



### Other Considerations

There are many factors that may also impact the ability to perform repairs within the general timelines. These include: large scale emergencies, budget, staffing, material shortages, and availability of contractor resources, road and weather conditions, or the need to respond to other highway priority safety issues.

When reviewing individual situations, maintenance managers should consider whether interim measures such as signing, cones, barricades, etc. are beneficial in reducing or delineating the hazard

Perform guardrail cleaning when material has accumulated such that it restricts drainage or proper operation of the guardrail installation. If material cannot be spread and left on the adjacent slope or area, dispose of the material in an appropriate location.

Refer to Activity 149 if the work resulted from a specific crash or incident and ODOT will not seek reimbursement from others.

Refer to Activity 160 or 162 when maintaining bridge rail that is not guardrail or concrete barrier.

Charge Activity 165 when maintaining guardrail or barrier that is only needed for operation of moveable bridges.

Refer to Activity 305 if the work resulted from a crash or incident and ODOT will seek reimbursement from others.

Refer to Activity 304 when upgrading an existing installation to a current design, when extending an installation, or when installing guardrail or barrier at a new location.

If existing guardrail or barrier has deteriorated or needs other maintenance or repair, the guardrail or barrier must be maintained or replaced unless either of the following occur;

- ODOT has reviewed the design of the roadway at that location and has concluded that guardrail or barrier is not needed at that location. A Professional Engineer must approve that review and conclusion. Refer to *ODOT Policy DES 05-02*.
- ODOT has reconstructed or reconfigured the roadway at that location such that guardrail or barrier is no longer needed.

Replace guardrail, barrier, and associated elements and hardware with similar design materials. The exception is that the old cable or obsolete wood guardrail designs are no longer acceptable and must be replaced with current design features.

When removing and replacing or restoring guardrail or barrier, either:

- Replace all removed elements by the end of each working day, or
- Install temporary guardrail or barrier to properly protect traffic until the installation is removed, replaced, or restored.

Replace or restore existing or needed delineators on guardrail posts or reflective markers on barrier.

Refer to the *Oregon Standard Drawings* for installation details. Seek guidance and assistance from the District Manager and the ODOT Standards Engineer in the Roadway Section of the Technical Services Branch.

Because specialized equipment can install guardrail posts very efficiently, it may be appropriate to establish a contract for replacement of guardrail, including that needed under Activities 149 and 305. Refer to discussion in the Purchasing and Acquisition of Goods and Materials section of this Guide.

### Equipment

Select equipment suitable for the work and situation. It may include:

- A backhoe or other device to remove and replace guardrail posts and anchors.
- A boom truck, crane, large front end loader, or large backhoe to remove and replace concrete barrier.
- Equipment-mounted guardrail cleaner
- Landscape rakes for hand cleaning

### Materials

Materials may include:

- Posts, rail or cable elements, anchor devices, and needed hardware for guardrail.
- Barrier elements and connectors for barrier.
- Glare screen elements, reflective markers, or delineators.

### Work Method

1. Identify sections needing work and secure needed equipment and materials.
2. Implement appropriate traffic control.
3. Implement appropriate methods to control erosion and sediment if needed.
4. Perform work, including temporary guardrail or barrier as needed.
5. Remove traffic control.
6. Dispose of removed, waste, or excess material in an appropriate location. Recycle material as appropriate.

### Measurement of Accomplishment, Expenditure Account, and Charge Activity

Measurement is lineal feet maintained or repaired. Expenditure account type is Highway EA; use a sub job appropriate for the crew performing the work.

- Charge work to Activity 151 in MMS, for guardrail and barrier maintenance, for work on glare screens located on barriers use Activity 545 in TEAMS