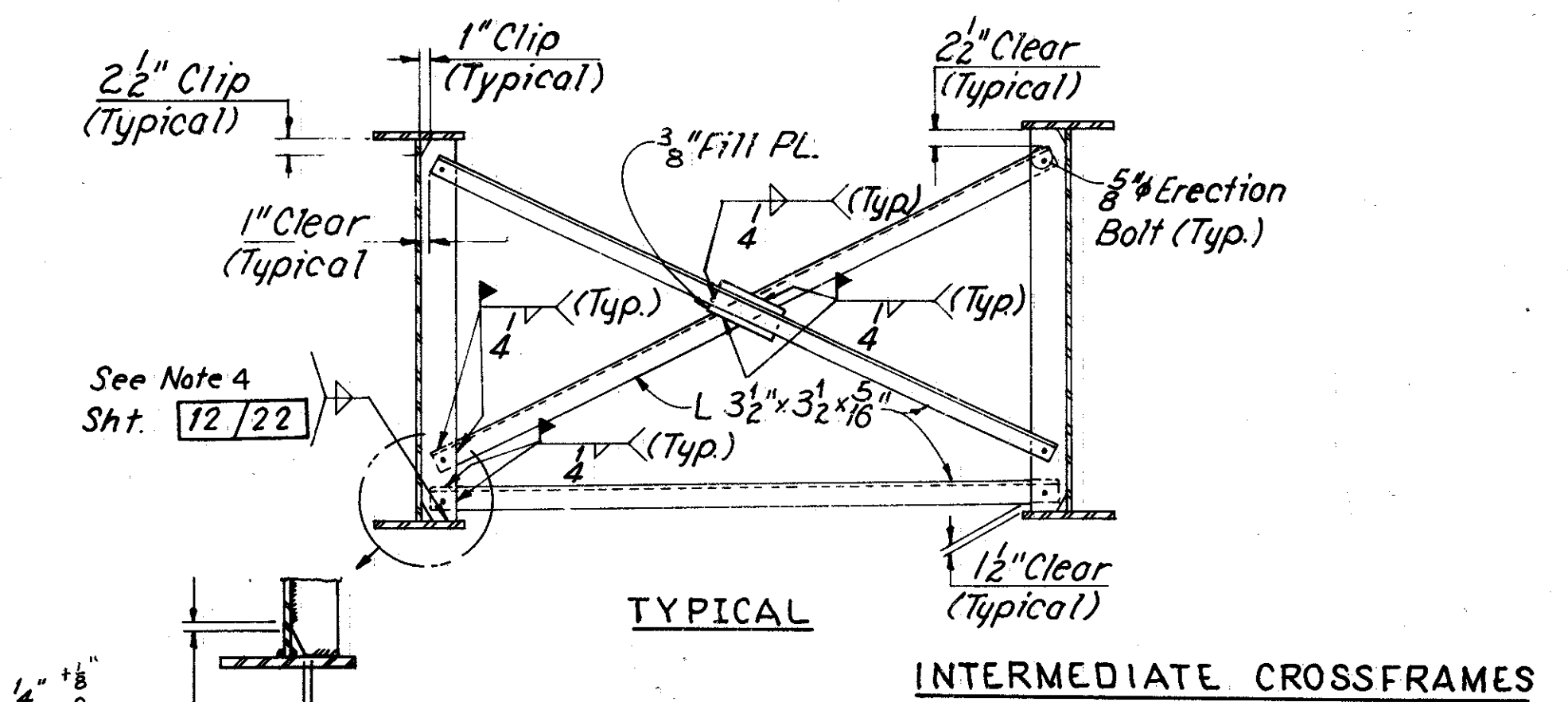
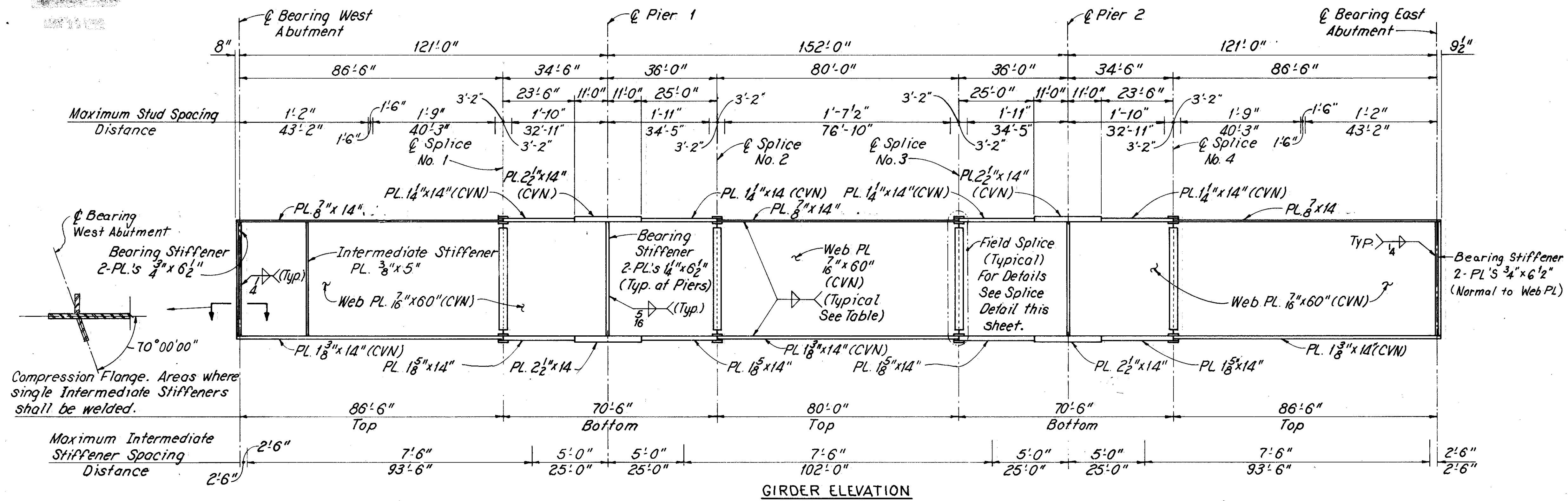
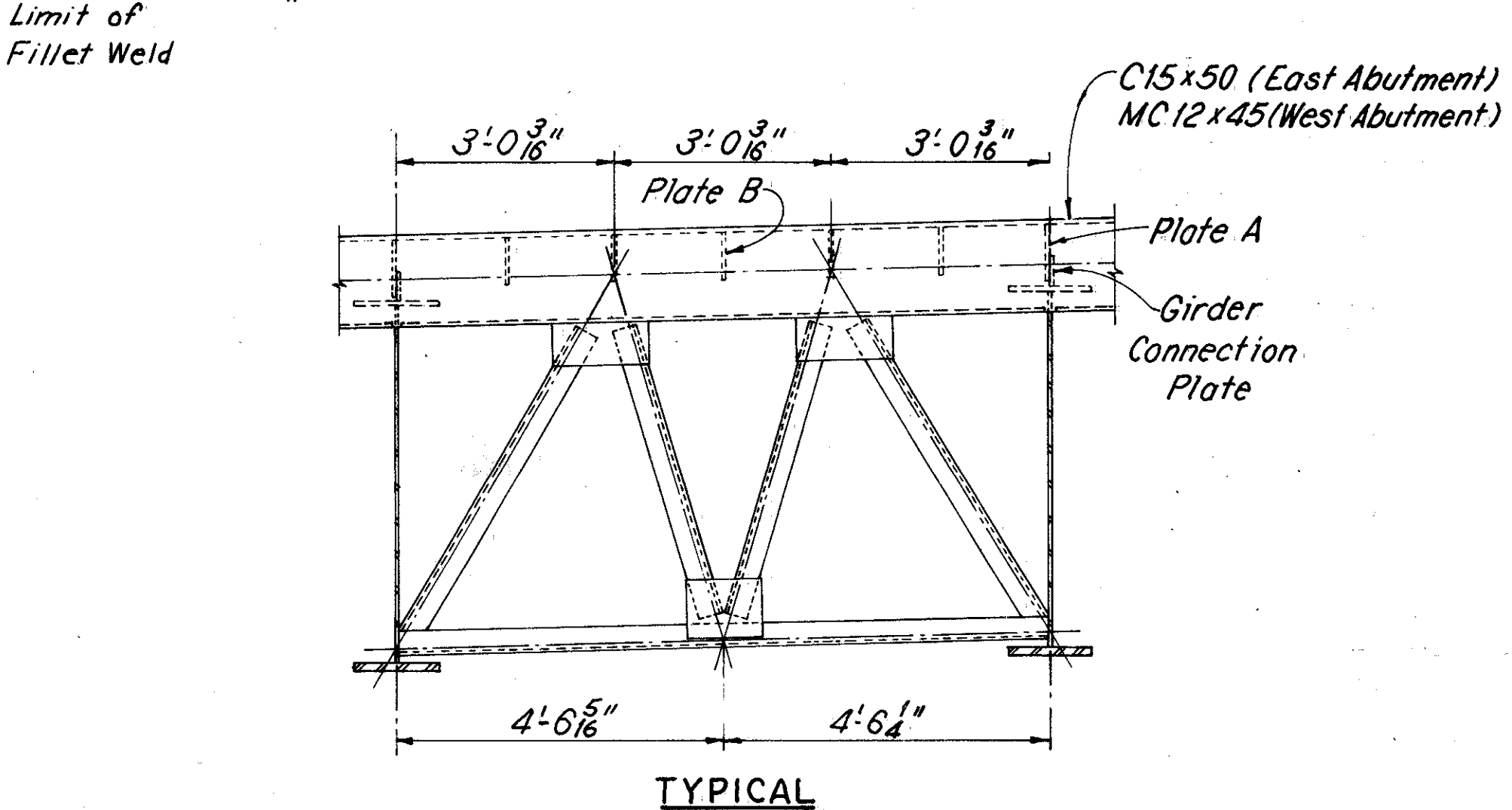


NOTES

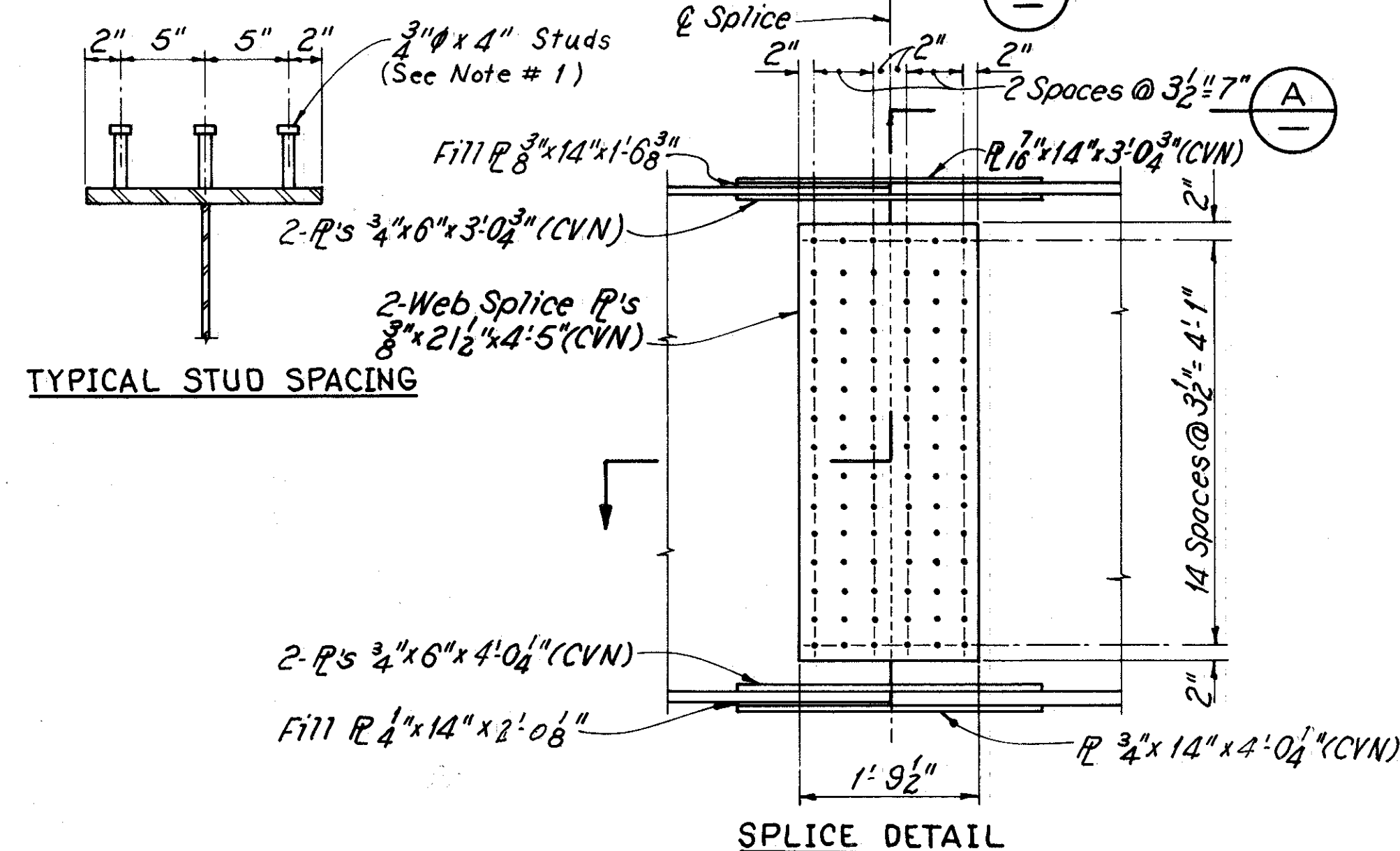
- LOCATE STUDS IN GROUPS OF 3 AS SHOWN, SHEAR CONNECTORS MAY BE SHIFTED TO CLEAR BOLT HEADS ON SPLICE, FOR SPACING ALONG GIRDER SEE GIRDER ELEVATION.
  - WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FASCIA STRINGER DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 1" FROM EDGE OF FLANGE, BE NOT MORE THAN 2" LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY AASHTO.
  - GRINDING OF BUTT WELDS IS NOT REQUIRED.
  - ALL FIELD SPLICES SHALL BE MADE WITH 1" DIAMETER HIGH STRENGTH STEEL BOLTS CONFORMING TO A325. THE BOLTS SHALL BE PLACED WITH THEIR HEADS ON THE OUTSIDE FACE OF EXTERIOR GIRDERS AND ON THE BOTTOM OF THE BOTTOM FLANGE PLATES AND THE TOP OF THE TOP OF FLANGE PLATES.
- HIGH STRENGTH BOLTS SHALL BE 1" DIAMETER A325 UNLESS OTHERWISE NOTED.**
- WHERE A SHAPE OR PLATE IS DESIGNATED (CVN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01 OF CMS.
  - ERECTION BOLTS: HOLE DIAMETER IN THE CROSSFRAMES AND GIRDER STIFFENERS SHALL BE RESPECTIVELY 1/16" AND 1/4" LARGER THAN THE DIAMETER OF THE ERECTION BOLTS. UNLESS REPLACED BY PERMANENT HIGH STRENGTH BOLTS, ERECTION BOLTS SHALL REMAIN IN PLACE. LOCK WASHERS SHALL BE FURNISHED FOR OTHER THAN FULLY TORQUED HIGH STRENGTH ERECTION BOLTS. BOLTS SHALL BE FURNISHED AS PART OF 513. IN LIEU OF ERECTION BOLTS AND AT THE OPTION OF THE CONTRACTOR, ALTERNATIVE MEANS OF TEMPORARY BRACING MAY BE USED SUBJECT TO THE APPROVAL OF THE DIRECTOR.



WEB TO FLANGE WELD SIZE	
FLANGE PL THICKNESS	FILLET WELD SIZE
7" 1/4" & 1 3/8"	5/16"
1 5/8"	3/8"
2 1/2"	3/8"



**END CROSSFRAMES**  
 Note: For Details not shown see Ohio Standard Drawing EXJ-2-81 Sheets 1 and 2 of 2.



For Notes and Details not shown see Ohio Standard Drawing SD-1-69 Sheet 4 of 4

WOODRUFF, INC.  
 CONSULTING ENGINEERS  
 CLEVELAND, OHIO

**GIRDER ELEVATION AND FRAMING DETAILS**  
 U.S. ROUTE 20 OVER THE GRAND RIVER

BR. NO.: LAK-20-1723 FROM STA. 18+91.00 TO STA. 22+89.56

LAKE COUNTY OHIO

MADE R.J.P. TRACED R.C.K. CHECKED A.M. REVIEWED A.J.M. REVISION  
 DATE 8-84 DATE 9-84 DATE 10/84 DATE 10/84 SHEET 13/22