

Transit Safety and Oversight Spotlight

U.S. Department of Transportation
Federal Transit Administration

Nov. 2019
Vol. 4 No. 10

INSIDE THIS ISSUE:

Upcoming Safety Training	2-3
FTA Focuses on Innovation at APTA Conference	4
Collision Avoidance Technology Tested in FTA Safety Research and Demonstration Project	5-6
Now Available: New Public Transportation Agency Safety Plan Online Resources	7
Learn, Share, and Engage in Agency Safety Plan Development	8
Data Spotlight: Collisions with People	9
TSO Profile	10
Upcoming TSO Speaking Events, Webinars, and Focus Groups	11

Message from the Associate Administrator

Dear Transit Colleagues,

Last month, I had the privilege of participating at the APTA TRANSform Conference in New York City where I moderated a safety panel on how New York’s regional transit providers are addressing their own safety priorities. Notably, Acting Administrator K. Jane Williams discussed key FTA updates, including new mechanisms in place to provide payments to grantees in the event of a future government shutdown and the ability for projects that are under budget to explore options with FTA to use remaining funding for additional project activities. The Acting Administrator also emphasized the importance of innovation, and FTA’s partnership with the transit industry through formula and competitive grants, to continue meeting the growing expectations of riders.

My staff also participated in several APTA committee meetings to provide timely updates on both safety and oversight activities. During the conference, we launched our new Public Transportation Agency Safety Plan (PTASP) [Technical Assistance Center \(TAC\)](#) to provide enhanced technical assistance on the development and implementation of safety plans.

We know that agencies are starting from different places in Agency Safety Plan development. The TAC will offer the resources to help all agencies meet the compliance deadline of July 20, 2020. Preliminary results from our recent safety stakeholder survey show that agencies are satisfied overall with FTA’s PTASP resources. If there is something new that would be helpful or that we need to do differently, please let us know. We are open to your suggestions on how FTA’s TAC can support you to meet the PTASP requirements. Email the TAC at PTASP-TAC@dot.gov to share your feedback.

In addition to the new TAC and to close out the year, we will continue to offer webinars and plan to participate at the APTA Mid-Year Safety meeting in December. Finally, I would also like to encourage applications for FTA’s [Transit Advisory Committee for Safety](#) or TRACS when the opportunity for the next charter is announced in early 2020.

Thank you for all you do on behalf of transit safety.

Sincerely,

Henrika Buchanan



Henrika Buchanan, Associate Administrator for Transit Safety and Oversight

Upcoming Safety Training

FTA sponsors several safety training courses, including those listed below. The [complete schedule](#) of training courses offered through September 2020 is available on FTA's safety website. Please contact the FTA-sponsored [Transportation Safety Institute \(TSI\)](#) at (405) 954-3682 for safety training registration and course information. Individuals may contact FTA's Safety Promotion Team at FTASafetyPromotion@dot.gov to request an [Individual Training Plan](#) (ITP). Participants in the Public Transportation Safety Certification Training Program have three years to complete their ITP requirements.

Courses Required by the Public Transportation Safety Certification Training Program (RAIL)*		
Effectively Managing Transit Emergencies	Tucson, AZ	Dec. 2-5
	Cleveland, OH	Dec. 16-19
	Baton Rouge, LA	Jan. 13-16
	Newark, NJ	Feb. 3-6
Safety Management System (SMS) Awareness (eLearning)	On demand at tsi.dot.gov	Available 24/7
SMS Principles for State Safety Oversight (SSO) Programs	Landover, MD	Dec.13
	Seattle, WA	Mar. 13
SMS Principles for Transit	Landover, MD	Dec. 10-12
	Tucson, AZ	Jan. 22-24
	Memphis, TN	Feb. 19-21
SMS Safety Assurance	Virtual-Live Training at tsi.dot.gov	Jan. 15
		Feb. 19
Transit Rail Incident Investigation	San Jose, CA	Dec. 16-20
Transit Rail System Safety	Landover, MD	Feb. 10-14
Voluntary Courses for the Public Transportation Safety Certification Training Program (BUS)**		
Fundamentals of Bus Collision Investigation	Monterey, CA	Jan. 13-17
	Orlando, FL	Jan. 27-31
Transit Bus System Safety	Philadelphia, PA	Dec. 2-6
	Garden City, NY	Jan. 27-31

*Applies to SSOA personnel and contractors who conduct safety audits and examinations of public transportation systems not subject to Federal Railroad Administration regulation, as well as rail fixed guideway public transportation system personnel and contractors who are directly responsible for safety oversight. Other safety personnel, including those from bus agencies, are encouraged to participate in the voluntary program.

**The voluntary bus program also includes Effectively Managing Transit Emergencies, SMS Awareness, SMS Safety Assurance, and SMS Principles for Transit. If you would like to participate in the voluntary program please contact FTASafetyPromotion@dot.gov to request an ITP and see the rail schedule above for course availability.

Training, cont. from pg. 2

ADDITIONAL COURSES: Bus and Rail Courses (In-Person)

Advanced Problems in Bus Collision Investigation	Phoenix, AZ	Feb. 3-7
Crime Prevention Through Environmental Design	Tampa, FL	Feb. 24-25
Instructor's Course for Transit Trainers	Orlando, FL Fresno, CA Hilton Head, SC	Dec. 9-13 Jan. 6-10 Feb. 24-28
Reasonable Suspicion and Post-Accident Testing Determination Seminar	Irvine, CA	Feb. 7
Safety, Security, and Emergency Management Considerations for FTA Capital Projects	Arlington, VA	Dec. 17-19
Substance Abuse Management and Program Compliance	Irvine, CA	Feb. 2-4
Transit Industrial Safety Management	Austin, TX	Jan. 6-10
Transit Safety and Security Audit Course	Landover, MD Pomona, CA	Dec. 4-6 Jan. 29-31
Transit Supervisor Certification Course	Los Angeles, CA Orlando, FL	Jan. 6-10 Feb. 3-7
Transit System Security	Las Vegas, NV Phoenix, AZ Atlanta, GA	Dec. 16-20 Jan. 13-17 Feb. 10-14
Transit System Security: Design Review	Tampa, FL	Feb. 26-28

ADDITIONAL COURSES: eLearning Courses (Web-Based)

Roadmap to Drafting an Agency Safety Plan for Bus Agencies	On demand at tsi.dot.gov	Available 24/7
Curbing Transit Employee Distracted Driving	On demand at tsi.dot.gov	Available 24/7
Fatigue and Sleep Apnea Awareness for Transit Employees	On demand at tsi.dot.gov	Available 24/7
Rail Nomenclature	On demand at tsi.dot.gov	Available 24/7
Bus Nomenclature	On demand at tsi.dot.gov	Available 24/7

FTA Focuses on Innovation at APTA Conference

At the APTA TRANSform Conference in October, FTA Acting Administrator K. Jane Williams focused her remarks and activities on the future of public transportation. As part of her keynote address to industry stakeholders, Acting Administrator Williams highlighted U.S. Transportation Secretary Elaine L. Chao's top priorities of safety, infrastructure investment, and innovation. A key theme throughout her remarks was innovation and the need to incorporate innovation into all aspects of public transportation to improve the riders' experience and meet their growing expectations as we enter the next decade. You can read her full remarks on the FTA [website](#).

FTA's Associate Administrator for Transit Safety and Oversight (TSO) Henrika Buchanan moderated a session on best practices in safety. FTA staff also conducted a Safety Management System training for 85 transit agency leaders and participated in several committee meetings including the Safety Coordinating Council Committee and the State Affairs Committee; as well as the Federal Procedures and Regulations and Funding, Finance, and Tax Policy Legislative Subcommittees. TSO's presentations from the conference are posted on TSO's conference presentation [website](#).



"Our ability to innovate and our leadership in the mobility discussion will ultimately determine the industry's ability to remain an option in the transportation network," said FTA Acting Administrator K. Jane Williams during FTA's general session. *Photo courtesy of Steve Barrett Photography.*

Paulina Orchard (left), Acting Division Chief for Safety Policy and Promotion, and Scott Giering (right), Director of the Office of Program Oversight, engaged with transit industry attendees at the FTA booth.



Henrika Buchanan, FTA's Chief Safety Officer and Associate Administrator for Transit Safety and Oversight, moderated the Best Practices in Safety: A NYC Regional Perspective session. *Photo courtesy of Steve Barrett Photography.*

Candace Key (left), Director of the Office of System Safety, and Scott Giering (center), Director of the Office of Program Oversight, participate in the State Affairs Committee Meeting and discussed PTASP implementation and State Management Review findings. *Photo courtesy of Steve Barrett Photography.*



Collision Avoidance Technology Tested in FTA Safety Research and Demonstration Project

Collisions are a serious problem in the public transportation industry with buses operating in highly congested traffic where other vehicles, pedestrians, and bicyclists are present. From 2002–2014, bus and vanpool transit modes reported¹ over 85,000 collisions resulting in over 1,300 fatalities, 201,000 injuries, and \$5.7 billion in casualty and liability expenses. The Pierce Transit Collision Avoidance and Mitigation Safety Research is one of the Federal Transit Administration's (FTA) [Safety Research and Demonstration Projects](#) which demonstrates how safety technology can significantly reduce the frequency and severity of these crashes and help protect vulnerable pedestrians, cyclists, and motorcyclists.

The project, funded largely by a \$1.66 million grant awarded by FTA in 2017, seeks to develop and demonstrate an automated collision avoidance and warning system (CAWS) for transit buses to detect impending forward collisions with motorized vehicles and non-motorized modes, such as pedestrians and bicyclists. The vehicle and pedestrian detection technology is paired with an automated emergency braking (AEB) system that can slow the bus by engaging the brakes.

Collision avoidance technologies have been incorporated into consumer cars and commercial trucks, but have not been explored extensively for public transit vehicles. Leaders in public transit, government, industry, and academia have teamed together to test the Pedestrian Avoidance Safety System (PASS) for use on transit buses.

PASS, developed by DCS Technologies, Inc., uses LIDAR technology to detect an imminent collision and automatically decelerate the vehicle. This gives operators the time and distance required to bring buses to a controlled stop.



A Pierce Transit bus equipped with the AEB system being tested at the VTTI Smart Road Facility. The front of the bus is equipped with LIDAR sensors, which look like small black boxes installed on the front bumper. *Photo courtesy of VTTI.*

The project is also developing a cost-savings analysis methodology to determine the return on investment for equipping buses with this technology. Effects on passenger motion and driver opinions and trust in the technology are also being studied. Two buses will have cameras and data recorders installed for monitoring passenger motion during braking.

Pierce Transit is the sole transit partner involved in this national FTA research project. Other partners include the Washington State Transit Insurance Pool—a risk pool consisting of 25 Washington transit agencies providing financial and management support to the project—the Virginia Tech Transportation Institute (VTTI), the University of Washington, the University of South Florida's Center for Urban Transportation Research, Munich Reinsurance America, Inc., and Veritas Forensic Accounting and Economics.

Continued on pg. 6

¹Source: FTA National Transit Database (NTD) for all reporting U.S. transit agencies.

Cont. from pg. 5

“This important work would not be possible without the collaboration between the [Washington] Department of Transportation, Pierce Transit, and the Federal Transit Administration. They are all promoting technology advancement and safety for pedestrians. We feel that automated collision avoidance systems like this are good both economically for our nation’s transportation system and for the wellbeing of our communities,” explained Andrew Krum, senior research associate for VTTI’s Center for Truck and Bus Safety.

Pierce Transit sent a bus to VTTI—the largest transportation safety institute in the United States—to install and evaluate the PASS equipment in controlled conditions on the Virginia Smart Roads testing facility. VTTI is testing about 150 scenarios under various conditions using an inflatable vehicle target for forward collision testing and a remote-controlled pedestrian mannequin that can simulate standing, walking, and running in front of the bus.

The initial testing period was successful and the project collected data to provide insight into PASS performance across vehicle speed, distance, and bus turning geometries. The testing showed good performance in low-speed, straight-line approaches and the data will serve as an input for further improvements.

After completion of in-service engineering testing in Winter 2019, Pierce Transit will conduct a revenue service field demonstration, which is scheduled to operate through April 2021. FTA will then receive a report highlighting the results of the project, including the effectiveness, return on investment, and other cost-saving impacts of the solution that transit industry can use to determine whether to equip their transit buses with driver assistance technology. The project is anticipated to finish in 2021.

For more information, check out NBC Washington’s [news report](#) and VTTI’s [press release](#) or contact FTA’s [Roy Chen](#).



Simulated pedestrian collision avoidance test of Pierce Transit bus equipped with LIDAR detectors on front bumper at VTTI Smart Road test track. Photo courtesy of VTTI.



Now Available: New Public Transportation Agency Safety Plan Online Resources

The [Public Transportation Agency Safety Plan \(PTASP\) regulation](#) requires certain operators of public transportation systems that are recipients or subrecipients of FTA grant funds to develop Agency Safety Plans, including the processes and procedures necessary for implementing Safety Management Systems (SMS).

FTA recently launched the PTASP [Technical Assistance Center \(TAC\)](#) to support agencies in meeting the PTASP requirements by the July 20, 2020 deadline. Through the TAC, FTA continues to add new resources to assist with drafting or reviewing ASPs. The new resources are organized by type:

Plan Development: regulatory requirements, activities and milestones for agency safety plan review and approval, and training materials to support plan development.

- [ASP Review Checklist for RTAs and SSOAs | Excel Checklist](#)
- [Sample Agency Safety Plan Development, Review and Approval Timeline for RTAs and SSOAs](#)
- [2019 PTASP Bus Workshop Participant Guide](#)
- [2019 FTA Joint SSO and RTA Workshop PTASP Workshop Participant Guide](#)

Safety Risk Management (SRM): tools to support development of SRM processes.

- [Potential Sources of Hazard Information for Bus Transit Operations](#)
- [Safety Risk Mitigations and Corrective Actions Guide](#)
- [Sample Safety Risk Assessment Matrices for Rail Transit Agencies](#)
- [Sample Safety Risk Register for Rail Transit Agencies](#) and [Guide](#)
- [Sample Safety Risk Register for Bus Transit Agencies](#) and [Guide](#)

Safety Performance Targets: information on developing voluntary safety performance indicators and safety performance targets.

- [Introduction to Safety Performance Indicators and Targets](#)

You can also browse resources by agency type, including small bus and rail transit providers, State Departments of Transportation, and more on the [TAC website](#). For questions on PTASP technical assistance, email PTASP-TAC@dot.gov or call 877-827-7243 (PTASP-AID).



Learn, Share, and Engage in Agency Safety Plan Development

By Paulina Orchard, FTA's Acting Division Chief for Safety Policy and Promotion and PTASP-TAC Lead



Paulina Orchard, FTA's Acting Division Chief for Safety Policy and Promotion and PTASP-TAC Lead

On October 14, 2019, FTA launched the Public Transportation Agency Safety Plan (PTASP) [Technical Assistance Center \(TAC\)](#)—a one-stop-shop for all things PTASP. What exactly is the TAC and who is it for? This article will explore the interactive components of the TAC and how you can further engage with FTA and the broader transit industry as you develop and review your Agency Safety Plans.

The TAC is a technical assistance resource for all organizations required to develop or oversee an Agency Safety Plan, including bus and rail transit providers (large and small), State Departments of Transportation, and State Safety Oversight Agencies.

First and foremost, the TAC offers one-on-one support for those developing an Agency Safety Plan. This can include reviews of draft plan contents and support with understanding specific PTASP requirements. On a case-by-case basis, the TAC can provide onsite support that includes training on Agency Safety Plan development and briefings for agency leaders.

The TAC also supports PTASP engagement, industry-wide. Organizations can engage through multiple methods, including online discussion forums in the [PTASP Community of Practice](#). The forums provide a platform for stakeholders to not only ask questions, but also receive feedback and share examples with transit industry colleagues. For example, if you are currently working on Employee Safety Reporting Program requirements for your Agency Safety Plan, you could post a question to ask for examples from your peers on what methods have worked or potential challenges. Forum users can respond by providing feedback and even sharing documents.

The PTASP Technical Assistance Center offers a range of services, from one-on-one support to peer engagement, so that all transit stakeholders can find what they need to prepare for July 20, 2020.



This forum offers peer-to-peer sharing of effective practices to support you in developing an Agency Safety Plan and implementing a Safety Management System. It also provides an opportunity for you to ask questions and request and share resources with the transit community.

How it works:

- Post a question, comment, or idea, or offer or request a resource.
- Check out questions, comments, or ideas others have suggested and vote on your favorites.
- Please include one question, comment, or suggestion per post to help us keep the forum focused.

Thanks for joining our community and working to support PTASP implementation.

Do you have a PTASP question or suggestion?

Enter it here.

Hot ideas Top New Category Status My feedback

3 votes
In a multimodal system with rail and bus, can the Chief Safety Officer oversee safety for BOTH rail and bus?
RESPONDED · 1 comment · PTASP Development

PTASP "Community of Practice" forum.

TAC website homepage with key engagement tools and resources.

Another component of the TAC is the Resource Library, a centralized repository for all PTASP-related FTA resources. This includes factsheets, technical assistance provided at recent PTASP bus and rail workshops, tools and checklists, training materials, webinars, and more. Resources are organized by agency type to easily identify materials that are most helpful to your organization's needs. Simply click on the icon that matches your agency type to access a curated list of resources sorted by topic.

Don't forget to [register](#) for updates to receive PTASP-TAC notifications via email. Additionally, a recent webinar provided an overview of the TAC. You can review the webinar [slides](#) and [re-cording](#) to learn more. For additional questions or support, email PTASP-TAC@dot.gov or call 877-827-7243 (PTASP-AID).

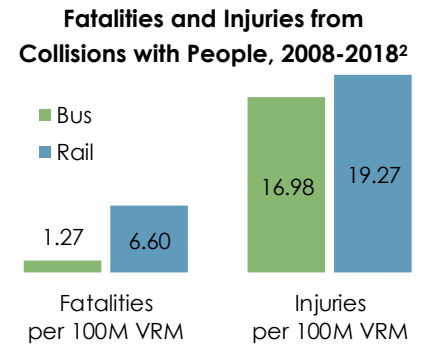
Data Spotlight: Collisions with People

The Transit Safety and Oversight Spotlight includes a “Data Spotlight” to share safety data trends and highlight data sets that may help the industry identify safety performance targets for their [Agency Safety Plans](#).

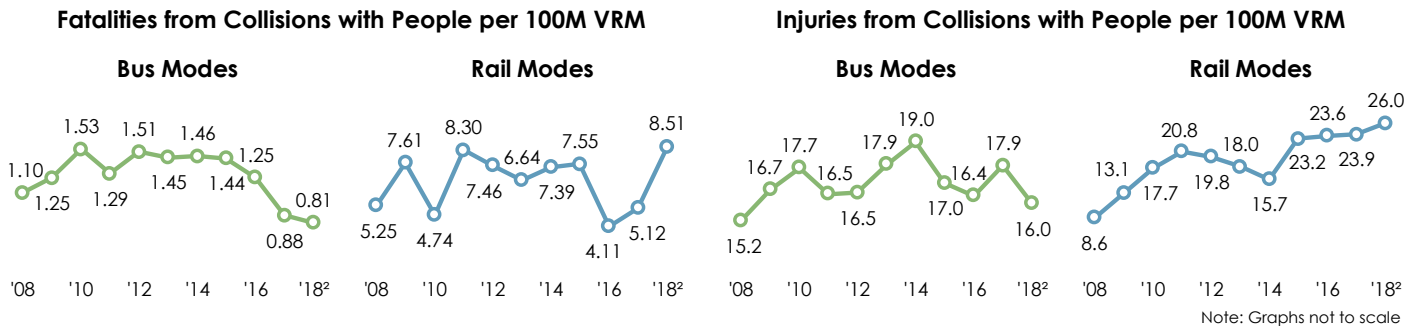
This month, we focus on National Transit Database (NTD) reporting of collisions¹ between transit vehicles and people between 2008 and 2018.² These are collisions with individuals not in a motor vehicle, such as pedestrians, bicyclists, and customers entering or exiting a bus or a train. Questions? Please contact FTA’s [Dharm Guruswamy](#).

Between 2008 and 2018, FTA required transit agencies to report a collision between a transit vehicle and person if the event met an NTD reporting threshold (e.g., injury, fatality, property damage). FTA expanded this requirement in 2015 to include *all* collisions between rail transit vehicles and people; bus reporting requirements did not change.

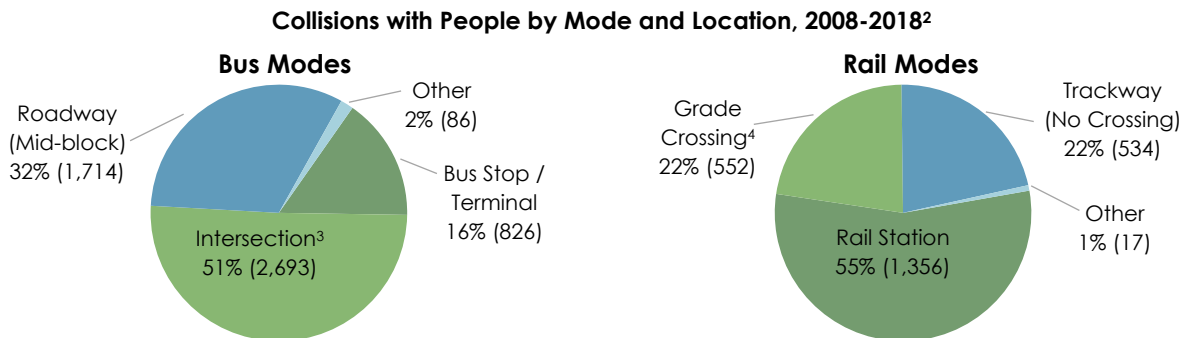
During this eleven-year period, transit agencies reported 5,319 collisions between bus transit vehicles and people, resulting in 400 *Fatalities* and 5,363 *Injuries* and 2,459 collisions between rail transit vehicles and people, resulting in 562 *Fatalities* and 1,640 *Injuries*. When accounting for differing service levels, rail modes reported more *Fatalities* from collisions with people per vehicle revenue mile (VRM) than bus modes (6.60 vs. 1.27 per 100M VRM). This was similar for the injury rate, with rail modes reporting 19.27 *Injuries* per 100M VRM from collisions with people compared to 16.98 for bus modes.



Below are the *Fatality* and *Injury* rates for collisions with people per 100M VRM from 2008 to 2018.



Most bus collisions with people (51 percent) occurred at street *Intersections*.³ In contrast, 55 percent of rail collisions with people occurred in *Stations* or other revenue facilities.



Most bus *Intersection* collisions with people (52 percent) occurred while buses were turning. In 2016, NTD began collecting data from agencies to specify turn direction. Since then, transit agencies have reported more than twice as many of these collisions during left turns (240) than right turns (117).

¹Data includes reporting from NTD full reporters and excludes all collisions involving suicides.

²Data submitted to the NTD for year 2018 is preliminary and subject to revision.

³Bus collisions at intersections include those at rail grade crossings.

TSO Profile

This month's profile includes a Q&A with Tamika Saunders, Transportation Program Analyst, Office of Program Oversight.



Tamika Saunders, Transportation Program Analyst, Office of Program Oversight

How would you explain your job to someone you've never met? I manage a program whose contractors conduct oversight reviews on transit agencies across the United States that receive certain grant funds.

What is your favorite part of your job? I enjoy the opportunity to visit different transit agencies, big and small, to observe the differences and apply my understanding of transit in my daily responsibilities. I also have an amazing team that I work with that make my job fun and enjoyable.

What were you doing prior to this role? Prior to this role, I worked for the Environmental Protection Agency in contracting.

What led you to work in transit? Growing up in Washington, DC, I used public transit my entire life. There weren't yellow school buses to take us to school so we used public transportation. When I became aware of a position at FTA that allowed me to incorporate my previous contracting experience and fulfilled my desire to engage in transit, I applied.

What are some current projects or initiatives that you or your team are working on? We are starting the Fiscal Year 2020 oversight review cycle and updating the [Comprehensive Review Guide](#).

How do you work with people outside of the FTA? How would you like to be working with them in the future? I work closely with contractors who conduct FTA's oversight reviews. Our continued collaboration helps to ensure a great working relationship with all parties, to include the FTA regions and recipients.

What is your favorite form of transportation and why? My favorite are trains because they are the fastest for my travel and the mode I used most as a child.

What are your hobbies and interest outside of work? I enjoy traveling with my husband and 3-year-old twins. Also, I am a big NFL fan and spend all day Sunday, and Monday and Thursday nights at home watching football.



Upcoming Webinars and Virtual Focus Groups

Oversight Tracking System (OTrak) Virtual Focus Groups

Focus Group 2: December 4, 2019
1:00-3:00 P.M. EST

The focus group will provide recipients with a first look at the system. FTA will demonstrate the key recipient functionalities and ask for feedback on user navigation, functions, and experience. The target audience includes staff involved in FTA's program oversight reviews who respond to FTA's information requests prior to a review, submit documentation to FTA to resolve findings, approve submission of documentation to FTA, or need access to past oversight review reports.

Public Transportation Agency Safety Plan (PTASP) Agency Highlights

November 21, 2019
2:00 PM EST

Learn from a Transit Agency, State Safety Oversight Agency, and a State Department of Transportation about developing an Agency Safety Plan. The Chicago Transit Authority (CTA), the Illinois Department of Transportation (IDOT), and the Maryland Department of Transportation/Maryland Transit Authority (MDOT/MTA) will share their perspectives, approaches, and experiences related to developing and approving Agency Safety Plans.

The webinar slides and recordings will be posted to the [PTASP Resource Library](#).



U.S. Department
of Transportation

**Federal Transit
Administration**

Federal Transit Administration
Office of Transit Safety and Oversight
1200 New Jersey Avenue SE
Washington, DC 20590

<https://www.fta.dot.gov/regulations-and-guidance/safety/transit-safety-oversight-tso>

Upcoming TSO Speaking Events

APTA Mid-Year Safety Seminar

December 3
Seattle, WA

Transportation Research Board (TRB)

Annual Meeting

January 13, 2020
Washington, DC