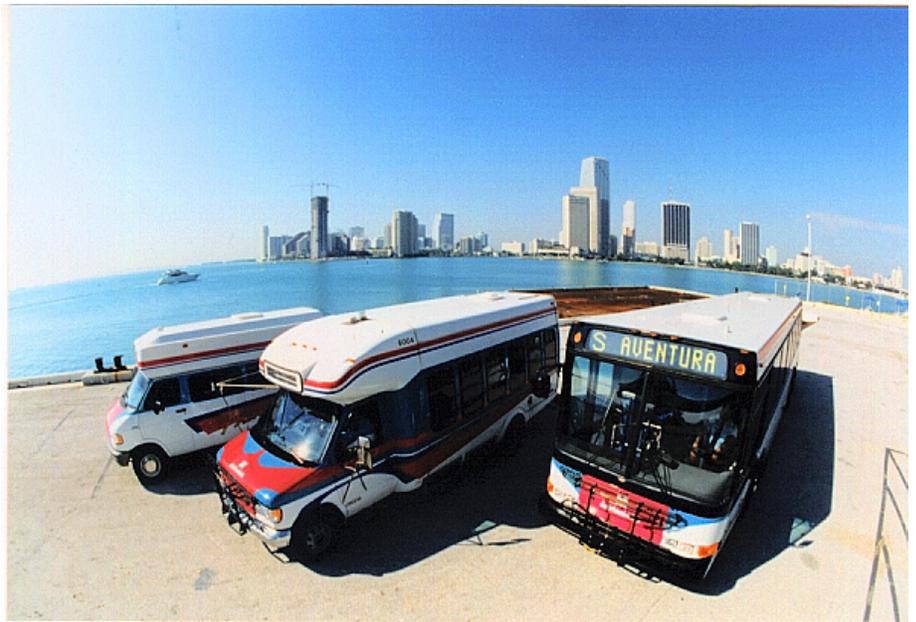


State Bus Transit Safety Guide

Deborah Buchacz Sapper

March 2005



www.cutr.usf.edu/bussafety

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<p>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.</p>			
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The opinions, findings and conclusions expressed in this publication are those of the authors and not necessarily those of the U.S. Department of Transportation or the State of Florida Department of Transportation.

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 web site 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.

TRANSIT BUS SAFETY RESOURCE GUIDE



WELCOME

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 for systems of any size but are particularly suitable for small urban and rural (section 5311) recipients.



PROJECT SCOPE

MEMORANDUM OF UNDERSTANDING



SAFETY PROGRAM ELEMENTS

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 ELEMENTS

ENHANCED ELEMENTS

WHAT'S NEW

March 23, 2005

FTA Safety and Security Questions for Triennial Reviews

FTA 2005 Triennial Review Workbook



TRANSIT BUS SAFETY RESOURCE GUIDE



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](#)



CORE PROGRAM ELEMENTS



DRIVER / EMPLOYEE SELECTION



DRIVER / EMPLOYEE TRAINING



VEHICLE MAINTENANCE



DRUG & ALCOHOL ABUSE PROGRAMS



SAFETY DATA ACQUISITION & ANALYSIS

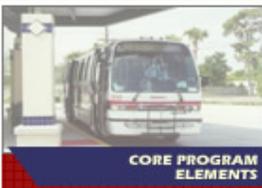


SECURITY



ENHANCED PROGRAM ELEMENTS

TRANSIT BUS SAFETY RESOURCE GUIDE



CORE PROGRAM ELEMENTS

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.



DRIVER / EMPLOYEE SELECTION

[Bus Driver Application - Laguna Beach, CA](#)

[Bus Operator Application for Safety-Sensitive Positions- King County \(Seattle\)](#)

[Bus Operator Application - TriMet \(Portland\) pdf](#)

[Bus Operator Application - Utah Transit Authority pdf](#)

[Bus Operator Selection - Edmonton Transit System](#)

[Bus Operator Selection - PSTA](#)

[Bus Operator Selection System - Winnipeg pdf](#)

[Bus Operator Survey & Selection Program \(BOSS\) - APTA](#)

[Canadian Urban Transport Association \(CUTA\) Employee Selection Training pdf](#)

[North Carolina Selection Procedures 1 2 3 4](#)

[Ohio Statewide Transportation Coordination Task Force](#)

[Santa Cruz MTD Operator Application & Materials - 1 2 3 4](#)

[Selection Criteria and Job Requirements - Sydney, Australia pdf](#)

[START - Transit Personnel Testing & Training Program](#)

[TCRP Synthesis 40 - Hiring and Training Public Transit Operators pdf](#)



DRUG & ALCOHOL ABUSE PROGRAMS



SAFETY DATA ACQUISITION & ANALYSIS



SECURITY



ENHANCED PROGRAM ELEMENTS



VEHICLE MAINTENANCE

TRANSIT BUS SAFETY RESOURCE GUIDE



DRIVER/EMPLOYEE TRAINING

Once qualified candidates are identified and hired, initial and on-going training is critical to insure 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.

[Driver Training for Small Urban and Rural Transit Systems \(NYSDOT\)](#)

[Florida Transit Operator Training Program](#)

[Kansas RTAP Ten Tips for Safety-Sensitive Staff Who Must Take Medications](#)

[National Safety Council Online Training](#)

[NCDOT Public Transit Training Resource Database](#)

[NTI Training - Workplace Safety & Security](#)

[NTI CD-ROM Training](#)

[Pennsylvania Training Resource & Information Network \(PennTrain\)](#)

[PennSCORE- Operator Training Manual](#)

[Project Action](#)

[RTAP Training & Technical Assistance - Handbook Chapter 13 pdf](#)

[TCRP Report 72 - Simulators and Bus Safety: Guidelines for Acquiring and Using Transit Bus Operator Driving Simulators](#)

[TCRP Report 81 - Toolbox for Transit Operator Fatigue pdf](#)

[TCRP Synthesis 40 - Hiring and Training Public Transit Operators pdf](#)

[Toolbox for Operator Fatigue Training](#)

[Transit Safety Review Forms \(Florida\)](#)

[TSI Transit Safety & Security Program pdf](#)

[Washington State Transportation Training Coalition](#)



CORE PROGRAM ELEMENTS



DRIVER / EMPLOYEE SELECTION



DRIVER / EMPLOYEE TRAINING



VEHICLE MAINTENANCE



DRUG & ALCOHOL ABUSE PROGRAMS



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CORE PROGRAM ELEMENTS



DRIVER / EMPLOYEE SELECTION



DRIVER / EMPLOYEE TRAINING



VEHICLE MAINTENANCE

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.

[APTA's Manual for System Safety Program Plans pdf](#)

[APTA's Standard Bus Procurement Guidelines](#)

[Florida's Vehicle Procurement](#)

[Florida's Vehicle Maintenance Training](#)

[NTI Procurement Training Offerings](#)

[Pre-Trip Inspection Procedures pdf](#)

[Transit Safety Review Forms \(Florida\)](#)

[Transit Vehicle Inspections: A Handbook for Rural Transit Providers pdf](#)

[Vehicle Inspection Form \(Iowa\) pdf](#)

[Vehicle Operation Inspection Procedures \(Utah\) pdf](#)

[Vehicle PreTrip Inspection \(Utah\) pdf](#)

[Vehicle Records, Preventative Maintenance & Surveillance \(Utah\) pdf](#)



DRUG & ALCOHOL ABUSE PROGRAMS



SAFETY DATA ACQUISITION & ANALYSIS



SECURITY



ENHANCED PROGRAM ELEMENTS

TRANSIT BUS SAFETY RESOURCE GUIDE



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.

[Accreditation Commission for Traffic Accident Reconstruction \(ACTAR\)](#)

[Critical Incident Management Guidelines](#)

[Florida Transit Bus Accidents 1 2 3](#)

[FTA National Transit Database Safety and Security Newsletter](#)

[Hazard Analysis Guidelines for Transit Projects pdf](#)

[North Carolina Safety Data Collection Procedures 1 2 3](#)

[Root Cause Training](#)

[TCRP Synthesis 18 - Bus Occupant Safety pdf](#)

[Traffic Accident Reconstruction Origin \(TARO\)](#)

[Transit Audit Checklist pdf](#)

[Transit Safety Review Forms \(Florida\)](#)

[Transit Security Checklist pdf](#)

[TSI Fundamentals of Bus Collision Investigation \(Training\)](#)

[TSI Transit Bus System Safety \(Training\)](#)

[Washington State Transit Insurance Pool Standards for Operations](#)

[Texas- Safety Data Acquisition and Analysis Guide](#)



CORE PROGRAM ELEMENTS



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DRIVER / EMPLOYEE TRAINING



VEHICLE MAINTENANCE



DRUG & ALCOHOL ABUSE PROGRAMS



SAFETY DATA ACQUISITION & ANALYSIS



SECURITY



ENHANCED PROGRAM ELEMENTS

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](#)

[APTA Terrorism & Public Transportation Resource Page pdf](#)

[ATU Security Information](#)

[Challenges in Securing Transit Systems \(GAO Report\) pdf](#)

[Critical Incident Management Guidelines](#)

[Emergency Preparedness Information \(WMATA\)](#)

[Emergency Response Guidebook 2000 pdf](#)

[FTA Top 20 Security Program Action Items for Transit Agencies](#)

[FTA Public Transportation System Security Plan and Emergency Preparedness Planning Guide](#)

[Keeping Our Members and Communities Safe: ATU's Role in Transit Security](#)

[Ohio Department of Transportation- System Security and Emergency Preparedness Plan \(SSEPP\) - Template](#)

[Ohio Department of Transportation- Memorandum of Executive Approval](#)

[NCTR - "Cops, Cameras, and Enclosures"](#)

[NTI Training - Workplace Safety & Security](#)

[Protecting Public Surface Transportation Against Terrorism pdf](#)

[Protecting Surface Transportation & Patrons from Terrorist Activities pdf](#)

[FTA-Guidance Document, Immediate Actions \(IAs\) for Transit Agencies for Potential and Actual Life-Threatening Incidents](#)

[TCRP Digest 59 - Guide to Public Transportation Security Resources pdf](#)

[TCRP Report 86 - Intrusion Detection for Public Transit Facilities pdf](#)

[TCRP Synthesis 21 - Improving Transit Security pdf](#)

[TCRP Synthesis 27 - Emergency Preparedness for Transit Terrorism pdf](#)

[Transit System Security Program Planning Guide](#)

[TSI Transit Safety & Security Program](#)

[Washington DOT Mutual Aid Agreement](#)

[Washington DOT Emergency Response Agreement](#)



CORE PROGRAM ELEMENTS



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VEHICLE MAINTENANCE



DRUG & ALCOHOL ABUSE PROGRAMS



SAFETY DATA ACQUISITION & ANALYSIS



SECURITY



ENHANCED PROGRAM ELEMENTS

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](#)



TRANSIT INSURANCE POOLS

[California Transit Insurance Pool](#)

[Washington State Transit Insurance Pool](#)

[Wisconsin Transit Insurance](#)

STATE LEGISLATION

Florida

[FDOT Legislation and Policy](#)
[Public Bus Safety Standards](#)

New York

[NYS Public Transportation Safety Board](#)
[NYS 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

[Model 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](#)

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BEST PRACTICES

AASHTO States

Florida

[Design Handbook for Florida Bus Passenger Facilities](#)

[Florida Paratransit 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 Guidebook](#)

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 Manual for System Safety Program Plans](#)

[APTA's Safety Management Audit Program](#)

FTA

[FTA Drug & Alcohol Information](#)

[FTA Drug & Alcohol Testing Program](#)

TCRP

