



moving FORWARD

WINTER 2011-12

A quarterly review of news and information about Pennsylvania local roads.

Road Ready

Posting and bonding roads provides best protection against heavy haulers

by Amy Bobb, PSATS

WHAT HAPPENS WHEN ROUGHLY 60 PERCENT of Pennsylvania is discovered to have Marcellus shale buried deep underground? Dozens of energy companies move into the state and start drilling to obtain access to what is estimated to be one of the world's largest natural energy reserves. Local economies boom, environmental concerns are raised, and thousands of trucks hauling equipment and water converge on rural roads.

As many municipal officials and road crews have discovered, the jobs and money that Pennsylvania's recent energy boom may bring to a community come at a price: damaged roads. Often, the roads

located in the Marcellus shale region are unpaved or secondary routes not designed to handle the number of vehicles and the heavy-hauling demands associated with deep-shale gas development.

That leaves the commonwealth and many of its municipalities grappling with how to handle the heavy hauling and truck traffic that accompanies the Marcellus shale drilling operations.

In recent years, PennDOT has become proactive in taking the necessary steps to protect secondary state roads from the damage caused by increased heavy truck traffic. A number of local governments are following suit.

PennDOT Paves the Way

"Our intent is to maintain the state's roads for use by the general motoring public," says David Mallin, maintenance program section chief for PennDOT's Bureau of Maintenance and Operations. "We strive to find the right balance by considering the industry's needs, protecting the state's infrastructure, and reducing the taxpayer's burden by targeting those individuals responsible for damage to the roads due to heavy hauling activities."

To achieve that end, PennDOT has pushed a standardized posting and bonding process that determines what type of traffic a road can handle and makes heavy haulers responsible for maintaining that road at a certain expected level.

Posting and bonding options are not new; they have been in place throughout the state for the past 30 years. But, since Marcellus shale activities have become prevalent in recent years, the number of miles of state-designated roadway posted with a weight limit has increased by 58.6 percent, resulting in 11,326 miles of posted state roads. Today, approximately 25 percent of the state's road system has been posted with weight restrictions, Mallin says, compared to 10 percent about three years ago.

As part of PennDOT's posting and bonding efforts, overweight haulers that travel posted roadways are required to provide a bond, which makes the user fiscally responsible for any excess maintenance costs arising from the heavy hauling.

Posting weight limits on a secondary road is the first step in ensuring that a municipality's roads are protected from heavy haulers.



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Posting and Bonding

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Since instituting a standardized posting and bonding program, Mallin says, PennDOT has been better at keeping up with the maintenance needs of roads affected by heavy truck traffic and has ensured that roads do not get destroyed to the point of requiring total rehabilitation. PennDOT's mission is simple: No deterioration of existing road/bridge conditions due to heavy truck traffic.

From State to Local Roads

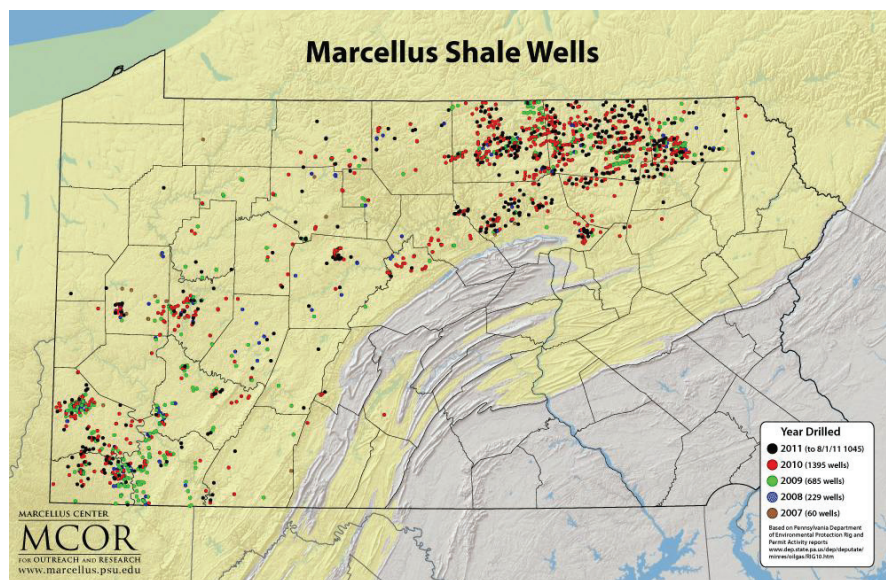
Municipalities affected by heavy haulers — whether it's Marcellus shale trucks or loggers — should consider adapting PennDOT's policies and procedures to post and bond their own rural roads.

"If municipalities do not require proper posting and bonding on their secondary roads, these roads could become destroyed over time," says Louis Ferretti, PennDOT's LTAP program manager, who encourages municipalities to apply PennDOT's policies when dealing with heavy haulers on local roads.

Municipalities in the affected Marcellus shale region can help to protect their local infrastructure by implementing the following posting and bonding procedure:



Older secondary routes and rural roads in Pennsylvania usually aren't designed for the heavy and more frequent traffic that accompanies Marcellus shale drilling operations.



This map shows how the number of Marcellus shale wells has rapidly increased in the last five years. In 2007, 60 wells were drilled. By the middle of 2011, Pennsylvania was home to nearly 10,000 wells.

Conduct a traffic and engineering study. Before posting a roadway with weight restrictions, a municipality should hire a professional engineer to conduct a traffic and engineering study of the roadway. Through this study, the engineer will analyze the roadway and determine what type of traffic the road can withstand and what, if any, weight restrictions should be in place. The traffic and engineering study, signed by the engineer, should be kept on file in the municipal office.

Adopt an ordinance or resolution establishing a local posting and bonding program. If the traffic and engineering study determines that roads should indeed be posted with weight restrictions, the elected municipal officials should adopt an ordinance or resolution establishing the requirements for the posting and bonding program. Once the program becomes local law, signs noting the weight limit restrictions can be installed on affected roads.

Work with haulers to obtain bonding to pay for excess maintenance. Under a posting and bonding program, a hauler must post the bond amount set by the municipality to cover its financial obligation for repairing a road from any damage caused by the hauler. The state requires different amounts of security depending on the type of roadway: \$6,000 per linear mile for unpaved roads; \$12,500 per linear mile for paved roads; and \$50,000 per linear mile for a paved road that will be reverted back to an unpaved roadway. These amounts, which are established in Chapter 189 of the Pennsylvania Code Title 67, have remained unchanged since 1981.

Incorporate an excess maintenance agreement. Municipalities should require haulers to sign an excess maintenance agreement. This will help to ensure that users will repair any roadway damage in excess of normal routine maintenance. Two options exist for repairing a roadway covered by an excess maintenance agreement: 1) the hauler makes the repairs itself or through a contractor; or 2) the municipality repairs the road and bills the hauler for the work.

Inspect local roadways and note conditions. Once an excess maintenance agreement is signed, but before a permit is issued to a hauler, the municipality and the hauler should conduct an initial inspection of the posted road, note any existing damage that the hauler is not responsible for, and determine a level of service on the road that is acceptable to both parties.

Once hauling begins, roadway condition surveys should be conducted on a regular basis to point out deteriorating conditions and implement repairs. (PennDOT conducts weekly roadway condition surveys.) Regular inspections should take note of shoulder deterioration, depressed pipes, extensive potholes, base deterioration, and wheel tracks on the roadway surface.

"You cannot invoice things that have not been documented," Mallin says. "These documented damages should receive immediate attention to ensure that necessary repairs do not exceed the bonded amounts."

Enforce the posting and bonding program. Municipal police or the Pennsylvania State Police are authorized to stop any trucks suspected to be over the weight limit and that have not registered with the municipality. In lieu of using



An excess maintenance agreement requires haulers that exceed the posted weight limit to repair any damage to roadways that is in excess of normal maintenance.

scales to weigh the truck, police can check the registration card and load manifest documents to determine the weight of the vehicle and its load. Violators could be fined. Keep in mind that school buses, emergency service vehicles, farming equipment, and government-owned and utility-owned vehicles may be exempted from posting and bonding requirements.

Ensure that users make any necessary repairs to damaged roads in a timely manner. Whenever a damaged roadway is noted, the municipality should send a letter notifying the hauler of any repairs for which the hauler is responsible for completing. If the repairs are not initiated in a timely manner (PennDOT requires repairs to be started within five days of notification), the municipality may suspend the user's permit. If the hauler launches an appeal and loses, the municipality can go after the bond money to try to force the repairs.

"Most of the time, the users are responsive because they want their operations to continue," Mallin says. "If they're not working because their permit has been suspended, they're not making money."

Release the bond only when satisfied with road conditions. Once hauling operations on local roads have ended, the municipality should conduct a final inspection of the bonded roadway and determine what repairs the user is liable for. The municipality should only release the bond and terminate permits issued to the user when the municipality is satisfied that the roadway has been returned to an equal or better condition than how it was found. ♦

PennDOT Resources

PennDOT has revised Chapter 15 dealing with weight restrictions on highways to incorporate municipalities into the state's regulations with the use of the phrase "posting authority" to mean both the state and the municipalities.

The encompassing language change has made Publication 221, Posting and Bonding Procedures for Municipal Highways, obsolete. Municipalities instead should follow Chapter 15, Weight Restrictions on Highways (Posted Highways), when setting up a posting and bonding program.

Chapter 15 and the various related documents a municipality can use to post and bond weight-restricted roads can be accessed on PennDOT's website, www.dot.state.pa.us. Go to "Bureau of Office Services" and then "Publications & Forms." Scroll down to "PUB 23," click on "Table of Contents," and then select "Chapter 15."

Commonly Asked Questions & Answers about Posting and Bonding

What is a posted road?

Any state or locally owned road that has a weight restriction established under Section 4902(a) of the Vehicle Code.

Why must roads be posted?

Many of the state's secondary and rural roads were not designed to support heavy truck loads. Consequently, these roads can become badly damaged when certain activities requiring heavy hauling, such as Marcellus shale operations, move into a region. Posting and bonding policies address this problem by requiring heavy haulers to be financially responsible for excess maintenance on roads they use.

Who determines if a road should be posted?

The Department of Transportation makes this determination for state-owned roads, and local governments do the same for locally owned roads.

What types of roads are posted?

In general, traffic routes (those marked with two- and three-digit numbers) and primary highways are not posted. Secondary routes that are not designed or built to handle heavy hauling usually require weight-limit postings.

What is bonding?

When a hauler bonds a road, it agrees to be responsible for excess maintenance costs arising from its heavy hauling. Bonding can be provided by a performance bond issued by an insurance company, certified or cashier's check, bank account, irrevocable letter of credit, or self-bonding (if certain qualifications are met and the hauler is considered financially sound by the posting authority).

What is excess maintenance? Why is an excess maintenance agreement necessary?

Excess maintenance is any necessary repairs caused by over-posted weight vehicles in excess of normal routine maintenance. An excess maintenance agreement ensures that all repair costs above normal maintenance become the responsibility of those who cause the damage, not the general taxpayer.

What happens if more than one hauler uses the same posted road?

If two or more haulers are using the same posted road, they should determine how responsibility for the roadway should be divided. If the haulers cannot come to a mutual agreement, then the posting authority will determine the relative responsibility for each hauler. ♦

Assessing and Preserving Historic Bridges

by Clay Naito, Lehigh University

HISTORIC BRIDGES ARE PREVALENT throughout the United States. Though many bridges located on main thoroughfares have been replaced over the past 50 to 100 years as vehicle demands increase and structures degrade, historic bridges can still be found on back roads and less-traveled paths. If you're the owner of one of these historic bridges, you must answer the question, "What should we do with this bridge?" The answer depends greatly on the condition and state of the bridge and who owns it.

Responsibility for inspecting and maintaining bridges varies from state to state. Public bridges may be owned by the state, municipalities, or other organizations such as toll commissions and port authorities. In Pennsylvania, the owner has an overall obligation to ensure that its structure does not present an unacceptable safety risk to the public.

Under Act 44 of 1988, the Pennsylvania Department of Transportation is empowered to inspect bridges owned by counties and municipalities that have not been inspected in accordance with national standards. In other states, such as Ohio, the Department of Transportation is only in charge of bridges located on state thoroughfares, and inspection and maintenance of local bridges is left to the owner. In some cases this can be a heavy burden for a city or county to manage.

Inspecting and Posting Bridges

Inspections of bridges over 20 feet in length must be conducted in accordance with the National Bridge Inspection Standards (NBIS). This requirement is mandated by federal law and is intended to ensure



A truck fails to follow the 15-ton weight restriction posted on a truss bridge over Shermans Creek.

proper inspection of bridges to identify needed repairs, maintenance, reconstruction, and preservation actions. NBIS requires each bridge to have a routine inspection every two years or less. During these inspections, load-carrying members of the bridge are examined. Special attention is paid to members that are either in poor condition or of critical importance to the bridge integrity. Detailed procedures exist for certified bridge inspectors to inspect various bridge types.

Following inspection, the load-carrying capacity of each bridge must be determined.

This procedure must account for degradation of the structural components of the bridge identified during inspection. A structural engineer must conduct the evaluation in accordance with the procedures of the state authority.

An inspected bridge may be shown to meet current highway loads, or it may be shown to only support a fraction of the allowable legal load. Bridges that are unable to support state traffic legal loads must be posted. Postings can range from a 3-ton to 40-ton limit. Above those levels, bridges are able to meet current state legal loads. Any bridge with a load rating below three tons must be closed to vehicle traffic. In Pennsylvania, more than 150 local bridges are presently posted at five tons.

Safe operation on posted bridges requires reliance on the judgment of the vehicle operators or the control booth monitors at either end of the bridge. Failure to maintain the posted limit can have devastating consequences as shown in the photo above of the 2005 overload of a truss bridge over Shermans Creek in Pennsylvania.

The Future of a Bridge

At any level of posting, a bridge is deemed functionally obsolete if it can no longer accommodate current traffic demands. At a 3-ton posting level, the bridge is no longer able to safely support automobiles or empty pickup trucks. If this occurs, residents in a community can be seriously affected, and discussions are necessary to determine the future of the bridge. Should the bridge be demolished and replaced? Should the bridge be repaired or retrofitted to handle higher loads? Should a bypass be created so that a historic bridge can be left in place? In Pennsylvania, such decisions are ultimately made by PennDOT with interaction from the bridge owner, residents, and other interested parties.

Decisions on what to do with a functionally obsolete historic bridge can be difficult. Pennsylvania is fortunate to have a large number of historic bridges, including the 1697 bridge over Pennypack Creek, the oldest stone-masonry arch bridge still in use in the United States; the 1839 bridge over Dunlaps Creek in Brownsville, the first all-iron bridge in the United States; and many other varieties of steel truss

Interested in Owning a Historic Bridge?

PennDOT, with the Department of General Services or county or township authorities, has a historic bridge marketing program. Through this program, PennDOT seeks groups interested in acquiring historic metal truss bridges that no longer meet traffic needs but could have new life as pedestrian spans. These bridges are all eligible for, or already listed on, the National Register of Historic Places and provide a direct connection to Pennsylvania's heritage. Surplus bridges are found statewide in a wide range of sizes, designs, and ages. Although acquiring a historic bridge includes accepting the responsibility for costs associated with moving and rehabilitating it, financial assistance may be available. For more information and a preview of some of the currently available bridges, please visit the PennDOT "Cultural Resources" page at www.penndotcrn.org and select Bridge Marketing.

bridges and covered wood bridges that are still in use. In many cases, the historical significance of the bridge may control the decisions of how to preserve and maintain the bridge.

Creative solutions can be the best approach for historic bridges. For smaller bridges that are historically significant, the bridge can be limited to pedestrian use. In some cases, construction of an adjacent bridge that meets current load requirements can be considered. In areas where this is not practical, the historic bridge can be relocated to a park. This has been done successfully for the 1860 Walnut Street cast and wrought-iron truss bridge in Hellertown.

For covered wood bridges that must meet legal loads, steel girders are often installed. The load path through the structure is transferred from the original wood framing to the newly installed, stronger steel

beams. This type of rehabilitation maintains the historic look of the bridge while meeting the demands of current traffic.

Traffic demands have increased significantly since the arrival of the Ford Model-T in 1908. To keep pace with these demands, the materials used to build bridges, the construction capabilities of the U.S. workforce, the design and analysis of available tools, the techniques used for inspection, and the rehabilitation methods employed on bridges have all greatly improved over the years.

Unfortunately, bridges will continue to age and degrade. To maintain public safety, bridges must be properly inspected in a timely manner, and appropriate action on the findings of the evaluation must be taken if historic bridges are to continue to serve us safely today and tomorrow. ♦

New Rules Affect Signs, Pavement Markings, Traffic Signals

Pennsylvania adopts the 2009 MUTCD

by Patrick M. Wright T.E., Pennoni Associates

IN NOVEMBER 2011, PENNDOT OFFICIALLY ADOPTED the 2009 Edition of the Manual on Uniform Traffic Control Devices (MUTCD) by notification in the Pennsylvania Bulletin (41 Pa.B. 6309). This new edition replaces the 2003 Edition. The adoption of the 2009 Edition of the MUTCD will affect some traffic control devices on local roads and streets. This article summarizes some of the significant changes resulting from the 2009 MUTCD adoption and how those changes will affect the installation and maintenance of traffic control devices in Pennsylvania municipalities.

What is the MUTCD?

The MUTCD defines standards and guidance for the design, placement, application, maintenance, and uniformity of traffic control devices in the United States. Traffic control devices include signs, pavement markings, and traffic signals. For example, the MUTCD establishes the shape, size, and color of stop signs, when to use them, and where to place them. The MUTCD, which is administered by the Federal Highway Administration (FHWA), is applicable to all public streets, highways, bikeways, and even private roads open to the public.

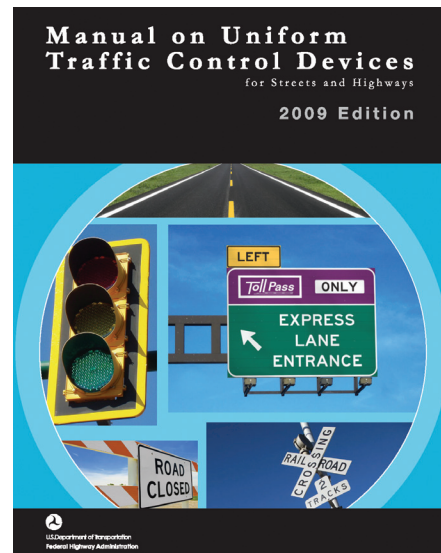
Consistent use of traffic control device standards is important so that road users can quickly recognize and understand the information being communicated by those devices. Thus, when someone drives from one township or city to another, from one state to another, all of the traffic control devices are consistent and uniform.

Traffic control devices are critical for the safe and efficient movement of people using the transportation system, including local roads. Following a standard, uniform system of traffic control devices helps reduce crashes and congestion. The standards in the MUTCD have been developed based on years of research and experience.

How is the MUTCD adopted in PA?

PennDOT publishes and adopts regulations for official traffic control devices to be used in Pennsylvania under the authority of Title 75, the Pennsylvania Vehicle Code. PennDOT adopted the MUTCD through the promulgation of Chapter 212 of Title 67 (Pennsylvania Code) in November 2005. As specified in Title 75 §6121, Pennsylvania has to comply with and adopt updated versions of the MUTCD according to federal regulations and state laws.

With the adoption of the 2009 MUTCD, PennDOT will also be revising corresponding PennDOT publications. In addition, PennDOT is developing new language for Chapter 212, a state regulation that is a supplemental to the MUTCD. There is an 18-month process associated with revising Chapter 212. Some of the engineering and traffic study requirements, warrants, principles, and guidelines included in the original Chapter 212 will be relocated to PennDOT Publication 46, the Traffic Engineering Manual. The result of all the changes is that the current 2009 Edition of the MUTCD will be the standard for official traffic control devices in Pennsylvania.



Traffic Control Devices

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Implications for Municipalities: Highlight of Key Changes

The most important change resulting from the 2009 MUTCD adoption is that municipalities should use the 2009 MUTCD for information regarding traffic control devices in Pennsylvania. All of the related PennDOT publications will also be updated. In December, these updated PennDOT publications will be available as PDFs on PennDOT's website (www.dot.state.pa.us/Internet/Bureaus/pdBOS.nsf/FormsAndPubsHomePage?OpenFrameSet).

Following are the most important publications to download:

- Publication 46, Traffic Engineering Manual
- Publication 213, Temporary Traffic Control Guidelines
- Publication 111, Pavement Markings and Signing Standards
- Publication 149, Traffic Signal Design Handbook
- Publication 236, Handbook of Approved Signs
- Publication 447, Approved Products for Low Volume Roads

A summary of some of the changes to common signs, pavement markings, and traffic signals follows. For additional information on other changes, visit the FHWA website (http://mutcd.fhwa.dot.gov/kno_2009.htm) and attend Local Technical Assistance Program (LTAP) classes. All of the LTAP safety courses will be revised this winter to reflect the changes in the standards. If you have specific questions, contact LTAP at www.ltap.state.pa.us or 1-800-FOR-LTAP (1-800-367-5827).

Techniques to Improve Sign Visibility

The MUTCD allows the use of some innovative practices, including flags, flashing lights, and retroreflective strips, to improve the visibility of signs for motorists (MUTCD Section 2A.15).

Stop Signs. The minimum size of stop signs has been increased to 30 x 30 inches. Previously, 24 x 24-inch signs were permitted on low-volume, low-speed roads, but this is no longer allowed in the 2009 MUTCD. Further, where side roads intersect a multilane highway, stop signs of a minimum size of 36 x 36 inches must be used on the side road (MUTCD Section 2B.03). For alleys, 24 x 24-inch stop signs may be used (MUTCD 2A.11).

For multi-way stop signs, the numbered plaques (two-way, three-way, and four-way) shall not be used. At intersections where all traffic stops, the ALL-WAY plaque shall be used (MUTCD Section 2B.05). For intersections with unique traffic control, special plaques (such as "traffic from the left does not stop") shall be used (MUTCD 2C.59).

Warning Signs. The 2009 MUTCD requires that the use of warning signs be based on an engineering study or engineering judgment (MUTCD Section 2C.02). Thus, warning signs cannot be arbitrarily placed on roadways. Warning signs include curve warning signs, pedestrian crossing signs, school signs, and many others.

The guidelines for the advance placement of warning W1-1



signs have been modified (MUTCD Table 2C-4) and will affect the location of newly installed signs (no requirement to retrofit). Further, the requirements for the use of curve warning signs were enhanced. For example, the new MUTCD standard requires curve warning signs to be used on roadways that are functionally classified as arterial or collectors, with more than 1,000 vehicles per day, and where the speed difference between the speed limit and advisory speed is 10 mph (MUTCD Section 2C.06).

Street Name Signs. The lettering and size requirements for street names did NOT change. The requirement for post-mounted street name signs is still for mixed-case lettering: 6-inch initial uppercase letter followed by 4.5-inch lowercase lettering. On low-speed (25 mph or less) streets, 4 inches/3 inches may be used (MUTCD Section 2D.43). For multilane roads with speeds higher than 40 mph, the letter height requirement is 8 inches/6 inches.



D3-1

Pavement Markings. The previous version of the MUTCD did not allow the use of single yellow centerlines; however, it was not clearly stated. The 2009 MUTCD specifically states that "a single solid yellow line shall not be used as a centerline marking on a two-way roadway." (MUTCD 3B.01)

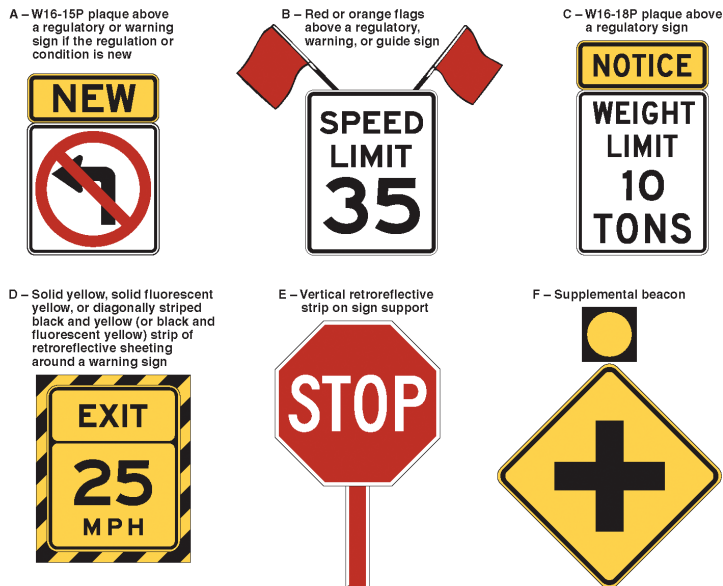


Single-line centerlines are prohibited, and railroad crossings with no signals or gates require the use of stop or yield signs.

Railroad Crossings. At railroad crossings with passive control (no signals or gates), the 2009 MUTCD requires the use of yield signs or stop signs, depending upon the conditions (MUTCD Section 8B.04). At minimum, passive grade crossings will require yield signs. Since the location of the yield signs may be within the railroad right-of-way, it will require coordination with the railroad.

Signals. The 2009 MUTCD contains many changes to traffic signals, including the traffic signal warrants, traffic signal timing, and placement of traffic signals. PennDOT approval is needed for all

Figure 2A-1. Examples of Enhanced Conspicuity for Signs



traffic signal permits/installations except in Philadelphia and Pittsburgh. Municipalities will need to check with their municipal engineer, signal maintenance contractor, and/or a qualified engineer to determine the extent of the impacts to local traffic signals. Some of the changes include:

- The use of 12-inch traffic signal displays (existing 8-inch displays will be grandfathered in).
- Changes to the location and number of signal heads on high-speed (>40 mph) approaches.
- Prohibition of the use of strobes or other flashing displays with red signal indications.
- Prohibition of the use of a red circular indication for left turn signals (must use a red arrow).
- Modifications to pedestrian phase and clearance interval calculations.
- Additional guidance is provided to pedestrian actuation with particular emphasis on Accessible Pedestrian Signals (APS).
- PennDOT cannot allow flashing yellow or red arrow indications until a Vehicle Code (Title 75) modification is completed.
- PennDOT will not be adopting the Pedestrian and Emergency Hybrid Beacon configurations because they violate Pennsylvania's Vehicle Code (Title 75).



Compliance Dates

As part of a federal initiative to reduce the cost burden on transportation agencies, revisions to the 2009 MUTCD compliance dates have been proposed and are under review. However, the review process takes time and does not guarantee that the proposed compliance revisions will be adopted as proposed. The revisions currently under review are about compliance dates from Table I-2 in

A free version of the 2009 edition of the MUTCD is available at <http://mutcd.fhwa.dot.gov/>

the MUTCD, including the dates for sign retroreflectivity and letter height requirements for street name signs. These proposed revisions have not yet been adopted and are not part of Pennsylvania's adoption of the 2009 MUTCD. Look for an article in a future edition of *Moving Forward* for the latest information about these rules.

Regardless of the compliance dates, if any new traffic control devices are installed, they must comply with the 2009 MUTCD. If any existing traffic control devices are replaced (e.g., signs were stolen or damaged), the new signs must comply with the 2009 MUTCD. For other traffic control devices, the recommended approach is to systematically upgrade the devices as the existing ones wear out or can be replaced as part of other projects.

THIS ARTICLE HIGHLIGHTED JUST A FEW OF THE MANY CHANGES in the 2009 MUTCD. These changes were selected for discussion because they may be common to many municipalities across the state. While not all inclusive or comprehensive, this review introduces the new edition of the MUTCD and demonstrates the nature of the changes that can be found within it. Always refer to the MUTCD and to the relevant PennDOT publications when planning your traffic control devices. ♦

Key Points of the MUTCD

(from MUTCD website)

- The MUTCD contains the national standards governing all traffic control devices. All public agencies and owners of private roads open to public travel across the nation rely on the MUTCD to bring uniformity to the roadway. The MUTCD plays a critical role in improving safety and mobility of all road users.
- The MUTCD is the law governing all traffic control devices. Noncompliance of the MUTCD ultimately can result in loss of federal-aid funds as well as significant increase in tort liability.
- Uniformity of traffic control devices is critical in highway safety and mobility as well as cutting capital and maintenance costs of TCDs for public agencies and manufacturers.
- The success of the MUTCD depends on nationwide complete acceptance and application of the MUTCD as well as extensive participation by the practitioners in developing and evaluating the content of the MUTCD.

Upcoming Workshops

To Register:
PHONE: 1-800-FOR-LTAP (367-5827)
WEBSITE: www.ltap.state.pa.us

This represents some of our scheduled courses. Look for updates on the website.

January 4, 2012
Chester County
Safe Driver

January 11, 2012
Luzerne County
Commonsense Solutions to
Intersection Problems

January 11, 2012
Cumberland County
Safe Driver

January 12, 2012
Clearfield County
Pavement Markings:
Applications and
Maintenance

January 18, 2012
Clearfield County
Americans with Disabilities
Act (ADA)

January 18, 2012
Chester County
Work Zone (Temporary)
Traffic Control

February 2, 2012
Schuylkill County
Equipment & Worker Safety

February 9, 2012
York County
Safe Driver

February 15, 2012
Lycoming County
Stormwater Facility Operation
and Maintenance

February 21, 2012
Lackawanna County
Managing Utility Cuts

March 6, 2012
Carbon County
Asphalt Roads Common
Maintenance Problems

March 6, 2012
Lycoming County
Road Surface Management

March 14, 2012
York County
Work Zone (Temporary)
Traffic Control

March 20, 2012
Lackawanna County
Equipment & Worker Safety

March 22, 2012
York County
Road Surface Management

March 27, 2012
Lycoming County
Work Zone (Temporary)
Traffic Control

Congratulations to the following Roads Scholar recipients:

- Richard Umpstead Jr., Muncy Borough
- Jehu Johnson, York City
- Jeff Laughman, York City
- Michael Heckman, Upper Uwchlan Township
- A.J. Grimm, York City
- Tom Hornberger, Caernarvon Township
- Larry Knechel, Montgomery Township
- Joe Lansberry, Woodbury Township
- Harry Latta, Waterford Borough
- John E. Moloney Jr., PennDOT
- George Thompson, Willistown Township
- Donald R. Voigt Jr., Ferguson Township
- Charles Welker, Ferguson Township
- Russell S. Fuhrman Jr., North Codorus Township
- Michael Krebs, North Codorus Township
- Cory R. Smith, East Penn Township

Have You Built a Better Mousetrap?

Show it off by entering PennDOT's competition seeking innovative gadgets, improved transportation

Have you or one of your coworkers recently built an innovative gadget or developed an improved way to do a job? If so, now is the time to show off a project your municipality is proud of by entering it in the Build a Better Mousetrap Competition.

PennDOT is looking for projects that municipal employees or road crews designed and built. It could be anything from the development of tools, equipment modifications, and/or processes that increase safety, reduce cost, improve efficiency, and improve the quality of transportation.

Entries must be submitted to PennDOT by **Friday, March 9**. A state winner will be chosen by the end of March and announced at the annual conference of the winner's respective municipal association. The winning entry will be submitted into a national competition to compete for prizes; winners at the national level will be announced at the annual LTAP/TTAP national conference this summer.

Entry forms were emailed to municipalities and are available online at www.ltap.state.pa.us. To enter the competition, complete the entry form and mail it by Friday, March 9, to PennDOT/LTAP, 400 North St., 6th floor, Harrisburg, PA 17120.



Workers in Richland Township, Allegheny County, show off their winning entry in the 2011 competition. For a cost of \$350 in materials and labor, they built a curbing attachment for their skid steer so that they could create nicely shaped and straight curbs.