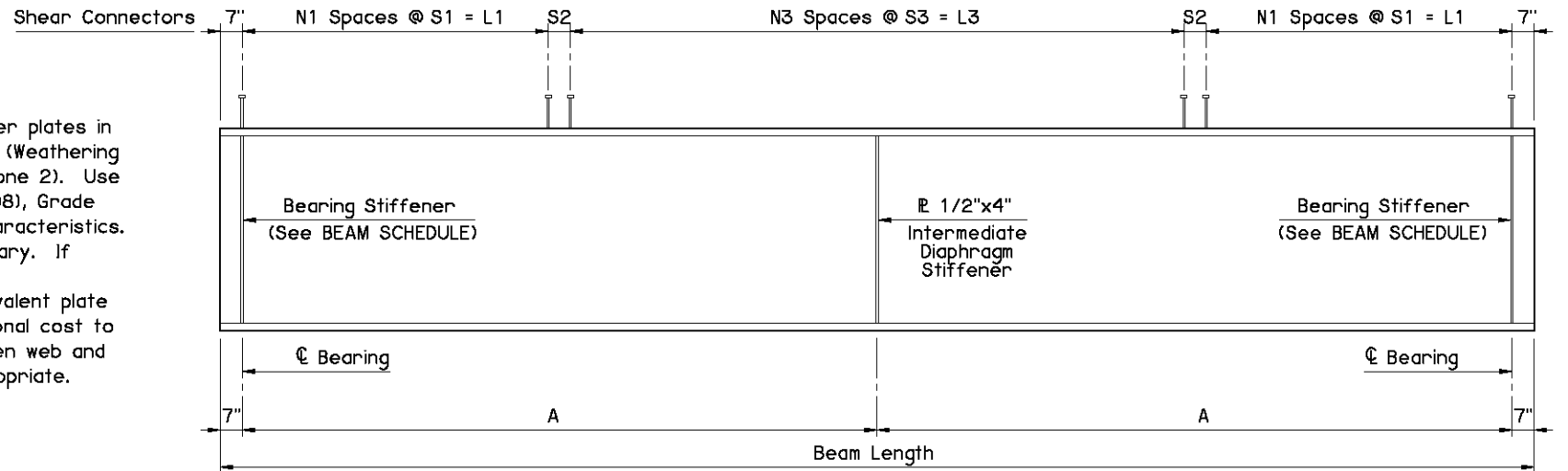


**ROLLED BEAM NOTES**

Provide structural steel for Rolled Beam and all stiffener plates in accordance with AASHTO M270 (ASTM A709), Grade 50WT2 (Weathering Steel, Non-Fracture Critical Charpy V-Notch tested for Zone 2). Use Shear Connectors conforming to AASHTO M169 (ASTM A108), Grade 1015, 1018 or 1020. Provide welding with weathering characteristics.

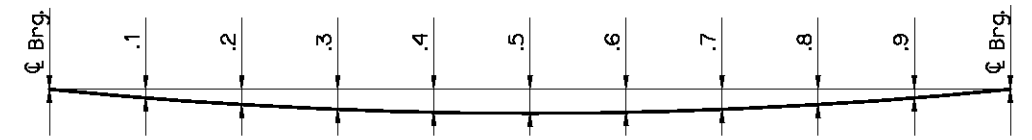
Camber Beams to account for vertical curve, if necessary. If cambering is not required, place natural camber up.

The Contractor may substitute Plate Girders using equivalent plate sizes in lieu of the Rolled Beam shape shown at no additional cost to the Department. Provide 5/16" minimum fillet welds between web and flanges. Non-destructive testing will be required as appropriate.



**ELEVATION**

BEAM SCHEDULE												
SPAN	BEAM	BEAM LENGTH	A	N1	S1	L1	S2	N3	S3	L3	BEARING STIFFENER	LFD OPERATING RATING
30'	W27x84	29'-8"	14'-3"	-	-	-	-	57	6"	28'-6"	℞ 5/8"x4"	HS 59.2
35'	W30x90	34'-8"	16'-9"	-	-	-	-	67	6"	33'-6"	℞ 3/4"x4 1/2"	HS 49.7
40'	W30x99	39'-8"	19'-3"	-	-	-	-	77	6"	38'-6"	℞ 3/4"x4 1/2"	HS 40.2
45'	W30x116	44'-8"	21'-9"	-	-	-	-	87	6"	43'-6"	℞ 3/4"x4 1/2"	HS 38.1
50'	W33x130	49'-8"	24'-3"	24	6"	12'-0"	7"	35	8"	23'-4"	℞ 3/4"x5"	HS 38.9

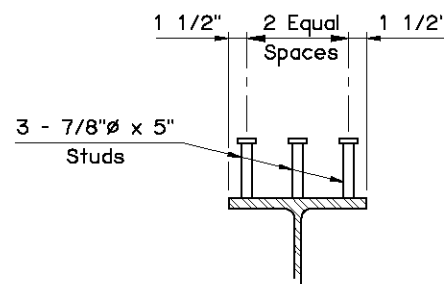


**DEAD LOAD DEFLECTION DIAGRAM**

Information shown on this sheet is applicable only to the standard bridge cross-section with 40' Clear Roadway, 8" Deck Slab and 4 Beams at 11'-10" spacing. Any deviation requires custom design and details with an appropriate Dead Load Deflection Diagram.

DEFLECTION SCHEDULE												
SPAN	BEAM AND DIAPHRAGM DEFLECTION						DECK SLAB, HAUNCH, S.I.P. STEEL DECK FORMS AND TRAFFIC RAIL DEFLECTION ②					
	℄ BRG.	.1 & .9	.2 & .8	.3 & .7	.4 & .6	.5	℄ BRG.	.1 & .9	.2 & .8	.3 & .7	.4 & .6	.5
30'	0.00"	0.01"	0.01"	0.01"	0.01"	0.02"	0.00"	0.07"	0.13"	0.17"	0.20"	0.21"
35'	0.00"	0.01"	0.01"	0.02"	0.02"	0.02"	0.00"	0.10"	0.19"	0.26"	0.30"	0.32"
40'	0.00"	0.01"	0.02"	0.03"	0.04"	0.04"	0.00"	0.16"	0.30"	0.41"	0.48"	0.50"
45'	0.00"	0.02"	0.04"	0.05"	0.06"	0.07"	0.00"	0.21"	0.39"	0.54"	0.63"	0.66"
50'	0.00"	0.03"	0.05"	0.07"	0.08"	0.08"	0.00"	0.24"	0.45"	0.62"	0.72"	0.76"

② The Dead Load Deflection shown at the tenth points are the deflections due to Deck Slab + Haunch + S.I.P. Steel Deck Form Allowance + Concrete Traffic Rail. It does not include the Beam weight, Diaphragms or Future Wearing Surface.



**SHEAR CONNECTOR DETAIL**

NOTE:  
For additional details, see DIAPHRAGM DETAILS.

APPROVED BY BRIDGE ENGINEER *Scott J. Smith* DATE *4/2/10*

OKLAHOMA DEPT. OF TRANSPORTATION  
BRIDGE STANDARD (ENGLISH)  
**ROLLED BEAM DETAILS**  
**30' THRU 50' SPANS**  
**CONVENTIONAL**

2009 SPECIFICATIONS | B40-C-RB-3050 | 02E  
B-346E