

Appendix E: Program Requirements for Development of a Rail Transit Agency System Safety Program Plan (SSPP)

SAMPLE

State Oversight Agency Program Requirements for the Development of Rail Transit Agency System Safety Program Plans

This document has been developed to serve as a template for use by state oversight agencies in specifying the requirements established in 49 CFR Part 659 for the development of a rail transit agency System Safety Program Plan (SSPP). State oversight agencies can adopt or tailor this document to establish the requirements to be addressed by rail transit agencies in developing or revising their SSPPs to address the 21 elements specified in 49 CFR Part 659.17.

NOTE: Complete samples for each of the 21 required SSPP sections are available on the CD-ROM that is provided with the FTA's *Implementation Guidelines for 49 CFR Part 659*.

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1. Executive Approval (Policy Statement)

- **Element:** *A policy statement is developed for the System Safety Program Plan (SSPP).*

A policy statement must be provided which establishes the System Safety Program Plan (SSPP) as an operating document that has been prepared for, and approved by, rail transit agency top management.

- **Element:** *The policy statement describes the authority that establishes the SSPP, including statutory requirements and relationship with the oversight agency.*

The policy statement should define, as clearly as possible, the authority for the establishment and implementation of the SSPP. As appropriate, reference should be made to the authority provided by state and local statutes to develop and safely operate the rail transit system. The role of the oversight agency in requiring the SSPP and monitoring its establishment and implementation should be clearly described.

- **Element:** *The policy statement is signed and endorsed by the rail transit agency's chief executive.*

Reference should be made to management's approval, either by referencing the enabling signature on the title page or by other means.

2. Purpose, Goals and Objectives

2.1 PURPOSE

- **Element:** *The purpose of the SSPP is defined.*

This section must explain the purpose of the SSPP. The SSPP establishes the activities that must be performed by all departments within the rail transit agency to ensure safe operations and work practices. The SSPP establishes the safety philosophy of the rail transit agency and provides the means and authority for implementing that philosophy.

2.2 GOALS

- **Element:** *Goals are identified to ensure that the SSPP fulfills its purpose.*

This section of the SSPP should identify the goals developed by the rail transit agency to meet the purpose established for the SSPP. Goals are broad statements of ideal future conditions for the safety program that are desired by the rail transit agency, endorsed by top management, and are supported by specific objectives to aid in their attainment. Goals must be realistic and generally are presented in qualitative terms.

Sample goals may include the following:

- identify, eliminate, minimize, and/or control safety hazards and their risks.
- provide a superior level of safety in transportation operations.
- achieve and maintain a superior level of safety in the agency's work environment.
- comply with applicable requirements for regulatory agencies.
- maximize the safety of future operations through the design and procurement process.

2.3 OBJECTIVES

- ***Element:*** *Objectives are identified to monitor and assess the achievement of goals.*

Objectives are the working elements of the SSPP, the means by which the identified goals are achieved. Unlike goals, objectives must be easily quantifiable. They must provide a framework for guiding the day-to-day activities that provide for a safe rail transit operation.

Sample objectives may include the following:

- Establish safety policies, procedures, and requirements that integrate safety into decision-making and operations.
 - Assign responsibilities related to safety policies, procedures, and requirements.
 - Verify adherence to safety policies, procedures, and requirements.
 - Thoroughly investigate all accidents, fires, injuries, and incidents as warranted.
 - Identify, analyze, and resolve all hazards in a timely manner.
 - Meet or exceed safety requirements in specifications; facility construction; equipment installation; and system testing, operations, and maintenance.
 - Meet or exceed safety requirements in vehicle operations and maintenance.
 - Evaluate and verify operational readiness of new transportation systems.
 - Establish standards, and procedures for safety training, and performance.
 - Evaluate routes and scheduling from a safety perspective.
- ***Element:*** *Stated management responsibilities are identified for the safety program to ensure that the goals and objectives are achieved.*

The SSPP should identify the titles and departments of persons responsible for developing and monitoring these goals and objectives. Quarterly, semi-annual, or annual reporting on the performance of the rail transit agency in meeting its goals and objectives should also be specified. Reports should be provided to the rail transit agency's executive leadership.

3. Management Structure

The primary purpose of this section is to provide organizational information and operating parameters for both those outside the organization that need to understand the rail transit system, and those inside the organization to have clearly defined lines of report and responsibility delineation. The information presented should be sufficient to allow non-technical and non-transit persons to understand the system and its basic operations.

3.1 OVERVIEW

- **Element:** *An overview of the management structure of the rail transit agency is provided including an organization chart.*

This section should provide a narrative description of the organization of the rail transit agency and include an organization chart. All major departments/functions should be introduced.

- **Element:** *Organizational structure is clearly defined and includes a brief description of: system history and scope of service, physical characteristics, operations, and maintenance.*

3.1.1 General Overview and History of Transit Agency

This section should describe when and how the rail transit agency was established, a brief history of service delivery, and major milestones in the rail transit agency's history.

3.1.2 Scope of Transit Services

This section should describe the various modes of transportation provided by the transit organization, including the number of passengers, the number of routes, the day and hours of service provided, and operational characteristics that could affect safety and security.

3.1.3 Physical Plant

This section should describe the size, location, and function of the transit agency's physical assets including: maintenance facilities, offices, stations, vehicles, signals, and structures for all modes.

3.1.4 Operations

The section should include a description of the role, the responsibilities and the organization of the operating departments.

3.1.5 Maintenance

This section should describe the role, the responsibilities, and the organization of the various maintenance departments. The type of maintenance required by each of the major systems and facilities should be briefly described.

3.2 INTEGRATION OF SAFETY FUNCTION

- **Element:** *A description of how the safety function is integrated into the rest of the rail transit organization is provided.*

This section of the SSPP should describe the organization of the rail transit safety function, and its relationship to the rail transit agency organization. An organizational chart of the system safety function should be provided as well as an organizational chart(s) demonstrating the relationship of the system safety function to the other rail transit agency departments/functions.

3.3 LINES OF AUTHORITY FOR SAFETY

- **Element:** *Clear identification of the lines of authority used by the rail transit agency to manage safety issues is provided.*

This section of the SSPP should describe the authority of the safety function to work with rail transit departments and executive leadership to receive information, identify safety concerns, conduct internal audits and inspections, develop recommendations and corrective action plans to address safety concerns, track and verify the implementation of recommendations and corrective action plans, and report, on a regular basis, to executive management.

4. Plan Review and Modification

4.1 ANNUAL SSPP REVIEW

- **Element:** *An annual assessment of whether the system safety program plan should be updated is specified.*

Once developed, the SSPP is vulnerable to becoming out-of-date if it is not revised to:

- reflect changes in organizational structure or system characteristics;
- review progress on tasks accomplished;
- refine and improve the current task descriptions and activities;
- identify new tasks required as the system grows or in response to new regulations; and
- identify additional or emerging safety- and fire/life safety-related tasks and responsibilities.

On-going review and revision ensures the status of the SSPP as a “living document” at the rail transit agency.

As specified in 49 CFR Part 659 (§ 659.25), state oversight agencies must now require an annual review of the rail transit agency’s SSPP to determine if it should be updated. This section of the SSPP should clarify that the rail transit agency will conduct a complete and thorough review of its SSPP annually. If an established schedule is in place to manage this annual review process, it should also be mentioned in this section. Any time-frames specified by the state oversight agency for this review should also be addressed.

4.2 SSPP CONTROL AND UPDATE PROCEDURES

- **Element:** *The process used to control changes to the system safety program plan is described.*

This section of the SSPP should describe the rail transit agency’s process for updating the SSPP. For many rail transit agencies, revision of the SSPP is conducted through a committee devoted to safety issues. The revision process is typically led by a designated member of the system safety function. Inputs for revisions are solicited from all rail transit agency staff, contractors, and the state oversight agency. At some rail transit agencies, the SSPP may be classified as a controlled document. As such, it is subject to formal document control procedures, including designation of control copies which are issued to individuals within rail transit agency by name and/or job title.

Whatever process is used by the rail transit agency to prepare revisions, once the revised version of the SSPP is complete, it typically must be reviewed and accepted by a designated committee or set of departments/functions. The accepted version of the SSPP is then usually forwarded on to the General Manager for approval and signature.

4.3 SSPP REVIEW AND APPROVAL BY THE STATE OVERSIGHT AGENCY

- **Element:** *Required coordination with the oversight agency regarding plan modification, including timeframes for submission, revision, and approval, is addressed.*

This section should explain how the rail transit agency will interface with the state oversight agency regarding the review and approval of the SSPP. Requirements should be detailed regarding how the rail transit agency will notify the state oversight agency regarding its performance of the annual review to determine whether the SSPP should be updated. In the event that an update is necessary, the rail transit agency will conform to its SSPP update process, and the timeframes and requirements specified by the state oversight agency in its Program Standard. In the event that an update is not needed for that year, the rail transit agency will notify the state oversight using the method and timeframe specified in the oversight agency’s Program Standard.

This section should also explain how the rail transit agency will respond to requests from the state oversight agency for revisions, additional information or other items, and how conflicts will be resolved regarding differences in opinion between the rail transit agency and the state oversight

agency. Finally, this section should also explain how the rail transit agency will receive the completed SSPP review checklist and formal correspondence letter from the state oversight agency, and adopt as final the SSPP that is approved by the state oversight agency.

4.4 SSPP CHANGE MANAGEMENT

- *Element: Specific departments and persons responsible for initiating, developing, approving, and issuing changes to the SSPP are identified.*

This section should identify the departments and persons responsible for each of the steps in reviewing, revising, approving and issuing changes to the SSPP. In addition, designated personnel within the system safety function should be identified with responsibility for coordinating with the state oversight agency.

5. SSPP Implementation – Tasks and Activities

5.1 OVERVIEW

- *Element: A description of the specific activities required to implement the SSPP is included.*¹²⁵
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This section of the SSPP should provide an overview of the approach followed by the rail transit agency in managing the specific activities performed to implement the SSPP and provide on-going safety in rail transit operations and maintenance activities. To ensure that rail operations are conducted in the safest manner possible, all transit system personnel will have been assigned safety responsibilities. In addition, within the rail transit agency, each department/function provides distinct roles and carries out specific responsibilities to ensure the protection of passengers, employees, local responders, the community served by the system, and the agency's property. These responsibilities and roles should be summarized in this section of the SSPP.

5.2 SYSTEM SAFETY FUNCTION

- *Element: Tasks to be performed by the rail transit safety function, by position and management accountability, are identified and described.*

The responsibilities and tasks of each position in the system safety function should be described. Tasks may include activities required to: establish the organization of safety activities and outline employee responsibilities with respect to those activities; promote and maintain safety and training programs as mandated by federal, state, and local regulatory agencies; set and implement established safety goals, objectives, and practices; provide the mechanisms for identifying and assessing safety hazards during the operation and maintenance of the system; provide the methods to eliminate, minimize, or control the identified hazards and/or other concerns; define the formal requirements necessary for maintaining insurance coverage; define the requirements and procedures for conducting standard safety audits; and coordinate with the state oversight agency.

5.2.1 Methodology Used by the System Safety Unit

- **Element:** *A description of the methodologies used by the system safety function to achieve their safety responsibilities should be provided.*

This section should describe the different methodologies used by the system safety function to ensure a proactive approach to safety. Examples include data collection and analysis, hazard management and resolution, periodic inspections, compliance checks, and internal audits.

5.3 SAFETY RESPONSIBILITIES OF OTHER DEPARTMENTS

- **Element:** *Safety-related tasks to be performed by other rail transit departments, by position and management accountability, are identified and described.*

The safety responsibilities and tasks of other rail transit departments should be described. For example, the role of operating departments, human resources, planning, customer services, etc. in the creation of a safe rail transit agency should be described. This description should include a brief overview of the department and a discussion of the department's safety responsibilities. As appropriate, and if not already addressed in Section 3, organizational charts showing the relationship of those units with major safety responsibilities to the rail transit agency and system safety should be provided.

5.4 SAFETY TASK RESPONSIBILITY MATRIX (OR NARRATIVE DESCRIPTION)

- **Element:** *A task matrix showing: all identified safety responsibilities, interfaces among all rail transit units responsible for each task, and the key reports or actions required, should be provided (or an equivalent narrative description).*

A safety task responsibility matrix (or a narrative equivalent) showing interfaces among the system safety unit and other rail transit units for identified safety responsibilities and the key reports or actions required, should be provided in the SSPP. An example of an integrated safety task matrix is displayed in Figure 1. This matrix depicts the roles and responsibilities of both the rail transit agency safety function and the other rail transit departments. As used in this figure:

- P **Primary Task Responsibility.** The identified participant(s) is (are) responsible for the preparation of the specified documentation.
- S **Secondary or Support Responsibility.** The identified participant(s) is (are) to provide the necessary support to accomplish and document the task.
- R **Review/Comment Responsibility.** The identified participant(s) may review and provide comment on the task or requirement.
- A **Approval Responsibility.** The identified participant is to review, comment and subsequently approve the task or requirement.

Figure 1: Sample Integrated Safety Task Matrix

TASK/ACTIVITY	State Oversight Agency	Management	Operations	Maintenance	Safety	Training	Engineering	Human Resources	Risk Management	Transit Police
Management Commitment & Directive/Policy	A	A	R	R	P	R	R	R	R	
Development of SSPP										
Summary Statement	A	A	S	S	P	S	S	R	R	
Authority	A	A	S	S	P	S	S	R	R	
Purpose	A	A	S	S	P	S	S	R	R	
Goals & Objectives	A	A	S	S	P	S	S	R	R	
Scope	A	A	S	S	P	S	S	R	R	
SSPP Controls & Revisions	A	A	S	S	P	S	S	R	R	
System Description										
Operations & Maintenance		R	P	P	P	R	P	R	R	
Operations		R	P	P	P	R	p	R	R	
Maintenance of Physical Plant & Equipment		R	P	P	P	R	S	R	R	
Facilities & Systems Description		R	P	P	P	R	p	R	R	
Safety Management										
Organizational Structure	R	P	P	P	P	P	P	R	R	R
Interagency Coordination	R	P	P	P	P	R	R	R	R	R
Interdepartmental Coordination	R	P	P	P	P	P	P	R	R	R
Safety Committees	R	P	P	P	P	R	P	R	R	R
Change Order Review Committee	R	P	P	P	P	R	P	R	R	R
Fire/Life Safety Committee	R	P	P	P	P	R	P	R	R	R
Safety Review Committee	R	P	P	P	P	R	P	R	R	R
Employee Safety Awards Committee	R	P	P	P	P	R	P	R	R	R
Security Program Committees	R	P	P	P	P	R	P	R	R	R
Proactive Security Committee	R	P	P	P	P	R	P	R	R	R
Security Breach Review Committee	R	P	P	P	P	R	P	R	R	R
System Safety Program Activities										
Hazard Management	R	P	P	P	P	R	P	R	R	R
Safety & Fire/Life Safety Implementation	R	P	P	P	P	R	P	R	R	R
Hazard Identification, Analysis & Resolution	A	R	P	P	P	S	S	R	R	
User Requirements		R	S	S	P	S	P			
Equipment and System Design		A	R	R	P	R	P			
Safety Certification Program	R	A	P	S	P	R	P			
Acceptance Testing and Inspection		A	P	P	S		P			
Configuration Management		A	R		R		P			
Computer Software Configuration Management		A	R		R		P			
Configuration Control		A	R		R		P			
Investigating Accidents, Incidents & Hazardous Conditions	R	R	P	P	P	S	S		R	
Internal Investigations	R	A	P	P	P	S	S		R	
Supervisor Investigations	R	A	P	P	S	S	S		R	

Figure 1: Sample Integrated Safety Task Matrix

TASK/ACTIVITY	State Oversight Agency	Management	Operations	Maintenance	Safety	Training	Engineering	Human Resources	Risk Management	Transit Police
Accident/Incident Investigation Team - Internal	R	A	P	P	P	S	S		R	
External Investigation	R	A	P	P	S	S	S		R	
State Oversight Agency	P	S	S	S	S	S	S		R	
NTSB	R	S	S	S	S	S	S		R	
Safety Inspections			P	P	P	R	R		R	
Facilities Inspections			P	P	P	R	R		R	
Equipment Inspections			P	P	P	R	R		R	
Operations Safety			P	P	P				R	
Emergency Operating (Response) Procedures			P	P	P				R	
Operational Documents			P	P	P				R	
Rules & Procedures Review			P	P	P				R	
Occupational Safety & Health Programs		R	R	R	P	R		R	R	
Industrial Hygiene Program		R	R	R	P	R		R	R	
Hazardous Material Management Program		R	R	R	P	R		R	R	
Personal Protective Equipment Protection		R	R	R	P	R		R	R	
Medical Surveillance Program		R	R	R	P	R		R	R	
Construction Safety Program		S	S	S	P		P	R		
Contractor Safety Program		S	S	S	P		P	R		
Safety & Security Data Acquisition, Analysis & Reporting		R	S	S	P	R	R		R	R
Data Acquisition		R	S	S	P	R	R		R	R
Data Analysis & Tracking		R	S	S	P	R	R		R	R
Reports		R	S	S	P	R	R		R	R
Training		R	P	P	P	P	R	R	R	
Safety/Industrial Hygiene Training & Education		R	P	P	P	P	R	R	R	
Operationally Related Safety Training		R	P	P	P	P	R	R	R	
LRV Operator		R	P	P	P	P	R	R	R	
LRV Supervisor		R	P	P	P	P	R	R	R	
Maintenance Personnel		R	P	P	P	P	R	R	R	
Emergency Response Personnel		R	S	S	P	S	R			S
Emergency Exercises & Drills		R	S	S	P	S	R			S
Public Awareness Program	R	R	P		S					S
Environmental Protection Program		S	S	P	S	S	P			
Hazardous Waste Management Program		S	S	P	S	S	P			
Waste Water Abatement Program		S	S	P	S	S	P			
Internal Audit Program	R	S	S	S	P	S	S	R	R	
External Audits	P	S	S	S	S	S	S	R	R	R
Drug & Alcohol Abuse Program/Policy		P	S	S	P	R		R		
System Safety Program Verification	R	A	P	P	P	S	P			

6. Hazard Management Process

6.1 OVERVIEW

- **Element:** *The process used by the rail transit agency to implement its hazard management program, including the role of the oversight agency in providing on-going monitoring, is described.*

This section of the SSPP should provide an overview of the hazard management process developed by the rail transit agency. The hazard management process must, at a minimum:

1. Define the rail transit agency's approach to hazard management and the implementation of an integrated system-wide hazard resolution process.
2. Specify the sources of, and the mechanisms to support, the on-going identification of hazards.
3. Define the process by which identified hazards will be evaluated and prioritized for elimination or control.
4. Identify the mechanism used to track through resolution the identified hazard(s).
5. Define minimum thresholds for the notification and reporting of hazard(s) to oversight agencies.
6. Specify the process by which the rail transit agency will provide on-going reporting of hazard resolution activities to the oversight agency. This activity may include weekly, monthly or quarterly meetings with the rail transit agency to discuss hazard management issues.

6.2 HAZARD MANAGEMENT PROCESS – ACTIVITIES AND METHODOLOGIES

- **Element:** *The hazard management process includes activities for: hazard identification, hazard investigation, evaluation, and analysis, hazard control and elimination, and hazard tracking.*

In this section of the SSPP, the rail transit agency should provide a detailed description of its approach to addressing each required element of the hazard management process. Each rail transit agency may use a variety of methodologies, including informal processes, such as review of reports from operations and maintenance personnel, results from rules compliance checks and employee evaluations, the mining of maintenance data, results from facilities and vehicles inspections, findings from internal safety and security audits, and daily review of the rail transit agency's unusual occurrences log, as well as more formal approaches, such as trend analysis, hazard classification and resolution using the Mil-Std 882 process, hazard analyses using inductive processes (Preliminary Hazard Analysis, Failure Modes and Effects Analysis, Job Hazard Analysis, etc.) and hazard analysis using deductive processes (Fault Tree Analysis). These methods should be identified and described in this section of the SSPP.

For example, the rail transit agency may state the following:

The hazard management process is the primary tool used by the rail transit agency to ensure the safety of rail transit agency activities, passengers, employees, facilities and vehicles. This process is accessible to all levels of the organization and is the means by which hazards are identified, analyzed for potential impacts on the transit system and resolved in a manner acceptable to management. This process will follow the guidelines listed in the five sub-sections below.

I. Hazard identification is a process whereby an attempt is made to discover conditions in the system that, if not altered, has the potential to cause accidents, injuries, or other losses. Where reasonably feasible, all employees are charged with the responsibility of identifying and reporting conditions that have the potential to cause accidents, injuries, or other losses. These conditions may be found in the form of physical hazards, unsafe actions, and policies that create or fail to recognize hazards. There may also be certain employees who, through periodic field observations, review of incident data, performance and complaint records, are identified as needing counseling, re-training, termination or other action as deemed appropriate.

Potentially hazardous conditions may also be identified through other means, including those listed below:

- Reports from passengers and other individuals through contact with customer service, field personnel, or management personnel.
- Reports from operators and other field personnel regarding hazards associated with agency vehicles, schedules, routes, policies and procedures.
- Reports from maintenance personnel regarding equipment and facilities hazards.
- Review of the rail transit agency's 24-hour unusual occurrences log.
- Investigation and review of accidents and incidents by safety personnel.
- Collection and analysis of accident statistics and risk management information system data regarding safety, accident rates, and claims reports, including trend analysis.
- Audits performed by knowledgeable safety personnel.
- Checklist audits performed by rail transit agency supervision.
- Information, experiences, and ideas from support departments.
- Observations of facilities and operations hazards, by administrative personnel.
- Results from drills, exercises and emergency response to accidents and incidents.
- Formal hazard analyses using the inductive process by analyzing system components to identify failure modes and effects on the system and personnel. Failure modes include conditions such as doors or switches failing to open or close, or acting improperly or inadequately. Examples of formal hazard analyses include Preliminary Hazard Analysis, Failure Modes and Effects Analysis.

- Formal hazard analysis using the deductive process to identify sequential and concurrent conditions which are required to support a specific operation or task. An example of this type of analysis is the Fault Tree Analysis.

II. Hazard classification for severity ensures that hazards are rated in terms of their effects on employees, passengers and/or the transit system. Severity categories are defined below.

- *Category I - Catastrophic:* Operating conditions are such that human error, environment, design deficiencies, element, sub-system or component failure or procedural deficiencies may cause death or major system loss, thereby requiring immediate cessation of the unsafe activity or operation.
- *Category II - Critical:* Operating conditions are such that human error, environment, design deficiencies, element, sub-system or component failure or procedural deficiencies may cause severe injury or illness or major system damage thereby requiring immediate action including immediate cessation of the unsafe activity or operation.
- *Category III – Marginal:* Operating conditions may cause minor injury or illness or minor system damage such that human error, environment, design deficiencies, element, sub-system or component failure or procedural deficiencies can be counteracted or controlled without serious injury, illness or major system damage.
- *Category IV – Negligible:* Operating conditions are such that human error, environment, design deficiencies, element, sub-system or component failure or procedural deficiencies will result in no, or less than minor, illness, injury or system damage.

III. Hazard classification for probability ensures that the probability that a hazard will occur can be described in potential occurrences per unit of time, events, population items or activity. A qualitative hazard probability may be derived from research, analysis, and evaluation of safety data from the operating experience of the rail transit agency or other similar transit authorities. A depiction of a hazard probability rating system is described below.

DESCRIPTIVE WORD	LEVEL	SPECIFIC INDIVIDUAL ITEM	FLEET OR INVENTORY
Frequent	A	Likely to occur frequently	Continuously experienced
Reasonably Probable	B	Will occur several times in life of an item	Will occur frequently
Occasional	C	Likely to occur sometime in life of an item	Will occur several times
Remote	D	Unlikely, but possible to occur in life of an item	Unlikely, but can reasonably be expected to occur
Improbable	E	So unlikely, it can be assumed occurrence may not be experienced	Unlikely to occur, but possible

IV. Risk assessment determines the acceptability of assuming a risk associated with a hazard, the necessity of implementing corrective measures to eliminate or reduce the hazard, or a combination of both. Hazard risk assessment involves categorization of hazard severity and probability of occurrence. A Risk Assessment Index, or Hazard Rating Table, is shown below.

Hazard Severity				
HAZARD FREQUENCY	CATEGORY I	CATEGORY II	CATEGORY III	CATEGORY IV
Frequent (A)	1A	2A	3A	4A
Probable (B)	1B	2B	3B	4B
Occasional (C)	1C	2C	3C	4C
Remote (D)	1D	2D	3D	4D
Improbable (E)	1E	2E	3E	4E

Hazard Risk Index	Criteria by Index
1A, 1B, 1C, 2A, 2B, 3A	Unacceptable
1D, 2C, 2D, 3B, 3C	Undesirable
1E, 2E, 3D, 3E, 4A, 4B	Acceptable with review
4C, 4D, 4E	Acceptable without review

- **Unacceptable Hazardous Conditions** - means a condition that may endanger human life or property. This condition cannot remain as is but must be mitigated.
- **Undesirable** - means that the hazard should be mitigated, if at all possible within fiscal constraints. However, it may be mitigated at a later time.
- **Acceptable with review** - means the system safety function must determine the risk associated with not mitigating the hazard.
- **Acceptable without review** - means that the hazard can remain.

After assessment of the severity and probability of a hazard, and where reasonably feasible, the key departments, safety committee, and the system safety function will make a standard analysis. A determination will be made regarding acceptance of the risk or taking corrective action. Risk assessment issues of significant impact or those where there is a lack of consensus will be submitted to the executive leadership for resolution.

Executive leadership will reach a consensus to accept, modify, or reject the recommendation. If modified or rejected, the safety committee is called into session for further review and recommendation. Upon final approval by executive leadership, the resolution is placed into the hands of the responsible department(s) for implementation.

V. Hazard Resolution refers to activities taken to eliminate or mitigate the hazard. Where reasonably feasible, a hazard that has been submitted by an individual for resolution shall be handled as follows:

- A written Hazard I.D. will be submitted to the system safety function for input into the Hazard I.D. Workflow System.
- The safety staff member will forward the Hazard I.D. to the immediate supervisor (in each case) and/or to other management (as appropriate) who shall initiate a resolution if possible.
- If unable to resolve, the supervisor shall forward the Hazard I.D. form along with their response to the appropriate department/function or committee for review and resolution. The decision on where best to forward the Hazard I.D. will be based on the best judgment of the supervisor/manager.
- As requested, the appropriate department/function or committee shall review and initiate a recommendation for resolution whenever possible.
- If the submitting employee is not satisfied with the response from the supervisor or the committee, they may appeal the decision directly to the safety committee.
- The safety committee may either accept the recommendations as presented, or may initiate their own resolution to the hazard.

When the risks are assessed, a plan is developed for resolution. There are four choices in the hazard resolution process:

- **Design for Minimum Risk:** From the first, design to eliminate hazards through design selection.
- **Safety Devices:** Hazards that cannot be eliminated or controlled through design selection shall be controlled to an acceptable level through the use of fixed, automatic or other protective safety design features or devices. Provisions shall be made for periodic functional checks of safety devices.
- **Warning Devices:** When either design or safety devices cannot effectively eliminate or control an identified hazard, devices shall be used to detect the condition and to generate an adequate warning signal to correct the hazard or provide for personnel evacuation. Warning signals and their application shall be designed to minimize the probability of incorrect personnel reaction to the signals and shall be standardized within like types of systems.
- **Procedures and Instruction:** Where it is impossible to eliminate or adequately control a hazard through design selection or use of safety and warning devices, procedures and training shall be used to control the hazard. Procedures may include the use of personal protective equipment. Precautionary notations shall be standardized as specified by management. Safety critical tasks and activities may require certification of personnel deficiency.

6.3 COORDINATING WITH THE STATE OVERSIGHT AGENCY

- **Element:** *Requirements for on-going reporting to the oversight agency relating to hazard management activities and status are specified.*

In this section of the SSPP, the rail transit agency should document its approach for providing on-going hazard management information to the state oversight agency. Examples of these activities include: submission of monthly or weekly logs and reports documenting the implementation of the rail transit agency's hazard management process and the conduct of monthly or quarterly meetings with the oversight agency to review results from the hazard management process. In addition, the role of the oversight agency in coordinating with the rail transit agency regarding the investigation of certain categories of hazardous conditions and the development, review and approval of corrective actions plans (as appropriate) should be specified.

To complete this section of the SSPP, the rail transit agency may state the following:

To ensure an on-going role in the oversight of the rail transit agency's hazard management process, the rail transit agency will establish a **Hazard Tracking Log** which reflects the consolidation of information in the hazard management process. The Hazard Tracking Log will contain all hazards identified through the various methods applied by the rail transit agency. The Hazard Tracking Log may be organized by the hazard number assigned by the rail transit agency, or by the type of hazard, the source from which it was identified, or the element of the rail transit agency's operation affected by the hazard (i.e., facilities, vehicles, track and signal, communications/SCADA, tunnel ventilation, personnel training and procedures, etc.). A sample log appears on the next page.

The proposed Hazard Tracking Log will be submitted monthly to the state oversight agency's designated point-of-contact. The state oversight agency will review the Monthly Hazard Tracking Log and forward any questions or requests for information to the rail transit agency.

In addition, the rail transit agency will conduct quarterly meetings with the oversight agency to review the Hazard Tracking Log and the other rail transit agency activities associated with the hazard management process. The rail transit agency will submit to the state oversight agency a proposed date and location for the quarterly meeting and a proposed agenda. The state oversight agency will review and approve the agenda, making any modifications as appropriate, and schedule the quarterly meeting with the rail transit agency. During the quarterly meetings, the rail transit agency will attempt to provide any documents and to answer any requests that the state oversight agency may have. If these records are not available at the quarterly meetings, they will be transmitted to the state oversight agency after the conclusion of the quarterly meeting.

7. Safety Certification

- **Element:** *A description of the safety certification process required by the rail transit agency to ensure that safety concerns and hazards are adequately addressed prior to the initiation of passenger operations for New Starts and subsequent major projects to extend, rehabilitate, or modify an existing system, or to replace vehicles and equipment.*

The rail transit agency may undertake major projects and modifications that require safety certification. In this section, the rail transit agency should define those projects which require certification. Examples may include: new rail systems and extensions, the acquisition and integration of new rail vehicles and safety critical technologies into existing service, and major safety critical redesign projects, excluding functionally similar replacements.

In addressing these projects, this section of the SSPP should state that the goals of the rail transit agency's safety certification program are to verify that identified safety and security requirements have been met and to provide evidence that the new operating segments/phases are safe and secure for use in revenue service.

This section should clarify that for each such project, the rail transit agency will develop a Safety and Security Certification Plan (SSCP) during the preliminary design phase of the project. Prior to revenue service, a Safety and Security Verification Report (SCVR) will be developed, documenting the agency's compliance with its SSCP.

The rail transit agency should briefly describe its process in implementing its safety certification program, including the following:

1. develop a certifiable items list;
2. identify safety and security requirements for each certifiable element;
3. verify compliance;
4. issue Certificates of Compliance for each certifiable element; and
5. issue rail transit agency certification.

This section should also identify final authority to approve the certification of rail transit agency major projects, extensions, etc. The role of the system safety function should also be described, including activities to be performed to ensure that:

1. facilities and equipment have been constructed, manufactured, inspected, installed, and tested, in accordance with safety and security requirements in the design criteria and contract specifications;
2. operations and maintenance procedures and rules have been developed and implemented to ensure safe and secure operations;
3. training documents have been developed for the training of operating personnel, and emergency response personnel;
4. transportation and maintenance personnel have been trained and qualified/certified;

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5. emergency response agency personnel have been prepared to respond to emergency situations in or along the right-of-way;
 6. safety and security-related system integration tests have been conducted; and
 7. security for the segments in operation and the Yard and Shop are addressed.

This section should also clarify that each critical certifiable system element receives a written safety and security certificate of conformance. When all required certifiable system elements are certified, a system safety certification statement, signed by the General Manager, is issued along with a Safety Certification Verification Report. These documents verify the readiness for revenue service for each operational phase of the system in regards to the safety and security requirements of the system. If the state oversight agency has additional authorities, beyond the scope of 49 CFR Part 659, for reviewing or approving this report, they should be stated here.

Finally, the rail transit agency should also identify the major components that form the baseline for certification. These typically include:

1. manuals of Design Criteria and Standard and Directive drawings which determine the safety and security requirements to be incorporated in the contract specifications;
2. the Contract Final Design which determines that the safety and security features of facilities, systems, and equipment are in compliance; and
3. the System Verification Report and Test Plans which form the basis for determining that safety and security-related inspections and tests have been performed in compliance with codes and guidelines, and that all facilities, vehicles, equipment, and procedures can function in a safe and secure manner.

Once the SSCP is adopted, a formal process 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 rail transit agency, regular reports should be included to ensure all organizational entities are thoroughly familiar with both the procedure and necessity for each exception.

8. Managing Safety in System Modifications

- **Element:** *The process used by the rail transit agency to ensure that safety concerns are addressed in modifications to existing systems, vehicles, and equipment, which do not require formal safety certification, but which may have safety impacts, is described.*

This section should clearly specify the rail transit agency's processes and procedures regarding those maintenance and construction activities that do not require formal safety certification, but that do require safety inspections and sign-offs prior to placement of the facility, equipment, part, or vehicle in service (i.e., replacements or repair in kind, etc.). To avoid confusion and to clarify roles and responsibilities, the rail transit agency system safety function should coordinate with the maintenance function to develop a formal procedure, if one does not already exist. This procedure should be referenced in this section.

In addressing this activity, the rail transit agency may require a sign-off prior to the placement of the modification in revenue service. In this case, 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.

The rail transit agency may also include operating and safety department personnel in the design review process for certain modification activities. Sign-off procedures may be established for the appropriate departments.

Finally, the rail transit agency may identify the department and person in the organization with responsibility for ensuring that hazards associated with system modifications are included in the Hazard Management Process. One function of the organization, usually system safety, should be delegated with the responsibility of ensuring that any hazards associated with system modifications of any kind are worked into the Hazard Management Process. In this way any accepted risks associated with such system changes will be documented and tracked from the outset.

9. Safety Data Acquisition

9.1 DATA ACQUISITION PROCESS

- **Element:** *The process used to collect, maintain, analyze, and distribute safety data is clearly defined.*

This section should clearly describe the process used by the rail transit agency to collect and analyze safety data to support improvements in the agency's safety performance and to monitor compliance with the agency's safety goals and objectives. This data can come from multiple sources, such as daily unusual occurrence logs, operator and supervisor reports, mining of maintenance data, analysis of vehicle and personnel records, and procurement contracts.

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 not only within the respective system on various operating characteristics relative to safety, but also from other rail transit agencies, the state oversight agency, and the FTA. This section should describe the sources of this data, ensuring that all required reports from all departments within the agency are identified.

As described in the Hazard Management Process section of this SSPP, analysis of this system specific data can be used to determine trends and patterns in system operation. Used as part of the hazard management process, data collection and analysis can 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.

9.2 ACCESS TO DATA

- **Element:** *The management process for ensuring that the safety function within the rail transit organization receives the necessary information to support implementation of the system safety program is clarified.*

In addition to describing the safety data acquisition process, the SSPP must address the management process used to ensure that other departments within the rail transit agency provide required data to the system safety function. This section of the SSPP should clarify which departments are responsible for reporting what types of data, and also identify management controls in place to ensure that this data is delivered to the safety department in a timely manner and is appropriately validated.

10. Accident/Incident Notification, Investigation and Reporting

10.1 OVERVIEW

- **Element:** *A description is provided regarding the process used by the rail transit agency to perform accident notification, investigation and reporting.*

This section of SSPP should describe the process used by the rail transit agency to conduct accident investigations, and to notify appropriate external agencies, including the state oversight agency, the National Transportation Safety Board (NTSB), and the Federal Railroad Administration (FRA). In addition, there should be clear links specified between the accident/incident notification, investigation and reporting process and the hazard management process. Finally, this section should address the process used by the rail transit agency to develop corrective action plans to prevent recurrences, and to coordinate review and approval of these plans with the state oversight agency.

10.2 ACCIDENT/INCIDENT INVESTIGATION CRITERIA

- **Element:** *Criteria for determining what accidents/incidents require investigation, and who is responsible to conduct specific investigations are developed.*

A formal policy needs to exist and be fully understood by all organizational elements on exactly how accidents/incidents will be classified, and how different classifications of accidents/incidents will be investigated, by whom, and to what level of detail. This policy should include a pre-determination regarding 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. The SSPP should describe these criteria in detail.

10.3 ACCIDENT/INCIDENT INVESTIGATION PROCEDURES

- **Element:** *A description of the procedures for performing investigations, including proper documentation and reporting of findings, conclusions reached, use of hazard resolution process to develop corrective action recommendations, and follow-up to verify corrective action implementation is provided.*

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 all organizational elements is also required. The SSPP should describe and reference these procedures. The rail transit agency should also submit these procedures to the state oversight agency with the SSPP for review and approval.

10.4 INTERNAL NOTIFICATION PROCEDURE

- **Element:** *Notification thresholds for internal departments/functions are defined.*

Predetermination of appropriate notification of accidents and participation in accident investigations should be understood and available to all involved rail transit personnel. The SSPP should clearly describe the internal notification procedures and the technology or methods used to support internal notification.

10.5 EXTERNAL NOTIFICATION PROCEDURE

- **Element:** *Criteria are specified for notifying external agencies (NTSB, state oversight agency) of accidents and incidents.*

49 CFR Part 659 mandates that each rail transit agency report accidents meeting specific thresholds to the state oversight agency. The rail transit agency system safety function must notify the state oversight agency within two hours of the occurrence of an accident or incident meeting the thresholds specified in FTA's 49 CFR Part 659. These thresholds include the following:

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1. A fatality (death at the scene or where an individual is confirmed dead within 30 days).
 2. Two or more injuries requiring immediate medical attention away from the scene.
 3. Property damage in excess of \$25,000.
 4. Any evacuation due to life safety reasons.
 5. Any collision at a grade crossing, regardless of injuries or property damage.
 6. Any main-line derailment.
 7. Any collision with an individual on a rail right of way.
 8. Any collision between a rail transit vehicle and another rail transit vehicle or a rail transit non-revenue vehicle.

Notification must occur through the means specified in the state oversight agency Program Standard. In addition, 49 CFR Part 659 requires that the state oversight agency investigate each accident meeting these thresholds. In the event that the state oversight agency intends to authorize the rail transit agency to conduct investigations upon its behalf, it will formally review, approve and adopt the rail transit agency's accident investigation procedures and submit them to FTA. In addition, the state oversight agency must formally (in writing) transmit its request to the rail transit agency, which must receive it. In the event that the state oversight agency plans to conduct independent investigations, using its own personnel or contractors, the state oversight agency coordinate this investigation with the rail transit agency.

This section of the SSPP should also identify the criteria utilized to notify other outside agencies. For example, the NTSB must be notified within two hours for any occurrence involving a passenger/employee fatality, two or more injuries to employees or passengers requiring admission to a hospital, an evacuation on the mainline, or a fatality at a rail grade crossing. The NTSB will be notified within 4 hours for any occurrence that totals or exceeds \$25,000. The system safety function will make these notifications.

FRA thresholds are more inclusive than the FTA thresholds, and only apply to those rail transit systems with waivers in place for shared track systems or that connect to the general railroad system. In the event the rail transit agency notifies FRA, it should also notify the state oversight agency. In addition, if the information is available, the rail transit agency should also notify the state oversight agency of the NTSB's intent to investigate the accident. The details for notifying the state oversight agency are described in the agency's accident investigation procedure.

10.6 ACCIDENT/INCIDENT REPORTING AND DOCUMENTATION

- *Element: Procedures are established for documenting and reporting on accident investigations.*

It is important that the rail transit agency have a procedure in place for the development, review and approval of reports and other materials documenting the results of the accident investigation. This section of the SSPP should reference the appropriate procedure or provide an outline of the required elements of a rail transit agency investigation activities and reports. The state oversight

agency may also specify certain accident investigation reporting requirements. These requirements should also be included.

10.7 CORRECTIVE ACTION RESULTING FROM ACCIDENT INVESTIGATION

- **Element:** *Process used to develop, implement, and track corrective actions that address investigation findings is specified.*

The SSPP needs to describe the process used to develop, track, report and verify implementation of all recommendations and identified needs for corrective actions. The agency should have a process in place to ensure all necessary corrective actions are completed. The corrective action process and the parties responsible for the corrective action process should be clearly described and identified in the SSPP.

10.8 COORDINATION WITH STATE OVERSIGHT AGENCY

- **Element:** *Coordination with the oversight agency is specified.*

In this section, the rail transit agency should describe its process for coordinating the conduct of accident investigations with the oversight agency, including the delivery of accident investigation reports and corrective action plans, working with the state oversight agency to receive approvals on corrective action plans, and providing the oversight agency with status updates.

11. Emergency Response Planning/Coordination/Training

11.1 RESPONSIBILITIES FOR EMERGENCY PREPAREDNESS

- **Element:** *The agency's emergency planning responsibilities and requirements are identified.*

In this section of the SSPP, the rail transit agency must identify its responsibilities for ensuring its readiness to respond to an emergency on its system or to support response to an emergency in its service area. Responsibilities typically include:

- developing an internal Emergency Operations Plan, which includes the rail transit agency's Incident Management Organization (IMO) for responding to emergencies and integrating with the Incident Command System (ICS) established by local responders;
- ensuring that the internal Emergency Operations Plan is appropriately coordinated with the SSPP and the System Security Plan;
- developing a Continuity of Operations Plan (COOP);

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- coordinating with local/county Emergency Management Agencies (EMAs) and other regional emergency planning groups and committees, to support the integration of rail transit agency resources and emergency response requirements into the regional emergency planning and preparedness program;
 - working with the local/county EMAs and public safety agencies to support regional programs for addressing requirements specified by the Department of Homeland Security (DHS) and the Federal Emergency Management Agency (FEMA) for the National Response Plan (NRP) and the National Incident Management System (NIMS);
 - ensuring that any emergency preparedness requirements specified in the terms of rail transit agency's participation in the Department of Homeland Security, Transit Security Grant Program (TSGP) or Homeland Security Exercise and Evaluation Program (HSEEP) are addressed;
 - coordinating with local public safety agencies and other transportation agencies to develop memorandum of understanding/agreement;
 - developing emergency procedures and training for transit employees;
 - developing emergency awareness training and signage/outreach for passengers and others who use the system;
 - conducting emergency exercises to validate and reinforce implementation of procedures and training; and
 - supporting familiarization of local responders with the rail transit agency system and vehicles.

11.2 COORDINATED SCHEDULE

- ***Element:*** *A description of the process used by the rail transit agency to develop an approved, coordinated schedule for emergency management program activities is provided.*

Emergency response is a primary component of any rail transit SSPP. This component must include an approved, coordinated schedule for all emergency response activities. This section of the SSPP must describe the process through which the rail transit agency develops, distributes and maintains this schedule. Specific responsibility should be identified by department and job title.

- ***Element:*** *Required meetings with external agencies regarding the emergency management program are specified.*

Meetings with outside agencies, participation in training and emergency exercises sponsored by other agencies, and revision and distribution of the rail transit agency's Emergency Operations Plans and emergency response procedures can all be scheduled on an annual basis, with necessary approvals and checks for completion built in. The process in place for managing this coordination should be documented in the SSPP.

Frequently the system safety function is responsible for coordination of these types of emergency preparedness functions. As part of the regular reports to general management issued by the system safety function, status reports on emergency preparedness items can automatically be included.

11.3 EMERGENCY EXERCISES

- *Element: The process used to evaluate emergency preparedness, such as annual emergency field exercises, is documented.*

Emergency exercises form the backbone of the process for determining whether emergency response plans are adequate. While no exercise can recreate the urgency of a real emergency, they still provide indispensable training and familiarization opportunities for both emergency response personnel and rail transit agency staff. Flaws in the planned process are also frequently discovered during the conduct of these exercises and their subsequent debriefings. It should be noted that emergency exercises need not always be full blown "mock" disasters, but can also be conducted as simple "walk-throughs" of how employees would respond to a specific set of circumstances, as well as targeted training opportunities.

In this section of the SSPP, the rail transit agency must describe its process for developing, scheduling, conducting and evaluating emergency exercises and drills. Coordination with the DHS, G&T Transit Security Grant Program and the G&T Homeland Security Exercise and Evaluation Program should be documented as appropriate.

- *Element: After action reports and implementation of findings are required.*

The rail transit agency must describe its process for ensuring the preparation and dissemination of after action reports to document the findings and recommendations from the emergency exercise or drill. In addition, the rail transit agency must document its approach to tracking the implementation of recommendations. Integration of relevant findings into the hazard management process should also be discussed. Finally, coordination with the DHS, G&T Transit Security Grant Program and the G&T Homeland Security Exercise and Evaluation Program should be documented as appropriate.

11.4 EMERGENCY PROCEDURES

- *Element: The process is explained to be used by the rail transit agency for the revision and distribution of emergency response procedures.*

The SSPP must reference or describe up-to-date emergency procedures that are accessible to transit agency emergency response units and external agencies, and explain how revised procedures are disseminated and communicated to employees and external agencies.

11.5 EMERGENCY TRAINING

- **Element:** *The agency's responsibilities for providing employee training are identified.*

An important consideration for handling of emergency situations is internal staff training. It is imperative that rail transit agency staff have absolute knowledge of both the standard and emergency operating characteristics of their rail transit agency. This can only be accomplished through proper initial and refresher training at all operational levels, as well as specifically targeted training for those staff members who may be involved in handling of emergency situations, while not necessarily involved in day to day operations. This section of the SSPP should provide an overview of the rail transit agency's training program for ensuring proficiency in the response to the full range of emergencies possible at the system.

11.6 FAMILIARIZATION TRAINING

- **Element:** *The agency's responsibilities for providing familiarization training to local public safety organizations are identified.*

Emergency response by its very nature implies significant involvement by outside agencies. Fire department, police, emergency medical services, and those local agencies involved in handling of terrorist activities (e.g., bomb threats) must be coordinated by the rail transit agency in order to ensure the best possible response to emergency situations, as well as realization of maximum benefit from the expertise contained within these external agencies.

12. Internal Safety Audit Process

12.1 OVERVIEW

- **Element:** *A description of the process used by the rail transit agency to ensure that planned and scheduled internal safety reviews are performed to evaluate compliance with the SSPP is included.*

This section of the SSPP must describe the rail transit agency's approach to developing, implementing and reporting an internal safety audit process or ISAP. The ISAP is a critical component of the rail transit agency's SSPP. Following the procedures developed for the ISAP, over a three-year period, every one of the 21 elements specified in the rail transit agency's SSPP will be reviewed and evaluated for its implementation. During this review, the ISAP process will determine if all organizational elements, equipment, procedures, and functions are performing as intended from a safety perspective. In addition, the ISAP measures effectiveness of the SSPP.

The SSPP must document the process and procedures used to plan, schedule, conduct, evaluate, and report on the internal safety audits and to ensure that reports are issued, with recommendations to address any deficiencies or findings. In addition, the revised 49 CFR Part 659 requires additional involvement of the state oversight agency in this process. These requirements must be addressed as well.

12.2 SCOPE OF ACTIVITIES

- **Element:** *Identification of departments and functions subject to review is performed.*

The objectives of the internal safety audit process are to provide a mechanism for determining the effectiveness of the rail transit agency SSPP and to assess its level and quality of implementation. Specifically, internal safety audit objectives are to:

- verify that safety programs have been developed/implemented in accordance with SSPP requirements;
- assess the effectiveness of the rail transit agency's system safety programs;
- identify program deficiencies;
- identify potential hazards in the operational system and weaknesses in the system safety programs;
- verify that corrective actions are being developed, implemented and tracked to closure to address deficiencies and potential hazards;
- recommend improvements to the rail transit agency SSPP;
- provide management with an assessment of the status and adequacy of the system safety program; and
- assure continuing evaluation of safety-related programs, issues, awareness and reporting.

Based on a careful review of these objectives and the activities addressed in the SSPP, the rail transit agency should identify the organizational units and functions which are subject to the internal audit process. A list of these organizational units and functions should be included in the SSPP.

A thorough ISAP 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 as specified in the SSPP.

12.3 AUDIT PROCESS

12.3.1 Integrity of Audit Process

- **Element:** *Auditors must be independent from the first line of supervision responsible for the activity being audited.*

This section of the SSPP must identify the rail transit agency personnel responsible for performing the ISAP, and specify requirements to protect against individuals auditing their own work. Required interfaces with the system safety function must also be specified.

In some instances, the system safety function of the rail transit agency will be responsible for implementation and oversight of the ISAP, however, each rail transit agency 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.

12.3.2 Cycle/Schedule

- **Element:** *A three-year audit schedule must be developed, reviewed, maintained and updated to ensure that all 21 SSPP elements are reviewed during the audit cycle.*

This section of the SSPP must specify the requirement to develop a three-year schedule depicting all 21 audits to be performed. This schedule must be disseminated within the rail transit agency, and also delivered to the state oversight agency. Responsibility for scheduling audits must be clearly identified, by department and job title. Regular dissemination of the audit schedule will support awareness of the ISAP throughout the rail transit agency. Annual schedule updates of this schedule must be provided to the state oversight agency with the Annual Audit Report (see Section 12.3.5).

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.

12.3.3 Checklists and Procedures

- **Element:** *The process for conducting reviews, including the development of checklists, and procedures for conducting audits and issuing of findings is described.*

To guide the performance of the ISAP, and to ensure its integrity, a set of ISAP procedures and checklists must be developed for all 21 audits. The procedures and checklists must be reviewed and approved by the rail transit agency, and submitted to the state oversight agency. The procedures must include the new requirement, specified in 49 CFR Part 659, that the rail transit agency must

notify the oversight agency no less than thirty days prior to the conduct of each internal audit. The oversight agency retains the authority to observe each internal safety audit.

This requirement ensures that a list of items to be audited will be prepared in advance and that the methodology for conducting the audit will be clearly specified. 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.

12.3.4 Audit Reporting

- *Element: The process for resolving problems and disagreements, report distribution, and follow-up on corrective action procedures is described.*

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 section of the SSPP must specify that an audit report will be prepared to document the results of each internal audit. At a minimum, this report should contain a brief overview of the activities performed, the completed checklists, and any findings, recommendations or concerns identified. This report may be delivered in draft to the audited department for a period of review and comment prior to finalization.

Each ISAP report, or an executive summary, should be provided to the chief executive officer and the individual, respective departments. To support discussion of results and the development of action plans to address findings, 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.

The SSPP must specify that a summary of recommended corrective actions, if any, must be included in each audit report. Corrective actions approved by management must then be formally tracked for compliance. In addition, a tracking log must be maintained by the system safety function, documenting the status of all recommended corrective actions.

12.3.5 Annual Audit Report

- **Element:** *The SSPP must describe the requirement of an annual audit report that summarizes the results of individual audits performed during the previous year and includes the status of required corrective action items. This report must be submitted to the state oversight agency for review and approval.*

This section of the SSPP must state that the rail transit agency will prepare an annual audit report documenting its activities and findings over the last year, and submit this report to the state oversight agency for review and approval. To support preparation of this report and its review by the state oversight agency, 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, respective departments, and the state oversight agency.

As specified by the state oversight agency, the annual report may include the following information:

- a listing of the internal safety and security audits conducted for that year;
- a discussion of where the RTA is in meeting its three-year internal audit schedule, including the identification of any obstacles in meeting the schedule and any proposed mitigation measures;
- an updated schedule for the next year's audits;
- the status of all findings, recommendations and corrective actions resulting from the audits conducted that year; and
- any challenges or issues experienced by the RTA system safety function or security/police function in obtaining action from/compliance with these findings, recommendations and corrective actions during that year.

12.3.6 Coordination with the Oversight Agency

- **Element:** *The ISAP process and reporting must be coordinated with the state oversight agency.*

The SSPP must identify the role of the state oversight agency in monitoring and overseeing implementation of the ISAP at the rail transit agency. In this capacity, the state oversight agency may request completed reports and status updates regarding the implementation of recommendations. In addition, results from the ISAP may feed into the hazard management process, which is also overseen by the state oversight agency.

12.3.7 Audit Completeness

- **Element:** *The ISAP process should be comprehensive.*

The SSPP should identify the types of documentation that may be required to ensure audit completeness: Maintenance Procedures, Training Manuals, Proceedings of Meetings, Equipment Specifications, Rules/Regulations, Management Program Plans, System Safety Program Plan, Standard Operating Procedures, Emergency Procedures, Configuration Management Plan, Hazardous Materials Management Plan, Administrative Procedures, Rule Book, Safety Rules, Fire Codes, and Engineering Design Criteria.

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.

13. Rules Compliance/Procedures Review

13.1 OVERVIEW

- **Element:** *Operating and maintenance rules and procedures that affect safety are identified.*

All rail transit systems should have a written expression of their policies and practices. These policies and practices are conveyed in various general and specialized rulebooks, operating bulletins, special orders, standard operating procedures and/or other similar documents, generally referred to as rules and procedures. Operating rules and procedures are created to promote safe, efficient, timely, and customer-oriented transit operations. Adherence to these operating rules is necessary to achieve these objectives. A rules compliance program is needed to verify adherence to operating rules.

The SSPP should identify all of the rules and procedures that affect passenger and employee safety, and, as such, are subject to compliance monitoring activities. These rules and procedures may also be reviewed during the ISAP, and/or the rail transit agency's activity to update its SSPP. This identification should include all safety-critical operating and maintenance rules and procedures.

13.2 REVIEW OF RULES AND PROCEDURES

- **Element:** *Operating and maintenance rules and procedures that affect safety are reviewed for their effectiveness and determinations are made regarding their need to be updated.*

The SSPP should describe the process used by the rail transit agency system safety function and supporting committees to review safety-critical operations and maintenance rules and procedures and to make determinations regarding whether they need updating. Procedures for document control and the methods for disseminating updates should also be described. Roles and responsibilities should be identified, by department and job title.

13.3 PROCESS FOR ENSURING RULES COMPLIANCE

- *Element: Description of process for developing, maintaining, and ensuring compliance with operating and maintenance rules and procedures.*

The benefits of rules and procedures come from their implementation and use, which can only be assured through periodic review and follow-up. Each rail transit agency shall develop a formal process of observations to evaluate and verify that rules are followed. Each rail transit agency must define its Rule Compliance program to verify and evaluate that its rules are followed. This program must be described in the SSPP.

13.4 COMPLIANCE TECHNIQUES – OPERATIONS AND MAINTENANCE PERSONNEL

- *Element: Techniques used to assess the implementation of operating and maintenance rules and procedures by employees, such as performance testing/compliance checks.*

While each rail transit agency shall develop its own requirements for assessing compliance with rules, the following elements must be included:

1. **Evaluation Process:** The rail transit agency must define which job classifications and job functions will be evaluated.
2. **Organizational Responsibility:** The rail transit agency must define which part or parts of the organization/departments or areas will administer the rule compliance process. This includes monitoring the compliance program to verify if it is being followed according to established policies and standards. The rail transit agency must establish the minimum level of qualification required to perform the function of an evaluator.
3. **Evaluation Cycle / Definition of the Frequency of Compliance Checks:** The rail transit agency must determine the evaluation frequency. The rail transit agency should consider the size and complexity of its operation in establishing the evaluation cycles.
4. **Method of Verification:** In determining the method, the rail transit agency must consider characteristics such as various times of the day, days of the week, geographic locations, system features and/or other appropriate practices/conditions. Compliance Checks will be observations of operational personnel performing their jobs/duties. Observations will be performed in a methodical, objective manner. The means of collecting data (i.e., forms, electronic, other) shall be standardized along with specific instructions for conducting the compliance checks. Observers must be trained in the methods of collection and proper documentation of the observations.
5. **Automated Verification:** Some rail transit agencies have automated means of monitoring rule compliance. The following elements should be monitored to the extent

possible of the rail transit agency's capabilities: on-time terminal dispatches; unauthorized train operation; improper train operations; proper vehicle speed; signal conformance; and nullification of operating / safety device.

13.5 COMPLIANCE TECHNIQUES – SUPERVISORY PERSONNEL

- *Element: Techniques used to assess the effectiveness of supervision relating to the implementation of operating and maintenance rules.*

In the SSPP, the rail transit agency must also describe its process for ensuring the effectiveness of supervisors in implementing operating and maintenance rules. This process may be similar to the one used for operations and maintenance personnel as described above or may be based on other methodologies.

13.6 DOCUMENTATION

- *Element: Process for documenting results and incorporating them into the hazard management program.*

In the SSPP, the rail transit agency must describe its process for maintaining records of compliance observations and corrective actions. The rail transit agency must also determine acceptable levels of compliance and have defined corrective actions or guidelines to address non-compliance.

14. Facilities and Equipment Inspections

14.1 FACILITIES AND EQUIPMENT SUBJECT TO INSPECTION

- *Element: Identification of the facilities and equipment that are subject to regular safety related-inspection and testing is provided.*

The SSPP must specify the general categories of facilities and equipment with safety-related characteristics and corresponding inspection requirements. In addition the SSPP must describe the process for developing and maintaining a custom list at the rail transit agency.

14.2 REGULAR INSPECTION AND TESTING

- *Element: A description of how safety-related equipment and facilities are included in a regular inspection and testing program is provided.*

The SSPP should describe the rail transit agency's approach to implementing a regular cycle of inspections for facilities and safety-related equipment along with a list of exactly which items are to be inspected. Observations of defective or missing equipment of course should be reported whenever observed.

For example, the SSPP may specify that all rail transit agency operating and maintenance facilities undergo a complete inspection by the system safety function at least once a year to ensure the safety and health of employees. Individual maintenance shops within the maintenance facilities are formally inspected on a monthly basis. These inspections are conducted using inspection forms, and include inspections to verify OSHA compliance, personal protective protection utilization, inspections of equipment, housekeeping inspections, inspections to verify industrial hygiene practices, etc. However, informal inspections may be conducted at any time. Inspection reports are issued which list the hazards and the safety and health problems found during the inspection. Follow-up inspections and reports are completed within 30 days. The department responsible for the inspected area is required to provide a schedule of corrective actions within 30 days. Follow-up inspections and reports are made 30 to 60 days after the initial inspection.

For equipment inspections, the SSPP may require that equipment inspections are made in accordance with manufacturer guidelines, industry-accepted standards and practices. The SSPP may also specify that track inspections will conform to FRA standards, such as: walking inspections twice a week; riding inspections by track inspectors twice a week; ultrasonic inspection once a year; and gage and other geometry measurements twice each year. Also, a sweep of the alignment will be performed by the first train each morning. The yard & shop areas are inspected monthly. Routine inspections of the structures, bridges, inverts, and aerial guideways are performed at established cycles using approved guidelines.

The system elements such as train control/signaling, grade crossing equipment, traction power, SCADA, and OCS are inspected at established cycles based on the manufacturer guidelines and industry experience. The periodicity of these inspections may be varied based on climatic conditions and corrective maintenance demands.

Rail vehicle inspections are made in accordance with industry-accepted procedures including periodic inspections specified by the Maintenance and Servicing Manual and the Heavy Maintenance Manual. Operators also perform visual inspections and relevant systems checks prior to service-start.

14.3 CHECKLISTS

- ***Element:*** *Use of a written checklist for conducting facility inspections.*

The SSPP should require use of a written checklist when conducting facility inspections. This checklist will ensure a more uniform and complete audit.

14.4 COORDINATION WITH HAZARD MANAGEMENT PROCESS

- **Element:** *Descriptions of how identified hazardous conditions are entered into the Hazard Resolution Process.*

The SSPP must require that results from facilities and equipment inspections are closely coordinated with the rail transit agency's hazard management process. The SSPP should provide a description of how hazards identified during these inspections are integrated into the hazard management process.

15. Maintenance Audits/Inspections

15.1 SYSTEMS AND FACILITIES SUBJECT TO MAINTENANCE PROGRAM

- **Element:** *A list of systems and facilities subject to a maintenance program, along with established maintenance cycle and required documentation of maintenance performed for each item, is provided.*

This section of the SSPP needs to list all of the systems and facilities subject to the rail transit agency's maintenance program. The maintenance cycle, a description of the maintenance to be conducted, and the required documentation of the maintenance to be performed needs to be detailed. The SSPP also needs to include a description of the type of maintenance audits the rail transit agency will conduct. This description should include the audits/inspections conducted by the front line maintenance employees and by the system safety function. The audits conducted should be a comprehensive process and including auditing whether the correct procedures are being followed, and the quality and timeliness of the work performed.

15.2 RESOLUTION OF AUDIT/INSPECTION FINDINGS

- **Element:** *A description of the process for tracking and resolving problems identified during inspections is provided.*

This section of the SSPP must describe the process used to ensure that all issues identified during maintenance audits/inspections are addressed and/or resolved. 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.

Safety critical systems, such as track, structures, train control, transit vehicles, tunnel ventilation and flood control, elevators, escalators, and communications are inspected/tested and/or serviced on a scheduled, periodic basis. Should such systems be found in a failed or to be in an out-of-tolerance condition, in such a manner that would present a hazard, the SSPP should state that

applicable operations will be restricted to maintain safety until such time a appropriate remedial action has been completed. Equipment found to be in a failed or out of tolerance condition are recorded and tracked by the responsible maintenance department. These discrepancies are not to be closed out until repairs are completed. In the case of transit vehicle maintenance, should a vehicle not receive the prescribed preventive maintenance within the required maintenance schedule, the vehicle is to be withheld from revenue service.

15.3 CHECKLISTS

- **Element:** *Use of a written checklist for conducting maintenance audits is required.*

A checklist should be used to document the maintenance audits conducted by System Safety and by maintenance employees. This checklist helps ensure a more uniform and complete audit, and will direct maintenance audits/inspections to focus on adherence to schedule, application of standards and procedures, and record keeping.

16. Training and Certification Review/Audit

16.1 OVERVIEW

- **Element:** *A description of the training and certification program for employees and contractors is provided.*

The SSPP should provide a description of the program in place for rail transit agency employees and contractors to ensure their consistent and complete training and their capabilities to perform their job activities safety and in compliance with rail transit agency rules and procedures. Such a program requires employees to have a base knowledge that is consistent across their particular job. The program also ensures that the rail transit agency provides initial certification and refresher training.

- **Element:** *Categories of safety-related work requiring training and certification are identified.*

Proper qualification of operating and maintenance personnel is a vital part of a safe transit environment. The SSPP should describe the categories of safety-related work that require training and certification.

16.2 EMPLOYEE SAFETY

- **Element:** *Description of the training and certification program for employees and contractors in safety-related positions is provided.*

The SSPP should describe each of the agency's training and certification programs including general course content and grading procedures. For example, each rail transit agency should

develop initial qualification and refresher training programs to ensure that employees demonstrate an understanding and proficiency in the application of rules, procedures, and equipment.

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. While the training program elements and content will be specific to the rail transit agency, the SSPP should describe the process applied to ensure that training staff, designated by the rail transit agency, are qualified by training and/or experience. Training staff shall be responsible for the preparation, maintenance, and provision of the training program.

As described in the SSPP, the qualification training program should include the following forms of instruction. Refresher and familiarization training/training for change can use any combination of the following forms: classroom instruction; field instruction (e.g., set up a train with a problem to simulate a unique situation); and on-the-job instruction (e.g., in revenue or non-revenue conditions or both).

The rail transit agency should establish durations for its training programs. The rail transit agency should also conduct periodic internal reviews of the complexity and types of its equipment, system characteristics, and performance to verify the adequacy of the time period allocated for training. The length of the training program is flexible. The rail transit agency shall allow adequate time in the training program for daytime and nighttime, and peak hour practice train operation. The SSPP should also specify that employee training is coordinated with the rail transit agency's Employee Safety Program (discussed in Section 18).

16.3 CONTRACTOR SAFETY

- **Element:** *Description of the training and certification program for contractors is provided.*

While employees of contractors do not come under the direct jurisdiction of rail transit agencies, 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 rail transit agency is in charge and all necessary rules and procedures will be followed without exception.

The rail transit agency, and the responsible units, must ensure 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.

16.4 RECORD KEEPING

- **Element:** *The process used to maintain and access employee and contractor training records is described.*

The SSPP should describe the way in which a permanent file of personnel training records are maintained by the transit agency.

16.5 COMPLIANCE WITH TRAINING REQUIREMENTS

- **Element:** *The process used to assess compliance with training and certification requirements is described.*

The SSPP needs to describe the process utilized to assess compliance with training and certification requirements. This process may include reviews of records and observations of training courses to evaluate: familiarization of equipment, operating conditions, procedures and practices, classroom training, performance/practice training, testing with established scores based on the nature, complexity and safety sensitivity of the material, application of standardized criteria for all elements such as length and type of training, locations (e.g., yards, routes, etc.), rail vehicle equipment, and specific topics to be included, (e.g., use of fire extinguishers, yard operations, signal tests, troubleshooting, etc.), post-qualification review of employee performance, including employee records and in-person interviews.

17. Configuration Management

17.1 OVERVIEW

- **Element:** *A description of the configuration management control process is provided and appropriate references are made to other rail transit agency documents governing this process.*

Configuration Management is a process which ensures, as much as possible, that all rail transit property, equipment, systems design elements, etc., are documented as to configuration accurately and completely. Any changes to an individual sub-system, or a fleet/inventory wide change should be recorded on as-built drawings in a timely and effective manner.

For most rail transit agencies, configuration management requirements are established in separate Configuration Management Plans (CMP) or procedures. These requirements are included in major contracts to assure that changes to design of equipment and facilities are adequately documented and approved. Contractors are required to submit "as-built" drawings and update manuals and procedures. Changes to designs, after completion of design reviews, are coordinated with the rail transit agency.

The SSPP should reference the CMP or configuration management procedure, and provide a brief description of the process used by the agency. In most cases, rail transit agencies use baseline management to ensure that the technical baseline (as established at the time of Safety Certification for Revenue Service for New Starts or at another time for existing systems) is defined and controlled throughout maintenance and operations, and that the end products satisfy the technical and operational requirements derived from the system needs. At specific points in time, selected documentation is formally designated and approved as part of the technical baseline. The operations and maintenance technical baseline is the final as-built documentation and system performance requirements. In this manner, configuration management includes certain specified contractual documents, operations and maintenance documents, and safety and security documents.

17.2 PROCESS FOR CHANGES

- *Element: Process for making changes is described.*

The rail transit agency establishes policy, responsibility and procedures for configuration control to ensure the continued design integrity of the system, subsystems, equipment and facilities. Achieving this integrity requires that configuration changes to the defined system elements are properly coordinated, reviewed, approved, documented, and implemented. The SSPP must describe this process.

In general, system changes are changes to the configuration and supporting documentation that are precipitated by need for new or revised: alignment extensions/upgrades, equipment extensions; systems; quality improvement initiatives; unforeseen conditions discovered during operations; and maintenance activities which require a re-design of a system or its component(s) and so on.

System and/or element changes which affect design and/or operations and maintenance of rail transit agency are reviewed and recommendations are made by a designated committee or function within the rail transit agency regarding requests for configuration management changes. System modifications to the operating system or design extensions are controlled by a systematic review and approval process which includes representatives from a variety of committees and functions, including the system safety function. The SSPP should describe this process, including the committees and functions and their roles and responsibilities.

Special processes may be in place for addressing issues such as computer software configuration management. Because of its significance, computer software may be managed and controlled in accordance with a designated software management process or applicable procedures, which may be separate from, or referenced in, the rail transit agency's CMP. These processes may apply to software and firmware that is developed in-house, licensed or procured from a commercial vendor, obtained from another organization, or otherwise acquired and used in rail transit agency applications. The SSPP should also describe these processes.

17.3 AUTHORITY FOR CHANGE

- *Element: Authority to make configuration changes is described and assurances are provided for formal notification of all involved departments.*

The SSPP should describe the process used to make changes using the rail transit agency's configuration management process. At a minimum, this should include: procedures for the 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 the system safety function, 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 and the Safety Certification Process, described in Sections 7 and 8 of the SSPP. Notification of changes, especially individual unit changes, cannot always occur in advance. It should be a requirement, however, that all units be informed of such changes as expeditiously as possible.

18. Compliance with Local, State and Federal Requirements

18.1 EMPLOYEE SAFETY PROGRAM

- *Element: A description of the safety program for employees and contractors that incorporates the applicable local, state, and federal requirements is provided.*

The SSPP should describe the rail transit agency's Employee Safety Program. While it is difficult to develop a generic program, at a minimum, those elements required by local, state 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 Occupational Safety & Health requirements promulgated by the Occupational Health and Safety Administration (OSHA) or state and local authorities. It is emphasized that these are only minimum programs, and that efforts should be made to maintain a thorough Employee Safety Program above and beyond these minimums.

For many rail transit agencies, Occupational, Environmental, Safety and Health (OES&H) programs are high priorities. The system safety function may be responsible for monitoring implementation of these programs, while designated safety officers or supervisors/managers within Rail Operations, Maintenance and Construction may be responsible for ensuring compliance with safety programs, all applicable OSHA standards and local codes. Generally, it is the responsibility of each department manager and supervisor to ensure a safe and healthy work environment for all employees under their direction. The rail transit agency Human Relations function may have the responsibility for ensuring that employee information bulletin boards are posted and maintained.

The rail transit agency may also conduct regular industrial hygiene studies such as air quality, noise level, hazardous materials, including wastes, and environmental stresses, to evaluate the degree of employee or patron exposure to chemical and physical agents encountered in the work environment, including the office environment. The survey results are utilized to determine the

necessary corrective action, including engineering and administrative controls and/or the required use of personal protective equipment. Reports of the industrial hygiene study are submitted to all affected departments.

Industrial hygiene studies may be performed on a hazard priority basis to identify and eliminate exposures that exceed the Threshold Limit Value (TLV) and Permissible Exposure Level (PEL). These priority levels are typically established by the system safety function through an evaluation of the work processes, including type of work performed, types of chemicals or hazardous materials used to which persons are exposed, frequency and duration of exposure, and number of employee (or patrons) exposed. Examples of high priority exposures include: airborne concentrations of lead, silica and other toxic particulates and aerosols, organic solvents and excessive noise levels.

In addition, physical examinations may be coordinated through the system safety function to monitor the health and welfare of employees, and to identify workplace conditions which may jeopardize their safety and health.

Finally, for construction projects, specific procedures are in place to ensure worker protection and public safety by fostering an awareness and concern for safety on the job site. Implementation of these procedures is the responsibility of the rail transit agency. The Construction function, in coordination with the system safety function, administers a program to address these procedures and their use in the field. Referenced documents for this program also contain requirements concerning contractor and subcontractor safety programs and implementation requirements. Manuals and training courses have been developed and include communication requirements including applicable federal, state and local OSHA requirements. Activities include: (i) providing basic E, S&H training to employees, (ii) training in fire prevention, industrial hygiene and environmental compliance, and (iii) administering the Substance Abuse Prevention and Security programs for E, S&H staff. All accident reports are reviewed and processed by appropriate rail transit agency staff and management.

18.2 WORKING ON OR NEAR RAIL TRANSIT CONTROLLED PROPERTY

- **Element:** *Safety requirements that employees and contractors must follow when working on, or in close proximity to, rail transit agency controlled property.*

The SSPP must describe the safety program established for employees and contractors working on, or in close proximity to, rail transit controlled property. Typically, the system safety function, working with the construction function, administers this program. Contractors are required to comply with all applicable OSHA standards for the safety of their own employees as well as to safeguard rail transit agency employees, contractors, passengers and the public. All employees and contractors working on, or interfacing with, the rail transit agency are required to attend safety training while working on the operating system. This training course may be developed jointly by the operating function and the system safety function. The rail transit agency's Operating and

Safety Rules and Procedures are typically included in each construction contract, and these rules and procedures bind contractors and employees performing work on the operating system.

18.3 COMPLIANCE WITH REQUIRED SAFETY PROGRAMS

- **Element:** *Processes for ensuring the employees and contractors know and follow the requirements are described.*

The SSPP must describe the rail transit agency's process for supporting compliance with the Employee and Contractor Safety Programs. Each rail transit manager and supervisor is typically responsible for having knowledge of, and enforcing compliance with, all applicable federal and state OSHA laws, standards and regulations. Although OSHA stipulates that employees are responsible for complying with OSHA standards, many rail transit agencies consider that it is responsible for the employees' compliance. As a result, the rail transit agency may ensure that procedures are established by all departments that facilitate disciplinary action against those individuals who fail to comply with applicable OSHA laws, standards, and regulations.

Examples of types of employee actions that require disciplinary action are: failure to use/wear required personal protective equipment, failure to follow appropriate chemical handling procedures, and the unauthorized modification of safety equipment and devices.

19. Hazardous Materials

- **Element:** *A description of the hazardous materials program, including the process used to ensure knowledge of and compliance with program requirements is provided.*

Transit agencies must have a process to ensure that the appropriate employees are familiar with the Hazardous Material Program and the Employee Safety Program. This process should be described in the SSPP.

Most rail transit agencies 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. Fundamental requirements of the Right-To-Know laws/standards are included in basic training and the rail transit agency's Hazard Communication Program. The system safety function enforces procedures that ensure compliance with the standards by employees of all departments.

Material Safety Data Sheets (MSDS) for all chemicals and other hazardous materials that are being considered for purchase and use are reviewed and evaluated by the system safety function for approval, prior to use. The user will furnish the manufacturer's MSDS for hazardous products, and information on the planned use and application methods. The rail transit agency procurement department will ensure that the system safety function has submitted written approval of requested materials prior to procurement.

The rail transit agency trains its employees in the use of chemicals and hazardous materials. Follow-up are conducted on the field use of approved products to ensure that safe, proper handling methods are utilized. Appropriate personal protective equipment (PPE) is also provided and its use is required, as specified, by the rail transit agency. Rail transit agency management and supervisory personnel are responsible for providing the necessary PPE and enforcing its use by employees.

20. Drug & Alcohol Abuse

- *Element: A description of the drug and alcohol program and the process used to ensure knowledge of and compliance with program requirements is provided.*

The abuse of legal drugs, the misuse of alcohol, and/or the use of illegal drugs by rail transit agency employees poses a serious risk of harm to the health and safety of the public and to other employees. Moreover, the use of illegal drugs, on or off duty, is inconsistent with the law-abiding behavior expected of all citizens, and with the special trust placed in such employees as public servants in the field of transportation.

Since virtually all rail transit agencies require federal funds for continued growth and operation, the Drug Testing Requirements of the FTA now form the basis for the drug and alcohol abuse programs. The SSPP must describe the Drug and Alcohol Abuse Program of the agency and must explain that the Drug and Alcohol Abuse Program includes FTA and US DOT requirements (49 CFR Parts 40, 653, and 654). The Drug and Alcohol Abuse Program of the transit agency must also comply with the Drug Free Workplace Act and the SSPP should acknowledge this compliance.

In addition, in this section of the SSPP, the rail transit agency should describe its Employee Assistance Program (EAP) and/or Substance Abuse Program (SAP). Through these programs, rail transit agencies provide an opportunity for employees to deal with drug and alcohol-related problems. Any employee who voluntarily requests assistance in dealing with a personal drug and/or alcohol problem may do so through the EAP and/or SAP in complete confidence and without jeopardizing his/her employment with rail transit agency solely because of the request for assistance. Other treatment programs for drug and alcohol problems are available through the health and welfare provider selected by rail transit agency. The immediate discontinuation of any involvement with alcohol or drugs is an essential requisite for participation in any treatment program. Although employees are encouraged to receive help for drug or alcohol problems, participation in an EAP and/or SAP will not excuse an employee's failure to comply with the requirements of the Policy.

21. Procurement

- **Element:** *A description of the measures, controls, and assurances in place to ensure that safety principles, requirements, and representatives are included in the rail transit agency procurement process.*

System safety should encompass 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 SSPP must describe the process that is used to prevent inadvertent acceptance of unauthorized materials or defective items.

In addition, the SSPP must describe the process used by the rail transit agency to ensure that all hazardous materials are procured in a safe and controlled manner. The procurement of hazardous materials must follow all state and federal regulations. The SSPP must describe the measures used to ensure safe procurement these hazardous materials, and where appropriate, reference other procedures or manuals.

The transit agency must also have a quality assurance program in place to assure that new materials used for maintenance or construction activities have been assessed for safety concerns or safety hazards. The SSPP must describe and/or reference this quality assurance program.