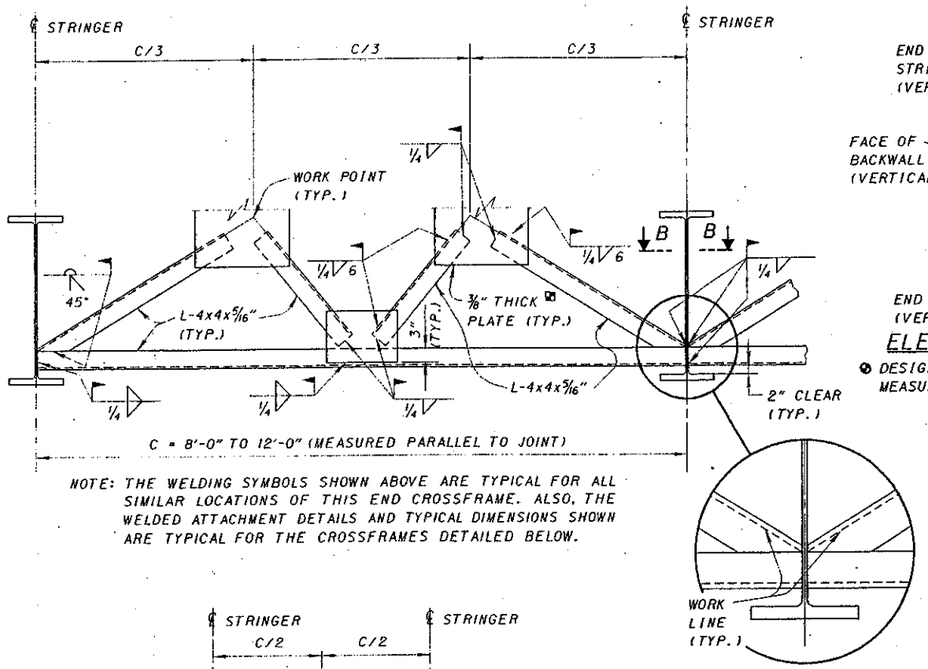
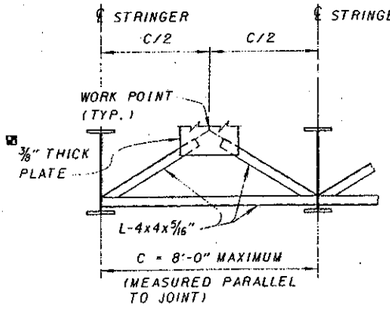
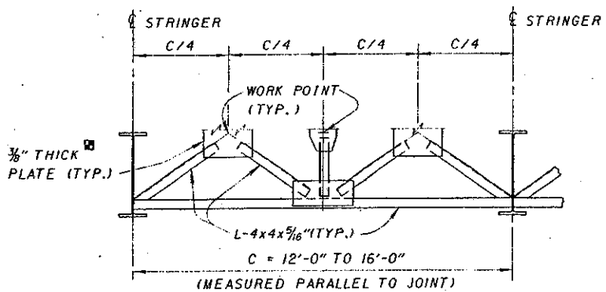
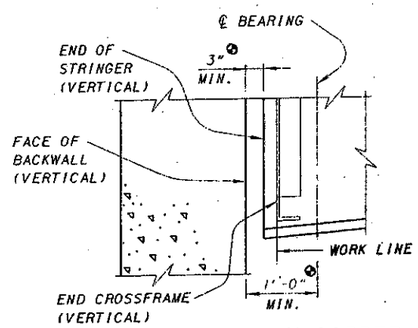


NOTE: THE WELDING SYMBOLS SHOWN ABOVE ARE TYPICAL FOR ALL SIMILAR LOCATIONS OF THIS END CROSSFRAME. ALSO, THE WELDED ATTACHMENT DETAILS AND TYPICAL DIMENSIONS SHOWN ARE TYPICAL FOR THE CROSSFRAMES DETAILED BELOW.





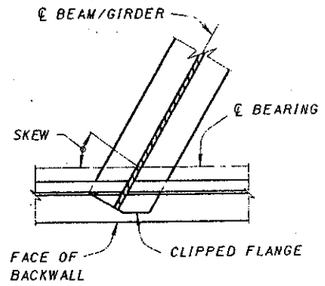
END CROSSFRAME DETAILS



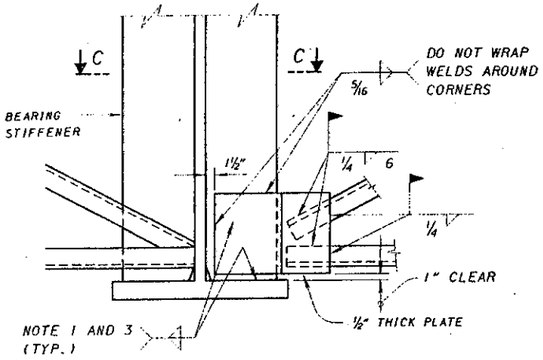
ELEVATION OF BEAM/GIRDER

◘ DESIGNER TO ESTABLISH DIMENSION REQUIRED, MEASURED NORMAL TO BACKWALL.

◘ 3/8" THICK PLATE IS A PART OF THE EXPANSION JOINT SYSTEM. SEE EXPANSION JOINT STANDARD DRAWINGS FOR DETAILS.

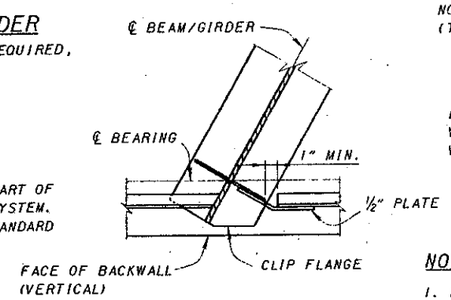


SECTION B-B

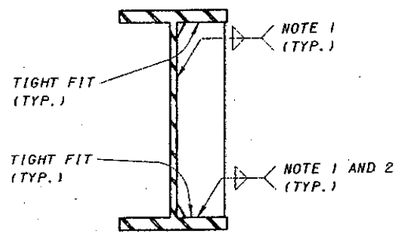


BEAM/GIRDER END

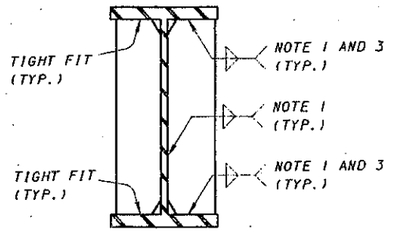
END CROSSFRAME FOR SKEWED BRIDGES WHERE BEARING STIFFENERS INTERFERE WITH END CROSSFRAMES.



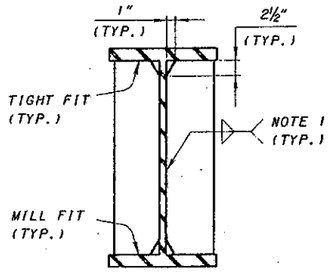
SECTION C-C



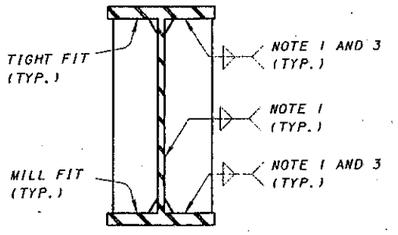
INTERMEDIATE STIFFENER



INTERMEDIATE STIFFENER WITH CROSSFRAMES



BEARING STIFFENER



BEARING STIFFENER WITH CROSSFRAMES

NOTES:

1. PROVIDE 1/4" WELD WHEN THE THICKER PLATE IS 3/4" OR LESS OR 5/16" WELD WHEN THE THICKER PLATE IS GREATER THAN 3/4", UNLESS DESIGN REQUIRES LARGER WELDS (SEE CMS 513.17).
2. INTERMEDIATE STIFFENERS REQUIRE FILLET WELDS TO THE COMPRESSION FLANGE ONLY PER CMS 513.08.
3. STIFFENERS TO WHICH CROSS FRAMES CONNECT REQUIRE FILLET WELDS TO BOTH FLANGES PER CMS 513.08

BEARING STIFFENER: BEARING STIFFENER SHALL BE VERTICAL AFTER ERECTION.

WELDS: STIFFENER TO STRINGER WELDS SHALL BE TERMINATED AS GIVEN BELOW:

A. STIFFENER TO STRINGER FLANGE WELDS 1/4" ± 1/8" AT BOTH ENDS OF THE STIFFENER.
B. STIFFENER TO STRINGER WEB WELDS 1/2" ± 1/4" AT BOTH ENDS OF THE STIFFENER.

MILL FIT: THE BEARING ENDS OF THE BEARING STIFFENER SHALL BE FLUSH AND SQUARE WITH THE WEB AND SHALL HAVE AT LEAST 75 PERCENT OF THIS AREA IN CONTACT WITH THE INNER SURFACE OF THE FLANGE.

TIGHT FIT: A TIGHT FIT IS DEFINED AS ONE IN WHICH THE STIFFENER AND FLANGE ARE IN PHYSICAL CONTACT OVER SOME PORTION OF THE END OF THE STIFFENER AND HAVING NO GAP IN EXCESS OF 1/16 INCH.

BEAM OR GIRDER ENDS: FOR STRUCTURES ON GRADE THE BEAM OR GIRDER ENDS SHALL BE CUT IN A MANNER THAT THEY ARE VERTICAL AFTER ERECTION. A THREE (3) INCH MINIMUM CLEARANCE AT 60 F SHALL BE MAINTAINED BETWEEN THE VERTICAL ENDS OF THE BEAMS OR GIRDERS AND THE VERTICAL FACE OF THE BACKWALL.

WORK POINTS: WORK POINTS SHALL BE COORDINATED BETWEEN EXPANSION JOINT AND STRUCTURAL STEEL SUPPLIERS TO ASSURE FIT UP AT ALL DESIGN LOCATIONS.

TRANSITION OF THICKNESS OR WIDTH AT BUTT JOINTS: REFER TO SECTION 9.20 OF THE AMERICAN WELDING SOCIETY (AWS) BRIDGE WELDING CODE AS AMENDED BY SUPPLIMENTAL SPECIFICATION 1011 WHICH PROVIDES TRANSITION DETAILS OF THICKNESSES AND WIDTHS AT COMPLETE PENETRATION BUTT JOINTS.

DESIGN AGENCY
OFFICE OF STRUCTURAL ENGINEERING

STATE OF OHIO DEPARTMENT OF TRANSPORTATION
Brad Fague 2-12-97
ADMINISTRATOR DATE

REVISIONS

DESIGNED JCR | DRAWN BDB/FD | CHECKED JS | REVIEWED WTL | GSD-1-96

STANDARD

GENERAL STEEL DETAILS