



**Highway Maintenance Manual**  
**Chapter 06 Winter Maintenance**  
**Section 05 Road Classifications**  
**Subject 01 Winter Highway Classifications**

**Bureau of Highway Maintenance**  
**August 2024**

## **1.0 General Guideline**

State highway maintenance during the winter months has two distinct highway classifications: "High-Volume" and "All Other." These classifications are described below.

## **2.0 Classifications**

The high-volume highway classification would typically include highways with four or more lanes for through traffic and selected two-lane highways. When determining the need for providing high volume coverage on two-lane highways, the following should be considered:

- functional classification
- high traffic volumes
- special service factors
- planned conversion from a two-lane to a multi-lane facility.

The "all other" highway classification would include all those highways not identified as high volume.

A description of the categories of roadway can be found in [HMM 06-15-05](#).

A map depicting the classification can also be found on the WisDOT web site:

<https://wisdot.maps.arcgis.com/apps/instant/portfolio/index.html?appid=21c938167cff47698b6a9c47faf1f114>

## **3.0 High Volume Highway Expectations**

When conditions warrant, 24-hour coverage should be provided during a winter storm. Depending on the severity and duration of the storm, maintaining a full complement of operators may not be practical. However, some minimal coverage should be provided (perhaps by reducing or staggering the workforce).

Typically, a plow operator's time should not exceed a continuous 18-hour shift.

Cycle times for each route should generally not exceed 1 ½ to 2 ½ hours.

Definition of "**24-hour coverage**": 24-hour coverage means that the county has a presence on the highway for 24 hours per day during a winter storm event unless passable roadway conditions have been achieved. This would only happen during winter storm events of long duration and when conditions warrant. When this does occur, it may mean further reducing the coverage on routes in the "all other" classification to assure available manpower or extending the winter operation section lengths on the high volume routes. However, continuous coverage does **not** mean that the service provider runs three shifts or that there are snowplows on the highway 24 hours per day throughout the winter irrespective of the weather conditions.

## **4.0 "All Other" Highway Expectations**

When conditions warrant, coverage should be provided up to 18 hours per day during the storm. The gap in coverage is necessary to provide for operator recovery time. The operator recovery time should typically be between the hours of 10:00 PM and 4:00 AM but will vary with specific storm conditions.

Some minimal ability to respond to emergencies should be provided during the hours that full coverage is not provided.

Typically, a plow operator's time should not exceed a continuous 18-hour shift.

Cycle times for each route should generally not exceed 2 ½ to 3 hours.

### **5.0 Exceptions**

The above highway classifications and coverage times are intended as a guide in winter maintenance operations and changes may be deemed appropriate based on local conditions. Exceptions to these guidelines may include:

- reducing coverage due to extreme conditions which would include:
  - > limited visibility for operators
  - > length and severity of the storm
- continuing service beyond suggested hours to prevent snow compaction or other hazardous conditions.
- allowing breaks between shifts during off AADT peak hours to reduce operational costs and operator fatigue.

### **6.0 Service Uniformity**

Customers place a high value on our ability to minimize unexpected changes in pavement condition. Therefore, a primary objective in supplying winter snow and ice control is to achieve consistent service on similar facilities. Please note that even when exceptions as listed above are made, we should strive for uniformity of service. This means that winter maintenance sections should end at logical locations where a motorist might anticipate a change in service. These might include:

- high volume intersections or interchanges where traffic volumes significantly change.
- leaving or entering municipalities
- dramatic or well-defined changes in topography

Providing continuity of service across jurisdictional boundaries will require close coordination between counties and regions.

### **7.0 Winter Highway Classifications Map**

Each region, working with the service providers within the region, will develop a map by October 1 of each year showing the high-volume highways. These maps will be submitted to central office for concurrence and verification of service uniformity across region boundaries. The central office will develop a statewide map that will be a compilation of the district maps. This statewide map will be available for public distribution no later than October 31 of each year. The map can also be found on the WisDOT web site at the following web address:

<https://wisdot.maps.arcgis.com/apps/instant/portfolio/index.html?appid=21c938167cff47698b6a9c47faf1f114>

WINTER HIGHWAY CLASSIFICATION TABLE

Typical Types of Highways	Winter Highway Class	Traveled Way	Paved Shoulder	Gravel Shoulder	Cycle Time
Major Urban Freeways  Most 6 Lanes and Greater	<b>High Volume</b>	<b>24-hr service</b> as conditions require...  (see <a href="#">HMM 06-15-05</a> for additional Guidance)	Wing plow during the storm to the shoulder point...  make extra shoulder pass with the wing plow if necessary...  shoulders should be cleared during normal (non-overtime) work hours under non-drifting conditions.	High volume highways do not typically have gravel shoulders...  the gravel portion of the shoulder should remain white... shoulders should be cleared during normal (non-overtime) work hours under non-drifting conditions.	Generally, 1 ½ to 2 ½ hours
Some 6-Lanes  High Volume 4 Lanes with AADT ≥25,000 and Some 4-Lanes with AADT <25,000  Most 2-lane with AADT ≥5000 and Some 2-Lanes with AADT <5000  Includes Interstates	<b>High Volume</b>	<b>24-hr service</b> as conditions require...  (see <a href="#">HMM 06-15-05</a> for additional Guidance)	Wing plow during the storm to the shoulder point...  make extra shoulder pass with the wing plow if necessary...  shoulders should be cleared during normal (non-overtime) work hours under non-drifting conditions.	High volume highways do not typically have gravel shoulders...  the gravel portion of the shoulder should remain white  ...shoulders should be cleared during normal (non-overtime) work hours under non-drifting conditions.	Generally, 1 ½ to 2 ½ hours
Some 4 Lanes with AADT <25,000  Most 2-Lane With AADT <5000 and Some 2-Lanes with AADT ≥5000	<b>All Other</b>	<b>18-hr coverage</b> as conditions require... Some minimal ability to respond to emergencies should be provided during hours that full coverage is not provided (see <a href="#">HMM 06-15-05</a> for additional Guidance)	Plow with traveled way,  do not make extra pass... shoulders should be cleared during normal (non-overtime) work hours under non-drifting conditions.	Wing shoulders while plowing traveled way, do not make extra pass...  <u>shoulders should remain white...shoulders should be cleared during normal (non-overtime) work hours under non-drifting conditions.</u>	Generally, 2 ½ to 3 hours

The above highway classifications and coverage times are intended as a guide in winter maintenance operations and changes may be deemed appropriate based on local conditions. Exceptions may include:

- Reducing coverage due to extreme conditions which would include limited visibility for operators or length and severity of the storm.
- Continuing service beyond suggested hours to prevent snow compaction or other hazardous conditions.
- Allowing breaks between shifts during off AADT peak hours to reduce operational costs and operator fatigue.
- Where heavy (deep) snow on the shoulder becomes a problem, such as when large trucks pull the snow back onto the roadway just by driving past at highway speed, plowing of the shoulders may be

completed during the storm or on overtime hours. However, completion of shoulder cleanup on non-overtime hours is preferred.