

SELECTION OF A PATCH METHOD

Mill-and-fill with virgin HMA

- Use virgin hot-mix asphalt (HMA) during the regular season. This option can be used in any situation: mill-and-fill or established potholes.
- HMA works for any depth repair. However, when the patch depth is greater than 4 inches, consider using multiple lifts and compacting after each lift is placed.

Mastic

- Mastic, although expensive, is the best option for low-depth, narrow potholes (less than 3 inches wide and less than 2 inches deep) along longitudinal joints.
- As with any maintenance operation, quality control is paramount. Use the proper amount of patching material for better compaction and longer-lasting patches.
- Ensure the patch area is dry before placing the material. Moisture doesn't seem to infiltrate mastic patches that are dry before repair.

Cold-mix asphalt patch

- Use cold-mix asphalt only for temporary fixes in small- to medium-sized potholes. The material is not designed to be structurally sound for depths greater than 2 inches. If a cold-mix patch can't be avoided, place the patch in two lifts, compacting the material after each lift is placed.

Advanced/proprietary materials

- Several advanced rapid set materials are available for use at sites that require short reopening times. It may not be necessary to compact these materials since they are mostly cementitious.

POTHOLE PREPARATION

Minimum required cleaning method

- **Sweeping:** Use a steel brush to sweep out a pothole, removing dirt, debris and any standing water. Note: Sweeping removes large particles from a pothole, but may not remove fine materials.

Recommended cleaning method

- **Compressed air:** Use a hose attached to an air compressor to remove dirt, debris and any standing water from a pothole. This method removes both fine and large particles, and helps to dry the pothole surface. This method removes both fine and large particles, as well as helps to dry the surface of the pothole.
- Eye protection is required when cleaning with compressed air.

Milling operations

- Use standard methods for milling both longitudinal joint distress and localized potholes. Before placing the patching material, follow the guidelines for cleaning a patch area.

PLACEMENT AND COMPACTION

HMA

- Completely cover the patch area with an approved tack material.
- If at all possible, don't allow the HMA delivery vehicle to drive directly in the milled area. Debris from the vehicle's tires will cover the tack material and make it non-functional.
- Use vibratory steel rollers to compact the material. To ensure patch longevity, compact the area thoroughly.

Mastic

- Use standard mastic operations.
- The material is moderately self-leveling and doesn't require compaction.

Cold-mix asphalt

- Use shovels to manually place patching material.
- For deeper patches, use multiple lifts, compacting the material after each lift.

MOISTURE ABATEMENT

HMA

- Once the area is dry, apply a liberal amount of sealant or tack to the area to keep moisture from infiltrating the patch contact point.

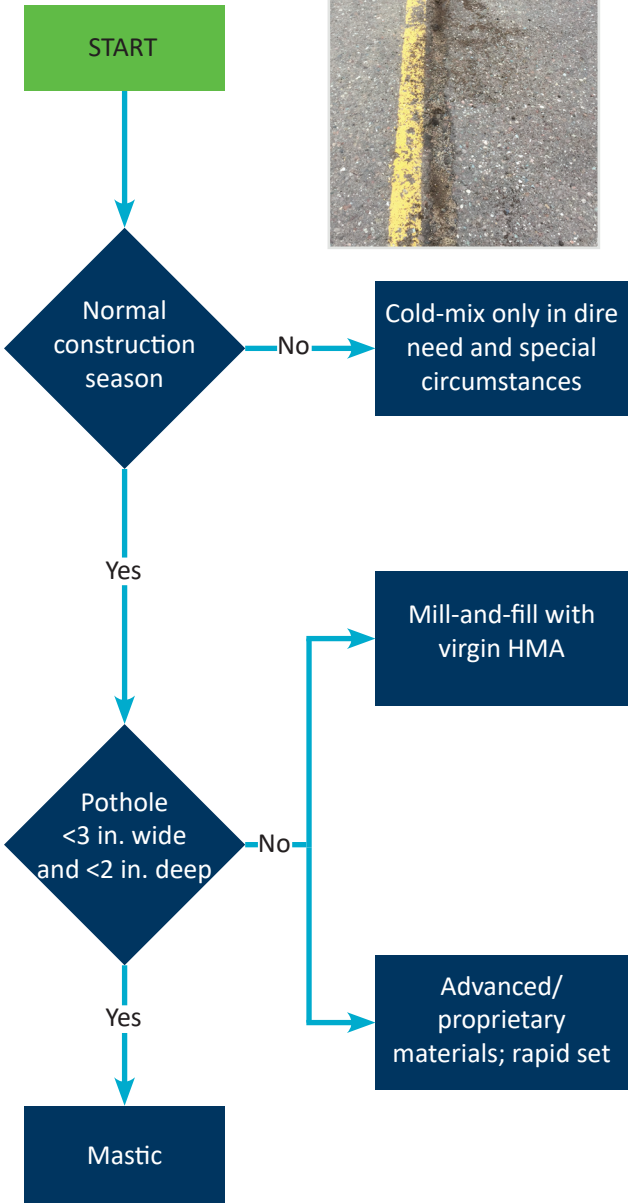
Mastic

- No sealant required. Mastic itself has a sealing quality that is moisture-resistant.

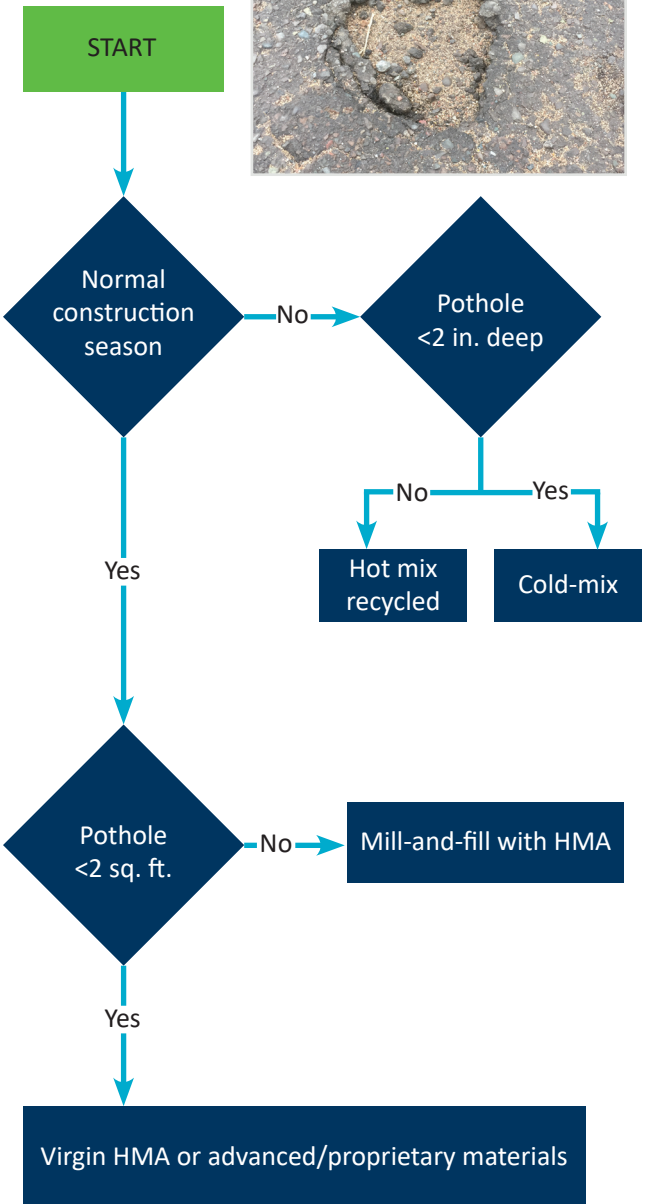
Cold-mix asphalt

- No sealant required. This patch material is generally used during the off-season, when there is normally less moisture. Since using this material is a temporary solution, moisture abatement is less of a concern.

POTHOLE AT LONGITUDINAL JOINTS



LOCALIZED POTHOLE



OUT-OF-SEASON CONSTRUCTION

Pothole at Longitudinal Joints

Cold-mix— only in dire need

Localized Pothole

Less than
2 in. deep

Cold-mix

More than
2 in. deep

Hot mix
recycled

NORMAL CONSTRUCTION SEASON

Pothole at Longitudinal Joints

Less than
3 in. wide and 2
in. deep

Mastic

More than 3
in. wide and
2 in. deep

Mill-and-fill
with virgin
HMA/advanced
proprietary
materials

Localized Pothole

Less than
2 sq. ft.

Virgin HMA/
advanced
proprietary
materials

More than
2 sq. ft.

Mill-and-fill
with HMA