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State Bus Transit Safety Guide

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State Bus Transit Safety Guide

Deborah Buchacz Sapper

March 2005

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16. Abstract  
The purpose of this project was to gather industry “Best Practices” for developing model state safety programs, necessary state legislation, for the development of improved bus transit safety standards and practices. This guide, as well as associated information included on a website, will serve to aid states in the development of a state system safety program and related implementing procedures which will address the voluntary requirements by FTA.

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STATE BUS TRANSIT SAFETY GUIDE

This document (generally a summary of the website) serves as the Final Report for “State Bus Transit Safety Guide”. Through its National Center for Transit Research (NCTR), and under contract with the Florida Department of Transportation, the Center for Urban Transportation (CUTR) was tasked to gather industry “Best Practices” for developing model state safety programs, for the development of improved bus transit safety and security standards and practices. The Bus Transit System Safety Resource Guide website can be found at http://www.cutr.usf.edu/bussafety/

In July of 2001, FTA developed a draft “Model Transit Bus Safety Program.” This document defines a model transit bus safety program inclusive of safety oversight functions to complement the implementation of a transit safety program. The Program was initiated by the FTA in response to a 1998 National Transportation Safety Board (NTSB) special investigation report entitled “Transit Bus Safety Oversight” (PB98-917006, NTSB/SIR-98/03). The document was the result of findings from investigations and a subsequent public hearing in March 1998 concerning high-profile bus accidents in the United States. The NTSB report observed that there is a lack of consistency among the states regarding oversight of transit bus safety and there is currently no overall Federal regulatory structure guiding the oversight of transit bus safety. Consequently, NTSB recommended that the U.S. DOT, the American Public Transportation Association (APTA), the Community Transportation Association of America (CTAA) and the American Association of State Highway and Transportation Officials (AASHTO) “develop…a model comprehensive safety program(s) and provide it to all transit agencies.” The goal of the recommendations was to encourage the development of transit bus safety standards and practices that large bus agencies, as well as small transit bus operations, could practicably implement.

In December 2003, a Memorandum of Understanding was signed by FTA, AASHTO, APTA, and CTAA to promote voluntary development and implementation of bus safety and security plans at the state and transit system levels. The Model Transit Bus Safety and Security Program generated from this MOU contains contain two general categories: Core Safety Program Elements and Enhanced Safety Program Elements.

Core Safety Elements are the safety program elements that all transit providers should implement. Core Elements apply to all Section 5307 and 5311 transit providers. In cases where service is contracted with 5307 and 5311 funds, the grantee shall ensure the contractor would implement the core and enhanced safety program elements as applicable. Section 5310 provider participation in a safety program is subject to state discretion, however participation is encouraged.

The Core Safety Program Elements include:

- Driver /Employee Selection
- Driver/Employee Training
- Vehicle Maintenance
- Drug and Alcohol Abuse Programs
Safety Data Acquisition and Analysis
- Security

The Bus Transit Safety Resource Guide web site serves to aid states and transit agencies in the development of a system safety and security programs and related implementing procedures which address the voluntary requirements established by the FTA and its partners.

The materials provided on the web site are scalable for systems of any size, but particularly suitable for small urban and rural systems and are intended to be used as outline models and templates for state and transit agencies in developing their safety and security programs. The site contains best practices related to Core Safety Elements defined in the FTA Model Transit Bus Safety and Security Program, state and transit agency safety plans, bus operator applications and selection forms, pre-trip procedures, transit safety review forms, procurement procedures, drug & alcohol requirements and policies, training program, transit insurance pools, state legislation on public transit safety and security.

The Bus Transit Safety Resource Guide will help promote voluntary development and implementation of bus safety and security programs at the state and transit system level. The Bus Transit Safety Resource Guide Website is currently being used as a tool for AASHTO, SCOPT Safety and Security Task Force, State Departments of Transportation and Transit Agencies developing bus safety and security plans and by the Transportation Safety Institute (TSI) as a resource in their Bus System Safety Course.

For more information, contact Mike Johnson, Project Manager, at (850) 414-4500, jamesmike.johnson@dot.state.fl.us

Below are images from the website that give an overview of the information provided on the main pages of the web site. Each page contains documents located on Transit Bus Safety Resource Guide website or links to other web sites.
The Florida Department of Transportation (FDOT), in collaboration with members from the American Association of State Highway and Transportation Officials’ (AASHTO) Multi-State Technical Assistance Program (MTAP), is working with the Center for Urban Transportation Research (CUTR) to promote a bus transit safety management practices guide and model program to aid states and transit systems in the development of a system safety program and related implementing procedures.

The purpose of this project is to gather industry “best practices” for developing model state safety programs and state legislation necessary for the development of improved transit bus safety standards and practices.

The guide will serve as a useful resource for state departments of transportation and transit systems of any size in developing bus safety plans. The sample plans, contacts, reference links, and checklists available at this site are adaptable to systems of any size but are particularly suitable for small urban and rural (section 5311) recipients.

The Transit Bus Safety Resource Guide has been developed in response to the Model Transit Bus Safety and Security Program under development by the Federal Transit Administration (FTA). In cooperation with the American Public Transportation Association (APTA), the Community Transportation Association of America (CTAA), the American Association of State Highway and Transportation Officials (AASHTO), and other representatives from the transit bus industry, this website will attempt to assist in the promotion of a Transit Bus Safety and Security Program.

The Transit Bus Safety and Security Program contains two general categories of program elements:
Core Program Elements

Core Safety Program Elements are those elements that all transit providers should implement. Core elements apply to all Section 5307 and 5311 transit providers. Section 5310 providers participation in a safety and security program is subject to state discretion. In cases where service is contracted with 5307 or 5311 funds, the grantee shall ensure that the contractor would implement the core elements as applicable.

The Core Safety Program Elements include:

- Driver/Employee Selection
- Driver/Employee Training
- Vehicle Maintenance
- Drug and Alcohol Abuse Programs
- Safety Data Acquisition and Analysis
- Security
## Driver/Employee Selection

Driver selection is critical to safe transit operations. The driver of a transit vehicle is directly responsible for the safety of their passengers and other motorists that share the road with transit buses. The transit provider should have a clear definition of driver qualifications and background. This applies to all safety-critical employees, both paid and volunteer.

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<td>TCRP Synthesis 40 - Hiring and Training Public Transit Operators.pdf</td>
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</table>
## Driver/Employee Training

Once qualified candidates are identified and hired, initial and on-going training is critical to ensure proper operations and adherence to the transit providers’ rules and regulations. Proper qualification of operating and maintenance personnel is a vital part of a safe transit environment. Driver training should address specific safety-related issues appropriate to the type of vehicle and driving assignment.

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<td>TCRP Synthesis 40 - Hiring and Training Public Transit Operators pdf</td>
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<td>TSI Transit Safety &amp; Security Program pdf</td>
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<td>Washington State Transportation Training Coalition</td>
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</table>
**Vehicle Maintenance**

Proper maintenance of vehicles and equipment is critical to the continued safe operation of the transit system. Unsafe vehicles present unnecessary hazards to the driver, passengers, and other vehicles on the road. Basic vehicle maintenance practices must regularly address safety-related vehicle equipment to ensure that no unsafe vehicles are dispatched for service.

<table>
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<th>Resource</th>
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<tr>
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<td>NTI Procurement Training Offerings</td>
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<td>Vehicle Records, Preventive Maintenance &amp; Surveillance (Utah).pdf</td>
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Vehicle Operation

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<td>Vehicle Records, Preventive Maintenance &amp; Surveillance (Utah).pdf</td>
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### Safety Data Acquisition & Analysis

Understanding safety data is an important step toward allocating important (and often scarce) resources to implement safety program elements. Safety data relative to transit provider operations can be used to determine safety trends in system operation. These data include information gathered from within the system on safety-related events such as passenger injuries or claims, employee injuries, accidents, and incidents. Driver reports (sometimes called logs) can be an important source of safety problems, such as dangerous stop locations, problems with bus equipment, safety problems with the route, and other issues. The data are useful in a formal hazard identification and resolution process to help identify hazards before they cause accidents. The data may also help improve system performance, not only in respect to safety, but also in overall delivery of service to the riding public. In addition, trend analyses of safety data can help determine the effectiveness of safety initiatives that have been implemented.

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<tr>
<th>Accreditation Commission for Traffic Accident Reconstruction (ACTAR)</th>
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<td>Hazard Analysis Guidelines for Transit Projects pdf!</td>
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<td>TSI Fundamentals of Bus Collision Investigation (Training)</td>
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<td>TSI Transit Bus System Safety (Training)</td>
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<td></td>
<td>Washington State Transit Insurance Pool Standards for Operations</td>
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<td></td>
<td>Texas - Safety Data Acquisition and Analysis Guide</td>
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SECURITY

The security of passengers and employees is paramount to promoting the objectives of the FTA and its partner organizations in developing a Model Program. Transit providers must take all reasonable and prudent actions to minimize the risk associated with intentional acts against passengers, employees and equipment/facilities. To further this objective, transit providers will need to develop security plans and procedures and emergency response plans and procedures. The plans must include coordination with local law enforcement and with other regional transit providers, the conduct of exercises for their emergency plans, and assessment of critical assets and measures to protect these assets.

| APTA Public Transportation Security Issues | Keeping Our Members and Communities Safe: ATUs Role in Transit Security |
| APTA Terrorism & Public Transportation Resource Page pdf | Ohio Department of Transportation - System Security and Emergency Preparedness Plan (SSEP) - Template |
| ATU Security Information | Ohio Department of Transportation - Memorandum of Executive Approval |
| Challenges in Securing Transit Systems (GAC Report) pdf | NCTR - "Caps, Cameras, and Enclosures" |
| Critical Incident Management Guidelines | NIT Training - Workplace Safety & Security |
| Emergency Preparedness Information (M&TA) | Protecting Public Surface Transportation Against Terrorism pdf |
| Emergency Response Guidebook 2000 pdf | Protecting Surface Transportation & Patrons from Terrorist Activities pdf |
| FTA Top 20 Security Program Action Items for Transit Agencies | FTA-Guidance Document immediate Actions (SAS) for Transit Agencies for Potential and Actual Life-Threatening Incidents |
| TCRP Synthesis 27 - Emergency Preparedness for Transit Terrorism pdf | TSI Transit Safety & Security Program |
| Transit System Security Program Planning Guide | Washington DOT Mutual Aid Agreement |
| Washington DOT Emergency Response Agreement |
**Training & Assistance**

There are several resources for technical assistance and outreach for bus system safety.

Federally supported training programs like those offered through the Transportation Safety Institute (TSI) provide opportunities for training and information.

Please visit the following sites to see what types of bus system safety training could benefit your organization:

- Transportation Safety Institute (TSI)
- Transportation and Security Certificate Program
- National Transit Institute (NTI)
- CTAA's Safety Review Program
- Kansas RTAP Program

**State Legislation**

**Florida**
- FDOT Legislation and Policy
- Public Bus Safety Standards

**New York**
- NYCT Public Transportation Safety Board
- NYCT Public Operator Information

**Safety Policies & Plans**

**Colorado**
- Colorado Safety Plan

**Florida**
- Bus Transit System Safety Review Form
- Pasco County SSPP

**Indiana**
- Indiana Safety Plan

**Ohio**
- Ohio Safety Plan

**North Carolina**
- Safety Resource CD

- Safety Policy Samples:
  - Sample Policy 1
  - Sample Policy 2
  - Sample Policy 3

- Training Material for Resource Guide:
  - System Safety Program Plan Elements
  - Final Safety Workshop
  - Final Safety Element Worksheet

- System Safety Program Plan Elements Rural County
  - 1 - 2
## Best Practices

### AASHTO States
- **Florida**
  - Design Handbook for Florse Bus Passanger Facilities
  - Florida Transit Maintenance Consortium
  - Florida RTAP Program
- **Iowa**
  - Iowa Office of Public Transit Manager's Handbook
  - Iowa Office of Public Transit Resources
- **Minnesota**
  - Guidebook for Minnesota Transit Providers
  - Transit Safety and Security Workbook
- **North Carolina**
  - NCDOT Public Transit Training Resource Database
- **Texas**
  - Texas Transit Safety Manual
- **Utah**
  - Utah Transit Program Compliance Forms
- **Washington**
  - Washington State Transit Insurance Pool Standards for Operations
  - Volunteer Drivers - A Guide to Best Practices

### APTA
- APTA's Safety Management Audit Program

### FTA
- FTA Drug & Alcohol Information
- FTA Drug & Alcohol Testing Program

### TCRP