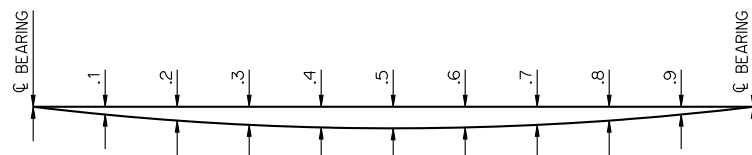


ELEVATION
BRIDGE SKEW 30° LEFT FORWARD IS SHOWN IN DRAWING.

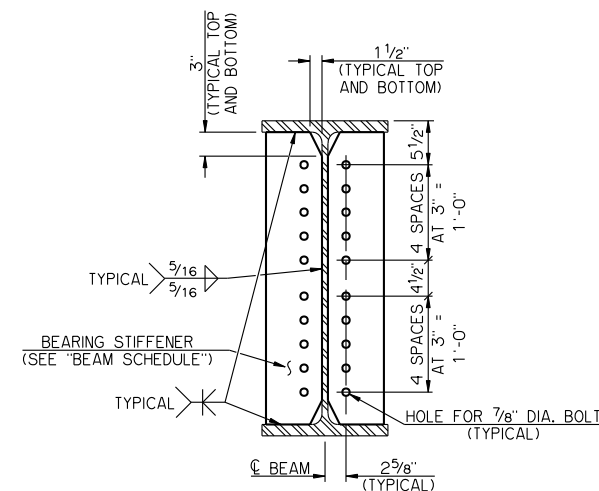
| SPAN | BEAM | BEAM LENGTH | A | BRIDGE SKEW | | | | | | | | | | | | BEARING STIFFENER | LFD OPERATING RATING ① | MAXIMUM (ADTT) _{SL} ALLOWABLE ② | |
|------|-----------|-------------|-------------|-------------|-------------|-------------|------------|------------|-------------|------------------|----|--------|-------------------|----|-----|-------------------|---------------------------|---|-----|
| | | | | 0° | | | | | | 30° LEFT FORWARD | | | 30° RIGHT FORWARD | | | | | | |
| | | | | B | C | B | C | B | C | N1 | S1 | L1 | S2 | N3 | S3 | | | | L3 |
| 80' | W40 X 183 | 79'-8" | 19'-7 1/2" | 19'-7 1/2" | 19'-7 1/2" | 16'-11 3/4" | 22'-3 1/4" | 22'-3 1/4" | 16'-11 3/4" | 42 | 7" | 24'-6" | 6" | 38 | 9" | 28'-6" | P 3/4" X 5" | HS 33.6 | 529 |
| 85' | W40 X 199 | 84'-8" | 20'-10 1/2" | 20'-10 1/2" | 20'-10 1/2" | 18'-2 3/4" | 23'-6 1/4" | 23'-6 1/4" | 18'-2 3/4" | 45 | 7" | 26'-3" | 6" | 40 | 9" | 30'-0" | P 3/4" X 7" | HS 33.4 | 527 |
| 90' | W40 X 215 | 89'-8" | 22'-1 1/2" | 22'-1 1/2" | 22'-1 1/2" | 19'-5 3/4" | 24'-9 1/4" | 24'-9 1/4" | 19'-5 3/4" | 48 | 7" | 28'-0" | 6" | 42 | 9" | 31'-6" | P 3/4" X 7" | HS 33.2 | 536 |
| 95' | W40 X 249 | 94'-8" | 23'-4 1/2" | 23'-4 1/2" | 23'-4 1/2" | 20'-8 3/4" | 26'-1 1/4" | 26'-1 1/4" | 20'-8 3/4" | 33 | 7" | 19'-3" | 6" | 72 | 9" | 54'-0" | P 3/4" X 7" | HS 35.8 | 645 |
| 100' | W40 X 249 | 99'-8" | 24'-7 1/2" | 24'-7 1/2" | 24'-7 1/2" | 21'-11 3/4" | 27'-3 1/4" | 27'-3 1/4" | 21'-11 3/4" | 32 | 8" | 21'-4" | 0" | 67 | 10" | 55'-10" | P 3/4" X 7" | HS 30.0 | 522 |



DEAD LOAD DEFLECTION DIAGRAM

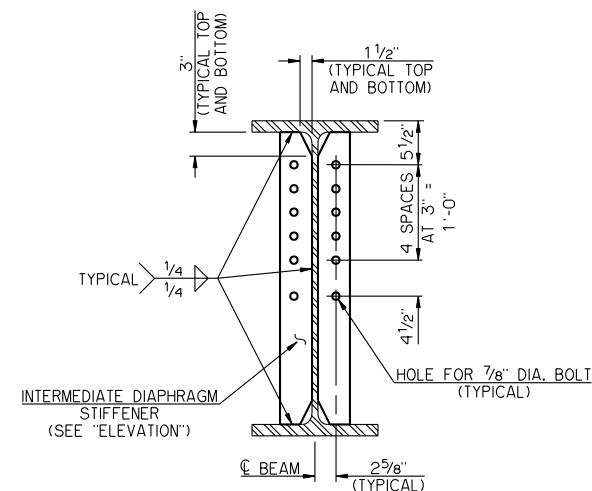
| SPAN | BEAM AND DIAPHRAGM DEFLECTION | | | | | | | | | | | | | | STEEL SIP FORMS, DECK SLAB, HAUNCH, AND CONCRETE TRAFFIC RAIL (TR3) DEFLECTION ③ | | | | |
|------|-------------------------------|-----------|-----------|-----------|-----------|-------|------------|-----------|-----------|-----------|-----------|-------|--|--|--|--|--|--|--|
| | CL BEARING | .1 AND .9 | .2 AND .8 | .3 AND .7 | .4 AND .6 | .5 | CL BEARING | .1 AND .9 | .2 AND .8 | .3 AND .7 | .4 AND .6 | .5 | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| 80' | 0.00" | 0.14" | 0.26" | 0.36" | 0.42" | 0.44" | 0.00" | 0.68" | 1.29" | 1.76" | 2.07" | 2.17" | | | | | | | |
| 85' | 0.00" | 0.17" | 0.32" | 0.44" | 0.52" | 0.54" | 0.00" | 0.78" | 1.48" | 2.03" | 2.38" | 2.50" | | | | | | | |
| 90' | 0.00" | 0.21" | 0.39" | 0.53" | 0.62" | 0.65" | 0.00" | 0.88" | 1.67" | 2.29" | 2.69" | 2.82" | | | | | | | |
| 95' | 0.00" | 0.25" | 0.47" | 0.64" | 0.75" | 0.79" | 0.00" | 0.94" | 1.78" | 2.43" | 2.85" | 2.99" | | | | | | | |
| 100' | 0.00" | 0.31" | 0.58" | 0.79" | 0.93" | 0.97" | 0.00" | 1.16" | 2.19" | 3.00" | 3.51" | 3.69" | | | | | | | |

DEFLECTION SCHEDULE



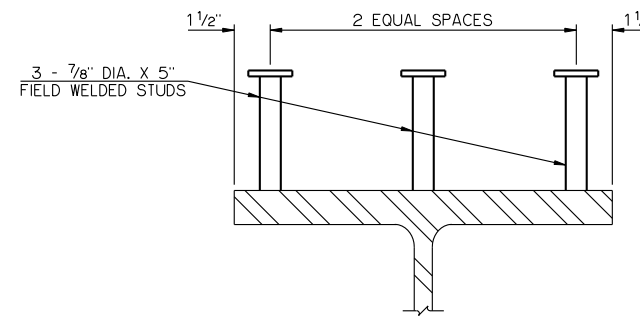
BEARING STIFFENER DETAIL

DETAIL SHOWN AT INTERIOR BEAM. OMIT BOLT HOLES ONLY IN BEARING STIFFENERS AT OUTSIDE FACE OF EXTERIOR BEAMS.



INTERMEDIATE DIAPHRAGM STIFFENER DETAIL

DETAIL SHOWN AT INTERIOR BEAM. OMIT INTERMEDIATE DIAPHRAGM STIFFENERS AT OUTSIDE FACE OF EXTERIOR BEAMS.



SHEAR CONNECTOR DETAIL

NOTES

STRUCTURAL STEEL FOR ROLLED BEAMS AND ALL STIFFENER PLATES SHALL CONFORM TO AASHTO M 270 (ASTM A 709), GRADE 50W, WEATHERING STEEL. ADDITIONALLY, THE STRUCTURAL STEEL SHALL SATISFY THE CHARPY V-NOTCH IMPACT TEST REQUIREMENTS OF AASHTO M 270 FOR ZONE 2 (NON-FRACTURE CRITICAL). SHEAR CONNECTORS SHALL CONFORM TO AASHTO M 169 (ASTM A 108), COLD DRAWN BARS, GRADES 1015, 1018 OR 1020, SEMI-KILLED OR FULLY KILLED DEOXIDATION

BEAMS SHALL BE CAMBERED TO ACCOUNT FOR VERTICAL CURVE, IF NECESSARY. IF CAMBERING IS NOT REQUIRED, PLACE NATURAL CAMBER UP.

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 3/16" FILLET WELDS. NON-DESTRUCTIVE TESTING WILL BE REQUIRED AS APPROPRIATE. COSTS TO CONSTRUCT PLATE GIRDERS SHALL BE AT THE CONTRACTOR'S EXPENSE.

TERMINATE FILLET WELDS 3/8" FROM THE EDGES OF CLIPPED CORNERS AND NON-CLIPPED CORNERS OF STIFFENER PLATES.

FOR ADDITIONAL DETAILS, SEE "DIAPHRAGM DETAILS."

- ① THE LFD OPERATING RATING SHOWN IN THE TABLE IS FOR THE ROLLED BEAMS ONLY AND APPLIES ONLY TO THE ROLLED BEAMS OF A BRIDGE CONSTRUCTED IN STRICT CONFORMANCE TO ALL RELEVANT DETAILS CONTAINED IN THE COMPLETE SET OF COUNTY BRIDGE STANDARDS AND TO THE ODOT STANDARD SPECIFICATIONS.
- ② THIS STANDARD SHALL NOT BE USED IF THE (ADTT) EXCEEDS THE VALUE SHOWN IN THE TABLE. THE (ADTT) IS THE NUMBER OF TRUCKS PER DAY TRAVELING THE BRIDGE IN ONE DIRECTION AVERAGED OVER A 75-YEAR DESIGN LIFE. A TRUCK IS DEFINED AS ANY VEHICLE HAVING MORE THAN EITHER TWO AXLES OR FOUR WHEELS.
- ③ THE DEAD LOAD DEFLECTIONS SHOWN AT THE TENTH POINTS ARE THE THEORETICAL BEAM DEFLECTIONS DUE TO A 5 PSF STEEL SIP FORMS ALLOWANCE, DECK SLAB, HAUNCH AND CONCRETE TRAFFIC RAIL (TR3). THE DEAD LOAD DEFLECTIONS SHALL BE ACCOUNTED FOR IN THE HAUNCH DEPTH CALCULATIONS.

APPROVED BY BRIDGE ENGINEER *Robert J. Duch* DATE 9-9-2011
 OKLAHOMA DEPARTMENT OF TRANSPORTATION
 COUNTY BRIDGE STANDARD (ENGLISH)
ROLLED BEAM DETAILS
80' THRU 100' SPANS
 32' CLEAR ROADWAY - CONVENTIONAL - SKEWED 0° AND 30°
 2009 SPECIFICATIONS CB32-C-SK0.30-RB-80100 O1E
 CB-705E