On the Road in New Hampshire

The T² Challenge

This year, a new event took place at the 10th Annual New Hampshire Agent Road Association Mountain of Demonstrations, at Waterville Estates, Campton, NH. The UNH Technology Transfer Center set up five training stations throughout the mountain. At each station, people participated in training exercises and earned credit towards the Road Scholar Program.

The five training stations were created around basic elements of the a road workers job. The training stations included: a pre-trip equipment check; sander calibration; use of an eye level to determine the slope of a road and other calculations; determining proper sign placement and road striping; and selecting the proper gravel types for common situations.

The events were successfully completed with the cooperation of Grappone Industrial, Inc, of Concord NH; Howard Fairfield, Inc, of Concord NH; Pike Sand and Gravel, Hooksett, NH; Waste Inc, Concord, NH; and Worksafe, Inc. Barre VT.

Civil Engineering Students from UNH, project assistants from the T² Center, and other volunteers (including Master Road Scholars), helped participants walk through the course of activities.

The challenge allowed participants to receive two hours of Road Scholar Credit. The Road Scholar Program recognizes individuals who have completed a quantity of workshops, covering specified topics. The program established the levels of accomplishment. The highest is the Master Road Scholar which is regarded as evidence of the individual being a professional road manager.

The event was fashioned after a program created by the Maine Local Roads Program at their American Public Works Association show in June. The Maine program has been in effect for 6 years and people always have a lot of fun while learning a lot. Happily, the same can be said for the T² Challenge. Over 70 people participated, they all had a good time while learning valuable information.
Adopting a Snow and Ice Control Policy

Why You Should Consider Adopting a Snow and Ice Control Policy Now

If your highway department is like others, you are reading this after a day of repairing asphalt roads, grading roads or ditches, mowing, or some other summer work. Maybe, you just finished picking up the last of the sand you put down over the winter. You are probably not ready to think about the next load of sand you will put down in just a few short months. Yet, developing policies for the winter season is easier now than before you have to clear the snow from an Alberta Clipper.

The NHDOT

The New Hampshire Department of Transportation (NHDOT) revised its Snow and Ice Control Policy in 1992. Steve Gray, the NHDOT Highway Maintenance Engineer was instrumental in adopting the policy. He has found it to be a vital part of their winter operations.

The NHDOT policy states the impossibility of having bare pavement through a storm. The policy sets levels of service to provide bare pavement within a day after a normal snowfall, or two days after a severe storm. The policy acknowledges that winter storms vary. Therefore, it is not feasible to create rules governing all winter operations: strategies are more appropriate. It also recognizes the importance of employees’ good personal judgment.

Developing a Policy

The first step to develop a snow and ice policy is to establish levels of service for different storm conditions. This might take one or more public forums. These give the director of public works or road agent the opportunity to educate their customers.

A level of service speaks to the what roads will look like during and after a storm. How often will a truck make a pass through each route? After a storm, will the roads be covered with hard pack or be bare? Maintenance strategies must be addressed along with materials usage and material types, application rates, and under what weather conditions materials will be used.

Benefits to the Municipality

Once the municipality establishes a level of service it must adopt a policy to support it. The policy should include strategies for winter maintenance, such as deicing or anti-icing.

Determining a level of service and adopting a policy serves a number of purposes:

- it protects the municipality,
- lets the employees know what is expected,
- educates the municipality’s residents,
- and it is a basis for budgeting.

A written policy provides the municipality with a standard for snow and ice removal. If a complaint or legal issue arises, the town can show they have a consistent plan to handle winter conditions. This is particularly helpful if the residents have had input into the policy. Also, the driving public knows what to expect.

A policy enables municipal employees to know what is expected of them. How often they are expected to make a pass. For example, how many hours they are expected to work during and after a storm. What safety procedures they should follow. What materials they should use and when.

A snow and ice removal policy educates the road manager’s customers, giving customers a voice to say what level of service they want (and will support). The education process allows the road manager the opportunity to explain basic elements of snow and ice removal. The forum gives customers the opportunity to ask questions about procedures and to inform management what they consider important.

A policy provides a base to develop a budget. A municipality committed to maintaining a certain level of service is more likely to provide funds to achieve it. Any funding they provide short the policy, decreases the policy’s value.

Conclusion

As you can see, there are many good reasons to have a snow and ice control policy. For a copy of the NHDOT snow and ice control policy call the UNH T^2 Center.
Highway Block Grant Aid Funds

How Grant Aid Amounts Are Calculated and Records Updated

During the 1997 fiscal year the State of New Hampshire distributed over $20,000,000 to cities and towns for maintenance and repair of their roads. Highway Block Grant Aid has two “Apportionments.” Apportionment A is 12% of the State’s highway revenues. It $21,028,425 in 1997. The smaller portion, Apportionment B, is a set amount of $400,000. It is intended to assist municipalities with high roadway mileage but very low property value relative to other municipalities. In Fiscal Year 1997, the NH Department of Transportation (NHDOT) distributed these funds to 31 municipalities.

This article focuses on Apportionment A. It describes how the NHDOT calculates municipal shares, and procedures to request changes in population and mileage records.

Calculation of Grant Aid Amounts

The NHDOT distributes Apportionment A Block Grant Aid quarterly to each municipality based on its relative population and miles of town maintained roads.

Population. The NH Office of State Planning (OSP) estimates the population of each municipality annually. The NHDOT distributes one-half of Apportionment A to each municipality based on its proportion of the total state population. In fiscal year 1997, a town or city received $9.25 for each resident.

Road Mileage. A municipality’s share of the other half of Apportionment A is based on its proportion of the total Class IV and Class V road miles in the state. In fiscal year 1997, a town or city received about $970 for each mile of Class VI or V road or street.

Class IV highways are state highway routes within the “compact sections” of 27 cities and towns. The NHDOT Commissioner designates the specific highway sections by procedures described in RSA 229:5, IV. Class V highways are all other roads, paved or unpaved, that the town or city has the duty to maintain year around.

By definition municipalities do not maintain Class VI roads. Therefore, they do not receive Block Grant Aid for Class VI roads. When a municipality accepts maintenance responsibility for a new or Class VI road, it must notify the NHDOT to receive Grant Aid for it.

Updating Population and Mileage Records

Each April the OSP informs municipal offices of the data it will use to calculate population estimates. Municipalities have 30 days to comment on this data. (Agencies use OSP population estimates for other state-municipality fund transfers unrelated to roads.)

Each March the NHDOT Bureau of Municipal Highways sends an "Information Report" to each municipal office. In Section 2 it requests information about highway reclassifications or discontinuance, or any other action regarding highways or bridges. The municipality must provide three information items:

- Road Name
- Classification
- Length

They should also provide, if known, the Road Inventory Number (RIN). The NHDOT data base has all information for a road tied to its RIN. Road names often change, and must be connected to the correct RIN. The NHDOT Bureau of Transportation Planning can prepare maps which show both their recorded Road Name and RIN for each road.

To request a map or the total mileage for block grant aid funds, municipal officials can call the Bureau of Transportation Planning at 271-3344. If the total mileage appears in error, municipal officials can also request the four items for each road. To correct any inaccuracy, municipal officials must provide a map and all four items for each needed correction. For certain mileage changes, the NHDOT will survey municipal roads to verify road lengths.

The state population and mileage records are obviously important to the amount of Block Grant Aid received by each New Hampshire municipality. The typical municipality has a small staff to review this information. Yet, inaccurate records could result in a municipality receiving less than its appropriate Block Grant Aid.

Acknowledgments

We gratefully acknowledge the assistance of New Hampshire Office of State Planning staff members and of the following individuals in the New Hampshire Department of Transportation: Robert T. Barry, Nancy J. Mayville, Richard G. Marshall, Nastaran Saadatmand, and David Szumalewski.
Master Road Scholars

Master Road Scholar James Dicey

James Dicey has been the Road Agent in the town of Troy since 1989. Before holding that position he was a laborer in the same town. He worked as a dump truck driver for two years, and then he worked as a machinist in Lawrence, Massachusetts for twelve years.

When Jim was asked why he attends so many classes, he responded, “I believe any knowledge will improve the way I do my job, especially field-related knowledge.” He says, “The classes make my job easier for me.” Although Jim does not push his employees to attend training, he creates the opportunity and greatly encourages it.

The selectmen in the town of Troy support Jim’s ambition and respect for education. Recently, Jim got the town to come together to build a new 58x60 foot facility to replace the old Department of Public Works garage. It took two summers, $50,000, and 43 town volunteers to complete.

Jim and his wife, Patricia, have five children ranging in age from 16 to 21. His hobbies include camping, bass fishing, and going to the Winston Cup races. Every June, he takes his family to the Poconos for vacation and to see the races.

Congratulations to Master Road Scholar Jim Dicey!

Master Road Scholar Thomas Plourde

Thomas Plourde has spent nine years as the Public Works Director in the town of Mont Vernon. While acting as Public Works Director, he served as a part-time police sergeant and firearms instructor for seven years. He has worked drilling, as well as spending three years as a medic in the United States Army.

Tom grew up in Tewksbury, Massachusetts, and graduated from what is now known as Lowell Regional Vocational Technical School with a specialization in upholstery. For the last thirty years, Tom has run his own upholstery business for automotives, boats, and antique furniture. He has also taught furniture upholstery.

Tom’s supervisors are pleased with the time and initiative he has taken to achieve the title of Master Road Scholar. Education is very important to Tom. There are two people who work for him, and he sends them both to training. He believes that “there are as many ways to do a job as there are people doing it,” and he likes to better himself by listening and learning.

Tom has been married for twenty-one years to his wife, Terry, and they have two children. His daughter is a senior at Souhegan High School in Amherst, and his son, Tom Jr., is a student at the University of New Hampshire. He will begin working for the UNH T² Center in the fall.

Scuba diving and target shooting are two of Tom’s hobbies. He owns a semi-automatic baretta he uses for target shooting in his back yard.

Congratulations to Master Road Scholar Tom Plourde!
New Hampshire Road Scholars

We are pleased to recognize the individuals who, during the Spring of 1997, have achieved the following levels in the UNH T² Center Road Scholar Program.

**Master Road Scholar.** Participated in UNH T² Center training activities which totaled 100 contact hours and covered the range of topics required for Road Scholar II.

<table>
<thead>
<tr>
<th>Road Scholar</th>
<th>Affiliation</th>
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</thead>
<tbody>
<tr>
<td>Paul Belanger</td>
<td>Bedford</td>
</tr>
<tr>
<td>J. Anthony Bergeron</td>
<td>Sunapee</td>
</tr>
<tr>
<td>James Dicey</td>
<td>Troy</td>
</tr>
<tr>
<td>Arthur Leblanc</td>
<td>Hollis</td>
</tr>
<tr>
<td>Thomas Plourde</td>
<td>Mont Vernon</td>
</tr>
<tr>
<td>Richard St. Hilaire</td>
<td>Kingston</td>
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**Senior Road Scholar.** Participated in UNH T² Center training activities which totaled 70 contact hours and covered the range of topics required for Road Scholar II.

<table>
<thead>
<tr>
<th>Road Scholar</th>
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<tbody>
<tr>
<td>Timothy Fiske</td>
<td>Temple</td>
</tr>
<tr>
<td>Robert Kline</td>
<td>Lebanon</td>
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<tr>
<td>George Mayhew</td>
<td>Kingston</td>
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**Road Scholar II.** Participated in UNH T² Center training activities which totaled 50 contact hours and covered a set of minimum subject areas including road design and construction basics, other technical, tort liability or safety, and supervision or personal development.

<table>
<thead>
<tr>
<th>Road Scholar</th>
<th>Affiliation</th>
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<tbody>
<tr>
<td>Richard Davis</td>
<td>Raymond</td>
</tr>
<tr>
<td>Dennis Desrochers</td>
<td>Hooksett</td>
</tr>
<tr>
<td>Jay Fitzgerald</td>
<td>Lebanon Municipal Airport</td>
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<tr>
<td>Clayton Foote</td>
<td>Francetown</td>
</tr>
<tr>
<td>Michael Gospodarek</td>
<td>Hudson</td>
</tr>
<tr>
<td>Scott Keddy</td>
<td>Raymond</td>
</tr>
<tr>
<td>Bruce MacBrien</td>
<td>NHDOT</td>
</tr>
<tr>
<td>Chuck Moore</td>
<td>Bridgewater</td>
</tr>
<tr>
<td>Gary Webster</td>
<td>Hudson</td>
</tr>
</tbody>
</table>

**Road Scholar I.** Participated in UNH T² Center training activities which totaled 30 contact hours.

<table>
<thead>
<tr>
<th>Road Scholar</th>
<th>Affiliation</th>
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<tbody>
<tr>
<td>Geno Cerullo</td>
<td>Derry</td>
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**HPC Showcase**

The Federal Highway Administration, the New Hampshire Department of Transportation (NHDOT) and the University of New Hampshire are sponsoring a two-day conference on High Performance Concrete September 22-23, 1997 at Waterville Valley, NH.

High Performance Concrete (HPC) can significantly improve the quality and lower the cost of bridge construction. Information pertinent to designers, concrete producers, and contractors will be presented as well as HPC mix design, fabrication and construction issues, strength and durability, quality control, and structural design.

The first HPC bridge in the Northeast was constructed in Bristol, NH and opened to traffic in the fall of 1996. It is a 65 foot single span structure that uses 8000 psi for the girders and 6000 psi for the cast-in-place deck. The designers, concrete producer, girder fabricator, and researchers will be describe their experiences at the showcase.

“We are very pleased with the results of the Bristol project,” said James Moore, Administrator NHDOT. “The concrete deck has had no cracking to date. We’ve learned a great deal and we would like to pass on what we’ve learned to others.”

To register call Kathy at the UNH T² Center before August 1, 1997.
Working with Contractors

Things to do Before Putting That Item or Job Out to Bid

Many people believe that all municipality purchases and contracts must go out to bid. There are only two instances when a municipality must put a purchase or contract out to bid:
1. When municipalities have local purchasing or bidding ordinances (these must be strictly followed),
2. If a public official is involved as one of the sellers or contractors (See RSA 95:1. There is not a state law requiring competitive bidding for town contracts and purchases).

If neither of these situations exists, then requests for bids is at the discretion of the municipal officials.

Requests for Bids vs. Request for Prices

When not required to request bids, municipal officials have two choices.
1. They can use a bid process, or
2. They can use a process known as a “request for prices.”

The difference between a request for bids and a request for prices is a request bids includes specifications and a request prices does not.

Whether writing a bid request or a request for prices, you must consider the entire scope of the project. For example, the scope of work for resurfacing could include the shimming, sweeping, paving, traffic control, and even markings. It should be clear who will perform each task. This procedure allows all parties to know what you expect of them.

The Bid Process

Bid requests should be written clearly. Writers should specify the products they want used and the procedures they want followed. Help is available in the bid request writing process. For starters, the state of New Hampshire specification book is a valuable resource. Neighboring municipalities can often assist with bid request writing. Vendors are another source of help; consult more than one.

Write requests using unit costs. This ensures that if you need to purchase another ton of asphalt, you will know how much each unit will cost.

When notifying potential bidders, only a small ad in the newspaper is required. For maximum competition, notify all potential bidders by letter.

By law, the municipality must accept the “lowest responsible bidder” who has followed the terms of the bid. After issuing a set of specifications, the municipality cannot accept an alternative. If an alternate looks better, then you must reject all the bids. Write a new set of specifications and re-advertise the bid.

Creating a Fair Process

Whether you are using the bid process or putting out a request for prices, you should make certain the process is equitable.

1. Make many qualified contractors aware of the job. Maintain a list of qualified contractors and send your bid specifications or request to prices to all of them. The list should contain information about the quality of each contractor’s work and any past experiences with the contractor. The State of New Hampshire has a list of qualified contractors and neighboring municipalities might have a similar list.
2. Before accepting a request for prices, look at the contractor’s level of experience. How long has the contractor been in business? If they have been in business 5 years or longer, chances are they will be around to solve problems a year or so from now. Also, companies that fail do so within 2 years of starting. Check with other municipalities to see if they have any experiences with the contractors.
3. Make certain the contractor carries adequate liability coverage. A primary reason to contract work out is to avoid liability. Be sure you are protected; write liability coverage specifications into bids.
4. Will the contractor guarantee their work will last a number of years?

Working with the Contractor

Good relations are necessary for obtaining a high quality of product or service and for receiving the best prices for future bids or requests for prices. To achieve a solid relationship, the project manager and job

Continued on page 8
The 10th Annual Mountain of Demonstrations

To my NHRAA Friends:

Congratulations New Hampshire Road Agents Association! This year marked the tenth year of the annual "Mountains of Demonstrations" with each year's show better than the previous years. You have made the phrase "Mountains of Demonstrations" mean something other than a mountain top crowded with demonstrators. What events at the "Mountains" are memorable to you? Business meetings in the pool? Trying to break the champagne bottle on the new timber bridge and ending up using a crow bar? Maybe Aunt Edna brings a smile to your face or recalling the message that the timber bridge was to arrive on time. Who smiles remembering the heavy rain that nearly washed the cold emulsion asphalt down the road before it was compacted then waiting for sunshine to complete the compaction? This produced the best recycled asphalt surface in the area. No one forgets John's chit chat on the walkie talkies until someone removed the batteries from his radio. I sure recall nearly ripping the bumper off my pickup with a front end loader. For those of you who have not smiled yet, then get more involved. Then you too will be able to recall the next parking lot picnic or have the pleasure in being part of a successful demonstration, exhibit or parking lot detail. The NHRAA "Mountains" are unique—when it was raining everywhere in the state, the Show had sunshine; similarly one year the state was bathed in sunshine and Waterville valley had rain. There are more than a hundred demonstration projects completed in the past ten years scattered over those mountain tops that encompasses Waterville Estates—a job well done!

It is through the good ideas of many and the dedicated efforts of NHRAA participants that made the "Mountains of Demonstrations" what it is today. The UNH T² Center staff extends its gratitude to the NHRAA for its commitment to the Show and now its willingness to assume full responsibility for hosting this year's Show and future Shows. NHRAA members should pat themselves on the back for their achievements—Congratulations!

The UNH T² Center anxiously looks forward to serving the NHRAA as a resource for future "Mountains of Demonstrations." The UNH T² Center is proud of its accomplishments in initiating the "Mountains of Demonstrations." We wish the NHRAA the best in making, under their leadership, the "Mountains of Demonstrations" much bigger and better over the next ten years. You had a great start with this year's show; Kathy has provided the following pictures to prove it!

Sincerely,

Charlie Goodspeed
1997 Mountain of Demonstrations

This year marked the 10th Annual Mountain of Demonstrations. The venue was decorated with balloon and there was an anniversary cake served with lunch.

Over 515 people attended, and over 100 New Hampshire municipalities represented. People came from all of the New England states as well as Pennsylvania, and New York. John Anderson, the former director of the T2 Center was on hand to guide the Tour of Past Demos.

Left: The main parking lot of the community center from on top of an aerial lift. The lift was provided by CUES of Amherst, NH.
Left: Participants perform a pre-trip check on a loader-backhoe.

Right: Robert & Melissa Potter and family, from Gilmanton, enjoy the show.
Right: Cheryl Doucette & Lauren Chaffee worked at the T^6 Challenge and UNH T^6 Center booths.

Left: People line up to catch the bus at the end of an informative day.
Crack Sealing

Introduction

Roads endure enormous stress and strain. Vehicle tires continually push and pull at paved surfaces. The faster or heavier the vehicle, the more the pavement is compressed and then tensioned. Temperature changes, even those within a 24-hour day, expand and contract the pavement sheet. Traffic and temperature create small surface cracks. Water seeps through the cracks to the base materials and weakens the roadway. More cracks form and become wider if not repaired. Untreated roads deteriorate much faster than treated roads.

Crack sealing is an inexpensive routine maintenance treatment that will significantly delay roadway deterioration. Local road crews need to apply sealing material directly into cracks before cracks become too large or before the roadway is subject to the freeze-thaw cycles of New England winters. Flexible rubberized asphalt sealants bond to crack walls and move with the pavement, preventing water from entering the road base. The life of the road is extended and maintenance costs greatly reduced over time.

Methods and Equipment

For the sealing process to be successful, crews must be trained and furnished with the proper equipment and materials. For the sealant to work, crews must remove all dirt, debris, and water from the cracks. The bonding material will not stick to dirty or wet surfaces. Using compressed air and a blow pipe is an effective method for removing the unwanted, loose material. If wet, compact dirt or other materials are in the crack, crews must dig them out.

Crack sealing performs better and costs less when highway crews rout cracks. The 4 1/2-year SHRP H-106 study examined the four crack sealing configurations shown in the sidebar. Researchers concluded that traffic increasingly wore away overbanded sealant materials leaving an insufficient amount of sealant in the unrouted cracks. The simple band-aid and reservoir-and-flush configurations (A and D) performed poorly, making them the least effective treatment methods. The most effective method was the standard recessed band-aid (Configuration B).

Crews should rout the cracks in two steps. They first loosen left over debris and widen narrow cracks. It is very important to only widen the crack and not deepen it. Widening cracks allows for a reservoir of sealant in the pavement. When the pavement expands, the reservoir holds enough sealant to stretch with the road. If narrow cracks expand further than the bonding material can stretch, water will seep into the pavement, and soon into the base.

After crews break up debris and widen cracks, they must clean the cracks again. A hot-air lance is the recommended method. The device generates compressed air as hot as 2,000°F and blows the crack clean of debris while drying it. Crews should apply sealant material immediately after the crack is clean and in moderate amounts.

continued on page 8
Materials

Pavement cracks can be repaired with either cold or hot sealants. Cold applied materials include liquid asphalt and polymer-modified liquid asphalt. Hot applied materials include asphalt cement, mineral-filled asphalt cement, fiberized asphalt, asphalt rubber, rubberized asphalt, and low-modulus rubberized asphalt.

To effectively seal a crack, the material must move with the road surface and remain adhered to crack walls. Mixtures of asphalt and rubber are long-wearing and can move with pavement during weather changes. One such mixture, commonly called "asphalt-rubber," is a special mixture of asphalt cement and used car tires. Asphalt-rubber is especially effective on roads subject to high traffic volume and heavy loads.

Other mixtures are effective for wide (high severity) cracks. These include polymer-modified liquid asphalt, rubberized asphalt, and low-modulus rubberized asphalt. Polymer-modified liquid asphalt is a mixture of natural and synthetic compounds with liquid asphalt. Rubberized asphalt and low-modulus rubberized asphalt are made by adding rubber to asphalt for flexibility. The choice of material depends on the type and amount of rubber in the mixture, and the type of the asphalt used.

Some materials, although often used because they are inexpensive, have little flexibility. These include asphalt cement, liquid asphalt, mineral-filled asphalt cement, and fiberized asphalt.

Conclusion

Sealants reduce deterioration of lightly damaged roads by minimizing the effects of traffic, weather, and temperature changes. Crack sealing is most cost effective when applied to longitudinal and transverse cracks. If the extent of cracking is high, a chip seal or thin overlay after sealing large cracks is the most cost effective treatment. If the surface has fatigue — so called "alligator" — cracks, the road base is failing and crack sealing is seldom cost effective.

In addition to saving road maintenance dollars, crack sealing saves money for motorists. It provides a smoother, safer road and reduces vehicle repairs.

The UNH T2 Center has additional information on crack sealing. Also, sealant equipment and material suppliers can provide information about treatments for particular pavement and climate conditions.

Sources


Special thanks to Dona Sears of ARTCO Equipment Sales, Inc., Cohoes, NY

Inspectors must be consistent. Unqualified and inconsistent job inspectors can cost everyone money. They may approve a job that is not up to standards. They may cause delays at a job site or cause work to stop.

Stay on track with payment dates. Make payments for the job as stated in the contract.

Conclusion

Following these guidelines will attract qualified contractors and increase competition. The result will be better products at reasonable costs.

Over time a municipality gains a reputation among contractors. If a municipality has the reputation treating contractors fairly, then they can expect to be treated fairly in return.

Sources

7 Ways to Choose Good Contractors, Better Roads August 1996
Bidding for Construction Work, New Hampshire Highways, March/April 1997
What You Need to Know, Better Roads, March 1997

Special thanks to Gus Lerandeau of All States Asphalt and to Bernia Waugh, Legal Counsel at the New Hampshire Municipal Association.

ROADNET

Subscribe to Roadnet! Send an email message to:
kathy.desroches@unh.edu.

In the body of message type:
add T2.NHROADS Your name.
For instance:

add T2.NHROADS John Doe.
Copies of the following books and pamphlets and our complete list of publications are available through the UNH T² Center. Some of our publications have an additional cost, as indicated below. If you are requesting an item with a charge, please include the check with your form. If ordering by mail, follow the instructions below. To request by telephone, call 603-862-2826, or in NH, 800-423-0060. Fax us at 603-862-2364, and you can e-mail at lchaffee@christa.unh.edu.

The following materials are available free of charge.

___ Vegetation Control for Safety. A guide for street and highway personnel. Goes through site clearance and safety operations for vegetation control.


___ Timber Retaining Wall Initiative. Tells the advantages of using timber for retaining walls and shows diagrams of typical walls. Includes a decision tree to help you decide if this design is right for you, and has a list of numbers to call for workshop schedules.

___ National Association of County Engineers (NACE) Action Guide: Solid Waste Management. Goes through planning for waste management with ways to finance and fund it, including charges and taxes. Also deals with recycling, combustion, and special waste issues. Information on transfer and collection also included.

___ Noise Wall Materials Comparison Matrix--Updated. Reprinted from the May/June 1996 issue of The Wall Journal, this comprehensive chart gives information from types of walls and kinds of materials to prices of noise walls for comparisons to others.

___ NACE Guide: Rural Transportation Planning. All aspects of transportation planning are covered, including community, data collection, future plans, and selecting and implementing the plans.

The following materials involve an extra cost. Please send a check with the form if requesting one of these materials.

___ Participant’s Manual for Preventive Maintenance Treatments Workshop. UNH T² Center. Nov. 1996. Describes the elements of a preventive maintenance program for local roads, the methods and materials for effective preventive maintenance treatments, and the road conditions which should receive them. Comes in a plastic binder. $15

___ Part IV of the Manual on Uniform Traffic Control Devices (MUTCD). Published by ATSSA, this book provides information on standards for uniform work zone traffic control. $12

To Request Material By Mail
Check the items you would like to receive. Fill out this form and include a check in the envelope, if necessary. Cut out this page and mail to the UNH T² Center.

Name:__________________________________________
Position:______________________________________
Organization:__________________________________
Address:_______________________________________
Town:_________ State:______ Zip:_________

Check is enclosed
$12 _____ $15 _____

Volume 12, No. 2 Summer 1997
VIDEOS
from the
University of New Hampshire Technology Transfer Center
Volume 12, No. 2 Summer 1997

The following videos are available from the UNH T²Center Video Library. You may take the videos out for a two week period, there is no charge. To request by mail, check the videos you would like to have, fill out the mail request form on page 9, staple closed, and mail. To request by telephone, call (603) 862-2826 or (800)423-0060 (in NH).

M-291 Asphalt Paving Inspection 60 min. In three parts, covers preliminary responsibilities, mix delivery, placement, compaction, and problems of paving.

M-293 Utility Cuts in Paved Roads 41 min. Describes all steps for making and closing utility cuts in paved roads: utility coordination and control, locating existing utilities, traffic control, pavement cutting, excavation, backfilling, surface restoration, and site cleanup.

NEW! M-294 Motorgrader Preventive Maintenance 12 min. Daily maintenance to reduce downtime and extend motorgrader service life. Describes and illustrates maintenance at prestart, during warm-up and operation, and after shutdown.


M-235 Reshaping Earth and Gravel Shoulders 15 min. Shows proper procedures for reshaping earth and gravel shoulders to correct shoulder drop-offs, rutting, build-up of material, and excessive weed control to maintain safe shoulder with proper cross slope. Nine steps are outlined, and tools and equipment are described.

M-250 Implementing a Maintenance Management Program 35 min. Defines maintenance management system, provides instruction on using an MMS, and points out the objectives of an MMS.

M-269 New Life for Old Roads 7 min. Describes the Full Depth Reclamation process, noting precautions to take in order to ensure success.

NEW! ST-249 Work Zone Safety for Rural Local Agencies Parts 1-7 1 hr. 42 min. Touching on traffic control devices, zones, applications, and flagging techniques. Information also discussed about legal liability.

NEW! ST-250 Traffic Control: What Works? 14 min. Developing rational, researched-based traffic control strategies to respond to and avoid future tragedies from traffic accidents.

NEW! PA-230 Utility Cut Repair: Doing it Right 11 min. Intends to increase the quality of workmanship associated with making and repairing utility cuts. Shows the benefits of doing things right, and the disadvantages of doing things the wrong way.

Technology Transfer Center
33 College Road
231 Kingsbury Hall
University of New Hampshire
Durham, NH 03824-3591
HERITAGE

by: Master Road Scholar, Sheldon Morgan
Public Works Director, Gilford NH

Many of us work in a community rich in history. I think a big part of our job consists preserving this history for the good of everyone.

In our day to day operation, we often gripe about the complexity of our jobs. We must follow many rules, from federal regulations on down through state and onto community laws. We gripe because, as hard as the job may already be, these rules make it harder. Somehow we manage, although we might curse those that have made our job what it is; we manage to plow through all the red tape and finish, even on time.

I mention this because I recently had a situation develop that reminded me of how frail our attachment to history and our heritage really is. For the sake of the job we sometimes turn a blind eye to what we may be doing to remnants of our past, for the sake of progress. Long and snaking stonewalls were built by our forefathers. Those large and stately trees that provide shade and beauty on warm summer days are somewhat forgotten in the midst of winter. The many scenic vistas are hidden away on some, less traveled road. Country lanes bordered by the trappings of a bygone era, and homesteads rich in history are often vital to the shaping of the community. There are so many other things that make the place we call home so special to us. Once these things are gone, they may never be replaced, and with them a part of our link to past generations. They remind us of a way of life that to us seems so simple and forthright. We can all too easily bulldoze them away forever.

As professionals, I believe we have a duty to protect and preserve these links from the ravages of time and machine. We were so fortunate to grow up with them. To ensure that our children and their children will have a sense of heritage passed on to them; we should endeavor in our daily work to preserve as much as is humanly possible. That link will bond them with our forefathers and their mark on history. Sometimes we may lose sight of our heritage and diminish it, for the sake of just getting the job done.

Milestones:

Kevin Clement is the new Road Agent in Lisbon.

Patrick Doughty has become the Road Agent in Lyman.

John Jurta has become the Road Agent in Andover.

Carl Quiram has become the new Director of Public Works in Goffstown.

Driveway and Curb Cuts

RSA 472:6 becomes effective July 18, 1997. It clarifies a municipality’s authority of driveways and other connections to public streets and highways. Private driveway connections, including structures such as culverts, remain the responsibility of the landowner. If any driveway connection threatens the integrity of the highway due to plugged culverts, erosion, etc., the planning board or designee can order the owner to repair it. If the owner fails to repair, the municipality can do the repair and charge the cost of the repair to the owner. It also clarifies local driveway regulations, or driveway permits issued under RSA 236:13, contain language governing the breach or removal of stone way, then an owner acting under that permit will not be in violation of RSA 462:6, which otherwise prohibits destruction of stone walls.

Contact the UNH T2 Center for a copy of the RSA/
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Left: Hank Lambert, from the Vermont Local Roads Program, assists with the eye level.