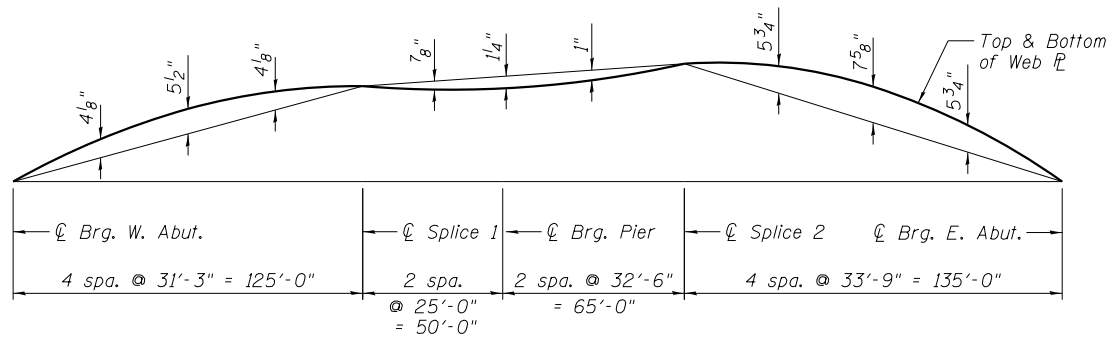


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



CAMBER DIAGRAM

TOP OF WEB ELEVATION TABLE

Girder No.	1	2	3	4	5	6	7	8	9
☐ Brg. W. Abut.	576.28	576.28	576.31	576.32	576.29	576.18	575.90	575.59	575.26
☐ Splice 1	577.31	577.43	577.57	577.69	577.77	577.77	577.60	577.41	577.19
☐ Brg. Pier	577.11	577.27	577.44	577.61	577.74	577.78	577.66	577.51	577.33
☐ Splice 2	577.07	577.29	577.52	577.75	577.93	578.03	577.97	577.87	577.75
☐ Brg. E. Abut.	574.20	574.54	574.90	575.24	575.54	575.76	575.82	575.84	575.84

(For fabrication Only)

INTERIOR GIRDER MOMENT TABLE

		0.4 Sp. 1	Pier	0.6 Sp. 2
I_s	(in ⁴)	67,404	173,167	85,149
$I_c(n)$	(in ⁴)	139,540	---	178,322
$I_c(3n)$	(in ⁴)	103,678	---	130,221
S_s	(in ³)	1822	4469	2536
$S_c(n)$	(in ³)	2398	---	3245
$S_c(3n)$	(in ³)	2174	---	2964
Z	(in ³)	---	4921	---
DC1	(k/')	1.176	1.427	1.223
M_{DC1}	(k)	1808	6423	3341
DC2	(k/')	0.200	0.200	0.200
M_{DC2}	(k)	393	854	618
DW	(k/')	0.350	0.350	0.350
M_{DW}	(k)	688	1495	1082
M_{LL-IM}	(k)	2795	3055	3463
M_u (Strength I)	(k)	8676	16,685	12,633
* $\phi_f M_n, \phi_f M_{nc}$	(k)	11,869	19,595	15,424
f_s DC1	(ksi)	11.9	17.2	15.8
f_s DC2	(ksi)	2.2	2.3	2.5
f_s DW	(ksi)	3.8	4.0	4.4
f_s 1.3 (LL + IM)	(ksi)	18.2	10.7	16.6
f_s (Service II)	(ksi)	36.1	34.2	39.3
** f_s (Total)(Strength I)	(ksi)	---	---	---
V_f	(k)	41	---	41

* Compact sections

** Non-compact and slender sections

INTERIOR GIRDER REACTION TABLE

		W. Abut.	Pier	E. Abut.
R_{DC1}	(k)	67.0	305.6	90.7
R_{DC2}	(k)	12.6	46.7	15.7
R_{DW}	(k)	22.1	81.6	27.5
R_{LL-IM}	(k)	133.3	237.6	141.6
R_{Total}	(k)	235.0	671.5	275.5

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.

$I_c(n), S_c(n)$

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) due to short-term composite live loads.

$I_c(3n), S_c(3n)$

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) due to long-term composite (superimposed) dead loads.

Z

Plastic Section Modulus of the steel section in non-composite areas.

DC1

Un-factored non-composite dead load.

M_{DC1}

Un-factored moment due to non-composite dead load.

DC2

Un-factored long-term composite (superimposed excluding future wearing surface) dead load.

M_{DC2}

Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load.

DW

Un-factored long-term composite (superimposed future wearing surface only) dead load.

M_{DW}

Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load.

M_{LL-IM}

Un-factored live load moment plus dynamic load allowance (impact).

M_u (Strength I)

Factored design moment = $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{LL-IM}$

$\phi_f M_n$

Compact composite positive moment capacity.

$\phi_f M_{nc}$

Compact non-composite negative moment capacity.

f_s (Service II)

Sum of stresses as computed from $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_{LL-IM}$

f_s (Total)(Strength I)

Sum of stresses as computed from $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{LL-IM}$

V_f

Maximum factored shear range in composite portion of span.

DESIGN DATA TABLES
STRUCTURE NO. 032-0119

DESIGNED	- JSI/MAJ/JFS
CHECKED	- JFS/MJB
DRAWN	- MLB/JLP
CHECKED	- JFS/MJB



SHEET NO. 20 33 SHEETS	F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	400	(32,47-4) HBR-2	GRUNDY	143	81
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		
		S.N. 032-0119		CONTRACT NO. 66873	