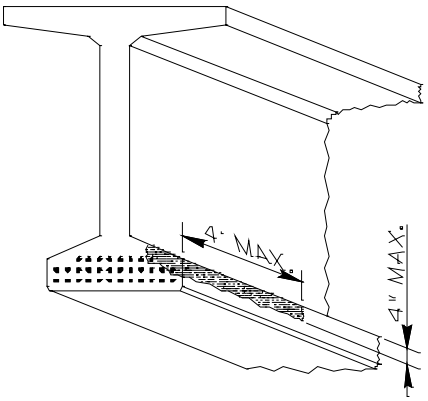
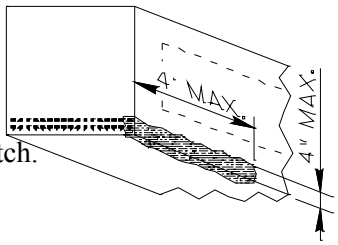
STANDARD REPAIR PROCEDURE #4
FOR
SPALLS AND VOIDS IN THE BOTTOM FLANGE THAT
EXPOSE PRESTRESSING STRAND

NOTE: This repair applies only to those voids which do not exceed 4 inches in depth, 4 feet in length and expose no more than 2 strands, and when no more than one spall or void appears in a given section of the girder. A section is defined as ¼ the length of the girder. No two such spalls or voids shall have their closest dimensions nearer than two beam depth apart. With the prior approval of the owner/engineer, this repair may be made, in the presence of the owners inspector without submitting the repair for formal approval.



Repairs at beam ends should be made after detensioning because any repairs made prior to detensioning will most likely fail due to high transfer stresses.

Repairs away from beam ends should be made prior to detensioning so that precompression stresses are induced in the patch material



A. Remove all loose concrete.

B. Square interfaces with existing concrete to be in contact with the patch.

C. Clean the excavated area, blowing away dust.

D. Repair Option 1 – Fill the voided area with approved polymer modified cementitious, shrinkage-compensated patching material, with a compressive strength equal or greater than the specified design strength of the beam. Prepackaged patching material is preferred to control quality.

E. Repair Option 2 – Coat surface to be adhered to with an approved bonding agent, following the manufacture's instructions. Fill the voided area with a high strength, cement based, shrinkage-compensated mortar, following the manufacture's instructions.

F. Detensioning should not occur until the patch reaches the specified compressive release strength.

G. For larger spalls of a similar nature and/or involving more strands, the same repair techniques may be employed but must be submitted to the owner/engineer for evaluation and approval.

H. In cases where the patch is located over vehicular traffic or pedestrian walkways, the patching material must be mechanically anchored either by encapsulating existing reinforcement, be anchored by supplemental reinforcement, or by other anchoring devices.