South Dakota Department of Transportation

FY2010 Annual Report

Mission

To provide a safe, efficient and effective transportation system.

Vision

As a responsible and conscientious transportation resource for South Dakota taxpayers, the South Dakota Department of Transportation will diligently work to provide transportation facilities that meet the needs of the traveling public. Our eyes are on the future. We are a proud, resourceful and energetic entity that will continue to strive to meet ever-changing needs today and every day to come.

The FY2010 Annual Report was prepared by the Office of the Secretary, Becker-Hansen Building, 700 E. Broadway Ave., Pierre, SD 57501-2586
SDDOT Web site: www.sddot.com

COVER: Upper Plains Contracting employees supervise paving of the last few feet of the westbound lanes of I-90 between White Lake and Mount Vernon in the fall of 2009.

1,500 copies of this report were printed by Midstates Printing of Aberdeen at a cost of $2.16 each.

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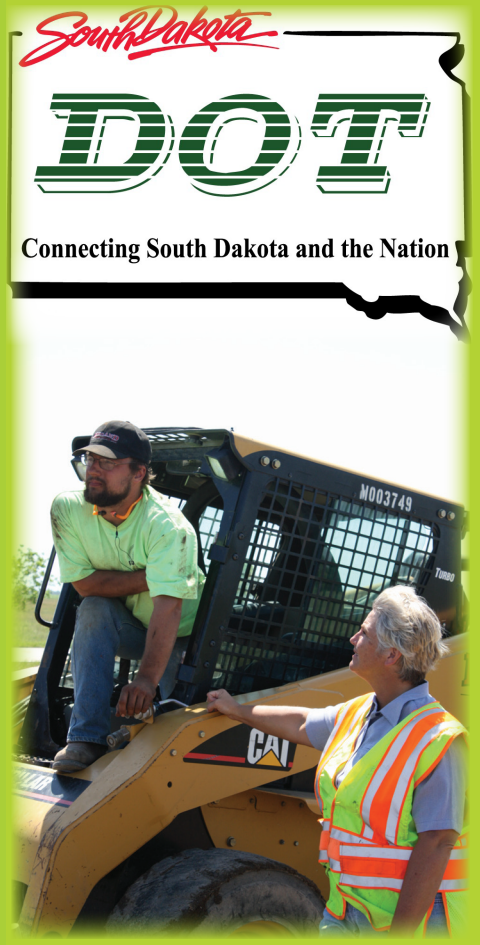


Mitchell Area Engineer Tammy Williams talks with a construction worker on an Interstate 90 project.

2009-2010 Strategic Initiatives

Preserve and maintain our current assets in the best condition possible with the available resources

The South Dakota Department of Transportation uses available resources to preserve and maintain our current transportation assets before considering expansion or enhancement. Recognizing the importance of our transportation system to the vitality and continued growth of South Dakota's economy, the department will continue to cooperate with local communities and private partners to identify opportunities for mutually beneficial system improvements when resources are available.

Develop a long-term strategy for maintaining, preserving and improving South Dakota's transportation system

As a leader in the transportation industry, the department will work with its partners and other stakeholders to develop a long-term strategy for efficiently and effectively utilizing available resources to maintain and preserve our current transportation system and to provide a means through which the Department may plan for future growth and economic development.

Maintain fiscal responsibility

The department will continue to demonstrate fiscal responsibility by adjusting its operations and business practices to maximize the efficient use of available revenues.

Promote a workplace that allows individuals the opportunity to grow and develop in their careers

The department will recruit and retain the best available talent through clear leadership and direction, open communication, appropriate training, mentoring and other developmental opportunities.

A Message from Transportation Secretary Darin P. Bergquist

To All South Dakotans:

I would like to open this report by emphasizing a single fact: South Dakota's economy relies on a safe, efficient and effective transportation system.

Farmers need that county highway and then a state highway to get to the elevator. Elevators need railroad tracks to get corn, soybeans and wheat to ports, which ship our grain to a hungry world. South Dakota businesses need our airports as well as highways and railroad lines to sell goods and services internationally, nationally and locally.

In this difficult economy, I am more keenly aware of how critical it is to support growth of the South Dakota economy by maintaining South Dakota's transportation system. Providing that system is our mission, and this past fiscal year we accomplished the mission in extraordinary ways.

Our greatest achievement was incorporating $183 million in federal American Recovery and Reinvestment Act (ARRA) economic stimulus funding into our five-year Statewide Transportation Improvement Program and letting the resulting road and bridge projects to contract.

Our staff took advantage of every opportunity to improve our transportation system. Your team is so efficient at obligating federal funds that the Federal Highway Administration (FHWA) regularly gives us "leftover" federal highway funding at the end of each fiscal year. We earned $10 million more by writing a successful grant in a federal competition for projects promising a significant long-term impact on connectivity and safety. This grant will pay a third of the cost of reconstructing U.S. Highway 18 from Oglala to Pine Ridge.

Operations Division employees once again showed their "broad shoulders" in the field, managing those extra ARRA projects and additional ARRA reporting requirements. Our field engineers and engineering technicians kept a tight rein on costs. In 2009, the percent differerence between the total amount of bid awards and actual costs was 1.07 percent, a very, very low figure in our business. An FHWA audit team said our Disadvantaged Business Enterprise (DBE) program was one of the best it had seen.

Our maintenance people deserve special thanks for their exceptional efforts in one of the worst winters in the past decade. Not only do these folks work long hours to clear roads of snow and ice during winter weather events, but after those hours have been put in and they have gone to bed, they routinely respond to phone calls asking them to once again get in their trucks to rescue stranded motorists and clear the way for ambulances—often in very poor visibility and dangerous conditions. South Dakotans should be very thankful for the dedication of these state employees.

From our efforts and those of many others, South Dakota's economy and employment are recovering from the economic downturn, although improvement is slow and fragile. This report illustrates and elaborates on those efforts. I encourage you to keep turning the pages, learning more about what this can-do agency has achieved recently and what is on the horizon for South Dakota's Department of Transportation.

Darin P. Bergquist
Secretary, South Dakota Department of Transportation

A View of FY2010

Finance and Management Director Kellie Beck

The Division of Finance and Management is actually two offices, the Office of Finance and the Office of Local Transportation Programs.

The Office of Finance reports and manages the financial activities of the department. This includes developing accounting processes and internal controls; accounts payable and receivable; billing and federal draw downs; budget preparation and monitoring; cash forecasting; project accounting; and financial reporting to management—as well as to other state and federal agencies.

Internal control has been a subject of much nationwide attention, defined as the process to ensure reliable financial reporting, effective and efficient operations, and compliance with applicable laws and regulations. To achieve adequate internal control, certain control activities—specific policies and procedures used by management to achieve objectives—must be implemented. Such activities include segregating duties, ensuring that employees have adequate skills and training, requiring proper authorization of transactions and activities, guaranteeing adequate documentation and record keeping, maintaining physical control over assets and records, and independent checks on performance.

The Local Transportation Programs Office has four programs: Aeronautics, Public Transit, Railroads and Local Government Assistance.

Office of Aeronautics: monitors the status and capacity of South Dakota's aviation system and provides specific services such as tall tower permits, aircraft registration, airport safety inspections and airport construction project monitoring. Find more information on recent projects on page 28.

Office of Public Transit: acts as a facilitator of public and specialized transit services. We do not directly provide the services, but rather contract with providers for services to be delivered. Learn about the growth and value of these services on page 26.

Office of Railroads: manages all real and personal property acquired by the state for railroad purposes. One of the year's largest improvements in our rail infrastructure is the new loop track at the Harrold Grain Co. See page 27 for more information on that project and other recent activities.

Office of Local Government Assistance (LGA): provides financial and technical assistance to county and city governments for the construction and reconstruction of their roads, streets and bridges.

Local governments may be eligible for state-funded grants from the **economic development grant program** to help pay for road improvements serving new or expanded facilities, including industrial park-related projects. Local governments can also apply for federally funded **Transportation Enhancement grants** for community-based projects that preserve visual and cultural transportation-related resources or improve quality of life. Numerous bike paths have been built with this funding, providing a safer and more enjoyable alternative for bicyclists than riding along road shoulders.

LGA also administers the local bridge inventory program, which manages and administers the **Bridge Inspection Program**. The inspection program provides assistance to local government entities to ensure compliance with federal and state laws and regulations. More details about LGA's activities can be found on page 25.

A View of FY2010
Operations Director Greg Fuller

The Division of Operations is responsible for the construction, preservation, maintenance and operation of South Dakota's State Highway System, working diligently to assure that highway construction projects provide travelers with a quality product. Once constructed, projects are properly preserved, maintained and operated in manner that will provide the best value for the dollars invested in providing a safe and reliable transportation system.

The Division of Operations construction staff surveys, designs, reviews plans and administers the construction of highway projects. During FY2010, the Department of Transportation awarded 198 contracts consisting of 234 projects at a contract amount of $337.3 million. The construction staff from the Division of Operations was responsible for the oversight of these contracts. Some of the most significant projects are highlighted in this report on pages 10-14.

The Division of Operations maintenance staff operates and maintains 8,858 miles of stste highway. In addition, the maintenance staff also maintains and operates the department's facilities and equipment fleet. Patching, pothole repair, crack sealing and joint repair keep the roadway surface in good condition. However, maintenance of the highway system goes far beyond simply maintaining the roadway surface. To provide a safe and reliable highway system, maintenance employees also repair and maintain guardrails, signs, signals, delineators and pavement markings, and perform vegetation control.

The Division of Operations emphasized improvement of our winter maintenance practices for the 2009-2010 winter season. The most severe winter encountered in recent memory, the challenge was met through the use of research, technology, training and the vast experience of our staff.

The department implemented the **Maintenance Decision Support System (MDSS)** during the past winter. The MDSS provides maintenance staff with up-to-date weather and roadway information and recommends the best maintenance strategies to fight snow and ice. Strategies include the use of salt, salt/sand, salt brine and other chemical deicers to melt snow and ice. Four hundred full-time maintenance personnel and 135 winter seasonal personnel are used for snow-plowing operations. The Division of Operations operates a fleet of 529 snowplow trucks, 12 snow blowers, 26 motor graders and 141 loaders to perform winter maintenance. Despite severe winter weather, the division reduced expenditures for winter maintenance by $2.3 million compared with the previous winter—without reducing the level of service.

South Dakota's citizens deserve and demand the most reliable and safest transportation system that their tax dollars can provide. As a leader in public service, the Division of Operations strives to meet and exceed those expectations.

A View of FY2010
Planning and Engineering Director Joel Jundt

The Division of Planning and Engineering plans, programs, designs and lets highway construction work on the State Highway System. It has eight offices that carry out many diverse activities. Each office plays a key role in the overall workings of the department, as the following simplified description entails.

For example:

The Office of Transportation Inventory Management collects and processes the data needed to determine current highway conditions. This information is then analyzed by our **Office of Project Development** to select the most cost-effective treatment possible for the funding amount available. Projects are then programmed and placed in the Statewide Transportation Improvement Program.

The Office of Road Design, Office of Materials and Surfacing and **Office of Bridge Design** use their knowledge and expertise to design projects that will not only meet today's needs but also will last well into the future.

Should additional right of way be needed, the **Office of Right of Way** acquires the property according to state and federal regulations. After completing plans and necessary agreements, the **Project Development Office** submits plans and proposals to prospective bidders and lets projects to contract.

The Office of Research works with the entire department to identify innovative methods and materials to use in creating long-term facilities, and in helping the SDDOT integrate intelligent transportation systems into our highway system. To learn more, go online: http://www.sddot.com/div.asp.

In keeping with SDDOT's strategic initiative, the division has focused on system preservation, which enhances the performance of assets while maximizing investment. Preservation extends the life of facilities when performed at the right time. This also reduces replacement funds needed, since reconstruction is much more expensive than maintenance.

Predicting federal and state revenues is key in facility planning and programming. When federal highway program legislation expired in September 2009, federal funding became much more unpredictable, consisting of a series of short-term extensions of funding. Congress shows no sign of passing a new national highway program in the near future. This uncertainty limits the ability to plan too far in the future and presents a challenge in endeavoring to get the most out of tax dollars.

South Dakota was very fortunate to receive ARRA money (stimulus funds) from the federal government this past year. This one-time allocation of an additional $183 million primarily was used to resurface numerous miles of state highway and fund some local enhancement projects, resulting in a short-term improvement in highway surface conditions. Stimulus funds were spread over the 2009-2010 construction seasons, and most of the remaining ARRA projects let in the spring of 2010 will be done by the end of 2010. The ARRA projects were in addition to regular federally funded projects, resulting in a near-historic year in the amount of work put out to contract. South Dakotans will be able to enjoy the fruits of this labor as they drive on smoother, safer highways in the next few years. It is hoped that future funding will at least remain constant or increase based on the projected needs of the system.

2009 Project Achievements

American Recovery and Reinvestment Act

South Dakota received an additional $183 million for road and bridges under the American Recovery and Reinvestment Act of 2009 (ARRA). These federal funds were spread over the 2009 and 2010 construction seasons.

The additional federal funding allowed the SDDOT to advance projects in its Statewide Transportation Improvement Program (STIP). The STIP is a list of needed projects for the next five years. The priority level of these projects is determined by their existing conditions, projected conditions and relation to other proposed construction projects. This information then is analyzed by computerized pavement and bridge management systems to determine the optimal years to make the improvements. These systems help the SDDOT plan treatments and repairs to extend the life of these assets, maximize the overall condition of our surface transportation infrastructure, and ensure that the end of the design lives of these improvements is spread over a span of years, moderating financial demands for future work.

Time lines were analyzed to determine which projects would meet the federal government's definition of "shovel ready." Plans had to be far enough along to be obligated by the June 30, 2009, and March 2, 2010, federal deadlines. Due to the short construction season in the upper Midwest, a March goal was set for project lettings. Staff from the Project Development Office and many other SDDOT employees had to plan for dramatically different scenarios and then efficiently adapt to circumstances.

South Dakota's ARRA projects also had to address locations identified as economically disadvantaged areas—in general the primarily rural counties of South Dakota—in an effort to create jobs. Finally, the work was strategically located so as not to impact projects currently under contract, while recognizing the impact to the South Dakota construction industry. The SDDOT estimates 351 jobs were created by these stimulus projects through December 2009, a number that will grow in 2010. The Transportation Commission followed its usual process of setting aside a percentage of South Dakota's federal stimulus funding for local governments. However, many local governments did not have projects ready to meet federal deadlines and extensive reporting requirements for stimulus money. The commission solved this by allocating the same amounts in the future from a separate category of federal funds regularly received by the state for use on local governments' federal-aid highways.

All $183 million was obligated by the end of 2010 to highway projects and federally required transportation enhancements, including bike paths and historical projects.

South Dakota awarded $10 million TIGER grant

The South Dakota Department of Transportation was one of just 15 state DOTs to receive a portion of $1.5 billion awarded in February by the U.S. Department of Transportation as Transportation Investment Generating Economic Recovery (TIGER) grants, a part of ARRA legislation.

The $10 million grant to the SDDOT will be used to pay a third of the $28.6 million cost of reconstructing U.S. Highway 18 between Pine Ridge and Oglala. This project is one of 51 winners out of a total of 1,457 applications from all 50 states.

"This is another example of South Dakota Department of Transportation employees being alert to, and taking advantage of, every opportunity to improve South Dakota's transportation system," Transportation Secretary Darin Bergquist said.

Major 2009 Projects—Mitchell Region

Stimulus project: I-90 reconstruction west of Mitchell

The 22-mile reconstruction of Interstate 90's westbound lanes between White Lake and Mount Vernon was one of the largest concrete paving projects in the country in 2009. This stimulus-funded project replaced a deteriorated 42-year-old reinforced portland cement concrete pavement (PCCP) with 10.5-inch-thick, jointed, doweled PCCP and asphalt concrete shoulders. This "green" project began with breaking up of the existing slabs, followed by a crushing operation that removed the reinforcing steel and reduced chunks to gravel size. This recycled concrete then was laid down as the gravel cushion directly beneath the new concrete. The old asphalt concrete shoulder material also was recycled and returned as part of the new asphalt concrete shoulders. This new construction has rumble strips that will help prevent run-off-the-road crashes. One hundred forty-two construction workers were employed each month on this project, which won a regional award in the 2010 America's Transportation Awards competition. The photograph to the left shows Upper Plains Contracting employees completing the last few feet of the project in the fall of 2009.

Resurfacing on I-90, Kimball to White Lake

This 14-mile I-90 project was located just west of the White Lake-to-Mount Vernon I-90 project described above. Instead of reconstructing the east- and westbound lanes of this stretch of original Interstate pavement, the SDDOT decided to resurface the original PCCP with asphalt concrete. Why did this segment get overlaid while the one to the east was reconstructed? The overall structural condition of this segment was better, meaning an asphalt concrete overlay could extend pavement life and delay more-costly reconstruction. This decision shows the department's pavement preservation strategy at work. The SDDOT works to maintain the overall condition of assets with the limited state and federal funds available. This project included bridge deck overlays.

Chamberlain truss bridge

Rehabilitation of this historic bridge began in July 2009. Workers are removing and replacing the bridge decks, repairing or replacing rusted structural steel, repairing concrete piers, replacing the abutments and repainting the trusses. Continued maintenance of the Chamberlain truss bridge serves three purposes: 1) an alternate route is maintained over the Missouri River for Interstate 90 traffic in case the current Missouri River bridge needs repair, 2) slower Chamberlain-to-Oacoma traffic is kept off the higher-speed Interstate, and 3) a much-loved and distinctive historic structure is preserved. This multiyear project is scheduled to be completed in August 2011. For updates, see http://www.sddot.com/projects_chambtruss.asp.

Major 2009 Projects—Mitchell Region

I-229 from Benson Road to I-90 in Sioux Falls

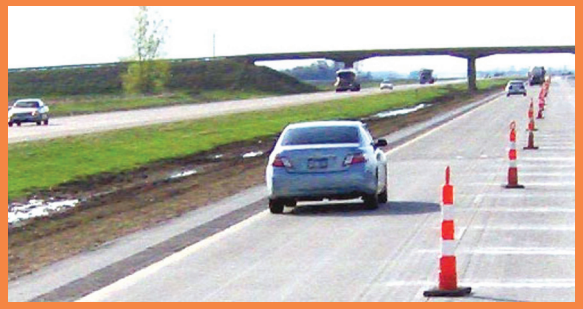
Deteriorated concrete pavement was replaced on the north- and southbound lanes of I-229 and on all four ramps at the I-229/I-90 interchange. Two of those ramps—the northbound I-229 to westbound I-90 and the eastbound I-90 to southbound I-229—were redesigned for increased safety. The work affected traffic flow on almost a mile of I-229 from north of the Benson Road interchange to I-90 in Sioux Falls during the summer. Traffic in all lanes was restored in October 2009. In the photograph to the left, Lead Project Engineer Travis Dressen consults with an excavator operator.

PCCP improvements to S.D. 50, Yankton to Gayville

This two-year project started in July 2009 and reconstructed 8.3 miles of state Highway 50's eastbound lane from east of Yankton to the border between Yankton and Clay counties with PCCP and added an approach slab next to the eastbound lane of the James River bridge. A complementary project resurfaced a 2.5-mile segment of westbound state Highway 50 from west of Gayville to east of the border between Yankton and Clay counties with a PCC overlay. The last mile of eastbound lane was graded and paved early in the 2010 construction season, along with placing the asphalt shoulders.

Stimulus project: I-29 reconstruction, northbound lanes south of Exit 47 (Beresford)

The original PCCP laid down for this stretch of I-29 reached the end of its service life and was replaced with 9.4 miles of nonreinforced PCCP, to just south of Exit 38 (Volin). Stimulus-funded projects such as this required extra oversight and reporting by both SDDOT and Federal Highway Administration (FHWA) officials. In the photograph to the left, Brett Hestdalen, FHWA pavement and materials engineer, and SDDOT Project Engineer Kurt Peppel monitor progress and quality control.



I-29 reconstruction, Junction City to Elk Point

This reconstruction project removed 9.6 miles of concrete on the southbound lanes of I-29 from Junction City to Elk Point and replaced it with PCCP. Like the old Interstate pavement described above, this segment had reached the end of its design life. The work included a bridge deck overlay, approach slabs and pavement restoration work. Traffic on the northbound lanes was head to head to allow this work to be completed. Some of the old concrete was crushed and used to stabilize the grade and build some of the shoulder gravel. Wet weather in the fall of 2009 slowed down the grading. Mainline paving began in September, and traffic resumed in the southbound lanes Dec. 4, 2009.

Major 2009 Projects—Aberdeen Region

Intersection of U.S. 81 and U.S. 212 in Watertown

Watertown's busiest intersection got a big makeover in 2009. The project included PCCP, grading, storm sewer, curb and gutter, and lighting. Realignment of the intersection, widened lanes and additional turn lanes made it easier for trucks to turn and improved overall safety. As part of the realignment, U.S. Highway 212 was reconstructed between 4th Street East and 6th Street East. The driving force behind the improvements was the need to remove and reconstruct a deteriorated and inadequate segment of U.S. 81 from south of 6th Avenue South to 3rd Avenue North; work extended to 12th Avenue South to accommodate the realigned intersection. Repaving and widening of this stretch made it safer. The traffic signal at U.S. 81 and 14th Avenue North also was upgraded.

Stimulus project: I-29 from Summit to S.D. 20

Almost 15 miles of the southbound lanes of I-29 between state Highway 20 North and U.S. Highway 12 were removed and replaced during 2009. Like the White Lake-to- Mount Vernon project on I-90 in the Mitchell Region, this project crushed the existing PCCP, and the resulting gravel was laid as a very hard, stable cushion for the new PCCP. The SDDOT provides incentives and disincentives for various elements of final products. The contractor on this project earned the incentive for producing smooth pavement.

U.S. 212 from Orient Corner to Turtle Creek in Redfield

Newly graded stretches of this highway were left unpaved over one or two winters to allow for any settlement or movement of the regraded material and underlying soils, most of which occurs in the first year after regrading. This helps prevent damage to the new surface. The new asphalt concrete surface should require less maintenance and last longer. Having a gravel temporary surface also saves money and avoids problems with a thin temporary pavement, which could crack under heavy truck traffic or catch on snowplow blades and break up. Winter maintenance was easier to perform on gravel. Grading was done as two projects in 2008 and 2009. Asphalt paving was completed as one project in 2010.

I-29 between S.D. 34 and Exit 121 in Moody County

As was the case for other Interstate projects in 2009, this segment reached the end of its roughly 40-year design life and needed to be replaced. The project removed and replaced 13.2 miles of PCCP from the northbound lanes of I-29 between state Highway 34 and two miles north of Exit 121 in Moody County. The unusually wet weather of 2009 slowed this project down. Traffic started rolling on the new pavement in November 2009.

Major 2009 Projects—Pierre Region

Stimulus project: I-90 edge drain installation and resurfacing, west of Kadoka to the east edge of Jones County

Edge drains were installed and asphalt shoulders rehabilitated along the I-90 east- and westbound lanes between the junctions with state Highway 73 North and state 73 South, and from the Jackson County line to west of Murdo. Water weakens the foundation underneath pavement, and edge drains prevent cracking and extend pavement life. The east- and westbound lanes from east of Murdo to the Jones County/Lyman County border were resurfaced with recycled asphalt concrete, and a crossover built for a future project. Altogether, this stimulus-funded work covered 32.2 miles.

U.S. 14/S.D. 34 from west of Fort Pierre to east of Hayes

The unstable shale soils of West River South Dakota have long challenged efforts to build and maintain smooth road surfaces. This 23.5-mile U.S. Highway 14/state Highway 34 project aimed to repair and resurface pavement that had cracked or heaved as a result of changing soil conditions and aging pavement. The existing asphalt concrete layer was removed and recycled into the new asphalt concrete surface. Eroded areas were repaired and weight-detecting sensors were updated.

Asphalt concrete resurfacing of S.D. 73, Bennett County

Reconstruction of 12.3 miles of state Highway 73 began in 2007 with regrading, followed by an interim surface. Half of the final layer of asphalt concrete was laid in 2009, and resurfacing was completed when two more inches were put down in 2010. A section near Martin was used to test warm-mix asphalt. (See page 23 for more information about this research.) This project improves a formerly narrow roadway with no shoulders, steep curves and sight distance problems. Residents of Bennett County have encouraged these improvements for a long time. The picture at left shows a green pickup machine taking hot asphalt concrete and conveying it to the asphalt paver.

Asphalt concrete reconstruction of U.S. 83 in Herreid

Reconstruction of this 0.9-mile segment of U.S. Highway 83 was completed in 2009. Grading, asphalt concrete surfacing, curb and gutter, Americans with Disabilities Act-compliant ramps, storm sewer and lighting were included. It was scheduled for 2007 but was deferred because of increasing construction costs and decreasing state revenues. “The City of Herreid was pleased to see this long-awaited project completed and appreciates the improvements that were made,” Mayor David Vander Vliet said. At left: Construction of a two-level curb helped the project comply with a federal law requiring the sidewalk slope in front of the Herreid post office to be 2 percent or less.

Major 2009 Projects—Rapid City Region

I-90 Exit 52

Removal of former I-90 Exit 51 and construction of its replacement, Exit 52, a half-mile to the east, was a complex, multiyear effort that began being planned in the late 1990s. Exit 51 was moved in order to consolidate service ramps in that vicinity into a single, standard diamond interchange. S-curves near Black Hawk needed straightening for improved safety. The I-90 westbound lanes one mile east of Exit 48 to one mile east of the former Exit 51 were reconstructed in 2009, as were a portion of the new eastbound lanes and the eastbound S-curve. State Highway 79, also called the Black Hawk Service Road or the Sturgis Road, was reconstructed from Peaceful Pines Road to Foothills Road, and from Anderson Road to Kimberly Drive.

Heartland Expressway south of Maverick Junction

Grading for the addition of two lanes, utility work, placing of PCCP and construction of a 628-foot bridge over the Cheyenne River started in 2009. An irrigation channel box culvert extension was completed in early 2010, the bridge was completed in June 2010, and concrete surfacing was finished in November 2010. An asphalt overlay of the southbound lanes was scheduled to be completed in 2011 but got done in 2010. Nearby, U.S. Highway 18 from Maverick Junction west 1.25 miles also is being regraded and getting new box culverts and new PCCP in 2010-2011. The photograph at left shows a beam being set in February 2010.

U.S. 212 from the Wyoming border to west of Belle Fourche

Nearly eight miles of asphalt concrete was cold milled and overlaid with PCC pavement. The remaining base of in-place asphalt concrete strengthened the subbase, which was built on bentonite clay. The milled asphalt concrete was used to build up and pave the shoulders. Safety improvements included slope flattening and rumble strips. This project also is being used to test a potentially more cost-effective dowel bar assembly and includes test sections for concrete cure rate application and joint sealing. The project was completed in December 2009. At left: A Knife River Midwest employee changes the teeth on a milling machine.

I-90, Lawrence County line to west of Exit 32, Sturgis

Like many stretches of South Dakota's Interstate system built in the 1960s, this segment reached the end of its design life and needed to be rebuilt. In 2009, 3.5 miles of PCCP from the eastbound lanes of I-90 were removed and replaced, from the Lawrence County line to near Exit 32 at Sturgis. Reconstruction of the westbound lanes, bridge widening at Exit 30 and bridge deck rehabilitation on the remaining three bridges were completed in the 2010 construction season. Also included in the work were four bridge deck overlays (one is pictured at left), approach slabs for eight bridges and widening of the westbound bridge crossing U.S. 14A and state Highway 34 at Exit 30.

Strategic Initiative:

Preserve and Maintain Our Current Assets in the Best Condition Possible With Available Resources

Pavements

State Highway System pavements are in "good" condition, according to the SDDOT Surface Condition Index. This index, calculated from extensive annual measurement of pavement roughness and other data, is 4.13 on a scale of 5.

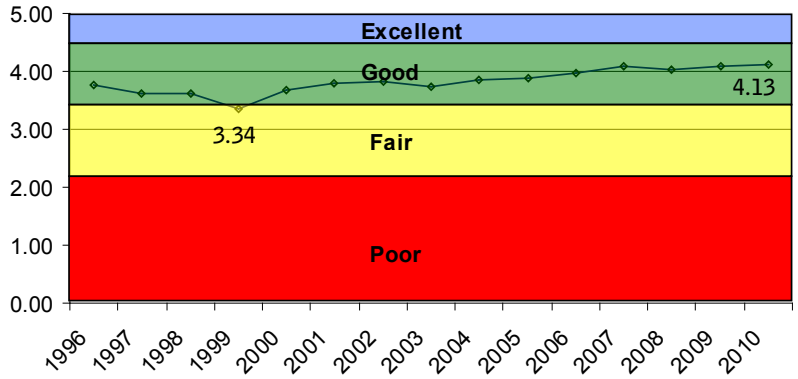
This improvement follows a 15-year low of 3.34 in 1999, after the winter and subsequent flooding of 1996-1997 caused significant deterioration in pavement smoothness and structural integrity. The upswing in overall condition since then is due mostly to the 1998 and 2005 federal highway bills, which, with the help of South Dakota's congressional delegation, increased funding for highway improvements in South Dakota.

But pavement conditions will trend downward unless federal and state funding for transportation is increased to account for inflation and aging infrastructure.

The SDDOT is working on a long-term solution for highway funding with our federal and state lawmakers. In the meantime, it will be very difficult to maintain this condition with the revenues available.

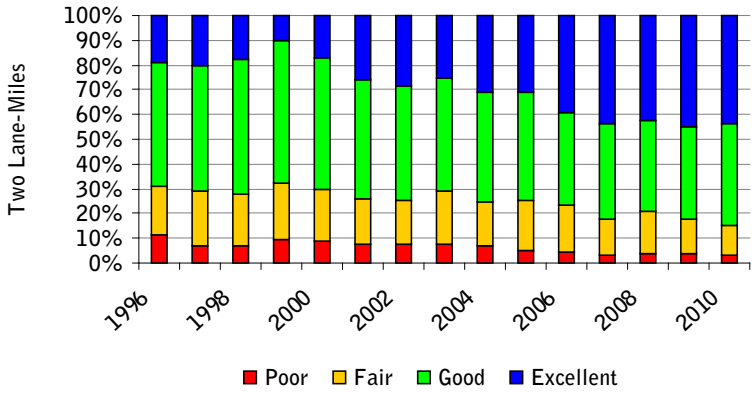
Pavement Surface Condition Index

By State Fiscal Year



State Highway System Conditions by Percentage

By State Fiscal Year



Before the current funding shortfall, SDDOT implemented controls to preserve highways and bridges in the best condition possible as a matter of good management.

Financial constraints today demand that preservation of existing assets be our main focus, which means numerous preservation treatment projects instead of more costly reconstruction. On the next page, see how preservation treatments cost-effectively extend pavement service life.

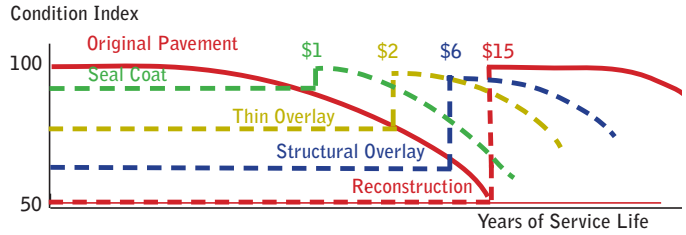
2009-2010 stimulus-funded projects helped maintain pavement conditions for a few years, but pavement conditions inevitably will decline without increased funding. The longer it takes to address road needs, the higher the price tag will be to get conditions back to an acceptable level.

Strategic Initiative:

Preserve and Maintain Our Current Assets in the Best Condition Possible With Available Resources

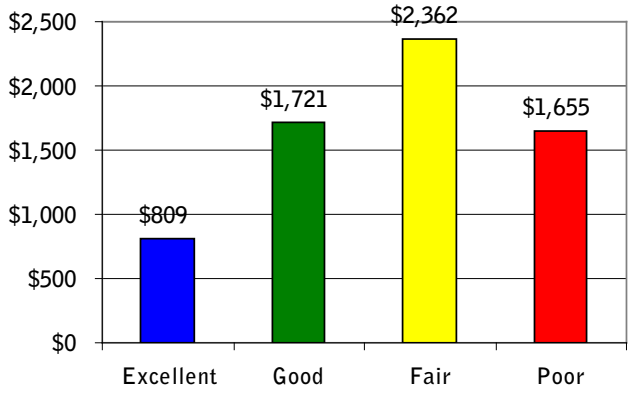
How Pavement Preservation Saves Money

Preservation Treatments v. No Preservation Treatments



At 50 on the condition index, pavement has zero years left of service life.

Pavement Maintenance Costs per Mile



Routine pavement maintenance includes pothole patching, isolated joint repairs, etc.

Temperature changes, moisture and heavy moving vehicles will begin to weaken pavements as soon as they are built.

The solid red curving line in the top left graph shows how a new pavement's condition declines over time with no preservation treatments. Dotted green, yellow and blue lines show how the pavement could be kept at excellent or good condition by a series of treatments: a seal coat, a thin overlay and a structural overlay. Each successive dotted line falls farther on the horizontal axis, showing how preservation extends service life and delays the need for reconstruction.

The goal of preservation is to maximize infrastructure investments by performing less-expensive treatments earlier in the lives of roads and bridges. This is achieved by calculating which of these treatments, performed when the facilities reach specific conditions, will help extend service life as long as possible. It is extremely important that treatments be performed at optimal moments in the facility's service life. If not, the benefit will be lessened or there will be no benefit at all, and the facility will need to be reconstructed sooner. A chip seal coat on a highway typically is about $18,000 a mile, and a mill and concrete (structural) overlay is $189,000 a mile. Reconstruction of a two-lane highway with asphalt concrete costs slightly more than $1 million per mile.

The bottom chart at left shows how pavement maintenance costs rise as pavement conditions worsen. Paradoxically, poor roads are cheaper to maintain than good and fair roads because little can be done to prolong pavement life and restore smoothness except reconstruction. Costs of maintaining poor roads are low because it's time to "give up."

Keeping pavements in excellent to good condition cuts the cost of maintaining them and delays the high cost of reconstruction. Taxpayers get the most "bang for their buck" when the right preservation treatments are performed at the right times. It's cheaper in the long run to fully fund pavement preservation needs every year. However, preservation treatments cannot extend pavement service life indefinitely. At some point, highways need to be reconstructed.

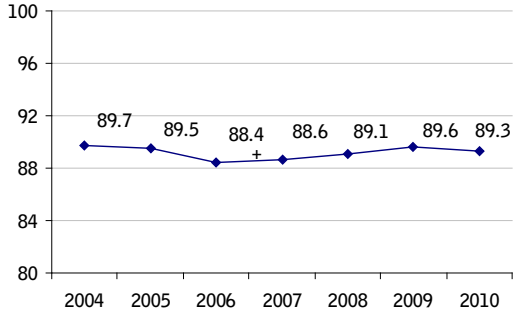
Strategic Initiative:
Preserve and Maintain Our Current Assets in the Best Condition Possible With Available Resources

Bridges

Like the State Highway System's pavements, state-owned bridges and culverts are in "good" shape.

The average sufficiency rating for these 1,803 structures is 89.7 on a scale of 1 to 100. Under this rating system, an unusable bridge gets a zero and a bridge in excellent structural and functional condition gets 100.

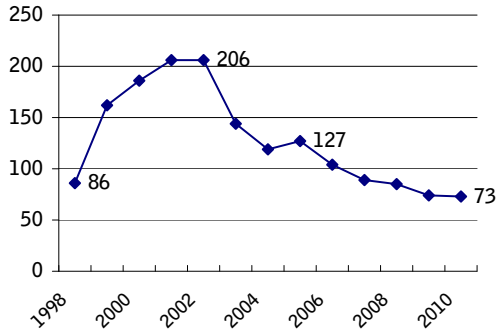
Average Sufficiency Index--State Bridges
By Calendar Year



Six new bridges and 15 new box culverts were let to contract on the state system in FY2010. One hundred twenty-eight existing bridges were let to contract for rehabilitation/repair work and six existing box culverts were let to contract for extension. The SDDOT reduced the number of structurally deficient bridges in 2009 and 2010; only 73 bridges are rated structurally deficient and 91 are rated functionally obsolete.

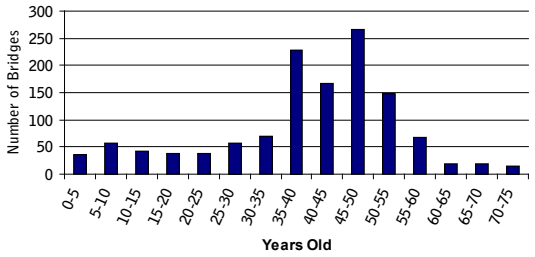
"Structurally deficient" and "functionally obsolete" do not mean unsafe. Structurally deficient is an engineering term from the federal National Bridge Inspection Standards (NBIS) that indicates certain elements of a bridge need repair or replacement. For example: Salt used to melt ice on bridges can penetrate the concrete deck surface, causing the internal steel reinforcement to rust. This process, in turn, can cause the concrete around the steel reinforcing bars to separate (delaminate) into two weaker layers. If prevalent enough on the deck surface, this delamination can result in a structurally deficient rating but typically does not make the bridge structurally unsafe. That deficient rating can be reversed with a new overlaid surface or by replacing the bridge deck. Functionally obsolete can mean a bridge is too narrow by current engineering standards for the traffic it is expected to carry or has a lower vertical or horizontal clearance than bridges built to current standards.

Number* of Structurally Deficient Bridges
By Calendar Year



**In 1999, South Dakota adopted a new AASHTO rating method that caused a change in the number of structurally deficient bridges. In 2002, South Dakota adopted an AASHTO revision to the rating method that is bringing the number of structurally deficient bridges back in line with the previous trend.*

Age Distribution of State Bridges
As of Calendar Year 2010



South Dakota's state-owned bridges are inspected regularly following the federal NBIS and some additional state criteria. Inspection data is analyzed using a bridge management system.

Most state-owned bridges date back to the Interstate construction era of the late 1950s, 1960s and 1970s, and are reaching the end of their 50-75-year design lives, when preservation treatments will not be enough to extend their service lives. The relatively modest costs of preservation efforts today on those bridges will have to yield to more substantial costs of reconstruction in the years ahead.

Strategic Initiative:

A Long-Term Strategy for South Dakota's Transportation Systems

State Highway System roads and bridges are in good shape, thanks to a federal highway bill that pays three-quarters of the annual cost of repair and reconstruction. Regular federal formula funding for both the state and local systems averages about $223 million a year. The extra $183 million of stimulus funding in 2009-2010 helped maintain our roads, but after 2010, that money will be used up.

Keeping South Dakota's state and local systems in good shape will require an increased level of federal funding—not a one-time boost—because a growing number of roads and bridges built decades ago now need to be rebuilt. Reconstruction will cost more than repair work has cost.

"Stimulus funding is the glue allowing South Dakota and the nation to hold the transportation system together while we develop a long-term solution for rural and urban transportation needs," said Darin Bergquist, Secretary of Transportation. "We need a federal highway bill that increases funding, so that we can continue to provide an efficient transportation system for agricultural and other goods and services."

The state Department of Transportation has worked hard over the past year to monitor and influence the next highway bill. The new bill will replace the Safe, Accountable, Flexible, Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU), which expired in September 2009 but continues to provide federal funding to states through successive legislative extensions. Extensions maintain the past level of funding, but do not address issues or problems that have arisen or increased in the past six years, including inflation.

The most prominent proposed highway bill has an urban orientation that many in Congress appear to favor. As part of a coalition of five rural Mountain-Plains states, South Dakota has made it clear that rural concerns need to be addressed as well. A lack of consensus on how to fund the nation's enormous infrastructure needs has kept any proposal from gaining sufficient support. Increasing the gas tax is politically unpalatable to some; however, one idea being discussed and debated is a sales tax on fuel instead of a per-gallon tax.

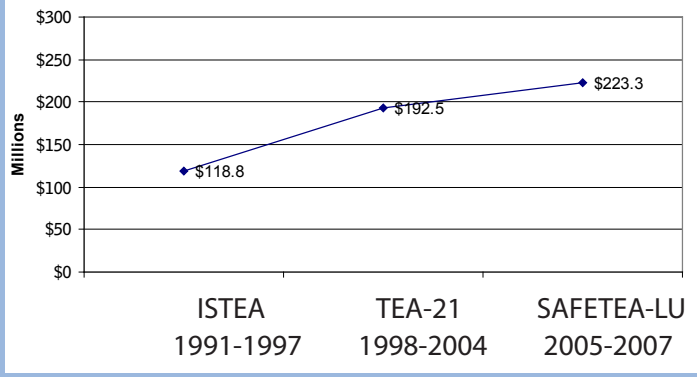
The Obama administration also wants to fund more innovative proposals and discretionary grants meeting national goals. These allocations of federal money would reduce the amount of money that historically went to South Dakota under funding formulas.

Given the divided nature of the new Congress, another extension of SAFETEA-LU may be the best South Dakota can reasonably hope for in 2011.

Bergquist spoke on rural transportation needs to the U.S. Senate Surface Transportation and Merchant Marine Infrastructure, Safety and Security Subcommittee field hearing chaired by Sen. John Thune in Sioux Falls on Aug. 10, 2009.

Average Annual Federal Formula Funds for State and Local Roads

Last Three Federal Highway Bills



Strategic Initiative:

Maintain Fiscal Responsibility

Efficiency

SDDOT's reputation for efficient use of federal highway funds nets an extra $22.7 million in 2009

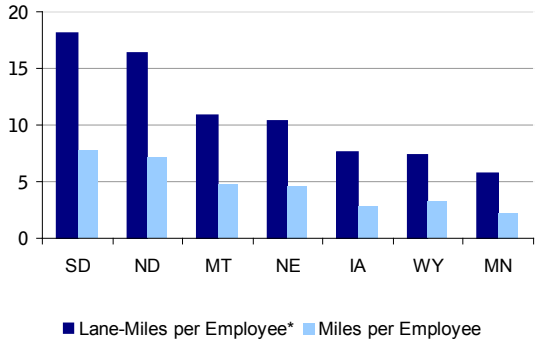
At the end of each federal fiscal year, the Federal Highway Administration (FHWA) reallocates federal highway money that other states or federal agencies cannot or will not spend.

SDDOT regularly receives some of these funds by consistently readying projects and committing federal funds to those projects in a timely manner. In FFY2009, SDDOT received $7.7 million of this money.

On Friday, Sept. 25—just days before the end of the federal fiscal year— the FHWA called to say South Dakota could receive $15 million *more* from a state that was unable to obligate the funds—if they could be allocated to a project or projects by the end of the day.

To make this happen, a key SDDOT employee heading to Sioux Falls for a medical appointment stopped at the Mitchell Region Office, appropriated a computer and, with bid-letting staff help, completed the paperwork. By day's end, South Dakota had $15 million more for road work.

When the $15 million was added to the $7.7 million in regular federal "leftover" money, $22.7 million in extra federal funding was obtained for South Dakota—a reward for administering available funding efficiently.

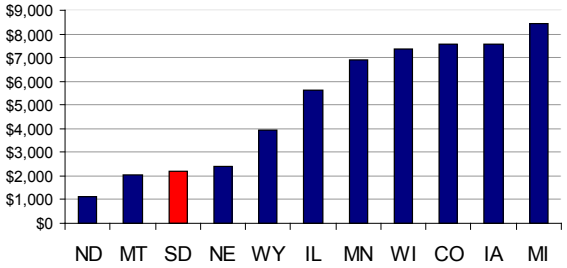


Miles of Highway per DOT Employee

South Dakota DOT employees manage and maintain more highway miles than DOT employees in neighboring states

***Lane-miles per employee is the number of miles of driving lanes divided by the number of employees. A mile of four-lane Interstate has four lane-miles.**

Sources: *Highway Statistics* 2008, Table HM-81 (October 2009), Federal Highway Administration, and the respective states.



Winter Maintenance Costs per Mile

South Dakota has low winter maintenance costs compared with other Midwestern, Western states

Of course, winter temperatures and precipitation vary throughout the United States. This chart focuses on Midwestern and Western states that regularly receive snow and below-freezing temperatures. One factor in North Dakota's lower per-mile costs in comparison to South Dakota is fewer hours spent on winter maintenance for secondary roads.

Sources: *Highway Statistics* 2008, Tables SF-4C (April 2010) and HM-81 (October 2009), Federal Highway Administration.

Strategic Initiative:

Maintain Fiscal Responsibility

Efficiency

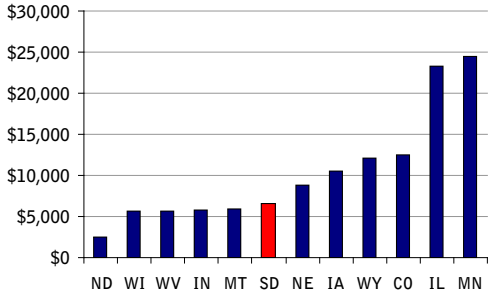
SDDOT keeps construction costs under tight control by producing high-quality designs that don't require major changes in the field

SDDOT design engineers and those who manage construction projects are proud of another statistic: the percent difference between total bid awards for construction projects and the projects' total final costs.

That figure was just 1.07% in 2009.

This means personnel thoroughly investigate the underlying construction sites, design the right treatment and provide a quality set of plans for contractors to use. Then Operations engineers and engineering technicians diligently administer the contract to stay within the scope of the project.

Mitchell Area Project Engineer Kent Gates talks with a member of a contractor's asphalt paving crew.

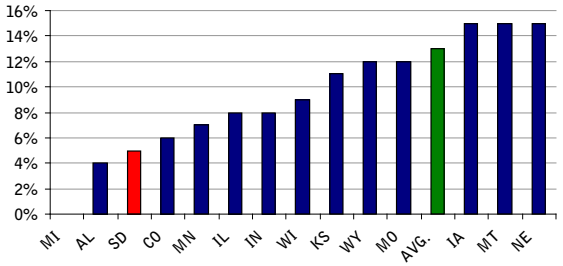


Routine* Maintenance Cost per Mile

South Dakota is 6th lowest in U.S.

***Includes maintenance of the driving surface, shoulders, bridges, drainage and erosion control, ditch cleaning, mowing, fence repair and other costs. Excludes snow and ice control.**

Source: *Highway Statistics* 2008, Tables SF-4C (April 2010) and HM-81 (October 2009), Federal Highway Administration.



Engineering* Costs as a Percentage of Total Project Costs

*South Dakota is 3rd lowest in the U.S.***

***Preliminary and construction engineering**
****Michigan appears to categorize engineering costs differently when reporting capital outlay expenditures, giving that state an artificially low figure.**

Source: *Highway Statistics* 2008, Table SF-4C (April 2010), Federal Highway Administration.

Strategic Initiative:

A Workplace That Allows Individuals to Grow and Develop Careers

Of all the training and educational opportunities offered to SDDOT employees, nothing has had a greater organizational impact—and the potential to continue improving this agency—than the Mentoring Program.

Started in 2006, this program pairs an employee who wants to share knowledge and experience with another employee wanting to grow in his or her career.

Mentors and mentees volunteer and then are matched based on what the mentor has to teach and the mentee wants to learn. They are guided through the process with introductory information about the program, a midpoint "energizer" meeting to review progress and address problems, and a final group meeting to mark the end of the mentoring year. Mentoring pairs also gather to hear special speakers discuss their career paths in state government.

Engineers just starting their careers learn in-depth from experienced engineers about engineering, SDDOT culture and how to design a career path within it.

Sometimes mentor pairs foster cross-office or cross-profession understanding. A snow-plow operator can understand why finance personnel need to collect certain information. An employee in the Central Office can get a better understanding of how decisions made in Pierre impact the agency's Region and Area offices.

Thirty-three mentoring pairs were matched in 2009 and completed their mentoring year in November 2010.

Mentor and SDDOT Environmental Engineer Tom Lehmkuhl of the Project Development Office explains the Concept to Contract (C2C) system to his mentee, Draftsman Sarah Vanneman of the Road Design Office.

Engineer-in-Training Program

With over 1,000 employees spread across the state, numerous offices with different functions, and complicated construction projects involving many steps and variables, the South Dakota Department of Transportation can be a complex organization for a new engineer to navigate.

The need to educate new engineering employees about these complexities was the impetus for reviving the Engineer-in-Training Program. Organizational efforts began in 2009 and became reality in February 2010.

New engineering employees spent two weeks learning about Central Office programs and got an overview of how a construction project starts and ends. The second phase provided extensive field training in the summer on different projects at various state locations.

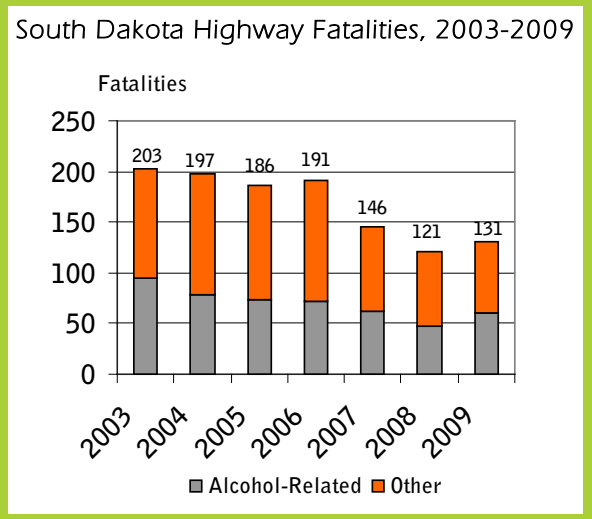
Safety

Crashes are a call to action.

SDDOT Traffic Engineers know when and where a serious crash has occurred within their Regions. It's each one's job to determine if the agency can do anything to improve safety at that location.

"I contact the Highway Patrol, local sheriff or our local DOT folks to obtain initial details of the crash," says Scott Jansen, the Mitchell Region Traffic Engineer. "I sometimes speak directly to the investigating officer. I will then review to determine if the roadway geometrics, road condition, signing, road construction or other items may have been a contributing factor in the crash. I also obtain a copy of the crash report as soon as it becomes available."

A rumble strip is stamped in fresh portland cement concrete.



If there's an indication a problem needs to be addressed immediately, Jansen makes a special trip to the crash site. If not, he incorporates a visit to the crash site with other duties.

"This process has resulted in a quick response to crashes from a DOT standpoint," he says.

An annual review of accidents occurring on the State Highway System, searches for problem areas. The SDDOT Traffic Safety Engineer participates in safety reviews of selected road plans and on-site safety reviews of specific state and local road system locations. The crash history of any location slated for reconstruction also is reviewed for possible safety enhancement by our Road Design Office. In the future, the agency will take a more systemic approach, focusing on the types of improvements that can enhance the overall safety of the State Highway System.

Rapid thump-thump-thumps from rumble strips have jolted many snoozing or distracted South Dakota drivers, restoring their focus on driving before their cars left the pavement.

Research shows these portland cement concrete and asphalt concrete grooved patterns are one of the most cost-effective ways the SDDOT can improve the safety of our State Highway System. In recognition of this, the department decided in 2009 that rumble strips could be installed as stand-alone projects on existing roads and will be considered as part of resurfacing projects.

Rumble strips will reduce one of South Dakota's most common causes of fatalities and injuries, run-off-the-road crashes.

Saving Taxpayer Dollars, Improving Service and Safety:

Research

Is there a better, cheaper, safer or faster way?

This question has been asked again and again at the SDDOT as roads and bridges have been built and maintained.

It's the SDDOT Office of Research mission to study problems and explore the potential of new technologies. This office often answers with a "yes" and provides the information necessary to make improvements. Sometimes the audience for the research results is the South Dakota Legislature, which needs impartial information to make highway policy and funding decisions.

This office employs professionals with widely varying areas of expertise and knowledge: civil engineering, metallurgy, physics, chemistry, geotechnical engineering, electrical engineering, geography and mechanical engineering. That's because research projects can include any aspect of transportation. Working with specialist consultants—often from South Dakota universities—the office has developed longer-lasting concrete, reduced the impact by construction activities on the environment, improved management practices within the SDDOT and created many more "better ways."

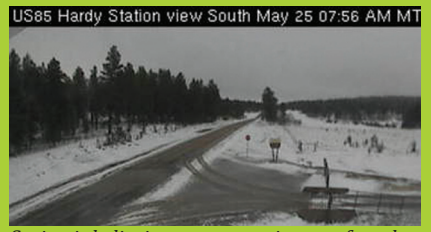
Research is paid for with specially designated federal funds.

511 Traveler Information and SafeTravelUSA.com — South Dakotans have used this three-digit phone number and visited the www.safetravelusa.com/sd Web site millions of times for current information about road conditions. Camera image views of nearly 50 specific highway locations have been extraordinarily popular. South Dakota was the tenth state to establish 511 service, which evolved from the #SAFE program developed jointly with North Dakota. The #SAFE system was the first statewide phone-based system in the country.

Maintenance Decision Support System (MDSS) — This computerized system played a role in reducing SDDOT winter maintenance costs last winter. The MDSS models and predicts the effect of various winter maintenance treatments using data on current road conditions, current and forecasted weather conditions, and the physics and chemistry of ice and deicing chemicals to suggest effective treatments and timings. Supervisors use the system in their offices for logistical decisions, while snowplow operators use it in-cab for immediate decision support. South Dakota leads a group of 16 states in MDSS development.

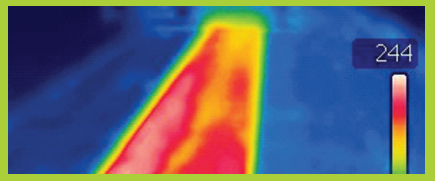
Warm Mix Asphalt — Compared to conventional hot mix asphalt, this material uses significantly less burner fuel, produces less air pollution, is less sensitive to long haul distances and can be used earlier and later in the construction season.

Driver Education and Teen Driving — With the state Department of Education, Department of Public Safety and Department of Health, the SDDOT is researching ways to improve driver education in our state. The SDDOT also is working with Iowa, Kansas, and the Centers for Disease Control and Prevention to evaluate young driver behavior and find ways to improve their driving. Crashes are the No. 1 cause of death among South Dakotans age 14 to 24. Reducing these deaths is a goal of the SDDOT Strategic Highway Safety Plan.



Seeing is believing: a camera image of road conditions from the SafeTravelUSA Web site

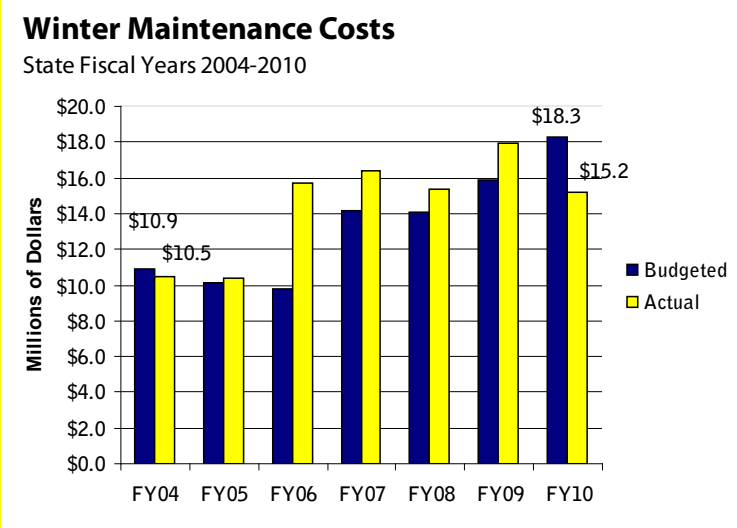
Operations Director Greg Fuller using the MDSS during the snowstorms of 2009-2010.



Thermographic image of warm mix asphalt


Pierre driving instructor Vern Miller buckles in as Jon Albright starts a driving lesson.

Winter Maintenance Activities, 2009-2010



The winter of 2009-2010 posed two major challenges to the South Dakota Department of Transportation Operations Division, one known and the other unknown.

The unknown challenge was the number of snowstorms and icing events, and the amount of precipitation they would bring. Although budgeting is based on the average cost, exactly how many personnel hours, gallons of diesel fuel and tons of deicing material will be needed year to year is never known, and costs can vary by the millions, as can be seen in the chart above.

The known challenge was the need to stretch our winter maintenance dollars even more. Winter maintenance is largely funded by the state gas tax; federal highway funding cannot be used for this purpose. State gas tax revenues—fixed per gallon, and not a percentage of the fuel dollars sold—have been declining or essentially stagnant since FY2004, while the cost of gasoline rose 101%, diesel fuel rose 174% and deicing chemicals increased 101% through 2008. These increases have forced the division to delay replacement of aging equipment to stay within its budget.

As Operations Division personnel planned implementation of a new computerized Maintenance Decision Support System, they looked at ways to safely maintain winter roads while cutting costs. Reviewing science on winter maintenance, it was determined that sand use on long stretches of highway could be reduced because sand doesn't improve traction at high speeds and can delay the melting action of the salt in the salt/sand mixture. Salt, however, was applied at the same rates as the previous winter.

Other policy changes and help from the partially implemented MDSS (described in greater depth on page 23) helped the Operations Division come in below its budgeted amount for winter maintenance by $2.6 million—despite a memorably snowy and windy winter.

South Dakota's winters will continue to be unpredictable. South Dakota's taxpayers can count on the SDDOT to provide winter maintenance with both safety and cost effectiveness in mind.

Jerry Hansen

SDDOT employee saves motorist during Christmas blizzard

SDDOT's Junction City Maintenance Supervisor Jerry Hansen got a call early Christmas Day from State Radio. A motorist had gone in the ditch along Interstate 29 in the southeastern part of the state. The man had contacted State Radio with a cell phone but now contact was lost. Could Hansen check on him? A snowstorm was blowing, visibility was pretty much zero and the Interstate was closed. Hansen loaded his vehicle with extra clothes and headed out. He found the man, nearly unconscious, and drove him to safety. Hansen received a letter of commendation for his heroism from Gov. M. Michael Rounds.

Assisting Local and Tribal Governments

Pete Red Tomahawk, Standing Rock Sioux Tribe transportation director (foreground), discusses highway safety concerns with Transportation Secretary Darin Bergquist (far right) at the 2010 Tribal STIP/TIP meeting. From left: Tim Bjorneberg, head of the SDDOT Project Development Office, and Terry Keller, SDDOT environmental engineering supervisor.

Urban and rural local governments received $20.1 million of South Dakota's federal road funding with $4.4 million in matching state funds in fiscal 2010. Federal funding for bridges on local systems was $7.9 million.

The Local Government Assistance (LGA) program within the South Dakota Department of Transportation's Office of Local Transportation Programs administered these funds and provided engineering oversight.

LGA is often called "the DOT within DOT" because of the wide range of responsibilities and services it provides to local governments, including:

- project management assistance from an engineer for urban projects (population 5,000 or greater) involving federal funding, through the bid letting
- project management assistance from engineers for local road and bridge projects involving federal funding, through the bid letting
- administration of bridge inspection contracts for about 4,000 bridges and box culverts on local systems and on state Game, Fish and Parks Department roads
- structure summary reports to local governments
- project management assistance through construction for Transportation Enhancement and economic development grant projects
- selection of a pool of prequalified consultant engineering firms with which local governments can contract
- preparation of consultant engineering contracts meeting federal laws and regulations.

The SDDOT's Operations Division works with local governments during flooding and winter weather emergencies. The Planning and Engineering Division coordinates state projects with local projects. Finally, the department meets annually with South Dakota tribes, the Bureau of Indian Affairs and the Federal Highway Administration to exchange information about needs and discuss upcoming projects.

Research and technical assistance to local governments

Only local governments in South Dakota with large populations can afford a professional engineer or staff of engineers. That's why a federal program exists to provide technical assistance to smaller agencies.

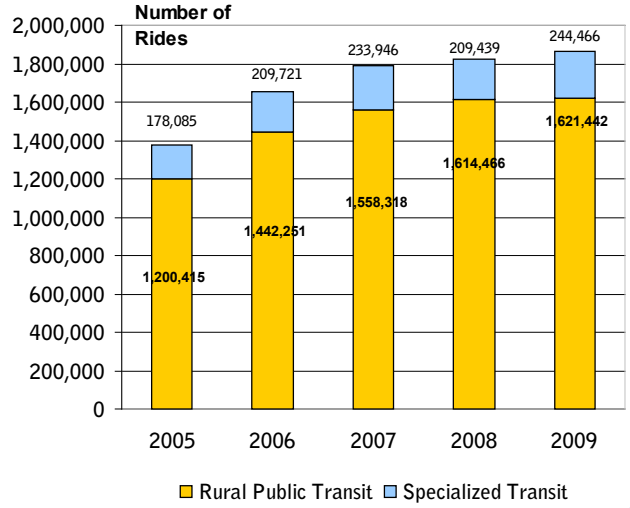
South Dakota's Local Transportation Assistance Program (LTAP) brings the latest highway and bridge technology to local officials. Staff members teach seminars on road and street maintenance, as well as equipment and operator safety. Upon request, they help local officials find solutions to specific transportation problems.

LTAP is jointly operated by South Dakota State University, the South Dakota School of Mines and Technology and the SDDOT. Two LTAP employees have desks at the SDDOT Central Office in Pierre. Larry Weiss and Cliff Reuer, both retired SDDOT engineers, travel extensively, helping local governments and serving as important links between local governments and the department.

Public Transit

Growth in Rural Public and Specialized Transit

Federal Fiscal Years 2005-2009



2009 was another record year for rural public and specialized transportation in South Dakota. Approximately 50 transit providers receiving federal grants through the SDDOT Office of Public Transit provided 1,865,908 rides, up 2.3 percent over 2008.

Ridership is measured with two major categories: *rural public transit*, which provides regular service to the public, school children, the elderly and persons with disabilities in areas with a population less than 50,000, and *specialized transportation*, which focuses on the elderly and persons with disabilities in urban *and* rural areas. Both categories saw growth in 2009 over 2008.

Public and special transportation service providers play a vital role in achieving numerous state government policy objectives. Among those is the effort to keep elderly residents and people with disabilities in their own homes and communities, living independently, instead of being forced to move to urban areas for needed services.

Stimulus funds buy transit buses and barns

Along with roads, bridges and airports, public transit in South Dakota benefitted from stimulus funding from the federal American Recovery and Reinvestment Act.

The SDDOT received $7.4 million, which is being used to fully or partially pay for new bus barn construction in Eureka, Britton, Groton and Flandreau; a replacement bus facility in Spearfish; and additions in Pierre, Aberdeen, Mitchell, Vermillion and Huron.

Eureka's new bus barn

Railroads

The Office of Railroads within Local Transportation Programs manages the rail lines acquired by the state of South Dakota during the 1980s. This includes leasing those rail lines to railroad operators, issuing utility installation permits, rehabilitating track, and overseeing industrial track expansion and construction.

The South Dakota Railroad Board approved these loans from the Railroad Trust Fund for improvements in FY2010:

- $3 million for construction of a loop track at Wheaton-Dumont Elevator in Britton
- $3 million for a 13,000-foot expansion to the South Dakota Wheat Growers siding near Roscoe
- $2 million for siding expansion at Oahe Grain in Onida.

A new loop track at the Harrold Grain Co. facility in Harrold was completed in the summer of 2010. This loop track, which can load a 140-car train and ship out 100,000 bushels an hour, was built with a $2.6 million loan from the fund. Local officials hope it can spur additional economic development in central South Dakota.

The Railroad Board has 14 active loans. The current balance due of all loans made is $30.6 million. Repayment of these loans generates $2.5 million each year, which returns to the Railroad Trust Fund.

Above: Aerial view of the new loop track at the Harrold Grain Co. facility, built with a state loan. The track allows the business to load a 140-car train and ship out 100,000 bushels an hour. Below: D&I Railroad lays continuous welded rail on the state-owned line between Elk Point and Canton. A loan to upgrade the line with additional continuous welded rail was approved in 2009. Left: Transportation Specialists Lynn Kennison and Misty Siedschlaw review a railroad right-of-way map. The Office of Railroads is responsible for approving permits to install utilities in state-owned railroad right of way. These maps, some dating back a century, are being digitized and preserved on microfilm.

Aeronautics

Along with the State Highway System and public transit, South Dakota's airports benefitted from the 2009 American Recovery and Reinvestment Act.

Mitchell's Municipal Airport received a $6.7 million grant to rehabilitate a runway. A picture of the finished project is bottom right. Martin received a $1 million grant, also to rehabilitate a runway. The Martin runway is the background on this page.

Pierre received $880,000 to begin site work for a new terminal building to be constructed in 2010. The architectural drawing of the new terminal is located to the right, in the middle.

Finally, a new airport was built at Rosebud in order to improve emergency ambulance service to the Rosebud hospital, which formerly relied on the Mission airport about 13 miles away. The Mission airport terminal was moved to the new Rosebud runway. A stimulus grant of $4.1 million paid for the grading work in 2009, pictured at top right. The entire project was completed in the fall of 2010.

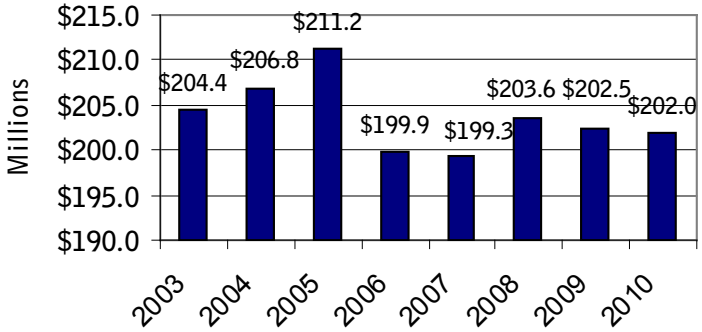
Other FFY2009 Aeronautics Office achievements:

- Administered 44 grants totaling $28.8 million in federal and $600,000 in state funds. Some notable projects:
  - Rapid City airport air rescue and fire-fighting building
  - Sioux Falls airport runway rehabilitation
  - Pierre airport taxiway reconstruction
  - Apron reconstruction at the Yankton, Milbank, Wagner and Britton airports
- Initiated consultant update of the State Aviation System Plan, to be completed in the summer of 2011
- Belle Fourche, Eagle Butte, Gregory, Hot Springs, Miller and Onida airports received Super Automated Weather Observing Systems (AWOS), funded by the Aeronautics Commission
- Inspected each general aviation airport.

Selected Financial Statistics

State Highway Fund Total Revenues*

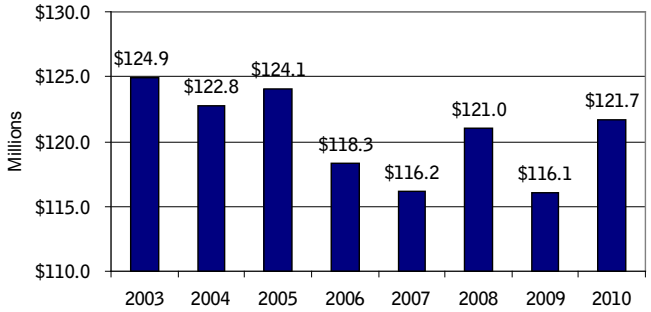
State Fiscal Years 2003-2010



**In addition to motor fuel tax revenues and motor vehicle 3% excise tax revenues, State Highway Fund total revenues include port of entry fees, prorate commercial license fees, over-height and weight permits, sales of land, right of way and other miscellaneous revenues.*

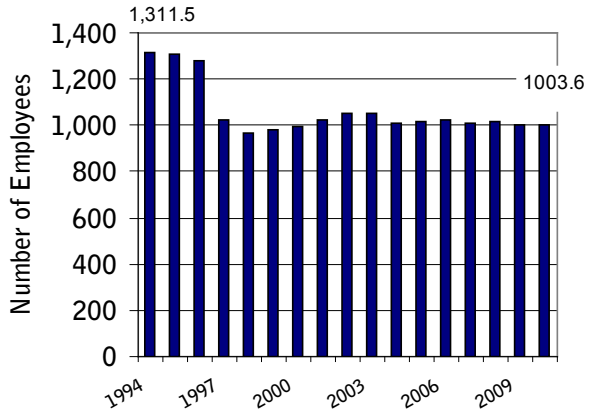
State Motor Fuel Tax Revenue

State Fiscal Years 2003-2010



Number of Full-Time Equivalent Employees*

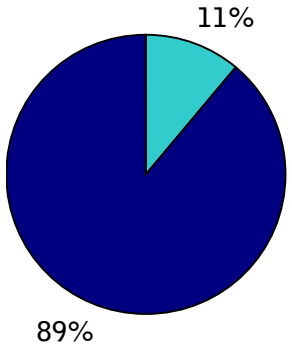
State Fiscal Years 1994-2010



**The drop of 255 employees between 1996 and 1997 was part of a state government-wide reorganization that cut the total number of state employees.*

Personal Services v. All Other Operating Expenses

State Fiscal Year 2010



Personal services, including employee salaries and benefits

All other operating expenses, including construction projects, winter maintenance, supplies, capital outlay, grants and travel

Accolades

To South Dakota's winter maintenance employees for keeping our winter roads clear and safe during the snowy, blowy winter of '09-'10

"This past Monday [Dec. 28, 2009], I traveled from Minnetonka, Minn., to Mobridge. The roads in Minnesota on Highway 7 were terrible at times—ice, snowpacked, etc. When we hit Highway 12 at the South Dakota border, all that changed. The road was clear of any snow or ice, and we were able to travel the speed limit all the way to Mobridge. I want to say, 'Wow! Way to go SDDOT!'"

-Donna Syverson, Mobridge

"I just want to say thank you for the great work all of you are doing on the roads this year. I travel from Madison to Sioux Falls every day for work, and as you know this has been a rough winter for travel, but the hard work that all of you are doing to keep the roads clean has made a great deal of difference. I keep all of you in my prayers because I know how dangerous it can be out in the bad weather. Thank you again for making my trips safer and less stressful."

-Mary Swanson, Madison

"I do want to thank you for the service that they do [for] the people of South Dakota, because we depend upon those roads for not only getting place to place but also for the goods and services that come in to the state."

-Rep. Larry Tidemann, Brookings
Chair, House Appropriations Committee

To South Dakota DOT employees for assisting in emergencies

"Once again you have come to our rescue to plow the way for the ambulance. You have no idea how much we appreciate you braving the blizzard to assist our crew in saving lives."

-Lemmon Ambulance

"I hope the man you rescued understands the risks you took to help him. There was an angel looking over him that night, by the name of Jerry Hansen."

-Gov. M. Michael Rounds in a letter of commendation to Jerry Hansen, Highway Maintenance Supervisor in Junction City. Hansen rescued a stranded motorist during the Christmas blizzard.

For the department's responsiveness and courtesy in addressing South Dakotans' concerns

"Over the past year, I couldn't believe how many constituent questions I had that related to the Department of Transportation. I always was very pleased with how my constituents were treated and how the agency dealt with every concern that anyone had and made amicable and very reasonable decisions as it related to everything. I want to thank you for that publicly and your staff, because they have been very good to me and my constituents throughout the entire year.

-Rep. Lance Russell, Hot Springs

"I did have a constituent concern when I left Wagner. By the time I got halfway home, we had pretty much addressed this constituent concern. I even got to talk to Mr. Secretary himself as I was traveling in a snowstorm!"

-Rep. Kent Juhnke of Vivian

"There are sometimes little questions and concerns that a constituent may have, that they're upset with the way this was done or they're not hearing back on right-of-way issues. Every time our regional engineers or staff went and specifically answered each question. We as legislators—it made us look good. Tell your staff and the officers in each regional office how great they've handled that."

-Rep. Shantel Krebs, Renner
Chair, House Transportation Committee

For improving our roads

"Just wanted to send you a note on Exit 10 [at Spearfish]. Your team did an excellent job fixing the rough asphalt. It makes driving a lot better."

-Jeff Flesner, RAMVAC Tech Support
Spearfish

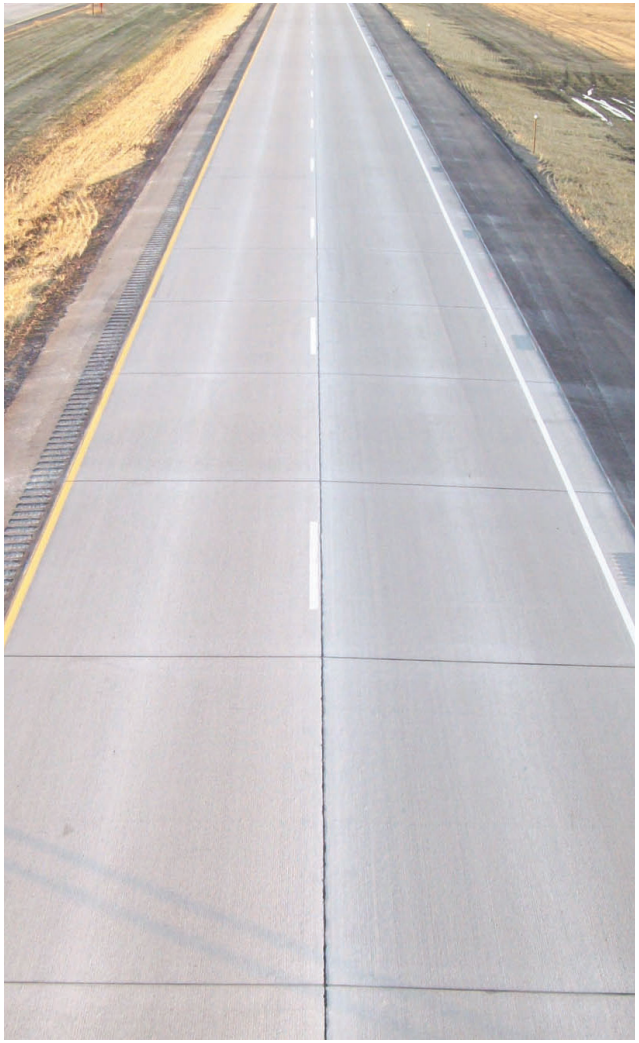
"We had a situation down in Meade County outside the city of Sturgis where we literally had a road collapsing and falling into a creekside bed. All of us thought it was going to be this summer before it could even be approached. But the Department of Transportation got involved, had some engineers come down and other personnel, put together a team and took quick and decisive action and got it fixed this fall. On behalf of the city of Sturgis, Meade County and the residents that were being diverted to other roads to get to work, I say thank you."

-Rep. Dean Wink of Howes

Recycling the Road







How SDDOT "goes green" by recycling tons of concrete: *Aggregate for concrete is an increasingly scarce and expensive resource. One way to conserve it is to crush portland cement concrete pavement (PCCP) that has reached the end of its design life and re-use it as the gravel cushion underneath new concrete pavement. Two major SDDOT projects recycled PCCP in this way in 2009. The process included demolition of existing pavement, excavation of the slabs (far left), then transportation of the slabs to the crushing facility (top middle). The slabs were mechanically crushed, reinforcing steel was removed and the material was stockpiled (center middle). At the bottom middle is a photograph of the finished material. The material was transported back to the roadbed and compacted. The old pavement is now supporting the new pavement (far right). The SDDOT also routinely recycles asphalt concrete.*

Getting the Drift

South Dakota Department of Transportation Operations personnel had plenty of opportunities to tackle snowdrifts during the white and windy winter of 2009-2010. Here Milton “Shorty” Feddersen of the Murdo Maintenance Unit uses a blower to whittle down a drift almost as high as the Okaton underpass at I-90 Exit 183. The photograph was taken after the Christmas 2009 blizzard. Inset: A ground-level photograph of the same drift.