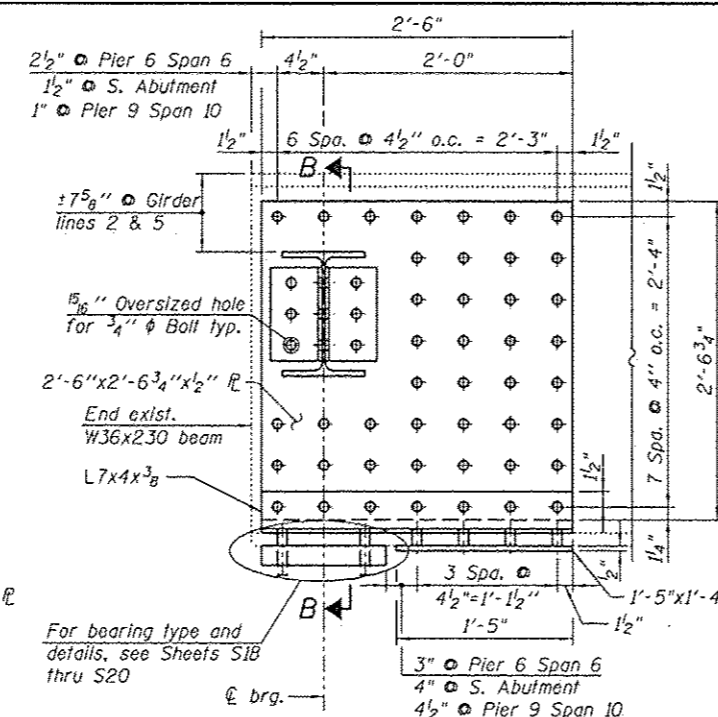
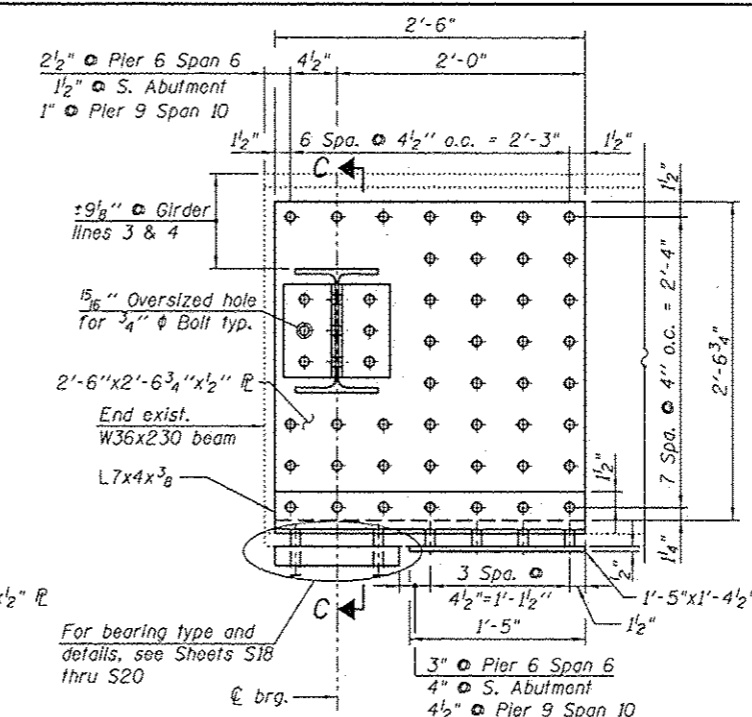


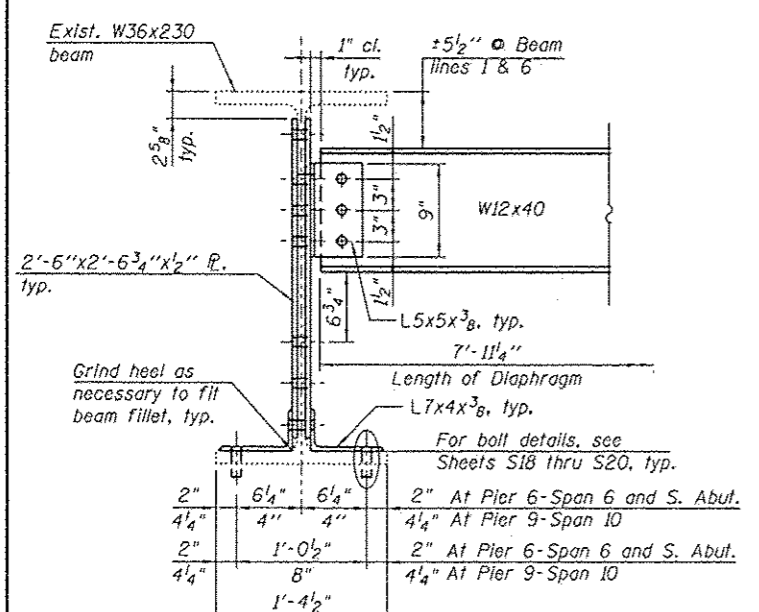
**DIAPHRAGM AND GIRDER REPAIR DETAIL**  
**(GIRDER LINES 1 & 6)**  
 At Pier 6 - Span 6  
 Pier 9 - Span 10  
 and South Abutment



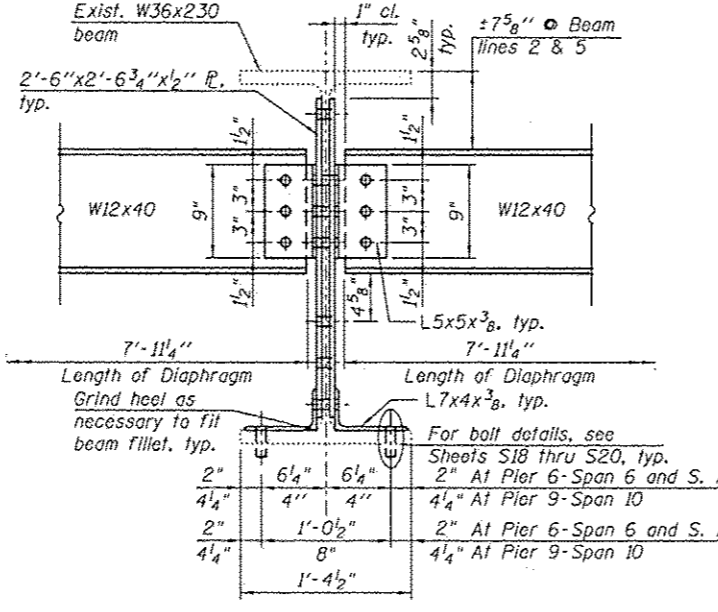
**DIAPHRAGM AND GIRDER REPAIR DETAIL**  
**(GIRDER LINES 2 & 5)**  
 At Pier 6 - Span 6  
 Pier 9 - Span 10  
 and South Abutment



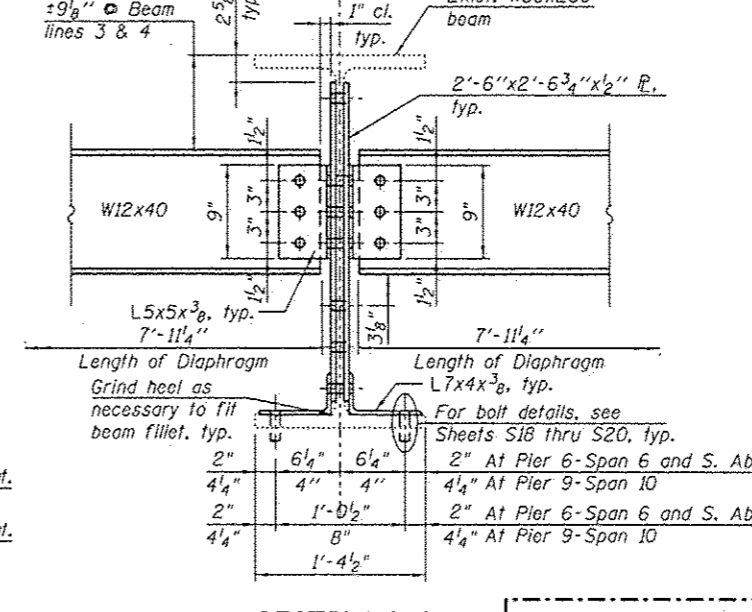
**DIAPHRAGM AND GIRDER REPAIR DETAIL**  
**(GIRDER LINES 3 & 4)**  
 At Pier 6 - Span 6  
 Pier 9 - Span 10  
 and South Abutment



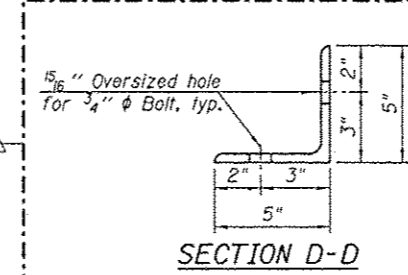
**SECTION A-A**  
 (Typ. for girder lines 1 and 6)



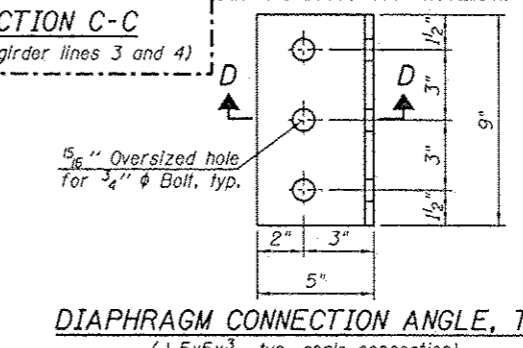
**SECTION B-B**  
 (Typ. for girder lines 2 and 5)



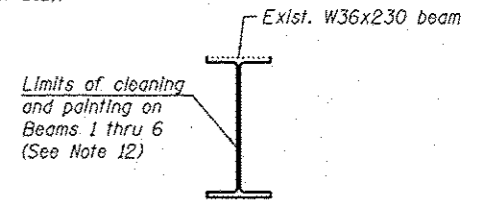
**SECTION C-C**  
 (Typ. for girder lines 3 and 4)



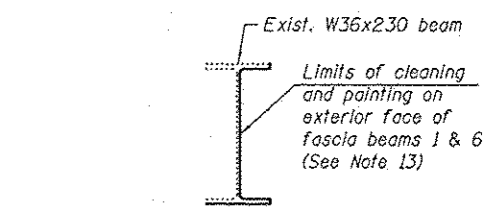
**SECTION D-D**



**DIAPHRAGM CONNECTION ANGLE, TYP.**  
 (L5x5x3/8, typ. angle connection)



**TYP. INTERIOR AND EXTERIOR W36x230 GIRDER**  
 (Pier 6 - Span 6, Pier 9 - Span 10, Span 1 at N. Abut. & Span 11 at S. Abut.)



**TYP. EXTERIOR W36x230 GIRDER**  
 (Spans 1 thru 6 & Spans 10 and 11)

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	5,850
Structural Steel Removal	Pound	6,190
Structural Steel Repair	Pound	7,320

**NOTES:**

- For locations of Diaphragm Repairs, see framing plan Sheet S15.
- All contact surfaces of joints for the diaphragms shall be free of paint or lacquer.
- All repair plates and angles, diaphragms and their connection plates shall conform to AASHTO Classification M-270 Gr 36.
- Diaphragm connection holes shall be 15/16" φ for 3/4" φ bolts. Two hardened washers shall be required at diaphragm connection.
- Hardened washers shall be required over all oversized holes.
- Cost of field drilling 15/16" φ holes is included with Furnishing and Erecting Structural Steel.
- Unless otherwise noted in the plans or specifications, field bolted connections shall use 3/4" φ high strength bolts with 15/16" φ holes.
- All connection bolts and fasteners shall be incidental to Furnish and Structural Steel Erect and Structural Steel Repair areas.
- Existing diaphragm and clip angle removal shall be paid for as Structural Steel Removal.
- New diaphragm and clip angles shall be paid for as Furnishing and Erecting Structural Steel.
- For cleaning and painting limits, see Sheet S15.
- Structural steel within the 10'-0" limits, near bearings shall be cleaned according to SSPC-SP10 (for cleaning and painting limits see Sheet S15).
- Structural steel for fascia beams outside the 10'-0" limits, near bearings shall be cleaned according to SSPC-SP15 (for cleaning and painting limits see Sheet S15).

**HBM**  
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DESIGNED - WM, JJS	DATE - 03/13/2013
CHECKED - MI	
DRAWN - WM	
CHECKED - MAI, MI	

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL REPAIR SECTIONS & DETAILS (SHEET I OF II)  
 EB US ROUTE 20 OVER PECATONICA RIVER STRUCTURE NO. 089-0042

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0301	(177-46-13M)	STEPHENSON	43	33

CONTRACT NO. 64J24  
 ILLINOIS FED. AID PROJECT