T3S

Are We There Yet?

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In This Issue...

FHWA Issues Guidance on Minimum Roadway Safety Data Collection

While many states are pursuing improvement in highway safety data analysis and the usage of analytical tools, many are asking what types of roadway data they should be collecting. The Government Accountability Office asked FHWA a similar question in 2009, when they issued a report on the effectiveness of the HSIP program (GAO-09-35). FHWA's Office of Safety, and an assembled expert working group, ended a year and a half of analysis and deliberation on this issue when they issued guidance on August 1, 2011, that describe a minimum level of roadway data elements that States should be collecting for their HSIP program analysis.

The listing of fundamental data elements for HSIP is as follows:		
Segment ID*	Intersection ID	RampID*
Route Name*	Location	Date Opened to Traffic
Alternate Route Name*	Intersection Type	Start Location
Route Type*	Date Opened to Traffic	Ramp Type
Area Type*	Traffic Control Type	Ramp/Interchange Configuration
Date Opened to Traffic	Major Road AADT	Ramp Length
Start Location*	Major Road AADT Year	Ramp AADT*
End Location*	Minor Road AADT	Ramp AADT Year*
Segment Length*	Minor Road AADT Year	
Segment Direction	Intersection Leg ID	
Roadway Class*	Leg Type	
Median Type	Leg Segment ID	
Access Control*		
Two-Way vs. One-Way Operation*		
Number of Through Lanes*		
Interchange Influence Area on Mainline Freeway		
AADT*		
AADT Year		
*Highway Performance Monitoring System full extent elements.		

This new guidance (found online at http://safety.fhwa.dot.gov/tools/data_tools/dcag.cfm) outlines the 38 data elements that are a priority for State and local agencies to collect on their roadways in order to conduct substantive enhanced safety analyses. These data elements overlap with existing Highway Performance Monitoring System

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SCDOT

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Intersection Safety at Local Rural Roads

by Dr. Airton Kohls & Matt Cate

University of Tennessee LTAP Center

Three million miles of local roads are maintained and operated by local administrators, township managers, and public works officials in more than 38,000 counties, cities, villages, towns and tribal governments across the United States. One issue common to all local agencies is traffic safety.

In 2008, 56 percent of the 37,261 fatalities on US roadways occurred in rural areas. More than 20 percent of all traffic fatalities in the US occur at intersections and over 80 percent of intersection-related fatalities in rural areas occur at unsignalized intersections. Rural areas face a number of highway safety challenges due to the nature of their facilities. Local rural roads also encompass a wide range of surface types, including paved facilities, gravel roads, and dirt roads. In contrast to higher volume facilities, many local rural intersections lack suitable design standards, delineation and signing. In many cases, rural roads were not professionally designed, but rather "evolved" over time to their current geometric configuration.

The 2009 State of Tennessee Strategic Highway Safety Plan identified a number of key areas that must be addressed to meet its stated goal of reducing the annual statewide total of highway fatalities to less than 900 by the end of 2012. The SHSP identifies a number of education, enforcement, engineering, and emergency response strategies that are key to this safety goal. The SHSP includes Intersection Safety as one of eight enhanced emphasis areas. The Federal Highway Administration also provides valuable information through its Local and Rural Road Safety Program (http://safety.fhwa.dot.gov/local_rural). FHWA's Intersection Safety: A Manual for Local Rural Road Owners (http://safety.fhwa.dot.gov/local_rural/training/fhwasa1108/) details a number of intersection safety countermeasures available to local governments. The following process, taken from this manual, can be used to assess intersection safety and determine whether countermeasures should be deployed.

The 5 Step Process

First, identify intersection safety issues by collecting crash history, roadway, and exposure information from state and local crash databases, law enforcement crash reports and citations, observations by law enforcement or road maintenance crews, public notifications and hospital records. Record and tabulate the information for safety analysis. Analyze the data and select and install countermeasures. Finally, assess the intersection safety treatment after installation.

Countermeasures

Deciding which countermeasures to install to address a safety issue can be challenging. When appropriate, an agency should seek engineering expertise from a state or local engineer.

Low cost countermeasures

- Enhanced Signing and Delineation – Improved traffic control devices can be used at unsignalized intersections that are not clearly visible to approaching motorists, particularly on a major road. The strategy is particularly appropriate for intersections with patterns of rear-end, right-angle, or turning crashes related to poor driver awareness of the intersection presence.
- Improved Maintenance of Stop Signs – All stop-controlled intersections should have damaged signs replaced without undue delay, and a suitable schedule for inspection, cleaning, and replacement of stop signs should be established.
- Provide a Stop Bar on Minor Road Approaches – This strategy is appropriate for locations with crashes related to lack of driver recognition of the intersection.
- Overhead Supplementary Stop Signs – The strategy of mounting a stop sign over the roadway is appropriate for unsignalized intersections with patterns of right-angle crashes related to lack of driver awareness of the presence of the intersection.
- Install Flashing Beacons at Stop-Controlled Intersections – This is appropriate to be used at stop-controlled intersections to supplement and call driver attention to stop signs. It helps mitigate patterns of right-angle crashes related to stop sign violations.

Moderate and high cost countermeasures

- Install Splitter Islands on the Minor Road Approach - This is appropriate for intersections where the speeds on the minor road are high.
- Install Transverse Rumble Strips – Rumble strips provide an auditory and tactile sensation to motorists approaching the intersection. Can be used at any Stop or Yield approach intersection, often in combination with advance signing to warn of the intersection ahead. Due to noise generated, care must be taken to minimize impacts to nearby residences and businesses.
- Clear Sight Triangles on Stop-Controlled or Yield-Controlled Approaches – This is appropriate for intersections with restricted sight distance and patterns of crashes related to lack of sight distance where sight distance can be improved by clearing roadside obstructions without major construction.
- Provide Right-Turn Lanes – Right turn lanes are appropriate for unsignalized intersections with a high frequency of rear-end crashes resulting from conflicts between vehicles turning right and following vehicles.
- Provide Bypass Lanes on Shoulder at T-Intersections – Bypass lanes are effective at three-legged unsignalized intersections on two-lane highways with moderate through and turning volumes, especially intersections that have a pattern of rear-end collisions involving vehicles waiting to turn left from the mainline.
- Provide Left-Turn Lanes – Left turn lanes can be effective at unsignalized intersections with a high frequency of crashes resulting from the conflict between (1) vehicles turning left and following vehicles and (2) vehicles turning left and opposing through vehicles.
- Provide Offset Left-Turn Lanes – Offset left turn lanes are effective at unsignalized 4-legged intersections with a high frequency of crashes between vehicles turning left and opposing through vehicles. This treatment can be applied at intersections on divided highways with medians wide enough to provide the appropriate positive offset, and also on approaches without medians if sufficient width exists.
- Realign Skewed Intersection - Skew realignment is appropriate at unsignalized intersections with a high frequency of crashes resulting from insufficient intersection sight distance and awkward sight lines at a skewed intersection.
- Improve Lighting – This strategy should be considered at unsignalized, unlit intersections with substantial patterns of nighttime crashes. In particular, patterns of rear-end, right-angle, or turning crashes on the major road approaches to an unsignalized intersection may indicate that approaching drivers are unaware of the presence of the intersection.
- Change Horizontal and/or Vertical Alignment – Realignment may be appropriate for unsignalized intersections with restricted sight distance due to horizontal and/or vertical geometry and with patterns of crashes related to that lack of sight distance that cannot be addressed by less expensive methods.
- Install Roundabout – Roundabouts can be appropriate for rural locations. In particular, unsignalized intersections with a history of right angle crashes are good candidates for roundabout installation. Additional right-of-way may be necessary to install a roundabout, as its geometric footprint differs from a traditional intersection.

Source: Intersection Safety – A Manual for Local Rural Road Owners. US Department of Transportation Federal Highway Administration, FHWA-SA-11-08

A Closer Look at Street Name Signs

by Matt Cate, P.E.
University of Tennessee LTAP Center

Street name signs are found on most roadways. From local streets to arterial highways, in urban and rural areas, the purpose of these signs is to help drivers identify intersecting roadways. These signs are especially important for drivers that are not intimately familiar with the area. While these drivers might only be out for a Sunday drive or trying to find a shortcut to work, we might also encounter situations where law enforcement officers, firefighters, or EMTs are also relying on street name signs to navigate the road network. Missing or inadequate street name sign usually result in nothing worse than a driver missing a turn, but they could make all the difference in the world for an ambulance, fire truck, or police car responding to a call.

Past editions of the Manual on Uniform Traffic Control Devices (MUTCD) have addressed the design of street name signs, but many agencies have not interpreted this information correctly. The 2009 MUTCD does a much better job of assembling and presenting this information in a way that most agencies can apply to their sign operations. This article summarizes many of the recommendations and requirements for street name signs found in the current MUTCD. To see this information in its entirety, Chapter 2D (Guide Signs—Conventional Roads) and Section 2D.43 (Street Name Signs) may be found online at http://mutcd.fhwa.dot.gov/htm/2009/part2/part2d.htm.

Placement (Section 2D.43, paragraphs 01, 20-24)

Street name signs should be installed at all urban intersections and to identify rural roads that lack other identification (such as route markers). Signs should identify all streets at the intersection. If a road has different names on opposite sides of the intersection, both names may be shown on the street name sign along with directional arrows. Each sign should be mounted parallel to the street it names.

In residential areas, at least one set of street name signs should be installed at each intersection. In busier commercial areas and on principal arterial highways, at least two sets of street name signs should be placed on diagonally-opposite corners. Street name signs may be placed above Stop and Yield signs with no additional vertical separation. The use of overhead street name signs should be considered in urban and suburban areas, especially where advanced street name signs are not used at major intersections.

Overhead signs place street name information in a prominent location, particularly at signalized intersections. Also note the size of the lettering (12") relative to the adjacent signal indications.

Lettering (Section 2D.42, paragraphs 03-09)

Roadway names must use a combination of lowercase letters with initial uppercase letters. This mixed case lettering is intended to increase the legibility of signs. This rule applies to the name of a place or roadway on any guide signs. The required, recommended, or optional size of letters is shown in the table below. Use of 6-inch uppercase and 4.5-inch lowercase letters is the only standard (mandatory) statement in the Chapter. Use of larger letters (high-speed multilane, overhead) is recommended, while use of smaller letters (low-speed, two-lane streets) is optional. The type of roadway (street, drive, avenue, etc.) may be indicated using 3-inch uppercase and 2.25-inch lowercase letters. Use only approved abbreviations as defined in Section 1A.15 of the MUTCD.

Type of Mounting	Type of Street or Highway	Speed Limit	Recommended Minimum Letter Height	
			Initial Upper-Case	Lower-Case
Overhead	All types	All speed limits	12 inches	9 inches
Post-mounted	Multi-lane	More than 40 mph	8 inches	6 inches
Post-mounted	Multi-lane	40 mph or less	6 inches	4.5 inches
Post-mounted	2-lane	All speed limits	6 inches*	4.5 inches*

** On local two-lane streets with speed limits of 25 mph or less, 4-inch initial uppercase letters with 3-inch lowercase letters may be used.*

Color (Section 2D.43, paragraphs 17 and 18)

The standard colors for conventional guide signs, including street name signs, are a white legend (text and border) on a green background. For agencies that wish to use different colors to distinguish their roadways from those maintained by another agency, the Federal Highway Administration (FHWA) has identified three acceptable alternatives. The green background may be replaced with blue or brown (the legend is still white), or a black legend on a white background may be utilized. No other color combinations are permitted. Advanced street name signs must be white on green.

These signs show three of the four available color options for street name signs, including the standard white on green (top), white on brown (lower left), and white on blue (lower right).

Retroreflectivity (Section 2A.08)

Street name signs must meet the minimum sign retroreflectivity standards introduced in Revision 2 to the 2003 MUTCD. The only color combination addressed in the

Minimum Maintained Retroreflectivity Levels for Street Name Signs[1]

Sign Color	Sheeting Type (ASTM D4956-04)				Additional Criteria
	Beaded Sheeting			Prismatic Sheeting	
White on Green	I	II	III	III, IV, VI, VII, VIII, IX, X	
	W^2; G ≥ 7	W^2; G ≥ 15	W^2; G ≥ 25	W ≥ 250; G ≥ 25	Overhead
	W^2; G ≥ 7	W ≥ 120; G ≥ 15			Post-mounted

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 This sheeting type shall not be used for this color for this application

retroreflectivity table is white on green. However, this does not mean the retroreflectivity of alternate color combinations can be ignored. Section 2D.43 explicitly states that "the street name sign shall be retroreflective or illuminated to show the same shape and similar color both day and night." Additionally, it would be no stretch for a plaintiff's attorney or expert witness to argue that the white legend of blue or brown street name signs should meet the minimum levels of retroreflectivity even if there is no direct equivalent for the background colors. Similarly, black on white street name signs could be held to the same standard as regulatory signs using the same color combination.

Retroreflectivity requirements will limit sign sheeting choices. In all cases, the white legend must use Type II (super engineer grade) or higher retroreflective sheeting. For overhead signs, the legend must utilize a Type III or higher prismatic sheeting. In all applications, the green background may use even Type I (engineer grade) sheeting provided that it meets or exceeds the minimum level of retroreflectivity shown in Table 2A-3. Many agencies are now using a transparent green film overlaid on white retroreflective sheeting to create street name signs. For these signs, the green retroreflectivity level must be compared to the minimum value corresponding to the underlying white sheeting.

These street name signs provide examples of properly-sized and placed pictographs. The top picture shows street name signs maintained by Knox County. The bottom picture shows a pictograph used to indicate a privately-maintained roadway.

"The pictograph is sized and placed correctly, however, the font for the sign is all uppercase which is not MUTCD compliant."

Border (Section 2D.43, paragraph 15)

The standard street name sign includes a border, but agencies are given an option to omit this feature.

Pictographs (Section 2D.43, paragraphs 10-13)

In addition to alternate street name sign colors, agencies also have the option to use a pictograph. A pictograph can be used to identify governmental jurisdiction, an area of jurisdiction, a governmental agency, a military base or branch of service, a government-approved university or college, or a government-approved institution. If used, the height and width of the pictograph should not exceed the uppercase letter height of the street name. The pictograph should be positioned on the left side of the sign.

These ornamental street name signs fail to meet MUTCD requirements for color, legibility, letter height, and/or retroreflectivity. The top sign is almost illegible under perfect conditions and will provide little if any benefit during nighttime hours.

Ornamental Signs

Remember that the MUTCD is "the national for all traffic control devices installed on any street, highway, bikeway, or private road open to public travel." Only roadways within private gated properties, parking areas, and driving aisles within parking areas are exempt from the standards within the MUTCD. These standards also apply to street name signs on privately-maintained roadways open to the public. The manual does not prohibit ornamental sign posts, provided that they meet the requirements for crashworthiness (yielding or breakaway) when placed inside the clear zone. Many ornamental signs fail to meet the standards described in the MUTCD for size, color, retroreflectivity, and/or shape. Signs may be mounted in an ornamental frame as long as the sign itself conforms to the Manual on Uniform Traffic Control Devices.

FHWA Equipment Loan Program Showcases Advances in Achieving Smoother Pavements

Use the latest equipment and test methods to measure pavement texture and friction and achieve smoother, quieter pavements with the Federal Highway Administration's (FHWA) Friction, Texture, and Profile Measurement Equipment Loan Program. Sponsored by FHWA's Pavement Surface Characteristics (PSC) Program, the initiative allows State transportation agencies and partnering academic institutions the opportunity to evaluate different types of PSC measurement devices at no charge. Equipment currently available through the program includes three Circular Texture Meters (CT Meters), three Dynamic Friction Testers (DF Testers), two GripTesters®, and one Highway Friction Tester (HFT).

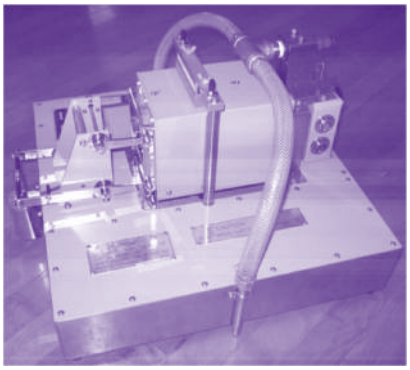
A pavement's functional properties are critical to its overall performance and management. In addition to providing adequate structural strength and durability over its intended life, an optimum pavement should feature a wearing surface that is smooth, has good friction, and generates low levels of noise. Achieving this combination of properties is dependent on various components of the pavement's surface texture. For example, microtexture (surface asperities less than 0.5 mm (0.020 in) in length) largely determines low–speed friction, while macrotexture (surface asperities between 0.5 mm (0.020 in) and 50 mm (1.96 in)) has a substantial impact on friction at high speeds, as well as on the generation of exterior pavement–tire noise and splash or spray from water on the pavement. Megatexture (surface asperities between 50 mm (1.96 in) and 500 mm (19.68 in)) affects vehicle and tire damage and interior vehicle noise.

The equipment available through the loan program offer portable solutions for measuring pavement friction and texture. Launched in 2006, the loan program supports the implementation of new national guidance on PSC, including the 2008 American Association of State Highway and Transportation Officials' Guide for Pavement Friction and FHWA's 2010 Technical Advisory on Pavement Friction Management (Advisory T 5040.38).

© APTech – The Circular Texture Meter uses a laser–displacement sensor to measure the vertical profile of a pavement surface.

State transportation departments and partnering research institutions can request equipment loans to become acquainted with the devices or to use them as part of a pavement friction or texture testing study. Loans of the CT Meter and DF Tester are administered jointly by Applied Pavement Technology, Inc., (APTech) and the Pennsylvania Transportation Institute (PTI). The CT Meter is a portable road surface macrotexture profiler that uses a laser–displacement sensor to measure the vertical profile of a pavement surface. The CT Meter software calculates and reports the mean profile depth (MPD) and root mean square (RMS) statistics, which characterize a pavement surface's macrotexture. Transportation agencies can also use the CT Meter in conjunction with friction testing equipment, such as the ASTM E 274 locked–wheel tester, to compute the International Friction Index (IFI).

The DF Tester, meanwhile, is a portable instrument for measuring pavement surface friction as a function of speed and under various conditions. It features both a measuring unit and a control unit. The measuring unit consists of a disc that is made to rotate horizontally at a specified velocity before being lowered onto a wet pavement to measure friction. The torque that is generated by the resistance between the test surface and spring–loaded sliders attached to the underside of the rotating disc is continuously monitored and converted to a measurement of friction. Users can view the recorded data using either an X–Y plotter or a laptop computer.



© APTech – A closeup view of the Dynamic Friction Tester, which can measure pavement surface friction as a function of speed and under various conditions.

Both the CT Meter and DF Tester can be transported in and operated from a van, pickup truck, sport utility vehicle, or other similar vehicle. Power is supplied to the equipment directly from the vehicle's battery.

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Safety Zone

11 Public Places with the Most Germs (www.rd.com)

Respiratory droplets—the medical community's polite term for what comes out of a person when they sneeze or cough—are filled with the germs that made the person sick. When we cough or sneeze they disperse widely, landing here and there, where they wait patiently for someone to touch them (research shows they can remain potent for several hours). Once on someone's hands, they stand a good chance of infecting them, since it is human nature to frequently touch our faces. This is exactly how colds and flu happen; the vast majority of cases are passed from person to person. Think of things that are touched by many people in a day, and you'll come up with the places where germs are shared. These can include

1. Handrails and door handles
2. Elevator buttons
3. Grocery cart handles
4. Restaurant menus
5. Money from a cash register
6. Light switches
7. Salt and pepper shakers in restaurants
8. Salad bars
9. ATM machines
10. Exercise equipment
11. Water fountain handles

Makes you nervous, doesn't it? Relax. It takes just a little common sense and attention to protect yourself from public germs. Here are ways to keep germs at bay:

- Handwashing: Always wash your hands before cooking, eating, or inserting your contact lenses. Wash your hands after cooking, using the toilet, petting an animal, handling garbage, blowing your nose, or coughing or sneezing into your hand. It doesn't matter if you wash with regular or antibacterial soap as long as you do a thorough job.

- Use hand sanitizer: Alcohol-based sanitizers that require no water are among the greatest health inventions of recent times. They're efficient at killing germs, whenever and wherever you encounter them, without the need of water or towels. Keep hands away from your face. No matter how many times you wash them, if you are in public, your hands will pick up germs. Germs will quickly enter your body if you rub your eyes or nose, stroke your chin, or touch your lips. Avoid the communal candy bowl or cookie jar. Given that only 67 percent of people who say they wash their hands actually do, and that only a third of those people use soap, you can imagine what's lurking in there.

The Federal Highway Administration Recently Issued Two Notices of Proposed Amendments (NPAs) to the 2009 Manual on Uniform Traffic Control Devices (MUTCD).

Karen Stippich, ITS/Operations Engineer, FHWA, Indiana Division

On August 31, a NPA was published in the Federal Register, proposing to revise Table I-2 in the Introduction to eliminate, extend, or otherwise revise most of the target compliance dates for upgrading existing traffic c control devices in the field that do not meet the current MUTCD standards.

Compliance dates indicate the final date when existing traffic control devices (TCDs) in the field, that don't meet the new requirements, must be replaced. The NPA proposes the elimination of 46 compliance dates, the extension of 4 compliance dates and the retention of 8 safety critical compliance dates. These safety critical upgrades include installing "ONE WAY" signs at intersections with divided highways or one-way streets and requiring STOP or YIELD signs to be added at all railroad crossings that don't have train activated automatic gates or flashing lights. The compliance dates that have received the most attention are the ones dealing with sign retroreflectivity. The NPA proposes that the compliance date for the "Implementation and continued use of an assessment or management method that is designed to maintain traffic sign retroreflectivity at or above the established minimum levels" be changed from January 22, 2012 to a date of 2 years after the revision is issued. Also, this management system will only need to cover regulatory and warning signs. The compliance date, but not the requirement, for the replacement of signs failing to meet the established minimum levels, would be eliminated. For TCDs where the compliance date has been eliminated, jurisdictions will be able to prioritize and schedule replacement based on safety needs, resources and service life. Additionally, on federal-aid projects the traffic control devices shall be in conformance with the most recent edition of the MUTCD before the highway is opened or re-opened to traffic. The other NPA, which was issued on August 2, proposes to revise Sections 1A.09 and 1A.13 of the 2009 MUTCD to clarify the definition of Standard statements in the MUTCD and to clarify the use of engineering judgment and studies in the application of traffic control devices. The comment period for this NPA closed on October 3. The proposed amendment reflects an interpretation regarding the definition of a Standard that the FHWA issued on October 1, 2010. The proposal gives a jurisdiction the option to use engineering study or apply engineering judgment, at a specific site, to deviate from a Standard statement if complying with the Standard statement at that location would be impossible or impractical. Jurisdictions need to remember that these amendments are only proposed and are not yet in effect. After the comment periods end, FHWA will issue final rules. The timing of the issuance of the final rules is uncertain and is dependent upon how long it takes to review the comments and make final decisions. Until the final rules are issued, the current 2009 MUTCD and its compliance dates remain in effect.

Resources

http://mutcd.fhwa.dot.gov/kno_2009.htm

For a complete list of compliance dates visit:

http://mutcd.fhwa.dot.gov/pdfs/2009/coverintrotoc.pdf

Visit Table 1-2. Target Compliance Dates Established by the FHWA

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The loan period for the CT Meter and DF Tester may vary from a few weeks to several months, depending on the specific nature of an agency's request. Agencies also have the opportunity to receive onsite or remote technical assistance from the APTech–PTI team, including calibration and demonstration of the devices. The current program will run until at least September 2012.

Loan terms include:

- Equipment loans are provided on a first–come, first–served basis.
- The equipment is provided for use by government entities and partnering academic institutions only and may not be transferred to a private third party.
- Onsite demonstrations and training, as well as on–call technical assistance, are provided without charge.
- There are no restrictions on the use of data collected using the equipment.

Transportation agencies must ensure the safekeeping of the equipment and provide the APTech–PTI team with prompt notification of the loss of or any damage to the loaned items. Agencies are also asked to submit a short report documenting their findings and any future plans for using the equipment.

Participants in the loan program to date include the Maryland State Highway Administration (SHA), which has used the DF Tester to measure and study the friction value on an unbound aggregate specimen that had been subjected to polishing by a device known as an aggregate polisher. "We have also used the DF Tester at five project sites to date," said Dan Sajedi, Chief of the Soils and Aggregate Technology Division, Office of Materials Technology, for the SHA. "It has been very helpful to have the loan of the equipment."

The Maryland SHA recently received a loan of the CT Meter, which is expected to be used to measure the macrotexture property of unbound specimens in the lab and asphalt pavement in the field. Maryland will also use the DF Tester and CT Meter together to measure the micro– and macrotexture properties of aggregate and pavement. The results will then be used to compute the IFI.

The California Department of Transportation, meanwhile, is using the two devices to help develop and implement new friction and texture specifications for bridge deck construction. And the University of Wisconsin–Madison's Modified Asphalt Research Center recently evaluated the potential of using the CT Meter and DF Tester to obtain information about the textural and frictional characteristics of pavement mix designs before construction.

Another device, the GripTester, is available through a separate FHWA equipment loan program administered by the Virginia Tech Transportation Institute. The GripTester is a rugged, compact device that can be operated while being towed by a vehicle at speeds up to 128 km/h (80 mi/hr). It provides continuous measurements of pavement friction that can be stored and analyzed on a laptop computer. Agencies can request the equipment for a loan period of up to 2 weeks. Training is provided. For more information on the GripTester loan program, contact Gerardo Flintsch at the Virginia Tech Transportation Institute, 540–231–1569 (email: flintsch@vt.edu).

FHWA expects to award a contract this month for administration of the HFT loan program.

For more information about the CT Meter and DF Tester equipment loan program or to make a loan request, visit www.appliedpavement.com/techResources_equipLoanProg_home.html. Requests can also be emailed to request@appliedpavement.com. For additional information on the PSC Program, contact Mark Swanlund at FHWA, 202–366–1323 (email: mark.swanlund@fhwa.dot.gov). To view FHWA's Technical Advisory on Pavement Friction Management (Advisory T 5040.38), visit www.fhwa.dot.gov/pavement/t504038.cfm.

To learn more about FHWA's pavement smoothness resources, including publications and other guidance, visit www.fhwa.dot.gov/pavement/smoothness/index.cfm.

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(HPMS) data elements and can be integrated with the crash data traditionally collected to provide a basis for better safety investment decisions. The guidance also identifies prerequisite conditions for using the elements and a recommended roadway prioritization methodology in addition to a listing of the elements (see table on page 1).

The list of elements was determined through an extensive research process outlined in a newly released background report (FHWA-SA-11-39) and is based on the Model Inventory of Roadway Elements (MIRE). Another aspect of the new guidance is that it acknowledges that additional resources will be needed to accomplish collection of this data. FHWA also developed a market analysis report (FHWA-SA-11-40), which estimates the unit costs for the collection of this data. The report is intended to assist States in developing better estimates of their own potential costs to implement the guidance.

Recycling Program Coming to South Carolina Welcome Centers

Travelers stopping at South Carolina's nine Welcome Centers soon will have the opportunity to recycle aluminum cans, plastic bottles and newspapers thanks to a new program developed by a public-private partnership, the South Carolina Department of Transportation (SCDOT) announced Tuesday, Nov. 15.

This new program, "South Carolina Welcomes You to Recycle," began November 15, 2011 at the York County Welcome Center on I-77 and covered all nine of the state's Welcome Centers once fully implemented.

"Many of the visitors who stop at our Welcome Centers have beverage containers and newspapers they would like to recycle," said Lee Tsiantis, SCDOT's Maintenance Contracts Manager. "This program will provide travelers a convenient opportunity to recycle while on the go. This recycling effort also will reinforce litter prevention and help keep South Carolina's roads clean and beautiful for all of us and our visitors to enjoy."

The "South Carolina Welcomes You to Recycle" partnership includes SCDOT, Sonoco Recycling, the South Carolina Department of Health and Environmental Control, the South Carolina Department of Parks, Recreation and Tourism and PalmettoPride.

Sonoco Recycling will provide the containers and signage for all of the Welcome Centers.

"This effort is part of our commitment to the recycling culture in South Carolina," said Jim Brown, vice president of Sonoco Recycling. "Recycling is not only good for the environment by conserving natural resources, but also is good for the economy by helping create jobs."

More than 2 million people visit South Carolina's Welcome Centers each year.

A news conference at the Welcome Center at York County launched the recycling program Tuesday.

"We are very appreciative for York County's essential commitment to pick up the recyclables for processing," Tsiantis said. "We are working on similar partnerships at all the Welcome Centers."

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How to Contact Us

SC Transportation Technology Transfer Service
Glenn Department of Civil Engineering
Clemson University—Box 340911
Clemson, SC 29634–0911
Phone: 888-414-3069 Fax: 864-656-2670
E-mail: t3s@clemson.edu
Web: www.clemson.edu/t3s

Director:	Jim Burati	864-656-3315
Program Manager:	Sandi Priddy	864-656-6141

Transportation Technology Transfer Service
Glenn Department of Civil Engineering
Clemson University
Box 340911
Clemson, SC 29634-0911

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