Metropolitan Council

Metro Transit

BUS PUBLIC TRANSPORTATION AGENCY SAFETY PLAN

Revision 2
July 2021

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 regularly updated versions of the Bus SSPP absent any requirement to do so, because it is good business practice and promotes a safety-minded corporate culture. Our bus 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 Bus ASP has been developed to comply with 49 CFR 673. Aside from reformatting there are few additional items that were required for compliance. Metro Transit continues to embrace its philosophy that safety is the cornerstone of what we do.

John MacQueen
John MacQueen (Jun 8, 2021 09:55 CDT)

John MacQueen
Acting Director, Rail and Bus Safety, Metro Transit

Date: Jun 8, 2021

POLICY STATEMENT AND AGENCY SAFETY PLAN AUTHORITY

Metro Transit is responsible for providing a safe and efficient means of transportation for the benefit of customers, employees and the public, under the authority granted by Minnesota Statute 473.405. The Bus Agency Safety Plan (Bus ASP) has been developed as a means of continued integration of safety into all Metro Transit bus system operations. Its format and content have been developed for compliance with FTA's Agency Safety Plan rule, 49 CFR 673.

The predecessor of the ASP is the SSPP. The Bus SSPP has been in place since 2005, approved and accepted by the Metro Transit General Manager and all members of senior staff of Metro Transit. While the General Manager of Metro Transit is ultimately responsible and accountable for safety performance of Metro Transit, the responsibility and authority for managing the overall safety effort has been delegated to the Director of Rail and Bus Safety. Further, executives, directors, managers and supervisors are responsible for safety within their respective departments.

The Safety Department provides safety support to all departments within Metro Transit and continues to assist in identifying and resolving unsafe conditions and hazards. Safety is a shared responsibility, and everyone plays a part. Accordingly, each department has responsibilities under the Plan and shall support its implementation. In accordance with this Bus ASP, Metro Transit continues its efforts in providing a safe and healthy transportation system for the public and its employees. Through the utilization of safety management systems, inspection procedures, and safety committee activities, remedial measures to eliminate or control identified hazards will be implemented and monitored for effectiveness.

Safety and accident prevention must be incorporated into the performance of every employee task. Employees are responsible for accident prevention and for maintaining safety standards consistent with their position and organization function.

Through a cooperative team effort and compliance with the Metro Transit Bus ASP, Metro Transit will achieve an optimum level of safety.

Weston W. Kooistra
Weston W. Kooistra (Jun 9, 2021 09:52 CDT)

Wes Kooistra
General Manager, Metro Transit

Date: Jun 8, 2021

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REVISION RECORD			
Revision	**Sections Affected**	**Revision Date**	**Comments**
Draft Revision 0	All	July 2019	Initial publication of the Bus ASP
Revision 1	Sec. 2.1.1; 3.1; 3.3; and 3.9	April 2020	Sec. 2.1.1: Updated sources of hazard information; Sec 3.1, 3.3, & 3.9: Correct references to SSPP to read ASP
Revision 2	Sec. 1.3; 1.5; 2.1.2; 3.1; 4.2; 4.3; 4.7	July 2021	Sec. 1.3: Updated system description. Sec. 1.5: Updated org. charts Sec. 2.1.2: Added language regarding Hazard Reports and specifying protections to employees who report hazards. Sec. 3.1: Added language regarding specific Safety Performance Targets. Sec. 4.2: Updated reference to current revision of Bus OEMP. Sec. 4.3: Added Powered Industrial Truck Program and Mobile Elevated Work Platform Plan. Sec. 4.7: Updated alternative fuels section.

1. SAFETY MANAGEMENT POLICY

1.1. PURPOSE AND SCOPE OF THE BUS AGENCY SAFETY PLAN

The purpose of the Bus Agency Safety Plan (ASP) is to provide Metro Transit with a comprehensive safety outline including reference to all current safety policies, procedures and activities that have been designed and implemented to maximize safe operation and ensure compliance with applicable regulations.

The ASP is a useful management tool that identifies both corporate and departmental safety procedures and provides clearly defined safety responsibilities at all levels within the agency.

The intent of the Plan is to promote a formal, system wide safety philosophy, and – culture – to document how system safety is integrated into Metro Transit activities.

This Plan has been developed in accordance with the American Public Transit Association (APTA) and Federal Transit Administration (FTA) guidelines for system safety program plans. The plan has been approved for implementation under Metro Transit authority by the General Manager.

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 operations and maintenance, maintenance of equipment and physical plant, design, construction, procurement, abatement and disposal activities. The Metro Transit Light Rail ASP and Commuter Rail System Safety Program Plan are companion documents to this Bus ASP. The Bus ASP describes how system safety is incorporated into Metro Transit's bus operations.

1.2. GOALS AND OBJECTIVES FOR THE BUS SAFETY MANAGEMENT PROGRAM

1.2.1. Goals

Metro Transit's system safety goal is to provide passengers, employees and those who interact with the bus operation with the highest degree of safety that is practical. This goal involves the design, development, operation and maintenance of a bus transportation system with strategies and tactics to improve the safety performance of Metro Transit. This Bus Agency Safety Plan is directed towards achieving this goal within Metro Transit's mission.

1.2.2. Objectives

The objectives of the Bus ASP are listed below.

- Performance commensurate with the motor bus industry; directly operated NTD metrics in fatalities, injuries, incidents and reliability
- Identification and elimination or control of hazards to employees, to customers or to the public
- Conducting Safe and effective bus operations
- Providing a working environment which meets or exceeds industry occupational health and safety standards and practices as well as regulatory requirements
- Accomplishing effective emergency response by Metro Transit and public safety agencies

- Investigation of accidents/incidents, fires, injuries, and near misses to determine probable cause(s) and contributing factors of the accident/incident for the purpose of implementing corrective action to prevent recurrence
- Integration of safety and hazard control measures into all Metro Transit department and division activities
- Establishment and implementation of safety policy, procedures, and requirements, which integrate safety into Metro Transit processes, decision making and operations
- Assignment of responsibilities related to safety policies, procedures, and requirements.

1.3. SYSTEM DESCRIPTION/ORGANIZATIONAL STRUCTURE

Metro Transit provides transportation services to customers within the Twin Cities metropolitan area. Prior to the pandemic, Metro Transit operated 130 bus routes, including 55 urban-local routes, 63 express routes and 9 suburban local routes serving the seven-county area. With the onset of that pandemic, service was greatly curtailed and is being incrementally restored as the region recovers and moves out of this episode. As of Dec. 31, 2020, Metro Transit's fleet included:

40-Ft Diesel	360
40-Ft Diesel BRT	16
40-Ft hyb Electric	100
60-Ft Diesel	173
coach	6
60-Ft ELECTRIC	16
Grand Total	**671**

(Note: this number only represents the active fleet as of 12/31/20. There were numerous buses sidelined due to reduced requirements from COVID.)
All Metro Transit buses are equipped with wheelchair lifts or ramps and racks for bicycles. Metro Transit uses an Ultra-Low Sulfur Biodiesel fuel. The percent of biodiesel varies based on season and pricing.

As of Dec. 31, 2020, Metro Transit had 3,090 employees, including 1,305 bus operators. Buses are stored and maintained at five service garages. Major bus maintenance and repairs occur at the Overhaul Base. Additional facilities include the Transit Control Center, Operations Support Center, Minneapolis Light Rail Operations & Maintenance Facility, St. Paul Light Rail Operations & Maintenance Facility, Light Rail Support Facility, Commuter Rail Operations & Maintenance Facility, Transfer Road and the Metro Transit Police Headquarters. There are also 64 Park & Rides, 970 bus shelters, 24 Transit Centers and 2 Service Centers. The Metro Transit Executive staff organization is depicted in Figure 1.

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 Bus Operations an accident will include but not be limited to events arising out of the operations of the bus, such as vehicle collisions when contact is made with another vehicle, equipment (forklift, sweeper, or bay-

cart), person, bike, gate arm, or other object, and customer bumps, trips and falls while boarding, on board or exiting the bus.

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 to personnel; damage to or loss of system service, equipment or property; 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. *Responsible Accident* means that the employee or operator had a reasonable opportunity to avoid the accident but failed to do so.

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. *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.

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

1.4.19. ***System Safety*** means t**he** 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.

1.4.20. *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.

The top levels of the Metro Transit organization, as shown in Figure 1, 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 bus 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 bus system and report safety issues. They are expected to report safety hazards to their immediate supervisor or to the Transit Control Center.

Figure 1

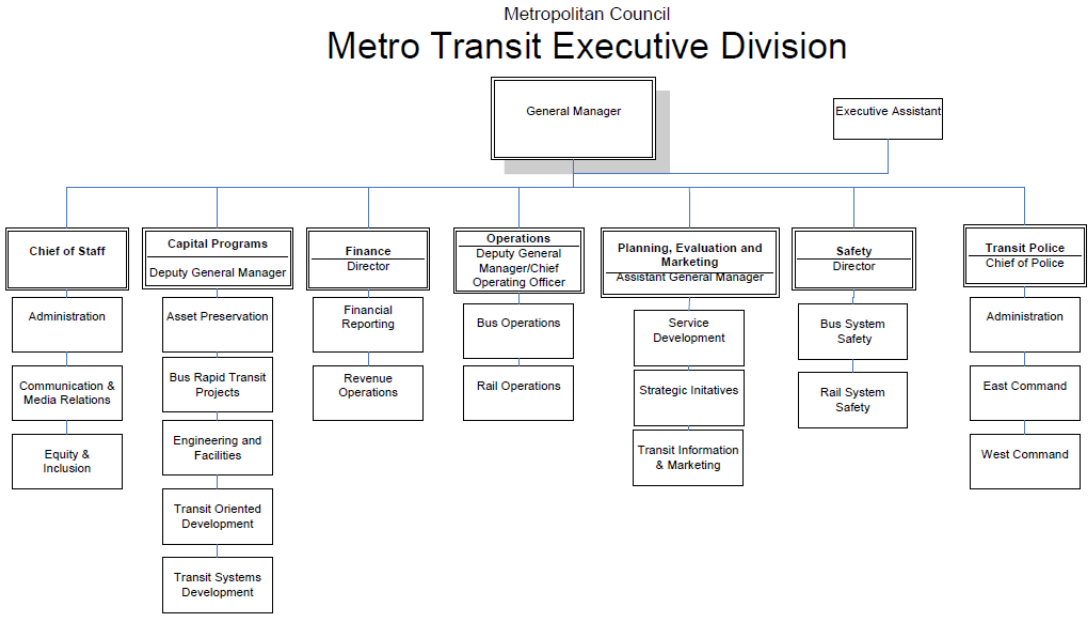
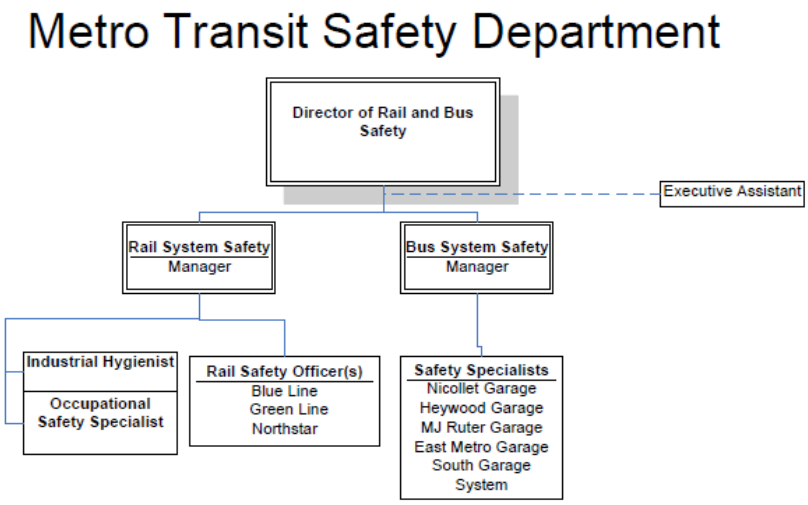


Figure 2



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 a Safety Department of 12 people, as shown on the organization chart in Figure 2. The Director of Rail and Bus Safety acts at the discretion of the General Manager and is the primary contact with state and federal safety regulatory 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 the Safety Department 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 related reports
- Developing, promulgating, reviewing, approving and conducting training programs to reduce/eliminate preventable accidents and expand awareness of safety procedures to employees and the public
- Inspecting facilities, equipment and property for existing or potentially hazardous conditions and recommending corrective actions
- Analyzing, monitoring and updating policies, procedures and plans to promote a safe working environment
- Implementing the ASPs associated with each mode
- Integrating system safety considerations into bus and rail operations, new design, and construction
- Developing, monitoring and evaluating bus, commuter rail and light rail safety programs to include accident/fire prevention and investigation, identification of occupational safety hazards and emergency preparedness
- Convening ad-hoc safety committees as appropriate
- Providing leadership to the safety staff.

1.5.1.2. Manager of Bus System Safety

The Manager of Bus System Safety supervises the six 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

- Providing regular safety reports to the Director of Rail and Bus Safety concerning accidents, incidents, and occupational health and safety issues
- Managing and conducting safety audits, including garage QA assessments
- Researching and investigating other industry practices
- Managing and implementing safety awards and safety incentive programs
- Assisting in preparing communications for publications
- Coordinating implementation and updates of the Bus ASP.

1.5.1.3. 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.

1.5.1.4. Rail Safety Officer

The Rail Safety Officer reports 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 O&M
- 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 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 Specialist

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 bus 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 (when required) 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. Bus Operations

The Bus Operations Division includes Bus Maintenance and Bus Transportation (Figure 3) 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 bus operators in safe bus 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 bus, 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, buses and equipment
- Maintaining current operating rules and procedures and disseminating these to employees, as appropriate
- Incorporating bus operator safety considerations in the development of new bus specifications and bus schedules
- Establish and maintain a configuration management process.
- Investigating incidents and accidents, and preparing and forwarding a report to the Safety Department.

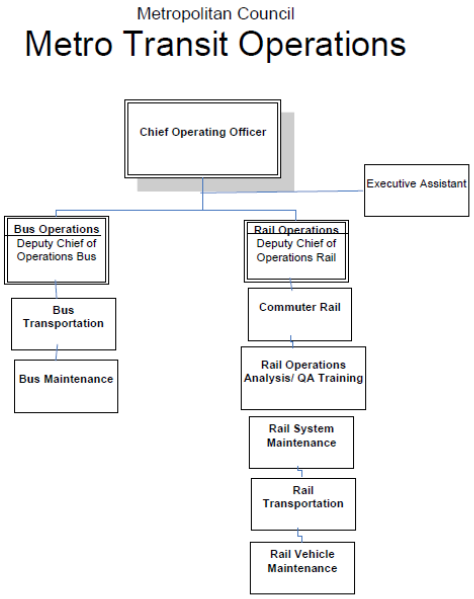


Figure 3

1.5.2.3. Engineering & Construction and Facilities Maintenance Depar

These departments provide engineering and maintenance for Metro Transit sup facilities, including bus garages, 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 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 bus operator safety issues in the development of bus schedules and routes
- 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 causes of responsible bus 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.

1.6. BUS ASP CONTROL AND UPDATE PROCEDURES

This section establishes the frequency and method for periodic review of the Bus 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 Bus ASP for Metro Transit. The Bus ASP will be reviewed and updated every year as appropriate to reflect changes in bus system, equipment, facilities or organization. Department heads will evaluate proposed changes and, if warranted, submit proposed changes to the Director of Rail and Bus Safety. No proposed changes to the Bus 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 Bus 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.

2. SAFETY RISK MANAGEMENT

2.1. HAZARD IDENTIFICATION/RESOLUTION PROCESS

Hazard identification and resolution is one of the objectives of the Metro Transit Bus System Safety Program. This process can be used by, is applicable to all levels of the organization, and is the means by which hazards are identified, analyzed for potential impacts 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:

- Hazards that develop as a result of accidents/incidents
- Hazards that are identified as part of an accident/incident investigation
- Internal or external facility inspections that identify hazards or unsafe conditions
- Employee observations of unsafe conditions or behavior (Hazard Report Form)

- A formal hazard analysis that analyzes system components to identify failure modes and effects on the total system or a part of, the system, as well as actions of personnel
- Internal audits or assessments.
- 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.

2.1.3. Assessing the Hazards - Qualitative Probability/Severity Hazard Analysis

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

2.1.3.1. Hazard Severity

Hazards are rated in terms of their effects on employees and/or the transit system. Severity categories are defined below.

Category I- Catastrophic

Operating conditions are such that human error, environment, design deficiencies, element, sub-system or component failure or procedural deficiencies may cause death or major system loss, thereby requiring immediate cessation of the unsafe activity or operation.

Category II- Critical

Operating conditions are such that human error, environment, design deficiencies, element, sub-system or component failure or procedural deficiencies may cause severe injury, illness, or major system damage thereby requiring immediate action including immediate cessation of the unsafe activity or operation.

Category III - Marginal

Operating conditions may cause minor injury, illness, or minor system damage such that human error, environment, design deficiencies, sub-system or component failure or procedural deficiencies can be counteracted or controlled without serious injury, illness or major system damage.

Category IV - Negligible

Operating conditions are such that personnel error, environment, design deficiencies, sub-system or component failure or procedural deficiencies will result in no, or minor, illness, injury or system damage.

2.1.3.2. Hazard Probability

The probability that a hazard will occur can be described in potential occurrences per unit of time, events, population items or activity. A qualitative hazard probability 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 probability rating system is described below.

DESCRIPTIVE WORD	LEVEL	SPECIFIC INDIVIDUAL ITEM	FLEET OR INVENTORY
Frequent	A	Likely to occur frequently ($P>10^{-1}$)	Continuously experienced in the system
Reasonably Probable	B	Will occur several times in life cycle of an item ($10^{-2} \leq P \leq 10^{-1}$)	Will occur frequently throughout the system
Occasional	C	Likely to occur sometime in life of an item ($10^{-3} \leq P \leq 10^{-2}$)	Will occur several times
Remote	D	Unlikely, but possible to occur in life of an item ($10^{-6} \leq P \leq 10^{-3}$)	Unlikely, but can reasonably be expected to occur
Improbable	E	So unlikely, it can be assumed occurrence may not be experienced ($P < 10^{-6}$)	Unlikely to occur, but possible

Please see the table below for additional information that might be useful in determining probability:

DESCRIPTIVE WORD	**LEVEL**	**Probability of Occurrence (P)**	**Mean Time Between Events (MTBE)**
Frequent	A	Chance of mishap greater than 1 in 10 ($P>10^{-1}$)	Mishap will occur in less than 1,000 operating hours
Reasonably Probable	B	Chance of mishap greater than 1 in 10 but less than 1 in 100 ($10^{-2} \leq P \leq 10^{-1}$)	Mishap will occur somewhere between 1,000 and 100,000 operating hours
Occasional	C	Chance of mishap greater than 1 in 100 but less than 1 in 1,000 ($10^{-3} \leq P \leq 10^{-2}$)	Mishap will occur somewhere between 100,000 and one million operating hours
Remote	D	Chance of mishap greater than 1 in 1,000 but less than 1 in a million ($10^{-6} \leq P \leq 10^{-3}$)	Mishap will occur somewhere between one million and 100 million operating hours
Improbable	E	Chance of mishap greater than 1 in a million ($P < 10^{-6}$)	Mishap occurrence exceeds 100 million operating hours

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 probability of occurrence. A Risk Assessment Index, or Hazard Rating Table, is shown below.

Hazard Categories

HAZARD FREQUENCY	CATEGORY I Catastrophic	CATEGORY II Critical	CATEGORY III Marginal	CATEGORY IV 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" means that the hazard may be allowed to remain provided that it is subject to continual monitoring to ensure that it doesn't worsen. Depending on the nature and scope of the analysis this could be a safety representative, a responsible department manager or a committee associated with the system under analysis. "Acceptable without review 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, buses, equipment, park & rides, shelters, bus stop locations, 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 probability of incorrect personnel reaction to the signals and shall be standardized within like types of systems. Warning devices can be either active (e.g., flashers) or passive (e.g., signs).

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.

3. SAFETY ASSURANCE

Safety Assurance involves processes within a transit agency's Safety Management System that function 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.

Risk Management manages the primary claims database in a system called Stars. Risk Management provides regular reports to Metro Transit management teams while Safety conducts further analysis and assists with distribution and communication. Data collected in Stars also contains data on employee injuries and workers compensation.

Metro Transit performs safety data collection and analysis for bus operations at the garage or facility level. The HASTUS Personnel Management System is used to track the individual safety performance of bus operators. Data collection in HASTUS will eventually replace TIS and will include at a minimum all of the same data with enhanced features and abilities to generate reports. Data collection in TIS or HASTUS includes the following:

- Employee on-duty vehicle collisions coded by type
- Employee on-duty citations
- Passenger accidents coded by type
- Employee responsible accidents
- Date of Safety Conferences
- Safety Keys Training
- Other corrective actions
- Discipline.

Metro Transit Safety prepares reports for OSHA and the NTD. The safety specialist at each garage is responsible for generating and updating the OSHA logs for that facility and the annual OSHA posting. At the Heywood Office, TCC, and Operations Support Center the Safety Manager is responsible for the OSHA data. The Industrial Hygienist is responsible for the OSHA reporting at the OHB and the Occupational Safety Specialist is responsible for reporting at Transfer Road.

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, probability 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
- Annual fatalities from the bus operation
- Annual injuries from the bus operation
- System reliability (vehicle mean distance between failures)

At the time of this plan revision, the goals for these target measures are based on 2019 actual operating experience, as that was the last full year of pre-pandemic operation and any targets set based on recent experience since the COVID 19 outbreak and the subsequent reductions in service levels would be artificially low as service begins to restore itself. 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
Collisions per 100,000 vehicle miles	3.8 / 100K vehicle miles
Annual fatalities from the bus operation (as reported to National Transit Database (NTD))	0 / calendar year
Annual injuries from the bus operation (as reported to National Transit Database (NTD))	175 / calendar year (14.5 / month)
System reliability (vehicle mean distance between failures)	7,731 miles Mean Distance Between Failures (MDBF)

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.

3.2. ACCIDENT/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). All accidents investigated by the operating department must be documented and forwarded to the Safety Department. Depending on the type and severity of the accident, an operating 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.

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 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 the National Transit Database (NTD).

3.2.1. Accident/Incident Policies

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

For non-employee accidents/incidents, employees are responsible to collect appropriate information and prepare 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.

When accident/incident reports and statistics show repetitive accidents/incidents that result in an inability to meet or exceed the safety goals, the Manager of Bus Safety will initiate an investigation to determine causes. The Director of Rail and Bus Safety will participate with appropriate departments/offices to determine the required corrective actions.

3.2.2. Procedures for Metro Transit Vehicle Collision or Customer Fall Reporting and Investigation

Metro Transit equipment accident reporting and investigation procedures are described in the following:

- Metro Transit Bus Operator's Rule Book and Guide
- Transit Control Center (TCC) policies and procedures
- District Supervisors operating policies and procedures
- Safety Department procedures for processing accidents
- A Workplace Accident and Injury Reduction (AWAIR) Program
- Metro Transit Police Policies and Procedures
- Maintenance Manager On Line Tool and Bus Maintenance SOPs
- Risk Management Policies and Procedures.

For all departments, whenever a bus, Metro Transit non-revenue vehicle, equipment, or personal vehicle being used for work purposes (not transportation to and from work) is involved in an accident the TCC must be notified as soon as possible. This is required whether the accident or incident took place on public or Metro Transit property. The exception is Metro Transit buses being operated by a mechanic in Metro Transit garage bays, maintenance facilities and yards.

Accident notification and response is included in Metro Transit's procedures in the TCC. All necessary emergency response agencies, Metro Transit management personnel and regulatory agencies are included in the notification process. A bus, vehicle, or equipment accident/incident report is prepared by the operator, reviewed by Safety, and forwarded to Risk Management, in accordance with established procedures.

In addition, the Safety Department, with data and support from Risk Management, conducts periodic reviews of bus accidents to determine common trends and develop appropriate preventive programs.

3.2.3 Procedures for Non-vehicle Accidents, Injuries or Incidents

3.2.3.1 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.

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

- Make appropriate arrangements for medical attention, if requested.
- Call TCC 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 Safety Specialist 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 Safety Specialist

3.3. FACILITIES INSPECTIONS

Metro Transit facilities are inspected on a regular basis to identify items needing corrective action. Facilities are listed in Section 1.3 (System Description/Organization Structure) of this Bus ASP.

When appropriate, facilities inspections should include Hazard Identification and Resolution as described in section 2.

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, Bus 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 uses 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, a work order is made for Engineering and Facility Maintenance to correct. The work order is identified as an AWAIR need so that progress can be easily tracked. 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 buses
- 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. BUS MAINTENANCE AUDITS/INSPECTIONS

Metro Transit bus maintenance plans and procedures include preventive maintenance activities, as well as scheduled and unscheduled maintenance procedures. Bus maintenance inspection and repair activities occur at bus garages and the overhaul base.

Bus maintenance refers to the inspection, maintenance and repair of buses. This is accomplished by performing preventative maintenance inspections and running repairs based on those inspections. Bus preventive maintenance schedules are detailed in the Metro Transit Bus Maintenance Plan and include both mileage-based and time-based inspections.

Bus Maintenance records all bus maintenance activities in the automated TXbase maintenance management system.

Metro Transit bus maintenance has an internal Quality Assurance program that audits the effectiveness of the inspection and maintenance plan. At each garage, the garage supervisors perform regular Quality Assurance on bus inspections, bus repairs, general cleaning and lift inspections.

3.5. RULES AND PROCEDURES REVIEW

Metro Transit is responsible for ensuring that operating Rules and Procedures are carefully developed, maintained and followed. Rules and Procedures are updated periodically as appropriate. Bus Operator Rules and Procedures use bulletins posted in each garage to notify them of all changes to practice, operating rules and regulations. To reinforce rules and operating procedures compliance, especially when an area of non-compliance is identified, bulletins may be re-issued.

Bus operations follow written Rules and Procedures. The Bus operator's Pocket Guide includes the following information:

- Definitions
- Equipment
- Normal Operations

- Special Operations
- Dealing with Passengers
- Emergencies
- Radio Codes.

3.6. SYSTEM MODIFICATION DESIGN REVIEW AND APPROVAL PROCESS

System modification refers to new bus specifications, new construction, remodeling of existing facilities, or changes in facility equipment or machinery. System modification is the result of any change to the transportation system, 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 the modification may encompass.

The objectives of the System Modification Program are to:

- Assure, to the maximum extent practical, that necessary safety requirements are designed and incorporated into the transportation system, buses, equipment and facilities
- Conduct a systematic review or testing of each new element of the system, buses, equipment or facilities to assure conformance to the intended design or specification
- Document those safety tests or reviews in a format that clearly displays the successful completion of the project
- Identify when engineering or design has not eliminated a hazard so that the appropriate mitigation can be developed.

The System Modification Program is supported by the following elements:

- Identification of safety requirements utilizing safety criteria derived from industry experience, codes, standards and mandated regulations
- Verification of compliance with safety requirements throughout the life cycle of the project (concept, design, construction, operation, maintenance and disposal)
- Review of safety critical elements or components affected by additions, deletions, substitutions, rebuilding, deferring maintenance or extension of service life.

System modification is accomplished by the following types of hazard management:

- System Safety- elimination, minimization, or control of hazards that could result in damage or injury
- Fire/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 patrons and the general public that result from operation of the system.

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 Construction Procedure 4.7.2, titled Record Documents, 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.

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.

3.9. INTERNAL SAFETY AUDITS

The Metro Transit Safety Department is responsible for the development and implementation of the Bus System Safety Audit Process that provides a proactive approach to ensure safe operations of the bus system. The Internal Bus Safety Audit Program Plan documents process by which the Metro Transit Bus ASP is audited. The audit plan will be revised to correspond with this Bus ASP.

3.9.1. Audit Responsibility

The Director of Rail and Bus Safety is responsible for establishing and promoting the safety audit process within Metro Transit. The Manager of Bus Safety is responsible for carrying out the audits and generating audit reports. The schedule for items to be audited is published in the Internal Bus Safety Audit Program Plan.

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 Bus 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 Bus 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 the General Manager that bus operations is reducing to practice that which is stated in its plans and procedures. Perhaps the most important means of satisfying an audit query is to produce documentation in the form of measurement, procedure, test, or visual. The operative phrase is "not documented, not done."

3.9.4. Audit Reporting

The Safety Department will document all internal safety audits in writing. Reports will identify areas that need correction or improvement. Typically, the report will be addressed to the appropriate department manager, preferably the manager(s) involved in the audit and who would be responsible for implementing corrective action. The manager of safety will maintain a corrective action matrix. This matrix will serve as a tracking mechanism for open items until their completion. (This does not include items identified by an AWAIR committee inspection unless the issue is a system issue.)

Audit records will be kept by the manager of safety for review and for preparation of summary reports for executive management, as appropriate and necessary.

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.

4.1.1. Licenses

The Commercial Driver's License (CDL) statuses of all Metro Transit employees who are required to hold a CDL are checked daily with the Minnesota Department of Public Safety. This includes bus/rail operators and maintenance employees. The checks include CDL status, Class status, appropriate Class (A or B), passenger endorsement when required and expiration date. Appropriate checks of licenses for rail and street supervisors are also conducted. Metro Transit has identified that a few employees (currently 24) hold a Wisconsin Driver's License. These are checked by a manual system. Information Services are developing a similar

automated check of Wisconsin Driver's License CDLs. No current employees hold CDLs in states other than Wisconsin and Minnesota.

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. Bus Transportation Training

All new Metro Transit bus operators receive a 1-day orientation. The morning section covers orientation to the Metropolitan Council. The afternoon training includes:

- Employee Benefits (HR)
- Right-to-Know information on safety & hazardous materials (Safety Department)
- Bloodborne Pathogens Awareness Training (Safety Department)
- Guest Speakers: MT General Manager & Director of Bus Transportation
- Drug & Alcohol Awareness - drug & alcohol policy, random testing, etc. for FTA safety sensitive & non-safety sensitive MT employees (IC instructor)

New part-time bus operators receive a minimum of 5 weeks of training that includes the following:

- Weekly evaluations
- Tests on radio communications
- Commercial driver's license road test by training department
- In service road test and safety review by safety department
- Written exam.

The Metro Transit instruction center has special procedures for re-hired bus operators that allow them to finish the re-training in a shorter period.

Bus operators going from part-time to full-time receive 200 hours of training reviewing operations, procedures, safety, violence prevention, and route training. They are evaluated weekly and must pass a written exam.

The Smith System of time and space cushion driving (Safety Keys) is incorporated throughout the initial training of the bus operators. A formal refresher on Safety Keys is taught to part-time bus operators after they have been driving for approximately 90 days. The safety department may refer bus operators to Safety Keys as a refresher course because of an infraction, safety-related complaint or incident. Safety Keys is also used as a refresher course for bus operators with the goal of every bus operator attending Safety Keys every three years.

The Transit Ambassador Program is part of the training given to bus operators when they transition from part time to full time.
Bus Transportation has developed a Professional Operator Development (POD) program that is presented annually to each bus operator. It includes information on new transit ways and other safe operating and organizational development needs. It also includes information on how to stay healthy and thrive as a Metro Transit Bus Operator.

4.1.4. Bus Maintenance Training

All new Bus Maintenance employees receive an additional 1-10 days of specific New Employee Maintenance Orientation, (NEMO) depending on the requirements of their position.

The Maintenance Training Department provides training in the following areas to new employees and current employees, depending upon their assignments, as appropriate:

- Foundation and Pneumatic brake systems
- Low voltage electrical systems
- Diesel Engine maintenance
- Vehicle inspection
- Automatic Transmission maintenance
- Air-conditioning repair with Environmental Protection Administration Certification
- Wheelchair Lift or Ramp maintenance
- Chassis maintenance
- Bus component overhaul
- Bus towing and safety training
- Oxygen-Fuel Gas Welding safety and procedures
- Vehicle movement operations.

Maintenance training records are organized by subject, including right-to-know, respirators, forklift, lock-out/tag-out, confined space, hearing protection, hazardous waste, personal protective equipment, and blood borne pathogens.

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 Bus Maintenance Department and Facility Engineering receive additional RTK training. They also receive other training as needed for their new position.

All new Bus Maintenance employees receive instructions on voluntary use of dust mask style respiratory protection. Employees that transfer to the Overhaul Base Body 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 bus maintenance and all new janitors in facility maintenance receive training in bloodborne pathogens by the Safety Department. Transportation Street Supervisors and Transit Control Center 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.

4.2. EMERGENCY RESPONSE PLANNING, COORDINATION, TRAINING

Emergency response is documented in the Bus Emergency Operations Management Plan (Bus OEMP) Rev. 5, February 2021.

This plan establishes the response process and responsibilities for various Metro Transit departments, employees, and outside agencies in the event of a bus transit emergency or a community emergency to which Metro Transit will be requested to respond and for which public safety agency assistance is required. Key elements of the Metro Transit Bus Emergency Operations Management Plan are as follows:

- Ensuring that proper notification of emergencies is implemented throughout the agency
- Providing training programs for employees and emergency response agencies
- Commitment to the use of the National Incident Management System (NIMS) and training of appropriate staff
- Conducting emergency preparedness exercises. These exercises will include discussion-based (tabletop) and operations-based (field) exercises involving Metro Transit personnel and external agencies. A drill planning committee may be used.
- Participation in community and state emergency preparedness exercises as appropriate.
- Ensuring that necessary cooperative agreements are established.

Metro Transit may conduct an emergency preparedness exercise as a stand-alone modal exercise, in conjunction with other modes, or as part of a large multi-agency exercise. All drills are evaluated and critiqued for the benefit of Metro Transit and the emergency response agencies.

Each Metro Transit facility has an Employee Emergency Action Plan. 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. Each year, at each facility, an emergency drill such as a fire drill will be conducted. 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.

Emergency planning is coordinated between the Transit Control Center and outside emergency responders. Joint inspections between Metro Transit staff and emergency responders are

conducted on existing and new facilities to address concerns of the emergency responder. Metro Transit also provides hybrid bus emergency response information to emergency responders in the Metro Area. This information is currently in the form of a power point presentation developed in cooperation with the EMS Education Department of North Memorial Medical Center, which provides emergency statewide emergency responder training and the Minnesota State Highway Patrol. The power point is also made available to any emergency responder in the Metropolitan area upon request. The Safety Department, along with the TCC and Engineering and Facility Maintenance assists in planning the coordination of emergencies through interaction with city Emergency Management services, and other related state and federal governmental agencies.

4.3. EMPLOYEE OCCUPATIONAL SAFETY PROGRAMS

The Safety Department is responsible for developing and implementing Employee Occupational 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
- A Workplace Accident and Injury Reduction Program with Committees.

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
Metropolitan Council Safety Committee Procedures	Available on Metnet Metropolitan Council Administration Policies and Procedures 4-9a

Program Title	Location
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 • Employee Handbook	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 • 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 MSDS information is available through a telephone hazard hotline or by online access.

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.

All Metro Transit employees are covered by this policy. The policy includes the following: The use of alcoholic beverages, intoxicants or controlled substances by employees subject to duty, or their possession, use or being under the influence thereof, while on duty or on authority property, is prohibited. Employees shall not report for duty under the influence of or use on authority property, any drug, medication or other substance including those prescribed by a doctor, that will in any way affect their alertness, coordination, reaction, response or safety. The illegal use, possession, manufacture, distribution or the dispensing or selling of any controlled substance on or off duty, or on or off authority property is prohibited.

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 4.4.1 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.

4.7. ALTERNATIVE FUELS AND SAFETY

Metro Transit currently has 114 hybrid diesel-electric buses in the fleet at the Nicollet, Heywood, and East Metro Garages, with 8 battery-electric buses in the fleet at Heywood Garage.

The following precautions for diesel-electric and all-electric buses include:

- All hybrid or ~~all~~ battery-electric buses are identified as such on the exterior of the bus so that those responding will know of the hazard
- Emergency Response information is provided by the manufacturer inside the rear engine compartment and behind the bus operator seat
- Emergency Response information is provided to all emergency responders in the areas with hybrid buses and ~~all~~ battery-electric buses.