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ES.1 EXECUTIVE SUMMARY

The National Environmental Policy Act (NEPA) of 1969 requires that federal agencies prepare an EIS for any major federal action that may have a significant impact on the environment. This Final Environmental Impact Statement (EIS) has been prepared by RTD under its responsibilities as the local lead agency to implement the LRT project. This document has been prepared in coordination with the Federal Transit Administration (FTA), the lead federal agency. The LRT project is illustrated in **Figure ES-1**.

This EIS discusses the potential environmental, social, and economic impacts associated with improvements to transportation in the West Corridor that extends west from the Denver Regional Transportation District's (RTD) existing LRT system in downtown Denver, through west Denver, Lakewood, and Jefferson County. Three alternatives are considered in this EIS: the LRT project and the Enhanced Bus and No Action Alternatives. The No Action Alternative represents the base condition for identifying impacts associated with the project and the Enhanced Bus Alternative represents an additional alternative to improve transit service in the West Corridor. The EIS serves as the primary document to facilitate review of the alternatives by federal, state, and local agencies and the general public. The EIS documents the purpose and need for the project and describes the alternatives considered. It addresses in detail the anticipated transportation and environmental impacts of the project and identifies any appropriate mitigation measures that may be required to minimize such impacts.

The Draft EIS was circulated for a 53-day review and public comment period, more than the required 45-day review. During the comment period, the Draft EIS was made available to interested parties, including private citizens, community groups, the business community, elected officials and public agencies. A public hearing was also held to formally receive comments.

After circulation of the Draft EIS, preliminary engineering and environmental studies were completed. Mitigation commitments, where necessary, were identified and responses to comments received during the Draft EIS comment period were addressed. This Final EIS incorporates all of these elements and identifies the preferred alternative and also reflects any adjustments in the project that have occurred as a result of the public review and comment period. Completion of this Final EIS, followed by a signed Record of Decision (ROD) by the FTA, will permit the project to be advanced to the final design and construction phases.

This Executive Summary highlights the most significant findings of the EIS relative to the document's major headings:

- Purpose and Need
- Alternatives Considered
- Affected Environment
- Transportation Impacts
- Environmental Consequences
- Financial Plan
- Public and Agency Involvement
- 4(f) and 6(f) Evaluation

ES.1.1 PURPOSE AND NEED

Current and projected travel patterns, levels of roadway congestion, growth in population and employment in the region and in the corridor indicate that some action be implemented in order to address the need for additional transportation capacity. To illustrate this trend, the West Corridor population is expected to increase from 120,326 to approximately 158,983, or 32 percent, by the year 2025. Over the same time period, employment in the West Corridor is expected to increase from 115,747 to 155,000, or 34 percent.

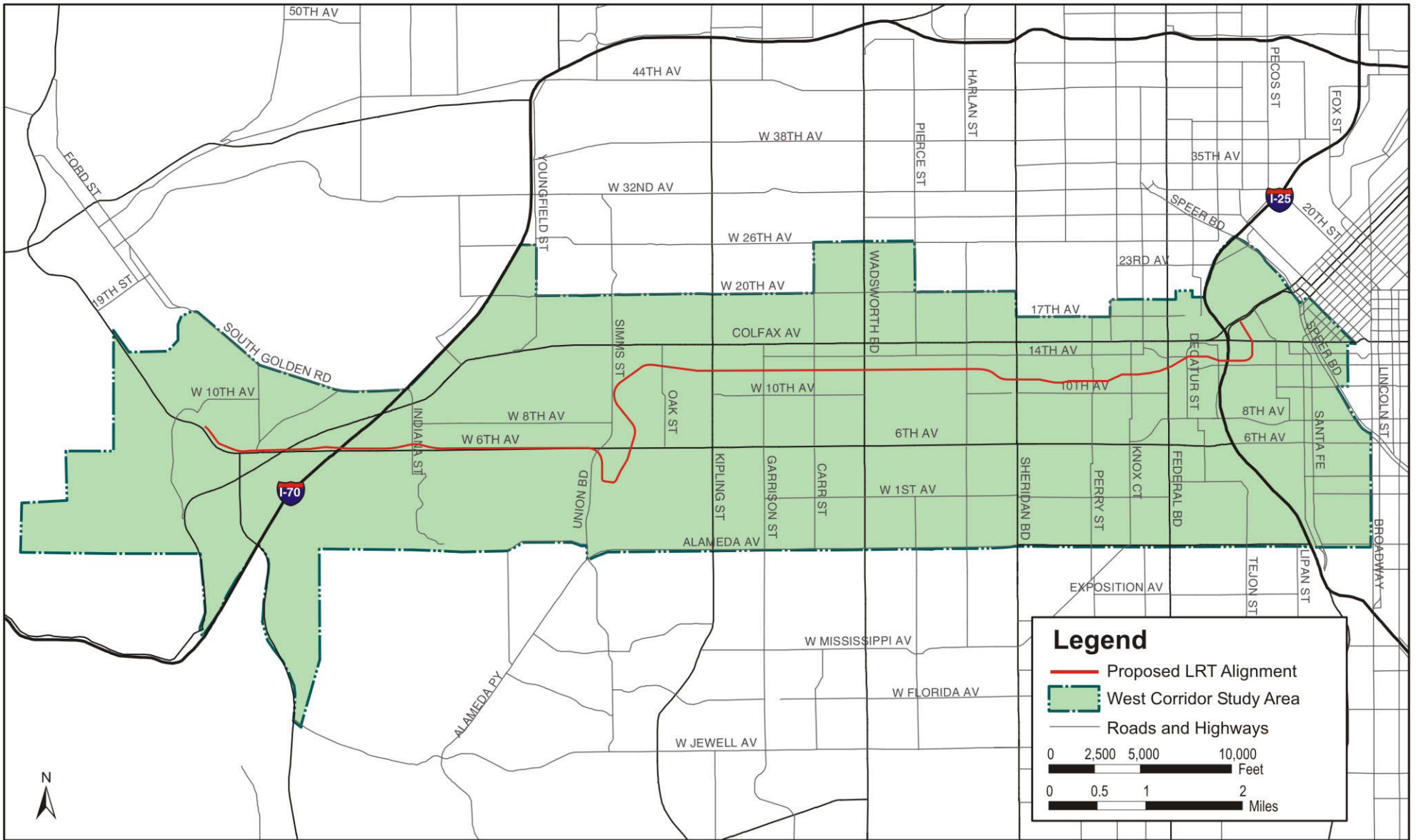


Figure ES-1
West Corridor
LRT Alignment



The number of people traveling on the regional roadway network will increase proportionally, creating significant burdens on today's crowded roads. Traffic volumes on West 6th Avenue at Wadsworth Boulevard are expected to be as much as 145,200 vehicles per day in 2025, representing an increase of 20.4 percent more than 2002 volumes. The high volumes and associated poor levels of service on the freeway will have the effect of making congestion worse on adjacent surface streets in the corridor.

The need for transportation improvements in the West Corridor is demonstrated by the following conditions that have been documented in the study area:

- The project corridor parallels I-70 and West 6th Avenue (US 6), two of the most congested highways in the region. The West 6th Avenue freeway currently carries the second highest traffic volumes in the Denver region, second only to Interstate 25, with forecasts indicating a greater than 20 percent increase in traffic volumes by 2025
- West 6th Avenue and West Colfax Avenue cannot be widened due to severe neighborhood impacts including extensive relocation, environmental justice concerns and park takings
- CDOT has not included widening West 6th Avenue on their Strategic Investment Plan
- The West Corridor has relatively high percentages of low-income, minority and nonvehicle households that are transit-dependent
- Travel time delay and congestion levels in the corridor are increasing
- Regional and local planning efforts have identified the need for transportation improvements in the corridor
- The Denver region has recently been classified as an attainment area for ozone by the Environmental Protection Agency but increasing growth and tightening standards put the region at risk of being nonattainment for air quality
- Existing and planned roadway improvements are insufficient to meet the demand within this corridor
- A significant amount of employment and population growth is forecast for the corridor.

Roadway congestion has worsened over time and is projected to worsen in the future, leading to further congestion on surface streets and increasing travel times for drivers and transit riders. Anticipated population and employment growth in the region will worsen these conditions and are indicators of the need for major transportation improvements.

Four primary project purposes have been identified for the West Corridor Project. These four purposes are briefly summarized below.

Offer Transportation Alternatives to Single-Occupancy Vehicle (SOV) Travel

As traffic congestion increases, an improved transit system would offer corridor residents, workers and commuters a reliable and efficient alternative to driving automobiles. This would be especially important for the low-income, elderly and transit-dependent individuals and families along the corridor. While both the LRT and Enhanced Bus alternatives would offer this alternative, the LRT would also provide travel along an exclusive right-of-way, free of traffic. Improved transit would offer an alternative to SOV travel in a corridor where congestion and travel time are projected to increase significantly.

Increase Regional Connectivity and Transit Effectiveness

RTD operates an extensive bus and light rail system to serve the region, providing access to jobs and economic opportunities. The improvements in the West Corridor would expand this service for current and prospective transit riders, both in the corridor and in the region as a whole. The corridor currently includes major economic and activity centers, including cultural, entertainment, sports, medical/health services and shopping facilities. Access between jobs and residential areas in the corridor from south, central and north Denver metropolitan areas would be improved as well. This would be especially true for transit users connecting to the Central, Southeast and Southwest LRT corridors. In addition, transit users would have access to major transfer options for other RTD bus routes including the 16th Street Mall Shuttle.

Increase People-Carrying Capacity on the Corridor

Regional travel demand in the western Denver area will increase and additional capacity will be needed to meet this demand. East-west travel patterns include residents from the developing mountain communities and western suburbs traveling to the Denver central business district, Denver Technological Center, and other subregional areas. At the same time, Lakewood, Golden and western Jefferson County continue to develop their economic base, with employment and economic opportunities attracting workers and shoppers from the Denver metropolitan area. The LRT project would be most effective in peak periods when congestion is highest and people-carrying capacity is needed most.

Support Local and Regional Planning Objectives

The West Corridor has been the subject of transportation improvement studies for more than 25 years. State and regional agencies such as the Colorado Department of Transportation (CDOT), RTD, Denver Regional Council of Governments (DRCOG), and local planning and transportation agencies for Denver, Lakewood, Golden and Jefferson County have stressed the need for additional transportation capacity through the corridor.

ES.1.2 ALTERNATIVES CONSIDERED

Three alternatives are being considered in this EIS, a No Action Alternative, an Enhanced Bus Alternative, and an LRT Alternative. The No Action Alternative includes transportation and transit projects that have a reasonable expectation of funding and are programmed for implementation. The No Action Alternative is used as a basis for determining the potential environmental impacts that would be associated with either the Enhanced Bus Alternative or the LRT Alternative. The Enhanced Bus Alternative would improve upon existing bus transit service in the West Corridor without the benefit of a major capital investment. The LRT Alternative is a 12.1-mile LRT project that would connect the West Corridor with the existing RTD light rail transit system that is in various stages of operation or construction. These alternatives are described in detail in Chapter 2.

The LRT Alternative was derived from the West Corridor Major Investment Study (MIS) that was concluded by RTD in 1997. The West Corridor MIS evaluated a wide range of transportation and transit solutions to respond to the growing mobility problems in the corridor. The MIS identified light rail along the Associated Railroad right-of-way as the Locally Preferred Alternative (LPA). The LPA also identified improvements for bicycle, pedestrian, roadway, and bus service elements. CDOT, DRCOG, RTD, and/or local jurisdictions will accomplish the bicycle, pedestrian, and roadway elements of the LPA through separate efforts. With input from the Citizen's Advisory Committee, the Technical Advisory Committee and the Policy Advisory Committee, the LPA was adopted by the RTD Board of Directors and incorporated in the DRCOG regional transportation plan in July 1997. The LRT element of the LPA is the focus of this EIS.

The No Action Alternative includes committed transportation improvements and bus service improvements that are intended to keep pace with population and employment growth in the region. The No Action Alternative uses the year 2025 as the horizon year for its future analysis. Planned transit facility improvements include acquisition or expansion of 20 park-n-Ride locations through out the metropolitan area, including Cold Spring in the West Corridor, as well as upgrades to six existing park-n-Rides. RTD proposes to improve bus shelters and upgrade the transfer facilities at Boulder, Market Street, and Civic Center, and is in the process of developing an intermodal transit hub at Denver Union Station.

The Enhanced Bus Alternative would improve the existing bus transit system to better serve the West Corridor. Buses would remain the only mode of public transportation in this part of the Denver metropolitan area. Bus service in the West Corridor would extend from the Denver central business district, through the City of Lakewood, to the existing Cold Spring park-n-Ride on Union Boulevard and on to the Jefferson County Government Center and would include existing east-west and north-south

routes. All transportation improvements assumed in the No Action Alternative are also included in the Enhanced Bus Alternative. Within the West Corridor, the Enhanced Bus Alternative also includes a new bus transfer facility at the Colorado Mills Mall (opened in fall 2002), the expansion of the existing Cold Spring park-n-Ride lot to 1,000 spaces, and a new park-n-Ride facility at the Jefferson County Government Center complex.

The Light Rail Transit Alternative would include the construction of 12.1-miles of LRT double rail tracks from the existing light rail line at Auraria West Station, west across the South Platte River, then west along the existing Associated Railroad right-of-way, which roughly parallels West 13th Avenue, and then turn south at Lakewood Industrial Park crossing to the south side of West 6th Avenue at the Denver Federal Center. West of the Denver Federal Center, the alignment would return to the north side of West 6th Avenue via a tunnel and parallel the highway at-grade to the Jefferson County Government Center. The LRT Alternative includes the development of twelve stations: Auraria West, Federal/Decatur, Knox, Perry, Sheridan, Lamar, Wadsworth, Garrison, Oak, Denver Federal Center, Red Rocks, and Jefferson County Government Center. Parking would be provided at six of these 12 stations, providing approximately 5,700 parking spaces. Bus access would be provided at each station, with the exception of the Auraria West Station, which would be located in an area that would directly serve the Auraria Campus but is not served by local streets. The LRT Alternative is illustrated in **Figure ES-1**.

ES.1.3 AFFECTED ENVIRONMENT

Qualified professionals have identified the existing natural and built environmental conditions in the West Corridor study area. These existing conditions were identified in accordance with standard practices in the respective areas of investigation. This existing conditions information formed the basis for impact assessment investigations for each category. Impact assessment categories that were identified in the study area include:

- Land Use
- Socioeconomic Characteristics
- Transportation
- Air Quality
- Noise
- Vibration
- Ecosystems
- Threatened and Endangered Species
- Cultural Resources and Parklands
- Visual and Aesthetic Resources
- Parks and Recreation Areas
- Water Resources
- Hazardous and Regulated Materials
- Utilities

Detailed information regarding the affected environment in the project study area is provided in Chapter 3 of the EIS.

ES.1.4 TRANSPORTATION IMPACTS

Travel demand in the West Corridor and the region has grown substantially over the past decade. Increases in population and employment have contributed significantly to this increase in travel demand. However, data have also shown that the number of trips and the miles traveled are outpacing the growth in population and employment. If travel demand continues to increase as forecast, the West Corridor's existing transportation system would not provide acceptable levels of mobility and service. By 2025, more roadways in the corridor and the region will continue to experience increased congestion and time delay. The current bus transit system, dependent on the existing roadways, will be seriously impacted by the increased roadway congestion. As a result, bus transit service will be restricted in its ability to effectively meet travel demand.

The No Action Alternative would not provide any improvements to the existing transportation system beyond what is currently funded as part of regional and local plans. Widening West 6th Avenue (US 6) is not currently in CDOT plans and the roadway will remain congested. The West Corridor's roadway and transit system will experience very poor levels of service if No Action is assumed for the year 2025, and

transit travel times would be greater than auto travel times. Improvements associated with the Enhanced Bus Alternative would rely on the congested roadway system. As a result, these improvements would not adequately improve transit travel times, comfort, operations or capacity to effectively meet the forecast travel demand in the West Corridor and the Denver region.

The LRT Alternative would provide an option to meet some of the travel demand in the West Corridor and would result in improved transit service and capacity. This alternative would provide rapid transit service independent of the roadway network and would operate effectively even when roadway congestion limits the effectiveness of the bus transit system. Moreover, light rail would offer improved transit service levels and comfort, would not be impacted by adverse weather conditions as much as roadway traffic, and would provide greater transportation capacity than equivalent bus or roadway improvements. The LRT Alternative would also benefit riders by providing faster travel times when compared to auto travel times. Interestingly enough, the LRT Alternative would not only provide advantageous travel times for transit patrons, but auto travel times associated with this alternative would be reduced when compared to auto travel times associated with the No Action and the Enhanced Bus Alternatives.

Average weekday light-rail ridership in 2025 is expected to be 31,100 for the 12-mile West Corridor. By comparison, RTD's existing 8.7-mile Southwest LRT line has observed daily ridership of 17,900 equating to 2,057 riders per center mile of track. Thus, the West Corridor is forecast to have 13,200 more daily riders and 500 more riders per mile than currently use the Southwest LRT line. Implementing the LRT Alternative would result in 296,000 average weekday system-wide linked transit trips. This is over 4,500 more than the Enhanced Bus and 7,500 more than the No Action Alternative.

The West Corridor LRT alignment would cross 42 roadways between its connection to the Central Platte Valley LRT Spur and the Jefferson County Government Center. Of these 42 roadway crossings, 20 would remain as at-grade crossings, eight would be closed, and 14 would be grade-separated from the LRT line. Additional detailed transportation impact information is provided in Chapter 4 of the EIS.

ES.1.5 ENVIRONMENTAL CONSEQUENCES

This Final EIS identifies the potential environmental consequences of the No Action, Enhanced Bus, and LRT Alternatives. The majority of the LRT project would be located within RTD-owned right-of-way along West 13th Avenue and CDOT-owned right-of-way along West 6th Avenue. West 13th Avenue land uses are quite mixed, but the majority of the area is residential in character. Consequently, a variety of environmental impacts would be due to the character of the surrounding land uses. Where the LRT alignment is located outside of the railroad right-of-way, property acquisitions would be required and associated land use impacts are identified. Chapter 5 of the EIS provides details of these and all other associated environmental consequences associated with the No Action, Enhanced Bus, and LRT Alternatives. No significant impacts are anticipated with either the No Action or Enhanced Bus Alternatives. **Table ES - 1** summarizes the potential impacts of the LRT Alternative and proposed mitigation measures, where necessary.

Table ES-1: Summary of LRT Alternative Environmental Impacts

Subject	Impacts	Mitigation Approach
Transportation	42 existing crossings 8 crossings would be closed or removed 14 crossings would be grade-separated 20 crossings would remain at-grade Localized traffic impacts at stations	Grade separations, crossings removed or combined Install new signals / improve timing at crossings and stations Street, signal and intersection improvements near stations
Land Use and Socioeconomics	Land use impacts at station areas, most notably at Sheridan and Wadsworth Stations LRT Maintenance Facility will employ 135 workers	Public policy initiatives to encourage transit-oriented development Neighborhood stations not to include major parking areas Minimize neighborhood business impact and maximize redevelopment opportunities Development of urban design committee
Community Impacts	Acquisition of approximately 31 acres for LRT station areas Acquisition of approximately 18 acres for LRT Maintenance Facility Acquisition of approximately 25 acres for LRT alignment right-of-way 34 businesses displaced 12 single-family residences displaced 179 multifamily residences displaced (Sheridan and Wadsworth Stations)	Acquisition and relocation assistance following RTD and federal policies and procedures.
Air Quality	No impacts anticipated	N/A
Noise and Vibration	7 areas of severe noise impact identified (62 single-family residences and 6 multifamily residences) 18 areas of moderate noise impact identified (214 residences, 3 parks, 1 school playground) 7 areas of vibration impact identified (34 single-family residences and 12 multifamily residences)	Noise barriers will mitigate all severe noise impact areas Noise barriers will mitigate noise impact areas along West 13 th Avenue from Harlan to Oak Vibration impacts will be mitigated by installation of ballast mats
Ecosystems	Minor impacts anticipated	N/A
Cultural Resources	211 historic structures and four historic archeological sites identified 10 sites determined eligible for the National Register of Historic Places Preliminary finding of adverse effect to Denver & Intermountain Railroad corridor, the Federal Boulevard bridge over Lakewood Gulch and a bunker in the Denver Federal Center Preliminary finding of no adverse effect to 2 sites No effect to remaining 5 sites	Sensitive treatment of LRT project design in area of Denver & Intermountain Railroad corridor Mitigation measures to be developed in consultation with Colorado State Historic Preservation Officer and formalized in Memorandum of Agreement

Table ES-2: Summary of LRT Alternative Environmental Impacts Continued

Subject	Impacts	Mitigation Approach
Parks and Recreation	11 recreation resources located adjacent to LRT alignment Direct use of five parks required for project <ul style="list-style-type: none"> • Rude Park • Sanchez Park • Lakewood Dry Gulch Park • Richey Park • Jefferson County open space 	Sensitive treatment of LRT right-of-way during final design
Visual Impacts	Visual impacts along West 13 th Avenue Minor visual impacts adjacent to parks	Design treatment of LRT structures Landscape treatment of LRT project components Development of urban design committee to address West 13 th Avenue improvements during final design
Water Resources	5 jurisdictional wetlands identified 3 isolated wetlands identified Minor impacts to wetlands 9 floodplains crossed by LRT alignment	Coordination with US Army Corps of Engineers for Section 404 permit Drainage and design solutions will reduce flooding potential to LRT project above floodplains
Hazardous Materials	10 areas of “major” concern identified	Contaminated soils to be removed and disposed of in accordance with government regulations Areas of concern avoided where possible by project design
Safety and Security	RTD design criteria specifies barriers to be installed adjacent to LRT alignment to permit safe operation At-grade crossings pose safety concerns	Art barrier concept developed to respond to sensitive areas where barriers are to be installed Development of urban design committee is proposed to address West 13 th Avenue improvements during final design Quad gates recommended at key locations
Geological Resources	No impacts anticipated	N/A
Construction	Temporary and limited duration impacts Temporary disruption of utilities	Coordination with affected utility companies, cities and property owners
Secondary and Cumulative Impacts	No impacts anticipated	N/A

ES.1.6 FINANCIAL ALTERNATIVES

Chapter 6 of the EIS discusses the financial ability of the RTD to construct and operate the West Corridor LRT project. The chapter discusses the agency's revenues and expenditures, capital and operating cost estimates for the LRT project, and outlines two possible financial scenarios to implement the project.

The LRT project is estimated to cost approximately \$492 million in 2002 dollars. In August 2002, RTD adopted its 2003-2008 *Transit Development Plan* and projected revenues through the year 2025. At that time, RTD estimated that it was possible to use projected RTD sales and use tax funds to construct the West Corridor LRT project between 2015 and 2019, with operation slated to begin in 2020.

Subsequently, RTD and the local economy have experienced a decline in sales and use tax receipts, thereby altering the outlook for project implementation. As a result, RTD is revising its financial plan for the West Corridor project and will examine two scenarios: (1) using available RTD revenues; and (2) advancing a regional transit system plan (FasTracks) that would require voter approval of a 0.4 percent increase in the RTD sales and use tax. The first scenario would result in a significant delay to project implementation due to reduced sales and use tax receipts, whereas the second scenario would accelerate the schedule for implementation.

ES.1.7 PUBLIC AND AGENCY INVOLVEMENT

The public and agency involvement program for the LRT project has been accomplished through an extensive effort. A project office was established in the West Corridor study area on West Colfax Avenue. Nearly 150 meetings have been conducted since the project's initiation, with nearly 2,500 participants. Eight newsletters, with a total distribution of 90,000 copies, have been issued to a wide range of recipients, including nearly 5,000 people on the project contact list. A Technical Advisory Committee, consisting of local government and public sector agencies in the study area, has met monthly during the study process to address technical matters. A Policy Advisory Committee, comprised of elected and appointed officials in the corridor, has aided the project team by providing policy guidance and direction.

The Draft EIS was circulated for a 53-day public review and comment period. During this comment period, the Draft EIS was made available to interested parties including private citizens, community groups, the business community, elected officials and public agencies. A public hearing was held April 16, 2003 within the study area to formally receive comments. Public comments were also submitted in writing throughout the full comment period.

After circulation of the Draft EIS, preliminary engineering and environmental studies were completed. Mitigation commitments, where necessary, have been identified and responses to comments received during the Draft EIS comment period have been developed (see Appendix C). This Final EIS incorporates all of these elements. The Final EIS identifies the LRT as the preferred alternative and reflects adjustments or revisions made in response to comments received during the Draft EIS public comment period. RTD will conduct a public information meeting to present information relative to the Final EIS. Completion of the Final EIS, followed by the signed Record of Decision (ROD) by the FTA, will permit the project to be advanced to the final design and construction phases.

ES.1.8 FINAL ENVIRONMENTAL IMPACT STATEMENT/4(f) AND 6(f) EVALUATION

Section 4(f) of the U.S. Department of Transportation Act of 1966 states that the Secretary of Transportation “may not approve the use of land from a significant publicly owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that (i) there is no feasible and prudent alternative to the use of land from the property; and (ii) the action includes all possible planning to minimize harm to the property resulting from such use.”

In response to the requirement to address the provisions of this Act, the Final EIS includes a Section 4(f) Evaluation to address these issues. Eleven historic sites eligible for listing on the National Register of Historic Places were included in the Section 4(f) evaluation, along with 13 public park or recreation areas that are located adjacent to the LRT alignment.

The LRT project would result in a direct use of the former Denver & Intermountain (Associated) Railroad, Federal Boulevard Bridge over Lakewood Gulch, Building 84A, Munitions Bunker, Rude Park, Sanchez Park, Lakewood Dry Gulch Park, and Jefferson County open space. The Section 4(f) Evaluation concludes that there is no prudent and feasible alternative to the use of three resources, and identifies efforts to minimize harm to the affected properties.

The *Land and Water Conservation Fund Act* (16 USC 4601-4) contains provisions to protect federal investments in park and recreation resources and the quality of those resources. Section 6(f)(3) of the *Land and Water Conservation Fund Act* contains a clear provision to protect grant-assisted areas from conversions to nonrecreation purposes. The resources were identified that used Land and Water Conservation Funds, Rude Park ballfield, Lakewood Dry Gulch Trail (D-10), and Richey Park. The Section 6(f) Evaluation concludes that the LRT project would not affect that recreational value of these resources.

Sections 4(f) and 6(f) Evaluations are provided in Chapter 8 of the EIS.

ISSUES TO BE RESOLVED

Following the public circulation and review of the Draft EIS, the RTD Board of Directors considered all public comments to resolve several issues. These issues are examined in further detail and the resolution of these issues is documented in this Final EIS.

- **Select Preferred Alternative** – Three alternatives were examined in the Draft EIS, a No Action Alternative, an Enhanced Bus Alternative, and a Light Rail Transit Alternative. The RTD Board of Directors selected the LRT Alternative that is the focus of the Final EIS.
- **Mitigation Measures** - Proposed mitigation measures, or in some cases a range of mitigation measures, were presented in the Draft EIS. Mitigation commitments were reviewed following the Draft EIS circulation period. Final mitigation commitments are documented in this Final EIS.