### MAINTENANCE PLANNING GUIDELINES

2/2014

**ACTIVITY:** Pipe Culvert Repairs (R319)

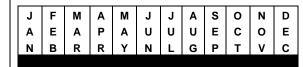
**ACTION:** Replace Pipe & Box Culverts (LF)

## **MAJOR & MINOR**

**DEFINITION:** The time and expenses incurred from removing and replacing pipe culverts. Includes time and expenses incurred for installing a new lining in an existing culvert and cleaning and repairing culverts.

**PURPOSE:** To replace deteriorated pipe and box culverts, which have caused the roadway or entrance to settle.

**SCHEDULING:** As needed.



# **RECOMMENDED EQUIPMENT:**

- Trucks
- Backhoe, Excavator, Loader, or Motorgrader
- Mechanical Compactor
- Dragline
- Crane
- Breaker
- Trenching Protective System/ Sheeting
- Traffic Control Equipment, (See EPG <u>616.23 Traffic Control</u> for Field Operations)

## **RECOMMENDED MATERIAL:**

- Pipe & Accessories
- Joint Compound
- Roadway Surface Material
- Precast Box Culvert
- Backfill Material

## **RECOMMENDED PROCEDURE:**

- 1. Contact Dig Rite and others to mark utilities.
- 2. Consult with Design for culvert drainage design requirements.
- 3. Develop trenching safety plan with competent person and supervisor.
- 4. Place traffic control devices as needed.
- 5. Remove existing pipe or box.
- 6. Install protective system in trench, if necessary.
- 7. Prepare subgrade.
- 8. Place new pipe or box and seal joints.
- 9. Remove protective system.
- 10. Compact material in lifts around and over pipe or box.
- 11. Place and compact surfacing material.
- 12. Clean work area.
- 13. Remove traffic control devices.

**SAFETY:** Refer to the <u>Comprehensive Safety Program sharepoint portal</u>. Wear all appropriate PPE. Refer to the <u>Risk Based Assessment</u> for additional information

**OTHER CONSIDERATIONS:** If entire roadway is to be closed, local news media, schools, emergency services, and law enforcement agencies should be informed in advance. Check if Corps of Engineers permit is needed.

**REFERENCES:** Missouri Standard Specifications for Highway Construction Sections <u>725</u>, <u>726</u>, <u>733</u>.