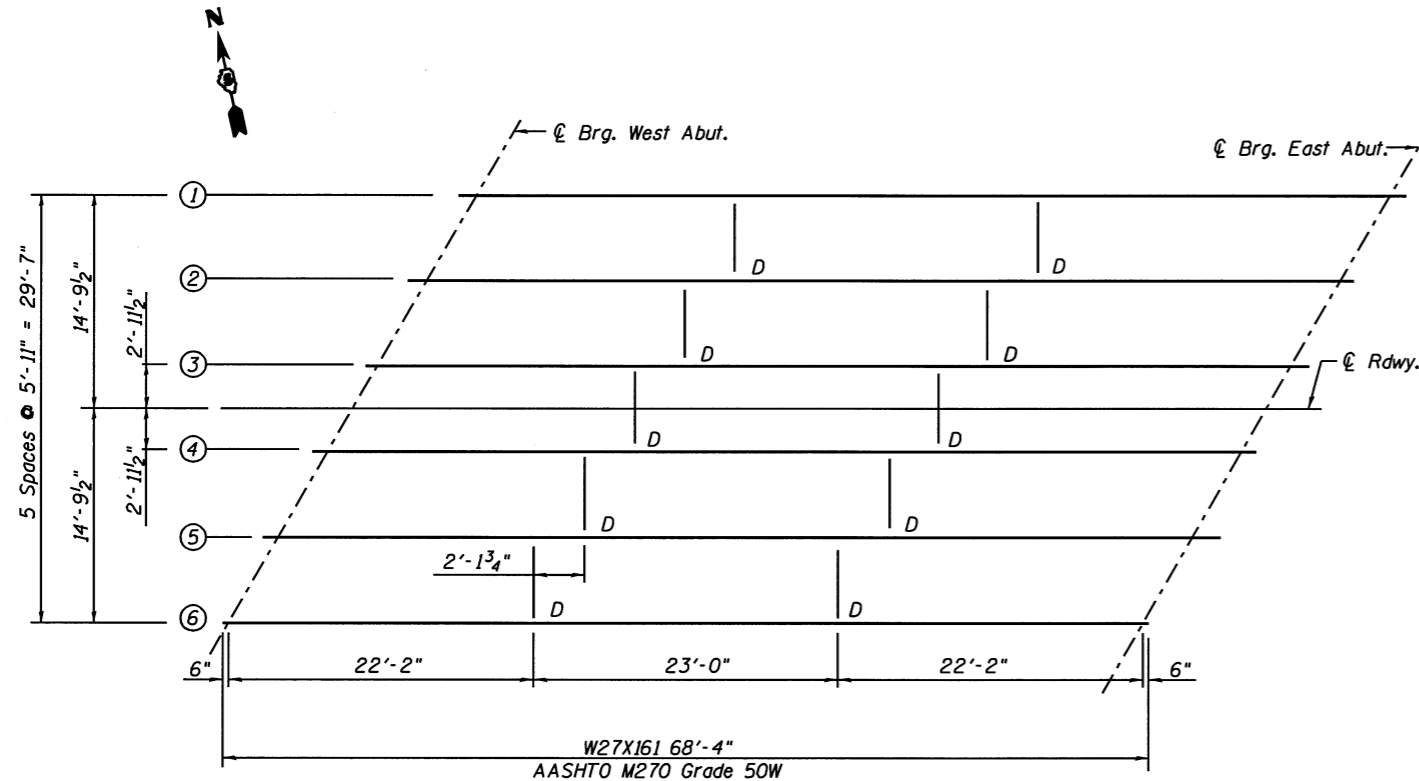


ELEVATION

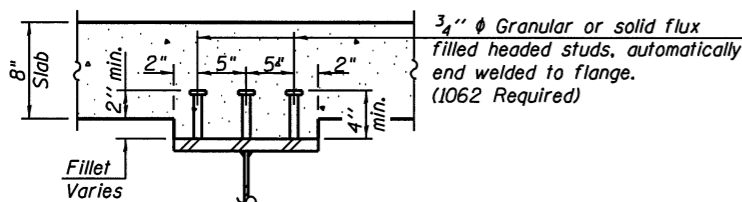


FRAMING PLAN

Note: All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor bolts.

See sheet 13 of 21 for location of 1/8" holes at beam ends.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.



SECTION A-A

	W. Abut.	E. Abut.
Beam 1	689.51	689.38
Beam 2	689.63	689.50
Beam 3	689.72	689.59
Beam 4	689.72	689.59
Beam 5	689.64	689.51
Beam 6	689.53	689.40

TOP OF BEAM ELEVATIONS

(For Fabrication use Only)

INTERIOR GIRDER MOMENT TABLE		0.5 Sp. 1
I_s	(in ⁴)	6,310
$I_c(n)$	(in ⁴)	16,787
$I_c(3n)$	(in ⁴)	11,918
S_s	(in ³)	458
$S_c(n)$	(in ³)	675
$S_c(3n)$	(in ³)	602
DC1	(k/')	0.806
M _{DC1}	(k)	471
DC2	(k/')	0.150
M _{DC2}	(k)	85
DW	(k/')	0.267
M _{DW}	(k)	151
$M_k \cdot IM$	(k)	877
M_u (Strength I)	(k)	2,456
$\phi_r M_n$	(k)	3,065.8
f_s DC1	(ksi)	12.3
f_s DC2	(ksi)	1.7
f_s DW	(ksi)	3.1
f_s (k+IM)	(ksi)	15.6
f_s (Service II)	(ksi)	37.5
0.95R _h F _{yf}	(ksi)	47.5
V _r	(k)	22.5

*Compact Section

INTERIOR GIRDER REACTION TABLE		Abut.
R _{DC1}	(k)	28.0
R _{DC2}	(k)	5.0
R _{DW}	(k)	9.0
$R_k \cdot IM$	(k)	78.6
R _{Total}	(k)	120.6

- 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 (in⁴ and in³).
- $I_c(n), S_c(n)$: 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 (in⁴ and in³).
- $I_c(3n), S_c(3n)$: 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 (in⁴ and in³).
- 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.).
- $M_k \cdot IM$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
- M_u (Strength I): Factored design moment (kip-ft.).
- $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_k \cdot IM$
- $\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (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_{sc}
- 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 (k+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
- $M_k \cdot IM / S_c(n)$ or $M_k \cdot IM / S_c(cr)$ as applicable.
- f_s (Service II): Sum of stresses as computed below (ksi).
- $f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_s(k \cdot IM)$
- 0.95R_hF_{yf}: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).
- V_r: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

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

FILE NAME =	USER NAME =	DESIGNED - PBB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FRAMING PLAN AND BEAM DETAILS STRUCTURE NO. 023-0034	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED -	REVISED -			749	14BR	EDGAR	115	52	
PLOT SCALE =		DRAWN - RJC	REVISED -			CONTRACT NO. 70618					
PLOT DATE =		CHECKED -	REVISED -			ILLINOIS FED. AID PROJECT					