

# PLANNING IT SAFE

July 2012

## The Highway Safety Manual – How Metropolitan and Statewide Planners Can Benefit from this Tool

Since the 1950s transportation professionals have been able to quantitatively assess project alternatives based on mobility, and more recently in terms of environmental impact. Limited means have existed to assess the safety performance of different design alternatives. To help address that gap, the Highway Safety Manual (HSM) was published by the American Association of State Highway Transportation Officials (AASHTO), culminating ten years of research and development by an international team of safety experts, academics, and practitioners.

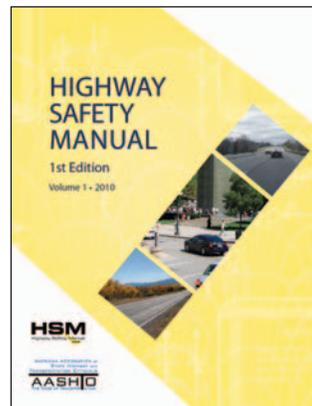
The HSM provides information and tools to support a science-based approach to quantifying safety, and is intended for use by state departments of transportation (DOT), counties, metropolitan and regional planning organizations, and cities across the Nation. By enabling transportation professionals to quantify the safety implications of decisions during the transportation project development process, the HSM allows for the explicit consideration of safety in transportation planning, design, operations, and maintenance.

*The mission of the TSPWG is to fully implement the SAFETEA-LU and MAP-21 safety planning factor and coordinate activities with the implementation and evaluation of Strategic Highway Safety Plans from a multimodal perspective on transportation safety planning.*

As transportation planning legislation increasingly emphasizes the importance of safety in transportation planning, the HSM provides several tools to integrate safety into the planning process both at the system and project levels. At the system level, planners can use the HSM network

Similarly, at the project level, the HSM provides tools for diagnosing crash frequency and severity, selecting countermeasures, and conducting an economic evaluation. In terms of corridor-specific plans, the HSM provides methods to estimate the change in safety performance across different concepts and approaches considered for a corridor. For example, the HSM can be used to assess the influence of the type and frequency of intersections, driveways, parking, or median types on crash frequency for an urban or suburban arterial.

A number of analysis tools and supporting documentation are available to support the use of HSM transportation planning. For further information on the HSM and related materials visit:



Source: AASHTO.

screening methods to identify locations on the network likely to benefit from safety improvements or behavioral crash types that are overrepresented. The HSM also provides tools to diagnose the crash frequency and severity at these locations and to select appropriate countermeasures or safety improvements. Finally, the HSM provides methods for prioritizing expenditures to ensure the highest number of crash reductions from implementing safety improvements throughout the system.

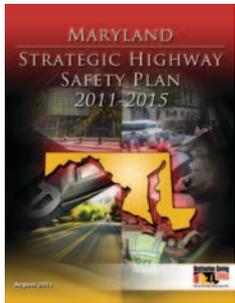
- AASHTO's HSM web site: <http://www.highwaysafetymanual.org>;
- The Federal Highway Administration's (FHWA) HSM web site: <http://safety.fhwa.dot.gov/hsm>; and
- The Transportation Research Board's (TRB) Safety Performance Committee web site: <http://www.safetyperformance.org>.

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## TSP in Practice



Source: Cambridge Systematics, Inc.

Statewide, regional, and local safety and transportation planners have joined forces to take a corridor approach to reducing fatalities and serious injuries. The Maryland State Highway Administration (SHA) recently updated the State's Strategic Highway Safety Plan (SHSP). The Plan identifies six emphasis areas with one focused on highway infrastructure.

Mary Deitz, Chief of Regional and Intermodal Planning Division at SHA, and Bala Akundi from the Baltimore Metropolitan Council (BMC), co-lead the infrastructure emphasis area. One of the key infrastructure strategies for reducing fatalities and serious injuries is the development of a corridor program targeting safety improvements in priority corridors. The improvements address

all roadway users, including pedestrians, bicycles, and motorists. Potential issues and solutions are first identified through a comprehensive roadway safety audit, and then addressed by a team, including a cross section of traffic safety, planning, highway design, education, and enforcement professionals. While safety is always being evaluated and enhanced on Maryland roadways, the corridor concept develops a multidisciplinary approach that facilitates a number of engineering teams and funding areas working together simultaneously.

Maryland is currently conducting a pilot test of the concept along MD 26, which links to a local roadway within the City of Baltimore. As part of the pilot, a corridor task force is meeting monthly to discuss key issues, relevant data, and appropriate infrastructure, education, and enforcement countermeasures for the corridor.

One of the first major tasks is to evaluate bus stop locations, pedestrian crossing patterns,

and the needed infrastructure to safely support transit and pedestrian access. The process involves several public meetings, in which the community will be encouraged to provide input and comments.

Through this approach, stakeholders from SHA, BMC, and the local jurisdictions are all working together to identify the most effective safety solutions. Additionally, a corridor approach provides the opportunity to address roadway, pedestrian, bicycle, and transit safety concurrently. If effective, this approach will be used to develop a tool kit to address other priority corridors around the State and complement the many other Maryland safety efforts underway. The lessons learned collectively through addressing the identified corridors will become best practices and incorporated into SHA projects moving forward. For more information, contact Mary Deitz at [mdeitz@sha.state.md.us](mailto:mdeitz@sha.state.md.us) or Bala Akundi at [bakundi@baltometro.org](mailto:bakundi@baltometro.org).

## TSP Tools and Publications

### APTA Releases New Standards to Help Bring Transit to the Table

By Michael Smith, APTA

The American Public Transportation Association (APTA) has published a new Recommended Practice (RP) for designing on-street bus stops and light rail stations, entitled *Design of On-street Transit Stops and Access from Surrounding Areas*. Developed through its Standards Development Program, the RP uses a formal, consensus-based process for writing and issuing standards for the public transportation industry. It is intended to support transit agencies and stakeholders in the pursuit of safe and efficient on-street access to transit, for both current and potential customers.

Transit agencies can use the document to assess existing or new on-street transit stops and to provide input to local jurisdictions and developers on pedestrian improvements. It can also be used by local jurisdictions and the general public to facilitate discussions about planning, design, and investment decisions

made by public agencies and elected officials. Developers, planners, and architects can also benefit when making design decisions on the interface between private development and public services where transit is present or planned. For more information, visit <http://www.aptastandards.com> or contact Michael Smith at [MSmith@apta.com](mailto:MSmith@apta.com).



Source: COMSTOCK, Inc.

### FTA Guidebook Focuses on Safety Management and Performance Measurement

A new guidebook from the Federal Transit Administration (FTA) provides information to transit agencies on the most promising ways to prevent public transportation crashes by integrating safety into all aspects of transit activities including planning, design, construction, operations, and maintenance. The publication focuses on Safety Management Systems which recognizes there will always be hazards and risks in public transportation, but a systematic and proactive management approach can identify and control those risks. The Safety Performance Measurement Systems, a component of safety management, brings clarity to vague concepts, helps transit agencies identify gaps in safety performance, and helps management and government boards take action to improve performance. To view a copy of the report, go to [http://transit-safety.fta.dot.gov/publications/safety/Transit\\_SMPM\\_Guidebook/PDF/Transit\\_SMPM\\_Guidebook.pdf](http://transit-safety.fta.dot.gov/publications/safety/Transit_SMPM_Guidebook/PDF/Transit_SMPM_Guidebook.pdf).

### Institute Targets Bicycle and Pedestrian Safety

The Mineta Transportation Institute at San Jose State University has released two reports targeting bicycle and pedestrian safety. Because many planners are involved in efforts to improve pedestrian and bicycle safety, particularly at the local and regional level, these reports can provide valuable information on the most effective approaches. The first report identifies the risks associated with cycling and presents information on the engineering and education aspects that can improve safety. The report goes on to discuss other countermeasures including enforcement and the need for more information on what type of enforcement programs are effective. For more information, go to <http://www.transweb.sjsu.edu/PDFs/research/2927-bicycle-commuter-safety.pdf>.



Source: Photodisk, Inc.

A second publication, “Integration of Bicycling and Walking Facilities into the Infrastructure of Urban Communities,” highlights best practices and program characteristics that promote a high level of bicycle and pedestrian travel. To view a copy of the report, go to <http://www.transweb.sjsu.edu/PDFs/research/2906-Bicycling-and-Walking-Facilities-Urban-Communities.pdf>.

### Guidance on Safety Countermeasures

A guidance memo from the FHWA Office of Safety highlights when and where certain processes, design techniques, and safety countermeasures, like the Nine Proven Countermeasures, should be used. The guidance is based on effectiveness data for various crash types and reflects the circumstances and situations where FHWA is confident the use of such measures will yield high pay-offs and be cost effective. When planners recommend investment decisions for safety

projects, reviewing the Nine Proven Countermeasures can serve as a starting point. The Agency is requesting partners to apply the guidance as they make investment decisions and develop projects, and to address the need for high-quality safety data to foster better decision-making. To view a copy of the memo, go to <http://safety.fhwa.dot.gov/policy/memo071008/>.

To help promote the use of proven safety countermeasures, FHWA has a new web site that includes detailed descriptions, research studies, and evaluations of nine research-proven countermeasures that focus on intersections, pedestrians, and roadway departure. To visit the web site, go to <http://safety.fhwa.dot.gov/provencountermeasures/>.

### Commercial Vehicles and Distracted Driving

While distracted driving is a problem for all drivers and all vehicle types, the nature of operating a commercial truck or motor coach may involve additional distractions such as weigh-in-motion systems. A study, *Distracted Driving Countermeasures for Commercial Vehicles*, conducted by the Federal Motor Carrier Safety Administration (FMCSA) examined the literature particularly focusing on countermeasures for driver distraction; results from a survey and in-depth interviews with motor carrier fleet managers; potential tactics and training methodologies to aid motor carriers and drivers in avoiding crashes; and the identification of gaps in knowledge and research needs. Distracted driving is gaining considerable attention from elected officials and the public. As individuals that are often called upon to provide answers to highway safety questions, planners should have as much information as possible when it comes to discussing the complex issue of distracted driving. To view a copy of the study, go to [http://onlinepubs.trb.org/onlinepubs/ctbssp/ctbssp\\_syn\\_24.pdf](http://onlinepubs.trb.org/onlinepubs/ctbssp/ctbssp_syn_24.pdf).

### FHWA Resource Center’s Planning Resource Team

The FHWA Resource Center has a number of resources available to help transportation planners. The Resource Center Planning

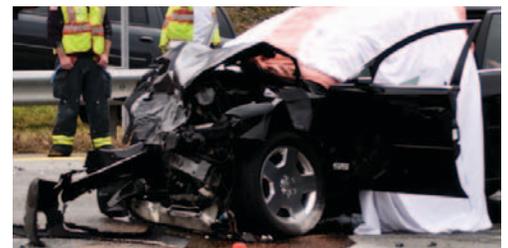
Team provides training and technical assistance on the metropolitan and statewide planning process, programs and products, as well as a number of planning specialty areas. To learn more about the FHWA Resource Center Planning Team, go to <http://www.fhwa.dot.gov/resourcecenter/teams/planning/index.cfm>.

### Interactive State Transportation Facts and Figures

The Bureau of Transportation Statistics now provides state-by-state transportation facts, comparisons, and rankings on topics, including infrastructure, fatalities, and injuries; distracted driving and safety equipment; freight volumes and values; passenger travel; economy and finance; and energy and environment. The interactive web site provides information such as the number of public road miles, the laws on distracted driving, the number of licensed drivers and registered vehicles, and the value of freight shipments. To visit the web site, go to <http://gis.rita.dot.gov/StateFacts/>.

### Traffic Fatalities Still Declining

Preliminary data from the National Highway Traffic Safety Administration (NHTSA) shows traffic fatalities are still declining. A statistic projection of traffic fatalities for the first nine months of 2011 shows an estimated 24,050 people died in motor vehicle traffic crashes, which represents a decline of approximately 1.6 percent compared to the first nine months in 2010. According to FHWA, vehicle miles traveled also decreased by about 1.3 percent during the first nine months of 2011. To read more, go to <http://www-nrd.nhtsa.dot.gov/Pubs/811583.pdf>.



Source: Cambridge Systematics, Inc.

## Members Corner

### Institutionalizing Safety in Transportation Planning Processes

By Rick Pain, TRB

Members of the Transportation Planning Working Group (TSPWG) presented the findings of the National Cooperative Highway Research Program (NCHRP) 08-76, *Institutionalizing Safety in Transportation Planning Processes: Techniques, Tactics, and Strategies*. Research shows that states are focusing more attention on safety because SHSPs became a requirement under the last reauthorization. However, the results also show safety is not being systematically integrated into metropolitan and statewide transportation plans to the degree expected roughly 15 years after legislation mandated safety as a decision factor in the transportation planning process. The project developed a solution in the form of a framework to walk state DOTs and metropolitan planning organizations (MPO) through a process to achieve safety integration.

The next question is where to go from here. The AASHTO Standing Committee on Research (SCOR) approved funding for a project to pilot test and demonstrate the framework developed by Cambridge Systematics for the NCHRP project. This creates an opportunity to provide technical assistance for some DOTs and MPOs willing to take bold steps toward a more comprehensive and explicit consideration of safety in the transportation planning processes.

The continued focus is necessary given the price tag of traffic crashes which cost this nation approximately \$230 billion per year. When that number is multiplied over 10 years – the costs become staggering. Safety considerations in the planning process continue to hold promise for a significant contribution to crash reduction. The safety and planning communities should review their processes and procedures with a sharp eye and use transportation plans as a tool to achieve zero deaths – a goal many states are adopting. Future articles in this newsletter will detail both the findings and framework from the NCHRP project, as well as plans for the pilot projects.

## TSP Events

### TSP Subcommittee

In January, the Transportation Safety Planning (TSP) subcommittee met during the Transportation Research Board Annual Conference and discussed future research needs. The chair of the subcommittee, Ed Stolof, charged the group with identifying and submitting a minimum of three research needs statements in 2012. The groups identified four potential needs:

- The development of a software tool to help automate the integration of GIS and crash data;
- Methods for regions and localities to conduct safety analyses with limited crash data;
- How statewide, regional, and local transportation planners can effectively use the HSM in the transportation planning process; and
- How behavioral factors can be considered and included in the transportation planning process.

To get involved with the TSP Subcommittee or discuss additional research ideas, contact Ed Stolof at [estolof@ite.org](mailto:estolof@ite.org).

### Safety Boot Camp for Planners

In May, the TRB Statewide Multimodal Transportation Planning Committee and the Transportation Programming, Planning, and Systems Evaluation Committee jointly hosted the conference, *Making Progress: Transportation Planners and Programmers Turn Ideas into Reality*. On the agenda was a half-day Safety Boot Camp. This interactive workshop provided the framework and tools for addressing safety in the long-range planning process and other planning documents. Participants left with concrete steps for turning their safety visions into reality and safety plans into programs. The event was held at the Grand Hyatt



Source: Cambridge Systematics, Inc.

Denver on Wednesday, May 23rd. For more information, visit <http://www.cvent.com/events/making-progress-transportation-planners-and-programmers-turn-ideas-into-reality/event-summary-3d267854366c4e5f87247470d5f33fa7.aspx>.

### Leadership Workshop for Transportation Safety Planners

FHWA and TSPWG will be hosting a Safety Leadership Roundtable in December 2012. To effectively direct safety funding towards the most critical needs throughout the state, it is important to align the safety priorities and programs in the statewide and MPO Long-Range Transportation Plans and the SHSP. This roundtable is expected to provide an opportunity for state, regional, and local transportation safety planners to discuss the opportunities and barriers for coordinating the different transportation safety planning processes. More information will be available this summer.

## Meetings

### July 8-10, 2012

*TRB Planning Committee  
Summer Meeting*

Irvine, California

[http://www.cvent.com/  
events/2012-trb-planning-  
committee-summer-meeting/  
event-summary-449ea4e-  
5418543c8a43a43a8906fc73a.  
aspx](http://www.cvent.com/events/2012-trb-planning-committee-summer-meeting/event-summary-449ea4e-5418543c8a43a43a8906fc73a.aspx)

### July 17-19, 2012

*10th National Conference  
on Access Management*

Dallas, Texas

[http://www.accessmanagement.  
info/AM2012/index.html](http://www.accessmanagement.info/AM2012/index.html)

### July 29-August 2, 2012

*TRB/AASHTO  
Roadside Safety Meeting*

Irvine, California

[http://www.cvent.com/  
events/trb-aashto-joint-  
roadside-safety-meeting/  
event-summary-ad03f-  
95c63c94cf080f19c296237b283.  
aspx](http://www.cvent.com/events/trb-aashto-joint-roadside-safety-meeting/event-summary-ad03f-95c63c94cf080f19c296237b283.aspx)

### August 26-29, 2012

*GHSA Annual Meeting*

Baltimore, Maryland

[http://www.ghsa.org/html/  
meetings/annual/2012/index.html](http://www.ghsa.org/html/meetings/annual/2012/index.html)

### August 29-31, 2012

*Highway Safety  
Management Meeting*

Baltimore, Maryland

[http://www.transportation.org/  
meetings/377.aspx](http://www.transportation.org/meetings/377.aspx)

### September 11-14, 2012

*AMPO Annual Conference*

Saratoga Springs, New York

[https://www.ampo.org/content/  
index.php?pid=261](https://www.ampo.org/content/index.php?pid=261)

### September 12-14, 2012

*TRB Planning in Small and  
Medium Communities Conference*

Big Sky, Montana

<http://trbtoolsofthetrade.org/>

### September 23-25, 2012

*NARC Executive  
Directors Conference*

Boise, Idaho

[http://narc.org/events/  
conferences/](http://narc.org/events/conferences/)

### October 28-31, 2012

*Traffic Records Forum*

Biloxi, Mississippi

[www.trafficrecordsforum.org](http://www.trafficrecordsforum.org)

## TSPWG Members

The TSPWG includes representatives from agencies and organizations dedicated to advancing the integration of safety practices in the transportation planning process. The group meets quarterly to identify future research needs and to share new safety planning ideas, tools, and resources. If your organization is interested in participating, contact Rick Pain, TSPWG Moderator, at [rpain@nas.edu](mailto:rpain@nas.edu). The core TSPWG members include:

AARP

American Association of Motor Vehicle Administrators (AAMVA)

American Association of State Highway and Transportation Officials (AASHTO)

American Planning Association (APA)

American Public Transportation Association (APTA)

Association of Metropolitan Planning Organizations (AMPO)

Community Transportation Association of America (CTAA)

Federal Highway Administration (FHWA)

Federal Motor Carrier Safety Administration (FMCSA)

Federal Transit Administration (FTA)

Governors Highway Safety Association (GHSA)

Institute of Transportation Engineers, Inc. (ITE)

International Association of Chiefs of Police (IACP)

National Association of County Engineers (NACE)

National Association of Development Organizations (NADO)

National Association of Regional Councils (NARC)

National Conference of State Legislatures (NCSL)

National Highway Traffic Safety Administration (NHTSA)

Rails-to-Trails Conservancy (RTC)

Transportation Research Board (TRB)

## Planning It Safe

### Editorial Oversight

*FHWA Office of Planning*

[http://www.fhwa.dot.gov/planning/transportation\\_safety\\_planning/index.cfm](http://www.fhwa.dot.gov/planning/transportation_safety_planning/index.cfm)

*FHWA Office of Safety*

<http://safety.fhwa.dot.gov/hsip/tsp/>

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[HTTP://TSP.TRB.ORG](http://TSP.TRB.ORG)