

The Center Line

North Dakota Local Technical Assistance Program • Upper Great Plains Transportation Institute • North Dakota State University

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Winter 2009

REGIONAL LOCAL ROADS CONFERENCE

by Jerome Horner

The 23rd Annual Regional Local Roads Conference was conducted Oct. 29-30 in Rapid City, The conference, a favorite for local transportation officials and employees, had more than 200 attendees, with representatives from five states attending the session.

The focus for the session was on how to deal with economic development and the resulting impact on local transportation systems. Several presenters from various states provided presentations on how they were dealing with the issue locally and the resulting lessons learned.

A perennial favorite agenda item of the conference has been the presentation of the “You Show Us” contest, which is a sharing of innovative ideas from county road departments. This year’s award went to Buffalo County, Nebraska, for the development of a retractable bridge parapet marker. North Dakota’s entry was submitted by Barnes County and was previously printed in our last newsletter.

The evaluations reflected very positively on the overall conference. The 2009 conference will again be held in Rapid City, SD, Oct.20-22.

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Kerry Johnson & Bruce Lowell - Barnes County
2008 North Dakota LTAP Winners

SLOPE COUNTY BUILDS NEW SHOP

By Vernon Monger

Slope County has recently constructed a new shop at the county seat of Amidon. A 50' by 60' metal building replaced an old implement shop that had previously been used.

Slope County is a sparsely populated county in the southwestern part of the state, bordering Montana. The county is bisected by the Little Missouri River and Deep Creek, with limited low water crossings creating more difficulty in maintaining the roads. There are only two cities, Marmarth and Amidon, within the county. The county has maintained small road department shops at these two locations. In addition, it has had equipment operators located at farmsteads within the county who maintain roads within the area. The county maintains approximately 1,043 miles of roadway with seven employees. There is oil exploration and production within the county with heavy truck traffic on many routes.

Dale Powell was recently appointed as road foreman for the county. Powell states that while the shop is small, it is a very big improvement over the previous facility. For winter operations they are able to get the motor graders and trucks into the building. Also, equipment maintenance can be better handled in the shop.



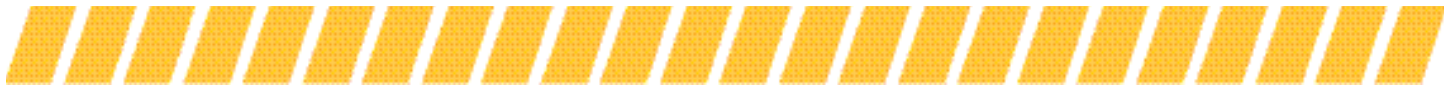
L.T. Lorge and Dale Powell

DAVE LEVI RETURNS TO NDLTAP AS PROGRAM MANAGER

by Gary Berreth

In our last Centerline issue we indicated the retirement of Dave Levi from our NDLTAP organization. Dave had been our NDLTAP Program Manager and was a principal contributor to our program's success. After unsuccessfully trying for months to find a replacement for Dave's position, we are pleased to report, that we have found someone with the same background and knowledge as Dave possessed. Yes, Dave Levi is back! We are fortunate that Dave has agreed to step back into his previous position as NDLTAP Program Manager.

Welcome back, Dave!



TRANSPORTATION OFFICIALS WORK TO IMPROVE DRIVER SAFETY WITH CENTERLINE RUMBLE STRIPES

This fall, centerline rumble stripes were placed on ND Highway 1806 beginning at Fort Lincoln State Park, south of Mandan, continuing south to the junctions of ND Highway 24 and ND Highway 6. This is the first time that rumble stripes were added to the centerline of a North Dakota highway.

Centerline rumble stripes are grooved patterns on the roadway that provide a rumbling sound and physical vibration to alert drivers that they are leaving the driving lane. Rumble stripes also improve the visibility of the centerline because the paint on the vertical side of the groove reflects the car lights more efficiently than the flat, horizontal pavement surface.

This section of road was selected for centerline rumble stripes because there were 15 fatal crashes on it in the past five years. Lane departure was listed as one of the factors involved in 10 of the 15 crashes.

Cost of the project was approximately \$1,800 per mile. In contrast, widening the road would have cost approximately \$1 million per mile. The total cost of the 62.5-mile project was approximately \$113,000.

The grooves are seven inches long, running parallel to the road and one foot wide running perpendicular to the road. They are 1/8" – 1/2" inch in depth. Vehicles will shift an average of 5.5 inches to the right when centerline rumble stripes are used. According to District observations, the stripes have not seemed to affect snowplows, or gathered ice or snow this winter.

The North Dakota Department of Transportation will review the effectiveness of the rumble stripes and listen to public comments as it considers the addition of more centerline rumble stripes across the state.

Submitted by: North Dakota Department of Transportation

OLIVER COUNTY HIGHWAY SUPERVISOR RETIRES

by Vernon Monger

Francis Pulver, highway supervisor for Oliver County, retired on Dec. 31, 2008, after serving on the county road department for 23. He served as the highway supervisor for the past 11 years and a member of the LTAP advisory board for 8 years.



Pulver had the road department staff involved in LTAP-sponsored training activities and the "You Show Us" contest over the years. These training programs, he states, have been very valuable to the county employees. New employees are hired with limited experience and the provided courses have been very valuable for them as well as being good refresher courses for other employees.

Pulver has been a lifelong Oliver county resident, growing up on a ranch and maintaining a hobby ranch with a few cows and horses. Now, he states, he will have more time to get back to breaking his draft horses which have been neglected because of time restrictions. You can see him this summer with his two and/or four horse teams hitched to a wagon or old farm machinery and participating in some of the local celebrations in the area or perhaps join him in a wagon train trail ride. He and his wife, Penny, reside in Center, ND.



CASS COUNTY OPENED ITS FIRST ROUNDABOUT THIS FALL

by Jerome Horner



Cass County opened its first roundabout this fall. The roundabout is at the junction of Cass County 17 and Cass County 52, south of the Horace Interchange, Exit 346, on Interstate 94. An open house was conducted Oct. 23 to showcasing the planning, design, construction, and operation of the new highway geometric design to the public and other interested transportation entities.

The roundabout was built at this location because of the geometrics at the existing intersection and to accommodate increased traffic volume without adding a traffic signal.

Cass County Engineer, Keith Berndt indicates that the implementation of the roundabout at this location has been very successful. Motorist have adapted well to the new highway geometry, with traffic moving efficiently and safely through the highway intersection.

The trend towards greater use of roundabouts has been a national initiative by FHWA and associated transportation officials. As the planners recognize that roundabouts limit the need for signalization while providing a safer, more efficient intersection, additional roundabouts are coming online.

Looking for your ideas and news articles

Contact Denise Brown at
(701) 328-9855 or
denise.brown.1@ndsu.edu
to share your ideas and
articles for upcoming
editions of The Center Line.

BURLEIGH COUNTY ENGINEER JON MILL RETIRES

By *Vernon Monger*

After serving as Burleigh County Engineer for the 28 years, Jon Mill retired on Dec. 31, 2008. He has served on the Local Technical Assistance Program (LTAP) advisory board since its inception in the late 1980's.

Mill began his engineering career with the NDDOT in 1970, after receiving his civil engineering degree from Montana State University. Working with the DOT, he served as the project coordinator for construction in the Valley City district prior to accepting the position with Burleigh County.



In addition to being a registered professional engineer, Mill is also a Certified Land Surveyor. He has been able to assist with the orderly planning necessitated by the rapid growth and development in and around Bismarck.

Mill has been very active on many boards and committees within the county and state. He has been a member of the county planning commission, metropolitan planning organization (MPO), and advisor to the park and water management boards. He is a past president of the North Dakota Association of County Engineers (NDACE), also serving as the liaison for the county road departments during the state legislative sessions. He has received the NDACE award for "Engineer/Superintendent of the Year" as well as the Association of Counties, "Outstanding Appointed County Official" award. Mill was also appointed by the Federal Highway Administration as North Dakota's representative to the "County Road Advisor Program" advisory committee.

As a strong supporter of the LTAP program Mill has provided valuable advice to our LTAP advisory board in establishing the training programs for local road and street departments. His experience and knowledge shared has contributed to a much better work force for all transportation, related activities in the state.

Mill and his wife (Marie) will continue to reside in Bismarck. He says he has neglected his toys for too long and now it is time to do more sledding, fishing, boating, and above all when the weather gets a little better, get the "Harley" out and get some miles on that.

Good luck in retirement, Jon. I'm sure we will continue to call on you for information and advice you have stored away.

COMING EVENTS

ND LTAP/TLN Events

Basic Asphalt - TLN
March 26, 2009
9:00 AM - 5:00 PM

Asphalt Conference - NDLTAP,
NDDOT, DAPA, AGC
March 24 - 25, 2009
Noon - Noon

Corrugated Steel Pipe - TLN
March 31, 2009
10:00 AM- 11:30 AM

Traffic Control Design
Specialist - ATSSA - TLN
April 13th & 14th, 2009
8:00 AM - 5:00 PM

Bridge Maintenance- TLN
April 22, 2009
9:00 AM - 5:00 PM

Hiring Smart - TLN
April 29, 2009
9:00 AM - 5:00 PM

Tractor/Mower Operation
Safety Training - TLN
April 30, 2009
9:00 AM - 3:30 PM

BURLEIGH COUNTY HIRES NEW ENGINEER

By *Vernon Monger*

Burleigh County recently hired, Marcus Hall, a county engineer to replace Jon Mill, who recently retired. Hall was previously employed by St. Louis County in Minnesota for the last 16 years, serving as bridge engineer, assistant county engineer and the county engineer, for the last 5 years.

Hall received his civil engineering degree from North Dakota State University in 1985 and a masters degree in structural engineering from Iowa State University. He has served on various transportation related boards in Minnesota over the years, being involved with the Minnesota “Local Road Research Board” (LRRB) and the Local Technical Assistance Program (LTAP) .

Hall and his wife, Daphne, will reside in Bismarck.



“YOU SHOW US HOW” Contest

This issue of “The Center Line” features additional entries from the last “You Show Us How” contest. This contest has been ongoing for 15 years. The program focuses on safety and operational efficiency improvements in the workplace.

We encourage all city and county road and street departments and others to submit ideas to us. We want to know what you are doing. What is the best idea you have implemented in your agency within the last few years? Have you built a better “mousetrap?” This is your opportunity to showcase something that you are proud of because it has worked for you. We will print articles about your innovation in our newsletter to share with your counterparts in the state and region. While the “You Show Us How” is a late summer contest for the fall local roads conference in Rapid City, we encourage you to work on items during the winter months if snow removal is at a minimum. You may submit items at any time and if you want assistance in preparing the article, please contact us.

Videos & Publications

Go to the ND LTAP website: www.ndltap.org

Publications can be ordered online by visiting the Online Dakota Information Network (ODIN) search engine (Opens a new window)

Videos can be ordered using one of the following methods:

Order Videos Online

Mail or fax your order using the video request form (PDF, 23K)

E-mail your order directly to denise.brown.1@ndsu.edu

“YOU SHOW US HOW” 2008 CONTEST ENTRY

Theft Proofing Above Ground Fuel Storage Tanks

Burleigh County Highway Department
Rodney Ness, Road Superintendent
2000 N 52nd St.
Bismarck, ND 58501
701-221-6870
County Population: Approx. 70,000



Problem Statement

With the sky rocketing price of fuel and gas it is inevitable that theft will become a bigger problem than it ever has been. Burleigh County has 8 above ground fuel storage tanks with a combined capacity of 12,000 gallons. At \$4 per gallon that is the potential of \$48,000 worth of inventory out there just for the taking. Many of these tanks are in remote or rural areas that would be attractive to theft.

Discussion of Solution

After looking at several of the commercial lock systems for above ground fuel tanks available on the market, none were truly theft proof. Most of them could be turned out with a pipe wrench, or just simply use a bolt cutter to cut the lock off. The tank bungs, air vents, and fill caps all had to be addressed. I had come up with an idea to make a lockable fill cap cover that would be virtually impossible for the average thief to break into. I sat down with our welder Fred Myers and gave him my ideas for the basic concept and ultimate goal. Fred took my concept and enhanced it with several changes and after trial and error and some fine tuning Fred completed what I feel is a nearly theft proof lockable fill cover. It involves a method of tying all of the unused bungs together with a metal strap, or installing a custom plug in the unused bungs that requires a unique shop built wrench to tighten or take out to prevent them from being turned out with a pipe wrench (see photos). The plug has holes that the wrench fits into, but the holes are filled with epoxy and would have to be drilled out in order to use the wrench. And finally to fabricate a metal cover that conceals the fill cap and padlock so it cannot be cut, pried with a bar, or hit with a hammer. The cover also conceals the threaded portion of the fill cap that screws into the tank so a pipe wrench cannot be used to screw it out. The cover is actually held onto the tank with the fill cap (see photos).

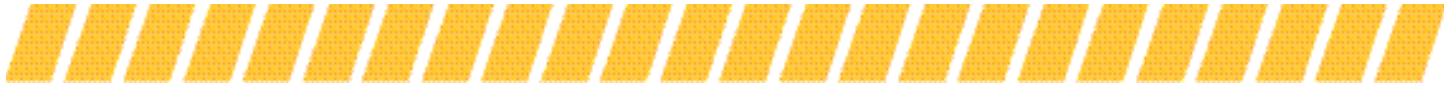
Labor and Materials

Everything except the padlocks was shop built. All materials were purchased from a local iron supplier or were on hand. Fred had some of the pieces bent at a local iron shop. Materials and outside vendor labor ran about \$150 per tank but that included the cost of a high security padlock. Our shop labor to build and install each of the covers ran about 6 man hours each. We estimate that the total cost per tank was around \$300 installed.

Savings and Cost Benefits:

The potential for fuel and gas theft will be virtually eliminated. It will not take long to realize the cost benefit at the current cost per gallon.





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