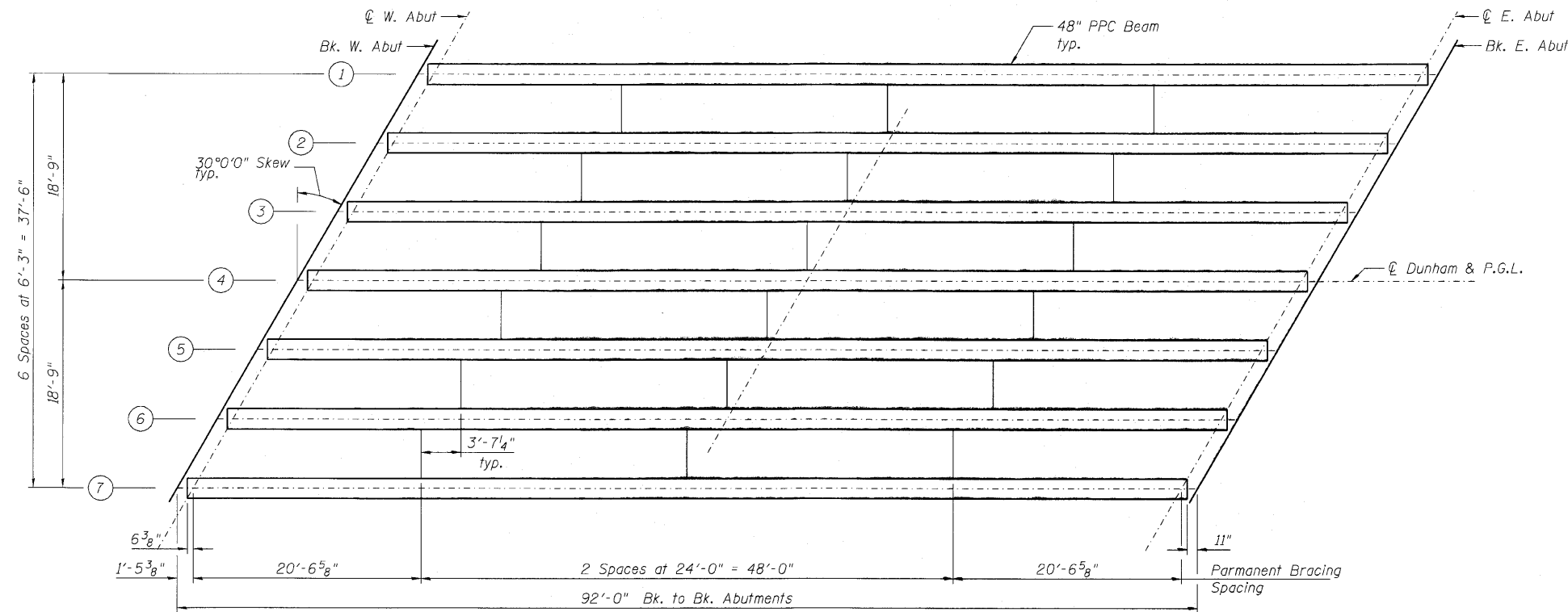


MCHENRY COUNTY  
DIVISION OF TRANSPORTATION



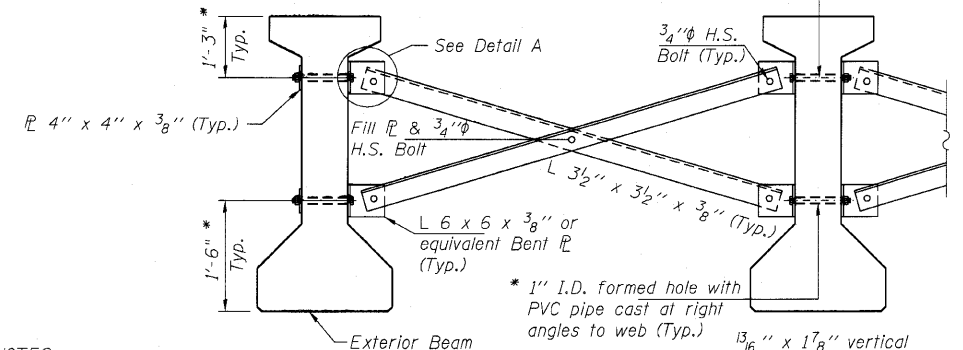
FRAMING PLAN

INTERIOR BEAM MOMENT TABLE	
0.5 Span	
I	(in <sup>4</sup> ) 144,117
I'	(in <sup>4</sup> ) 378,730
S <sub>b</sub>	(in <sup>3</sup> ) 6,834
S <sub>b</sub> '	(in <sup>3</sup> ) 11,047
S <sub>t</sub>	(in <sup>3</sup> ) 5,355
S <sub>t</sub> '	(in <sup>3</sup> ) 27,609
DC1	(k/ft) 1.248
M <sub>DC1</sub>	(k) 1,239
DC2	(k/ft) 0.047
M <sub>DC2</sub>	(k) 47
DW	(k/ft) 0.286
M <sub>DW</sub>	(k) 284
M <sub>L + IM</sub>	(k) 1,388

INTERIOR BEAM REACTION TABLE	
Abut.	
R <sub>DC1</sub>	(k) 55.6
R <sub>DC2</sub>	(k) 2.1
R <sub>DW</sub>	(k) 12.7
R <sub>L + IM</sub>	(k) 87.8
R <sub>Total</sub>	(k) 157.7

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.  
 3/4" φ A307 Bolts with lock nuts. (Typ.)  
 Bolts through the concrete web shall be tightened to snug tight only.



NOTES:  
 All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.  
 Two hardened washers are required for each set of oversized holes.  
 All holes shall be 15/16" φ unless otherwise noted.  
 5/16" x 3" x 3" plate washers are required over all slotted holes.  
 All bolts shall be galvanized according to AASHTO M232.  
 Bracing shall be installed as beams are erected and tightened as soon as possible during erection.  
 Permanent bracing will not be measured separately for payment, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Beams of the type and size specified.

PERMANENT BRACING DETAILS FOR  
48" AND 54" PPC I-BEAMS

FRAMING PLAN  
STRUCTURE NO. 056-3179

SHEET NO. S-12	F.A.S. RTE. 1233	SECTION 06-00321-00-BR	COUNTY MCHENRY	TOTAL SHEETS 48	SHEET NO. 30
S-21 SHEETS			CONTRACT NO. 63516		
ILLINOIS FED. AID PROJECT					

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