Activity 123
Minor Culvert and Inlet Repair

Description

Activity 123 involves repair or replacement of minor drainage structures. It includes:

- Culverts, storm sewers, siphons and box culverts less than 6 feet in diameter or width
- Catch basins, inlets and manholes
- Slip liners or cured in place liners.

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 whose elevation in relation to the surrounding drainage causes it not to function properly.

General Information

Refer to discussion in the General Instructions section preceding Activity 120 in this section of the *Maintenance Guide* for additional information including environmental and traffic control recommendations and other important considerations.

If needed test *material removed from ditches for substances* that may be harmful to the environment. Ensure that waste or excess material is disposed of in an appropriate location. Seek guidance and assistance from the District Manager and the Region Environmental Coordinator.

Refer to Activities 160 and 162 for:

- Repair of culverts, storm sewers, siphons, and box culverts that are 6 feet 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 121.

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

If the drainage facility nearly always carries water, if it contains or supports fish or fish resources, or if it supports fish passage, perform maintenance or repairs under Activity 124.

Maintain water quality features under Activity 125.

Equipment

- Truck.
- Backhoe or excavator.
- Appropriate hand tools.

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.
- Slip liners or cured in place liners.
- Appropriate backfill material.
- Replacement surfacing material.
- Devices to control erosion and sediment.
- 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 methods of erosion, sediment control or pollutants and contaminants control.
4. Repair or replace the effected drainage structure.
5. Restore the effected surfacing, slopes, or other materials.
6. Clean the effected roadway surface.
7. Remove traffic control.
8. To prevent environmental damage, clean tools and equipment using Best Management Practices.
9. 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; use a sub job appropriate for the crew performing the work.

Use a sub job within the 800 series if the work involves bicycle path facilities. These sub jobs are assigned by the Maintenance Management System (MMS) Unit based on the type of work performed.

- Charge Activity 123.