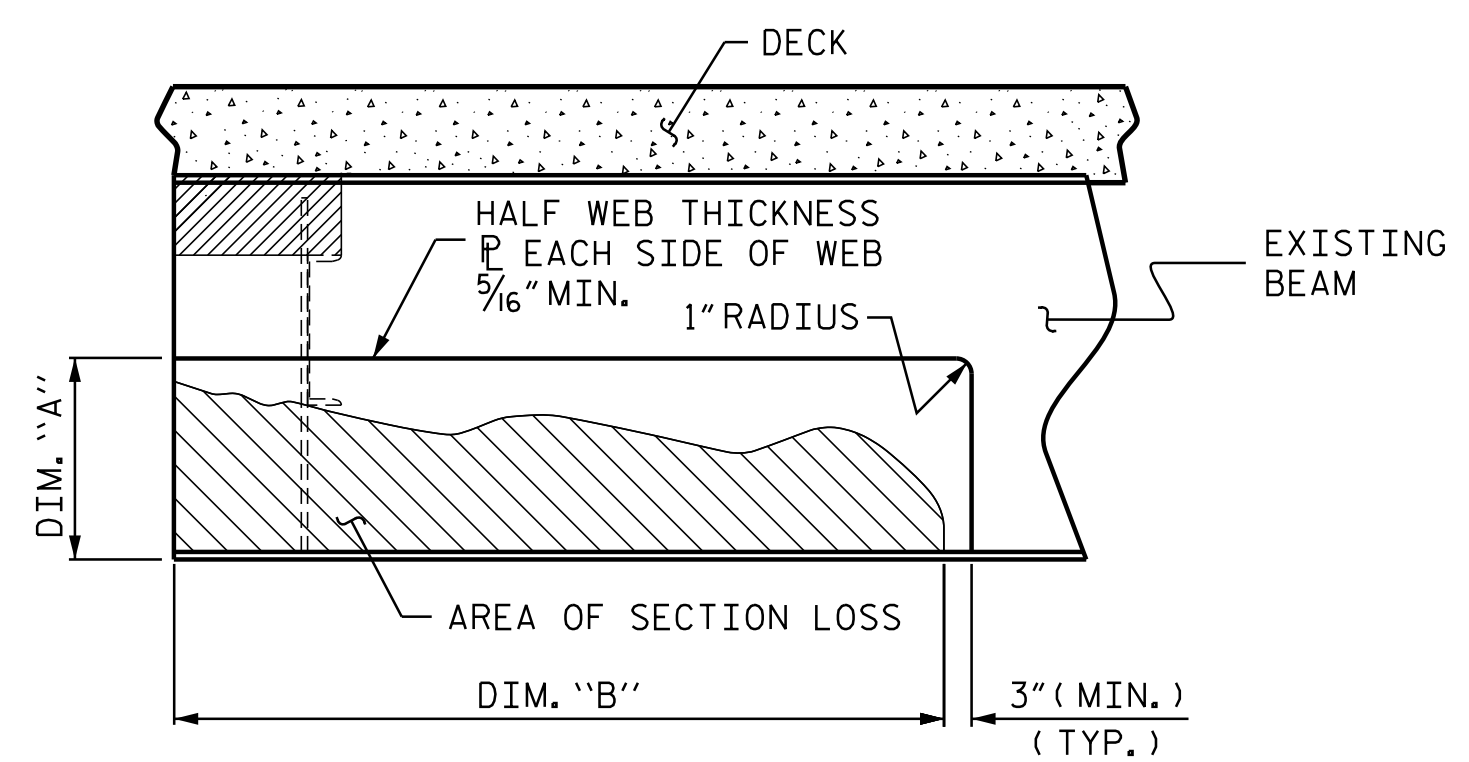
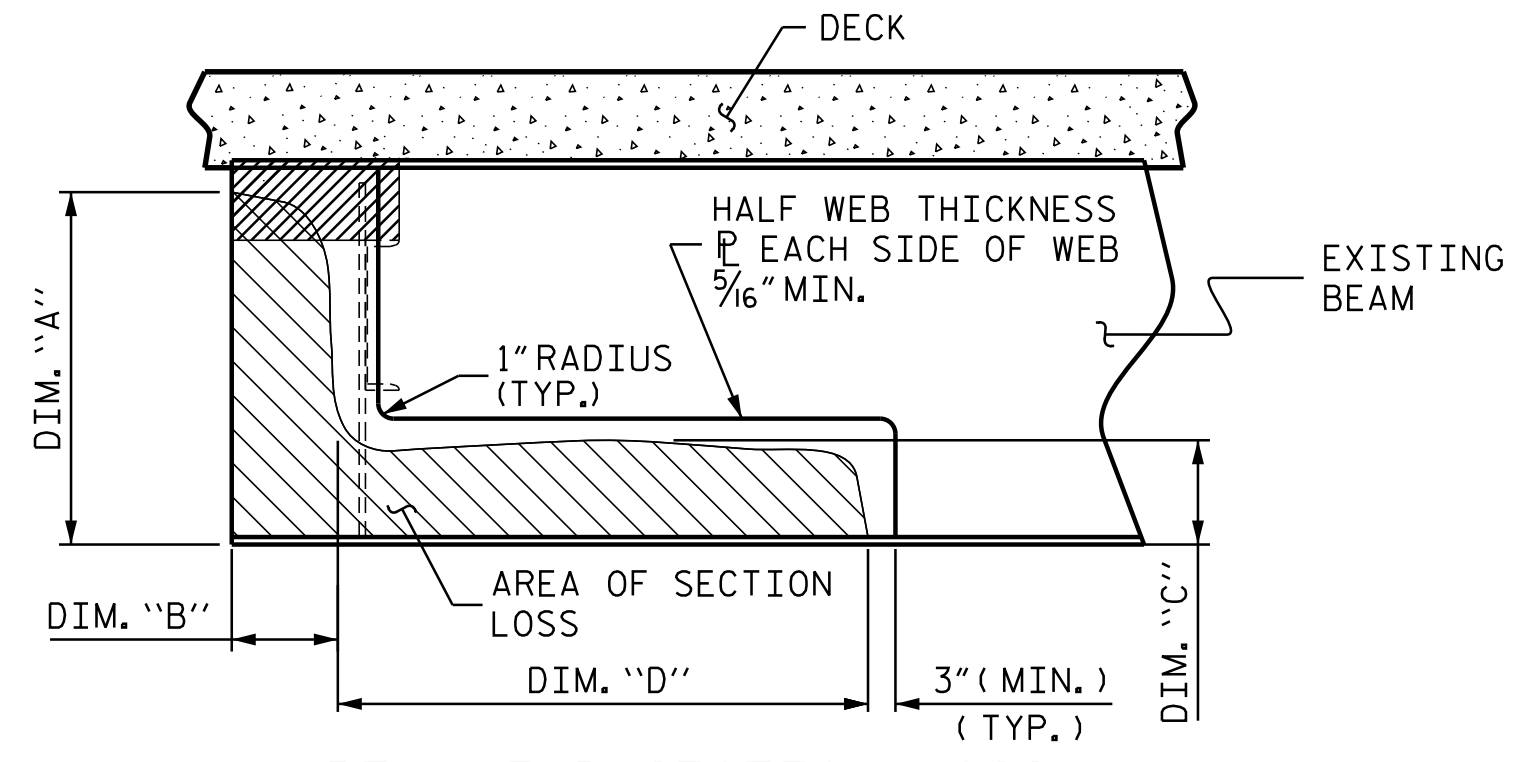


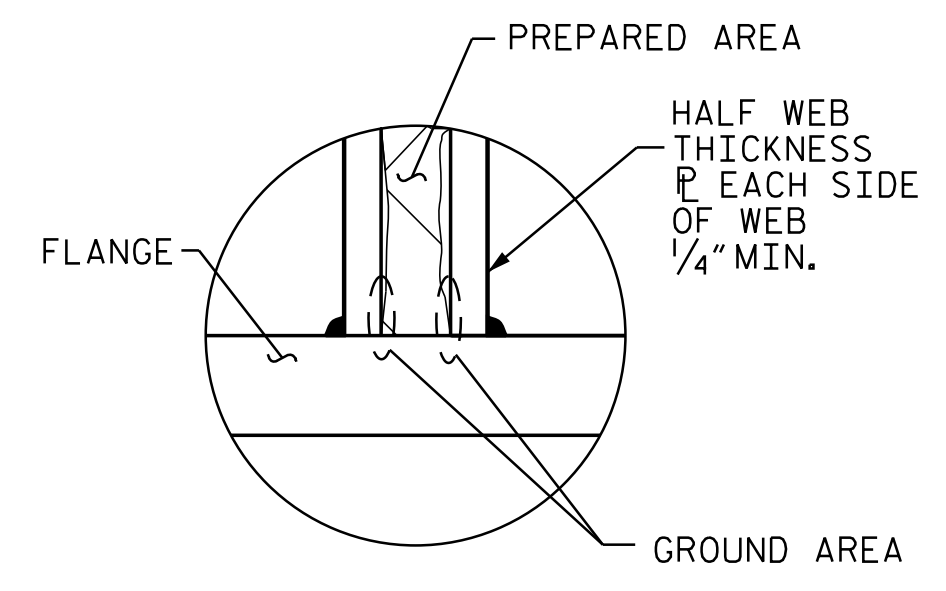
DETAIL "A"



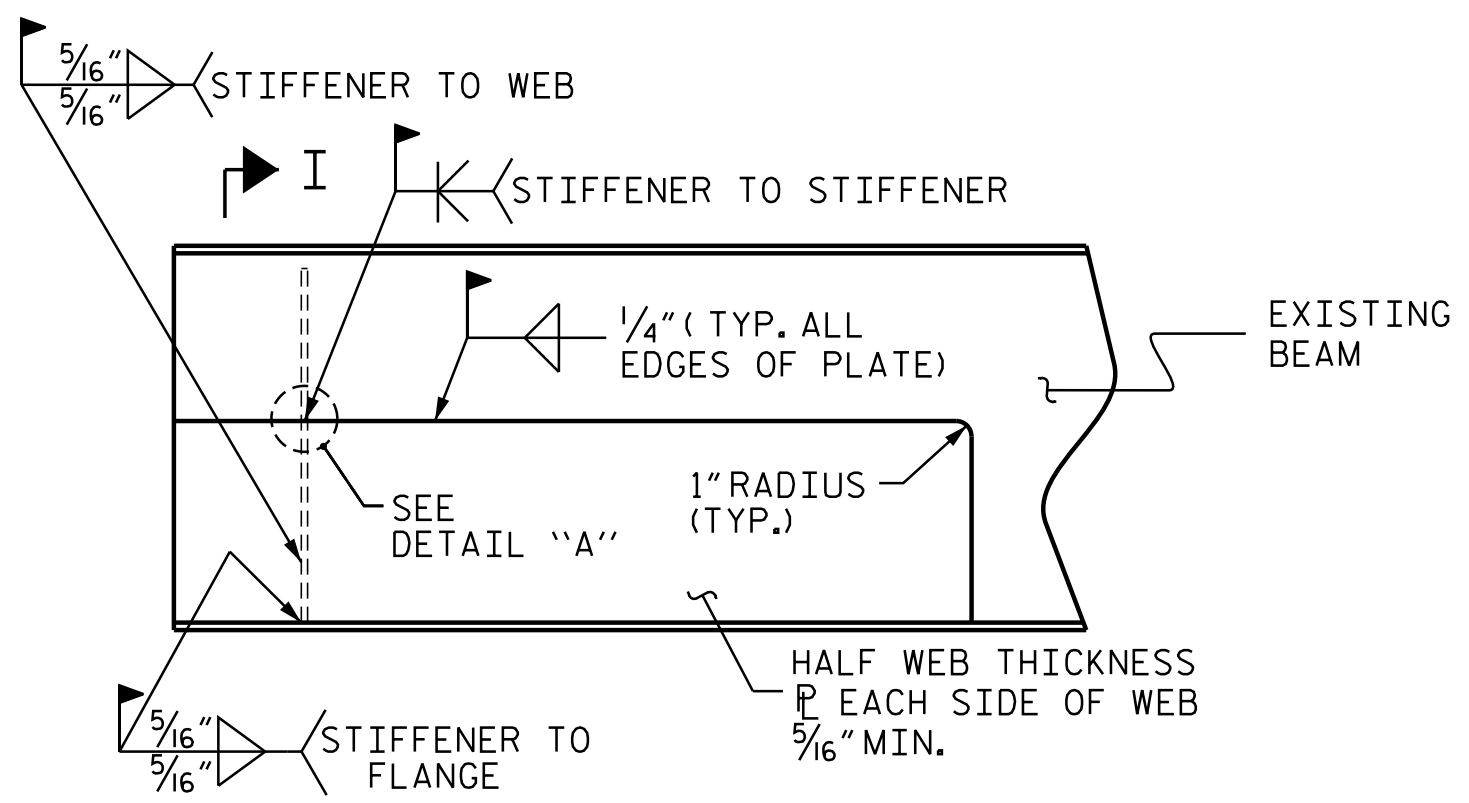
BEAM END SECTION LOSS AND PLATING REPAIR



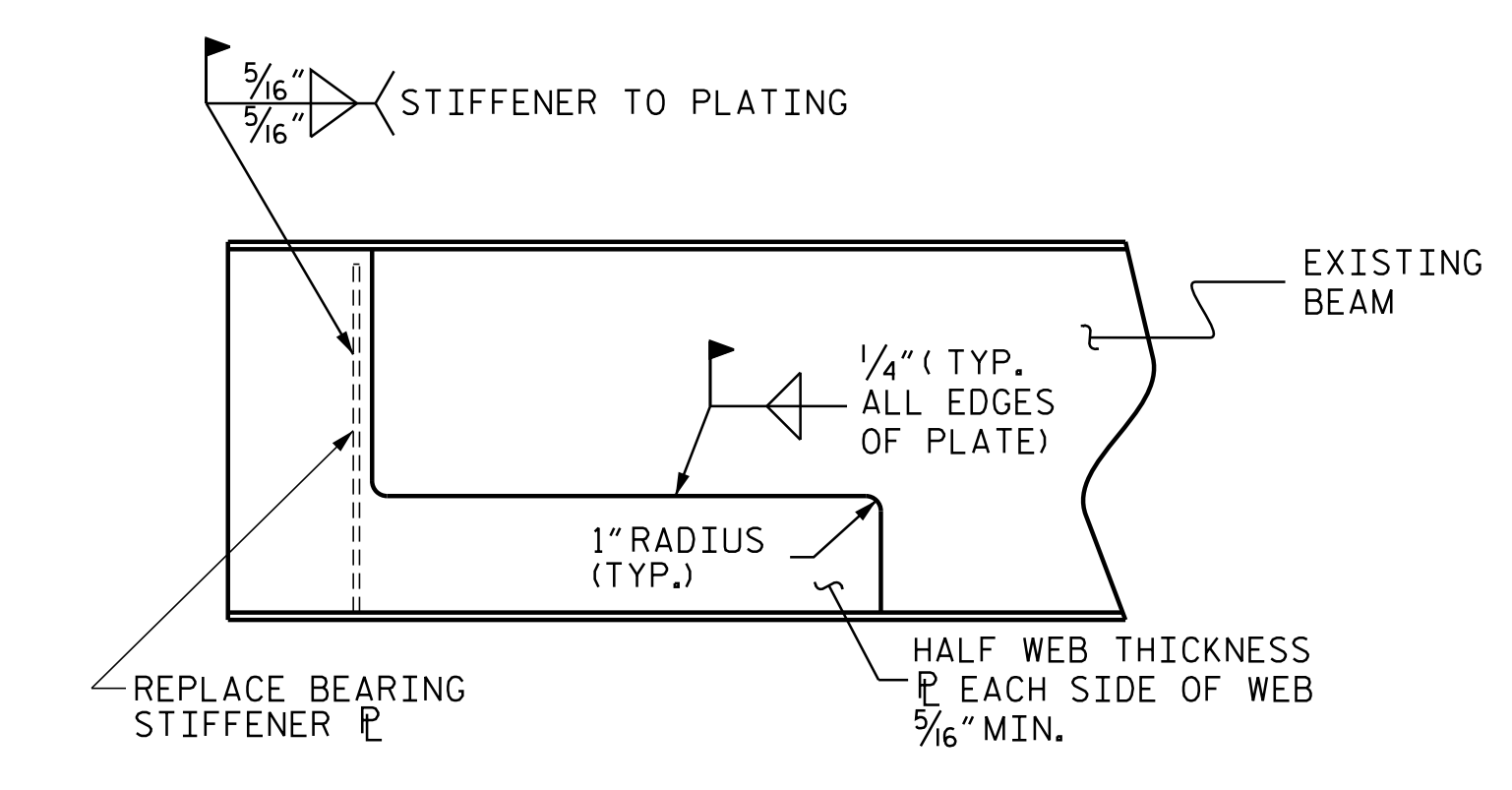
BEAM END SECTION LOSS AND PLATING REPAIR



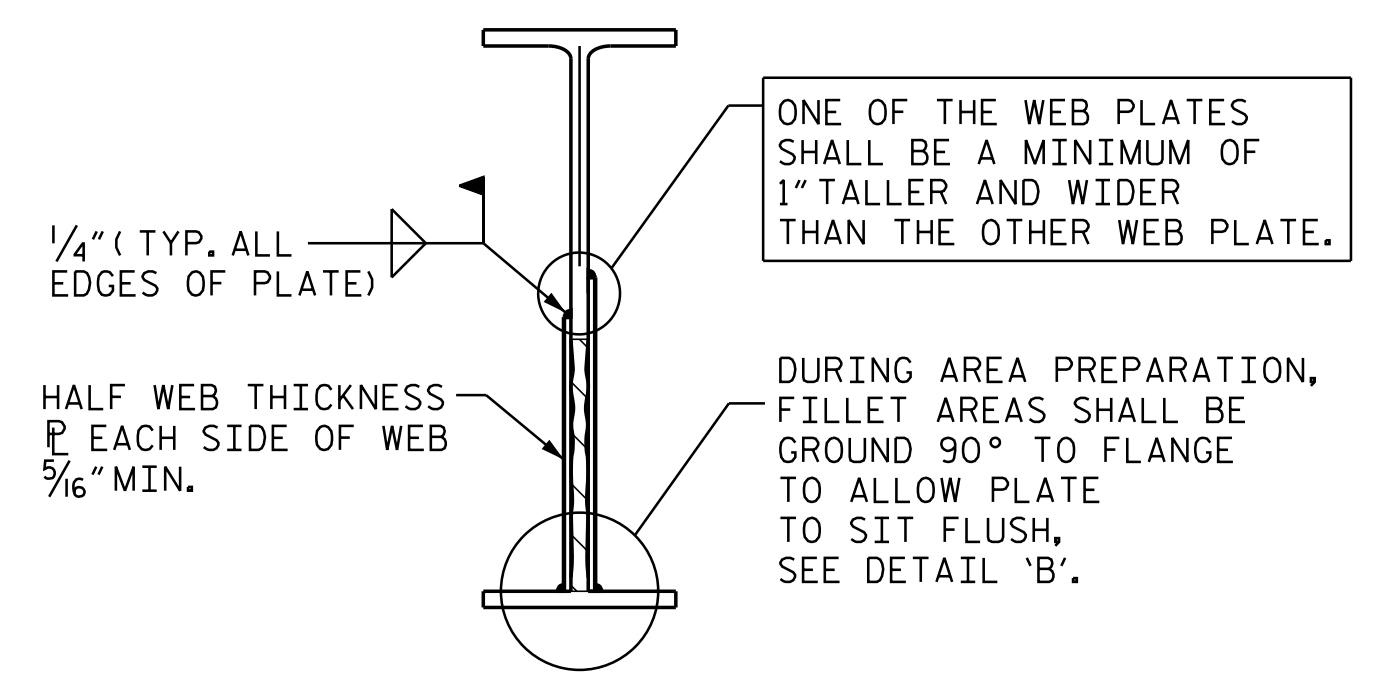
DETAIL "B"



BEAM END PLATING REPAIR

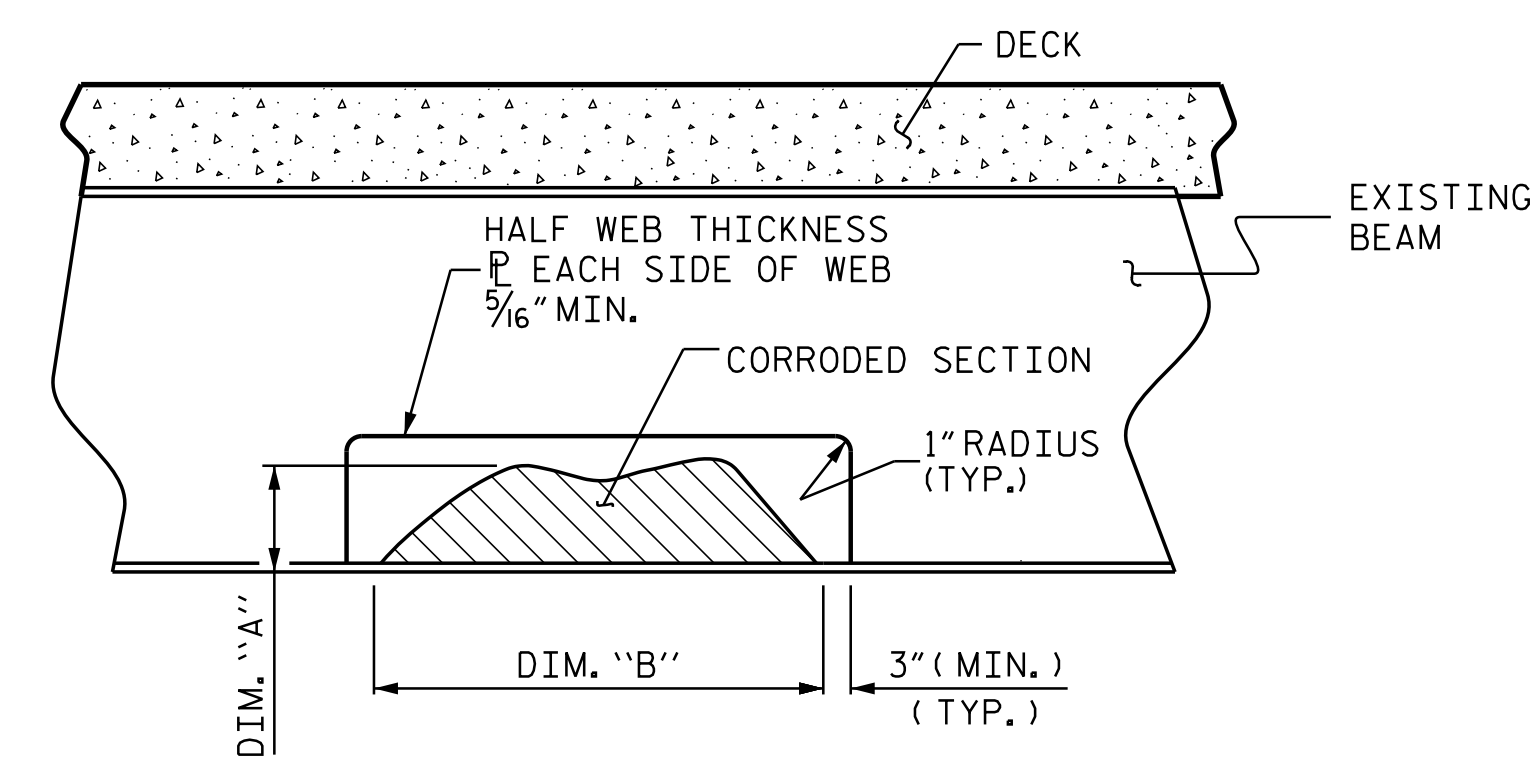


BEAM END PLATING REPAIR

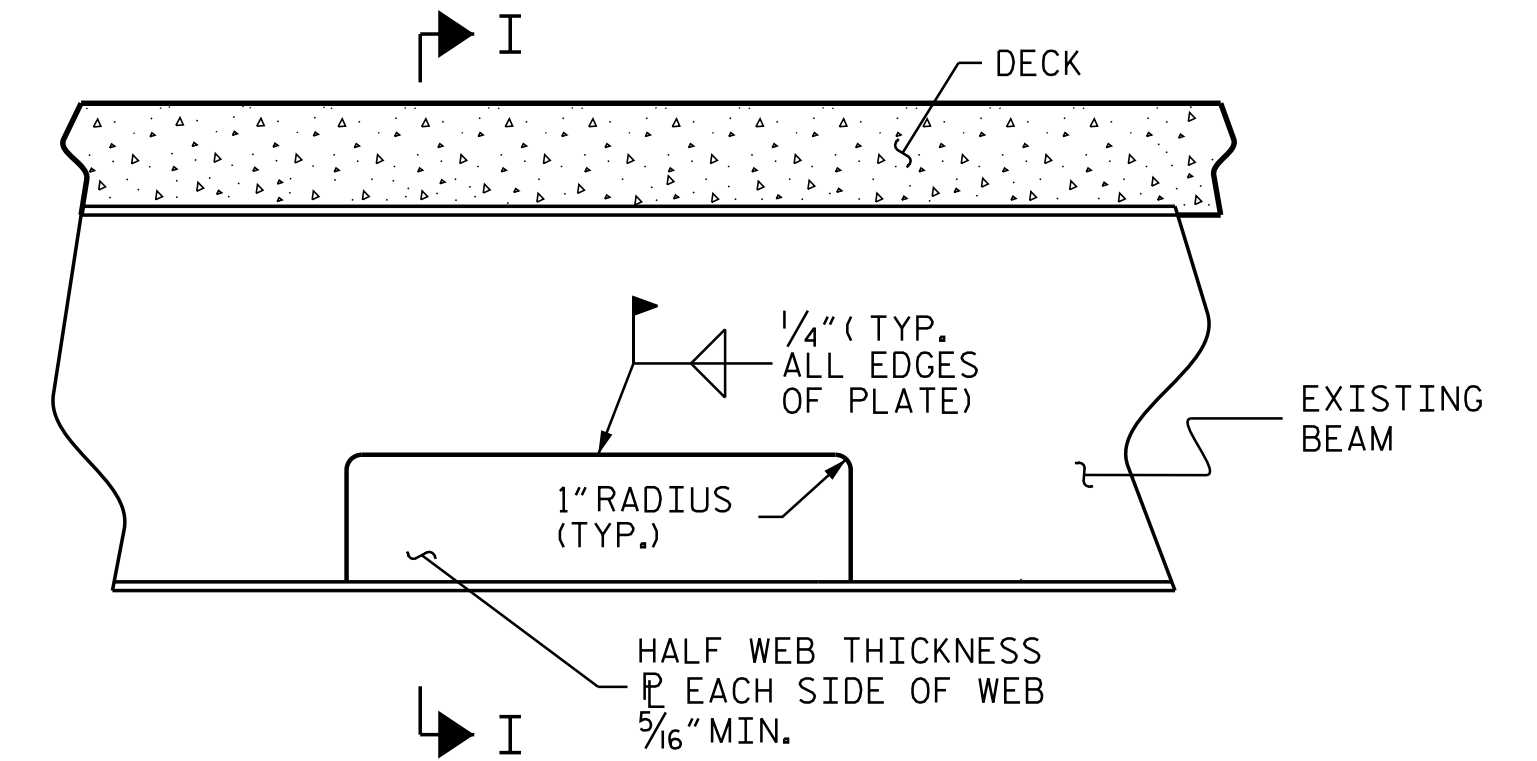


SECTION I-I

BEAM END PLATING REPAIR

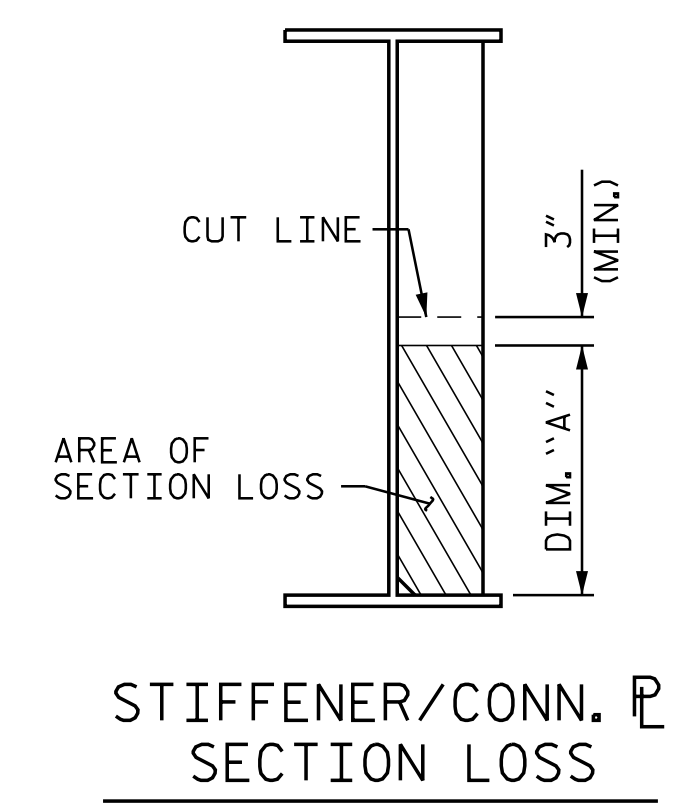


INTERMEDIATE SECTION LOSS BEAM PLATING REPAIR

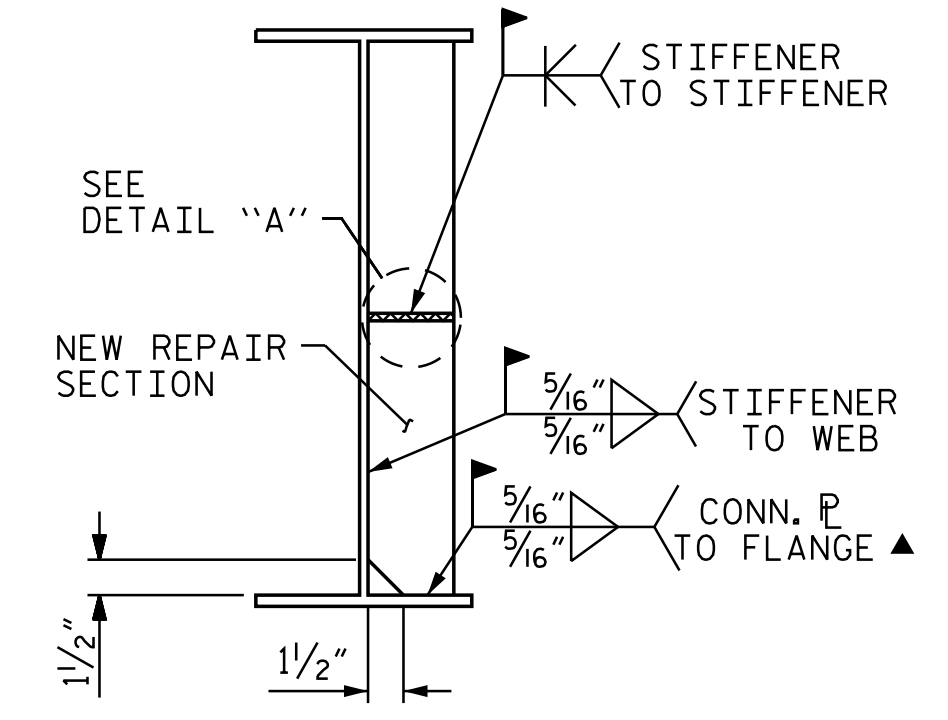


INTERMEDIATE SECTION LOSS BEAM PLATING REPAIR

INTERMEDIATE BEAM PLATING REPAIR



STIFFENER/CONN. PLATE SECTION LOSS



STIFFENER/CONN. PLATE SECTION REPAIR

▲ FOR STIFFENERS, MILL TO BEAR AND DO NOT WELD

STIFFENER/CONNECTOR PLATE REPAIR

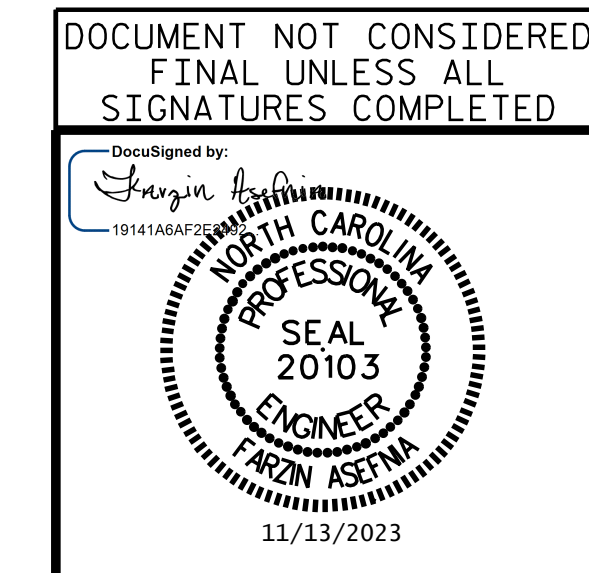
BEAM PLATING REPAIR NOTES

ALL CONDITIONS AND DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION OR INSTALLATION OF ANY COMPONENTS.
 REPAIR PLATES SHALL BE ASTM A588, GRADE 50 KSI STEEL.
REPAIR SEQUENCE:
 COORDINATE WITH MATERIALS AND TEST UNIT AT LEAST 4 DAYS PRIOR TO ANTICIPATED WORK.
 REMOVE LIVE LOAD FROM REPAIR AREA BY EITHER CLOSING BRIDGE TO TRAFFIC OR SHIFTING TRAFFIC AWAY FROM REPAIR AREA.
 IF NECESSARY, REMOVE EXISTING STIFFENER TO INSTALL WELDED PLATE REPAIR. REPLACE WITH A NEW STIFFENER PLATE OF SIMILAR SIZE.
 IF BEAM DETERIORATION EXTENDS INTO THE CONCRETE DIAPHRAGM THEN CHIP AWAY CONCRETE TO DETERMINE THE EXTENT OF THE DAMAGE.
 MECHANICALLY CLEAN RUST, SCALE, AND EXISTING PAINT TO AT LEAST 3" BEYOND REPAIR AREA.

PRIME ENTIRE REPAIR AREA AND REPAIR PLATES WITH AN ORGANIC ZINC PRIMER PRIOR TO WELDING NEW PLATES. REMOVE PRIMER IN WELD AREA.
 ONE PLATE SHALL BE PLACED, AS INDICATED, ON EACH SIDE OF THE BEAM WEB. ONE OF THE WEB PLATES SHALL BE A MINIMUM OF 1" TALLER AND WIDER THAN THE OTHER WEB PLATE TO OFFSET THE WEB PLATE WELDING LOCATIONS ON THE EXISTING BEAM WEB.
 EACH PLATE SHALL BE APPROXIMATELY ONE-HALF THE ORIGINAL THICKNESS OF THE BEAM WEB, WITH A MINIMUM THICKNESS OF 5/16".
 FULLY WELD ALONG TOP AND SIDES OF THE PLATES AS SHOWN.
 ALL WELDING SHALL BE IN ACCORDANCE WITH CURRENT APPLICABLE AWS AND NCDOT STANDARD SPECIFICATIONS.
 ALL WELDS SHALL BE INSPECTED AND TESTED BY THE NCDOT MATERIALS AND TEST UNIT IN ACCORDANCE WITH THE CURRENT AWS BRIDGE WELDING CODE AND STANDARD SPECIFICATIONS.
 IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, AFTER REPAIR, GRIND ALL WELDS FLUSH, AND THOROUGHLY CLEAN AREA TO REMOVE DEBRIS AND OILS FROM THE REPAIR PROCESS.
 CLEANING AND PAINTING OF REPAIRED STRUCTURAL STEEL SHALL BE PERFORMED AS PART OF THE OVERALL CLEANING AND PAINTING CONTRACT.

FOR CLEANING AND PAINTING, SEE PAINTING EXISTING WEATHERING STEEL STRUCTURE SPECIAL PROVISIONS.
 AFTER BEAMS ARE REPAIRED AND PAINTED, ANY CONCRETE REMOVED FROM THE BENT DIAPHRAGMS SHALL BE RECAST. ANY REINFORCING STEEL CUT DURING THE REMOVAL PROCESS SHALL BE SPLICED WITH A SIMILAR SIZE BAR WITH AT LEAST A ONE FOOT SPLICE TO THE EXISTING STEEL. NO SEPARATE PAYMENT SHALL BE MADE FOR CONCRETE AND REINFORCING STEEL AS THIS IS CONSIDERED INCIDENTAL TO THE PAY ITEM "BEAM REPAIR". FOR BEAM REPAIR, SEE SPECIAL PROVISIONS.
 REMOVE ALL TRAFFIC CONTROL DEVICES.

PROJECT NO. I-5941
DURHAM COUNTY
 BRIDGE NO. 310355
 SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BEAM PLATING REPAIR DETAILS

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO. S-73
 TOTAL SHEETS 74

DRAWN BY : M. HOGAN DATE : 3/2023
 CHECKED BY : JIA XU DATE : 7/2023
 DESIGN ENGINEER OF RECORD: F. ASEFNIA DATE : 11/2023

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