

ITEM 18502.3101 M - FULL-DEPTH PORTLAND CEMENT CONCRETE (PCC) LIFT-OUT

DESCRIPTION. Mark the area to be lifted, saw cut, lift, and dispose of:

- PCC.
- Permeable base.
- PCC patched with hot mix asphalt (HMA).
- Full-depth HMA within the marked area.

MATERIALS.

Anchoring Material and Dispensing Equipment. Use a pourable, 2 component, 100% solids structural epoxy meeting §701-07, Anchoring Materials - Chemically Curing, dispensed:

- From side-by-side cartridges by manual or pneumatically powered injection guns.
- Through a static nozzle that homogeneously mixes the material without any hand mixing.

CONSTRUCTION DETAILS. Schedule all full-depth repair operations (from lift-out to concrete placement) to minimize the total time to complete any individual repair. As the time frame from saw cutting to placement increases, the potential for damage to the surrounding pavement scheduled to remain in place also increases, particularly in hot weather or as the temperature rises. No time frame to completion is specified in this item due to contract variability.

Mark the boundaries of the area to be lifted out. Do not cut until the Engineer approves the marked boundaries. Saw cut full-depth around the removal area at the approved boundaries, including through the permeable base, if any. These cuts will become the transverse and longitudinal joints that define the repair. Use a diamond blade saw equipped with cutting guides, blade guards, water cooling systems, dust controls, and cut depth control. Set the cut depth to minimize subbase disturbance. Make straight saw cuts around the repair perimeter that result in smooth faces that are perpendicular to the pavement surface. Make transverse cuts perpendicular to the longitudinal joint.

Over cut the saw cut intersections a distance equal to the pavement thickness, including the permeable base, if any. After lift-out and before placing the full-depth repair material, fill the over cuts in concrete to remain in place with anchoring material. Place the anchoring material as deep as possible into the over cut, starting at the deepest portion of the over cut and proceeding to the shallowest portion. Block the deepest portion of the over cut such that the anchoring material does not enter into the lift-out area. Finish the anchoring material flush to the pavement surface. When using new cartridges of anchoring material, ensure that the initial material exiting the nozzle appears uniformly mixed. If it is not uniformly mixed, waste the material until uniformly mixed material extrudes.

Additional saw cuts within the repair boundaries to facilitate lift-out without damaging the repair boundaries are permitted. Use any saw for these cuts. Set the cut depth to minimize subbase disturbance. Do not over cut into adjacent concrete that is not scheduled for removal. (Be advised that the longer partial-width cuts remain in place without removal and replacement, the greater the potential for damaging the surrounding concrete scheduled to remain in place, particularly in hot weather or as temperatures are rising. No payment will be made for repairing damage to the surrounding pavement scheduled to remain in place.) Over cutting is allowed if the adjacent concrete is scheduled for removal.

If traffic is to be maintained on the pavement after cutting, remove all debris from the pavement before traffic is restored.

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Drill holes and insert lift pins into the concrete to be removed. Lift and dispose of the concrete such that there is:

- No damage to the surrounding pavement to remain in place.
- Minimal disturbance to the subbase.
- No damage to any adjacent curb, drainage structure, or utility.

Pavement sections too deteriorated to lift-out as determined by the Engineer and full-depth HMA may be excavated rather than lifted. Excavate the pavement such that there is minimal disturbance to the subbase.

Dispose of all material in accordance with §203-3.08, Disposal of Surplus Excavated Material.

METHOD OF MEASUREMENT. The work will be measured for payment as the number of square meters of pavement satisfactorily lift-out or excavated, measured to the nearest 0.1 m² based on the Engineer-approved removal areas marked on the pavement prior to saw cutting.

BASIS OF PAYMENT. Include the cost of all labor, material, and equipment necessary to satisfactorily perform the work in the unit price bid for Full-Depth PCC Lift-Out. No additional payment will be made for:

- Extra work required to repair damage to the adjacent pavement that occurred during any operation.
- Additional saw cuts made inside the repair boundaries to facilitate lift-out.

Additional payment will be made if the original repair area did not completely extend into sound concrete.

Subbase removal and replacement or drainage enhancement identified before or after removal are paid under separate items.