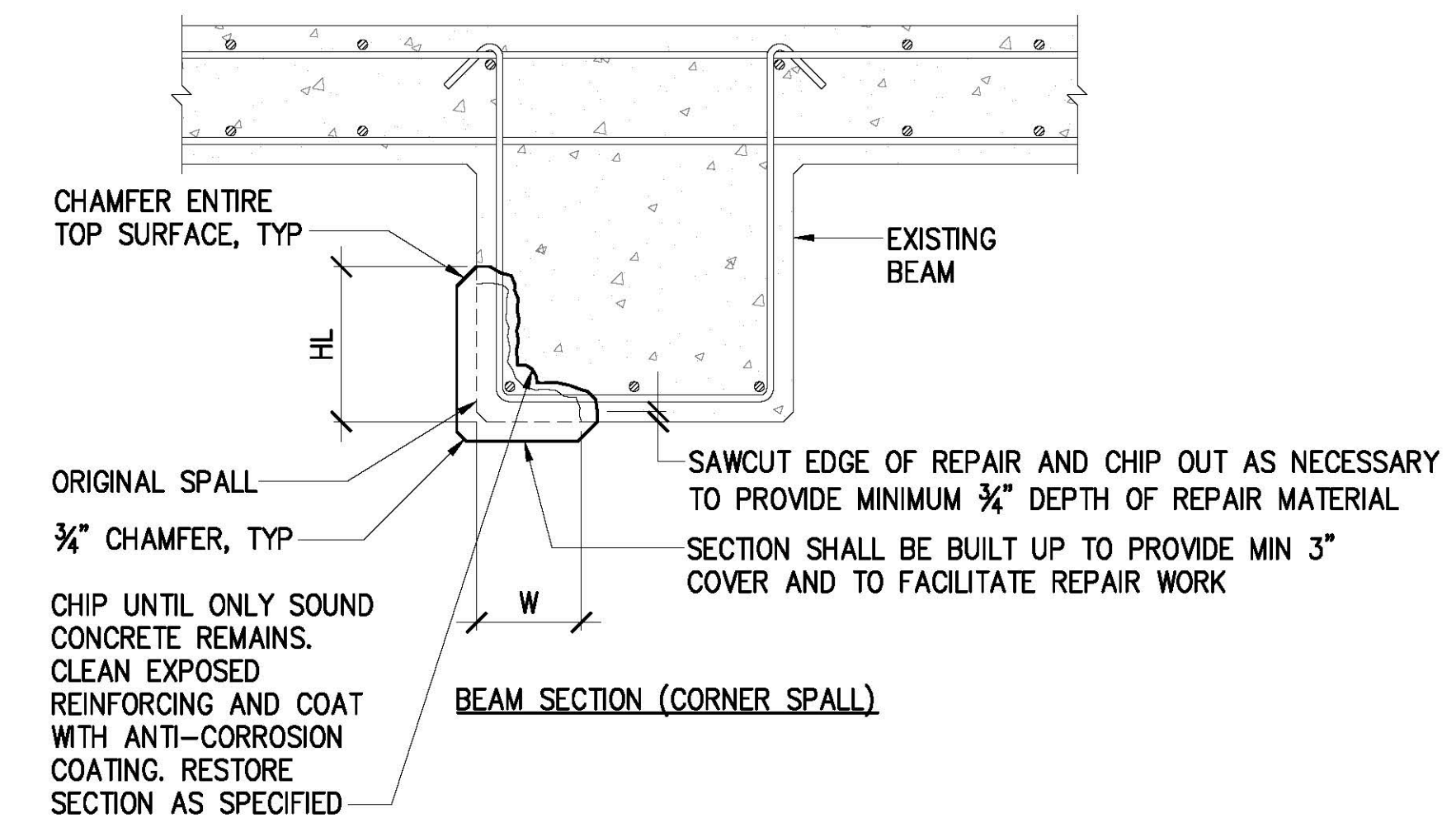
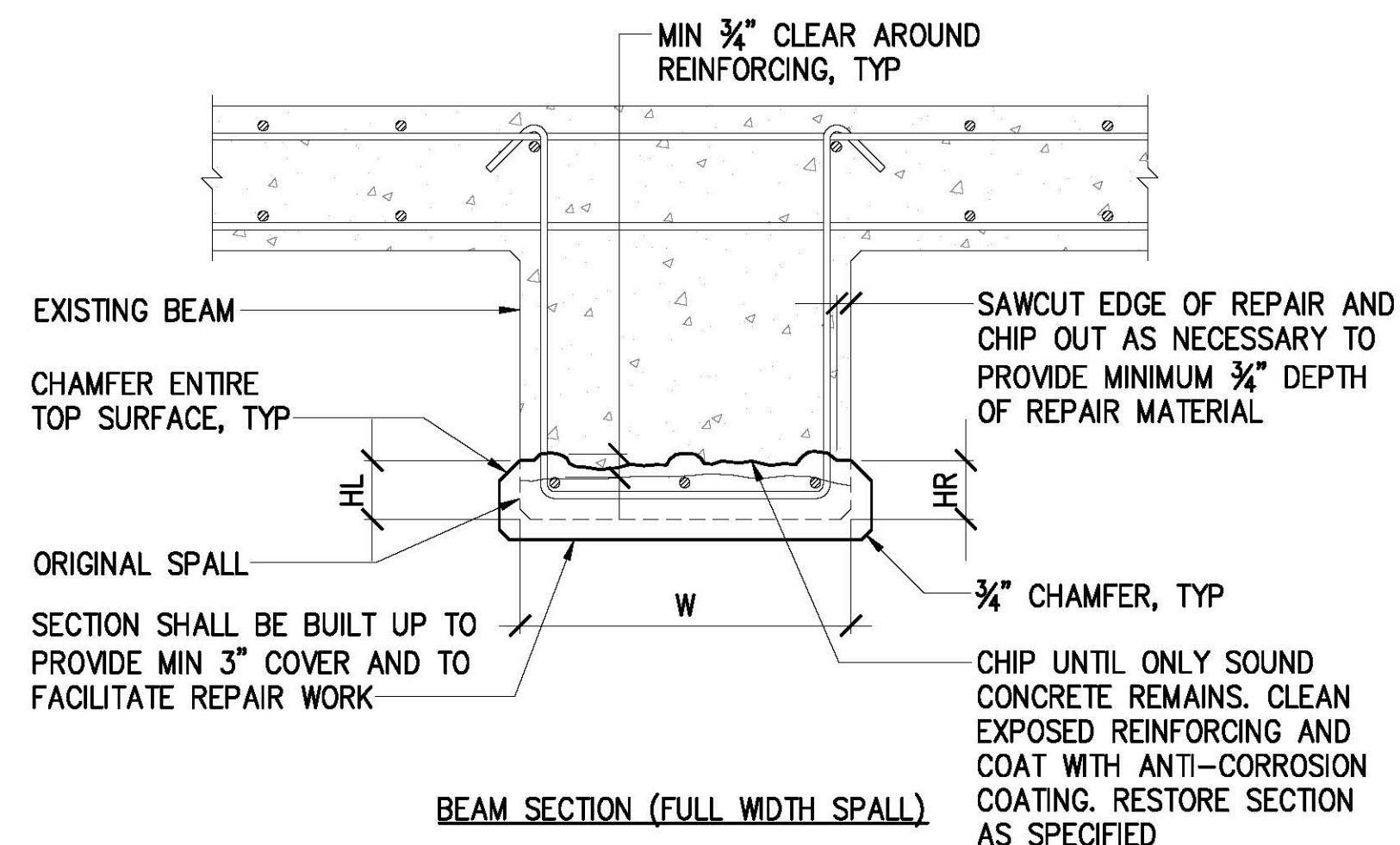
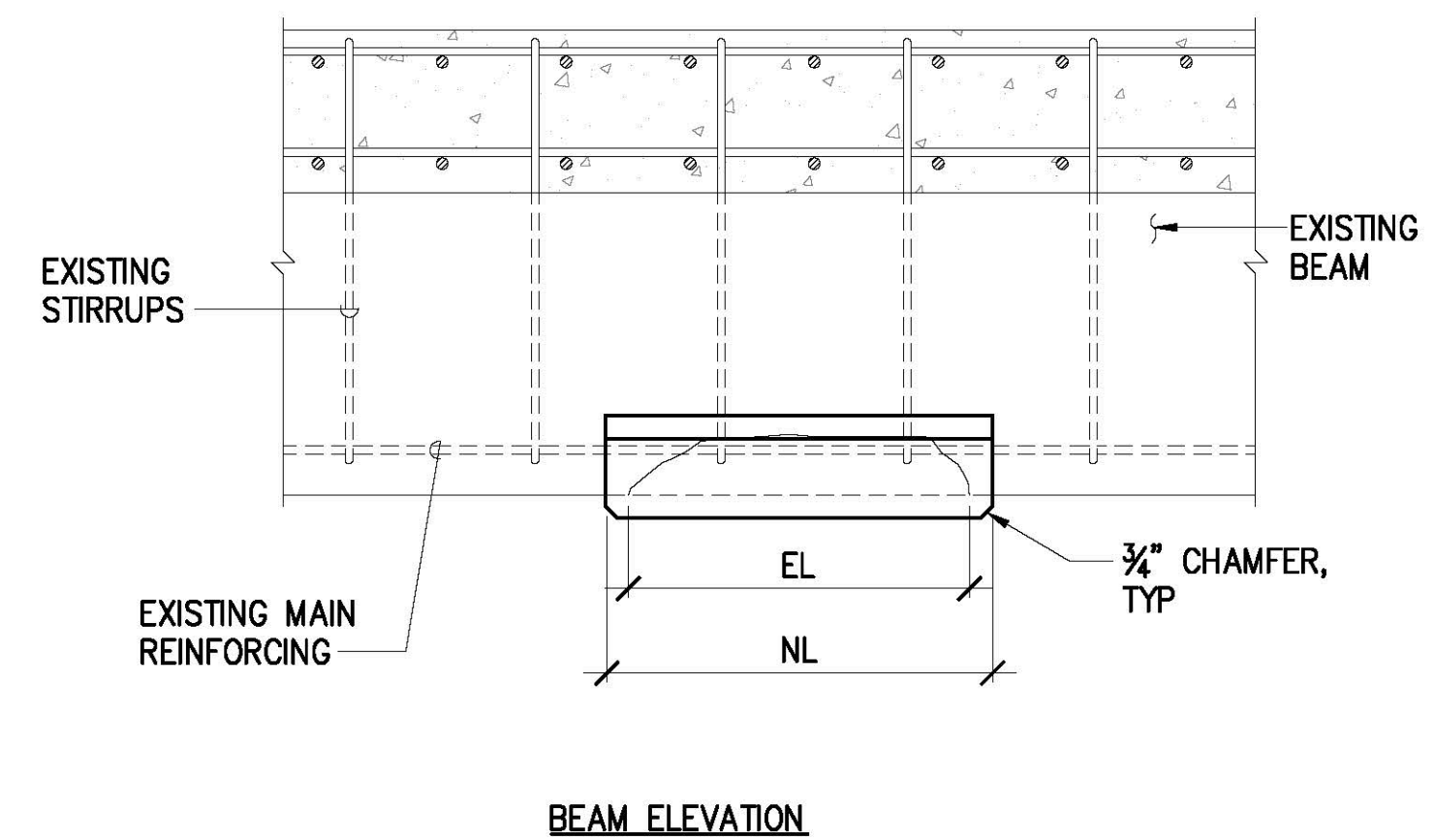


**PAY AREA:**  
 HL = HEIGHT OF REPAIR (LEFT SIDE)  
 HR = HEIGHT OF REPAIR (RIGHT SIDE)  
 W = ORIGINAL WIDTH OF BEAM/GIRDER SPALL  
 EL = EXISTING LENGTH OF SPALL  
 NL = LENGTH OF REPAIR

**PAY AREA = (HL+HR+W)NL**

**NOTES:**

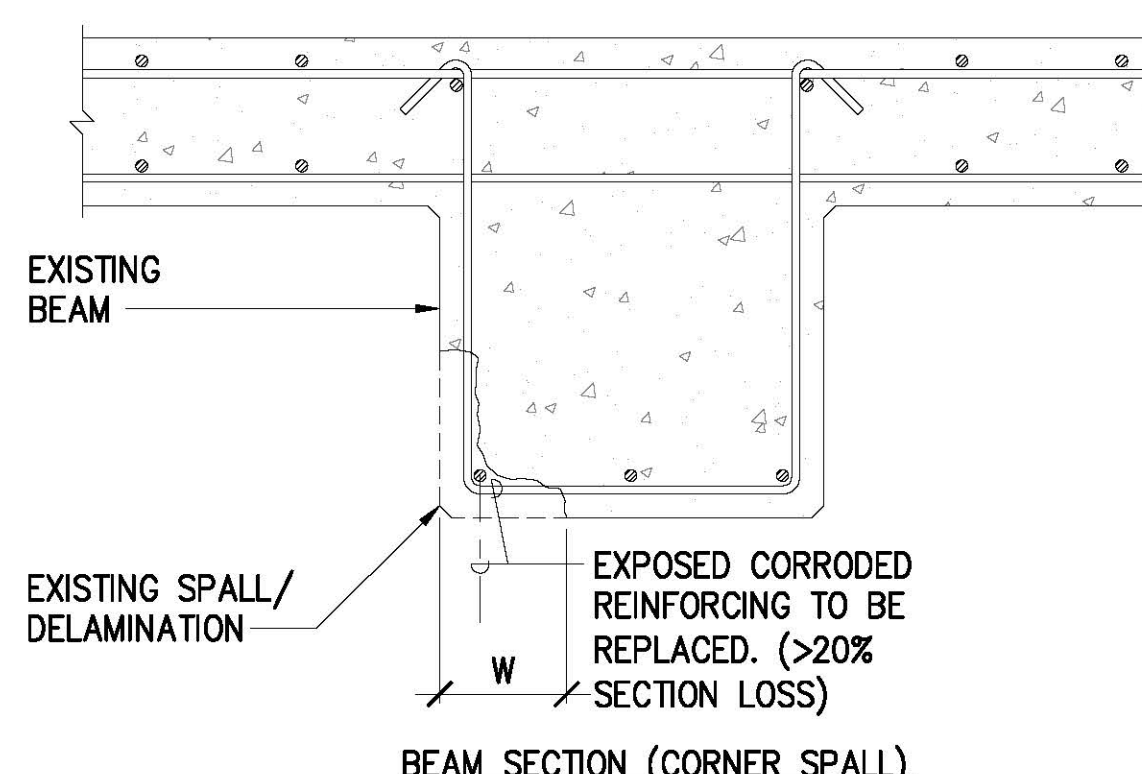
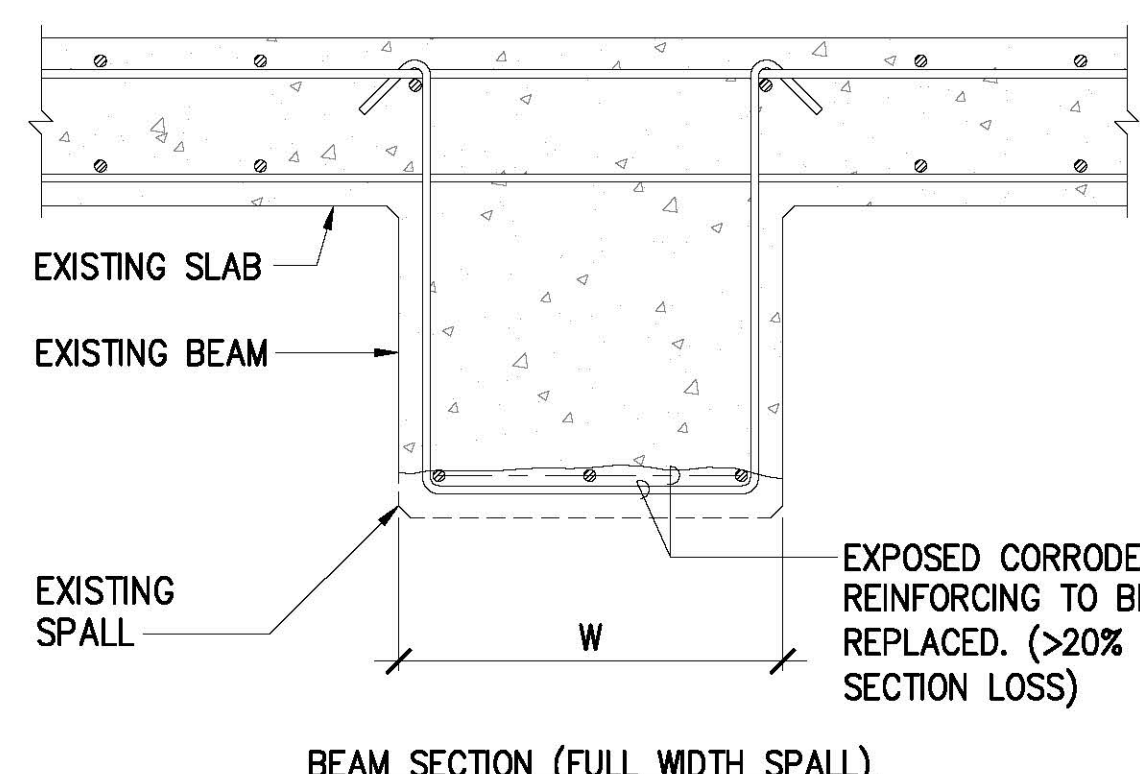
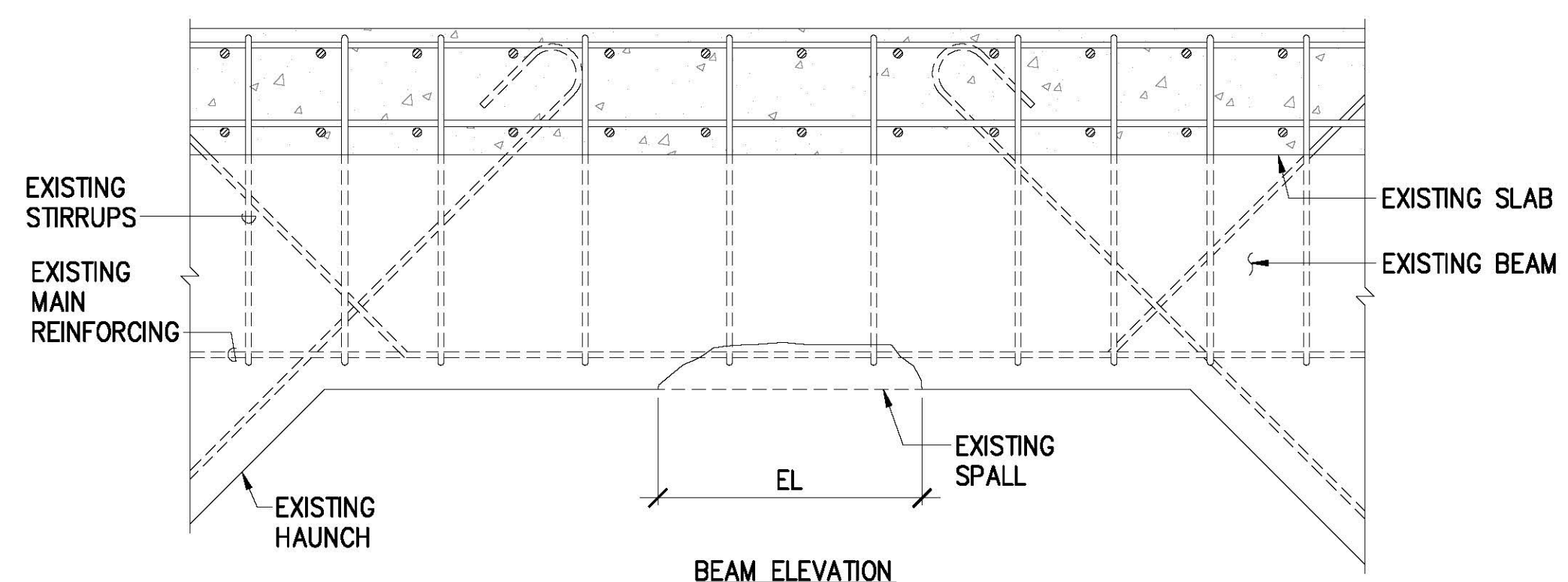
1. PAY AREA SHALL BE THE TOTAL REPAIRED AREA ON ALL BEAM FACES. IF HL, HR OR W VARY ALONG THE LENGTH OF REPAIR, PAY AREA SHALL BE CALCULATED INDIVIDUALLY FOR EACH BEAM FACE.



**EXISTING CONDITION**

**REPAIRED CONDITION**

**1 BEAM SPALL REPAIR (TYPE B)**  
 S-9 NOT TO SCALE

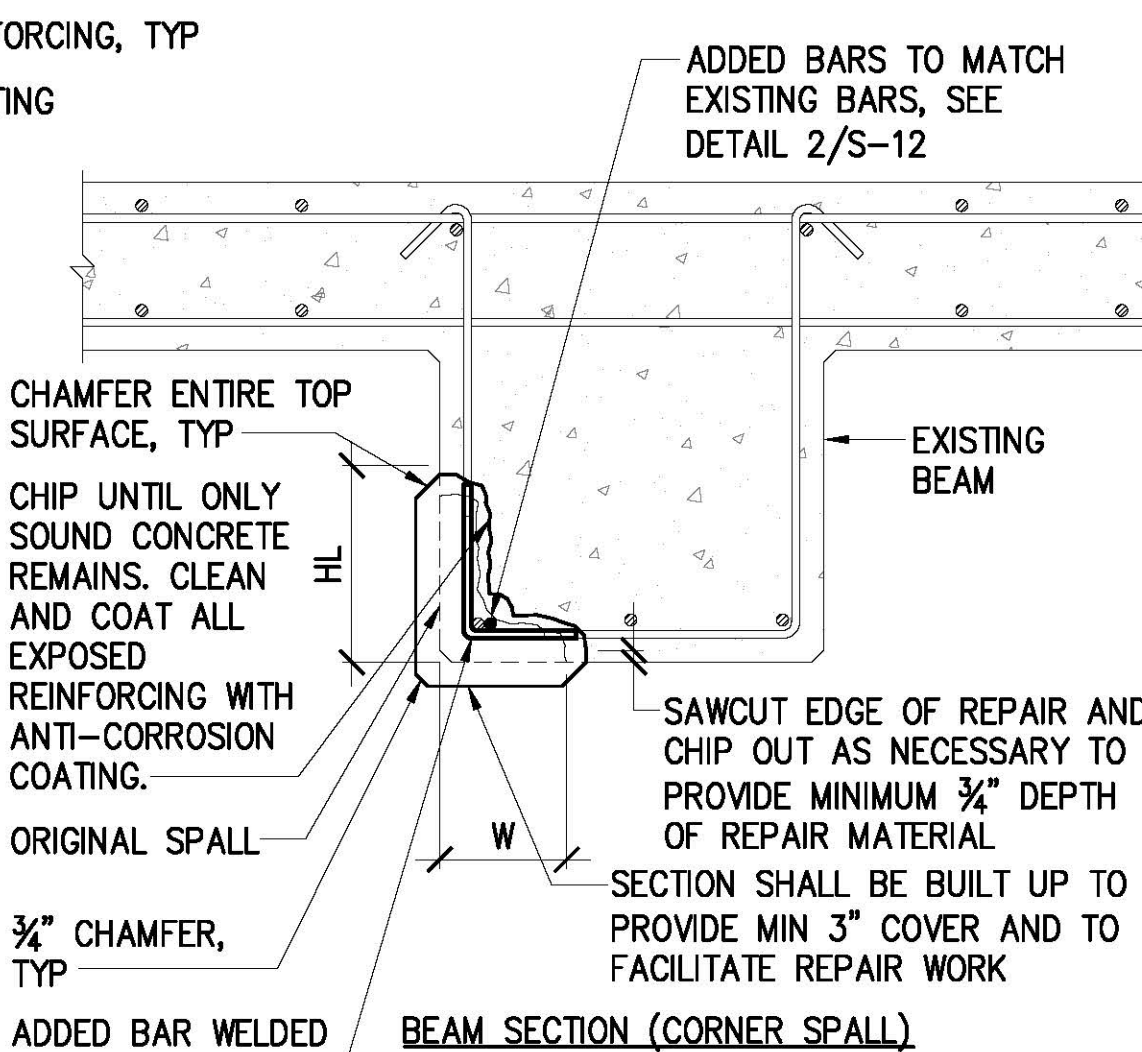
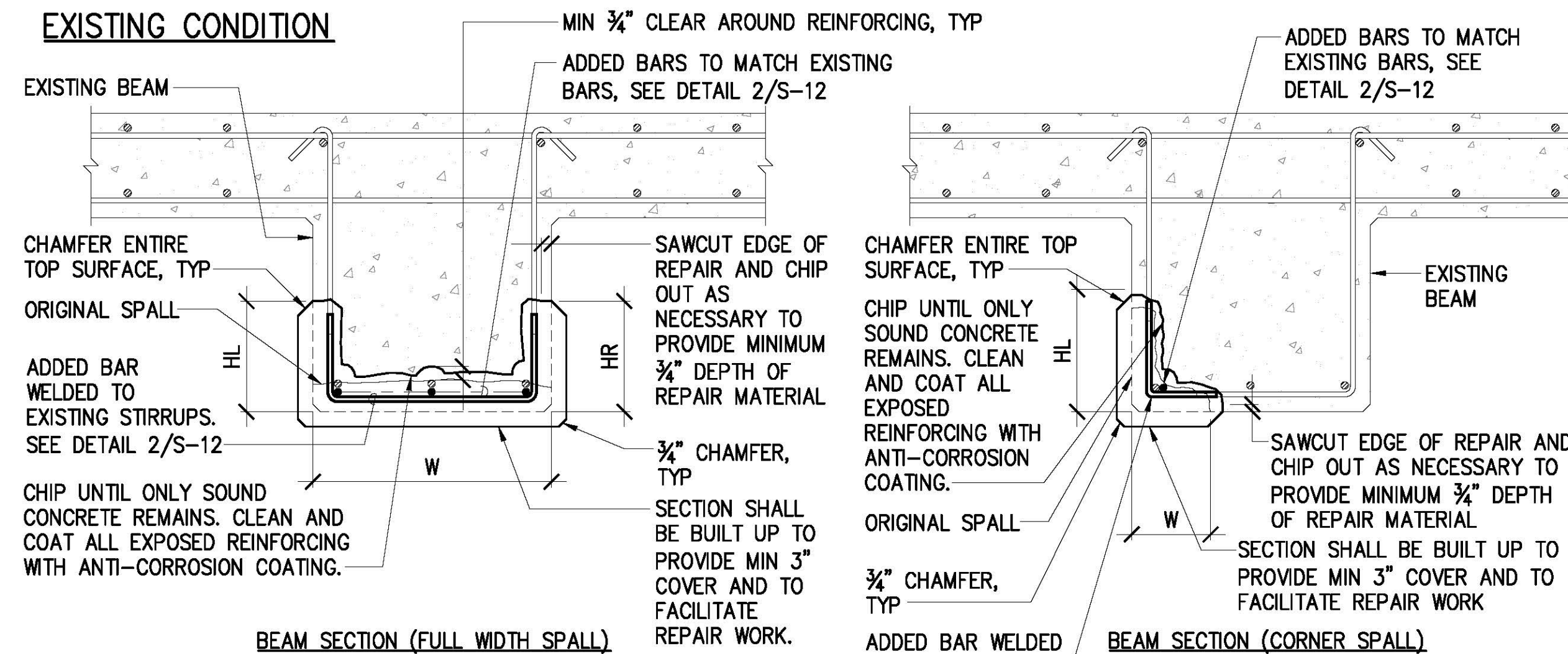
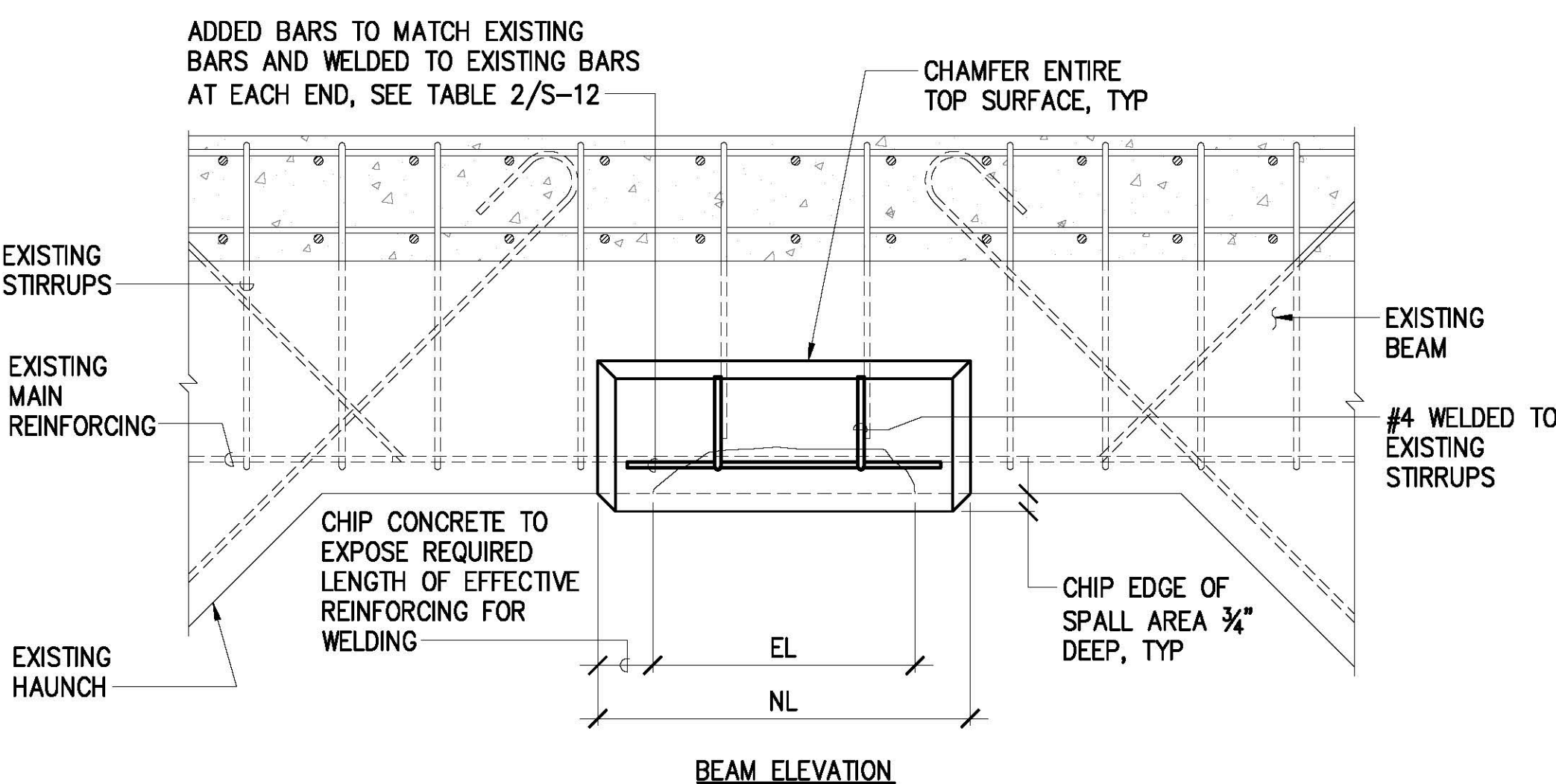


**PAY AREA:**  
 HL = HEIGHT OF REPAIR (LEFT SIDE)  
 HR = HEIGHT OF REPAIR (RIGHT SIDE)  
 W = ORIGINAL WIDTH OF BEAM/GIRDER SPALL  
 EL = EXISTING LENGTH OF SPALL  
 NL = LENGTH OF REPAIR

**PAY AREA = (HL+HR+W)NL**

**NOTES:**

1. PAY AREA SHALL BE THE TOTAL REPAIRED AREA ON ALL BEAM FACES. IF HL, HR OR W VARY ALONG THE LENGTH OF REPAIR, PAY AREA SHALL BE CALCULATED INDIVIDUALLY FOR EACH BEAM FACE.



**EXISTING CONDITION**

**REPAIRED CONDITION**

**2 BEAM SPALL REPAIR WITH REINFORCING STEEL REPLACEMENT (TYPE BR)**  
 S-9 NOT TO SCALE

		REVISION DATE DESCRIPTION BY APPROVED	
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HARBORS DIVISION			
JOB TITLE SUBSTRUCTURE REPAIRS AT PIERS 16 AND 17 HONOLULU HARBOR, OAHU, HAWAII			
SHEET TITLE BEAM SPALL REPAIR DETAILS			
DESIGNED BY: GO DRAWN BY: DL CHECKED BY: GM DATE: 04/2023 SCALE: AS SHOWN	JOB NUMBER S10852		
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION EXP. 4-30-24 MKE ASSOCIATES LLC			SHEET S-9 11 of 14 SHTS.