

3.13.10 Utilities

Impact Assessment

The potential for impacts to existing utilities during the construction of the proposed DART Rail to Rowlett exists.

Mitigation Treatments

An allowance is included in the project cost estimate developed during the preliminary engineering phase of the proposed project to cover relocation, protection, and/or consolidation of the utilities along the proposed DART Rail to Rowlett Alignment. Facilities conflicting with the proposed DART Rail to Rowlett Alignment would be relocated prior to construction or maintained and protected during construction. Utility relocation and protection would be closely coordinated with the affected utility companies. Any required relocations would be carried out without disruption of service.

3.13.11 Hazardous Materials

The *DART Environmental Protection Guidelines* outline procedures for toxic substances encountered during construction.

Impact Assessment

Potential construction impacts related to toxic substances and hazardous wastes include the unexpected encounter of hazardous materials and the potential impacts resulting from the disturbance, transport, emission, and disposal of hazardous materials during construction of the proposed DART Rail to Rowlett. One high risk site was identified in the DART Rail to Rowlett Study Area.

Mitigation Treatments

Mitigation treatments for hazardous materials are outlined in Section 3.12 of this document. Additional mitigation and coordination efforts are outlined in *DART Environmental Protection Guidelines*. In the event that hazardous materials are encountered during construction, the contractor must notify DART and stop work immediately. Mitigation and control measures would be coordinated with the EPA, Texas Air Control Board, Texas Water Commission, and the Texas Department of Health.

3.14 Cumulative Impacts

The cumulative effects of a project are those effects which are the result of a series of incremental, human-induced changes in the environment in the past, present, and foreseeable future (40 CFRs 1508.7). Cumulative effects include both direct and indirect effects of the project activity, as well as effects of unrelated activities. If any of these effects combine to create an impact on the environment, the combined impact is referred to as the cumulative impact.



Cumulative effects may occur at a later point in time than the direct impacts or at some distance from the initial activity, so it is important for the accuracy of an LEA that potential cumulative impacts also be identified and evaluated.

Potential cumulative effects must be considered during the NEPA process in order to assess the full impact that the project could have on the environment. Each individual project may have little impact on the natural area, but as the effects of the projects compound over time, the environmental impact can become significant.

In order to analyze the potential cumulative effects of the proposed DART Rail to Rowlett project, past, present, and future projects and activities in the vicinity of the study area must be considered. All direct and indirect impacts of the proposed DART Rail to Rowlett project, all programmed LRT and BRT projects, and all other planned development/improvement activities should be considered in this analysis. The prior and future construction of the PGBT/SH 190 should also be examined.

Projects identified within the immediate vicinity of the proposed project include:

- PGBT/SH 190 extension
- Downtown Garland Redevelopment Plan
 - Patty Granville Arts Center improvements
 - DCCCD satellite campus on 25 acres near the DART Downtown Garland LRT station
 - 1st Street corridor improvements
 - Closure of 5th Street/Walnut Street intersection
- City of Rowlett Downtown Master Plan
 - Main Street Revitalization project

The proposed DART Rail to Rowlett is part of the *DART 2030 Transit System Plan* and *NCTCOG Mobility 2025—Metropolitan Transportation Plan, Amended April 2005*, which include transit improvements throughout the region. Specific to the DART Rail to Rowlett Study Area, PGBT/SH 190 is planned for extension into Rowlett on the eastern edge of the DART Rail to Rowlett Study Area. An EIS for the PGBT/SH 190 provides further impacts that would contribute to the DART Rail to Rowlett Study Area.

3.14.1 Land Use and Economic Impact

Compatibility with Local and Regional Plans

The proposed DART Rail to Rowlett has been developed in conjunction with planned public transportation and roadway improvements, as well as regional and local land use plans and projects. It is anticipated that the Proposed DART Rail to Rowlett would integrate the communities in the corridor and encourage TOD, which would support the area's land use plans and projects. Current land uses surrounding potential station locations are compatible with these objectives. The proposed DART Rail to Rowlett would not contribute to cumulative adverse local land use impacts that could result from development of the surrounding areas, but rather would benefit corridor communities by supporting more efficient land use development. Therefore, land use development associated with the proposed DART Rail to Rowlett would not

DART RAIL TO ROWLETT | Connecting Communities



result in adverse cumulative impacts but would rather benefit corridor communities by supporting more efficient land use development.

Acquisition of Property

Only minor partial acquisitions would occur under the DART Rail to Rowlett. The proposed DART Rail to Rowlett is therefore not expected to contribute to an adverse cumulative impact on the acquisition of property.

Barriers to Social Interaction

Increased reciprocal mobility between the cities of Garland and Rowlett could enhance community cohesion as the DART Downtown Garland LRT station and proposed DART Downtown Rowlett LRT Station could become focal points within their respective communities. The stations could serve as a meeting place for community members to interact with one another and with members of other communities. The proposed DART Rail to Rowlett could therefore contribute beneficially to any cumulative impact on barriers to social interaction that may develop as a result of other, unassociated projects.

Public Facilities and Services

Traditionally, neighborhoods and communities in the area have been built around the existing rail ROW and other major transportation corridors. It is anticipated that the proposed DART Rail to Rowlett project, when considered in conjunction with other current and future projects, would increase mobility options to and from community facilities, thus enhancing the surrounding neighborhoods. These community facilities include medical centers, places of worship, police and fire stations, libraries, schools, and a community college. Therefore, the construction of the proposed DART Rail to Rowlett would have a positive cumulative impact both within the DART Rail to Rowlett Study Area and the broader metropolitan context as community cohesion and quality of life would be enhanced.

Population and Employment

Implementation of the proposed DART Rail to Rowlett project and any resulting induced development could potentially lead to population and employment impacts. Such types of development could translate into an increase in population and employment near the stations. More people living downtown and traveling downtown to shop and work could increase traffic flows in the downtown area, but would be off-set by increased transit usage over time. The planned Dallas County Community College campus in the vicinity of the station would likely attract additional development to the area that would cater to the population, such as multi-family housing and retail development. The campus would further benefit the downtown Garland community by adding a vibrant college population to the day-time downtown setting. Therefore, the proposed action when considered with other past, present, and future actions would have a beneficial cumulative impact on population and employment in the project area.

Induced Development

An important factor in the evaluation of cumulative impacts of new transit facilities is the induced growth of the area due to improved transportation access to the area. Downtown Garland and downtown Rowlett could benefit from future commercial development as well as additional residential development that is more likely to occur with the existence of enhanced rail transit facilities. Since Rowlett has zoned the area surrounding the proposed DART Downtown Rowlett LRT station to promote TOD, it is likely that the LRT station would induce high-density, mixed-

DART RAIL TO ROWLETT | Connecting Communities



use development in the area. The extension of the rail line eastward beyond downtown Garland could also increase development and automobile traffic flows in the immediate DART Downtown Garland LRT Station vicinity. The Dallas County Community College campus in the DART Downtown Garland LRT Station vicinity is an example of rail transit-induced development in the DART Rail to Rowlett Study Area. Therefore, the proposed action when considered with other past, present, and future actions would have a beneficial cumulative impact on induced development in the proposed DART Rail to Rowlett Corridor.

Environmental Justice Assessment (Executive Order 12989)

No disproportionately adverse impacts to environmental justice as a result of the proposed DART Rail to Rowlett are anticipated. There is a potential that the development of the proposed DART Rail to Rowlett would have a beneficial cumulative impact on low income and/or minority populations as mobility options would be enhanced. Any potential environmental justice concerns would be mitigated in order to ensure that no low-income or minority populations would suffer disproportionately adverse impacts as result of the proposed DART Rail to Rowlett. Any additional current or planned transportation and redevelopment projects would be subject to the same analysis. It is therefore assumed that no adverse cumulative effects as related to environmental justice would result from the proposed DART Rail to Rowlett.

3.14.2 Safety and Security

The proposed DART Rail to Rowlett may result in a slight mode shift away from autos toward public transportation. This effect could reduce cumulative accident potential within the proposed DART Rail to Rowlett Corridor and surrounding areas. The proposed DART Downtown Rowlett LRT Station may influence security within the DART Rail to Rowlett Study Area. The station may add to the number of locations in the DART Rail to Rowlett Corridor where crimes could potentially occur, but the additional activity concentrated around the stations may however lessen this potential. Therefore, the magnitude of additional criminal activities as a result of the proposed DART Rail to Rowlett is not expected to be significant on a cumulative basis.

Construction of the proposed DART Rail to Rowlett could cause a slight increase in demand for additional fire or police personnel. Impacts on fire and police services from this project in conjunction with other development projects in the area may result in short-term cumulative impacts. It is anticipated that these impacts would be minor through the use of mitigation treatments such as issuing advanced notice on traffic detours and closures.

3.14.3 Visual and Aesthetic Resources

Past developments and associated roadway construction have modified visual resources within the DART Rail to Rowlett Corridor. It is anticipated that additional modifications will result from current and future developments and associated roadway construction. The application of design guidelines for all current and future projects will ensure that while the actions would contribute to a change in the visual environment, these changes would not be overly adverse. There is a potential that the extension of the LRT line from the DART Downtown Garland LRT Station and the development of the proposed DART Downtown Rowlett LRT Station would have

DART RAIL TO ROWLETT | Connecting Communities



a beneficial cumulative impact in some areas as stations may serve as a focal point for community development and/or improvement.

3.14.4 Historic, Cultural, and Archeological Resources

Section 106 of the National Historic Preservation Act of 1966 requires that impacts on historic and archaeological resources are comprehensively considered for all proposed actions. Impacts to historic and archaeological resources within the DART Rail to Rowlett Study Area would therefore be evaluated and appropriately mitigated as per Section 106. Any additional current or future projects within or surrounding the DART Rail to Rowlett Study Area would be similarly regulated under Section 106. It is therefore assumed that no adverse cumulative impacts as related to historic and archaeological resources would result from the proposed DART Rail to Rowlett.

3.14.5 Parklands and Recreational Facilities

Demand for and use of parks and recreation facilities has increased in proportion to the growth of the region. Population growth and continuing development in neighborhoods surrounding parks will increase demand for and use of existing parks and recreation facilities. The proposed DART Rail to Rowlett would not significantly adversely affect parklands and recreational facilities. The development of transit and other facilities throughout the proposed DART Rail to Rowlett Corridor, however, could result in cumulative impacts over time (such as noise, visual, and traffic impacts) to parks and recreation facilities. These potential impacts would be mitigated on a project by project basis in accordance with all applicable laws, statutes and regulations. It is therefore assumed that no adverse cumulative impacts as related to parklands and recreational facilities would result from the proposed DART Rail to Rowlett.

3.14.6 Transportation Facilities

If the proposed DART Rail to Rowlett is implemented, travel opportunities by transit would be enhanced, transit trip times would be reduced to some locations, transit mode-share would be increased and patronage would be increased. These impacts would be considered positive cumulative effects.

Cumulative traffic impacts associated with the proposed DART Rail to Rowlett are expected to be limited and not adverse with proper mitigation treatments. In general, new trips would not be generated by the proposed DART Rail to Rowlett, but would be beneficially redistributed toward transit because of the increased availability of transit improvements.

3.14.7 Biological and Natural Resources

Wetlands

The impact of the proposed DART Rail to Rowlett project on wetlands would be minimal, as the alignment would be elevated over the wetlands. The proposed DART Rail to Rowlett is therefore not expected to contribute to an adverse cumulative impact on wetlands.

DART RAIL TO ROWLETT | Connecting Communities



Geology and Soils

The impact of the proposed DART Rail to Rowlett on geology and soils would occur at various locations and areas within the proposed DART Rail to Rowlett Corridor. It is anticipated that none of the potential impacts would produce additive effects on general geology and soil conditions in the Dallas metropolitan area. Therefore, it is assumed that no adverse cumulative impacts on mineral resources and geology would result from the proposed DART Rail to Rowlett.

Vegetation

A number of regulatory measures have been introduced in an effort to curb historic vegetation loss. Construction within the proposed DART Rail to Rowlett ROW would result in a loss of vegetation. Relevant mitigation requirements would however be followed in order to limit or prevent the loss of vegetation. These mitigation requirements would apply to any additional transportation and redevelopment projects within or surrounding the DART Rail to Rowlett Study Area. Cumulative impacts are therefore anticipated to be minimal and would result from minor indirect and direct impacts from construction activities.

Wildlife and Threatened and Endangered Species

A number of regulatory measures have been introduced in an effort to curb impacts to wildlife and threatened or endangered species. These regulatory measures are in reaction to past actions which have resulted in the direct take of species or indirectly caused a substantial loss or degradation of habitat. Coordination with the USFWS during final design and construction of the proposed DART Rail to Rowlett would ensure that appropriate mitigation treatments are implemented to minimize impacts on wildlife. Due to the historical presence and usage of the railroad ROW, potential habitats along the proposed DART Rail to Rowlett Corridor are generally disturbed. Additionally, the LRT track would be elevated over the Rowlett Creek Preserve, thus eliminating any potential barrier to free movement of wildlife in the vicinity. Minimal wildlife displacement could be possible during construction activities; however such impacts would be temporary. Therefore, the proposed DART Rail to Rowlett would not impact wildlife or threatened and endangered species in the long-term. Impacts for any additional transportation and redevelopment projects would be evaluated in a similar manner. The proposed DART Rail to Rowlett is therefore not expected to contribute to an adverse cumulative impact on wildlife and threatened and endangered species.

3.14.8 Water Resources and Floodplains

Impacts to waters within the DART Rail to Rowlett Study Area would result from bridge support and culvert replacements and/or extensions along the proposed DART Rail to Rowlett Alignment. These activities would be conducted in accordance with all applicable laws, statutes, and regulations. These regulatory requirements would apply to any additional transportation and redevelopment projects within or surrounding the DART Rail to Rowlett Study Area. It is therefore assumed that no adverse cumulative impacts to water resources would result from the proposed DART Rail to Rowlett.

DART RAIL TO ROWLETT | Connecting Communities



3.14.9 Noise and Vibration

Cumulative noise levels would increase along the DART Rail to Rowlett Corridor due to the addition of rail noise to existing traffic noise. Future noise levels are also expected to increase due to the addition of related transportation projects. These increases may be offset by the anticipated reduction in vehicular traffic. Potential noise impacts within the proposed DART Rail to Rowlett Study Area, as cited in **Table 3-8**, would be mitigated in accordance with FTA noise guidelines. Similar noise mitigation efforts would be undertaken for any additional transportation and redevelopment projects. It is therefore assumed that no adverse cumulative impacts as related to noise would result from the proposed DART Rail to Rowlett.

Allowable levels of vibration along the proposed DART Rail to Rowlett Corridor are governed by FTA impact criteria. Calculations indicate that projected ground-borne vibration levels at some locations along the DART Rail to Rowlett Corridor would require mitigation. Once mitigated, however, all locations along the DART Rail to Rowlett Corridor would meet FTA standards. No cumulative impacts as related to vibration are therefore anticipated as a result of the proposed action.

3.14.10 Air Quality

The proposed DART Rail to Rowlett would not directly increase air pollution; however a population increase spurred by the proposed DART Rail to Rowlett could lead to increased non-point source air pollution from automobiles in the vicinity of Rowlett and Garland. This effect, coupled with the increase in automobile traffic in the northeast part of the DFW Metroplex due to the current use of SH 190 and the planned expansion of PGBT/SH 190 into Rowlett, could result in an overall, cumulative increase in smog and other air pollutants in the vicinity of Rowlett and Garland. As transit ridership increases in the DART Rail to Rowlett Corridor over time, the resultant benefits to air quality should partially off-set the potential negative impacts from population increases and development. The proposed DART Rail to Rowlett is therefore expected to contribute negligibly to potential adverse cumulative impacts to air quality.

3.14.11 Utilities

Where utilities must be rebuilt or where new construction is warranted, coordination with utility companies and government agencies would take place in order to ensure design conformance and environmental compliance. Any additional current or planned transportation and redevelopment projects would also be subject to these requirements. It is therefore assumed that no adverse cumulative effects from utilities would result from the proposed DART Rail to Rowlett.

3.14.12 Hazardous/Regulated Materials

The proposed DART Rail to Rowlett has the potential to affect or be affected by hazardous waste sites, both known and unknown. Any additional transportation and redevelopment projects also have this same potential. No adverse impacts would occur with proper mitigation in accordance with the applicable hazardous waste laws, statutes, and regulations. Therefore, no

DART RAIL TO ROWLETT | Connecting Communities



adverse cumulative impacts are anticipated to result from hazardous materials. Additionally, hazardous materials that may be encountered during construction would be removed or treated in place, thus reducing the potential for cumulative impacts within or surrounding the DART Rail to Rowlett Study Area.

3.15 Unresolved Issues

The following is a summary of unresolved issues related to the proposed DART Rail to Rowlett LEA. These issues will be resolved upon further analysis during final design.

- Final design of noise impact mitigation. Implementation of the mitigation program along with input from impacted property owners will determine the type of noise mitigation (sound barriers, insulation, etc.).
- USACE permitting requirements and potential mitigation design for impacts to jurisdictional waters in accordance with Section 404 of the CWA. These requirements and a determination of mitigation would be determined upon completion of final design.

