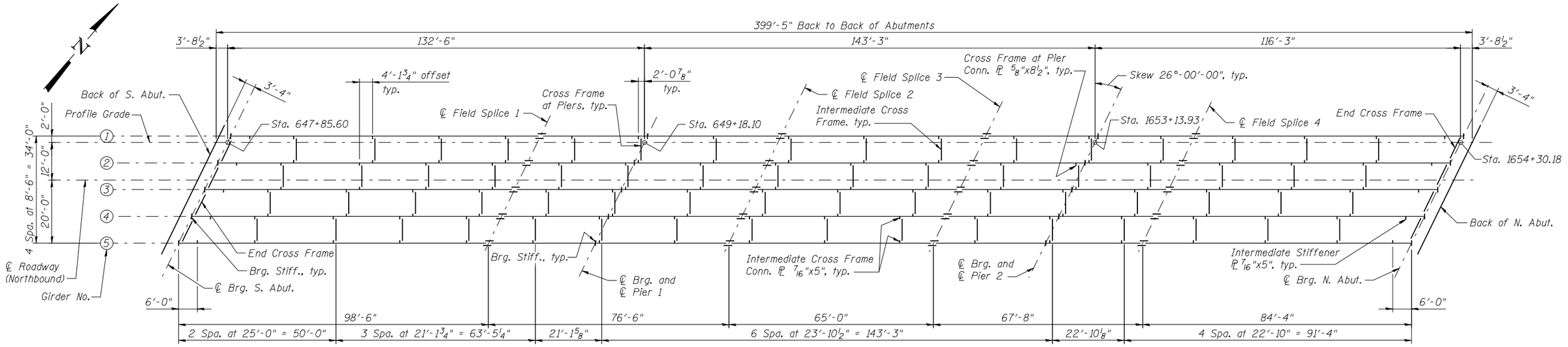

FRAMING PLAN

INTERIOR GIRDER MOMENT TABLE						
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
I_s	(in^4)	28547	61621	31920	50413	25993
$I_c(n)$	(in^4)	81602	71372	96160	60200	71491
$I_c(3n)$	(in^4)	58705	71372	67403	60200	52402
$I_c(cr)$	(in^4)	35075	71557	39432	60166	31806
S_s	(in^3)	1218	2007	1496	1647	1025
$S_c(n)$	(in^3)	1727	2550	2107	2191	1469
$S_c(3n)$	(in^3)	1585	2550	1936	2191	1345
$S_c(cr)$	(in^3)	1321	2570	1620	2200	1115
DC1	(k/')	1.08	1.22	1.11	1.17	1.07
M_{DC1}	('k)	1284	2675	601	2032	965
DC2	(k/')	0.2116	0.2116	0.2116	0.2116	0.2116
M_{DC2}	('k)	265	460	132	368	198
DW	(k/')	0.38	0.38	0.38	0.38	0.38
M_{DW}	('k)	475	825	236	660	355
M_{L+IM}	('k)	2051	2515	1885	2281	1748
M_u (Strength I)	('k)	6238	9558	4569	7982	5045
$\phi_f M_n$	('k)	8360	10711	10111.1	9141	7183
f_s DC1	(ksi)	12.7	16.0	4.8	14.8	11.3
f_s DC2	(ksi)	2.0	2.2	0.8	2.0	1.8
f_s DW	(ksi)	3.6	3.9	1.5	3.6	3.2
f_s (L+IM)	(ksi)	14.3	11.8	10.7	12.5	14.3
f_s (Service II)	(ksi)	36.8	37.4	21.1	36.7	34.8
$0.95R_hF_{yf}$	(ksi)	47.5	47.5	47.5	47.5	47.5
f_s (Total)(Strength I)	(ksi)	48.7	49.2	28.0	48.3	46.1
$\phi_f F_n$	(ksi)	50.0	50.0	50.0	50.0	50.0
V_r	(k)	27.0	29.5	24.3	30.0	26.8

INTERIOR GIRDER REACTION TABLE HL93 Loading (Unfactored)					
		S. Abut.	Pier 1	Pier 2	N. Abut.
R_{DC1}	(k)	55.0	186.2	162.1	47.2
R_{DC2}	(k)	10.7	33.5	30.1	9.1
R_{DW}	(k)	19.2	60.1	54.1	16.4
R_{LL+IM}	(k)	94.7	182.6	181.2	102.1
R_{Total}	(k)	179.6	462.4	427.5	174.8

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) 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-Strength I, and Service II) in uncracked sections 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-Strength I, and Service II) in uncracked sections, 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 $in.^3$).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
$M_{L+IM} / S_c(n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s(L+IM)$

$0.95R_hF_yf$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_s(L+IM)$

$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

V_r: Maximum factored shear range in span computed according to Article 6.10.10.

Note:
M_{LL} and R_{LL} include the effects of centrifugal force and superelevation.

Notes:
For Structural Steel Notes, see sheet C32.
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

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JACOBS	USER NAME =	DESIGNED - S. STEIB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
		CHECKED - R. RILEY	REVISED -	FRAMING PLAN AND DESIGN DATA – N.B. STRUCTURE NO. 082-0334 (N.B.) & 082-0335 (S.B.)
	PLOT DATE = 17-OCT-2012	DRAWN - E. KRACK	REVISED -	SHEET NO. C28 OF 76 SHEETS
FILE NAME=0820334-76848-028-Framing Plan(NB).dgn		CHECKED - J. SMITH	REVISED -	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
788	520-1-2HVB	ST. CLAIR	237	85
		CONTRACT NO. 76848		
	ILLINOIS	FED. AID PROJECT		