

## Maintenance Innovation State of the Practice

**Maintenance Innovation:** Maintenance Priority Lists

**Description:** Given the challenges with funding, time and staff resources, state departments of transportation (DOTs) may have to prioritize maintenance activities. For example, repair potholes before picking up trash and before mowing. For example, in Washington State DOT’s [maintenance accountability process](#), maintenance activities are prioritized by how “critical each activity is in helping the Maintenance Program achieve broad policy objectives, which are consistent with the WSDOT strategic plan.”



(Source: [Colorado DOT.](#))

**Requester Name/Agency:** Jim Fox, Colorado Department of Transportation

**Date of Request:** April 10, 2024

**Query:** Does your agency have a formal priority list related to maintenance activities?

### Summary of Responses:

The table below summarizing member responses is followed by more detail for states that have a formal list of maintenance priorities (Mississippi, South Carolina and Texas). Of the 10 agencies without formal priorities, five respondents mention safety as a priority. New York State DOT prioritizes extreme risk and four other states (Connecticut, Idaho, Illinois and Utah) specify snow or winter response, all of which imply safety as a priority.

State	Formal List	Stated Priority
California	No	Safety first
Connecticut	No	Winter response
Idaho	No	Winter response
Illinois	No	Safety first, winter response and from the centerline out
Indiana	No	Safety first
Michigan	No	None provided
Mississippi	Yes	The agency’s 2019 Field Operations Manual outlines maintenance priorities (see page 2). The respondent added priorities are generally from the centerline out.
New York	No	Generally, from the centerline out. However, sometimes concerns on the right of way are of high significance due to liability or extreme risk.
Ohio	No	Safety first, then from the centerline of the road out through the right of way
South Carolina	Yes	Basic guidelines are described on page 2. The respondent reported updated documentation is in development.
Texas	Yes	The agency’s Maintenance Management Manual outlines maintenance priorities (see page 2). The respondent noted that the manual incorporates a “safety first” theme.

State	Formal List	Stated Priority
Utah	No	Driver safety and winter response, followed closely by reactive and preventive pavement maintenance (potholes, crack sealing, chip sealing, etc.), and striping.
Virginia	No	Contract performance specifications sometimes drive certain assets or timelines as priorities.

### Mississippi Department of Transportation

Within the agency's 2019 Field Operations Manual, a chapter titled *Quality Standards for Highway Maintenance* includes goals to serve as a guide for maintenance activities. Recognizing that available funds, equipment or personnel may dictate activities at times, the prime objective is to:

[P]rovide the motorist with a safe riding surface and an adequately signed, satisfactorily drained well-kept roadway in the most economical manner possible. In general, the intended priority of the maintenance operations focuses attention from the centerline of the roadway outward.

The manual details several areas of maintenance activity:

- *Roadway Surfaces.* For both bituminous and concrete surfaces, these priorities are discussed:
  - "First priority" is surface deficiencies that affect the safety, ride quality and capital investment, such as slippery pavement or surface texture failures, raveling, potholes or blowups, excessive settlement or heave, or debris on roadway.
  - "Second priority" is surface defects having a long-range effect on ride quality, safety and capital investment, such as cracks, corrugations or spalling, wheel track depressions, and non-functioning joints and pumping.
- *Shoulders and Approach.* General goals include:
  - Shoulders should provide horizontal stability to the road base, conduct water away from the pavement edge, provide emergency parking and provide an area for pedestrian traffic.
  - Approaches should provide safe access to roadways from private property, city streets and county roads.
- *Drainage.* Recognizing that liquid or frozen water is "the greatest natural destructive force affecting the highways," deficiencies in drainage should be corrected as soon as practicable and additional inspection conducted during periods of heavy rain or high runoff. Includes ditches, channels, culverts, underdrains, and inlets and catch basins.
- *Roadside.* Roadsides should be maintained to make "satisfactory contributions to the safety, convenience, appearance, and pleasure of the public and the preservation and protection of the roadway itself." Includes vegetation, timber, and brush control; litter; rest areas, roadside parks and historical monuments; curbing and islands; and fences.
- *Structures.* All bridges and minor structures should be maintained "as initially constructed or subsequently improved in order to ensure structural integrity, preserve the capital investment and aesthetics, and provide a safe and comfortable ride."
- *General Physical Maintenance.* The goal is "to provide a means to report and quantify maintenance procedures used to restore roadway features which were necessitated by the occurrence of an unusual or unforeseen event."

### South Carolina Department of Transportation

Guidelines provided by the respondent address:

- *Maintenance work requests,* stating that priority ("ASAP") issues are safety and major issues including stop signs down, large potholes, trees or large debris in a roadway, or flooded areas. Other requests are considered 30-day or one-year goals.
- *Routine work* on a five- or six-year rotation, including vegetation, drainage, signs and pavement markings.
- *Senior management mandates,* such as sweeping interstate barrier walls, mowing and litter pickup.

## Texas Department of Transportation

TxDOT's Maintenance Management Manual provides maintenance priorities in a section on level of service guidelines. The highway maintenance priorities are identified in the table below.

### Maintenance Priorities

Priority	Description
1	Safety—Provide for the safety of the traveling public.
2	Protection of the investment—Protect the investment of public dollars in the <a href="#">state highway system</a> , its right of way and all its facilities.
3	User comfort—Provide for the comfort of the traveling public.
4	Aesthetics—Provide for the beauty and the attractiveness of the roadway and facilities.

The manual also lists desirable, acceptable and tolerable levels of service for:

- *Pavement maintenance*: Longitudinal rutting, alligator cracking and ride quality.
- *Roadside maintenance*: Vegetation, litter control, pavement edges, drainage, rest areas and picnic areas.
- *Operations*: Safety treatments, illumination, traffic signals, signs and pavement markings.
- *Bridge maintenance*: Bridges; channels, culverts and approaches; and decks, superstructures and substructures.

## References

[Maintenance Accountability Process](#), Washington State Department of Transportation, 2024.

[MAP Manual](#), Washington State Department of Transportation, 2022.

[Manual Notice: 2023-1 Maintenance Management Manual](#), Texas Department of Transportation, 2023.

*2019 Maintenance Field Operations Manual*, Mississippi Department of Transportation, 2019. (Available on the members only page of the No Boundaries website.)