

STRUCTURAL STEEL GENERAL NOTES

ISSUED: 2009

PLATE
3.9-1

NOTES TO DESIGNERS

- PROVIDE MATERIALS AND WORKMANSHIP CONFORMING TO THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, AND AASHTO/AWS D1.5 WELDING CODE.
- REFER TO SECTION 24 IN THIS MANUAL FOR ADDITIONAL NOTES THAT ARE TO BE SHOWN ON CONTRACT PLANS:
- FILLET WELD SIZES AS REQUIRED BY DESIGN TO BE SHOWN ON PLANS.
- DO NOT CHANGE WIDTH OF TOP FLANGE PLATE IN SIMPLE SPAN GIRDERS.
- MINIMUM CHANGE OF THICKNESS OF FLANGE PLATES SHALL BE $\frac{1}{2}$ ".
- THE FOLLOWING TABLE PROVIDES GUIDELINES IN THE SELECTION OF FLANGE PLATES:

T2 (IN)	T1a (IN)	T1b (IN)	T1c (IN)	T1d (IN)	T1e (IN)
$2\frac{3}{4}$ *	$2\frac{1}{4}$	2	$1\frac{3}{4}$	$1\frac{5}{8}$	-
$2\frac{1}{2}$	$1\frac{3}{4}$	$1\frac{5}{8}$	$1\frac{1}{2}$	$1\frac{3}{8}$	-
$2\frac{1}{4}$	$1\frac{5}{8}$	$1\frac{1}{2}$	$1\frac{5}{8}$	$1\frac{1}{4}$	$1\frac{1}{8}$
2	$1\frac{1}{2}$	$1\frac{3}{8}$	$1\frac{1}{4}$	$1\frac{1}{8}$	-
$1\frac{3}{4}$	$1\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{1}{8}$	1	-
$1\frac{5}{8}$	$1\frac{1}{8}$	1	$\frac{7}{8}$	$\frac{3}{4}$	-
$1\frac{1}{2}$	1	$\frac{7}{8}$	$\frac{3}{4}$	-	-
$1\frac{5}{8}$	$\frac{7}{8}$	$\frac{3}{4}$	-	-	-
$1\frac{1}{4}$	$\frac{3}{4}$	-	-	-	-

* NOT RECOMMENDED FOR TENSION FLANGES.

(1) SELECT FLANGE PLATE THICKNESS T2 FOR MAXIMUM MOMENT.

(2) SELECT T1 FROM AVAILABLE CHOICES T1a THRU T1e.

(3) USE T1 TO ENTER T2 COLUMN FOR RANGE OF POSSIBILITIES FOR NEXT SPLICE. CONTINUE UNTIL T1 MINIMUM IS OBTAINED.

(NOTE: SEE GUIDE PLATE 3.9-4 FOR THICKNESS DESIGNATIONS)

- MINIMUM LENGTH OF FLANGE PLATES SHOULD BE ABOUT 16 FEET. PLATE LENGTHS SHOULD BE PROPORTIONED TO MINIMIZE, AS MUCH AS PRACTICAL, NUMBER OF BUTT JOINTS IN THE TOTAL SPAN LENGTH.
- FLANGE PLATE THICKNESS OF THE COMPONENT PLATES SHOULD BE STANDARDIZED AS MUCH AS PRACTICAL IN EACH CONTRACT TO MINIMIZE EXCESSIVE VARIABILITY IN THE ORDER MATERIAL AND TO MAXIMIZE USE OF THE ORDER MATERIAL.
- CHANGES IN FLANGE AREAS MAY BE ACCOMPLISHED BY VARYING THE THICKNESS AND WIDTH (EXCEPT SEE NOTE D) OF ADJACENT FLANGE PLATES. HOWEVER, A DESIGN MAINTAINING THE SAME WIDTH OF FLANGE AND CHANGING ONLY THE THICKNESS IS PREFERRED IN ORDER TO IMPROVE THE "STRESS FLOW" CHARACTERISTICS OF THE JOINT.
- SEE SUBSECTION 24.4 OF THIS MANUAL ABOUT "ECONOMICS OF STRINGER DESIGN".
- LOCATE ALL INTERMEDIATE STIFFENERS ON OPPOSITE SIDE OF WEB FROM LONGITUDINAL STIFFENERS WHEN POSSIBLE.
- WHEN A BEARING STIFFENER IS USED AS A CONNECTION PLATE, WELD TO TOP AND BOTTOM FLANGE.
- MEMBERS, WELD AND PLATE SIZES SHOWN IN PLATES 3.9-2 THRU 3.9-25 ARE FOR STRAIGHT GIRDERS WITH MAXIMUM GIRDER SPACING OF 10'-0" AND FOR SKEW ANGLES UPTO 20°.
- THE DETAILS SHOWN IN PLATES 3.9-2 THRU 3.9-25 ARE VALID FOR SKEW ANGLES 0° TO 20°. PROVIDE SPECIAL DETAILS FOR SKEW ANGLES GREATER THAN 20°.
- PROVIDE INTERMEDIATE DIAPHRAGMS NORMAL TO THE MAIN MEMBERS FOR SKEWS > 20°.
- THE DIAPHRAGMS SHOWN IN PLATES 3.9-2 THRU 3.9-25 ARE FOR STRAIGHT GIRDERS ONLY AND DO NOT INCLUDE WIND LOAD TRANSFERRED THROUGH CONNECTIONS.
- SEE GUIDE PLATE 3.9-26 FOR "NOTES TO BE SHOWN ON CONTRACT PLANS".