

733 - HYDRODEMOLITION

SECTION 733

HYDRODEMOLITION

733.1 DESCRIPTION

Use hydrodemolition to prepare the bridge deck surface for patching and overlay. Remove concrete and asphalt surfacing to the limits shown in the Contract Documents.

BID ITEM

Hydrodemolition

UNITS

Square Yard

733.2 MATERIALS - None specified.

733.3 CONSTRUCTION REQUIREMENTS

When hydrodemolition is used on the project, in addition to any permits required by **DIVISION 100**, obtain a National Pollutant Discharge Elimination System (NPDES) permit. Apply for NPDES permit a minimum of 60 days before beginning the hydrodemolition operations. The permit application is obtained through the (Permit Section) Kansas Department of Health and Environment (KDHE), headquarters in Topeka, Kansas.

Use a hydrodemolition machine that is capable of producing a water jet through an orifice at a pressure a minimum of 17,000 psi. Use a machine with forward and backward motion that is capable of moving the water jet transversely across the concrete surface. The machine must operate with sufficient pressure to remove the unsound concrete. The machine must be capable of controlling these functions:

- the water pressure;
- the angle and distance of the orifice in relation to the concrete surface;
- the limits of transverse and longitudinal movement of the orifice;
- the speed of the orifice in transverse and longitudinal directions.

Adjust the hydrodemolition machine to remove the concrete to the approximate depth shown in the Contract Documents. Do not remove sound concrete below the top of the transverse layer of reinforcing steel. Perform the hydrodemolition to comply with the construction sequence shown in the Contract Documents.

Remove all unsound concrete. The Engineer will check the results of the hydrodemolition machine to verify that the machine is removing all of the unsound concrete, but is not removing sound concrete.

The Engineer will establish a hydrodemolition test area on the bridge deck. In the test area the Engineer will locate and record the limits of an area of unsound concrete. After the hydrodemolition machine is operated over this test area, the Engineer will measure the area that requires a deck patch. If the area requiring a deck patch is greater than 15% more than the area initially recorded by the Engineer, adjust the hydrodemolition machine to operate within the 15% tolerance.

Shield the water jet on the hydrodemolition machine to protect workers and the traveling public. Do not allow water to accumulate on the bridge. Do not damage areas adjacent to or below the bridge when draining the water from the bridge.

Remove and dispose of all asphalt surfacing and broken concrete removed from the bridge deck.

733.4 MEASUREMENT AND PAYMENT

When shown is a bid item in the contract, the Engineer will measure hydrodemolition by the square yard. Payment for "Hydrodemolition" at the contract unit price is full compensation for the specified work.