

MINNESOTA DEPARTMENT OF PUBLIC SAFETY



Office of State Safety Oversight Light Rail Program 2016 Annual Report

Mission

The mission of the Office of State Safety Oversight (OSSO) is to ensure a safe and secure environment for riders and the general public who interact with the Light Rail Public Transportation System through collaborative partnerships, providing guidance, and conducting audits, reviews and inspections.

Overview

In 49 CFR Part 659, the Federal Transit Administration requires states with defined rail fixed guideway systems (including light rail and heavy rail transit, monorails, trolleys, etc.) to conduct safety and security oversight of those systems. In Minnesota, the Department of Public Safety is the designated agency for safety and security oversight of rail fixed-guideway safety systems.

The FTA requirement for the SSO focuses on system safety and security processes surrounding the Rail Transit Agency's System Safety Program Plan (SSPP) and Security & Emergency Preparedness Plan (SEPP). The Minnesota Rail Safety Oversight Program Procedures and Standards describes the minimum content that the Minnesota Rail Safety Oversight Program (MnRSOP) requires for these two plans, as well as associated procedures for reviewing those plans and assessing their implementation.

The overall objectives of the Office of State Safety Oversight are to reduce the potential for safety and security incidents and to increase safety and security awareness at the Rail Transit Agency (RTA). The Minnesota Procedures and Standards include minimum requirements for safety practices to reduce the likelihood of unintentional events that may lead to death, injury, or property damage, and security practices to reduce intentional wrongful, criminal, or terrorist acts.

Background

In July 2000, the U.S. Department of Transportation requested that the State of Minnesota designate an agency to establish safety requirements to comply with the State Safety Oversight Rule, 49 CFR 659. This designation was prompted by Federal Transit Administration approval and grant award for the Hiawatha Corridor Light Rail Line. In October 2000, the Department of Public Safety, Minnesota State Patrol was assigned the duties of State Safety Oversight.

The State Patrol's role included the oversight of a contractor with technical expertise to conduct project oversight, and develop the required documents to fulfill the requirements of 49 CFR 659. The State Patrol provided oversight for the design, construction, and revenue service phases of the Metro Blue Line (Hiawatha Line) and the design, construction, and revenue service phases of the Metro Green Line (Central Corridor).

In 2014, the State Legislature passed Minnesota Statute 299A.017 establishing the Office of State Safety Oversight (OSSO). On February 11, 2015, the OSSO was staffed by a program manager and began full-time oversight duties. Since that time, the OSSO has been directly involved in the Green Line Extension project (Target Field to Eden Prairie) and the Blue Line extension project (Target Field to Brooklyn Park). The OSSO plays a more active role in the day-to-day operations with Metro Transit.

Budget

The OSSO is staffed by a program manager and funded with \$60,000 state general funds and a \$240,000 federal match for a total budget of \$300,000; a 20 percent state funding and 80 percent federal match.

Performance Measures

The OSSO works primarily with the Metro Transit Rail Safety Department and the Metro Transit Police Department to accomplish the required objectives in the Federal Rule. Some of the activities include:

- Audits regarding specified elements in 49 CFR 659
- Assisting in investigations
- Metro Transit overall operations
- Security elements
- Hazard management and corrective action plans
- Involvement in safety functions
- Meetings with safety awareness groups and transit senior management

The OSSO oversees the safety certification process regarding the development of the Green Line (Southwest Corridor) and the Blue Line (Bottineau) extension projects. This includes oversight of the processes used by Metro Transit during the design phase, construction phase, and the pre-revenue service phase of the projects.

Accident Investigations

The Office of State Safety Oversight is required by the FTA SSO Final Rule, parts 659.33 and 659.35, to investigate certain accidents at the transit agency(s) it oversees. Under the Minnesota Rail Safety Oversight Program definition, accident means an incident meeting any of the following criteria:

1. A fatality at the scene or when an individual is confirmed dead within thirty (30) days of a rail transit-related incident;
2. Injuries requiring immediate medical attention away from the scene for two or more individuals;
3. Property damage to rail transit vehicles, non-rail transit vehicles, other rail transit property or facilities and non-transit property that equals or exceeds \$25,000;
4. An evacuation due to life safety reasons;
5. A collision at a grade crossing;
6. A mainline derailment;
7. A collision with an individual on a rail right-of-way; or
8. A collision between a rail transit vehicle and a second rail transit vehicle, or a rail transit non-revenue vehicle.

If any incident meets the criteria above, the transit agency must notify the MnRSOP within two hours of the occurrence. In accordance with Federal Transit Administration requirements, the MnRSOP “must investigate, or cause to be investigated, at a minimum” all reportable accidents (49 CFR Part 659.35). Currently the Transit Agency conducts its own investigation and submits the final report to the OSSO.

When the final report is received, the OSSO reviews the report to ensure a thorough description of investigation activities, causal and contributing factors are identified, and corrective actions are established and implemented, if applicable. After review and any changes, the OSSO formally approves and adopts the final investigation report and notifies the transit agency.

The light rail oversight program manager may assist the transit agency in investigations by interviewing operators, reviewing video footage and reviewing documents in the investigation file.

The following table displays a three year summary of train miles traveled and collisions at Metro transit. The table also displays the collision per 100,000 miles.

Light Rail Transit Collision Data Summary			
	Blue Line	Green Line	System Total
2014 Train Miles	2,777,851	1,419,416	4,197,267
2014 Collisions	16	27	43
2014 Collisions/100,000 Miles	0.58	1.90	1.02
2015 Train Miles	2,708,223	2,493,951	5,202,174
2015 Collisions	13	32	45
2015 Collisions/100,000 Miles	0.48	1.28	0.87
2016 Train Miles	2,777,097	2,548,548	5,325,645
2016 Collisions	13	24	37
2016 Collisions/100,000 Miles	0.46	0.94	0.69

The table below displays a three year summary of details regarding the type of collisions that have occurred at Metro Transit.

Light Rail Reportable Collision Details							
	Blue Line	Green Line	System Totals ⁽³⁾	Train	Motor Vehicle	Bicycle	Pedestrian
2014 No Damage/No Injury ⁽¹⁾	4	2	6	N/A ⁽²⁾	N/A	1	4
2014 Property Damage	8	20	28	N/A	N/A	0	0
2014 Personal Injury	2	4	6	2	4	0	3
2014 Fatality	2	1	3	0	0	0	3
2015 No Damage/No Injury	2	1	3	N/A	N/A	1	2
2015 Property Damage	6	23	29	N/A	N/A	0	0
2015 Personal Injury	4	6	10	0	3	1	6
2015 Fatality	1	2	3	0	0	1	2
2016 No Damage/No Injury	1	0	1	N/A	N/A	0	1
2016 Property Damage	7	17	24	N/A	N/A	1	0
2016 Personal Injury	4	7	11	0	8	0	5
2016 Fatality	1	0	1	0	0	0	1
<p>(1) No damage/No injury – is a reportable crash with no visible property damage/no visible personal injury/hit and run vehicle with no damage to the train.</p> <p>(2) N/A - indicates information not available.</p> <p>(3) System Totals - total reportable collisions to light rail system. Injury and fatality totals may reflect multiple injuries in one or more vehicles.</p>							

Corrective Actions and Hazards

The rail transit agency must have a Hazard Management Program and an approved Corrective Action Plan (CAP) Process that actively analyzes the agency's operating environment, policies and procedures, system modifications and extensions, and other areas that affect safety, for potential hazards. The hazard management process must identify, report, classify, resolve, and track safety hazards in a manner that is planned, consistent, and rigorous, as well as appropriate to the transit agency's size and operating situation.

Corrective action plans are required for deficiencies identified through the on-site safety and security review, accident and hazards investigations, internal safety and security reviews, or other means by which a hazard may be brought to the attention of transit system. The transit agency maintains the CAPS LOG and submits to the OSSO on a monthly basis. The program manager meets on a regular basis as well with the Safety Department to discuss items in the log. The program manager also reviews any items that have been added or completed and enters the data in the Federal Transit Reporting website on a log. Each month, after review, the program manager sends an approval letter to the transit agency identifying any changes to the log.

Corrective Action and Hazards			
	2014	2015	2016
Corrective Action Plans	53	35	45
Identified Hazards	27	5	7

On-Site Safety and Security Reviews

In accordance with the FTA's SSO Final Rule (Part 659.29), the Minnesota Rail Safety Oversight Program must, "at least every three years ... conduct an on-site review of the rail transit agency's implementation of its system safety program plan and security & emergency preparedness plan. Alternatively, the on-site review may be conducted in an on-going manner over the three year timeframe."

MnRSOP utilizes an ongoing review process intended to address all 21 safety and security review items within a three-year period. MnRSOP will conduct on-site assessments and reviews to determine transit system compliance with its own system safety program plan (SSPP) and its security & emergency preparedness plan (SEPP). MnRSOP's on-site reviews are conducted primarily by contractors who coordinate closely with both the MnRSOP Program Manager and the transit system's managers.

Upon completion of a triennial on-site safety and security review, or a significant portion of that review, MnRSOP will complete a written report, typically transmitted to the transit agency within 30 days after the on-site review. The report contains a summary of the review methodology, persons interviewed, records reviewed, and equipment/operations inspected. Depending on the outcome of the review, the report will also list any findings and observations that MnRSOP has identified.

Findings will include those items where the transit system is not in compliance with its own plans and procedures or with external guidelines with which it is bound to comply. Observations will include all other items, including those review results where MnRSOP has concluded that the transit system could improve its system safety program plan, security & emergency preparedness plan, procedures, or practices.

Internal Audits

MnRSOP also requires the transit agency to develop and document a process for the performance of ongoing internal safety and security audits to assess implementation of the system safety program plan and the security and emergency preparedness plan. The rail transit agency must notify MnRSOP at least 30 days before conducting internal safety and security audits. The transit agency must also provide written checklists for each audit 30 days before on-site audit activity. MnRSOP may request to participate in transit agency internal audits from time to time each year, the transit agency must submit to MnRSOP a report of all safety and security internal audits performed in the previous calendar year. The final written report must be submitted to MnRSOP on or before February 1 of each year. Within 30 days of receipt, MnRSOP will issue a written response either accepting or rejecting the annual RTA safety and security audit report.

If MnRSOP rejects the report, the transit agency will address noted deficiencies and requested changes in the report and submit a revised report to MnRSOP within the timeframe specified by MnRSOP, typically 15 days. MnRSOP, at its discretion, may arrange for a meeting with the transit agency to discuss the noted deficiencies and requested changes. Once approved, a final version of the report must be submitted in an unalterable format with all transit agency approval signatures visible.

The following table shows the triennial audits required by 49 CFR 659 and the year in which the element is scheduled.

Triennial Audit Schedule

1. Policy Statement	2014
2. Goals & Objectives	2014
3. Management Structure	2014
4. SSPP Change Control	2014
5. SSPP Implementation Activities	2014
6. Hazard Management Program & CAPs	2016
7. System Modifications	2016
8. Safety Certification	2016
9. Safety Data	2014
10. Accident Notif., Invest., Rptg.	2016
11. Emergency Management (see also security) (POETE)	2016
12. Internal Safety Reviews	2016
13. Rule Compliance, Mtc., Checks	2015
14a. Facil. & Equip. Safety Inspections: Structures	2016
14b. Facil. & Equip. Safety Inspections: Stations	2015
14c. Facil. & Equip. Safety Inspections: Maintenance	2015
15a. Maintenance Audits & Insp.: Track	2016
15b. Maintenance Audits & Insp.: Signals	2016
15c. Maintenance Audits & Insp.: Power	2014
15d. Maintenance Audits & Insp.: Vehicles - General (LRV)	2015
15e. Maintenance Audits & Insp.: Vertical Transp.	2016
15f. Maintenance Audits & Insp.: Communications	2016
16. Employee & Contractor Training	2016
17. Configuration Management	2016
18. Employee & Contractor Safety	2014
19. Hazardous Materials	2014
20. Drug & Alcohol Program	2016
21. Procurement	2014
SEPP Audit Elements	
1: Policies, goals, objectives, chief executive endorsement	2015
2: System Description	2015
3: SEPP Management Activities	2015
4: SEPP Program (Personal Security) A2	2015
5: Threats and vulnerabilities management	2015
6: Implementation of the SEPP	2015
7: SEPP and Accompanying Procedures access for oversight agency	2015
8: Corrective Action Plan (CAP) process	2015
Drills/Exercises	2015
Other Audit Elements	
Tunnel Ventilation System	2015