16.0 SAFETY AND SECURITY

This chapter describes the efforts of the Charlotte Area Transit System (CATS) to provide safe and secure operations of its transit services, vehicles, transit centers, light rail stations, park-and-ride lots and administrative and operating facilities associated with the alternatives under study in this Final Environmental Impact Statement (EIS). This chapter also includes an evaluation of the proposed LYNX Blue Line Extension Northeast Corridor Light Rail Project (LYNX BLE) facilities for safety or security. Mitigation is identified as necessary.

16.1 Changes to this Chapter since the Draft EIS

This chapter has been revised to reflect the identification of the Light Rail Alternative as the Preferred Alternative for the LYNX BLE, and updates to CATS Safety and Security organization.

16.2 Affected Environment

The Charlotte-Mecklenburg Police Department provides law enforcement within the City of Charlotte and some areas of Mecklenburg County. The Mecklenburg County Sheriff's Office provides additional law enforcement in Mecklenburg County. The University of North Carolina at Charlotte (UNC Charlotte) has its own police department with officers certified by the State of North Carolina. The campus is patrolled 24 hours a day, seven days a week. Officers patrol the campus in cars, on bicycles and on foot. There are over 200 emergency blue light phones located on campus.

CATS provides law enforcement on transit vehicles, at transit stations and at park-and-ride lots through the Transit Police using Charlotte-Mecklenburg Police Department officers and by contracting for private law enforcement company police officers. These police officers provide roving patrols at CATS facilities and on CATS vehicles. Surveillance of the transit stations is conducted through monitoring of Closed Circuit Televisions (CCTV) placed on each station platform and in park-and-ride facilities. Transit Police and fare Inspectors provide roving fare inspection services on all CATS light rail vehicles and at CATS light rail stations. Blue light emergency phones are located on station platforms and throughout the park-and-ride facilities. Passenger assistance phones for non-emergency use are located on each of the ticket vending machines that are also located on the station platforms.

Crime Prevention Through Environmental Design (CPTED) concepts deter criminal activity for transit stations and facilities and are used in the design of all CATS facilities. The basic principal of CPTED is to increase natural surveillance by providing good sight-lines and avoiding conditions such as tall landscaping and other features that can provide individuals with areas to hide or ways to obstruct mechanical methods of surveillance such as CCTV cameras.

16.3 Environmental Consequences

16.3.1 No-Build Alternative

The No-Build Alternative would have no impact on safety and security within the project corridor.

16.3.2 Preferred Alternative

The proposed station platforms and the park-and-ride lots would be designed using CPTED principles in accordance with the *LYNX Blue Line Extension Design Criteria* (2011).

16.3.2.1 Design Elements to Provide Safe and Secure Operations

Station Platforms and Park-and-Ride Facilities:
The station platforms are being designed using CPTED design principles to increase natural surveillance opportunities. CCTV cameras would be placed on every platform and within park-and-ride facilities and monitored by Transit Police and CATS' Operations personnel. Blue light emergency phones would be available at regular intervals at park-and-ride locations. The ticket vending machines would contain Passenger Assistance Telephones that would link to the central control center. Transit Police would provide roving patrols along the corridor, at stations, and at the proposed park-and-ride facilities. Transit

Police would also monitor proof of payment. Intercoms on transit vehicles would be used to make emergency announcements. Each station platform would be equipped with a public notification system to inform transit users of emergency procedures. Safety elements that would be put in place for multi-use paths and access to the station and park-and-ride lots would include transition walkways; blue light emergency phones; limited entry and exit points; and provisions for persons with disabilities. The design of the parking garages for the University City Blvd. Station and the JW Clay Blvd. Station also includes office space for on-site security.

Rail Safety:
Between 30th Street and Old Concord Road the light rail would operate in the NCRR right-of-way. The design would include a separation of at least 54 feet between the existing freight tracks and the proposed light rail tracks. Fencing would be placed between the existing freight and proposed light rail tracks that would contain an intrusion detection device to alert the CATS Rail Operations Control Center in the event of a derailment of either a CATS Light Rail Vehicle (LRV) or a freight train that would cause a break in the fence. Gates with an active warning system would be used at all grade crossings. As required by the Federal Railroad Administration (FRA), horns would be used to alert motorists, pedestrians and bicyclists that a train is approaching the crossing.

Vehicular, Bicycle, and Pedestrian Safety:
Vehicle, bicycle and pedestrian safety provisions would be made to minimize conflicts between automobiles, bicyclists and pedestrians. Crossings would be clearly marked with signage and would be limited to dedicated locations. Rail crossing gates would be used to stop vehicles at the railroad tracks. The gates would include an active warning system that would alert the control center of any interference with the gates. Bicycle and pedestrian crossings would be provided at all street and rail crossings. Fencing would be placed along the edge of all retaining walls in areas where evacuation paths are adjacent to the tracks.

From approximately Old Concord Road to just north of JW Clay Boulevard, the light rail would operate in the median of North Tryon Street/US-29 with platforms located in the center of the roadway. The right-of-way of North Tryon Street/US-29 is owned by North Carolina Department of Transportation (NCDOT) and an eight-foot clear zone would be provided between the light rail trackway and adjacent traffic. Left turns and U-turns would be limited to locations at signalized intersections in order to reduce conflicts with light rail vehicles. Walkways and crosswalk signal boxes would be provided to facilitate pedestrian and bicycle movements at all intersections and to provide crossings between the park-and-ride facilities and the station platforms.

16.3.2.2 Operational Provisions for Safety and Security

The CATS Office of Safety and Security oversees the security operations of the CATS transit facilities and vehicles and manages the safety review of all plans for CATS capital improvements such as light rail. Team members are certified in CPTED procedures and conduct design reviews for all CATS capital facilities. The General Manager for the Office of Safety and Security serves as the Chairperson of CATS' Safety and Security Review Committee. As such, the General Manager oversees the safety certification process with the Federal Transit Administration (FTA) and ensures that the design criteria address the requirements of the Project Management Plan (PMP) and Safety and Security Management Plan (SSMP). Responsibilities also include the application of the design criteria during the design and construction phases of the proposed project.

The Office of Safety and Security is actively engaged in efforts to improve and reduce security threats to transit patrons and employees. The Office operates under a set of Standard Operating Procedures that are updated on an annual basis. All CATS employees are certified under a Transit Worker Identification Certification program and are identified with badges that provide access to the CATS facilities in which they work.

Office of Safety and Security staff are members of a number of committees that coordinate law enforcement and safety activities in the Charlotte-Mecklenburg region and within North Carolina, including: the Fire Life Safety Committee, FTA's roundtable related to transit and terrorism, and the North

Carolina Joint Terrorism Task Force. The Office of Safety and Security conducts a vigorous safety training program for all CATS staff, including light rail operators, Transit Police, designers and City management staff.

The design elements of the Preferred Alternative and the procedures of the CATS Office of Safety and Security indicate that CATS is taking proactive measures to provide safe and secure transit operations. The Preferred Alternative would provide a center of activity at the transit stations that would provide the opportunity for increased pedestrian traffic and more natural surveillance of the transit facilities and the surrounding community, resulting in a positive impact on safety and security within the communities that the stations are located in.

The Preferred Alternative would result in a change in the configuration of North Tryon Street/US-29; however, the redesign of North Tryon Street/US-29 with added light rail facilities would result in restricted turning movements and the redesign of crosswalks at each station location. These modifications would improve conditions for vehicles over the No-Build Alternative at signalized intersections where protected only phasing would be provided. The Preferred Alternative would require pedestrians to be alert to both automobile traffic and light rail traffic while crossing over North Tryon Street/US-29 and would therefore make the pedestrian crossing of the street more complex. While pedestrians would have to be aware of both light rail and motor vehicles when crossing the street, pedestrian signals and railroad gates and signals would be provided to help inform pedestrians when they should cross the street and/or railroad tracks. A pedestrian refuge area would also be provided between the light rail tracks and adjacent traffic lanes at all signalized intersections. Stations that have center platforms would add an additional stopping point where pedestrians can stand. The Preferred Alternative has the potential to result in a short-term increase in vehicular conflicts while drivers, bicyclists and pedestrians are getting accustomed to the alteration of North Tryon Street/US-29 and the need to look for both automobiles and light rail vehicles. No long-term negative impact on safety and security would be anticipated.

16.4 Mitigation

The design elements listed in Section 16.3.2.1 will be included in the project design to provide for safe and secure operations of the Preferred Alternative. Through their participation in the engineering plan design review process, the Charlotte Department of Transportation will ensure that the design elements specifically related to walkways and crosswalk signal boxes for pedestrians traveling to and from the light rail station in the immediate vicinity of the station platforms and park-and-ride lots are included in the project design. CATS will also continue its public outreach regarding driver safety within the Northeast Corridor to minimize potential for vehicular and pedestrian/vehicular conflicts that could occur as a result of the light rail line running in the existing median of North Tryon Street/US-29.