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U. S. Department of Transportation

Federal Transit Administration

IMPLEMENTATION GUIDELINES FOR STATE SAFETY OVERSIGHT OF RAIL FIXED GUIDEWAY SYSTEMS

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These guidelines will assist states, oversight agencies, and rail transit agencies in developing safety and security programs to satisfy the requirements of the Federal Transit Administration (FTA). These requirements were published in the *Federal Register* on December 27, 1995 as "Rail Fixed Guideway Systems; State Safety Oversight" (49 CFR part 659). These guidelines are directed at states and rail transit systems receiving Federal funding under FTA's formula program for urbanized areas (formerly section 9).

These guidelines are organized by the key steps that states, oversight agencies, and rail transit systems must take in establishing and administering effective rail safety and security oversight programs.

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Finally, the authors would like to thank those representatives from the six existing Oversight Agencies who supplied materials to support the development of these Guidelines:

Mr. Donald Johnson
California Public Utilities Commission

Mr. Michael Johnson
Florida Department of Transportation

Mr. Timothy Davis
Massachusetts Department of Public Utilities

Mr. Richard Mooney
Missouri Department of Economic Development,
Division of Transportation

Mr. Norman Schneider
New York Public Transportation Safety Board

Mr. David Barber
Pennsylvania Department of Transportation

METRIC/ENGLISH CONVERSION FACTORS

ENGLISH TO METRIC	METRIC TO ENGLISH
LENGTH (APPROXIMATE) 1 inch (in) = 2.5 centimeters (cm) 1 foot (ft) = 30 centimeters (cm) 1 yard (yd) = 0.9 meter (m) 1 mile (mi) = 1.6 kilometers (km) 1 kilometer (km) = 0.6 mile (mi)	**LENGTH (APPROXIMATE)** 1 millimeter (mm) = 0.04 inch (in) 1 centimeter (cm) = 0.4 inch (in) 1 meter (m) = 3.3 feet (ft) 1 meter (m) = 1.1 yards (yd)
AREA (APPROXIMATE) 1 square inch (sq in, in^2) = 6.5 square centimeters (cm^2) 1 square foot (sq ft, ft^2) = 0.09 square meter (m^2) 1 square yard (sq yd, yd^2) = 0.8 square meter (m^2) 1 square mile (sq mi, mi^2) = 2.6 square kilometers (km^2) 1 acre = 0.4 hectare (ha) = 4,000 square meters (m^2)	**AREA (APPROXIMATE)** 1 square centimeter (cm^2) = 0.16 square inch (sq in, in^2) 1 square meter (m^2) = 1.2 square yards (sq yd, yd^2) 1 square kilometer (km^2) = 0.4 square mile (sq mi, mi^2) 10,000 square meters (m^2) = 1 hectare (ha) = 2.5 acres
MASS – WEIGHT (APPROXIMATE) 1 ounce (oz) = 28 grams (gm) 1 pound (lb) = .45 kilogram (kg) 1 short ton = 2,000 pounds (lb) = 0.9 tonne (t)	**MASS - WEIGHT (APPROXIMATE)** 1 gram (gm) = 0.036 ounce (oz) 1 kilogram (kg) = 2.2 pounds (lb) 1 tonne (t) = 1,000 kilograms (kg) = 1.1 short tons
VOLUME (APPROXIMATE) 1 teaspoon (tsp) = 5 milliliters (ml) 1 tablespoon (tbsp) = 15 milliliters (ml) 1 fluid ounce (fl oz) = 30 milliliters (ml) 1 cup (c) = 0.24 liter (l) 1 pint (pt) = 0.47 liter (l) 1 quart (qt) = 0.96 liter (l) 1 gallon (gal) = 3.8 liters (l) 1 cubic foot (cu ft, ft3) = 0.03 cubic meter (m^3) 1 cubic yard (cu yd, yd3) = 0.76 cubic meter (m^3)	**VOLUME (APPROXIMATE)** 1 milliliter (ml) = 0.03 fluid ounce (fl oz) 1 liter (l) = 2.1 pints (pt) 1 liter (l) = 1.06 Quarts (qt) 1 liter (l) = 0.26 gallon (gal) 1 cubic meter (m^3) = 36 cubic feet (cu ft, ft^3) 1 cubic meter (m^3) = 1.3 cubic yards (cu yd, yd^3)
TEMPERATURE (EXACT) °C=5/9(°F - 32)	**TEMPERATURE (EXACT)** °F=9/5(°C) + 32

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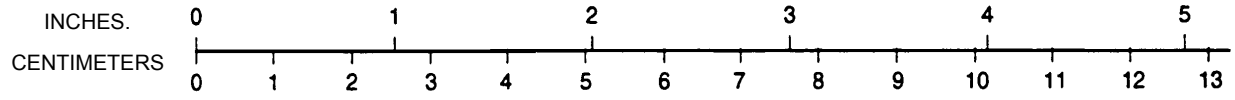

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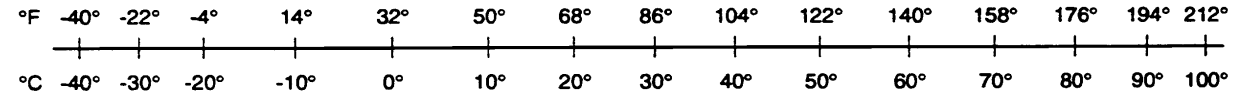

For more exact and or other conversion factors, see NIST Miscellaneous Publication 286, Units of Weights and Measures. Price $2.50. SD Catalog No. C13 10286.

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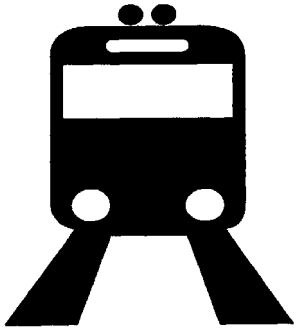
Chapter 1.
Background

In response to congressional concern regarding the potential for catastrophic accidents and security incidents on rail transit systems, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) added Section 28 to the Federal Transit Act (codified at 49 U.S.C. Section 5330). This section requires the Federal Transit Administration (FTA) to issue a Rule creating the first state-managed oversight program for rail transit safety and security.

FTA published "Rail Fixed Guideway Systems; State Safety Oversight" on December 27, 1995 (to be codified at 49 CFR Part 659), subsequently referred to as State Safety Oversight Rule or Part 659. Only those states with Rail Fixed Guideway Systems (RFGS) meeting the definition specified in Part 659 must comply with FTA's State Safety Oversight Rule. The next chapter discusses this definition and lists each rail transit system and state that FTA has identified as potentially affected.

The ultimate goal of FTA's State Safety Oversight Program, detailed in Part 659, is to improve rail transit safety and security. These Guidelines have been prepared to assist those who must implement Part 659 in achieving this goal.



Chapter 1 of these Guidelines introduces the basic requirements of Part 659. This Chapter also describes how to use these Guidelines to develop an effective Oversight Program. Subsequent chapters will address specific details of implementation.

Section 1.1
Summary of FTA's State Safety Oversight Rule

This section presents, in summary form, the requirements of Part 659, including:

- The obligation of the *state* to designate the Oversight Agency.

- The authorities and responsibilities of the *Oversight Agency* in developing the requirements and programs necessary to comply with FTA's State Safety Oversight Program.

- The role of the *rail transit system* in complying with the program developed by the Oversight Agency.

Section 1.1.1
The State

The primary responsibility of the state is to designate an Oversight Agency (or Agencies) to oversee the safety of the rail transit systems operating within its borders. When the rail system operates only within a single state, that entity must be an agency of the state; when it operates in more than one state, the affected states may designate a single entity to oversee that system. In neither case may the state designate the rail transit system as the Oversight Agency.

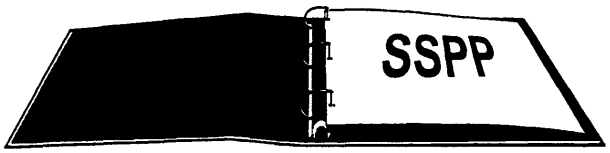
To ensure the Oversight Agency's candid assessment of the probable cause of a particular accident or unacceptable hazardous condition, the state may wish to enact legislation prohibiting the disclosure of Oversight Agency investigation reports in litigation. The state also may prevent the disclosure of information pertaining to the security practices and technologies used by an individual rail transit system.

Section 1.1.2
The Oversight Agency

The designated State Oversight Agency is required by Part 659 to perform seven distinct functions. These activities constitute the core of FTA's State Safety Oversight Rule. The Oversight Agency must:

- **Develop a System Safety Program Standard (Program Standard)**. This written document defines the relationship between the Oversight Agency and the rail transit system and guides the rail transit system in developing its System Safety Program Plan (SSPP).

  The Program Standard must, at a minimum, comply with the American Public Transit Association's Manual for the Development of Rail Transit System Safety Program Plans (APTA Manual) and include specific provisions addressing security. *See Chapter 6 for a full discussion*.



- **Require, review and approve, and monitor the implementation of an SSPP that complies with the Oversight Agency's Program Standard at each rail transit system.** By January 1, 1997, the Oversight Agency must review and approve, in writing, the rail transit system's SSPP. The security provisions of the SSPP, however, do not have to be approved initially by the Oversight Agency until January 1, 1998. After the initial approvals, the Oversight Agency must review, as necessary, the rail transit system's SSPP and determine whether it should be updated. *See Chapter 7*.

- **Require each rail transit system to report the occurrence of accidents and unacceptable hazardous conditions within a period of time specified by the Oversight Agency.** The Oversight Agency must investigate such events in accordance with established procedures. The Oversight Agency may conduct its own investigation, use a contractor to conduct an investigation, rely on the investigation conducted by the rail transit system or the National Transportation Safety Board (NTSB), or use a combination of these methods. *See Chapter 8*.

- **Require the rail transit system to implement a Corrective Action Plan.** The Oversight Agency must require the rail transit system to minimize, control, correct, or eliminate, hazardous conditions identified during investigations, in accordance with a Corrective Action Plan drafted by the rail transit system and approved by the Oversight Agency. *See Chapter 9*.

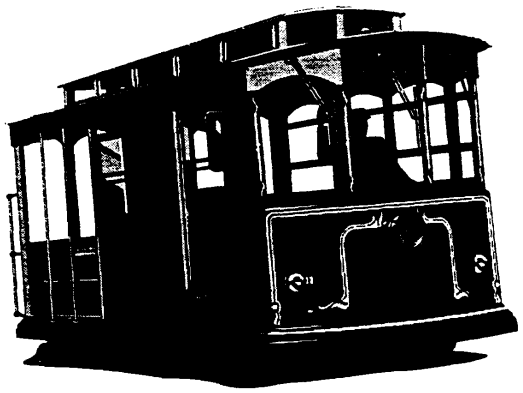
- **Conduct on-site visits at each rail transit system at a minimum of every three years to perform a formal Safety Review.** In a Safety Review, the Oversight Agency must assess whether the rail transit system's actual safety and security practices and procedures comply with its SSPP. Once this Review is completed, the Oversight Agency must prepare a report containing its findings and recommendations, an analysis of the efficacy of the rail transit system's SSPP, and a determination of whether the SSPP should be updated. *See Chapter 10*.

- **Require the rail transit system to conduct safety audits according to the Internal Safety Audit Process detailed in the APTA Manual (Checklist Number 9)**. In addition, the Oversight Agency must require the rail transit system to compile and submit an Annual Audit Report for review. *See Chapter 11*.

- **Report to FTA.** The Oversight Agency must submit three kinds of reports to FTA: an Initial Submission; an Annual Submission; and a Periodic Submission. *See Chapter 12*.

Section 1.1.3
The Rail Transit System

While the requirements in Part 659 are directed at the states and the Oversight Agencies, the rail transit agencies play an important role in the State Safety Oversight Program.



To comply with Part 659, the Oversight Agency must require each rail transit system within its jurisdiction to perform the following activities (at a minimum):

- Develop an SSPP that complies with the Oversight Agency's Program Standard. *See Chapter 6*.

- Classify hazardous conditions according to the **APTA Manual Hazard Resolution Matrix**. *See Chapter 8*.

- Report, within the time frame specified by the Oversight Agency, any accident or unacceptable hazardous condition. *See Chapter 8*.

- Obtain the Oversight Agency's approval of a Corrective Action Plan and then implement the Plan so as to minimize, control, correct, or eliminate the particular unacceptable hazardous condition. *See Chapter 9*.

- Conduct safety audits that comply with the **Internal Safety Audit Process, APTA Manual (Checklist Number 9)**. *See Chapter 11*.

- Draft and submit to the Oversight Agency a report summarizing the results of the safety audit process. *See Chapter 11*.

Section 1.2
Compliance with FTA's State Safety Oversight Program

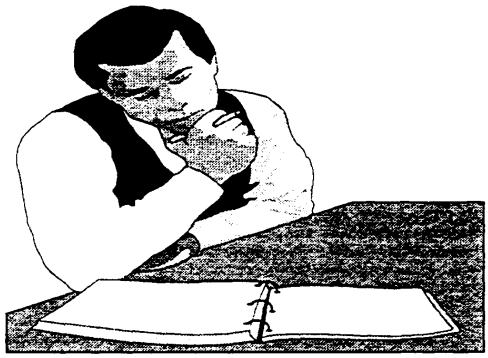
Under the Formula Grant Program for Urbanized Areas (formerly Section 9), FTA provides funds to support the planning, construction, and operation of transit agencies, including rail transit systems. States and urbanized areas that receive funds from the Formula Grant Program for Urbanized Areas must comply with The General Terms and Conditions specified in FTA's Master Agreement, or apportioned funds may be suspended or withheld. Compliance with Part 659 is a condition of the Master Agreement.

If an affected state or urbanized area that receives funding under FTA's Formula Grant Program for Urbanized Areas does not comply with Part 659, FTA may withhold up to five percent of the amount of Formula Grant funds for Urbanized Areas to be apportioned for use in any state or affected urbanized area, beginning in fiscal year 1998. While FTA's State Safety Oversight Program addresses the safety and security of rail transit agencies, it is the **state which must comply with this Program**. State compliance is achieved by designating the Oversight Agency and by using the Oversight Agency to implement the minimum requirements specified in FTA's State Safety Oversight Program.

The requirements for the rail transit agencies will be developed and implemented by the State Oversight Agency in accordance with the minimum requirements established in Part 659.

Section 1.3
How to Use These Guidelines

These Guidelines are written as though a rail transit system has no established Oversight Agency. The Guidelines will assist the states, Oversight Agencies, and rail transit systems in developing the required programs. A logical sequence for implementing the various elements of a successful program is provided and examples of documents, check lists, forms, and procedures are presented. These Guidelines will also assist existing Oversight Agencies in modifying their practices as necessary for compliance with Part 659.



The appendices supplement material contained in the text, provide additional resources and references, define terms, and identify specific detailed information on subjects that may be ancillary to the Guidelines or applicable only to certain situations of rail transit system operations.

Appendix A, "Rail Fixed Guideway Systems, State Safety Oversight," contains a complete copy of Part 659. Appendix B, APTA Manual, includes APTA's Manual for the Development of Rail Transit System Safety Program Plans. Appendix C, Acronyms, provides an alphabetical list of pertinent acronyms. Appendix D, Terms and Definitions, defines terms which are used throughout the text.

Statements in these Guidelines that refer to *specific FTA requirements* contain the word "**must**" (e.g., "A state **must** designate an Oversight Agency..."). Program elements *not explicitly required* by the regulations, but suggested as an integral part of successful implementation, are generally addressed using the word "**should.**" *Optional* elements, or those program features that have several acceptable alternatives, are expressed by the use of the word "**may**."

Illustrative Examples are also used throughout these Guidelines to help clarify some of the more difficult issues and to provide practical guidance on how others in the transit industry have dealt with them. *These examples are not required methods for implementation*; rather, they provide models of how some states have chosen to deal with specific issues. Illustrative Examples are presented in gray, shaded boxes.

In certain instances, the information in these Guidelines exceeds the regulatory minimum and covers additional aspects of safety oversight considered helpful in developing a comprehensive Oversight Program. An Oversight Agency may choose to implement a Program that exceeds these minimums, but it is not required to do so.

Section 1.4
Other Resources

While these Guidelines include all of the materials necessary to establish a State Safety Oversight Program that complies with FTA's requirements, additional training and information are available to oversight and rail transit system personnel. Figure 1-1 contains the names and addresses of government and industry representatives who can provide supplemental technical assistance regarding the implementation of Part 659.

Name (Type of Support)	Agency	Address	Phone
Roy Field (General Program Information)	FTA	TPM-30 U.S. DOT/FTA Office of Safety and Security 400 Seventh Avenue, S.W. Washington, D.C. 20590	(202) 366-0197
Nancy Zaczek (Legal Interpretation)	FTA	Office of Chief Counsel Federal Transit Administration 400 Seventh Avenue, S.W. Washington, D.C. 20590	(202) 366-4011
William T. Hathaway (Technical Assistance)	Volpe National Transportation Systems Center (Volpe Center)	DTS-38 Volpe Center 55 Broadway, Kendall Square Cambridge, MA 02142	(617) 494-2081
Richard W. J. Cacini FTA Training Programs)	Transportation (Safety Institute (TSI)	U.S. DOT/TSI, DTI-80 P.O. Box 25082 Oklahoma City, OK 73125	(405)954-3682
Paul J. Lennon (Industry Materials and Training)	APTA	APTA 1201 New York Ave, N.W. Suite 400 Washington, D.C. 20005	(202)898-4083

Figure 1-1. Government and Industry Representatives

States with questions regarding the effective implementation of a Safety Oversight Program may wish to draw on the experience of states with existing Oversight Agencies.

Figure 1-2 identifies officials within the existing State Oversight Agencies who have agreed to answer inquiries concerning their programs and procedures.

Name	Oversight Agency	Address	Phone
Donald Johnson	California Public Utilities Commission (CPUC)	505 Van Ness St San Francisco, CA 94102	(415)703-4142
Michael Johnson	Florida Department of Transportation (FDOT)	605 Suwannee St., MS-26 Tallahassee, FL 32399	(904) 488-7774
Timothy Davis	Massachusetts Department of Public Utilities (DPU)	100 Cambridge St. Boston, MA 02114	(617)727-3559
Richard Mooney	Missouri Department of Economic Development, Division of Motor Carrier and Railroad Safety	PO Box 1216 Jefferson City, MO 65102	(573)751-7121
Norman Schneider	New York Public Transportation Safety Board (PTSB)	1220 Washington Ave. Albany, NY 12232	(518)457-6512
David Barber	Pennsylvania Department of Transportation (PennDOT)	1215 Transportation and Safety Bldg. Harrisburg, PA 17120	(717) 787-7540

Figure 1-2. Existing State Oversight Agency Contacts

Chapter 2.
Who is Affected by
Part 659?

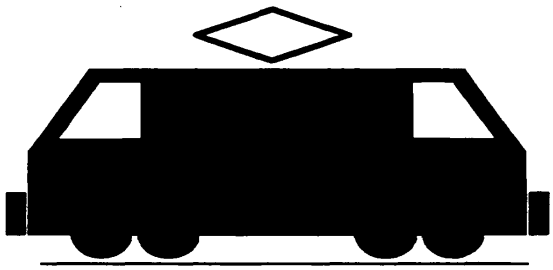
§659.5
Definition of Rail Fixed Guideway System

Any light, heavy or rapid rail system, monorail, inclined plane, funicular, trolley, or automated guideway that is included in FTA's calculation of fixed guideway route miles or receives funding under FTA's formula program for urbanized areas and is not regulated by the Federal Railroad Administration.

This chapter identifies the states and rail transit systems potentially affected by FTA's State Safety Oversight Program. Only states with rail transit systems that meet the definition of Rail Fixed Guideway System, as specified in Part 659, must comply with these requirements.

Section 2.1
Potentially Affected States

In 1997, the first full year that FTA's State Safety Oversight Program will be in effect, 19 states (and the District of Columbia) and 32 rail transit systems may be affected. Figure 2-1 lists the states that may be affected by Part 659 and the rail transit systems that operate within these states. Figure 2-2 lists the 3 rail transit agencies that operate in more than one state (and the District of Columbia).



State	Total Systems	Transit System1	Rapid Rail	Light Rail	Cable Car	Automated Guideway	Inclined Plane
California	6	BART	♦				
		LACMTA	♦	♦			
		Muni		♦	♦		
		SDTI		♦			
		SRTD		♦			
		SCCTD		♦			
Colorado	1	RTD		♦			
Florida	3	HARTLine				♦	
		JTA				♦	
		MDTA	♦			♦	
Georgia	1	MARTA	♦				
Illinois	1	CTA	♦				
Louisiana	1	RTA		♦			
Maryland	1	MTAMD	♦	♦			
Massachusetts	1	MBTA	♦	♦			
Michigan	1	DTC				♦	
New Jersey	1	NJT		♦			
New York	2	NFTA		♦			
		NYCT	♦				
Ohio	1	GCRTA	♦	♦			
Oregon	1	Tri-Met		♦			
Pennsylvania	3	CCTA					♦
		PAT		♦			♦
		SEPTA	♦	♦			
Tennessee	2	CARTA					♦
		MATA		♦			
Texas	2	DART		♦			
		IT		♦			
Washington	1	Seattle		♦			
		Metro				♦	

[1] *Transit System acronyms are located in Appendix C.*

Figure 2-1. States Potentially Affected by 49 CFR 659

Transit System	States	Rapid Rail	Light Rail.
BSDA	Illinois, Missouri		♦
PATCO	New Jersey, Pennsylvania	♦.	
WMATA	Washington, D.C., Maryland, Virginia	♦	

Figure 2-2. Rail Transit Systems Operating in More Than One State

To determine if a state must comply with Part 659, the state must assess whether it has any rail transit systems operating within its borders that meet the definition of a RFGS. A RFGS must:

- Be a light, heavy, or rapid rail system, monorail, inclined plane, funicular, trolley, or automated guideway, and
- Be included in FT A's calculation of fixed guideway route miles or receive funding under FT A's formula program for urbanized areas, and
- Not be regulated by the FRA.

Six states potentially affected by FT A's State Safety Oversight Program already have agencies that oversee the safety of their rail systems. These states, and their respective Oversight Agencies, are listed in Figure 2-3. California and Massachusetts utilize divisions of their State Public Utilities Commissions. In Florida and Pennsylvania, the State Department of Transportation is the safety Oversight Agency. In Missouri, oversight responsibilities have been assigned to the Division of Motor Carrier and Railroad Safety. In New York, the Public Transportation Safety Board (PTSB) is a separate board within the New York State Department of Transportation.

State	Oversight Agency
California	Public Utilities Commission (CPUC)
Florida	Department of Transportation(FDOT)
Massachusetts	Department of Public Utilities(DPU)
Missouri	Department of Economic Development, Division of Motor Carrier and Railroad Safety
New York	Public Transportation Safety Board (PTSB)
Pennsylvania	Department of Transportation (PennDOT)

Figure 2-3. States with Existing Oversight Agencies

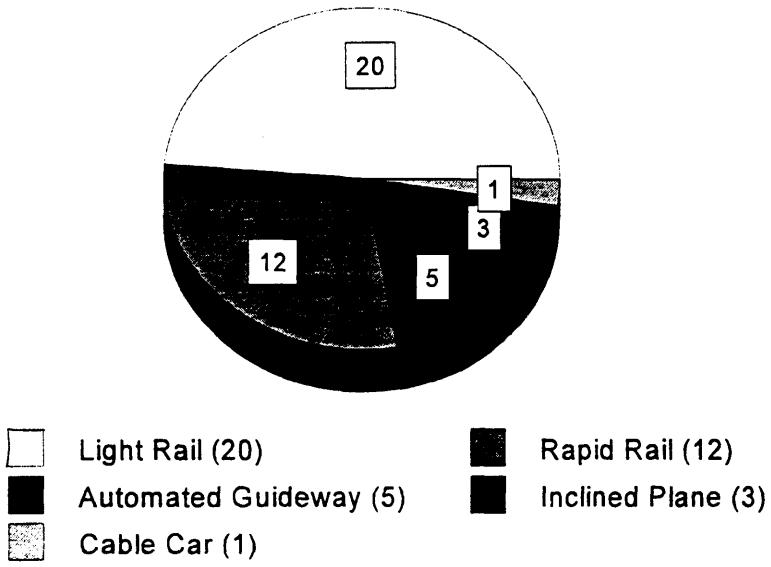
The 13 other potentially affected states (and the District of Columbia) currently do not oversee or directly monitor the safety of rail transit systems. Each of these states, if it is determined that an RFGS operates within its borders, must designate an Oversight Agency, and the Oversight Agency must then develop a program to oversee RFGS safety.

The map in Figure 2-4 displays the states and the rail transit systems potentially affected by FT A's State Oversight Program.

Section 2.2
Potentially Affected Rail Transit Systems

The 32 rail transit systems potentially affected by the FT A requirements vary greatly in size, age, and operating environment.

As indicated in Figures 2-1 and 2-2, the 32 potentially affected rail transit systems provide service across five different rail modes. The chart below indicates the number of systems operating each mode (some systems operate more than one mode).



Rail Modes Potentially Affected by Part 659

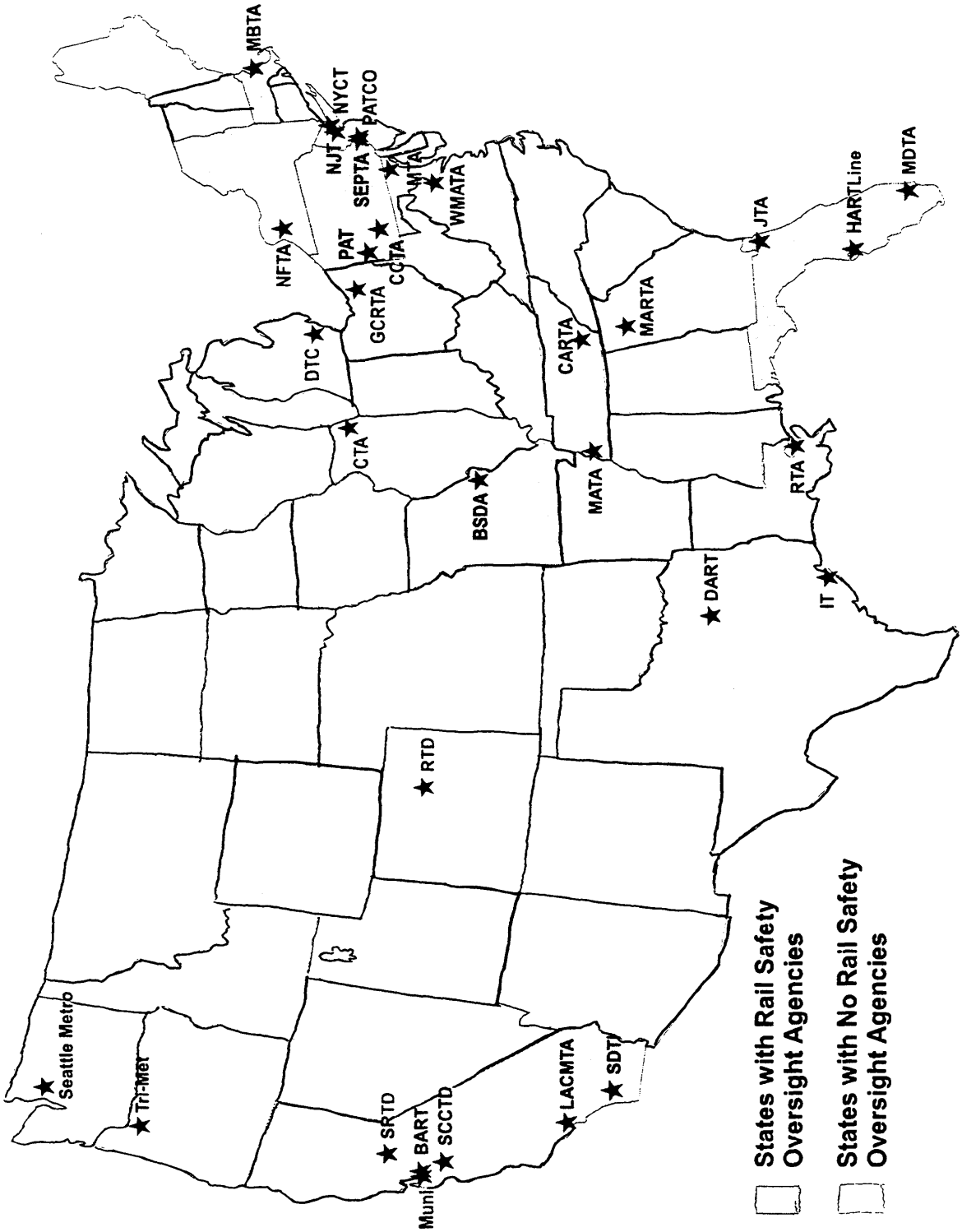


Figure 2-4. States and RFGS Potentially Affected by Part 659

Chapter 3.
Designating the Oversight Agency

§659.21

Designation of Oversight Agency

(a) For a transit agency or agencies operating within a single state, the state must designate an agency of the state, other than a transit agency, to serve as the Oversight Agency and to implement the requirements of this part.

(b) For a transit agency operating a system within more than one state, those states may designate a single entity, other than the transit agency, to implement the requirements of this part.

Part 659 requires the state to designate and support an Oversight Agency to oversee the safety and security of each RFGS. This chapter discusses how to identify and designate the Oversight Agency.

Section 3.1
State-RFGS Classifications

Part 659 divides the affected states, and RFGS into three distinct categories:

- States with One RFGS Operating in a Single State (see Section 3.1.1).
- States with Multiple RFGS (see Section 3.1.2).
- RFGS Operating in More Than One State (see Section 3.1.3).

Section 3.1.1
States with One RFGS Operating in a Single State

Eight of the states potentially affected by this legislation fulfill both of the following (see box next page):

- There is only one RFGS in the state; *and*
- That RFGS operates in only one state.

States with One RFGS Operating in a Single State	
State	**RFGS**
Colorado	Denver RTD
Georgia	MARTA
Louisiana	RTA
Massachusetts	MBTA
Michigan	Detroit TC
Ohio	GCRTA
Oregon	Tri-Met
Washington	Seattle Metro

For these states, a single agency of the state must be selected to act as the Oversight Agency for the RFGS. This agency must not be the RFGS.

Section 3.1.2
States with Multiple RFGS

Nine states have multiple RFGS operating within their borders (see box next column). For these states, paragraph (a) of Section 659.21 allows the state to designate one Oversight Agency for *all* of the RFGS within the state; one Oversight Agency for *each* RFGS; or a combination of one Oversight Agency for several RFGS and another Oversight Agency for a particular system(s).

States with Multiple RFGS	
State	**RFGS**
California	BART, LACMTA, Muni, SDTI, SRTD, SCCTD
Florida	HARTLine, JTA, MDTA
Illinois	CTA, BSDA
Maryland	MTAMD, WMATA
New Jersey	NJT, PATCO
New York	NFTA, NYCT
Pennsylvania	CCTA, PAT, SEPTA, PATCO
Tennessee	CARTA, MATA
Texas	DART, IT

For states in this category, FTA suggests that the state designate only one agency to implement Part 659. Such a designation would avoid duplication of efforts and ensure maximum consistency in the application of the state's Oversight Program. States are not required to do this, however, and may elect to designate multiple Oversight Agencies should they desire. The Oversight Agencies must, in all cases, be agencies of the state.

Section 3.1.3
RFGS Operating in More than One State

Paragraph (b) of Section 659.21 addresses the designation of an Oversight Agency for the three RFGS that operate within a multistate jurisdiction (see box below). These states have the flexibility to designate a single Oversight Agency or to designate multiple Oversight Agencies.

RFGS Operating in More Than One State

RFGS	States
BSDA	Illinois, Missouri
PATCO	New Jersey, Pennsylvania
WMATA	Washington, D.C., Maryland, Virginia

Again, it is suggested that a single Oversight Agency be selected. The Oversight Agency may be an agency of a state, an independent entity created by agreement between the affected states, or an agency of one of the affected states. In no case may this Agency be the RFGS.

Section 3.2
Which Agency Should Implement the Oversight Program?

The Oversight Agency is defined by Part 659 in the following manner:

> **§659.5 Oversight Agency**
>
> The entity, other than the transit agency, designated by the state or several states to implement this part [Section 659].

The first step in designating an Oversight Agency is to *identify which state agency* will assume responsibility for the Program. For those affected states that have already designated an Oversight Agency, this identification process has already been completed. However, for the majority of affected states, which have not yet selected an Oversight Agency, this can be a complex process.

First, identification of the Oversight Agency should occur as early in the implementation process as possible. The earlier the potential Oversight Agency is notified of this new role, the more opportunity Agency personnel will have to work within the state government to ensure the appropriate authority, direction, and financial support for the Agency.

Second, a state may consider the following factors in selecting an Oversight Agency:

- An agency that works with the rail transit systems and is already knowledgeable in their operations, including safety issues, may be the appropriate choice for the Oversight Agency. This agency is most likely the transit division of the state's Department of Transportation.

  States should be aware of potential conflicts of interests when a funding agency acts as an Oversight Agency. Such a designation is not prohibited by Part 659. However, if such a designation is made, the funding function should be separate and independent of the oversight function.

- An agency that has responsibilities in other aspects of transportation safety may expand its duties to include rail transit safety oversight. However, the state should consider the specialized expertise required to administer a rail safety Oversight Program.

- An agency with regulatory responsibilities—a Department of Public Utilities, Public Utilities Commission, or other agency—may already have the authority (currently not exercised) to oversee rail safety. The state may prefer to keep such authority and responsibilities within a single agency.

Third, a state may find that there is a legal prohibition for one state agency to oversee another state agency—such as a rail transit system. If this is the case, then the state must first reverse this prohibition before it can designate an Oversight Agency. For some affected states, the identification process may be relatively straightforward, as

one agency clearly will have established a role in the oversight of rail transit.

For other states, the identification of the Oversight Agency may be more difficult, as two or more state agencies may have a shared responsibility for managing rail transit activities. In this case, the state may choose to designate more than one Oversight Agency, each with specific responsibilities. In all cases, close communications and a formalized agreement between the agencies are encouraged.

Section 3.3
What is Required of the State to Certify Compliance?

Before January 1, 1997, the Oversight Agency must submit to FTA the name and address of the Oversight Agency and the name(s) and address(es) of the rail transit agency or agencies subject to the Oversight Agency's jurisdiction.

The Oversight Agency may use the attached form [Certification of Compliance for FTA Recipients], which must be filed with the FTA, Office of Safety and Security, in Washington, D.C.

The FTA will review the Certification, and if necessary, work with the state to address concerns related to the designation of a particular Oversight Agency. Any state unable to designate an Oversight Agency in the time frame specified in Part 659 should contact the FTA, Office of Safety and Security, as soon as possible.

Certification of Compliance for FTA Recipients
[certifying compliance with 49 CFR Part 659.45 (a)(1) and (a)(2)]

Date_____

United States Department of Transportation
Federal Transit Administration
Office of Safety and Security
400 Seventh Street, S.W.
Washington, D.C. 20590

I, _____ , _____
(Name) (Title)

certify that _____ has implemented a State Safety
(Name of Oversight Agency)

Oversight Program that meets the requirements of 49 CFR 659 to provide safety oversight for the following Rail Fixed Guideway System(s):

_____

_____

_____

I further certify that I have no conflict of interest with any Rail Fixed Guideway System overseen

as a result of 49 CFR 659, nor does _____ and its
(Name of Oversight Agency)

contractors.

Sincerely,

(Name)
(Title)

Chapter 4.
Establishing the Authority of the Oversight Agency

Each state must designate an Oversight Agency with sufficient legal authority to comply with the minimum requirements established in Part 659. This chapter explains these minimum legal authorities and discusses additional powers that the Oversight Agency may consider when establishing its Oversight Program.

Section 4.1
Minimum Authority for the State Oversight Agency

As summarized in Section 1 .1.2, to comply with Part 659, the state, at a minimum, must designate an Oversight Agency with clear authority to:

- Issue a Program Standard to guide the development of an SSPP at each RFGS within the Oversight Agency's jurisdiction. This Standard must comply, at a minimum, with the APTA Manual and must address passenger and employee security (§659.31). *See Chapter 6.*
- Require each RFGS within the state to develop, submit, and implement an SSPP that complies with the Program Standard (§659.33). *See Chapter 7*.
- Monitor the implementation of the SSPP at each RFGS and require updates or modifications as deemed necessary, within a time frame specified by the Oversight Agency (§659.33). *See Chapter 7*.
- Require each RFGS to classify hazardous conditions, according to the APTA Manual, Hazard Resolution Process (Checklist Number 7), and report unacceptable hazardous conditions in a time frame specified by the Oversight Agency (§659.39). *See Chapter 8.*

- Require the RFGS to notify the Oversight Agency of an accident, based on the definition in Part 659, in a time frame specified by the Oversight Agency (§659.39). *See Chapter 8.*

- Conduct investigations of accidents/unacceptable hazardous conditions at each RFGS with full access to all information and evidence collected by the RFGS (§659.41). *See Chapter 8.*

- Require Corrective Action Plans, to be developed by the RFGS and approved by the Oversight Agency, which address identified unacceptable hazardous conditions in a time frame specified by the Oversight Agency (§659.43). *See Chapter 9.*

- Conduct on-site Safety Reviews at each RFGS a minimum of every three years to audit the implementation of the SSPP (§659.37). *See Chapter 10.*

- Require each RFGS to conduct an ongoing, internal safety audit process, in compliance with the APTA Manual (Checklist Number 9), and to report annually to the Oversight Agency documenting its safety auditing activities (§659.35). *See Chapter 11.*

- Certify and report annually to FTA (§659.45). *See Chapter 12.*

States with laws or regulations that have already granted broad oversight powers to the identified Oversight Agency may already possess sufficient authority to implement the minimum requirements of Part 659.

For those states with no existing legislation to support oversight activities, many options are available for providing the minimum authority necessary to implement Part 659. States requiring assistance should contact FTA's Office of Safety and Security or FTA's Chief Counsel's Office at the addresses and phone numbers presented in Figure 1-1 (page 1-7) of these Guidelines.

Section 4.2
States with Existing Oversight Agencies

Agencies in six states currently provide ongoing RFGS safety oversight (see box on next page). To comply with the minimum requirements specified in Part 659, these agencies may have to adjust existing programs to meet new responsibilities.

States with Existing Oversight Agencies	
State	**RFGS**
States	RFGS
California	BART, LACMTA, Muni, SDTI, SRTD, SCCTD
Florida	HARTLine, JTA, MDTA
Massachusetts	MBTA
Missouri	BSDA
New York	NFTA, NYCT
Pennsylvania	CCTA,PAT, PATCO, SEPTA

FTA urges these potentially affected states to review their authorizing statutes to ensure that the Oversight Agency possesses sufficient legal powers to carry out the minimum requirements of FTA's State Safety Oversight Program. FTA believes that one or more of these states may have to modify existing programs to comply fully with Part 659. For example, the following issues may require consideration:

- The inclusion of passenger security in the Program Standard and SSPP.
- Arrangements with adjoining states for oversight of multi-state RFGS.
- The inclusion of on-site Safety Reviews.
- The incorporation of inclined planes into the Oversight Program.

Section 4.3
Affected States with No Existing Oversight Program

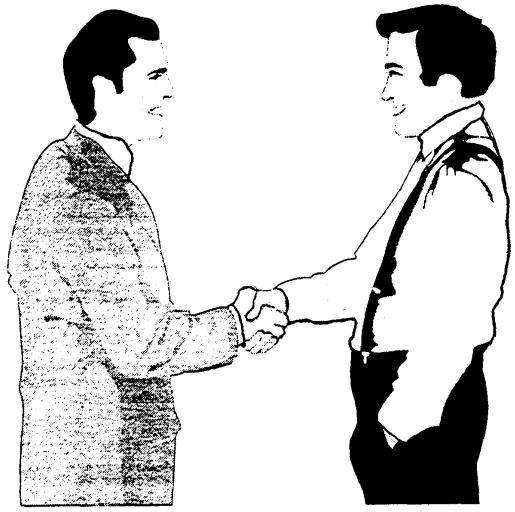
Thirteen potentially affected states currently have no program to oversee RFGS safety and security (see box below). These states must designate an Oversight Agency with authority to meet FTA's minimum requirements.

Potentially Affected States with No Existing Oversight Program	
States	RFGS
Colorado	RTD
Georgia	MARTA
Illinois	BSDA, CTA
Louisiana	RTA
Maryland	MTAMD, WMATA
Michigan	DTC
New Jersey	NJ Transit, PATCO
Ohio	GCRTA
Oregon	Tri-Met
Tennessee	CARTA, MATA
Texas	DART, IT
Virginia	WMATA
Washington	Seattle Metro

Section 4.4
Additional Oversight Authorities

The state may wish to review the *minimum authorities* presented in Section 4.1 for possible expansions or additions, as deemed appropriate to the specific situation of both the Oversight Agency and each RFGS within its jurisdiction.

This section identifies additional authorities that one or more existing Oversight Agencies have found helpful in establishing an effective Oversight Program. FTA stresses that these additional authorities are *not required* for compliance with Part 659.



Illustrative Example: Additional Oversight Authorities

In addition to the minimum authorities specified in Part 659, one or more of the existing Oversight Agencies has the authority to:

- Require the SSPP to cover the full scope of safety-related activities performed by the RFGS, including:
  - Preliminary engineering and conceptual design;
  - Construction design, procurement, and specification; and
  - Pre-operational testing and start-up.
- Review and recommend the establishment of equipment and safety standards resulting from the findings of investigations and Safety Reviews.
- Hold public hearings, including:
  - Administer oaths and examine any person under oath; and

- Issue subpoenas requiring the testimony of an individual or the production of documents.

Withhold funds for non-compliance with Oversight Agency requirements, including:

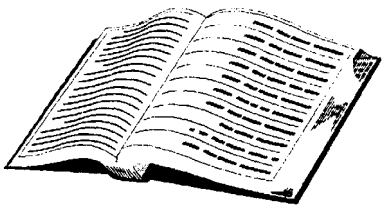
- Failure to submit SSPP;
- Failure to update or modify SSPP;
- Failure to notify Oversight Agency of accidents or unacceptable hazardous conditions;
- Failure to submit a Corrective Action Plan within the time frame specified by the Oversight Agency; and
- Failure to implement corrective actions.

Chapter 5. Oversight Agency Processes

This chapter presents several options for the Oversight Agency to consider in creating its Oversight Program.

Section 5.1 Developing Policies and Procedures

Specifying the exact details of how the Oversight Agency operates is beyond the scope of Part 659, and is left for the Oversight Agency to determine. An Oversight Agency, depending upon its statutory authority and how it chooses to develop its own safety Oversight Program, may wish to use rules, regulations, departmental orders, policies, procedures, or other documented practices to establish its own internal processes.



When developing policies and procedures, an Oversight Agency may consider all options available for documenting its internal processes.

The Oversight Agency may allow the RFGS to comment on the procedures the Oversight Agency plans to adopt; several existing Oversight Agencies have noted that the development of an effective Oversight Program needs the commitment of both the Oversight Agency and each RFGS. One way to achieve this commitment is to consider the opinions and expertise of RFGS safety and management personnel.

This may be accomplished by conducting sessions with representatives from each RFGS within the Oversight Agency's jurisdiction, soliciting comments on proposed policies, and/or developing policies that are acceptable to both the Oversight Agency and the RFGS. A more formal process, if needed, may be used. For example, the Oversight Agency may form a Policy Committee comprised of representatives from each RFGS within the Oversight Agency's jurisdiction and Oversight Agency personnel. This Committee may be official, as part of a State Transit Association or some other organization, or it may be ad hoc, arranged specifically to develop the initial policies and procedures to guide the early operation of the Oversight Agency.

The following are areas where the Oversight Agency may seek comment from the RFGS:

- Providing assistance on the development of the Program Standard, and other Oversight Agency procedures, such as those used for accident/unacceptable hazardous condition investigations and Three-Year Safety Reviews.
- Establishing roles and responsibilities for compliance with Oversight Agency requirements.
- Identifying necessary training/ technical support.
- Identifying compliance problems and issues.

By involving the RFGS in the development of the Oversight Program, the Oversight Agency will be able to identify and address Potential points of conflict. Also, by involving the RFGS in the development of the Oversight Program, the Oversight Agency may benefit from the expertise of RFGS personnel in addressing any specific issues that may arise, or in explaining their existing safety and security practices and policies.

Finally, by involving the RFGS in the development of the Oversight Program, the Oversight Agency may create an informal environment which stimulates communication and consensus. Involvement of RFGS personnel in the development of the state's Oversight Program ensures that critical concerns are addressed and improves the chances for each RFGS's acceptance and support of the Oversight Program.

Section 5.2
Who Can Develop Policies and Procedures?

To develop its Oversight Program, the Oversight Agency may:

- Use Oversight Agency personnel to prepare all materials and perform all activities.

- Incorporate existing guidelines prepared by the RFGS and develop cooperative joint-programs with each RFGS for activities such as accident investigations.

- Use contractors to develop documents and perform oversight functions, such as accident/hazardous conditions investigations and Three-Year Safety Reviews (the RFGS cannot be a contractor but can investigate accidents and unacceptable hazardous conditions).

- Participate in the APTA Rail Safety Audit Program and the APTA Panel of Inquiry Program.

- Combine any of the above alternatives.

Section 5.3
Policy Communication

There are many alternatives available to each Oversight Agency for communicating with the RFGS. Initially, the Oversight Agency may send a letter to each RFGS within its jurisdiction explaining the designation of the Oversight Agency and the scope of its authority.

While developing its Program, the Oversight Agency may use the RFGS personnel providing support on the development of policies and procedures to communicate preliminary information.

Once the Oversight Program has been clearly developed, the Oversight Agency may undertake a more proactive approach to communicating its policies and requirements to each RFGS within its jurisdiction.

Such an approach may involve the following activities:

- Developing an orientation training session.

- Conducting meetings to discuss specific implementation issues.

- Hosting a "town meeting" with RFGS personnel.

- Providing written materials, such as guidelines and manuals.
- Using memoranda and letters to communicate new policies.
- Developing an electronic bulletin board to disseminate information.

These types of activities are strongly recommended to reduce confusion and improve the ease of compliance. In addition, these types of programs can be educational for both the RFGS and the Oversight Agency.

Chapter 6.
Developing the System
Safety Program Standard

§659.31 (a)
The System Safety Program Standard

The Oversight Agency must develop and adopt a System Safety Program Standard that, at a minimum

(1) Complies with [APTA's] Manual for the Development of Rail Transit System Safety Program Plans, and

(2) Requires the transit agency to address the personal security of its passengers and employees.

One of the Oversight Agency's first responsibilities is to develop a Program Standard. At a minimum, the Program Standard must comply with APTA's Manual for the Development of Rail Transit System Safety Program Plans. Since the APTA Manual was derived from Mil Std 882-B and 882-C, the Oversight Agency may also use these documents to guide the development of the Program Standard. The Program Standard must also include provisions for passenger and employee security. This Chapter describes the required contents of the Program Standard. The recommended schedule for development of the Program Standard is also provided.

Section 6.1
Relationship between the Program Standard and the SSPP

The Program Standard provides safety and security program planning guidelines to support RFGS development of an SSPP. Each RFGS SSPP must comply with the requirements specified in the Oversight Agency's Program Standard.

The principal objective of the Program Standard is to ensure that safety and security are addressed in all aspects of the operation of the RFGS. The success of the Oversight Program depends upon definitive statements of safety objectives and requirements in the Program Standard, and the careful translation of these objectives and requirements into actual operating practices at the RFGS, as documented in the SSPP.

Figure 6-1 identifies key components in the relationship between the Program Standard and the SSPP:

Program Standard	SSPP
Written by the Oversight Agency	Written by the RFGS
Defines relationship between Oversight Agency and RFGS *and* guides the development of SSPP	Details safety and security policies, objectives, responsibilities, and procedures at the RFGS
Details required contents of the RFGS SSPP	Development of this document is guided by the Program Standard

Figure 6-1. Relationship between the Program Standard and the SSPP

Section 6.2
Using the APTA Manual

The APTA Manual, which is located in Appendix B, represents the results of a cooperative effort between the rail transit industry and FTA. This document clearly defines the requirements for developing a SSPP while emphasizing the flexibility necessary for allowing each RFGS to provide for its own, unique safety program. The APTA Manual tailors Mil Std 882-B requirements to the transit environment, and therefore, it has been selected as the minimum requirement for FTA's Safety Oversight Program. Security planning guidelines are not provided in the APTA Manual. These requirements will be discussed in Section 6.4.

To ensure that each RFGS focuses on the process of system safety, rather than on compliance with specific standards or criteria, the APTA Manual is somewhat flexible, providing a general outline for the development of a SSPP, but leaving the details of content matter up to the individual RFGS. FTA supports this approach to the development of a SSPP, since ensuring the successful implementation of the system safety process is the only way to guarantee the viability of the SSPP.

However, the flexible nature of the APTA Manual may create some confusion for Oversight Agency personnel charged with drafting the Program Standard. FTA suggests that the Oversight Agency tailor the requirements in the APTA Manual to ensure

that the SSPP developed by each RFGS **reflects the actual safety practices of the RFGS.** The SSPP is not merely a document submitted to satisfy a statutory requirement; it contains the safety program which supports the operation of each RFGS.

When drafting the Program Standard, the Oversight Agency may choose to develop *a separate document* for each RFGS within its jurisdiction, or it may develop *one document* for all RFGS within its boundaries.

To assist Oversight Agencies in developing the Program Standard, a General Outline is provided in Figure 6-2. It should be noted that this Outline presents only one possible approach for developing the Program Standard. Figure 6-2 contains the minimum planning guidelines in the APTA Manual, as well as relevant sections from selected FTA documents to address the security requirements for the Program Standard.

Section 6.3
Complying with the APTA Manual

Based on the minimum requirements specified in the APTA Manual, the Oversight Agency, in its Program Standard, may require that the SSPP to be developed by the RFGS contain the following major sections (as presented in Figure 6-2):

- ***Introduction.*** This section explains the SSPP and describes how it is intended to be used in sustaining the operations of the RFGS. It should address the RFGS's authority; the purpose, scope, and authority of the SSPP; and the safety objectives and policies of the RFGS. It may contain the following topics:

  - Policy Statement Supporting the System Safety Program Plan from General Manager/Executive Director.

  - Statement of Legal Authority for SSPP.

  - Description of Purpose and Scope of SSPP.

  - Goals for SSPP.

  - Objectives for SSPP.

  - Specification of Policies in Place to Support the Implementation of the SSPP.

  - Identification of Procedures for Updating/Modifying the SSPP.

- ***System Description.*** This section provides a physical description of the RFGS. It defines the organizational structure of the RFGS, its relationship with surrounding jurisdictions, and the internal responsibilities of key personnel and their staffs. This section also addresses the operating characteristics, operating and safety procedures, maintenance policies and procedures, and the manner in which system modifications are managed. It may include the following topics:

  - History of Transit System.
  - Scope of Service.
  - Organizational Structure.
    - Organizational Diagrams for Entire Agency.
    - Organizational Diagrams for System Safety Unit.
    - Organizational Diagrams Identifying the Lines of Communication between System Safety Unit and Transit System.
    - Organizational Diagrams for Relationship of Transit System to Local Political Jurisdictions.
  - Physical Plant.
  - Operations.
  - Maintenance.
  - System Modifications.

- ***System Safety Unit Activities.*** This section addresses the responsibilities of those charged with managing the system safety process at the RFGS. It identifies safety tasks which these personnel are to accomplish on a continuing basis, as well as the schedule for completion. The responsibilities of the System Safety Unit within the RFGS for managing both the System Safety Program and SSPP must be clearly documented. This section may address the following topics:

  - Management of the SSPP -- System Safety Unit Responsibilities.

- Methodology for Managing Plan
  - Hazard Identification/ Resolution Process.
  - Accident/Incident Reporting and Investigation.
  - Internal Safety Audit Process.
  - Facilities Inspections.
  - Maintenance Audits/ Inspections.
  - Rules/Procedures Review.
  - Training and Certification Review/Audit.
  - Safety Data Acquisition and Analysis.
  - Emergency Planning/ Response/Coordination/ Training.
  - Configuration Management.
  - Employee Safety Program.
  - Hazardous Materials Programs.
  - Drug and Alcohol Testing and Abuse Programs.
  - Contractor Safety Coordination.
  - Procurement.
- Safety Tasks.
- Task Matrix (including milestones).

- ***Safety-Related Activities of Other Units.*** This section addresses the safety-related responsibilities of all other organizational elements in the RFGS (at both line and staff levels). It may address the following topics:
  - Interdepartmental/Interagency Coordination.
  - Safety-Related Tasks of Other Departments.
  - Task Matrix (including milestones).

- ***System Safety Program Plan Implementation and Maintenance.*** This section contains schedules for the implementation and maintenance of the SSPP, including auditing and the review/modification of the SSPP. It may address the following topics:
  - Program Schedule.
  - SSPP Updates.
  - Safety Audits.
- ***System Safety Program Plan Verification.*** This section addresses verification of compliance with the implementation activities specified in the System Safety Program and documented in the SSPP. It may address the following topics:
  - New Systems.
  - Operational Systems.
  - Occupational Safety & Health.
  - Construction Safety.
  - Fire Protection.
  - Safety Information and Reporting
  - Safety Training.

Oversight Agencies may also wish to include in the Program Standard policies and procedures describing their relationships with the RFGS. Issues such as accident and unacceptable hazardous condition notification, procedures for submitting and updating the SSPP, management of corrective actions, accident investigation activities, and reporting requirements may be addressed. Inclusion of these policies in the Program Standard will simplify the preparation of initial submittals to FTA, as discussed in Chapter 12.

The Oversight Agency should pay special attention to the hazard identification and resolution process and the internal safety audit process described in the APTA Manual (Checklist Numbers 7 and 9). These two activities are necessary to implement additional requirements of Part 659. The hazard identification and resolution process is specified by Part 659 for the detection of unacceptable hazardous conditions, and the internal safety audit process is required for the preparation of annual reports documenting RFGS safety auditing activities. These two requirements will be discussed further in Chapters 8 and 11.

Section 6.4
Required Security Contents of the Program Standard

The APTA Manual does not specifically discuss the issue of security. Therefore, to obtain guidance on the development of the security portion of the Program Standard, FTA suggests using the following two FTA documents:

- Transit System Security Program Planning Guide.
- Transit Security Procedures Guide.

These documents are available from FTA, Office of Safety and Security. Passenger and employee security are included in Part 659 because safety and security risks are interrelated for rail transit passengers and employees. Part 659 has been designed to reduce incidents which harm passengers and employees, whether these incidents are unintentional (safety) or intentional acts (security).

Necessarily, the development of the security component of the Program Standard will require considerable coordination with the Police and/or Security Department at each RFGS. FTA encourages this coordination, since compliance with the requirements in Part 659 will focus more attention on security and will encourage the adoption of the systems approach to reducing the occurrences of criminal incidents, in the same manner in which this approach is currently applied in the safety field. Many RFGS Police Departments have incorporated the Systems approach into their operations, and have already developed plans suitable for incorporation into the RFGS's existing SSPP.

[Note: §659.33(d) allows the Oversight Agency to "prohibit a transit agency from publicly disclosing the security aspects of the System Safety Program Plan." FTA suggests that the Oversight Agency obtain the authority from the state legislature to bar sensitive security materials in the SSPP from public disclosure.]

As indicated in Figure 6-2, the security component of the Oversight Agency's Program Standard may contain the following sections:

- ***Management of Security Activities.*** This section identifies the security responsibilities of the Police/Security Department within the Rail Fixed Guideway System, and may address the following topics:
    - Management of Security Program.

- Division of Security Responsibilities.
- Proactive Measures.
- Response Measures.

- ***Security Roles and Responsibilities.*** This section documents the security activities performed to provide personal security for employees and passengers. It may address the following subjects:
  - Security Planning Activities.
  - Proactive Measures.
  - Response Measures.
  - Resource Allocation.
  - Emergency Response Coordination/Training/ Management.
  - Threat and Vulnerability Identification/Resolution Process.
  - Security Data Collection and Analysis.
  - Security Equipment and Facilities.
  - Interdepartmental/Interagency Communication and Coordination.
  - Training.
  - Task Matrix.

- ***Security-Related Activities.*** This section identifies the security responsibilities of other departments within the RFGS. It may address the following subjects:
  - Security-Related Activities of Other Transit Departments.
  - Task Matrix.

- ***Evaluation of Security Component of System Safety Program Plan.*** This section addresses verification of compliance with the security implementation activities specified in the System Safety Program and documented in the SSPP. It may include the following topics:
  - Internal Review.
  - External Audits.

Section 6.5
Schedule for Developing the Program Standard

The following schedule is specified for compliance with §659.33:

- **By January 1, 1997,** the Oversight Agency must review and approve in writing, the safety component of the SSPP for each RFGS located within its jurisdiction.

- **By January 1, 1998,** the Oversight Agency must review and approve in writing the security component of the SSPP for each RFGS located within its jurisdiction.

To meet this schedule, FTA suggests that the Oversight Agency issue its Program Standard *at least two months in advance of the January 1, 1997 deadline.*

1 Introduction

1.1 Policy Statement from General Manager/Executive Director
1.2 Statement of Legal Authority for SSPP
1.3 Purpose of SSPP
1.4 Scope of the SSPP
1.5 Goals for the SSPP
1.6 Policies in Place to Support the Implementation of the SSPP
1.7 SSPP Update Procedures

2 RFGS Description

2.1 History
2.2 Scope and Service
2.3 Organizational Structure
2.4 Physical Plant
2.5 Operations
2.6 Maintenance
2.7 System Modifications

3 Safety Department Activities

3.1 Management of the SSPP – System Safety Unit Responsibilities
3.2 Methodology for Managing Plan
3.3 Safety Tasks
3.4 Task Matrix (including Milestones)

4 Safety-Related Activities of Other Departments

4.1 Safety-Related Tasks
4.2 Task Matrix

5 System Safety Program Plan Implementation and Maintenance

5.1 Program Schedule
5.2 SSPP Update
5.3 Safety Audits

Figure 6-2. General Outline for the Program Standard

6 System Safety Program Plan Verification

6.1 New Systems
6.2 Operational Systems
6.3 Occupational Safety & Health
6.4 Construction Safety
6.5 Fire Protection
6.6 Safety Information and Reporting
6.7 Safety Training

7 Management of Security Activities

7.1 Management of Security Program
7.2 Division of Security Responsibilities
7.3 Proactive Measures (Including Relevant Committees)
7.4 Response Measures (Including Relevant Committees)

8 Security Roles and Responsibilities

8.1 Security Planning Activities
8.2 Proactive Measures
8.3 Response Measures
8.4 Resource Allocation
8.5 Emergency Response Coordination/Training/Management
8.6 Threat and Vulnerability Identification/Resolution Process
8.7 Security Data Collection and Analysis
8.8 Security Equipment and Facilities
8.9 Interdepartmental/Interagency Communication and Coordination
8.10 Training
8.11 Task Matrix

9 Security-Related Activities of Other Departments

9.1 Security-Related Activities of Other Transit Departments
9.2 Task Matrix

10 Evaluation of Security Component of SSPP

10.1 Internal Review
10.2 External Review

Figure 6-2. General Outline for the Program Standard (continued)

Chapter 7.
Reviewing and Approving the System Safety Program Plan

§659.33
System Safety Program Plans

(a) Except as provided in §659.33(b), the Oversight Agency must require the transit agency to:

(1) Implement, beginning on January l, 1997, an [SSPP] conforming to the Oversight Agency's System Safety Program Standard; and

(2) Approve, in writing, before January l, 1997, the transit agency's [SSPP].

(b) The Oversight Agency must require the transit agency to:

(1) Implement, beginning on January l, 1998, the security portions of its [SSPP]; and

(2) Approve, in writing, before January l, 1998, the security portions of the transit agency's [SSPP].

Section 7.1
Scheduling the Review of the SSPP

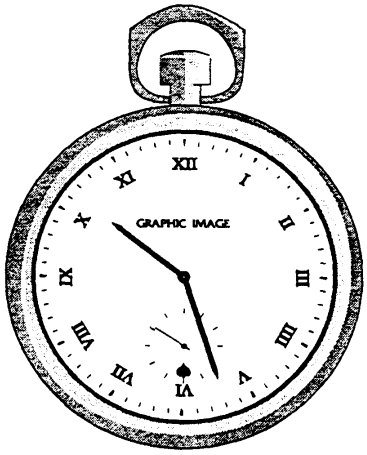
To meet the requirements of FTA's State Safety Oversight Program, the Oversight Agency must schedule two distinct activities:

- Initial Approval of SSPP.
- Ongoing Approval of SSPP.

Initial Approval. FTA's State Safety Oversight Program requires that the Oversight Agency approve, in writing, the RFGS's SSPP by **January l, 1997.** This Initial Approval only addresses the safety component of the SSPP.

By **January l, 1998,** the Oversight Agency must approve, in writing, the security portion of the SSPP. As discussed in earlier chapters, additional time has been provided to develop security requirements that incorporate the systems approach into the RFGS security program.

Ongoing Approval. After the Initial Approval, the Oversight Agency must continue to review and approve each RFGS SSPP, in writing, as deemed necessary by the Oversight Agency.



Section 7.2
Determining SSPP Compliance with the Program Standard

Upon receiving the SSPP from the RFGS, the Oversight Agency must evaluate it for compliance with the Program Standard. In performing this activity, the Oversight Agency may examine the following elements of the SSPP:

- System safety and security goals and objectives.
- System description.
- Organizational structure.
- System safety and security program contents.
- Hazard identification and resolution process.
- Internal safety audit procedures and schedule of milestones.
- Hazardous condition classification process.
- Accident/unacceptable hazardous condition notification procedures.
- RFGS controls used to assure compliance with Oversight Agency requirements.

In its evaluation, the Oversight Agency must determine the following:

- Does the SSPP address the general requirements of the Program Standard?
- Are the necessary controls in place to assure RFGS compliance with Oversight Agency policies and procedures, including the notification of accidents and hazardous conditions?

- Does the SSPP meet the minimum requirements for the Internal Safety Audit Process, specified in the APTA Manual (Checklist Number 9)?

- Does the SSPP provide a clear and feasible process for the identification and classification of hazardous conditions?

Review and approval of the SSPP should be a cooperative process in which both the Oversight Agency and RFGS work together to develop a format and a level of detail that is acceptable to both agencies. It is essential that the SSPP describe the actual practices of the RFGS. The Oversight Agency must work with the RFGS to ensure that the SSPP is a viable and dynamic document.

Section 7.3
Requiring Modifications and Updates

In the event that the Oversight Agency cannot approve the SSPP, it should:

- Identify the specific sections of the SSPP which are not in compliance.

- Recommend appropriate modifications or additions.

- Specify a time frame during which the revisions must be accomplished.

Chapter 8.
Investigation Procedures

§659
41 Investigations

The Oversight Agency must:

(a) Establish procedures to investigate accidents and unacceptable hazardous conditions.

(b) Unless the [NTSB] has investigated or will investigate an accident, the Oversight Agency must investigate accidents and unacceptable hazardous conditions occurring at a transit agency under its jurisdiction.

FTA's State Safety Oversight Program requires the Oversight Agency to investigate accidents and unacceptable hazardous conditions at the RFGS. This chapter explains:

- What conditions require an investigation.
- Who can conduct the investigation.
- Investigation procedures and follow-up activities.

Each RFGS should have existing procedures in place for investigating accidents. In addition, many RFGS may presently investigate unacceptable hazardous conditions. The Oversight Agency's investigation is not intended as a duplication of effort. Rather, the investigation performed by the Oversight Agency provides an independent assessment of the primary causal factors of the accident or unacceptable hazardous condition.

As will be explained in Chapter 9, the findings of the Oversight Agency's investigation will support the development of a Corrective Action Plan. This Plan will be prepared by the RFGS to eliminate, correct, mitigate, or control investigated hazardous conditions.

Section 8.1
Conditions Requiring an Investigation

All RFGS experience accidents and hazardous conditions. The majority of these occurrences are minor in nature. The investigation provision in Part 659 is not designed to require Oversight Agency evaluation of these minor incidents. An Oversight Agency must investigate *major* accidents or *unacceptable* hazardous conditions because such an investigation may reveal systemic safety problems; if so, those problems must be addressed by the RFGS in a Corrective Action Plan to ensure passenger and employee safety.

An investigation should determine the:

- Nature and extent of personal injury and property damage or loss.
- Probable cause or causes of the accident/unacceptable hazardous condition.
- Corrective action(s) appropriate to avoid or minimize similar incidents in the future.

An Oversight Agency investigation is *required* only for the occurrence of an accident or an unacceptable hazardous condition that meets the definitions specified in Part 659, although the Oversight Agency may adopt a definition of accident that is broader than that in Part 659. Part 659 defines accident and unacceptable hazardous condition as follows:

§659.5 Definitions

Accident. Any event involving the revenue service operation of an RFGS if, as a result:

(1) An individual dies;

(2) An individual suffers bodily injury and immediately receives medical treatment away from the scene of the accident; or

(3) A collision, derailment, or fire causes property damage in excess of $ 100,000.

Unacceptable Hazardous Condition. A hazardous condition determined to be an unacceptable hazardous condition using the APTA Manual's Hazard Resolution Matrix (APTA Manual, Checklist Number 7), where a hazardous condition is defined as a condition that may endanger human life or property.

In the Program Standard or other related documents, the Oversight Agency must clearly address several issues regarding investigations:

- What is an accident (see Section 8.1.1)?
- When does an unacceptable hazardous condition exist (see Section 8. 1.2)?
- What notification procedures should be used (see Section 8.2)?
- Who can/will conduct investigations for each type of accident or unacceptable hazardous condition (see Section 8.3)?
- How will the investigation be performed (see Section 8.4)?
- What reporting requirements are associated with an investigation (see Section 8.5)?

Section 8.1.1
What Is an Accident?

The State Safety Oversight Program requires the RFGS to notify the Oversight Agency if any *one* of the conditions detailed in the definition of accident occurs. To comply with this requirement, the Oversight Agency must specify the information to be monitored by the RFGS during an accident.

For example, the RFGS must notify the Oversight Agency if a passenger is injured during revenue service operations and requires medical attention away from the scene of the accident. Many RFGS currently do not monitor this information, and must institute procedures to do so.

The RFGS also must report accidents which cause over $100,000 in property damage. While serious collisions or derailments may result in property damage in excess of this amount, other incidents may require evaluation to determine an estimated property damage value. The process for this evaluation must be established by the Oversight Agency in the Program Standard or other supporting documentation.

Section 8.1.2
When Does an Unacceptable Hazardous Condition Exist?

The RFGS also must determine when an unacceptable hazardous condition exists. The Oversight Agency must require the

RFGS to classify hazardous conditions by using the APTA Manual's Hazard Resolution Matrix (APTA Manual, Checklist Number 7) in order to make this determination.

As explained in Chapter 6 of these Guidelines, the hazard classification process specified in the APTA Manual is an integral part of the SSPP Planning Guidelines to be developed by the Oversight Agency in the Program Standard. This is a formal process for determining which hazards are:

- Acceptable;
- Acceptable, with review by management staff;
- Undesirable; or
- Unacceptable.

All hazards are included in this categorization. Many RFGS currently use this hazard classification system to support their safety programs.

Once a hazard is identified, an analysis as to its potential *severity* and *probability* of occurrence is performed using the classification process specified in the APTA Manual. These terms are defined in detail in the APTA Manual (Checklist Number 7).

The process for this analysis should be standardized and documented by the Oversight Agency. This procedure must be followed by the RFGS as prescribed.

The APTA Manual Hazard Resolution Matrix is reproduced in Figure 8-1. This Matrix presents Hazard Severities ranging from I (most severe) to IV (least severe)

Hazard Resolution Matrix				
	Catastrophic	**Critical**	**Marginal**	**Negligible**
Frequent	**Unacceptable**	**Unacceptable**	**Unacceptable**	Acceptable/WR[1]
Probable	**Unacceptable**	**Unacceptable**	Undesirable	Acceptable/WR[1]
Occasional	**Unacceptable**	Undesirable	Undesirable	Acceptable
Remote	Undesirable	Undesirable	Acceptable/WR[1]	Acceptable
Improbable	Acceptable/WR[1]	Acceptable/WR[1]	Acceptable/WR[1]	Acceptable
[1] Acceptable/WR – Acceptable with review by management staff				

Figure 8-1. APTA Manual Hazard Resolution Matrix

across the top of the chart and Probability of Occurrence ranging from A (Frequent) to E (Improbable) down the left side of the chart. The Oversight Agency must be notified of all hazardous conditions w hich fall into the categories labeled "unacceptable."

Section 8.2
Notification

When an accident occurs at an RFGS or the RFGS becomes aware of an unacceptable hazardous condition, the Oversight Agency must be notified, and an investigation is required.

The Oversight Agency must be notified of the accident or unacceptable hazardous condition within the time period and by the process it specifies in the Program Standard or other documents. The Oversight Agency should address the following notification issues:

- Required notification time frame.
- Oversight Agency personnel to be notified.
- RFGS personnel performing the notification.
- Method of notification (phone/fax).
- Information required (time of event, extent of damage, etc.).

Section 8.3
Who Can Conduct Investigations?

The Oversight Agency may select any of the following methods for conducting investigations:

- Using Oversight Agency staff.
- Using a contractor, such as a consulting firm or the APTA Panel of Inquiry (at an Oversight Agency's request, APTA assembles a team of experts to conduct an investigation, gathering evidence at the scene and issuing a report of findings).
- Reviewing and approving investigations conducted by the RFGS.
- Using a combination of any of the above methods.

The purpose of Part 659 is to ensure that the RFGS operates safely and that the systemic causes of accidents and unacceptable hazardous conditions are addressed. Therefore, the Oversight Agency should conduct investigations of the most serious accidents or unacceptable hazardous conditions directly or by contract. If the Oversight Agency chooses to contract its investigations, or if it chooses to review and approve the RFGS investigation, the Oversight Agency personnel should maintain active involvement in all stages of the investigation process.

The State Safety Oversight Program is intentionally flexible, however, allowing the Oversight Agency to adapt an Oversight Program to the needs of the RFGS within the state's jurisdiction. For example, the Oversight Agency may use a contractor to investigate certain types of accidents or unacceptable hazardous conditions, its own staff to investigate others, and it may review and approve the investigation performed by the RFGS for yet other cases.

If the Oversight Agency elects to have the RFGS conduct the investigation, the Oversight Agency must, at a minimum, review and approve the RFGS 's findings of probable cause of the accident or unacceptable hazardous condition.

Illustrative Example:
PTSB

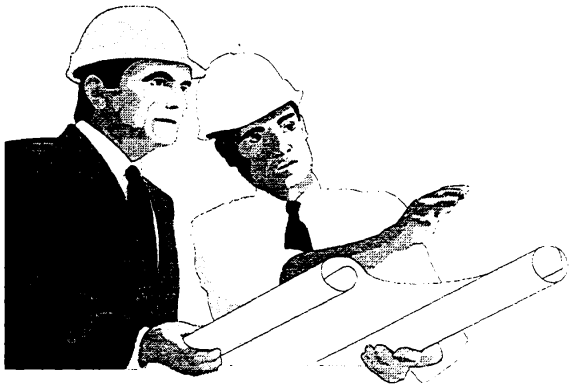
The New York State PTSB provides an example of an Oversight Agency which conducts accident investigations using its own full-time staff. The PTSB's statutory authority states that "the Board shall investigate accidents occurring on public transportation facilities and report on the results of such investigations."

As a result of the volume of rail service in the state, PTSB has found it worthwhile to have in-house staff conduct rail accident investigations. Over the past decade, PTSB has investigated approximately 50 rail accidents per year, including accidents at NYCT (New York City), NFTA (Buffalo), and commuter railroads. To guide its investigators, PTSB has developed a "Rail Accident Investigation Manual." This documents provides complete instructions for:

- Accident notification protocol.
- Investigation procedures.
- Data collection
- Determination of probable cause for rail accidents.

Section 8.4
Planning and Performing an Investigation

It is critical that the Oversight Agency develop detailed plans and procedures for conducting an investigation *before* an accident or unacceptable hazardous condition is reported.



An Oversight Agency may develop one set of procedures for investigating accidents and another one for investigating unacceptable hazardous conditions. It is especially important that an Oversight Agency address the following issues in developing its investigation procedures:

- The personnel who will conduct certain types of investigations (e.g., a particular Oversight Agency may choose to conduct all *accident* investigations, and direct RFGS staff to head *unacceptable hazardous condition* investigations).
- The scope of the investigation in each case (e.g., types of issues to be addressed, evidence to be collected, and documentation required).
- Procedures for communicating information collected by the RFGS during its investigation (e.g., requirement of periodic verbal updates).
- The content, format, and schedule of the report developed to document the investigation and to present findings of primary causal factors.

Section 8.5
Investigation Reporting

FTA may periodically request that the Oversight Agency submit reports or other information documenting activities concerning the performance of accident and unacceptable hazardous condition investigations.

Chapter 9. Requiring and Approving Corrective Actions

§659.43
Corrective Actions

The Oversight Agency must require the transit agency to minimize, control, correct, or eliminate any investigated hazardous condition within a time period specified by and in accordance with a Corrective Action Plan approved by the Oversight Agency.

Chapter 8 discussed the conduct of investigations and the development of related procedures. This chapter explains how Corrective Action Plans addressing these unacceptable hazardous conditions may be developed, submitted, approved, and monitored for implementation.

Section 9.1
The Corrective Action Plan

The term corrective action is used in Part 659 to describe any action administered by the RFGS to minimize, control, correct, or eliminate any unacceptable hazardous condition identified by the Oversight Agency.

During the investigation of an accident or unacceptable hazardous condition, the Oversight Agency may identify corrective actions to avoid or minimize the reoccurrence of the investigated incident or to address systemic problems at the RFGS. To ensure that these identified actions are addressed by the RFGS, the Oversight Agency must develop a process for RFGS preparation and submittal of a Corrective Action Plan.

As explained in Chapter 6, the process for managing Corrective Action Plans must be clearly addressed in the Program Standard. This process should:

- Provide an effective means for the communication of unacceptable hazardous conditions identified by the Oversight Agency and recommended corrective actions to the RFGS.
- Establish a time frame during which the RFGS must develop and submit a Corrective Action Plan addressing all identified corrective actions.
- Address Oversight Agency approval, monitoring, and verification activities related to the Corrective Action Plan.

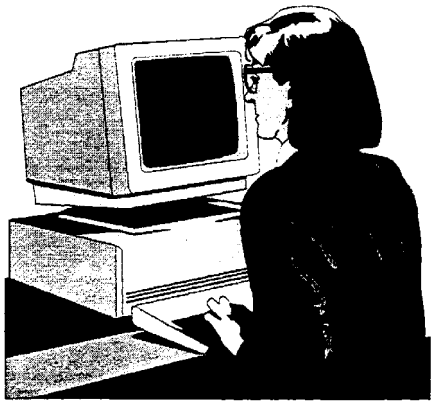
Once the Oversight Agency has determined that a particular investigated hazardous condition must be corrected according to a Corrective Action Plan, it must notify the RFGS to develop such a Plan. The RFGS must then prepare a Corrective Action Plan to address it, according to the time frame specified by the Oversight Agency in the Program Standard. This Corrective Action Plan must be approved by the Oversight Agency.

In the course of an investigation, if it becomes apparent that the Oversight Agency will require corrective actions to address an identified unacceptable hazardous condition, the Oversight Agency should inform the RFGS as soon as possible. The method for managing corrective actions should be cooperative in nature. Both the Oversight Agency and the RFGS must work together to identify corrective actions, to develop a time frame for implementing the corrective actions, and to provide a mechanism for the verification of completed actions.

Since the management of Corrective Actions works only with the cooperation of the RFGS, it is important that the Oversight Agency be clear in all of its findings for corrective actions.

If the Corrective Action Plan developed by the RFGS is not acceptable to the Oversight Agency, then notification should be made to the RFGS that:

- Explains why the Corrective Action Plan is unacceptable.
- Recommends alternative actions.
- Specifies a date for the submission of a revised Corrective Action Plan.



Corrective actions may be near-term, long-term, or a combination of both. Depending on the nature of the unacceptable hazardous condition, interim measures may be administered until final corrective action can be implemented.

Section 9.2
Monitoring Corrective Actions

Part 659 does not address record keeping. However, careful records maintenance is essential to the management of corrective actions. The State Safety Oversight Program requires the Oversight Agency to monitor all corrective actions.

A manual or automated Information management System may be used to monitor corrective actions and their Status. Correspondence concerning corrective actions may also be maintained. When a corrective action has been completed and verified by the Oversight Agency, the RFGS may wish to create a record and remove that corrective action from the list of active corrective actions.

FTA may periodically request Information from the Oversight Agency concerning the Status of corrective actions at each RFGS within the state.

Chapter 10.
Three-Year Safety Reviews

§ 659.37
Safety Reviews

At least every three years, the Oversight Agency must conduct an on-site safety review of the transit agency's implementation of its SSPP and prepare and issue a report containing findings and recommendations resulting from that review, which, at a minimum must include an analysis of the efficacy of the SSPP and a determination of whether it should be updated.

This chapter explains the process to be used by the Oversight Agency in conducting Three-Year Safety Reviews. Topics covered include:

- A description of the Safety Review Process.
- Who can perform Safety Reviews.
- Minimum requirements for Safety Reviews.
- An approach to developing a Three-Year Safety Review Program.

Section 10.1
Introduction

The Three-Year Safety Review:

- Allows the Oversight Agency to assess the effectiveness of RFGS's SSPP and whether it is being followed.
- Assesses whether RFGS's management is committed to ensuring safe and secure operation.
- Helps identify for the Oversight Agency systemic safety and security issues affecting the public and RFGS employees.
- Ensures that the Oversight Agency maintains a proactive role in the safety/security process at the RFGS.

The Three-Year Safety Review must be conducted on-site and must involve the

examination of both agency documents and facilities. FTA anticipates that the typical duration for the on-site component of the Safety Review is between two and five days, depending on the size and complexity of the RFGS operation. In addition, the Review must assess the efficacy of the SSPP in a written report.

While the Oversight Agency possesses considerable flexibility in implementing this requirement, the Safety Review must be comprehensive, addressing both safety and security activities as specified in the RFGS's SSPP. For this reason, newly established Oversight Agencies may choose to schedule their first Safety Review after January 1998 to include the security component of the SSPP.

Section 10.2
Safety Review Personnel

An Oversight Agency may:

- Conduct its own Safety Review, utilizing in-house personnel.

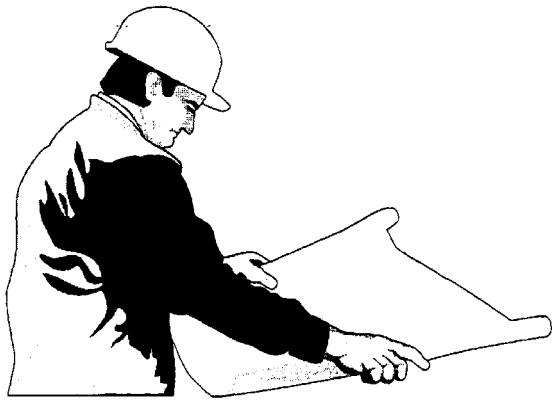
- Contract out the Safety Review (e.g., by utilizing APTA's **Rail Safety Audit Program** or by hiring another qualified contractor).

- Adopt a combination approach (e.g., a contractor performs some element(s) of the Safety Review, or Oversight Agency personnel and a contractor comprise a team which jointly performs the Safety Review).

The Oversight Agency should maintain an active role in the Safety Review by either:

- Conducting its own Safety Review.

- Accompanying the contractor during the Safety Review, if the Review is performed by an outside contractor.



Illustrative Example: PennDOT

Pennsylvania's existing State Oversight Agency, PennDOT, contracts its Safety Reviews with a private consulting firm. PennDOT has developed an effective approach to contract management that allows the Oversight. Agency to maintain active involvement in this oversight function.

PennDOT has operated its **Rail Transit Safety Review Program** (RTSRP) since 1992. Since the inception of the RTSRP, PennDOT has used a private contractor to conduct most of the program activities, including on-site safety audits.

PennDOT's program manager establishes program policies, participates in selected review activities, attends key meetings with the rail transit systems [(Southeastern Pennsylvania Transportation Authority (SEPTA) in Philadelphia and Port of Allegheny County (PAT) in Pittsburgh)], and reviews the activities of the contractor team.

Under the RTSRP, on-site review activities at the two transit systems take place on an ongoing basis. These include reviews and audits of operations, vehicle maintenance, facilities maintenance, inspection procedures, substance abuse programs abuse programs, training programs, system safety functions, and other operational/administrative areas. PennDOT believes that this ongoing review process provides a more complete and accurate view of transit safety. For the RFGS in Pennsylvania, the absence of intense audit periods minimizes disruptions to the schedules of transit system service and personnel.

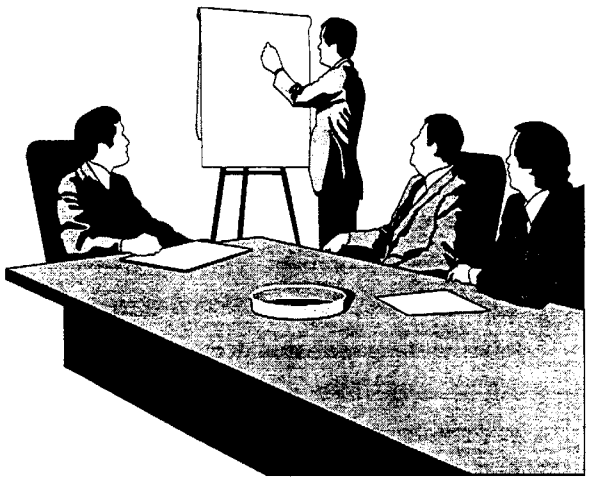
Section 10.3
Minimum Requirements

To allow maximum flexibility, FTA has intentionally not defined the required elements of the Safety Review. Instead, the Oversight Agency should determine for itself, based on the age, size, and complexity of each individual RFGS within its jurisdiction, the exact extent of the Safety Review. In all cases, the Safety Review must be comprehensive, *covering all issues included in the RFGS's SSPP.*

According to Part 659, the Safety Review, at a minimum, must include:

- An analysis of the efficacy of the SSPP.
- A determination of whether the SSPP should be updated.

The Safety Review should be an effective means of determining how well the safety program documented in the SSPP is functioning at the RFGS. Therefore, it is important that the Review be conducted according to established industry Standards. Materials prepared for the APTA **Rail Safety Audit Program** provide excellent documentation concerning the development and content of these Standards.



Section 10.4 Three-Year Safety Review Program

To conduct this Review, the Oversight Agency must develop a Three-Year Safety Review Program. Sections 10.4.1 through 10.4.4 present *one possible approach* the Oversight Agency may take to the Three-Year Safety Review. Oversight Agencies may choose to adopt this model program, which represents a combination of the practices currently in use by states with existing Oversight Agencies.

Illustrative Example: Model Three-Year Review Program

A model program should contain the following four phases:

- Planning the Review.
- Conducting the Review.
- Preparing the Report.
- Updating the SSPP.

Sections 10.4.1 through 10.4.4 present each of phases and demonstrate suggested Oversight Agency activities.

Section 10.4.1
Planning the Review

The Three-Year Safety Review is based on the SSPP developed by the RFGS. Overall Review planning and scheduling are based on the programs and procedures in place at the RFGS. The goal of the Review is for the Oversight Agency to determine whether the RFGS is following its SSPP and whether the SSPP is in compliance with the Program Standard.

The Review should be scheduled as far in advance as possible (existing Oversight Agencies often schedule up to a year in advance). Tentative dates should be arranged with each RFGS within the Oversight Agency's jurisdiction. The following subsections identify the actions which should be accomplished during this phase of the model Safety Review Program.

Section 10-4.1.1
Develop Review Schedule

This activity

- Identifies when the Oversight Agency will conduct all Safety Review activities for each RFGS within its. jurisdiction.
- Promotes communication with the RFGS;
- Includes milestones for the following activities:
    - Pre-Review Meeting (to plan for the Review with the RFGS).
    - Documentation Submittals by the RFGS.
    - On-Site Review.
    - Post-Review Debriefing with RFGS.
    - Final Report Completion.
    - SSPP Update Process Initiation and Completion.

Section 10.4.1.2
Designate a Review Leader

Within several months of the Review, the Oversight Agency should designate a Review Leader. This individual should begin preparing for the Review by:

- Arranging a Pre-Review meeting with the RFGS.
- Identifying all documents necessary to support the Review.
- Identifying the Oversight Agency's Review Team.

Section 10.4.1.3
Prepare a Safety Review Plan

The Review Leader should prepare a Plan to guide the performance of the Review. This Plan should include all necessary documentation both to:

- Direct the Review.
- Manage all information obtained by the Oversight Agency during the Review.

Section 10.4.1.4
Quantify/Qualify RFGS SSPP Goals and Objectives

This activity enables Oversight Agency personnel to evaluate the efficacy of the SSPP by developing a set of quantitative and qualitative performance criteria based on the goals and objectives submitted by the RFGS in its SSPP.

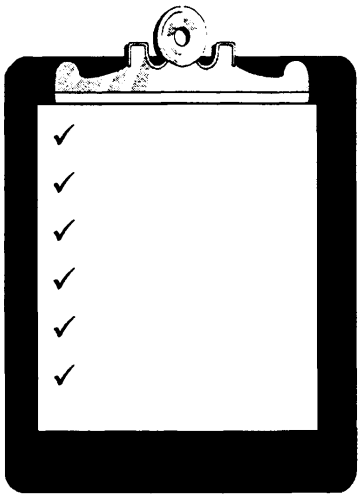
These criteria should:

- Be straightforward.
- Reflect the intent of the RFGS SSPP.
- Be specified in a checklist or some other formal presented to the RFGS for evaluation prior to conducting the Review.

Section 10.4.1.5
Prepare Review Checklists and Forms

This activity consists of preparing checklists to guide the on-site portion of the Review. The checklists should be based on the SSPP submitted by the RFGS and approved by the Oversight Agency. The following items should be covered in the checklists:

- Management Support for the SSPP.
- Goals and Objectives of the SSPP.
- Management of the SSPP.
- System Safety and Security Tasks and Responsibilities.
- Hazard Identification and Resolution Process.
- Safety and Security Training and Certification.
- Safety and Security Policies and Procedures.
- Maintenance Policies and Procedures.
- Internal Safety Auditing.
- SSPP Implementation and Maintenance.
- SSPP Verification.



The Oversight Agency may:

- Forward the checklists to the RFGS several days in advance of the Review to enable RFGS personnel to determine which members of its staff and what documentation will be required to verify the RFGS's implementation and compliance with its SSPP.
- Discuss the checklists and specific scheduling of the Review at a Pre-Review Meeting conducted between the Oversight Agency and the RFGS several weeks in advance of the Review.

The checklists should guide the Review, to ensure that the level of verification with the SSPP is accurately assessed. Figure 10-1 provides a sample checklist form used in the APTA Rail Safety Audit Program. This form:

- Provides an adequate guide for documenting items reviewed by the Oversight Agency .
- Rates the implementation level of each item.

A supplemental form may be used to provide an explanation for any item not in compliance with the RFGS's SSPP. Figure 10-2 provides an example of this type of form (reproduced from the New York State PTSB).

10.4.2 Conducting the Review

The Review should:

- Be conducted in an organized and professional manner.
- Result in as little disruption to the RFGS as possible.

Checklists prepared from the RFGS's SSPP should enable the Oversight Agency's Review Team to focus on the specific items requiring verification. Traditionally, verification is determined by:

- Evaluating documents and data maintained by the RFGS.
- Conducting interviews with RFGS personnel.
- Observing the on-site operation of the RFGS.

Review findings should be recorded directly onto the Review Checklist, and a rating of compliance should be given based on the examination of evidence. The Oversight Agency should use a consistent rating system which:

- Provides for a range of compliance levels (i.e. exceeds compliance, in compliance, needs improvement).
- Includes ratings for inability to review (with attached reason).
- Includes ratings for Not Applicable (with attached reason).

APTA RAIL SAFETY AUDIT PROGRAM		CONTROL:			DATE OF AUDIT:		
		Page 1 of					
		Auditor					
ITEM		ITEM DESCRIPTION	1	2	3	4	REMARKS

COLUMN DEFINITIONS:

1 - Meets Plan Requirements
2 - Meets Plan Requirements with Comments (See Supplemental Form)
3 - Needs Improvement (See Supplemental Form)
4 - Not Audited (See Reason/Reference in Remarks Column)

Figure 10-1. APTA Rail Safety Audit Checklist Form

SUPPLEMENTAL FORM		
NYSPTSB RAIL SAFETY AUDIT PROGRAM	CONTROL:	DATE:
	SF#	PAGE OF
	AUDITOR:	
STATUS/CONDITION:		
EFFECT/COMMENT:		
RECOMMENDATION:		
ASSIGNED RESPONSIBILITY:		
COMPLETION DATE:	VERIFICATION:	

Figure 10-2. New York PTSB Audit Form

When an item on the checklist is not in compliance, the Oversight Agency should prepare a supplemental form verifying non-compliance. The supplemental form should identify the specific item and the cause for non-compliance. These forms will be important to the Oversight Agency's assessment of the efficacy of the SSPP.

Immediately following the Review, the Oversight Agency may conduct a debriefing with the RFGS to disclose the preliminary results of the Review. During this debriefing, the Oversight Agency may:

- Explain the objectives and scope of the Review.
- Identify areas that are in compliance.
- Present observations.

- Discuss the findings.
- Present a summary of the overall status of the SSPP.
- Discuss scheduling of reports to be prepared by the Oversight Agency documenting the Review findings (the Oversight Agency may leave copies of the completed checklist forms with the RFGS for further review).
- Explain the process through which the RFGS can take exception to the Review findings.

10.4.3 Preparing the Report

Within the time frame designated by the Oversight Agency, a report documenting the findings of the Three-Year Safety Review must be prepared by the Oversight Agency. Based on experiences of existing Oversight Agencies, the Oversight Agency should develop a process for managing RFGS exceptions to the findings of the Review in order to minimize conflict and to improve communication. This process may include:

- Distributing a draft copy of the report to the RFGS before it is formally submitted by the Oversight Agency.

- Conducting a working meeting to discuss the findings of non-compliance with the SSPP.

- Preparing a Summary Report in which the findings are discussed in advance of the formal submission of the report. In this manner, the RFGS can prepare a formal response for inclusion in the final report.

To satisfy the minimum requirements of the State Safety Oversight Program, the report prepared by the Oversight Agency to document the Three-Year Safety Review must address the following issues:

- Verification that the SSPP is an integral part of the RFGS's overall management, engineering, operating, and maintenance practice.

- Verification that the SSPP contains provisions for modification/update in order to ensure that it remains a dynamic and viable document.

- Verification that the RFGS regularly monitors compliance with the SSPP.

- Verification that the RFGS identifier potentially serious hazardous conditions such that methods to eliminate, control, and mitigate them are implemented.

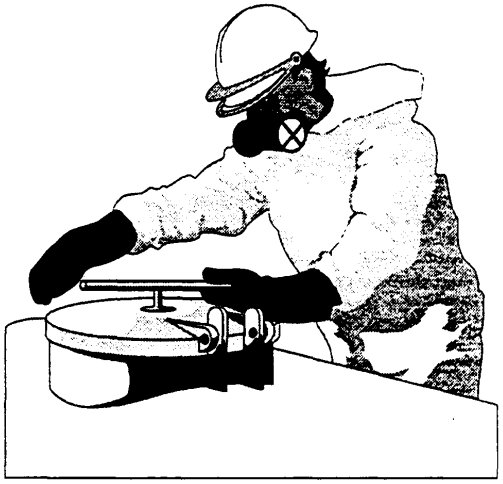
The report format is flexible; however, it may be useful for the Oversight Agency to specify a particular format to ensure consistency. This report should include at least the following information:

- A resolution citing the authority and purpose of the Review.

- Principal findings and observations, including an evaluation of the efficacy of the SSPP.

- Recommendations for updating the SSPP.

- Submitted comments and/or exceptions taken by the RFGS.



Section 10.4.4
Updating the SSPP

To address items in non compliance which RFGS SSPP, the Oversight Agency may require modification or updates to the SSPP. Or, if a systemic or procedural issue must be addressed, the Oversight Agency may choose to modify its Program Standard to require changes to the RFGS SSPP.

In either case, the Oversight Agency must notify the RFGS, in writing, of these required changes. Following the process explained in Chapter 7, the Oversight must clearly identify:

- Elements of the SSPP must be changed.
- Time frame during which the revisions to the SSPP must be accomplished.
- Process for Oversight Agency approval of the revised SSPP.

As discussed in Chapter 7, the process used by the Oversight Agency to require and approve modification and updates to the SSPP should be specified clearly by the Oversight Agency in the Program Standard or additional documentation.

If the Oversight Agency choose to modify the Program Standard to address issue resulting from the Three-Year Safety Review, a copy of the revised Program Standard should be submitted to FTA.

Chapter 11.
Safety Monitoring

§659.35
Transit Agency Annual Audit Reports

The Oversight Agency must:

(a) Require that the transit agency submit, annually, a copy of the Annual Safety Audit Report prepared by the transit agency as a result of the Internal Safety Audit Process (APT A Guidelines, Checklist Number 9); and

(b) Review the Annual Safety Audit Reports prepared by the transit agency.

To comply with FTA's State Safety Oversight Program, the Oversight Agency must require the RFGS to submit an Annual Safety Audit Report documenting safety auditing activities, based on the Internal Safety Auditing Process specified in the APTA Manual (Checklist Number 9).

Section 11.1
Introduction

Safety monitoring is an ongoing process which occurs each day at the RFGS. During regular operation, the RFGS receives information concerning safety performance from the following sources:

- RFGS personnel who collect and report data on a daily basis (e.g., members of the Safety, Police/ Security, Maintenance, Risk Management, and Operations Departments).
- Individuals outside the RFGS who provide scheduled inspections and audits [e.g., inspectors from Fire Departments, Building Code Enforcement Units, Occupational Safety and Health Administration (OSHA), and Environmental Protection Agency (EP A)].
- Outside contractors who provide warranty service and supplementary technical and training services (e.g., equipment vendors, consultants, and trainers).

These personnel provide information which contributes to an overall picture of safety at the RFGS. RFGS Safety personnel, in performing their monitoring function, as specified in the APTA Manual (Checklist Number 9), review and act upon information regarding the RFGS's adherence to safe operational practices. In many cases, these personnel summarize and analyze this information in reports to RFGS management and use findings to direct RFGS activities and programs.

FTA's State Safety Oversight Program specifies that the Oversight Agency must require the RFGS to annually summarize and present key findings of all monitoring activities related to RFGS safety. The report prepared by the RFGS must address all areas contained in the APTA Manual (Checklist Number 9). However, it should be noted that not all areas will be audited or inspected by each RFGS every year.

For RFGS participating in the APTA **Rail Safety Audit Program**, this Internal Safety Auditing Process should already be in place. For those RFGS that do not participate in the APTA Program, an Internal Safety Audit Process that complies with the APTA Manual (Checklist Number 9) must first be established.

FTA's State Safety Oversight Program does not require that an *audit of all activities relating to safety be performed at a given point* during the year (as with the Three-Year Safety Review). Rather, each Oversight Agency must require that annually, on a date determined by the Oversight Agency, the RFGS summarize the safety activities that have been undertaken, *on an ongoing basis*, throughout the year.

As discussed in Chapter 10, the Three-Year Safety Review is intended to provide a "snapshot" of the RFGS's compliance with the SSPP at one point in time. The Annual Safety Audit Report, however, summarizes RFGS safety activities for the entire year (see Figure 11-1).

The safety auditing process provides an opportunity for the Oversight Agency to play a proactive role in requiring that the RFGS monitor safety in a systematic and ongoing manner.

Annual Audit Report	Three-Year Safety Review Report
Summarizes *all* RFGS safety monitoring activities over the past year	Provides a "*snapshot*" of RFGS compliance efforts with the SSPP at a single point in time
Focuses on the RFGS's *schedule* of monitoring activities and *major findings*	Provides a comprehensive view of the *status* of RFGS processes as they relate to the SSPP
Documents activities occurring throughout the entire year at the RFGS	Documents a Review which takes place on-site over the course of a few days at the RFGS
Based on APTA Manual (Checklist Number 9)	Based on RFGS SSPP

Figure 11-1. Annual Audit Report vs. Three-Year Safety Review Report

Section 11.2
Required Elements of the Safety Monitoring Program

The Internal Safety Auditing Process specified in the APTA Manual directs safety monitoring activities in each of the following areas:

- Facilities Inspections.
- Maintenance Audits/Inspections.
- Rules/Procedures Review.
- Training and Certification Review/Audit.
- Emergency Response Planning, Coordination, Training.
- System Modification Review and Approval Process.
- Safety Data Acquisition/Analysis.
- Interdepartmental/Interagency Coordination.
- Configuration Management.
- Employee Safety Program.
- Hazardous Materials Programs.
- Drug and Alcohol Abuse Programs
- Contractor Safety Coordination.
- Procurement.

FTA encourages the Oversight Agency to allow the RFGS to submit existing reports, schedules, and findings, prepared for RFGS management to fulfill this requirement.

Illustrative Example: Recommended Contents of Annual Safety Audit Report

To reduce the reporting requirements for the RFGS, the Oversight Agency may choose to specify a report format emphasizing two important aspects of RFGS safety monitoring:

- **Scheduling of Audits and Inspections:** The Oversight Agency may require the report to provide a schedule of safety activities undertaken throughout the year, including:

  - Safety (or other) Department initiatives.
  - Regular inspections performed by outside agencies.
  - Safety-related training efforts.

  This schedule can be summarized in a chart or other graphic indicating auditing/inspection milestones.

- **Major Findings:** To accompany the schedule, the Oversight Agency may require that the report explain major findings resulting from these activities, including:

  - Areas of non-compliance and corrective actions administered based on inspections.
  - Outcomes of Safety (or other) Department initiatives.
  - Progress of training efforts and evaluations.

By focusing its attention on internal safety audit scheduling and major findings, the Oversight Agency assists the RFGS in identifying all safety-related activities performed not only within me Safety Department but throughout the entire RFGS. This focus will support the activities of the RFGS in obtaining and analyzing this information.

Chapter 12. Reporting and Document Submittal

This chapter summarizes the reporting and document submittal requirements specified in Part 659. As discussed in earlier chapters, the Oversight Agency must:

- Require each RFGS to submit reports and other documents necessary to satisfy Part 659.
- Report to FTA on its compliance activities.

Figure 12-1 presents a graphic representation of the report and document submittal requirements detailed in FTA's State Safety Oversight Rule.

Section 12.1 Required RFGS Documents

To comply with Part 659, the Oversight Agency must require the following documents from each RFGS within its jurisdiction:

- SSPP.
- SSPP updates or modifications.
- Notification of accidents and unacceptable hazardous conditions.
- Corrective Action Plan.
- Annual Safety Audit Report.

Figure 12-2 identifies the dates specified in Part 659 for compliance and the chapters of these Guidelines that discuss the preparation of these submittals.

The Oversight Agency may require additional documentation from the RFGS; Figure 12-2, however, presents the minimun requirements for Part 659.

Section 12.2 Documents Submitted to FTA

FTA's State Safety Oversight Program requires the Oversight Agency to make the following three submissions to FTA:

- **Initial Submissions.** The Initial Submission contains information that will not change frequently and describes the initial activities of the Oversight Agency.

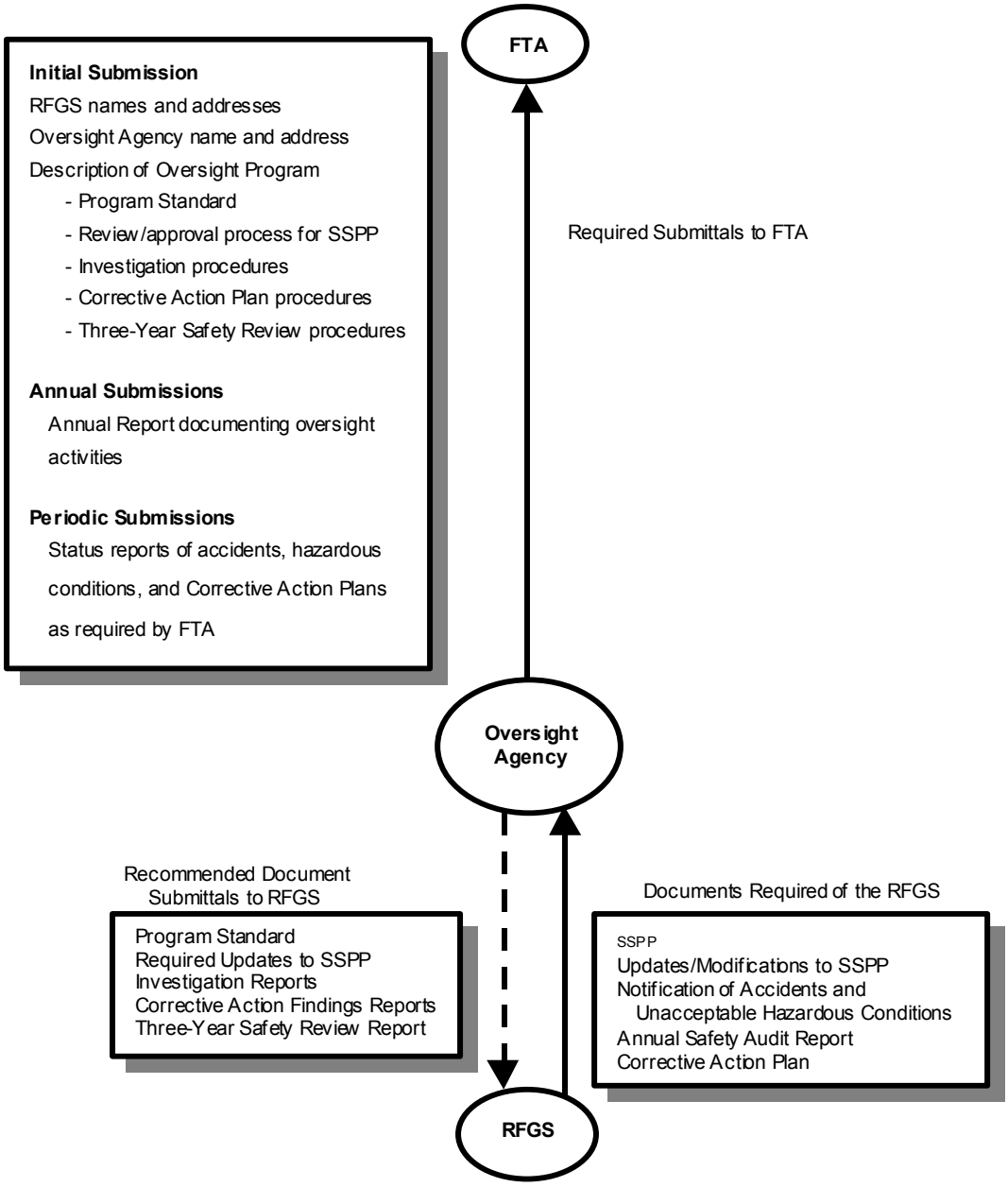


Figure 12-1. Documentation to be Prepared by Oversight Agency

Required Document	Relevant Chapter of these Guidelines	Due Date Specified by Part 659
SSPP	Chapter 6	January 1, 1997
SSPP Updates and Modifications	Chapter 7	As needed
Notification of Accidents and Unacceptable Hazardous Conditions	Chapter 8	In response to an incident which meets the definition of "accident" or "unacceptable hazardous condition"
Corrective Action Plan	Chapter 9	Following the investigation of an accident or unacceptable hazardous condition, if required by the Oversight Agency
Annual Safety Audit Report	Chapter 11	Annually, as required by the Oversight Agency

Figure 12-2. Required RFGS Documents

- **Annual Submissions.** Annual Submissions document the ongoing oversight activities of the Oversight Agency for the previous 12 months.

- **Periodic Submissions.** FTA may periodically require that the Oversight Agency submit certain types of information such as status reports on accidents and unacceptable hazardous condition investigations and Corrective Action Plans. These reports must be submitted only upon FTA's request.

Figure 12-3 presents the documents required for each of these submissions to FTA.

Section 12.2.1
Initial Submissions

Prior to January 1, 1997, the Oversight Agency must submit to FTA the following information, which must be updated as necessary:

- **The name and address of the Oversight Agency.** Submission of the "Certification of Compliance for FTA Recipients" (see Chapter 3) fulfills this obligation. This form includes all necessary information from the Oversight Agency required by Part 659.

Documentation Type	Preparation Details Contained in	Due by
Initial		
RFGS/Oversight Agency names/addresses	Chapter 3	January 1, 1997
Description of Oversight Program		
– Program Standard	Chapter 6	
– Review/approval process of SSPP (including written procedures for Three-Year Reviews)	Chapter 7 (Chapter 10)	
– Investigatory Procedures	Chapter 8	
– Corrective Action Procedures	Chapter 9	
Annual		
Oversight activities for previous year		March 15 (annually)
– Most common causes for investigated accidents and unacceptable hazardous conditions	Chapter 8	
– Three-Year Safety Review Reports	Chapter 9	
Periodic		
Status reports of accidents, unacceptable hazardous conditions and corrective actions	Chapter 8	Only at the request of FTA

Figure 12-3. Required Submittals to FTA

- **The name(s) and address(es) of the RFGS subject to the Oversight Agency's jurisdiction.** Submission of the "Certification of Compliance for FTA Recipients" (see Chapter 3) fulfills this obligation.
- **A written description of the Oversight Agency's Oversight Program including the following information:**
  - **A copy of the System Safety Program Standard.**

- **The procedures or process for reviewing and approving the RFGS's SSPP.** (These procedures, if included as part of the Program Standard, do not require separate submission.)

- **Investigation procedures.** (These procedures, if included as part of the Program Standard, do not require separate submission.)

- **Procedures for ensuring that appropriate corrective actions have been taken by the RFGS to correct, eliminate, minimize, or control investigated hazardous conditions.** (These procedures, if included as part of the Program Standard, do not require separate submission.)

Submission of "Certification of Initial Submission" of these Guidelines (see next page) will fulfill these requirements.

Section 12.2.2
Annual Submissions

Before March 15th of each year, the Oversight Agency must submit to FTA a publicly available Annual Report summarizing oversight activities for the preceding 12 months.

These activities include the following:

- **Investigations.** A description of the most common probable causal factors of accidents and unacceptable hazardous conditions must be included in the Annual Report.

- **Three-Year Reviews.** If a Three-Year Safety Review was performed by the Oversight Agency within the last 12 months, the report should be included in the Annual Submission.

- **General.** Any other general information that the Oversight Agency deems necessary to describe to FTA the Oversight Agency's activities within the year should be included. Where possible, the Oversight Agency should make use of existing documents.

Submission of "Certification of Annual Submission" will fulfill these requirements.

Initial Submission
Certification of Compliance for FTA Recipients
[certifying compliance with 49 CFR part 659.45 (a)(3)(I -iv)]

Date_____

United States Department of Transportation
Federal Transit Administration
Office of Safety and Security
400 7th Street, S.W.
Washington, D.C. 20580

I, _____ , _____
(Name) (Title)

submit the following information describing the _____
(Name of Oversight Agency)

Oversight Program:

(1) A copy of the System Safety Program Standard developed to comply with the APTA Manual for the Development of Rail Transit System Safety Program Plans, to include provisions for passenger security, and to establish the relationship between -

_____ and
(Name of Oversight Agency)

_____ .
[Name of Rail Fixed Guideway Systems(s)]

(2) The procedures or process for reviewing and approving each RFGS System Safety Program Plan within _____'s jurisdiction,
(Name of Oversight Agency)

including the procedures used to conduct the Three-Year Safety Review.

(3) The procedures for the investigation of accidents and unacceptable hazardous conditions.

(4) The procedures for ensuring that appropriate corrective actions have been taken by each RFGS to correct, eliminate, minimize, or control investigated hazardous conditions.

The attached information accurately documents the Oversight Program administered by

_____
(Name of Oversight Agency)

Signed: _____
(Name and Title)

Annual Submission
Certification of Compliance for FTA Recipients
[certifying compliance with 49 CFR part 659.45 (b)]

Date_____

United States Department of Transportation
Federal Transit Administration
Office of Safety and Security
400 7th Street, S.W.
Washington, D.C. 20580

I, _____ , _____
(Name) (Title)

submit the attached Annual Report which summarizes the oversight activities of

_____ for the preceding twelve
(Name of Oversight Agency)

months. The attached information accurately documents the Oversight Program administered by

_____
(Name of Oversight Agency)

Signed: _____
(Name and Title)

Section 12.2.3
Periodic Submissions

FTA's State Safety Oversight Program also requires periodic submissions. FTA may request information from each Oversight Agency, such as status reports of accident and unacceptable hazardous condition investigations and Corrective Action Plans.

Section 12.2.4
Submittal Address

Each of the submissions described in this section must be sent to:

FTA State Oversight Program
Federal Transit Administration
Office of Safety and Security
400 7th Street, S.W.
Washington, D.C. 20590

Section 12.3
Document Submittals to the RFGS

Part 659 does not specify the documents which must be submitted to the RFGS by the Oversight Agency. However, the exchange of information between the Oversight Agency and the RFGS enhances communication and builds support for the Oversight Program.

Based on the experience of the existing Oversight Agencies, the Oversight Agency may consider submitting the following documents to the RFGS:

- A copy of the Oversight Agency Program Standard.
- Required Updates of SSPP.
- Three-Year Safety Review Report.
- Investigation Reports.
- Corrective Action Findings Report.

Figure 12-4 describes the documents that the Oversight Agency may wish to submit to the RFGS and provides a recommended schedule for submission.

Document Required	Preparation Details Contained in	Recommended Schedule
System Safety Program Standard	Chapter 6	Prior to January 1,1997[1]
System Safety Program Plan Updates	Chapter 7	As needed
Investigation Reports	Chapter 8	Following Investigations of Reported Accidents and Unacceptable Hazardous Conditions at the RFGS
Corrective Action Findings Reports	Chapter 9	Following Investigation of Accidents and Reported Unacceptable Hazardous Conditions at the RFGS
Three-year Review Report	Chapter 10	Triennially, Following Scheduled Reviews of the RFGS

[1] *To allow the RFGS to meet the deadline for developing the SSPP (which is based on the Program Standard) by January 1, 1997, FTA suggests that the Oversight Agency issue the Program Standard several months in advance of the January 1, 1997 deadline.*

Figure 12-4. Recommended Documents to be Provided to the RFGS

Appendix A

49 CFR 659

"Rail Fixed Guideway Systems; State Safety Oversight"

federal register

Wednesday
December 27, 1995

Part IV

Department of Transportation

Federal Transit Administration

49 CFR Part 659
Rail Fixed Guideway Systems; State Safety Oversight; Final Rule

DEPARTMENT OF TRANSPORTATION

Federal Transit Administration

49 CFR Part 659

[Docket NO. 92-D]

PIN 2132-AA39

Rail Fixed Guideway Systems; State Safety Oversight

AGENCY: Federal Transit Administration, DOT.

ACTION: Final rule.

SUMMARY: As required by the Intermodal Surface Transportation Efficiency Act of 1991, the Federal Transit Administration (FTA) issues a rule requiring States to oversee the safety of rail fixed guideway systems not regulated by the Federal Railroad Administration (FRA). This document accordingly sets forth FTA's State safety oversight program, which is intended to improve the safety of rail fixed guideway systems.

EFFECTIVE DATE: This regulation is effective January 26, 1996. The incorporation by reference of certain documents in the regulation is approved by the Director of the Federal Register as of January 26, 1996.

FOR FURTHER INFORMATION CONTACT: For program issues: Judy Meade or Roy Field, Office of Safety and Security, Federal Transit Administration, (202) 366–2896 (telephone) or (202) 366–3765 (fax). For legal issues: Nancy Zaczek, Office of Chief Counsel, Federal Transit Administration, (202) 366–4011 or (202) 366–3809.

SUPPLEMENTARY INFORMATION:

This preamble is organized as follows:

I. Background
- A. 49 U.S.C. § 5330
- B. Summary of the final rule
- C. Overview of the comments

II. Discussion of the Comments
- A. Rail Fixed Guideway System
- B. System Safety Program Standard
- C. System Safety Program Plan—the fix factors
- D. Planning, design, and construction
- E. Accountability factor
- F. EPA and OSHA requirements
- G. Security
- H. Biennial safety reviews
- I. Safety audits
- J. Accident
- K. Hazardous condition
- L. Investigations
- M. Confidentiality of oversight agency investigation reports
- N. Certified Transit Safety Professional

III. Section-by-Section Analysis

IV. Economic Analysis

V. Regulatory Process Matters

I. Background

The Intermodal Surface Transportation Efficiency Act of 1991 (Pub. L. 102-240), enacted into law on December 18,1991, added section 28 to the Federal Transit Act (recently codified at 49 U.S.C. 5330 (1994)), which requires the Federal Transit Administration to issue regulations creating a State oversight program. On June 25, 1992, FTA issued an Advance Notice of Proposed Rulemaking (ANPRM) soliciting public comment on a range of issues to be addressed in drafting a Notice of Proposed Rulemaking (NPRM). 57 FR 28572. The agency held hearings on the ANPRM in Los Angeles, California; Portland, Oregon; and Washington, DC. Thirty-five entities either submitted comments to the docket or testified at one of the three hearings, including fifteen transit authorities, three utility commissions, eight States, one engineering firm, two transit associations, one labor union, one Federal agency, one transit supplier, two representatives from the people mover industry, and one transportation consultant.

On December 9, 1993, FTA publisbed its NPRM (58 FR 64855) and today publishes its final rule, which requires States to oversee the safety of rail fixed guideway systems.

A: 49 U.S.C. 5330

In general, section 5330 applies only to those States in which a rail fixed guideway system operates that is not regulated by the Federal Railroad Administration, and requires any such State to designate a State oversight agency to be responsible for overseeing the rail fixed guideway system's safety practices. FTA is required to issue a rule implementing the program and may withhold Federal funds if a State fails to implement the rule.

More specifically, the statute describes the responsibilities of the State and the agency the State designates to provide oversight, which in most instances will be an agency of the State because most rail fixed guideway systems operate in only one State. When a rail fixed guideway system operates in more than one State, however, the statute permits the affected States to designate any entity, other than the transit agency itself, to oversee that rail fixed guideway system.

Whether the oversight agency is a State agency or some other entity, it must require each affected transit agency to create a system safety program plan, which the oversight agency must review and approve. The oversight agency must also investigate accidents and hazardous conditions. Once a hazardous condition has been discovered, the oversight agency must require the transit agency to correct or eliminate it.

If a State has not met these requirements or has not made adequate efforts to comply with them, the Secretary may withhold up to five percent of a fiscal year's apportionment under FTA's formula program for urbanized areas (formerly section 9) attributable to the State or an affected urbanized area in the State.

B. Summary of the Final Rule

The rule delineates the responsibilities of the State, the oversight agency, the transit agency, and the FTA.

The State

Under the rule, the primary responsibility of the State is to designate an entity or entities to oversee the safety of a rail fixed guideway system. When the rail fixed guideway system operates only within a single State, that entity or entities must be an agency of the State: when it operates in more than one State, the affected States may designate a single entity to oversee that system. In neither case may the State designate the transit agency as the oversight agency.

To ensure the oversight agency's candid assessment of the probable cause of a particular accident or unacceptable hazardous condition, the rule allows the State to enact legislation prohibiting the disclosure of oversight agency investigation reports.

The Oversight Agency

The rule directs the oversight agency, or an entity acting on its behalf, to develop a system safety program standard, a document that establishes the relationship between the oversight and transit agencies and specifies the procedures that the transit agency must follow. The system safety program standard must, at a minimum, comply with the American Public Transit Association's "Manual for the Development of Rail Transit System Safety Program Plans" ("APTA Guidelines"), a manual widely used throughout the transit industry and available from the American Public Transit Association (APTA), 1201 New York Avenue, N.W., Washington, D.C. 20005–3917, or the Federal Transit Administration, Office of Safety and Security, 400 7th Street, S.W., Washington, D.C. 20590. The APTA Guidelines assist in developing safety practices to reduce the likelihood of unintentional events that may lead to death, injury, or property damage. In

addition, the system safety program standard must include specific provisions addressing "security" matters, intentional wrongful or criminal acts, such as muggings, rapes, murders, assaults, or terrorist activities. To develop this portion of the system safety program plan, we suggest that the oversight agency use FTA's "Transit Security Procedures Guide" and "Transit System Security Program Planning Guide," available from the FTA at the address above.

The oversight agency must require the transit agency to develop a system safety program plan that complies with the oversight agency's system safety program standard. By January 1,1997, the oversight agency must review and approve, in writing, the transit agency's system safety program plan; however, the "security" provisions of the system safety program plan must be approved initially by the oversight agency by January 1,1998. After the initial approvals, the oversight agency must review, as necessary, the transit agency's system safety program plan and determine whether it should be updated. All oversight agency approvals must be in writing.

The rule allows the oversight agency to prohibit the transit agency from publicly releasing the "security" provisions in the system safety program plan.

The oversight agency must require the transit agency to conduct safety audits according to the Internal Safety Audit Process detailed in checklist number 9 of the APTA Guidelines. Once a year the transit agency must compile and submit an audit report to the oversight agency or an entity acting on its behalf for review.

Aside from reviewing the transit agency's safety audit reports, the oversight agency must conduct on-site safety reviews every three years. In a safety review, the oversight agency must assess whether the transit agency's actual safety practices and procedures comply with its system safety program plan. Once this review is completed, the oversight agency must prepare a report containing its findings and recommendations, an analysis of the efficacy of the transit agency's system safety program plan, and a determination of whether the system safety program plan should be updated.

The oversight agency must require the transit agency to report the occurrence of accidents and unacceptable hazardous conditions within a period of time specified by the oversight agency. The oversight agency must investigate such reports in accordance with procedures it has established. The oversight agency may conduct its own investigation, use a contractor to conduct an investigation, or rely on the investigation conducted by the transit agency or the National Transportation Safely Board (NTSB).

After the oversight agency has investigated an accident or unacceptable hazardous condition, it must require the transit agency to minimize, control, correct, or eliminate it, in accordance with a corrective action plan drafted by the transit agency and approved by the oversight agency.

The oversight agency must submit three kinds of reports to FTA: an initial submission, an annual submission, and a periodic submission. In the initial submission, the oversight agency lists the names and addresses of the rail fixed guideway systems it oversees. This report must be updated only when that information changes. In the annual submissions, the oversight agency must submit to FTA a publicly available report summarizing its oversight activities for the past year. Periodically, an oversight agency must submit to FTA status reports of accidents, hazardous conditions, and corrective action plans. The oversight agency must submit these reports only if FTA so requests.

The Transit Agency

The transit agency must develop a system safety program plan that complies with the oversight agency's system safety program standard. It must conduct safety audits that comply with the Internal Safety Audit Process, APTA Guidelines, checklist number 9, and draft and submit to the oversight agency a report summarizing the results of the safety audit. The transit agency must classify hazardous conditions according to the APTA Guidelines' Hazard Resolution Matrix. The transit agency must report, within the timeframe specified by the oversight agency, any accident or unacceptable hazardous condition that has occurred on the rail fixed guideway system. The transit agency may, if the oversight agency so chooses, conduct investigations on behalf of the oversight agency. Once an investigation has been completed, the transit agency must obtain the oversight agency's approval of a corrective action plan and then implement the plan so as to minimize, control, correct, or eliminate the particular unacceptable hazardous condition or condition that has caused an accident.

The Federal Transit Administration

The FTA assesses whether the State has complied with the rule or has made adequate efforts to comply with it. If the FTA determines that the State is not in compliance or has not made adequate efforts to comply, it may withhold up to five percent of the amount apportioned for use in the State or affected urbanized areas under FTA's formula program for urbanized areas (formerly section 9). Also, FTA receives reports from the oversight agency.

C. Overview of the Comments

The FTA received 60 comments in response to the NPRM. FTA considered all comments filed in a timely manner as well as all statements and material presented at the public hearings on the rule. The breakdown among commenter categories is as follows:

Transit Agencies	27
State DOTs	9
Public Utilities	6
Cities	1
Federal Agencies	2
Independent Consultants	8
Trade Associations	2
Safety Societies/Associations	5

In Section II below, we discuss in detail the public comments addressing issues raised in the NPRM. One such issue, how the term "rail fixed guideway system" should be defined, affects the scope of the rule. Another key issue, how the system safety program standard should be developed and what it should include, will directly affect the relationship between the oversight and transit agencies. Most important, we examine whether the oversight agency should use the APTA Guidelines or Military Standard 882B or 882C (MIL-STD 882B or 882C) to develop its system safety program standard. We also examine whether the system safety program standard should cover the planning, design, and construction phases of a rail fixed guideway system's life cycle; EPA and OSHA-type matters; "security"; and other issues.

Also, we discuss the oversight agency's role in investigating accidents and unacceptable hazardous conditions. A related issue concerns whether investigation reports should be kept confidential.

For additional discussion on individual issues, see also the Section-By-Section Analysis below in Section III.

II. Discussion of the Comments

A. Rail Fixed Guideway System

The first issue is the definition of "rail fixed guideway system." Statutes give us limited guidance in this regard; section 5330, the authority for this rulemaking, states that it applies "only to States that have rail fixed guideway mass transportation systems not subject

to regulation by the Federal Railroad Administration." Another provision. 49 U.S.C. §5302, defines "mass transportation" as “transportation by a conveyance that provides regular and continuing general or special transportation to the public * * *. Finally, 49 U.S.C. § 20102(1), which defines railroads subject to regulation by the FRA, specifically excludes "rapid transit operations within an urban area that are not connected to the general railroad system of transportation." Of mass transportation systems, generally, only commuter railroads are regulated by the FRA. Therefore, we asked in both the ANPRM and the NPRM whether we should adopt a narrow definition and include only light and heavy rail systems or a broad definition and include other rail systems, such as monorails, inclined planes, trolley systems, and funiculars, as well.

Many commenters to the ANPRM did not address this issue. Those that responded directed their comments to specific issues; for instance, six commenters discussed including people movers, while only two commenters proposed a definition for FTA's consideration. In the NPRM, FTA proposed to define "rail fixed guideway system" as

Any public transportation facility not regulated by the Federal Railroad Administration, which occupies a separate right-of-way exclusively for public transportation or uses steel-wheeled calenary or other rail system sharing a right-of-way with other forms of transportation and, which is included in the calculation of fixed guideway route miles under section 9 of the FT Act.

As we explained in the preamble to the NPRM, this definition would cover light and heavy rail, cable cars, trolleys, people movers, and inclined planes so long as their mileage is included in the calculation of fixed guideway route miles under section 9 of the FT Act. We further noted that the Morgantown People Mover, which is not used in the calculation of route miles under the section 9 formula program, would not be covered by the proposed rule, while the Detroit People Mover, which is used in the calculation of the section 9 formula would be covered. We further noted that the definition also would not cover rubber-wheeled trolley buses that use a catenary system, as they are subject to motor vehicle regulations.

Many of the commenters to the NPRM urged FTA to adopt the narrow definition, with most of them suggesting that the definition be limited to light and heavy rail systems only. In support of their contention, some of these commenters noted that in the past.

NTSB had recommended that FTA oversee the safety of rapid rail transit systems only, although these commenters stated that light rail systems should be covered by the rule as well. Concerning people movers, inclined planes, amusement rides, funiculars, historical trolleys, cable cars, and other rail transit systems, these commenters opposed their inclusion, opining that they do not present the same level of risk to public safety as posed by heavy and light rail systems.

NTSB also commented on this issue by stating that although it had no accident investigation experience with people movers or incline planes that would provide a basis to determine if these systems should be covered by the FTA's regulations, the Board believe[s] that the safety of any system that regularly transports people should be monitored by an appropriate State or local agency. Limiting the definition of a rail fixed guideway system to those systems used by an urbanized area in the calculation of fixed guideway route miles under Section 9 of the Federal Transit Act would apparently exclude some of these systems from the proposed regulation. Further, it is possible that an urbanized area could not count in the statutory formula to determine Section 9 Federal funds the rail route miles of a particular system to avoid having the system covered by the proposed oversight regulation In short, the Safety Board questions the need for the Section 9 limitation to the definition.

FTA Response. Although most commenters recommended that we cover only light and heavy rail systems, we agree with the NTSB that "any system that regularly transports people should be monitored by an appropriate State or local agency." Hence, the rule covers inclined planes, monorails, trolleys, automated guideways, and funiculars along with light, rapid, and heavy rail systems. We did, however, change the definition to clarify that guided busways are not-covered.

We also made another change in light of NTSB's assertions that the proposed definition may exclude some systems that are not used to calculate fixed guideway route miles under FTA's formula grant program for urbanized areas. We do not believe this would be the case because FTA's grant program is based, in part, on the amount of "fixed guideway route miles" within an urbanized area. It is therefore in the urbanized area's interest to include as many systems as possible. Moreover, in most instances, a system that receives Federal funding under FTA's formula grant program for urbanized areas would have its mileage included in the calculation. The opposite, however, is not true; there are systems whose mileage is used in the calculation that do not receive funding under FTA's formula grant program for urbanized areas. That is why we proposed covering those systems that are used in the calculation instead of just certain recipients of FTA funding; it is actually a broader category. Nevertheless, we have added a provision to cover any system that receives funding under FTA's formula grant program for urbanized areas or is used in the calculation of "fixed guideway route miles." This definition should cover most rail mass transit systems not regulated by the FTA.

B. System Safety Program Standard

Section 5330 requires FTA to issue regulations that direct the State oversight agency to develop "a safety program plan for each [rail] fixed guideway mass transportation system in the State." In the NPRM, we proposed to require the oversight agency to adopt a system safety program standard. . which a transit agency would then use to develop its system safety program plan, the document used by the transit agency to ensure that it uses proper safety practices and procedures.

The NPRM further proposed that the oversight agency's "system safety program standard" comply, at a minimum, with the American Public Transit Association's "Manual for the Development of Rail Transit System Safety Program Plans," ("APTA Guidelines"). In the preamble to the NPRM, we noted that we had considered adopting Military Standard 882B (MIL–STD 882B), which has been subsequently superseded by MIL–STD 882C, but found it unnecessary because APTA had developed its Guidelines by adapting MIL–STD 882B to the transit industry.

While most commenters favored the use of the APTA Guidelines, one .. commenter strongly favored the use of MIL–STD 882B or 882C to develop the system safety program standard. This commenter noted that:

[T]he discussion of the Proposed Rule indicates that the APTA requirement is equivalent to MIL–STD 882B, and that the APTA standard can therefore be used in place of the MIL–STD. It should be noted that the APTA standard is not equivalent to the military standard. There are significant and important philosophical differences between the two documents. The most important of the differences is that MIL–STD 882 specifies that system safety be started very early in the project, that it must be involved in the design of the system, that a specific order of precedence must be followed to increase safety, and that risk assessments must be based upon probability and severity. The APTA standard emphasizes the use of system safety for operational systems after they have been completed and put into service.

indicates that system safety is mostly concerned with operations and procedures, and implies that safety can be 'audited' into a system. While the APTA Manual does mention that system safety is needed during the design phases, the emphasis is clearly on later phases • • • . Another potential concern with the APTA Manual is that it describes the audit process in terms of determining whether or not the transit agency is following its system safety program, but is silent on the issue of determining whether or not that program can be expected to accomplish its goals. While this is appropriate for an organization such as APTA, it may not be appropriate for an Oversight Agency. It may be important for the Oversight Agency to review the Transit Agencies plans with an eye toward trying to determine whether or not the plan is likely to result in an effective system safety program • • • .

This commenter also noted that MIL-STD 882C incorporates changes concerning "Software Safety."

FTA Response. This commenter has certainly made a convincing case for the adoption of MIL-STD 882B or 882C, and we emphasize that, although we have adopted the proposal as published in the NPRM, we have not precluded the use of either of those Military Standards-Instead we have adopted the APTA Guidelines as a minimum standard the oversight agency must meet or exceed; because the APTA Guidelines were derived from MIL-STD 882B, an oversight agency that bases its system safety program standard on either MIL-STD 882B or 882C should meet or exceed the requirements of the APTA Guidelines. Moreover, by adopting the APTA Guidelines as a minimum standard, we accomplish two objectives: establishing a nation-wide baseline standard and giving a State more flexibility and control in developing its own program.

We do, in fact, urge the oversight agency to assess the APTA Guidelines in relation to MIL-STD 882B or 882C and decide which one best addresses its needs. We believe that an oversight agency that uses either MIL-STD 882B or 882C as a basis for its system safety program standard is well served, and we urge an oversight agency to at least consider those Military Standards in developing its own oversight program.

Although we have not mandated the use of MIL-STD 882B or 882C, we have addressed one of the concerns of this commenter, by adding a provision in the rule to require the oversight agency to determine the efficacy of the transit agency's system safety program plan and require the transit agency to update it, if necessary.

This commenter also commented that the MIL-STD 882C's section on "Software Safety" is "of critical importance to modern transit systems"; we recommend that both the oversight agency and the transit agency assess whether that section meets the safety needs of the "rail fixed guideway system."

C. System Safety Program Plan—the Six Factors.

As mentioned above, under the NPRM the transit agency was to develop a system safety program plan that complied with the oversight agency's system safety program standard. In the preamble to the NPRM, we suggested that the system safety program plan should: (1) be endorsed by top management; (2) establish the safety goals and objectives of the transit agency; (3) identify safety issues; (4) require cooperation within the transit agency to address the identified safety issues; (5) recognize that achieving safety goals and objectives may require the involvement of entities other than the transit agency; and (6) provide a schedule for the implementation and revision of the system safety program plan. We then asked for comment on whether we should require these six factors in the final rule.

Only seven commenters responded to this issue, and none of them opposed the general concept of the six factors. Several of the commenters noted, however, that all six factors are included in the APTA Guidelines, making them unnecessary if FTA incorporates the APTA Guidelines into the final rule.

FTA Response. Since the six factors are included in the APTA Guidelines, which we have incorporated by reference into the final rule, the oversight agency must require the transit agency to address all six factors in its system safety program plan.

D. Planning, Design, and Construction.

In the preamble to the NPRM. we noted that section 5330 may be read

To apply only to the operation of rail fixed guideway systems, which would lead to the conclusion that the NPRM covers only those rail fixed guideway systems already in existence, or other systems only when they commence operations. On the other hand, if we were to interpret section [5330] to apply during the planning, design, and construction phases of a system, we would then have to decide when the State would be required to comply with this proposed rule. This would be especially difficult for those States where systems are in the planning stage, which can be a lengthy process, and it would be difficult to specify at what point the oversight agency would have to be established.

Of the commenters that responded to this issue, only a few favored covering the pre-operational phases of the rail fixed guideway system's life cycle. One of these commenters stated that "[t]o ensure that the design of facilities and systems results in optimal safety, the system safety approach has been shown to be highly effective and cost efficient."

The vast majority of the commenters were against covering the planning, design, and construction phases in this rule, stating in effect, that other mechanisms, *i.e*., FTA's Program Management Oversight (PMO) process and the construction contract itself can ensure that safety is planned, designed. and constructed into new rail fixed guideway systems.

FTA Response. Although we agree that a system safety program plan should cover the planning, design, and construction of a "rail fixed guideway system," the language of section 5330 leads us to conclude that it covers only operating systems or systems about to commence operations. Section 5330 directs a State to establish and carry out a "safety program plan for each [rail] fixed guideway mass transportation system in the State," never mentioning the planning, design, and construction phases of a system's life cycle. Moreover, because of the lengthy planning, design, and construction phases of a system's life cycle, we believe that it is impractical, especially for a State planning its first "rail fixed guideway system," to require that a State create a bureaucracy years before a single passenger is served, when there are other mechanisms available to ensure that safety is designed, planned. and constructed into a new "rail fixed guideway system." This does not mean, however, that a State is precluded from creating an oversight agency that oversees the planning, design, and construction of a "rail fixed guideway system." On the contrary, we encourage the States to do so, although we do not, under this rule, require it. Also, we encourage the oversight agencies to work with PMOs to ensure that safety is designed, planned, and constructed into new "rail fixed guideway systems."

E. Accountability Factor.

While drafting the NPRM, we were concerned that the development of a State Safety Oversight Program would not be complete without some mechanism to ensure transit agencies' commitment to safety. To "institutionalize" this commitment and to meet the requirements of section 5330, we developed the "accountability factor," in which the oversight agency would require a transit agency to

identify tasks critical to safety and the persons responsible for performing those tasks. This concept was derived from section 207 of MIL-STD 882B, which concerns the "identification of safety-critical equipment and procedures." The "accountability factor" was intended to help the transit agency identify and correct problems.

Most of the commenters on this issue opposed the inclusion of the "accountability factor" in the rule because, in their opinion, it would not achieve its intended purpose of making systems safer. For instance, one commenter stated such a requirement would allow the oversight agency not just to oversee but to micromanage the transit agency; another claimed that it would become a "paperwork" exercise and actually hinder the development of safety practices and procedures. Yet another commenter stated that it would be used to "fix" blame. One commenter argued that the "accountability factor" was a "misapplication" of section 207 of MIL-STD 882B, which, according to this commenter, was developed to verify compliance with safety equipment and procedures, an activity distinct from system safety program activities. Last, some commenters indicated that the "accountability factor" was not necessary under the rule because a well-drafted system safety program plan incorporates accountability into it.

Although the NTSB favored the inclusion of the "accountability factor" in the final rule, it did not elaborate on its reasoning.

FTA Response. The final rule does not include the "accountability factor" because on balance, we have concluded that the oversight agency is best suited to meet the directives of section 5330(c)(1) to "establish[ ]• • • lines of authority [and] levels of responsibility and accountability • • • for the rail fixed guideway system. We note that the APTA Guidelines checklist numbers 1 through 5 stress the development of a concept similar to the proposed "accountability factor."

F. EPA and OSHA Requirements.

We asked whether the system safety program plan should address matters covered by the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA). Four argued that it should; three were opposed. Those in favor supported a "comprehensive approach" to safety in which various safety issues or "disciplines" are integrated for a total prevention effort. Those in opposition were concerned about creating overlapping jurisdiction between the oversight agency and the State agency with authority to enforce the EPA and OSHA laws and regulations.

FTA Response. By adopting the APTA Guidelines, which address OSHA and EPA matters in System Safety Checklist numbers 19 and 20, respectively, we have required that these matters be included in the system safety program

plan. Although this allows the possibility of jurisdictional conflicts among State agencies, the benefits of the oversight agency's adopting a total approach to safety outweigh this possibility. Moreover, a State can plan to reduce or eliminate any duplicative jurisdiction between the oversight agency and any other State agency with jurisdiction over EPA and OSHA matters.

G. Security.

In the preamble to the NPRM, we asked whether the system safety program plan should address security matters, and if so, what specifically should be included. Many commenters responded to this question, most negatively; some contended that security matters should be handled by law enforcement personnel and not by transit safety professionals, others opined that requiring the system safety program plan to address security matters is outside the scope of section 5330, and others stated that whether transit security matters should be included in the system safety program plan should be decided by State and local transit officials and not mandated by the Federal government.

More particularly, one commenter noted that "security is a separate issue which requires separate treatment, separate techniques, separate concerns, and separate disciplines." This commenter continued:.

(Although, many times the public may perceive their safety as being "freedom from assault or attack from other individuals', normally professionals in the industry define safety in association with unintentional

events or conditions (accidents), whereas, security is defined as being associated with intentional acts (usually illegal acts). The causes and the control measures for these two situations (safety and security) are entirely different • • •. One good reason for keeping these separate is the different type of management required. Typically, effective management of security requires law enforcement type management philosophies, whereas effective management of safety requires entirely different (and sometimes opposite) kinds of thinking. Management of these two functions must be separated, because of the different skills, philosophies, management styles, and kinds of managers required.

Other commenters noted another important difference between safety procedures and security measures: Safety procedures, policies, and processes can be made public and still be effective, whereas security measures, to be effective, must be kept confidential. Thus, these commenters reasoned, security measures should not be included in a publicly available document, such as a system safety program plan.

The commenters in favor of requiring the system safety program plan to address security matters focused on the similarities between security measures and safety issues. Most notably, these commenters stated, safety and security procedures are both forms of risk management; "[s]afety is the management of the risk to persons and property from accidental or negligent loss • • [while] security is the management of the risk to persons and property from criminal acts."

Last, some commenters contended that emergency planning and response procedures were the same for both safety and security events. Four commenters recommended that FTA include security only when it relates to emergency planning and response.

FTA Response. Because we agree with the commenter who noted that safety and security are both forms of risk management and because of recent terrorist acts, we have decided to require the inclusion of security considerations in the system safety program plan. In response to another commenter, however, we have added a provision to the rule that will allow the security portion of the system safety program plan to be barred from public disclosure.

We disagree, however, with the argument that Congress did not intend section 5330 to include security. Section 5330(c)(1) states that "[a] State meets the requirement of this section if the State—establishes and is carrying out a safety program plan for each (rail) fixed guideway mass transportation system in the State • • •" (emphasis added). According to Webster's Third New International Dictionary, "safety" means "the condition of being safe; freedom from exposure to danger, exemption from hurt, injury, or loss," whereas "security" means "the quality or state of being secure: as (a) freedom from danger: safety." It seems clear, therefore, that the meaning of safety encompasses the meaning of security. Moreover, according to the System Safety Glossary published in 1985, by the Transportation Safety Institute "safety" is defined as "[a] reasonable degree of freedom from those conditions that can cause injury or death to personnel, damage to or loss of equipment or

property; freedom from danger"; this would certainly cover intentional acts. Similarly, according to the Transit Security Program Planning Guide recently published by the FTA, "security" means "freedom from intentional danger," while "safety" means "freedom from danger." Therefore, section 5330 can be interpreted, and we do, to require the inclusion of security in the system safety program plan.

Other commenters indicated that security should not be included in the system safety program plan because safety and security are as different from each other as apples from oranges. One transit agency presented safety and security as two different disciplines requiring two different approaches and two different kinds of trained personnel. Thus, this commenter reasoned, the system safety program plan should not address security matters. In our view, however, safety and security risks are interrelated, especially from the perspective of transit passengers. We agree with the commenter who wrote:

[A]lthough the disciplines have been separated in their normal application there is a trend for a united knowledge base of safety with security so that any type of hazard is examined for its implication as a security type of problem. As with other disciplines, safety and security requirements may be at odds requiring careful analysis of the potential hazards and threats against the transit system and the development of appropriate trade-off studies. The Transit Safety Professional needs to have security analyses in the curriculum of study and certification to ensure awareness of the issues and concerns related to security. In addition, security systems themselves require safety analyses to ensure that they are properly covered.

We also disagree with the commenter who recommended that only emergency response procedures be included in the system safety program plan. We note that the APTA Guidelines already contain a provision concerning emergency preparedness. While emergency preparedness is itself a valuable activity, it does not prevent either intentional or unintentional acts from occurring. An emergency preparedness plan is used to develop a response to an event, while the overall system safety program plan develops procedures to reduce the likelihood of either intentional or unintentional events from occurring.

H. Biennial Safety Reviews

In the proposed rule, the oversight agency would comprehensively review, on-site, the rail fixed guideway system's safety practices every two years. Most commenters objected to this provision. Some maintained that a review every two years was unnecessary and burdensome; in support of their contention, they mentioned APTA's Rail Safety Audit Program, in which auditors employed by APTA review a rail fixed guideway system's safety practices every three years. They maintain that a three-year review schedule adequately addresses safety needs. One commenter indicated that APTA adopted a three-year schedule to give rail fixed guideway systems time to take corrective and other recommended actions. Another commenter, a State agency already overseeing rail fixed guideway systems, stated that it does not independently conduct on-site reviews, but instead observes the APTA auditors review a system; this commenter concluded that this approach works well for it and the rail fixed guideway systems under its jurisdiction. Some commenters urged us to specifically allow oversight agencies to use the APTA Rail Safety Audit Program.

Other commenters favored a flexible approach, in which the oversight and transit agencies schedule reviews appropriate for the age, size, and complexity of the rail fixed guideway system. One commenter recommended that we specify the exact requirements of a safety review.

FTA Response. Agreeing generally with the commenters, we have made the rule more flexible. For instance, the rule requires the oversight agency to review the transit agency's safety practices at least every three years instead of every two, as we had proposed. The oversight agency may conduct these reviews more frequently if it chooses. Moreover, the rule expressly allows the oversight agency to use a contractor to conduct the required review, which allows the oversight agency to use the APTA Rail Safety Audit Program or any other qualified contractor to conduct safety reviews.

Although one commenter had urged us to define specifically the requirements of a safety review, we have declined to do so. Instead, the oversight agency should determine for itself, based on the age, size, and complexity of the individual rail fixed guideway system within its jurisdiction, the exact extent of the review; however, it must be comprehensive, *i.e.*. cover all matters included in the transit agency's system safety program plan.

The process used by the California Public Utilities Commission (CPUC) illustrates how the rule can be flexible. Instead of using its staff to conduct comprehensive safety reviews. CPUC staff accompany and observe APTA auditors who perform a comprehensive safety audit. This system allows CPUC personnel to cover the daily operation and maintenance activities of the rail fixed guideway system and conduct in-depth reviews of particular activities on an "apparent need" basis. For instance. CPUC's staff conducted in-depth reviews of track maintenance practices at five different rail fixed guideway systems. In short, an oversight agency could conduct its own safety reviews, contract them out completely, or adopt an approach similar to CPUC's, in which both a comprehensive safety review and an in-depth review of a particular system component is conducted by another contractor or oversight agency personnel.

One commenter recommended that the extent and frequency of safety reviews depends on the particular phase of the rail fixed guideway system's lifecycle. This commenter recommended that a safety audit be performed during the preliminary engineering phase to assure properly defined criteria, during the final design stage to assure that the criteria has been included in the specifications, during pre-revenue testing to assure the systems have been properly installed and the system tested and safety certified, then every two to three years when the system is operational, and more frequently if there are serious problems. We agree with this commenter, although we have not adopted his suggestions formally in the rule. Instead, we strongly urge oversight agencies to consider these kinds of factors when establishing a safety review process.

1. Safety Audits

FTA proposed to require the transit agency to conduct a "safety audit," a "methodical, ongoing, internal examination of a transit agency's safety practices to determine whether they comply with the policies and procedures required under the transit agency's system safety program plan." The results of these safety audits were to be compiled every six months by the transit agency into a report to the oversight agency, which would review those reports as part of its monitoring function required under section 5330.

Nineteen commenters responded to this proposed safety audit process, with most of them objecting that such audits amount to a "paperwork exercise" that could be detrimental to the safe operation of a rail fixed guideway system. They argued that the "safety audits" and the "biennial reviews" were redundant and that auditing continuously was not necessary to

ensure the safe operation of a rail fixed guideway system. Some of these commenters recommended that FTA adopt a system of random periodic checks similar to the APTA review process; others recommended that the oversight agency set the timeframe for safety audits by the transit agency. Still others recommended that the frequency of safety audits be linked to the age, type, and speed of the system, maintaining that different rail fixed guideway systems have different safety auditing needs.

FTA Response. FTA had intended the "safety audit" process to be used in addition to the "Internal Safety Audit Process" in checklist number 9 of the APTA Guidelines, which apparently confused the commenters. To clarify our intent, we have withdrawn the proposed definition, "safety audit," and now require the oversight agency to develop a process that complies with APTA's "Internal Safety Audit Process." Although we make this change, we nevertheless encourage transit and oversight agencies to view safety and the safety auditing process as a routine, daily matter. As noted in the APTA Guidelines, "[t]he Internal Safety Audit Process • • • requires constant attention and activity."

To ensure that both transit and oversight agencies view the safety auditing process as a "constant activity," we have retained the requirement for the transit agency to complete and submit safety auditing reports to the oversight agency, a requirement in the APTA Guidelines, which states that audit reports are to be used as a "management tool." FTA had proposed semi-annual reports, which most commenters objected to as a "paperwork exercise." In response, we have changed the reporting time period from semi-annually to annually to reduce the paperwork burden.

J. Accident

To focus oversight agency accident investigations on serious events that may show a systemic safety problem. FTA proposed to define "accident" as "any event involving the operation of a rail fixed guideway system resulting in: (1) [D]eath directly related to the event; (2) [i]njury requiring hospitalization within twenty-four hours of the event; [3] [a] collision, derailment, or fire causing property damage in excess of $25,000; or (4) [a]n emergency evacuation." The vast majority of commenters opposed this definition and recommended numerous ways to change it.

For instance, several commenters requested that FTA limit the definition to those events involving revenue service operations, thus excluding incidents occurring in rail yards. According to the commenters, these kinds of incidents are covered by OSHA rules; eliminating them from the rule, these commenters reasoned, would avoid duplicative and perhaps conflicting Jurisdiction between the oversight agency and the State and Federal agencies responsible for enforcing OSHA regulations.

Some commenters recommended that any incident involving trespassers or employees be excluded from the definition. These commenters maintained that events involving trespassers would not necessarily indicate a systemic safety problem; in other words, it is impossible to protect against trespassers. Several commenters maintained that events involving employees should not be covered to avoid duplicative jurisdiction between the oversight agency and the State and Federal agencies regulating the workplace.

Other commenters recommended that FTA exclude certain kinds of personal injuries from the definition, stating that it is difficult, if not impossible, for a transit agency to monitor every slip, trip, or fall that occurs at a rail fixed guideway system. They further maintain that these kinds of injuries are not sufficiently serious to trigger an investigation by the oversight agency.

Still other commenters noted that, in most cases, a transit agency would be unable to determine whether a person was hospitalized as a result of the injury. Transit agency personnel operating in large metropolitan areas would be forced to contact dozens of hospitals, a task that would strain its resources: moreover, many hospitals do not release this kind of information to the public.

Several of these commenters recommended that FTA define accident, in part, as any injury in which a person is treated at the scene or is transported from the scene by medical personnel. This change would ease the administrative burden on the rail fixed guideway system, these commenters contended

Many commenters strongly objected to the $25,000 property damage threshold, with most of them indicating that property damage estimates are subjective and become obsolete over time, others contended that $25,000 was too low. Some recommended that FTA annually adjust the dollar amount for inflation, and others recommended that the dollar amount be set by agreement between the oversight and transit agencies.

Several commenters recommended that FTA define an emergency evacuation, with one proposing that it be limited to circumstances in which emergency doors and exit routes are used, thus excluding instances when passengers are asked to leave a train disabled in a station.

FTA Response. In light of the comments, FTA has made several changes to the definition of accident. For instance, we have limited the definition to only those events that occur during the revenue service operation of the rail fixed guideway system, which eliminates from the rule any injuries or deaths to workers in rail yards. We made this change, not because these are unimportant events, but to avoid overlapping jurisdiction among State agencies. We do, however, encourage the oversight agency to establish a relationship with the State agency having jurisdiction over these matters and share information, thus making the workplace safer for rail fixed guideway system employees.

We disagree with commenters asking us to exclude incidents involving trespassers from the rule. Although we sympathize with the perspective of transit agencies, we believe that any death or injury requiring immediate medical treatment away from the scene of the event, which occurs while the rail fixed guideway system is in revenue service, should be investigated by the oversight agency.

We agree with those commenters who objected to the hospitalization requirement and have changed the rule to state that an accident has occurred if a person has been injured and "immediately receives medical treatment away from the scene of the accident. " This language is used in FTA's drug and alcohol rules, as well.

Although several commenters asked us to remove property damage dollar thresholds, we did not do so. Instead, we have raised the dollar threshold to $100.000, which should reduce the number of accidents involving property damage.

Last, we have removed the portion of the definition concerning emergency evacuations. In many instances, a serious event involving the evacuation of a mass transit vehicle also will involve a death, an injury requiring immediate medical treatment away from the scene, or more than $ 100,000 in property damage, any of which, by themselves, will trigger an oversight agency investigation. Hence, by making this change we have focused an oversight agency's resources on serious events involving the emergency evacuation of a mass transit vehicle.

K. Hazardous Condition

FTA proposed to define a "hazardous condition" as "any condition which may endanger human life or property," and "unacceptable hazardous condition" as "a hazardous condition determined to be an unacceptable hazardous condition using the hazard resolution matrix of the "Rail Safety Audit Manual' published by APTA." FTA further proposed to require the oversight agency to investigate only unacceptable hazardous conditions, whereas the transit agency was to correct or eliminate any hazardous condition.

Several commenters were confused by these two definitions and one maintained that the definitions were understandable only in conjunction with the APTA Guidelines checklist number 7.

Another commenter argued that FTA should not adopt the APTA Guidelines' hazard classification process. This commenter stated that

[T]he Hazard Resolution Matrix contained in the APTA guidelines is an inadequate indicator of when an investigation should be triggered. As an example, it is well-known that currently-operating modern escalators frequently cause minor injuries to patrons (particularly children) Following the APTA guidelines, one would categorize the hazard associated with an operating escalator in Category III (marginal-minor injury). Furthermore, since escalators are usually operating more often than not, the hazard exists all the time the escalator is operating Again following the APTA guidelines, the hazard probability would be in Category A—frequent-likely to occur frequently (individual): continuously experienced (fleet/inventory). Under the Hazard Resolution Matrix of the APTA guidelines, this would be a Category III-A, which would be labeled 'unacceptable.' Following the reasoning proposed in the NPRM, all escalators would continuously have to be corrected or eliminated by all transit agencies, and all escalator accidents investigated by the oversight agency Since escalators cannot be corrected (at least so far no one has been successful in creating an escalator that doesn't have these hazards), all escalators would have to be eliminated from transit properties.

In contrast, another commenter supported the use of the APTA Guidelines Hazard Resolution Matrix because, according to this commenter, it has been adopted and practiced by more than 95 percent of the affected systems.

Several commenters objected to FTA's proposal to require transit agencies to "correct or eliminate any hazardous condition." which they characterize as an "impossible chore." In the words of one commenter, "|i]f every transit agency was required to eliminate every condition that may cause minor injury • • • all of its resources would be extended in attempting to eliminate these potential minor threats, with little resources left to run the transit system." One commenter recognized this problem also, and suggested that FTA require that hazardous conditions be corrected, eliminated, or controlled. One commenter maintained that the oversight agency should not be required to investigate any hazardous condition.

FTA Response. Although FTA has made some changes to the rule, we have not changed the definitions. The terms "hazardous condition" and "unacceptable hazardous condition" must be read in conjunction with the APTA Guidelines, particularly with the hazard resolution process, checklist number 7. To identify hazards, FTA has mandated the use of this particular process by transit agencies, even if a transit agency has used MIL-STD 882B or 882C to develop its system safety program plan. We have mandated this process, despite some commenters who opposed its adoption, because it is widely used and accepted throughout the transit industry.

Also, the rule requires the oversight agency to investigate unacceptable hazardous conditions as well as accidents. Although at least one commenter opposed requiring the oversight agency to investigate unacceptable hazardous conditions, section 5330(c)(2)(B) requires the oversight agency to "investigate hazardous conditions " To focus State resources on serious safety issues. FTA has interpreted section 5330 narrowly, thus requiring an oversight agency to investigate only "unacceptable hazardous conditions."

We agree with the commenters who maintained that not all hazardous conditions can be corrected or eliminated. Risk cannot be taken out of life. Therefore, we require a transit agency to correct or eliminate any hazardous condition if possible, and if not, the transit agency must either minimize or control it. For instance, one commenter noted that escalators are hazardous conditions, which can be corrected only by eliminating the escalator. Under this rule, the transit agency is not required to eliminate escalators, but it is required to minimize or control the risks associated with escalators. A transit agency can take one or more of several actions to minimize these risks, such as installing an emergency shut-off switch, retrofitting the escalator with additional safety devices, posting instructions on how to avoid accidents on escalators, or developing educational programs for children on how to properly use escalators. Many transit agencies have addressed the safety issues of escalators but we urge them to consider other measures to make escalators, safer, especially for children.

L Investigations

FTA proposed to require the oversight agency to develop its own investigation procedures and to investigate accidents except those being investigated by the National Transportation Safety Board (NTSB), and all unacceptable hazardous conditions.

Twenty-seven commenters responded to issues arising from this proposal. Although one commenter stressed that the oversight agency should not conduct any investigations, most commenters focused on the oversight agency's role in investigating an "accident" or "unacceptable hazardous condition." The vast majority of these commenters maintained that the oversight agency should not conduct its own independent investigation, but should focus on the process used by the transit agency in conducting investigations. These commenters noted that the transit agency must be responsible for operating its own system; an independent investigation by the oversight agency may implicitly usurp the authority of the transit agency over safety and other operational matters, according to these commenters. Others insisted that although the oversight agency's primary responsibility was to ensure that the transit agency properly conducted investigations, it should nevertheless be authorized to investigate extraordinary events. One commenter maintained that the oversight agency should not investigate an "accident" or "unacceptable hazardous condition" unless the transit agency's investigation is inadequate.

FTA Response. Despite the opinion of at least one commenter, the oversight agency is required under section 5330 to investigate accidents and hazardous conditions. As discussed above, we proposed to define "accident" in a manner to focus the oversight agency's investigation on serious events of a systemic nature. Similarly, instead of proposing to require the oversight agency, to investigate all "hazardous conditions," we proposed that it investigate only "unacceptable hazardous conditions." We have not changed this basic scheme.

Moreover, we believe that our proposal was misunderstood, and we seek now to clarify the role of the oversight agency in conducting investigations. The oversight agency is not only responsible for developing its own investigatory procedures, it is

responsible for determining how it will investigate. An oversight agency may contract for this service; some may elect to use APTA's Panel of Inquiry, others may choose to use other experts. The oversight agency may allow the transit agency to conduct some or all investigations. The oversight agency may choose to investigate all "accidents" and "unacceptable hazardous conditions" or investigate some and contract for the investigation of others. The rule is flexible in this regard, just as we had proposed in the NPRM. Although the examples set forth above are not exhaustive, ultimately, unless the NTSB is conducting an investigation, either the oversight agency or an entity acting on its behalf must investigate "accidents" and "unacceptable hazardous conditions."

We do, however, encourage the oversight agency to either directly or by contract conduct independent investigations. Moreover, we disagree strongly with commenters who maintain that the oversight agency should focus on the process used by the transit agency to conduct investigations. The purpose of this rule is to ensure that a rail fixed guideway system operates safely and that the systemic causes of "accidents" and "unacceptable hazardous conditions" are addressed; focusing on process in this context, therefore, is misplaced. Rather, the focus of the oversight agency should be to assist the transit agency in preventing "accidents" and "hazardous conditions."

M. Confidentiality of Oversight Agency Investigation Reports

Several commenters to the ANPRM requested that we include a provision in the rule barring the discovery or the use in evidence of any investigative report compiled as a result of this rule. In the NPRM, we noted that section 5330 did not specifically address this matter, and hence, we doubted that we could make such a mandate. Nevertheless, we asked whether we should adopt a provision which would require that the oversight agency investigation reports be kept confidential.

Almost every commenter favored the adoption of such a provision. One commenter wrote:

[T]he investigations at rail fixed guideway systems are often confidential • • and thus they are not subject to discovery or public disclosure. If the information gathered by the states becomes a public document, then the FTA will be building into this regulation a serious conflict between the state agencies and the [rail] fixed guideway systems. In order to ensure better gathering of information by the states, and to maintain unreserved cooperation with the local transit systems. It is strongly recommended that the information gathered by the states must be protected from disclosure.

Another commenter wrote "[w]e submit that a discovery exemption is critical to the efficient operation of the oversight agency, as it would protect the agency's limited staff and resources from the inundation of subpoenas and other discovery requests." Yet another commenter wrote that

[The rail fixed guideway system] believes that FTA should provide protection for Attorney-Client privilege under the proposed rule to include investigative materials and materials pertaining to 'hazardous condition' discussions or findings by the State oversight agency. If FTA does not have the statutory authority to provide such protection, it should require the States to do so. The loss of [the rail fixed guideway system's] Attorney-Client privilege over such documents would have a serious negative economic impact on third party litigation.

The remaining commenters maintained that although the issue is an important one. FTA should remain silent on it.

FTA Response FTA agrees strongly that the oversight agency investigation reports should be kept confidential, thus, we have added a provision to the rule permitting a State to require that these reports be kept confidential, and we encourage strongly that the State authorize the oversight agency to do so.

N. Certified Transit Safety Professional

FTA proposed to require the use of Certified Transit Safely Professionals primarily in response to comments to the ANPRM and related public bearings, which reflected concern throughout the transit industry about the expertise necessary to carry out an effective oversight-program. These commenters maintained that an effective oversight program could not be achieved without the use of certified safety professionals.

In response to these comments, the NPRM proposed to require both the oversight agency and the transit agency to use the services of a Certified Transit Safety Professional, either from within their own organizations or under contract, to comply with the requirements of the rule. A Certified Transit Safety Professional was defined as one who had "successfully completed the Safety Professional Certification requirements established by the Board of Certified Safety Professionals. * * * or, a registered professional engineer in system safety." FTA also sought comment on whether it should require a Certified Transit Safety Professional to have a minimum number of years of experience in transit safety.

Forty-seven comments were received on this matter, which was among the most controversial proposals in the NPRM. Although most commenters opposed the inclusion of this concept in the final rule, some recommended changes to the definition of certified transit safety professional. For instance, several commenters noted that organizations other than the Board of Certified Safety Professionals certify safety professionals, such as the World Safety Organization or the Federal Railroad Administration. Others recommended that the rule recognize experience equivalent to the training required by the Board of Safety Professionals. One commenter recommended that, in addition to certification, a Certified Transit Safety Professional be required to have a minimum number of years of experience.

Several commenters opposing this proposal maintained that the Board of Certified Safety Professionals does not certify professionals in transit safety. The Board of Safety Professionals, however, did not oppose this proposal. Instead, they recommended that FTA require the certified transit safety professional's certification to be current. Several commenters noted that States do not certify professional engineers in system safety, although one commenter noted that the Board of Certified Safety Professionals 1993-1094 Directory listed 200 Safety Professionals certified in system safety.

One commenter who opposed this proposal nevertheless recommended that FTA require safety professionals to complete FTA's Rail System Safety Course. Another commenter recommended that a peer group develop guidelines concerning the experience and training for transit safety professionals, which a transit agency could adopt. Other commenters objected to the proposal stating that such a training requirement would be too expensive.

FTA Response. In response to the overwhelming comments opposed to this proposal. FTA has removed the Certified Transit Safety Professional provision from the rule. We do, however, urge the States to develop their own criteria to ensure that both the transit and oversight agencies are using qualified professionals under this rule to ensure the safe operation of rail fixed guideway systems. In this regard, we recommend that safety professionals, at a minimum, have transit safety experience and complete the courses at the Transportation Safety Institute (TSI) sponsored by FTA applicable to rail transit systems. TSI offers the following

courses: System Safety, Accident Investigation, System Security, and Emergency Management. FTA has provided training assistance to the transit industry in safety since 1976, and this program will be a major contribution to State Safety Oversight. Moreover, we urge States to require safety employees to be certified by the Board of Certified Safety Professionals, the World Safety Organization, or other comparable organization; safety professionals should possess a certain level of experience as well.

III. Section-by-Section Analysis

Please note that issues addressed in the Section- by-Section Analysis may also be discussed in the Discussion of the Comments.

Subpart A—General Provisions

A. Purpose. (§659.1)

This section explains that FTA is implementing the requirements of 49 U.S.C § 5330; which requires a State to establish an agency to oversee the safety *of rail* fixed guideway systems. This rule directs the oversight agency to develop a system safety program standard and to require the transit agency to develop a system safety program plan that complies with the system safety program standard. In addition, the oversight agency must conduct safety reviews and investigations and ensure that the transit agency has developed and implemented a system safety program *plan* that complies with this rule and is effective.

B. Scope. (§659.3)

This section explains that the rule applies only to States with rail fixed guideway systems that are not regulated by the FRA.

C. Definitions. (§ 659.5)

1. Accident

An accident triggers an investigation by the oversight agency or its agent, and is defined as an event that occurs when the rail fixed guideway system is in revenue service and an individual dies or is injured and immediately receives medical treatment away from the scene; **or a** collision, derailment, or fire results in $100,000 in property damage.

Injuries, deaths, or property damage that occur when the rail fixed guideway system is not in revenue service are excluded from the definition. Hence, under the rule, the oversight agency or its agent is not required to investigate these events, but may do so under its own authority.

An "individual" means anyone, including a passenger, trespasser, employee, or other bystander.

2. APTA Guidelines

The "APTA Guidelines" means the "Manual for the Development of Rail Transit System Safety Program Plans" published by the American Public Transit Association on August 20.1991.

3. Contractor

A "contractor" means an entity that performs tasks required under this part on behalf of the oversight or transit agency. A transit agency may not be a contractor for an oversight agency.

4. FTA

The "FTA" means the Federal Transit Administration, an agency of the United States Department of Transportation.

5. Hazardous Condition

"Hazardous Condition" means a condition that may endanger human life or property. It encompasses "unacceptable hazardous conditions." defined below.

6. Investigation

"Investigation" means the process used to determine the probable cause of the "accident" or "unacceptable hazardous condition. " It includes a review by the oversight agency of the transit agency's determination of the probable cause of an "accident" or "unacceptable hazardous condition."

An "investigation" may be conducted by the oversight agency itself or by some other entity acting on its behalf, or the investigation may be conducted by the transit agency. If the oversight agency chooses the latter method it must, at a minimum, review and approve the transit agency's findings of probable cause of the "accident" or "unacceptable hazardous condition."

7. Oversight Agency

The agency designated by the State or affected States to implement the requirements of this part.

8. Rail Fixed Guideway System

"Rail fixed guideway system" means any light, heavy, or rapid rail system, monorail, inclined plane, funicular, trolley, or automated guideway that is included in FTA's calculation of fixed guideway route miles or receives funding under FTA's formula program for urbanized areas and is not regulated by the Federal Railroad Administration.

9. Safety

"Safety" means freedom from danger; it includes freedom from unintentional as well as intentional acts.

10. Safety Review

"Safety review" means a comprehensive **review** by the oversight agency of the transit agency's safety practices. It includes an analysis by the oversight agency of the efficacy of the transit agency's system safety program plan and a determination of whether the system safety program plan must be modified, changed, or updated. The safety review must be conducted at the rail fixed guideway system.

11. Security

"Security " means freedom from intentional danger. Intentional danger includes criminal acts such as muggings, rapes, robberies, or terrorists acts, such as bombings, releases of poisonous gases, or kidnappings.

12. System Safety Program Plan

"System safety program plan" means the written document developed by the transit agency in accordance with the requirements of the oversight agency's system safety program standard.

13 System Safety Program Standard

"System safety program standard" means the document developed by the oversight agency that complies, at a minimum, with the APTA Guidelines and requires the rail fixed guideway system to address the personal security of its passengers and employees. It may contain more requirements than the APTA Guidelines. The transit agency must comply with this document when it develops **its** system safety program plan.

14. Transit Agency

"Transit agency" means the entity operating the rail fixed guideway system.

15. Unacceptable Hazardous Condition

An "unacceptable hazardous condition" is a particular kind of hazardous condition determined by using the Hazard Resolution Matrix contained in the APTA Guidelines at checklist number 7.

D. Withholding of Funds for Non-Compliance. (§ 659.7)

This section is taken from section 5330, which authorizes FTA to withhold Federal funding from a State or an urbanized area in the State. In particular, FTA is authorized to withhold up to five percent of an affected urbanized area's apportionment if the State, in the opinion of FTA, is not in compliance or making adequate efforts to comply with the rule. The sanctions for non-compliance do not begin until September 30, 1997. In the event of non-compliance with the rule.

the Administrator may withhold funds until the State comes into compliance.

Subpart B—The Role of the State

A. Designation of Oversight Agency. (§659.21)

This section directs the State to select an agency to oversee the rail fixed guideway system and prohibits the State from selecting the transit agency to perform this role. Paragraph (a) concerns rail fixed guideway systems that operate within only one State. In these instances, the State must designate a State agency to implement the rule. If the State chooses, this paragraph allows the State to designate an oversight agency for each rail fixed guideway system within the State. For instance, a State may wish to designate one agency for an historical trolley system and another for the remaining systems within the State. The rule is flexible in this regard and is written to accommodate those States that have established an oversight program under State law.

For those States that have not established an oversight program and have more than one rail fixed guideway system within the State, we recommend that the State designate only one agency to implement the rule. This would save resources and ensure the consistent application of the rule.

Paragraph (b) is directed to States that jointly operate a multi-State rail fixed guideway system. Although we recommend that the affected States designate a single oversight agency, this paragraph allows them to designate more than one agency, other than the transit agency, to implement the rule. Moreover, this paragraph recognizes that a single oversight agency designated by the affected States will not be an agency of any particular State.

B. Confidential Accident Reports. (§659.23)

This section permits the State to require the oversight agency to keep investigation reports confidential in civil litigation

Subpart C—The Oversight Agency's Role

A. The System Safety Program Standard. (§ 659.31)

This section directs the oversight agency to develop a system safety program standard that complies, at a minimum, with the American Public Transit Association's "Manual for the Development of Rail Transit System Safety Program Plans" (APTA Guidelines) available from the American Public Transit Association, 1201 New York Avenue, N.W., Washington, D.C. 20005-3917 or Office of Safety and Security, Federal Transit Administration, 400 Seventh Street, S.W., Washington, D.C. 20590, and requires the transit agency to address the personal security of its passengers and employees.

As discussed above, because the APTA Guidelines were derived from MIL-STD 882B, we believe that existing oversight agencies that have used MIL-STD 882B or its successor MIL-STD 882C to create their oversight programs should meet, if not exceed, the APTA Guidelines, although we recommend that these existing oversight agencies review their programs in this regard.

This section further directs the oversight agency to develop a standard that would require the transit agency to address the personal security of its passengers and employees. In this regard. FTA has neither developed specifications nor adopted a standard for the oversight agency to follow. Instead, we have published, independently, two "how to" documents to be used by both the oversight and transit agencies in developing security standards and procedures. These documents. "Transit Security Procedures Guide," and "Transit System Security Program Planning Guide" are available free of charge from the Office of Safety and Security, Federal Transit Administration, at the address noted above. Although the use of these documents is not mandated under the rule, we recommend strongly that every affected State and transit agency obtain copies and review them. As noted above. FTA also offers several courses on security through TSI. Moreover, we suggest that the oversight agency require the transit agency to address such criminal acts as terrorist activities and "street crime" such as muggings, rapes, drug dealings, etc.

This section also allows the oversight agency to create a program that is more stringent than that required under the APTA Guidelines, although we urge those agencies not to adopt FRA-type regulations.

B. System Safety Program Plans. (§ 659.33)

This section establishes January 1, 1997, as the deadline for the implementation of the system safety program plan and requires the oversight agency to have initially reviewed and approved it before that date. It further establishes January 1, 1998, as the implementation date for the security provisions of the system safety program plan. It also requires the oversight agency to direct the transit agency to update the system safety program plan as necessary. The oversight agency may decide that it is necessary for a system safety program plan to be updated at certain intervals, or it may make a determination based on accident statistics or results from safety audits or reviews, for example. Should the oversight agency make such a determination, this section directs it to again review and approve the transit agency's updated system safety program plan.

This section allows the oversight agency to determine whether the security provisions of the system safety program plan should be publicly available. FTA recommends strongly that the oversight agency prohibit the transit agency from publicly disclosing the security portions of the system safety program plan under any circumstance.

C. Transit Agency Annual Audit Reports. (§ 659.35)

Checklist number 9 of the APTA Guidelines requires the transit agency to draft a report summarizing the findings of its internal safety audit. This section of the rule requires the annual submission of that report to the oversight agency for its review.

D. Safety Reviews. (§ 659.37)

At least every three years, the oversight agency must conduct an on-site safety review of the transit agency's implementation of its system safety program plan. After this review has been completed, the oversight agency must issue a report detailing its findings and recommendations, its analysis of the system safety program plan, and its determination whether the safety program plan should be updated or changed.

E. Transit Agency Report on Accidents and Unacceptable Hazardous Conditions, (§ 659.39)

To investigate "accidents" and "unacceptable hazardous conditions" as required by section 5330, the oversight agency must know about them. This section directs the oversight agency to require the transit agency to report "accidents" and "unacceptable hazardous conditions" within the time specified by the oversight agency.

F. Investigations. (§ 659.41)

As discussed above in the Discussion of the Comments, the oversight agency is not required to conduct the investigation itself, but may do so through another entity such as a

contractor or even the transit agency. The oversight agency, however, must decide how it is going to conduct an investigation and establish the procedures it or the entity acting on its behalf will use.

There are numerous ways the oversight agency may comply with this requirement. For instance, the oversight agency may establish one set of procedures to investigate accidents and another to investigate unacceptable hazardous conditions. The oversight agency may use a contractor, such as the APTA Panel of Inquiry, to investigate certain kinds of accidents and its own staff to investigate others.

The rule is intentionally flexible to allow the oversight agency to adapt an oversight program to the needs of the rail fixed guideway systems within the State's Jurisdiction.

G. Corrective Actions. (§ 659.43)

Section 659.41 requires the oversight agency to investigate "unacceptable hazardous conditions." This section directs the oversight agency to require the transit agency to develop a corrective action plan to eliminate, minimize, or control investigated hazardous conditions in accordance with the approved corrective action plan and within the time period specified by the oversight agency.

H. Oversight Agency Report to the Federal Transit Administration. (§659.45)

This section requires three kinds of reports: initial, annual, and periodic. The initial submission contains information that will not change frequently, such as the name and address of the oversight agency and the transit agencies it oversees, a copy of the system safety program standard, and a description of the oversight agency's procedures for conducting investigations and ensuring that the transit agency has undertaken appropriate corrective actions. This report must be updated only when some of the information within it changes.

The annual submission describes the activities of the oversight agency for the previous twelve months, including any determinations by the oversight agency of the probable cause of "accidents" and "unacceptable hazardous conditions," if it can do so and protect the confidentiality of investigation reports. This section allows an oversight agency required to submit annual reports to the State to submit the same report to FTA, if it contains all the necessary information.

Last, this section allows FTA to periodically ask the oversight agency to submit certain kinds of information such as the status reports on "accidents," "hazardous conditions," and corrective action plans. These reports must be submitted only upon FTA's request.

I. Use of Contractors. (§ 659.47)

This section expressly allows the oversight or transit agency to use contractors to perform certain tasks required under the rule. The agencies may use a contractor to perform some or all of these tasks. For instance, an oversight agency may use a contractor to conduct only accident investigations, while another may use a contractor solely to conduct safety reviews. A transit agency may not be a contractor for the oversight agency, however.

J. Certification of Compliance. (§659.49)

This section requires the oversight agency to initially certify before January 1.1997, that it has complied with the rule. Thereafter, the oversight agency is required to certify annually that it is in compliance with the rule.

IV. Economic Analysis

FTA has evaluated the industry-wide costs and benefits of the rule, "Rail Fixed Guideway Systems; State Safety Oversight," which requires a State to develop through an oversight agency, a program to oversee the safety of rail fixed guideway systems. At least 19 States will be required to create an oversight agency that must:

- Develop a System Safety Program Standard which includes provisions addressing security.
- Approve the transit agency's initial system safety program plan.
- Conduct safety reviews.
- Establish investigation procedures.
- Investigate accidents and unacceptable hazardous conditions.
- Ensure the transit agency complies with the oversight agency's system safety program standard.
- Review corrective action plans.
- Report to FTA.

At least 33 transit agencies must:

- Develop a System Safety Program Plan and update it, as necessary.
- Prepare annual audit reports.
- Conduct safety audits.
- Classify hazardous conditions according to the APTA Hazard Resolution Matrix.
- Report accidents and unacceptable hazardous conditions to the oversight agency
- Prepare corrective action plans.
- Handle hazardous conditions according to approved corrective action plans.
- Maintain safety data.

Generally, in analyzing the costs of this rule, the Regulatory Evaluation considered only those activities required by the rule. For those States and transit agencies that have already established a program similar to the one required by the rule, the Regulatory Evaluation considered only those activities necessary to bring these programs into compliance with the rule. Year One costs are estimated to be approximately $336,000, the lowest for any single year. This is because the costs incurred in Year One are generally limited to activities of the oversight agencies and the FTA. Total costs for the first ten years are estimated to be approximately $9.1 million.

The estimated benefits of the rule are assumed to take full effect in the third year of implementation, 1998. Therefore, the estimated fatalities and injuries averted are based on an eight-year period. For this period there would be 16 fatalities and 1.528 injuries averted. Based on the Department's Willingness to Pay Threshold, the total benefit of the rule is approximately $107 million over a ten-year period.

V. Regulatory Process Matters

A. Executive Order 12866

FTA has evaluated the costs and benefits to the States of creating an oversight program to oversee the safety of rail fixed guideway systems and has determined that this rule is a major rule under Executive Order 12866 because it affects State and local governments.

B. Departmental Significance

This proposed rule is a "significant regulation" under the Department's Regulatory Policies and Procedures, because it changes an important Departmental policy. That policy change requires the States to oversee the safety of rail fixed guideway systems, something the Federal government has never before required.

C. Regulatory Flexibility Act

In accordance with 5 U.S.C. 603(a), FTA has evaluated the effects of this proposed rule on small entities. Based on this evaluation, FTA hereby certifies that this action will not have a significant economic impact on a substantial number of small entities because the affected transit agencies will in most cases be large.

D. Paperwork Reduction Act

The information collection requirements in this rule have been reviewed and approved by the Office of Management and Budget under OMB #2132-0558.

E. Executive Order 12612

We have reviewed this rule under the requirements of Executive order 12612 on Federalism. FTA has determined that since this rule has significant Federalism implications it warrants a Federalism assessment. We note, however, that this rulemaking is mandated by 49 U.S.C 5330, which requires a State to create an oversight agency to oversee the safety of rail fixed guideway systems.

In considering the Federalism implications of the proposed rule. FTA has focused on several key provisions of Executive order 12612.

Necessity far action. This rule is mandated by law, which requires that rail fixed guideway systems be subject to State oversight Approximately twenty-one States have rail fixed guideway systems operating within their jurisdictions. Of those, only five States have established a State oversight program.

Consultation with State and local governments. FTA's mission is to provide financial assistance to [?]ass transportation systems throughout the nation, thus providing grants to State and local governments. [?] this rule will affect almost half of the States as well as many local governments, we published an ANPRM on June 25, 1992, at 57 FR 28572, to solicit the views of State and local governments. In addition, we held three public hearings in conjunction with the ANPRM. Also, FTA published an NPRM on December 9, 1993, at 58 FR 64855, on which numerous State and local governmental agencies commented. Moreover, we held a public hearing on the NPRM on March 8, 1994, in conjunction with an American Public Transit Association conference, thus allowing more State and local agencies to participate in the development of this rule. In short, we actively sought the views and comments of the affected States.

Need for Federal action. This rule responds to a Congressional mandate but is designed to give a State maximum flexibility in designing its own oversight program.

Authority. The statutory authority for this rule is discussed elsewhere in this preamble.

Pre-emption. This rule does not, as such, pre-empt Stale or local law. There may be instances in which a Stale or local agency faces a conflict between compliance with the rule and State and local requirements. Because compliance with the rule is a condition of Federal financial assistance. State and local governments have the option of not seeking the Federal funds if they choose not to comply with this rule.

F. National Environmental Policy Act

FTA has determined that this rule has no environmental implications. Its purpose is to create a State oversight program designed to oversee the safety of rail fixed guideway systems.

G. Energy Impact Implications

This regulation does not affect the use of energy because it creates a State oversight program designed to oversee the safety of rail fixed guideway systems.

List of Subjects in 49 CFR Part 659

Grant programs—transportation, Incorporation by reference. Mass transportation, Reporting and recordkeeping requirements. Safety. Security, and Transportation.

Accordingly, for the reasons cited above, the agency amends title 49 of the Code of Federal Regulations by adding a new part 659, to read as follows:

PART 659—RAIL FIXED GUIDEWAY SYSTEMS; STATE SAFETY OVERSIGHT

Subpart A—General Provisions

Sec.

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659.3 Scope.
659.5 Definitions.
659.7 Withholding of funds for non-compliance.

Subpart B—The Role of the State

659.21 Designation of oversight agency.
659.23 Confidential investigation reports.

Subpart C—The Oversight Agency's Role

659.31 The system safety program standard.
659.33 System safety program plans.
659.35 Transit agency annual audit reports.
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659.39 Transit agency report on accidents and unacceptable hazardous conditions.
659.41 Investigations.
659.43 Corrective actions.
659.45 Oversight agency report to the Federal Transit Administration.
659.47 Use of contractors.
659.49 Certification of compliance
Appendix to Part 659—Sample Certification of Compliance.

Authority. 49 U.S.C. § 5330.

Subpart A—General Provisions

§ 655.1 Purpose.

This part implements 49 U.S.C. 5330 by requiring a State to oversee the safety of rail fixed guideway systems through a designated oversight agency.

§ 658.3 Scope.

This part applies to a State that has within its boundaries a rail fixed guideway system not regulated by the Federal Railroad Administration (FRA).

§659.5 Definitions.

As used in this part—

Accident means any event involving the revenue service operation of a rail fixed guideway system if as a result:

(1) An individual dies:

(2) An individual suffers bodily injury and immediately receives medical treatment away from the scene of the accident; or

(3) A collision, derailment, or fire causes property damage in excess of $100,000

APTA. Guidelines means the American Public Transit Association's "Manual for the Development of Rail Transit System Safety Program Plans." published on August 20.1991.

Contractor means an entity that performs tasks required by this part on behalf of the oversight or transit agency The transit agency may not be a contractor for the oversight agency

FTA means the Federal Transit Administration, an agency within the U.S. Department of Transportation.

Hazardous condition means a condition that may endanger human life or property. It includes unacceptable hazardous conditions.

Investigation means a process to determine the probable cause of an accident or an unacceptable hazardous condition; it may involve no more than a review and approval of the transit agency's determination of the probable cause of an accident or unacceptable hazardous condition.

Oversight agency means the entity, other than the transit agency, designated by the State or several States to implement this part.

Rail fixed guideway system means any light, heavy, or rapid rail system, monorail, inclined plane, funicular, trolley, or automated guideway that is:

(1) Included in FTA's calculation of fixed guideway route miles or receives funding under FTA's formula program for urbanized areas (49 U.S.C. 5336); and

(2) Not regulated by the Federal Railroad Administration.

Safety means freedom from danger.

Safety review means a formal, comprehensive, on-site examination by the oversight agency of a transit agency's safety practices to determine whether they comply with the policies and procedures required under the transit agency's system safety program plan.

Security means freedom from intentional danger.

System safety program plan means a document adopted by the transit agency

detailing its safety policies, objectives, responsibilities, and procedures.

System safety program standard means the standard developed and adopted by the State oversight agency which, at a minimum, complies with the APTA Guidelines and which addresses personal security.

Transit agency means an entity operating a rail fixed guideway system.

Unacceptable hazardous condition means a hazardous condition determined to be an unacceptable hazardous condition using the APTA Guidelines' Hazard Resolution Matrix (APTA Guidelines, checklist number 7).

§ 659.7 Withholding of funds for non-compliance.

The Administrator of the FTA may withhold up to five percent of the amount required to be apportioned for use in any State or affected urbanized area in such State under FTA's formula program for urbanized areas for any fiscal year beginning after September 30. 1997, if the State in the previous fiscal year has not met the requirements of this part and the Administrator determines that the State is not making adequate efforts to comply with this part.

Subpart B—The Role of the State

§ 659.21 Designation of oversight agency.

(a) For a transit agency or agencies operating within a single State, the Slate must designate an agency of the State, other than a transit agency, to serve as the oversight agency and to implement the requirements of this part.

(b) For a transit agency operating a system within more than one State, those States may designate a single entity, other than the transit agency, to implement the requirements of this part.

§ 659.23 Confidential Investigation reports.

The State may prohibit an investigation report that may be prepared by the oversight agency from being admitted into evidence or used in a civil action for damages resulting from a matter mentioned in the report.

Subpart C—The Oversight Agency's Role

§ 659.31 The system safety program standard.

(a) The oversight agency must develop and adopt a system safety program standard that, at a minimum—

(1) Complies with the American Public Transit Association's "Manual for the Development of Rail Transit System Safety Program Plans" (APTA Guidelines) published on August 20. 1991, hereby incorporated by reference: and

(2) Requires the transit agency to address the personal security of its passengers and employees.

(b) The APTA Guidelines specify procedures for developing a system safety program plan, generally discuss the principles of system safety, and specifically address certain issues critical to the safe operation of a rail fixed guideway system.

(c) The incorporation by reference of the APTA Guidelines has been approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies of the APTA Guidelines may be obtained from the American Public Transit Association, 1201 New York Avenue, N.W., Washington D.C. 20005-3917. (202) 893-4000. The Guidelines may be inspected at, and are available from the Federal Transit Administration. Office of Safety and Security. 400 7th Street, S W., Washington, D.C. 20590, and at the Office of the Federal Register. 800 North Capitol Street. N.W., Washington, D.C.

§ 659.33 System safety program plans.

(a) Except as provided in § 659.33(b), the oversight agency must require the transit agency to—

(1) Implement, beginning on January 1, 1997, a system safety program plan conforming to the oversight agency's system safety program standard; and

(2) Approve in writing before January 1, 1997, the transit agency's system safety program plan.

(b) The oversight agency must require the transit agency to—

(1) Implement, beginning on January 1, 1998, the security portions of its system safety program plan; and

(2) Approve in writing before January 1, 1998, the security portions of the transit agency's system safety program plan.

(c) After December 31.1996, the oversight agency must review and approve, in writing, the transit agency's system safety program plan, as necessary, and require the transit agency to update its system safety program plan, as necessary.

(d) The oversight agency may prohibit a transit agency from publicly disclosing the security aspects of the system safety program plan.

§ 659.35 Transit agency annual audit reports.

The oversight agency must—

(a) Require that the transit agency submit, annually, a copy of the annual safety audit report prepared by the transit agency as a result of the Internal Safety Audit Process (APTA Guidelines. checklist number 9): and

(b) Review the annual safety audit reports prepared by the transit agency.

§ 659.37 Safety reviews.

At least every three years the oversight agency must conduct an on-site safety review of the transit agency's implementation of its system safety program plan and prepare and issue a report containing findings and recommendations resulting from that review, which, at a minimum, must include an analysis of the efficacy of the system safety program plan and a determination of whether it should be updated.

§ 659.39 Transit agency report on accidents and unacceptable hazardous conditions.

The oversight agency must require that the transit agency report accidents and unacceptable hazardous conditions to the oversight agency within a specified period of time.

§ 659.41 Investigations.

The oversight agency must— (a) Establish procedures to investigate accidents and unacceptable hazardous conditions.

(b) Unless the National Transportation Safety Board has investigated or will investigate an accident, the oversight agency must investigate accidents and unacceptable hazardous conditions occurring at a transit agency under its jurisdiction.

§ 659.43 Corrective actions.

The oversight agency must require the transit agency to minimize, control, correct or eliminate any investigated hazardous condition within a time period specified by and in accordance with a corrective action plan approved by the oversight agency.

§ 659.45 Oversight agency report to the Federal Transit Administration.

(a) *Initial submissions*. Before January 1,1997, the oversight agency must submit to FTA the following information, which must be updated as necessary:

(1) The name and address of the oversight agency;

(2) The name(s) and address(es) of the transit agency or agencies subject to the oversight agency's jurisdiction under this part; and

(3) A written description of the oversight agency's oversight program including the following information:

(i) A copy of its system safety program standard;

(ii) Its procedures or process for reviewing and approving the transit agency's system safety program plan:

(iii) Its investigatory procedures; and

(iv) Its procedures for ensuring that appropriate corrective actions have been taken by the transit agency to correct, eliminate, minimize, or control investigated hazardous conditions.

(b) *Annual submissions*. Before January 1 of each year, the oversight agency must submit to FTA a publicly available annual report summarizing its oversight activities for the preceding twelve months, including a description of the most common probable causal factors of accidents and unacceptable hazardous conditions.

(c) *Periodic submissions*. Status reports of accidents, hazardous conditions, and corrective action plans must be forwarded to the FTA upon request

(d) *Addresses*. Reports and annual summaries must be sent to: Federal Transit Administration. Office of Safety and Security, 400 7th Street, S.W., Washington, D.C. 20590.

§ 659.47 Use of contractors.

(a) The oversight agency may use a contractor to—

(1) Develop a system safety program standard;

(2) Review system safety program plans;

(3) Review annual audit reports;

(4) Conduct safety reviews;

(5) Prepare safety review findings;

(6) Establish investigation procedures;

(7) Conduct investigations;

(8) Review corrective action plans;

and/or

(9) Prepare initial or annual submissions to FTA.

(b) The oversight agency may allow a transit agency to use a contractor to—

(1) Develop or update a system safety program plan;

(2) Prepare annual audit reports; and/ or

(3) Develop a corrective action plan.

§ 659.48 Certification of compliance.

(a) Before January 1,1997, and annually thereafter, the oversight agency must certify to the FTA that it has complied with the requirements of this part. Each certification shall comply with the applicable sample certification provided in the appendix to this part.

Each certification shall be sent to:

Federal Transit Administration. Office of Safety and Security. 400 7th Street. S.W., Washington. D.C. 20590.

(b) Each certification must be signed by an official authorized by the oversight agency and must comply with the applicable sample certification provided in the appendix to this part.

Appendix to Part 659—Sample Certification of Compliance.

This appendix contains an example of certification language

I, (name), (title), certify that (name of the oversight agency) has implemented a State oversight program that meets the requirements of 49 CFR part 659 and further certify that I have no conflict of interest with any rail fixed guideway system overseen as a result of 49 CFR part 659, nor does (name of the oversight agency) and its contractors.

Issued: December 18, 1995.

Gordon J. Linton.

Administrator.

[FR Doc. 95-31159 Filed 12-26-95; 8:45 am]

BILLING CODE 4910-57-U

Appendix B

American Public Transit Association

Manual For The Development of
Rail Transit System Safety Program Plans

(APTA Manual)

MANUAL

FOR THE

DEVELOPMENT

OF

RAIL TRANSIT

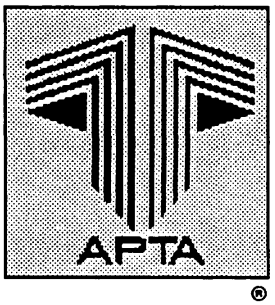
SYSTEM SAFETY

PROGRAM PLANS

AMERICAN PUBLIC
TRANSIT ASSOCIATION

* * *

RAIL SAFETY AUDIT PROGRAM



I. PREFACE

In October of 1986, the Rail Safety Review Board (RSRB) of the American Public Transit Association (APTA), on the recommendation of the RSRB's Task Force on Safety Accreditation, initiated the **Rail Safety Audit Program** (RSAP). During the first phase of the RSAP, a pilot program of six, high level, formal safety audits were scheduled at six volunteer transit systems over the ensuing eighteen months. Upon completion of the pilot program, APTA staff gathered information from the auditors and participants in the pilot audits, meet with the Task Force on Safety Accreditation, and produced a report to the RSRB which recommended a course of action on rail safety accreditation.

The development of this manual is a direct outgrowth of the RSRB's recommendation and reflects, in great measure, the experience gained during the Pilot Audit Program. The Manual was developed to serve several purposes. Among them were:

- ¤ to provide a primer for both new start and established rail transit systems with regard to the definition of the elements recommended for inclusion in a rail transit System Safety Program Plan

- ¤ to establish a recommended format for System Safety Program Plans

- ¤ to assist transit systems with established System Safety Program Plans in the continuing development and definition of their respective programs

- ¤ to provide tangible evidence to the public and governmental oversight agencies that the transit industry possesses the means and expertise required to develop sound, effective, proactive safety programs designed to reduce accident potential and increase the efficiency of transit operations.

This revision of the Manual for the Development of Rail Transit System Safety Program Plans is not the last word on the subject of Rail Transit System Safety. Through its use by APTA in the Rail Safety Audit Program, and by the respective transit systems as they prepare for the audits or develop their plans, it is anticipated that numerous ideas and recommendations for improvements to the Manual will be forthcoming. These will be welcomed and evaluated for inclusion as part of the ongoing revision program.

Rail transit systems which will be participating in the APTA Rail Safety Audit Program will be expected to ensure that the twenty-three items contained in the **Checklist** portion of this document have been incorporated into their respective System Safety Program Plans. However, as it is fully realized that each system is somewhat unique, and that respective System Safety Program Plans must allow for the respective characteristics of each system, the document does not prescribe an absolute format for System Safety Program Plans, but rather offers a suggested format, along with the type of methodology that will accomplish the purposes of System Safety. A **Sample System Safety Program Plan Format** is included in this manual (See Appendix #5, Sample Format: Rail Transit System Safety Program Plan). The final choice of methodology which will ensure that these twenty-three checklist items are accomplished will rest with each respective transit system. The methodology, must however, be demonstrable from an audit perspective, and properly documented by the system.

APTA would like to acknowledge the efforts of Ralph S. Weule, Immediate Past Chairman, APTa Rail Safety Commmittee, David L. Andrus, Jr., Chairman, APTA Rail Safety Committee, Donald Dzinski, ICF Kaiser Engineers, Inc., Harvison Hunt, ICF Kaiser Engineers, Inc., and James A. Talley, Landrum & Brown, for their efforts in bringing about this document. Robert G. Schwab, Chairman of the APTA Rail Safety Review Board, is acknowledge for his efforts in bringing the Rail Safety Audit Program to fruition. The support of the entire Rail Safety Review Board was indispensible in accomplishing this task as well.

This document has also borrowed System Safety information from the System Safety Program Plans of the San Francisco Bay Area Rapid Transit District, Metro-Dade Transit Agency, New York City Transit Authority, Port Authority Transit Corporation of Pennsylvania and New Jersey, and the Washington Metropolitan Area Transit Authority, as well as from documents entitled; (*Draft Content Guidelines for Rail System Safety Program Plans)* (American Public Transit Association, June 1, 1979), and *Content Guidelines for the Development of System Safety Program Plans for Fixed Guideway Transit Systems in the Operational Phase* (Booz, Allen & Hamilton, Inc., April 1981, UMTA DOT UM-60-80-C071004). Additional indispensable assistance in the establishment of the System Safety philosophy in the Transit industry was provided by Gwendolyn Cooper, Urban Mass Transportation Administration, and William T. Hathaway, Transportation Systems Center, U.S. Department of Transportation.

This document is issued as part of the APTA *Rail Safety Audit Program Manual*, which provides all the information needed for rail transit systems to participate in the Rail Safety Audit Program. The *RSAP Manual* is issued to all Rail System members of APTA and contains the following sections:

- ¤ Rail Safety Audit Program Administrative Procedures
- ¤ Manual for the Development of Rail Transit System Safety Program Plans
- ¤ Rail Safety Review Board Charter
- ¤ Rail Safety Committee Charter
- ¤ Rail Safety Audit Program Master Schedule
- ¤ Glossary of Terms
- ¤ Appendices

Revisions will be sent to all Rail Transit Systems as they occur.

APTA Rail Safety Audit Program
June 1, 1989
August, 20, 1991

AMERICAN PUBLIC TRANSIT ASSOCIATION
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II. INTRODUCTION

The primary purpose for the existence of a transit system is to move people, safely. In order to move its passengers as safely as possible, an individual transit system must be able to identify all hazards, for their elimination, minimization, or control, and all safety-related responsibilities, delegating these responsibilities to the proper units within the organization, and providing these respective units with the resources to carry out their assigned responsibilities. A transit system has the responsibility of maintaining oversight of its safety status and program to ensure all responsibilities are being carried out and coordinated. This process is known as System Safety.

A transit system establishes a System Safety Program Plan by formalizing this process in a written document. It implements the System Safety Program by policy directive from the chief executive officer. This generally designates authority and responsibility for program administration and audit to a specific, independent unit of the organization.

The American Public Transit Association (APTA) has produced this Manual for the Development of Rail Transit System Safety Program Plans to assist its members in developing and implementing a System Safety Program Plan designed for the specific needs of each rail transit system. This Manual will further serve as the baseline for the APTA Rail Safety Audit Program, wherein member systems can apply for a formal Safety Audit. Qualification for a Safety Audit requires the development and approval of a System Safety Program Plan.

The Rail Safety Audit Program is designed to provide a transit system with an evaluation of its System Safety Program Plan. It involves a triennial audit which will examine fully the following cumulative System Safety characteristics:

A. Does the respective transit system have a System Safety Program Plan which is in conformance with the *APTA Manual for the Development of Rail Transit System Safety Program Plans?*

B. Has the respective transit system's Program Plan been fully implemented?

C. Is the respective transit system conducting an internal safety audit program to identify, track, and resolve safety program deficiencies?

The net result to the participating transit systems will be an improved ability to know whether adequate attention is being given to safety considerations in the continuing operation of their systems. While it will not evaluate or audit actual physical conditions of the transit system, it will examine the safety management practices of the participating systems, and will help each system to determine if its own System Safety Management Program is up to accepted, contemporary practice.

Even though the program will not audit physical conditions, it will offer the unique ability of having independent expert evaluation of whether a transit system's own management process is tracking all the items necessary to maximize safe operation, such as maintenance data, training, inspection, and employee testing.

The Program is also designed to demonstrate the ability of the Rail Transit Industry to maintain adequate self-regulation programs.

III. SYSTEM SAFETY CHECK LIST

A. CHECK LIST

1. POLICY STATEMENT AND AUTHORITY FOR SYSTEM SAFETY PROGRAM PLAN
2. DESCRIPTION OF PURPOSE FOR SYSTEM SAFETY PROGRAM PLAN
3. CLEARLY STATED GOALS FOR SYSTEM SAFETY PROGRAM PLAN
4. IDENTIFIABLE AND ATTAINABLE OBJECTIVES
5. SYSTEM DESCRIPTION/ORGANIZATIONAL STRUCTURE
6. SYSTEM SAFETY PROGRAM PLAN CONTROL AND UPDATE PROCEDURES
7. HAZARD IDENTIFICATION/RESOLUTION PROCESS
8. ACCIDENT/INCIDENT REPORTING & INVESTIGATION
9. INTERNAL SAFETY AUDIT PROCESS
10. FACILITIES INSPECTIONS (Includes Systems Equipment & Rolling Stock)
11. MAINTENANCE AUDITS/INSPECTIONS (All Systems & Facilities)
12. RULES/PROCEDURES REVIEW
13. TRAINING AND CERTIFICATION REVIEW/AUDIT
14. EMERGENCY RESPONSE PLANNING, COORDINATION, TRAINING
15. SYSTEM MODIFICATION REVIEW/APPROVAL PROCESS
16. SAFETY DATA ACQUISITION/ANALYSIS
17. INTERDEPARTMENTAL/INTERAGENCY COORDINATION
18. CONFIGURATION MANAGEMENT
19. EMPLOYEE SAFETY PROGRAM
20. HAZARDOUS MATERIALS PROGRAMS
21. DRUG AND ALCOHOL ABUSE PROGRAMS
22. CONTRACTOR SAFETY COORDINATION
23. PROCUREMENT

III.B. CHECK LIST DESCRIPTION

1. POLICY STATEMENT AND AUTHORITY FOR SYSTEM SAFETY PROGRAM PLAN

1.1 Policy Statement

The transit system should establish the System Safety Program Plan as an operating document that has been prepared for, and approved by, transit system top management. Reference should be made to the management approval either by enabling signature on the title page or by other means. This approval should be by the chief executive officer or the governing board.

1.2 Authority

The body empowered to develop the fixed guideway transit system should be identified by its legal name. Any authorizing and implementing legislation which may have been required to establish that body should be cited. This information should include federal, state, and local statutes enacted to establish the transit system as the operating and/or developing entity for the transportation system or systems in the area. If the area served has multiple political jurisdictions, the interface responsibilities among these jurisdictions should be defined.

The Authority statement in the System Safety Program Plan should define as clearly as possible the authority for establishment and implementation of the System Safety Program and how that authority has been delegated through the organization.

2. DESCRIPTION OF PURPOSE FOR SYSTEM SAFETY PROGRAM PLAN

This section addresses the intent of the System Safety Program Plan and defines why it is being written. It should emphasize that the System Safety Program Plan establishes the safety philosophy of the whole organization and provides the means for implementation. For example, a System Safety Program Plan could be implemented for the following reasons:

- ¤ Establish a safety program on a systemwide basis
- ¤ Provide a medium through which a property can display its commitment to safety
- ¤ Provide a framework for the implementation of safety policies and the achievement of related goals and objectives
- ¤ Satisfy federal and state requirements
- ¤ Meet accepted industry standards and audit provisions
- ¤ Satisfy self insurance provisions

In addition, the relationship of System Safety to system operations should be defined. All departments involved must have a clear definition of their individual responsibilities relative to the scope of the System Safety Program. Authority for plan implementation must be provided for all plan participants in detail. This section should also contain System Safety definitions applicable to the operating system and provide reference where appropriate, to other related terms which should be defined in the appendix.

3. CLEARLY STATED GOALS FOR SYSTEM SAFETY PROGRAM PLAN

The overall goal of a System Safety Program for fixed guideway transit systems is to identify, eliminate, minimize, and/or control safety hazards and their attendant risks by establishing requirements, lines of authority, levels of responsibility and accountability, and methods of documentation for the organization. A transit system should begin with this overall goal and develop specific goals applicable to its own program. These should be system-specific goals, tailored to the individual needs of the system.

In specifying system safety goals, a transit system should be guided by the following:

- A goal must by nature be long-term. Inasmuch as the System Safety Program extends throughout the life of the transit system, the goal must have broad and continuing relevance.
- A goal must be meaningful. Goals are characterized by their broadness and continuing relevance. But they must not be so broad as to be meaningless. Specific, desired results must be identified.
- A goal must be realizable. Any goal that meets the first two criteria but cannot be reached is meaningless. A goal in some real sense must be attainable.

For example, a goal might be to establish and maintain a high level of safety comparable to other fixed guideway transit systems in the U.S. This goal is long-term, meaningful, and realizable. Likewise other goals might be: (1) to identify, eliminate, minimize, and/or control all safety hazards; and (2) to provide appropriate actions and measures to obtain necessary safety-related agreements, permits and approvals from outside agencies, where applicable.

4. IDENTIFIABLE AND ATTAINABLE OBJECTIVES

Objectives are the working elements of the System Safety Program, the means by which the identified goals are achieved. Unlike goals, objectives must be easily quantifiable, however, they must still be meaningful in that they provide a framework for the day to day activities that provide for a safe transit operation. Objectives are usually met through the implementation of Policies.

Policies are central to the System Safety Program and must be established by top management. The transit system should therefore be guided by the following:

- Policies set the framework for guiding the safety program, on a relatively long-term basis
- Policies should be assessable
- Policies are methods for reaching a specified objective

An example of a safety policy would be to establish a safety program incorporating public, patron, employee, and property safety, including fire protection, loss prevention, and life safety requirements. The policies established by a specific transit system should depend on the goals defined by that system and on its system safety philosophy.

5. SYSTEM DESCRIPTION/ORGANIZATIONAL STRUCTURE

The objectives of this section are to define both the transit system physical characteristics, including service and performance parameters, and the organizational structure of the system

5.1 System Description

This section should briefly describe the system's characteristics. The information presented should be sufficient to allow non-technical and non-transit persons to understand the system and its basic operations. The following components should be included in the System Description:

- History
- Scope of Service
- Physical Plant
- Operations
- Maintenance
- System Modifications

5.2 Organizational Structure

This section should provide or reference:

5.2.1 Detailed organizational diagrams sdhowing the title of each position

5.2.2 Detailed diagram of the structure of the system safety unit identifying the key positions at all levels

5.2.3 Diagrams showing the relationship and lines of communications between the system safety unit and other units of the organization

5.2.4 The relationship of the transit system to local political jurisdictions

6. SYSTEM SAFETY PROGRAM PLAN CONTROL AND UPDATE PROCEDURES

This section establishes the frequency of review of the System Safety Program Plan and describes the method by which updates, corrections, and modifications will be made to the Plan. The procedure should state whether the Plan will be updated on demand or at selected intervals. This subsection should also include a description of the steps required for developing and issuing a change. Top management approval of the change should be included as a step when appropriate. Any change in safety goals or safety policies should be considered a top management decision.

7. HAZARD IDENTIFICATION/RESOLUTION PROCESS

The Hazard Identification/Resolution Process is perhaps the heart of the System Safety Program. While there has been much written about the level of formality needed for this section of the program, it remains an individual matter for each transit system to fit the proper process to its respective organization. The important element which must be included in a fully developed System Safety Program is the mechanism, accessible to all levels of the organization, by which hazards are identified, analyzed for potential impact on the operating system, and resolved in a manner acceptable to general management.

A Hazard Resolution Process consists of three primary components:

- **HAZARD IDENTIFICATION**
- **HAZARD CATEGORIZATION**
- **HAZARD RESOLUTION**

> The process offered here is taken from Military Standard 882(B). This standard offers a formal manner of addressing hazard resolution, provides a good way of ensuring that all hazards are addressed adequately and the resolution process documented properly. It is emphasized, however, that this method is offered as a sample only. Each transit system must ensure that its safety methodologies are tailored to the unique capabilities of its organization. It should therefore not be construed that the hazard categorization methodology offered by Mil Std 882(B) is a mandatory part of all System Safety Programs. However, a property functioning System Safety Program must explain how the Hazard Resolution process of the respective transit system is carried out and documented.

7.1 HAZARD IDENTIFICATION

In its Hazard Identification procedure, a transit system describes the methods used for ensuring that as many hazards as possible can be identified and entered into the Hazard Resolution process before they cause problems. While it is virtually impossible to identify every hazard, there are various formal processes, as well as the time tested method of direct observation and input from field personnel on situations and designs which could cause accidents or injuries. These methods may include such exercises as **Preliminary Hazard Analysis (PHA), Operating Hazard Analyses (OHA), Critical/Catastrophic Items List (CCIL), Fault Tree Analysis, Subsystem Interface Analysis, and various Human Factors Analyses.**

These formal Hazard Analyses processes prove most useful in new start rail systems, which need to analyze as completely as possible all aspects of system design. As there is no "history" to provide other means of analyzing the operation, a new rail system should have the necessary hazard analyses built into both design consulting and procurement contracts.

Conversely, systems in operation, especially those which have been operating for a long time, may not necessarily need to get involved with such formal levels of hazard analysis on a regular basis. Usually the input of operating and maintenance personnel can provide the type of data that can be used for a sufficient Hazard Analysis Process. The key factor, however, is that whatever process is used, it must be, as a minimum, formal enough to have been documented in a procedure, available to all units of the organization, reviewed and administered on a routine basis, usually by System Safety staff, and have high level visibility and participation. Any formal process must have appropriate sign-offs and checks and balances built into it. if a respective system uses the committee approach to safety coordination, hazard identification must be a regular part of the committee activities.

It should be noted that Hazard Identification is an ongoing process, viable throughout the system life cycle. Accordingly, it needs to be coordinated with such other activities as Accident/Incident

Investigation so that accidents and incidents which result from previously unidentified hazards are subsequently entered into the Hazard Resolution stage of the process, with all essential documentation of such situations maintained.

7.2 HAZARD CATEGORIZATION

The following sections represent a methodology adopted from Military Standards which can be used to develop a formal process for determining which hazards are acceptable, acceptable with certain conditions applied, and unacceptable. Once again, while there are other methods available for hazard resolution, the key factors are a formal procedure, with normal determination made in advance as to which types of hazards must have which type of resolution. It is also extremely important to design in advance a process for handling exceptions to the established procedure, as it is virtually impossible to anticipate every situation.

7.2.1 Included in this section is a method for Categorization of all identified hazards. Hazards are normally categorized in terms of severity and probability of occurrence.

7.2.2.1 HAZARD SEVERITY - is defined as a subjective measure of the worst credible mishap resulting from personnel error, environmental conditions, design inadequacies, and/or procedural efficiencies for system, subsystem, or component failure or malfunction, categorized as follows:

- I (Catastrophic) - Death or system loss
- II (Critical) - Severe injury, severe occupational illness, or major system damage
- III (Marginal) - Minor injury, minor occupational illness, or minor system damage
- IV (Negligible) - Less than minor injury, occupational illness, or system damage

7.2.2.2 HAZARD PROBABILITY - is defined as the probability that a specific hazard will occur during the planned life expectancy of the system element, subsystem, or component. It can be described subjectively in potential occurrences per unit of time, events, population, items, or activity, ranked as follows:

- A (Frequent) - Likely to occur frequently (individual); Continuously experienced (fleet/inventory)
- B (Probable) - Will occur several times in life of an item; will occur frequently in fleet/inventory
- C (Occasional) - Likely to occur sometime in the life of an item; will occur several times in fleet/inventory
- D (Remote) - Unlikely but possible to occur in life of an item; unlikely but can be expected to occur in fleet/inventory
- E (Improbable) - So unlikely, it can be assumed occurrence may not be experienced; unlikely to occur, but possible in fleet

Once a hazard is identified, an analysis as to its potential severity and probability of occurrence is performed. The process for this analysis should be standardized by the transit system and documented by an approved procedure. This procedure must be followed as prescribed. While it is possible to develop a qualitative methodology for this type of analysis, the most practical method for rail transit application is simple deductive reasoning, applied on a collective, or organizational basis. The composite management staff of all key line and staff departments, administered by the safety unit, can effectively determine the severity of all but the most difficult or unusual hazards.

HAZARD RESOLUTION MATRIX				
	I	II	III	IV
A	UN	UN	UN	AC/WR
B	UN	UN	UD	AC/WR
C	UN	UD	UD	AC
D	UD	UD	AC/WR	AC
E	AC/WR	AC/WR	AC/WR	AC
Codes: UN - Unacceptable UD - Undesireable AC/WR - Acceptable with review by management staff AC - Acceptable				

Figure 1

It is important, however, to determine in advance the exact mechanism for implementation of this process, as well as some type of administrative appeal process, should consensus on categorizing a specific hazard prove to difficult to achieve. A mechanism for outside assistance should also be provided

Hazards identified on an ongoing basis should be entered into the formal process, the same as those identified by formal analyses techniques associated with new procurement and new system construction. All employees involved in the hazard identification process should know and understand their respective roles

7.3 HAZARD RESOLUTION

Hazard Resolution is defined as the analysis and subsequent actions taken to reduce to the lowest level practical, the risk associated with an identified hazard. Hazard Resolution is not synonymous with hazard elimination In a rail transit environment, there are some hazards which are impossible to eliminate and others which are highly impractical to eliminate. Reduction of

risk to the lowest practical level can be accomplished in a variety of ways from protective and warning devices to special procedures. There are, however, some hazards which present a risk which cannot be accepted because of severity and high probability which must be eliminated.

Part of the Hazard Resolution procedure should be a predetermined matrix prescribing which identified hazard are acceptable, acceptable with mitigation, and unacceptable. Once this matrix is defined by the transit system, deviation from the prescribed resolution process should occur only through approved, predetermined channels. A sample Hazard Resolution Matrix might look like that contained in figure 1.

In addition to the Hazard Resolution Matrix, a companion procedure must accompany it describing exactly how hazards defined as "unacceptable" and "undesirable" will be reduced to an acceptable level. In addition, any prescribed review by management staff must be predefined to ensure the process cannot be bypassed, although provision can be made for allowing exceptions to the process in an approved manner.

It should be noted that the entire Hazard Resolution process is nothing more than a formalized, predetermined procedure for Risk Acceptance by the transit management staff. It allows for a systematic hazard identification process and a coordinated hazard effects minimization process. Management of the Hazard Resolution process should reside with the safety unit of the transit organization, which should be responsible for all supporting documentation and coordination. The coordination process can take on many different forms, such as safety committees and internal communications mechanisms, however, the key to its success still remains in the predetermined, administered process.

8. ACCIDENT/INCIDENT REPORTING & INVESTIGATION

Conducting investigations of accident and incidents is also related to the Hazard Resolution process in that feedback and follow-up from these investigations should automatically be entered into the Hazard Resolution process. It is virtually impossible to anticipate all hazards before they cause an accident or incident, however, once such an incident occurs, it is incumbent on transit safety management to do everything possible to prevent a recurrence of the respective problem. Accordingly, the Accident/Incident Reporting and Investigation process should include a formal link to the Hazard Resolution process.

Some of the basic elements necessary for a properly executed investigation of all accident and incidents include the following:

8.1 CRITERIA

A formal policy needs to exist and be fully understood by all organizational elements on exactly which accidents/incidents will be investigated. This policy should include a predetermination on such things as thresholds for automatic activation of an investigation, guidelines on whether incidents should be investigated immediately or after the fact, and who is in charge of each specific level of investigation.

8.2 PROCEDURES

Preparation of appropriate procedures, formats, and approaches for performing investigations must be documented and properly implemented. Verification of full understanding and compliance with such procedures by ait organizational elements is also required.

8.3 INTERNAL NOTIFICATION

Predetermination of appropriate notification of accidents and participation in accident investigations should be understood and available to all involved transit personnel.

8.4 REPORTING

Findings, conclusions, and recommendations resulting from investigations should be specified as to type, format, distribution, and retention.

8.5 FOLLOW-UP

Assurance that all recommendations and identified needs for corrective actions are assigned, tracked, reported and verified. This is an extremely important step providing a key element in recurrence prevention.

8.6 DOCUMENTATION

All necessary information pertaining to a specific occurrence should be contained in standard format and stored in a specified location. Uses of incident documentation include ongoing training, especially where human error and procedural error are involved, litigation, where documentation of efforts to prevent such incident can be extremely valuable, especially in establishing that transit management is reasonable and prudent, and budget development, where certain redesigns and equipment purchases can be easily justified.

8.7 EXTERNAL NOTIFICATION

Preparation of necessary reports to all necessary agencies, such as the NTSB, state and local regulatory agencies, and governing boards.

While actual procedures for accident/incident investigation may vary greatly from one transit system to another, especially in such areas as the department in charge and addressing of corrective actions, the ultimate goal remains the same - elimination of accidents. While we know that this goal is virtually unattainable, it is nevertheless a goal which provides a worthwhile target

9.0 INTERNAL SAFETY AUDIT PROCESS

System Safety is the formal process of managing a safety program to ensure that all identified safety elements in a given environment are in place and performing as designed. In a transit environment, it is difficult to identify any elements which are not safety related, even if only indirectly so. The Internal Safety Audit Process thus becomes extremely important in determining if all organizational elements, equipment, procedures, and functions are performing as intended, from a safety perspective. It requires constant attention and activity.

In the past there has been a tendency to audit only those organizational elements which deal with such responsibilities and assets as finance. However, it is just as easy for operational and maintenance personnel, at any level, to overlook an important function or process. The assets for which operational and maintenance personnel have responsibility include the safe transportation of passengers, employee safety, and protection of property. These assets are far more valuable and important than those of other audited areas. Because of this, the internal safety audit is absolutely essential to proper System Safety Management. Safety Management and good overall management are inseparable concepts.

A thorough Internal Safety Audit Process must provide top management with a mechanism for documenting the fact that key elements of the organization are performing specified functions. These organizational elements must include all key elements with identified system safety responsibilities. Chapters 10 through 22 of this document provide details on which organizational elements must be included and how the auditing process relates to each.

The audit process must also provide a detailed and approved implementation plan by including the following elements:

9.1 AUDIT RESPONSIBILITY

Normally the System Safety Unit of the transit system would be responsible for implementation and oversight of the Internal Safety Audit Process, however, each transit system must be able to tailor such responsibilities to its own unique organizational structure. The overriding philosophy which must be protected regardless of structure is the independent nature of the audit process. The unit in charge of auditing must not be the unit in charge of implementation of the items being audited.

9.2 AUDIT REPORTING

In order for an internal audit to be effective, the results of the audit must be used for positive, all-encompassing corrective actions. This does not occur if the audit report is not an official document which is automatically provided to all appropriate levels of management. This would include as a minimum, a departmental summary report being provided to the chief executive officer and the individual, respective departments. Various techniques such as audit coordination meetings and management briefings can be used to make the process as unobtrusive as possible, while still providing valuable input to each respective department being audited as to areas of concern and possible corrective actions.

It is also important to design the process so that it is construed as a positive force in the organization. While the internal audit should be as cooperative as possible, there must also be an administrative process to deal with any problems or disagreements which develop. It should be emphasized that the audit process is only a management tool which provides assistance in discovering possible problem areas. By itself it should not be considered an internal regulatory or decision making process. Final authority for all decisions always rests within the management structure as prescribed by the individual organization.

9.3 AUDIT COMPLETENESS

While the audit process usually relies on the concept of spot checking of sample areas being audited for compliance with internal procedures and requirements, it should not contain any surprises or unexpected events. All departments involved need to know when audits will be conducted and how they will examine departmental documents. While ongoing inspections may

be conducted on an unannounced basis, actual audits should be done on a coordinated basis, with full management support. Once schedules are approved by general management, all involved departments must provide absolute cooperation. The following audit elements, as a minimum, must be prescribed as part of the documented audit procedure:

9.3.1 CYCLE/SCHEDULE • Audited departments must know when to expect audits. Audits must be scheduled so that they are as unobtrusive as possible. Unannounced inspections or spot audits must be approved as part of the overall audit process with concurrence of general management.

9.3.2 CHECK LISTS - A list of items to be audited must be prepared in advance. When necessary, audited departments should be given time to produce necessary documentation. This does not preclude spot check of individual records, such as maintenance records or personnel qualification records, however, the cooperative nature of the audit process must be maintained.

9.3.3 DOCUMENTATION - Formal documentation of all aspects of the internal audit process must be maintained. Included in this documentation, should be all necessary reports to general management and respective departments.

9.3.4 FOLLOW-UP/CORRECTIVE ACTION - A summary of recommended corrective actions, if any, must be included in the audit report process. Corrective actions approved by general management must then be formally tracked for compliance.

It is also incumbent on the organization to have a periodic external evaluation, or audit, such as the APTA Rail Safety Audit Program, of its internal audit process. In this way assurance can be maintained that all prescribed safety processes within the transit system are being followed. It is recommended that this type of outside evaluation be performed, as a minimum, once every three years.

NOTE: The remaining chapters of this document deal with specific organizational functions which must be included in the **Internal Safety Audit Process**. It is recognized that respective transit organizations deal with these performance-based characteristics in different organizational ways. The purpose of this document is to specify the end results which must be obtained, not the manner in which these results are achieved.

Transit systems which subscribe to the APTA Rail Safety Audit Program will need to ensure that a clear and available audit trail for the elements describe in chapters 10 through 23 is maintained.

10. FACILITIES INSPECTIONS

The important function of maintenance of all transit facilities is one which must be verified and checked constantly. The first step in this process is to identify and locate all facilities/equipment with safety-related characteristics. Such items as Fire Protection Equipment, emergency communications equipment, and employee safety devices would be included in this category, however, it is not practical to develop a complete list in this document, especially since a custom list for each transit system needs to be developed.

Once again a regular cycle of inspections needs to be developed along with the list of exactly which items are to be inspected. Observations of defective or missing equipment of course should be reported whenever observed. Facilities inspections should also be closely coordinated with the Hazard Resolution Procedure, as those responsible for Facilities Inspections will frequently be in a position to observe hazardous conditions.

11. MAINTENANCE AUDITS/INSPECTIONS

The internal audit process must contain a mechanism for determining if proper documentation is being kept on all maintenance activities. While the cycle for audits needs to be developed and approved in advance, the concept of spot checking maintenance documents and records can be effective in spotting problems before they cause a negative situation. This process will be able to flag trends in improper record keeping. If required maintenance is routinely not being performed, spot checking of records is an excellent method for such determination, however, the audit process needs to go beyond just the record keeping stage to determine if the problem is a simple record keeping oversight, or actual lack of required maintenance.

It is imperative that proper corrective actions be prescribed, implemented, and tracked as part of this process. Such audit records become extremely valuable tools in establishing that the respective management organization is reasonable and prudent in discharging its professional responsibilities. Since accidents are prevented by such preparation and double checking, the audit/inspection process should be considered an excellent way of minimizing costly litigation.

12. RULES/PROCEDURES REVIEW

Operational considerations need to be included in the internal audit process as well. One of the most important functions of the operations unit is to ensure that rules and procedures are carefully developed, maintained, and followed. The internal audit process must contain a methodology for ensuring uniform, coordinated development and implementation of operating rules and procedures. Likewise, maintenance departments must do the same for maintenance rules and procedures. In the case of maintenance, this applies not only to safety rules, but also to procedures for conducting inspections and making repairs to equipment. Improper maintenance procedures have been the documented cause of numerous accidents in the transportation industry. The safety audit process is designed to minimize this possibility.

Review of departmental records to determine if enforcement methods are up to date and in effect, as well as supplemental spot checks by safety unit personnel (or other units responsible for internal auditing) are essential parts of the internal audit process, relative to Rules/Procedures Review. Proper follow-up and documentation of these elements can prove to be invaluable tools for both accident prevention and litigation purposes.

13. TRAINING AND CERTIFICATION REVIEW/AUDIT

Proper qualification of operating and maintenance personnel is a vital part of a safe transit environment. The internal audit process should ensure that all necessary training is being conducted and documented. It can also provide a valuable method for evaluating the effectiveness of operational training. Not only should certification records of operating (including maintenance) personnel be reviewed for completeness and accuracy as part of the audit process, but the content and presentation of material and testing, including grading processes, should also be reviewed and evaluated on a periodic basis.

It is essential that any audit efforts in this area be closely coordinated among all involved units of the organization. Evaluation of training techniques might be best approached through a "team" method, where several observers periodically evaluate course content and presentation. Such characteristics as consistency over several classes, and effective and equitable testing of personnel in both initial and recurrent training should be part of the evaluation process.

14. EMERGENCY RESPONSE PLANNING. COORDINATION. TRAINING

Emergency Response is a primary component of any rail transit System Safety Program. As such it must be given constant attention. A typical self-auditing process for this component would include an approved, coordinated schedule for all emergency response elements. Meetings with outside agencies, emergency drills, and revision and distribution of Emergency Response Procedures can all be scheduled on an periodic basis, with necessary approvals and checks for completion built in. Frequently the safety unit of the transit organization is responsible for coordination of these types of emergency response functions. As part of the regular reports to general management issued by the safety unit, status reports on emergency response items can automatically be included. These reports would then provide an audit trail for both internal and external audits.

15. SYSTEM MODIFICATION REVIEW AND APPROVAL PROCESS

During the rail transit system safety developmental process, there were two distinct documents used, one for transit systems in the acquisition, or building stage, and another for transit systems in the operating phase of their respective life cycles. It eventually became apparent that rail transit systems are virtually in a perpetual state of acquisition, as new equipment, system expansions and modifications, and system rehabilitations require constant design and procurement efforts. Ongoing acquisitions and procurements in fact can be more critical than initial design for many reasons. Coordination and compatibility with the existing system, construction efforts under operating conditions, and testing and break-in phases must all be managed as part of the ongoing system safety effort.

It has also become apparent that System Safety Management can be an extremely useful Project Management tool, as a well prepared and thorough System Safety Program serves as an excellent check list for project completion and can easily include a certification process for determining operational readiness of new equipment and system expansions. In order to serve these purposes, however, the System Safety Program must incorporate all necessary coordination processes. Perhaps most important is a detailed, documented approval process with specifics of sign-off requirements and exception capability. Review of preliminary design and acceptance of final design must not occur in a vacuum. While not all units of the organization have the capability to conduct their own design reviews, nor should they be able to, there should be a coordination process which ensures all organizational entities have the opportunity to comment on design specifics.

One unit of the organization, usually system safety, should be delegated with the responsibility of ensuring that any hazards associated with system expansions or modifications of any kind are worked into the Hazard Resolution Process. In this way any accepted risks associated with such system changes will be documented and tracked from the outset.

Once the Plan is adopted, a formal process, included in the Plan, should specify what happens when a portion of the system will not be available on time, or equipment which will be placed in service is not complete. Issuance of such directives as "work-arounds" or "exceptions" should occur only when top management determines that they are absolutely necessary. If such exceptions prove to be necessary, all departments involved need to sign off on the process to indicate they fully understand the nature of the exception and what temporary measures are in place to mitigate any potential side effects.

The exceptions in place must also be monitored constantly to ensure that neither the procedure nor the spirit of the mitigating factors are bypassed or removed during the life of the respective exception. If any type of coordinating committee or communication process is maintained by a respective transit system, regular reports must be included to ensure all organizational entities are thoroughly familiar with both the procedure and necessity for each exception.

16. SAFETY DATA ACQUISITION/ANALYSIS

One of the most important services the safety unit provides for the transit organization is the collection, maintenance, and distribution of safety data relative to system operation. This data includes information gathered from within the respective system on various operating characteristics relative to safety. Analysis of this system specific data can be used to determine trends and patterns in system operation. Used as part of the Hazard Resolution process, data collection and analysis can be used to identify hazards before they cause accidents by such techniques as trend analysis. It thus becomes a vital component of efforts to improve system performance, not only in respect to safety but also in overall delivery of service to the riding public.

Exactly what types of analyses are used as part of the data collection process must be determined by the individual needs of each transit system. This decision is based on variable aspects of the system environment such as whether any major system changes or procurements are underway. Frequently, ongoing procurement contracts require a certain amount of safety analysis and data to be provided by suppliers. It must be determined in advance how this data will be used and who will be responsible for its evaluation. Few transit systems can devote the personnel to produce the complex forms of analysis, such as fault tree analysis and failure modes and effects analysis, however, if needed this type of detailed analysis can be obtained through consulting contracts.

Communication with the rest of the transit industry is also a productive source of input into both Data Acquisition and Hazard Resolution processes. This type of coordination can be used to discover potential problems before they even occur at a given system by monitoring events at other systems, especially those with similar components. Participation in industry committees, workshops and conferences, and other efforts in this regard further enhance the value of Data Acquisition.

17. INTERDEPARTMENTAL/INTERAGENCY COORDINATION

Good communications equal good management. As indicated before, System Safety equals good management. It is therefore incumbent on the System Safety Program to ensure the communi cations process, relative to safety issues, is functioning in proper fashion. There is a great tendency for specific units within the transit organization to keep all matters within the unit. While many issues are not necessarily organization wide news, it should not be up to individual units to decide on the appropriateness of sharing of certain information. The communications process must therefore be spelled out in detail in advance. Deviations from this approved procedure must be brought to general management attention as part of the ongoing Internal Safety Audit Process.

This process also applies to all agencies with which a respective transit agency must coordinate. It is not possible to determine on a generic basis what these agencies should be. Each transit system must develop its own list of agencies with which regular coordination is required. As a minimum. Emergency Response Agencies should be included on the list. Such items as training of emergency response personnel, emergency drills and familiarization processes, and procedures for actual emergencies should be developed in coordination with these agencies. The procedures must be documented, exercised and administered on a regular basis, most logically by the System Safety unit.

Each transit system must also develop a similar process for any other agencies with which it deals, such as parent agencies and governmental oversight agencies. A regular report process on such coordination must be included as a part of the auditable System Safety documentation.

18. CONFIGURATION MANAGEMENT

Configuration Management is a process which ensures, as much as possible, that all property, equipment, systems design elements, etc., are documented as to configuration, accurately and completely. Any changes to an individual subsystem, or a fleet/inventory wide change must be recorded on as-built drawings in a timely and effective manner. The Configuration Management process must include, as a minimum, procedures for authority to make configuration changes, the process for incorporating these changes into all appropriate documentation, and the process for ensuring that all necessary units, including System Safety, are formally made aware of such changes. It is also recommended that the process be coordinated or combined with the System Modification Review and Approval Process so that system-wide changes can be approved in advance.

Approval of changes, especially individual unit changes, cannot always be approved in advance. It should be a requirement, however, that all units be informed of such changes as expeditiously as possible.

Configuration Management is much more involved and time-consuming during the design and procurement stages of a transit system life cycle. At that time, tracking of design changes, verification of as-built drawings, and maintenance of the process subsequent to delivery are much more involved processes. However, once the process gets out of control, it is extremely difficult and costly to catch up. It can also produce significant safety hazards, as future changes to the system or individual subsystems could have unknown results. Since most transit systems never get out of the procurement stage of their life cycle, it is important to keep the Configuration Management process under control.

19. EMPLOYEE SAFETY PROGRAM

The most valuable resource any transit system has is its employee work force. Time and money are constantly being spent, even without realizing it, on getting the individual members of the work force to a condition of maximum and effective productivity. It is therefore not only essential from an employee consideration perspective, but also from a good management perspective, to ensure as much as possible the safety of our employees.

An Employee Safety Program must be designed to have the best possible input from all necessary units, including the employees themselves. While it is difficult to develop a generic program, as a minimum, those elements required by either local or federal law must be incorporated into the Employee Safety Program These include such elements as Employee Right To Know requirements for hazardous materials and locally required Occupational Safety & Health requirements. It is emphasized that these are only minimum programs, and efforts should be made to maintain a thorough Employee Safety Program above and beyond these minimums.

20. HAZARDOUS MATERIALS PROGRAMS

Most transit systems come under the jurisdiction of either state or federal Environmental Protection Agencies. It is incumbent on each system to determine which regulations it must follow and then ensure all organizational elements are aware of these requirements and how they must be followed.

Over and above required environmental issues, it is emphasized that transit at the national level is promoted as a "Friend of the Environment: each transit system should examine its operation to determine where improvements can be made and how to maximize the positive effect that transit use by the general public has on our environment.

21. DRUG AND ALCOHOL ABUSE PROGRAMS

Since virtually all rail transit systems require federal funds for continued growth and operation, the Drug Testing Requirements of the Urban Mass Transportation Administration (UMTA) now form the basis for the drug abuse programs at rail transit systems. Above and beyond these programs, transit systems must also provide a mechanism for ensuring that the same proscriptions are provided for alcohol abuse. The bottom line is protection of the riding public and transit employees. All efforts should be geared toward this end.

22. CONTRACTOR SAFETY COORDINATION

While employees of contractors do not come under the direct jurisdiction of transit systems, when contractors work on transit property, especially under operating conditions, certain requirements must be applied to all members of the contractor work force. This is essential for the safety of passengers, transit employees, contractor employees, and protection of transit property. The contractor and all contractor employees must be clear right from the outset that the transit system is in charge and all necessary rules and procedures will be followed without exception.

This of course places a significant responsibility on the transit system, and the responsible units, for ensuring that all contractor personnel: 1) Are instructed on the procedures, 2) Know the procedures, and 3) Follow the procedures. Sanctions which will be imposed must be spelled out from the beginning, and if possible, included in the contract.

23 PROCUREMENT

System Safety extends to include the routine procurement of supplies, materials, and equipment. Procedures must be in place and enforced to preclude the introduction into the transit environment of unauthorized hazardous materials and supplies, as well as defective or deficient equipment. The existence of and adherence to such procedures and sanctions must be demonstrable for audit purposes.

IV. SUMMARY

The implementation of the Rail Safety Audit Program (RSAP) is the culmination of more than 10 years of dedicated effort by numerous inddividuals and groups within the transit industry who recongizeed early on that rail transit, rather that being an anachronism in the space age, had the potential for further growth in tandem with ever burgeoning urban and suburban populations. Their foresight has been realized as more and more communities address the need for, and acquire, various modes of rail transit as means of transporting larger numbers of people safely, efficiently, and with minimal environmental impact.

One of the key considerations in the selection of rail transportation (light\heavy rail, people movers, etc.) to move large numbers of people is the fact that these modes have demonstrated, for a hundred years or more, that they are indeed safe modes of transportation. Within rail transit the concept of safety has always been present. Only in recent history has it become necessary to establish formal, professional, safety functions and staffs within rail organizations to address and resolve the significant safety issues raised in an era of legislative and consumer activism and litigation.

The fruition of the RSAP is a positive reflection on the degree of maturity that has been achieved buy the industry with respect to the development and implementation of formal safety programs and functions. It is also a regognition of the fact that the mere presence of a safety function or individual does not constitute a safety program, and further, that system safety concepts and activities must become integral to the organizational thought process.

This manual reflects the collective thoughts of numerous transit safety professionals with many years experience in the development and implementation of safety programs at a wide range of transit properties across the country. It provides information on the "why" of System Safety; "guidance on the construction and implementation of system safety programs;" checklists to aide properties in the evaluation for their respective system safety programs (SSPP) and, most importantly, it describes the mechanism to be used to evaluate the effectiveness of those SSPPs which have been prepared and implemented throughout the industry.

The Rail Safety Audit Program is designed and intended to be a cooperative venture between APTA and those transit systems that are participating in the program. Although guidelines have been established, the program is designed to be sufficiently flexible to accomodate the diverse opeational situations that are faced by each system.

The overall goals of the RSAP are to assist transit organizations in the management of their safety programs and to demonstrate the transit industry's ability to develop and implement meaningful, effective, self-regulatory programs.

Appendix C

Acronyms

Appendix C
Acronyms

APTA	American Public Transit Association
APTA Manual	American Public Transit Association Manual for the Development of Rail Transit System Program Plans
BART	Bay Area Rapid Transit District
BSDA	Bi-State Development Agency
CAP	Corrective Action Plan
CARTA	Chattanooga Area Regional Transportation Authority
CCTA	Cambria County Transit Authority
CFR	Code of Federal Regulations
CPUC	California Public Utilities Commission
CTA	Chicago Transit Authority
DART	Dallas Area Rapid Transit Authority
DOT	Department of Transportation
DPU	Department of Public Utilities
DTC	Detroit Transit Corporation
EPA	Environmental Protection Agency
FDOT	Florida Department of Transportation
FRA	Federal Railroad Administration
FTA	Federal Transit Administration

GCRTA	Greater Cleveland Regional Transit Authority
HARTLine	Harbour Island People Mover
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
IT	Island Transit
JTA	Jacksonville Transportation Authority
LACMTA	Los Angeles County Metropolitan Transportation Authority
MARTA	Metropolitan Atlanta Rapid Transit Authority
MATA	Memphis Area Transit Authority
MBTA	Massachusetts Bay Transportation Authority
MDTA	Metro-Dade Transit Agency
MTAMD	Maryland Mass Transit Administration
MTDB	Metropolitan Transit Development Board
Muni	San Francisco Municipal Railway
NFTA	Niagara Frontier Transportation Authority
NJT	New Jersey Transit Corporation
NTSB	National Transportation Safety Board
NYCT	New York City Transit Authority
OSHA	Occupational Safety and Health Administration
PAT	Port Authority of Allegheny County
PATCO	Port Authority Transit Corporation
PennDOT	Pennsylvania Department of Transportation
PTSB	Public Transportation Safety Board

RFGS	Rail Fixed Guideway System
RTA	New Orleans-Regional Transit Authority
RTD	Denver Regional Transportation District
SCCTD	Santa Clara County Transportation District
SDTI	San Diego Trolley, Inc.
Seattle Metro	Municipality of Metropolitan Seattle
SEPTA	Southeastern Pennsylvania Transportation Authority
SRTD	Sacramento Regional Transit District
SSPP	System Safety Program Plan
SSPS	System Safety Program Standard
Tri-Met	Portland Tri-County Metropolitan Transportation District of Oregon
TSI	Transportation Safety Institute
USDOT	United States Department of Transportation
VNTSC	Volpe National Transportation Systems Center
WMATA	Washington Metropolitan Area Transit Authority

Appendix D

Terms and Definitions

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Accident — Any event involving the revenue service operation of a rail fixed guideway system if, as a result:

(1) An individual dies;

(2) An individual suffers bodily injury and immediately receives medical treatment away from the scene of the accident; or

(3) A collision, derailment, or fire causes property damage in excess of $100,000.

Annual Safety Audit Report — The report prepared by the RFGS describing safety auditing activities performed during the preceding twelve months.

APTA Manual — The American Public Transit Association's Manual for the Development of Rail Transit System Safety Program Plans, published on August 20, 1991.

Contractor — An entity that performs tasks required by 49 CFR 659 on behalf of the oversight or transit agency. The transit agency may not be a contractor for the oversight agency.

Corrective Action Plan — A Plan prepared by a RFGS that describes the actions it will take to correct, eliminate, mitigate, or control unacceptable hazardous conditions.

Emergency — A situation which is life threatening or which causes damage on or in any RFGS facility, right-of-way, or vehicle.

Hazard — Any real or potential condition that can cause injury, death, or damage to or loss of equipment or property.

Hazard Analysis — An analysis performed to identify hazardous conditions for the purpose of their elimination or control.

Hazardous Condition — A condition that may endanger human life or property. It includes unacceptable hazardous conditions.

Hazard Level/Severity A qualitative measure of hazards stated in relative terms. The four most commonly identified hazard level categories are:

I -	Catastrophic	(Death or system loss)
II -	Critical	(Severe injury, severe occupational illness, or major system damage)
III -	Marginal	(Minor injury, minor occupational illness, or minor system damage)
IV -	Negligible	(Less than minor injury. occupational illness, or system damage)

Hazard Probability The probability that a hazard will occur during the planned life of the system. Hazard probability may be expressed in quantitative or qualitative terms. An example of a hazard probability ranking system is:

A	Frequent
B	Probable
C	Occasional
D	Remote
E	Improbable

Hazard Resolution The analysis and actions taken to reduce, to the lowest level practical, the risk associated with an identified hazard.

Incident An unforeseen event or occurrence which does not necessarily result in death, injury or property damage.

Investigation A process to determine the probable cause of an accident or an unacceptable hazardous condition. This process may involve no more than a review and approval of the transit agency's determination of the probable cause of an accident or unacceptable hazardous condition.

Oversight Agency	The entity, other than the transit agency, designated by the State or several States to implement 49 CFR 659.
Rail Fixed Guideway System (RFGS)	Any light, heavy, or rapid rail system, monorail, inclined plane, funicular, trolley, or automated guideway that is: (1) Included in FTA's calculation of fixed guideway route miles or receives funding under FTA's formula program for urbanized areas (49 USC 5336); and (2) Not regulated by the Federal Railroad Administration.
Risk	An expression of possible loss over a specific period of time or number of operational cycles. It may be expressed as the product of hazard severity and probability.
Safety	Freedom from danger.
Security	Freedom from intentional danger.
System	A composite of people, procedures and equipment which are integrated to perform a specific operational task or function within a specific environment.
System Safety	The application of operating, technical, and management techniques and principles to the safety aspects of a system throughout its life cycle to reduce hazards to the lowest practical level through the most effective use of the available resources.
System Safety Program	The combined tasks and activities of system safety management and system safety engineering that enhance operational effectiveness by satisfying the system safety requirements in a timely manner throughout all phases of a system life-cycle.
System Safety Program Plan	Document adopted by the transit agency detailing its safety policies, objectives, responsibilities, and procedures.
System Safety Program Standard	The standard developed and adopted by the State Oversight Agency which, at a minimum, complies with the APTA Guidelines and which addresses personal security.

Three-Year Safety Review	A formal, comprehensive, on-site examination by the oversight agency of a transit agency's safety practices to determine whether they comply with the policies and procedures required under the transit agency's system safety program plan.
Transit Agency	An entity operating a Rail Fixed Guideway System.
Unacceptable Hazardous Condition	A hazardous condition determined to be an unacceptable hazardous condition using the APTA Guidelines' Hazard Resolution Matrix (APTA Guidelines, Checklist Number 7).