On the Road in New Hampshire
Pavement Preservation Research

The NHDOT is currently conducting a statewide research project on alternative pavement surface treatments. The state is testing a treatment in each of its six districts.

- District 1-Crafco Polypatch
- District 2-Double Chip Seal
- District 3-Rubber Chip Seal
- District 4-Double Chip Seal
- District 5-Crafco Polypatch
- District 6-Nova Chip

The district engineers chose the treatment and test section locations based on existing pavement condition.

The idea blossomed from a 2004 research project in Brookline where five surface treatments were tested on NH 13 over 8.8 miles. Experimental treatments were also tested in 2005 on NH 16 in Errol and US 3 in Pittsburgh.

The project’s intent is to evaluate pavement preservation treatments statewide. Today, pavements face more challenges than in the past, such as increased traffic volumes, heavier vehicles, and increased materials and construction costs. This research will enable the NHDOT to more economically preserve its roadway network. Treatments will extend the useful life of the pavement and delay, or avoid, future reconstruction.

One early research conclusion is that the NHDOT must educate the public of the purpose and benefits of treatments. For instance, pavement treatments are applied to roads that are still in good condition which is counter-intuitive to the “worst first” philosophy.

Materials selection and the existing pavement condition are important in the performance and viability of treatments. To maximize the benefits, apply the right treatment, to the right road, at the right time.

Materials must be clean. If the fine content is too high, a layer of dust will emerge within a few hours of application. The NHDOT has changed their specification to accommodate cleaner stone and the contractor must perform a wash gradation analysis of the materials before starting a project.

Special thanks to Eric Thibodeau and Stephen Gray at NHDOT.

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Master Roads Scholars

Master Roads Scholar – Doug Almon

Doug Almon is a highway maintainer III for the NHDOT district 6. He started working for the NHDOT as a highway maintainer II in August 2000. Doug served as a Seabee in the U.S. Navy for 28 years. He worked on road and runway construction and other public works projects.

Doug says he wishes to continue to take classes. He has enjoyed the UNH T² Roads Scholar program. He thinks it is a good and worthwhile program. He got his son involved, David, who is also a master roads scholar.

Doug is married to Debra and they also have a daughter, who is getting her Masters in Education from UNH and another son, who earned his Masters in Political Science from UNH.

Master Roads Scholar – Albert Anderson

Albert Anderson is a foreman for the Hancock Highway Department. He was hired as a light equipment operator and has worked for the department for 26 years. Albert also worked for the Greenfield Highway Department and the New Hampshire Department of Transportation.

Albert will continue to take classes because he says they are fun and he always learns something new. Albert says “you are never too old to learn.”

Albert has been married to Judith for eight years. He loves to collect antiques.

Master Roads Scholar–Ken Baldwin

Ken Baldwin is an equipment operator in the town of Chesterfield. He has worked as an equipment operator for 21 years. His first job with public works was mowing cemeteries. Ken says that “education is good” and plans to continue taking classes even as a master roads scholar.

Master Roads Scholar –Tom Dubey

Tom Dubey is the road agent in the Town of Thornton. He was hired 11 years ago as a police officer for the town. The town established a highway department five years later and Tom transferred in as a laborer/equipment operator I. Tom maintains about 55 miles of road.

Tom plans to continue to take classes because he always learns something new and knows there is a need to stay current with technology.

Tom and Donna have been married for 22 years. Donna is a High School math teacher in Tilton. They have three daughters. Tom likes to ride his motorcycle and spend time with his family.

Master Roads Scholar – David Foster

David Foster is the city engineer in Somersworth. He was hired 8 years ago. Previously, he worked as a contract administrator at the NHDOT Bureau of Construction. He specialized in inspection, layout, and construction of bridges and other road construction.

David will continue to take classes because he likes to learn new ideas and technology.

David has been married for 28 years and has three children, two boys and one girl. David enjoys traveling around the United States.
Master Roads Scholar – Bob Nicol

Bob Nicol is the heavy equipment operator for the town of Northfield. He has worked in Northfield for seven years. He was hired initially as a laborer/truck driver. At one time, he was promoted to assistant road agent but the position was terminated. Previously, Bob delivered pipe for E.J. Prescott.

Bob will continue to take classes because he wants to learn new information to make his job easier.

Bob likes to play golf, horseshoes, and pool.

Master Roads Scholar – Glenn Smith

Glenn Smith is a highway patrol foreman for the NHDOT District 4. He has worked for the DOT for 14 years. Glenn worked as a seasonal temporary worker for Fitzwilliam’s Public Works Department. He worked in construction until joining the NHDOT.

Glenn says he will continue to take classes because of the fast advancement of technology.

Glenn is married to Christine, they have two daughters. Glenn loves to camp with his family in Maine.

Master Roads Scholar – Mike Sousa

Mike Sousa is the highway superintendent in the town of Enfield. He was hired as a mechanic and promoted to heavy equipment operator within a year. Previously, he worked as a grader operator in the town of Grafton.

Mike will continue to take classes because he always learns something and values new ideas. He finds the networking, at classes, to be valuable.

Mike is married with two adult children. He once raced automobiles at the dirt and asphalt track in Canaan. Now, he is a pit crew member.

Master Roads Scholar – Brian Sullivan

Brian Sullivan is the municipal services director for the city of Franklin. He joined Franklin in August of 2003. Brian began working in public works as a laborer at age 16. He worked summers, as a laborer, while attending Saint Anselm College in Manchester. After college, Brian worked 20 years, as a road foreman in Ingham, MA. Brian worked as a public works director in Florida and in Massachusetts.

Brian would like to instruct UNH T2 classes some day. He says he needs to pick the right expertise to share with others. He says the UNH T2 Center provides a great program for road officials and employees. He says he always learns a lot. Brian says the classes are well worth it to attend.

Brian is renovating a wooden cottage, built in the early 1900’s, on a lake. He has been working on it for the past three years.
Since 1997, motorcycle fatalities have more than doubled in the United States. This has brought motorcycle safety to road designers’ attention. Motorcycle safety is a concern to all road users. This article describes road construction and design standards to increase motorcycle safety.

Safety factors for motorcyclists are:
- Visibility & sight distance,
- Road geometry,
- Workzones,
- Pavement maintenance,
- Skid resistant surfaces,
- Guardrails,
- Parking availability & design, and
- Assessments in motorcycle safety.

Visibility & Sight Distance

Sight distance is the length of roadway that a driver can see ahead. Stopping sight distance (SSD) is the minimum sight distance required to stop a vehicle on wet pavement after seeing an object, without hitting it. Engineers use SSD to determine the minimum length of vertical curves and minimum radii of horizontal curves. SSD is set by American Association of Highway Transportation Officials (AASHTO). It is meant for cars but not for other vehicles, including motorcycles. Whenever possible, use a more generous SSD.

Road Geometry

The leading cause of motorcycle accidents on curves with other vehicles is that the driver of the other vehicle does not see them. In accident reports, drivers say they were unable to see the motorcycle before it’s too late.

Use traffic signs and pavement markings with clear and consistent messages to warn drivers of unexpected road geometry. When possible, design roads with little curve, as one half of motorcycle fatalities are related to road curves.

Workzones

Workzones are dangerous for motorcyclists. Post specific warnings for motorcycles. Place warning signs for grooved pavement, bumps in the road, edge drop-offs, and other hazards.

Use steel construction plates of an adequate size and with a skid resistant surface. Plates can be slippery when wet. Recess plates to avoid creating an edge trap. Edge traps prevent a motorcycle’s front wheel from moving side-to-side. Even a small edge trap may result in an accident.

Use weighted workzone devices to prevent them from being blown into the travel lane. Many signs, cones, and barrels have a heavy rubber ring on the bottom. Use a second weighted ring in dangerous locations. Check workzones regularly to ensure correct placement of safety devices.

Pavement Maintenance

When using pavement maintenance treatments, post warning signs.

Seal coating is the application of liquid asphalt over pavement. Gravel is spread over liquid asphalt. Motorcycles can easily lose traction on this loose material.

Milling machines produce a coarse surface with longitudinal grooves. The course material may cause a motorcycle to lose traction. Grooves can create an edge trap.

Edge traps often occur during paving opera-
tions. Current highway standards permit pavement edges of up to 1.5 inches without tapering.

Potholes are an issue. Post warning signs and repair as soon as viable. To prevent potholes, install an effective drainage system and crackseal.

Cracksealing is an effective pavement treatment however, it becomes slick during warm weather. Like any surface treatment, use only when appropriate.

Accumulated sand becomes a hazard. Winter sand often accumulates at stop signs and intersections. Sweep as soon as possible.

**Skid-Resistant Surfaces**

Skid-resistant surfaces allow vehicles to stop or turn. Examine pavement for skid resistance during road maintenance. Older pavements often have poor skid resistance. Grind, overlay, or apply a surface treatment to increase skid resistance.

**Guardrails**

Guardrails are safety device for cars and trucks but unsafe for motorcycles. Almost half of all motorcycle guardrail collisions result in fatalities. Helmet usage is not a solution as over 2/3 of fatally injured riders wore helmets. Guardrails prevent vehicles from going over embankments. Install guardrails when the embankment is steeper than 3 to 1. Place guardrail as far from traveled way as practical. Apply retroreflective material to guardrails to increase visibility at night.

**Parking Availability & Design**

On street parking reduces a driver’s ability to see pedestrians. Place parking areas more than 20 feet away from un-signalized crosswalks and more than 30 feet away from a signalized intersections. Install “no parking zone” signs in restricted areas.

**Assess Motorcycle Safety**

It is the duty of a highway departments to reduce traffic accidents and save lives. Use road safety audits to assess safety. Obtain motorcycle crash data. Use crash reports to decide which areas need improvements. Make a list of improvement needs, prioritize the list, and take action.

**References:**


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**Stopping Sight Distance**

<table>
<thead>
<tr>
<th>Design speed (mph)</th>
<th>Brake reaction distance (ft)</th>
<th>Braking distance on level (ft)</th>
<th>Calculated Stopping sight distance (ft)</th>
<th>Design (ft)</th>
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</table>

**Stopping Sight Distance**
If You Can’t Drain It - You Can’t Maintain It!

Drainage is an important issue in roadway construction and maintenance. Specific issues related to drainage are:

- Establish or restore ditch elevation,
- Maintain inlets/outlets on storm sewers,
- Inspect culvert ends for damage/obstruction,
- Inspect channels at pipe/structure locations, and
- Basic surface drainage issues on pavement and gravel roads.

Routinely maintain ditches and culverts. Remove siltation to maintain water flow, direction of flow, and pipe capacity. A 36” culvert half-full with silt will not carry the water as designed.

Keep inlets free of vegetation and other objects. When plugged, drainage bypasses the inlet and continues downstream, the accumulation may result in flooding.

If the grade exiting the culvert is too steep, then install erosion protection to reduce water velocity.

Inspect culverts annually. Look for evidence of obstructions, damage, and scour that may cause failure. Remove obstructions, repair culverts, and in some cases, install rip-rap.

Maintain roadway ditch sections and drainage channels leading to culverts and bridges.

Ditches are a basic surface drainage component. It is important that the ditch’s foreslope is adequate to get the water away from the road surface, into the ditch, and below subgrade. Shallow ditches allow water to saturate the base and subgrade, creating instability and weakness. Keep in mind that when ditches are too deep, they may become a roadside hazard.

The structural strength of a road is not in the surface, but in the sub-base and subgrade. Roads must be well-constructed and drained. Saturated roads loaded with traffic will develop surface cracks and deteriorate.

Source:
Weiss, Larry, Skorseth, Ken, The Connection, SD LTAP Volume 19, Number 3, Fall 2006

Test Your Knowledge

Items in this Spring 2007 Road Business

Across

3 Retroreflective signs are used to ___ visibility.
5 One of the most fundamental issues in roadway maintenance.
7 Alternative retroreflective coating to beads.
9 High priority sign
10 Method of sign management replacment
11 This portion of email recipients understand the tone behind email.
12 An edge ___ is a raised or lowered pavement edge.
14 ___ solving is a soft skill
15 Skill that cannot be taught or gained.
16 Location of structural road strength
17 ___ resistance is the amount of pavement traction.

Down

1 “You need to recruit and hire not only good people, but the ___ people.” George Haines
2 Cutting 200 of these, per day, will help you lose 20 lbs per year.
4 A phone ___ is often more effective than an email.
5 Stopping sight _______.
6 Culvert outlets may need this protection.
8 ____ skills.
12 Light needed to see ____ every 13 years after the age of 20.
13 C in TCD
14 ____ .net is an online community for you.

Answers are on the T² website.
Introduction

Traffic control devices (TCDs) are essential for safe roads, especially at night. In order to be most useful, they must be maintained and clearly visible. The Federal Highway Administration (FHWA) plans to revise the Manual on Uniform Traffic Control Devices (MUTCD) to require minimum levels of retroreflectivity.

The compliance date for achieving minimum levels of retroreflectivity for traffic signs has not been set. FHWA will publish the final rule on 11/30/07. (See page 4 of this technical note for the minimum proposed levels.)

Why Retroreflectivity is Important

Retroreflectivity is a sign and pavement marking technology that reflects light on the sign or pavement marking back towards the light source at the same angle.

Retroreflective TCDs save lives. Annual fatalities on US highways have declined from 50,331 in 1978 to 42,643 in 2003, this is in part due to retroreflective devices. Approximately 50% of fatal crashes occur at night. According to statistics:

- The night crash rate is three times higher than day-time crashes.
- Drivers are likely to be more fatigued and intoxicated at night.
- Visual cues that delineate roadway alignment are harder to see at night.

• Regulatory, warning, and guidance information is compromised under dark conditions or when headlight illumination is less than optimal.
• Glare from opposing traffic can adversely affect the driver’s ability to detect changes in road alignment or to see TCDs.
• Adverse weather further reduces night visibility of the
road and TCDs.

- The driving population is aging. Visual acuity decreases as a person ages

### How it Works

Retroreflectivity uses prisms or beaded coatings to reflect the light, that contacts the sign surface, back at the light source rather than deflected away. The prisms or beads capture light, refract it, and return it.

To be able to see, people need a certain amount of light. Light must be reflected off an object and enter the eye for vision to occur. As people age, the amount of light needed to see properly increases considerably. Studies show that starting after age 20, the amount of light needed to see, doubles every 13 years.

Many vehicles are equipped with cut-off headlights, which are flat on the top rather than round. Cut-off headlights produce very little forward light. Therefore the headlights produce less light on the sign, making it more difficult to see.

### Sheeting Materials

There are four types of retroreflective sheeting materials:

- **Type 1** “engineering grade” is a medium-intensity retroreflective sheeting that utilizes enclosed lens glass-bead sheeting
- **Type 2** “super engineering grade” is a medium-intensity retroreflective sheeting that uses enclosed lens glass-bead sheeting
- **Type 3** high-intensity retroreflective sheeting using embedded lens glass-bead sheeting retroreflective material
- **Type 4** high-intensity retroreflective sheeting that uses nonmetal micro-prisms for retroreflectivity.

Glass beads in type 1 and type 2 sheeting materials are set into an adhesive material, usually a sticky vinyl. In type 3, embedded glass-beads are enclosed in a layer of plastic resin and attached to an adhesive. In type 4, micro-prisms are enclosed in a layer of resin. All of these sheeting materials are surrounded by a protective liner. The materials differ in the amount of light they reflect. Type 4 is the most retroreflective and type 1 the least.

### Increasing and Maintaining Sign Visibility

When a sign no longer meets minimum retroreflectivity standards, a municipality may repair or replace it.

One method to increase sign visibility is to light the sign or use overhead light fixtures, such as street lights, to illuminate a sign. These methods are far more costly than using retroreflective materials.

### Managing Retroreflectivity

FHWA suggest the following management and assessment methods for agencies to use to maintain traffic signs. Combining two or more of the proposed methods is acceptable, depending on the agency size and available resources.

A. **Visual Nighttime Inspection** The retroreflectivity of an existing sign is assessed by a trained sign inspector. Inspection is conducted from a moving vehicle at night. Replace
This image demonstrates retroreflectivity in pavement markings. It follows the same principles as signs, light is reflected off the glass bead and back towards the light source.

signs below minimum retroreflectivity levels.

B. Measure Sign Retroreflectivity Sign retroreflectivity is measured using a retroreflectometer. Replace signs below minimum retroreflectivity levels.

C. Expected Sign Life When signs are installed, the installation date is labeled or recorded. The sign's age is compared to the expected sign life. The expected sign life is based on the experience of sign retroreflectivity degradation in a geographic area compared to the minimum levels. Replace signs older than the expected life.

D. Blanket replacement Replace all signs in an area/corridor, or of a given type, at specified intervals. This eliminates the need to assess retroreflectivity or track the life of individual signs. The replacement interval is based on the expected sign life, compared to the minimum levels, for the shortest-life material used on the affected signs.

E. Control Signs Replace signs in the field based on the performance of a sample of control signs. The control signs might be a small sample located in a maintenance yard or in the field. The control signs are monitored to determine the end of retroreflective life for the associated signs. Replace all field signs represented by the control sample before the retroreflectivity levels of the control sample reach the minimum.

Place priority for replacing signs at critical areas such as stops, crash sites, and curves. Priority may also be given to the necessity of the signs:

• High Priority Signs Stop, Do Not Enter, and

Wrong Way signs.

• Middle Priority Signs Warning signs such as curve or merge signs

• Low Priority Signs Informational signs such as signs indicating exits or other directions.

Implementation is costly. There are low-cost user-friendly tools for local agencies. One downloadable tool is a safety software suite available at: http://waylon.engr.usu.edu. This suite is royalty free, GIS based, and includes a sign management module as well as a crash analysis module. Technical support is handled through a user forum.

It is crucial to replace signs to maintain legibility, contrast, color, placement and other such physical qualities of the signs. A municipality may choose to use any of these assessment methods or combine methods to suit their needs and budget.

Sources:
Pietrucha, Martin Traffic Sign Retroreflectivity “Sign Retro 101”. Federal Highway Administration Visibility Team Power Point. 2/02/07.
Retroreflectivity. Tech Note #43. Bay State Roads Program: Local Technical Assistant Program (LTAP) Fall 2006.

Special Thanks to G. Stuart Thompson, UT LTAP for his help with this article.
### Proposed Minimum Levels of Retroreflectivity

<table>
<thead>
<tr>
<th>Sign Color</th>
<th>Beaded Sheet</th>
<th>Prismatic Sheet</th>
<th>Additional Criteria</th>
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</thead>
<tbody>
<tr>
<td>White on Green</td>
<td>$W^*; G \geq 7$</td>
<td>$W^*; G \geq 15$</td>
<td>Overhead</td>
</tr>
<tr>
<td>Black on Yellow</td>
<td>$Y^<em>; O^</em>$</td>
<td>$Y \geq 50; O \geq 50$</td>
<td>Ground-mounted</td>
</tr>
<tr>
<td>Black on Orange</td>
<td>$Y^<em>; O^</em>$</td>
<td>$Y \geq 75; O \geq 75$</td>
<td></td>
</tr>
<tr>
<td>White on Red</td>
<td>$W \geq 35; R \geq 7$</td>
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<td></td>
</tr>
<tr>
<td>Black on White</td>
<td>$W \geq 50$</td>
<td></td>
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</tbody>
</table>

1. The minimum maintained retroreflectivity levels shown in this table are in units of cd/lx/m² measured at an observation angle of 0.2° and an entrance angle of -4.0°.
2. For text and fine symbol signs measuring at least 1200 mm (48 in) and for all sizes of bold symbol signs.
3. For text and fine symbol signs measuring less than 1200 mm (48 in).
4. Minimum Sign Contrast Ratio $\geq 3:1$ (white retroreflectivity + red retroreflectivity)
5. This sheeting type should not be used for this color for this application.

#### Bold Symbol Signs

- W1-1, -2 – Turn and Curve
- W1-3, -4 – Reverse Turn and Curve
- W1-5 – Winding Road
- W1-6, -7 – Large Arrow
- W1-8 – Chevron
- W1-10 – Intersection in Curve
- W1-11 – Hairpin Curve
- W1-15 – 270 Degree Loop
- W2-1 – Cross Road
- W2-2, -3 – Side Road
- W2-4, -5 – T and Y Intersection
- W2-6 – Circular Intersection
- W3-1 – Stop Ahead
- W3-2 – Yield Ahead
- W3-3 – Signal Ahead
- W4-1 – Merge
- W4-2 – Lane Ends
- W4-3 – Added Lane
- W4-5 – Entering Roadway Merge
- W4-6 – Entering Roadway Added Lane
- W6-1, -2 – Divided Highway Begins and Ends
- W6-3 – Two-Way Traffic
- W10-1, -2, -3, -4, -11, -12 – Highway-Railroad Advance Warning
- W11-2 – Pedestrian Crossing
- W11-3 – Deer Crossing
- W11-4 – Cattle Crossing
- W11-5 – Farm Equipment
- W11-6 – Snowmobile Crossing
- W11-7 – Equestrian Crossing
- W11-8 – Fire Station
- W11-10 – Truck Crossing
- W12-1 – Double Arrow
- W16-5p, -6p, -7p – Pointing Arrow Plaques
- W20-7a – Flagger
- W21-1a – Worker

#### Fine Symbol Signs – Symbol signs not listed as Bold Symbol Signs.

#### Special Cases

- W3-1 – Stop Ahead: Red retroreflectivity $\geq 7$
- W3-2 – Yield Ahead: Red retroreflectivity $\geq 7$; White retroreflectivity $\geq 35$
- W3-3 – Signal Ahead: Red retroreflectivity $\geq 7$; Green retroreflectivity $\geq 7$
- W3-5 – Speed Reduction: White retroreflectivity $\geq 50$
- For non-diamond shaped signs such W14-3 (No Passing Zone), W4-4p (Cross Traffic Does Not Stop), or W13-1, -2, -3, -5 (Speed Advisory Plaques), use largest sign dimension to determine proper minimum retroreflectivity level.

The proposed minimum levels are outline in chart above. It identifies acceptable sheeting types and minimum levels of retroreflectivity as a function of the color of the sign, whether they are ground mounted or overhead, and the text and symbol types, either bold or fine. Fine symbol signs are those not listed as bold and not covered in the special cases section.
Road Business Four Year Index

To request articles call, fax, or email the UNH T2 Center or visit the web at www.t2.unh.edu/rdbus_index.


Interviewing for the Right Skills

"Success in any business is 85% ability to relate to other people and attitude and only 15% job knowledge and technical skills.”
Carnegie Foundation, 2005

Recruiting is one of the most important managerial tasks. Meeting candidates provides the best chance to gain information about their skills and experience, and to match the right person to the job and organization. George Haines, in his article on succession planning (APWA Reporter, September 2006), says that to develop a great team, “you need to recruit and hire not only good people, but the right people.”

Interviews are a basic screening method that can be complicated and time-consuming. The higher the level of the position, the more complex the interview process.

There are three major items to look for in the interview process: hard skills, talent, and soft skills.

Hard skills are easily defined, while soft skills are not. Hard skills include technical abilities such as education, certifications, licenses, specialization, and experience.

In his book First, Break All the Rules: What the World’s Greatest Managers Do Differently, Marcus Buckingham says, in addition to the standard interview questions, one should interview for talent. This is to discover if the candidate’s patterns of thought, feeling or behavior match the job and organization’s. “Great managers, select for talent…and not simply experience, intelligence or determination.”

Talent may be:
- Attitude,
- Drive,
- Personal charm,
- Verbal skills,
- Poise,
- Sense of humor,
- Smile,
- Self-confidence, and
- Integrity.

Talent cannot be taught. Talent makes clear the why of a person (drive), the how of a person (how they think), and the who of a person (how they relate). Talents are unique and long lasting traits. As Buckingham says, “People don’t change that much.”

Soft Skills or “People Skills”

Each person has a combination of hard and soft skills. Hard skills are documented on a résumé; soft skills are confirmed in an interview.

Hard skills, talent, and soft skills are distinct elements of a person’s performance. Combined, these elements create employee potential. When a candidates’ work experience, education and other hard skills are equal, the candidate with the best soft skills will get the job.

To assess someone’s soft skills, one must meet them. Remember the phrase—“Works and plays well with others”? That is a critical soft skill, there are many more, all of which are important for any job.

What are soft skills? Many are related to people (or interpersonal) skills. These are the more prominent:
- Effective listening,
- Accountability,
- Assertiveness,
- Time management,
- Delegation,
- Goal setting,
- Team building,
- Stress management,
- Problem solving,
- Motivation,
- Leadership,
- Interviewing,
- Effective communications, and
- Managing resources

The above soft skills can be categorized into four basic groups:
- Problem solving,
- Communication,
• Personal qualities and work ethic, and
• Interpersonal and teamwork.

What are employers looking for? Employers seek a mixture of skills and experience, but they consistently look for soft skills.

A recent study by the Center for Creative Leadership concluded that an estimated 40% of all new managers fail within the first 18 months. The most cited reason was a lack of soft, or people, skills.

As people move along their career path, experience and knowledge that they’ve gained through their most recent job tends to determine the next career move. Hard skills help to land a job; however, over time, these hard skills may become outdated.

So how does one prepare for interview with a prospective employee or prepare for a new position? Some examples of questions to use:

**Problem Solving**

• What are the critical factors you look for in evaluating other’s work?
• Describe a situation in where you did a good job analyzing a problem and rectifying it.
• Describe a situation where you had to solve a problem without having all the information. What did you do and what happened?

**Communications**

• Describe a time when you said something wrong. What happened?
• What is your experience dealing with the poor performance in subordinates?
• In the past, how have you had dealt with irate citizens?

**Teamwork**

• Describe the types of teams you have worked on. What worked well and what did not?
• Discuss a time when there were problems getting others to work together. How did you handle it?

**Interpersonal Skills**

• Describe how you developed relationships with others when you were new on your current job.
• Describe a time when you had problems with a supervisor and had to communicate them. What did you do and what happened?
• When working with coworkers or citizens, what really tries your patience and how do you cope?

These questions are geared towards soft skills; normally not included on a résumé. Keep questions open ended, require candidates to give answers which may reveal their soft skills. These questions require a story in response. When being interviewed, remember, the interviewer is looking for personal accounts, not the “textbook” answer.


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**Sometimes, A Conversation is More Meaningful**

Email has its advantages. Such as the ability to reach people without having to find them. However, email has taken over and often communication would be better face-to-face or by telephone. How often does one change what they will say next because of the reaction to their last statement?

Would a problem with a customer be better handled if the customer’s response was immediate? The nuance of the spoken voice includes information often missed with electronic communication.

According to NYU’s Stern School of Business, as few as half of recipients get the tone or intent of an email. And most people “vastly overestimate” their ability to relay and comprehend messages accurately. At Syracuse University, they say misinterpretation is highest when the email comes from the boss.
Publications
UNH Technology Transfer Center
These publications are available from the UNH T² Center. See www.t2.unh.edu/video_pub/publist.html for a complete list and to access some publications online. To request publications, complete form and mail or fax to 603-862-0620.

_Covered Bridge Manual_. This manual provides technical and historic information on preservation of covered bridges, including bridge components, engineering issues, and existing bridges. USDOT & FHWA.

_Culvert Inspection and repair_ This article covers culvert inspections to determine needed cleaning, repair or replacement, and methods to minimize erosion. UNH T² Center, Road Business, Fall 2000.

_Place Culverts Correctly the First Time_ This article provides information for planning and installing culverts, including sizing the culvert and correct installation practices. UNH T² Center, Road Business, Summer 2003.


_Stormwater Strategies, NRDC-CD ROM_ A report detailing the definition of stormwater and presenting effective implementations of stormwater practices.

_CDIL Information Sheets_ This sheet provides information on drug testing procedures, setting policies for a drug testing program, and providers of CDIL testing. UNH T² Center.

_Maintenance to Reduce Potholes_ This article covers proper budgeting, using a management system, drainage, cracksealing, and coordinating roadwork. UNH T² Center, Road Business, summer 2001.

_Bicycle and Pedestrian Safety-CD ROM_ This interactive CD is in English or Spanish with closed captions, and contains information on bicyclist safety awareness. USDOT & FHWA.

_Common Roadside Invasives_ This laminated field guide has illustrations and names of various herbaceous weeds to help identify what weeds are growing near roadsides to remove and prevent future growth. FHWA.

_Soil Erosion and Water Pollution Prevention: NACE Action Guide_ Points out the role of the county engineer; defines water erosion and the contributing factors; discusses a design for erosion prevention and ways to control erosion during construction; and roadside repair and maintenance. NACE, 1992.

_Erosion Control Handbook for Local Roads_ This manual provides guidelines and methods for effective erosion control practices on low volume roads. Minnesota Local Road Research Board.

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Material Request Form

Name: ___________________________  Title: ____________________________
Affiliation: ___________________________  Mailing address: ___________________________
Town/City: ___________________________  State: __________________ Zip: __________
Phone: __________ Fax: _____________
Email: ____________________________
**Milestones**

Doug Barnard, retired, City of Concord, passed away in January.

Robin Berry has retired from the Town of Mason.

Gary Paige has been promoted to public works director in Franconia.

Richard Russell was promoted to public works director in Salem.

Romeo Turcotte, North Hampton, won the snowfall contest. The first two-inch snowfall was February 2. He chose January 5.

The National Workzone Awareness Week is April 2-6, 2007.

The City of Keene created a video to be aired on public access tv. It is called: “The Faces of Public Works.”

**Websites**

Finding the Time: www.mindtools.com

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**Dietary Sleepwalking**

One Cornell professor says people eat whatever there is without a second thought.


Attractive food and a room’s lighting affects how long we sit at the table and how much we eat. Use smaller plates. When having a snack, use a smaller bowl, those with larger bowls take 50% more.

The more variety, the more we eat. He suggests a rule of two, take only two foods at once. People may refill as often as they wish, but will eat less.

Enjoyable surroundings can cause people to eat more. At a party, don’t start eating until the last person at the table starts. Use the rule of two.

Don’t buy snacks in big packages. He says half the food bought in huge quantities will be gone in a week.

To slim down, don’t starve. Cut 200 calories a day to lose 20 pounds a year without feeling hungry.

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**Road Business** is a quarterly publication of the University of New Hampshire Technology Transfer Center.

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The Technology Transfer Center at the University of New Hampshire (UNH) is supported by the Federal Highway Administration (FHWA), the New Hampshire Department of Transportation (NHDOT), and UNH. Any opinions, findings, conclusions, or recommendations presented in this newsletter are those of the authors and do not necessarily reflect the views of FHWA, NHDOT, or UNH. Any product mentioned in the Road Business is for information only and should not be considered a product endorsement.

**Listservs**

A listserv is a free way to use email to exchange information. To subscribe send an email to ListProc@lists.unh.edu. Leave the subject line blank, in the body of your message type:

Subscribe listname your name

For instance:

Subscribe pw.net John Doe

**PW.NET**

Want to know what is happening in other towns? Or, learn the very latest in regulations? Need a place to ask questions of other public works officials? Want to be the first to receive notifications of UNH T² Center workshops? Sign up for pw.net

**RunOff.Talk**

Want to discuss NPDES II issues and concerns? This list enables a dialog to clarify federal permits, and determine the best technical management for compliance. Use it to announce meetings and conferences.
## Spring Workshop Calendar

### Basics

<table>
<thead>
<tr>
<th>Date</th>
<th>Workshop</th>
<th>Location</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 3</td>
<td>Drainage, Drainage, Drainage</td>
<td>Concord</td>
<td>$75 FULL</td>
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<tr>
<td>April 5</td>
<td>Drainage, Drainage, Drainage</td>
<td>Rochester</td>
<td>$75</td>
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<tr>
<td>June 7</td>
<td>Drainage, Drainage, Drainage</td>
<td>Manchester</td>
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### Supervisory or Personal Development

<table>
<thead>
<tr>
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<th>Workshop</th>
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<tbody>
<tr>
<td>March 29</td>
<td>Ethics for Public Works</td>
<td>Lincoln</td>
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<tr>
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<td>Concord</td>
<td>$60 FULL</td>
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<td>April 25</td>
<td>Managing Highway Departments</td>
<td>Lincoln</td>
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<tr>
<td>April 26</td>
<td>Managing Highway Departments</td>
<td>Manchester</td>
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### Technical Aspect of Road Maintenance or Repair

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<th>Location</th>
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<tr>
<td>March 21</td>
<td>Erosion Control 2</td>
<td>Portsmouth</td>
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<td>March 28</td>
<td>Erosion Control 2</td>
<td>Somersworth</td>
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<td>April 4</td>
<td>Bridge Maintenance</td>
<td>Swanzey</td>
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<td>April 9</td>
<td>Basic Math</td>
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<tr>
<td>April 10</td>
<td>Construction Inspection</td>
<td>Rochester</td>
<td>$75</td>
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<td>April 11</td>
<td>Geotextiles</td>
<td>Somersworth</td>
<td>$75 FULL</td>
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<td>April 24</td>
<td>Reconstruction Project Planning</td>
<td>Somersworth</td>
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<tr>
<td>May 1</td>
<td>Municipal Permits</td>
<td>Concord</td>
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<td>May 3</td>
<td>Plan Reading</td>
<td>Lebanon</td>
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<td>Pavement Markings</td>
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<td>June 6</td>
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### Tort Liability

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<tr>
<td>April 17</td>
<td>Workzone Traffic Control</td>
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<td>May 10</td>
<td>MUTCD</td>
<td>Swanzey</td>
<td>$75</td>
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