







CONDENSED EXTERNAL WINTER HIGHWAY MAINTENANCE PLAN

2026-2027

SD DOT

CONTACT US

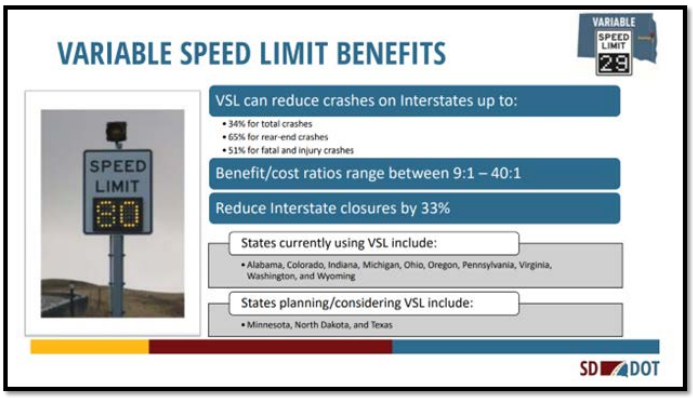
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Secretary's Message

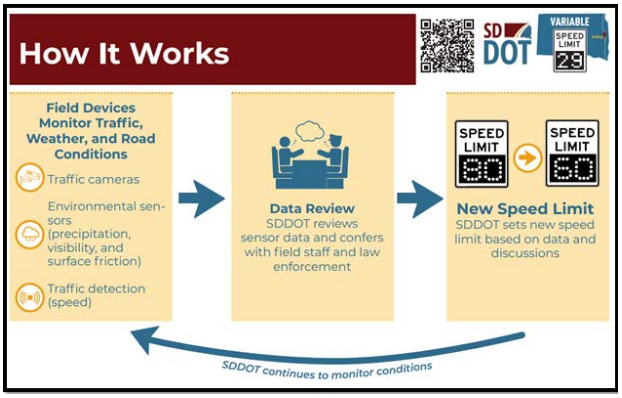
Two SDDOT projects were recently honored as 2026 America's Transportation Awards (ATA) competition winners within the Western Association of State Transportation Officials (WASHTO) Region. These awards are a testament to the work our 1,000 member staff members do every day to improve safety, enhance mobility, and deliver high-quality transportation solutions for the people of South Dakota. AASHTO's award program highlights the meaningful accomplishments of state DOTs and the vital role that transportation plays in our daily lives.



The Variable Speed Limit (VSL) project won in the "Best Use of Technology and Innovation, Small Project" category. The South Dakota Department of Transportation (SDDOT) deployed a Variable Speed Limit (VSL) system on a 19-mile segment of Interstate 29 from S.D. Highway 32 (Flandreau) to U.S. Highway 14B at Brookings. This segment, which lies along the Coteau des Prairies, a plateau that sees more wind, snow, and ice, has historically experienced a higher winter crash rate. The VSL system allows SDDOT to adjust posted speed limits in response to changing weather, roadway, and traffic conditions. By providing speed limits that better reflect real-time conditions, the system enhances safety, promotes consistent driver behavior, and improves overall traffic operations during adverse winter weather events.

This VSL deployment is the first of its kind in South Dakota. The system uses cameras and electronic sensors to detect temperature, visibility, wind speed and direction, pavement surface conditions, traffic speeds, and other relevant information SDDOT staff use to establish an appropriate speed limit. The speed limit is displayed in real-time on electronic speed limit signs. Speed limits are reduced as conditions deteriorate and are restored as conditions improve. This system will be replicated on other segments of Interstate highway in South Dakota.

By providing speed limits that better reflect real-time conditions, the system enhances safety, promotes consistent driver behavior, and improves overall traffic operation during adverse weather events. I-29 is a main corridor for regional commuter traffic and for national and international freight traffic. By improving this segment of the Interstate, the regional economy and local communities benefit from safer, more reliable travel to and from their destinations.



Thank you for your continued trust and partnership as we introduce new tools like the VSL system to enhance safety and reliability on our highways. By combining innovation with our team's dedication, we are committed to providing motorists with safer, more consistent travel during winter weather events. We appreciate your support as we work together to ensure everyone arrives safely at their destinations this winter.



Sincerely,

Joel Jundt, Secretary
South Dakota Department of Transportation



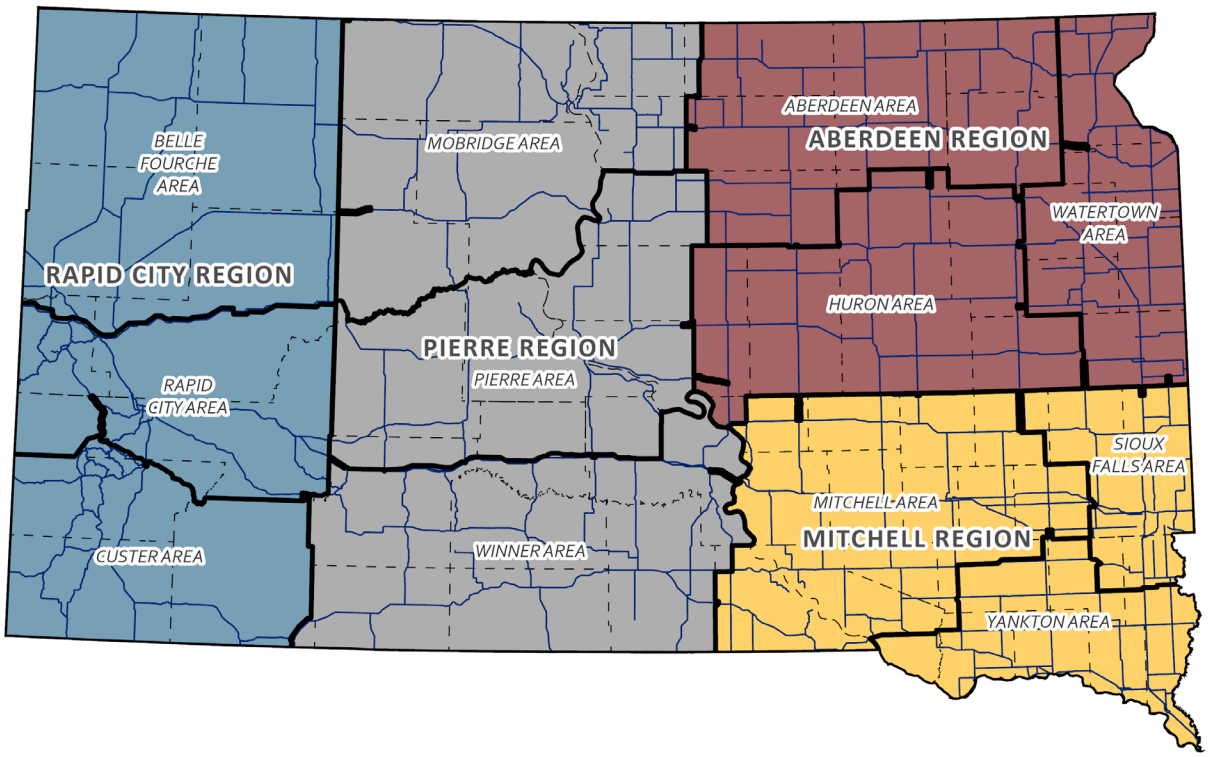
ABOUT THE SDDOT:

Through open plains and rolling hills, from big cities to family farms, the roadways in South Dakota connect us all. When winter arrives each year, the South Dakota Department of Transportation (SDDOT) is responsible for performing maintenance activities on nearly 7,800 miles of roadways. To manage these activities so roads can be as safe as possible for all travelers in South Dakota, the SDDOT and others created this plan which is updated annually. This is the SDDOT Winter Highway Maintenance Plan (WHMP) for 2026-2027.

DIVISION OF WORK ACROSS THE STATE

At the highest level, SDDOT works in partnership with neighboring states to track weather patterns and events that affect the area. This information-sharing system can give advanced warnings of upcoming events, which helps decision-makers prepare and deploy resources.

Winter conditions, both in general and resulting from events like storms, vary greatly throughout the State. Rather than adopt a “one-size-fits-all” approach, South Dakota is divided into Regions and Areas with dedicated individuals and teams responsible for the local decisions and activities.



The largest sections are the four primary Regions, each of which has an appointed Region Engineer: Rapid City, Pierre, Aberdeen, and Mitchell. Each Region is subdivided into three Areas (twelve Areas statewide), each with an assigned Area Engineer. Each Area has a variety of routes to address based on priority.

**The SDDOT does not perform winter maintenance in cities with a population over 2,500, those duties fall under the responsibility of the city.*



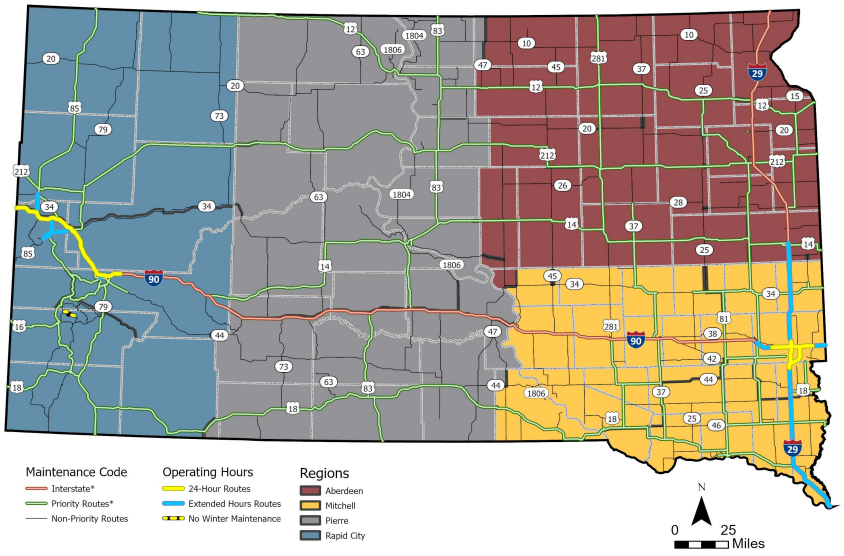
LEVEL OF SERVICE

CLASSIFICATION	COVERAGE TIMES DURING HOURS OF OPERATION*	DESIRED PAVEMENT CONDITION DURING EVENT**	DESIRED PAVEMENT CONDITION AFTER EVENT**
Priority Routes Include Interstate	Once every 2 hours	Maintain safe passage when practical	Driving Surface is 80% clear of snow and ice within 18 hours
Non-Priority Routes	Once every 4 hours	Maintain safe passage when practical	Driving Surface is 80% clear of snow and ice within 36 hours
Shoulders, Low Volume Roads, Local Intersection, etc.	Minimal coverage as necessary to prevent drifting onto driving lanes, etc.	Minimal coverage as necessary to prevent drifting on to driving lanes, etc.	Begin clearing these areas as soon as practical for safe passage.

Note: Interstates and priority routes are given first attention when weather conditions become severe and/or equipment availability becomes limited.

* Coverage times are goals. Actual times may vary. When conditions allow, crews attempt to make one round of coverage on all routes near the beginning of a shift. Coverage times specified in the table are intended to be subsequent coverage times. Roads with lower traffic volumes may be plowed less frequently during a storm event if priority routes take precedent.

** Pavement conditions are goals. Actual pavement conditions may vary.



*Interstate and Priority Routes receive the same level of service.

DID YOU KNOW

Normal winter maintenance hours are 5 a.m. to 7 p.m.





ROADWAY CLOSURES AND OPENINGS

SDCL 31-4-14.1 allows the Secretary of DOT and the Secretary of DPS to restrict the use of any State Highway if they agree the restriction or closing is necessary for the protection and safety of the public due to inclement weather. Notices to the public are made through installation of barriers, warning signs, media press releases, text, traveler information (SD511), social media, or placing flaggers to detour traffic. Additionally, all closures are promptly posted on the 511 Traveler Information sites. SDCL 31-4-14.3 provides for civil penalties for rescue of persons in violation of this statue in amounts of $1,000 - $10,000.

In the past, typically only Interstate closures were implemented during inclement weather due to the Interstate having controlled access points. There has been an increase of travelers using non-Interstate highways to attempt to avoid Interstate closures. This has resulted in dangerous situations such as stranded motorists and increased traffic for SDDOT snow plows to work around. When conditions exist, SDDOT and DPS will consider closure of both Interstate and non-Interstate routes for the protection and safety of the public.



LEVELS OF TRAVEL ADVISEMENT

SDDOT uses different levels of travel advisories to communicate road conditions and help travelers make informed decisions. SD511 can show the following advisories:

ROAD IMPASSABLE

Travel on the road segment is physically impossible, typically due to widespread deep snow and drifts.

NO TRAVEL ADVISED

Road and weather conditions are unavoidably hazardous and/or impassable. Poor visibility, drifts, blowing snow, ice, and other hazards overwhelm the route.

ROAD BLOCKED

Travel is impossible due to the roadway being physically blocked. This advisement is used mainly to warn thru-traffic that the road is not passable.

MAINTENANCE SUSPENDED

Plows have temporarily halted operations for the route. Road and weather conditions are likely as hazardous (or worse) than NTA conditions.

INCLEMENT WEATHER ROAD CLOSURE

Winter weather events produce imminently hazardous conditions at a faster rate than plow crews can remove, and an enforced road closure is in place.



BUDGET

FISCAL YEAR 2027

DESCRIPTION	BUDGETED AMOUNT DOT FORCES
Snow and Ice Control	$24,537,339.00
Contract Snow Removal	$ 39,000.00
TOTAL	$24,576,339.00

INNOVATION

SDDOT's winter operations are centered around innovation through the creation of the Maintenance Decision Support System (MDSS) and continued research of better practices. Below are two examples of this innovation:

HIGH FRICTION SURFACE TREATMENT (HFST)

High Friction Surface Treatment (HFST) is a thin layer of high-quality polish-resistant aggregate bonded to the pavement with a polymer resin binder. The treatment has a long-lasting skid resistance and makes the pavement more resistant to wear and polishing. HFST is placed at locations that have a history of injury crashes with vehicles leaving the roadway due to winter road conditions. Due to the cost, HFST is only applied at isolated locations such as horizontal curves, bridge decks, and intersections. South Dakota currently has over 67 HFST locations which have shown an 80% reduction of road departure crashes with winter road conditions as a contributing factor. HFST has a service life of approximately 10 years or the life of the pavement it is placed on. South Dakota has not seen an accelerated deterioration of HFST due to snow removal operations.

MAINTENANCE DECISION SUPPORT SYSTEM (MDSS)

The Maintenance Decision Support System (MDSS) collects and analyzes weather and road condition data and provides recommendations for effective winter maintenance treatments. The MDSS allows SDDOT to select treatments most effective for current and future conditions. The MDSS was developed and refined by DTN, LLC through a multi-State pooled fund study led by SDDOT's Office of Research. DTN is available 24 hours a day, seven days a week for technical assistance and weather-related questions.

SNOW AND ICE CONTROL MATERIALS

A variety of materials are used by SDDOT for winter operations. Salt, chemicals, and abrasives may be used individually or in combination given specific weather and road conditions.

There are two methods used to treat winter roadways: anti-icing and deicing. Anti-icing consists of applying chemical material to pavement prior to a storm or at the beginning of a storm with the goal of reducing the bonding of ice to pavement. Deicing is treating the roadway with plowing and abrasive/chemical application during and after a storm.

DID YOU KNOW?

Salt is only effective down to 15 degrees. Below that, the salt cannot melt ice and snow faster than it forms. In this case, sand is used to provide traction - the traction is not as good as pavement, so drive with caution!

Strong Crosswinds

Abrasive materials may not be appropriate if the wind is too strong, particularly if the precipitation is blowing across the pavement. Abrasive materials in this condition could cause precipitation to adhere to the road surface.

RESEARCH FOR BETTER PRACTICES

SDDOT is exploring several new innovations to improve the safety of travelers and maintenance workers and to increase SDDOT operational efficiency.

- SDDOT's winter chemical research project continues to support more efficient and cost effective winter operations by evaluating chemical performance across temperature ranges, improving MDSS flexibility, and expanding training resources. Recent efforts also introduced a statewide process for documenting chemical capabilities and costs, helping regions make informed, practical material decisions aligned with research findings

- SDDOT continues advancing its snow plow route optimization initiative, led by efforts from the Office of Research and Operations. Current work focuses on evaluating opportunities to improve route efficiency and enhance service consistency across regions. Additional analysis and field input will guide the next phase of implementation.

- The South Dakota Department of Transportation (SDDOT) implemented its first Variable Speed Limit (VSL) system last winter along Interstate 29 between SD Highway 32 and Brookings. This system enables SDDOT to adjust posted speed limits in real time based on changing weather, roadway, and traffic conditions. By aligning speed limits with actual conditions, the VSL system is designed to enhance safety, encourage more consistent driver behavior, and improve traffic flow during adverse weather events. The next VSL installation in South Dakota is planned for Interstate 90 from Sturgis to Tilford.



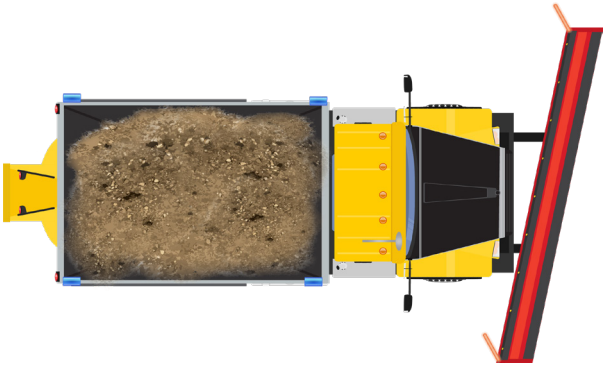
- Winter operations is a key customer service for the SDDOT. Reduction of traffic crashes is a strategic goal. SDDOT analyzes crashes on the State highway system in relation to the Winter Severity Index (WSI). The WSI is a way to quantify the severity in which winter conditions affect the maneuverability of roadways.

EQUIPMENT AND MATERIALS

A variety of mobile snow and ice control equipment is used on a routine basis. The most common types are trucks, plows (front mount, wing, under-body, and tow), sanders, front-end loaders, and anti-icing systems.

Equipment Types and Number of Units

EQUIPMENT	NO. OF UNITS
Full-time Snowplows	397
Road Graders with V-Plows	21
Snow Blowers	110
Tow Plows	26
Spare Snowplows	49

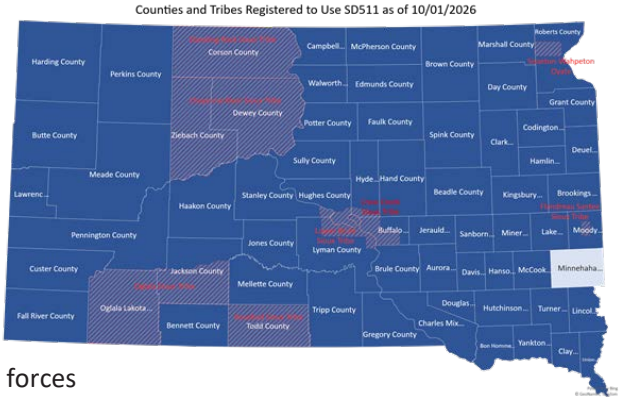


The tow plows are a 36-foot trailer, equipped with either a 250-gallon liquid deicer tank and an 8-cubic yard hopper sander, or two (2) 1,000-gallon liquid deicer tanks. The setup is decided during equipment ordering. The tow plow can deploy either to the left or the right to do a wider sweep (centerline to shoulder) of the road than a typical plow truck can make alone. The tow plows are stationed on the Interstate highways and four-lane expressway roads where they can be the most efficient.



TRAVELER INFORMATION SYSTEM

SDDOT's SD511 Traveler Information System informs travelers, law enforcement, emergency responders, and highway maintenance personnel of conditions that affect travel. Its main purpose is to help the public make well-informed travel decisions. SD511 information includes:



- Weather conditions and forecasts
- Observed winter road conditions and closures, reported by SDDOT maintenance forces
- Potentially worsening road conditions, predicted from weather forecasts
- Roadway images from 150+ roadside cameras
- National Weather Service alerts
- Emergencies and incidents affecting traffic flow
- Special events affecting traffic flow
- Commercial vehicle restrictions
- Construction and maintenance work zones reported by SDDOT forces
- Floodgate messages to convey specific or unique situations. This allows a longer message with more detail to be pushed to individual routes or statewide.
- Travel advisories and closures for participating Counties and Tribes in development.
- Enable construction activities and movement restrictions on ramps to be specifically identified
- Enable vehicle dimension and weight limits and other restrictions to be entered specifically on divided highways, so our commercial vehicle permitting system can capture them directly from SD511.

SDDOT maintenance and construction forces feed winter road reports and road work information into the traveler information system through the Roadway Management System (RMS).

SD511 disseminates information via several media to make information as accessible as possible:

- **511 Telephony:** Users can reach the phone-based 511 system by dialing 5-1-1 on mobile and landline phones throughout South Dakota. From outside the State, the system can be reached at 1-866-MYSD511 (1-866-697-3511). The automated telephony and voice recognition system allows users to hear information with hands-free operation.



- **511 Website:** The full-featured SD511 website at https://www.sd511.org provides the same information in graphical and textual form on any modern web browser.

- **511 Mobile Apps:** Android and iOS (Apple) mobile applications are available free from their respective app stores. They provide the same information as sd511.org in mobile-friendly format.

- **My511SD Travel Alerts:** Users can subscribe at the sd511.org website to receive free text and email alerts for road closures, no travel advisories, flooding, and other significant events at specific locations and times of interest to them.



- **Interstate Closure Text Notification System:** Subscribe to a free text-in service dedicated to keeping travelers informed of inclement weatherrelated closures on Interstate 90 and Interstate 29 in the state of South Dakota.
Text: SDInterstates to 605-836-8836

- **Rest Area and Port of Entry Kiosks:** The SDDOT has installed kiosks that display travel information at all commercial vehicle ports of entry and all but one Interstate highway rest area.

- **County and Tribal Travel Advisories:** Counties and tribes are able to post travel advisories and closures on the State SD511 system. SDDOT maintains a contact list for counties and tribes and provides training prior to each winter season.