NDDOT
North Dakota
Department of Transportation

North Dakota Department of Transportation

BIENNIAL REPORT

2005 - 2007

Submitted by

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
Bismarck, North Dakota
www.dot.nd.gov

DIRECTOR
Francis G. Ziegler, P.E.

December 1, 2007

North Dakota Department of Transportation

Francis G. Ziegler, P.E.
Director

John Hoeven
Governor

December 1, 2007

The Honorable John Hoeven
Governor of North Dakota
600 East Boulevard Avenue
Bismarck, ND 58505-0001

Dear Governor Hoeven:

In compliance with Sections 24-02-01 and 54-06-04 of the North Dakota Century Code, I present to you the Biennial Report of the North Dakota Department of Transportation for fiscal years 2005 to 2007.

This biennium has brought the department many challenges, which our hard-working, dedicated employees have turned into accomplishments. The department is a leader in state government in providing e-commerce customer services. Intelligent Transportation System initiatives have helped to make our state highway system even safer by providing motorists with up-to-date information on weather and road conditions. Our employees have kept the roadways clear in the worst of weather, completed countless maintenance projects each year, and they have successfully completed a number of large construction projects. I am very proud of the department and especially its employees and all that they accomplish.

Sincerely,

Francis G. Ziegler, P.E.
Director

Enclosure

North Dakota Department of Transportation

Biennial Report: July 1, 2005 through June 30, 2007

NDDOT at a Glance

Offices, Divisions and Districts

Office of Business Support Services

Office of Driver and Vehicle Services

Office of Project Development

Office of Operations

Office of Transportation Programs

Statutory and Constitutional Responsibilities

Creation

The first North Dakota State Highway Commission was created in 1913. The North Dakota Department of Transportation was created by 1989 North Dakota Session Laws Ch. 22, codified as North Dakota Century Code, Title 24.

Function

NDCC § 24-01-01 and 24-03-02 make NDDOT responsible for the construction, maintenance, protection, and control of the highways comprising the state highway system. NDCC § 39-01-01.1 describes the general responsibilities of the Drivers License and Traffic Safety Division and the Motor Vehicle Division. When authorized under NDCC § 24-04-01, the Department of Transportation director may enter into contracts and do all things necessary to cooperate with the federal government in the construction of roads under the provisions of a congressional act.

Funding

The state highway fund must be spent in the following order of priority: (1) maintenance of the state highway system, and (2) the cost of construction and reconstruction in an amount necessary to ensure federal aid available to the state. Monies not spent under (1) or (2) may be spent on state highways for construction, improvement, or maintenance. (NDCC § 24-02-37).

National Highway Safety Act of 1966

Under NDCC § 54-07-05, the Governor has the responsibility of dealing with the federal government with respect to the state's participation in the national Highway Safety Act of 1966. The Governor has designated the director of the Department of Transportation to act on his behalf in administering that act.

Rail Service Assistance

The department, with the approval of the Public Service Commission, has the authority to qualify the state for rail service assistance under the Railroad Revitalization and Regulatory Reform Act of 1977 (NDCC § 49-17.1-02).

State Aeronautics Board

The NDDOT director serves as a liaison to the State Aeronautics Board, helping the board plan and coordinate airport and ground transportation.

Key 2007 Legislation

HB 1012 - This is the department's appropriation bill which provides funding to operate the department during the 2007-2009 biennium. The bill approved a one--time transferring of 10% of revenue collected through vehicle excise tax to the department of transportation. The bill also designated a legislative council study on highway funding and infrastructure needs, during the 2007-2008 interim. The council shall report its findings and recommendations, together with any legislation required to implement the recommendations to the 61st legislative assembly. The final NDDOT 2007-2009 budget is $903 million.

HB 1104 – Provided for additional moving and related expenses for displaced persons and businesses because of street and highway project impacts to properties.

HB 1348 – Capped the special fuels excise tax at four cents.

HB 1445 – Defined equipment requirements and allowed operation of registered off-highway vehicles on roadways with speed limits of 65 mph or lower.

HB 1465 – Required licensing of motor-powered recreational vehicle dealers.

HB 1476 – Allowed golf carts on city streets, if allowed by city ordinance.

SB 2113 – Uniform Carrier Registration Program — transfers NDDOT authority to register interstate trucking from Single-State Registration program to Uniform Carrier Registration (UCR) program.

Major Accomplishments

Strategic Planning and Performance Measures Initiative. As a result of NDDOT's internal strategic plan, the concept of applying performance measures to program delivery has been advanced by the department. Starting in 2004, NDDOT developed performance measures in which progress is measured on a biennial basis in various areas including customer satisfaction, employee satisfaction, workers safety, highway safety, highway system condition, project development and delivery. Over the next biennium, NDDOT will update the current strategic plan. The plan includes five goals: enhance customer service, increase safety on North Dakota's transportation system and within the Department, improve the quality and efficiency of North Dakota's transportation system and services, enhance employee effectiveness and well-being, and strengthen stakeholder relationships.

NDDOT values of Professionalism, Respect, Integrity, Dedication and Excellence are incorporated into everyday operations.

Four Bears Bridge Completed. The Four Bears Bridge, which crosses over Lake Sakakawea in the northwest corner of the Fort Berthold Reservation near New Town, was completed in the fall of 2005. The 4,500-foot long structure cost over $66 million to complete, and was the single largest contract ever let by the NDDOT. This project is a prime example of working together to bridge cultures and working in harmony to produce this unique structure which serves the Mandan, Hidatsa, and Arikara Nation, as well as the state of North Dakota. Since its completion, the Four Bears Bridge and plaza area has received more than 14 awards.

New Driver's License Design Implemented. North Dakota driver's licenses and nondriver identification cards received a new look in 2006. As the cards are phased in over the next four years, drivers who get new licenses or renew their license, will be issued cards with a color-coded state map, a holographic image and, for persons under age 21, a vertically-formatted design. Some features include anti-counterfeiting measures such as a ghost image of the holder and the State Seal overlapping the portrait.

TransAction II Plan Implemented. The NDDOT has led the development of a series of statewide strategic transportation plans entitled *TransAction* and *TransAction II*. This plan has been developed to help the NDDOT focus the use of our resources and meet the ever-changing and growing transportation needs and demands of the state's residents, visitors and businesses. *TransAction II* will help create a more secure and efficient transportation system by addressing issues such as; improvement of the load-carrying capacity of the state highway system, enhance the harmony and compatibility of truck movements and truck size/-weight laws and regulations with respect to Interstate movements, in order to move more commodities to enhance the state's economy. By focusing on the initiatives and resources laid out in *TransAction II*, the NDDOT will be able to improve the quality of the transportation system not only here in North Dakota but globally.

Relocation of US 281. To help alleviate some of the problems associated with rising water in the Devils Lake Basin, NDDOT relocated a segment of US 281 west of Minnewaukan. Approximately 25 miles of roadway was constructed and surfaced and ND 19 was extended to tie into the relocated highway. The project, which improves safety and ride quality, was completed in the fall of 2006 and cost approximately $35.4 million.

Four-Laning US 2 from Minot to Williston. Work continues on the four-laning project of US 2 between Minot and Williston. A total of 46 miles of the project have been completed as of October 2006, with completion of the total four-laning project for the US 2 corridor is set for 2008. NDDOT utilized bonding to accelerate completion of the project.

Liberty Memorial Bridge. Construction began on the new four-lane Liberty Memorial Bridge between Bis-

marck and Mandan in the spring of 2006. The new bridge will replace the current Memorial Bridge which was built in 1922. Due to the age of the structure and the need for major repairs, the new bridge will replace the existing structure at a construction cost of approximately $47 million. NDDOT held public meetings and public hearings before determining which alternative to build. Traffic is expected to be transferred to the new 2,369-foot steel structure in 2008.

Major Construction Projects. The department's commitment to providing a transportation system to safely move people and goods continued to progress this past biennium. In 2005 and 2006, the department advanced more than 450 projects totaling approximately $580 million. Some of the major projects include: reconstruction and six-laning of I-29 northbound in the Fargo area, reconstruction of the historical Rainbow Arch Bridge in Valley City, phase two of four-laning US 2 from Minot to Williston, and completion of the last phase of the US 52 corridor from Kenmare to Brooks Junction/US 2 reconstruction.

Rail Freight Strategy. A unified state rail freight strategy has been developed to help North Dakota's agricultural producers, processors, manufacturers and other industries move products to world markets. The strategy promotes west bound co-service intermodal containerized shipping of primarily agricultural commodities and specialty crops to Pacific Rim markets from Minot and Fargo. Bismarck's Northern Plains Commerce Center (NPCC) became home to a transloading facility with intermodal capabilities. It is envisioned that the Minot-Fargo co-service plan in concert with the NPCC will provide the state's shippers with expanded shipping and market opportunities.

Safe Routes to School Program. NDDOT implemented the Safe Routes to School (SRTS) program in 2006. SRTS is a new federal program that empowers communities to make walking and bicycling to schools a safe and routine activity once again. The SRTS program makes funding available for a wide variety of programs and projects that encourage children to walk and bicycle safely to school.

Safety Belt Use In North Dakota Tops National Average. Safety belt use in North Dakota has risen to 82.2%, topping the 2006 national average of 81% for the first time. This is an increase of 3.2% over last year's 79%, according to the latest statistics from the 2007 Statewide Safety Belt Survey conducted for the NDDOT. The state has seen a 14.8% increase over the last three years, which reflects a growing trend in safety belt use.

Environmental Excellence Award. In 2007 NDDOT was awarded the Federal Highway Administration (FHWA) Environmental Excellence Award in the Cultural and Historical Resources category for the "Scattered Village Exhibit and Curriculum Project." This is the first time any North Dakota organization received an Environmental Excellence award. The project is an interpretive and educational project resultant from the discovery of a pre-historic village during the 1997 construction of 1st Street East in Mandan, North Dakota. The project was a collaborative effort between NDDOT, Mandan Public Library, Mandan Hidatsa Arikara Nation, Mandan Public Schools, State Historical Society of North Dakota, and the City of Mandan. The interpretive exhibit consists of the display and interpretation of recovered artifacts on permanent display at the Mandan Public Library. The educational exhibit consists of classroom curriculum for North Dakota history which is taught in the 4th and 8th grades.

Motor Vehicle. Enhanced online vehicle registration system, which now averages 15% of total renewal methods; added an online registration fee calculation program for use by dealers, financial institutions, or consumers; updated system software for the International Registration Program (IRP) which allows the largest motor carriers to register online; implemented the second half of the pickup fee increase based on 2005 legislation; implemented positively-received automated telephone answering; and enhanced employee security.

Major Challenges

Construction Inflation. The greatest challenge facing the transportation industry the past couple of years is the significant increase in the cost of road and bridge construction and maintenance. As the price of oil has increased and become more volatile, the cost of oil based products used for highway construction and maintenance have increased. In 2006, construction inflation was about 30% over prior years construction

prices. The sharply increasing construction costs forced the department to delay about $130 million worth of projects during the 2006–2007 construction seasons.

Transportation Funding. North Dakota is very dependent on federal funding to preserve and improve its transportation system. Historically, North Dakota has received over $2 for every $1 sent into the Federal Highway Trust Fund. However, expenditures from the Federal Highway Trust Fund are exceeding revenue going into the fund. If this trend continues it is projected that the Federal Highway Trust Fund will no longer be able to support the level of funding approved by the Congress in 2009. In addition, in 2009 the current Federal Highway Program expires and Congress will go through the process of reauthorizing the program. Recipient states like North Dakota that get more funding than they contribute to the Federal Trust Fund will be challenged with maintaining their current share. If federal funding is reduced, North Dakota will be faced with looking for alternative funding sources to maintain its existing programs.

Hiring and Retaining Employees. The department uses many tools to hire and retain quality employees, but recruitment and retention is a major challenge. Our biggest needs are to fill engineering, engineering technician, and equipment operator positions. There have been a limited number of candidates applying for job openings and many turn down job opportunities due to noncompetitive wages.

Equipment operator recruitment and retention is a concern, especially in Western North Dakota where there is a strong demand for truck drivers in the oil industry. We find that new hires often stay long enough to achieve Commercial Drivers License (CDL) status and then depart for other jobs. Other classifications such as drivers license examiners are being impacted by needs and competition from the retail sector.

Uniformity of Truck Size and Weight Regulations. The federal government, states, provinces, and local jurisdictions all have roles in regulating truck size and weights, resulting in inconsistencies that impact the efficiency of moving freight. Changes in agricultural production, increasing fuel prices, the demand for just--in-time deliveries, and the fact that we are competing in a global economy compound the need for more uniformity in truck size and weight regulations. The challenge is to get the various entities to work together to enhance uniformity in regulations, engineering standards, and truck configurations to improve the economic competitiveness of the trucking industry.

The Impact of Energy Development on State Highways. Expansion of the oil, ethanol, and biodiesel industries is good news for North Dakota as it represents new jobs, provides additional tax revenue, and supports a growing economy. However, as these industries have grown, the associated increased truck traffic has dramatically escalated the deterioration of several state and local highways. Some of these roadways are experiencing severe rutting and pavement distress. This accelerated distress requires additional maintenance and rehabilitation activities.

North Dakota is the ninth largest oil producing state with oil production averaging over 100,000 barrels per day. It is estimated that up to 400 loads of equipment and materials are required to set up and service a vertical well site and 600 loads are required for a horizontal well. In addition, not all wells are directly connected to a pipeline; therefore, after a well is operating, the crude oil is transported by tanker truck to "tank farms" for storage and distribution.

For several years there were only two ethanol plants in North Dakota. Recently, two additional ethanol plants started production and there are plans to add more ethanol and biodiesel plants in the near future. It is estimated that a 100 million gallon ethanol plant could generate as many as 71,000 truckloads per year, which is equivalent to 200 trucks per day. The potential impact on the road network is a major concern as many of these roads were not built to handle the additional truck volumes associated with these industries.

Roads Functioning as Dikes in the Devils Lake Basin. In 2005, the water level in Devils Lake reached a record elevation of 1449.2 feet. As the water has risen, there are approximately 10 miles of state and BIA roads in the Devils Lake area that are functioning as dikes. These roads were not constructed to function as dikes, and the failure of these roads would result in large volumes of land being inundated, loss of homes, and potential loss of life. There is approximately $10 million of federal funding available annually (up to a maximum of $70 million) to raise the grades on these roadways in the Devils Lake Basin. The NDDOT is working, as part of a multi-agency committee, to resolve this complex issue. The challenge will be to stay ahead of the rising water and to coordinate the grade raise projects with multiple jurisdictions.

Major Goals

Goal 1: Enhance customer satisfaction.

NDDOT's customers are the reason the department works so hard to constantly improve its products and services. The department is reviewing how it provides information to the public regarding those products and services, and how the department can learn from the feedback provided by customers. Through this review, the department will make adjustments in its procedures so it can continue to offer the highest level of customer satisfaction possible.

Goal 2: Increase safety on North Dakota's transportation system and within the Department of Transportation.

Safety is paramount to the NDDOT. The department's mission is to provide a transportation system that safely moves people and goods. This is also true in regards to department employees.

By increasing safety on the state highway system, the department strives to decrease the number of crashes, injuries, and fatalities. Additionally, in the area of worker safety, the NDDOT aims to eliminate or decrease the number of worker injuries, work zone injuries, and fleet vehicle accidents.

Goal 3: Improve the quality and efficiency of North Dakota's transportation system and services.

NDDOT always strives for the highest levels of quality and efficiency possible. The department aims to attain this through decreasing the number of deficient bridges, increasing ride quality on the state highway system, improving pavement condition, and improving load-carrying capacity within the confines of the resources available to the department.

Goal 4: Enhance employee satisfaction.

This agency could not function without its employees. The NDDOT is reviewing retention rates (excluding retirements), and results gathered from an organizational climate survey. From this valuable information, the department will re-evaluate its approach to offer the highest level of employee satisfaction possible.

Goal 5: Strengthen stakeholder relationships.

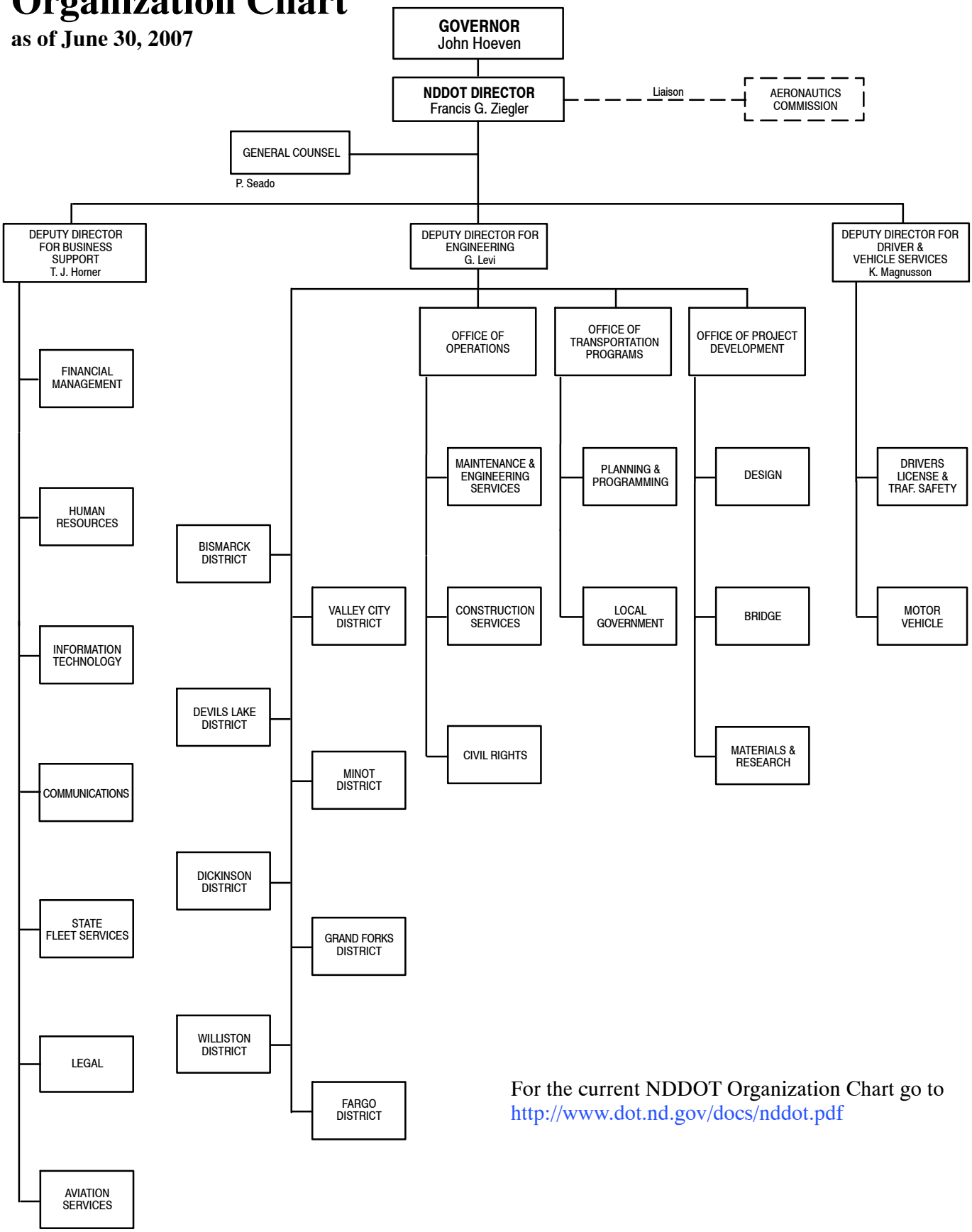
Good relationships and open communication with department stakeholders is very important to the NDDOT. Stakeholders have a vested interest in the department. They have the ability to influence what the department does and can affect department credibility. NDDOT's goal is to consistently try to protect and strengthen those relationships.

Financial Data

Audited financial information for the Department of Transportation is available from the North Dakota Office of Management and Budget. This information can also be found online at www.nd.gov/fiscal.

Organization Chart

as of June 30, 2007



For the current NDDOT Organization Chart go to
http://www.dot.nd.gov/docs/nddot.pdf

OFFICE OF BUSINESS SUPPORT

This office includes all administrative divisions and the communications function.
The deputy director is Tim Horner.

Communications

Peggy Anderson, director

Responsibilities and Activities

The Communication Division is responsible for all aspects of communication within the North Dakota Department of Transportation (NDDOT). This includes internal communications with NDDOT employees and external communications with the general public, media, legislators, civic groups and stakeholders.

NDDOT is able to communicate externally through the use of a Web site that contains up-to-date information about the department, its programs, policies, and its mission and goals. We also communicate with the public through public meetings and hearings; letters to the editor; interviews with local TV and radio stations, news releases, ads and notices, press conferences and presentations with various civic and local government groups.

This division is also responsible for facilitating internal communications with our employees and constituents through an internal Web site called MyDOT. The site is only available to employees of NDDOT. We also communicate internally through a weekly newsletter entitled *The Grapevine*, which is available online, through e-mail and US mail to our employees and retirees.

This division also serves as a resource to the executive and lay staff by providing assistance in areas to include: talking points, speeches, Power Point presentations, videos, posters, biennial reports, brochures, handbooks, technical and statistical manuals, photographic enhancements, live bid openings, study guides, proofreading and graphics.

Key Accomplishments

During the 2005–2007 biennium, Communications became a division. In August of 2006, the Multi-Media Section joined the new Communication Division. Communications was previously located under the Executive Office and the Multi-Media Section was under the Information Technology Division. Together they are now able to offer more consolidated services to better serve NDDOT employees and North Dakota citizens.

A new design was developed and implemented in October of 2006 for the NDDOT Intranet site. In September of 2007, a new improved external NDDOT Web site was launched to allow for easier navigation and quick access to important information.

Construction was completed on the the Four Bears Bridge near New Town in September of 2005. The Communication Division oversaw the on-site public information duties during this project and continues to make presentations to various civic groups and citizens throughout the state.

In June of 2006, construction started on the new Memorial Bridge between Bismarck and Mandan. This project has been revolutionized with the use of two Web cams situated on both sides of the Missouri River. This technology allows the community to observe the bridge construction online in real time. Construction is expected to be completed in the summer of 2009.

NDDOT has received four Telly Awards for its "Arching through the Centuries" video production that details the construction and history of Rainbow Arch Bridge in Valley City.

The documentary, created by the Multi-Media Section of the Communications Division, was aired on Prairie Public Television and a DVD of the program along with an Education Guide was distributed to Barnes County middle schools in 2006. The video production details settling of the Valley City region, birth of the community and advancement of transportation across the Sheyenne River in Barnes County.

The Telly Awards honor the very best local, regional, and cable television commercials and programs, as well as the finest video and film productions. The NDDOT video documentary won first place in the history and biography category and second place in three categories including public relations, information and documentary.

The NDDOT promoted work zone safety and snow plow safety through the use of a "talking orange" ad campaign. This public awareness program was run on television and radio media outlets statewide.

Financial Management

Shannon Sauer, director

Responsibilities and Activities

The Financial Management Division is responsible for the department's accounting and reporting functions, budgeting, payroll, procurements, audits, revenue forecasting, central supply, cash management, and the disposal of highway equipment and materials.

Key Accomplishments

During the past biennium, the Financial Management Division met the required number of International Fuel Tax Agreement/International Registration Plan audits. During the biennium, the division successfully processed approximately 120,000 vendor payments and issued approximately 31,000 payroll checks. The division continued to be heavily involved in the continued implementation and refinement of the Connect ND project.

Near the end of the biennium, the division began implementation of a new, state of the art time and labor system. This system replaces a legacy system which had been used for more than 20 years. The new system will streamline the agency's payroll processing function and provide managers with vastly improved tools to manage their employee's time and labor activity. This implementation will span into the 2007-2009 biennium.

Human Resources

Bob Evans, director

Responsibilities and Activities

The Human Resources Division (HRD) is responsible for a broad spectrum of activities and programs that pertain to employee—from recruitment to retirement, employees are our business. Activities include staffing and salary plans, payroll, position classifications and essential functions, personnel policies, training and much more.

Training. The HRD training staff handles a growing number of NDDOT-sponsored and outside training, meeting, and conference sessions. There were 993 sessions coordinated and processed this biennium.

Leader Development Programs. The department has implemented a three level effort to improve the leadership skills and capabilities of our employees.

The basic level training program, *The 21 Indispensable Qualities of a Leader*, is designed to help employees recognize, develop, and refine the personal characteristics needed to be a truly effective leader, the kind that people want to follow. The classes focus on helping an employee become the leader they *ought to be on the inside*, so they are able to become the leader they *want to be on the outside*.

The intermediate level training program, *The 360° Leader: Developing Your Influence from Anywhere in the Organization,* points out that 99% of all leadership occurs not from the top but from the middle of an organization. Leading in all directions requires three sets of leadership skills—how to lead up, across, and down the department. This knowledge allows leaders to influence the people they work for, the people who are on the same level, as well as those who work for them.

The advanced level training program, *The 21 Irrefutable Laws of Leadership*, boils leadership down to 21 laws or constants that stand the test of time; 21 Laws that can be learned and applied in life; 21 Laws that compliment each other; 21 Laws that have consequences; and 21 Laws that provide the foundation for Leadership.

Payroll. Our payroll staff processed 147 new regular employees and 249 temporary employees during this past biennium. Recruitment bonuses were awarded to 38 employees hired into "hard to fill" categories, and 159 performance bonuses were awarded to employees who were nominated by their peers for service provided beyond assigned duties.

TRAC Program. TRAC is a hands-on math and science curriculum, designed around transportation focused projects that are intended to introduce and interest students in the civil engineering and transportation professions. There were 14 schools involved in the program this biennium. Highlights were the teams from Rugby (High School Division) and Parshall (Junior High Division) advancing to the National TRAC Challenge Drawbridge Competition.

Mentoring Program. Mentor/mentee pairs commit to year-long relationships that has proved rewarding to both parties. Mentors nurture, guide, and open doors for their mentees. Both receive the perspective of looking at issues through a different pair of eyes. Twenty--seven mentoring pairs are currently participating in the program; 30 pairs participated last year.

Wellness Program. The wellness program provides opportunities and activities encouraging employees to choose healthy lifestyle behaviors.

Health and wellness fairs were held for employees throughout the state, giving participants insight into their wellness rating. About 40%, or 407, employees participated in the health and wellness fairs conducted by the Burleigh–Morton County Chapter of the American Red Cross. Health assessments covered cholesterol, blood glucose, blood pressure, body mass index, strength/grip testing, and flexibility testing. Information was also available on tobacco use and sleep disorders.

Grants and Internship Programs. The internship program provides hands-on experience in NDDOT divisions and districts for college students. NDDOT had 100 interns participate this biennium in this win-win program. Grants were awarded to 14 college students majoring in engineering-related fields; NDDOT offered employment to these students upon graduation.

Succession Plan. Succession planning is defined as an executive-level process to identify and develop a pool of qualified employees for targeted leadership positions. The succession planning program was implemented targeting positions at the district engineer, division director, and executive manager levels. Professional development plans have been submitted by 30 employees, which have been reviewed by a committee. Recommendations are being developed to help employees strengthen their professional skills. The program has been expanded to include opportunities for participants in the areas of workplace investigations, preparing and delivering speeches, legislative testimony, cross-training, special assignments and a 360° review.

Career Pathing. Career Pathing can be defined as providing career opportunities within an organization that meet organizational needs and provide promotion and professional growth opportunities for employees. The purpose of a Career Pathing system is to meet NDDOT's current and future occupational needs as well as those of individual employees while also contributing to employee retention. Career Pathing was a major undertaking this past biennium, and we are currently transitioning between the planning and implementation stages.

Major Goals

Enhance employee effectiveness and well-being. Our employees are the reason for our success. Based upon the results of the second organizational climate survey, NDDOT will continue to enhance its efforts in the areas of succession planning, mentorship, and career-pathing, as well as leader and individual training and development. Several human resource program adjustments have been implemented, and a follow-on organizational climate survey will document the impact of those efforts. A wellness program is in place to help improve employee health and reduce the overall cost of employee health benefits.

Information Technology

Doug Faiman, director

Responsibilities

The Information Technology Division (ITD) is responsible for all technology-related activities including information systems, network and PC support, telecommunications, electronic equipment, information processing, media, technology training, desktop publishing, web development, and e-business. ITD is also responsible for records management, photography, printing, mailing, and building security.

In addition, staff is involved with various committees including: Continuum of Government, Highway Engineer Exchange Program, specific strategic business plans, Enterprise Architecture, United State Postal Service Postal Customer Council, Research Advisory, Research and Engineering, and Mobile Communications.

During the last biennium, ITD made great strides in increasing staff efficiency to keep up Review Board and associated Domain Teams, electronic document management system, computer aided drafting and de-

sign, with the ever growing workload. This has included updating equipment, installing new or revised software applications, providing technical training, and increased development and maintenance of Web sites.

Major Activities

ISS Engineering Section

Maintenance Decision Support System (MDSS) Automatic Vehicle Locator (AVL) PILOT PROJECT – Phase 3. This project added Automatic Vehicle Locator/Remote Data Collection (AVL/RDC) equipment to trucks in the Fargo, Grand Forks, and Dickinson Districts for a total of 26 snow plow trucks. Three types of communications infrastructure (radio, wireless, radio with hot spots) are being used to collect and send data. The project provides Meridian Environmental (vendor) access to the data for forecasting, analysis and modeling and to make maintenance recommendations back to NDDOT. Maintenance supervisors are provided the ability to make informed decisions based on what treatments the operators are applying to the road surface and what Meridian Environmental is recommending.

The districts and Maintenance and Engineering Services Division (MESD) have identified the following benefits of the project: emergency notification for operators in time of distress, efficient truck dispatching and management of material resources, and better forecasting of roadway condition(s) for the traveling public.

AMRS – Automated Materials Record System. Selected personnel from Materials, Information Technology, and Construction conducted a feasibility study which was completed on August 17, 2005.

Materials, Information Technology, Construction, and the State ITD did the Analysis Phase for the Automated Materials Record System. A presentation was given to management on April 28, 2006. The project was put on the list for funding, but was unfunded.

AI/CBT – Anti-Icing / Computer-Based Training. A group of individuals from Maintenance and Engineering Services, Information Technology and GANTEK Multi Media Company worked together to rollout computer-based training in snow and ice control to the districts. The main focus of the project was to customize the SCOM (Snow and Ice Control Maintenance) which is a program of American Association of State Highway and Transportation Officials (AASHTO). The program was put onto individual CD's and distributed to the sections and districts.

WIM – Planning and Programming. We have successfully incorporated Weigh in Motion (WIM) data into the Traffic Data Editing and Analysis application (TDEA). WIM data will now be collected and processed by TDEA to calculate Equivalent Single Axle Load (ESAL) Factors. These ESAL factors play a vital role in the design and improvement of roads, road material research and developing traffic projections. WIM data is also presented to Highway Patrol as a tool in helping to enforce weight restrictions.

Survey-Tablets - Design. Design's survey crew is currently running an electronic version of the project field book. This application has been developed as a pilot project to run on an Xplore tough book tablet PC. The electronic field book enables the collection of sign data, manholes and Global Positioning System (GPS) points in the field. Functionality has also been developed to allow for synchronization and replication while in the field. This gives the user the ability to stay current with all the active projects that are currently in working status. Data that is collected will be fed electronically to the MicroStation Computer Aided Drafting and Design (CADD) Software to aide in the design process.

STIP – Statewide Transportation Improvement Program. NDDOT bids over 250 construction projects per year at an annual cost ranging from $250 to $325 million. At any one time, three years of projects are in some stage of development. The Priority System is a process where construction projects are identified, prioritized, scheduled, and allocated a budget based on the current investment strategy.

In order to coordinate and prioritize projects, plus maximize the associated funding, we needed an effective, organized system to support state and federal projects. A rewrite of the priority system integrating the Planning Development Program (PDPG) and STIP functions streamlined the entire process. It also makes the department more efficient and productive by saving time and allowing staff to concentrate on the task of providing a transportation system that safely moves people and goods. The final project cost of $270,607, which includes some additional scope and resources, is $19,918 (6.9%) under the revised budget. The product was implemented nearly four weeks ahead of schedule and all other deliverables were either on time or ahead of schedule.

DTIMS. The Pavement Management System upgrade project consisted of upgrading dTIMS (Deighton's To-

tal Infrastructure Asset Management Solution) software by moving it from a Microsoft Access limited user access database to an enterprise solution on a SQL Server database. The move to an enterprise database benefited NDDOT by providing a more stable data environment. Customized reports were created to present decision-makers with strategies for managing the North Dakota roadway system. The reported results will assist management in their decision-making on future roadway improvement projects.

Web. The DOT Web Development Team finalized and released an updated and enhanced internal website (Intranet). This site serves as a single access point for information within NDDOT. As department staff is located throughout the state, the Intranet has worked to improve communication and increase awareness of important information for all of NDDOT. It serves as a way to assist employees in their daily business and strives to bring them closer together. The DOT Web Development Team design and concept was approved by Executive Management and they gave the go ahead to move forward on the new Web site plan.

Geographic Information Systems (GIS) 05-07. In June 2007 the OnRamp portal was put into production. The OnRamp system is a web based application that combines six million forward-looking images of the state highway system with an easy-to-use mapping interface. Users can "drive" the highways from their desktop while viewing map features/attributes along with aerial photography. The system combines information from eight different databases into one seamless application.

A pilot project which marries GIS and FileNet through a spatial connector was completed. Users can find documents in FileNet by just clicking a feature on a map. The system then queries FileNet via feature attributes. Users can also add documents through the GIS interface, the system automatically populates FileNet indices from the feature attributes.

Design Division's Environmental Section Converted to Digital. Most wetland surveys are now digital. NDDOT wetland surveys and topographical surveys are usually done independent of each other because the skills required for these surveys are specific to different personnel. Previously, most NDDOT wetland surveys were done by measuring tape, old photos and old plans. Data was recorded by written notes and sketches. Now digital wetland delineations can be done independent of traditional survey ground control. They are done with Global Positioning Systems (GPS). Processes were developed to import data into both ArcMap and MicroStation. Ground Projections for each county were created to help convert the data. Previously, we did not have the custom ground projections set up in ArcMap. Now it is easier to share information between ArcMap and MicroStation. Macros were set up in both ArcMap and MicroStation to expedite the import process.

PEEK Brand Automatic Data Recorder (ADR) 6000. In 2007, the North Dakota Department of Transportation will complete its first installation of a PEEK ADR 6000 traffic recorder on a segment of Interstate 29 in an urban section in the city of Fargo. The ADR 6000 is installed on a six-lane doweled, concrete pavement section of roadway. The system is comprised of an entrance and exit detection loop separated by an axle detection loop (in each lane). It has no piezo of any kind for axle detection within the array. The system classifies vehicles according to the Federal Highway Administration (FHWA) scheme "F" for vehicle classification. A unique feature of the ADR 6000 is that it can track, count and classify a vehicle that happens to be changing lanes while passing over the loops. The advertised accuracy of this system is better than standard traffic counting hoses. With this system, the department can safely and accurately collect traffic data on a high volume urban location without NDDOT employees having to install temporary counters in the traffic stream, eliminating major safety concerns. The system will be completely functional by late fall of 2007 and added to the NDDOT auto polling procedures at that time.

Aerial Camera and TerraShare. NDDOT has successfully implemented the first Intergraph Z/I Imaging Digital Mapping Camera (DMC) equipped with a Solid State Disc storage cartridge. With the DMC, we are able to cover more ground than with previous camera, which gives us the ability to respond to requests for project data for mapping, GIS, and remote sensing applications. The DMC offers flexibility and accuracy by facilitating faster processing of imagery, production of better quality deliverables and easier data collection for more efficient digital image analysis and delivery. The DMC gives us the ability to work in color, infraRed, and/or pan.

GEOPAK Drainage. GEOPAK Drainage application is still not fully implemented. Several policies methods have been re-examined and may be improved due to the consideration of GEOPAK drainage. The NDDOT "Intensity Duration Frequency" (IDF) tables may be changed to equations. Roadway spread equations are

being updated. NDDOT grate capacities (factors of safety-clogging factors) may be adjusted and they will be formally documented.

DL&MV Systems

Digital Driver License System Replacement. A new five-year contract for providing digital driver's documents was issued in 2005 to Viisage Technology, Inc. The updated system added a number of new security features and adopted the National Driver License card format and standards.

Real ID Initiatives. In anticipation of the implementation of the Federal Real ID Act, NDDOT implemented two new systems which will be required:

- SAVE (Systematic Alien Verification for Entitlements) which validates documents issued by Immigration and Naturalization Service of the Department of Justice.
- EVVERS (Electronic Verification of Vital Event Records System) is a cooperative effort between the states' driver license and vital records agencies to verify birth certificates and death records. North Dakota is one of three states that are piloting the EVVRS application.

Social Security Administration (SAA) Privacy Agreement. As of 2006, NDDOT no longer displays the SSN on any document or on-line application. A technical systems security requirements document was approved by SSA in November 2006. The SSA requires any agency that verifies social security numbers against the SSA database to implement a number of changes to insure the security of the numbers.

Driver License Web-Based Applications.

- **Status Check**. Drivers can now verify the status of their driver record on-line and free of charge. This eliminates the need to call the Drivers License and Traffic Safety Division for this information.
- **On-line Abstracts.** Modifications were made to the existing application which allowed the viewing and printing of a drivers 'releasable' portion of their record versus the requiring the driver abstract to be mailed.

Motor Vehicle Web-Based Applications.

- **Systems rewrite.** The motor vehicle on-line renewal, address change and plate reservations were some of the first Web applications implemented in North Dakota. It undertook a complete systems rewrite to bring them into compliance with today's Web standards.
- **On-Line Fee Calculator**. A new system for use by motor vehicle dealers and the general public was developed to assist them on computing the numerous fees and credits. This has greatly reduced the number of incorrect fees being submitted.

International Fuel Tax Agreement (IFTA) and International Registration Plan (IRP) Clearinghouse Memberships. As part of the Commercial Vehicle Information Systems and Networks (CVISN), NDDOT joined the International Fuel Tax and International Registration Plan Clearinghouses which allows for funds and monthly transmittals to be handled electronically. The project was funded with a 50% matching Federal grant.

Fargo, Grand Forks, and, Williston Electronic Convictions. In 2005-2006, the above municipalities began sending their convictions electronically to the Drivers License and Traffic Safety database which eliminated the paper citations. NDDOT receives approximately 95% of all court convictions electronically which eliminates double entry and errors.

Computer Aided Drafting and Design – (CADD). During the 2005-2007 biennium IT has improved our 2D and 3D abilities.

- **2D.** In order to have capability to design highway projects using orthophotography, the Softcopy Imageviewer process. This software provides highway designers the means to view orthophotos in two dimensions. It also provides software tools to integrate raster and vector data, for the purpose of designing highways. The software also manages how the raster data appears on the screen. This will provide the image backdrop to plan and profile sheet layouts
- **3D.** In order to have capability to view and work with orthophotography using 3D through the Softcopy SSK process, this kit allows designers the means to convert a PC workstation into a digital stereoplotter. It also provides high-quality stereo display and feature collection capability, as well as interactive digital terrain modeling collection and editing.

Legal Hearing Application. The Legal Hearing Application was rewritten and currently the automated workflow is being developed to streamline the process between Drivers License and the hearing officers. The hearing officers use the Legal Hearing Application to add/update information for upcoming hearings. After the hearing information is added, "Hearing Notices"

can be printed and sent to the petitioner, arresting officers, and attorneys. After the hearing is completed, the hearing officer enters the decision information into the database and prints out the decision for the petitioner and attorney.

Electronic Document Management System (EDMS). A policy review workflow implemented for an automated annual review of existing policies.

A Policy Acknowledgement form and completion tracking with e-mail reminders was implemented.

An Alltel bill review workflow was completed to allow for each division/district to review and approve their phone bill electronically.

The use of LiquidOffice form for Bridge Inspections SFN 3601—offline capabilities, updates database and saves form to FileNet.

We completed Division EDMS reviews and some implementation with Planning and Programming, Legal Hearings, Maintenance and Engineering Services Division and Bridge CAS contracts.

Department policies and manuals were stored in FileNet as the record copy but are accessible via the NDDOT Intranet which includes full searching capability.

All bridge files have been scanned and stored in the FileNet repository.

A Disadvantaged Business Enterprise (DBE) Application was developed with electronic signature capabilities. This eliminated the need for DBEs to meet at a physical location. The DBE online directory was completed and posted on the NDDOT Web site.

Time and Labor Project. A contract was awarded to Workforce Software to implement a Time and Labor solution for the department allowing employees to enter their time and request leave electronically. The system has e-mail notifications and electronic approvals to streamline the process. Requirements were gathered and the rollout is scheduled for the first quarter of the 2007-2009 biennium.

FleetFocus FA – InfoCenter. This software was added to the internet allowing divisions/districts to access their information with just a Web connection. This gave many more people access to information that they did not have previously. FleetFocus FA allows organizations to capture and analyze all costs associated with owning and operating a fleet of vehicles, including equipment tracking, work order processing, preventive maintenance scheduling, parts and fuel inventory, and vehicle component warranty costs.

Professional Flight Management (PFM). PFM allows us to schedule passengers and flights using a worldwide airport directory with airport information. It has a record keeping component for logs, crew currency, crew training, usage, etc. It also has a multitude of reporting capabilities on aircrafts, pilots, passengers, etc.

Agencies can view the schedule via the web, to make their necessary flight arrangements. The pilots can also access this data via their Blackberries when they are away from computer access.

Computer Network Services

During the past biennium, ITD maintained a greater than 99% availability of computer network services, and provided support to all NDDOT employees in central office, district offices, sections, and remote locations.

The Computer Network Services (CNS) maintained and supported NDDOT customers on 930 workstations and other peripherals and devices including printers, plotters, scanners, PDA's, cell phones, security devices, and communications, which were distributed throughout the state. The CNS also installed required software, software updates, and maintained hardware and software maintenance service agreements. Approximately 350 desktop computer workstations were upgraded with new hardware on a planned replacement cycle.

Mail Center Section

The Mail Center continues to automate its mailing services to meet United States Postal Service's regulations. New equipment has been installed which now sprays indicia, or postage markings, on the various pieces of mail. Accuracy of addresses continues to be improved.

Multi-Media Section

The Multi-Media Section continued doing the live bid opening Web cast eight to nine times each year. Public Hearing videos were created for various projects around the state. Video was shot and a script is being written and edited for the Four Bears Bridge construction project. A half-hour video was produced on the Rainbow Bridge construction project in Valley City along with a study guide distributed to schools around

the state. Webcams were set up documenting the construction progress of the Liberty Memorial Bridge.

The new Intranet and Internet Web designs were developed by the Multi-Media staff in conjunction with the Web Development Team. With the Web Development Team, pages are being built and updated.

The West Fargo Main Street construction project Web site was developed by Multi-Media. Multi-Media staff continues to build pages and update the Memorial Bridge and West Fargo construction Web sites.

This section also produced numerous technical manuals, brochures, and various graphic projects for in--house and public distribution.

In August of 2006, the Multi-Media Section joined the new Communication Division.

Photo Lab Section

The Photo Lab continues to transition from the film process to digital photography. Over 95% of the photos are now taken with digital cameras which greatly saves in the cost of film.

Records Management Section

2005: 12,913.57 linear inches of records or 860.9 cubic feet records volume in Records Center were destroyed as per records retention guidelines. The maintains section 21,014 linear inches of inactive division records in the center (note: this does not include the engineering records—plans, microfilm, etc.)

2006: 11,184.11 linear inches, or 745.61 cubic feet, of records were destroyed per records retention guidelines.

2007: has not been completed.

Telecommunications/Radio

Information Technology designed and installed a wireless hotspot system at 14 visitor centers along I-94 and I-29. This gives free Internet access to travelers.

In addition, the department assisted in the preparation of a request for proposal (RFP) for a new Public Safety Radio Communications System to replace the current system, which is 30 years old. This RFP also included over $900,000 for upgrades/updates to the tower site infrastructure statewide. The contract was awarded to Motorola in December 2004.

The Telecom/Radio section continues to provide maintenance, engineering and support for over 900 NDDOT mobile and handheld radios, 40 repeaters and radio tower sites and associated infrastructure, 24 Roadway Information Management System (RWIS) sites, 12 Weigh-In-Motion (WIM) sites, 48 Automatic Data Recorder (ADR) sites, 20 Display Message Boards, two bridge deck sprayers w/camera and PC and printer support in the eight districts and 68 sections. The Telecom section also provides support for 108 State Radio base station/repeaters, 36 Mobile Data stations and all of the Highway Patrol mobile, handheld radio and device maintenance. The central radio shop in Bismarck also provides support for state radio office's Motorola Dispatch Console, Central Electronics Bank, Mobile Data Radio Network controller and Wireless Network Gateway.

Legal

Paul Seado, general counsel

Responsibilities and Activities

The Legal Division provides legal services and advice to NDDOT in all areas, with emphasis on: pre-litigation issues; driver's license and motor vehicle administrative matters; contract development, negotiation, drafting, and administration assistance; review of nonconstruction and construction-related contract documents; risk management; legislation; and administrative rule-making.

During the 2005-2007 biennium, the Legal Division held 3,509 driver's license hearings, an increase of 14% over the previous biennium. Eighty-one percent, or 2,853, were implied consent hearings (DUIs). Legal Division also completed 22 Motor Vehicle Division hearing files, which include dealer licensing cases and IFTA/IRP audit appeals. Also during the 2005-2007 biennium, the division reviewed and assisted with the administration of approximately 3,069 contracts/documents, an 8% increase over the previous biennium.

The Legal Division is expected to meet additional challenges during the 2007–2009 biennium in the areas of right-of-way acquisition, contracts, and risk management.

State Fleet Services

Paul Hanson, director

Responsibilities and Activities

The function of State Fleet Services is to purchase, manage, operate, maintain, and dispose of the state's licensed motor vehicles (approximately 3,150 vehicles). In addition, State Fleet Services conducts defensive driving course training for all state vehicle drivers, manages the alcohol and controlled substance testing for all state agency and university Commercial Drivers License (CDL) drivers and the NDDOT insurance programs.

Key Accomplishments

The high cost of fuel caused the operating expenses to climb $6 million beyond the original operating budget. To correct the problem, $2 million was transferred from the capital budget through savings from withheld purchasing and through legislative action; $4 million was allowed to be spent from the 2007-2009 capital budget.

During the 2005-2007 biennium, State Fleet Services continued its efforts to expand the use of alternative fuels. State Fleet Services continues to use E10 in all of the state-owned gasoline sites and has purchased several more Flex Fuel Vehicle (FFV) vehicles allowing the expanded usage of E85.

State Fleet Services partnered with EERC to provide a Chevrolet FFV pickup which has been converted to use hydrogen fuel and is being used at the NDSU North Central Research Station based in Minot.

State Fleet Services continued to expand the use of bio-diesel. In May of 2006, State Fleet Services expanded the program to all state-owned fueling sites by using a B20 product in the summer months and a B2 product in the winter months. The projected annual usage is 30,000 gallons of B100 on an annual basis.

Vehicle specifications have been changed to include emphasis on better fuel economy. As a result of this, the average MPG of the fleet sedan has improved from 21.3 MPG in 2005 to 25.6 MPG in 2007. This group of sedans travels approximately 11 million miles per year so that equates to a savings of 86,745 gallons of gasoline annually. This savings contributed to having a biennium ending mileage rate of $.26 per mile, the lowest rate since April 2003.

OFFICE OF DRIVER AND VEHICLE SERVICES

This office includes Drivers License and Traffic Safety Division and Motor Vehicle Division.
The deputy director is Keith Magnusson.

Drivers License and Traffic Safety

Marsha Lemke, director

Responsibilities and Activities

The Drivers License and Traffic Safety Division offices are visited by more than a quarter of the state's population each year. The division represents one-half of NDDOT's front-counter services, where a driver's permit, license, renewal, or identification card can be obtained; driving records or crash reports may be purchased; or applicable fees for suspension-related driving behavior may be paid. All 28 drivers license sites are fully automated for customer convenience.

Law enforcement, the court system, and insurance companies rely on the quality and accessibility of conviction and crash report data gathered and maintained by the division. While a portion of the division's responsibility is regulatory, promoting safety on our state's highways is paramount. The division applies for, receives, and administers all National Highway Traffic Safety Administration federal grant funds. Based on problem identification data, an annual highway safety plan is developed, and approximately $4.9 million is spent each year by local entities and state agencies in promoting traffic safety efforts. During the past biennium, the main focus was centered on impaired driving prevention, safety belt use, child passenger safety awareness, and motorcycle safety education.

Key Accomplishments

Through effective state and local efforts, a statewide safety belt use survey showed safety belt use in North Dakota at 82.2%; the highest safety belt use rate in North Dakota's history and higher than the 2006 national safety belt use rate.

The transmission of electronic crash reports was deployed in 2004 and deployment to law enforcement agencies continues. Currently, 44% of crashes are reported electronically compared to 28% in 2005. This is a 57% increase and work continues toward reaching the goal of 70%.

From July 1, 2005, through June 30, 2007, the division processed 388,890 permits, licenses, and identification cards; administered 125,934 written tests, 65,803 driving tests, and 276,728 vision tests. In addition, 68,328 suspensions, revocations, and cancellations were issued and 265,565 traffic citations were processed.

The Strategic Highway Safety Plan (SHSP) was developed by bringing together the 4 E's (Engineering, Education, Enforcement, and Emergency Medical Services). Representatives from each of these groups analyzed crash data and developed specific emphasis areas to concentrate on in order to reduce the number of fatalities on North Dakota highways.

Motor Vehicle

Lorrie Pavlicek, director

Responsibilities and Activities

The Motor Vehicle Division administers all programs relating to the titling and registration of vehicles. The division regulates motor vehicle dealers, interstate motor carriers, mobility-impaired parking privileges, and intrastate household goods carriers. It also is responsible for maintaining and making available records created by its various activities.

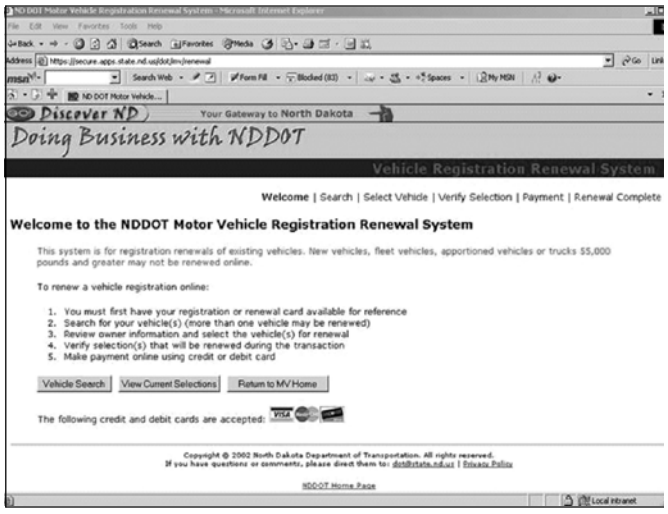
The division serves the public throughout the state through services provided at it's central office in Bismarck, five privatized branch offices, seven chamber of commerce offices, seven county treasurer's offices, in person, by mail, by fax, by e-mail, and through the internet. Six of the branch offices also provide partial registration services to interstate motor carriers, who no longer need to conduct their transactions in Bismarck. Branch offices located within the same building

as the department's driver's license testing sites are in Jamestown, Minot, and Dickinson. These privatized operations provide an enhanced customer service for the citizens of our state.

NDDOT's Motor Vehicle Division completed over 2.85 million customer transactions during the past biennium.

Key Accomplishments

During the 2005–2007 biennium the division processed more than 2.85 million customer transactions, collected and distributed $301,241,126.24 for various state government agencies, and responded to approximately 250,000 customer inquiries via telephone, e--mail, letter, and fax. The division registered 898,016 vehicles in FY2005 and 901,520 in FY2006. The division utilized 3.13% of total collections to cover administrative and operational expense.



Online vehicle registration renewal system.

Use of the on-line vehicle registration renewal system continues to increase. During the biennium 198,192 vehicles were renewed on-line with $14,350,399.00 collected, for an average of approximately 11% of all renewals processed; up from 8% in the 2003–2005 biennium.

The division increased dealer enforcement, while increasing dealer communication with the Dealer Dispatch quarterly newsletter. The improvement in communication decreased the number of dealer violations and enhanced the relationship between the dealer community and the division. Additionally, an on-line fee and credit process was implemented, which decreased the number of errors made in calculation of fees and credits for vehicle transactions.

Throughout the biennium, the new on-demand decal printing system has provided excellent service for our customers. In 2006, we transitioned to a paper roll system from the older fan-fold system, providing the ability to multi-stuff registration cards with decals in a single envelope for a single customer. This reduced the cost of mailing these items and enhanced the efficiency of the printing and mailing process.

The motor carrier Web-based application system has been an excellent tool. The utilization of this system continues to increase, with positive results for the motor carrier industry, through reduced time and cost to physically come to an office to complete paperwork.

Future Challenges

Two identified future challenges for the division are the potential loss of institutional knowledge through retirement of long-term employees; and retention of new employees. The division has several long-term employees, including several senior managers, who are at or near retirement.

Additionally, the Motor Carrier program, SSRS will be replaced with Unified Carrier Registration. Implementation of this program will be a challenge during the fall/winter of 2007.

Lastly, general public service expectations will be addressed through evaluating and pursuing technology solutions for enhanced service delivery.

OFFICE OF PROJECT DEVELOPMENT

This office includes the Bridge, Design, and Materials and Research Divisions.
The office director is Ron Henke.

Bridge

Terry Udland, engineer

Responsibilities and Activities

The Bridge Division's primary responsibilities include designing and preparing plans for construction and rehabilitation of state highway bridges, inspecting bridges on state and county roads, and rating bridges for load-carrying capacity. In addition, the division manages the inventory of state and county bridges and structures. The division also performs preliminary engineering, writes project concept reports and hydraulic reports, and issues drainage permits for upcoming projects. Based on need, the division is continuously planning and scheduling the rehabilitation and the replacement of the state's existing bridges. The division is also responsible for hiring consultants to perform preconstruction and construction engineering.

Administrative Functions

During the 2005-2007 biennium, the division continued to contribute to the construction of the Liberty Memorial Bridge Replacement Project.

Design Section

The Design Section of the Bridge Division designed and prepared the plans for 14 new bridges, 20 new box culverts and 10 box culvert extensions, and for 77 sites of miscellaneous work (rail retrofits, approach slabs, deck overlays, bridge painting, and general maintenance). The division finished designing and preparing the plans for the new Liberty Memorial Bridge.

New bridges include:

- Liberty Memorial Bridge, Bismarck
- 19th Avenue Fargo, over I-29
- Goose River, Hillsboro
- Little Muddy River and Tagus overhead on US 2
- Embden Interchange, I-94
- 12th Avenue over I-29 and 12th Avenue over BNSF, Fargo
- Heart River, Mandan

Preliminary Engineering Section

This section of the Bridge Division prepared plans for three projects which included the Velva underpass lift station and Great Bend drainage improvements, issued 10 drainage permits, prepared 12 hydraulic reports, wrote 13 project concept reports which included Burlington on US 2, and the Mouse River at Towner, and completed 36 drainage investigations. The section also reviewed plans and hydraulic reports from consultants including 12th Avenue in Fargo and Broadway in Minot.

Structural Management Section

The structural management section manages 4,441 state, county, and city bridges. In addition, 5,026 bridge inspection reports were processed through cooperation with bridge inspectors from NDDOT's eight districts. The section also rated bridges for load-carrying capacity and issued 2,557 overload permits in cooperation with ND Highway Patrol.

Consultant Administration Section

The consultant administration section performs solicitations for consulting engineers to perform preconstruction and construction engineering for NDDOT. The section interviews and negotiates with the consultants on the scope of work and contract fee.

The section's accomplishments include soliciting and processing approximately 338 contracts and supplements, managing nearly 63 projects through environmental documentation, design, and submittal of final plans, and managing approximately 136 district design projects. The section also hired consulting engineers to perform construction engineering on 139 projects.

In addition, the section reviews consultant invoices for preliminary engineering, processes them for payment, and maintains spreadsheets showing the current status of all preconstruction engineering contracts. The section also maintains a spreadsheet which projects date of current consultant expenditures, and compares these costs with the department's budget allocation for consultant services.

Design

Mark Gaydos, engineer

Responsibilities and Activities

The Design Division's primary responsibilities are to develop concept reports, plans, and specifications for construction projects on the state and federal highway system; develop environmental documents and obtain federal approval; ensure compliance with cultural resource impact issues; perform all aspects of right of way related work; manage billboard laws; coordinate and conduct all aerial photographs and surveys; and provide contract administration for design, archaeological, surveying, and right of way consultants.

Key Accomplishments

I-29 from Main Avenue to Cass County Road 20, Fargo. These projects provided for the reconstruction of the northbound and southbound I-29 roadways from the Main Avenue Interchange to the Cass County Road 20 Interchange. The reconstruction consisted of widening the existing I-29 four-lane facility to a six-lane facility with the addition of auxiliary lanes. The 12th and 19th Avenue North Interchanges were also modified to include additional lanes, pedestrian/bike paths, loop ramps, ramp widening, signals and lighting.

These were the last two projects of an eight-year reconstruction effort on the I-29 Urban Corridor through the city of Fargo. The corridor extends from Rose Coulee (south of 32nd Avenue South) to Cass County Road 20, a distance of approximately 8 miles. Beginning in the year 2000, the urban corridor projects have included the reconstruction of six interchanges, seven new loop ramps, 15 new bridges, and the expansion of two bridges.

I-94 from Near South Heart to East of the East Dickinson Interchange. This project provided for 12 miles of reconstruction of the westbound I-94 roadway from near South Heart to the east of the East Dickinson Interchange. The proposed work consisted of regrading and widening to accommodate new pavement section, grade adjustments to improve sight distance in four different areas, subgrade repair, grade lowering under the West Dickinson interchange, underground drainage system installation at the south ditch of I-94 along the southeast side of the I-94 and ND 22 interchange, extensions and replacement of centerline pipes, riprap, headwall placement, guardrail, lighting, signing, and pavement marking improvements. This is the first project of a six-year reconstruction effort for the I-94 corridor from reference point 53 to near reference point 101.

US 2 Four-Lane. The plans for the last 50 miles of grading were completed and bid for the four-laning of US 2 from Williston to Brooks Junction. The first grading projects started in 2004. The last of the surfacing projects should be complete in 2008.

In 2006 grading, aggregate base, and structural work was completed on two projects from the junction of US 85 to Ray, 21.6 miles. Bituminous surfacing work was completed from Tioga east about 12 miles and from Stanley east about 9 miles. In 2007 grading, aggregate base, and structural work was completed from 9 miles east of Stanley to Junction US 52, Brooks Junction, 27.8 miles. Bituminous surfacing work was completed from the Junction of US 85 to Ray and bituminous overlays were completed for two projects on the westbound lanes from Ray east to four miles east of Junction ND 40 and Stanley east nine miles for a total of 24 miles.

Approximately 4.7 million cubic yards of earth was moved, 1.68 million tons of aggregate base was used, and 350 thousand tons of bituminous surfacing was placed on these projects.

Major structures constructed include the railroad overhead at Tagus and four large box culverts thoughout these projects.

US 12 from West of Scranton to Hettinger. This 26.8 mile long project on the US 12 was developed in three sections. The existing roadway was originally constructed in the 1940s and had deteriorated significantly.

Section 1, from 0.5 mile west of Scranton to 0.5 mile east of Scranton, included 1.040 mile of widening, blended base, hot bituminous surfacing, box culvert extensions, east loop reconstruction, removal of the west loop, and turn lanes. This project also included the Scranton structure replacement, realignment of ND 67 for a new structure, removal of the existing structure, and realignment of Bowman County Road 0645 for the new structure. This segment was completed in the 2006 construction season.

Section 2, from 0.5 mile east of Scranton east to Adams County, included 6.5 miles of widening, blended base course, hot bituminous surfacing, vertical curve re-

grading, and centerline pipe replacement and reinforced concrete box extension.

Section 3, from Adams County east to Hettinger, included 19.25 miles of widening, blended base course, hot bituminous surfacing, 1.5 miles of vertical curve regrading, and reinforced concrete box replacement or extensions at nine sites.

Earthwork was a major part of each segment with approximately 653,040 CY of earth being moved. Sections 2 and 3 are being constructed in the 2007 season.

US 83 from Max North to Near Jct. ND 23. This project from Max north to near the Junction of ND 23 is the first segment in the series of improvements for the southbound roadway on the US 83 corridor. The proposed work consisted of regrading and widening, grade adjustments to improve sight distance, backslope grading and ditch widening to allow for snow storage, grade raise to reduce the chance of flooding, extensions and replacement of centerline pipes, replacement of the approach pipes, signing, and pavement marking improvements. The roadway widening allows sufficient width for the placement of two 12-foot driving lanes with an 8-foot outside shoulder and a 4-foot inside shoulder. The existing surfacing was removed and recycled, or recycled in place depending upon the amount of grading work required. A new asphalt wearing course was installed. Earthwork was a major part of this segment with approximately 417,100 CY of earth being moved.

ND 1804 from Signal Street to 48th Avenue South. This reconstruction project began at Signal Street (just east of the University of Mary) and extended north to 48th Avenue South. This project involved the regrading and realignment of approximately three miles of 1804 to improve the sight distance, provide additional traffic capacity, and correct substandard horizontal curves. The existing two-lane facility was reconstructed as a four-lane facility, with a continuous left turn from the University of Mary to 48th Avenue South. In addition, ditch regrading, structure widening, pedestrian and bicycle facilities were constructed. Earthwork was a major part of this project as approximately 350,000 CY of earth was moved while the existing roadway remained open to the traveling public. This was the third phase of a four-phase project for the ND 1804/University Drive corridor in Bismarck.

Drayton/Robbin Bridge. The environmental documentation and hydraulic study were completed for a new 4,090-foot bridge. The project will raise the grade of the roadway and provide a dry crossing between North Dakota and Minnesota during the most extreme flooding conditions. Plans are currently being developed for construction which could begin in 2009.

Right of Way. The Design Division acquired right of way on 51 different highway projects. A total of 525 right of way parcels were acquired for these projects. There were seven business relocations; five business tenant relocations; five residential relocations; and three residential tenant relocations on these projects. Appraisals were prepared on 36 different right of way ownerships. The remaining right of way parcels were acquired by donation, minimum payment or by using the appraisal waiver process.

Some of the major right of way projects involve the acquisition of the right of way for the last three segments of US 2, west and east of Berthold, for the 4-laning of US 2 between Minot to Williston; the completion of the right of way acquisition on ND 1804, from 48th Avenue south to the University of Mary south of Bismarck; the right of way acquisition for the new Memorial Bridge between Bismarck and Mandan; the right of way acquisition for the new Main Avenue and South University Drive Railroad Underpass structure in Fargo; and the right of way acquisition for the new 9th Street and I-94 Separation and future Interchange at West Fargo.

Surveys and Photogrammetry. The survey section developed six manuals related to survey procedures including GPS technology, data collection, data transfer between design files and data collectors and earthwork. Four training sessions were held throughout the state with about 100 department and consultant staff attending.

Environmental and Cultural Resources.

- The department received an Environmental Excellence Award from the Federal Highway Administration for its role in providing excellence in cultural and historical resources for the Scattered Village exhibits and curriculum. The Scattered Village Exhibits and Curriculum Project is the first project from North Dakota to receive this award. Other entities recognized include Mandan Public Library, Mandan Hidatsa and Arikara Nation, Mandan Public Schools, Whattadame Productions, Color and Design.

  The project was a collaborative effort and includes an outreach program that provides interpretive and educational materials resulting from the discovery of a significant pre-historic village during the construction of a street in Mandan. The educational portion con-

sists of curricula for North Dakota history, which is taught in the fourth and eighth grades.

The exhibits are on permanent display at the Morton Mandan Public Library. The video portion of the educational curricula was also named a winner of the 2006 Telly Award.

- A cultural partnership was created through a Tribal Consultation Programmatic Agreement. This was the first agreement of its kind because it incorporates a group approach with 12 tribes on 9 reservations to address tribal concerns about cultural resources on NDDOT projects. Because of the partnership approach in the agreement, it has been identified as a model for future agreements with other states and federal agencies.

  The agreement reinforces NDDOT's commitment to a transportation system that safely moves people and goods while still recognizing important aspects of heritage and culture.

  The tribes involved in the development of this agreement were the: Mandan, Hidatsa, Arikara Nation; Turtle Mountain Band of Chippewa Indians; Spirit Lake Dakotah Nation; Standing Rock Sioux Tribe; Sisseton/Wahpeton Oyate; Fort Peck Assiniboine and Sioux Tribes; Northern Cheyenne Tribe; Crow Tribe; and Lower Sioux Indian Community.

- The Environmental Section went digital. Most wetland surveys are now digital. NDDOT wetland surveys and topographical surveys are usually done independent of each other because the skills required for these surveys are specific to different personnel. The surveys are made using GPS technology. Processes were developed to import data into both ArcMap and MicroStation. Now it is easier to share information between ArcMap and MicroStation.

- The department implemented procedures to review material sources for compliance with all Federal and State laws and regulations which govern the protection of wetlands protected under the Clean Water Act and Executive Order 11990, threatened and endangered species protected under the Endangered Species Act, and Section 4(f) properties protected under Section 4(f) of the Department of Transportation Act. In addition, the Department must comply with Section 106 of the National Historic Preservation Act (NHPA).

NDDOT Support Center (DOTSC). Two full-time NDDOT employees manage this section. NDDOT partners with the Upper Great Plains Transportation Institute (UGPTI) to train and utilize college students on NDDOT design projects. This section provides real-life experience for engineering students and serves as an opportunity to recruit new engineers to the NDDOT. This past biennium there have been 20 students who worked at DOTSC. Ten of these students graduated. Of these, four accepted full-time employment with the NDDOT and four are working in North Dakota in the engineering field.

Technical Support Section. The Technical Support Section is a new section created in 2006. Primary responsibilities of this section include writing, updating, reviewing and publishing the NDDOT's Design Manual. Additional materials for Design Division's Web site, including standard and typical plan notes, typical plan detail sheets, and standard drawings are prepared by the Technical Support Section. This section is also charged with the responsibilities of administering the accommodation and relocation of utilities on highway projects, and providing technical support for consultant or district developed project concept reports and plans for highway projects. Additional responsibilities of the section include research as directed by the Design engineer or program managers.

Materials and Research

Ron Horner, engineer

Responsibilities and Activities

The Research Section of Materials and Research is responsible for the department's research program, which focuses on contributing to the goals and objectives of the NDDOT Strategic Business Plan. Research projects fall into one of three categories: Federal Highway Administration-sponsored Pooled Fund Studies, in-house NDDOT research projects, and university research projects. Examples of current projects include:

Pooled Fund Studies

- Animal-Vehicle Crash Mitigation Using Advanced Technologies
- Maintenance Decision Support System (MDSS) for Snow and Ice Control

- Implementation of Low-Cost Safety Improvements

In-House Research Projects

- Evaluation of Ground Penetrating Radar for Determining Flexible Pavement Thickness and Concrete Bridge Deck Condition
- Evaluation of the Light Weight Inertial Profiler for Measurement of Pavement Smoothness
- Laboratory and Field Evaluation of Blended Base Materials to Optimize the Percentage of Recycled Asphaltic Material Used in Mine and Blend Projects

University Projects

- Evaluation of High Performance Concrete Bridge Decks
- Evaluation of the Performance of Hot Bituminous Pavement Binders Used on NDDOT Flexible Pavement Projects
- Evaluation of Portland Cement Concrete Surface Sealants

Recommendations for new research projects are provided by NDDOT executive management, division and district personnel, and university researchers. Evaluation and project selection is conducted by the NDDOT Research Advisory Committee and executive management, with review and approval by the FHWA.

Research reports on completed and in-progress projects are available on the NDDOT Web site at http://www.dot.nd.gov/materials/researchlist.html.

This series of photos shows an animal-vehicle crash mitigation system that is the subject of current pooled-fund study.

Evaluation and Testing Equipment

Materials and Research Division evaluates roadways to help determine their condition. Information collected with evaluation and test equipment may be used in recommendations for future roadway improvements or to determine the smoothness of new roadways.

The Falling Weight Deflectometer (FWD) is one piece of equipment used. The FWD helps determine the strength of a roadway. The information collected is one of the tools used to help determine when Spring Load Limits may be put in place or removed.

Falling Weight Deflectometer (FWD)

Two new pieces of equipment that help determine the smoothness of the roadways have been purchased as part of the goal to provide the traveling public with a quality roadway system. The lightweight profiler or "Gator" and a truck-mounted laser profiler are shown below.

The lightweight profiler or "Gator."

A truck-mounted profiler.

OFFICE OF OPERATIONS

This office includes the Civil Rights, Construction Services, and Maintenance and Engineering Services Divisions.
The office director is Darcy Rosendahl.

Civil Rights

Deb Igoe, director

NDDOT is committed to eliminating unlawful discrimination in its state, federal, and federally assisted programs on the basis of race, color, national origin, religion, sex, age, physical or mental handicap or disability, political opinion or affiliation, status with regard to marriage or public assistance, or participation in lawful activity off the employer's premises during non-working hours which is not in direct conflict with the essential business-related interests of the employer. In addition, NDDOT ensures that all beneficiaries and potential beneficiaries of these programs are offered an equal participation opportunity. NDDOT also protects the civil rights of its employees and applicants for employment. The Civil Rights Division has the responsibility for developing, implementing, and monitoring the following seven programs:

Disadvantaged Business Enterprise Program (DBE)

This program is responsible for certification of minority, female, and other socially and economically disadvantaged owned businesses under the rules and regulations of the federal DBE guidelines. The DBE program encourages the development and use of companies owned and controlled by minorities, women, and socially and economically disadvantaged individuals on federally-aided highway construction projects. The companies can be contractors, suppliers, or manufacturers with capabilities in the transportation industry. At the end of FY 2006, NDDOT certified eight new businesses, for a total of 83 DBEs. At the end of FY 2007, four companies were certified in the DBE program.

To participate in the program, the companies must be annually certified by NDDOT. Under the DBE Program, select contracts are assigned percentage goals, based on the potential for DBE participation, type of work, location, and total dollar amount of the contract. The prime contractor must meet the assigned DBE goal or prove sufficient good faith efforts were made to meet the goal. NDDOT awarded $21.1 million to DBE contractors in FY 2006 and $18.2 million in FY 2007.

DBE/OJT Supportive Services

NDDOT receives federal funding to provide technical assistance and support to companies owned and controlled by minorities, women, and socially and economically disadvantaged individuals with capabilities in the transportation industry. This technical assistance is in the area of DBE certification, bidding, bonding, bookkeeping, loans, contract procurement, etc. This allows DBE firms to enhance their capabilities, to make them competitive in the project bid process, and to increase their overall effectiveness. In addition, state funds are used to provide counseling services to target group on-the-job trainees and to monitor their progress under the program. NDDOT contracts with a consultant to provide this assistance and these services. Currently, the On the Job Training (OJT) supportive services consultant is Wold Engineering, P.C.

EEO Contract Compliance Review Program

This program ensures that federal-aid highway construction projects valued at more than $10,000 include minority and female employees on construction crews. Contractors report their achievements annually. For 2006, there were a total of 2,406 employees working in highway construction. Of these employees, there were 203 minority males, representing 8.4% of the total work force, and 218 females, representing 9.1%. For 2007, a total of 2,500 employees worked in highway construction. Of these employees, there were 204 minority males, representing 8.2% of the total work force, and 220 females, representing 8.8%.

Contractors with federally-funded highway construction contracts must also comply with the requirements of the Civil Rights Act of 1964, as amended, and the related contract special provisions regarding equal employment opportunity, disadvantaged business enterprise utilization, and on-the-job training. Formal compliance reviews document contractor efforts. If any deficiencies are found during the audit, the Civil Rights Division makes recommendations for corrective action. Under this program, the Civil Rights Division conducts in-depth audits on 10–12 contractors each

year. The division conducted 11 in-depth audits in 2006 and 12 in 2007.

EEO On-the-Job Training Program

This program provides training for minority, female, and economically disadvantaged individuals in the skilled craft classifications used by contractors on highway construction projects. Contractors are assigned trainees based on the total amount of federal-aid work they receive each season. The contractors may choose to train equipment operators, truck drivers, concrete finishers, structural carpenters, or other skilled craft workers. Training programs run from 350 hours to 500 hours. Annually, highway construction contractors must provide on-the-job training to anywhere from 25 to 40 qualified individuals. For 2006 there was a goal of 30 trainees; 38 were assigned and 20 graduated from the program. For 2007 there is a goal of 30 trainees; 47 have been assigned and, with the program not completed, 23 have graduated.

Labor Compliance Program

This program ensures that Davis-Bacon wage rates and fringe benefits are paid to highway construction workers on federal-aid contracts valued at more than $2,000 and subsequent subcontracts. Certified payroll monitoring and a formal complaint process document contractor compliance. All federally funded highway construction contracts are subject to the federal Davis-Bacon and related Acts. The US Department of Labor has empowered NDDOT to enforce all pertinent labor laws pertaining to Davis-Bacon wage rates, overtime, fringe benefits, payrolls, etc. Any contractor employee who feels he or she has not been properly paid may file a wage rate complaint with NDDOT. The Civil Rights Division investigates the complaint and recovers any back wages found due.

Title VI and Nondiscrimination Program

This program ensures that all programs, activities, and services offered to the general public by NDDOT are free from discrimination. Under Title VI of the Civil Rights Act of 1964 and its related statutes and regulations, no person or groups may, on the grounds of race, color, sex, age, national origin, and handicap or disability, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal financial assistance. Within NDDOT, for example, Title VI might affect the site selection for a federal-aid highway construction project or the allotment of money for a subsidized busing facility for people with disabilities.

Title VII (Internal EEO) Program

This program ensures that the recruitment and selection of regular and temporary employees for NDDOT is done in a discrimination-free manner and that the work environment is free of discrimination. It also includes procedures for investigating discrimination complaints. EEO training of all NDDOT employees is part of Title VII of the Civil Rights Act of 1964. Title VII, and its related statutes and regulations, protects employees from discrimination and harassment based on race, color, religion, sex, age, national origin, and handicap or disability in all phases of employment. Title VII applies to employees and relates only to employment issues.

Construction Services

Cal Gendreau, engineer

Responsibilities and Activities

The Construction Services Division is responsible for all highway construction bid opening activities for NDDOT construction projects including pre--qualification of contractors bidding on projects. The division reviews the constructability of project plans, establishes contract completion dates and performs field reviews of federal aid projects. Construction Services reviews and approves contractor payments, provides technical support for the Construction Automated Records System (CARS), and assists the district offices with the resolution of contract disputes and arbitrations. The division also assists the district offices in monitoring the Disadvantaged Business Enterprise (DBE) program. Construction Services is also responsible for management and supervision of the engineering pool, and coordinates statewide construction staffing. During the construction season, the division reports road construction conditions that affect the traveling public, and maintains a road construction map on the NDDOT Web site.

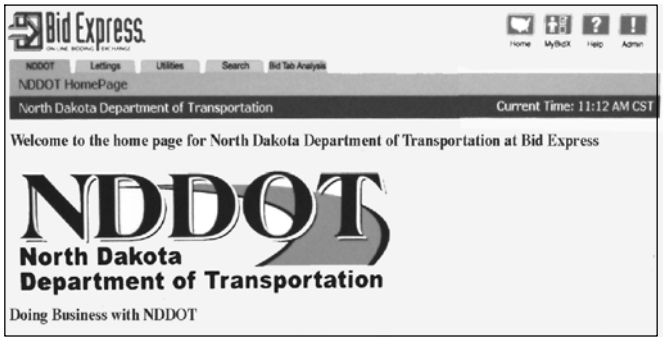
Contractor Payments

The Construction Automated Records System (CARS) application provides an automated system to pay contractors on NDDOT projects.

The CARS application is a Web-based system, with users being able to access records from any location with Internet service. Most reports are stored on-line, reducing the need for paper copies and mailings.

Internet Bidding

In 2003, legislation was passed allowing the department to develop rules and procedures for Internet bidding. In 2004, NDDOT implemented Internet bidding for NDDOT construction projects. The bidding program was updated in 2006. Highway construction contractors can now download bidder information and submit their bids to NDDOT via the Internet. This service has been very well received by the construction industry.



Bids can now be submitted via Bid Express.

Live Bid Openings on the Internet

NDDOT bid openings can be viewed live from any location with Internet access. The Internet broadcast is accessed by clicking on the link found on the NDDOT Web page. This live Web cast provides real-time bid information.

Maintenance and Engineering Services

Brad Darr, engineer

Responsibilities and Activities

The Maintenance and Engineering Services Division (MESD) is responsible for NDDOT property and facilities; safety, health, and emergency responses; budgeting for maintenance operations, capital improvements, equipment, pavement marking program, value engineering program; construction and maintenance specifications; construction contract special provisions and supplemental specifications for construction projects; the pavement preservation program; Roadway Weather Information System (RWIS); static traffic control devises; Tribal Employment Rights Office (TERO) issues; Intelligent Transportation Systems (ITS); and load restriction and road condition reports.

Administrative Functions

MESD is responsible for a broad variety of administrative functions, including trucking issues, equipment operator testing, emergency response/incident management, the 511 traveler information system, which includes load restrictions and road conditions reports. The division coordinates posting of spring-time load restrictions with the eight district offices and provides load restriction notification to the media and to truckers, and posts the load restrictions on the NDDOT Web site.

Maintenance Operations

Maintenance operations are a core function of the division. MESD provides guidance and sharing of new concepts on many road top and road side operations, such as patching, crack filling, sealing, snow and ice control, and mowing. MESD administers the budget for the purchase of major equipment, pavement marking contracts, and district maintenance operations. The division administers the pre-approval process to evaluate new equipment, and develops specifications for the use of new maintenance materials and practices.

MESD develops the equipment specifications for all non-fleet equipment, oversees equipment procurement, and provides technical assistance to the districts in effective repair techniques and preventive maintenance strategies. The division is implementing a pavement preservation program, and provides general support services for all maintenance activities.

Accomplishments

During the 2005-2007 biennium, the department continued exploring the use of different liquid deicers. Salt brine continues to be the most widely used liquid deicer. Blending of different liquid deicers with salt brine improved the melting temperature and helped reduce

the application costs when compared to using other chemical deicers alone.

North Dakota snowplow in action.

The department purchased and built approximately 44 new snow plow trucks this past biennium using a turn--key process. All equipment to make the truck complete is installed on the truck chassis prior to the truck leaving the installer's shop. New front snow plows are purchased for each unit and are mated to the trucks at the district.

The department procured two used generators from the Water Commission which were installed in the Williston and Valley City District offices. The Devils Lake and Dickinson Districts are the only district offices that do not have permanent mounted generators. The generators will provide for emergency power for the department to carry out operations during power outages.

Buildings that were constructed in this biennium include; Devils Lake District Head Quarters office addition, Glen Ullin and Drayton section buildings, and in Minot an Equipment Storage Building. The Oriska Rest Area remodel was another large project that was included in this biennium.

An energy-savings project with Energy Services Group was entered into for all districts and central office.

Safety. Safety is paramount to NDDOT, and MESD is responsible for a variety of safety-related topics, including a review of employee accidents, an employee safety program and health services, and workers compensation claims. The safety office is responsible for working with OMB Risk Management to insure that NDDOT receives the Risk Management Workers Compensation Premium discount and the Risk Management Fund Contribution Discount. In addition, the division maintains the North Dakota Department of Transportation safety manual.

Intelligent Transportation System (ITS) Operations. ITS technologies assist MESD in providing better information to the traveling public. The division's ITS activities include coordinating the development and deployment of roadway/weather information. This includes managing federal ITS grants and projects, providing technical assistance to the districts, and developing ITS equipment specifications. MESD is responsible for collecting and disseminating roadway and weather information. This information is provided to the general public via public service announcements, the Internet, and the North Dakota 511 Travel Information Service. MESD oversees a pilot project using AVL and data collection equipment. The project is intended to improve the efficiencies and safety of the traveling public during snow and ice control operations.

Facilities Management. MESD is responsible for facilities management activities that include capital improvements of department property, coordination of construction administration, budget, and visitor center/-rest area operations. MESD provides assistance to the districts in the maintenance, repair, and capital improvements of NDDOT property and facilities, and is responsible for developing the specifications and request for proposals, as well as for procuring contractors and providing construction administration for the construction of section buildings. MESD is responsible for developing and managing the budget for all major capital improvements and coordinates the replacement program for visitor centers and rest areas. This includes selection of the consultants and contract administration for the construction of each new facility. In the past biennium, six section buildings were replaced or expanded to make room for larger snow trucks. Ten office additions were constructed in various sections across the state to provide office space for the employees. Security equipment was installed in several rest areas and district offices and some WiFI systems were installed in several rest areas.

Signs. MESD is responsible for all static traffic control devices along state controlled roadways. MESD issues work orders to the eight districts for installation of new signs along North Dakota roadways. MESD develops detailed sign layouts for the districts for sign replacement and issues speed orders adjusting existing speed limits per recommendation of NDDOT director. MESD issues detail sign layouts and permits for Tourist Oriented Directional Signs (TODS) and monitors the application process. The division administers the Tourism Signing Advisory Committee (TSAC) program. Included in TSAC is the application process, recommendations, and formal agreement. The

division provides technical assistance to the districts, counties, and the public on Manual on Uniform Traffic Control Devices (MUTCD) mandates and interpretations. The division is responsible for issuing and maintaining the *Guidelines for Work Zone Safety for Utilities* handbook.

Engineering Services

MESD develops the department's *Standard Specifications for Road and Bridge Construction* and is responsible for updating every five years. The division is responsible for the development of contract provisions and special provisions required for all construction projects. The division plays the role of liaison with the Associated General Contractors, soliciting input for construction specifications and addressing construction--related concerns.

MESD is the department's liaison with tribal governments on Tribal Employment Rights Ordinance (TERO) issues. The division develops and negotiates agreements with TERO offices for all department projects on reservations.

MESD conducts technical studies and provides technical assistance to all department divisions and districts. The division is responsible for maintaining the department's *Flagging Handbook* and manual on *Traffic Control Requirements for NDDOT Operations on Highways and Streets.*

Maintenance Decision Support System (MDSS) and Automated Vehicle Location System (AVL). The department is active in implementing MDSS. Several states joined together to form a pooled-fund study to jump-start this project, which will continue into the next biennium. The study is being coordinated with the automated vehicle location and data collection project, which is intended to provide maintenance operators with up-to-date weather information, equipment coordination during adverse weather, and best maintenance strategies to combat poor road conditions caused by the weather.

Emergency Response. The department continues to be prepared to provide fire control support to other agencies. The department has committed the use of its equipment fleet and personnel to assist in responding to emergencies, such as the Coleharbor straight-line winds event and flooded highways due to heavy rain and spring run off. MESD coordinates the response effort with the North Dakota Department of Emergency Services.

Living Snow Fence Program. NDDOT continued the Living Snow Fence program in this biennium. The department has partnered with the North Dakota Forest Service and North Dakota Department of Emergency Services to protect the state highway system by planting living snow fences.

Living snow fence at Northern Cass School northeast of Arthur, Cass Co. Hwy. 26, May 2007.

Challenges

The department is continuing to move into new areas, with advanced technology being applied to many aspects of transportation. Additional portable dynamic message signs were purchased to communicate with the traveling public to provide a safer traveling environment.

The department is continuing to implement a pilot project which involves equipping a group of snow plow trucks with AVL using Global Positioning System (GPS). This provides the ability to locate trucks at any given time, and to provide additional information to the operators to respond to adverse conditions. The technology will be used to coordinate a rapid response effort to emergency situations. MDSS is tied in to this system and provides equipment operators with the information they need to better conduct snow and ice removal activities.

NDDOT will continue to deploy ITS. Various technologies are continuing to be deployed, including installation of road weather information system sites, automated bridge anti-icing systems, statewide DMS implementation, video detection for signal activation, WiFi systems at remaining rest areas, fiber optic communications links, video surveillance for security purposes, incident management, integrated road reporting.

OFFICE OF TRANSPORTATION PROGRAMS

This office includes the Local Government and Planning and Programming Divisions and the strategic planning function.
The office director is Bob Fode.

Local Government

Dave Leftwich, engineer

Responsibilities and Activities

The Local Government Division administers, coordinates, and allocates funds for all county, urban, Transportation Enhancement, and transit federal aid programs and projects. Local Government also provides a liaison between the Federal Highway Administration, county and city officials, and NDDOT divisions and districts during project development; assists local entities in getting their projects ready for the bid openings; and coordinates the Emergency Relief program on a statewide basis on behalf of NDDOT.

Key Accomplishments

Local Government provides a one-stop service to city and county governments and to transit projects for all their transportation-related projects.

North Dakota counties received:

- $46.0 million for road projects,
- $ 9.6 million to repair or replace 28 bridges,
- $ 1.5 million for TE projects (multi-use paths, etc.).

North Dakota's 13 largest cities received:

- $43.5 million for street projects,
- $ 2.4 million for TE projects (multi-use paths, etc.).

Transit Section. Transit programs are vital to the state of North Dakota. The state's population continues to decline in rural areas, yet aging and special-needs residents depend more on transit services. Transit programs are also vital in the state's larger cities, as their population continues to increase. During the 2005-2007 biennium, the Local Government Transit Section distributed:

- $17.3 million in federal funds for buses, vans, buildings, and operating expenses to local transit authorities,
- $ 4.4 million in state funds for operating expenses.

Without these funds, many transit programs would have to be reduced or cut.

Legacy Trails. A Congressional earmark provided $1.4 million for the Legacy Trails program. This program funds trails and multi-use paths along the Missouri River.

Recreational Trails. Our partnership with North Dakota Parks and Recreation continues with NDDOT providing $1.3 million in Recreational Trail funds to North Dakota Park and Recreation to administer. These funds are used for motorized and non-motorized trails around the state.

Transportation Enhancement. Transportation Enhancement (TE) funds for NDDOT projects and for Tourism projects were also administered through Local Government.

- $3.3 million for TE projects along rural state highways, for visitor centers, and for landscaping,
- $1.4 million for tourism TE projects.

Future Programs

Three new programs were developed this biennium, with the first projects being constructed in 2008.

ND STREET. North Dakota Small Town Revitalization Endeavor for Enhancing Transportation (ND STREET) provides $3.0 million per year, starting in 2008, for cities less than 5,000 in population to upgrade existing pavement infrastructure and enhance the appearance of sidewalks on the state highway through towns.

Small Rural Economic Development. This program provides $640,000 per year, starting in 2008, for cities less than 5,000 in population and counties to upgrade existing infrastructure to new businesses.

Safe Routes to Schools. This program provides $1.0 million per year to improve safety for children walking to school. Projects will be awarded in July of 2007 for 2008 construction which will include replacement and

new construction of sidewalks, signs and pavement markings, and a multi-use trail. Also included is a flashing beacon and the removal of numerous accessibility barriers by providing accessibility ramps near schools.

Planning and Programming

Scott Zainhofsky, engineer

Planning Section

The section implemented TransAction, the Statewide Strategic Transportation Plan. In 2007, NDDOT updated North Dakota's statewide strategic transportation plan. The new plan, TransAction II, was developed employing an extensive public input process that involved all levels of government and the public sector. The plan identifies the state's transportation goals and 12 strategic initiatives. An implementation plan is being developed to prioritize actions and the allocation of resources for achieving the initiatives identified in TransAction II. The work plan will stress cooperative efforts between governmental entities and the private sector providers of transportation services.

Highway Performance Classification System (HPCS). The Planning Section published the seventh annual edition of the Highway Performance Classification System Report. The report identifies trends and provides a basis for the development of performance measures to monitor the performance of the state highway system. During the upcoming year, NDDOT plans to review the HPCS to determine if the classification of various highway segments should be changed. NDDOT also plans to develop guidelines for urban sections of the Interstate and Interregional Corridors.

Strategic Freight System Analysis. In 2006, NDDOT contracted with Upper Great Plains Transportation Institute to conduct a two-part study that will be used to develop a Strategic Freight Plan for the state. Phase 1 of the report (now completed) developed information regarding freight flows through, leaving, entering and circulating within the state. It also identified major freight generators, determined freight volumes, evaluated shipping preferences, identified major freight corridors and facilities, and identified transportation system freight impediments. Phase 2 of the report will analyze economic trends, changes in international trade policy, and project future freight flows. The projected completion date of Phase 2 is January 2008.

Highway-Rail Grade Crossings. NDDOT obligated $2,350,235 of federal funds for 21 railroad signal projects for the fiscal years 2006–2007. Nine of the projects included new installation of active warning, flashing-light signals with short arm gates, 12-inch LED lights and constant-warning-time train prediction. Existing active warning signals were upgraded at 12 locations. The signal upgrades include flashing-light signals to gates, 12-inch LED lights and present day electronics and train prediction circuitry. The 21 projects were on US and State highways, county major collectors, county off-system and city roadways. NDDOT endeavored to reasonably distribute signal projects statewide and among the five railroads operating in the state, including the newly formed Yellowstone Valley Railroad out of Montana.

Rail Freight Assistance Plans. NDDOT administers two rail freight assistance programs: one state funded (Freight Rail Improvement Program – FRIP) and one federally funded (Local Rail Freight Assistance – LRFA). Both programs provide loan funds for eligible projects. In fiscal year 2006, NDDOT obligated $1,511,170 of federal funds for one LRFA project. The project consisted of rail rehabilitation replacing light rail with heavier rail and replacing/renewing ties, ballast, and hardware. A total of about nine miles of track was rehabilitated by the project. In fiscal year 2007, NDDOT obligated $105,958 of state funds for one FRIP project. The project was to construct a rail spur to provide rail service to an agricultural products shipper. An additional $2.9 million of FRIP funds were obligated for three projects during fiscal year 2006, but the applicants later decided to proceed without using the FRIP loan funds. $2,545,570 of the previously obligated FRIP funds was obligated to other projects shortly after the end of the biennium.

Rail Plan Update. In fiscal year 2005, NDDOT contracted with Upper Great Plains Transportation Institute to update the state rail plan. The update is nearly complete with implementation projected to begin late in calendar year 2007.

Roadway Data Section

Mapping/Cartography. During the 2005–2007 biennium, the Cartography Section published a complete six-year cycle of the county base map series to digital form. These maps have also been put on the depart-

ment's Internet for the public to view. The second generation tourist map was printed in November of 2006. Other maps that were converted into digital form were the County Major Collector (CMC) book, the Fire District Book prepared in cooperation with the Insurance Department, and the bridge maps prepared in cooperation with the Bridge Division. Prior to 2005 -2007, these maps where updated by placing Chartpak tape on a foil, or by inking on a foil. Besides the above mentioned feats, the Cartography Section is continuing to update its data from aerial and ground inventory. Additionally, with the aid of aerial photography, the Section is matching the city streets to the photos. They are also working toward the goal of putting all our cities on the Internet like the County Base Maps and converting the first generation of digital map (ArcView 3X) to the next generation of mapping software (ArcMap).

Highway Information and Statistics. The roadway data section responded to various requests for information pertaining to functional class systems, mileage change orders and mile point locations for construction projects and various bridges on the state highway and county systems.

All Federal-Aid and Functional Class system changes from Local Government Division were updated in the Highway Performance Monitoring System (HPMS) database.

The application to add the relocation of US 281 from South of Minnewaukan to Jct. US 2 was completed and approved by American Association of State Highway and Transportation Officials. The Roadway Data Section provided traffic information for high-accident locations for the Traffic Operations section. They also completed numerous surveys and questionnaires from other states and national organizations regarding the departments' roadway data files.

Roadway Information Management System (RIMS). The Roadway Information Management System (RIMS) provides a structured method of collecting, processing and maintaining roadway data in a timely accurate manner. The various divisional data files, combined with generalized retrieval and output programs, are processed to provide North Dakota Department of Transportation management with a powerful, flexible tool for inquiring into the data base. This system includes the various types of data necessary for general use in overall planning and operation of the State Highway System. The highway components database is maintained and updated with construction plans from each bid opening. This section continues to provide system support for RIMS, and continues to generate numerous reports containing RIMS data for all eight districts. Numerous ArcMap GIS maps were produced for analysis and also to reflect the data on the state and county highway system. The Devils Lake Basin elevation data was updated during this timeframe.

The section will continue to explore and implement ideas that will allow the user to have more information available from his/her computer system. They will also continue to provide the best and most accurate information available. The section is working with the Information Technology Division on a pilot project called Sign Inventory System Prototype Development Project. The sign inventory prototype application will be a custom ArcGIS Server 9.2 Mobile application designed to allow NDDOT sign maintenance staff to update the sign inventory database while in the field.

Highway Performance Monitoring System (HPMS). The annual HPMS data submittal was submitted prior to the June 15 deadline. NDDOT continues to be recognized by FHWA as a leader in collecting, analyzing and submitting HPMS data in a timely manner.

HPMS review was conducted by FHWA and the roadway data/traffic section in 2005, 2006, and 2007.

Traffic Data Collection and Processing. The section completed all traffic counts according to the traffic counting schedule. These included 48-hour volume counts on state highways, county system, and all functionally classified streets within urban limits. The section employees also completed special studies, such as intersection turning movement data for 16 locations. They collected speed information for seven speed studies. They also collected traffic volume and truck class for 19 locations throughout North Dakota.

During this timeframe, the section employees repaired seven ATRs loop and/or piezos in the roadbed.

The section installed an ADR 6000—a loop-based classification counter with an advertised ability to classify vehicles with vehicle classification data daily. It is a replacement of an older ADR model that was upgraded during the Automatic Traffic Recording Operations Construction project. This classification counter is advertised to have the ability to track and classify in high traffic volume urban locations as well as classify vehicles in weaving or passing scenarios. The installation of the electronics and all northbound loops was

completed in 2006. All southbound loops were installed in 2007.

Traffic Data Analysis. The section provided timely traffic data for updating of the department's data files. Traffic forecasts were made for many urban, county, and state highways.

The section completed updates to the Traffic Data Editing and Analysis (TDEA) processing software that will incorporate all traffic volumes into a common database. They added the direction field to the TDEA software which will provide traffic data by direction for divided highways. During the year they produced and distributed monthly and annual reports from ATR data, and submitted a monthly volume data file to FHWA. The section produced and distributed various maps showing ESAL data, Truck AADT, NHS, ATR Locations, Weigh-In-Motion Locations, and Border Crossings. They also provided User Cost and Trip Generation analysis to the department customers.

The section did research and analyzed traffic data relating to existing and future economic development.

State Traffic Volume Map and Strip Maps: Improved GIS Projects. The section produced the annual State Strip Map and State Traffic Flow Map. Electronic version of the turning movement diagram was also completed.

Weigh In Motion (WIM). Installation and training of all 12 WIM systems was completed January 15, 2005. Funds for this project have been provided through the NDDOT construction program.

Successful replacement of two Kistler Quartz Piezo sensors was accomplished in July 2007. One sensor was replaced at each of the West Fargo and Washburn WIM sites.

In 2005, the NDDOT was selected as the lead state for an AASHTO sponsored Technology Implementation Group (TIG) project. NDDOT, along with the California, Florida, Nevada and Indiana DOT's, participated in developing an in-depth presentation to address new Virtual Weigh In Motion (VWIM) technology that was available and being used in some states. A brochure and shortened version of the presentation were also produced and are currently being presented at many major conferences/meetings across North America. North Dakota was the lead state on this project.

The NDDOT has maintained a yearly calibration schedule for all 12 WIM sites.

Planning Information Systems. The section participated in the creation of a desktop application that allows NDDOT employees to access digital images collected by Pathways pavement collection van.

In cooperation with Information Technology Division, the section developed the Online Roadway Analysis Mapping Portal (OnRAMP), a web-based application combining the digital images with spatial data, that is available to employees over the Intranet.

They created an ArcIMS application for the RIMS database, allowing users to display, query, and analyze data spatially in an internet based GIS system.

Reference point locations for the state highway system were validated and relocated using GPS.

Utilizing GPS, the section collected locations of all RWIS, ATR, and WIM sites. This data was used to meet the new requirements of One Call regulations in the state of North Dakota.

The section continued to maintain the route system and reference point database.

Numerous GIS projects were completed for engineering analysis and related studies.

Traffic Operations Section

The traffic operations section responded to approximately 350 various requests. The section also completed traffic operations studies for all major reconstruction projects, provided requested crash information, and reviewed and commented on design plans, project concept reports, and consultant traffic operations studies.

The section also reviewed numerous studies and roadway design plans for proposed large retail developments throughout the state. Traffic volume projections were developed for all urban intersections.

In addition, safety improvements were implemented through the Title II Highway Safety Improvement Program, field work included traffic signal inspections of new installations and annual maintenance of the 33 state-maintained signals. Signing accomplishments included 60 work orders, 29 speed orders and 8 Tourist Signing Advisory Committee (TSAC) signs. These signing responsibilities were transferred to the Maintenance and Engineering Services Division in October 2006.

Programming Section

The Programming Section's major responsibilities are project authorization and development. This includes preparing the Statewide Transportation Improvement Program (STIP) document, monitoring project development, preparing and assembling contract proposals and documents for all bid openings, and programming and monitoring federal aid for all state and local projects.

Project scoping reports accompany all highway priority projects, which assist in estimating the future costs of projects. In cooperation with both the Information Technology Division and the Information Technology Department this past biennium, the section developed an online STIP process that enables the districts to enter their priority projects online and provide a more efficient means of gathering and collecting data. It has the potential of including the tribal communities, cities, counties, and FHWA.

NDDOT has improved the STIP format, making it more user friendly, posting it on the Web site, and providing the ability to comment online. In addition, the public input process has been expanded to include meetings with the tribal communities, cities, and counties. The section meets individually with each tribal entity to discuss any issues they may have with the department and upcoming STIP, in addition to their Tribal Transportation Planning meeting. The section presents the development process as well as informs them of the upcoming projects in their jurisdictions. NDDOT is currently working with the tribes to combine and streamline both processes.

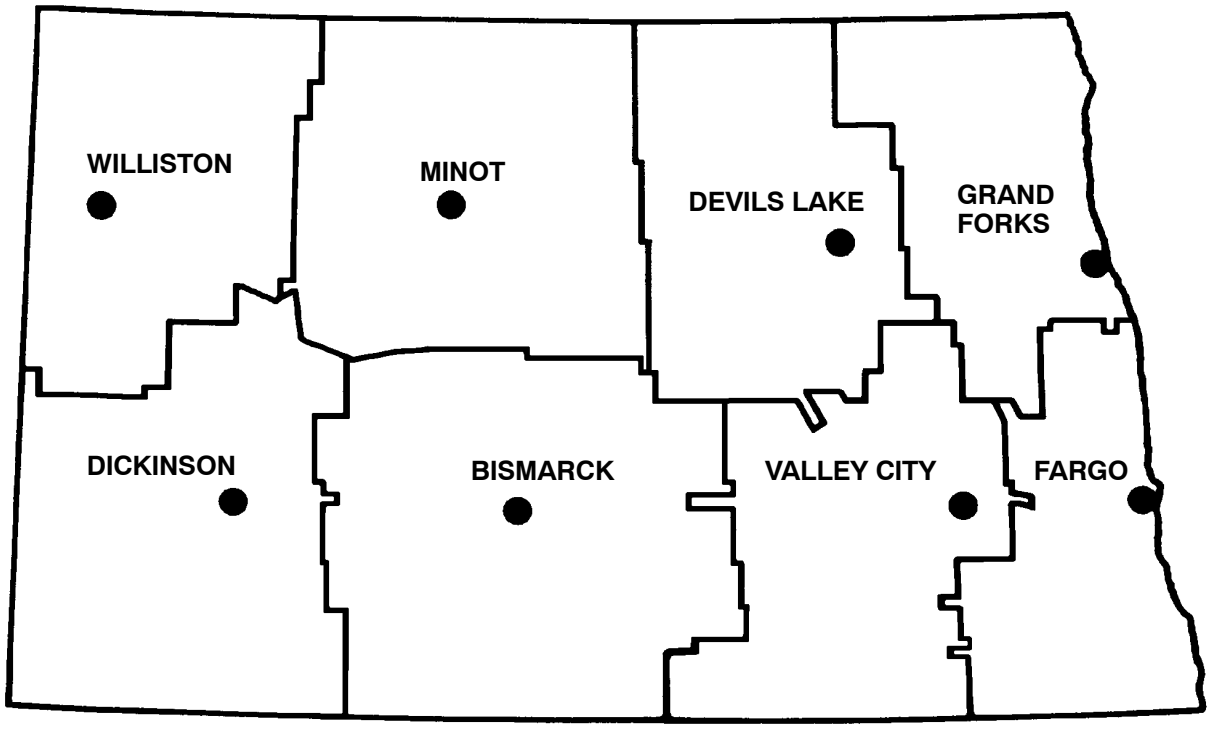
Pavement Management Section

The Pavement Management and Scoping section's three major responsibilities are pavement condition data collection and processing, pavement management analysis, and project scoping.

Pavement condition data is collected annually for approximately 8,400 roadway miles. This data is processed and made available electronically and in published format for department personnel to use in various stages of decision making and project development. Data storage and processing procedures have improved due to new data management methods implemented in 2007 and will continue to improve with advancements in computer technology.

Pavement condition data is the main input into the department's pavement management analysis. The computer analysis uses condition information along with many user defined analysis parameters to run an optimization process. The analysis selects suggested projects based on predicted pavement performance and budget limits. The two major goals of the analysis are to aid management in project selection and to provide a method for predicting long-term impacts to the highway network. The section is fully reviewing and modifying the analysis parameters, with initial reviews of the results from the revised analysis being very favorable.

District Biennial Reports



DISTRICT OVERVIEW

Included here are all eight district office in North Dakota's transportation system. The districts are administered by Grant Levi, Deputy Director for Engineering.

North Dakota's transportation system is divided among eight regional districts. The district engineer is responsible for all the construction and maintenance activities in their designated region. District construction activities include monitoring the conditions of bridges and roadways to determine which roadways should receive the highest priority for reconstruction based on need and available funding. The district then works with the appropriate divisions in the Central Office to establish short- and long-term construction programming of the projects. Planning and design of individual projects is a joint effort with the appropriate divisions within the department. The contract administration of the projects is then handled by the district construction staff.

Maintenance activities consist of roadway and non--roadway maintenance. Included in the roadway activities are crack sealing, blade patching, seal coats and snow and ice control activities. Non-roadway maintenance activities include the issuing of utility permits, drive permits, the Adopt-A-Highway program, the interstate haying program, the noxious weed program, the billboard program and dealing with all other right of way issues.

The districts also have a partnership with cities and counties to work together on transportation issues. Included in this process is the bridge inspection program in which district personnel inspect the bridges for these entities.

Bismarck District

Kevin Levi, engineer

Responsibilities and Activities

The Bismarck District is located in the south central part of the state, and lies in nearly even halves on either side of the Missouri River. Of the 2,800 lane miles, 445 are on the Interstate system and 2,355 are on the state highway system. The district staff consists of 99 full--time employees, which is supplemented with approximately 25 to 30 temporary employees for summertime construction and maintenance activities.

Key Accomplishments

During this past biennium, the district has had a very active construction and maintenance program which included the following activities.

- With the department's emphasis on providing a good ride on all roadways, approximately 131 miles of the lower tiered roadways in the district have received thin lift overlays totaling $8.9 million. These roadways should provide the traveling public with a good ride for the next 7-10 years.

- Major asphalt overlay projects in the 2005-2007 biennium included ND 36 from the junction of ND 3 to Lake Williams, ND 31 from I-94 to the junction of ND 200A, and I-94 from ND 25 to ND 1806. These projects accounted for approximately 51 miles of roadway in the district being overlaid.

- Two urban projects in the City of Bismarck were completed: ND 1804 from south 12th Street to Bismarck Expressway, and ND 1804 from Signal Street to 48th Avenue. These projects greatly improved the traffic flow along these corridors. The costs of these projects totaled approximately $10.7 million.

Worker cuts off pier face on Apple Creek Bridge, ND 1804.

- The Memorial Bridge was closed for approximately two months during the winter/spring of 2006 for emergency repairs when deteriorated concrete was found in the piers. The closure created challenges for the traveling public throughout the Bismarck/Mandan communities. The district was able to design and construct necessary repairs to return the structure to full service within a 2-month timeframe.

- The new Liberty Memorial Bridge reconstruction project is well underway with over half of the project completed. The new bridge will replace the existing structure at a construction cost of approximately $47 million, and traffic is expected to be transferred in 2008. The east and west approach structures are nearly complete with the beams to be set on the main structure by late fall of 2007.

Early morning fog at Pier 7.

- Regular preventive maintenance on all roadways is an ongoing activity for the district. These activities consist of attempting to seal coat the district roads on a seven-year cycle, contract patching the segments of roadway that show distress from the traffic, and using mini mac to help reduce the impacts from depressed transverse cracks prior to overlay projects. Micro surfacing and slurry seals have proved to be a cost effective solution on high volume roadways. The contract patching program consisted of projects on several different roadways totaling approximately $1.2 million.

Future Challenges

The continuation of the Liberty Memorial Bridge reconstruction project, reconstruction of Mandan Avenue/Division Street and reconstruction of ND 1804 from Desert Road to Signal Street will provide interesting challenges for the next biennium. The district will continually be challenged to provide the public with a snow and ice control program that meets their demands. As more people commute to their jobs, the department is expected to provide extended service with its present staff. New technology and equipment are being used to make snow and ice control activities more efficient. Computers have been installed in maintenance sections to provide site-specific forecasts.

With this information, maintenance crews can react in a timely manner to weather conditions and plan the proper snow and ice control strategies in advance. Also, anti-icing and pre-wetting equipment are being used to better control the amount and the time that chemicals are being used during a storm condition. This helps provide safer roadways and saves the department money on the amount of chemical used.

Devils Lake District

Wayde Swenson, engineer

Responsibilities and Activities

The Devils Lake District is responsible for the construction and maintenance of 1,144 miles of roadway located in the north central part of the state. The District is staffed by 75 full-time administration, construction, maintenance and shop employees.

Key Accomplishments

In 2006, the new corridor for US 281 was completed. Five large projects and several smaller ones were built to relocate US 281 to prevent the road from being flooded by the rising waters of Devils Lake. A total of 15 miles of new roadway was built to accomplish this.

Ribbon-cutting ceremony marks completion of US 281 project.

There were approximately 5 miles of roadway rebuilt, 50 miles of roadway paved and 110 miles of roadway seal coated in the district. This work was done by the contracting industry this past biennium.

The district maintenance crews have done the following this past biennium: sawed/sealed transverse cracks with polymers on 60 miles of new asphalt structural overlays, seal coated approximately 160 miles of roadway, crack poured approximately 40% of the district's roadways and filled transverse cracks on approximately 55 miles of roadway with the minimac machine.

The district maintenance crews erected salt sheds at the Maddock and Carrington sections. These were 28' x 40' pole barn-type buildings.

An office addition to the district headquarters was completed in 2007 to help alleviate an overcrowding condition in the existing facility. This addition was a 40' x 60', with two offices, conference room and bathrooms.

Future Challenges

The rising waters are and continue to be a concern for several of the roadways in the region. The overflow of water from Devils Lake into Stump Lake equalized as the bodies of water are both at the same elevation now. Some of the State highways at present are acting as dams which are an unintended capacity for the roadways. At present, a group is working on determining the best fix for the conditions of Roads Acting as Dams, with help from several Federal agencies.

The Devils Lake District yard is lacking sufficient building storage for salt and salt/sand products. Due to environmental issues, this building should be considered high priority for the district. Salt sheds are also needed at the Cando and Starkweather section yards.

A standby generator is needed for the district headquarters in Devils Lake. This need is extremely critical during the winter snow-ice season if power were to go out for an extended period of time.

Economic and social changes within the district will also affect how people and commodities move. Through school consolidations and branch rail lines closing, the department has to make changes to accommodate the traffic and public. Branch rail line closings have an impact on the transportation system such that the grain hauled to the elevator must still be moved to the market to be sold. Whether it is the producers hauling the grain further to a different elevator or the elevator trucking the grain to a different site to rail load it, it will change and challenge the use of the roadways.

Dickinson District

Larry Gangl, engineer

Responsibilities and Activities

The Dickinson District is responsible for maintenance on 1,978 lane miles of roadway on the Interstate and state highway systems. The district has 63 full-time employees.

Key Accomplishments

The Dickinson District had several key accomplishments over the past biennium. The district resurfaced and reconstructed 594 miles of district roadways at a cost of $73 million. Some of these projects included resurfacing and safety improvements on both the eastbound and westbound lanes of I-94 from Belfield to Fryburg and Belfield to South Heart reconstruction of westbound I-94 from Dickinson to South Heart, and blended base on US 12 from Bowman to Hettinger.

District construction crews administered construction contracts on several large construction contracts. The design of all seal coats and thin lift overlays were completed by district construction employees. Many preliminary surveys were also completed.

District maintenance forces seal coated 60 miles of seal coats, performed crack maintenance on 400 lane miles of roadway, and repaired depressed cracks on 200 lane miles of roadways. Maintenance forces constructed concrete containment systems for brine, repaired eroded areas within the right of way on numerous highways throughout the district, improvement facilities by replacing roofs on tower buildings, remodeled a bathroom, repainted shops, and constructed utility sheds. A new section building was constructed in Belfield and an addition was constructed at Killdeer.

The district is involved in the department's Automated Vehicle Location (AVL) pilot project. The system works with out Maintenance decision Support System (MDSS). The system provides real time vehicle location, spread rates, plow functions, air and pavement temperatures to the MDSS. The MDSS program provides operators with pavement forecasts, material application rates, radar, satellite, and other functions to help our operators with winter snow and ice control operations. Five of our 13 AVL units are cellular-based and can receive radar and weather information in the cab. Three sections, Beach, Belfield, and Dickinson, had AVL equipment installed in their snow plow trucks.

Automated Vehicle Location (AVL) unit.

Construction Projects

2005

- US 85 Bowman to Scranton; widening, mine and blend, HBP
- Thin Lift overlay - 115 miles
- Seal coat - 162 miles
- CPR - 1 mile

2006

- Interstate reconstruction South Heart to Dickinson, westbound
- Structure at Scranton
- ND 22, 21st Street North to end of city limits
- Thin lift overlay - 16 miles
- Seal coat - 17 miles
- Safety - 31 miles
- Grinding - 8 miles

2007

- I-94 Belfield to Fryburg, break and seat and HBP overlay, safety improvements
- US 12 Scranton to Hettinger, mine and blend, widen, HBP
- Thin lift - 100 miles
- Seal coat - 67 miles

Future Challenges

The Dickinson District is facing similar challenges in the next biennium to those that other districts and organizations are experiencing. There is a need to recruit new employees to fill current positions. Funding is also a challenge, whether it's money needed to repair or reconstruct district roadways, or to replace deficient or obsolete equipment.

Fargo District

Kevin Gorder, interim engineer

Responsibilities and Activities

The Fargo District is located in the southeastern part of the state, and is responsible for 1,811 miles of roadway. The district has 88 full-time employees assigned in four sections: highway engineering, roadway maintenance, vehicle maintenance, and administration.

Key Accomplishments

The eight-year reconstruction of I-29 through the urban section of Fargo was completed in 2007. This project including building 15 new bridges, widening two bridges, and adding a third lane in each direction from 32nd Avenue South to 19th Avenue North. This transformation from a rural interstate to an urban interstate should provide the Fargo area with a corridor to move people and goods well into the future.

A two-year project started in downtown Fargo to reconstruct the railroad underpass on University Drive near Main Avenue. This project included closing Main Avenue and University during construction. The project widened the underpass to accommodate five traffic lanes, increased the vertical clearance to approximately 15 feet to allow delivery trucks to use this route, and lengthened the bridge to give it a more open feel under the structure.

Railroad underpass on University Drive, Fargo.

Approximately 16 miles of I-94 was reconstructed between Casselton and Buffalo.

Key accomplishments in roadway maintenance include crack sealing 295 miles and chip sealing 185 miles of asphalt highways. Forty-three miles of concrete interstate highway and ramps were crack sealed as well.

Intelligent Transportation Systems (ITS) continue to be developed. Traffic signal video detection cameras were installed at the 12th Avenue North and 19th Avenue North interchanges on I-29. Two pan-zoom-tilt cameras were added along Fargo's interstates. The first camera was placed near the I-94 bridges that cross the Red River and the second camera was placed at the 19th Avenue North interchange on I-29. These cameras have proven to be very beneficial as we respond to incidents along the heavily traveled interstate corridors in Fargo. We are able to quickly survey an incident from the office and dispatch any of the needed resources to clear the roadway and ensure public safety.

The district Traffic Operations Center (TOC) continues to grow and develop. A larger board and software to control and monitor multiple cameras simultaneously was installed.

The district added a second anti-icing bridge deck spray system on the I-94 bridges over the Red River. Approximately 65,000 vehicles use these bridges every day. The Minnesota Department of Transportation is a partner in the installation and operation of this deck spray system.

Future Challenges

The largest challenge facing the Fargo District is keeping up with the continued population and business growth. With this growth, the district continues to see an increase in car and truck traffic and heavy loads. Interchanges along I-94 are also starting to see longer lines of vehicles stacking up on the ramps as housing and business growth continues in the Fargo-West Fargo metropolitan area, especially to the south and west. NDDOT has started to respond to this challenge by adding additional turn lanes on our ramps.

Wind energy is also creating a burden on our state highways. Generators and their corresponding towers have grown to the point that they can not travel on the interstates due to their height. Most of these loads are in the 200,000-pound range and travel on state highways that were not designed for this size of load, accelerating the deterioration of our state highways. The demand for wind towers could increase by 15% next year and approximately 30% each year after that.

Reconstruction and rehabilitation of the area highways have not kept up with this rapid growth, so the maintenance staff is faced with more highway repair activities than in the past. Our ability to maintain multilane roads when a lane is closed for maintenance work creates traffic safety challenges we have not had before due to the high volume of traffic. Current staffing does not allow for 24-hour maintenance of state highways or interstates. This is a challenge the district is attempting to mitigate with improved snow plows, anti-icing applications, technology, and scheduling staggered work shifts.

The Fargo District has also seen the development of several large rail unit train car agricultural elevators and fertilizer plants. These facilities generate large truck volumes for transporting grain. Prior to these large facilities, products were delivered to the closest elevator and shipped by rail to its destination. Currently, the product is trucked between facilities to large rail loading facilities creating a burden on our state highways. The district continues to overlay roadways to improve their load carrying capacity in the spring. Spring load restrictions on the districts highways continue to impact the efficient movement of agricultural commodities. The result of load restrictions often means businesses and farmers must make more trips to move their product.

Grand Forks District

Les Noehre, engineer

Responsibilities and Activities

The Grand Forks District is responsible for the construction and maintenance of approximately 940 miles of highways in the northeast corner of North Dakota. The district consists of 70 full-time employees. The district has four sections: highway engineering, roadway maintenance, vehicle maintenance, and administration.

Key Accomplishments

Maintenance

During the 2005-2007 biennium, Grand Forks District maintenance forces performed routine crack repairs using the Minimac as well as the other traditional methods; crack pouring, patching, sealing, mowing, riprap and drainage repairs, and winter maintenance to the district's 940 miles of highways. Extra work done to enhance the function and appearance of our roadways included additional drainage, cattail mowing, and removal of unsightly trees and brush, particularly along the I-29 corridor. Due to wetter than normal conditions, extra attention to drainage was required.

The district is in the process of completing a new section building at the Drayton section. This building will house all of the equipment which must be stored inside, including trucks, motor grader, loader, and Oshkosh snowblower assigned to the section. Previously, rented storage space was needed to store the Oshkosh blower, in order to assure emergency response.

In May of 2006, Grand Forks District hosted a training session for operators statewide of the Minimac micro--surfacing machines. Grand Forks District has started a District Operations Center concept, in which snow events and other emergency work are managed. The concept includes gathering timely and accurate information so that administrative personnel can make decisions and help manage the event.

Grand Forks District again experienced its share of emergency work. In January 2006, the Alexander Henry Rest Area was struck by a loaded semi truck and trailer at a high rate of speed. Nearly the entire month of April 2006 was spent managing roadway issues related to both overland and Red River flooding in the north part of the district. Maintenance crew members volunteered to help with fire emergencies in the western parts of the state, but were only called on to deliver liquid totes to help control fires. Culvert washouts in a few locations were repaired using district-owned equipment.

The biennium also provided some warmer than normal conditions in addition to other snow events. Freezing

rain and ice conditions added to the district's need for salt treatments.

Construction

During the 2005 construction season, the Grand Forks District completed a one-mile reconstruction of 32nd Avenue and Columbia Road in Grand Forks. The project was completed this year with the installation of the permanent pavement marking and other incidental items. The district had two of the first micro-surfacing projects completed during the year on ND 17 and US 2. These projects were complete from the intersection of ND 17 and ND 1 to Adams on ND 17 and on eastbound ND 2 from ND 32 to east of ND 18. Micro-Surfacing is a mixture of a polymer-modified cationic emulsified asphalt, mineral aggregate, mineral filler, water and additives that are proportioned, mixed, and spread with a machine over the highway. The micro--surfacing is used to restore and preserve the surface characteristics of pavements. They may be designed to correct rutting, improve inadequate pavement cross sections, and enhance frictional properties of structurally sound polished pavements.

US 81 was widened from Grafton to ND 66 in 2004, this section of highway was paved with additional asphalt in 2005 to complete work on this stretch of roadway.

Other work being performed this year included a mine and blended base, subcut, shoulder widening project on ND 200 11 miles east of Finley to the intersection of ND 200 and ND 18. Additionally, 18 miles of hot bituminous pavement on ND 15 and ND 17, 32 miles of contract patching, and 11 miles of seal coats were completed in the district.

Widening roadway on ND 200.

In 2006, the district completed a grade raise on ND 1, five miles north of Lakota. Included with the grade raise was the replacement of centerline pipe and paving of the 1.2-mile project. During that same year, US 81 had projects which replaced the structure near Ardoch along with turn lanes and two slurry seal projects beginning at Manvel and ending at Minto. These two slurry seals covered a length of 12 miles and were some of the first placed in the state. The slurry seals are intended to correct moderate-to-severe raveling, oxidation and loss of matrix, and improve skid resistance.

Centerline pipe on ND 1.

Asphalt paving was done to complete the section of ND 200 11 miles east of Finley to the intersection of ND 200 and ND 18. Dowel bar retrofit and grinding was completed on two sections of ND 2. This work was completed on 14 miles of eastbound ND 2 beginning in Michigan, the second four-mile section was completed on westbound ND 2 from Michigan west. In addition to this work on ND 2 a structural overlay including the building of turn lanes, a bridge deck overlay, box culvert extension, traffic signals and shoulder widening was 90% completed on the eastbound roadway from the Air Base to Grand Forks. The district completed several other projects including seven seal coats which totaled 42 miles. One of the seven seal coat projects was completed in an urban section and was completed at night to help alleviate traffic issues.

2007 projects under way early in the year included the completion of the structural overlay on the eastbound roadway from the Air Base to Grand Forks. A shoulder widening project, along with the replacement of a box culvert and aggregate shouldering, was started in April. This work, on US 81, is at the north intersection of US 81 and ND 66 to Hamilton. Other projects included three bridge deck overlays on ND 2 (Emerado) and I-29 (Oslo Interchange) and a concrete pavement repair project on northbound I-29 north of Manvel.

Minot District

Jim Redding, engineer

Responsibilities and Activities

The Minot District is located in the northwestern part of the state and is responsible for the construction and maintenance of over 1,200 miles of highways. The district has 70 full-time employees. Construction and maintenance activities for the highways in the Minot District are planned, many are designed, and scheduled by the district, and are performed out of the district office and eight outlying sections. Winter snow and ice control is provided for the public seven days a week at all maintenance sites beginning at 5 am, and earlier if needed during emergencies or storm events. Additional support services are provided to the cities, counties, utilities, USAF and public from the district, which range from everyday activities to emergency responses.

Key Accomplishments

Reconstruction Projects

Hot Bituminous Surfacing was completed on the final of four newly reconstructed segments of the US 52 corridor from Kenmare to the junction of US 2. US 52 is part of a major commercial trucking corridor beginning at the US/Canadian border and extending through North Dakota. The final surfacing project was 12 miles from Carpio to the junction of US 2, at a cost of $2.7 million.

Phase 1 of North Broadway (21st Avenue to University Drive) reconstruction in Minot was bid and work began in 2007. The total bid was $8.6 million. Except for minor items, Phase 1 will be substantially completed in 2007.

Phase 2 (4th Avenue to University Drive) of North Broadway in Minot is in the design stage and is currently scheduled to be bid in February 2008.

Reconstruction of the southbound lanes of US 83 extending from the junction of ND 23 to Max was started in 2007. The 9-mile grading contract was awarded at a cost of $6.9 million. Asphalt paving of this segment is scheduled to be done in 2008.

Another segment of US 83 from Max south will be reconstructed in 2009–2010, which will bring the US 83 corridor from Minot to Bismarck to current design standards for a 4-lane highway.

The Bottineau City segment of ND 5 was reconstructed in 2006. This project included grading, asphalt surfacing, storm sewer, street lighting, shared-use path and other improvements. The appearance of the entrance to the City of Bottineau was greatly enhanced when the project was completed. The contract amount for this project was $5.5 million.

Ribbon cutting opening ND 5 in Bottineau. (Photo courtesy of the *Bottineau Courant*.)

Resurfacing Projects

Resurfacing projects with Hot Bituminous Pavement (HBP) resurfacing extends the life of asphalt pavements, allowing spring load restrictions to remain at the level they currently are or, in some cases, to raise the level of spring load restrictions.

A structural overlay was completed on an 8-mile segment of ND 3 south of Harvey at a cost of $1 million, or approximately $125,000 per mile.

Thin lift overlays (1.5” HBP) were constructed on 72 miles of highway. Thin lift overlays extend the life of the roadways an estimated five to seven years. The total cost of the thin lift overlays was $4.4 million, or approximately $61,000 per mile.

Twenty-nine miles of highway received continuous contract patch (1.5” HBP). The cost of the paving projects totaled $1.7 million, or approximately $60,000 per mile.

Chip Seal Projects

Chip Seals provide a new wearing surface on asphalt pavements, sealing the surface from oxidation.

Eighty-two miles of roadway were chip seal coated by contract. These contract chip seal coats bids totaled $1.6 million, or approximately $20,000 per mile. Minot District maintenance forces chip sealed 78 miles.

USAF Missile Road Maintenance

The Minot District administers missile road surface treatment projects and provides winter snow and ice control on routes used (state, county, township) by the US Air Force for access to the 150 missile silo sites and 15 Launch Control Facilities under the control of the Minot Air Force Base (MAFB). The funding for surface treatment projects comes from FHWA and the Department of Defense.

Seventy miles of the Transporter Erector Routes (routes used by the USAF) were re-graveled. These projects are routes off the state system. In addition, the township gravel road from the North Gate of MAFB to a paved Ward County road was double chip sealed to provide a bituminous surface wearing course.

Safety Improvement Projects

Several safety improvement projects were completed including guardrail retrofits on several structures.

A safety project was constructed during 2006–2007 from Minot to MAFB. The shoulders in the southbound lane were widened, inslopes along the entire segment were all brought to 6:1 slopes. Turning lanes at the two entrances of MAFB were lengthened to accommodate traffic that becomes backed up on US 83 during peak traffic flow into MAFB and vehicle inspections are being performed.

Left- and right- turning lanes were constructed on US 83 at the junction of US 83 and ND 23.

Miscellaneous Projects

A landscaping project, which includes granite signs as well as plantings at the five major entrances of US highways into Minot, was bid in 2005 and constructed in 2006. The signing and landscaping provide attractive entrances to the City of Minot.

A structure on ND 60 near Willow City was replaced in 2006.

The Minot District engineering staff completed preliminary plans and surveys for future construction projects.

Project concept reports and plans were prepared for variety of projects including seal coats, resurfacing projects, annual district pavement marking plans, turn lanes, and other items as required.

Two new reloading sites for snow and ice control materials were established near Max and at Drake. The reloading site building at Blaisdell was relocated to Berthold by Minot District maintenance employees with the assistance of a private house moving company.

Sealed floor drain sewer systems were installed at the Towner and Velva maintenance sections. Both of these locations are in Wellhead Protection areas.

Heated storage building was constructed in Minot for trucks and equipment.

Valley City District

John Thompson, engineer

Responsibilities and Activities

The Valley City District is located in the south central portion of the state. The district is responsible for highway construction, engineering and administration, roadway and bridge maintenance, roadside maintenance, rest area/visitor center maintenance, materials testing, equipment and vehicle maintenance, traffic engineering, and highway sign maintenance.

The Valley City District's 71 full-time employees are responsible for 900 lane miles of roadway.

Key Accomplishments

US 281. In 2006 and 2007 the segment of US 281 from Edgeley to ND 46 was widened, structures replaced and resurfaced. The urban portion of US 281 from 17th Avenue to the southern city limits in Jamestown was also completed in 2007. US 281 from Ellendale to Jamestown has been reconstructed in the time frame of 1999 to 2007. This roadway has a good ride, does not have restricted load capacity in the spring and has wide shoulders. This is a milestone accomplishment for US 281 in the Valley City District. The segment of US 281

from the South Dakota border through Ellendale will be resurfaced in the near future.

I-94. The westbound roadway of I-94 was resurfaced in 2006, completing reconstruction of both roadways between Valley City and Tower City.

Three pavement repair and pavement grinding projects were done between Jamestown and Valley City between 2005 and 2007. The outcome of these interstate projects is smoother ride and preservation of the pavement on this important roadway in the Valley City District.

Emergency Grade Raise Project. ND 46 was overtopped with water about 4 miles east of Gackle in early June of 2007. The department responded with a temporary grade raise to keep the roadway in service. This was quickly followed by a more permanent grade raise; five feet of earth fill with a foot of base and surfacing. This work will be complete during the fall of 2007. Credit goes to the entire department for the quick response to this situation. It took assistance from almost every division to provide the public with a reliable surface by the end of this construction season.

ND 46 east of Gackle.

Preventative Maintenance. The following roadways received 1.5 inch overlays during 2006 and 2007. The purpose of these projects is to restore the ride on these pavements and continue to provide reasonable load capacity in the spring.

- ND 36 from Woodworth to US 52 near Pingree
- ND 200 from Glenfield to Cooperstown
- ND 32 west of Enderlin
- ND 11 from Ellendale to Ludden

Maintenance Operations. Maintenance employees are assigned to maintenance sections distributed throughout the district. Their duties are focused on ensuring the roadways are safe for travelers. This work includes; keeping the roadway free of snow and ice, removing debris from the roadway, mowing the roadsides, removing obstacles from the roadsides, and keeping the pavement in good repair.

Other work is done to preserve our investment in the pavement. Examples of this work are crack sealing, chip seals, and patching.

The district and these sections are often the first point of contact for questions on highway right of way, access to business and homes, outdoor advertising and many other public concerns.

Williston District

Walt Peterson, engineer

Responsibilities and Activities

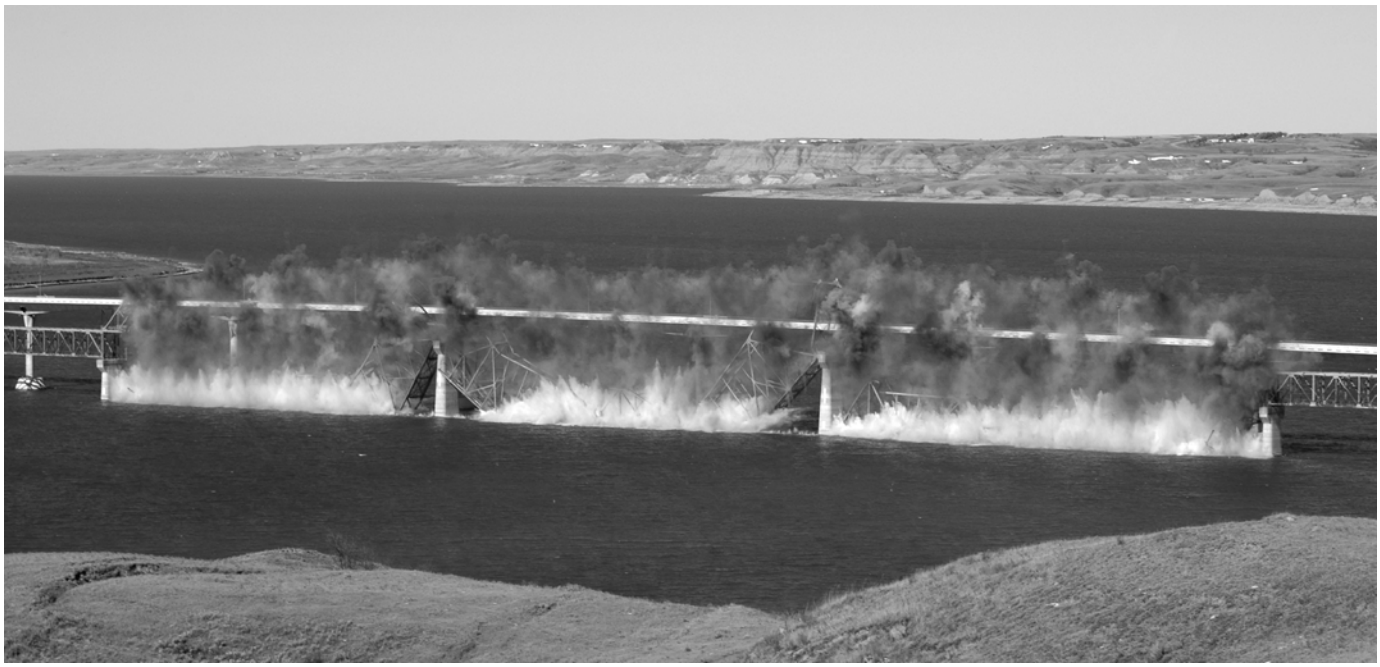
The Williston District is responsible for moving people and goods safely over the highways.

The district maintained over 900 miles of paved highways in the northwest corner of North Dakota. Sixty--two employees are responsible for routine maintenance activities, designing and administering construction programs, and repairing equipment and administering the state fleet program. During the two main seasons, road construction and winter, the many customers use our system. It is our goal that these customers have a pleasant and safe journey over the roadways.

Key Accomplishments

The new Four Bears Bridge was opened in October 2005, with the demolition of the old bridge to follow. The building of the new bridge and the removal of the old bridge provided many memorable events; as the public was invited to share in the dedication of the new

bridge, as well as observe the "dynamiting" of the old structure. Young and old gathered on the shoreline to watch the old structure come down in several pieces.



The the old Four Bears Bridge was demolished in October of 2005 after a new structure was built.

The four-laning of US 2 continued through 2005, 2006, and 2007; with 34 miles, 20 miles, and 29 miles respectively, being graded and paved the following years. This has allowed a completed segment from 13 miles north of Williston to 10 miles east of Stanley to be opened for traffic through the summer of 2007. The remaining segment from 10 miles east of Stanley to 8 miles east of Berthold will be paved in 2008 and opened to traffic, completing the 100-mile project. A dedication of the entire corridor is scheduled for the fall of 2008. Many positive comments have been received about the addition of the two lanes, including the feeling of how much safer it is to drive between Minot and Williston.

We have added a maintenance section in Tioga to better service the highways between Williston and Minot. The additional operators will be able to respond quicker to the needs of the added US 2, 4-lane, and well as ND 40 north of Tioga. The public should see a much quicker response to road conditions because of this section. The City of Tioga has been extremely helpful in finding a location for us to establish our section.

With the assistance of our equipment operators, we are spreading the word about how the department works by having them present the "Be Smart" program to all local schools in the area. Students are allowed to sit in the trucks as well as autograph the snowplows. Many safety ideas are planted in the minds of the young students, who hopefully, are taking the message home to their households.

Available Resources

This is a compilation of published reports, studies, and regulations. To get a copy of any of these documents, contact the NDDOT Communication Division at:

peganderson@nd.gov
701-328-2671

Bridge Division

- Structure description and inspection reports for all structures on state and county systems
- Copies of bridge plans
- Hydraulic studies
- Specific project file information

Civil Rights Division

- Davis-Bacon Wage and Payroll Requirements Handbook
- DBE Goal Setting Methodology
- DBE Program Administration Manual
- Disadvantaged Business Enterprise (DBE) Directory
- EEO Affirmative Action Plan Update
- External Civil Rights Manual
- On-the-Job Training Program
- Supportive Services Newsletter
- Title VI and Nondiscrimination Program Plan

Construction Services Division

- Pre-qualified contractor list
- Average annual bid prices
- Construction and road condition report
- Construction Manual
- Construction Records Manual
- Approved Subcontractor List
- Bidding Requirements and Conditions

Design Division

- Right of Way Acquisition Procedures for Local Public Agency/Federal-Aid Projects
- The NDDOT Relocation Assistance Program: When I Must Move
- Public information for highway and street projects
- Landowner Rights, North Dakota Eminent Domain Law
- Right of Way Manual
- Project concept reports
- Environmental impact statements
- Environmental assessments
- Archaeological reports
- Right of way plats
- Roadside Advertising in ND
- Mailboxes Can Be Hazardous to Your Health
- Design Manual and Guides
- Survey Manual and Guides
- CADD Standards and Guides

Drivers License and Traffic Safety Division

- Annual ND Highway Safety Plan
- Annual Crash Summary
- Life Source Donor Brochure
- Statistics on test results, licenses, permits, identification cards
- Driver guides for cars, motorcycles, trucks, and buses
- Drivers License site locations
- Evaluations of the safety plans
- Posters, pamphlets, and audiovisual materials on traffic safety
- Strategic Highway Safety Plan

Human Resources Division

- Employment brochures

Information Technology Division

- Special maps for sale to public
- Aerial photographs for other agencies and departments

Maintenance and Engineering Services Division

- Interactive reports to the public
- 511 and Traveler Information
- Spring load restriction postings

Materials and Research Division

- Field Sampling and Testing Manual
- Soil survey reports
- Aggregate pit information
- Bridge foundation reports
- Pavement deflection test reports
- Pavement thickness design
- Hot bituminous pavement recommendations
- Materials testing
- Research program
- Transportation Technician Qualification program

- Research Library

Planning and Programming Division

- ND Highway Statistics
- ND Traffic Report
- ND State Rail Plan
- ND State Tourist Map
- Statewide Transportation Improvement Program (STIP)
- ND incorporated city atlases
- ND annual speed monitoring report
- Specific highway information
- Roadway mileage
- Current and forecasted traffic
- Pavement condition data
- Pavement ride data
- Pavement strength data
- Urban area boundary maps
- County truck traffic data
- ND State, County, and city traffic volume data
- Reports on highway funding
- TransAction (ND Statewide Transportation Plan)

NDDOT History

1913

First State Highway Commission formed with three members. Governor L.B. Hanna chairman. No extra compensation.

1917

To get newly available federal funds, North Dakota abolished old commission, created new five-member body: governor as chairman, commissioners of agriculture and labor, and two members appointed by governor.

1920s

By mid-1922, construction completed on more than 1,000 miles of state highway: 20 were graveled; the rest were only earth-graded.

1925: Legislature created state highway fund to partially match federal aid.

1930s

1935: First drivers' licenses issued.

The department employed thousands with federal relief funds during the Depression.

In six years in the 1930s, under six governors, seven men served as highway commissioner.

1940s

During World War II there was a great shortage of highway materials.

Many highway engineers and other employees left for armed services.

Soldiers returning from Germany cited Autobahn, with its high speeds and controlled access, as model for highway design. This led to Interstate program.

1950s

Federal Aid Highway Act of 1956 created.

1956: First Interstate contracts in North Dakota let for section of US 10 between Valley City and Jamestown.

1960s

Interstate work continued.

1968: Highway Building on capitol grounds completed.

1970s

1977: North Dakota first state in union to let contract for final stretch of Interstate (I-29 between Drayton and Pembina).

1980s

With the completion of the Interstate, department needs changed from construction to maintenance. This philosophy exists to the present day.

Walter R. Hjelle retires after a total of 25 years as Highway Department director (1961-1983 and 1986-1988), the longest tenure in department history.

1990s

January 1990: North Dakota Highway Department became Department of Transportation. Motor Vehicle Department merged into NDDOT as Motor Vehicle Division.

For the first time, more state funding than just enough to match federal funds is necessary to preserve system

built over 75 years. System deteriorating faster than state can maintain it.

February 1997: After months of working with consultant, department issues its first strategic business plan.

January 1993–February 2000: Director Marshall W. Moore's tenure is the second-longest in NDDOT history.

2001

Newly elected Governor John Hoeven names new NDDOT Director David Sprynczynatyk to lead the effort to create a Statewide Strategic Transportation Plan involving all government jurisdictions, all modes of transportation, and the public.

2002

North Dakota's first Statewide Strategic Transportation Plan, TransAction, is completed and introduced by Governor John Hoeven and NDDOT Director David Sprynczynatyk.

2004

A survey was conducted, in cooperation with the University of North Dakota, to gather information regarding how well the department was meeting the needs of its customers. The results showed that 82% of the department's customers were either satisfied or very satisfied. The Drivers License and Motor Vehicle Division's product and service levels earned a 90% and 86% rating, respectively.

In late 2004, the Highway Performance Classification System was finalized, which was endorsed by the North Dakota Legislature during the 2005 session.

2005

The new Four Bears Bridge was opened in October, followed by the demolition of the old bridge.

2006

Francis Ziegler is appointed by Governor John Hoeven as the new NDDOT director.

North Dakota had 7,385 centerline miles of state highways, and an additional 99,239 miles of county and rural roads, streets, and trails. The 7,385 centerline miles equate to 8,458 roadway miles. At the end of 2006, NDDOT had opened an additional 46 roadway miles as a result of the US 2 four-lane initiative.

2007

TransAction II, the updated Statewide Strategic Transportation Plan, was published in the spring of 2007.