

ELEVATION

SECTION

GIRDER WEB REPAIR

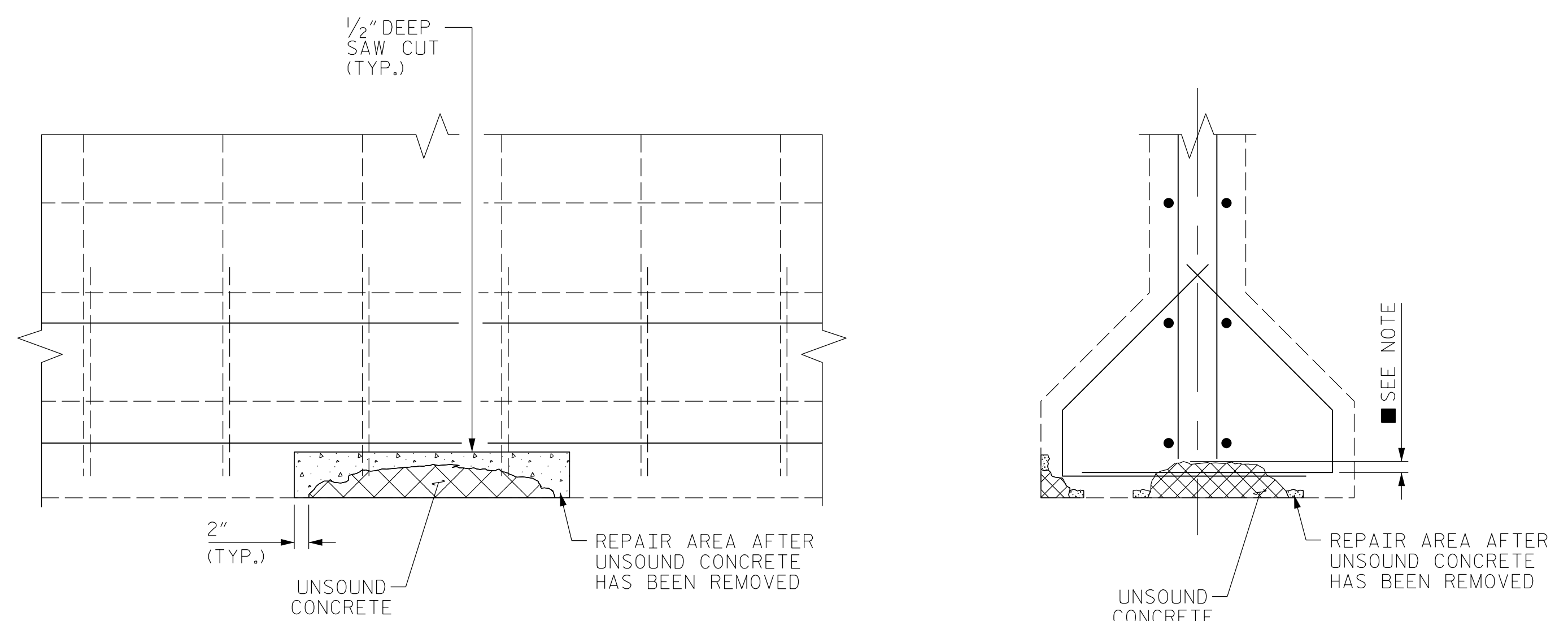
PRESTRESSED GIRDER REPAIR SEQUENCE:

1. SOUND CONCRETE TO DETERMINE EXTENTS OF REPAIR LOCATION (PHOTO REQUIRED).
2. REMOVE SURFACE CONCRETE TO VERIFY THAT SAW CUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL. SAW CUT AROUND REPAIR AREA TO A NOMINAL DEPTH OF 1/2".
3. REMOVE CONCRETE WITHIN SAW CUT AREA TO MINIMUM DEPTH 1/2" DEPTH. IF CONCRETE IS DAMAGED BEYOND THE ORIGINAL SAW CUT, A NEW SAW CUT IS REQUIRED.
4. ▲ IF MORE THAN HALF THE CIRCUMFERENCE OF A REINFORCING BAR IS EXPOSED DURING THIS PROCESS, REMOVE ADDITIONAL CONCRETE TO 1" BEHIND THE BAR. THIS DOES NOT APPLY TO PRESTRESS STRANDS.
5. ■ ALL UNSOUND CONCRETE MUST BE REMOVED. HOWEVER, PRESTRESSED STRAND SHOULD NOT BE DISTURBED UNLESS ABSOLUTELY NECESSARY. USE EXTREME CARE TO NOT DAMAGE STRANDS.
6. CLEAN ALL EXPOSED REINFORCING BARS AND PRESTRESSED STRANDS. FOR BARS WITH MORE THAN 10% SECTION LOSS, SPLICE AND SECURELY TIE SUPPLEMENTAL REINFORCING BARS AS NEEDED. NOTE AND PROVIDE DETAILED DOCUMENTATION, INCLUDING LOCATION AND SEVERITY OF ALL DAMAGE TO PRESTRESSED STRANDS THAT EXCEEDS 10% SECTION LOSS. IF FIVE OR MORE STRANDS ARE DAMAGED, NOTIFY THE ENGINEER PRIOR TO PLACEMENT OF REPAIR MATERIAL.
7. REMOVE ALL LOOSE OR WEAKENED MATERIAL THEN CLEAN THE REPAIR AREA OF DIRT, GREASE, OIL, AND FOREIGN MATTER.
8. PREPARE SURFACE AND PLACE APPROVED MATERIAL ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. MAXIMUM AGGREGATE SIZE FOR REPAIR MATERIAL SHALL NOT EXCEED 2/3 THE MINIMUM REPAIR DEPTH.
9. FOR GIRDER REPAIRS, SEE PROJECT SPECIAL PROVISION FOR REPAIRS TO PRESTRESSED CONCRETE GIRDERS AND SEE "SUPERSTRUCTURE DEFICIENCIES" SHEETS.

NOTES:

PREPACKAGED MATERIAL IS REQUIRED.

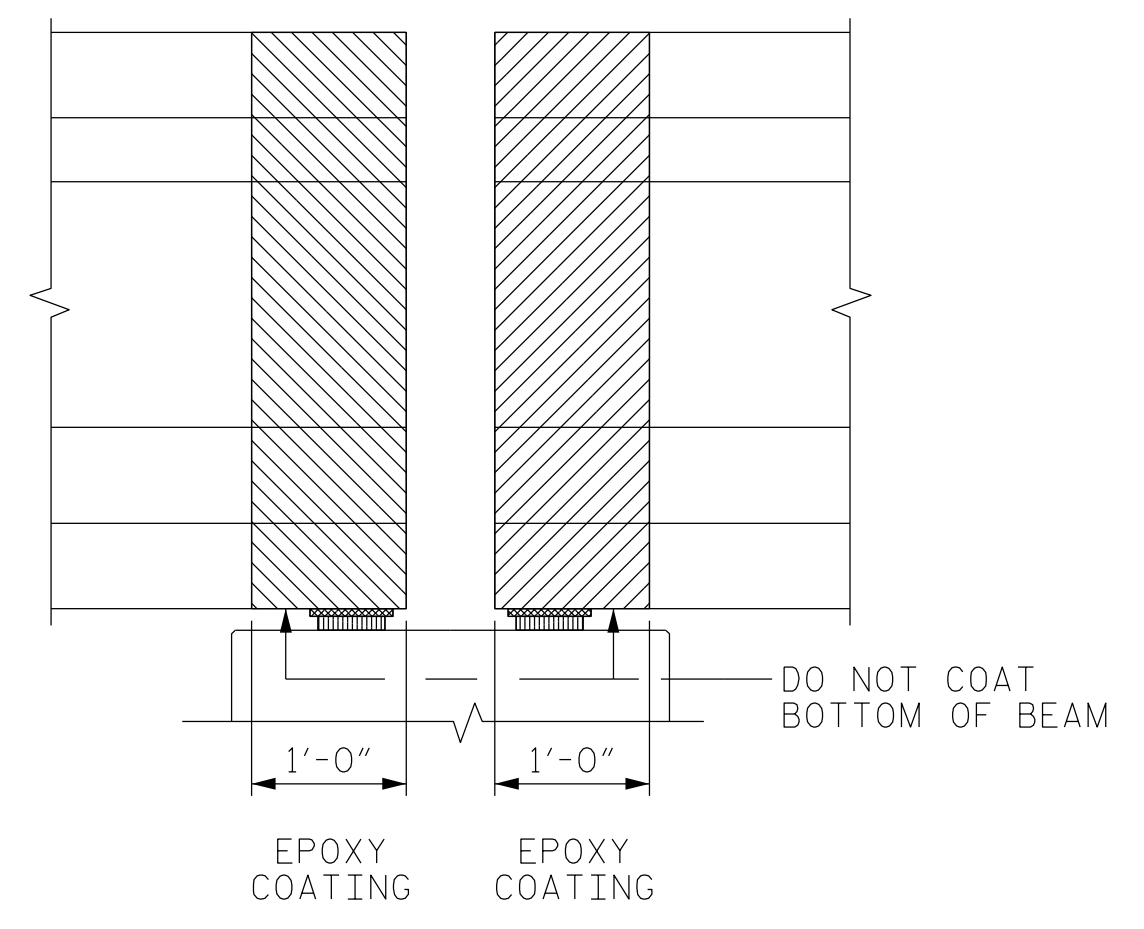
FOR REPAIRS OVER TRAFFIC AND SHALLOW REPAIRS THAT DO NOT ENGAGE REINFORCEMENT, ANCHOR PATCH MATERIAL USING 1/4" GALVANIZED BOLTS, EPOXY ANCHORED WITH 2" EMBEDMENT. PLACE BOLTS IN A 6" GRID. USE A LATEX OR EPOXY PATH MATERIAL FOR IMPROVED BOND. USE EXTREME CARE TO NOT DAMAGE STRANDS.



ELEVATION

SECTION

GIRDER FLANGE REPAIR



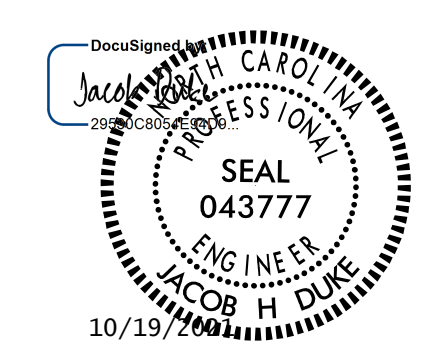
EPOXY COATING END OF GIRDERS

(GIRDER AT END BENT SHOWN)

AS-BUILT REPAIR QUANTITY TABLE				
EPOXY COATING BEAM ENDS				
ELEMENT(S)	NO.	RATE	TOTAL	
			ESTIMATE	ACTUAL
54" PCG (SPANS 1-15 & 19-33)	7	20.1 SF	4221 SF	
72" MBT (SPANS 16 & 18)	7	31.1 SF	435 SF	
72" MBT (SPAN 17)	10	31.1 SF	311 SF	
45" PCG (SPANS 34-73)	7	16.7 SF	4676 SF	
TOTALS			9,643 SF	

PROJECT NO. 15BPR.46
 DARE COUNTY
 BRIDGE NO. 270012

SHEET 2 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

CONCRETE RESTORATION
 DETAILS

P/S CONCRETE GIRDERS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-52
1			3			TOTAL SHEETS
2			4			137

DRAWN BY : JACOB H. DUKE DATE : 9/30/2020
 CHECKED BY : DIEGO A. AGUIRRE DATE : 10/1/2020
 DESIGN ENGINEER OF RECORD: JACOB H. DUKE DATE : 10/1/2020

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED