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CROSSROADS

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WISCONSIN TRANSPORTATION INFORMATION CENTER– LTAP

Careful process prepares way for action on weight limits

"Our goal from the start was to come up with a comprehensive system that made sense for Town residents and Town businesses, and for the truckers."

HEAVY TRUCK TRAFFIC on local roads becomes an issue when statutory weight limits prove too general for enforcement. The Town of Hull in Portage County is about to pass an ordinance on weight limits that gets specific. The detailed ordinance defines those limits, the status of listed and unlisted roads, exemptions, and the permitting process in an effort to preserve the integrity of Town roads and ensure the safety of pedestrians and bicyclists.

Town Chairperson John Holdridge, who spear-headed the careful process behind the ordinance, says the Town Board decided to take action after the Wisconsin Department of Transportation proposed turning a Town road into a county trunk highway as part of an interchange project. Town sentiments to keep the road "local" prevailed. But that situation and the history of truckers detouring through town to avoid scales made it clear to local officials it was time to create consistent, enforceable weight limits.

"Our goal from the start was to come up with a comprehensive system that made sense for Town residents and Town businesses, and for the truckers," Holdridge explains. "We also wanted an ordinance the sheriff's office and state patrol could effectively enforce."

Research lends substance

Holdridge and others saw the need for good information to lend substance and enforceability to a new ordinance. Working with engineer Dave Glodowski of Gremmer & Associates in Stevens Point, he scoured the state for examples of a weight-limit system Hull could copy or refine. Finding none that met Town concerns, they researched the issue closer to home.

Wilshire Drive in the Town of Hull, improved in 2007, is a listed road under the new ordinance where a weight limit of 15,000 lbs per axle applies.

The board held three public meetings over two years where concerned truckers voiced opposition to new limits. Hoping for constructive suggestions, Holdridge and Glodowski met individually with area businesses running heavy trucks to learn more about their operations. Next to the voices of people living on the roads and law enforcement, input from this interest group was critical to writing a realistic, workable ordinance. The meetings proved fruitful. They helped identify valid exemptions and defuse any ill will.

"It was important for us to hear them and for them to hear us," Holdridge says. "We needed facts about what kind of trucks they were running, and axle weights. But we also needed a chance to persuade them the ordinance wasn't intended to put them out of business."

Glodowski, meanwhile, collected data on existing Town roads to record the condition of each and classify their pavement structure. Glodowski describes it as akin to engineering in reverse. "Unlike evaluating a site for new pavement design, for this we dug down to see the soil composition and identify construction materials on existing pavements—especially those we consider old roads—looking for signs of how well they would support truck traffic."

His findings form the basis for year-round limitations on Town of Hull roads, considered Class B as defined by state statute and allowing a maximum total weight limit

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INSIDE

Estimating road and street improvement projects

ROAD CONSTRUCTION costs have seen big increases in the past three years. Gone are the days of price stability when it was easy to assume project costs would rise only a few percentage points annually.

Estimating road and street improvement projects is harder today given substantial increases in material and transportation costs, and volatility in the price of improvements. One way to minimize surprises is to follow good practices for estimating project quantities and costs.

Preliminary vs. detailed

Preliminary estimates of construction costs come in handy when developing a road-improvement plan and budget. If you do this planning in WISLR, the Wisconsin Information System for Local Roads that has a built-in cost database, you need to modify your numbers in WISLR to account for price increases and local differences in costs. Also adjust for the type of maintenance and construction activities you plan to implement. Consider including a contingency of 5-to-10 percent in estimates to anticipate unseen price increases or additional work.

Numbers used in a preliminary estimate represent an average, or typical project. Many projects, however, differ from the average. Before putting a project out for bid, make a more-detailed cost estimate of actual construction costs on the project. ►

Idea EXCHANGE

Brine-making facility speeds process

REDUCE THE AMOUNT of salt spread on icy roads and bridges, and improve the effect of what you ***do*** lay down. The Dane County Department of Public Works, Highway and Transportation took up that challenge two plowing seasons ago and now treats its roads by a process of prewetting with a salt-brine solution that mixes with the salt—an application that saves salt and acts more quickly. To supply its brine needs, the Department built a new facility at its Madison headquarters to house a precision-run brine-making process.

The set-up includes computerized controls for programming the process, a 2.5-yard container for mixing the brine solution, and two 4,000-gallon holding tanks adjacent to a truck port where vehicles stop to "fuel up" with the solution. The county also transfers brine to 3,000-gallon storage tanks at six outlying facilities as needed.

Crew Leader Gary Keegan describes the brine-making process as fast and efficient. "It makes it easy to meet our needs and even supply other counties." After his crew loads a measure of rock salt into the container and programs the brine-making run, water sprays on the salt from overhead. Spray sensors monitor flow to achieve an exact 23 percent solution, the salinity Keegan says addresses most county winter road conditions. Sensors guard against overflow and shut the spray down when the salt gets too low.

Brine making in this operation is a continuous process that produces approximately 8,000 gallons of brine in two hours. With greater water velocity, Keegan predicts they could speed production substantially. The facility produced 130,000 gallons of brine last year.

The county piloted the in-house process in 2005 and ran it full out in 2006. Its anti-icing operation involved two trucks equipped with 1,800- and 1,000-gallon tanks to treat bridge decks on state routes and county routes with heavy traffic. The trucks go out when there are predictions of frost or light snow with pavement temperatures at 10-to-35 degrees.

Twenty-five trucks are equipped for prewetting. The county expects to put six more in service this year, all assigned to state routes. Costs amount to approximately $7,000 per truck for retrofitting and $5,000 to equip a new truck.

Dane County Highway Commissioner Gerald Mandli says the Department anticipates over time the cost-effective operation will reach its goal to reduce salt use up to one third and improve road safety. ■

To learn more:

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Gary Keegan uses touch-screen controls to program salinity and view the progress of the run. INSET *The large 2.5-yard mixing bin is mounted in an enclosure adjacent to computer controls.*

For a detailed estimate, you need to know what the specific items of work are and where the project will physically start and stop. You need to take measurements and observe existing conditions.

Field information

The most basic information you need is the length and width of the road. Measure length along the centerline with a measuring wheel or along each pavement edge, averaged to find the centerline length. Measure width with a measuring tape in several places, noting where changes in width occur. If variations are minor, average the measurements to find the width.

If you have road length and width measurement information on file and are confident of its accuracy, use it instead to calculate project quantities. Be sure to add in street radius returns and other additional pavement areas included in the proposed improvements. All these measurements go into the formula for calculating square yards of pavement in the project.

While in the field, take note of other work you will need to do at the same time. Identify and measure areas that require patching and pavement markings that will need repainting. Also note signs that need replacing.

Look for safety problems—trees too close to the road, shoulder edge drop offs, poor sight distance, protruding headwalls, hazardous mailboxes, missing or damaged guardrail, and other potential problems. Consult the SAFER Manual from the Transformation Information Center (TIC) to identify hazards and prioritize safety improvements.

Check for drainage issues on the road slated for maintenance. Plan and coordinate ditch cleaning and culvert replacement work with pavement improvements.

For urban roads, identify deteriorating curb and sidewalk sections for replacement. Evaluate the need for handicapped accessible sidewalk ramps with detectable warning fields.

Gather data on any additional work identified and decide what to include in the bid. If you plan to do work in-house that must be coordinated with the contractor, describe it in your bid specifications.

Estimating quantities

A good quantity estimate is the foundation of a fair bidding process. Provide work items and quantities on the bid proposal form to ensure all contactors submit bids that follow the same specifications. A basic set of bid documents and specifications, including a bid proposal form, are available from TIC.

Resources to help with calculating quantities of gravel and asphalt materials include the *Inspectors Job Guide and Highway Maintenance Tables* from TIC. The Wisconsin Asphalt Pavement Association has useful information on its website that discusses materials and specifications, and gives examples of estimating quantities.

Sample quantity estimate from Wisconsin Asphalt Pavement Association

SPECS

22-foot wide asphalt road

6.7 miles long

SOLUTION

Roadway area =
22 ft x 6.7 mi x 5280 ft/mi =
778,272 SF

778,272 SF ÷ 9 SF/ SY = 86,475 SY

Total seal coat quantity = 86,475 SY

Construction costs

With measurement and quantity information in hand, the next step is getting data on current unit prices.

Good outlets for timely, relevant cost data are neighboring cities, towns and villages, and the county highway department. Ask for information about project size and scope to determine if the project is similar enough to yours so cost data will be useful. Since haul distances affect the price of materials, use cost data from nearby communities or locations with similar access to materials.

While recent projects with similar specifications are a good source of information, you will need to adjust for cost increases. The Federal Highway Administration website provides information on construction economics and price increases.

Project size and type have a major effect on unit prices. The per-ton price for a small amount of asphalt surface patching may be double or triple the price per ton of an asphalt resurfacing job due to differences in equipment used and the economies of scale.

Local contractors are another helpful source for cost information and several consultants in Wisconsin provide access on their websites to bid tabulations for recently bid projects. If projects listed are geographically close and similar to yours, these tabulations can be helpful.

WisDOT posts average unit prices for pay items on state contracts on its Highway Construction Contract Information (HCCI) website. It features a visual view of year-to-year increases statewide that helps with preliminary costs estimates.

Pulling it all together

WisDOT's *Controlling Item Cost Estimate Worksheet* lists common major items for road construction projects and serves as a checklist for the complicated but important process of estimating your road and street improvement projects. The project scoping tools provided by the department help local governments pull quantities and estimated unit costs together. ■

Helpful links

Wisconsin Asphalt Pavement Association website with links to "local specifications" calculation tables.
www.wispave.org

US Department of Transportation Federal Highway Administration link to information about construction cost increases and competition.
www.fhwa.dot.gov/programadmin/contracts/price.cfm

WisDOT Highway Construction Contract Information (HCCI) website.
http://roadwaystandards.dot.wi.gov/hcci/bid-letting/reports/aupfy05-07.pdf

WisDOT created this helpful *Controlling Item Cost Estimate Worksheet* tool for organizing project estimates.
www.dot.wisconsin.gov/localgov/highways/tools.htm

Request the *Inspector's Job Guide and Highway Maintenance Tables* and sample specifications and bid documents from TIC. Call 800-442-4615 or order online.
http://tic.engr.wisc.edu/publications.lasso

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Early alert key to working with utility relocations

A road crew at a new bridge project works around nearby overhead power lines. This can be less costly than relocation.

RELOCATING POLES or buried facilities to make way for a road project can be a major operation for a utility company. Local officials in charge of the project generally have the authority to require relocation if an existing facility inside the right-of-way conflicts with construction activity, or affects public health and safety.

They also have the chance, says State Utility Access Engineer Ernie Peterson of WisDOT, to make the whole project run smoother by communicating early and often with the utility.

Peterson and others in WisDOT recently met with utility companies to compare notes on utility coordination. One result was creation of a straightforward coordination process the state plans to use in the next round of federally funded road projects.

Planners start the process by alerting the utility early about a proposed project. Project designers then meet with the utility before finalizing the plans to evaluate relocation needs and avoid any unnecessary or costly moves.

"The companies told us they weren't getting adequate notice from the designers when a project called for relocation," Peterson says. "We can see it serves everyone's interests to do a better job communicating from the planning stages through implementation."

Julie DeBauche, Utility Projects Specialist with WisDOT, notes local road projects face the same challenges and, on larger projects, could benefit from following a similar collaborative process. "Depending on the size of the project, guidelines call for alerting utilities at least one construction season ahead. A week or two is not enough." Follow-up is equally critical, she adds. Staying in touch with the utility between design and construction helps ensure they complete all relocation work in a timely way.

Peterson suggests that better give-and-take between project planners and utilities pays off in both time and money. State or local projects stay on schedule and on budget when all parties work together. A redesign that saves relocation costs also benefits rate payers and tax payers who fund these projects. ■

Action on weight limits—Town of Hull

continued from page 1

without permit of 48,000 lbs. The ordinance distinguishes between new roads recently reconstructed to accommodate a limited amount of heavy vehicle use and old roads that cannot handle big loads without risking damage.

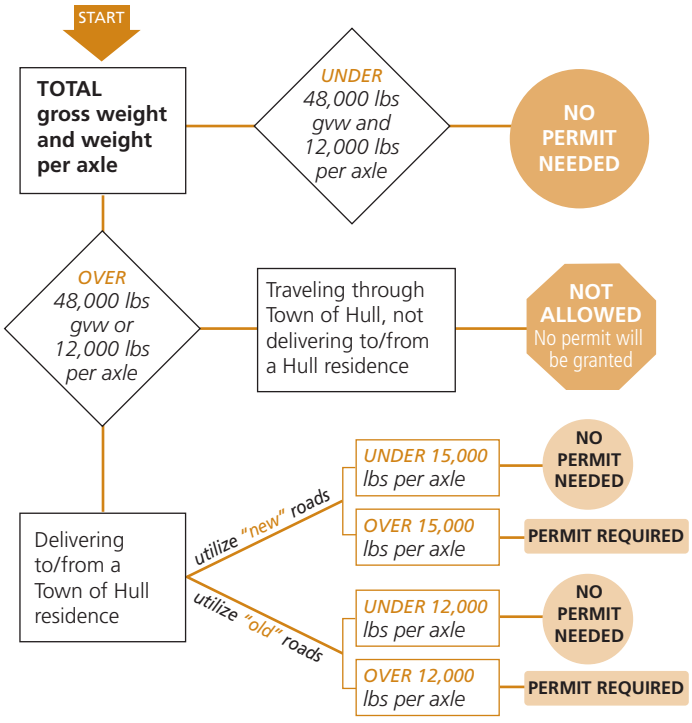
Local roads, local runs

Language in the new weight limits ordinance talks about protecting citizen safety and the Town's investment in 80 miles worth of local roads. Holdridge admits reference to pedestrian and bicycle safety is unusual in such an ordinance. But, he notes, it is increasingly necessary for urban towns that border larger municipalities—Hull is contiguous to Stevens Point—to accommodate all types of travel, not just motor vehicles.

The ordinance also lists the goal of providing truck access for delivery of goods and services to Hull residents and businesses.

When the load requires a permit, Town officials will work with the trucker to identify a suitable route, time of day and other details. Town businesses routinely operating trucks

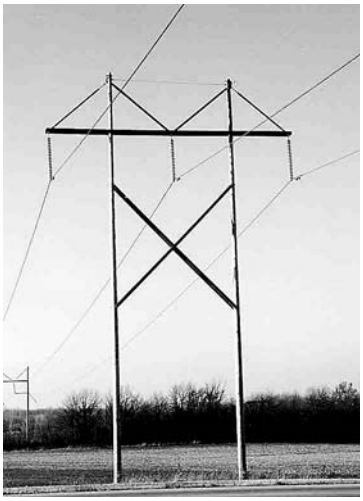
Permitting Process Flowchart



This Permitting Flow Chart provides at-a-glance view of factors governing new Town of Hull weight limits.

Permits and poles

MANY LOCAL GOVERNMENTS in Wisconsin regulate placement of new utility facilities in road right-of-way under their jurisdiction, typically through a permitting process established by ordinance or policy. Some adapt location requirements similar to the WisDOT Utility Accommodation Policy.



Bob Fasick of WisDOT's Bureau of Highway Operations notes those guidelines require utility companies to place their facilities outside the clear zone as close to the right-of-way boundary as practical and in alignment with the road. Installed facilities must be easy to service without major traffic disruption. They must accommodate future road improvements or be relocated when necessary.

The Wisconsin Towns Association (WTA) advises its members to adopt reasonable policies for permitting utilities in case they need to defend a denial. WTA recommends language that, along with location requirements and other provisions, indemnifies the town against any damage caused during installation in the town right-of-way, establishes an inspection process, and addresses work-site safety and clean up.

Fasick observes that utility placements on local roads sometimes demand more flexibility because of unique or uneven terrain. In the North woods, for example, overhead lines may cross back and forth along a road to protect stands of trees. A steep right-of-way is not the best place to locate poles; so local designers and utilities must find practical alternatives that do not compromise motorist safety. Counties with few or remote roads may follow an informal policy for utility placement to find solutions that work best. Whatever the approach, the goal is meeting a community's utility needs while preserving the safety and integrity of local roads. ■

Helpful links

Information on utility coordination issues:
http://roadwaystandards.dot.wi.gov/standards/util/index.htm

Wisconsin Towns Association
www.wisctowns.com/

WisDOT Utility Accommodation Policy (State Highway Maintenance Manual, Chapter 96) covers policy and permitting issues:
www.dot.wisconsin.gov/business/rules/property-96.htm

over the limits and operators exceeding weight limits who store vehicles at their residence or place of business need a special permit. Speed limits and restrictions related to spring breakup and other situations figure into permitting requirements.

Vehicles using Hull roads to travel from one municipality to another but not delivering to a Town address must meet Class B requirements to travel on local roads. The ordinance specifies that no overweight permits will be issued.

Like other towns and municipalities in the state, Hull follows WisDOT procedures for designating roads as "haul roads" for frequent heavy loads exceeding the limits from one location. Holdridge notes including a reference to administering special permits for haul roads in the ordinance gives the Town a process to follow in recovering damages.

The ordinance, scheduled to take effect October 1, carries a list of exceptions. Besides deliveries of goods to and from Town, these include:

- Fire department vehicles
- Town dump trucks when sanding, salting, or plowing
- Public utility vehicles involved in construction, repair or maintenance within the Town
- School buses serving Town residents
- Garbage haulers contracted to do pick ups in the Town
- Septic haulers serving Town residences, emptying only
- Emergency vehicles when responding to a crisis situation
- Vehicles transporting agricultural products to or from Town locations

Tighter enforcement

Holdridge stayed in close contact with the Portage County Sheriff's Department and State Patrol officers as review and discussion of the new ordinance commenced. Clear language on limits and what is expected of permit holders promises tighter enforcement, he says. "Local law enforcement understands our purpose here and is ready to monitor truck traffic on Town roads. Having a strong ordinance and logical permit system in place gives them what they need to address violations."

Making it easy on truck operators was important, too. A weight-limits Town map now exists showing old and new roads based on the Gremmer evaluation. And a Permitting Flow Chart helps explain the permitting process with a quick look at the factors that govern the new limits.

Cooperative approach

The Town of Hull Board will revisit the ordinance on weight limits each April at the annual Town Meeting to measure its effectiveness. John Holdridge anticipates learning a lot over the next six months that will inform any changes or refinements. But the reasonable process they followed to develop the ordinance itself demonstrated a cooperative approach he feels resulted in a document that works for all. ■

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Sidewalk policies walk the line

PEDESTRIAN FACILITIES are an important part of a community's transportation system. Sidewalks in good repair that provide safe access to schools, parks, shopping areas and other destinations contribute to a better quality of life. They connect neighborhoods and people.

A well-thought-out sidewalk policy helps local governments establish an organized, defensible approach to repairing, replacing, adding sidewalks sections, and upgrading curb ramps. Two Wisconsin communities working with updated sidewalk policies share their experiences—helping to illustrate the issues of setting priorities while responding to local issues.

Fitchburg: ranking improvements

This growing Dane County city adopted a sidewalk installation policy in 1989 that names safety, improved pedestrian circulation, and better delineation of street right-of-way lines among reasons for installing new sidewalk segments.

In 1999, Fitchburg hired consultants to develop a bicycle and pedestrian plan that City Transportation Project Engineer Ahnaray Bizjak says identifies completing missing sidewalk segments as a major community benefit. The plan established ranking criteria the public works department uses to prioritize sidewalk installations in established neighborhoods. Each of nine criteria has a point value. Points accumulated determine a segments status in the sidewalk program.

Bizjak says the department balances criteria points against many factors when mapping where and when to install segments. They also consider overall development patterns and weigh community support for bringing sidewalk into the landscape. She cites recent unexpected opposition to putting in sidewalk segments along one of the city's collector streets as proof that gaining "buy-in" from residents affected is critical.

Opposition to sidewalk installation typically has to do with the assessment homeowners expect to pay for the improvement. Fitchburg's current policy does not assess single-family residential properties for new sidewalk. Even without assessments, the city still encounters locations where neighborhood residents do not support construction of sidewalks. In some cases, Fitchburg assesses driveway improvements adjacent to a residential sidewalk installation and the city does levy a 100-percent sidewalk assessment on adjoining multi-family residences and commercial properties.

Fitchburg's current land division ordinance requires sidewalks on both sides of the street in new residential developments and requires sidewalks in all future business-park improvements.

Fitchburg's example mirrors existing recommendations on how communities should address sidewalk requirements on new streets. The table shown here, adapted from WisDOT's *Wisconsin Pedestrian Planning Guidance* publication, outlines suggested sidewalk installation policy.

Fond du Lac: better customer service

Mark Lentz, Public Works Director for the City of Fond du Lac, ruefully recalls the scatter-shot method his department once used for sidewalk maintenance. "We handled everything on a complaint basis, responding to calls for repairs and replacements without bothering about an orderly process."

About seven years ago, the city's engineering group evaluated and improved the program that dated back almost 40 years. The result, Lentz says, is a systematic approach to maintenance and repair that covers the whole city once every 10 years, minimizes municipal liability and reduces costs.

Working with engineering consultants from OMNNI Associates in Appleton, planners divided the city

Fitchburg sidewalk ranking criteria

1. **Average daily traffic volume**
   One point for every 500 vehicles
2. **Speed**
   Points calculated for percentile of speed above 25 mph
3. **Geometrics**
   Sight distance based on evaluation of roadway grades
4. **Street widths**
   Measurements curb-to-curb
5. **On-street parking**
   Points for every car parked along measured sections overnight
6. **Destination pathway**
   Shorter the walk to parks, schools and other outlets, the higher the points
7. **Connectivity**
   Points for proximity to existing sidewalk segments 500 feet or longer
8. **Population density**
   Points for increases within quarter-mile of segment
9. **Zoning**
   Parks rank highest at 20 points, agriculture ranks lowest at zero

WisDOT guidelines for installing new sidewalks

Land-use	New streets
Commercial & Industrial *All streets*	Both sides
Residential *Major arterials & collectors*	Both sides
Residential (Local Streets) *More than 4 units per acre*	Both sides
Residential (Local Streets) *1 to 4 units per acre*	One side required, prefer both; shoulder both sides
Residential (Local Streets) *Less than 1 unit per acre*	One side preferred, shoulder both sides

into quarter sections, prioritized need and developed a plan to concentrate on one section annually starting in 2000. Along with defective sidewalks, the annual sidewalk inspection process also identifies missing sidewalk segments and missing curb ramps.

Displaced joints, large cracks, and holes score high for sidewalk replacement based on criteria that measures hazards and trip-and-fall potential. Work began in older, central-city neighborhoods with sidewalks in greatest need of maintenance. New subdivisions come last in a process Lentz says will allow public works to get around the entire community by 2010.

Fond du Lac assesses property owners 100 percent for sidewalk work under this plan. Consultant fees are factored into the charges.

The process for alerting homeowners about maintenance plans changed, too. In the past, the department mailed orders to residents identifying sidewalk deficiencies and naming options for replacement. "Calls flooded in with people asking a million questions about what was wrong, how to respond," notes Lentz. "People were confused."

Now the department uses GIS tracking to locate each sidewalk segment. The survey team takes digital photos to identify individual deficiencies and another photo of the adjacent house for verification. The city sends the information with a clear explanation of the needed repair or replacement to the homeowner. Lentz explains this visual, clear communication improved customer service and reduced calls by 90 percent.

Lentz has shared Fond du Lac's experience at the American Public Works Association National Congress and one-on-one with many municipalities looking for new ideas. He understands the interest. "This system came about as a team effort. It shows in how well the system works, and in the benefits to the community and our bottom line."

Looking for ideas

Two current WisDOT publications address pedestrian transportations issues and serve as a resource for local officials looking for ideas on setting guidelines.

Wisconsin Pedestrian Policy Plan 2020 Published in 2002, this plan document samples pedestrian planning efforts by Wisconsin cities, and provides background on funding issues and potential sources of funding.

Wisconsin Pedestrian Planning Guidance Information source for planning and developing pedestrian facilities. WisDOT plans a new *Best Practices Guide for Pedestrian Facilities,* due out in 2008, that expands on guidelines in this 1993 publication.

Scouring the web to learn how local governments across Wisconsin set policy on, for example, sidewalk assessments, turns up a range of approaches.

AT LEFT AND ABOVE: ***Sidewalk gaps and defects gain or lose maintenance priority based on local government policies.***

Some communities pick up the tab for both new and replacement sidewalks. Others assess property owners 100 percent for new while the city pays 100 percent of replacement costs. Another formula used is a 50/50 split on paying for both new and replacement sidewalks.

Pedestrian futures

Pedestrian issues remain high on the agenda in communities across the state. They are moving to close sidewalk gaps and provide safe walking routes to community amenities from new and established neighborhoods. A comprehensive sidewalk policy and inspection process offers local governments a manageable approach to maintaining and improving this important infrastructure. ■

Helpful links

Pedestrian and Bicycle Information Center, national clearinghouse for a range of information on pedestrian transportation features guidelines on prioritizing sidewalk maintenance.
www.walkinginfo.org/pedsafe/moreinfo_sidewalks.cfm

WisDOT lists pedestrian projects, plans, and studies on its website, including the two publications cited here.
www.dot.wisconsin.gov/projects/ped.htm

Useful guidance on prioritizing sidewalk projects from the **Federal Highway Administration** – *How to Develop a Pedestrian Safety Action Plan* available online.
http://drusilla.hsrc.unc.edu/cms/downloads/howtoguide2006.pdf

Contacts

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Safe Routes program starts strong

HEALTHY AND SAFE, whatever it takes. Wisconsin's Safe Routes to School (SRTS) program generated lots of interest from communities across the state during its inaugural grant-making round earlier this year. In July, SRTS announced grants totaling nearly $4 million awarded to 47 cities, towns, villages and school districts.

Renee Callaway, who coordinates the program for WisDOT, reports SRTS started strong with 162 applications from a broad mix of urban and rural communities. "Everyone is concerned about children getting to school safely and looking for ways to encourage them at a young age to stay healthy and fit."

The federally funded initiative targets infrastructure and program improvements to create and promote safer walking and bicycling routes to school for children grades K-8.

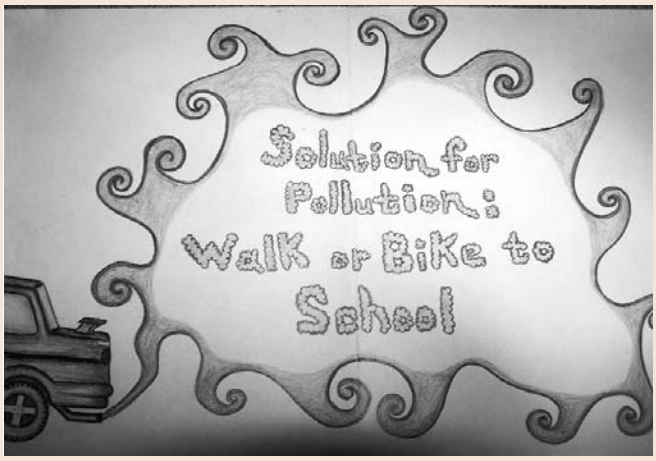
With applications for the next round of SRTS grants available in January, Callaway says a review of funded projects highlights what local officials are doing to increase traveling safety and reduce congestion around schools. Grant proposals also outlined efforts to improve air quality and educate the community-at-large on pedestrian safety.

Examples of infrastructure and non-infrastructure projects funded through SRTS in 2007 include:

- Install sidewalks along local roads near schools where rapid growth produces more traffic and greater the safety issues
- Build multi-use trails along school routes to accommodate pedestrian and bicycle traffic; reduce the number of intersections to cross
- Construct traffic calming measures, like curb extensions and traffic circles, near schools
- Update or add signage and pavement markings near schools
- Develop or expand programs in bicycle and pedestrian safety
- Create Safe Routes coordinator positions to raise awareness and work with area communities to implement improvements

Callaway says SRTS emphasizes a planning and assessment step in the programs it funds. "That's where the changes start, as the groups affected come together to discuss and identify what they see as barriers to safety," she notes. "When parents, schools, local governments, law enforcement start talking, the results enlighten the whole process and make it more likely the plan will be a good one."

Applications for the 2008 grant period become available in January. Callaway suggests, however, there is no need to wait for SRTS funding to implement simple improvements. The program exists, in part, to make things happen. But, she adds, communities can tap into SRTS resources any time for help creating routes to school that are pedestrian friendly and safe. ■



TOP An SRTS group in Eau Claire hosted a bike rodeo for kids and parents to encourage bicycling to school. CENTER Poster art from a Middleton school project sends the SRTS message. BOTTOM Bump outs at crosswalks to improve pedestrian safety are a feature of SRTS programs.

Safe Routes workshops scheduled

Wisconsin Safe Routes to School and TIC have collaborated on a workshop for communities and districts hoping to implement SRTS strategies and/or apply for a grant in the next round. The workshop is scheduled from October 15 to 25 at the following locations.

October 15	Waukesha
October 19	DePere
October 23	Wausau
October 24	Rice Lake
October 25	Tomah

Curriculum covers the assessment process, identifies resources for implementing improvements and examines projects funded in 2007. For more information and to register, go to *http://tic.engr.wisc.edu/Workshops/index.lasso.*

Helpful links

Wisconsin's Safe Routes to School website with links to applications, a toolkit for getting started on a plan and helpful survey tools to use in assessments.

www.dot.wisconsin.gov/localgov/aid/saferoutes.htm

Legal rights and responsibilities on local roads

AUTHORITY OVER LOCAL roads requires that local governments recognize their legal rights and responsibilities as governed by state statute. Other articles in this issue of *CROSSROADS* examine relocation, permits and policies related to utility facilities. In this piece, we recap guidelines on two local road topics as outlined by Carol Nawrocki, legal counsel with the Wisconsin Towns Association. We revisit her recommendations on how to determine right-of-way width and keep it free of hazards.

Establishing right-of-way width

Wisconsin law (Wis. Stat. 82.18) generally presumes a right-of-way of 66 feet. When not specified by highway order as in the case of a new road or one acquired after 10-years maintenance, as stated in Wis. Stat. 82.31(a), the 66-feet rule applies. Details of rights-of-way for roadways acquired by deed or acceptance of a plat may vary, but should appear in those legal documents filed with the register of deeds.

Nawrocki notes that evidence of an ancient fence line, trees growing close to the road, natural barriers like bluffs, and other existing conditions can overcome the presumption of a standard width. In case of a dispute, she says local governments have recourse to litigation. They also can purchase additional right-of-way by deed or accept a petition to widen the road and pay damages under Wis. Stat. 82.10-14.

Removing hazard-causing structures or objects

Local governments have an obligation to seek removal of any structure or object that encroaches on the highway right-of-way. These include cement planters, stone retaining walls, junk cars, bricked-in mail boxes or other structure or object placed in the right-of-way by a landowner or occupant that is seen to pose a clear hazard to traffic. Failure to have the structure or object removed makes the authority potentially liable for damages or injuries that occur if the object is struck.

If approaching the property owner or occupant and explaining the need to move a structure or object for safety reasons does not work, the local government can send a notice requesting removal under Wis. Stat. 86.04. This gives residents 30 days to comply or deny the encroachment. If they fail to do either, a fine of $1 per day begins to accrue and local officials may go to circuit court to recover the penalty. If successful in court, the local government receives a judgment ordering the owner/occupant, or defendant to remove the item within a certain time period. If the defendant disregards the order, local officials have the right to remove the encroachment and recover costs accordingly.

When an owner/occupant denies the encroachment in writing, local officials may take circuit court action to remove it.

Nawrocki further advises town officials that when a structure or object in the right-of-way poses an immediate threat to the public safety and requires emergency action, they do not have statutory authority to remove it or a clear right to recover costs. In such a case, local officials should consider closing the road temporarily, or installing signs, lighted barricades or other markings around the object to protect motorists. She suggests acting with caution and consulting legal advisors before moving an item under such circumstances.

Driveway headwall close to the road presents a risk to motorists and liability for local governments.

It is worth noting that trees, shrubs or vegetation that present a hazard in the right-of-way fall outside the definition used above of *structure* or *object*. Local governments have the authority, by law, to remove, cut or trim these hazards to ensure safe use of the highway with or without notifying the property owner. ■

In case of a dispute, local governments have recourse to litigation.

Link to Wisconsin Towns Association website with sample town ordinances, fact sheets on town government issues and other useful information.
www.wisctowns.com/

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Stop signs not mandated on private roads

"The National Committee for the MUTCD is looking at signing on private roadways as part of a general review — an indication of how often this question gets raised."

PULLING OUT of a private road or commercial driveway onto a public thoroughfare requires the routine caution of yielding to oncoming traffic. But should that road or driveway include a stop sign to make sure motorists do?

Confusion over the status of traffic control devices on private roads—and who pays for them—persists anywhere there is new development and burgeoning traffic. Tom Heydel, Regional Traffic Engineer with WisDOT's Southeast Region, reminds local governments that state law does not mandate or prohibit stop signs on private roads. Property owners who decide to install stop or yield signs do so at their own expense, making sure to get permission from the authority that owns the right of way and following MUTCD *(Manual on Uniform Traffic Control Devices)* standards.

With or without a stop sign, the law says drivers entering a highway from a point of access, like a driveway or private road other than another highway or street, shall yield the right of way to all vehicles approaching on the highway the driver is entering.

"Interestingly, the National Committee for the MUTCD is looking at signing on private roadways as part of a general review—an indication of how often this question gets raised," Heydel notes.

Current standards apply to devices installed on any public street, highway or bicycle trail open to public travel. In the interest of creating uniformity of signage and placement, Heydel anticipates a future edition will address traffic control devices for any facility open to public travel, including private property. ■

Stop signs on private roads must meet MUTCD standards. The signs above and at left do not.

Diggers Hotline reminder

811
Know what's below.
Call before you dig.

"CALL BEFORE YOU DIG" is standard procedure on construction and road projects that involve excavation. Recently, the Common Ground Alliance helped launch a federally mandated national Diggers Hotline 811 number to reduce confusion over multiple numbers and preserve access to local service. *CROSSROADS* checked with Wisconsin Diggers Hotline to learn about using the new number in local government projects to identify underground utility lines.

Chad Krueger with Diggers Hotline reports 811 is available to professionals, but largely targets private property owners with an easy-to-remember number that encourages responsible digging by do-it-your-selfers. The existing 800-242-8511 number remains in service and can continue in use on local governments' plans. Diggers Hotline also invites the use of its Remote Entry program, an advanced, online method of filing complete locate requests. Another electronic option is to file locate requests using the Diggers Hotline email-a-locate program. Access both the Remote Entry and email programs from www.diggershotline.com/.

DIGGERS HOTLINE

CALENDAR

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5-7 Highway Bridge Design

6-7 Principles and Practices of Estimating for Construction and Design Professionals

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7-8 Improving Public Works Construction Inspection Skills

9-10 Maintaining Asphalt Pavements

28-29 Implementing a Sidewalk Management System

Pesticide Applicator Training: Right-of-Way

30 Carroll College, Waukesha

31 Marathon County Extension Office, Wausau

Registration information and training manuals at University of Wisconsin Pesticide Applicator Training Program website, *http://ipcm.wisc.edu/pat* or contact Rose Scott: 608-262-7588 or PAT-program@facstaff.wisc.edu. Pre-register two weeks before date of the course.

Publications

Inspector's Job Guide and Highway Maintenance Tables, a pocket-sized book that includes tables for help estimating quantities of gravel and asphalt materials for road construction projects.

SAFER Manual, TIC 1996, 40 pp. Practical guide to evaluating roadway safety. Provides examples of common roadway hazards, suggests strategies for minimizing hazards and provides a simple method to prioritize safety improvements.

Sample Bid Documents and Specifications are available from TIC. They provide a template for producing specifications and bid documents for bidding local street construction and maintenance projects.

Using Weight Limits to Protect Local Roads, TIC 2003, 8 pp. Examines seasonal load restrictions, techniques for evaluating roads that need protection and guidelines for setting limits.

How Vehicle Loads Affect Pavement Performance, 4 pp. Early TIC bulletin that covers the basics of how loaded trucks cause road deterioration.

Websites

Asphal Concrete WisLine Presentation from Wisconsin Asphalt Pavement Association and TIC, 2004. Document on specifying and estimating available at: www.wispave.org/downloads/WAPA%27s%20WISLINE%20Presentation%2004.pdf

Includes useful tables and examples to use in calculating quantities for asphalt, aggregate base course, gravel roads, gravel shoulders and chip seal projects.

New national *811 Diggers Hotline* number information available available online at www.call811.com/.

Wisconsin Diggers Hotline information available at www.diggershotline.com/.

DVD/VHS/ Multimedia

The following items are new to the TIC collection and related to topics in this newsletter.

Chain Saw Safety, Maintenance & Operation, Stihl Incorporated, 2006, 63 min., #18917, DVD. Provides detailed information on chain saw features, maintenance, sharpening, protective apparel and proper chain saw operation. Topics divided into five chapters easily accessed for shorter, focused training sessions. Suitable for employees responsible for chain saw operation or maintenance.

Driving Modern Roundabouts: Rules of the Road, Washington State Department of Transportation, 2002, 9 min 45 sec, #18918, DVD. Explains and illustrates rules of the road for roundabouts. Shows traffic in multi-lane roundabout and discusses truck, pedestrian and bicycle travel through roundabouts. Appropriate presentation for local government officials and public when considering or introducing roundabouts.

Roundabouts in Kansas, Kansas Department of Transportation, 2004, 10 min 10 sec, #18919, DVD. Good overview of roundabouts that describes safety improvements and traffic delay reductions that result. Illustrates how to drive through a single-lane roundabout using driver's-eye view 3D animation. Examples of the improved traffic safety and flow through construction of roundabouts in Kansas.

Roundabouts: The Wisconsin Experience, Wisconsin Department of Transportation and Brown County Planning Commission, 12 min, #18920, VHS. Discusses safety advantages of roundabouts and experiences of communities in Wisconsin with roundabouts in operation. Local engineering, public works, police and school officials discuss their experience with implementation of roundabouts. Useful for local government officials and staff members.

The Case for Roundabouts Federal Highway Administration and Educational Media Group, 2001, #18921, VHS. Discusses how roundabouts provide safety improvements, capacity increase, cost reduction, and traffic-delay reduction. Intended for local government officials and staff audiences.

Sand and Salt Spreader Calibration, Baystate Roads Program Massachusetts Local Technical Assistance Program, 2006, 13 min., #18928, DVD. Stresses importance of spreader calibration, demonstrates procedures for calibration of salt and sand spreaders, and describes calculations needed to determine proper calibration.

Road Safety Audits: A New Way of Doing Business, USDOT Federal Highway Administration, 2006, 13 min, #18927, DVD. Introduces concept of Road Safety Audits and discusses how to build a roadway safety audit team and conduct road safety audits.

RESOURCES

Print copies of publications available free from TIC while supplies last. Electronic copies may be downloaded using the online order form at: *http://tic.engr.wisc.edu/publications*

Video, CDs, and DVDs are loaned free through county UW-Extension offices. Print copies of the current TIC Lending Library Catalog were distributed in July. Items also are listed on the TIC website.

TIC website

http://tic.engr.wisc.edu/

CROSSROADS provides information on roads and bridges for local officials. Published quarterly by the Wisconsin Transportation Information Center (TIC)—part of the nationwide Local Technical Assistance Program (LTAP)—with assistance from the Federal Highway Administration, WisDOT, and the University of Wisconsin–Extension. For permission to reproduce articles or graphics, please contact us.

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CALENDAR

TIC Workshops

Specific details, locations, and registration forms go to all CROSSROADS recipients prior to each workshop. Additional workshop information and online registration is available at: http://tic.engr.wisc.edu/workshops/listing.lasso.

Safe Routes to School Workshops covers assessment process, identifies resources for implementing improvements and examines funded projects for communities and districts hoping to implement SRTS strategies and/or apply for grant funds. Fee: $45

October 15	Waukesha
October 19	DePere
October 23	Wausau
October 24	Rice Lake
October 25	Tomah

Winter Road Maintenance
Practical information and procedures for snow and ice control on local roads. New winter maintenance equipment will be on display. Come prepared to share your ideas and learn from others. Fee: $45

October 2	Green Bay
October 3	Waukesha
October 4	Barneveld
October 8	Tomahawk
October 9	Cable
October 10	Eau Claire
October 11	Tomah

Highway Safety Workshop
Reviews basics of signing and marking, and highlights good sign installation and maintenance practices on local roads.Also helps you identify roadside safety hazards and understand and use crash information to improve the safety of local roads. Fee: $45

November 1	Barneveld
November 2	Waukesha
November 5	DePere
November 6	Tomahawk
November 7	Cable
November 8	Eau Claire
November 9	Tomah

On-Site Workshops Save time and travel costs by bringing instruction to your shop or office. Schedule training for the time and place most convenient for you and ask the instructors to tailor content to your specific needs. On-site workshops let you train more people for the same or less cost, including staff from other municipal departments, nearby communities, or businesses you contract with. Contact TIC early to get the program you need on the date you want. On-site workshops from TIC include:

- Basic Surveying for Local Highway Departments
- Basic Work Zone Traffic Control
- Flagger Training

Snow Plow Roadeo and Equipment Show The 18th annual event sponsored by the Wisconsin Chapter American Public Works Association will be held at Lambeau Field in Green Bay, Wednesday, September 19. Additional information and registration forms available at *www.wisconsin.apwa.net/index.asp* or contact Gordon Paprocki at (414) 302-8809 or gpaprocki@ci.west-allis.wi.us.

UW– Madison Seminars

Local government officials are eligible for a limited number of scholarships for these Engineering Professional Development courses held in Madison. http://epd.engr.wisc.edu or 800-462-0876 for details.

OCTOBER

11-12 Soil Engineering for Non-Soils Engineers and Technicians

15-16 Managing Snow and Ice Control Operations

17-18 Designing and Implementing Roundabouts

29-30 Legal Aspects of Engineering, Public Works, and Construction

NOVEMBER

5-6 Pavement Design

7-8 Evaluation and Rehabilitation of Pavements

12-16 Structural Design for Non-Structural Engineers

DECEMBER

3-4 Comprehensive Practices for Effective Construction Project Management

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