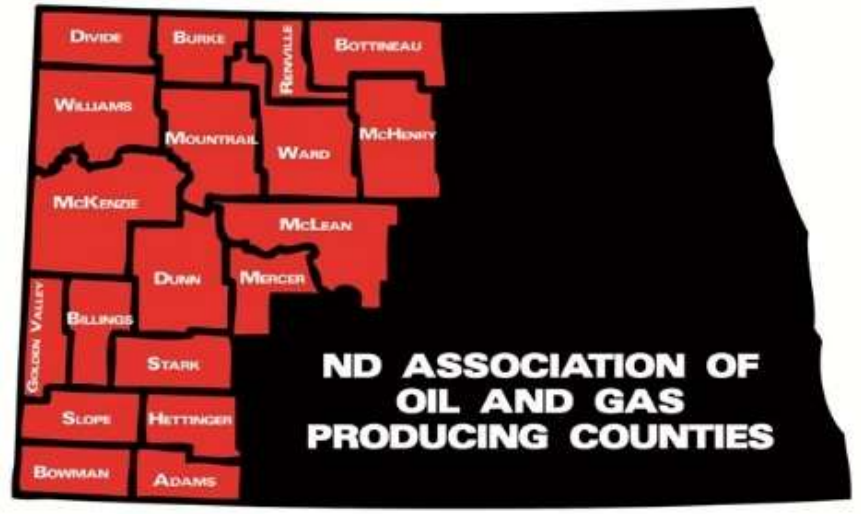
Killdeer Roundtable Meeting



NDDOT
North Dakota Department of Transportation

February 24, 2015
Dale C. Heglund

NDSU UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

NDLTAP

Staff Bio

Sandra Baisch
Administrative Secretary
Phone: (701)328-9855
Fax: (701)328-9866
sandra.baisch@ndsu.edu

The happy face you see when entering our office is Sandy. Her goal is to make s
everything in the office is running smoothly. She is always ready to lend a hand
loves a challenge. Sandy looks forward to meeting new people and tackling new
projects.

In her spare time she likes to travel, ride ATV's, and try new creative projects.

Each day is a new opportunity to make someone smile.

NDSU UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

Position Announcement:

Part-Time Technical Support Representative

NDSU - North Dakota Local Technical Assistance Program (NDLTAP) is seeking an individual to provide transportation-related technical assistance to the oil and gas producing counties in western North Dakota. Position is part-time, non-benefited for 2015. Salary commensurate with experience. Extensive travel in western ND will be necessary.

Qualifications:

- Knowledge of local government agencies and procedures.
- Experience in road construction and maintenance.
- Excellent interpersonal communication skills.
- Ability to work independently with limited guidance.
- Valid driver's license.

Duties:

- Assist counties with road repair strategies, development of roadway improvement planning, and dust suppression alternative analysis.
- Provide information on signing, equipment, truck impacts, traffic management, roadway materials and safety items.
- Facilitate on-site technical support and training through workshops and conferences
- Assist counties with implementation of an asset management program, transfer of information and experiences from county-to-county
- Serve as liaison between NDLTAP and NDAOGPC, NDDOT and the oil counties.

Application:
Send resume to dale.heglund@ndsu.edu. For additional information contact Dale Heglund at 701-318-6893.

NDSU is an EEO/AA-M/F/Vet/Disability Employer. ***Women & traditionally underrepresented groups are encouraged to apply.***

NDSU UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

NORTH DAKOTA LOCAL TECHNICAL ASSISTANCE PROGRAM

About Us

Programs

Resources

- Resource Library
- Safety Talk
- Bakken Briefings
- Newsletters
- Staff Presentations
- Traffic Safety Evaluations
- External Web Links

Events

Upcoming Events

TLN - PE Review for Civil Engineers - Fall 2014 (September 2, 4, & 6, 2014)

- *Sep. 2, 2014 – Webinar*
- *Sep. 4, 2014 – Webinar*
- *Sep. 6, 2014 – Webinar*

ND Truck-Weight Education

NDLTAP

Bakken Briefings

Digouts *(PDF, 78K)*

Throughout the area roadway failures in the surface and subgrade are occurring. The frost went deep. Culverts froze. Groundwater drainage has created failures.

The question is what do we do now? How deep do we dig? Do we have material to "bridge" the area? With today's increased traffic and heavier loads, the answers get more complicated and expensive. Some of the answers are hidden by the material we remove. Some of the answers may not be found.

Previous Briefings

- Object Markers *(PDF, 108K)*
- Drainage Maintenance *(PDF, 75K)*

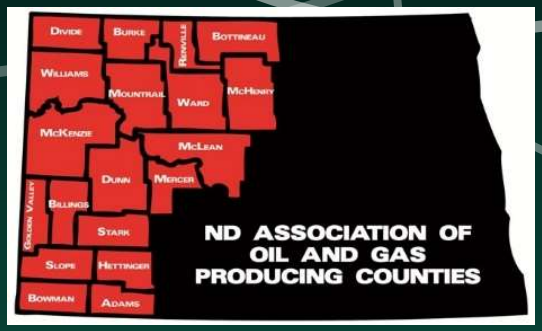
Local Road Updates

Boots on the ground report from local roads around the region.

- May 2014 Status Report *(PDF, 241K)*
- Apr. 2014 Status Report *(PDF, 241K)*
- Mar. 2014 Status Report *(PDF, 384K)*

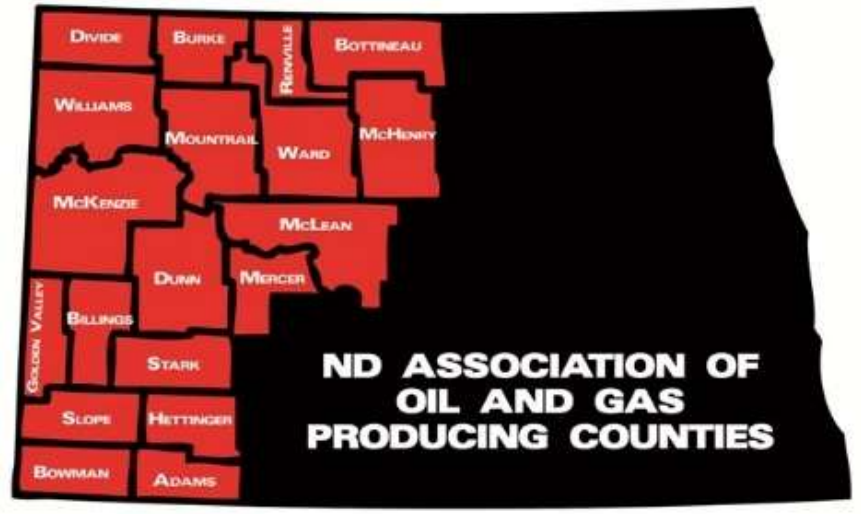
Al Heiser – New NDLTAP Advisory Board Member

Mountrail County



NDAOGPC – Vicky Steiner (invited) and Daryl Dukart

Killdeer Roundtable Meeting



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Grand Forks Herald

Senate passes $1.1 billion 'surge' funding bill for oil impacts

By Mike Nowatzki Today at 1:43 p.m.

BISMARCK – The "surge" is on the verge of becoming law.

Senators voted 46-0 to pass Senate Bill 2013, a $1.1 billion package designed to address critical road and infrastructure needs primarily in North Dakota's Oil Patch but also across the state. The House approved an amended version Friday on a 90-2 vote.

Gov. Jack Dalrymple is expected to sign the bill Tuesday.

"This bill hopefully will satisfy some of the great needs," said Sen. Karen Krebsbach, who carried the bill, adding, "I think we have a lot riding on this bill."

BREAKDOWN OF SENATE BILL 2103

Amended Senate Bill 2103

Hub cities (Williston, Dickinson, Minot and Watford City): $172 million

Counties: $240 million

Certain eligible cities: $10 million

Other cities: $100 million

Non-producing counties: $112 million

Non-producing townships: $16 million

Department of Transportation: $450 million

Senate Bill 2103 prior to amendment

Hub cities: $215 million

Counties: $300 million

Certain eligible cities: $21.25 million

Other cities: $140 million

Non-producing counties: $140.8 million

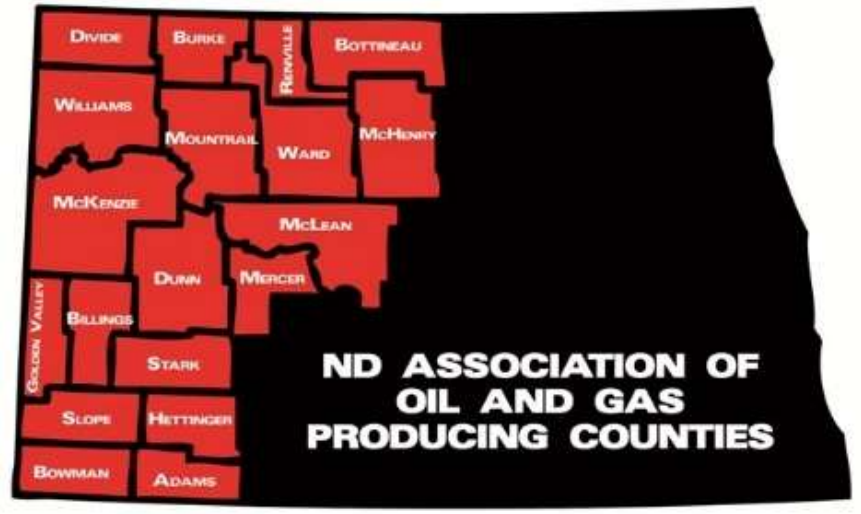
Non-producing townships: $19.2 million

Department of Transportation: $300 million

Strategies for Road Projects in 2015

Open Discussion

Killdeer Roundtable Meeting



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NORTH DAKOTA LOCAL TECHNICAL ASSISTANCE PROGRAM

- About Us
- Programs
- Resources
- Events

Upcoming Events

TLN - Construction Project Management / Contract Administration

- *Feb. 26, 2015 – Video Conference*

NORTH DAKOTA LOCAL TECHNICAL ASSISTANCE PROGRAM

JOIN OUR EMAIL LIST

LEARNING MANAGEMENT SYSTEM (LMS)

County

Transportation Learning Network

A Partnership of DOTs and Universities

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Transportation Learning Network
A partnership with MDT, NDDOT, SDDOT, WYDOT and the Mountain-Plains Consortium Universities

LEARNING SERIES 2014-2015

Basic Sign Installation and Maintenance

DATE: Thursday, May 7, 2015
TIME: 9:00 AM to 12:00 PM CST
DELIVERY: Video Conference

This course will cover basic concepts of permanent sign installations with appropriate supporting information from the 2009 MUTCD. Attendees will gain knowledge in the following areas:

Topics covered:

- Types of Roadways
  - Freeway, Expressway, Conventional
  - Components of Roadways
  - Clear Zones
- Signing Standards
  - Sign Offsets
  - Vertical and Lateral Clearance of Signs
  - Breakaway Bases
    - NCHRP 350
    - MASH
  - MUTCD allowed Sign Colors
  - Overview of Lettering Size
- Sign Maintenance Concepts
  - Sign Supports and Bases
  - Vegetation Control
  - Cleaning

SPEAKER(S)

Ken Kadrmas, (Retired) NDDOT, Maintenance Division, Senior Transportation Manager, Signing Section

TARGET AUDIENCE

This workshop is intended for DOT, City, County and Township entry/ intermediate level sign shop staff. Supervisors and manager may wish to attend as a refresher course.

REGISTRATION / FEES

REGISTRATION DEADLINE: Tuesday, April 28, 2015

NDSU UPPER G
TRANSP

Transportation Learning Network

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LEARNING SERIES 2014-2015

Highway Pipe Installation Construction and Inspection

DATE	TIME	DELIVERY (VIDEO CONF / WEBINAR)
Wednesday, March 4, 2015	9:00 AM CT to 3:00 AM CT	Video(Bismarck Broadcast)

DESCRIPTION / LEARNING OUTCOMES

Installation of concrete, steel and plastic pipe under highways is a complex challenge for transportation agencies. Knowledgeable field staff and appropriate specifications are critical to ensuring properly functioning, long life culverts that also provide for a smooth ride to the traveling public.

In this 4.5-hour video conference, attendees will learn:

- Why is proper installation required? Show examples and purpose of the course.
- Eliminate myths regarding compaction.
- Concepts of the 3 primary types of pipes/culverts:
  - Materials, manufacturing and connection concepts.
- Acceptable construction storing and handling methods.
- Excavation and bedding material and compaction concepts.
- Backfill material and compaction concepts:
  - Standards and regulations for compaction
  - Resource section on specifications
  - Review of soil materials and backfill materials (optional)
    - How do different material types react?
- Connection and inspection concepts.
- Joint testing and joint integrity.
- End treatments and applicable inspection issues.
- Post installation inspection as per AASHTO LRFD Bridge Construction Specs, Sections 26 (CMP), 27 (RCP), and 30.

SPEAKER(S) / BIO(S)

Jim Merchlewitz is a Zone Engineer with Advanced Drainage Systems, Inc. and is responsible for policies and standards with municipal and state agencies and national organizations in ND, MN, IA, SD, NE, & WI. Jim has 20 years of experience in the consulting and construction industries and holds a B.S.C.E. (Civil Engineering) from Iowa State University and a M.B.A.

TARGET AUDIENCE

Construction inspectors, specification writers, materials staff, contractors, and suppliers. *This presentation was last shown on April 24, 2014; much of this presentation will be a repeat.*

NDSU UPPER TRANSP

State of the Guardrail Industry: Advances in Longitudinal Barrier Design

Bob Bielenberg

Midwest Roadside Safety Facility
University of Nebraska-Lincoln

NDLTAP Video Conference
February 18, 2015

Transportation Learning Network

A partnership with MDT, NDDOT, SDDOT, WYDOT and the Mountain-Plains Consortium Universities

LEARNING SERIES 2014-2015

ACCESS MANAGEMENT

DATE: Wednesday, April 8, 2015
TIME: 9:00 AM – 4:00 PM CT
DELIVERY: Video Conference

Access control is the management of the location and design of driveways and roads, as they connect to other streets, roads and highways. Access connections often create serious conflicts for motorists as vehicles enter, maneuver and exit the roadway. As access frequency increases, collision potential and travel delay also increase. When access proliferates excessively, roadways (including intersections) lose their intended function and capacity. Arterial roads, originally designed to connect and serve communities become congested leading to delays and safety problems not only for motorists but also for pedestrians and bicyclists.

Topics covered include:

- Introduction to access management
- Safety, operational and economic impacts of access management
- Access management principles and procedures
  - Roadway classification for access management
  - Corridor access management plans
  - Access connection permitting, coordination and public involvement
- Land development and access management strategies
- Retrofit experiences
- Design principles
  - Access location and spacing
  - Driveway design
  - Medians and median treatments
  - *Highway Capacity Manual* concepts
- Access management techniques

SPEAKER(S)

Ronald W. Eck, PE, Professor Emeritus of Civil Engineering at West Virginia University and is Senior Advisor with the WV Local Technical Assistance Program. He has been involved in traffic engineering and traffic safety for over 35 years. He chaired the City of Morgantown Traffic Commission for 18 years. In the late 1990's, he was co-principal investigator on a project to update the West Virginia Division of Highways Driveway Manual.

TARGET AUDIENCE

State and municipal transportation engineers, planners, technicians, public works directors, street supervisors, elected officials.

REGISTRATION / FEES

REGISTRATION DEADLINE: Friday, March 27, 2015

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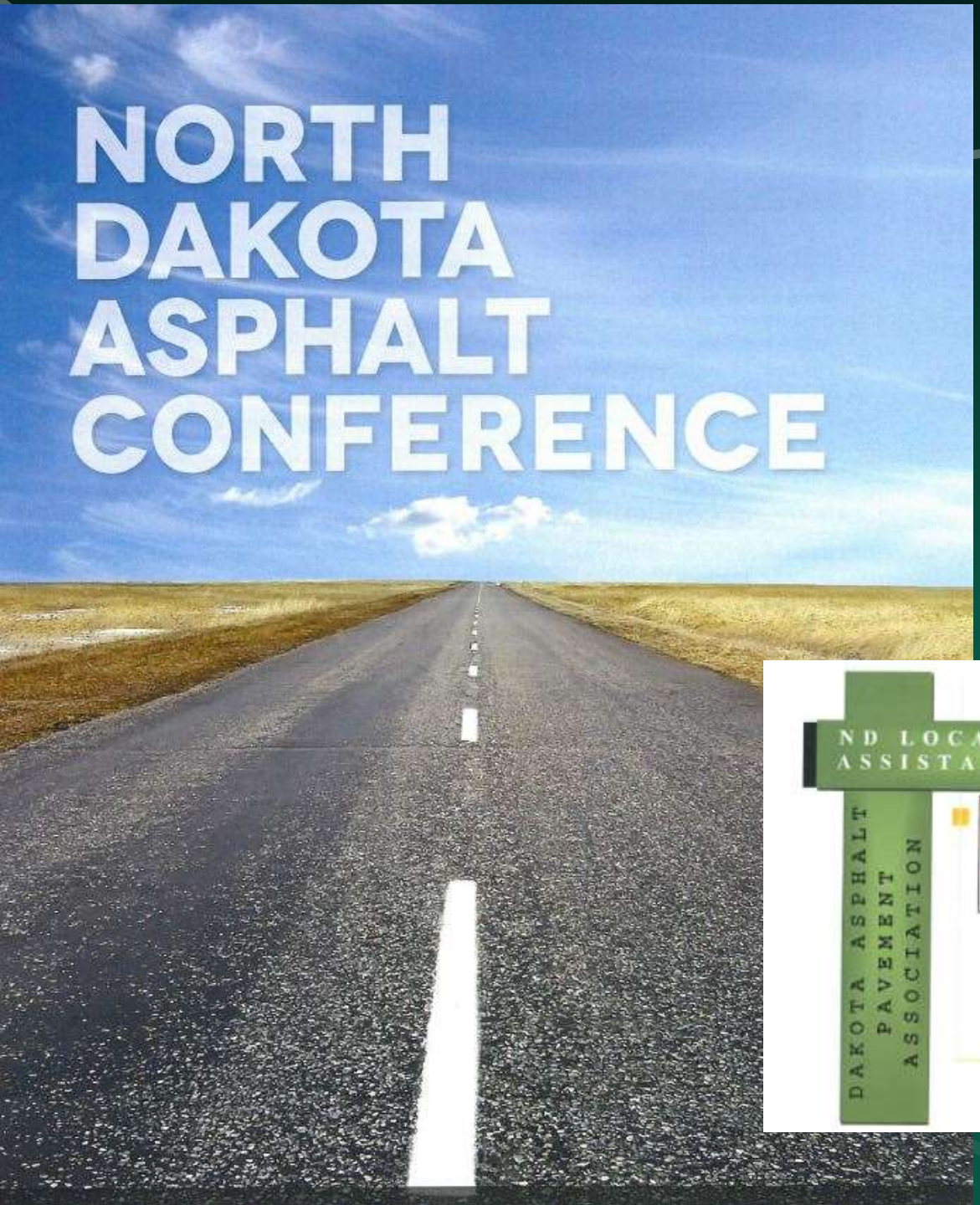
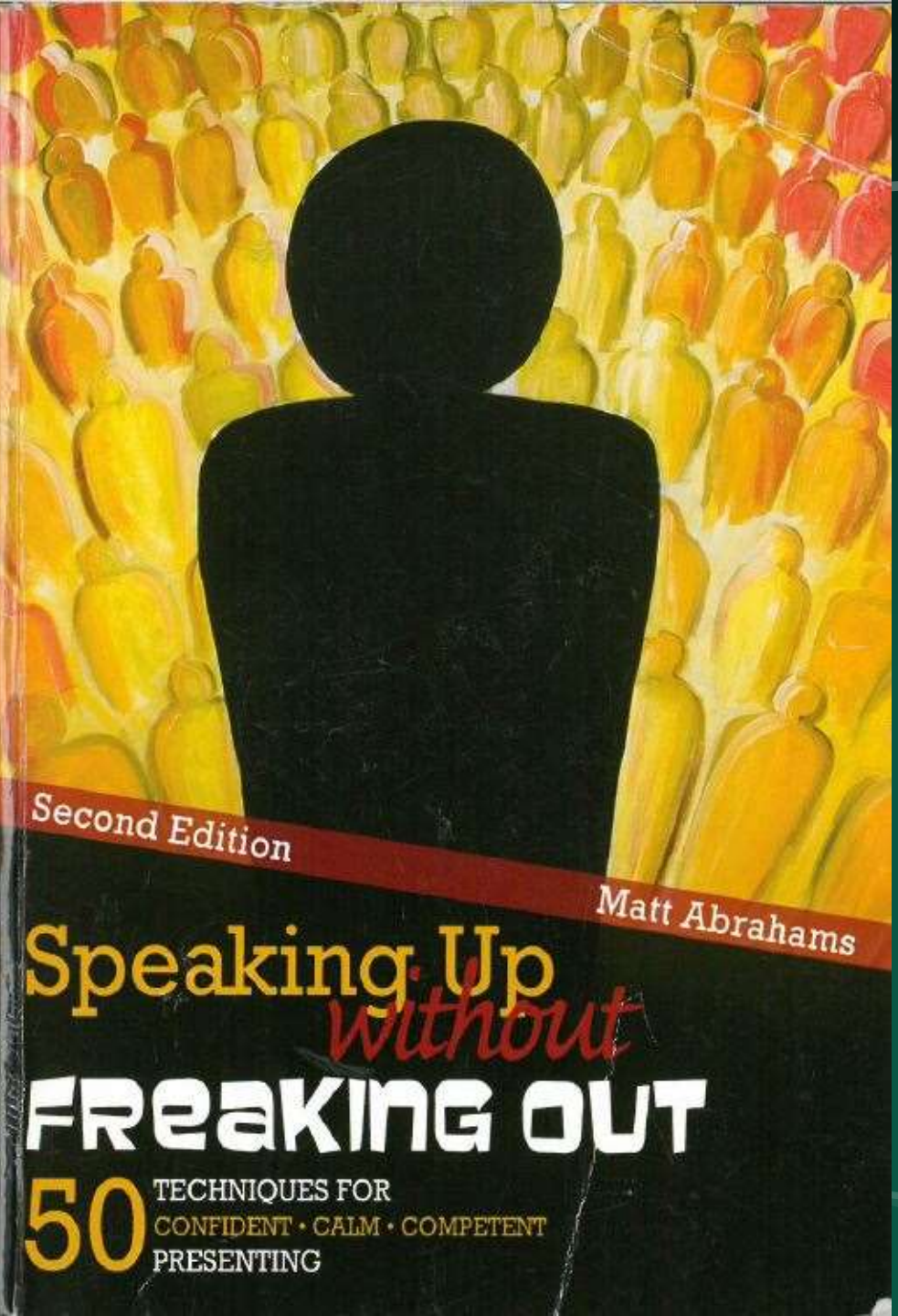


ND LOCAL TECHNICAL ASSISTANCE PROGRAM

DAKOTA ASPHALT PAVEMENT ASSOCIATION

NORTH DAKOTA ASPHALT CONFERENCE 30

SAVE THE DATE
March 31-April 1, 2015
Ramada Bismarck Hotel
Bismarck, ND



Presentation Tips

Line to Leader

Basic Sign Class

Surface Selection Tool

Oil Brine

Smart Signs

Permitting

Local Road Surface Selection Tool

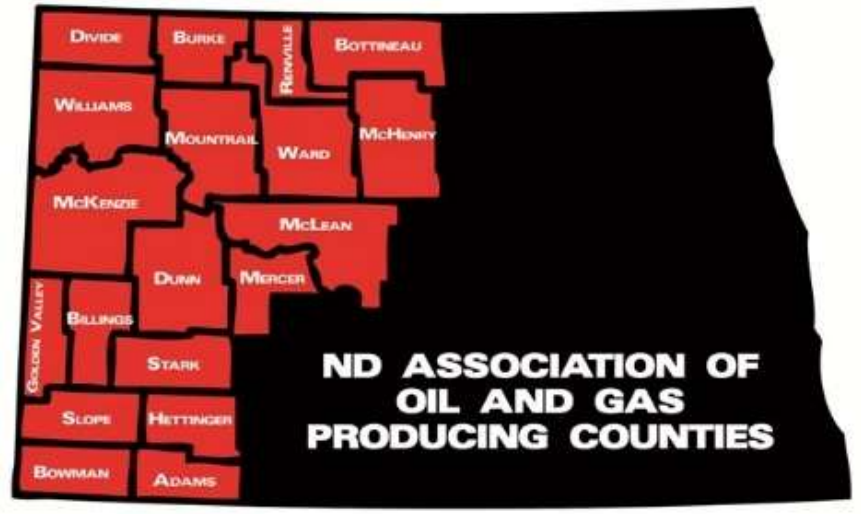




This analytical tool applies the low-volume road management methodologies recommended under the project titled "Local Road Surfacing Criteria (SD 2002-10)". The objective of this study is to develop a methodology that allows the user to compare the costs associated with different road surfaces. Specifically, this tool is used to determine the costs associated with maintaining roads with different surfaces and selecting the most appropriate road surface for a specific set of circumstances. More information about this project and tool can be found by clicking "Software Introduction".

Click "Start Analysis" to start a regular analysis.
Click "Administrator Login" to log in if you are an administrator.
Detailed user's guide is available by clicking "User's Guide".

Killdeer Roundtable Meeting



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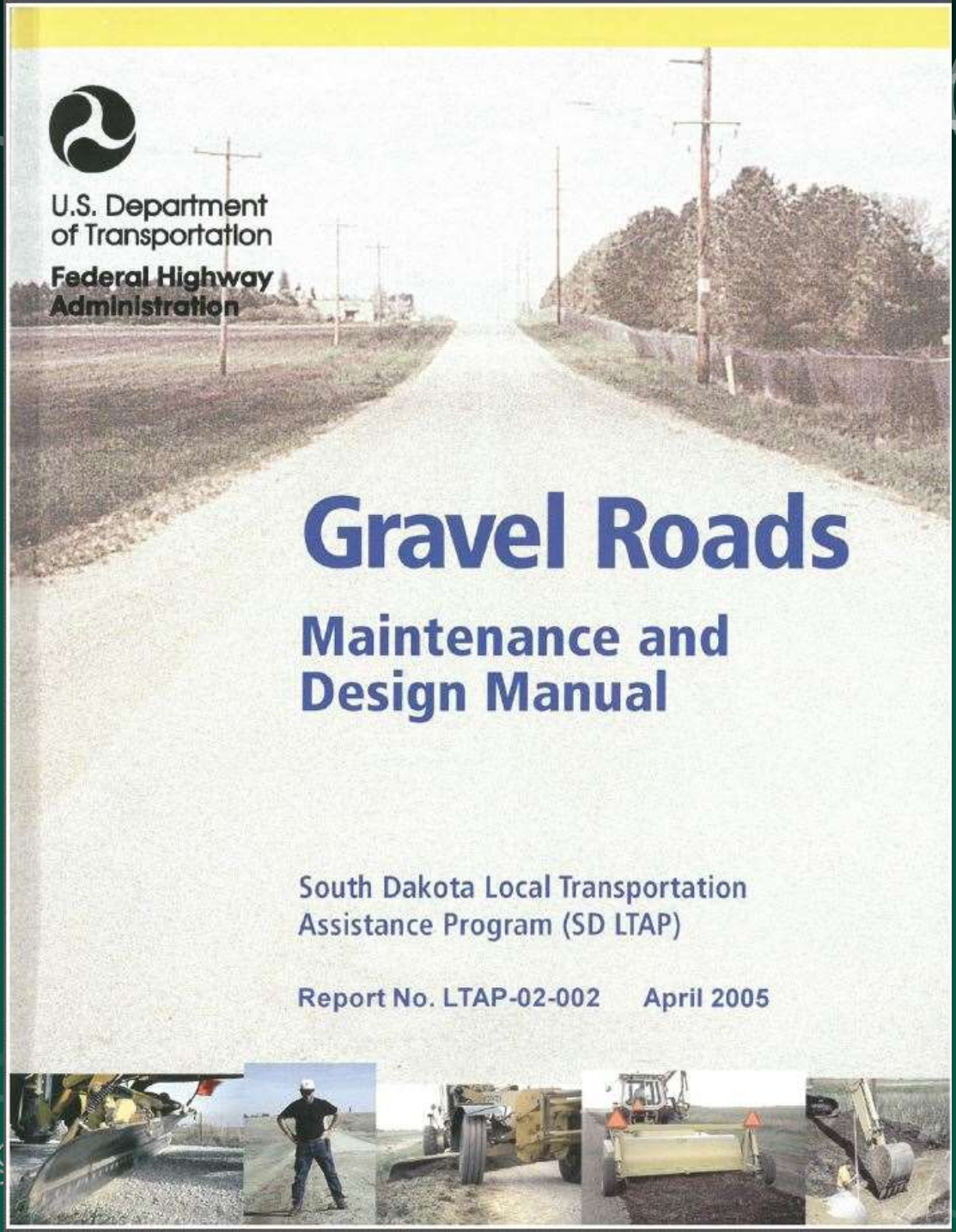
Roadway Foundations – Best Practices

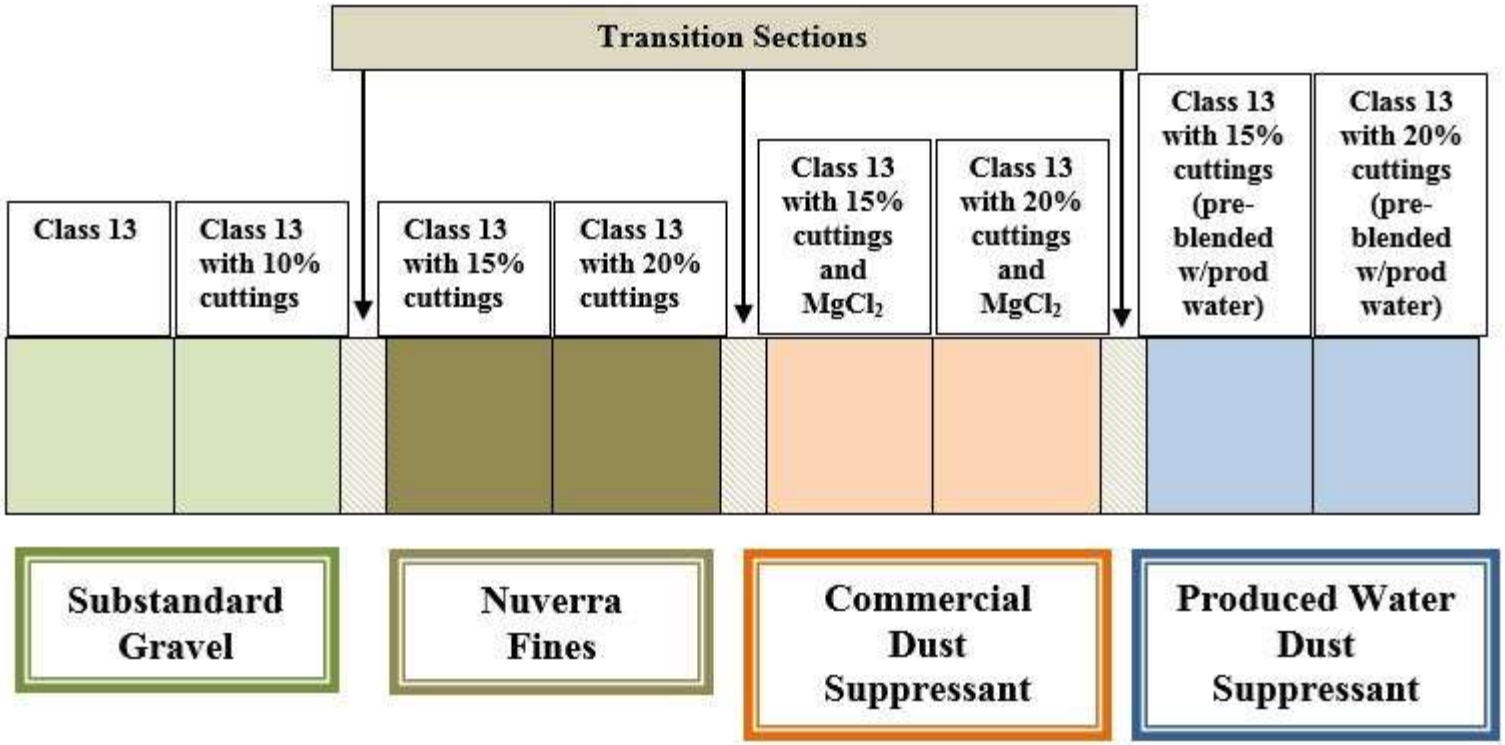
Open Discussion


U.S. Department
of Transportation
Federal Highway
Administration
Gravel Roads
Maintenance and
Design Manual
South Dakota Local Transportation
Assistance Program (SD LTAP)
Report No. LTAP-02-002 April 2005

GRAVEL SURFACE SPECIFICATIONS

Sieve Size	SD Gravel Surface Spec % Passing	ND Aggregate Surface Spec (Class 13) % Passing
1"	-	100
¾"	100	70 – 100
#4	50 – 78	38 – 75
#8	37 – 67	22 – 62
#30	-	12 – 45
#40	13 – 35	-
#200	4.0 – 15.0	7 – 15
P.I.	4 – 12	-
LA Abrasion	40%	50%
Shale	-	12%
Process Required	crushed	-
Fractured Faces	-	10%*

Beneficial Use Demonstration Project: Gravel PI Enhancer



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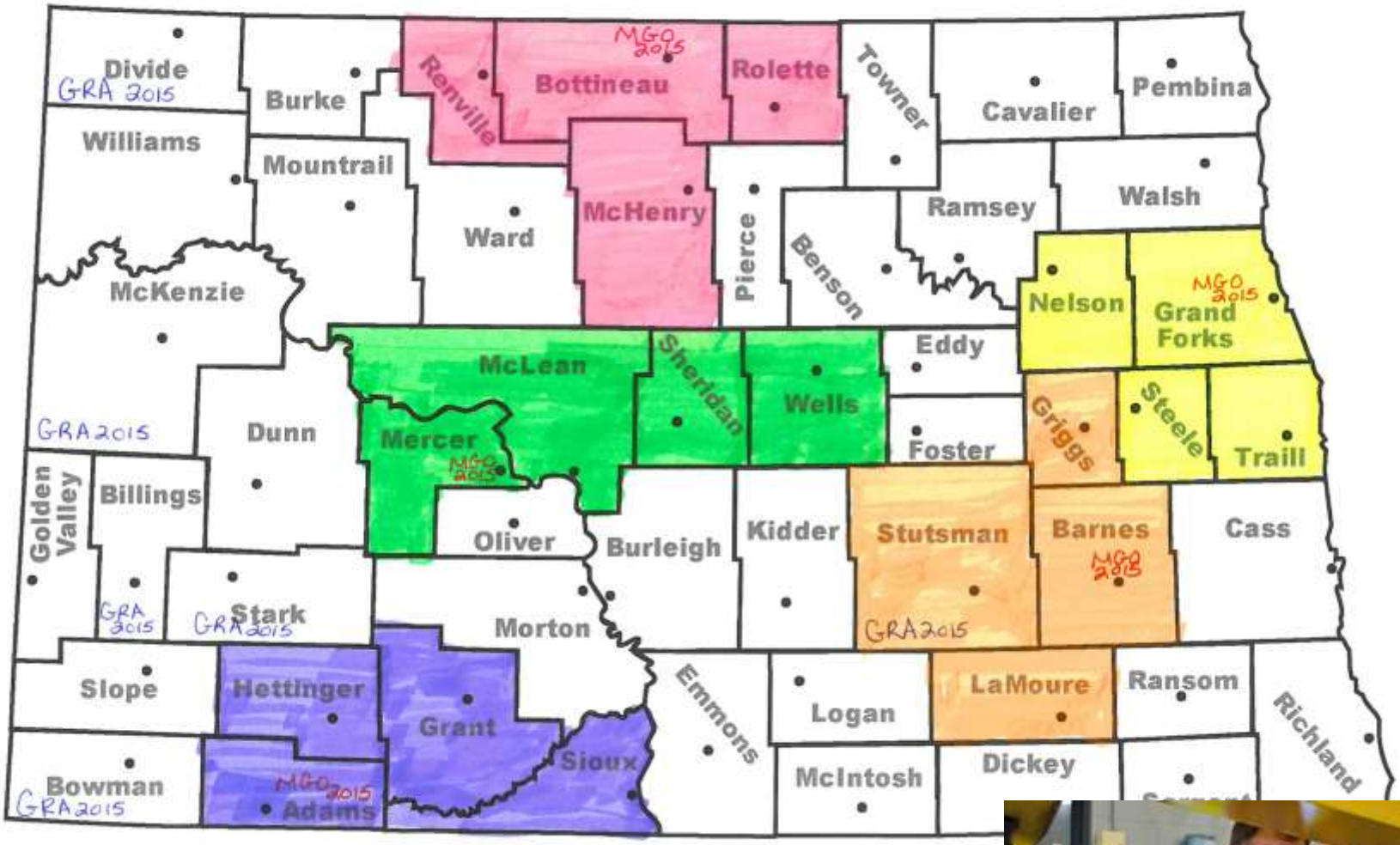

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Steve Mullen: NDDOT Planning and Access Management

Community Planning Resources – Put together to assist local government

https://www.dot.nd.gov/divisions/planning/land-use-transportation-planning.htm

Partial list:

Resources related to Land Use and Transportation Workshop

Purpose

Tools for Land Use and Transportation Planning.

Webinar Files PDF

- Link to Webinar (view the whole webinar, or click left subsections to see a particular part)
- Intro NDDOT
- Transportation and Communities 01282015
- Dickinson Comp Plan
- Williams County SBM
- VWND NDDOT
- Coordinating Land Use Transportation
- LOS Analysis 012615
-

Planning Resource Links

Local Planning Resource Guide PDF

Urban Planning

- Bismarck-Downtown Subarea Study
- City of Bismarck Growth Management Plan
- Dickinson Comprehensive Plan PDF
  - More information on Comprehensive Planning - Vision West ND PDF
- Fargo-Moorhead Metropolitan Council of Government Long Range Transportation Plan PDF
- Fargo-Moorhead Metropolitan Council of Governments South Washington Street and 52nd Avenue Corridor Study PDF
- Grand Forks-East Grand Forks South Washington Street Corridor Study
- Fargo-Moorhead Metropolitan Bicycle and Pedestrian Plan PDF
- Bicycle and Pedestrian Master Plan element of the Grand Forks-East Grand Forks Metropolitan Planning Organization 2040 Long Range Transportation Plan PDF
- Bismarck-Mandan Transit Development Plan
- National Association of City Transportation Officials Urban Bikeway Design Guide
- Institute of Transportation Engineers Context Sensitive Solutions
- Designing Walkable Urban Thoroughfares: A Context Sensitive Approach, Institute of Transportation Engineers, 2010 PDF
- National Complete Streets Coalition

County Planning

- McKenzie County Comprehensive Plan PDF
- Williams County Comprehensive Plan PDF

North Dakota Planning

- North Dakota Planning Handbook, North Dakota Planning Association, 2005 PDF
- North Dakota Department of Transportation Long Range Transportation Plan
- North Dakota Planning Handbook, North Dakota Planning Association, 2005 PDF

New Brochure

Proper planning provides safe transportation for the future

Access management is the careful planning of the location, design, and operation of driveways, median openings, interchanges and street connections. The purpose of access management is to provide access to land development that preserves the safety and efficiency of the transportation system.

The intent of this brochure is to provide local land use and transportation practitioners, elected and appointed officials, and the development community general guidance when considering access placement or impacts on the state and local transportation system.

Access related decisions made at the site level of an establishment can influence the operational and safety characteristic of the local, state, and national transportation system.

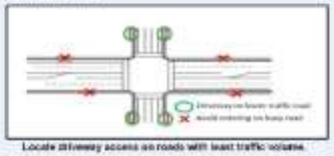
Access management works on the design, placement and management of entry and exit points (i.e., driveways, entrances or exits) between roadways and adjacent properties. These entry and exit points can be managed by careful planning, regarding their location, the types of turning movements allowed, and if appropriate, medians that provide or prohibit access to the driveways.

Developing and implementing effective access management strategies that promote or improve safety requires considering the location of driveways in the context of current and future access needs, current and future intersection operations, and mobility for pedestrians and bicyclists.

Critical Access Management Options:

1. Locate driveways on the appropriate roadway type

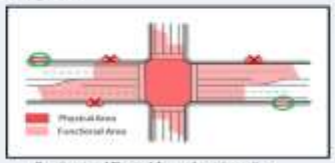
Providing access (i.e., driveways, entrances or exits) onto roadways with the lowest traffic volumes and speeds, generally improves safety near intersections.



Locate driveway access on roads with least traffic volume.

2. Avoid driveways within Functional Areas of an intersection

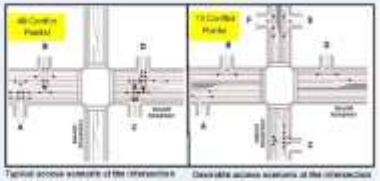
Functions such as lanes for turning and merging, stacking needs, reaction times, stopping distance, future expansions and road conditions need to be considered when determining the size of functional areas. Driveways in these functional areas contribute to accidents and congestion.



Functional and Physical Areas of an intersection.

3. Reducing crashes by limiting the number & type of driveways.

It is desirable to minimize the number of conflict points created with existing and future driveways since more conflict points increase the risk of a crash occurring. Research over the past decades has consistently shown that crash rates increase as driveway density increases on a road-

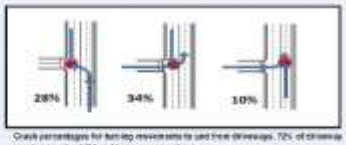


Typical access scenario of the intersection of two public roadways.

Desirable access scenario at the intersection of two public roadways.

4. Control medians and left turns for improved safety.

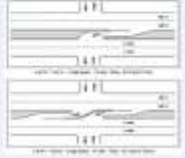
When possible, restrict turning movements to and from a driveway. Research has shown that 72 percent of crashes at a driveway involve a left-turning vehicle. Reducing or eliminating left turns to or from driveways, combined with efforts to reduce conflict points enhances safety.



Crash percentages for turning movements to and from driveways. 72% of driveway crashes involve left-hand turns on main street.

Use Medians to improve safety

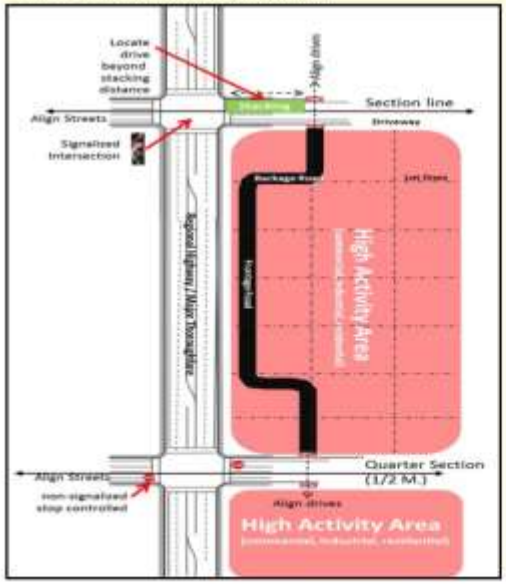
One method to manage or limit left turns to and from driveways is with the proper use of medians. Proper use of medians has been found to improve roadway safety significantly relative to undivided roadways.



All drawings are courtesy of the Federal Highway Administration.

tern of traffic access.

Local jurisdictions are encourages to develop local access management policies for locally owned roadways to clarify desired phased connections to our state and federal highway systems.



ccess Permit:

cal NDDOT District Engineer. ess application forms is pro-

d application to the local e required information as indi-

the landowner and the District . This review considers such other nearby accesses. tion from the landowner for tial developments which could impact highway traffic. District Engineer will discuss standard details of driveway design, and how private drives shall be in conformance with Standard Drawing D-203-08. District Engineers will provide a Driveway Application and Permit SFN 5918, and explain the permit requirements and obligations to the applicant. Districts may provide staking assistance as needed to obtain a properly constructed drive.

4) If approved by NDDOT, an access permit approving start of work on the access is returned to the landowner.

5) NDDOT inspects all final work accomplished on the access before the (final or legal) access is accepted as complete.

6) If accepted as complete, the access permit is signed by NDDOT , making the access legal by permit for use as specified.

For more information on NDDOT's Guidelines for Access to North Dakota State Highways, or to obtain a copy of the complete policy, contact NDDOT by calling toll-free 1-855-NDROADS or 1-855-637-6237, or to find out what District you are in go to the NDDOT website at *www.dot.nd.gov*

NDDOT
North Dakota
Department of Transportation

Providing a transportation system that safely moves people and goods.

Planning for Roadway Intersection and Driveway Access

NDDOT
North Dakota
Department of Transportation

NDSU

FEB 23, 2015 - BIS. TRIB.

Highway 85 is leading in deadly stats

Oil patch corridor has more traffic,

2014 Crash Severity on Major N.D. Highways	
Interstate 94	
Fatal	4
Injury	141

Dust Control Update

Dale C. Heglund, PE/PLS

NDAOGPC – Sept 18, 2014 – Williston

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NORTH DAKOTA LOCAL TECHNICAL ASSISTANCE PROGRAM

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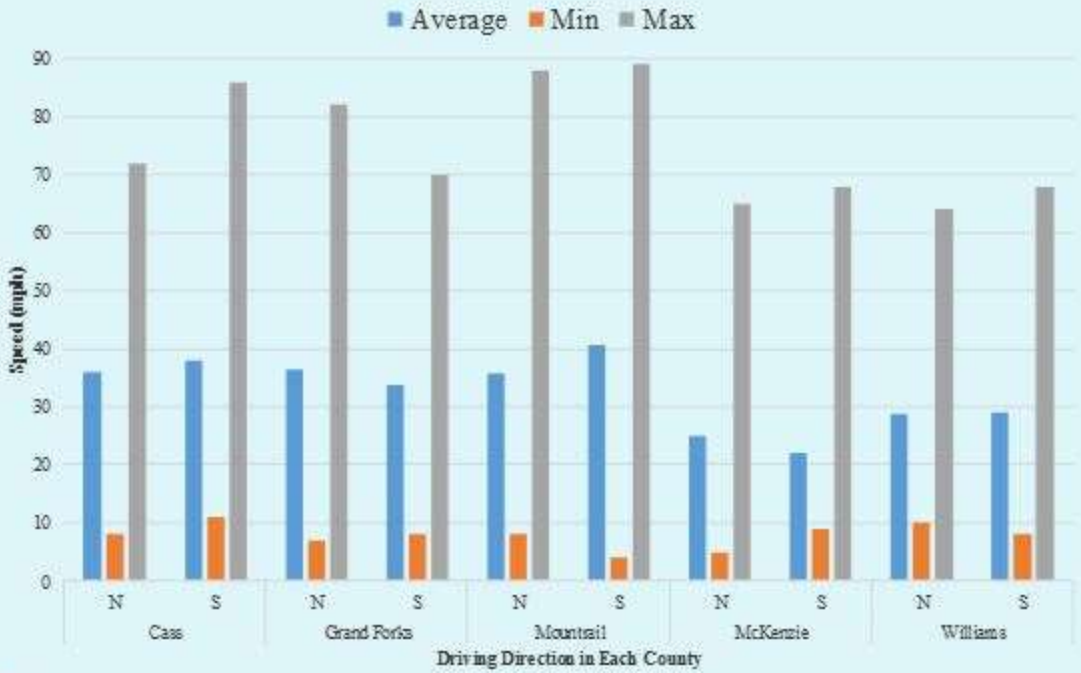
July-August Vehicle Speed Results



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Radar Recorder

Traffic Data Collection Using Radar

Police Depart. Packages

The new Radar Recorder represents a leap forward in the use of radar for accurate traffic data collection. Equipped with 2nd generation algorithms, the Radar Recorder accurately records up to two lanes of bi-directional traffic data without personnel ever having to go into the road.

There are no road tubes or loops required with this device - simply mount the unit at a convenient location, aim it at the road and you'll begin collecting highly accurate data in a matter of minutes. The unobtrusive nature of this device means you can covertly record data without drivers knowing and altering their driving habits.

When you are ready to review your data and produce reports, connect a computer to the unit and download your data using the TRAXPro software . The data can then be processed, and reports produced.

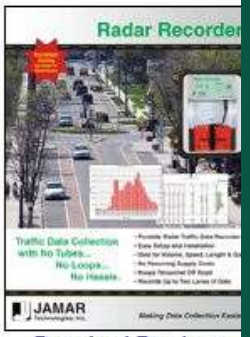
Features of the Radar Recorder

- Non-Invasive Radar Technology
- Data for Volume, Speed & Length
- Covert 'Black Box' Recording
- Collect continuous data for months
- Computer download & interface
- Powered by rechargable battery
- Easy Installation
- Optional Wireless Bluetooth
- Waterproof Case
- RS-232 Serial Port for Download
- One-Year Warranty
- Free Technical Support

USED BY:

- **State DOTs**
- **Planning Commissions**
- **Public Works**
- **Police Departments**
- **Universities**
- **Municipal Agencies**
- **Engineering Firms**

...And More



Download Brochure

"Love the Radar Recorder. It has totally changed my counting program."
- Satisfied User

Safe and Easy Installation

The non-invasive radar sensing method allows you to easily install the Radar Recorder and begin collecting in just a matter of minutes. Since no tubes or loops are used, you never have to be in the road when installing the Radar Recorder. Simply mount the Radar Recorder to any convenient location and aim it toward the road.

Included with the Radar Recorder is an installation kit comprised of installation bracket and utility tools. This installation kit gives you everything you need to install the Radar Recorder in the field. Low cost spare mounting bracket kits are also available for purchase to simplify installation at locations you count frequently.

View Installation Video

NDSU

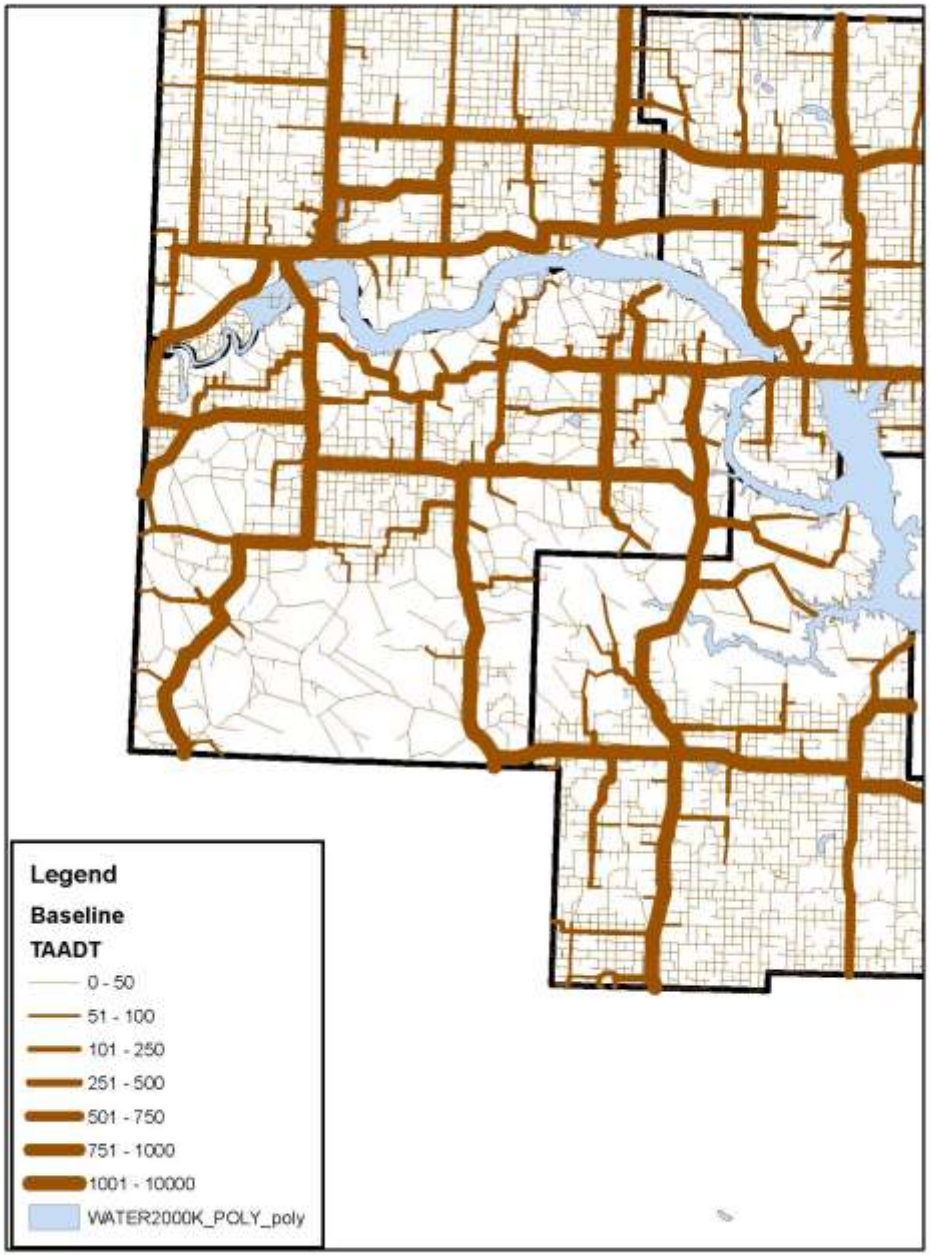

WILLIAMS
DUST
CONTROL
COUNTY
BRINE
SPREADER

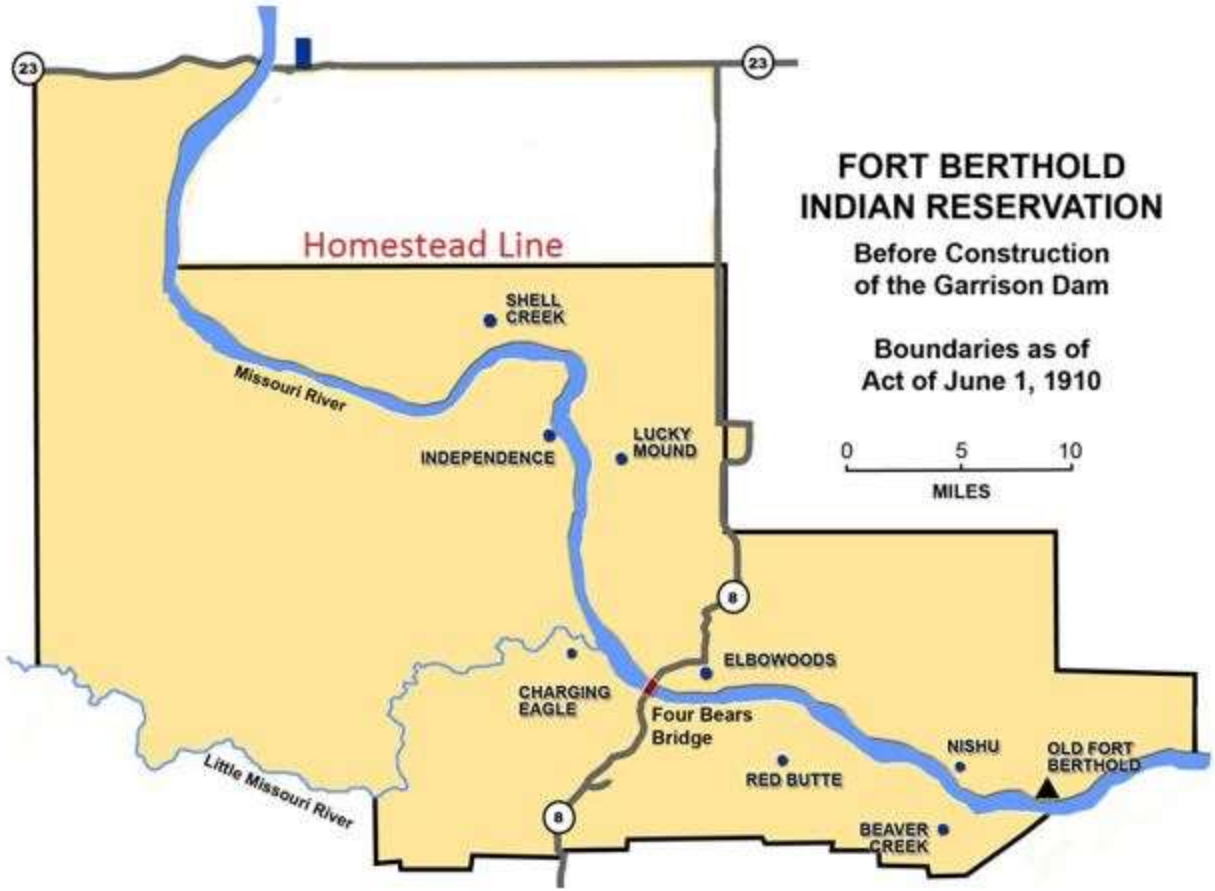
Guidelines for the Use of Oilfield Salt Brines for Dust and Ice Control

The North Dakota Administrative Code §33-24-02-02(5)(a)(2) states that wastes are exempt from waste management rules and are not considered a waste when it is: "(2) Used or reused as effective substitutes for commercial products; . . "

When used in the manner outlined in this guidance, the North Dakota Department of Health (NDDoH) considers oilfield-produced saltwater (brine) to be an effective substitute for commercial dust and ice control products. If oilfield saltwater brine is used in a manner that does not fall within these guidelines it may be considered illegal disposal of a waste, and the user may be subject to penalties pursuant to the requirements in North Dakota Century Code Chapter 23-29 and Chapter 61-28, and North Dakota Administrative Code Article 33-16, Article 33-20,

Oil Field Salt Brines


Legend
Baseline
TAADT
0 - 50
51 - 100
101 - 250
251 - 500
501 - 750
751 - 1000
1001 - 10000
WATER2000K_POLY_poly



The distinction of this boundary is important to roadway assignment, primarily due to the fact that everything to the North and East of the 1910 boundaries is maintained by the county, while everything shown in tan on the 1910 map is maintained by the Three Affiliated Tribes.

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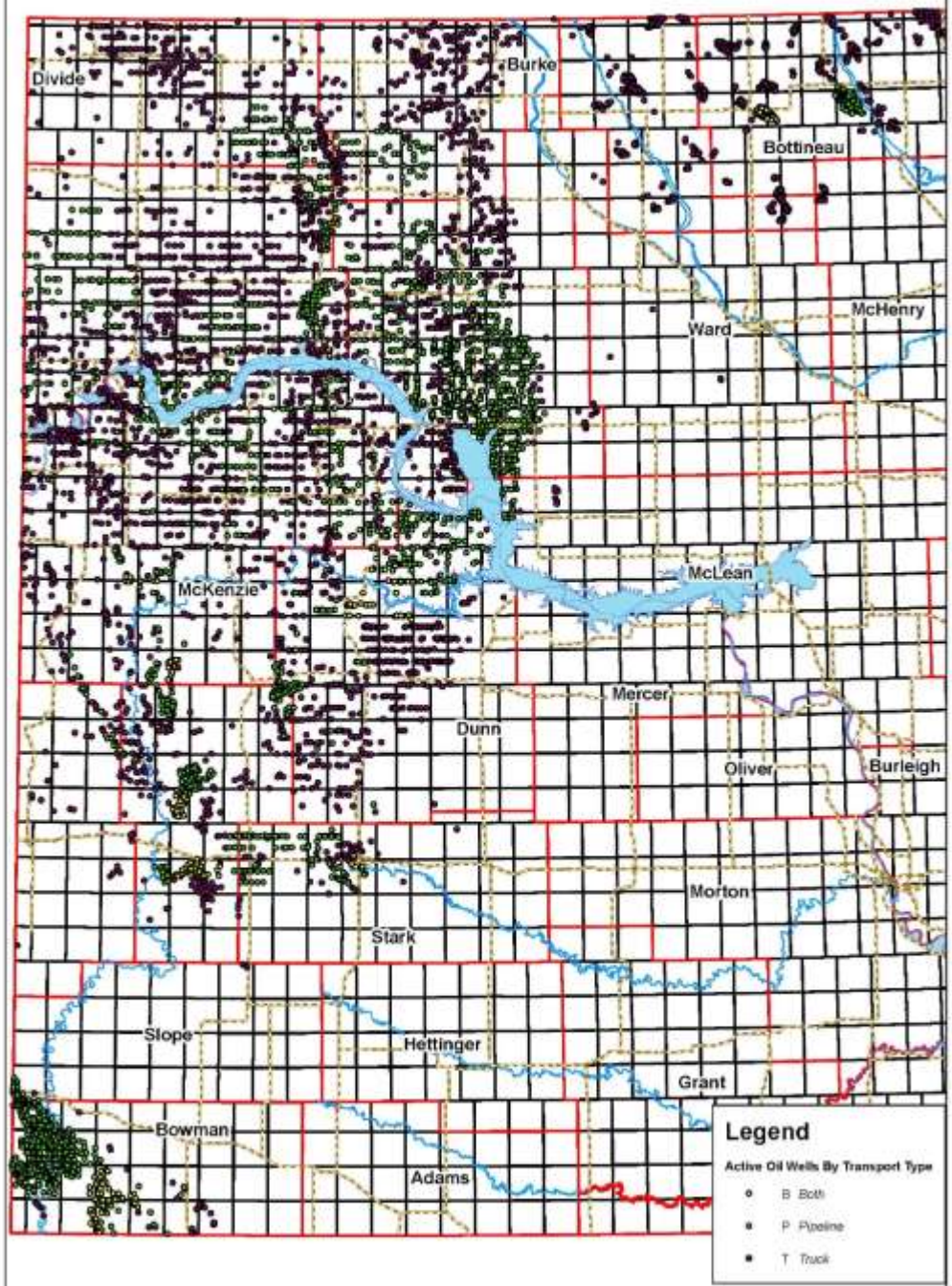
Active Oil Wells By Transport Type



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NORTH DAKOTA LOCAL TECHNICAL ASSISTANCE PROGRAM

Western Counties
Sign Truck – Show and Tell
(roundtable discussion)

Tuesday, January 27, 2015
9:00 AM – 4:00 PM (MT)

Stark County Shop
52 30th Ave West
Dickinson ND

Jeff Baranko
great NDLTA
program lea
Ideas were s
to Jeff's truc
sign equipm

The Western
format with
shop, we hav
environment
that everyon
hope is to fi

This is a grea
and to creat

Target Audie

Note: Please
training is el

Contact Info
Denise Brow
Steve Chase,

You Show Us & Smart Signs

February 24, 2015

Dale C. Heglund - NDLTAP – 701-318-6893 – ndltap.org

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NORTH DAKOTA LOCAL TECHNICAL ASSISTANCE PROGRAM

TRANSPORTATION LEARNING NETWORK