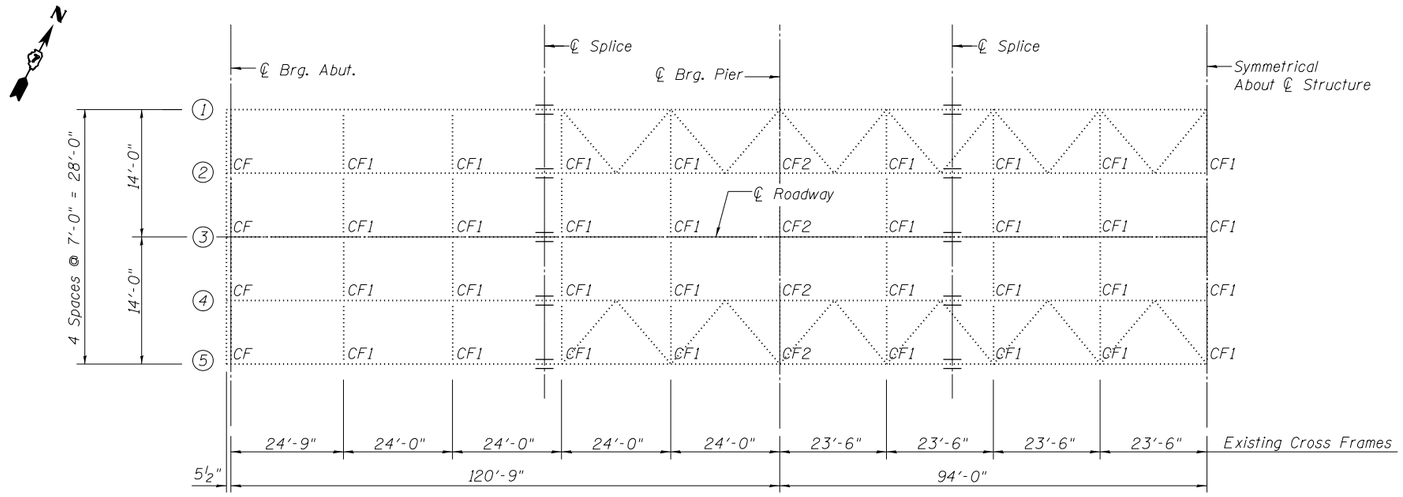


HALF FRAMING PLAN

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}).

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.).

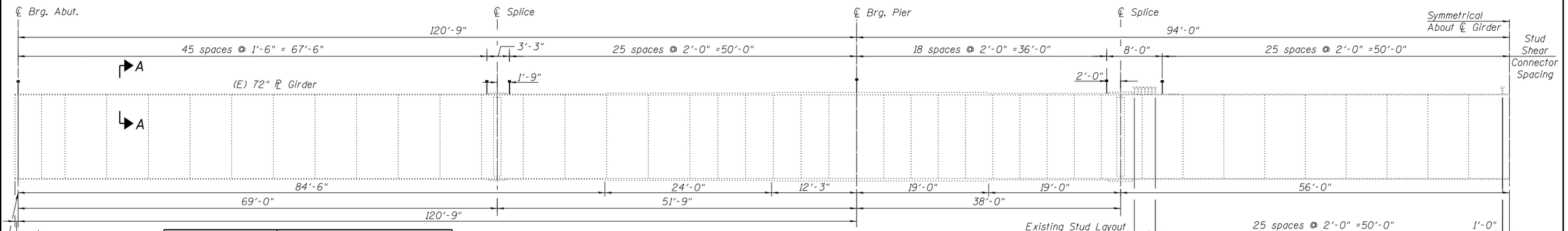
M_u: Factored design moment (kip-ft.).
$1.3\ [\ M\mathcal{D} + M_s\mathcal{D} + \frac{5}{3}(M\mathcal{L} + M_I)]$

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).



HALF GIRDER ELEVATION

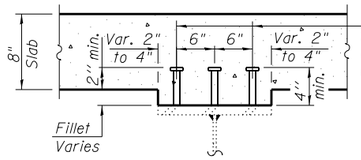
MOMENT TABLE		INTERIOR GIRDERS		
		0.4 Sp.1/ 0.6 Sp.3	Pier 1 & 2	0.5 Sp. 2
I_s	(in^4)	45365	137690	63979
$I_c(n)$	(in^4)	104552	230825	165155
$I_c(3n)$	(in^4)	77603	179748	115276
$I_c(cr)$	(in^4)		150841	
S_s	(in^3)	1234	3600	2250
$S_c(n)$	(in^3)	1697	4152	3002
$S_c(3n)$	(in^3)	1542	3900	2749
$S_c(cr)$	(in^3)		3707	
$\mathcal{D}$	(k/')	1.120	1.222	1.120
$M\mathcal{D}$	('k)	496	3266	1652
$s\mathcal{D}$	(k/')	0.340	0.340	0.340
$M_s\mathcal{D}$	('k)	208	951	639
$M\mathcal{L}$	('k)	934	1656	1444
M_{IM}	('k)	190	301	231
$\frac{5}{3}[M\mathcal{L} + I]$	('k)	1874	3262	2792
M_a	('k)	3351	9722	6607
* M_u	('k)	4821		7181
f_s $\mathcal{D}$ non-comp	(ksi)	4.9	10.9	8.8
f_s $\mathcal{D}$ (comp)	(ksi)	1.7	3.1	2.8
f_s $\frac{5}{3}[M\mathcal{L} + M_I]$	(ksi)	13.3	10.6	11.2
f_s (Overload)	(ksi)	19.9	24.6	22.8
** f_s (Total)	(ksi)		32.0	
VR	(k)	58.2	75.2	59.9

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

REACTION TABLE		INTERIOR GIRDERS	
		Abut.	Pier
$R\mathcal{D}$	(k)	47.5	250.5
$R\mathcal{L}$	(k)	41.4	94.2
R_I	(k)	8.4	10.9
R_{Total}	(k)	97.3	355.6

CONSTRUCTION SEQUENCE

The bearings shall be removed and replaced following the concrete deck removal and before the proposed deck is constructed.



¾" ϕ Granular or solid flux filled headed studs, automatically end welded to flange. (3.465 Required)

SECTION A-A

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

FILE NAME =	USER NAME =	DESIGNED PBB	REVISED -
		CHECKED MCB	REVISED -
	PLOT SCALE =	DRAWN MLO	REVISED -
	PLOT DATE =	CHECKED PBB/MCB	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 058-0049
SHEET NO. 16 OF 39 SHEETS

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
710	(48X-B-2)BR & (48BR)BR	MACON	144	54
		CONTRACT NO. 74438		
	ILLINOIS FED. AID PROJECT			