

**ITEM 08502.4468 M - SURFACE PREPARATION AND ASPHALT CONCRETE
PAVEMENT REPAIR IN EXISTING PORTLAND CEMENT
CONCRETE PAVEMENT**

DESCRIPTION:

This work shall consist of patching spalls, potholes, or other surface distress in portland cement concrete pavement slabs. The patch area shall be prepared by removal of all existing patching material, broken, damaged or disintegrated concrete and patched with asphalt concrete, Top Course, where indicated in the contract documents or directed by the Engineer.

MATERIALS:

The materials used shall meet the requirements of the specified Top Course Asphalt listed in the contract plan or proposal and section 403 of the Standard Specifications.

CONSTRUCTION DETAILS:

Repairs shall conform to the details shown in the contract documents and/or as directed by the Engineer. The area surrounding the spall or other distress shall be sounded with a 1 kg to 1.5 kg hammer. The Engineer will designate the perimeter of the area to be patched. To minimize cracking or further spalling and to maximize the service life of the pavement repair, patch areas should approach rectangular dimensions and preferably square dimensions when feasible. Patches should refrain from tapers or dimensions that result in narrow, pointed shapes. All asphalt concrete, foreign materials of any kind, and unsound concrete shall be removed from the repair area.

The contractor has the option of using chipping hammers, or a small milling machine.

1. Chipping Hammers - The edges of the patch shall be chipped to produce a nearly vertical, intentionally rough sound edge. No undercutting shall be required or permitted. The floor of the patched area shall be chipped away to produce a minimum patch depth of 40 mm at all points within the patch.

Chipping hammers that are used shall not damage the concrete that is to remain. Chipping hammers shall weigh not more than 20 kg with the bit and muffler removed. The contractor shall provide the Engineer with information from the hammer manufacturer that these requirements are not exceeded. The air pressured used to power the hammer shall not exceed 700 kPa measured at the air compressor. An air pressure gauge in proper working condition shall be provided. Only sharp, 75 mm minimum width, chisel point bits shall be used. All bits determined by the Engineer to be dull shall be sharpened or replaced. If the Engineer determines that the contractor's operations are resulting in damage to concrete that is to remain, the contractor shall make immediate corrections. These corrections shall include the use of a lighter chipping hammer if so directed by the Engineer. Damage caused by the contractor's operations shall be repaired to the satisfaction of the Engineer at no additional expense to the State.

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2. Milling Machines - Milling machines that are used for concrete removal shall result in the same surface preparation as in 1. Chipping Hammers. Their use shall be approved by the Engineer.

Air blasting shall follow concrete removal to remove any remaining contaminants or loose chips of concrete.

Immediately prior to placing the patching material, the area to be patched shall be cleaned of all loose material by vacuum or air blasting. Air compressors shall be equipped with moisture traps. Air blasting shall have a pressure sufficient to remove all loose debris. The contractor is required, at all time while air blasting, to provide protection by means of screening, approved by the Engineer to prevent damage to, or interference with traffic in adjacent lanes.

Patching material shall be placed during the same working day as when the patch area is prepared.

Tack Coat - All repair areas shall have tack coat applied. The material shall conform to all provisions of Item 407.01 M as noted in the Standard Specifications, except that pressure distributors will not be required.

Steel pavement mesh which is exposed in the area to be patched shall be removed and not replaced.

Patching material shall not be placed in wet weather. If, in the opinion of the Engineer, the patching material is damaged, it shall be removed and replaced. Temperature limitations for placing the patching materials shall conform to section 403 of the Standard Specifications.

METHOD OF MEASUREMENT:

This work will be measured as the number of square meters of the prepared area plane to the surface of the pavement.

BASIS OF PAYMENT:

The unit price bid shall include the cost of all labor, materials, and equipment necessary, including disposal of the removed materials, to complete the work.