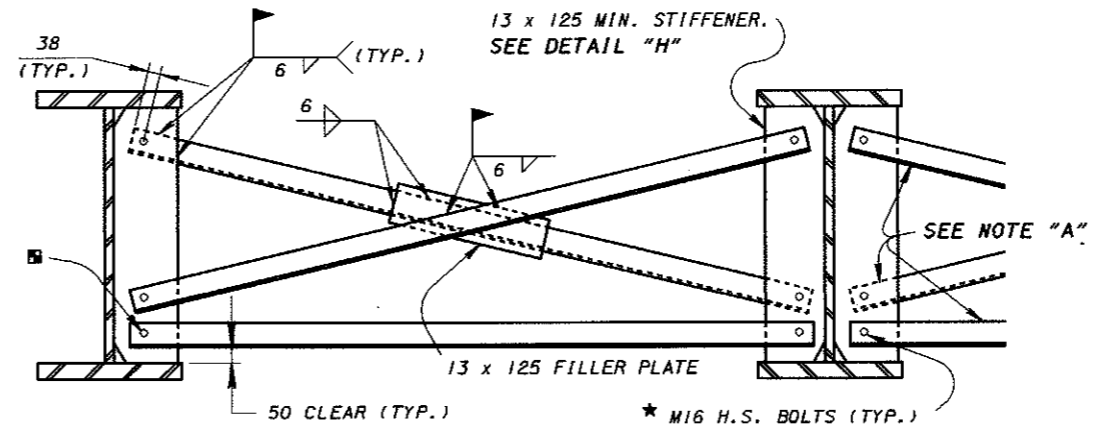
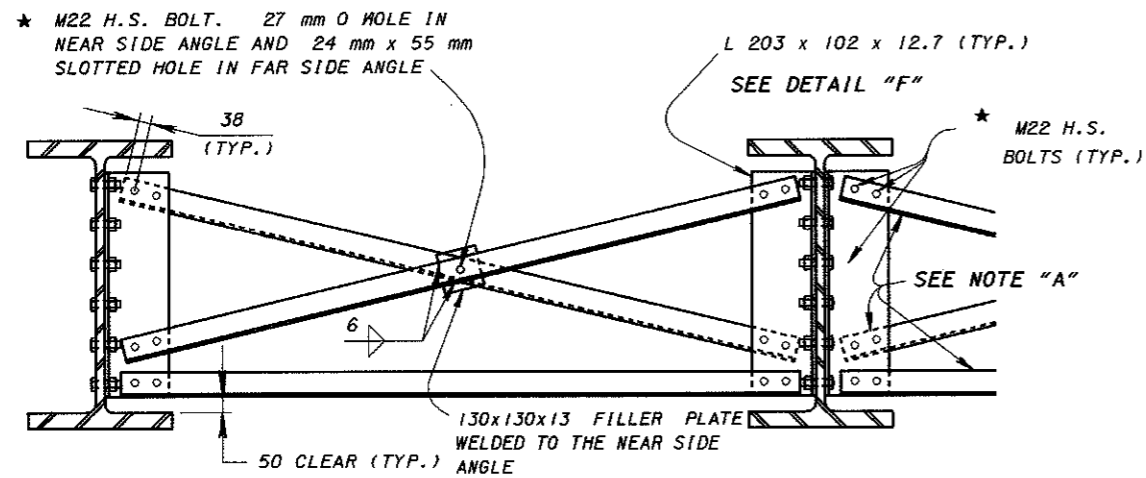


**TYPE 1: INTERMEDIATE WELDED CROSSFRAME DETAILS**  
FOR ROLLED BEAM BRIDGES  
AASHTO CASE 11

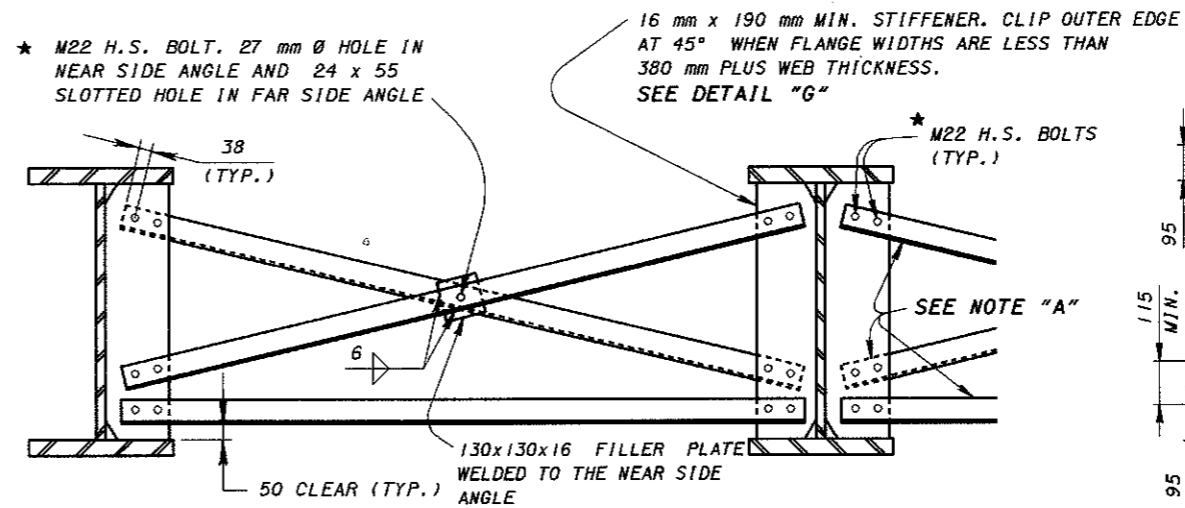


**TYPE 3 INTERMEDIATE WELDED CROSSFRAME DETAILS**  
FOR GIRDER BRIDGES AND AASHTO CASE 1 ROLLED BEAM BRIDGES

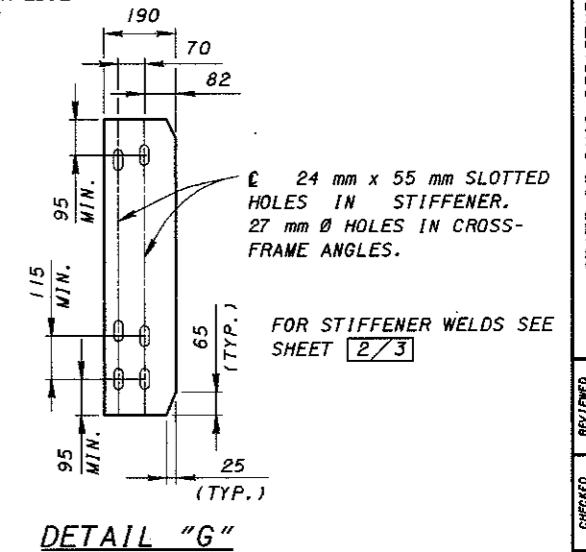
CROSSFRAME ANGLE SIZE	
DEPTH OF BEAM/GIRDER	MINIMUM SIZE ANGLE
$D < 1250 \text{ mm}$	76x76x7.9
$1200 \text{ mm} < D < 1350 \text{ mm}$	89x89x9.5
$1300 \text{ mm} < D < 1550 \text{ mm}$	102x102x9.5



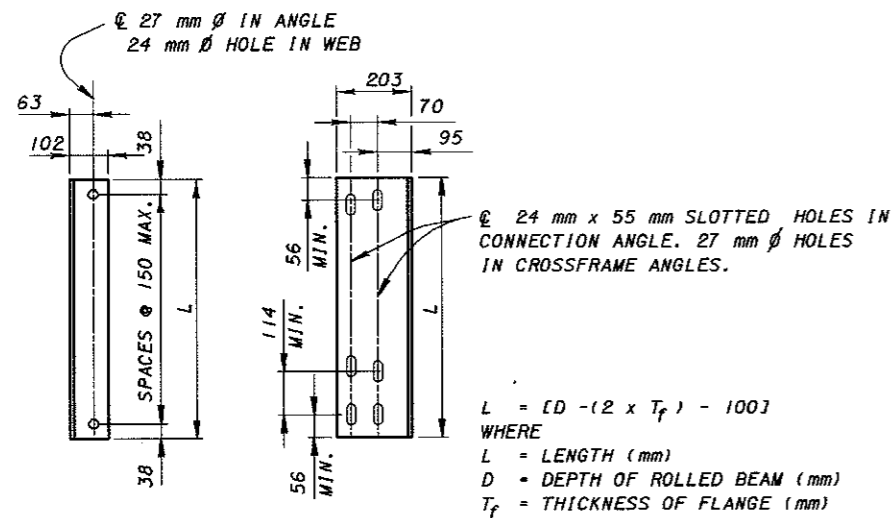
**TYPE 2: INTERMEDIATE BOLTED CROSSFRAME DETAILS**  
FOR ROLLED BEAM BRIDGES  
AASHTO CASE 1 OR CASE 11



**TYPE 4 INTERMEDIATE BOLTED CROSSFRAME DETAILS**  
FOR GIRDER BRIDGES AND AASHTO CASE 1 ROLLED BEAM BRIDGES



**DETAIL "G"**



**DETAIL "F"**

\* ALL BOLTS ARE A325M TYPE 1 GALVANIZED FOR A GALVANIZED OR PAINTED BRIDGE AND A325M TYPE 3 FOR A588M WEATHERING STEEL BRIDGE. EACH ANCHOR ASSEMBLY SHALL INCLUDE A BOLT, NUT AND TWO (2) WASHERS, TIGHTENED PER CMS SECTION 513.15.

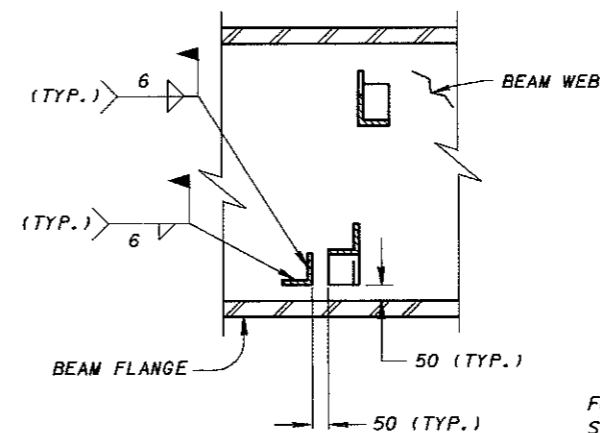
THE FABRICATOR SHALL CHECK LONGITUDINAL CROSSFRAME SPACING SO THAT INTERFERENCE WITH BOLTED SPLICES, ANCHOR BOLTS, COMPLETE PENETRATION WEB OR FLANGE WELDED SPLICES AND BEARING STIFFENERS CAN BE AVOIDED. SPACING SHALL BE ADJUSTED TO PROVIDE AT LEAST 150 mm OF LONGITUDINAL CLEARANCE. THE FABRICATOR MAY ADJUST CROSSFRAME SPACES UP TO A MAXIMUM OF 5000 mm CENTER TO CENTER UNLESS THE CONTRACT DRAWINGS PROVIDE A NOTED MAXIMUM.

FOR COMPLETELY SHOP PAINTED OR GALVANIZED SYSTEMS, A TYPE 2 OR TYPE 4 CROSSFRAME SHALL BE USED.

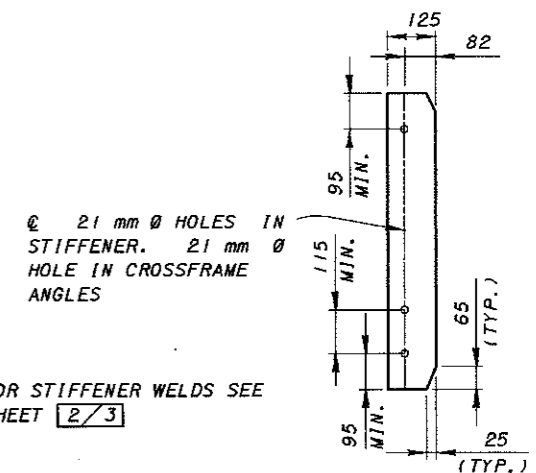
AT THE OPTION OF THE CONTRACTOR, TYPE 2 CROSSFRAME CAN BE USED IN LIEU OF TYPE 1 CROSSFRAME AND TYPE 4 CROSSFRAME CAN BE USED INSTEAD OF TYPE 3 CROSSFRAME.

AT SKEWED STRUCTURES THE NEED OF SLOTTED HOLES AT EACH CROSS FRAME LOCATION SHALL BE INVESTIGATED AND SPECIFIED ON THE PLANS AS REQUIRED.

**NOTE "A"**  
MATCH CROSSFRAME LEGS TO EACH SIDE OF THE WEB, SEE CROSSFRAME ANGLE SIZE GUIDE TABLE FOR SIZES



**SECTION A-A**



**DETAIL "H"**