



As part of the property acquisition process, sites within the proposed right-of-way that have structures will be surveyed for the presence of asbestos-containing materials (ACM). The results of these surveys will determine whether or not additional impacts exist due to the presence of these hazardous/regulated materials. If the presence of these materials is confirmed during the survey, mitigation measures will be initiated as part of demolition and construction activities. DART has in place an on-going due diligence policy and program to assess the environmental condition of all properties contemplated for purchase as right-of-way or for the siting of transit facilities. Under this program, DART performs a separate Phase I Environmental Site Assessment (ESA) of each parcel or site under consideration for purchase in order to assess its specific probability for contamination. A Phase II ESA may also be undertaken to identify and quantify hazardous/regulated materials so the resulting need for cleanup or mitigation can be factored by Real Estate.

5.11 SAFETY AND SECURITY

The construction and operation of public transit projects increases multi-modal traffic and the potential for conflicts with automobiles and pedestrians. The ensuing safety and security issues center around avoiding accidents between competing travel modes and ensuring the daily safety of transit patrons at and near station areas, as well as persons and automobiles who must cross the alignment. Consequently, transit projects can place additional demands on police and fire protection services in the communities they serve. The impacts on safety and security issues for the No-Build and the LRT Alternatives are described below.

The potential safety and security impacts associated with the No-Build and LRT Alternatives address a wide range of considerations including:

- Police protection and community safety services;
- Fire protection and emergency medical services;
- Pedestrian activity; and
- Station area activity.

5.11.1 No-Build Alternative

The No-Build Alternative would expand bus services and facilities in the project corridor in accordance with the DART Five Year Action Plan. DART Transit Police and the municipal police departments of Dallas and Irving would continue to provide public safety services without the need for significant additional resources beyond those already planned to keep up with growth.

5.11.2 LRT Alternative

Impacts on Police Protection and Community Safety Services

The proposed project is not expected to cause any impact to demand for municipal police protection or community services. Police protection would be required for project security during both the construction and operation of the proposed project, but DART would take responsibility for project and public security by providing both uniformed and undercover transit police on its vehicles and at station areas. Should it become necessary, DART staff would work with local police to apprehend criminals.

One Dallas Police Department Division (Northwest Operations) is located within the corridor north of Love Field near the proposed Bachman Station. No project-related impacts are expected to effect that division. The Irving Police Department operates a storefront in the Las Colinas Urban Center at 385 E. Las Colinas Boulevard. No project-related impacts are expected to affect this facility.

DFW Airport has jurisdiction for police protection on airport property. There are no DFW Airport police facilities located within the corridor.



Both the University of Dallas and North Lake College operate an internal police force on their campuses. Additionally, the Las Colinas Association operates a private force that supplements the Irving Police Department by monitoring alarms and patrolling member properties in Las Colinas. No project related impacts are expected to affect these facilities.

The presence of DART Transit Police and other personnel would serve to reduce the volume of crime at stations. The project would not require increased staffing for local police within either of the affected municipalities.

Police Protection and Community Safety Services Mitigation

DART Transit Police provide frequent random patrols of the stations and trains. The LRT vehicles include an operator-controlled silent alarm to alert DART Transit Police to a security problem, radio communications between trains and the central control center and a two-way emergency communication system between the train operator and passengers.

At the University of Dallas Station, where the station would be partially below-grade (between the frontage road and the main lanes of SH 114), special security measures have been designed. In addition to roaming DART security officers, the station would be equipped with a “panic button” that sounds an alarm and activates a two-way communication device to the DART security headquarters.

Before start-up, DART would host security sessions with police, fire, schools, emergency response teams, employers, and other interested parties located within the corridor. The information sessions would cover the details of LRT operations, potential security issues and agency responsibilities.

Impacts on Fire Protection and Emergency Medical Services

There is currently one fire station located within the corridor. It is located on East Las Colinas Boulevard in the Las Colinas Urban Center. The LRT Alternative may require fire protection services for control of fires in the vehicles and at the substations. However, it is unlikely that a fire would occur in light rail vehicles since all vehicles would be constructed of flame and shatter resistant materials, would have two fire extinguishers per car, and would have an exterior emergency door release for use by police or firefighters. Similarly, light rail stations would be constructed with fire-resistant materials. Because the potential for fire is low, it is not anticipated that the LRT Alternative would necessitate the hiring of additional fire protection personnel in either of the affected communities.

The potential exists for increased demands for emergency medical services due to the concentration of passengers at the LRT stations. In addition, emergency vehicle response time could be slightly impacted by at-grade LRT crossings. These crossings would be provided with gates that would block access across the tracks while the light rail vehicle passes. Typical gate down time ranges from 35 to 50 seconds depending on the width of the crossing.

At the North Lake Station DART is proposing to close and reroute a portion of Brangus Drive. This could alter the existing pattern of emergency service. DART with the City of Irving is coordinating the closure of Brangus Drive with the Irving Fire Department.

DFW Airport has jurisdiction for fire protection and emergency medical services on airport property. There is no DFW Airport fire protection facility located within the corridor.

Fire Protection and Emergency Medical Services Mitigation

DART would sponsor information sessions for police, fire, emergency response teams, schools and employers in the corridor. These information sessions would cover LRT operations and the potential emergency issues associated with operations.



Alternate routing for fire and police vehicles operating out of facilities near at-grade crossings would be evaluated as part of the final design phase of the project. Consideration would be given to whether alternate routes would create longer response time than the 35-50 second gate down time. The effects of both would be greatest during peak traffic hours. During these times of day, traffic could be a greater detriment to response time than the crossing gates. Where there are at-grade crossings, DART would cooperate with the City of Dallas, City of Irving and DFW Airport to ensure emergency vehicle priority.

The Final Section designer would design the guideway in accordance with the National Fire Protection Association NFPA -130 (Standard for Fixed Guideway Transit and Passenger Railway Systems) and the applicable fire and building codes of the local jurisdictions. Emergency egress provisions would be provided at a maximum spacing of 2,500 feet for below grade and elevated guideway sections. Ventilation, fire suppression, lighting, and other Life Safety provisions would be incorporated in accordance with NFPA -130.

The DART Fire/Life Safety Committee will continue to coordinate through final design and construction with the City of Irving and Irving Fire Department regarding the closure of Brangus Drive.

Impacts on Pedestrian and Vehicle Accidents

The addition of frequent LRT service along the alignment would present safety and security concerns for adjacent residents and businesses. The proposed project has the potential to impact vehicular and pedestrian safety at points where the alignment crosses streets at-grade and in areas where corridor residents use informal crossings as short cuts to access neighborhood facilities. The potential for conflict at these informal crossings is especially important around schools and other community facilities. There are three schools and two colleges within the corridor, all located in the City of Irving.

Cistercian Preparatory School is adjacent to the alignment on the northeast side of SH 114. The LRT line would be elevated over Cistercian road (the entrance to the school and abbey) at this point. Students at the school arrive and depart by car and bus, so would not have exposure to pedestrian safety conflicts at the school.

The Highlands School is located on Northgate Drive just outside the Project Corridor (more than one-half mile), but is near the University of Dallas campus and the proposed University of Dallas LRT station. Students at the school arrive and depart by car and bus, so would not have exposure to pedestrian safety conflicts at the school.

Pedestrian accidents would be minimal given that much of the alignment is located in highway right-of-way. One exception is through the Las Colinas Urban Center along Lake Carolyn Parkway. The highest potential for pedestrian and vehicular conflicts with the LRT system is where transit patrons have to cross a major street to access a station. This would be the case at the LRT stations at University of Dallas, in the Las Colinas Urban Center (South Las Colinas, Lake Carolyn, and North Las Colinas), Carpenter Ranch, and North Lake College.

Pedestrian and Vehicle Accidents Mitigation

All federal, state and municipal laws regulating safety, design and operating procedures would be followed. The proposed project is designed to provide grade-separated crossings at most major arterials and all railroad rights-of-way, so the potential for accidents with other vehicles or freight trains would be minimized at these major intersections. Installing special signage, providing designated street crossings, and employing crossing guards can mitigate the potential for accidents involving pedestrians. Through its public involvement process, DART would identify areas with special safety needs in order to coordinate the most appropriate response for transit patrons.



To reduce the potential for pedestrian accidents near schools, DART would work with school officials to identify appropriate safety features such as fencing and pedestrian crossing gates. Pedestrian “Z” crossings designed using sidewalk and fencing configurations have been installed along other DART light rail transit lines that channel pedestrians toward the track to ensure complete visibility before crossing the tracks.

In addition, in order to accommodate automobile traffic, all crossing approaches would be signed with standard safety and warning signs installed in order to warn drivers of a train’s approach. Crossing gates would be installed at all at-grade crossings such that at the approach of any light rail vehicle the gates would lower and automobile traffic would be stopped until the rail vehicles have cleared the street. Where light rail vehicle speed equals or exceeds 45 miles per hour, the alignment would be fenced to prevent access by pedestrians or automobiles that may be accustomed to “informal” track crossings. Fences can also be provided where speeds are less than 45 miles per hour, depending on adjacent land uses and pedestrian activity.

Should an accident occur, safety features on all LRT vehicles include emergency manual door releases, a public address system inside and outside the car, an automatic feature that stops the train if operators release control, safety mirrors, sight and sound warning systems, impact resistant windows and windshields, “sensitive edges” on passenger doors to detect possible obstructions, and three brake systems per car—dynamic brakes, disc brakes and magnetic track brakes.

Station Area Safety Impacts and Mitigations

Although the addition of light rail service increases the potential for modal conflict in and around station areas, stations have been designed with safety measures such that no impact to station areas is anticipated. DART incorporates a number of safety considerations into the design of LRT stations. These include measures such as limiting pedestrian access across the tracks to dedicated track crossings, providing adequate lighting, and maintaining good visibility and sight lines throughout the station areas. Similarly, where bus service would feed light rail station areas, bus bays are designed to allow boarding and alighting from a common rail and bus platform such that pedestrian activity would be separated from buses and automobiles.

5.12 CONSTRUCTION IMPACTS

Short-term impacts and mitigations associated with constructing the project are documented in the following section. The construction scenario describes the construction process by line segment and by grade; the other sub-sections analyze short-term construction impacts by impact category.

5.12.1 Construction Scenario

It is anticipated that DART would award the construction contract for the Irving/DFW LRT Line as one primary construction contract. DART would likely subdivide the contract into two separate Line Section contracts, enabling DART to effectively manage the construction efforts of the build-out. Construction would progress from southeast to northwest with the second Line Section Contract beginning 6 months after initiation of the first Line Section work. Each contract is expected to last between 2 and 2-1/2 years. An overview of the four construction activity areas (Facilities, Trackwork, Systems, and Landscaping) follows.

Facilities Construction

DART’s implementation plan calls for dividing the corridor into two separate Line Section contracts as follows:

1. Line Section I-1 – Farmers Branch/Carrollton LRT Line to SH 114
2. Line Section I-2 – SH 114 to Belt Line Road

Each Line Section would contain at-grade, aerial and below-grade (open cut) construction components. **Table 5-15** outlines the summary of work for each type of construction by elevation.