NOTE "A"
WHILE DAM & SHEAR TONGUE ARE SHOP ASSEMBLED WITH TEETH CENTERED. DRILL HOLES FROM THE SOLID OR SUB DRILL & REAM TO SHOP SIZE INDICATED

NOTE "B"
ALL STEEL SURFACES TO BE BLAST CLEANED AS PER SS PC-SP5-66, ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY- INCLUDING OPEN HOLES.

INST-16W

GENERAL NOTES

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

MAX. THICK. AT POINT OF WELDING - INCHES	MINIMUM PREHEAT AND INTERPASS TEMP. - DEG. F
TO 3/4" INCL.	50 DEG.
OVER 3/4" TO 1 1/2"	70 DEG.
OVER 1 1/2" TO 2 1/2"	150 DEG.
OVER 2 1/2"	225 DEG.

A1 USE LOW HYDROGEN RACO E6018G ELECTRODES & RACO B1S MATARI-R WIRE WITH LINDE 80 FLUX

REQUIRED LIST

QTY	SHIPPING MARK	DESCRIPTION	REMARKS
ONE	ED5	EXPANSION DAM 57x19x58-3	
ONE	SH41	SHIMS	
2	SH42		
ONE	SH43		
2	SH44		
ONE	SH45		
2	SH46		
ONE	SH47		
2	SH48		
ONE	SH49		
2	SH50		
ONE	SH51		
2	SH52		
ONE	SH53		
2	SH54		
ONE	SH55		
2	SH56		
ONE	SH57		
2	SH58		
ONE	SH59		
2	SH60		
ONE	SH61		
2	SH62		
1	SH129		
1	SH130		
1	SH131		
1	SH132		
1	SH133		
1	SH134		
1	SH135		
1	SH136		
1	SH137		
1	SH138		
1	SH139		

EXP. DAM & SHIMS

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
by Arnold Noorthy
JAN 26 1970

For location of details shown on this sheet refer to diagrams.

E4

SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
41	SH50	2	STP	8		8	5	2 15/16	
42	SH51	1	PL	8 1/16		4	5	3	
43	SH52	2	STP	8		8	5	3	
44	SH53	1	PL	8 1/16		4	5	5 7/8	
45	SH54	2	STP	8		8	5	5 7/8	
46	SH55	1	PL	8 1/16		14	5	0	
47	SH56	2	STP	8		8	5	0	
48	SH57	1	PL	8 1/16		4	5	2 5/8	
49	SH58	2	STP	8		8	5	2 5/8	
50	SH59	1	PL	8 1/16		4	5	3 3/8	
51	SH60	2	STP	8		8	5	3 3/8	
52	SH61	1	PL	8 1/16		4	4	1 15/16	
53	SH62	2	STP	8 1/16		8	4	1 15/16	
54	SH129	1	PL	B1/16		1/2	5	11 3/4	
55	SH130	1	PL	B1/16		1/2	5	2 5/8	
56	SH131	1	PL	B1/16		1/2	5	5 5/8	
57	SH132	1	PL	B1/16		1/2	5	0 1/16	
58	SH133	1	PL	B1/16		1/2	5	2 15/16	
59	SH134	1	PL	B1/16		1/2	5	3	
60	SH135	1	PL	B1/16		1/2	5	5 3/4	
61	SH136	1	PL	B1/16		1/2	5	0	
62	SH137	1	PL	B1/16		1/2	5	2 5/8	
63	SH138	1	PL	B1/16		1/2	5	3 3/8	
64	SH139	1	PL	B1/16		1/2	4	1 15/16	

MILL ORDER

LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
		E	

MATERIAL
RIVETS OR BOLTS
OPEN HOLES
A325 FIELD BOLTS
SHOP CONTACT SURFACES
PAINT

FIELD NOTES SEE DWGS

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

NO.	DATE	INIT.	REVISION
A1	11-14	K.L.D.	

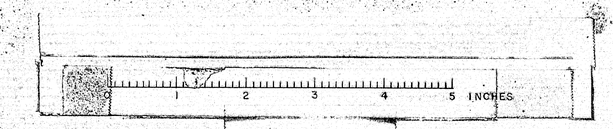
CUSTOMER: MAINE STATE HIGHWAY COMMISSION
STRUCTURE: PISCATAQUA RIVER BRIDGE
PROJECT NO I-95-1-22-16
CONTRACT NO 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL

BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

POTTSTOWN DRAFTING ROOM LEETSDALE WORKS
MADE BY DRL DATE 9/25/69 IN CHARGE BK BENTLEY
CHECKED BY RLP DATE 9-12-69 SHOP NO. 1
CONTRACT CE6289-080 DRAWING NO. 5A

33043 (Rev.D 7-63)

106-50



ANCH. STRAP SPCG.
SHIPPING ℄ SPCG.
ANCH. STRAP SPCG.
TOOTH SPCG.

PLAN VIEW (DEVELOPED)

MATCH LINE

SECTION-Ⓐ

SECTION-Ⓑ

GUTTER SPCG. HORIZ.
HORIZ.

SECTION-Ⓒ (DEVELOPED)

DETAIL OF PR- PM

DETAIL OF PR- PN

DETAIL OF PR'S- PS, PT

GUTTER WELD (TYP.)

EXPANSION DAM-EDG

SHIMS - SH85 to SH106 INCL. & SH108, SH109

WORK THIS DWG WITH DWG. # GA

For location of details shown on this sheet refer to diagrams.

E5

APPROVED:- HARDESTY & HANOVER CONSULTING ENGINEERS 101 PARK AVE. NEW YORK 17, N.Y.

BY Anatol Moorthy JAN 5 1970

CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
PROJECT No. I-95-1(22)-16
STRUCTURE CONTRACT No. 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL

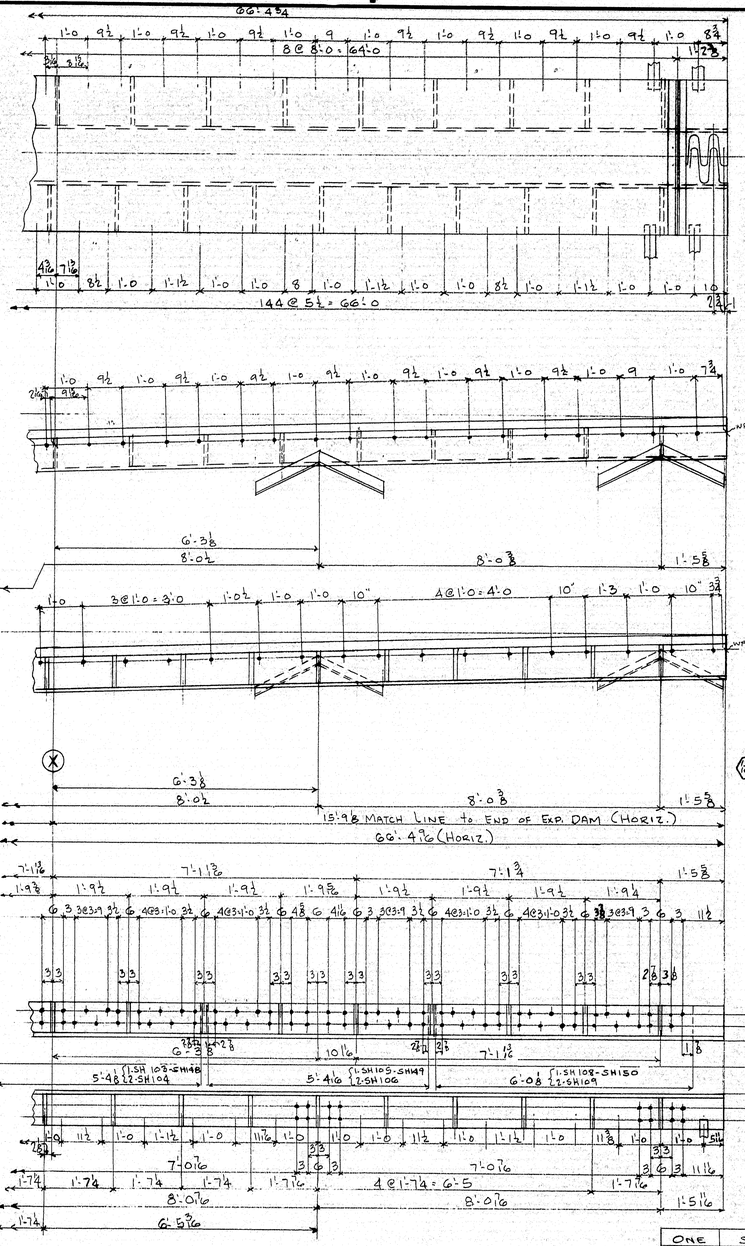
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

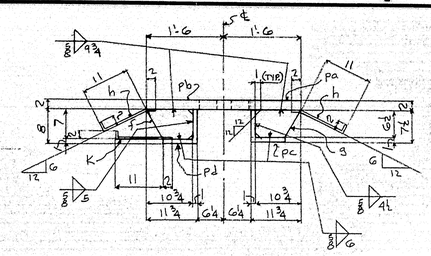
POTTSTOWN DRAFTING ROOM LEETSDALE WORKS
MADE BY E.T.W. DATE IN CHARGE B.R.B.
CHECKED BY R.L.P. DATE 9-15-69 SHOP NO. 1
CONTRACT CE-6249-080 DRAWING NO. 6

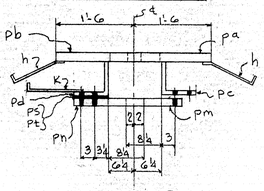
REVISION NO. 5-13 DATE ELT INIT.

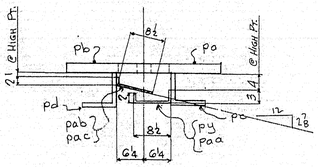
SUBMITTAL 1 2 3 4 5 6 7 8 9 0
DATE

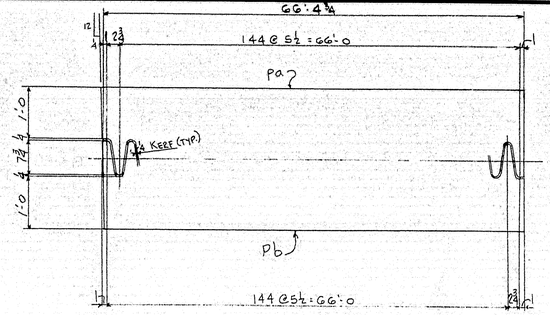
106-51

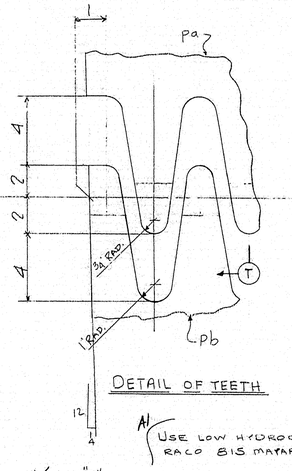


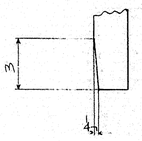












A1 USE LOW HYDROGEN RACO E8018G ELECTRODES & RACO B1S MAYARI-R WIRE WITH LINDE 80 FLUX.

NOTE "B"

ALL STEEL SURFACES TO BE BLAST CLEANED AS PER SS PC-SPS-66. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY - INCLUDING OPEN HOLES

GENERAL NOTES

NOTE "A"

WHILE DAM & SHEAR TONGUE ARE SHOP ASSEMBLED WITH TEETH CENTERED, DRILL HOLES FROM SOLID OR SUB-DRILL & REAM TO SHOP SIZE INDICATED.

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY Arnold Moorthy
JAN 26 1970

MAX. THICK. AT POINT OF WELDING - INCHES	MINIMUM PREHEAT AND INTERPASS TEMP. - DEG. F
TO 3/4" INCL.	50 DEG.
OVER 3/4" TO 1 1/2"	70 DEG.
OVER 1 1/2" TO 2 1/2"	150 DEG.
OVER 2 1/2"	225 DEG.

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

A1

For location of details shown on this sheet refer to diagrams.

INSTALLMENT "16E"

REQUIRED LIST

QTY.	SHIPPING MARK	DESCRIPTION	REMARKS
ONE	EDG	EXPANSION DAM (5/8 x 19 x 66'-6)	
ONE	SH85	SHIM	
2	SH86	do	
ONE	SH87	do	
2	SH88	do	
ONE	SH89	do	
2	SH90	do	
ONE	SH91	do	
2	SH92	do	
ONE	SH93	do	
2	SH94	do	
ONE	SH95	do	
2	SH96	do	
ONE	SH97	do	
2	SH98	do	
ONE	SH99	do	
2	SH100	do	
ONE	SH101	do	
2	SH102	do	
ONE	SH103	do	
2	SH104	do	
ONE	SH105	do	
2	SH106	do	
ONE	SH108	do	
2	SH109	do	
		(CONTINUED)	

ONE	SH110	do	
ONE	SH111	do	
ONE	SH112	do	
ONE	SH113	do	
ONE	SH114	do	
ONE	SH115	do	
ONE	SH116	do	
ONE	SH117	do	
ONE	SH118	do	
ONE	SH119	do	
ONE	SH150	do	

SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS	MILL ORDER LENGTH FT.	MILL ORDER LENGTH IN.	MILL ORDER ITEM PAGE	MILL ORDER ITEM LINE
1	ONE - EXPANSION DAM - EDG												
2	P1a	1	PL	20		2	66	5 5/8	C.F. 35/64 x 2 (WWW)	66	8	201	01
3	P1b	1	PL	20		2	66	4 3/4					
4	P1c	1	L	8	7 1/2	1	66	5 15/16	C.F. 5/8 x 8 x 1	66	9	201	07
5	P1d	1	L	8	8	1	66	5 1/4		66	9	201	07
6	f	41	BR	7		3/4	0	10 3/4		30	0	202	08
7	g	37	BR	6 1/2		3/4	0	10 3/4	C.F. 7/8 x 7/8 x	30	0	202	08
8	h	141	BR	2 1/2		3/8	1	3	(BENT)	30	0	202	09
9	K	57	BR	2 1/2		3/8	1	3	(BENT)	30	0	202	09
10	P1m	1	PL	12 3/4		2	1	9		25	3	201	21
11	P1n	1	PL	12		2	1	4 1/4	C.F. 12 3/4 x 2 x	25	3	201	21
12	P1s	1	PL	8 1/16		1/4	1	0				E	
13	P1t	2	STP	8		3/8	1	0				E	
14	pad	1	PL	8 1/16		1/2	1	0				E	
15	t	9	L	3	2	1/4	3	0				E	
16	w	9	L	3	2	1/4	3	0				E	
17													
18		18	MB	7/8 ø			0	1 1/2	SHIPPING BOLTS				
19		2	MB	3/4 ø			0	5	do do				
20		2	MB	5/8 ø			0	3 1/4	do do				
21													
22	P4	9	PL	12 3/4		3/8	1	9 5/8	ABT. (BENT)			E	
23	P1aa	9	PL	12 3/4		3/8	1	9 1/4	ABT. (BENT)				
24	P1ab	9	PL	10		3/8	1	10 3/8	ABT. (BENT)				
25	P1ac	9	PL	10		3/8	1	8 3/4	ABT. (BENT)				
26													
27	SDS	1	WD			3/8	18	0					
28	FW	1	WD			5/16	6	0					
29	FW	1	WD			5/8	119	3					
30	TGOOS	1	WD			1	132	9 1/2					
31	FW	1	WD			5/8	266	8					
32													
33													
34				LOOSE MATERIAL									
35	SH85	1	PL	8 1/16		1/4	6	0 1/16				E	
36	SH86	2	STP	8		1/8	6	0 1/16					
37	SH87	1	PL	8 1/16		1/4	5	4					
38	SH88	2	STP	8		1/8	5	4					
39	SH89	1	PL	8 1/16		1/4	5	4 15/16					
40	SH90	2	STP	8		1/8	5	4 15/16					
41	SH91	1	PL	8 1/16		1/4	5	3 1/16					
42	SH92	2	STP	8		1/8	5	3 1/16					
43	SH93	1	PL	8 1/16		1/4	5	4					
44	SH94	2	STP	8		1/8	5	4					
45	SH95	1	PL	8 1/16		1/4	5	4					
46	SH96	2	STP	8		1/8	5	4					
47	SH97	1	PL	8 1/16		1/4	5	3					
48	SH98	2	STP	8		1/8	5	3					
49	SH99	1	PL	8 1/16		1/4	5	4 1/16					
50	SH100	2	STP	8		1/8	5	4 1/16					
51	SH101	1	PL	8 1/16		1/4	5	4 3/16					
52	SH102	2	STP	8		1/8	5	4 3/16					
53	SH103	1	PL	8 1/16		1/4	5	4 1/8					
54	SH104	2	STP	8		1/8	5	4 1/8					
55	SH105	1	PL	8 1/16		1/4	5	4 1/16					
56	SH106	2	STP	8		1/8	5	4 1/16					
57	SH108	1	PL	8 1/16		1/4	6	0 1/8					
58	SH109	2	STP	8		1/8	6	0 1/8					
59	SH140	1	PL	8 1/16		1/2	6	0 1/16					
60	SH141	1	PL	8 1/16		1/2	5	8					
61	SH142	1	PL	8 1/16		1/2	5	5 1/16					
62	SH143	1	PL	8 1/16		1/2	5	4 1/4					
63	SH144	1	PL	8 1/16		1/2	5	4 1/4					
64	SH145	1	PL	8 1/16		1/2	5	3 7/8					
65	SH146	1	PL	8 1/16		1/2	5	4 1/16					
66	SH147	1	PL	8 1/16		1/2	5	4 7/16					
67	SH148	1	PL	8 1/16		1/2	5	4 1/2					
68	SH149	1	PL	8 1/16		1/2	5	4 1/16					
69	SH150	1	PL	8 1/16		1/2	6	0 1/8					
70	SH161A	1	PL	8 1/16		1/2	5	4 9/16					

D2

MATERIAL: A36 / A242 - MAYARI R - PREFIX "P"
BOLTS - AS NOTED
OPEN HOLES - 1 1/16 ø U.N.
A325 FIELD BOLTS - 7/8 ø GALV.
SHOP CONTACT SURFACES: PAINTED EXCEPT WELDED SURFACE
WELDING - AS NOTED
MILLING - AS NOTED
REAMING - AS NOTED
PAINT - 1 COAT ZINC RICH EPOXY PAINT INCLUDING ALL OPEN HOLES SEE NOTE "B"

NO.	DATE	REVISION
0		
9		
8		
7		
6		
5		
4		
3		
** 2	5-13	1/16 RLP 1/8 RLP
A1	11-19	
1		

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

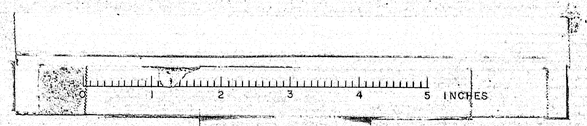
EXPANSION DAM - EDG

CUSTOMER: MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
PROJECT NO. I-95-1 (22) 16
STRUCTURE: CONT. NO. 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL

BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM LEETSDALE WORKS
MADE BY E.T.H. DATE IN CHARGE B.K.B.
CHECKED BY R.L.P. DATE 9-15-69 SHOP NO.
CONTRACT CE-6249-000 DRAWING NO. 6A

106-52

32453 (Rev.C 4-63)



49'-8 13/16" CURB LINE to CURB LINE

49'-6 15/16"

107 @ 5 1/2" = 49'-10 1/2"

6 @ 7'-10" = 47'-0"

PLAN VIEW (DEVELOPED)

SECTION - (A)

SECTION - (B)

49'-5 15/16" - HORIZ WP to WP

SECTION - (C) (DEVELOPED)

DETAIL OF Pa - PS & Pt

DETAIL OF Pa - PM

DETAIL OF Pa - PM

GUTTER WELD (TYPICAL)

WORK THIS DWG. WITH DWG. # 7A

FOR GEN. NOTES, SEE DWG. # 7A

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE., NEW YORK 17, N.Y.
S. S. Nishimura
OCT 1 1969

For location of details shown on this sheet refer to diagrams.

MATERIAL	
RIVETS OR BOLTS	
OPEN HOLES	
A325 FIELD BOLTS	
SHOP CONTACT SURFACES	
PAINT	

REVISION										
NO.	0	9	8	7	6	5	4	3	2	1
DATE										
INIT.										

SUBMITTAL 1 2 3 4 5 6 7 8 9 0

DATE

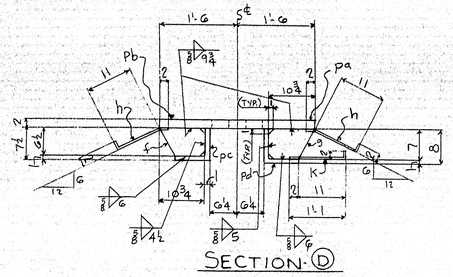
CUSTOMER: MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
PROJECT NO. F-95-1(22)-16
STRUCTURE: CONTRACT NO. 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL

BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

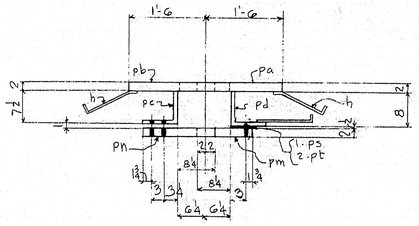
POTTSTOWN DRAFTING ROOM LEETSDALE WORKS
MADE BY E.T.H. DATE 8/6/69 IN CHARGE B.K.B.
CHECKED BY R.L.P. DATE 8/28/69 SHOP NO. 1
CONTRACT CEG249-080 DRAWING NO. 7

5443 (1-63)

106-53



SECTION · Ⓓ



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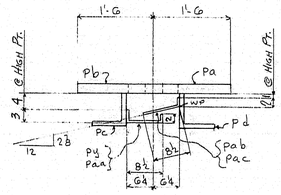
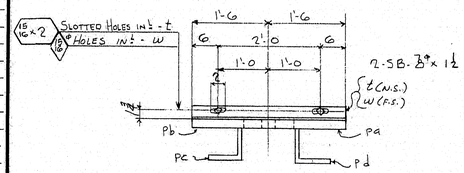
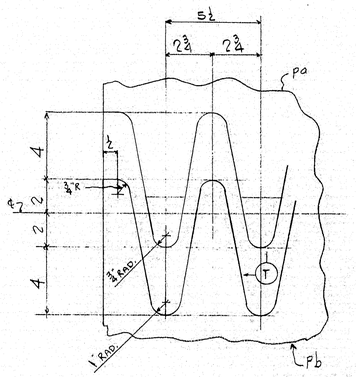


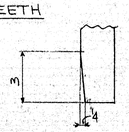
SECTION · Ⓕ



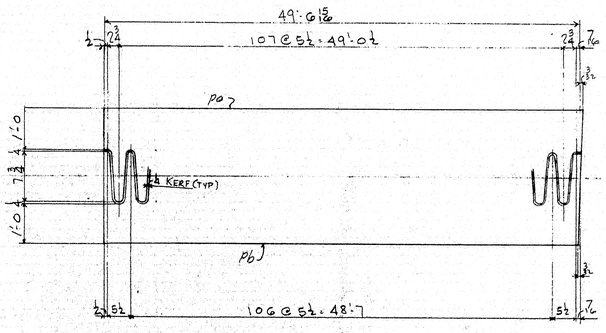
SECTION · Ⓖ



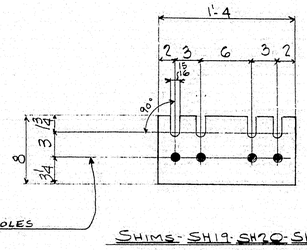
DETAIL OF TEETH



SECTION Ⓣ (TYP.)



BURNING DIAGRAM



SHIMS - SH19 - SH20 - SH119

INSTALLMENT

5E	5W	9E	9W	14E	14W	16E	16W
			1				
			1				
			2				
			1				
			2				
			1				
			2				
			1				
			2				
			1				
			2				
			1				
			2				
			1				
			2				
			1				
			2				
14	14	8	8	9	16	9	8
28	28	16	16	18	32	18	16
			1				
			1				
			1				
			1				
			1				
			1				
			1				
			1				
14	14	8	8	9	16	9	8

REQUIRED LIST

QTY.	SHIPPING MARKS	DESCRIPTION	REMARKS
ONE	ED7	EXPANSION DAM (58 × 22 × 49'-10¾)	
ONE	SH1	SHIM	
2	SH2	do	
ONE	SH3	do	
2	SH4	do	
ONE	SH5	do	
2	SH6	do	
ONE	SH7	do	
2	SH8	do	
ONE	SH9	do	
2	SH10	do	
ONE	SH11	do	
2	SH12	do	
ONE	SH13	do	
2	SH14	do	
ONE	SH15	do	
2	SH16	do	
ONE	SH17	do	
2	SH18	do	
86	SH19	do	
172	SH20	do	
ONE	SH110	do	
ONE	SH111	do	
ONE	SH112	do	
ONE	SH113	do	
ONE	SH114	do	
ONE	SH115	do	
ONE	SH116	do	
ONE	SH117	do	
ONE	SH118	do	
86	SH119	do	

GENERAL NOTES

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

MAX. THICK. AT POINT OF WELDING - INCHES	MINIMUM PREHEAT AND INTERPASS TEMP. - DEG. F
TO 3/4" INCL.	50 DEG.
OVER 3/4" TO 1 1/2"	70 DEG.
OVER 1 1/2" TO 2 1/2"	150 DEG.
OVER 2 1/2"	225 DEG.

PAY ITEM 504.711

NOTE "A" - WHILE DAM AND SHEAR TONGUE ARE ASSEMBLED WITH TEETH CENTERED DRILL HOLES FROM SOLID OR SUB-DRILL AND REAM TO SHOP SIZE INDICATED.

NOTE "B"
ALL STEEL SURFACES TO BE BLAST CLEANED AS PER SS PC-SPS-66. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY-INCLUDING OPEN HOLES.

A1 USE LOW HYDROGEN RACO 8018Q ELECTRODES & RACO 81S MAYARI-R WIRE WITH LINDE 80 FLUX.

SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR FOUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1	ONE · EXPANSION DAM · ED7								
2	Pa	1	PL	20		2	49	7⅝	WWW CF. 954×2
3	Pb	1	PL	20		2	49	7 1/16	
4	Pc	1	L	8	7½	1	49	11⅜	C.F. L 8×8×1
5	Pd	1	L	8	8	1	49	10⅝	
6	f	32	BR	6½		¾	0	10¾	7×¾
7	g	30	BR	7		¾	0	10¾	
8	h	115	BR	21		⅜	1	3	(BENT)
9	K	43	BR	21		⅜	1	3	(BENT)
10	Pm	1	PL	12¾		2	1	9	MZE
11	Pn	1	PL	12		2	1	44	MZW C.F. 12¾ × 2
12	Ps	1	BR	4½		¼	1	9	
13	Pt	2	BR	4½		⅜	1	9	
14	pad	1	BR	9½		½	1	9	
15	t	7	L	3	2	¼	3	0	SHIPPING L's
16	w	7	L	3	2	¼	3	0	SHIPPING L's
17									
18	Py	8	PL	12¾		⅜	1	9⅜	ABT. (BENT)
19	Paa	8	PL	12¾		⅜	1	9¼	ABT. (BENT)
20	Pab	8	PL	10		⅜	1	10⅜	ABT. (BENT)
21	Pac	8	PL	10		⅜	1	8¼	ABT. (BENT)
22									
23		14	MB	⅞ Ø			0	12	HAMM SHIPPING BOLTS
24		2	MB	⅞ Ø			0	5	do do
25		2	MB	5/8 Ø			0	3¾	do do
26									
27	TGODS	1	WD			1	99	3½	
28	FW	1	WD			1/16	4	8	
29	FW	1	WD			5/16	98	0	
30									
31	FW	1	WD			5/8	211	9	
32	SDS	1	WD			⅜	16	0	
33			LOOSE MAT'L						
34	SH1	1	PL	8 1/16		¼	5	9 1/16	
35	SH2	2	STP	8		⅜	5	9 1/16	
36	SH3	1	PL	8 1/16		¼	5	6 33/64	
37	SH4	2	STP	8		⅜	5	6 33/64	
38	SH5	1	PL	8 1/16		¼	5	9	
39	SH6	2	STP	8		⅜	5	9	
40	SH7	1	PL	8 1/16		¼	5	3 33/64	
41	SH8	2	STP	8		⅜	5	3 33/64	
42	SH9	1	PL	8 1/16		¼	5	8 15/64	
43	SH10	2	STP	8		⅜	5	8 15/64	
44	SH11	1	PL	8 1/16		¼	5	5 3/4	
45	SH12	2	STP	8		⅜	5	5 3/4	
46	SH13	1	PL	8 1/16		¼	5	4	
47	SH14	2	STP	8		⅜	5	4	
48	SH15	1	PL	8 1/16		¼	5	3 5/16	
49	SH16	2	STP	8		⅜	5	3 5/16	
50	SH17	1	PL	8 1/16		¼	4	5 15/32	
51	SH18	2	STP	8		⅜	4	5 15/32	
52	SH19	86	PL	8 1/16		1/4	1	4	
53	SH20	172	STP	8		⅜	1	4	
54	SH110	1	PL	8 1/16		½	5	9 1/16	
55	SH111	1	PL	8 1/16		½	5	6 33/64	
56	SH112	1	PL	8 1/16		½	5	9	
57	SH113	1	PL	8 1/16		½	5	3 5/8	
58	SH114	1	PL	8 1/16		½	5	8 15/64	
59	SH115	1	PL	8 1/16		½	5	5 3/4	
60	SH116	1	PL	8 1/16		½	5	4	
61	SH117	1	PL	8 1/16		½	5	3 5/16	
62	SH118	1	PL	8 1/16		½	4	5 15/32	
63	SH119	86	PL	8 1/16		½	1	4	

MILL ORDER

LINE	LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
1				
2	49	11½	201	05
3				
4	50	0½	201	11
5	50	0½	201	11
6	30	0	202	08
7				
8	30	0	202	08
9	30	0	202	09
10	30	0	202	09
11	25	3	201	21
12	25	3	201	21
13			E	
14			E	
15			E	
16			E	
17				
18			E	
19			E	
20			E	
21			E	
22				
23				
24			AM222	
25				
26				
27				
28				
29				
30				
31				
32				
33				
34			E	
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53			E	
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				

	a	b	c
a			
b			
c			
d			
f			
g			
h			
k			
m			
n			
p			
s			
t			
w			
y			

For location of details shown on this sheet refer to diagrams.

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
By Arnold Novitsky
JAN 26 1970

MATERIAL: A36 / A242 - MAYARI-R - PREFIX "P"
RIVETS OR BOLTS - NONE
OPEN HOLES - 1⅛ Ø U.N.
A325 FIELD BOLTS - ⅞" - GALV.
SHOP CONTACT SURFACES - NOT PAINTED (UM)
WELDING - AS NOTED
MILLING - AS NOTED
REAMING - AS NOTED
PAINT - 1 COAT ZINC RICH EPOXY PAINT INCLUDING ALL OPEN HOLES
SEE NOTE "B"

MK. NO.	DATE	INIT.	REVISION
A1	1/26/70	RLC	

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

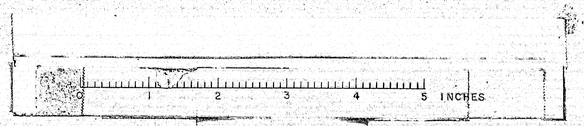
EXPANSION DAM - ED7

CUSTOMER: MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
PROJECT NO. 95-1(22)-16
STRUCTURE: CONTRACT NO. 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL

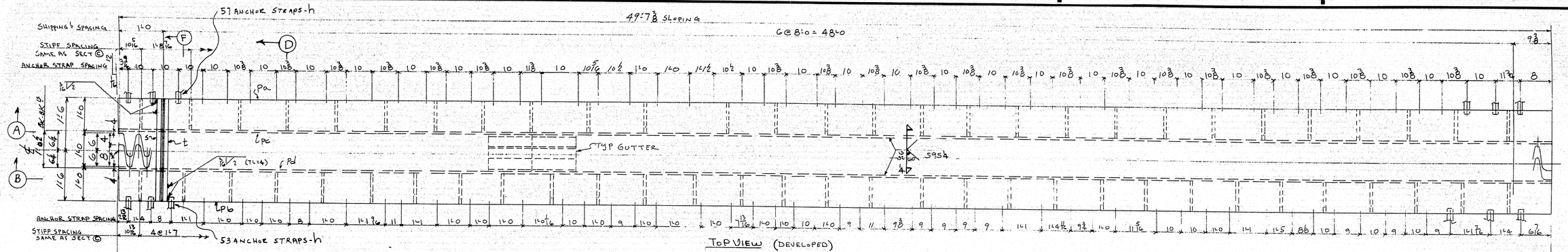
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

POTTSTOWN DRAFTING ROOM LEETSDALE WORKS
MADE BY E.T.H. DATE 8/6/69 IN CHARGE B.K.B.
CHECKED BY R.L.C. DATE 8/28/69 SHOP NO. 1
CONTRACT CE G249-080 DRAWING NO. 7A

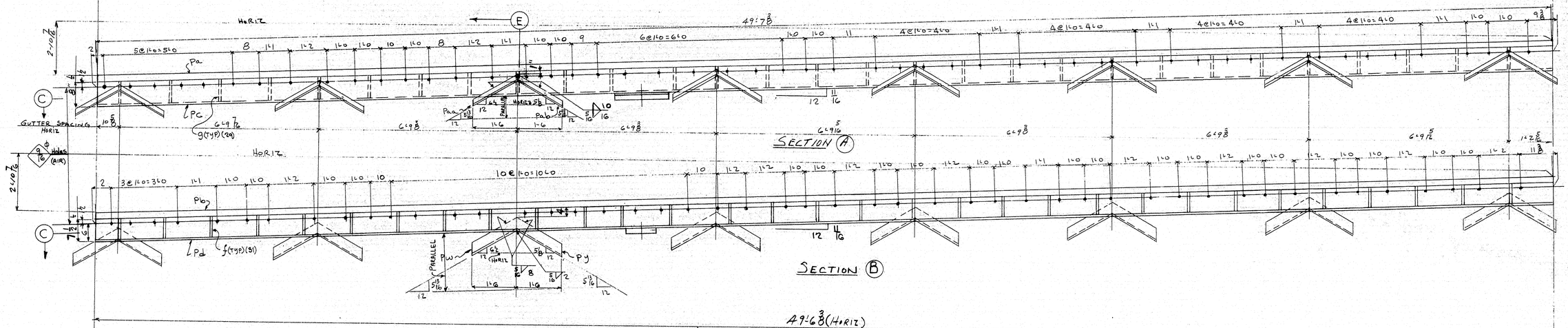
WORK THIS DWG. WITH DWG. # 7



106-54

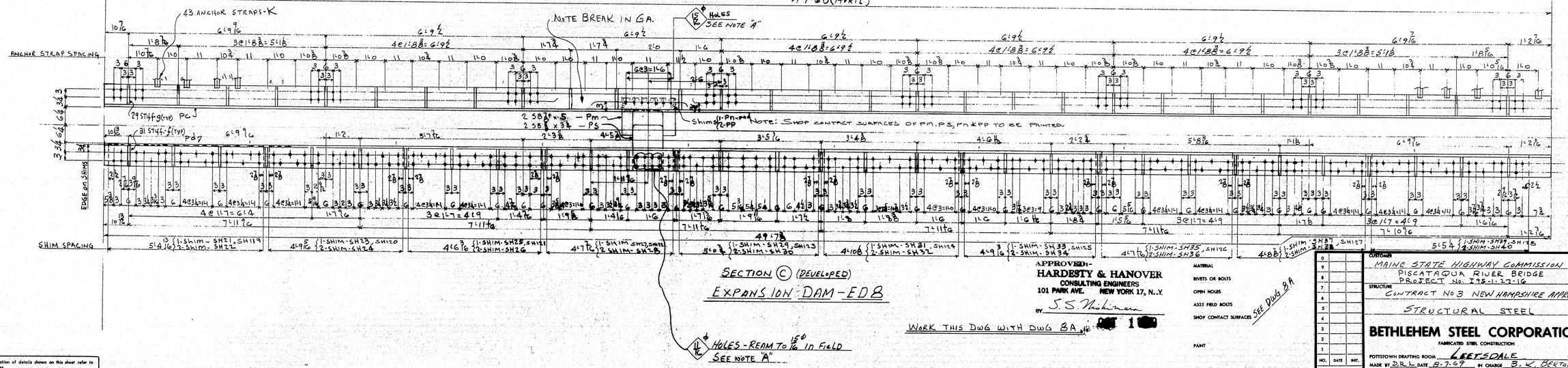


TOP VIEW (DEVELOPED)



SECTION (A)

SECTION (B)



SECTION © (DEVELOPED)

EXPANSION DAM-ED8

WORK THIS DWG WITH DWG 8A

For location of details shown on this sheet refer to diagrams.

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY J.S. Nishimura

	MATERIAL	SEE DWG 8A
	RIVETS OR BOLTS	
	OPEN HOLES	
	A325 FIELD BOLTS	
	SHOP CONTACT SURFACES	
	PAINT	

NO.	DATE	INIT.	REVISION
0			
9			
8			
7			
6			
5			
4			
3			
2			
1			

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

CUSTOMER: MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
PROJECT No. I 95-1-27-16
STRUCTURE: CONTRACT NO 3 NEW HAMPSHIRE APPROACH

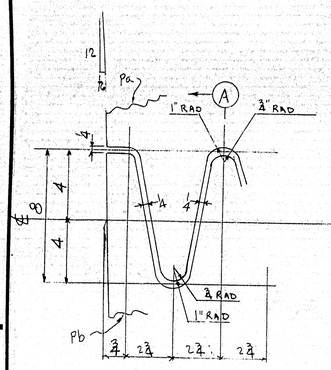
STRUCTURAL STEEL

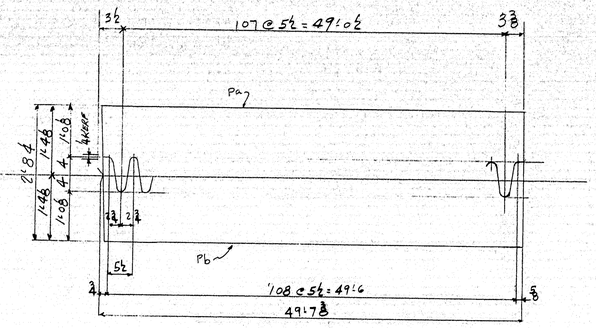
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

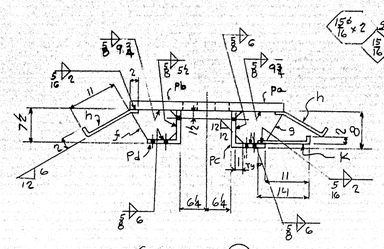
POTTSTOWN DRAFTING ROOM LEETSDALE WORKS
MADE BY D.R.L. DATE 6-7-69 IN CHARGE B. K. BERTOLET
CHECKED BY R.L.P. DATE 6-24-69 SHOP NO. 1
CONTRACT CE6249-080 DRAWING NO. 8

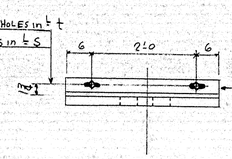
34663 (1-63)

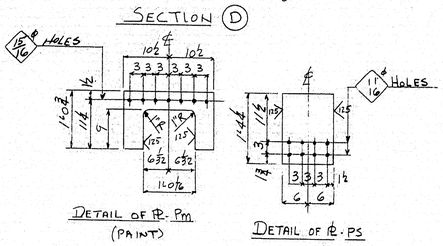
106-33

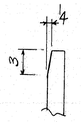


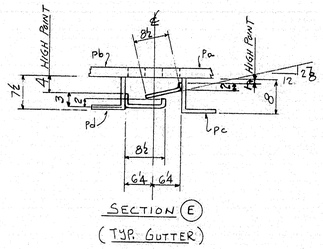


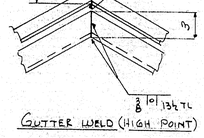


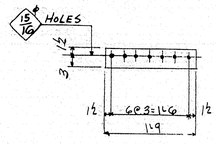












GENERAL NOTES

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

MAX. THICK. AT POINT OF WELDING - INCHES	MINIMUM PREHEAT AND INTERPASS TEMP. - DEG. F
TO 3/4" INCL.	50 DEG.
OVER 3/4" TO 1 1/2"	70 DEG.
OVER 1 1/2" TO 2 1/2"	150 DEG.
OVER 2 1/2"	225 DEG.

A2 USE LOW HYDROGEN RACO E80I8G ELECTRODES & RACO 815 MAYARI-R WIRE WITH LINDE 80 FLUX.

NOTE "A" WHILE DAM & SHEAR TONGUE ARE SHOP ASSEMBLED WITH TEETH CENTERED, DRILL HOLES FRIM SOLID OR SUB DRILL & REAM TO SHOP SIZE INDICATED.

NOTE "B"
ALL STEEL SURFACES TO BE BLAST CLEANED AS PER SS PC-SPS-66. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY - INCLUDING OPEN HOLES.

INST 9E

REQUIRED LIST

No	MARK	DESCRIPTION	REMARKS
ONE	SH165	SHIM	D1
ONE	SH120		
ONE	SH121		
ONE	SH122		
ONE	SH123		
ONE	SH124		
ONE	SH125		
ONE	SH126		
ONE	SH127		
ONE	SH128		
ONE	EDB	EXPANSION DAM STRIP x 49'7½	
ONE	SH21	SHIMS	
2	SH22		
ONE	SH23		
2	SH24		
ONE	SH25		
2	SH26		
ONE	SH27		
2	SH28		
ONE	SH29		
2	SH30		
ONE	SH31		
2	SH32		
ONE	SH33		
2	SH34		
ONE	SH35		
2	SH36		
ONE	SH37		
2	SH38		
ONE	SH39		
2	SH40		

SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS	MILL ORDER LENGTH FT.	MILL ORDER LENGTH IN.	MILL ORDER ITEM PAGE	MILL ORDER ITEM LINE
1		1	EXPANSION DAM EDB										
2	P.a	1	PL	20		2	49	7 7/16	CF 35 4x2x	49	11½	201	05
3	P.b	1	PL	20		2	49	7½					
4	P.c	1	L	8	8	1	49	7⅜		50	0½	201	11
5	P.d	1	L	8	7½	1	49	7 13/16	C.F Bx Bx1	50	0½	201	11
6	f	31	BR	6½		⅜	0	10⅜	7x ⅜ x	30	0	202	08
7	g	29	BR	7		⅜	0	10⅜	CF 12	30	0	202	08
8	h	110	BR	24		⅜	1	3	BENT	30	0	202	09
9	K	43	BR	9½		⅜	1	3	BENT	30	0	202	09
10	P.m	1	PL	12⅜		2	1	9	M2E	25	3	201	21
11	P.s	1	PL	12		2	1	4 4	M2W CF 12 x 2	25	3	201	21
12	P.n	1	BR	4½		4	1	9				E	
13	P.p	2	BR	4½		⅜	1	9				E	
14	S	7	L	3	2	4	3	0	SHIPPING LS			E	
15	t	7	L	3	2	4	3	0	SHIPPING LS			E	
16	P.w	8	PL	12⅜		⅜	1	9⅜	abt BENT			E	
17	P.y	8	PL	12⅜		⅜	1	9 4	abt BENT			E	
18	P.aa	8	PL	10		⅜	1	10⅜	abt BENT			E	
19	P.ab	8	PL	10		⅜	1	5⅞	abt BENT			E	
20	p.ad	1	BR	4½		1/2	1	9				E	
21	FW	1	WD			5/16	99	2 3/4					
22	TGDDB	1	WD			1	99	2⅞					
23	SD	1	WD			⅜	16	0					
24	FWD	1	WD			3/16	4	8					
25	FWD	1	WD			⅝	204	11					
26													
27		14	MB	⅞			0	1½	H.H. H.N. SHIPPING BOLTS			AMOR	
28		2	MB	⅞			0	5	" "				
29		2	MB	⅝			0	3⅜	" "				
30													
31													
32													
33				LOOSE MATERIAL									
34	SH21	1	PL	8⅞		4	5	4 13/16				E	
35	SH22	2	STP	E		⅝	5	4 13/16					
36	SH23	1	PL	8⅞		4	4	9 7/16					
37	SH24	2	STP	E		⅝	4	9 7/16					
38	SH25	1	PL	8⅞		4	4	6 7/16					
39	SH26	2	STP	E		⅝	4	6 7/16					
40	SH27	1	PL	8⅞		4	4	7 7/16					
41	SH28	2	STP	8		⅝	4	7 7/16					
42	SH29	1	PL	8⅞		4	5	0⅞					
43	SH30	2	STP	8		⅝	5	0⅞					
44	SH31	1	PL	8⅞		4	4	10⅜					
45	SH32	2	STP	E		⅝	4	10⅜					
46	SH33	1	PL	8⅞		4	4	9 7/16					
47	SH34	2	STP	E		⅝	4	9 7/16					
48	SH35	1	PL	8⅞		4	4	7 7/16					
49	SH36	2	STP	8		⅝	4	7 7/16					
50	SH37	1	PL	8⅞		4	4	8⅜					
51	SH38	2	STP	E		⅝	4	8⅜					
52	SH39	1	PL	8⅞		4	5	5⅛					
53	SH40	2	STP	E		⅝	5	5⅛					
54	SH165	1	PL	8⅛		½	5	4 13/16					
55	SH120	1	PL	8⅛		½	4	9 7/16					
56	SH121	1	PL	8⅛		½	4	6 7/16					
57	SH122	1	PL	8⅛		½	4	7 7/16					
58	SH123	1	PL	8⅛		½	5	0⅞					
59	SH124	1	PL	8⅛		½	4	10⅜					
60	SH125	1	PL	8⅛		½	4	9 7/16					
61	SH126	1	PL	8⅛		½	4	7 7/16					
62	SH127	1	PL	8⅛		½	4	8⅜					
63	SH128	1	PL	8⅛		½	5	5⅛					
64													
65													

EXPANSION DAM

MATERIAL A36 STEEL / A242-MAYARI-R-PREFIX-P
BOLTS AS NOTED
OPEN HOLES 13/16 unless NOTED
A325 FIELD BOLTS ⅞
SHOP CONTACT SURFACES NOT PAINTED (UNLESS NOTED)
MILL - NONE
REAM - AS NOTED
PAINT ONE COAT ZINC RICH EPOXY PAINT
WELDING - AS NOTED SEE NOTE "B"

NO.	DATE	INT.	REVISION
A2	11/18	KLP	
B1	11/11	KLP	

SUBMITTAL 1 2 3 4 5 6 7 8 9 0
DATE

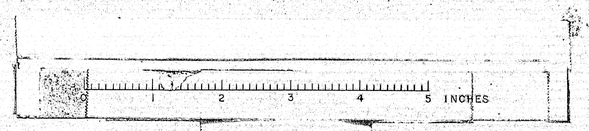
CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE PROJECT NO. I 95.1-22-16
STRUCTURE CONTRACT NO 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL

BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
shown to last to
POTTSTOWN DRAFTING ROOM LEETSDALE WORKS
MADE BY DKL DATE 6/8/69 IN CHARGE B.K. BRODLET
CHECKED BY KLP DATE 8-29-69 SHOP NO. 1
CONTRACT CE 6249-080 DRAWING NO. 8A

For location of details shown on this sheet refer to diagrams.

	a	b	c
a			
b			
c			
d			
f			
g			
h			
k			
m			
n			
p			
s			
t			
w			
y			

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY Arnold Dorothy
JAN 26 1970



106-56

PLAN VIEW (DEVELOPED)

SECTION-A

SECTION-B

SECTION-C (DEVELOPED)

DETAIL OF PB- PS & PT

DETAIL OF PB- PM

DETAIL OF PB- PN

GUTTER WELD (TYPICAL)

EXPANSION DAM-ED9

SHIMS - SH63 THRU SH84

WORK THIS DWG. WITH DWG # 9A

FOR GEN NOTES SEE DWG # 9A

MATCH LINE-X

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CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.

For location of details shown on this sheet refer to diagrams.

	a	b	c
a			
b			
c			
d			
f			
g			
h			
k			
l			
n			
p			
s			
t			
w			
y			

MATERIAL										
RIVETS OR BOLTS										
OPEN HOLES										
A325 FIELD BOLTS										
SHOP CONTACT SURFACES										
PAINT										
SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

NO.	DATE	INIT.
REVISION		

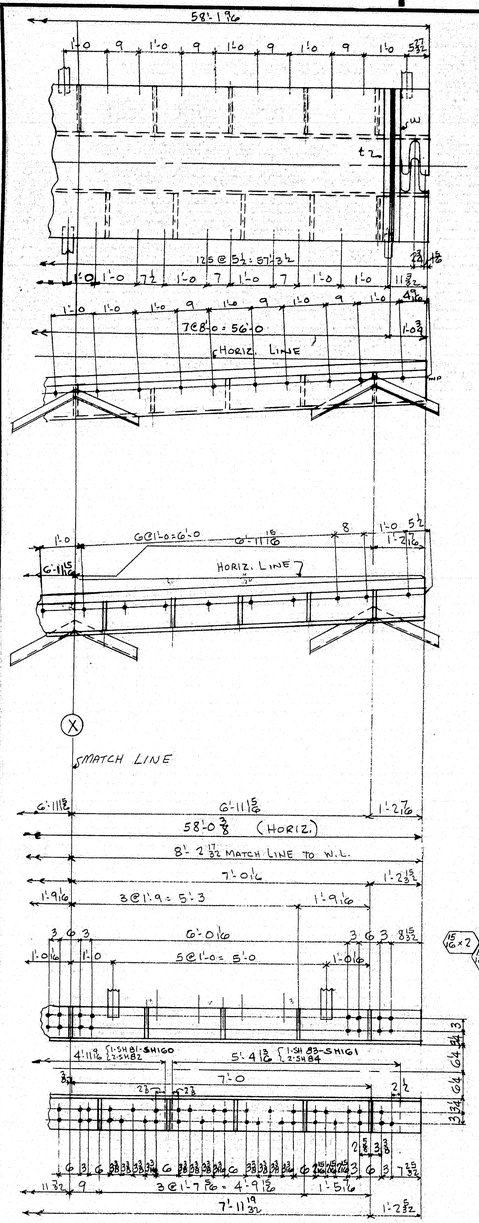
CUSTOMER: MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
PROJECT No. I-95-1(23)-16
STRUCTURE: CONTRACT No. 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL

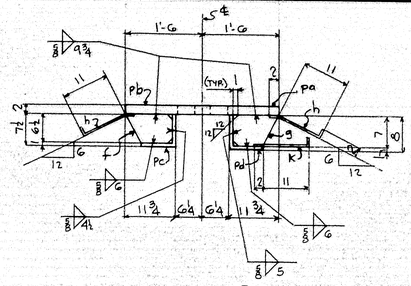
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

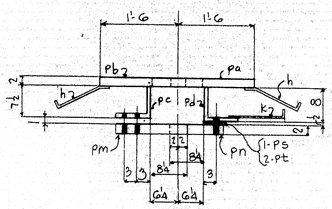
POTTSTOWN DRAFTING ROOM LEETSDALE WORKS
MADE BY E.T.W. DATE 5/11/69 IN CHARGE D.K.B.
CHECKED BY R.L.P. DATE 9-10-69 SHOP NO. 1
CONTRACT CE-6249-080 DRAWING NO. 9

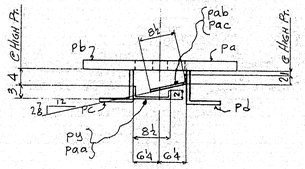
36663 (1-63)

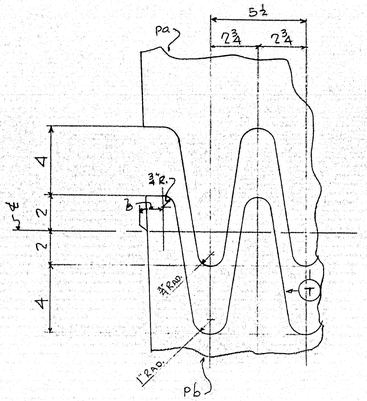
106-57

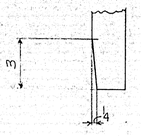


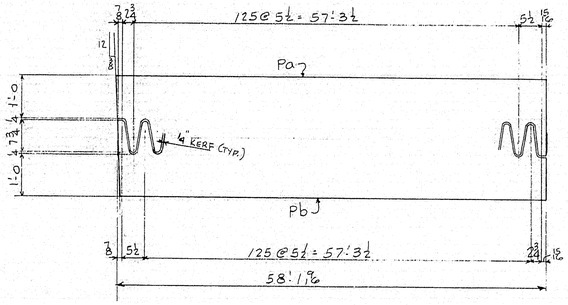












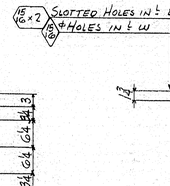
BURNING DIAGRAM

NOTE "A"

WHILE DAM & SHEAR TONGUE ARE SHOP ASSEMBLED WITH TEETH CENTERED, DRILL 1 1/8" HOLES FROM SOLID OR SUB DRILL & REAM TO 1 1/8"

PAY ITEM - 504.711

INSTALLMENT - "14E"



GENERAL NOTES

USE LOW HYDROGEN RACO E8018G ELECTRODES & RACO B18 MAYARI-R WIRE WITH LINDE 80 FLUX.

A1

NOTE "B"

ALL STEEL SURFACES TO BE BLAST CLEANED AS PER SSPC-SP5-63. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY - INCLUDING OPEN HOLES.

MAX. THICK. AT POINT OF WELDING - INCHES	MINIMUM PREHEAT AND INTERPASS TEMP. - DEG. F
TO 3/4" INCL.	50 DEG.
OVER 3/4" TO 1 1/2"	70 DEG.
OVER 1 1/2" TO 2 1/2"	150 DEG.
OVER 2 1/2"	225 DEG.

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

A1

ONE	SH152	do
ONE	SH153	do
ONE	SH154	do
ONE	SH155	do
ONE	SH156	do
ONE	SH157	do
ONE	SH158	do
ONE	SH159	do
ONE	SH160	do
ONE	SH161	do
ONE	SH151	do

For location of details shown on this sheet refer to diagrams.

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
By Arnold Moody
JAN 26

REQUIRED LIST

QTY.	SHIPPING MARK	DESCRIPTION	REMARKS
ONE	ED9	EXPANSION DAM (58	x 22 x 58'-2)
ONE	SH63	SHIM	
2	SH64	do	
ONE	SH65	do	
2	SH66	do	
ONE	SH67	do	
2	SH68	do	
ONE	SH69	do	
2	SH70	do	
ONE	SH71	do	
2	SH72	do	
ONE	SH73	do	
2	SH74	do	
ONE	SH75	do	
2	SH76	do	
ONE	SH77	do	
2	SH78	do	
ONE	SH79	do	
2	SH80	do	
ONE	SH81	do	
2	SH82	do	
ONE	SH83	do	
2	SH84	do	

(CONTINUED)

SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR FOOMOS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1	ONE-EXPANSION DAM-ED9								
2	P:a	1	PL	20		2	58	2 1/8	C.P.35 1/4 x 2
3	P:b	1	PL	20		2	58	1 3/8	
4	P:c	1	L	8	7 1/2	1	58	1 3/16	C.P.8 x 8 x 1
5	P:d	1	L	8	8	1	58	2 7/16	
6	f	36	BR	G 1/2		3/4	0	10 3/4	7 x 3/4 x
7	g	34	BR	7		3/4	0	10 3/4	
8	h	129	BR	2 1/2		3/8	1	3	(BENT)
9	K	48	BR	2 1/2		3/8	1	3	(BENT)
10	P:m	1	PL	12 3/4		2	1	9	(M2E)
11	P:n	1	PL	12		2	1	4 3/4	(M2W) C.F. 12 3/4 x 2
12	P:s	1	BR	4 1/2		1/4	1	9	
13	P:t	2	BR	4 1/2		3/8	1	9	
14	Pad	1	BR	9 1/2		1/2	1	9	
15	t	8	L	3	2	1/4	3	0	SHIPPING L's
16	w	8	L	3	2	1/4	3	0	SHIPPING L's
17	P:y	9	PL	12 3/4		3/8	1	9 5/8	ABT. (BENT)
18	P:aa	9	PL	12 3/4		3/8	1	9 1/4	ABT. (BENT)
19	P:ab	9	PL	10		3/8	1	10 3/8	ABT. (BENT)
20	P:ac	9	PL	10		3/8	1	8 3/4	ABT. (BENT)
21									
22		16	MB	7/8 ϕ			0	1 1/2	HAHN SHIPPING BOLTS
23		2	MB	7/8 ϕ			0	5	do do
24		2	MB	5/8			0	3 3/4	do do
25									
26	SDS	1	WD			3/8	18	0	
27	TGODS	1	WD			1	116	3 4	
28	FW	1	WD			7/16	5	4	
29	FW	1	WD			5/8	110	0	
30									
31	FW	1	WD			3/8	239	1	
32									
33									
34									
35	LOOSE MATERIAL								
36	SH63	1	PL	8 1/16		1/4	5	6 5/8	
37	SH64	2	STP	8		3/8	5	6 3/8	
38	SH65	1	PL	8 1/16		1/4	4	9 3/8	
39	SH66	2	STP	8		3/8	4	9 3/8	
40	SH67	1	PL	8 1/16		1/4	4	9 3/4	
41	SH68	2	STP	8		3/8	4	9 3/4	
42	SH69	1	PL	8 1/16		1/4	5	11 33/64	
43	SH70	2	STP	8		1/8	5	11 33/64	
44	SH71	1	PL	8 1/16		1/4	5	11 1/16	
45	SH72	2	STP	8		3/8	5	11 1/16	
46	SH73	1	PL	8 1/16		1/4	4	9 33/64	
47	SH74	2	STP	8		3/8	4	9 33/64	
48	SH75	1	PL	8 1/16		1/4	5	2 3/8	
49	SH76	2	STP	8		3/8	5	2 3/8	
50	SH77	1	PL	8 1/16		1/4	5	6 7/16	
51	SH78	2	STP	8		3/8	5	6 7/16	
52	SH79	1	PL	8 1/16		1/4	5	0 1/2	
53	SH80	2	STP	8		3/8	5	0 1/2	
54	SH81	1	PL	8 1/16		1/4	4	11 15/16	
55	SH82	2	STP	8		3/8	4	11 15/16	
56	SH83	1	PL	8 1/16		1/4	5	4 13/16	
57	SH84	2	STP	8		3/8	5	4 13/16	
58	SH151	1	PL	8 1/16		1/2	5	6 1/8	
59	SH152	1	PL	8 1/16		1/2	4	9 3/8	
60	SH153	1	PL	8 1/16		1/2	4	9 3/8	
61	SH154	1	PL	8 1/16		1/2	5	11 33/64	
62	SH155	1	PL	8 1/16		1/2	5	11 1/16	
63	SH156	1	PL	8 1/16		1/2	4	9 33/64	
64	SH157	1	PL	8 1/16		1/2	5	2 3/8	
65	SH158	1	PL	8 1/16		1/2	5	6 1/16	
66	SH159	1	PL	8 1/16		1/2	5	0 1/2	
67	SH160	1	PL	8 1/16		1/2	4	11 15/16	
68	SH161	1	PL	8 1/16		1/2	5	4 13/16	

MILL ORDER

LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
58	3	201	03
58	4	201	09
30	0	202	08
30	0	202	08
30	0	202	09
30	0	202	09
25	3	201	21
25	3	201	21
		E	
		E	
		E	
		E	
		E	
		E	
		E	
		E	
		E	
		E	
		AM 202	

EXPANSION DAM - ED9

MATERIALS A36 / A242-MAYARI-R -PREFIX-P
RIVETS OR BOLTS NONE
OPEN HOLES - 1 1/8" U.N.
A325 FIELD BOLTS - 7/8" - GALV.
SHOP CONTACT SURFACES - NOT PAINTED (U.N.)
WELDING - AS NOTED
MILLING - AS NOTED
REAMING - AS NOTED
PAINT - 1 COAT ZINC RICH EPOXY PAINT INCLUDING ALL OPEN HOLES SEE NOTE B

NO.	DATE	BY	REVISION
A1	11-19	RLP	

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

CUSTOMER: MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
PROJECT NO. I-95-1(22)16
STRUCTURE: CONT. No. 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL

BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM LEETSDALE WORKS
MADE BY E.T.H. DATE IN CHARGE BKB
CHECKED BY RLP DATE 9-10-69 SHOP NO. 1
CONTRACT CE-6249-080 DRAWING NO. 9A

D5433 (Rev. C 64)

106-58

53'-11 CURB LINE TO CURB LINE

53'-9¼

ANCH. STRAP SPCG.

TOOTH SPCG. 8

SHIPPING ℄ SPCG.

STIFF. SPAC. SAME AS SECT ©

TYP GUTTER

ANCHOR STRAP SPACING SAME AS ABOVE

117 @ 5½ = 53'-7½

6 @ 8'-4 = 50'-0

PLAN VIEW (DEVELOPED)

HORIZ LINE

HOLES (AIR)

HORIZ GUTTER SPCG.

SECTION Ⓐ

SECTION Ⓑ

53'-8 3/16 (HORIZONTAL)

BOLTS - BOLT HDS (NS) SEE NOTE "A"

ANCH. STRAP SPACING

K (TYP)

NOTE. BREAK IN GA

NOTE: SHOP CONTACT SURFACES OF Pm & Pn TO BE PAINTED

7-325 x 3/4 x 44

7-HWB x 15/16 x 3/16

SECTION Ⓒ (DEVELOPED)

HOLES (SEE NOTE "A")

DETAIL OF ℄-Pm

DETAIL OF ℄-Pn

HOLES-DRILL TO 15/16 IN FIELD.

2-SB-8 x 3¾

GUTTER WELD (TYPICAL)

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
JAN 5 1970

WORK THIS DWG WITH DWG # 10A

FOR GEN. NOTES SEE DWG # 10A

For location of details shown on this sheet refer to diagrams.

	MATERIAL
	RIVETS OR BOLTS
	OPEN HOLES
	A325 FIELD BOLTS
	SHOP CONTACT SURFACES
	PAINT

NO.	DATE	INIT.	REVISION
0			
9			
8			
7			
6			
5			
4			
3			
2			
1			

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

CUSTOMER: MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
PROJECT NO. I 95-1(20)-16
STRUCTURE: CONTRACT NO 3 NEW HAMPSHIRE APPROACH

STRUCTURAL STEEL

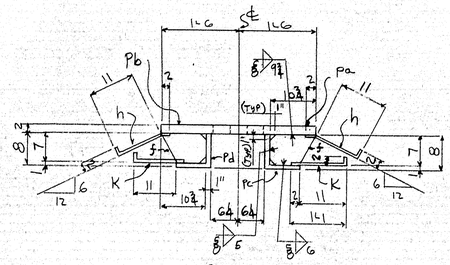
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

POTTSTOWN DRAFTING ROOM LEETSDALE WORKS
MADE BY DRL DATE 8/28/69 IN CHARGE B.K.B
CHECKED BY RLD DATE 9/4/69 SHOP NO. 1

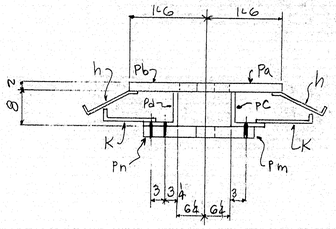
CONTRACT CEG 249-080 DRAWING NO. 10

34665 11-68

106-69



SECTION (D)



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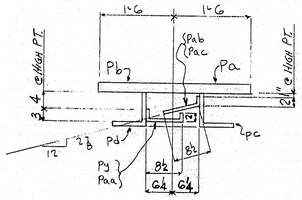

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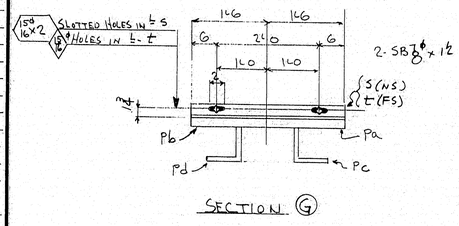
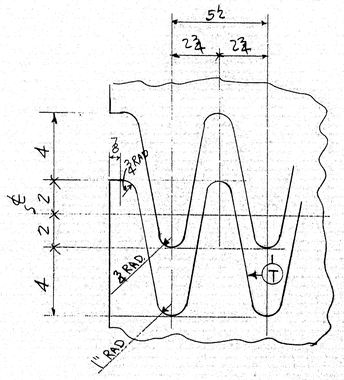
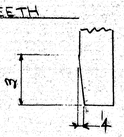


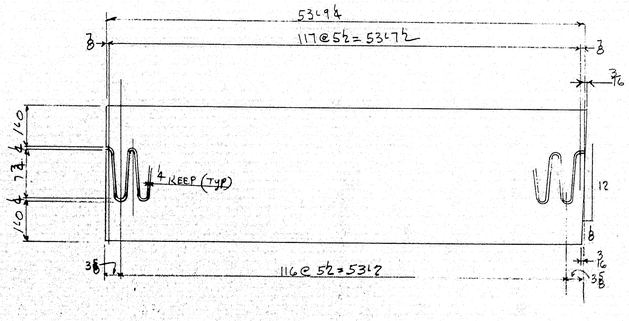
SECTION (G)



DETAIL OF TEETH



SECTION (T) (TYP)



BURNING DIAGRAM

GENERAL NOTES

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

MAX. THICK. AT POINT OF WELDING - INCHES	MINIMUM PREHEAT AND INTERPASS TEMP. - DEG. F
TO 3/4" INCL.	50 DEG.
OVER 3/4" TO 1 1/2"	70 DEG.
OVER 1 1/2" TO 2 1/2"	150 DEG.
OVER 2 1/2"	225 DEG.

NOTE "A" WHILE DAM & SHEAR TONGUE ARE SHOP ASSEMBLED WITH TEETH CENTERED, DRILL HOLES FROM SOLID OR SUB DRILL & REAM TO SHOP SIZE INDICATED

NOTE "B"
ALL STEEL SURFACES TO BE BLAST CLEANED AS PER SSPC-SP5-66. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY - INCLUDING OPEN HOLES.

A1 USE LOW HYDROGEN RACO E8018G ELECTRODES & RACO BISMAYARI-K WIRE WITH LINDE 80 FLUX.

SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1	ONE EXPANSION DAM - ED10								
2	Pa	1	PL	20		2	53	9 15/16	CF 35&2
3	Pb	1	PL	20		2	53	9 15/16	
4	Pc	1	L	8	8	1	54	1 7/16	
5	Pd	1	L	8	8	1	54	1 7/16	
6	f	62	BR	7		3/8	0	10 3/4	
7	h	115	BR	24		3/8	1	3	BENT
8	K	86	BR	24		3/8	1	3	BENT
9	Pm	1	PL	12 3/4		2	1	9	M2E
10	Pn	1	PL	12		2	1	4 4	M2W CF 12¾x2
11	S	7	L	3	2	4/16	3	0	SHIPPING ℄
12	℄	7	L	3	2	4/16	3	0	SHIPPING ℄
13	Py	8	PL	13 3/4		3/8	1	9 3/4	abt (Bent)
14	Paa	8	PL	12 3/4		3/8	1	9 3/4	abt (Bent)
15	Pab	8	PL	10		3/8	1	10 3/8	abt (Bent)
16	Pac	8	PL	10		3/8	1	8 3/4	abt (Bent)
17									
18									
19									
20		7	3&5	3/8 d			0	44	GALV.
21		7	HW	1 1/8 d	15/16 d	3/16			GALV.
22		14	MB	7/8 d			0	12	H.T.W.H. SHIPPING BOLTS
23		2	MC	5/8 d			0	3 3/4	H.T.W.H. SHIPPING BOLTS
24									
25									
26									
27	TOOLS	1	WD			1	107	7	
28	FW	1	WD			7/16	4	8	
29	FW	1	WD			7/16	94	8	
30									
31	FW	1	WD			5/8	214	5	
32	SDS	1	WD			3/8	16	0	
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									

MILL ORDER

LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
53	11	201	04
		201	10
		201	10
30	0	202	08
30	0	202	09
30	0	202	09
25	3	202	21
25	3	202	21
		E	
		E	
		E	
		E	
		E	
		E	
		AM201	
		AM202	

PAY ITEM 504.711

INST	REQUIRED LIST				
	14W	QTY.	SHIP MRK	DESCRIPTION	REMARKS
		1	ONE	ED10	EXP DAM 58x22x 54.1B

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY Arnold Moorby
JAN 26 1970

A36
MATERIAL A242 MAYARI-K PREFIN-P
RIVETS OR BOLTS NONE
OPEN HOLES 1⅛d UN,
A325 FIELD BOLTS ⅞d GALV
SHOP CONTACT SURFACES NOT PAINTED (UN)
WELDING AS NOTED
MILLING - AS NOTED
REAMING - AS NOTED
PAINT 1 COAT ZINC RICH EPOXY PAINT INCLUDING ALL OPEN HOLES SEE NOTE "B"

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

NO.	DATE	INIT.	REVISION
A1	11-14-69	RLP	

EXPANSION DAM ED10

CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
PROJECT No. I 95-1(22)-16
STRUCTURE CONTRACT NO 3 NEW HAMPSHIRE APPROACH
STRUCT. FAB. STEEL

BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM LEE TO DALE WORKS
MADE BY E.R.L. DATE 9/8/69 IN CHARGE E.K.B.
CHECKED BY R.L.P. DATE 9/9/69 SHOP NO. 1
CONTRACT CE6249-050 DRAWING NO. 10A

WORK THIS DWG. WITH DWG # 10

35423 (Rev.C 4-65)

106-60

49'-2

107 @ 5½ = 49'-0½

6 @ 7'-10 = 47'-0

PLAN VIEW (DEVELOPED)

SECTION-(A)

SECTION-(B)

49'-1

SECTION (C) (DEVELOPED)

7-HSB ⅞ x 4¼ } BOLT HDS. (N.S.)
7-SHW 1⅛ HOLES }

⅞ HOLES-REAM TO 15/16" IN FIELD
2-SB ⅞ x 3¼

HOLES IN Lpd, Lpc, & Pm m

BOLTS (HDS. N.S.) SEE NOTE "A"

DETAIL OF A-Pm

DETAIL OF B-Pm

GUTTER WELD (TYPICAL)

For location of details shown on this sheet refer to diagrams.

APPROVED-
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY S.S. Nishimura
DEC 10 1969

WORK THIS DWG. WITH DWG. # 11A

FOR GEN. NOTES SEE DWG # 11A

MATERIAL	
RIVETS OR BOLTS	
OPEN HOLES	
A325 FIELD BOLTS	
SHOP CONTACT SURFACES	
PAINT	

REVISION

NO.	DATE	INIT.

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
PROJECT NO. 1-95-1(22)-16
STRUCTURE CONTRACT NO. 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL

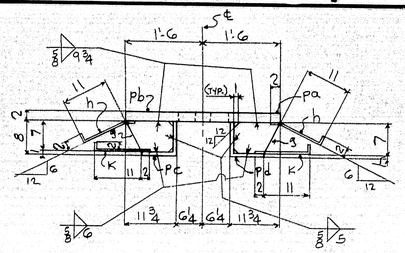
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

POTTSTOWN DRAFTING ROOM LEETSDALE WORKS
MADE BY E.T.H. DATE IN CHARGE B.K.B.
CHECKED BY R.L.P. DATE 9-10-69 SHOP NO. 1

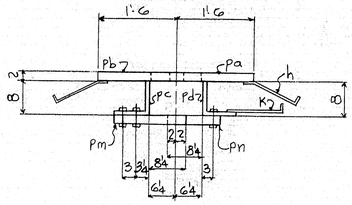
CONTRACT CE-G249-080 DRAWING NO. 11

36663 (1-65)

106-61



SECTION-Ⓓ



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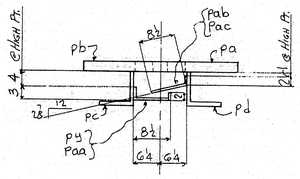
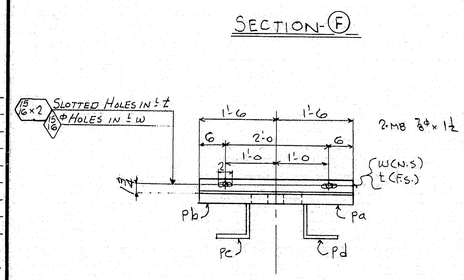
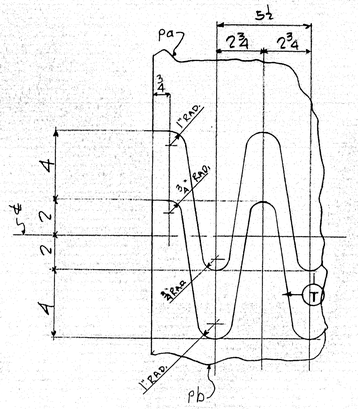


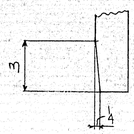
SECTION-Ⓕ



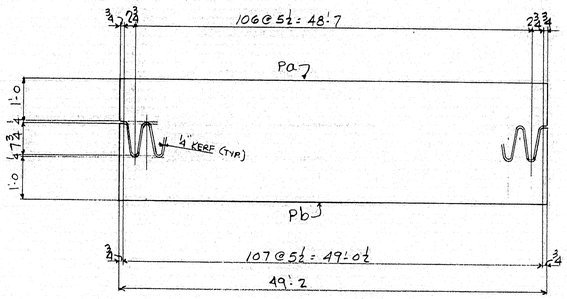
SECTION-Ⓖ



DETAIL OF TEETH



SECTION-Ⓣ (TYP.)



BURNING DIAGRAM

NOTE "A"
WHILE DAM & SHEAR TONGUE ARE SHOP ASSEMBLED WITH TEETH CENTERED, DRILL HOLES FROM SOLID OR SUB DRILL & REAM TO SHOP SIZE INDICATED.

GENERAL NOTES:

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

MAX. THICK. AT POINT OF WELDING - INCHES	MINIMUM PREHEAT AND INTERPASS TEMP. - DEG. F
TO 3/4" INCL.	50 DEG.
OVER 3/4" TO 1 1/2"	70 DEG.
OVER 1 1/2" TO 2 1/2"	150 DEG.
OVER 2 1/2"	225 DEG.

NOTE "B"
ALL STEEL SURFACES TO BE BLAST CLEANED AS PER SS-PC-SPS-66. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY PAINT - INCLUDING OPEN HOLES.

USE LOW HYDROGEN RACO E8018G ELECTRODES & RACO B1S MAYARI-R WIRE WITH LINDE 80 FLUX.

SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1	EXPANSION DAM - ED11								
2	Pa	1	PL	20		2	49	2	} CJP 35A-2
3	Pb	1	PL	20		2	49	2	
4	Pc	1	L	8	8	1	49	2 1/16	
5	Pd	1	L	8	8	1	49	2 1/16	
6	g	62	BR	7		3/4	0	10 3/4	
7	h	96	BR	2 1/2		3/8	1	3	BENT
8	K	85	BR	2 1/2		3/8	1	3	BENT
9	Pm	1	PL	12 3/4		2	1	9	(MTE)
10	Pn	1	PL	12		2	1	4 1/4	(MTW) C.I.F. 12 3/4 x 2
11	t	7	L	3	2	1/4	3	0	SHIPPING L's
12	w	7	L	3	2	1/4	3	0	" "
13									
14									
15		7	325	7/8ϕ			0	4 1/4	} GALV.
16		7	HW	1 3/4	13/16	3/16			
17		14	MB	7/8ϕ			0	1 1/2	H.H.H.N. SHIPPING BOLTS
18		2	MB	5/8ϕ			0	3 3/4	
19	Py	7	PL	12 3/4		3/8	1	9 3/8	ABT. BENT
20	Paa	7	PL	12 3/4		3/8	1	9 1/4	
21	Pab	7	PL	10		3/8	1	10 3/8	
22	Pac	7	PL	10		3/8	1	8 3/4	
23									
24									
25									
26									
27	SDS	1	WD			3/8	14	0	
28	TGDS	1	WD			1	98	4	
29	FW	1	WD			5/16	4	8	
30	FW	1	WD			5/8	81	4	
31									
32	FW	1	WD			5/8	214	5	
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									

MILL ORDER

LINE	LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
2	49	6	201	06
3	49	6	201	06
4	49	7	201	12
5	49	7	201	12
6	30	0	202	08
7	30	0	202	09
8	30	0	202	09
9	25	3	201	21
10	25	3	201	21
11			E	
12			E	
19			E	
20			(	
21			(	
22			E	

PAY ITEM 509.711
INSTALLMENT "5E"

REQUIRED LIST

QTY	SHIPPING MARK	DESCRIPTION	REMARKS
ONE	ED11	EXPANSION DAM (5 1/8 x 22 x 50'-2)	

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY Arnold Nowitzky JAN 26 1970

For location of details shown on this sheet refer to diagrams.

MATERIAL { A36 / A242-MAYARI-R-PREFIX:P
RIVETS OR BOLTS - NONE
OPEN HOLES - 1 3/16ϕ U.N.
A325 FIELD BOLTS - 7/8ϕ GALV.
SHOP CONTACT SURFACES - UNPAINTED (U.N.)
WELDING - AS NOTED
MILLING - AS NOTED
REAMING - AS NOTED
PAINT - 1-COAT ZINC RICH EPOXY PAINT INCLUDING OPEN HOLES SEE NOTE "B"

NO.	DATE	INIT.	REVISION
0			
9			
8			
7			
6			
5			
4			
3			
2			
1			

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

EXPANSION DAM - ED11

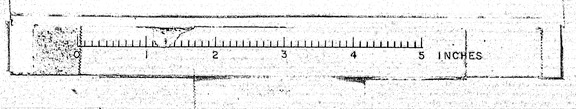
CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
PROJECT NO. I-95-1 (22)-16
STRUCTURE CONTRACT NO. 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL

BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

POTTSTOWN DRAFTING ROOM LEETSDALE WORKS
MADE BY E.T.H. DATE IN CHARGE B.K.B.
CHECKED BY R.L.P. DATE 9-10-69 SHOP NO. 1
CONTRACT CE-6249-080 DRAWING NO. 11A

35453 (Rev.C 4-65)

106-62



49'4 CURBLINE TO CURB LINE

49'2

ANCH STRAP SPCG

STIFF SPCG SAME AS SECT ©

STIFF SPCG SAME AS SECT ©

ANCH. STRAP SPCG

TOOTH SPCG

SLIPPING L SPCG

ANCHOR STRAP SPACING SAME AS ABOVE

10 @ 5½ = 49'0½

6 @ 7'10 = 47'0

ANCHOR STRAP SPACING SAME AS ABOVE

PLAN VIEW (DEVELOPED)

HORIZ LINE

HORIZ GUTTER SPCG.

HOLES (A.I.R.)

HORIZ

PARALLEL

SECTION (A)

SECTION (B)

49'1 (HORIZONTAL)

BOLTS (NOTHDS. N.S.) SEE NOTE "A"

HOLES - REAM TO IN FIELD

ANCH. STRAP SPCG.

NOTE: BREAK IN GA.

NOTE: SHOP CONTACT OF Pm & Pn TO BE PAINTED

7 PLS 12¾" × ⅜" } GALV.
7 PLS 12¾" × ⅜"

SECTION © (DEVELOPED)

GUTTER WELD (TYPICAL)

DETAIL OF P-Pm

DETAIL OF P-Pn

HOLES (SEE NOTE "A")

For location of details shown on this sheet refer to diagrams.

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY S.S. Nishkian
DEC 10 1956

WORK THIS DWG WITH DWG # 12A

FOR GEN. NOTES SEE DWG # 12A

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

REVISION

NO.	DATE	INIT.

MATERIAL
RIVETS OR BOLTS
OPEN HOLES
A325 FIELD BOLTS
SHOP CONTACT SURFACES
PAINT

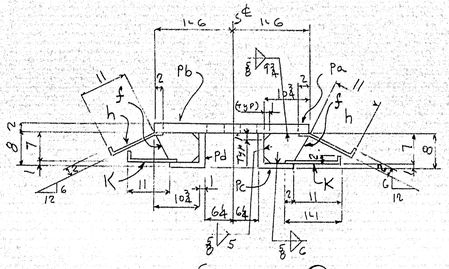
CUSTOMER: MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
PROJECT NO. I 95 1(23) 16
STRUCTURE: CONTRACT NO 3 NEW HAMPSHIRE APPROACH
STRUCTUAL STEEL

BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

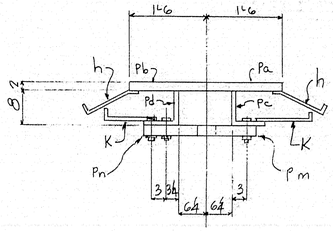
POTTSTOWN DRAFTING ROOM — LEETSDALE — WORKS
MADE BY D.R.L. DATE 9/3/65 IN CHARGE B.K.B.
CHECKED BY R.L.B. DATE 9/9/69 SHOP NO. 1
CONTRACT CE 6249-080 DRAWING NO. 12

36465 (1-63)

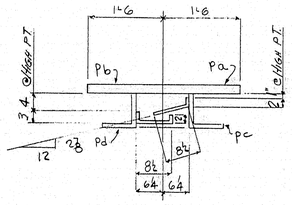
106-63



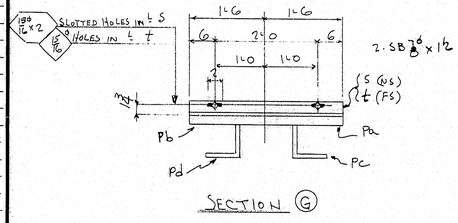
SECTION (D)



SECTION (E)



SECTION (F)



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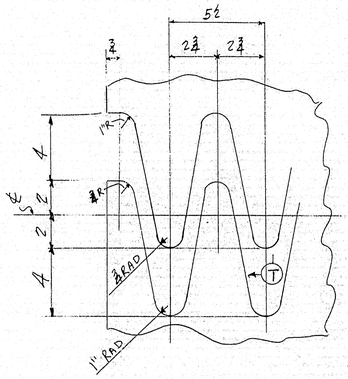
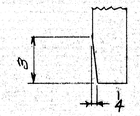
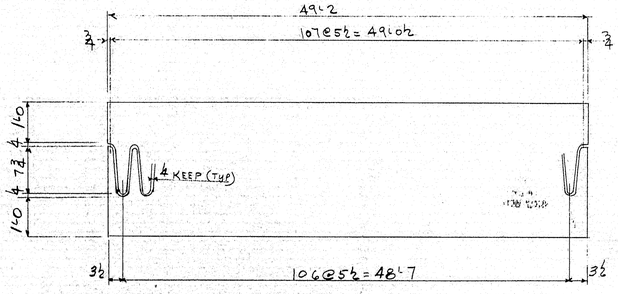


DETAIL OF TEETH



SECTION (T) (TYP)



BURNING DIAGRAM

GENERAL NOTES

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

MAX. THICK. AT POINT OF WELDING - INCHES	MINIMUM PREHEAT AND INTERPASS TEMP. - DEG. F
TO 3/4" INCL.	50 DEG.
OVER 3/4" TO 1 1/2"	70 DEG.
OVER 1 1/2" TO 2 1/2"	150 DEG.
OVER 2 1/2"	225 DEG.

NOTE "A" WHILE DAM & SHEAR TONGUE ARE SHOP ASSEMBLED WITH TEETH CENTERED, DRILL HOLES FROM SOLID OR SUB DRILL & REAM TO SHOP SIZE INDICATED.

NOTE "B"
ALL STEEL SURFACES TO BE BLAST CLEANED AS PER SS PC-SPS-66. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY - INCLUDING OPEN HOLES.

USE LOW HYDROGEN RACO E8018G ELECTRODES & RACO 8IS MAYARI-R WIRE WITH LINDE 80 FLUX.

SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1	ONE EXPANSION DAM ED12								
2	Pa	1	PL	20		2	49	2	C.F 35½ x 2
3	Pb	1	PL	20		2	49	2	
4	Pc	1	L	8	8	1	49	6	
5	Pd	1	L	8	8	1	49	6 7/16	
6	f	64	BR	7		3/8	0	10¾	
7	h	94	BR	2½		3/8	1	3	BENT
8	K	85	BR	2½		3/8	1	3	BENT
9	Pm	1	PL	12¾		2	1	9	M2E
10	Pn	1	PL	12		2	1	4½	M2W C.F 12¾ x 2
11	S	7	L	3	2	4	3	0	SHIPPING ℄
12	t	7	L	3	2	4	3	0	SHIPPING ℄
13	Py	7	PL	12¾		3/8	1	9⅜	abt (Bent)
14	Paa	7	PL	12½		3/8	1	9½	abt (Bent)
15	Pab	7	PL	10		3/8	1	10⅜	abt (Bent)
16	Pac	7	PL	10		3/8	1	8⅜	abt (Bent)
17									
18									
19									
20		7	325	¾ ø			0	4½	GALV.
21		7	HW	1⅜ ø	45°	9/16			H.H.H.N.
22		14	MB	⅞ ø			0	1½	SHIPPING BOLTS
23		2	MB	⅞ ø			0	3¾	
24									
25									
26									
27	TGOOS	1	WD			1	98	4	
28	FW	1	WD			1/8	4	8	
29	FW	1	WD			7/16	84	2	
30									
31	FW	1	WD			5/16	219	8	
32	SDS	1	WD			3/16	14	0	
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
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55									

MILL ORDER

LINE	LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
2	49	6	201	06
3	49	6	201	06
4	49	7	201	12
5	49	7	201	12
6	30	0	202	08
7	30	0	202	09
8	30	0	202	09
9	25	3	201	21
10	25	3	201	21
11			E	
12			E	
13			E	
14			E	
15			E	
16			F	

PAY ITEM 504.711

INST	QTY.	SHIP MRK	DESCRIPTION	REMARKS	CODE
SW	ONE	ED12	EXP DAM 58x22x 49'2		

EXPANSION DAM ED12

MATERIAL A36
A242 MAYARI-R PREFIX. P
RIVETS OR BOLTS NONE
OPEN HOLES 1 3/16 DIA.
A325 FIELD BOLTS ⅞ ø GALV.
SHOP CONTACT SURFACES NOT PAINTED (UN)
WELDING AS NOTED
MILLING - NONE
REAMING - NONE
PAINT 1 COAT ZINC RICH EPOXY PAINT INCLUDING ALL OPEN HOLES. SEE NOTE "B"

HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY Arnold Nouthi
JAN 26 1970

NO.	DATE	INIT.
REVISION		

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE PROJECT NO. I-95 1-22
STRUCTURE CONTRACT NO 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL

BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

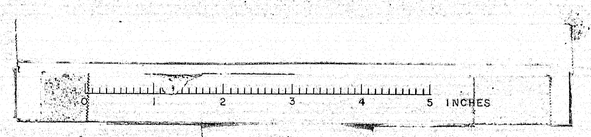
POTTSTOWN DRAFTING ROOM LEETSDALE WORKS
MADE BY D.R.L DATE 1/16/69 IN CHARGE B.K.B
CHECKED BY RLC DATE 9-9-69 SHOP NO. 1
CONTRACT CE 6249-080 DRAWING NO. 12A

WORK THIS DWG. WITH DWG # 12

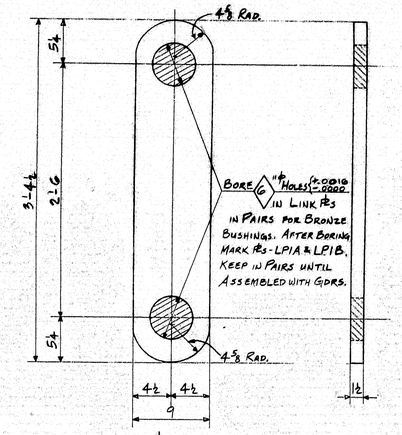
For location of details shown on this sheet refer to diagrams.

33433 (Rev. C 4-63)

106-64

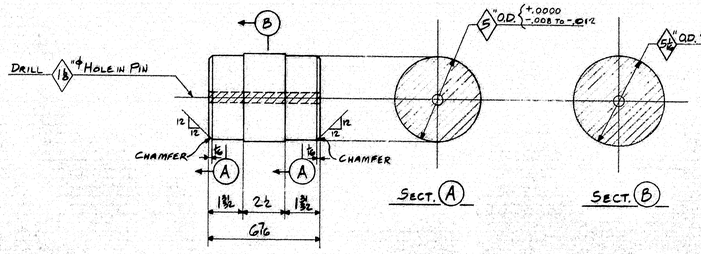


8,8,6



LINK PLATE - LP1

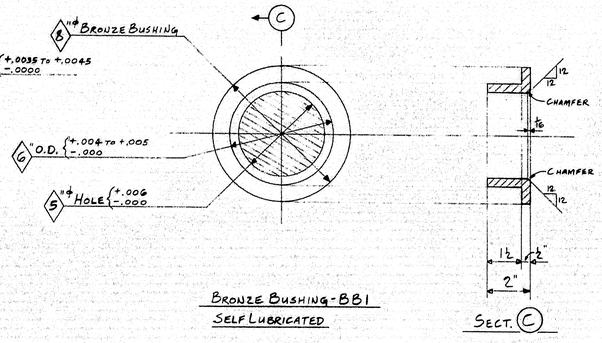
ALL LINK PLS TO BE UTRASONIC TESTED BY O.S.I.



PIN - P1

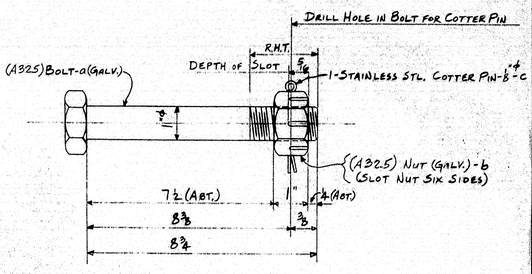
STAINLESS PIN - ASTM-A582 TYPE 303

(NO PAINT)



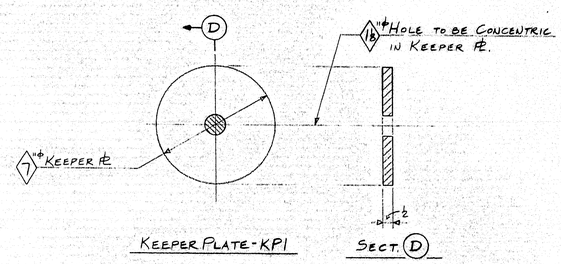
BRONZE BUSHING - BB1

SELF LUBRICATED

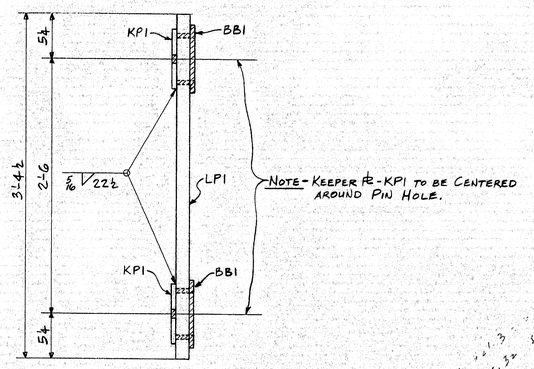


KEEPER BOLTS - KB1, KB2 (ALIKE)

(A325, GALVANIZED)



KEEPER PLATE - KP1



LINK PLATE ASSEMBLY

MARKS - LP1A & LP1B

PAY ITEM 504.711

INSTALLMENTS								QTY.	SHIPPING MARK	REQUIRED LIST DESCRIPTION	REMARKS
17W	17E	13W	13E	8W	8E	4W	4E				
16	18	16	18	16	16	14	14	128	LP1	LINK PLATES	SHOP ASSEMBLED
32	36	32	36	32	32	28	28	256	KP1	KEEPER PLATES	TO GIRDERS IN
32	36	32	36	32	32	28	28	256	BB1	BRONZE BUSHINGS	ASSEMBLIES LP1A & LP1B
8	9	8	9	8	8	7	7	64	KB1	KEEPER BOLTS	SHOP ASSEMBLED
16	18	16	18	16	16	14	14	128	P1	PINS	TO GIRDERS
8	9	8	9	8	8	7	7	64	KB2	KEEPER BOLTS	SAME AS KB1
8	9	8	9	8	8	7	7	64	LP1A	LINK PLATE ASSEMBLY	
8	9	8	9	8	8	7	7	64	LP1B	DO	

D1 (FOR DRAWING ROOM REFERENCE ONLY)

D1 (

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY J.S. Nishimura OCT 1 1969

For location of details shown on this sheet refer to diagrams.

SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS	MILL ORDER LENGTH FT.	MILL ORDER LENGTH IN.	MILL ORDER ITEM PAGE	MILL ORDER ITEM LINE
1													
2													
3		128	KEEPER BOLTS	G4-KB1 & G4-KB2									
4													
5	a	128	325	1"ϕ			0	8¾	GALV. HEX. HD.			902-6N	
6	b	128	M	NUT FOR 1"ϕ BOLT					" HVY. HEX.			902-6N	
7	c	128	M	⅝"ϕ			0	2	STAINLESS STL. COTTER PIN			902-51N	
8													
9													
10													
11													
12													

LINE														
13														
14					LOOSE MATERIAL									
15														
16														
17														
18														
19	P1	128	RD	5⅛			0	6⅞	(STAINLESS STL.)	5¼	18	4	902-5N	
20														
21	BB1	256	M	8"ϕ			0	2	LUBRITE BUSHING (TREPANNED)				902-51N	
22														
23	LP1	128	PL	9		1½	3	4½	A36	MOLD-LOC 23	5/16 51	6⅛ 10⅝	24 47	15 D1C
24														
25	KP1	256	W	7"ϕ	15"ϕ	½"			A36	D1			J	
26														
27														

LINE														
28														
29														
30					128 - SHOP ASSEMBLIES G4-LP1A & G4-LP1B									
31														
32	LP1	128	PL											
33	KP1	256	W											
34	BB1	256	M											
35	FW	128	WD							5/16	3	9		
36														
37														
38														
39														
40														
41														
42														

Shop wants to know why did we list these as loose mat'l.

ALL MATERIAL TO BE ASSEMBLED WITH GIRDERS EXCEPT BOLTS KB2.

LINK PLS, PINS, BRONZE BUSHINGS, KEEPER BOLTS

MATERIAL - AS NOTED
[illegible] BOLTS - 1"ϕ
OPEN HOLES - AS NOTED
A325 FIELD BOLTS - 1"ϕ
SHOP CONTACT SURFACES - NO PAINT
MILLING - NONE
PAINT - NO PAINT
WELDING - AS NOTED

CUSTOMER: MAINE STATE HIGHWAY COMMISSION
STRUCTURE: PISCATAQUA RIVER BRIDGE
PROJECT NO. I-95-1(22)16
CONT. NO. 3 NEW HAMPSHIRE APP.
STRUCTURAL STEEL

BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

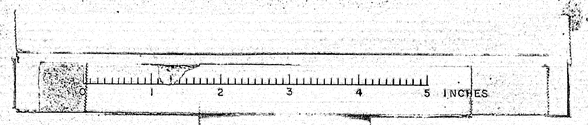
POTTSTOWN DRAFTING ROOM POTTSTOWN WORKS
MADE BY CCM DATE 8-14-69 IN CHARGE B.K. BERTOLET
CHECKED BY RLP DATE 8-21-69 SHOP NO. 2
CONTRACT CJ-6249-082 DRAWING NO. 13

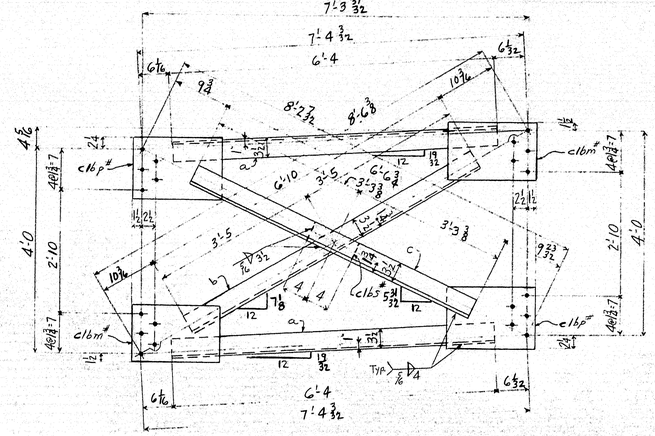
SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

NO.	DATE	INIT.	REVISION
1	10-8	A.K.P.	

35042 (Rev.D 7-65)

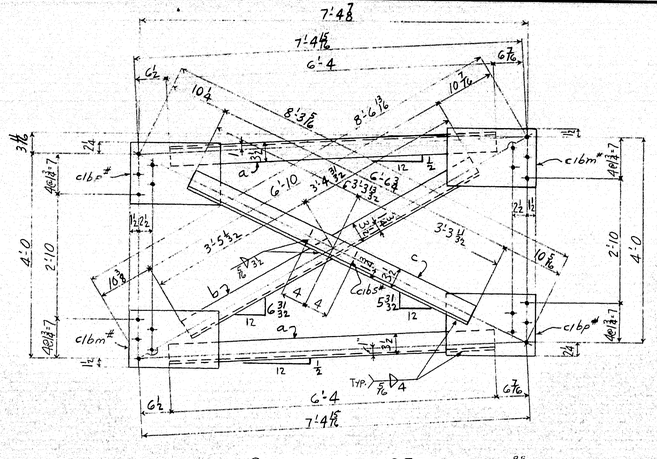
DETWILER-1 K. FINE-4. MACH-3 10-6-65





CROSS FRAME CF70

100



CROSS FRAME CF71

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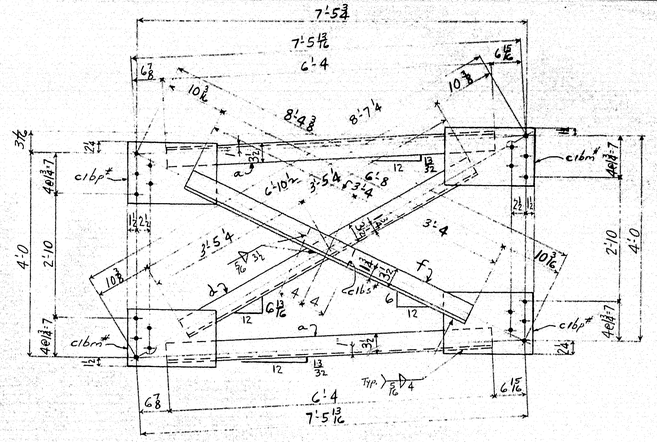
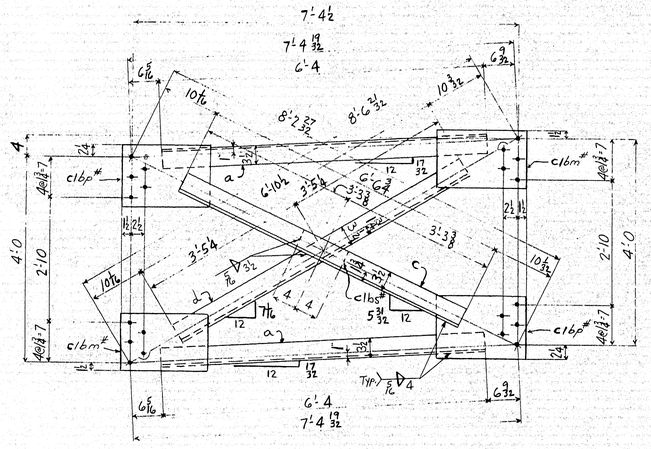


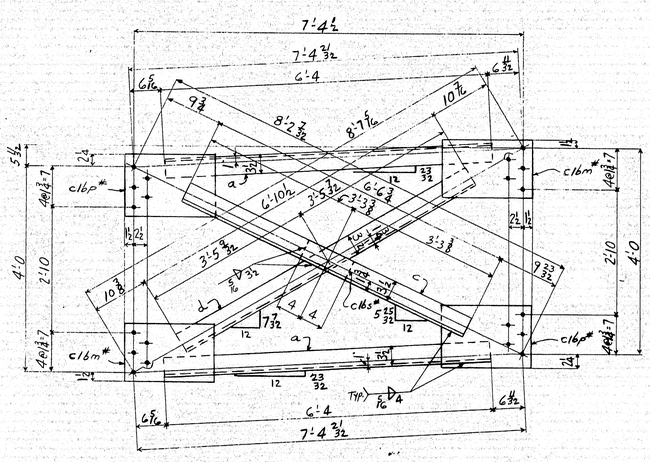
CROSS FRAME CF72

98



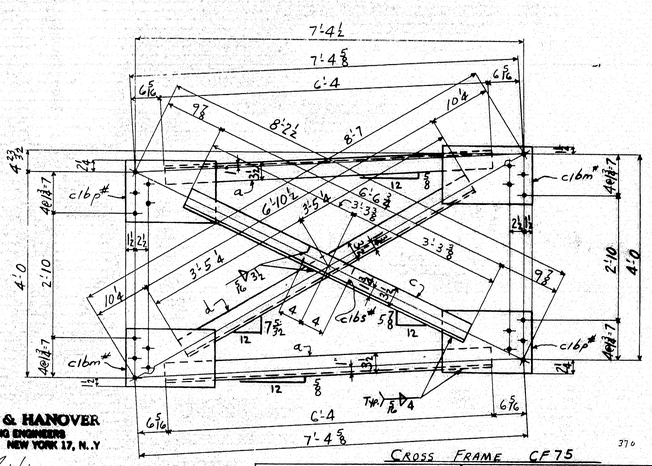
CROSS FRAME CF73

98



CROSS FRAME CF74

3C9



CROSS FRAME CF75

370

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y
BY S.S. Nichols
SEP 29 1966

NOTES:
MTL. THK. TO 2" INCL. MUST BE PREHEATED TO 50° DEG. F
ALL OPEN HOLES - NP 3

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

USE E7016,18,28 LOW HYDROGEN ELECTRODES OR GR. SAW-2 FOR WELDING.

For location of details shown on this sheet refer to diagram.

EG E11

SHOP BILL

LINE	WEIGHT TOTAL	WEIGHT EA.	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1			15- CROSS FRAMES CF70								
2			a	30	L	4		3½	6	4	
3			b	15	L	4		3½	6	10	
4			c	15	L	4		3½	6	6¾	
5			c 16m#	30	PL	10		½	1	3½	
6			c 16p#	30	PL	10⅜		½	1	3½	
7			c 16s#	15	BR	3½		½	0	8	
8			FW	15	WD			5/16	6	6	
9											
10											
11			15- CROSS FRAMES CF71								
12			a	30	L	4		3½	6	4	
12			b	15	L	4		3½	6	10	
12			c	15	L	4		3½	6	6¾	
12			c 16m#	30	PL	10		½	1	3½	
12			c 16p#	30	PL	10⅜		½	1	3½	
12			c 16s#	15	BR	3½		½	0	8	
12			FW	15	WD			5/16	6	6	
13											
13											
13			15- CROSS FRAMES CF72								
13			a	30	L	4		3½	6	4	
13			d	15	L	4		3½	6	10½	
13			f	15	L	4		3½	6	8	
14			c 16m#	30	PL	10		½	1	3½	
15			c 16p#	30	PL	10⅜		½	1	3½	
16			c 16s#	15	BR	3½		½	0	8	
17			FW	15	WD			5/16	6	6	
18											
19											
20			6- CROSS FRAMES CF73								
21			a	12	L	4		3½	6	4	
22			d	6	L	4		3½	6	10½	
23			c	6	L	4		3½	6	6¾	
24			c 16m#	12	PL	10		½	1	3½	
25			c 16p#	12	PL	10⅜		½	1	3½	
26			c 16s#	6	BR	3½		½	0	8	
27			FW	6	WD			5/16	6	6	

MILL ORDER

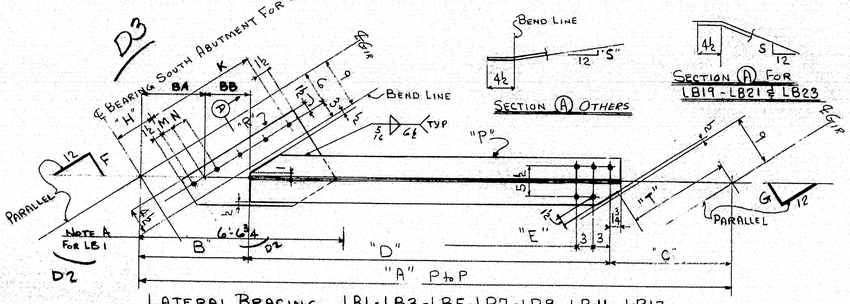
LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
47	1	29	11C
46	6B	29	10C
47	1	29	11C
20	10	29	25
21	0	29	26
		J	
47	1	29	11C

27			46	6B	29	10C					
27			47	1	29	11C					
27			20	10	29	25					
27			21	0	29	26					
27					J						
28											
28											
28			47	1	29	11C					
28			46	6B	29	10C					
28			47	1	29	11C					
29			20	10	29	25					
30			21	0	29	26					
31					J						
32											
33											
34											
35											
36			44	9⅛	48	08					
37			21	8½	48	12B					
38			20	6½	48	11C					
39			47	11½	48	19A					
40			30	2B	48	19C					
41			30	2B	48	15C					
42					J						
43											

12- CROSS FRAMES CF74

			a	24	L	4	3½	⅜	6	4	
			d	12	L	4	3½	⅜	6	10½	
			c	12	L	4	3½	⅜	6	6¾	
			c 16m#	24	PL	10		½	1	3½	
			c 16p#	24	PL	10⅜		½	1	3½	
			c 16s#	12	BR	3½		½	0	8	
			FW	12	WD			5/16	6	6	

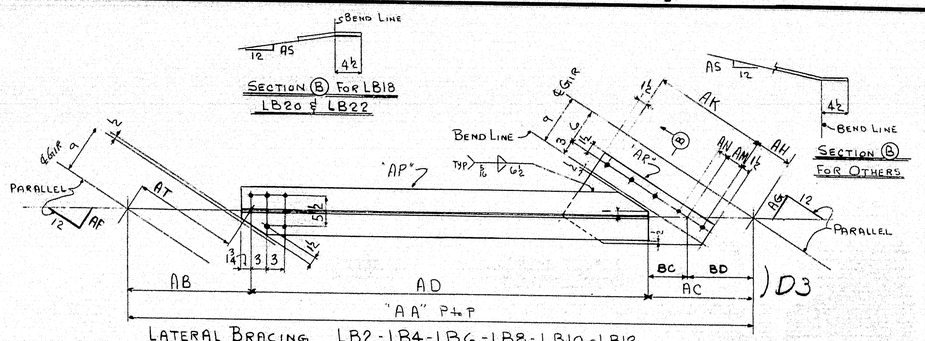
UPPER LINE 4-5



LATERAL BRACING LB1 - LB3 - LB5 - LB7 - LB9 - LB11 - LB13
LB15 - LB17 - LB19 - LB21 & LB23

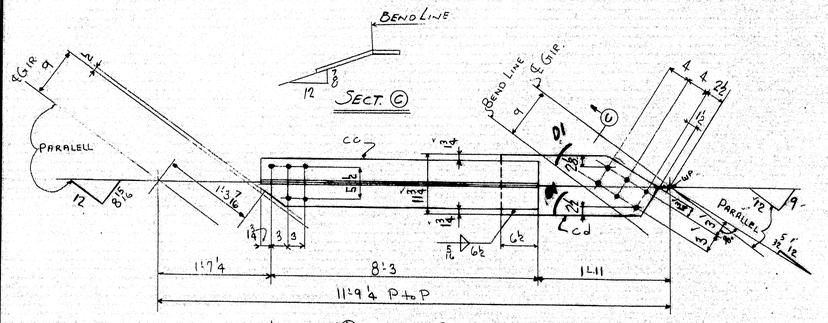
MARK	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	BA	BB
LB1	14'-5 7/16	1'-7 1/2	1'-9 1/4	11'-0 1/16	10'-6 11/16	7 1/8	8	6 3/4	4@9 1/2=1'-7 1/2	2 7/16	2 9/16	a	b	4	1'-5 11/16	10 7/8	8 5/8
LB3	14'-4 5/8	1'-7	1'-9	11'-0 3/8	10'-6 3/8	7 1/16	7 7/8	6 5/8	4@5=1'-8	2 5/8	2 3/8	d	f	1/4	1'-5 9/16	11 3/32	7 31/32
LB5	14'-4 1/8	1'-7	1'-9 1/2	10'-11 13/16	10'-5 1/16	7 3/16	7 7/16	7	4@5=1'-8	2 7/16	2 1/16	k	f	1/4	1'-6	11 3/32	7 31/32
LB7	14'-3 15/16	1'-7	1'-9 7/8	10'-11 1/16	10'-5 1/16	7 1/16	7 1/16	7	4@5=1'-8	2 3/8	2 5/8	s	f	1/4	1'-6 7/16	11 1/8	7 7/8
LB9	14'-3 5/8	1'-7 3/4	1'-10 1/4	10'-9 7/8	10'-3 5/8	7 1/16	7 1/8	6 3/4	4@5 1/4=1'-9	2 3/4	2 1/4	aa	ab	3/16	1'-6 9/16	11 3/32	8 1/32
LB11	14'-2 7/8	1'-7 3/4	1'-10 1/4	10'-8 5/8	10'-2 5/8	7 1/16	7 1/16	6 3/4	4@5 1/4=1'-9	2 7/8	2 3/4	af	ag	3/16	1'-6 11/16	11 1/32	8 1/32
LB13	14'-2 9/16	1'-7 3/4	1'-10 1/4	10'-8 1/16	10'-2 1/16	7 1/16	7 1/16	6 3/4	4@5 1/4=1'-9	2 7/16	2 5/8	ah	ai	1/8	1'-6 13/16	11 3/32	8 1/32
LB15	14'-1 13/16	1'-8 1/4	1'-10 3/4	10'-6 13/16	10'-0 13/16	7 1/16	7 1/8	7	3@5 1/4+1'-3 1/2-5 1/2	2 1/16	2 7/16	aw	ay	1/16	1'-7 7/16	11 1/32	8 3/4
LB17	14'-1 1/4	1'-8 1/4	1'-10 3/4	10'-6 1/4	10'-0 1/4	7 1/16	7 1/16	7	3@5 1/4+1'-3 1/2-5 1/2	2 1/16	2 1/16	bc	bd	1/16	1'-7 7/16	11 1/8	8 3/8
LB19	14'-0 1/16	1'-8 3/4	1'-10 3/4	10'-5 7/16	9'-11 7/16	7 1/16	7 1/16	7 1/16	5 1/4-3@5 1/2+1'-4 1/2	2 3/8	2 1/2	bg	bh	3/8	1'-7 1/2	11 3/32	9 3/32
LB21	14'-0 3/16	1'-8 3/4	1'-11 1/4	10'-4 7/16	9'-10 3/16	7 1/16	7 1/16	7 1/16	5 1/4-3@5 1/2+1'-4 1/2	2 1/16	2 1/16	bp	bs	1/4	1'-7 5/16	11 1/32	8 15/16
LB23	11'-2 11	1'-5 5/8	1'-7 1/4	8'-10 5/8	8'-4 5/8	8 1/16	8 1/16	5 1/2	4@4 3/4+1'-1 7	2 1/16	2 1/16	ca	cb	5/16	1'-3 1/2	10 3/32	7 3/32

D3



LATERAL BRACING LB2 - LB4 - LB6 - LB8 - LB10 - LB12
LB14 - LB16 - LB18 - LB20 & LB22

MARK	AA	AB	AC	AD	AF	AG	AH	AK	AM	AN	AP	AR	AS	AT	BC	BD
LB2	14'-3 3/16	1'-9 1/4	1'-6 1/2	10'-11 7/16	8	8 1/16	6 1/2	4@5'-1'-8	2 1/16	2 1/16	cf	c	1/4	1'-5 1/2	7 3/32	10 3/32
LB4	14'-2 5/8	1'-9 1/4	1'-6 1/2	10'-10 7/8	7 15/16	8	6 1/2	4@5=1'-8	2 1/8	2 1/8	g	c	1/4	1'-5 3/4	7 1/16	10 1/16
LB6	14'-2 1/8	1'-9 1/2	1'-7	10'-9 15/16	7 15/16	7 15/16	6 1/2	4@5 =1'-8	2 1/8	2 3/16	n	c	1/4	1'-6	8 3/32	10 29/32
LB8	14'-1 11/16	1'-9 3/4	1'-7	10'-8 15/16	7 3/4	7 15/16	6 5/8	4@5=1'-8	2 3/16	2 1/4	w	c	1/4	1'-6 1/4	7 15/16	11 3/32
LB10	14'-1 7/16	1'-10 1/4	1'-7	10'-7 15/16	7 7/8	7 15/16	7	4@5 1/4=1'-9	2 3/8	2 1/4	ac	ad	3/16	1'-6 1/2	7 7/8	11 3/16
LB12	14'-0 1/16	1'-10 1/4	1'-7 3/4	10'-6 11/16	7 15/16	7 7/8	6 3/4	4@5 1/4=1'-9	2 1/4	2 1/4	as	ak	1/8	1'-6 5/8	8 1/32	11 3/32
LB14	14'-0 1/8	1'-10 1/4	1'-7 3/4	10'-6 1/16	7 15/16	7 15/16	6 3/4	4@5 1/4=1'-9	2 1/4	2 1/4	ah	ak	3/16	1'-6 13/16	8 1/16	11 3/16
LB16	13'-11 15/16	1'-10 3/4	1'-7 3/4	10'-5 5/16	7 7/8	7 15/16	6 3/4	4@5 1/4=1'-9	2 1/16	2 5/16	bq	bb	1/16	1'-7 1/16	8 1/32	11 3/32
LB18	13'-11 7/8	1'-10 3/4	1'-8 1/4	10'-4 3/16	7 7/8	7 7/8	7	5 1/2-3@5 1/2+1'-3 1/2	2 3/4	2 1/2	cf	cg	1/8	1'-7 1/16	8 1/16	11 1/16
LB20	13'-10 7/16	1'-10 3/4	1'-8 1/4	10'-3 1/16	7 7/8	7 15/16	7	5 1/2-3@5 1/2+1'-3 1/2	2 3/4	2 1/2	bk	bm	1/4	1'-7 1/2	8 3/4	11 1/2
LB22	13'-10 1/4	1'-11 1/4	1'-8 3/4	10'-2 1/4	7 15/16	7 15/16	7 1/4	3@5 1/2+1'-4 1/2-5 1/2	2 3/4	2 1/2	bt	bw	Fc	1'-7 15/16	9 3/32	11 31/32



a	b	c

INSTALL. 19W	18W	17W	QTY.	MARKS	DESCRIPTION	REMARKS
1			ONE	LB1	LATERAL BRACE	
1			ONE	LB2	do do	
1			ONE	LB3	do do	
1			ONE	LB4	do do	
1			ONE	LB5	do do	
1			ONE	LB6	do do	
1			ONE	LB7	do do	
	1		ONE	LB8	do do	
	1		ONE	LB9	do do	
	1		ONE	LB10	do do	
	1		ONE	LB11	do do	
	1		ONE	LB12	do do	
	1		ONE	LB13	do do	
	1		ONE	LB14	do do	
	1		ONE	LB15	do do	
	1		ONE	LB16	do do	
		1	ONE	LB17	do do	
		1	ONE	LB18	do do	
		1	ONE	LB19	do do	
		1	ONE	LB20	do do	
		1	ONE	LB21	do do	
		1	ONE	LB22	do do	
		1	ONE	LB23	do do	
		1	ONE	LB24	do do	

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY S-S-Nishimura
SEP 30 1969

For location of details shown on this sheet refer to diagrams.

GD3-E5

(MATL THK. TO 3/4" INCL MUST BE PREHEATED TO 50°F. USE E7016, 10, 28 LOW HYDROGEN ELECTRODES OR EQ. SAW-2 FOR WELDING.) D1

NOTE "A":- ALL STEEL SURFACES IN THIS AREA TO BE BLAST CLEANED AS PER S.S.P.C. SP5-66. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY PAINT, INCLUDING OPEN HOLES & CONTACT SURFACES. (NO. 3 ALL OPEN HOLES)

PAY ITEM 504.711

MATERIAL A36
RIVETS OR BOLTS NONE
OPEN HOLES 15/16 ℄
A325 FIELD BOLTS 7/8 ℄
SHOP CONTACT SURFACES No PAINT
MILL - NONE
WELDING - AS SHOWN
PAINT ONE COAT AASHO-M72 TYPE II RED LEAD (U.W.)

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

SHOP BILL

LINE	ASSEMBLY MARK	NO.	GRADE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS	MILL ORDER LENGTH FT.	MILL ORDER LENGTH IN.	MILL ORDER ITEM PAGE	MILL ORDER ITEM LINE
1				ONE LATERAL BRACE LB1									
2	a	1	BT	10	31		11	2 1/16		45	10	31	45
3	b	1	PL	13		5/8	1	10 1/2	BENT 14 1/2 x 5/8 x	26	0	28	19
4	FW	1	WD			Fc	1	1					
5				ONE LATERAL BRACE LB2									
6	cf	1	BT	10	31		11	1 7/16		45	10	31	45
7	c	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x	26	0	28	19
8	FW	1	WD			Fc	1	1					
9				ONE LATERAL BRACE LB3									
10	d	1	BT	10	31		11	2 5/8		45	10	31	45
11	f	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x	26	0	28	19
12	FW	1	WD			Fc	1	1					
13				ONE LATERAL BRACING LB4									
14	g	1	BT	10	31		11	0 5/8		45	10	31	45
15	c	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x	26	0	28	19
16	FW	1	WD			Fc	1	1					
17				ONE LATERAL BRACING LB5									
18	k	1	BT	10	31		11	1 7/16		45	10	31	45
19	f	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x	26	0	28	19
20	FW	1	WD			Fc	1	1					
21				ONE LATERAL BRACING LB6									
22	n	1	BT	10	31		10	11 3/8		45	10	31	45
23	c	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x	26	0	28	19
24	FW	1	WD			Fc	1	1					
25				ONE LATERAL BRACING LB7									
26	s	1	BT	10	31		11	8 1/2		45	10	31	45
27	f	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x	26	0	28	19
28	FW	1	WD			5/16	1	1					
29				ONE LATERAL BRACING LB8									
30	w	1	BT	10	31		10	10 1/16		45	10	31	45
31	c	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x	26	0	28	19
32	FW	1	WD			5/16	1	1					
33				ONE LATERAL BRACING LB9									
34	aa	1	BT	10	31		10	11 1/8		45	10	31	45
35	ab	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
36	FW	1	WD			5/16	1	1					
37				ONE LATERAL BRACING LB10									
38	ac	1	BT	10	31		10	9 1/16		45	10	31	45
39	ad	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x	26	0	28	19
40	FW	1	WD			5/16	1	1					
41				ONE LATERAL BRACING LB11									
42	af	1	BT	10	31		10	10 5/8		45	10	31	45
43	ag	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
44	FW	1	WD			5/16	1	1					
45				ONE LATERAL BRACING LB12									
46	ah	1	BT	10	31		10	8 7/16		45	10	31	45
47	ak	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
48	FW	1	WD			Fc	1	1					
49				ONE LATERAL BRACING LB13									
50	am	1	BT	10	31		10	10 1/16		45	10	31	45
51	ap	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
52	FW	1	WD			Fc	1	1					
53				ONE LATERAL BRACING LB14									
54	as	1	BT	10	31		10	7 7/8		45	10	31	45
55	ak	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
56	FW	1	WD			5/16	1	1					
57				ONE LATERAL BRACING LB15									
58	aw	1	BT	10	31		10	8 7/16		45	10	31	45
59	ay	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
60	FW	1	WD			5/16	1	1					
61				ONE LATERAL BRACING LB16									
62	ba	1	BT	10	31		10	6 15/16		45	10	31	45
63	bb	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
64	FW	1	WD			5/16	1	1					
65													
66													
67				ONE LATERAL BRACING LB17									
68	bc	1	BT	10	31		10	8		45	10	31	45
69	bd	1	PL	13		5/8	2	0	4 BENT 14 1/2 x 5/8 x	26	0	28	19
70	FW	1	WD			5/16	1	1					
71				ONE LATERAL BRACING LB18									
72	cf	1	BT	10	31		10	5 15/16		45	10	31	45
73	cg	1	PL	13		5/8	2	0	4 BENT 14 1/2 x 5/8 x	26	0	28	19
74	FW	1	WD			5/16	1	1					
75				ONE LATERAL BRACING LB19									
76	bg	1	BT	10	31		10	6 15/16		45	10	31	45
77	bh	1	PL	13		5/8	2	0	3/4 BENT 14 1/2 x 5/8 x	26	0	28	19
78	FW	1	WD			5/16	1	1					
79				ONE LATERAL BRACING LB20									
80	bk	1	BT	10	31		10	5 7/16		45	10	31	45
81	bm	1	PL	13		5/8	2	0	4 BENT 14 1/2 x 5/8 x	26	0	28	19
82	FW	1	WD			5/16	1	1					
83				ONE LATERAL BRACING LB21									
84	bp	1	BT	10	31		10	5 7/16		45	10	31	45
85	bs	1	PL	13		5/8	2	0	3/4 BENT 14 1/2 x 5/8 x	26	0	28	19
86	FW	1	WD			5/16	1	1					
87				ONE LATERAL BRACING LB22									
88	bt	1	BT	10	31		10	4		45	10	31	45
89	bw	1	PL	13		5/8	2	0	3/4 BENT 14 1/2 x 5/8 x	26	0	28	19
90	FW	1	WD			5/16	1	1					
91				ONE LATERAL BRACING LB23									
92	ca	1	BT	10	31		8	11 1/2		40	0	31	44
93	cb	1	PL	13		5/8	2	1	BENT 14 1/2 x 5/8 x	26	0	28	19
94	FW	1	WD			5/16	1	1					
95				ONE LATERAL BRACING LB24									
96	cc	1	BT	10	31		8	4 3/4		40	0	31	44
97	cd	1	PL	11 3/4		5/8	2	3 1/2	BENT 14 1/2 x 5/8 x	26	0	28	19
98	FW	1	WD			5/16	1	1					

LINES 56C

LATERAL BRACING - STA. 524+26.00 to STA 527+08.00

CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE PROJECT NO. I95 (12) 16
CONT NO 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM POTTSTOWN WORKS
MADE BY KIRK DATE 8-8-69 IN CHARGE B.K. BERTOLET
CHECKED BY ATD DATE 8/26/69 SHOP NO. 2
CONTRACT CJ6249-071 DRAWING NO. 15

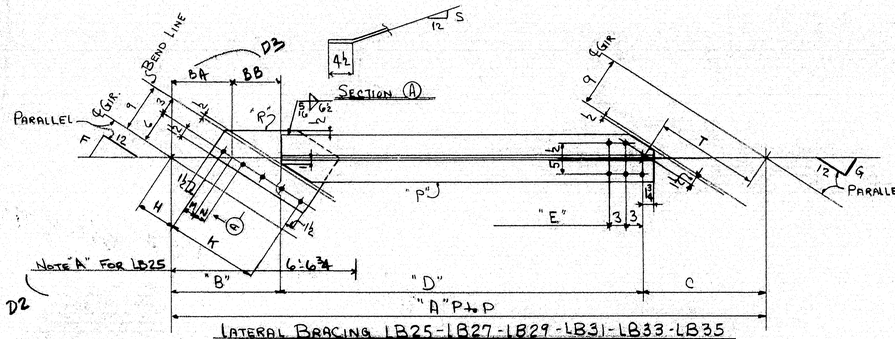
NO.	DATE	REVISION
23		
22	11/28	ADDN
21	11/7	DTD

O.S.I. - 1

35433 (Rev. C 4-63)

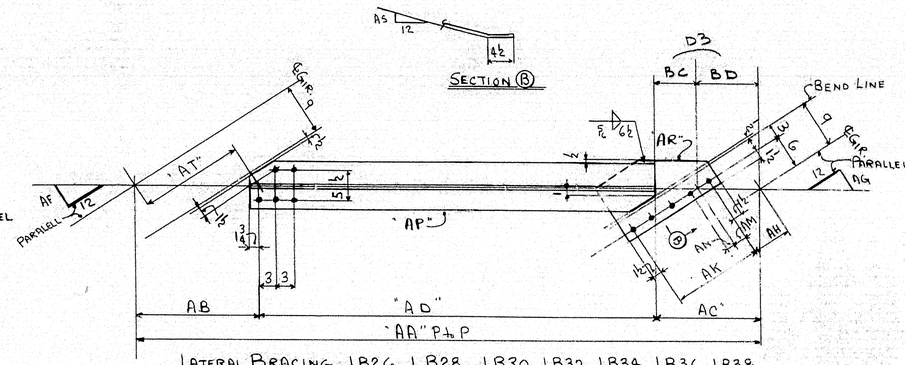
106-67

LOWER LINE 15-16



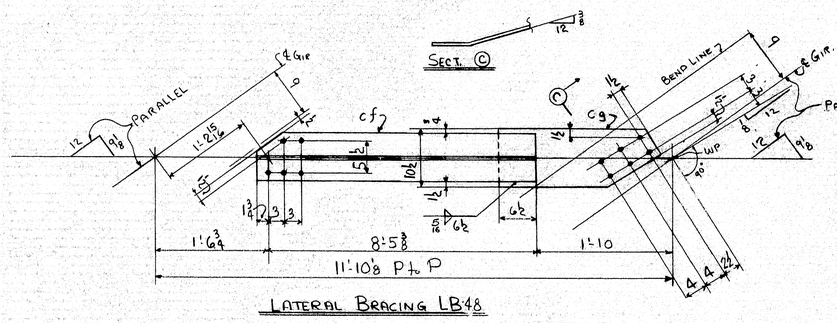
LATERAL BRACING LB25-LB27-LB29-LB31-LB33-LB35
LB37-LB39 LB41 LB43 LB45 LB47

MARK	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	BA	BB
LB25	14'-3 3/8	1'-7	11'-9 3/8	10'-11 3/8	10'-5 5/8	7 3/4	7 3/4	7	4@5'-1 1/8	2 5/8	2 1/4	a	b	1/4	1'-6 1/4	11 3/16	7 15/16
LB27	14'-3 9/16	1'-7	11'-9 3/8	10'-10 1/8	10'-4 1/4	7 1/4	7 1/4	7	4@5'-1'-8	2 3/8	2 3/8	f	b	1/4	1'-6 1/4	11 3/16	7 15/16
LB29	14'-3 3/16	1'-7 3/4	11'-10 1/4	10'-9 7/8	10'-3 3/16	7 1/8	7 1/8	6 3/4	4@5'-1 1/4-1'-9	2 1/16	2 1/16	m	n	1/4	1'-6 1/16	11 3/16	8 1/16
LB31	14'-3	1'-7 3/4	11'-9 5/8	10'-9 3/8	10'-3 3/16	7 1/8	7 1/8	6 3/4	4@5'-1 1/4-1'-9	2 3/8	2 1/2	t	n	1/4	1'-6 7/16	11 3/16	8 1/16
LB33	14'-2 11/16	1'-7 3/4	11'-10 1/4	10'-8 1/16	10'-2 1/16	7 1/2	7 1/8	6 3/4	4@5'-1 1/4-1'-9	2 3/8	2 3/8	ab	n	1/4	1'-6 1/8	11 3/16	8 3/16
LB35	14'-2 7/8	1'-7 3/4	11'-10 1/4	10'-8 5/16	10'-2 1/16	7 1/8	7 1/8	6 3/4	4@5'-1 1/4-1'-9	2 7/16	2 5/16	aq	n	1/4	1'-6 3/8	11 3/8	8 3/8
LB37	14'-1 15/16	1'-7 3/4	11'-10 1/4	10'-7 15/16	10'-1 15/16	7 1/16	7 1/16	6 3/4	4@5'-1 1/4-1'-9	2 5/16	2 5/16	ap	n	1/4	1'-6 7/16	11 3/8	8 3/8
LB39	14'-1 5/8	1'-8 1/4	11'-10 3/4	10'-7 5/8	10'-0 5/8	7 1/8	7 1/8	7	3@5'-1'-3 1/2-5 1/2	2 3/8	2 1/2	ba	bb	1/4	1'-7 3/8	11 5/16	8 5/8
LB41	14'-1 1/4	1'-8 1/4	11'-10 3/4	10'-6 3/4	10'-0 1/4	7 1/8	7 1/8	7	3@5'-1'-3 1/2-5 1/2	2 1/8	2 1/16	bf	bb	1/4	1'-7 7/16	11 1/2	8 3/4
LB43	14'-0 15/16	1'-8 1/4	11'-10 3/4	10'-5 15/16	9'-11 15/16	7 1/4	7 1/8	7	3@5'-1'-3 1/2-5 1/2	2 1/16	2 1/16	bm	bb	1/4	1'-7 1/2	11 5/16	8 5/8
LB45	14'-0 5/8	1'-8 3/4	11'-11 1/4	10'-4 7/8	9'-10 5/8	7 1/8	7 1/8	7 1/4	5@4'-3@5'-1'-1 1/4	2 3/16	2 1/8	bt	bw	1/4	1'-7 15/16	11 3/32	9 3/32
LB47	11'-11 3/4	1'-5 5/8	11'-7	8'-11 1/8	8'-5 1/8	9	9	5 1/2	4@4 1/2-1'-7	2 1/2	2 1/4	cc	cd	1/4	1'-3 7/16	10	7 7/8



LATERAL BRACING LB26 LB28 LB30 LB32 LB34 LB36 LB38
LB40 LB42 LB44 LB46

MARK	AA	AB	AC	AD	AF	AG	AH	AK	AM	AN	AP	AR	AS	AT	BC	BD
LB26	14'-2 1/16	1'-9 1/2	1'-7	10'-9 7/16	7 1/2	7 1/2	6 3/8	4@5'-1'-8	2 5/8	2 3/8	c	d	1/4	1'-6	7 3/4	11 3/32
LB28	14'-1 3/4	1'-9 3/4	1'-7	10'-9	7 3/8	7 3/4	7	4@5'-1'-8	2 5/8	2 1/16	h	g	1/4	1'-6 1/4	7 15/16	11 1/16
LB30	14'-1 7/16	1'-9 7/8	1'-7	10'-8 1/16	7 1/16	7 1/16	7	4@5'-1'-8	2 5/8	2 5/8	p	d	1/4	1'-6 7/16	7 3/8	11 1/8
LB32	14'-1 1/16	1'-10 1/4	1'-7	10'-7 1/16	7 1/8	7 1/16	7	4@5'-1'-9	2 3/8	2 3/8	y	af	1/4	1'-6 1/8	7 3/8	11 1/8
LB34	14'-0 1/16	1'-10 1/4	1'-7 3/4	10'-6 1/8	7 1/16	7 1/8	6 3/4	4@5'-1'-9	2 1/16	2 1/8	ad	af	1/4	1'-6 1/8	8 3/16	11 3/16
LB36	14'-0 1/8	1'-10 1/4	1'-7 3/4	10'-6 1/16	7 1/8	7 1/8	6 3/4	4@5'-1'-9	2 3/8	2 1/4	ak	af	1/4	1'-6 3/8	8 3/16	11 3/16
LB38	14'-0 1/16	1'-10 1/4	1'-7 3/4	10'-6 1/16	7 1/8	7 1/8	6 3/4	4@5'-1'-9	2 3/8	2 3/8	at	af	1/4	1'-6 3/8	8 3/16	11 3/16
LB40	13'-11 7/8	1'-10 1/4	1'-8 1/4	10'-5 7/8	7 7/16	7 1/16	6 3/4	4@5'-1'-9	2 1/16	2 1/8	bc	af	1/4	1'-6 1/16	8 3/8	11 3/8
LB42	13'-11 1/4	1'-10 3/4	1'-8 1/4	10'-5 1/2	7 3/8	7 3/8	7	5@3-4@5'-1'-3 1/2	2 3/16	2 1/16	bh	bk	1/4	1'-7 3/8	8 1/2	11 7/16
LB44	13'-11 7/16	1'-10 3/4	1'-8 1/4	10'-4 15/16	7 3/8	7 3/8	7	5@3-4@5'-1'-3 1/2	2 1/16	2 1/16	bp	bk	1/4	1'-7 7/16	8 3/4	11 1/2
LB46	13'-10 7/8	1'-10 3/4	1'-8 1/4	10'-3 7/8	7 1/4	7 1/4	7	5@3-4@5'-1'-3 1/2	2 1/16	2 1/16	ca	bk	1/4	1'-7 1/2	8 5/8	11 5/8



	a	b	c
a			
b			
c			
d			
e			
f			
g			
h			
k			
m			
p			
s			
w			
y			

For location of details shown on this sheet refer to diagrams.

GD3-E5

INSTALL			REQUIRED LIST			
19E	18E	17E	QTY	MARKS	DESCRIPTION	REMARKS
1			ONE	LB25	LATERAL BRACE	
1			ONE	LB26	〃	
1			ONE	LB27	〃	
1			ONE	LB28	〃	
1			ONE	LB29	〃	
1			ONE	LB30	〃	
1			ONE	LB31	〃	
1			ONE	LB32	〃	
	1		ONE	LB33	〃	
	1		ONE	LB34	〃	
	1		ONE	LB35	〃	
	1		ONE	LB36	〃	
	1		ONE	LB37	〃	
	1		ONE	LB38	〃	
	1		ONE	LB39	〃	
	1		ONE	LB40	〃	
		1	ONE	LB41	〃	
		1	ONE	LB42	〃	
		1	ONE	LB43	〃	
		1	ONE	LB44	〃	
		1	ONE	LB45	〃	
		1	ONE	LB46	〃	
		1	ONE	LB47	〃	
		1	ONE	LB48	〃	

APPROVED VERSION
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY S.S. Nishimura
OCT 1 1969

JOHNSON 451

67			ONE LATERAL BRACE LB41																
68		bf	1	BT	10	31							10 8				45	10	31 45
69		bb	1	PL	13			5/8	2	0 4	BENT	14 1/2 x 5/8 x					26	0	28 19
70		FW	1	WD				5/16	1	1									
71			ONE LATERAL BRACE LB42																
72		bh	1	BT	10	31							10 6 4				45	10	31 45
73		bk	1	PL	13			5/8	2	0 4	BENT	14 1/2 x 5/8 x					26	0	28 19
74		FW	1	WD				5/16	1	1									
75			ONE LATERAL BRACE LB43																
76		bm	1	BT	10	31							10 7 1/16				45	10	31 45
77		bb	1	PL	13			5/8	2	0 4	BENT	14 1/2 x 5/8 x					26	0	28 19
78		FW	1	WD				5/16	1	1									
79			ONE LATERAL BRACE LB44																
80		bp	1	BT	10	31							10 5 5/8				45	10	31 45
81		bk	1	PL	13			5/8	2	0 4	BENT	14 1/2 x 5/8 x					26	0	28 19
82		FW	1	WD				5/16	1	1									
83			ONE LATERAL BRACING LB45																
84		bt	1	BT	10	31							10 6 3/8				45	10	31 45
85		bw	1	PL	13			5/8	2	0 4	BENT	14 1/2 x 5/8 x					26	0	28 19
86		FW	1	WD				5/16	1	1									
87			ONE LATERAL BRACE LB46																
88		ca	1	BT	10	31							10 5 5/8				45	10	31 45
89		bk	1	PL	13			5/8	2	0 4	BENT	14 1/2 x 5/8 x					26	0	28 19
90		FW	1	WD				5/16	1	1									
91			ONE LATERAL BRACE LB47																
92		cc	1	BT	10	31							9 0 1/8				40	0	31 44
93		cd	1	PL	13			5/8	1	10	BENT	14 1/2 x 5/8 x					26	0	28 19
94		FW	1	WD				5/16	1	1									
95			ONE LATERAL BRACE LB48									14 1/2 x 5/8 x					26	0	28 19
96		cf	1	BT	10	31							8 7/8				40	0	31 44
97		cg	1	PL	10 1/2			5/8	2	2 1/2	BENT	14 1/2 x 5/8 x					26	0	28 19
98		FW	1	WD				5/16	1	1									

LINES 1-15

(MATL THK TO 3/4" INCL MUST BE PREHEATED TO 50°F USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR. SAW-2 FOR WELDING

D2 NOTE "A" - ALL STEEL SURFACES IN THIS AREA TO BE BLAST CLEANED AS PER SSPC-SP5-66. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY PAINT, INCLUDING OPEN HOLES & CONTACT SURFACES.

PAY ITEM 504.711

D1

SHOP BILL												MILL ORDER			
LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION USE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS	LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
1		ONE LATERAL BRACE LB25											
2	a	1	BT	10	31			11 0 3/8		45	10	31	45
3	b	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x	26	0	28	19
4	FW	1	WD			5/16	1	1					
5		ONE LATERAL BRACE LB26											
6	c	1	BT	10	31			10 11 7/8		45	10	31	45
7	d	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x	26	0	28	19
8	FW	1	WD			5/16	1	1					
9		ONE LATERAL BRACE LB27											
10	f	1	BT	10	31			11 0 7/16		45	10	31	45
11	b	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x	26	0	28	19
12	FW	1	WD			5/16	1	1					
13		ONE LATERAL BRACE LB28											
14	h	1	BT	10	31			10 10 3/4		45	10	31	45
15	d	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x	26	0	28	19
16	FW	1	WD			5/16	1	1					
17		ONE LATERAL BRACE LB29											
18	m	1	BT	10	31			10 10 5/8		45	10	31	45
19	n	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
20	FW	1	WD			5/16	1	1					
21		ONE LATERAL BRACE LB30											
22	p	1	BT	10	31			10 10 5/8		45	10	31	45
23	d	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x	26	0	28	19
24	FW	1	WD			5/16	1	1					
25		ONE LATERAL BRACE LB31											
26	t	1	BT	10	31			10 11 5/8		45	10	31	45
27	n	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
28	FW	1	WD			5/16	1	1					
29		ONE LATERAL BRACE LB32											
30	y	1	BT	10	31			10 9 1/16		45	10	31	45
31	af	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
32	FW	1	WD			5/16	1	1					
33		ONE LATERAL BRACE LB33											
34	ab	1	BT	10	31			10 10 1/16		45	10	31	45
35	n	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
36	FW	1	WD			5/16	1	1					
37		ONE LATERAL BRACE LB34											
38	ad	1	BT	10	31			10 8 5/8		45	10	31	45
39	af	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
40	FW	1	WD			5/16	1	1					
41		ONE LATERAL BRACE LB35											
42	ag	1	BT	10	31			10 10 1/16		45	10	31	45
43	n	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
44	FW	1	WD			5/16	1	1					
45		ONE LATERAL BRACE LB36											
46	ak	1	BT	10	31			10 8 5/8		45	10	31	45
47	af	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
48	FW	1	WD			5/16	1	1					
49		ONE LATERAL BRACE LB37											
50	ap	1	BT	10	31			10 9 1/16		45	10	31	45
51	n	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
52	FW	1	WD			5/16	1	1					
53		ONE LATERAL BRACE LB38											
54	at	1	BT	10	31			10 7 15/16		45	10	31	45
55	af	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
56	FW	1	WD			5/16	1	1					
57		ONE LATERAL BRACE LB39											
58	ba	1	BT	10	31			10 8 3/8		45	10	31	45
59	bb	1	PL	13		5/8	2	0 4	BENT 14 1/2 x 5/8 x	26	0	28	19
60	FW	1	WD			5/16	1	1					
61		ONE LATERAL BRACE LB40											
62	bc	1	BT	10	31			10 7 3/8		45	10	31	45
63	af	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	26	0	28	19
64	FW	1	WD			5/16	1	1					
65													
66													

LATERAL BRACING, STA 524+26.00 to 527+08.00

MATERIAL A36
RIVETS OR BOLTS NONE
OPEN HOLES 15/16 ø
A325 FIELD BOLTS 7/8 ø
SHOP CONTACT SURFACES NO PAINT
PAINT MILL - NONE
WELDING AS SHOWN
ONE COAT AASHO-M72 TYPE II RED LEAD (U.N.)

(15) ALL OPEN HOLES

REVISION			
D3	11/25	RDM	
D2	9/9	DTD	
NO.	DATE	INIT.	

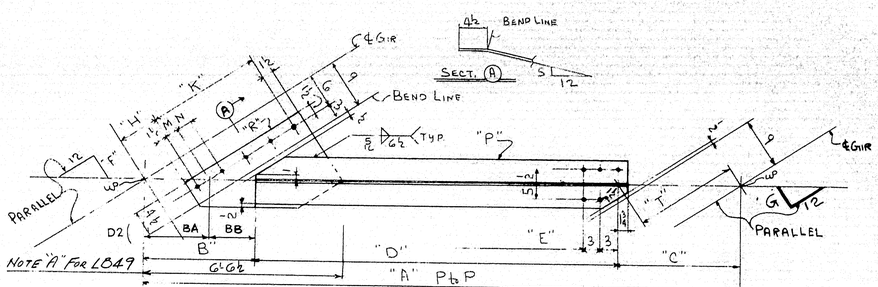
SUBMITTAL | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
DATE

CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE PROJECT NO I95 I(22) 16
CONT. NO. 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM POTTSTOWN WORKS
MADE BY KRK DATE 5-14-69 IN CHARGE BK BERTOLET
CHECKED BY BT DATE 5/26/69 SHOP NO. 2
CONTRACT C-16249-071 DRAWING NO. 16

O.S.I-1

106-69

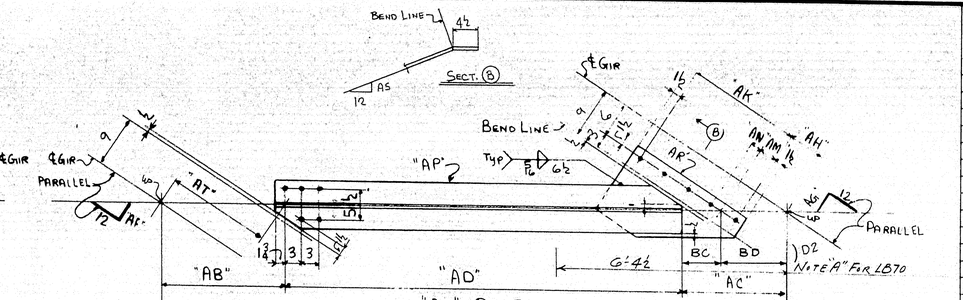
UPPER LINE 4 & 5



FOR LEFT END OF LB57 & LB63 SEE CENTER BELOW.

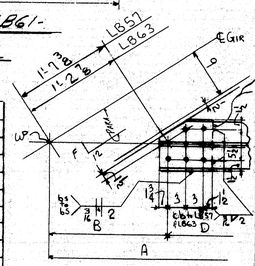
LATERAL BRACING LB51-LB53-LB55-LB57-LB59-LB61-LB63-LB65-LB67-LB69 & LB49

MARK	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T
LB51	14'-9 3/8	1'-7 3/4	1'-10 1/4	11'-3 1/2	10'-9 7/8	7 7/16	7 5/8	6 3/4	4@5 3/4 = 1'-9	2 3/8	2 1/2	f	g	h	1'-6 13/16
LB53	14'-8 13/16	1'-7 3/4	1'-10 1/4	11'-2 15/16	10'-8 15/16	7 1/2	7 11/16	6 3/4	4@5 3/4 = 1'-9	2 3/8	2 3/8	M	n		1'-6 13/16
LB55	12'-4 1/4	1'-4 3/4	1'-6	9'-5 1/2	8'-11 1/2	7 1/16	7 5/16	5	4@3 3/4 + 4@3 3/4 + 1'-1 1/2	2 7/16	2 3/8	t	w		1'-2
LB57	14'-10 1/4	1'-10 3/8	1'-10 3/8	11'-0 3/8	10'-6 3/8	7 5/8	7 5/8	–	———	–	–	bt	–	–	1'-7 7/16
LB59	14'-8 1/2	1'-8 1/4	1'-10 3/4	11'-1 1/16	10'-7 1/8	7 5/8	7 5/8	7	3@5 3/4 + 1'-3 3/8 + 5 1/2	2 3/8	2 3/8	as	ac	5/8	1'-7 7/16
LB61	14'-7 1/16	1'-8 1/4	1'-10 3/4	11'-1 1/16	10'-6 11/16	7 7/16	7 7/16	7	3@5 3/4 + 1'-3 3/8 + 5 1/2	2 3/8	2 3/8	am	an	7/8	1'-7 7/16
LB63	12'-4 7/16	1'-6	1'-6 3/4	9'-4 7/16	8'-10 5/8	9 3/8	9 3/8	–	———	–	–	cc	–	–	1'-2 1/2
LB65	14'-8 3/4	1'-8 3/4	1'-11 1/4	11'-0 3/4	10'-6 3/4	7 1/8	7 1/8	7 1/4	5 1/4 - 3@5 1/2 = 1'-4 1/2	2 3/8	2 3/8	ba	bb	7/8	1'-8
LB67	14'-7 1/2	1'-8 3/4	1'-11 1/4	10'-11 1/2	10'-5 1/2	7 1/8	7 1/8	7 1/4	5 1/4 - 3@5 1/2 = 1'-4 1/2	2 3/8	2 3/8	bf	bb	7/8	1'-8
LB69	14'-6 1/4	1'-8 3/4	1'-11 1/4	10'-10 1/4	10'-4 1/4	7 1/8	7 1/8	7 1/4	5 1/4 - 3@5 1/2 = 1'-4 1/2	2 3/8	2 3/8	bk	bb	7/8	1'-8
LB49	14'-10 3/8	1'-7 3/4	1'-10 1/4	11'-4 3/8	10'-10 3/8	7 7/8	7 7/8	6 3/4	4@5 3/4 = 1'-9	2 1/16	2 7/16	a	b	3/8	1'-6 7/16

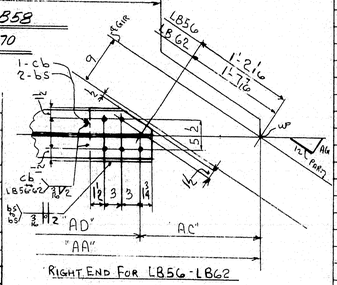


LATERAL BRACING LB50-LB52-LB54-LB56-LB58-LB60-LB62-LB64-LB66-LB68 & LB70

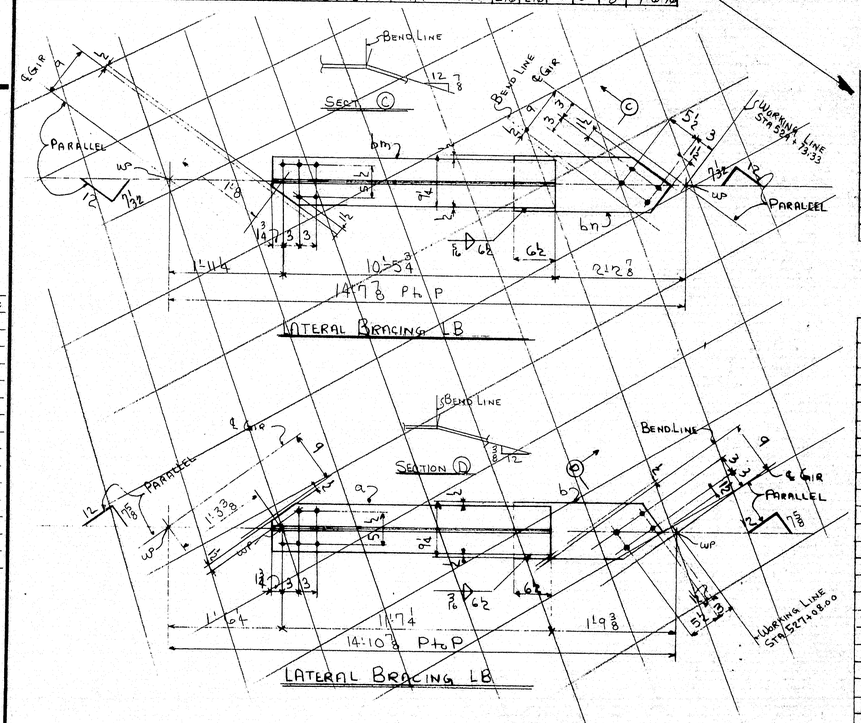
MARK	AA	AB	AC	AD	AF	AG	AH	AK	AM	AN	AP	AR	AS	AT
LB50	14'-8 3/4	1'-9 7/8	1'-7	11'-3 3/8	7 1/16	7 3/8	7	4@5 = 1'-8	2 7/8	2 1/16	c	d	5/8	1'-6 7/16
LB52	14'-8 3/8	1'-10 7/8	1'-7 3/4	11'-2 1/8	7 5/8	7 5/8	6 3/4	4@5 1/2 = 1'-9	2 3/8	2 1/2	h	k	5/8	1'-6 13/16
LB54	14'-8 1/8	1'-10 1/4	1'-7 3/4	11'-2 1/16	7 5/8	7 5/8	6 3/4	4@5 1/2 = 1'-9	2 3/8	2 1/2	p	s	3/4	1'-6 3/4
LB56	12'-5 5/8	1'-6	1'-6	9'-5 1/2	9 7/16	9 7/16	–	———	–	–	bp	–	–	1'-2 1/16
LB58	14'-7 7/8	1'-10 1/4	1'-7 3/4	11'-1 9/16	7 7/8	7 7/8	6 3/4	4@5 1/4 = 1'-9	2 1/8	2 5/8	ad	af	13/16	1'-7 3/8
LB60	14'-7 7/8	1'-10 3/4	1'-8 1/4	11'-0 5/8	7 5/8	7 5/8	7	5 1/2 - 3@5 1/2 = 1'-4 1/2	2 1/8	2 1/16	ah	ak	5/8	1'-6 13/16
LB62	14'-8 7/16	1'-10 3/4	1'-9 3/4	10'-11 1/2	7 1/4	7 1/4	–	———	–	–	ca	–	–	1'-7 1/2
LB64	12'-11 1/2	1'-6	1'-4 3/4	9'-2 3/4	9 7/16	9 7/16	5	5@4 3/8 - 1'-1 5/8 = 4 5/8	2 1/2	2 1/2	as	aw	5/8	1'-2 1/16
LB66	14'-6 5/8	1'-11 1/4	1'-8 3/4	10'-11 5/8	7 3/16	7 3/16	7	3@5 1/2 - 1'-4 1/2 - 5 1/4	3	2 7/8	bc	bd	7/8	1'-8
LB68	14'-7 1/4	1'-11 1/4	1'-8 3/4	10'-11 3/4	7 1/8	7 1/8	7 1/8	3@5 1/2 - 1'-4 1/2 - 5 1/4	2 7/8	2 3/8	bg	bd	7/8	1'-8
LB70	14'-7 3/8	1'-11 1/2	1'-8 1/2	10'-11 7/8	7 1/4	7 3/16	7 1/8	3@5 1/2 - 1'-4 1/2 - 5 1/4	3 1/16	2 7/16	bm	bn	3/8	1'-7 1/16



LEFT END FOR LB57-LB63



RIGHT END FOR LB56-LB62



MARK	BA	BB
LB51	11 3/32	8 17/32
LB53	11 1/16	8 13/32
LB55	9 1/16	7 1/16
LB59	11 1/16	8 1/16
LB61	11 1/16	8 1/16
LB65	11 3/32	8 17/32
LB67	11 3/32	8 17/32
LB69	11 3/32	8 17/32
LB49	11 1/16	8 1/16

MARK	BC	BD
LB50	7 23/32	11 3/32
LB52	8 1/16	11 1/16
LB54	8 3/32	11 3/32
LB58	8 1/32	11 3/32
LB60	8 3/32	11 1/32
LB64	7 3/8	9 13/32
LB66	8 3/32	11 1/32
LB68	8 3/32	11 3/32
LB70	8 1/32	11 1/16

INSTALL 16W	15W	14W	QTY	MARKS	REQUIRED LIST DESCRIPTION		REMARKS
			ONE	LB49	LATERAL	BRACE	
1			ONE	LB50	″	″	
1			ONE	LB51	″	″	
1			ONE	LB52	″	″	
1			ONE	LB53	″	″	
1			ONE	LB54	″	″	
1			ONE	LB55	″	″	
1			ONE	LB56	″	″	
	1		ONE	LB57	″	″	
	1		ONE	LB58	″	″	
	1		ONE	LB59	″	″	
	1		ONE	LB60	″	″	
	1		ONE	LB61	″	″	
	1		ONE	LB62	″	″	
		1	ONE	LB63	″	″	
		1	ONE	LB64	″	″	
		1	ONE	LB65	″	″	
		1	ONE	LB66	″	″	
		1	ONE	LB67	″	″	
		1	ONE	LB68	″	″	
		1	ONE	LB69	″	″	
		1	ONE	LB70	″	″	

SHOP BILL										MILL ORDER	
LINE NO.	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE ON POLARIS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS	LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
1				ONE LATERAL BRACE LB49									
2	a	1	BT	10	31			11 6 3/8		50	4	31	46
3	b	1	PL	13		5/8	2	0	BENT 14½×⅝	26	0	28	19
4	FW	1	WD			5/16	1	1					
5				ONE LATERAL BRACE LB50									
6	c	1	BT	10	31			11 5 5/8		50	4	31	46
7	d	1	PL	13		5/8	1	11	BENT 14½×⅝	26	0	28	19
8	FW	1	WD			5/16	1	1					
9				ONE LATERAL BRACE LB51									
10	f	1	BT	10	31			11 5 5/8		45	10	31	45
11	g	1	PL	13		5/8	2	0	BENT 14½×⅝	26	0	28	19
12	FW	1	WD			5/16	1	1					
13				ONE LATERAL BRACE LB52									
14	h	1	BT	10	31			11 4 3/8		45	10	31	45
15	k	1	PL	13		5/8	2	0	BENT 14½×⅝	26	0	28	19
16	FW	1	WD			5/16	1	1					
17				ONE LATERAL BRACE LB53									
18	m	1	BT	10	31			11 4 1/16		45	10	31	45
19	n	1	PL	13		5/8	2	0	BENT 14½×⅝	26	0	28	19
20	FW	1	WD			5/16	1	1					
21				ONE LATERAL BRACE LB54									
22	p	1	BT	10	31			11 4 1/16		45	10	31	45
23	s	1	PL	13		5/8	2	0	BENT 14½×⅝	26	0	28	19
24	FW	1	WD			5/16	1	1					
25				ONE LATERAL BRACE LB55									
26	t	1	BT	10	31			9 7 3/4		50	4	31	46
27	w	1	PL	13		5/8	1	8 3/4	BENT 14½×⅝	26	0	28	19
28	FW	1	WD			5/16	1	1					
29				ONE LATERAL BRACE LB58									
30	ad	1	BT	10	31			11 3/16		45	10	31	45
31	af	1	PL	13		5/8	2	0	BENT 14½×⅝	26	0	28	19
32	FW	1	WD			5/16	1	1					
33				ONE LATERAL BRACE LB59									
34	ag	1	BT	10	31			11 3/16		45	10	31	45
35	ac	1	PL	13		5/8	2	0 4	BENT 14½×⅝	26	0	28	19
36	FW	1	WD			5/16	1	1					
37				ONE LATERAL BRACE LB60									
38	ah	1	BT	10	31			11 2 5/8		45	10	31	45
39	ak	1	PL	13		5/8	2	0 4	BENT 14½×⅝	26	0	28	19
40	FW	1	WD			5/16	1	1					
41				ONE LATERAL BRACE LB61									
42	am	1	BT	10	31			11 2 7/16		45	10	31	45
43	an	1	PL	13		5/8	2	1	BENT 14½×⅝	26	0	28	19
44	FW	1	WD			5/16	1	1					
45				ONE LATERAL BRACE LB64									
46	as	1	BT	10	31			9 4 1/2		50	4	31	46
47	aw	1	PL	13		5/8	1	8 3/4	BENT 14½×⅝	26	0	28	19
48	FW	1	WD			5/16	1	1					
49				ONE LATERAL BRACE LB65									
50	ba	1	BT	10	31			11 2 1/4		45	10	31	45
51	bb	1	PL	13		5/8	2	0 3/4	BENT 14½×⅝	26	0	28	19
52	FW	1	WD			5/16	1	1					
53				ONE LATERAL BRACE LB66									
54	bc	1	BT	10	31			11 0 3/8		45	10	31	45
55	bd	1	PL	13		5/8	2	0 3/4	BENT 14½×⅝	26	0	28	19
56	FW	1	WD			5/16	1	1					
57				ONE LATERAL BRACE LB67									
58	bf	1	BT	10	31			11 1 4		45	10	31	45
59	bb	1	PL	13		5/8	2	0 3/4	BENT 14½×⅝	26	0	28	19
60	FW	1	WD			5/16	1	1					
61				ONE LATERAL BRACE LB68									
62	bg	1	BT	10	31			11 1		45	10	31	45
63	bd	1	PL	13		5/8	2	0 3/4	BENT 14½×⅝	26	0	28	19
64	FW	1	WD			5/16	1	1					
67				ONE LATERAL BRACE LB69									
68	bk	1	BT	10	31			11 0		50	4	31	46
69	bb	1	PL	13		5/8	2	0 3/4	BENT 14½×⅝	26	0	28	19
70	FW	1	WD			5/16	1	1					
71				ONE LATERAL BRACE LB70									
72	bm	1	BT	10	31			11 1 3/8		50	4	31	46
73	bn	1	PL	13		5/8	2	0 3/4	BENT 14½×⅝	26	0	28	19
74	FW	1	WD			5/16	1	1					
75				ONE LATERAL BRACE LB56									
76	bp	1	BT	10	31			9 9		50	4	31	46
77	bs	2	FILL	9/4		3/4		0 9/4					
78	cb	1	FILL	9/4		3/8		0 9/4					
79	FW	1	WD			5/16		0 4					
80	SD	1	WD			5/16		0 8					
81				ONE LATERAL BRACE LB57									
82	bt	1	BT	10	31			11 4 1/4		50	4	31	46
83	bs	2	FILL	9/4		3/4		0 9/4					
84	cb	1	FILL	9/4		3/8		0 9/4					
85	FW	1	WD			5/16		0 4					
86	SD	1	WD			5/16		0 8					
87				ONE LATERAL BRACE LB62									
88	ca	1	BT	10	31			11 3 7/16		45	10	31	45
89	bs	2	FILL	9/4		3/4		0 9/4					
90	cb	1	FILL	9/4		3/8		0 9/4					
91	FW	1	WD			5/16		0 4					
92	SD	1	WD			5/16		0 8					
93				ONE LATERAL BRACE LB63									
94	cc	1	BT	10	31			9 7 1/16		50	4	31	46
95	bs	2	FILL	9/4		3/4		0 9/4					
96	cb	1	FILL	9/4		3/8		0 9/4					
97	FW	1	WD			5/16		0 4					
98	SD	1	WD			5/16		0 8					

LINE 4-5

LATERAL BRACING STA 527+08.00 to STA 529+73.33

MATL THK TO 2" INCL MUST BE PREHEATED TO 50°F. USE E70XX, 18, 28, LOW HYDROGEN ELECTRODES OR GR SAW-2 FOR WELDING.

PAY ITEM 504.711

NOTE "A"
ALL STEEL SURFACES IN THIS AREA TO BE BLAST CLEANED AS PER SSPC-SP5-GG. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY PAINT INCLUDING OPEN HOLES & CONTACT SURFACES.

MATERIAL A36
RIVETS OR BOLTS NONE
OPEN HOLES 15/16
A325 FIELD BOLTS 7/8
SHOP CONTACT SURFACES No PAINT (UN)
MILL NONE
WELDING AS SHOWN
PAINT ONE COAT AASHO M72 TYPE II RED LEAD (UN)
ALL OPEN HOLES (UN)

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

NO.	DATE	INIT.	REVISION
0	1/4/67	BTD	

CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE PROJECT NO I 95 I(22) 16
CONT NO 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM POTTSTOWN WORKS
MADE BY MRK DATE 8-12-69 IN CHARGE B.K BERGOLET
CHECKED BY BTD DATE 9/10/69 SHOP NO. 2
CONTRACT CT6249-071 DRAWING NO. 17

APPROVED: HARDESTY & HANOVER CONSULTING ENGINEERS 101 PARK AVE. NEW YORK 17, N.Y.
BY Arnold Hanover DEC 30 1969

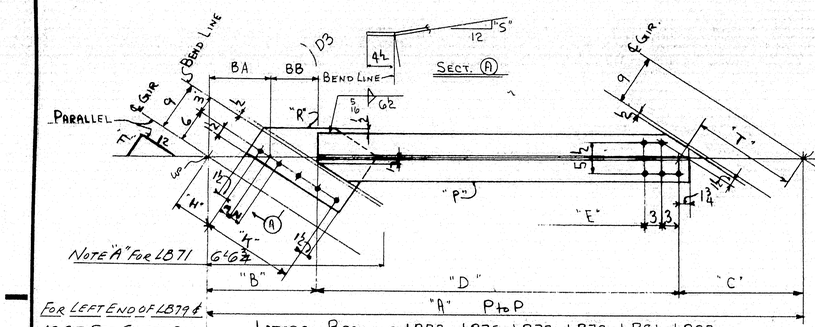
For location of details shown on this sheet refer to diagrams.
GD4-E6

O.S.I. L 106 — A433 (Rev. 6-68) DEC 8 1968

	a	b	c
a			
b			
c			
d			
f			
g			
h			
k			
m			
n			
p			
s			
t			
w			
y			

0 1 2 3 4 5 INCHES

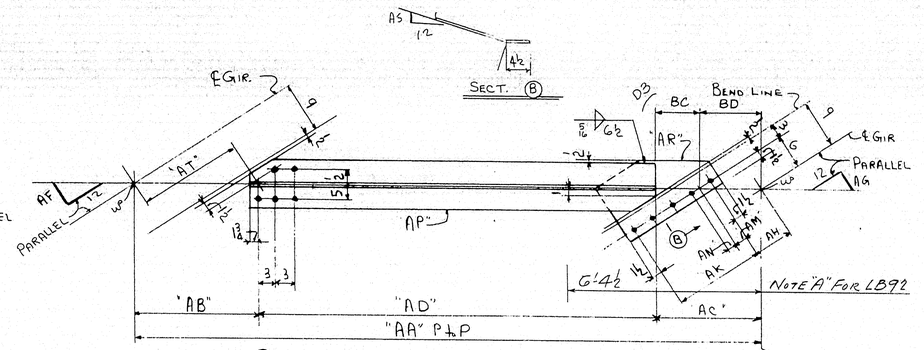
LOWER LINE 12-13



FOR LEFT END OF LB79 & LB85 SEE CENTER BELOW

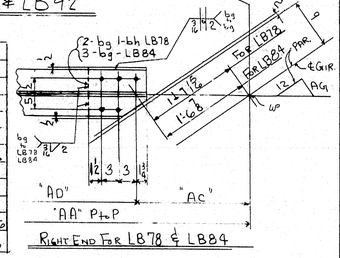
LATERAL BRACING LB73 - LB75 - LB77 - LB79 - LB81 - LB83
LB85 - LB87 - LB89 - LB91 & LB71

MARK	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	BA	BB
LB73	14'-8½	1'-7¾	1'-9⅞	11'-2⅜	10'-8⅞	7¾	7¾	6¾	4@5 - 1'-8	2⅛	2⅞	f	g	½	1'-6½	1'-11⅞	8⅜
LB75	14'-8½	1'-7¾	1'-10¼	11'-2½	10'-8½	7¾	7¾	6¾	4@5 - 1'-8	2⅜	2⅛	m	n	⅝	1'-6½	1'-11⅞	8⅜
LB77	12'-4¾	1'-4¾	1'-6	9'-5½	8'-11½	9¾	9¾	5	4½-3@4½-1'-1½	2½	2½	t	w	1/16	1'-2	1'-9⅜	7'-8
LB79	14'-5¼	1'-10¼	1'-10¼	10'-8⅞	10'-2⅞	7⅞	7⅞	—	—	—	—	bk	—	—	1'-6⅛	—	—
LB81	14'-5½	1'-8¼	1'-10¼	10'-10⅜	10'-4⅜	7⅜	7⅜	7	3@5'-1'-3½-5½	2¾	2½	ac	ad	¾	1'-6⅛	1'-11⅞	8'-1⅜
LB83	14'-5½	1'-8¾	1'-10¾	10'-10	10'-4	7¾	7¾	7¼	5½-3@5'-1'-3½-5½	2¾	2½	ah	ak	⅞	1'-7½	1'-11⅝	9'-3⅜
LB85	11'-10½	1'-4⅞	1'-6	9'-0⅜	8'-6⅜	9⅞	9⅞	—	—	—	—	bp	ap	—	1'-2⅛	—	—
LB87	14'-2⅛	1'-8¾	1'-11¼	10'-6⅛	10'-0⅛	7⅞	7⅞	7¼	5½-3@5'-1'-1½-5½	2⅞	2⅞	ap	ak	⅞	1'-7⅛	1'-11¾	9'
LB89	14'-3⅞	1'-8¾	1'-11¼	10'-7⅜	10'-1⅜	6¾	7¾	7¼	5½-3@5'-1'-1½-5½	3⅛	2⅞	am	ak	⅞	1'-8¼	1'-11⅝	8'-1⅝
LB91	14'-3½	1'-9½	1'-11⅜	10'-6⅝	10'-0⅝	6¾	6¾	7¼	5½-3@5'-1'-1½-5½	2⅞	2⅞	ba	bb	⅞	1'-8⅛	1'-10⅝	9'-1⅞
LB71	14'-8⅛	1'-7	1'-9½	11'-4⅛	10'-10⅛	7¾	7¾	G1	4@5'-1'-8	2¾	2¾	o	b	⅞	1'-6	1'-11⅝	7'-1⅝

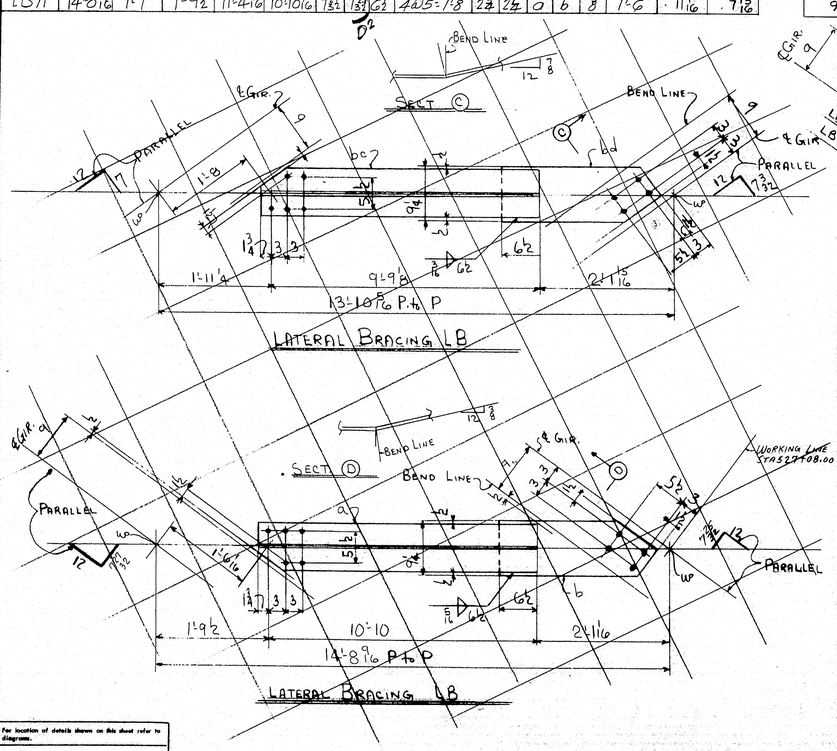


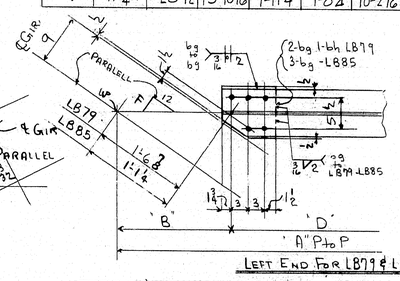
LATERAL BRACING LB72 - LB74 - LB76 - LB78 - LB80 - LB82
LB84 - LB86 - LB88 - LB90 & LB92

BC	BD	MARK	AA	AB	AC	AD	AF	AG	AH	AK	AM	AN	AP	AR	AS	AT
8⅛	10⅛	LB72	14'-6⅞	1'-9½	1'-7	11'-2⅛	7¾	7¾	6½	4@5=1'-8	2⅜	2⅜	c	d	½	1'-6
7⅛	11⅛	LB74	14'-5½	1'-9½	1'-7	11'-1	7¾	7¾	6⅜	4@5=1'-8	2⅜	2⅜	h	k	⅝	1'-6⅛
7⅝	11⅜	LB76	14'-4⅜	1'-9⅜	1'-7	10'-11⅜	7¾	7¾	7	4@5=1'-8	2⅛	2⅛	p	s	⅝	1'-6⅞
—	—	LB78	11'-11⅜	1'-5⅜	1'-5	9'-10⅜	10⅛	10⅛	—	—	—	—	bf	—	—	1'-1⅞
8½	11¼	LB80	14'-3¾	1'-10¼	1'-7¾	10'-9⅞	7¾	7¾	6¾	4@5'-1'-9	2⅜	2¼	aa	ab	¾	1'-6⅜
8⅜	11⅜	LB82	14'-2⅞	1'-10¼	1'-7¾	10'-8⅞	7¾	7¾	6¾	4@5'-1'-9	2⅜	2⅜	af	ag	⅞	1'-6⅛
—	—	LB84	14'-0⅞	1'-10¾	1'-10¼	10'-3⅞	7¾	7¾	—	—	—	—	bm	—	—	1'-7⅜
7⅝	9⅝	LB86	11'-10⅜	1'-7	1'-5¼	8'-10⅜	9⅞	9⅞	5½	4@5-3@4½-1'-1½	2⅜	2⅝	am	an	⅞	1'-3
9⅜	11⅝	LB88	14'-1⅞	1'-11¼	1'-8¾	10'-5⅝	7⅛	7⅛	7¼	3@5'-1'-4½-5¼	2¾	2½	as	at	⅞	1'-8
8⅜	11⅝	LB90	13'-11⅞	1'-11¼	1'-8¾	10'-3⅛	7⅛	7⅛	7¼	3@5'-1'-4½-5¼	2⅜	2⅜	ay	at	⅞	1'-8⅛
9	11¾	LB92	13'-10⅞	1'-11¼	1'-8¾	10'-2⅝	7	7⅜	7¼	3@5½-1'-4½-5¼	2⅜	2⅜	bc	bd	⅞	1'-8⅛



RIGHT END FOR LB78 & LB84





INSTALL. 16E	15E	14E	QTY	MARK	DESCRIPTION	REMARKS
1			ONE	LB71	LATERAL BRACE	
1			ONE	LB72	do do	
1			ONE	LB73	do do	
1			ONE	LB74	do do	
1			ONE	LB75	do do	
1			ONE	LB76	do do	
1			ONE	LB77	do do	
1			ONE	LB78	do do	
	1		ONE	LB79	do do	
	1		ONE	LB80	do do	
	1		ONE	LB81	do do	
	1		ONE	LB82	do do	
	1		ONE	LB83	do do	
	1		ONE	LB84	do do	
		1	ONE	LB85	do do	
		1	ONE	LB86	do do	
		1	ONE	LB87	do do	
		1	ONE	LB88	do do	
		1	ONE	LB89	do do	
		1	ONE	LB90	do do	
		1	ONE	LB91	do do	
		1	ONE	LB92	do do	

a	b	c

For location of details shown on this sheet refer to diagrams.

GD4-E6

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY Arnold Hanover
DEC 30 1969

MATL THK TO 2" INCL MUST BE PREHEATED TO 50°F USE E7016, 18, 28, LOW HYDROGEN ELECTRODES OR GA-SAW-2 FOR WELDING.

NOTE "A" PAY ITEM 504-711
ALL STEEL SURFACES IN THIS AREA TO BE BLAST CLEANED AS PER SSPC-SPS-6G. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY PAINT, INCLUDING OPEN HOLES & CONTACT SURFACES.

SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1				ONE LATERAL BRACE LB71					
2	a	1	BT	10	31		11	5 1/2	
3	b	1	PL	13		5/8	1	11	(BENT) 14½x⅝
4	FW	1	WD			PL	1	1	
5				ONE LATERAL BRACE LB72					
6	c	1	BT	10	31		11	3 1/16	
7	d	1	PL	13		5/8	1	11	BENT 14½x⅝
8	FW	1	WD			PL	1	1	
9				ONE LATERAL BRACE LB73					
10	f	1	BT	10	31		11	4 5/8	
11	g	1	PL	13		5/8	1	11	BENT 14½x⅝
12	FW	1	WD			PL	1	1	
13				ONE LATERAL BRACE LB74					
14	h	1	BT	10	31		11	2 3/8	
15	k	1	PL	13		5/8	1	11	BENT 14½x⅝
16	FW	1	WD			PL	1	1	
17				ONE LATERAL BRACE LB75					
18	m	1	BT	10	31		11	4 4	
19	n	1	PL	13		5/8	1	11	BENT 14½x⅝
20	FW	1	WD			PL	1	1	
21				ONE LATERAL BRACE LB76					
22	p	1	BT	10	31		11	1 3/8	
23	s	1	PL	13		5/8	1	11	BENT 14½x⅝
24	FW	1	WD			PL	1	1	
25				ONE LATERAL BRACE LB77					
26	t	1	BT	10	31		9	7 1/4	
27	w	1	PL	13		5/16	1	8 3/4	BENT 14½x⅝
28	FW	1	WD			PL	1	1	
29				ONE LATERAL BRACE LB80					
30	aa	1	BT	10	31		10	11 1/2	
31	ab	1	PL	13		5/16	2	0	BENT 14½x⅝
32	FW	1	WD			PL	1	1	
33				ONE LATERAL BRACE LB81					
34	ac	1	BT	10	31		10	0 1/2	
35	ad	1	PL	13		5/8	2	0 4	BENT 14½x⅝
36	FW	1	WD			PL	1	1	
37				ONE LATERAL BRACE LB82					
38	af	1	BT	10	31		10	9 1/2	
39	ag	1	PL	13		5/8	2	0	BENT 14½x⅝
40	FW	1	WD			PL	1	1	
41				ONE LATERAL BRACE LB83					
42	ah	1	BT	10	31		10	11 3/4	
43	ak	1	PL	13		5/8	2	0 3/4	BENT 14½x⅝
44	FW	1	WD			PL	1	1	
45				ONE LATERAL BRACE LB86					
46	am	1	BT	10	31		9	0 5/16	
47	an	1	PL	13		5/8	1	9 3/4	BENT 14½x⅝
48	FW	1	WD			5/16	1	1	
49				ONE LATERAL BRACE LB87					
50	ap	1	BT	10	31		10	8 1/16	
51	(ak)	1	PL	13		5/8	2	0 3/4	BENT 14½x⅝
52	FW	1	WD			PL	1	1	
53				ONE LATERAL BRACE LB88					
54	as	1	BT	10	31		10	7 1/4	
55	at	1	PL	13		5/8	2	0 3/4	BENT 14½x⅝
56	FW	1	WD			5/16	1	1	
57				ONE LATERAL BRACE LB89					
58	(aw)	1	BT	10	31		10	8 5/8	
59	(akm)	1	PL	13		5/8	2	0 3/4	BENT 14½x⅝
60	FW	1	WD			5/16	1	1	
61				ONE LATERAL BRACE LB90					
62	ay	1	BT	10	31		10	5 7/8	
63	at	1	PL	13		5/8	2	0 3/4	BENT 14½x⅝
64	FW	1	WD			5/16	1	1	
65									
66									

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
67				ONE LATERAL BRACE LB91					
68	ba	1	BT	10	31		10	8 3/8	
69	bb	1	PL	13		5/8	2	1 3/4	BENT
70	FW	1	WD			PL	1	1	
71				ONE LATERAL BRACE LB92					
72	bc	1	BT	10	31		10	4 1/16	
73	bd	1	PL	13		5/8	2	0 2/8	BENT
74	FW	1	WD			PL	1	1	
75				ONE LATERAL BRACE LB78					
76	bf	1	BT	10	31		9	4 3/8	
77	bg	2	FLL	9¼		3/4	0	9¼	
78	bh	1	FLL	9¼		5/8	0	9¼	
79	SD	1	WD			3/16	0	8	
80	FW	1	WD			PL	0	4	
81				ONE LATERAL BRACE LB79					
82	bk	1	BT	10	31		11	0 1/16	
83	bg	2	FLL	9¼		3/4	0	9¼	
84	bh	1	FLL	9¼		5/8	0	9¼	
85	SD	1	WD			3/16	0	8	
86	FW	1	WD			PL	0	4	
87				ONE LATERAL BRACE LB84					
88	bm	1	BT	10	31		10	7 1/16	
89	bg	3	FLL	9¼		3/4	0	9¼	
90	SD	1	WD			3/16	0	8	
91	FW	1	WD			PL	0	4	
92				ONE LATERAL BRACE LB85					
93	bp	1	BT	10	31		9	3 5/8	
94	bg	3	FLL	9¼		3/4	0	9¼	
95	SD	1	WD			3/16	0	8	
96	FW	1	WD			PL	0	4	
97									
98									

MILL ORDER

LINE	LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
1				
2	45	10	31	45
3	26	0	28	19
4				
5				
6	45	10	31	45
7	26	0	28	19
8				
9				
10	45	10	31	45
11	26	0	28	19
12				
13				
14	45	10	31	45
15	26	0	28	19
16				
17				
18	45	10	31	45
19	26	0	28	19
20				
21				
22	45	10	31	45
23	26	0	28	19
24				
25				
26	40	0	31	44
27	26	0	28	19
28				
29				
30	45	10	31	45
31	26	0	28	19
32				
33				
34	45	10	31	45
35	26	0	28	19
36				
37				
38	45	10	31	45
39	26	0	28	19
40				
41				
42	45	10	31	45
43	26	0	28	19
44				
45				
46	40	0	31	44
47	26	0	28	19
48				
49				
50	45	10	31	45
51	26	0	28	19
52				
53				
54	45	10	31	45
55	26	0	28	19
56				
57				
58	45	10	31	45
59	26	0	28	19
60				
61				
62	45	10	31	45
63	26	0	28	19
64				
65				
66				

LATERAL BRACING STA 527+08.00 to 529+73.33

MATERIAL	A36
RIVETS OR BOLTS	NONE
OPEN HOLES	15/16
A325 FIELD BOLTS	7/8
SHOP CONTACT SURFACES	NO PAINT(UL)
PAINT	MILL NONE
WELDING	AS SHOWN
	ONE COAT AASHO-M72 TYPE II RED LEAD (UN)

REVISION NO.	DATE	INIT.
1	11/19	VTO
2	11/26	VTO

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

CUSTOMER: MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE: PROJECT NO I 95 I(22) 16
CONT NO 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM: POTTSTOWN WORKS
MADE BY KIRK DATE 8-13-69 IN CHARGE B.K. BERTOLET
CHECKED BY DTO DATE 9/11/69 SHOP NO. 2
CONTRACT C76249-071 DRAWING NO. 18

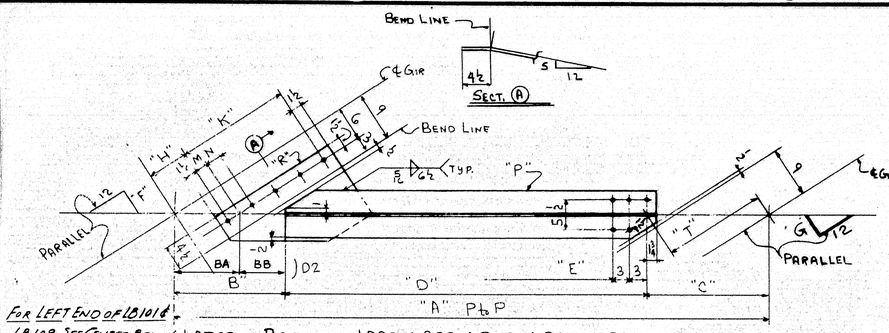
O.S.I.-1

33433 (Rev. C 4-68)

106-70

OCT 2 1969

UPPER LINE 4 & 5



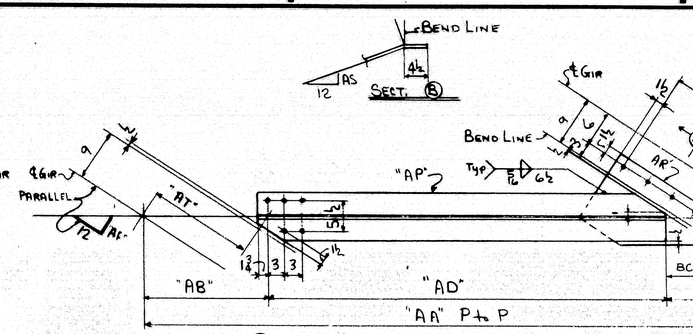
FOR LEFT END OF LB101 & LB108 SEE CENTER BELOW

LATERAL BRACING LB95 - LB97 - LB99 - LB101 - LB103
LB105 - LB107 - LB108

D2

MARK	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	BA	BB
LB95	15'-2 7/16	1'-8 1/4	1'-10 3/4	11'-7 9/16	11'-1 9/16	7 5/16	7 5/16	7	3@5 1/4-1'-3 1/2-5 1/2	2 1/16	2 5/8	d	f	B	1'-7 7/16	11 5/8	8 5/8
LB97	15'-1 1/2	1'-8 1/4	1'-10 3/4	11'-6 1/2	11'-0 1/2	7 1/16	7 1/16	7	3@5 1/4-1'-3 1/2-5 1/2	2 1/16	2 5/8	k	f	B	1'-7 7/16	11 5/8	8 5/8
LB99	15'-0 7/16	1'-8 1/4	1'-10 3/4	11'-5 7/16	10'-11 7/16	7 3/8	7 3/8	7	3@5 1/4-1'-3 1/2-5 1/2	2 3/4	2 1/2	n	f	B	1'-7 7/8	11 1/16	8 13/16
LB101	12'-6 3/8	1'-6	1'-6	9'-6 3/8	9'-0 3/8	9 7/8	9 7/8	—	———	—	—	am	—	—	1'-2 1/16	-	-
LB103	15'-2 1/4	1'-8 1/4	1'-10 3/4	11'-7 1/4	11'-1 1/4	7 1/4	7 1/4	7	3@5 1/4-1'-3 1/2-5 1/2	2 1/16	2 5/8	t	f	B	1'-7 7/16	11 5/8	8 5/8
LB105	15'-1 1/4	1'-8 1/4	1'-10 3/4	11'-6 1/4	11'-0 1/4	7 3/32	7 3/32	7	3@5 1/4-1'-3 1/2-5 1/2	2 1/16	2 5/8	y	f	B	1'-7 1/2	11 5/8	8 5/8
LB107	15'-0 1/4	1'-8 1/4	1'-10 3/4	11'-5 1/4	10'-11 1/4	7 3/32	7 3/32	7	3@5 1/4-1'-3 1/2-5 1/2	2 1/16	2 5/8	ac	f	B	1'-7 7/16	11 1/2	8 3/4
LB108	12'-6 1/4	1'-6	1'-6	9'-6 1/4	9'-0 1/4	9 7/8	9 7/8	—	———	—	—	as	—	—	1'-1 1/2	-	-

D2

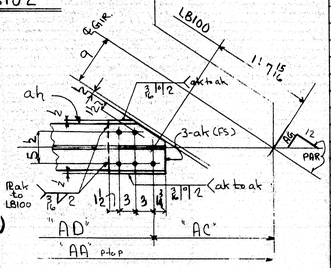


LATERAL BRACING LB94 - LB96 - LB98 - LB100 - LB102
LB104 & LB106 - LB109

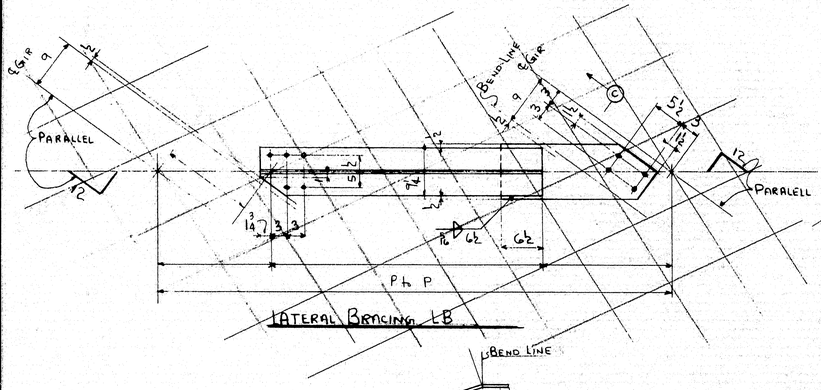
D2

BC	BD	MARK	AA	AB	AC	AD	AF	AG	AH	AK	AM	AN	AP	AR	AS	AT
6 3/32	9 3/32	LB94	12'-4 1/4	1'-6	1'-4 1/4	9'-6	10	10	5	4@4 1/4-1'-5	2 5/16	2 1/4	ah	c	3/8	1'-1 13/16
8 13/16	11 7/16	LB96	15'-1 1/2	1'-10 3/4	1'-8 1/4	11'-6 1/2	7 3/8	7 3/8	7	4@5 1/4 - 1'-9	2 3/4	2 1/2	g	h	7/16	1'-7 3/8
8 5/8	11 1/8	LB98	15'-2 3/8	1'-10 3/4	1'-8 1/4	11'-7 3/8	7 13/32	7 13/32	7	5@3 1/4-1'-3 1/2-5 1/2	2 15/16	2 5/8	m	h	7/16	1'-7 7/16
-	-	LB100	15'-3 3/4	1'-11 1/4	1'-11 1/4	11'-4 3/4	7 3/32	7 3/32	-	———	—	ah	—	—	1'-7 1/16	
6 27/32	9 1/32	LB102	12'-1 4	1'-6	1'-4 1/4	9'-5 3/4	9 1/8	9 1/8	5	4@4 1/4-1'-5	2 1/4	2	P	S	7/16	1'-1 1/8
8 3/4	11 1/2	LB104	15'-1 5/8	1'-10 3/4	1'-8 1/4	11'-6 1/8	7 5/8	7 5/8	7	5@3 1/4-1'-3 1/2-5 1/2	2 1/16	2 1/4	aa	h	7/16	1'-7 7/16
8 5/8	11 5/8	LB106	15'-2 1/4	1'-10 3/4	1'-8 1/4	11'-7 1/4	7 3/4	7 3/4	7	5@3 1/4-1'-3 1/2-5 1/2	2 1/16	2 5/8	aa	h	7/16	1'-7 1/2
6 27/32	9 13/32	LB109	12'-3 5/16	1'-6	1'-4 1/4	9'-5 1/16	9 1/16	9 1/16	5	4@4 1/4-1'-5	2 1/4	2	af	ag	3/8	1'-1 1/8

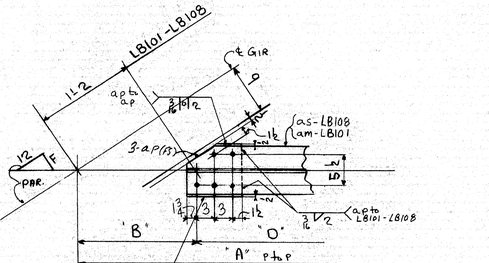
D2



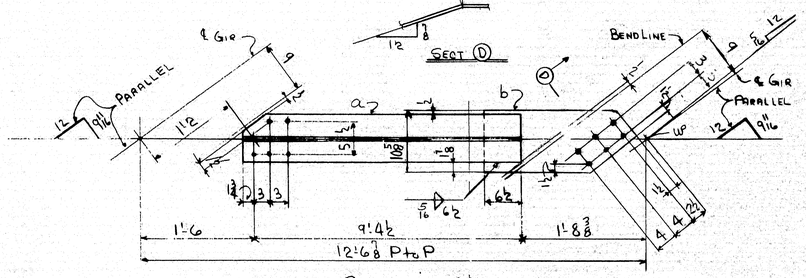
RIGHT END FOR LB100



LATERAL BRACING LB



LEFT END LB101 & LB108



LATERAL BRACING LB93

a	b	c
a		
b		
c		
d		
f		
g		
h		
k		
m		
n		
p		
s		
r		
w		
y		

INSTALL 8W	7W	6W	REQUIRED LIST QTY	MARKS	DESCRIPTION	REMARKS
1			ONE	LB93	LATERAL BRACE	
1			ONE	LB94	"	
1			ONE	LB95	"	
1			ONE	LB96	"	
1			ONE	LB97	"	
1			ONE	LB98	"	
1			ONE	LB99	"	
1	1		2	LB100	"	
1			ONE	LB101	"	
1			ONE	LB102	"	
1			ONE	LB103	"	
1			ONE	LB104	"	
	1		ONE	LB105	"	
	1		ONE	LB106	"	
	1		ONE	LB107	"	
		1	ONE	LB108	"	
		1	ONE	LB109	"	

For location of details shown on this sheet refer to diagrams.

GD7-E9

D1

SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS	MILL ORDER LENGTH FT.	MILL ORDER LENGTH IN.	ITEM PAGE	ITEM LINE
1				ONE LATERAL BRACE LB93									
2	a	1	BT	10	31		9	6 1/2		40	0	31	44
3	b	1	PL	9 1/4		5/8	2	0 3/4	BENT			J	
4	FW	1	WD			F'G	1	1					
5				ONE LATERAL BRACE LB94									
6	ah	1	BT	10	31		9	7 3/4		40	0	31	44
7	c	1	PL	13		5/8	1	8	BENT 14 1/2 x 5/8	26	0	28	19
8	FW	1	WD			F'G	1	1					
9				ONE LATERAL BRACE LB95									
10	d	1	BT	10	31		11	9 5/8		50	4	31	46
11	f	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8	26	0	28	19
12	FW	1	WD			F'G	1	1					
13				ONE LATERAL BRACE LB96									
14	g	1	BT	10	31		11	8 1/4		50	4	31	46
15	h	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8	26	0	28	19
16	FW	1	WD			F'G	1	1					
17				ONE LATERAL BRACE LB97									
18	k	1	BT	10	31		11	8 1/4		50	4	31	46
19	f	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8	26	0	28	19
20	FW	1	WD			F'G	1	1					
21				ONE LATERAL BRACE LB98									
22	m	1	BT	10	31		11	9		50	4	31	46
23	h	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8	26	0	28	19
24	FW	1	WD			F'G	1	1					
25				ONE LATERAL BRACE LB99									
26	n	1	BT	10	31		11	7 7/16		50	4	31	46
27	f	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8	26	0	28	19
28	FW	1	WD			F'G	1	1					
29				ONE LATERAL BRACE LB102									
30	p	1	BT	10	31		9	7 1/2		40	0	31	44
31	S	1	PL	13		5/8	1	8	BENT 14 1/2 x 5/8	26	0	28	19
32	FW	1	WD			F'G	1	1					
33				ONE LATERAL BRACE LB103									
34	t	1	BT	10	31		11	9		50	4	31	46
35	f	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8	26	0	28	19
36	FW	1	WD			F'G	1	1					
37				ONE LATERAL BRACE LB104									
38	w	1	BT	10	31		11	8 1/16		50	4	31	46
39	h	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8	26	0	28	19
40	FW	1	WD			F'G	1	1					
41				ONE LATERAL BRACE LB105									
42	y	1	BT	10	31		11	8		50	4	31	46
43	f	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8	26	0	28	19
44	FW	1	WD			F'G	1	1					
45				ONE LATERAL BRACE LB106									
46	aa	1	BT	10	31		11	9		50	4	31	46
47	h	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8	26	0	28	19
48	FW	1	WD			F'G	1	1					
49				ONE LATERAL BRACE LB107									
50	ac	1	BT	10	31		11	7		50	4	31	46
51	f	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8	26	0	28	19
52	FW	1	WD			F'G	1	1					
53				ONE LATERAL BRACE LB109									
54	af	1	BT	10	31		9	7 7/16		40	0	31	44
55	ag	1	PL	13		5/8	1	8	BENT 14 1/2 x 5/8	26	0	28	19
56	FW	1	WD			F'G	1	1					
57				2 LATERAL BRACES LB100									
58	ah	2	BT	10	31		11	8 1/4		50	4	31	46
59	ak	6	PL	9 1/4		5/8	0	9 1/4				J	
60	FW	2	WD			3/16	0	4					
61	SDS	2	WD			3/16	0	4					
62													
63													
64													
65													
66													

LINE 4-5

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS	MILL ORDER LENGTH FT.	MILL ORDER LENGTH IN.	ITEM PAGE	ITEM LINE
67				ONE LATERAL BRACE LB101									
68	am	1	BT	10	31		9	9 3/4	D1	40	0	31	44
69	ap	3	PS	9 1/4		5/8	0	9 1/4				J	
70	FW	1	WD			F'G	0	9 1/4					
71	SDS	1	WD			F'G	0	4					
72													
73				ONE LATERAL BRACE LB108									
74	as	1	BT	10	31		9	9 3/4	D1	40	0	31	44
75	ap	3	PS	9 1/4		5/8	0	9 1/4				J	
76	FW	1	WD			F'G	0	9 1/4					
77	SDS	1	WD			F'G	0	4					
78													
79													
80													
81													
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83													
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94													
95													
96													
97													
98													

LATERAL BRACING STA 534+61.37 to STA 536+62.00

NP 3 NO PAINT ALL OPEN HOLES UNLESS NOTED

(MATL THK TO 3/4" INCL MUST BE PREHEATED TO 50°F USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR. SAW-2 FOR WELDING.) D1

APPROVED
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY S. S. Nishimura
OCT 1 1964

MATERIAL A36
RIVETS OR BOLTS NONE
OPEN HOLES 15/16
A325 FIELD BOLTS 7/8
SHOP CONTACT SURFACES NO PAINT
MILL NONE
WELDING AS SHOWN
PAINT ONE COAT AASHO-M72 TYPE II RED LEAD (O.H.)

REVISION NO.	DATE	INIT.
D2	7/19/69	BTD
D1	1/29/69	B.K.H.

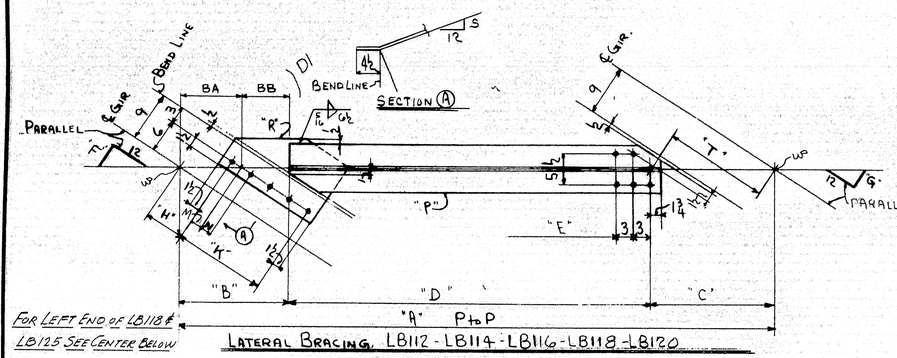
SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE PROJECT NO I 95 I (22) 16
CONT NO 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM Pottstown WORKS
MADE BY KIRK DATE 8-14-69 IN CHARGE B.K. BEMDOLET
CHECKED BY BTD DATE 8/27/69 SHOP NO. 2
CONTRACT CJ6249-071 DRAWING NO. 19

35433 (Rev. C 6-63)

O.S.I - 1

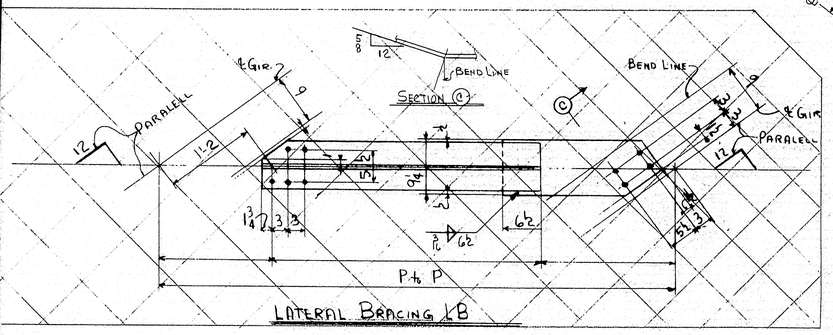
106-71



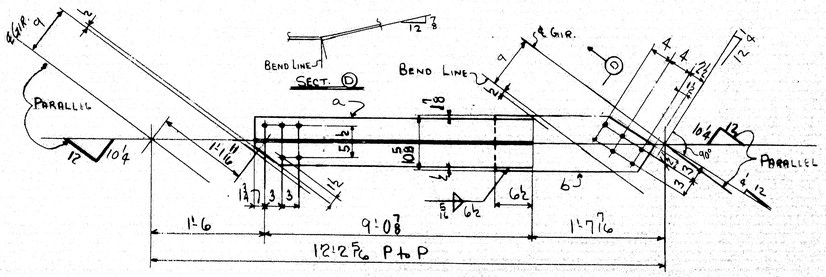
FOR LEFT END OF LB118 & LB125 SEE CENTER BELOW

LATERAL BRACING, LB112 - LB114 - LB116 - LB118 - LB120
LB122 - LB124 - LB125

MARK	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	BA	BB
LB112	14'-10 7/16	1'-7 3/4	1'-10 1/4	11'-4 7/16	10'-10 7/16	7 17/32	7 17/32	6 3/4	4@5 1/4 = 1'-9	2 5/8	2 5/8	f	g	5/8	1'-6 7/8	.11 3/8	.8 3/8
LB114	14'-11 3/8	1'-7 3/4	1'-10 1/4	11'-5 3/8	10'-11 3/8	7 5/8	7 13/32	6 3/4	4@5 1/4 = 1'-9	2 15/16	2 5/8	m	g	3/4	1'-6 15/16	.11 13/32	.8 13/32
LB116	15'-0 1/8	1'-8 1/4	1'-10 3/4	11'-5 1/4	10'-11 1/4	7 3/32	7 13/32	7	3@5 1/4 = 1'-3 3/4 - 5 1/2	2 3/8	2 1/2	p	s	7/8	1'-7 3/8	.11 1/32	.8 25/32
LB118	12'-1 3/8	1'-5 5/8	1'-5 5/8	9'-2 5/8	8'-8 5/8	10 3/8	10 3/8	—	———	—	—	am	—	—	1'-1 7/16	—	—
LB120	14'-10 5/8	1'-7 3/4	1'-10 1/4	11'-4 5/8	10'-10 5/8	7 1/2	7 1/2	6 3/4	4@5 1/4 = 1'-9	2 5/8	2 3/8	w	g	7/8	1'-6 7/8	.11 11/32	.8 13/32
LB122	14'-11 1/16	1'-7 3/4	1'-10 1/4	11'-5 1/16	10'-11 1/16	7 7/16	7 7/16	6 3/4	4@5 1/4 = 1'-9	2 15/16	2 5/8	aa	g	7/8	1'-6 23/32	.11 3/32	.8 3/32
LB124	15'-0	1'-8 1/4	1'-10 3/4	11'-5	10'-11	7 3/8	7 3/8	7	3@5 1/4 = 1'-3 3/4 - 5 1/2	2 3/8	2 1/2	ad	S	7/8	1'-7 3/8	.11 1/16	.8 1/16
LB125	12'-1 1/16	1'-5 5/8	1'-5 5/8	9'-2 7/16	8'-8 7/16	10 1/16	10 3/16	—	———	—	—	ap	—	—	1'-1 7/16	—	—

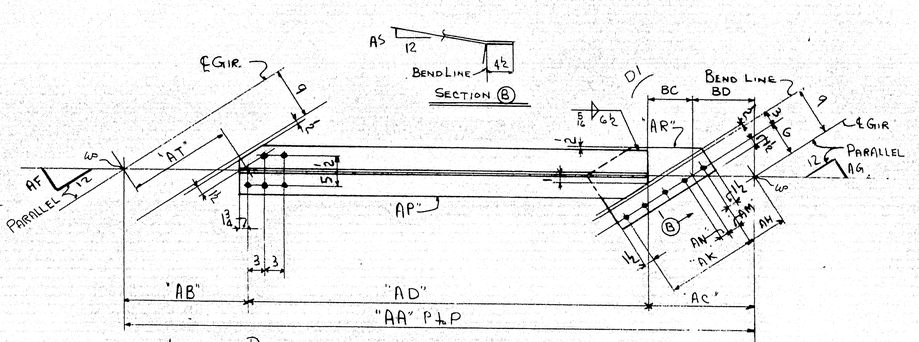


LATERAL BRACING LB



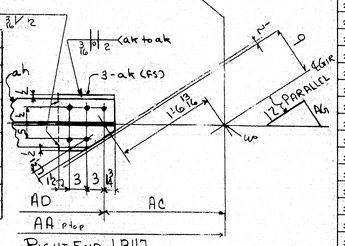
LATERAL BRACING, LB110

For location of details shown on this sheet refer to diagrams.
GD7 - E9

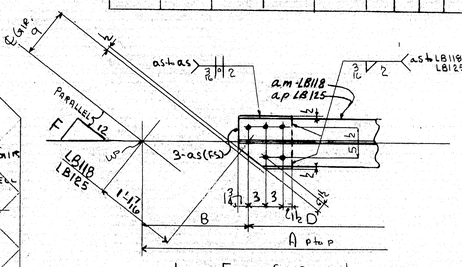


LATERAL BRACING LB111 - LB113 - LB115 - LB117 - LB119
LB121 & LB123

BC	BD	MARK	AA	AB	AC	AD	AF	AG	AH	AK	AM	AN	AP	AR	AS	AT
.6 13/16	.9 1/16	LB111	12'-4 3/8	1'-6	1'-4 1/4	9'-6 8	9 3/4	9 31/32	5	4@5 1/4 = 1'-5	2 1/4	2	c	d	3/8	1'-1 1/8
.8 1/32	.11 25/32	LB113	14'-11 1/16	1'-10 1/4	1'-7 3/4	11'-5 1/16	7 15/16	7 15/16	6 3/4	4@5 1/4 = 1'-9	2 15/16	2 5/8	h	k	3/8	1'-6 15/16
.8 3/8	.11 3/8	LB115	14'-10	1'-10 1/4	1'-7 3/4	11'-4	7 3/32	7 3/32	6 3/4	4@5 1/4 = 1'-9	2 5/8	2 3/8	af	ag	3/8	1'-6 8
—	—	LB117	14'-8 3/8	1'-10 1/4	1'-10 1/4	11'-0 3/8	7 7/16	7 7/16	—	———	—	—	ah	—	—	1'-6 1/16
.6 7/8	.9 3/8	LB119	12'-4 1/16	1'-6	1'-4 1/4	9'-5 13/16	9 3/8	9 3/8	5	4@5 1/4 = 1'-5	2 1/4	2	t	d	3/8	1'-1 3/8
.8 1/32	.11 3/32	LB121	14'-10 3/8	1'-10 1/4	1'-7 3/4	11'-4 3/8	7 7/16	7 7/16	6 3/4	4@5 1/4 = 1'-9	2 15/16	2 5/8	y	k	7/8	1'-6 1/2
.8 1/32	.11 3/32	LB123	14'-9 3/8	1'-10 1/4	1'-7 3/4	11'-3 5/8	7 3/32	7 3/32	6 3/4	4@5 1/4 = 1'-9	2 15/16	2 5/8	ab	K	7/8	1'-6 8



RIGHT END LB117



LEFT END of LB118 & LB125

INSTALL 8E	INSTALL 7E	INSTALL 6E	REQUIRED LIST Qty	MARK	DESCRIPTION	REMARKS
1			ONE	LB110	LATERAL BRACE	
1			ONE	LB111	″	
1			ONE	LB112	″	
1			ONE	LB113	″	
1			ONE	LB114	″	
1			ONE	LB115	″	
1			ONE	LB116	″	
1	1		2	LB117	″	
1			ONE	LB118	″	
1		1	2	LB119	″	
1			ONE	LB120	″	
1			ONE	LB121	″	
	1		ONE	LB122	″	
	1		ONE	LB123	″	
	1		ONE	LB124	″	
		1	ONE	LB125	″	

SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1				ONE LATERAL BRACE LB110					
2	a	1	BT	10	31		9	2 5/8	
3	b	1	PL	10 5/8		5/8	2	0	BENT
4	FW	1	WD			PLO	1	1	
5				ONE LATERAL BRACE LB111					
6	c	1	BT	10	31		9	7 3/8	
7	d	1	PL	13		5/8	1	8	BENT 14 1/2 x 5/8 x
8	FW	1	WD			PLO	1	1	
9				ONE LATERAL BRACE LB112					
10	f	1	BT	10	31		11	6 PLO	
11	g	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x
12	FW	1	WD			PLO	1	1	
13				ONE LATERAL BRACE LB113					
14	h	1	BT	10	31		11	6 13/16	
15	k	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x
16	FW	1	WD			PLO	1	1	
17				ONE LATERAL BRACE LB114					
18	m	1	BT	10	31		11	7 PLO	
19	g	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x
20	FW	1	WD			5/16	1	1	
21				ONE LATERAL BRACE LB115					
22	af	1	BT	10	31		11	5 3/4	
23	ag	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x
24	FW	1	WD			5/16	1	1	
25				ONE LATERAL BRACE LB116					
26	p	1	BT	10	31		11	7	
27	s	1	PL	13		5/8	2	0 4	BENT 14 1/2 x 5/8 x
28	FW	1	WD			PLO	1	1	
29				2 - LATERAL BRACE LB119					
30	t	2	BT	10	31		9	7 PLO	
31	d	2	PL	13		5/8	1	8	BENT 14 1/2 x 5/8 x
32	FW	2	WD			PLO	1	1	
33				ONE LATERAL BRACE LB120					
34	w	1	BT	10	31		11	5 3/4	
35	g	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x
36	FW	1	WD			PLO	1	1	
37				ONE LATERAL BRACE LB121					
38	y	1	BT	10	31		11	6 5/8	
39	k	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x
40	FW	1	WD			PLO	1	1	
41				ONE LATERAL BRACE LB122					
42	aa	1	BT	10	31		11	6 13/16	
43	g	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x
44	FW	1	WD			PLO	1	1	
45				ONE LATERAL BRACE LB123					
46	ab	1	BT	10	31		11	5 5/8	
47	k	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x
48	FW	1	WD			PLO	1	1	
49				ONE LATERAL BRACE LB124					
50	ad	1	BT	10	31		11	6 3/4	
51	S	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8 x
52	FW	1	WD			PLO	1	1	
53				2 LATERAL BRACE LB117					
54	ah	2	BT	10	31		11	3 3/8	
55	ak	6	PL	9 1/4		5/8	0	9 1/4	
56	FW	2	WD			3/8 PLO	0	1 1/4	
57	SD	2	WD			3/8 PLO	0	0 8	
58									
59				ONE LATERAL BRACE LB118					
60	am	1	BT	10	31		9	6 5/8	
61	as	3	FILL	9 1/4		5/8	0	9 1/4	
62	FW	1	WD			3/8 PLO	0	1 1/4	
63	SD	1	WD			3/8 PLO	0	0 8	
64									
65									
66									

MILL ORDER

LINE	LENGTH FT.	LENGTH IN.	PAGE	LINE
1				
2	40	0	31	44
3				J
4				
5				
6	40	0	31	44
7				
8	26	0	28	19
9				
10	50	4	31	46
11				
12	26	0	28	19
13				
14	50	4	31	46
15				
16	26	0	28	19
17				
18	50	4	31	46
19				
20	26	0	28	19
21				
22	50	4	31	46
23				
24	26	0	28	19
25				
26	50	4	31	46
27				
28	26	0	28	19
29				
30	40	0	31	44
31				
32	26	0	28	19
33				
34	50	4	31	46
35				
36	26	0	28	19
37				
38	50	4	31	46
39				
40	26	0	28	19
41				
42	50	4	31	46
43				
44	26	0	28	19
45				
46	50	4	31	46
47				
48	26	0	28	19
49				
50	50	4	31	46
51				
52	26	0	28	19
53				
54	45	10	31	45
55				J
56				
57				
58				
59				
60	45	10	31	45
61				J
62				
63				
64				
65				
66				

67				ONE LATERAL BRACE LB125								
68	ap	1	BT	10	31		9	5 5/8				
69	as	3	FILL	9 1/4		5/8	0	9 1/4	DH	40	0	31 44
70	FW	1	WD			3/8 PLO	0	1 1/4				J
71	SD	1	WD			PLO	0	0 8				
72												
73												
74												
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LATERAL BRACING STA 534+51.67 to 536+62.00

ALL OPEN HOLES

(MATL THK TO 3/4" INCL. MUST BE PREHEATED TO 50°F USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR SAW-2 FOR WELDING.) D1

MATERIAL A36
RIVETS OR BOLTS NONE
OPEN HOLES 15/16
A325 FIELD BOLTS 7/8
SHOP CONTACT SURFACES NO PAINT
MILL - NONE
WELDING AS SHOWN
PAINT ONE COAT AASHO M72 TYPE II RED LEAD

REVISION	NO.	DATE	INIT.
	0		
	1		
	2		
	3		
	4		
	5		
	6		
	7		
	8		
	9		

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

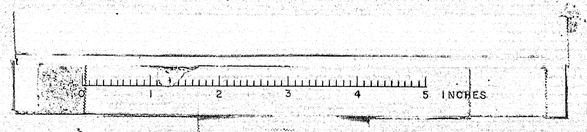
CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE PROJECT NO I 95 I(22) 16
CONT NO 3 NEW HAMPSHIRE APPROACH.
STRUCTURAL STEEL

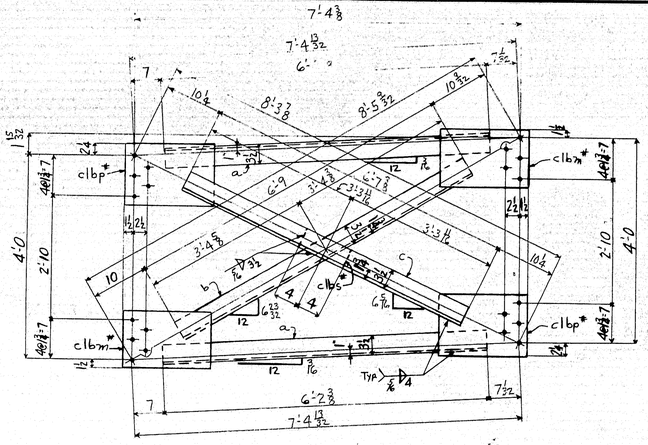
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

POTTSTOWN DRAFTING ROOM Pottstown WORKS
MADE BY KIRK DATE 8-15-69 IN CHARGE E.K. BERTOLET
CHECKED BY OTO DATE 9/2/69 SHOP NO. 2
CONTRACT CJ6249-071 DRAWING NO. 20

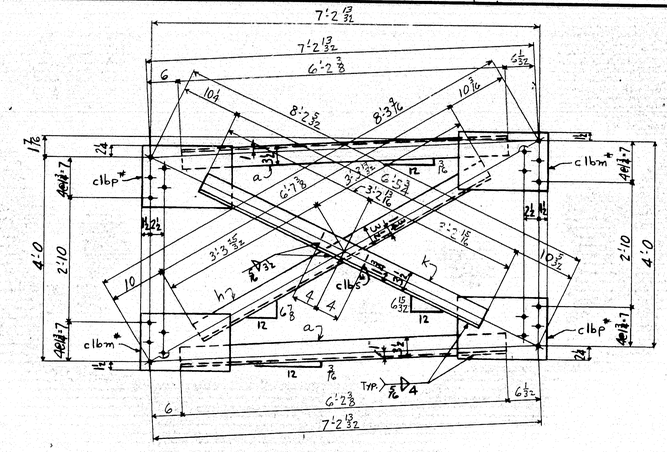
DESIGNED BY HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY S.S. Nishimura
SEP 30 1969
PAY ITEM 514.711

O.S.I.-1 106-72 SEP 2





CROSS FRAME CF1R



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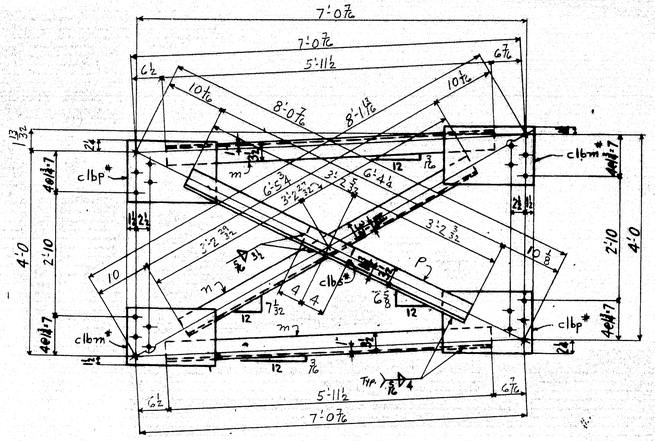

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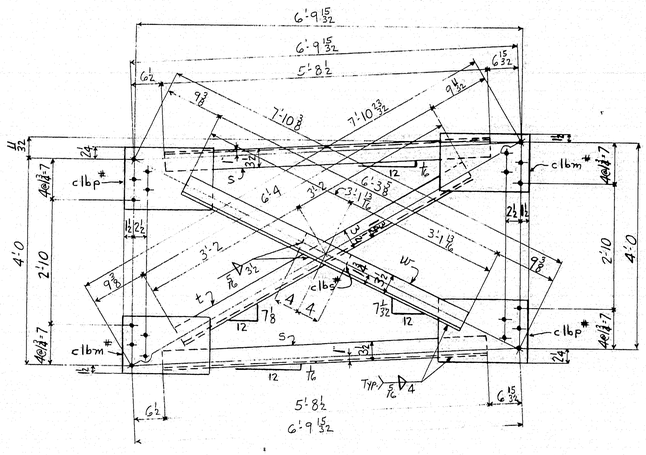

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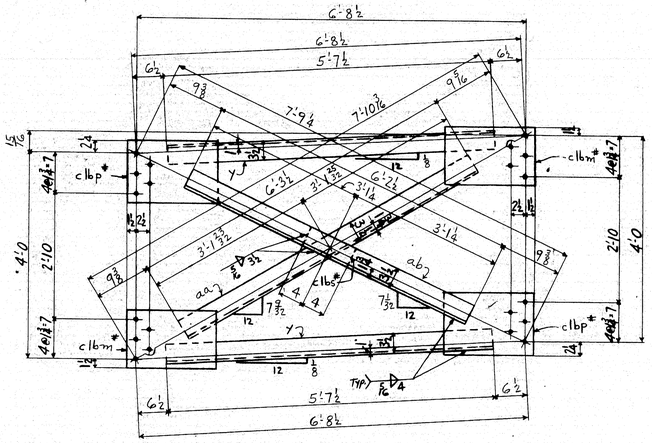

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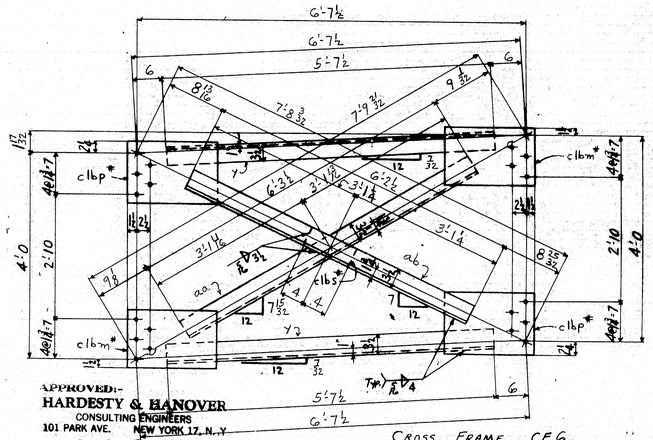


CROSS FRAME CF6

NOTES:
MTL. THK. TO 3/4" INCL. MUST BE PREHEATED TO 50° DEG.F
ALL OPEN HOLES - NF 3

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

USE E7016,18,28 LOW HYDROGEN ELECTRODES OR GR. SAW-2 FOR WELDING.

For location of details shown on this sheet refer to diagrams.

E5

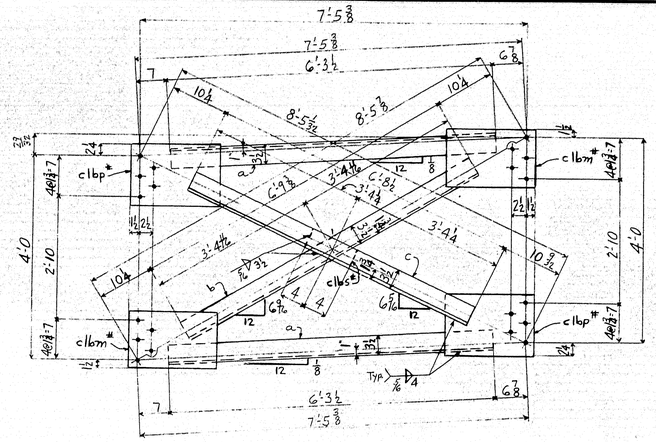
SHOP BILL

ITEM NO.	WEIGHT TOTAL	WEIGHT EA.	ASSEMBLY MARK	NO.	SHAPE	SIZE	GRADE OR NOTE OR PATTERN NO.	LENGTH THICK	FT.	IN.	REMARKS
1			14- CROSS FRAMES 4-CF1R 10-CF1L								
2			a	28	L	4	3½	3/8	6	2 3/8	
3			b	14	L	4	3½	3/8	6	9	
4			c	14	L	4	3½	3/8	6	7 3/8	
5			c lbm*	28	PL	10		1/2	1	3½	
6			c lbp*	28	PL	10 3/8		1/2	1	3½	
7			c lbs*	14	BR	3½		1/2	0	8	
8			FW	14	WD			5/16	6	6	
9											
10											
11			30- CROSS FRAMES 16-CF2R 14-CF2L								
12			a	60	L	4	3½	3/8	6	2 3/8	

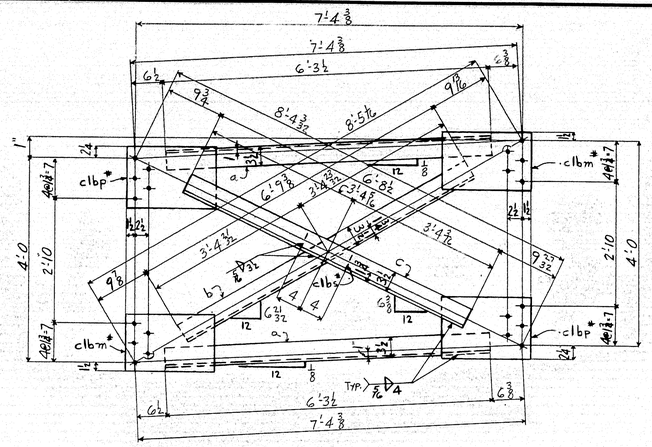
MILL ORDER

ITEM	LENGTH FT.	IN.	PAGE	LINE
a	43	10½	29	060
b	9	5½	29	110
c	9	7 3/8	29	150
c lbm*	20	10	29	25
c lbp*	21	0	29	26
c lbs*			J	
a	43	10½	29	060

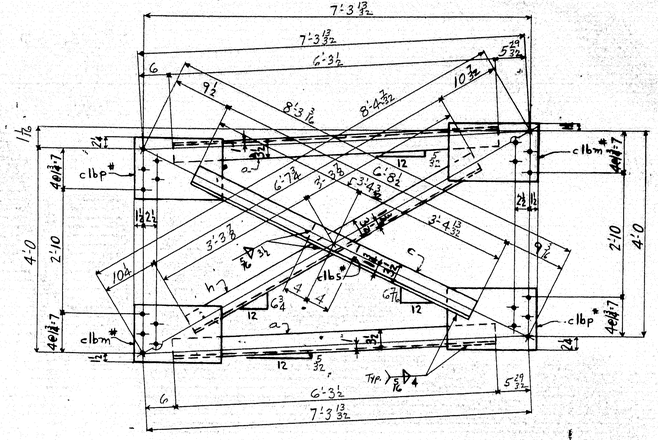
| ITEM NO. | | | | | | | | | | |



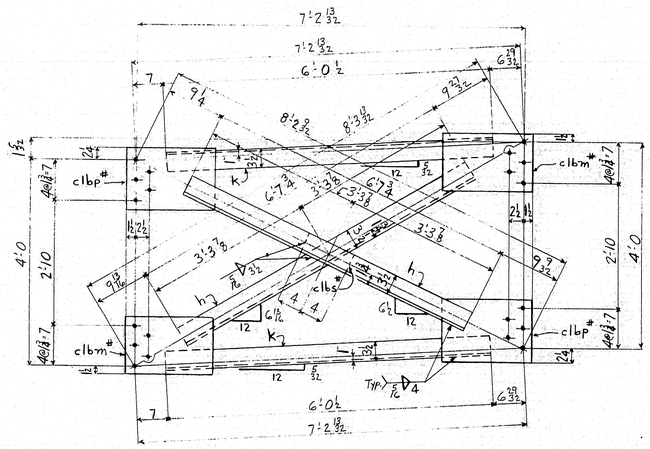
CROSS FRAME CF7



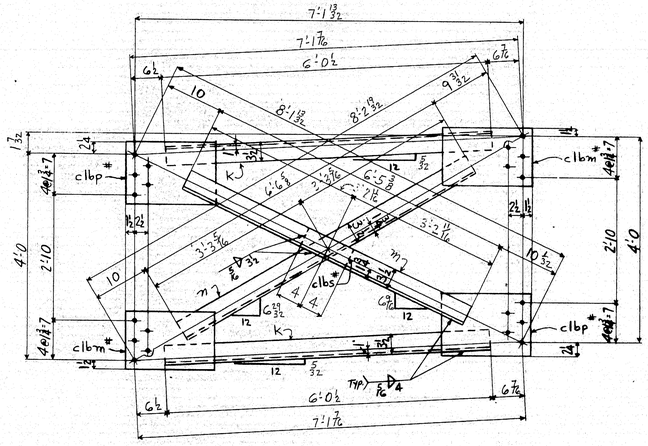
CROSS FRAME CF8



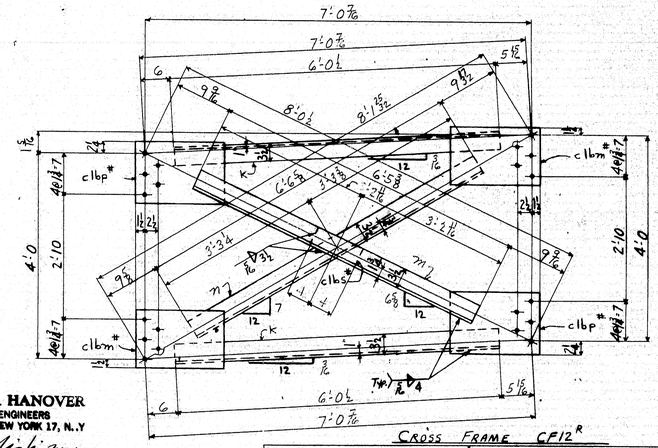
CROSS FRAME CF9



CROSS FRAME CF10



CROSS FRAME CF11



CROSS FRAME CF12R

NOTES:

MTL. THK. TO ½" INCL. MUST BE PREHEATED TO 50°DEG.F
ALL OPEN HOLES - NP 3

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

USE E7016,18,28 LOW HYDROGEN ELECTRODES OR GR. SAW-2 FOR WELDING.

For location of details shown on this sheet refer to diagrams.

E5

SHOP BILL

LINE	WEIGHT TOTAL	WEIGHT EA.	ASSEMBLY MARK	NO	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1			ONE-CROSS FRAMES CF7								
2			a	2	L	4	3½	⅜	6	3½	
3			b	1	L	4	3½	⅜	6	9⅜	
4			c	1	L	4	3½	⅜	6	8½	
5			c lbm*	2	PL	10		½	1	3½	
6			c lbp*	2	PL	10⅜		½	1	3½	
7			c lbs*	1	BR	3½		½	0	8	
8			FW	1	WD			5/16	6	6	
9											
10											
11			ONE-CROSS FRAMES CF8								
12			a	2	L	4	3½	⅜	6	3½	

MILL ORDER

LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
44	7¼	29	07c
48	3⅜	29	12c
33	7½	29	11B
20	10	29	25
21	0	29	26
		J	

ONE-CROSS FRAMES CF9

a	2	L	4	3½	⅜	6	3½	44	7¼	29 07c
h	1	L	4	3½	⅜	6	7⅜	33	7½	29 11B
c	1	L	4	3½	⅜	6	8½	33	7½	29 11c
c lbm*	2	PL	10		½	1	3½	20	10	29 25
c lbp*	2	PL	10⅜		½	1	3½	21	0	29 26
c lbs*	1	BR	3½		½	0	8			J
FW	1	WD			5/16	6	6			

ONE-CROSS FRAMES CF10

k	2	L	4	3½	⅜	6	0½	36	10⅜	29 05B
h	2	L	4	3½	⅜	6	7⅜	47	1	29 11c
c lbm*	2	PL	10		½	1	3½	20	10	29 25
c lbp*	2	PL	10⅜		½	1	3½	21	0	29 26
c lbs*	1	BR	3½		½	0	8			J
FW	1	WD			5/16	6	6			

ONE-CROSS FRAMES CF11

k	2	L	4	3½	⅜	6	0½	36	10⅜	29 05B
m	1	L	4	3½	⅜	6	6⅜	33	7½	29 11B
m	1	L	4	3½	⅜	6	5⅜	45	5⅜	29 09D
c lbm*	2	PL	10		½	1	3½	20	10	29 25
c lbp*	2	PL	10⅜		½	1	3½	21	0	29 26
c lbs*	1	BR	3½		½	0	8			J
FW	1	WD			5/16	6	6			

2-CROSS FRAMES 1-CF12R 1-CF12L

k	4	L	4	3½	⅜	6	0½	36	10⅜	29 05B
m	2	L	4	3½	⅜	6	6⅜	33	7½	29 11B
m	2	L	4	3½	⅜	6	5⅜	45	5⅜	29 09D
c lbm*	4	PL	10		½	1	3½	20	10	29 25
c lbp*	4	PL	10⅜		½	1	3½	21	0	29 26
c lbs*	2	BR	3½		½	0	8			J
FW	2	WD			5/16	6	6			

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY S.S. Nishimura
SEP 30 1969

INSTALLMENTS: 18E 18W 19W

REQUIRED LIST

QTY.	SHIPPING MARK	DESCRIPTION	REMARKS
1	ONE CF7	CROSS FRAMES	
1	ONE CF8	Do	
1	ONE CF9	Do	
1	ONE CF10	Do	
1	ONE CF11	Do	
1	ONE CF12R	Do	
1	ONE CF12L	Do	

PAY ITEM - 504.711
MATERIAL - A36 STEEL
RIVETS OR BOLTS - NONE
OPEN HOLES - 15/16 ϕ
A325 FIELD BOLTS - ⅞ ϕ
SHOP CONTACT SURFACES - NO PAINT
WELDING - AS NOTED
MILLING - NONE
PAINT - ONE COAT AASHO-M72 TYPE II RED LEAD (UN)

"CROSS FRAMES"

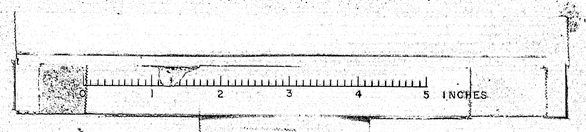
CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE PROJECT NO. I-95-1 (22) 1G
CONT. NO. 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM POTTSTOWN WORKS
MADE BY DEW DATE 8/8/69 IN CHARGE BERTOLET
CHECKED BY STO DATE 8/19/69 SHOP NO. 2
CONTRACT CJ-6249-070 DRAWING NO. 22

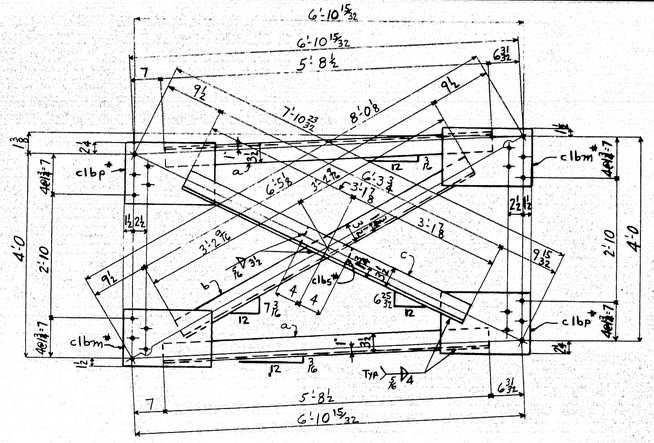
REVISION NO. | DATE | INT.

SUBMITTAL 1 2 3 4 5 6 7 8 9 0
DATE

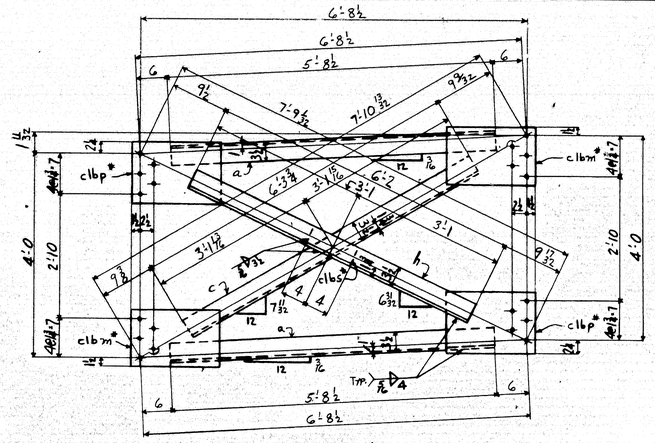
106-17

SEP 9 1969

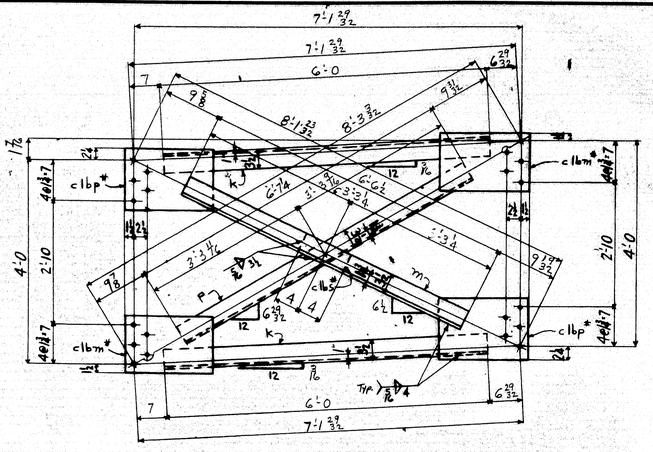




CROSS FRAME CF13



CROSS FRAME CF14



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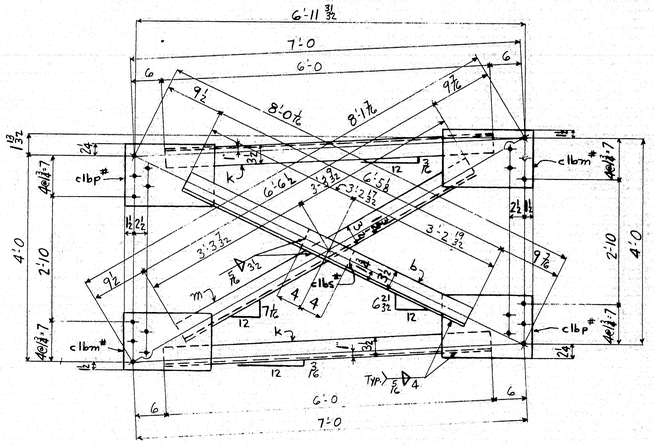
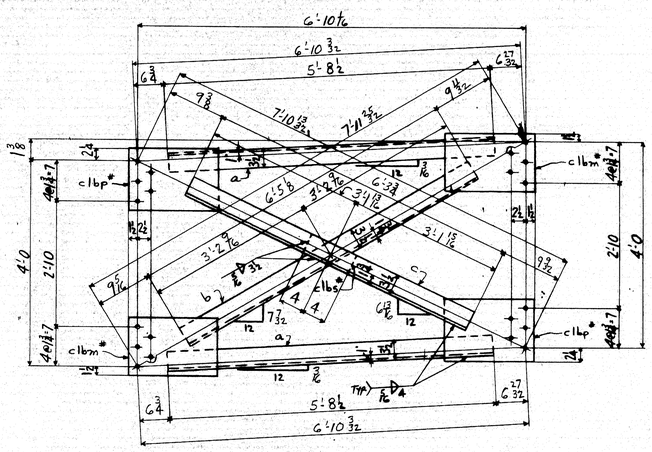


CROSS FRAME CF16R



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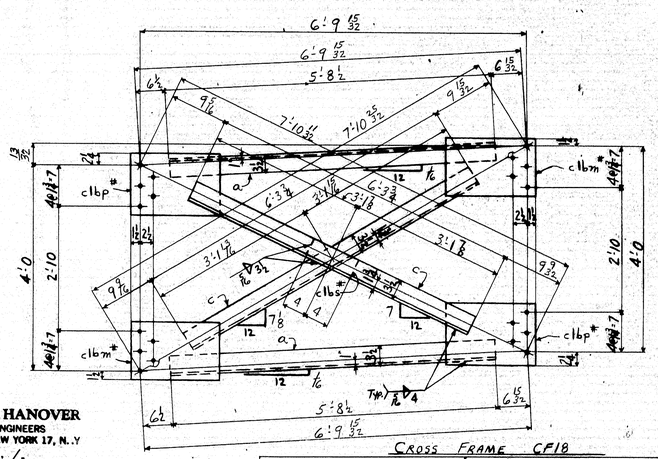


CROSS FRAME CF18

NOTES:

MTL. THK. TO ¾" INCL. MUST BE PREHEATED TO 50°DEG.F

ALL OPEN HOLES - NP 3

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

USE E7016,18,28 LOW HYDROGEN ELECTRODES OR GR. SAW-2 FOR WELDING.

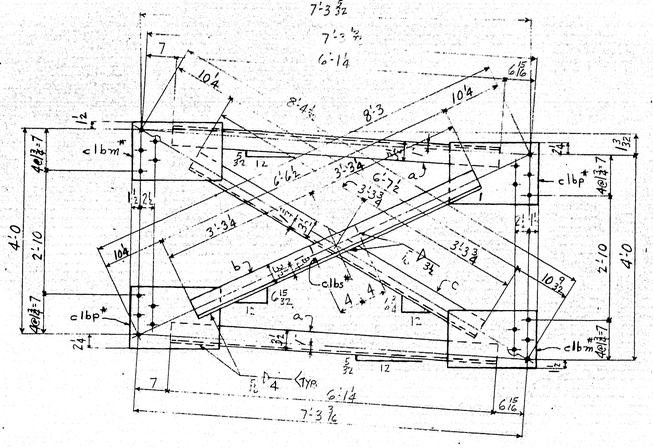
For location of details shown on this sheet refer to diagrams.

E5

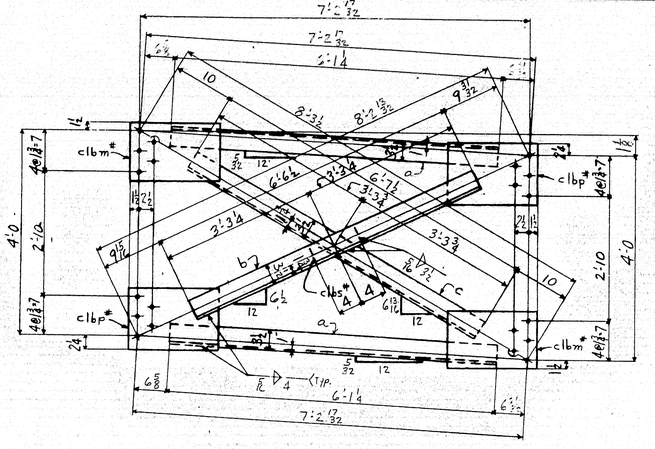
SHOP BILL

LINE	ASSEMBLY MARK	NO	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	THICK	LENGTH FT.	LENGTH IN.	REMARKS	MILL ORDER LENGTH FT.	MILL ORDER LENGTH IN.	MILL ORDER ITEM PAGE	MILL ORDER ITEM LINE
	18- CROSS FRAMES - CF13								D1/S12 D1/S24				
2	a	36	L	4	3½	⅜	5	8½		48	3¾	29	024
3	b	18	L	4	3½	⅜	6	5⅛		47	7¾	29	030
4	c	18	L	4	3½	⅜	6	3¾		45	5¾	29	029
5	c lbm*	36	PL	10		½	1	3½		44	7¼	29	028
6	c lbp*	36	PL	10⅜		½	1	3½		20	10	29	25
7	c lbs*	18	BR	3½		½	0	8		21	0	29	26
8	FW	18	WD			5/16	6	6				J	
9													
10													
11	12- CROSS FRAMES - CF14												
12	a	24	L	4	3½	⅜	5	8½		48	3¾	29	024

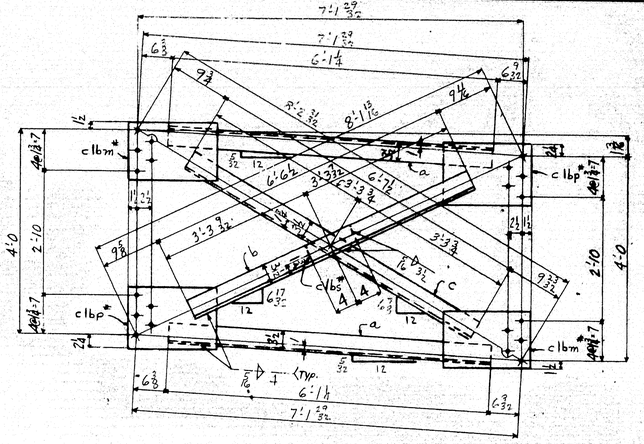
| | | | | | | | | | | | | |



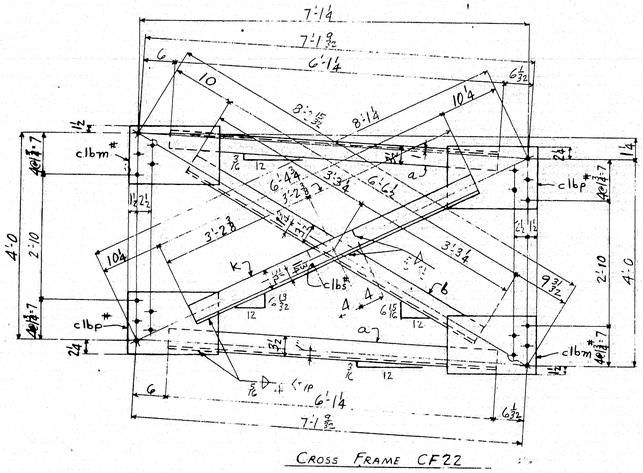
CROSS FRAME CF19



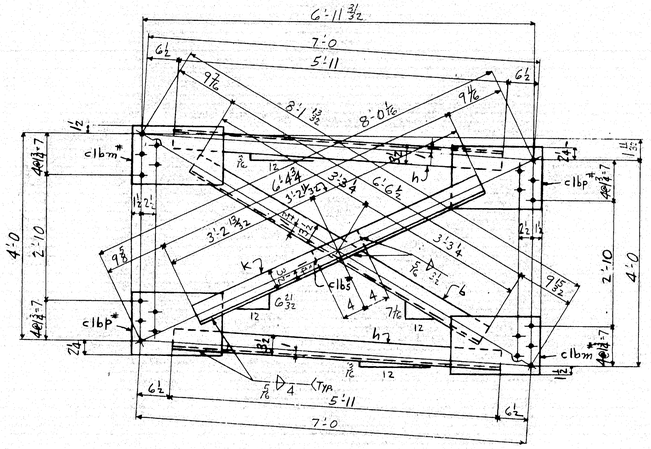
CROSS FRAME CF20



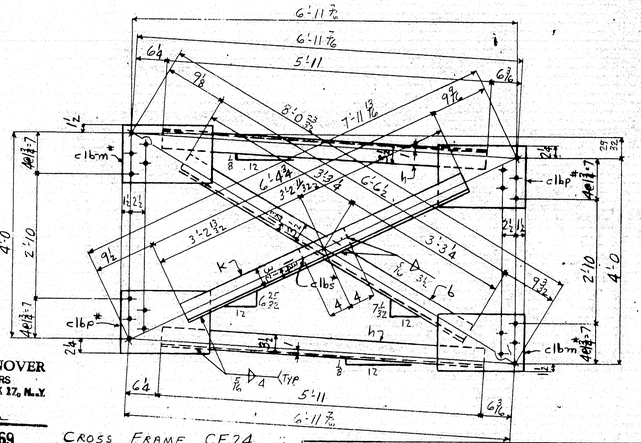
CROSS FRAME CF21



CROSS FRAME CF22



CROSS FRAME CF23



CROSS FRAME CF24

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY J.S. Nichimura
SEP 30 1969

NOTES.

MTL. THK. TO ½" INCL. MUST BE PREHEATED TO 50° DEG.F

ALL OPEN HOLES - NP 3

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

USE E7016,18,28 LOW HYDROGEN ELECTRODES OR GR. SAW-2 FOR WELDING.

For location of details shown on this sheet refer to diagrams.

E5

SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SIZE	WEIGHT TOTAL	WEIGHT EA.	SECTION NOTCH OR PUNCHES	SECTION LENGTH FT	SECTION LENGTH IN	SECTION LENGTH FRACT	REMARKS
1	ONE - CROSS FRAME - CF19										
2	a	2	L	4 3½				6	1	¼	
3	b	1	L	4 3½				6	6	½	
4	c	1	L	4 3½				6	7	½	
5	c lbp*	2	PL	10⅜				½	1	3½	
6	c lbm*	2	PL	10				½	1	3½	
7	c lbs*	1	BR	3½				½	0	8	
8	FW	1	WD					5/16	6	6	
9											
10											
11	ONE - CROSS FRAME - CF20										
12	a	2	L	4 3½				6	1	¼	

MILL ORDER

LINE	LENGTH FT	LENGTH IN	LENGTH FRACT	ITEM PIECE MARK
2	49	1⅞	29	050
3	46	6⅛	29	100
4	46	6⅛	29	100
5	21	0	29	26
6	20	10	29	25
7				J

LINE											
12	b	1	L	4	3½	⅜	6	6½			
12	c	1	L	4	3½	⅜	6	7½			
12	c lbm*	2	PL	10		½	1	3½			
12	c lbp*	2	PL	10⅜		½	1	3½			
12	c lbs*	1	BR	3½		½	0	8			
12	FW	1	WD			5/16	6	6			
13											
13	ONE - CROSS FRAME - CF21										
13	a	2	L	4	3½	⅜	6	1¼			
13	b	1	L	4	3½	⅜	6	6½			
13	c	1	L	4	3½	⅜	6	7½			
13	c lbm*	2	PL	10		½	1	3½			
13	c lbp*	2	PL	10⅜		½	1	3½			
13	c lbs*	1	BR	3½		½	0	8			
13	FW	1	WD			5/16	6	6			
14											
15	ONE - CROSS FRAME - CF22										
16	a	2	L	4	3½	⅜	6	1¼			
17	k	1	L	4	3½	⅜	6	4¾			
18	b	1	L	4	3½	⅜	6	6½			
19	c lbm*	2	PL	10		½	1	3½			
20	c lbp*	2	PL	10⅜		½	1	3½			
21	c lbs*	1	BR	3½		½	0	8			
22	FW	1	WD			5/16	6	6			

27	46	6⅛	29	100	27						
27	46	6⅛	29	100	27						
27	20	10	29	25	27						
27	21	0	29	26	27						
27				J	27						
28					28						
28	29	1⅞	29	050	28						
28	46	6⅛	29	100	28						
28	46	6⅛	29	100	28						
29	20	10	29	25	29						
30	21	0	29	26	30						
31				J	31						
32					32						
33	29	1⅞	29	050	33						
34	47	7¾	29	090	34						
35	46	6⅛	29	100	35						
36	20	10	29	25	36						
37	21	0	29	26	37						
38				J	38						
39					39						
40					40						
41					41						
42					42						

ONE CROSS FRAME CF23

h	2	L	4	3½	⅜	5	11			
k	1	L	4	3½	⅜	6	4¾			
b	1	L	4	3½	⅜	6	6½			
c lbm*	2	PL	10		½	1	3½			
c lbp*	2	PL	10⅜		½	1	3½			
c lbs*	1	BR	3½		½	0	8			
FW	1	WD			5/16	6	6			

8 CROSS FRAMES CF24

h	16	L	4	3½	⅜	5	11			
k	8	L	4	3½	⅜	6	4¾			
b	8	L	4	3½	⅜	6	6½			
c lbm*	16	PL	10		½	1	3½			
c lbp*	16	PL	10⅜		½	1	3½			
c lbs*	8	BR	3½		½	0	8			
FW	8	WD			5/16	6	6			

49	1⅞	29	050			
44	10⅜	29	090			
46	6⅛	29	100			
20	10	29	25			
21	0	29	26			
		J				

49	1⅞	29	050			
44	10⅜	29	090			
46	6⅛	29	100			
20	10	29	25			
21	0	29	26			
		J				

INSTALLMENTS

19E	18W	18E
	1	
	1	
	1	
		1
		1
5	3	8

REQUIRED LIST

QTY.	SHIP MK.	DESCRIPTION	REMARKS
ONE	CF19	CROSS FRAMES	
ONE	CF20	Do	
ONE	CF21	Do	
ONE	CF22	Do	
ONE	CF23	Do	
CF24		Do	

PAY ITEM - 504.711

MATERIAL - A36 STEEL

RIVETS OR BOLTS - NONE

OPEN HOLES - 11/16 ϕ

A325 FIELD BOLTS - 7/8 ϕ

SHOP CONTACT SURFACES - NO PAINT
WELDING - AS NOTED
MILLING - NONE

PAINT - ONE COAT AASHO-M72 TYPE II RED LEAD (VU)

"CROSS FRAMES"

CUSTOMER: MAINE STATE HIGHWAY COMMISSION

PISCATAQUA RIVER BRIDGE

STRUCTURE: PROJECT NO. I-95-1 (22) 16

CONT. NO. 3 NEW HAMPSHIRE APPROACH

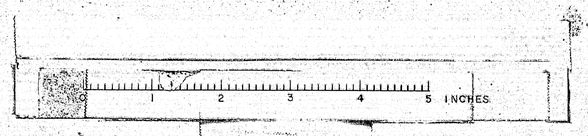
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

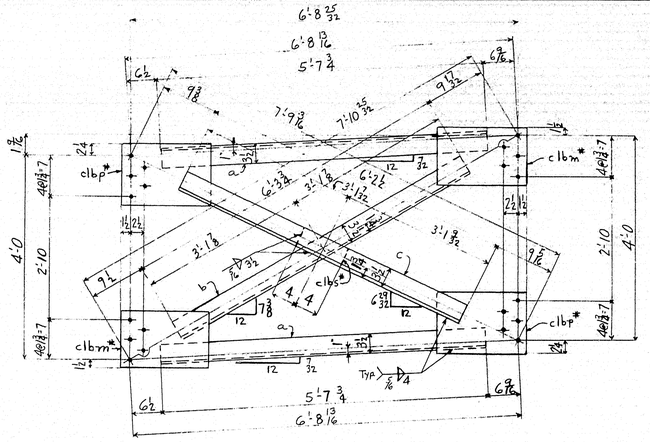
POTTSTOWN DRAFTING ROOM, Pottstown WORKS
MADE BY DEW DATE ____ IN CHARGE 6447&87
CHECKED BY BTD DATE 8/19/69 SHOP NO. 2
CONTRACT CJ-6249-070 DRAWING NO. 24

NO.	DATE	BY	REVISION

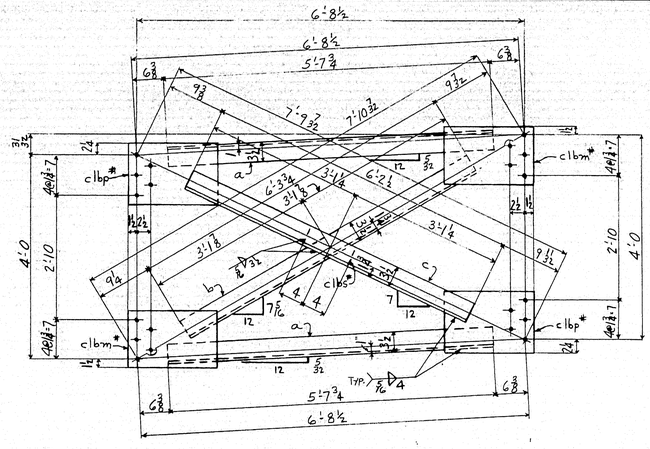
SUBMITTAL DATE: 1 2 3 4 5 6 7 8 9 0

106-76

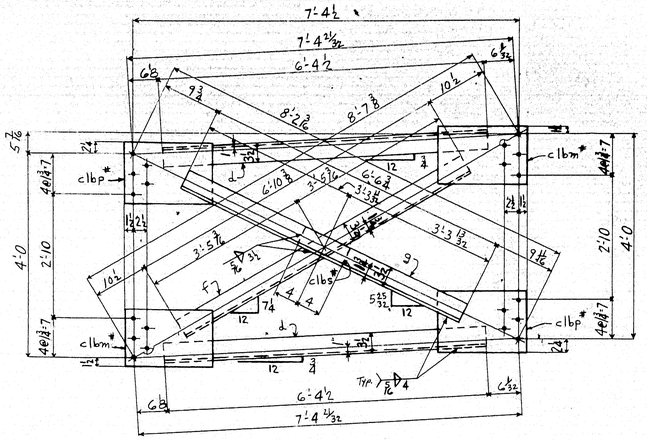




CROSS FRAME CF26



CROSS FRAME CF27



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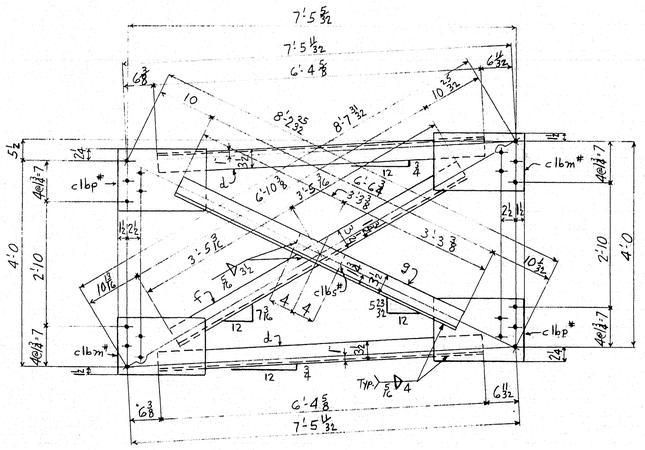

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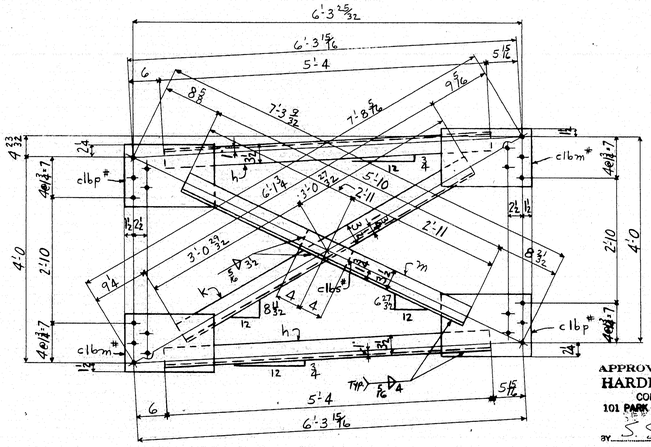
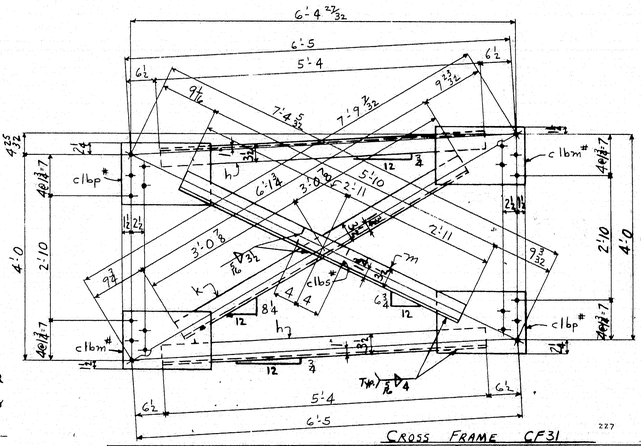


CROSS FRAME CF30



CROSS FRAME CF31

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY S. S. Nishimura
SEP 30 1969

NOTES:
MTL THK. TO ¾" INCL. MUST BE PREHEATED TO 50° DEG.F
ALL OPEN HOLES - NP 3

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

USE E7016,18,28 LOW HYDROGEN ELECTRODES OR GR. SAW-2 FOR WELDING.

For location of details shown on this sheet refer to diagrams.

E5 E9

SHOP BILL

LINE	WEIGHT TOTAL	WEIGHT EA.	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK.	LENGTH FT.	LENGTH IN.	REMARKS
1			9 CROSS FRAMES CF26								
2			a	18	L	4	3½	⅜	5	7¾	
3			b	9	L	4	3½	⅜	6	3¾	
4			c	9	L	4	3½	⅜	6	2½	
5			c	lbm* 18	PL	10		½	1	3½	
6			c	lbp* 18	PL	10⅜		½	1	3½	
7			c	lbs* 9	BR	3½		½	0	8	
8				FW 9	WD			5/16	6	6	
9											
10											
11			ONE CROSS FRAMES CF27								
12			a	2	L	4	3½	⅜	5	7¾	

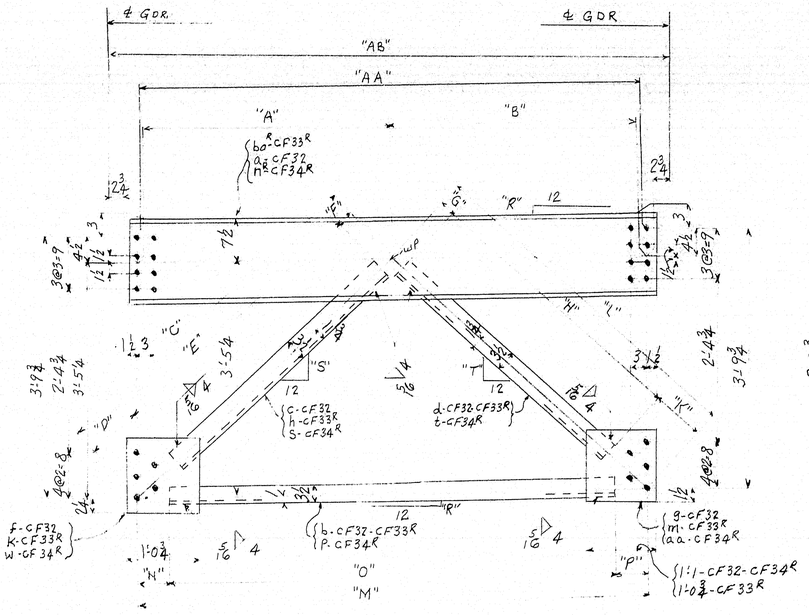
MILL ORDER

LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
45	7¾	29	020
44	7¼	29	070
43	5⅝	29	090
43	10½	29	080
20	10	29	25
21	0	29	26

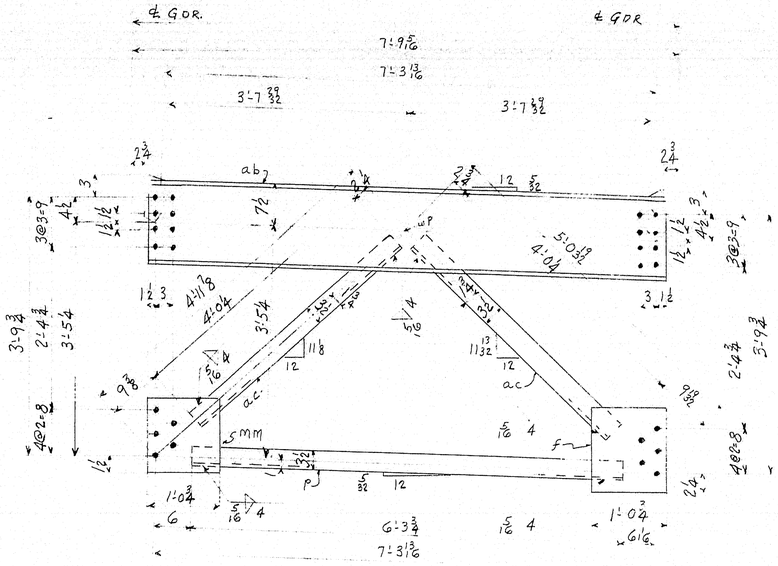
12		b	1	L	4	3½	⅜	6	3¾	
12		c	1	L	4	3½	⅜	6	2½	
12	a	lbm*	2	PL	10		½	1	3½	
12	c	lbp*	2	PL	10⅜		½	1	3½	
12	d	lbs*	1	BR	3½		½	0	8	
12		FW	1	WD			5/16	6	6	
13										
13		174 CROSS FRAMES CF28								
13		d	348	L	4	3½	⅜	6	4½	
13		f	174	L	4	3½	⅜	6	10⅜	
14		g	174	L	4	3½	⅜	6	6¾	
14	c	lbm*	348	PL	10		½	1	3½	
15	c	lbp*	348	PL	10⅜		½	1	3½	
16	c	lbs*	174	BR	3½		½	0	8	
17		FW	174	WD			5/16	6	6	
18										
19		25 CROSS FRAMES CF29								
20		d	50	L	4	3½	⅜	6	4⅝	
21		f	25	L	4	3½	⅜	6	10⅜	
22		g	25	L	4	3½	⅜	6	6¾	
23	c	lbm*	50	PL	10		½	1	3½	
24	c	lbp*	50	PL	10⅜		½	1	3½	
25	c	lbs*	25	BR	3½		½	0	8	
26		FW	25	WD			5/16	6	6	

27		b	1	L	4	3½	⅜	6	3¾	
27		c	1	L	4	3½	⅜	6	2½	
27	a	lbm*	2	PL	10		½	1	3½	
27	c	lbp*	2	PL	10⅜		½	1	3½	
27	d	lbs*	1	BR	3½		½	0	8	
27		FW	1	WD			5/16	6	6	
28										
28		174 CROSS FRAMES CF28								
28		d	348	L	4	3½	⅜	6	4½	
28		f	174	L	4	3½	⅜	6	10⅜	
28		g	174	L	4	3½	⅜	6	6¾	
29	c	lbm*	348	PL	10		½	1	3½	
30	c	lbp*	348	PL	10⅜		½	1	3½	
31	c	lbs*	174	BR	3½		½	0	8	
32		FW	174	WD			5/16	6	6	
33										
34		35 CROSS FRAMES CF30								
35		h	70	L	4	3½	⅜	5	4	
36		k	35	L	4	3½	⅜	6	1¾	
37		m	35	L	4	3½	⅜	5	10	
38	c	lbm*	70	PL	10		½	1	3½	
39	c	lbp*	70	PL	10⅜		½	1	3½	
40	c	lbs*	35	BR	3½		½	0	8	
41		FW	35	WD			5/16	6	6	
42										
43		35 CROSS FRAMES CF31								
		h	70	L	4	3½	⅜	5	4	
		k	35	L	4	3½	⅜	6	1¾	
		m	35	L	4	3½	⅜	5	10	
	c	lbm*	70	PL	10		½	1	3½	
	c	lbp*	70	PL	10⅜		½	1	3½	
	c	lbs*	35	BR	3½		½	0	8	
		FW	35	WD			5/16	6	6	

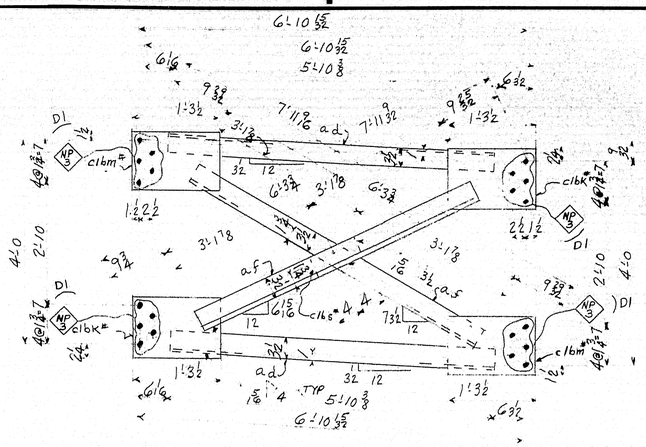
27		44	7¼	29	070					
27		43	10½	29	080					
27	a	20	10	29	25					
27	c	21	0	29	26					
27				J						
28										
28										
28			



CROSS FRAME-CF32-CF33R-CF34R
(ZINC RICH EPOXY) / D1



CROSS FRAME-CF35
(ZINC RICH EPOXY) / D1



CROSS FRAME-CF25
(AASHO-M72-TYPE II RED LEAD) / D1

NOTE "A"
ALL STEEL SURFACES ON THIS SHEET TO BE BLAST CLEANED AS PER SSPC-SP5-66.
ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY INCLUDING OPEN HOLES UNLESS NOTED) D1

GENERAL NOTES:
MTL THK TO ¾" INCL. MUST BE PREHEATED TO 50° DEG. F

D1 (
NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD
USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR. SAW-2 FOR WELDING

DIM / MK	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"K"	"L"	"M"	"N"	"O"	"P"	"R"	"S"	"T"	"AA"	"AB"
CF32	3'-9 7/16	3'-9 3/16	5'-1 5/32	9 11/32	4'-1 1/4	2 3/8	2 3/8	4'-1	9 17/32	5'-0 29/32	7'-6 3/8	6	6'-6 3/8	6	1/8	11 1/16	10 27/32	7'-6 3/8	7'-11 9/32
CF33R	3'-9 7/16	3'-9 3/16	5'-1 1/16	9 1/4	4'-2 1/8	2 5/16	2 7/16	4'-1	9 1/4	5'-0 15/16	7'-6 3/8	6	6'-6 3/8	6	3/16	11 5/32	10 3/4	7'-6 3/8	7'-11 27/32
CF34R	3'-7 29/32	3'-7 29/32	5'-0 3/4	9 3/4	4'-0 3/4	2 1/4	2 1/2	3'-11 3/4	9 1/2	4'-11 3/4	7'-3 13/16	6	6'-3 3/4	6 1/16	3/16	11 5/32	11 1/16	7'-3 13/16	7'-9 5/16

For location of details shown on this sheet refer to diagrams.

E5

INSTALL				REQUIRED LIST			
17W	17E	19W	19E	QTY	SHIPPING MARK	DESCRIPTION	REMARKS
		1		ONE	CF32	CROSS FRAME	
		2		2	CF33R	Do	
		5		5	CF33L	Do	
			6	6	CF34R	Do	
			2	2	CF34L	Do	
			1	ONE	CF35	Do	
5	3			8	CF25	Do	

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK 12, N.Y.
SEP 30 1969

PAY ITEM - 504.711
MATERIAL - A36 STEEL
RIVETS OR BOLTS - NONE
OPEN HOLES - 15/16
A325 FIELD BOLTS - 7/8
SHOP CONTACT SURFACES - NO PAINT
WELDING - AS NOTED
MILLING - NONE
PAINT - ONE COAT AASHO-M72 TYPE II RED LEAD - CF25 (UN)
OTHERS - ONE COAT OF ZINC RICH EPOXY - SEE NOTE "A"

CUSTOMER: MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER COMMISSION
STRUCTURE: PROJECT NO I-95-1 (22) 16
CONT. NO 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM POTTSTOWN WORKS
MADE BY LET DATE 8-14-69 IN CHARGE B.K.B.
CHECKED BY DTO DATE 8/21/69 SHOP NO. 2
CONTRACT CJG6249-070 DRAWING NO. 26

REVISION: NO. 1 DATE 11/26/69 INIT. BAL

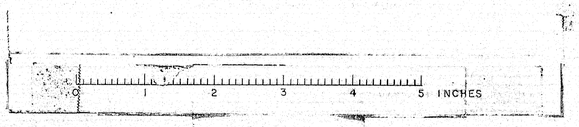
SUBMITTAL / DATE: 1 2 3 4 5 6 7 8 9 0

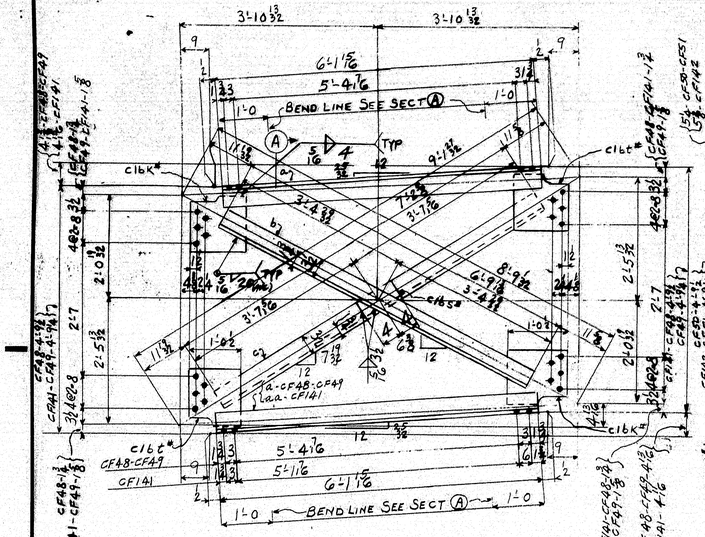
O.S.I.-1

106-78

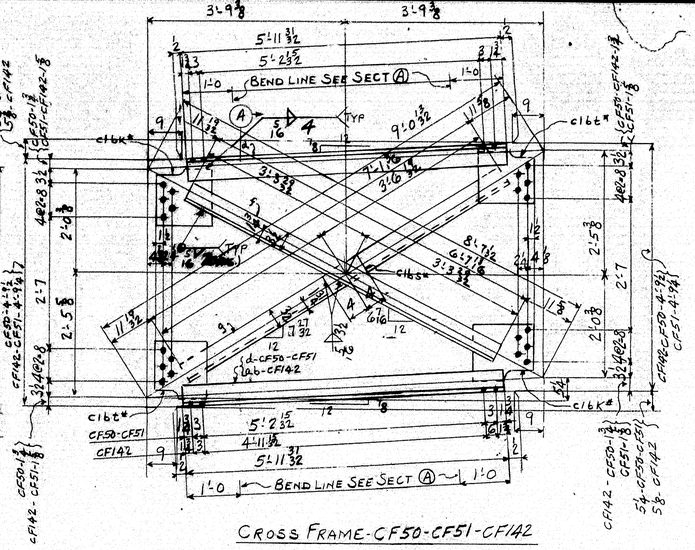
SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	THICK	LENGTH FT.	LENGTH IN.	REMARKS	MILL ORDER LENGTH FT.	MILL ORDER LENGTH IN.	MILL ORDER ITEM PAGE	MILL ORDER ITEM LINE
1		16	CROSS FRAMES	1-CF32	2-CF33R	5-CF33L							
2				6-CF34R	2-CF34L								
3	a	1	C	15	33.9		7	9½	CF32 ·	47	3⅜	29	19C
4	ba R s	5 2	C	15	33.9		7	9⅜	CF33R ·	2 15 / 47	2⅝ / 3⅜	29 / 29	19D / 19C
5	n R s	2 6	C	15	33.9		7	7/16	CF34L ·	6 95 / 47	10⅞ / 3⅜	29 / 29	21C / 19C
6	b	8	L	4	3½	⅜	6	6⅜	1-CF32 · 1-CF33R ·	46	6⅜	29	10C
7	P	8	L	4	3½	⅜	6	3¾	CF34L ·	44	7¼	29	07C
8	c	1	L	4	3½	⅜	4	1¾	CF32 ·	40	8⅜	29	18C
9	h	7	L	4	3½	⅜	4	2⅜	CF33R ·	31	7¼	29	16A
10	S	8	L	4	3½	⅜	4	0¾	CF34R ·				
11	d	8	L	4	3½	⅜	4	1	1-CF32 · 1-CF33R ·	40	8⅜	29	18C
12	t	8	L	4	3½	⅜	3	11¾	CF34R ·				
13	f	1	PL	12¾		⅜	1	1½	CF32 ·				J
14	g	1	PL	12½		⅜	1	1	CF32 ·				J
15	m	7	PL	11¾		⅜	1	0¾	CF33R ·				J
16	K	7	PL	12¾		⅜	1	0¾	CF33L ·				J
17	w	8	PL	12¾		⅜	1	1	CF34R ·				J
18	aa	8	PL	12		⅜	1	1	CF34L ·				J
19	FW	16	WD			5/16	4	0					
20													
21													
22													
23													
24													
25													
26													
27													
28	1-CROSS FRAME-CF35												
29	ab	1	C	15	33.9		7	7		22	11	29	22B
30	P	1	L	4	3½	⅜	6	3¾		44	7¼	29	07C
31	ac	2	L	4	3½	⅜	4	0¼		40	8⅜	29	18C
32	mm	1	PL	12¼		⅜	1	0¾				J	
33	f	1	PL	12¾		⅜	1	1½				J	
34	FW	1	WD			5/16	4	0					
35	8-CROSS FRAMES-CF25												
36	ad	16	L	4	3½	⅜	5	10⅜		149	1⅞	29	25D
37	af	16	L	4	3½	⅜	6	3¾		44	7¼	29	07C
38	c 16bk	16	PL	10		½	1	3½		20	10	29	25
39	c 16bk	16	PL	10¾		½	1	3½		21	0	29	26
40	c 16bk	8	BR	3½		½	0	8				J	
41	FW	8	WD			5/16	6	6					
42													

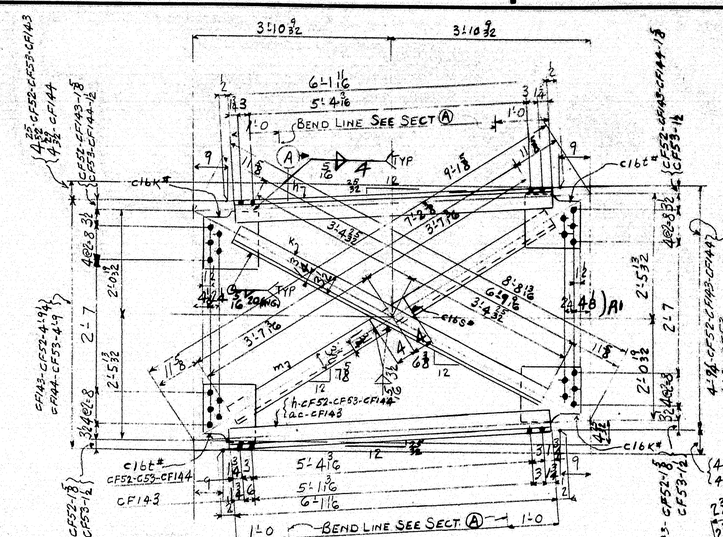




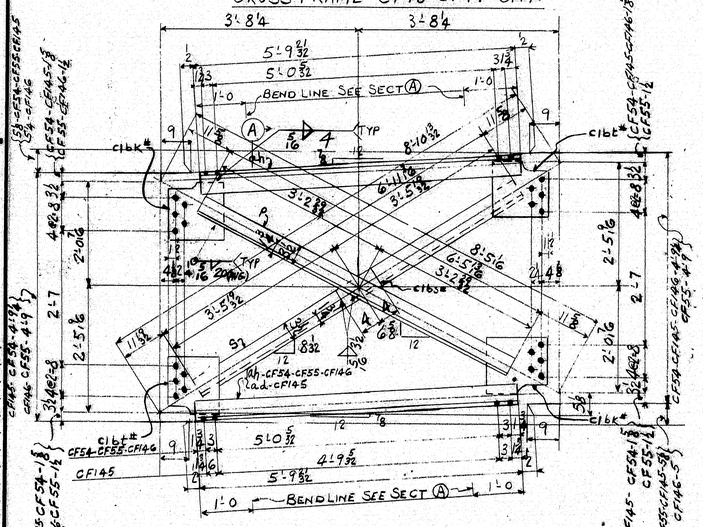
CROSS FRAME - CF48 - CF49 - CF141



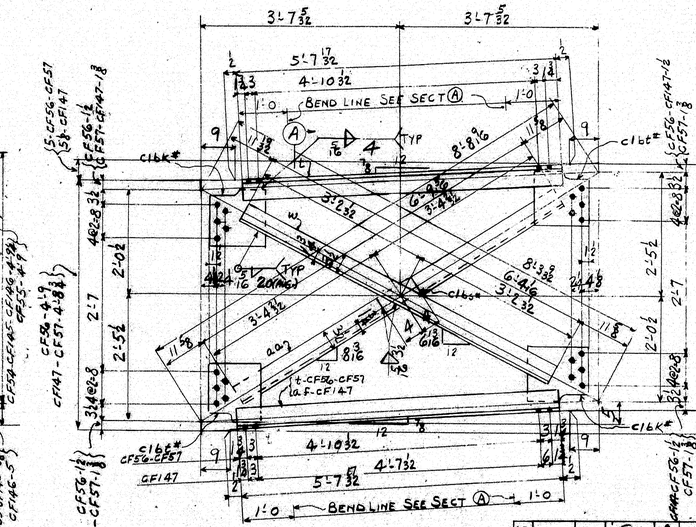
CROSS FRAME - CF50 - CF51 - CF142



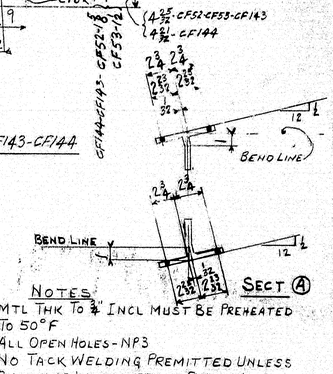
CROSS FRAME - CF52 - CF53 - CF143 - CF144



CROSS FRAME - CF54 - CF55 - CF145 - CF146



CROSS FRAME - CF56 - CF57 - CF147



NOTES.
MTL THK TO 3" INCL MUST BE PREHEATED TO 50°F
ALL OPEN HOLES - NP3
NO TACK WELDING PREMITTED UNLESS SHOWN OR INCORPATED IN FINAL WELD
USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR SAW-2 FOR WELDING
ALL RE-ENTRANT CUTS TO HAVE 1" RAD.

INSTALL					REQUIRED LIST			
12W	15E	15W	16E	16W	QTY	SHIPPING MARK	DESCRIPTION	REMARKS
				3	3	GF48	CROSS FRAME	
				3	3	CF49	DO	
			3		3	CF50	DO	
			3		3	CF51	DO	
				3	3	CF52	DO	
				3	3	CF53	DO	
		3			3	CF54	DO	
		3			3	CF55	DO	
	3				3	CF56	DO	
	3				3	CF57	DO	
				1	ONE	CF141	DO	
		1			ONE	CF142	DO	
			1		ONE	CF143	DO	
			1		ONE	CF144	DO	
	1				ONE	CF145	DO	
	1				ONE	CF146	DO	
1					ONE	CF147	DO	

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY S.S. Nishkian DEC 30 1969

Per location of details shown on this sheet refer to diagrams:
E6 - E7

SHOP BILL

LINE	WEIGHT TOTAL	WEIGHT EA.	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1				7	CROSS FRAME -				3	CF48 3	CF49
2			a	13	BT	4	17.5		6	1 1/16	G-CF48 G-CF49 1-CF141
3			b	7	L	4	3 1/2	3/8	6	9 1/16	
4			c	7	L	4	3 1/2	3/8	7	2 5/8	
5			c 16K*	14	PL	12 1/2		1/2	1	0	
6			c 16K*	14	PL	13		1/2	1	0 1/2	
7			c 16S*	7	BR	3 1/2		1/2	0	8	
8			FW	7	WD			1/16	10	6	
9			aa	1	BT	4	17.5		6	1 1/16	CF141
10				7	CROSS FRAME -				3	CF50 3	CF51 1-CF142
11			d	13	BT	4	17.5		6	0	G-CF50 G-CF51 1-CF142
12											

MILL ORDER

LINE	LENGTH FT.	LENGTH IN.	ITEM PIECE	ITEM LINE
13				
14	1-CF141			
15			36	11
16				
17	6	10	36	13C
18	47	11 1/4	36	13D
19	21	9 3/8	36	14D
20	20	9	36	40
21	20	7	24	34
22			J	
23				
24			36	11
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36			3607	
37				

LINE																
13		f	7	L	4	3 1/2	3/8	6	7 1/16							
14		g	7	L	4	3 1/2	3/8	7	1 1/16							
15		c 16K*	14	PL	12 1/2		1/2	1	0	20	9	36	40			
16		c 16K*	14	PL	13		1/2	1	0 1/2							
17		c 16S*	7	BR	3 1/2		1/2	0	8	20	7	24	34			
18		FW	7	WD			1/16	10	6			J				
19		ab	1	BT	4	17.5		6	0	CF142						
20												36	07			
21			8	CROSS FRAME -				3	CF52 3	CF53 1	CF143 1	CF144				
22		h	15	BT	4	17.5		6	1 1/16	G-CF52 G-CF53 2-CF143 1-CF144						
23		K	8	L	4	3 1/2	3/8	6	9 1/16	47	11 1/2	36	13C			
24		m	8	L	4	3 1/2	3/8	7	2 3/8	43	7 3/8	36	13D			
25		c 16S*	16	PL	12 1/2		1/2	1	0	20	9	36	40			
26		c 16K*	16	PL	13		1/2	1	0 1/2	20	7	24	34			
27		c 16S*	8	BR	3 1/2		1/2	0	8			J				
28		FW	8	WD			1/16	10	6							
29		P	8	L	4	3 1/2	3/8	6	5 13/16	45	7 1/2	36	17C			
30		S	8	L	4	3 1/2	3/8	6	11 7/16	45	10	36	16C			
31			7	CROSS FRAMES				3	CF56 3	CF57 1	CF147					
32		af	1	BT	4	17.5		5	7 1/16	CF147						
33		t	13	BT	4	17.5		5	7 1/16	G-CF56 G-CF57 1-CF147						
34		w	7	L	4	3 1/2	3/8	6	4 1/16	5	8 3/4	36	05			
35		aa	7	L	4	3 1/2	3/8	6	9 1/16	45	7 1/2	36	17C			
36		c 16K*	14	PL	12 1/2		1/2	1	0	47	11 3/4	36	13C			
37		c 16K*	14	PL	13		1/2	1	0 1/2	20	9	36	40			
38		c 16S*	7	BR	3 1/2		1/2	0	8	20	7	24	34			
39		FW	7	WD			1/16	10	6			J				

PAY ITEM - 504.711

MATERIAL - A36 STEEL
RIVETS OR BOLTS - NONE
OPEN HOLES - 15/16"ϕ
A325 FIELD BOLTS - 7/8"ϕ
SHOP CONTACT SURFACES - NO PAINT
WELDING - AS NOTED
MILLDING - NONE
PAINT - ONE COAT AASHO-M72 TYPE II RED LEAD

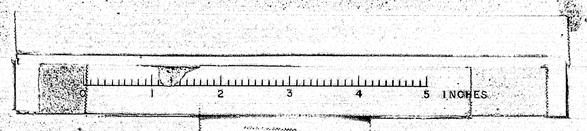
NO.	DATE	BY
1	2-24-70	LET
REVISION		

SUBMITTAL DATE: 1 2 3 4 5 6 7 8 9 10

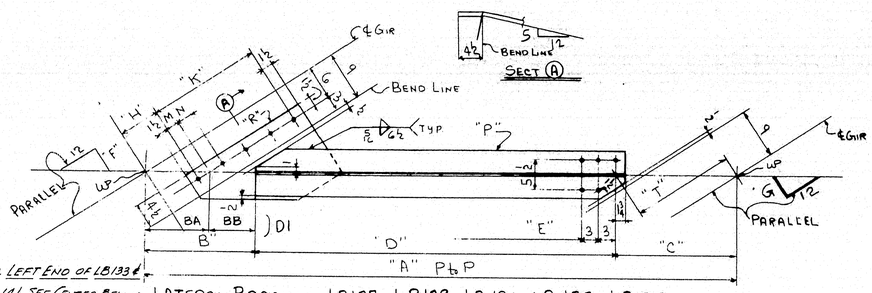
CUSTOMER: MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE: PROJECT NO I-95-1 (22) 16.
CONT NO 3 NEW HAMPSHIRE APPROACH

BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM POTTSTOWN WORKS
MADE BY LET DATE 8-20-69 IN CHARGE BERTOLET
CHECKED BY [illegible] DATE 9-8-69 SHOP NO. 2
CONTRACT CJG249-070 DRAWING NO. 27

106-79 OCT. A.D. 1969



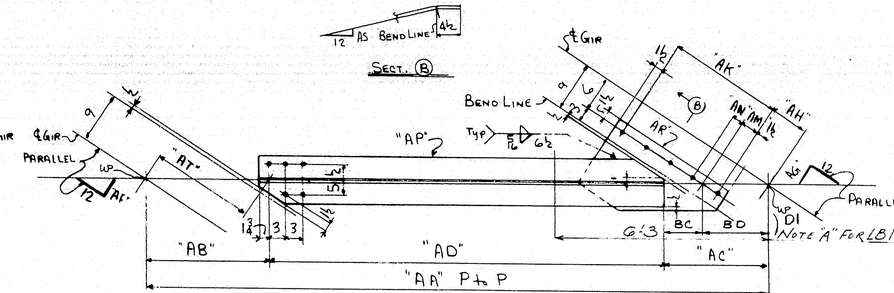
UPPER LINE 4 & 5



For LEFT END of LB133 & LB141 SEE CENTER BELOW

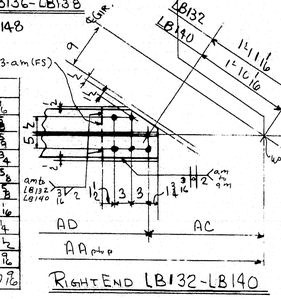
LATERAL BRACING LB127 - LB129 - LB131 - LB133 - LB135 LB137 - LB139 - LB141 - LB143 - LB145 & LB147

MARK	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	BA	BB
LB127	14'-9 7/8	1'-10 1/4	2'-1 5/8	10'-10	10'-4	6 7/16	6 7/16	8	4@5 3/8 = 1'-11 1/2	3 7/16	2 1/16	a	b	3/8	1'-10 3/8	1'-0 1/16	9 1/16
LB129	14'-8 3/16	1'-10 1/4	2'-1 5/8	10'-8 5/8	10'-2 5/8	6 15/16	6 15/16	8	4@5 3/8 = 1'-11 1/2	3 7/16	2 1/16	f	b	3/8	1'-10 3/8	1'-0 23/32	9 17/32
LB131	14'-7 11/16	1'-10 1/4	2'-1 5/8	10'-7 1/8	10'-1 1/8	6 1/2	6 1/2	8	4@5 3/8 = 1'-11 1/2	3 7/16	2 1/16	h	b	3/8	1'-10 1/16	1'-0 19/32	9 21/32
LB133	11'-11 15/16	1'-8	1'-8	8'-7 13/16	8'-1 13/16	8 1/2	8 1/2	—	—	—	—	aa	—	—	1'-4 7/16	—	—
LB135	14'-9 3/16	1'-10 1/4	2'-1 5/8	10'-9 1/4	10'-3 1/4	6 3/8	6 3/8	8	4@5 3/8 = 1'-11 1/2	3 7/16	2 1/16	n	b	3/8	1'-10 5/16	1'-0 13/32	9 1/16
LB137	14'-8 1/16	1'-10 1/4	2'-1 5/8	10'-8 3/8	10'-2 3/8	6 5/8	6 5/8	8	4@5 3/8 = 1'-11 1/2	3 7/16	2 1/16	s	b	3/8	1'-10 3/8	1'-0 15/32	9 1/16
LB139	14'-7 1/16	1'-10 1/4	2'-1 5/8	10'-7 7/8	10'-1 7/8	6 3/8	6 3/8	8	4@5 3/8 = 1'-11 1/2	3 7/16	2 1/16	w	b	3/8	1'-10 5/16	1'-0 17/32	9 1/16
LB141	11'-11 1/4	1'-7 1/2	1'-8	8'-7 3/4	8'-1 3/4	8 5/8	8 5/8	—	—	—	—	ak	—	—	1'-4 7/16	—	—
LB143	14'-4 1/16	1'-10 1/4	2'-1 5/8	10'-4 7/16	9'-10 7/16	6 1/2	6 1/2	8	4@5 3/8 = 1'-11 1/2	3 7/16	2 1/16	ac	b	3/8	1'-10 1/4	1'-0 1/32	9 31/32
LB145	14'-3 1/16	1'-10 1/4	2'-1 5/8	10'-3 1/16	9'-9 1/16	6 1/2	6 1/2	8	4@5 3/8 = 1'-11 1/2	3 7/16	2 1/16	ae	b	3/8	1'-10 1/4	1'-0 1/32	9 31/32
LB147	14'-2 1/8	1'-10 1/4	2'-1 5/8	10'-2 1/4	9'-8 1/4	6 9/16	6 9/16	8	4@5 3/8 = 1'-11 1/2	3	2 3/16	af	b	3/8	1'-10 1/4	1'-0 3/32	9 33/32

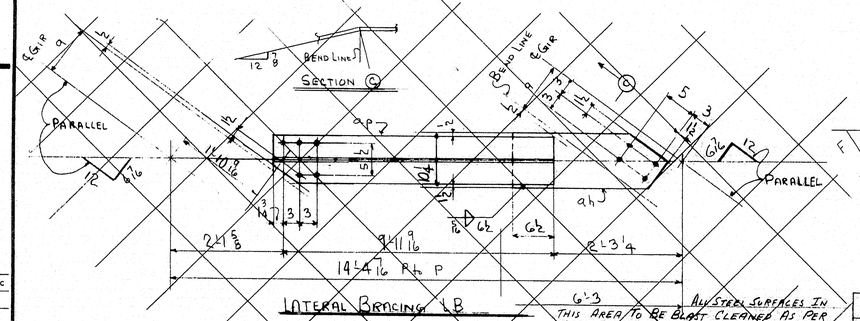


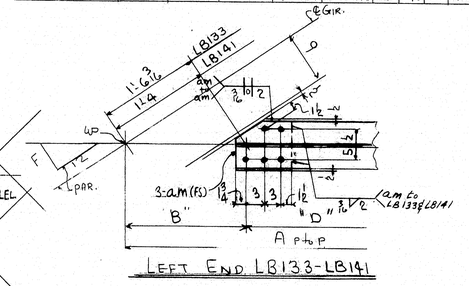
LATERAL BRACING LB128 - LB130 - LB132 - LB134 - LB136 - LB138 LB140 - LB142 - LB144 - LB 146 & LB148

BC	BD	MARK	AA	AB	AC	AD	AF	AG	AH	AK	AM	AN	AP	AR	AS	AT
9 3/32	1'-0 19/32	LB128	14'-9 5/16	2'-1 5/8	1'-10 1/4	10'-8 7/16	6 13/32	6 13/32	8	4@5 3/8 = 1'-11 1/2	3 7/16	2 13/16	c	d	3/8	1'-10 9/16
9 1/16	1'-0 1/16	LB130	14'-9 1/16	2'-1 5/8	1'-10 1/4	10'-9 1/16	6 7/16	6 7/16	8	4@5 3/8 = 1'-11 1/2	3 7/16	2 1/16	g	d	3/8	1'-10 3/8
—	—	LB132	14'-9 3/4	2'-1 5/8	2'-0 7/8	10'-7 3/8	6 3/8	6 3/8	—	—	—	—	ak	—	—	1'-10 5/8
7 13/32	10 3/32	LB134	11'-9 1/4	1'-7 1/2	1'-5 5/8	8'-8 7/8	8 3/8	8 3/8	5 1/2	4@4 3/8 = 1'-7	2 3/8	z	k	m	3/8	1'-3 3/4
9 1/16	1'-0 1/16	LB136	14'-7 3/4	2'-1 5/8	1'-10 1/4	10'-7 3/8	6 7/16	6 7/16	8	4@5 3/8 = 1'-11 1/2	3 7/16	2 1/16	p	d	3/8	1'-10 5/8
9 1/16	1'-0 1/16	LB138	14'-8 1/4	2'-1 5/8	1'-10 1/4	10'-8 3/8	6 5/16	6 5/16	8	4@5 3/8 = 1'-11 1/2	3 7/16	2 1/16	t	d	3/8	1'-10 3/8
—	—	LB140	14'-9 1/4	2'-1 5/8	2'-0 3/8	10'-6 1/4	6 3/16	6 3/16	—	—	—	—	ah	—	3/8	1'-10 1/16
7 5/8	10 1/4	LB142	11'-10 11/16	1'-8	1'-5 5/8	8'-6 13/16	8 5/8	8 5/8	5 3/8	4@4 3/8 = 1'-7	2 7/16	2 7/16	y	m	3/8	1'-4 4
9 3/32	1'-0 1/32	LB144	14'-2 3/8	2'-1 5/8	1'-10 1/4	10'-3	6 9/16	6 9/16	8	4@5 3/8 = 1'-11 1/2	3	2 3/16	ab	a	3/8	1'-10 1/2
9 3/32	1'-0 1/32	LB146	14'-3 5/8	2'-1 5/8	1'-10 1/4	10'-3 3/4	6 1/2	6 1/2	8	4@5 3/8 = 1'-11 1/2	3 1/16	2 1/16	ad	d	3/8	1'-10 7/16
9 1/16	1'-0 1/16	LB148	14'-4 7/16	2'-1 5/8	1'-10 1/4	10'-4 7/16	G 7/16	G 7/16	8	4@5 3/8 = 1'-11 1/2	3 7/16	2 1/16	ap	ah	3/8	1'-10 7/16

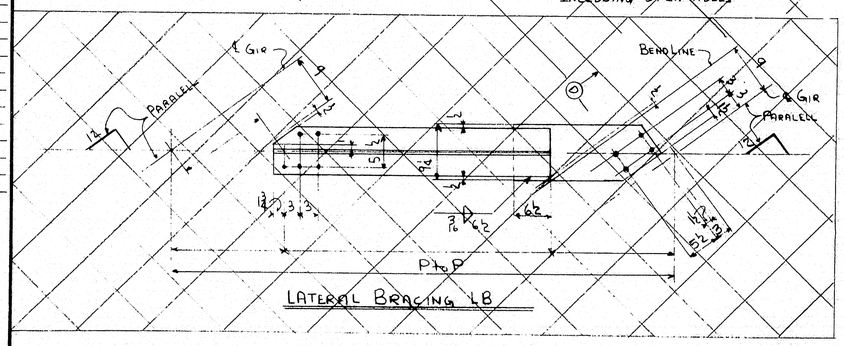


RIGHT END LB132 - LB140





LEFT END LB133 - LB141



ALL STEEL SURFACES IN THIS AREA TO BE BLAST CLEANED AS PER SSPC-SP8-66. ALL STEEL WILL THEN RECEIVE ONE COAT of ZINC RICH EPOXY PAINT, INCLUDING OPEN HOLES.

INSTALL 11W	10W	9W	QTY	MARKS	DESCRIPTION	REMARKS
			ONE	LB127	LATERAL BRACE	
1			ONE	LB128	do	
1			ONE	LB129	do	
1			ONE	LB130	do	
1			ONE	LB131	do	
1			ONE	LB132	do	
	1		ONE	LB133	do	
	1		ONE	LB134	do	
	1		ONE	LB135	do	
	1		ONE	LB136	do	
	1		ONE	LB137	do	
	1		ONE	LB138	do	
	1		ONE	LB139	do	
	1		ONE	LB140	do	
		1	ONE	LB141	do	
		1	ONE	LB142	do	
		1	ONE	LB143	do	
		1	ONE	LB144	do	
		1	ONE	LB145	do	
		1	ONE	LB146	do	
		1	ONE	LB147	do	
		1	ONE	LB148	do	

HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
SEP 30 1969

For location of details shown on this sheet refer to diagrams.

GD6 - E8

SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1				ONE LATERAL BRACE LB127					
2	a	1	BT	10	31		10	11 3/4	
3	b	1	PL	13		5/8	2	2 1/2	BENT 14 1/2 x 3/8 x
4	FW	1	WD			5/16	1	1	
5				ONE LATERAL BRACE LB128					
6	c	1	BT	10	31		10	10 3/8	
7	d	1	PL	13		5/8	2	2 1/2	BENT 14 1/2 x 3/8 x
8	FW	1	WD			5/16	1	1	
9				ONE LATERAL BRACE LB129					
10	f	1	BT	10	31		10	10 5/8	
11	b	1	PL	13		5/8	2	2 1/2	BENT 14 1/2 x 3/8 x
12	FW	1	WD			5/16	1	1	
13				ONE LATERAL BRACE LB130					
14	g	1	BT	10	31		10	10 1/16	
15	d	1	PL	13		5/8	2	2 1/2	BENT 14 1/2 x 3/8 x
16	FW	1	WD			5/16	1	1	
17				ONE LATERAL BRACE LB131					
18	h	1	BT	10	31		10	9 7/16	
19	b	1	PL	13		5/8	2	2 1/2	BENT 14 1/2 x 3/8 x
20	FW	1	WD			5/16	1	1	
21				ONE LATERAL BRACE LB134					
22	k	1	BT	10	31		8	9 7/8	
23	m	1	PL	13		5/8	1	10	BENT 14 1/2 x 3/8 x
24	FW	1	WD			5/16	1	1	
25				ONE LATERAL BRACE LB135					
26	n	1	BT	10	31		10	11	
27	b	1	PL	13		5/8	2	2 1/2	BENT 14 1/2 x 3/8 x
28	FW	1	WD			5/16	1	1	
29				ONE LATERAL BRACE LB136					
30	p	1	BT	10	31		10	9 5/8	
31	d	1	PL	13		5/8	2	2 1/2	BENT 14 1/2 x 3/8 x
32	FW	1	WD			5/16	1	1	
33				ONE LATERAL BRACE LB137					
34	s	1	BT	10	31		10	9 1/16	
35	b	1	PL	13		5/8	2	2 1/2	BENT 14 1/2 x 3/8 x
36	FW	1	WD			5/16	1	1	
37				ONE LATERAL BRACE LB138					
38	t	1	BT	10	31		10	10 3/8	
39	d	1	PL	13		5/8	2	2 1/2	BENT 14 1/2 x 3/8 x
40	FW	1	WD			5/16	1	1	
41				ONE LATERAL BRACE LB139					
42	w	1	BT	10	31		10	9 15/16	
43	b	1	PL	13		5/8	2	2 1/2	BENT 14 1/2 x 3/8 x
44	FW	1	WD			5/16	1	1	
45				ONE LATERAL BRACE LB142					
46	y	1	BT	10	31		8	8 7/16	
47	m	1	PL	13		5/8	1	10	BENT 14 1/2 x 3/8 x
48	FW	1	WD			5/16	1	1	
49				ONE LATERAL BRACE LB143					
50	aa	1	BT	10	31		10	5 15/16	
51	b	1	PL	13		5/8	2	2 1/2	BENT 14 1/2 x 3/8 x
52	FW	1	WD			5/16	1	1	
53				ONE LATERAL BRACE LB144					
54	af	1	BT	10	31		10	9 7/8	
55	d	1	PL	13		5/8	2	2 1/2	BENT 14 1/2 x 3/8 x
56	FW	1	WD			5/16	1	1	
57				ONE LATERAL BRACE LB145					
58	ae	1	BT	10	31		10	4 1/2	
59	b	1	PL	13		5/8	2	2 1/2	BENT 14 1/2 x 3/8 x
60	FW	1	WD			5/16	1	1	
61				ONE LATERAL BRACE LB146					
62	ad	1	BT	10	31		10	5 1/2	
63	d	1	PL	13		5/8	2	2 1/2	BENT 14 1/2 x 3/8 x
64	FW	1	WD			5/16	1	1	
65									
66									LINE 49 &
67				ONE LATERAL BRACE LB147					
68	af	1	BT	10	31	10 4	45	10	31 45
69	b	1	PL	13		5/8 2 2 1/2 BENT 14 1/2 x 3/8 x	26	0	28 19
70	FW	1	WD			5/16 1 1			
71				ONE LATERAL BRACE LB148					
72	ap	1	BT	10	31	10 6 7/16	45	10	31 45
73	ah	1	PL	13		5/8 2 2 1/2 BENT 14 1/2 x 3/8 x	26	0	28 19
74	FW	1	WD			5/16 1 1			
75				ONE LATERAL BRACE LB132					
76	ak	1	BT	10	31	10 10 3/8	45	10	31 45
77	am	3	FIL	9 4		5/8 0 9 4 J			
78	FW	1	WD			3/16 0 4			
79	SD	1	WD			3/16 0 8			
80									
81				ONE LATERAL BRACE LB133					
82	aq	1	BT	10	31	8 11 7/16	40	0	31 44
83	am	3	FIL	9 4		5/8 0 9 4 J			
84	FW	1	WD			3/16 0 4			
85	SD	1	WD			3/16 0 8			
86									
87				ONE LATERAL BRACE LB140					
88	ah	1	BT	10	31	10 10 4	45	10	31 45
89	am	3	FIL	9 4		5/8 0 9 4 J			
90	FW	1	WD			3/16 0 4			
91	SD	1	WD			3/16 0 8			
92									
93				ONE LATERAL BRACE LB141					
94	ak	1	BT	10	31	8 11 7/16	40	0	31 44
95	am	3	FIL	9 4		5/8 0 9 4 J			
96	FW	1	WD			3/16 0 4			
97	SD	1	WD			3/16 0 8			
98									

MILL ORDER

LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
45	10	31	45
26	0	28	19
45	10	31	45
26	0	28	19
45	10	31	45
26	0	28	19
40	0	31	44
26	0	28	19
45	10	31	45
26	0	28	19
45	10	31	45
26	0	28	19
45	10	31	45
26	0	28	19
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45	10	31	45
26	0	28	19
45	10	31	45
26	0	28	19
40	0	31	44
26	0	28	19
45	10	31	45
26	0	28	19
45	10	31	45
26	0	28	19
40	0	31	44
26	0	28	19
45	10	31	45
26	0	28	19
45	10	31	45
26	0	28	19

NOTE 3 — ALL OPEN HOLES (UN)

NOTE "A"
ALL STEEL SURFACES IN THIS AREA TO BE BLAST CLEANED AS PER SSPC-SP5-66. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY PAINT, INCLUDING OPEN HOLES.

PAY ITEM 504.711

MATERIAL A36
RIVETS OR BOLTS NONE
OPEN HOLES 15 9 16
A325 FIELD BOLTS 7 8
SHOP CONTACT SURFACES NO PAINT (UN) MILL - NONE
WELDING - AS SHOWN
PAINT ONE COAT AASHO-M72 TYPE II RED LEAD (U.N.)

REVISION NO.	DATE	INIT.
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		

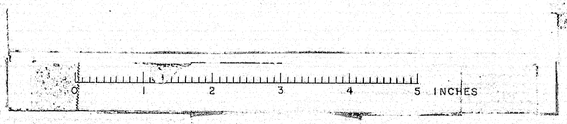
SUBMITTAL 1 2 3 4 5 6 7 8 9 0
DATE

LATERAL BRACING STA 531+83.67 to STA 534+51.67

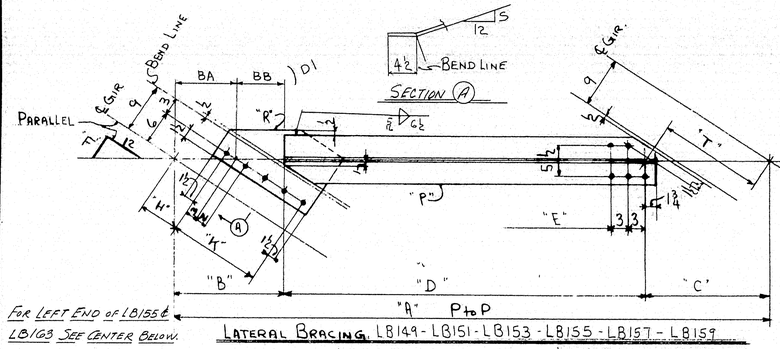
CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE PROJECT NO I95 I(22)16
CONT NO 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM POTTSTOWN WORKS
MADE BY KIRK DATE 8-20-69 IN CHARGE B.K. BERTOLET
CHECKED BY BTD DATE 9/4/69 SHOP NO. 2
CONTRACT CJ6249-071 DRAWING NO. 28

O.S.I-1

106-80 OCT 7 19



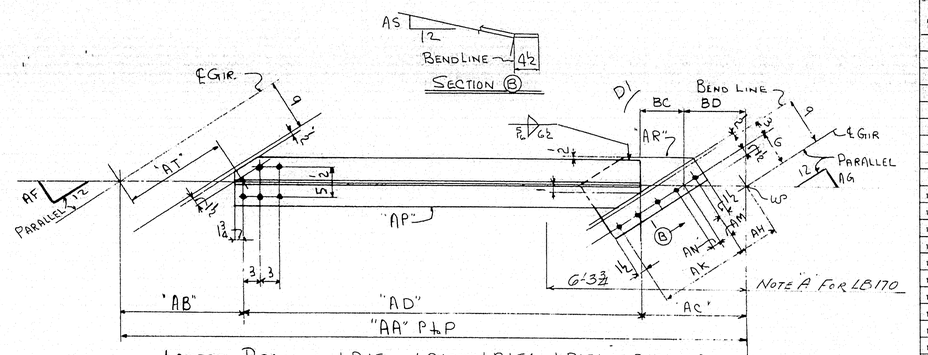
LOWER LINE 12 TO 13



FOR LEFT END of LB155 & LB163 SEE CENTER BELOW.

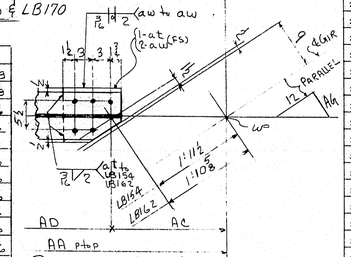
LATERAL BRACING LB149 - LB151 - LB153 - LB155 - LB157 - LB159 LB161 - LB163 - LB165 - LB167 & LB169

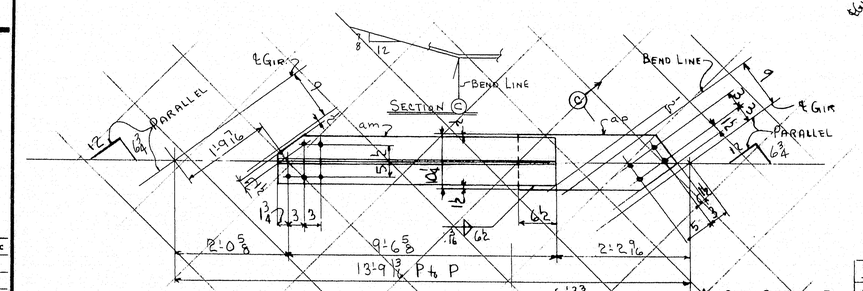
MARK	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	BA	BB
LB149	14'-6 5/8	1'-8 3/4	2'-0 5/8	10'-9 1/4	10'-3 1/4	6 7/8	6 7/8	7 1/4	5 1/2 - 30 5/8 x 1/4 - 14 1/2	3 1/4	2	a	b	3/8	149 3/8	1'-0 3/32	8 27/32
LB151	14'-7 1/8	1'-9 1/2	2'-0 5/8	10'-9 1/16	10'-3 1/16	6 29/32	6 29/32	7 1/4	5 1/2 - 30 5/8 x 1/4 - 15 1/2	2 13/16	2 1/16	f	g	3/8	149 1/2	1'-0 3/8	9 3/8
LB153	14'-7 1/16	1'-9 1/2	2'-0 5/8	10'-9 9/16	10'-3 7/16	6 11/16	6 11/16	7 3/4	5 1/2 - 30 5/8 x 1/4 - 15 1/2	3	2 1/2	h	g	3/8	149 1/2	1'-0 5/16	9 5/16
LB155	11'-8 3/8	1'-9 3/4	1'-6 3/4	8'-3 5/8	7'-9 5/8	9 3/8	9 3/8	—	—	—	—	ay	y	—	120 1/8	-	-
LB157	14'-5 7/16	1'-9 1/2	2'-0 5/8	10'-7 1/16	10'-1 1/16	6 11/16	6 11/16	7 3/4	5 1/2 - 30 5/8 x 1/4 - 15 1/2	3	2 1/2	p	q	3/8	149 1/2	1'-0 5/16	9 5/16
LB159	14'-5 1/16	1'-9 1/2	2'-0 5/8	10'-7 1/16	10'-1 1/16	6 3/32	6 3/32	7 3/4	5 1/2 - 30 5/8 x 1/4 - 15 1/2	3 1/16	2 3/8	w	q	3/8	149 7/16	1'-0 11/32	9 11/32
LB161	14'-6 7/16	1'-10 1/4	2'-1 5/8	10'-6 7/16	10'-0 7/16	6 1/2	6 1/2	8	4 @ 5 1/2 = 11'-11 1/2	3 1/16	2 1/16	aa	ab	3/8	150 1/2	1'-0 11/32	9 11/32
LB163	11'-6 3/4	1'-5 5/8	1'-7 1/4	8'-5 3/8	7'-11 3/8	8 3/8	8 3/8	—	—	—	—	bb	—	—	113 1/2	-	-
LB165	13'-11 7/16	1'-9 1/2	2'-0 5/8	10'-1 7/16	9'-7 7/16	6 3/4	6 3/4	7 3/4	5 1/2 - 30 5/8 x 1/4 - 15 1/2	2 7/16	2 1/16	ad	g	3/8	149 7/16	1'-0 1/4	9 1/4
LB167	14'-0 7/16	1'-9 1/2	2'-0 5/8	10'-2 5/8	9'-8 5/8	6 11/16	6 11/16	7 3/4	5 1/2 - 30 5/8 x 1/4 - 15 1/2	3	2 1/2	ag	g	3/8	149 1/2	1'-0 5/16	9 5/16
LB169	14'-1 3/8	1'-9 1/2	2'-0 5/8	10'-3	9'-9	6 3/8	6 3/8	7 3/4	5 1/2 - 30 5/8 x 1/4 - 15 1/2	3 3/8	2 3/8	ak	g	3/8	149 7/16	1'-0 1/16	9 1/16

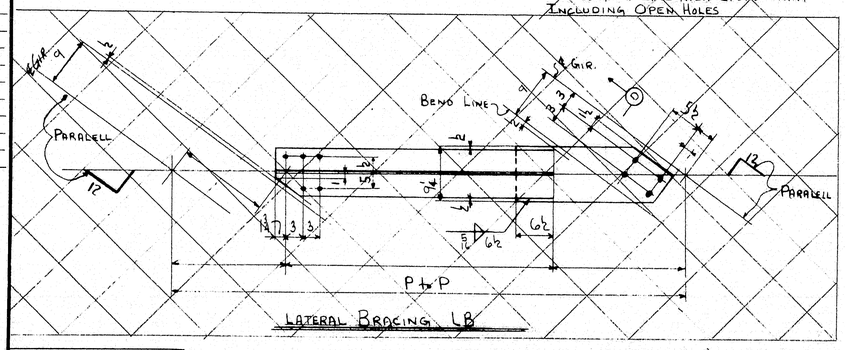


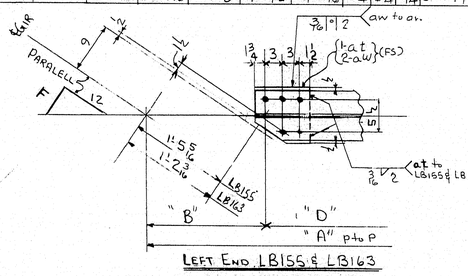
LATERAL BRACING LB150 - LB152 - LB154 - LB156 - LB158 - LB160 LB162 - LB164 - LB166 - LB168 & LB170

BC	BD	MARK	AA	AB	AC	AD	AF	AG	AH	AK	AM	AN	AP	AR	AS	AT
8 3/32	1'-0 3/32	LB150	14'-5 15/16	2'-0 5/8	1'-8 3/8	10'-8 9/16	6 3/8	6 3/8	7 1/4	30 5/8 x 1/4 x 14 1/2 - 5 1/4	3 1/4	2	c	d	3/8	149 3/8
8 3/32	1'-0 3/32	LB152	14'-4 5/8	2'-0 5/8	1'-8 3/8	10'-7 1/4	6 3/8	6 3/8	7 1/4	30 5/8 x 1/4 x 14 1/2 - 5 1/4	3 1/4	2	h	d	3/8	149 3/8
-	-	LB154	14'-3 5/16	2'-0 5/8	2'-1 3/8	9'-11 7/16	6 1/16	6 1/16	—	—	—	as	—	—	119 7/16		
7 7/16	10 1/16	LB156	11'-9 7/16	1'-7 1/4	1'-5 5/16	8'-0 11/16	8 1/16	8 1/16	5 1/2	4 @ 4 1/2 = 18'-0	2 7/16	2 1/16	m	n	3/8	1'-3 1/16
9 1/16	1'-0 1/16	LB158	14'-4 15/16	2'-0 5/8	1'-9 1/2	10'-6 13/16	6 5/8	6 5/8	7 3/4	30 5/8 x 1/4 x 15 1/2 - 5 1/4	3 1/16	2 3/8	s	t	3/8	149 7/16
9 1/16	1'-0 1/16	LB160	14'-3 3/4	2'-0 5/8	1'-9 1/2	10'-5 5/8	6 5/8	6 5/8	7 3/4	30 5/8 x 1/4 x 15 1/2 - 5 1/4	3 1/16	2 3/8	u	t	3/8	149 7/16
-	-	LB162	14'-2 9/16	2'-0 5/8	2'-2	10'-0	6 3/8	6 3/8	—	—	—	—	ba	—	—	149 7/16
7 5/8	10 1/4	LB164	11'-8 5/16	1'-7 1/2	1'-5 1/2	8'-6 1/16	8 1/16	8 1/16	5 1/4	4 @ 4 1/2 = 18'-0	2 7/16	2 1/16	ac	n	3/8	1'-3 13/16
9 1/16	1'-0 1/16	LB166	13'-11 1/16	2'-0 5/8	1'-9 1/2	10'-1 3/4	6 3/32	6 3/32	7 3/4	30 5/8 x 1/4 x 15 1/2 - 5 1/4	3	2 1/2	af	t	3/8	149 1/2
9 1/4	1'-0 1/4	LB168	13'-10 13/16	2'-0 5/8	1'-9 1/2	10'-0 11/16	6 3/8	6 3/8	7 3/4	30 5/8 x 1/4 x 15 1/2 - 5 1/4	2 15/16	2 1/16	ah	t	3/8	149 1/16
9 1/4	1'-0 1/4	LB170	13'-9 15/16	2'-0 5/8	1'-9 1/2	9'-11 11/16	6 1/2	6 1/2	7 1/2	30 5/8 x 1/4 x 15 1/2 - 5 1/4	2 15/16	2 1/16	am	ap	3/8	1'-9 7/16









LEFT END LB155 & LB163

INSTALL 11E	10E	9E	QTY	MARK	DESCRIPTION	REMARKS
1			ONE	LB149	LATERAL BRACE	
1			ONE	LB150	do do	
1			ONE	LB151	do do	
1			ONE	LB152	do do	
1			ONE	LB153	do do	
1			ONE	LB154	do do	
	1		ONE	LB155	do do	
	1		ONE	LB156	do do	
	1		ONE	LB157	do do	
	1		ONE	LB158	do do	
	1		ONE	LB159	do do	
	1		ONE	LB160	do do	
	1		ONE	LB161	do do	
	1		ONE	LB162	do do	
		1	ONE	LB163	do do	
		1	ONE	LB164	do do	
		1	ONE	LB165	do do	
		1	ONE	LB166	do do	
		1	ONE	LB167	do do	
		1	ONE	LB168	do do	
		1	ONE	LB169	do do	
		1	ONE	LB170	do do	

ALL STEEL SURFACES IN THIS AREA TO BE BLAST CLEANED AS PER SSPC-SPS-66. ALL STEEL WILL THEN RECEIVE ONE COAT of ZINC RICH EPOXY PAINT INCLUDING OPEN HOLES

HARDESTY & HANOVER CONSULTING ENGINEERS 101 PARK AVE. NEW YORK 17, N.Y.

S.S. Nishimura

SEP 30 1969

For location of details shown on this sheet refer to diagrams.

GD6 E8

	SHOP BILL												MILL ORDER			
LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS				LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
1				ONE LATERAL BRACE LB149												
2	a	1	BT	10	31		10	11					45	10	31	45
3	b	1	PL	13		5/8	2	0 3/4	BENT 14 1/2 x 5/8 x				26	0	28	19
4	FW	1	WD			PG	1	1								
5				ONE LATERAL BRACE LB150												
6	c	1	BT	10	31		10	10 5/8					45	10	31	45
7	d	1	PL	13		5/8	2	0 3/4	BENT 14 1/2 x 5/8 x				26	0	28	19
8	FW	1	WD			PG	1	1								
9				ONE LATERAL BRACE LB151												
10	f	1	BT	10	31		10	10 1/2					45	10	31	45
11	g	1	PL	13		5/8	2	1 3/4	BENT 14 1/2 x 5/8 x				26	0	28	19
12	FW	1	WD			PG	1	1								
13				ONE LATERAL BRACE LB152												
14	h	1	BT	10	31		10	9					45	10	31	45
15	d	1	PL	13		5/8	2	0 3/4	BENT 14 1/2 x 5/8 x				26	0	28	19
16	FW	1	WD			5/16	1	1								
17				ONE LATERAL BRACE LB153												
18	k	1	BT	10	31		10	11 1/2					45	10	31	45
19	g	1	PL	13		5/8	2	1 3/4	BENT 14 1/2 x 5/8 x				26	0	28	19
20	FW	1	WD			5/16	1	1								
21				ONE LATERAL BRACE LB156												
22	m	1	BT	10	31		8	10 7/16					40	0	31	44
23	n	1	PL	13		5/8	1	10	BENT 14 1/2 x 5/8 x				26	0	28	19
24	FW	1	WD			5/16	1	1								
25				ONE LATERAL BRACE LB157												
26	p	1	BT	10	31		10	8 13/16					45	10	31	45
27	q	1	PL	13		5/8	2	1 3/4	BENT 14 1/2 x 5/8 x				26	0	28	19
28	FW	1	WD			5/16	1	1								
29				ONE LATERAL BRACE LB158												
30	s	1	BT	10	31		10	8 5/16					45	10	31	45
31	t	1	PL	13		5/8	2	1 3/4	BENT 14 1/2 x 5/8 x				26	0	28	19
32	FW	1	WD			PG	1	1								
33				ONE LATERAL BRACE LB159												
34	w	1	BT	10	31		10	9 1/2					45	10	31	45
35	q	1	PL	13		5/8	2	1 3/4	BENT 14 1/2 x 5/8 x				26	0	28	19
36	FW	1	WD			5/16	1	1								
37				ONE LATERAL BRACE LB160												
38	y	1	BT	10	31		10	7 3/8					45	10	31	45
39	t	1	PL	13		5/8	2	1 3/4	BENT 14 1/2 x 5/8 x				26	0	28	19
40	FW	1	WD			PG	1	1								
41				ONE LATERAL BRACE LB161												
42	aa	1	BT	10	31		10	8 7/16					45	10	31	45
43	ab	1	PL	13		5/8	2	2 1/2	BENT 14 1/2 x 5/8 x				26	0	28	19
44	FW	1	WD			5/16	1	1								
45				ONE LATERAL BRACE LB164												
46	ac	1	BT	10	31		8	8 1/16					40	0	31	44
47	n	1	PL	13		5/8	1	10	BENT 14 1/2 x 5/8 x				26	0	28	19
48	FW	1	WD			5/16	1	1								
49				ONE LATERAL BRACE LB165												
50	ad	1	BT	10	31		10	3 5/16					45	10	31	45
51	g	1	PL	13		5/8	2	1 3/4	BENT 14 1/2 x 5/8 x				26	0	28	19
52	FW	1	WD			PG	1	1								
53				ONE LATERAL BRACE LB166												
54	af	1	BT	10	31		10	3 1/4					45	10	31	45
55	t	1	PL	13		5/8	2	1 3/4	BENT 14 1/2 x 5/8 x				26	0	28	19
56	FW	1	WD			5/16	1	1								
57				ONE LATERAL BRACE LB167												
58	ag	1	BT	10	31		10	4 1/16					45	10	31	45
59	g	1	PL	13		5/8	2	1 3/4	BENT 14 1/2 x 5/8 x				26	0	28	19
60	FW	1	WD			5/16	1	1								
61				ONE LATERAL BRACE LB168												
62	af	1	BT	10	31		10	2 1/16					45	10	31	45
63	t	1	PL	13		5/8	2	1 3/4	BENT 14 1/2 x 5/8 x				26	0	28	19
64	FW	1	WD			5/16	1	1								
65																
66																
67				ONE LATERAL BRACE LB169												
68	ah	1	BT	10	31		10	4 3/4					45	10	31	45
69	g	1	PL	13		5/8	2	1 3/4	BENT 14 1/2 x 5/8 x				26	0	28	19
70	FW	1	WD			5/16	1	1								
71																
72	am	1	BT	10	31		10	1 1/16	✓				40	0	31	44
73	ap	1	PL	13		5/8	2	1 3/4	BENT 14 1/2 x 5/8 x				26	0	28	19
74	FW	1	WD			5/16	1	1								
75																
76				ONE LATERAL BRACE LB154												
77	as	1	BT	10	31		10	3 1/4					45	10	31	45
78	at	1	FILL	9 1/4		5/8	0	9 1/4								
79	aw	2	FILL	9 1/4		1/2	0	9 1/4								
80	so	1	WD			3/16	0	8								
81	FW	1	WD			PG	0	9								
82				ONE LATERAL BRACE LB155												
83	ay	1	BT	10	31		8	7 1/8					40	0	31	44
84	at	1	FILL	9 1/4		5/8	0	9 1/4								
85	aw	2	FILL	9 1/4		1/2	0	9 1/4								
86	SI	1	WD			PG	0	8								
87	FW	1	WD			PG	0	9								
88				ONE LATERAL BRACE LB162												
89	ba	1	BT	10	31		10	3 1/2					45	10	31	45
90	at	1	FILL	9 1/4		5/8	0	9 1/4								
91	aw	2	FILL	9 1/4		1/2	0	9 1/4								
92	SI	1	WD			PG	0									
93	FW	1	WD			PG	0	9								
94				ONE LATERAL BRACE LB163												
95	bb	1	BT	10	31		8	9 9/16					40	0	31	44
96	at	1	FILL	9 1/4		5/8	0	9 1/4								
97	aw	2	FILL	9 1/4		1/2	0	9 1/4								
98	SO	1	WD			3/16	0	8								
99	FW	1	WD			PG	0	9								

LINE 12-13

NP 3 ALL OPEN HOLES (UN)

NOTE "A"
ALL STEEL SURFACES IN THIS AREA TO BE BLAST CLEANED AS PER SSPC-SPS-66. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY PAINT INCLUDING OPEN HOLES.

PAY ITEM 504.711

MATERIAL A36
RIVETS OR BOLTS NONE
OPEN HOLES 13/16
A325 FIELD BOLTS 7/8
SHOP CONTACT SURFACES No PAINT (UN)
MILL - NONE
WELDING AS SHOWN
PAINT ONE COAT AASHO-M72 TYPE II RED LEAD (UN)

LATERAL BRACING STA 531+83.67 to 534+51.67

REVISION NO.	DATE	INIT.

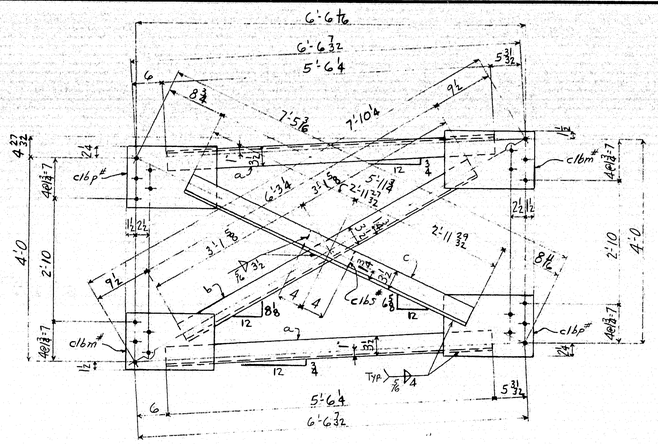
SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE PROJECT No I 95 I(22) 16
CONT No 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM Pottstown WORKS
MADE BY KIRK DATE 8/21/69 IN CHARGE B.K. BERTOLET
CHECKED BY STD DATE 9/4/69 SHOP NO. 2
CONTRACT CJ6249-071 DRAWING NO. 29

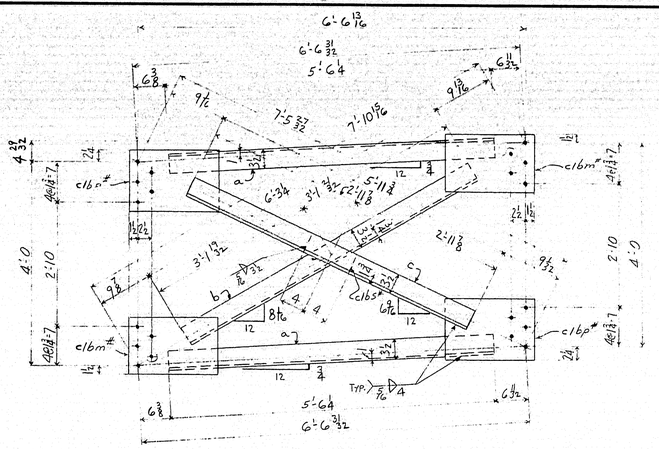
O.S.I-1

106-84

35433 (Rev. C 4-63) 1968



CROSS FRAME CF36 224



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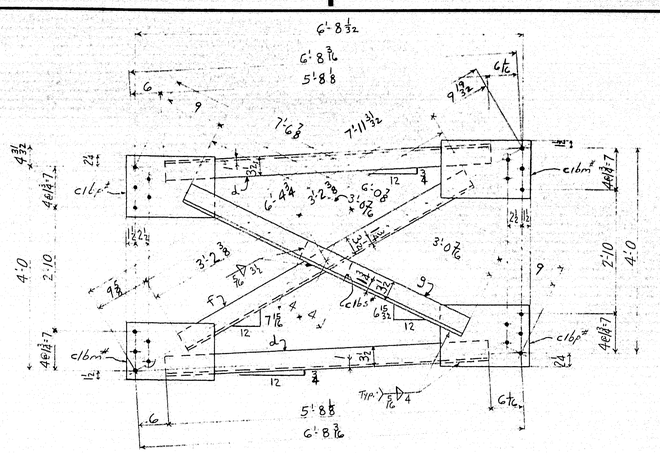

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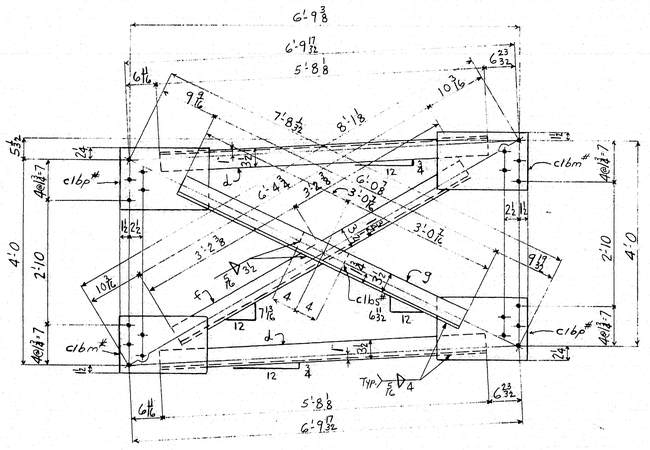

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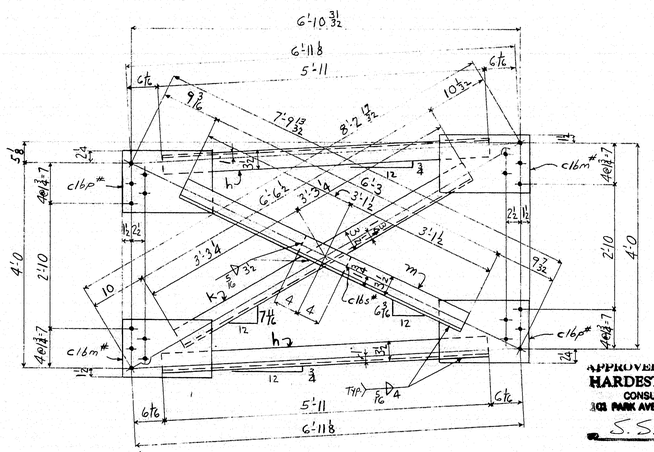
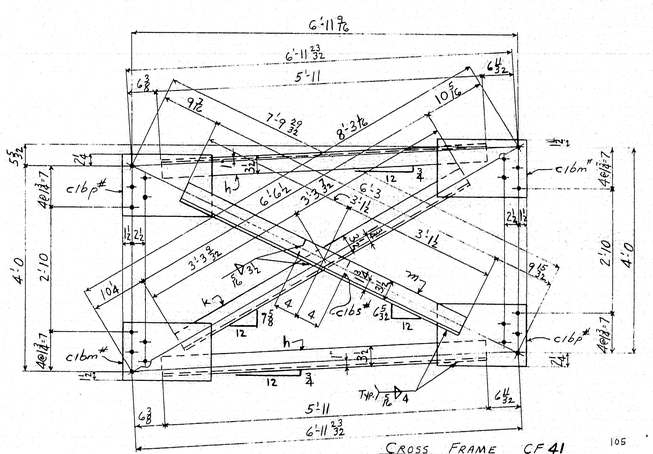


CROSS FRAME CF40 106



CROSS FRAME CF41 105

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 12, N.Y.
S.S. Nishimura
SEP 30 1969

NOTES:
MTL. THK. TO ¾" INCL. MUST BE PREHEATED TO 50° DEG.F
ALL OPEN HOLES - NP 3
NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.
USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR. SAW-2 FOR WELDING.

For location of details shown on this sheet refer to diagrams.
E7, E8, EG

SHOP BILL

LINE	WEIGHT TOTAL	WEIGHT EA.	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1			28 - CROSS FRAMES CF36								
2			a	56	L	4	3½	⅜	5	6¼	
3			b	28	L	4	3½	⅜	6	3¾	
4			c	28	L	4	3½	⅜	5	11¾	
5			℄ 16m*	56	PL	10		½	1	3½	
6			℄ 16p*	56	PL	10⅜		½	1	3½	
7			℄ 16S	28	BR	3½		½	0	8	
8			FW	28	WD			5/16	6	6	
9											
10											
11			29 - CROSS FRAMES CF37								
12			a	58	L	4	3½	⅜	5	6¼	

MILL ORDER

LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
29	4½	29	110
48	5½	29	140
48	10	29	130
48	10	29	130
20	10	29	25
21	0	29	20
		J	
		5/16	6	6
48	10	29	130

LINE												
12			b	29	L	4	3½	⅜	6	3¾		
12			c	29	L	4	3½	⅜	5	11¾		
12			℄ 16m*	58	PL	10		½	1	3½		
12			℄ 16p*	58	PL	10⅜		½	1	3½		
12			℄ 16S	29	BR	3½		½	0	8		
12			FW	29	WD			5/16	6	6		
13												
13												
13			29 - CROSS FRAMES CF38									
13			d	58	L	4	3½	⅜	5	8⅛		
13			f	29	L	4	3½	⅜	6	4¾		
13			g	29	L	4	3½	⅜	6	0⅞		
14			℄ 16m*	58	PL	10		½	1	3½		
15			℄ 16p*	58	PL	10⅜		½	1	3½		
16			℄ 16S	29	BR	3½		½	0	8		
17			FW	29	WD			5/16	6	6		
18												
19												
20			29 - CROSS FRAMES CF39									
21			d	58	L	4	3½	⅜	5	8⅛		
22			f	29	L	4	3½	⅜	6	4¾		
23			g	29	L	4	3½	⅜	6	0⅞		
24			℄ 16m*	58	PL	10		½	1	3½		
25			℄ 16p*	58	PL	10⅜		½	1	3½		
26			℄ 16S	29	BR	3½		½	0	8		
27			FW	29	WD			5/16	6	6		

27			7 - CROSS FRAMES CF40									
27			h	14	L	4	3½	⅜	5	11		
27			k	7	L	4	3½	⅜	6	6¼		
27			m	7	L	4	3½	⅜	6	3		
28			℄ 16m*	14	PL	10		½	1	3½		
28			℄ 16p*	14	PL	10⅜		½	1	3½		
28			℄ 16S	7	BR	3½		½	0	8		
28			FW	7	WD			5/16	6	6		
28												
28												
29			21 - CROSS FRAMES CF41									
30			h	42	L	4	3½	⅜	5	11		
31			k	21	L	4	3½	⅜	6	6¼		
32			m	21	L	4	3½	⅜	6	3		
33			℄ 16m*	42	PL	10		½	1	3½		
34			℄ 16p*	42	PL	10⅜		½	1	3½		
35			℄ 16S	21	BR	3½		½	0	8		
36			FW	21	WD			5/16	6	6		
37												
38												
39												
40												
41												
42												

10	44	4½	29	15R								
44	5¾	29	16C									
44	5¾	29	16C									
44	5¾	29	16C									
20	10	29	25									
21	0	29	20									
		J										
		5/16	6	6								
44	5¾	29	16C									
44	5¾	29	16C									
44	5¾	29	16C									
20	10	29	25									
21	0	29	20									
		J										
		5/16	6	6								

INSTALLMENTS

12E	14W	14E	13W	13E	12W	11E	11W	10E
							14	14
	8			7	7	7		
	8			14	7			
	8	14			7			
7								
7	14							

REQUIRED LIST

QTY.	SHIPPING MARK	DESCRIPTION	REMARKS
28	CF36	CROSS FRAMES	
29	CF37	Do	
29	CF38	Do	
29	CF39	Do	
7	CF40	Do	
21	CF41	Do	

PAY ITEM - 504.711
MATERIAL - A36 STEEL
RIVETS OR BOLTS - NONE
OPEN HOLES - 15/16" ϕ
A325 FIELD BOLTS - 7/8" ϕ
SHOP CONTACT SURFACES - NO PAINT
WELDING - AS NOTED
MILLING - NONE
PAINT - ONE COAT AASHO-M72 TYPE II RED LEAD UNLESS NOTED

"CROSS FRAMES"

CUSTOMER MAINE STATE HIGHWAY COMMISSION
STRUCTURE PISCATAQUA RIVER BRIDGE
PROJECT NO. I-95-1 (22) 16
CONT. No. 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM POTTSTOWN WORKS
MADE BY DEW DATE 8/30/69 IN CHARGE BERTOLET
CHECKED BY DLL DATE 9/5/69 SHOP NO. 2
CONTRACT CJ-6249-070 DRAWING NO. 30

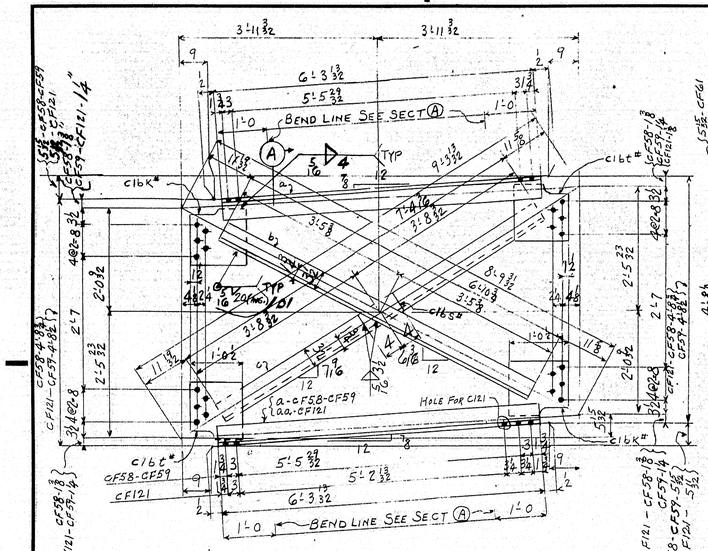
REVISION

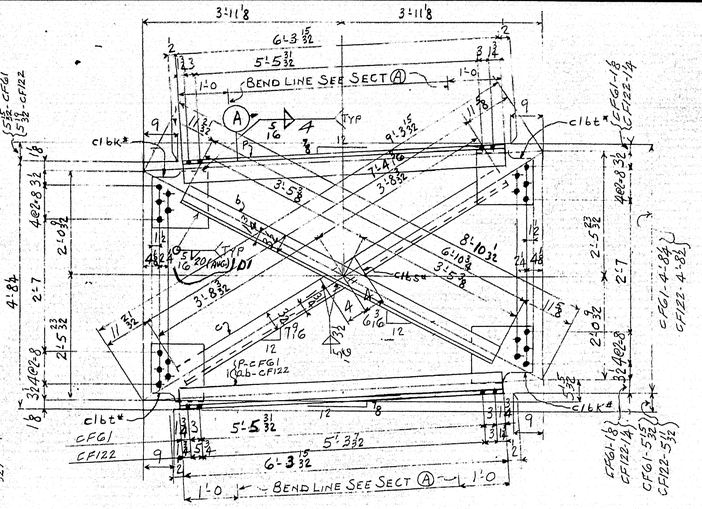
NO.	DATE	INIT.
0		
9		
8		
7		
6		
5		
4		
3		
2		
1		

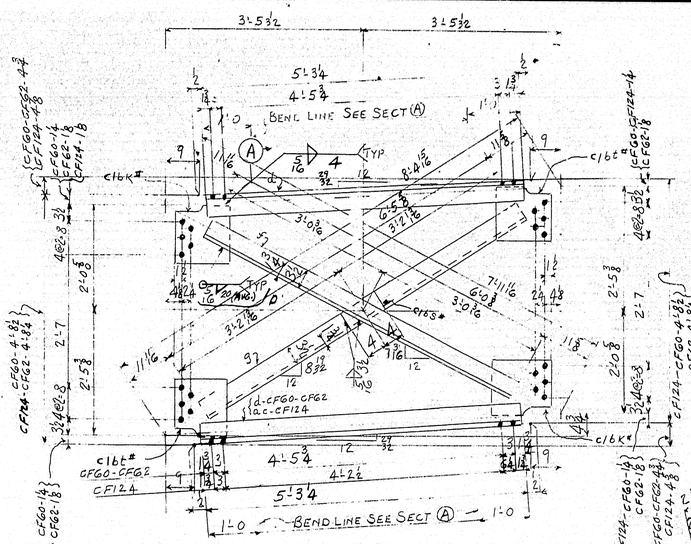
SUBMITTAL 1 2 3 4 5 6 7 8 9 0
DATE

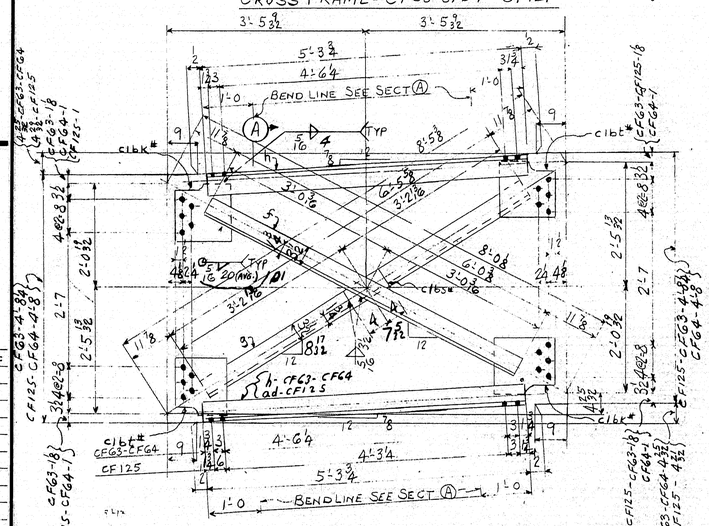
106-82

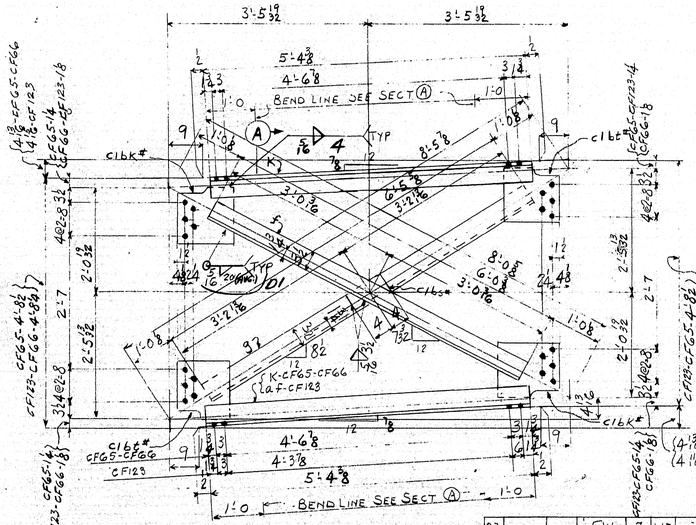
3502 PRINTED IN U.S.A. 1-69 1986

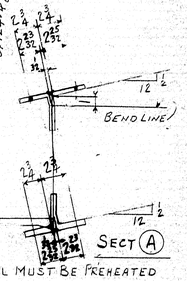












NOTES
MTL THK To 2" INCL MUST BE PREHEATED To 50°F
ALL OPEN HOLES - NP3
NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPATED IN FINAL WELD
USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR SAW-2 FOR WELDING
ALL RE-ENTRANT CUTS TO HAVE 3/4" RAD.

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. * NEW YORK 17, N.Y.
S.S. Nakkim
DEC 30 19[illegible]

PAY ITEM - 504.711

For location of details shown on this sheet refer to diagrams.

E8 - E9

INSTALL 8W	8E	9W	9E	10W	QTY	SHIPPING MARK	DESCRIPTION	REMARKS
3					3	CF58	CROSS FRAMES	
2	2				4	CF59	Do	
		3			3	CF60	Do	
	3				3	CF61	Do	
		3			3	CF62	Do	
			3		3	CF63	Do	
			3		3	CF64	Do	
				3	3	CF65	Do	
				3	3	CF66	Do	
1					ONE	CF121	Do	
	1				ONE	CF122	Do	
				1	ONE	CF123	Do	
		1			ONE	CF124	Do	
			1		ONE	CF125	Do	

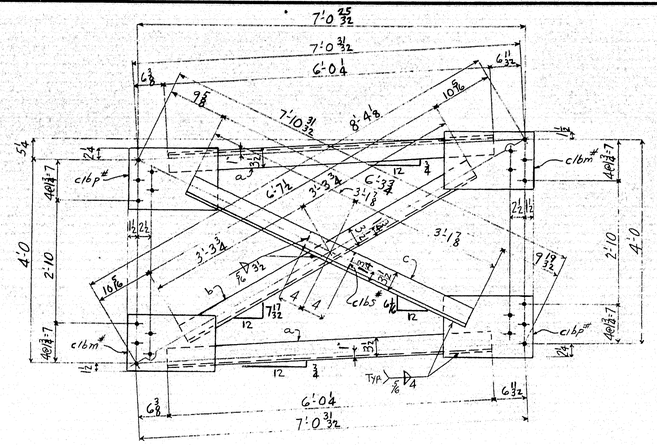
SHOP BILL

LINE	WEIGHT TOTAL	WEIGHT EA.	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1				8	CROSS FRAME - 3-CF58 4-CF59 1-CF121						
2			a	15	BT	4	17.5		6	3 13/32	6-CF58 8-CF59 1-CF121
3			b	8	L	4	3½	3/8	6	10¾	
4			c	8	L	4	3½	3/8	7	4 7/16	
5			c	16*	PL	12½		½	1	0	
6			c	16k*	PL	12½		½	1	1	
7			c	16s*	BR	3½		½	0	8	
8			FW	8	WD			5/16	10	6	01
9			aa	1	BT	4	17.5		6	3 5/32	1-CF121
10											
11				4	CROSS FRAME - 3-CF61						1-CF122
12			p	7	BT	4	17.5		6	3 5/32	6-CF61 1-CF122
13			b	4	L	4	3½	3/8	6	10¾	
14			c	4	L	4	3½	3/8	7	4 7/16	
15			c	16*	PL	12½		½	1	0	
16			c	16k*	PL	12½		½	1	1	
17			c	16s*	BR	3½		½	0	8	
18			FW	4	WD			5/16	10	6	01
19			ab	1	BT	4	17.5		6	3 5/32	1-CF122
20											
21				7	CROSS FRAME - 3-CF60						8-CF62 1-CF124
22			d	13	BT	4	17.5		5	3¼	6-CF60 1-CF124
23			f	7	L	4	3½	3/8	6	0 3/8	
24			g	7	L	4	3½	3/8	6	5 5/8	
25			c	16*	PL	12½		½	1	0	
26			c	16k*	PL	12½		½	1	1	
27			c	16s*	BR	3½		½	0	8	
28			FW	7	WD			5/16	10	6	01
28			ac	1	BT	4	17.5		5	3¼	1-CF124
28					7 - CROSS FRAMES						3-CF68 3-CF64 1-CF125
28			ad	1	BT	4	17.5		5	3¼	CF125
28			h	13	BT	4	17.5		5	3¼	6-CF63 6-EFG4 1-EF125
28			g	7	L	4	3½	3/8	6	5 5/8	
29			f	7	L	4	3½	3/8	6	0 3/8	
30			c	16*	PL	12½		½	1	0	
31			c	16k*	PL	12½		½	1	1	
32			c	16s*	BR	3½		½	0	8	
33			FW	7	WD			5/16	10	6	01
34				7	CROSS FRAMES						3-CF65 3-CF66 1-CF123
35			af	1	BT	4	5		5	4 3/8	1-CF123
36			K	13	BT	4	17.5		5	4 3/8	6-CF65 6-EFG6 1-EF123
37			f	7	L	4	3½	3/8	6	0 3/8	
38			g	7	L	4	3½	3/8	6	5 5/8	
39			c	16*	PL	12½		½	1	0	
40			c	16k*	PL	12½		½	1	1	
41			c	16s*	BR	3½		½	0	8	
42			FW	7	WD			5/16	10	6	01

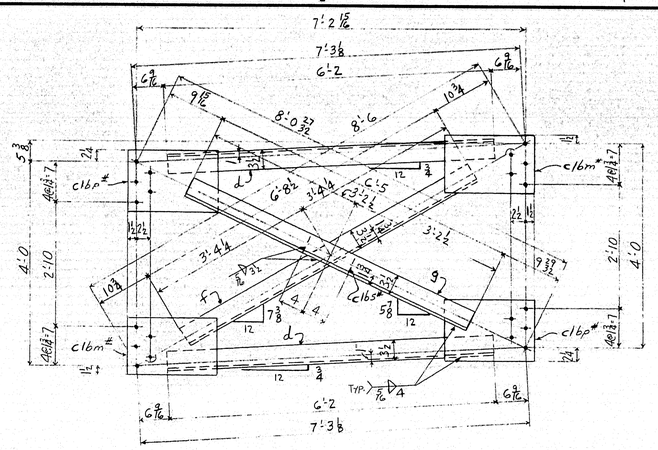
MILL ORDER

LINE	LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
1				
2				
3			36	09
4				
5				
6				
7				
8				
9				
10				
11				
12			36	09
13				
14				
15				
16				
17				
18	44	5 5/8	29	100
19	44	5 5/8	36	300
20	34	8	36	358
21	20	9	36	40
22	20	9	36	40
23			J	
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				

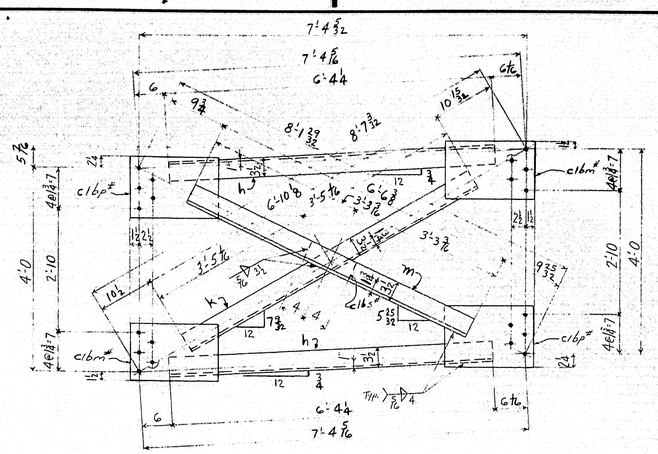
| LINE | | | | | | | | | | |



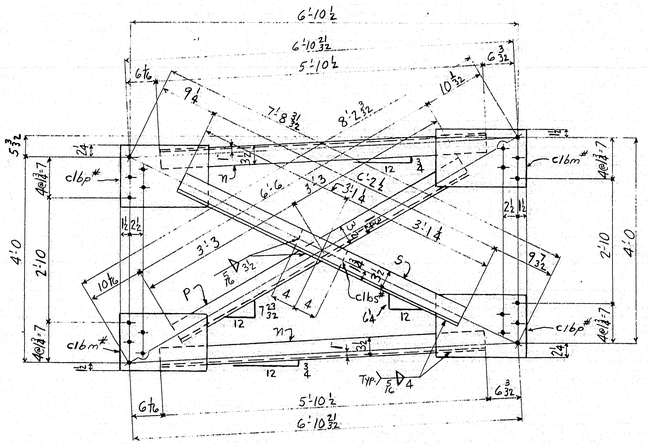
CROSS FRAME CF42 103



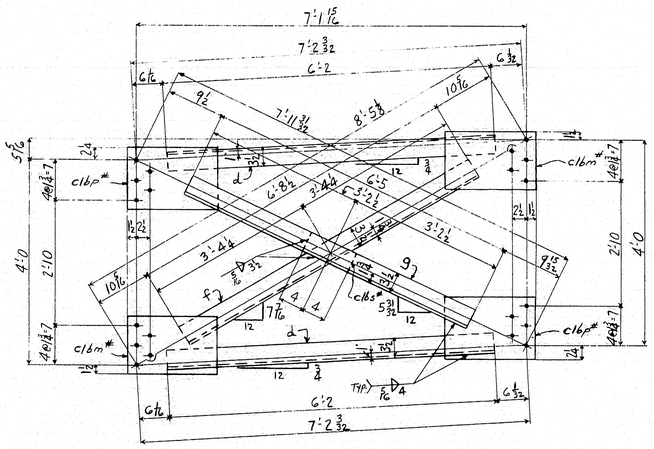
CROSS FRAME CF43 790



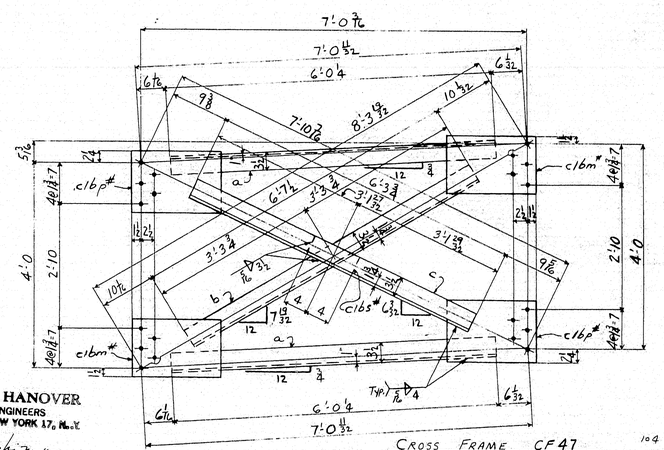
CROSS FRAME CF44 789



CROSS FRAME CF45 108



CROSS FRAME CF46 102



CROSS FRAME CF47 104

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY: S. S. Nishimura

SEP 29 1969

NOTES:
MTL. THK. TO 1" INCL. MUST BE PREHEATED TO 50° DEG. F
ALL OPEN HOLES ⌀ NP 3

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR. SAW-2 FOR WELDING.

For location of details shown on this sheet refer to diagrams.

EG, E7

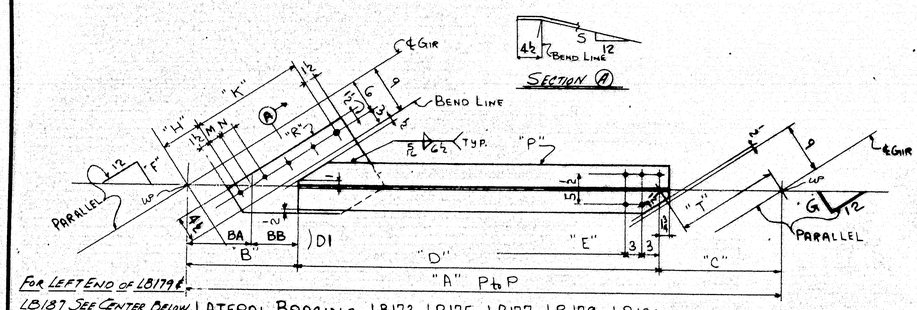
SHOP BILL

LINE	WEIGHT TOTAL	WEIGHT EA.	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1			22- CROSS FRAMES CF42								
2			a	44	L	4	3½	⅜	6	0¼	
3			b	22	L	4	3½	⅜	6	7½	
4			c	22	L	4	3½	⅜	6	3¾	
5			c 16m#	44	PL	10		½	1	3½	
6			c 16p#	44	PL	10⅜		½	1	3½	
7			c 16s#	22	BR	3½		½	0	8	
8			FW	22	WD			5/16	6	6	
9											
10											
11			7- CROSS FRAMES CF43								
12			d	14	L	4	3½	⅜	6	2	
12			f	7	L	4	3½	⅜	6	8½	
12			g	7	L	4	3½	⅜	6	5	
12			c 16m#	14	PL	10		½	1	3½	
12			c 16p#	14	PL	10⅜		½	1	3½	
12			c 16s#	7	BR	3½		½	0	8	
12			FW	7	WD			5/16	6	6	
13											
13			7- CROSS FRAMES CF44								
13			h	14	L	4	3½	⅜	6	4⅛	
13			k	7	L	4	3½	⅜	6	10⅛	
13			m	7	L	4	3½	⅜	6	6⅜	
14			c 16m#	14	PL	10		½	1	3½	
15			c 16p#	14	PL	10⅜		½	1	3½	
16			c 16s#	7	BR	3½		½	0	8	
17			FW	7	WD			5/16	6	6	
18											
19											
20											
21											
22			7- CROSS FRAMES CF45								
23			n	14	L	4	3½	⅜	5	10½	
24			P	7	L	4	3½	⅜	6	6	
25			S	7	L	4	3½	⅜	6	2½	
26			c 16m#	14	PL	10		½	1	3½	
27			c 16p#	14	PL	10⅜		½	1	3½	
28			c 16s#	7	BR	3½		½	0	8	
29			FW	7	WD			5/16	6	6	

MILL ORDER

LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
49	1⅜	29	05C
46	6⅜	29	10C
44	7½	29	07C
20	10	29	25
21	10	29	26
		J	
49	1⅜	29	05C
46	6⅜	29	10C
43	10½	29	06C
20	10	29	25
21	10	29	26
		J	
47	1	29	11C
46	6⅜	29	10C
20	10	29	25
21	10	29	26
		J	
44	7½	29	07C
48	3⅜	29	12C
46	6⅜	29	10C

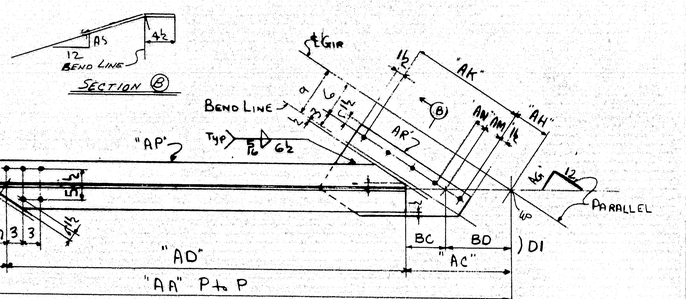
UPPER LINE 4 & 5



FOR LEFT END OF LB179 & LB187 SEE CENTER BELOW.

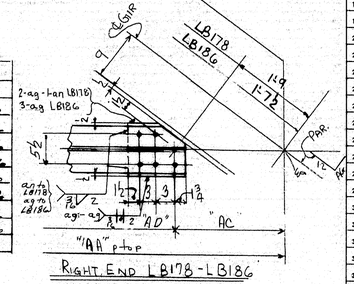
LATERAL BRACING LB173-LB175-LB177-LB179-LB181
LB183-LB185-LB187

MARK	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	BA	BB
LB173	12-11⅛	1-9½	2-0⅝	11-1¾	10-7⅞	6⅜	6⅜	7⅞	5½-3ES⅜-1-5½	3	2½	d	f	⅞	1-9½	1'-0⅝	9⅞
LB175	14-10⅛	1-9½	2-0⅝	11-0⅞	10-6⅞	6⅜	6⅜	7⅞	5½-3ES⅜-1-5½	3	2½	k	f	⅞	1-9½	1'-0⅝	9⅞
LB177	14-9⅞	1-9½	2-0⅝	10-11⅞	10-5⅞	6⅜	6⅜	7⅞	5½-3ES⅜-1-5½	3	2½	h	f	⅞	1-9½	1'-0⅝	9⅞
LB179	12-2	1'-6⅜	1-7½	8'-11⅛	8'-5⅝	8⅝	8⅝	-	—	—	—	ah	—	—	1'-3⅜	-	-
LB181	14-10¾	1-10¼	2-1⅝	10-10½	10-4½	6⅞	6⅞	8	4ES⅜-1-11½	3	2⅜	s	t	⅞	1-10½	1'-0⅞	9⅜
LB183	14-9⅝	1-10¼	2-1⅝	10-9⅝	10-3⅜	6⅞	6⅞	8	4ES⅜-1-11⅝	3	2⅜	w	t	⅞	1-10½	1'-0⅞	9⅜
LB185	14-8½	1-10¼	2-1⅝	10-8⅝	10-2⅜	6⅞	6⅞	8	4ES⅜-1-11½	3	2⅜	ab	t	⅞	1-10½	1'-0⅞	9⅜
LB187	12-10⅜	1'-7⅜	1'-8	8'-9⅞	8'-3⅝	8⅝	8⅝	-	—	—	—	ap	—	—	1'-4.4	-	-

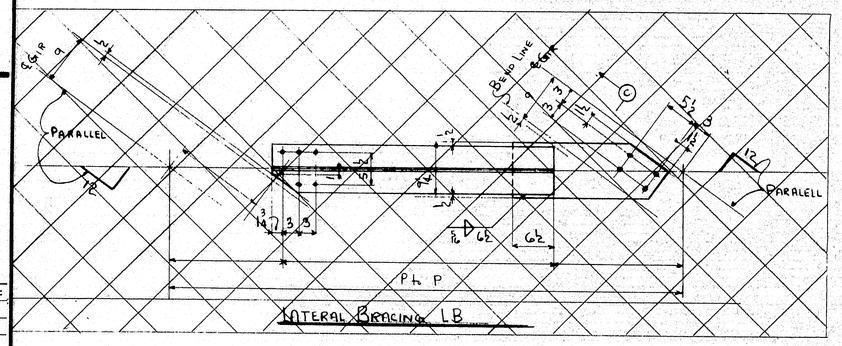


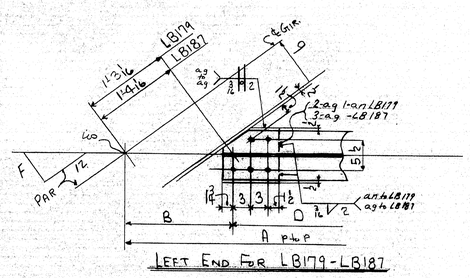
LATERAL BRACING LB172-LB174-LB176-LB178-LB180
LB182-LB184-LB186 & LB188

BC	BD	MARK	AA	AB	AC	AD	AF	AG	AH	AK	AM	AN	AP	AR	AS	AT
7/16	9⅛	LB172	12-10⅜	1'-7	1'-5¼	8-11⅜	9⅞	9⅞	5½	4ES⅜-3-1½-1-1½	2¼	2¼	af	c	⅜	1'-3
9½	1'-0⅝	LB174	14'-9⅛	2'-0⅝	1'-9½	10'-11⅛	6⅝	6⅝	7⅜	3ES⅜-1-5½-5½	2½	2½	g	h	⅞	1'-9⅛
9⅞	1'-0⅝	LB176	14'-10⅝	2'-0⅝	1'-9½	11'-0⅛	6⅝	6⅝	7⅜	3ES⅜-1-5½-5½	3	2½	m	h	⅞	1'-9½
-	-	LB178	14'-11¼	2'-0⅝	2'-0	10'-10⅝	6⅝	6⅝	-	—	—	—	af	—	—	1'-9⅞
7⅞	9⅛	LB180	11'-11	1'-9	1'-5¼	8'-10¾	9⅛	9⅛	5½	4ES⅜-3-1½-1-1½	2⅞	2⅛	p	c	⅜	1'-3⅜
9⅛	1'-0⅛	LB182	14'-9⅛	2'-0⅝	1'-9½	10'-10⅝	6⅝	6⅝	7⅜	3ES⅜-1-5½-5½	3⅜	2⅜	v	h	⅞	1'-9⅞
9⅜	1'-0⅛	LB184	14'-9¾	2'-1⅝	1'-10¼	10'-9⅞	6⅝	6⅝	8	4ES⅜-1-11½	3	2⅜	y	aa	⅞	1'-10⅜
-	-	LB186	14'-10⅞	2'-1⅝	1'-10¼	10'-10⅞	6⅝	6⅝	-	—	—	—	am	—	—	1'-10⅜
7½	10⅜	LB188	11'-10	1'-9¼	1'-5⅝	8'-9⅜	8⅜	8⅜	5⅞	4ES⅜-1-1.7	2⅜	2⅛	ac	ad	⅞	1'-3 7/16

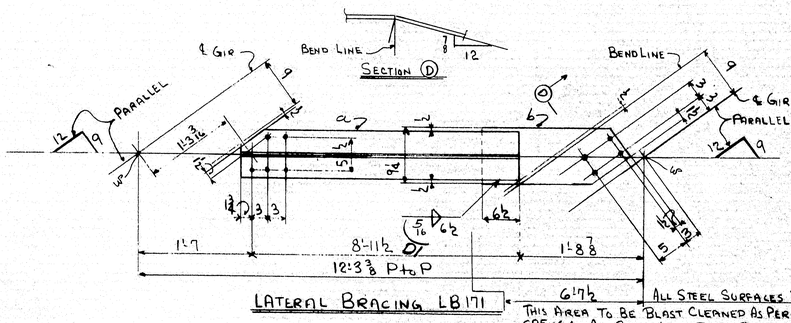


RIGHT END LB178-LB186





LEFT END FOR LB179-LB187



ALL STEEL SURFACES IN THIS AREA TO BE BLAST CLEANED AS PER SSPC SP5-G6. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY INCLUDING OPEN HOLES AND SHOP CONTACT SURFACES

INSTALL 13W	12W	11W	QTY	MARKS	DESCRIPTION	REMARKS
1			ONE	LB171	LATERAL BRACE	
1			ONE	LB172	do do	
1			ONE	LB173	do do	
1			ONE	LB174	do do	
1			ONE	LB175	do do	
1			ONE	LB176	do do	
1			ONE	LB177	do do	
1			ONE	LB178	do do	
	1		ONE	LB179	do do	
	1		ONE	LB180	do do	
	1		ONE	LB181	do do	
	1		ONE	LB182	do do	
	1		ONE	LB183	do do	
	1		ONE	LB184	do do	
	1		ONE	LB185	do do	
	1		ONE	LB186	do do	
		1	ONE	LB187	do do	
		1	ONE	LB188	do do	

SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1				ONE LATERAL BRACE LB171					
2	a	1	BT	10	31		9	1⅞	
3	f	1	PL	9¾		⅝	2	1⅜	BENT
4	FW	1	WD			5/16	1	1	
5				ONE LATERAL BRACE LB172					
6	af	1	BT	10	31		9	1⅞	
7	c	1	PL	13		⅝	1	9¾	BENT 14½×⅝×
8	FW	1	WD			⅜	1	1	
9				ONE LATERAL BRACE LB173					
10	d	1	BT	10	31		11	3½	
11	f	1	PL	13		⅝	2	1¾	BENT 14½×⅝×
12	FW	1	WD			⅜	1	1	
13				ONE LATERAL BRACE LB174					
14	g	1	BT	10	31		11	1⅞	
15	h	1	PL	13		⅝	2	1¾	BENT 14½×⅝×
16	FW	1	WD			⅜	1	1	
17				ONE LATERAL BRACE LB175					
18	k	1	BT	10	31		11	2⅝	
19	f	1	PL	13		⅝	2	1¾	BENT 14½×⅝×
20	FW	1	WD			5/16	1	1	
21				ONE LATERAL BRACE LB176					
22	m	1	BT	10	31		11	2¼	
23	h	1	PL	13		⅝	2	1¾	BENT 14½×⅝×
24	FW	1	WD			5/16	1	1	
25				ONE LATERAL BRACE LB177					
26	n	1	BT	10	31		11	1⅛	
27	f	1	PL	13		⅝	2	1¾	BENT 14½×⅝×
28	FW	1	WD			5/16	1	1	
29				ONE LATERAL BRACE LB180					
30	p	1	BT	10	31		9	10¾	
31	c	1	PL	13		⅝	1	9¾	BENT 14½×⅝×
32	FW	1	WD			⅜	1	1	
33				ONE LATERAL BRACE LB181					
34	s	1	BT	10	31		11	0⅝	
35	t	1	PL	13		⅝	2	2¼	BENT 14½×⅝×
36	FW	1	WD			⅜	1	1	
37				ONE LATERAL BRACE LB182					
38	v	1	BT	10	31		11	0¼	
39	h	1	PL	13		⅝	2	1¾	BENT 14½×⅝×
40	FW	1	WD			⅜	1	1	
41				ONE LATERAL BRACE LB183					
42	w	1	BT	10	31		10	11½	
43	t	1	PL	13		⅝	2	2¼	BENT 14½×⅝×
44	FW	1	WD			⅜	1	1	
45				ONE LATERAL BRACE LB184					
46	y	1	BT	10	31		10	11⅝	
47	aa	1	PL	13		⅝	2	2¼	BENT 14½×⅝×
48	FW	1	WD			⅜	1	1	
49				ONE LATERAL BRACE LB185					
50	ab	1	BT	10	31		10	10⅜	
51	t	1	PL	13		⅝	2	2¼	BENT 14½×⅝×
52	FW	1	WD			5/16	1	1	
53				ONE LATERAL BRACE LB188					
54	ac	1	BT	10	31		8	10⅜	
55	ad	1	PL	13		⅝	1	10	BENT 14½×⅝×
56	FW	1	WD			5/16	1	1	
57				ONE LATERAL BRACE LB178					
58	af	1	BT	10	31		11	2⅝	
59	ag	2	PL	9¾		¾	0	9¾	
60	an	1	PL	9¾		⅝	0	9¾	
61	so	1	WD			⅜	0	8	
62	FW	1	WD			⅞	0	4	
63									
64									
65									
66									

LINES #5

MILL ORDER

LINE	ASSEMBLY MARK	NO.	SHAPE	LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
67							
68	ah	1	BT	40	0	31	44
69	ag	2	PL			J	
70	an	1	PL			J	
71	so	1	WD				
72	FW	1	WD				
73							
74							
75	am	1	BT	45	10	31	45
76	ag	3	PL			J	
77	so	1	WD				
78	FW	1	WD				
79							
80							
91	ap	1	BT	40	0	31	44
82	ag	3	PL			J	
83	so	1	WD				
84	FW	1	WD				
85							
86							
87							
88							
89							
90							
91							
92							
93							
94							
95							
96							
97							
98							

ALL OPEN HOLES (UN)

MAT'L THK TO ¾" INCL. MUST BE PREHEATED TO 50°F
USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR
SAW-2 FOR WELDING.

MATERIAL A36
RIVETS OR BOLTS NONE
OPEN HOLES ⅞ ϕ
A325 FIELD BOLTS ⅞ ϕ
SHOP CONTACT SURFACES NO PAINT (UN)
MILL - NONE
WELDING - AS SHOWN
PAINT ONE COAT AASHO-M72 TYPE II RED LEAD U.N

APPROVED
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY Arnold North JAN 16 1970

PAY ITEM 504.711

NO.	DATE	INIT.	REVISION
0	11/22/69	GDS	

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

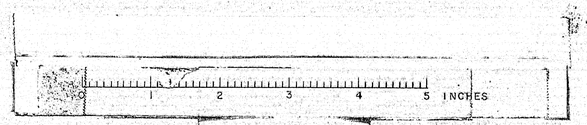
CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE PROJECT NO I95 I(22)16
CONT. NO 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM POTTSTOWN WORKS
MADE BY NRK DATE 5-26-69 IN CHARGE B.K. BERTOLET
CHECKED BY BKB DATE 11/5/69 SHOP NO. 2
CONTRACT CJ6249-071 DRAWING NO. 33

LATERAL BRACING STA 529+73.33 to STA 531+83.67

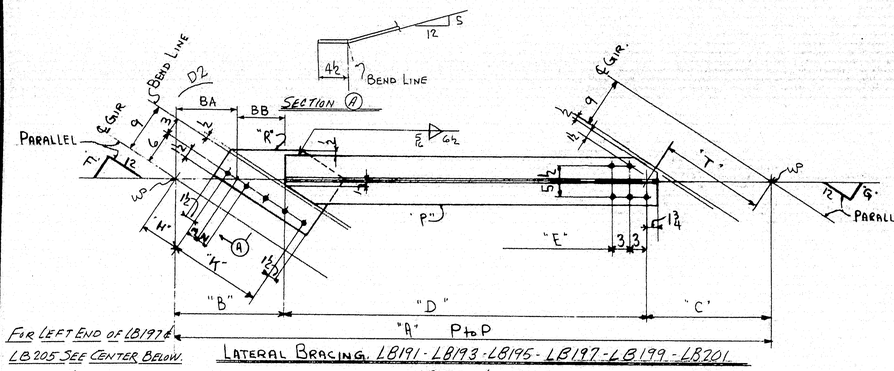
For location of details shown on this sheet refer to diagrams.
GDS E7

O.S.I-1

OCT 14 106-85



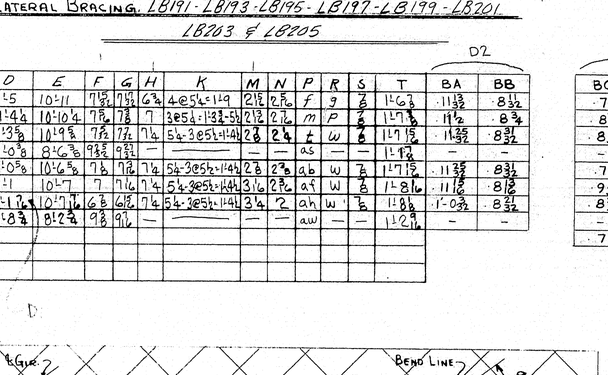
LOWER LINE



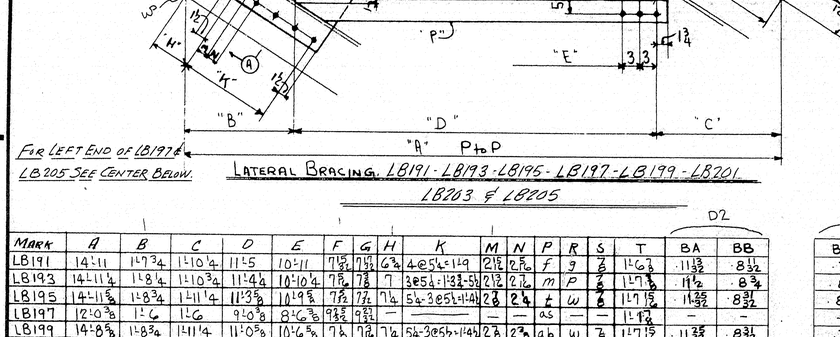
FOR LEFT END OF LB197 & LB205 SEE CENTER BELOW.

LATERAL BRACING LB191 - LB193 - LB195 - LB197 - LB199 - LB201 LB203 & LB205

MARK	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	BA	BB
LB191	14'-11	14'-7 3/4	1'-10 1/4	11'-5	10'-11	7 15/16	7 7/32	6 3/4	4@5 1/4 = 1'-9	2 1/16	2 5/16	f	g	5/8	1'-6 3/8	11 3/32	8 11/32
LB193	14'-11 1/4	14'-8 1/4	1'-10 3/4	11'-4 1/4	10'-10 1/4	7 7/8	7 3/8	7	3@5 1/4 = 1'-3 1/2 - 5 1/4	2 1/16	2 1/16	m	p	5/8	1'-7 7/16	11 1/2	8 3/4
LB195	14'-11 5/8	14'-8 3/4	1'-11 1/4	11'-3 5/8	10'-9 5/8	7 7/8	7 7/8	7 1/4	5 1/4 - 3@5 1/4 = 1'-4 1/4	2 1/8	2 1/4	t	w	5/8	1'-7 15/16	11 25/32	8 31/32
LB197	12'-0 3/8	1'-6	11'-6	9'-0 3/8	8'-6 3/8	9 5/32	9 3/32	—	——	—	—	as	—	—	1'-9 1/2	—	—
LB199	14'-8 5/8	14'-8 3/4	1'-11 1/4	11'-0 5/8	10'-6 5/8	7 1/8	7 1/16	7 1/4	5 1/4 - 3@5 1/4 = 1'-4 1/4	2 1/8	2 3/8	ab	w	5/8	1'-7 15/16	11 25/32	8 31/32
LB201	14'-9	14'-8 3/4	1'-11 1/4	11'-1	10'-7	7	7 1/16	7 1/4	5 1/4 - 3@5 1/4 = 1'-4 1/4	3 1/16	2 1/8	af	w	5/8	1'-8 1/16	11 1/2	8 1/2
LB203	14'-9 7/16	14'-8 3/4	1'-11'4	11'-1 7/16	10'-7 7/16	6 5/8	6 5/8	7 1/4	5 1/4 - 3@5 1/4 = 1'-4 1/4	3 1/4	2	ah	w	5/8	1'-8 1/8	11 3/32	8 7/32
LB205	11'-10	1'-6 3/4	1'-6 1/2	8'-8 3/4	8'-2 3/4	9 3/8	9 1/16	—	——	—	—	aw	—	—	1'-2 9/16	—	—



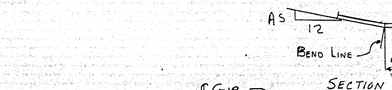
LATERAL BRACING LB

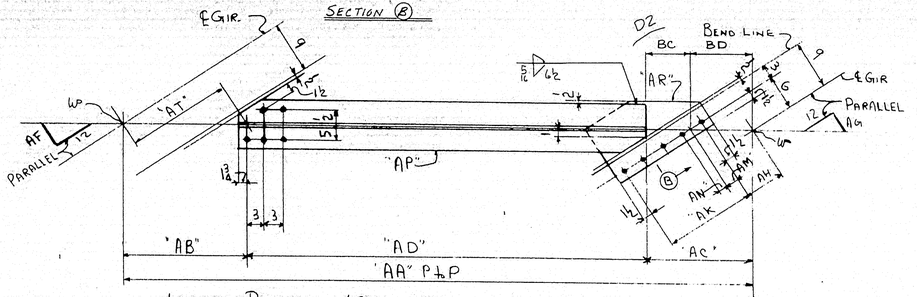


LATERAL BRACING LB189

For location of details shown on this sheet refer to diagrams.

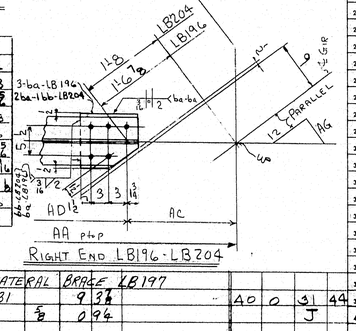
GD5-E7



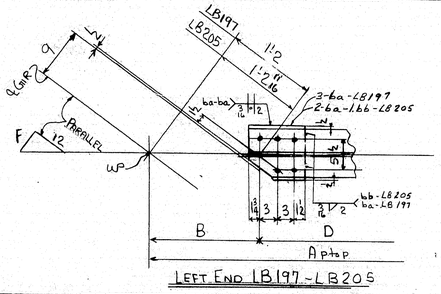


LATERAL BRACING LB190 - LB192 - LB194 - LB196 - LB198 - LB200 LB202 - LB204 - LB206

BC	BD	MARK	AA	AB	AC	AD	AF	AG	AH	AK	AM	AN	AP	AR	AS	AT
.7	.9 1/4	LB190	12'-3 3/8	1'-6	1'-4 1/4	9'-5 1/8	10 3/32	10 3/8	5	4@4 1/4 = 1'-5	2 1/16	2 3/16	c	d	1/2	1'-1 3/4
.8 3/8	.11 3/8	LB192	14'-9 7/8	1'-10 1/4	1'-7 3/4	11'-3 5/16	7 15/32	7 31/32	6 3/4	4@5 1/4 = 1'-9	2 3/8	2 3/8	h	k	1/2	1'-6 5/8
.8 3/32	.11 1/32	LB194	14'-7 1/16	1'-10 3/4	1'-7 3/4	11'-1 1/16	7 1/16	7 5/8	6 3/4	4@5 1/4 = 1'-9	2 3/8	2 3/8	s	k	1/2	1'-6 15/16
—	—	LB196	14'-6 1/8	1'-10 3/4	2'-0 2	10'-6 3/8	7 1/8	7 1/16	—	——	—	—	ap	—	—	1'-7 3/8
.7 1/8	.9 1/16	LB198	12'-10 1/2	1'-6	1'-4 3/4	9'-2 1/16	9 3/8	9 9/16	5	3@4 1/2 = 1'-1 1/2 - 4 1/8	2 1/16	2 3/16	y	aa	1/2	1'-2 1/16
.9 3/32	.11 3/32	LB200	14'-9 7/16	1'-11 1/4	1'-8 3/4	10'-11 7/16	7 5/8	7 7/8	7 1/4	3@5 1/4 - 1'-4 1/4 - 5 1/4	2 3/4	2 1/2	ac	ad	1/2	1'-7 15/16
8 3/32	.11 3/32	LB202	14'-5 15/16	1'-11 1/4	1'-8 3/4	10'-9 7/16	7 3/32	7 3/32	7 1/4	3@5 1/4 - 1'-4 1/2 - 5 1/4	2 1/8	2 1/8	ag	ad	1/2	1'-8 1/16
—	—	LB204	14'-4 1/2	1'-11 1/4	2'-1 5/8	10'-4	7 1/16	7 1/8	—	——	—	—	at	—	—	1'-8 1/8
.7 1/16	.9 1/8	LB206	11'-10 3/8	1'-6 3/4	1'-5 1/4	8'-10 3/8	9 3/32	9 3/8	5 1/2	4 1/2 - 3@4 1/2 = 1'-1 1/2	2 1/4	2 1/4	ak	am	7/8	1'-2 7/8



RIGHT END LB196 - LB204



LEFT END LB197 - LB205

INSTALL 13E	12E	11E	QTY	MARK	DESCRIPTION	REMARKS
1			ONE	LB189	LATERAL BRACE	
1			ONE	LB190	do	
1			ONE	LB191	do	
1			ONE	LB192	do	
1			ONE	LB193	do	
1			ONE	LB194	do	
1			ONE	LB195	do	
	1		ONE	LB196	do	
	1		ONE	LB197	do	
	1		ONE	LB198	do	
	1		ONE	LB199	do	
	1		ONE	LB200	do	
	1		ONE	LB201	do	
	1		ONE	LB202	do	
	1		ONE	LB203	do	
	1		ONE	LB204	do	
		1	ONE	LB205	do	
		1	ONE	LB206	do	

LINE	ASSEMBLY MARK	NO.	SHAPE	SHOP BILL SECTION SIZE	SIZE OR POUNDS	THICK	LENGTH FT.	LENGTH IN.	REMARKS	MILL ORDER LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
1				ONE LATERAL BRACE LB189									
2	a	1	BT	10	31		9	2 1/4		40	0	31	44
3	b	1	PL	10 3/8	31	5/8	2	2	BENT 14 1/2 x 8 3/8	26	0	28	19
4	FW	1	WD			5/16	1	1					
5				ONE LATERAL BRACE LB190									
6	c	1	BT	10	31		9	6 3/4		40	0	31	44
7	d	1	PL	13		5/8	1	8	BENT 14 1/2 x 8 3/8	26	0	28	19
8	FW	1	WD			5/16	1	1					
9				ONE LATERAL BRACE LB191									
10	f	1	BT	10	31		11	6 3/4		45	10	31	45
11	g	1	PL	13		5/8	2	0	BENT 14 1/2 x 8 3/8	26	0	28	19
12	FW	1	WD			5/16	1	1					
13				ONE LATERAL BRACE LB192									
14	h	1	BT	10	31		11	5/16		45	10	31	45
15	k	1	PL	13		5/8	2	0	BENT 14 1/2 x 8 3/8	26	0	28	19
16	FW	1	WD			5/16	1	1					
17				ONE LATERAL BRACE LB193									
18	m	1	BT	10	31		11	6		45	10	31	45
19	p	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 8 3/8	26	0	28	19
20	FW	1	WD			5/16	1	1					
21				ONE LATERAL BRACE LB194									
22	s	1	BT	10	31		11	3/16		45	10	31	45
23	k	1	PL	13		5/8	2	0	BENT 14 1/2 x 8 3/8	26	0	28	19
24	FW	1	WD			5/16	1	1					
25				ONE LATERAL BRACE LB195									
26	t	1	BT	10	31		11	5 3/16		45	10	31	45
27	w	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 8 3/8	26	0	28	19
28	FW	1	WD			5/16	1	1					
29				ONE LATERAL BRACE LB198									
30	y	1	BT	10	31		9	3 1/2		40	0	31	44
31	aa	1	PL	13		5/8	1	9 1/4	BENT 14 1/2 x 8 3/8	26	0	28	19
32	FW	1	WD			5/16	1	1					
33				ONE LATERAL BRACE LB199									
34	ab	1	BT	10	31		11	2 3/8		45	10	31	45
35	w	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 8 3/8	26	0	28	19
36	FW	1	WD			5/16	1	1					
37				ONE LATERAL BRACE LB200									
38	ac	1	BT	10	31		11	1 3/16		45	10	31	45
39	ad	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 8 3/8	26	0	28	19
40	FW	1	WD			5/16	1	1					
41				ONE LATERAL BRACE LB201									
42	af	1	BT	10	31		11	2 1/4		45	10	31	45
43	w	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 8 3/8	26	0	28	19
44	FW	1	WD			5/16	1	1					
45				ONE LATERAL BRACE LB202									
46	ag	1	BT	10	31		10	11 1/16		45	10	31	45
47	ad	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 8 3/8	26	0	28	19
48	FW	1	WD			5/16	1	1					
49				ONE LATERAL BRACE LB203									
50	ah	1	BT	10	31		11	3 1/16		45	10	31	45
51	w	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 8 3/8	26	0	28	19
52	FW	1	WD			5/16	1	1					
53				ONE LATERAL BRACE LB206									
54	ak	1	BT	10	31		9	0 1/4		40	0	31	44
55	am	1	PL	13		5/8	1	9 1/4	BENT 14 1/2 x 8 3/8	26	0	28	19
56	FW	1	WD			5/16	1	1					
57				ONE LATERAL BRACE LB196									
58	ap	1	BT	10	31		10	10 3/8		45	10	31	45
59	ba	3	PL	9 1/4		5/8	0	9 1/4				J	
60													
61	SD	1	WD			3/16	0	8					
62	FW	1	WD			3/16	0	4					
63													
64													
65													
66													

LINES 12 & 13

LINE	ASSEMBLY MARK	NO.	SHAPE	SHOP BILL SECTION SIZE	SIZE OR POUNDS	THICK	LENGTH FT.	LENGTH IN.	REMARKS	MILL ORDER LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
67				ONE LATERAL BRACE LB197									
68	as	1	BT	10	31		9	3 1/4		40	0	31	44
69	ba	3	PL	9 1/4		5/8	0	9 1/4				J	
70													
71	SD	1	WD			3/16	0	8					
72	FW	1	WD			3/16	0	4					
73													
74				ONE LATERAL BRACE LB204									
75	at	1	BT	10	31		10	7		45	10	31	45
76	ba	2	PL	9 1/4		5/8	0	9 1/4				J	
77	bb	1	PL	9 1/4		3/4	0	9 1/4				J	
78	FW	1	WD			3/16	0	4					
79	SD	1	WD			3/16	0	8					
80				ONE LATERAL BRACE LB205									
81	aw	1	BT	10	31		9	0 1/4		40	0	31	44
82	ba	2	PL	9 1/4		5/8	0	9 1/4				J	
83	bb	1	PL	9 1/4		3/4	0	9 1/4				J	
84	FW	1	WD			3/16	0	9					
85	SD	1	WD			3/16	0	8					
86													
87													
88													
89													
90													
91													
92													
93													
94													
95													
96													
97													
98													

NP 3 ALL OPEN HOLES (UN)

MAT'L THK. TO 3/4" INCL MUST BE PREHEATED TO 50°F USE E70 16, 18, 28 LOW HYDROGEN ELECTRODES OR G.R. SAW-2 FOR WELDING

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 13, N.Y.
BY Arnold Hardesty DEC 30 1969

PAY ITEM 504.711

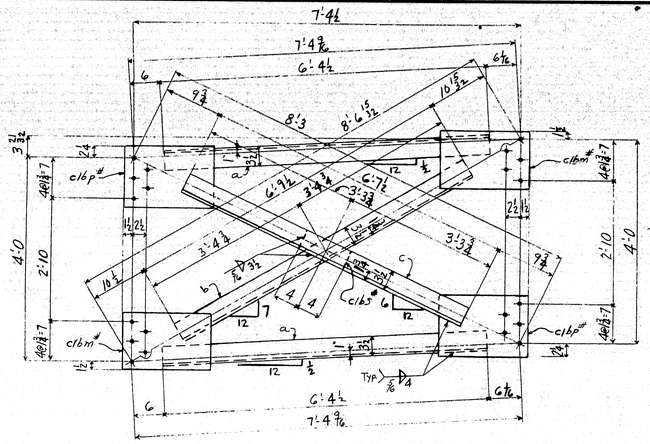
MATERIAL A36
RIVETS OR BOLTS NONE
OPEN HOLES 13/16 ø
A325 FIELD BOLTS 7/8 ø
SHOP CONTACT SURFACES No PAINT
PAINT MILL-NONE WELDING AS SHOWN ONE COAT AASHO-M72 TYPE II RED LEAD U.N

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

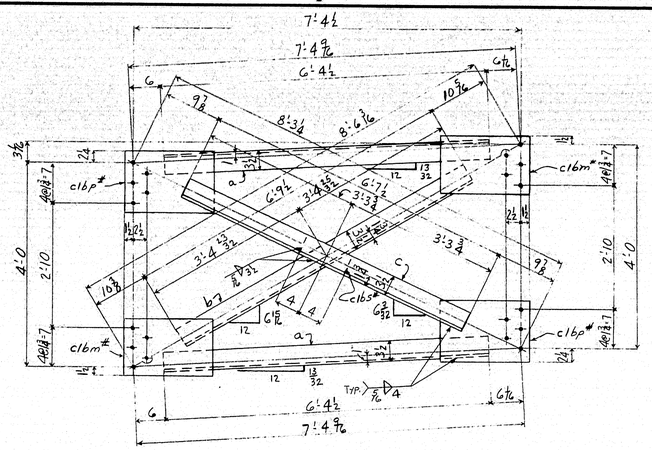
NO.	DATE	INIT.
REVISION		

LATERAL BRACING STA 529+73.33 to 531+83.67

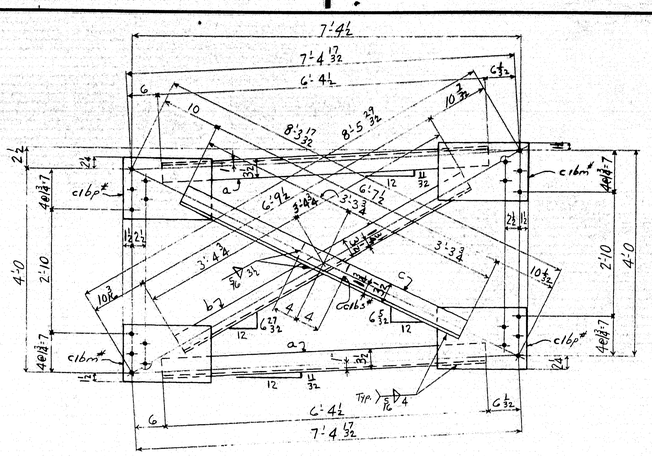
CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE PROJECT NO. I 95 I(22) 16
CONT NO 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM POTTSTOWN WORKS
MADE BY KIRK DATE 8-25-67 IN CHARGE B.K. BERTOLET
CHECKED BY STD DATE 9/8/69 SHOP NO. 2
CONTRACT CT6249-071 DRAWING NO. 34



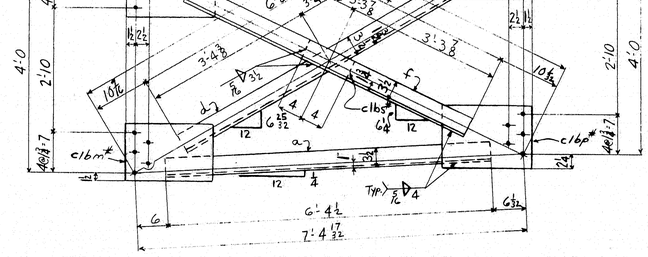
CROSS FRAME CF76 379 371



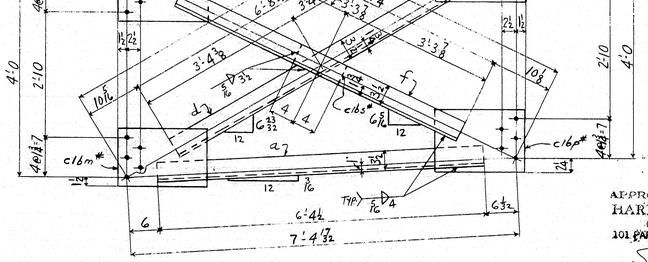
CROSS FRAME CF77 412



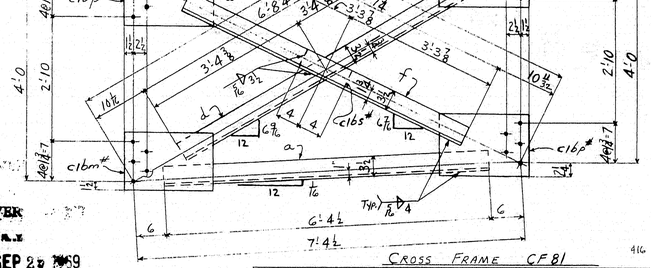
CROSS FRAME CF78 413



CROSS FRAME CF79 414



CROSS FRAME CF80 415



CROSS FRAME CF81 416

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
S. S. Nishan SEP 29 1969

NOTES:
MTL. THK. TO ¾" INCL. MUST BE PREHEATED TO 50° DEG. F
ALL OPEN HOLES - NP 3

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR. SAW-2 FOR WELDING.

For location of details shown on this sheet refer to diagrams.

E11, E12

SHOP BILL

LINE	WEIGHT TOTAL	WEIGHT EA.	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1			6- CROSS FRAMES CF76								
2			a	12	L	4	3½	⅜	6	4½	
3			b	6	L	4	3½	⅜	6	9½	
4			c	6	L	4	3½	⅜	6	7½	
5			c 16m*	12	PL	10		½	1	3½	
6			c 16p*	12	PL	10⅜		½	1	3½	
7			c 16s*	6	BR	3½		½	0	8	
8			FW	6	WD			5/16	6	6	
9											
10											
11			12- CROSS FRAMES CF77								
12			a	24	L	4	3½	⅜	6	4½	
12			b	12	L	4	3½	⅜	6	9½	
12			c	12	L	4	3½	⅜	6	7½	
12			c 16m*	24	PL	10		½	1	3½	
12			c 16p*	24	PL	10⅜		½	1	3½	
12			c 16s*	12	BR	3½		½	0	8	
12			FW	12	WD			5/16	6	6	
13											
13											
13			6- CROSS FRAMES CF78								
13			a	12	L	4	3½	⅜	6	4½	
13			b	6	L	4	3½	⅜	6	9½	
13			c	6	L	4	3½	⅜	6	7½	
14			c 16m*	12	PL	10		½	1	3½	
15			c 16p*	12	PL	10⅜		½	1	3½	
16			c 16s*	6	BR	3½		½	0	8	
17			FW	6	WD			5/16	6	6	
18											
19											
20											
21			6- CROSS FRAMES CF79								
22			a	12	L	4	3½	⅜	6	4½	
23			d	6	L	4	3½	⅜	6	8¾	
24			f	6	L	4	3½	⅜	6	7¾	
25			c 16m*	12	PL	10		½	1	3½	
26			c 16p*	12	PL	10⅜		½	1	3½	
27			c 16s*	6	BR	3½		½	0	8	
27			FW	6	WD			5/16	6	6	

MILL ORDER

LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
44	9⅛	48	09C
49	11½	48	11C
47	11½	48	11C
30	2⅛	48	14C
30	2⅛	48	15C
		J	
44	9⅛	48	09C
49	11½	48	11C
47	11½	48	11C
30	2⅛	48	14C
30	2⅛	48	15C
		J	
46	7¾	48	09C
49	11½	48	11C
47	11½	48	11C
30	2⅛	48	14C
30	2⅛	48	15C
		J	

ONE - CROSS FRAMES CF80

a	2	L	4	3½	⅜	6	4½	
d	1	L	4	3½	⅜	6	8¾	
f	1	L	4	3½	⅜	6	7¾	
c 16m*	2	PL	10		½	1	3½	
c 16p*	2	PL	10⅜		½	1	3½	
c 16s*	1	BR	3½		½	0	8	
FW	1	WD			5/16	6	6	

4- CROSS FRAMES CF81

a	8	L	4	3½	⅜	6	4½	
d	4	L	4	3½	⅜	6	8¾	
f	4	L	4	3½	⅜	6	7¾	
c 16m*	8	PL	10		½	1	3½	
c 16p*	8	PL	10⅜		½	1	3½	
c 16s*	4	BR	3½		½	0	8	
FW	4	WD			5/16	6	6	

INSTALLMENTS

	1W	1E	2W	QTY.	SHIPPING MARK	DESCRIPTION	REMARKS
			6	6	CF76	CROSS FRAMES	
		6	6	12	CF77	Do	
			6	6	CF78	Do	
			6	6	CF79	Do	
			1	ONE	CF80	Do	
	4			4	CF81	Do	

PAY ITEM - 504.701 - INST. 1W
PAY ITEM - 504.711 - BALANCE

MATERIAL - A36 STEEL
RIVETS OR BOLTS - NONE
OPEN HOLES - 15/16" ϕ
A325 FIELD BOLTS - 7/8" ϕ
SHOP CONTACT SURFACES - NO PAINT
WELDING - AS NOTED
MILLING - NONE
PAINT - ONE COAT AASHO-M72 TYPE II RED LEAD UNLESS NOTED

"CROSS FRAMES"

CUSTOMER: MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE: PROJECT NO. I-95-1(22)16
CONT. NO. 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM Pottstown WORKS
MADE BY DEW DATE 8/25/69 IN CHARGE Bertolet
CHECKED BY DRL DATE 9/11/69 SHOP NO. 2
CONTRACT CJ-6249-070 DRAWING NO. 35

REVISION NO. DATE INIT.

SUBMITTAL 1 2 3 4 5 6 7 8 9 0
DATE

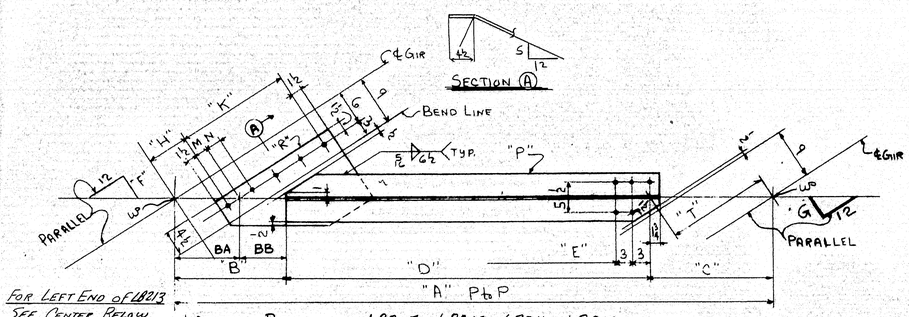
35042 (Rev. 8-68)

106-87

NOV 17 1969

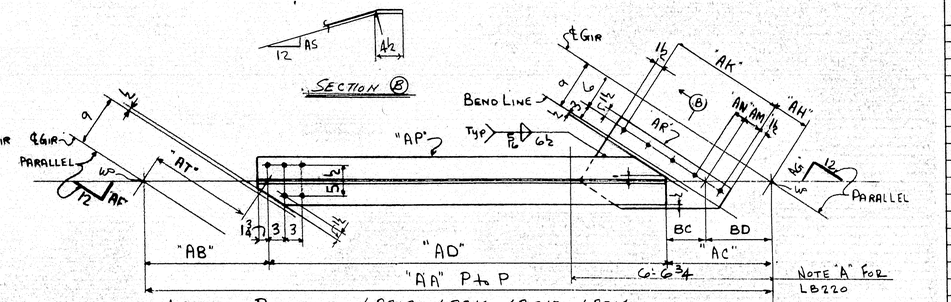
0 1 2 3 4 5 INCHES

UPPER LINE 4 & 5



FOR LEFT END OF LB213 SEE CENTER BELOW

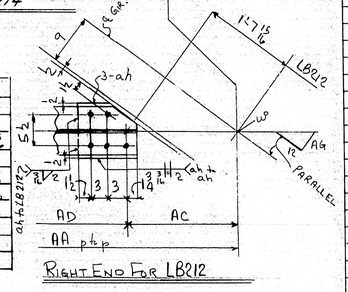
LATERAL BRACING LB207 - LB209 - LB211 - LB213
LB215 - LB217 & LB219



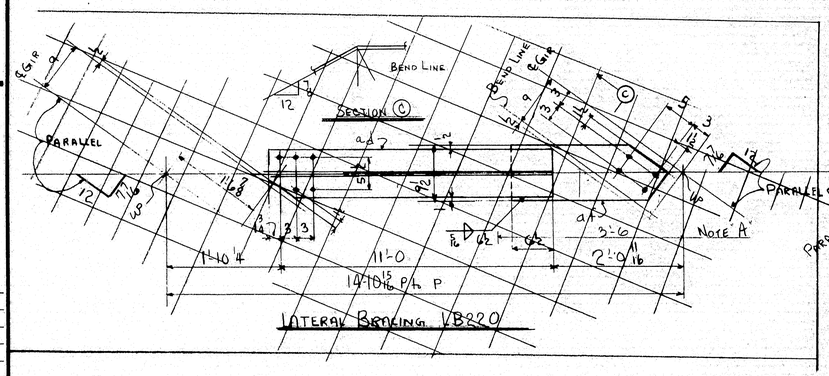
LATERAL BRACING LB208 - LB210 - LB212 - LB214
LB216 - LB218 & LB220

MARK	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	BA	BB
LB207	15'-2 7/8	1'-8 3/4	1'-11 1/4	11'-6 15/16	11'-0 7/8	7 3/32	7 3/32	7	7 1/4	5 3/4 - 3@5 1/2 = 1'-4 1/2	2 3/8	2 1/2	a	6	3/8	1'-7 15/16	11 31/32	9 3/32
LB209	15'-1 7/8	1'-8 1/4	1'-10 3/4	11'-6 7/8	11'-0 3/4	7 3/32	7 3/32	7	3@5 1/4 + 1@3 5/8 - 5/8	2 1/16	2 5/8	f	g	3/8	1'-7 1/2	11 5/8	8 5/8
LB211	15'-0 7/16	1'-8 1/4	1'-10 3/4	11'-5 3/16	10'-11 7/16	7 11/32	7 11/32	7	3@5 1/4 + 1@3 5/8 - 5/8	2 1/16	2 5/16	k	g	3/8	1'-7 7/16	11 1/2	8 3/4
LB213	12'-6 1/4	1'-5 1/2	1'-6	9'-6 3/4	9'-0 3/4	9 15/32	9 15/32	—	———	—	—	ak	—	—	1'-2 1/16	-	-
LB215	14'-9 1/8	1'-7 3/4	1'-10 1/4	11'-3 1/8	10'-9 1/8	7 1/8	7 1/8	6 3/4	4@5 1/4 = 1'-9	2 1/16	2 5/8	S	E	7/8	1'-6 15/16	11 13/32	8 11/32
LB217	14'-8 13/16	1'-7 3/4	1'-10 1/4	11'-2 13/16	10'-8 13/16	7 1/32	7 1/32	6 3/4	4@5 1/4 = 1'-9	2 1/8	2 3/8	aa	E	7/8	1'-6 3/8	11 3/8	8 3/8
LB219	14'-7 7/8	1'-7 3/4	1'-10 1/4	11'-1 3/8	10'-7 7/8	7 1/32	7 1/32	6 3/4	4@5 1/4 = 1'-9	2 1/8	2 1/4	ac	E	7/8	1'-6 3/4	11 1/4	8 1/2

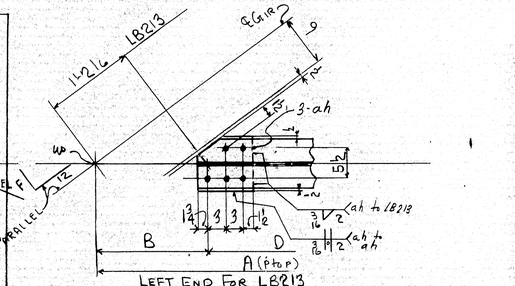
BC	BD	MARK	AA	AB	AC	AD	AF	AG	AH	AK	AM	AN	AP	AR	AS	AT
8 5/8	11 5/8	LB208	15'-1 15/16	1'-10 3/4	1'-8 1/4	11'-6 5/8	9 3/32	9 3/32	7	5@5 1/4 + 1@3 5/8	2 15/16	2 5/8	c	d	3/8	1'-7 1/2
8 5/8	11 5/8	LB210	15'-1 2 5/8	1'-10 3/4	1'-8 1/4	11'-7 5/8	7 1/4	7 1/4	7	5@5 1/4 + 1@3 5/8	2 15/16	2 5/8	h	d	3/8	1'-7 1/4
-	-	LB212	15'-1 3/4	1'-11 1/4	1'-10 1/4	11'-5 3/4	7 3/8	7 3/8	-	———	—	—	ag	—	—	1'-7 15/16
6 3/32	9 3/32	LB214	12'-3 15/16	1'-6	1'-4 1/4	9'-5 11/16	9 15/16	9 15/16	5	4@4 1/2 = 1'-6	2 1/4	2	m	p	3/8	1'-1 7/8
8 3/8	11 3/8	LB216	14'-8 15/16	1'-10 1/4	1'-7 3/4	11'-2 5/8	7 3/32	7 3/32	6 3/4	4@5 1/4 = 1'-9	2 2/8	2 3/8	w	y	3/8	1'-6 3/8
8 3/32	11 3/32	LB218	14'-9 1/8	1'-10 1/4	1'-7 3/4	11'-3 1/8	7 1/4	7 1/4	6 3/4	4@5 1/4 = 1'-9	2 1/8	2 3/8	ab	y	3/8	1'-6 3/8
8 1/16	11 1/16	LB220	14'-10 15/16	1'-10 1/4	1'-7 3/4	11'-4 1/16	7 1/16	7 1/16	6 3/4	4@5 1/4 = 1'-9	2 1/8	2 3/8	ad	af	3/8	1'-6 3/8



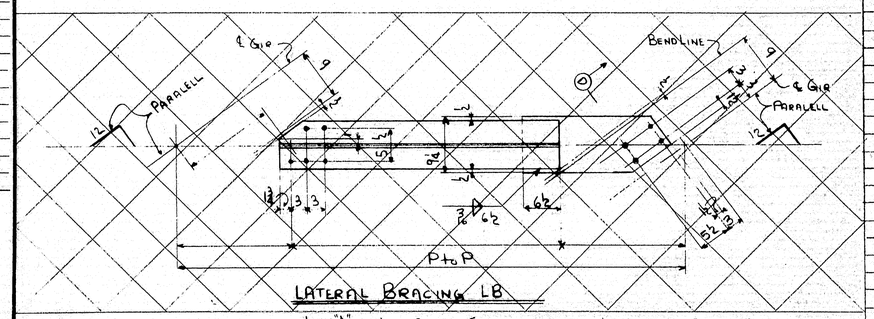
RIGHT END FOR LB212



LATERAL BRACING LB220



LEFT END FOR LB213



LATERAL BRACING LB

NOTE "A" - ALL STEEL SURFACES IN THIS AREA TO BE BLAST CLEANED AS PER SSPC-SP5-66. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY PAINT INCLUDING OPEN HOLES & CONTACT SURFACES.

For location of details shown on this sheet refer to diagrams.

GDB - E1D

INSTALLMENT		REQUIRED		LIST		
6W	5W	QTY	MARKS	DESCRIPTION		REMARKS
1		ONE	LB207	LATERAL	BRACE	
1		ONE	LB208	do	do	
1		ONE	LB209	do	do	
1		ONE	LB210	do	do	
1		ONE	LB211	do	do	
1		ONE	LB212	do	do	
	1	ONE	LB213	do	do	
	1	ONE	LB214	do	do	
	1	ONE	LB215	do	do	
	1	ONE	LB216	do	do	
	1	ONE	LB217	do	do	
	1	ONE	LB218	do	do	
	1	ONE	LB219	do	do	
	1	ONE	LB220	do	do	

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS	MILL ORDER LENGTH FT.	MILL ORDER LENGTH IN.	MILL ORDER ITEM PAGE	MILL ORDER ITEM LINE
1				ONE LATERAL BRACE LB207									
2	a	1	BT	10	31			11 7 1/16		50	0	49	38
3	b	1	PL	13		5/8	2	0 3/4	BENT 14 1/2 x 5/8 x	20	0	49	36
4	FW	1	WD			5/16	1	1					
5				ONE LATERAL BRACE LB208									
6	c	1	BT	10	31			11 8 1/16		50	0	49	38
7	d	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8 x	20	0	49	36
8	FW	1	WD			5/16	1	1					
9				ONE LATERAL BRACE LB209									
10	f	1	BT	10	31			11 7 15/16		50	0	49	38
11	g	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8 x	20	0	49	36
12	FW	1	WD			5/16	1	1					
13				ONE LATERAL BRACE LB210									
14	h	1	BT	10	31			11 9 1/16		50	0	49	38
15	d	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8 x	20	0	49	36
16	FW	1	WD			5/16	1	1					
17				ONE LATERAL BRACE LB211									
18	k	1	BT	10	31			11 6 15/16		50	0	49	38
19	g	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8 x	20	0	49	36
20	FW	1	WD			5/16	1	1					
21				ONE LATERAL BRACE LB212									
22	m	1	BT	10	31			9 7 1/16		40	0	49	37
23	p	1	PL	13		5/8	1	8	BENT 14 1/2 x 5/8 x	20	0	49	36
24	FW	1	WD			5/16	1	1					
25				ONE LATERAL BRACE LB215									
26	s	1	BT	10	31			11 5 1/8		50	0	49	38
27	t	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	20	0	49	36
28	FW	1	WD			5/16	1	1					
29				ONE LATERAL BRACE LB216									
30	w	1	BT	10	31			11 4 1/16		50	0	49	38
31	y	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	20	0	49	36
32	FW	1	WD			5/16	1	1					
33				ONE LATERAL BRACE LB217									
34	aa	1	BT	10	31			11 4 7/16		50	0	49	38
35	t	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	20	0	49	36
36	FW	1	WD			5/16	1	1					
37				ONE LATERAL BRACE LB218									
38	ab	1	BT	10	31			11 5 1/16		50	0	49	38
39	y	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	20	0	49	36
40	FW	1	WD			5/16	1	1					
41				ONE LATERAL BRACE LB219									
42	ac	1	BT	10	31			11 3 5/8		50	0	49	38
43	z	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	20	0	49	36
44	FW	1	WD			5/16	1	1					
45				ONE LATERAL BRACE LB220									
46	ad	1	BT	10	31			11 4 15/16		50	0	49	38
47	af	1	PL	13		5/8	2	0	BENT			J	
48	FW	1	WD			5/16	1	1					
49				ONE LATERAL BRACE LB212									
50	ag	1	BT	10	31			11 9 1/4		50	0	49	38
51	ah	3	FILLS	9 1/4		5/8		0 9 1/4				J	
52	FW	1	WD			3/16		0 4					
53	SC	1	WD			3/16		0 8					
54				ONE LATERAL BRACE LB213									
55	ak	1	BT	10	31			9 10 1/4		40	0	49	37
56	ah	3	FILLS	9 1/4		5/8		0 9 1/4				J	
57	FW	1	WD			3/16		0 4					
58	SC	1	WD			3/16		0 8					
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LINES 4&5

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY S. S. Nishimura DEC 16 1969

NO 3 ALL OPEN HOLES EXCEPT WHERE EPOXY PAINT IS USED. PAY ITEM 504.711

MATL THK TO 3/4" INCL. MUST BE PREHEATED TO 50°F USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR-SAW-2 FOR WELDING.

MATERIAL A36
RIVETS OR BOLTS NONE
OPEN HOLES 154
A325 FIELD BOLTS 74
SHOP CONTACT SURFACES NO PAINT MILL-NONE WELDING-AS SHOWN
PAINT ONE COAT AASHO-M72 TYPE II RED LEAD LIN.

NO.	DATE	INIT.	REVISION
0			
9			
8			
7			
6			
5			
4			
3			
2			
1			

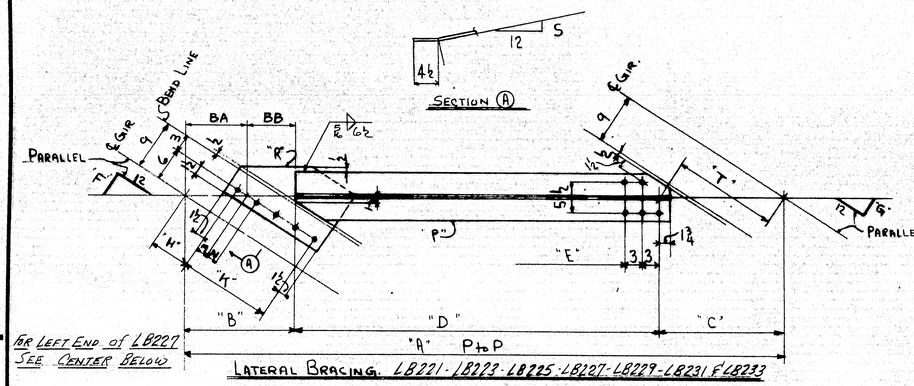
SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

LATERAL BRACING STA 536+62.00 to STA 538+34.33

CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE PROJECT No. I 95 I (22) 16
CONT. No. 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM POTTSTOWN WORKS
MADE BY KIRK DATE 8-25-69 IN CHARGE B.K. BERTOLET
CHECKED BY BTO DATE 9/22/69 SHOP NO. 2
CONTRACT CJ6249-071 DRAWING NO. 36

O.S.I.-1

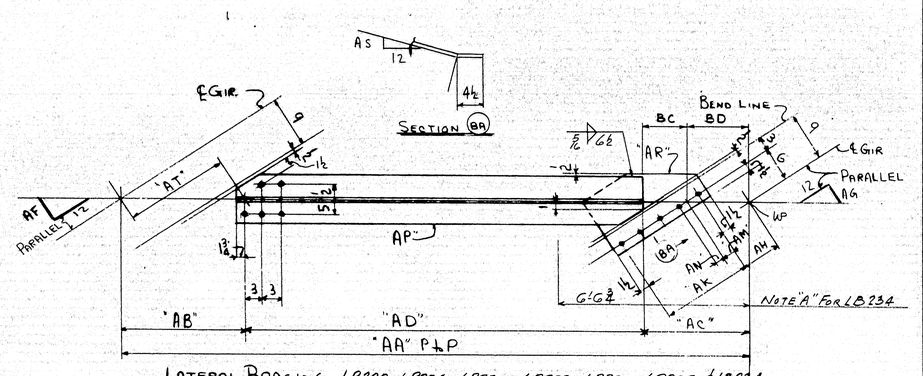
106-88



FOR LEFT END of LB227
SEE CENTER BELOW

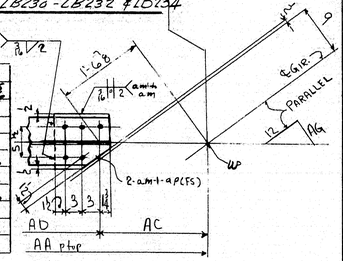
LATERAL BRACING LB221 · LB223 · LB225 · LB227 · LB229 · LB231 & LB233

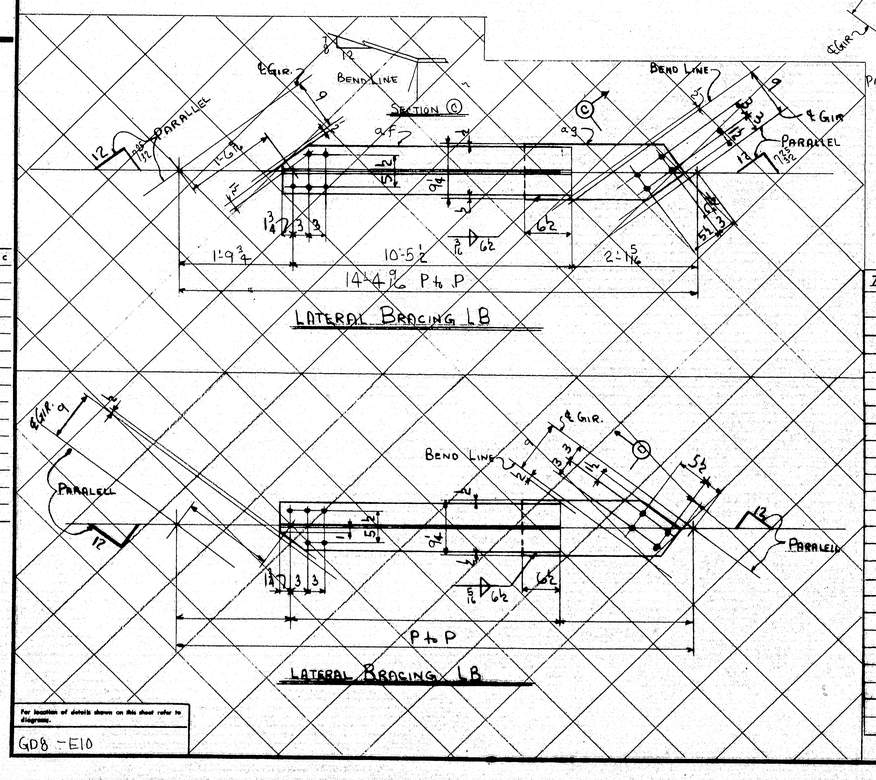
MARK	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	BA	BB
LB221	14'-10	1'-7 3/4	1'-10 1/4	11'-4	10'-10	7 1/2	7 1/2	6 3/4	40 5/4 = 1'-9	2 5/8	2 5/8	a	b	5/8	1'-6 5/8	1'-11 3/32	8 5/32
LB223	14'-11	1'-7 3/4	1'-10 1/4	11'-5	10'-11	7 7/8	7 7/8	6 3/4	40 5/4 = 1'-9	2 5/8	2 5/8	a	b	5/8	1'-6 5/8	1'-11 3/32	8 5/32
LB225	15'-0	1'-8 1/4	1'-10 3/4	11'-5	10'-11	7 3/8	7 3/8	7	30 5/4 = 1'-3 3/4 - 5/2	2 3/4	2 1/2	k	m	5/8	1'-7 1/2	1'-11 7/16	8 1/16
LB227	12'-11 7/16	1'-5 5/8	11'-5 15/16	9'-2 3/8	8'-8 3/8	10 1/8	10 1/8	—	———	—	—	as	—	—	1'-4 3/16	-	-
LB229	14'-5 11/16	1'-7	1'-9 3/4	11'-0 1/8	10'-6 1/8	7 3/4	7 3/4	7	40 5 = 1'-8	2 5/8	2 11/16	t	w	5/8	1'-6 5/16	1'-11 3/32	7 23/32
LB231	14'-6 1/16	1'-7	1'-9 3/4	11'-1 1/8	10'-7 1/8	7 7/8	7 7/8	7	40 5 = 1'-8	2 3/4	2 5/8	ab	w	5/8	1'-6 1/16	1'-11 3/8	7 7/8
LB233	14'-7 5/8	1'-7 3/4	1'-10 1/4	11'-1 5/8	10'-7 5/8	7 5/8	7 5/8	6 3/4	40 5/4 = 1'-9	2 1/16	2 1/16	ad	b	5/8	1'-6 1/32	1'-11 3/16	8 1/16

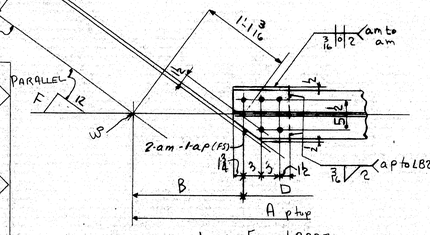


LATERAL BRACING LB222 · LB224 · LB226 · LB228 · LB230 · LB232 & LB234

BC	BD	MARK	AA	AB	AC	AD	AF	AG	AH	AK	AM	AN	AP	AR	AS	AT
8 5/8	11 5/8	LB222	14'-10 3/8	1'-10 1/4	1'-8 4	11'-4 3/8	7 3/8	7 3/8	7	5'-3 30 5/4 = 1'-9 3/8	2 3/8	2 1/4	c	d	3/8	1'-6 15/16
8 1/2	11 1/2	LB224	14'-9 7/8	1'-10 1/4	1'-7 3/4	11'-3 7/8	7 5/8	7 5/8	6 3/4	40 5/4 = 1'-9	2 1/8	2 1/8	g	h	3/8	1'-6 1/16
—	—	LB226	14'-8 3/8	1'-10 1/4	1'-10 4	11'-0 3/8	7 3/32	7 5/32	—	—	—	—	ak	—	—	1'-6 3/32
6 7/8	9 3/8	LB228	12'-4 1/16	1'-6 6	1'-4 1/4	9'-5 1/8	9 3/32	9 3/32	5	40 4 = 1'-5	2'-4 2	P	s	3/8	1'-1 3/8	
7 7/8	11 3/8	LB230	14'-6 1/16	1'-9 3/8	1'-7	11'-0 1/16	7 3/32	7 3/32	7	40 5 = 1'-8	2 3/8	2 5/8	u	aa	3/8	1'-6 7/16
7 23/32	11 3/32	LB232	14'-5 9/16	1'-9 3/8	1'-7	11'-0 1/16	7 3/32	7 3/32	7	40 5 = 1'-8	2 3/8	2 5/8	ac	aa	3/8	1'-6 7/16
7 23/32	11 3/32	LB234	14'-4 7/8	1'-9 4	1'-7	11'-0 1/16	7 5/32	7 5/32	6 3/4	40 5 = 1'-8	2 1/16	2 1/16	af	ag	3/8	1'-6 1/4







LEFT END LB227

For location of details shown on this sheet refer to diagrams.

GD8 - E10

INSTALLMENT		REQUIRED LIST			
6E	5E	Qty	MARK	DESCRIPTION	REMARKS
1		ONE	LB221	LATERAL BRACE	
1		ONE	LB222	" "	
1		ONE	LB223	" "	
1		ONE	LB224	" "	
1		ONE	LB225	" "	
1		ONE	LB226	" "	
	1	ONE	LB227	" "	
	1	ONE	LB228	" "	
	1	ONE	LB229	" "	
	1	ONE	LB230	" "	
	1	ONE	LB231	" "	
	1	ONE	LB232	" "	
	1	ONE	LB233	" "	
	1	ONE	LB234	" "	

LINE	ASSEMBLY MARK	NO.	SHAPE	SHOP BILL SECTION SIZE	SHOP BILL SECTION PLATE AND ROLLED WIDTH	SHOP BILL SECTION THICK	SHOP BILL LENGTH FT.	SHOP BILL LENGTH IN.	REMARKS	MILL ORDER LENGTH FT.	MILL ORDER LENGTH IN.	MILL ORDER WIDTH PAGE	MILL ORDER WIDTH LINE
1				ONE LATERAL BRACE LB221									
2	a	1	BT	10	31		11	5 3/4		50	0	49	38
3	b	1	PL	13		5/8	2	0	BENT 14½x5/8x	20	0	49	36
4	FW	1	WD			PC	1	1					
5				ONE LATERAL BRACE LB222									
6	c	1	BT	10	31		11	6 1/8		50	0	49	38
7	d	1	PL	13		5/8	2	0 4	BENT 14½x5/8x	20	0	49	36
8	FW	1	WD			PC	1	1					
9				ONE LATERAL BRACE LB223									
10	f	1	BT	10	31		11	6 3/4		50	0	49	38
11	b	1	PL	13		5/8	2	0	BENT 14½x5/8x	20	0	49	36
12	FW	1	WD			PC	1	1					
13				ONE LATERAL BRACE LB224									
14	g	1	BT	10	31		11	5 5/8		50	0	49	38
15	h	1	PL	13		5/8	2	0	BENT 14½x5/8x	20	0	49	36
16	FW	1	WD			PC	1	1					
17				ONE LATERAL BRACE LB225									
18	k	1	BT	10	31		11	6 3/4		50	0	49	38
19	m	1	PL	13		5/8	2	0 4	BENT 14½x5/8x	20	0	49	36
20	FW	1	WD			PC	1	1					
21				ONE LATERAL BRACE LB228									
22	p	1	BT	10	31		9	7 7/8		40	0	49	37
23	s	1	PL	13		5/8	1	8	BENT 14½x5/8x	20	0	49	36
24	FW	1	WD			PC	1	1					
25				ONE LATERAL BRACE LB229									
26	t	1	BT	10	31		11	2 1/16		50	0	49	38
27	w	1	PL	13		5/8	1	11	BENT 14½x5/8x	20	0	49	36
28	FW	1	WD			PC	1	1					
29				ONE LATERAL BRACE LB230									
30	y	1	BT	10	31		11	3 1/2		50	0	49	38
31	aa	1	PL	13		5/8	1	11	BENT 14½x5/8x	20	0	49	36
32	FW	1	WD			PC	1	1					
33				ONE LATERAL BRACE LB231									
34	ab	1	BT	10	31		11	3 7/16		50	0	49	38
35	w	1	PL	13		5/8	1	11	BENT 14½x5/8x	20	0	49	36
36	FW	1	WD			PC	1	1					
37				ONE LATERAL BRACE LB232									
38	ac	1	BT	10	31		11	2 7/16		50	0	49	38
39	aa	1	PL	13		5/8	1	11	BENT 14½x5/8x	20	0	49	36
40	FW	1	WD			PC	1	1					
41				ONE LATERAL BRACE LB233									
42	ad	1	BT	10	31		11	3 3/8		50	0	49	38
43	b	1	PL	13		5/8	2	0	BENT 14½x5/8x	20	0	49	36
44	FW	1	WD			PC	1	1					
45				ONE LATERAL BRACE LB234									
46	af	1	BT	10	31		11	1 3/16		50	0	49	38
47	ag	1	PL	13		5/8	1	11	BENT 14½x5/8x	20	0	49	36
48	FW	1	WD			PC	1	1					
49													
50				ONE LATERAL BRACE LB226									
51	ak	1	BT	10	31		11	3 3/8		50	0	49	38
52	am	2	PL	9 4		1/2	0	9 4				J	
53	ap	1	PL	9 4		5/8	0	9 4				J	
54	FW	1	WD			PC	0	4					
55	SL	1	WD			PC	0	8					
56													
57				ONE LATERAL BRACE LB227									
58	as	1	BT	10	31		9	6 4		40	0	49	37
59	am	2	PL	9 4		1/2	0	9 4				J	
60	ap	1	PL	9 4		5/8	0	9 4				J	
61	FW	1	WD			PC	0	4					
62	SL	1	WD			PC	0	8					
63													
64													
65													
66													

LINES 10 & 11

LATERAL BRACING STA 536+62.00 to 538+34.33

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY S.S. Nicholson DEC 16 1969

MATL THK TO ½" INCL. MUST BE PREHEATED TO 50°F USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR-SAW-2 FOR WELDING.

NOTE "A"
ALL STEEL SURFACES IN THIS AREA TO BE BLAST CLEANED AS PER SSPC-SP5-GG. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY PAINT. INCLUDING OPEN HOLES & CONTACT SURFACES.

NO. 3 ALL OPEN HOLES
PAY ITEM 507.711

MATERIAL A36
RIVETS OR BOLTS NONE
OPEN HOLES 15/16
A325 FIELD BOLTS 7/8
SHOP CONTACT SURFACES NO PAINT
PAINT MILL - NONE WELDING AS SHOWN
ONE COAT AASHO-M72 TYPE II RED LEAD

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

REVISION NO. | DATE | INIT.

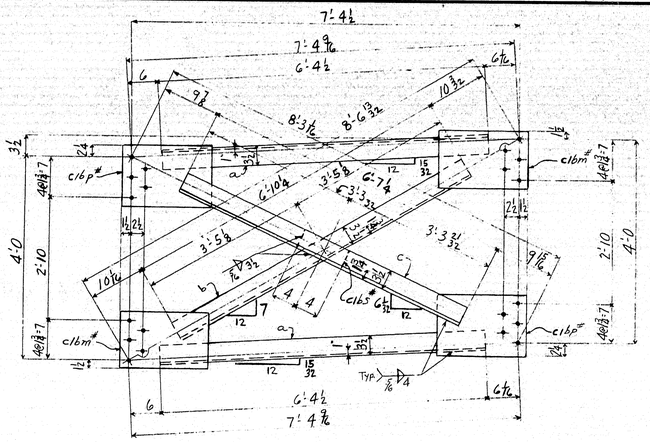
CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE PROJECT NO I 95 1(22) 16
CONT NO 3 NEW HAMPSHIRE APPROACH.
STRUCTURAL STEEL.

BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

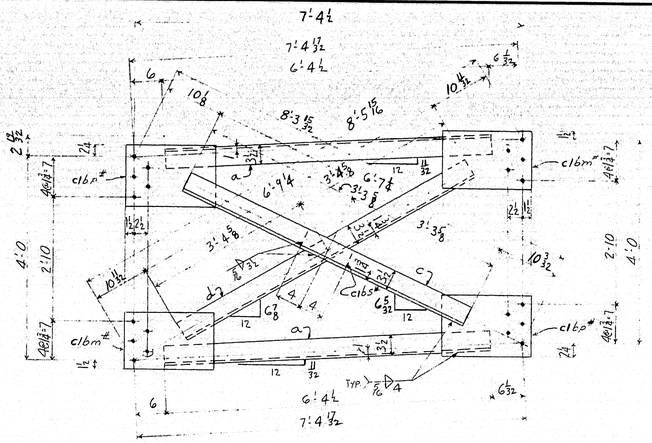
POTTSTOWN DRAFTING ROOM — POTTSTOWN WORKS
MADE BY KIRK DATE 8-27-69 IN CHARGE R.K. BERTOLET
CHECKED BY STD DATE 9/22/69 SHOP NO. 2
CONTRACT CJ6249-071 DRAWING NO. 37

O.S.I-1 106-89 DEC 15 1969

35433 (Rev. C 6-63)



CROSS FRAME CF82



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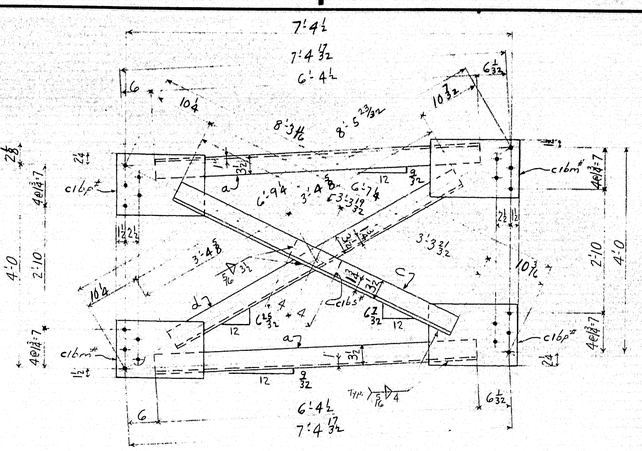

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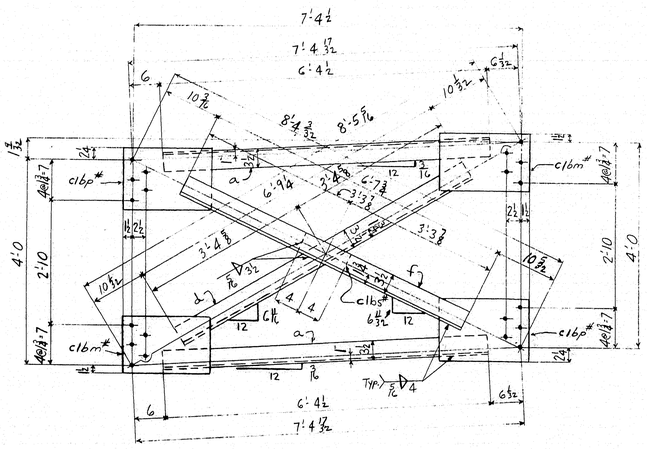

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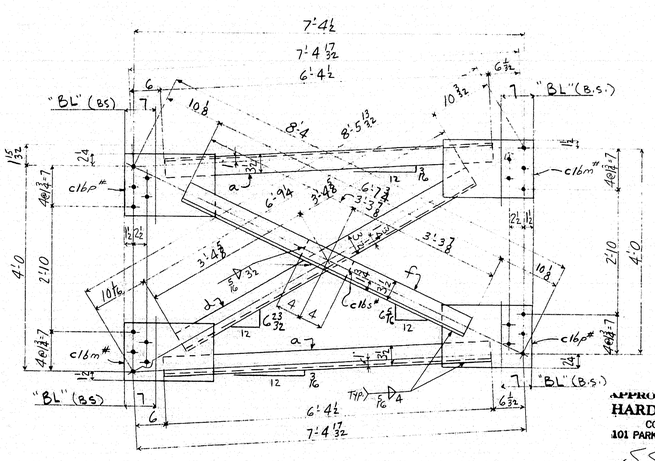

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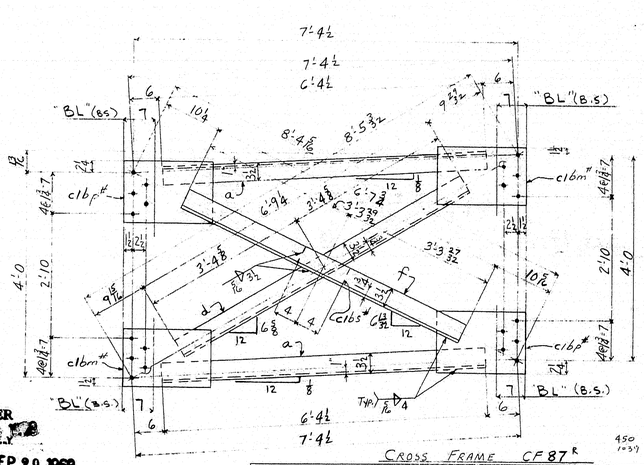


CROSS FRAME CF87R

NOTES:

MTL. THK. TO ¾" INCL. MUST BE PREHEATED TO 50° DEG.F

ALL OPEN HOLES - NP 3

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR. SAW-2 FOR WELDING.

For location of details shown on this sheet refer to diagrams.

E12

6 - CROSS FRAMES CF82

LINE	WEIGHT TOTAL	WEIGHT EA.	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION PER FOOT POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1			6 - CROSS FRAMES CF82								
2			a	12	L	4	3½	⅜	6	4½	
3			b	6	L	4	3½	⅜	6	10⅛	
4			c	6	L	4	3½	⅜	6	7⅛	
5			c 16m*	12	PL	10		½	1	3½	
6			c 16p*	12	PL	10⅜		½	1	3½	
7			c 16s*	6	BR	3½		½	0	8	
8			FW	6	WD			5/16	6	6	
9											
10											
11			6 - CROSS FRAMES CF83								
12			a	12	L	4	3½	⅜	6	4½	

MILL ORDER

LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE	
44	9⅛	48	08C	
49	1½	48	12C	
47	11½	48	11C	
30	2⅛	48	14C	
30	2⅛	48	15C	
		J		
44	9⅛	48	08C	
47	11½	48	11C	
49	1½	48	12C	
30	2⅛	48	14C	
30	2⅛	48	15C	
		J		
44	9⅛	48	08C	

5 - CROSS FRAMES CF85

a	10	L	4	3½	⅜	6	4½	
f	5	L	4	3½	⅜	6	7⅛	
d	5	L	4	3½	⅜	6	9⅛	
c 16m*	10	PL	10		½	1	3½	
c 16p*	10	PL	10⅜		½	1	3½	
c 16s*	5	BR	3½		½	0	8	
FW	5	WD			5/16	6	6	

49	1½	48	12C					
47	11½	48	11C					
30	2⅛	48	14C					
30	2⅛	48	15C					
		J						
44	9⅛	48	08C					
47	11½	48	11C					
49	1½	48	12C					
30	2⅛	48	14C					
30	2⅛	48	15C					
		J						

12 - CROSS FRAMES CF86

a	24	L	4	3½	⅜	6	4½	
f	12	L	4	3½	⅜	6	7⅛	
d	12	L	4	3½	⅜	6	9⅛	
c 16m*	24	PL	10		½	1	3½	
c 16p*	24	PL	10⅜		½	1	3½	
c 16s*	12	BR	3½		½	0	8	
FW	12	WD			5/16	6	6	

44	9⅛	48	08C	
47	11½	48	11C	
49	1½	48	12C	
30	2⅛	48	14C	
30	2⅛	48	15C	
		J		

3 - CROSS FRAMES 2 - CF87R, ONE CF87L

a	6	L	4	3½	⅜	6	4½	
f	3	L	4	3½	⅜	6	7⅛	
d	3	L	4	3½	⅜	6	9⅛	
c 16m*	6	PL	10		½	1	3½	
c 16p*	6	PL	10⅜		½	1	3½	
c 16s*	3	BR	3½		½	0	8	
FW	3	WD			5/16	6	6	

44	9⅛	48	08C	
47	11½	48	11C	
49	1½	48	12C	
30	2⅛	48	14C	
30	2⅛	48	15C	
		J		

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY S.S. Nishimura SEP 29 1969

INSTALLMENTS

2W	2E	1W	1E	QTY.	SHIPPING MARK	DESCRIPTION	REMARKS
	6			6	CF82	CROSS FRAMES	
	6			6	CF83	Do	
	6			6	CF84	Do	
4		1		5	CF85	Do	
1		3	8	12	CF86	Do	
		1	1	2	CF87R	Do	
			1	ONE	CF87L	Do	

REQUIRED LIST

"BL" INDICATES ONE COAT OF BLUE-LACQUER.

PAY ITEM - 504.701 - INST.-1E-1W
PAY ITEM - 504.711 - BALANCE

MATERIAL - A36 STEEL
RIVETS OR BOLTS - NONE
OPEN HOLES - 15/16" ϕ
A325 FIELD BOLTS - ⅞" ϕ
SHOP CONTACT SURFACES - NO PAINT
WELDING - AS NOTED
MILLING - NONE
PAINT - ONE COAT AASHO-M72 TYPE II RED LEAD UNLESS NOTED

"CROSS FRAMES"

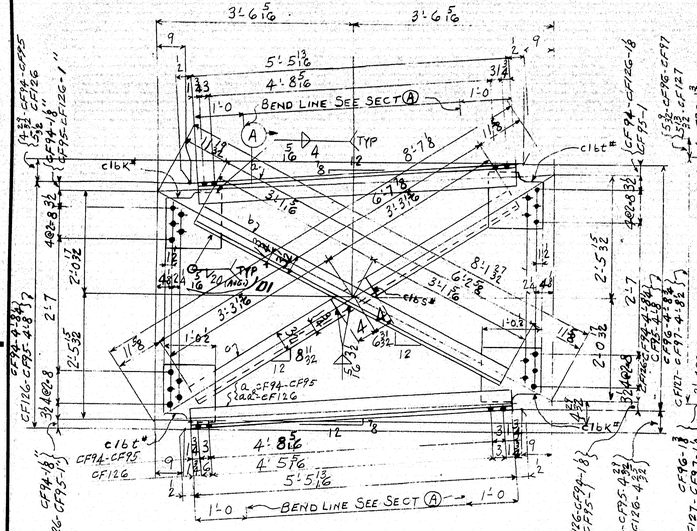
CUSTOMER MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE PROJECT NO. I-95-1 (22) 16
CONT. NO. 3 NEW HAMPSHIRE APPROACH
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM POTTSTOWN WORKS
MADE BY DEW DATE 8/26/69 IN CHARGE BERTOLET
CHECKED BY D.R.L DATE 9/11/69 SHOP NO. 2
CONTRACT CJ-6249-070 DRAWING NO. 38

REVISION NO. | DATE | INIT.

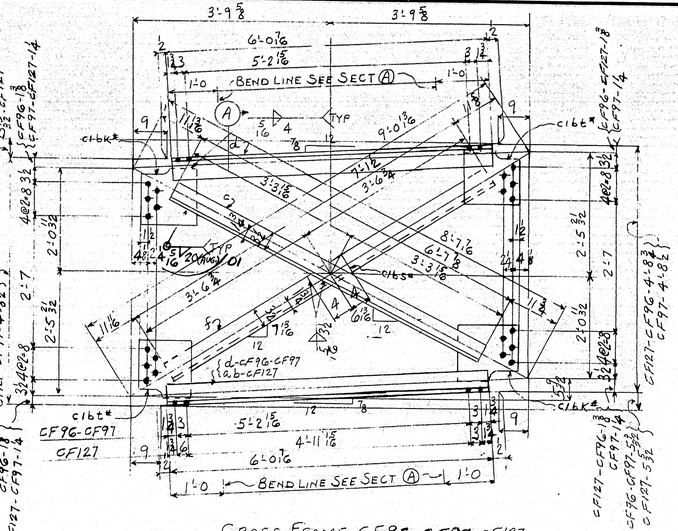
SUBMITTAL 1 2 3 4 5 6 7 8 9 0
DATE

106-38

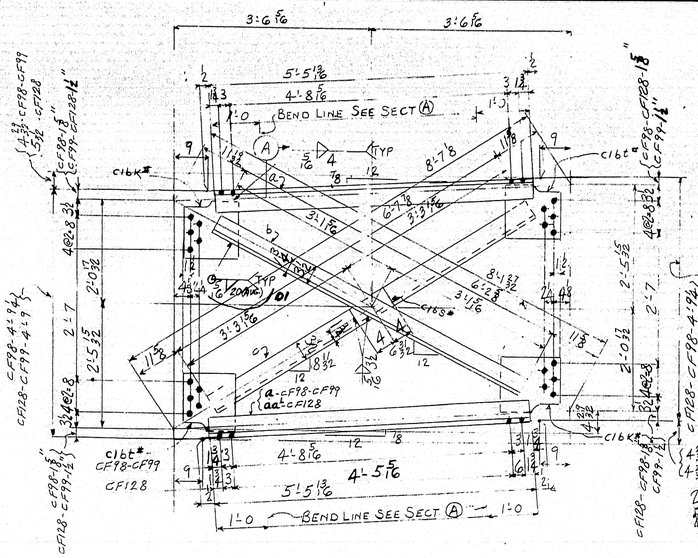
0 1 2 3 4 5 INCHES



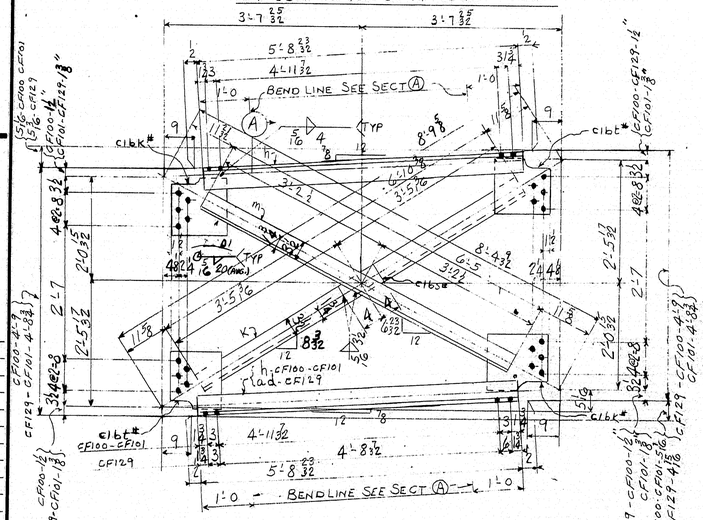
CROSS FRAME - CF94 - CF95 - CF126



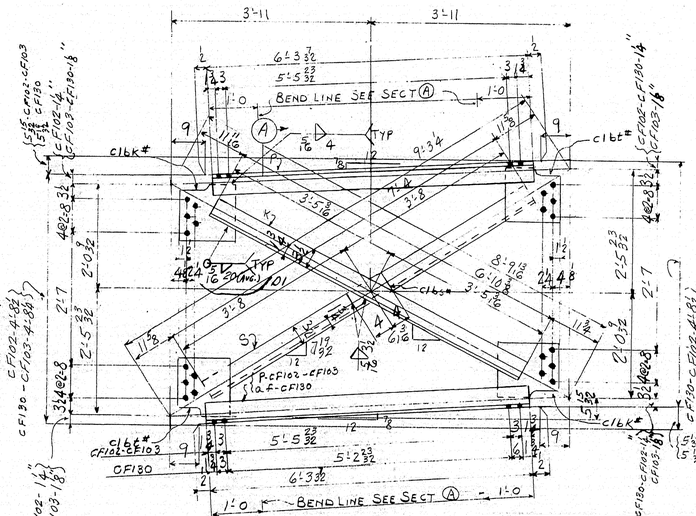
CROSS FRAME - CF96 - CF97 - CF127



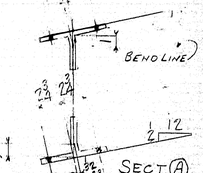
CROSS FRAME - CF98 - CF99 - CF128



CROSS FRAME - CF100 - CF101 - CF129



CROSS FRAME { CF102 / CF103 / CF130



NOTES

MTL THK TO ¾" INCL MUST BE PREHEATED TO 50°F
ALL OPEN HOLES - NP3
NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPATED IN FINAL WELD
USE E70I6, I8, 28 LOW HYDROGEN ELECTRODES OR GR SAW-2 FOR WELDING
ALL RE-ENTRANT CUTS TO HAVE ¾" RAD.

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY S.S. Hardesty DEC 30 1969

PAY ITEM - 504.711

For location of details shown on this sheet refer to diagrams.

E

	a	b	c
a			
b			
c			
d			
f			
g			
h			
k			
e			
n			
p			
s			
t			
w			
y			

SHOP BILL

LINE	WEIGHT TOTAL	WEIGHT EA.	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR FOUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1				7	CROSS FRAME - 3-CF92 3-CF95						
2			a	13	BT	4	17.5		5	5 13/16	G-CF94, G-CF95 1-CF126
3			b	7	L	4	3½	3/8	6	2 5/8	
4			c	7	L	4	3½	3/8	6	7 1/8	
5			c 16k*	14	PL	12½		½	1	0	
6			c 16k*	14	PL	12½		½	1	1	
7			c 16s*	7	BR	3½		½	0	8	
8			FW	7	WD			5/16	(10	6)	D1
9			aa r	1	BT	4	17.5		5	5 13/16	1-CF126
10											
11				7	CROSS FRAME - 3-CF96 3-CF97						1-CF127
12			d	13	BT	4	17.5		6	0 1/16	G-CF96, G-CF97 1-CF127
13			c	7	L	4	3½	3/8	6	7 1/8	
14			f	7	L	4	3½	3/8	7	1½	
15			c 16k*	14	PL	12½		½	1	0	
16			c 16k*	14	PL	12½		½	1	1	
17			c 16s*	7	BR	3½		½	0	8	
18			FW	7	WD			5/16	(10	6)	D1
19			a b	1	BT	4	17.5		6	0 1/16	1-CF127
20											
21				7	CROSS FRAME - 3-CF98 3-CF99						1-CF128
22			a	13	BT	4	17.5		5	5 13/16	G-CF98 G-CF99 1-CF128
23			b	7	L	4	3½	3/8	6	2 5/8	
24			c	7	L	4	3½	3/8	6	7 1/8	
25			c 16k*	14	PL	12½		½	1	0	
26			c 16k*	14	PL	12½		½	1	1	
27			c 16s*	7	BR	3½		½	0	8	
28			FW	7	WD			5/16	(10	6)	D1
28			aa l	1	BT	4	17.5		5	5 13/16	1-CF128
28			a d	1	BT	4	17.5		5	8 3/4	1-CF129
28			h	13	BT	4	17.5		5	8 3/4	G-CF100 G-CF101 1-CF129
29			K	7	L	4	3½	3/8	6	10 3/8	
30			m	7	L	4	3½	3/8	6	5	
31			c 16k*	14	PL	12½		½	1	0	
32			c 16k*	14	PL	12½		½	1	1	D1 Use 13 × ½
33			c 16s*	7	BR	3½		½	0	8	
34			FW	7	WD			5/16	(10	6)	D1
35				6	CROSS FRAME - 3-CF102 2-CF103 1-CF130						
36			a f	1	BT	4	17.5		6	3¼	1-CF130
37			P	11	BT	4	17.5		6	3¼	2-CF102 2-CF103 1-CF130
38			K	6	L	4	3½	3/8	6	10 3/8	
39			S	6	L	4	3½	3/8	7	4	
40			c 16k*	12	PL	12½		½	1	0	
41			c 16k*	12	PL	12½		½	1	0	Use 13 × ½
42			c 16s*	6	BR	3½		½	0	8	
43			FW	6	WD			5/16	(10	6)	D1

MILL ORDER

LINE	LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
13				
14				
15				
16	1-CF126			
17			36	04
18	46	2½	36	24C
19	46	2½	36	24C
20	20	9	36	40
21	20	9	36	40
22			J	
23				
24			36	04
25				
26	1-CF127			
27			36	08
28				
29				
30				
31				
32				
33				
34				
35				
36	1-CF128			
37			36	04
38	44	5 3/4	29	16
39	47	1	36	20C
40	20	9	36	40
41	20	9	36	40
42			J	
43				

INSTALL 6W	10E	11E	11W	12E	REQUIRED LIST QTY	SHIPPING MARK	DESCRIPTION	REMARKS
	3				3	CF94	CROSS FRAME	
	3				3	CF95	Do	
			3		3	CF96	Do	
			3		3	CF97	Do	
		3			3	CF98	Do	
		3			3	CF99	Do	
		3			3	CF100	Do	
		3			3	CF101	Do	
3					3	CF102	Do	
2					2	CF103	Do	
	1				ONE	CF126	Do	
		1			ONE	CF127	Do	
			1		ONE	CF128	Do	
				1	ONE	CF129	Do	
					ONE	CF130	Do	

MATERIAL - A36 STEEL
RIVETS OR BOLTS - NONE
OPEN HOLES - 15/16"ø
A325 FIELD BOLTS - 7/8"ø
SHOP CONTACT SURFACES - NO PAINT
WELDING - AS NOTED
MILLDING - NONE
PAINT - ONE COAT AASHO-M72 TYPE II RED LEAD - UN

NO.	DATE	REVISION	INT.
1	12/16/69		

CUSTOMER: MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE: PROJECT NO I-95-1 (22) 16
CONT NO 3 NEW HAMPSHIRE APPROACH

BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

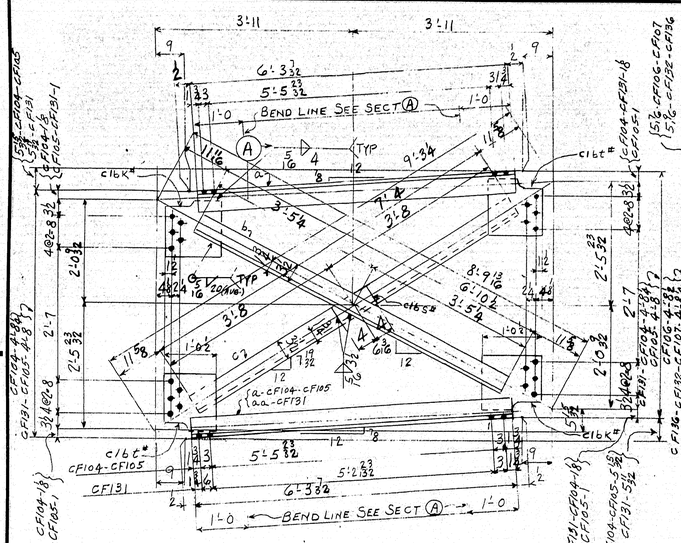
POTTSTOWN DRAFTING ROOM, POTTSTOWN WORKS
MADE BY LET DATE 8-26-69 IN CHARGE BERTOLET
CHECKED BY E DATE 9-5-69 SHOP NO. 2
CONTRACT CJG249-070 DRAWING NO. 39

SUBMITTAL 1 2 3 4 5 6 7 8 9 0
DATE

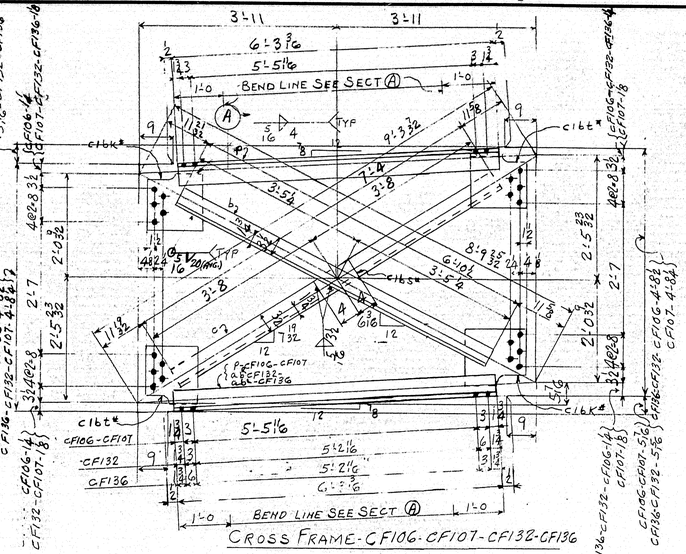
106-91

33042 (Rev.3 1-63)

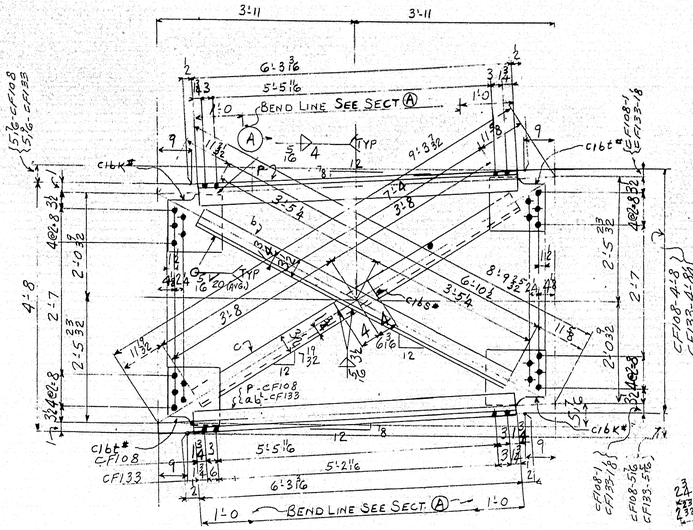
0 1 2 3 4 5 INCHES



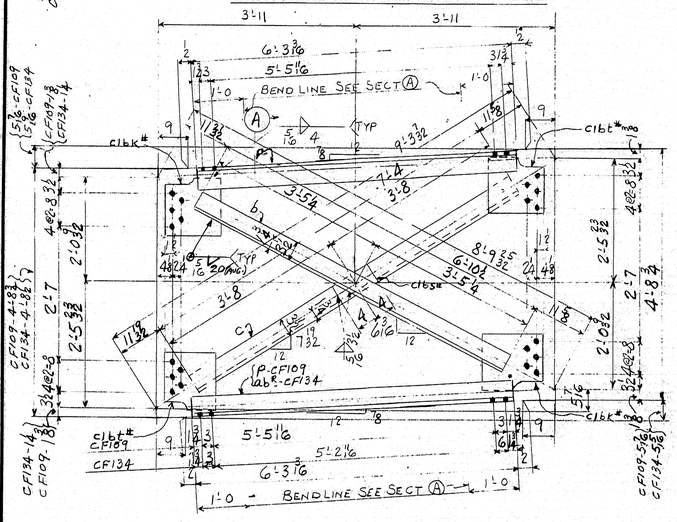
CROSS FRAME - CF104-CF105-CF131



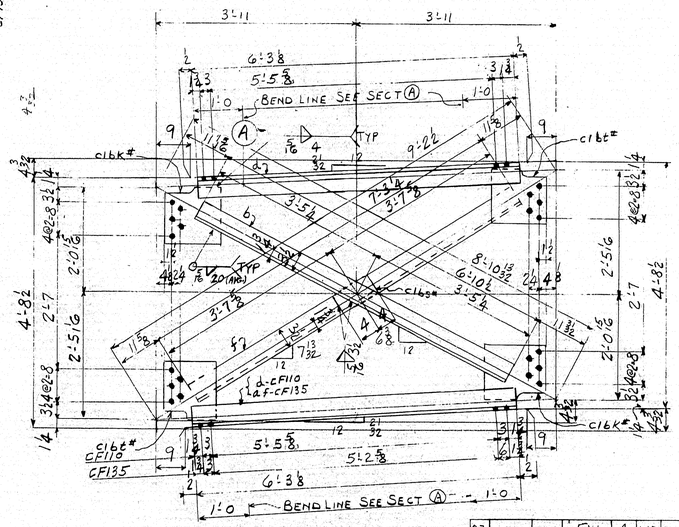
CROSS FRAME - CF106-CF107-CF132-CF136



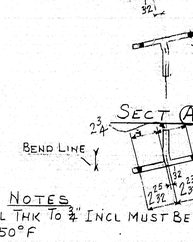
CROSS FRAME - CF108-CF133



CROSS FRAME - CF109-CF134



CROSS FRAME - CF110 CF135



NOTES
MTL THK TO 1/2" INCL MUST BE PREHEATED TO 50°F
ALL OPEN HOLES - NP3
NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPATED IN FINAL WELD
USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR SAW-2 FOR WELDING
ALL RE-ENTRANT CUTS TO HAVE 3/4" RAD.

For location of details shown on this sheet refer to diagrams.

E10 - E11

SHOP BILL

LINE	WEIGHT TOTAL	WEIGHT EA.	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1				6	CROSS FRAME				2-CF104	3-CF105	
2			a	11	BT	4	17.5		6	3 1/2	4-CF104 1-CF105 1-CF131
3			b	6	L	4	3 1/2	3/8	6	10 1/2	NOTE: CUT 36G-10 & 36E 7th FROM EACH END LG. OF 45° CUTS
4			c	6	L	4	3 1/2	3/8	7	4	
5			c 16k#	12	PL	12 1/2		1/2	1	0	
6			c 16k#	12	PL	11 1/2		1/2	1	0 1/2	
7			c 16s#	6	BR	3 1/2		1/2	0	8	
8			FW	6	WD			5/16	10	6	
9			aa	1	BT	4	17.5		6	3 3/16	CF131
10											
11				16	CROSS	FRAME -			7-CF106	7-CF107	1-CF132 1-CF136
12			p	30	BT	4	17.5		6	3 3/16	14-CF106, 14-CF107 16-CF132 1-CF136

MILL ORDER

LINE	LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE	SAVE CROP
13					
14					
15					
16	1-CF131				
17	6	4 1/4	36	10	
18	42	11 3/4	36	14C	
19	42	11 3/4	36	14C	
20	20	9	36	40	
21	20	9	36	40	
22			J		
23					
24	6	4 4	36	10	
25					
26					
27	38	0	49	39	

	b	12	L	4	3 1/2	3/8	6	10 1/2	4	48	10 4	48	17C		
	c	16	L	4	3 1/2	3/8	7	4	6	48	10	36	16C		
	c 16k#	32	PL	12		1/2	1	0 1/2		44	2 3/4	48	01D		
	c 16k#	32	PL	13		1/2	1	0 1/2	SAVE CROP	14	10 1/2	48	03A		
	c 16s#	16	BR	3 1/2		1/2	0	8		14	10 1/2	48	04A		
	FW	16	WD			5/16	10	6		28	21	96	04C		
	ab^L	1	BT	4	17.5				1-abR-CF132 1-abL-CF136				J		
				4	CROSS	FRAME -			3-CF108	1-CF133					
	P	7	BT	4	17.5		6	3 3/16		38	0	49	39		
	b	4	L	4	3 1/2	3/8	6	10 1/2	2	48	10	48	19C		
	c	4	L	4	3 1/2	3/8	7	4	2	44	2 3/4	48	01D		
	c 16k#	8	PL	12		1/2	1	0 1/2	2	14	10 1/2	48	03A		
	c 16k#	8	PL	13		1/2	1	0 1/2	2	30	1 7/8	48	04C		
	c 16s#	4	BR	3 1/2		1/2	0	8				J			

	FW	4	WD			5/16	10	6							
	ab^L	1	BT	4	17.5		6	3 3/16		38	0	49	39		
			4	CROSS	FRAMES	3-CF109	1-CF134								
	ab^R	1	BT	4	17.5		6	3 3/16	CF134	38	0	49	39		
	P	7	BT	4	17.5		6	3 3/16	6-CF109 1-CF134	38	0	49	39		
	b	4	L	4	3 1/2	3/8	6	10 1/2		44	2 3/4	48	01D		
	c	4	L	4	3 1/2	3/8	7	4		44	2 3/4	48	01D		
	c 16k#	8	PL	12		1/2	1	0 1/2		30	9 3/8	48	04D		
	c 16k#	8	PL	13		1/2	1	0 1/2		30	9 3/8	48	05C		
	c 16s#	4	BR	3 1/2		1/2	0	8				J			
	FW	4	WD			5/16	10	6							
			6	CROSS	FRAMES	5-CF110	1-CF135								
	af	1	BT	4	17.5		6	3 3/8	CF135	38	0	49	39		
	d	11	BT	4	17.5		6	3 3/8	10-CF110 1-CF135	38	0	49	39		
	b	6	L	4	3 1/2	3/8	6	10 1/2		44	0 1/4	48	17C		
	f	6	L	4	3 1/2	3/8	7	3 1/4	4	44	5 3/4	72	16C		
	c 16s#	12	PL	12		1/2	1	0 1/2	4	31	5 1/4	48	11C		
	c 16k#	12	PL	13		1/2	1	0 1/2				J			
	c 16s#	6	BR	3 1/2		1/2	0	8				J			
	FW	6	WD			5/16	10	6							

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY S.S. Nishimi DEC 30 1969

INSTALL 2W	3E	3W	5E	5W	6E	QTY	SHIPPING MARK	DESCRIPTION	REMARKS
				2		2	CF104	CROSS FRAME	
				3		3	CF105	DO	
2	2		3			7	CF106	DO	
		2	2			7	CF107	DO	
3						3	CF108	DO	
	3					3	CF109	DO	
5						5	CF110	DO	
				1	1	ONE	CF131	DO	
		1	1			ONE	CF132	DO	
	1					ONE	CF133	DO	
						ONE	CF134	DO	
1						ONE	CF135	DO	
	1					ONE	CF136	DO	

PAY ITEM - 504.711

MATERIAL - A36 STEEL
RIVETS OR BOLTS - NONE
OPEN HOLES - 1 1/16"
A325 FIELD BOLTS - 7/8"
SHOP CONTACT SURFACES - NO PAINT
WELDING - AS NOTED
MILLDING - NONE
PAINT - ONE COAT AASHO-M72 TYPE II RED LEAD

CUSTOMER: MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
STRUCTURE: PROJECT NO I-95-1 (22) 76
CONT NO 3 NEW HAMPSHIRE APPROACH

BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION
POTTSTOWN DRAFTING ROOM: POTTSTOWN WORKS
MADE BY LET DATE 8-27-63 IN CHARGE GERTOLET
CHECKED BY E DATE 9-5-69 SHOP NO. 2
CONTRACT CJG249-070 DRAWING NO. 40

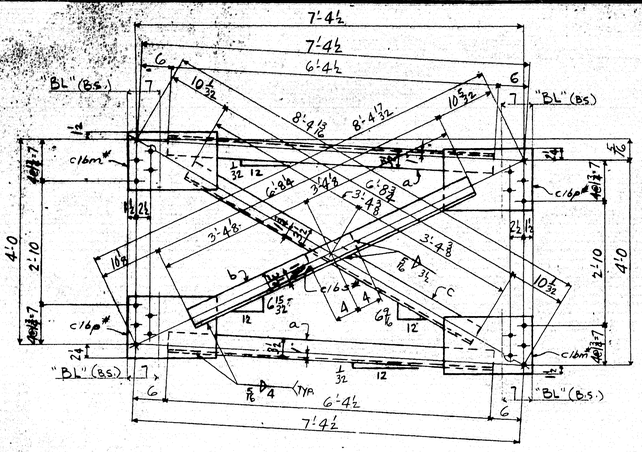
NO.	DATE	REVISION
9		
8		
7		
6		
5		
4		
3		
2		
1		

SUBMITTAL 1 2 3 4 5 6 7 8 9 0
DATE

106-92

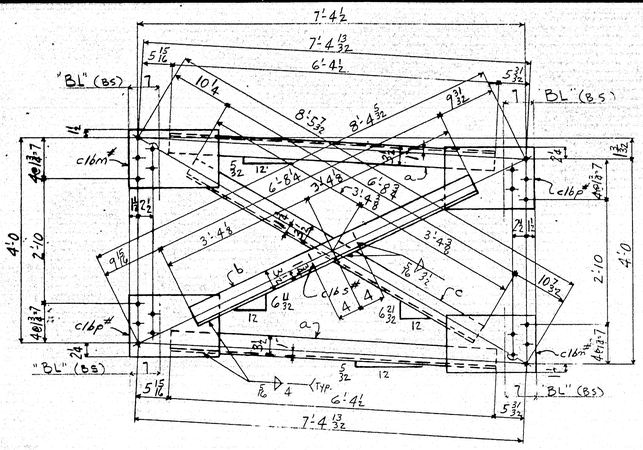
32043 (Rev. 3-68) 1969

0 1 2 3 4 5 INCHES



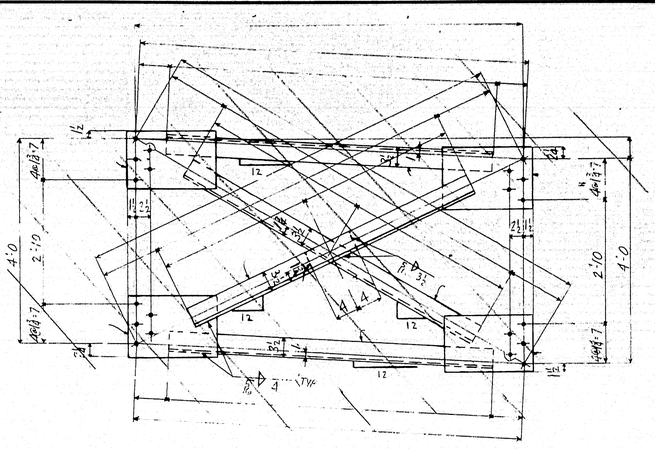
CROSS FRAME CF88

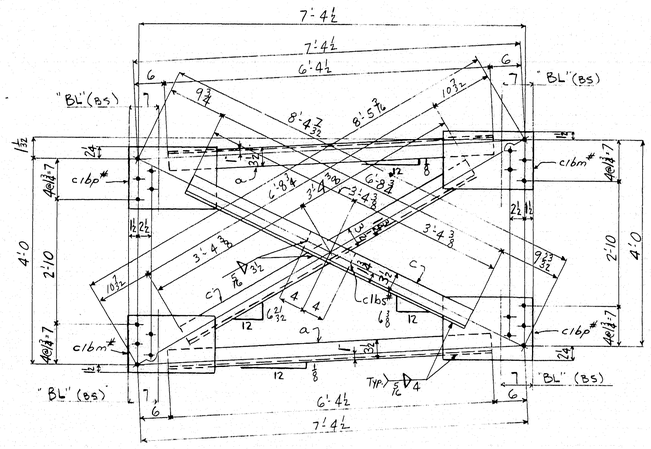
417
1040



CROSS FRAME CF89

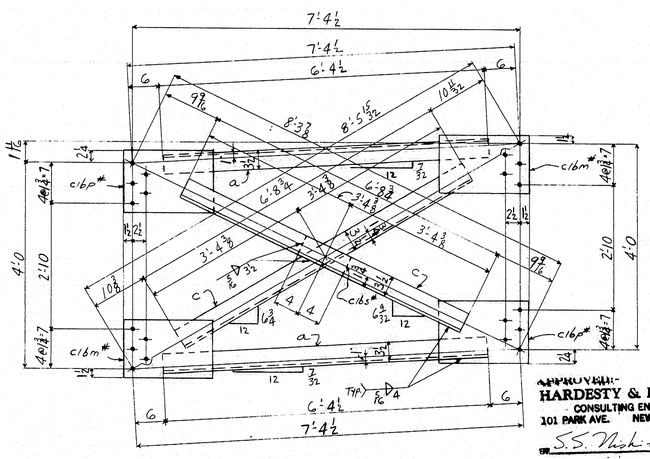
418





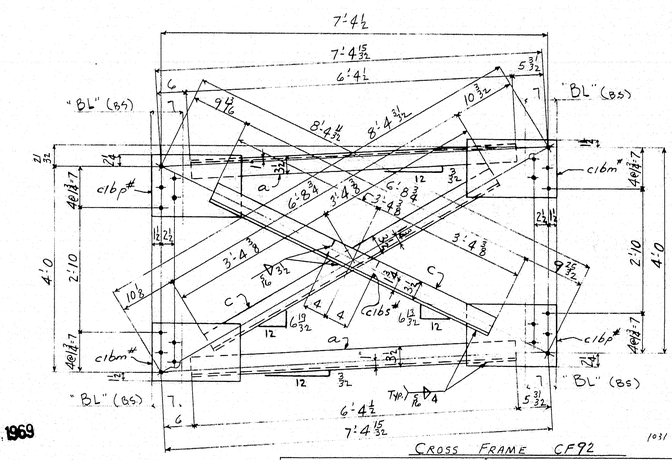
CROSS FRAME CF90

449



CROSS FRAME CF91

1030



CROSS FRAME CF92

1031

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
S.S. Nishimura SEP 29 1969

NOTES:

MTL. THK. TO ¾" INCL. MUST BE PREHEATED TO 50° DEG. F

ALL OPEN HOLES - NP 3

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR. SAW-2 FOR WELDING.

For location of details shown on this sheet refer to diagram.

E12

SHOP BILL

LINE	WEIGHT TOTAL	WEIGHT EA.	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1			5- CROSS FRAMES CF88								
2			a	10	L	4	3½	⅜	6	4½	
3			b	5	L	4	3½	⅜	6	8¾	
4			c	5	L	4	3½	⅜	6	8¾	
5			c 16m*	10	PL	10		½	1	3½	
6			c 16p*	10	PL	10¾		½	1	3½	
7			c 16s*	5	BR	3½		½	0	8	
8			FW	5	WD			5/16	6	6	
9											
10											
11			4- CROSS FRAMES CF89								
12			a	8	L	4	3½	⅜	6	4½	
12			b	4	L	4	3½	⅜	6	8¾	
12			c	4	L	4	3½	⅜	6	8¾	
12			c 16m*	8	PL	10		½	1	3½	
12			c 16p*	8	PL	10¾		½	1	3½	
12			c 16s*	4	BR	3½		½	0	8	
12			FW	4	WD			5/16	6	6	
13											
13			ONE - CROSS FRAMES CF90								
13			a	2	L	4	3½	⅜	6	4½	
13			c	2	L	4	3½	⅜	6	8¾	
13											
14			c 16m*	2	PL	10		½	1	3½	
15			c 16p*	2	PL	10¾		½	1	3½	
16			c 16s*	1	BR	3½		½	0	8	
17			FW	1	WD			5/16	6	6	
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											

MILL ORDER

LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
44	9⅛	48	08C
47	11½	48	11C
49	½	48	12C
30	2⅛	48	14C
30	2⅛	48	15C
		J	
44	9⅛	48	08C
48	9¾	48	10C
30	2⅛	48	14C
30	2⅛	48	15C
		J	
44	9⅛	48	08C
48	9¾	48	10C
30	2⅛	48	14C
30	2⅛	48	15C
		J	
44	9⅛	48	08C
48	9¾	48	10C
30	2⅛	48	14C
30	2⅛	48	15C
		J	

ONE - CROSS FRAMES CF92

a	2	L	4	3½	⅜	6	4½	44	9⅛	48	08C
c	2	L	4	3½	⅜	6	8¾	19	2	48	09B
c 16m*	2	PL	10		½	1	3½	30	2⅛	48	14C
c 16p*	2	PL	10¾		½	1	3½	30	2⅛	48	15C
c 16s*	1	BR	3½		½	0	8			J	
FW	1	WD			5/16	6	6				

"BL" INDICATES ONE COAT OF BLUE LACQUER.

INSTALLMENTS

IW	IE	QTY.	SHIPPING MARK	DESCRIPTION	REMARKS
4	1	5	CF88	CROSS FRAMES	
4		4	CF89	Do	
1		ONE	CF90	Do	
	6	6	CF91	Do	
	1	ONE	CF92	Do	

PAY ITEM · 504.701

MATERIAL · A36 STEEL

RIVETS OR BOLTS - NONE

OPEN HOLES - 15/16" ϕ

A325 FIELD BOLTS - ⅞" ϕ

SHOP CONTACT SURFACES - NO PAINT
WELDING - AS NOTED
MILLING - NONE

PAINT - ONE COAT AASHO-M72 TYPE II RED LEAD UNLESS NOTED

"CROSS FRAMES"

CUSTOMER: MAINE STATE HIGHWAY COMMISSION

STRUCTURE: PISCATAQUA RIVER BRIDGE
PROJECT NO. I-95-1(22)16
CONT. No. 3 NEW HAMPSHIRE APPROACH

STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

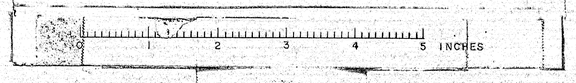
POTTSTOWN DRAFTING ROOM POTTSTOWN WORKS
MADE BY DEW DATE 8/22/69 IN CHARGE BERTOLET
CHECKED BY DRL DATE 9/11/69 SHOP NO. 2
CONTRACT CJ-6249-070 DRAWING NO. 41

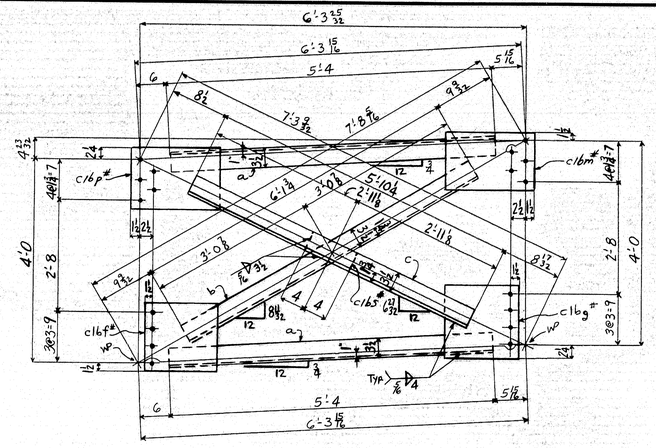
REVISION NO. | DATE | INIT.

SUBMITTAL DATE: 1 2 3 4 5 6 7 8 9 0

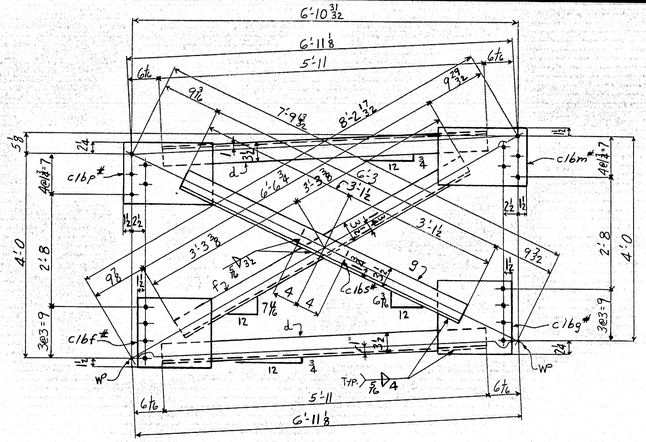
35042 (Rev.9-1465)

106-93

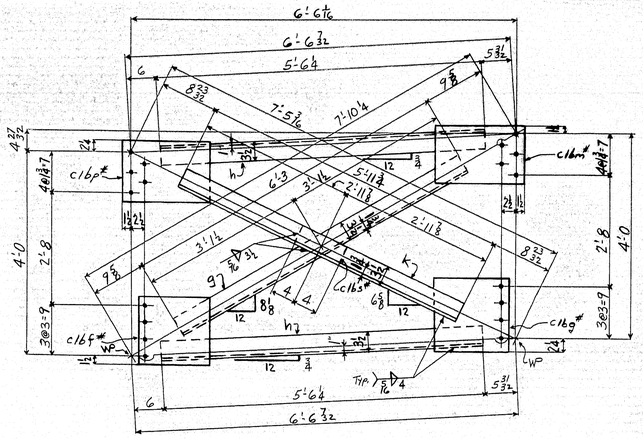




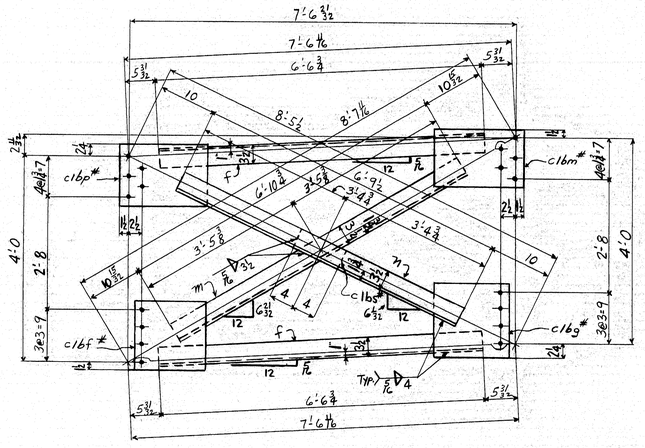
CROSS FRAME CF93



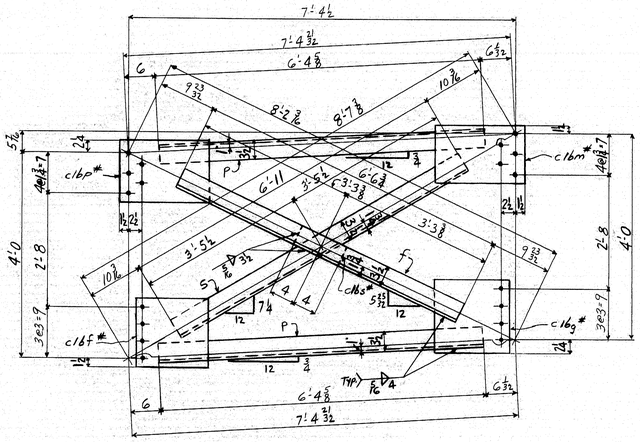
CROSS FRAME CF111



CROSS FRAME CF112



CROSS FRAME CF113



CROSS FRAME CF114

NOTES:

MTL THK. TO ¾" INCL. MUST BE PREHEATED TO 50° DEG.F

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.

USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR. SAW-2 FOR WELDING.

For location of details shown on this sheet refer to diagrams.

E6 E8 E10

SHOP BILL

LINE	WEIGHT TOTAL	WEIGHT EA.	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1			14- CROSS FRAMES CF93								
2			a	28	L	4		3½	5	4	
3			b	14	L	4		3½	6	1⅜	
4			c	14	L	4		3½	5	10⅛	
5			c 16m*	14	PL	10		½	1	3½	
6			c 16p*	14	PL	10⅜		½	1	3½	
7			c 16s*	14	BR	3½		½	0	8	
8			c 16f*	14	PL	12		½	1	1	
9			c 16g*	14	PL	12¾		½	1	1	
10			FW	14	WD			5/16	6	6	
11			7- CROSS FRAMES CF111								
12			d	14	L	4		3½	5	11	

MILL ORDER

LINE	LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
12			f 7 L 4 3½ ⅜ 6 6⅜	46 6B 29 10C 27
12			g 7 L 4 3½ ⅜ 6 3	46 6B 29 10C 27
12			c 16m* 7 PL 10 ½ 1 3½	20 10 29 25 27
12			c 16p* 7 PL 10⅜ ½ 1 3½	21 0 29 26 27
12			c 16s* 7 BR 3½ ½ 0 8	J 27
12			c 16f* 7 PL 12 ½ 1 1	J 27
13			c 16g* 7 PL 12¾ ½ 1 1	J 28
13			FW 7 WD 5/16 6 6	28
13			8- CROSS FRAMES CF112	28
13			h 16 L 4 3½ ⅜ 5 6⅜	28
13			k 8 L 4 3½ ⅜ 5 11⅜	46 6B 29 10C 28
13			g 8 L 4 3½ ⅜ 6 3	28
14			c 16m* 8 PL 10 ½ 1 3½	20 10 29 25 29
15			c 16p* 8 PL 10⅜ ½ 1 3½	21 0 29 26 30
16			c 16s* 8 BR 3½ ½ 0 8	J 31
17			c 16f* 8 PL 12 ½ 1 1	J 32
18			c 16g* 8 PL 12¾ ½ 1 1	J 33
19			FW 8 WD 5/16 6 6	34
20			15- CROSS FRAMES CF113	35
21			f 30 L 4 3½ ⅜ 6 6⅜	36
22			m 15 L 4 3½ ⅜ 6 10⅜	46 6B 29 10C 37
23			n 15 L 4 3½ ⅜ 6 9½	38
24			c 16m* 15 PL 10 ½ 1 3½	20 10 29 25 39
25			c 16p* 15 PL 10⅜ ½ 1 3½	21 0 29 26 40
26			c 16s* 15 BR 3½ ½ 0 8	J 41
27	43	10½	c 16f* 15 PL 12 ½ 1 1	J 42
	43	10½	c 16g* 15 PL 12¾ ½ 1 1	J
			FW 15 WD 5/16 6 6	
			12- CROSS FRAMES CF114	
			P 24 L 4 3½ ⅜ 6 4⅝	46 7¾ 48 09C
			S 12 L 4 3½ ⅜ 6 11	6 46 10¼ 48 19C
			f 12 L 4 3½ ⅜ 6 6⅜	6 46 10 48 19C
			c 16m* 12 PL 10 ½ 1 3½	10 10 3¾ 48 04C
			c 16p* 12 PL 10⅜ ½ 1 3½	30 2B 48 14C
			c 16s* 12 BR 3½ ½ 0 8	30 2B 48 15C
			c 16f* 12 PL 12 ½ 1 1	J
			c 16g* 12 PL 12¾ ½ 1 1	J
			FW 12 WD 5/16 6 6	

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY S. S. Parker DEC 30 1969

INSTALLMENTS 5W	5E	16W	16E	14W	14E	9W	9E	REQUIRED LIST QTY.	SHIPPING MARK	DESCRIPTION	REMARKS
						7	7	14	CF93	CROSS FRAMES	
				7				7	CF111	Do	
					8			8	CF112	Do	
		7	8					15	CF113	Do	
6	6							12	CF114	Do	

"CROSS FRAMES" @ EXP. JOINTS

Pay Item - 504.711

MATERIAL - A36 STEEL

RIVETS OR BOLTS - NONE

OPEN HOLES - 11/16 (REAM IN FIELD TO 15/16)

A325 FIELD BOLTS - 7/8" ϕ GALV.

SHOP CONTACT SURFACES - NO PAINT

WELDING - AS NOTED

MILLING - NONE

PAINT ONE COAT ZINC RICH EPOXY PAINT

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

NO.	DATE	INIT.
0		
9		
8		
7		
6		
5		
4		
3		
2		
1		

REVISION

CUSTOMER MAINE STATE HIGHWAY COMMISSION

STRUCTURE PISCATAQUA RIVER BRIDGE

PROJECT NO. I-95-1 (22) 16

CONT. NO. 3 NEW HAMPSHIRE APPROACH

STRUCTURAL STEEL

BETHLEHEM STEEL CORPORATION

FABRICATED STEEL CONSTRUCTION

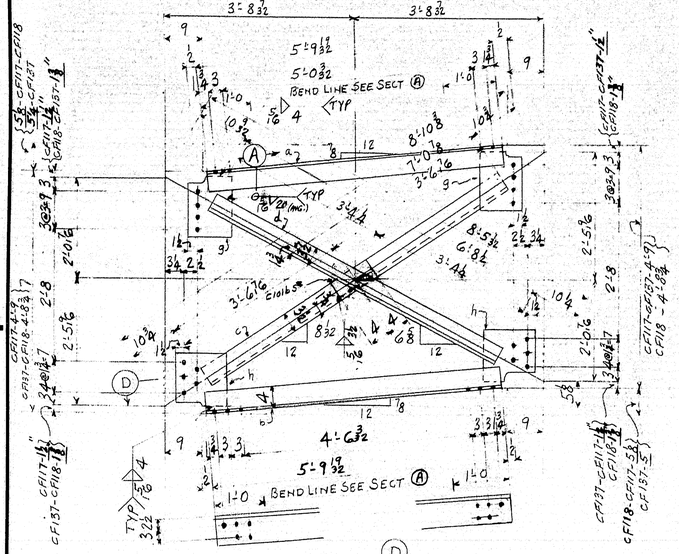
FOTTSTOWN DRAFTING ROOM Pottstown WORKS

MADE BY DEW DATE 8/23/69 IN CHARGE BERTOLET

CHECKED BY D.R.L DATE 9/8/69 SHOP NO. 2

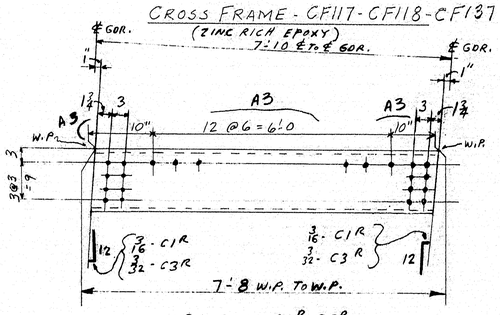
CONTRACT CJ-6249-070 DRAWING NO. 42

106-94

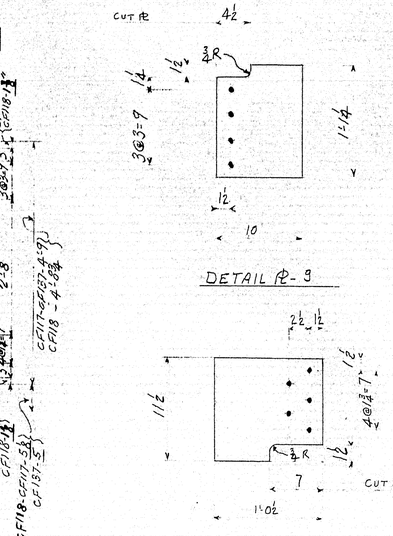


SECT (D)

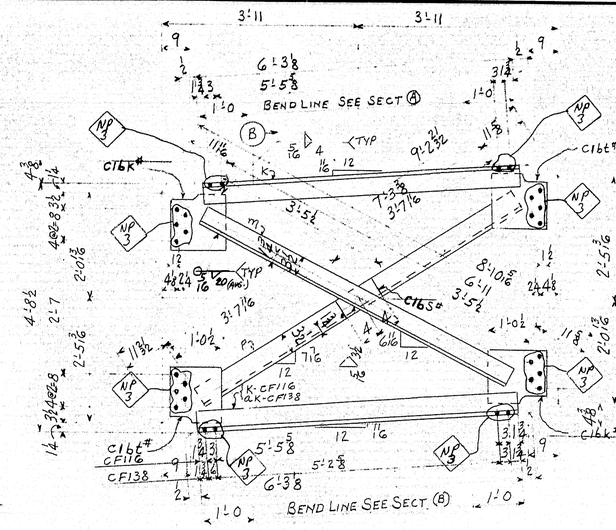
CROSS FRAME - CF117 - CF118 - CF137
(ZINC RICH EPOXY)



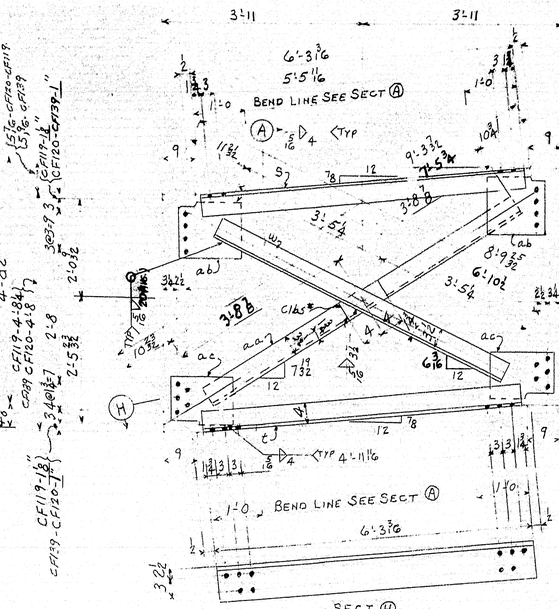
CHANNEL - C1R & C3R
(ZINC RICH EPOXY)



CHANNEL - C2R & C4R
(ZINC RICH EPOXY)

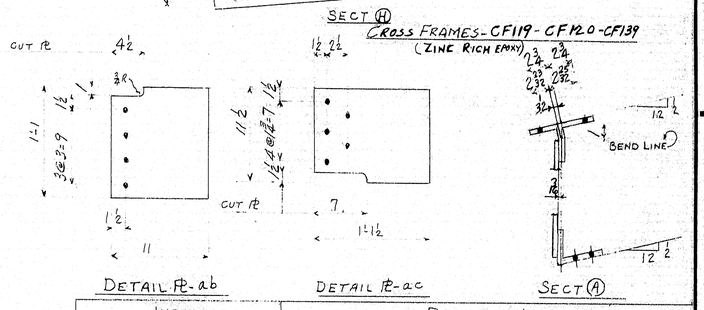


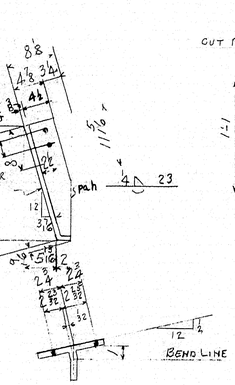
CROSS FRAME - CF116 - CF138
(AASHO-M72 - TYPE II RED LEAD)



SECT (H)

CROSS FRAMES - CF119 - CF120 - CF139
(ZINC RICH EPOXY)





CANOPY - CA1R
(A242 STEEL) - CANOPY ONLY
(ZINC RICH EPOXY PAINT)

SECT (B)

NOTES

MTL THK TO ¾ INCL MUST BE PREHEATED TO 50°F

NO TACK WELDING PERMITTED UNLESS SHOWN OR INCORPATED IN FINAL WELD
USE E70IG, 18, 26 LOW HYDROGEN ELECTRODES OR GR SAW-2 FOR WELDING
ALL RE-ENTRANT CUTS TO HAVE ¾" RAD.

NOTE: A : ALL STEEL SURFACES ON THIS SHEET TO BE BLAST CLEANED AS PER SSPC-SP5-66 ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY. INCLUDING OPEN HOLES

PAY ITEM - 504.701 FOR { CHANNELS - C1R, C2R, C3R & C4R AND CANOPY CA1R }

PAY ITEM - 504.711 - BALANCE } UNLESS NOTED

For location of details shown on this sheet refer to diagrams.

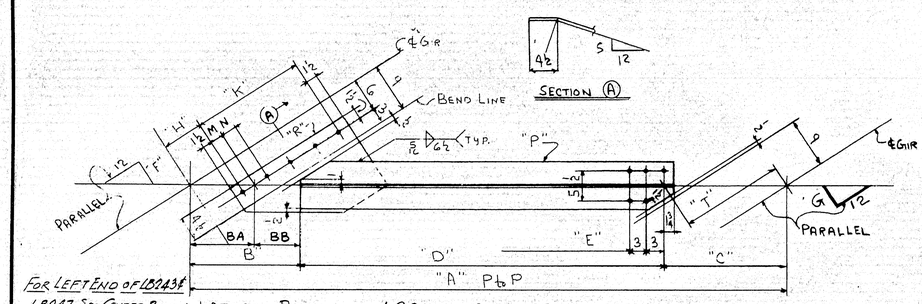
SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1				7 - CROSS FRAMES			3 - CF117	3 - CF118	1 - CF137
2	a	7	BT	4	17.5		5	9 3/8	
3	b	7	L	7	4	1/2	5	9 5/8	BENT
4	c	7	L	4	3 1/2	5/8	7	0 7/8	
5	d	7	L	4	3 1/2	5/8	6	8 1/2	
6	C1b6*	7	BR	3 1/2		1/2	0	8	
7	g	14	PL	10		1/2	1	1/4	
8	h	14	PL	11 1/2		1/2	1	0 1/2	
9	FW	7	WD			5/16	10	6	
10									
11				6 - CROSS FRAMES - 5 - CF116 1 - CF138					
12	K	11	BT	4	17.5		6	3 3/8	10 - CF116 1 - CF138
13	m	6	L	4	3 1/2	3/8	6	11	
14	P	6	L	4	3 1/2	3/8	7	3 3/8	
15	C1b1*	12	PL	12 1/2	b1	1/2	1	0	b1
16	C1b6*	12	PL	13		1/2	1	0 1/2	b1
17	C1b5*	6	BR	3 1/2		1/2	0	8	
18	FW	6	WD			5/16	10	6	
19	aK	1	BT	4	17.5		6	3 3/8	CF138
				12 - CROSS FRAMES			3 - CF119	8 - CF120	1 - CF139
20									
21	S	12	BT	4	17.5		6	3 3/8	
22	t	12	L	7	4	1/2	6	3 3/16	BENT
23	w	12	L	4	3 1/2	3/8	6	10 1/2	
24	aa	12	L	4	3 1/2	3/8	7	5 3/8	
25	ab	24	PL	11		1/2	1	1	
26	ac	24	PL	11 1/2		1/2	1	1 1/2	
27	C1b5*	12	BR	3 1/2		1/2	0	8	
28	FW	12	WD			5/16	10	6	
29				28 - CANOPY			14 - CA1R	14 - CA1L	
30	P, ab	56	PL	28 5/8	b1	3/8	1	10 5/8	USE MR50
31	P, ah	56	BR	42		3/8	1	9 3/8	
32	FW	28	WD			4	3	10	
33									
34									
35									
36									
37									
38				LOOSE MATERIAL					
39	C2R, C4R	3/16	SC	18	45.8		6	4 4	
40	C4R	3/32	SC	18	45.8		6	4 4	
41	C1R	3/16	C	15	50		7	6	
42	C3R	3/32	C	15	50		7	6	

MILL ORDER

LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
		J	
		J	
44	5 3/8	29	16C
44	5 3/8	29	16C
		J	
20	10	29	25
		J	

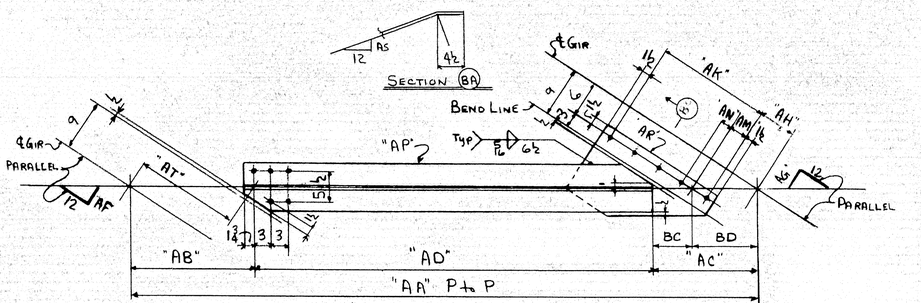
UPPER LINE 4 & 5



FOR LEFT END OF LB243 & LB247 SEE CENTER BELOW

LATERAL BRACING LB237 - LB239 - LB241 - LB243

LB245 & LB247

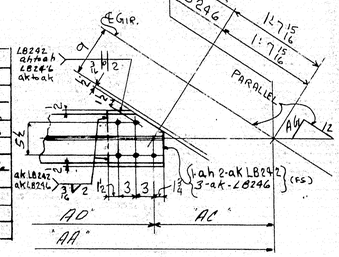


LATERAL BRACING LB236 - LB238 - LB240 - LB242

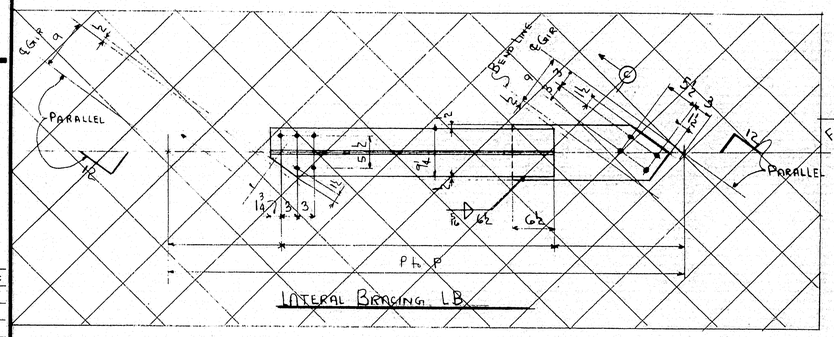
LB244 - LB246 - LB248

MARK	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	BA	BB
LB237	15'-2 3/8"	1'-8 1/4"	1'-11 1/4"	11'-6 11/16"	11'-0 11/16"	7 3/32"	7 3/32"	7 1/16"	5&4-3@5&2-14&2	2 3/8"	2 1/2"	f	g	3/8"	1'-7 15/16"	11 21/32"	8 19/32"
LB239	15'-1 7/16"	1'-8 1/4"	1'-10'2	11'-6 7/16"	11'-0 7/16"	7 3/32"	7 3/32"	7	3@5&4-13 1/2-5&2	2 1/8"	2 5/8"	m	p	3/8"	1'-7 1/4"	11 3/8"	8 3/8"
LB241	15'-0 7/16"	1'-8 1/4"	1'-10 3/4"	11'-5 7/16"	10'-11 7/8"	7 1/32"	7 1/32"	7	3@5&4-13 1/2-5&2	2 1/8"	2 7/16"	t	p	3/8"	1'-7 3/8"	11 1/2"	8 3/4"
LB243	12'-6 1/4"	1'-6	1'-6	9'-6 1/4"	9'-0 1/4"	9 5/8"	9 5/8"	—	———	—	—	y	—	—	1'-2 11/16"	-	-
LB245	15'-0 7/16"	1'-8 1/4"	1'-10 3/4"	11'-5 7/16"	10'-11 7/8"	7 3/32"	7 3/32"	7	3@5&4-13 3/8-5&2	2 1/8"	2 7/16"	t	aa	3/4"	1'-7 3/8"	11 1/2"	8 3/4"
LB247	12'-5 5/8"	1'-6	1'-6 1/4"	9'-5 5/8"	8'-11 3/8"	9 1/16"	9 1/16"	—	———	—	—	ag	—	—	1'-2 3/8"	-	-

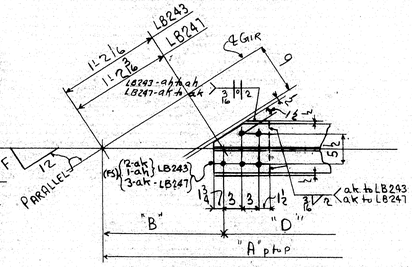
BC	BD	MARK	AA	AB	AC	AD	AF	AG	AH	AK	AM	AN	AP	AR	AS	AT
6 27/32"	9 13/32"	LB236	12'-3 15/16"	1'-6	1'-4 1/4"	9'-5 1/16"	9 29/32" 9 31/32"	5	4@4 1/2=1'-5	2 1/4"	2	c	d	3/8"	1'-1 15/16"
8 3/4"	11 1/2"	LB238	15'-1 15/16"	1'-10 3/4"	1'-8 1/4"	11'-6 7/16"	7 7/8" 7 7/8"	7	5 1/2-3@5 3/4-13 3/8-2 1/8"	2 1/8"	2 7/16"	h	k	3/8"	1'-7 7/16"
8 5/8"	11 5/8"	LB240	15'-2 1/4"	1'-11 3/4"	1'-8 1/4"	11'-7 1/4"	7 7/8" 7 7/8"	7	5 1/2-3@5 3/4-13 3/8-2 1/8"	2 1/8"	2 5/8"	s	k	3/8"	1'-7 1/2"
-	-	LB242	15'-3 1/4"	1'-11 1/4"	1'-11 1/4"	11'-4 3/4"	7 7/8" 9 7/8"	—	———	—	—	w	—	—	1'-7 15/16"
8 5/8"	11 5/8"	LB244	15'-2 7/8"	1'-10 1/2"	1'-8 1/4"	11'-7 7/16"	7 7/8" 7 7/8"	7	5 1/2-3@5 3/4-13 3/8-2 1/8"	2 1/16"	2 5/8"	s	af	3/8"	1'-7 1/4"
-	-	LB246	15'-3 1/8"	1'-11 1/4"	1'-11 1/4"	11'-4 5/8"	7 7/8" 7 7/8"	-	———	—	—	af	—	—	1'-7 15/16"
6 25/32"	9 15/32"	LB248	12'-4 3/8"	1'-6	1'-4 1/4"	9'-6 1/8"	9 3/32" 9 3/32"	5	4@4 1/2=1'-5	2 5/16"	1 15/16"	ab	ac	9/16"	1'-1 15/16"



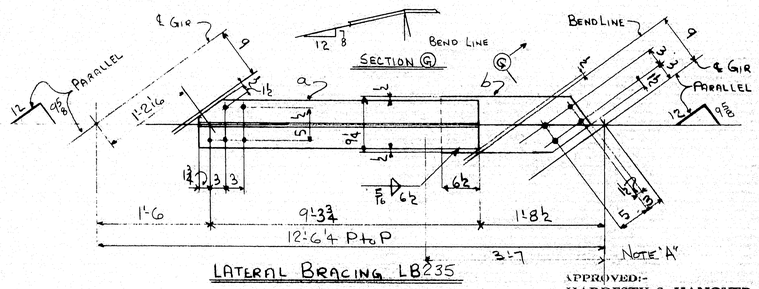
RIGHT END LB242 & LB246



LATERAL BRACING LB



LEFT END FOR LB243 & LB247

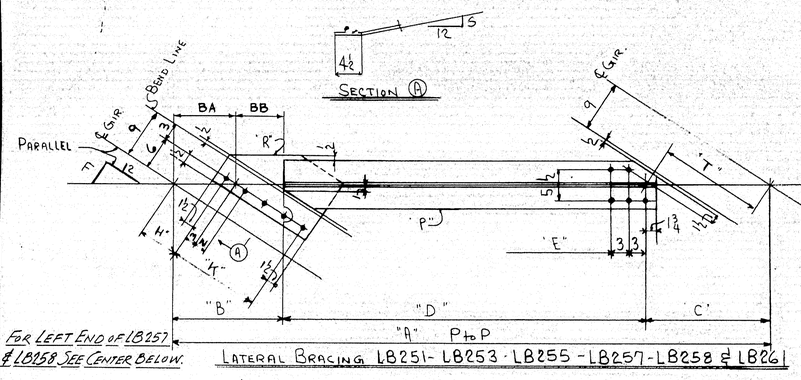


LATERAL BRACING LB235

INSTALLMENT			REQUIRED LIST			
2W	4W	3W	QTY	MARKS	DESCRIPTION	REMARKS
	1		ONE	LB235	LATERAL BRACE	
	1	1	2	LB236	do do	
	1	1	2	LB237	do do	
	1	1	2	LB238	do do	
	1	1	2	LB239	do do	
	1		ONE	LB240	do do	
	1		ONE	LB241	do do	
	1		ONE	LB242	do do	
		1	ONE	LB243	do do	
		1	ONE	LB244	do do	
		1	ONE	LB245	do do	
		1	ONE	LB246	do do	
1			ONE	LB247	do do	
1			ONE	LB248	do do	

| | | | SHOP BILL | | |

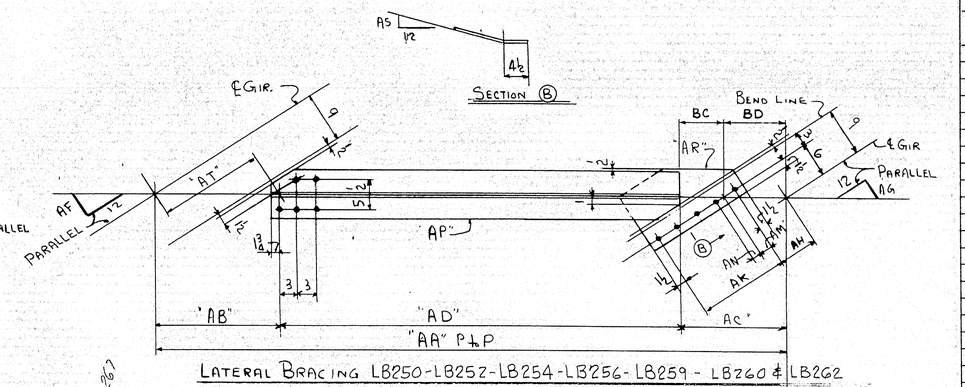
LOWER LINE 10 11



FOR LEFT END OF LB257 & LB258 SEE CENTER BELOW.

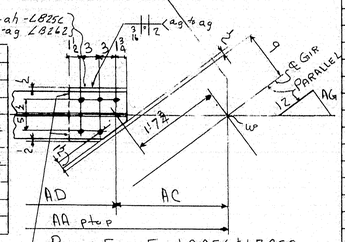
LATERAL BRACING LB251 - LB253 · LB255 - LB257 - LB258 & LB261

MARK	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	BA	BB
LB251	14'-10	1'-6 7/8	1'-10 1/4	11'-4	10'-10	7 1/2	7 1/2	6 3/4	4@5 1/4 = 1'-9	2 7/8	2 3/8	F	9	3/8	1'-6 3/8	11 11/32	8 15/32
LB253	14'-11	1'-7 3/4	1'-10 1/4	11'-5	10'-11	7 7/8	7 7/8	6 3/4	4@5 1/4 = 1'-9	2 7/8	2 3/8	ff	ak	3/8	1'-6 15/16	11 13/32	8 13/32
LB255	14'-11 15/16	1'-8 1/4	1'-10 3/4	11'-4 15/16	10'-10 15/16	7 3/8	7 3/8	7	3@5 1/4 = 1'-3 3/32 = 5'-6	2 7/8	2 3/8	t	m	3/8	1'-7 3/8	11 7/16	8 13/16
LB257	12'-1 5/8	1'-6 1/4	1'-6	9'-1 3/8	8'-7 3/8	10 7/8	10 7/8	—	—	—	DT	y	—	—	1'-1 5/8	—	—
LB258	12'-2 1/4	1'-6 1/4	1'-6	9'-2	8'-8	10 3/8	10 3/8	—	—	—	DI	aa	—	—	1'-1 3/8	—	—
LB261	14'-11 15/16	1'-8 1/4	1'-10 3/4	11'-4 15/16	10'-10 15/16	7 3/8	7 3/8	7	3@5 1/4 = 1'-3 3/32 = 5'-6	2 7/8	2 3/8	t	af	3/8	1'-7 3/8	11 7/16	8 13/16

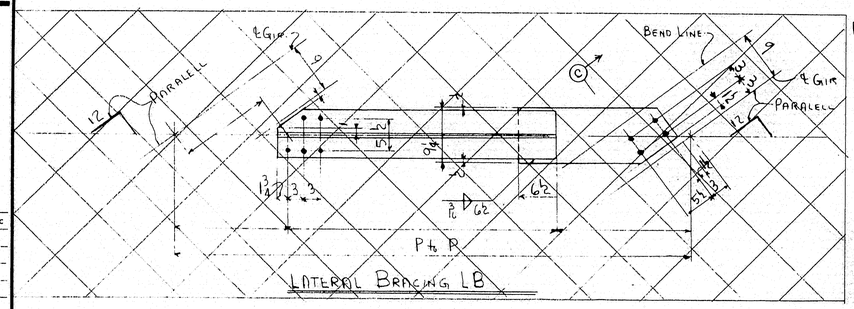


LATERAL BRACING LB250 - LB252 - LB254 - LB256 - LB259 - LB260 & LB262

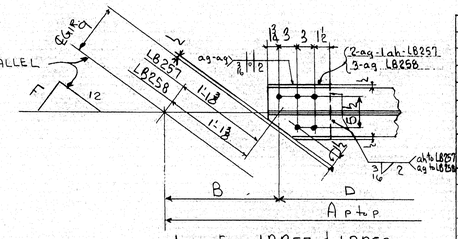
BC	BD	MARK	AA	AB	AC	AD	AF	AG	AH	AK	AM	AN	AP	AR	AS	AT
6 3/8	9 3/8	LB250	12'-4 1/16	1'-6	1'-4 1/4	9'-5 13/16	9 3/8	9 3/8	5	4@4 1/4 = 1'-5	2 1/4	2	c	d	3/8	1'-1 3/8
8 25/32	11 15/32	LB252	14'-10 3/8	1'-10 3/4	1'-8 1/16	11'-3 7/8	7 13/16	7 13/16	7	5@3 5/8 = 1'-3 3/4	2 3/4	2 1/2	h	k	3/8	1'-7 3/16
8 11/32	11 13/32	LB254	14'-9 7/8	1'-10 1/4	1'-7 3/4	11'-3 3/8	7 3/32	7 3/32	6 3/4	4@5 1/4 = 1'-9	2 5/16	2 5/16	h	s	3/8	1'-6 7/8
—	—	LB256	14'-8 3/8	1'-10 1/4	1'-11 1/4	10'-11 3/8	7 1/32	7 1/32	—	—	—	—	w	—	—	1'-7 3/4
6 27/32	9 5/32	LB259	12'-3 1/16	1'-6	1'-4 1/4	9'-5 7/8	9 5/16	9 5/16	5	4@4 1/4 = 1'-5	2 1/4	2	ab	ac	5/8	1'-1 1/2
8 3/32	11 5/32	LB260	14'-9 3/8	1'-10 1/4	1'-7 3/4	11'-3 3/8	7 5/16	7 5/32	6 3/4	4@5 1/4 = 1'-9	2 1/16	2 5/16	h	ad	3/4	1'-6 7/8
—	—	LB262	14'-8 3/8	1'-10 1/4	1'-11 1/4	10'-11 3/8	7 1/32	7 1/32	—	—	—	—	w	—	—	1'-7 3/4



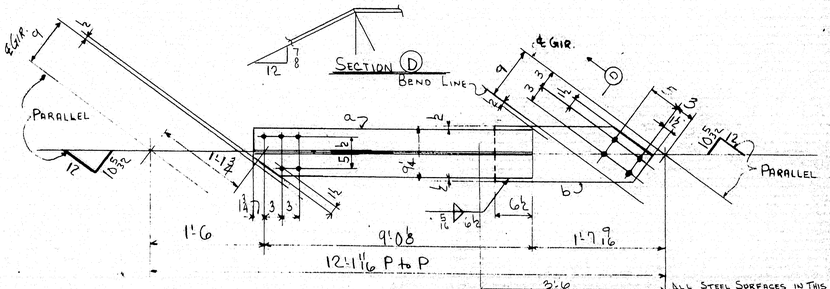
RIGHT END FOR LB256 & LB262



LATERAL BRACING LB



LEFT END LB257 & LB258



LATERAL BRACING LB249

INSTALLMENT			REQUIRED LIST			
2E	4E	3E	QTY	MARK	DESCRIPTION	REMARKS
	1		ONE	LB249	LATERAL BRACE	
	1	1	2	LB250	do do	
	1	1	2	LB251	do do	
	1	1	2	LB252	do do	
	1	1	2	LB253	do do	
	1		ONE	LB254	do do	
	1		ONE	LB255	do do	
	1		ONE	LB256	do do	
		1	ONE	LB257	do do	
/			ONE	LB258	do do	
/			ONE	LB259	do do	
		1	ONE	LB260	do do	
		1	ONE	LB261	do do	
		1	ONE	LB262	do do	

ALL STEEL SURFACES IN THIS AREA TO BE BLAST CLEANED AS PER SSPC-SP5-63. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY PAINT, INCLUDING OPEN HOLES & CONTACT SURFACES

For location of details shown on this sheet refer to diagrams.

GD9 - E11

SHOP BILL									MILL ORDER			
LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS	LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
1				ONE LATERAL BRACE LB249									
2	a	1	BT	10	31		9	1 3/8		40	0	49	37
3	b	1	PL	9 1/4		5/8	1	11 7/8	BENT			J	
4	FW	1	WD			PG	1	1					
5				2 LATERAL BRACE LB250									
6	c	2	BT	10	31		9	7 3/8		40	0	49	37
7	d	2	PL	13		5/8	1	8	BENT 14 1/2 x 5/8 x	20	0	49	36
8	FW	2	WD			5/16	1	1					
9				2 LATERAL BRACE LB251									
10	f	2	BT	10	31		11	5 3/8		50	0	49	38
11	g	2	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	20	0	49	36
12	FW	2	WD			5/16	1	1					
13				2 LATERAL BRACE LB252									
14	h	2	BT	10	31		11	5 3/8		50	0	49	38
15	k	2	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8 x	20	0	49	36
16	FW	2	WD			5/16	1	1					
17				2 LATERAL BRACE LB253									
18	f	2	BT	10	31		11	6 3/4		50	0	49	38
19	ak	2	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	20	0	49	36
20	FW	2	WD			5/16	1	1					
21				ONE LATERAL BRACE LB254									
22	h	1	BT	10	31		11	5 3/8		50	0	49	38
23	s	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	20	0	49	36
24	FW	1	WD			5/16	1	1					
25				ONE LATERAL BRACE LB255									
26	t	1	BT	10	31		11	6 1/16		50	0	49	38
27	m	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8 x	20	0	49	36
28	FW	1	WD			5/16	1	1					
29				ONE LATERAL BRACE LB256									
30	w	1	BT	10	31		11	2 3/8		50	0	49	38
31	ag	2	FLL	9 1/4		5/8	0	9 1/4				J	
32	ah	1	FLL	9 1/4		1/2	0	9 1/4				J	
33	FW	1	WD			3/16	0	1 1/4					
34	SD	1	WD			3/16	0	0 8					
35				ONE LATERAL BRACE LB257									
36	y	1	BT	10	31		9	3 3/8	DI	40	0	49	37
37	ag	2	FLL	9 1/4		5/8	0	9 1/4				J	
38	ah	1	FLL	9 1/4		1/2	0	9 1/4				J	
39	FW	1	WD			3/16	0	1 1/4					
40	SD	1	WD			3/16	0	0 8					
41				ONE LATERAL BRACE LB258									
42	aa	1	BT	10	31		9	5 1/2		40	0	49	37
43	ag	3	FLL	9 1/4		5/8	0	9 1/4				J	
44	FW	1	WD			3/16	0	1 1/4					
45	SD	1	WD			3/16	0	0 8					
46				ONE LATERAL BRACE LB259									
47	ab	1	BT	10	31		9	6 1/16		40	0	49	37
48	ac	1	PL	13		5/8	1	8	BENT 14 1/2 x 5/8 x	20	0	49	36
49	FW	1	WD			5/16	1	1					
50				ONE LATERAL BRACE LB260									
51	h	1	BT	10	31		11	5 3/8		50	0	49	38
52	ad	1	PL	13		5/8	2	0	BENT 14 1/2 x 5/8 x	20	0	49	36
53	FW	1	WD			5/16	1	1					
54				ONE LATERAL BRACE LB261									
55	t	1	BT	10	31		11	6 1/16		50	0		
56	af	1	PL	13		5/8	2	0 1/4	BENT 14 1/2 x 5/8 x	20	0	49	38
57	FW	1	WD			5/16	1	1					
58				ONE LATERAL BRACE LB262									
59	w	1	BT	10	31		11	2 3/8	DI	50	0	49	38
60	ag	3	FLL	9 1/4		5/8	0	9 1/4				J	
61	FW	1	WD			3/16	0	1 1/4					
62	SD	1	WD			3/16	0	0 8					
63													
64													
65													
66													

Line to ℄

LATERAL BRACING STA 538+34.33 to 540+44.67

NOTE 3: ALL OPEN HOLES (EXCEPT THOSE FOR RIVETS IF USED) AND MATERIAL AFTER PAINT IS USED. PAY ITEM 504.711

MATL THK TO 3/4" INCL. MUST BE PREHEATED TO 50°F USE E7016, 18, 28, LOW HYDROGEN ELECTRODES OR SAW-2 FOR WELDING.

DESIGNED BY: HARDESTY & HANOVER CONSULTING ENGINEERS 101 PARK AVE. NEW YORK 17, N.Y.

BY S.S. Nishimura DEC 16 1969

A36
RIVETS OR BOLTS NONE
OPEN HOLES 15/16 7/8
A325 FIELD BOLTS 8
SHOP CONTACT SURFACES NO PAINT MILL · NONE WELDING AS SHOWN
PAINT ONE COAT AASHO-M72 TYPE II RED LEAD (V.H)

NO.	DATE	BY	REVISION
0	11/4/69	BT.	

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

CUSTOMER: MAINE STATE HIGHWAY COMMISSION

STRUCTURE: PISCATAQUA RIVER BRIDGE

PROJECT NO. I 95 I (22) 16

CONT. NO 3 NEW HAMPSHIRE APPROACH

STRUCTURAL STEEL

BETHLEHEM STEEL CORPORATION

FABRICATED STEEL CONSTRUCTION

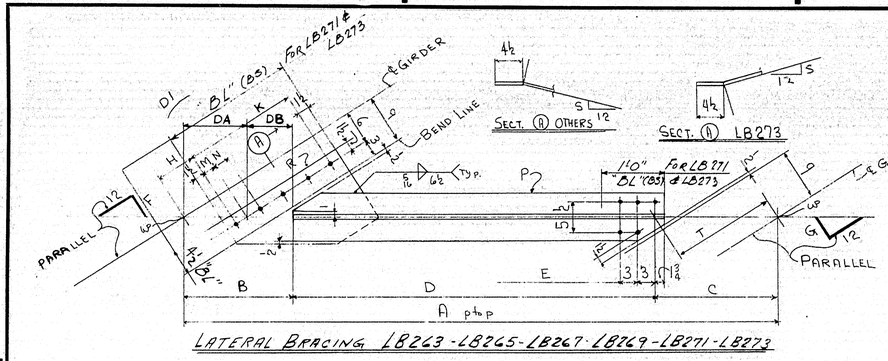
POTTSTOWN DRAFTING ROOM POTTSTOWN WORKS

MADE BY KIRK DATE IN CHARGE B.K. BERTOLET

CHECKED BY S.T.O. DATE 9/23/69 SHOP NO. 2

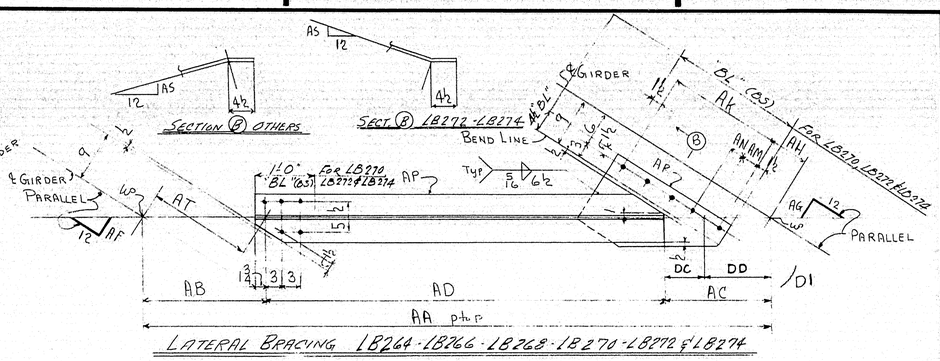
CONTRACT CI6249-071 DRAWING NO. 45

O.S.I.-1 106-97 DEC 15 1969



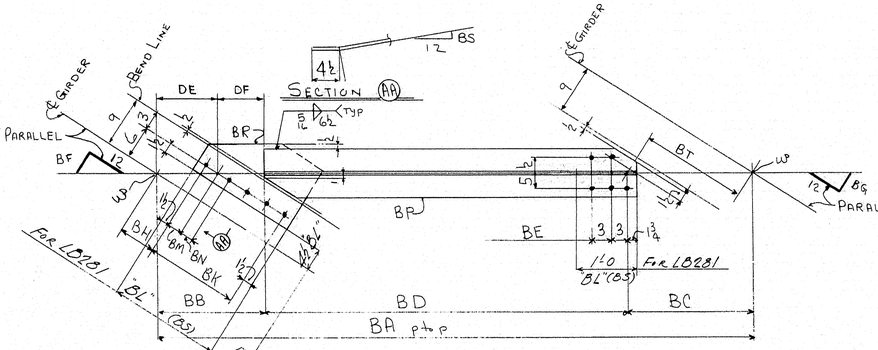
LATERAL BRACING LB263 - LB265 - LB267 - LB269 - LB271 - LB273

MARK	A	B	C	D	E	F	G	H	K	M	N	P	R	S	T	DA	DB
LB263	14'-4 1/16	1'-7	1'-9	11'-0 1/16	10'-6 1/16	7 7/8	7 7/8	6 1/2	4@5"=1'-8	2 5/8	2 3/8	a	b	9/16	1'-5 9/16	10 29/32	8 3/32
LB265	14'-3 15/16	1'-7	1'-9	10'-11 7/16	10'-5 7/16	7 7/8	7 7/8	6 1/2	4@5"=1'-8	2 5/8	2 3/8	c	d	3/8	1'-5 7/16	10 29/32	8 3/32
LB267	14'-3 13/16	1'-7	1'-9	10'-11 1/2	10'-5 13/16	7 7/8	7 7/8	6 1/2	4@5"=1'-8	2 5/8	2 3/8	f	g	5/16	1'-5 5/16	10 33/32	8 3/32
LB269	13'-11 1/2	1'-6 1/2	1'-8 3/4	10'-8 1/4	10'-2 1/4	8 1/8	8 1/8	6 1/4	4@4 7/8"=1'-7 1/2	2 5/8	2 1/4	h	k	5/16	1'-5 5/16	10 33/32	7 25/32
LB271	13'-11 1/2	1'-6 1/2	1'-8 3/4	10'-8 1/4	10'-2 1/4	8 1/8	8 1/8	6 1/4	4@4 1/8"=1'-7 1/2	2 5/8	2 1/4	h	m	1/16	1'-5 3/16	10 33/32	7 25/32
LB273	13'-11 9/16	1'-6 1/2	1'-8 3/4	10'-8 9/16	10'-2 9/16	8 1/8	8 1/8	6 1/4	4@4 1/8"=1'-7 1/2	2 5/8	2 1/4	h	p	1/16	1'-5 5/16	10 33/32	7 25/32



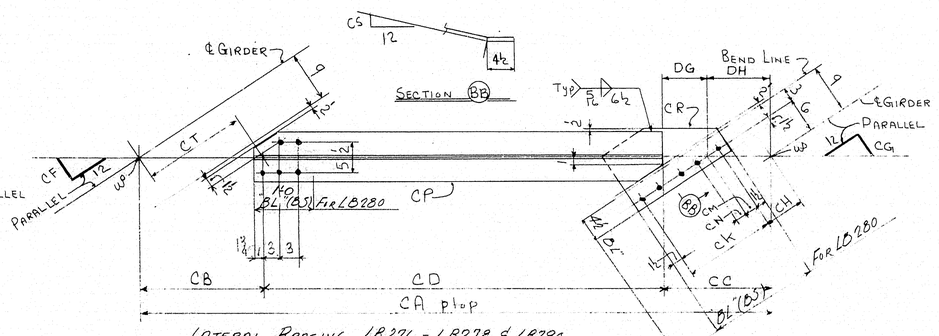
LATERAL BRACING LB264 - LB266 - LB268 - LB270 - LB272 & LB274

MARK	AA	AB	AC	AD	AF	AG	AH	AK	AM	AN	AP	AR	AS	AT	DC	DD
LB264	14'-3 1/2	1'-9	1'-7	10'-11 1/2	7 7/8	7 7/8	6 1/2	4@5"=1'-8	2 5/8	2 3/8	s	t	1/2	1'-5 9/16	8 3/32	10 29/32
LB266	14'-3 9/16	1'-9	1'-7 1/16	10'-11 1/16	7 7/8	7 7/8	6 1/2	4@5"=1'-8	2 5/8	2 3/8	s	w	5/8	1'-5 7/16	8 3/32	10 29/32
LB268	14'-3 5/8	1'-9	1'-7	10'-11 5/8	7 7/8	7 7/8	6 1/2	4@5"=1'-8	2 5/8	2 3/8	bc	y	9/16	1'-5 5/16	8 3/32	10 29/32
LB270	13'-11 9/16	1'-8 3/4	1'-6 9/16	10'-8 1/4	8 1/8	8 1/8	6 1/4	4@4 1/2"=1'-7 1/2	2 5/8	2 1/4	aa	a b	1/16	1'-5 9/16	7 27/32	10 33/32
LB272	13'-11 1/2	1'-8 3/4	1'-6 1/2	10'-8 1/4	8 1/8	8 1/8	6 1/4	4@4 1/2"=1'-7 1/2	2 5/8	2 1/4	aa	ac	1/16	1'-5 3/16	7 25/32	10 33/32
LB274	13'-11 1/2	1'-8 3/4	1'-6 1/2	10'-8 1/4	8 1/8	8 1/8	6 1/4	4@4 1/2"=1'-7 1/2	2 5/8	2 1/4	aa	ad	5/16	1'-5 3/16	7 25/32	10 33/32



LATERAL BRACE LB275 - LB277 - LB279 & LB281

MARK	BA	BB	BC	BD	BE	BF	BG	BH	BK	BM	BN	BP	BR	BS	BT	DE	DF
LB275	14'-3 3/8	1'-7	1'-9	10'-11 3/8	10'-5 3/8	7 7/8	7 7/8	6 1/2	4@5"=1'-8	2 5/8	2 3/8	af	ag	5/8	1'-5 7/16	10 29/32	8 3/32
LB277	14'-3 7/16	1'-7	1'-9 1/16	10'-11 3/8	10'-5 3/8	7 7/8	7 7/8	6 1/2	4@5"=1'-8	2 5/8	2 3/8	af	ah	1/2	1'-5 1/2	10 29/32	8 3/32
LB279	13'-11 5/8	1'-6 1/2	1'-8 3/4	10'-8 3/8	10'-2"	8 1/8	8 1/8	6 1/4	4@4 7/8"=1'-7 1/2	2 5/8	2 1/4	ak	am	5/16	1'-5 3/16	10 33/32	7 25/32
LB281	13'-11 3/8	1'-6 1/2	1'-8 3/4	10'-8 3/8	10'-2"	8 1/8	8 1/8	6 1/4	4@4 3/8"=1'-7 1/2	2 5/8	2 1/4	ak	ap	1/4	1'-5 1/16	10 33/32	7 25/32



LATERAL BRACING LB276 - LB278 & LB280

MARK	CA	CB	CC	CD	CF	CG	CH	CK	CM	CN	CP	CR	CS	CT	DG	DH
LB276	14'-3 3/4	1'-9 1/2	1'-7	10'-1 1/4	7 1/2	7 1/2	6 5/8	4@5"=1'-8	2 5/8	2 3/8	as	at	1/2	1'-6 1/16	7 31/32	11 1/32
LB278	14'-3 5/8	1'-9 1/2	1'-7 1/16	10'-1 1/8	7 1/2	7 1/2	6 5/8	4@5"=1'-8	2 5/8	2 3/8	aw	ay	5/16	1'-6 1/16	7 31/32	11 1/32
LB280	13'-11 1/16	1'-8 3/4	1'-6 1/2	10'-8 1/4	8 1/8	8 1/8	6 1/4	4@4 7/8"=1'-7 1/2	2 5/8	2 1/4	ba	bb	1/4	1'-5 5/16	7 25/32	10 33/32

NOTES
MATL THK TO 3/4" INCL. MUST BE PREHEATED TO 50°F
USE E7016, 18, 28 LOW HYDROGEN ELECTRODES OR GR-SAW-2 FOR WELDING.

For location of details shown on this sheet refer to diagrams:
GD10 E12

PAY ITEM	INSTALLMENT 2E	IE	2W	IW	QTY	MARK	REQUIRED LIST DESCRIPTION	REMARKS
504.711			2		2	LB263	LATERAL BRACE	
			1		ONE	LB264	do	
			1		ONE	LB265	do	
			2		2	LB266	do	
			1		ONE	LB267	do	
			1		ONE	LB268	do	
504.711			1		ONE	LB269	do	
504.701				1	ONE	LB270	do	
				1	ONE	LB271	do	
				1	ONE	LB272	do	
				1	ONE	LB273	do	
504.701				1	ONE	LB274	do	
504.711	2				2	LB275	do	
	3				3	LB276	do	
	2				2	LB277	do	
	1				ONE	LB278	do	
504.711	1				ONE	LB279	do	
504.701		3			3	LB280	do	
504.701		2			2	LB281	do	

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY Arthur Hardesty
DEC 30 1969

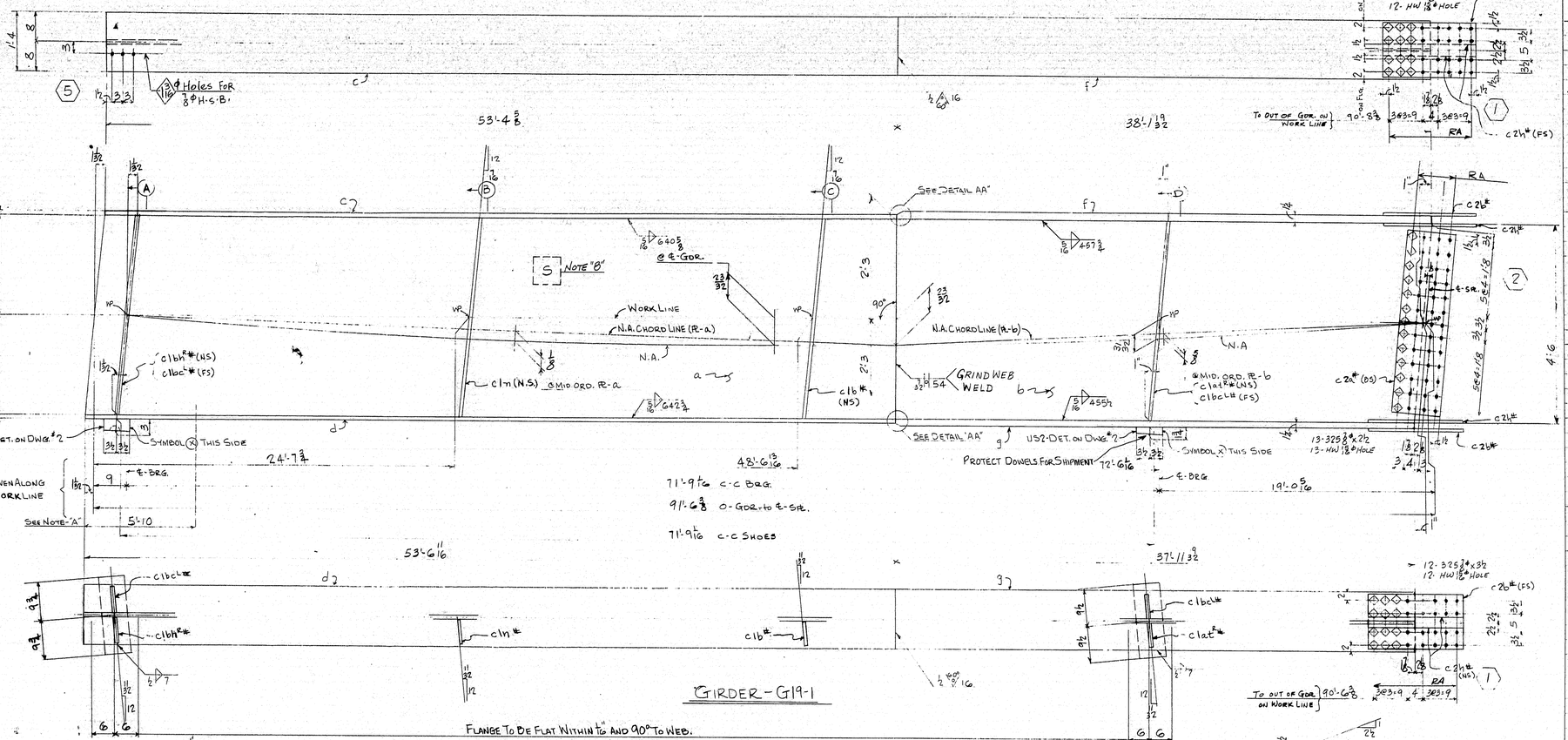
"BL" INDICATES ONE COAT OF BLUE LACQUER.

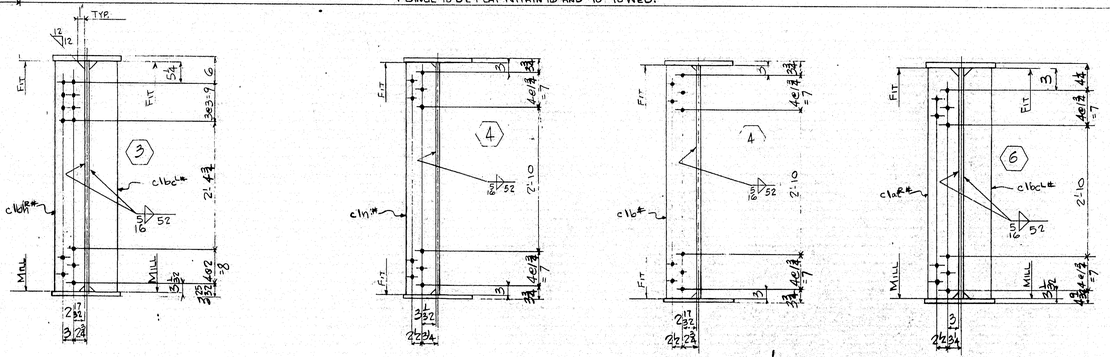
SHOP BILL

LINE	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR POUNDS	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
1				2 - LATERAL BRACE LB263					
2	a	2	BT	10	31		11	11 3/16	
3	b	2	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x
4	FW	2	WD			Fc	1	/	
5				ONE LATERAL BRACE LB264					
6	s	1	BT	10	31		11	1/4	
7	t	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x
8	FW	1	WD			Fc	1	/	
9				ONE LATERAL BRACE LB265					
10	c	1	BT	10	31		11	11/16	
11	d	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x
12	FW	1	WD			Fc	1	/	
13				2 LATERAL BRACE LB266					
14	s	2	BT	10	31		11	1/4	
15	w	2	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x
16	FW	2	WD			Fc	1	/	
17				ONE LATERAL BRACE LB267					
18	f	1	BT	10	31		11	11/16	
19	g	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x
20	FW	1	WD			Fc	1	/	
21				ONE LATERAL BRACE LB268					
22	bc	1	BT	10	31		11	1 3/16	
23	y	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x
24	FW	1	WD			Fc	1	/	
25				ONE LATERAL BRACE LB269					
26	h	1	BT	10	31		10	10	
27	k	1	PL	13		5/8	1	10 1/2	BENT 14 1/2 x 5/8 x
28	FW	1	WD			Fc	1	/	
29				ONE LATERAL BRACE LB270					
30	aa	1	BT	10	31		10	10	
31	ab	1	PL	13		5/8	1	10 1/2	BENT 14 1/2 x 5/8 x
32	FW	1	WD			Fc	1	/	
33				ONE LATERAL BRACE LB271					
34	h	1	BT	10	31		10	10	
35	m	1	PL	13		5/8	1	10 1/2	BENT 14 1/2 x 5/8 x
36	FW	1	WD			Fc	1	/	
37				ONE LATERAL BRACE LB272					
38	aa	1	BT	10	31		10	10	
39	ac	1	PL	13		5/8	1	10 1/2	BENT 14 1/2 x 5/8 x
40	FW	1	WD			Fc	1	/	
41				ONE LATERAL BRACE LB273					
42	h	1	BT	10	31		10	10 1/16	
43	p	1	PL	13		5/8	1	10 1/2	BENT 14 1/2 x 5/8 x
44	FW	1	WD			5/16	1	/	
45				ONE LATERAL BRACE LB274					
46	aa	1	BT	10	31		10	10	
47	ad	1	PL	13		5/8	1	10 1/2	BENT 14 1/2 x 5/8 x
48	FW	1	WD			5/16	1	/	
49				2 LATERAL BRACE LB275					
50	af	2	BT	10	31		11	1/8	
51	ag	2	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x
52	FW	2	WD			Fc	1	/	
53				3 LATERAL BRACE LB276					
54	as	3	BT	10	31		11	/	
55	at	3	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x
56	FW	3	WD			Fc	1	/	
57				2 LATERAL BRACE LB277					
58	af	2	BT	10	31		11	1/8	
59	ah	2	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x
60	FW	2	WD			Fc	1	/	
61				ONE LATERAL BRACE LB278					
62	aw	1	BT	10	31		11	10 3/8	
63	ay	1	PL	13		5/8	1	11	BENT 14 1/2 x 5/8 x
64	FW	1	WD			5/16	1	/	
65				ONE LATERAL BRACE LB279					
66	at	1	BT	10	31		10	10 1/2	
67	am	1	PL	13		5/8	1	10 1/2	BENT 14 1/2 x 5/8 x
68	WD	1	WD			Fc	1	/	
69				3 LATERAL BRACE LB280					
70	ba	3	BT	10	31		10	10	
71	bb	3	PL	13		5/8	1	10 1/2	BENT 14 1/2 x 5/8 x
72	WD	3	WD			Fc	1	/	
73				2 LATERAL BRACE LB281					
74	ak	2	BT	10	31		10	10 1/2	
75	ap	2	PL	13		5/8	1	10 1/2	BENT 14 1/2 x 5/8 x
76	WD	2	WD			5/16	1	/	
77									
78									
79									
80									

MILL ORDER

LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
30	0	49	38
20	0	49	36





SHOP BILL

MARK	ASSEMBLY MARK	NO.	SHAPE	SECTION SIZE	SECTION SIZE OR FOLDING	SECTION THICK	LENGTH FT.	LENGTH IN.	REMARKS
	ONE-GIRDER-G19-1								
	a	1	PL	54		1/16	53	6 11/16	562 x 1/16
	b	1	PL	54		2	38	1 19/32	56 x 2
	c	1	PLU	16		¾	53	4 ⅝	
	d	1	PLU	16		¾	53	6 11/16	
	f	1	PLU	16		¾	38	1 19/32	
	g	1	PLU	16		14	38	1 19/32	
C	2b*	2	PLU	15		½	2	1	
C	2h*	4	PL	G½		½	2	1	
C	2a*	2	PLW	13		⅜	4	2	
C	16h*	1	BR	7½		¾	4	G 31/32	MIE FIE
C	16c*	2	BR	7½		¾	4	G 31/32	MIE FIE
C	1n	1	BR	7		½	4	6	F2E
C	1b	1	BR	7		½	4	6	F2E
C	1at*	1	BR	7½		¾	4	G 31/32	MIE FIE
	USG	1	UPPER SHOE						DET. on DWG.# 2
	USG	1	UPPER SHOE						DET. on DWG.# 2
		24	325 ⅞ϕ				0	3½	H.H.H.-H.H.N.
		13	325 ⅞ϕ				0	7½	H.H.H.-H.H.N.
		37	HW 1⅛ϕ HOLE						
	FWL	1	WD			1/16	366	1	
	FWS	1	WD			1/16	52	0	
	FW	1	WD			½	2	4	
	SOS	1	WD			½	4	6	
	VGOS	1	WD			⅜	2	8	

MILL ORDER

LENGTH FT.	LENGTH IN.	ITEM PAGE	ITEM LINE
53	10½	1	101
38	7	26	07
53	8	1	103
53	8	1	103
38	3	26	13
38	3	26	13
21	3	24	47
21	1	24	48
18	4	24	49
18	4	24	49
18	4	24	51
18	4	24	51
18	4	24	49

NOTE "B"
SHOP TO USE REMOVABLE PAINT FOR STENCILING.

NOTE "A"
ALL STEEL SURFACES IN THIS AREA TO BE BLAST CLEANED AS PER SSPC-SP5-63. ALL STEEL WILL THEN RECEIVE ONE COAT OF ZINC RICH EPOXY PAINT INCLUDING ORFIL HI175.

MAX. THK. of POINT OF WELDING (INCHES)	MINIMUM PREHEAT & INTERPASS TEMP. (DEGREES F.)
To ¾" INCL.	50°
OVER ¾" to 1½" INCL.	70°
OVER 1½" to 2½" INCL.	150°
OVER 2½"	225°

(SP 3) ALL OPEN HOLES (UN)

USE E7016, E7018 & E7028 LOW HYDROGEN ELECTRODES OR GRADE SAW-2 FOR WELDING. NO TACK WELDING WILL BE PERMITTED UNLESS SHOWN OR INCORPORATED IN FINAL WELD.
RA - HOLES MARKED RA SHALL BE SUBPUNCHED OR SUBDRILLED 1/4" AND REAMED TO SIZE OR DRILLED FULL SIZE FROM THE SOLID WITH CONNECTING PARTS ASSEMBLED.

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY S.S. Nichiporuk
SEP 26 1969

MATERIAL A36 STEEL
BOLTS ¾ϕ
OPEN HOLES 15/16ϕ U.N.
A325 FIELD BOLTS ⅞ϕ
SHOP CONTACT SURFACES NO PAINT (UN) (SEE NOTE "A")
WELD-AS NOTED
MILL-AS NOTED
PAINT ONE COAT AASHO-M72-TYPE II RED LEAD (UN)

INST.-19W

REQUIRED LIST

QTY.	SHIPPING MARK	DESCRIPTION	REMARKS
ONE	G19-1	GIRDER 19½ x 59 x 92 9	

PAY ITEM - 504.711

GIRDERS

CUSTOMER
MAINE STATE HIGHWAY COMMISSION
PISCATAQUA RIVER BRIDGE
PROJECT No. I-95-1(22)16
CONT. No. 3 - NEW HAMPSHIRE APP.
STRUCTURAL STEEL
BETHLEHEM STEEL CORPORATION
FABRICATED STEEL CONSTRUCTION

POTTSTOWN DRAFTING ROOM — POTTSTOWN WORKS
MADE BY RD DATE 7-22-69 — IN CHARGE D.K. BERTOLET
CHECKED BY RJ DATE 9-11-69 — SHOP NO. 2
CONTRACT CT-6249-020 — DRAWING NO. 101

NO.	DATE	INIT.	REVISION
0			
9			
8			
7			
6			
5			
4			
3			
2			
1			

SUBMITTAL	1	2	3	4	5	6	7	8	9	0
DATE										

For location of details shown on this sheet refer to diagrams.
E5

INSP # 1-1 K. FINE-2 106-99

33433 (Rev. C 4-63)