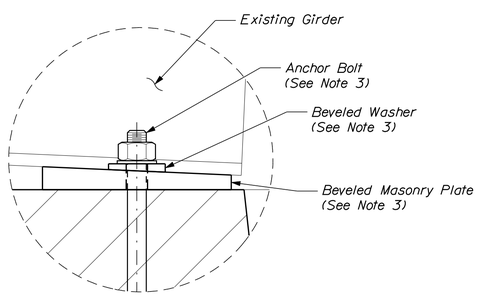
The Contractor shall be advised that the intent of the work is to keep the steel at the same elevation as existing

ABUTMENT NOTES

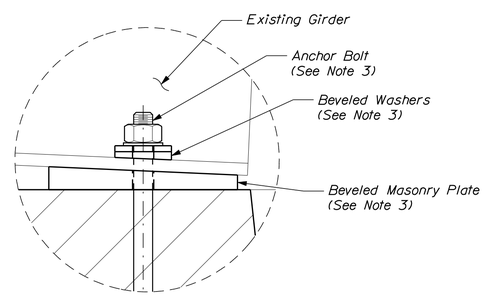
1. Live Load to be present on bridge during all phases of work.
2. Temporary shoring is required at each bearing during rehab work.
3. Refer to Bearing Details Sheet No. 17 for details.
4. Saw Cut 1" deep min. at limits of Structural Concrete Removal prior to demolition where ever possible.
5. Bottom of steel elevation to match existing upon completion of repair work.
6. Existing reinforcing steel in abutments to remain in place. Replace if damaged during construction.
7. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.
8. Minimum embedded depth for anchor bolts is 12".
9. Areas of vertical facing concrete repairs are approximate. All abutment concrete shall be evaluated by the Resident Engineer and repaired as necessary.



SECTION A-A
Scale: ½" = 1'-0"



DETAIL "D" (GIRDERS 1 & 7)
NOT TO SCALE



DETAIL "E" (GIRDERS 2-6)
NOT TO SCALE

LEGEND:

- Repair of Upward Facing Concrete Surfaces Below Reinforcing Steel (>7.9 in.)
- Repair of Vertical Facing Concrete Surfaces Above Reinforcing Steel (<7.9 in.)
- Denotes Cracking

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084 BRIDGE PLANS

BRIDGE NO. 3039

PROJ. MANAGER	DEVIN ANDERSON		
DESIGN-DETAILED	F. DAHAR	BY	T. LINDO
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE NOV 2012

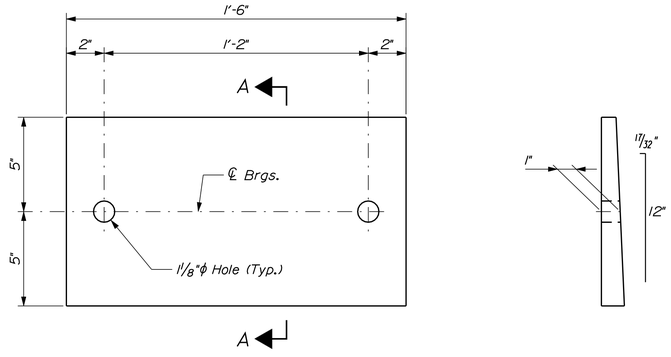
DATE

STATION 46 BRIDGE
WOOLWICH
SAGADAHOC

ABUTMENT NO. 2
FIXED END

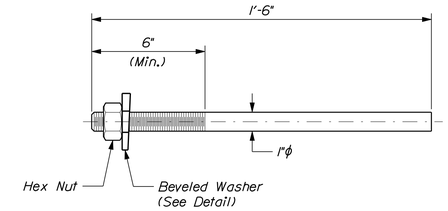
SHEET NUMBER
16
OF 28

Filename: ...\Bridge\MSTA\016_AbuImen12.dgn Division: BRIDGE Username: LindoT Date:11/30/2012



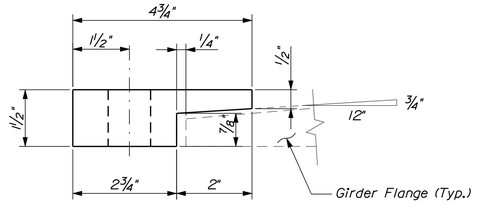
TYPICAL MASONRY PLATE
(9 REQUIRED - (7) - ABUTMENT 1 (G1 - G7) & (2) - ABUTMENT 2 (G1 & G7))

SCALE: 3"=1'-0"



TYPICAL ANCHOR BOLT (28 REQUIRED)

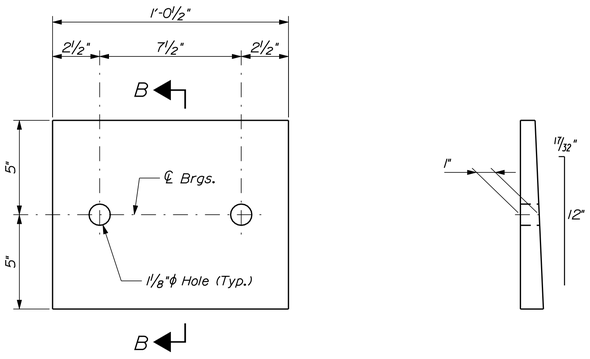
SCALE: 3"=1'-0"



VIEW C-C

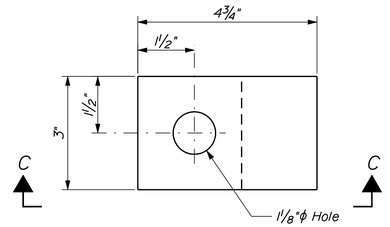
NOTES

1. Dimnesions based on record plans. All dimensions should be field verified prior to fabrication.
2. Bearings and anchor bolts for Girders 1-7 are to be removed and replaced in kind.
3. Use beveled plate washers to match slope of girders in order to keep anchor bolts vertical.
4. Bearings for Girders 8 & 9 are to be realigned and refurbished in place. Existing anchor bolts to remain.
5. Field Clean and Overcoat top and bottom faces of bottom flange for 2'-0" length at end of all girders at abutment. See Detail 1 on Sheet 26.
6. For Girders 2-6 at Abutment 2, more than 1 beveled washer plate may be needed to get anchor bolts in vertical position.
7. Refer to Abutment drawings 15 and 16 for girder elevations at bearings.
8. Bearings at Abutment 1 (expansion end) shall have self-lubricating substance placed between masonry plate and bottom flange of girder.
9. All holes in plates are 1 1/8" diameter U.N.O..



MASONRY PLATE AT FIXED ABUTMENT GIRDERS 2-6 (5 REQUIRED)

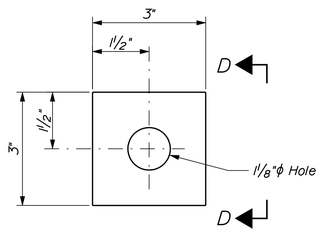
SCALE: 3"=1'-0"



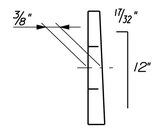
PLAN

EXPANSION CLIP PLATE (14 REQUIRED)

SCALE: 6"=1'-0"



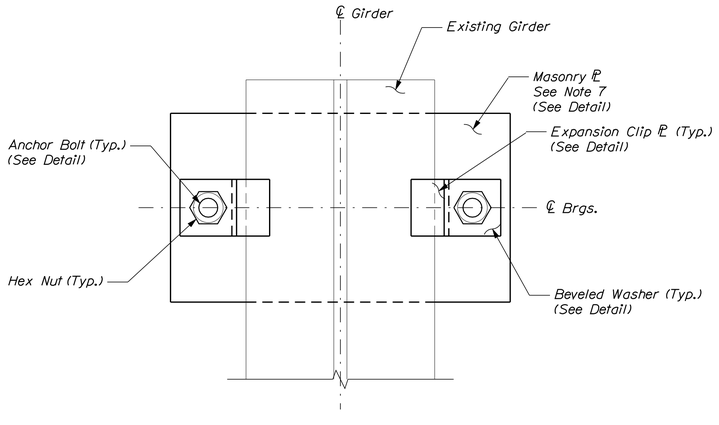
PLAN



VIEW D-D

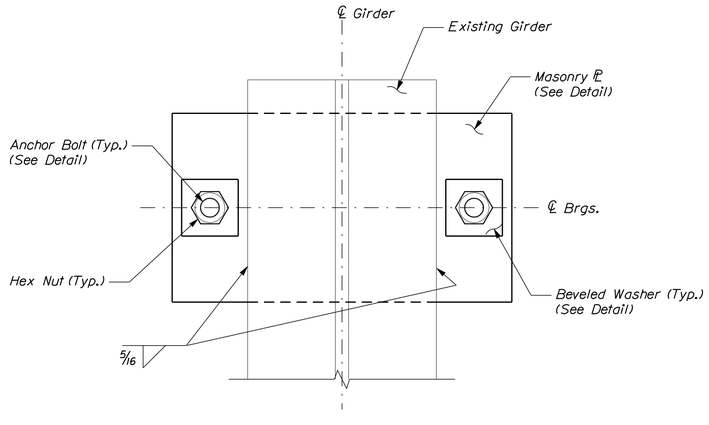
BEVELED WASHER PLATE (38 REQUIRED)

SCALE: 6"=1'-0"



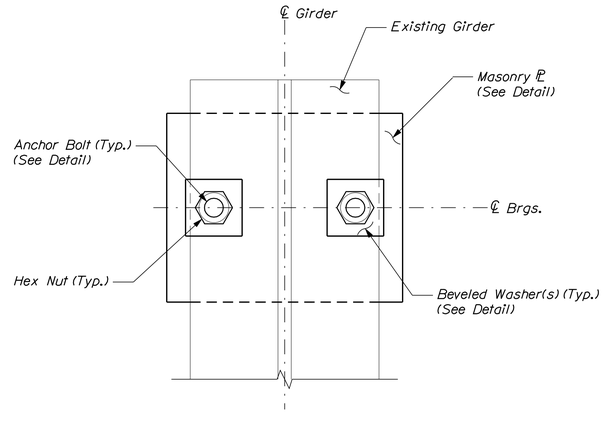
TYPICAL EXPANSION BEARING DETAIL (7 LOCATIONS)

SCALE: 3"=1'-0"



FIXED BEARING DETAIL
GIRDERS 1&7 (2 LOCATIONS)

SCALE: 3"=1'-0"



FIXED BEARING DETAIL
GIRDERS 2-6 (5 LOCATIONS)

SCALE: 3"=1'-0"

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084

BRIDGE NO. 3039

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	T. LINDO	NOV 2012
CHECKED-REVIEWED	F. DAHAR	
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REVISIONS 3		
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FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

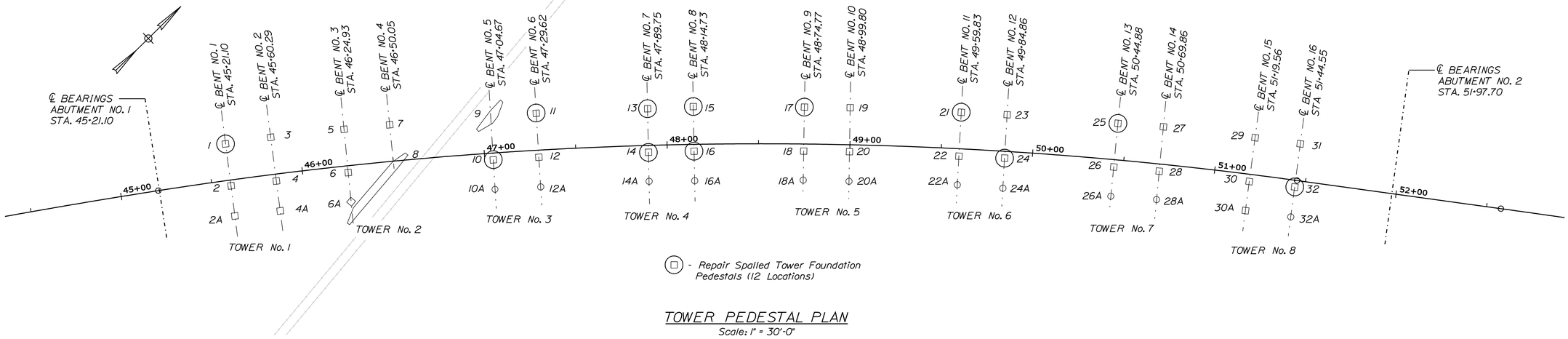
STATION 46 BRIDGE
WOOLWICH
SAGADAHOC

ABUTMENT BEARING DETAILS

SHEET NUMBER
17
OF 28

ERDMAN ANTHONY

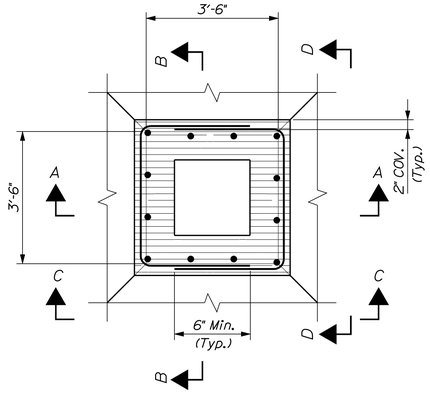
Filename: ...\MSTA\017_Abutment Brg Dtls.dgn Division: BRIDGE Username: LindoT Date:11/30/2012



- Repair Spalled Tower Foundation Pedestals (12 Locations)

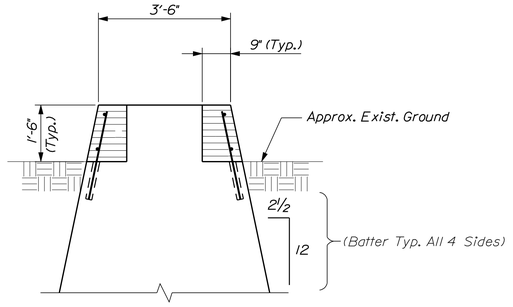
TOWER PEDESTAL PLAN

Scale: 1" = 30'-0"



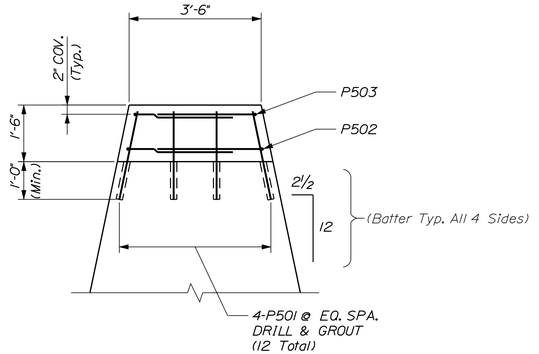
TOWER PEDESTAL REPAIR PLAN

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



SECTION A-A & SECTION B-B

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



VIEW C-C & VIEW D-D

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

LEGEND:

Repair of Upward Facing Concrete Surfaces Below Reinforcing Steel (>7.9 in.)

Tower Pedestal Repair Locations

NOTES

1. Depending on the extent of damage to pedestal, Contractor may need to excavate around pedestal to expose all areas in need of repair. Install temporary cofferdam (i.e. sandbags) and de-water as necessary.
2. Pedestal 1 bears on ledge, all other pedestals (11) to be repaired sit on distribution slabs 4'-6" below the top of the pedestal. Distribution slabs are on piles.
3. Backfill any necessary areas with native material. Backfill shall be incidental to Item 206.082 - Structural Earth Excavation - Major Structures.

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

BRIDGE NO. 3039 | WIN 17084 | BRIDGE PLANS

PROJ. MANAGER DEVIN ANDERSON			
DESIGN-DETAILED	F. DAHAR	T. LINDO	NOV. 2012
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
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REVISIONS 1			
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FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

STATION 46 BRIDGE
WOOLWICH SAGADAHOC

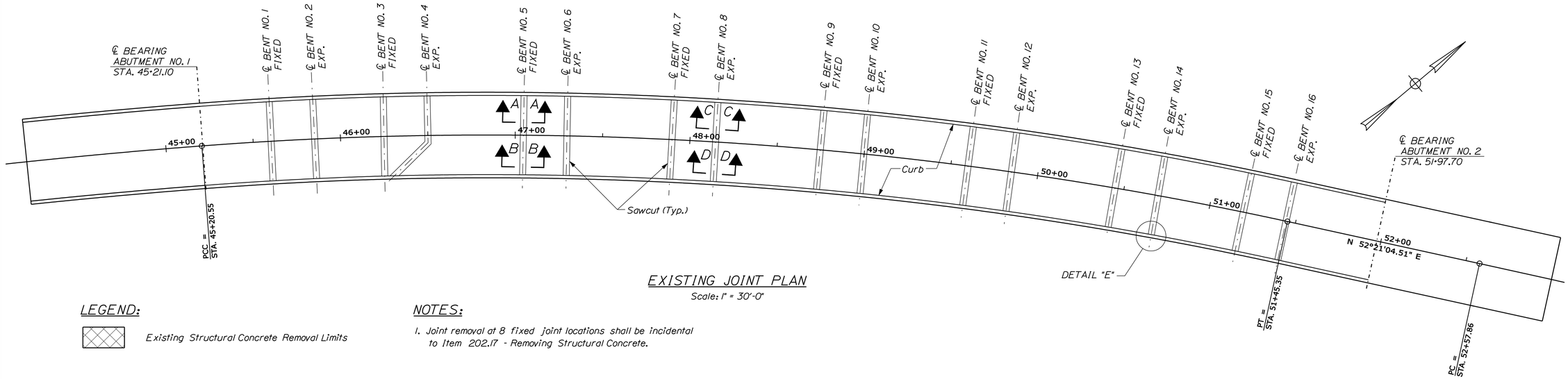
TOWER PEDESTAL REPAIR PLAN AND DETAILS

SHEET NUMBER

18

OF 28

Filename: ...\018_Tower Pedestal Repair.dgn Division: BRIDGE Username: LindoT Date:11/30/2012



EXISTING JOINT PLAN

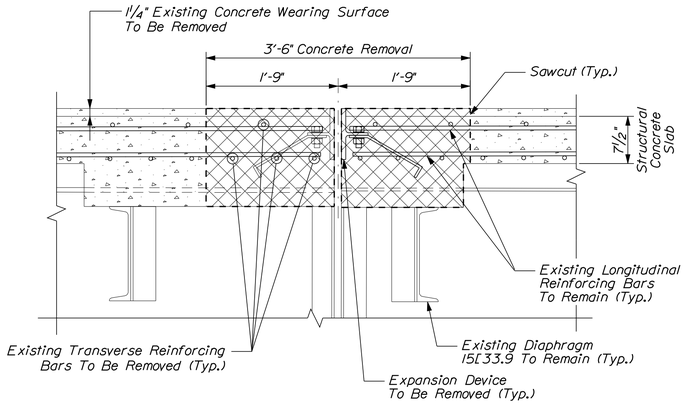
Scale: 1" = 30'-0"

LEGEND:

Existing Structural Concrete Removal Limits

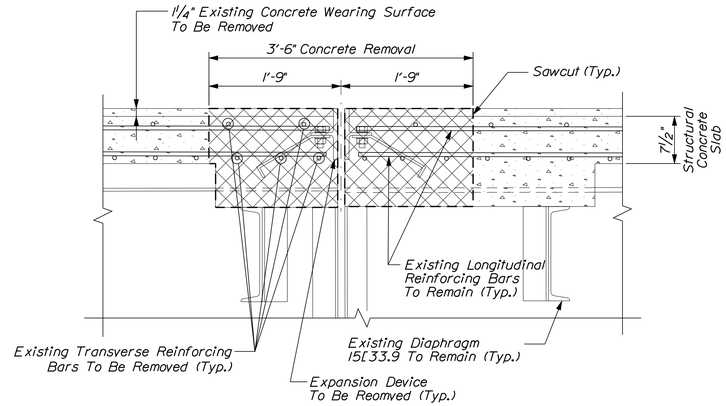
NOTES:

1. Joint removal at 8 fixed joint locations shall be incidental to Item 202.17 - Removing Structural Concrete.



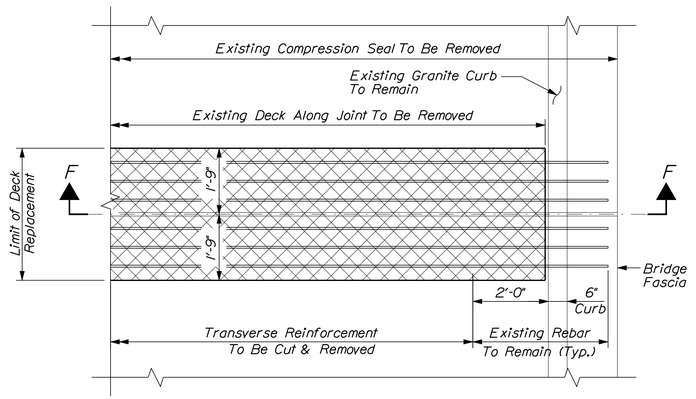
SECTION A-A (TYP. FIXED)

SCALE: 1" = 1'-0"



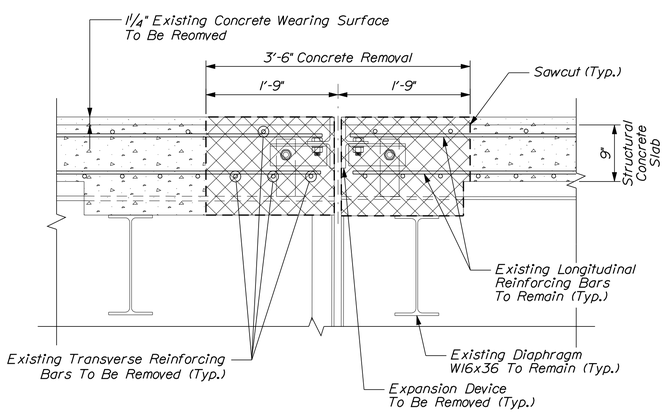
SECTION C-C (TYP. EXPANSION)

SCALE: 1" = 1'-0"



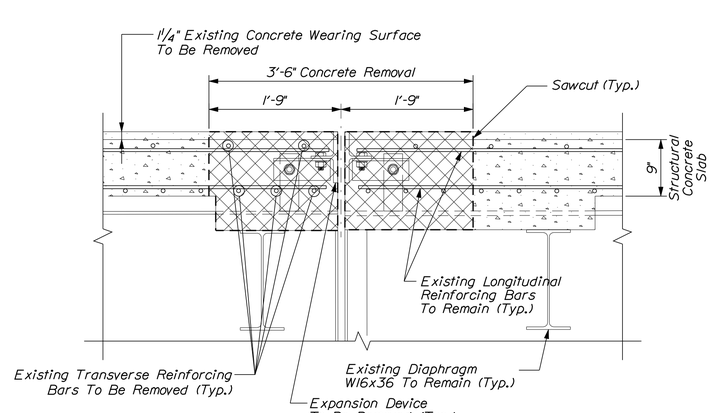
DETAIL "E" (TYP. ALL JOINTS)

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



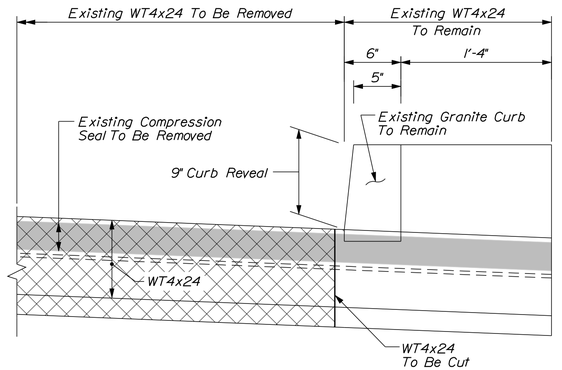
SECTION B-B (TYP. FIXED)

SCALE: 1" = 1'-0"



SECTION D-D (TYP. EXPANSION)

SCALE: 1" = 1'-0"



SECTION F-F

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

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084
BRIDGE NO. 3039
BRIDGE PLANS

	BY	DATE
PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	T. LINDO	NOV 2012
CHECKED-REVIEWED	F. DAHAR	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

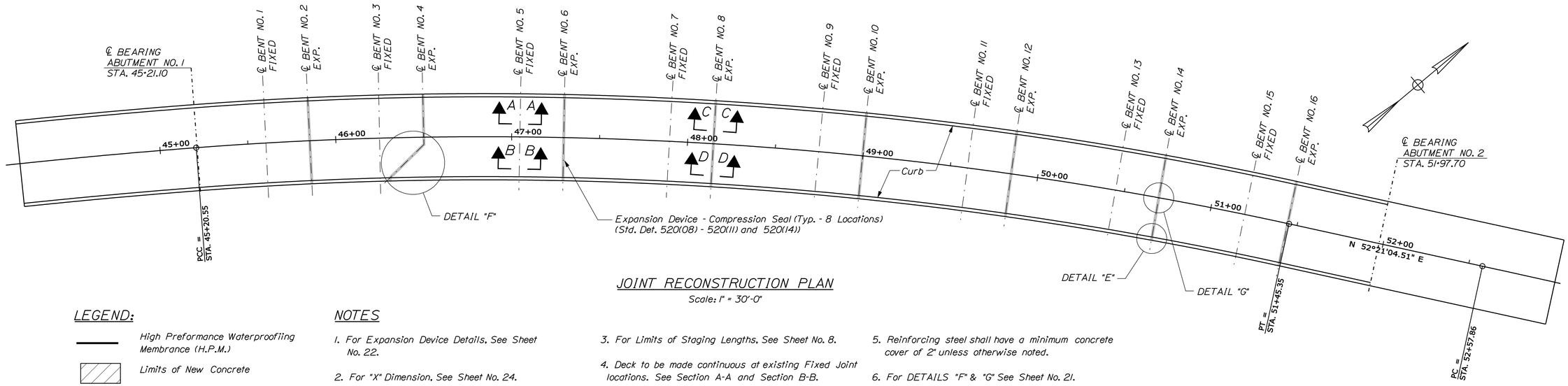
DATE

STATION 46 BRIDGE
WOOLWICH — SAGADAHOC

DECK JOINT REMOVAL DETAILS

SHEET NUMBER
19
OF 28

Filename: ...\MSTA\019_Existing Joints.dgn Division: BRIDGE Username: LindoT Date:11/30/2012



JOINT RECONSTRUCTION PLAN

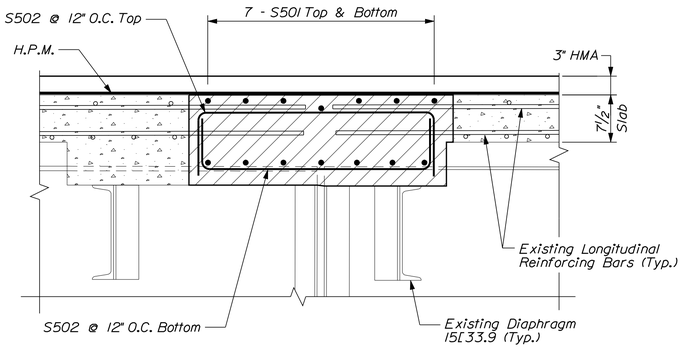
Scale: 1" = 30'-0"

LEGEND:

- High Preformance Waterproofiing Membrance (H.P.M.)
- Limits of New Concrete

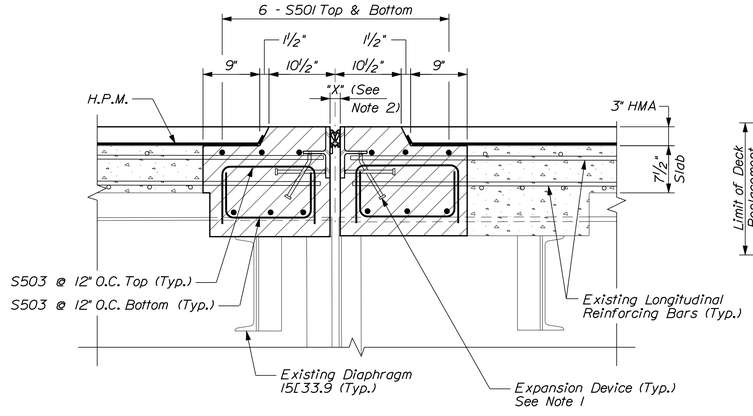
NOTES

1. For Expansion Device Details, See Sheet No. 22.
2. For "X" Dimension, See Sheet No. 24.
3. For Limits of Staging Lengths, See Sheet No. 8.
4. Deck to be made continuous at existing Fixed Joint locations. See Section A-A and Section B-B.
5. Reinforcing steel shall have a minimum concrete cover of 2" unless otherwise noted.
6. For DETAILS "F" & "G" See Sheet No. 21.



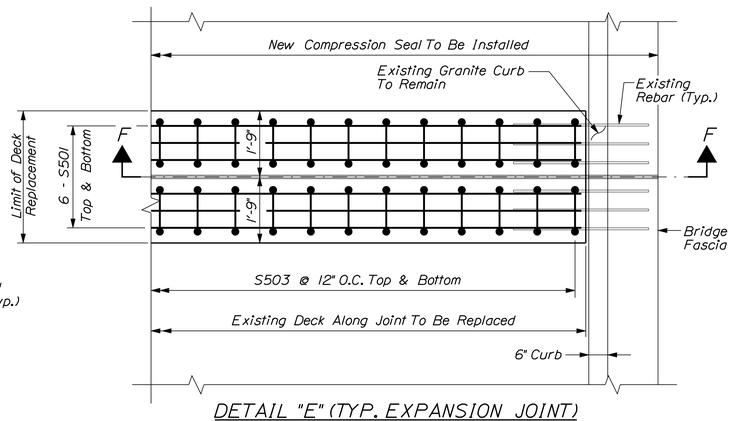
SECTION A-A (TYP. FIXED)

SCALE: 1" = 1'-0"



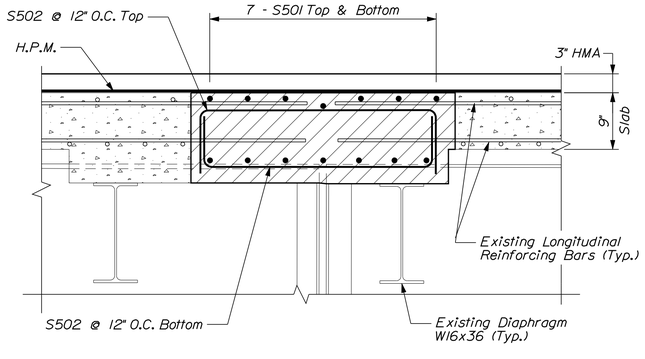
SECTION C-C (TYP. EXPANSION)

SCALE: 1" = 1'-0"



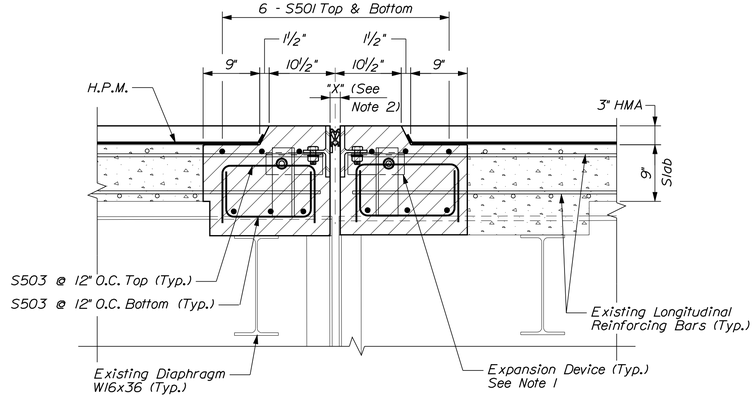
DETAIL "E" (TYP. EXPANSION JOINT)

SCALE: ½" = 1'-0"



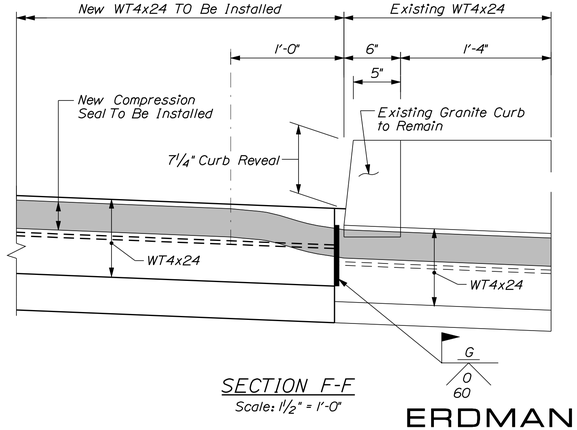
SECTION B-B (TYP. FIXED)

SCALE: 1" = 1'-0"



SECTION D-D (TYP. EXPANSION)

SCALE: 1" = 1'-0"



SECTION F-F

Scale: 1½" = 1'-0"

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084 BRIDGE PLANS

BRIDGE NO. 3039

	BY	DATE
PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	T. LINDO	NOV 2012
CHECKED-REVIEWED	F. DAHAR	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

STATION 46 BRIDGE
WOOLWICH — SAGADAHOC

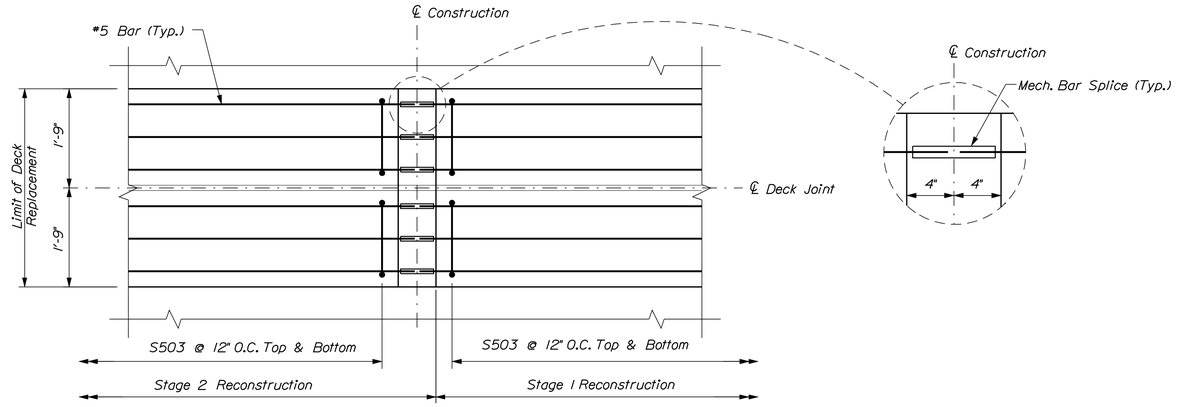
DECK JOINT REPLACEMENT DETAILS - 1

SHEET NUMBER

20

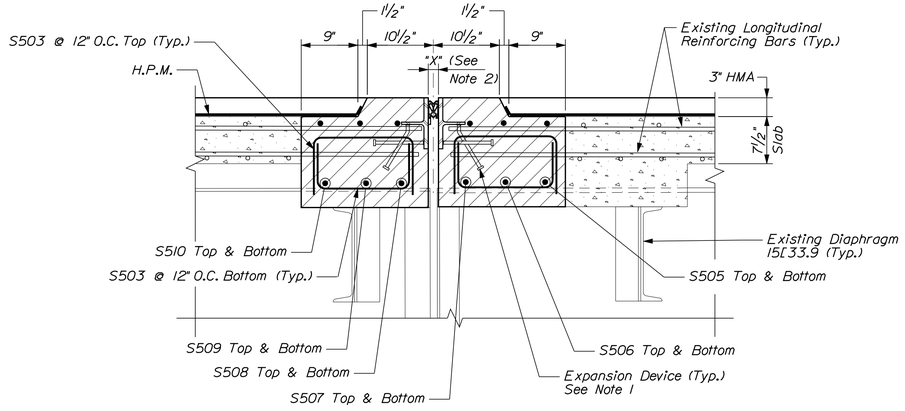
OF 28

Filename: ...\MSTA\020_Proposed Joints-1.dgn Username: LindoT Division: BRIDGE Date:11/30/2012



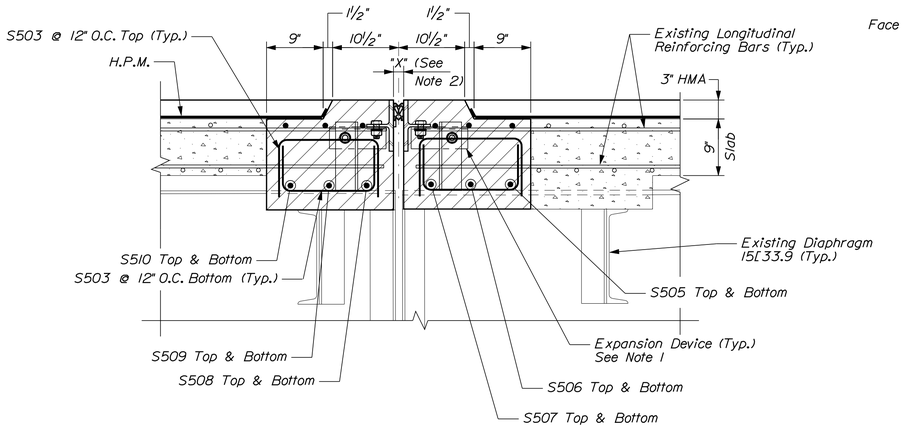
DETAIL "G" (TYP. EXPANSION JOINT)

SCALE: 3/4" = 1'-0"



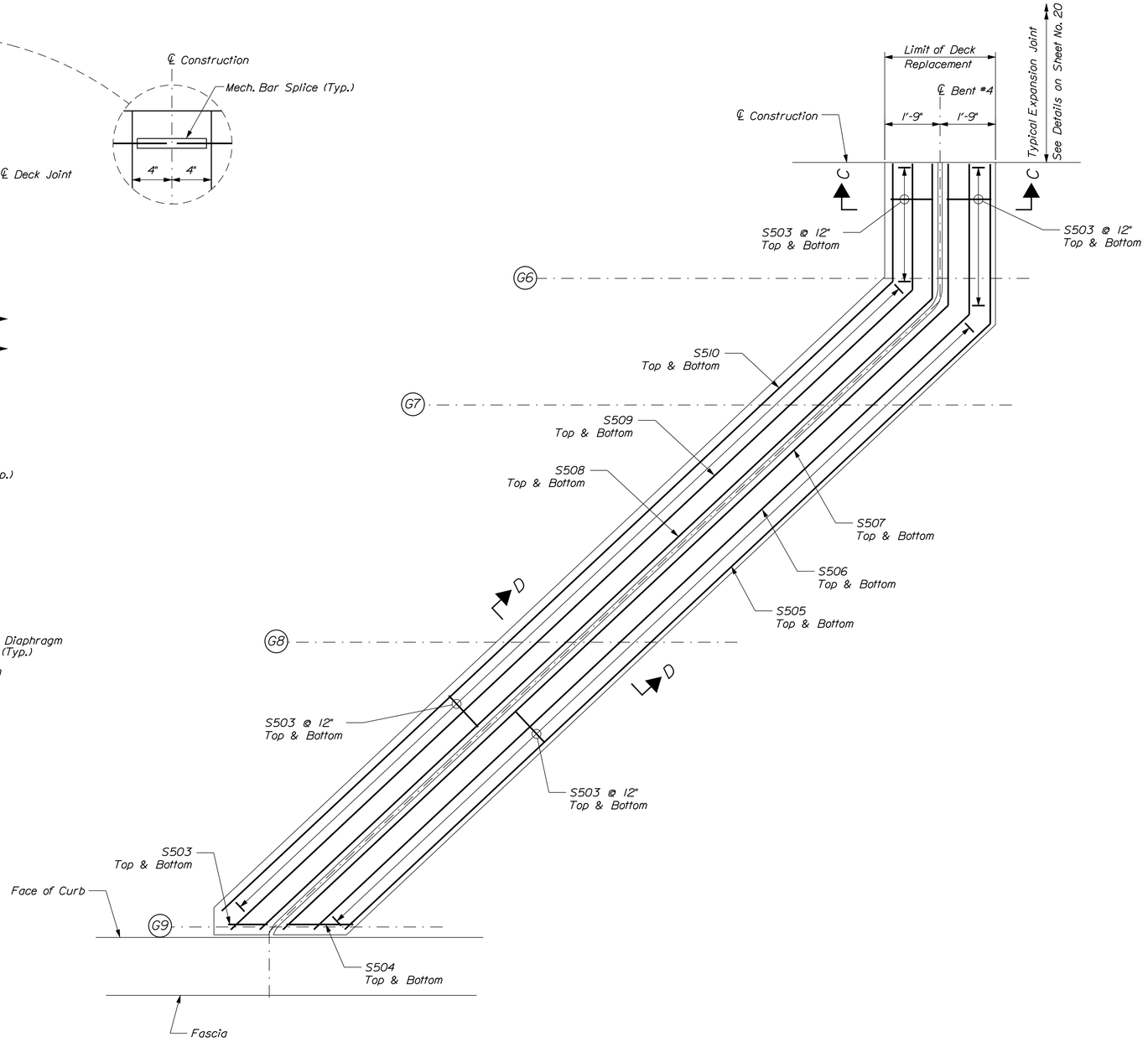
SECTION C-C

SCALE: 1" = 1'-0"



SECTION D-D

SCALE: 1" = 1'-0"



DETAIL "F"
BENT #4 SKEWED EXPANSION JOINT REINFORCEMENT PLAN

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

LEGEND:

- High Preformance Waterproofiing Membrance (H.P.M.)
- Limits of New Concrete

NOTES

1. For Expansion Device Details. See Sheet No. 22.
2. For "X" Dimension. See Sheet No. 24.
3. Unless otherwise noted. 2" Min. Cover for reinforcement.

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084

BRIDGE NO. 3039

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	T. LINDO	NOV. 2012
CHECKED-REVIEWED	F. DAHAR	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

STATION 46 BRIDGE

WOOLWICH SAGADAHOC

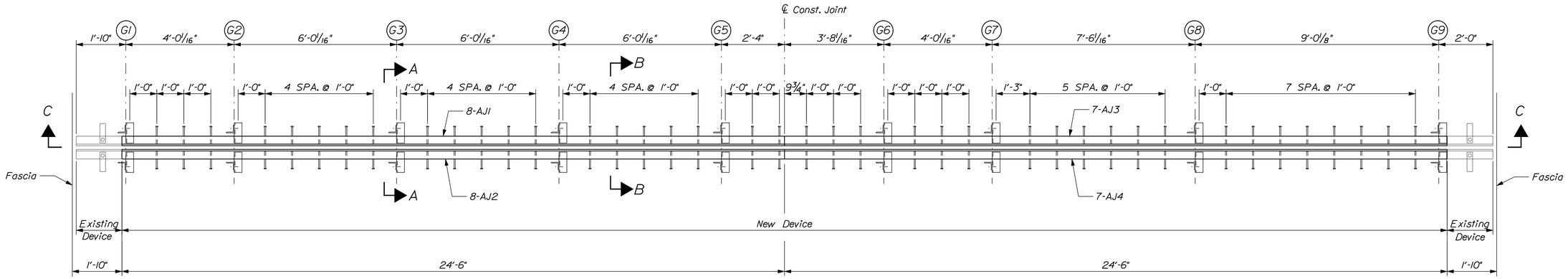
DECK JOINT REPLACEMENT DETAILS - 2

SHEET NUMBER

21

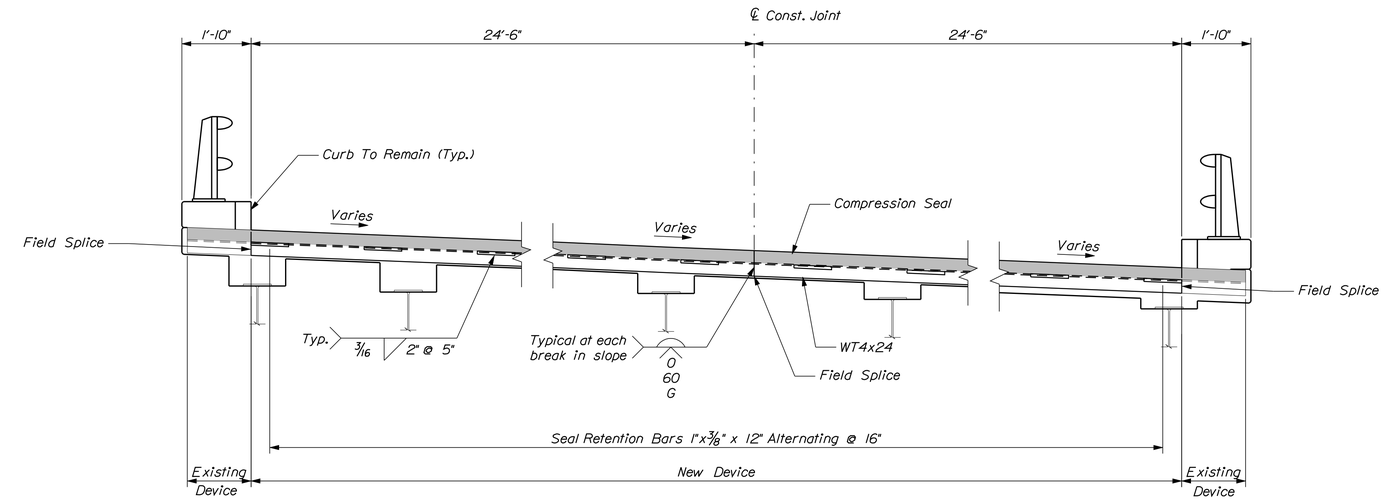
OF 28

Filename: ...\MSTA\021_Proposed Joints-2.dgn Division: BRIDGE Username: LindoT Date:11/30/2012



TYPICAL JOINT PLAN

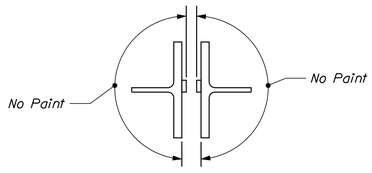
Scale: 1/2" = 1'-0"

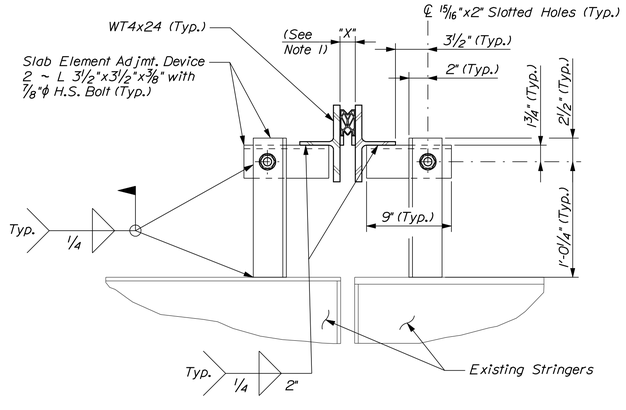


SECTION C-C

NOTES

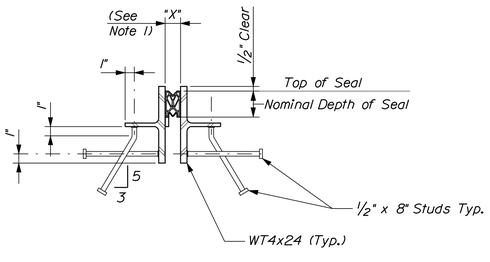
1. For "X" dimension. See Sheet No. 24.





SECTION A-A (Typ. At Stringer Locations)

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

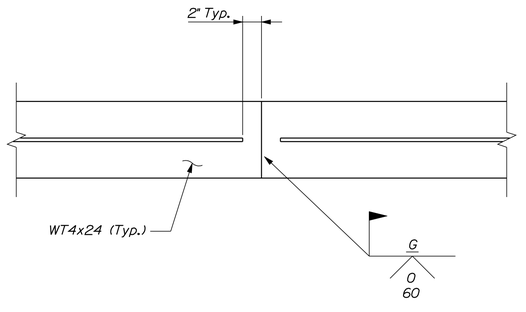


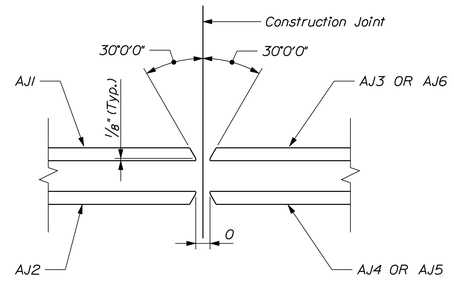
SECTION B-B (Typ. At All Other Locations)

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

ELEVATION - TYPICAL INSTALLATION

Not To Scale





END PREPARATION AT CONSTRUCTION JOINT

NOT TO SCALE

SECTION A-A (Typ. At Stringer Locations)

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

SECTION B-B (Typ. At All Other Locations)

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

JOINT ARMOR FIELD SPLICE

NOT TO SCALE

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084

BRIDGE NO. 3039

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	F. DAHAR	NOV. 2012
CHECKED-REVIEWED	T. LINDO	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

STATION 46 BRIDGE

SAGADAHOC

WOOLWICH

EXPANSION JOINT DETAILS

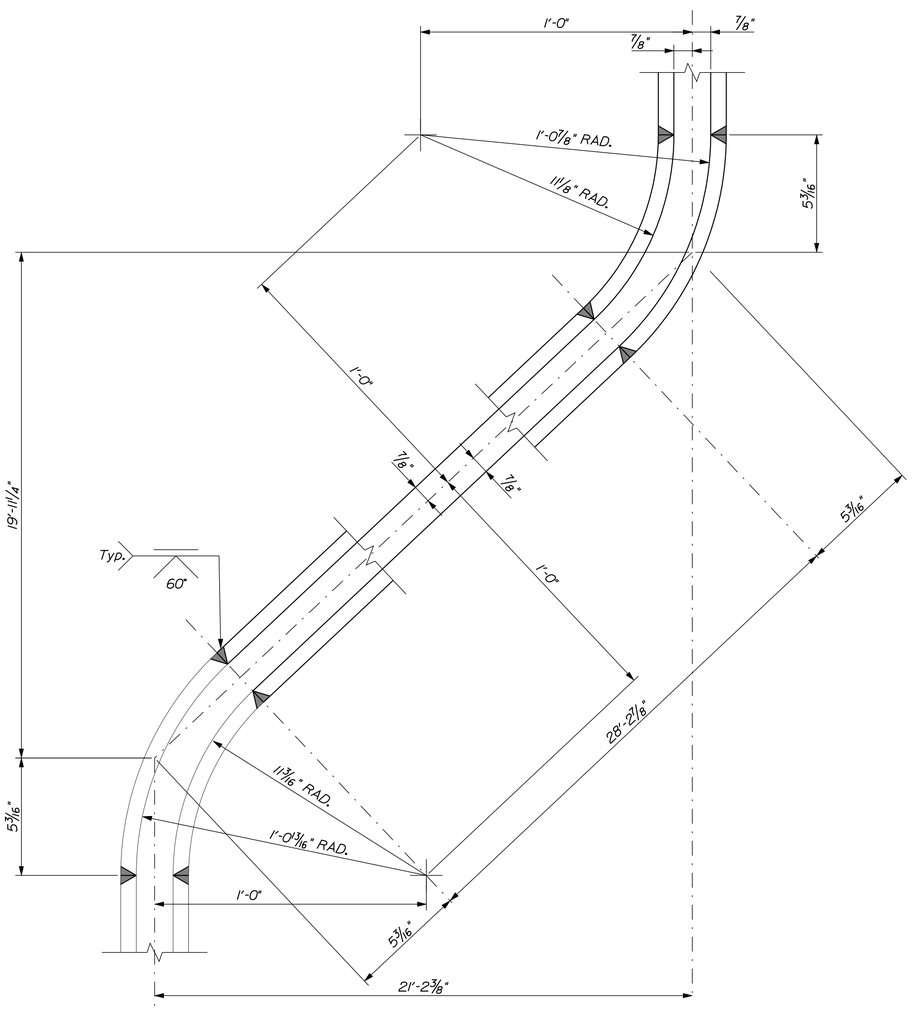
SHEET NUMBER

22

OF 28

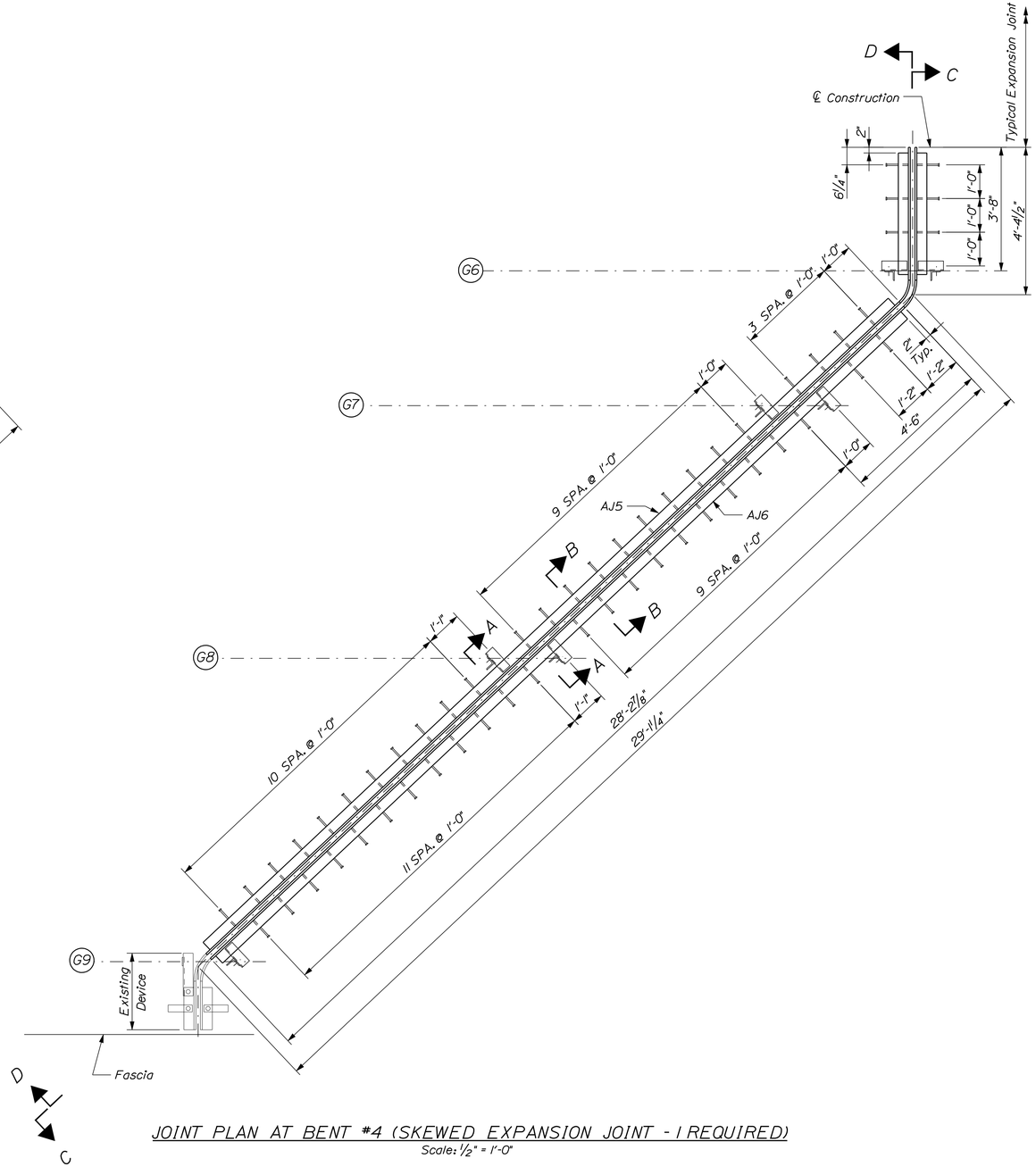
Filename: ...\022_Superstructure_Exp Joint Dtls.dgn Division: BRIDGE Username: LindoT Date:11/30/2012

Filename: ...\023_Superstructure_Bent 4 Plan.dgn Division: BRIDGE Username: LindoT Date:11/30/2012



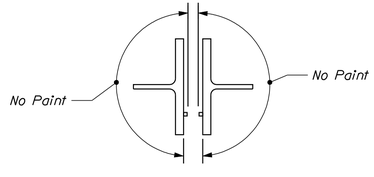
JOINT KEY PLAN AT BENT #4 (SKEWED EXPANSION JOINT)

Not to Scale



JOINT PLAN AT BENT #4 (SKEWED EXPANSION JOINT - 1 REQUIRED)

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



NOTES:

1. Refer to Typical Joint Details for portion of device north of centerline of construction.
2. Refer to Sheet No. 22 for SECTION A-A and SECTION B-B.
3. For SECTIONS C-C and D-D, see Sheet 24.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

BRIDGE NO. 3039 | WIN 17084 | BRIDGE PLANS

	BY	DATE
PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	T. LINDO	NOV. 2012
CHECKED-REVIEWED	F. DAHAR	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

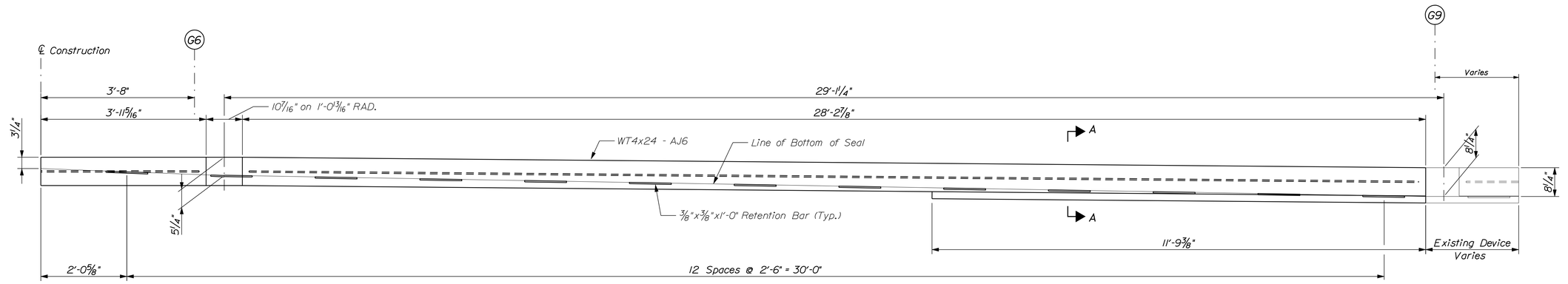
DATE

STATION 46 BRIDGE
WOOLWICH SAGADAHOC

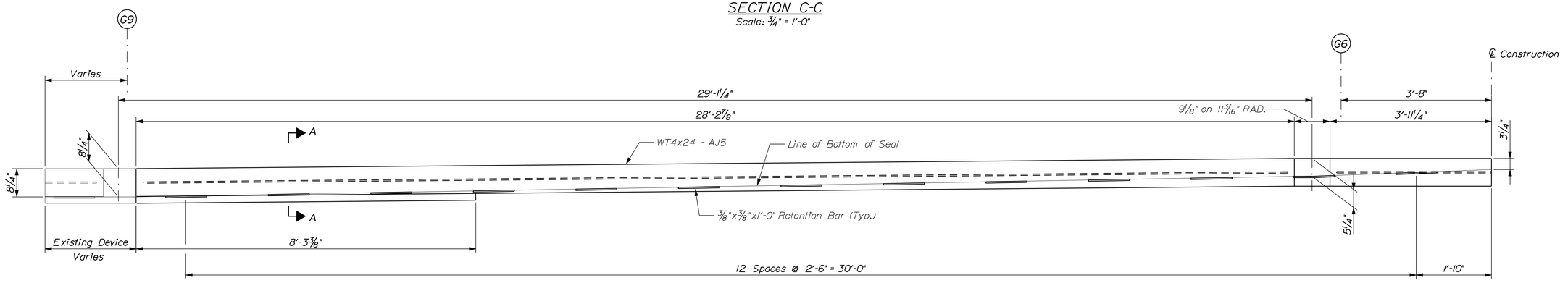
BENT #4 SKEWED
EXPANSION JOINT PLAN

SHEET NUMBER
23
OF 28

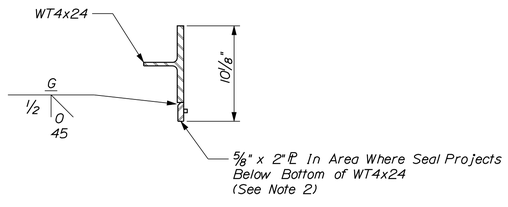
ERDMAN ANTHONY



SECTION C-C
Scale: 3/4" = 1'-0"



SECTION D-D
Scale: 3/4" = 1'-0"



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

NOTES:

1. Refer to Sheet 23 for section cut locations.
2. Refer to Sheet 22 Expansion Joint Details for installation details.

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084
BRIDGE NO. 3039
BRIDGE PLANS

	BY	DATE
PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	T. LINDO	NOV. 2012
CHECKED-REVIEWED	F. DAHAR	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

STATION 46 BRIDGE
WOOLWICH
SAGADAHOC

BENT #4 SKEWED EXPANSION JOINT ELEVATIONS

SHEET NUMBER
24
OF 28

Filename: ...\024_Superstructure_Bent 4 Elevs.dgn Division: BRIDGE Username: LindoT Date:11/30/2012

JOINT LOCATION	MOVEMENT RATING (in.)	X (in.) @ 45° F	COMPRESSION SEAL NOMINAL WIDTH
Bent 2	0.81	1.72	2½"
Bent 4	0.81	1.72	3"
Bent 6	1.00	1.63	2½"
Bent 8	1.07	2.02	3"
Bent 10	1.07	2.02	3"
Bent 12	1.07	2.02	3"
Bent 14	0.94	1.66	2½"
Bent 16	0.94	1.66	2½"

Accounts for skew

COMPRESSION SEAL TEMPERATURE ADJUSTMENT CHART

	JOINT LOCATION	APPLICABLE LENTH - DISTANCE FROM FIXED BRG. (ft.)	TEMPERATURE °F									
			5	15	25	35	45	55	65	75	85	95
X at Various Temperatures	Bent 2	65.0	1.92	1.87	1.82	1.77	1.72	1.67	1.62	1.57	1.52	1.47
	Bent 4	65.0	1.92	1.87	1.82	1.77	1.72	1.67	1.62	1.57	1.52	1.47
	Bent 6	80.0	1.87	1.81	1.75	1.69	1.63	1.56	1.50	1.44	1.38	1.32
	Bent 8	85.4	2.28	2.21	2.15	2.06	2.02	1.95	1.88	1.82	1.75	1.69
	Bent 10	85.4	2.28	2.21	2.15	2.06	2.02	1.95	1.88	1.82	1.75	1.69
	Bent 12	85.4	2.28	2.21	2.15	2.06	2.02	1.95	1.88	1.82	1.75	1.67
	Bent 14	75.0	1.89	1.83	1.77	1.71	1.66	1.60	1.54	1.48	1.42	1.37
	Bent 16	75.0	1.89	1.83	1.77	1.71	1.66	1.60	1.54	1.48	1.42	1.37

Filename: ...\025_Compression Seal Tables.dgn Division: BRIDGE Username: LindoT Date:11/30/2012

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084
BRIDGE NO. 3039
BRIDGE PLANS

SIGNATURE

P.E. NUMBER

DATE

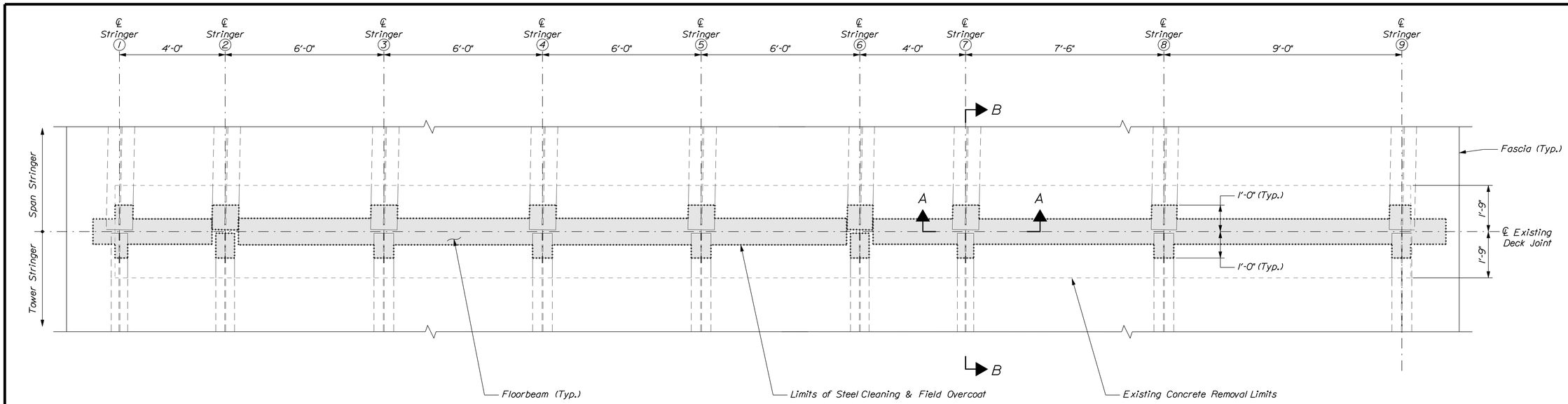
		BY	DATE
PROJ. MANAGER DEVIN ANDERSON			
DESIGN-DETAILED	F. DAHAR	T. LINDO	NOV 2012
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATION 46 BRIDGE
WOOLWICH
SAGADAHOC

COMPRESSION SEAL TABLES

SHEET NUMBER
25
OF 28

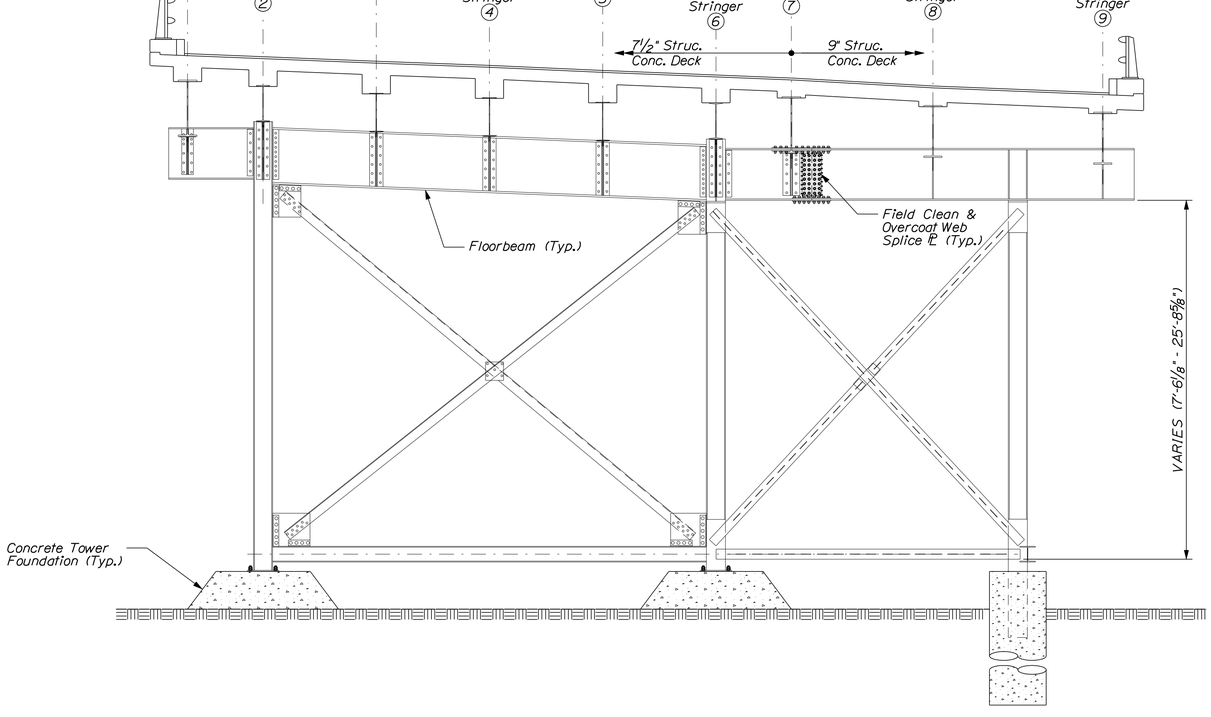
ERDMAN ANTHONY



PLAN AT TOWER BENT

(FLOORBEAM & STRINGER FLANGE SHADED)

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



TRANSVERSE SECTION AT TOWER BENT

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

STEEL PAINTING TABLE	
BENT	QUANTITY (SF)
ABUT 1	31
1	268
2	268
3	268
4	294
5	268
6	268
7	268
8	268
9	268
10	268
11	268
12	268
13	268
14	268
15	268
16	268
ABUT 2	31
TOTAL	4358

NOTES

1. See Sheet No. 26 for Sections A-A & B-B.
2. Clean & Field Overcoat all stringers within 1'-0" of centerline of existing deck joints.
3. Clean & Field Overcoat top and bottom face of top flange and top face of bottom flange of all floorbeams
4. Clean & Field Overcoat all floorbeam splice plates and bolts on splice plates.
5. Structural steel shall be power tool cleaned under Specification SSPC SP15.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084

BRIDGE NO. 3039

BRIDGE PLANS

SIGNATURE

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	BY	DATE
PROJ. MANAGER DEVIN ANDERSON		
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CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

STATION 46 BRIDGE
WOOLWICH
SAGADAHOC

STEEL CLEANING AND FIELD OVERCOAT

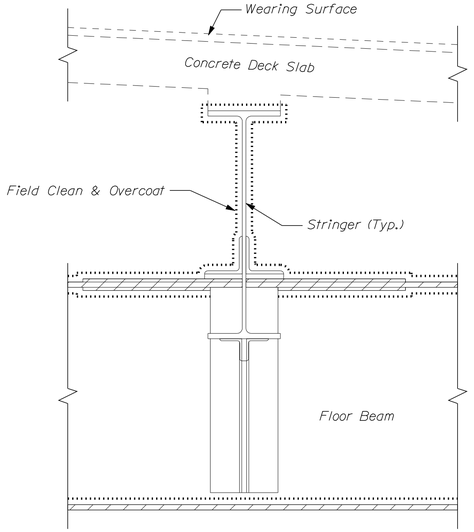
SHEET NUMBER

26

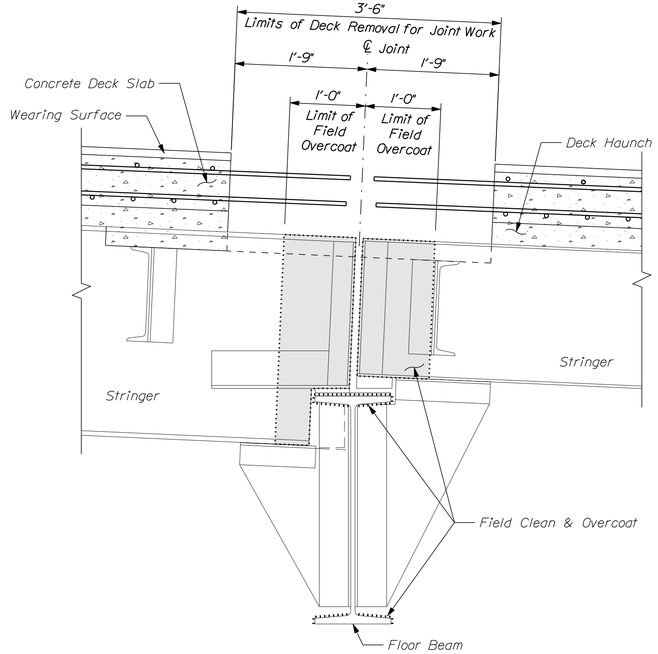
OF 28

ERDMAN ANTHONY

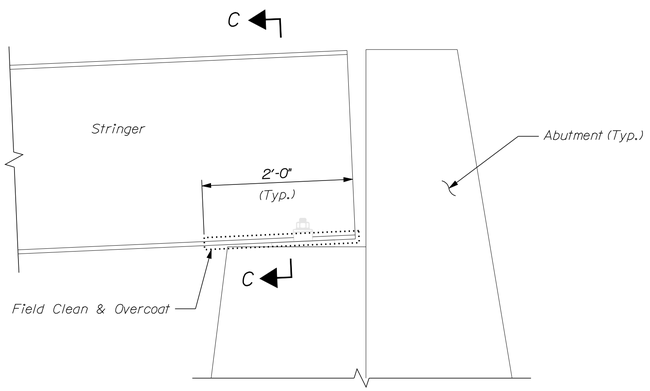
Filename: ...\026_Bent Plan-Elevation.dgn Division: BRIDGE Username: LindoT Date:11/30/2012



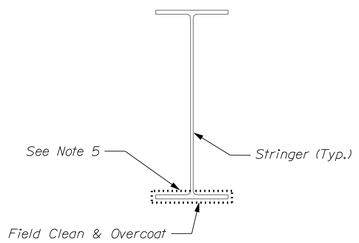
SECTION A-A
Scale: 1"=1'-0"



SECTION B-B
Scale: 1"=1'-0"



DETAIL "1"
Scale: 1"=1'-0"



SECTION C-C
Scale: 1"=1'-0"

NOTES

1. Any splice plates (flanges & web) within 1'-0" of Joint ℄ shall be painted.
2. Refer to Sheet No. 25 for section cut locations.
3. Field Clean and Overcoat shall take place after deck joint removal when steel is exposed (open to above).
4. Floorbeams at existing joint locations to be painted on 3 surfaces: Top of Flange, Bottom of Top Flange and Top of Bottom Flange (refer to SECTION B-B).
5. Field Clean and Overcoat top and bottom face of bottom flange of all girders 2'-0" from end of girder at both abutments.
6. Structural steel shall be power tool cleaned under Specification SSPC SP15.

LEGEND:

..... Payment Limit for Field Painting of Existing and New Structural Steel

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

BRIDGE NO. 3039 | WIN 17084 | BRIDGE PLANS

	BY	DATE
PROJ. MANAGER DEVIN ANDERSON		
DESIGN-DETAILED	T. LINDO	NOV 2012
CHECKED-REVIEWED	F. DAHAR	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

STATION 46 BRIDGE
WOOLWICH SAGADAHOC

STEEL CLEANING AND FIELD OVERCOAT DETAILS

SHEET NUMBER
27
OF 28

ERDMAN ANTHONY

Username: LindoT Date:11/30/2012
Division: BRIDGE
Filename: ...\MSTA\027_Bent Details.dgn

STRAIGHT BARS

MARK	QTY.	LENGTH	LOCATION
ABUTMENT 1			
A501	4	2'-0"	G1 - Beam Seat Dowels
A501	4	2'-0"	G2 - Beam Seat Dowels
A501	4	2'-0"	G3 - Beam Seat Dowels
A501	4	2'-0"	G4 - Beam Seat Dowels
A501	4	2'-0"	G5 - Beam Seat Dowels
A501	4	2'-0"	G6 - Beam Seat Dowels
A501	4	2'-0"	G7 - Beam Seat Dowels
ABUTMENT 2			
B501	4	2'-0"	G1 - Beam Seat Dowels
B501	4	2'-0"	G2 - Beam Seat Dowels
B501	4	2'-0"	G3 - Beam Seat Dowels
B501	4	2'-0"	G4 - Beam Seat Dowels
B501	4	2'-0"	G5 - Beam Seat Dowels
B501	4	2'-0"	G6 - Beam Seat Dowels
B501	4	2'-0"	G7 - Beam Seat Dowels
TOWER PEDESTALS			
P501	12	2'-5"	Pedestal Location 1
P501	12	2'-5"	Pedestal Location 10
P501	12	2'-5"	Pedestal Location 11
P501	12	2'-5"	Pedestal Location 13
P501	12	2'-5"	Pedestal Location 14
P501	12	2'-5"	Pedestal Location 15
P501	12	2'-5"	Pedestal Location 16
P501	12	2'-5"	Pedestal Location 17
P501	12	2'-5"	Pedestal Location 21
P501	12	2'-5"	Pedestal Location 24
P501	12	2'-5"	Pedestal Location 25
P501	12	2'-5"	Pedestal Location 32
SUPERSTRUCTURE DECK			
S501	28	24'-3"	Transverse Bars - Bent 1
S501	24	24'-3"	Transverse Bars - Bent 2
S501	28	24'-3"	Transverse Bars - Bent 3
S501	12	24'-3"	Transverse Bars - Bent 4 Westbound Lane
S501	28	24'-3"	Transverse Bars - Bent 5
S501	24	24'-3"	Transverse Bars - Bent 6
S501	28	24'-3"	Transverse Bars - Bent 7
S501	24	24'-3"	Transverse Bars - Bent 8
S501	28	24'-3"	Transverse Bars - Bent 9
S501	24	24'-3"	Transverse Bars - Bent 10
S501	28	24'-3"	Transverse Bars - Bent 11
S501	24	24'-3"	Transverse Bars - Bent 12
S501	28	24'-3"	Transverse Bars - Bent 13
S501	24	24'-3"	Transverse Bars - Bent 14
S501	28	24'-3"	Transverse Bars - Bent 15
S501	24	24'-3"	Transverse Bars - Bent 16

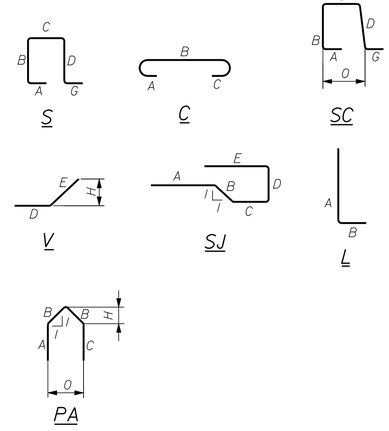
MARK	QTY.	LENGTH	LOCATION

BENT BARS

MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
ABUTMENT 1														
A502	12	6'-10"	S	0'-0"	1'-5"	4'-0"	1'-5"			0'-0"				G1 & G2 Beam Seat Hoop
A502	12	6'-10"	S	0'-0"	1'-5"	4'-0"	1'-5"			0'-0"				G6 & G7 Beam Seat Hoop
A503	6	5'-6"	S	0'-0"	1'-5"	2'-8"	1'-5"			0'-0"				G3 Beam Seat Hoop
A503	6	5'-6"	S	0'-0"	1'-5"	2'-8"	1'-5"			0'-0"				G4 Beam Seat Hoop
A503	6	5'-6"	S	0'-0"	1'-5"	2'-8"	1'-5"			0'-0"				G5 Beam Seat Hoop
ABUTMENT 2														
B502	12	6'-10"	S	0'-0"	1'-5"	4'-0"	1'-5"			0'-0"				G1 & G2 Beam Seat Hoop
B502	12	6'-10"	S	0'-0"	1'-5"	4'-0"	1'-5"			0'-0"				G6 & G7 Beam Seat Hoop
B503	6	5'-6"	S	0'-0"	1'-5"	2'-8"	1'-5"			0'-0"				G3 Beam Seat Hoop
B503	6	5'-6"	S	0'-0"	1'-5"	2'-8"	1'-5"			0'-0"				G4 Beam Seat Hoop
B503	6	5'-6"	S	0'-0"	1'-5"	2'-8"	1'-5"			0'-0"				G5 Beam Seat Hoop
TOWER PEDESTALS														
P502	2	9'-4"	S	0'-0"	2'-10"	3'-8"	2'-10"			0'-0"				Bottom Stirrup - Pedestal 1
P503	2	8'-6"	S	0'-0"	2'-8"	3'-2"	2'-8"			0'-0"				Top Stirrup - Pedestal 1
P502	2	9'-4"	S	0'-0"	2'-10"	3'-8"	2'-10"			0'-0"				Bottom Stirrup - Pedestal 10
P503	2	8'-6"	S	0'-0"	2'-8"	3'-2"	2'-8"			0'-0"				Top Stirrup - Pedestal 10
P502	2	9'-4"	S	0'-0"	2'-10"	3'-8"	2'-10"			0'-0"				Bottom Stirrup - Pedestal 11
P503	2	8'-6"	S	0'-0"	2'-8"	3'-2"	2'-8"			0'-0"				Top Stirrup - Pedestal 11
P502	2	9'-4"	S	0'-0"	2'-10"	3'-8"	2'-10"			0'-0"				Bottom Stirrup - Pedestal 13
P503	2	8'-6"	S	0'-0"	2'-8"	3'-2"	2'-8"			0'-0"				Top Stirrup - Pedestal 13
P502	2	9'-4"	S	0'-0"	2'-10"	3'-8"	2'-10"			0'-0"				Bottom Stirrup - Pedestal 14
P503	2	8'-6"	S	0'-0"	2'-8"	3'-2"	2'-8"			0'-0"				Top Stirrup - Pedestal 14
P502	2	9'-4"	S	0'-0"	2'-10"	3'-8"	2'-10"			0'-0"				Bottom Stirrup - Pedestal 15
P503	2	8'-6"	S	0'-0"	2'-8"	3'-2"	2'-8"			0'-0"				Top Stirrup - Pedestal 15
P502	2	9'-4"	S	0'-0"	2'-10"	3'-8"	2'-10"			0'-0"				Bottom Stirrup - Pedestal 16
P503	2	8'-6"	S	0'-0"	2'-8"	3'-2"	2'-8"			0'-0"				Top Stirrup - Pedestal 16
P502	2	9'-4"	S	0'-0"	2'-10"	3'-8"	2'-10"			0'-0"				Bottom Stirrup - Pedestal 17
P503	2	8'-6"	S	0'-0"	2'-8"	3'-2"	2'-8"			0'-0"				Top Stirrup - Pedestal 17
P502	2	9'-4"	S	0'-0"	2'-10"	3'-8"	2'-10"			0'-0"				Bottom Stirrup - Pedestal 21
P503	2	8'-6"	S	0'-0"	2'-8"	3'-2"	2'-8"			0'-0"				Top Stirrup - Pedestal 21
P502	2	9'-4"	S	0'-0"	2'-10"	3'-8"	2'-10"			0'-0"				Bottom Stirrup - Pedestal 24
P503	2	8'-6"	S	0'-0"	2'-8"	3'-2"	2'-8"			0'-0"				Top Stirrup - Pedestal 24
P502	2	9'-4"	S	0'-0"	2'-10"	3'-8"	2'-10"			0'-0"				Bottom Stirrup - Pedestal 25
P503	2	8'-6"	S	0'-0"	2'-8"	3'-2"	2'-8"			0'-0"				Top Stirrup - Pedestal 25
P502	2	9'-4"	S	0'-0"	2'-10"	3'-8"	2'-10"			0'-0"				Bottom Stirrup - Pedestal 32
P503	2	8'-6"	S	0'-0"	2'-8"	3'-2"	2'-8"			0'-0"				Top Stirrup - Pedestal 32
SUPERSTRUCTURE DECK														
S502	100	4'-8"	S	0'-0"	0'-10"	3'-0"	0'-10"			0'-0"				Stirrup - Bent 1
S502	100	4'-8"	S	0'-0"	0'-10"	3'-0"	0'-10"			0'-0"				Stirrup - Bent 3
S502	100	4'-8"	S	0'-0"	0'-10"	3'-0"	0'-10"			0'-0"				Stirrup - Bent 5
S502	100	4'-8"	S	0'-0"	0'-10"	3'-0"	0'-10"			0'-0"				Stirrup - Bent 7
S502	100	4'-8"	S	0'-0"	0'-10"	3'-0"	0'-10"			0'-0"				Stirrup - Bent 9
S502	100	4'-8"	S	0'-0"	0'-10"	3'-0"	0'-10"			0'-0"				Stirrup - Bent 11
S502	100	4'-8"	S	0'-0"	0'-10"	3'-0"	0'-10"			0'-0"				Stirrup - Bent 13
S502	100	4'-8"	S	0'-0"	0'-10"	3'-0"	0'-10"			0'-0"				Stirrup - Bent 15
S503	200	2'-11"	S	0'-0"	0'-10"	1'-3"	0'-10"			0'-0"				Stirrup - Bent 2
S503	200	2'-11"	S	0'-0"	0'-10"	1'-3"	0'-10"			0'-0"				Stirrup - Bent 6
S503	200	2'-11"	S	0'-0"	0'-10"	1'-3"	0'-10"			0'-0"				Stirrup - Bent 8
S503	200	2'-11"	S	0'-0"	0'-10"	1'-3"	0'-10"			0'-0"				Stirrup - Bent 10
S503	200	2'-11"	S	0'-0"	0'-10"	1'-3"	0'-10"			0'-0"				Stirrup - Bent 12
S503	200	2'-11"	S	0'-0"	0'-10"	1'-3"	0'-10"			0'-0"				Stirrup - Bent 14
S503	200	2'-11"	S	0'-0"	0'-10"	1'-3"	0'-10"			0'-0"				Stirrup - Bent 16
S503	238	2'-11"	S	0'-0"	0'-10"	1'-3"	0'-10"			0'-0"				Stirrup - Bent 4
S504	2	3'-7"	S	0'-0"	0'-10"	1'-11"	0'-10"			0'-0"				Stirrup - Bent 4
S505	2	32'-11"	V				27'-11"	5'-0"			3'-8"			Transverses Bars - Bent 4
S506	2	33'-1"	V				28'-4"	4'-9"			3'-5"			Transverses Bars - Bent 4
S507	2	33'-2"	V				28'-9"	4'-5"			3'-3"			Transverses Bars - Bent 4
S508	2	33'-4"	V				29'-1"	4'-3"			3'-1"			Transverses Bars - Bent 4
S509	2	33'-6"	V				29'-6"	4'-0"			2'-11"			Transverses Bars - Bent 4
S510	2	32'-8"	V				29'-0"	3'-8"			2'-8"			Transverses Bars - Bent 4

MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

TYPE - BENDING DIAGRAMS



All dimensions are out-to-out of bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 315 and ACI Standard 318.

Reinforcing Bar: ASTM A615/A615M, Grade 60

GENERAL NOTES

1. The first digits following the letter(s) of the mark indicate the size of the bar:

   Mark "A502" = bar size #5
   Mark "P805" = bar size #8
   Mark "S650" = bar size #6

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 17084.00

WIN 17084

BRIDGE NO. 3039

BRIDGE PLANS

PROJ. MANAGER DEVIN ANDERSON			
DESIGN-DETAILED	F. DAHAR	NOV. 2012	
CHECKED-REVIEWED	T. LINDO	NOV. 2012	
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

STATION 46 BRIDGE
WOOLWICH SAGADAHOC

REINFORCING SCHEDULE

SHEET NUMBER

28

OF 28

Filename: ...\028_Reinforcing Schedule.dgn Division: BRIDGE Username: LindoT Date:11/30/2012