



APTA SS-SEM-S-014-20, Rev. 1

First Published: Feb. 21, 2020

First Revision: July 29, 2022

Security Emergency Management Working
Group

Transit Agency Emergency Management Program

Abstract: This standard provides a framework for transit agencies to use in the development and implementation of an integrated emergency management program.

Keywords: emergency management program (EMP), Emergency Operations Plan (EOP), operations, security, threat and vulnerability assessment (TVA)

Summary: This standard follows a systematic approach to emergency management program development and implementation that ensures that each component is integrated as part of the whole system. A comprehensive emergency management program should consist of prevention, protection, mitigation, response and recovery principles in an all-hazards approach.

Scope and purpose: This document contains numerous references to other APTA standards (see “Related APTA standards” at the end of this document), which cover in more detail those specific areas of emergency management. This document serves as the main overview piece that establishes the framework for an emergency management program.

This document represents a common viewpoint of those parties concerned with its provisions, namely transit operating/planning agencies, manufacturers, consultants, engineers, and general interest groups. APTA standards are mandatory to the extent incorporated by an applicable statute or regulation. In some cases, federal and/or state regulations govern portions of a transit system’s operations. In cases where this is a conflict or contradiction between an applicable law or regulation and this document, consult with a legal advisor to determine which document takes precedence.”

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Introduction

This introduction is not part of APTA SS-SEM-S-014-20, Rev. 1, "Transit Agency Emergency Management Program."

APTA recommends the use of this document by:

- individuals or organizations that operate rail transit systems;
- individuals or organizations that contract with others for the operation of rail transit systems; and
- individuals or organizations that influence how rail transit systems are operated (including but not limited to consultants, designers and contractors).

Note on alternate practices

Individual rail transit systems may modify the practices in this standard to accommodate their specific equipment and mode of operation. APTA recognizes that some rail transit systems may have unique operating environments that make strict compliance with every provision of this standard impossible. As a result, certain rail transit systems may need to implement the standards and practices herein in ways that are more or less restrictive than this document prescribes. A rail transit system may develop alternates to APTA standards so long as the alternates are based on a safe operating history and are described and documented in the system's safety program plan (or another document that is referenced in the system safety program plan).

Documentation of alternate practices shall:

- identify the specific APTA rail transit safety standard requirements that cannot be met;
- state why each of these requirements cannot be met;
- describe the alternate methods used; and
- describe and substantiate how the alternate methods do not compromise safety and provide a level of safety equivalent to the practices in the APTA safety standard (operating histories or hazard analysis findings may be used to substantiate this claim).

Transit Agency Emergency Management Program

1. Overview

Transit agency emergency management programs seek to promote safer, less vulnerable transit agencies with a capacity to cope with all hazards and disasters. This standard follows a systematic approach to the development and implementation of these programs consistent with guidance from the Federal Transit Administration and the Department of Homeland Security, including the Federal Emergency Management Agency and the Transportation Security Administration. By following a systematic approach, agencies' security and emergency management elements will be crafted in a manner that results in an integrated, implementable and sustainable program.

1.1 Scope of the emergency management program

Transit agencies must ensure that their emergency management programs are sufficiently scalable and flexible to address both small- and large-scale emergencies. Transit agencies must also be aware that these designations may change over time based on increases or decreases in size, duration and complexity.

1.1.1 Small-scale emergencies

Small-scale emergencies are daily situations faced by transit agencies and local emergency services personnel. For example, an emergency medical services response to a passenger in need of medical attention would be categorized as a small-scale emergency. EMS manages the medical emergency on scene, while the transit agency coordinates the response to the service interruption. Small-scale emergencies are common and usually well-coordinated between the first responders and the transit agency. They typically result in minimal impact to service delivery.

1.1.2 Large-scale emergencies

Large-scale emergencies can have a significant impact on a transit agency. Whether the event is a no-notice event (e.g., earthquake, chemical spill, terrorism) or a notice event (e.g., winter storm, civil unrest, hurricane), transit agencies need to have a plan in place and a clear understanding of what is expected of them by local, state and federal officials. When large-scale emergencies occur, coordination between the transit agency, local government and other stakeholders is necessary. Identifying the expectations for the agency and clarifying the capabilities it can provide during emergencies can help reduce the time needed to make critical decisions. Providing overall pre-emergency planning and other components, such as training and exercises for notice and no-notice events, are the first line of defense in coordinating large-scale emergencies to ensure an effective response and recovery.

2. What is an emergency management program?

In addition to ensuring safety and minimizing vulnerability to threats and hazards, transit agency emergency management programs seek to achieve the following:

- Help the transit agency fulfill its responsibility to protect employees, deliver services to the community and preserve the environment.
- Facilitate compliance with regulatory requirements of federal, state and local agencies.
- Improve the agency's ability to recover from financial losses, regulatory fines and damages to equipment.
- Reduce exposure to civil, political and criminal liability in the event of an incident.
- Enhance the agency's image and credibility with employees, customers, suppliers and the community.
- Reduce insurance costs, if possible
- Align the transit agency's emergency planning with local, state and regional partners.

2.1 The five mission areas of emergency management

According to the National Preparedness Goal, the five mission areas of an effective emergency management program are prevention, protection, mitigation, response and recovery.

2.1.1 Prevention

Prevention includes those capabilities necessary to avoid, prevent or stop a threatened or actual act of terrorism. A transit agency must have a response plan, trained personnel and adequate resources to be effective during an emergency. The local government and other stakeholders may request resources from the transit agency to aid in disaster response; therefore, planning is critical. Prevention activities may include the following:

- Establish an Emergency Operations Center (EOC) and supporting standard operating procedures.
- Develop and maintain emergency communications plans and systems.
- Establish an alert and warning notification system for passengers and employees.
- Develop a training and exercise program.
- Develop processes for facilitating intelligence and information sharing, including building relationships with local, state and regional emergency responders, to include emergency management agencies.
- Inform senior management of emergency preparedness activities.
- Incorporate the National Incident Management System/Incident Command System framework.
- Incorporate first responder familiarization training with local responders.
- Develop a list of agency resources that could be used in a disaster (e.g., generators, buses, heavy equipment).
- Determine the agency's ability to assist during an emergency (e.g., with evacuations) before one occurs, and communicate those capabilities with the local and state emergency management agencies.

2.1.2 Protection

Protection includes the capabilities to safeguard the homeland against acts of terrorism and man-made or natural disasters. These activities help deter threats and hazards through steady-state or deployable resources. Steady-state protective measures are implemented regularly without a trigger event, while deployable protective measures can be set in motion in response to an escalated threat profile. Protection activities may include the following:

- Inventory/procure equipment, personnel and material resources from the transit agency, local responders, local government and the private sector that may be available in an emergency.

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- Develop processes for facilitating access control and identity verification, including deploying assets that restrict or limit entry into critical locations and systems.
- Build screening, search and detection capabilities and resources.
- Implement countermeasures to protect cybersecurity assets, both physical and virtual, from harm.
- Leverage law enforcement and security personnel as a visual deterrent.
- Identify resource shortfalls, and work with appropriate officials on ways to correct them.

2.1.3 Mitigation

Mitigation includes those capabilities necessary to reduce loss of life and property by lessening the impact of disasters. Pre-disaster mitigation programs have shown that communities can do a lot to prevent major emergencies or disasters from affecting them negatively. For example, requiring roof reinforcements will reduce damage from hurricane winds. Preventing new construction in floodplains or placing structures on columns in those areas can reduce the chance of flooded homes. If transit agencies cannot prevent disasters, then they can at least help to reduce the damaging impact. Mitigation activities may include the following:

- Conduct a threat and vulnerability analysis (TVA) and hazard analysis of the agency.
- Align the mitigation plan with state, local and regional partners to reduce hazards.
- Assist local government departments and community organizations in developing and organizing emergency expectations and capabilities of the transit agency.
- Help in the development of evacuation plans and transit-related capabilities supporting local government plans.
- Establish mutual aid agreements to get necessary services, equipment and other resources during an emergency.

2.1.4 Response

Response includes those capabilities necessary to save lives, protect property and the environment, and meet basic human needs after an incident has occurred. Response addresses the short-term direct effects of an event and is the period during and immediately following an emergency. During this phase, transit officials and local responders provide emergency assistance to victims. While providing transportation services to the agency's passengers is the primary focus of transit agencies, they also provide support to local and regional responders during emergencies to the best of their abilities. Response activities may include the following:

- Implement activities intended to limit loss of life, personal injury, property damage, environmental impacts and service degradation.
- Develop processes for minimizing public exposure to environmental hazards.
- Stabilize immediate infrastructure threats.
- Use the ICS/Unified Command response framework.
- Coordinate with local emergency management agencies for on-scene security and protection.
- Activate the transit agency EOC (where applicable).
- Provide emergency assistance in accordance with mutual aid agreements or requests for support.

2.1.5 Recovery

Recovery includes those capabilities necessary to assist communities affected by an incident to recover effectively. During recovery, the transit agency initiates service restoration as quickly and safely as possible. It continues until all systems return to normal or near-normal operation. Short-term recovery restores transit

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operations to minimum operating conditions. Long-term recovery may go on for months—even years—until the affected area returns to its previous condition. Recovery activities may include the following:

- Evaluate the incident to identify lessons learned and track them in an After Action Report/Improvement Plan (AAR/IP).
- Provide Employee Assistance Plan resources to employees who may need care and treatment.
- Rebuild, repair or procure equipment and supplies for transit operations and services.
- Determine facility and system restoration needs, such as repair or long-term capital improvements.

3. Components of a sustainable emergency management program

With threats, hazards and vulnerabilities evolving over time, a dynamic and flexible emergency management program will allow and encourage a continuous cycle of renewed assessments, planning and evaluation. Transit agencies shall integrate program elements, including TVAs, mitigation planning, emergency operations plans, SOPs, training and exercises to create an implementable, sustainable and complete emergency management program.

An emergency management program identifies relevant natural, technological and human-caused threats and hazards and profiles their potential risk to the critical assets of a transit agency through TVAs. After this assessment, transit agencies shall adopt mitigation measures to address the identified vulnerabilities. These actions will feed into the development of emergency management and operations plans that detail roles and responsibilities during an emergency. Specific actions and procedures shall be subsequently detailed in the form of SOPs. Transit agency personnel shall be trained on the plans and procedures, and the various program elements shall then be tested and evaluated using exercises and drills. Transit agencies shall use the results to fine-tune or improve the emergency management program, the steps of which shall be a continuous cycle, with each iteration adding robustness and ensuring that it is up to date.

3.1 Identifying and evaluating threats

Before the threats, hazards and vulnerabilities faced by each transit agency can be addressed, they must be identified and evaluated as to how they may affect transit agency employees, passengers, tracks, stations, vehicles and yards. Agencies shall use an all-hazards approach, which means considering and, if warranted, addressing hazards that are human-caused (terrorism, crime, disgruntled employees, cyber-attacks, etc.); natural (weather, earthquakes, flooding, etc.); and technological (utility outages, hazardous materials, computer network outages, etc.).

Transit agencies should identify the key assets that may be at risk, analyze their functions and criticality, and finally assign an asset value rating to each. Transit agencies should consider working with local governments and other stakeholders during this process so efforts can be coordinated consistently and expertise shared.

3.2 Emergency Operations Plan

Each transit agency should develop a formal Emergency Operations Plan (EOP) that provides an operational framework for how the agency will plan for, respond to and recover from an emergency.

An EOP is a clear and concise document that provides information and procedures relevant to emergencies. A typical EOP outlines the roles and responsibilities for each of the departments within an organization through a concept of operations, which delineates the sequence of actions that the agency will follow during an emergency.

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A well-executed EOP does the following:

- Describes how various prevention, protection, mitigation, response and recovery plans are integrated.
- Provides an overarching plan that aligns the transit agency with the state and local emergency plans.
- Provides guidance for the various functions and services within the transit agency with a general concept of potential emergency assignments before, during and after emergency situations.
- Details the expected response by local, state and federal government, as well as provides guidelines and establishes organizational priorities necessary to ensure a successful and coordinated effort.

For additional information on other types of emergency management procedures, please see the related APTA standards listed at the end of this document.

3.3 Training

Training of both transit agency employees and first responder personnel is a crucial step in the successful implementation of emergency management programs. Training is vital to ensuring that plans and procedures can be performed during emergency conditions. Training helps to reinforce the specific action-based processes that transit agency personnel need to follow when responding to and recovering from an emergency. Also, training on the overall EOP helps transit personnel understand the agency's philosophy and how their own actions impact other departments during an emergency.

Additionally, there is specific security and emergency preparedness training that transit agencies may want to consider for their personnel. This includes various training modules like security awareness training, tunnel evacuation training, fire life-safety training, facility training, and weather-based event training, among other system-specific emergency action training. These training modules and/or initiatives shall be coordinated through an overall transit agency emergency management training plan.

This training plan shall consider the following points:

- personnel training needs based upon assigned duties
- in-house training versus use of consultants
- scope and duration of the training required, including any prerequisites
- objectives to be covered by the training
- review of training effectiveness
- consistent and current training materials
- training schedule, including initial and refresher training
- employee training documentation
- consistency with the NIMS training program as provided by FEMA

Transit agencies shall also identify joint training sessions or materials they can use with partner and first responder agencies to ensure a safe and effective response to emergencies. This includes facility, tunnel and equipment familiarization tours, and workshops that provide local responders insight into the unique operating conditions of transit systems.

The transit agency shall regularly conduct drills and exercises. These serve not only as useful practice in the event of an emergency, but also to evaluate the state of the emergency management program and its components. Transit agencies shall tie exercises and drills into the overall emergency management program as an integral and recurring element, rather than treating them as an isolated or separate activity. The industry standard for creating and conducting exercises is the Homeland Security Exercise and Evaluation Program (HSEEP). For more information about HSEEP, visit www.fema.gov/media-library/assets/documents/32326.

The scope and type of exercise will depend on the general exercise objectives and the resources available to design and conduct it. There are two categories of exercises, discussion-based and operations-based, each with varying degrees of complexity.

3.3.1 Discussion-based exercises

Discussion-based exercises familiarize participants with current plans, policies, agreements and procedures, or may be used to develop new plans, policies, agreements and procedures. Discussion-based exercises include seminars, workshops, tabletop exercises and games.

3.3.2 Operations-based exercises

Operations-based exercises validate plans, policies, agreements and procedures; clarify roles and responsibilities; and identify resource gaps in an operational environment. Operations-based exercises include drills, functional exercises, and full-scale exercises.

The transit agency shall note strengths and areas for improvement discovered during exercises. These observations, along with suggested improvement actions derived from them, are incorporated into an AAR/IP. The AAR/IP shall be presented to and discussed among key participants and transit agency officials.

Lessons learned from exercises and drills shall be used to improve the transit agency's emergency management program. As corrective actions are implemented, subsequent drills and exercises will yield improvements or identify additional issues that need to be addressed.

3.4 After action reporting

An integral part of an emergency management program is documentation of responses and lessons learned from real world incidents and exercises. Agencies should collect information as an incident evolves and note after action review observations in a written AAR/IP to support improvements in operations and note areas of excellence to be maintained.

After any significant incident or event, transit agency emergency management personnel should facilitate an agency-wide after-action review. Before the agency-level after-action review, department heads should conduct after-action reviews specific to their operations and bring consolidated departmental findings, observations and commendations to the agency after-action review. Resulting AAR/IPs should note specific observations, proposed corrective actions, primary and supporting departments responsible for correcting the observation and a target date for completion.

The consolidated AAR/IP should be distributed to department heads for their information and action. Before special events, emergency management personnel should review previous AAR/IPs to ensure adequate corrective actions have been taken. AAR/IPs should also be reviewed before severe weather seasons and can be used as a basis for developing exercise objectives to assess if improvements have been made. Any operational gaps or lessons learned noted in the AAR/IP should be integrated into a corrective action program in order to ensure alignment.

3.5 Emergency management program personnel

It is recommended that each transit agency have at least one person who is solely or partially dedicated to all aspects of emergency preparedness. At large transit agencies, a full-time position for emergency management is appropriate to ensure that all components of the transit agency are properly prepared for emergencies and how best to respond and recover from them when they occur. At small transit agencies with resource limitations, a part-time position combined with security, safety or risk management is appropriate.

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Additionally, transit agencies must recognize that emergency management requires upper management support to be successful. The chief executive sets the tone by supporting all aspects of the emergency management program by directing senior management to get involved.

3.6 Program funding

As with any new or existing program, developing an emergency management program requires funding. This is especially important for emergency management, as it is not usually considered part of operational or capital funding. Therefore, transit agencies need to be creative and search for and use available funding in a coordinated and systematic way.

3.6.1 Funding planning

Transit agencies shall determine their needs and, as appropriate, complete grant applications to support these emergency management and security goals. This may require the involvement of a transit agency's Finance and Procurement departments, board of directors, and/or other relevant stakeholders. It is recommended that once areas are identified, transit agencies concentrate their efforts in explaining how the grant funding will help them develop/revise and implement a systematic program. Clear plans that show integrated planning components help transit agencies demonstrate funding needs and clear objectives that they will use the funding to support.

3.6.2 Funding and technical assistance

After the terrorist attacks of Sept. 11, 2001, funding for security and emergency preparedness planning activities increased significantly. However, funding is competitive and often cannot be applied to all emergency management-based initiatives. Technical assistance and reference materials from industry sources such as APTA have been made available to assist transit agencies.

Grants and other funding streams for emergency preparedness functions may be available through the following agencies and associations:

- Department of Homeland Security
- Transportation Security Administration
- Federal Emergency Management Agency
- Federal Transit Administration
- Federal Railroad Administration
- Transportation Research Board
- local or state-run programs

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Related APTA standards

APTA SS-SEM-S-001-08, Rev. 2, “Continuity of Operations Plan for Transit Agencies”
APTA SS-SEM-S-003-08, Rev. 2, “Security and Emergency Management Aspects of Special Event Service”
APTA SS-SEM-S-006-09, Rev. 2, “Transit Vehicles and Nonrevenue Equipment During Emergencies”
APTA SS-SEM-S-005-09, Rev. 1, “Establishing a Contagious Virus Response Plan”
APTA SS-SEM-S-009-09, Rev. 1, “Emergency Communication Strategies for Transit Agencies”
APTA SS-SEM-S-004-09, “Transit Exercises”
APTA SS-SEM-RP-007-09, “Creating an Alternate or Backup Operations Control Center”
APTA SS-SEM-RP-015-19, “Suspension of Service of a Public Transportation System and Recovery”
APTA SS-SEM-RP-002-08, Rev. 1, “First Responder Familiarization of Transit Systems”
APTA SS-SEM-RP-008-09, Rev. 1, “Safe Mail and Package Handling”
APTA SS-SEM-RP-011-09, Rev. 1, “Regional Emergency Planning and Participation in Mutual Aid”
APTA SS-SEM-WP-013-10, “Operational Strategies for Emergency Smoke Ventilation in Tunnels”
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Definitions

all hazards: Any natural or human-caused phenomena that impact the operations of a transit agency and/or its employees, ridership, first responders, etc.

Abbreviations and acronyms

AAR/IP	After Action Report/Improvement Plan
EMP	emergency management program
EMS	emergency medical services
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
FEMA	Federal Emergency Management Agency
FTA	Federal Transit Administration
HSEEP	Homeland Security Exercise and Evaluation Program
ICS	Incident Command System
NATSA	North American Transportation Services Association
NIMS	National Incident Management System
SOP	standard operating procedure
TVA	threat and vulnerability assessment

Document history

Document Version	Working Group Vote	Public Comment/ Technical Oversight	CEO Approval	Policy & Planning Approval	Publish Date
First published	—	—	—	—	Feb. 21, 2020
First revision	July 30, 2021	Oct. 1, 2021	May 9, 2022	June 22, 2022	July 29, 2022