

Activity 104 Pavement Sealing

Description

Activity 104 involves applying liquid asphalt for a fog seal, or with cover aggregate for a chip seal, on sections of bituminous pavement to seal lean bituminous surfaces and to prolong the life of the surface. A chip seal may also improve friction characteristics of the roadway surface. This Activity includes the installation of temporary pavement markers or markings.

General Instructions

Refer to discussion in the General Instructions section, preceding Activity 100 in this section of this Guide, about when Activity 104 may be needed.

The Transportation Maintenance Manager and the District Manager should plan to perform this work at routine intervals, as appropriate, and to include appropriate funding and work in the performance budget process.

If significant amounts of Activity 104 are needed, consider having the work performed by contract methods. Refer to discussion in the Purchase and Acquisition of Goods and Services section of this Guide. The District Manager may also request the Region Manager to include a project in ODOT's Statewide Transportation Improvement Program to perform the work.

Before performing Activity 104, perform needed work under Activities 100, 101, 102, 107, and possibly 110.

Controlling Erosion, Sedimentation, and Pollutants or Contaminants

Plan and implement methods to control erosion, sedimentation, and pollutants or contaminants, including those discussed in the Control of Erosion, Sedimentation, and Pollutants or Contaminants section of this Guide and the *ODOT Routine Road Maintenance Water Quality and Habitat Guide Best Management Practices*.

As appropriate, implement and maintain devices and processes including those described in the *Field Manual for Erosion and Sediment Control*.

Also implement appropriate practices to control or contain waste material from the sealing operation and from cleanup of tools and equipment. Use only approved release agents in truck beds, on tires, and on tools. Do not use diesel for this purpose.

Temporary Protection and Direction of Traffic

Plan, implement, and maintain traffic control as addressed in the *Traffic Control on State Highways for Short Term Work Zones* handbook.

Remove loose aggregate by sweeping and use pilot vehicles, as appropriate, to control traffic speed until the liquid asphalt has adequately cured.

Equipment

Equipment may include:

- Device to apply liquid asphalt (the supplier of the liquid asphalt may furnish this service as well).
- Water truck or other method to dampen cover aggregate in the stockpile.
- Trucks to haul cover aggregate.
- Machine or devices to spread cover aggregate.
- Roller(s), preferably pneumatic, to compact cover aggregate.
- Sweeper.
- Pilot vehicle(s).

Materials

Materials may include:

- Liquid asphalt.
- Aggregate cover material for a chip seal.
- Sand or other material to blot a fog seal.
- Building paper for joints.
- Temporary traffic markers and other appropriate marking material.

Work Method

1. Implement appropriate traffic control, including pilot cars.
2. Sweep, or otherwise remove, loose or unacceptable material.
3. Place temporary pavement markers with removable covers.
4. As needed, place building paper at construction joints to prevent additional buildup of seal material.
5. Apply liquid asphalt. For a chip seal, assure that the operation to place cover aggregate follows closely.
6. Apply cover aggregate, removing any excess to prevent rough areas.
7. Compact cover aggregate with at least two (2) coverages of the roller.
8. Repeat steps 4 through 7 as appropriate to place additional lifts.
9. Until liquid asphalt has properly cured, control traffic speed. Sweep periodically to remove loose aggregate. For a fog seal, apply sand or other material to blot liquid asphalt if it is sticking to vehicle tires.
10. Remove covers from temporary pavement markers.
11. Remove traffic control.
12. Schedule replacement of the permanent pavement markers and markings. Maintain and replace the temporary markers and markings until the permanent markers or markings are in place.
13. Remove the temporary pavement markers.
14. Dispose of waste or excess material properly.

Measurement of Accomplishment, Expenditure Account, and Charge Activity

Measurement is tons (megagrams) of liquid asphalt placed. Expenditure account type is Highway EA. Designate a subjob of 800 if the work involves bicycle path facilities.

Also record the milepoint locations of work performed, for use by the Pavement Management System.

- Charge all chip seal work to TEAMS Activity 104.
- Charge all fog seal work to TEAMS Activity 504.