Metro Transit

LIGHT RAIL TRANSPORTATION

AGENCY SAFETY PLAN

REVISION 3

JULY 2022

Safety Governance Statement

Metro Transit has a long-standing practice of maintaining a System Safety Program Plan SSPP for all three of its modes: light rail, commuter rail, and bus. We have had 16 versions of the Light Rail (LRT) SSPP not only because it was a requirement of 49 CFR 659, but because it is good business practice and promotes a safety-minded corporate culture. Our LRT SSPPs – and, by extension this Agency Safety Plan – document how safety is integrated into our operation and supporting activities.

In 2018, FTA published 49 CFR 673, the Agency Safety Plan (ASP) rule. That rule requires that all modes not overseen by another regulatory agency (e.g., FRA) must be governed by an agency safety plan. We believe that mode-specific ASPs make the most sense and since the rule allows transit agencies to develop ASPs that are mode-specific, we have elected to apply that approach.

This LRT ASP has been developed to comply with 49 CFR 673. We have worked with the Office of State Safety Oversight in developing and refining this plan in accordance with its own Procedures and Standards. Future revisions of this document will reflect ongoing FTA guidance. Metro Transit continues to embrace its philosophy that safety is the cornerstone of what we do.

POLICY STATEMENT AND AGENCY SAFETY PLAN AUTHORITY

Metro Transit recognizes management of safety as a core agency function. Metro Transit is dedicated to planning, designing, constructing, operating and maintaining transportation systems that optimize the safety of passengers, employees, consultants, contractors, emergency responders, and the public. Accountability for safety begins with the Accountable Executive and permeates all levels of Metro Transit employees, including consultants and Transit Contractor employees. The following safety objectives reflect Metro Transit's overarching safety goals and demonstrate commitment to establishing, implementing, and continually improving Safety Management Systems (SMS):

- Integrate safety management into the primary responsibilities of all employees;
- Support SMS through allocation of resources and promotion of a safety culture that facilitates safe practices and effective employee safety reporting and communication;
- Define roles and responsibilities for all employees that contribute to safety performance and SMS;
- Implement risk-based hazard management consistent with risk acceptance levels;
- Operate an employee safety reporting program that ensures no action will be taken against any employee who discloses a safety concern unless disclosure indicates beyond reasonable doubt an illegal act, gross negligence, or a deliberate disregard of regulations or procedures;
- Comply with or exceed legislative and regulatory requirements and industry standards;
- Ensure systems and services that support operations meet or exceed agency safety standards;
- Require safety information and training to ensure all employees are competent in safety management for tasks allocated to them;
- Establish and measure safety performance against data-driven safety performance targets; and
- Continually improve safety performance and implementation of SMS.

By applying SMS as outlined above and detailed in this Agency Safety Plan (ASP), Metro Transit commits to making safety the top priority of all its operations. Metro Transit will achieve an optimum level of safety through a cooperative effort in compliance of this ASP.

Wes Kooistra
General Manage, Metro Transit

Date Signed

Table of Contents

Revision	Revision Date	Comments
Revision 0	July 2019	Initial publication of the Rail ASP
Revision 1	April 2020	Safety Governance Statement wording modified to reflect current status; Sec.1.1: Updated version of OSSO Procedures & Standards; Sec.1.5: clarified Met. Council role in approving ASP and updated Org. Charts as required; Sec.1.5.2.3: added wording to include construction support and contracted personnel; Sec.1.6: clarified timeline for annual review and approval process; Throughout document: changed SSOA to OSSO to reflect current nomenclature.
Revision 2	July 2021	Sec. 1.3: Updated system description. Sec 1.5: Updated Org Charts, Figure 4 Page 15 and Figure 5 Page 21. Sec. 2.1.2: Added language specifying protections to employees who report hazards. Sec. 3.1: Added language regarding specific Safety Performance Targets. Sec. 3.5: Clarified language regarding disciplinary action. Sec 3.9: Corrected name of LRT Internal Audit Plan. Sec. 4.2: Updated language regarding emergency responder inspections to reflect actual practice. Sec. 4.3: Added Powered Industrial Truck Program and Mobile Elevated Work Platform Plan.
Revision 3	July 2022	Updates throughout plan from the Bipartisan bill Added ASP Development, Approvals, & Certification sheet. Sec. 1.1: Updated to include current approval groups. Sec. 1.5: Update organizations charts. Sec. 1.7: SMS documentation & records added. Sec. 2.1: Updated hazard Severity, hazard likelihood, and hazard categories charts to reflect current information. Sec. 2.1.7: Update CAP creation and tracking process. 3.1: Added "Safety Events" as part of the data collection process. Sec. 3.2.5: Added Health and Safety hazard section. Sec. 3.7: Updates to council policies to reflect current policy.

Agency Safety Plan Development, Approvals, & Certification

Signature of Accountable Executive/Certification of Compliance	"This certifies that Metro Transit has established a Public Transportation Agency Safety Plan meeting the requirement of 49 CFR Part 673."	
	Wes Kooistra General Manager, Metro Transit	Date Signed
Signature of the Chief Safety Officer		
	Andrew Brody Director, Bus and Rail Safety, Metro Transit	Date Signed
Office of State Safety Oversight		
	Tim Rogotzke Light Rail Program Manager, Minnesota Department of Public Safety	Date signed
Approval by the Board of Directors	This Agency Safety Plan was approved by the Metropolitan Council.	
		Date Approved
Approval by the Joint Labor-Management Safety Committee	This Agency Safety Plan was approved by the Joint Labor-Management Safety Committee	
		Date Approved
Entity that Drafted this Agency Safety Plan	Metro Transit Safety	

1. Safety Management Policy

1.1 PURPOSE AND SCOPE OF THE LIGHT RAIL TRANSPORTATION AGENCY SAFETY PLAN

The Light Rail Transportation Agency Safety Plan (ASP) has been developed to provide Metro Transit with a comprehensive safety outline for integration of a safety culture throughout the organization. It includes or references current safety policies, procedures and activities that have been designed and implemented to maximize safe operation and ensure that all required regulatory demands and agency safety requirements are satisfied. The ASP also identifies Metro Transit policies and procedures that will be developed and implemented to meet light rail safety requirements.

The ASP was developed under the authority and direction of the State Safety Oversight Agency, which resides in the MN Department of Public Safety. The MN Department of Public Safety established the Office of State Safety Oversight in Minnesota State Statue 299A.017. This Plan has been developed in accordance with the Office of State Safety Oversight Procedures and Standards. This plan was also approved by the Office of State Safety Oversight, Metropolitan Council Board members, Joint Labor Management Safety Committee (JLMSC), implemented under Metro Transit authority and accepted by the General Manager.

The ASP documents how Metro Transit incorporates system safety into its operations. The ASP is a useful management tool which identifies both corporate and departmental safety procedures and provides a clearly defined method for maintaining a high degree of management control for all safety responsibilities, at all levels within the agency.

The intent of the ASP is to promote a formalized systemwide safety philosophy. To ensure agency acceptance and clearly defined departmental safety responsibility, management representatives from all departments within the organization contributed to the formulation, development and implementation of this Plan.

The implementation and distribution of this Plan throughout Metro Transit will assist in assuring that safety is included in all aspects of daily operations including, but not limited to, administration, management, bus and rail operations, maintenance of vehicles, equipment and physical plant, design, construction, procurement, abatement and disposal activities. The Metro Transit Bus ASP and Commuter Rail System Safety Program Plan are companion documents to this Rail ASP. The Rail ASP describes how system safety is incorporated into Metro Transit's Light Rail operations.

1.2 GOAL AND OBJECTIVES FOR THE RAIL SYSTEM SAFETY MANAGEMENT PROGRAM

1.2.1 Goals

Metro Transit's system safety goal is to provide passengers, employees and those who come in contact with the rail transportation system, the highest degree of safety that is practical. This goal involves the development, implementation and maintenance of a light rail safety effort comprising strategy and tactics to improve the safety performance of Metro Transit. This Light Rail Agency Safety Plan is directed towards achieving this goal within Metro Transit's mission.

1.2.2. Objectives

The objectives of the Rail ASP support and achieve the system safety goal. Properly implemented, the safety management systems processes documented herein will provide for:

- Performance commensurate with the rail transit industry; directly operated NTD metrics in fatalities, injuries, incidents and reliability
- Identification and elimination or control of hazards to employees, to patrons or to the public
- A working environment which meets or exceeds all government and industry occupational health and safety standards and practices
- Investigation of all major accidents/incidents and identification and documentation of accident causes, for the purpose of implementing corrective action to prevent recurrence
- Effective emergency response by Metro Transit and public safety agencies
- Integration of safety and hazard control measures into all Metro Transit department and division activities. Detailed maintenance activities can be found in the Rail Systems Maintenance Plan and the LRT System Fleet Management Plan.

Where incidents, audits, or observations indicate that the goals or objectives of this plan are clearly not being met, the Safety Department coordinates discussion with involved departments and develops action plans for follow up and correction.

1.3 SYSTEM DESCRIPTION/ORGANIZATIONAL STRUCTURE

Metro Transit provides transportation services to customers within the Twin Cities metropolitan area using a network of bus, light rail and commuter rail routes, employing over 3,000 employees (over 350 of them assigned to LRT), and based out of 12 major administrative, operations and maintenance facilities.

Metro Transit provides light rail transportation services to customers within the Twin Cities metropolitan area through the LRT Blue and Green Lines. The Blue Line provides rail service originating in downtown Minneapolis, through a 1.6-mile tunnel under the Minneapolis St. Paul International Airport to the Mall of America in Bloomington (see Figure 1 for the Blue Line system map). The Blue Line was the first leg of a planned network of light rail, commuter rail and transit corridors to serve the Twin Cities region, opening in 2004. The Green Line opened in June 2014 and links downtown Minneapolis with the University of Minnesota, the Midway

area, the state Capitol complex, and downtown St. Paul. It connects with the existing Blue Line near downtown Minneapolis, sharing the existing corridor to its terminus at Target Field Station (See Figure 2 for the Green Line system map.)

	BLUE LINE	GREEN LINE
MILEAGE	12	11
STATIONS – AT GRADE	15	18
STATIONS – ELEVATED	3	0
STATIONS - UNDERGROUND	1	0
SUBSTATIONS	19	14
MAINTENANCE FACILITIES	2	1
END TO END TRAVEL TIME (MINUTES)	40	45
PEAK HEADWAYS (MINUTES)	10	10
RIDERSHIP (2021)	4,547,985	16,124,569

Fare collection on light rail is self-service/barrier-free proof of payment and Metro Transit Police officers are responsible for fare inspection and enforcement.

The light rail vehicle fleet consists of 27 Bombardier, BOC-LF-70 (70 percent low floor light rail vehicles) and 64 Siemens S70 (70 percent low floor light rail vehicles), with an additional 27 S70 vehicles being delivered as part of the Green Line extension (see below). The vehicle propulsion is powered by 750 VDC from overhead power lines. The vehicles are equipped with closed circuit TV cameras on board and outward facing cab cameras for digital recording.

The LRT Rail Control Center (RCC) includes a Supervisory Control and Data Acquisition System (SCADA) to monitor train location, track, systems, and alarms. SCADA also allows for control of substation breaker applications and monitors substation critical alarms. The Rail Control Center facility is located at the Blue Line Operation and Maintenance facility in Minneapolis, with an Emergency Backup Center located in St. Paul.

The radio system is the regional 800 MHz trunked network. This radio system supports normal and emergency radio communications and is compatible with most of the regional emergency services radio networks.

On the Blue Line, the signal system is an automatic block system, with Train to Wayside (TWC) communication and highway grade crossing warning equipment. Most of the Green Line is street trackage with signaled interlocking at periodic intervals.

Maintenance and operating facilities include the Blue Line Operating and Maintenance (Minneapolis O&M) building; the Rail Support Facility, and the Green Line Operating and Maintenance Facility (St. Paul OMF).

Metro Transit provides commuter rail service between Big Lake and downtown Minneapolis, terminating at Target Field Station, where it connects with busses and both Blue and Green Line LRT. The commuter railroad operates over Burlington Northern Santa Fe (BNSF) tracks, which are part of the general railroad system regulated by FRA. Rolling stock for this service includes six locomotives and 18 coaches (including 6 cab cars) for push-pull service.

Metro Transit has secured a Full Funding Grant Agreement (FFGA) status on the Southwest Corridor LRT (Green Line Extension). The Green Line Extension will connect to the existing Light Rail System at Target Field Station and extend light rail service to St. Louis Park, Hopkins, Minnetonka, and Eden Prairie. The Federal Transit Administration (FTA) has also approved the Blue Line Extension to enter the Project Development phase. The Blue Line Extension will serve downtown Minneapolis, north Minneapolis, Golden Valley, Robbinsdale, Crystal, and Brooklyn Park, although that project is currently delayed. As with the Operating LRT lines, the Green Line extension and the Blue Line extension would be governed by this ASP at the point they were commissioned for revenue service.

Figure 1 Blue Line LRT Alignment

Figure 2 Green Line LRT Alignment

1.4 DEFINITIONS

1.4.1. Accident: FTA defines an accident as an event that involves any of the following: A loss of life; a report of a serious injury to a person; a collision of public transportation vehicles; 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.

For purposes of Metro Transit Rail Operations an accident will include but not be limited to events arising out of the operations of the Light Rail Train, such as vehicle collisions when contact is made with another vehicle, equipment, person, bike, or other object, and customer trips and falls on LRT premises.

1.4.2. Accountable Executive means a single, identifiable person who has ultimate responsibility for carrying out the Public Transportation Agency 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.

1.4.3. Chief Safety Officer means an adequately trained individual who has responsibility for safety and reports directly to a transit agency's chief executive officer, general manager, president, or equivalent officer.

1.4.4. Hazard means 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 public transportation system; or damage to the environment.

1.4.5. Hazard Risk means the composite of predicted severity and likelihood of the potential effect of a hazard.

1.4.6. Hazard Risk mitigation means a method or methods to eliminate or reduce the effects of hazards.

1.4.7. Incident (FTA SMS definition) means 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 transit agency.

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

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

1.4.10. Public Transportation Agency Safety Plan means the documented comprehensive agency safety plan for a transit agency that is required by 49CFR673.

1.4.11. Safety means the freedom from harm resulting from unintentional acts or circumstances.

1.4.12. Safety Assurance means processes within a transit agency's Safety Management System that functions to ensure the implementation and effectiveness of safety risk mitigation.

1.4.13. Safety Management Policy means a transit agency's documented commitment to safety, which defines the transit agency's safety objectives and the accountabilities and responsibilities of its employees in regard to safety.

1.4.14. Safety Management System (SMS) means the formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of a transit agency's safety risk mitigation. SMS includes systematic procedures, practices, and policies for managing risks and hazards.

1.4.15. Safety Promotion means a combination of training and communication of safety information to support SMS as applied to the transit agency's public transportation system.

1.4.16. Safety Risk Management means a process within a transit agency's Public Transportation Agency Safety Plan for identifying hazards and analyzing, assessing, and mitigating safety risk.

1.4.17. Security means the freedom from harm resulting from intentional acts or circumstances.

1.4.18. Serious injury (FTA SMS definition) means any injury which: (1) Requires hospitalization for more than 48 hours, commencing within 7 days from the date of the injury was received; (2) Results in a fracture of any bone (except simple fractures of fingers, toes, or noses); (3) Causes severe hemorrhages, nerve, muscle, or tendon damage; (4) Involves any internal organ; or (5) Involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

1.4.19. State of good repair means the condition in which a capital asset is able to operate at a full level of performance.

1.4.20. System Safety means the application of engineering and management principles, criteria, and techniques to achieve acceptable risk, within the constraints of operational effectiveness throughout the system and throughout the life cycle of the system.

1.4.21. Transit Asset Management Plan means the strategic and systematic practice of procuring, operating, inspecting, maintaining, rehabilitating, and replacing transit capital assets to manage their performance, risks, and costs over their life cycles, for the purpose of providing safe, cost-effective, and reliable public transportation.

1.5 SAFETY ROLES AND RESPONSIBILITIES

The Metropolitan Council is the legislative decision-making body for Metro Transit. Metro Transit is the transportation agency of the Metropolitan Council organization. Transit responsibilities of the Metropolitan Council include:

- Policy direction and governance
- Legislative coordination on topics of interest to Metro Transit
- Policy calendar for future board actions
- Interpretation of views of the region's citizens, Metro Transit customers, and local communities into board policies.
- Annually approve the Metro Transit ASP.

The top levels of the Metro Transit organization, as shown in Figure 3, include the General Manager, Director of Capital Projects, Chief Operating Officer (COO), and directors of Safety, Police & Security Services Engineering & Facilities, Service Development, Strategic Initiatives, Marketing & Customer Service, and Transit Oriented Development.

Metro Transit has many safety roles and responsibilities provided by each Metro Transit department. To ensure that LRT operations are conducted in the safest manner possible, all transit system personnel have been assigned safety responsibilities. The following sections identify key safety roles.

All Metro Transit employees have the responsibility to serve as the eyes and ears of the transit system and report safety issues. They are expected to report safety hazards to their immediate supervisor or to the Rail Control Center.

Figure 3

Metro Transit Executive Division

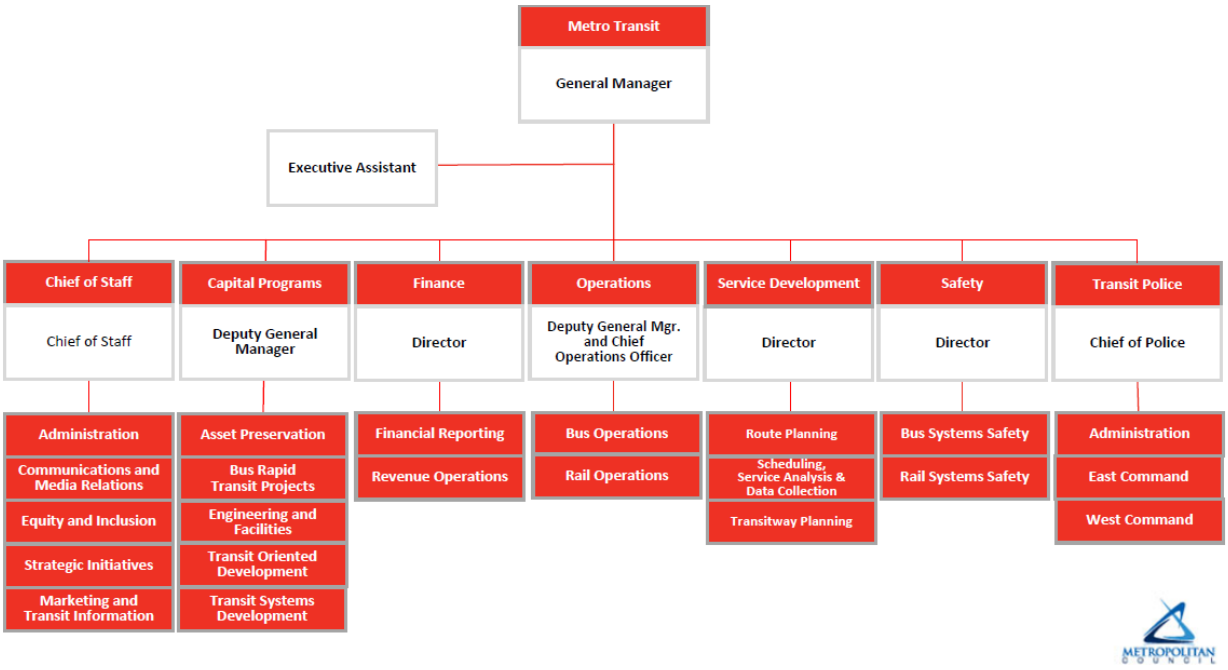
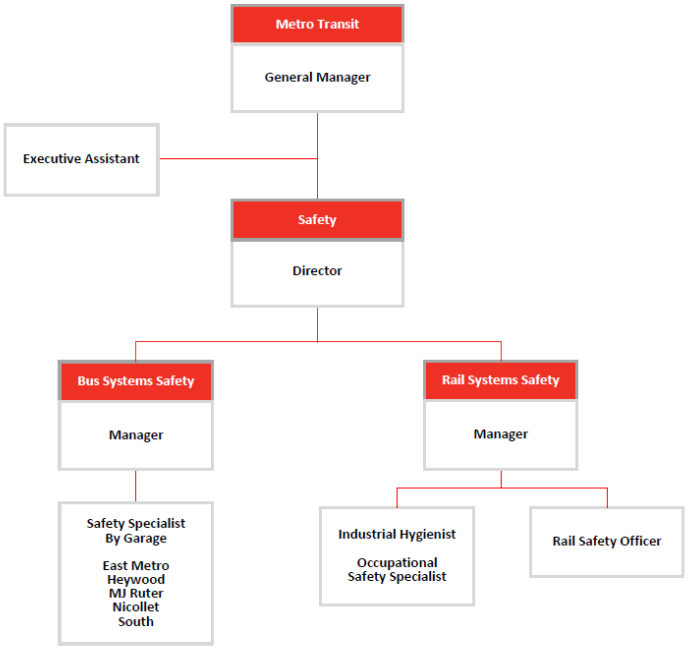


Figure 4

Metro Transit Safety Department



1.5.1 Safety Department

1.5.1.1 Director of Rail and Bus Safety

The Director of Rail and Bus Safety for Metro Transit reports to the General Manager, and manages the Safety Department, as shown on the organization chart in Figure 4. The Director of Rail and Bus Safety acts at the discretion of the General Manager in matters of safety and is the primary contact with state and federal safety agencies. This position is Metro Transit's Chief Safety Officer as defined in this ASP.

The Director of Rail and Bus Safety is responsible for direction and leadership of Safety Department staff in the following activities:

- Performing safety planning activities including system safety, construction safety and safety certification
- Conducting safety audits
- Maintaining liaison with public safety agencies and oversight agencies for emergency response planning, emergency procedures and disaster drills
- Ensuring compliance with federal, state and local laws and regulations
- Conducting appropriate investigations and developing reports
- Developing and conducting training programs to reduce/eliminate preventable accidents and expand awareness of safety procedures
- Implementing the safety certification program
- Implementing the Rail and Bus Agency Safety Plans
- Analyzing, monitoring and updating policies, procedures and plans to promote a safe working environment
- Reviewing engineering designs prior to construction of new facilities or systems, or modifications to the existing rail system
- Reviewing and approving safety education programs
- Integrating system safety considerations into bus and rail operations, new design, and construction
- Developing and implementing rail and bus safety programs to include accident prevention and investigation, hazard identification and resolution, and emergency preparedness
- Convening ad-hoc safety committees as appropriate.

1.5.1.2. Manager of Rail System Safety

The Manager of Rail System Safety supervises the Rail Safety Officers, the Industrial Hygienist and the Occupational Safety Specialist. Job responsibilities include:

- Developing, implementing and recommending safety programs to the Director of Rail and Bus Safety to maximize safe and healthy working conditions for employees and or to maximize public and passenger safety
- Remaining vigilant for novel approaches to promote safety
- Providing leadership and direction to the Rail Safety Officers
- Ensuring regulatory compliance and providing training, including preparation of necessary reports
- Reviewing engineering designs prior to construction of new facilities or systems, or modifications to the existing rail system
- Assisting with implementation of the safety certification program
- Coordinating safety department investigations of rail accidents
- Providing regular safety reports to the Director of Rail and Bus Safety concerning accidents, incidents, and occupational health and safety issues
- Maintaining the Consolidated Hazard matrix for rail mode
- Conducting safety audits
- Researching and investigating other industry practices
- Managing and implementing rail safety awards and safety incentive programs
- Assisting in preparing communications for publications
- Coordinating implementation and updates of the Light Rail ASP and Commuter Rail SSPP and other related rail plans.

1.5.1.3. Bus System Safety Manager

The Manager of Bus System Safety supervises the Safety Specialists. Job responsibilities include:

- Developing, implementing and recommending safety programs to the Director of Rail and Bus Safety to maximize public and passenger safety
- Remaining vigilant for novel approaches to promote safety
- Providing support of the industrial hygienist, the occupational safety specialist and safety specialists
- Ensuring regulatory compliance and providing training, including preparation of necessary reports
- Reviewing engineering designs prior to construction of new facilities or systems, or modifications to existing system elements
- Coordinating safety department investigations of bus accidents
- Maintaining the Consolidated Hazard matrix for bus mode
- Assisting with implementation of the safety certification program

1.5.1.4. Rail Safety Officers

The Rail Safety Officers report to the Manager of Rail System Safety and supports the Rail Safety Program. Duties include:

- Identifying, prioritizing and resolving safety hazards
- Investigating accidents and incidents, as appropriate
- Preparing required regulatory reports
- Performing safety analyses as required
- Performing design review of rail systems and facilities
- Performing safety audits and inspections of facilities to ensure compliance with local, state and federal codes and regulations
- Participating in safety certification including design, construction, integrated tests, emergency drills and training
- Conducting and supporting FTA-mandated safety audits
- Chairing the Workplace Accident & Injury Reduction Committee (AWAIR) at the Rail facilities
- Recording all rail work injuries on OSHA 300 logs
- Developing and monitoring safety goals in the rail division
- Developing and overseeing periodic safety related drills in the rail division
- Participating in Fire/Life Safety Committee meetings
- Administering the rail safety awards programs

1.5.1.5. Industrial Hygienist

The Industrial Hygienist reports to the Manager of Rail and Bus Safety and is responsible for the following:

- Developing, administering and issuing standards, policies and procedures in order to protect employees from health hazards associated with their workplace
- Assuring that Metro Transit is in compliance with OSHA Hazard Communication Standards and Minnesota Right-to-Know regulations
- Developing and conducting annual Right-to-Know training programs for employees
- Providing technical assistance and support in controlling employee exposure to hazardous chemicals and harmful physical agents
- Evaluating worksites and providing coaching in ergonomics
- Conducting safety surveys
- Monitoring effectiveness of ventilation systems
- Assisting with classifying confined space air monitoring requirements and equipment calibration.
- Anticipating and analyzing impact of proposed safety regulations on Metro Transit
- Chairing the Workplace Accident & Injury Reduction Committee (AWAIR) at the Overhaul Base
- Recording all work injuries on OSHA 300 logs and providing technical expertise on construction site safety

- Working with and assisting Occupational Safety Specialist when required.

1.5.1.6. Occupational Safety Specialist

The Occupational Safety Specialist reports to the Manager of Rail and Bus Safety and is responsible for the following:

- Developing, administering and issuing standards, policies and procedures protecting employees from health hazards associated with their workplace
- Assuring that Metro Transit is in compliance with federal and State OSHA General Industry and Construction Standards and regulations
- Assisting the Industrial Hygienist with the developing and conducting annual Right-to-Know training programs for employees and as otherwise required
- Providing technical assistance and support for confined space, machine guarding, lock out tag out and fall protection.
- Evaluating worksites and providing coaching in ergonomics
- Conducting safety surveys
- Anticipating and analyzing impact of proposed safety regulations on Metro Transit
- Chairing the Workplace Accident & Injury Reduction Committee (AWAIR) at the Transfer Road Facility
- Recording all work injuries on OSHA 300 logs and providing technical expertise on construction site safety

1.5.1.7. Bus Safety Specialists

Bus Safety Specialists are assigned to each Metro Transit operating garage and one is designated as the System Safety Specialist. The Safety Specialists report to the Manager of Bus Safety. Duties include:

- Identifying, prioritizing and following up on the resolution of safety hazards
- Observing drivers and mechanics and ensuring that they are following safety policies and procedures
- Evaluating new bus operators' performance and transferring bus operators' performance as appropriate
- Investigating bus and other company vehicle accidents objectively to determine causal and contributing factors, including responsibility
- Assisting managers and supervisors in investigating industrial accidents
- Conducting operator safety conferences
- Monitoring corrective action implementation and their effectiveness
- Requesting Ride and Trail Checks for operators to identify unsafe driving practices and procedures
- Reviewing bus operators' safety records with Transportation Managers
- Developing and conducting safety-training sessions for employees and the public

- Performing safety audits and inspections of facilities to ensure compliance with local, state and federal codes and regulations
- Recording all work injuries on OSHA 300 logs and assist supervisors with employee injury investigations
- Administering the bus safety awards programs
- Chairing the AWAIR Committee at their respective garages.

1.5.2. Other Metro Transit Divisions

All levels within the Metro Transit organization have defined roles and responsibilities for safety.

1.5.2.1. General Manager

The Metro Transit General Manager is responsible for ensuring Metro Transit's commitment to safety. This position is the agency's Accountable Executive as defined in this plan. This responsibility includes:

- Promulgating the safety policy for Metro Transit.
- Signs this ASP as Accountable Executive and presents same to the Metropolitan Council for annual approval.
- Delegating to the Director of Rail and Bus Safety the responsibility and authority for implementation of the Metro Transit Bus, Northstar, and LRT ASPs.
- Incorporating safety awareness into all management decision-making activities
- Recommending and approving the financial resources needed to ensure the safety of Metro Transit customers
- Maintaining in Metro Transit an awareness of the need for safety of Metro Transit customers, employees and the members of the public with whom we interact
- Continuously reviewing, monitoring, and addressing safety issues
- Funding training and education for Metro Transit employees needed to ensure safety for customers and employees
- Fostering interagency and intergovernmental cooperation and agreements needed to ensure that safety issues are well coordinated
- Ensuring ongoing communication about safety related matters with customers, employees, Union leadership, elected officials, FTA, and civic groups.

1.5.2.2. Chief Operating Officer, Deputy Chief Operating Officers

These executive level managers support and assist the General Manager in fulfilling their departmental responsibilities. They provide leadership in ensuring Metro Transit's commitment to safety and set an example to others. Responsibilities are outlined below by department.

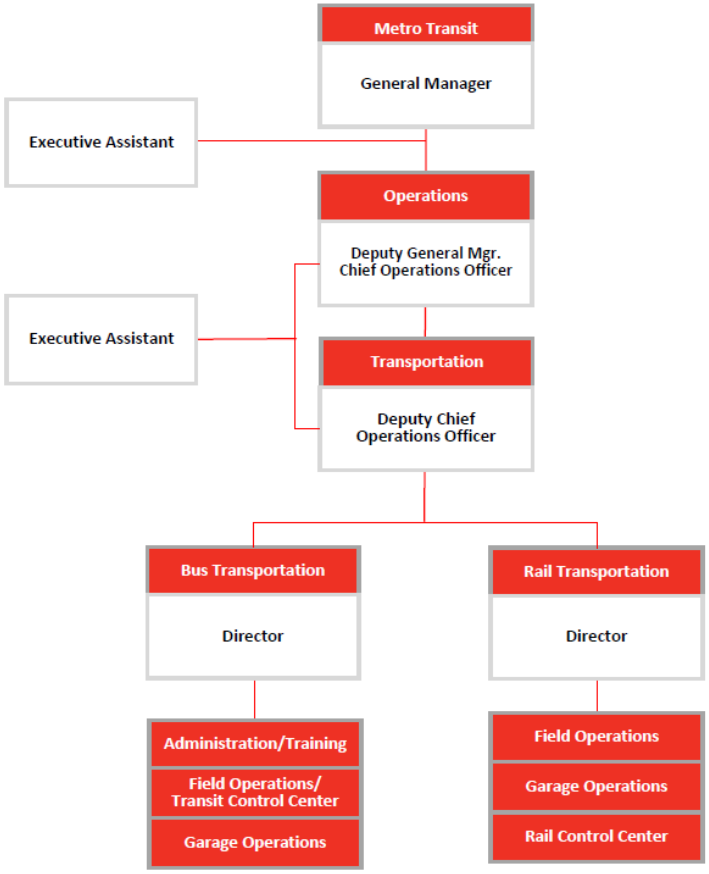
1.5.2.2.1. Rail Operations

The Rail Operations Division includes Rail Maintenance and Rail Transportation (Figure 5) up to and including the COO. Safety responsibilities include:

- Investigating accidents and collecting data to assist with identifying causes and eliminate hazards
- Training new and current rail operators in safe rail operations
- Ensuring that employees have the training and equipment to perform their jobs safely
- Enforcing safety rules
- Conducting monthly safety meetings; disseminate safety materials and information to employees
- Issue safety equipment and ensure its proper fit and use
- Training personnel in safe operations of the trains, safe standard operating procedures and ensuring that operating staff attend required OSHA training
- Ensuring that quality control is reflected in all equipment maintenance activities
- Participating in emergency preparedness exercises
- Working with the Director of Rail and Bus Safety, establishing safety goals and objectives for the department
- Correcting unsafe conditions and practices
- Involving safety in design and construction of new systems, trains and equipment
- Maintaining current operating rules and procedures and disseminating these to employees, as appropriate
- Incorporating rail operator safety considerations in the development of new rail specifications and rail schedules
- Establish and maintain a configuration management process
- Supporting the safety certification program
- Supporting internal audits.

Figure 5

Metropolitan Council Metro Transit Operations



1.5.2.3. Engineering & Construction and Facilities Maintenance Departments

These departments provide engineering, construction, and maintenance for Metro Transit support and public facilities, including Rail Operations and Maintenance facilities, LRT stations, offices, park and ride lots and structures, transit centers and passenger shelters throughout the metropolitan area. Safety responsibilities include:

- Establishing and maintaining a configuration management process for facilities and facility systems
- Ensuring that facilities are designed and constructed with a strong emphasis on safety using established engineering practices and standards
- Ensuring that employees and contracted personnel have the training and equipment to perform their jobs safely
- Ensuring that facilities are maintained in safe operating condition
- Participating in the "A Workplace Accident and Injury Reduction" (AWAIR) Program
- Issuing safety equipment and ensuring its proper use

- Training personnel in safe procedures and ensuring attendance at OSHA required training
- Ensuring that quality control is reflected in all facility maintenance activities
- Participating in emergency preparedness exercises
- Establishing safety goals and objectives for the department
- Correcting unsafe conditions and practices
- Involving the Safety Department in design and construction of new systems, and facilities.

1.5.2.4. Transit Systems Development Department

This department provides design, engineering and construction oversight of all new fixed guideways for LRT and BRT (New Starts Projects). Responsibilities include:

- Involving the Safety Department, Rail Operations and Bus Operations in design and construction of new systems, and facilities
- Establishing and maintaining a configuration management process via a Configuration and Change Control Management Plan that incorporates system safety items
- Developing a Safety and Security Management Plan for each New Starts project
- Developing a Safety & Security Certification Plan for each project
- Conducting a Preliminary Hazard Analysis (PHA) and Threat and Vulnerability Analysis (TVA) for New Starts Projects in conjunction with the Metro Transit Safety Department, Rail Ops, Bus Ops and public safety agencies
- Completing a Design and Construction Safety Certification Process for each project
- Providing administrative support for the Safety Review Committee for each project
- Providing administrative and technical support for generating the final Safety & Security Certification Verification Report (SSCVR) for each project
- Participating in emergency preparedness exercises
- Establishing a Construction Safety Manager reporting directly to the Deputy General Manager and working in collaboration with the Safety Department to ensure staff compliance with Metro Transit, State and Federal rules and regulations
- Administrative support for the Safety Review Committee.

1.5.2.5. Administration

Administration includes service development, finance, customer services and marketing, materials management systems, and grants administration.

- Ensuring that service is planned and developed with a strong emphasis on safety using industry standards and best practices
- Incorporating rail operator safety issues in the development of rail schedules.
- Disseminating safety programs to the public

1.5.2.6. Human Resources

Human Resources reports to the Deputy Regional Administrator of the Metropolitan Council. Safety responsibilities include:

- Administering the Drug and Alcohol Program
- Administering pre-employment and fit-for-duty physicals and the Medical Monitoring Program
- Recruiting and selecting employees who will have safe attitudes and the ability to perform their duties safely
- Planning and administering New Employee Orientation (NEO).

1.5.2.7. Risk Management

The Risk Management Department is the official custodian of all claims and liability data. Risk Management Staff maintain records, analyze data, make reports, and assist with identifying trends and making recommendations for loss prevention. Risk Management manages the contractor for property insurance and is the primary contact with the vendor of property insurance for loss control activities.

1.5.2.8. Strategic Initiatives

Strategic initiatives has provided analysis related to the primary causes and locations of rail accidents. They are a resource available upon request for conducting ad hoc statistical analyses and research.

1.5.2.9. Transit Police

The Metro Transit Police Department is primarily responsible for policing and system security issues and they have a system wide Rail & Bus Security and Emergency Preparedness Plan (SEPP). Security responsibilities are detailed in this plan. Security incidents involve intentional injury or damage. This safety plan addresses System Safety, which is involved with unplanned accidents and incidents. The Metro Transit Police department provides support and has procedures for responding to accidents, incidents and other emergencies. Security is overseen and audited by the Department of Homeland Security.

1.6 LIGHT RAIL ASP CONTROL AND UPDATE PROCEDURES

This section establishes the frequency and method for periodic review of the Rail ASP and describes the process by which updates, corrections and modifications to the Plan are implemented.

The Safety Department will coordinate the review and revision process of the Rail ASP for Metro Transit. The Rail ASP will be reviewed and updated every year as appropriate to reflect changes in Rail system, equipment, facilities or organization. Appropriate management will evaluate proposed changes and, if warranted, submit proposed changes to the Director of Rail

and Bus Safety. No proposed changes to the Rail ASP will be made unless approved by the Director of Rail and Bus Safety. The Director of Rail and Bus Safety, through the Manager of Rail System Safety, has the responsibility to ensure that the review and revision process is conducted annually.

The Director of Rail and Bus Safety may implement modifications to the plan on an ongoing basis. For urgent safety issues, the Director of Rail and Bus Safety may immediately implement modifications to the plan to maximize the level of safety in the system and develop appropriate procedures to carry out the modifications.

Modifications that do not require immediate implementation will be subject to the review process below.

Responsible Parties	Elements of Revision Process
System Safety	Documents Recommendations for Revision
Senior Management	Reviews Their Section of the Light Rail Agency Safety Plan
Responsible Department	Documents Comments to Proposed Revision
Senior Management	Documents Approval of Respective Sections of Plan
System Safety	Incorporates Any Changes into Revised Plan
System Safety	Director Submits Revised Document to OSSO
Responsible Department	Implement ASP Revisions

The Director of Rail and Bus Safety (often through the Manager of Rail System Safety) will notify appropriate LRT management staff of the requirement to review the Plan and offer revisions or concurrence. The draft ASP will then go to the Joint Labor Management Safety Committee (JLMSC) for review and approval. Upon receipt of the approved sections from other departments and the JLMSC the Safety Department will incorporate any required changes. A copy of the updated Plan will be forwarded to the Minnesota Office of State Safety Oversight (OSSO) for final review and approval. Once the OSSO approves the plan, it will be submitted to the Metro Transit GM with recommendation for approval to allow for approval by the Metropolitan Council (governing board) no later than July.

Once annual review of the LRT ASP is completed and approvals from the OSSO and the Metro Transit GM are obtained, the plan will be redistributed and posted on the Metropolitan Council intranet site (http://metnet/mt/Safety/Rail/SitePages/Home.aspx). Only the current version on the plan is available to employees. During Annual Right to Know training an overview of the ASP and agency Safety goals are presented to all employees. A revision record will be included within the plan, which includes the revision number, date, and a description of modifications. If no revisions are deemed necessary, the revision record will indicate same.

1.7 SMS DOCUMENTATION AND RECORDS

Metro Transit will maintain required documentation related to the implementation of this ASP and SMS. This includes documents that are included in whole, or by reference, that describe the programs, policies, and procedures that it uses to carry out its ASP. These documents will be made available upon request by the FTA or other federal entity. Metro Transit will maintain these documents for a minimum of three years after they are created within the Metro Transit shared "H" drive under Safety.

2. SAFETY RISK MANAGEMENT

2.1 HAZARD IDENTIFICATION/RESOLUTION PROCESS

Hazard identification and resolution is one of the objectives of the Metro Transit Light Rail Transportation Agency Safety Plan. This process can be used by and is applicable to all levels of the organization, and is the means by which hazards are identified, analyzed for potential likelihood and severity on the transit system, and resolved in a manner acceptable to management. The process is described below

2.1.1. Defining the system

The system to be analyzed is defined by its physical and functional characteristics, including:

- People
- Procedures
- Facilities & Equipment
- Operating environment

The "system" should be appropriately defined as to lend itself to the analysis at hand.

2.1.2. Identifying the Hazards

Hazard identification defines conditions and faults, which have the potential for causing an accident. Hazards can be identified in a variety of ways:

- Formal hazard analyses using the inductive process. They analyze system components to identify failure modes and effects on the total system or a part thereof, as well as personnel actions. Failure modes include conditions such as: fails to open; fails to close; opens or closes when not required; fails to act; acts improperly or inadequately or at the wrong time; or any combination. Examples of formal hazard analyses include Preliminary Hazard Analysis, Failure Modes and Effects Analysis and Job Hazard Analysis.
- Formal hazard analysis using the deductive process to identify sequential and concurrent states, which are causally or conditionally required to support a specific effect. An example of this type of analysis is the Fault Tree Analysis.
- Hazards that are identified as a result of accidents/incidents
- Facility inspections that identify hazards or unsafe conditions (including formal AWAIR or maintenance inspections)
- Employee observations of unsafe conditions or behavior, which can be reported verbally or through completion of a safety hazard report form.

- Safety staff regularly reviews NTSB reports, FRA and FTA bulletins or advisories, OSSO inputs, and general industry trends to determine their applicability as inputs into the safety management and/or hazard analysis process.
- Daily Special Situations Reports (SSRs) are copied to the Safety staff and to the OSSO. These are reviewed on an ongoing basis to identify known or potential issues that can have an impact on safe operations.
- Staff reports of particular incidents are copied to the Safety department for analysis and further investigation as appropriate.
- Employees can fill out a Hazard Report Form, which requires a supervisory response as well as inclusion of the Safety Department in the process. These are discussed at the quarterly AWAIR (A Workplace Accident and Injury Reduction committee) meetings. The AWAIR program clearly provides protections for employees who report safety conditions to senior management as does Minnesota state statutes.

Metro Transit will report certain threshold hazards to the OSSO no later than the next business day and will track them to closure per Section 2.1.6 below.

The transit agency will provide notification to the OSSO via SSR of the following occurrences:

1. Elevator or escalator incidents involving injury to one or more persons requiring immediate transport to a hospital for treatment;
2. Explosion or fire;
3. Release of hazardous materials;
4. Unauthorized persons entering the track area – accidental (known to transit agency);
5. Unauthorized persons entering the track area - intentional or trespassing (known to transit agency – may be reported and tracked by the police or security as designated by the transit agency):
6. Collisions of rail transit vehicle with a fixed object, including buildings, bumping posts, doors, signals, and support structures;
7. Collisions between rail transit vehicles and other transit agency vehicles in shared (rail-bus) corridors;
8. Train Separation (train uncoupling while operating in revenue service);
9. Non-mainline derailments
10. Non-Safe Signal System Failures (e.g. false proceed, activation failure/partial activation of a rail grade crossing system);
11. Stop signal violation;
12. Switch run-through;
13. Face-up (unauthorized opposing moves) of rail transit vehicles in a signal section, single-track section, or similar area;
14. Near misses of rail transit vehicles or rail work vehicles;
15. Incapacitation of rail transit vehicle operator in revenue service;
16. Rail work zone incursions by a rail transit vehicle or rail work vehicle (including hi-rail vehicles); or
17. Off-platform or wrong-side door activation on a rail transit vehicle.

The level of effort and analysis will naturally depend on the nature and severity of the hazard. Similar to accident investigation, significant hazards may result in short term investigations with ongoing evaluations and investigations of hazards that may not be immediately resolved.

2.1.3 Assessing the Hazards - Qualitative Likelihood/Severity Hazard Analysis

A hazard analysis technique widely accepted in transit is qualitative likelihood and severity hazard analysis, as described in MIL-STD 882. The process involves defining the system, identifying the hazards, assigning severity, assigning likelihood, generating the risk index, categorizing the risk, and deciding among methods of mitigation.

2.1.3.1 Hazard Severity

SEVERITY	CHARACTERISTICS			
	People	**Equipment/Services**	**Financial**	**Reputational**
Catastrophic (1)	Several deaths and/or numerous severe injuries *(per event)*	Total loss of equipment or system interruption, requiring months to repair	Estimated loss from the incident in excess of $500,000	Ongoing media coverage, irreparable reputational damage, government intervention (weeks – months)
Critical (2)	Low number of deaths and/or serious injury* *(per event)*	Significant loss of equipment or system interruption, requiring weeks to repair	Estimated loss from the incident in excess of $100,000-$499,999	Prolonged media campaign, serious reputational damage, sustained government involvement (days - weeks)
Marginal (3)	Minor injury and possible serious injury *(per event)*	Some loss of equipment or system interruption, requiring seven or less days to repair	Estimated loss from the incident in excess of $10,000-$99,999	Adverse media coverage, reputational damage, government involvement
Negligible (4)	Possible minor injury *(per event)*	Some loss of equipment, no system interruption, less than 24 hours to repair	Estimated loss from the incident in excess of $1,000-$9,999	Local media coverage and some reputational damage

**Per 49 CFR 673, serious injury: 1) Requires hospitalization for more than 48 hours, commencing within 7 days from the date of the injury was received; 2) Results in a fracture of any bone (except simple fractures of fingers, toes, or noses); 3) Causes severe hemorrhages, nerve, muscle, or tendon damage; 4) Involves any internal organ; or 5) Involves second or third-degree burns, or any burns affecting more than 5 percent of the body surface.*

2.1.3.2. Hazard Likelihood

The likelihood that a hazard will occur can be described in potential occurrences per unit of time, events, population items or activity. A qualitative hazard likelihood may be derived from research, analysis, and evaluation of safety data from the operating experience of Metro Transit or other similar transit authorities. A depiction of a hazard likelihood rating system is described below.

Likelihood Level	Specific Individual Item	Fleet or Inventory	Frequency
Frequent A	Likely to occur frequently in the life of an item	Continuously experienced	> 1 event / month
Probable B	Will occur often in the life of an item	Will occur frequently in the system	> 1 event / year
Occasional C	Likely to occur sometime in the life of an item	Will occur several times	>1 event / 10 year
Remote D	Unlikely, but possible to occur in the life of an item	Unlikely, but can be expected to occur	> 1 event / 20 years
Improbable E	So unlikely, it can be assumed occurrence may not be expected	Unlikely to occur, but possible	< 1 event for 30 years

2.1.3.3. Hazard Risk Assessment

Risk assessment determines the acceptability of accepting a risk associated with a hazard, the necessity of implementing corrective measures to eliminate or reduce the hazard, or a combination of both. Hazard risk assessment involves categorization of hazard severity and likelihood of occurrence. A Risk Assessment Index, or Hazard Rating Table, is shown below.

Hazard Categories

HAZARD FREQUENCY	CATEGORY (1) Catastrophic	CATEGORY (2) Critical	CATEGORY (3) Marginal	CATEGORY (4) Negligible
Frequent (A)	**1A**	**2A**	**3A**	**4A**
Probable (B)	**1B**	**2B**	**3B**	**4B**
Occasional (C)	**1C**	**2C**	**3C**	**4C**
Remote (D)	**1D**	**2D**	**3D**	**4D**
Improbable (E)	**1E**	**2E**	**3E**	**4E**

Hazard Risk Index	Criteria by Index *
1A, 1B, 1C, 2A, 2B, 3A	Unacceptable
1D, 2C, 2D, 3B, 3C	Undesirable
1E, 2E, 3D, 3E, 4A, 4B	Acceptable with review
4C, 4D, 4E	Acceptable without review

"Unacceptable" means the hazard cannot remain as is but must be mitigated.

"Undesirable" means that the hazard should be mitigated, if possible, within fiscal constraints. However, it may be mitigated at a later time. Further a management decision must be made as to when and how a hazard associated with an undesirable risk will be mitigated, or if management allows the hazard to exist and accepts the associated risk.

"Acceptable with review" must be reviewed by management and determine the risk associated without mitigating the hazard.

"Acceptable without review" means that the hazard can remain.

Managers can use the Hazard Rating Table to prioritize hazardous conditions and focus available resources on the most serious hazards requiring resolution while effectively managing the available resources.

2.1.4 Resolving the Hazards

A number of different means are employed to resolve identified hazards. These include design changes, the installation of controls and warning devices and the implementation of special procedures or training. The order of precedence for resolving hazards is as follows:

Design for Minimum Risk

The first priority is to eliminate hazards through engineering and design. This is applicable for facilities, rolling stock and equipment, park & rides, routes, transit stations, and product selection to provide a few examples.

Safety Devices

Hazards that cannot be eliminated or controlled through design selection shall be controlled to an acceptable level using fixed, automatic, or other protective safety design features, devices or personal protective equipment. Provisions shall be made for periodic functional checks of safety devices.

Warning Devices

When neither the design nor the safety devices can effectively eliminate or control an identified hazard, devices shall be used to detect the condition and to generate an adequate warning signal to correct the hazard or provide for personnel evacuation. Warning signals and their application shall be designed to minimize the likelihood of incorrect personnel reaction to the signals and shall be standardized within like types of systems.

Procedures and Instruction

Where it is impossible to eliminate or adequately control a hazard through design selection or use of safety and warning devices, procedures and training shall be used to control the hazard. Procedures may include the use of personal protective equipment. Precautionary notations on signs shall be standardized as specified by management. Safety critical tasks and activities may require certification of personnel proficiency.

2.1.5. Follow up

Whatever the decision with respect to a particular hazard it must be monitored for effectiveness. If accepted, the situation must be monitored to ensure that the hazard has not worsened. If a corrective action plan has been developed, that corrective action must be verified and monitored to ensure that unexpected hazards have not developed.

2.1.6. Hazard Tracking and Reporting to OSSO

The Safety Department is responsible for identifying those issues from accident / incident data, operating infractions, or trends discovered which are significant enough to pose an undue hazard to employees or passengers and facilitate tracking of progress toward resolving those issues. This is done by means of the Consolidated Hazard Matrix developed by the Safety Department to comply with OSSO Procedures and Standards Section 5: Corrective Action Plans, which tracks those items of interest in terms of the problems discovered, the desired resolution, the individual responsible for resolution, and the progress. This matrix includes safety audit issues, post-accident or incident issues, individual hazard reports and those items cited by the AWAIR safety committee. Additionally, items that involve significant change to form, fit or function to the operation are managed through the Rail Change Review Committee and tracked on the matrix. As items are corrected, those corrections are noted on the Consolidated Hazard Matrix located on the Safety shared drive and closed out as appropriate. All items on the matrix will be evaluated to determine if they present a hazard and if so, a hazard classification will be generated and documented. The safety department reviews these items on an ongoing basis, and when unacceptable delays are encountered in resolution, the items are escalated to appropriate senior management for assistance in resolution and closure.

The Safety Department provides monthly updates of these items to the OSSO.

2.1.7 Corrective Action Plans

Corrective Action Plans are required for the following situations:

- Deficiencies identified through on-site safety and security review,
- Accident and hazards investigations (when potential hazards are identified),
- Internal safety and security reviews,
- All hazard reports submitted
- Any issue that could present immediate hazard(s) to persons,
- Hazards or observations that are the result of meeting, audits, or discussions.

Corrective Action Plans will meet the following OSSO guidelines outlined in Section 5 of the Procedures and Standards, and are summarized and tracked through the LRT Consolidated Hazard Matrix (with appropriate matrix headings referenced in parentheses):

- Identify the source of the noted deficiency, finding, or hazard ("Source");
- Reference the date the CAP was opened ("Reference");
- Line Number as a ("unique identifier")
- Identify the noted deficiency, finding or hazard ("Issue Description");
- Process, plan, or mechanism to address and resolve deficiency ("Corrective Action Plan");
- Timeframe for implementation of plan of action ("Target Date");
- Status of corrective action plan ("Status" with updated progress reflected in "Comments");
- Department(s) and person(s) who will be responsible for implementation ("Responsible" with additional detail in "Comments");
- A Risk Index Assessment of the hazard present ("Hazard Severity", "Hazard Likelihood", and "Risk Index").

The LRT Consolidated Hazard Matrix is described in greater detail in the previous section of this ASP. Metro Transit allows NO Unacceptable Hazards to persist upon discovery without proper and immediate mitigation. As with any discovered hazards, the means of correction are documented in the LRT Consolidated Hazard Matrix, which is submitted to the OSSO on a monthly basis.

Deficiencies discovered during audits are detailed on the audit checklists and a corrective action plan (CAP), including responsible persons and timelines, is agreed upon with appropriate management. These action items are summarized on the Consolidated Hazard Matrix. As items are corrected, those corrections are noted on the matrix and closed out as appropriate. The safety department reviews these items on an ongoing basis, including monthly submission of the matrix to OSSO, and when unacceptable delays are encountered in resolution, the items are escalated to appropriate senior management for assistance in resolution.

In the event that OSSO and Metro Transit are unable to agree on the resolution of a CAP a panel will be convened, consisting of the Rail System Safety Manager (or designee), the State Safety Oversight Manager (or designee), and the Manager of the "responsible department" for

the CAP in question. The panel will attempt to resolve the dispute and if that proves impossible Section 5.5 of the OSSO Program Standard dictates that:

"In the event OSSO and the transit agency cannot reach a consensus regarding a CAP at the staff level, the OSSO r will contact the transit agency's General Manager to arrange a meeting to discuss the issue. Should the OSSO and transit agency General Manager be unable to reach consensus, the Office of State Safety Oversight will arrange for the Minnesota Department of Public Safety's Commissioner's Office to review each party's position and supporting materials and issue a decision on the dispute."

3. SAFETY ASSURANCE

Safety Assurance involves processes within a transit agency's Safety Management System that functions to ensure the implementation and effectiveness of safety risk mitigation. This involves monitoring key aspects of the operation for mitigation effectiveness and to ensure that no new hazards have been introduced into the system. This ongoing attention also provides for identification of new hazards as changes to the operation form, fit, or function are made. The rest of this section describes the safety assurance techniques used by Metro Transit.

3.1. SAFETY DATA ACQUISITION/ANALYSIS

Collection of safety data, and analysis of such data, is one way to help maintain safe working conditions at Metro Transit. Hazard identification and analysis of accidents will prevent future incidents and accidents. Metro Transit reviews accidents and incidents, looks for undesirable trends, and regularly reports safety data to the Federal Transit Administration (via National Transit Database), OSHA, NTSB, and Metro Transit departments as appropriate.

Metro Transit performs safety data collection and analysis for Rail Operations at the facility level. This Data includes the following:

- Data reported includes the following:
- Employee on-duty accidents
- Passenger on-train accidents
- Station accidents
- Rail accidents
- Accident monthly, annual and past years comparisons
- Lost time data
- Accident severity and frequency
- Risk severity.

Metro Transit Safety prepares reports for OSHA and the NTD. The Rail Safety Officers are responsible for generating and updating the OSHA logs for the facilities and the annual OSHA posting.

Risk Management, Safety and operations management will determine an optimal degree of safety that minimizes risk while maximizing operational effectiveness within political, financial and technological constraints. Factors considered are the evaluation of cost, likelihood of damage, notoriety factor, frequency and severity of exposure, and the balance of benefit to loss.

Strategic Initiatives (SI) works with data collected from many sources to use higher level of analysis to identify significant risk factors and trends in accidents and injuries. This leads to informed recommendations for accident reduction programs and better use of limited resources. These targets will include measurements as established under the National Public Transportation Safety Plan (NPTSP), specifically:

- Collisions per 100,000 vehicle miles
- Fatalities from the LRT operation
- Injuries from the LRT operation
- Safety Events from the LRT operation
- System reliability (vehicle mean distance between failures)

The sole exception to that methodology was determining the target goal for fatalities by mode. While experience has unfortunately often been otherwise, we believe that stating any goal greater than zero deaths somehow sends an unacceptable message. The specific goals for these target measures set at this plan revision are:

Target	**Goal**
Est. Annual Vehicle Revenue Miles (VRM)	**4,800,000**
Collisions per 100,000 vehicle miles	.60 / 100K vehicle miles
Number of Fatalities	0
Rate of Fatalities per 100K VRM	0
Number of Injuries	100
Rate of Injuries per 100K VRM	2.08333
Number of Safety Events	122
Rate of Safety Events per 100K VRM	2.542
Total Major Mechanical Failures	192
Miles Between Major Mechanical Failures (System reliability)	25,000

By incorporation in this plan, these goals will be adopted by the Metropolitan Council as part of the plan approval and reevaluated annually based on actual trends. The Rail Safety, Speed, and Reliability Performance Team helps collectively determine these goals and measure and, where necessary, determine steps for improvement.

When requested, Metro Transit will provide the safety performance targets to the Council, the region's MPO, for the Council to use the safety performance targets directly and provide the targets to the State to aid in the MPO and State planning process, as applicable. Metro Transit

will coordinate, to the maximum extent practicable, with the State to support the selection of State transit safety performance targets.

3.2. INCIDENT REPORTING AND INVESTIGATION

Metro Transit's policy is to document, investigate and review all accidents/incidents at an appropriate level for the severity or potential severity of that occurrence. The purpose of accident/incident reporting and investigation is to ensure that all accidents/incidents are investigated objectively with the goal of determining probable cause(s) and contributing causal factors (fact-finding, not fault-finding). Depending on the type and severity of the accident, a Transportation representative will be involved in the investigation process, and possibly an accident investigation committee may be convened. All investigation findings, conclusions and recommended corrective actions to prevent recurrence will be documented, and designated management personnel are assigned responsibilities to ensure that corrective actions are implemented and monitored for effectiveness. This process is the subject of Metro Transit's LRT Accident/Incident Investigation program, which is annually reviewed, updated, and approved by the SSO on the same intervals as this document.

All occupational illnesses and injuries are investigated at the first line supervisor level. The Safety Department is available to front line supervisors to assist with their investigations when requested or may choose to be lead an investigation as appropriate. All first report of injury forms and supporting investigation reports are forwarded to Risk Management and filed. At the same time, a copy of the report, along with other facts collected, must be sent to the designated Safety Department staff for review and determination of appropriate corrective action.

Where required, the Safety Department will forward reports to all regulatory agencies, including Minnesota Occupational Safety and Health (OSHA), and report data as required to the National Transit Database (NTD).

3.2.1. Accident/Incident Policies

The purpose of accident/incident reporting and investigation is to ensure that all accidents/incidents are investigated with two objectives: of

- determining primary and contributing causal factors.
- These findings (and, if appropriate – recommendations) are then translated into corrective action plans that would prevent recurrence of the accident.

All investigation findings, conclusions and recommended corrective actions to prevent recurrence are documented, and designated management personnel are assigned the responsibility to ensure that corrective actions are implemented and monitored for effectiveness.

3.2.2. Procedures for Rail Accident/Incident Reporting and Investigation

The Metro Transit Rail Accident/Incident Investigation Plan describes the process of accident/incident reporting and investigation. This plan is reviewed and updated as needed annually during the first calendar quarter. Metro Transit rail policy is to investigate all accidents/incidents. Accidents, occupational illnesses and injuries are investigated at the first line supervisor level. Safety staff and Rail Operations developed and implemented a training module for all supervisors on accident investigation and response and all supervisors receive this training as part of their initial training (as well as providing to all staff already on board that have not attended the TSI Rail Incident Investigation course). Accident investigation reports are compiled, reviewed and filed by the Rail Transportation Department. In addition, a copy of these reports is forwarded to the Safety Department and then forwarded to all regulatory agencies as required, including the Office of State Safety Oversight.

The Safety Department is notified of accidents and incidents. Depending on the type and severity of the accident, a Safety Department representative, a Minnesota State Safety Oversight representative, a MN OSHA representative, National Transportation Safety Board representative, and or other Federal agencies with investigative authority could be involved in the investigation process, and possibly an accident investigation committee convened as well. The Safety Department may initiate its own investigation, including convening of an ad-hoc accident investigation board, as appropriate.

Accident notification and response is included in Metro Transit's procedures. All necessary emergency response agencies, Metro Transit management personnel, and regulatory agencies are included in the notification process. In accordance with the OSSO Procedures and Standards, the OSSO is notified of certain types of accidents and incidents on the Light Rail Transit System, specifically:

Accidents to be tracked by the transit agency and reported to the OSSO within two hours:

1. Fatality (occurring at the scene or within 30 days following the accident);
2. One or more persons suffering serious injury (serious injury in accordance with the definition in the Definitions & Acronyms section of this document; the notification is based on information available to the transit agency at the time);
3. A collision involving a rail transit vehicle with any other vehicle, person, or object;
4. A runaway train;
5. An evacuation for life safety reasons; or
6. Any derailment of a rail transit vehicle (yard and mainline).

Incidents to be tracked by the transit agency within 30 days:

1. A personal injury that is not a serious injury;
2. One or more injuries requiring medical transportation away from the event;

3. Non-collision-related damage to equipment, rolling stock, or infrastructure that disrupts the operations of a transit agency;
4. A maintenance-related evacuation of a train into the right-of-way or onto adjacent track; or customer self-evacuation;
5. Certain low-speed collisions involving a rail transit vehicle that result in a non-serious injury or property damage; or
6. Damage to catenary or third-rail equipment that disrupts transit operations.

Occurrences to be tracked by the transit agency and made available to the OSSO or FTA for review, as requested:

1. Non-collision-related damage to equipment, rolling stock, or infrastructure that does not disrupt the operations of a transit agency;
2. Close calls / near misses (of which the transit agency is made aware);
3. Safety rule violations;
4. Violations of safety policies;
5. Damage to catenary equipment that do not disrupt operations; or
6. Vandalism / theft.

As provided in 49 CFR 674 and the OSSO Procedures and Standards, the Safety Department is authorized to conduct investigations on behalf of the MN OSSO. When the Safety Department conducts an investigation on behalf of the OSSO, the final report shall be submitted to the OSSO for review, approval, and adoption of the report(s) and any corrective actions proposed.

In addition to the accident investigation function, the Safety Department conducts a periodic review of rail accidents and incidents to determine common trends and develop appropriate preventive programs.

3.2.3. Accident/incident Personnel Policies

Metro Transit currently has accident/incident policies for employee, non- employee/customer, and LRT accidents/incidents.

An employee involved in an accident/incident must do the following:

- Request medical attention, if necessary
- Report and describe the accident/incident according to policy, rule, and/or union contract
- For loss of time from work, report to the medical facility as soon as possible within twenty-four hours of the occurrence or on the next day the medical facility is open.

The employee's immediate supervisor will prepare and distribute the appropriate forms as soon as possible, but no more than twenty-four hours after notification of the accident/incident.

The supervisor will take the following actions:

- Make appropriate arrangements for medical attention, if requested
- Review the accident/incident and, depending on the nature and severity, convey the impact to the appropriate department for response to the scene
- Conduct an initial investigation of the accident/incident
- Ensure that conditions which could cause a similar accident/incident are reported for remedial and/or corrective action
- Ensure that proper documentation is prepared and filed for use in developing a corrective action plan
- If loss of time from work is possible or occurs at any time afterwards due to the accident/incident, direct the employee to report to the medical facility as soon as possible; preferably within twenty-four hours or on the next day the medical facility is open.

For non-employee accidents/incidents, employees are responsible for collecting the appropriate information and preparing an accident report. A copy of the accident report is forwarded to the Safety Department and Risk Management Department for filing and follow-up investigation and reporting.

3.2.4. Procedures for Non-vehicle Accidents, Injuries or Incidents

3.2.4.1 An employee involved in an accident/incident must do the following:

- Request medical attention, if necessary
- Report and describe the accident/incident according to policy and/or union contract
- Complete and sign a first report of injury form (If incapacitated the supervisor must complete this form).
- If the employee seeks medical attention for an injury, the employee must submit workability notes from the doctor's office visit and any follow up visits to their supervisor as soon as possible.
- For loss of time from work or restricted duty, the employee must report to the medical facility as soon as possible within twenty-four hours of the occurrence or on the next day the medical facility is open.

3.2.4.2 The employee's supervisor will take the following actions:

- Make appropriate arrangements for medical attention, if requested.
- Call RCC whenever 911 is contacted for emergency medical purposes
- Conduct an initial investigation of the accident/incident and report findings to management and the Safety Department.

- Complete Supervisors portion of Employees First Report of Injury form and assure the employee section is complete.
- Ensure that conditions, which could cause a similar accident/incident, are reported and that remedial and/or corrective action is taken
- Ensure that proper documentation is prepared/kept and recommendations are made
- If loss of time from work or restricted duty is possible after the accident/incident, direct the employee to report to the medical facility as soon as possible within twenty-four hours or on the next day the medical facility is open.
- Forward all doctor workability notes to Risk Management and your facility Rail Safety Officer along with the first report of injury.
- Ensure the first report of injury form is completely filled out. Submit the 1st report of injury form and any doctor workability notes to Risk Management and the facility Rail Safety Officer.

3.2.5 Heath Safety Hazards

Metro Transit will use its Safety Risk Management (SRM) process spelt out in this plan to document and mitigate any health hazards that would arise such as a pandemic. Furthermore, Metro Transit will follow guidelines consistent of the Centers for Disease Control and Prevention and the Minnesota Department of Health whichever is the most restrictive.

3.3. FACILITIES INSPECTIONS

Metro Transit facilities are inspected on a regular basis to identify items needing corrective action. The facilities associated with the Light Rail system, such as the yard and shops, stations, and substations will also be inspected on a regular basis. Systems components follow inspection guidelines found in the Rail Systems Maintenance Plan. Facilities such as buildings and stations have periodic inspection criteria built into the TX Base system and include periodic inspection of safety components (such as elevators, fire alarm and suppression systems, which may be performed by contractors) as well as boilers, cranes/hoists, and other facility components.

The majority of the light rail functions are housed in the Blue Line Operations and Maintenance Facility building (O&M) including the Rail Control Center; vehicle maintenance; transportation; and training. The Green line Operations and Maintenance Facility (OMF) in St. Paul provides facilities for storage and servicing of Green Line rolling stock. Other related facilities include the Metro Transit headquarters building at the Heywood Office Building (administration), and the adjacent Rail Support Facility (for systems employees).

Facilities safety inspections are closely related to the Hazard Management Process (Section 2) because those personnel who conduct facility inspections will often discover hazardous conditions. As conditions are noted by the maintenance department, safety staff, field supervision, or train operators at station facilities, they are reported to the RCC who makes notification to facilities maintenance. It is the responsibility of facilities maintenance to resolve the hazards passed along by RCC.

3.3.1. Facility Inspection Checklists

Facility inspections are conducted using checklists to guide the inspection. All inspections are documented. Inspection reports include the following:

- Date of Inspection
- Name of Facility
- Listing of Items Observed
- Description of Observed Deficiencies
- Recommendations to Improve Safety
- Name of Inspector.

Facilities and Engineering, Rail Maintenance, and Safety conduct monthly safety inspections in their locations as part of the "A Workplace Accident and Injury Reduction" (AWAIR) program. The inspection team may use a variety of checklists that focus on different aspects of industrial safety each month but is always on the lookout for general facility defects. When a defect is noted, it is recorded in the meeting minutes and shared with Engineering and Facility Maintenance to correct. If the problem cannot be resolved with simple maintenance, then steps are taken to include the needed improvement in the facility capital improvement plans. In the meantime, steps are taken to mitigate the hazard.

Other types of inspections conducted through Engineering and Facility Maintenance include:

- Exterior conditions
- Building facilities – HVAC, electrical, boilers, hoists, overhead cranes
- General housekeeping
- Fire extinguishers in the facilities and the vehicles
- Fuel and hazardous materials storage tanks
- Fire suppression systems including sprinklers
- Fire alarm systems.

Certain facility inspections are contracted out, such as the sprinkler inspections and overhead crane inspections. All fire systems are monitored by outside contractors, who check for alarms and coordinate with appropriate Metro Transit staff.

Temporary measures will be mandated immediately by the inspector, garage manager, or Safety to protect life and property should corrective action for an unacceptable or undesirable hazard be delayed for any reason.

3.4. RAIL MAINTENANCE AUDITS/INSPECTIONS

The Metro Transit maintenance audits/inspections provide top management with a mechanism for documenting the fact that key elements of the organization are effectively performing specified functions.

An audit attempts to answer the following questions:

- Does a plan or procedure or schedule exist?
- Is it adequate?

- Is it communicated effectively?
- Is it implemented?
- Are results documented and followed up on, as appropriate?
- Who is responsible for it?
- Is it monitored?
- When it was last audited?
- Is there a report on the results of the audit?
- What corrective actions were required?

These organizational elements include all Metro Transit maintenance plans and procedures including preventive maintenance activities, scheduled maintenance, and unscheduled maintenance procedures. Maintenance Inspection and Repair activities occur for Systems, Vehicles and Facilities.

Systems maintenance includes track, traction power substations, train control, and communications. The governing maintenance document for all systems is the Rail Systems Maintenance Plan. Track maintenance typically includes measurements of track gauge, profile, alignment, cross level, twist and wear, flaws. Power inspections typically include replacement of breakers, substation battery tests, and substation maintenance. Signals maintenance typically includes testing of signal equipment such as switches, relays, track circuits and wiring.

Vehicle maintenance typically includes the inspection, maintenance and repair of rolling stock by performing scheduled maintenance inspections and running repairs. These are typically governed by industry experience and manufacturer recommended maintenance.

Frequencies of preventive maintenance by equipment type are tracked by TXBASE, the adopted central maintenance management system for Metro Transit. Metro Transit may change to alternative tracking software at its discretion.

3.5. RULES AND PROCEDURES REVIEW

The Metro Transit Rail Operations Department is responsible for ensuring that operating Rules and Procedures are carefully developed, maintained and followed. The Rail Operations Manager develops and updates rules and procedures and conducts a periodic review of rules and procedures and test operations.

Rail operations are conducted in accordance with Rules and Procedures. Each rail employee is issued a controlled copy of the Metro Transit Rail Operations Rule Book and is tested annually on its contents. This applies to both transportation employees (including supervisors) and those maintenance employees whose functions require them to interface with mainline or yard train operations. Additionally, management employees are provided access to the Light Rail Standard Operating Procedures for reference. Rulebook revisions require review and approval by the Rail Change Review Committee (RCRC).

Rail car and systems maintenance also have procedures (such as Rail Fleet Management Plan for rail car maintenance or the Rail Systems Maintenance Plan for systems maintenance) which standardize how they maintain equipment and managers of these respective departments are

responsible for ensuring compliance with those procedures through sign off on work performed or QA assessments.

Proficiency tests are conducted periodically by the Rail Operations or Maintenance Departments and/or the Safety Department to ensure compliance with rules and procedures. These are performed in accordance with the Light Rail Compliance Testing Reference Guide, which prescribe a frequency of testing and highlighted rules, and tests are conducted on operating employees (including supervisors) as well as maintenance employees whose jobs entail compliance with operating rules. Serious infractions are addressed immediately, and other deficiencies are reported to the appropriate authority for remedial or disciplinary action.

Transportation management has developed a tracking and summary system where violations can be summarized by employee or by specific violation and trends can be noted. Operations uses a violation rating system classifying violations according to severity and discipline follows those levels. The responsibility for establishing, tracking, and dealing with these matters' rests with operations and maintenance management, not the Safety Department.

3.6. SYSTEM MODIFICATION DESIGN REVIEW AND APPROVAL PROCESS

Safety certification programs will govern rail system commissioning, start-up and any modifications to existing facilities. The Metro Transit Safety and Security Certification Program is tailored for each New Start capital project. The Safety and Security Review Committee will evaluate evidence in terms of whether the new start system is considered safe for passenger operations.

The objectives of the Safety Certification Program are to:

- Assure, to the maximum extent practical, that necessary safety and security requirements are designed and incorporated into the rail transportation system, equipment and facilities
- Conduct a systematic review or testing to evaluate system elements for conformance to the intended design
- Document those safety tests or reviews in a format that clearly displays the successful completion of the project.

Safety certification must address requirements under four integrated functions:

- System Safety- elimination, minimization, or control of potential hazards and the protection of property from damage against injury and/or property damage.
- Fire and Life Safety - elimination, minimization, or control of potential hazards to customers, employees, emergency response personnel and the general public caused by fire, smoke, explosion or resulting panic, and the protection of property from fire, explosion or chemical exposures.
- Occupational Safety - elimination, minimization or control or potential hazards to employees and emergency response personnel.

- Public Safety - elimination, minimization or control of potential hazards to the general public and customers that result from operation of the system.

Critical participation on safety committees by MTPD ensures an all-hazards approach to the safety certification process that incorporates threat and vulnerability considerations.

The Safety & Security Review Committee will review aspects of the proposed rail system development including the following:

- Operational safety impacts
- Customer safety impacts
- System safety requirements
- Employee safety training requirements
- System hazard elimination/control.

System modification is the result of any changes to the transportation system, rolling stock, equipment, and facilities. This process is applicable to new procurement, as-built drawings or schematics, training on maintenance and/or operations associated with this endeavor, certification of any operational rules, agreements and maintenance and repair/training manuals that it may encompass. The Metro Transit Rail Change Review Committee evaluates evidence presented in terms of whether the system modification is considered safe for public occupancy and passenger operations.

The Rail Change Review Committee (RCRC) meets periodically to evaluate proposed changes to the system. This forum ensures configuration control as well as system safety considerations in modifications that may be less comprehensive in scope, e.g. items not requiring full scale safety certification, but which nevertheless change form, fit or function of a safety critical item. Typically, for projects not requiring an FFGA, this process is implemented in lieu of full safety certification.

3.7. CONFIGURATION MANAGEMENT

The Metro Transit Configuration Management process will include design modifications, specification and procurement of vehicles and components, and contract change orders.

Metro Transit Work Instruction Policy E-11, titled Project Execution Plan (PEP), applies to all construction projects. This procedure requires project documents including drawings and specifications to be delivered to many different departments within Metro Transit and include an archives file.

Each design group will typically make changes as required to drawings that are then sent to the field forces. The field forces will perform the work per the design drawings and indicate any variations from the design. These variations are incorporated on the drawings that will include the latest revision date. These drawings are called As-Built or In-Service drawings. As Built or In-Service drawings are filed at the respective design office with copies sent to field locations or headquarters, as necessary.

The Safety Department is made aware of projects of significance when Engineering issues Project Execution Plans. These include a short description of the project and identify stakeholders, etc. The Director of Safety reviews these and determines the level of participation from Safety Department staff to ensure that safety has been included in changes to equipment, systems, vehicles and facilities.

Accordingly, LRT Operations has established a configuration management process to track the status of the rail system configurations. The configuration management process includes the Rail Change Review Committee (RCRC -Significant system changes must be approved by the RCRC.

After the proposed change is approved by the RCRC, each design group typically makes changes as required to drawings that are then sent to the field forces. The field forces perform the work per the design drawings and indicate any variations from the design. These variations are incorporated on the drawings and the revision date noted. These drawings are called As-Built or In-Service drawings. As Built or In-Service drawings are held at the rail transportation library and respective design office with copies sent to field locations or headquarters as necessary.

3.8. PROCUREMENT

The Purchasing Department is responsible for the procurement of materials, services (contracts) and public works. Generally, specifications are in the form of written description, performance requirements, drawings, prints, commercial industry standards and other descriptive literature references. All items to be procured shall be evaluated for health, safety, and environmental compliance with current applicable regulatory specifications.

Requestors of goods or services from procurement are responsible for identifying material or services that have potential safety impact and for ensuring that such material or services meet safety requirements of Federal and State compliance regulations, OSHA standards, or identifying the requirement for Safety Department review.

Common supplies will require user department review. Special supplies or services may require review by the Safety Department. All chemicals require Safety Data Sheets (SDS) review by the user department and the Safety Department before utilization.

Metro Transit Purchasing will consult with the Safety Department during pre-procurement planning for specialty items requiring safety review. In particular, when procuring toxic substances, Metro Transit vendors must supply SDSs before shipping toxic substances, as defined by the Minnesota State Right-to-Know Law, or when defined as a hazardous chemical by the Occupational Health and Safety Administration Hazardous Communication Standard.

3.9. INTERNAL SAFETY AUDITS

The Metro Transit Safety Department is responsible for the preparation and implementation of a System Safety Audit Policy and Program that provides a proactive approach toward auditing

safety compliance. The audit plan is documented in the LRT Agency Safety Plan - Internal Audit Program Plan. Audits are conducted within all departments and cover agency safety policies and procedures, as well as regulatory requirements. Internal rail safety audits are conducted of all items in this LRT Agency Safety Plan within a three-year period, as required by the Office of State Safety Oversight.

3.9.1. Audit Responsibility

The Director of Rail and Bus Safety is responsible for implementing the audit process, performing safety audits of the Metro Transit organization with and through safety Dept staff. Members of the Metro Transit staff, who are not directly involved in the area being audited, assist him.

3.9.2. Internal Safety Audit Objectives

The objectives of the internal safety audits are to provide a mechanism for determining the effectiveness of the Light Rail Transportation ASP and to assess the implementation level of the Plan. Specifically, Metro Transit's internal safety audit objectives are to:

- Verify that safety programs have been developed/implemented in accordance with Rail ASP requirements
- Assess the effectiveness of programs
- Identify program deficiencies
- Identify potential hazards in the operational system
- Verify that prior corrective actions are being tracked for closure
- Provide management with an assessment of the status and adequacy of system safety
- Assure continuing evaluation of safety-related programs, issues, awareness and reporting.

3.9.3. Safety Audit Process

Safety audits rely on the concept of spot-checking samples in areas for compliance with internal safety procedures and requirements. The departments to be audited will be notified when safety audits will be conducted, what types of documents will be reviewed, and the audit criteria. Ongoing inspections can be conducted on a surprise basis, but internal safety audits must be coordinated with all concerned parties. The intent of the audit process is to satisfy and ensure Metro Transit is in regulatory compliance and suggest industry best practices. Perhaps the most important means of satisfying an audit query is to produce documentation in the form of measurement, procedure, test, or visual.

3.9.4. Audit Reporting

The Safety Department documents all internal safety audits. The audits are conducted according to the LRT Internal Audit Plan using checklists, which contain references to corresponding LRT Agency Safety Plan sections. The results are documented in the Metro Transit Internal Rail Safety Audit report issued upon completion of the audits, with corrective actions summarized on the Consolidated Hazard Matrix. The LRT Safety Audit report will be transmitted to the OSSO with a certification letter from the General Manager, indicating whether the agency is in compliance with its ASP or identifying the activities the agency will take to achieve compliance. For the purposes of the certification letter, open items do not, in and of themselves, indicate noncompliance. Rather, items that have a corresponding corrective action plan would indicate compliance with the audit program and, by extension, the LRT ASP.

4. SAFETY PROMOTION

4.1. TRAINING AND CERTIFICATION

Training and certification programs occur during initial hiring, during ongoing operations and maintenance, and as a result of safety infractions.

4.1.2. New Employee Orientation

All new Metro Transit employees receive new employee orientation that is developed by the Human Resources Department. The new employee orientation varies from 1 to 4 days depending on the work the employee will be doing. The morning of the first day covers an orientation to the Metropolitan Council. The afternoon session covers Employee Benefits, Safety Overview and Right-To-Know training, and Drug and Alcohol awareness and policy. Additional department-specific training follows as detailed in the following sections.

4.1.3. Rail Transportation Training

Rail training and certification programs for employees include the following:

- Operators: rules and procedures, vehicle certification, and line familiarization
- Supervisors: rules and procedures, vehicle certification, line familiarization, specialized training
- Vehicle maintainers: rules and procedures (including Blue Flag protection and Lock Out – Tag Out), line familiarization; in-depth vehicle certification; on-the-job training
- Systems maintainers: rules and procedures, vehicle certification; specialized training.

All rail employees are recertified annually on rules / procedures and OTE operation. Vehicle maintainers and systems employees are recertified every three years on critical maintenance tasks as determined by the appropriate departments. Training records are tracked by the individual operating, systems maintenance, or vehicle maintenance department via the manual or electronic recordkeeping system of their choosing. Such records must be readily available on site for inspection and verification by any interested party.

4.1.4. Contractor Safety Training

Any contractor requesting a permit to work on the Right of Way (specifically, working within 12' of track centers or OCS) must complete the Metro Transit On-Track Safety class developed and delivered by the Safety Department. An electronic roster is maintained by the Safety Department of all contractors completing this training. After completing the training, the contractors are issued a certification card that must be on their person anytime they access the ROW. The roster is also accessible by Rail Transit Supervisors who may check compliance with procedures on the Right of Way. (In emergencies or unforeseen situations, limited exceptions may be made to allow inspections or emergency maintenance by non-trained personnel when escorted by a qualified person.)

4.1.5. OSHA Required Safety Training

All new Metro Transit employees receive Right-to-Know (RTK) training in new employee orientation. The health hazards of diesel exhaust emissions and controls used by Metro Transit are included in this training as an overview of Safety Data Sheets (SDS) and the new Global Harmonized System for Labels and hazard communication.

All transportation and maintenance employees at Metro Transit receive a brief (minimum 15 minutes) refresher in Right-To-Know every year.
Employees transferring into the Rail Maintenance Department and Facility Engineering receive additional RTK training. They also receive other training as needed for their new position.

All new Rail Maintenance employees receive instructions on voluntary use of dust mask style respiratory protection. Employees that transfer to the Rail Body/Paint Shop receive instructions on the mandatory use of respirators including half-mask style and supplied air systems. Body Shop employees receive supplemental and updated information about mandatory respiratory issues as part of their Right to Know training. Employees wearing respirators for comfort reasons receive refresher training as deemed appropriate due to observations of work practices in the work environment.

All new cleaners in rail maintenance and all new janitors in facility maintenance receive training in bloodborne pathogens by the Safety Department. Rail Supervisors also receive bloodborne pathogens training. Annual bloodborne pathogen training is provided by the Safety Department.

Additional training arranged for or provided by Metro Transit includes:

- Forklift
- Lock-Out/Tag-Out
- Confined Space
- Hearing Protection
- Personal Protective Equipment (PPE)
- Personal Fall Arrest Systems
- Other topics as requested.

4.1.6. Rail System Safety Staff Training

The Director, Manager of Rail System Safety, and Rail Safety Officers shall be certified as required by 49 CFR 672. At a minimum, this would include completing required TSI classes to obtain a Transit Safety and Security Program certification (TSSP), and Public Transit Safety Certification Training Program (PTSCTP) and required recertification training.

4.2 EMERGENCY RESPONSE PLANNING, COORDINATION, TRAINING

The Safety Department, in conjunction with the Rail Operations Department and Fire and Life Safety Committee, has developed and implemented a Light Rail Operations Emergency Management Plan.

This Light Rail Operations Emergency Management Plan incorporates the key elements of emergency management. Key emergency response topics addressed in this plan include:

- Ensuring that proper notification of emergencies is implemented throughout the agency.
- A formal accident investigation program, further described in the Metro Transit Rail Accident/Incident Investigation Plan
- Emergency drills, including tabletop exercises and actual field exercises involving Metro Transit personnel and external agencies. The types and locations of emergency drills are discussed in the Fire and Life Safety Committee.
- Training programs for employees and emergency response agencies

The Rail and Safety Departments provide training materials to public safety agencies that respond to calls on or about Metro Transit property. These agencies include local fire departments, police departments, medical facilities, and EMS agencies.

Emergency drills are held each year. The Office of State Safety Oversight and other rail agencies are invited to these drills as observers. The Fire and Life Safety Committee meets on a regular basis to discuss the types and locations of these emergency drills. All drills are evaluated and critiqued for the benefit of Metro Transit and the emergency response agencies. Emergency planning is currently performed by coordination between Metro Transit departments and emergency responders.

Each existing Metro Transit facility has an Employee Emergency Action Plan. The Safety Department develops Emergency Action Plans for facilities related to the rail system. These plans specify the recommended sequence of actions to be taken by Metro Transit personnel in the event of an emergency (fire, medical, security, etc.). Components of the plan include recognition of the emergency, establishing proper notification procedures, and proper response action to the emergency. The safety department is responsible for periodic review and update of these plans, with the assistance of facility management and the operating departments occupying these facilities.

4.3 EMPLOYEE OCUPATIONAL SAFETY PROGRAMS

The Safety Department is responsible for developing and implementing Employee Safety policies and programs for Metro Transit.

Employee Safety Programs include the following elements:

- Right-to Know Programs
- Hazard Identification and Resolution Process
- Worker Protection and Safety
- Industrial Hygiene Programs
- Hazardous Materials Control
- Personal Protective Equipment
- Workplace Safety Training

Metro Transit Employee Safety Programs include the following (current versions as found on "MetNet" intranet site):

Program Title	Location
A Workplace Accident and Injury Reduction (AWAIR) Program • Safety Committees • Safety Hazard Reports • Inspections • Hazard Analysis	Available on Metnet: Metro Transit Safety Policy/Safety Department
Metropolitan Council Accident/Injury Prevention Program	Available on Metnet Metropolitan Council Administration Policies and Procedures 4-9a

Program Title	Location
Metropolitan Council Safety Committee Procedures	Available on Metnet Metropolitan Council Administration Policies and Procedures 4-9a
Hazard Communication/Right-To-Know Program	Available on Metnet: Metro Transit Safety Policy/Safety Department
Metropolitan Council Right-To-Know Policy • SDS management contract	Available on Metnet: Metropolitan Council Administration Policies and Procedures 4 -9a
Respirator Protection Program • Medical Evaluations • Fit-Testing • Training	Available on Metnet: Safety Department and Maintenance Managers; Metro Transit Safety Policy/Safety Department
Bloodborne Pathogens Exposure Control Plan	Available on Metnet: Metro Transit Safety Policy/Safety Department
Hearing Conservation and Medical Monitoring • Baseline Hearing Tests • Annual Hearing Tests	Industrial Hygienist
Confined Space Entry Program	Available on Metnet: Metro Transit Safety Policy/Safety Department
Fall Arrest and Fall Equipment Plan	Available on Metnet: Metro Transit Safety Policy/Safety Department
Silica Exposure Control Plan	Available on Metnet: Metro Transit Safety Policy/Safety Department
Powered Industrial Truck Program	Available on Metnet: Metro Transit Safety Policy/Safety Department
Mobile Elevated Work Platform Plan	Available on Metnet: Metro Transit Safety Policy/Safety Department

Program Title	Location
Employee Emergency Action Plans • Nicollet • Heywood • Heywood Office • MJ Ruter • East Metro • South • Overhaul Base • Transit Control Center • Transfer Road • Operations Support Facility (OSC) • LRT O&M (Minneapolis) • LRT OMF (St. Paul) • Rail Support Facility (RSF) • LRT Training Center • Northstar VMF • Northstar BNSF Crew Rest Facility	Safety Department

4.4 HAZARDOUS MATERIALS PROGRAMS

The proper handling, use, and disposal of hazardous materials are important functions at Metro Transit. Each department is responsible for obtaining and distributing current information on hazardous materials in their areas of jurisdiction. This information includes technical specifications, Safety Data Sheets (SDS), instructions and procedures. The Safety Department will be consulted prior to any chemical procurement changes or process changes that may introduce new hazards into the work environment. Employee access to SDS information is available through online access or telephone hazard hotline.

Training on hazardous chemicals will be provided whenever new hazards are introduced into the work environment or whenever hazardous chemicals will affect specialized procedures such as Confined Space Entry. Chemical training will provide information on specific hazards and measures that can be taken to control or minimize the hazards. Control measures can include such strategies as engineering controls, substitution, or personal protective equipment.

All new procurements for a chemical, substance, or compound are sent to the Safety Department and to the Environmental Manager (consultant) for review before being brought onto Metro Transit property. In 2012, new procedures, including a new form, were implemented.

Metro Transit Materials Management Department ensures that materials, which come onto Metro Transit property, are properly labeled and packaged.

The Safety Department is responsible for the following occupational safety and health activities related to hazardous materials:

- Overseeing and administering industrial hygiene inspections and monitoring
- Maintaining the Safety Data Sheet (SDS) data base
- Providing technical advice and expertise
- Responding to exposure concerns and incidents
- Performing reviews and audits of agency practice
- Recommending Personal Protective Equipment
- Reviewing new procurements of hazardous materials
- Overseeing and auditing performance on various hazardous materials programs.

The Engineering & Facility Management Department is responsible for the following hazardous materials activities:

- Compliance with 2012 MPCA License for VOCs
- Spill response, clean up, and investigation
- Annual environmental audits of all facilities, properties and projects
- Capital program review and advisement
- Liaison with government agencies
- Authority policy and procedure review and implementation
- Regulatory review and implementation
- Administrative functions for hazardous waste and environmental lab contract preparation Hazardous waste storage, management and disposal.

4.5. DRUG AND ALCOHOL POLICY

Metro Transit is committed to maintaining an alcohol and drug free workplace, to provide a safe and productive work environment and to retain public trust and confidence in our transportation services. The purpose of the Drug and Alcohol Policy is to prevent accidents, incidents and losses resulting from alcohol and drug use. This policy also defines alcohol and drug-testing requirements, outlines applicable Employee Assistance Program services, and complies with the Federal Transit Administration's drug and alcohol regulations.

The Metro Transit Drug and Alcohol Policy also includes provisions for detection and deterrence sanctions for violations, Employee Assistance Program, and definitions of special requirements for safety sensitive positions. This program is administered by the Human Resources Department.

4.6 CONTRACTOR SAFETY COORDINATION

Contractor personnel work on Metro Transit property under the authority of various capital projects. The execution of these projects involves contractor personnel who do not come under the direct jurisdiction of Metro Transit, who work on Metro Transit property, and often under operating conditions. Certain safety requirements must be applied to all members of the contractor work force to ensure the safety of passengers, Metro Transit employees, contractor employees, as well as the protection of Metro Transit property.

Construction Job Site Safety Requirements are detailed in Metro Transit procedure C-07 titled Construction Job Site Safety.

Contractors are required to comply with Federal and Minnesota Occupational Safety and Health Administration (OSHA) safety requirements. This stipulation is incorporated into Metro Transit contracts. Contractors are expected to have their own written safety programs to meet OSHA's requirements. The Safety Department may ask to review the contractor's safety program(s).

Contractors are required by contract to use either their own, or Metro Transit's Hot Works program for any welding, cutting, or other hot works operations.

Specific LRT training contractor training requirements are specified above in Section 4.1.4 of this plan.