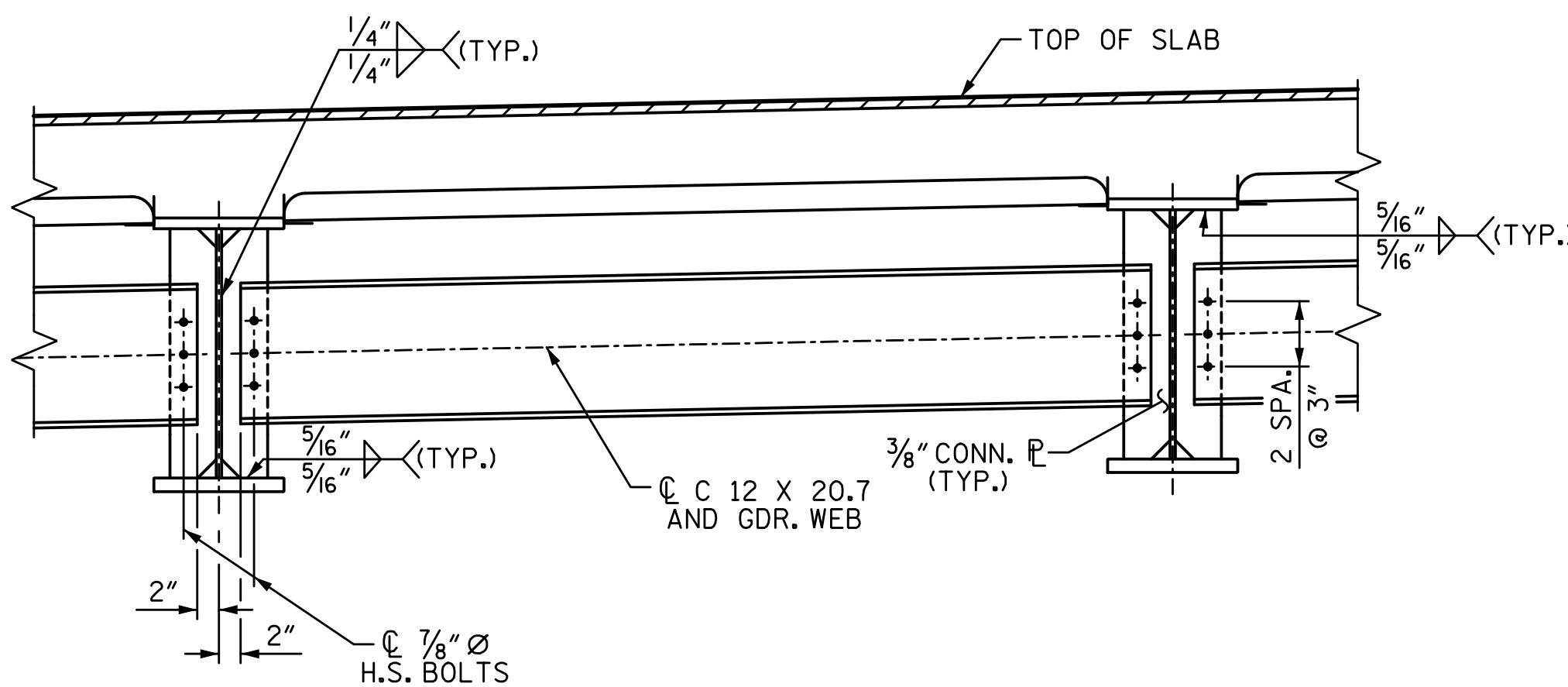


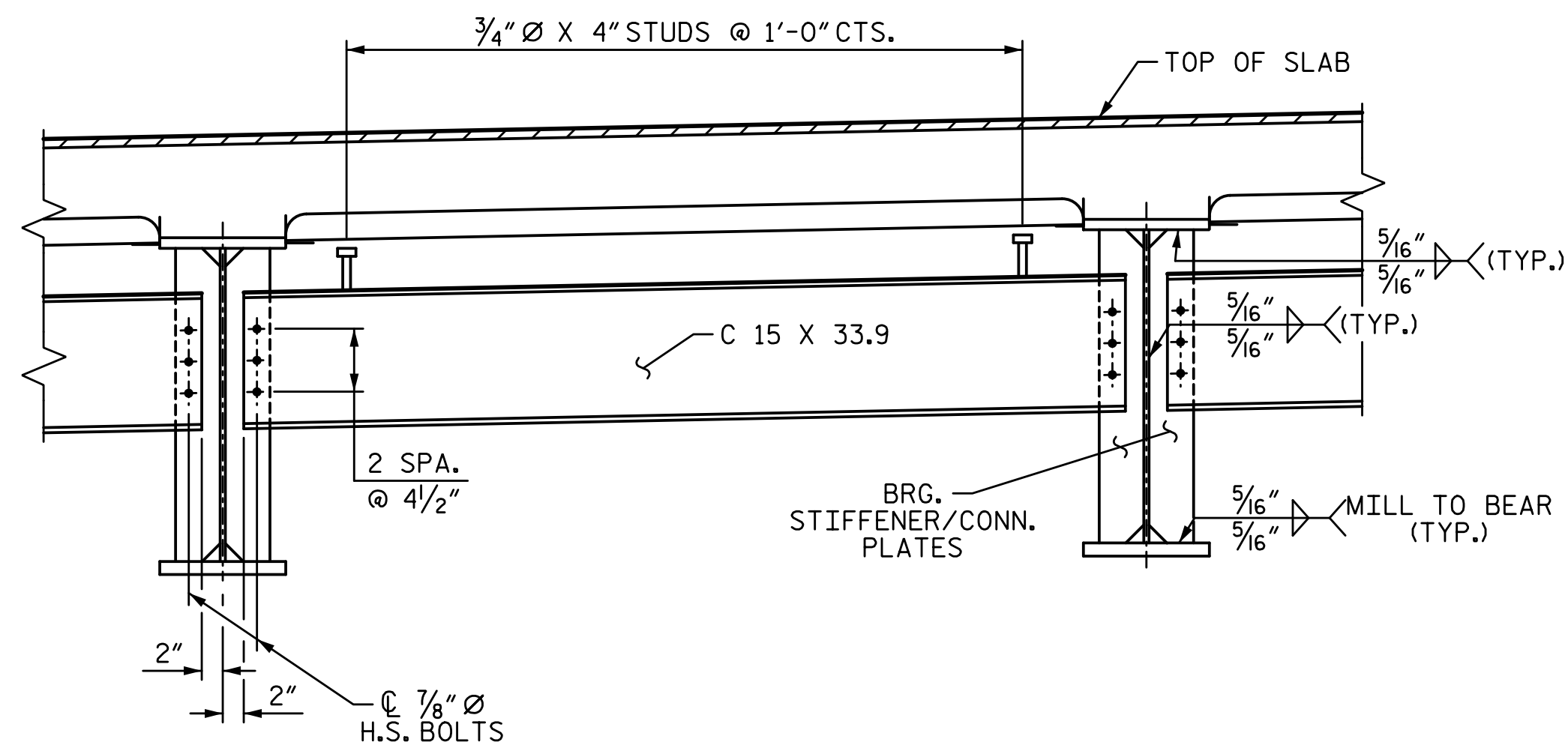
**END BENT & BENT DIAPHRAGM - D1**

SPANS A & D LEFT WIDENING, SPANS A, B, C & D RIGHT WIDENING



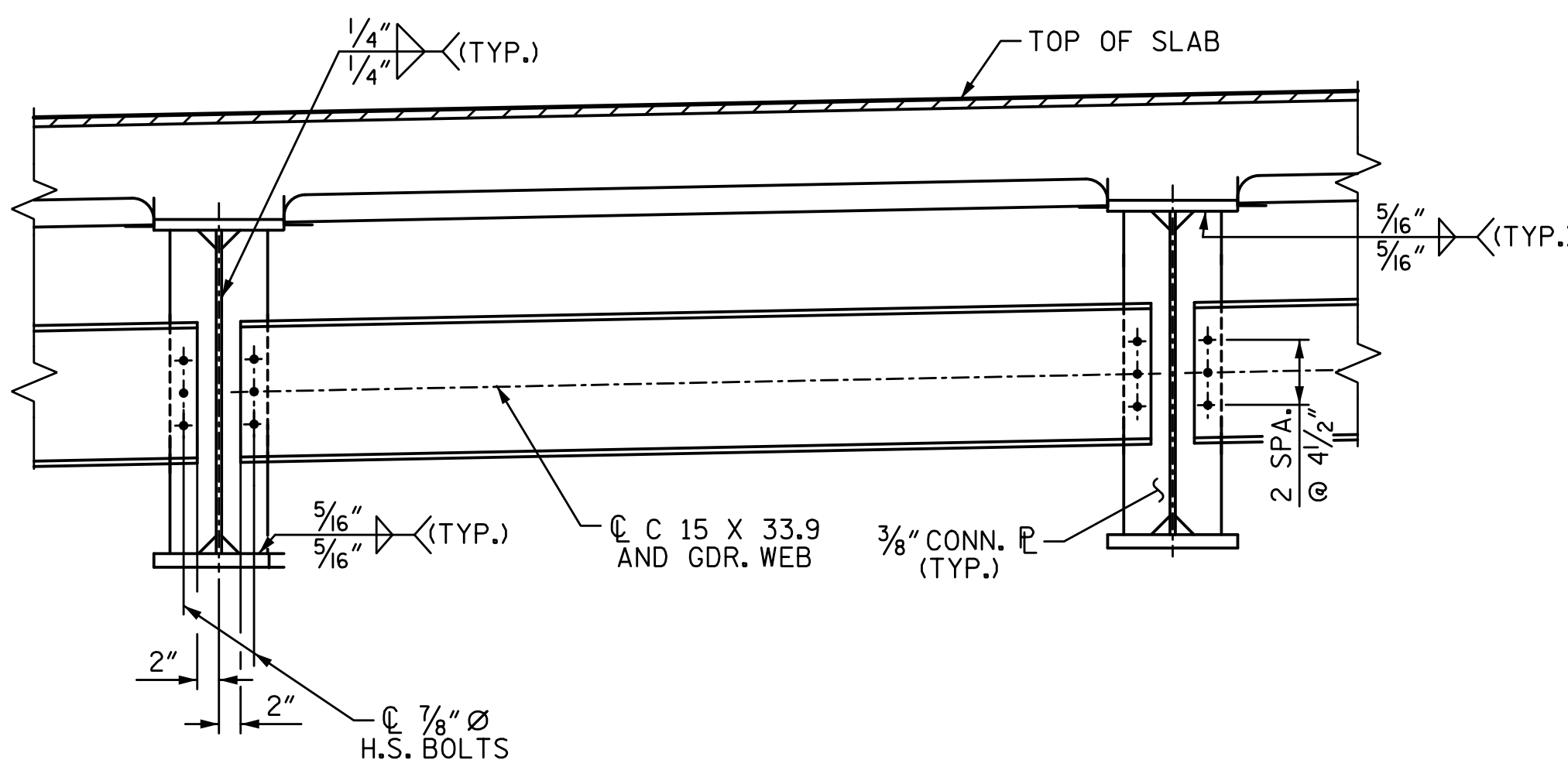
**INTERMEDIATE DIAPHRAGM - D3**

SPANS A & D LEFT WIDENING, SPANS A, B, C & D RIGHT WIDENING



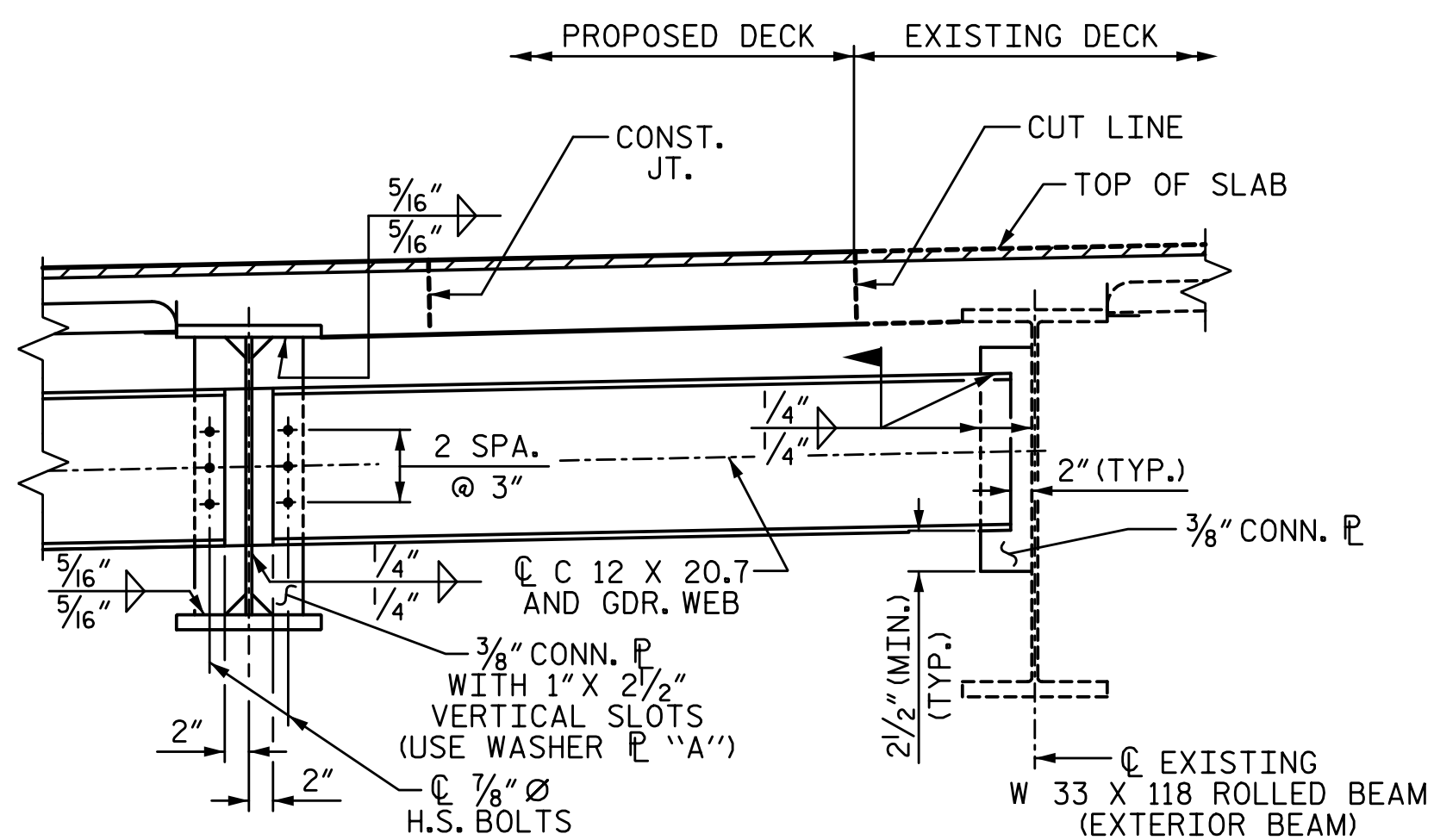
**BENT DIAPHRAGM - D2**

SPANS B & C LEFT WIDENING



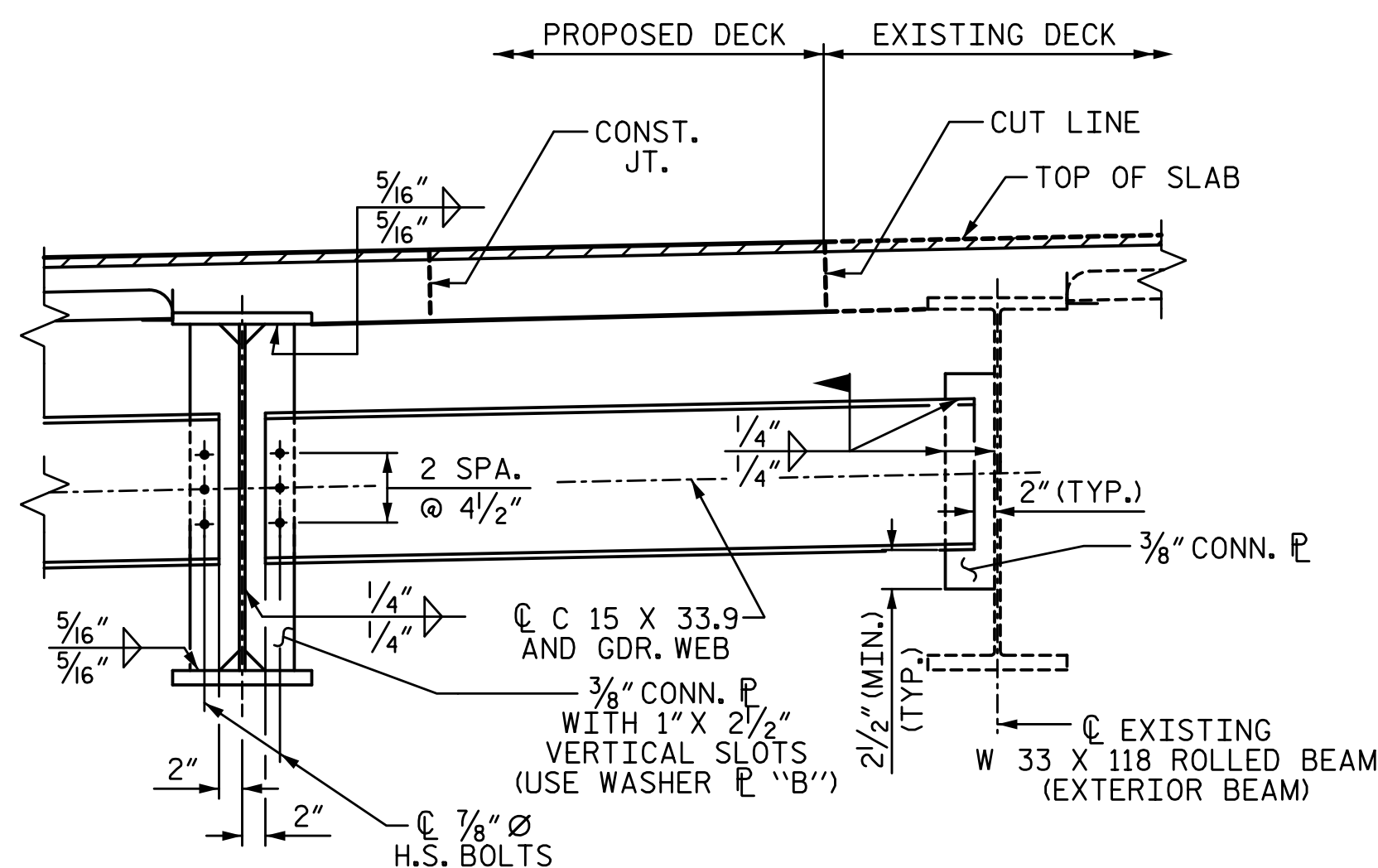
**INTERMEDIATE DIAPHRAGM - D4**

SPANS B & C LEFT WIDENING



**INTERMEDIATE DIAPHRAGM - D5**

SPANS A & D LEFT WIDENING, SPANS A, B, C, & D RIGHT WIDENING



**INTERMEDIATE DIAPHRAGM - D6**

SPANS B & C LEFT WIDENING

**NOTES:**

ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 50W AND PAINTED IN ACCORDANCE WITH SYSTEM 5 OR SYSTEM 6 OF THE STRUCTURAL STEEL SHOP COATINGS PROGRAM AND SECTION 442-8 OF THE STANDARD SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

ALL DIMENSIONS SHOWN ARE HORIZONTAL OR VERTICAL, UNLESS OTHERWISE NOTED.

ALL FIELD CONNECTIONS TO BE 7/8" DIA. HIGH STRENGTH BOLTS UNLESS OTHERWISE NOTED.

BEARING STIFFENERS/CONNECTOR PLATES ARE TO BE PLACED ALONG THE SKEW AND SHALL BE PLUMB.

CHARPY V-NOTCH TEST IS REQUIRED FOR WEB PLATES AND BOTTOM FLANGE PLATES FOR ALL GIRDERS AND IN ACCORDANCE WITH ARTICLE 1072-7 OF THE STANDARD SPECIFICATIONS.

CONNECTION BOLTS ARE TO BE LOCATED AT THE BOTTOM OF THE CONNECTION SLOTS AND TIGHTENED TO A SNUG FIT PRIOR TO FIELD WELDING OPPOSITE END OF DIAPHRAGM. AFTER WELDING DIAPHRAGM TO CONNECTION ANGLE AND PRIOR TO THE POURING OF THE SLAB, BACK OFF BOLTS 1/2 TURN TO ALLOW FOR VERTICAL DEFLECTION OF NEW BEAM. AFTER DEFLECTIONS HAVE OCCURRED, TIGHTEN BOLTS AS REQUIRED BY THE STANDARD SPECIFICATIONS.

PERMITTED FLANGE AND WEB SHOP SPLICES SHALL NOT BE LOCATED WITHIN 15 FEET OF MAXIMUM DEAD LOAD DEFLECTION (NOR WITHIN 15 FEET OF INTERMEDIATE BEARINGS OF CONTINUOUS UNITS). KEEP 2 FEET MINIMUM BETWEEN WEB AND FLANGE SHOP SPLICES. KEEP 6" MINIMUM BETWEEN CONNECTOR PLATE OR TRANSVERSE STIFFENER WELDS AND WEB OR FLANGE SHOP SPLICES.

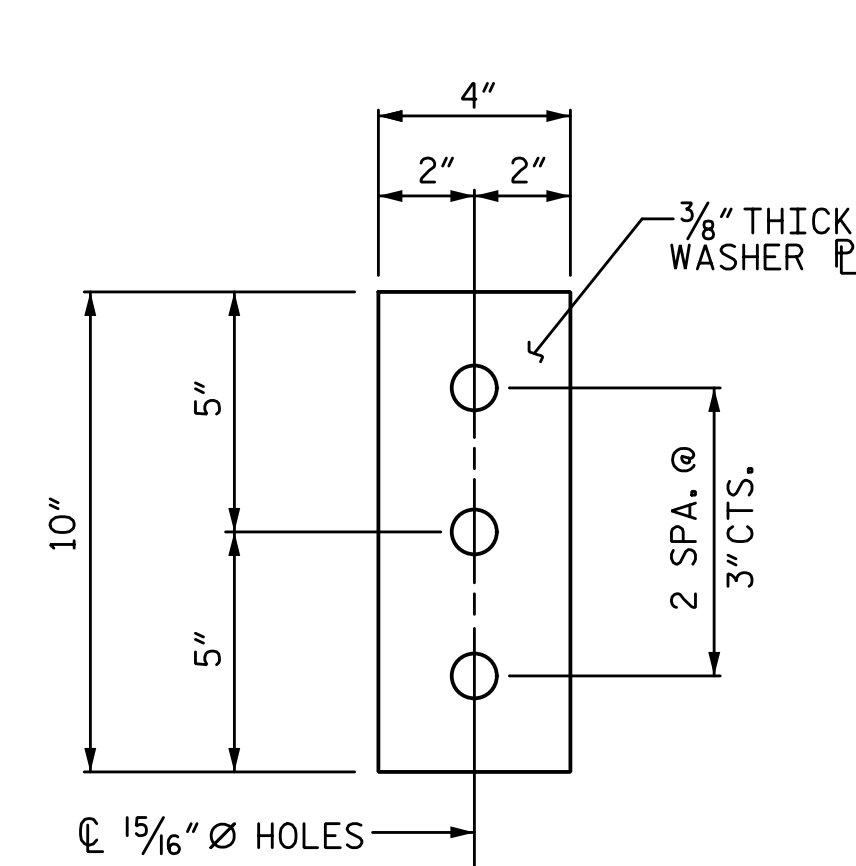
STUDS ON GIRDERS MAY BE SHIFTED UP TO 1" IF NECESSARY TO CLEAR FLANGE SPLICE WELD.

TENSION ON THE ASTM A325 BOLTS SHALL BE CALIBRATED USING DIRECT TENSION INDICATOR WASHERS IN ACCORDANCE WITH ARTICLE 440-8 OF THE STANDARD SPECIFICATIONS.

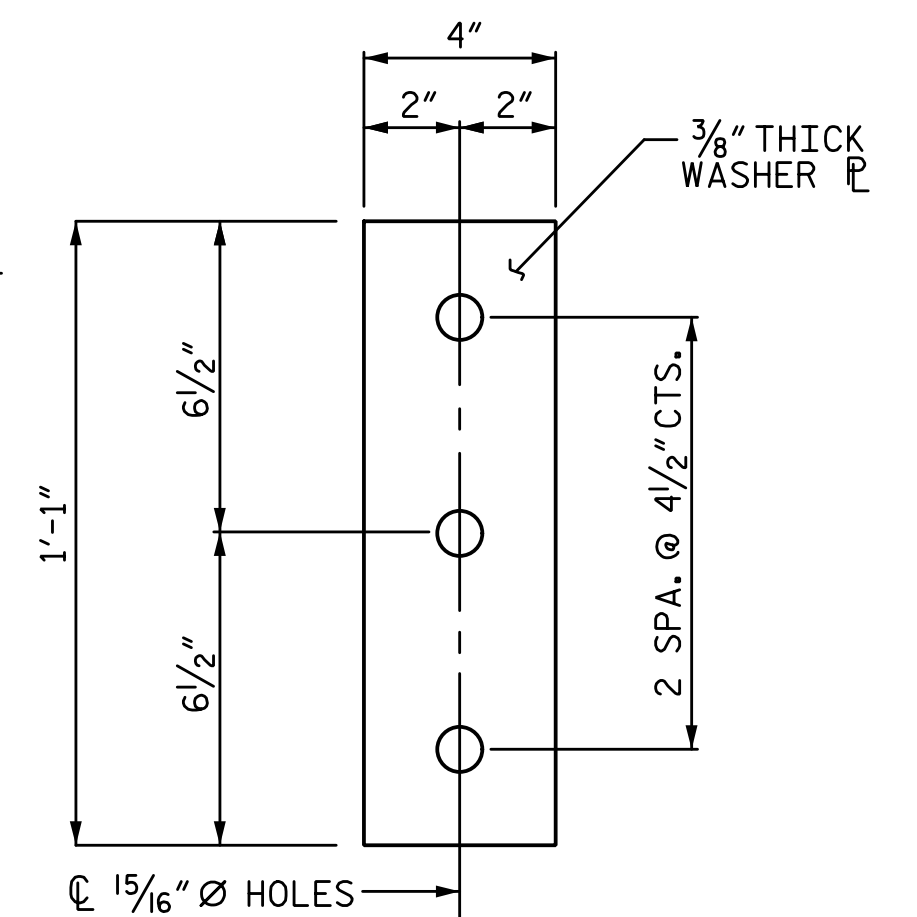
END OF GIRDERS SHALL BE PLUMB.

BEARING STIFFENER MAY REQUIRE COPING IF WIDER THAN BOTTOM FLANGE.

FABRICATORS SHALL DETAIL DIAPHRAGM MEMBERS AND CONNECTIONS FOR FULL DEAD LOAD FIT UP. GIRDERS SHALL BE PLUMB AND AFTER THE FULL AMOUNT OF DEAD LOAD IS APPLIED.



WASHER P "A"



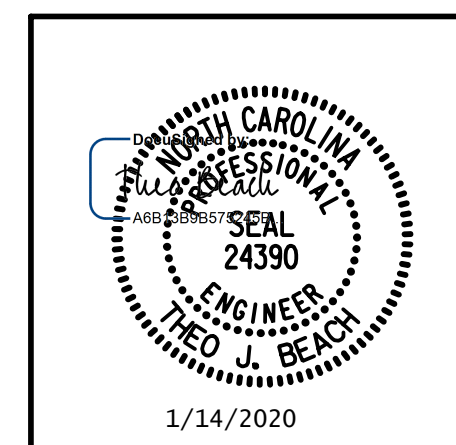
WASHER P "B"

PROJECT NO. I-5711  
ALAMANCE COUNTY  
 STATION: STA. 27+02.26 -L-

SHEET 3 OF 4

PLANS PREPARED BY:

**SE & A**  
 SIMPSON ENGINEERS & ASSOCIATES  
 5640 Dillard Drive  
 Suite 200  
 Cary, NC 27518  
 (919) 852-0468  
 (919) 852-0538 (Fax)  
 www.simpsonengr.com  
 LICENSURE NO. C-2521



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 SUPERSTRUCTURE

**STRUCTURAL STEEL DETAILS**

LEFT & RIGHT WIDENING

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-21
1			3			TOTAL SHEETS
2			4			89

**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**

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DRAWN BY: <u>S.D. COOPER</u>	DATE: <u>1-20</u>
CHECKED BY: <u>T. BEACH</u>	DATE: <u>1-20</u>
DESIGN ENGINEER OF RECORD: <u>T. BEACH</u>	DATE: <u>1-20</u>