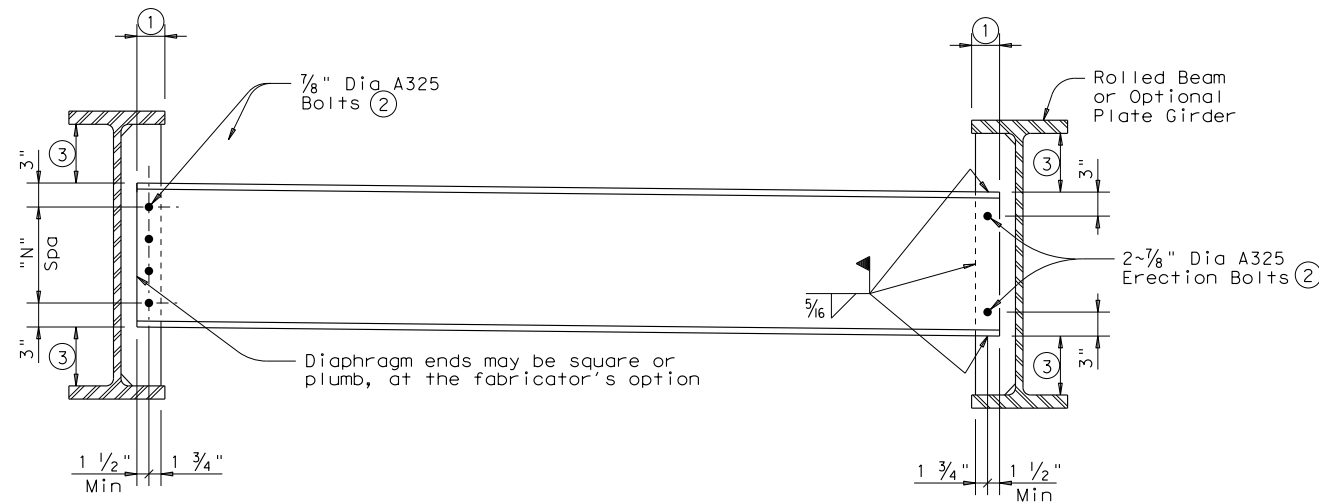


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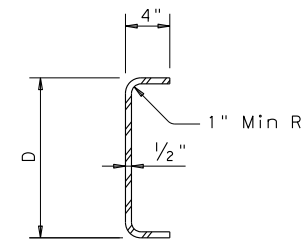
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**BOLTED CONNECTION OPTION ④**

**WELDED CONNECTION OPTION**

**DIAPHRAGM ELEVATION**

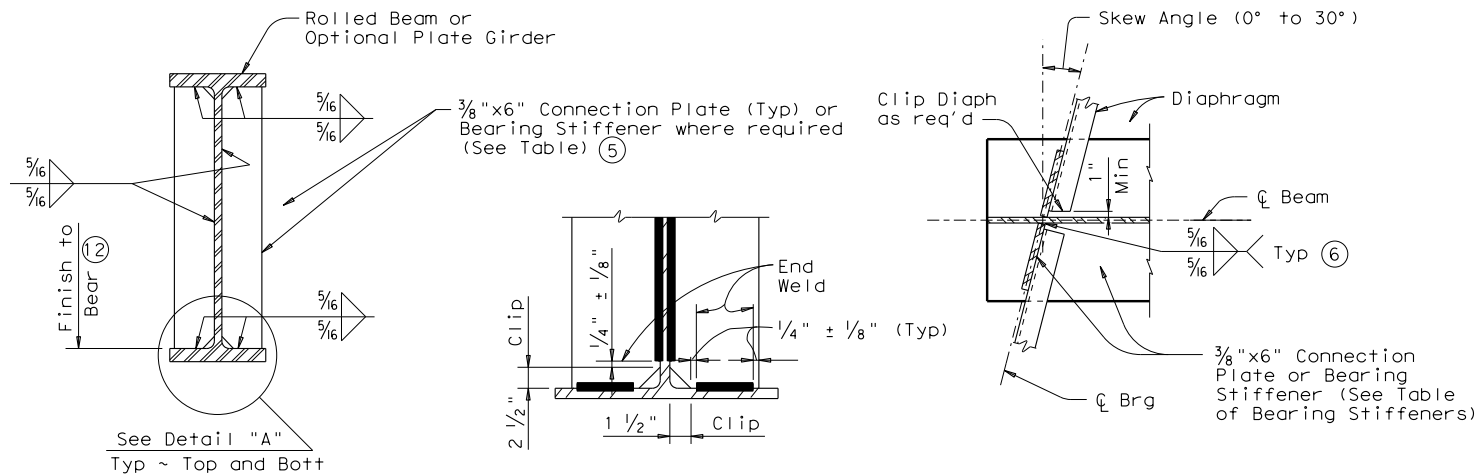


**OPTIONAL BENT PLATE DIAPHRAGM SECTION**

**TABLE OF DIAPHRAGM DATA**

Beam Size	Diaphragm Member	Optional Bent PL Diaph Depth, D	"N" Spaces
W18	C12 x 20.7	12"	2
W21 thru W30	C15 x 33.9	15"	3
W33 & W36	MC18 x 42.7	18"	3
W40	W21 x 44 ①	21"	3

- ① For W21x44 diaphragm members, cut and chip F.S. of diaphragm as required to clear stiffener/connection plate.
- ② All bolts shall have one hardened washer each. Holes are 5/16" Dia. Erection bolts for welded connection must be at least snug tight. Bolts for bolted connection must be fully tightened in accordance with Item 447 "Structural Bolting".
- ③ Center Diaphragm on Connection Plate - 1/2".
- ④ For structures to be painted with System II, faying surfaces of bolted diaphragm connections (not welded) shall be painted with the specified prime coat after receiving a SSPC SP-10 blast cleaning.
- ⑤ Connection plates and bearing stiffeners shall be omitted at fascia side of exterior beams.
- ⑥ Weld size must be increased by amount of gap if gap exceeds 1/16".
- ⑦ Bearing Stiffeners required only for optional plate girders. Omit at fascia side of exterior girders.
- ⑧ The Fabricator shall determine the stud height based on the requirements shown except that the studs shall not be less than 5" in height.
- ⑨ Studs shall be electric arc end-welded to the flanges with complete fusion. See Steel Beam Span sheets for spacing.
- ⑩ Place drip plate 3' from low bearing or 3' from each bearing for bridges on flat grades.
- ⑪ For exterior beams of unpainted weathering steel only.
- ⑫ Required only for bearings of optional plate girders.



**ELEVATION**

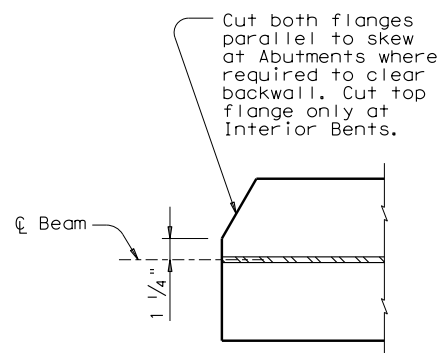
**DETAIL "A"**

**PLAN AT BEARINGS**

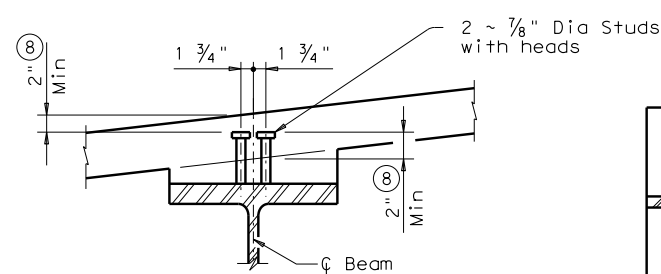
**CONNECTION PLATE AND BEARING STIFFENER DETAILS**

**TABLE OF BEARING STIFFENERS ⑦**

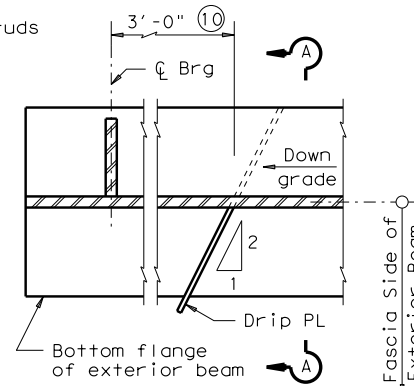
Flange Width	Bearing Stiffener Size
12"	3/4" x 5 1/2"
14"	3/4" x 6 1/2"
15"	3/4" x 7"
16"	3/4" x 7 1/2"



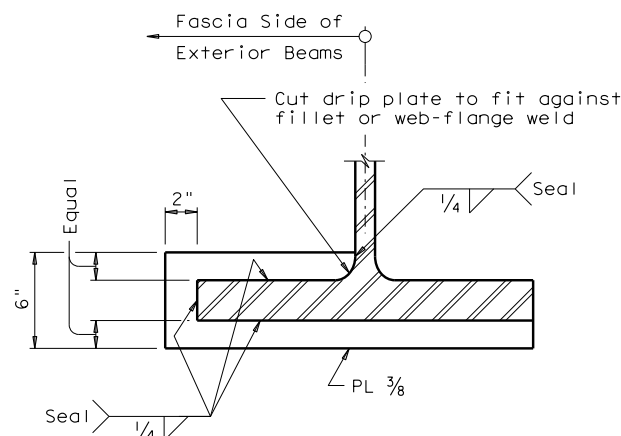
**SKewed BEAM END DETAIL**



**STUD CONNECTOR DETAIL ⑨**



**PLAN**



**SECTION A-A**

**DRIP PLATE DETAILS ⑩**

**GENERAL NOTES:**

Designed according to AASHTO LRFD Specifications.  
See Steel Beam Span sheets for location of diaphragms and location of bearing stiffeners and/or connection plates.

The details shown on this sheet are applicable for use only with the Steel Beam Standard Designs shown on Standards SBSD-24, SBSD-28 and SBSD-30.

**HL93 LOADING**

Texas Department of Transportation  
**STEEL BEAM MISCELLANEOUS DETAILS**  
 SBMD

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DIST		COUNTY	SHEET NO.	