

SECTION 416
INSTALLING ADHESIVE-BONDED ANCHORS AND DOWELS
FOR STRUCTURAL APPLICATIONS

416-1 Description.

Prepare and install adhesive bonded anchors and dowels in hardened concrete as indicated in the Contract plans, as directed by the Engineer, and in accordance with the manufacturer's instructions and this Section.

Anchors and dowels in this Section are intended for use in structural applications where designated on the Contract plans.

416-2 Materials.

Use adhesive bonding material systems which meet the requirements of Section 937, and are included on the Qualified Products List.

416-2.1 Storage of Materials: Store materials delivered to the job-site in the original unopened containers within an appropriate facility capable of maintaining storage conditions consistent with the manufacturer's recommendations.

416-3 Equipment.

Ensure that the equipment used to install adhesive-bonded anchors and dowels is in conformance with the recommendations of the manufacturer.

416-4 Preparing of Concrete Members.

Ensure that concrete members receiving adhesive-bonded anchors or dowels are structurally sound and free of cracks in the vicinity of the anchor or dowel to be installed. Unless other equipment is recommended by the adhesive manufacturer, drill holes to the diameter required by the manufacturer, but as a minimum, not less than 105% nor more than 150% of the diameter of the steel bar anchor, using a rotary hammer drill and bit.

Clean and prepare drilled holes in accordance with the manufacturer's recommendations, but as a minimum, use compressed air to remove loose particles from drilling, brush inside surface to free loose particles trapped in pores, then use compressed air again to remove the remaining loose particles. Use a non-metallic bristle brush and avoid over-brushing to prevent polishing the inside surface of the drilled hole.

416-5 Installing of Anchors or Dowels.

Install anchors or dowels in accordance with the details shown on the plans and the manufacturer's instructions, with particular attention to requirements and/or limitations due to anchor position, dampness, ambient temperature, and curing.

Use adequate quantities of the adhesive bonding material to fill the drilled hole to within 1/4 inch [5 mm] of the concrete surface measured after placement of the steel bar or anchor.

416-6 Acceptance.

The Engineer will base acceptance of adhesive-bonded anchors and dowels on determining that the material requirements of Section 937, the installation requirements of this Section, and the placement requirements of the plans have been met. The Engineer may also require testing of installed anchors and dowels.

416-7 Basis of Payment.

The work specified in this Section will not be paid for directly, but will be considered as incidental work.