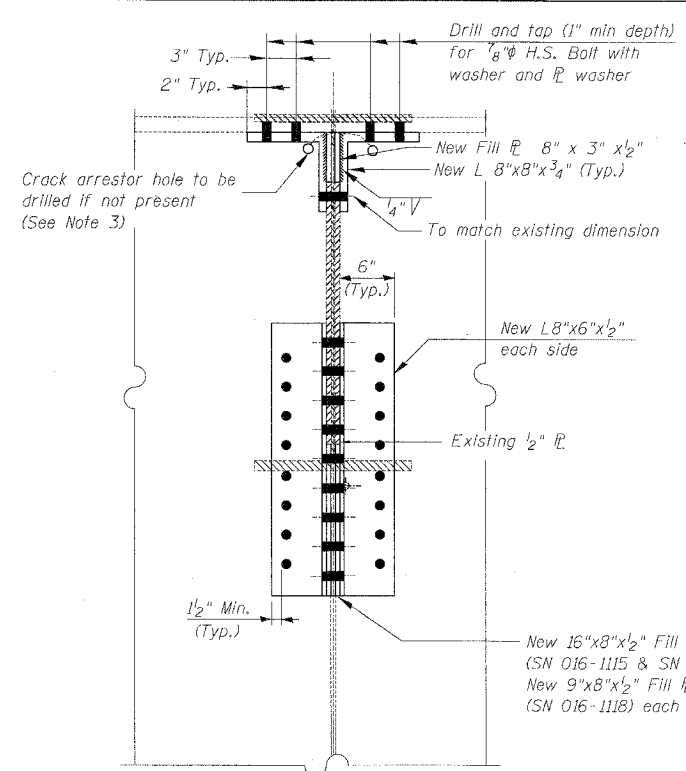
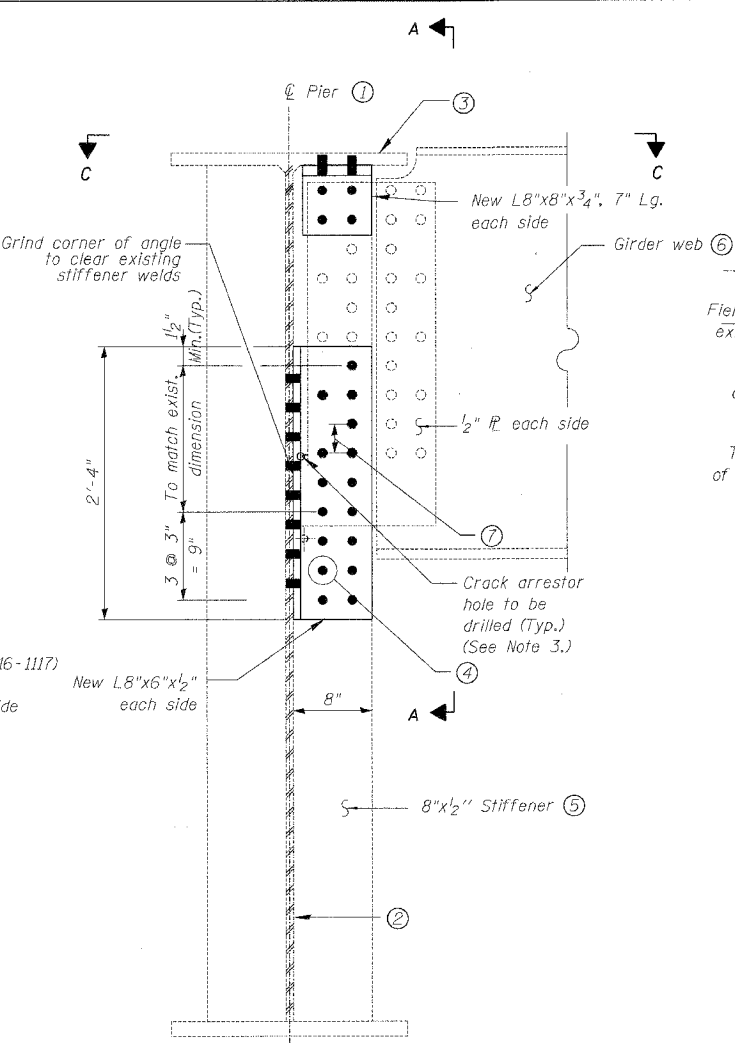


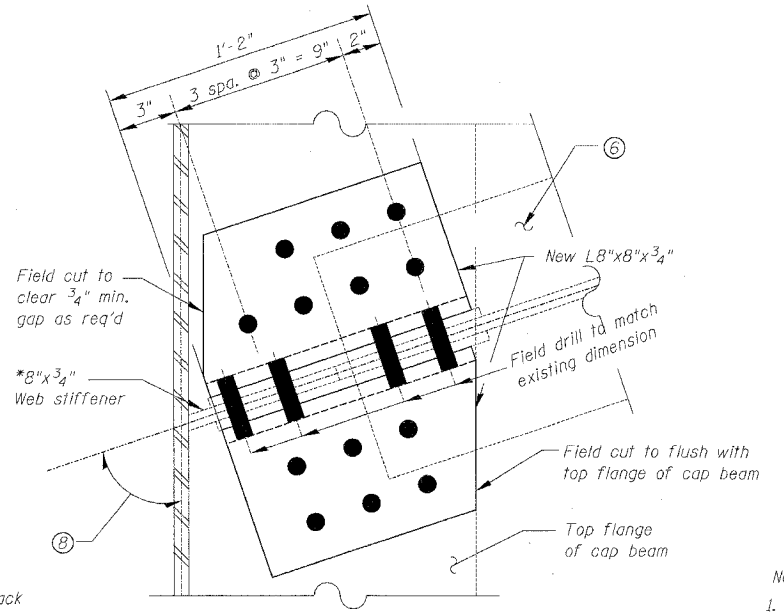
PARTIAL ELEVATION
(S.N. 016-1115 & S.N. 016-1117)



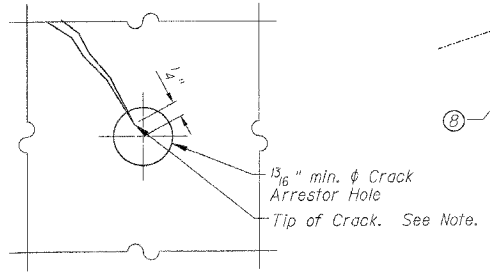
VIEW A-A



PARTIAL ELEVATION
(S.N. 016-1118)



VIEW B-B
(Looking through top flange)



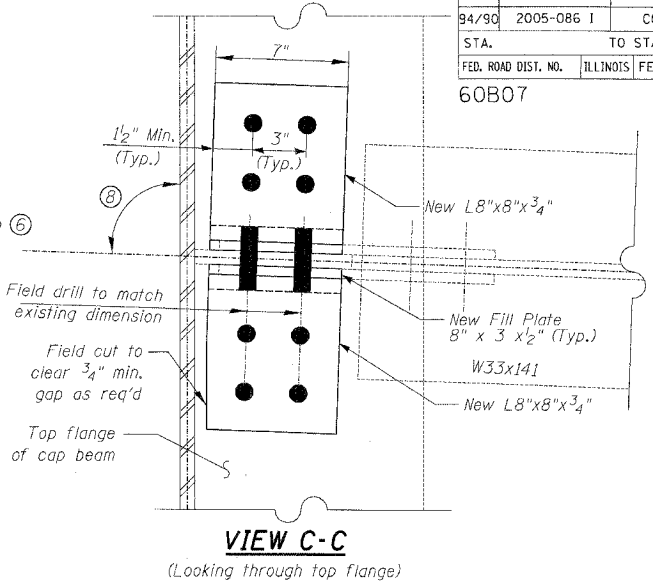
CRACK ARRESTOR HOLE DETAIL

Note:
Locate crack tip using liquid dye penetrant or magnetic particle testing. Drill 13/16" min. φ Crack Arrestor hole at the crack tip. After crack arrestor hole has been drilled, dye penetrant or magnetic particle testing shall be used to verify that the drilled hole has captured the crack tip. Cost shall be included in the cost of "Structural Steel Repair".

BILL OF MATERIAL

Item	Unit	Quantity
Structural Steel Repair	Pound	3,560
Temporary Shoring & Cribbing	Each	14

- Notes:
- All H.S. bolts for this repair work shall be 7/8" φ except at S.N. 016-1115.
 - Prior to removal of any existing bolts, girder to be repaired shall be temporarily supported (see Table for Supporting Reactions & min. Jacking Capacity, and see Special Provision for Temporary Shoring and Cribbing).
 - Drill a crack arrestor hole where a crack is present without a arrestor hole at crack tip (see Crack Arrestor Hole Detail). Cost shall be incidental to "Structural Steel Repair".
 - All west side angles L8"x6"x1/2" shall be bent at angles ⑧ provided in Table. All east side angle L8"x6"x1/2" shall be bent at angles (180°-⑧).



VIEW C-C
(Looking through top flange)

SUPPORTING REACTIONS & MINIMUM JACKING CAPACITY

S/N	Pier No.	Girder No.	Span No.	DL+(LL+I) (k)	Min. Jack. Capacity (k)
016-1115	17	7S	17	91	140
	7	5S	8	105	160
	19	3S	19	86	130
016-1117	20	6S	20	150	225
	20	8S	20	115	175
	20	9S	20	115	175
	23	7S	23	135	205
	23	8S	23	135	205
	19	6N	19	86	130
016-1118	H1	6.7	H2	159	240
	H3	3-5	H4	158	240

S.N.	① Pier No.	② Girder No.	③ Span No.	④ Exist. Cap Beam Web Plate	⑤ Exist. Cap Beam Top Flange	⑥ Bolt Dia.	⑦ Exist. Stiffener Size	⑧ Girder Size	⑨ Exist. Bolt Spacing	⑩ Angle
016-1115	17	7S	17	114"x1/8"	30"x2"	1"	8"x3/4"	W36x182	3"	91°48'20"
	7	5S	8	66"x1/2"	30"x2"	7/8"	8"x3/4"	W36x182	2 3/4"	68°13'42"
	19	3S	19	126"x3/4"	30"x2"	7/8"	8"x3/4"	W36x194	2 3/4"	71°09'13"
016-1117	20	6S	20	102"x5/8"	30"x1 1/2"	7/8"	8"x1/2"	48" PG	3"	71°18'40"
	20	8S	20	102"x5/8"	30"x1 1/2"	7/8"	8"x1/2"	48" PG	3"	71°18'40"
	20	9S	20	102"x5/8"	30"x1 1/2"	7/8"	8"x1/2"	48" PG	3"	68°44'06"
	23	7S	23	126"x3/4"	30"x2"	7/8"	8"x1/2"	48" PG	3"	71°18'40"
	23	8S	23	126"x3/4"	30"x2"	7/8"	8"x1/2"	48" PG	3"	71°18'40"
	19	6N	19	126"x3/4"	30"x1 1/4"	7/8"	8"x3/4"	W36x194	2 3/4"	71°19'01"
016-1118	H1	7	H2	84"x1"	24"x1"	7/8"	8"x1/2"	72" PG	3"	82°01'23"
	H1	6	H2	84"x1"	24"x1"	7/8"	8"x1/2"	72" PG	3"	83°52'10"
	H3	3	H4	96"x5/8"	26"x1 1/8"	7/8"	8"x1/2"	60" PG	3"	73°02'53"
	H3	4	H4	96"x5/8"	26"x1 1/8"	7/8"	8"x1/2"	60" PG	3"	73°02'53"
	H3	5	H4	96"x5/8"	26"x1 1/8"	7/8"	8"x1/2"	60" PG	3"	72°10'37"

REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
DAN RYAN ELEVATED BRIDGE
BEARING REPLACEMENT & STEEL REPAIR
STEEL REPAIRS - DETAIL I
SCALE: NTS
DATE: 3/7/2008
DRAWN BY: MTR
CHECKED BY: BLU