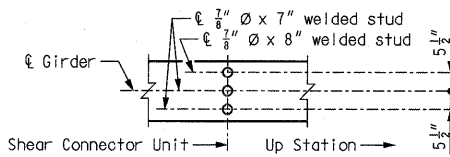
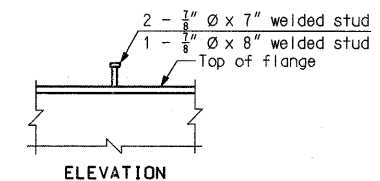


**GIRDER ELEVATION**  
Spans (21-22) & (22-23)

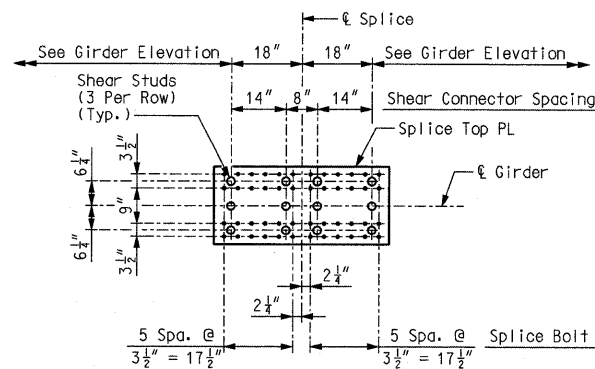
SHEAR STUD SPACING								
Location	S1	S2	S3	S4	S5	S6	S7 *	S8 *
Girder 5	92 Spa. @ 16" = 122'-8"	14"	50 Spa. @ 15" = 62'-6"	17 7/8"	79 Spa. @ 15" = 98'-9"	12 3/8"	109 Spa. @ 14" = 127'-2"	5'-1 7/8"
Girder 6	91 Spa. @ 16" = 121'-4"	20 5/8"	50 Spa. @ 15" = 62'-6"	12 3/8"	78 Spa. @ 15" = 97'-6"	19 3/8"	108 Spa. @ 14" = 126'-0"	5'-5 7/8"
Girder 7	91 Spa. @ 16" = 121'-4"	11 1/4"	50 Spa. @ 15" = 62'-6"	7 1/4"	78 Spa. @ 15" = 97'-6"	12 1/4"	108 Spa. @ 14" = 126'-0"	4'-8"
Girder 8	90 Spa. @ 16" = 120'-0"	17 3/4"	49 Spa. @ 15" = 61'-3"	17 3/4"	77 Spa. @ 15" = 96'-3"	19 3/4"	107 Spa. @ 14" = 124'-10"	5'-0 1/8"



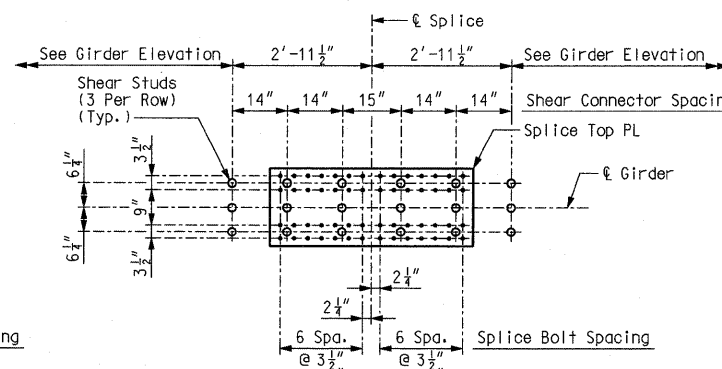
**PLAN OF STUD CONN. (3 STUDS PER UNIT)**  
**\* DETAILS OF SHEAR CONNECTORS FOR S7 AND S8**

For total weight of shear connectors, see Sheet No. 88.  
Shear connectors shall be in accordance with Sec 712, 1037, and 1080.

- Notes:
- \*\*  $\ell$  Back Bearing is measured parallel to  $\ell$  Pier 23.
  - Plate girders shall be fabricated to be in accordance with the camber diagram shown on Sheet No. 75.
  - \*\*\* Indicates flange plates subject to notch toughness requirements. All web plates shall be subject to notch toughness requirements. All flange and web splice plates except fill plates shall be subject to notch toughness requirements.
  - Fabricated structural steel shall be ASTM A709 Grade 50W, except as noted.
  - Longitudinal dimensions are horizontal arc dimensions from  $\ell$  bearing to  $\ell$  bearing.
  - For Framing Plan, see Sheet No. 53.
  - For location of slab drain attachment holes, see slab drain details on Sheet Nos. 127 thru 130.
  - For detail of expansion device stiffener at Pier 23, see Sheet No. 88.
  - For table of Girder Dimensions, see Sheet No. 53.
  - \*\*\* Drip plate, girder 8 only. See Sheet No. 88 for details.
  - For details of shear connectors not shown, see Sheet No. 88.



**SPLICE PLATE PLAN VIEW B-B**  
(Field Splice Detail with Shear Studs)



**SPLICE PLATE PLAN VIEW C-C**  
(Field Splice Detail with Shear Studs)

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 63 of 152

GIRDER ELEVATION EB - UNIT 2 (3 OF 3)

Detailed JUL 2009  
Checked JUL 2009

CONTRACT NO. 76D61	
F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR
USER NAME = jjo11ff	
PLOT SCALE = #SCALE#	
PLOT DATE = 4/14/2010	
DESIGNED - HNTB	
CHECKED - CMT	
DRAWN - CMT / HNTB	
REVISED -	
REVISED -	
REVISED -	
REVISED -	

ILLINOIS APPROACH STRUCTURE  
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

MISSOURI HIGHWAYS  
AND TRANSPORTATION COMMISSION

**HNTB**  
715 KIRK DRIVE  
KANSAS CITY, MO 64105  
TELEPHONE (816) 472-1201  
CERTIFICATE OF AUTHORITY  
NO. 001270

**CMT**  
CRAWFORD, MURPHY & TILLY, INC.  
2750 WEST WASHINGTON STREET  
SPRINGFIELD, IL 62702  
TELEPHONE (217) 787-8050  
ENGINEERING CORPORATION - 000631