

**U.S. DOT Federal Railroad Administration
Office of Passenger and Freight Programs**

Monitoring Procedure 22 – Safety and Security Management Plan (SSMP)

1.0 PURPOSE

This Monitoring Procedure describes the Monitoring and Technical Assistance Contractor's (MTAC) review and analysis of the Grantee's implementation of Federal requirements for safety and security management.

2.0 KEY PRINCIPLES

Safety and security should be considered as a top priority and incorporated into the work of planning, design, construction, and testing of rail projects, so that during operation, safety and security risks are reduced and safe transport of passengers and freight is ensured.

3.0 REQUIRED DOCUMENTS

The MTAC will obtain and review the documents listed in 3.0 of the following MPs as applicable to the Grantee's project under review:

- MP 20 Project Management Plan (referencing Safety and Security Management Plan)
- MP 32A Planning and Concept Design
- MP 32C Scope
- MP 38 Vehicle Acquisition and Management
- MP39 Preliminary Engineering and Final Design

In addition, the MTAC will access and apply the following:

- FRA Passenger Startup Hazard Analysis Manual
- Grantee's Annual Self-Assessment for Safety and Security
- FRA safety regulations from the FRA Office of Safety, at <http://www.fra.dot.gov/Page/P0010>, some of which are listed:
 - 49 CFR Parts 213 and 238 Final Rule on Vehicle / Track Interaction Safety Standards; High-Speed and High Cant Deficiency Operations. USDOT, FRA 49 CFR Parts 213 and 238, Federal Register / Vol. 78, No. 49 / Wednesday, March 13, 2013 / Rules and Regulations
 - 49 CFR 213-Track Safety Standards
 - 49 CFR 214-Railroad Workplace Safety (Roadway worker protection)
 - 49 CFR 228-Hours of service railroad employees
 - 49 CFR 233-Signal systems reporting requirements
 - 49 CFR 234-Grade crossing signal system safety and State action plans
 - 49 CFT 235-Instructions governing applications for approval of a discontinuance or material modification of a signal system or relief from the requirements of part 236

- 49 CFR 236-Rules, standards, and instructions governing the installation, inspection, maintenance, and repair of signal and train control systems, devices, and appliances
 - 49 CFR 237-Bridge Safety Standards
 - 49 CFR 238-Passenger Equipment Safety Standards
 - 49 CFR 239-Passenger Train Emergency Preparedness
- Grantee's System Safety Program Plan
 - The System Safety Program Plan is a component of the Safety and Security Management Plan (SSMP). It should follow the APTA/FRA Guide, soon to be an FRA regulation in 49CFR270. Refer to the Notice of Proposed Rulemaking, <https://www.federalregister.gov/articles/2012/09/07/2012-20999/system-safety-program>, in which "FRA proposes to require commuter and intercity passenger railroads to develop and implement a system safety program (SSP) to improve the safety of their operations. An SSP would be a structured program with proactive processes and procedures developed and implemented by commuter and intercity passenger railroads to identify and mitigate or eliminate hazards and the resulting risks on each railroad's system. A railroad would have a substantial amount of flexibility to tailor an SSP to its specific operations. An SSP would be implemented by a written SSP plan and submitted to FRA for review and approval. A railroad's compliance with its SSP would be audited by FRA."

4.0 SCOPE OF WORK

Referring to the documents in 3.0 above and the conditions at the project sites, the MTAC will perform the review as follows. In addition, the MTAC will coordinate with FRA Safety personnel to ensure they conduct their reviews. The review under this MP is ideally performed once per project phase.

1. Plan the review – based on activities, documentation, committees, and responsibilities identified in the Grantee's Safety and Security Management Plan (SSMP), prepare a list of documents and materials to review, individuals to interview, and sites to visit; and a schedule for the interviews and site visits
2. Safety, Security -- Threat, Vulnerability, Hazard Analyses – Coordination of reviews by FRA and DHS
 - Obtain the established coordination plan between the FRA Railroad Policy and Development and FRA Office of Safety; in accordance with this plan, ensure reviews and approvals by the Office of Safety are performed in a timely manner;
 - Ensure the FRA Office of Safety staff reviews and approves the Grantee's policy, process, and procedures prior to Grantee's start of the analyses;
 - For security related analyses and designs, ensure the Security Officer within the FRA Office of Safety provides a review and also obtains reviews as required from the Department of Homeland Security, Transportation Security Administration, etc.
3. Assess the Grantee's project documents, SSMP, and Threat/Vulnerability/Hazard Analysis. Consider whether the analysis is adequate and whether the proposed infrastructure and operations planning and design will tend to do the following:

- Protect life, prevent accidents and injuries for
 - pedestrians and bicyclists at stations
 - pedestrians, bicyclists, and autos at grade crossings
 - train passengers
 - Protect property
 - Control and minimize the effects of all incidents and accidents
 - Eliminate/mitigate hazards and reduce vulnerability to security threats
 - Prevent release of hazardous materials
 - Create a safe connected rail network infrastructure
 - Create safe operating conditions given the proposed railroad infrastructure conditions and train traffic
4. Interview the Grantee and consultant staff (senior and middle managers and consultant personnel identified in the SSMP, PMP or others with safety and security responsibilities in the agency and throughout the project) – to verify that personnel charged with carrying out the safety and security programs are aware of their responsibilities and are capable of meeting them.
 5. Assess the consistency between the Grantee’s SSMP, hazard analysis, risk analysis and the Grantee’s activities and processes; and assess both for consistency with the FRA’s safety regulations.
 6. The FRA Office of Safety is responsible for field inspections and final regulatory inspections. The MTAC should coordinate with FRA and ensure the reviews and approvals are obtained from the FRA Office of Safety staff for the following:

During concept design, preliminary engineering and final design

 - Highway-Rail Crossing and Trespasser Prevention including quiet zones
 - Motive Power and Equipment
 - Signal and Train Control
 - Track

During construction

 - field inspections (periodic and final) and certifications where applicable, e.g. PTC

During Pre-revenue Testing

 - Testing Plans, verification of integrated testing, and certifications where applicable, e.g. PTC
 7. Inspecting selected sites, to view evidence that safety and security programs are being implemented throughout the project area.
 8. Produce a report on the review, by topic, with findings, analysis, professional opinions regarding status, and recommendations for action. Refer to MP 01 for more information on reports.

4.1 Typical Contents of SSMP

1. Management Commitment and Philosophy

- Safety and Security Policy Statement
- Overarching Goal
- Applicability and Scope

2. Safety and Security Integration into Project Development

- Safety and Security Activities
- Safety and Security Procedures and Resources
- Agency / Grantee Management Interfaces
 - Organization Chart
 - Identification of Safety and Security Decision Makers
 - Defined Interfaces for Grantee staff and construction contractors

3. Safety and Security Responsibility Assignments

- Responsibility and Authority

- At project transition points, e.g. from PE to Design-Build contract; from PE to Final Design; from Final Design to Construction, etc., demonstration of proper turnover of materials, information, and plans to new project team members

- Committee Structures

- Safety and Security Review Committee
- Fire/Life Safety and Security Committee
- Safety and Security Change Review Board
- Safety and Security Operations Review Committee

- Safety and Security Responsibilities Matrix

- Designated Function for Safety
- Designated Function for Security
- Construction Safety
- Project Manager (Executive)
- Operations Manager

4. Safety and Security Design Criteria

- Approach to Development of Design Criteria
- Design Reviews
- Deviations, changes, configuration control

5. Safety and Security Analysis

- Preliminary Safety and Security Analysis
- Hazard Analysis and
- Threat and Vulnerability Analysis

Health Hazard Analysis
Systems, subsystems
Failure modes, effects, criticality analysis

6. Process for Ensuring Qualifying Operations and Maintenance Personnel
 - O&M Personnel Requirements
 - Plans and procedures
 - Training Program
 - Emergency Preparedness
 - Public Awareness
7. Safety and Security Verification Process
 - Design Criteria Verification Process
 - Construction Specification Conformance Process
 - Testing and Inspection Verification
 - Hazard and Vulnerability Resolution Verification
 - Operational Readiness Verification
 - Safety and Security Certification Requirements
8. Construction Safety and Security
 - Construction Safety and Security Program Elements
 - Construction Phase Hazard and Vulnerability Analysis
9. FRA Office of Safety reviews and coordination for compliance with regulations
10. US Dept. of Homeland Security coordination

5.0 REFERENCES – SEE MP 01