

# BIENNIAL REPORT

North Dakota Department of Transportation

2013-2015



*The Liberty Memorial, Expressway, BNSF Train, and Grant Marsh Bridges crossing the Missouri River.*

submitted by

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION**

Bismarck, North Dakota  
dot.nd.gov

**DIRECTOR**  
Grant Levi, P.E.

December 1, 2015



# North Dakota Department of Transportation

Grant Levi, P.E.  
*Director*

Jack Dalrymple  
*Governor*

December 1, 2015

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

Dear Governor Dalrymple:

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 2013 to 2015.

The department worked hard to enhance the state's transportation system by dedicating a record amount of resources to enhance safety and traffic movement by rebuilding, repairing and maintaining highways across the state.

In all, the North Dakota Department of Transportation's budget for the 2013-2015 Biennium was \$2.8 billion. This budget included maintenance and enhancement of state, county, city and township roadways, as well as funding for other NDDOT programs which provided snow and ice control, road maintenance, and drivers license and motor vehicle registration services throughout North Dakota. It also included an unprecedented sum in non-matching State General Fund dollars.

A few of the many accomplishments completed this past biennium include: working on the largest construction programs in state history; constructing several truck bypasses and truck reliever routes around the communities of Alexander, Dickinson, New Town, Watford City and Williston. The department also renewed nearly one million vehicle registrations each year.

Thanks to your support and leadership, and the support of our legislative body and our partners in the counties, cities, and townships along with our dedicated staff, the department was able to help meet transportation needs throughout the state.

Sincerely,

A handwritten signature in cursive script that reads "Grant Levi".

Grant Levi, P.E.  
Director

Enclosure



# *North Dakota Department of Transportation*

## **Biennial Report: July 1, 2013 through June 30, 2015**

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## *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, Safety and Motor Vehicle Divisions. 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).

## *Key 2013-2015 Legislation*

The 2013 Legislature passed historic transportation legislation appropriating a record amount of \$2.8 billion in transportation funding for the 2013-2015 biennium. The funding includes maintenance and enhancement of state, county, city and township roadways, as well as funding for other NDDOT programs which provide snow and ice control, road maintenance, driver's license and motor vehicle registration services throughout North Dakota.

Some NDDOT budget highlights included:

- Approximately \$2.26 billion to rebuild and repair state highways, city, county and township roads in every region of the state.
  - » SB 2012 and SB 2176 included \$1.16 billion in one-time funding from the general fund for enhanced state highway investments for western

North Dakota. The passage of SB 2176, made some of the funding contained in SB 2012 available early.

- » HB 1358 appropriated funding to counties and townships for local road projects.
- \$6.82 million was appropriated for new vehicle license plates. This included implementation of a new digital flat plate. A committee was utilized to decide on the new design of the plate.

Truck legislation included:

- SB 2025 - Overweight fines go to jurisdiction that oversees the roadway.
- HB 1124 - allows permits to be accepted in either printed or electronic format.

## Major Goals

The NDDOT's major goals are established through our Strategic Planning process, which has steadily evolved since its inception in 1997. Through these efforts, the Department continues to be recognized as the State's transportation leader that operates as a progressive and innovative organization that carries out its vision and mission.

### Vision

North Dakota's Transportation Leader Promoting:

***Safe Ways – Superior Service  
Economic Growth***

### Mission

***Safely move people and goods.***

As the Department strives to meet the transportation needs of the energy, agriculture, and manufacturing industries it is faced with increasing challenges. To meet these challenges and advance our mission the NDDOT has incorporated five strategic emphasis focus areas and goals.

### Strategic Focus Areas and Goals

**Safety** – Provide a safe and secure transportation system and workplace.

**Team** – Recruit, develop, and retain a high performing workforce that results in everyone working together to achieve our mission and vision.

**Service** – Be proactive and adaptive to provide superior external and internal services, products, and programs.

**Innovation** – Promote a culture of innovation to enhance external and internal services, products, and programs.

**Assets** – Preserve and enhance assets managed by NDDOT

### Values

In practicing the Department's values of *Professionalism, Respect, Integrity, Dedication, and Excellence* it will be successful in being North Dakota's transportation leader.

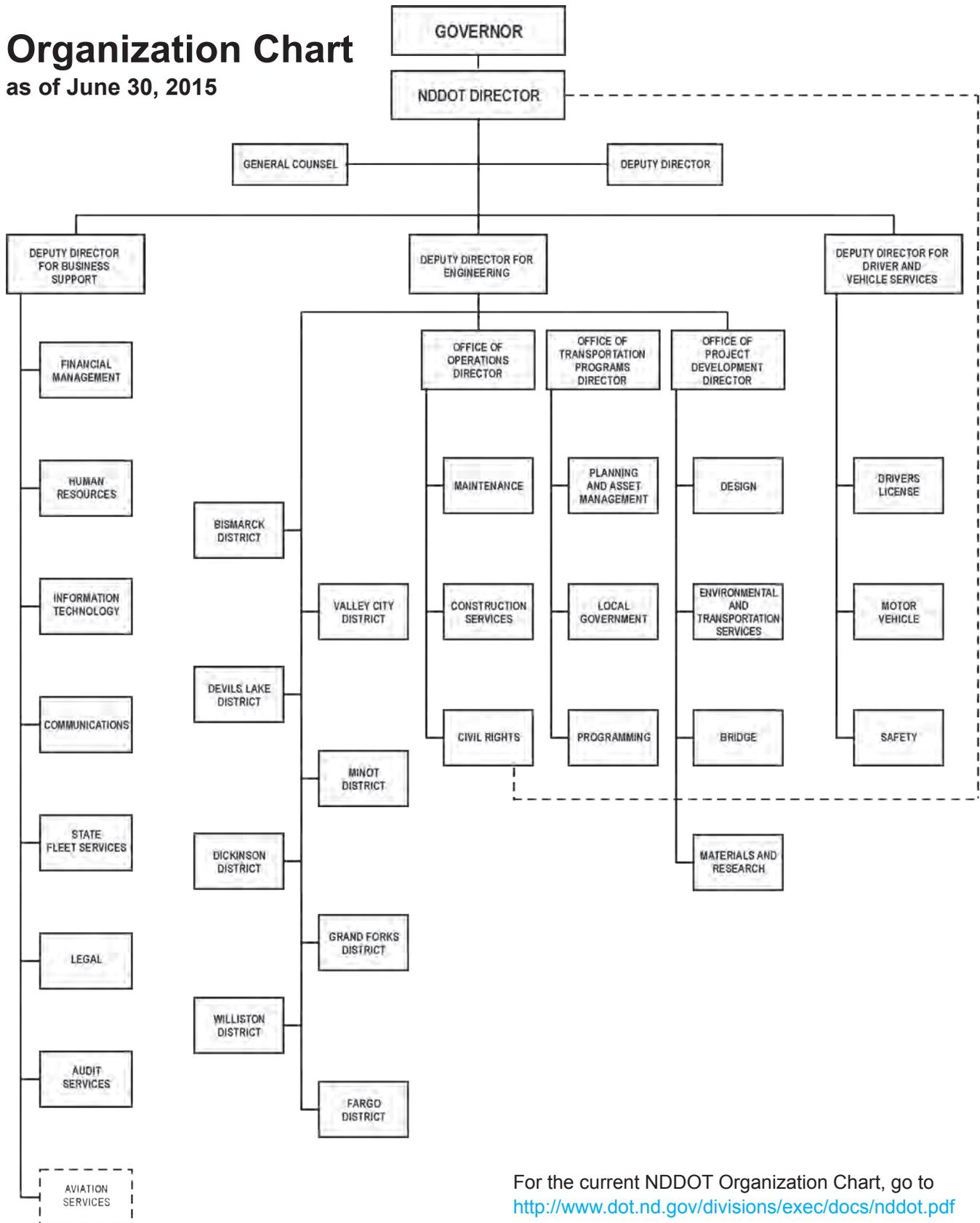
## Financial Data

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](http://www.nd.gov/fiscal).

# Organization Chart

as of June 30, 2015



For the current NDDOT Organization Chart, go to <http://www.dot.nd.gov/divisions/exec/docs/nddot.pdf>



## Office of Business Support



**The Office of Business Support includes all administrative divisions and the communications function. The Deputy Director is Darcy Rosendahl.**

## Audit Services

Daryl Splichal, Director

### Responsibilities and Activities

The Audit Services Division is responsible for performing internal audits of the North Dakota Department of Transportation (NDDOT) district and division activities, conducting audits of consultant engineers indirect cost rates and project costs, and verification of railroad and utility project costs. Audit Services is also responsible for motor carrier program audits, including federally required audits of International Fuel Tax Agreement (IFTA) and International Registration Program (IRP) registered North Dakota based motor carriers.

### Key Accomplishments:

The Audit Services Division continues to focus on ensuring applicable policies and regulations are followed and ensuring proper use of federal and/or state funds. This includes completion of mandated motor carrier audits and reviews of consulting engineers' indirect cost rates. IFTA and IRP program requirements include completion of audits for an average of 3 percent of registered motor carriers each year. Approximately 60 motor carrier audits were completed each year of the Biennium. Indirect cost rates submitted by architectural and engineering consulting firms for work on transportation projects are reviewed to ensure they comply with applicable federal regulations. Audit Services follows the AASHTO *Uniform Audit and Accounting Guide* in its reviews of consulting firms and helps to educate the firms regarding allowable costs. Approximately 15 firms were reviewed each of the past years to verify project costs and overhead rates. Other project audits include review of railroad transportation, safety and other local government transportation projects and contracts.

Internal audits were conducted annually of district inventory procedures and other NDDOT division procedures. Reviews of department policies and procedures are scheduled or conducted at the request of management personnel. Internal audits are conducted to verify compliance with regulations, contracts or program requirements, to address fraud or other potential risks, and to ensure proper controls are in place to accomplish department goals and objectives.

## Communications

Peggy Anderson, Director

### Responsibilities and Activities

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

The NDDOT communicates externally through the use of a website that contains up-to-date information about the department, its programs, policies, goals and its mission. The latest external

communication outlet used by the department is social media, such as Facebook and YouTube. Other avenues for external communication include: 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.

The Communication Division is also responsible for facilitating internal communications with our employees and constituents. The primary venue for internal communication is an employee-only website known as "MyDOT." The Communication Division also serves as a resource to the entire department by providing assistance in areas such as: information campaigns, talking points, speeches, PowerPoint presentations, videos, posters, biennial reports, brochures, handbooks, technical and statistical manuals, study guides, proofreading and graphics.



Communications employee, Terri Wilhelm, taping Governor's Budget Address, 12-3-2014.

Also part of the Communication Division is the Multi-Media Section. The Multi-Media Section is responsible for photography, video production, graphic design and web page design. Multi-Media provides many services to NDDOT and other state agencies by taking pictures and developing photographs, shooting, editing and producing videos; designing web pages as well as various print media, such as posters, manuals, reports, brochures and fliers.

## Key Accomplishments

During the 2013-2015 biennium, the Communication Division worked closely with every division and district throughout the NDDOT on numerous projects and campaigns.

These following accomplishments represent some of the highlights of the biennium.

- Distributed information to the public by sending out over 350 news releases each year in 2013 and 2014.
- Created YouTube videos on a regular basis to inform employees and the general public about various NDDOT programs including construction, safety, and snow and ice control.
- The NDDOT won a bronze Telly Award for our video documentary production entitled *Liberty Memorial Bridge; Proudly Honoring Veterans Since World War I*. The documentary, which was produced by the Communication Division's Multi-Media Section, chronicles the bridge's early history spanning over 80 years. The video explains how the bridge served and connected the communities of Bismarck and Mandan for decades until the construction of the new Liberty Memorial Bridge and then demolition of the historic bridge.
- Continued to provide up-to-date information regarding travel alerts, travel advisories, public meetings and events through the use of news releases, the department's website and Facebook page.
- Developed and promoted Snow Plow Operator Week in North Dakota February 24-28, 2014. The state recognized the efforts made by all snow plow drivers to keep roads maintained and safe for traveling motorists throughout the winter.
- The Communications Division completed a new NDDOT History Video and History Book called *Roads of Progress*, which have been distributed to school, college and city libraries throughout the state.
- Worked on several groundbreaking and ribbon cutting events for construction projects as NDDOT worked on the largest construction programs in state history during the 2013-2015 construction seasons.
- A new design was developed by Multi-Media staff and approved by the State Legislative Budget Committee for implementation of a new flat license plate in 2015. The new flat plate design, called the Sunrise Plate, will replace the embossed Buffalo plate that has been utilized for 23 years.



## Financial Management

Shannon Sauer, Director

### Responsibilities and Activities

The Financial Management Division is responsible for performing and overseeing the tasks required to accomplish:

- Accounting and reporting
- Budgeting
- Payroll
- Procurement
- Revenue forecasting
- Central supply
- Cash management
- Requisitions to State Purchasing Division

- Disposal of highway equipment and materials

### Key Accomplishments

During the past biennium, the Financial Management Division completed the following accomplishments:

- Accounted for \$2.85 billion in state and federal revenues and expenditures.
- Processed approximately 120,000 vendor payments.
- Processed and issued approximately 31,000 payroll checks.
- Developed the budget for the 2015-2017 biennium, which totals more than \$2.7 billion.

## Human Resources

Michael Sandal, Director

### Responsibilities and Activities

The Human Resources Division is responsible for a broad spectrum of programs impacting NDDOT employees. Responsibilities include, but are not limited to: recruitment and retention, salary administration, employee relations, payroll, performance and career development, position classification, policy development, management services and other activities that may arise due to legislative action or priorities.

In 2014, the Human Resources Division received the Lieutenant Governor's Well Workplace Bronze Award for the Employee Wellness Program.

### Strategic Training Plan

In an effort to formalize workforce development, Human Resources updated the Strategic Workforce Development Plan. This was done in collaboration with the Information Technology Division and the Engineering and Technical Training Manager contracted through Upper Great Plains Transportation Institute. An annual assessment of training needs is conducted via a meeting with training liaisons. Each division and district has representation. The leadership development program continues to be a focus.

### Salary Administration

The oil boom, coupled with shrinking qualified appli-

cant pools, mandates innovation in order to recruit and retain our workforce, and satisfy the growing service level expectations of the traveling public.

The department remains committed to remaining competitive in statewide salary markets. Intensive management of the department's authorized salary dollars allowed market based adjustments to best address this need during the biennium. The authorized salary levels for temporary employees were updated during this same period.

To meet recruitment oil country vacancy requirements the department now offers:

- A recruitment bonus for all classifications.
- A moving allowance for all vacant positions.
- A salary differential payment to offset the higher cost of labor for designated positions.
- A rental allowance payment to offset the higher cost of rental property.

### Recruiting Solutions

On February 12, 2014, the State of North Dakota implemented Oracle's PeopleSoft Recruiting Solutions. Recruiting Solutions is an updated, online application system which provides candidates and managers online access and management of the NDDOT selection process. Recruiting Solutions

does this by:

- Assisting Applicants (internal and external) to search, view and apply for NDDOT jobs online. Track the status of their applications. Quickly and easily apply for additional positions.
- Assisting Managers to identify and hire quality talent. Track the entire selection process and schedule interviews through MS Outlook without dual entry.
- Assisting Recruiters to track the entire selection process, ensure use of HR best practices and quickly screen applicant qualifications.

### Grants and Internship Program

The internship program provides hands on experience in NDDOT divisions and districts for college students.

NDDOT had 35 interns participate this biennium in this program. Grants were awarded to four college students majoring in engineering-related fields; NDDOT offered employment to these students upon graduation.

### Temporary Employee Health Insurance

Effective January 1, 2015, the department began offering health insurance for qualifying temporary employees as required by the Affordable Care Act (ACA). Temporary employees working 30 hours per week for a period of six months or longer were offered a single health insurance plan through NDPERS. The cost of the monthly premium was shared by the employee and the department.

## Information Technology

Russ Buchholz, Director

### Responsibilities and Activities

The Information Technology Division (ITD) is responsible for all technology-related activities including information systems, network and PC support, telecommunications, video conferencing, wired and wireless technology, information processing, technology training, web development and implementation, and e-business. ITD is also responsible for records management, printing, mailing, and building security.

In 2013, Information Technology Division was awarded funding for the NDRoad Mobile Application. The NDRoad Mobile Application received an award in the Mobile Web Application category at the AASHTO Transcomm 2014 Skills contest.

### Key Accomplishments

To better serve NDDOT divisions, employees and the general public, ITD focused on transitioning antiquated platforms into dynamic applications enhancing overall efficiency for the end users, public safety and commerce.

### System and Applications

**Conference and Training.** Online registration for NDDOT conferences and training streamlining registration, certification tracking and PDH documentation.

**Remote Access.** Web application allowing NDDOT to remote access all ITS devices in the field such as dynamic message signs, environmental sensor stations and closed circuit television modules and cameras.

**REFFILE Web Application.** Quick access to correspondence from 1980 to present regarding ND Highway signage requests. Provides viewing and input access based on user security credentials to individual records, multiple records, and reporting features.

**STARS (State Titling And Registration System).** Motor vehicle system modernization contract awarded to Fast Enterprises currently in the development phase with a go-live date of June 2016.

**NDRenewals Mobile App.** Users can renew vehicle registration, update permanent or temporary address and email. Provides a reminder when vehicle renewals are due.

**BlackCatGrants.** Web-based grant management system used by the Local Government Transit section to coordinate budget and grant tracking and facilitate project management supporting statewide transportation programs.

**CARS Overhead Clearances.** Construction services has the ability to track overhead clearance changes caused by road construction projects.

**dot.nd.gov (Internet).** Expanded division webpage content for public information.

**MyDOT (Intranet).** Improved information based on location and enhanced information flow.

**Carcass Tracking.** Western ND staff equipped with iPhones and Esri's mobile collector application to collect animal/vehicle crashes along with attributes about the animal directly in the field.

**Digital Driver's License System.** Added security features to reduce ability of counterfeit license production.

**Drivers License Knowledge Testing System.** Ten languages available including sign language in addition to immediate feedback to tester.

**DOT FleetFocus App.** Bi-monthly updates for fleet inventory/billing data including daily fuel prices downloaded to verify fuel billing accuracy.

**B2GNow.** Captures information from contractors electronically instead of the paper process.

**LCPTTracker.** Labor Compliance Software specializing in collecting, verifying and managing certified payrolls and other labor compliance related documents.

**System Center 2012 Configuration Manager.** Management suite to support over 1,200 devices.

**Secunia Software Vulnerability Management.** Third party software vulnerability patching.

**HEAT Service Management system.** Upgrade HelpDesk ticketing to IT Department technicians and support.

**VNDOT.** Configure conference rooms and install equipment for wireless video conference capability.



Wellness meeting using VNDOT.

## Telecommunications

**Tower sites.** Continue to maintain over 1,200 radios and stations for the NDDOT, State Radio and the Highway Patrol. Constructed new tower sites at Esmond and Mohall. Replacement buildings completed at Peer Creek and Hannaford DOT towers to accommodate State Radio stations. Co-located State Radio and DOT Stations at the Marmarth tower owned by Slope Electric Coop. New replacement buildings completed at Carrington, Driscoll, Finley Wahpeton, Cleveland, Fortuna, Mott and Dogden Butte towers.

**Davicom.** New tower site monitor system.



Photo taken with PTZ Camera of the Lewis and Clark Bridge construction.

**PTZ Cameras.** Added cameras statewide including the Lewis and Clark Bridge project location.

## Printing and Mailing

Printed and distributed updated version *Road and Bridge Standard Specifications*.

Printed and distributed *Roads of Progress – History of NDDOT*.

**Loading Dock/Garage.** New enclosed area providing additional security for incoming and outgoing shipments.

## Legal

Dreux Kautzmann, General Counsel

### Responsibilities and Activities

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



Jenny Klein of the Legal Division.

### Key Accomplishments

#### July 1, 2013 – June 30, 2014

- Legal Division held 2,365 driver's license hearings; 2,040 were implied consent hearings (DUIs).

- Legal Division reviewed and assisted with the administration of approximately 2,083 contract documents.

#### July 1, 2014 – June 30, 2015

- Legal Division held 2,542 drivers license hearings; 1,894 were implied consent hearings (DUIs).
- Legal Division reviewed and assisted with the administration of approximately 1,750 contract documents.

#### July 1, 2013 – June 30, 2015

- Legal Division held 4,907 driver's license hearings. Implied consent hearings (DUIs) decreased by 1.2 percent over the previous biennium.
- Legal Division reviewed and assisted with the administration of approximately 3,833 contract documents, a 3.3 percent decrease over the previous biennium.

The Legal Division is expected to meet additional challenges during the 2015-2017 biennium in the areas of right-of-way acquisition, contracts and risk management.

## State Fleet Services

Robin Rehborg, 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 3,650 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, the state fuel contract and driver ID program and the NDDOT insurance programs.

### Key Accomplishments

All state employees who drive state vehicles at least once a month are required to take a DDC course every four years. State Fleet offers both classroom and online classes. In 2014, State Fleet held 46 instructor-led classes training 930 employees and 1,115 employees took the online course. From January through June 2015, 37 instructor-led courses were held training 785 employees and 619 employees took the online course. The university system has also implemented an online course which is in its infancy.

State Fleets DDC Instructor was awarded the Outstanding Safety Instructor award in 2014 and 2015. The instructor has received this honor four years in a row.

In an effort to streamline the fuel payment process, State Fleet collaborated with NDDOT IT and State

ITD to develop a fuel software system. The system has many facets to check for exceptions, items which should not be charged to the Voyager Card and fraudulent fills. It has cut the time spent on paying the fuel bill every two weeks from days to one day or less.

In January 2015, State Fleet entered into a rebate program with the current contracted fuel vendor. For the last six months of the biennium the fleet recouped an average of \$1,450 per month in retail fuel purchases.

In July 2013, State Fleet went live with the Driver ID program. This program replaced the old credit card PIN number. Each state employee that drives a state vehicle must have a driver ID number. This new system allows State Fleet to identify who is using the vehicle credit card, where it is used, and what type of purchase was made. If a question arises on a transaction the user can be contacted directly to answer any questions. State Fleet manages the database of approximately 13,000 driver ID numbers.



# Office of Driver and Vehicle Services



**The Office of  
Driver and  
Vehicle Services  
includes the  
Drivers License,  
Motor Vehicle and  
Safety Divisions.  
The Deputy  
Director is  
Mark Nelson.**

## Drivers License

Glenn Jackson, Director

### Responsibilities and Activities

The Drivers License Division provides identification validation, licensing and driver record management services for all North Dakota drivers. Drivers License Examiners process each applicant for licensure in the state, who are evaluated for identity, residency and qualification to include both knowledge and skill, and issued the pertinent permit, license or non-driver identification card, thereby ensuring individuals licensed in North Dakota are fully authorized and capable.

Drivers License clerks provide record management services for the division that links the driving record with the court system, to ensure that only those driving errors the individual is convicted of become part of the record. This also involves suspending, cancelling and revoking licenses, enforcing the points schedule, processing hearing requests, collecting funds for driver records and abstracts, reinstatements, verification of insurance and other actions to ensure the driving record is accurate. The division also provides administrative support for all sites, from logistic support to financial management, to ensure the state wide division team has all the tools necessary for success.

### Key Accomplishments

From July 1, 2013, through June 30, 2015, the division processed 449,966 permits and licenses; 35,096 identification cards; administered 224,553 written tests, 107,385 driving tests, and 330,264 vision screenings. In addition, the division processed 95,970 suspensions, revocations, and cancellations; 290,528 traffic citations; 7,241 Temporary Restricted Licenses; 14,151 implied consent violations; and 8,096 hearings.

The division completed a digital driver license system upgrade program that enhanced license and identification card security through an upgrade of the collateral and improved camera and printing systems. The division implemented a commercial driver testing system upgrade to tablet scoring system, improving efficiency in the process. The division initiated a customer satisfaction survey process at all driver license sites and after two years of data the current satisfaction rating is above 95 percent.

## Motor Vehicle

Linda Sitz, 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 its central office in Bismarck, seven privatized

branch offices, six chamber of commerce offices and seven county treasurer's offices. Services are provided in person, by mail, by fax, by email and through the internet. Five 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 Bismarck, Carson, Langdon, Minot and Dickinson. All of these licensing and registration operations provide enhanced customer service for the citizens of our state.

## Key Accomplishments

During the 2013-2015 biennium, the division processed more than 3.6 million customer transactions, and responded to approximately 320,000 customer inquiries via telephone, email, letter and fax. The division registered 1,054,751 vehicles in FY2014 and 1,084,593 in FY2015. Use of the online vehicle registration renewal system continues to increase. During the 2013-2015 biennium, 453,213 vehicles were renewed online, for an average of approximately 25 percent of all renewals processed. 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. The Motor Vehicle Division implemented the following enhancements: online title lookup available on the public website, have five branch offices that currently issue titles, MV Business Process Modeling research conducted to map current processes, began data cleanup of current database, implemented a new refund policy and live paperwork policy, legislation passed for a new general license plate issuance.



*The Sunrise Plate.*

## Safety

Karin Mongeon, Director

### Responsibilities and Activities

The Safety Division develops, implements, and evaluates programs designed to reduce motor vehicle crashes, fatalities and injuries.

### Key Accomplishments

#### Traffic Records Program

The Traffic Records Program is responsible to collect and analyze crash data to identify traffic safety problems in North Dakota to address through the safety planning processes administered by the Safety Division. The Traffic Records program also works to coordinate other data sources pertinent to roadway safety including driver, vehicle, roadway, injury, court and other data sources.

- Completed the annual *North Dakota Crash Summary*, data analysis for the Highway Safety Improvement Program, performance measure development for the *Highway Safety Plan*, and critical crash analysis for enforcement planning.

- Provided crash analysis to various customers of the NDDOT.
- Began TraCS (Traffic and Criminal Software) conversion for law enforcement users from TraCS 10 to TraCSWeb.
- About 95 percent of crash reports are now received electronically through TraCS.

#### Strategic Highway Safety Plan

The Safety Division is responsible to coordinate the development, implementation and evaluation of the North Dakota Strategic Highway Safety Plan (SHSP) in cooperation with local, state, federal, tribal and private sector safety stakeholders. The SHSP is a data-driven, multi-year comprehensive plan that establishes statewide goals, objectives, and key emphasis areas and integrates the four Es of highway safety: engineering, education, enforcement and emergency medical services (EMS). The SHSP allows highway safety programs and partners in the state to work together in an effort

to align goals, leverage resources and collectively address the state's safety challenges.

- Established an SHSP Executive Leadership Team comprised of state and local officials/leaders to assist the NDDOT, the NDDOT Steering Committee, and SHSP stakeholders to advance motor vehicle safety strategies within the SHSP.
- Worked with the SHSP Steering Committee to: (1) establish Priority Emphasis Area Teams to work toward active implementation of safety strategies identified in the SHSP for each of the six priority emphasis areas; (2) review progress with SHSP strategy implementation and evaluation; and (3) plan and conduct the annual SHSP stakeholder conference – the North Dakota Traffic Safety Partner Summit held in Bismarck in April 2014.

### Traffic Safety Program

The Traffic Safety Program is responsible for the administration of grant programs to change driver and passenger behaviors to reduce fatalities and injuries caused by motor vehicle crashes.

- Applied for and received grant funding through the National Highway Traffic Safety Administration (NHTSA) under the federal requirements of MAP-21 (Moving Ahead for Progress in the 21st Century) – the federal transportation bill – for programs to support traffic safety programming statewide.
- Provided overtime grant funds, enforcement equipment and training to participating state, county and city law enforcement agencies to conduct sustained, multi-agency, high-visibility enforcement to encourage seat belt use and deter impaired and distracted driving.
- Conducted a comprehensive assessment of the state's Impaired Driving Prevention Program to identify strengths, weaknesses, opportunities, and barriers to the effective prevention, enforcement, arrest, prosecution, and adjudication of impaired driving.
- Provided continued grant support to the North Dakota Driver and Traffic Safety Education Association (NDDTSEA) to advance driver education in the state. And, obtained funding support through private sector businesses for the purchase of in-

car video used to record teen driving experiences for use in classroom activities.

- Promoted Parents LEAD (Listen, Educate, Ask, Discuss), an underage drinking prevention program for parents/caregivers that provides resources and information to prevent underage alcohol consumption. The program is jointly administered between four state agencies: the NDDOT, the North Dakota University System, the North Dakota Department of Human Services, and North Dakota State University Extension Service.
- Developed a media tag, *Code for the Road. Follow the Rules. Follow the Law.*, as the umbrella message for statewide traffic safety campaigns.

- Conducted two Driving Skills for Life (DSFL) programs for teens in Bismarck and Dickinson. The events consisted of a ride and drive session conducted via law enforcement officers where the teens had the opportunity to drive through a driving range under normal conditions and then again while taking a selfie while driving and then being distracted as someone texted them as they drove. And, participants were escorted through a series of traffic safety information, activity and photo opportunity stations. The program was made possible through program sponsors including the North Dakota National Guard, Eide Ford (Bismarck), Parkway Ford (Dickinson), and other traffic safety partners.
- Grants were provided to two tribes to administer Tribal Community Traffic Safety Programs for outreach through public information and education activities. Media in the form of TV, radio and print ads (for use with newspaper, posters, billboards, etc.) was produced and distributed on each of North Dakota's four reservations.
- Provided grant funds to the North Dakota Association of Counties to provide outreach through public information and education activities to county-level leadership and employees.



# Office of Project Development



*Hwy. 281 over the James River, New Rockford*

**The Office of Project Development includes the Bridge, Design, Environmental and Transportation Services and Materials and Research Divisions. The Office Director is Bob Fode. This office is administered by Ron Henke, Deputy Director of Engineering.**

## Bridge

Terry Udland, Engineer

### Responsibilities and Activities

Bridge Division's primary responsibilities include:

- Write environmental documents for structure rehabilitation and replacement projects.
- Design and prepare plans for rehabilitation and replacement of state highway bridges.
- Inspect bridges on state, county, and city roads.
- Rate state and local bridges for load-carrying capacity.
- Prepare structural hydraulic reports.
- Issue drainage permits.
- Develop and analyze roadway hydraulics.

Based on need, Bridge Division is continuously planning and scheduling the rehabilitation and the replacement of the state's existing bridges.

### Key Accomplishments

#### Design Section

Designed and prepared plans for seven new bridges, five new box culverts and 20 box culvert extensions, 52 sites of miscellaneous work for rail retrofits, approach slabs, deck overlays, bridge painting, and general maintenance. Assisted consultants and reviewed their design and plan preparation on 20 projects.

Some of the new bridges are:

- ND 31 over the Cannon Ball River.
- US 281 over the James River in New Rockford.
- ND 23 over Cherry Creek in Watford City.
- US 85 over Little Muddy River at two locations.
- I-94 Interchange Structure at West Dickinson Bypass.

#### Structure Management Section

Processed routine bridge inspection reports for over 4,800 bridges through cooperation with the bridge inspectors from NDDOT's eight districts.

Structural Management rated new and existing bridges for load carrying capacity in conjunction with the ND Highway Patrol Permit Section. The Automated Routing System that came into use in June 2013 has allowed many permit applications to be analyzed automatically and reduced the Bridge Division's time requirements by 75 percent.

The Structure Management Section provides information to consultants, counties, and cities regarding the condition of local bridges.

This enables the owners to program improvements with Local Government Division.

NDDOT purchased an Aspen Aerial A-62 snooper to be used for detailed bridge inspections. This picture shows it being used on I-94 Grant Marsh Bridge over the Missouri River.



### Preliminary Engineering and Hydraulics Section

The preliminary engineering and hydraulics section of the Bridge Division performs hydrologic and hydraulic analysis and design for urban storm drains and rural roadway culverts and prepares hydraulic reports for box culverts and bridges. This section investigates drainage-related complaints, reviews assessment drain crossings, provides drainage permits, authors environmental documents for stand-alone structural improvement and bridge replacement projects, and provides recommendations for complex erosion control situations.

### 2013-2015 Biennium:

- Authored environmental documents for 14 stand-alone structural improvement or drainage projects.
- Prepared 10 hydraulic reports for new structures.
- Designed two urban storm drain systems.
- Hydrologic and hydraulic analysis and culvert size recommendations were performed for approximately 40 rural highway projects on the state system.
- Completed 10 separate drainage investigations.
- Prepared 31 permits for drainage requests on highway right of way.
- Reviewed hydraulic activities associated with consultant-developed projects on the state highway system.
- Performed one hydrologic analysis for a grade raise in a closed basin.

## Design

Roger Weigel, 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; provide CAD support; prepare right of way plats; coordinate and conduct all aerial photographs and surveys; utility coordination on state highways; maintain design policies in Design Manual; and provide technical support for design consultants.

### Key Accomplishments

#### Roundabouts

A roundabout decreases delay times, improves flow, decreases conflict points for potential crashes, and decreases the severity of crashes. The roundabout south of Killdeer was the first for the NDDOT. Because of the success at Killdeer, several other roundabouts throughout the state are being developed and constructed. The locations include; the intersection of ND 200 and ND 58, and two others along ND 23 east of Watford City at Johnson's Corner and Keene's Corner. The Killdeer Bypass is incorporating two roundabouts, one at

the south Jct. ND 200 and another at the north Jct. ND 22. The Killdeer Bypass has been bid and will be constructed in 2016. The Jct. US 52/US 281 in Carrington is currently under development and is planned for 2016 construction.

### Major Urban Projects

#### Watford City

**ND 23B in Watford City from 7th Street to ND 1806.** The ND 23B project in Watford City started in 2012 in conjunction with the ND 23 corridor east to the Reservation Boundary. The project was developed to incorporate an urban section from 7th Street to the new Southeast Bypass and to accommodate the traffic demand. The project consisted of reconstruction with concrete, widening to a three-lane section with curb and gutter, extension of the shared-use path with pedestrian underpass, pedestrian crosswalks, street lighting, storm drain, traffic signal at 12th Street NE, and replaced the structure across Cherry Creek. The project is currently under construction and will be completed in 2016.

**US 85B in Watford City.** US 85B west and south of Watford City connecting to the new Southwest Bypass is currently being developed. The project

is anticipated to include an urban concrete section, widening to a three-lane section, curb and gutter, storm drain, street lighting, and pedestrian crosswalks.

**New Town**

**ND 23B Northeast Truck Reliever Route (NE TRR).** The NE Truck Reliever Route (TRR) was developed and constructed on the north east side of New Town to relieve truck congestion on Main Street/ND 23 from the intersection of ND 1804/ND23 to approximately one mile east of College Drive. The NE TRR consisted of a new two-lane asphalt section with concrete intersections, turn lanes, and a traffic signal at the intersection of ND 23B/ND 23. The project was completed in 2014.

**ND 1804 in New Town from the Junction of ND 23 to the new Truck Reliever Route.** Traffic along ND 1804 between New Town and Williston has increased in recent years due to the traffic generated by the oil activities. The need for improvement was driven by the volume of truck traffic in the area, lack of designated turn lanes, narrow shoulders, rutting at the intersection, access issues and lack of pedestrian facilities. The project consisted of reconstruction with concrete, widening ND 1804 to a three-lane section, installation of sidewalks, driveway improvements, storm drain, street lighting along ND 1804, traffic signal at ND 23/ND 1804 intersection, pedestrian crosswalks, flashing beacon at 39½ Street and incidentals.



Construction of ND 1804 in New Town from the junction of ND 23 to

**ND 23 and New Town Main Street.** New Town Main Street and ND 23 were also in a similar situation as ND 1804 for there was an increase in traffic along ND 23 generated by oil activity. ND 23 was reconstructed from the intersection of ND 1804/ND 23 to East Avenue. The project consisted of recon-

struction with concrete, widening to a three-lane section, frontage roads, pedestrian facilities and crosswalks, storm drain and street lighting.

ND 23 from East Avenue to ND 23B Northeast Truck Reliever Route was constructed with concrete. The project consisted of a concrete overlay and widening to a three-lane section with shoulders, pedestrian crosswalks, street lighting and a signal at College Drive.

**West Fargo**

**West Fargo Main Avenue Reconstruction.** This project is the third and last segment of reconstruction programmed for West Fargo Main Avenue. The environmental document for Main Avenue was prepared in 2007 and approved in 2008. The middle segment extending from Morrison Street to 5th Steer East was constructed in 2009. The east segment extending from 5th Street East to 45th Street East was constructed in 2012. This segment extends from I-94 to Morrison Street and is a scheduled as a two-year construction project for 2015 to 2016. The project consists of replacing a five-lane non-divided rural roadway with a four-lane divided urban roadway. The existing frontage roads were removed and replaced with sidewalks, shared use path and storm water detention. In addition, the Sheyenne River Bridge and Legal Drain 21 will be replaced with box culverts. This segment will complete a four-lane urban roadway corridor that extends from the I-94 West Fargo Interchange to 25th Street in Fargo, a distance of 5.7 miles.



Paving on West Fargo Main Avenue.

**Statewide Basemap Phase I completed.** The Photogrammetry Section of Design joined forces with Department of Emergency Services to create sub-meter accurate roadway centerlines for every single maintained roadway in North Dakota. Using aerial photography, the final images were collected in November of 2013. These images were then

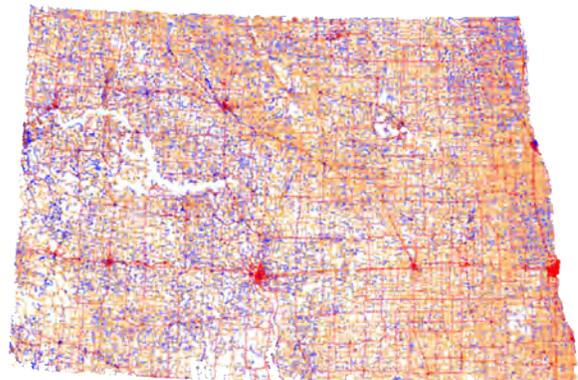
formed into a giant ortho-rectified mosaic from which the roadway centerlines were then digitized. The last roadway centerline was collected and delivered, on schedule and under budget, on January 26th 2015. Over 125,000 images were utilized to create 118,357

miles of roadway centerline data. The resultant map and addressing data will be used by emergency response personnel and other State Agencies. Members of the Basemap team, including NDDOT pilots and crew, can be seen in the following photo:



The image to the right shows the 305,271 road segments that were digitized, creating:

- 118,357 miles of centerline data
- 20,148 miles of paved roads
- 65,507 miles of unpaved roads
- 32,702 miles of miscellaneous roads



### Sign Replacement

A state wide initiative started to replace guide, regulatory, and warning signs that no longer meet minimum reflectivity levels as well as regulatory and warnings signs older than 10 years. Sign replacement projects began in the Fargo and Grand Forks Districts. Sign replacements are planned for Bismarck, Valley City, Dickinson, Williston, Minot and Devils Lake Districts. Highways are prioritized based on Highway Performance classification starting with Interstate and continuing through the District Collectors. Maintaining signs to meet the minimum reflective levels set forth in the *Manual*

*on Uniform Traffic Control Devices (MUTCD)* will promote highway safety and efficiency by providing clear, uniform guidance and information for the roadway user.

### Flashing Yellow Left Turn Arrows

Flashing yellow arrows replace the green ball on left turn traffic signal heads to help reduce driver confusion when to yield to oncoming traffic. Recently, flashing yellow arrows have been included on new traffic signal system installations, South Washington Street in Grand Forks, and on the Bismarck Expressway traffic signal revision project.

## Environmental and Transportation Services

Mark Gaydos, Engineer

### Responsibilities and Activities

The Environmental and Transportation Services Division provides support and allied services necessary to carry out the project development activities within the department. Activities are coordinated with roadway design, bridge design and material divisions to assure that projects are developed in a timely and cost effective manner while maintaining appropriate sensitivity to environmental and cultural resource concerns and assuring that affected property owners are treated fairly in conformance with applicable state and federal laws and all applicable rules and regulations.

The division is comprised of five major functions, which include: Environmental Services, Cultural Resource Services, Right of Way Services, Consultant Administration Services and Technical Services.

### Environmental Services

Environmental services are provided by two sections. They provide guidance, procedures, and project documentation to assure proposed projects comply with the National Environmental Policy Act, and other related federal and state laws and regulations.



Wetlands along Hwy. 21, maintenance project near Carson, 2014

They perform wetlands services such as delineations and development and monitoring of mitigation sites and banks. Other responsibilities include studies and coordination with threatened and endangered species, migratory birds, wildlife, biological assessments, noise, stormwater and material clearances. They prepare and obtain necessary project permitting associated with federal and state requirements and environmental commitments and mitigation are tracked to ensure compliance for impacts related to highway construction projects.

### Cultural Resource Services

The cultural resource section provides guidance, procedures, and project documentation to assure proposed projects comply with the National Historic Preservation Act and other related federal and state laws and regulations.



The old Crystal Springs fountain alongside the original stretch of Highway 10 west of Medina.

The section performs archaeological services, inventories, mitigation, monitoring of historical sites and monitoring of construction projects to ensure compliance. The section also provides tribal consultation, agency coordination, and completes the necessary project permitting associated with federal and state requirements.

### Right of Way Services

The right of way section provides services related to the acquisition and management of all real properties necessary for highway purposes including, highway right of way, rest and recreation areas, and tracts of land necessary for the restoration, preservation, and enhancement of scenic beauty adjacent to the state highway system.

### Technical Services

The technical services section develops the department's *Standard Specifications for Road and Bridge Construction, Supplement Specifications, Special Provisions, Value Engineering* for construction projects and other associated engineering studies.

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

### Consultant Administration Services

The consultant administration section performs solicitations for consultant services, including preliminary engineering, construction engineering and architectural services. The section prepares request for proposals, conducts interviews and selections, and negotiates contracts (scope of work and fees) and supplemental agreements with the consultants.

In addition, the section processes payments for preconstruction engineering, maintains current status of preliminary engineering contracts, maintains consultant expenditures and compares these costs with the department's budget allocation for consultant services.

### Key Accomplishments:

#### July 1, 2013 to June 30, 2014

- Updated and created several subject area webpages for material source approvals, environmental permitting, cultural resources, highway traffic noise and wetlands.
- Revised procedures and published a Wetlands, Permitting and Vegetation section of the *Design Manual*. Developed and delivered a two-day advanced training course on conducting wetland delineations.
- Renewed the department's commitment to effective tribal consultation meeting National Highway Preservation Act Requirements. The *North Dakota Tribal Consultation Programmatic Agreement* was ratified by numerous Tribal partners, FHWA and NDDOT.

#### July 1, 2014 to June 30, 2015

- The *Standard Specifications for Road and Bridge Construction* was published. This was a comprehensive rewrite last completed in 1986 and included a change to imperative mood and active voice.
- Participated in the Office of Project Development Conference. This conference included the development and delivery of training sessions regarding the right of way process and wetlands and permitting necessary for internal staff and external consultants in developing highway projects. Over 380 people attended the conference and over 230 people attended the training sessions.
- Revised procedures and published manuals for Consulting Engineering Services and Value Engineering.
- Developed a carcass data collection pilot program in western North Dakota. The program is intended to identify potential high animal vehicle collision locations and assist in evaluating measures to reduce those collisions.
- The NDDOT, FHWA and the Tribal Consultation Committee received the Advisory Council on Historic Preservation (ACHP) Chairman's Award for Achievement in Historic Preservation for creating a better tribal consultation process. This award commended the long term effort of the member Tribes, FHWA and NDDOT in development of the *Programmatic Agreement for Tribal Consultation* and the commitment to participation in the regularly held Tribal Consultation Committee meetings.

## Materials and Research

Ron Horner, Engineer

### Responsibilities and Activities

Our division's primary responsibility is assurance of the quality and economy of highway and bridge construction through the control of materials.

The division is made up of the following sections: Bituminous, Geotechnical, Gravel Prospecting, Testing Laboratory, and Pavement Design and Research sections.

### Key Accomplishments

#### Testing Laboratory

- Tested high volumes of highway materials like aggregate, cement, soil, and paint and glass beads used in project construction, meeting required test dates. Maintained national accreditation of the testing laboratory.
- Served as materials testing resource throughout the state during pre-construction and construction phases.
- Continued the aggregate reference sample program for verification and compliance purposes between NDDOT and industry.
- Provided instruction of test procedures to enrolled participants in Technical Certification Program. Provided certification by participants' performance in completing all procedures correctly.

#### Bituminous Section

- Tested asphaltic materials used on NDDOT construction projects.
- Evaluated and approved superpave mix designs for paving projects.
- As member of the Combined States Binder Group determined asphalt cement supplier's compliance with specifications and procedures.
- Developed material recommendations for paving plans based on traffic levels and project location. These are used to estimate plan quantity and incorporate different material quality levels for each project.
- Assisted in the asphalt related changes and revisions in the *NDDOT Standard Specifications for Road and Bridge Construction* and *NDDOT Field Sampling and Testing Manual* to reflect current construction practices.

- Incorporated construction procedures and materials selection into asphalt paving projects for recycled asphalt pavement, warm mix asphalt use in late season paving and improving centerline joints.
- Monitored all asphalt paving projects in the state including chip seal, micro-surface and slurry seal for specification compliance and construction problems.
- Served as a resource for questions regarding mix designs, specifications, bituminous materials and construction issues that arise during paving. Provided dispute resolution with contractors and the districts when problems arose.
- Monitored projects for Quality Control/Quality Assurance (QC/QA) compliance.
- Trained and demonstrated mix design and liquid asphalt testing for bituminous certification classes and other interested groups.

#### Gravel Prospecting Section

- Aggregate demand has grown due to drastic improvements needed for increased traffic and infrastructure needs. We have continued to locate quality aggregate sources to provide contractors the option to bid on state projects and to ultimately lower overall costs. Gravel pits that are found and secured are advertised through the bidder's plans and proposals. The information includes pit plat drawings, boring logs of test holes of aggregate source, pit analysis and other pertinent information the contractor may need for mining plans and bidder costs.



Field testing for gravel.

- Tested, monitored, and evaluated state-owned aggregate sources to be used in upcoming projects, and released exhausted sources.
- Maintained an aggregate information database with pit usage, compiled usage reports, and assisted the public in aggregate material requests.

### Geotechnical Section

#### July 1, 2013 to June 30, 2014

- Designed and constructed the following landslide areas:
  - » Hwy. 8 near Reference Point 124 (North of Halliday)
  - » I-94 near Reference Point 32 (Consultant Support)
- Installed and monitored instrumentation for construction of the 116th Avenue interchange embankments near Dickinson.
- Provided guidance and support for several construction projects in the Williston and Dickinson Districts.

#### July 1, 2014 to June 30, 2015

- Launched Soil Nail Wall on Hwy. 46 near the Wild Rice River.



Soil nail wall on Hwy. 46.

- Assisted in rewrite of the *NDDOT Standard Specifications for Road and Bridge Construction* as well as the *NDDOT Field Sampling and Testing Manual*.
- Installed frost heave monitoring instrumentation on Hwy. 1 north of Lakota.

### Pavement Design and Research Section

The Pavement Design and Research Section provided pavement designs used by NDDOT designers' and consultants for rehabilitation, reconstruction and maintenance of NDDOT highway and bridge projects, and managed the department's research program.

Monitored continuing research and initiated new research projects:

- Evaluation of warm mix asphalt pavements.
- Stabilization of soil/base layers for asphalt pavements.
- Evaluation of pavement marking materials.
- Evaluation of joint repair techniques on large diameter culverts and Cure-in-Place Pipe Liners (CIPP).
- Evaluation of best practices for sealing cracks in HMA pavements.
- Literature review of best repair materials and methods for early opening of repaired PCC pavements.

Performed other diverse activities including:

- Collected pavement surface profile data to support the department's *Ride Specifications Manual* to ensure contractors construct smooth, long lasting HMA and PCC pavements.
- Collected Falling Weight Deflectometer (FWD) data for pavement and subgrade strength to support NDDOT districts' efforts to administer springtime load restrictions.
- Reviewed welder qualifications to certify welders for work on NDDOT projects.
- Reviewed geotextile material certifications for compliance with NDDOT specifications.
- Administered shop inspection contracts for fabrication of overhead sign structures and steel bridges.

# Office of Operations



Scour at the end of an approach pipe.

**The Office of  
Operations includes  
the Civil Rights,  
Construction  
Services and  
Maintenance  
Divisions. This office  
is administered by  
Wayde Swenson,  
Office Director.**

## Civil Rights

Ramona Bernard, Director

### Responsibilities and Activities

The Civil Rights Division manages eight federally-mandated (US-DOT) programs:

- Disadvantaged Business Enterprise (DBE)
- On-the-Job Training (OJT)
- DBE and OJT Supportive Services (DBE/SS and OJT/SS)
- DBE Business Development Program (BDP)
- Contractor Compliance Reviews
- Labor Compliance
- Title VI and Nondiscrimination/ADA
- Internal EEO/AAR/Title VII

### Key Accomplishments

#### July 1, 2013 to June 30, 2014

- Procured a Spanish translation and auditory recording of the *Noncommercial Drivers License Manual* and the *Motorcycle Operators Manual* for the public. (1/2015)
- Established the DBE Business Development Program to assist DBEs in growing their businesses along with the OJT Program Assessment and Strategic Planning Initiative in an effort to assess and fine-tune the relevancy of the department's program.
- The division accomplished a complete redesign of the statistical method and more complex and accurate analysis used to set hiring goals, and moved to a more complex and accurate analysis of the available workforce for the department. In 2014, the department adopted a five-year plan under which absolute parity for women and minorities will be accomplished.

#### July 1, 2014 to June 30, 2015

- In 2014, the division created online forms to assist in performing the analysis of certified payroll for EEO purposes. These forms saved the division 150+ hours of staff time and allowed reviewed contractors to easily check their progress in terms of EEO requirements on a project.
- Initiated the department's Civil Rights Certification and Compliance System based on the B2Gnow and LCPTracker platforms. Prior to this time, all federally required contract tracking was received on paper and reported using excel workbooks.
- In 2015, the division chose and purchased LCP Tracker and scheduled training for division staff. One prime contractor and all lower tier subcontractors on a large federal-aid contract began using LCP Tracker as a pilot project to identify issues prior to the required use of LCP Tracker by 2016.

### **Contractor Compliance Review**

The annual review of at least 10 prime contractors in the requirements of a broad spectrum of EEO laws and programs including the Civil Rights Act of 1964 as amended and related NDDOT contract special provisions of OJT, DBE and affirmative action.

### **Disadvantaged Business Enterprise Program (DBE)**

The DBE certification is a U.S. Department of Transportation program for transportation-related firms that are owned and controlled by minority, female, and other socially and economically disadvantaged individuals. The department encourages the use of DBE contractors through the assignment of goals on federal-aid highway construction projects. Project goals are based on the potential for DBE participation, type of work, location and total contract dollar amount. Prime contractors must meet the assigned project goal or show good faith efforts toward meeting their goal.

### **On-the-Job Trainees (OJT)**

The OJT program provides skilled craft training in heavy highway construction for minorities, women, and economically disadvantaged individuals. Each year about 20 trainees graduate to journey workers. Prime contractors prepare their trainees for full-time high-paying jobs while providing replacements for retiring employees and job vacancies due to competition from other industries. Current employees are eligible for skill-upgrades in addition to external recruitment to fill trainee positions.

### **DBE/OJT Supportive Services**

NDDOT provides technical assistance and support for the DBE and OJT Programs. DBE/SS assists in-state and out-of-state businesses with DBE applications. Additionally, DBE/SS enters DBE payments as the department tracks DBE participation. OJT/

SS monitors trainees' progress in their programs, evaluates trainee qualifications, assures correct wage rates are being paid and meets one-on-one with trainees as the work on the job site.

### **DBE Business Development Program**

Training to enhance DBE firms' capacity for business growth and competitiveness on construction specifications, bidding/quoting, management, business planning, marketing and state procurement opportunities are provided through the DBE BDP. The BDP provides one-on-one business counseling and an intensive series of training in a group setting — the DBE Boot Camp. This training and support are intended to assist DBE firms in growing out of the program.

### **Labor Compliance**

The division addresses changes in the interpretation of prevailing wage law (Davis Bacon) on federal-aid highway projects, and assisted contractors and trucking employees with navigating and complying with the changes. We screen and investigate employee complaints and handle contractor questions on Davis Bacon compliance on a daily basis. We also monitor the labor rates for construction classifications and provide the information to contractors and others.

### **Title VI/Nondiscrimination/ADA**

This program ensures that all programs, services, and activities administered by NDDOT, its recipients, sub recipients or contractors are free from discrimination.

### **Title VII/Internal EEO**

NDDOT ensures the recruitment and selection of regular and temporary employees is done in a discrimination-free manner and that the work environment is free of discrimination.

## Construction Services

Cal J. Gendreau, Engineer

### Responsibilities and Activities

The Construction Services Division administers highway construction contracts. The division is responsible for highway construction bid openings, contracts, bonds, and contract payments. The division provides services in contractor pre-qualifications, construction scheduling, engineering reviews, contractor claims, project staffing, construction records, environmental (stormwater), engineering equipment, and various other services.

The Construction Services Division activities can be consolidated into six key operational functions.

They are:

- Bid Openings and Contract Payments
- Contract Services
- Records Management
- Construction Services
- Administrative Support Services
- Environmental (Stormwater)

### Key Accomplishments

#### Addition of the Environmental Section

In December 2013, a new environmental section was created in the Construction Services Division to deal with stormwater on highway construction projects. This section is composed of two positions that were previously housed in the Environmental and Transportation Services Division. The Environmental Section is responsible for oversight

of the NDDOT Stormwater Program including Construction, Industrial and Municipal Stormwater Permit Programs. The section conducts compliance assistance visits on construction sites with State and Federal Construction General Permits and Maintenance facilities with Industrial Permits. Providing stormwater training to internal staff, consultants and contractors is one of the section's main activities. Also, the section is responsible for reviewing stormwater measures on construction plans.

#### Consultant Liaisons

Two positions were added to the Construction Services Division to provide oversight over multiple consultant's and their projects in the Bakken oil field region.

#### Contractor Payments on NDDOT Construction Projects

Total contract payments for highway construction for the 2013-2015 biennium were \$1.054 billion. This compares to the \$1.079 billion in the 2011-2013 biennium.

#### Contract Plans and Proposals

Construction Services introduced the Contract Plans and Contract Proposals system to the industry in 2013. Since that time 686 Contract Plans and 420 Contract Proposals are available online. Contract Plans and Proposals can be obtained by anyone on the internet at this link: <https://apps.nd.gov/dot/filenet/public/plansProposalsSearch.htm>



Stabilized stream crossing.

## Maintenance

Brad Darr, Engineer

### Responsibilities and Activities

The Maintenance Division is responsible for NDDOT property management and facilities; safety, health, and emergency responses; Emergency Relief for state highways, budgeting for maintenance operations, capital improvements, equipment, pavement marking, maintenance specifications; the pavement preservation program; Roadway Weather Information System (RWIS); static traffic control devices; Intelligent Transportation Systems (ITS); Billboard Program/Junkyard Program and load restriction and road condition reports.

### Key Accomplishments

#### Global Harmonization System (OSHA Requirement)

Safety is paramount to NDDOT and the Maintenance Division 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. To further reduce injuries and accidents Global Harmonization principals have been implemented.

#### Capital Improvements

Buildings that were funded in this biennium include; Valley City equipment building, Rugby and Harvey Section buildings, and 15 section salt sheds constructed with our own labor. Two large salt buildings were constructed at district offices. Repairs were made to the numerous buildings.

#### Intelligent Transportation Systems (ITS)

ITS transportation safety and mobility and enhances productivity through the use of advanced information and communications technologies. ITS technologies assist the Maintenance Division 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 providing technical assistance to the districts and developing ITS equipment specifications. The Maintenance Division is responsible for collecting and disseminating roadway and weather information. This information is provided to the general public via the Internet, the North Dakota 511 Travel Information Service, a

mobile application, and our Dynamic Message systems (DMS). Nine additional cameras were added to aid the traveling public. The division added/upgraded 12 Environmental Stations(ESS) and six permanent DMS were installed to better inform the public of Amber Alerts, Safety messages as well as the travel alerts, no travel advisories, and road closures.

The Maintenance Division 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. An RFP was issued this biennium but not awarded due to legal challenges in the industry.

#### Emergency Response Efforts

The department has committed the use of its equipment fleet and personnel to assist in responding to emergencies such as flooded highways due to excessive snow fall and spring run-off, to other agencies and local governments. The Maintenance Division coordinates the response effort with the North Dakota Department of Emergency Services (DES). No emergencies occurred but lessons learned continue to be incorporated in the updating of plans.

#### 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.

#### Equipment

The Maintenance Division continues to pursue equipment that will make the department more efficient and effective. The department has recently purchased eight bidirectional tow plows. Also, a snow blower was purchased from surplus property.

# Office of Transportation Programs



25th St. S. Reconstruction - Fargo

**The Office of  
Transportation  
Programs includes the  
Local Government,  
Planning/Asset  
Management and  
Programming  
Divisions. The Office  
Director is  
Steve Salwei.**

## Local Government

Paul M. Benning, Engineer

### Responsibilities and Activities

The Local Government Division administers, coordinates and allocates funds for all rural, urban, transportation alternatives, and transit federal and state 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. Local Government also assists local entities in getting their projects ready for bid openings, and coordinates the Emergency Relief Program on a statewide basis on behalf of NDDOT.

### Key Accomplishments

#### Rural Projects

The Rural Programs Section administered \$280 million in state aid provided by HB 1358 (2013-2015 Legislative Session). These funds were spent on oil impacted and economic developmental access roads to assist all 53 counties in their infrastructure needs due to the increased oil activity and economic related activities.

The Rural Programs Section also administered \$36 million in federal funds to improve roadways and bridges in the rural areas of North Dakota.

These programs remain vital to provide good roads and bridges in the rural areas to allow the oil and agricultural industries to bring their products to the world.

#### Urban Projects

The Urban Programs Section administered the US Hwy. 2 Overpass/18th Street Underpass project in the city of Williston. The facility was designed to create a separation between local and regional traffic, providing an overpass for regional traffic and an underpass for local traffic. State and local officials gathered on June 25, 2015, for the dedication of the facility and to celebrate the important infrastructure investment which will help address rapid growth and enhance roadway safety.

The Urban Programs Section assisted the city of Fargo with the 25th Street South Reconstruction project. This project was designed to provide additional lanes of travel on 25th Street, a wider bridge over I-94, and a new slip ramp to enter eastbound I-94. The project was constructed in 2014.

#### Transportation Alternative Projects

The current transportation bill MAP-21 (Moving Ahead for Progress in the 21st Century) combined the previous Transportation Enhancement (TE) and Safe Routes to School (SRTS) programs into a new program called the Transportation Alternatives Program (TAP). This federally funded program provides funds for community-based projects to enhance the travel experience by all modes. Funding in the amount of \$1.5

million each year help communities create bike paths, develop walkable safe routes to school, improve non-driver access to transit and increase mobility. These investments enhance communities, connections and access.

### Transit Projects

The transit program is an important piece of the overall transportation picture. Transit services are a necessity to the people of North Dakota. Transit provides mobility for people and helps keep people

who may be living in rural areas or a small community in their homes longer. North Dakota has approximately 34 transit providers which provide services for the general public. For the past two years, transit ridership was over 3.1 million rides, with approximately 2.2 million rides being general public and 900,000 being elderly or disabled populations. Transit provides a vital service to the community and the Local Government's Transit Program is committed to work with our partners to provide continued and improved service.

## Planning/Asset Management

Scott Zainhofsky, Engineer

### Responsibilities and Activities

In support of NDDOT's mission to "safely move people and goods," the Planning/Asset Management Division strives to serve the needs of its customers, including internal NDDOT staff and executives, by providing the highest quality information and analyses, in the most efficient and timely manner the available resources will allow. By providing long-range and system-level visioning, planning, and leadership, the division's diverse functions and work products support the department's strategic and investment decision-making processes through data collection, data management and analysis.

The division is responsible for transportation-planning and engineering-management programs, including (but not limited to):

- Statewide transportation planning and special studies, such as:
  - » The long-range strategic transportation plan (currently, TransAction III).
  - » Technical planning assistance to local units of government.
  - » Highway-needs and levels-of-service studies.
  - » Transportation policy planning.
  - » Maintaining the *Highway Performance Classification System* and *Annual Report*.
  - » Maintaining the strategic Freight Network classifications and definitions.
  - » Assessing transportation impacts of various economic sectors.
- Railroad planning and programs, such as:
  - » Statewide rail plan.

- » Railroad/highway crossing signals, closures, and surfacing improvements.
- » Rail loan and quiet zone programs.



Controlled rural railroad crossing, 66th Street, Bismarck.

- Mapping services (e.g. county base maps, highway/tourist map, et al.).
- Traffic data collection, analysis, and forecasting.
- Transportation and roadway data collection and analysis.
- Department-wide asset management, including modeling:
  - » The current and predicted condition of the state highway system.
  - » Highway system funding needs.
  - » Level of service that can be provided based on budgetary limitations.
  - » The effects of budgetary tradeoffs between numerous department investment options.

- Pavement performance evaluation and condition survey.
- Program-level performance management (i.e. service indicator development, target setting, outcome reporting, etc. for major department-level program areas).
- Policy and legislation evaluation and research.

## Key Accomplishments

- Developed the state's first strategic plans related to freight and asset management, providing, respectively:
  - » Guidance for the development of North Dakota's transportation system as it relates to serving the needs of commerce.
  - » Guidance on the overall management processes used to preserve and enhance the state's highway system condition and service capabilities.
- Developed an industry first-of-its-kind system-performance model used to assist the department in monitoring and improving the function of the state's highway infrastructure. This investment-management model assists the NDDOT in identifying, at a system level, the most efficient and effective means of improving the overall load-carrying capacity, clearance heights and widths, rural-roadway traffic saturation and other similar service-related characteristics.
- Developed another industry first, proof of concept, cross-asset analysis tool. This tradeoff

hub provides real-time forecasted estimates of service levels or conditions likely to be provided by various funding distributions between multiple asset classes and program areas. Essentially, the tool provides estimated results of proposed funding-distribution scenarios, in real time. At this time, the tool is a proof of concept that is being expanded to provide actual forecasts associated with numerous program areas.

- Coordinated and conducted, with local road authorities and railroads, a record number of rail-highway crossing field diagnostics. These field diagnostic teams determine the appropriate safety improvements, if any, to be implemented at the specific crossing in question. The list of crossings reviewed was generated from a solicitation of public and private partners.
- Prepared well over 600 individual maps, each year of the 2013-2015 biennium. This equates to roughly 2.5 maps per working day.
- Developed, in partnership with the Western North Dakota Transportation Planner stationed in the Williston District, numerous local planning resources to assist local jurisdictions in the planning process. Products included:
  - » *Local Planning Resource Guide*.
  - » Local Planning resource webpage on the NDDOT website.
  - » A variety of webinars and presentations on local planning.

## Programming

Jane Berger, Engineer

### Responsibilities and Activities

The Programming Division is responsible for coordinating the development of the Statewide Transportation Improvement Program (STIP), managing federal funds, compiling information for bidder's packages, implementing the department's scoping process and completing traffic operations activities. These responsibilities include a system wide perspective as well as project level involvement from early project inception through to project completion.

### Key Accomplishments

**July 1, 2013 to June 30, 2014**

#### Federal Highway Administration Inactive Projects

The Programming Division, working with FHWA, Local Government Division and the Financial Management Division, has closed over 400 of the active 527 Emergency Relief (ER) projects since April of 2013. This has drastically limited the amount of projects that show up on the inactive list. Also the continued efforts by an Inactive Committee lead by Programming Division has brought awareness to inactive projects and limited the projects that show up on the list by incorporating process changes.

#### Increase in Number of Projects Bid

In addition to Programming Section regular activities, the section prepared bid package information for an additional \$1.161 billion of state-funded projects for the biennium.

#### Lighting Guidelines

Traffic Operations Section completed a rewrite of the NDDOT lighting policy. The rewrite incorporated information from recent national research and a

philosophy of being more proactive in the installation of lighting as a safety enhancement.

**July 1, 2014 to June 30, 2015**

#### Turn Lane Guidelines

Traffic Operations Section completed a rewrite of the NDDOT guidelines for the installation of turn lanes along state highways. The rewrite incorporated information from recent national research and clarified the cost participation and project programming practices.

#### Local Road Safety Plans

NDDOT is concerned about safety on all roadways including state highways, county and local roadways. In 2015, the NDDOT, in partnership with local agencies, completed the development of local road safety plans for every county, major city and the four tribes in North Dakota. The plans provide the local entities with an easier way to submit federal funding eligible effective safety projects. The goal of NDDOT and our local partners and other safety stakeholders throughout the state is to reduce the number of severe and fatal traffic crashes within the state. NDDOT has received project submittals from the plans and safety projects are currently under development.

#### Road Safety Review

A road safety review of the US 85 four-lane corridor from Watford City to US 2 was completed in early 2015. The review included examination of the existing facility by an independent, multidisciplinary team of people. The goal of the review was to determine potential road safety issues and identify opportunities for improvements in safety for all road users. Safety improvements identified in the review have been completed and other projects for the corridor are under development.

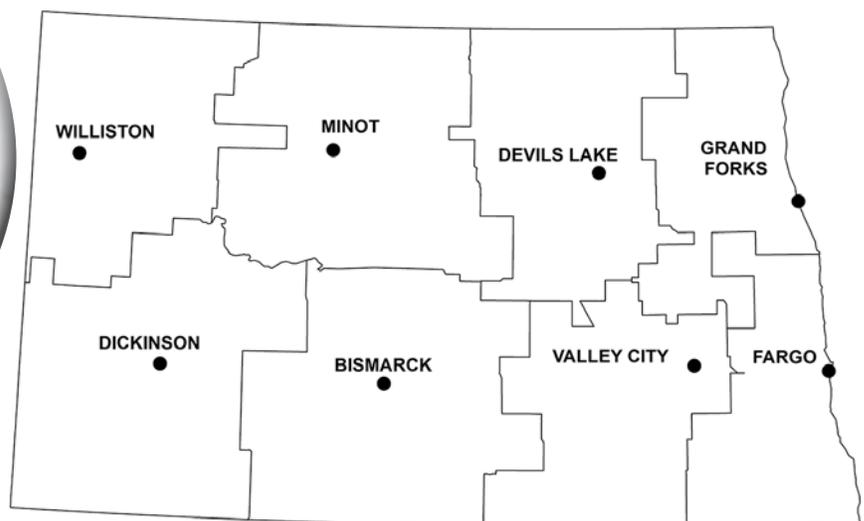
## *District Overview*



**Included here are all eight district offices in North Dakota's transportation system. The districts are administered by Ron Henke, Deputy Director for Engineering.**

### **Responsibilities and Activities**

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 96 full-time employees, which is supplemented with approximately five 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.

A few of the major construction projects completed in 2013 are as follows:

- Bituminous overlay and widening on US 83 from the State Line to Strasburg.
- Bituminous overlay and widening on ND 21 from New Leipzig to Carson.
- Bituminous overlay and widening ND 200 from Jct. 1806 to Jct. US 83.
- Bituminous overlay and widening ND 200A from Jct. ND 200 to Jct. ND 31.
- Several chip seals and microsurfacing projects throughout the district.

A few of the major construction projects completed in 2014 are as follows:

- Bituminous overlay and widening on ND 21 from Carson to Jct. ND 31.
- Bridge replacement over the Cannonball River on ND 31.
- Grading on Business Loop I-94 from exit 147 to Old Hwy. 10.
- Bituminous overlay and turn lane modifications on US 83 from Washburn to ND 200.
- Mill and Bituminous Overlay on I-94 from Bismarck to Sterling.
- Grade Raise on ND 200 near RP 250.
- Several chip and microsurfacing projects throughout the district.

In addition to the projects listed above, district employees helped to administer several construction

projects in other districts.

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 the mini mac to help reduce the impacts from depressed transverse cracks prior to overlay projects. Microsurfacing and slurry seals have proved to be a cost effective solution on high volume roadways.



Grade raise on ND 3 using dutchwrap technique.

Other maintenance activities in the district include:

- The Dura Patcher was used at several locations throughout the district on four-lane as well as two-lane highways.
- Contract Patching with Maintenance Forces - 2,954 tons of hot mix was placed using the rental paving machine on various highways.
- Transportation technicians assisted with several construction projects.
- We are in the process of building concrete Salt Brine Tank containment systems. We will start this fall in the outlying sections with total completion by next year.
- The 100' x 100' salt/sand Hoop Building is being built with completion this fall by contract forces.
- Last winter crews put in many long hours dealing with snow and ice issues to help provide good roads for the traveling public.

## Devils Lake District

Greg Semenko, Engineer

### Responsibilities and Activities

The Devils Lake District is located in the north central part of the state. The district is tasked with the maintenance, construction and administration for 2,304 lane-miles for the state highway system. The district employs 71 full-time employees which handle duties related to construction, maintenance, sign maintenance, shop mechanics and administration. The district maintains the roadways and equipment used throughout the year. The district staff also prepares plans, builds projects and monitors other programs throughout the district.

### Key Accomplishments

#### Construction

##### 2013

- Completed a preventive maintenance project from Dunseith to Rolla, which included subcuts and ADA compliance.
- Completed a pipe replacement and paving project on Hwy. 5 east of Rock Lake.

##### 2014

- Completed a sliver widening project on Hwy. 20 from the junction of Hwy. 5 south to Starke-weather and continued a paving Hwy. 20 and 17 to Edmore. This also included pipe replacement.
- Replaced an aging bridge over the James River at New Rockford.
- Replaced a bridge on Hwy. 66, west of Bisbee, with a box culvert.
- Worked in Cando on the municipal section.

##### 2015

- Installed weather stations and cameras around Devils Lake.
- Completed a paving project on Hwy. 2 east of Devils Lake.



*Resurfacing of Hwy. 2 east of Devils Lake.*

- Completed 556 lane miles of seal coats on the highway system for preventive maintenance.

#### Maintenance

- Completed salt buildings in Rugby and Maddock, so each section has salt storage.
- Began construction on a new section building in Rugby.
- Addressed many drainage issues within the right of ways of the highways.
- Continue the preventive maintenance activities of crack sealing, min macing, scotch patching, blade patching and dura patching highways.
- Continue ongoing activities of maintenance on bridges, signs, trucks, equipment, buildings and yards.

Even though Devils Lake has not risen within the past couple years, the prairie pothole region still present's challenges with the smaller bodies of water next to the roads. Preservation of the highway system is ongoing with contractors and our own forces to provide the load carrying capacity and comfort to the public.

## Dickinson District

Larry Gangl, Engineer

### Responsibilities and Activities

The Dickinson District is located in the south west corner of the state. Of the 2,000 lane miles of roadways which it manages, 400 are on the Interstate highway system and 1,600 are on the state highway system. The district staff consists of 61 full-time employees. These employees handle duties related to roadway construction and maintenance, sign maintenance, shop mechanics and administration.

### Key Accomplishments

The Dickinson District had very active maintenance and construction program. The district has had large investment in construction projects.

A few of the major construction projects completed in 2013 are as follows:

- Grading and paving on ND 22 from north of Killdeer to Lost Bridge.
- Grading and concrete paving on I-94 just east of Dickinson.
- Grading and paving on ND 22 north of Dickinson to near Manning.

A few of the major construction projects completed in 2014 are as follows:

- Grading and paving the initial phase of the Dickinson truck bypass.
- Widening and paving on ND 200 East of Hazen.



Construction of Exit 56 where Hwy. 22 bypass intersects with I-94.

- Safety improvements on ND 21 west of New England.

In 2015, one of the major construction projects completed was the grading, structure and paving of the new interchange at Exit 56 in Dickinson.

Snow and ice control and preventive maintenance are top priorities for Dickinson District maintenance employees. Maintenance crews are out early in the morning and late in the evening plowing and applying product to improve roadway conditions for commuters. The district continues to use automatic vehicle location systems with cameras to improve winter snow and ice control service levels. Preventive maintenance activities consist of chip seal coats, bridge preventive maintenance, crack sealing, and repairing depressed transverse pavements joints with microsurfacing material.

Other maintenance activities include:

- Construction of a salt brine generation facility in Beulah.
- Construction of salt storage facilities at Killdeer, New England, Beach, Bowman, Beulah, Richardson and Hettinger.
- Contract administration on paving, district striping and pipe repair projects.
- CDL concrete testing pad.

Managers and supervisors work with weather forecasters and developers of the weather information software to make improvements in MDSS (maintenance decision support software).

The district office was renovated due to the large population growth in and around the Dickinson district. This population growth is largely due to expansion of the oil industry in Western North Dakota. Driver's License and Motor Vehicle offices out grew their current space in the district office and relocated to new offices off the district building grounds. Due to the addition of several new troopers, Highway Patrol acquired the space in the district office building formerly held by these two agencies.

## Fargo District

Bob Walton, Engineer

### Responsibilities and Activities

The Fargo District is located in the southeastern part of the state, and is responsible for 1,824 lane miles of roadway. The district has 83 full-time employees assigned in four sections: highway engineering, roadway maintenance, vehicle maintenance, and administration. One engineer was temporarily assigned to the Williston District.

### Key Accomplishments - Construction

In 2013, Construction Staff was challenged with several maintenance type projects that had a large impact on urban interstate traffic. All six lanes of I-94 from the Red River to Veterans Boulevard had concrete pavement repair work, including reconstruction of the tri-level bridge approach panels and repainting the arched pedestrian bridge over I-94 near the 25th Street interchange. We also had a mill and overlay project on ND Hwy. 13 from Gwinner west to ND Hwy. 1 that included significant drainage improvements. The Fargo District was also able to assist in managing and completing several asphalt overlay, chip seal, and grade raise projects in the Valley City District.

In 2014, the Fargo District construction season was focused on managing the city of Fargo's I-94/25th Street interchange project, improving ND 46 from Enderlin to I-29, and performing concrete repair of I-29 from the ND 200A interchange north to the ND 200 interchange. The concrete repair included grinding the rough passing lane smooth as well as repairing numerous pavement failures in the driving lane. Two additional thru lanes were added to 25th Street over I-94, and large retaining walls were built so an eastbound on-ramp could be added. The ND 46 work was the first year of a three-year project to widen and restore a smooth driving surface to the highway.



New on-ramp being constructed at the Fargo 25th St. Interchg.

A landslide along ND 46 was discovered during the project and was repaired using "soil nailing," a new technique to the state. Staff also oversaw a large I-94 culvert installation in the Valley City District designed to reduce the chance of



Soil nailing to repair a slide.

overland flooding which recently has required closing the interstate. Additionally, during the biennium, 154 miles of district highways had contract chip seals completed, and 73 miles of highway had thin lift overlays completed to improve ride and extend the highway's serviceability.

### Key Accomplishments - Maintenance

The summer of 2013 was impacted by strong rain storms and localized flooding which required closing several state highways and I-94 near Casselton. The winter of 2013-2014 was colder and windier than previous years. There were many blowing snow events in the Red River Valley that made visibility difficult for long periods, but left no significant snow accumulation. I-29 was closed three times between January 3 and April 1, 2014, and I-94 from Bismarck to Fargo was closed twice. The winter of 2014-2015 started out mild, and had a late January warm-up that created slippery roads due to freezing rain and frost events. The milder temperatures created many freeze-thaw cycles which made spring maintenance a challenge. During the biennium, District Maintenance forces completed 18 lane-miles of depressed crack repair, 29 miles of chip sealing, 1,073 lane-miles of crack sealing, and 108 lane-miles of gravel shoulder repair.

In 2013, district maintenance staff built a 150' x 60' salt storage in Wyndmere which serves as a bulk salt distribution facility for the district's southern Maintenance Sections. They also constructed three 60' x 60' salt storage facilities in Mayville, Lisbon, and Wahpeton in 2014. The Fargo Cold Storage building was insulated, and the floor was replaced with a heated floor. Now all winter maintenance equipment used in the three Fargo Maintenance sections can be stored in heated buildings.

## Grand Forks District

Les Noehre, Engineer

### Responsibilities and Activities

The Grand Forks District provides administrative support, construction, operations, maintenance, and fleet support for 1,980 lane miles of state highways in six counties.

### Key Accomplishments

In 2013 the district completed an 11.1 mile concrete overlay project on US 2 eastbound from Niagra to 1.4 miles west of the junction of ND 18. Placing concrete over asphalt pavement is commonly used to address moderately to severely distressed pavements. The existing asphalt pavement provided a foundation for the concrete that serves as a new pavement with increased structural capacity. This project was the first of this type of work within the Grand Forks District.



*A steamroller packs down freshly laid blacktop on Hwy. 18.*

Grand Forks District's biggest project in 2014 was reconstruction of northbound I-29 between Buxton and Thompson. This 10.2-mile project was the last of four reconstruction projects south of Grand Forks on I-29 in a five-year period, which completed the reconstruction of I-29 from Buxton to just south of Grand Forks.

Three urban projects within the City of Grand Forks were completed in 2013 and 2014. They included concrete pavement repairs, dowel bar retrofit, pavement grinding, asphalt overlay, microsurfacing, signal work, ADA ramps and pavement marking on three major corridors within the city; 32nd Avenue South. (Business US 81), Gateway Drive (US 2), and Washington Street (Business US 81). These three streets are heavily traveled corridors within the city and were challenging to complete, yet they will provide the traveling public with years of service.

Maintenance sections perform a variety of duties from the usual seasonal operations including ditch mowing, snow and ice operations, maintenance on culverts, bridges, right of way, building and grounds, radio tower sites, and a host of other tasks.

Snow and ice operations occur largely during the worst weather conditions with operators out on the roadway in the early hours of the morning (often 4 a.m.) to late in the evening, and also during the middle of the night responding to emergencies. Snow plow operators often work every weekend and most, if not all, holidays due to winter weather conditions. Winter weather during the 2013-2014 season was moderately severe in the district, and our people logged many hours plowing snow and ice as well as responding to requests from law enforcement and other emergencies.

During the construction season maintenance forces support and supplement our construction personnel on construction projects. They are trained and certified to test asphaltic materials, aggregates, concrete materials, and as inspectors in asphalt batch plants and on construction projects. They also provide traffic control for both maintenance and construction activities.

A few of the significant accomplishments of our maintenance forces during this biennium include:

- Installation of triple 41" x 54" arched multi-plate culverts along ND 81 east of Hamilton.
- Replacing a centerline culvert on ND 1 south of Binford.
- Completing salt sheds at Drayton, Adams, and Cooperstown.
- Renovating three storage buildings in Grand Forks that were in very poor condition.
- Chip sealing the Joliette Highway Patrol Truck Scale site.
- Chip sealing the Alexander Henry Rest Area lot.
- Shouldering work along ND 15 west of Thompson.
- Shouldering work along ND 32 north at the junction of US 2.
- Asphalt patching on ND 32 from Edinburg to ND 15.
- Crack sealing 982 miles of district highways.

The district shop was short a person for most of the biennium, yet the rest of the crew managed to keep all of our equipment in good repair and available for operations. They too can work long hours during snow and ice operations performing tasks such as repairing electrical problems, damaged and worn snow plows, windshield wipers, heaters, frozen air lines, and a multitude of minor items. They also diagnose major items to be sent out for warranty work, or work beyond our capabilities.

During the biennium the sign shop maintained, repaired and replaced over 1,000 signs on the districts highways. We had a backlog of sign work and through construction contracts and significant effort on the part of the sign shop crew, most of the backlog has been eliminated.

Our administrative staff does a superior job of paying the bills, taking care of the district staff, and responding to the public. They consistently get contracts, permits, and bills paid on time and with happy customers and vendors. Plus the rest of the district staff relies on them to help with everything from routine items such as routing forms to the proper department division, to complex situations such as dealing with a serious injury or illness.

Overall the district has responded to many challenges during the past biennium, from severe weather to personnel shortages to difficult tasks. In all areas we have attempted to serve the citizens of North Dakota, and our visitors, well.

## 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 2,300 lane miles of highways. The district has 71 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 maintenance sections. Winter snow and ice control is available as needed at all maintenance sites beginning at 5 a.m., and earlier if needed during emergencies or storm events. Additional support services are provided to the cities, counties, utilities, United States Air Force, and public from the district, which range from everyday activities to emergency responses. Minot Air Force Base is located north of Minot and includes 150 missile launch facilities and 15 missile alert facilities. District maintenance staff provides winter escorts to certain missile movements to these sites on state-county-township roads.

### Key Accomplishments

High water levels continue to challenge highways in the district. US 83 south of Max was overtopped in 2013, ND 53 near Benedict was overtopped in 2014 requiring temporary and permanent grade raises be constructed. Several high water areas required quick action by maintenance staff to place rip rap and other erosion materials in response to wave action working on roadway foreslopes.

235 highway miles asphalt overlay were bid during

the biennium in spring of 2014 and 2015.

An intersection safety improvement project was constructed at junction US 52 and ND 3 at Harvey including adding turn lanes and highway intersection lighting. Intersection safety improvement project on US 52 at Drake Lake Street was bid in 2015 and is currently under construction. This project includes widening, turn lanes, grade improvements of Lake Street into Drake, and highway intersection lighting. A project improving many intersections with turn lanes between Berthold and Surrey was constructed in 2014.

US 83 Bypass mill and structural overlay project included reconstruction of US 2/52 and US 83 signalized intersection, realignment of turn lanes on US 2/52, and widening of US 83 Bypass leg to provide dual southbound left turns which was a large bottleneck in traffic movement during 2011 flood when this was only Mouse River crossing available in the Minot area.



Hwy. 83 coming into Minot near Hwy. 2 and 52 interchange.

Salt sheds were constructed by Minot District maintenance staff at Velva in 2013, Parshall and Kenmare in 2014, and Towner in 2015. All section salt and treated sand stockpiles are now stored under a roof.

Harvey section building was replaced in 2014-2015.

Although snow totals were not high, extensive efforts by maintenance staff to keep roadways clear of ice from freezing fog, freezing rain and morning frost from warming overnight temperatures was required during 2014-2015 winter. Maintenance staff works long hours, giving up weekends and holidays with their families to keep roadways safe.

### Construction Contracts

#### **2013**

- Temporary and permanent grade raise bid on northbound lanes of US 83 RP 179, 9 miles north of Max.
- 78.3 miles asphalt overlay (bid during 2011-2013 biennium but built in 2013-2015).
- US 83 Bypass Mill/Structural Overlay:
  - » Included reconstruction of US 2/52 and US 83 signalized intersection, realignment of turn lanes on US 2/52, widening of US 83 Bypass leg to allow dual southbound left turns which was large bottleneck in traffic movement during 2011 flood.
- ND 23/ND 37 Parshall corner east to county line. Passing/climbing lanes, widen, mine and blend, 12 miles.

#### **2014**

- 66.7 miles asphalt overlay
- Safety projects:
  - » US 2 Turn lanes installation/upgrade to current standards. Berthold to Surrey.
  - » US 52 Harvey Intersection improvements Jct. ND 3.
- Slide repair SE of Brooks Junction.
- 124 roadway miles chip seal coat (not all completed in 2014).
- Temporary grade raise ND 53 at Benedict.

#### **2015**

- ND 23 County line east to Jct. ND 28 8.9 miles. Passing/climbing lanes, widening, mine and blend.
- 35.7 miles chip seal constructed in 2015-2017 biennium.
- Safety Projects:
  - » US 83 and ND 23 junction ITS improvements
  - » US 52 Drake intersection 0.5 miles
- Asphalt Overlay:
  - » 168.3 roadway miles
- Permanent grade raise ND 53 near Benedict continues.

### Maintenance Activities

- Salt sheds constructed by Minot district maintenance staff. All section salt and treated sand stockpiles are now under a roof.
  - » 2013 Velva
  - » 2014 Parshall
  - » 2014 Kenmare
  - » 2015 Towner
- During the 2013-2015 biennium, Minot district maintenance forces performed wide variety of activities to improve/extend life of roadways and maintain ride quality including:
  - » Crack sealing
  - » Patching with hot mix asphalt
  - » Dura Patcher in continuous use during summer months
  - » Mini Mac used to improve depressed crack asphalt pavements
- Although snow totals were not high, extensive efforts by maintenance staff to keep roadways clear of ice from freezing fog, freezing rain and morning frost from warming overnight temperatures was required during 2014-2015 winter. Maintenance staff works long hours, giving up weekends and holidays with their family to keep roadways safe.
- New section building at Harvey constructed during 2014-2015 by contractor.

## Valley City District

John Thompson, Engineer

### Responsibilities and Activities

The Valley City District is located in the south central portion of the state. The region includes the cities of Jamestown and Valley City. The district includes the James and Sheyenne River basins and a region known as a prairie chateau, west of the James River. It is the prairie chateau region, which does not have an established river system. This lack of drainage creates a large challenge maintaining a transportation system due to flooding of roadways.

The district is responsible for the operation of 1965 lane miles of roadway. The Valley City District has 71 employees in four functional areas; roadway maintenance, engineering, motor vehicle maintenance and administration.

Responsibilities include administration of highway construction contracts, roadway design, pavement maintenance, and maintenance of roadside features, removal of snow and ice, and right of way management. The district is the point of contact for questions concerning right of way, access to state highways, utility crossings, outdoor advertising, and many other citizen concerns.

### Key Accomplishments

Project types during the 2013-2015 biennium years include:

- The mission is to provide for the efficient and safe movement of people and freight.
- Safety projects at intersections to decrease serious crashes at these locations.

- Surfacing and surface treatments placed to extend the life of the pavement, maintain or improve the load capacity, and maintain a smooth pavement.
- A number of drainage structures have been replaced or improved to ensure the safe uninterrupted movement of traffic where streams cross roadways.

The effort placed is in ensuring the roadways are kept in a safe passable condition during the winters is an ongoing project. This requires the efforts of a significant number of district employees who respond to weather events whenever necessary. To the small communities in which they reside, they are the Department of Transportation. They represent the communities' connection to the surrounding region, and the ability to travel regardless of the weather conditions. The addition of better equipment, practices, and technology has leveraged our efforts, allowing us to provide better service with the same number of employees.



Medina Section, Valley City District



Intersection improvement project on US 52 north of Jamestown.

## Williston District

Joel Wilt, Engineer

### Responsibilities and Activities

The Williston District is responsible for the construction and maintenance of highways in the northwest corner of the state. This is the heart of the oilfield activities and has one of the most impacted transportation systems. The district provides support for over 1,934 lane miles of roadway. This includes snow and ice control through the winter months to ensure safe travel for the public, and mowing and removal of debris during the summer months to promote a good image of North Dakota.

### Key Accomplishments

**Note:** Dollar amounts are construction contracts only.

#### July 1, 2013 to June 30, 2014

- US 2, Montana border to Jct. ND 1804 – asphalt structural overlay, Jct. ND 1804 to Jct. US 85 – Concrete overlay on existing four lanes. (18.5 miles)
- Safety signage and pavement marking on county roads in Burke, Divide, McKenzie, Mountrail, and Williams Counties.
- US 85 from Jct, ND 50 north and west to Fortuna – Mine and blend, cement stabilization, and asphalt paving. (31.6 miles)
- US 2 eastbound lanes from Tioga east to Stanley – Structural overlay and turn lane additions. (25.5 miles)
- ND 1806 near Watford City and Charlson - Structural overlay and signage. (34 miles)
- ND 8 from Jct. ND 50 to Bowbells including Main Street – Widening, mine and blend, turn lanes, and asphalt paving. (22.9 miles)
- US 2 eastbound lanes from north Jct. US 85 to Ray – Concrete overlay and turn lane additions. (20.7 miles)
- US 85 from Grassy Butte north 7.5 miles and from Long X Bridge north to Watford City – Asphalt overlay. (18.5 miles)
- ND 1804 from Ross corner to Williston – Mill and asphalt overlay. (49.1 miles)
- ND 1804 from Montana line to Marley Crossing – Widening and asphalt overlay. (7.8 miles)

- US 85 from Watford City to 10 miles north of Alexander – Four-lane widening and asphalt overlay. (22.1 miles)
- ND 40 from Tioga north to Jct. ND 50 – Widening and asphalt overlay. (19 miles)

#### July 1, 2014 to June 30, 2015

- US 85 Watford City SW Bypass – New construction. (7.5 miles)
- ND 23 Watford City SE Bypass – New construction. (5.7 miles)
- US 2 from Stanley to Berthold EB/WB – Thin lift asphalt overlay. (37.7 miles)
- US 85 Williston Bypass Phase 1 and 1a – New construction (2.7 miles)
- ND 23 Newtown NE Truck Reliever Route – New Construction. (3 miles)
- ND 1804 from ND 23 to Newtown NE TRR – Widening and concrete overlay. (1.3 miles)
- US 85 Alexander Bypass – New construction. (2.8 miles)
- US 2 Williston 18th Street underpass – New bridge.
- US 85 Mckenzie County Road 16 to Lewis and Clark Bridge – Four-lane widening and asphalt overlay. (9 miles)



US 85 four-lane section.

## *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.

### **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 State Capitol Grounds completed.

### **1970s**

**1977:** North Dakota first state in union to let contract for final stretch of 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 (NDDOT). 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 percent 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 percent and 86 percent 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.

The I-29 reconstruction projects through the Fargo corridor were completed in 2007. Started in 2000, these projects included the reconstruction of six interchanges, seven new loop ramps, 15 new bridges and the expansion of two bridges.

### 2008

NDDOT completed the four-laning of US 2 between Williston and Minot with the total of 97 miles of four-lane highway added to the system when the project was finished in October 2008.

The new Liberty Memorial Bridge in Bismarck-Mandan was completed in November 2008.

### 2009

2009 was one of the largest road construction programs in North Dakota. The NDDOT awarded bids on approximately 292 projects which amounted to \$383 million in road improvement projects.

NDDOT launched the new [NDteendrivers.com](http://NDteendrivers.com) website aimed at informing teens about safe driving habits.

### 2010

The new Drayton-Robbin Bridge crossing the Red River near Drayton was completed.

NDDOT launched a new law enforcement program across the state called the Regional Driving Under the Influence (DUI) Task Force in an effort to deter drunk driving throughout North Dakota.

### 2011

Construction was conducted for the US 85 Super 2 Project, with intermittent passing and turn lanes, between Watford City and Williston.

### 2012

Completed temporary bypasses on the northwest side and northeast side of Williston. Also, completed first roundabout project on a state highway on ND 22 near Killdeer.

### 2013

Governor Jack Dalrymple appointed Grant Levi as the new NDDOT Director.

The 2013 construction program is estimated to bid out approximately \$878 million in infrastructure projects across the state, making it the largest construction program in state history.

NDDOT launched a County Safety program to provide additional safety measures on rural roads. The safety program provides funding for implementation of safety measures that may include: enhanced signing for road curves; upgraded signing or pavement markings to improve visibility of intersections; larger regulatory or warning signs, and intersection warning rumble strips.

### 2014

NDDOT worked on four-laning US 85 between Watford City and Williston; constructed several truck bypasses and truck reliever routes around the communities of Alexander, Dickinson, New Town, Watford City and Williston. The department also renewed nearly one million vehicle registrations.

The 2014 Customer Satisfaction Survey results illustrated the top four categories that ranged from 83 percent to 96 percent in satisfied or very satisfied were: traveler info, motor vehicle, drivers

license, and communications.

## 2015

The department worked on a large construction program across the state which included building two roundabouts – one east of Watford City on ND 23 and ND 73, and one near Fairview on ND 200 and ND 58.

The NDDOT issued a new flat license plate, called the Sunrise Plate. The new flat plate replaced the embossed Buffalo Plate and Lewis and Clark Plate. The Buffalo Plate had been used for 23

years and some vehicles had deteriorated plates that were losing their reflectivity. In 2013, the state legislature recognized the need and provided the resources to replace the general issue plate and indicated it should be a flat plate design. The NDDOT worked with Tourism, Highway Patrol and Roughrider Industry to design the new plate, while taking the history and tradition of North Dakota into consideration. In 2014, the North Dakota Legislative and Budget Committee approved the new design. The license plate replacement process occurs from November 2015 to June 2017.

## NDDOT Awards

NDDOT received a number of awards in 2014 and 2015 including the following:

- Lieutenant Governor's Well Workplace Bronze Award (*Human Resources Wellness Committee*)
- Advisory Council on Historic Preservation (ACHP) Chairman's Award for Achievement in Historic Preservation (*Environmental and Transportation Services*)
- AASHTO Local Roads Safety Program (*Local Government, Safety and Programming*)
- North Dakota Library Association (NDLA) Notable State Document (Liberty Memorial Bridge Video) (*Communications*)
- Bronze Telly Award for video documentary entitled *Liberty Memorial Bridge; Proudly Honoring Veterans Since World War I* (*Communications*)
- Outstanding Safety Instructor Award in both 2014 and 2015 (*State Fleet*)
- NDRoad Mobile Application received an award in the Mobile Web Application category at the AASHTO Transcomm 2014 Skills contest. (*Communications and Information Technology*)

