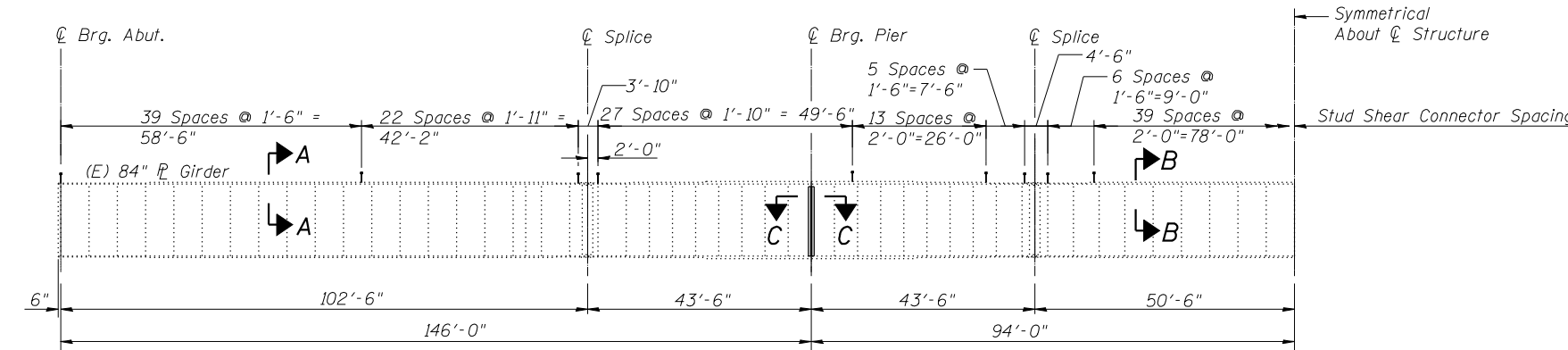


FRAMING PLAN

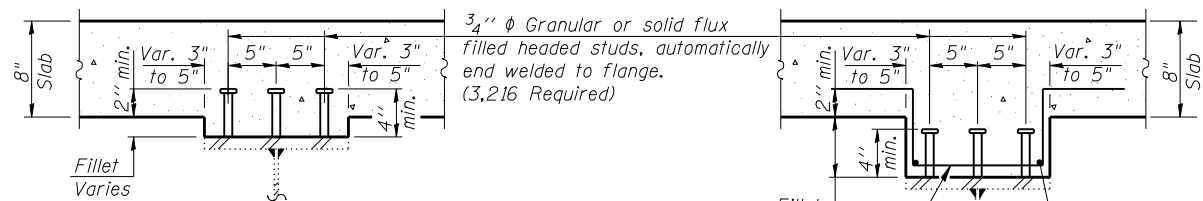


HALF GIRDER ELEVATION

BILL OF MATERIAL

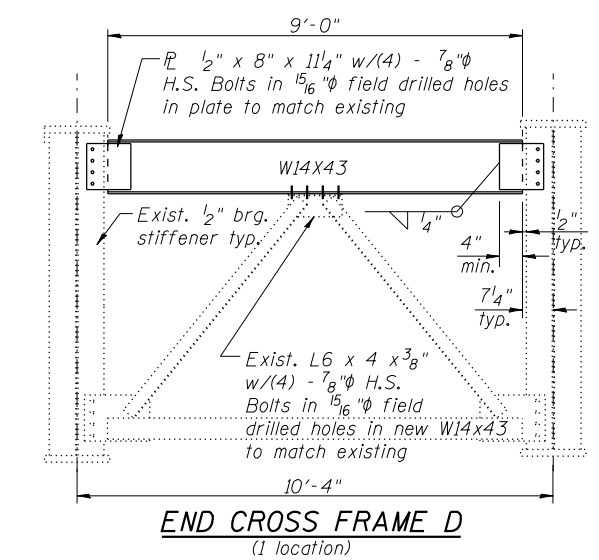
Item	Unit	Quantity
Structural Steel Repair	Pound	434

Note:
See sheet 18 of 34 for Section C-C, Section G-G and Section H-H.

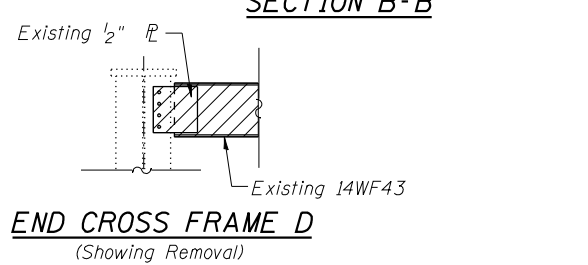


SECTION A-A

SECTION B-B



END CROSS FRAME D
(I location)



END CROSS FRAME D
(Showing Removal)

CONSTRUCTION SEQUENCE

The bearings and noted portion of End Cross Frame D shall be removed and replaced following the concrete deck removal and before the proposed deck is constructed.

Note:
Existing 14WF43 and 1/2" connection plates to be removed. Cost included with Structural Steel Repair.
Cost of field drilling is included with Structural Steel Repair.

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in.⁴ and in.³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in.⁴ and in.³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

$I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in.⁴ and in.³).

Q : Un-factored non-composite dead load (kips/ft.).

M_D : Un-factored moment due to non-composite dead load (kip-ft.).

s_D : Un-factored long-term composite (superimposed) dead load (kips/ft.).

M_{sD} : Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M_L : Un-factored live load moment (kip-ft.).

M_I : Un-factored moment due to impact (kip-ft.).

M_a : Factored design moment (kip-ft.).
 $1.3 [M_D + M_{sD} + \frac{1}{3} (M_L + M_I)]$

M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments below (ksi).
 $M_D + M_{sD} + \frac{1}{3} (M_L + M_I)$

f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.3 [M_D + M_{sD} + \frac{1}{3} (M_L + M_I)]$

VR: Maximum l_t + impact shear range within the composite portion of the span for stud shear connector design (kips).

INTERIOR GIRDER MOMENT TABLE			
	0.4 Sp.1/ 0.6 Sp.3	Pier 1 & 2	0.5 Sp. 2
I_s	(in ⁴) 134088	251856	134088
$I_c(n)$	(in ⁴) 251081	401211	251081
$I_c(3n)$	(in ⁴) 190661	317108	190661
$I_c(cr)$	(in ⁴)	274650	
S_s	(in ³) 3065	5596	3065
$S_c(n)$	(in ³) 3752	6358	3752
$S_c(3n)$	(in ³) 3469	5993	3469
$S_c(cr)$	(in ³)	5748	
Q	(k/ft) 1.495	1.714	1.495
M_D	(k) 1875	4884	1879
s_D	(k/ft) 0.535	0.535	0.535
M_{sD}	(k) 769	1536	855
M_L	(k) 1809	2444	1964
M_{IM}	(k) 335	420	313
$5/3 [M_L + M_I]$	(k) 3573	4773	3795
M_a	(k) 8083	14551	8488
M_u	(k) 9667		9666
f_s non-comp	(ksi) 7.3	10.5	7.4
f_s comp	(ksi) 2.7	3.1	3.0
$f_s 5/3 [M_L + M_I]$	(ksi) 11.4	9.0	12.1
f_s (Overload)	(ksi) 21.4	22.6	22.5
f_s (Total)	(ksi) 29.3		
VR	(k) 87.9	111.3	92.2

* Compact section
** Braced non-compact and partially braced section

INTERIOR GIRDER REACTION TABLE		
	Abuts.	Piers
R_D	(k) 104.7	386.9
R_L	(k) 63.9	142.8
R_I	(k) 11.8	15.6
R_{Total}	(k) 180.4	545.3

BLANK, WESSELINK, COOK & ASSOCIATES DECATUR, ILLINOIS ENGINEERS - CONSULTANTS DESIGN FIRM NO. 184000894

FILE NAME =	USER NAME =	DESIGNED	REVISIONS
		PBB	-
		MCB	-
		MLO	-
		PBB/MCB	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 058-0010

SHEET NO. 17 OF 34 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(48X-B-2)BR & (48BR)BR	MACON	144	94
CONTRACT NO. 74438				
ILLINOIS FED. AID PROJECT				