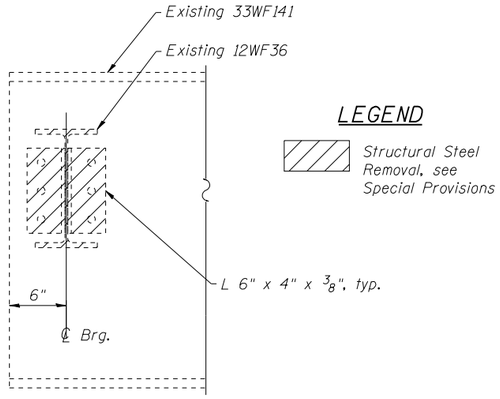


LEGEND

Structural Steel Removal, see Special Provisions

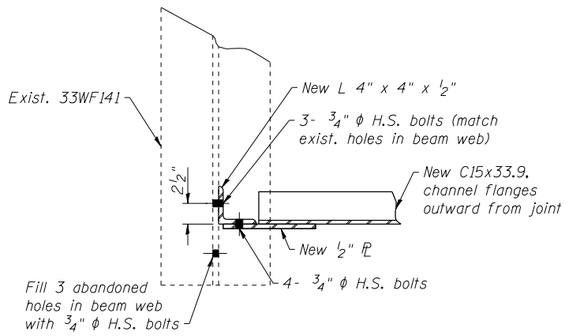
INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Piers 1 & 2	0.5 Sp. 2
I_s	(in^4)	7450	7450	7450
$I_c(n)$	(in^4)	19,200	-	19,200
$I_c(3n)$	(in^4)	13,990	-	13,990
S_s	(in^3)	448	448	448
$S_c(n)$	(in^3)	648	-	648
$S_c(3n)$	(in^3)	584	-	584
Z	(in^3)	-	514	-
$\mathcal{D}$	(k/')	0.793	0.943	0.793
$M\mathcal{D}$	('k)	178.5	345.1	130.9
$s\mathcal{D}$	(k/')	0.150	-	0.150
$M_s\mathcal{D}$	('k)	33.8	-	24.8
$M\mathcal{L}$	('k)	326.6	259.5	312.6
M_I	('k)	90.4	70.0	82.2
$\frac{5}{3}[M\mathcal{L}+M_I]$	('k)	695.0	549.2	658.0
M_a	('k)	1179.5	1162.5	1057.8
* M_u	('k)	2558.0	1542.0	2558.0
f_s $\mathcal{D}$ (non-comp)	(ksi)	4.78	9.24	3.51
f_s $\mathcal{D}$ (comp)	(ksi)	0.69	-	0.51
f_s $\frac{5}{3}(M\mathcal{L}+M_I)$	(ksi)	12.87	14.71	12.19
f_s (Overload)	(ksi)	18.34	23.95	16.21
** f_s (Total)	(ksi)	-	-	-
VR	(k)	45.7	-	38.6

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

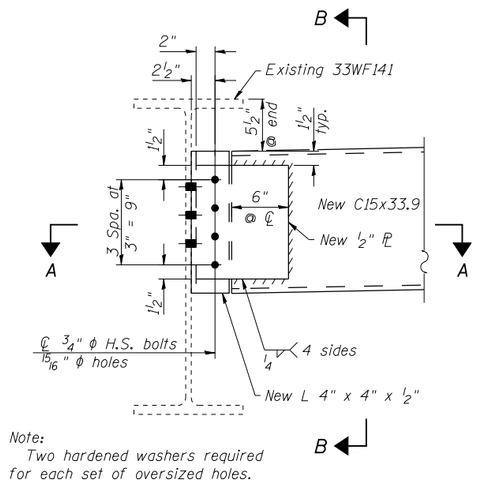
INTERIOR BEAM REACTION TABLE			
		Abut.	Pier
$R\mathcal{D}$	(k)	20.0	63.2
$R\mathcal{L}$	(k)	32.1	41.2
R_I	(k)	8.9	11.2
R_{Total}	(k)	61.0	115.6

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 $in.^3$).
Z: Plastic Section Modulus of the steel section in non-composite areas ($in.^3$).
$\mathcal{D}$: Un-factored non-composite dead load (kips/ft.).
$M\mathcal{D}$: Un-factored moment due to non-composite dead load (kip-ft.).
$s\mathcal{D}$: Un-factored long-term composite (superimposed) dead load (kips/ft.).
$M_s\mathcal{D}$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
$M\mathcal{L}$: Un-factored live load moment (kip-ft.).
M_I: Un-factored moment due to impact (kip-ft.).
M_a: Factored design moment (kip-ft.).
$1.3\ [\ M\mathcal{D} + M_s\mathcal{D} + \frac{5}{3}\ (M\mathcal{L} + M_I)]$
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).
$M\mathcal{D} + M_s\mathcal{D} + \frac{5}{3}\ (M\mathcal{L} + M_I)$
f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.3\ [M\mathcal{D} + M_s\mathcal{D} + \frac{5}{3}\ (M\mathcal{L} + M_I)]$
VR: Maximum $\mathcal{L}$ + impact shear range within the composite portion of the span for stud shear connector design (kips).

REMOVAL OF EXISTING END DIAPHRAGM D

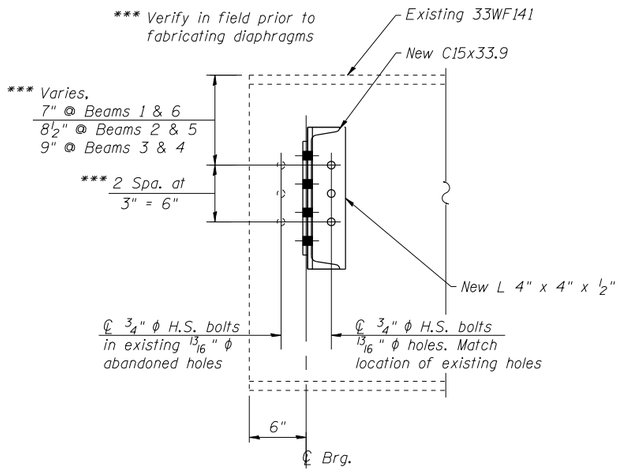


SECTION A-A



Note:
Two hardened washers required for each set of oversized holes.

PROPOSED END DIAPHRAGM D
(10 Required)



VIEW B-B

ESCA CORPORATION, INC.	USER NAME = koh	DESIGNED - SHL 02/13	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STEEL DETAILS STRUCTURE NO. 097-0027
	ESCA PROJECT NO. 988.14	CHECKED - RDP 02/13	REVISED -		
		DRAWN - DWH 02/13	REVISED -		SHEET NO. 13 OF 22 SHEETS
	PLOT DATE = 7/3/2014 8:39:24 AM	CHECKED - SHL 05/13	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
877	100B-1	WHITE	54	32
		CONTRACT NO. 78231		
	ILLINOIS	FED. AID PROJECT AID		