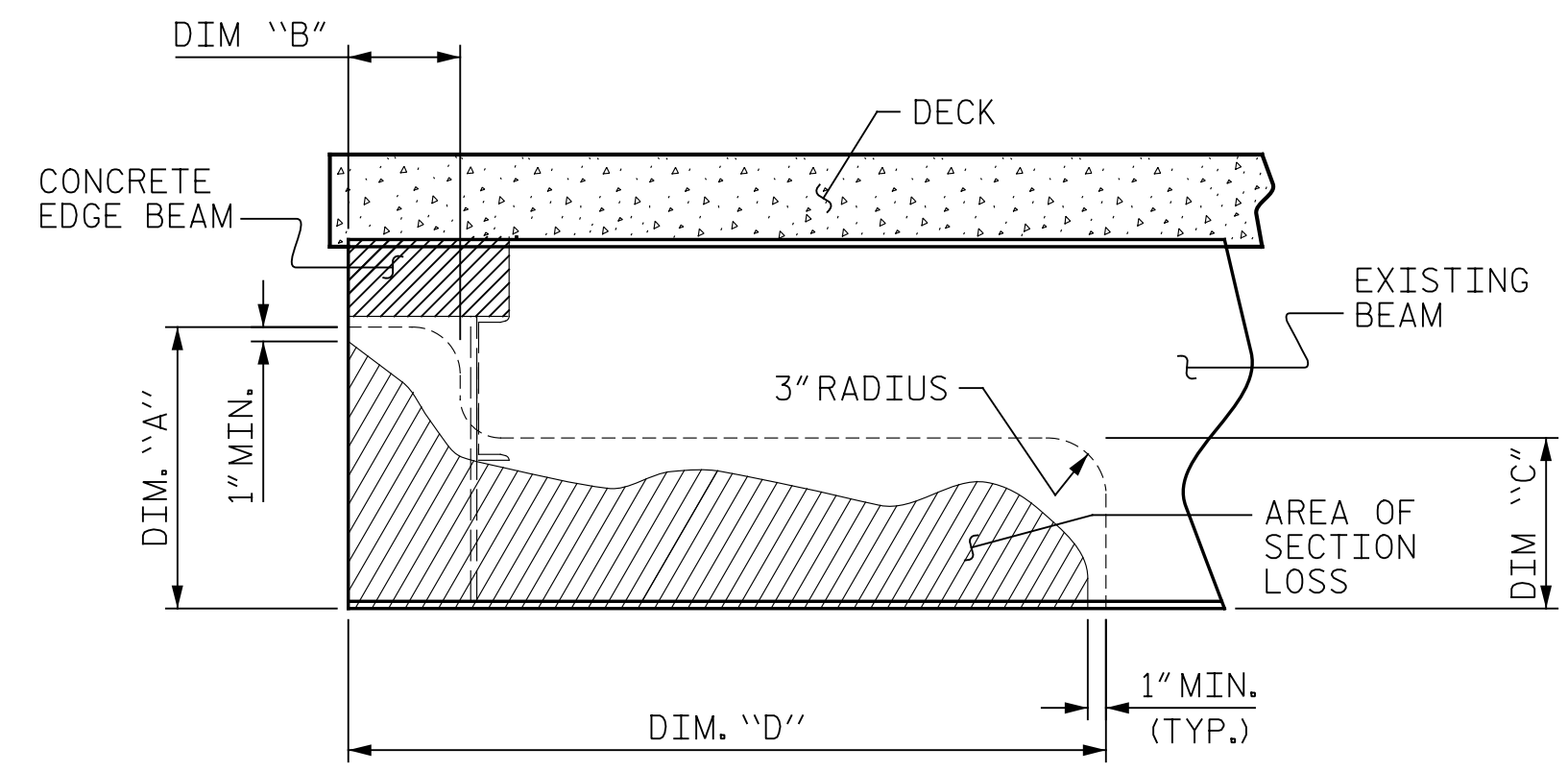
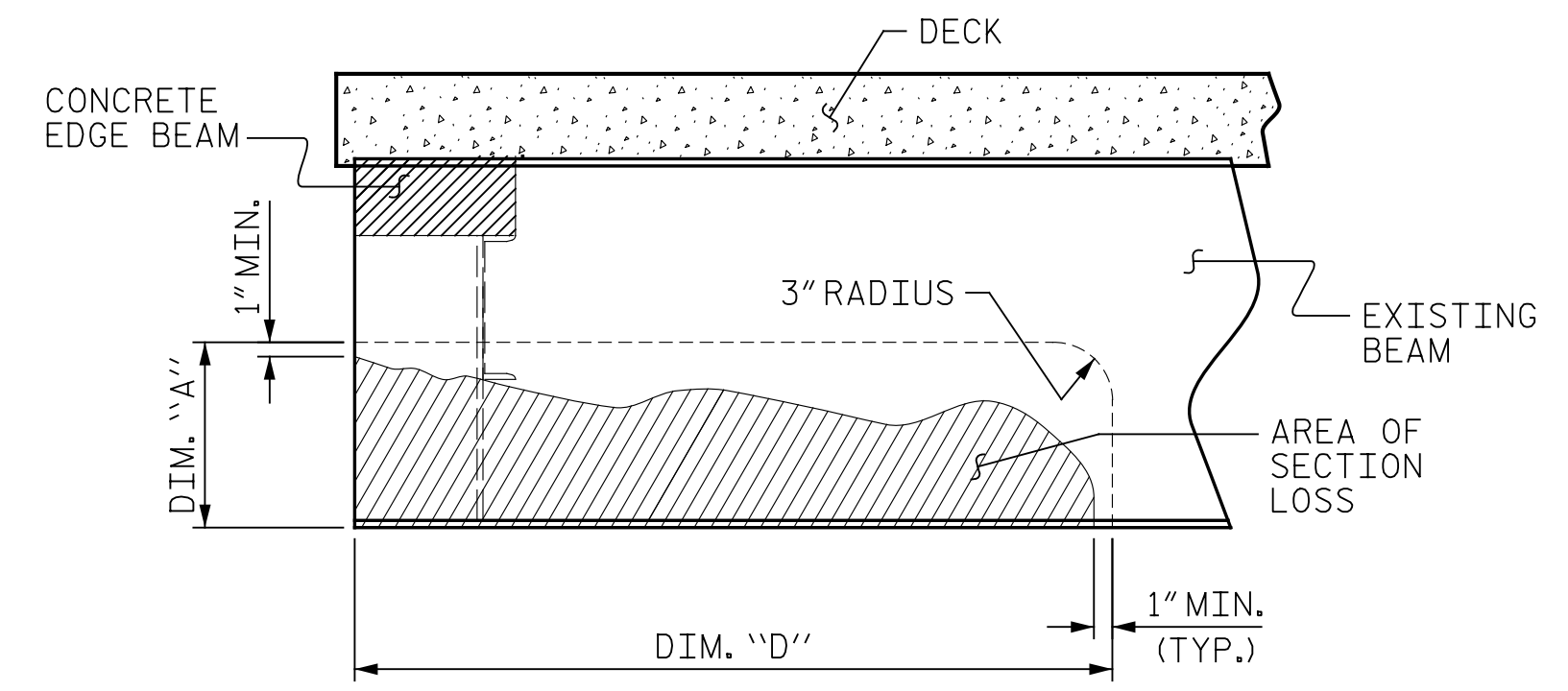


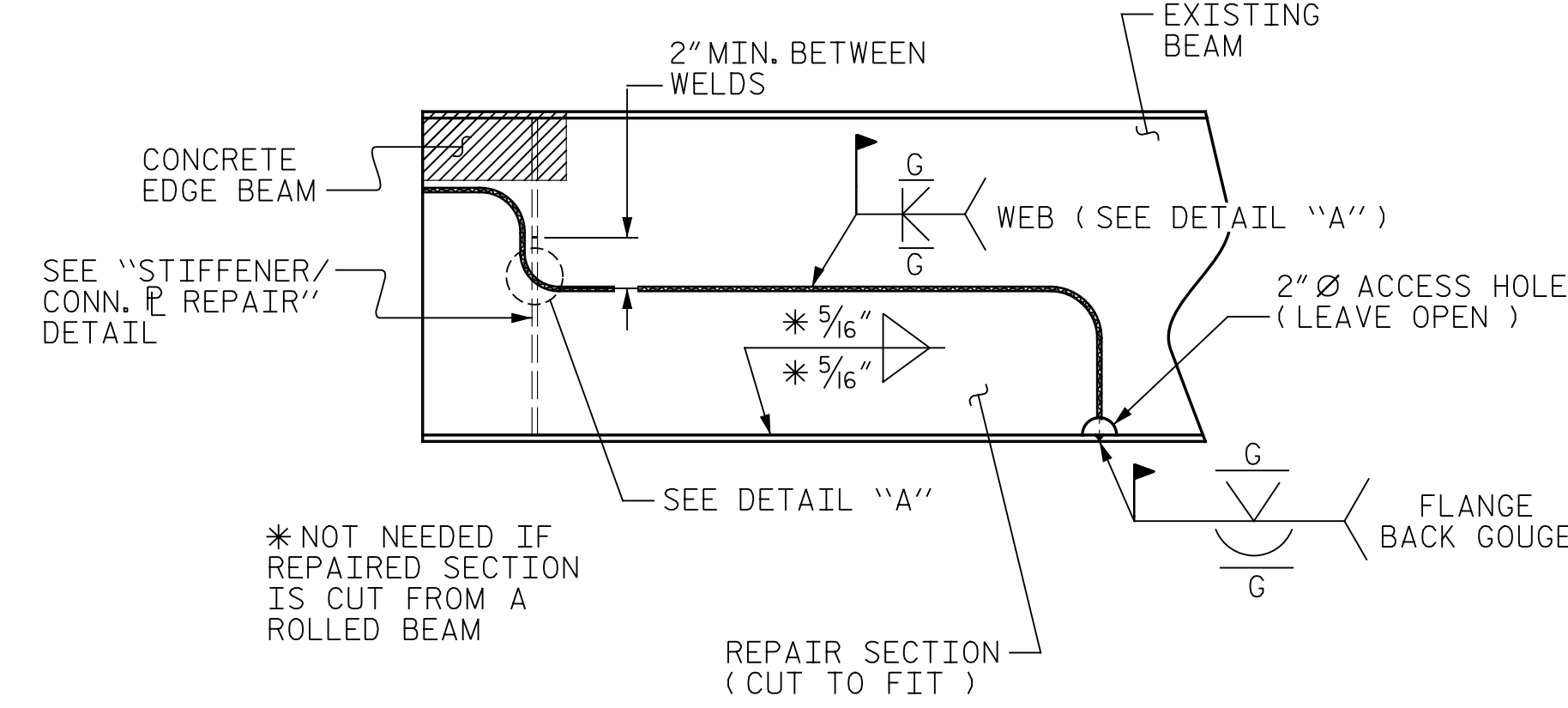
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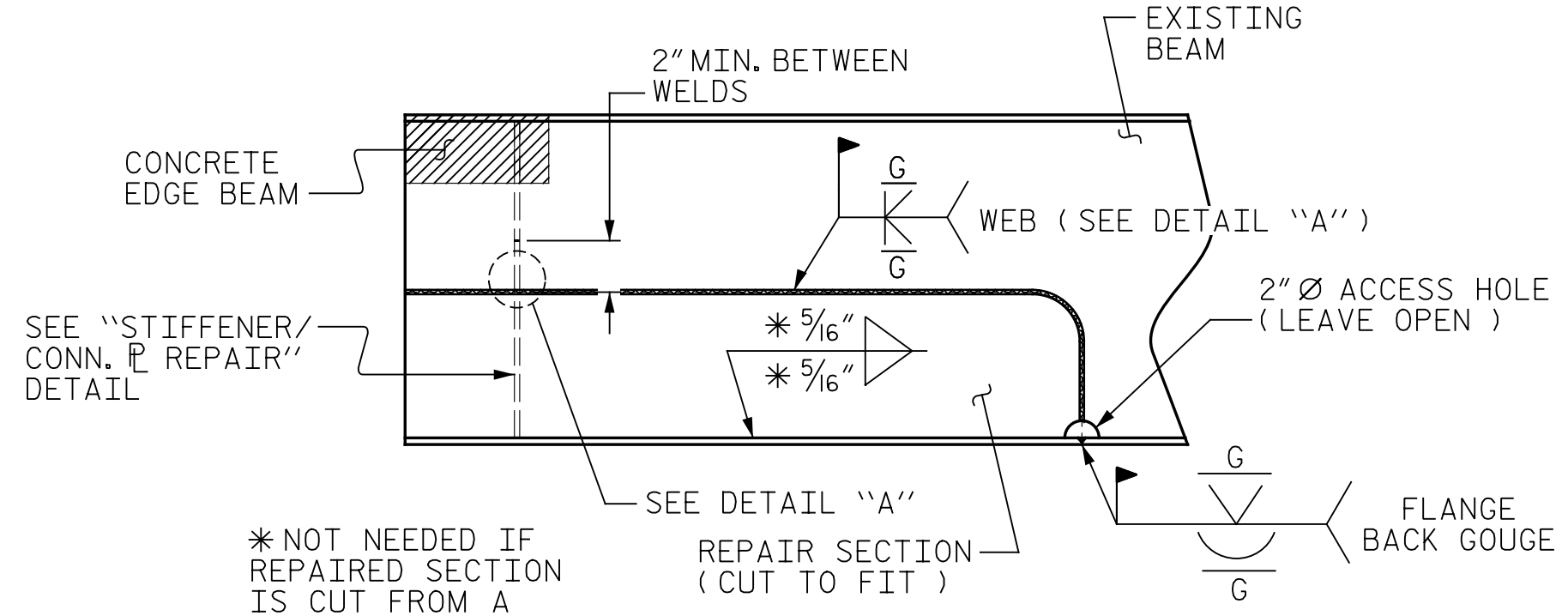
SECTION LOSS REMOVAL



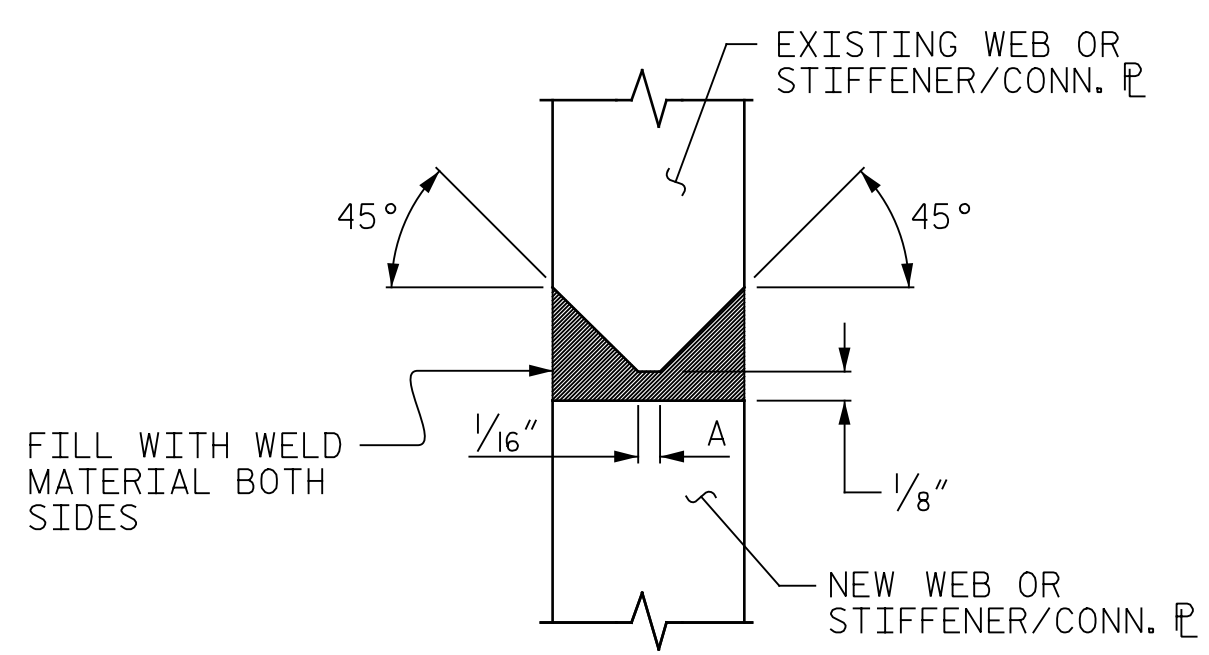
SECTION LOSS REMOVAL



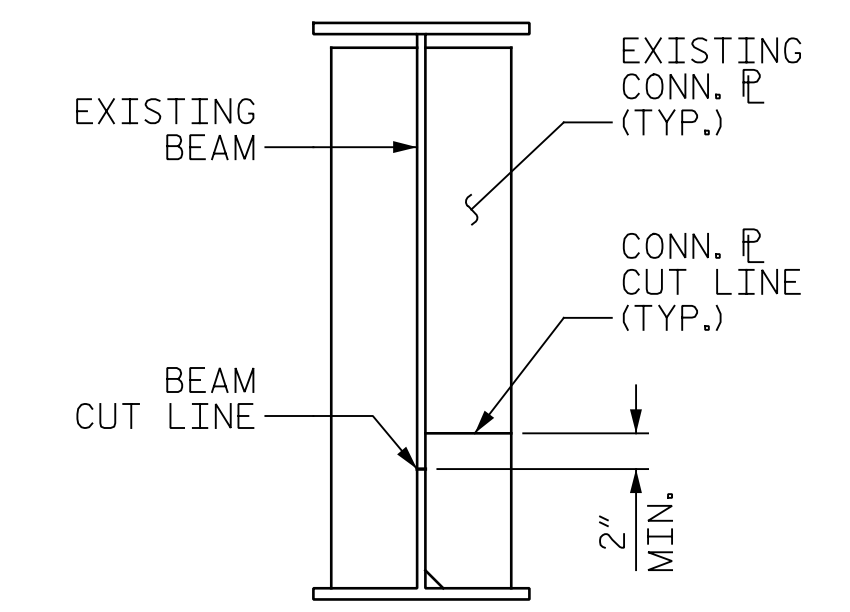
SECTION REPAIR



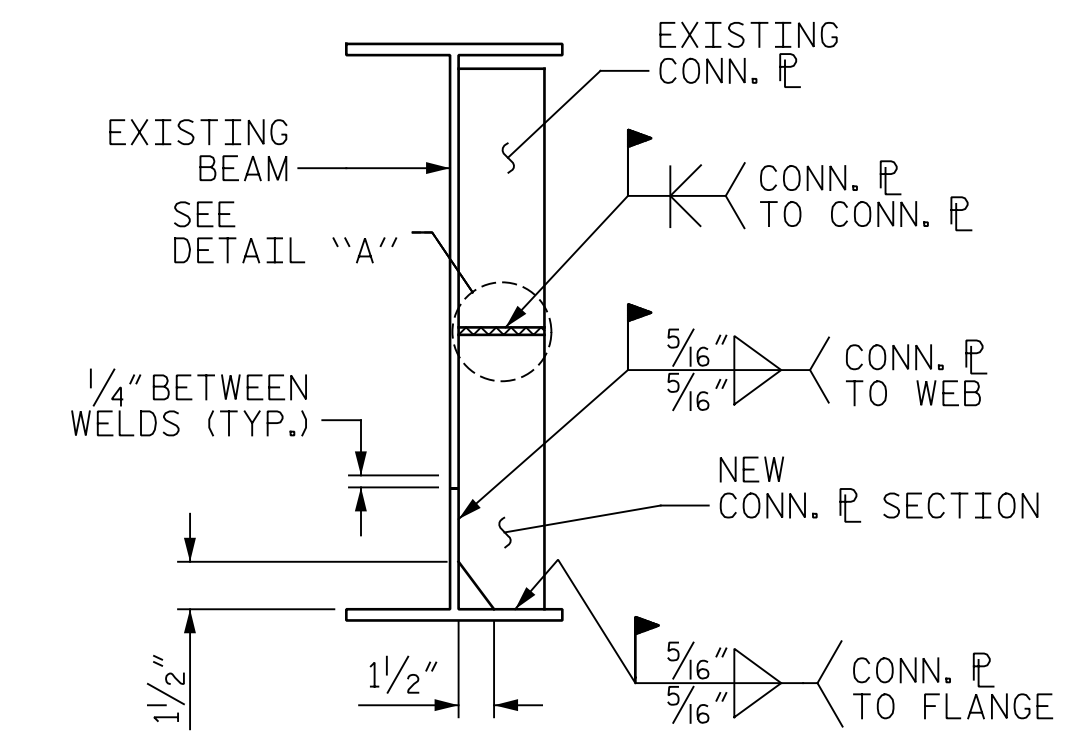
SECTION REPAIR



DETAIL "A"



STIFFENER/CONN. P REMOVAL



STIFFENER/CONN. P REPAIR

▲ FOR STIFFENERS, MILL TO BEAR AND DO NOT WELD

NOTES:

AFTER THE STRUCTURAL STEEL HAS BEEN BLASTED AND PRIMED, THE STRUCTURAL STEEL AND BEARING SHALL BE INSPECTED FOR EXCESSIVE SECTION LOSS. AREAS THAT EXHIBIT AN EXCESS OF 35% SECTION LOSS SHALL BE REVIEWED BY THE ENGINEER TO DETERMINE IF AREA OF SECTION LOSS SHOULD BE REPAIRED.

FOR FIELD MEASURING, SEE SPECIAL PROVISIONS.

AS DETERMINED BY THE ENGINEER, AREAS WITH EXCESSIVE SECTION LOSS OR AREAS WITH TEMPORARY REPAIRS SHALL BE REMOVED AND THE BEAMS SHALL BE REPAIRED AS INDICATED ON THIS PLAN SHEET. CONTRACTOR AND ENGINEER TO DETERMINE ACTUAL DIMENSIONS OF AREA TO BE REMOVED AND REPLACED. REMOVE CONCRETE BENT DIAPHRAGMS AS NEEDED TO EVALUATE LIMITS OF REPAIR.

FOR CONCRETE DIAPHRAGM REPAIR, SEE SPECIAL PROVISIONS.

AREAS OF EXCESSIVE SECTION LOSS, IN ADDITION TO THOSE INDICATED ON PLAN SHEETS, MIGHT BE ENCOUNTERED. THE CONTRACTOR SHALL HAVE ADDITIONAL REPAIR MATERIALS ON HAND OR READILY AVAILABLE, SO ADDITIONAL AREAS OF EXCESSIVE SECTION LOSS MAY BE REPAIRED IN A TIMELY MANNER.

PAYMENT FOR THE SECTION REPAIR SHALL BE BASED ON THAT AMOUNT OF REPAIR ACTUALLY PERFORMED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

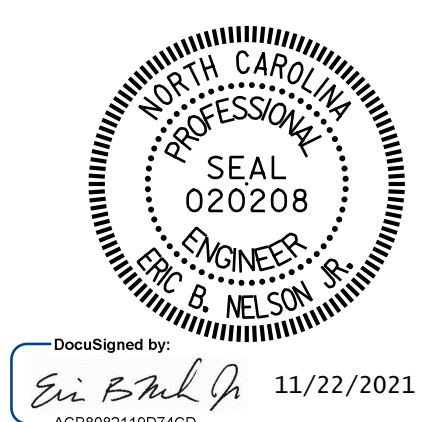
PROVIDE RUN-OFF WELD TABS, WHERE APPLICABLE, TO PROVIDE PROPER WELD START AND TERMINATION. SEE NCDOT M&T FIELD WELD MANUAL AND AWS D1.5 SECTION 3.12.

GOUGES AND INDENTIONS FROM IMPACT ON GIRDERS SHALL BE GROUND SMOOTH PRIOR TO BLASTING AND PAINTING OPERATION.

BEAM END REPAIR SEQUENCE:

1. REMOVE LIVE LOAD FROM REPAIR AREA BY EITHER CLOSING BRIDGE TO TRAFFIC OR SHIFTING TRAFFIC AWAY FROM REPAIR AREA.
2. REMOVE DEAD LOAD FROM BEAM BY JACKING AND BLOCKING. CONTRACTOR SHALL SUBMIT JACKING PLAN FOR APPROVAL, PRIOR TO BEGINNING WORK. SEE BRIDGE JACKING SPECIAL PROVISIONS.
3. STEEL DIAPHRAGM CHANNELS AND/OR STIFFENERS MAY BE TEMPORARILY REMOVED, IF NECESSARY, AND REPLACED AFTER BEAM REPAIR.
4. IF BEAM DETERIORATION EXTENDS INTO THE CONCRETE DIAPHRAGM THEN CHIP AWAY CONCRETE TO DETERMINE THE EXTENT OF THE DAMAGE. CUT OUT BY APPROPRIATE MEANS THE DAMAGED BEAM AREA AND/OR BEARING STIFFENER.
5. MECHANICALLY CLEAN RUST, SCALE, AND EXISTING PAINT TO AT LEAST 3" BEYOND REPAIR AREA.
6. INSTALL NEW CUT-TO-FIT SECTION. REPLACEMENT CUT-TO-FIT BEAM SECTION SHALL BE NEW AND FROM SIMILAR SIZE ROLLED BEAM OR APPROVED EQUIVALENT PLATES. THE GRADE OF STEEL SHALL BE AASHTO M270, GRADE 36 OR BETTER. FULLY WELD ALONG NEW BEAM SECTION AS SHOWN.
7. ALL WELDING SHALL BE IN ACCORDANCE WITH CURRENT APPLICABLE AWS AND NCDOT STANDARD SPECIFICATIONS.
8. 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.
9. IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, AFTER REPAIR, GRIND ALL WELDS FLUSH, THOROUGHLY CLEAN AREA TO REMOVE DEBRIS AND OILS FROM REPAIR PROCESS.
10. CLEANING AND PAINTING OF REPAIRED STRUCTURAL STEEL SHALL BE PERFORMED AS PART OF THE OVERALL CLEANING AND PAINTING CONTRACT.
11. FOR CLEANING AND PAINTING, SEE PROJECT SPECIAL PROVISIONS.
12. AFTER GIRDERS ARE REPAIRED AND PAINTED, ANY CONCRETE REMOVED FROM THE BENT DIAPHRAGMS SHALL BE CAST BACK. 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. SEE CONCRETE DIAPHRAGM REPAIR SPECIAL PROVISION.
13. LOWER SPAN TO BEAR; CHECK FOR DISTRESS.
14. REMOVE JACKING EQUIPMENT AND TEMPORARY SUPPORTS.
15. REMOVE ALL TRAFFIC CONTROL DEVICES.

PROJECT NO. I-5997  
WAKE COUNTY  
 BRIDGE NO. 910263 & 910264



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

BEAM REPAIR

ASSEMBLED BY : M. LEE	DATE : 09/2021
CHECKED BY : YANACCONO	DATE : 09/2021
DRAWN BY : PCB 10-16	
CHECKED BY : XXX XXX	

PLANS PREPARED BY:  
**Gannett Fleming**  
 Excellence Delivered As Promised

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 (919) 420-7660  
 NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-76
1			3			TOTAL SHEETS
2			4			82