

220 CMR: DEPARTMENT OF PUBLIC UTILITIES

220 CMR 151.00: RAIL FIXED GUIDEWAY SYSTEM: SYSTEM SAFETY PROGRAM STANDARD

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151.01: Purpose and Scope

- (1) 220 CMR 151.00 establishes the standard of the Commonwealth of Massachusetts oversight required to implement the provisions of 49 U.S.C. 5329(e), 49 U.S.C. 5330, and 49 CFR Part 674, *Rail Fixed Guideway Systems, State Safety Oversight*.
- (2) 220 CMR 151.00 is applicable to the Massachusetts Bay Transportation Authority (Transportation Authority), the transit agency operating rail fixed guideway systems in the Commonwealth of Massachusetts.
- (3) The Department of Public Utilities (Department) exercises jurisdiction over safety of equipment and operations of the Transportation Authority pursuant to M.G.L. c. 161A, § 3(i). In addition, pursuant to 49 CMR Part 674, the Department has authority to investigate any allegation of noncompliance with the Public Transportation Agency Safety Plan.
- (4) Pursuant to 49 CFR Part 674, the Department is responsible for establishing minimum standards for rail safety practices and procedures to be used by the Transportation Authority. The Department's program standard is consistent with the National Public Transportation Safety Plan, the Public Transportation Safety Certification Training Program, and the rules for Public Transportation Agency Safety Plans. In addition, the Department must oversee the execution of these practices and procedures to ensure compliance with the provisions of 49 CFR Part 674.

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- (5) The Department and the Transportation Authority shall meet quarterly, during the months of January, April, July, and October, to discuss safety concerns.
- (6) The Department and the Accountable Executive of the Transportation Authority shall meet at least annually.
- (7) The Department and the Board of Directors of the Transportation Authority shall meet at least annually.
- (8) The Department and the Chief Safety Officer of the Transportation Authority shall meet at least monthly.
- (9) Where revisions are necessary to the 220 CMR 151.00, the Department will conduct a rulemaking proceeding, in accordance with M.G.L. c. 30A §§ 1 through 6A, 950 CMR 20.00: *Preparing and Filing Regulations* and 220 CMR 2.00: *Rules for Adopting, Amending, or Repealing Regulations and for Issuing Advisory Rulings*, to amend 220 CMR 151.00. The Department will submit the amended System Safety Program Standard to the Transportation Authority within 30 days of Department promulgation. The Transportation Authority must acknowledge within one business day receipt of the amended System Safety Program Standard in writing and provide a schedule for implementation in its System Safety Program Plan or Public Transportation Agency Safety Plan within 60 days thereof.
- (10) The Department and the Transportation Authority operate as legally and financially independent agencies. There is an absolute funding prohibition between the Department and the Transportation Authority.
- (11) The Department does not employ any individual who is also responsible for administering, or providing services to, the Transportation Authority.
- (12) The Department shall submit an annual report summarizing the oversight activities related to the Transportation Authority of the safety of the rail fixed guideway system to the Governor of the Commonwealth of Massachusetts, the Federal Transit Administration, and the board of directors of the Transportation Authority.

151.02: Definitions

Accident. An Event that involves any of the following: a loss of life; a report of a serious injury to a person; a collision involving a rail transit vehicle; a runaway train; an evacuation for life safety reasons; or any derailment of a rail transit vehicle, at any location, at any time, whatever the cause. An accident must be reported in accordance with the thresholds for notification and reporting set forth in 49 CFR Part 674, Appendix A and 220 CMR 151.09.

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Accountable Executive. A single, identifiable individual who has ultimate responsibility for carrying out the Public Transportation Safety Plan of a public transportation agency; responsibility for carrying out the agency's Transit Asset Management Plan; and control or direction over the human and capital resources needed to develop and maintain both the agency's Public Transportation Agency Safety Plan, in accordance with 49 U.S.C. 5329(d), and the agency's Transit Asset Management Plan in accordance with 49 U.S.C. 5326.

Administrator. The Federal Transit Administrator or the Administrator's designee.

Computation of Time. Computation of any period of time referred to in 220 CMR 151.00 shall begin with the first business day following that on which the act that initiates such period of time occurs. Saturdays, Sundays, and legal holidays shall be excluded from the computation of any period of time referred to in 220 CMR 151.00.

Contractor. An entity that performs tasks required on behalf of FTA, the State Safety Oversight Agency, or a Rail Transit Agency through contract or other agreement. The Rail Transit Agency may not be a Contractor for the State Safety Oversight Agency

Corrective Action Plan (CAP). A plan developed by the Rail Transit Agency that describes the actions the Rail Transit Agency will take to minimize, control, correct, or eliminate risks and hazards, and the schedule for implementing those actions. The State Safety Oversight Agency or FTA may require a Rail Transit Agency to develop and carry out a corrective action plan.

Department. The Department of Public Utilities, Commonwealth of Massachusetts.

Derailment. A non-collision Incident in which one or more wheels of a transit vehicle unintentionally leaves the rails.

Electronic Device. Wireless or portable electronic handheld equipment that may be hands-free or not. This includes, but is not limited to, cellular phones, smartphones, two-way pagers, portable internet devices, MP3 players, iPods, Bluetooth devices or any headphones or earbuds of any type, and any other portable electronic devices.

Event. An Accident, Incident or Occurrence.

FRA. The Federal Railroad Administration, an agency within the U.S. Department of Transportation.

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

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Hazard. Any real or potential condition that can cause injury, illness, or death; damage to or loss of the facilities, equipment, rolling stock, or infrastructure of a rail fixed guideway public transportation system; or damage to the environment.

Incident. An event that involves any of the following: a personal injury that is not a serious injury; one or more injuries requiring medical transport; or damage to facilities, equipment, rolling stock, or infrastructure that disrupts the operations of a rail transit agency. An incident must be reported to FTA's National Transit Database in accordance with the thresholds for reporting set forth in 49 CFR Part 674, Appendix A.

Investigation. The process of determining the causal and contributing factors of an accident, incident, or hazard, for the purposes of preventing recurrence and mitigating risk.

National Public Transportation Safety Plan. The plan to improve the safety of all public transportation systems that receive Federal financial assistance under 49 U.S.C. c. 53.

NTSB. The National Transportation Safety Board, an independent Federal agency.

Occurrence. An Event without any personal injury in which any damage to facilities, equipment, rolling stock, or infrastructure does not disrupt the operations of a rail transit agency.

Operator. A Transportation Authority Motorperson, Yard Motorperson and Streetcar Motorperson, whether working as a Pilot or Trailer, who is on duty and on his or her train or streetcar.

Order. A final decision of the Department. The Transportation Authority may appeal an Order pursuant to 220 CMR 1.00: *Procedural Rules*.

Oversight Agency. The entity, other than the rail transit agency, designated by the state to implement 49 CFR Part 674.

Passenger. A person who is on board, boarding, or alighting from a rail transit vehicle for the purpose of travel.

Passenger Operations. The period of time when any aspect of rail transit agency operations are initiated with the intent to carry passengers.

Person. A passenger, employee, contractor, pedestrian, trespasser, or individual on the property of a rail fixed guideway public transportation system.

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Program Manager. The single, identifiable individual employed by the Department who has ultimate responsibility for managing the State Safety Oversight Program.

Program Standard. A written document developed and approved by the State Safety Oversight Agency, that describes the policies, objectives, responsibilities, and procedures used to provide rail transit agency safety oversight.

Public Transportation Agency Safety Plan (PTASP). The comprehensive agency safety plan for a transit agency, including a Rail Transit Agency, that is required by 49 U.S.C. 5329(d) and based on a Safety Management System. Until one year after the effective date of 49 CFR Part 673, *Public Transportation Agency Safety Plans*, a System Safety Program Plan (SSPP) developed pursuant to 49 CFR Part 659 will serve as the rail transit agency's safety plan.

Public Transportation Safety Certification Training Program. Either the certification training program for Federal and State employees, or other designated personnel, who conduct safety audits and examinations of public transportation systems, and employees of public transportation agencies directly responsible for safety oversight, established through interim provisions in accordance with 49 U.S.C. 5329(c)(2), or the program authorized by 49 U.S.C. 5329(c)(1).

Rail Fixed Guideway Public Transportation System (RFGPTS). Any fixed guideway system that uses rail, is operated for public transportation, is within the jurisdiction of a State, and is not subject to the jurisdiction of the Federal Railroad Administration, or any such system in engineering or construction. Rail fixed guideway public transportation systems include, but are not limited to, rapid rail, heavy rail, light rail, monorail, trolley, inclined plane, funicular, and automated guideway.

Rail Transit Agency (RTA). Any entity that provides services on a rail fixed guideway public transportation system.

Rail Transit-controlled Property. Property that is used by the rail transit agency and may be owned, leased, or maintained by the rail transit agency.

Rail Transit Vehicle. The rail transit agency's rolling stock including, but not limited to, passenger and maintenance vehicles.

Risk. The composite of predicted severity and likelihood of the potential effect of a hazard.

Risk Assessment Code. The terminology, reviewed and approved by the Department, used for the characterization of risk such as high, serious, medium, or low based on hazard severity and probability of occurrence.

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Risk Assessment Matrix. An indicator of the correlation among the categories of:

- (a) severity of conditions that may endanger human life or property; and
- (b) the patterns of frequency of the occurrence of the hazardous condition.

The matrix, reviewed and approved by the State Safety Oversight Agency, classifies the degree of risk, and also provides a guideline for reporting of an occurrence and subsequent action for hazard resolution.

Risk Mitigation. A method or methods to eliminate or reduce the effects of hazards.

Safety. Freedom from harm resulting from unintentional acts or circumstances.

Safety Management Systems (SMS). A formal, top-down, organization-wide, data-driven approach to managing safety risks and assuring the effectiveness of safety risk mitigations. SMS includes systematic procedures, practices, and policies for managing risks and hazards.

Safety Risk Management. A process within a Rail Transit Agency's Safety Plan for identifying hazards and analyzing, assessing, and mitigating safety risk.

Serious Injury. Any injury which:

- (a) requires hospitalization for more than 48 hours, commencing within seven days from the date that the injury was received;
- (b) results in a fracture of any bone (except simple fractures of fingers, toes, or nose);
- (c) causes severe hemorrhages, nerve, muscle, or tendon damage;
- (d) involves any internal organ; or
- (e) involves second- or third-degree burns, or any burns affecting more than 5% of the body surface.

Standard Operating Guideline Manual. The policies and procedures established by the State Safety Oversight Agency to implement the Program Standard.

State. A State of the United States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, Guam, American Samoa, and the Virgin Islands.

State Safety Oversight Agency (SSOA). An agency established by a State that meets the requirements and performs the functions specified by 49 U.S.C. 5329(e) and 49 CFR Part 674. The Department is the SSOA for the Commonwealth of Massachusetts.

System Safety Program Plan (SSPP). A document developed and approved by the rail transit agency, describing its safety policies, objectives, responsibilities, and procedures. Until one year after the effective date of 49 CFR Part 673, *Public Transportation Agency Safety Plans*, the SSPP developed pursuant to 49 CFR Part 659

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will serve as the rail transit agency's safety plan.

Transportation Authority. Massachusetts Bay Transportation Authority, the RTA in the Commonwealth of Massachusetts.

Unannounced On-site Oversight Activity. That, as further outlined in Department's *Standard Operating Guideline Manual*, at any time or place, and without advanced warning, the Department may enter Rail Transit Agency-controlled property to conduct inspections, audits, observations, and investigations to determine whether the Rail Transit Agency is complying with 49 CFR Part 674, applicable regulations, Department policies and procedures, and the Transportation Authority's operation and safety procedures.

Vehicle. Any rolling stock used on a rail fixed guideway public transportation system including, but not limited to, passenger and maintenance vehicles.

151.03: Public Transportation Agency Safety Plan

(1) The Transportation Authority shall develop and implement a written Public Transportation Agency Safety Plan (PTASP) within one calendar year after publication of 49 CFR Part 673, *Public Transportation Agency Safety Plans*.

(2) Prior to the development and implementation of its PTASP, the Transportation Authority shall continue to maintain, update, and implement its written System Safety Program Plan (SSPP) pursuant to 49 CFR Part 659 which shall include:

- (a) A policy statement signed by the Transportation Authority's chief executive that endorses the safety program and describes the authority that establishes the SSPP.
- (b) A clear definition of the goals and objectives for the safety program and stated management responsibilities to ensure they are achieved.
- (c) An overview of the management structure of the Transportation Authority, including:
 1. An organization chart;
 2. A description of how the safety function is integrated into the rest of the rail transit organization; and
 3. Clear identification of the lines of authority used by the Transportation Authority to manage safety issues.
- (d) The process used to control changes to the SSPP, including:
 1. Specifying an annual assessment of whether the SSPP should be updated; and
 2. Required coordination with the Department, including timeframes for submission, revision, and approval.
- (e) A description of the specific activities required to implement the system safety program, including:

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1. Tasks to be performed by the Transportation Authority safety function, by position and management accountability, specified in matrices and/or narrative format; and
 2. Safety-related tasks to be performed by other Transportation Authority departments, by position and management accountability, specified in matrices and/or narrative format.
- (f) A description of the process used by the Transportation Authority to implement its hazard management program, including activities for:
1. Hazard identification;
 2. Hazard investigation, evaluation and analysis;
 3. Hazard control and elimination;
 4. Hazard tracking; and
 5. Requirements for ongoing reporting to the Department relating to hazard management activities and status.
- (g) A description of the process used by the Transportation Authority 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.
- (h) A description of the safety certification process required by the Transportation Authority to ensure that safety concerns and hazards are adequately addressed prior to the initiation of major projects to extend, rehabilitate, or modify an existing system, or to replace vehicles and equipment.
- (i) A description of the process used to collect, maintain, analyze, and distribute safety data, to ensure that the safety function within the Transportation Authority receives the necessary information to support implementation of the system safety program.
- (j) A description of the process used by the Transportation Authority to perform accident notification, investigation and reporting, including:
1. Notification thresholds for internal and external organizations;
 2. Accident investigation process and references to procedures;
 3. The process used to develop, implement, and track corrective actions that address investigation findings;
 4. Reporting to internal and external organizations; and
 5. Coordination with the Department.
- (k) A description of the process used by the Transportation Authority to develop an approved, coordinated schedule for all emergency management program activities, which include:
1. Meetings with external agencies;
 2. Emergency planning responsibilities and requirements;
 3. Process used to evaluate emergency preparedness, such as annual emergency field exercises;
 4. After action reports and implementation of findings;
 5. Revision and distribution of emergency response procedures;

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6. Familiarization training for public safety organizations; and
 7. Employee training.
- (l) A description of the process used by the Transportation Authority to ensure that planned and scheduled internal safety reviews are performed to evaluate compliance with the SSPP, including:
1. Identification of departments and functions subject to review;
 2. Responsibility for scheduling reviews;
 3. Process for conducting reviews, including the development of checklists and procedures and the issuing of findings;
 4. Review of reporting requirements;
 5. Tracking the status of implemented recommendations; and
 6. Coordination with the oversight agency.
- (m) A description of the process used by the Transportation Authority to develop, maintain, and ensure compliance with rules and procedures having a safety impact, including:
1. Identification of operating and maintenance rules and procedures subject to review;
 2. Techniques used to assess the implementation of operating and maintenance rules and procedures by employees, such as performance testing;
 3. Techniques used to assess the effectiveness of supervision relating to the implementation of operating and maintenance rules; and
 4. Process for documenting results and incorporating them into the hazard management program.
- (n) A description of the process used for facilities and equipment safety inspections, including:
1. Identification of the facilities and equipment subject to regular safety-related inspection and testing;
 2. Techniques used to conduct inspections and testing;
 3. Inspection schedules and procedures; and
 4. Description of how results are entered into the hazard management process.
- (o) A description of the maintenance audits and inspections program, including identification of the affected facilities and equipment, maintenance cycles, documentation required, and the process for integrating identified problems into the hazard management process.
- (p) A description of the training and certification program for employees and contractors, including:
1. Categories of safety-related work requiring training and certification;
 2. A description of the training and certification program for employees and contractors in safety-related positions;
 3. Process used to maintain and access employee and contractor training records; and

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4. Process used to assess compliance with training and certification requirements.
- (q) A description of the configuration management control process, including:
1. The authority to make configuration changes;
 2. Process for making changes; and
 3. Assurances necessary for formally notifying all involved departments.
- (r) A description of the safety program for employees and contractors that incorporates the applicable local, state, and federal requirements, including:
1. Safety requirements that employees and contractors must follow when working on, or in close proximity to, rail transit agency property; and
 2. Processes for ensuring the employees and contractors know and follow the requirements.
- (s) A description of the hazardous materials program, including the process used to ensure knowledge of and compliance with program requirements.
- (t) A description of the drug and alcohol program and the process used to ensure knowledge of and compliance with program requirements.
- (u) 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's procurement process.
- (3) The Transportation Authority shall submit the SSPP or PTASP to the Department for review and approval prior to its implementation. The SSPP or PTASP should be submitted in electronic format *via* email to the Program Manager. Supporting procedures and referenced materials may be submitted in hard copy, by fax, mail, email, or in-hand delivery.
- (4) The Transportation Authority shall conduct an annual review of the SSPP or PTASP on or before August 1st of each year and update it as necessary to ensure the SSPP remains current. The Transportation Authority shall submit an updated SSPP or PTASP, and any accompanying procedures, for Department review and approval on or before September 1st of each year. If no updates are required, the Transportation Authority shall so notify the Department in writing before September 1st of each year.
- (5) Should the Transportation Authority update the SSPP or PTASP outside the annual review cycle, either upon its own initiative or upon the written request of the Department for modifications to the SSPP or PTASP, the Transportation Authority shall submit a revised SSPP or PTASP to the Department. The SSPP or PTASP should be submitted in electronic format *via* email to the Program Manager within 30 calendar days of the event requiring the changes. Supporting procedures and referenced materials may be submitted in hard copy, by fax, mail, email, or in-hand delivery.

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- (6) The Transportation Authority shall submit to the Department as part of its SSPP or PTASP, a description of the process used by the Transportation Authority to develop, maintain, and ensure compliance with rules and procedures having a safety impact, including:
- (a) Identification of operating and maintenance rules and procedures subject to review;
 - (b) Techniques used to assess the implementation of operating and maintenance rules and procedures by employees, such as performance testing;
 - (c) Techniques used to assess the effectiveness of supervision relating to the implementation of operating and maintenance rules; and
 - (d) Process for documenting results and incorporating them into the Hazard Management Process.

151.05: Internal Safety Audits

- (1) The Transportation Authority shall develop and document in its SSPP or PTASP a process requiring ongoing internal safety audits over a three-year cycle to evaluate compliance with, and measure the effectiveness of, the SSPP or PTASP.
- (2) In its internal safety audit, the Transportation Authority shall:
- (a) Describe the process used to determine if all identified elements of its SSPP or PTASP are performing as intended.
 - (b) Ensure that all elements of the SSPP or PTASP are reviewed in an ongoing manner and completed over a three-year cycle.
 - (c) Use qualified personnel who are not the supervising managers of the activity under review.
 - (d) Record its audit on a written checklist provided by the Department and entitled "DPU Checklist For Review of Annual Internal Audits."
 - (e) Submit to the Department any checklists or procedures to be used during the safety portion of the audit.
 - (f) Notify the Department in writing of the time and location of an internal audit at least 30 days in advance.
 - (g) Prepare written report documenting recommendations and any corrective actions identified as result of internal audit.
- (3) The Transportation Authority shall file with the Department for review and approval on or before February 15th an annual report documenting the internal audits conducted during the past calendar year and the status of subsequent findings and corrective actions. The report shall state the results of each audit in terms of the adequacy and effectiveness of the SSPP or PTASP.
- (4) Along with the annual report, the Transportation Authority must include a formal letter signed by its Accountable Executive certifying the Transportation

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Authority is in compliance with its SSPP or PTASP. If the Transportation Authority's findings indicate noncompliance with its SSPP or PTASP, its Accountable Executive must identify in the formal letter the nature of the noncompliance and the steps it will take to achieve compliance.

(5) The Department shall observe the Transportation Authority's internal audit activities, in whole or on a sample basis, and will monitor the internal audit program.

151.06: Hazard Management Process

(1) The Transportation Authority shall incorporate the following process, as approved by the Department, in its SSPP or PTASP to identify and resolve hazards during operation, including hazards resulting from subsequent system extensions or modifications or operational or environmental changes or hazards discovered during reviews, inspections or investigations.

(2) Hazard Tracking Log. The Transportation Authority shall consolidate all hazard information developed pursuant to its various methodologies for identifying and assessing hazards into a single, coordinated process. This process may include worksheets, forms, computer databases and other tools to support standardization and organization of hazard information. Based on this process, the Transportation Authority shall establish a Hazard Tracking Log that reflects the consolidation of information in the hazard management process by listing all identified hazards. The Hazard Tracking Log may be organized by assigned number, type of hazard, source from which it was identified, or element of the Transportation Authority's operation affected by the hazard (*i.e.*, facilities, vehicles, track and signal, communications, tunnel ventilation, personnel training procedures, Form B, internal audits, rules compliance testing, and safety hotline, *etc.*), requirements for ongoing reporting to the Department regarding hazard management activities, and the status of the hazard. The Transportation Authority shall submit the Hazard Tracking Log as part of its SSPP or PTASP for review and approval. Upon approval, the Hazard Tracking Log shall be continuously available to the Department staff for review.

(3) Hazard Categorization. The Transportation Authority shall include a formal process to assess and document the risk of each identified hazard. Safety risks must be evaluated in terms of probability and severity, and shall take into account mitigations already in place to reduce the probability or severity of the potential consequence(s) analyzed. The formal process shall include a Risk Assessment Matrix that assigns a Risk Assessment Code based on the combination of one severity category and one probability level.

(4) Hazard Notification.

(a) The Transportation Authority shall notify the Department, at a minimum, of any condition meeting the two highest risk levels identified within the Risk Assessment Matrix.

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- (b) The Transportation Authority shall notify the Department within the time limit and in the format determined by the Department.
- (c) After initial notification, the Department may require the Transportation Authority to conduct further activities in order to provide more detailed information, including conducting an investigation pursuant to 220 CMR 151.09(3) through (9).

151.07: Corrective Action Plans

- (1) The Transportation Authority must develop a written corrective action plan (CAP) reported on a Department-approved form to address hazardous conditions meeting certain Risk Assessment Codes specified by the Department, and identified through:
 - (a) Investigations, in which identified causal and contributing factors are determined by the Transportation Authority or the Department as requiring corrective actions;
 - (b) Safety reviews and audits performed by the Department;
 - (c) Internal safety audits performed by the Transportation Authority;
 - (d) The Hazard Management Process; or
 - (e) Unannounced On-site Oversight Activities performed by the Department.
- (2) Each CAP shall identify the:
 - (a) Event or condition requiring corrective action;
 - (b) Action necessary to eliminate or control occurrence or condition;
 - (c) Schedule for implementation;
 - (d) Person or department responsible for implementation;
 - (e) The Department supervisor who is attesting to the content of the CAP.
- (3) The Transportation Authority shall submit the CAP to the Department for review and formal approval within 60 days of the identification of the Hazard and/or Risk or the event triggering the necessity of a CAP. The Department must review and approve the CAP before the Transportation Authority carries out the plan, an exception may be made for emergency CAPs to ensure immediate safety, provided the Department receives timely notification and provides subsequent review and approval. The Department may monitor the Transportation Authority's progress in carrying out the CAP through unannounced, on-site inspections, or any other means the Department deems necessary or appropriate. Upon request, the Transportation Authority must allow the Department access to review the data used in the preparation of the CAP.
- (4) If the Transportation Authority does not complete a CAP within 60 days of the discovery of the Hazard and/or Risk, it shall submit a written request for an extension outlining the reason(s) for the extension, including the tasks to be completed and a

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time line for completion.

- (5) The Transportation Authority must provide the Department with written:
 - (a) Verification that each corrective action described in the CAP has been implemented, or that a proposed alternate action(s) has been implemented subject to Department review and approval;
 - (b) Status reports as requested by the Department, describing the status of each corrective action not completely implemented pursuant to a CAP's implementation schedule; and
 - (c) Reports to the Department, using the Department's CAP identification number, when the requirements of an approved CAP have been satisfied.

- (6) Upon receipt of the Transportation Authority's CAP, the Department has 15 days in which to review and approve the CAP in writing. If the Department rejects the CAP, the Transportation Authority has 20 days from notice of rejection to submit a revised CAP to the Department for approval. The Department may grant an extension beyond the 20 days for good cause shown.

- (7) If the Department is unable to approve a proposed CAP or to resolve a dispute with the Transportation Authority resulting from the development or enforcement of a CAP, the Department must either:
 - (a) Report the areas of disagreement in writing to, and negotiate with, the Transportation Authority until the dispute is resolved;
 - (b) Develop, and submit to the Transportation Authority for implementation, its own written CAP or enforcement procedures according to the requirements of 220 CMR 151.07; or
 - (c) Issue any Order that it deems necessary.

- (8) In the event the National Transportation Safety Board (NTSB) or FTA conducts an accident investigation, the Department shall review the finding and/or recommendations to determine if they necessitate the development of a corrective action plan. If a CAP is required by the FTA, or the Department, the Transportation Authority shall develop it.

- (9) The Department will monitor and track the implementation of each approved corrective action plan through completion. Such monitoring will occur both monthly and quarterly as part of the scheduled meetings between the Department and the Transportation Authority pursuant to 220 CMR 151.01(5).

- (10) The Department may withhold from public disclosure CAPS prepared or approved by the Department whose release is likely to jeopardize public safety as contemplated in M.G.L. c. 4, § 7, clause Twenty-sixth(n).

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151.08: Department Notification

- (1) When notice to the Department is required pursuant to 220 CMR 151.00, the Transportation Authority shall notify the Department by first contacting the Department representative assigned to the Transportation Authority as prescribed by the Department. Alternatively, the Transportation Authority shall notify the Program Manager. The Transportation Authority shall maintain current contact information for these primary and alternative points-of-contact.

- (2) Written notice to the Department of a hazard, accident or similar event, to the extent possible under the circumstances, shall include, but not be limited to:
 - (a) Name and title of person reporting;
 - (b) Event type;
 - (c) Location, time, and date of event;
 - (d) Fatalities;
 - (e) Injuries;
 - (f) Rail transit vehicle(s) involved (type, number);
 - (g) Other vehicle(s) involved (type, number);
 - (h) Property damage estimate;
 - (i) NTSB reportable;
 - (j) FTA reportable;
 - (k) Rail transit agency primary person (*i.e.*, Chief Investigator) conducting the investigation (name, title, phone and fax numbers, email address);
 - (l) Description of the event;
 - (m) Immediately implemented and/or planned corrective actions;
 - (n) Name and telephone number of person from whom additional information may be obtained;
 - (o) Method and time of notice to the Department.

151.09: Accident Notification and Investigation

- (1) The Transportation Authority shall notify the Department and the FTA within two hours of, and in writing by the close of business on the next business day following, any incident involving a rail transit vehicle or taking place on rail transit-controlled property where one or more of the following occur (“Accident Notification”):
 - (a) Fatality at the scene or occurring within 30 days following the accident;
 - (b) One or more persons suffering Serious Injury;
 - (c) Property damage resulting from a collision involving a rail transit vehicle or the derailment of a rail transit vehicle;
 - (d) Evacuation due to life safety reasons;
 - (e) Derailment;
 - (f) Collision with a person resulting in Serious Injury or fatality;
 - (g) Collision between a rail transit vehicle and second rail transit vehicle or

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a rail transit non-revenue vehicle;

- (h) Collision at grade crossing resulting in Serious Injury or fatality;
- (i) Collision with an object resulting in Serious Injury or fatality; or
- (j) Fires resulting in Serious Injury or fatality.

(2) The Transportation Authority shall investigate any incident requiring Accident Notification to the Department. The Department will provide, and the Transportation Authority will use a Department-approved investigation checklist form(s) as may be required by the Department for this investigation.

(3) The investigation shall include the following:

- (a) On-site inspection.
- (b) Visual examination and measurements.
- (c) Examination by the following methods and/or tests as necessary:
 - 1. radiographic;
 - 2. ultrasonic;
 - 3. magnetic particle;
 - 4. liquid dye testing.
- (d) Functional testing of the following as necessary:
 - 1. vehicle;
 - 2. track;
 - 3. traction power;
 - 4. signals;
 - 5. communication equipment.
- (e) Interviews with witnesses.
- (f) Review of maintenance records and procedures.
- (g) Review of employee training and certification.
- (h) Photographs.
- (i) Police and coroner reports.
- (j) Review of alcohol and drug test results.
- (k) Review of hours of service records.
- (l) Review of operating rules and procedures.
- (m) Identification of the factors that caused or contributed to the accident.
- (n) Findings, recommendations, and a CAP, as necessary and appropriate, or as otherwise required by the Department.

(4) The Department may conduct an independent investigation or oversee/monitor an investigation conducted by the Transportation Authority. The Transportation Authority shall provide to the Department, upon request, documentation, access to investigative sites, activities, and personnel involved in the investigative process. The Department and the Transportation Authority shall coordinate investigative activities prior to finalizing investigative reports.

(5) The Transportation Authority shall submit to the Department a final report of

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its investigation within 60 days of the event triggering the Accident Notification. The Department shall approve the format and required contents for the final report.

(6) In the event that the Transportation Authority does not complete a final report within 60 days of the event triggering the Accident Notification, it shall submit written status reports as requested by the Department until the final report is completed.

(7) Upon receipt of the Transportation Authority's final report, the Department has 15 days in which to review and approve the report in writing. If the Department rejects the report, the Transportation Authority has 20 days from notice of rejection to submit a revised final report to the Department for approval. The Department may grant an extension beyond the 20 days for good cause shown.

(8) If the Department is unable to approve a final report, or to resolve a dispute with the Transportation Authority resulting from the development of a final report, the Department must either:

- (a) Report the areas of disagreement in writing to, and negotiate with, the Transportation Authority until the dispute is resolved; or
- (b) Conduct its own investigation according to the requirements of 220 CMR 151.09, and submit the final report to the Transportation Authority for implementation, allowing the Transportation Authority an opportunity to file a written dissent pursuant to the procedures outlined in the *Standard Operating Guideline Manual*; or
- (c) Issue any Order that it deems necessary.

(9) The Department may withhold from public disclosure investigation reports prepared or approved by the Department whose release is likely to jeopardize public safety as contemplated in M.G.L. c. 4, § 7, clause Twenty-sixth(n).

151.10: Management and Oversight Process

(1) Review and Approval. The Department shall review and approve initial and revised PTASPs and annual reports on the internal safety audit process.

- (a) The Department will review only final documents bearing the required signatures of the Transportation Authority's management. After approval, the Department will issue a formal letter of approval to the Transportation Authority, which will include the checklist used to conduct the review.
- (b) Upon receipt of the final document from the Transportation Authority, the Department has 15 days in which to review and approve it in writing. If the Department rejects the document, the Transportation Authority has 20 days from notice of rejection to submit a revised document to the Department for approval. The Department may grant an extension beyond the 20 days for good cause shown.

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(c) If the Department is unable to approve a final document, or to resolve a dispute with the Transportation Authority resulting from the development of the document, the Department must either:

1. Report the areas of disagreement in writing to, and negotiate with, the Transportation Authority until the dispute is resolved;
2. Develop its own document according to the requirements of the relevant section, and submit it to the Transportation Authority for implementation; or
3. Issue any Order that it deems necessary.

(2) Triennial Audit. The Department shall create an ongoing audit program specific to the Transportation Authority's implementation of its SSPP or PTASP. All sections of the SSPP or PTASP shall be reviewed at least once every three years.

(a) The ongoing audit program will include, but will not be limited to, the following on-site announced and unannounced activities: observations, inspections, investigations, audits, examinations, interviews, and testing.

(b) As part of the ongoing audit program the Department shall prepare and issue a report containing findings and recommendations, including an analysis of the effectiveness of the SSPP or PTASP, and a determination of whether it should be updated. Further, the Transportation Authority will be given the opportunity to comment on any Department finding and/or recommendation offered in an audit report.

(c) In conducting on-site audit, the Department may request additional information, clarifications or revisions specific to the Transportation Authority's SSPP or PTASP. The Department may also perform inspections, investigations and reviews of the operation and maintenance of the Transportation Authority's rail fixed guideway system to determine whether its safety procedures comply with the SSPP or PTASP. In the event the Transportation Authority objects to such a request, the Department and the Transportation Authority shall agree to an appropriate course of action to address outstanding issues within 15 days of the objection.

(d) The Department will update the Transportation Authority of the on-site audit results either at a regularly scheduled Department and Transportation Authority meeting or by sending a formal notification.

(e) At the conclusion of the three-year audit cycle, the Department will issue a final report that will include, findings and recommendations identified as a result of ongoing audit activities.

(3) Reporting Requirements to FTA.

(a) Annual Submission. Before March 15th of each year, the Department must submit the following material to the FTA:

1. The Department program standard, and supporting procedures, approved in accordance with 49 CFR Part 674.27, with an indication of any changes to the Department program standard during the preceding

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12 months;

2. Evidence that each of its employees and contractors has completed the requirements of the Public Transportation Safety Certification Training Program, or, if in progress, the anticipated completion date of the training;

3. A publicly available report that summarizes its oversight activities for the preceding 12 months, describes the causal factors of accidents identified through investigation, and identifies the status of corrective actions, changes to PTASPs, and the level of effort by the Department in carrying out its oversight activities;

4. A summary of the triennial audits completed during the preceding 12 months, and the Transportation Authority's progress in carrying out CAPs arising from triennial audits conducted in accordance with 49 CFR Part 674.31;

5. Evidence that the Department has reviewed and approved any changes to the PTASPs during the preceding 12 months; and

6. A certification that the Department is in compliance with the requirements of 49 CFR Part 674.39.

(b) The Department must make periodic submissions to the FTA upon its request.

(c) The Department must submit all filings to the FTA electronically using a reporting system specified by FTA.

(d) The Department must maintain a signed copy of each annual certification to FTA, subject to audit by FTA.

(4) Conflict of Interest. In its oversight of the Transportation Authority's PTASP, the Department shall prohibit a party or entity from providing services to both the Department and the Transportation Authority concerning the PTASP so as to avoid conflicts of interest.

(5) Department Access to Information. The Transportation Authority shall grant the Department access to information necessary to discharge the requirements set forth in the Program Standard, including, but not limited to:

(a) Reports generated and databases utilized to monitor the status and performance of the Transportation Authority's rail transit system;

(b) All approved policies, procedures, directives, system element descriptions (general and technical), or documents that support the SSPP or PTASP;

(c) The Transportation All-page System;

(d) The Operations Control Center Log; and

(e) Maintenance Databases.

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151.11: Track Inspection

(1) Inspections.

(a) All inspections must be made according to the schedule set out in 220 CMR 151.11(2), by a person designated under 220 CMR 151.11(4).

(b) Each inspection must be made on foot or by riding over the track in a vehicle at a speed that allows the person making the inspection to visually inspect the track structure for compliance with 220 CMR 151.00. However, mechanical, electrical and other track inspection devices may be used to supplement visual inspection. If a vehicle is used for visual inspection, the speed of the vehicle may not be more than five miles per hour when passing over track crossings, highway crossings or turnouts.

(c) If the person making the inspection finds a deviation from the inspection requirements, the inspector shall immediately initiate remedial action.

(2) Schedule for Track Inspection.

(a) Each track inspection must be made according to the following schedule:

TYPE OF TRACK	REQUIRED FREQUENCY
Light Rail Passenger-service Track	Three times per week with at least one calendar day interval between inspections.
Light Rail Yard and Storage Track Heavy Rail Yard and Storage Track	Weekly with at least three calendar days interval between inspections, or before use, if track is used less than once a week.
Heavy Rail Passenger-service Track	Twice weekly with at least one calendar day interval between inspections.

(b) In addition to 220 CMR 151.11(2)(a), any track undergoing or awaiting repair that has a speed restriction placed on it shall be inspected at a frequency that will insure safe operations at all times.

(c) Each switch, turnout, and track crossing must be inspected on foot at least weekly. In the case of track that is used less than once a week, each switch, turnout, and track crossing must be inspected before it is used.

(d) In the event of fire, flood, severe storm, or other occurrence which might have damaged track structure, a special inspection must be made of the track involved as soon as possible after the occurrence.

(e) The Department of Public Utilities may require inspections at more frequent intervals in areas of dense traffic, high operating speed or

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questionable physical conditions.

(3) Schedule for Rail Inspection.

- (a) In addition to 220 CMR 151.11(2)(a), at least once a year a continuous search for internal rail defects must be made of all rail in all passenger-service track.
- (b) Inspection equipment, including ultrasonic rail testing equipment, must be capable of detecting defects between joint bars, in the area enclosed by joint bars.
- (c) Each defective rail must be marked with highly visible marking on both sides of the web and base.

(4) Personnel.

- (a) The Transportation Authority shall designate qualified persons to supervise restorations and renewals of track under traffic conditions. Each person designated must have:
 - 1. Experience/Education.
 - a. One year of supervisory experience in railroad track maintenance;
 - b. A combination of supervisory experience in track maintenance and training from a course in track maintenance; or
 - c. A college level educational program related to track maintenance.
 - 2. Ability to:
 - a. Understand inspection requirements;
 - b. Detect deviations from the inspection requirements;
 - c. Prescribe appropriate remedial action to correct or safely compensate for deviations;
 - d. Procure written authorization from the Transportation Authority to prescribe remedial actions to correct or safely compensate for any deviations from the inspection requirements.
- (b) The Transportation Authority shall designate qualified persons to inspect track for defects. Each person designated must have:
 - 1. Experience/Education.
 - a. At least one year of experience in track inspection; or
 - b. A combination of experience in track inspection and in-house training from a course in track inspection.
 - 2. Ability to:
 - a. Understand inspection requirements;
 - b. Detect deviations from the inspection requirements;
 - c. Prescribe appropriate remedial action to correct or safely compensate for deviations;
 - d. Procure written authorization from the Transportation Authority to prescribe remedial actions to correct or safely

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compensate for any deviations from the inspection requirements pending review by a qualified person designated under 220 CMR 151.11(4)(a).

- (c) Personnel Records of designees under 220 CMR 151.11(4)(a) and (b) shall show:
1. The basis for each designation;
 2. Records must be kept available for inspection or copying by the Department of Public Utilities.

(5) Records/Reports.

(a) The Transportation Authority shall keep a record of each track and rail inspection required to be performed; and such record shall identify the designee who performed the inspection.

(b) The Transportation Authority shall designate a location where each original record shall be maintained for at least one year after the track inspection covered by the track inspection record. The Transportation Authority shall retain a rail inspection record for at least two years after the rail inspection and for one additional year after remedial action is taken.

(c) Track Inspection Records and Rail Inspection Records shall be:

1. Prepared on the day the inspection is made;
2. Signed by the person making the inspection.

(d) Inspection Records must specify:

1. The track or rail inspected;
2. The date of inspection;
3. Location of any deviation;
4. Nature of any deviation from the established track standards;
5. Remedial action taken by the person making the inspection.

(e) Records must be kept available for inspection or copying by the Department of Public Utilities.

151.12: Track Maintenance

(1) Unless otherwise structurally supported, all track must be supported by ballast material which will:

- (a) Transmit and distribute the load of the track and railroad rolling equipment to the subgrade;
- (b) Restrain the track laterally, longitudinally, and vertically under dynamic loads imposed by railroad rolling equipment and thermal stress exerted by the rails;
- (c) Provide adequate drainage for the track;
- (d) Maintain proper track crosslevel, surface, and alignment.

(2) Crossties shall be made of a material to which rail can be securely fastened.

- (a) Each 39-foot segment of track shall have a sufficient number of

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cross ties which in combination provide effective support that will maintain gage, surface, and alignment.

(b) The minimum number and type of cross ties specified in 220 CMR 151.12(3) effectively distributed to support the entire segment; and at least one cross tie of the type specified in 220 CMR 151.12(3) that is located at a joint location.

(3) Each 39-foot segment of track shall have the minimum number and type of cross ties as indicated in the following table:

MAXIMUM TRACK SPEED	MINIMUM NUMBER OF TIES	
	Tangent Track*	Curved Track**
15 miles per hour	5	6
25 miles per hour	8	9
60 miles per hour	8	10
* Track that is straight or has a radius curve greater than 1000 feet. ** Track having a radius curve measuring less than 1000 feet.		

Cross ties required shall be of the type which are not:

- (a) Broken through;
- (b) Split or otherwise impaired to the extent the cross ties will allow the ballast to work through, or will not hold spikes or rail fasteners;
- (c) So deteriorated that the tie plate or base of rail can move laterally two inches relative to the cross ties; or
- (d) Cut by the tie plate (or rail base) through more than 15% (nominally 1-1/8") of a tie's thickness.
- (e) For track constructed without cross ties, such as slab track, track connected directly to bridge structural components and track over servicing pits, the track structure must meet the requirements of 220 CMR 151.12(3) in regards to gage restraint, rail support, surface and alignment.

(4) Gage is measured between the heads of the rails at right-angles to the rails in a plane 5/8 of an inch below the top of the rail head.

(5) Gage must be within the limits prescribed in the following table:

MAXIMUM TRACK SPEED	MINIMUM TRACK GAGE	MAXIMUM TRACK GAGE
10 miles per hour	56"	58"
60 miles per hour	56"	57 3/4 "

(6) Each rail joint, insulated joint, and compromise joint must be of the proper design and dimensions for the rail on which it is applied.

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- (7) If a joint bar is cracked, broken, or because of wear allows excessive vertical movement of either rail when all the bolts are tight, it must be replaced.
- (8) If a joint bar is cracked or broken between the middle two bolt holes it must be replaced.
- (9) In the case of conventional jointed rail in passenger-service track, each rail must be bolted with at least two bolts at each joint. Yard and storage track joints must be bolted with at least one bolt on each rail.
- (10) In the case of continuous welded rail (CWR) track, each rail must be bolted with at least two bolts at each joint used to connect CWR strings or to connect CWR to conventional rail.
- (11) Each joint bar must be held in position by track bolts tightened to allow the joint bar to firmly support the abutting rail ends and to allow longitudinal movement of the rail in the joint to accommodate expansion and contraction due to temperature variations.
- (12) When any condition in 220 CMR 151.12(9) and (10) is not satisfied, an operating restriction must be put in place immediately until the condition is satisfied. The Transportation Authority shall notify the Program Manager of the imposition or removal of an operating restriction within 48 hours of said action.

151.13: Use or Possession of Electronic Device While on Duty.

An Operator is prohibited from using or having in his or her possession an Electronic Device while the Operator is on duty and on his or her train, which includes streetcars. The Electronic Device cannot be anywhere on the Operator's person or property, such as pocketbook or other belongings. The Electronic Device cannot be on the vehicle he or she is operating or in any part of a train consist. The Operator cannot give the Electronic Device to another person on the train or streetcar to hold, whether or not that person is a Transportation Authority employee. The Operator is prohibited from any use of any Electronic Device while on duty, including, but not limited to, telephoning, checking the time, texting, playing games, reading, e-mailing, or listening to music.

REGULATORY AUTHORITY

220 CMR 151.00: 49 U.S.C. 5330, 49 CFR 659, 49 CFR 674, M.G.L. c. 161A, § 3(i).