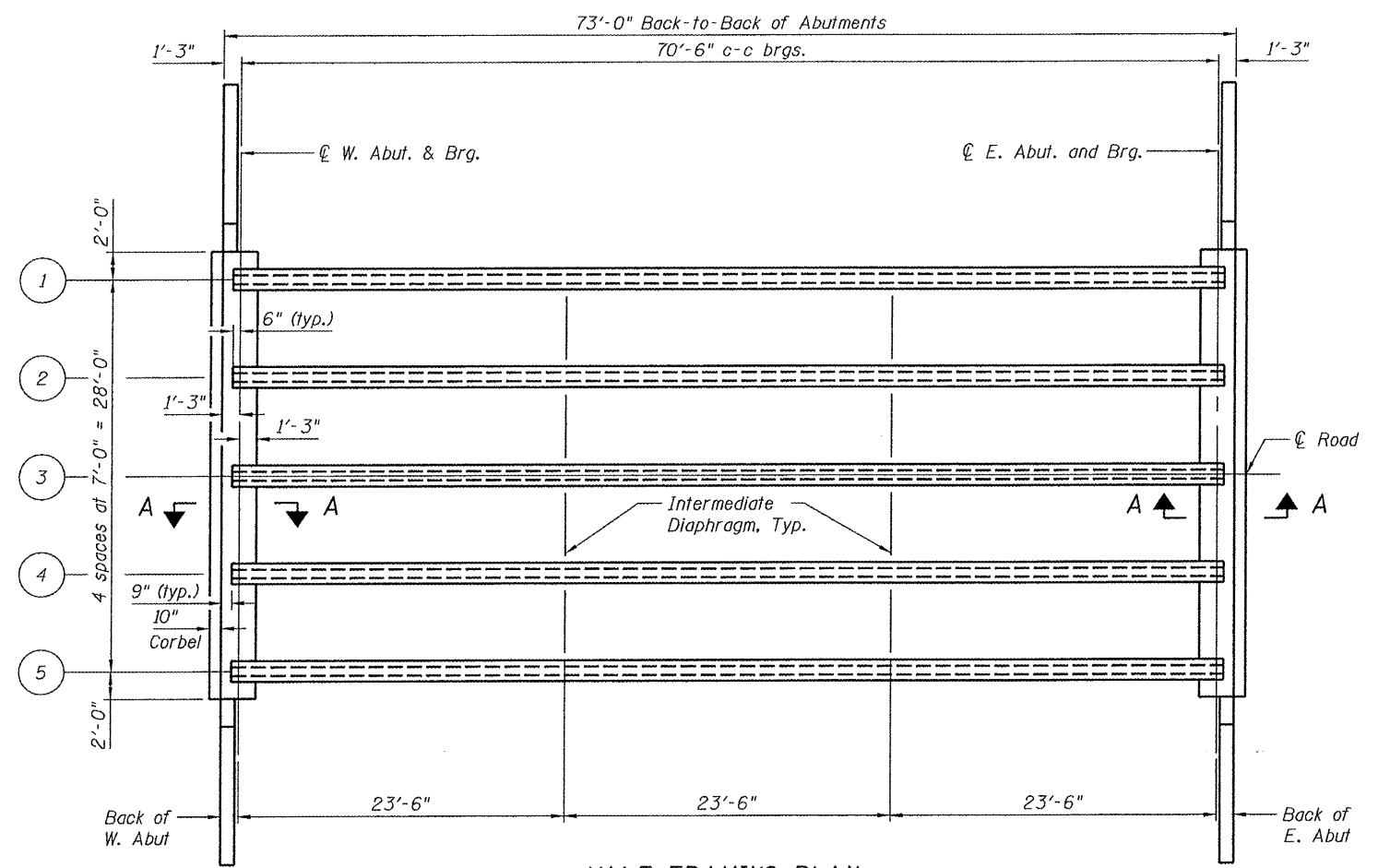


85552



**HALF FRAMING PLAN**

All Beams are Precast Prestressed Concrete I-Beams, 48"

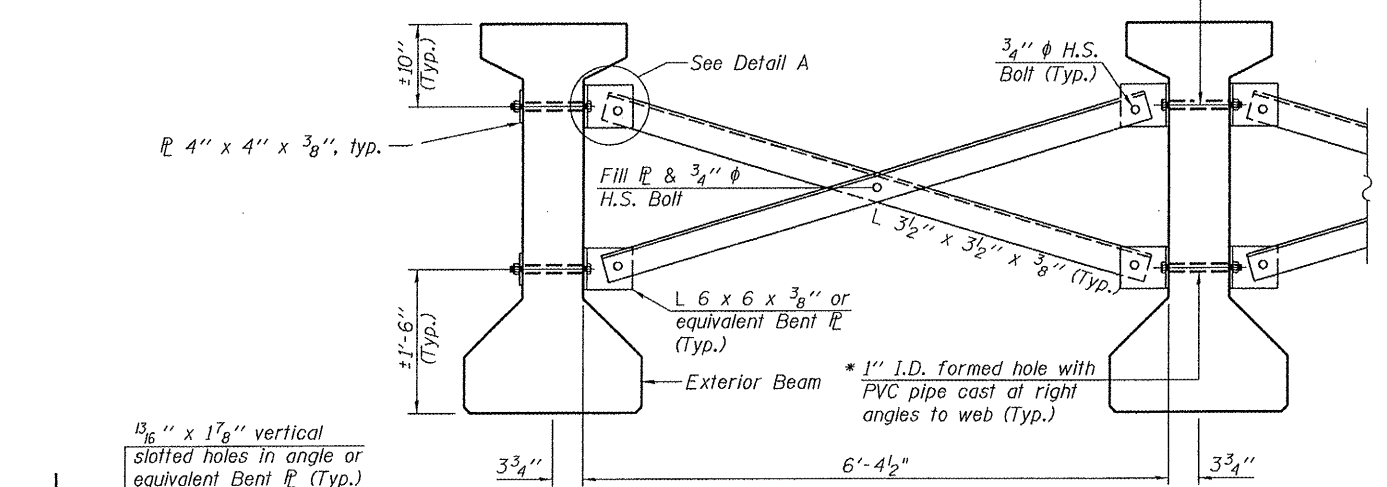
INTERIOR BEAM MOMENT TABLE		
0.5 Span		
I	(in <sup>4</sup> )	144,117
I'	(in <sup>4</sup> )	404,202
S <sub>b</sub>	(in <sup>3</sup> )	6,834
S <sub>b</sub> '	(in <sup>3</sup> )	11,323
S <sub>t</sub>	(in <sup>3</sup> )	5,355
S <sub>t</sub> '	(in <sup>3</sup> )	32,855
DC1	(k/')	1.324
M <sub>DC1</sub>	(k)	823
DC2	(k/')	0.024
M <sub>DC2</sub>	(k)	15
DW	(k/')	0.350
M <sub>DW</sub>	(k)	217
M <sub>L + IM</sub>	(k)	1,121

INTERIOR BEAM REACTION TABLE		
Abut.		
R <sub>DC1</sub>	(k)	46.7
R <sub>DC2</sub>	(k)	0.8
R <sub>DW</sub>	(k)	12.3
R <sub>L + IM</sub>	(k)	78.5
R <sub>Total</sub>	(k)	138.3

- I: Non-composite moment of inertia of beam section (in<sup>4</sup>).
- I': Composite moment of inertia of beam section (in<sup>4</sup>).
- S<sub>b</sub>: Non-composite section modulus for the bottom fiber of the prestressed beam (in<sup>3</sup>).
- S<sub>b</sub>': Composite section modulus for the bottom fiber of the prestressed beam (in<sup>3</sup>).
- S<sub>t</sub>: Non-composite section modulus for the top fiber of the prestressed beam (in<sup>3</sup>).
- S<sub>t</sub>': Composite section modulus for the top fiber of the prestressed beam (in<sup>3</sup>).
- DC1: Un-factored non-composite dead load (kips/ft.).
- M<sub>DC1</sub>: 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<sub>DC2</sub>: 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<sub>DW</sub>: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- M<sub>L + IM</sub>: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

\* Fabricator shall locate to miss strands within permissible tolerances.

$\frac{3}{4}$ "  $\phi$  A307 Bolts with lock nuts. (Typ.) Bolts through the concrete web shall be tightened to snug tight only.



**INTERMEDIATE DIAPHRAGM**

**Notes:**

- All material for intermediate diaphragm shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
- Two hardened washers are required for each set of oversized holes in intermediate diaphragm.
- All holes shall be  $\frac{1}{16}$ "  $\phi$  unless otherwise noted.
- $\frac{5}{16}$ " x 3" x 3" plate washers are required over all slotted holes.
- All bolts shall be galvanized according to AASHTO M232.
- Intermediate diaphragm shall be installed as beams are erected and tightened as soon as possible during erection.
- Permanent bracing shall not be paid for separately but shall be included in the cost of furnishing and erecting the prestressed beams.
- For section A-A, see sheet 5 of 13.

**FRAMING PLAN**  
**STRUCTURE NUMBER 101-3102**

PROFESSIONAL DESIGN FIRM LICENSE #184-001084		SHEET NO. 6		F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
© Copyright Hanson Professional Services Inc. 2011		03R1808	13 SHEETS	0052	03-00324-00-BR	Winnebago	24	14
		DATE 12/16/11	CONTRACT NO. 85552					
Hanson Professional Services Inc.		FED. ROAD DIST. NO. 2 ILLINOIS FED. AID PROJECT						

12/08/2011  
 I:\Users\03R1808\CADD\Struct\Sheet\S-006-014-Beams.dgn  
 LAYOUT SMK 7/25/11  
 DRAWN JDM 12/16/11  
 REVIEWED SMK 12/16/11

**DETAIL A**