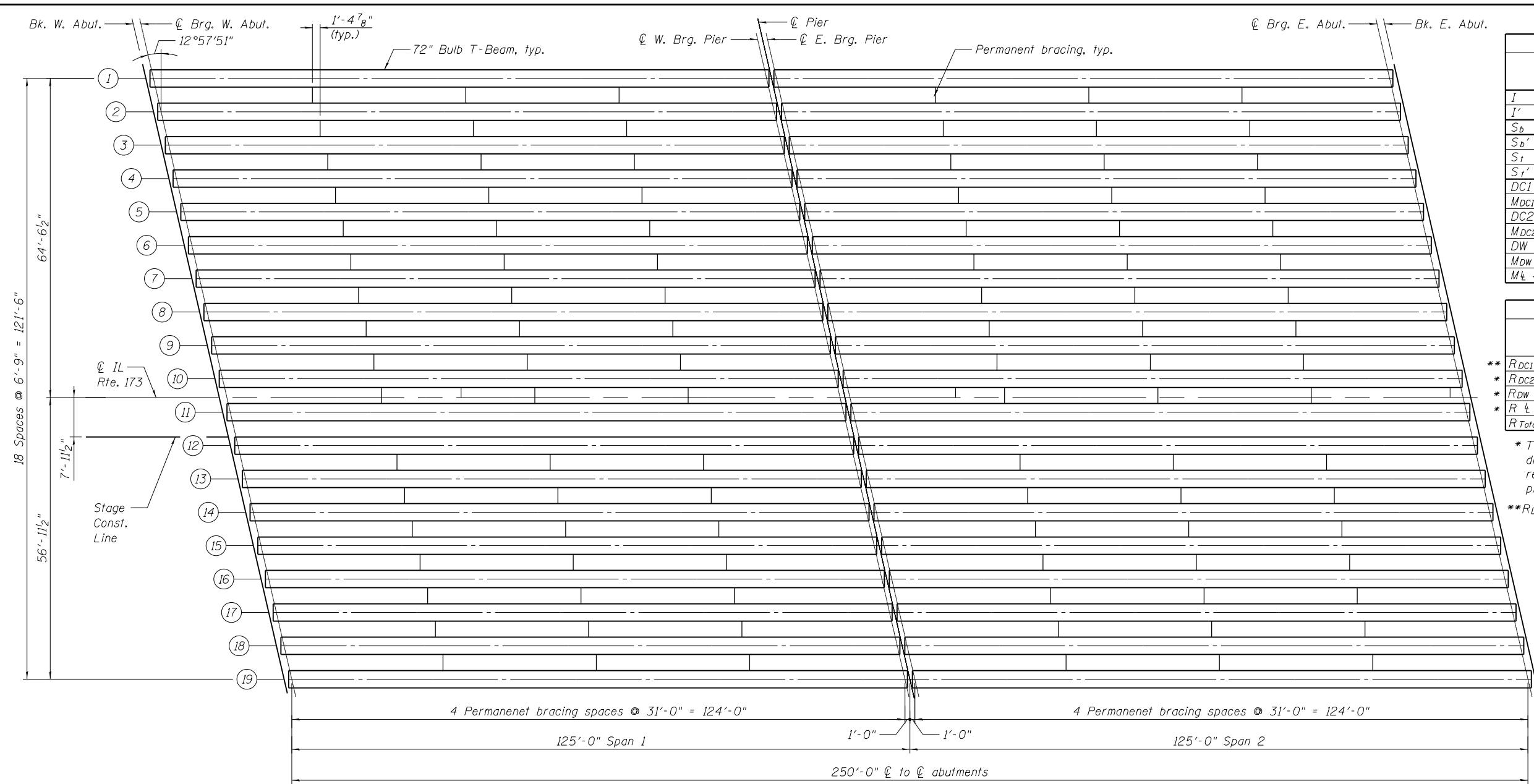


6/19/2012 11:05:55 AM

S:\101\05_CADD\60L77_IL_173\60L77_Sheets\0490535-60L77-023-FP.dgn

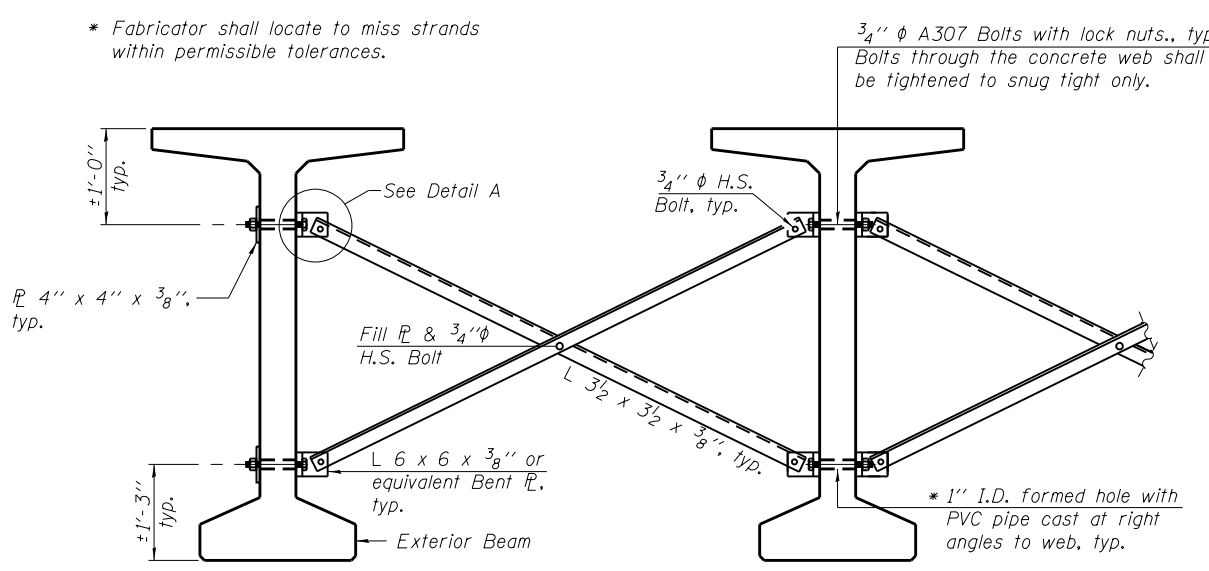


	0.4 Sp. 1 0.6 Sp. 2	Pier
I	545,894	-
I'	1,020,166	1,020,166
S_b	14,915	-
S_b'	19,624	19,624
S_t	15,421	-
S_t'	50,973	50,973
$DC1$	1.56	1.56
M_{DC1}	2,893	-
$DC2$	0.25	0.25
M_{DC2}	273	-470
DW	0.29	0.29
M_{DW}	317	-546
$M_L + IM$	1,803	-1,787

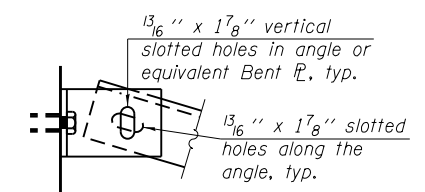
	W. Abut. E. Abut.	Pier
** R_{DC1}	117.3	207.8
* R_{DC2}	11.7	39.1
* R_{DW}	13.6	45.3
* $R_L + IM$	91.2	178.6
R_{Total}	233.8	470.8

* The total R_{DC2} , R_{DW} and $R_L + IM$ are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios. The bearing design at a pier is based on the maximum reactions of either span.
 ** R_{DC1} includes weight of concrete diaphragms.

* Fabricator shall locate to miss strands within permissible tolerances.



FRAMING PLAN



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 1 5/16" phi 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 shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete Bulb T-Beams.

I : Non-composite moment of inertia of beam section (in^4).
 I' : Composite moment of inertia of beam section (in^4).
 S_b : Non-composite section modulus for the bottom fiber of the prestressed beam (in^3).
 S_b' : Composite section modulus for the bottom fiber of the prestressed beam (in^3).
 S_t : Non-composite section modulus for the top fiber of the prestressed beam (in^3).
 S_t' : Composite section modulus for the top fiber of the prestressed beam (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.).

BOWMAN, BARRETT & ASSOCIATES INC.
 CONSULTING ENGINEERS
 Chicago, Illinois
 312.228.0100
 www.bbandatinc.com

USER NAME =	DESIGNED - MRM	DATE - 6/19/2012
PLLOT SCALE =	CHECKED - IL	REVISED -
PLLOT DATE =	DRAWN - LAM	REVISED -
	CHECKED - MRM	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
 STRUCTURE NO. 049-0535 (BRIDGE NO. 441)

SHEET NO. S-23 OF S-36 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94	49-1-R-1	LAKE	677	461
CONTRACT NO. 60L77				

ILLINOIS FED. AID PROJECT