Agency Safety Plan

November 2022
Revision 2

CHARLOTTE AREA TRANSIT SYSTEM
Charlotte-Mecklenburg Government Center (CMGC)
600 East Fourth Street
Charlotte, NC 28202

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Summary of Changes
Revision 2
November 2022

Location	Change
Entire Document	Minor wording changes to improve clarity
Definitions	Added specific language for Bus to Accident and Collision definitions. <u>Accident</u> "Bus: An event that involves any of the following: a fatality; bodily injury in which that person receives immediate medical attention away from the scene of the accident; or at least one of the vehicles involved in the accident had to be towed from the scene." <u>Collision</u> "Bus: the motor vehicle striking or being struck by another vehicle, person, or object."
Purpose and Scope	Added documents that state and federal agencies can review upon request. "The SMS Manager will ensure that FTA, other Federal Agencies, and the NCDT State Safety Oversight Agency (SSOA) will have access to review all CATS SMS and ASP documentation, audit reports, investigation reports and other safety related documents upon request."
Section 1.3.1	Light Rail Operations - Lynx Blue Line Changed maximum speed from 55 mph to 66 mph for LRVs
Section 1.3.2	Bus Operations Division Changed bus fleet total; added CATS procurement of electric vehicles. The CATS revenue bus fleet is comprised of approximately 316 buses. "As part of a special project to assess transitioning to all electrical vehicles, CATS is currently assessing 18 electric buses from two different manufacturers."
Section 1.3.3	Special Transportation Service (STS) Changed number of STS vehicles from 85 to 84
Section 1.4.3	Updated responsibilities of General Manager of Safety and Security "General Manager of Safety and Security (Chief Safety Officer and SMS Manager)" "The GM of S&S is adequately trained in safety and is empowered and authorized to administer a comprehensive integrated and coordinated ASP, including the day-to-day implementation and operations of the agency Safety Management System (SMS) program and for developing and maintaining the ASP in compliance with CFR 49 673. The CSO maintains CATS Safety program and acts as a liaison with first responders and emergency management."
Section 1.5	Added description of Safety Responsibilities Task Matrix and implementation activities in regards to project documents and contracts. "Table 1 lists safety responsibilities by position and title. A description of the specific activities required to implement the ASP will be included for all employees, agents, and contractors, as part of the ASP implementation plan."

Location	Change
	"Additionally, Office of Safety & Security will work with procurement and project management to ensure appropriate ASP elements are incorporated into project documents and contracts."
Section 1.6	Updated information in Table 2, Rail and Bus Safety and Security Committees' membership composition. *Rail* "Members: S&S, QA, and frontline employees and management from MOW, RCM, Transportation, Parts & Warranty, Facilities Management. The committee membership will be 50% Frontline and 50% Management at a minimum." *Bus* "Members: S&S, BOD Operations and Maintenance supervisors and managers, frontline employees from BOD Operators, Facilities Management, STS operator, STS supervisor"
Section 1.6	Updated responsibilities of Rail Safety and Security Committee. "Review and approve the ASP as revised"
Section 1.7	Employee Reporting Program Added description of S&SF48 *Safety Issues Reporting Form* and described how safety committees will use hazard tracking logs. "The S&SF48 Safety Issues Reporting Form is available to all employees via city intranet or can be requested from employee's supervisor. This form can be completed by hard copy or emailed and submitted to supervisors or the Office of Safety and Security." "Reported safety concerns are tracked by the Rail and Bus Safety and Security Committee using safety concerns tracking logs. This information is shared with the Office of Safety and Security for review and to identify potential hazards that need to be mitigated through our Hazard Risk Management process."
Section 1.11	Safety Plan Implementation and Task Procedures Added "Key processes not included or referenced in this ASP can be found in CATS plans, manuals, policies, and procedures that are controlled in the CATS' Quality Management System and processes."
Section 2.2.1	Hazard Management Process Added Hazards identified during annual Transit Asset Condition Assessment to the list (#11)
Section 2.2.2	Minor wording changes for clarity
Section 2.3.4	Acceptable without review Added "Unacceptable and undesirable safety conditions identified during the Transit Asset Condition Assessment as described in CATS TAMP Section 2.0 will be reported to the OS&S immediately."
Section 2.4.2	Evaluation of Current Mitigations Added "CAPS are verified by Safety Assurance activities that are tracked in the ISA schedule, Operational Audits tab."
Section 3.2.5	Minor wording changes for clarity
Section 3.2.6	Integrity of the Review Process Added "The lead auditor will be a qualified person from Quality Assurance or the Office of Safety and Security."
Section 3.5.1.2	Process for Change

Location	Change
	Added "Employees receive awareness and notification in regard to changes in their work area. This is verified with sign-off sheets.
Section 3.5.2.2	Process for Change – Control of Records Described how ASP records have to be kept for a minimum of 3 years Records related to ASP development and SMS implementation will be retained electronically for a minimum of three (3) years in accordance with CATS Records Retention Schedules and 49 Parts 670, 672, 673, and 674.
Section 4.2	Safety Plan Review and Modification Described annual review and approval of ASP done by departments and approved by NCDOT The SMS Manager will ensure compliance with all ASP/SSOPS standards prior to submitting the ASP to the CSO and CEO for approval to include department heads review and comments. The annual update is provided to NCDOT for review and approval per the State Safety Oversight Program Standards (SSOPS) as amended.
Section 4.5.2.1	Review of Rules and Procedures Describe responsibilities related to policy updates and QA role Division or Section Managers are responsible to update policies and procedures specific to their departments. Quality Assurance Section is responsible for reviewing, routing for approval, distributing and maintaining CATS plans, manuals, policies, and procedures.
Section 4.5.3	Added reference to CATS HR02, CATS Drug and Alcohol Policy; added requirements for new hires acknowledgement of drug and alcohol policy
Section 4.6.3	Added explanation of training for reporting safety issues
Section 4.6.4.1	Revised Hours of Service (HOS) requirements for bus operators in accordance with FMCSA Part 395; Added HOS requirements for STS operators
Section 4.6.4.1	Bus Operations Division Hours of Service Revised Hours of Service (HOS) requirements for bus operators in accordance with FMCSA Part 395; Added HOS requirements for STS operators Fixed Route: In accordance with the FMCSA Part 395 Hours of Service for Motor Carriers of Passengers and the Collective Bargaining Agreement with the Union, requirements for maximum hours of operation (Maximum driving time for passenger-carrying vehicles) of a CATS Fixed Route Bus Operator are as follows: Shall not drive more than ten (10) hours following eight (8) or nine (9) consecutive hours off duty depending on position (Regular vs. Extra Board). Shall not drive any period after being on-duty for fifteen (15) hours following eight (8) consecutive hours off. On runs of six (6) hours or more of continuous time, employees will be allowed at least thirty (30) minutes, but no more than one (1) uninterrupted hour for meal relief. On runs of twelve (12) platform hours or more will be allowed a second lunch period of at least thirty (30) uninterrupted minutes, but not more than one (1) uninterrupted hour.

Location	Change
	All straight, split, or other assigned runs of regular operators, will consist of eight (8) hours a day for five (5) days or ten (10) hours a day for four (4) days exclusive of check-in time and travel time included in computing total platform time. Paratransit: CATS Special Transportation Services (STS) Follows DOT Hours of Service Regulations and Required managerial approval for work hours above 56 hours per week.
Section 4.6.4.2	Rail Operations Hours of Service Added process steps to take when HOS violations occur in rail operations and described fatigue awareness training Operations schedules completed for the following week will be reviewed for any scheduled HOS violations. Any individual scheduled to exceed HOS who cannot have their scheduled changed to comply with the requirements will have their schedule approved by the respective manager. The manager will send a memo describing the violation and the reason for the violation to the GM of Rail Operations and Facilities for review and approval. Once the GM approves the HOS violation, the memo will be submitted to the Rail Safety Manager by the end of the respective work week. This will be in addition to the current procedure where HOS violations noted on weekly timesheets will be reported to the Rail Safety Manager. Fatigue awareness training is provided in the new hire training program and information is periodically provided in the Rail Operations Daily Activity Plan (RODAP).
Section 4.6.5	Recordkeeping Added “The Training Department also keeps detailed training records on initial and refresher training by employee.”
Section 4.7	Safety Communication and Outreach Added “The Bus and Rail Safety and Security Committees will review and approve the ASP annually.”

Definitions

Accident:
Rail: An event that involves any of the following: a loss of life; a serious injury to a person; a collision involving a rail transit vehicle; a runaway train; an evacuation for life safety reasons; or any derailment of a rail transit vehicle, at any location, at any time, whatever the cause. An accident must be reported in accordance with the thresholds for notification and reporting set forth in the State Safety Oversight Program Standard (SSOPS).
Bus: An event that involves any of the following: a fatality; bodily injury in which that person receives immediate medical attention away from the scene of the accident; or at least one of the vehicles involved in the accident had to be towed from the scene.

Accountable Executive: A single, identifiable individual who has ultimate responsibility for: carrying out the Public Transportation Safety Plan of a public transportation agency; carrying out the agency's Transit Asset Management Plan; and controlling or directing 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 its Transit Asset Management Plan, in accordance with 49 U.S.C. 5326. For CATS, the CEO is the Accountable Executive.

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

Agency Safety Plan (ASP): See Public Transportation Agency Safety Plan (PTASP).

All-Hazards Approach: An ideology and approach used by planners to conduct integrated planning and build capability for safety, security, and emergency management, and to optimize and continuously improve the use of resources and the management of risks from hazards, threats, vulnerabilities, and adverse events or incidents.

APTA Guidelines: The American Public Transit Association's (APTA) *Manual for the Development of Rail Transit System Safety Program Plans*, published on August 20, 1991 (revised June 2001).

Charlotte Regional Transportation Planning Organization (CRTPO): The federally designated Metropolitan Planning Organization (MPO) for the Charlotte Urbanized Area.

Chief Safety Officer: 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. A Chief Safety Officer may not serve in other operational or maintenance capacities unless employed by a transit agency that is a small public transportation provider as defined in this part or by a public transportation provider that does not operate a rail fixed guideway public transportation system.

Collision:
Rail: An impact in which one piece of on-track equipment strikes another piece of on-track equipment, railroad property, object, person, or non-rail vehicle.
Bus: the motor vehicle striking or being struck by another vehicle, person, or object.

Contractor: An entity that performs tasks on behalf of the Federal Transit Administration (FTA), a State Safety Oversight Agency (SSOA), or a Rail Transit Agency (RTA), through contract or other agreement. The contractor may not perform tasks for the oversight agency and the RTA at the same time.

Corrective Action Plan (CAP): A plan developed by a Rail Transit Agency (RTA) that describes the actions the RTA will take to minimize, control, correct, or eliminate risks and hazards, and the schedule for taking those actions. Either a State Safety Oversight Agency (SSOA) or the Federal Transit Administration (FTA) may require an RTA to develop and carry out a Corrective Action Plan.

Designated personnel: Can be defined in the following two ways:

1. Employees and contractors identified by the CATS Agency Safety Plan whose job function is directly responsible for safety oversight of CATS Transportation Services; or
2. Employees and contractors of a State Safety Oversight Agency whose job functions require them to conduct safety audits and examinations of the rail fixed guideway public transportation systems subject to the jurisdiction of the agency.

Derailment: A non-collision event that occurs when a train or other rail vehicle unintentionally comes off its rail, causing it to no longer be properly guided on the railway.

A derailment occurs when the LRV or on-track equipment leaves the rail for a reason other than a collision, explosion, highway-rail grade crossing impact, etc.

Point of Derailment: The point on the rail where the normal wheel-rail relationship was disturbed.

Cause of Derailment: A condition or failure, that results in a derailment, collision, or other type of accident. A condition is a characteristic of an LRV or track which can be measured or identified during equipment or track inspection, or personnel interview. A failure is a physical failure of a track or car component or a human failure to properly perform a job.

Directly responsible for safety oversight: Public transportation agency personnel whose primary job function includes the development, implementation, review, and enforcement of the agency's safety plan, and/or the State Safety Oversight Agency (SSOA) requirements for the rail fixed guideway public transportation system, pursuant to 49 CFR parts 659 or 674.

Equivalent Authority: An entity that carries out duties similar to that of a Board of Directors, for a recipient or subrecipient of FTA funds under 49 U.S.C. Chapter 53, including sufficient authority to review and approve a recipient or subrecipient's Public Transportation Agency Safety Plan. The Metropolitan Transit Commission (MTC) is CATS Equivalent Authority.

Emergency Conditions: Unexpected events or incidents that occur naturally or manmade that impact the ability of CATS to operate normal service that causes a hazardous condition requiring an immediate response.

Emergency Operations Plan (EOP): Describes the coordination and preparedness activities related to an organization's emergency response policies and procedures, including: the assignment of employee responsibilities during an emergency; specific emergency response annexes, as deemed necessary; and addressing various threats and vulnerabilities specific to internal organizational systems, functions, or work groups.

Emergency Management Program (EMP): A comprehensive framework, including plans, policies, and procedures, established to manage an All-Hazards Approach to emergency preparedness and response activities. This framework addresses the five phases of emergency management: prevention, preparedness, response, recovery, and mitigation. It incorporates, by reference, integration of the Emergency Operations Program (EOP) and its annexes.

Event: An Accident, Incident, or Occurrence.

Examination: A process for gathering or analyzing facts and information related to the safety of a rail fixed guideway public transportation system.

Finding of Noncompliance: A determination of noncompliance made when the facts disclosed during an investigation, compliance review, hazard trend analysis, or other information, indicate a failure to comply with the provisions of the State Safety Oversight Program Standard.

FRA: The Federal Railroad Administration. An agency within the U.S. Department of Transportation.

FTA: The Federal Transit Administration. An agency within the U.S. Department of Transportation.

FTA Reportable Event (Rail Only): A rail event that meets the notification threshold for the Federal Transit Administration (FTA). A Non-FTA Reportable Event does not rise to the threshold for reporting to the FTA but is required to be reported to NCDOT per 49CFR Part 674 and the SSOPS.

Hazard: Any real or potential condition that can cause: injury, illness, or death; damage to or loss of the facilities, equipment, rolling stock, or infrastructure of the Transit Agency (TA); or damage to the environment.

Hazard Management Log: An information management tool for tracking identified hazards, rating the hazards, any mitigations, and how the hazard is resolved. Unacceptable and Undesirable Hazardous Conditions must be captured in the Risk Register.

Homeland Security Exercise and Evaluation Program (HSEEP): A set of guiding principles for exercise programs related to national security, as well as a common approach to the management, design and development, execution, evaluation, and improvement planning for such programs.

Incident: An event that involves any of the following: a non-serious personal injury; one or more injuries requiring medical transport; damage to facilities, equipment, rolling stock, or infrastructure which disrupts the operations of a transit agency.

Investigation: The process of determining the causal and contributing factors of an accident, incident, or hazard, to prevent recurrence and mitigating risk.

Individual: Any person on the property of a Transit Agency.

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

NCDOT: The North Carolina Department of Transportation. The designated State Safety Oversight Agency (SSOA) for the State of North Carolina.

NTSB: The National Transportation Safety Board. An independent Federal agency charged with determining the probable cause of transportation accidents, promoting transportation safety, and assisting victims of transportation accidents and their families.

New Starts Project: One type of transit capital investment project for a Rail Transit Agency funded under FTA's 49 U.S.C.5309 discretionary construction program.

Occurrence: An Event without any personal injury in which damage to facilities, equipment, rolling stock, or infrastructure does not disrupt the operations of the Transit Agency.

Operator of a public transportation system: A provider of public transportation as defined under 49 U.S.C. 5302(14).

Passenger: A person who is on board, boarding, or alighting from a rail or bus transit vehicle for travel.

Passenger Operations: The period when any aspect of a Transit Agency's operations is initiated within revenue service with the intent to carry passengers.

Performance measure: A quantifiable indicator of performance or condition that is used to establish targets and to assess progress toward meeting the established targets.

Performance target: A quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by the Federal Transit Administration (FTA).

Person: A passenger, employee, contractor, pedestrian, trespasser, or any individual on the property of a transit agency.

Preliminary Engineering Phase: The second developmental phase required for New Starts Projects to receive Federal funds. During this phase, project sponsors investigate the merits of all potential configurations and designs in greater detail. The results of this phase provide the basis for subsequent funding and implementation decisions. This phase concludes with the request to enter the final design phase.

Public Transportation Agency Safety Plan (PTASP or ASP): The documented comprehensive agency safety plan for a transit agency that is required by 49 U.S.C. 5329(d) and 49 CFR Part 673.

Public Transportation Safety Certification Training Program (PTSCTP): The certification training program for Federal and State employees, or other designated personnel, who conduct safety audits and examinations of public transportation systems, and employees of public transportation agencies directly responsible for safety oversight, established in 49 CFR Part 672.

Qualification Level (QL): The practical examination for a qualifying Rail/Streetcar Operator is scored based on three levels. A Qualification Level 1 (QL-1) requires no performance or safety deviations, and the operator performed all functions with complete accuracy and confidence level was high. A Qualification Level 2 (QL-2) requires the operator to have only minor performance deviations, no safety related deviations, the operator performed the majority of the functions with accuracy and their confidence level was high to moderate. A Qualification Level 3 (QL-3) is a failing score with the occurrence of major performance and/or safety deviations and the operator's confidence level was low and uncertain.

Rail Fixed Guideway Public Transportation System (RFGPTS): Any fixed guideway system that uses rail, is operated for public transportation, is within the jurisdiction of a State, and is not

subject to the jurisdiction of the Federal Railroad Administration (FRA), or any such system in engineering or construction. RFGPTSs include, but are not limited to, rapid rail, heavy rail, light rail, monorail, trolley, streetcar, inclined plane, funicular, and automated guideway.

Rail Transit Agency (RTA): Any entity that provides services on a rail fixed guideway public transportation system. Both RTAs and Rail Fixed Guideway Public Transportation Systems (RFGPTS) are referenced in various FTA documents and, as such, indicate the same entity, regardless of which of the two acronyms is referenced.

Rail Transit-Controlled Property: Property that is used by the Rail Transit Agency (RTA) and may be owned, leased, or maintained by the RTA.

Rail Transit Vehicle: The RTA's rolling stock, including, but not limited to, passenger and maintenance vehicles.

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

Risk Register: An information management tool used to document Safety Risk Management and Safety Assurance activities. It records the hazards identified by the transit agency, the potential consequences associated with those hazards, initial safety risk ratings, new mitigations implemented to eliminate or minimize the risk associated with the hazard, revised safety risk rating, and mitigation monitoring measures and activities to ensure the implementation and effectiveness of mitigations.

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

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

Safety audit: A review or analysis of system components for compliance with the safety requirements. Audit methods may include interviews, document and record reviews, firsthand observations of operations and maintenance activities, spot checks, inspections, and visual examinations and measurements.

Safety Events (under NTD): Total number of reportable events and rate per total vehicle revenue miles by mode. The safety events measure captures all reported safety events that occur during transit operations and the performance of regular supervisory or maintenance activities. A reduction in safety events will support efforts to reduce fatalities and injuries, as well as damages to transit assets. Measuring the number of safety events by mode over vehicle revenue miles provides a safety event rate from which future performance can be compared.
Reportable events (Accidents) include:

- Train derailments
- Collisions (vehicle-to-vehicle, vehicle-to-person, vehicle-to-object)
- Collisions at grade crossings
- Fires
- Evacuations for safety reasons

Safety Management System (SMS): A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies, and procedures. SMS defines the activities by which safety management is undertaken by an organization to achieve acceptable levels of safety. SMS also defines the method of identifying hazards and controlling risks in a work and operational environment and continuously monitors these methods for effectiveness.

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

Security: Freedom from harm resulting from intentional acts or circumstances.
Sensitive Security Information (SSI): Information as described in 49 CFR § 1520, which is obtained or developed while conducting security activities, the disclosure of which would be detrimental to transportation safety. SSI includes: security program plans; security and vulnerability assessments; threat information; incident response plans; security directives and measures; security inspection or investigative information; security screening information or procedures; specifications for devices for detection of weapons or destructive devices or substances; specifications for communications equipment used for transportation security; and critical infrastructure information, including drawings, design plans, cut sheets, or architectural drawings.

Serious Injury: 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 nose);
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.

SPEAR: Database management software for tracking incidents and maintenance records pertaining to equipment for rail and bus operations.

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

State Safety Oversight Agency (SSOA): An agency established by a State that meets the requirements and performs the functions specified by 49 U.S.C. 5329(e) and the regulations set forth.

State Safety Oversight Program Standard (SSOPS): A written document developed and adopted by a State Safety Oversight Agency to describe the policies, objectives, responsibilities, and procedures used to provide Rail Transit Agency safety oversight.

Substantial Damage: Damage which adversely affects the structural strength, performance, or operating characteristics of the vehicle, facility, equipment, rolling stock, or infrastructure which requires towing, rescue, onsite maintenance, or immediate removal prior to safe operation.

System Reliability: The mean distance between major mechanical failures by mode. The System Reliability measure expresses the relationship between safety and asset condition. The rate of vehicle failures in service, defined as mean distance between major mechanical failures, is measured as revenue miles operated divided by the number of major mechanical failures. This is a measure of how well a fleet of transit vehicles is maintained and operated. The Federal Transit Administration (FTA) recognizes the diversity of the transit industry and that agencies have varied equipment types with varied rates of performance. This measure allows agencies to develop safety performance targets that are specific to their own fleet type, age, operating characteristics, and mode of operation.

Unacceptable Hazardous Condition: A hazardous condition determined to be an unacceptable risk according to an established evaluation matrix which evaluates the severity and probability of the risk.

Vehicle: Any rolling stock used on a Rail Fixed Guideway Public Transportation System (RFGPTS), including, but not limited to, passenger and maintenance vehicles.

ACRONYMS

AAR	After Action Report
APTA	American Public Transit Association
AREMA	American Railway Engineering and Maintenance of Way Association
ASP	Agency Safety Plan
BLE	Blue Line Extension
CAP	Correction Action Plan
CATS	Charlotte Area Transit System
CRTPO	Charlotte Regional Transportation Planning Organization
CIL	Certifiable Items List
CEO	Chief Executive Officer
CFR	Code of Federal Regulations
CSO	Chief Safety Officer
CWP	Certification Work Plan
DHS	Department of Homeland Security
EOP	Emergency Operations Plan
EMP	Emergency Management Program
EPCP	Emergency Preparedness and Continuity Plan
FNC	Finding of Noncompliance
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
HML	Hazard Management Log
GL2	CityLYNX Gold Line Phase 2
HSEEP	Homeland Security Exercise and Evaluation Program
IIC	Investigator in Charge
I & M	Inspection and Maintenance
MAP-21	Moving Ahead for Progress in the 21st Century
N/A	Not Applicable
NCDOL	North Carolina Department of Labor
NCDOT	North Carolina Department of Transportation
NFPA	National Fire Protection Association
NTD	National Transit Database
NTSB	National Transportation Safety Board
OCS	Overhead Catenary or Contact System

OHA	Operating Hazard Analysis
OSHA	Occupational Safety and Health Administration
OSH	Occupational Safety and Health
PHA	Preliminary Hazard Analysis
PTASP	Public Transportation Agency Safety Plan
PTSCTP	Public Transportation Safety Certification Training Program
RFGPTS	Rail Fixed Guideway Public Transportation System
ROW	Right of Way
RTA	Rail Transit Agency
RWP	Roadway Worker Protection
SMS	Safety Management System
SOP	Standard Operating Procedure
SRM	Safety Risk Management
SSCP	Safety and Security Certification Plan
SSI	Sensitive Security Information
SSO	State Safety Oversight
SSOA	State Safety Oversight Agency
SSOPS	State Safety Oversight Program Standard
SSPP	System Safety Program Plan
TSA	Transportation Security Administration
UHC	Unacceptable Hazardous Condition
USC	United States Code

Purpose and Scope

The purpose of the Agency Safety Plan (ASP) is to set forth the requirements for identifying, evaluating, and minimizing safety risks throughout CATS Bus, Rail, and Special Transportation Services (STS). The ASP design and implementation includes the development of a comprehensive Safety Management System (SMS) as described in Federal Transit Administration's 49 CFR, Part 673 and follows the North Carolina State Safety Oversight Program Standards (SSOPS) and the four components of SMS: Safety Management Policy, Safety Risk Management, Safety Assurance, and Safety Promotion. The SMS Manager will ensure that FTA, other Federal Agencies, and the NCDT State Safety Oversight Agency (SSOA) will have access to review all CATS SMS and ASP documentation, audit reports, investigation reports and other safety related documents upon request.

The ASP is specifically developed to:

- Establish the System Safety Program for CATS.
- Identify the relationships and responsibilities of CATS with other City of Charlotte departments and other agencies and organizations that impact transit system safety.
- Provide formal documentation of CATS Management's commitment to safety.
- Provide a framework for implementing CATS' safety policy.
- Achieving CATS system safety goals and objectives in compliance with the *National Public Transportation Safety Plan, January 2017.*
- Satisfy federal, state, and local laws, codes, ordinances, and regulations.

Section 1 Safety Management Policy

1.1 Chief Executive Officer's Safety Management Policy Statement

The following is the Safety Management Policy Statement issued by the Chief Executive Officer (CEO) of the Charlotte Area Transit System (CATS). (See Appendix B CATS EX03 *Safety Policy.*) This policy statement was reviewed and approved by the Metropolitan Transit Commission (MTC).

The Charlotte Area Transit System (CATS) was organized with the mission to provide safe, secure, reliable, and effective rail, bus, and paratransit transportation services to our customers. Accordingly, safety is a primary concern that affects all levels of CATS activities including operations, maintenance, and administrative functions of the organization.

All employees and contractors of CATS are expected to conduct their duties safely, aimed at preventing, controlling, and minimizing undesired events, such as customer or employee injury, equipment or property damage, or degradation to system safety in any CATS function. Employees and customers are CATS' most important assets, and their safety and security are among CATS' greatest responsibilities.

While the minimizing of unsafe conditions and the prevention of accidents in CATS' transportation system and facilities are the responsibility of each employee, they are first and foremost the responsibility of CATS Management. A safety reporting program was established as a viable tool for employees to voice their safety concerns. No disciplinary action will be taken against any employee who communicates a safety concern through the CATS safety reporting program unless such disclosure indicates the following: an illegal act, gross misconduct and/or negligence, or a deliberate or willful disregard of CATS rules, policies, and procedures.

CATS Management is committed to developing a Safety Management System (SMS) and will develop programs to promote the safety and security of all employees and customers. We are fully committed to providing a safe work environment and safe vehicles, systems, and facilities. To that end, CATS' General Manager of Safety and Security is empowered and authorized to administer a comprehensive, integrated Agency Safety Plan.

CATS will distribute this Safety Management Policy Statement to each employee and will review it with employees during employee safety meetings and toolbox talks with supervisors. CATS commitment to developing our SMS is supported by the following safety objectives:

- **Support** the implementation of an effective SMS by providing appropriate resources to support an organizational culture that fosters safe operational policies, encourages effective safety reporting and communication, and actively manages safety with the same attention to results as that given to the other management systems of CATS.
- **Integrate** the management of safety as an explicit responsibility of CATS managers and employees.

- **Clearly define** for all managers, employees, and contractors their accountabilities and responsibilities for the delivery of safe transit services and the performance of our safety management system.
- **Establish and operate** a safety reporting program as a fundamental tool in support of CATS hazard identification and safety risk evaluation activities to eliminate or mitigate the safety risks of the consequences of hazards resulting from our operations or activities to a point that is as low as reasonably practical.
- **Comply** with and, wherever possible, exceed any applicable legislative and regulatory requirements and standards.
- **Ensure** that sufficiently trained and skilled personnel are available and assigned to implement CATS safety management processes and activities.
- **Ensure** that all staff are formally provided with adequate and appropriate safety management information, are competent in safety management system activities, and are assigned only safety related tasks commensurate with their skills.
- **Establish and measure** our safety performance against realistic safety performance indicators and safety performance targets.
- **Continually improve** our safety performance through management processes that ensure relevant safety action is taken in a timely fashion and is effective when performed.
- **Ensure** contracted services are ordered and delivered in compliance with our safety performance standards.

1.2 Goals and Objectives

1.2.1 Goals

The system safety goal is to design, construct, test, prepare, and operate a transportation system that attains a practical optimum level of safety during the entire life cycle of the system's five phases – Planning, Design, Construction, Operations, and/or Disposal as applicable. The ASP is directed toward achieving this goal within CATS' strategic goals and constraints.

The following are CATS' goals in achieving comprehensive system safety:

- Develop a sustainable safety culture focusing on safety through knowledge.
- Promote learning through the development of a comprehensive training curriculum.
- Ensure training enhances individual performance and provides continuous learning for all levels that is managed through a centralized learning management system.
- Continue to cultivate coordination, communication, and collaboration to achieve solutions for shared strategic initiatives.

Properly implemented, the Safety Management Systems processes documented herein will provide for the following:

- Identification and elimination or control of hazards to employees, customers, or 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 CATS and public safety agencies
- Integration of safety and hazard control measures into all CATS department and division activities.

1.2.2 Objectives - Safety Performance Metrics/Targets and Indicators

To accomplish the system safety goal and promote continuous improvement, CATS developed performance metric objectives that are Specific, Measurable, Attainable, Relevant, and Time-bound (SMART).

CATS has identified the following NTD Safety Performance metrics from the *National Public Transportation Safety Plan*, January 2017. These Safety Measures and Targets are reflected in the Charlotte Regional Transportation Planning Organization's (CRTPO) Performance Based Planning & Programming – Transit Safety Plan. See Appendix H for annual performance targets and results. CATS coordinates with the State and CRTPO in the selection of State and MPO safety performance targets, to the maximum extent practicable.

Performance Measures

1. **Fatalities:** Total number of reportable fatalities.
   a. **Rail:** A fatality confirmed within 30 days of a reportable event to as defined in the current National Transit Database Safety and Security Policy Manual.
   b. **Bus**: A fatality confirmed within 30 days of a reportable event as defined in the current National Transit Database Safety and Security Policy Manual.

2. **Injuries:** Total number of reportable events and rate per total vehicle revenue miles by mode.
   a. **Rail:** A serious reportable injury to FTA and/or NCDOT within two (2) hours as defined in the NCDOT State Safety Oversight Program Standard (SSOPS). Also includes any injury reported based on the current National Transit Database (NTD) Safety and Security Policy Manual and all employee injuries reported to Risk Management.
   b. **Bus**: Any reportable injury as defined in the current National Transit Database Safety and Security Policy Manual.

3. **Safety Events:** Total number of preventable reportable events and rate per total vehicle revenue miles by mode.
   a. **Rail:** A major safety preventable reportable event to FTA and/or NCDOT within two (2) hours as defined in the current National Transit Database (NTD) Safety and Security Policy Manual and NCDOT State Safety Oversight Program Standard (SSOPS).
   b. **Bus**: A safety preventable reportable event as defined in the current National Transit Database Safety and Security Policy Manual.

4. **System Reliability:** Mean Distance Between Major Mechanical Failures by mode.
   a. **Rail:** A failure of some mechanical element of the revenue vehicle that prevents the vehicle from completing a scheduled revenue trip or from starting the next scheduled revenue trip because actual movement is limited or because of safety concerns. Train is off-loaded and out of service.
   b. **Bus**: A failure of some mechanical element of the revenue vehicle that prevents the vehicle from completing a scheduled revenue trip or from starting the next scheduled revenue trip because actual movement is limited or because of safety concerns. The vehicle is road called and operator given another bus.

The Office of Safety and Security will review and analyze the data received related to the target goals. A report showing the performance status of the four target goals will be submitted to CATS Leadership, the MTC, NCDOT, and CRTPO on a quarterly basis and updated annually in Appendix H - *Safety Annual Targets and Results*.

Where incidents, audits, or observations indicate that the goals or objectives of this plan are clearly not being met, the Safety and Quality Assurance sections coordinate discussion with involved divisions and develop corrective action plans for follow up and completion.

1.3 System Description

1.3.1 Light Rail Operations

LYNX Blue Line

The LYNX Blue Line is the Charlotte region's first light rail service. It is 18.9 miles long and operates seven days a week from I-485/South Boulevard Station to the UNC Charlotte Main Campus in University City. With 26 stations, including 11 park and ride locations, the LYNX Blue Line provides a congestion free commute with a consistent travel time. Rail operating hours are approximately from 5:30 a.m. to 2:00 a.m., six days a week and until 1:30 a.m. on Sundays.

All CATS light rail passengers board trains at light rail stations. Each light rail station provides protection from inclement weather, lighting, blue light emergency phones, and security camera coverage. Appendix D – System Maps shows the map of the LYNX Blue Line.

The operation of the Blue Line rail system is managed by the Rail Operations Control Center (ROCC) in accordance with CATS Rail Operations Control Center (ROCC) Procedures Manual.

The Siemens Light Rail fleet consists of 42 double articulated, low floor Light Rail Vehicles (LRVs). The LRVs were procured by CATS from Siemens Transportation Systems and meet the following physical and performance characteristics:

- 70% Low Floor Design
- 100% Low Floor Boarding
- 68 Passenger Seats (Minimum)
- Maximum Speed of 66 mph
- Approximately 93 ft. in length and 9 ft. in width
- Bi-Directional Operation
- Cameras
- Automatic passenger counters

The LRVs and the station platform interface are compliant with the Americans with Disabilities Act (ADA). LRVs are capable of operating as single units or coupled in consists of up to two cars (with three car consist capability at designated stations for future express service). Each LRV is equipped with operating cabs at both ends and feature alternating current (AC) propulsion, cab signaling equipment, automated station announcements, and a climate control system.

CityLYNX Gold Line

The CityLYNX Gold Line is the Charlotte region's streetcar service which returned to revenue service August 2021. It is approximately four miles long and has 17 stops/platforms for boarding and alighting, running from the intersection of French Street and Beatties Ford Road to the intersection of Sunnyside Avenue and Hawthorne Lane. The CityLYNX Gold Line is a conventional in-street running fixed-guideway with a mix of center and side platforms. Each stop has a shelter to provide protection from inclement weather. Appendix D shows a map of the CityLYNX Gold Line.

The operation of the Gold Line rail system is managed by the Rail Operations Control Center (ROCC) in accordance with CATS Rail Operations Control Center (ROCC) Procedures Manual.

The Siemens Light Rail Hybrid Streetcar fleet consists of 6 double-articulated, low floor Light Rail Vehicles (LRVs). The LRVs were procured by CATS from Siemens Transportation Systems and have the following physical and performance characteristics:

- 70% Low Floor Design
- 100% Low Floor Boarding
- 54 Passenger Seats (Minimum)
- Maximum Speed of 66 mph
- Approximately 85 ft. in length and 9 ft. in width
- Bi-Directional Operation
- Cameras
- Automatic passenger counters
- On Board Energy Storage System (OESS)

The streetcars and the stop interface are compliant with the Americans with Disabilities Act (ADA). Streetcars operate as single units. Each streetcar is equipped with operating cabs at both ends and feature both alternating current (AC) propulsion or battery operations, cab signaling equipment, automated station announcements, and a climate control system. The hybrid streetcar is designed to operate for specified distances without the overhead catenary system power utilizing the vehicle's battery pack also known as the On Board Energy Storage System (OESS).

Rail Car Maintenance

Light Rail Vehicles, including streetcars, are maintained by Rail Car Maintenance in accordance with the CATS Light Rail Fleet Management Plan, applicable Light Rail SOPs, and manufacturer's maintenance manuals.

Rail Maintenance of Way

The vehicles are powered by electricity distributed by an Overhead (contact) Catenary System (OCS). A train control system, using cab signaling, provides vehicle spacing and routing throughout the light rail system. The Rail Maintenance of Way (MOW) section is responsible for the maintenance of Train Control and Communication Systems, Traction Power Substations, Overhead Catenary Systems, and track work on the LYNX Blue Line and the CityLYNX Gold Line. The CATS systems and equipment are maintained in accordance with CATS ROD600, *Preventive Maintenance Requirements for Rail MOW* and the referenced ROD600-series SOPs.

The South Boulevard Light Rail Facility

The South Boulevard Light Rail Facility is adjacent to and west of the mainline light rail track between New Bern Street and Clanton Road. Detailed information on the facility is contained in the Light Rail Fleet Management Plan. The Facility includes the ROCC, Bus Operations Control Center (BOCC), maintenance shop, storage yard and administrative offices. Staff members are located in the building 24 hours a day, seven days a week, to ensure the safe and efficient operation of the LYNX Blue Line.

The Main Shop building contains the following rail vehicle service inspection and repair facilities:

- A service track for interior and exterior vehicle cleaning
- A running repair track for scheduled car servicing and inspection
- A light repair area for change-out of minor components
- A heavy repair area for vehicle overhauls, major repairs, and modifications
- A wheel truing machine for running rail vehicle and truck wheel truing
- A truck shop for change-out and repair/overhaul of vehicle truck components
- An electronics shop for repairing electronic equipment and components
- Parts storage areas

- Overhead work platforms and maintenance pits
- Shop areas for repair of couplers, pantographs, and brakes
- A machine shop, welding shop, and carpentry shop
- A portable vehicle hoist system
- A 7.5-ton bridge crane, a monorail crane, and various jib cranes

Component repair shops, which support maintenance services for all components of the light rail system, are included in the maintenance facility. A paint booth is provided in a separate building. Interior vehicle cleaning may be done on the LRV service and cleaning track, or it may be accomplished on the storage tracks. Daily LRV washing may occur when vehicles return from service or during off-peak service hours by drawing equipment from the storage tracks.

As a part of the BLE project significant, much-needed vehicle storage and specialty maintenance capability was added to the South Boulevard facility. In its original construction, the SBLRF was originally sized to accommodate a fleet of 40 vehicles. Improvements to the outside yard area at the SBLRF allowed for the accommodation of 16 additional LRVs and three trolleys.

North Brevard Light Rail Facility

The North Brevard Light Rail Facility at 1911 North Brevard Street is a satellite facility utilized to perform daily vehicle cleaning, basic preventive maintenance inspections, and basic running repairs including lowest level component replacement (for failure or repair only).

1.3.2 Bus Operations Division

The CATS Bus Operations Division (BOD) is the entity that provides CATS' fixed-route bus service. CATS operates 72 fixed routes: local buses, express buses, and neighborhood shuttles. Express routes provide service to and from outlying areas of Mecklenburg County as well as neighboring counties.

CATS buses provide transit service seven days a week to LYNX Blue Line stations and on urban streets, suburban streets, limited access highways, and a bus-only busway. Bus operating hours are from 5:00 a.m. to 2:00 a.m., 6 days a week and until 1:30 a.m. on Sundays.

The CATS revenue bus fleet is comprised of approximately 316 buses. As part of a special project to assess transitioning to all electrical vehicles, CATS is currently assessing 18 electric buses from two different manufacturers.

Many bus lines terminate at, or pass through, the Charlotte Transportation Center, a downtown center where a large number of passengers transfer from one line to another. This facility is covered and provides passenger information and other amenities.

In addition to the Charlotte Transportation Center, CATS operates and maintains neighborhood transit centers throughout the service area. The neighborhood

transit centers enhance travel within neighborhoods and provide transfer opportunities to the fixed-route service for residents to continue their travel outside of their neighborhoods. CATS continues development of additional neighborhood transit centers.

Bus Park and Ride lots are used largely by commuters who travel from outlying suburban areas to light rail stations and the uptown business district. CATS currently provides bus service to over 50 Park and Ride lots.

The majority of CATS bus passengers board buses at stops located at the curb. Many stops have shelters for protection from inclement weather and there may also be a bench in the shelter. Lighting is generally from nearby streetlights.

Bus shelters are maintained by the CATS Facilities Management Section within the Rail Division. CATS contracts with a management company to manage the Charlotte Transportation Center.

South Tryon Street Bus Facility

This facility opened in March 2005 and is the principal CATS Bus Operations and Maintenance Facility. It is the centralized administrative base for BOD and provides space for warehousing and major repair activities. This facility has capacity for 250 buses.

Davidson Street Bus Facility

This facility was built and opened in 1985 and was originally designed to be a full-service maintenance facility for 200 vehicles. The separate administration building at 901 N. Davidson St. was rehabilitated in 2011 and now houses CATS' Special Transportation Services (STS), Vanpool Services, and CATS Technology. From this location, STS provides the operation and dispatch activities for its ADA-mandated paratransit service.

An enclosed fuel lane and bus wash is located at 929 N. Davidson St. where daily vehicle service occurs. Across the public street, at 900 N. Davidson St., bus maintenance functions are performed including routine preventive maintenance and corrective maintenance.

1.3.3 Special Transportation Service

CATS provides a demand-response paratransit service called Special Transportation Service (STS).

Located at the Davidson Street Bus Facility, STS provides the operation and dispatch activities for its Americans with Disabilities Act (ADA) mandated paratransit service. STS provides service during the same hours as fixed routes: normally 5 a.m. until 2 a.m., 7 days a week.

- Approximately eighty-four (84) lift-equipped buses are maintained by the Bus Operations Division.

1.3.4 Vanpool

Vanpools are a flexible, comfortable, cost-effective way for groups of 5 to 15 commuters to share their ride to work. A Vanpool consists of a group of people who live and work near each other and share similar commuting schedules. The CATS Vanpool program provides vans, gas cards, insurance, and maintenance. Vans are available 24 hours a day, 7 days a week.

- Approximately 87 vanpool vans are maintained by the City of Charlotte's Management and Financial Services Department/Fleet Management.

1.3.5 Facilities Management

CATS facilities are maintained by the Facilities Management section in accordance with the Facilities Management Plan. The major goals and objectives of this Facilities Management Plan are to do the following:

- Responsively address ongoing maintenance needs.
- Maintain facilities for all modes of transit in a safe condition and in compliance with applicable codes and regulations.
- Provide for the inspection of buildings and major building components when they reach the end of their expected service life.
- Provide periodic inspections on all passenger amenities.
- Provide appropriate custodial care to clean and sanitize facilities.
- Properly prioritize facility maintenance, renovation, and replacement needs to best utilize available resources.
- Serve as the framework to be used in the management of CATS facilities when this work is contracted outside the department.
- Assign responsibility and provide planning for the maintenance and renewal of parking lots, driveways, walkways, plazas, and outdoor lighting which support CATS facilities.
- Promote the efficient and effective use of existing space.
- Implement energy saving and environmentally friendly improvements.

1.4 Management Responsibilities and Lines of Authority

The SMS Structure, CATS Organizational Chart and the Safety and Security organizational chart in Appendix A capture CATS lines of authority to manage safety issues.

1.4.1 Metropolitan Transit Commission (Equivalent Authority)

The Interlocal Agreement by and among the County of Mecklenburg, the City of Charlotte, and the Towns of Cornelius, Davidson, Huntersville, Matthews, Mint Hill,

and Pineville established the Metropolitan Transit Commission and provides transit services through the metropolitan region.

The Interlocal Agreement mandated the creation of a chief transit official position, now titled Chief Executive Officer (CEO). The CEO of the Charlotte Area Transit System is also the Director of the Public Transit Department of the City of Charlotte and has responsibility for making recommendations to the MTC on transit planning and programming; for implementing the approved operating and capital programs; and for implementing the policies and actions approved by the MTC.

As the Equivalent Authority, the MTC will review and approve the ASP and any revisions to the ASP as required by 49 CFR 673. A copy of the MTC Resolution will be provided as evidence that the MTC has reviewed and approved the ASP (Appendix F).

1.4.2 Chief Executive Officer (Accountable Executive)

The Chief Executive Officer is accountable for ensuring that CATS Safety Management System (SMS) through the Agency Safety Plan is effectively implemented throughout the entire agency. The CEO is accountable for ensuring action is taken, as necessary, to address substandard performance in CATS SMS. The accountable Executive provides leadership and management oversight for the Executive and other divisions of CATS. The Executive Division includes Human Resources, Legal, and Civil Rights.

1.4.3 General Manager of Safety and Security (Chief Safety Officer and SMS Manager)

The CEO has designated the General Manager of Safety and Security (GM of S&S) as the Chief Safety Officer (CSO) and SMS Manager for CATS. The GM of S&S is adequately trained in safety and is empowered and authorized to administer a comprehensive integrated and coordinated ASP, including the day-to-day implementation and operations of the agency Safety Management System (SMS) program and for developing and maintaining the ASP in compliance with CFR 49 673. The CSO maintains CATS Safety program and acts as a liaison with first responders and emergency management. The GM of S&S may not serve in any other operational or maintenance capacities. The GM of S&S reports directly to the CATS CEO and informs the whole Leadership team on the status of the SMS and risks to CATS.

1.4.4 CATS Leadership and Executive Management

CATS Leadership Team consists of the CEO's direct reports. The CATS Leadership team is responsible for the communication, implementation, and management of their assigned responsibilities of the ASP.

1.4.5 Key Staff and Groups

The Chief Operating Officer is responsible for overseeing and performing complex professional leadership, direction, strategic planning and directing of

BOD, Rail Operations Division, STS, and Facilities. The COO is responsible for managing CATS day- to- day operations and reporting them to the CEO.

The General Manager of Bus Operations has responsibility for CATS public transportation services including fixed-route and demand bus service, vanpool, and paratransit services for ADA-eligible riders.

The General Manager of Rail Operations and Facilities has responsibility for Rail Operations and Facilities Management.

The Chief Transit Financial Officer is responsible for Capital Budget and Operating Budget support. The Revenue Section receives, tracks, and distributes cash revenue.

The Director of Marketing/Communications maintains public information and involvement programs.

The Chief Technology Officer works with CATS and City IT to protect CATS Technology and integrate new technology with current technology.

Planning & Development Division Director oversees long-range transit system and transit land use planning and construction project management, as well as short term planning and managing current service operations and Quality Assurance.

CATS Quality Assurance Section is responsible for oversight of the quality management system. CATS Quality Assurance section oversees the Policy and Procedure review process and participates in ASP audits.

City Procurement is a division within the City Department of General Services in the City of Charlotte. City Procurement has staff assigned to CATS procurements.

1.4.6 NCDOT State Safety Oversight

As required by 49 CFR Part 674, the State of North Carolina has designated the North Carolina Department of Transportation (NCDOT) to serve as the State Safety Oversight (SSO) Agency responsible for overseeing CATS' system safety and security programs as implemented and administered for CATS' rail transit system. NCDOT's authority as an SSO Agency is established by North Carolina Statute G.S. 136-18.

NCDOT's State Safety Oversight Program Standard (SSOPS) establishes the minimum requirements for the agency safety program that must be met by rail fixed guideway systems operating in the State of North Carolina. CATS is responsible for meeting the requirements of NCDOT's SSOPS and for complying with the requirements of 49 CFR Part 673.

1.5 Safety Responsibilities Task Matrix

Table 1 lists safety responsibilities by position and title. A description of the specific activities required to implement the ASP will be included for all employees, agents, and contractors, as part of the ASP implementation plan.

Table 1 - Safety Responsibilities

Position/Title	Safety Responsibilities (Areas refer to departmental/divisional responsibilities unless noted as system-wide)
Chief Executive Officer	• All system-wide/Accountable Executive
Deputy Director/Chief Operating Officer	• Hazard Management • Accident and Incident Investigation • Risk Mitigation and Verification of Effectiveness • Data Acquisition and Analysis • Drug and Alcohol Program • Rules and Procedures • Facilities and Equipment Safety • Qualification and Training Qualification • Employee and Contractor Safety • Configuration Management
Planning & Development Division Director	• Hazard Management for design and construction • Safety and Security Certification for Major Projects • System Modification • Risk Mitigation for projects and Verification of effectiveness • Safety and Security Qualification • Employee and Contractor Safety • Configuration Management
General Manager – Rail Operations	• Hazard Management • Accident and Incident Investigation • Risk Mitigation and Verification of Effectiveness • Data Acquisition and Analysis • Drug and Alcohol Program • Rules and Procedures • Facilities and Equipment Safety • Qualification and Training Qualification • Employee and Contractor Safety • Configuration Management
General Manager – Bus Operations	• Hazard Management • Accident and Incident Investigation • Risk Mitigation and Verification of Effectiveness • Data Acquisition and Analysis • Drug and Alcohol Program • Rules and Procedures • Facilities and Equipment Safety • Qualification and Training Qualification • Employee and Contractor Safety • Configuration Management
Sr. Manager – Bus Operations/Special Transportation Service (STS)	• Hazard Management • Accident and Incident Investigation

	• Risk Mitigation and Verification of Effectiveness • Drug and Alcohol Program • Rules and Procedures • Facilities and Equipment Safety • Qualification and Training Qualification • Employee Safety • Configuration Management
Service Implementation & Scheduling Manager	• System Modification • Route Development and Modification • Rules and Procedures • Configuration Management
General Manager of Safety and Security	• Safety Goals and Objectives • System Safety Program Implementation • Safety and Security Certification • System Modification • Safety and Security Qualification • Safety Data Acquisition and Analysis • Accident and Incident Investigation, Notification and Reporting • Risk Mitigation and Verification of Effectiveness • Emergency Management • Rules and Procedures • Facilities and Equipment Safety Inspections • Training Qualification • Employee and Contractor Safety • Hazardous Materials Management • Emergency Drills • Audits in Design and Construction • Audits with NCDOT SSO
Chief Financial Officer	• Hazard Management • Rules and Procedures • Risk Mitigation and Verification of Effectiveness • Data Acquisition and Analysis • Security of Revenue • Training Qualification • Employee Safety
Director of Marketing/Communications	• Crisis Communication • Public and Internal Communications • Risk Mitigation and Verification of Effectiveness • Training Qualification • Operation Life Saver
Procurement Services Manager (General Services)	• Procurement • Hazard Management • Safety and Security Qualification • Emergency Management • Configuration Management
Human Resources Manager	• Drug and Alcohol Program • Blood Exposure Control Plan • Configuration Management
Quality Assurance Manager	• Rules and Procedures • System Modification

	• Configuration Management • Internal Audits
Information & Technology Director	• Hazard Management • Rules and Procedures • Facilities and Equipment Safety • Configuration Management • Emergency Management • Data Acquisition and Analysis • Training Qualification • Employee and Contractor Safety
Manager – Facilities Maintenance	• Hazard Management • Rules and Procedures • Facilities and Equipment Safety • Configuration Management • Training Qualification • Employee and Contractor Safety
Supervisors and Managers	• Comply with CATS Rules, Procedures and Policies • Identify and report hazards through the appropriate chain of command and safety reporting systems • Assist, as necessary, in the investigation, mitigation and elimination of hazards and unsafe conditions. • Oversee front-line employees to ensure compliance with safe work practices and adherence to policies and procedures • Support emergency situations • Provide appropriate training and tool talks • Evaluate employees for Reasonable Suspicion
All Employees and Contractors	• Comply with CATS Rules, Procedures and Policies • Identify and report hazards through the appropriate chain of command and safety reporting systems • Support in the investigation, mitigation and elimination of hazards and unsafe conditions. • Support emergency situations • Attend and participate in appropriate training and/or tool talks

As part of the implementation plan, the Office of Safety and Security will hire full-time CATS staff to implement various programs/activities, such as hazard management processes, data collection, analysis, and reporting. Additionally, Office of Safety & Security will work with procurement and project management to ensure appropriate ASP elements are incorporated into project documents and contracts.

1.6 Committees' Safety Responsibilities Task Matrix

Table 2 - Committees' Safety Responsibilities	
Name	**Main Purpose**
Project Team meets as specified in Project Management Plans. Members: Led by Development - Coordinate with all divisions Chair(s): Project Manager(s)	• Provide oversight and coordination between all divisions and project committees • Track and oversee all critical tasks are completed on time • Allocate available resources as needed • Coordinate with other City departments and external agencies as required
Safety and Security Review Committee (SSRC) meets monthly, or more frequently as necessary. Members: Rail Operations, Bus Operations, STS, Development, S&S, Technology, Facilities Management, Quality Assurance, CMPD Chair: GM Safety and Security delegated to the Rail Safety Manager	• Review safety and security certification of system components including certifiable items lists and hazard analysis • Hazard Management for Projects
Safety and Security Committee (SSC) meets monthly or more frequently as necessary Members: Rail Operations, Bus Operations, STS, S&S, Technology, Facilities Management, Quality Assurance, CMPD, HR, Marketing and Communications, and Chairs of safety & security committees Chair: GM Safety and Security delegated to the Security Manager	• Review all safety and security efforts • Hazard Assessments and Recommend Mitigations • NCDOT reportable Incident/accident Investigation reviews • Review security breaches • Vehicle Accident Review • Items escalated from Rail, STS, and Bus safety committees
Rail Safety & Security Committee meets monthly Members: S&S, QA, and frontline employees and management from MOW, RCM, Transportation, Parts & Warranty, Facilities Management. The committee membership will be 50% Frontline and 50% Management at a minimum. Chair selected by committee members Rail Safety Liaison: Rail Safety Coordinator	• Hazard Assessments and Recommend Mitigations • Identify and investigate rail safety issues. • Review and approve the ASP as revised
Bus Safety & Security Committee meets monthly Members: S&S, BOD Operations and Maintenance supervisors and managers, frontline	• Hazard Assessments and Recommend Mitigations • Identify and investigate bus safety & security issues

Table 2 - Committees' Safety Responsibilities	
Name	**Main Purpose**
employees from BOD Operators, Facilities Management, STS operator, STS supervisor Chair: Bus Safety Training Coordinator	
Fire-Life Safety Committee meets bi-monthly, or more frequently as required. Members: S&S, Bus Operations, Rail Operations, Facilities Management, Risk Management, QA, Technology, CMPD, CFD, MEDIC, NCDOT –Rail Division, Project Staff (Design and Construction Chair: GM Safety and Security delegated to Bus Safety Coordinator	• Act as liaison group with emergency response agencies • Review designs, standards, and procedures • Make recommendations • Participate in emergency exercises

1.7 Employee Reporting Program

CATS employees and contractors are held accountable for their safety performance and for compliance with rules and regulations. Employees who intentionally conduct unsafe acts will be disciplined commensurate with the offense per City, CATS, and contractor policies and procedures.

Employees are expected to address safety concerns within their control immediately. Employees are to report unsafe conditions and issues with procedural compliance to their supervisor or manager. If an employee feels that a safety concern is not being addressed promptly, the employee is encouraged to escalate unsafe issues to their safety committee representative, General Manager, or the Office of Safety & Security. CATS Management encourages employees to report safety concerns with no fear of reprisal. CATS Leadership will have no tolerance for any retaliation against employees, contractors or the public who report safety concerns. Reported safety concerns will be tracked in the appropriate hazard tracking format per the Hazard Management section of this ASP. For employee-reported safety concerns, where contact information is provided, the recipient of the safety concern is responsible to follow-up with the employee. The S&SF48 *Safety Issues Reporting Form* is available to all employees via city intranet or can be requested from employee's supervisor. This form can be completed by hard copy or emailed and submitted to supervisors or the Office of Safety and Security. Another method of reporting a safety concern is to send an email to reportsafety@ci.charlotte.nc.us. This email account is monitored by all Safety and Security managers. Any reported safety concern to this email address will be reviewed, added to the hazard safety log if applicable, and followed-up with the department manager and employee sending the email.

Reported safety concerns are tracked by the Rail and Bus Safety and Security Committee using safety concerns tracking logs. This information is shared with the Office of Safety and Security for review and to identify potential hazards that need to be mitigated through our Hazard Risk Management process.

The City of Charlotte maintains an Employee Hotline that allows for anonymous 24/7 reporting of Abuse, Fraud, and Safety and Waste violations. The hotline should only be used

in instances when employees are not comfortable reporting directly to Human Resources, management or the Office of Safety and Security. CATS Safety and Security managers are part of the Employee Hotline process.

Details on the Employee Hot Line are communicated on the City's CNET and at City offices/facilities throughout the City.

Examples of reportable offenses for safety include:

- Witnessing or experiencing unsafe working conditions or behavior that compromises one's safety or the safety of others.
- Equipment or facility maintenance issues that can lead to unsafe working conditions.

Employee Hotline process:

- An employee can either call in or email a safety concern. Reports are kept anonymous and confidential.
- Once the incident has been reported, the employee will be given a unique report number by the Hotline Operator which will allow them to call in or email at a later time to either provide additional information or to follow up on the report status.
- The report will then be provided to the CATS Office of Safety and Security for an initial screening for review and action.
- The issue will be reviewed and a determination will be made: unfounded; credible with immediate resolution or mitigation; or credible with long term mitigation until final solution can be made. Responses to how the issue was addressed are sent back to the Hotline administrator.
- An anonymous employee can call or email with their assigned unique number to hear the determination, mitigation, or resolution.
- CATS Safety and Security will submit all appropriate documentation and reports to the third-party administrator who manages the Hotline who will confirm in writing the information was made available to the anonymous employee.

1.8 Safety Plan and Policy Dissemination

All CATS employees will receive training on the ASP and CATS Safety Policy. CATS EX03 Safety Policy is communicated by all divisions during New Hire Safety training and is available on CATS CNET site with CATS Policies and Procedures. CATS Policies and Procedures (including CATS Safety Policy) are available on CATS CNET site and at key locations throughout CATS. ASP training for current employees will include training on the ASP and CATS Safety Policy including the employee's roles and responsibilities. The ASP is a controlled document that CATS QA manages through CATS QA02 Control and Distribution of Plans, Manuals, Policies, and Procedures to ensure only the most current revision of the document is available to employees.

1.9 Emergency Preparedness and Continuity Plan (EPCP)

CATS EPCP incorporates the FTA requirements for an Emergency Preparedness and Response Plan. The EPCP provides planning and program guidance to ensure that CATS is capable of conducting its Mission Essential Functions under all threats and conditions.

The EPCP also includes CATS Continuity of Operations Plan (COOP) which describes how CATS will continue to operate under conditions where various resources are impacted.

The CATS EPCP is maintained by CATS Quality Assurance and is a stand-alone document that can be reviewed on site by both internal and external authorized personnel as requested.

1.10 Integration of Safety Function

The ASP serves as a blueprint for the organizational integration of the safety function and its effective implementation ensures a safe functioning system. The safety function is integrated throughout all operations and activities of CATS through the delegation of safety functions and safety responsibility via CATS Safety Policy Statement from the CEO to all employees and contractors to include safety requirements, responsibilities and objectives into the work plans of managers and supervisors. Managers and supervisors are responsible for developing programs to promote the safety of all employees and customers. Safety is incorporated into employee training provided by CATS Instructors.

Bus and rail operators and supervisors must be aware of conditions which may affect passenger safety and report problems so that they may be corrected. The Manager of Safety for Bus or Rail is notified of safety issues through various mechanisms described in this ASP and participates in the hazard resolution process, along with the General Manager of Safety and Security.

Safety performance is measured through the monthly tracking and corporate reporting of indicators such as passenger and transit facility occupant injuries and injury rates as reported to the FTA's National Transit Database. In addition, the Rail Hazard Tracking Log is submitted to NCDOT on a quarterly basis, and as a one-year log annually after end of the calendar year.

1.11 Safety Plan Implementation Tasks and Activities

Activities required to implement the ASP that were identified during the development of the ASP and identified in gaps are captured in Appendix I on the CATS Implementation Timeline. CATS shall provide the CATS ASP implementation plan to NCDOT quarterly or as requested. Key processes not included or referenced in this ASP can be found in CATS plans, manuals, policies, and procedures that are controlled in the CATS' Quality Management System and processes.

Section 2 Safety Risk Management (SRM)

2.1 Overview

Safety Risk Management is the process for identifying hazards and analyzing, assessing, and mitigating safety risk.

Hazard identification and resolution is one of the goals of the CATS System Safety Program. This process is applicable to all levels of the organization. It is how hazards are identified and analyzed for potential impacts and severity on the transit system. It also describes how identified hazards are resolved in a manner acceptable to management.

CATS defines a hazard as a condition or set of conditions, internal or external to the system or system operation, that can cause injury, illness, or death; damage to or loss of facilities, rolling stock, or infrastructure of CATS equipment or property; or damage to the environment.

The CATS Office of Safety and Security, under the direction of the General Manager of Safety and Security, is directly responsible for the implementation of the CATS Hazard Management Process. This includes:

- developing, updating, and auditing the Hazard Management Process;
- training all designated CATS employees and its contractors on the Hazard Management Process; and
- maintaining the Rail Safety and Bus Safety Hazard Registers.

2.2 Hazard Management Process

2.2.1 Hazard Identification

Methods of Hazard Identification of Day-to-Day Operations

1. Job Hazard Analysis will be conducted in Bus and Rail Operations and Maintenance as part of the implementation plan.
2. Hazards that are identified as a result of accidents/incidents
3. System and facility inspections that identify hazards or unsafe conditions
4. Safety issues or hazards identified during scheduled audits (Internal Safety Review Program, ASP Section 3.2) and unscheduled audits, as warranted by staff
5. Employee observations of unsafe conditions or behavior which can be reported verbally or through completion of a written safety report.
6. Safety staff regularly reviews bulletins or advisories, SSOA inputs, and general industry trends to determine their applicability as inputs into the safety management and/or hazard analysis process
7. Operational data reports (e.g. SPEAR, ROCC/BOCC & key process indicator reports) are reviewed on an ongoing basis to identify known or potential issues that can have an impact on safe operations
8. Safety issues brought to the various safety committees
9. Customer, contractor, and employee complaints
10. Hazards identified by NCDOT SSO or FTA

11. Hazards identified during annual Transit Asset Condition Assessment

2.2.2 Addressing Identified Hazards

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

- People
- Procedures
- Facilities & Equipment
- Operating Environment

CATS QA05 *Nonconformity and Corrective Action* procedure identifies the steps for addressing nonconformances which include hazardous conditions identified in section 2.2.1.

For employee identified unsafe conditions, employees are expected to address safety concerns within their control immediately. Employees are expected to report unsafe conditions and issues with procedural compliance by speaking with or e-mailing a written safety report to their supervisor or manager. Employee Handbooks describe the unusual circumstances that must be reported to their control center. If an employee feels that a safety concern is not being addressed in a timely manner, the employee is encouraged to escalate unsafe issues by speaking with or e-mailing their safety committee representative, General Manager, or the Office of Safety & Security.

Identified hazards will be rated based on the Hazard Risk Assessment. As part of the implementation plan, Bus, Bus Safety, Rail, Rail Safety, Facilities, and STS will maintain their own Hazard Management Logs.

Acceptable hazards (1E, 2D, 2E, 3C-3E and 4A-4E) that are not immediately resolved will be reported to the appropriate section to address as time and resources are available. “Acceptable with Review” and “Acceptable without Review” hazards will be managed by supervisors/managers to closure and maintained on their Hazard Management Log.

Undesirable Hazardous Conditions (1D, 2C, 3A, and 3B) must be reported by e-mailing a written safety report to the General Manager, the SMS Manager and the CSO unless it is already mitigated per the Division’s Hazard Management Log. The General Manager and the SMS Manager or CSO will ensure that a risk mitigation is documented on the Risk Register and in place for any undesirable safety issues.

Unacceptable Hazardous Conditions (UHCs) (1A, 1B, 1C, 2A and 2B) must be reported immediately by e-mailing a written safety report to the General Manager of Safety and Security. The General Manager and the SMS Manager or CSO will ensure that a risk mitigation is in place for any unacceptable safety issues. Unacceptable Hazardous Conditions must be mitigated in the most expedient manner before returning to normal service. The CSO will notify the CEO immediately by phone or e-mail of any Unacceptable Hazardous Conditions and

the mitigations that were put in place. When the mitigations that are put in place reduce the hazardous condition to Undesirable or better, the CSO will recommend return to normal service to the CEO who will approve the recommendation after review. CATS shall notify NCDOT of an Unacceptable Hazardous Condition (UHC) within two hours, via email or phone, regardless of the time of day. All other hazardous conditions and on-going resolutions will be reported quarterly to NCDOT with the Hazard Management Log.

2.2.3 Methods for Continuous Hazard Identification and Targeted Campaigns

The methods used for hazard identification as mentioned above in Sections 2.2.1 and 2.2.2 are done on a continuous basis based upon inspection intervals and investigating safety complaints. Based on the hazards identified through these methods, safety-specific topics or inspections will be conducted to address issues identified from the data analysis.

2.2.4 Hazard Management Logs

As part of the implementation plan, and to ensure the sharing of safety data and information, Hazard Logs and Risk Registries will be available electronically in an accessible location for appropriate employees to access and review. Hazard logs and risk registries are living documents and are reviewed and updated at a minimum quarterly. As part of the ASP implementation plan, safety will appoint Safety Coordinators who will be responsible for maintaining, updating, and setting up the hazard log to ensure adequacy and appropriateness of the hazard log.

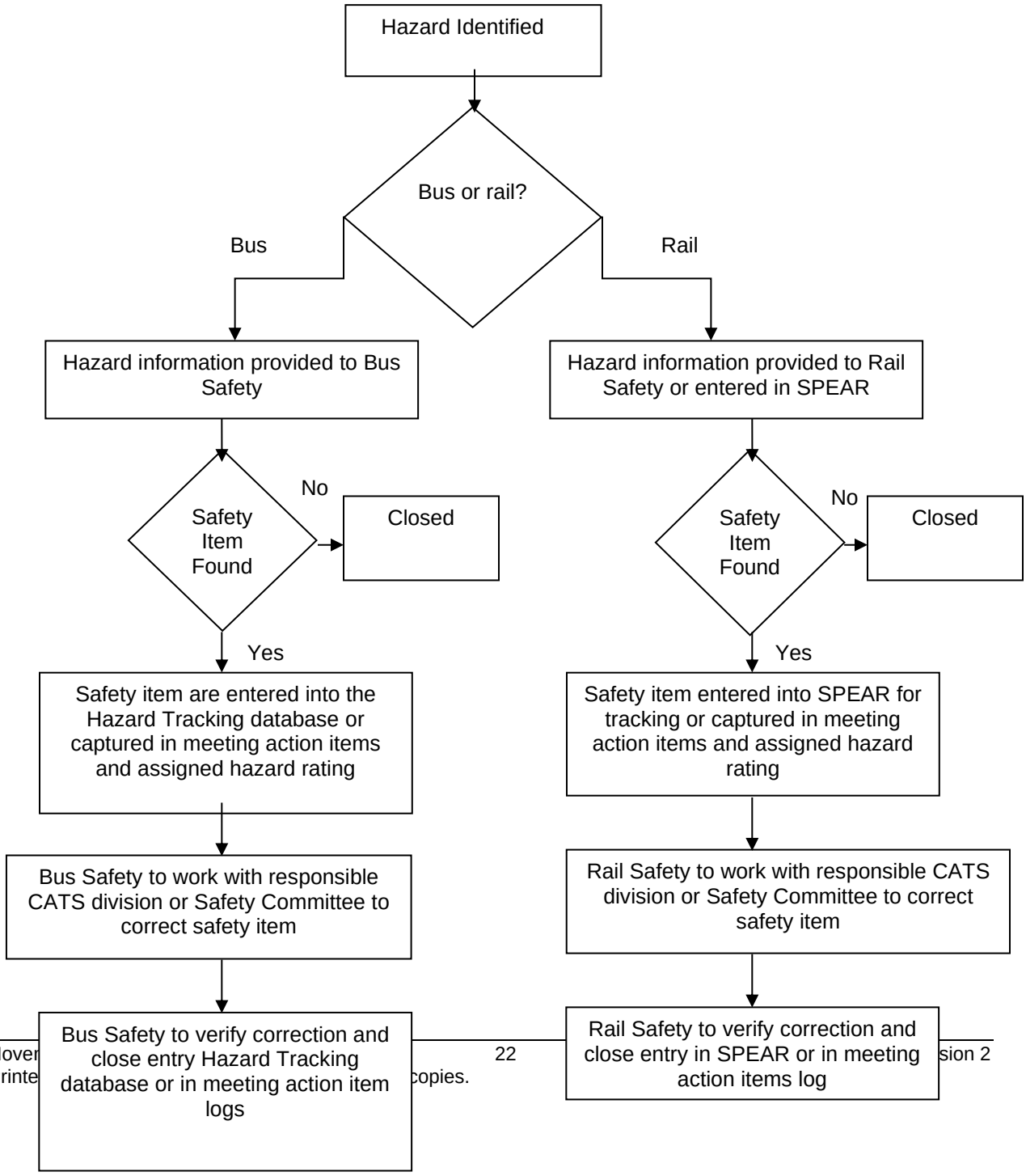
The Rail Safety Office is responsible for identifying those rail issues from accident/ incident reports and SPEAR entries which are significant enough to pose an undue hazard to employees or passengers and facilitate tracking of progress toward resolving those issues. This is done by tracking all safety issues and hazards in the Rail Hazard Management Log, which tracks those items of interest in terms of the problems discovered, the desired resolution, the individual responsible for resolution, and the progress. This log includes safety audit issues, post-accident or incident issues, individual hazard reports and those items cited by the safety committee. As items are corrected, those corrections are noted on the log and closed out as appropriate. The Office of Safety 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. Additionally, when Rail Operations is considering alternate materials or software instead of the Original Equipment Manufacturer (OEM) product or to change any configurations to the existing systems, it must be approved by the Rail Change Control Board per CATS ROD801 Configuration Change Control.

The Rail Safety Office provides quarterly updates of Hazardous Conditions to the SSOA.

The Bus Hazard Log is created from reported BOCC or supervisor generated incident/accident reports. It could also come from an operator statement that gets forwarded to Bus Safety.

As part of the implementation plan, Divisions will manage their Hazard Tracking Logs to reflect the status of identified hazards. The Hazard Tracking Logs will be managed to eliminate, reduce, or control each hazard to an acceptable level. Identified hazards will be assigned a hazard rating. The Safety Manager and General Manager will review hazard ratings and status of the Hazard Log on a monthly basis. When an item is added by the Office of Safety, the Division Manager will be notified by e-mail. Hazard Tracking Logs will be distributed to CATS Leadership on a monthly basis. Hazard Tracking logs will be distributed to the SSC on a quarterly basis for review and discussion.

Figure 1 - Hazard Tracking Process



Utilizing the information collected in the various safety reports, the Chief Safety Officer will provide a monthly safety summary to the MTC, CATS CEO, and CATS employees. TV screens are centrally located in areas (e.g. breakrooms) to display safety information, Chief Safety Officer's monthly report, alerts, statistical information, and other safety education materials for employees who do not have access to e-mail. The CATS CEO will receive safety updates during the Senior Leadership meetings.

2.2.5 Safety Risk Register

As part of the implementation plan, the Office of Safety and Security along with Quality Assurance will manage the Risk Registry that will be distributed to each division to use to track risks. The Safety Risk Registers will capture, manage, and mitigate identified Undesirable and Unacceptable Hazardous Conditions. The register will include, at a minimum, the hazardous condition, potential consequences of the hazard, safety risk assessment for each potential consequence, mitigation that is in place and the hazard rating after mitigation, monitoring activities, and responsibilities for monitoring.

A summary report of the updates and status of the Risk Register will be provided to the CEO and CATS Leadership Team monthly.

2.3 Safety Risk Assessment

2.3.1 Hazard Analysis Processes

Risk Assessment is a quantitative calculation based on largely **subjective judgments** used to determine the risk associated with each hazard and thus the urgency for implementing corrective measures to eliminate or reduce risk to a level of acceptability.

Risk Assessment is comprised of evaluating hazard severity (categorizing the hazard) and evaluating hazard probability. The factors considered in this analysis include system safety, schedule, and the impact on the public's perception of safety on the system in the community where CATS operates.

2.3.2 Safety Risk Indexing (Likelihood and Severity of Consequences)

Table 3 - Hazard Severity Categories

Severity	Category	Characteristics
Catastrophic	1	May cause death, system loss, or severe disruption of service system wide.
Critical	2	May cause severe injury, severe occupational illness, major system damage, or major system wide disruption of service.
Marginal	3	May cause minor injury, minor occupational illness, minor system damage, or minor system disruption of service.
Negligible	4	Less than minor injury, occupational illness, system damage, or less than minor system disruption of service.

Hazard severity is a subjective determination. With historical data, an objective determination applicable specifically to CATS can be derived. The determination reflects a credible mishap that could be anticipated to result from human error, procedural deficiencies, design inadequacies, component failure, or malfunction. Hazard Severity at CATS is based on the *Department of Defense Standard Practice for System Safety* (MIL-STD-882E) as follows:

Hazard Severity Categories
The categorization of hazards is consistent with risk-based criteria for severity; it reflects the principle that not all hazards pose an equal amount of risk to personal or system safety.

2.3.3 Hazard Probability

The probability of a particular event or a specific hazard occurring may be defined as a ratio of the number of times that a specific event occurs to the total number of trials in which this event may occur during the planned life expectancy of a system. Generally, hazard probability is described quantitatively in potential occurrences per units of time, miles, trips/runs or passengers carried. A hazard probability may be derived from the analysis of transit system operating experience, evaluation of CATS safety data, or from historical safety data from other passenger rail systems.

Table 4 - Hazard Probability Categories

Probability Levels Description	Level	Specific Guidance
Frequent	A	Likely to occur frequently to an individual item. Continuously experienced in the system.
Probable	B	May occur several times in the life of an item. May occur frequently in the system.
Occasional	C	Likely to occur sometime in the life of an item. May occur several times in the system.
Remote	D	Unlikely, but possible to occur in the lifetime of an item. Unlikely, but can be expected to occur at some time in the system.
Improbable	E	So unlikely to occur, it can be assumed occurrence may not be experienced. Unlikely, but possible to occur in system.
Eliminated	F	Incapable of occurrence. This level is used when potential hazards are identified and later eliminated.

2.3.4 Hazard Probability Categories

Hazard Risk Assessment

CATS has adopted a system for assessing the level of risk for each identified hazard to determine what action(s) must be taken to correct or document the hazard risk. This risk assessment system has been incorporated into the formal System Safety Analysis which enables CATS decision-makers to understand the

amount of risk involved in accepting the hazard in relation to the cost (schedule, cost, operations) to reduce the hazard to an acceptable level.

The Risk Assessment Matrix identifies the risk assessment index based upon hazard category and probability and the criteria for defining further actions based upon that index.

Table 5

MIL-STD-882E Risk Assessment Matrix				
SEVERITY / PROBABILITY	Catastrophic (1)	Critical (2)	Marginal (3)	Negligible (4)
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
Eliminated (F)	ELIMINATED			

Hazard Risk Index	Criteria by Index
	Unacceptable (Immediate Action Required)
	Undesirable (Management Decision Required)
	Acceptable with Review by Management
	Acceptable without Review
	Potential Hazard was Identified and Eliminated

Risk Assessment Matrix and Hazard Risk Index

Follow-up actions resulting from the Risk Assessment are as follows:

Unacceptable: The hazard must be mitigated in the most expedient manner possible before normal service may resume. Interim corrective action may be required to mitigate the hazard to an acceptable level while the permanent resolution is in development.

Undesirable: A hazard at this level of risk must be mitigated unless a documented decision to manage the hazard until resources are available for full mitigation is

issued by executive management and forwarded to NCDOT for review and approval/disapproval.

Acceptable with review: The Office of Safety and Security must determine if the hazard is adequately controlled or mitigated as is.

Acceptable without review: The hazard does not need to be reviewed by management and does not require further mitigation or control.

The Risk Assessment Process is used to prioritize hazardous conditions and focus available resources on the most serious hazards requiring resolution.

Unacceptable and undesirable safety conditions identified during the Transit Asset Condition Assessment as described in CATS TAMP Section 2.0 will be reported to the OS&S immediately.

2.3.5 Risk Tolerability Non-Consensus Procedures

In situations where there is non-consensus on Hazard Risk Assessment ratings, the Subject Matter Expert will take the lead in providing information to the SMS Manager and Operations Manager to promote resolution of non-consensus. If consensus is not reached, the CSO will make the final decision.

2.4 Safety Risk Mitigations

2.4.1 Resolving Hazardous Conditions

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 based on available funding:

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, etc.

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.

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.

CATS Business Planning Process in the CATS Quality Manual describes the budget cycle for all CATS divisions. It is the responsibility of each CATS division/section to prioritize risks based on the Hazard Management process using Hazard Ratings to help resolve identified hazards.

2.4.2 Evaluation of Current Mitigations

Whatever the decision with respect to a particular hazard, mitigations, and Corrective Action Plans (CAPS) must be monitored for effectiveness and to ensure that another hazard has not been introduced. CAPS are verified by Safety Assurance activities that are tracked in the ISA schedule, Operational Audits tab. If a risk mitigation is not effective or appropriate, the safety risk control should be reviewed through the Safety Risk Management and Hazard Analysis process.

2.4.3 Risk Mitigation Implementation and Tracking

Mitigations that have been implemented are tracked in Hazard Management logs by the Division/Section and/or the Safety Risk Register. The person assigned the mitigation will be responsible for tracking and reporting on the status of the mitigation through closure.

Corrective Action Plans
Corrective Action Plans (CAPs) are required for deficiencies identified through on-site safety review, accident and hazard investigations, internal safety reviews, or other means by which a hazard may be brought to the attention of CATS. CAPs will follow the format described in Section 3.4.8.3.

2.5 Safety Data Acquisition and Analysis

2.5.1 Data Acquisition Process

The Office of Safety and Security monitors the safety performance of the various CATS operations. Accident, incident, injury, and other safety data is collected throughout the organization and analyzed to determine trends within the organization. The safety data collected is analyzed to determine if safety performance meets established safety objectives. The accident and incident data assists in identifying service areas that generate a higher percentage of accidents or potential for higher accident rates.

The safety data that is collected includes injuries to passengers, CATS personnel, and the public; hazardous equipment failures; unacceptable hazardous conditions;

vandalism and security hazards; and rules and procedures violations. The Office of Safety and Security analyzes safety-related data for the purpose of implementing corrective action to assist in prevention or reoccurrence of hazards.

2.5.2 Data Reporting to Safety Function (process)

The Office of Safety and Security analyzes the data from SPEAR reports, incident investigations, safety committees, field inspections, police reports, and Risk Management. The Office of Safety and Security also uses the data acquisition and analysis process to identify system trends and to monitor safety and security program performance. The Office of Safety and Security provides monthly safety program performance reports to executive management. As part of the implementation plan, Safety will also supply monthly updates to employees.

Currently, safety performance (NTD) reports are submitted to FTA on a monthly and annual basis. The report contains injury data regarding passengers, CATS personnel, and customer/public accidents and incidents. The Office of Safety and Security, based on FTA established guidelines, compiles safety data for the overall CATS organization. The report summarizes accidents and incidents into three categories: minor incidents, major incidents, and safety/security issues. CATS uses this report to establish safety performance goals and objectives for each coming fiscal year.

2.5.3 Access to Data

Information regarding accidents, incidents, and hazardous conditions of the various CATS divisions are obtained from several different reporting mechanisms. These include, but are not limited to the following reports:

- Accident/Injury Reports
- Incident Reports
- Daily Operations Summary
- Accident/Incident Database (Bus)
- SPEAR Database – Material Maintenance Management System (MMMS)
- Employee/Occupational Injury reports
- National Transit Database (NTD) Safety and Security reporting module
- CCTV Video
- Automatic Vehicle Locators (Bus)

2.5.4 Use of Data (Trend Analysis)

Hazard data and accident/incident data is used to identify trends. Trends are then further analyzed and/or investigated by the Office of Safety and Security to determine causal factors where possible and identify issues of increasing severity and/or probability. Interviews with personnel in the affected division(s) may also be conducted. The various Safety teams identify hazards, areas susceptible to accidents, traffic problems, and other critical factors and develop mitigations to address potential consequences of the hazards.

Section 3 Safety Assurance (SA)

3.1 SA Implementation Process

Safety Assurance involves processes within a transit agency's Safety Management System that functions to ensure the implementation and effectiveness of CATS programs. This involves monitoring key aspects of the operation for 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.

3.2 Internal Safety Audit Program

3.2.1 Overview

The purpose of internal system safety audits is to evaluate the effectiveness and safety performance of the implementation of the ASP and SMS by CATS Divisions. The Office of Safety and Security and Quality Assurance are jointly responsible for the direction of the safety reviews and audits of CATS divisions and contractors to determine performance related to the System Safety goals and objectives. The Internal Safety Audit (ISA) Team will be led by the Office of Safety and Security or Quality Assurance with support from division staff or external agencies.

All CATS divisions and contractors are subject to safety audits. The criticality of certain operations requires rigorous development of reviews and audits. These include training, maintenance, and operations activities. Both periodic and no-notice inspections are undertaken to address all aspects of the activity, including documentation, practices, and compliance with this ASP, CATS policy and other requirements. The Internal Safety Audit team reviews training, practices, and procedures to correct deficiencies identified during the conduct of audits or other safety activities, including inspections and emergency drills.

3.2.2 Purpose and Scope

The purpose of internal safety audits is to confirm all safety components are in place and assigned safety tasks and activities are being accomplished. This provides an additional means of documentation for senior management to verify how well each division is fulfilling their safety-related goals and objectives as required in the ASP.

Organizational functions subject to the safety audit process include:

- Facility inspections
- Maintenance audits/inspections
- Review of rules, standard operating procedures, special bulletins, and orders
- Review of training/retraining programs
- Emergency response planning, coordination, and training
- Configuration Management
- Systems modifications (review and approval)

- Safety data analysis
- Employee safety programs
- Hazardous materials program
- CATS safety goals and objectives
- Occupational safety and health programs
- Contractor safety
- Procurement and specification engineering
- Drug and Alcohol Testing Program
- Any aspect or responsibility as outlined in this document

Pursuant to 49 CFR 673 and NCDOT SSOPS Section 4.7, the Internal Safety Audit process must evaluate the following components:

1. **Safety Management Policy § 673.23(a)**
    1. Goals and Objectives § 673.23(a)
    2. Management Accountabilities and Responsibilities § 673.23(d)
    3. Employee Reporting Program § 673.23(d)
    4. Safety Policy Dissemination § 673.11(a)(5)
    5. Reference to Emergency Management Plan (EMP) § 673.21(a)-(d)
        (a) Safety Management Policy Section§ 673.23
        (b) Safety Risk Management Section§ 673.25
        (c) Safety Assurance Section§ 673.27
        (d) Safety Promotion Section§ 673.29

2. **Safety Risk Management (SRM) Section§ 673.25(a)-(d)**
    1. SRM Process
    2. Hazard Identification
    3. Safety Risk Assessment
    4. Safety Risk Mitigations
    5. Safety Data Acquisition and Analysis

3. **Safety Assurance Section§ 673.27(c)**
    1. SA Implementation Process
    2. Safety Performance Monitoring and Measurement
    3. Internal Safety Review Program
    4. Coordination with Hazard Management Program
    5. Management of Change

4. **Safety Promotion Section§ 673.29(a)-(b)**
    1. Safety Plan Dissemination
    2. Safety Plan Review and Modification
    3. Safety Plan Implementation Tasks and Activities (including responsibilities matrix)
    4. Employee and Contractor Safety Programs (knowledge and compliance)
    5. Compliance with Local, State, and Federal Requirements
    6. Training and Certification Program
    7. Safety Communication and Outreach
    8. Environmental Management Program

3.2.3 City and CATS Divisions Subject to Internal Safety Audits (ISAs)

- Bus Operations including STS
- Rail Operations
- Facilities Management
- Safety and Security
- Quality Assurance
- Marketing and Communications
- CATS Technology
- City Procurement
- City HR
- Finance/Revenue

3.2.4 ISA Process

The General Manager of Safety and Security is responsible for the management of the Internal Safety Audit Program. All CATS divisions are required to cooperate fully with the ISA team. Executive and senior managers ensure that their divisions participate fully in the safety audit process. CATS Quality Assurance and Safety and Security will jointly conduct safety audits.

3.2.5 ISA Cycle / Schedule

Over a three-year period, key components of the ASP must be audited at least once. The CATS Internal Safety Audit Process is intended to be a continuous safety review process. The Office of Safety and Security and Quality Assurance will jointly develop and annually submit a comprehensive Internal Safety Audit schedule to NCDOT each December, detailing when it will audit the Agency Safety Plan components over the three-year period. The schedule is revised as necessary to accommodate schedules for auditors and the audited divisions. CATS QA100 Quality Audits outlines the process to be followed for ISA.

The ISA team will identify the components of the annual safety performance assessment based on SMS and conduct a safety assessment annually to verify compliance to audit schedule.

The ISA lead auditor notifies the division/organization and NCDOT a minimum of 15 days in advance of a scheduled safety audit. This notification must include the audit checklist for the sections of the ASP to be audited.

3.2.6 Integrity of Review Process

To maintain the integrity of the review process, an ISA team is used to conduct safety audits. The lead auditor will be a qualified person from Quality Assurance or the Office of Safety and Security. The Office of Safety and Security does not lead audits/reviews of those functions and components for which it is directly responsible to implement. These components are audited by Quality Assurance personnel, or an independent member of the audit team. No team member shall audit a function or activity for which he/she is responsible. The lead auditors will

be certified to conduct audits by accredited bodies such as the Transportation Safety Institute (TSI), American Society for Quality (ASQ).

3.2.7 ISA Checklist Development Process

Audit checklists are developed in advance and submitted to NCDOT for review and approval. Checklists are prepared during the review of the documents referenced in the ASP section; previous audits; audit findings; and corrective actions. Audit checklists are provided to the organization or division being audited and to NCDOT a minimum of 15 days in advance of the audit.

Pre-audit and post-audit conferences are held by the audit team, as appropriate, with the entity being audited. The safety audits are comprised of record reviews, interviews, field observations and inspections, and measurements to verify the accuracy of documentation and spot inspections of facilities and equipment to verify compliance with the ASP, procedures, codes, and regulations.

The following list of documents may be used to support development of the audit checklists:

- ASP, SSP, and EPCP
- Rule Book(s), bulletins, and procedures
- Standard and emergency operating procedures
- Training program documentation
- Management and/or administrative plans/procedures
- Design standards and criteria
- Accident and investigation reports
- Hazard tracking logs
- Corrective Action Plans
- Previous audit reports
- Other sources as determined by NCDOT SSO upon request

3.2.8 Audit Report

The Office of Safety and Security will provide a draft safety audit report to NCDOT SSO for approval. NCDOT SSO makes changes/ recommendations to the audit report prior to final issue of the report.

Upon completion of each audit report, the Office of Safety and Security issues a final report of the results and specifies areas of deficiency, including cause; prepares recommendations; identifies the need for Corrective Action Plans; and distributes copies of the report to CATS Chief Executive Officer, Quality Assurance Manager, Safety and Security staff, and the audited Division.

Responsible Divisions are expected to determine the cause of nonconformances and to develop corrective actions, though the audit team may make recommendations and must approve corrective actions. The results of the audit

are used for positive corrective action, not as an internal regulatory process. Safety Audit coordination meetings and management briefings are held to review areas of concern or disagreement over findings and evaluate possible corrective actions. Safety and Security personnel monitor and track corrective actions with the affected divisions to ensure implementation.

Safety and Security personnel submit the CAPs (for Rail only) to the NCDOT SSO for review and approval in accordance with Section 3.4.8.3 - *Corrective Action Plans*. Safety and Security personnel track the implementation of the NCDOT-approved CAPs through closure. Safety and Security will also provide the CAPs to the audit team after the CAPs are approved by NCDOT SSO.

3.2.9 Annual Review Report

An Annual Safety Activities Report is provided to the CEO and to the NCDOT SSO for review and approval on or before February 15th. The report includes:

- results of the internal Safety Audit Process for the calendar year in terms of the adequacy and effectiveness of the ASP and the status of subsequent findings and corrective actions,
- a summary of the Emergency Management Program,
- the internal safety audits planned for the upcoming calendar year,
- a summary of all hazards identified during the previous year and corrective actions taken to address these hazards,
- a summary of all reportable accidents/incidents,
- status of resource allocation plan for SMS implementation, and
- identification of staff designated for implementation of ASP/SMS implementation and safety oversight at CATS.

Along with the annual report, CATS must include a formal letter signed by the CEO certifying CATS is in compliance with its ASP. If the safety audit's findings indicate noncompliance with its ASP, the CEO must identify in the formal letter the nature of the noncompliance and the steps CATS will take to achieve compliance. An implementation schedule detailing when compliance will be achieved may also be provided.

3.2.10 Coordination with SSO Program

As noted above, the following aspects of the Internal Safety Audit Process are coordinated with NCDOT per the current SSOPS:

- Internal Safety Audit Cycle and Schedule
- Safety Audit Checklists
- Actual dates of each safety audit
- Each Safety Audit Report
- Corrective Action Plans
- Annual Safety Activities Report
- CEO Annual Certification

3.2.11 Corrective Action Follow-up Procedures

Findings from Safety audits will be added to the appropriate Hazard Management Log by the lead auditor per the Hazard Management Process. If applicable, a CAP will be created per Section 3.4.8.3 - *Corrective Action Plans*. Corrective action plans are reviewed monthly by the SMS manager or designee to provide oversight and direction for corrective action activities in order to resolve hazardous conditions and deficiencies. Any hazardous condition/deficiencies that are rated as Unacceptable will be reported by the Chief Safety Officer or SMS Manager to the CEO per the Hazard Management Program. The CSO will include a summary of safety deficiencies identified during audits as part of the hazardous conditions monthly report to the CEO.

3.3 Maintenance and Inspection Program for Vehicles, Equipment, Systems, and Infrastructure

3.3.1 Facilities and Equipment Subject to Inspections

Periodic inspections are made of all CATS facilities and equipment to ensure they are maintained in a state of good repair; clean, safe, and functional to safeguard employees, visitors, and passengers.

CATS Facilities Management Plan identifies the responsibilities for facilities and equipment maintenance. Inspection schedules are included as an appendix to the Facilities Management Plan. Facilities Management performs inspections of CATS facilities (South Boulevard Light Rail Facility, South Tryon Bus Facility, and Davidson Street Bus Facility), as well as all transit centers, park and rides, bus stops, light rail stations, streetcar stops and amenities. They also contract the inspection and maintenance of facilities equipment. The Facilities Management Plan identifies the priority structure assigned to Work Orders generated from inspections. Operational/Safety Related items are priority one with a targeted response time of four hours or less. Facilities Management will immediately notify the Office of Safety and Security when an urgent safety issue is identified.

Items are inspected and maintained in accordance with the manufacturer’s recommendations, Facilities Management Plan, SOPs and CATS standards by Facilities Management staff, Bus and Rail Operations staff or contractors.

Shop equipment is maintained and serviced according to manufacturer's recommendations and the Facilities Management Plan. In certain facilities, the services of outside vendors are required for servicing specialty items such as lifts, hoists, and fire detection and suppression systems.

A member of the Office of Safety and Security staff completes a quarterly safety inspection of transit facilities and light rail stations that covers a variety of OSHA 1910 and 1926 considerations in the facility such as housekeeping, fire extinguishers and guard rails/stair-rails in place. The Office of Safety and Security forwards the inspection reports to the responsible division/sections for resolution.

Rail Car Maintenance conducts daily inspections of vehicles before releasing vehicles into revenue service. Bus Maintenance conducts an inspection of buses and reviews operator inspection cards when buses go for fueling. Any safety critical items identified will result in the vehicle being taken out of service for repair prior to release to revenue service.

Operators perform pre-trip inspections of vehicles prior to entering revenue service. Results of these inspections are documented on the pre-trip inspection card and submitted to Maintenance for follow-up and repair. Inspections are conducted to ensure that vehicles are safe, clean, reliable, and ready for revenue service. Any safety critical items identified will result in the vehicle being taken out of service for repair prior to release to revenue service.

As part of the implementation plan, CATS Transit Asset Management (TAM) Program will be establishing the direction for Asset Management Policies. The program will establish the divisional roles and responsibilities as stated in the CATS TAM Implementation Plan. The process will tie into the review of State of Good Repair and any Unacceptable or Undesirable Hazards will be addressed by following the Hazard Management Plan in the ASP. A report rating deferred maintenance items will be provided by Operations and Facilities at the monthly Safety and Security Committee (SSC).

3.3.2 Systems and Facilities Subject to Maintenance Programs

CATS ROD600 *Preventive Maintenance Requirements for Rail Systems* summarizes the maintenance and inspections performed by the Rail Maintenance of Way division. The Maintenance of Way division performs the following inspections in accordance with the Systems Maintenance Yearly Schedule and the 600-series Light Rail SOPs.

- Grade Crossings
- Signal Houses
- Track Circuits
- Switch Machines
- Traction Power Sub-Stations
- Overhead Catenary System
- Track and Roadbed
- Embedded Track Slab
- Track Drains
- Embedded Switch Machines

Light Rail vehicles are serviced and maintained in accordance with the Light Rail Fleet Management Plan and the 500-series Light Rail SOPs. Rail Car Maintenance performs equipment inspections in accordance with the Light Rail Fleet Management Plan and ROD SOPs. A Daily Inspection of each LRV is performed by Rail Car Maintenance in accordance with the Light Rail Fleet Management Plan and CATS Procedure ROD502, *LRV Daily Inspection*.

Buses are maintained in accordance with the Bus Fleet Management Plan. CATS BOD100 *Preventative Maintenance Inspection (PMI) Audits* identifies the internal

audit process that ensures a high level of quality and reliability in performing preventative maintenance inspections and repairs for CATS transit buses.

3.3.3 Regular Inspections and Testing Procedures

Inspections of facility equipment are made in accordance with appropriate maintenance manuals and procedures. Inspection of equipment prior to use is captured in Rule Books and Maintenance Manuals.

3.3.4 Resolution of Review/ Inspection Findings

Each facility inspection report is sent to the Facilities Administrative Officer for generation of work orders. It identifies specific areas and targets specific recommendations for corrective action. Identified unacceptable hazards are reported to the General Manager of Facilities and the CSO. Facilities Work Orders are tracked through completion in CityWorks. Facilities staff will rate identified hazards and maintain a Hazard Tracking Log.

Preventative Maintenance of Vehicle work orders are triggered by either vehicle mileage or time milestones. Maintenance inspections are scheduled and tracked through the MMMS (SPEAR). SPEAR tracks these work orders through completion. Identified unacceptable hazards will result in the vehicles being taken out of service.

3.3.5 Checklists

Facilities Management uses *CATS Facilities Inspection Checklist* (Form FMF03) and Rail Station Monthly Inspection checklist (FMF07) for regular inspections. Transit Amenities use *TAMS Daily Inspection Sheet* (FMF04) to document inspections at bus and streetcar stops.

Systems Maintenance checklists and forms are completed in accordance with the 600-series Light Rail SOPs and the Track Maintenance Plan.

The RCM Mechanic completes the LRV Daily Inspection Checklist (RODF091 S-70s and RODF093 Streetcars) and submits it to the Rail Car Maintenance Supervisor.

Bus Maintenance Technicians perform Preventative Maintenance Inspections using forms developed for each specific bus type. Shop Foremen perform safety inspection reviews on buses using Shop Foreman Safety Review Form B.

The Office of Safety and Security conducts Facility Safety Inspections using iAuditor and Station Safety and Security Inspections using Checklist (S&SF29) based on OSHA Standards. (See Appendix E for forms and iAuditor screenshot of the various facility inspection templates). These checklists are used to perform quarterly safety related inspections at facilities and stations.

A Pre-Departure Inspection is performed daily by vehicle operators and documented on the pre-trip inspection forms.

3.3.6 Coordination with Hazard Management Program

Hazards identified during safety inspections are to be resolved as close to the source as possible. Identified hazards are reported via email or phone call to the appropriate section manager to make them aware of the hazard that needs to be resolved. Issues that are noted immediately, resolved, and result in a formal corrective action, will be tracked following the Safety Corrective Action Plan process in the safety CAP log. Technicians are to repair equipment that does not meet safety requirements or take the equipment out of service/remove it from the work area as appropriate. Defective equipment must be tagged-out if it cannot be removed from the work area. Employees are to reject equipment that is not fit for use and issues must be addressed and resolved as soon as possible, with safety critical items being resolved first.

S&S Inspection reports are e-mailed to the responsible personnel for resolution and tracked through inspection logs. UAH/UDH hazards identified through inspection reports will be managed to closure and tracked using a centralized enterprise resource system.

3.4 Accident / Incident Notification, Reporting and Investigations

3.4.1 Overview

All CATS employees and contractors are expected to comply with CATS S&S03 *Accident/Incident Investigation and Reporting* procedure (Appendix C) and use the forms prescribed. Roles, responsibilities, and accident reporting thresholds are outlined in the procedure, including accident notification, reporting and investigation throughout the organization. The level of investigation required is dependent on the seriousness of the event. Each accident/incident is investigated by a supervisor as specified in the procedure.

3.4.2 Accident / Incident Reporting Criteria to NCDOT and FTA (Rail Only)

NCDOT State Safety Oversight Program Standard (SSOPS) requires that CATS submits reports to NCDOT and FTA regarding accidents/incidents as defined in SSOPS Section 6.1 Figure 8. Criteria are detailed in CATS S&S03 Section 8.3 *External Notifications by Safety and Security*.

3.4.3 Accident / Incident Investigation Procedures on behalf of NCDOT (Rail Only)

In general, NCDOT authorizes CATS to conduct accident investigations on its behalf, unless otherwise notified. CATS Safety personnel conducting investigations will be in compliance with the Public Transportation Safety Certification Program (PTSCP). For all investigations conducted by CATS on behalf of NCDOT, CATS utilizes procedure CATS S&S03 *Accident/Incident Investigation and Reporting* to conduct its investigations. CATS S&S03 has been approved by NCDOT. Information collected during investigations includes, at a minimum, scene assessment, supervisory and emergency responder reports, audio/visual reports, and vehicle downloads.

CATS must submit any updates and revisions to its accident investigation procedures to NCDOT as they are completed and implemented by CATS or with the annual update of the ASP. This procedure, S&S03, is Appendix C of CATS ASP.

NCDOT may participate in the investigation process when CATS is conducting the investigation on NCDOT's behalf. The terms of participation are specified in the NCDOT SSOPS, CATS ASP and in CATS S&S03 *Accident/Incident Investigation and Reporting*. If NCDOT elects to conduct an investigation of accidents or incidents, the General Manager for Safety and Security may also conduct an independent investigation.

3.4.4 Supervisor Investigation

Bus, Light Rail, and Paratransit accidents and incidents which do not involve serious injury and/or damage usually require only an initial investigation by the supervisor responding to the scene. Rail accidents and incidents that may be investigated by supervisors only are those that **do not** meet the criteria specified in ASP Section 3.4.2. The supervisor at the scene will:

- Perform an investigation, including an on-site inspection of the accident scene
- Conduct interviews with involved personnel and witnesses as appropriate
- Review reports written by involved personnel
- Gather, collect, and review physical evidence
- Complete each CATS accident / incident investigation form that applies to the event. (See CATS S&S03 *Accident/Incident Investigation and Reporting*.)
- Submit a report based on the information collected to the Manager of Safety – Bus/Rail, Office of Safety and Security. The Manager of Safety – Bus/Rail will ensure that the General Manager of Safety and Security and the City of Charlotte Risk Management Division are provided copies of all reports.

3.4.5 Safety and Security Follow-up

The CATS Office of Safety and Security reviews all accident/incident reports for potentially serious problems or conditions. All accident/incident data is collected throughout the organization and analyzed to determine trends within the operations. Additionally, when accident/incident reports and statistics show repetitive trends that result in an inability to meet or exceed the safety goal and objective, the Office, through the Manager of Safety - Bus, the Manager of Safety - Rail or Manager of Security, initiates an investigation to determine the causal factors and settle on required corrective actions, approved by the General Manager of Safety and Security.

3.4.6 Investigation Called by Chief Executive Officer

The Chief Executive Officer may bring in additional resources to support an investigation of any incident/accident occurrence conducted by the Office of Safety and Security including investigations by NCDOT or the National Transportation Safety Board (NTSB).

3.4.7 Internal Notification of Accidents and Unacceptable Hazards (from CATS S&S03)

Depending on the type of incident, the operator/employee must immediately notify the appropriate communications center and/or Safety and Security personnel. Non-revenue vehicle operators must notify their supervisor/manager if possible. CATS follows the S&S03 *Accident/Incident Investigation and Reporting* procedure when making internal notifications.

3.4.8 External Notification Procedure (Rail Only)

CATS follows the S&S03 *Accident/Incident Investigation and Reporting* procedure when making external notifications. The reportable incidents identified in S&S03 are based on the current Code of Federal Regulations (CFR) related to public transportation and the NCDOT State Safety Oversight Program Standards (SSOPS).

3.4.8.1 At-scene Procedures

CATS S&S03 describes the roles and responsibilities of CATS personnel on the scene of an incident.

3.4.8.2 Accident / Incident Investigation Reporting, and Documentation

NCDOT (Rail Only)
Each CATS investigation conducted on behalf of NCDOT must be documented in a final report that includes a description of investigation activities, findings, identified causal factors, and a Corrective Action Plan, if applicable. Preliminary reports will be submitted within 72 hours post incident and final reports will be submitted when completed with updates provided to NCDOT every 30 days. All investigation and reporting requirements will follow current NCDOT State Safety Oversight Program Standards (SSOPS) and CATS S&S03 *Accident/Incident Investigation and Reporting* procedure.

Reports and records of accident investigations submitted to NCDOT by CATS, as well as related reports and records produced by both NCDOT and CATS, will be treated as confidential information and will not be released without concurrence by both NCDOT and CATS. All documentation related to accident investigations are kept on a secure server within CATS. Hard copy or electronic copy of documents are available upon request by authorized personnel.

National Transit Database
Accidents and Incidents for CATS are also reported to the National Transit Database (NTD) monthly.

Major events are reported by mode separately for each event. Information includes number of fatalities, number of injuries, total estimated property damage, date, time, and address of the event. Report includes a brief synopsis of the event.

For minor events: CATS reports by mode (Bus, Commuter Bus, Light Rail, STS, Vanpool); the number of events by location (in revenue facilities, in transit vehicles, in non-revenue facilities); the number of injuries by category (customer, worker, or other); and for fires by location.

3.4.8.3 Corrective Action Plans (Rail Only)

After the occurrence of an accident and subsequent investigation, the development of recommendations, the identification of an unacceptable hazardous condition, or hazards or deficiencies identified through internal or external safety reviews/audits, the CATS Safety and Security representative will enter a Corrective Action Plan (CAP) in NCDOT's web-based software program within 30 calendar days after identification of the need for a CAP. CATS may request additional time to prepare the CAP for complex issues. Should the web-based program not operate properly, then the CAP will be submitted in the manner requested by the NCDOT SSO representative.

The Corrective Action Plan will include:

- a title that references the ASP element number, the year, and a suffix starting with "01" indicating the first item for that element and year (progressing numerically for additional CAPs for the same element and year). The alphanumeric format must be: "ASPxx-year-xx", using four digits for the year;
- the hazard or deficiency identified and investigation (if relevant to the CAP);
- reason for the noncompliance (if relevant to the CAP);
- proposed actions planned to minimize, control, correct, or eliminate the unsafe or hazardous condition, including interim action if required;
- scheduled date of completion of implementation;
- division and individual responsible for implementing the CAP;
- comments subsequently added, especially pursuant to NCDOT review and closure of the CAP.

The CAP shall be submitted to NCDOT for review and approval using the web-based system. NCDOT will enter its approval or rejection of a CAP within 15 calendar days of receiving the CAP. In the event NCDOT rejects a CAP, NCDOT will state its reasons and recommend revisions. CATS shall submit a revised CAP to NCDOT no later than 15 calendar days following the rejection. If NCDOT takes issue with CATS' proposed CAP, NCDOT and CATS must work together until NCDOT approval can be obtained. NCDOT approval is not necessary for short-term measures required to immediately mitigate hazardous conditions; however, these measures shall not replace the need for a long-term CAP. NCDOT will provide its support for such short-term measures, or outline its concerns regarding them, in its written approval or disapproval of the formal CAP.

If the NTSB investigates, CATS and NCDOT shall review the NTSB findings and recommendations to determine if a CAP is required. If a CAP is required either by the NTSB or NCDOT, CATS shall develop it.

Unacceptable Hazardous Conditions that are identified through any means, including after action reports, as containing Sensitive Security Information (SSI) will be tracked in a separate hazard log.

The CAP log generated in NCDOT's web-based software program includes entries related to:

- most probable cause;
- corrective actions for investigation reports, annual audits, three-year safety reviews, and FTA Program Audits;
- unacceptable hazardous conditions;
- hazard analysis or safety reviews performed at the request of NCDOT; and
- other related external reviews.

The status of open corrective actions is reported and reviewed on a monthly basis with Rail Operations management. All corrective actions are prioritized for implementation using the risk assessment matrix and assigned a responsible person to lead the corrective action effort and close the corrective action after resolution. NCDOT requires verification from CATS that the CAP has been implemented either by documentation submitted by CATS, independent visual inspection by NCDOT, or both.

3.4.8.4 Coordination with State Safety Oversight Agency (Rail Only)

When an accident, incident, or condition involves post-accident inspections, examination, or testing by CATS Divisions, the Office of Safety and Security is the lead CATS office to coordinate with NCDOT. The Office of Safety and Security will evaluate the need for accident/incident reconstruction, in cooperation with the City of Charlotte Risk Management Division.

NCDOT may choose to investigate rail accidents and Unacceptable Hazardous Conditions rather than having the Office of Safety and Security perform the investigation on its behalf. CATS will fully cooperate with the NCDOT in its investigation, with the General Manager of Safety and Security serving as CATS' primary point of contact. NCDOT submits draft reports to CATS for review and feedback. CATS will notify NCDOT SSO in writing of any findings or issues in which they disagree. Additional information and clarification will be provided to NCDOT to address any disagreements. NCDOT SSO will make the final decision on findings and issues.

3.5 Management of Change

3.5.1 Procedures for Evaluating Safety Risk of Proposed Changes

3.5.1.1 Internal / External Sources of Change

Changes to the CATS systems can be identified through internal and external sources. These sources can include review of SPEAR entries, field inspections, audits, investigations, and reports from NCDOT or FTA. A list of sources of change can be found in Section 2.2.1 *Hazard Identification*.

3.5.1.2 Process for Change

CATS Management will ensure that any changes in its projects or existing services will be carried out in a planned manner. Before approving any planned changes, it will consider the following:

- The purpose of the changes and their potential consequences in the scope of any construction/planning of project and/or services to the public.
- The available resources.
- Review of responsibilities and authorities of people who would be impacted with these changes; and
- Safety implications or hazardous conditions.

For Rail Operations, the following process will be used to review, evaluate, and document the process of change:

- CATS established policies or procedures intended to reduce safety risk shall not be changed until formal review by CATS Safety & Security, Quality Assurance and Operations staff meet and agree on the change to ensure no additional hazard or safety risk is introduced. The formal review will be documented using either the Hazard Analysis Form or Safety Analysis Form signed by appropriate management personnel, or by having the Rail Safety Manager co-sign the bulletin or notice indicating Safety was involved in the review and accepts the change. Review and comment by NCDOT shall be required as defined in the NCDOT State Safety Oversight Program Standards (SSOPS) prior to the change taking effect. Once the changes have been approved, employees will need to be trained on the change prior to implementing the new policy or procedure.
- If the analysis documents the proposed change should be implemented, the change will be made following the *ROD304 Bulletins, Notices, General Orders and Operating Orders* and/or *ROD801 Configuration Change Control Procedure*. Employees receive awareness and notification in regard to changes in their work area. This is verified with sign-off sheets.
- CATS established rail policies and procedures that will be affected include but not limited to the following documents:
  - Rail Rulebook
  - Rail Operations Control Center (ROCC) Manual
  - Rail SOPs
  - Rail Maintenance Handbook
  - Track Maintenance Handbook

Change is planned to ensure it is accomplished in a controlled manner and CATS Management shall ensure that the integrity of the SMS is maintained when changes to the system are planned and implemented.

3.5.1.3 Field Observations for Changed Work Environments

Identified changes to the CATS System or mitigations that have been implemented in the field will be verified and monitored by the appropriate Division staff and Office

of Safety personnel to ensure the mitigation is appropriate and effective. If it is determined that a mitigation for an Unacceptable or Undesirable hazard is ineffective, the SMS Manager or the CSO will be notified and a different mitigation will be implemented to address the issue. These changes will be managed on the Division's Hazard Management Log and the Safety Risk Register as applicable.

3.5.2 Configuration Management

3.5.2.1 Overview

Configuration Management is defined as the effective control of a facility's as-built arrangement and operation to ensure compliance with approved and/or accepted technical requirements and other governing criteria. Control of the as-built configuration of facilities, systems, equipment, and vehicles begins during development of the final design and extends through construction, start-up, and operations, concluding with deactivation of the facility, system, equipment, or vehicle. CATS Configuration Management includes document and record control, change control in operating systems and construction change control.

3.5.2.2 Process for Change

1. Control of Documents

CATS Quality Assurance procedure CATS QA02 *Control and Distribution of Plans, Manuals, Policies and Procedures* defines the controls needed:

- To approve documents for adequacy prior to issue
- To review and update as necessary and re-approve documents
- To ensure that changes and the current revision status of documents are identified
- To ensure that current versions of applicable documents are available at points of use
- To ensure that documents remain legible and readily identifiable
- To prevent the unintended use of obsolete documents and to apply suitable identification to them if they are retained for any purpose

Employees shall use the specified or latest revision of specifications or controlled documents to include documents of external origin.

2. Control of Records

Records are established and maintained to provide evidence of conformity to requirements, and for the effective operation of the quality management system. SMS records are maintained by the record owners identified on CATS Records Retention Schedules and shall remain legible, readily identifiable, and retrievable. CATS RIM01 *Control of Public Records* defines the controls needed for the identification, storage, protection, retrieval, retention time, and disposition of records. Record retention schedules for CATS documents maintained by CATS and by other City departments for CATS are available in CATS Record Retention Schedule on

CNet/CATS/CATS Records Management site. CATS Records Retention schedules are in compliance with NC General Statute (NCGS) Chapter 132. Records related to ASP development and SMS implementation will be retained electronically for a minimum of three (3) years in accordance with CATS Records Retention Schedules and 49 Parts 670, 672, 673, and 674.

3. Contract Changes

Changes to a contract can originate from various sources in the form of change notices, verbal directives, or contractor claims with merit. The procedure for contract changes is CATS P&CM04. CATS may, by written change order, make a change to the work within the general scope of the contract. The contractor may propose changes to CATS for its review and approval or disapproval. Acceptance of contractor-proposed changes is solely within CATS' discretion. Regardless of source, changes are considered to be pending until they are made a part of the Contract by a fully executed change order. The resident engineer (RE) maintains a status log of all pending changes and make periodic reports to management on actions being taken to finalize these changes. General Conditions Article entitled "Changes" dictates the Contract provisions for making changes to the Contract. In addition, CATS' Change Control Procedure must be followed. When there is conflict between the General Conditions, CATS Change Control Procedure, and the Construction Management Manual, the General Conditions takes precedence, followed by CATS Change Control Procedure, and finally the Construction Management Manual.

4. Configuration Change Control in Light Rail Vehicles

CATS Procedure CATS ROD801 establishes the process to be followed to use alternative material instead of Original Equipment Manufacturer materials and/or make changes in the process pertaining to the repair and maintenance of light rail equipment. The procedure also establishes a Configuration Control Board to review and approve or reject requests for changes to maintenance and material parts or processes and to ensure adherence to the procedure.

5. Configuration Change Control in Buses for BOD and STS

CATS Procedure CATS BOD104 *Configuration Change Control* establishes the process to be used for change control of BOD and STS vehicles. When BOD Maintenance is contemplating a change through the Original Equipment Manufacturer, it is reviewed and approved by Change Control Managers. Change Control Managers include: the GM of Bus, Director of Maintenance, and Manager of Safety – Bus.

6. Authority for Change

The CATS Quality Manual is the authority for the following types of changes:

- Control of Records
- Control of Documents

3.5.3 Safety and Security Certifications (SSC)

The CATS safety and security certification process is used to ensure that safety concerns and hazards are adequately addressed prior to the initiation of passenger operations for new start projects and subsequent major projects to extend, rehabilitate, or modify our existing system, and to replace vehicles and equipment. Major Capital Projects are defined as $100 million or greater by the FTA, but the administrator may apply this process for Federal funded projects under $100 million. The process also applies to all other projects determined by CATS' Office of Safety and Security to be of sufficient significance to require formal safety and security certification. CATS' processes for safety and security certification are based on FTA's Handbook for Safety and Security Certification (2002) and CATS' own configuration management plans and procedures. Separate safety and security certification plans are developed for each identified project.

During the performance of hazard analyses, as part of the Safety and Security Certification Process, CATS identifies Category 1 Catastrophic and Category 2 Critical hazards. These hazards constitute the Safety Critical Items List (SCIL), a subset of the CIL, to provide visibility of these issues and to verify monitoring and control. The Office of Safety and Security updates the CIL to reflect the status of all hazards, prioritizing Category 1 and 2 hazards. The SCIL and CIL are published and managed until all hazards have been eliminated, reduced, or controlled to acceptable levels. System changes and modifications are not to be made without first being reviewed and approved by the SSRC.

A separate Safety and Security Certification Plan (SSCP) is developed for new start projects and major projects in accordance with the FTA's Handbook for Safety and Security Certification (2002).

Current SSCPs include the CityLYNX GL2 and the LYNX BLE.

CATS is a self-certifying agency except in cases where the required expertise to oversee the safety and security certification process is not available among CATS staff in the estimation of the General Manager of Safety and Security. In those cases, qualified consulting services may be retained to perform the certification according to FTA standards. Although CATS may contract out safety and security certification services, CATS maintains the responsibility to report to the FTA their acceptance and endorsement of the work performed under the safety and security certification process.

3.5.3.1 Certifiable Components

a. These components are broken down into 4 major categories:

1. Facilities/Equipment
2. Systems
3. Integrated Test Requirements
4. Operational Requirements

b. The certifiable components for a project are defined by reviewing the project design criteria manual, project management plan (PMP), and like project-related documents such as the CILs and specifications.

c. All major contractor and manufacturer audits, inspections, and tests where the safety and security of customers and/or employees, equipment, or facilities could be affected by the improper or incorrect construction or manufacture of system components. These audits, inspections, and tests cover both facilities and system components. Included are First Article Inspections, Mockup Reviews, Qualification Tests, Performance Tests, and Acceptance Tests. The integrated tests are developed to verify the integration and compatibility of equipment, facilities, and operation/maintenance procedures to function together under normal, abnormal, and emergency situations. This includes verifying the coordination, response, environmental constraints, and capabilities of CATS and outside agencies.

d. The safety and security certifiable components in each construction package are certified independently once all sub-element and sub-item submittals are received, reviewed, signed off by the appropriate construction staff, and verified. Any “Open Items” that remain in effect with operational restrictions are documented and attached to the components certificate. The restriction(s) must have been resolved (or workarounds / operating restrictions put in place) and approved by the SSRC.

e. The Project Safety and Security Certificate is prepared by the Office of Safety and Security and reviewed/approved by the SSRC once all the construction packages have safety and security certificates, transportation and maintenance personnel have been trained, emergency response personnel have been prepared to respond to emergency situations in or along the right-of-way, and safety and security system integration tests have been conducted. The overall project certificate and cover letter are presented to the CATS CEO for signature by the General Manager of Safety and Security. The certificate’s signature provides a formal notification that the applicable portion of the operating system is safe and secure for revenue service. Any “Open Items” that remain in effect with operational restrictions are documented SCIL and attached to the System Safety and Security Certificate. The restriction(s) must have been resolved (or workarounds / operating restrictions put in place) and approved by the SSRC.

3.5.3.2 Hazard Resolution for Projects

The hazard resolution process can be applied throughout the five phases of the system life cycle.

Phase 1 - Planning
Phase 2 - Design
Phase 3 - Construction
Phase 4 - Operations
Phase 5 - Disposal

Identification of hazards is the responsibility of all divisions and is key to system safety. Hazards that are identified are analyzed for severity, frequency, and cost feasibility of remedial action required to eliminate or reduce the hazard to the lowest practical level. Hazard identification defines conditions and faults which have the potential for causing an accident. The CATS Office of Safety and Security verifies that mechanisms are in place for identifying and reporting hazards on the system.

Assessment of a hazard is based on the probability of occurrence and the severity of an event. Hazards with greater severity or probability to cause serious injury have a greater need for immediate resolution.

Hazard resolution is the corrective action taken in response to the hazard identification and assessment process, but time and resource restrictions may determine the level of resolution that can be accomplished. The following are actions for hazard resolution:

- Eliminate the hazard if possible.
- Install protective devices/measures to reduce the hazard.
- Provide training to educate the workforce of possible hazards.
- If the hazard cannot be eliminated, reduce exposure to it.

Hazard analysis **encompasses** a set of methodologies that first searches throughout the system for the potential to do harm. Having found such hazards, further analysis attempts to control any hazard at an acceptable level. However, to do so first requires an understanding of the causes of the hazards.

Hazard analysis **attempts** to determine the set of primary events in the hazard generation process. Upon identification of these events, CATS will seek to mitigate, control, or eliminate the generation of hazards in ways that can reduce their risk to an acceptable level.

Hazard analysis also attempts to **reduce** the severity of accident events by introducing protective devices and equipment, procedures and/or forms, or system modifications that reduce the amount of human and property damage in an accident event.

The **objective** of **hazard identification and analysis** is to identify and define as many hazardous conditions as possible and enter them into the Hazard Resolution process before those conditions or associated activities cause an accident, injury, death, or other loss.

While identifying every hazard is unlikely, the historical rail and bus passenger accident experience is a reliable source of input information that aids in the identification and capturing of hazards. CATS also uses inspections and checklists to identify hazards. For potential hazards during design of projects, we do hazard analysis as described in the Preliminary Hazard Analysis and mitigated hazards are moved to the Operational Hazard Analysis for CATS projects.

CATS uses the hazard identification and analysis process in the areas of System Safety, Environmental Protection, Design, and Procurement before purchasing and accepting new equipment and modifications of existing facilities, systems, or rolling stock. When safety certification is required, CATS uses qualified consulting services to verify that new or overhauled equipment, facilities, and rolling stock meet its safety requirements.

3.5.4 Managing Safety in System Modifications

Changes and/or modifications, including non-permanent system changes or modifications made to CATS' existing systems, vehicles, facilities, and equipment that have the potential to adversely impact customer, employee, public, and/or system safety or security, but do not require safety certification (as determined by CATS' Office of Safety and Security), are subject to CATS' hazard management program. Such changes and modifications must be accomplished in a controlled manner to ensure that safety is incorporated into the project designs, plans, and procedures developed to implement the system change or modification. Such changes and modifications must also be performed in accordance with CATS plans and applicable CATS procedures such as CATS EX06 *Project Management Planning and Project Management Plans*, CATS P&CM04 Change Control Procedure or CATS ROD801 Configuration Change Control Procedure.

Any division or section initiating a change must inform the CATS Office of Safety and Security and any other affected division or section, so they may review possible impacts, including safety or security impacts, resulting from the proposed change or modification. The Office of Safety and Security may determine that safety analyses are required as part of the change/modification design process. CATS Quality Assurance has oversight responsibility for changes to policies and procedures and enforcement of review by affected divisions/sections.

Organizations providing professional services, architectural / engineering design, construction, or construction management to CATS are required to provide a Quality Assurance/Quality Control Plan (QAP) that defines the administrative and control measures appropriate for their respective scope of services.

3.5.5 Managing Safety in Procurement

CATS shall ensure that any purchased product conforms to specified purchase requirements. The type and extent of control applied to the supplier and the purchased product shall be dependent upon the effect of the purchased product.

Procurement actions are conducted in accordance with all applicable Federal, State, and local laws, regulations, and policies. CATS conforms to the current procurement ordinances, policies and/or procedures adopted by the Council of the City of Charlotte or the Charlotte City Manager.

The City Council has full budget and signature authority for all contracts. The authority to sign contracts for normal operations, supplies, and service contracts has been delegated to the City Manager or his/her designee, the Department

Director or his/her designees, or the Chief Procurement Officer, based on the total dollar amount of the contract.

The Chief Procurement Officer has primary responsibility for procurement and contract administration, including issuing and compliance, with CATS Procurement Policies and Procedures.

CATS Procurement Manual details the requirements for all important activities, such as preparation of purchase orders, contracts for services, bid lists, vendor quality requirements, and contract file maintenance.

CATS CEO, project managers, and other key personnel have primary responsibilities, contributor/support responsibilities, or approval authority for specified aspects of the procurement function based on the scope of the contract. Responsibilities are identified in the Procurement Manual.

Large procurements need to be planned during the budget preparation cycle to ensure specifications and contract awards are not driven by budget. All procurements must have an accurate detailed estimate prior to solicitation.

Large projects (over $100,000) require a Project Management Plan (PMP) that will identify project team members including the Office of Safety and Security. The Procurement Service Request (PSR) identifies whether a PMP is required. The Office of Safety and Security identifies the level of safety certification for the project in the PMP. Safety and security design criteria and standards are integrated into all project designs, unless determined otherwise by the General Manager of Safety and Security.

Planning for procurement and contracts entails considering safety, as well as technical, business, and management requirements in controlling acquisition from inception to completion.

The purchasing process begins with the preparation of a specification and PSR that is then submitted to City Procurement. For hazardous materials, safety items, personal protective equipment, safety products/systems, and service contracts, the Office of Safety and Security will review and approve the PSR prior to the processing of the purchase order.

City Procurement works in conjunction with all CATS divisions and applicable City of Charlotte Departments and utilizes existing city contracts for all purchasing contracts. When purchasing personal protective equipment (PPE) for employees, controlling chemicals and other hazards in the workplace, mandating safety requirements in specific contracts, and requiring compliance from specific vendors with CATS safety requirements, the Office of Safety and Security is consulted and reserves the right of approval.

Those specifying requirements for purchased products and services are responsible for ensuring that products and services meet requirements specified in the procurement information. When products or services are received that do not meet requirements, employees are expected to work with Procurement to

arrange a return or adjustment as appropriate. CATS QA works with Procurement and key suppliers to ensure that suppliers have the capability to meet specified requirements.

The Rail Operations Warranty and Parts Manual addresses the visual inspection of parts prior to placing in inventory. Bus Warranty and Parts also performs a receiving inspection of incoming material.

CATS currently utilizes the SPEAR Maintenance and Material Management System (MMMS) to effectively track all parts procurement, work orders, vendor technical bulletins, recall notices, and end user defect comments. Currently, the SPEAR MMMS keeps an active log of this information, which is retained for configuration management purposes.

The Office of Safety and Security has identified requirements to include in contract documents for contractors working on CATS property.

Section 4 Safety Promotion

4.1 Safety Plan Dissemination

Reference Section 1.8 on Safety Plan and Policy Dissemination.

4.2 Safety Plan Review and Modification

The Agency Safety Plan is a living document because CATS is an evolving transit system. The ASP therefore requires an annual compliance review. Each CATS Division and the Rail Safety and Security Committee (SSC) will review the ASP annually and submit draft changes for consideration for incorporation in the revised ASP. Safety and Security staff shall complete their reviews for the previous calendar year and submit to the SSC for approval. The SMS Manager will ensure compliance with all ASP/SSOPS standards prior to submitting the ASP to the CSO and CEO for approval to include department heads review and comments. The CEO will certify annually that the ASP meets all required standards. The annual update is provided to NCDOT for review and approval per the State Safety Oversight Program Standards (SSOPS) as amended.

The annual update of the ASP addresses the following:

- Change in service defined as system expansion, extended service, or change in the operation plan;
- Change in service equipment, facilities, or vehicles;
- Change in management or organizational change and reassignment of functional responsibilities which affect operations and/or safety;
- Change in safety polices, goals or objectives;
- Changes in regulatory requirements;
- Occurrence of a significant event or incident that warrants possible revision of the ASP; or
- Audit results, on-site reviews, or changing trends in incident/accident data.

All revisions to the ASP are made in accordance with procedure CATS QA02 *Control and Distribution of Plans, Manuals, Policies and Procedures*.

The General Manager of Safety and Security shall ensure that all changes and updates to the ASP are communicated to the North Carolina Department of Transportation, the designated State Safety Oversight agency for CATS. The finalized ASP, whenever the ASP is revised, is submitted with the signature of the CEO and the resolution of the ASP approval by the MTC.

The EPCP shall also be reviewed annually.

4.3 Safety Plan Implementation Tasks & Activities (including responsibilities matrix)

Appendix I contains the Gaps for Implementation of ASP and will include responsibilities.

4.4 Employee and Contractor Safety Programs (knowledge and compliance)

North Carolina has a fully approved State Occupational Safety and Health Plan under the United States Department of Labor, Occupational Safety and Health Administration (OSHA) 1910 Occupational Safety and Health Standards. The North Carolina Department of Labor (NCDOL) exercises jurisdiction over the occupational safety and health of all private and public-sector employers and employees within the State. Therefore, CATS employees are protected by the regulations issued by the North Carolina Department of Labor, Occupational Safety and Health Division. NCDOL adopted the Federal OSHA regulations and has issued a limited number of state-specific standards.

Safety information on approved methods and procedures are included in manuals, handbooks, and other documentation developed for the training and qualification of operating and maintenance personnel. Identification of protective devices and emergency equipment are included in the training documentation and instruction. In addition, safety posters and notices are used, as appropriate, to enhance safety awareness during all phases of system operations. Safety concerns are incorporated in briefings given to personnel prior to their working with equipment or facilities. Each operating division has a specific training protocol for refresher training as well as new employee orientation.

Safety Awards Programs are used to encourage both individual and group participation in the CATS Safety Program. Examples of employee recognition programs are: National Safety Council Safe Driver Award Pins, periodic group recognitions, and safety plaques. Other incentives and bonus programs may be periodically used to specifically recognize the safety achievement of employees in the various divisions

4.5 Compliance with Local, State, and Federal Requirements

4.5.1 Working on or Near Rail Transit Controlled Property

All CATS employees and contractors working on or near CATS Right-of-Way are provided mandatory Roadway Worker Protection Program (RWPP) Training by the Office of Safety and Security or other trainer with the approval of the Office of Safety and Security. Training is valid for one year from date of RWPP training. Personnel who successfully complete the Roadway Worker Protection training are issued a certification card valid for one year from the date of training. The card shall be carried by personnel when working in the rail system.

The RWPP applies to all roadway workers involved in the Right-of-Way of the CATS LYNX Blue Line and CityLYNX Gold Line. The purpose of this safety program is to aid in the prevention of accidents and injuries while working within CATS' Right-of-Way. These rules serve as a minimum safety standard based upon the following documents, as adapted for the conditions of CATS operations:

- 49 CFR 214 Railroad Workplace Safety
- APTA RT-OP-S-010-04 Standard for Contractor's Responsibility for Right of Way Safety
- APTA RT-S-OP-004-03 Standard for Work Zone Safety
- APTA RT-S-OP-016-11 Roadway Worker Protection Program Requirements

The safety of roadway workers is a top priority of CATS. Contractors and CATS employees must communicate and coordinate movements along the Right-of-Way with the ROCC in order to provide for the safety of roadway workers. Accordingly, all roadway workers must follow the applicable procedures outlined in this program.

To ensure compliance with the CATS Roadway Worker Protection Program, the Office of Safety & Security will conduct periodic onsite inspections of approved work crews to verify the following:

- Job Safety Briefings
- RWPP Cards
- PPE
- Proper flagging
- Other items as needed

If any on-site violation of rules or procedures is observed, the violation will immediately be brought into compliance. If no immediate remedy is available, work crew members may be asked to leave the approved work zone until such time as the work zone is brought back into compliance.

4.5.2 Required Safety Programs

The CATS Office of Safety and Security has the responsibility for ensuring that all applicable OSHA standards are properly implemented and the applicable training and associated Personal Protective Equipment (PPE) are provided by the responsible office. CATS tracks OSHA training for the various City positions using MySucess software. Transit Management of Charlotte (TMC) tracks OSHA training for maintenance personnel in SPEAR and Palocity for bus operators and administrative employees. Each individual operating/maintenance section has the responsibility for enforcing employee compliance to the implemented OSHA standards.

The rulebooks published and distributed by CATS include: The Rail Rule Book, the Rail Maintenance Handbook, the Bus Operations Control Center Standard Operations Procedures and Reference Guide and the Bus Maintenance Procedures. Training is provided on the rulebooks and procedures during operations and maintenance training courses.

4.5.2.1 Review of Rules and Procedures

Policies, plans, rulebooks referenced above, and procedures are reviewed periodically to verify they meet the needs of the transit system in normal and emergency conditions. Division or Section Managers are responsible to update policies and procedures specific to their departments. Quality Assurance Section is responsible for reviewing, routing for approval, distributing and maintaining CATS plans, manuals, policies, and procedures. Prior to any changes occurs, the Management of Change process in Section 3.5.1.2 will be followed.

The Quality Assurance section coordinates additions to or deletions from these documents which impact the safe operation of the system with the CATS Office of Safety and Security and respective Division staff and other affected divisions/sections for approval prior to implementation. CATS QA02 *Control of Plans, Manuals, Policies, and Procedures* stipulates control and distribution, including the three-year review process. The length of time needed for the review may vary based on the document being reviewed but the individual reviews should not exceed 30 days. CATS QA08 *Procedure Change Request Process* gives employees two ways to submit a procedure change request. The Rail section managers may issue a bulletin per CATS ROD304 *Bulletins, Notices, General Orders and Operating Orders* when an immediate revision is required to an operating rule or procedure. CATS safety committees, accident /incidents and audit reviews are also opportunities for rules reviews.

4.5.2.2 Process for Rules Compliance

Bus Operations conducts operational checks as part of their Standards of Excellence Program. Rule compliance checks are tracked and reported monthly to CATS Management. The Bus Safety staff conduct operator training and do accident refresher training. The Bus Safety staff perform safety audits if there is a general complaint about safety habits.

Rail Supervisors conduct ride checks of each rail operator at a minimum of three ride checks per month (Form RODF063), 15 ride checks totaled each month per supervisor.

Each STS Supervisor conducts field road observations quarterly using the Supervisor's Field Observation Report (Form STSF03).

Maintenance supervisors evaluate compliance with maintenance rules on an ongoing basis along with work completion and performance assessments. MOW conducts a minimum of three evaluations per quarter using the CATS Light Rail System Evaluation Form (RODF600). Rail Car Maintenance (RCM) conducts and documents monthly assessments of RCM employees.

Ride checks, safety audits, and field observations provide an opportunity for retraining to compliance to specific rules.

4.5.2.3 Compliance Techniques – Operations and Maintenance Personnel

Compliance techniques include observation of work activities and tasks and questioning employees about their knowledge of the respective rulebooks and handbooks. During initial training, employees are tested on their knowledge of applicable rules and procedures through written examinations.

4.5.2.4 Compliance Techniques – Supervisory Personnel

Rail
The Office of Safety and Security reviews a sample of Rail Operator ride check and observation forms and Maintenance proficiency check forms on an annual basis to evaluate the effectiveness of compliance methods utilized by supervisory personnel. The ride checks and field observations assess employees' knowledge of rules and procedures and validate the success of CATS' employee training programs.

Recommendations for enhancement of the compliance methods are submitted to Division managers by the Office of Safety and Security for appropriate action.

Bus
Bus Superintendents review Supervisor Ride checks to ensure they are being completed annually.

STS
Ride checks are reviewed by the STS Operations Manager.

4.5.2.5 Documentation

Safety and Security periodically audits the proficiency check forms for completeness and identification of hazards. Identified hazards will be tracked in the Hazard Tracking Log. Unacceptable and Undesirable Hazardous Conditions will be reported per the Hazard Management Process.

4.5.3 Compliance with Drug and Alcohol Programs

CATS is certified as a drug-free workplace and complies with all provisions of the U.S. Department of Transportation, Federal Transit Administration, 49 CFR Part 655 Prevention of Alcohol Misuse in Transit Operations, 49 CFR Part 40 Procedures for Transportation Workplace Drug and Alcohol Testing Programs and CATS HR02 CATS Drug and Alcohol Policy.

The FTA posts the latest Drug and Alcohol Regulations, Rules, and Notices at: http://transit-safety.volpe.dot.gov/DrugAndAlcohol/Regulations/Regulations/default.aspx

New hires sign a form acknowledging receipt of the D&A Policy and related training. Updates to the policy are distributed either by paper with a form signed acknowledging receipt or by completing the review and acknowledgement online through the City/CATS Learning Management System.

4.5.4 Compliance with Contractor Safety Program

CATS requires a safe working environment for construction projects and workers. Per the FTA Project and Construction Management Guidelines, the Office of Safety and Security reviews the contractor's safety plan and concurs with or approves its compliance with this plan. CATS conducts periodic audits of contractors to assess their adherence to their construction safety plan. Any

contractor employee found to be working in the operating rail system without a valid Contractor ROW safety card issued by CATS will be considered a trespasser and Police will be notified to take appropriate action. At a minimum, the contractor employee will be determined to be unqualified to work on a CATS contract and will be removed from the work site.

Workers on the project are required to follow OSHA 1926 Safety and Health Regulations for Construction safe work practices and comply with applicable safety, health, and fire loss prevention standards, and conduct their personal work activities in a manner which does not place themselves, other employees, or the public in a hazardous position. If a safety issue is identified by a CATS contractor on a CATS project, the contractor must immediately contact the designated CATS safety representative for the project.

It is CATS' responsibility to require that no project be so urgent that safety precautions are by-passed. The prevention of personal injury and property losses must always be part of the work task and in the mind of the manager, supervisor, and employee.

4.6 Training and Certification Program

4.6.1 Overview

Instruction in safe methods of operations and safety procedures is included in rulebooks, manuals, handbooks, and other documentation developed for the training and qualification of operations and maintenance personnel. Training systems have been developed by each department, which include in-house classroom training, field training, on-the-job training, and testing. Each department is responsible for establishing safety training requirements for its employees. Bus and Rail Instructors are responsible for providing new and revised safety training programs to the office of Safety and Security for review.

As part of the implementation plan, a comprehensive program for review activities that identify where new safety training is needed, where current safety training must be revised and updated, and refresher training needs to be added to the current training requirements for employees and contractors. The program will also include updating job descriptions and training requirements for front line employees, managers and supervisors and senior managers.

4.6.2 Classification of employees / contractors directly responsible for safety

The Office of Safety and Security, in conjunction with other divisions, provides all employees with training in the areas of basic safety, the ASP, applicable OSHA regulations, ergonomics, and defensive driving, if applicable. In addition to the standard safety training provided by, or in conjunction with, the safety staff, safety awareness is maintained by special training presentations such as: bulletins; newsletters; and at work training to instruct employees on methods to prevent traffic, passenger, and employee accidents. Periodic training classes are held throughout the year to refresh or present new topics of concern to employees.

4.6.3 Certification and Training Requirements

All employees and contractors play a role in safety at CATS. All employees will be required to attend initial SMS training in person. Ongoing SMS awareness training will be conducted periodically including the various way to report safety issues. Employees are trained to know their role and responsibility and how to report safety concerns to management. CATS Safety and Security staff worked with the Training Department to develop the training materials. The Training Department will be responsible for maintaining the training records.

SMS training and a SMS pocket card will be provided to all new hire employees as part of their orientation training. Safety & Security staff will provide the SMS training and CATS Training will maintain and manage the training materials and maintain training records.

Bus
The Office of Safety and Security oversees and coordinates operational safety and defensive driver training for Bus Operations. The Bus Operator Training Program is a comprehensive training program that includes classroom and road/route training prior to qualification. The bus training program includes components such as defensive driving techniques, vehicle familiarization, rules of the road, and road training.

A CDL permit is required to start the bus training program. The Office of Safety and Security is a third-party examiner for the CDL. Operators who have two (2) preventable accidents are required to complete accident retraining. Operators who are out of work for 30 days or more must pass a Ride Check (S&SF15 *Training & Development Sheet*) from Safety and Security. The North Carolina Department of Motor Vehicles automatically notifies CATS of bus operators whose licenses are suspended. Bus Operations uses S&SF42 *Trainee Mentor Evaluation* form to track employee mentor training and evaluation.

Refresher Training: The Office of Safety and Security conducts two-hour refresher training as operators are available.

STS
The Office of Safety and Security conducts STS Operator training. It is a four-week new hire training that consists of classroom instruction and vehicle operator training coordinated through STS Operations. A third-party DMV examiner conducts road tests and training for new licensees. Operators who are out of work for 30 days or more must pass a Ride Check conducted by Safety and Security.

Refresher Training for STS Drivers: The Office of Safety and Security is conducting two-hour refresher training as operators are available.

Rail
Employees will receive initial SMS training in person and then annually either in person or online. Contractors will receive annual SMS training as part of their Roadway Worker Protection Program (RWPP) training. Contractors working on the safety and security components of CATS projects will be required to meet the FTA

Safety Certification and recertification training as outlined in 49 CFR 672 and the CATS ASP.

The Rail/Streetcar Operator training program is a comprehensive two-phase program which includes both classroom and practical instruction. Specific information about the training program for Rail Operators can be found in the *Rail Operator Training Manual* and *ROD308 Rail Operations Training Procedure*.

Requalification Training
All Rail Operators shall attend requalification training at a minimum of every two years. The Rail Instructor will do requalification with a limited number of Operators at a time to minimize manpower disruptions. These training programs are reviewed by Rail Operations Management and the Office of Safety and Security and are subject to review via the Internal Safety Audit Process.

ROCC Controller Training
The ROCC Controller training curriculum is a comprehensive training program requiring completion of the Rail Operator training program followed by two weeks classroom and ten weeks practical instruction. The training requirements for ROCC Controllers can be found in the ROCC Controller New Hire Training Curriculum.

ROCC Requalification Training
All Rail Controllers must complete requalification training at a minimum of every two (2) years. The Chief Rail Controller administers requalification training which consists of written and practical examinations. These training programs are reviewed by Rail Operations Management and the Office of Safety and Security and are subject to review via the Internal Safety Audit Process.

ROCC Refresher Training
ROCC Controllers who are out of work for 30 days or more are required to complete refresher training. This training is administered by the Rail Training Instructor or the Chief Controller depending upon the content that will be reviewed. ROCC Controllers who are out of work for more than 90 days must complete requalification testing. These training programs are reviewed by Rail Operations Managers and the Office of Safety and Security and are subject to review via the Internal Safety Audit Process.

Maintenance Training
Rail Maintenance employees are provided training in accordance with the Rail Maintenance Handbook.

Bus Maintenance employees are provided training in accordance with an annual training plan prepared by the training team.

49 CFR 672 Safety Training
CATS Office of Safety and Security General Manager, Managers and Coordinators for rail and bus have been designated in April 2020 as being directly responsible for the safety oversight of a rail fixed guideway and bus public transportation systems and must comply with this regulation. Those employees required to meet

this regulation must complete the following minimum training requirements within three years of being identified responsible for safety oversight.

Required Training:

- One-hour course on SMS Awareness – e-learning delivery (all required participants)
- Two-hour courses on Safety Assurance – e-learning delivery (all required participants)
- Twenty hours on SMS Principles for Transit (all required participants)
- Transportation Safety Institute (TSI) Courses:
  - Rail System Safety (36 hours)
  - Effectively Managing Transit Emergencies (32 hours)
  - Rail Incident Investigation (36 hours)

Safety refresher training shall be completed every two years after completing the initial requirements. The refresher training must include, at a minimum, one hour of safety oversight training.

CATS will develop a process to ensure employees are provided training on implemented changes that impact their duties and responsibilities.

4.6.4 Hours of Service (HOS)

4.6.4.1 Bus Operations Division (BOD)

Fixed Route:
In accordance with the FMCSA Part 395 Hours of Service for Motor Carriers of Passengers and the Collective Bargaining Agreement with the Union, requirements for maximum hours of operation (Maximum driving time for passenger-carrying vehicles) of a CATS Fixed Route Bus Operator are as follows:

- Shall not drive more than ten (10) hours following eight (8) or nine (9) consecutive hours off duty depending on position (Regular vs. Extra Board).
- Shall not drive any period after being on-duty for fifteen (15) hours following eight (8) consecutive hours off.
- On runs of six (6) hours or more of continuous time, employees will be allowed at least thirty (30) minutes, but no more than one (1) uninterrupted hour for meal relief.
- On runs of twelve (12) platform hours or more will be allowed a second lunch period of at least thirty (30) uninterrupted minutes, but not more than one (1) uninterrupted hour.
- All straight, split, or other assigned runs of regular operators, will consist of eight (8) hours a day for five (5) days or ten (10) hours a day for four (4) days exclusive of check-in time and travel time included in computing total platform time.

Paratransit:
CATS Special Transportation Services (STS)

- Follows DOT Hours of Service Regulations and
- Required managerial approval for work hours above 56 hours per week.

4.6.4.2 Rail

Rail Operations personnel include management, administration, supervisors, train operators, maintenance of way and rail car maintenance employees. Other than administrative staff, all other Rail Operations staff are considered to be safety-sensitive positions. Work schedules will meet Hours of Service requirements. The Rail Rulebook, Section 2.43 describes the work hours of Rail Operations safety-sensitive employees.

Rail Operations Employees

- No more than 16 hours per day for unanticipated events with no more than 12 hours of work in the aggregate.
- Must have 10 hours of time off between shifts.
- No more than 60 hours per week.

Work Week

- Train operators are not allowed to work more than six days in a row without a full day off (24 hours)
- Other Rail Operations employees are not allowed to work more than seven days in a row without a full day off (24 hours)

All Employees that work a 60-hour work week will then have two consecutive off days following the 60-hour work week.

Transportation supervisors may extend hours of service up to a maximum of 16 hours per day for unanticipated events with no more than 12 hours of work in the aggregate, only with the permission of the Transportation Manager and upon e-mail notification to the Manager of Safety – Rail. These extended hours are in compliance with APTA RT-S-OP-15-09 Standard for Train Operator Hours of Service Requirements and NCDOT State Safety Oversight Program Standards Revision 5 Section 10 Hours of Service Policy Requirements. Employees will be excused from extended hours if they report that they are fatigued when requested to work beyond 12 hours in a shift.

Extended Hours During Emergency Conditions

During emergency conditions, the GM of Operations and Manager of Rail Safety have the authority to jointly temporarily suspend hours of service requirements in order to provide critical transportation services. NCDOT will be notified of emergency conditions that require a temporary suspension of HOS requirements.

Violations of this section will be captured in the Hazard Management Log and NCDOT will be notified as noted in the current SSOPS. Operations schedules completed for the following week will be reviewed for any scheduled HOS violations. Any individual scheduled to exceed HOS who cannot have their scheduled changed to comply with the requirements will have their schedule approved by the respective manager. The manager will send a memo describing the violation and the reason for the violation to the GM of Rail Operations and Facilities for review and approval. Once the GM approves the HOS violation, the memo will be submitted to the Rail Safety Manager by the end of the respective work week. This will be in addition to the current procedure where HOS violations noted on weekly timesheets will be reported to the Rail Safety Manager. Rail

Operations Administrative staff will review timesheets weekly to verify compliance with Hours or Service and number of days consecutively worked. Rail Operations Managers and Supervisors will review and develop work schedules that follows this section's requirements. If a violation is noted, Rail Safety will be notified by email of the violation, who will notify NCDOT. Rail Operations will follow ROD301 Performance Code Policy as appropriate for violations of this section.

The Office of Safety and Security shall notify NCDOT of any violation of the RTA's HOS policy within 72 hours following the RTA's confirmation of a violation. Notifications to NCDOT shall be made via email. The notification will include the following information:

- The employee's identification number
- The employee's work title
- The type of violation
- The schedule of work and rest for the period of 72 hours prior to the infraction
- A description of the circumstances which resulted in the violation.

An hours of service violation log will be submitted to NCDOT on a quarterly basis.

Fatigue awareness training is provided in the new hire training program and information is periodically provided in the Rail Operations Daily Activity Plan (RODAP).

4.6.4.3 Contractors

Contractors working on the CATS Right of Way (ROW) are considered safety-sensitive employees. Contractors are required to follow their employers' hours of service and work schedule policies, in addition, their employees are required to meet the following requirements while working on CATS property.

- Work no more than 12 hours per day
- Must have 10 hours of time off between shifts
- Work no more than 60 hours per week
- Employees are not allowed to work more than seven days in a row

4.6.5 Recordkeeping

The Office of Safety and Security, in collaboration with Rail Operations and Bus Operations, maintains a record of all operations, maintenance, and OSHA-required safety training provided to employees and contractor employees, including a list of the required training for each position. The training records for employees is kept in the City of Charlotte MySucess program that tracks all CATS employee training. The Training Department also keeps detailed training records on initial and refresher training by employee. Contractor training records are kept on sign-in sheets that are scanned into a file on a secure network and entered into a database maintained by the Office of Safety and Security.

Timekeeping records managed through their time-record software programs will be maintained for a minimum of three years.

4.7 Safety Communication and Outreach

Safety Committees

Safety Committees are required to serve as the basic forum to review safety issues and hazards, hazard reports, safety inspections reports, accident investigations, and corrective actions. The Safety Committee representatives communicate safety concerns from their work areas to the Safety Committee, and report back to their workgroups. Safety Committee meeting minutes are available to all employees. The Bus and Rail Safety and Security Committees will review and approve the ASP annually.

Safety Messages

For employees, TV screens are centrally located in areas (e.g. breakrooms) to display safety information, Chief Safety Officer's monthly report, alerts, statistical information, and other safety education materials. Operations employees are informed of hazards in their workspace through tool talks, bulletins, and informal shop meetings on an as needed basis.

Marketing collateral materials will be used to raise safety awareness throughout the facilities, which may include, but is not limited to, brochures, posters, email blasts and newsletters to best accommodate every division's best communication practices.

For the public, per the Marketing and Communications Plan, Marketing and Communications provides safety marketing materials to its key audiences, including, but not limited to, the business community, the education community, the nonprofit community, drivers, riders, and community leaders, during public outreach events, such as safety blitzes and transportation fairs. Marketing and Communications also utilizes social media and online videos to educate the public, along with opt-in riders' alerts that include email and SMS messaging. CATS also post alerts on the See Say App.

In 2020, CATS Marketing developed SMS and safety materials including pocket cards for all employees and safety messages and posters for the public. Posters regarding agency policy, safety roles and responsibilities and how to report safety concerns are maintained around the facilities.

CATS Safety & Security coordinates with CATS Marketing to review and update SMS marketing materials and safety messages to the public on an annual basis. CATS Marketing will produce and replace updated materials as needed.

Safety Quarterly Messages

The Safety Department publishes quarterly safety messages to be posted throughout all facilities. This is a communication tool that use to enhance health and safety awareness among employees.

Safety Suggestion Boxes

Safety Suggestion Boxes are a tool that allows employees to share their safety ideas and concerns. Any safety-related comments and concerns received from Safety Suggestion Boxes are discussed and addressed at the Safety Committee Meeting.

Employee Recognition Program
CATS established the Employee Recognition Program to promote safety performance, build morale, and focus attention on achieving the agency's safety goals.

4.7.1 Procedures Used to Communicate Safety (external stakeholders and general public)

Per the Marketing and Communications Plan, CATS Marketing and Communications will continue to provide safety marketing materials to its key audiences, including, but not limited to, the business community, education community, nonprofit community, drivers, riders, and community leaders, during public outreach events, such as safety-marketing blitzes and transportation fairs. Marketing and Communications also utilizes social media and online videos to educate the public, along with opt-in riders' alerts that include email and SMS messaging. Marketing and Communications will create marketing collateral that explains proper safety procedures to be displayed in highly visible areas for the public. Methods of communication may include, but are not limited to posting inside vehicles, social media, and audio announcements. CATS will also use email and newsletters to communicate with key stakeholders. CATS will continue its partnership with Operation Lifesaver, Inc. and will perform safety presentations for community members and professional drivers' groups, among others.

CATS Public Relations Team will communicate with media to inform them of necessary safety procedures. Public Relations will leverage the media to distribute key safety messages to customers.

4.7.2 Communication and Follow-up on Reported Safety Concerns

Customers may report unsafe conditions anonymously through the See Say application on their smart device. Reported incidents are tracked through the Office of Safety and Security. As part of the implementation plan, a procedure will be developed to address the See Say app as a safety reporting tool, and Marketing and Communications will leverage marketing signage, social media, and video to communicate with the public and key stakeholders about this service.

Customers can report unsafe conditions by calling the Customer Service Call Center at 704-336-RIDE or emailing telltransit@charlottenc.gov. (See CATS CSVS04 *Customer Insights Tracking Process.*)

As part of the implementation plan, the Office of Safety and Security will work with CATS Marketing/Communications to develop printed and electronic summary reports that provide feedback to employees on safety concerns submitted to the various safety committees. Employees who report safety concerns to management will receive a response from their supervisor or manager on how the concern was addressed.

4.8 Environmental Management Program

CATS is fully aware of the importance of employee chemical safety programs and the duty to comply with legally mandated hazardous materials rules and regulations. To this end,

CATS has implemented a materials acceptance/rejection program to monitor and control chemicals which are brought on to CATS property and are used by employees.

CATS S&S05 *Hazard Communication Program* is in compliance with Title 29 Code of Federal Regulations Part 1910.1200, Hazard Communication Program. CATS' Hazard Communication program covers the procurement, receipt, storage, and disposal of hazardous materials. It also documents the maintenance of Safety Data Sheet (SDS) binders and employee training. Hazardous waste/chemical safety inspections are included in the responsibilities for safety inspections. CATS has contracted for the services of a properly licensed hazardous waste contractor for removal of hazardous materials. When necessary, consultants may be hired for special projects such as indoor air quality, chemical vapor, and particulate sampling.

The Office of Safety and Security reserves the right to reject a product if it is deemed too hazardous for employee use or CATS is unable to provide adequate safeguards or protection.

The SDS review/request procedure, which requires SDS review and approval of the Office of Safety and Security, is included in CATS S&S05 *Hazard Communication Program*. Section 2.8 of the CATS Rail Maintenance Handbook addresses the requirements of Safety Data Sheets for chemicals and hazardous materials used in CATS rail facilities and on CATS property. These programs are the responsibility of the using division and the Office of Safety and Security. Program effectiveness is reviewed via the Internal Safety Audit Process.

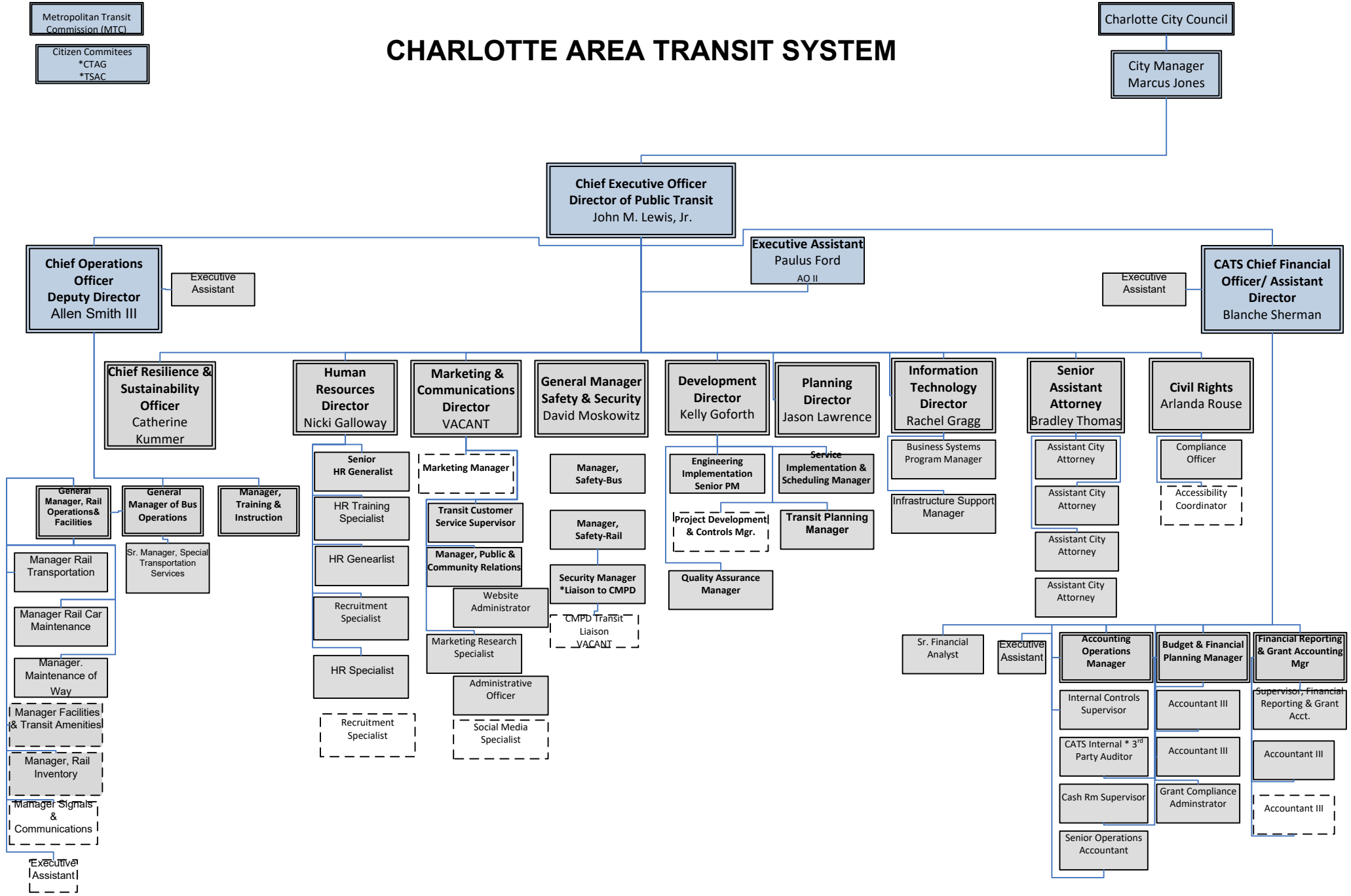
Training on hazardous chemicals will be provided whenever new hazards are introduced into the work environment or whenever hazardous chemicals will affect specialized procedures. Chemical training will provide information on specific hazards and measures that can be taken to control or minimize the hazards.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

All new procurements for a chemical, substance, or compound are sent to the Office of Safety and Security for review before being brought onto CATS property. Each CATS division is responsible for ensuring that materials that come onto CATS property are properly labeled and packaged. The Office of Safety is responsible for the following occupational safety and health activities related to hazardous materials:

- Reviewing the Safety Data Sheet (SDS) database
- Providing technical advice and expertise
- Responding to exposure concerns and incidents
- Performing reviews and audits of agency practices
- Recommending Personal Protective Equipment
- Reviewing and approving new procurements of hazardous materials
- Overseeing and auditing performance on various hazardous materials programs.

APPENDIX A
Organization Charts

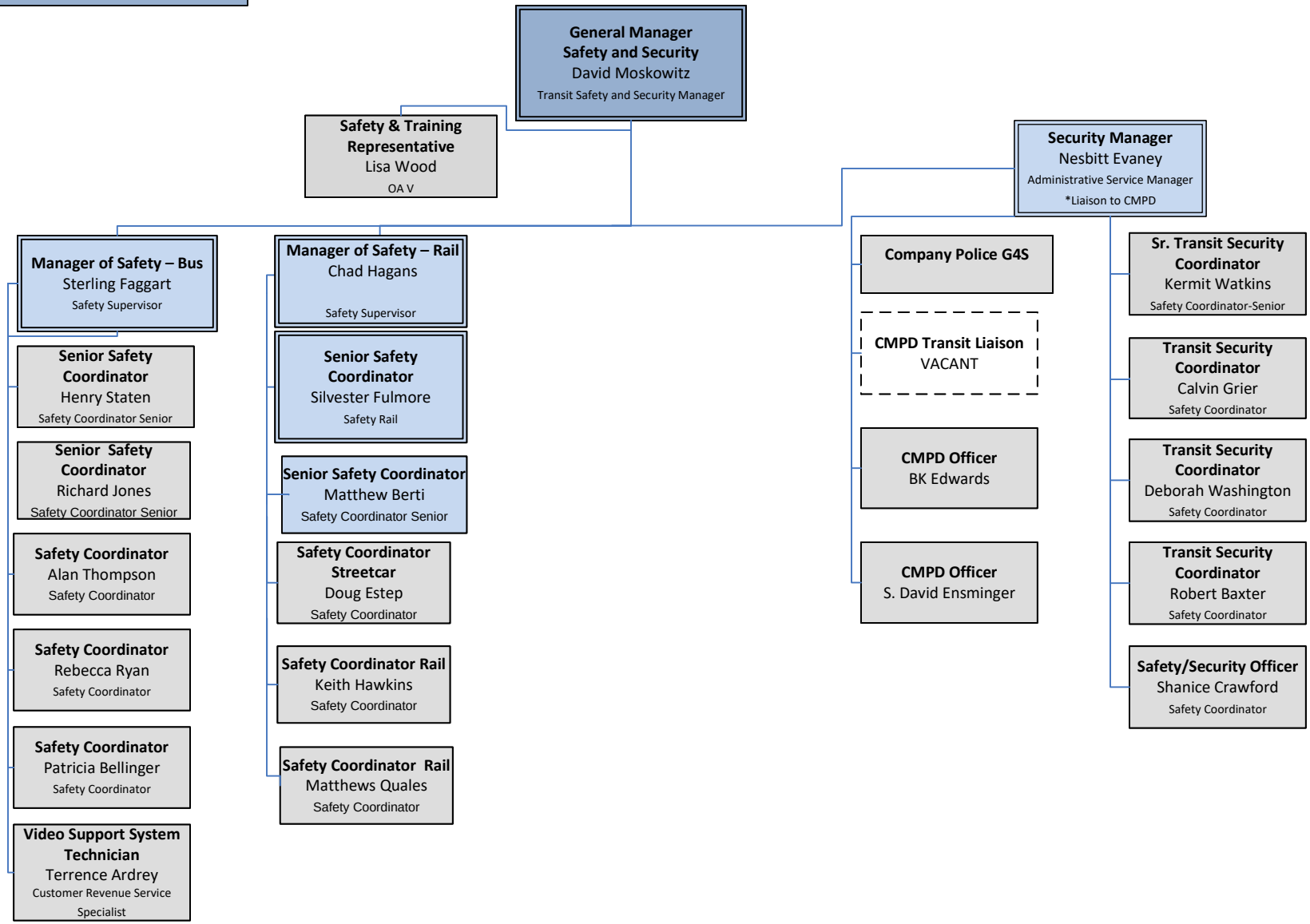
CHARLOTTE AREA TRANSIT SYSTEM



*CTAG – Citizen Transit Advisory Group
*TSAC – Transit Services Advisory Committee

June 2022

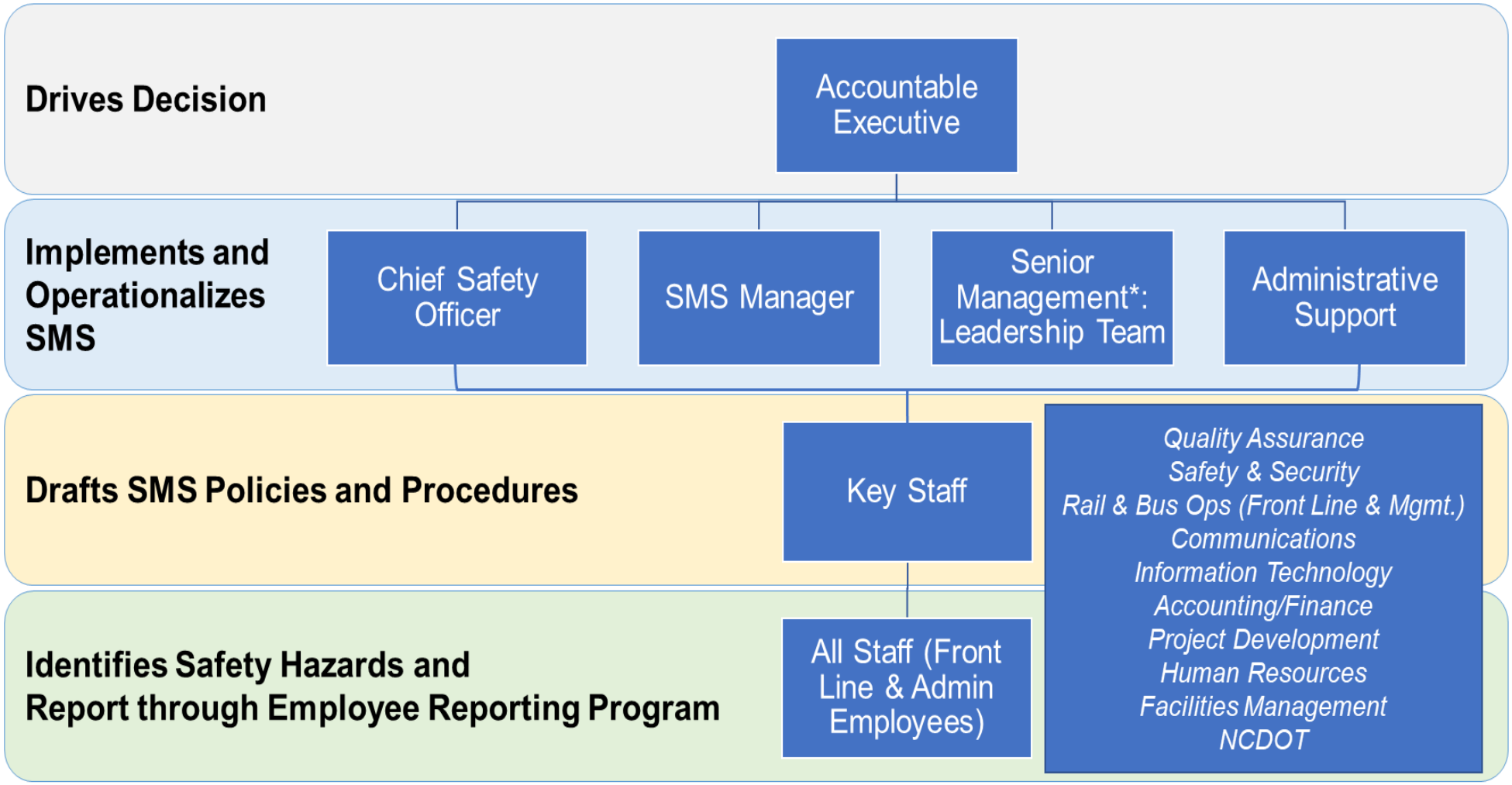
Safety and Security



* Individuals holding an interim position will be found twice, once in the interim roles and again in their hired position budgeted

July 2021.

CATS ASP Organizational Structure



**Includes Executive leaders, from all agency functions or departments, that support revenue service operations.*

APPENDIX B
CATS EX03 Safety Policy

Subject/Title: **Safety Policy**	**Procedure No:** **CATS EX03**
Previous Revision: **February 24, 2020**	**Revised Date:** **September 13, 2022**

John Lewis
Chief Executive Officer and Director of Public Transit

The Charlotte Area Transit System (CATS) was organized with the mission to provide safe, secure, reliable and effective rail, bus and paratransit transportation services to our customers. Accordingly, safety is a primary concern that affects all levels of CATS activities including operations, maintenance, and administrative functions of the organization.

All employees and contractors of CATS are expected to conduct their duties safely, aimed at preventing, controlling and minimizing undesired events, such as customer or employee injury, equipment or property damage, or degradation to system safety in any CATS function. Employees and customers are CATS' most important assets, and their safety and security are among CATS' greatest responsibilities.

While the minimizing of unsafe conditions and the prevention of accidents in CATS' transportation system and facilities are the responsibility of each employee, they are first and foremost the responsibility of CATS Management. A safety reporting program was established as a viable tool for employees to voice their safety concerns. No disciplinary action will be taken against any employee who communicates a safety concern through the CATS safety reporting program unless such disclosure indicates the following: an illegal act, gross misconduct and/or negligence, or a deliberate or willful disregard of CATS rules, policies, and procedures.

CATS Management is committed to developing a Safety Management System (SMS) and will develop programs to promote the safety and security of all employees and customers. We are fully committed to providing a safe work environment and safe vehicles, systems, and facilities. To that end, CATS' General Manager of Safety and Security is empowered and authorized to administer a comprehensive, integrated Agency Safety Plan.

CATS will distribute this Safety Management Policy Statement to each employee and will review it with employees during employee safety meetings and toolbox talks with supervisors. CATS commitment to developing our SMS is supported by the following safety objectives:

- **Support** the implementation of an effective SMS by providing appropriate resources to support an organizational culture that fosters safe operational policies, encourages effective safety reporting and communication, and actively manages safety with the same attention to results as that given to the other management systems of CATS.
- **Integrate** the management of safety as an explicit responsibility of CATS managers and employees.
- **Clearly define** for all managers, employees and contractors their accountabilities and responsibilities for the delivery of safe transit services and the performance of our safety management system.
- **Establish and operate** a safety reporting program as a fundamental tool in support of CATS hazard identification and safety risk evaluation activities to eliminate or mitigate

the safety risks of the consequences of hazards resulting from our operations or activities to a point that is as low as reasonably practical.

- **Comply** with and, wherever possible, exceed any applicable legislative and regulatory requirements and standards.
- **Ensure** that sufficiently trained and skilled personnel are available and assigned to implement CATS safety management processes and activities.
- **Ensure** that all staff are formally provided with adequate and appropriate safety management information, are competent in safety management system activities, and are assigned only safety related tasks commensurate with their skills.
- **Establish and measure** our safety performance against realistic safety performance indicators and safety performance targets.
- **Continually improve** our safety performance through management processes that ensure relevant safety action is taken in a timely fashion and is effective when carried out.
- **Ensure** contracted services are ordered and delivered in compliance with our safety performance standards.

Summary of Changes:

Third paragraph: Updated sentence: “A safety reporting program was established as a viable tool for employees to voice their safety concerns.

APPENDIX C
CATS S&S03 Accident/ Incident Investigation & Reporting

Subject/Title: **Accident/Incident Investigation and Reporting**	**Procedure No:** **CATS S&S03**
Previous Revision: **August 31, 2021**	**Revised Date:** **July 28, 2022**

John Lewis
Chief Executive Officer and Director of Public Transit

1.0 PURPOSE AND SCOPE

This document establishes the procedures for notification and investigation of accidents/incidents involving vehicles and property owned by the City of Charlotte (City) / Charlotte Area Transit System (CATS). This includes how personnel initially report, respond to, and investigate accidents. The procedures established herein are to be adhered to by employees in all Divisions within CATS and Transit Management of Charlotte (TMOC), as well as contracted carriers and service providers.

The procedures herein apply to any accident in which a person or persons are injured or property damage is incurred as a result of a vehicle collision involving any City-owned vehicle or any other vehicle operated by a CATS employee or agent of CATS while engaged in City business. This includes accidents/incidents involving the general public either in vehicular accidents, passenger accidents, or accidents occurring on City property. This procedure applies to all City / CATS-owned vehicles including fixed rail vehicles.

It is intended that this procedure complies with City Policies and the accident and incident notification and reporting requirements of the North Carolina Department of Transportation (NCDOT) State Safety Oversight Program Standard for Rail Fixed Guideway Systems (SSOPS) Section 6. CATS may conduct an investigation on behalf of NCDOT pursuant to Section 7 of the NCDOT SSOPS.

2.0 REFERENCES

NCDOT State Safety Oversight Program Standard for Rail Fixed Guideway Systems
CATS Emergency Preparedness and Continuity Plan
CATS Crisis Communication Plan
CATS System Safety Program Plan
City Policy MFS 8 Vehicle Accident Reporting Procedures
City Policy MFS 10 Critical Incident Review Procedures
City Policy HR 4 Maintenance of a Drug and Alcohol-Free Workplace
TMOC Alcohol and Drug Policy
City Policy HR 23 Employee Injury/Illness Reporting and Managed Return to Work
CATS MR01 Media Protocol
CATS S&S06 Suspicious/Dangerous (HOT) Object on a Vehicle or CATS Property
CATS S&S08 Reporting Hazardous Materials Spills
Spill Prevention Control and Countermeasure Plans

3.0 RESPONSIBILITY

Employees in all Divisions within CATS and TMOC, as well as contracted carriers and service providers, are to cooperate and share information on investigations of accidents to ensure that causes and contributing factors can be identified and remedial action taken.

4.0 DEFINITIONS

Accident any safety or security event that involves any of the following:

- loss of life; a report of a serious injury to a person; a collision involving a
- transit vehicle; a runaway train; an evacuation for life safety reasons; or any
- derailment of a transit vehicle, at any location, at any time, whatever the cause.

City of Charlotte Critical Incident Review Board – The convening body given authority by the City Manager and comprised of designated City employees and external experts to review all critical incidents as defined in City Policy MFS 10.

Critical Incident – Any incident or occurrence including, but not limited to: death or significant bodily harm requiring hospitalization; extensive property damage that could exceed $50,000; threats of legal involvement/action; or an unusual event that falls outside the scope of the Department's routine incident response. (Per City Policy MFS 10).

Derailment – a non-collision event in which one or more wheels of a rail transit vehicle or on-track equipment unintentionally leaves the rails.

Event – An accident, incident or occurrence, including human factors and property damage.

Fatality – For purposes of Federal Transit Administration (FTA) statistical reporting on transportation safety, a fatality is considered a death due to injuries in a transportation crash, accident, or incident that occurs within 30 days of that occurrence.

Incident – 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. An incident must be reported to FTA's National Transit Database (NTD) in accordance with the thresholds for reporting.

Incident Commander – The City's representative at the scene of a collision/incident who has the authority and responsibility for managing and coordinating all emergency response actions. This responsibility can transfer depending on how the situation at the scene unfolds.

Injury – Includes harm to passengers, operator, and others directly involved in an accident.

Liaison, CATS – The first CATS employee on the scene of a collision/incident, who controls and directs CATS activities at the scene, and who supports the on-scene Incident Commander and leads the CATS collision/incident investigation. This responsibility can

transfer depending on how the situation at the scene unfolds. **CATS Safety and Security (S&S)** will assume this role upon arrival on scene.

MFS Management and Financial Services – A department of the City of Charlotte Management & Financial Services include Finance, Fleet Management, Internal Audit, Risk Management and Strategy & Budget.

Major Incident – An incident that meets or exceeds $25,000 in property damage and/or an injury that requires an overnight stay at the hospital.

Minor Incident – An incident that results in property damage of less than $25,000 and no injury that requires an overnight hospital stay.

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

Post-Accident Review Committee – Committee led by S&S to conduct an additional review of initial investigation of major and critical incidents, review cause, and identify mitigation/corrective action(s).

Property – Vehicles, equipment, or other physical objects that are owned by the City or others that were involved in an accident.

Serious Injury – Life-threatening or incapacitating injury requiring emergency medical attention.

5.0 GOALS/OBJECTIVES

The goals/objectives of CATS' accident investigation response and reporting procedures are listed below:

1. Ensure life safety.
2. Stabilize the incident.
3. Preserve property.
4. To determine the probable cause and contributing factors of the accident:
   - Equipment failure
   - Personnel action(s)
   - Hazardous condition(s)
   - Procedural defect
   - Actions of other people
5. To identify and implement corrective action as soon as possible.
6. To provide concise, accurate, appropriate, and timely information.

6.0 HAZARD MANAGEMENT

During accident/incident investigations, CATS anticipates hazards will be identified. To better assess, rate, track and resolve or mitigate these hazards, the hazard management process in the Agency Safety Plan (ASP) will be utilized.

7.0 PREPARATION FOR ACCIDENT/INCIDENT

The CATS Incident Response Team members are prepared to address emergencies on the scene. Incident responders will carry equipment and forms required on the scene. Safety & Security Incident Response Equipment (S&SF41) and Tools of Investigation (S&SF05 ROD and STS) are captured in Appendix A.

8.0 PROCEDURES

8.1 Notification Procedures for Any Accident, Injury, Property Damage, or Crime

For any incident, the operator/employee must immediately notify the appropriate communications center and/or CATS S&S personnel. Non-revenue vehicle operators should also notify their supervisor/manager as soon as possible.

Type of Incident	Includes	Contact
Bus	CATS fixed route, TMOC, Contracted Services	Bus Operations Control Center **(704) 336-4042; (704) 432-3761**
Rail	Light Rail Vehicle (LRV) (including Streetcar)	Rail Operations Control Center **(704) 432-5040; (704) 432-7622**
STS	STS	STS Dispatch **(704) 336-4591; (704) 336-2637**
Vanpool	Vanpool drivers	911 and notify Vanpool Coordinator **(980) 722-3396**
Other CATS Divisions	City cars, personal operated on City business	911 and Supervisor/Manager
	Criminal activity Firearms, potential terrorist activity, dangerous (HOT) object	911 and CATS Police Communications **(704) 432-8273**

The caller states their involvement in the incident and provides the following information (as applicable):

1. Bus – Bus Number and if asked provide payroll number
   Rail – Train number and call number
   Non-Revenue – Name and Division/Section
2. Route information
3. Location
4. Direction of travel
5. Number of persons injured and/or requiring medical assistance
6. Extent of damage to the transit vehicle/Towing required
7. Any other assistance that may be required
8. Any known property damages.

Bus Operations Control Center fills out Transit Master Incident Notification Report and emails to BOD Notify – Minor Accidents.

Rail Operations Control Center logs incident into SPEAR.

STS completes form S&SF01 Accident Notification Report.

Vanpool Coordinator requests police report from police department with local jurisdiction.

Each control center/dispatch office has call chains for all reportable events. After gathering the information from the operator and other parties, the respective communications center or manager forwards the information to the designated personnel and contacts the following agencies and City personnel (at a minimum):

1. Call "911" to notify emergency personnel (and Company Police for Rail incidents).
2. Call "911" for issues (and notify Company Police and CATS S&S).
3. Notify appropriate manager.

The above notification shall be completed within **fifteen (15) minutes** of the communications center or supervisor/manager being informed of the event.

Additional notifications may be made, including:

1. Division or on-duty manager
2. Additional operations managers (Rail Car Maintenance, Bus Maintenance, Rail Systems, STS Dispatch, Facilities Management, etc.)
3. Other support services (e.g., towing company) if necessary. Equipment Management: **(704) 336-2722** (business hours 6:00 a.m. - 10:00 p.m.); after hours: **(980) 721-4676** or **(980) 721-4664**
4. Dellinger Wrecker Service – **(704) 588-3875**

If the respective control center/dispatch office cannot reach an individual who must respond to the scene, the control center/dispatch office will contact the alternate(s) for the individual.

All individuals who are in the designated notification process (call chain) shall appoint one alternate in the event they cannot be reached by one of the control centers/dispatch offices. Contact information is updated regularly and is maintained by the control centers/dispatch offices.

8.2 Internal Notifications by Safety & Security

In any accident, incident, property damage, or crime resulting in a fatality, serious injury or major property damage, S&S is responsible for the following:

1. Ensure notification is made to CATS Media Relations at **(980) 722-0311**. All media relations/ communications shall be coordinated by the CATS Public Information office, in accordance with the provisions of the Crisis Communications Plan.
2. Notify the General Manager of S&S via cell phone.
3. Notify Risk Management at **(704) 336-3301** (business hours) **(704) 634-2053** (after hours). Risk Management may arrange a response.
4. The General Manager of S&S will notify the CATS Chief Executive Officer (CEO).
5. Notify other internal CATS divisions as appropriate. Notify Rail and STS for evacuation of the Charlotte Transportation Center.

8.3 External Notifications by Safety and Security

S&S will notify the external agencies below based on criteria provided by the corresponding agencies and specified in the referenced CFRs or State Safety Oversite Program Standards (SSOPS). The record of the notification(s) will be captured in follow-up emails sent to these agencies.

Anytime CATS must notify NCDOT and FTA of an accident or incident as defined below, CATS is also to notify the NCDOT-designated personnel, via cell phone, immediately upon knowledge of a major rail-related event involving a fatality, serious injury to a person, or a runaway train. Immediate notification is required to allow NCDOT to determine if its representative(s) will be dispatched to the event scene.

NCDOT SSO Program Manager: Timothy P. Abbott
- Cell phone: **(919) 218-6880**
- E-mail address: tpabbott@ncdot.gov

NCDOT SSO Program Manager Alternate: Jahmal Pullen, PE
- Cell phone: **(919) 423-8143**
- E-mail address: jmpullen@ncdot.gov

FTA Transportation Operations Center (TOC)
- Cell phone: **(202) 366-1863**
- E-mail address: CMC-01@dot.gov

1. **<u>Rail</u> - Notify NCDOT and FTA within two (2) hours by phone or e-mail for rail safety accidents including:**

(a) Loss of Life: Refers to a fatality (death) occurring at the scene or confirmed within 30 days following an accident that occurs on a transit property or is related to transit operations or maintenance.
Excludes deaths resulting from illness or other natural causes and criminal homicides that are not related to collisions with a rail transit vehicle.

(b) Serious Injury to a Person: Refers to any injury which occurs on a transit property or is related to transit operations or maintenance and includes at least one of the following:
1. Requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received;
2. Results in a fracture of any bone (except simple fractures of fingers, toes, or nose);
3. Causes severe hemorrhages, nerve, muscle, or tendon damage involving any internal organ; or
4. Involves second-degree or third-degree burns, or any burns affecting more than five percent of the body surface.

Note: CATS safety personnel are not expected to undergo medical training to determine whether an injury meets the definition of "serious injury" and thus should make a determination based on available information at the time that the classification is made. Some injuries may not be apparent until the person undergoes a medical examination, at which point notification to SSO may be upgraded.

Excludes serious injuries resulting from illness or other natural causes and criminal assaults that are not related to collisions with a rail transit vehicle;

(c) Collision Involving a Rail Transit Vehicle:
Refers to a collision (contact) involving two or more rail transit vehicles, and all collisions involving at least one rail transit vehicle at a grade crossing, that results in <u>substantial property damage</u>, <u>serious injury</u> or <u>fatality</u>, as defined herein.**

Substantial damage is any physical damage to transit or non-transit property including vehicles, facilities, equipment, rolling stock, or infrastructure.

Substantial damage **Includes** damage which adversely affects the structural strength, performance, or operating characteristics of the vehicle, facility, equipment, rolling stock, or infrastructure requiring towing, rescue, onsite maintenance, or immediate removal prior to safe operation.

Substantial damage **Excludes** damage such as cracked windows, dented, bent or small puncture holes in the body, broken lights or mirrors; or removal from service for minor repair or maintenance, testing, or video and event recorder download.

{source: FTA 2-Hour Accident Notification Guide-9/24/21}.

Also see definition of a rail transit vehicle, as included in the SSOPS.

In addition to the FTA and NCDOT two-hour collision notifications required above, NCDOT also requires two-hour notification for all collisions involving a rail transit vehicle or on-track equipment, regardless of location (yard or mainline).**

Following its review of the initial notification details (for non-FTA reportable collisions), NCDOT will notify CATS of its decision to require CATS to conduct formal preliminary and final investigations, on behalf of NCDOT, and submit investigation reports to NCDOT for review and approval.

Collisions not meeting NCDOT's requirement for formal investigation and reporting, shall be documented on CATS hazard log and included in the CATS quarterly hazard analysis reporting to NCDOT.

(d) Runaway Train: Refers to a train which is no longer under the control of an operator, regardless of whether the operator is physically on the vehicle at the time.

(e) Evacuation for Life Safety Reasons: Refers to a situation that occurs when persons depart from transit vehicles or facilities for life safety reasons (imminent danger), including self-evacuation.

Imminent danger may include situations such as fires, presence of smoke or noxious fumes, hazardous material spills, vehicle fuel leaks, weapon fired on a vehicle, electrical hazards, bomb threats, suspicious items, or other hazard(s) that constitutes a real potential danger to any person.

Includes evacuations of vehicles or facilities for events occurring on adjacent non-transit properties (i.e. bomb threat, gas leak, or fire) that causes a transit agency to evacuate a nearby rail transit vehicle or facility for life safety reason(s).

Excludes evacuations that are not for a life safety reason, such as an evacuation of a train into the right-of-way or onto adjacent track; or customer self-evacuation or transfer of passengers to rescue vehicles or alternate means of transportation due to obstructions, loss of power, mechanical breakdown and system failures, or damage.

(f) Derailment: Refers to a non-collision event in which one or more wheels of a rail transit vehicle, including on-track equipment, unintentionally leaves the rails (at any location, at any time, and for any reason).

2. Rail - NCDOT Unacceptable Hazardous Condition (UHC) Reportable Events within two (2) hours (non-FTA reportable):

(a) A revenue vehicle opening doors on the wrong side away from the platform or opening vehicle doors when the railcar doors are off the platform.

(b) Stop/Red Signal Overrun (verified Vital System Report) includes any instance in which a train operator passes a red signal or passes an

employee on the right of way who is communicating, by way of hand signals, to the train operator to STOP the train and remain standing.

(c) Near miss contact of a rail transit vehicle with any authorized track-side personnel including roadway worker, contractors, or other authorized personnel.

(d) Pantograph and OCS damage (Catenary line pulled down or pantograph entanglement).

(e) Violation of Stop and Proceed Order as initiated by the Rail Operations Control Center (ROCC) or other CATS personnel, passing a dark signal, or passing a flashing Grade Crossing Indicator (GCI).

3. **Federal Railroad Administration (FRA) notifications:** Anytime CATS must notify the FRA of an accident as defined by 49 CFR 225.5 (i.e. shared use of the general railroad system trackage or corridors), CATS must also notify the SSO and FTA of the accident within the same time frame established by the FRA.

FRA Notification: rrswebinquiries@dot.gov

SSO Program Manager: Timothy P. Abbott
- Cell phone: **(919) 218-6880**
- E-mail address: tpabbott@ncdot.gov

SSO Program Manager Alternate: Jahmal Pullen, PE
- Cell phone: **(919) 423-8143**
- E-mail address: jmpullen@ncdot.gov

A manager within S&S shall notify NCDOT of an unacceptable hazard within 24 hours (or the next business day) of the categorization of the hazard as an unacceptable hazard.

FTA Transportation Operations Center (TOC)
- Cell phone: **(202) 366-1863**
- E-mail address: CMC-01@dot.gov

4. **Rail - National Transportation Safety Board (NTSB)**

A manager within S&S will notify the NTSB via the National Response Center at **(800) 424-0201** at the earliest practicable time after the occurrence of any one of the following railroad accidents per 49 CFR Part 840.3 Notification of railroad accidents:

(a) No later than two hours after an accident that results in:

(1) A passenger or employee fatality or serious injury to two or more crewmembers or passengers requiring admission to a hospital.

(2) The evacuation of a passenger train due to life safety events.

(3) Damage to a container resulting in release of hazardous materials or involving evacuation of the general public.

(4) A fatality at a grade crossing.

(b) No later than four hours after an accident that does not involve any of the circumstances enumerated in paragraph (a) of this section but that results in one of the following:

(1) Damage (based on a preliminary gross estimate) of $150,000 or more for repairs, or the current replacement cost, to railroad and non-railroad property.

(2) Damage of $25,000 or more to a passenger train and railroad and non-railroad property.

(c) Accidents involving joint operations must be reported by the railroad that controls the track and directs the movement of trains where the accident has occurred.

(d) In the event the NTSB "Go Team" responds to investigate the incident, command and control will transfer to the team at the conclusion of rescue operations. The Office of Safety & Security is responsible to support the Go Team and protect the scene so the team can conduct their investigation.

Anytime CATS must notify the NTSB of an accident as described above, CATS must also notify the SSO of the accident within the same time frame established by the NTSB.

SSO Program Manager: Timothy P. Abbott
- Cell phone: **(919) 218-6880**
- E-mail address: tpabbott@ncdot.gov

SSO Program Manager Alternate: Jahmal Pullen, PE
- Cell phone: **(919) 423-8143**
- E-mail address: jmpullen@ncdot.gov

5. Transportation Security Administration (TSA)

Safety and Security will notify the local office of TSA at **(704) 916-6281** and Department of Homeland Security (DHS) by calling the Freedom Center at **(866) 615-5150** and reporting potential threats or significant security concerns within one-hour of notification to S&S of the incident.

Potential threats or significant security concerns encompass incidents, suspicious activities, and threat information including, but not limited to, the following (CFR 1580.203 subpart c):

(a) Interference with the train or transit vehicle crew.

(b) Bomb threats, specific and non-specific.

(c) Reports or discovery of suspicious items that result in the disruption of rail operations.

(d) Suspicious activity occurring onboard a transit vehicle or inside the facility of a rail transit system that results in a disruption of rail operations.

(e) Suspicious activity observed at or around transit vehicles, facilities, or infrastructure used in the operation of the rail transit system.

(f) Discharge, discovery, or seizure of a firearm or other deadly weapon on a transit vehicle or in a station, facility, or storage yard, or other location used in the operation of the rail transit system.

(g) Indications of tampering with rail transit vehicles.

(h) Information relating to the possible surveillance of a rail transit vehicle or facility, storage yard, or other location used in the operation of the rail transit system.

(i) Correspondence received by the rail transit system indicating a potential threat to rail transportation.

(j) Other incidents involving breaches of the security of the rail transit system operations or facilities.

Information reported should include, as available and applicable (from CFR 1580.203 subpart d):

(a) The name of the rail transit system and contact information, including a telephone number or e-mail address.

(b) The affected station, or other facility.

(c) Identifying information on the affected rail transit vehicle including train number, transit line, and route, as applicable.

(d) Origination and termination locations for the affected rail transit vehicle, including transit line and route.

(e) Current location of the rail transit vehicle.

(f) Description of the threat, incident, or activity.

(g) The names and other available biographical data of individuals involved in the threat, incident or activity.

(h) The source of any threat information.

6. S&S will report **spills per CATS S&S08 *Reporting Hazardous Materials Spills*** or the appropriate *Spill Prevention and Countermeasure Plan*.

7. **For events on Freight Rail** (as specified in e-Rail Rail Security Awareness Training), report all suspicious activity, Gate Failures or Incidents to:
   - CSX Public Safety Coordination Center: **1 (800) 232-0144**
   - Norfolk Southern Police Communications Center: **1 (800) 453-2530**

8.4 External Notifications by Risk Management

CATS Employees: Risk Management is responsible for contacting North Carolina Occupational Safety and Health Administration (OSHA) for any event resulting in a fatality or the hospitalization of three or more employees per City Policy HR23. Beginning January 1, 2015, OSHA will require the following to be reported:

- Work related fatality – within 8 hours
- Any work-related in-patient hospital admission (regardless of number of employees), any amputation, or any loss of an eye within 24 hours.

TMOC Employees: BOD – HR will follow the same guidelines as City Risk Management for notification for all TMOC employees.

8.5 On-Scene Activities and Responsibilities

Responsibility for and command of the incident depends on the circumstances of the accident. This order shall be as follows:

<u>Primary Incident Commander</u>
The Fire Department Commanding Officer: rescue, firefighting, mass casualty, or hazardous materials incidents.

Local Police Jurisdiction: accident investigation, traffic control or scene clearance/transfer to CATS.

The first CATS representative on-scene will serve as CATS Liaison until such time as command is transferred appropriately. The CATS Incident Commander will serve as liaison to other responding agencies as needed. Command should be transferred to CATS S&S personnel upon their arrival unless current IC and S&S determine this is not necessary. If it is decided that command will not be transferred to S&S personnel, the S&S personnel on scene will serve as Safety Officer.

Ranking CATS Operations personnel, until relieved by a CATS S&S representative for incidents where only internal CATS Department is responding; not requiring emergency response agencies.

Bus Employee Responsibilities

Bus Operator:

- Assess the situation, check on passengers and occupants of other vehicles involved for injuries that require medical attention.
- Call the BOCC and provide information outlined in section 8.1.
- Pass out patron information cards and ensure they are collected once completed.

Supervisor:

- Assume control of the incident for CATS and act as CATS' Liaison or Incident Commander (IC) (ICS Unified Command)
- Notify the BOCC if additional medical attention is needed and coordinate towing if required (Must remain at scene until all vehicles are cleared).
- Establish detour if route is blocked.
- Support Bus Safety & Security if on-scene response is required.
- Collect accident/incident information.
- Coordinate tripper bus for passenger transport.

Maintenance Staff:

- Provide towing if required.
- Support Bus Safety & Security if requested to brake test vehicle, hold out of service until investigation is complete.
- Provide estimate of repairs to Risk Management.

Rail Employee Responsibilities

Rail Operator:

- Report incident to the ROCC
- Check on passengers and vehicle
- Provide information to first responders and act as CATS' representative
- Transfer command to supervisor on scene

Supervisor:

- Accept command of the incident for CATS and act as CATS' Liaison or Incident Commander (IC) (ICS Unified Command)
- Transfer command to and support Rail Safety staff once command is transferred
- Begin collecting accident/incident information
- Work with other staff to ensure it is safe to move the train and return to normal operations

Rail Safety Staff:

- Accept command of the incident for CATS and act as CATS' Liaison or Incident Commander (IC) (ICS Unified Command)
- Serve as primary Incident Commander once first responders have turned over incident to CATS
- Work with CATS personnel to ensure it is safe to move the train and return to normal operations

Rail Car Maintenance:

- Inspect the vehicle for damages
- Verifies that the vehicle is safe to be on and/or around it
- Ensures that the pantograph has been lowered and/or circuit breakers turned off if damages compromise the safety of others or cause environmental hazards (i.e. hydraulic oil leaks)
- Verify it is safe to move back to a yard for further inspection and repair if needed

Maintenance of Way:

- Inspect for electrical hazards from the OCS and will notify if the area is unsafe to enter
- Inspect track and switches
- Inspect signals and gates
- Inspect other railroad infrastructure to ensure there is no damage to equipment and safe to move train back to shop
- Verify it is safe to operate trains in the affected area prior to returning to normal service

In the event the National Transportation Safety Board (NTSB) Go-Team responds to the incident, command and control will transfer to the team at the conclusion of rescue operations. The Office of Safety & Security is

responsible to support the Go-Team and protect the scene so the team can conduct their investigation.

See CATS Emergency Preparedness and Continuity Plan for detail on setting up a command center.

8.5.1 Protection of the Accident Scene

Before emergency responders arrive on scene, operators and field/street supervisors should take steps to prevent further injury and damage by:

1. Securing the scene with vehicles, tape, etc.
2. Moving passengers and others to a safe place.
3. Closing off CATS vehicles to prevent people from entering. This effort is to prevent fraudulent claims or contamination of any forensic evidence.

Ensure that evidence and the physical circumstances at the scene are preserved as much as possible.

Access to the scene should be controlled. Only fire, police, MEDIC personnel, and authorized City personnel shall be allowed access to the scene.

The ranking Operations person protects the accident scene until a CATS S&S representative responds. The responding personnel from S&S will assist in protecting the scene and CATS property with help from local law enforcement.

8.5.2 Immediate Actions to be Taken

The operator, CATS supervisor, TMOC supervisor, or first responding personnel to the accident scene for all accidents is responsible for:

1. Protecting and assisting the injured.
2. Ensuring sufficient resources are en route (i.e., Fire, Rescue, Police, Towing Company).
3. Securing the accident scene.

4. The following procedure will be followed for any accident involving a serious injury or major property damage per City Policy MFS08:

    a. Immediately, while the vehicles are still at the accident scene, contact Risk Management with details of the accident. Risk Management will provide additional direction if the vehicles have been removed from the accident scene.
    b. Avoid starting the vehicle or turning on the vehicle's ignition switch. Valuable information can be lost from the onboard computer if this occurs.
    c. If directed by Risk Management, make arrangements with Equipment Management for secure movement and storage of the City owned vehicle.

5. The law enforcement agency investigating an accident outside of Mecklenburg County may require that the City vehicle be towed to a local facility. In this case, Equipment Management will make arrangements to have the vehicle transported to a City facility.

6. Arranging for transportation of vehicle operator for drug/alcohol testing, if the criteria level is met under the City's/CATS' or TMOC's drug/alcohol program and the operator is not hospitalized.

7. Collect information needed to submit a "Vehicle Accident Report." See forms in Appendix A.

8. An "On the Job Injury Report" (https://claims.ci.charlotte.nc.us) must be completed for any City employee who is injured. An employee with a serious injury should be transported by Emergency Medical Services (EMS) to the nearest emergency care facility. Employees requesting treatment for minor injuries that do not require EMS should be transported to the nearest Concentra Care facility. Trips to the emergency room should be avoided for a minor injury provided an Urgent Care facility is open. A copy of the Treatment Referral Form must be completed and provided to the urgent care facility. The Treatment Referral Form and maps for facility locations can be found at the Risk Management reporting website http://riskmgmtonline.ci.charlotte.nc.us/helper/helperOTJIR.html.

9. TMOC employees will follow TMOC procedures for treating injured employees and will use TMOC forms for on-the-job injuries.

8.5.3 Collection of Information

Collection of appropriate information shall be the responsibility of the CATS supervisor, TMOC supervisor, or S&S staff at the discretion of an S&S manager. Risk Management has the discretion of collecting the information for any accident involving a fatality, serious injury, or major property damage.

1. Note the passengers on vehicle, take photographs of the accident scene, appropriate rails and switches (Rail Operations only), and vehicle(s) involved unless a fatality has occurred. Avoid taking photographs of seriously injured passengers. For fatality incident/accident, secure scene and hold for Charlotte-Mecklenburg Police Major Crash Unit and CATS Safety & Security.

2. Gather names of injured parties and witnesses, including non-passengers. Have patrons complete *Accident/Incident Patron Information Card* S&SF06 for Bus, or *Passenger Status Card* RODF032 Rail if applicable.

3. Mark final resting spots of vehicles involved in the accident/incident.

4. Complete *Incident and Accident Report – Supervisors* RODF040 for Rail.

5. Establish initial damage assessment of CATS property, other property, and total property damage.

6. For STS only: Checklist S&SF03 details the actions to be taken during the initial investigation.

7. Collect video from bus or rail vehicle and provide video to Charlotte-Mecklenburg Police Department. CATS MR01 *Media Protocol* will be followed for release of any video to the public.

8. For Rail only, Light Rail Vehicle downloads.

8.6 Isolation of CATS Vehicles

If it has been determined that the vehicle needs to be isolated, the vehicle will be secured at a CATS facility.

CATS S&S shall ensure a Vehicle Isolation Form S&SF07 is affixed to the vehicle with the date, name, and department of person responsible for isolating the vehicle. CATS S&S will control access to the vehicle.

S&S may authorize access to the vehicles following a consultation with the Risk Management Representative. When accessing the vehicles, the Access Section of the Vehicle Isolation Form must be completed indicating the name, date, department or agency, and reason for accessing the vehicle.

The Risk Management Claims Manager, in conjunction with S&S must approve access for any testing involving the vehicle or the removal or repair of any component. Access will be coordinated with S&S.

If an NTSB Go Team responds to the incident, CATS vehicles involved in the accident cannot be moved or removed from the scene until authorized by the NTSB team and S&S.

8.7 Vehicle Release

Vehicles will be released from an incident scene once it is determined the vehicle is safe to operate or be towed by vehicle maintenance personnel and cleared by a Supervisor or Safety and Security Staff.

Bus Operations

- Minor incidents – Bus supervisor confirms minor damage to bus and safe to release the bus to return to service or back to a bus maintenance facility.
- Major incidents – Safety & Security staff confirms with Bus Maintenance staff the bus is safe to operate back to a maintenance facility or must be towed and will release the vehicle from the scene.
- Safety & Security staff will either isolate the vehicle or release the bus-to-bus maintenance for further inspection and repair.

Rail Operations

- Minor incidents – Rail supervisor confirms minor damage to train and safe to operate train. If Rail Safety staff is more than 10 minutes away from the scene and there are no injuries on the train or the ROW, the Rail Supervisor calls the on-call Rail Safety number to receive verbal release of the train back to a rail yard where safety staff will continue their investigation.
- Major incidents - Safety & Security staff confirms with Rail Car Maintenance staff the train is safe to operate back to a maintenance facility or must be towed and Maintenance of Way staff confirmed track, signals and systems are safe to operate on at which point safety staff will release the train from the incident scene.
- Safety & Security staff will either isolate the vehicle or release it to rail car maintenance for further inspection and repair.

Isolated Vehicles

Any isolated vehicle shall not be repaired or returned to revenue service until the Vehicle Isolation Form has been signed indicating S&S has given written authorization that vehicle may be released. Prior to release, S&S will check with the respective parties involved in the accident investigation to confirm that they have completed their examination of the involved vehicle.

Upon completion of all repairs and testing, CATS or TMOC Maintenance Director issues a written report to S&S on each accident resulting in the vehicle being isolated. The report confirms that the vehicle is safe and may return to service.

The Vehicle Isolation Form is kept in the accident file in the Office of Safety & Security after completing the written authorization releasing the vehicle.

If the vehicle involved is beyond repair (a total loss), then Maintenance must notify the CATS Chief Financial Officer for a determination on future disposition of the asset, including the need to notify the FTA.

8.8 Accident Investigation Documents and Reviews

This section describes the review and documentation required for an accident or incident. Additional actions may be required depending upon the severity of the incident as defined in Section 4.

8.8.1 Drug/Alcohol Test Results

When an accident meets the drug/alcohol test criteria as defined in CATS HR02 *Drug and Alcohol Policy for Safety Sensitive Employees*, City Policy HR 4 *Maintenance of a Drug and Alcohol-Free Workplace* for City employees or the *Alcohol and Drug Policy* for TMOC employees, test results are reported to the Drug and Alcohol Program Manager. All post-accident testing is performed immediately. Results of a negative drug test are generally known within 48 hours. Positive drug test results may not be known for 72 hours. Alcohol results are known immediately after testing and are provided verbally to the transporting supervisor.

In the event an employee is incapable of giving consent due to serious injury or death, post-accident testing cannot be performed by CATS or TMOC per FTA regulations. Testing may be performed by the applicable law enforcement agency. CATS S&S Manager, TMOC staff, or Risk Management may request results from that agency.

8.8.2 Accident/Incident Investigation Report Format

For each accident/incident and unacceptable hazardous condition as defined through the hazard resolution matrix, CATS will prepare and submit the appropriate accident/incident investigation forms and supporting documents and, if necessary, a corrective action plan including a corrective action implementation schedule. The investigation report will be submitted to NCDOT and should include at a minimum the information listed below:

- **Cover Page**
  - Date of report;
  - Addressed to NCDOT SSO; and

- Signed by an authorized agent of CATS.

- **Event Tracking**
  - Document Control Number;
  - Event #;
  - Event Name/Title;
  - Event Type (fatality, injuries, property damage, evacuation, derailment or other);
  - Event Hazard Rating;
  - Date & Time of event;
  - Date & Time initially reported to SSO;
  - Date & Time Preliminary Report was submitted to SSO;
  - Name and job title of person assigned to lead the investigation of the event (accident, incident, or unacceptable hazardous condition (UHC)); and
  - Date Final Report submitted to SSO.

- **Event Summary Statement**
  - Event Description (summary statement of what occurred).

- **Event Narrative (details)**
  - Fatalities (agency employees and civilians);
  - Injuries; (agency employees and civilians);
  - Number of persons transported for medical treatment;
  - Sequence of Events (leading up to, during, and following the incident occurring). Includes summary of audio/video review by investigation team (on-board and stationary recording devices);
  - Rail transit vehicle(s) involved (type, vehicle number, consist type);
  - Number of vehicles towed from scene or taken out of service;
  - Posted speed vs. actual speed of vehicles involved at the time incident occurred (speed estimated, verified, or unknown);
  - Number of passengers onboard consist at time of incident;
  - Number of passengers in non-rail vehicles;
  - Number of rail vehicles derailed;
  - Number of other vehicle(s) involved and type (car, truck, semi, etc.);
  - Property damage estimate to revenue vehicles;

- Property damage estimate to track, signals, right-of-way, or other agency owned infrastructures;
- Property damage estimate to other, non-agency, property;
- Summary set of photographs, diagrams, and drawing related to the event (i.e., location, damage to rail and non-rail vehicles and property, etc.). A complete/comprehensive set(s) of relevant supporting documents should be attached to the Final Incident Report;
- Attachments that include all related reports (i.e., police, operator, witness statements, etc.);
- Attachments that include all related Safety and Security (S&S) Department's documentation of S&S independent investigations, interviews, findings, and recommendations related to the incident;
- Drug and/or alcohol tests performed and for which employees (by job title and direct/indirect involvement in incident) and under who's authority was testing performed (meets FTA threshold or agency policy);
- NTD reportable (if yes, date/time reported, or monthly reporting scheduled);
- NTSB reportable (if yes, date/time reported);
- FRA reportable (if yes, date/time reported);
- Primary person (i.e., Chief Investigator) conducting the investigation (name, title, phone numbers and email address);
- Citation(s) written by Law Enforcement or other authority (and to whom);
- Physical Characteristics of the Scene (including weather, outdoor ambient temperature, road and visibility conditions, etc.); and/or
- Interview Summary Findings.

- **Probable Cause (s) and Contributing Factors**
  - Condition(s) of rail rolling stock and infrastructure contributing to event
  - Other non-agency condition(s) contributing to event
  - Job hazard analysis summary (if completed)
  - Human factors analysis summary (if completed)
  - Analysis of safety risk mitigation(s) currently in place which should have prevented event (if completed)
  - Hours-of-service details for employee(s) involved (including split-shifts and over-time worked within previous 72 hours)

- **Conclusions**
  - Chief Investigator's findings and summary statement

- **Findings, Recommendations, and Proposed Corrective Action Plan(s)**
  - List tasks, follow-up activities, and risk mitigations strategies being implemented in order to improve agency control of safety risk (including assignment of agency key staff members, by name and job title, and target dates for completion).
  - Identify proposed CAPs needed to properly address associated safety risks and follow reporting and management of CAPs, as outlined in **Section 9** of this SSOPS.
  - List safety risk monitoring plans intended to ensure that all recommendations and corrective actions are: 1) implemented; 2) effective in controlling safety risk to an acceptable level; and 3) create no new safety risk (unintended or otherwise).

8.8.3 Distribution of Accident/Incident Reports

CATS shall forward a copy of the report file, which includes all statements, forms, and accident/incident reports to Risk Management.

For major and critical incidents, reports will be forwarded within 48 hours after the accident or by 5:00 p.m. Tuesday if the accident occurred Friday night, Saturday, or Sunday.

Rail Operations:

CATS shall provide a Preliminary Investigation Report to NCDOT within **72 hours** of an event meeting the definition of an Accident/UHC; as defined herein. CATS shall provide a Final Investigation Report-Draft to NCDOT within **thirty (30) calendar days** following the reportable event. Final reports shall include but may not be limited to 1) hazard analysis and safety risk mitigation activities conducted during reportable event investigations; 2) planned completion date(s) for these activities; and 3) specific Department(s) and specific personnel assigned to complete the investigation and other these activities.

In the event that CATS cannot provide a Final Investigation Report to NCDOT within the timeframe stated above, CATS shall formally request a time extension, not to exceed **thirty (30) additional calendar days**. CATS' time-extension request must include the following information:

• Status/Progress of the incident investigation to date

• Reason(s) for the delayed Final Investigation Report

• Proposed date (if approved) when Final Report will be submitted to NCDOT

• CATS Lead Investigator's Name, email address, and direct phone contact #

NCDOT shall approve or deny an extension request, via email. In the event that an extension request is denied, CATS shall submit its Revised Final Investigation Report, meeting the requirements listed below, within a timeframe established by NCDOT and included in the denial email from NCDOT.
The following timeline and actions shall be followed to ensure that Final Investigation Reports are completed per the standards of NCDOT:

1. As stated above, CATS shall provide a Final Investigation Report-Draft to NCDOT for review within **thirty (30) calendar days** following the reportable event.

2. If NCDOT is satisfied with its review of the Final Investigation Report-Draft, CATS will update the report format to indicate "Final Investigation Report". Subsequently, NCDOT will adopt the report as final; communicating its decision via formal letter to CATS, at which point the report becomes the Final Investigation Report and will be submitted to FTA's SSOR website.

3. If NCDOT is not satisfied with the Final Investigation Report-Draft or does not approve the proposed CAPs, NCDOT will communicate its concerns/questions, via email to CATS, using the NCDOT SSO Comment Tracking Sheet within **fifteen (15) calendar days** following receipt of the draft report.

4. CATS shall have **fifteen (15) calendar days**, from date of receipt, to fully respond to the comments issued by NCDOT. CATS' responses to NCDOT's comments shall be included in the document body of the CATS Revised Final Investigation Report submission to NCDOT. If additional discussion or follow-up is warranted, NCDOT or CATS may request to convene a conference call with one another to reach a resolution for unresolved questions/concerns.

5. If NCDOT is satisfied with the Revised Final Investigation Report and CATS' responses to comments, NCDOT will adopt the revised report as final; communicating its decision via formal letter to CATS, at which point the report becomes the Revised Final Investigation Report and will be submitted to FTA's SSOR website.

8.8.4 Risk Management Investigation

Risk Management is responsible for managing any claim against the City. Risk Management may elect to retain the services of outside experts, such as forensic engineers, to assist with the investigation. Information concerning the investigation may be shared with the CATS S&S Manager(s).

8.8.5 Equipment Review and Report

The responsible division shall review vehicles involved in accidents/ incidents. If the vehicle is isolated, the review will not be conducted until the vehicle is released unless otherwise requested by Risk Management.

The following should be submitted to S&S and Risk Management:

1. A comprehensive damage assessment and cost estimate for repairs.
2. A preliminary determination as to whether any component failed and thereby contributed to the accident. This does not apply to a vehicle in isolation.

For any vehicle held in isolation, all inspections and determinations of component failure will be coordinated between Risk Management and S&S.

8.8.6 Supervisor's Accident Investigation Report

The supervisors shall complete their reports by the end of their shift.

Bus, STS: and Vanpool Post-*Accident Questionnaire* (form S&SF11) and *Accident/Incident Summary* (form S&SF09)

Rail: *Incident and Accident Report – Supervisors* (form RODF040)

The supervisor's accident investigation reports, including Employee Accident Report (form S&SF08), pre-trip inspection cards, and Patron Information Card shall be submitted to S&S by the end of the next business day.

8.8.7 Operator's Accident Report

The Employee Accident Report (S&SF08) shall be completed by the operator(s) involved in the accident by the end of the employee's shift or run, unless the employee is hospitalized. This report is turned in to S&S and reviewed for clarity and completeness. S&S keeps the original and forwards a copy to Risk Management.

In the event the operator is seriously injured, unconscious, or hospitalized, this report will be completed by the supervisor on duty pending the employee's return to work.

For Vanpool, drivers complete the Risk Management Vehicle Accident Reporting form.

8.8.8 Operator's Statement

The operator completes a written statement (included in S&SF08) by the end of his or her shift. All recorded statements are the responsibility of Risk Management.

8.8.9 External Reports

Depending on the circumstances and/or severity of the accident, external reports may be required. Copies of all external reports are sent to Risk Management. External reports may include, but are not limited to the following:

- Coroner's Reports
- Emergency Medical Services Reports
- Fire Department Reports
- Hospital Records
- Municipal Police Reports
- Original Equipment Manufacturer's Reports

Activities involving accident reconstruction or other professional experts are performed at the request and direction of Risk Management.

8.8.10 Safety and Security Regulatory Reports

The General Manager of S&S is responsible for meeting the reporting requirements of NCDOT, FTA and the NTSB. Copies of reports required by these agencies will be provided to Risk Management.

All CATS and TMOC employees are expected to cooperate fully with CATS S&S in the accident investigation.

8.8.11 Claims Management

Interaction with any party involved in a claim against the City is the responsibility of Risk Management. This includes insurance carriers and legal counsel. Risk Management is the only entity authorized to discuss settlement of these claims.

8.8.12 Post-Accident Review Committee for Major and Critical accidents

As called for by the Manager of Safety (Rail or Bus), a Post-Accident Review Committee led by CATS S&S and comprised of Safety, Operations, and other Departments as required may be assembled and a meeting may be called. Subsequent meetings may be convened to share information

concerning remedial measures. For critical incidents, the same post-accident review may be conducted.

8.8.13 Critical Incident Review (per City Policy MFS 10)

Risk Management, in collaboration and consultation with CATS CEO, City Manager's Office, and City Legal staff, will determine whether the *City of Charlotte Critical Incident Review Board* will convene.

If it is determined that the *City of Charlotte Critical Incident Review Board* will convene, Risk Management will notify all Board Members and schedule and facilitate the Board meeting. The Board will present a mitigation plan and conduct follow-up activities as described in City Policy MFS 10.

9.0 CORRECTIVE ACTION PLAN (NCDOT- RAIL ONLY)

After a rail accident, incident, occurrence or unacceptable hazardous condition as defined through the hazard resolution matrix, CATS will submit a corrective action plan (CAP) to the NCDOT when applicable. See the CATS ASP and NCDOT SSOPS, as amended for further instructions on CAPs.

10.0 REPORT ACCEPTANCE AND APPROVAL

Accident/Incident report acceptance and approval are the responsibility of the CATS General Manager of S&S. Coordination and review of Accident/Incident reports will be afforded CATS Operations prior to acceptance and approval. Final approved reports will be officially transmitted from the CATS General Manager of S&S to NCDOT.

11.0 SAFETY AND SECURITY COMMITTEE ("SSC")

The Safety and Security Committee ("SSC") will identify opportunities to reduce safety and security risks through design, technology, and changes in procedures and processes. The committee will:

1. Look at trends in major and critical preventable accidents.
2. Review probable causes and contributing factors, establish conclusions, and give recommendations and corrective actions.
3. Identify and assign owners for additional improvements to reduce preventable accidents.
4. Prioritize improvements and provide estimated costs. Assign champions for funded items and track successes.

The committee is chaired by the General Manager of S&S. Members will include representatives from Bus, Rail, or STS Operations (depending on type of incident), Development, S&S, Technology, Facilities Management, Quality Assurance, and CMPD. Additionally, members of the Post-Accident Review Committee described in Section 7.8.1 may contribute to the SSC.

12.0 RECORDS REQUIRED

Forms identified in this procedure along with other pertinent records and photographs collected as part of the investigation will be forwarded to Risk Management. Copies will be maintained by S&S per the CATS records retention schedule.

Risk Management and the City's legal staff will determine the official distribution and/or release of any accident reports.

Summary of Changes

4.0 Added definition of derailment in this section.
8.3 Updated subheadings and numbering; updated and provided additional information for collisions involving rail transit vehicles and notification requirements. Added to NCDOT UHC Reportable Events section clarification for stop/red signal overruns.
8.8.2 Made revisions to instructions for Investigation Reports, format and content.
8.8.3 Updated procedure to describe RTA and NCDOT responsibilities concerning accident/incident report distribution, extension requests, comment resolution and report acceptance.
9.0 Added reference to NCDOT program standard.

Entire Document: Wording and grammatical changes were made for clarity.

Appendix A
Accident/Incident Investigation Forms

CATS FORMS

Accident Notification Report (STS) ..... S&SF01
Incident and Accident Report – Supervisors (Rail) RODF040
Patron Information Card (Bus and STS) ..... S&SF06
Passenger Status Card (Rail S-70) RODF032
Accident/Incident Investigation Documentation Checklist (STS) ..... S&SF03
Tools of Investigation (checklist) (STS) ..... S&SF05-STS
Tools of Investigation (checklist) (ROD) ..... S&SF05-ROD
Vehicle Isolation Form ..... S&SF07
Employee Accident Report ..... S&SF08
Accident/Incident Summary (Bus and STS) ..... S&SF09
Post-Accident Questionnaire (Bus and STS) ..... S&SF11
Infraction Record Entry – STS ..... S&SF36
Emergency Response Equipment ..... S&SF41

RISK MANAGEMENT FORMS

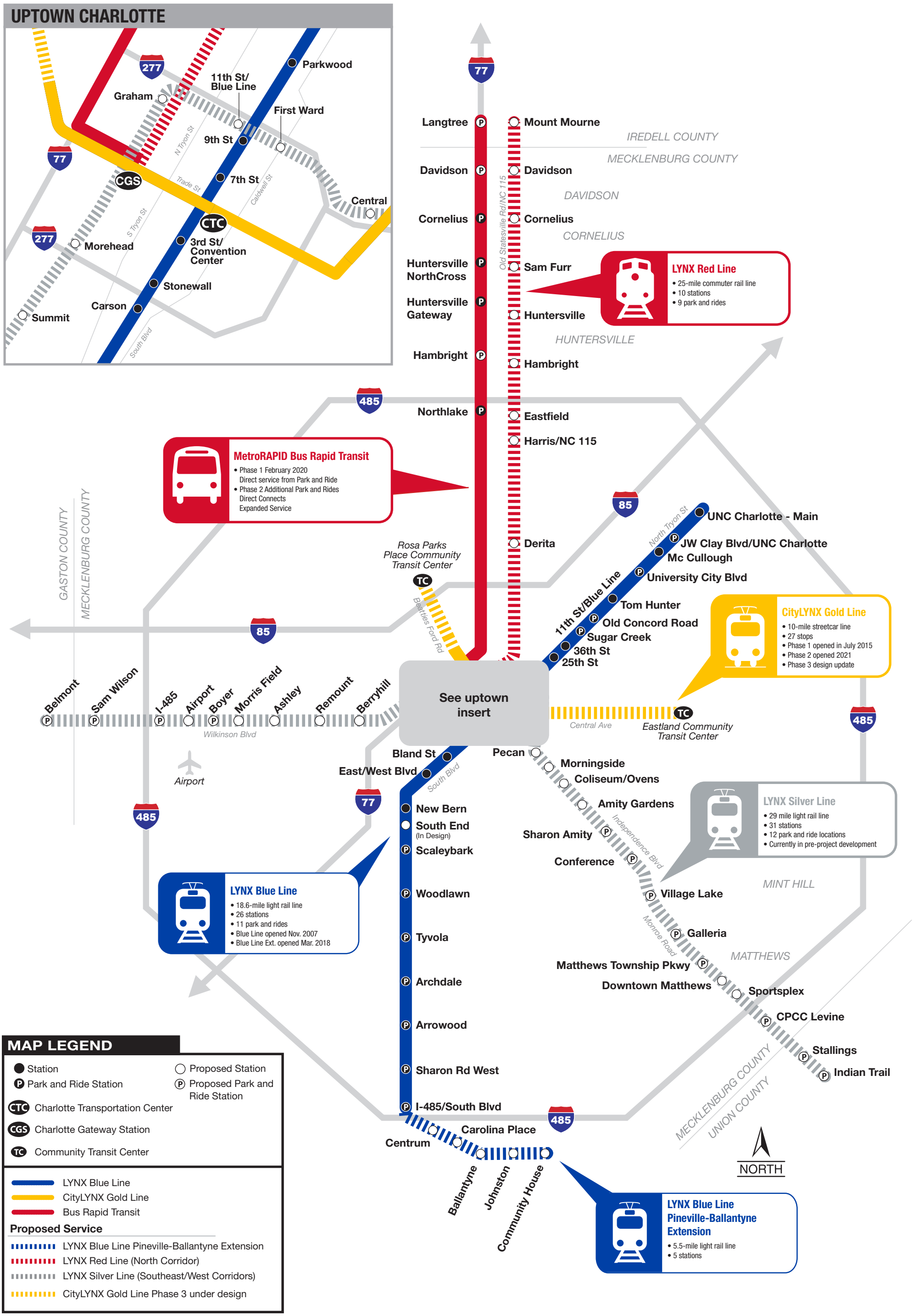
https://claims.ci.charlotte.nc.us
On the Job Injury Report
Vehicle Accident Reporting Form (Vanpool Drivers and Non-operations divisions)
General Liability Reporting Form
Property Loss Reporting Form

City Forms available on CNet/Human Resources/Drug and Alcohol Testing
City of Charlotte Post Accident Testing Checklist PDER-6
Appointment Form and Authorization for Drug and/or Alcohol Test PDER-2

TMOC FORMS

Drug and Alcohol Authorization ..... N/A

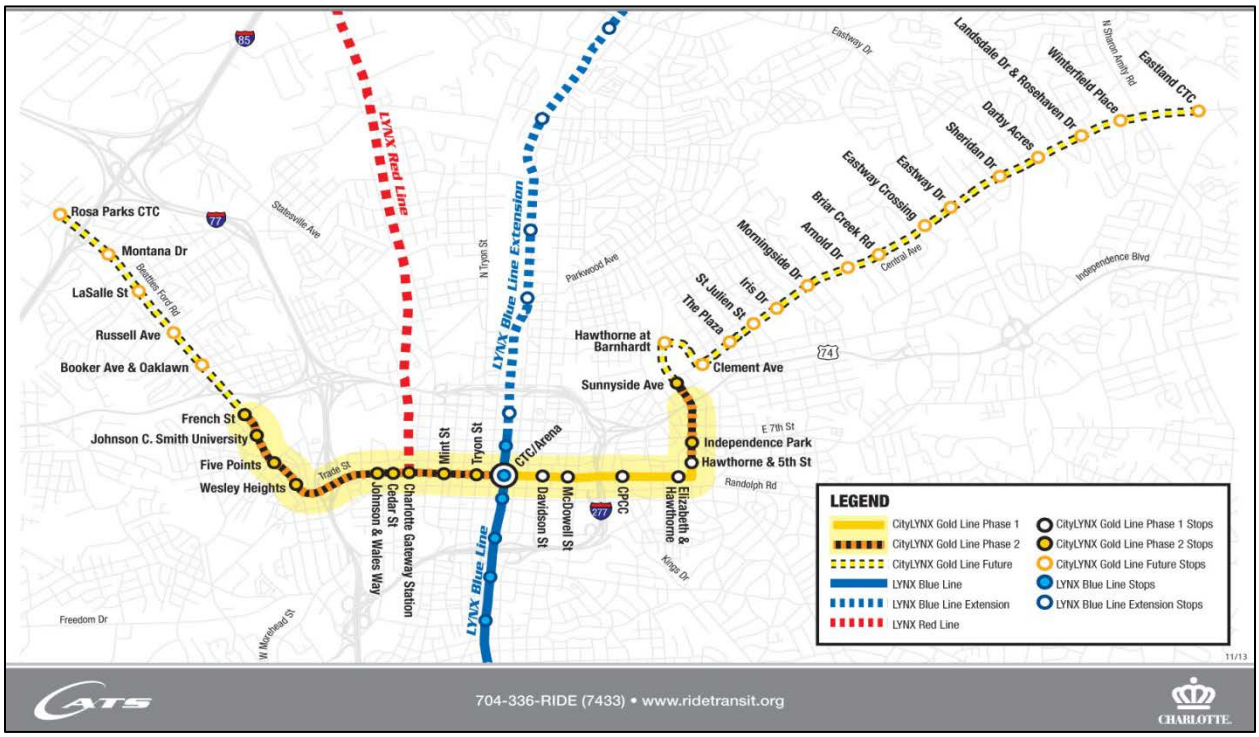
APPENDIX D
System Maps


UPTOWN CHARLOTTE
Graham
11th St/ Blue Line
Parkwood
First Ward
9th St
7th St
CGS
CTC
Central
Morehead
3rd St/ Convention Center
Stonewall
Carson
Summit
N Tryon St
Trade St
Caldwell St
S Tryon St
South Blvd
Langtree
Mount Mourne
IREDELL COUNTY
MECKLENBURG COUNTY
Davidson
DAVIDSON
Cornelius
CORNELIUS
Huntersville NorthCross
Sam Furr
Huntersville Gateway
Huntersville
HUNTERSVILLE
Hambright
Northlake
Eastfield
Harris/NC 115
Old Statesville Rd/NC 115
LYNX Red Line
• 25-mile commuter rail line
• 10 stations
• 9 park and rides
MetroRAPID Bus Rapid Transit
• Phase 1 February 2020
Direct service from Park and Ride
• Phase 2 Additional Park and Rides
Direct Connects
Expanded Service
Rosa Parks Place Community Transit Center
Derita
Beatties Ford Rd
GASTON COUNTY
MECKLENBURG COUNTY
UNC Charlotte - Main
JW Clay Blvd/UNC Charlotte
Mc Cullough
University City Blvd
Tom Hunter
Old Concord Road
Sugar Creek
36th St
25th St
11th St/Blue Line
North Tryon St
CityLYNX Gold Line
• 10-mile streetcar line
• 27 stops
• Phase 1 opened in July 2015
• Phase 2 opened 2021
• Phase 3 design update
Belmont
Sam Wilson
I-485
Airport
Boyer
Morris Field
Ashley
Remount
Berryhill
Wilkinson Blvd
See uptown insert
Central Ave
Eastland Community Transit Center
Airport
Bland St
East/West Blvd
South Blvd
Pecan
Morningside
Coliseum/Ovens
Amity Gardens
Sharon Amity
Conference
Independence Blvd
New Bern
South End
(In Design)
Scaleybark
Woodlawn
Tyvola
Archdale
Arrowood
Sharon Rd West
I-485/South Blvd
LYNX Silver Line
• 29 mile light rail line
• 31 stations
• 12 park and ride locations
• Currently in pre-project development
MINT HILL
Village Lake
Galleria
Monroe Road
MATTHEWS
Matthews Township Pkwy
Downtown Matthews
Sportsplex
CPCC Levine
Stallings
Indian Trail
MECKLENBURG COUNTY
UNION COUNTY
LYNX Blue Line
• 18.6-mile light rail line
• 26 stations
• 11 park and rides
• Blue Line opened Nov. 2007
• Blue Line Ext. opened Mar. 2018
Carolina Place
Centrum
Ballantyne
Johnston
Community House
NORTH
LYNX Blue Line Pineville-Ballantyne Extension
• 5.5-mile light rail line
• 5 stations
MAP LEGEND
Station
Park and Ride Station
Proposed Station
Proposed Park and Ride Station
Charlotte Transportation Center
Charlotte Gateway Station
Community Transit Center
LYNX Blue Line
CityLYNX Gold Line
Bus Rapid Transit
Proposed Service
LYNX Blue Line Pineville-Ballantyne Extension
LYNX Red Line (North Corridor)
LYNX Silver Line (Southeast/West Corridors)
CityLYNX Gold Line Phase 3 under design

CATS
CHARLOTTE AREA TRANSIT SYSTEM

v0717

CityLYNX Gold Line Route Map



APPENDIX E
Forms

CHARLOTTE AREA TRANSIT SYSTEM
RAIL OPERATIONS

Rail Operator Ride Check Form

Operator Name: _____ Radio #: _____

Date:_____ Start Time: _____ End Time: _____

Start Location:_____End Location: _____

Alignment (check one): _____Blue Line _____Gold Line

Purpose of this ride check:

☐ Periodic efficiency ride-along ☐ Re-training following infraction

☐ Recertification ☐ Return to work following extended absence

☐ Other (explain) _____

_____

Rate each observed behavior on a scale of 1 to 5, with 5 being excellent and 1 being unacceptable, needs retraining. Any re-training needs must be presented to operations manager and/or instructor supervisor.

_____ Possesses all required items (Operating Orders, radio, Rule Book, etc.)

_____ Wearing proper uniform (including shoes) and uniform is clean and neat

_____ In possession of accurate watch which indicates seconds

_____ Cell phone and unauthorized electronic equipment OFF and out of sight

_____ Knows the rule of the day

_____ Uses proper radio protocol; reports all appropriate situations that could affect operations

_____ Performs pre-trip inspection *(note if verbal/physical assistance needed)*

_____ Always checks both sides of train via cameras prior to closing doors and departing station

_____ Coupling

- _____ checked couples
- _____ operates at appropriate speed when coupling
- _____ makes announcements
- _____ works horn or bell prior to moving
- _____ brake and rolling free test performed

_____ Operates switches when leaving yard *(document performance)*

_____ Request authorization to leave yard

_____ Operates on time according to schedule

_____ Smooth station stops and accelerations

Rail Operator Ride Check Form

_____ ADA station announcements made if necessary

_____ Makes proper Streetcar Station/ADA announcements

_____ Documents and repeats back location of alerts

_____ ROD425 *Switching Streetcar Operating Cabs* compliance

_____ Performs proper interior train/streetcar inspections at terminal stations

_____ Performs proper interior train inspections at terminal stations

_____ Makes all appropriate customer service announcements

_____ Operates to appropriate station berthing marker

_____ Proper use of horn and bell

_____ Proper TWC code set

_____ Proper use of opticom/ommitter

_____ Uses Door Close button to close doors

_____ Identifies affected door and able to cut out *(document performance)*

_____ Talks through pumping off a handbrake *(document performance)*

_____ Observes and follows all signals

_____ Identifies crossover, diamond interlocking, and turnout *(document response)*

_____ Sounds horn and slows to 10 mph when workers are on ROW

_____ Operates at speeds no greater than 5 mph in curves and obeys speed limits on streetcar alignment

_____ Uses appropriate station approach speeds during normal and inclement weather

_____ Scans grade crossings properly to ensure GCI is illuminated and gates are down

_____ Monitor signal cabinet indications

_____ Good defensive operating techniques and is always prepared to stop

_____ Good observation techniques and constantly scans ahead (not “tunnel vision”)

_____ In seat and ready to depart terminal stations one minute prior to departure time.

_____ Notifies ROCC when departing Streetcar Terminals.

_____ Operates safely and is in compliance with the Rail Rule Book and all rail SOPs

_____ Non-revenue

_____ Operates at appropriate speed entering platform

_____ Operates at appropriate speed passing through

_____ Makes services announcements

_____ Utilizes horn or bell when passing through

Supervisor's Observations:

_____

_____

_____

_____

_____

Suggested Areas for Improvement:

_____

_____

_____

Overall Rating:_____(Use the same 1 – 5 scale)

Supervisor Name: _____

Supervisor Signature: _____

Operator Comments:

_____

_____

_____

Operator Signature: _____

Submit completed form to Instructor/Supervisor.

Instructor/Supervisor: Submit form to Manager, Rail Transportation. Form will be maintained in employee's training file.

Manager, Rail Transportation - Signature: _____

Office of Safety & Security (Bus Operations) Training & Development Sheet

Employee Information			
Employee Name		Date	
ID Number		CDL Exp Date	
Medical Card Exp Date		Seniority Date	

Safety History Last 36th Months		
Date	Incident Type	Preventability ID
		Preventable ☐ Non-Preventable ☐
		Preventable ☐ Non-Preventable ☐
		Preventable ☐ Non-Preventable ☐
		Preventable ☐ Non-Preventable ☐
		Preventable ☐ Non-Preventable ☐

Class Room Training (Check Box If Covered)				
Interview	☐	Video: The 5 keys to safety	☐	Comment
MCI	☐	Other: Reference Comment	☐	
Defensive Driving	☐	Video: Out of Harms Way	☐	
Defensive Driving Test	☐	Video: The Critical Point	☐	
Pre-Trip	☐	Video: Searching for Safety	☐	
Post-Trip	☐	Video: Driving the 5 Keys	☐	
ADA Refresh	☐	Bus Start	☐	
Fare Box	☐	Bus Securement	☐	
Radio	☐	Security Refresh	☐	

Employee Signature

Platform and General Training			
Review Area	Good	Needs Attention	Comment
Uniform	☐	☐	
Name Tag	☐	☐	
Shoes	☐	☐	
Safety Vest	☐	☐	

Bus Stops			
Signal 150 ft before Stop	☐	☐	
4 Way Flashers 50 Feet Before Stop	☐	☐	
Bus Is Parallel to the Curb	☐	☐	
6" to 12" from			

Curb	☐	☐	

Training & Development Sheet Page 2 of 3

Speed and Space Cushion			
Review Area	**Good**	**Needs Attention**	**Comment**
Obey Speed Limits	☐	☐	
Speed Safe For Conditions	☐	☐	
Smooth Braking	☐	☐	
Maintained Good Space Cushion	☐	☐	

Lane Change			
Use Direction Signal	☐	☐	
Scan Mirror	☐	☐	
Proper Clearance	☐	☐	

Turns			
5 MPH or Less While Turing	☐	☐	
Scans Mirrors	☐	☐	
Use Direction Signals	☐	☐	
Proper Position	☐	☐	
Proper Steering Technique	☐	☐	
Aware of Right Of Way	☐	☐	

Intersection Operation			
Aware of Stale Green Lights	☐	☐	
Scan Intersection on Approach	☐	☐	
Covers Brake	☐	☐	
Observes Space Cushion When Stopped	☐	☐	
Scans Area While Stopped	☐	☐	
Wait 3 Seconds To Proceed	☐	☐	
Brake/Accelerate	☐	☐	

Smoothly			

Training & Development Sheet

Safety			
Review Area	**Good**	**Needs Attention**	**Comment**
Pre-Trip	☐	☐	
HeadSign	☐	☐	
Lot Speed	☐	☐	
Adjust Interior Mirror	☐	☐	
Adjust Exterior Mirror	☐	☐	
Seat Belt Use	☐	☐	
Hand Position	☐	☐	
Knows and Explains The Five Keys To "Smith System"			
Aim HIgh In Steering	☐	☐	
Get The Big Picture	☐	☐	
Keep Your Eyes Moving	☐	☐	
Leave Yourself An Out	☐	☐	
Make Sure They See You	☐	☐	

Employee Signature: _____ Date:_____

Safety Officer Signature: _____Date: _____

Class Room Time: Platform Time:

Station Safety Inspection Checklist

STATION SAFETY INSPECTION CHECKLIST

Station _____ **Inspection Date:**_____

Inspector:_____

Safety & Security Items	Pass		Fail		Comments
	TI	T2	T1	T2	
1. ADA					
• Ramps free of hazards					
• Platform tactile edging in place					
• Pedestrian crossings (clearly marked)					
• Adequate color contrast (30/70%) between platform surface and tactile edging					
2. Lighting system					
• Identify outages					
3. PA system					
• Operable					
4. Fencing/railing					
• Secured					
• Hand rails present and secured at stairs (if 4 or more steps are present)					
5. Benches					
• Secured					
6. Vegetation issues (over-growth, line of sight issues)					
7. Low clearance issues (head strike hazards for small children)					
8. Trash receptacles					
• Secured to platform					
• Lid secured to main receptacle					
9. Exposed conduit (if present, is it covered to restrict public access to it)					
10. Station canopy					
• Secured					
• Vertical clearance (head strike hazards for adults)					
11. Pedestrian bridges					
• Skid resistant surfaces, stairs, landings, walkways					

Station Safety Inspection Checklist

Safety & Security Items	Pass		Fail		Comments
	TI	T2	T1	T2	
• Railing on stairs					
12. Elevators					
• Signage (in case of fire, do not use elevator)					
• Sensitive door edge operational					
13. Park and Ride lots					
• Lighting system					
- Identify outages					
• Perimeter fencing					
• ADA requirements, (tactile warning strips)					
14. Wind screens					
• Secured to station					
• No sharp edges					
15. Exposed wiring and cabling					
16. Metal fabrication					
• No sharp edges					
17. Tripping hazards present (station platform, ramps, steps, sidewalks)					
18. Electrical outlets					
• Exposed circuits					
19. Slip resistant surface					
• Stairs					
• Walkways					
• Ramps					
• Landings					
• Other walking surfaces					
20. Other					
•					
•					

Charlotte Area Transit System
Trainee Evaluation

This evaluation is a confidential document. Please fill out completely and return to Dispatch.

DATE		**RUN NUMBER**	
MENTOR NAME		**MENTOR PAYROLL #**	
TRAINEE NAME		**TRAINEE PAYROLL #**	

RUNS TOTAL PLATFORM TIME: _____ **(Found on Run Assignment Sheet)**

TRAINEE DRIVE TIME ON RUN

Start Time		End Time		Platform Time	
Start Time		End Time		Platform Time	
Start Time		End Time		Platform Time	
Start Time		End Time		Platform Time	
				TOTAL PLATFORM TIME	

MENTORS DRIVE TIME ON RUN – IF TOOK OVER THE BUS FOR A PERIOD OF TIME

Start Time		End Time		Platform Time	
Start Time		End Time		Platform Time	
Start Time		End Time		Platform Time	
Start Time		End Time		Platform Time	
				TOTAL PLATFORM TIME	

TRAINEE SKILLS AND OPERATING PERFORMANCE:

E =EXCELLENT	**G = GOOD**	**F = FAIR Comment Needed**	**P = POOR Unable to perform the task after repeated instructions. Needs additional work outside of mentor training**

**If safety issue is noted during mentor training, notify the BOCC immediately for assistance.

CRITERIA	E	G	F	P	COMMENT
Appearance					
Vehicle Inspection					
AVL Log On					
Head Sign Usage					
Paddle Knowledge					
Fares and Transfer					
Courtesy					
Right Turn					
Left Turn					

Charlotte Area Transit System
Trainee Evaluation

This evaluation is a confidential document. Please fill out completely and return to Dispatch.

Smoothness: Stops & Start					
Intersection Awareness					
General Awareness					
Pulling into Curbs					
Use of Signals					
Use of Four-Way Flashers					
Use of Mirrors					
Use of Hands					
Use of Feet					
Use of Wheelchair Lift					
Use of Kneeler					
Use of Interior Lights					
Radio Procedures					
Defensive Driving Skills					
Seatbelt Use					
Pedestrian Awareness					
Post Trip Inspection					

Overall General Comments: _____

_____

_____

Mentor Signature: _____

Superintendent Signature: _____ **Date:** _____
(Or Designee)

Manager of Safety Signature: _____ **Date:** _____
(Or Designee)

Safety Issue Reporting Form

Name: _____ **Date:** _____

Unit or Division: _____

Has this issue been reported to a supervisor? Yes No

If yes, when was it first reported to a supervisor? _____

Location of Issue/Concern: _____

Nature of Issue/Concern: _____

To be filled out by Safety Personnel

Name: _____ **Date Received:** _____

Date Reviewed: _____ **Initial Hazard Rating** _____

Assigned To: _____ **Final Hazard Rating** _____

Actions Taken: _____

Close Date: _____ **Manager Signature:** _____

CATS Operator Field Assessment

Score: _____

Operator Name		Observation Date		Observation Purpose
ID#		Obs Start Time		☐ Refresher ☐ Random Op ☐ Post Acc Date of Accident
Bus#		Obs End Time		
Observer Name				Observer Method
Mark a ✓ in the appropriate box for each line observed **S**- Satisfactory **U**-Unsatisfactory **NA**- Not Applicable				☐ Ride-along ☐ Static Obs ☐ Trailing

	Pre/Post-Trip	S	U	NA
1.	Seat/Mirror positions			
2.	Body/Lights condition			
3.	Interior cleanliness			
4.	Lift/ securement straps			
5.	Safety equipment			
6.	Seat condition			
7.	Tire pressure			
8.	Door condition			
9.	A/C, defroster			
10.	Fire Extinguisher			
11.	Uniform wear			
	Defensive Driving			
12.	Eyes moving			
13.	Posture and 2-hands on wheel			
14.	Looking ahead 10 seconds			
15.	Moves body and head to clear blind spots			
16.	Uses headlights/ signals/ flashers appropriately			
17.	Uses push pull when turning			
18.	Makes complete stop			
19.	Slows for intersections			
20.	Speed control			
21.	Focus on road			
22.	Appropriate following dist. (4-5 seconds)			
23.	Adjusts for adverse weather driving			
24.	Keeps an out on all sides			
25.	Change lanes cautiously			
26.	Stops at RR tracks (15-50ft)			

	Defensive Driving	S	U	NA
27.	Stays in right or middle lane of travel			
28.	Brakes/Accelerates smoothly			
29.	5 mph on turns with square turns			
	PASS			
30.	Gets out of seat for passenger			
31	Introduces self to passenger			
32.	Verifies passenger/ collects fare			
33.	Assists passenger to seating area, assures use of seatbelt			
34.	Courteous to passengers			
35.	Shows ADA sensitivity to passenger			
	Lift/Securement			
36.	Gets down to eye level of passenger			
37.	Allows ambulatory passenger to use lift			
38	Lowers lift/ramp after clearing area			
39.	Uses posey belt or asks passenger to buckle MD belt			
40.	Positions MD facing away from bus (unless passenger requests forward)			
41.	Electric MD is powered off, manual device brakes locked during lift use/ securement			
42.	Uses proper 4 pt. tiedown technique			
43.	Fastens passenger seatbelt appropriately			
	Operations			
44.	Proper radio technique			
45.	Tickets accounted for			
46.	Uses MDT/ SatNav correctly			
47.	Load/unload times sat			
48.	MDT/VIR/paperwork are filled properly			
49.	Wears seatbelt correctly			
50.	Other:			

Total # S _____ **Total # U** _____

Comments (explain any U's)

_____

_____

_____

Observer Signature

Operator Signature

Fill in form at
https://forms.office.com/g/syAwG0Sfmm

SafetyCulture: Manage i

Secure | https://app.safetyculture.io/#/iauditor/templates/index

Apps | Bookmarks | Bookmark Manager | SafetyCulture: Manag | CATS Camera Status | System Impairment N | MCSO | Police Reports - Char | National Transit Repo | Calendars / District a | Latitude Longitude Fi | Other bookmarks

Templates Archive

Upgrade

You have used **100%** of your monthly data transfer allowance. It will reset on **Friday, March 10, 2017**. Want unlimited monthly data transfer? Upgrade your plan.

Search | Filter: OFF

Duplicate | Archive | Refresh | New Template

Name	Description	Last Used	Modified	Rating
4 months ago				
South Tryon Administration	Quarterly Safety Inspection	28 Feb 2017	24 Oct 2016	
South Tryon Fuel Fare and Wash	Quarterly Safety Inspection	3 May 2016	14 Oct 2016	
North Davidson Bus Maintenance Facility Copy	Quarterly Safety Inspection	Never	14 Oct 2016	
South Blvd. Light rail Maintenance Facility	Quarterly Safety Inspection	Never	14 Oct 2016	
North Davidson Fuel Fare and Wash	Quarterly Safety Inspection	Never	13 Oct 2016	
Huntersville Northcross Park and Ride	Quarterly Safety Inspection	Never	13 Oct 2016	
Huntersville Gateway Park and Ride	Quarterly Safety Inspection	11 Aug 2016	13 Oct 2016	
5 months ago				
Eastland Transit Center	Quarterly Safety Inspection	Never	13 Oct 2016	
Albemarle Road Park and Ride	Quarterly Safety Inspection	Never	13 Oct 2016	
Mallard Creek Park and Ride	Quarterly Safety Inspection	Never	6 Oct 2016	
6 months ago				
Rosa Parks Transit Center	Quarterly Safety Inspection	Never	9 Sep 2016	★★
North Davidson Bus Maintenance Facility - duplicate	Quarterly Safety Inspection	Never	22 Aug 2016	

APPENDIX F
Approvals of Agency Safety Plan

MTC Resolution and CATS Safety & Security Committee

METROPOLITAN TRANSIT COMMISSION
Wednesday, October 26, 2022
5:30pm
Charlotte-Mecklenburg Government Center
2nd Floor, Conference Room 267
AGENDA

I. Call to Order ..... Commissioner Leigh Altman
- Attendance (Roll Call)

II. Approval of the September 28, 2022 Summary (**p.5-15**) ..... Commissioner Leigh Altman

III. Chief Executive Officer's Report (**p.17-25**) ..... John Lewis, Jr.

IV. Report from the Chair of the Transit Service Advisory Committee (TSAC) ..... Jack Zovistoski

V. Report from the Chair of the Citizens Transit Advisory Group (CTAG) ..... Edward Tillman

VI. Public Comments

VII. Informational Items
- Charlotte Transit Center Design Update (**p.27-55**) ..... Jason Lawrence
- LYNX Silver Line Fall Public Engagement (**p.57-77**) ..... Andy Mock
  Center City Alignment Study & Bojangles Alignment Recommendation

VIII. Action Item
- CATS Agency Safety Plan (**p.77**) ..... David Moskowitz
- CONNECT Beyond Committee Appointment (**p.81-82**) ..... Geraldine Gardner
- MTC 2022 Remaining Meeting Schedule (**p.84**) ..... John Lewis, Jr.

IX. MTC Commissioners' Business

X. Adjourn

$2.25 fare is not worth the risk to the operators. They are not to be the fare police of sorts. They need to do their jobs and allow others to do theirs.

There is an activity going on with Allied Universal to have more security officers but not trying to over-police our service options and not having a security officer on every bus, being very strategic with where those security officers are by targeting specific buses and routes in parts of the city. But I think also one other aspect that was addressed but needs to be, I will say, widely distributed, 1.1 million trips typically we do on an annual basis. The number of significant issues is less than 10, so although it seems based upon the media and I would say hyperbole it's a bad situation, overall, it's not nearly what you might assume, but that level of messaging has to be more proactive versus reactive because in newspapers typically it leads to leaks, and so we will always have a bad representation if there is a negative activity going on.

Discussion:

COMMISSIONER ALTMAN (Mecklenburg County): Mr. Tillman, could you, just for those who are listening and may not be familiar, say what the qualifications are for folks who you'd like to have apply to CTAG and just say what the whole name stands for and give another opportunity for the advertisement?

EDWARD TILLMAN: Sure. I will have to get the qualifications. I don't want to go off the cuff with that. I would rather have assistance in providing the information.

COMMISSIONER ALTMAN (Mecklenburg County): And what's the free phone opportunity that you referenced?

EDWARD TILLMAN: That was Project Lifeline. With Project Lifeline, if the person does not qualify financially and fall within a certain level, they can work through Project Lifeline to acquire that. I think Mr. Lewis has a little more information on that as well.

CATS CEO LEWIS: One of the things that we wanted to make sure, that our fare capping initiative was widely accessible to as many of our passengers and users as possible. One of the things that's obviously an impediment, you can't use our mobile app if you don't have a cell phone. Even if you have a cell phone, if you don't have a data plan that can also be an impediment. We're taking it step-by-step. We were partnered with Project Lifeline. If you meet a certain income level, you are eligible for a free phone. That's a federal program.

But we've also worked very hard. Rachel Gragg and her team and the operations team over the last six months, to make all of our buses and trains hotspots. We have Wi-Fi, free Wi-Fi, on board all of our vehicles. It's not 100%, but anytime we see a challenge or a limit to our programs we want to address those, and Project Lifeline was a big step forward on the fare capping stand.

VI. Public Comments - None

VII. Informational Items

A. Review CATS Agency Safety Plan (ASP) **David Moskowitz**

David Moskowitz - CATS Transit Safety & Security Manager – shared a presentation on the CATS Agency Safety Plan Version 2; based on pages 42-51 in the MTC Agenda Packet for September 28th, 2022 meeting.

METROPOLITAN TRANSIT COMMISSION
ACTION ITEM
STAFF SUMMARY

SUBJECT: Approve CATS Agency Safety Plan (ASP) **DATE: October 26, 2022**

1.0 **PURPOSE/SCOPE**: Approve Final Draft of the CATS Agency Safety Plan Version 2

2.0 **BACKGROUND**:

- On July 19, 2018, FTA published 49 CFR Part 673, entitled Public Transportation Agency Safety Plan (PTASP)
  - Under the Public Transportation Safety Program, 49 U.S.C. 5329(d)(1)(A), Congress required each transit agency's Board of Directors, or an Equivalent Authority, to approve the agency's safety plan.
    - MTC is considered CATS' Equivalent Authority and has authority to review and approve an agency's safety plan.

- On September 14, 2022, NCDOT State Safety Oversight (SSO) Agency provided conditional approval of the Final Draft of the CATS ASP

- Section 4.2 of the ASP requires MTC review and approval of all significant revisions. Revisions are in red text for ease of review

3.0 **PROCUREMENT BACKGROUND**: N/A

4.0 **POLICY IMPACT**: CATS policies to be updated to meet agency SMS/ASP requirements.

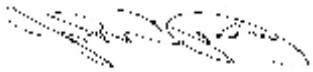
5.0 **ECONOMIC IMPACT**: N/A

6.0 **ALTERNATIVES**: N/A

7.0 **RECOMMENDATIONS**: MTC reviewed and approved the Final Draft of CATS ASP Revision 2.

8.0 **ATTACHMENT**: Revision 2 of the Final Draft of the CATS Agency Safety Plan (sent via email under separate cover)

SUBMITTED AND RECOMMENDED BY:



John M. Lewis, Jr.
Chief Executive Officer, Charlotte Area Transit System
Director of Public Transit, City of Charlotte

79

METROPOLITAN TRANSIT COMMISSION
Wednesday, November 16, 2022
5:00pm
Charlotte-Mecklenburg Government Center
Basement, Conference Room CH-14
AGENDA

I. Call to Order ..... Commissioner Leigh Altman
- Attendance (Roll Call)

II. Approval of the October 26, 2022 Summary (**p.5-12**)..... Commissioner Leigh Altman

III. Chief Executive Officer's Report (**p.14-22**) ..... John Lewis, Jr.

IV. Report from the Chair of the Transit Service Advisory Committee (TSAC) .... Krissy Oechslin

V. Report from the Chair of the Citizens Transit Advisory Group (CTAG)..... Edward Tillman

VI. Public Comments

VII. Informational Items
- CTC Redevelopment - Public Engagement Update (**p.24-33**)..... Jason Lawrence

VIII. Action Item
- None

IX. MTC Commissioners' Business

X. Adjourn

that there were other systems who were embarking on these kinds of studies. What you see here is the federal process which we must go through.

We are in pre-project development. As Andy stated, at that point we have a decision to make on whether or not we enter into project development, because there's a timeline associated with that, and we must have a funding source identified. Then we go to project engineering and then construction. Transit projects typically take 10+ years to move forward, but we were at that time literally in a race for additional funding but doing the lend/funding source at the federal level. We are actually racing with other jurisdictions to get to that project development phase till we can compete for federal funds, and so that's why the timing of this is critical for us.

Even though there is record investment from a transit standpoint from the federal level, there are many multitudes more projects than there is the ability to fund. First in has the highest -- the best chances for competing for those funds. That's why we have been pushing to move the Silver Line and as many other projects as we can forward because we want to be in the best position to compete, realizing that the project development point, that middle blue diamond, is really the key point that we have to achieve.

MAYOR LYLES (City of Charlotte): We're on schedule that we can do this under the Infrastructure Act?

CATS CEO LEWIS: I think we're still in a good position for that, yes. Also, I just wanted to make sure MTC members are aware that as we continue to advance this project there may be times where we will continue to make refinement, hopefully minor refinements to the corridor as we continue to move through engineering and design. The Uptown alignment is a pretty big consideration. The Bojangles alignment is a minor consideration, refinement to the corridor, but as of now the rest of the corridor remains the exact same as we envision in the LPA that was passed by the board. We continue to hone that down, and there may be times when we will come back with additional refinement, but I just wanted to make sure that board members are aware that we are not substantially changing the rest of the alignment, that these are the two areas that we're focused on now.

VIII. Action Item

A. CATS Agency Safety Plan (ASP) **John Lewis, Jr.**

John Lewis, Jr - CATS Executive Officer – present the CATS Agency Safety Plan (ASP) Version 2 for action; based on page 79 in the MTC Agenda Packet for October 26th, 2022 meeting.

Resolution: A motion to approve the **CATS Agency Safety Plan (ASP) Version 2** was made by **Mayor Rusty Knox (Town of Davidson)**; seconded by **Mayor Melinda Bales (Town Huntersville)**. Motion carried unanimously.

B. CONNECT Beyond Committee Appointments **Geraldine Gardner**

Geraldine Gardner – Executive Director, Centralina Regional Council – made an appeal for MTC Appointments to the CONNECT Beyond Committee for action; based on pages 81-82 in the MTC Agenda Packet for October 26th, 2022 meeting.

Discussion:

CATS CEO LEWIS: As board members are aware, CATS has been a partner with Centralina Regional Council of Governments to create a regional mobility initiative creating a

Rail Safety and Security Committee Meeting Minutes

The following are the minutes from the Rail Safety and Security Committee meeting.

Meeting Conducted: September 27, 2022

Meeting Started: 13:30hrs Meeting Ended: 14:30hrs

Attendees
(* Indicate Rail Safety and Security Committee Members)

*Silvester Fulmore	*Mike Hoopingarner	*Essence Douglas	*Darnelle Rice
*Melody Richerson	Martin Ellison	Joe Rayano	*Laura Johnson
Estep Douglas	*Keith Hawkins	*Jared Barbee	David Moskowitz
*Timothy Steele	*Gary Lee	*Larry Woolard	*Deltrin Harris
*Chris Baker	*Robert Baxter	*Shanice Crawford	*Kevin Porterfield
*Joseph Shihab	*Marie Darby		

Election:

The following positions are up for re-election: Committee Chairman, Vice-Chairman, and Secretary.

In accordance with the bylaws, the term of the Committee Chairman, Vice-Chairman, and Secretary has concluded. During the meeting, the Rail Safety and Security Committee agreed to elect new officers at the next meeting. This will allow time for committee members to learn more about the roles and duties of the open positions so that they may make an informed decision as to whether they would like to fill any of the open positions.

Discussions:

- **Discussed Berthing Markers for Gold Line**
  - Facilities ordered and installed different styles of high visibility reflective signs at a few stations on the Gold Line as potential replacement berthing markers. Pictures were taken of the temporary installed berthing markers and sent to the Rail Safety and Security Committee for review. The Rail Safety and Security Committee agreed that the high visibility yellow reflective sign was the best option.
  - A motion and second was made to accept and approve the installation of the yellow reflective sign at all Gold Line stations that can accommodate those signs. The motion passed.
  - Facilities placed an order for the high visibility yellow reflective signs.

- **Recommendation for High Voltage equipment for Traction Power/OCS**
  - During a High Voltage training class, a concern of not having enough high voltage arc suits was mentioned to the Rail Safety and Security Committee.
  - The Maintenance of Way (MOW) department found that they had 10 high voltage arc flash suits available.
  - It was recommended by the Rail Safety and Security Committee to use the existing high voltage arc suits and to ensure that each shift had the appropriate number of arc flash suits and trained personnel.
  - MOW inspected and cleaned the high voltage arc suits, and each shift was ensured to have trained Traction Power/OCS key personnel who could use the suits.
  - It was reported that during the inspection of the high voltage arc suits, a few arc hoods were found to be damaged. MOW placed an order to replace the damaged hoods and ordered an additional arc suit to ensure the proper fit for one of their technicians.
  - MOW is awaiting the arrival of the hoods and arc flash suit, but each shift has at least one complete arc flash suit.

- **Track greaser Inspection form in review**
  - Train operators reported sliding conditions into the Parkwood station after traveling through track greaser.
  - MOW brought in a contractor from LB Foster to inspect the track greasers and found several issues with the grease guide adjustments and control settings that caused too much grease to be pump out.
  - It was recommended by the Rail Safety and Security Committee that the MOW Track Department develop a Track Greaser Inspection Form with the recommendations of LB Foster.
  - MOW Track developed the Track Greaser Inspection form that was reviewed by Rail Safety and then submitted to Quality Assurance (QA) for review and format. The form was then sent out by QA for approval and comments. The form has been added to SPEAR and is now part of their quarterly inspection.
  - This item is now closed.

- **Berthing Markers for Blue Line at stations (visibility for operators during dark hours /inclement weather)**

- Operators reported that some of the berthing markers on the Blue Line were faded and hard to see during dark hours and inclement weather.
- The Committee initially voted to paint the concrete ties yellow with glass beads but after reviewing this option decided not to paint the concrete ties.
- After further discussion, it was then recommended that the operators identify the specific locations of the berthing markers that have poor visibility in dark hours and during inclement weather.
- MOW will plan to replace berthing markers with poor visibility at the locations identified by the operators once a list is compiled of the station locations.
- Transportation is currently working on the list.

➢ **I-485/UNCC Terminal Ends glass beads on concrete tie at berthing marker**

- It was recommended by the Rail Safety and Security Committee that the concrete tie located at the berthing markers on the platform be painted yellow to ensure proper alignment to the berthing marker.
- MOW recommended glass beads be added to the yellow paint on the concrete tie for high reflective visibility.
- MOW Track painted the concrete ties at the platform berthing marker yellow and added the glass beads on both Tracks 1 & 2 of I485/UNCC.
- This item is now closed

➢ **Additional note pads needed at each suggestion box.**

- It was discussed that additional note pads at each suggestion box are needed.
- A list of Safety Suggestion Box location will be provided at the next meeting.

➢ **Safety Certificates**

- CATS Office of Safety and Security will resume the safety certificate program in 2023.

- The criteria for the Safety Certificate were reviewed with the committee:

  ➢ CATS Office of Safety and Security will review incident reports and risk management injury reports on an annual basis to determine candidate qualification. Employee reports shall be provided by supervisors and managers for determination of eligibility. Employees must meet the following criteria:

- Employed by CATS/RAIL for at least one calendar year. (Note: employees hired by February 28 will be credited for the full calendar year.)
- No OSHA recordable injuries for the previous calendar year.
- No NCDOT Preventable Accidents or incidents for the previous calendar year.

➢ **Safety Recognition Program**
  - The committee was informed that the CATS Office of Safety and Security will resume hosting the quarterly Safety Appreciation Day beginning in October 2022.
  - Will recognize employees for their contributions in the overall safety of the organization.

➢ **Myrtle Ave Swing Gate Installation**
  - It was reported to the Rail Safety and Security Committee that for MOW to enter the tail track at I-485, they must remove the guard rail located at the end of Myrtle Ave. to gain vehicle access. It was also mentioned that the uneven and rough terrain for vehicle access to the I-485 tail track needed to be graded.
  - The Rail Safety and Security Committee recommended to have the guard rail removed and install a swing gate at the end of Myrtle Ave. There was a motion to accept the recommendation and second. The motion passed.
  - CDOT approved this recommendation of replacing the guard rail with a swing but required that CATS place red diamond plated signs on the gates.
  - The guard rail was removed and the swing gates where installed.
  - Facilities installed the red diamond plated signs on the swing gates.
  - MOW plans to grade a road to the tail track off Myrtle Ave.

➢ **Rail Safety Committee Bylaws**
  - The amended Rail Safety and Security Committee bylaws were emailed to the committee members for review prior to the meeting.
  - There was a motion and second to accept and approve the Rail Safety and Security Committee Bylaws. The motion passed.

➢ **Rail Safety Committee- Agency Safety Plan (ASP) Approval**
  - It was discussed that the Rail Safety and Security Committee needed to approve the final draft of the CATS Agency Safety Plan (ASP) Version 2 which was being

sent to the Metropolitan Transit Commission (MTC). Once approved by the MTC, the revised ASP will be sent to NCDOT for final approval.

- A motion and second was made to accept and approve the draft CATS ASP Revision 2. The motion passed.

- **Train Control Crossing Case Guardrails**
  - It was discussed that on several occasions' vehicles have crashed into the crossing cases causing damage to equipment.
  - Matthew Berti (Rail Safety), MOW, Facilities, and CDOT went into the field to look at several train control crossing case locations and is working to identify proper location, and position of guardrails.

- **Interlocking Terminology Change**
  - During NCDOT's Triennial Audit of CATS, an NCDOT auditor was with a CATS employee when a request to the ROCC was made to access an interlocking in the North Yard. The employee used one abbreviation and the ROCC acknowledged their location with a different abbreviation. This caused the auditor some confusion regarding if the controller knew where they were on the ROW.
  - After reviewing the audio, this was confirmed that different abbreviations were used to describe the same location.
  - It was recommended to stop using abbreviations over the radio and use plain language to report the roadway workers location on the ROW (i.e., use South Yard South and South Yard North Interlocking for the South Yard, and for the North Yard use Brevard South and Brevard North Interlocking).
  - MOW asked if this would impact or change equipment, plans or drawings. It was discussed that this only applied to radio transmissions while on the ROW and would not affect drawings or plans.
  - Once applicable terminology is identified and approved, the Training Department will be notified, and proper documentation will be submitted for the training of employees before this change would go into effect.

- **Access Gate at the fence behind Signal House (Signal 17) Clark Interlocking**
  - MOW stated that they have safety concerns walking on uneven terrain from the signal house parking slab up to the University Pointe grade crossing and back down to the interlocking carrying tools and equipment.
  - MOW wants to install a gate behind Signal House (Signal 17) Clark Interlocking.

- A motion and second was made to install a gate behind Signal House 17. The motion passed.

- **Safety Topic**
  - Read and discussed the safety topic: Achieving Safety Goals
    - Follow safety goals set by company
    - Act toward meeting goals
    - Make work task or workplace safe
    - Track safety records

- **Reviewed Safety Reporting Methods**
  - Reviewed the various ways employees and contractors can report safety concerns:
    - Safety suggestion boxes: Method for letting employees know safety issues are being heard and address
    - Safety email: reportsafety@ci.charlotte.nc.us
    - Anonymous: Safety Hotline at 1-844-566-4040 or CATS CNET Page and click on the anonymous reporting link
    -

- **Next Meeting:**
  - October 25, 2022, at 13:30hrs

APPENDIX G
Reference
Documents Index

Reference Documents Index

Bus Operations Control Center Standard Operations Procedures and Reference Guide

Bus Operations Division Procedures Manual

CATS BOD100 *Preventative Maintenance Inspection (PMI) Audits*

CATS BOD104 *Configuration Change Control*

CATS Marketing and Communications Plan

CATS HR02 Drug and Alcohol Policy for Safety Sensitive Employees

City Policy HR4 Drug and Alcohol-Free Workplace

Rail Maintenance Handbook

Rail Rule Book

ROD304 *Bulletins, Notices, General Orders and Operating Orders*

CATS ROD600, *Preventive Maintenance Requirements for Rail MOW*

ROD600-series SOPs

CATS ROD801 Configuration Change Control
CATS Policy and Procedure Manual

CATS CSVS04 *Customer Insights Tracking Process*

CATS EX03 Safety Policy

CATS P&CM04 Change Control Procedure

CATS QA01 *Control of Public Records*

CATS QA02, *Control and Distribution of Plans, Manuals, Policies and Procedures*

CATS QA05 *Nonconformity and Corrective Action*

CATS QA08 *Procedure Change Request Process*

CATS S&S03 Accident/Incident Investigation and Reporting

CATS S&S05 *Hazard Communication Program*

CATS Procurement Manual

CATS Quality Manual

Safety and Security Certification Plan - BLE

Safety and Security Certification Plan - CityLYNX GL2

Transit Management of Charlotte, Inc. Substance Abuse Policy

External References

National Public Transportation Safety Plan, January 2017

North Carolina State Safety Oversight Program Standards (SSOPS)

North Carolina G.S. 20-37.19 reporting positive DOT drug or alcohol tests under 49 CFR Part 382 or Part 655.

FTA's Handbook for Safety and Security Certification (2002)

FTA posts the latest Drug and Alcohol Regulations, Rules, and Notices at: http://transit-safety.volpe.dot.gov/DrugAndAlcohol/Regulations/Regulations/default.aspx

49 U.S.C. Chapter 53

49 U.S.C.5309 discretionary construction program

49 U.S.C. 5329(d)

49 CFR Part 40 Procedures for Transportation Workplace Drug and Alcohol Testing Programs

49 CFR Part 655 Prevention of Alcohol Misuse in Transit Operations

49 CFR 672 Safety Training

49 CFR Part 673 Public Transit Agency Safety Plans

49CFR Part 674 and the SSOPS

MIL-STD-882E DEPARTMENT OF DEFENSE STANDARD PRACTICE SYSTEM SAFETY

APPENDIX H
Safety Annual
Targets and Results

CATS PTASP DATA

Fatalities (Goal: 0 per 100k mi)

Mode	2017 Incidents	2017 Rate	2018 Incidents	2018 Rate	2019 Incidents	2019 Rate	2020 Incidents	2020 Rate	2021 Incidents	2021 Rate	2022* Incidents	2022* Rate
Bus	0	0.00	0	0.00	0	0.00	2	0.02	2	0.02	1	0.02
STS	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Rail	2	0.39	1	0.10	1	0.09	0	0.00	3	0.40	0	0.00

Preventable Safety Events (Goal: 0.5 per 100k mi)

Mode	2017 Incidents	2017 Rate	2018 Incidents	2018 Rate	2019 Incidents	2019 Rate	2020 Incidents	2020 Rate	2021 Incidents	2021 Rate	2022* Incidents	2022* Rate
Bus	56	0.41	42	0.31	41	0.30	22	0.19	30	0.27	22	0.34
STS	12	0.44	13	0.47	1	0.04	0	0.00	4	0.19	4	0.37
Rail	4	0.78	11	1.06	15	1.28	7	0.75	12	1.60	5	0.95

Reportable Injuries (Goal: 0.80 per 100k mi)

Mode	2017 Incidents	2017 Rate	2018 Incidents	2018 Rate	2019 Incidents	2019 Rate	2020 Incidents	2020 Rate	2021 Incidents	2021 Rate	2022* Incidents	2022* Rate
Bus	198	1.44	113	0.84	55	0.40	43	0.38	104	0.93	77	1.20
STS	24	0.88	16	0.58	6	0.22	6	0.32	7	0.33	2	0.18
Rail	16	3.13	22	2.13	17	1.45	10	1.07	10	1.34	4	0.76

System Reliability

Mode	2017 Mean Distance in VRM Between Major Mechanical Failures	2018 Mean Distance in VRM Between Major Mechanical Failures	2019 Mean Distance in VRM Between Major Mechanical Failures	2020 Mean Distance in VRM Between Major Mechanical Failures	2021 Mean Distance in VRM Between Major Mechanical Failures	2022* Mean Distance in VRM Between Major Mechanical Failures
Bus	14,398	14,365	15,117	16,196	12,921	9,772
STS	925,336	33,486	92,128	106,149	3,044,141	27,091
Rail	3,626	3,803	4,680	5,643	4,281	4,313

(Goals: Bus < 1 per 15k mi; STS: < 1 per 60k mi; Rail: < 1 per 3k mi)

* Through July 31, 2022

APPENDIX I
Gaps for Implementation of ASP

Identified Gaps and Actions for Implementation of the ASP

#	These gaps are in no particular order. CATS will address the gaps and develop timelines to implement open action items.	Implementation Plan Section
1	As part of the implementation process, reported safety concerns will be tracked in the appropriate hazard tracking format per the Hazard Management section of this ASP.	Detailed in 2022 ASP, Section 1.7 CLOSED
2	For employee reported safety concerns, where contact information is provided, the recipient of the safety concern is responsible to follow-up with the employee.	Detailed in 2022 ASP, Section 1.7 CLOSED
3	CATS Safety and Security is being inserted in the Employee Hotline process. Action items: • Set up an e-mail to receive CATS Hotline Safety issues. John Lewis will notify the City Hotline Administrator of the CATS e-mail. • Train Employees on the purpose and use of City Hot Line as part of the anonymous employee safety reporting process.	Detailed in 2021 ASP, Section 1.7 CLOSED
4	Train CATS employees on the ASP and CATS Safety Policy.	Detailed in 2022 ASP, Section 4.6.3 Implementation Plan Phase 1 Item #1: Training Materials Complete. Frontline Training to be complete by 12/31/22 Implementation Plan Phase 1 Item #2: CLOSED
	• Need to develop plan to educate current and new employees on the new ASP and what their roles and responsibilities are related to the ASP.	Detailed in 2022 ASP, Section 4.6.3 CLOSED
5	Conduct Job Hazard Analysis in Bus and Rail Operations and Maintenance.	Phase 2 Item #11
6	For employee identified unsafe conditions, employees are expected to address safety concerns within their control immediately. Employees are expected to report unsafe conditions and issues with procedural compliance by speaking with or e-mailing a written safety report to their supervisor or manager. Develop a form for Employee observations of unsafe conditions or behavior.	Phase 1 Item #9

	• Need to develop form for Employee observations of unsafe conditions or behavior.	Detailed in 2022 ASP, Section 1.7 S&SF48 Safety Issue Reporting Form CLOSED
	• Educate employees on reporting using the form.	Detailed in 2022 ASP, Section 1.7 CLOSED
	• Work with communications to develop a summary format of incidents and actions taken.	Phase 1 Item #9f
	• Need process to loop back to Individuals filing safety concerns and provide their contact information.	Phase 1 Item #9f
7	Update CATS QA05 to include addition of Hazard ratings to identified nonconformances and following ASP for tracking hazardous conditions.	Removed in 2021 ASP, identified hazards and associated ratings are already captured in hazard management logs as stated in section 2.2.2 and 3.2.11 of the ASP. CLOSED
8	Identified Hazards will be rated based on the Hazard Risk Assessment. As part of the implementation plan, safety will appoint Safety Coordinators who will be responsible for maintaining, updating and setting up the hazard log to ensure adequacy and appropriateness of the hazard log.	Detailed in 2022 ASP, Section 2.2.4 CLOSED
9	Long term: Develop a centralized system that all hazards and safety issues can be placed so we can have a complete picture from the agency standpoint on what safety issues we are dealing with, how are they mitigated and what is being done to address the issues. Still need to decide how to capture the information from various sources and bring it into one location.	Phase 2 Item #6
10	Unacceptable Hazardous Conditions (UHCs)(1A, 1B, 1C, 2A and 2B) must be reported within two hours by e-mailing a written safety report to the General Manager, the SMS Manager and the CSO as part of the implementation plan. • Include in the ASP training • Include as part of the ASP internal audit process	Detailed in 2021 ASP, Section 2.2.2 CLOSED
11	Based on the hazards identified (section 2.2.1 and 2.2.2), safety specific topics or inspections will be conducted to address issues identified from the data analysis.	Phase2 Item #10
12	To ensure the sharing of safety data and information, Hazard Logs and Risk Registries will be available electronically in an accessible location for appropriate employees to access and review.	Phase 1 Item #15

13	Safety issues and hazards will be tracked in Hazard Management Logs, to include problems discovered, the desired resolution, the individual responsible for resolution, and the status through closure.	Detailed in 2021 ASP, Section 2.2.4 CLOSED
14	The Hazard Tracking Logs will be managed to eliminate, reduce or control each hazard to an acceptable level. Identified hazards will be assigned hazard rating. The Safety Manager and General Manager will review hazard ratings and status of the Hazard Logs monthly. When an item is added by the Office of Safety, the General Manager will be notified by e-mail. Hazard Tracking Logs will be distributed to CATS Leadership monthly. Hazard Tracking logs will be distributed to the SSC on a quarterly basis for review and discussion. • Process to capture hazards identified during proficiency checks GAP Task Amended in 2021 ASP: Hazard Tracking Logs will be distributed to CATS Leadership monthly. A safety summary will be distributed to the SSC and MTC for review and discussion.	Detailed 2022 ASP, Section 2.2.4 CLOSED
15	Utilizing the information collected in the various safety reports, a safety summary will be provided monthly to the executive management and MTC by the Chief Safety Officer. The CATS CEO will receive updates during the Senior Leadership meetings. • Develop a monthly safety report format and begin reporting by August 2020 • Develop format for reporting to senior management.	Detailed in 2021 ASP, Section 2.2.4 CLOSED
16	Rail Safety and Bus Safety will develop Risk Registers to capture, manage, and mitigate identified Undesirable and Unacceptable Hazardous Conditions. • Approved Risk Register by management	Detailed in 2022 ASP, Sections 2.1 and 2.2.5 Phase 2 Item #4
17	Corrective action plans that have been developed, shall be verified, and monitored to ensure that unexpected hazards have not developed.	Detailed in 2022 ASP, Section 2.4.2 CLOSED
18	The Office of Safety and Security will provide monthly safety program performance reports to executive management and employees.	Phase 1 Item #9f
19	The Office of Safety and Security and Quality Assurance will jointly develop and annually submit a comprehensive Internal Safety Audit schedule to NCDOT, detailing when they will audit the agency safety plan components over the three-year period.	Detailed in 2022 ASP, Section 3.2.5 CLOSED
20	The Internal Safety Audit team will identify the components of the annual safety performance assessment based on SMS and conduct a safety assessment annually.	Detailed in 2021 ASP, Section 3.2.5 CLOSED

21	Lead auditors will be certified to conduct audits by the Transportation Safety Institute or ASQ (American Society for Quality).	Detailed in 2021 ASP, Section 3.2.6 CLOSED
22	Findings from Safety audits will be added to the appropriate Hazard Management Log by the lead auditor per the Hazard Management Process. If applicable, a CAP will be created per Section 3.4.4.3 Corrective Action Plans. Any hazardous condition/deficiencies that are rated as Unacceptable will be reported by the Chief Safety Officer or SMS Manager to the CEO per the Hazard Management program. The CSO will include a summary of safety deficiencies identified during audits as part of the hazardous conditions monthly report to the CEO.	Detailed in 2021 ASP, Section 3.2.11 CLOSED
23	Identified changes to the CATS System or mitigations that have been implemented in the field will be verified and monitored by the appropriate Division staff and Office of Safety personnel to ensure the mitigation is appropriate and effective. If it is determined that a mitigation for an Unacceptable or Undesirable hazard is ineffective, the SMS Manager or the CSO will be notified, and a different mitigation will be implemented to address the issue. These changes will be managed on the Division's Hazard Management Log and the Safety Risk Registry as applicable.	Phase 2 Item #4
24	Recommendations for enhancement of the compliance methods are submitted to Division managers by the Office of Safety and Security for appropriate action.	Detailed in 2022 ASP. Section 4.5.2.4 CLOSED
25	CATS employees who are designated personnel who are directly responsible for the safety oversight of a rail fixed guideway public transportation systems are required to complete safety refresher training every two (2) years after completing the initial requirements. The refresher training must include, at a minimum, one (1) hour of safety oversight training.	Detailed in 2021 ASP, Section 4.6.3 CLOSED
26	CATS will develop a process to ensure operations employees are provided training on implemented changes that impact their duties and responsibilities.	Detailed in 2022 ASP, Section 3.5.1.2 CLOSED
27	Prepare marketing materials to raise safety awareness throughout the facilities, which may include, but is not limited to, brochures, posters, email blasts and newsletters to best accommodate every division's best communication practices.	Detailed in 2021 ASP, Section 4.7 CLOSED
28	CATS Marketing and Communications will create marketing collateral that explains proper safety procedures to be displayed in highly visible areas for the public, which may include, but is not limited to inside vehicles, social media, and audio announcements. CATS will also use email and newsletters to communicate with key stakeholders.	Detailed in 2021 ASP, Section 4.7.1 CLOSED

29	A procedure will be developed to address the See Say app as a safety reporting tool, and Marketing and Communications will leverage marketing signage, social media and video to communicate with the public and key stakeholders about this service.	Phase 2 Item #14
30	Conduct Job Hazard Analysis in Bus and Rail Operations and Maintenance	Phase 2 Item #11
31	A comprehensive program for review activities that identify where new safety training is needed, where current safety training must be revised and updated, and refresher training needs to be added to the current training requirements for employees and contractors. The program will also include updating job descriptions and training requirements for front line employees, managers and supervisors and senior managers.	Phase 2 Item #20
32	CATS Transit Asset Management (TAM) Program will be establishing the direction for Asset Management Policies. The program will establish the divisional roles and responsibilities as stated in the CATS TAM Implementation Plan. The process will tie into the review of State of Good Repair and any Unacceptable or Undesirable Hazards will be addressed by following the Hazard Management Plan in the ASP. A report rating deferred maintenance items will be provided by Operations and Facilities at the monthly Safety and Security Committee (SSC).	Phase 2 Item #19
33	As part of the implementation plan, the Office of Safety and Security will hire Safety Coordinators to work with CATS to implement various programs/activities such as hazard management processes, data collection, analysis, and reporting.	Phase 1 Item #13
34	As part of the ASP implementation plan, safety will hire Safety Coordinators who will be responsible for maintaining, updating, and setting up the hazard log to ensure adequacy and appropriateness of the hazard log.	Phase 1 Item #13
35	SMS training will be incorporated in the RWP training provided to contractors.	Added to 2022 ASP, Section 4.6.3 CLOSED
36	City IT begins the process to identify and procure a data system to meet the needs of SMS implementation.	Phase 1 Item #14
37	UAH/UDH hazards identified through inspection reports will be managed to closure and tracked using a centralized enterprise resource system.	Phase 1 Item #14
38	The Office of Safety and Security will work with CATS Marketing/Communications to develop printed and electronic summary reports that provide feedback to employees on safety concerns submitted to the various safety committees. Employees who report safety concerns to management will receive a response from their supervisor or manager on how the issue was resolved.	Added for 2021 ASP Implementation Plan Update Phase 2 Item #17