



APTA STANDARDS DEVELOPMENT PROGRAM

STANDARD

American Public Transportation Association
1300 I Street, NW, Suite 1200 East, Washington, DC 20006

APTA RT-OP-S-013-03, Rev. 2

First Published: Sept. 28, 2003

First Revision: Dec. 31, 2014

Second Revision: January 4, 2019

Operating Practices Working Group

Training of Rail Operating Employees

Abstract: This standard provides requirements for the development and implementation of rail transit system operations training programs for employees.

Keywords: for-cause training, operations personnel, qualification, rail operating employees, rail transit system, requalification, training

Summary: This standard is intended to provide the training requirements and recommended practices for rail operations employees. Elements include training program development, testing phases, qualification, requalification, performance tracking, training program revision and training documentation.

Scope and purpose: This standard outlines the basic elements required for a comprehensive rail operating employee training and retraining program. The purpose of a comprehensive training program is to ensure the consistent and complete training of all appropriate rail operating employees covered by this standard. Such a program requires each employee to have a base knowledge that is consistent across his or her particular job. The program also ensures that the rail transit system provides initial qualification and requalification.

This rail transit system standard represents a common viewpoint of those parties concerned with its provisions, namely transit operating/planning agencies, manufacturers, consultants, engineers and general interest groups. The application of any recommended practices or guidelines contained herein is voluntary. In some cases, federal and/or state regulations govern portions of a transit system's operations. In those cases, the government regulations take precedence over this standard. APTA recognizes that for certain applications, the standards or practices as implemented by individual transit agencies may be either more or less restrictive than those given in this document, unless referenced in federal regulations.

© 2019 The North American Transportation Services Association (NATSA) and its parent organization APTA. No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without prior written permission of NATSA.

Table of Contents

Participants.....	iii
Introduction	iv
Note on alternate practices	iv
1. Requirements.....	1
2. Training program development.....	1
3. Testing phases.....	1
4. Qualification	1
5. Requalification	2
6. Performance tracking and training program revision	2
7. Training documentation.....	2
7.1 General.....	2
7.2 Electronic recordkeeping	3
Definitions.....	4
Abbreviations and acronyms.....	4
Summary of document changes	4
Document history.....	5
Appendix A (informative): Information on components of developing a training program.....	6



Participants

The American Public Transportation Association greatly appreciates the contributions of **Gary Howard, Linda Lee, Henry Woods, Amanda Nightingale, Brian Riley** who provided the primary effort in drafting this document.

At the time this standard was completed, the working group included the following members:

Amanda Nightingale, *Chair*
Brian Riley, *1st Vice Chair*
Gary Howard, *2nd Vice Chair & Secretary*

Tony Abdallah, *New York City Transit*
Ray Abraham, *Valley Metro*
Roy Aguilera, *BART*
Michael Alexander, *Delaware Transit Corp.*
Michael Avery, *King County Metro*
Mark Benedict, *Metro Transit*
Patrick Brouard, *Atkins*
Michael Coplen, *Federal Transit Administration*
Ms. Marie Darby, *Charlotte Area Transit Systems*
Victor Demmons, *MARTA*
Paul Denison, *Sound Transit*
Brian Dwyer, *STV Incorporated*
Ronald Ester, *Chicago Transit Authority*
Lucas Ewing, *Utah Transit Authority*
Anthony Fazio, *SEPTA*
Donald Filippi, *North County Transit District*
Kim Fjeldsted, *Utah Transit Authority*
Zandra Ford, *Baltimore MTA*
Paula Fraser, *BART*
Martin Gulley, *Bi-State Development Agency*
Deltrin Harris, *WMATA*
Melvyn Henry, *SFMTA*
David Hill, *VTA*
Gary Hinton, *Maryland Transit Administration*
Gary Howard, *METRO (Harris County)*
Stu Jackes, *HART*
Jhaun Jasper, *Chicago Transit Authority*
Keith Jones, *DC Streetcar*
Manael Kennerly Sr., *WMATA*
Anne Egan Kirsch, *MTA*
Linda Ann Lee, *City of Atlanta*
Cynthia Lewis, *Maryland Transit Administration*

Stephen Lino, *LACMTA*
Jason Lurz, *Ansaldo Honolulu*
William McClellan, *Alternate Concepts*
Pamela McCombe, *WSP USA*
Nicole McGann, *Metra*
Cynthia McMonagle, *Port Authority*
Amanda Nightingale, *King County Metro*
Pat McWilliams, *NJ Transit*
Marie Olson, *Sound Transit*
Dedric Parham, *MARTA*
Patrick Preusser, *TriMet*
James Price, *Hampton Roads Transit*
Brian Riley, *San Diego MTS*
Gregory Robinson, *Miami-Dade Transit*
Kevin Rogers, *Niagara Frontier Transit Metro*
Gerry Ruggiero, *Jacobs*
Harold Samms III, *JTA*
Duane Sayers, *SMART*
Ernesto Scarpitti, *Delta Railroad Corp. Inc.*
Gary Schafer, *Regional Transportation District*
Benjamin Simms IV, *Hampton Roads Transit*
Andrew Skabowski, *METRO (Harris County)*
Allen Smith III, *HNTB*
James Smith, *Bi-State Development Agency*
William Steinmetz, *Consultant*
Russell Stone, *DART*
Joseph Tassiello, *NJ Transit*
Debra Thacker, *Valley Metro*
Lisa Woodruff, *LACMTA*
Henry Woods, *MARTA*

Project team

Charles Joseph, *American Public Transportation Association*

Project consultants

Christopher Wallgren and Sam Korach, *Transportation Resource Associates, Inc.*

Introduction

This introduction is not part of APTA RT-OP-S-013-03, Rev. 2, *Training of Rail Operating Employees*.

This standard represents a common viewpoint of those parties concerned with its provisions, namely transit operating/planning agencies, rail transit systems, manufacturers, consultants, engineers and general interest groups. The application of any standards or recommended practices contained herein is voluntary. In some cases, federal and/or state regulations govern portions of a rail transit system's operations. In those cases, the government regulations take precedence over this standard. APTA recognizes that for certain applications, the standards or recommended practices, as implemented by individual rail transit systems, may be either more or less restrictive than those given in this document.

Note that rail transit is not directly comparable to railroads (Amtrak, commuter, freight rail, etc.). Rail transit systems differ greatly in the types of service, vehicles and technology employed, with some systems operating fully automated trains on exclusive rights-of-way and others operating on streets mixed with traffic. Rail transit demands a unique approach to solving its problems, and the APTA Rail Transit Standards Program was enacted to accomplish this complex task.

APTA recommends the use of this standard 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).

Training of Rail Operating Employees

1. Requirements

Each rail transit system must develop qualification, requalification, familiarization and refresher training programs to ensure that rail operating employees demonstrate an understanding and proficiency in the application of rules, policies, procedures and equipment and system characteristics.

2. Training program development

The transit agency should establish a training program for both qualification and requalification. The program elements, content and duration will be specific to and identified by the agency.

Training staff should be designated by the agency and be qualified by training and/or experience. Training staff are responsible for the preparation, maintenance and provision of the training program. The qualification training program should include the following forms of instruction, as applicable to the agency. Required refresher and familiarization training may use any combination of the following forms of instruction:

- Classroom instruction
- Field instruction (e.g., for train operators, set up a train with a problem to simulate a unique situation)
- On-the-job instruction (in revenue or nonrevenue conditions or both, and under daytime, nighttime, and peak hour conditions, as applicable)
- Computer-based training, if applicable
- Simulator training, if applicable

The agency should establish requirements for refresher training, which may include provisions related to extended absences, specific skills building and/or new equipment.

3. Testing phases

The agency should determine if the training module requires testing. If a test is required, then the agency should set the required passing score for the module, based on the safety criticality and complexity of the material covered by the test. Testing may include written and/or practical/hands-on demonstration of knowledge of process, equipment or systems.

4. Qualification

The rail transit systems should develop a qualification process that includes the following:

- Standardized criteria for all elements, such as length and type of training, locations (e.g., yards, routes), rail vehicle equipment, operating conditions, and specific topics to be included (e.g., use of fire extinguishers, yard operations, signal tests, troubleshooting)
- Post-qualification review of employee performance, including employee records and in-person interviews. The agency should establish the number, frequency and topics of the post-qualification reviews based on agency requirements. The agency should prescribe the maximum post-qualification review period following qualification.

5. Requalification

After successful qualification, all rail operating employees should periodically attend a requalification training course. This course should be formally established depending on agency requirements. A pretest may be administered to employees to determine which areas need strengthening prior to starting requalification. The transit agency should determine the content, frequency and minimum test scores required to maintain qualification.

6. Performance tracking and training program revision

The agency should conduct periodic internal reviews of the complexity and types of its equipment, system characteristics and performance to verify the adequacy of the training.

Each rail transit system should perform a periodic review of employee performance. The purpose of this review is to determine whether gaps exist between employee knowledge, skills or abilities commensurate with the job requirements, or with occupational category tasks/responsibilities. The data gathered through the review should be used to determine whether systemic performance gaps exist, and to determine if modifications to any training component are appropriate to close those gaps.

The agency should determine the intervals and methods of such review. Examples of methods of such review include, but are not limited to, direct observation of employee performance, accident/incident related data, industry trends, agency-initiated or independent audits and test/examination scores. At the agency's option, the review required under this standard may be conducted in conjunction with any periodic review.

Based upon the results of the review, one or more designated people should coordinate any necessary adjustments to any associated training program.

7. Training documentation

7.1 General

Each transit agency must maintain records to demonstrate the training and qualification of each employee subject to this standard. These requirements apply equally to the agency or any training/learning organization the agency may employ to conduct its training. Should an agency engage such a training/learning organization, it is responsible for the following requirements.

- Designate the method of record retention, such as hard copy file and/or electronically.
- Make the records of current employees accessible during normal business hours at the agency's headquarters or other designated location.
- Designate its record retention policy for current and former employees.

At a minimum, the records should include the following information for each affected employee:

- The name of the employee
- Unique identifier, such as an employee identification number, etc.
- Craft or occupational category for which the employee is deemed qualified
- The subject/title and date of each formal training successfully completed, such as operating rules, physical characteristics qualifications and vehicle operation qualification.

NOTE: Training that may be done informally, such as through home-mailings, training bulletins, written operational review, online informational opportunities or “safety blitz job briefings” are not required to be documented.

- The date of any required on-the-job training modules program component that was successfully completed
- The date of any qualification indicating successful completion of all required training associated with the craft or occupational category

7.2 Electronic recordkeeping

Electronic recordkeeping systems with the capability to do so should meet the following conditions.

- The electronic system is designed so that the integrity of each record is maintained through appropriate levels of security, such as recognition of an electronic signature or other means, that uniquely identify the initiating person as the author of that record. No two people should have the same electronic identity.
- The transit agency, training organization or learning institution adequately limits and controls access to such information retained in its electronic database system and identifies those individuals who have such access.
- The transit agency has a designated representative who is authorized to authenticate retrieved information from the electronic system as true and accurate copies of the electronically kept records.

Definitions

familiarization training: Training that is utilized to familiarize employees with existing and/or new conditions.

qualification: The initial training and testing program given to employees new to a classification that upon successful completion qualifies them to carry out the full scope of duties and responsibilities of the classification. Some agencies refer to this as certification.

refresher training: Training and testing given to existing employees in a classification that, upon successful completion, maintains this qualification to carry out the full scope of duties and responsibilities of the classification. Refresher training programs may be integrated with training for changes.

requalification: Training and testing given to employees currently qualified to ensure that they maintain the required level of skill, knowledge and/or ability to carry out the full scope of duties and responsibilities of the classification. Some rail transit systems refer to this as recertification.

train operator: An authorized onboard employee who controls the movement of a train.

Abbreviations and acronyms

NATSA North American Transit Services Association

Summary of document changes

1. Document formatted to the new APTA standard format.
2. Title of document changed to “Training of Rail Operating Employees.”
3. Sections have been moved and renumbered.
4. Scope and summary moved to the front page.
5. Sections of definitions, abbreviations and acronyms moved to the end of the document.
6. Three new sections added: “Summary of document changes,” “Note on alternate practices” and “Document history.”
7. Some global changes to section headings and numbering resulted when sections dealing with references and acronyms were moved to the end of the document, along with other cosmetic changes, such as capitalization, punctuation, spelling, grammar and general flow of text.
8. Expansion of definitions for clarity.
9. Section 2: Bullets/content added. Additional provisions for trainer requirements and additional types of training described.
10. Section 3: Additional sentence added related to types of testing that may be considered.
11. Section 4: First three bullets removed for redundancy; bullets are covered in Section 3.
12. Section 5: Sentence removed regarding requirement for rail transit system to periodically review its equipment to reconsider requalification requirements.
13. Section 6: Performance tracking section expanded to include additional information and guidance on the performance of employee reviews.
14. Section 7.1 added to include general information on training documentation.
15. Section 7.2 added to include information on electronic recordkeeping documentation.
16. Appendix A: Expanded to incorporate other considerations for training program development.

Document history

Document Version	Working Group Vote	Public Comment/ Technical Oversight	Rail Transit CEO Approval	Rail Transit Standards Policy & Planning Approval	Publish Date
First published	February 14, 2003	—	—	September 28, 2003	September 2003
First revision	March 12, 2014	March 2014	August 15, 2014	December 11, 2014	December 31, 2014
Second revision	June 29, 2018	September 1, 2018	October 8, 2018	November 21, 2018	January 4, 2019

Appendix A (informative): Information on components of developing a training program

This appendix provides additional information that should be considered by the rail transit system in using this standard for developing training programs for rail operating employees.

Training program development

When developing the qualification training program, consideration should be given to the following:

- **Curriculum:** This is any and all information pertaining to the classification for which the training is being developed. This material includes general, operational, safety and emergency rules and procedures, documents, equipment, tools and all elements of the position.
- **Student-to-instructor ratio:** The agency should establish the student-to-instructor ratio for both classroom and performance training according to the nature and complexity of the subject matter.
- **Resources:** This includes the necessary training materials, information and personnel. Materials may be written, visual and/or tactile.

Other considerations

This standard is intended to provide the training requirements and recommended practices for rail operating employees. The transit agency should also have a system to track performance to measure the effectiveness of training and a process to document training.

To develop a program to comply with this standard, the rail transit system may consider some of the instructional design activities, such as the following:

- Conducting a needs analysis
- Developing a project plan
- Developing instructional goals
- Forming a training advisory committee
- Conducting a target audience analysis
- Conducting a task analysis
- Developing performance objectives
- Developing criterion-referenced test items
- Developing the overall instructional design strategy
- Developing lesson plans
- Developing formative and summative evaluation plans
- Developing a train-the-trainer program
- Developing a plan for reviewing and updating the curriculum