Austin Transit Partnership

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Austin Light Rail Phase 1 Project

Safety and Security Technical Report

Austin, TX

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Acronyms and Abbreviations

Term/Acronym	Definition
ATCEMS	Austin-Travis County Emergency Medical Services
ATP	Austin Transit Partnership
CapMetro	Capital Metropolitan Transportation Authority
CFR	Code of Federal Regulations
City	City of Austin
DEIS	Draft Environmental Impact Statement
FTA	Federal Transit Administration
I-35	Interstate 35
OMF	Operations and Maintenance Facility
Project	Austin Light Rail Phase 1 Project
UT	University of Texas at Austin

1 Introduction

The Federal Transit Administration (FTA) and Austin Transit Partnership (ATP) are completing an environmental review of the Austin Light Rail Phase 1 Project (the Project) in Austin, Texas. This safety and security technical report was prepared to support the Project's Draft Environmental Impact Statement (DEIS) in accordance with the National Environmental Policy Act and related laws and regulations. FTA and ATP are the Lead Agencies in the National Environmental Policy Act process.

The purpose of the safety and security technical report is to evaluate potential effects of the Build Alternative and the Design Options with respect to onboard passenger and operator safety, bicycle and pedestrian safety, station area security, emergency response, and facility design. This technical report documents the affected environment, identifies potential effects of the No Build and Build Alternative and the Design Options, and describes mitigation measures that would effectively manage risk associated with construction and operation of the Project.

2 Regulatory Setting

Public safety and security are important components of any transit improvement project. There are numerous federal, state, and local regulations governing safety. The Project would comply with relevant federal and state plans, policies, and regulations described below.

2.1 Federal

2.1.1 Railroad Safety Statutes and Regulations (49 United States Code Sections 201–213 and 49 Code of Federal Regulations Parts 670–674)

These railroad safety statutes mandate a set of requirements to promote safety in an effort to reduce accidents and incidents associated with railroad operations. Under these statutes, Congress authorized FTA to issue regulations at 49 Code of Federal Regulations (CFR) Parts 670–674 pertaining to its public transportation safety program (Part 670), safety certification (Part 672), agency safety plans (Part 673), and state safety oversight (Part 674). Part 673 requires states and certain operators of public transportation systems that receive federal financial assistance under 49 United States Code 53 to develop public transportation agency safety plans based on the Safety Management System approach. Operators of public transportation systems are required to implement safety and security plans. The development and implementation of safety and security plans will help ensure that public transportation systems are safe nationwide (49 CFR 673).

2.1.2 Department of Homeland Security / Transportation Security Administration (49 CFR 1580)

The enactment of the Aviation and Transportation Security Act (49 CFR 1580) in November 2001 established the Transportation Security Administration as the agency responsible for transportation security screening and enforcement (49 United States Code 114). The Transportation Security Administration's administrative rules for rail transportation security are codified under 49 CFR 1580.

2.1.3 Transportation Security Administration – Security Directives for Passenger Rail

These directives require rail transportation operators to implement certain protective measures, report potential threats and security concerns to the Transportation Security Administration, and designate a primary and alternate security coordinator. Specifically, Security Directives RAILPAX-04-01 and RAILPAX-04-02 would be applicable to this Project.

2.2 State

The Texas Department of Transportation acts as the State Safety Oversight Agency, which oversees each rail transit agency, operated for public transportation, located within the State of Texas that is not subject to the jurisdiction of the Federal Railroad Administration, or any such system in engineering or construction. Rail transit agency public transportation systems include rapid rail, heavy rail, light rail, monorail, trolley, inclined plane, funicular, and automated guideway.

2.2.1 Senate Bill 1523, Unfunded Mandates Information and Transparency Act of 2017

The enactment of Senate Bill 1523 in 2017 provided the Texas Department of Transportation with the authority to establish and enforce minimum safety standards for the safety of all rail transit agencies within its oversight. These standards are consistent with the National Public Transportation Safety Plan (FTA 2024), Public Transportation Safety Certification Training Program, rules for Public Transportation Agency Safety Plans, and all other applicable state and federal laws.

2.2.2 Texas Administrative Code Title 43, Part 1, Chapter 7

Chapter 7, Subchapter E – Rail Fixed Guideway System State Safety Oversight Program, of the Texas Administrative Code, describes how the Texas Department of Transportation will carry out its State Safety Oversight Agency Program responsibilities consistent with both state and federal requirements. It provides a legal framework, consistent with the program standard, for each rail transit agency in Texas to follow to create, implement, and administer program requirements for their respective agencies. Relevant to safety, it includes provisions to address identified hazards and safety concerns that require mitigation.

2.2.3 Texas Commission on Law Enforcement

The Texas Commission on Law Enforcement functions as the regulatory agency for all peace officers in Texas. It offers certifications for police officers, jailers, and dispatchers. The mission of the Texas Commission on Law Enforcement is "to establish and enforce standards to ensure that the people of Texas are served by highly trained and ethical law enforcement, corrections, and telecommunications personnel" (Texas Commission on Law Enforcement 2023).

2.3 Local

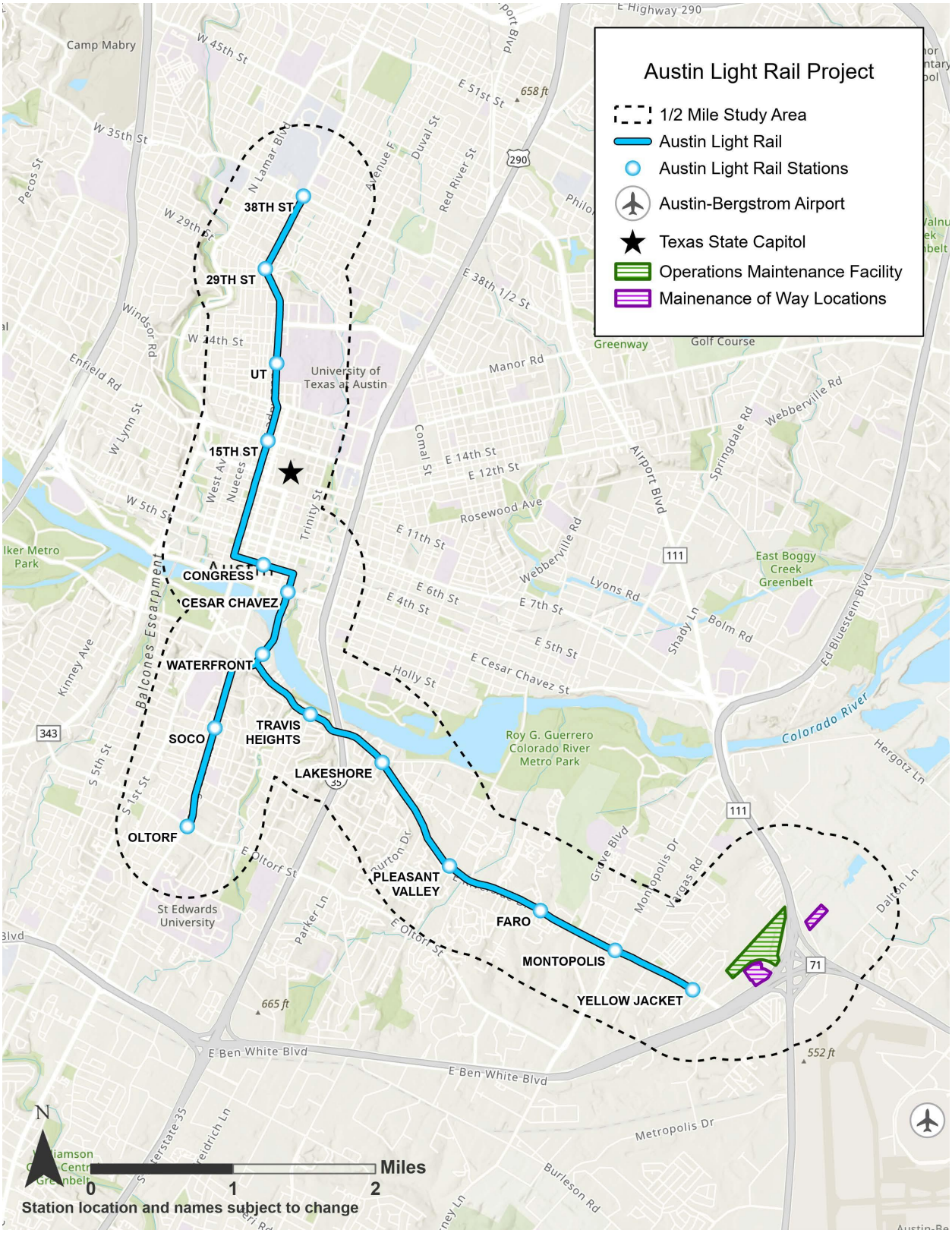
The City of Austin (City) and Travis County have four safety and emergency management plans: *Travis County Comprehensive Emergency Management Plan* (2021); *Travis County Hazard Mitigation Plan Update* (2017); the City's *Pedestrian Safety Action Plan* (2018); and *City of Austin Emergency Operations Plan* (2020). The *Pedestrian Safety Action Plan* (City of Austin 2018) provides a comprehensive strategy for addressing pedestrian safety in Austin. The plan also aims to encourage more walkable environments that support sustainable, socially equitable, and affordable future developments. The plan offers 21 recommendations to reduce injury to pedestrians.

3 Methodology

The data collection and impact assessment methodology used to assess safety and security are described below. The Study Area considered for the analysis is shown in **Figure 1** and includes the area within 0.5 mile on either side of the proposed alignment and stations.

Austin Transit Partnership

Figure 1: Study Area



3.1 Data Collection

The data sources reviewed for the safety and security analysis are provided in **Table 1**.

Table 1: Data Sources

Focus Area	Data Source
Onboard Passenger and Operator Safety	National Transit Database Safety and Security Time Series 2017–2023 (FTA 2023), City of Austin *Vision Zero Two-Year Plan: 2021–2022* (City of Austin 2023a)
Bicycle and Pedestrian Safety	City of Austin Open Data Portal (City of Austin 2023b)
Safety and Security at Facilities	City, state, and national Federal Bureau of Investigation data (2023)
Emergency Response	City of Austin Open Data Portal (City of Austin 2023b); Austin Police Department, Crime Search (Austin-Travis County Emergency Medical Services [ATCEMS] 2023)

3.2 Impact Assessment

The assessments of onboard passenger and operator safety, bicycle and pedestrian safety, safety and security at facilities, and emergency response consider the Build Alternative as a whole and discuss key differences among the Design Options, as appropriate.

3.2.1 Onboard Passenger and Operator Safety

The assessment of onboard passenger and operator safety documents the risk to passengers using rail, relative to other modes of travel available under the No Build Alternative.

3.2.2 Bicycle and Pedestrian Safety

Bicycle and pedestrian safety was evaluated through the lens of proposed changes to bicycle/pedestrian connectivity in and around the Study Area, by reviewing existing and planned (No Build) bicycle/pedestrian conditions along the Project corridor and at all proposed station locations. The bicycle and pedestrian safety analysis builds on the previously completed Orange and Blue Line Planning and Environmental Linkages studies (Capital Metropolitan Transportation Authority [CapMetro] 2020a and 2020b).

3.2.3 Safety and Security at Facilities

Crime rates were evaluated at the City level and used to determine potential conditions at Project stations, park-and-rides, and the operations and maintenance facility (OMF). Potential security hazards were measured using 2023 Federal Bureau of Investigation crime rates for jurisdictions where Project facilities are proposed. Crime rates are categorized according to the standards used by the Federal Bureau of Investigation's Uniform Crime Reporting Program, a program that is used to standardize and track reporting of crime on a national level.

3.2.4 Emergency Response

The emergency response analysis catalogs the fire stations, police stations, emergency response centers, and in-patient medical centers in the Study Area. A geographic analysis was conducted to relate the preliminary engineering design street network effects (see **DEIS Appendix D**) to these emergency service providers to determine the relative potential to affect emergency response times.

4 Affected Environment

This section provides an overview of the affected environment and available resources related to onboard passenger and operator safety, emergency response, station area security, and bicycle and pedestrian safety within the Study Area.

4.1 Onboard Passenger and Operator Safety

The City's Vision Zero High-Injury Network identifies streets with a relatively high number of serious injuries and fatal crashes as a tool for prioritizing locations for engineering, education, or enforcement interventions (City of Austin 2022). The City's Transportation and Public Works Department has identified 13 initial project areas from their "High Injury Network" to implement immediate, low-cost solutions. Two of these project areas are in the Study Area: one on Riverside Drive and the other on South Pleasant Valley Road. As shown in **Figure 2**, improvements to these project areas are substantially complete.

According to the *Vision Zero Two-Year Update: 2021-2022*, Vision Zero completed four major intersection safety improvement projects within the Study Area, including Congress Avenue and Oltorf Street, Pleasant Valley Road and Elmont Drive, Interstate 35 (I-35) and 7th Street, and I-35 and 8th Street (City of Austin 2023a). The program's investments have started to show safety improvement, including a 31 percent reduction in serious injury and fatal crashes and nearly 100 fewer total crashes per year at major intersection safety project locations. However, fatal crashes on state-owned roadways continued to increase in 2021 and 2022 while fatal crashes on non-state-owned roadways remained relatively flat. Pedestrian fatalities also continued to rise, and Austin's Black population continued to be substantially overrepresented among severe crash victims. While Black people make up less than 7 percent of the Austin population, they accounted for 15 percent of people seriously injured or killed in crashes in 2021 and 2022 (City of Austin 2023a).

Figure 2: High-Injury Roadway Improvements

Source: City of Austin 2022.

4.2 Bicycle and Pedestrian Safety

DEIS Appendix D provides existing bicycle and pedestrian facilities maps, including the existing sidewalk networks. Within the Study Area, bicycle and pedestrian facilities include off-street urban trails, sidewalks along roadways, pedestrian signals, curb ramps, and pedestrian crosswalks. Roadway intersections are controlled by either a traffic signal or stop sign. Existing bicycle facilities and sidewalks lack connectivity in some locations throughout the Study Area.

Currently, large volumes of bicyclists and pedestrians interact with the Project corridor at existing CapMetro Rapid station locations and throughout the University of Texas at Austin (UT) campus, South Congress, and downtown areas. Bicycle and pedestrian activity is likely to increase throughout the corridor as a result of increasing population, job densities, and planned transportation improvements. While the sidewalk network is more complete between UT West Mall station and Republic Square (93 to 96 percent), peak pedestrian volumes can exceed sidewalk capacity during special events or when UT is in session.

4.3 Safety and Security at Facilities

Local crime rates are a key factor in understanding facility security risks. The type of crime that is typical at or near transit system facilities can be divided into three categories: systemic, on employees, and on patrons. Systemic crimes include vandalism on vehicles, facilities, or destruction of property. Crimes against employees include assaults on operators and employees in facilities. Finally, crimes on patrons range from petty theft to assault. Austin has higher crime rates compared to the State of Texas and the United States overall. When compared to the state, Austin has substantially more violent crimes: robbery (38 percent more) and aggravated assault (25 percent more). When compared to the national rates, Austin has substantially more violent crimes: rape (36 percent more), robbery (47 percent more), and aggravated assault (42 percent more). When compared to the state, Austin has substantially more property crimes (20 percent more), burglaries (46 percent more), larceny/thefts (55 percent more), and vehicle thefts (67 percent more); when compared to the national rates, Austin has substantially more property crimes (46 percent more), burglaries (85 percent more), larceny/thefts (81 percent more), and vehicle thefts (96 percent), as shown in **Table 2**.

Table 2: Reported Crime Rates for 2022 per 100,000 Residents

Location	Homicide	Rape	Robbery	Aggravated Assault	Property Crime	Burglary	Larceny /Theft	Vehicle Theft
City of Austin	7.1	54.7	97.3	381.2	3590	498.9	2536.3	554.6
Texas	6.7	50.0	70.5	304.7	2999.9	334.3	1634.4	331.2
National	6.3	40.0	66.1	268.2	1954.4	269.8	1401.9	282.7

Source: Federal Bureau of Investigation 2023.

4.4 Emergency Response

Emergency service providers include fire (Austin Fire Department), law enforcement (Austin Police Department), and emergency medical services (Austin-Travis County Emergency Medical Services [ATCEMS]). Medical services include hospitals and in-patient emergency facilities, including any in-patient behavioral health facilities. Fire, police, and ATCEMS districts that intersect the Study Area are documented in the following sections. **Figure 3** shows the fire, police, and ATCEMS stations located in the Study Area.

4.4.1 Fire Response

Six fire stations are located within the Study Area, as shown in **Table 3** and **Figure 3**.

Table 3: Fire Stations within the Study Area

Name	Location
Austin Fire Department, Station 1	401 East 5th Street
Austin Fire Department, Station 2	506 West Martin Luther King Jr. Boulevard
Austin Fire Department, Station 3	201 West 30th Street
Austin Fire Department, Station 6	1705 South Congress Avenue
Austin Fire Department, Station 9	4301 Speedway
Austin Fire Department, Station 22	5309 East Riverside Drive

Source: City of Austin 2023.

4.4.2 Police Response

The Austin Police Department consists of 2,570 law enforcement officers and support personnel. There is currently an officer shortage with approximately 360 officer vacancies with an additional approximately 200 vacancies in support personnel, which can lead to longer than target response times throughout the City. One Austin Police Department police station and two campus-associated police departments are located within the Study Area, as shown in **Table 4** and **Figure 3**.

Table 4: Police Stations Within the Study Area

Name	Location
Austin Police Department Headquarters	715 East 8th Street
Austin Community College Campus Police Department – Rio Grande Campus	1212 Rio Grande Street
University of Texas System Police	702 Colorado Street

Source: City of Austin 2023.

Figure 3: Fire, Police, and Emergency Medical Services Stations Within the Study Area

4.4.3 Emergency Medical Services

The ATCEMS Department provides 9-1-1 emergency medical response to the citizens of Austin and Travis County and serves a population of more than 2.2 million in a service region of more than 1,039 square miles. As shown in **Table 5** and **Figure 3**, five ATCEMS stations and two additional ATCEMS teams are located within the Study Area. A few of the stations are collocated with Austin Fire Department stations.

Table 5: Emergency Medical Services Stations Within the Study Area

Name	Location
ATCEMS Medic Station 12	5309 East Riverside Drive
ATCEMS Headquarters and Demand Medic Station 4	15 Waller Street
ATCEMS Medic Station 6	401 East 5th Street
ATCEMS Demand Station 5	415 West 2nd Street
ATCEMS Medic Station 3	1305 Red River
ATCEMS Demand Medic Station 3	1705 South Congress Avenue

Source: ATCEMS 2023.

5 Environmental Consequences

This section analyzes the potential safety and security effects of the No Build Alternative, the Build Alternative, and the Design Options.

5.1 No Build Alternative

The No Build Alternative serves as the baseline from which to compare the effects of the Build Alternative. Under the No Build Alternative, the Project would not be built. Existing CapMetro Bus routes and the existing Red Line service would continue, as defined in the April 2019 CapMetro transit network. Furthermore, the No Build Alternative is defined as the existing transportation system as well as any committed highway and transit improvements defined in the *2045 Regional Transportation Plan* (Capital Area Metropolitan Planning Organization 2024), except for the Project. Any effects related to safety and security as a result of the planned improvements are unknown at this time and would be determined for each individual project.

Other safety and security hazards could increase relative to existing conditions as a result of planned projects, employment, and population growth. These hazards could include:

- traffic accidents and related injuries and fatalities due to increased population use and existing transit capacity;
- frequency of the criminal activity with population increases;
- long emergency response times due to increases in traffic congestion;

- increased demand of law enforcement, fire protection, and overall emergency services due to an increase in employment and population; and
- increased hazards for bicyclists and pedestrians as they travel in the corridor.

Alternatively, under the No Build Alternative, there are also safety and security improvements being made. Until recently, CapMetro has relied on the Austin Police Department to provide security and respond to distress calls on CapMetro property. Because the continuing growth of Austin may strain the Austin Police Department, CapMetro has implemented a Public Safety Program. The Public Safety Program takes a three-pronged approach to addressing public transit safety by using public safety ambassadors, community intervention specialists, and transit police officers to support the program. The role of public safety ambassadors is to ride CapMetro services and respond to immediate safety concerns, provide directions, and connect riders with appropriate resources. Intervention specialists are on-staff social workers equipped to respond to quality-of-life issues, such as connecting individuals to essential resources like food, housing, or health care, and are available to provide mental health first aid training to CapMetro employees. The Program's police officers prevent and investigate crimes committed within CapMetro's property and contact the Austin Police Department when needed.

5.2 Build Alternative and Design Options

5.2.1 Onboard Passenger and Operator Safety

The Build Alternative would introduce a new, comparatively safe transportation alternative for those in the corridor.

Train derailments occur when any of a train's wheels leave its designated location on the track. Except in cases of emergency or special circumstances, light rail vehicles would operate on separate tracks for each direction of service (i.e., there would be no bi-directional tracks) to reduce the risk of rail-on-rail collisions. The potential for derailment would be mitigated through design (i.e., curvature and operating speed restrictions would be consistent with industry best practices) and regular maintenance of the light rail track and equipment. Light rail vehicles and automobiles would have separate rights-of-way to minimize the potential for collisions. While there is a risk that automobiles would turn in front of the light rail vehicles, collision risk at grade crossings would be mitigated by using signals, gates, and whistles.

The potential for fire on the light rail trainset or at facilities is low because the system would be constructed primarily of steel and concrete and there would be no source of combustible fuel on the vehicles or in the stations, with the exception of fuel needs at the OMF. Mechanical failure could pose some risk to passengers or employees if it results in being confined to a non-operational vehicle and could introduce safety hazards for employees performing emergency maintenance. Additionally, mechanical failure of the doors could affect the safety of boarding or alighting passengers. The occurrence of mechanical failure would be minimized by implementing an inspection, testing, and maintenance program. Any hazards posed by the electrical power system would be managed per regulatory requirements.

5.2.2 Bicycle and Pedestrian Safety

The Build Alternative would improve bicycle and pedestrian connectivity by creating consistent, connected, and dedicated bicycle/pedestrian lanes and shared use paths. Pedestrian crossings across the guideway would be permitted at signalized intersections via crosswalks with pedestrian signals. In addition, separate signalized pedestrian crossings with pedestrian-activated signals would be provided where the spacing of signalized intersections is considered too far apart to provide for safe pedestrian crossings, particularly near proposed stations. Pedestrian crossing protection measures in open transit areas such as UT have yet to be determined but could likely include restricted crossing access.

Compared to existing CapMetro Rapid buses, the larger light rail vehicles and additional doors for boarding and alighting would reduce bicycle/pedestrian conflicts, particularly in high-volume pedestrian areas like along Guadalupe Street through the UT campus, also known as “the Drag.”

Multiple doors (more entry/exit options) reduce congestion by dispersing crowds of passengers and providing better visibility for vehicle operators at stations, lowering the potential for accidents.

Under the Build Alternative, Guadalupe Street would function as a transit/bike/pedestrian-only corridor, with general traffic redirected to the surrounding roadways. In this location, a 12-foot-wide bike lane would be built on each side of the guideway, which may also be used for emergency and delivery vehicles. Between Congress Avenue and Colorado Street, 3rd Street would be converted to a transit/bike/pedestrian-only corridor, and the existing bicycle lane would be relocated to 4th Street. For all Design Options, dedicated bicycle and pedestrian lanes would be provided on an either an attached or separate structure crossing Lady Bird Lake adjacent to the light rail bridge with connections to existing and planned bicycle and pedestrian paths on each shore.

The Center-Running Bike/Ped. and Shade Tree Facilities on East Riverside Design Option would provide center-running bicycle and pedestrian facilities east of I-35 on East Riverside Drive. Under this Design Option, bicycles and pedestrians would be fully buffered from vehicular traffic. Bicyclists and pedestrians would be provided crossings at specific locations to access the center-running lanes to discourage crossing outside of those locations. Under the Build Alternative, protected curbside bicycle and pedestrian facilities or shared use paths would be provided. In either case, fewer conflicts among bicycles, pedestrians, and motor vehicles would be expected to occur due to the safety features included in the Project’s design and the decreased traffic volumes in the Study Area. **DEIS Appendix D** discusses the traffic analysis.

5.2.3 Safety and Security at Facilities

Safety and security design elements for the stations, guideway, park-and-rides, and OMF would comply with the American Public Transportation Association’s Crime Prevention Through Environmental Design and would meet applicable emergency access/egress and structural federal emergency preparedness requirements. Many transit systems use Crime Prevention Through Environmental Design by creating open sightlines and providing ample lighting at stations and park-and-rides, security cameras, and access fencing/barriers. Applying Crime

Prevention Through Environmental Design throughout the system to create a design can affect behaviors and reduce risk by:

- providing guidance to transit planners, designers, and builders;
- deterring criminal activity;
- increasing perceived risk of apprehension;
- maximizing the perceived presence of transit and law enforcement staff;
- minimizing out-of-sight activity; and
- managing access to authorized areas and controlling access to non-public areas.

Applicable Occupational Safety and Health Administration and National Fire Protection Association standards for emergency access and egress; Americans with Disabilities Act requirements; International Building Code standards adopted by Texas Local Government Code 214.216; and other structural design, fire life safety, and accessibility standards specified under local permitting requirements would be employed. Prior to beginning regular service operations, ATP would develop an Inspection, Testing, and Maintenance Plan that specifies minimum standards and schedules for inspection, testing, and maintenance of vehicles, track, and other critical infrastructure required for the prevention of mechanical failures. During operations, CapMetro would perform the specified inspections, tests, and maintenance tasks at the identified intervals.

By adopting Crime Prevention Through Environmental Design criteria, the Build Alternative would create stations and area designs to deter possible criminal activity. Stations and other Build Alternative facilities would be designed to maximize visibility. Such designs would provide reciprocal observations from public areas into the facilities, bring transit riders to new activity hubs in the area, and strengthen community involvement within public spaces. At-grade crossings would be fully equipped with modern safety features, including grade crossing warning systems and, in some cases, gate arms/mechanisms.

Station areas, park-and-rides, and the OMF would be in active areas with adequate lighting and security cameras and designed in accordance with Crime Prevention Through Environmental Design principles to deter possible criminal activity. Access would be restricted at the OMF via a 24-hour guard booth and security fencing around the site's perimeter. In addition, the CapMetro dedicated police department would be employed to prevent and investigate crimes committed within CapMetro's property, which would include the station areas, park-and-rides, and OMF. There would be nominal differences between the Build Alternative and the Design Options because safety and security measures would be implemented uniformly at all facilities.

5.2.4 Emergency Response

Traffic analyses performed for the Build Alternative and Design Options found that the traffic volumes would decrease compared to the No Build Alternative along the corridor due to the reduction in vehicle miles traveled. Overall, the Build Alternative would reduce personal vehicle trips, resulting in fewer cars at intersections as compared to the No Build Alternative traffic volumes. Traffic flow would retain similar patterns to the No Build Alternative: The AM peak

period would have prominent flow toward the direction of downtown, while PM peak period would have traffic flow away from downtown. The Build Alternative would shift traffic patterns in various areas along the corridor. Roadways and intersection modifications (to be designed in accordance with the City's Transportation Criteria Manual) would include protected bicycle and pedestrian facilities behind the curb (either separate raised bicycle lane and sidewalk or, where constrained, a shared use path). Intersections would be designed as protected intersections, with physical separation for bicyclists, pedestrians, and motor vehicles (see the conceptual design drawings in **DEIS Appendix C**). At-grade intersections would create delays and interruptions to traffic flow, especially during the peak AM and PM periods. Cross movements of at-grade roadway intersections would experience increased delay as traffic signal priority would be given to light rail vehicles. This would cause a brief interruption of traffic flow. Vehicles moving north or south along the Project corridor would benefit from the same transit signal priority improvements designed to improve light rail transit travel speeds. Negative effects on emergency response times are more likely for street movement perpendicular to the Project corridor and may occur through:

- reduced speeds due to traffic or level of service effects on the existing grid; or
- physical modifications to corridor intersections, which would limit particular movements and require alternate routing of an emergency response vehicle.

To mitigate this potential effect, ATP would conduct an emergency vehicle response analysis and coordinate with emergency response providers to establish an emergency response plan and communication protocols to address any increase in response times during Project construction, beginning in 2026, and operation, beginning in 2033.

Elevating the Waterfront Station under the Lady Bird Lake Bridge Extension Design Option would eliminate the potential for conflicts with east-west movements by grade-separating (elevating) the track at Riverside Drive, which would benefit emergency responders from Austin Fire Station 6 and ATCEMS Demand 3. Provisions for emergency access under the other Design Options and their effect on response times will be further analyzed as the Project design is advanced, as will any movement restrictions associated with the at-grade alignment in downtown.

5.2.5 Construction-Related Effects

Effects on pedestrians would occur as sidewalks would be temporarily closed during construction. Safe pedestrian detour would be provided around construction areas. If not properly operated, secured, and maintained, construction equipment could create a risk due to potential theft of equipment. As is common in infrastructure projects, construction site access would be limited to authorized personnel. Temporary road closures and modified traffic routing would occur during the construction period. At these construction sites, lane closures and detours could potentially create a distraction to automobile drivers, bicyclists, and pedestrians, resulting in potential safety effects. In addition, road closures, detours, and localized automobile congestion could increase the response time for law enforcement, fire and emergency services personnel, transit, and school buses. The resulting localized automobile congestion could

increase the response time for emergency vehicles, including law enforcement, fire, and ATCEMS, as noted in **DEIS Appendix D**.

6 Mitigation

ATP would comply with local, state, and federal safety and security plans, policies, and regulations, and greater or unusual safety and security concerns would not be expected to occur under the Build Alternative or the Design Options. Under 49 CFR 673, ATP would develop an Agency Safety Plan and annually assess implementation and report findings to FTA. The Texas Department of Transportation would serve as the state safety oversight agency.

In addition, ATP would coordinate with emergency response providers to establish an Emergency Response Plan and communication protocols to mitigate any increase in response times during Project construction and operation. ATP would also develop an Inspection, Testing, and Maintenance Plan that specifies minimum standards and schedules for inspection, testing, and maintenance of vehicles, track, and other critical infrastructure required for the prevention of mechanical failures. During operations, ATP would ensure that the specified inspections, tests, and maintenance tasks are performed at the identified intervals.

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