

FEATURE

## Transit Agency Safety Plans Mandated by MAP-21

*What does it mean for Kansas?*

By James Decker



**T**he Moving Ahead for Progress in the 21st Century Act (MAP-21) establishes several new public transportation requirements related to safety and safety performance. Specifically, the new *Public Transportation Agency Safety Plan* requirement states that recipients of federal transit funding need to establish a comprehensive safety plan and have it certified (either by their respective state DOT or self-certified). This requirement is intended to improve the safety and security of the Nation's public transportation systems by establishing and enforcing minimum federal safety standards.

While the Federal Transit Administration (FTA) has yet to formally establish the specific requirements for developing a safety plan, the general requirements outlined

*Continued on page 2*

Illustration: www.shutterstock.com / Neilin Radkov

FEATURE

## Improving Relationships With Underrepresented Groups

By James Decker

**C**ommunity outreach is critical for the success of a transit service and is required by federal law. Public involvement has been shown to strengthen community relationships, create a sense of ownership, and provide a diverse forum for ideas that can improve transit services in the community.

Many agencies use traditional communication techniques that often fail to engage specific demographic groups due to varied cultural, attitudinal, and communicative barriers. The ability to fully engage in dialogue groups that use (or would like to use) your service will foster improved communication and a

better appreciation of the service, and has the potential to improve efficiency and cost-effectiveness of operations. This article will highlight important research and best practices regarding the experiences of transit agencies in engaging underrepresented groups, and

*Continued on page 4*

### INSIDE

Transit adopt-a-stop programs . . . . .	Page 7	Upcoming conferences . . . . .	Page 15
Cameras: An alternative for blind spot removal . . . . .	Page 9	Webinars and publications . . . . .	Page 15
Safety in Ten: Get ready for winter driving . . . . .	Page 11	Kansas RTAP training . . . . .	Page 16
New!!! Kansas RTAP accepting credit cards & e-checks . . . . .	Page 13		

## Mandated safety plans *Continued from page 1*

in MAP-21 are consistent with the Safety, Security, and Emergency Preparedness Plans (SSEPPs) adopted by many of the Nation's larger (and some rural) transit agencies. Transit agencies currently operating without an SSEPP or similar plan are encouraged to develop a comprehensive safety plan to improve the safety and security of its passengers and be in line to comply with the eventual FTA requirements.

This article will discuss some of the anticipated features of a Public Transportation Agency Safety Plan, discuss the importance of pro-actively adopting a SSEPP, and provide essential resources to help with developing a comprehensive safety plan.

### Background

Since 1964 the FTA, the agency that administers federal assistance for the nation's transit systems, has been exercising safety authority over air, rail and oceangoing passenger vessels. Passengers travelling by these modes have had the assurance that their carriers are required to be in compliance with federal safety regulations. However, safety for public surface transportation has not been federally regulated. This gap in federal authority has resulted in a patchwork of state laws that do not provide seamless, consistent safety measures across transit systems in the United States.

Since 2004, the National Transportation Safety Board (NTSB) has reported on nine transit accidents that resulted in 15 fatalities, 297 injuries, and over \$30 million in property damage (FTA-2013-0030). According to the NTSB, probable causes and contributing factors to the accidents were deficiencies in: 1) training and supervision of employees, 2) maintenance of equipment and infrastructure, and 3) safety oversight and management. The federal requirement to establish and certify a public transportation agency safety plan will establish a standard to better address these deficiencies and improve the safety of our Nation's public transportation systems.



*A Safety Management System is the "big approach" to transit safety. It's "not just another safety program; not just another binder on the shelf," said Tom Littleton, FTA's Associate Administrator for Transit Safety and Oversight. It represents a scalable framework, from the largest transit agency to the smallest.*

### MAP-21 changes to safety and oversight

MAP-21 now grants the FTA the authority to establish and enforce a new comprehensive national transit safety and oversight framework. One of the new safety elements is the Public Transportation Agency Safety Plan mandate that requires each entity receiving federal transit funding to develop, implement, and certify a comprehensive agency safety plan.

Each recipient of federal funds from the Urbanized Area Formula Grants Program (5307) will be required to complete a comprehensive safety plan. An advanced notice of proposed rulemaking (FTA-2013-0030) has proposed that each state may opt to develop and certify plans for Section 5311 recipients.

Some of the requirements of the plan include:

- Risk identification, hazard mitigation strategies, and performance targets established by the FTA (pending);
- Comprehensive safety training for operations personnel;
- Identification of a transit agency safety officer;
- Annual review and update of the safety the plan.

The requirements for the transit agency safety plan are expected to be scaled to the size and operating environments of agencies.

## A SSEPP is a good model

Every transit system, whether a large fixed-route bus system or a small rural paratransit service, has the duty to make safety, security, and emergency preparedness a top priority. Passengers, taxpayers and government leaders expect public transit to be a safe and secure mode of transportation.

A comprehensive Safety, Security, and Emergency Preparedness Plan (SSEPP) establishes a basis for managing safety initiatives, improves communication and collaboration with emergency services, and helps promote a healthy safety culture within the agency. Components of a SSEPP match up well with the language of the Public Transportation Agency Safety Plan requirement in MAP-21 and should transition well to the requirement for such a plan.

## Moving forward and applicable resources

While the FTA has yet to issue a final rule to carry out the safety plan requirement, transit agencies should not put safety and security on hold. Many resources exist to help facilitate safety planning for both fixed route and paratransit bus service.

The FTA's Office of Safety and Oversight has a bus safety program at <http://bussafety.fta.dot.gov>. This website offers suggested guidance and resources to assist transit agencies in identifying practical strategies to implement and/or enhance effective safety, security, and emergency preparedness programs. The program offers guidelines, self-assessment tools, and case studies detailing the development and implementation of applicable programs and plans. It also offers detailed templates of working SSEPPs.

Another resource available is the newly-completed *Transit Cooperative Research Program Report 160: Paratransit Emergency Preparedness and Operations Handbook*. The purpose of the handbook is to provide

On October 2013 the FTA issued an advanced notice of proposed rulemaking (ANPRM) to request public comments on a wide range of topics pertaining to the new public transportation safety elements, including the Public Transportation Agency Safety Plan. Many of the questions submitted thus far pertain to current safety plans, potential barriers and challenges, and alternatives. While it remains to be seen what the final Public Transportation Agency Safety Plan requirements will be, the ANPRM establishes the importance of the safety plan and offers transit agencies an opportunity to provide feedback on the regulation.

paratransit service providers with guidance, strategies, tools, and resources to plan for, prepare for, respond to, and recover from a range of emergencies. The guidance in the handbook is applicable to urban, suburban, rural, and tribal paratransit operating environments.

Additional resources regarding MAP-21, the Public Transportation Agency Safety Plan requirement, and the development of a Safety, Security, and Emergency Preparedness Plan can be found in the Sources below. ●

**“Transit systems vary widely, so a one-size-fits-all approach simply will not work.** There are huge multi-modal operations like MARTA in Atlanta...to small systems that might consist of a handful of shuttle vans. That's why we [at FTA] are working with our stakeholders, including transit operations themselves, to craft a safety program that makes sense for the various modes, geographic locations, and sizes of our nation's transit facilities.”

—FTA MAP-21 Safety Oversight Q&A

## Sources

- MAP-21: Moving Ahead for Progress in the 21st Century. FTA. <http://www.fhwa.dot.gov/map21/>.
- MAP-21 Fact Sheet. USDOT. [http://www.fta.dot.gov/documents/MAP-21\\_Fact\\_Sheet\\_-\\_Transit\\_Safety\\_and\\_Oversight.pdf](http://www.fta.dot.gov/documents/MAP-21_Fact_Sheet_-_Transit_Safety_and_Oversight.pdf).
- MAP-21 Safety and Oversight Questions and Answers. FTA. [http://www.fta.dot.gov/tso\\_15038.html](http://www.fta.dot.gov/tso_15038.html).
- Advanced Notice of Proposed Rulemaking. FTA-2013-30. <http://www.gpo.gov/fdsys/pkg/FR-2013-10-03/pdf/2013-23921.pdf>.
- Safety, Security, and Emergency Preparedness Excellence – A Roadmap. FTA. <http://bussafety.fta.dot.gov/Roadmap.pdf>.
- Transit Bus Safety Program. FTA. <http://bussafety.fta.dot.gov>.
- TCRP Report 160: Paratransit Emergency Preparedness and Operations Handbook. Transportation Research Board. [http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp\\_rpt\\_160.pdf](http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_160.pdf).

## Partnerships with underrepresented groups *Continued from page 1*



*Lack of representation in public input processes may be related to cultural, disability, low-income or lack-of-education barriers.*

discuss best practices that lead to stronger relationships with these stakeholders.

### **The issue: Giving underrepresented communities a voice**

Public involvement needs to be inclusive so the full range of community interests are considered in developing a transit service. This can be difficult to achieve, however, as some community groups encounter barriers that hinder participation. The U.S. Department of Transportation (USDOT) and Federal Highway Administration (FHWA) have identified these groups as “underrepresented.”

Lack of representation in public input processes may be related to cultural, disability, low-income or lack-of-education barriers. According to the USDOT, “Cultural differences sometimes hinder full participation in transportation planning and project development. People with disabilities find access to transportation difficult and their ability to participate in public involvement efforts constrained. People with low incomes often lack both access and time to participate. They may be difficult to reach, distrustful of the public involvement process, or need to work rather than attend meetings and public hearings; thus eliminating themselves from the public awareness process. Poorly educated people often are not fully aware of what transportation services are available or of opportunities to help improve them.”<sup>1</sup>

### **Beyond the traditional model**

Transit agencies have traditionally used the, “decide, announce, and defend approach.”<sup>2</sup> This model for public participation uses one-way communication methods such as public notices, open house presentations, and various handouts to inform the public. This method may not attract underrepresented community groups and can hinder feedback.

It is important for transit agencies to look at community demographics. Who are you reaching now, and who do you need to reach? What you’ve done in the past may not work in the future. Effective public participation requires being creative and proactive; you may need to work in new ways with groups and individuals that may not have been involved in the past.

### **Who do transit agencies engage now?**

Reported in the TCRP Research Results Digest 107, Monica Simon of Simon and Simon Research Associates conducted a national survey of 80 transit agencies to document their experiences in reaching and engaging the participation of disability and underrepresented communities.<sup>3</sup> Transit agency respondents indicated that they sought public input for all of their major decision-making activities, with 92 percent including people with disabilities and seniors. Approximately 60 percent included underrepresented minority groups. Agencies identified African Americans, Asian Americans, Hispanics,

immigrants, Native Americans, persons with disabilities, and seniors as targeted underrepresented groups in their communities.

### **What were the identified barriers?**

Cultural, attitudinal, and language barriers may limit or prevent involvement from certain community groups. The same survey asked transit agencies to identify the significance of barriers to engaging underrepresented community groups. Overall, 33 percent of the agencies responding to the survey indicated that a lack of public interest had a significant impact on engaging these groups. Additionally, 42 percent identified lack of trust and 32 percent identified a lack of understanding as somewhat significant barriers to participation.<sup>4</sup>

### **How are they being engaged?**

Agencies reported using five primary strategies to overcome barriers and engage community groups:<sup>5</sup>

- Outreach to disability organizations (92 percent)
- Partnering with community organizations that provide information and receive public input on transportation issues (90 percent)
- Partnering with advocacy organizations and the community to expand the communication network (85 percent)
- Implementing transit agency advisory councils or citizen advisory committees to increase two-way communication (82 percent).

*continued on pages 5 & 6*

## A Blueprint for Success in Engaging Underrepresented Groups

**W**hile there is no single strategy to engage the community and foster more meaningful public involvement, the TCRP Research Results Digest 107 included an eight step blueprint to increase public involvement from underrepresented groups. It establishes a baseline process that can be tailored to meet the needs and context of your community.

**Step 1: Define goals and objectives.** Update your goals and objectives to clarify the opportunities and challenges of developing relationships with underrepresented community groups. Goals should be broad reaching and include the needs of all stakeholders, and objectives need to be clear, realistic steps to reach these goals. It is vital for the agency to consider stakeholder's actual needs and goals as opposed to the agency's perception by seeking feedback from the public on a regular basis. This can be accomplished via face-to-face public participation events that encourage open discussion between stakeholders.

**Step 2: Conduct a needs assessment.** Gather information essential to developing partnerships. An accurate assessment will determine what underrepresented groups think and feel about issues and help guide collaboration. Common techniques include focus groups, interviews, surveys, and charrettes. According to Bishop, community organizations are eager to assist in the process and can often provide a meeting location, refreshments, and other resources.

**Step 3: Identify leaders and stakeholders.** Involve community leaders to receive expert input of needs and concerns without having to attract numerous individual members. Collaborating with a leader from a community group that is not well represented in the public input process instills confidence and helps build trust between the transit agency and the underrepresented group. Lane Transit relies on leaders to provide connections to community members who can later be included in public participation events. Community leaders can be identified through steering and advisory committees, working groups, surveys, newsletters, and personal meetings with important stakeholders.

**Step 4: Build cultural competence.** Create an environment that will allow the greatest diversity of individuals to participate. To accomplish this, develop a high level of cultural competence to overcome potential cultural or language barriers which may limit participation. Develop communication tools, on-going cross-cultural and diversity training, and a network of cultural and community experts to help bridge cultural gaps and encourage meaningful participation.

**Step 5: Maintain open communication.** Freely share information and develop solutions based on community input to establish a foundation of communication and trust, the most important factors identified by survey participants in establishing partnerships. CT Transit's procedures for responding to public comments builds trust and fosters improved communication between the agency and its consumers. Implementing similar two-way communication techniques may encourage more meaningful public participation.

**Step 6: Engage underrepresented groups.** Tailor public outreach based on the composition of your community. There is no one size fits all approach, so a combination of faith-based groups, social media, print and electronic media, community and human services agencies should be utilized. Rees suggests studying community demographics to identify who you are reaching now and who you need to reach. Engage with applicable community organizations to identify leaders and a network of community members.

**Step 7: Organize meetings.** Consider the needs of the community when planning the location, time, and accessibility of public meetings. Public meetings are a common, low-cost method to provide information and/or gather input from the community. The location should be convenient for stakeholders, occur on the weekend or evenings, avoid major religious holidays, and include childcare and refreshments if possible.

**Step 8: Sustain partnerships.** Maintain partnerships through strategic evaluation and persistence. Utilize performance management as a tool to determine the success of public involvement efforts. This evaluation will dictate whether public participation efforts need to be improved or can be maintained. Attendance at events and meetings and exit surveys are often used to monitor the performance of the relationship.

More in-depth information regarding the eight step blueprint can be found in TCRP Research Results Digest 107.

## Partnerships with underrepresented groups *Continued from page 4*

These methods helped increase awareness of transit service, establish a more meaningful sense of ownership, develop familiarity with transit staff, and provide a forum to voice ideas and opinions. Other common strategies included asking elected and government officials to raise awareness of public participation options, a community newsletter, signs on buses, social media, targeted newspaper ads, direct mail, flyers and posters, and mass emails.

### A closer look at best practices

We conducted interviews with two transit agencies and one private non-profit organization to gather information about developing partnerships with disability and minority communities: **Lane Transit District (LTD)** in Eugene, Oregon, **CT Transit** in Hartford, Connecticut and **The Arc of Douglas County**, Lawrence, Kansas. These organizations place a high value on public involvement and believe that the first step to connecting with target markets is to develop relationships with the various organizations that serve underrepresented groups.

Collaborating with community organizations has allowed both LTD and CT Transit to better make service decisions regarding the needs and concerns of their underrepresented groups. CT Transit has affectionately labeled their approach “BORPSAT,” short for a “bunch of the right people sitting around a table.”<sup>6</sup> In-person events and a service-review committee have also been successful strategies for CT Transit.

Phil Fry, the CT Transit’s Assistant GM of Planning and Marketing, said that service improvements suggested at public meetings, or to a driver, through the phone, mail, or website are reviewed in-depth. Fry investigates and personally

responds to a majority of the public comments CT Transit receives, from a community-wide issue to a particular bus arriving late. Providing direct and indirect public feedback opportunities and responding to service comments has reduced communication barriers and improved trust between CT Transit and the community.

Since its inception in 1970, Eugene’s LTD has been partnering with nonprofits and social service agencies to create an environment built on trust and respect. According to Cosette Rees, Accessible and Customer Services Manager for LTD, the transit professionals at LTD acknowledge that they are not experts on every community issue. The agency reaches out to community organization leaders and their networks to gain expertise on various issues and to “break down silos.”

Rees defines a successful partnership with a community group as an effort that “helps more people, does more good, and stretches resources and funding.” She believes that developing partnerships allows transit agencies to increase their ability to serve more community groups.

The Arc of Douglas County is an advocacy agency for individuals with disabilities and their families. A majority of their constituents are transit-dependent and rely on the local public transit service for access to employment. The Arc has worked with Lawrence Transit since its inception to accommodate the needs of the disabled community.

Barbara Bishop, Executive Director of the Arc, says that effective communication between transit agencies and community organizations serving underrepresented populations needs to be a top priority. Community organizations should be well informed about transit services, including what the agency can and cannot provide. By being up-front about

service limitations, community agencies and its constituents will better understand service parameters and become an ally in overcoming these potential barriers to service. Knowledge of the transit service has helped Arc staff assist their constituents with route planning and to answer general questions and concerns about access.

Transit agencies should also look for opportunities to communicate directly with the populations they are trying to serve. Bishop said, “transit agencies often prefer to work with community organizations because they tend to offer solution-oriented feedback instead of problems.” However, it’s important that transit agencies also gather feedback directly from the users or potential users of the system. Public events and face-to-face discussions foster more meaningful public involvement, where “transit professionals can have open conversations, personally identify with specific community groups, and receive compliments, not just problems,” Bishop said.

There are many additional best practices across the nation, including from Wichita Transit in Wichita, Kansas. In the July 2011 edition of the *Kansas Trans Reporter*, we reported on a public engagement project in Wichita to reach the Hispanic community to improve mobility for Hispanic seniors. Project leaders in the Wichita region recognized that the Hispanic senior population had grown 67 percent from 2000 to 2010, and it was estimated to grow another 40 percent by 2020. Outreach strategies needed to be improved to overcome language and access barriers experienced by the Hispanic community.

The agency reached out to church leaders who are highly respected and known in the Hispanic community. Meetings were held in church facilities immediately following services, and pastors encouraged the congregation to participate in the public participation opportunity. With help from church leaders, the project established a creative way to improve on traditional public meetings to better reach and connect with the Hispanic community.

<sup>6</sup>Federal Highway Administration and Federal Transit Administration. 2002. Public Involvement Techniques for Transportation Decision-Making. U.S. Department of Transportation. Washington, D.C.

<sup>7</sup>Black, R. 2006. “Public Participation in Diverse Communities: Tools for Consensus Building,” Paper #06-2580, Transportation Research Board 85th Annual Meeting, Transportation Research Board, Washington, D.C.

<sup>8</sup>Simon, Monica. “Developing Partnerships Between Transportation Agencies and The Disability and Underrepresented Communities.” Research Results Digest 107 (2013), p14. Transit Cooperative Research Program, Apr. 2013. Web. 20 Oct. 2013.

<sup>9</sup>Ibid., p.15.

<sup>10</sup>Ibid., p.17.

<sup>11</sup>Ibid., p.31.

Wichita Transit also held staff education programs in Hispanic sensitivity training and hired a Hispanic mobility manager to continually improve this partnership.

### Moving forward

A successful transit service will only occur when all affected stakeholders work together to develop a consensus

on a decision or service direction. Fully engaging groups and individuals in your community who use or would like to use your service in a dialogue fosters improved communication, a better appreciation of challenges and successes, and has the potential to improve efficiency and cost-effectiveness of operations. Assessing underrepresented

groups in your community and using the eight step blueprint for engaging those groups (see page 5) will foster more meaningful public participation and develop strong, sustaining relationships between the transit agency and community stakeholders.

For additional information on this topic, consult the sources listed below. ●

### Sources

- Arnstein, Sherry. "A Ladder of Citizen Participation." A Ladder of Citizen Participation. JAIP, 1969. Web. 20 Oct. 2013.
- "Including People with Disabilities in Coordinated Transportation Plans." Rep. Project ACTION, July 2009. Web.
- Phone Interview: Cosette Rees, Lane Transit District, October 11, 2013.
- Phone Interview: Phil Fry, CT Transit, October 14, 2013.
- Phone Interview: Barbara Bishop, The Arc of Douglas County, December 4, 2013.

## SAFETY

# Transit Adopt-a-Stop Programs

*Building community ownership in clean and attractive stops.*

By James Decker

**A**dopt-a-stop programs are community initiatives where volunteers agree to pick up litter at transit stops and assist with other maintenance tasks. These programs are valuable to public transportation agencies because they help create a sense of ownership of transit service within the community, enhance the appearance of stops and stations, and improve safety and security for passengers. While such programs predominately exist in urban areas, this low-cost initiative can be a viable option for a rural agency to create a win-win for both their transit service and the community. This article will provide background information regarding adopt-a-stop programs, analyze program results from a recent national survey, and highlight successful case studies to demonstrate how effective an adopt-a-stop program can be on any scale.

### How do they work?

While there is no "one size fits all" formula for adopt-a-stop programs, the general principle is that volunteers will collect stray litter at the site at an agreed-upon interval. The transit agency will often pick up the filled trash bags, although volunteers may opt to recycle or dispose of the trash themselves. Volunteers who agree to adopt a stop may either be individuals or a group such as a business, community group, or other organization. Volunteer responsibilities are typically confirmed in a simple written document outlining the frequency of trash collection and various small details.

**Agency liability:** According to a Transit Cooperative Research Program survey, most adopt-a-stop programs (but not all) require volunteers to sign a waiver of responsibility. How these agencies view risk of injury to volunteers and insure against risk was not addressed. It may be valuable to review your agency policy regarding liability and volunteer workers.

Upon volunteering for the program, the individual or group is often given public recognition via a sign or a plaque at the adopted site. Some transit agencies also distribute transit passes to volunteers as an additional reward.

Adopt-a-Stop programs have proven to be valuable for numerous reasons. Stops often become unsightly due to debris discarded from patrons, wind that drives leaves and trash into the area, and vandals who damage stop facilities. Keeping these transit stops clean and attractive can consume a significant amount of staff time for overextended transit agencies. An adopt-a-stop program helps alleviate this difficulty by employing volunteer assistance at a stop. A clean, well-cared-for stop is inviting to riders and provides a feeling of safety—features that encourage strong ridership.

In addition to helping keep transit stops clean, the program creates an opportunity for the community to be

*continued on next page*

## Transit stop adoption *Continued from page 7*

more involved in the local transit service. This involvement has been shown to create a sense of ownership where communities better recognize the value of the transit service. Often, an established adopt-a-stop program is encouraged to continue and expand due to the perceived benefits of improved stop appearance, public support, image in the community, and improved ridership.

### Adopt-a-stop survey results

In 2013, a study sponsored by the Transit Cooperative Research Program included a survey of 30 agencies and organizations that marketed an adopt-a-stop program. The survey targeted a diverse group of large, small, urban, suburban and rural systems throughout the United States. The highlights are as follows:

- 78 percent of the respondents reported that an adopt-a-stop program is a means to “enhance station/stop appearance.”
- 85 percent said such programs “encourage citizen involvement, pride, and ownership in their respective communities.”
- The majority of respondents typically spent about \$500 to \$1,000 per year on the program. The money is primarily used for basic cleaning supplies, transit passes, and signage.
- Management of the program required fewer than 16 hours per month.
- Most volunteers (80 percent) received training through printed procedures and guidelines.
- 73 percent of the respondents viewed their adopt-a-stop program to be successful.

The survey revealed that none of the questioned agencies or organizations started their adopt-a-stop program to save costs. While maintenance departments are grateful for the extra help and the ability to free manpower for other responsibilities, improved relations with the community and cleaner, safer stops were reported as the top benefits of the program. Comments from the survey indicated that the adopt-a-stop program created numerous goodwill aspects in the community that cannot be monetized.

### Some examples

We interviewed two transit agencies based on the success of their adopt-a-stop program in urban and rural areas. The first interview was with the Regional Transit District



*Austin, Texas's adopt-a-stop program uses signs on its trash receptacles with a community-minded message inspired by a Beatles song.*

in Denver, Colorado. RTD is the regional authority operating more than 10,000 bus stops in the Denver metro area. An adopt-a-stop program has been in place since 1993, and of the more than 10,000 bus stops in the system, almost 10 percent of these have been adopted by the community.

RTD adopt-a-stop volunteers are required to sign a simple agreement that outlines their responsibilities and duties. Following that, the agency installs a sign at the adopted stop to identify the volunteer, and a trash can is installed at the site. The program's coordinator then periodically checks the location for compliance or inactivity (i.e. monthly, quarterly, or semi-annually depending on the location and usage). Approximately 50 percent of the volunteers in the program are individual volunteers, and the other half are businesses or community organizations.

Our second interview was with Tri-County Metropolitan Transportation District in Portland, Oregon. TriMet is a municipal cooperative agency that provides 79 bus lines for a total of 6,826 bus stops. TriMet's adopt-a-stop program has been in place since 1998, and as of 2013, 201 bus stops have been adopted by 170 community, municipal, and business organizations. The program is coordinated by a community affairs specialist who is responsible for managing the database for the program, responding to interested volunteers, and interacting with the community. The success of the program has created a sense of ownership in the community and has helped provide some relief for maintenance staff.

Similar to RTD, volunteers at TriMet sign a simple agreement that describes volunteer duties (i.e. weekly trash can disposal and report any damage or graffiti). TriMet then installs a trash can that has been affixed with a plaque honoring the volunteering organization at the adopted stop. Unlike RTD, however, TriMet requires volunteers to dispose of the trash bags into TriMet's own trash dumpsters and only allows organizations to participate in the program. The coordinator has found that it is more manageable and successful to recruit groups rather than individual volunteers.

Allowing only organizations to volunteer creates a limitation in the potential for maintaining rural stops. For example, at RTD, a majority of the adopted stops along rural routes are managed by individuals. Rural volunteer locations seem to depend on a civic-minded individual who regularly uses the stop to ride the bus. This is in contrast to TriMet, where transit stops along rural routes are typically

only adopted if they are in the vicinity of a “mini population center.” This organization-only requirement may hinder the adoption of transit stops in truly remote locations.

### **Implementing an adopt-a-stop program in a rural community**

When asked how this program could function in a rural setting, both RTD and TriMet coordinators stressed the importance of initiating a pilot program, as both of these agencies did. The initial collaboration with a single business or organization will help the agency iron out all of the procedural and organizational details. The media attention from the inaugural adopted stop will also generate buzz that can attract early volunteers to the program. Once the pilot program has been deemed a success, the program can expand to locations where individuals, businesses, or community organizations have expressed interest.

The frequency of maintenance of adopted stops will depend on ridership. The more riders using the stop, the more frequent the trash pick-up.

This process can be slow however, so it is important for early adopt-a-stop programs to be given adequate time to

build momentum. The creation of a website, the use of social media, and the advertisement of the program in the bus stop handout and at stops can be used to recruit volunteers.

The program’s coordinator may find it helpful to reach out to local businesses that are in close proximity to a stop and solicit them to volunteer. These businesses will benefit from the recognition, and the community, transit agency and business will all benefit from the cleaner, safer stop.

### **In sum**

Adopt-a-stop programs are low-cost initiatives for transit agencies to strengthen the operation of public transit in the area. Following the success of urban programs, rural transit agencies have the opportunity to establish a program that fosters community ownership in transit, creates partnerships, and encourages citizen participation in community service. These substantial community benefits, combined with the minimal resources required, makes an adopt-a-stop program a viable initiative for many transit agencies.

For more information on this topic, consult the resources mentioned in the article, and the Sources below. ●

### **Sources**

- TCRP Synthesis 103: Transit Station and Stop Adoption Programs. 2013. <http://www.trb.org/Publications/Blurbs/168857.aspx>
- Allen, S. 2011. “Own the Road: A Brief History of Adopt-a-Highway Program.” <http://mentalfloss.com/article/27018/own-road-brief-history-adopt-highway-program>
- “A look at What Some States Are Doing: Adopt-a-Stop Program Gets Going in California,” AASHTO Quarterly Magazine Vol. 71, No. 4 Oct. 1992
- Phone Interview: Michelle Wyffels, TriMet, October 11, 2013.
- Phone interview: Scott Reed, RTD-Denver, October 10, 2013.

## **TECHNOLOGY**

# **Cameras Can Help Eliminate Blind Zones**

By Clifton Hall

**A** set of mirrors is a standard safety device for transit vehicles for viewing objects to the rear and side. One common and universal shortcoming of mirrors is their inability to show the complete space surrounding the vehicle, producing what is commonly known as a blind zone. According to a National Transit Database’s 2002 figure, 46 percent of all transit collisions occur on the side of transit vehicles. “Blind zones” have been identified as the primary culprit, and secondarily, the reduced visibility of objects in the mirrors during inclement weather.

This article explores side-mounted cameras as a possible solution to increase visibility in areas mirrors may miss. It also describes the use of cameras in completely replacing side-view mirrors, and estimated costs of implementing

a mirror-camera hybrid system. This article will provide information to managers to assist with decision-making for using side-view cameras in their transit operations.

### **Vision-based systems**

A number of technologies have been developed to improve safety and avoid collision. Generally, these technologies are as vision-based or sensor-based. For this article, we’ll discuss vision-based systems; their primary advantage over sensors is that they give drivers exact visual information, instantly.

A set of mirrors is the most common and inexpensive form of a vision-based system, and allow the driver to see

*continued on next page*

## Blind spot cameras *Continued from page 9*

large areas to the side and rear of the vehicle. Two types of mirrors are typically used in transit vehicles: flat mirrors and convex mirrors. Flat mirrors provide an undistorted, reversed image while convex mirrors provide a wider-than-normal visual range that is also reversed and is distorted depending on the angle of the mirror's shape.

Camera-based systems feature either normal or wide-angle lenses, which deliver video to monitors with a reversed image that mimics the effect of mirrors. These systems can be used as a stand-alone replacement for mirrors, or can be used with traditional mirrors as a supplement that enables the driver to see the blind zone. When using cameras instead of flat mirrors, 64.4 percent of the blind zone is reduced, compared with a 43 percent reduction for a flat-convex combination mirrors. Using a camera with wide-angle lens, 100 percent of the blind zone is eliminated, according to the National Center for Transit Research (NCTR). Just like convex mirrors, wide-angle cameras present a distorted image. However, mirrors stick out from the vehicle's profile, and can collide with objects or people close to the side of the bus, including infrastructure, signs, pedestrians, and bicyclists, where cameras do not pose this concern.

With these benefits, why aren't camera-only systems the standard vision system for large vehicles? The first reason is price. They are typically at least 10 times the price of mirrors. Another significant reason is how remarkably different it is to drive without mirrors; some drivers are uncomfortable with them. A reasonable compromise for the problems of either mirrors or cameras being used alone is to use a traditional mirror in combination with a side-view camera to monitor the blind zone. This "hybrid" approach, plus traditional mirror systems and stand-alone camera systems were all evaluated for effectiveness by the NCTR.

### Comparative testing

The NCTR study was done in two phases. Phase I was done with traditional mirrors as the baseline, and replaced mirrors with cameras to test their detection enhancement capabilities. For Phase II, mirror-camera hybrids were tested against mirrors in a stationary position and then deployed in an actual transit system to evaluate real-world performance. Phase I surveyed drivers' opinions on using the system on a closed course, while surveys were used in Phase II to evaluate drivers' opinions on the systems' performance on actual transit routes.

In addition to a significant reduction in blind spots, a



National Center for Transit Research

*Camera-based systems can be a stand-alone replacement for mirrors or can be used in combination with traditional mirrors, like above, to help drivers better see vehicles and obstacles in the blind zone.*

lane change test showed that the cameras were at least as dependable as mirrors when the other vehicle's reaction time was taken into account. The potential sideswipe scenario yielded several examples of the camera systems giving a longer visual than the mirrors.

In further testing, drivers were given a chance to become familiar with the system by driving around a closed course, then, once parked, they were timed on how quickly they spotted objects' locations. Drivers identified objects correctly more often, and significantly faster, when using camera-hybrid systems as opposed to mirrors alone. Even though there were more objects to scan with a mirror-hybrid system, it did not decrease performance in reaction time or visibility. The identification time for several of the harder-to-see objects was significantly reduced when cameras were used. These results suggest that using camera-hybrid systems can reduce the time it takes to see and identify an object, while also minimizing blind zones. Commonly cited problems with the system were that they did not work better in inclement weather than mirrors, that they should be adjustable, and that using them at night, when cars' headlights pass the field-of-vision, can be distracting.

### Considerations and conclusion

Based on this study, the NCTR has issued general recommended requirements for transit providers considering *continued on page 14*

### Sources

- Evaluation of Camera-Based Systems to Reduce Transit Bus Side Collisions-Phase II. (2012). Accessed October 8, 2013. <http://www.nctr.usf.edu/2012/12/evaluation-of-camera-based-systems-to-reduce-transit-bus-side-collisions-phase-ii/>
- Evaluation of Camera-Based Systems to Reduce Transit Bus Side Collisions. (2010). Accessed October 8, 2013. <http://www.nctr.usf.edu/2011/08/evaluation-of-camera-based-systems-to-reduce-transit-bus-side-collisions-2/>.
- Diamond International, Kansas City, MO. Telephone Interview.

## Get Ready for Winter Driving

By Anne Lowder



**K**ansas is known for its variable and sometimes harsh weather. The secret to transporting your passengers safely on slick or snow-covered roads is advanced planning and driving adapted to adverse weather conditions. We'll talk about preparing in advance, changing your driving habits, and what to do if you are in an accident.

### Driver and passenger preparation

In winter driving, consider both personal preparation as well as preparation of your bus for unforeseen conditions. While avoiding driving in known hazardous conditions is the wisest choice, storms may strike with little or no warning. Time spent in preparation is your best defense. If winter weather deteriorates, you are less likely to panic and stress out if you are prepared.

The American Red Cross classifies winter storms as, "deceptive killers." According to the U.S. Department of Commerce National Weather Service for Southeastern Kansas 2013 (<http://www.crh.noaa.gov/sgf/?n=winterawareness2013>), 70 percent of ice-and-snow related deaths occur in automobiles. The Kansas Department of Transportation reports that in Kansas 14 percent of vehicle accidents are because of adverse weather conditions. As stated in our Coaching the Van Driver III class, panic and stress are leading factors in making the wrong choice during an emergency.

An essential part of preparing for winter driving is assembling emergency travel supplies. The American Red Cross and the National Weather Service have created the following list for emergency winter travel supplies. You should consider the list as merely a suggestion. Modifications to the list are recommended depending on the length of your route, the areas where you are driving and the number of passengers who are likely to be on board at any given time. The important thing is



www.shutterstock.com / Benoit Daoust

to make a checklist and be sure you have everything you need on your bus, before going out on your route.

### Emergency winter travel supplies

- Flashlight and extra batteries
- Ice scraper/snow brush
- Blankets
- Fire extinguisher
- First aid kit
- Bottled water
- Non-perishable high-energy foods, such as granola bars, raisins or peanut butter
- Shovel
- Reflective emergency triangles
- Sand or cat litter (for tire traction)
- Knife
- Pencil and paper
- Candles (even one lit candle can provide emergency heating)
- Matches
- Cell phone
- Red bandana (tie to the antenna when help is needed)

An essential tool to use in winter conditions is the trip manifest. Make sure

you notify dispatch if you veer from the manifest. On out of town trips, you should notify dispatch of the route you will be traveling and the expected time of arrival. If dispatch knows the starting point and time, the route and the destination, help can reach you much more quickly, in the event of an emergency.

You should not only remain alert during hazardous weather to highway conditions but you should know where you are on your route at all times. Pay attention to mile markers and highway exit numbers. Know the state, county or interstate number for the road on which you are traveling. Know what county or city you are near. And, as basic as it may sound, you should know what direction you are traveling.

### Bus prep

In addition to the added perils of winter driving, the change in weather can challenge the vehicle's systems. Freezing temps, salted roads and wintery precipitation can gang up on your bus if you don't do the following maintenance checks that are specific to winter driving. According to AutoRepairabout.com's Winter Auto Maintenance Checklist, the following steps should be completed to prepare your vehicle for winter weather.

- **Check your antifreeze.** Your antifreeze is an essential part of your bus's winter protection. Your bus contains a mix of water and antifreeze. Make sure the level is full and the mixture is close to 50/50 to prevent freezing.

- **Inspect your tires.** Tires are your first defense to prevent crashes. Winter is not the time to get cheap about your tires, so take the time to check the tread depth and rotate your tires. The National Highway Transportation Safety Board says you need at least 2/32" of depth to be safe. Check the tread and replace any tires that do not have the correct tread depth. Also, be sure to check your tire pressure.

*continued on next page*

## Winter driving *Continued from page 11*

Believe it or not, tires lose a little pressure when it gets cold, so pump them up.

• **Replace your wipers.** What do your windshield wipers have to do with winter weather? Two things: First, anything falling from the sky is going to end up on your windshield, and second, in areas that see snowfall in the winter, you're also driving on roads that may have a lot of sand and salt on them, both of which end up on your windshield. It takes wipers that are in top shape to keep your windshield clean and safe.

• **Check your windshield washer fluid.** You'll be using lots of washer fluid as you try to keep your windshield clean. Tip: Don't fill your washer fluid reservoir with anything except washer fluid or it will freeze!

• **Inspect your brakes.** Brakes are not a good area to cut corners. Be sure your brakes have enough meat left to get you through the season.

• **Check your engine oil.** KDOT requires you to check your oil on a weekly basis. This should go without saying but be more rigorous about checking and changing your bus's oil and filter during the winter months and remember to use the manufacturer's recommended oil viscosity range for winter.

### Change your driving habits in winter

To prevent the weather conditions from controlling your vehicle, you must first anticipate potential problems. This may mean driving cautiously or not driving at all when dangerous weather conditions exist. The National Safety Council's Coaching the Van Driver training recommends driving techniques such as scanning ahead, communicating with other drivers and creating a cushion of safety for your vehicle.

Some road conditions warrant slow and cautious driving. Slippery roads caused by rain, snow, or sleet, and gravel roads, make it much more difficult for you to control your vehicle. Fog, rain and snow reduce visibility and can cause moisture to form on the vehicle brakes. This will increase your stopping distance. These road conditions are especially dangerous because the vehicle may not respond as

### Tips for Driving on Slippery Surfaces

- Drive defensively and be prepared for any situation.
- Adjust your speed to the road and weather conditions.
- Allow yourself time and space to stop safely.
- Keep the windshield and windows clear.
- Be sure headlights, wiper blades, and defrosters are in top working condition.
- Make only slight and gentle movements with your brake, accelerator, and steering wheel. Sudden braking or accelerating could cause a skid.
- Allow more time to complete your routes.
- Roads are the most slippery during the first 10 minutes of a storm, so adjust your speed to the conditions and drive with caution.
- Watch out for other drivers.

expected, even though you may respond quickly and diligently. By maintaining a cushion of safety around your vehicle, scanning ahead and increasing your following distance, you will have more time to anticipate and react to potential adverse weather conditions.

• **Slippery surfaces.** Rain both reduces visibility and makes roadway surfaces dangerous. When it rains, drivers should drive more slowly than usual, and by Kansas law, use your low beam headlights and windshield wipers. Increase normal following distance of four seconds by more than one second for each adverse condition. Stopping distances on slippery pavement are from two to ten times farther than on dry pavement. In this situation you have two adverse conditions (rain and slippery pavement) so increase your following distance to six seconds.

Roads are most dangerous for the first 10 to 15 minutes after the rain has begun to fall, especially if it has not rained for a while. This is because oil from the asphalt and residues left on the road by vehicles mixes with dirt, dust, rubber and rain water to create a slick surface.

Wet pavement, when combined with other factors such as vehicle speed and improper tire pressure, can cause you to lose vehicle control due to hydroplaning. Hydroplaning can occur at 30 mph and its probability increases with speed. When hydroplaning occurs, there is no friction available to brake, accelerate, or corner. A gust of wind or even a slight

turn could create an unpredictable and uncontrollable skid, especially with oversize transit vehicles. When roads are wet, reduce your speed to avoid hydroplaning.

Brakes are also a concern in the rain. Wet brakes are less effective. When driving in the rain, test the brakes regularly. If the brakes don't respond normally, apply slight pressure to the brake until it responds normally, suggests Kansas Highway Patrolman Trooper Wingate.

• **Snowy and icy surfaces.** Snow and ice make roads more difficult to navigate. Slush makes it difficult to steer, hard packed snow increases the danger of skidding, and black ice makes driving extremely dangerous. Black ice is a thin layer of ice that forms on the road's surface.

Streets and highways covered with snow, snow pack, or ice are hazardous, and especially so when the snow or ice begins to melt. The slush or wet surface acts as a lubricant and traction is reduced. Extreme weather conditions may require special equipment (e.g., studded tires or tire chains) and/or special skills by the driver (e.g., slow starts and stops).

Shaded sections of the highway and surfaces on bridges and overpasses will freeze before the rest of the road. These same areas will also take longer than other parts of the highway to thaw.

If you must drive during a snowstorm, reduce the vehicle speed, use the windshield wipers and defroster, and turn on the vehicle's low beam headlights. You should reduce speed by more than

half for packed snow and slow down to a crawl on ice.

If you apply your brakes suddenly on an icy road, the vehicle will go into a skid. If you begin to skid, let up on the accelerator and turn the front wheels in the direction of the skid. If you have to stop on a slippery surface, it is advisable to apply slight gradual pressure to the brakes, gradually slowing the vehicle without locking the wheels.

#### **A quick reminder of what to do if you're in a crash or are stranded**

- **Call for help.** When calling 911 or dispatch for help, remember to give the location first before you start reporting on the incident. That way if you lose contact with 911 or dispatch, they will know where you are.

- **Evacuate only if necessary.** The National Weather Service reports that

many people die each year when they attempt to leave their vehicle during a storm. You should not leave the vehicle in search of help. The best chance of rescue is to stay with the vehicle. You should remain calm and not panic. Tie a red bandanna to the vehicle antenna as a signal for help.

- **Keep passengers warm until help arrives.** If you are able to start the engine, keep the bus running for 10 minutes out of each hour, and run the heater. Make sure the exhaust is clear, or you could become a victim of carbon monoxide poisoning. Leave a window partially open, as an extra precaution. Keep the interior lights on, while the engine is running, as this provides additional heat. Keep moving your arms and legs, as this will forestall hypothermia.

- **Make yourself visible to others.** Set your emergency triangles as

recommended by the Federal Motor Carriers Association. In most cases, set triangle-one 10 feet in front of the vehicle, set triangle-two 10 feet in back of the vehicle, and set triangle-three 100 feet in back of the of the vehicle. Also, turn on the vehicle emergency flashers for more visibility.

#### **In sum**

Winter driving means preparing in advance your vehicle emergency supplies, honing up on your winter driving habits, and knowing what to do if you are in an accident. Prepare now for confident and effective responses to winter weather conditions when you need it.

#### **Sources**

- National Safety Council. (2009). Coaching the Van Driver III. Training.
- Kansas Department of Transportation. (January –June 2013) Kansas Strategic Highway Plan.
- National Oceanic and Atmospheric Administration. <http://www.crh.noaa.gov/images/ind/Winter%20Driving.pdf> Accessed December 3, 2013.
- U.S. Department of Commerce National Weather Service for Southeastern Kansas 2013. Accessed December 3, 2013. <http://www.crh.noaa.gov/sgf/?n=winterawareness2013>
- Federal Motor Carriers Safety Administration . A Motors Carrier's Guide to Improving Highway Safety. June 6, 2010. Page 80. <http://www.fmcsa.dot.gov/safety-security/eta/index.htm>

## **New!!! Kansas RTAP Now Accepting Credit Cards and E-Checks**



**K**ansas RTAP now accepts credit cards and e-checks as payment for your training registration fees. We have partnered with KanPay through Kansas.gov—an online payment processing system specifically designed for state and municipal governments. KanPay provides the most up-to-date security measures to protect your information. Credit cards or e-checks are accepted through on-line registrations only. All major credit cards are accepted.

You can pay when you register or you can request an invoice be sent to you by email. If someone else in your organization is responsible for payment, provide your invoice to them, which will include instructions for sending a check. Or they can go to our “Event Payment” tab to change

the payment for that invoice to a credit card or e-check. This way, you will still be able to register for an event even if you can't provide payment at the time of registration.

To get started using our new service, go to our regular workshop registration page at <http://www.ksrtap.org> to register as usual. You will still be able to register more than one person on a single registration form. You will see easy instructions to proceed with your payment options.

We hope that you will find this a helpful tool to process your payment for our transit-related training. As always, if you have any questions or concerns, contact Kristin Kelly, Training Coordinator, at (785) 864-2594 or [kbkelly@ku.edu](mailto:kbkelly@ku.edu).

## How To Reach Us

For a free subscription to the *Kansas TransReporter* or to contact one of our faculty or staff, call toll-free (800) 248-0350 (in Kansas) or (785) 864-2595 (outside Kansas). Send correspondence to:

**Kansas TransReporter  
Kansas University Transportation Center  
1536 W. 15th Street, M2SEC Room G520  
Lawrence, KS 66045**

Send e-mail messages to Pat Weaver at [weaver@ku.edu](mailto:weaver@ku.edu) or Lisa Harris at [LHarris@ku.edu](mailto:LHarris@ku.edu). Visit our website at <http://www.ksrtap.org>

## Kansas RTAP Staff

Assistance can be obtained by contacting a *Kansas TransReporter* staff person at the numbers or address above.

Project Director ..... Pat Weaver  
Editor ..... Lisa Harris  
Contributors ..... Anne Lowder,  
James Decker, Clifton Hall

## Other Services

In addition to publishing the *Kansas TransReporter*, Kansas RTAP offers a variety of other educational services. Following is a partial list of these services:

- Publication dissemination
- Program planning assistance
- Technical assistance
- Video lending library
- Telephone consultation
- Computer database searches
- Training development
- Referral services
- Website
- Email discussion group

## Blind spot cameras *Continued from page 9*

adding camera-based systems to their vehicles. The added field of vision should be maximized without causing unnecessary distortion, which can distract the driver and increase reaction time. Cameras should also be equipped with technology to filter bright lights such as headlights and streetlamps, which reduces direct glare and “blooming” that make camera images unusable or distracting.

A color display is much preferred since it allows objects to be more easily identified, although black and white images may have a higher resolution when infrared illumination is used.

Camera housings should be rugged and waterproof. For externally mounted cameras, measures such as clearing condensation from the housing, avoiding collection of snow, dust, and debris, and preventing camera vibration should all be taken into account.

Camera monitors should not disrupt a driver’s normal field-of-view, and should be mounted on pillars, doors, or the dashboard to minimize obstruction.

The NCTR’s standard recommendations are for full-size transit buses to use right and left side cameras with independent housings, attached to mirror posts within the mirror’s extension, a camera angle of 60-65 degrees with the field-of-view defined by the vehicle’s edge, along with a 7-inch monitor on the left A-pillar and an 8-inch monitor on the top center of the dashboard.

For cutaway buses, NCTR recommends an integrated mirror/camera housing, with a view of 60-65 degrees defined by the edge of the vehicle. It recommends a 7-inch monitor on the left A-pillar, with a 7-inch right view monitor mounted either on the right A-pillar, the top of the dashboard, or high on the right A-pillar.

It is important to reverse the image received by the monitor to match the perspective of the bus’s mirrors.

Ideally, monitors should

automatically power up when the ignition is started, and shut down when the ignition is turned off. On/off switches located on the monitors should allow the driver to turn monitors off and on by choice while the ignition is running.

While camera systems have been shown to be safe and effective supplements to the standard mirror systems, it is clear that implementing

*It’s important to reverse the image received by the camera’s monitor to match how an image would look in an mirror.*

them will take some adjustment by transit drivers. The camera systems very much change the driving experience.

Price, as always, is a consideration when deciding to invest in new systems and utilities. A Kansas City-area truck dealer quoted parts and installation for a side-view camera system between \$3000-4000, including two Velvac brand integrated camera-mirrors, two monitors (capable of receiving two additional inputs), necessary cabling, and installation labor.

Safety is an obvious benefit, but it is up to each transit provider to decide if side-view cameras are worth the cost of improving safety for the agency. ●

# Transit Resources

## WEBINARS AND PUBLICATIONS

### Don't Gamble on Senior Transportation Funding: Winning Local Match for Federal Grants

A series of four webinars produced as part of an National Center on Senior Transportation online mini-course with ideas and practical suggestions on how to secure matching funding. The webinars explain local match requirements and help managers to think creatively on how to develop or increase local match funding. - See more at: <http://seniortransportation.easterseals.com/TrainingEvents/NewsArticle/tabid/176/token/detail/nid/59/Default.aspx#sthash.oyUUosmK.dpuf>

### Planning for Transportation After Medical Services Pocket Guide – Rural Edition

Easter Seals Project Action has a brochure that provides tips to help patients who live in rural areas or who visit rural medical facilities talk with their caregivers, physicians, and health care providers about transportation options and needs. 2013. Download at: [http://advsearch.projectaction.org/iframe/simple\\_search.aspx?title=planning+for+transportation+after+medical+services&orgids=&fromdate=&todate=&searchorg=&catids=&abstract=&fileid=0&org=a2GSpnDbrul=&keyword=](http://advsearch.projectaction.org/iframe/simple_search.aspx?title=planning+for+transportation+after+medical+services&orgids=&fromdate=&todate=&searchorg=&catids=&abstract=&fileid=0&org=a2GSpnDbrul=&keyword=)  
 Order hard copy. Fill out and fax order form below.

## UPCOMING CONFERENCES

### February 2 – 5, 2014

Southwest Transit Association Annual Conference & EXPO  
San Antonio, TX  
<http://www.swta.org>

### March 30 – April 1, 2014

2014 National Transit Institute  
Transit Trainers Workshop  
Long Beach, CA  
<http://www.ntionline.com/courses/courseinfo.php?id=176>

### April 15 – 17, 2014

FTA 95h Annual Drug and Alcohol Program National Conference  
Little Rock, AR  
<http://transit-safety.fta.dot.gov/DrugAndAlcohol/Training/NatConf/2014/default.aspx>

### May 4 – 7, 2014

2014 APTA Bus and Paratransit Conference  
Kansas City, MO  
<http://www.apta.com>

### June 8 – 13, 2014

Community Transportation Association of America  
2014 Expo  
Saint Paul, MN  
<http://web1.ctaa.org/webmodules/webarticles/anmviewer.asp?a=3615&z=5>

### August 11 – 13, 2014

Kansas Public Transportation Association  
2014 KPTA Conference  
Wichita, KS  
<http://kstransit.org/>

## ORDER FORM

A few of our above resources are available in hard copy for readers who do not have internet access. These resources have a checkbox at the end of the listing. Check the item(s) you would like to receive and fill out the form below. Fax to (785) 864-3199.

Name \_\_\_\_\_ Title \_\_\_\_\_

Agency \_\_\_\_\_ Phone \_\_\_\_\_

Street Address \_\_\_\_\_ E-mail address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip+4 \_\_\_\_\_

**University of Kansas  
Transportation Center  
Kansas TransReporter  
1536 W. 15th Street, M2SEC Building, Room G520  
Lawrence, KS 66045-7609**

Return Service Requested

**SAVE A TREE!**

If you would rather link to our newsletter electronically instead of receiving a hard copy, send your email address to LHarris@ku.edu and we'll send a notice to you when each issue is published.

**Is your mailing information correct?** Send any changes to (785) 864-3199 (fax).



The *Kansas TransReporter* is an educational and technology transfer newsletter published quarterly by the Kansas University Transportation Center (KUTC), under the umbrella of KU's Transportation Research Institute. The newsletter is free to rural and specialized transit providers and others with an interest in rural and specialized service.

The *Kansas TransReporter* is co-sponsored by the Federal

Transit Administration under its Rural Transportation Assistance Program (RTAP) and the Kansas Department of Transportation.

The purposes of the RTAP program are to: 1) educate transit operators about the latest technologies in rural and specialized transit; 2) encourage their translation into practical application; and 3) to share information among operators.

January 2014, Volume 27, Number 1. Copyright © Kansas University Transportation Center. All rights reserved. Reproduction of material appearing in the *Kansas TransReporter* requires written permission.

## Calendar

### 2014 Kansas RTAP Drivers Training

**Responding to Emergencies: Response Procedures and Crisis Communication**

March 20 in Liberal  
April 24 in Manhattan  
June 26 in Olathe  
July 17 in Hays  
September 4 in Independence  
September 10 in Garden City  
October 16 in Salina  
October 23 in Topeka  
November 20 in Emporia

May 15 in Ottawa  
June 25 in McPherson  
July 9 in Emporia  
July 10 in Topeka  
July 16 in Oakley  
August 28 in Salina  
October 9 in Bonner Springs  
October 22 in Ottawa

**Also available to agencies** are two hands-on training opportunities:

- **Advanced Mobility Securement**
- **Evacuation Techniques for Rural Transit Passengers**

Please contact Anne Lowder at 785-864-1469 or alowder@ku.edu to host and schedule these training sessions in your area.

**NSC Coaching the Van Driver III: Driving Defensively in a Distracting Environment**

February 5 in Pittsburg  
February 6 in Independence  
February 19 in Wichita  
March 19 in Garden City  
April 9 in Holton  
April 23 in Great Bend  
May 14 in El Dorado

**Providing a Safe Environment for Your Transit Passengers: Part I - Passenger Assistance Procedures and Part II - Infectious Disease Awareness and Prevention**

February 20 in Hutchinson  
April 10 in Leavenworth  
August 27 in Winfield  
September 3 in Pittsburg  
September 11 in Dodge  
October 15 in Russell  
November 19 in Moundridge

**Want to register by credit card or e-check?**

We are now able to accept these forms of payment online. See page 13 for more details.

**\*\*To register for a Kansas RTAP workshop, go to <http://www.krsrtap.org>. Click on "Register to attend." Questions? Contact Kristin Kelly at (785) 864-2594 or [kbkelly@ku.edu](mailto:kbkelly@ku.edu).**

The University of Kansas prohibits discrimination on the basis of race, color, ethnicity, religion, sex, national origin, age, ancestry, disability, status as a veteran, sexual orientation, marital status, parental status, gender identity, gender expression and genetic information in the University's programs and activities. The following person has been designated to handle inquiries regarding the nondiscrimination policies: Director of the Office of Institutional Opportunity and Access, IOA@ku.edu, 1246 W. Campus Road, Room 153A, Lawrence, KS, 66045, (785) 864-6414, 711 TTY.

