

UGPTI/NDLTAP Updates

North Dakota Association of County Engineers

January 26, 2017 - Fargo

Dale C. Heglund, PE/PLS, NDLTAP Director





New County Leaders

Reed Oien – Steele County (December 2016)

Shane Biggs – Bowman County (January 2017)



North Dakota Local Technical Assistance Program

@nditap

Home

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Dave Sather, Jenny Heglund and Larry Syverson

Write a comment...

North Dakota Local Technical Assistance Program
added 3 new photos.

Published by Dale Heglund [?] · December 11, 2016 ·

Please help welcome and congratulate North Dakota's newest county leader, Reed Oien, Highway Superintendent for Steele County.

This week, the Steele County Commission selected Reed to lead the county's road department, recognizing his vast background and energetic passion to serve. Reed's background includes a wide array of county, construction, agricultural, trucking and business ventures. Even with his vast background, his desire to learn and grow is strong. His pass... [See More](#)





Steve Chase Retired



North Dakota Local Technical Assistance Program

NDLTAP Team



Sandra Baisch - Road Scholar



Denise Brown - Training



Leanna Emmer – Truck Weight



Chris Padilla – Erosion and Safety



Dale Heglund – Program



Curt Glasoe – Western Resource

What does **NDLTAP** stand for?



To All Local ND Agencies

NDLTAP encourages you to enter the "You Show Us" contest. It's a rewarding way to share your innovative ideas with others that may benefit from your creativity. The contest is also a good way for you, your crews, and your department to get some well-earned recognition for your efforts. It's a morale booster for everyone!

Project Award

The top innovation will receive one paid trip to the Regional Local Roads Conference in Rapid City, SD, on October 18-19, 2017. The trip includes bus travel, hotel, and conference registration. The state and regional awards will be presented at this conference.

2016 TOP INNOVATIONS



1. Pickup Sign Ramp - Steele County
2. Shop Welding Exhaust Fan - Billings County
3. Motor Grader Reversible Wheel Rake - Lamoure County



2016 Steele County - State Winner

(l. to r. Reed Oien, Steele County; Noel Clocksin, SDDOT; Tim Nerby, Steele County)



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2017 "You Show Us" CONTEST

2016 Steele County



2015 Dickey County



NDSU UPPER GREAT PLAINS
TRANSPORTATION INSTITUTE

EROSION & SEDIMENT CONTROL FOR NORTH DAKOTA MUNICIPALITIES, COUNTIES AND TOWNSHIPS



NDSU UPPER GREAT PLAINS
TRANSPORTATION INSTITUTE

North Dakota Local Technical Assistance Program

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Bismarck, ND 58501

Phone: 701 . 328 . 9855

www.ndltap.org



NDSU UPPER GREAT PLAINS
TRANSPORTATION INSTITUTE

North Dakota Local Technical Assistance Program



Save the Date!

**2017 Northland "How To"
Training & Education Workshop
March 21-22, 2017
Ramada Plaza Suites, Fargo, ND**

**Attend sessions on real-world roadway
issues with topics covering:**

- **Pavement Marking** (*March 20 Preconference*)
- **Safety**
- **Signing**
- **Temporary Traffic Control**



**Northland Chapter of ATSSA
American Traffic Safety Services Association**

How-To Conference Grant Program (Local Gov)

We are excited to announce that in partnership with the Northland Chapter of American Traffic Safety Services Association (ATSSA), we are offering a limited number of scholarships to the Northland Chapter of ATSSA How-To Conference held in Fargo, ND (typically in March of each year). This unique offering is intended to raise awareness, overall knowledge, and networking opportunities in the transportation industry.

Eligibility

Scholarships are available to local government employees/officials who are either decision makers in selection, inspection, or maintenance of pavement markings, traffic signs, and temporary work zone traffic controls. Applicants must be employed with a county, city, township, or similar who work with roadway signing, markings, work zones, etc. on the roadway in order to be eligible.

Terms

Scholarship recipients may only use the grant to pay for registration to the Northland Chapter of ATSSA How-To Annual Conference. Recipients of this scholarship are expected to attend the full conference. Recipients may be asked for testimonials at the conclusion of the conference in

Selection

Applicants are selection com consideration a

- Applica city, to
- Applica roadwa
- Applica
- Past pa of ATSS

Equal Opp

No applicant, o sex, national or marriage or pu

HOW-TO CONFERENCE GRANT APPLICATION North Dakota State University, Upper Great Plains Transportation Institute North Dakota Local Assistance Program		Return application to: ND LOCAL TECHNICAL ASSISTANCE PROGRAM 515% EAST BROADWAY, SUITE 101 BISMARCK, ND 58501 OR EMAIL TO SANDRA.BAISCH@NDSU.EDU	
<i>(Please print or type. Attach additional paper if needed)</i>			
Name (last, first, middle)		Work Position/Title	
Address		Telephone Number	
City	State	ZIP Code	
Employer/School		Work/School Telephone Number	
City	State	ZIP Code	
Do you have any relatives employed by NDSU, NDLTAP, or ATSSA? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, give name and relationship.			
Are you currently working or enrolled in a ND college or university in the transportation field? Yes No If yes, provide:			
Briefly describe why you should receive this grant?			
Have you attended the Northland Chapter of ATSSA How-To Conference in the past? Yes No If yes, provide when:			

SAFETY TALKS - Retooled

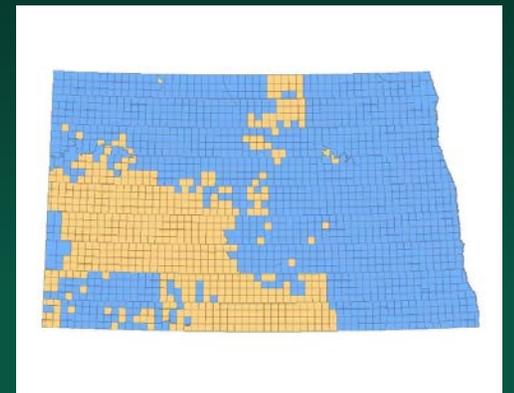


Asphalt Solutions – The Innovation Matrix



North Dakota has 107,000 miles of roadway

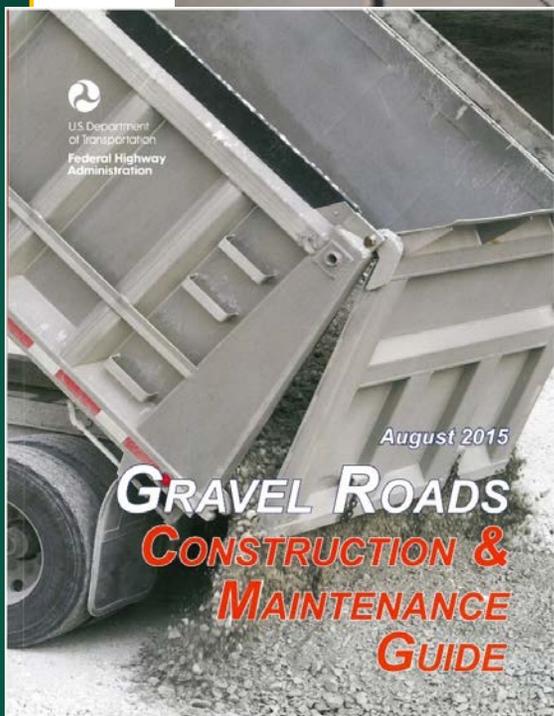
NDDOT - 7,400 miles – all paved – 92% asphalt and 8% concrete
Cities - 1,900 miles - 200 miles of gravel

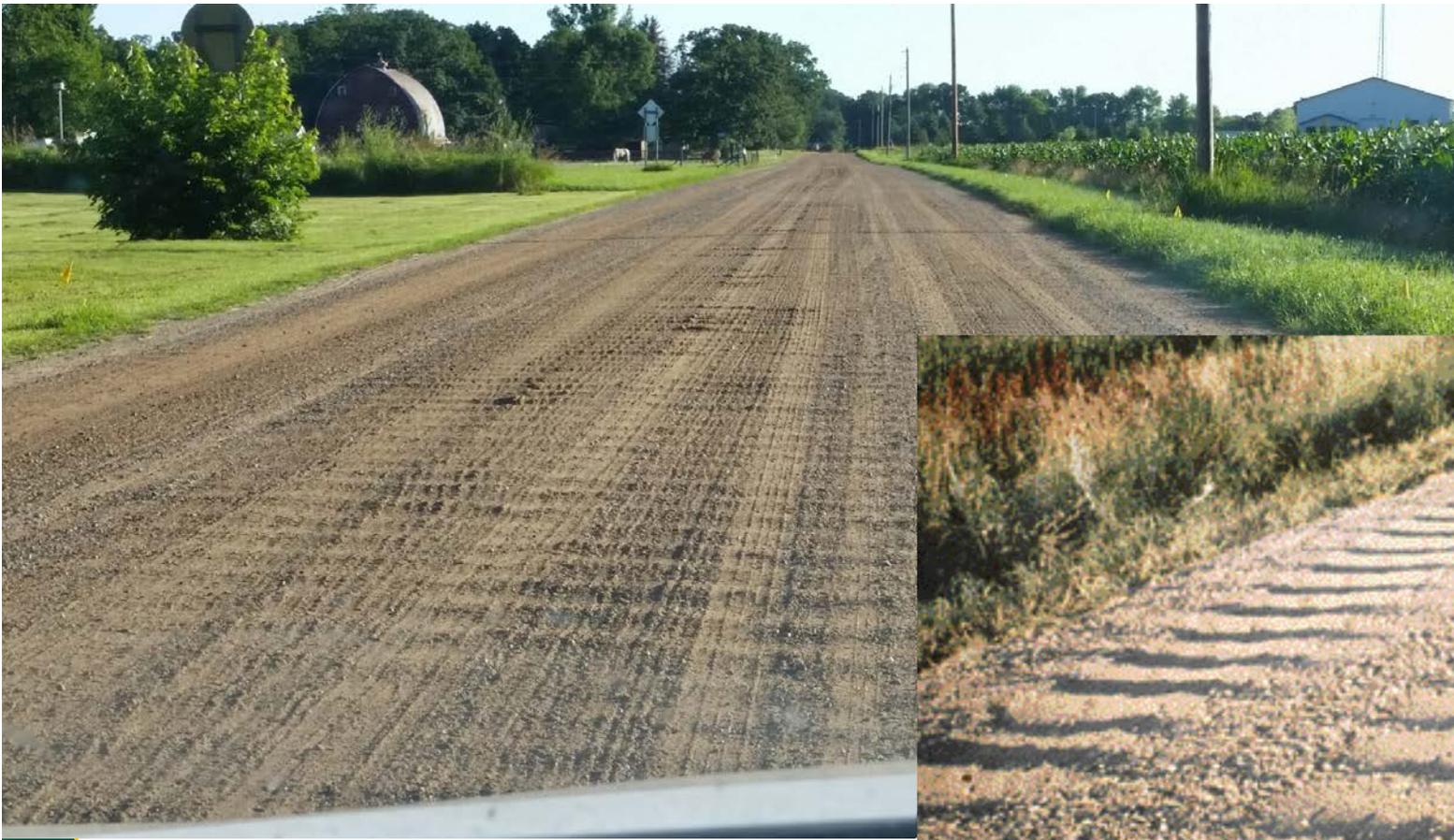


County/Local Road Network has 97,700 miles

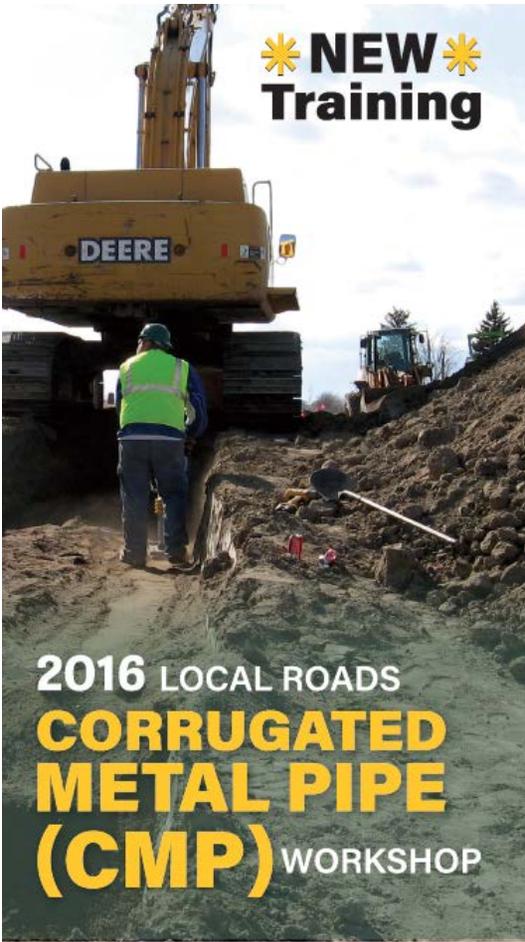
6,600 miles are paved, 59,000 miles are gravel surfaced (55% of total system!) and 32,000 miles are unsurfaced

State Network	107,000 Miles	Paved	Gravel
NDDOT	7,400	7400	0
Cities	1,900	1,700	200
Local Roads	97,700	6,600	59,000





**NEW
Training**



**2016 LOCAL ROADS
CORRUGATED
METAL PIPE
(CMP) WORKSHOP**



NDSU | UPPER GREAT PLAINS
TRANSPORTATION INSTITUTE
NORTH DAKOTA LOCAL TECHNICAL ASSISTANCE PROGRAM



North Dakota Local Technical Assistance Program

What does **GRIT** stand for?



GRIT Team - Conference On-Site Assistance

NDLTAP and the Upper Great Plains Institute are hosting a special exhibit table to help you get started on or to help you work on your **Geographic Roadway Inventory Tool (GRIT)** data input.

Stop by the NDLTAP exhibit booth for data entry assistance.



Brad Wentz



Andrew Wrucke



Dale Heglund

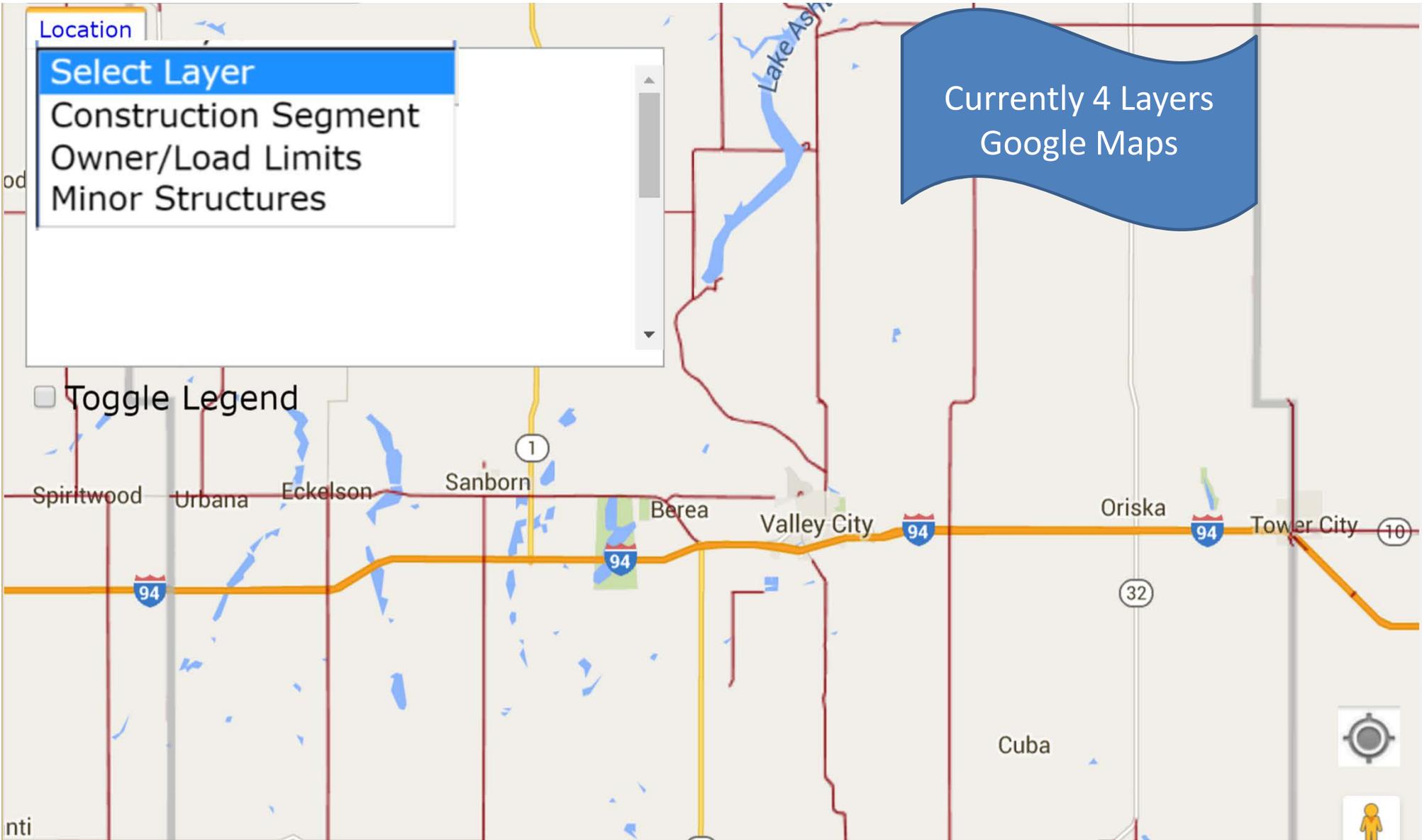
Location

Select Layer

- Construction Segment
- Owner/Load Limits
- Minor Structures

Toggle Legend

Currently 4 Layers
Google Maps



NDSU UPPER GREAT PLAINS TRANSPORTATION INSTITUTE **GRIT All Layers** GRIT Editor | Help?

Enter location

Web map viewer available to all for reviewing and analysis

(3 of 4)
 TranHigh 0
 PSR_Ride 2.01
 PSR_Cond 1.50
 PSR_Comb 1.74
 Image_url [More info](#)
 int_pnts 0

Image 1



[Zoom to](#)

Layer List

Operational Layers

- grit_construction
- Last Construction - Paved
 - Planned
 - 0 - 5 Years old
 - 6 - 15 Years old
 - 16 - 25 Years old
 - 26 - 55 Years old
 - Not Available
- Last Construction - Gravel
- Last Construction - All
- GRIT_overlap_construction
- Pavement Condition IRI 2015
- Pavement Condition PSR 2015
 - na
 - Poor
 - Fair
 - Good
 - Very Good
- Spring Load Restrictions / Ownership
- GRIT_overlap_owner
- Maintenance - Last Seal Coat
- Minor Structures
- 2015 Traffic Counts

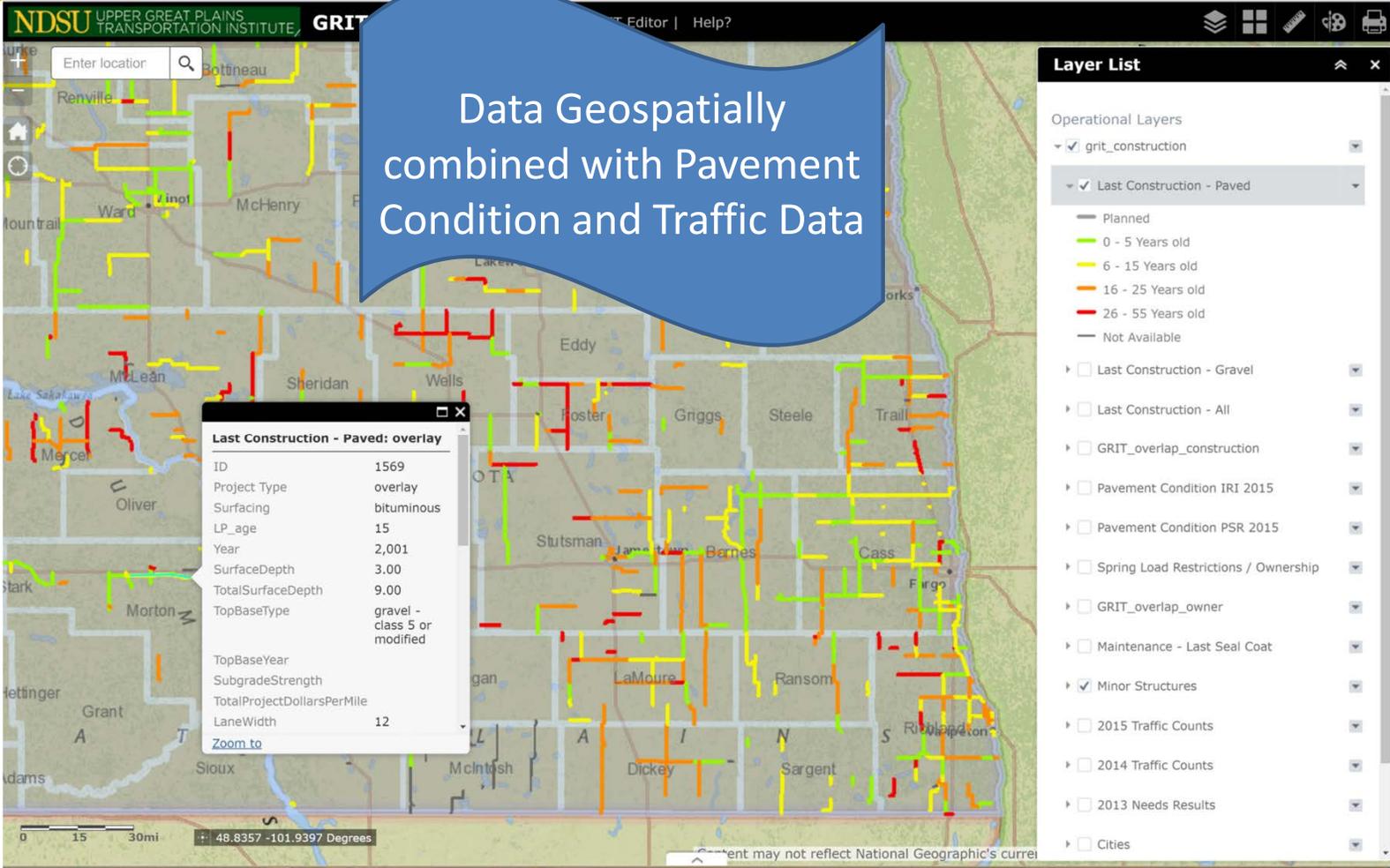
0 1.5 3mi 46.6331 -98.6872 Degrees

LaMoure Barnes Dickey

mi Airport LaMoure Rott Muir Airport

ment may not reflect National Geographic's current

Data Geospatially combined with Pavement Condition and Traffic Data



Minor Structures

Location Structure Condition Signing

Type: Pipe Culvert

Material: Steel

Span Length: 22.50 ft

Cell Diameter: 3 ft

Cell Size: Width: Height: ft

Save Delete Cancel Copy:

Toggle Legend

St SE 32 23th St SE 32 28th St SE

Map Satellite

Background layers: WebForm.aspx

Google Imagery ©2016, DigitalGlobe, USDA Farm Service Agency 50 m Terms of Use Report a map error

Other data layers such as
and Minor Structures

MINOR STRUCTURES
COUNTY OFF SYSTEM STRUCTURES LESS THAN 20 FEET

STRUCTURE NUMBER	OPER RATING	RDWAY WIDTH	BRIDGE LENGTH	TRAFFIC COUNT	YEAR BUILT	INV ROUTE	LOCATION	STRUCTURE TYPE
RENVILLE								
103-01.0	H11	20.3	8	24	1940	OFF	15W 1N SHERWOOD	TIMBER STRINGER
104-02.0	H13	20.0	8	24	1930	OFF	15W SHERWOOD	TIMBER STRINGER
104-02.1	H06	20.0	6	24	1930	OFF	15W SHERWOOD	TIMBER STRINGER
104-03.1	H11	23.3	15	25	1925	OFF	15W 1S SHERWOOD	TIMBER STRINGER
105-05.0	H12	22.0	18	25	1930	OFF	15W 3SE SHERWO	TIMBER STRINGER
105-05.1	H20	.0	6	25	1935	OFF	15W 3SE SHERWO	CONCRETE CULVERT
105-06.0	H20	.0	6	50	1925	OFF	15W 4SE SHERWO	CONCRETE CULVERT
105-06.1	H18	23.0	8	50	1926	OFF	15W 4SE SHERWO	TIMBER STRINGER
106-07.0	H15	24.0	8	30	1931	OFF	15W 5SE SHERWO	TIMBER STRINGER
108-07.0	H05	18.3	7	24	1930	OFF	1W 11N TOLLEY	TIMBER STRINGER
109-07.0	H11	19.0	16	24	1948	OFF	11N TOLLEY	TIMBER STRINGER
109-12.0	H20	.0	6	24	1927	OFF	8N & W TOLLEY	CONCRETE CULVERT
109-13.0	H20	.0	13	24	1920	OFF	7N & W TOLLEY	CONCRETE CULVERT
109-13.1	H20	20.0	7	24	1920	OFF	6N & W TOLLEY	CONCRETE CULVERT
113-18.0	H20	24.0	17	45	1950	OFF	3E TOLLEY	CONCRETE CULVERT
115-31.0	H20	25.0	7	24	1950	OFF	7N & 1E CARPIO	CONCRETE CULVERT
117-02.0	H11	23.0	16	40	1940	OFF	2W 1N SHERWOOD	TIMBER STRINGER
118-17.0	H06	20.3	16	24	1937	OFF	5W 1S MOHALL	TIMBER STRINGER
118-33.0	H20	.0	10	24	1919	OFF	6N 3E OF CARPIO	CONCRETE CULVERT
122-11.0	H08	22.6	15	40	1925	OFF	2S 1E LARAINÉ	TIMBER STRINGER
122-20.0	H06	20.0	16	24	1927	OFF	4S 2W MOHALL	TIMBER STRINGER
123-21.0	H20	.0	18	24	1974	OFF	1W & 5S OF MOHALL	STEEL CULVERT
124-23.0	H20	.0	7	24	1919	OFF	7MI S .7SE MOHALL	STEEL CULVERT
125-24.0	H20	24.0	14	35	1977	OFF	4.3E 2N OF GRAND	STEEL CULVERT
130-36.0	H11	23.0	17	24	1930	OFF	3S 8W GLENBURN	TIMBER STRINGER
131-32.0	H12	23.0	16	60	1926	OFF	7W 1N GLENBURN	TIMBER STRINGER
132-33.0	H11	23.8	16	65	1925	OFF	5W GLENBURN	TIMBER STRINGER
136-32.0	H09	20.0	17	24	1930	OFF	2W 1N GLENBURN	TIMBER STRINGER
137-34.0	H20	24.0	19	110	1968	OFF	CITY GLENBURN	CONCRETE STRINGER
137-37.0	H25	24.3	19	50	1924	OFF	1W 3S GLENBURN	CONCRETE STRINGER
138-34.0	H05	20.0	14	24	1925	OFF	2E 1S GLENBURN	TIMBER STRINGER
139-32.0	H16	23.0	16	100	1932	OFF	2E 2N GLENBURN	TIMBER STRINGER
139-32.1	H15	21.3	16	24	1932	OFF	2E 1N 1E GLENS	TIMBER STRINGER



Untitled - ArcMap

File Edit View Bookmarks Insert Selection Geoprocessing Customize Windows Help

1:500,000 Drawing Arial 10 B I U Snapping

Table Of Contents

- Layers
 - S:\SLA\GIS\Minor Structures\Yuan
 - Barnes_on_point
 - S:\UGPTI\COMMON\Andrew Wrucke\GI
 - NDHUB_COUNTIES_polygon

Identify

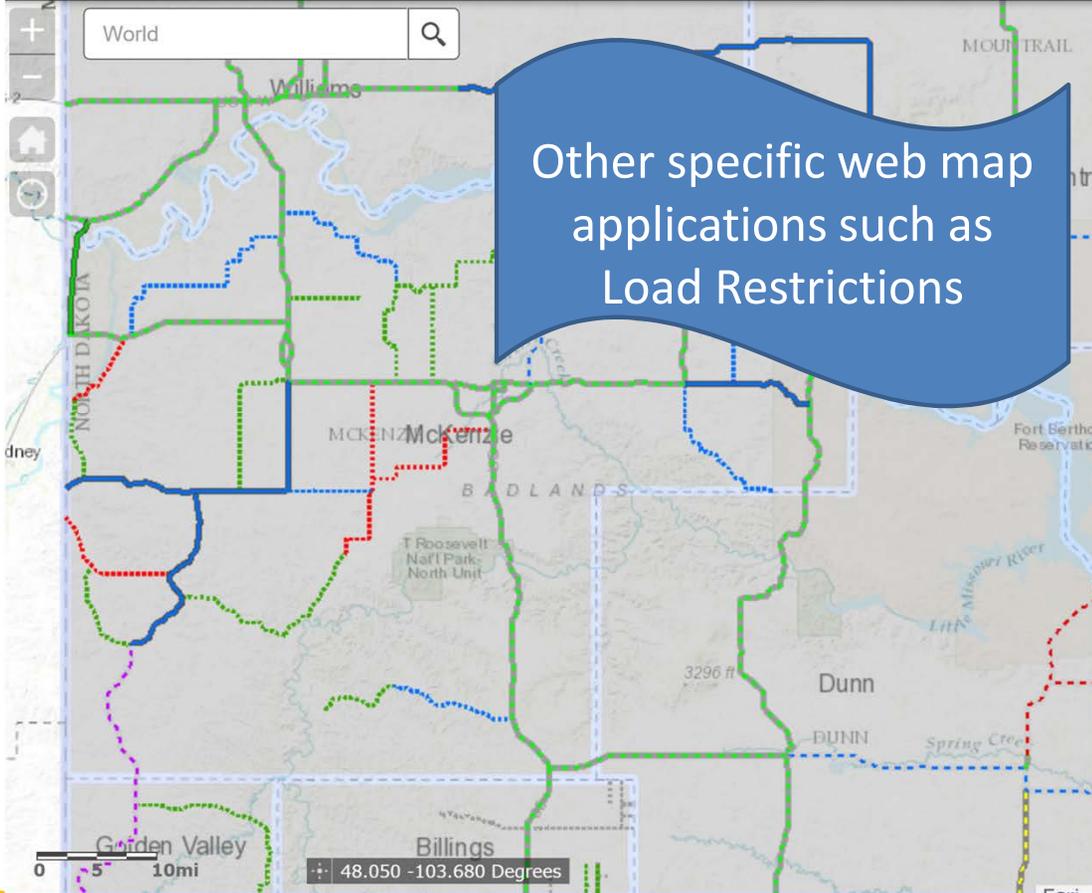
Identify from: <Top-most layer>

- Barnes_on_point
 - 120-19.0

Location: 2,574,861.379 487,020.413 Feet

Field	Value
FID	3
Shape	Point
Id	0
ST_id	120-19.0

Identified 1 feature



Other specific web map applications such as Load Restrictions

Legend

Spring Load Restrictions - State

Current Load Restrictions in Effect-N,E

- 8 Ton
- 7 Ton
- 6 Ton
- 5 Ton
- By Legal Weight
- Interstate System

Proposed Load Restrictions-N,E

- 8 Ton
- 7 Ton
- 6 Ton
- 5 Ton
- By Legal Weight
- Interstate System

Spring Load Restrictions - County (Proposed)

Proposed Spring Load Restrictions

- 9 ton
- 8 ton
- 7 ton
- 6 ton
- 5 ton

2016 National Local Technical Assistance Program Association



National
LTAP & TTAP
Association



Save the Date

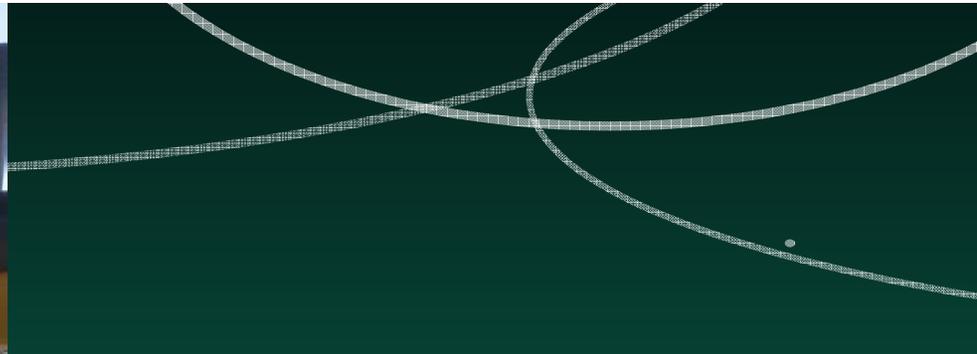
NDLTAP Motor-Grader Operator Boot Camp

April 25th and April 26th, 2017

**Burleigh County Highway
Department**

Bismarck ND

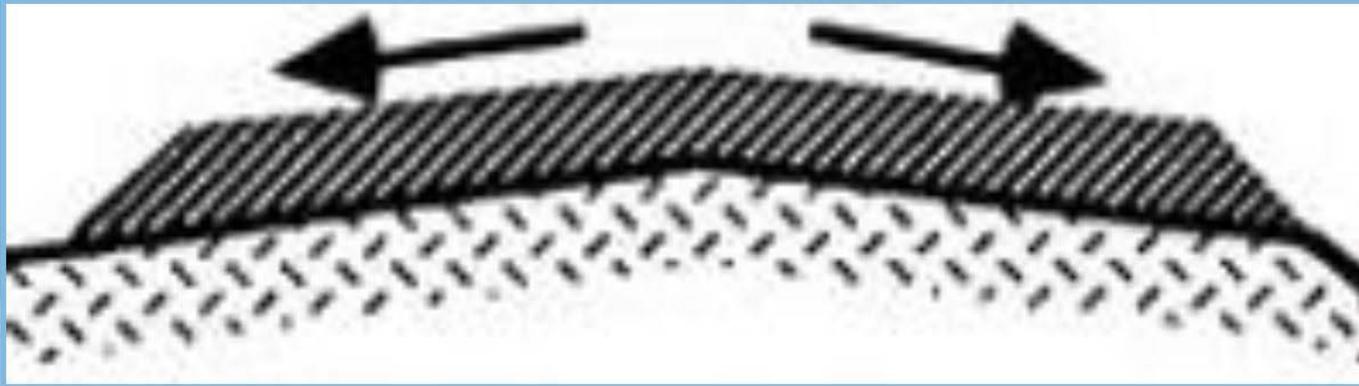


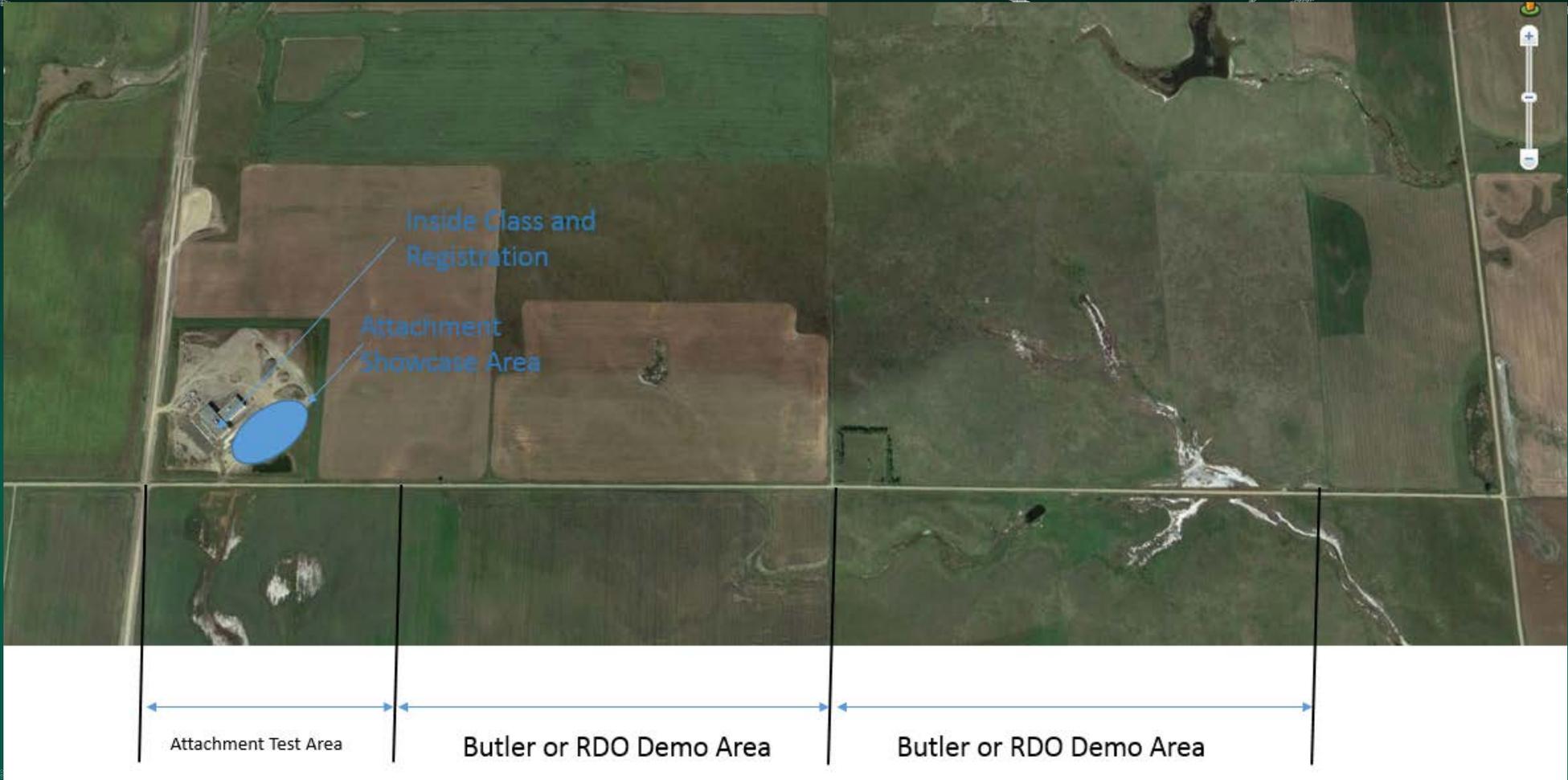


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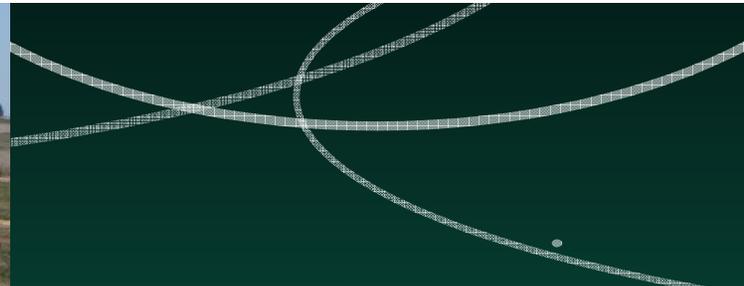


Gravel at or near 4%

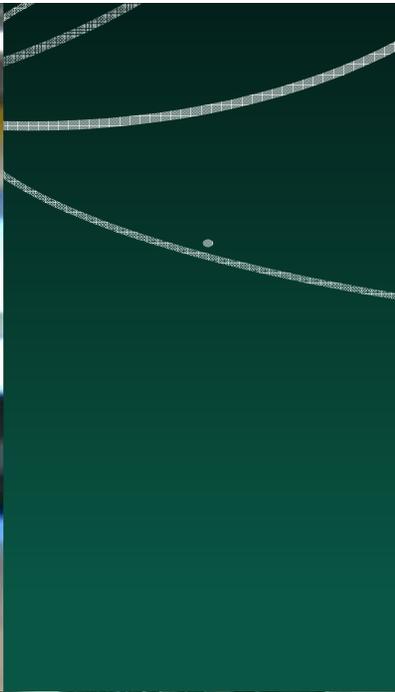








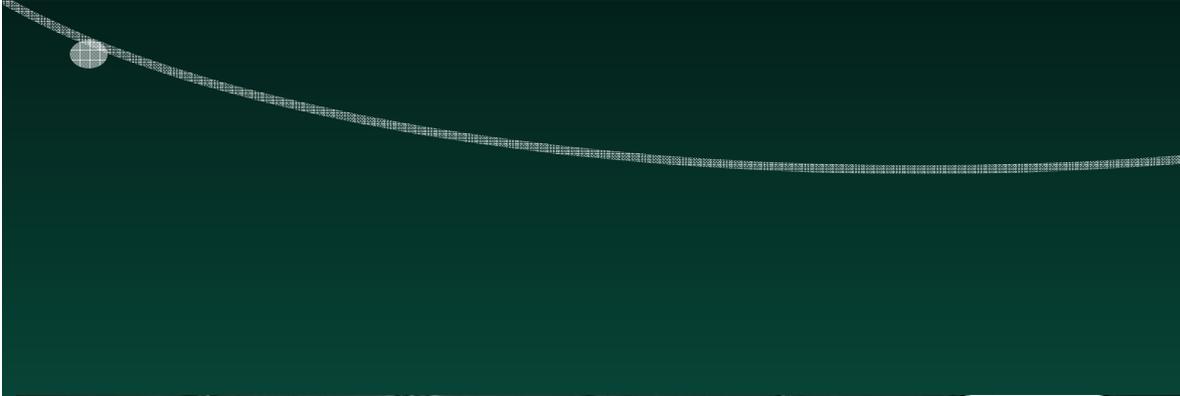






NDSU

e Program

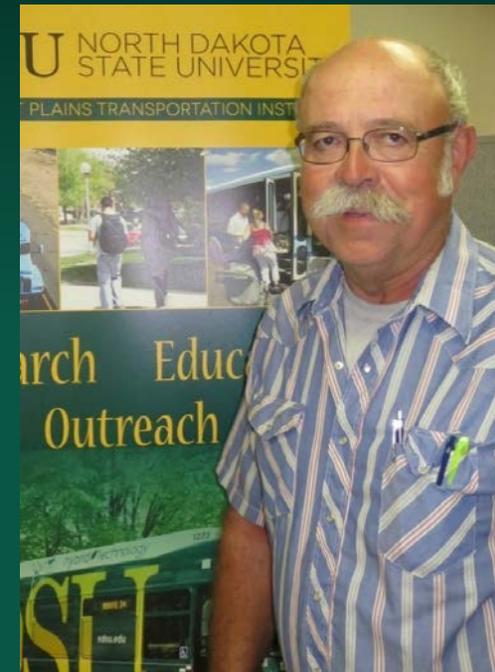


LOCAL ROADWAY SIGNING 101



LOCAL ROADWAY SIGNING 101

Subject Expert
Jon Mill, PE/PLS



Hettinger – February 15th

North Dakota Truck Harmonization Study



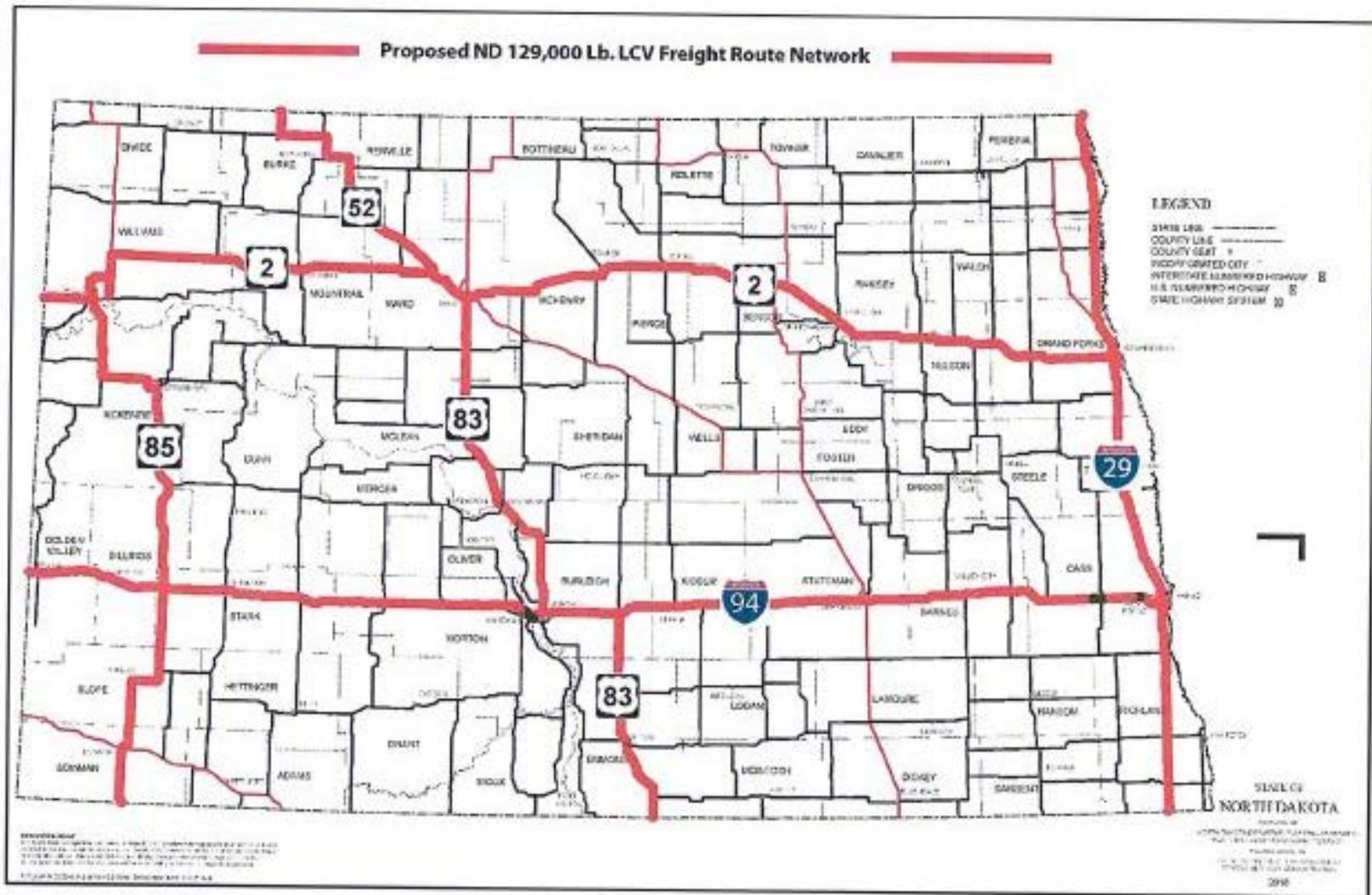


Figure 1. North Dakota Primary Longer Combination Vehicle (LCV) 129,000 lb. Backbone Network.

- [Transportation Infrastructure Monitoring & Systems enhancements \(TIMSe\)](#)
- [Vehicle Information Systems enhancements \(VISE\)](#)
- [Transit Operations & Passenger Service enhancement \(TOPSe\)](#)
- [Future Agricultural Real-time Monitoring Systems environments \(FARMSe\)](#)

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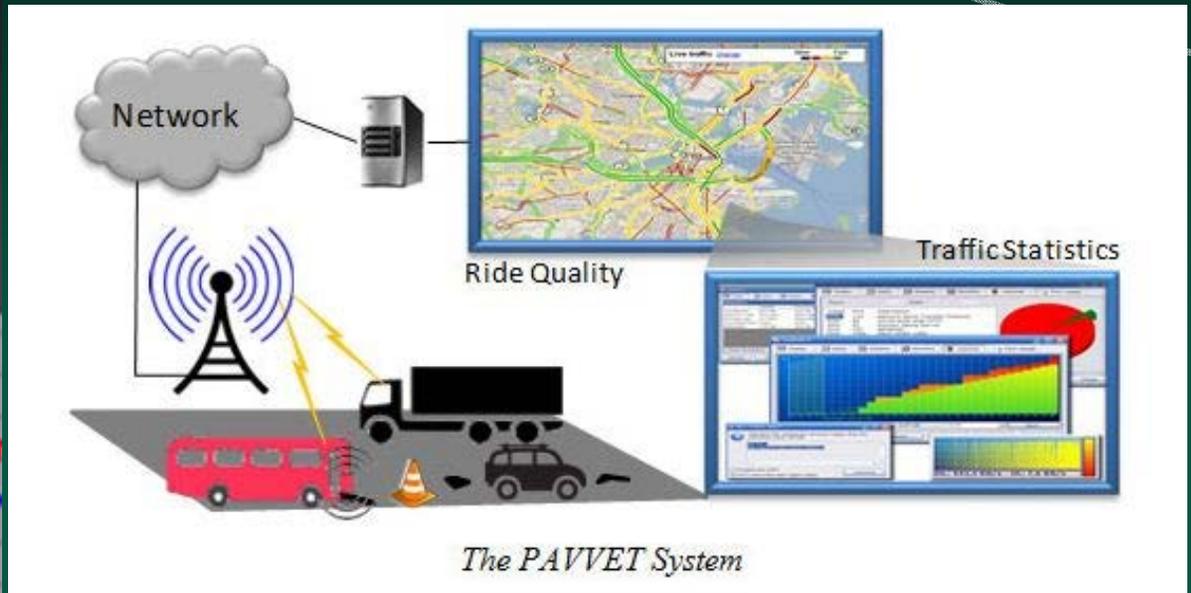
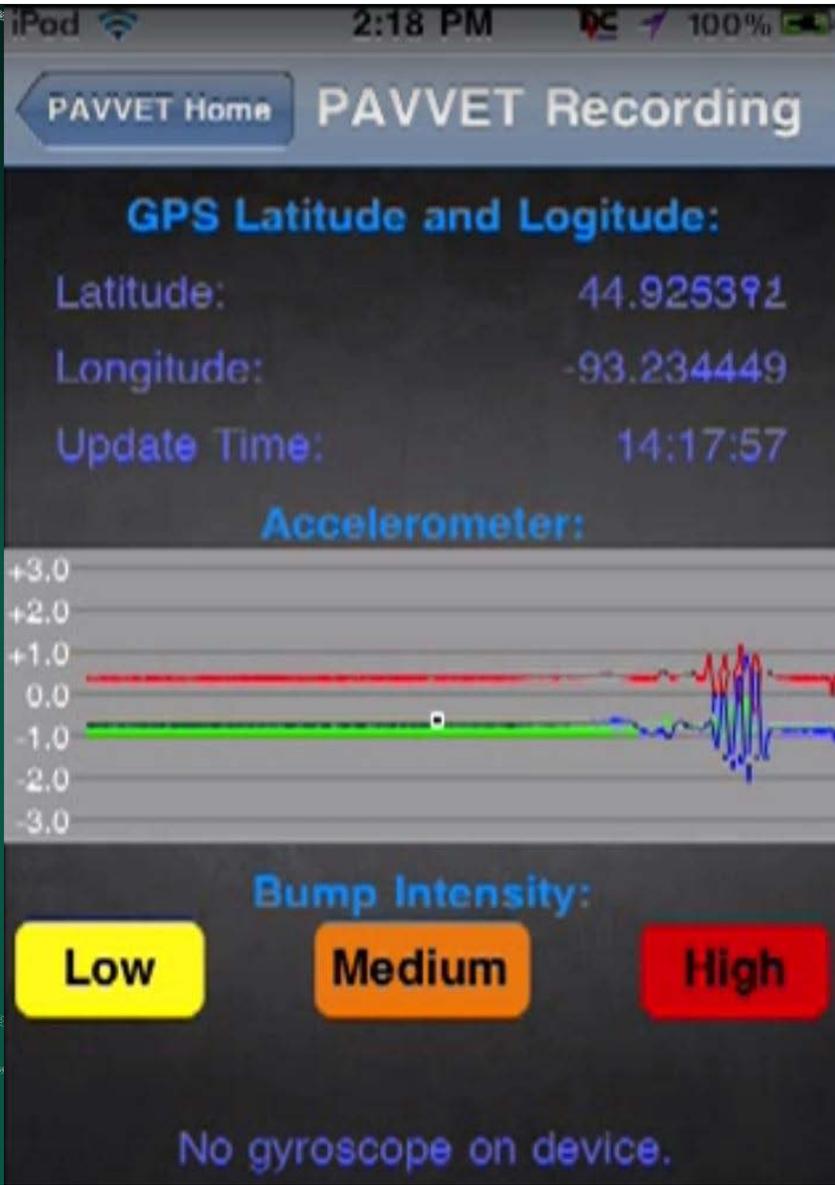
SMARTSe Research Project

Performance Analysis Via Vehicle Electronic Telemetry (PAVVET)

The International Roughness Index (IRI) and Power Spectral Density (PSD) are the two most widely utilized indices to summarize ride-quality and pavement condition. Producing them requires calibrated roughness profiling equipment and personnel with specialized training. Even with the latest high-speed profiling technologies, transportation agencies cannot afford the time and expense necessary to produce these indices more frequently than once per year. Consequently, symptoms of distress conditions go unnoticed, for example, frost heaves that appear in between data collection cycles and disappear afterwards. To mitigate these risks, agencies are seeking lower-cost approaches to comply with federal condition reporting requirements for the national highway network.

The IRI is strictly a ride-quality index, derived from the accumulated suspension movement of a simulated quarter-car, rolling over the elevation profile at a fixed reference speed of about 50 miles per hour. Characterizing roughness for urban roads is nearly impossible because IRI is undefined at other speeds. As a mechanical filter, the model emphasizes wavelength energy that excites the modal resonances,







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