

ROLLED BEAM NOTES

Structural steel for Rolled Beam and all stiffener plates shall conform to AASHTO M270 (ASTM A709), Grade 50WT2 (Weathering Steel, Non-Fracture Critical Charpy V-Notch tested for Zone 2). Shear Connectors shall conform to AASHTO M169 (ASTM A108), Grade 1015, 1018 or 1020. Welding shall have weathering characteristics. Beams shall be cambered to account for dead load deflection and, if necessary, vertical curve. Contractor may elect to fabricate Plate Girders using equivalent plate sizes in lieu of Rolled Beam shape shown. Web to flange welds shall be minimum 5/16" fillet welds. Non-destructive testing will be required as appropriate. Costs to construct Plate Girders shall be at the Contractor's expense.

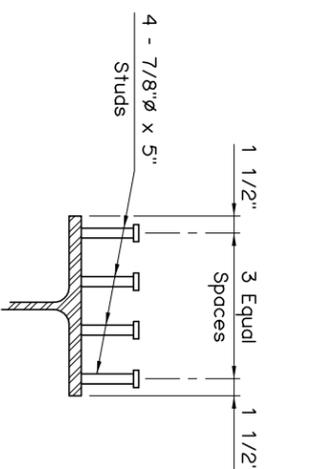
HALF ELEVATION AT ABUTMENT

ELEVATION

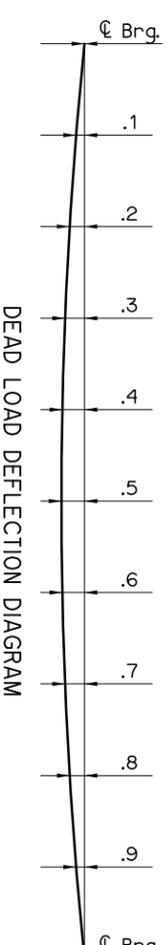
HALF ELEVATION AT PIER

① Elastomeric Pad shall have a 50 durometer hardness and consist of a single layer. The pad shall extend 1/2" beyond the end of the beam as shown.

BEAM SCHEDULE										
SPAN	BEAM	BEAM LENGTH	A	N1	S1	L1	S2	BEARING STIFFENER	ELASTOMERIC PAD	LFD OPERATING RATING
80'	W40x215	79'-8"	19'-7 1/2"	29	10"	24'-2"	5"	R 3/4"x7"	1"x1'-3 3/4"x4'-10 1/2"	HS 33.5
85'	W40x249	84'-8"	20'-10 1/2"	32	10"	26'-8"	5"	R 3/4"x7"	1"x1'-3 3/4"x4'-10 1/2"	HS 36.0
90'	W40x277	89'-8"	22'-1 1/2"	35	10"	29'-2"	5"	R 3/4"x7"	1"x1'-3 7/8"x4'-10 1/2"	HS 36.6
95'	W40x297	94'-8"	23'-4 1/2"	38	10"	31'-8"	5"	R 3/4"x7"	1"x1'-3 7/8"x4'-10 1/2"	HS 34.5
100'	W40x324	99'-8"	24'-7 1/2"	41	10"	34'-2"	5"	R 3/4"x7"	1"x1'-3 7/8"x4'-10 1/2"	HS 34.4



SHEAR CONNECTOR DETAIL



DEAD LOAD DEFLECTION DIAGRAM

SPAN	BEAM AND DIAPHRAGM DEFLECTION										DECK SLAB, HAUNCH, SIP FORMS AND TRAFFIC RAIL DEFLECTION ②									
	1 & 9	2 & 8	3 & 7	4 & 6	5	6	7	8	9	10	1 & 9	2 & 8	3 & 7	4 & 6	5	6	7	8	9	10
80'	0.00"	0.12"	0.22"	0.31"	0.36"	0.38"	0.36"	0.31"	0.22"	0.12"	0.00"	0.67"	1.26"	1.72"	2.02"	2.12"	2.02"	1.72"	1.26"	0.67"
85'	0.00"	0.15"	0.28"	0.39"	0.46"	0.48"	0.46"	0.39"	0.28"	0.15"	0.00"	0.73"	1.38"	1.89"	2.22"	2.33"	2.22"	1.89"	1.38"	0.73"
90'	0.00"	0.19"	0.36"	0.49"	0.57"	0.60"	0.57"	0.49"	0.36"	0.19"	0.00"	0.82"	1.56"	2.13"	2.49"	2.62"	2.49"	2.13"	1.56"	0.82"
95'	0.00"	0.24"	0.45"	0.61"	0.72"	0.76"	0.72"	0.61"	0.45"	0.24"	0.00"	0.97"	1.83"	2.51"	2.94"	3.08"	2.94"	2.51"	1.83"	0.97"
100'	0.00"	0.29"	0.55"	0.75"	0.88"	0.92"	0.88"	0.75"	0.55"	0.29"	0.00"	1.08"	2.05"	2.80"	3.28"	3.45"	3.28"	2.80"	2.05"	1.08"

② The Dead Load Deflection shown at the tenth points are the deflections due to Deck Slab + Haunch + 5 P.s.f. SIP Deck Form Allowance + Concrete Traffic Rail. It does not include the Beam weight, Diaphragms or Future Wearing Surface.

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. Skew angle may be as much as 30° if diaphragms are not staggered. Stay-in-Place Deck Forms are permitted if the conditions listed in the STAY-IN-PLACE DECK FORM NOTES on LONGITUDINAL SECTION sheet are satisfied. Any modification will require a custom design with an appropriate Dead Load Deflection Diagram.

NOTE: For additional details, see DIAPHRAGM DETAILS.

APPROVED BY BRIDGE ENGINEER *Chad Head* DATE 12-1-04
 OKLAHOMA DEPT. OF TRANSPORTATION
 BRIDGE STANDARD (ENGLISH)
 ROLLED BEAM DETAILS
 80' THRU 100' SPANS
 INTEGRAL

1999 SPECIFICATIONS B40-I-RB-80100 O1E B-148E