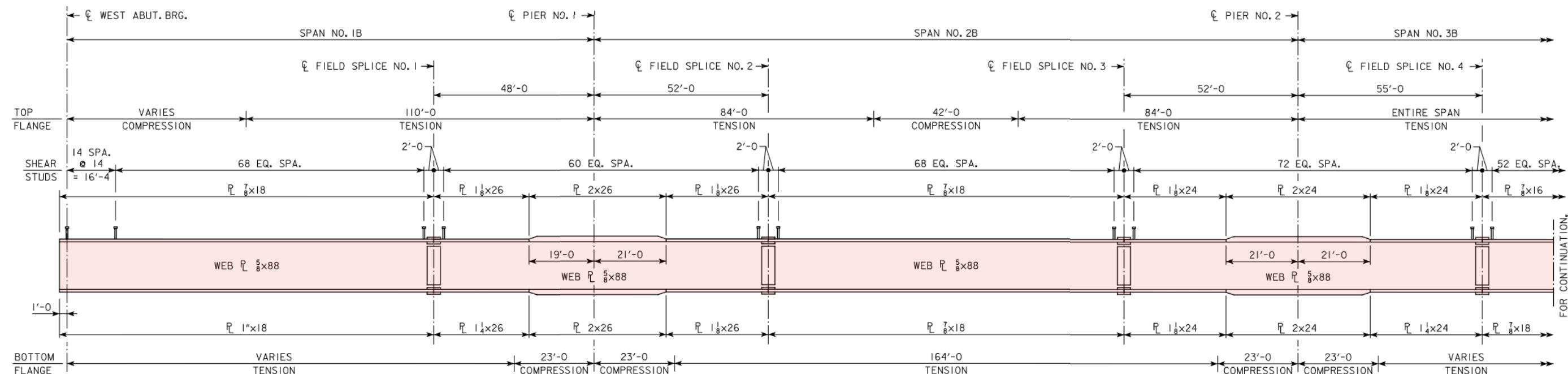


STRUCTURAL STEEL LAYOUT



GIRDERS A, D, F & H ELEVATION

NOTES

ALL DIMENSIONS SHOWN ARE MEASURED IN A HORIZONTAL PLANE UNLESS NOTED OTHERWISE

MEASURED WITH RESPECT TO LOCAL TANGENT.

▲ MEASURED WITH RESPECT TO LOCAL TANGENT.
▲ CONTRACTOR TO NOTE CROSS FRAME ERECTION AT THESE LOCATIONS MAY REQUIRE SPECIAL CONSIDERATION DURING GIRDER ERECTION. BEARING AND JACKING STIFFENERS MAY CONFLICT WITH CROSS FRAME PLACEMENT AFTER THE GIRDER ARE ERECTED.

ALL CROSSFRAMES SHALL BE TYPE ① UNLESS NOTED OTHERWISE
ALL INTERMEDIATE STIFFENERS SHALL BE AT EQUAL SPACES
BETWEEN CROSS FRAMES UNLESS NOTED OTHERWISE.

BETWEEN CROSS FRAMES UNLESS NOTED OTHERWISE.
CHARPY V-NOTCH TOUGHNESS REQUIREMENTS IN ACCORDANCE
WITH ARTICLE 4152.02, OF THE STANDARD SPECIFICATIONS SHALL
APPLY TO ALL CROSS FRAMES, DIAPHRAGMS, CONNECTION STIFFENERS
AND CONNECTION PLATES AT CROSS FRAMES AND DIAPHRAGMS.

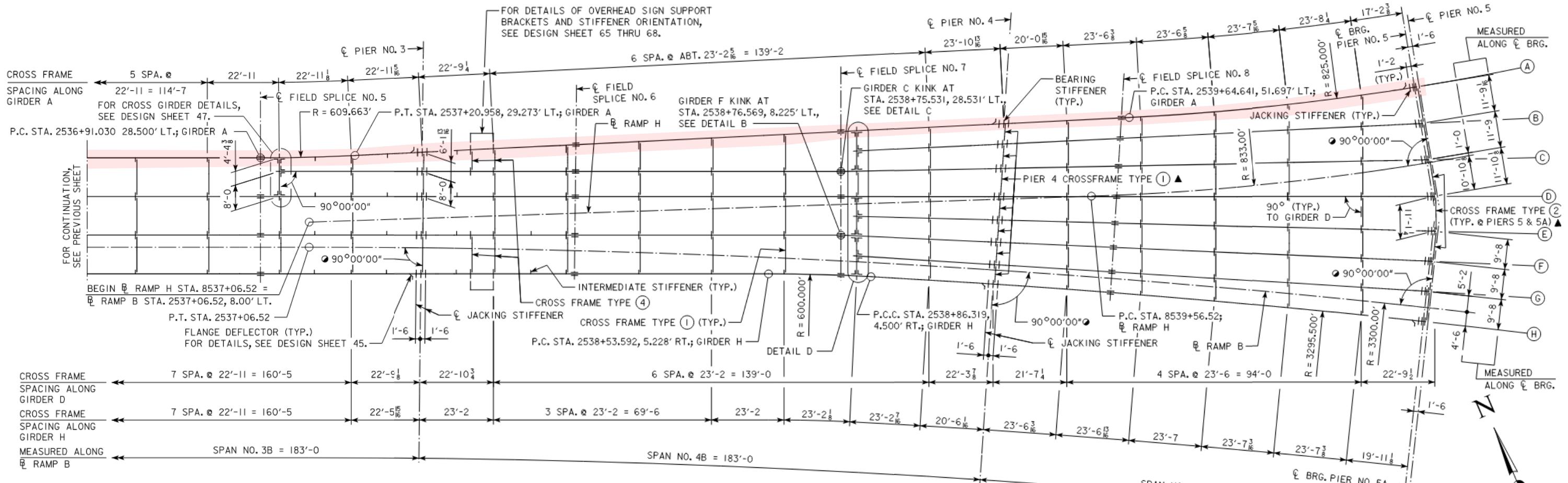
Oversized holes for bolted connections shall not be allowed unless noted otherwise.

THE CONTRACTOR'S ERECTION PLANS SHALL BE DESIGNED BY PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF IOWA. ERECTION PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO OR WITH STRUCTURAL STEEL SHOP DRAWINGS.

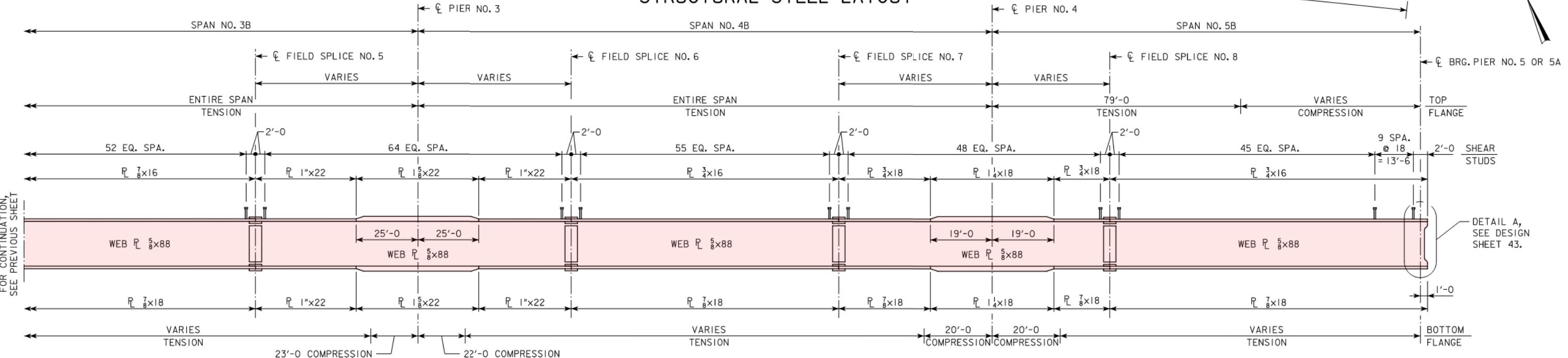
THE FABRICATOR MAY REQUEST THE SUBSTITUTION OF A SINGLE PLATE OPTION FOR THE TOP AND BOTTOM FLANGE IN THE NEGATIVE REGION BETWEEN FIELD BOLTED SPLICE PLATES. THE REQUEST SHALL INCLUDE DESIGN CALCULATIONS SIGNED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF IOWA VERIFYING THE PLATE SIZE SUBSTITUTION AND BOLTED FIELD SPLICE ARE SATISFACTORY.

Unit Test Instruction for the Design-to-Construction Data Exchange			
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1.	12/22/23	.	
No.	Date	Issue / Revision Notes	
Unit Test Description			Unit Test / Sheet No.
Level 1 Girder 02			
Drawn By DHC		Reviewed By CDC	
L1-Br03-Girder 02 / 01			

L1-Br03-Girder 02 / 01



STRUCTURAL STEEL LAYOUT



GIRDERS A, D, F & H ELEVATION

NOTES:

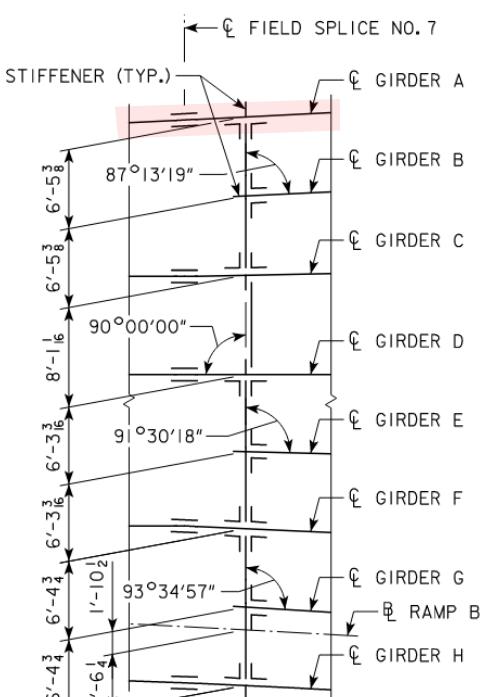
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Unit Test Instruction for the Design-to-Construction Data Exchange			 
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1	11/7/23	.	
No.	Date	Issue / Revision Notes	
Unit Test Description			Unit Test / Sheet No.
Level 1 Girder 02			
Drawn By DHC	Reviewed By CDC		

L1-Br03-Girder 02 / 02

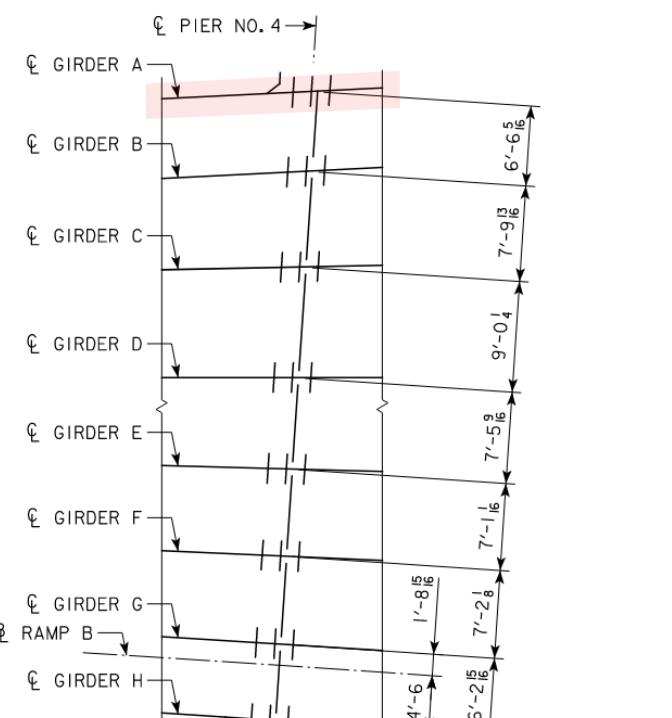
GIRDER DATA													
GIRDER	SPAN NO. 1B				SPAN NO. 2B				SPAN NO. 3B				
	€ W. ABUT. BRG. TO F.S. NO. 1	F.S. NO. 1 TO P.T.	P.T. TO € PIER NO. 1	SPAN LENGTH	€ PIER NO. 1 TO F.S. NO. 2	F.S. NO. 2 TO F.S. NO. 3	F.S. NO. 3 TO € PIER NO. 2	SPAN LENGTH	€ PIER NO. 2 TO F.S. NO. 4	F.S. NO. 4 TO F.S. NO. 5 (P.C. GIRDER A)	P.C. TO P.T. (GIRDER A)	F.S. NO. 5 TO € PIER NO. 3	SPAN LENGTH
A	111'-3 ¹ ₂	5'-0	43'-0	159'-3 ¹ ₂	52'-0	106'-0	52'-0	210'-0	55'-0	76'-6 ¹ ₈	30'-0 ¹³ ₁₆	51'-10 ⁵ ₁₆	183'-4 ⁷ ₁₆
B	-	-	-	-	-	-	-	-	-	-	-	-	-
C	-	-	-	-	-	-	-	-	-	-	-	-	45'-9 ³ ₁₆
D	110'-8 ¹³ ₁₆	5'-0	43'-0	158'-8 ¹³ ₁₆	52'-0	106'-0	52'-0	210'-0	55'-0	76'-6 ¹ ₈	-	51'-8	183'-2 ⁸
E	-	-	-	-	-	-	-	-	-	-	-	-	-
F	110'-2 ¹ ₁₆	5'-0	43'-0	158'-2 ¹ ₁₆	52'-0	106'-0	52'-0	210'-0	55'-0	76'-6 ¹ ₈	-	51'-6 ³ ₈	183'-0 ¹ ₂
G	-	-	-	-	-	-	-	-	-	-	-	-	-
H	109'-7 ³ ₈	5'-0	43'-0	157'-7 ³ ₈	52'-0	106'-0	52'-0	210'-0	55'-0	76'-6 ¹ ₈	-	51'-4 ¹³ ₁₆	182'-10 ⁵ ₁₆

GIRDER DATA									
GIRDER	SPAN NO. 4B					SPAN NO. 5B			
	€ PIER NO. 3 TO F.S. NO. 6	F.S. NO. 6 TO P.C. (GIRDER H)	P.C. TO P.C.C. (GIRDER H)	F.S. NO. 6 TO F.S. NO. 7	F.S. NO. 7 TO € PIER NO. 4	SPAN LENGTH	€ PIER NO. 4 TO F.S. NO. 8	F.S. NO. 8 TO € BRG. PIER NO. 5 OR 5A	SPAN LENGTH
A	49'-1	-	-	85'-1 ¹¹ ₁₆	51'-7 ³ ₈	185'-10 ¹ ₆	35'-11 ⁵ ₁₆	4'-0	95'-7 ¹⁵ ₁₆
B	-	-	-	-	-	46'-7 ¹⁵ ₁₆	36'-5 ¹ ₈	-	97'-1 ¹³ ₁₆
C	49'-0	-	-	85'-1 ⁹ ₁₆	50'-7 ⁵ ₁₆	184'-8 ⁸ ₁₆	36'-10 ¹⁵ ₁₆	-	98'-11 ¹¹ ₁₆
D	49'-0	-	-	85'-2 ⁵ ₈	50'-0	184'-2 ⁵ ₈	37'-6	-	100'-10 ³ ₄
E	-	-	-	-	-	45'-0 ¹ ₁₆	38'-0 ¹ ₈	-	101'-1 ¹³ ₁₆
F	49'-0	-	-	85'-4 ¹ ₄	49'-1	183'-5 ¹ ₄	38'-6 ¹ ₁₆	-	100'-1 ³ ₈
G	-	-	-	-	-	44'-1 ⁹ ₁₆	39'-0 ¹ ₁₆	-	99'-1 ¹⁵ ₁₆
H	49'-0	61'-10 ⁹ ₁₆	32'-8 ⁵ ₁₆	85'-5 ¹⁵ ₁₆	48'-2 ¹¹ ₁₆	182'-8 ⁵ ₁₆	39'-5 ¹ ₂	-	98'-4 ¹⁵ ₁₆
									137'-9 ¹¹ ₁₆



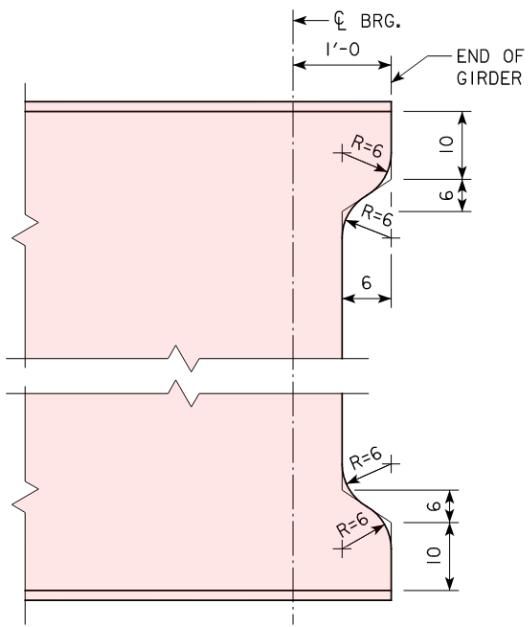
DETAIL D
(FOR CROSS GIRDER DETAILS,
SEE DESIGN SHEET 47)

NOTES:
1.



PIER NO. 4 DETAIL

NOTE:
FOR NOTES, SEE DESIGN SHEET 41.



DETAIL A

Unit Test Instruction for the
Design-to-Construction Data Exchange

1	11/7/23	.
No.	Date	Issue / Revision Notes

Unit Test Description

Level 1 Girder 02

Drawn By

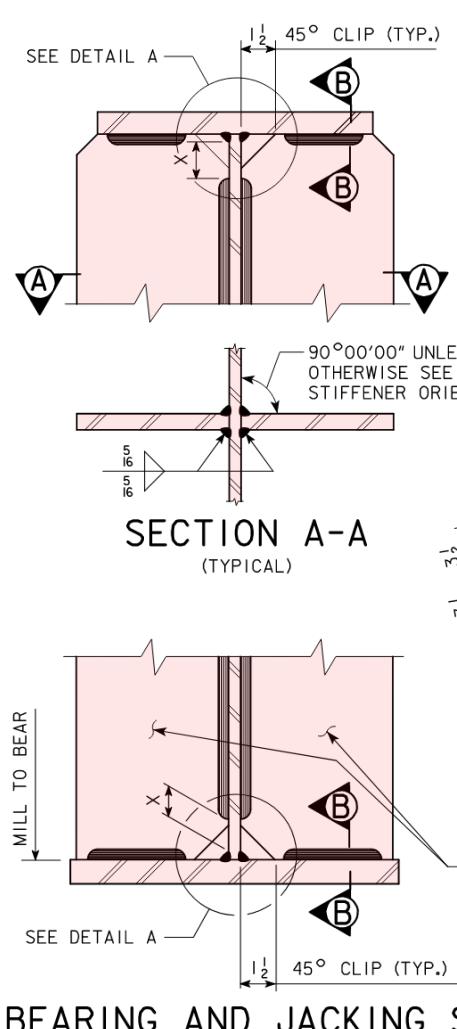
DHC



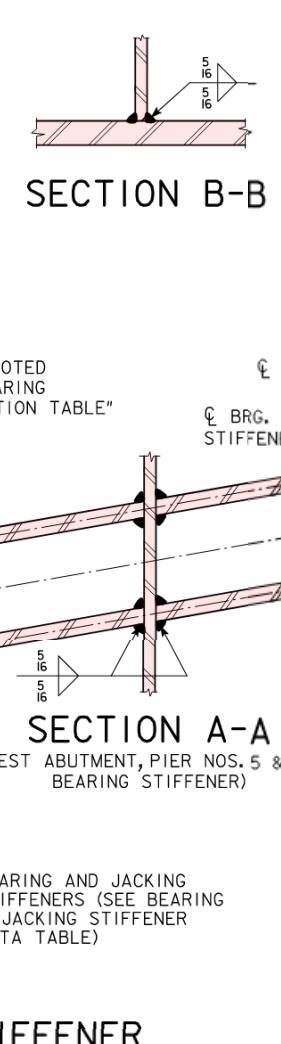
Reviewed By

CDC

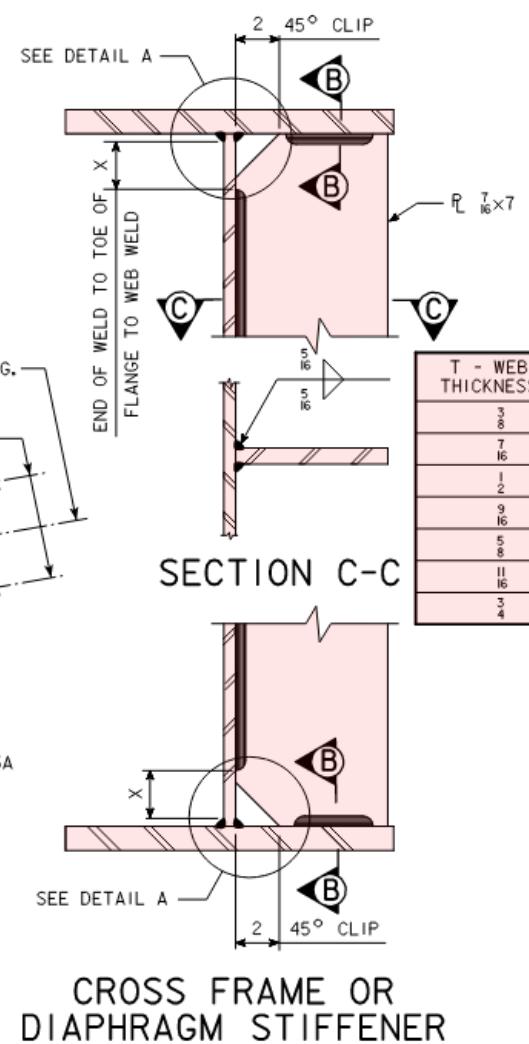
L1-Br03-Girder 02 / 03



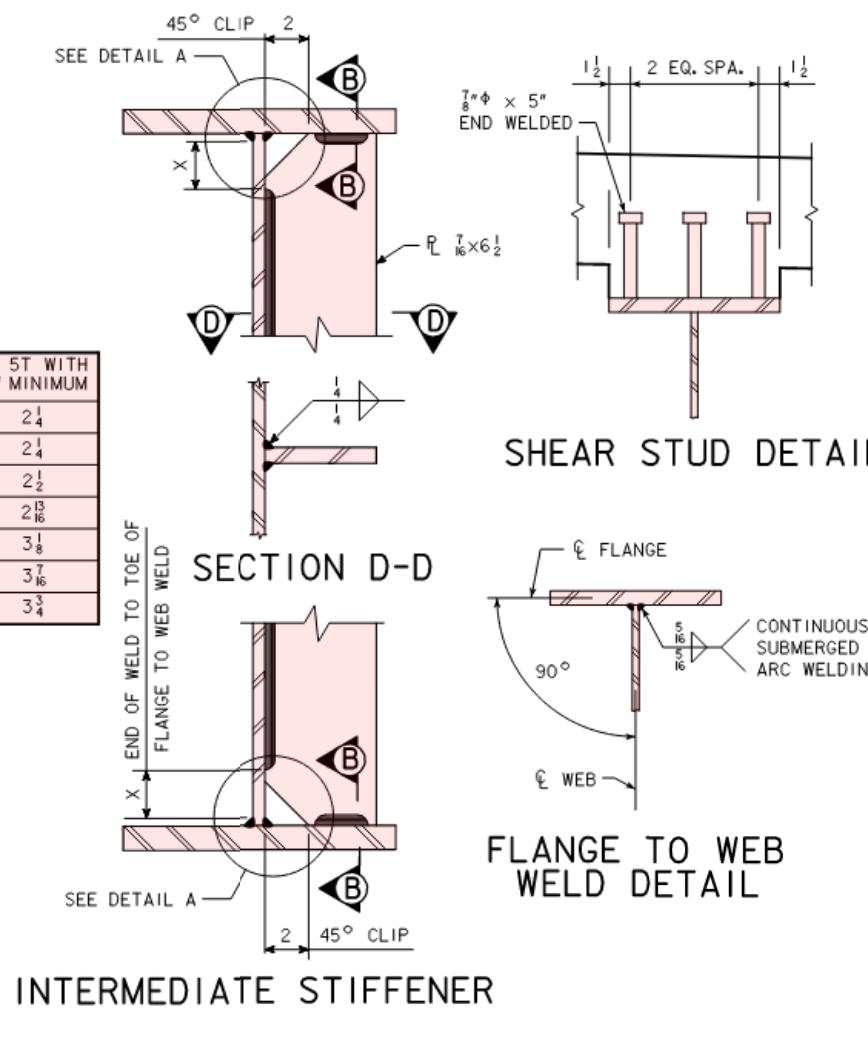
BEARING AND JACKING STIFFENER



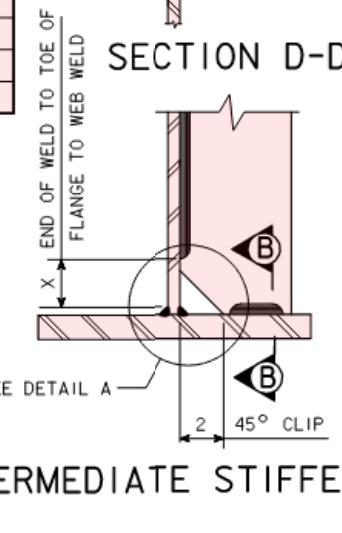
SECTION B-B



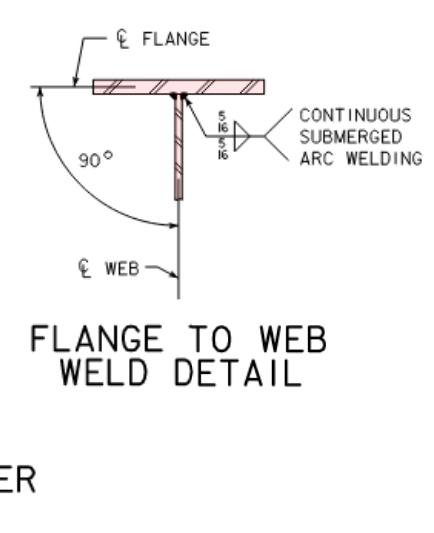
SECTION C-C



SHEAR STUD DETAIL



SECTION D-D

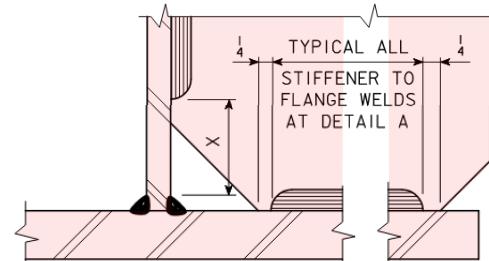


FLANGE TO WEB WELD DETAIL

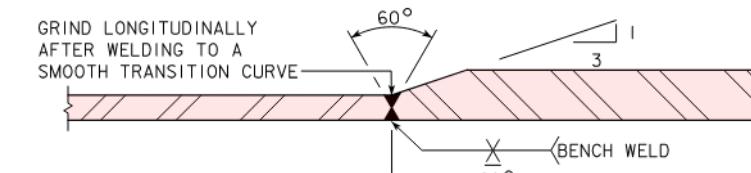
INTERMEDIATE STIFFENER

NOTES:

1.

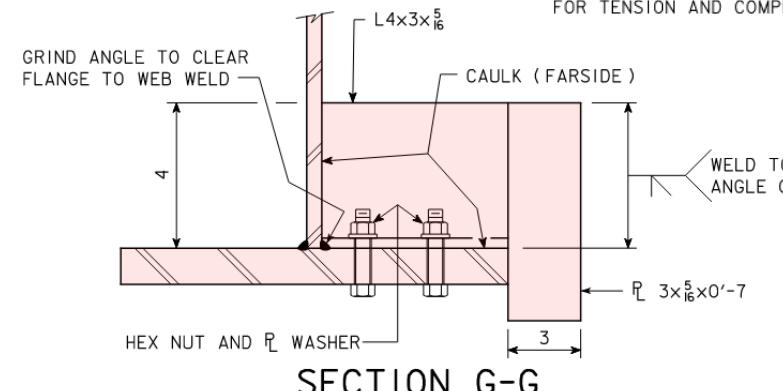


DETAIL A



FLANGE PLATE TRANSITION AT SHOP SPLICES

ALL FLANGE BUTT WELDED JOINTS SUBJECT TO TENSION OR REVERSAL OF STRESS ARE TO BE RADIOPHOTOGRAPHED FULL WIDTH. ALL BUTT WELDED JOINTS SUBJECT TO COMPRESSION ONLY ARE TO BE RADIOPHOTOGRAPHED FOR A MINIMUM OF 50 PERCENT OF THE WIDTH.
FOR TENSION AND COMPRESSION LIMITS OF GIRDERS, SEE GIRDER ELEVATIONS.



SECTION G-G

FLANGE DEFLECTORS ARE REQUIRED ON THE OUTSIDE OF THE EXTERIOR GIRDERS AT THE ABUTMENT AND PIERS AS SHOWN ON THE STRUCTURAL STEEL LAYOUT.
FLANGE DEFLECTOR COMPONENTS ARE TO BE PAINTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS.
GRADE 50W "WEATHERING STEEL" MAY BE USED IN LIEU OF PAINTED GRADE 36 STEEL FOR FLANGE DEFLECTORS.

BEARING & JACKING STIFFENER DATA TABLE		
LOCATION	BEARING STIFFENER SIZE	JACKING STIFFENER SIZE
WEST ABUT.	P L 3x8 1/2	P L 3x7
PIER NO. 1	P L 1 1/2x12 1/2	P L 3x7
PIER NO. 2	P L 1x11 1/2	P L 3x7
PIER NO. 3	P L 1x10 1/2	P L 3x7
PIER NO. 4	P L 3x8 1/2	P L 3x7
PIER NO. 5	P L 3x8 1/2	P L 3x7
PIER NO. 5A	P L 3x8 1/2	P L 3x7

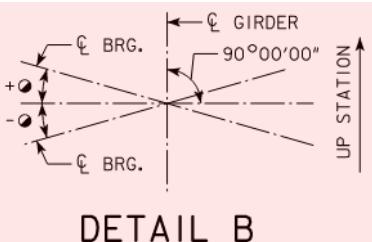
BEARING STIFFENER ORIENTATION TABLE			
GIRDER	PIER NO. 3	PIER NO. 4	PIER NOS. 5 & 5A
A	03°27'03"	06°37'42"	-00°13'56" <input checked="" type="checkbox"/>
B	-	06°34'50"	-06°38'44" <input type="checkbox"/>
C	00°37'30"	04°56'03"	-08°17'31" <input type="checkbox"/>
D	00°37'30"	03°48'09"	▲ <input type="checkbox"/>
E	-	02°17'51"	■ <input type="checkbox"/>
F	00°37'30"	01°14'38"	03°39'57" <input type="checkbox"/>
G	-	00°13'12"	02°38'31" <input type="checkbox"/>
H	00°37'30"	00°00'00" <input checked="" type="checkbox"/>	00°01'34" <input type="checkbox"/>

● FOR DETAILS, SEE DETAIL B.

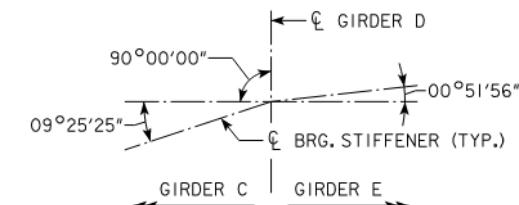
▲ FOR DETAILS, SEE DETAIL C.

■ FOR DETAILS, SEE DETAIL D.

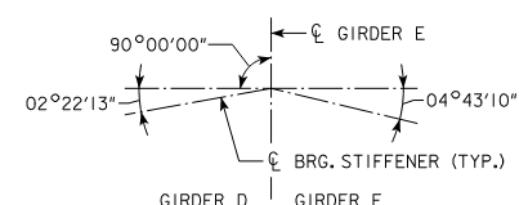
MEASURED WITH RESPECT TO THE LOCAL TANGENT.



DETAIL B



DETAIL C



DETAIL D

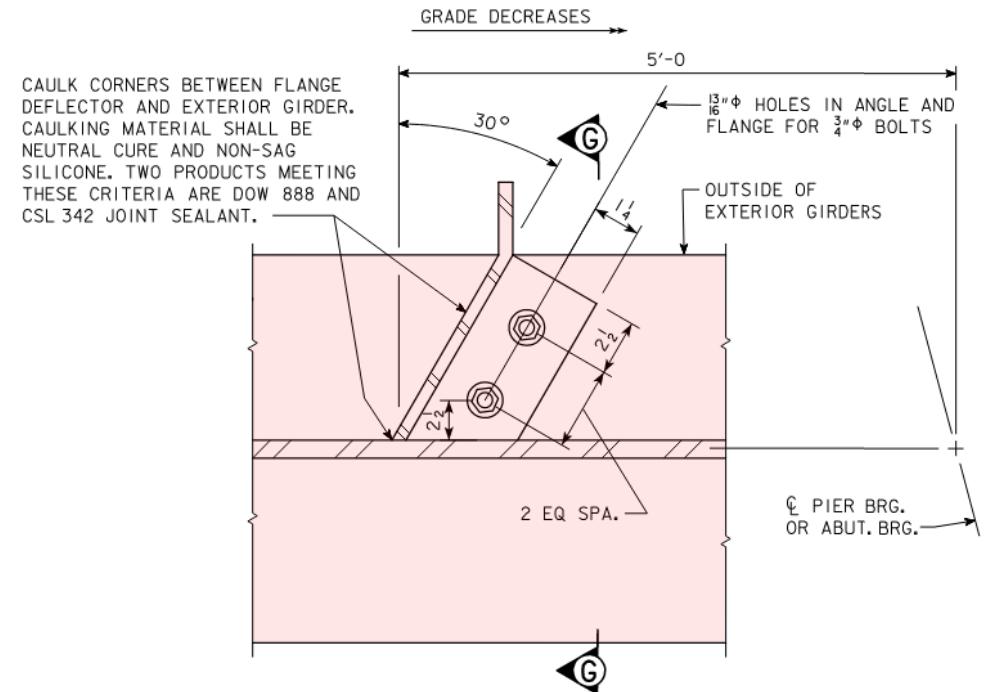
Unit Test Instruction for the Design-to-Construction Data Exchange

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1	11/7/23	.
No.	Date	Issue / Revision Notes
Unit Test Description		Unit Test / Sheet No.
Level 1 Girder 02		
Drawn By	Reviewed By	
DHC	.	

BIM
FOR
BRIDGES
AND STRUCTURES
TPF-5(372)

HDR **jō** consulting

L1-Br03-Girder 02 / 03



NOTES:

1.

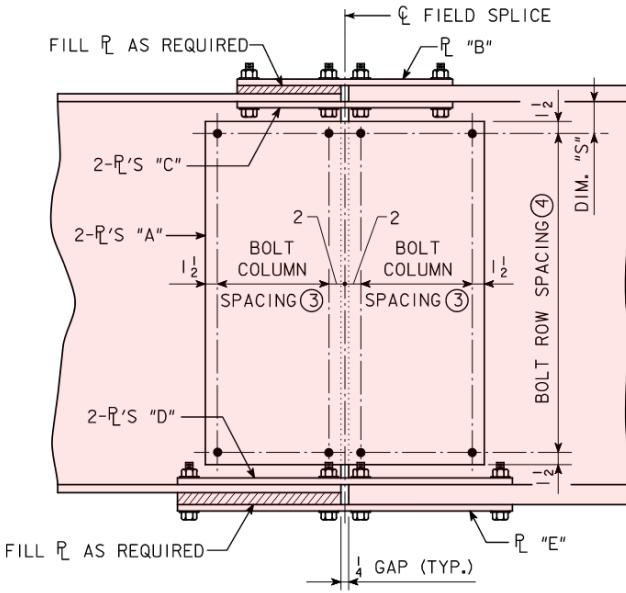
Unit Test Instruction for the Design-to-Construction Data Exchange		
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1	11/8/23	.
No.	Date	Issue / Revision Notes
Unit Test Description		Unit Test / Sheet No.
Level 1 Girder 02		
Drawn By		Reviewed By
DHC		.

BIM
FOR
BRIDGES
AND STRUCTURES
TPP-5(372)

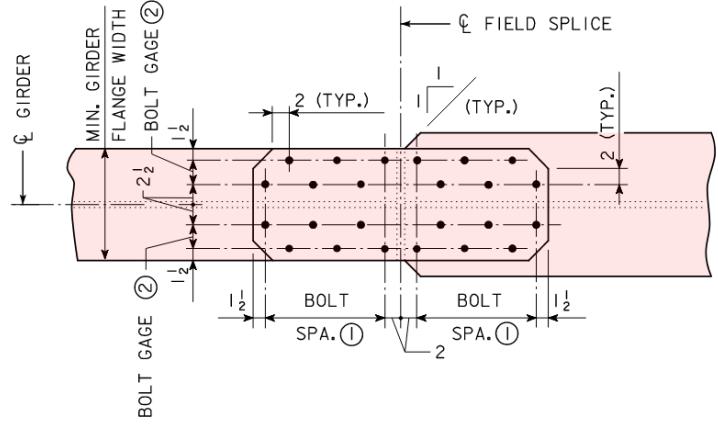
HDR

jō consulting

L1-Br03-Girder 02 / 04



FIELD SPLICE ELEVATION



**FLANGE SPLICE 16" & 18" MIN.
GIRDER FLANGE WIDTH**

FIELD SPLICE SCHEDULE

FIELD SPLICE SCHEDULE														
FIELD SPLICE NO.	TOP FLANGE SPLICE					WEB PLATE SPLICE				BOTTOM FLANGE SPLICE				
	MIN. GIRDER FLANGE WIDTH	PLATE "B"	PLATE "C" (2 REQUIRED)	BOLT SPACING ①	BOLT GAGE ②	WEB PLATE "A" (2 REQUIRED)	BOLT COLUMN SPACING ③	BOLT ROW SPACING ④	DIM. "S"	MIN. GIRDER FLANGE WIDTH	PLATE "D" (2 REQUIRED)	PLATE "E"	BOLT SPACING ①	BOLT GAGE ②
1	18	$\frac{3}{8} \times 18 \times 3'-7$	$\frac{7}{16} \times 8 \times 3'-7$	$9 @ 2 = 1'-6$	5	$\frac{3}{8} \times 13 \times 7'-0$	$1 @ 3 = 0'-3$	$27 @ 3 = 6'-9$	$3\frac{1}{2}$	18	$\frac{1}{2} \times 8 \times 3'-7$	$\frac{7}{16} \times 18 \times 3'-7$	$9 @ 2 = 1'-6$	5
2, 3	18	$\frac{3}{8} \times 18 \times 3'-7$	$\frac{7}{16} \times 8 \times 3'-7$	$9 @ 2 = 1'-6$	5	$\frac{3}{8} \times 13 \times 7'-0$	$1 @ 3 = 0'-3$	$27 @ 3 = 6'-9$	$3\frac{1}{2}$	18	$\frac{7}{16} \times 8 \times 3'-7$	$\frac{3}{8} \times 18 \times 3'-7$	$9 @ 2 = 1'-6$	5
4-8	16	$\frac{3}{8} \times 16 \times 2'-11$	$\frac{7}{16} \times 7 \times 2'-11$	$7 @ 2 = 1'-2$	4	$\frac{3}{8} \times 13 \times 7'-0$	$1 @ 3 = 0'-3$	$27 @ 3 = 6'-9$	$3\frac{1}{2}$	18	$\frac{7}{16} \times 8 \times 3'-7$	$\frac{3}{8} \times 18 \times 3'-7$	$9 @ 2 = 1'-6$	5

NOTES:

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Unit Test Instruction for the Design-to-Construction Data Exchange			  
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Unit Test Description:			Unit Test / Sheet No.
Level 1 Girder 02			
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