Activity 123
Minor Culvert and Inlet Repair

Description

Activity 123 involves repair or replacement of minor drainage structures including:

- Culverts and storm sewers less than 6 feet (1.8 meters) in diameter or width.
- Siphons and box culverts less than 6 feet (1.8 meters) in width or diameter.
- Catch basins, inlets, and manholes.

General Instructions

Perform this activity to correct deterioration or damage that restricts proper function of the drainage structure. Also perform this activity to adjust or rebuild a drainage structure which surface does not acceptably match the surrounding roadway surface.

Perform this activity to maintain these facilities at the level allowed by the performance budget and as described in the *Desired Conditions of Maintenance Features on State Highways*.

Refer to Activities 160 and 162 for:

- Repair of culverts, storm sewers, siphons, and box culverts that are 6 feet (1.8 meters) or greater in diameter or width.
- Repair of drains on bridges.
- Repair of overhead flumes.

Refer to Activity 304 if installing a new drainage facility at a new location or if enlarging the existing facility.

A Professional Engineer must approve some repairs or replacements. Refer to ODOT *Policy DES 05-02*.

Periodically inspect drainage facilities to detect damage or deterioration, including when cleaning each facility. Charge the inspection to Activity 123, 129, or 047 as appropriate.

Be aware of confined space needs as well as ensuring that the structural integrity of the culvert is adequate for the work.

If the drainage facility is carrying an active flow, take appropriate measures to divert the flow or to shut off the flow while performing the repairs.

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*.

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.

Equipment

Select equipment as needed for the work and situation.

Materials

Materials may include:

- Appropriate materials to repair or replace the damaged drainage structure; e.g., pipe sections with appropriate connectors, portland cement grout or concrete, patching compounds, shims or other devices to allow adjustment of a structure, etc.
- Appropriate backfill material.
- Replacement surfacing material.
- Devices to control erosion and sedimentation.
- Appropriate material to clean tools, etc.

Work Method

1. Determine needed work and secure needed materials and safety clearances.
2. Implement appropriate traffic control.
3. Implement appropriate measures to control erosion, sedimentation, and pollutants or contaminants.
4. Repair or replace the affected drainage structure.
5. Restore the affected surfacing, slopes, or other materials.
6. Clean the affected roadway surface.
7. Remove traffic control.
8. Dispose of removed or waste material in an appropriate location.

Measurement of Accomplishment, Expenditure Account, and Charge Activity

Measurement is number of worker hours involved. Expenditure account type is Highway EA. Designate a subjob of 800 if the work involves bicycle path facilities.

- Charge TEAMS Activity 123 if fish passage is not involved.
- Charge TEAMS Activity 353 when repairing or replacing minor drainage structures to maintain or restore fish passage.