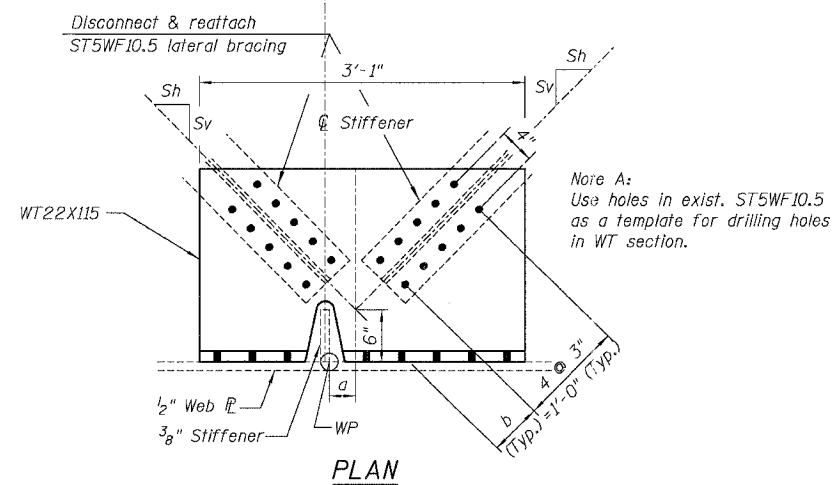
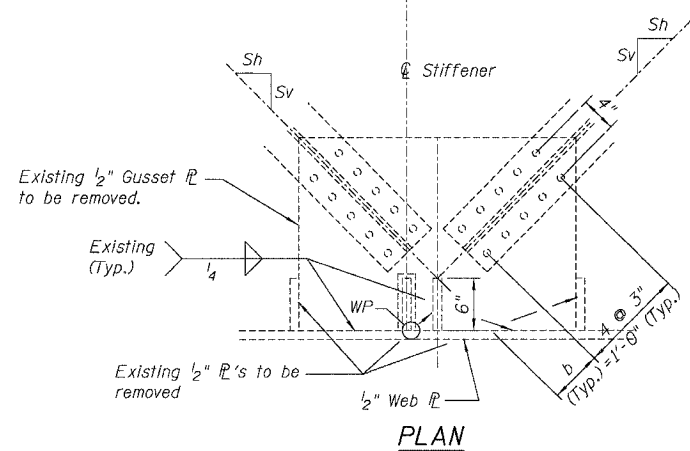
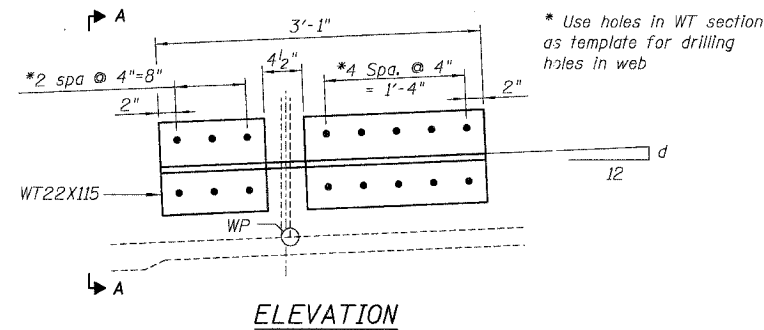
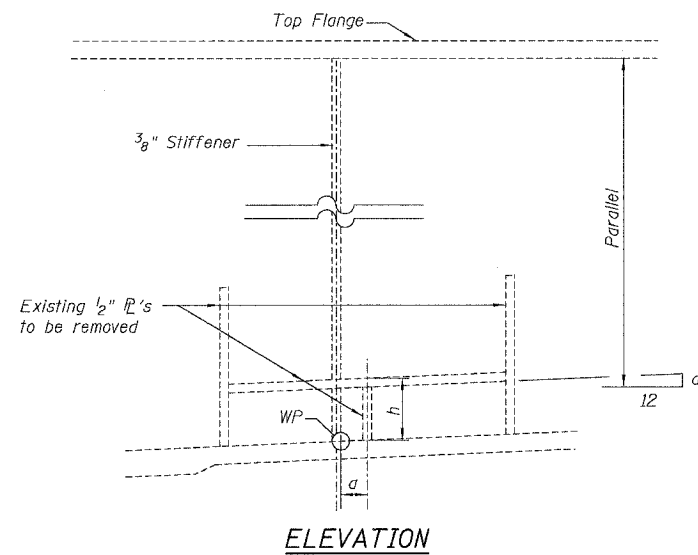


HOAN-TYPE CONNECTION DETAIL DIMENSIONS

Structure Number	Span	Girder No	a**	b	Sh	Sv	h	d
016-1114	1	14	3"	6 1/16"	12	7	6 7/8"	5/8
		15	-3 1/2"	6 1/2"	12	7	9 3/16"	5/8
		16	-3 3/4"	6"	11 13/16"	12	6 3/8"	1/16
		17	3 1/4"	6"	11 13/16"	12	10 1/8"	1/16
		18	-3 9/16"	6"	11 13/16"	12	7 1/2"	1/16
		19	3 1/4"	6"	11 13/16"	12	11 9/16"	5/8
016-1070	1	20	-3 13/16"	6"	11 13/16"	12	6 3/8"	5/8
		21	3 1/4"	6"	11 13/16"	12	10 3/16"	5/8
016-1070	1	22	-2 3/16"	6"	12	10 7/8"	6 3/8"	5/8
		23	3 1/6"	5 5/16"	12	10 7/8"	10 5/16"	5/8
016-1114	3	14	3 1/6"	5 9/16"	12	7	6 1/2"	9/16
		15	-3 7/16"	5 9/16"	12	7	6 3/8"	9/16
		16	-3 1/4"	6"	11 13/16"	12	6 3/8"	1/2
		17	3 5/16"	6"	11 13/16"	12	6 1/2"	1/2
		18	-3 3/4"	6"	11 13/16"	12	7 1/16"	9/16
		19	3 5/16"	6"	11 13/16"	12	6 5/16"	9/16
016-1070	3	20	-3 1/4"	6"	11 13/16"	12	7 1/2"	1/2
		21	3 1/4"	6"	11 13/16"	12	7 3/8"	1/2
		22	-4 1/8"	6"	12	10 7/8"	6 3/8"	1/2
		23	3 1/4"	5 5/16"	12	10 7/8"	6 1/16"	1/2
		24	3 1/4"	5 5/16"	12	10 7/8"	6 1/16"	1/2
		25	3 5/16"	6"	12	6 13/16"	6 7/16"	1/2

** "+" for north offset from WP, and "-" for south offset from WP.



EXISTING CONNECTION DETAIL

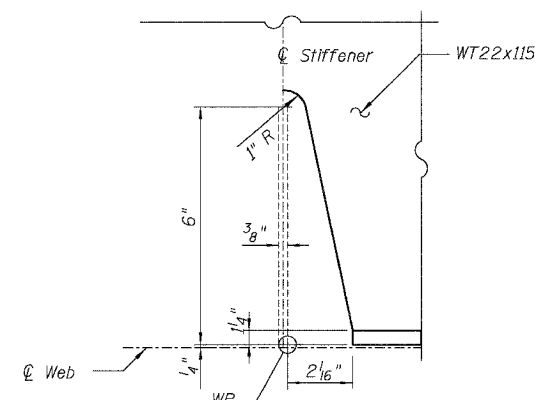
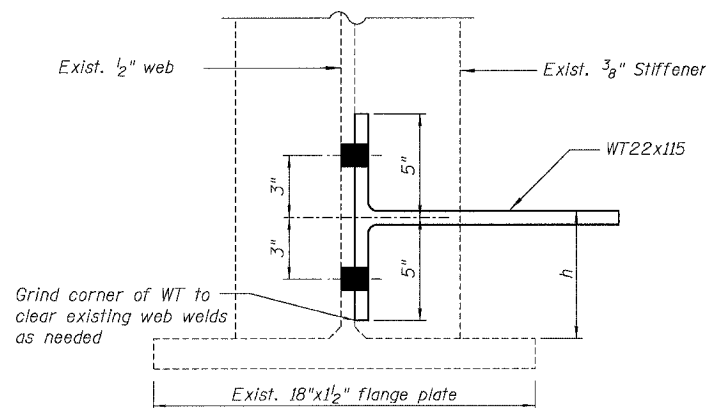
PROPOSED CONNECTION DETAIL

PROCEDURE FOR REPAIR DETAIL

1. Remove existing horizontal gusset plate as shown. The minimum distance from cut to face of web shall be the larger of 1/4" or web to gusset plate weld size, with removal of remaining material by grinding as described below. The cut shall be made vertically through the gusset without angling the cut towards the web. Equipment and method of cutting shall be approved by the Engineer. Any method of removal to be used shall ensure that no damage is done to the existing web, vertical stiffener or welds connecting these elements. Cutting shall be done in a manner such that the paint on the opposite face of the web is not damaged. If damage occurs, the damaged area shall be repainted at the contractor's expense and procedures shall be modified to prevent damage at subsequent removal locations.
2. Remove material between cut and web by grinding and grind smooth at web surface. Web plate surfaces shall have a roughness average (Ra) of 250u in. or less. Grinding equipment shall be approved by the Engineer. The grinding operation should not gouge the girder web plate.
3. The web surface at the modification shall be inspected using dye penetrant or magnetic particle methods. Any cracks found shall be identified and reported to the Bureau of Bridges and Structures for further disposition.

BILL OF MATERIAL

Item	Unit	Quantity
Structural Steel Repair	Pound	8,240



DETAIL E HOAN-TYPE CONNECTION REPAIR

BOWMAN, BARRETT & ASSOCIATES INC
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. 94/90 (DAN RYAN EXPRESSWAY) NB DAN RYAN ELEVATED BRIDGE REPAIR FROM 15TH TO 28TH STREETS STRUCTURAL STEEL REPAIR DETAIL E
NAME	DATE	

SCALE: NTS
DATE: 7/22/2005
DRAWN BY: BDC
CHECKED BY: BLU

16-660-0000-0170-05-13-Steel Repair-6580-13-SSR04-99