U.S. Department of Transportation
Federal Transit Administration

2021 FTA Joint State Safety Oversight and Rail Transit Agency Virtual Workshop

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Capital Projects Safety Oversight

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Federal Transit Administration

Overview

- Authority
- Guidance
- Minimum Requirements
- State Safety Oversight Agency Oversight Activities
- Rail Transit Agency Project Plan
- FTA Resources
- New Service

Authority - Oversight

49 C.F.R. § 674.7

Rail fixed guideway public transportation system means any fixed guideway system that uses rail is operated for public transportation, within the jurisdiction of a State, and not subject to the jurisdiction of the Federal Railroad Administration, or any such system in **engineering or construction**.

49 C.F.R. § 674.25(b)

An SSOA must review and approve the Public Transportation Agency Safety Plan (PTASP) for every rail fixed guideway public transportation system within its oversight. An SSOA must oversee an RTAs execution of its PTASP. **An SSOA must enforce the execution of a PTASP, through an order of a corrective action plan or any other means, as necessary or appropriate**. An SSOA must ensure that a PTASP meets the requirements (49 C.F.R. § 673).

49 C.F.R. § 674.27(a)

An SSOA must adopt and distribute a written SSO program standard, consistent with the National Public Transportation Safety Plan and the rules for PTASPs. This SSO program standard must identify the processes and procedures that govern the activities of the SSOA. Also, **the SSO program standard must identify the processes and procedures an RTA must have in place to comply with the standard**.

Guidance

49 C.F.R. § 673
III. Notice of Proposed Rulemaking and Response to Relevant Comments

FTA Response: …each transit agency must apply its **Safety Risk Management processes**—and all other SMS processes—to all elements of its operations, including the design, construction, and operation of major capital projects, New Starts and Small Starts projects, and any other extension or expansion of transit service.

Source: Maryland Purple Line Transit Project (The Washington Post)

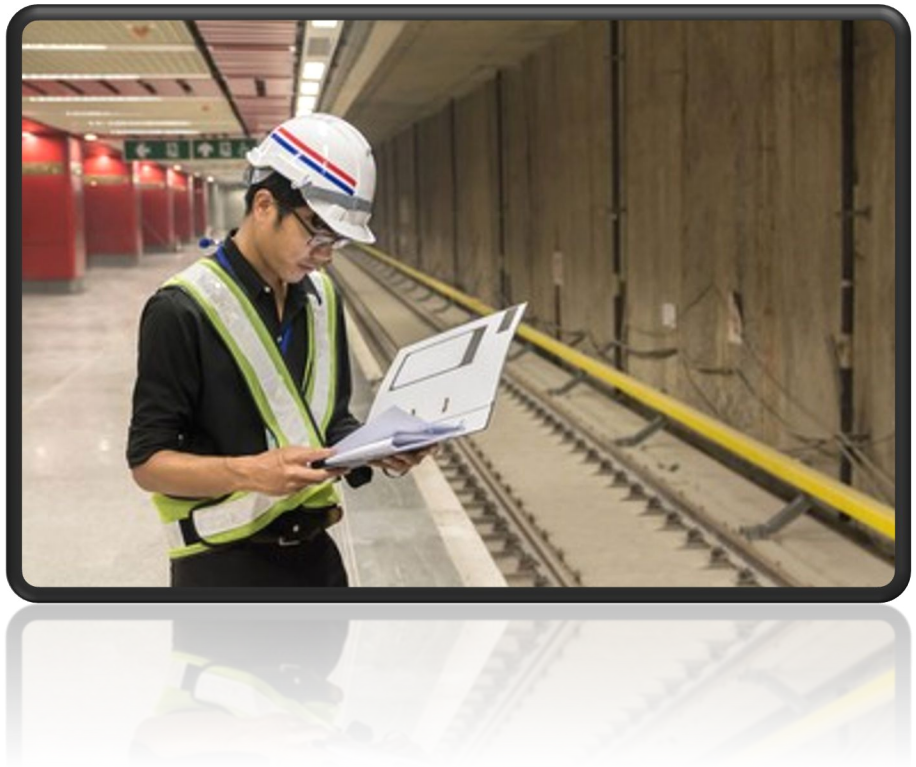
Minimum Requirement

49 C.F.R. § 673.25(a)

Safety Risk Management process. A transit agency must develop and implement a Safety Risk Management process for all elements of its public transportation system. The Safety Risk Management process must be comprised of the following activities: safety hazard identification; safety risk assessment; and safety risk mitigation.

SSOA Oversight Activities

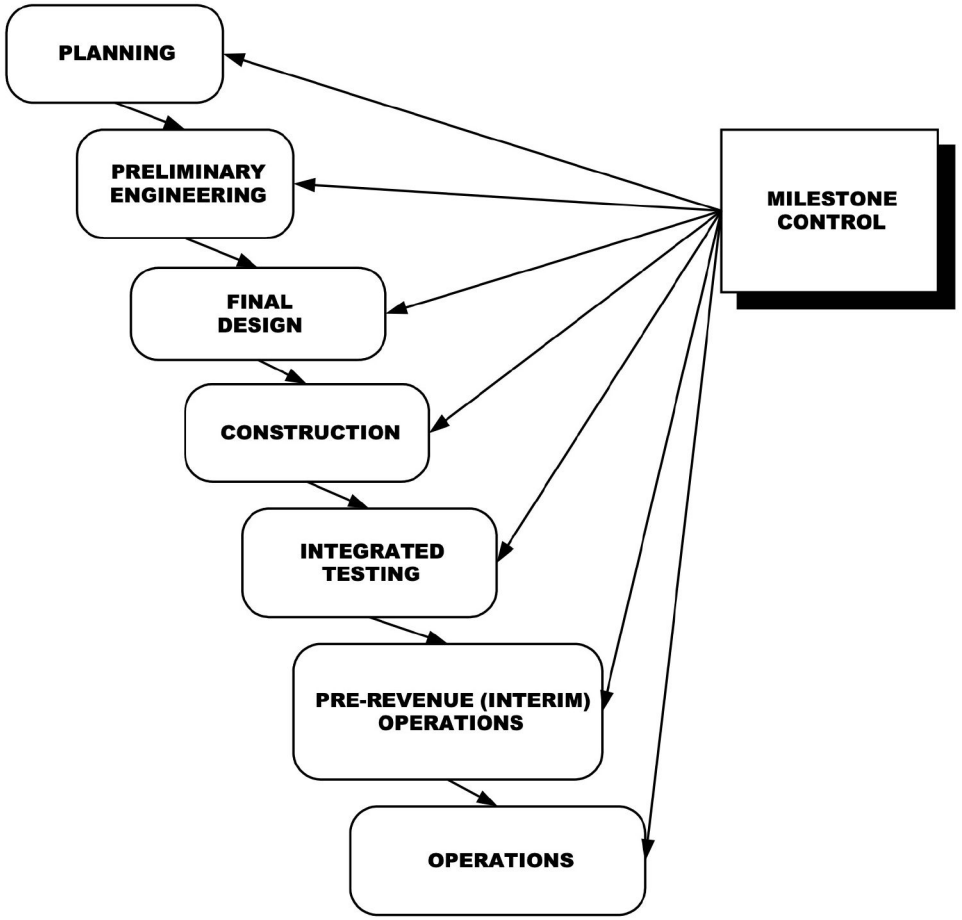
- Ensure Program Standard Addresses Engineering and Construction Oversight Process
- Ensure Program Standard Identify Minimum PTASP Requirements
- Review and Approve PTASP
- Conduct Oversight Activities of Capital Projects



RTA Project Plan:

Safety & Security Certification (SSC) Process

Project Life Cycle



Project Safety and Security Certification

Step 1: Identify Certifiable Elements

Step 2: Develop Design Criteria

Step 3: Design Criteria Conformance Checklist

Step 4: Construction Specification Conformance

Step 5: Safety and Security Test Requirements

Step 6: Perform Testing and Validation

Step 7: Manage Integrated Tests

Step 8: Manage “Open Items”

Step 9: Verify Operational Readiness

Step 10: Issue Safety and Security Certification

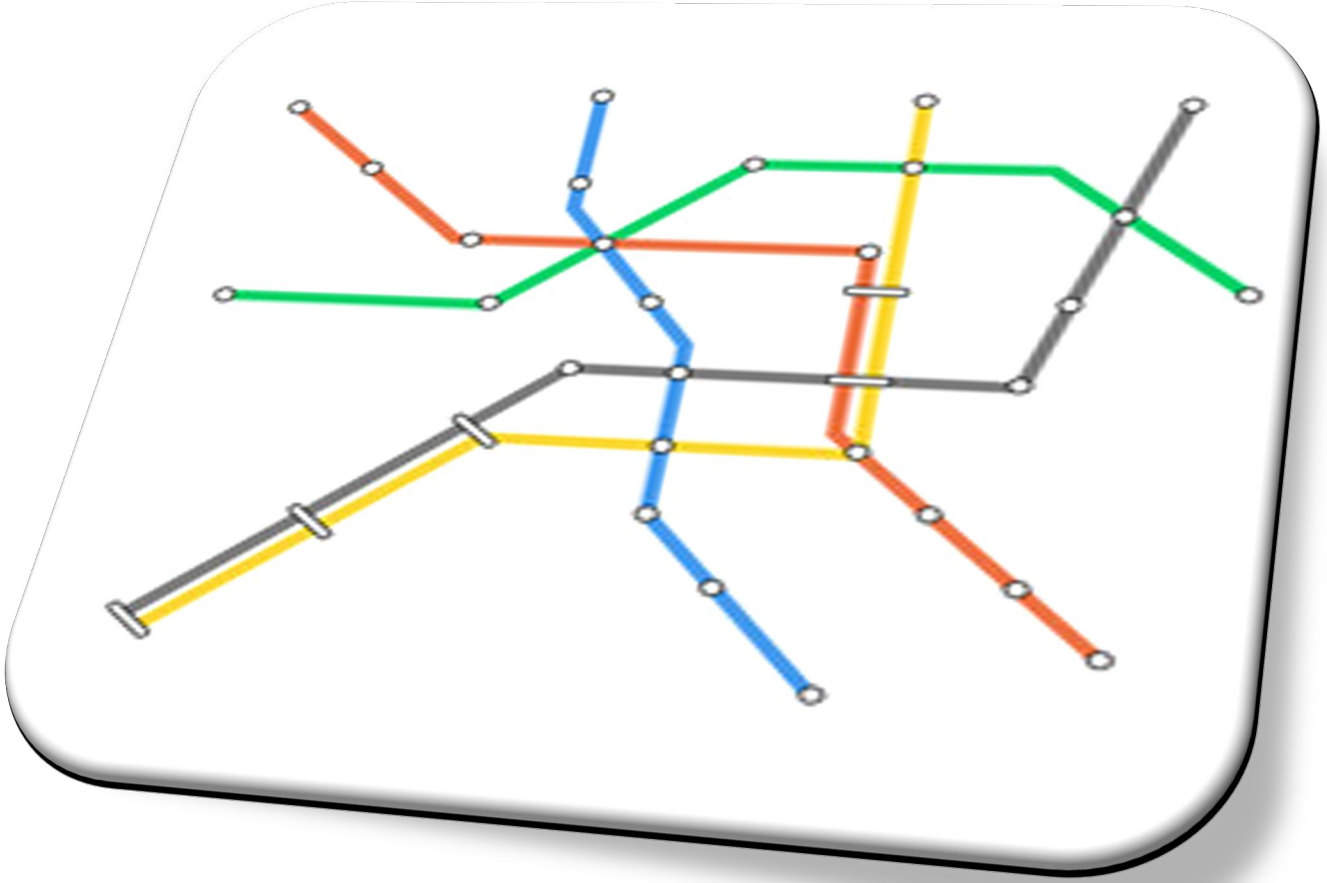
FTA Resources

FTA Resource List

- FTA Circular 5800.1 – Safety and Security Management Guidance for Major Capitol Projects (March 1, 2016)
- FTA Handbook for Transit Safety and Security Certification (November 2002)
- FTA OP-54 Reviews

New Service

- SSOA authorizes the project to go into revenue service.



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Safety Certification of RTA Capital Projects by CPUC

Daren Gilbert
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California Public
Utilities Commission

CPUC Safety Certification Process has three Major Elements

1

Major Projects must have a ***CPUC approved Safety Certification Plan***.

2

RTSB Staff ***ongoing participatation in SC meetings*** (FLS, SSRC, Rail Activation Comm, etc.) and ***conduct inspections and observations of construction and testing*** during the project lifecycle.

3

SSCVR submittal initiates a significant final review and assessment of project testing documentation and the status of open items and issues of concern identified during the project construction to provide ***written authorization for revenue service***.

Currently Active Capital Projects in California

(Projects in red are in construction)

- **San Francisco MTA**
  - Central Subway
  - LRV 4 vehicle procurement
- **BART**
  - FOTF New Vehicle Procurement
  - Communications Based Train Control upgrade
  - Traction Power System Improvement Project
  - Irvington Station Project
- **SC VTA**
  - BART Silicon Valley Phase 2 (Jointly with BART)
  - Eastridge Extension to BART
  - Light Rail Signal Priority Project
- **LA Metro**
  - P3010 New Vehicle Procurement
  - HR4000 New Vehicle Procurement
  - Crenshaw/LAX transit Corridor Proj.
  - Regional Connector
  - Westside Extension (purple line Phases 1,2 and 3)
  - Foothills Extension Phase 2b
  - West Santa Ana Branch Line
  - East San Fernando Valley Extension
- **San Diego Trolley**
  - Midcoast Project
  - New Vehicle procurement Project
- **OC Streetcar** (New system)

Formal Requirements of CPUC General Order 164 and CPUC Program Standard

- Safety Certification required:

  2.17 **Major Projects** (Projects) means new rail systems or extensions, the acquisition and integration of new vehicles and safety critical technologies into existing service or major safety critical redesign projects, excluding functionally and technologically similar replacements.

  - RTAs advised to consult Staff during early planning to determine if formal SCP will be required.
  - No minimum project cost criteria is applied

General Order 164-E, Section 11- Requirements for Safety Certification Plan

- 11.2 Each RTA shall prepare a Project specific Safety Certification Plan (SC Plan) for each of its Projects. Applicable FTA guidelines shall be used as a reference.
- 11.3 Each RTA shall submit the SC Plan to Staff for review and Commission approval during the preliminary engineering phase. The RTA shall revise and expand the SC Plan as the Project progresses, as necessary. The RTA shall file any revision of the SC Plan with Staff. Within 45 calendar days, Staff shall approve or reject the proposed revisions.

General Order 164-E, Section 12- Requirements for Safety Certification Verification Report

- 12.1 Each RTA shall submit a Safety Certification Verification Report (SCVR) to verify Project compliance with the SC Plan.
- 12.2 Each RTA shall submit the SCVR to Staff at least 21 calendar days prior to the start of service. The SCVR shall certify that: (a) all requirements of the SC Plan have been completed except for listed open items, if any, (b) that all safety hazards have been adequately mitigated, and (c) adequate restrictions/workarounds are in place to ensure the safety of operations until open items are closed. Staff shall respond to the SCVR within 14 calendar days.

Practical application of CPUC General Orders and Program Standard

Program Standard

- Provides detail and structure to the SC process for Staff and RTA
- Includes the SC checklist Staff uses to evaluate the SC Plan content as an appendix.
- Discusses the use and purpose for the Safety and Security Certification Oversight Plan (SSCOP).
- Advises on recommended safety oversight activities and general expectations.

Safety Certification Oversight Plan (SSCOP)

In a SSCOP Staff indicates to the RTA tests and other activities that are selected for observations.

Examples of tests and other activities that may be selected are:

- a. Tests of newly installed automatic train control, block signaling and interlocking equipment;
- b. Initial testing of grade crossing warning devices;
- c. Simulation testing of automatic train control software and hardware elements;
- d. Brake rate testing and commissioning of new or refurbished transit vehicles;
- e. Emergency response drills;
- f. Safety training classes for certification / recertification;
- g. Internal safety and security audits; and
- h. Start-up testing and pre revenue operations prior to opening a new extension or major system modification.

Key Elements in Successful Project Safety Certification

- CPUC's process is based on FTA safety certification guidelines.
- Early Engagement is important
  - Environment Process – Notice of Preparation
  - For new systems and RTAs meet with them and explain the process
- Get involved in all the project meetings with the RTA and its contractors and other local authorities such as:
  - Project Planning meetings
  - Safety and Security Review Committee
  - Fire Life Safety Committee
  - Design review meetings – Crossings
- Once the project begins, attend the FTA Quarterly meetings and engage with the FTA Region team – SSOAs are their eyes and ears.

Key Elements in Successful Project Safety Certification

- Active engagement at Project meetings; take a proactive approach to issues and concerns.
- SSOAs may need to help RTAs and contractors over rough spots during the project.
- Site visits and observations of key activities are essential elements of SCP oversight.
- Observing testing and conducting inspections to verify activities and assure SCP compliance are helpful in keeping the contractor within the project requirements.
- As changes occur during the project lifecycle, the SC plan may need to be updated. (Once the CPUC approves the SCP, Staff may approve updates and revisions.)

California Public Utilities Commission

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CPUC Web Site - Rail Transit Safety Branch homepage:
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Capital Projects Safety Oversight

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WisDOT SSO Capital Projects Oversight

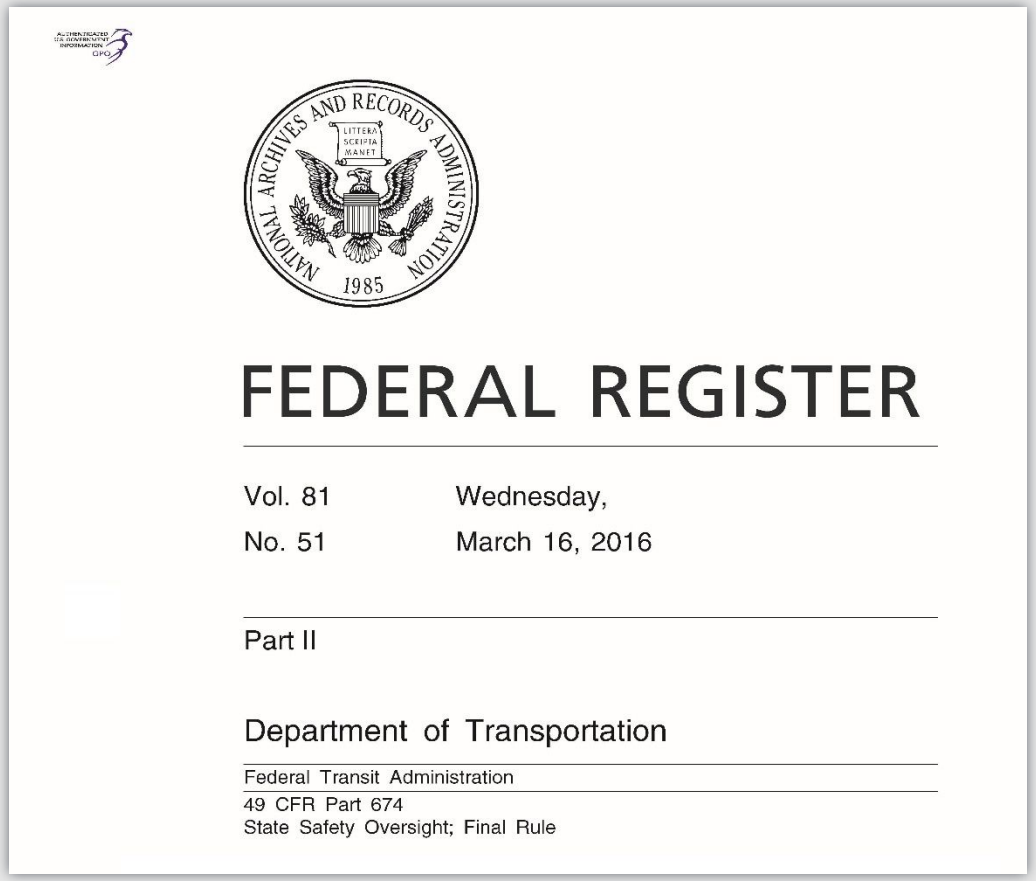
49 CFR Part 674 – Preamble (81 FR 14229)

One of the many benefits of SMS is that it is flexible; it does not impose a one-size-fits-all methodology. Rather, SMS can be tailored to the mode, size, and complexity of any transit agency in any operating environment.

Simply put, **SMS requires a transit agency to identify its own safety risks**, *and to target its human and financial resources to manage the potential consequences of those risks.*

WisDOT SSO Capital Projects Oversight

- Federal requirements
- RTA responsibilities
- SSO agency competencies



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Part II

Department of Transportation

Federal Transit Administration

49 CFR Part 674
State Safety Oversight; Final Rule

Federal Requirements

49 U.S.C. § 5329(e); 49 CFR Part 674

- Financial and legal independence from RTAs
- Does not provide transportation services in area
- Does not employ RTA administrative employees

Federal Requirements

49 U.S.C. § 5329(e); 49 CFR Part 674

- Can review, approve, oversee, and enforce PTASP
- Can investigate
- Audits systems against PTASP
- Provides annual status report

RTA Responsibilities

PTASP – 49 CFR Part 673

- Compendium of requirements for system safety program
  - Follow federal SMS framework for safety risk identification, analysis, mitigation, and communication

RTA Responsibilities

"SMS requires a transit agency to identify its own safety risks"

RTA Responsibilities

- Develop design, construction, and safety testing criteria, procedures, and plan
  - Review federal capital project rules and requirements
  - Communicate what you are going to do, who is going to do it, when they're going to do it, and what project completion and plan compliance is supposed to look like

SSO Agency Competencies

- Focused on an RTA's PTASP
  - Review
  - Approve
  - Oversee
  - Enforce

SSO Agency Competencies

Pre-Revenue Service Review (PRSR)

SSO Agency Competencies

- PRSR follows a “concurrence model”
  - Review RTA safety plan for capital projects
  - Oversee RTA compliance with its capital project safety plan
  - Concur with RTA self-certification of readiness to operate

SSO Agency Competencies

- PRSR derived from federal capital project review and approval
  - Review RTA project and construction management plans
  - Attend regular RTA project meetings during design, engineering, construction, and safety testing/pre-revenue phases
  - Review RTA safety certification verification report (SCVR), or equivalent

SSO Agency Competencies

Provide concurrence with RTA self-certification

- RTA is responsible to assess its own project risks
  - SSO agency and RTA communicate and work together to understand and manage those risks

In Review

- No SSO agency certification of RTA capital projects
  - This is outside SSO agency competency
  - RTA develops capital project plan
  - SSO agency reviews, approves, oversees, and enforces PTAS; oversees RTA's adherence to its capital project safety plan
- SSO agency concurs with RTA's self-certification
  - Pre-Revenue Service Report (PRSR)

Contact Information

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