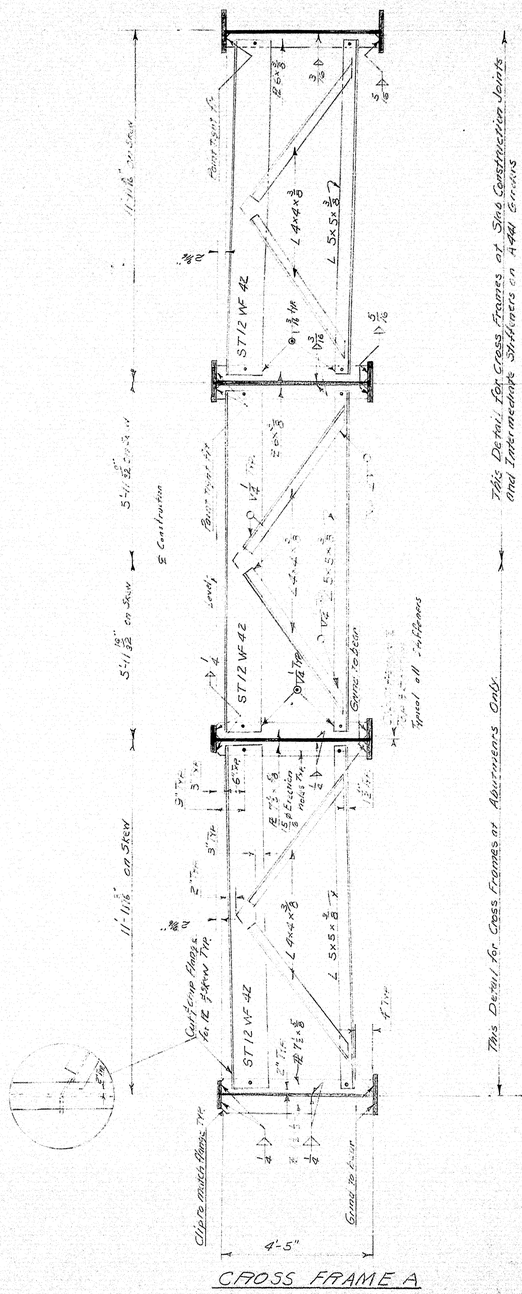
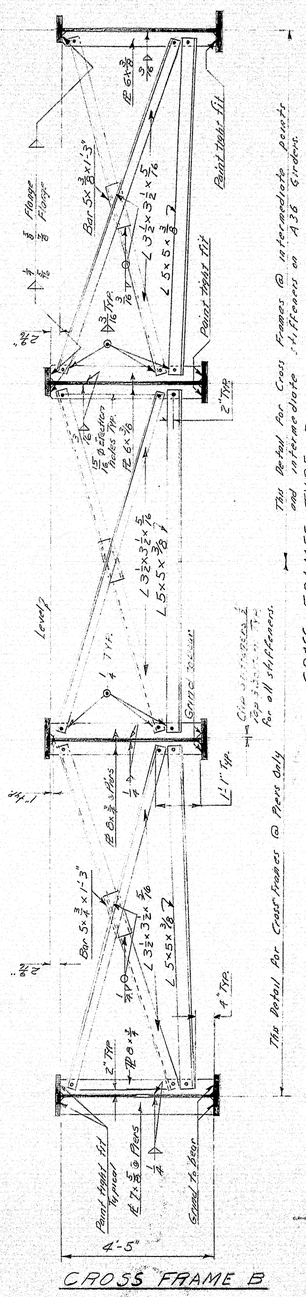
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



CROSS FRAME A

This Detail for Cross Frames at Abutments Only and Intermediate Stiffeners on A441 Girders

CROSS FRAMES TYPE A



CROSS FRAME B

This Detail for Cross Frames @ intermediate points and intermediate stiffeners on A36 Girders.

CROSS FRAMES TYPE B

~NOTES~

~SPECIFICATIONS~

DESIGN: The American Association of State Highway Official Standard Specifications for Highway Bridges. 1961 with Interim Specifications 1961 & 1962.

FABRICATION & ERECTION: State of Maine State Highway Commission, Standard Specifications, Highways & Bridges Revision of January 1956 and Supplemental Specifications February 1960.

WELDING: Specifications for Welded Highway and Railway Bridges American Welding Society AWS D2.0-63 as modified by contract specifications.

~DESIGN~

LOADING: HS20-44

ALLOWABLE STRESSES: In accordance with Design

~A. S. T. M. STEEL CLASSIFICATION~

GIRDERS: A36 or A441 as shown on erection plan sheet # 25

BEARING STIFFENERS: A36

FIELD SPLICES: A36

H. S. BOLTS: A325

PEDESTALS: As shown on Standard Sheet "BD 101-64

ALL OTHER: A36 unless otherwise noted.

~GIRDER FABRICATION NOTES~

Flanges are to be Butt Welded in accordance with Detail C & View B-B. Sheet "25 and the specifications and inspected in conformance with the specifications prior to being fillet welded to the web plates.

The steel fabricator at his option may fabricate the web plates with butt welds with the following limitations: "A" A maximum of two(2) transverse welds in the positive moment area per girder per span. "B" A maximum of one (1) transverse weld each side of ℄ of bearing at a minimum distance of 10'-0" from ℄ bearing. If butt welds are used to fabricate the web plates they shall be made & inspected in conformance with the specifications before the web plates are fillet welded to the flange plates. The location and detail of the butt welds in the webs shall be subject to approval by the Engineer.

Girders to be cambered in accordance with details on sheet "27

Girders to be fitted with bearing and intermediate stiffener details and location shown on sheet "25

Girders to be fitted with shear connectors details shown on sheet "27

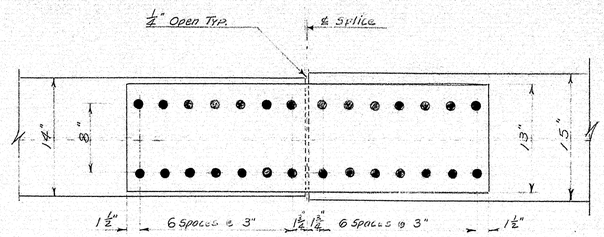
Armored Joints to be fabricated according to Standard Details BD-104-64.

Expansion Finger Joint to be fabricated according to Standard Details BD-105-64.

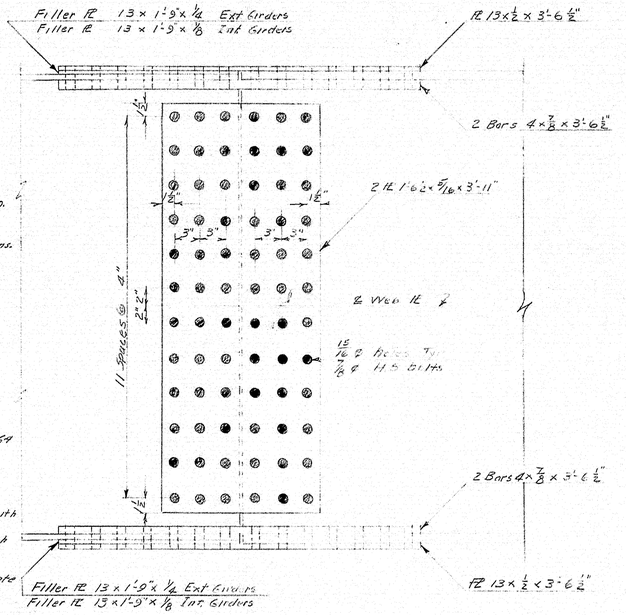
Curb Expansion Joints to be fabricated according to Standard Details BD-105-64.

For Expansion and Fixed Pedestals see Standard Details BD-101-64. Pedestal EP 7 to be modified as shown: D = 2'-4" & J = 0'-5".

Drains to be fabricated according to Standard Details BD-104-64



PLAN



ELEVATION
FIELD SPLICE

NOTE: Estimated weight of Structural Steel including Drains = 210,000 lbs.

DESIGN– Dotson TRACE+ DETAIL– G.E.A. CHECK– T. H. K.	BRIDGE NO. 5161 SURVEY– PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

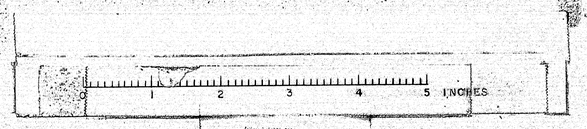
SANDY RIVER BRIDGE
OVER
SANDY RIVER
IN THE TOWN OF
STRONG
FRANKLIN COUNTY

CROSS FRAMES

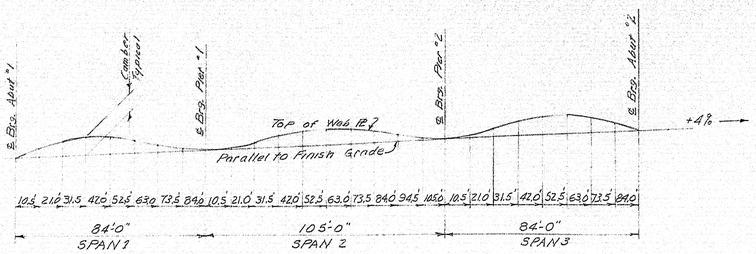
SHEET 26 OF 32 AUGUSTA, MAINE May 1964

92-35

C. D. CO., NO. 44-131 26720



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



CAMBER DIAGRAM

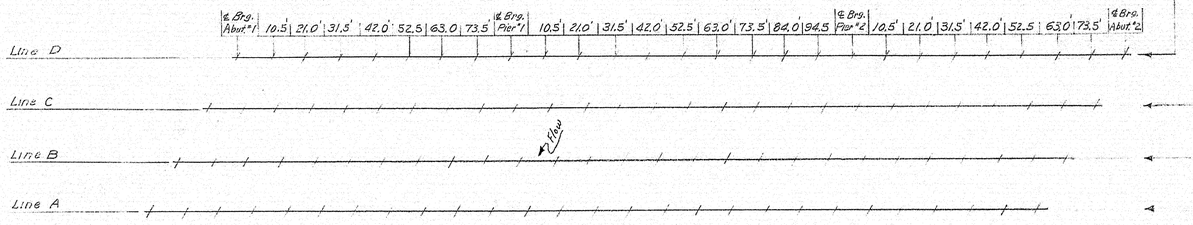
Dimensions Horizontal

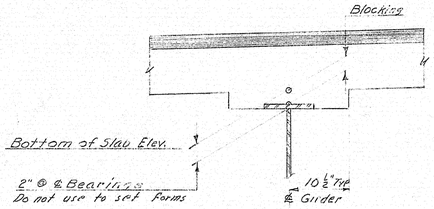
ALL GIRDER LINES		
SPAN	POINT	CAMBER
1	℄ Brg. A°1	0"
	10.5'	1/2"
	21.0'	3/4"
	31.5'	7/8"
	42.'	1"
	52.5'	7/8"
	63.0'	3/4"
	73.5'	1/2"
	℄ Brg. Pier°1	0"
2	10.5'	1/2"
	21.0'	3/4"
	31.5'	7/8"
	42.0'	1"
	52.5'	1 1/8"
	63.0'	1"
	73.5'	3/4"
	84.0'	1/2"
	94.5'	1/4"
	℄ Brg. Pier°2	0"
3	10.5'	1/4"
	21.0'	1/2"
	31.5'	3/4"
	42.0'	1"
	52.5'	1 1/8"
	63.0'	1 1/4"
	73.5'	1 1/2"
	℄ Brg. A°2	0"

BOTTOM OF SLAB ELEVATIONS

GIRDER	SPAN 1								SPAN 2									SPAN 3							
	℄ Brg. Abut°1	10.5'	21.0'	31.5'	42.0'	52.5'	63.0'	73.5'	℄ Brg. Pier°1	10.5'	21.0'	31.5'	42.0'	52.5'	63.0'	73.5'	84.0'	94.5'	℄ Brg. Pier°2	10.5'	21.0'	31.5'	42.0'	52.5'	63.0'	73.5'	℄ Brg Abut°2
Girder Line A	101.79	102.27	102.69	103.13	103.54	103.89	104.34	104.71	105.15	105.58	106.02	106.47	106.91	107.34	107.75	108.15	108.54	108.94	109.35	109.78	110.22	110.66	111.10	111.53	111.93	112.32	112.71
Girder Line B	102.24	102.70	103.15	103.58	104.00	104.40	104.79	105.19	105.60	106.03	106.47	106.92	107.36	107.79	108.20	108.60	108.99	109.39	109.80	110.23	110.67	111.12	111.56	111.98	112.39	112.78	113.16
Girder Line C	102.48	102.94	103.39	103.82	104.24	104.64	105.03	105.43	105.84	106.27	106.71	107.16	107.60	108.03	108.44	108.84	109.23	109.63	110.04	110.47	110.91	111.36	111.79	112.22	112.63	113.02	113.40
Girder Line D	102.51	102.96	103.41	103.84	104.26	104.66	105.06	105.45	105.86	106.29	106.74	107.18	107.63	108.05	108.46	108.86	109.26	109.65	110.06	110.49	110.93	111.38	111.82	112.24	112.65	113.04	113.42

All Dimensions Horizontal

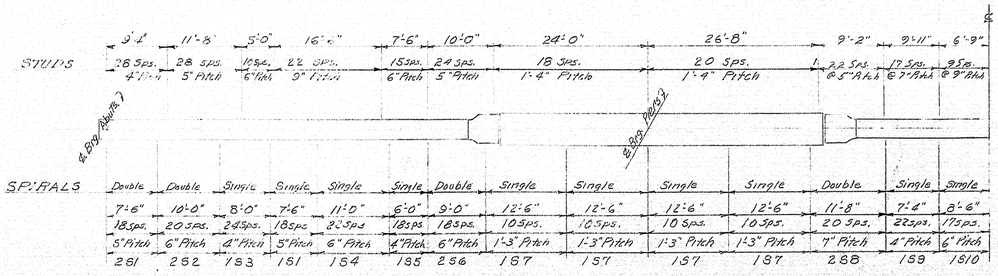




BLOCKING DETAIL

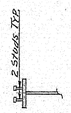
NOTE:
To compensate for dead load deflection as well as possible irregularities in the finished slab the bottom of slab elevations at the ℄ of the span are controlled by the elevations of the slab forms at the ℄ of the span.

CONVERSION TABLE	
Horizontal Dist.	On Steel Dist.
10'-6"	10' 6⅛"
21'-0"	21' 0⅛"
31'-6"	31' 6⅛"
42'-0"	42' 0⅛"
52'-6"	52' 6½"
63'-0"	63' 0⅝"
73'-6"	73' 6¾"
84'-0"	84' 0⅞"
94'-6"	94' 6⅞"
105'-0"	105' 1"



SHEAR CONNECTOR DETAILS
Typical all Girders

Note: Dimensions are symmetrical about ℄ Structure, and are horizontal.



Note:
See Standard Detail Sheet BD 104-64 for details. Dimensions given for Spirals do not allow for lap. Lap should be a min. of 3". Added bar should be allowed for proper welding at lap. Skew angle for studs = 30°-0'
Pitch and transverse spacing may be revised slightly at girder field splices to clear bolts.

SHEAR CONNECTOR SCHEDULE			
TYPE	MARK	Number	LENGTH *
Studs		3416	
Spirals	S1	24	7'-6"
	S2	16	10'-0"
	S3	8	8'-0"
	S4	8	11'-0"
	S5	8	6'-0"
	S6	16	9'-0"
	S7	32	12'-6"
	S8	16	11'-8"
	S9	8	7'-4"
	S10	8	8'-6"

* Length does not include lap.

DESIGN– Dotson
TRACE– DETAIL– G.E.R.
CHECK– T.H.K.

BRIDGE NO. 5761
SURVEY–
PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

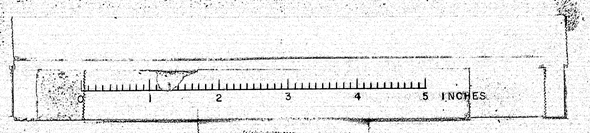
SANDY RIVER BRIDGE
OVER
SANDY RIVER
IN THE TOWN OF
STRONG
FRANKLIN COUNTY

BLOCKING DETAILS

SHEET 27 OF 32 AUGUSTA, MAINE May 1964

92-36

C. S. CO., NO. 44-131 28788



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

End of Curb Abut #1 to End of Curb Abut #2 275'-7 3/4" Horizontal
Rail Post 275'-10" Along Grade

84'-0" Center to Center Brgs
64'-2 1/4" Out to Out of Slab #1

105'-0" Center to Center Brgs
42'-4" Out to Out of Slab #2

FLOW

Same Dimensions US & DS
Same Dimensions US & DS
Rail Post Spacing: 27 Spaces @ 10'-1 3/4" = 273'-11 1/4" Along Grade

Contraction Jts in Curb
Drains

Back of Abut #1
15'-5 1/4"
12'-10 1/4"
7 3/4"
1C8
1C7
1C6
10C10@1'-6"
3C2
11C1@1'-6"
3C2
11C1@1'-6"
3C2
11C1@1'-6"
Const. Jt. Slab #1
3C3
7C1@1'-6"
3C3
7C1@1'-6"
3C3
7C1@1'-6"
3C3
7C1@1'-6"
End Slab #2
16'-3"
16'-3"
16'-3"
20'-0"
40'-0"
10'-7"
10'-7"
12'-6"
10'-7"
10'-7"
32'-6"

1" Plastic Tube
Splice 1'-3" Min.
Bend in field
3F3 Top
1/2" Preformed Exp. Jt. Filler at Piers Only, US & DS

545 Spaces @ 14" = 63'-0" 55 F1 Bars
54 Spaces @ 14" = 63'-0" 55 F2 Bars Top
55 F2 Bars Bottom

36 Spaces @ 14" = 42'-0" 37 F1 Bars
35 Spaces @ 14" = 40'-10" 36 F2 Bars Top
36 F2 Bars Bottom

2'-6"
15'-0"
35'-0"
30'-0"
15'-0"
12"
5"
30°00'00" Skew
14 1/4"
Back of Backwall
Face of Backwall
End of Slab
Longitudinal Bars Spaced as Shown on Typical Cross Section (All Slabs)
Construction # 1
2 1/4"
3 1/2"
21"
9"
16'-0"
16'-0"
2"
9"
23 L3 Over Piers
30°00'00" Skew
A
A
B
B
C
C
15'-5 1/4"
1" Plastic Tube
11C1@1'-6"
1C11
1C10
1C9
1'-3"
Curb Reinforcing Same as US Curbs
3 F3 Top
Curb Reinforcing Same as US Curbs
3 F3 Top

Note:
When placing Longitudinal Bars L1 & L2 in Slabs #1 & #2 Alternate Splices as shown.

Rail Detail See Sh. #30
27 Spaces @ 10'-1 3/4" = 273'-11 1/4" US & DS Along Grade

PLAN

All dimensions horizontal (except rail post spacing)

SLAB 1

SLAB 2

35'-0"
1'-0" 1'-0" 6"
15'-0"
℄ Construction
15'-0"
6" 1'-0" 1'-0"
2" Bit. Conc. Surface Course, Type A
Membrane Waterproofing (1/4" allowed)
8" Portland Cement Concrete Slab
3/4" Straight Crown
1/2" Typ
1"V-Groove Typ
Vertical Bar Curb Type 1
9" Reveal
2" Bit. Conc. Surface Course, Type A
Membrane Waterproofing 1/2"
1/2" Clear
-1/4"
L3 Bars
L Bars
F2 Bars
-1/4"
F1 Bars
3" Typ
2'-0"
1'-6"
C Bars
C1
Level
ST 12 WF 42
Bot. of Slab
Blocking
Top of Beam
Level
10 1/2" Typ
10 1/2" Typ
L 4x4x3/8
L 5x5x3/8
L 3 1/2 x 3 1/2 x 5/16
L 5x5x7/8
14 Drains Required
For Details see BD 104-62
6" Water Line
See Detail C, Sheet #31
10'-4"
5'-2"
5'-2"
10'-4"
HALF TRANSVERSE SECTION AT ABUTS. & SLAB CONST. JTS.
HALF TRANSVERSE SECTION AT INTERMEDIATE CROSS FRAMES

TRANSVERSE SECTION

U.S. = Up Stream
D.S. = Downstream

NOTES:

1. Concrete for curbs shall not be placed until concrete in superstructure slab has set in place a minimum period of seven (7) days. Prior to placing curb concrete, formwork may be completed and reinforcing bars type 1 placed. Bar bond agent shall be applied to exposed surfaces of the slab.
2. At construction joints in curbs, bar and cord bonding shall be provided by coating concrete across joint with a suitable bond agent. Joints in curbs shall be formed by cord type joints as shown at every construction joint in concrete curb. Form joints in curbs opposite joints in wearing surface and slab at each sloping face point.
3. Provide 1" min. depth type drainage holes through curb 3" below bottom of slab. Holes shall be spaced at 14'-0" maximum centers. Roadway and curb shall be sloped to drain to holes.
4. Concrete placing sequence: Slabs #1, #2 & #3 shall be placed before slabs #4 & #5.

DESIGN- Datum	BRIDGE NO. 5161
TRACE- DEDH - G.E.A.	SURVEY-
CHECK- T.H.K.	PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

SANDY RIVER BRIDGE
OVER
SANDY RIVER
IN THE TOWN OF
STRONG
FRANKLIN COUNTY

SUPERSTRUCTURE - SPANS 1 & 2

SHEET 28 OF 32 AUGUSTA, MAINE May 1964

C. B. CO., NO. 44-131 28788

92-37

0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

FLOW

105'-0" C-C Brgs.

62'-8" O-O Slab 3

84'-0" C-C Brgs

41'-4" O-O Slab 4

Same Dimensions US & DS — Contraction Jts in Curbs

Same Dimensions US & DS — Drains

16'-3" | 16'-3" | 15'-1" | 15'-1" | 10'-7" | 10'-7" | 10'-7" | 10'-7"

40'-0" | 32'-6" | 12'-6" | 8'-8" | 31'-4"

11'-4" | 3C2 | 11C18 1-6" | 3C2 | 11C18 1-6" | 3C4 | 10C10 1-6" | 3C4 | 10C10 1-6" | 3C3 | 7C18 1-6" | 3C3 | 7C18 1-6" | 3C3 | 7C18 1-6" | 3C3 | 7C18 1-6"

3 F3 Top

L1 7 — Space 1'3" Max. — L4 7

3 F3 Top

L2 7

½ Preformed Expansion Joint for Piers Only U.S. & D.S.

L1 7

L3 7

53 Spaces @ 14" = 61'-10" 54 F1 Bars

52 Spaces @ 14" = 60'-8" 53 F2 Bars Top

53 F2 Bars Bottom

5" | 1'-0" | 2'-6" | 15'-0" | 30'-0" | 35'-0"

16'-0" | 14'-0"

36 Spaces @ 14" = 42'-0" 37 F1 Bars

35 Spaces @ 14" = 40'-10" 36 F2 Bars Top

36 F2 Bars Bottom

2" | 9"

30°-00'-00" Skew

Construction # 7

Curb Reinforcing Same as U.S. Curb

Curb Reinforcing Same as U.S. Curb

Bend in field

Bend in field

3 F3 Top

NOTE: When Work Construction Joint is Made 2 F3 Bars Shall be Spliced

Skew Face Spacing 21 Spaces @ 10" = 16'-1¾" 11C5½ US & DS Along Grade

SLAB 3 — PLAN — SLAB 4

Membrane Waterproofing

+4%

3½"

2½"

8"

3"

½" Drip Notch

3" | 3" | 12"

4" min.

ST 12 WF 42

Coat with Epoxy Resin Surface Sealant

4 Pier

SECTION A-A

SECTION B-B

1" Clear

12" Clear

1" Clear

4 Pier

SECTION C-C

+4%

Membrane Waterproofing

9¼ @ 45°

Coat this surface with Epoxy Resin Surface Sealant

ST 12 WF 42

5¾"

4 Pier

SECTION D-D

DESIGN- Dafen
TRACE + DETAIL - GEO.
CHECK- T. H. K.

BRIDGE NO. 5161
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

SANDY RIVER BRIDGE
OVER
SANDY RIVER
IN THE TOWN OF
STRONG
FRANKLIN COUNTY

SUPERSTRUCTURE - SPANS 2 & 3

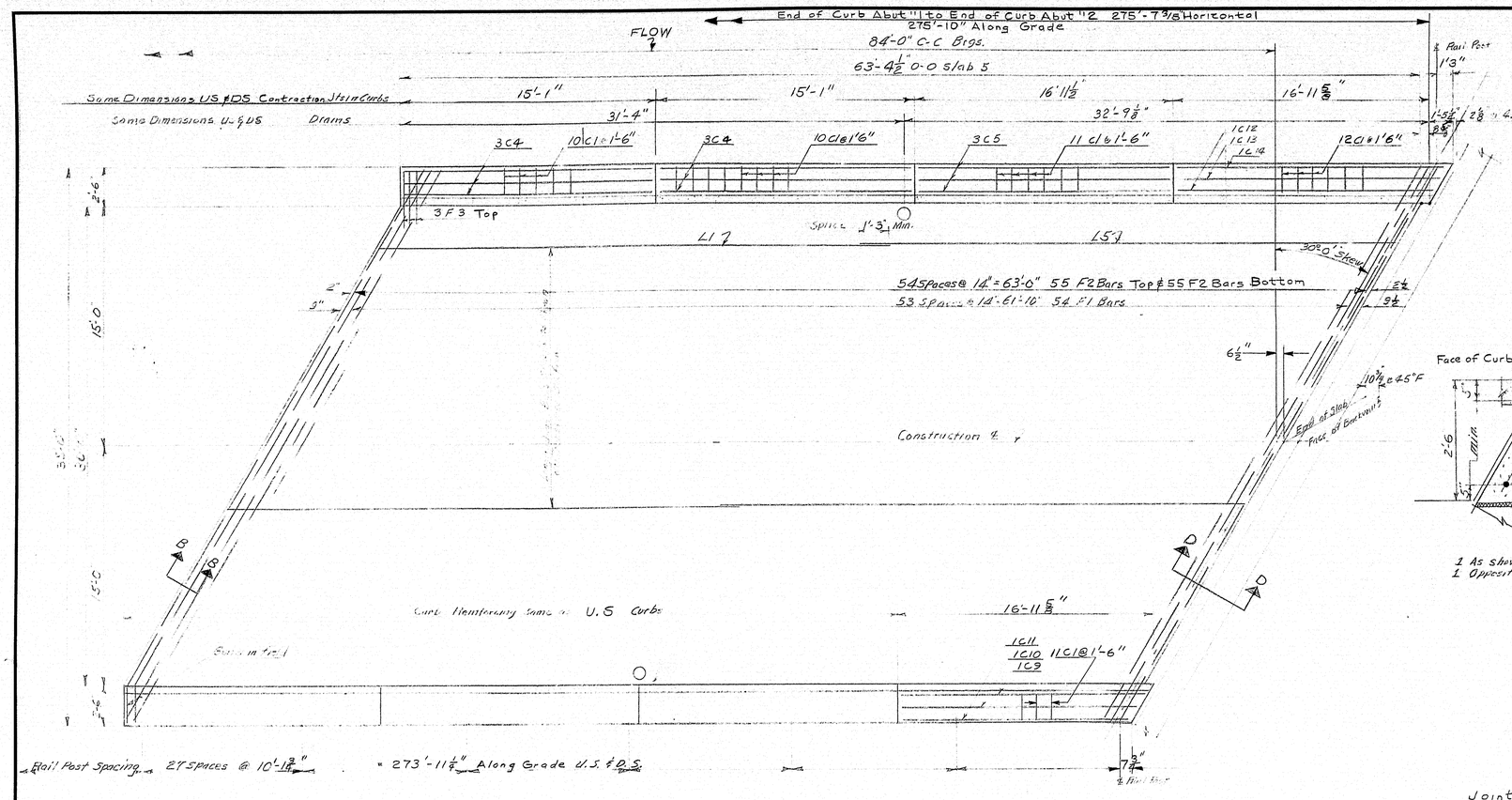
SHEET 23 OF 32 AUGUSTA, MAINE — May 1964

92-38

C. B. CO., NO. 44-131. 28788

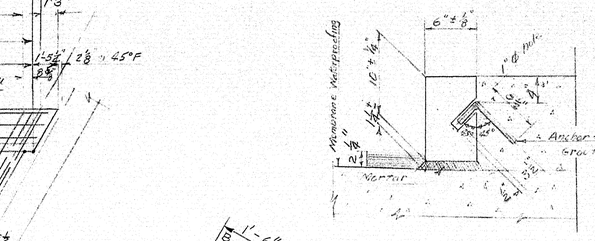
0 1 2 3 4 5 INCHES

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

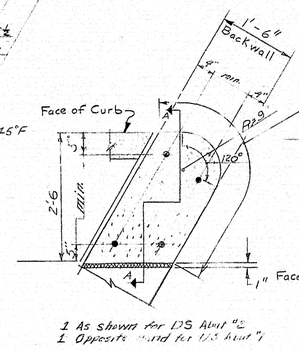


SLAB 5

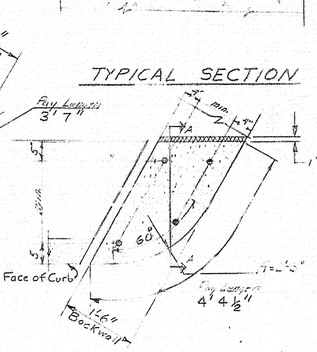
PLAN

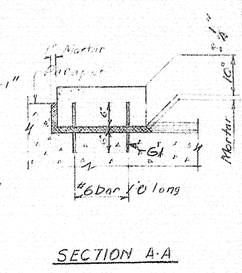


TYPICAL SECTION



PLAN





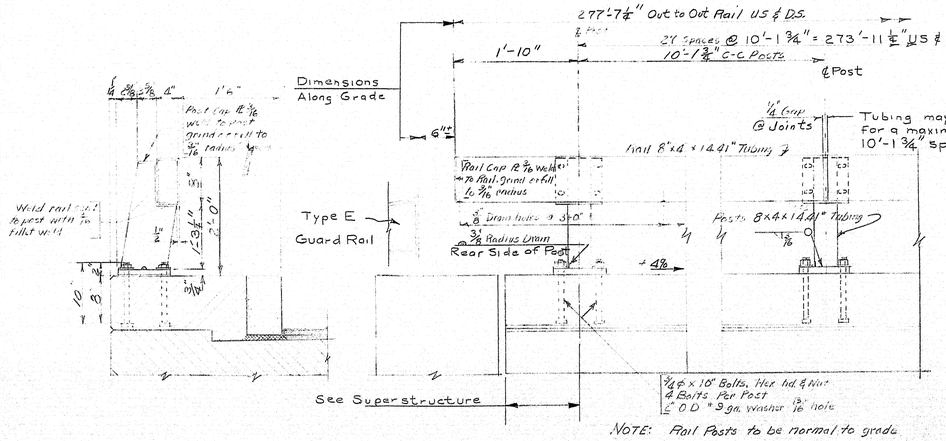
SECTION A-A

NOTE: Grout "6 bar x 0 into 1 1/4" hole ... Prior to setting Stone on backwall. Drill 1 1/4" ... Payment for drilling for and grouting ... "6 bars to be included in the price for Item 705-14 Mortaring, Etc., Masonry

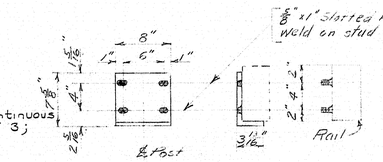
END DETAIL
@ Abutment Backwalls

VERTICAL BRIDGE CURB TYPE I

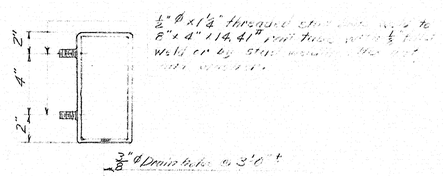
Joints in granite curb are to be provided at every curb Contraction Joint



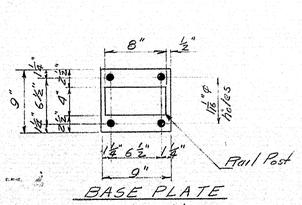
RAIL DETAILS



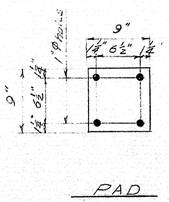
RAIL SEAT
Cut from 8" x 4" x 23.02" tubing



RAIL



BASE PLATE
56 Req'd.
PL 9" x 3/4" x 0'-9"



PAD

At least one pad shall be used under each post. Supply 10% in excess of number of posts. See specifications for material.

DESIGN– Dalton	BRIDGE NO. 5161
TRACE & DETAIL – G.F.A.	SURVEY–
CHECK– T.H.K.	PLOT–

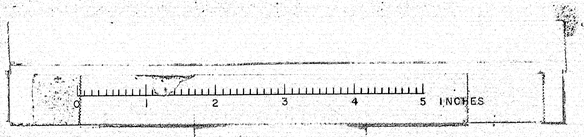
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

SANDY RIVER BRIDGE
OVER
SANDY RIVER
IN THE TOWN OF
STRONG
FRANKLIN COUNTY
SUPERSTRUCTURE – SPAN 3
CURB & RAIL DETAILS
SHEET 30 OF 32 AUGUSTA, MAINE

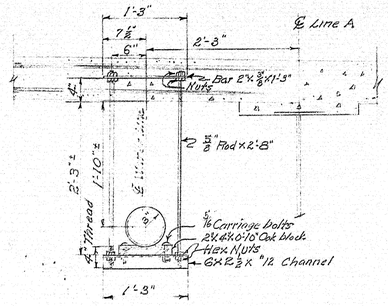
May 1964

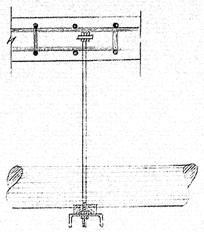
92-39

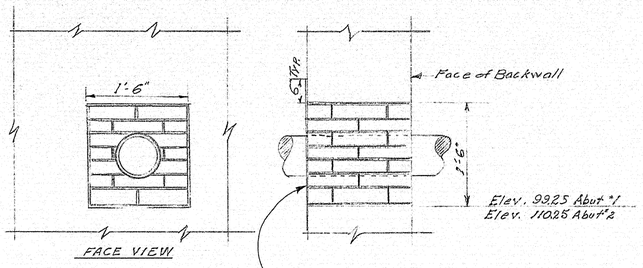
C. D. CO., NO. 44-131 28780

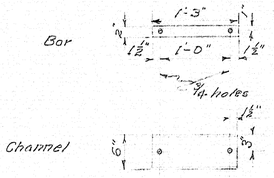


B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



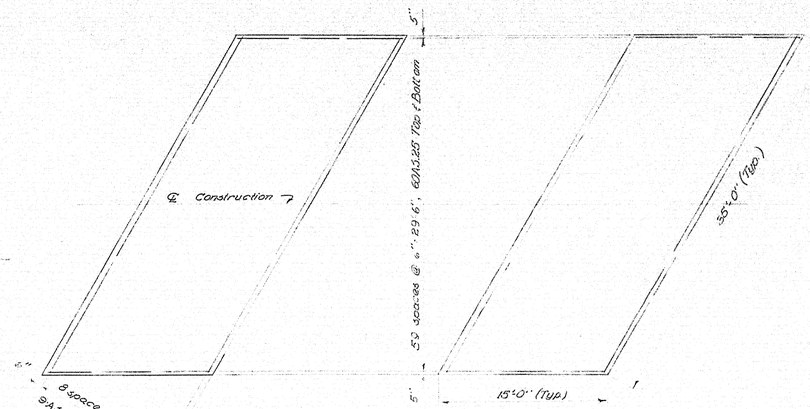






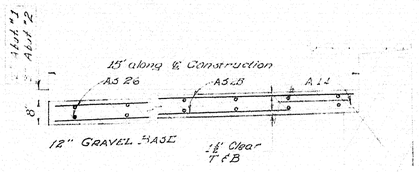
DETAIL C - 6" WATER LINE

NOTE: All materials and labor shall be furnished by the Water Utility and shall be coordinated with the Engineer and Contractor. The first Hanger shall be four (4) feet from face of backwall and two (2) hangers per section of Pipe there after.



ABUT. 1

ABUT. 2



APPROACH SLABS

Approach Slab concrete to be paid for under Item 701 33 Portland Cement Concrete Abutments and Retaining Walls.

DESIGN- Detten TRACE+ DETAIL - G.E.D. CHECK- T.H.K.	BRIDGE NO. 5161 SURVEY- PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

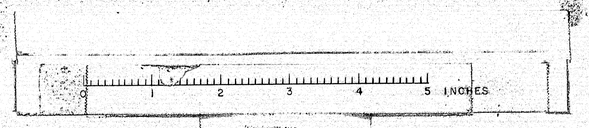
SANDY RIVER BRIDGE
OVER
SANDY RIVER
IN THE TOWN OF
STRONG
FRANKLIN COUNTY

APPROACH SLAB & WATER LINE DETAILS

SHEET 31 OF 32 AUGUSTA, MAINE May 1964

92-40

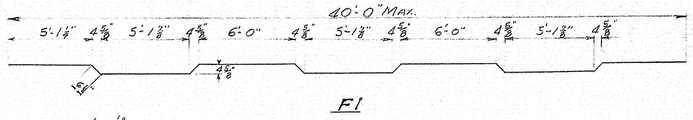
C. B. CO., NO. 44-131 26726

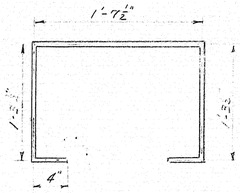


REINFORCING STEEL SCHEDULE

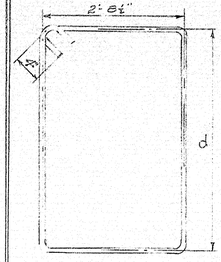
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

SUPERSTRUCTURE

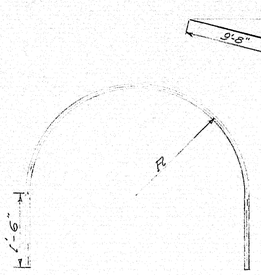




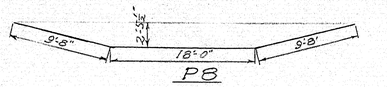
PIERS

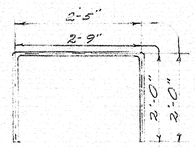


S	d
1	4'-0"
2	4'-1"
3	4'-2½"
4	4'-4½"
5	4'-7"
6	4'-9½"
7	4'-11½"
8	5'-1½"
9	5'-3½"
10	5'-6"
11	5'-8½"
12	6'-0½"
13	6'-3"
14	6'-5½"



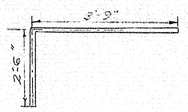
PN	R
9	2'-6⅜"
10	2'-6"
11	2'-5½"
12	2'-4½"
13	2'-3⅝"
14	2'-3"
15	2'-2⅛"
16	2'-1⅛"
17	2'-0⅛"
18	2'-0"
19	1'-11⅛"
20	1'-10½"
21	1'-9⅝"
22	1'-9"
23	1'-8½"
24	1'-7½"
25	1'-6⅝"
26	1'-6"
27	1'-5⅞"

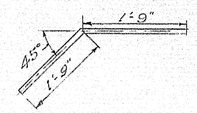


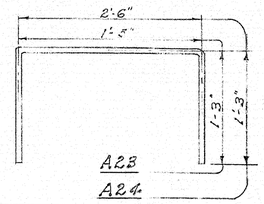


DIMENSIONS TO ℄ BAR (TYP.)

ABUTMENTS







BENT BARS

MARK	SIZE	NO	LENGTH	LOCATION
F1	7	237	40'-11"	All Slabs
C1	4	364	5'-0"	All Curbs US & DS

STRAIGHT BARS

F2	7	470	40'-0"	All Slabs
F3	7	24	4'-0"	Location as shown on Superstructure Plan
L1	5	420	32'-8"	All Slabs 1,2,3 & 5
L2	↓	140	10'-1"	Slabs 3 & 4
L3		46	30'-0"	Slab 3 & 2
L4		12	31'-0"	Slab 3
L5	5	60	31'-8"	Slab 5
C2	#4	32	15'-11"	Curbs US & DS
C3	↓	48	10'-5"	Curbs US & DS
C4		24	14'-1"	Curbs US & DS
C5		8	16'-1"	Curbs US & DS
C6		1	14'-8"	Curb A3
C7		1	14'-5"	Curb US
C8		1	13'-9"	Curb US
C9		2	16'-5"	Curb DS
C10		2	15'-5"	Curb DS
C11		2	15'-5"	Curb DS
C12		1	16'-11"	Curb US
C13	↓	1	17'-5"	Curb US
C14	4	1	17'-11"	Curb US

APPROACH

AS 25	6	24	14'-8"	Approach Slabs Abutments 1&2
AS 26	4	36	31'-6"	Approach Slabs Abutments 1&2

PIERS

PF1	6	36	8'-0"	Pier #2 Distribution Slab
PF2	6	9	33'-6"	Pier #2 Distribution Slab
PF3	6	36	9'-6"	Pier #1 Distribution Slab
PF4	6	10	31'-6"	Pier #1 Distribution Slab

BENT BARS

MARK	SIZE	NO	LENGTH	LOCATION
P8	7	8	37'-4"	Pier Caps - Piers 1&2
P33	4	16	6'-7"	Bearing Pads - Piers 1&2
P34	↓	16	6'-5"	Bearing Pads - Piers 1&2
S1	5	6	14'-1"	Pier Caps - Piers 1&2
S2		8	14'-3"	Pier Caps - Piers 1&2
S3		8	14'-6"	Pier Caps - Piers 1&2
S4		8	14'-9"	Pier Caps - Piers 1&2
S5		8	15'-2"	Pier Caps - Piers 1&2
S6		8	15'-8"	Pier Caps - Piers 1&2
S7		8	16'-0"	Pier Caps - Piers 1&2
S8		8	16'-5"	Pier Caps - Piers 1&2
S9		8	16'-9"	Pier Caps - Piers 1&2
S10		8	17'-3"	Pier Caps - Piers 1&2
S11		8	17'-9"	Pier Caps - Piers 1&2
S12		8	18'-3"	Pier Caps - Piers 1&2
S13		8	18'-9"	Pier Caps - Piers 1&2
S14		52	19'-0"	Pier Caps - Piers 1&2
PN9	↓	2	11'-0"	Pier Shaft - Pier 2

MARK	SIZE	NO	LENGTH	LOCATION
PN11	5	4	10'-8"	Pier Shaft - Piers 1&2
PN12		4	10'-5"	Pier Shaft - Piers 1&2
PN13		4	10'-3"	Pier Shaft - Piers 1&2
PN14		4	10'-1"	Pier Shaft - Piers 1&2
PN15		4	9'-10"	Pier Shaft - Piers 1&2
PN16		4	9'-8"	Pier Shaft - Piers 1&2
PN17		4	9'-6"	Pier Shaft - Piers 1&2
PN18		4	9'-3"	Pier Shaft - Piers 1&2
PN19		4	9'-1"	Pier Shaft - Piers 1&2
PN20		4	8'-11"	Pier Shaft - Piers 1&2
PN21		4	8'-8"	Pier Shaft - Piers 1&2
PN22		4	8'-6"	Pier Shaft - Piers 1&2
PN23		4	8'-4"	Pier Shaft - Piers 1&2
PN24		4	8'-1"	Pier Shaft - Piers 1&2
PN25		4	7'-11"	Pier Shaft - Piers 1&2
PN26		4	7'-3"	Pier Shaft - Piers 1&2
PN27	↓	2	11'-3"	Pier Shaft - Pier 2
PN10	5	2	10'-10"	Pier Shaft - Pier 2

STRAIGHT BARS

P35	7	12	12'-0"	Pier Shaft - Pier 2	P36	7	8	23'-0"	Pier Shaft - Pier 2
D1	7	124	7'3"	Seals - Piers 1&2	P18	5	4	19'-11"	Pier Shaft - Piers 1&2
P1	11	16	39'-4"	Pier Caps - Piers 1&2	P19		4	19'-3"	Pier Shaft - Piers 1&2
P3	↓	16	25'-0"	Pier Caps - Piers 1&2	P20		4	18'-8"	Pier Shaft - Piers 1&2
P5	6	4	38'-10"	Pier Caps - Piers 1&2	P21		4	18'-0"	Pier Shaft - Piers 1&2
P6		4	38'-5"	Pier Caps - Piers 1&2	P22		4	17'-5"	Pier Shaft - Piers 1&2
P7	↓	4	38'-1"	Pier Caps - Piers 1&2	P23		4	16'-9"	Pier Shaft - Piers 1&2
P9	5	2	25'-6"	Pier Shaft - Pier 2	P24		4	16'-2"	Pier Shaft - Piers 1&2
P10		2	24'-11"	Pier Shaft - Pier 2	P25		4	15'-6"	Pier Shaft - Piers 1&2
P11		4	24'-4"	Pier Shaft - Piers 1&2	P26		4	15'-0"	Pier Shaft - Piers 1&2
P12		4	23'-8"	Pier Shaft - Piers 1&2	P27	↓	2	26'-2"	Pier Shaft - Pier 2
P13		4	28'-0"	Pier Shaft - Piers 1&2	P28	7	8	19'-0"	Pier Shaft - Pier 1
P14		4	22'-6"	Pier Shaft - Piers 1&2	P29		12	10'-0"	Pier Shaft - Pier 1
P15		4	21'-9"	Pier Shaft - Piers 1&2	P30		42	13'-3"	Pier Shaft - Pier 1
P16		4	21'-2"	Pier Shaft - Piers 1&2	P31		84	16'-2"	Pier Shaft - Piers 1&2
P17	↓	4	20'-6"	Pier Shaft - Piers 1&2	P32	↓	12	17'-2"	Pier Shaft - Pier 2

BENT BARS

MARK	SIZE	ABUT 1	ABUT 2	LENGTH	LOCATION
A9	5	26	26	6'-9"	Bridge Seat
A14	6	23	23	3'-6"	Backwall
A23	4	8	8	4'-0"	Bearing Pads
A24	↓	8	8	5'-0"	Bearing Pads

STRAIGHT BARS

A1	6	84	84	6'-0"	Footing
A2		42	42	42'-0"	Footing
A3		10	6	6'-9"	Footing
A4		8	8	3'-6"	Footing
A5		8	10	4'-6"	Footing
A6	↓	10	20	7'-3"	Footing
A7	5	50	56	2'-6"	Footing
A8		26	26	5'-[illegible]"	Footing
A10		12	12	20'-0"	Bridge Seat
A11	↓	26	26	2'-6"	Bridge Seat
A12	4	20	20	24'-5"	Backwall
A13	5	52	52	6'-5"	Backwall
A15		10	8	7'-5"	Wings
A16		8	4	9'-4"	Wings
A17		6	8	9'-8"	Wings
A18		4	2	8'-6"	Wings
A19	↓	4	4	6'-7"	Wings
A20	4	12	10	8'-0"	Wings
A21		2	2	6'-6"	Wings
A22	↓	2	2	5'-0"	
G1	6	3	3	20'-0"	Curb

All reinforcing steel to be intermediate grade.

Dimensions to ℄ of bars.

DESIGN- Dolan
TRACE- DETAIL- G.E.H.
CHECK- T.H.K.

BRIDGE NO. 5161
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

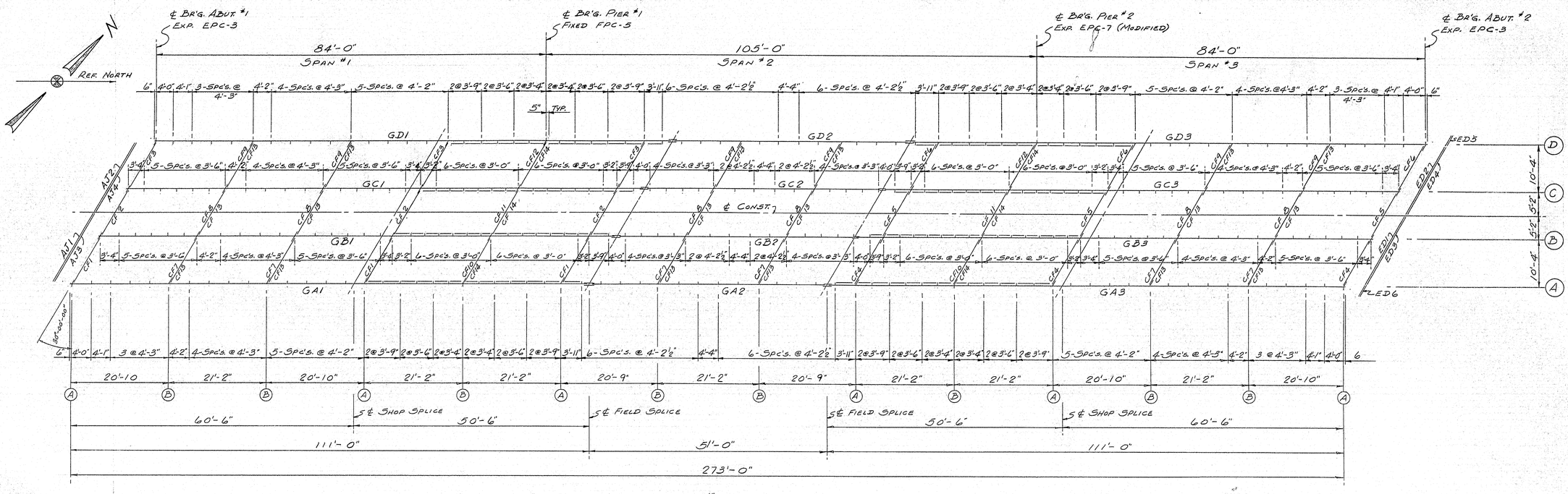
SANDY RIVER BRIDGE
OVER
SANDY RIVER
IN THE TOWN OF
STRONG
FRANKLIN COUNTY

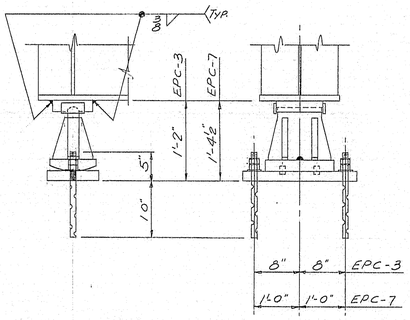
REINFORCING STEEL SCHEDULE

SHEET 32 OF 32 AUGUSTA, MAINE May 1964

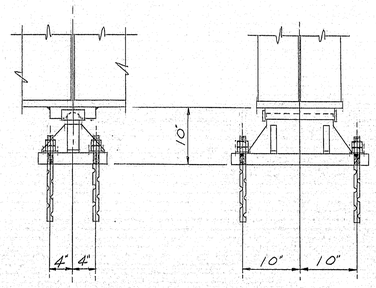
92-41

C. B. CO., NO. 44-131 28788

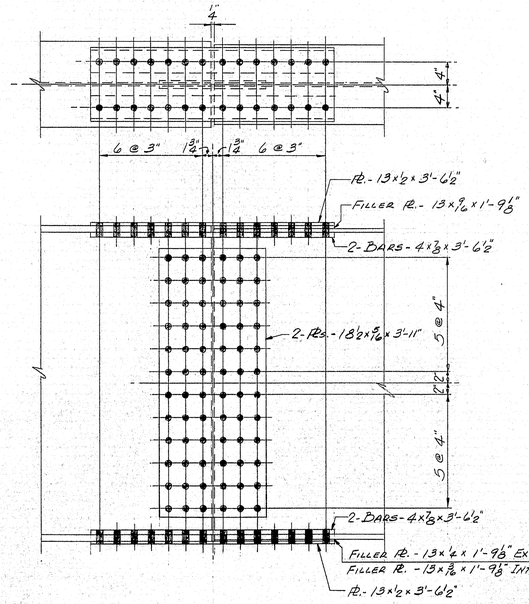




EXPANSION BEARING PEDESTALS

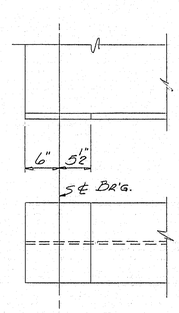


FIXED BEARING PEDESTAL - FPC-5



FIELD SPLICE DETAIL

56 - ⅞"ϕ x 0'-4" H.S. BOLTS FOR EXT. GIRDER FL'G. SPLICE
56 - ⅞"ϕ x 0'-4½" H.S. BOLTS FOR INT. GIRDER FL'G. SPLICE
72 - ⅞"ϕ x 0'-2¼" H.S. BOLTS FOR WEB SPLICE



DETAIL "X"

REV. 3-22-65

NOTES:

All structural steel shall conform to the latest revision of the specification A. S. T. M. designation A36 & A441 as noted.

Bolts for splices shall be A. S. T. M. A325 7/8"ϕ heavy hexagon structural bolts with heavy semi-finished hexagon nuts & one hardened round washer.

Holes in stringers are for high strength bolts. They are to be free from burrs. There shall be no paint within three inches of such open holes.

Subpunch or drill 11/16"ϕ; ream assembled (not with template) parts to be connected in the field to 15/16"ϕ or drill from solid. Match mark all connecting parts before disassembling & supply the engineer with a diagram showing match marks.

Fabricate & erect in accordance with M. S. H. C. standard specifications.

FIELD TO INSTALL ⅞"ϕ ROUND HEAD CARRIAGE BOLTS IN FLEMING BRACKET HOLES WITH HEAD ON EXTERIOR SIDE OF GIRDER.

SHOP CONNECTIONS: WELD - E7028 ELECTRODE
FIELD CONNECTIONS: ⅞"ϕ H.S. BOLT & WELD
HOLES: 15/16" ϕ
PAINT: STATE OF MAINE SPEC'S.

APP'D. 1-5-65

FRAMING PLAN

PRINT ISSUE			
3	DIST. S.H.C.	3-12-65	
2		2-12-65	
1	SHC	2-8-65	
2	SHOP	2-5-65	
2	SHOP	1-11-65	
2	F. A.	12-22-64	
2	F. A.	12-1-64	
2	F. A.	11-24-64	

2-F.A. 3-22-65

DRAWN	11-3-64	R.A.M.
REVISION	12-1-64	R.A.M.
REVISION	3-22-65	R.A.M.
REVISION		

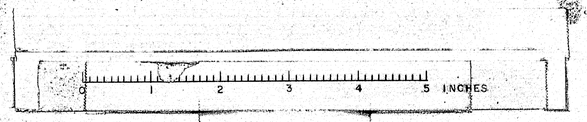
Bancroft & Martin Inc.
Brewer, Maine

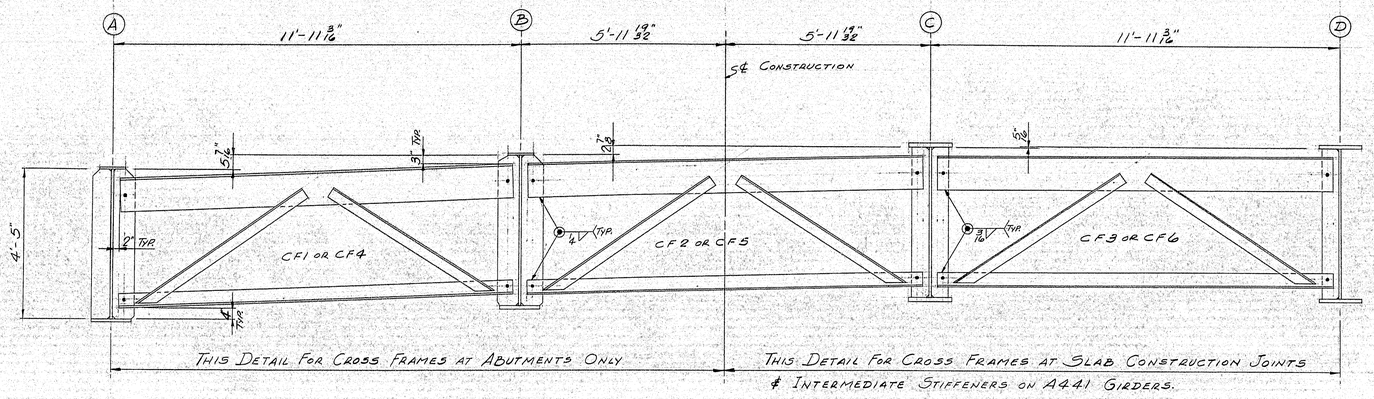
SANDY RIVER BRIDGE
STRONG, MAINE

CUSTOMER ELLIS C. SNODGRASS, INC.
DESIGNER MAINE STATE HIGHWAY COMM.

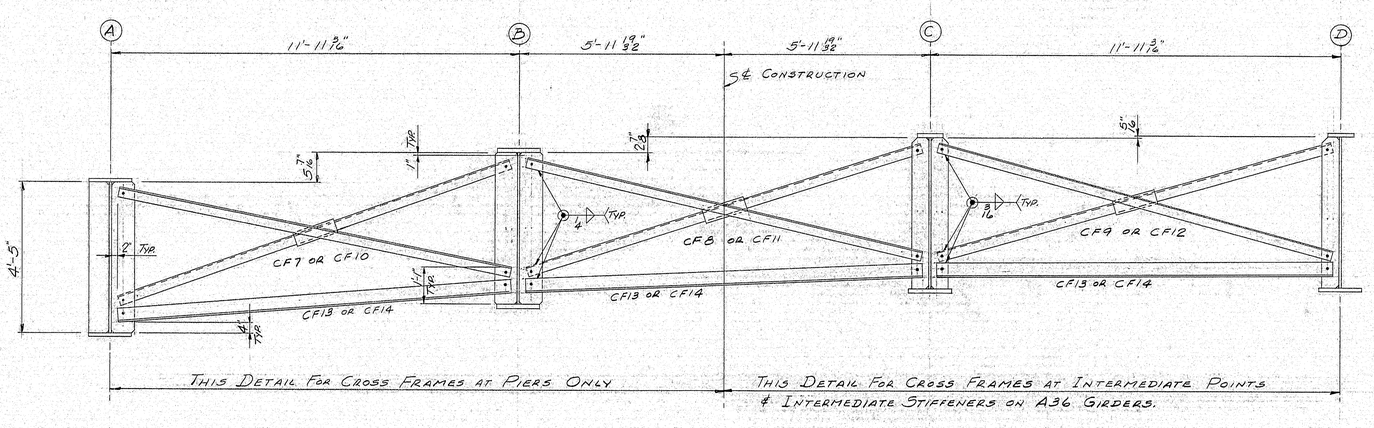
ORDER VERBAL
DWG. B64-386-E1

94-184

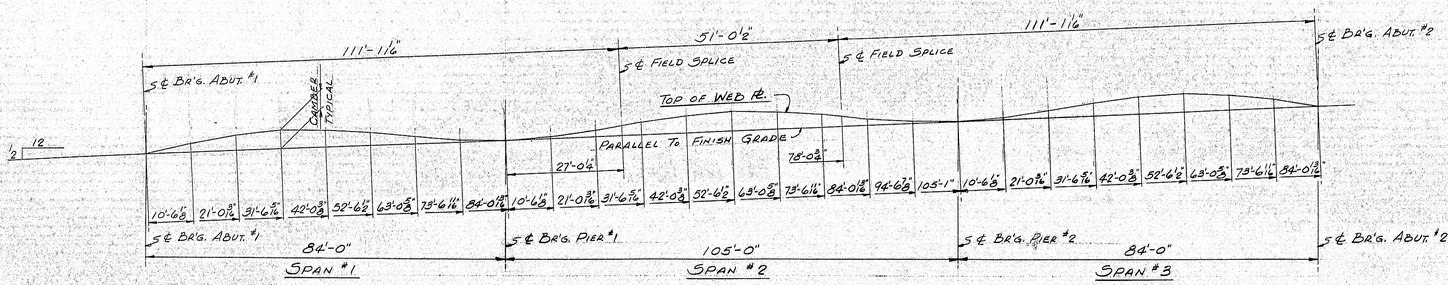




CROSS FRAMES TYPE A



CROSS FRAMES TYPE B



CAMBER DIAGRAM

ALL GIRDER LINES		
SPAN	POINT	CAMBER
1	℄ BR'G. A#1	0"
	10'-6 5/8"	1 3/16"
	21'-0 15/16"	1 3/8"
	31'-6 7/16"	1 1/16"
	42'-0 3/8"	1 5/8"
	52'-6 1/2"	1 3/8"
	63'-0 3/8"	1/16"
	73'-6 11/16"	3/16"
	℄ BR'G. P#1	0"
2	10'-6 5/8"	3/16"
	21'-0 15/16"	5/8"
	27'-0 1/4"	15/16"
	31'-6 7/16"	1 3/8"
	42'-0 3/8"	1 1/16"
	52'-6 1/2"	2"
	63'-0 3/8"	1 15/16"
	73'-6 11/16"	1 3/8"
	73'-0 3/4"	15/16"
	84'-0 15/16"	3/8"
	94'-6 3/8"	3/16"
	℄ BR'G. P#2	0"
3	10'-6 5/8"	3/16"
	21'-0 15/16"	1/16"
	31'-6 7/16"	1/8"
	42'-0 3/8"	1/8"
	52'-6 1/2"	1 1/16"
	63'-0 3/8"	1/8"
	73'-6 11/16"	1/8"
	℄ BR'G. A#2	0"

NOTE:
THE CAMBER ORDINATES IN THE TABLE ARE TO BE USED IN FABRICATING THE GIRDER WEBS. THESE ORDINATES INCLUDE THE SUM OF THE CAMBER ORDINATES SHOWN ON THE CONTRACT DRAWINGS & THE ANTICIPATED DEFLECTION DUE TO SHRINKAGE.

SHOP CONNECTIONS: WELD - E7028 ELECTRODE
FIELD CONNECTIONS: 7/8" ϕ H.S. BOLT & WELD
HOLES: 15/16" ϕ
PAINT: STATE OF MAINE SPEC'S.

APP'D. AS NOTED 12-2-64

CROSS FRAME LAYOUTS & CAMBER DIAGRAM

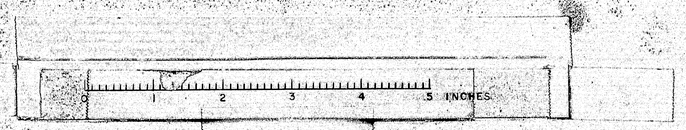
PRINT ISSUE			
3	DIST.	3-12-65	
3	S.H.C.	2-12-65	
1	SHC	2-8-65	
2	SHOP	2-5-65	
3	SHOP	1-15-65	
2	F.A.	12-22-64	
2	F.A.	11-24-64	
DRAWN	11-5-64	R.A.M.	
REVISION	2-12-65	R.A.M.	
REVISION			
REVISION			

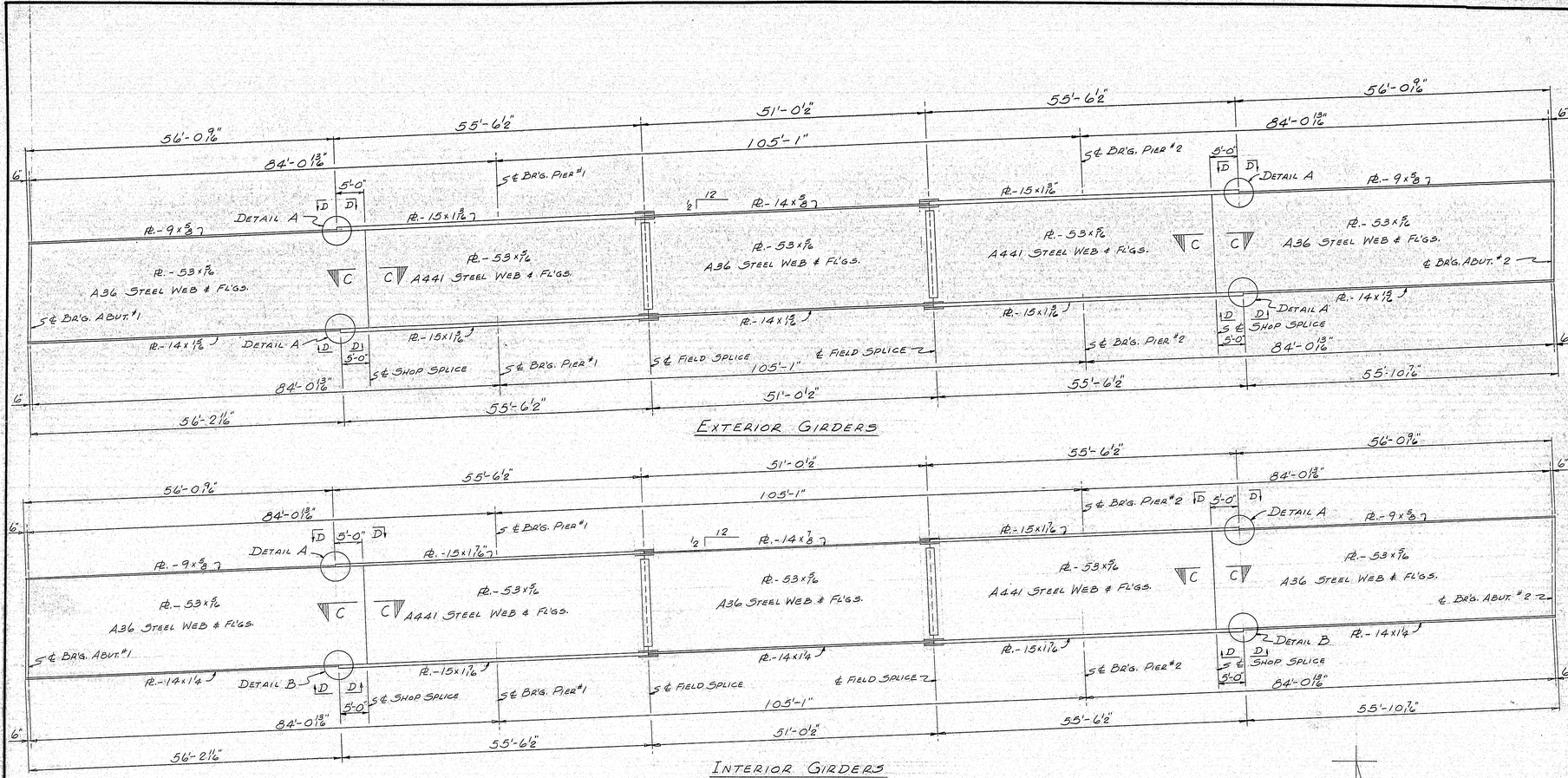
Bancroft & Martin Inc.
Brewer, Maine

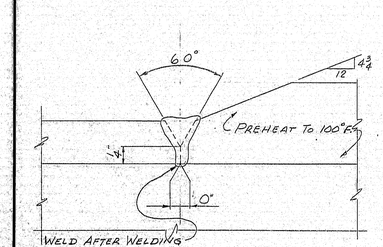
SANDY RIVER BRIDGE
STRONG, MAINE

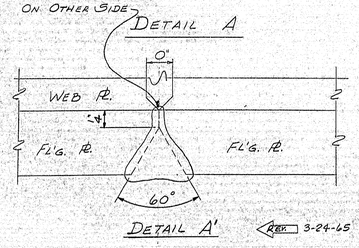
CUSTOMER ELLIS C. SNODGRASS, INC.
DESIGNER MAINE STATE HIGHWAY COMM.
ORDER VERBAL
DWG B64-386-E2

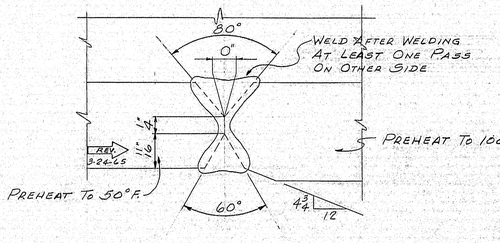
97-185

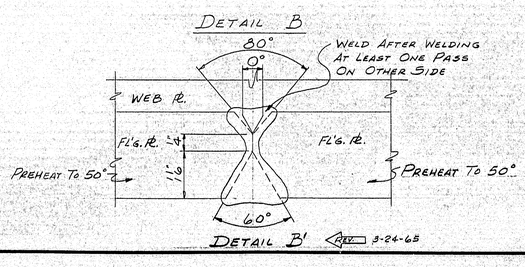


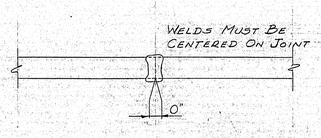












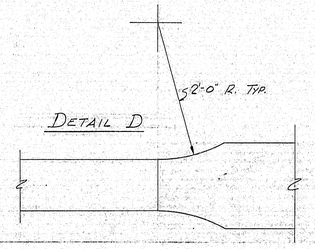


Plate Girders

Welding Notes (Submerged Arc)

Welds for flange plate & web plate butts.

A441 - Linde Air Prod. Co. Unionmelt 5/32 #36 wire-Grade 50 flux.
A36 - Linde Air Prod. Co. Unionmelt 5/32 #29 wire-Grade 50 flux.

Web to flange fillets.

A441 & A36 - Linde Air Prod. Co. Unionmelt 5/32 #29 wire-Grade 50 flux.

Bearing stiffeners.

A441 & A36 - Lincoln Electric Co. 3/32 L60 wire-780 flux.

The following non-destructive tests of welded steel girders will be required.
A- Radiographic testing of shop butt welds.
B- Magnetic particle testing of shop welds, girder webs to flanges & bearing stiffeners to girder webs. For additional information see supplemental specifications & special provisions.

Flanges & webs are to be butt welded & inspected in accordance with the above specifications prior to being fillet welded to each other.

All butt welds in web plates & flange plates are to be ground flush.

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS

BILL OF MATERIAL DWG. B64-386-E3

SHOP CONNECTIONS: WELD & 7/8" ϕ H.S. BOLT
FIELD CONNECTIONS: WELD & 7/8" ϕ H.S. BOLT
HOLES: 15/16" ϕ
PAINT: STATE OF MAINE SPEC'S.

APP'D. AS NOTED 12-2-64

DESIGN DETAILS

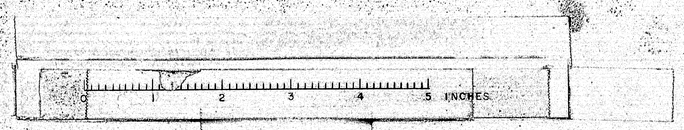
NO.	DIST.	PRINT ISSUE 3-12-65
3	SHC	6-12-65
1	SHC	2-8-65
2	SHOP	2-5-65
2	SHOP	1-28-65
2	F.A.	1-25-65
2	F.A.	11-24-64
2	F.A.	10-13-64
2	PORT.	10-12-64
DRAWN	10-12-64	R.A.M.
REVISION	1-11-65	R.A.M.
REVISION	3-24-65	R.A.M.
REVISION		

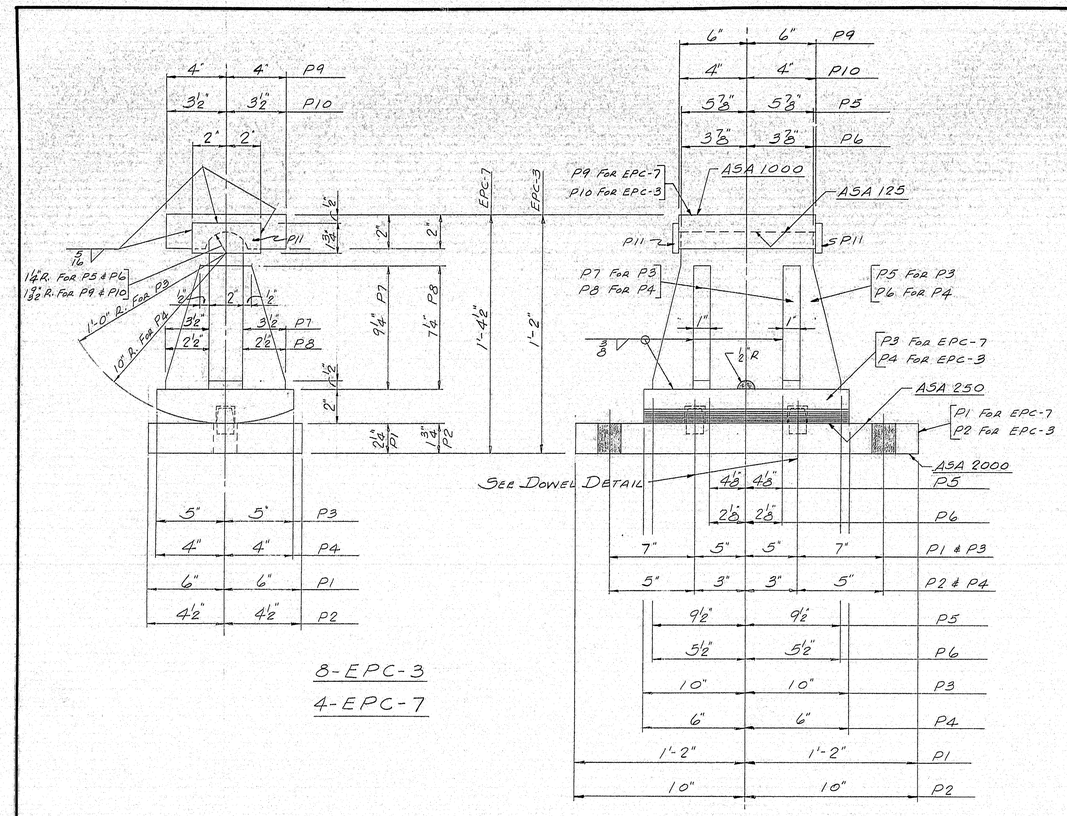
Bancroft & Martin Rolling Mills Company
Brewer, Maine

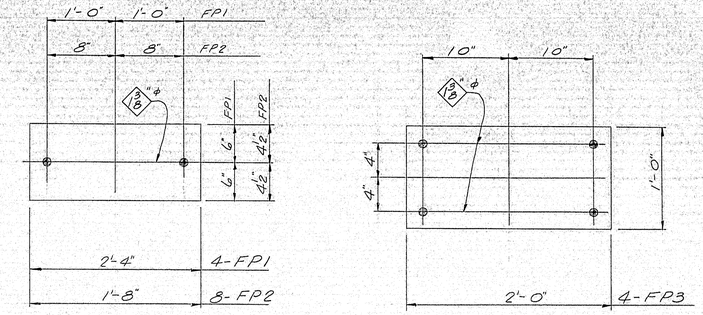
SANDY RIVER BRIDGE
STRONG, MAINE

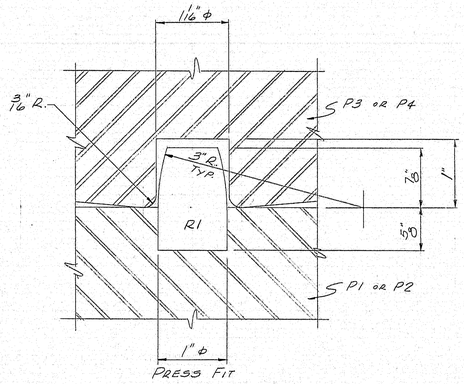
CUSTOMER ELLIS C. SNODGRASS, INC.
DESIGNER MAINE STATE HIGHWAY COMM.

ORDER VERBAL DWG B64-386-E3

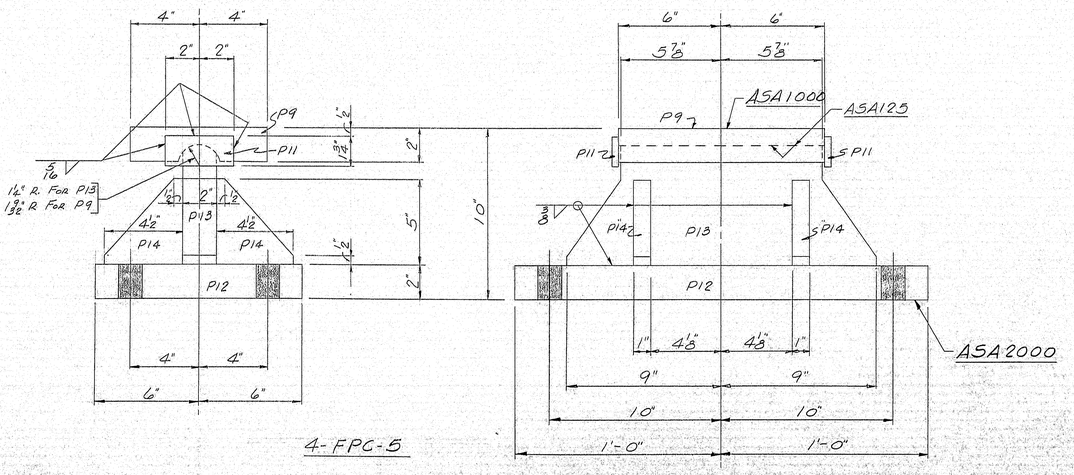


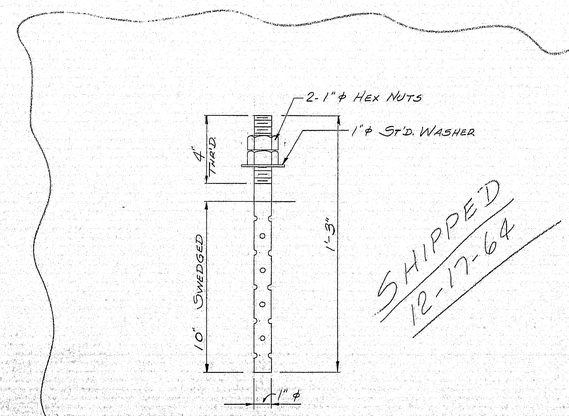






DOWEL DETAIL





40-ABI
ANCHOR BOLT DETAIL

SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
			BILL OF MATERIAL				DWG. B64-386-S1
EPC-3	8		PEDESTAL				
EPC-7	4		Do				
FPC-5	4		Do				
P1	4		PL-12×2¼	2	4		FINISHED A36
P2	8		PL-9×1¾	1	8		Do
P3	4		PL-10×2	1	8		Do
P4	8		PL-8×2	1	0		Do
	4	P5	PL-11¼×2	1	7		Do
	8	P6	PL-9¼×2	0	11		Do
	16	P7	PL-3'2×1	0	9¼		
	32	P8	PL-2'2×1	0	7¼		
P9	8		PL-8×2	1	0		FINISHED
P10	8		PL-7×2	0	8		Do
	32	P11	PL-1¾×⅜	0	4		
P12	4		PL-12×2	2	0		FINISHED
	4	P13	PL-7×2	1	6		Do
	16	P14	PL-4'2×1	0	5		
	24	R1	ROD-1" ϕ	0	1'2		MACHINED
FP1	4		12×⅜	2	4		FABCO PAD SA47
FP2	8		9×⅜	1	8		Do Do Do
FP3	4		12×⅜	2	0		Do Do Do
AB1	40		ROD-1" ϕ	1	3		SWEDGED A36
	80		1" ϕ HEX NUT				
	40		1" ϕ STD. WASHER				

SHIPPED 12-17-64

R.E.R. #3035

E7028 LOW HYDROGEN
SHOP CONNECTIONS: ELECTRODE & PREHEAT 2" THK. & OVER MAT. TO 50° F.
FIELD CONNECTIONS: ⅞" ϕ H.S. BOLT & WELD
HOLES: 1⅛" ϕ U.N.
PAINT: STATE OF MAINE SPECS.

APP'D. AS NOTED 12-2-64

PEDESTALS

PRINT ISSUE		
3	DIST.	3-12-65
2	SHC	2-12-65
1	SHC	2-8-65
4	PORT.	12-18-64
2	F.A.	11-24-64
DRAWN	11-9-64	R.A.M.
REVISION		
REVISION		
REVISION		

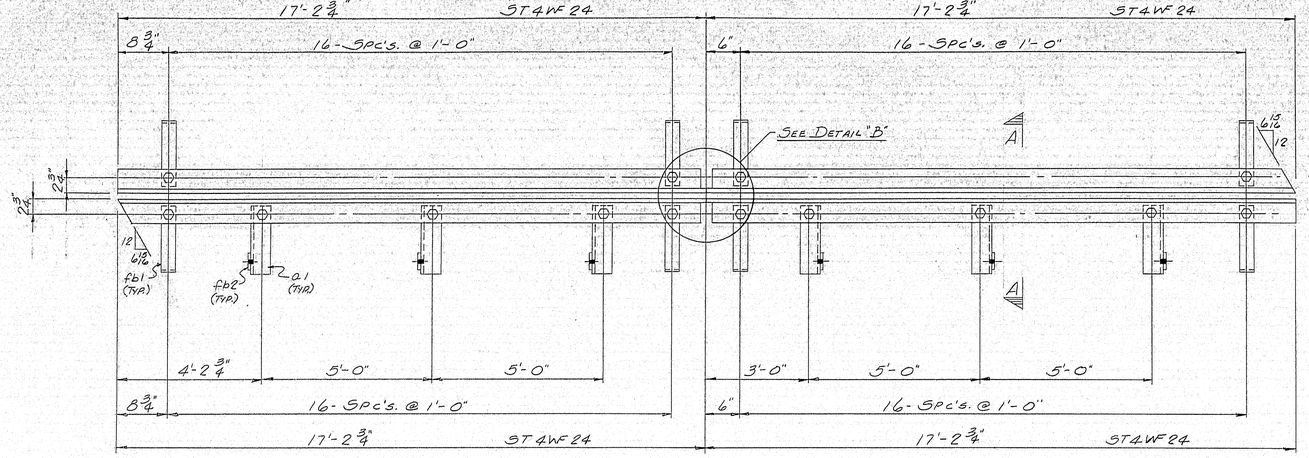
Bancroft & Martin Rolling Mills Company
Brewer, Maine

SANDY RIVER BRIDGE
STRONG, MAINE

CUSTOMER ELLIS C. SNODGRASS, INC.
DESIGNER MAINE STATE HIGHWAY COMM.
ORDER VERBAL DWG. B64-386-S1

F-107

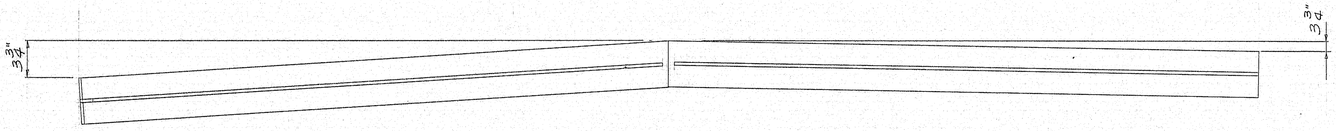
ONE - AJ1

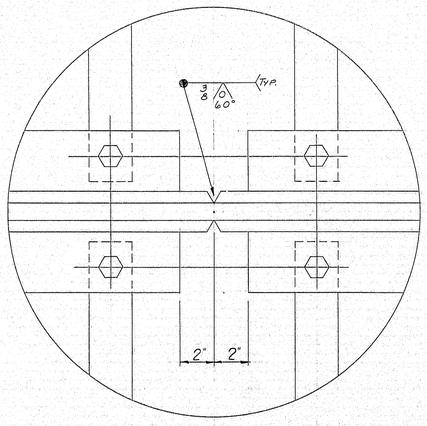


ONE - AJ2

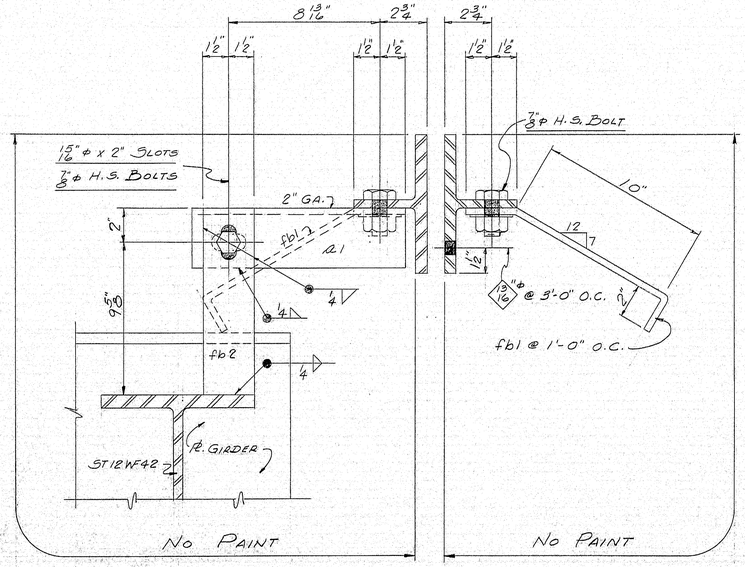
ONE - AJ3

ONE - AJ4





DETAIL "B"



"AA"

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
AJ1	1		ST4WF24	17 2 3/4		A36
AJ2	1		Do	17 2 3/4		
AJ3	1		Do	17 2 3/4		
AJ4	1		Do	17 2 3/4		
	6	a1	4-3'2x3 3/8	1 0 1/2		
	68	fb1	BAR-2 1/2 x 3/8	1 3		BENT
	6	fb2	BAR-3 x 3/8	0 11 5/8		
	80	SHOP	7/8" H.S. BOLT	0 2 1/4		HEAVY NUTS A325
	80	Do	7/8" H.S. WASHER			A325

SHOP CONNECTIONS: 7/8" ϕ H.S. BOLT
FIELD CONNECTIONS: WELD
HOLES: 15/16" ϕ U.N.
PAINT: STATE OF MAINE SPEC'S.

APP'D AS NOTED 12-2-64

ARMORED JOINTS

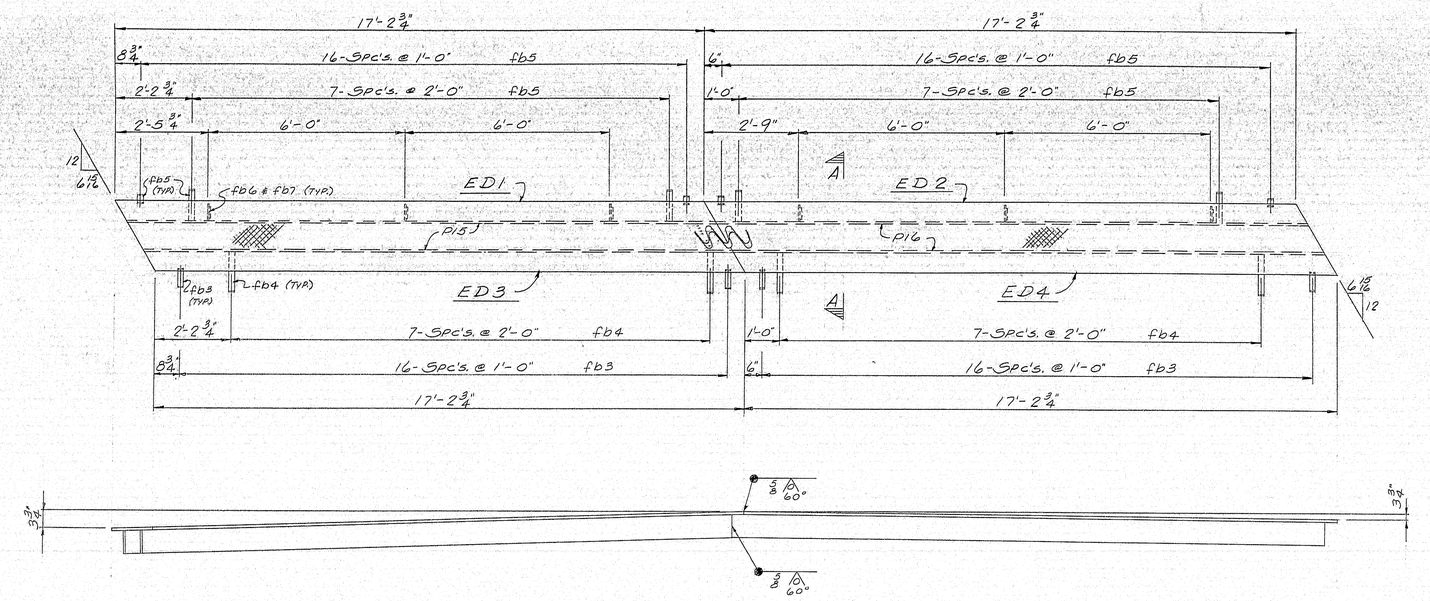
PRINT ISSUE		
3	DIST	3-12-65
2	SHC	2-12-65
1	SHC	2-8-65
5	SHOP	12-21-64
2	F.A.	11-24-64
DRAWN		11-12-64 R.A.M.
REVISION		
REVISION		
REVISION		

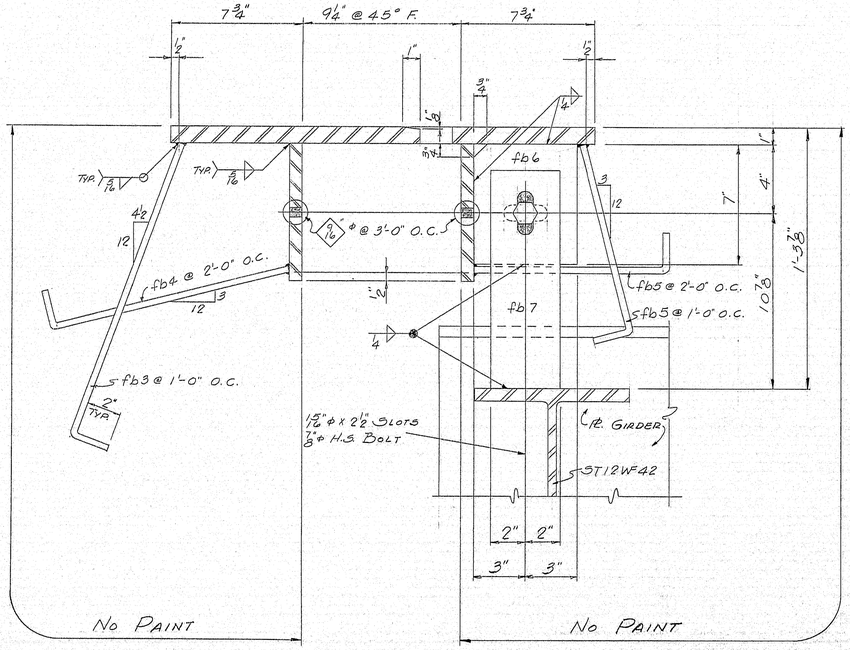
Bancroft & Martin Rolling Mills Company
Brewer, Maine

SANDY RIVER BRIDGE
STRONG, MAINE

CUSTOMER ELLIS C. SNODGRASS, INC.
DESIGNER MAINE STATE HIGHWAY COMM.
ORDER VERBAL DWG B64-386-52

94-188





"AA"

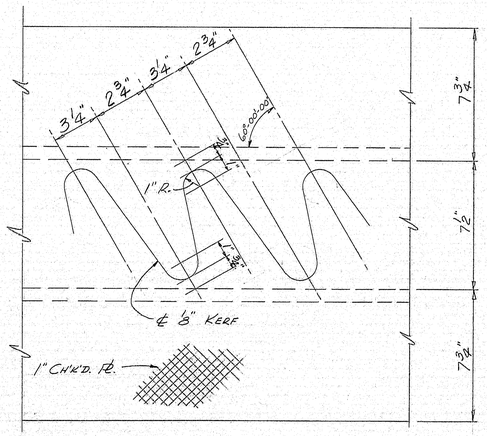


PLATE CUTTING DETAIL

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
			BILL OF MATERIAL			DWG. B64-386-53
ED1	1		ROADWAY EXP. DAM			
ED2	1		Do			
ED3	1		Do			
ED4	1		Do			
	1		PL-23 x 1	18 4		CHK'D. PL. (FOR ED1 & ED3) A36
	1		Do	18 4		Do (FOR ED2 & ED4)
	2	P15	PL- 8 x 3/4	17 3 9/16		
	2	P16	Do	17 3 9/16		
	34	fb3	BAR-2 x 3/8	1 8		BENT
	16	fb4	Do	1 4		Do
	50	fb5	Do	1 1		Do
	6	fb6	BAR-6 x 3/8	0 7		
	6	fb7	BAR-4 x 3/8	1 1/4		
	6	SHOP	7/8" ø H.S. BOLT	0 2		A325 (HEAVY NUTS)
	6	Do	7/8" ø H.S. WASHER			A325

SHOP CONNECTIONS: WELD - E7028 ELECTRODE
FIELD CONNECTIONS: WELD
HOLES: AS NOTED
PAINT: STATE OF MAINE SPEC'S.

APP'D. AS NOTED 12-2-64

ROADWAY EXPANSION DAMS

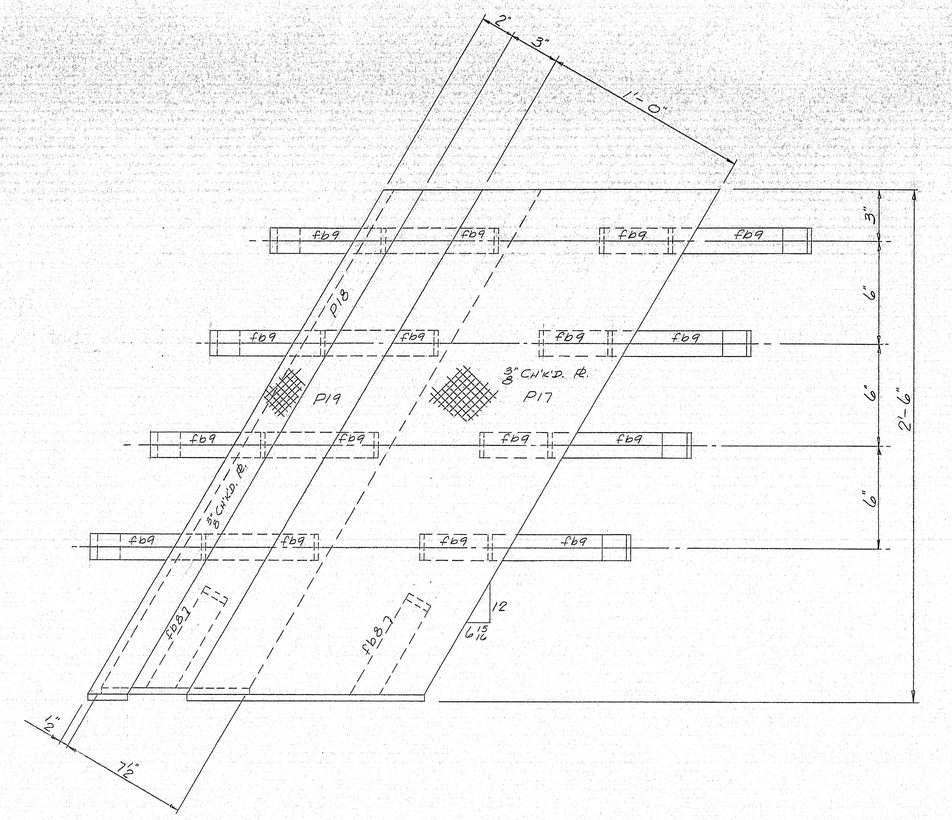
PRINT ISSUE		
3	DIST.	3-12-65
2	SHC	2-12-65
1	SHC	2-8-65
5	SHOP	12-21-64
2	F.A.	11-24-64
DRAWN		11-13-64 R.A.M.
REVISION		
REVISION		
REVISION		

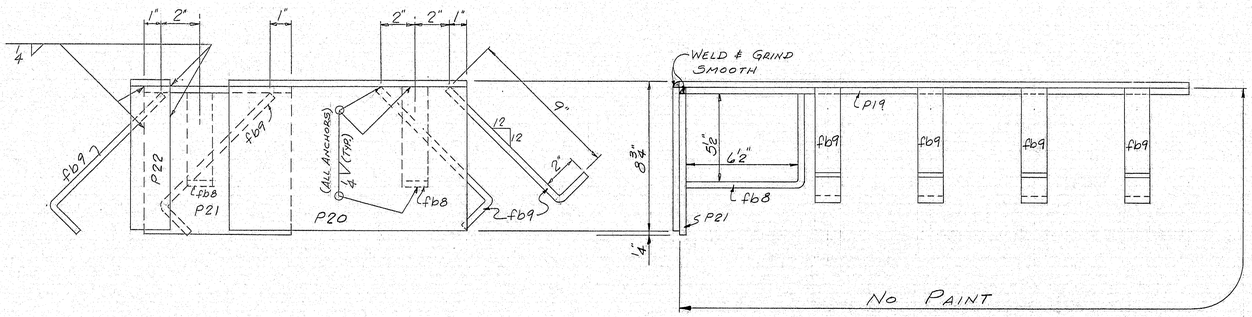
Bancroft & Martin Rolling Mills Company
Brewer, Maine

SANDY RIVER BRIDGE
STRONG, MAINE

CUSTOMER ELLIS C. SNODGRASS, INC.
DESIGNER MAINE STATE HIGHWAY COMM.
ORDER VERBAL DWG. B64-386-53

64-189





ONE- ED5 (AS SHOWN)
ONE- ED6 (OPP. HAND)

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
ED5	1		SIDEWALK EXP. DAM.			
ED6	1		DO			
	2	P17	PL-12 x 3/8	3 5⅛		CH'K'D. PL. A36
	2	P18	PL- 2 x 3/8	2 11⅞		DO
	2	P19	PL-7½ x 3/8	3 2⅛		
	2	P20	PL-8¾ x 3/8	1 1⅛		
	2	P21	PL-8¼ x 3/8	0 8⅛		
	2	P22	PL-2⅝ x 3/8	0 8¾		
	4	fb8	BAR-1½ x 3/8	1 0		BENT
	32	fb9	DO	0 11		DO

SHOP CONNECTIONS: WELD-E7028 ELECTRODE
FIELD CONNECTIONS:
HOLES: NONE
PAINT: STATE OF MAINE SPEC'S.

APP'D. AS NOTED 12-2-64

SIDEWALK EXPANSION DAMS

PRINT ISSUE		
3	DIST.	3-12-65
2	SHC	2-12-65
1	SHC	2-8-65
5	SHOP	12-21-64
2	F.A.	11-24-64
DRAWN		11-16-64 R.A.M.
REVISION		
REVISION		
REVISION		

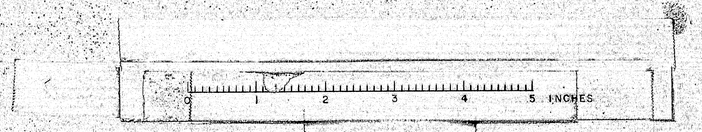
Bancroft & Martin Rolling Mills Company
Brewer, Maine

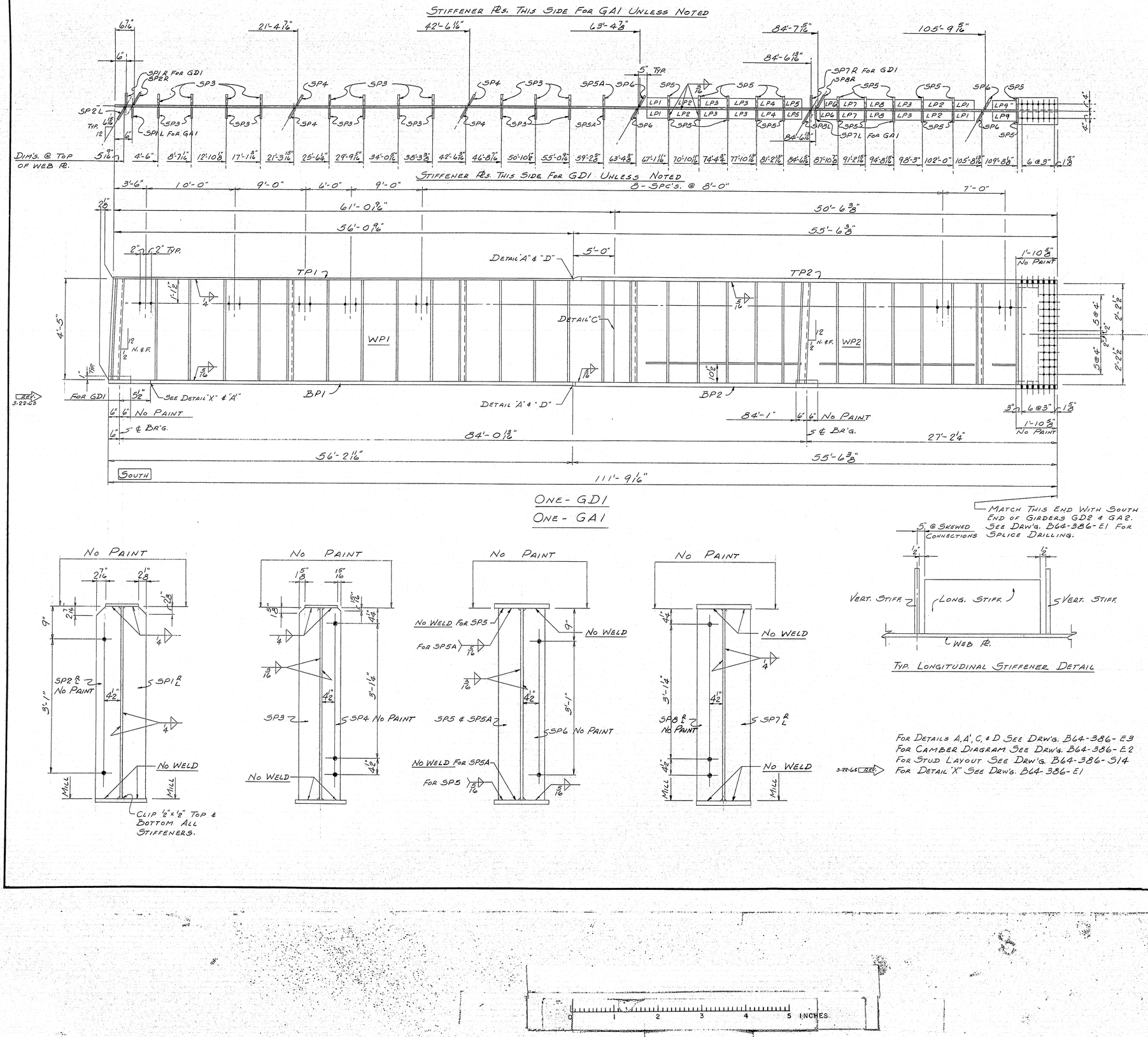
SANDY RIVER BRIDGE
STRONG, MAINE

CUSTOMER ELLIS C. SNODGRASS, INC.
DESIGNER MAINE STATE HIGHWAY COMM.

ORDER VERBAL DWG. B64-386-54

64-190





ONE - GD1
ONE - GA1

MATCH THIS END WITH SOUTH END OF GIRDERS GD2 & GA2. SEE DRW'G. B64-386-E1 FOR SPLICE DRILLING.

TYP. LONGITUDINAL STIFFENER DETAIL

For Details A,A', C, & D See Drw'g. B64-386-E3
For Camber Diagram See Drw'g. B64-386-E2
For Stud Layout See Drw'g. B64-386-314
For Detail 'X" See Drw'g. B64-386-E1
3-22-65 REV.

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
GD1	1		GIRDER	111 9 1/16		
GA1	1		Do	111 9 1/16		
	2	WP1	PL.-53 x 5/16	61 2 1/16		A36
	2	WP2	Do	50 6 3/8		A441
	2	TP1	PL.- 9 x 3/8	56 0 9/16		A36
	2	TP2	PL.-15 x 1 7/16	55 6 3/8		A441
	2	BP1	PL.-14 x 1 5/16	56 2 1/16		A36
	2	BP2	PL.-15 x 1 7/16	55 6 3/8		A441
	1	SP1R	PL.- 6 1/2 x 1/2	4 5		MIE
	1	SP1L	Do	4 5		MIE — A36
	1	SP2R	PL.- 7 1/2 x 5/8	4 5		No Paint - MIE
	22	SP3	PL.- 6 x 3/8	4 5		
	4	SP4	Do	4 5		No Paint
	22	SP5	Do	4 5		
	2	SP5A	Do	4 5		
	4	SP6	Do	4 5		No Paint
	1	SP7R	PL.- 7 x 5/8	4 5		MIE
	1	SP8R	PL.- 8 x 3/4	4 5		No Paint - MIE
	4	LP1	PL.- 5 x 7/16	3 3 3/8		
	4	LP2	Do	3 7 5/8		
	6	LP3	Do	3 4 3/4		
	2	LP4	Do	3 2 5/8		
	2	LP5	Do	2 8 1/2		
	2	LP6	Do	3 0 1/8		
	2	LP7	Do	3 2 3/4		
	2	LP8	Do	3 4 5/8		
	2	LP9	Do	3 5 3/8		
	1	SP2L	PL.- 7 1/2 x 5/8	4 5		No Paint - MIE
	1	SP7L	PL.- 7 x 5/8	4 5		MIE
	1	SP8L	PL.- 8 x 3/4	4 5		No Paint - MIE
FIELD	224		7/8" ϕ H.S. BOLT	0 4 4		A325 - W/HEAVY NUT
Do	224		Do	0 4		Do Do
Do	576		Do	0 2 4		Do Do
Do	1024		7/8" ϕ H.S. WASHER			Do
Do	230		3/4" ϕ M. BOLT	0 2		FOR CROSS FRAMES

BILL OF MATERIAL DWG. B64-386-55

SHOP CONNECTIONS: SEE DRW'G. B64-386-E3 FOR WELDING NOTES
FIELD CONNECTIONS: 7/8" ϕ H.S. BOLT & WELD
HOLES: 15/16" ϕ
PAINT: STATE OF MAINE SPEC'S.

APP'D. 1-26-65

EXTERIOR GIRDERS — SPAN #1

PRINT ISSUE		
2	F.A.	3-22-65
3	DIST.	3-12-65
2	SHC	2-12-65
1	SHC	2-8-65
5	SHOP	1-28-65
2	F.A.	1-25-65
2	F.A.	12-22-64
DRAWN	11-23-64	R.A.M.
REVISION	1-11-65	R.A.M.
REVISION	3-22-65	R.A.M.
REVISION		

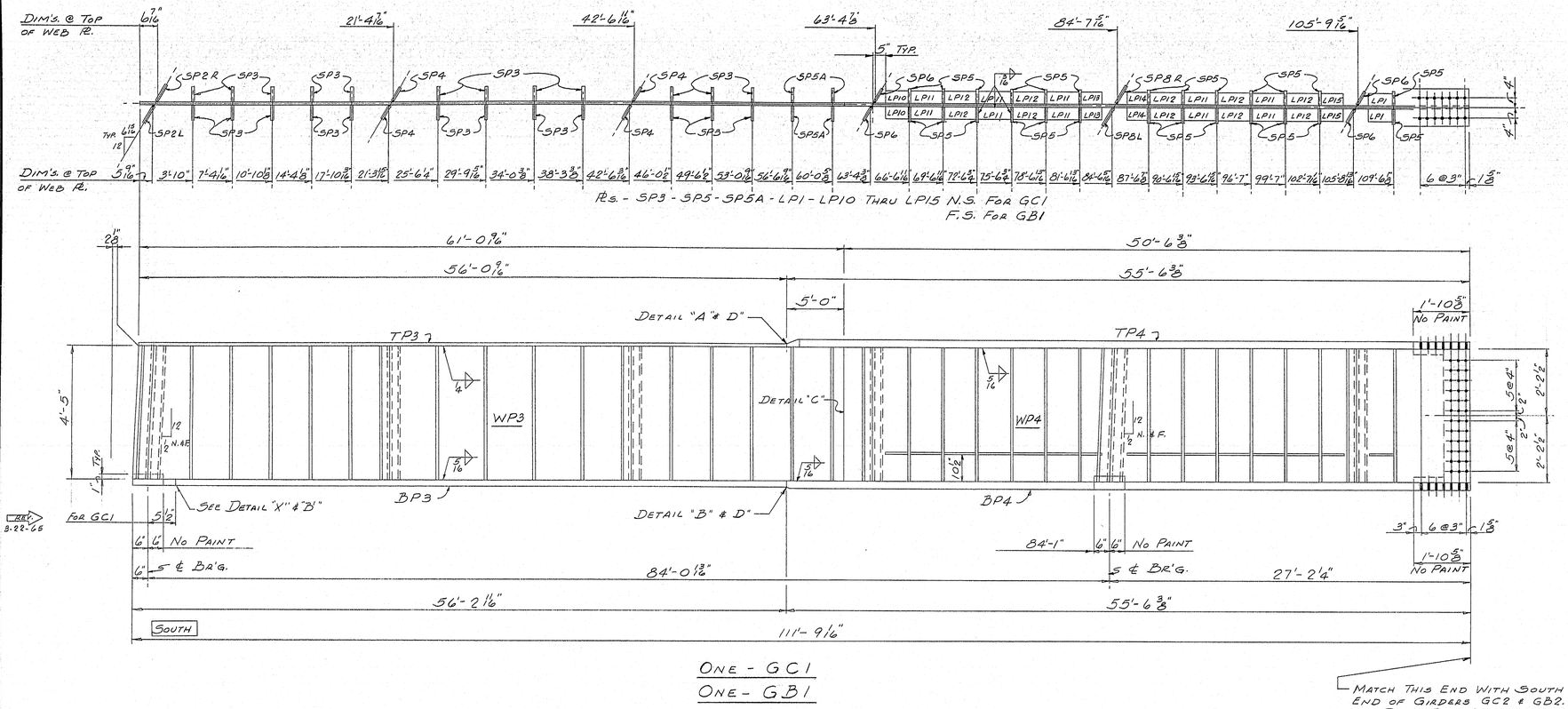
Bancroft & Martin Rolling Mills Company
Brewer, Maine

SANDY RIVER BRIDGE
STRONG, MAINE

CUSTOMER ELLIS C. SNODGRASS, INC.
DESIGNER MAINE STATE HIGHWAY COMM.

ORDER VERBAL DWG. B64-386-55

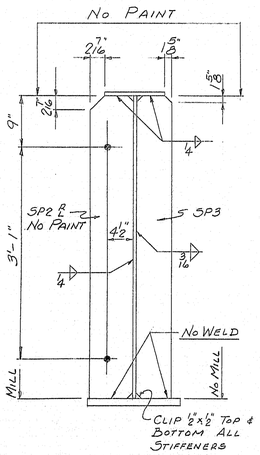
14.197

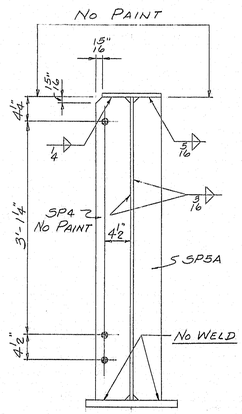


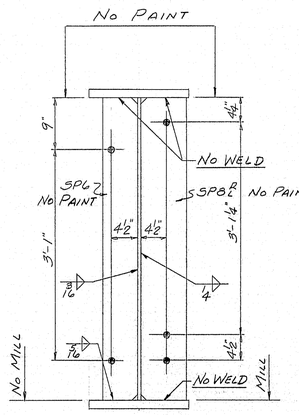
ONE - GC1

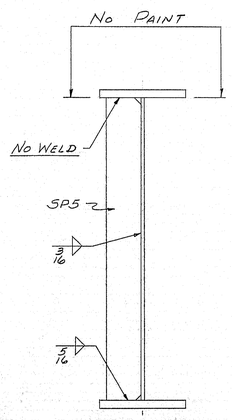
ONE - GB1

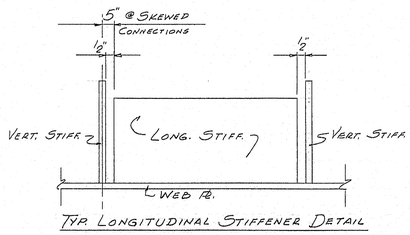
MATCH THIS END WITH SOUTH END OF GIRDERS GC2 & GB2. SEE DRW'G. B64-386-E1 FOR SPLICE DRILLING.











TYP. LONGITUDINAL STIFFENER DETAIL

FOR DETAILS A, B, B', C, & D SEE DRW'G. B64-386-E3
FOR CAMBER DIAGRAM SEE DRW'G. B64-386-E2
FOR STUD LAYOUT SEE DRW'G. B64-386-E14
3-22-65 REV. FOR DETAIL "X" SEE DRW'G. B64-386-E1

SHOP CONNECTIONS: SEE DRW'G. B64-386-E3 FOR WELDING NOTES.
FIELD CONNECTIONS: 7/8" ϕ H.S. BOLT & WELD
HOLES: 15/16" ϕ
PAINT: STATE OF MAINE SPEC'S.

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
GC1	1		GIRDER	111 9 1/16		
GB1	1		Do	111 9 1/16		
	2	WP3	PL.-53 x 5/16	61 2 1/16		A36
	2	WP4	Do	50 6 3/8		A441
	2	TP3	PL.- 9 x 5/8	56 0 9/16		A36
	2	TP4	PL.-15 x 1 7/16	55 6 3/8		A441
	2	BP3	PL.-14 x 1 1/4	56 2 1/16		A36
	2	BP4	PL.-15 x 1 1/16	55 6 3/8		A441
	2	SP2R	PL.- 7 1/2 x 5/8	4 5		No Paint - MIE A36
	24	SP3	PL.- 6 x 3/8	4 5		
	8	SP4	Do	4 5		No Paint
	26	SP5	Do	4 5		
	4	SP5A	Do	4 5		
	8	SP6	Do	4 5		No Paint
	2	SP8R	PL.- 8 x 3/4	4 5		No Paint - MIE
	2	LP10	PL.- 5 x 5/16	2 8 3/8		
	10	LP11	Do	2 10 3/8		
	10	LP12	Do	2 10 3/4		
	2	LP13	Do	2 4 1/2		
	2	LP14	Do	2 8 1/8		
	2	LP15	Do	2 8 1/4		
	2	LP1	Do	3 3 3/8		
	2	SP2L	PL.- 7 1/2 x 5/8	4 5		No Paint - MIE
	2	SP8L	PL.- 8 x 3/4	4 5		Do Do

APP'D. 1-26-65

INTERIOR GIRDERS - SPAN #1

PRINT ISSUE		
2	F.A.	3-22-65
3	DIST.	3-12-65
2	SHC	2-12-65
1	SHC	2-8-65
5	SHOP	1-28-65
2	F.A.	1-25 65
2	F.A.	12-22-64
DRAWN	11-27-64	R.A.M.
REVISION	1-11-65	R.A.M.
REVISION	3-22-65	R.A.M.
REVISION		

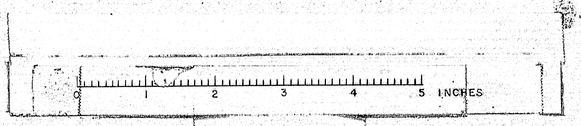
Bancroft & Martin Rolling Mills Company
Brewer, Maine

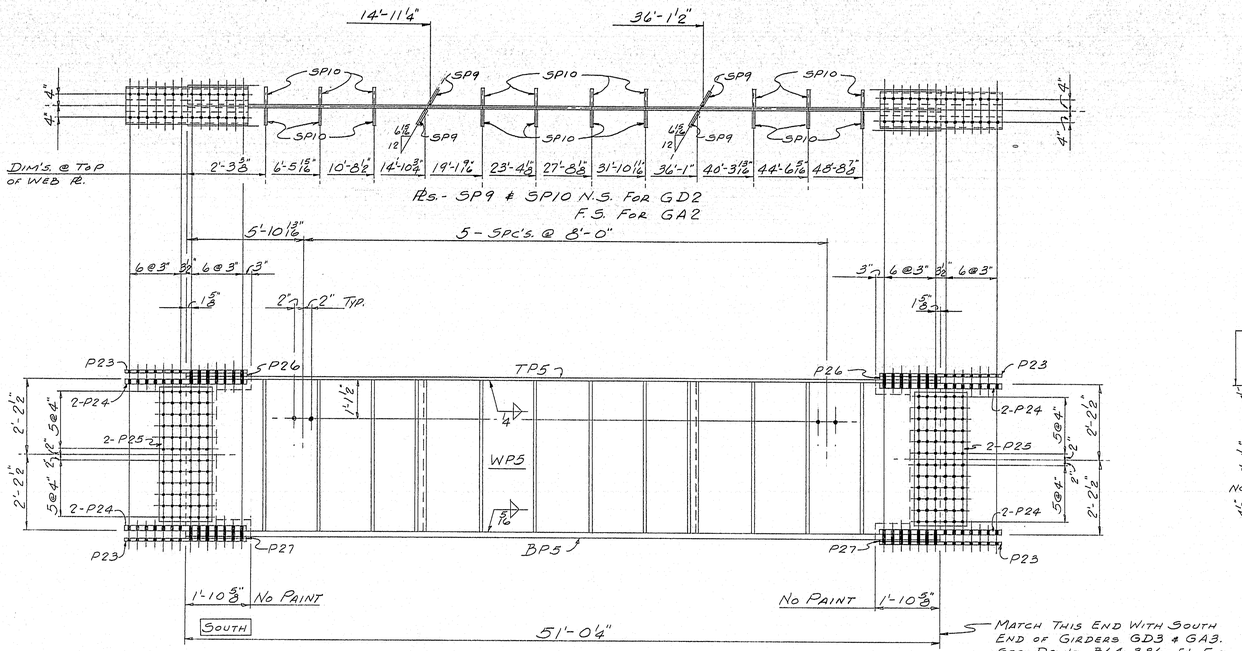
SANDY RIVER BRIDGE
STRONG, MAINE

CUSTOMER ELLIS C. SNODGRASS, INC.
DESIGNER MAINE STATE HIGHWAY COMM.

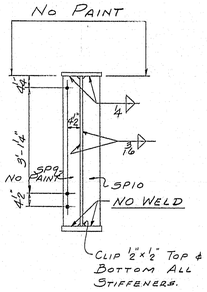
ORDER VERBAL DWG. B64-386-S6

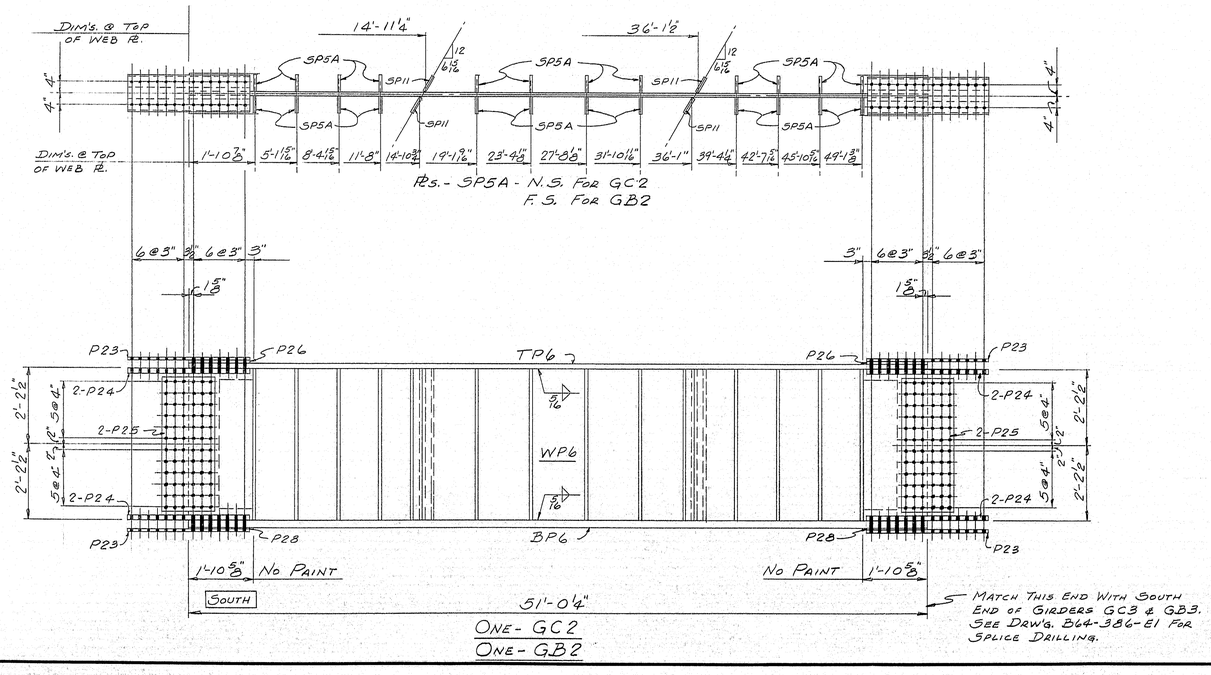
94-192



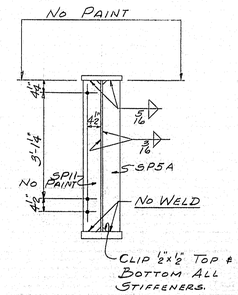


ONE - GD2
ONE - GA2





ONE - GC2
ONE - GB2



SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
GD2	1		GIRDER	51 04		
GA2	1		Do	51 04		
GC2	1		Do	51 04		
GB2	1		Do	51 04		
	2	WP5	PL.- 53 x 5/16	51 04		A36
	2	TP5	PL.- 14 x 3/8	51 04		
	2	TP6	PL.- 14 x 7/8	51 04		
	2	BP5	PL.- 14 x 1 1/8	51 04		
	2	BP6	PL.- 14 x 1¼	51 04		
	24	SP5A	PL.- 6 x 3/8	4 5		
	4	SP9	Do	4 5		NO PAINT
	20	SP10	Do	4 5		
	8	SP11	Do	4 5		NO PAINT
	16	P23	PL.- 13 x ½	3 6½		
	32	P24	PL.- 4 x 7/8	3 6½		
	16	P25	PL.- 13½ x 7/16	3 11		
	8	P26	PL.- 13 x 9/16	1 9⅜		
	4	P27	PL.- 13 x ¼	1 9⅜		
	4	P28	PL.- 13 x 3/16	1 9⅜		
	2	WP6	PL.- 53 x 5/16	51 04		

FOR CAMBER DIAGRAM SEE DRW'G. B64-386-E3
FOR STUD LAYOUT SEE DRW'G. B64-386-S14

SHOP CONNECTIONS: SEE DRW'G. B64-386-E3 FOR WELDING NOTES.
FIELD CONNECTIONS: ⅞" ø H.S. BOLT & WELD
HOLES: 1⅝" ø
PAINT: STATE OF MAINE SPEC'S.

APP'D. 1-26-65

EXTERIOR & INTERIOR GIRDERS — SPAN #2

PRINT ISSUE		
3	DIST.	3-12-65
2	SHC	2-12-65
1	SHC	2-8-65
5	SHOP	1-28-65
2	F.A.	1-25-65
2	F.A.	12-28-64
DRAWN		12-1-64 R.A.M.
REVISION		1-11-65 R.A.M.
REVISION		
REVISION		

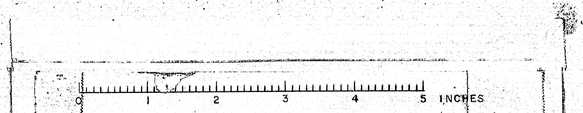
Bancroft & Martin Rolling Mills Company
Brewer, Maine

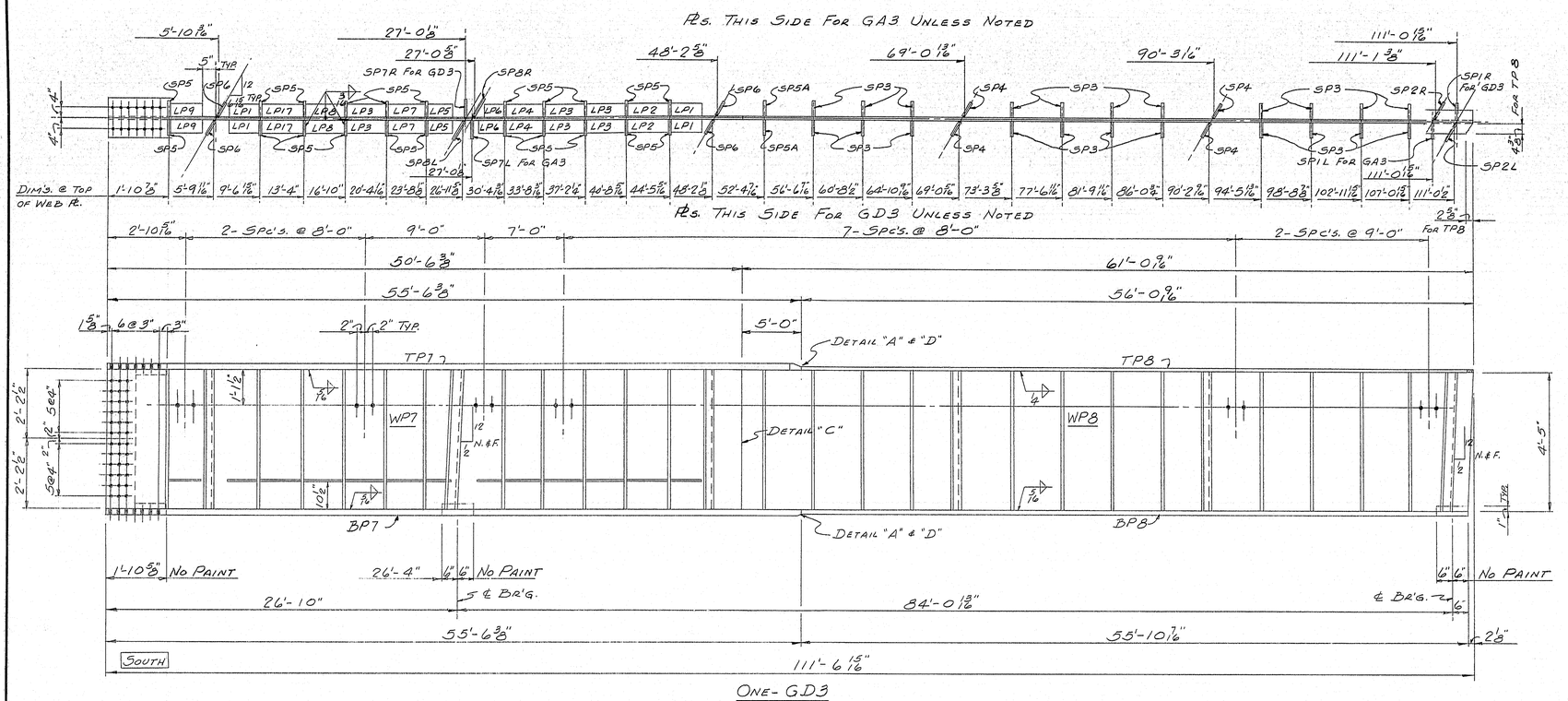
SANDY RIVER BRIDGE
STRONG, MAINE

CUSTOMER ELLIS C. SNODGRASS, INC.
DESIGNER MAINE STATE HIGHWAY COMM.

ORDER VERBAL DWG. B64-386-S7

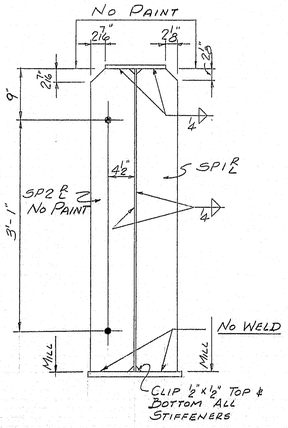
94-193

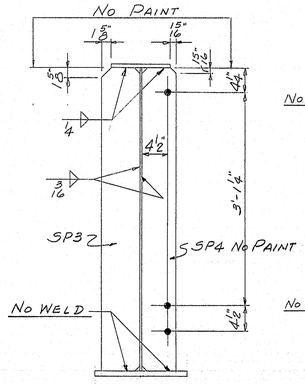


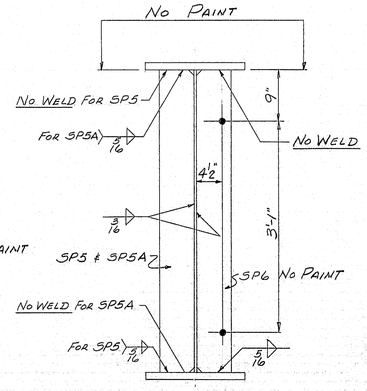


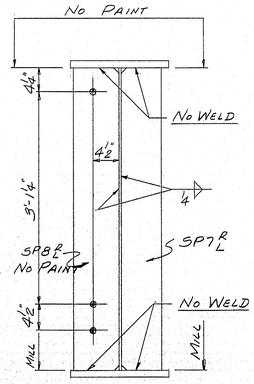
One - GD3

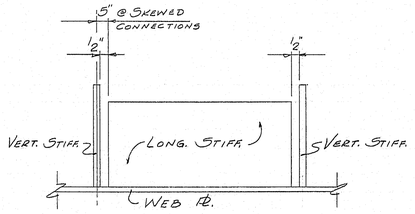
One - GA3











Typ. Longitudinal Stiffener Detail

For Details "A", "C", & "D" See Drw's. B64-386-E3
For Camber Diagram See Drw's. B64-386-E2
For Stud Layout See Drw's. B64-386-S14

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
GD3	1		Girder	111 6 15/16		
GA3	1		Do	111 6 15/16		
	2	WP7	Pl.- 53 x 5/16	50 6 3/8		A-441
	2	WP8	Do	61 0 1/16		A-36
	2	TP7	Pl.- 15 x 1 3/16	55 6 3/8		A-441
	2	TP8	Pl.- 9 x 3/8	56 0 1/16		A-36
	2	BP7	Pl.- 15 x 1 3/16	55 6 3/8		A-441
	2	BP8	Pl.- 14 x 1/2	55 10 1/16		A-36
	1	SP1R	Pl.- 6 1/2 x 1/2	4 5		MIE
	1	SP2R	Pl.- 7 1/2 x 3/8	4 5		No Paint - MIE
	22	SP3	Pl.- 6 x 3/8	4 5		
	4	SP4	Do	4 5		No Paint
	22	SP5	Do	4 5		
	2	SP5A	Do	4 5		
	4	SP6	Do	4 5		No Paint
	1	SP7R	Pl.- 7 x 5/8	4 5		MIE
	1	SP8R	Pl.- 8 x 3/4	4 5		No Paint - MIE
	4	LP1	Pl.- 5 x 5/16	3 3 3/8		
	2	LP2	Do	3 7 5/8		
	6	LP3	Do	3 4 3/4		
	2	LP4	Do	3 2 5/8		
	2	LP5	Do	2 8 1/2		
	2	LP6	Do	3 0 1/8		
	2	LP7	Do	3 2 3/4		
	2	LP8	Do	3 4 5/8		
	2	LP9	Do	3 5 3/8		
	2	LP17	Do	3 7 3/4		
	1	SP1L	Pl.- 6 1/2 x 1/2	4 5		MIE
	1	SP2L	Pl.- 7 1/2 x 5/8	4 5		No Paint - MIE
	1	SP7L	Pl.- 7 x 5/8	4 5		MIE
	1	SP8L	Pl.- 8 x 3/4	4 5		No Paint - MIE

SHOP CONNECTIONS: See Drw's. B64-386-E3 For Welding Notes.
FIELD CONNECTIONS: 7/8" ϕ H.S. Bolt & Weld
HOLES: 15/16" ϕ
PAINT: State of Maine Spec's.

App'd. 1-26-65

Exterior Girders - Span #3

PRINT ISSUE		
3	Dist.	3-12-65
2	SHC	2-12-65
1	SHC	2-8-65
5	Shop	1-28-65
2	F.A.	1-25-65
2	F.A.	12-22-64
DRAWN	12-2-64	R.A.M.
REVISION	1-11-65	R.A.M.
REVISION		
REVISION		

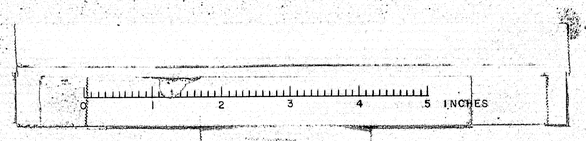
Bancroft & Martin Rolling Mills Company
Brewer, Maine

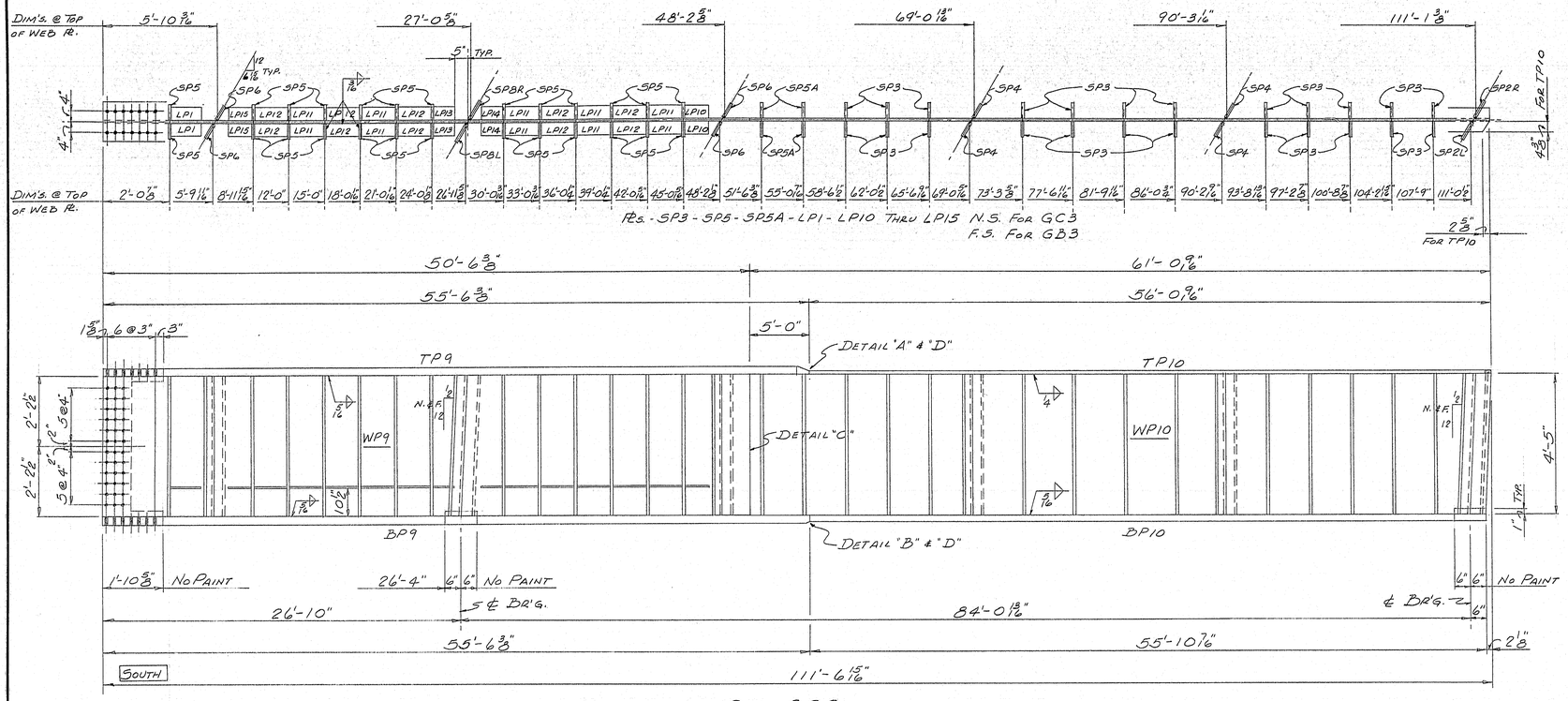
Sandy River Bridge
Strong, Maine

CUSTOMER Ellis C. Snodgrass, Inc.
DESIGNER Maine State Highway Comm.

ORDER Verbal DWG. B64-386-S8

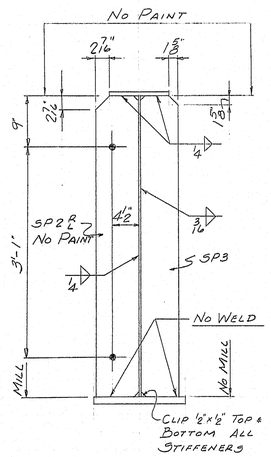
94.197

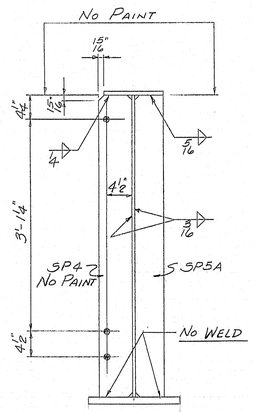


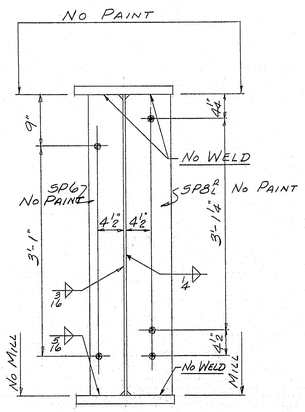


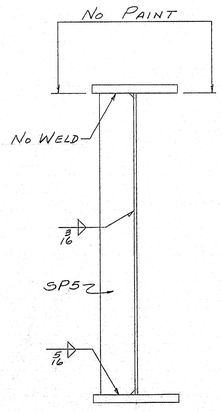
ONE - GC3

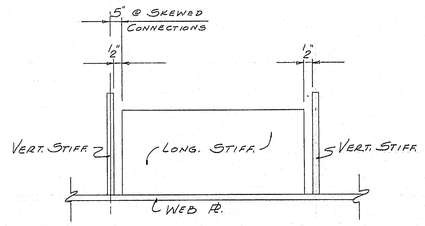
ONE - GB3











TYP. LONGITUDINAL STIFFENER DETAIL

FOR DETAILS "A", "B", "C", & "D" SEE DRW'G. B64-386-E3
FOR CAMBER DIAGRAM SEE DRW'G. B64-386-E2
FOR STUD LAYOUT SEE DRW'G. B64-386-S14

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
GC3	1		GIRDER	111 6 1/2		
GB3	1		DO	111 6 1/2		
	2	WP9	PL.-53 x 7/16	50 6 3/8		A441
	2	WP10	DO	61 0 9/16		A36
	2	TP9	PL.-15 x 1 7/16	55 6 3/8		A441
	2	TP10	PL.-9 x 5/8	56 0 1/16		A36
	2	BP9	PL.-15 x 1 7/16	55 6 3/8		A441
	2	BP10	PL.-14 x 1/4	55 10 7/16		A36
	2	SPBR	PL.-7 1/2 x 5/8	4 5		NO PAINT-MIE
	24	SP3	PL.-6 x 5/8	4 5		
	8	SP4	DO	4 5		NO PAINT
	26	SP5	DO	4 5		
	4	SP5A	DO	4 5		
	8	SP6	DO	4 5		NO PAINT
	2	SPBR	PL.-8 x 3/4	4 5		NO PAINT-MIE
	2	LP1	PL.-5 x 7/16	3 3 3/8		
	2	LP10	DO	2 8 5/8		
	10	LP11	DO	2 10 3/8		
	10	LP12	DO	2 10 3/4		
	2	LP13	DO	2 4 1/2		
	2	LP14	DO	2 8 1/8		
	2	LP15	DO	2 8 1/4		
	2	SP2L	PL.-7 1/2 x 5/8	4 5		NO PAINT-MIE
	2	SP3L	PL.-8 x 3/4	4 5		DO DO

BILL OF MATERIAL DWG. B64-386-S9

SHOP CONNECTIONS: SEE DRW'G. B64-386-E3 FOR WELDING NOTES.
FIELD CONNECTIONS: 7/8" ϕ H.S. BOLT & WELD
HOLES: 1 1/16" ϕ
PAINT: STATE OF MAINE SPEC'S.

APP'D. 1-26-65

INTERIOR GIRDERS - SPAN #3

PRINT ISSUE		
3	DIST.	3-12-65
2	SHC	2-12-65
1	SHC	2-8-65
5	SHOP	1-28-65
2	F.A.	1-25-65
2	F.A.	12-22-64
DRAWN	12-4-64	R.A.M.
REVISION	1-11-65	R.A.M.
REVISION		
REVISION		

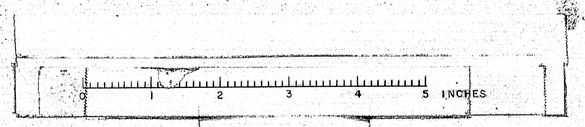
Bancroft & Martin Rolling Mills Company
Brewer, Maine

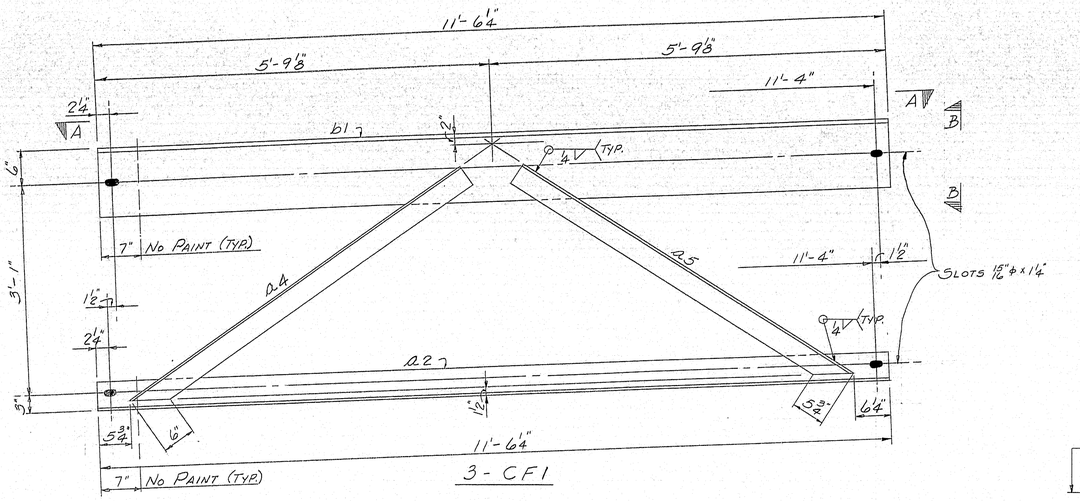
SANDY RIVER BRIDGE
STRONG, MAINE

CUSTOMER ELLIS C. SNODGRASS, INC.
DESIGNER MAINE STATE HIGHWAY COMM.

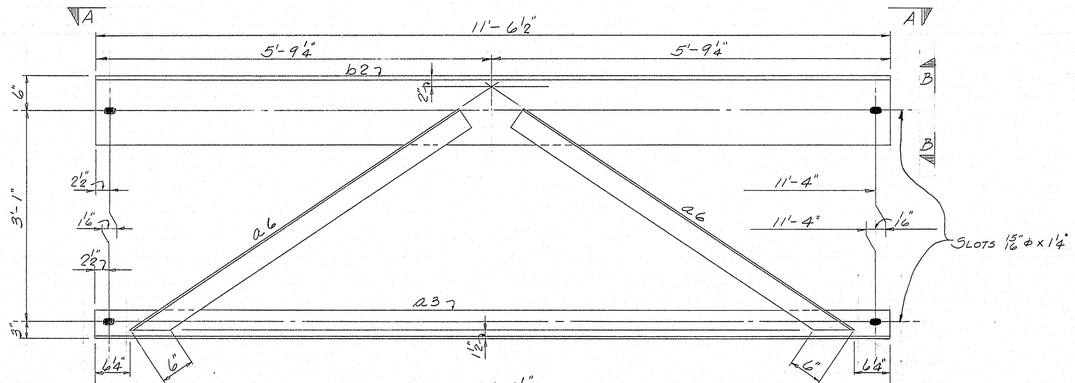
ORDER VERBAL DWG. B64-386-S9

94.195

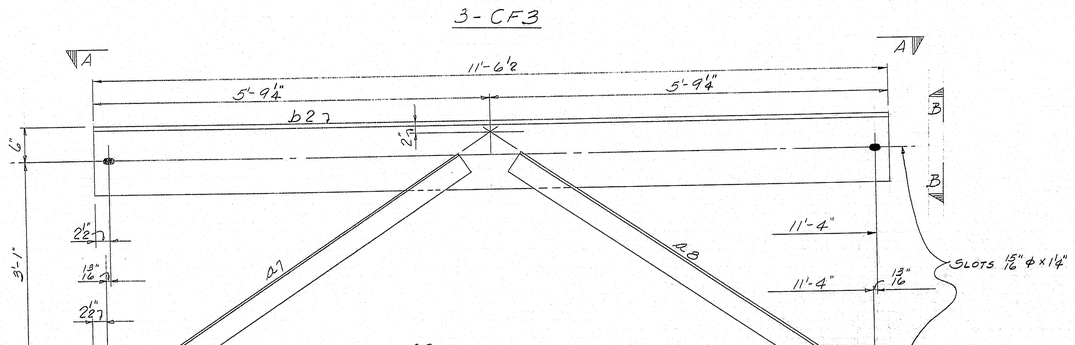




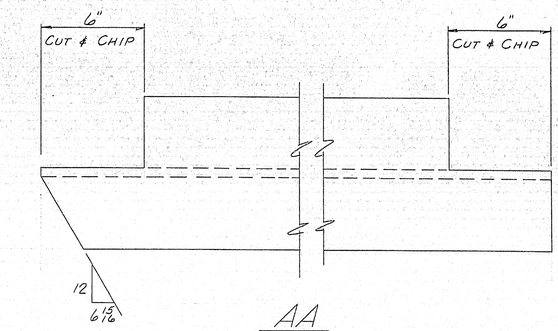
3 - CF1



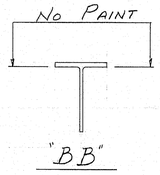
3 - CF3



3 - CF2



AA



"BB"

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
CF1	3		Cross Frame			
CF2	3		Do			
CF3	3		Do			
	3	b1	ST12WF42	11	6¼	A36
	6	b2	Do	11	6½	
	3	a2	∠-5x5x3/8	11	6¼	
	6	a3	Do	11	6½	
	3	a4	∠-4x4x3/8	5	10¾	
	3	a5	Do	5	8½	
	6	a6	Do	5	9½	
	3	a7	Do	5	10	
	3	a8	Do	5	9	

BILL OF MATERIAL DWG. B64-386-510

SHOP CONNECTIONS: WELD - E7028 ELECTRODE
FIELD CONNECTIONS: 3/4" ϕ MACH. BOLT & WELD
HOLES: 15/16" ϕ x 1¼" SLOTS
PAINT: STATE OF MAINE SPEC'S.

APP'D. 1-5-65

CROSS FRAMES - TYPE A

PRINT ISSUE		
3	DIST.	3-12-65
2	SHC	2-12-65
1	SHC	2-8-65
5	SHOP	1-11-65
2	F.A.	12-22-64
DRAWN	12-7-64	R.A.M.
REVISION		
REVISION		
REVISION		

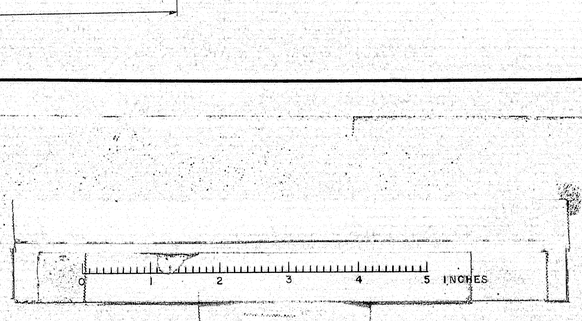
Bancroft & Martin Rolling Mills Company
Brewer, Maine

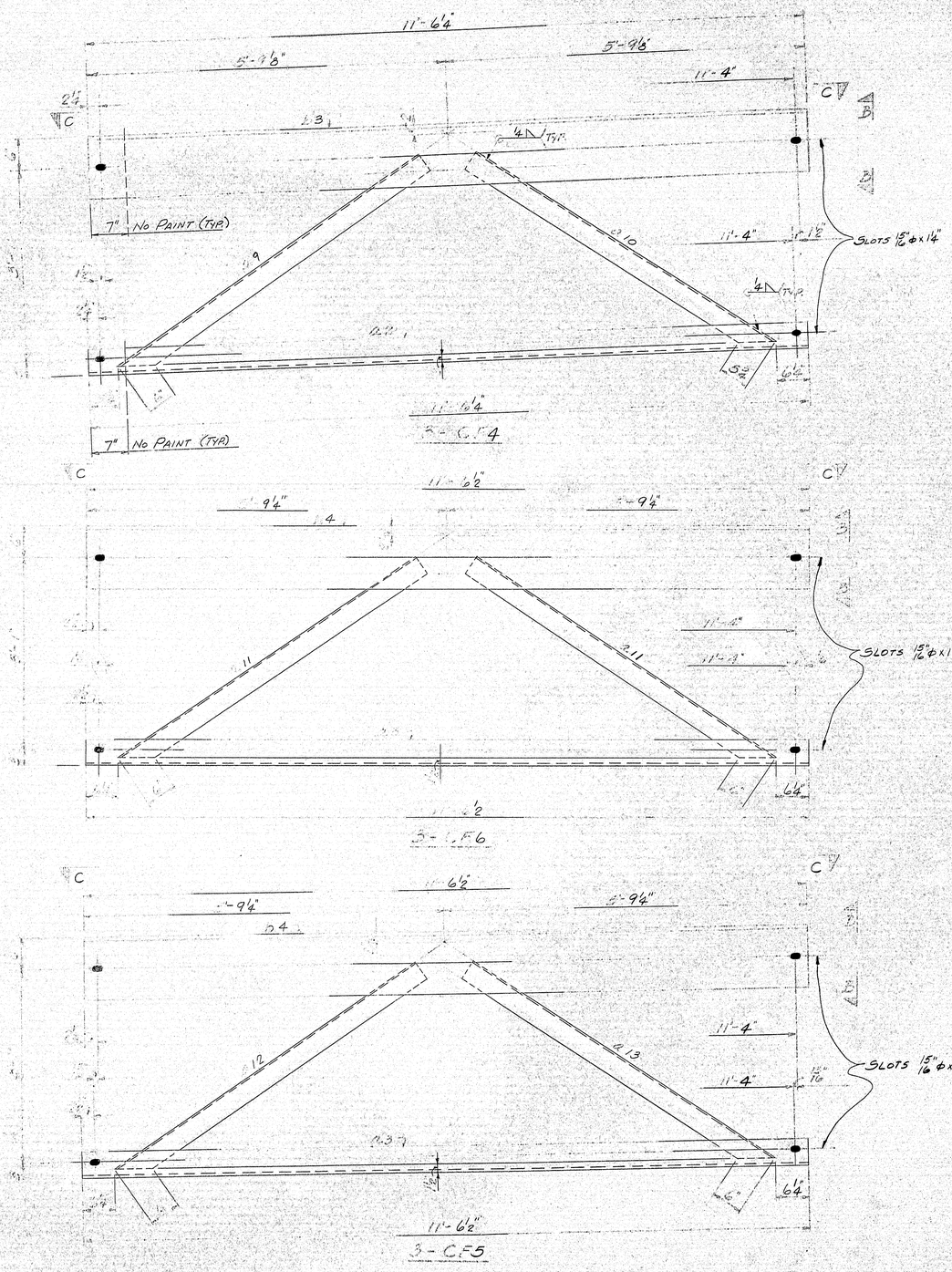
SANDY RIVER BRIDGE
STRONG, MAINE

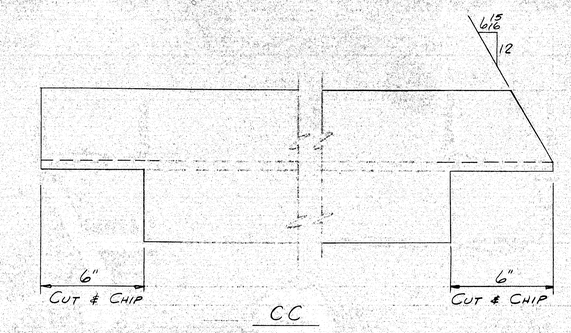
CUSTOMER ELLIS C. SNODGRASS, INC.
DESIGNER MAINE STATE HIGHWAY COMM.

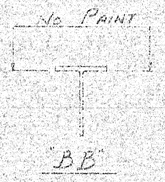
ORDER VERBAL DWG. B64-386-510

94-192









SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
CF4	3		Cross Frame			
CF5	3		Do			
CF6	3		Do			
	3	b3	ST12WF42	11 6¼		A36
	6	b4	Do	11 6½		
	3	a2	L 5x5x⅝	11 6¼		
	6	a3	Do	11 6½		
	3	a9	PL 4x4x⅜	5 10¼		
	3	a10	Do	5 9½		
	6	a11	Do	5 9¼		
	3	a12	Do	5 1⅛		
	3	a13	Do	5 9		

SHOP CONNECTIONS: WELD - E 70 XX ELECTRODE
FIELD CONNECTIONS: ⅞" ϕ MACH. BOLT & WELD
HOLES: 15/16" ϕ x 1¼" SLOTS
PAINT: STATE OF MAINE SPEC'S

APP'D. 1-5-65

CROSS FRAMES - TYPE A

PRINT ISSUE		
3	DIST.	3-12-65
2	SHC	2-12-65
1	SHC	2-8-65
5	SHOP	1-11-65
2	F.A.	12-22-64
DRAWN		12-9-64 A.M.
REVISION		
REVISION		
REVISION		

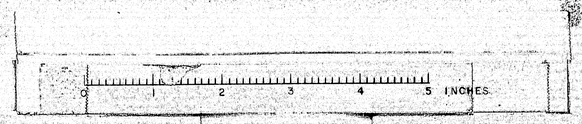
Bancroft & Martin Rolling Mills Company
Brewer, Maine

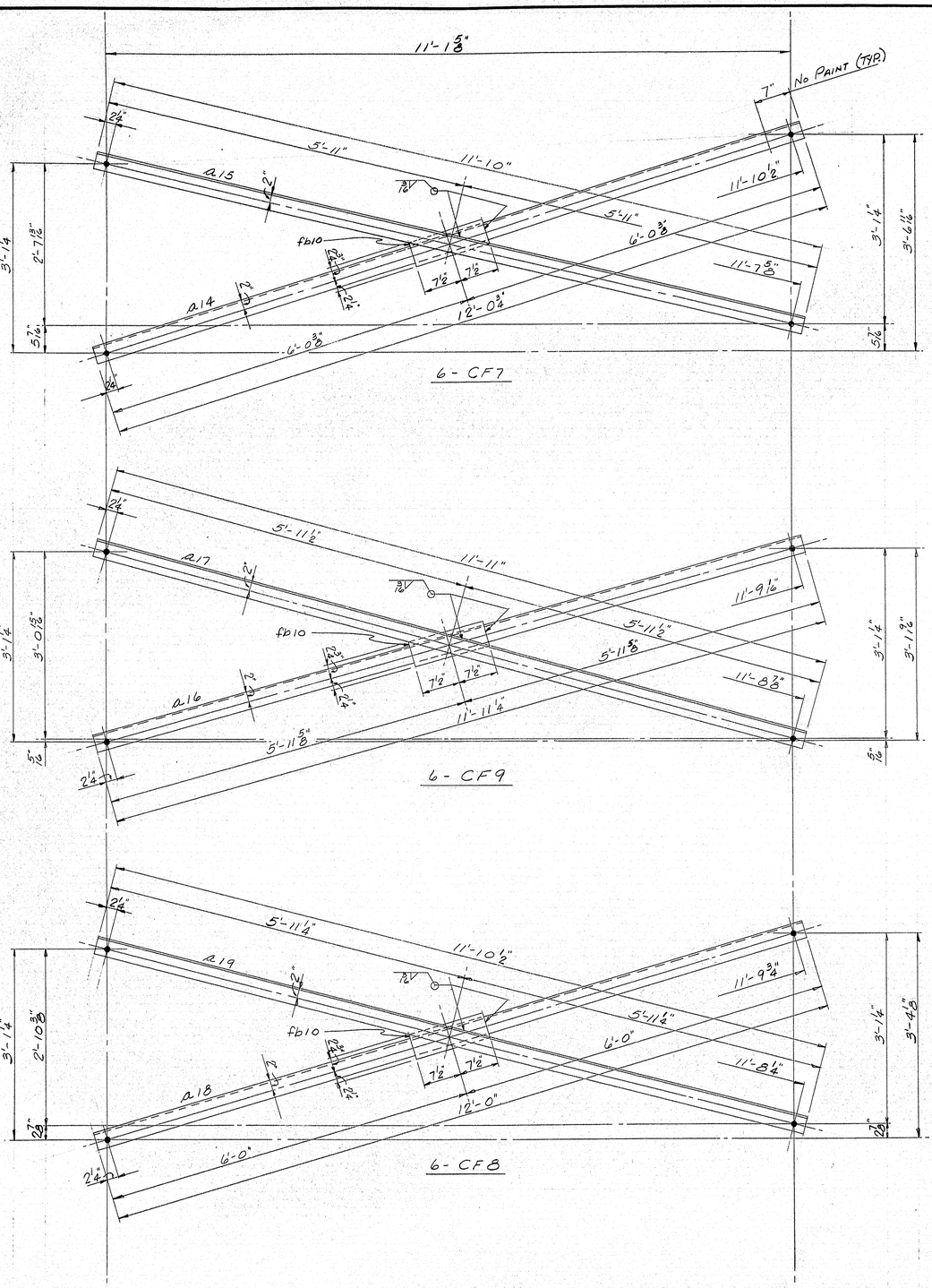
SANDY RIVER BRIDGE
STRONG, MAINE

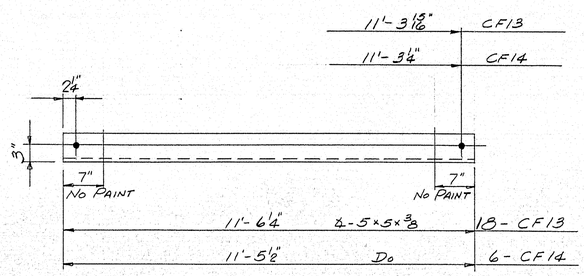
CUSTOMER ELLIS C. SNODGRASS, INC.
DESIGNER MAINE STATE HIGHWAY COMM.

ORDER VERBAL | DWG B64-386-511

94-197







SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
CF7	6		CROSS FRAME			
CF8	6		Do			
CF9	6		Do			
	6	A14	∠-3 1/2x3 1/2x5/16	12	0 3/4	A36
	6	A15	Do	11	10	
	6	A16	Do	11	11 1/4	
	6	A17	Do	11	11	
	6	A18	Do	12	0	
	6	A19	Do	11	10 1/2	
	18	FD10	BAR-5x3/8	1	3	
CF13	18		∠-5x5x3/8	11	6 1/4	
CF14	6		Do	11	5 1/2	

BILL OF MATERIAL — DWG. B64-386-S12

SHOP CONNECTIONS: WELD - E7028 ELECTRODE
FIELD CONNECTIONS: 3/4" ϕ MACH. BOLT & WELD
HOLES: 1/2" ϕ
PAINT: STATE OF MAINE SPEC'S.

APP'D. 1-5-65

CROSS FRAMES - TYPE B

PRINT ISSUE		
3	DIST.	3-12-65
2	SHC	2-12-65
1	SHC	2-8-65
5	SHOP	1-11-65
2	F.A.	12-22-64
DRAWN	12-9-64	R.A.M.
REVISION		
REVISION		
REVISION		

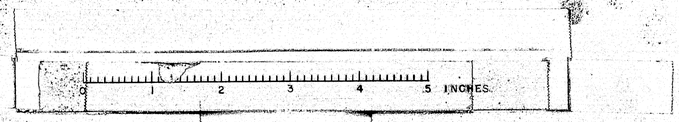
Bancroft & Martin Inc.
Brewer, Maine

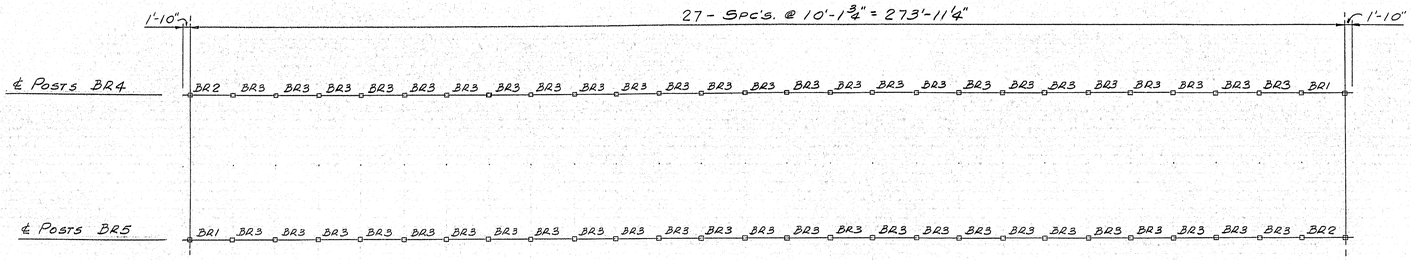
SANDY RIVER BRIDGE
STRONG, MAINE

CUSTOMER ELLIS C. SNODGRASS, INC.
DESIGNER MAINE STATE HIGHWAY COMM.

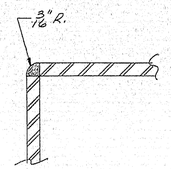
ORDER VERBAL — DWG. B64-386-S12

94.190

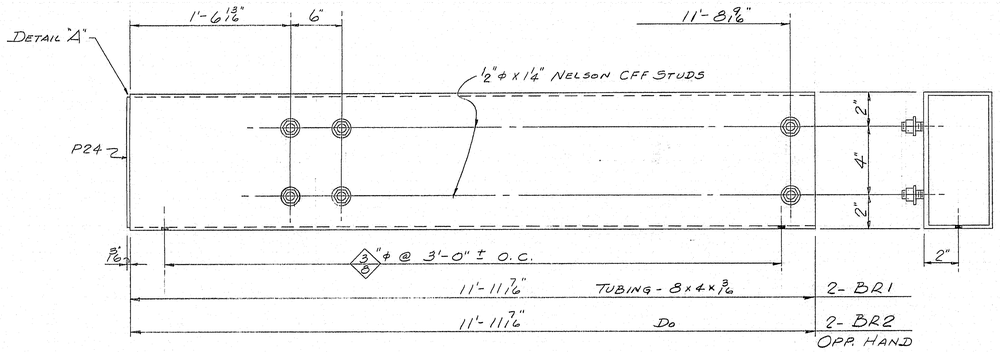


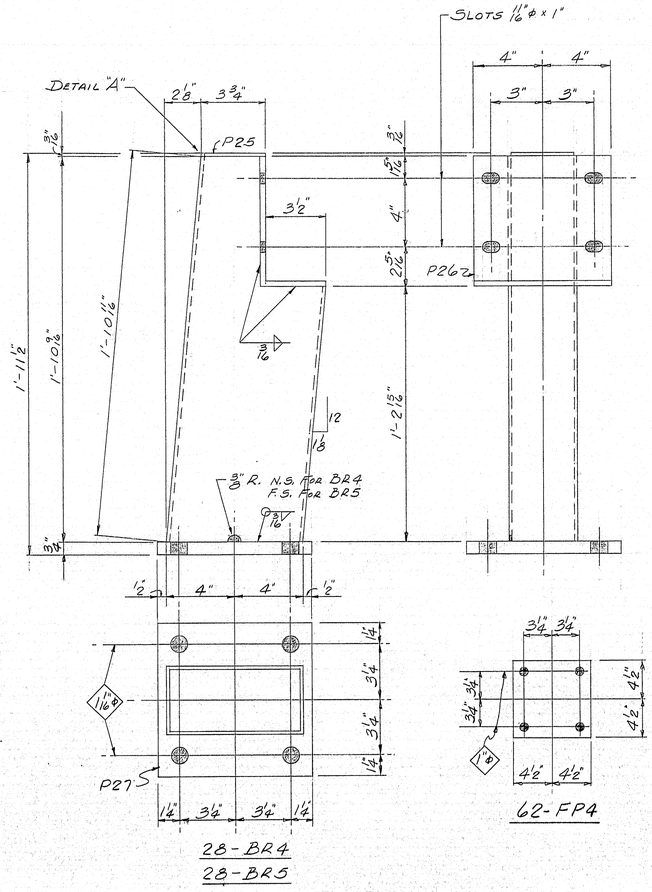


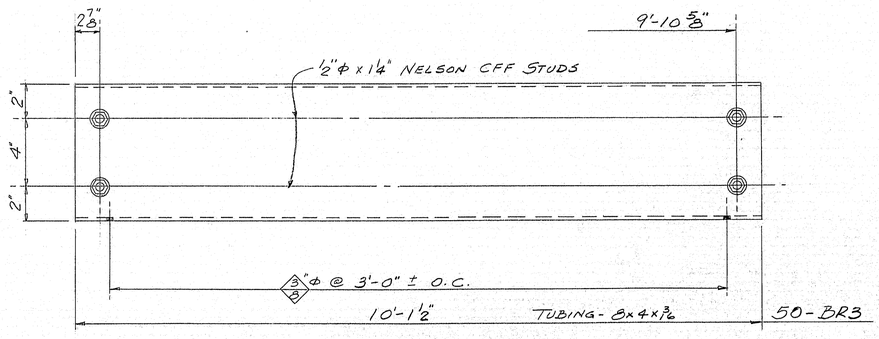
GUARD RAIL PLAN



DETAIL "A"







SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
BR1	2		TUBING 8x4x3/16	11 11 7/16		A36
BR2	2		Do	11 11 7/16		
BR3	50		Do	10 1½		
BR4	28		Do	1 11		
BR5	28		Do	1 11		
	4	P24	PL-3 3/8 x 3/16	0 7 5/8		
	56	P25	PL-3 1/16 x 3/16	0 3 3/8		
	56	P26	PL-8 x 5/16	0 11 5/8		BENT
	56	P27	PL-9 x 3/4	0 9		
	224	SHOP	½"ϕ STUDS	0 1¼		NELSON CFF
	224	Do	½"ϕ HEX NUTS			
	224	Do	½"ϕ WASHERS			
AB	224		¾"ϕ M. BOLT	0 10		
	224		¾"ϕ WASHERS			
FP4	62		PAD-9x1'-8	0 9		FABCO PAD SA47 REQ # 3038

SHOP CONNECTIONS: WELD - E7028 ELECTRODE
FIELD CONNECTIONS: BOLT
HOLES: AS NOTED
PAINT: STATE OF MAINE SPEC'S.

APP'D. 1-5-65

GUARD RAIL

PRINT ISSUE		
3	DIST.	3-12-65
2	SHC	2-12-65
1	SHC	2-8-65
5	SHOP	1-11-65
2	F.A.	12-22-64
DRAWN	12-10-64	R.A.M.
REVISION		
REVISION		
REVISION		

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Brewer, Maine

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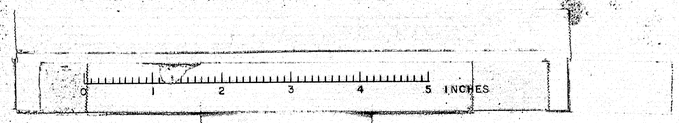
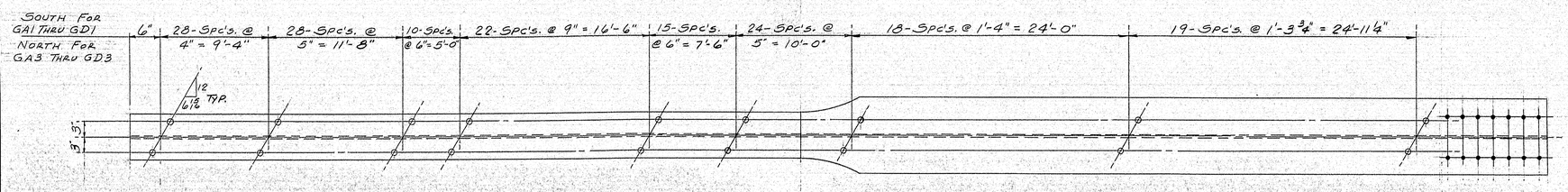
CUSTOMER ELLIS C. SNODGRASS, INC.
DESIGNER MAINE STATE HIGHWAY COMM.

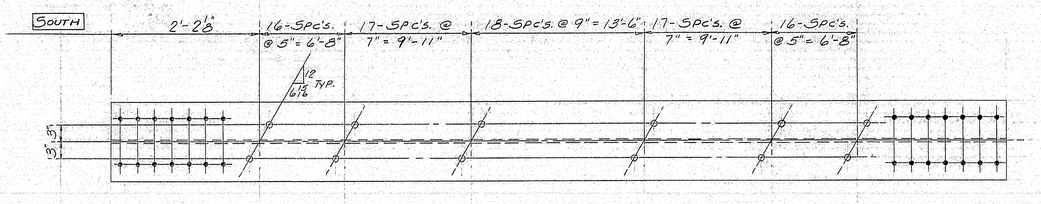
ORDER VERBAL DWG. B64-386-513

97.179

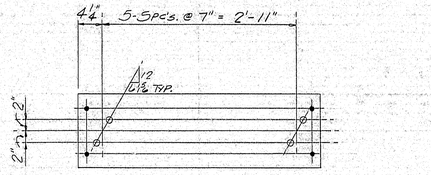




FOR GA1 THRU GD1 & GA3 THRU GD3

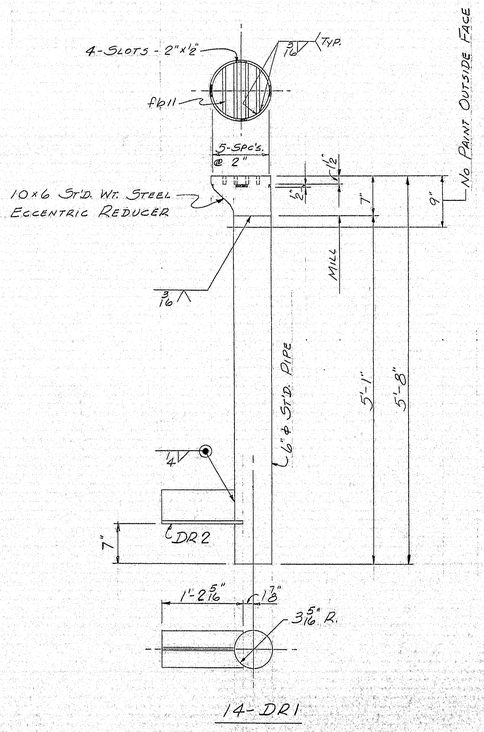


FOR GA2 THRU GD2



TYP. STUD LAYOUT FOR TOP FL'G. SPLICE PL.

DR1 3-3-65



14-DR1

SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
	3416	SHOP	7/8" ø STUDS	0	5		NELSON STUD TYPE S3F
DR1	14		6" ø STD. PIPE	5	1		M1E A-36
	14		10x6 - STD. ECCENTRIC REDUCER	STEEL WELDING			
DR2	14		ST6WF13.5	1	2 7/16		
	56	FD11	BAR-1/2x1/2	0	10		FIT

BILL OF MATERIAL DWG. B64-386-314

SHOP CONNECTIONS: WELD - E7028 ELECTRODE
FIELD CONNECTIONS: WELD
HOLES:
PAINT: STATE OF MAINE SPEC'S.

APP'D. 1-5-65

STUD LAYOUT & DRAIN DETAIL

PRINT ISSUE		
3	DIST.	3-12-65
3	SHC	3-8-65
2	F.A.	3-3-65
2	SHC	2-12-65
1	SHC	2-8-65
5	SHOP	1-11-65
2	F.A.	12-22-64
DRAWN	12-11-64	R.A.M.
REVISION	3-3-65	R.A.M.
REVISION		
REVISION		

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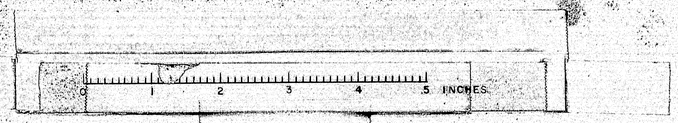
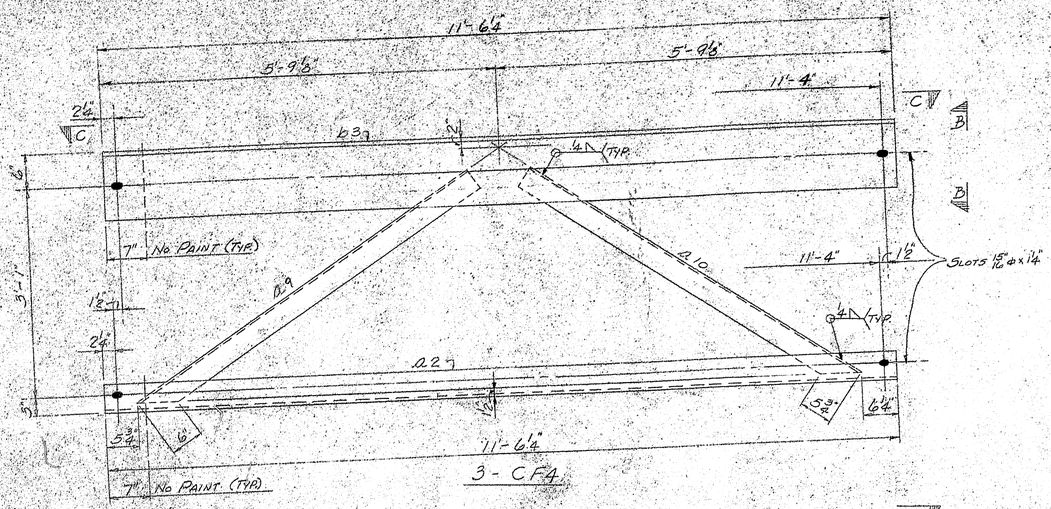
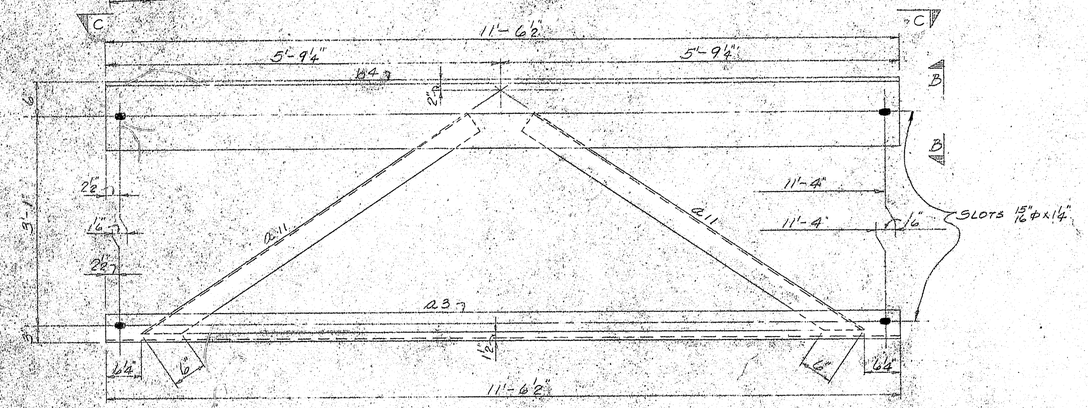
ORDER VERBAL DWG. B64-386-314

97-200

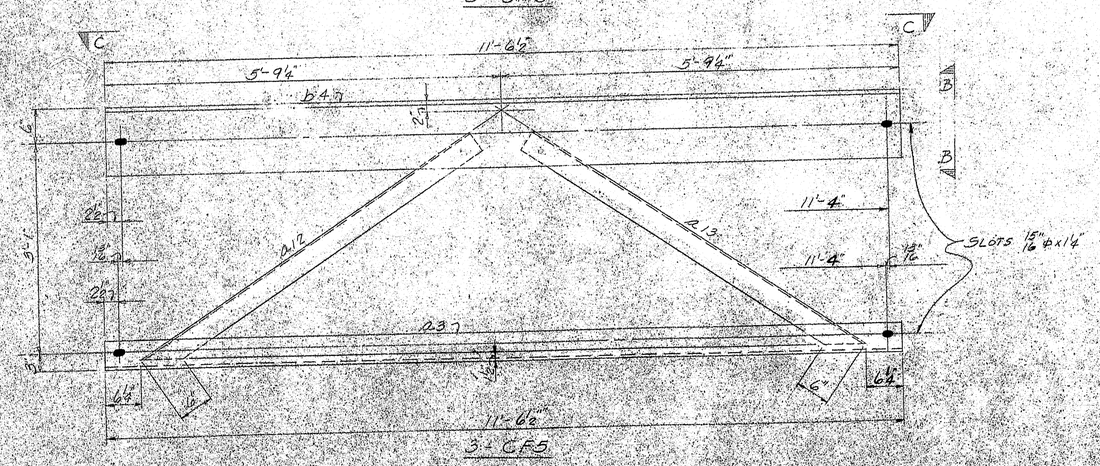




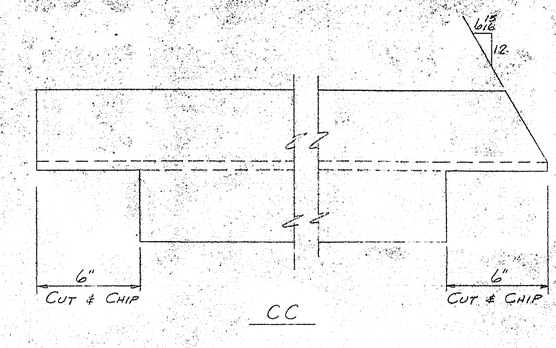
3 - CF4



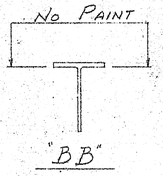
3 - CF6



3 - CF5



CC



"BB"

SHIP MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
CF4	3		CROSS FRAME			
CF5	3		Do			
CF6	3		Do			
	3	b3	ST12WF42	11	6¼	A36
	6	b4	Do	11	6½	
	3	a2	∠-5x5x⅜	11	6¼	
	6	a3	Do	11	6½	
	3	a9	∠-4x4x⅜	5	10¼	
	3	a10	Do	5	8½	
	6	a11	Do	5	9½	
	3	a12	Do	5	10	
	3	a13	Do	5	9	

BILL OF MATERIAL — DWG B64-386-S1

SHOP CONNECTIONS: WELD - E7028 ELECTRODE
FIELD CONNECTIONS: ¾" Ø MACH. BOLT & WELD
HOLES: 15/16" Ø x 1¼ SLOTS
PAINT: STATE OF MAINE SPEC'S.

APP'D 1-5-65

CROSS FRAMES - TYPE A

PRINT ISSUE		
3	DIST.	3-12-65
2	SHC	2-12-65
1	SHC	12-8-65
5	SHOP	1-11-65
2	F.A.	12-22-64
DRAWN		12-9-64 R.A.M.
REVISION		
REVISION		
REVISION		

Bancroft & Martin Rolling Mills Company
Brewer, Maine

SANDY RIVER BRIDGE
STRONG MAINE

CUSTOMER ELLIS G. SNODGRASS, INC.
DESIGNER MAINE STATE HIGHWAY COMM.
ORDER VERBAL DWG B64-386-S1

94-197