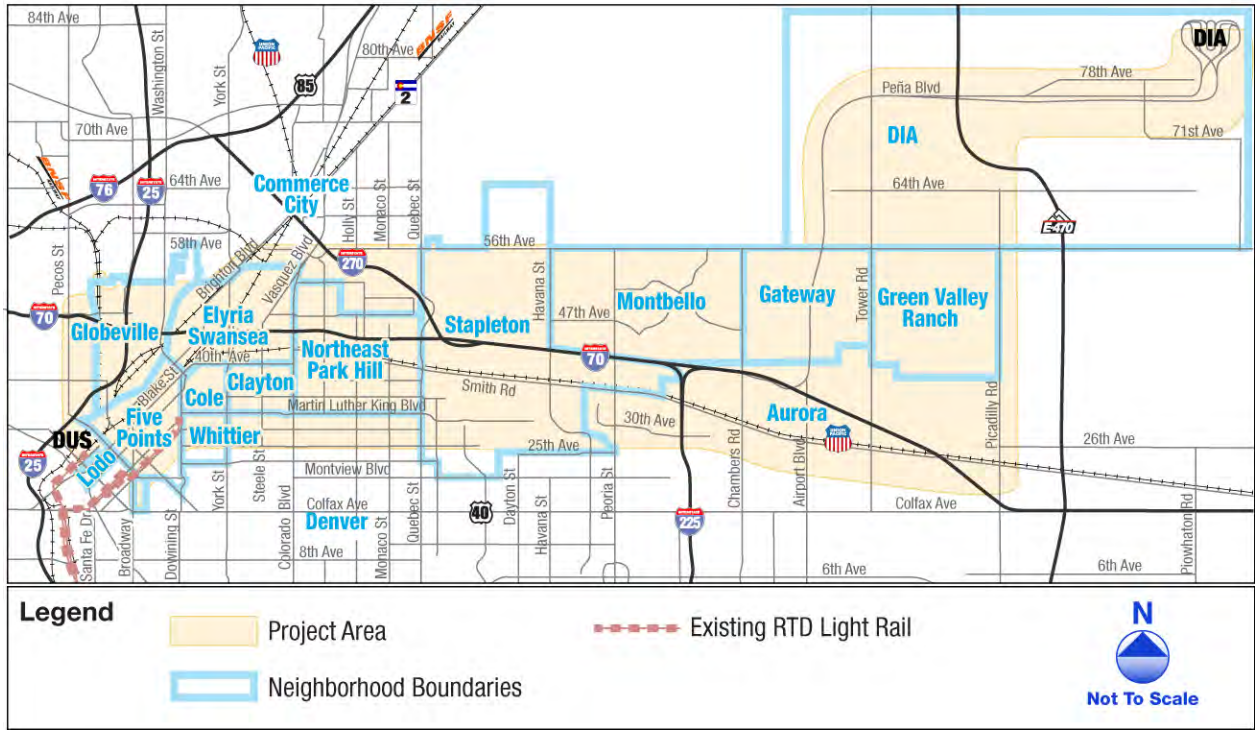
S.0 EXECUTIVE SUMMARY

The East Corridor Final Environmental Impact Statement (FEIS) proposes commuter rail transit from downtown Denver to Denver International Airport (DIA). As shown in Figure S-1, the East Corridor project area covers established neighborhoods on the west end of the corridor and emerging residential and commercial areas on the east. The project area includes portions of Aurora, Adams County, and several Denver neighborhoods.

Figure S-1
Project Area



The East Corridor Environmental Impact Statement (EIS) began in June 2003. It was initially part of the I-70 East Corridor EIS, a joint effort between the Regional Transportation District (RTD), the Federal Transit Administration (FTA), the Colorado Department of Transportation (CDOT), the Federal Highway Administration (FHWA), and the City and County of Denver (CCD). In June 2006, the highway and transit elements of the I-70 East Corridor EIS were separated into two independent projects because they serve different travel markets, are located in different corridors, have different funding sources, and meet the criteria for independent utility. The two independent projects that resulted were the I-70 East EIS (focused on highway improvements) and the East Corridor EIS (focused on transit improvements). Information on the I-70 East EIS is on the project website at *www.i-70east.com*.

The East Corridor Final EIS (FEIS) identifies and evaluates rapid transit solutions and complies with the policies and procedures under the National Environmental Policy Act (NEPA) of 1969 as amended. Potential mitigation measures in this FEIS will be finalized in the Record of Decision (ROD). FTA is responsible for ensuring that all mitigations committed to in the ROD are implemented by RTD.

The Draft EIS (DEIS) was released for public and agency review for a 45-day comment period beginning January 30, 2009 and ending March 16, 2009. During that time, the document was available for the public, federal, state, and local agencies and other interested parties to review and provide comments on the analysis and resulting recommendations. During the 45-day comment period, RTD held public hearings on March 4 and 5, 2009, at which time formal comments were taken as part of the public record for this document. Written comments were accepted during the 45-day comment period. All formal comments and responses are in Chapter 8, Response to Agency and Public Comments.

Changes that resulted from the public and agency comment process were evaluated and are included in this FEIS. After completion of the FEIS, FTA will issue a ROD, at which time RTD may then begin final design and construction of the proposed improvements.

Detailed information on Sections S.1, Purpose and Need through S.8, Response to Agency and Public Comments can be found in the respective FEIS chapters.

S.1 PURPOSE AND NEED

The purpose of this project is to provide high-capacity, fixed-guideway transit that improves transportation access and mobility between downtown Denver and DIA, with connections to the rest of the RTD transit system, consistent with, and identified in, previous planning efforts including the *Metro Vision 2030 Regional Transportation Plan* (Denver Regional Council of Governments [DRCOG], 2005b), the *FasTracks Plan* (RTD, 2004), and the associated referendum vote of November 2004. The need for this project results from:

- Limited regional connectivity
- Increased transportation demand
- Lack of reliable alternate modes of travel
- Increased travel times in the region
- Limited transportation options for underserved populations
- Completion of the *FasTracks Plan* regional fixed-guideway transit system

Limited regional connectivity
The existing transportation system in the East Corridor has neither sufficient capacity nor facilities to handle the increased travel demand within the corridor and region, specifically to maintain connections among major activity centers within the corridor such as downtown Denver, the Stapleton redevelopment area, and DIA. Based on DRCOG 2030 travel demand forecast, there will be more than ten million daily trips in the project area.

Increased transportation demand
Recent population and employment growth has been heavily influenced by the development of DIA and other areas, resulting in increased travel demand in the corridor. Population and employment in the project area increased by about 20 percent between 1996 and 2001. The influence of DIA and other development in the corridor is expected to continue as population is projected to increase 75 percent and employment is projected to increase 71 percent between 2001 and 2030.

Lack of reliable alternate modes of travel
The East Corridor serves a growing number of users ranging from commuters and tourists from outlying areas and DIA to local traffic within the project area. The demand from these users is more than the existing transportation infrastructure can efficiently carry. Transportation options are limited to auto travel and existing limited fixed-route bus service. Travel time on I-70 is unreliable because of increased highway congestion.

Increased travel times in the region
Rapid transit in the East Corridor would offer residents, workers, and commuters a reliable and efficient alternative to single-occupant vehicle travel in a corridor with significant congestion and long travel times that are expected to increase. As estimated by DRCOG's 2030 travel demand model, without improvements, the travel time is expected to more than double from 2001 to 2030.

Limited transportation options for underserved populations
Throughout the public scoping process it was apparent that there is a strong demand and need to better serve the populations in the East Corridor with improved transit. These include individuals without access to vehicles and minority, low-income, and elderly populations. The minority population in the study area neighborhoods is 76 percent, while 28.4 percent is low income. These numbers are considerably higher than the statewide figures of 25.5 percent for minority populations and 14.8 percent for low-income populations.

Completion of the *FasTracks Plan* regional fixed-guideway transit system
The East Corridor is not only an important link to the Denver Union Station (DUS) and DIA, it is also a part of 122 miles of new rapid transit facilities that include light rail, commuter rail, and bus rapid transit (BRT). These new transit facilities will connect with destinations throughout the Denver metropolitan area, including the proposed I-225 transit connection at the Peoria station and the Central Corridor connection at the 38th/Blake station.

Past transportation studies have evaluated different alignments, transit technologies, and station locations in the project area. In 2004, RTD adopted the *FasTracks Plan* (RTD, 2004), a comprehensive plan to expand rapid transit in the Denver metropolitan area. The voter-approved plan provides a 0.4-cent sales tax increase to design, construct, and begin operation of the expanded transit system. The *FasTracks Plan* included commuter rail along a portion of the Union Pacific Railroad (UPRR) corridor that runs east from downtown Denver and along Smith Road as a placeholder to determine corridor funding. While the associated referendum vote of November 2004 of the *FasTracks Plan* provides a funding source for the transit improvements, this EIS will determine the Preferred Alternative for the East Corridor.

Several previous studies demonstrated a need for rail transit improvements in the corridor:

- *Denver Airport Rail Service Feasibility Study* (CCD, 1992)
- *Air Train Environmental Assessment* (CCD,1994)
- *East Corridor Major Investment Study* (DRCOG,1997)

S.2 ALTERNATIVES CONSIDERED

Numerous alternatives were proposed as transportation improvements in the East Corridor. Alternatives were developed during the scoping process based on input from the community and affected agencies, previous studies, and new concepts developed by the project team.

After project scoping was completed with interested stakeholders, the local community, cooperating agencies, and others, a list of project goals and objectives was developed. The project goals are:

- **Access:** Provide for reasonable access to transportation facilities.
- **Capacity:** Provide for realistic capacity expansion and minimize future congestion.
- **Community:** Support community plans and avoid, minimize, and mitigate impacts on neighborhoods.
- **Environment:** Avoid, minimize, and mitigate adverse impacts on the natural, social, and cultural environment.

- **Implementation:** Provide a cost-effective transportation solution that can be implemented.
- **Mobility:** Enhance mobility by providing transportation choices.
- **Safety:** Address safety needs and upgrade facilities to current standards.
- **Security:** Provide a secure transportation system.

Based on the project purpose, need, goals, and objectives, specific evaluation criteria were developed to compare alternatives and determine which ones best address the East Corridor issues and needs. A four-tiered screening process (see Figure S-2) was used to narrow the list of alternatives to the Preferred Alternative. Alternatives were evaluated at each screening level (initial screening, comparative screening, detailed screening, and alternative refinement) based on the evaluation criteria determined from the project purpose, need, goals, and objectives.

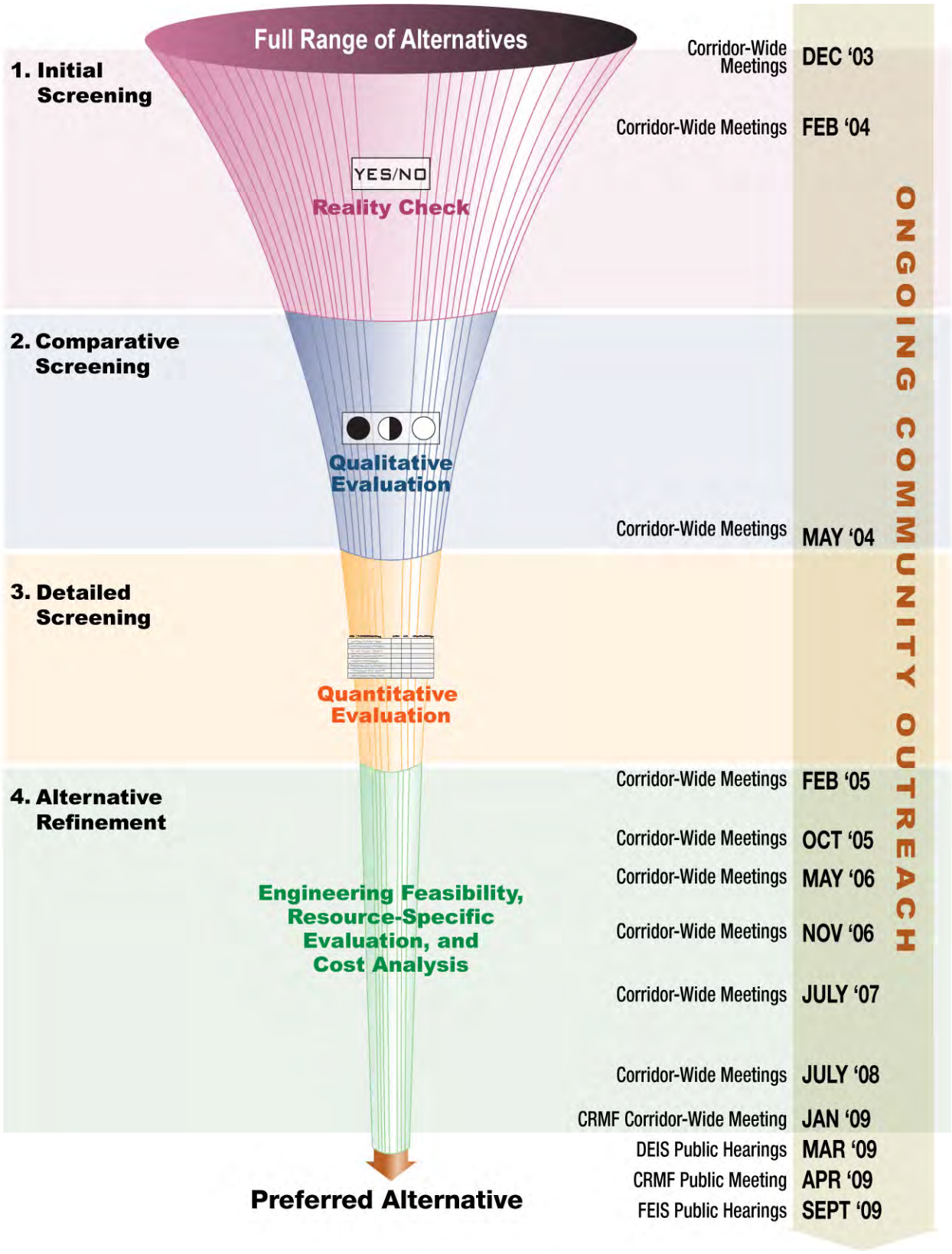
- **Initial Screening:** The first level of evaluation, initial screening, eliminated alignments, technologies, and station locations that did not have a realistic chance of being designed and built because they would either result in significant environmental impacts, were not located in the project area, or were not a technology that is in revenue service.
- **Comparative Screening:** Comparative screening continued to look at alignments and technologies relative to each other within categories to determine whether some were clearly better than others. A qualitative (good/better/best) approach was used to determine the alternatives within each category that were more effective at meeting the project purpose and need.
- **Detailed Screening:** Alignments, station locations, and technologies remaining after comparative screening were combined to create several corridor-wide alternatives for analysis in detailed screening. A quantitative (measure-based) analysis was used to identify the strengths and weaknesses of the alternatives.
- **Alternative Refinement:** Alternatives that remained after the detailed screening were further developed and analyzed as part of alternative refinement. The evaluation was more in depth than the detailed screening analysis and was used to determine the alternatives most responsive to the project purpose and need. This fourth level of screening considered engineering feasibility; potential effects on social, environmental, and economic resources; and an analysis of capital, operation, and maintenance costs.

More than 100 alternatives (alignment, station locations, and technologies) were evaluated in the screening process. As part of the detailed screening, the following eight alternatives were evaluated:

- Alternative 1: I-70 BRT
- Alternative 2: UPRR Commuter Rail
- Alternative 3: UPRR Light Rail Transit (LRT)
- Alternative 4: UPRR BRT
- Alternative 5: Bruce Randolph Avenue LRT
- Alternative 6: Bruce Randolph Avenue BRT
- Alternative 7: Martin Luther King Boulevard LRT
- Alternative 8: Martin Luther King Boulevard BRT

Alternatives 2 and 3 were carried into the alternative refinement process. Alternative 3: UPRR LRT, was eliminated. Alternative 2: UPRR Commuter Rail, was refined and developed as the Preferred Alternative and is presented in the FEIS.

Figure S-2
Alternative Screening Process



Alternatives carried forward in the FEIS

In addition to the Preferred Alternative, a No-Action Alternative and Transportation System Management (TSM) Alternative are presented in the FEIS.

No-Action Alternative

The No-Action Alternative includes planned and committed roadway improvements reflected in the DRCOG *Metro Vision 2030 Regional Transportation Plan* (2005b) and full implementation of the RTD FasTracks system, including the commuter rail maintenance facility (CRMF), except for the East Corridor. Bus service improvements for the No-Action Alternative are intended to keep pace with population and employment growth, consistent with trends in the project area. Evaluating this alternative helps determine whether the benefits of the Preferred Alternative are acceptable considering the environmental, economic, and social impacts and their mitigation costs.

Transportation System Management Alternative

To fulfill the requirements of the FTA New Starts criteria, a TSM Alternative was developed to represent the "best that can be done" without major capital investments. This alternative is included for mobility and financial comparisons. It includes an expansion of bus transit service beyond the No-Action Alternative and short-term improvements already committed for implementation.

Preferred Alternative

The East Corridor Preferred Alternative alignment is shown in Figure S-3, and a simulation is shown in Figure S-4. The alignment generally follows the UPRR corridor between DUS and Airport Boulevard and then the Peña Transportation Corridor to DIA. Characteristics of the Preferred Alternative include:

- Double-track electric multiple unit (EMU) commuter rail
- 6 new stations
- 7,900 parking spaces (3,529 parking spaces for opening day of 2015)
- 20 grade-separated crossings
- 17 at-grade crossings
- Average weekday ridership of 37,900
- 29-minute travel time from DUS to DIA
- Service between 3:00 a.m. and 1:00 a.m. 365 days a year
- 15-minute frequency (headway) from 4:00 a.m. to 11:00 p.m.
- Capital cost of $1.642 billion (in year of expenditure dollars)
- Annual estimated operating cost of $17,575,188 (in 2008 dollars)

In addition to DUS, recommended stations include:

- 38th/Blake (formerly called 40th/40th)
- Colorado
- Central Park
- Peoria
- 40th/Airport
- DIA

Figure S-3
East Corridor Preferred Alternative

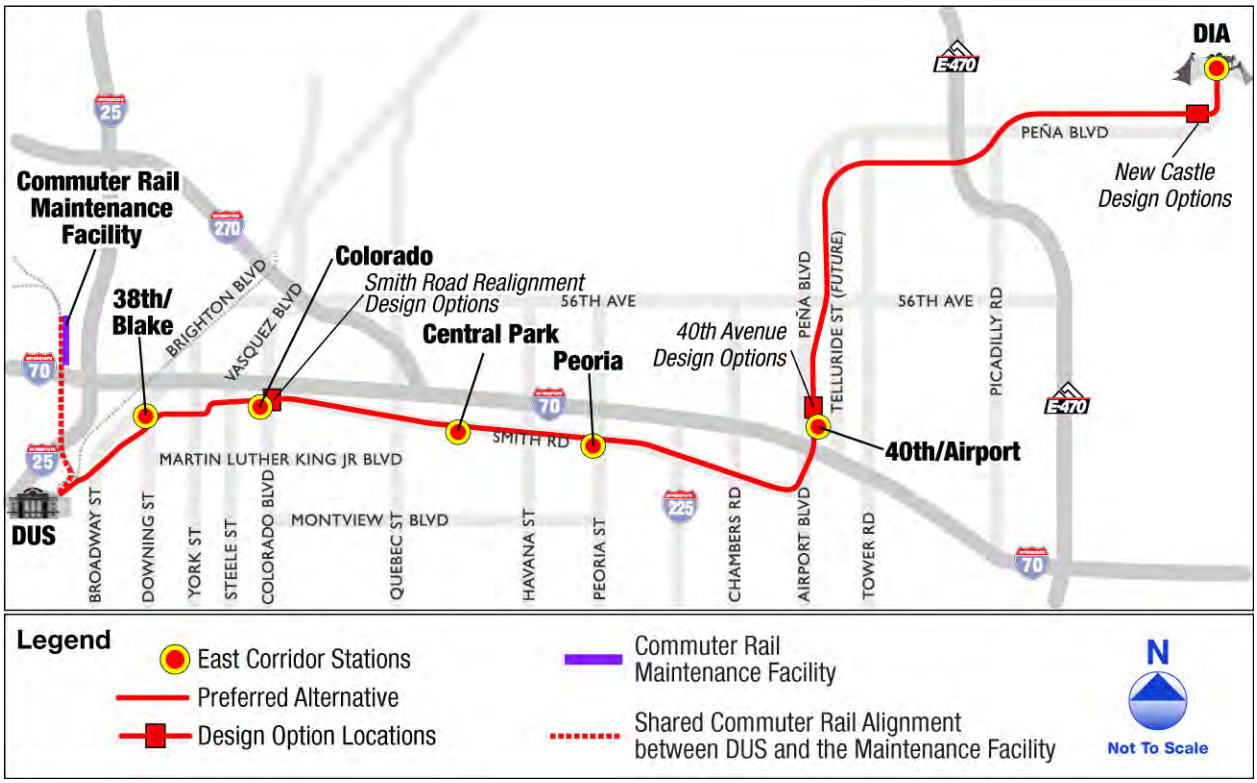


Figure S-4
Preferred Alternative Simulation (near DIA)

Two grade separation design options (40th Avenue Design Option and New Castle Design Option) have been evaluated in the FEIS. The at-grade option for 40th Avenue is included in the Preferred Alternative. The grade-separated option for New Castle Street is included in the Preferred Alternative. As part of the transit improvements, various roadway improvements and freight rail relocations would be necessary. At the Colorado and Peoria stations, Smith Road realignment modifications are proposed. Two design options have been evaluated for the realignment of Smith Road near Colorado station in this FEIS. Roadway modifications are also proposed along 40th Avenue and Smith Road.

The Preferred Alternative includes the CRMF at the Fox North site. The CRMF would include facilities to repair, maintain, clean, fuel, and store the FasTracks commuter rail vehicles.

The opening day operating plan for the Preferred Alternative would include four trains per hour (15-minute headway) in each direction between DUS and DIA throughout most of the day. While four-car trains would be used for operations on opening day, the corridor would be planned and designed so that platforms could be expanded to ultimately accommodate eight-car trains.

S.3 AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES

Detailed studies were conducted to determine the impacts of the No-Action Alternative and Preferred Alternative on social, environmental, and economic resources. These studies addressed:

- Social impacts and community facilities
- Land use, zoning, and economic development
- Land acquisition, displacements, and relocation of existing uses
- Historic, archaeological, and cultural resources
- Visual and aesthetic qualities
- Parklands and recreation areas
- Air quality and energy
- Noise and vibration
- Biological resources
- Natural resources
- Hazardous materials
- Safety and security
- Utilities

The potential impacts of the Preferred Alternative and proposed mitigation strategies are listed in the table at the end of this Executive Summary. Some of the potential impacts of the Preferred Alternative include:

- Full acquisition of six residential properties requiring relocation of seven residences and the full acquisition of 58 commercial/industrial properties requiring relocation of 49 businesses.
- Lease or acquisition of approximately 54 acres of railroad right of way (ROW).
- Adverse effect on four historic resources.
- Some change in the visual character of the corridor due to the addition of grade-separated tracks, overhead catenary wires, roadway relocations, and other components of the Preferred Alternative.
- Direct impacts to two existing recreational resources and four proposed trails.
- A decrease in regional vehicle miles traveled with an associated reduction in air pollutants.

- Severe noise impacts to 229 sensitive noise receptors; however, all of these impacts would be mitigated through the implementation of a quiet zone.
- Direct impacts on multiple utilities as part of the construction.
- Approximately 1.0942 acres of jurisdictional wetlands would be directly impacted and mitigated.

S.4 TRANSPORTATION SYSTEMS

Implementation of a transit system has the potential to affect the surrounding transportation system, which includes other transit systems, roadways, freight, air facilities, and bicycle and pedestrian facilities.

The No-Action Alternative does not adequately improve the transportation system to meet the future corridor needs. Congestion continues, and the need for a reliable transit connection from downtown Denver to DIA remains. Travel times from downtown Denver to DIA increase to 79 minutes during peak periods in the future based on the approved projects in the *2030 Regional Transportation Plan*.

The Preferred Alternative generates an estimated 37,900 average daily riders in 2030. The travel time from DUS to DIA would be 29 minutes. Construction of the Preferred Alternative would require new grade separations, including Broadway, 38th Street, BNSF Market Lead, Quebec Street, UPRR mainline, Airport Boulevard, I-70, 56th Avenue, E-470, Peña Boulevard, New Castle Street, Sand Creek, First Creek, and Second Creek. There would be 17 at-grade crossings with the appropriate crossing controls.

Some intersection modifications (such as adding turning lanes, increasing vehicle storage lengths, and providing new traffic signals) would be required near station areas to address potential traffic impacts generated by the stations.

The proposed DUS was planned through a separate EIS document and NEPA process. FTA made its final environmental decision by selecting an alternative in the ROD on October 17, 2008. The EMU commuter rail vehicles for all four FasTracks commuter rail corridors would be serviced by the CRMF, included in the Preferred Alternative.

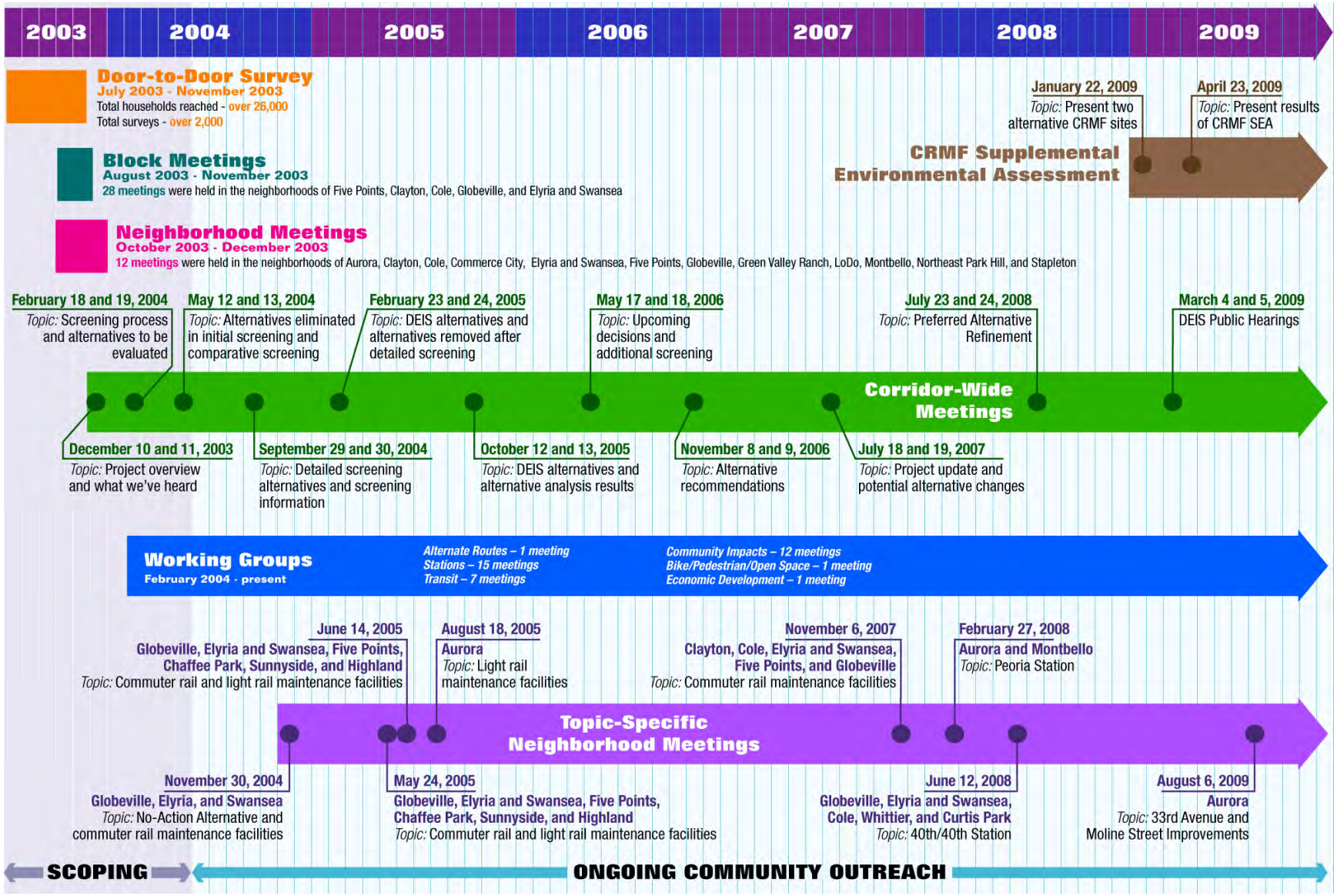
S.5 FINANCIAL ANALYSIS AND EVALUATION OF ALTERNATIVES

The Preferred Alternative would likely be funded through a combination of local, federal, and private sources. The local funds would be provided through RTD sales tax revenues and bond proceeds and by local governments. Federal funding is anticipated from the FTA New Starts grants program.

S.6 COMMUNITY OUTREACH AND AGENCY INVOLVEMENT

The East Corridor EIS has followed an extensive community and agency involvement process since the project began in July 2003. The overall goal of the community outreach and agency involvement program has been to provide an open, dynamic process that includes as many of the residents, businesses, agencies, stakeholders, and community groups as possible. The process has been structured to involve people early and often and to share information as it became available. Figure S-5 shows the community outreach activities that have occurred throughout the FEIS development.

Figure S-5
Community Outreach Activities



Note: The I-70 East Corridor project separated into two separate projects, East Corridor EIS and I-70 East EIS, in June 2006.

The East Corridor EIS committee structure provided a framework for involvement by all interested parties. The corridor complexity, multiple conflicting interests, and high level of sensitivity demanded an encompassing outreach and committee structure so that everyone was afforded an opportunity for meaningful involvement. The structure also managed the wealth of ideas and multiple participants to a recommended alternative that had the general support of sometimes conflicting interests.

Coordination activities with federal and state resource agencies included phone calls, e-mails, letters, and meetings to provide study information and to gain the necessary acceptance through the planning and environmental process.

S.7 SECTION 4(F) EVALUATION

Section 4(f) of the United States (U.S.) Department of Transportation Act (USDOT) of 1966 declares that "[it is] the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites" (49 United States Code [USC] §303). Section 4(f) is applicable to historic properties if the properties are eligible for listing, or are listed, on the National Register of Historic Places (NRHP).

The Preferred Alternative would result in the use of four Section 4(f) resources.

Thirty historic resources were identified within the area of potential effect. A portion of the ROW from two historic resources as well as segments of two historic resources would be permanently incorporated into the project: the Derby Lateral (High Line Canal Lateral A Extension/Segment the Doherty Ditch), the 35th and Blake LLC property, the Freedom Cab Company property, and the Denver Utah Pacific Railroad, Chicago Burlington Quincy Siding and Spur.

Ninety parks and recreational resources were identified within the project area. These parks and recreational properties include regional bicycle/pedestrian trails, open space corridors, neighborhood/community parks, school playgrounds, and recreation centers. Two park and recreational resources (the Sand Creek Regional Greenway trail and the proposed Derby Lateral trail) that are protected under Section 4(f) in the project area would be impacted by the Preferred Alternative and only one (Sand Creek Regional Greenway trail) would incur a use.

Numerous avoidance alternatives were considered, but none were prudent and feasible. Continued efforts to minimize harm to these resources will be explored during the design and construction phases of the project.

S.8 RESPONSE TO AGENCY AND PUBLIC COMMENTS

All formal comments submitted as part of the public and agency review of the DEIS are summarized in this section with responses. Specific responses to individual comments are in Chapter 8, Response to Agency and Public Comments. Ninety-seven comments were received: 32 comments at public hearings (verbal and written), 31 comments submitted via an electronic DEIS feedback form and e-mail, and 34 letters/comments were submitted to RTD and/or FTA. Common themes of the submitted comments are summarized below with general responses.

Potential Stations: Include the potential stations at 64th/Peña and 72nd/Himalaya or Dunkirk as part of the Preferred Alternative.

Response: Potential stations at 64th/Peña and 72nd/Himalaya or Dunkirk are not part of the Preferred Alternative. If implemented in the future, these stations would require additional

environmental analysis and clearance. RTD will continue to coordinate with developers and local agencies.

Pedestrian and Student Safety: Concern about pedestrian and student safety with increased frequency of trains crossing at-grade on local streets near Bruce Randolph Middle School.

Response: RTD evaluated pedestrian safety near schools and coordinated with school officials to develop appropriate mitigation for crossings near schools. Crossings will meet RTD standard design criteria and Public Utility Commission (PUC) recommendations for pedestrians, bicycles, and automobiles that could include gates, flashing lights, street medians, and signs. RTD will continue to work with school district personnel to implement a safety educational program regarding commuter rail crossings.

Central Corridor Extension: Include the connection to the 30th/Downing light rail station in the East Corridor FEIS.

Response: The Central Corridor Extension is no longer a part of the East Corridor EIS document or NEPA process. A separate environmental evaluation for the Central Corridor Extension is expected to be completed by the end of 2009.

As currently planned, the Central Corridor Extension would turn up 36th Street at the intersection of 36th Street and Downing Street. The line would terminate at the 38th/Blake station and provide a direct transfer to the East Corridor.

Smith Road Relocation near the Park Hill Golf Course: Why does Smith Road need to be relocated on the Park Hill Golf Course property?

Response: The relocation of Smith Road is necessary because the available span under the Colorado Boulevard bridge would not accommodate both the commuter rail alignment and the roadway cross section. Two design options to realign Smith Road between Colorado Boulevard and Dahlia Street are included in this FEIS. Design Option 1 includes building a new road along the edge of Park Hill Golf Course and was previously included in the Preferred Alternative in the DEIS. Design Option 2 uses the existing Albion Street for the Smith Road realignment and is included in the Preferred Alternative. Both options include additional modifications to the surrounding roadway network.

Peoria Street Grade Separation: Grade separate Peoria Street and the East Corridor.

Response: Based on the grade separation safety, traffic operations, and completed feasibility analyses, the Peoria Street crossing was determined infeasible to grade separate based on property impacts, financial constraints, and the inability to address traffic congestion. Although the grade separation of Peoria Street would not be required due to the East Corridor, it should be noted that the local jurisdictions have expressed interest in a grade separation; therefore, the Preferred Alternative would not preclude a future grade separation by others.

Station Access and Design Details: Local agency and resident concerns about bicycle and pedestrian access to the proposed stations and the design details of the stations.

Response: Stations are accessed in many ways (walk, drive, bicycle, bus, transfer, and rail transfer). RTD has conducted a station design process to specifically address issues of pedestrian access, bicycle access, bus access, and station urban design templates in more detail. RTD held coordination meetings with both CCD and the City of Aurora (Aurora) and

transit working group meetings with the public. Results from the additional stations refinements are in Chapter 2, Alternatives Considered, and Chapter 4, Transportation Systems, in this FEIS.

Grade Separations at 40th Avenue and New Castle Street: Desire by local agencies and some developers to grade separate the Preferred Alternative crossings at 40th Avenue and New Castle Street.

Response: Design Options have been analyzed for both of these crossings and are included in this FEIS. The Preferred Alternative includes an at-grade crossing of 40th Avenue and a grade-separated crossing of New Castle Street.

Business Relocations: How are business relocations as a result of property acquisition being handled?

Response: All property acquisitions will comply fully with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act). Relocation assistance for businesses will also be consistent with the Uniform Act. Mitigations applicable to potential acquisitions are included in Table 3.2–10 and Table 3.4–5 in Section 3.2, Social Impacts and Community Facilities and Section 3.4, Land Acquisitions, Displacements, and Relocation of Existing Uses.

In addition, the project team has met with many property owners who are potentially impacted based on the current level of design. Many potentially impacted business tenants were also contacted to participate in a survey to identify how the relocation of businesses would affect low-income and minority populations. Survey results are included in Section 3.2, Social Impacts and Community Facilities, of this FEIS.

S.9 UNRESOLVED ISSUES

Several unresolved issues must be addressed as the project proceeds into the ROD and design phases:

- Conduct Phase II studies for hazardous materials.
- Refine mitigation measures with stakeholders and regulatory agencies.
- Obtain the 404 permit from the U.S. Army Corps of Engineers (USACE).
- Complete Section 106 consultation.
- Complete ROW discussions with UPRR.
- Continue coordination with local governments, the Federal Railroad Administration (FRA), and PUC to help facilitate implementation of quiet zone(s) in the study area.

S.10 MITIGATION SUMMARY

Table S-1 summarizes the Preferred Alternative potential impacts and the associated proposed mitigations to minimize impacts.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
Social Impacts and Community Facilities	
Direct Impacts • Acquisition of six residential properties. • No impacts to community facilities • Benefit from improved transit system and decreased congestion.	• Provide acquisition and relocation assistance consistent with the Uniform Act, as amended.
Indirect Impacts • Possible growth in population near stations at transit-oriented developments (TOD).	• No mitigation required; this change is consistent with local and regional plans that encourage TOD near stations.

Temporary Construction Impacts
• Residences within 300 feet of the project would be most affected by construction inconveniences (noise, dust, and traffic). There are 624 households within 300 feet of the Preferred Alternative alignment. These households are located in the Five Points, Elyria and Swansea, Northeast Park Hill, and Aurora neighborhoods.
• Three multi-family residential buildings south of the South Platte River along Fox Street would be affected by construction (noise and dust) of the shared Gold Line and Northwest Rail commuter rail projects' alignment between DUS and the CRMF.
	• Develop a construction management plan and coordinate with affected neighborhoods as needed. The construction plan would include:
	  • Communication plan to inform the public of road closures, operating protocols, and disruption of utility service.
	  • Air quality protection.
	  • Noise and vibration control.
	  • Water quality protection.
	  • Hazardous waste control.
	  • Visual protection.
	  • Traffic control.
	  • Noxious weed management.
	  • Archeological monitoring plan.
	  • Construction safety and security plan.
	  • Energy plan.

Environmental Justice	
Direct Impacts • Acquisition of six residential properties including seven relocations in Elyria and Swansea (less than 0.5 percent of the housing units in that neighborhood). • Faster travel and the availability of more travel options. • Easier access to jobs and services through expanded public transit options including faster access to local destinations (e.g., DIA, Stapleton, and downtown Denver) as well as regional destinations (e.g., Aurora, Lakewood, Arvada, and Thornton) due to planned connecting rail and bus lines. • An estimated 1,460 new jobs related to construction and operation of the project would benefit all people, including minority and low-income populations, by providing opportunities for employment.	• Provide acquisition and relocation assistance consistent with the Uniform Act. • For low-income and minority residential households that are acquired and relocated, RTD will provide free, comprehensive one-year transit passes to all household members. • An informational meeting will be held for businesses being relocated. The meeting will provide an introduction and overview of the process associated with the Uniform Act, as well as consolidated information on resources available, including assistance from local, state, and federal agencies and private agencies in the community. The meeting will not provide details related to individual eligibility.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
Indirect Impacts • An estimated 3,360 construction-related jobs would benefit all people, including minority and low-income populations, by providing opportunities for employment.	• No mitigation required.

Temporary Construction Impacts
• Residences within 300 feet of the project would be most affected by construction inconveniences (noise, dust, and traffic). There are 624 households within 300 feet of the Preferred Alternative alignment. This 300-foot zone has higher percentages of minority and low-income populations relative to the general population.
	• Develop a construction management plan and coordinate with affected neighborhoods as needed. The construction plan would include:
	  • Communication plan to inform the public of road closures, operating protocols, and disruption of utility service.
	  • Air quality protection.
	  • Noise and vibration control.
	  • Water quality protection.
	  • Hazardous waste control.
	  • Visual protection.
	  • Traffic control.
	  • Noxious weed management.
	  • Archeological monitoring plan.
	  • Construction safety and security plan.
	  • Energy plan.
	• Minimize construction-related fugitive emissions by implementing dust control practices that may include:
	  • Using water or wetting agent to control dust.
	  • Using wind barriers and wind screens to prevent spreading of dust from the site.
	  • Having a wheel wash station and/or crushed stone apron at egress/ingress areas to prevent dirt being tracked onto public streets.
	  • Using vacuum powered street sweepers to remove dirt tracked onto streets.
	  • Covering all dump trucks leaving sites.
	  • Covering or wetting temporary excavated materials.
	  • Using a binding agent for long-term excavated materials.
	  • Monitoring for particulate matter having a diameter less than or equal to 10 micrometers (PM_{10}) to allow for the real-time modification or implementation of various dust control measures.
	• Implementing potential mitigation strategies to reduce mobile source air toxics (MSAT) emissions during construction; possible strategies include:
	  • Prohibiting unnecessary idling of construction equipment.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
	• Locating diesel engines and motors as far away as possible from residential areas. • Locating staging areas as far away as possible from residential uses. • For winter time construction; install engine pre-heater devices to eliminate unnecessary idling. • Prohibit tampering with equipment to increase horsepower or to defeat emission control devices effectiveness. • Require construction vehicle engines to be properly tuned and maintained. • Use construction vehicles and equipment with the minimum practical engine size for the intended job. • Schedule work outside of normal hours for sensitive receptors or adjust work to fit the use of adjacent facilities (should be necessary only in extreme circumstances, such as construction immediately adjacent to a health care facility, church, outdoor playground, or school).
Secondary and Cumulative Impacts • Overall, long-term, positive effect on minority and low-income communities.	• No mitigation required.
Land Use and Zoning	
Direct Impacts • Alignment, stations, and CRMF are consistent with adopted land-use plans.	• Monitor parking demand after construction of parking facilities to phase expansion as necessary after 2015.
Indirect Impacts • Potential increase in the urban density within 0.5 mile of stations. • Change in existing zoning near stations to support TOD opportunities.	• No mitigation required.
Temporary Construction Impacts • No impacts.	• No mitigation required.
Secondary and Cumulative Impacts • Future changes in land use and zoning as related to the Preferred Alternative are either consistent with or already identified in CCD and Aurora plans.	• No mitigation required.
Economic Conditions	
Direct Impacts • Loss of approximately $601,000 in annual property taxes from commercial/industrial properties.	• Follow the Uniform Act.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
• Relocation of 49 businesses and potential loss of approximately 813 jobs; however, the majority of these businesses plan to relocate in the same general area. • Addition of approximately 1,460 jobs as a result of construction and operation of the East Corridor.	
Indirect Impacts • Loss of indirect jobs due to displacement of businesses. • Benefit of 3,360 indirect jobs as a result of the project. • Benefit of additional indirect jobs as a result of TOD. • Benefit of high-density, mixed-use development as a result of TOD. • Increased land values around stations as a result of TOD.	• No mitigation required.

Temporary Construction Impacts
• Temporary changes to access to businesses around stations, roadway realignments, and at roadway crossings.
	• Create a construction management plan that includes:
	  • Clear signage and direction for alternative access to businesses.
	  • Coordination with local groups, business districts, communities, and jurisdictions using a variety of media (e.g., radio, flyers, advertisements, and website), where appropriate.
	  • Temporary access provided during normal business hours, where possible.
	  • Necessary permits obtained by contractors.
	  • Traffic maintenance plans to maintain access and circulation.
	  • Plans to minimize impacts to bus routes.

Land Acquisitions, Displacements and Relocation of Existing Facilities	
Direct Impacts • Full acquisition of 6 residential properties and the relocation of 7 residences. • Full acquisition of 58 commercial/industrial properties with 49 business relocations (several properties are vacant) and partial acquisition of 86 to 90 properties. • Acquisition of approximately 54 acres of railroad ROW. • Lease or license agreement for approximately 123 acres of the Peña Transportation Corridor.	• For any person(s) whose real property interests would be affected by the Preferred Alternative, the acquisition of those property interests would comply fully with the Uniform Act and its amendments. • Where the acquired improvements are occupied, relocate those individuals from the subject property (residential or business) to replacement sites. • When feasible, provide any person scheduled to be displaced with a general written description of the RTD relocation program. Provide notification to indicate that the displaced person(s) will not be required to move without at least 90 days' advance written notice. For residential relocations, this

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
• Permanent easements, use and occupancy agreements, common use agreements, and/or intergovernmental agreements for acquisition/use of approximately 24 acres of ROW from other governmental agencies (CDOT, State of Colorado, CCD, Aurora, and E-470).	notice cannot be provided until a written offer to acquire the subject property has been presented and at least one comparable replacement dwelling has been made available. • Relocation payments provided to displaced businesses are determined by federal eligibility guidelines. • An informational meeting will be held for businesses being relocated. The meeting will provide an introduction and overview of the process associated with the Uniform Act, as well as consolidated information on resources available, including assistance from local, state, and federal agencies and private agencies in the community. The meeting will not provide details related to individual eligibility.
Indirect Impacts • No impacts.	• No mitigation required.
Temporary Construction Impacts • Use of property for temporary construction easements as determined during design.	• Coordinate the use of the property with the specific property owner for any property where a temporary construction easement is required.
Secondary and Cumulative Impacts • No impacts.	• No mitigation required.
Historic Resources	

Direct Impacts
• Adverse effects to four historic resources:
  • High Line Canal Lateral A Extension/Segment "The Doherty Ditch" (5DV840.13).
  • Two historic buildings (5DV9309 and 5DV9501).
	• Coordinate with the State Historic Preservation Office (SHPO) and consulting parties through design phase.
	• Explore additional minimization of impact to resource during final design.
	• A memorandum of agreement is being established between SHPO, FTA, and RTD.

• Denver Utah Pacific Railroad, Chicago Burlington Quincy Siding & Spur (Waterworks Sales Co, J.M. Warner Co, & Richardson Lumber Spur) (5AM1888.5 and 5DV6243.7).	• Coordinate with SHPO and consulting parties through design phase. • Memorandum of agreement has been established with SHPO, FTA, and RTD through the RTD Gold Line project's NEPA process. • Included as mitigation in the memorandum of agreement is a Level II documentation found in OAHP Form no. 1595, Historical Resource Documentation; Standards for Level I, II, III Documentation. This mitigation will be implemented before construction.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
Indirect Impacts • Indirect impacts to 26 properties from a combination of noise, visual, and historic setting impacts resulting in no adverse effect. • Additional 73 potentially eligible properties that would be indirectly impacted by noise.	• Implementation of quiet zones. If quiet zones are not feasible, wayside horns and building insulation will be used. • Develop a communication plan as part of the construction management plan. • Incorporate sensitive design of aerial structures and retaining walls.
Temporary Construction Impacts • No impacts.	• No mitigation required.
Archaeological and Paleontological Resources	
Direct Impacts • Potential impacts to unknown archaeological resources.	• Develop a worker awareness-training program and have project monitoring during construction. • Perform data recovery and excavation. • Where known archaeological sites are present, avoid ground disturbing demolition and/or removals where possible. • Perform archaeological monitoring during construction activities. If cultural deposits are discovered during construction, cease work in the area of discovery and notify SHPO. The designated representative will evaluate any such discovery, and in consultation with SHPO, complete appropriate mitigation measures, if necessary, before construction activities are resumed.
Indirect Impacts • No impacts.	• No mitigation required.
Temporary Construction Impacts • All construction impacts are direct impacts.	• No mitigation required.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
Visual and Aesthetics Qualities	

Direct Impacts
• Project features that present the potential for visual change include:
  • Five grade-separated crossings (up to six with design options).
  • Overhead catenary and track way.
  • Electric substations where the alignment intersects with Quebec Street, 40th Avenue, and east of Tower Road.
  • Transit stations and park-n-Ride facilities.
  • CRMF would replace existing industrial land uses with a new industrial land use, resulting in no change to the existing visual character of the site.
	• Conducted transit working group meetings and coordinated with local agencies to collect input on the proposed architectural design of stations.
	• Consider sensitive design of aerial structures and retaining walls.
	• Conducted fencing workshops with CCD, Aurora, and DIA to identify visually sensitive areas and included a more aesthetically pleasing fencing type, where appropriate, based on feedback.

Indirect Impacts • Possible densification of land uses near stations. These areas may develop with taller buildings that would change the visual surroundings near the stations.	• No mitigation required.
Temporary Construction Impacts • Temporary disturbances to areas under construction and the potential for construction vehicle and equipment storage.	• Fence and screen construction material staging areas depending on adjacent land use. • After project construction, and where feasible, restore the ground surfaces outside of the trackway to their original condition.
Parklands and Recreation Areas	
Direct Impacts • Acquisition of 0.94 acres of the Park Hill Golf Course for the Preferred Alternative (Smith Road Realignment Design Option 2). • Smith Road Realignment Design Option 1 requires acquisition of 5.87 acres of the Park Hill Golf Course. • Relocation of a portion of the Sand Creek Regional Greenway trail. • Crossings of four planned trails (Derby Lateral, First Creek, Second Creek, and E-470).	• Coordinate golf course hole relocation/redesign with George W. Clayton Trust, DBA Clayton Early Learning, and Park Hill Golf Course (if Design Option 1 is implemented). • Coordinate trail design with Denver Parks and Recreation, the Sand Creek Greenway Partnership, and Forest City, as appropriate. • Provide a trail detour during construction. • Accommodate an at-grade Derby Lateral trail crossing of the Preferred Alternative within the at-grade crossing of 48th Avenue. • Use design features that accommodate grade-separations for future trail crossings at First Creek, Second Creek, and E-470.
Indirect Impacts • No impacts.	• No mitigation required.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
Temporary Construction Impacts • Temporary detour of Sand Creek Regional Greenway trail during construction.	• Provide adequate trail detour, including advanced notice and signing before beginning construction. Detour signage will comply with the Americans with Disabilities Act of 1990 and Part 6F of the *Manual on Uniform Traffic Control Devices* (FHWA, 2007). • Limit use of trail detour to only those periods of construction activity that are necessary for safety. • Do not locate construction equipment staging on trails.
Air Quality	
Direct Impacts • Reduction in regional vehicle miles traveled (VMT). • Slight decrease in regional vehicle emissions (carbon monoxide [CO], oxides of nitrogen [NO_X], volatile organic compound [VOC], PM_{10}). • Significant decreases in MSATs from existing conditions. • No CO hot-spot violations.	• No mitigation required; however, general air quality mitigation strategies for the FasTracks program will be implemented.
Indirect Impacts • No impacts.	• No mitigation required.

Temporary Construction Impacts
• Expected to be low to moderate; however, localized, small-scale impacts may occur.
	• Include site-specific mitigation measures in a construction management plan.
	• Minimize construction-related fugitive emissions using dust control practices that may include:
	  • Using water or wetting agent to control dust.
	  • Using wind barriers and wind screens to prevent spreading of dust from the site.
	  • Having a wheel wash station and/or crushed stone apron at egress/ingress areas to prevent dirt being tracked onto public streets.
	  • Using vacuum-powered street sweepers to remove dirt tracked onto streets.
	  • Covering all dump trucks leaving sites.
	  • Covering or wetting temporary excavated materials.
	  • Using a binding agent for long-term excavated materials.
	  • Monitoring for PM_{10} to allow for the real-time modification or implementation of various dust control measures.
	• Implement potential mitigation strategies to reduce MSAT emissions during construction; possible strategies include:
	  • Prohibiting unnecessary idling of construction

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
	equipment. • Locating diesel engines and motors as far away as possible from residential areas. • Locating staging areas as far away as possible from residential uses. • For winter construction, installing engine pre-heater devices to eliminate unnecessary idling. • Prohibiting tampering with equipment to increase horsepower or to defeat emission control devices effectiveness. • Requiring construction vehicle engines to be properly tuned and maintained. • Using construction vehicles and equipment with the minimum practical engine size for the intended job. • Schedule work outside of normal hours for sensitive receptors or adjust work to fit the use of adjacent facilities (should only be necessary in extreme circumstances, such as construction immediately adjacent to a health care facility, church, outdoor playground, or school).
Secondary and Cumulative Impacts • No impacts.	• No mitigation required.
Energy	
Direct Impacts • Approximately 862.50 billion British thermal units (BTU) of energy consumed, which is a decrease of 1.25 billion BTU daily as compared to the No-Action Alternative. • Approximately 12.2 million BTUs would be used daily for commuter rail vehicle movements served by the CRMF. • CRMF buildings would expend 36.9 million BTU daily.	• RTD will investigate the use of energy-efficient design and Leadership in Energy and Environmental Design certification for the CRMF.
Indirect Impacts • No impacts.	• No mitigation required.
Temporary Construction Impacts • Minimal consumption of fossil fuels during construction.	• Incorporate best management practices (BMP) into the project to reduce energy use during construction and implement environmental sustainability policies. These BMPs may include energy efficient lighting, electrical systems, mechanical equipment, and building insulation.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
Noise	

Direct Impacts
• No noise impacts with the implementation of mitigation strategies.
• Noise impacts without mitigation.
  • 229 severe noise impacts.
  • 457 moderate noise impacts – 222 of which were within the top 50 percent of the moderate range, and 44 of which have existing noise exposure above 65 A-weighted decibels (dBA).
  • No noise impacts from station areas.
  • One receptor impacted by roadway noise southeast of 40th Avenue and Jackson Street intersection.
  • Noise impact to Park Hill Golf Course caused by Smith Road realignment Design Option 1.
	• Implement quiet zones so that EMU warning horns can be silenced with mitigation (freight horns would also be silenced).
	• RTD will assist local jurisdictions with their quiet zone applications to the FRA and PUC. Local jurisdictions must submit quiet zone applications.
	• Use building insulation for the two receptors impacted by EMU vehicle noise that cannot be mitigated by quiet zones.
	• If quiet zones are not feasible, use wayside horns and building insulation.
	• No mitigation required for traffic noise.

Indirect Impacts • No impacts.	• No mitigation required.
Temporary Construction Impacts • Noise related to construction activities.	• Develop a communication plan as part of the construction management plan to inform the public of potential construction noise impacts and measures that will be employed to reduce them. • Minimize construction duration and nighttime activities in residential areas. • Re-route truck traffic away from residential streets, where possible. • Combine noisy operations so that they occur at the same time. • Use well-maintained equipment with modern mufflers. • Use noise blankets on equipment and/or quiet-use generators. • Use alternative construction methods (such as sonic or vibratory pile driving) in noise-sensitive areas. • Conduct pile driving and other high-noise activities during daytime construction (generally 7 a.m. to 7 p.m.), where possible.
Secondary and Cumulative Impacts • No impacts.	• No mitigation required.

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Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
Vibration	
Direct Impacts • No impacts.	• No mitigation required.
Indirect Impacts • No impacts.	• No mitigation required.
Temporary Construction Impacts • Vibration related to construction activities.	• Avoid nighttime construction in neighborhoods. • Use alternative construction methods to minimize the use of impact and vibratory equipment (such as pile drivers and compactors). • Re-route construction-related truck traffic along roadways that will create the least disturbance to residents.
Secondary and Cumulative • No impacts.	• No mitigation required.
Wildlife	
Direct Impacts • No impacts.	• No mitigation required.
Indirect Impacts • Minimal impacts.	• No mitigation required.
Temporary Construction Impacts • Minimal impacts.	• No mitigation required.
Vegetation	
Direct Impacts • Impacts to midgrass prairie (42 acres).	• No mitigation required.
Indirect Impacts • No impacts.	• No mitigation required.
Temporary Construction Impacts • Minimal impacts.	• Seed areas of temporary disturbance with an appropriate mixture of native grasses. • Limit construction vehicle operations to the designated construction area.
Noxious Weeds	
Direct Impacts • No impacts.	• No mitigation required.
Indirect Impacts • No impacts.	• No mitigation required.
Temporary Construction Impacts • During construction, the Preferred Alternative may result in the proliferation of noxious weeds in areas where existing vegetation is removed.	• Seed areas of temporary disturbance with an appropriate mixture of native grasses, plant forbs, and shrubs where appropriate. • Develop and implement an integrated noxious weed management plan during construction. Preventive measures include:

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
	• Inspecting contractors' vehicles before they are used for construction to ensure that they are free of soil and debris capable of transporting noxious weed seeds or roots. • Treating noxious weeds observed in and near the construction area at the start of construction with herbicides, or physically removing them to prevent seeds blowing into disturbed areas during construction. • Assess potential areas of topsoil salvage for presence and abundance of noxious weeds before use. Treat topsoil from heavily infested areas by spraying, moving offsite, or burring during construction. • Reclaiming areas of temporary disturbance in phases throughout project construction using permanent native seed mixtures. • Using certified weed-free mulch and hay bales. • Using weed control principles of integrated pest management to treat target weed species by using a combination of two or more management techniques (biological, chemical, mechanical, and cultural). • Using BMPs to control erosion and sedimentation during construction and to protect water quality in streams, including berms, brush barriers, check dams, erosion control blankets, filter strips, sandbag barriers, sediment basins, sheet mulching, silt fences, straw-bale barriers, surface roughening, and diversion channels.
Special Status Species	
Direct Impacts • Potential to impact burrowing owls occupying prairie dog colonies. • Approximately 26 acres of prairie dog colonies impacted. .	• If construction in prairie dog colonies occurs during burrowing owl nesting season (March 15 to October 31), conduct three surveys at least one week apart, with the last survey no more than 15-days before construction. If there are no burrowing owls or prairie dogs present in the prairie dog holes, contractors must fill the prairie dog holes to ensure no burrowing owls will nest in the area during the project. If burrowing owls are discovered, the contractor must stay at least 150 feet from the nest (a 150-foot radius). • Mitigate impacts to prairie dog colonies in accordance with FasTracks mitigation guidance. Specific strategies include: • Initiating coordination with the Colorado Department of Wildlife (CDOW) Denver Service

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
	Center District's Wildlife Manager before any manipulation of prairie dogs or their colonies begins. • If a prairie dog colony is less than 2 acres, but has the potential to expand into areas that are currently inactive (i.e., not constrained), the available and accessible habitat will be the determining factor for the size of the area to be considered. • Conducting relocation efforts for prairie dog colonies greater than 2 acres in accordance with CRS 35-7-203 and any other applicable laws or regulations. • If a relocation site cannot be located for colonies larger than 2 acres, capture the prairie dogs and donate to raptor rehabilitation facilities, or turn over to the U.S. Fish and Wildlife Service (USFWS) for the black-footed ferret reintroduction program. • At no time will the RTD authorize earth-moving activities that result in the burying of living prairie dogs. If needed, obtain from CDOW humane techniques for the killing of prairie dogs within a town less than 2 acres in size. • Perform all relocation of prairie dogs in compliance with a CDOW Permit to Capture and Relocate Prairie Dogs. Acquire this before any relocation activities.
Indirect Impacts • Minor indirect impacts due to loss of winter prey for bald eagles with loss of prairie dog colonies.	• No mitigation required.
Temporary Construction Impacts • Additional noise and human disturbance to bald eagles during construction. • If construction occurs during the primary nesting season or at any other time that may result in the take of nesting migratory birds, a qualified biologist will conduct a field survey of the affected habitats and structures to determine the absence or presence of nesting migratory birds.	• Conduct annual raptor nest surveys during nesting season (generally February 1 through July 31) to determine the presence of active raptor nests. If an active nest is located, establish season buffers and coordinate with CDOW to prevent disturbance to nesting birds during construction. • Under the Migratory Bird Treaty Act, avoid construction activities in grassland, wetland, stream, and woodland habitats, and those that occur on bridges (which may affect swallow nests on bridge girders) that would otherwise result in the take of migratory birds, eggs, young, and/or active nests. Although the provisions of the Migratory Bird Treaty Act are applicable year-round, most migratory bird nesting activity in eastern Colorado occurs from April 1 to August 31; however, some

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
	migratory birds are known to nest outside of the primary nesting season. For example, raptors can be expected to nest in woodland habitats from February 1 to July 15. If the proposed construction project is planned to occur during the primary nesting season or at any other time that may result in the take of nesting migratory birds, USFWS recommends that the project proponent (or construction contractor) arrange to have a qualified biologist conduct a field survey of the affected habitats and structures to determine the absence or presence of nesting migratory birds. Conduct surveys during the nesting season. In some cases, such as on bridges or other similar structures, nesting can be prevented until construction is complete. It is further recommended that the results of field surveys for nesting birds, along with information regarding the qualifications of the biologist(s) performing the surveys, be thoroughly documented and that the documentation be maintained on file by the project proponent (or construction contractor) for review by USFWS (if requested) until construction has been completed. Immediately contact USFWS Colorado Field Office for further guidance if a field survey identifies the existence of one or more active bird nests that cannot be avoided by the planned construction activities. Adherence to these guidelines will help avoid the unnecessary take of migratory birds and the possible need for law enforcement action.
Floodplains and Drainage/Hydrology	
Direct Impacts • Sand Creek 100-year floodplain: Three new proposed piers would have a negligible impediment on the 100-year floodplain. New embankment across the floodplain overflow area east of the old runway tunnels would slightly modify water surface elevations. New piers for an additional freight rail bridge over Sand Creek are also anticipated to have a negligible impact on the 100-year floodplain. • First Creek 100-year floodplain: Four new piers would have a negligible impact on the 100-year floodplain. • Second Creek 100-year floodplain: Four new	• Complete detention and water quality treatment in accordance with the Urban Drainage and Flood Control District (UDFCD) and local jurisdictions and implement BMPs. • Coordinate floodplain management with local jurisdictions and UDFCD.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
piers would have a negligible impact on the 100-year floodplain. • Third Creek 100-year floodplain: Box culvert extension would have a negligible impact on the 100-year floodplain. • Additional impervious surfaces associated with some stations and substations.	
Indirect Impacts • Additional impervious surfaces introduced by TOD around stations.	• No mitigation required.
Temporary Construction Impacts • Construction activities within the Sand Creek, First Creek, Second Creek, and Third Creek floodplains and in urban flooding areas.	• Adhere to UDFCD and local jurisdiction requirements.
Waters of the U.S. and Wetlands	
Permanent, Direct Impacts • Preferred Alternative: 1.0942 acres of wetland impact and 0.0035 acre of impact to open water, all of which are classified as jurisdictional waters of the U.S.	• Implement ongoing avoidance and minimization measures throughout the design and construction phases. • Minimize impacts by fencing construction zones with high-visibility temporary construction fencing. • Minimize impacts to wetland areas used for construction access by covering them with layers of geotextile, straw, and soil before use. • Implement mitigation for wetland impacts by purchasing credits from a wetland bank. • Obtain 404 Individual Permit.
Indirect Impacts • Indirect impacts to wetlands include the alteration of wetland hydrology due to changes in flow routing or runoff volumes and the introduction and/or spread of non-native plant species (e.g., noxious weeds).	• Install erosion control and sediment control BMPs before ground disturbance activities. Permanently stabilize completed areas within seven days. • Perform no equipment staging or storage of construction materials within 50 feet of waters of the U.S., including wetlands. • Use no chemicals (such as soil stabilizers, dust inhibitors, or fertilizers) within 50 feet of waters of the U.S., including wetlands. • Seed and/or plant and mulch all areas of exposed soil throughout construction (following completion of each section). • Conduct noxious weed control as needed. Only aquatic label herbicides will be used in or near waters of the U.S., including wetlands.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
Temporary Construction Impacts • Preferred Alternative: 1.0914 acre of temporary wetland impact and 0.5092 acre of temporary impact to open water, all of which are classified as jurisdictional waters of the U.S. • Increased delivery of pollutants and temporary increases in sediment inputs during construction.	• Avoid inadvertent temporary impacts by fencing the limits of disturbance during construction. • Cover wetland areas used for construction access with a layer of geotextile, straw, and soil before use. • Restore wetlands temporarily affected during construction to pre-construction conditions.
Water Resources and Water Quality	
Direct Impacts • Impervious area increase of 47.4 acres at stations. • Unmitigated overall increase in annual mass load for lead, copper, zinc, phosphorous, and total suspended solids of 527 percent for Sand Creek. BMPs with 85 percent effectiveness reduce impacts to existing conditions. • Unmitigated overall increase in annual mass load for lead, copper, zinc, phosphorous, and total suspended solids of 3.5 percent for the South Platte River.	• Contractor to obtain all required permits for construction activities. • The Preferred Alternative shall meet CCD, CDOT, and Aurora water quality requirements. Minimum technical requirements for BMPs (including those presented in UDFCD Volume III) are reducing post-development runoff to the maximum extent practicable and controlling the remaining runoff through BMPs that treat the necessary water capture quality volume. • Consider the use of permeable pavement in final design. • Develop a Spill Prevention Control and Countermeasure Plan for the CMRF.
Indirect Impacts • No impacts.	• No mitigation required.
Temporary Construction Impacts • Minor temporary stream alterations at Sand Creek, First Creek, and Third Creek. • Temporary construction impacts would occur during the demolition of the existing buildings and tracks in the study area, as well as during construction of the CRMF. • With BMPs and erosion control devices properly in place, water quality would not change during demolition or construction processes. The BMPs and erosion control devices would treat storm water runoff from the impacted areas.	• Develop a stormwater management plan. • Use stabilization BMPs such as mulching, temporary seeding, or erosion control blankets. • Use temporary erosion control BMPs such as staging construction to reduce disturbance; minimizing access areas; and using temporary seeding, early final grading and seeding of completed areas, clean water diversions, silt fences, erosion bales, erosion control blankets, sediment traps, sediment basins, soil stockpile management, and temporary diversion structures. • Develop a spill control plan as required by RTD MS4 permit; train staff in proper fueling procedures and procedures to contain spills to minimize the potential for surface and groundwater contamination from petroleum products.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
Geology and Soils	

Direct Impacts
• Geotechnical conditions (such as collapsible, shrinking/swelling soils, and corrosive soils) would require appropriate engineering designs to avoid impacts.
	• Use appropriate engineering designs to minimize potential impacts. These include:
	  • Shoring of slope cuts and shallow excavations, retaining walls, and dewatering systems to engineer slope cuts for stability.
	  • Using engineering techniques such as drainage systems to direct surface water and runoff, slope design, covering slope during construction, use of engineered fill, and prompt and appropriate revegetation.
	  • Using engineering techniques such as deep foundations into bedrock below perennial water table, specialized piers and footings, over-excavation with moisture treatment and compaction of backfill, engineered or imported fill, subsurface drainage systems, and surface water diversions to mitigate for expansive bedrock, soil, and surficial materials.
	  • Using engineering techniques such as shoring of excavations, retaining walls, drainage systems, excavation and/or engineered or imported fill, compaction, pre-construction flooding and/or loading, and geogrids or geotextiles to mitigate for collapsible soils.
	  • Using techniques such as use of coated and resistant steel and concrete and drainage systems to mitigate for corrosive soils.
	  • Using engineered fills and dewatering systems to mitigate for shallow groundwater.
	  • Designing alignment requirements with existing and altered topographies.
	  • Using engineering techniques and design to conform to anticipated probable maximum seismic events.

Indirect Impacts • No impacts.	• No mitigation required.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation

Temporary Construction Impacts
• Soil erosion during construction.
	• Use BMPs to mitigate soil erosion and blowing dust during construction. Potential BMPs include:
	  • Staging construction to reduce disturbance.
	  • Minimizing site access areas.
	  • Temporary seeding.
	  • Early final grading and seeding of completed areas.
	  • Clean water diversions.
	  • Silt fences.
	  • Erosion bales.
	  • Erosion control blankets.
	  • Sediment traps.
	  • Sediment basins.
	  • Soil stockpile management.
	  • Temporary diversion structures.
	  • Spill prevention and control measures.
	  • Using water or a wetting agent to control dust.

Hazardous Materials	

Direct Impacts
• Areas of concern include:
  • 6 known or potential landfills.
  • 1 National Priority List (NPL) site (Vasquez Boulevard and I-70).
  • 8 Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) no further remedial action planned (NFRAP) sites.
  • 9 Voluntary Cleanup Program (VCUP) sites
  • 8 open leaking underground storage tank (LUST) sites.
  • 116 closed LUST sites.
  • 4 Resource Conservation and Recovery Act (RCRA) corrective action list sites.
  • 2 RCRA large-quantity generator (LQG) sites.
  • 8 RCRA small-quantity generator (SQG) sites.
  • 1 treatment, storage, and disposal site.
	• Develop management measures to address hazardous materials encountered during construction and operation of the Preferred Alternative. The environmental management plan will consist of specific measures to protect worker and public health and safety as well as programs to manage contaminated material during construction.
	• Prepare a Phase I Environmental Site Assessment for properties to be acquired.
	• Modify track and structure locations during design (to the extent practical), especially excavation, to minimize conflict with subsurface contamination.
	• Complete a site-specific Phase II investigation where subsurface disturbance is anticipated in a potentially hazardous area. Collect soil and/or groundwater samples and submit for laboratory analysis as needed.
	• Develop a materials handling plan.
	• Develop a health and safety plan.
	• Prepare an asbestos and/or lead-based paint survey for buildings that will be demolished.

Indirect Impacts • No impacts.	• No mitigation required.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
Temporary Construction Impacts • Potential for hazardous materials sites to become exposed during construction. • Water quality protection. • Protection of construction workers. • Accidental release of hazardous materials.	• Implement construction BMPs including a stormwater pollution prevention plan. BMPs may include secondary containment areas for refueling construction equipment, berms or ponds to control runoff, dust suppression, and a monitoring program to test stormwater for contaminants before discharge from the construction site. • Use construction practices in compliance with Occupational Safety and Health Administration (OSHA) requirements for construction workers who may be exposed to hazardous materials; prepare health and safety and emergency response plans, air monitoring (if necessary), and provision for personal protective equipment. • Where avoidance of potentially contaminated sites is not feasible, coordinate further site investigation with the affected property owner.
Safety and Security	
Direct Impacts • The operation of the Preferred Alternative would neither increase nor decrease crime rates in the project area. • The operation of the Preferred Alternative would increase the frequency of trains at grade crossings.	• No mitigation required beyond adherence to the RTD station design guidelines for safety and security. • RTD will continue to coordinate with the Fire and Life Safety Committee in preparing an emergency plan and coordinating emergency responses. • Crossing improvements would upgrade existing warning devices to gates and barrier curbs at a minimum.
Indirect Impacts • No impacts.	• No mitigation required.
Temporary Construction Impacts • Potential security hazards if the work areas are not adequately secured.	• Secure construction areas to reduce security hazards.
Utilities	

Direct Impacts
• The Preferred Alternative would have direct utility impacts on the following:
  • 10 major electrical transmission lines.
  • 32 major natural gas lines.
  • 15 major petroleum lines.
  • 9 major water lines.
  • 7 major sanitary and storm sewer lines.
  • 100 major telecommunication lines.
• CRMF would have direct impacts on the following:
  • 2 water mains.
  • 5 storm sewers.
  • 2 sanitary sewers.
	• As appropriate for the impact, include the following mitigation:
	  • Avoid utilities during final design and construction.
	  • Reinforce or protect utilities through casing pipes and other construction methods.
	  • Use cathodic protection to mitigate corrosion or electrical grounding to mitigate effects of induced voltages caused by alternating current.
	  • Relocate utilities in coordination with the utility owner or municipality.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
• 1 gas line. • Multiple fiber optic telecommunication and electric lines.	
Indirect Impacts • Possible densification of development around transit stations requiring additional utilities.	• No mitigation required.
Temporary Construction Impacts • Temporary interruptions in service.	• Coordinate temporary interruptions in utility service with affected property owners and tenants. • See direct impacts; construction impacts to utilities are direct impacts.
Transit Service and Operations	
Direct Impacts • Benefit of improved travel time through the corridor. The travel time for the Preferred Alternative is 29 minutes from DUS to DIA, while the projected auto travel time would be 79 minutes in 2030. • The Preferred Alternative would provide service to 37,900 riders (average weekday) in 2030. • 3,529 parking spaces would be provided on opening day, and 7,900 spaces would be provided by 2030. • The Preferred Alternative would reduce regional VMT by approximately 204,000 per day over the No-Action Alternative in 2030. • The Preferred Alternative would reduce regional vehicle hours of travel (VHT) by approximately 11,000 per day over the No-Action Alternative in 2030.	• No mitigation required.
Indirect Impacts • No impacts.	• No mitigation required.
Temporary Construction Impacts • No impacts.	• No mitigation required.
Roadway Facilities and Traffic	
Direct Impacts • New commuter rail service crossing existing roadways between DUS and DIA.	• Crossing improvements will upgrade existing crossing protection to gates with barrier curbs at a minimum; these include York Street/Josephine Street, Clayton Street, Steele Street, Dahlia Street, Holly Street, Monaco Street, Quebec Street Frontage Road Southbound, Quebec Street Frontage Road Northbound, Ulster Street, Havana Street, Peoria Street, Sable Road, and Chambers Road. • Add gates and barrier curbs to new at-grade

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Impacts	Mitigation
	crossings; these include 40th Avenue, 48th Avenue, and Tower Road. • Add new grade separations at Airport Boulevard, I-70, 56th Avenue, E-470, Peña Boulevard, and New Castle Street.
• York Street/Josephine Street crossing and adjacent intersection with 40th Avenue.	• No mitigation required; the proposed intersection results in improved operations over the No-Action Alternative.
• Clayton Street mid-block crossing.	• None; the crossing operates at level of service (LOS) D or better during the peaks without mitigation measures.
• Steele Street mid-block crossing.	• None; the crossing operates at LOS D or better during the peaks without mitigation measures.
• Dahlia Street crossing and adjacent intersection with Smith Road.	• Add an eastbound left-turn lane on Smith Road. • Add a westbound left-turn lane on Smith Road.
• Holly Street crossing and adjacent intersection with Smith Road.	• Add an eastbound left-turn lane on Smith Road. • Add a westbound left-turn lane on Smith Road. • Add a northbound left-turn lane on Holly Street. • Add a southbound left-turn lane on Holly Street. • Add an eastbound right-turn lane on Smith Road. • Add a westbound right-turn lane on Smith Road.
• Monaco Street crossing and adjacent intersection with Smith Road.	• Add an eastbound left-turn lane on Smith Road. • Add a westbound left-turn lane on Smith Road. • Add a southbound right-turn lane on Monaco Street.
• Quebec Street Southbound Frontage Road crossing and adjacent intersection with Smith Road.	• Add an eastbound through lane on Smith Road.
• Quebec Street Northbound Frontage Road crossing and adjacent intersection with Smith Road.	• This crossing and intersection are included in the station impacts and mitigation.
• Ulster Street crossing and adjacent intersection with Smith Road.	• This crossing and intersection are included in the station impacts and mitigation.
• Havana Street crossing and adjacent intersection with Smith Road.	• Add an eastbound left-turn lane on Smith Road. • Add a westbound left-turn lane on Smith Road. • Add a northbound left-turn lane on Havana Street. • Add a southbound left-turn lane on Havana Street. • Add an eastbound right-turn lane on Smith Road. • Add a westbound right-turn lane on Smith Road. • Add a southbound right-turn lane on Havana Street.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Roadway Crossing	Mitigation
• Peoria Street crossing and adjacent intersection with Smith Road.	• This crossing and intersection are included in the station impacts and mitigation below.
• Sable Road crossing and adjacent intersection with Smith Road.	• Add a westbound right-turn lane on Smith Road.
• Chambers Road crossing and adjacent intersection with Smith Road.	• Add a second westbound lane on Smith Road. • Add an eastbound shared through/right-turn lane on Smith Road. • Add a second eastbound left-turn lane on Smith Road. • Add length to the remaining turn bays at the intersection.

• 40th Avenue mid-block crossing.	• No mitigation required:
	  • The crossing has only minimal degradation in operations with implementation of the Preferred Alternative (at grade).
	  • Grade separation avoids impacts to operations with implementation of Design Option 2.

• 48th Avenue mid-block crossing.	• None; the crossing has only minimal degradation in operations.
• Tower Road mid-block crossing.	• None; the crossing operates at LOS D or better during the peaks without mitigation measures.

• New Castle Street mid-block crossing.	• No mitigation required:
	  • The crossing has no degradation in operations with implementation of the Preferred Alternative (grade separated).
	  • The crossing has only minimal degradation in operations with implementation of Design Option 1.

Indirect Impacts • No impacts.	• No mitigation required.
Temporary Construction Impacts • Temporary increases in traffic for construction workers and materials during construction. • Temporary lane closures to accommodate construction activities.	• Develop traffic control plans as part of the construction management plan to reduce construction-related traffic congestion and maintain traffic flow and access to local businesses and residences.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Station Locations and Traffic		
Station	**Impacts**	**Mitigation**
38th/Blake	The Preferred Alternative would generate 1,250 daily trips.	• Add a northbound right-turn lane on 38th Street at Brighton Boulevard. • Add a second southbound left-turn lane on 38th Street at Brighton Boulevard. • Signalize 40th Street at Brighton Boulevard. The traffic signal would likely be added as the parking expands to a point where station-generated traffic volumes warrant the need for a traffic signal. • Add a westbound left-turn lane on Brighton Boulevard at 40th Street. • Add an eastbound right-turn lane on Brighton Boulevard at 40th Street. • Convert the intersection of Brighton Boulevard and 39th Street to a right-in, right-out intersection where left turns would not be allowed from Brighton Boulevard onto 39th Street. • Add an eastbound right-turn lane on Brighton Boulevard at 39th Street. • Optimize signal timing at the Walnut Street and Marion Street and Walnut Street and Downing Street intersections. • Convert the Wynkoop Street and 38th Street intersection to right-in, right-out.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Station	Impacts	Mitigation
Colorado	The Preferred Alternative would generate 4,520 daily trips.	• Add a northbound left-turn lane on Colorado Boulevard at 40th Avenue. • Add one eastbound and one westbound lane to 40th Avenue between Jackson Street and Colorado Boulevard. • Re-stripe the westbound 40th Avenue approach to Colorado Boulevard to have two left-turn lanes, one through lane, and one shared through-right lane. • Convert the southbound Colorado Boulevard at 40th Avenue right-turn movement to a free right turn, which would include the addition of a westbound lane on 40th Avenue to receive the turning vehicles. • Convert the eastbound 40th Avenue at Colorado Boulevard right-turn movement to a free right turn, which would include the addition of a southbound acceleration lane on Colorado Boulevard to receive the turning vehicles. • Add a northbound right-turn pocket on Colorado Boulevard at 40th Avenue • Convert the west leg of 41st Avenue at Colorado Boulevard to a right-in, right-out access, which would result in a free right-turn for southbound Colorado Boulevard at 41st Avenue. • Add an eastbound left-turn lane on 40th Avenue at Jackson Street. • Add a westbound right-turn lane on 40th Avenue at Jackson Street. • Add a second southbound left-turn lane on Jackson Street at 40th Avenue. • Signalize the intersection of Jackson Street and 40th Avenue. The traffic signal would likely be added as the parking expands to a point where station generated traffic volumes warrant the need for a traffic signal. • Add a second northbound left-turn lane on Jackson Street at 41st Avenue. • Add a southbound right-turn (through-right) and a southbound left-turn lane on Jackson Street at 41st Avenue. • Signalize the intersection of Jackson Street and 41st Avenue. The traffic signal would likely be added as the parking expands to a point where station generated traffic volumes warrant the need for a traffic signal. • Add a northbound right-turn lane on Colorado Boulevard at 40th Avenue (not required with implementation of Smith Road Realignment

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Station	Impacts	Mitigation
		Design Option 1).
Central Park	The Preferred Alternative would generate 3,770 daily trips.	• RTD and Park Creek Metropolitan District will work together to design and construct the roadway improvements necessary to support the station and the proposed surrounding development.
Peoria	The Preferred Alternative would generate 4,770 daily trips.	• Close Smith Road between Moline Street and Peoria Street. • Reroute Smith Road. • Convert the westbound through lane on Smith Road at Peoria Street to a left-turn lane. • Add a southbound free right-turn lane at Peoria Street and 33rd Avenue. • Add a second eastbound left-turn lane on 33rd Avenue at Peoria Street. • Add an eastbound right-turn lane on 33rd Avenue at Peoria Street. • Add a second northbound left-turn lane on Peoria Street at 33rd Avenue. • Convert the portion of 33rd Avenue between Peoria Street and the station access to a four-lane section with auxiliary lanes (total of seven lanes). • Add a northbound right-turn lane on Peoria Street at Smith Road.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Station	Impacts	Mitigation
40th/Airport	The Preferred Alternative would generate 5,522 daily trips.	• Add a southbound right-turn lane on the Peña Boulevard southbound exit ramp at 40th Avenue. • Add an eastbound right-turn lane on 40th Avenue at the Airport Boulevard southbound ramps. • Convert the westbound middle lane on 40th Avenue at the Airport Boulevard southbound ramps from a through lane to a combined left-through lane. • Add a westbound right-turn lane on 40th Avenue at the Peña Boulevard northbound ramps. • Add a northbound right-turn lane on the Peña Boulevard northbound exit ramp at 40th Avenue. • Convert the eastbound right-turn lane on 40th Avenue at Salida Street to a free right turn. • Add a southbound right-turn lane on Tower Road at 40th Avenue. • Convert the eastbound through lane to a left-turn lane and the eastbound right-turn lane to a combined through-right lane at the intersection of 40th Avenue and Tower Road. • Add an eastbound right-turn lane at the intersection of Salida Street and the park-n-Ride north access. • Add a southbound right-turn lane on Tower Road at Salida Street. • Add an eastbound left-turn lane on Salida Street at Tower Road. • Convert the intersection of Salida Street and park-n-Ride north access to a ¾-movement intersection with left turns allowed from Salida Avenue into the access; however, left turns from the access road to Salida Avenue would be prohibited. • Add a traffic signal at the intersection of Salida and the park-n-Ride south access by others. • Add a traffic signal at the intersection of 40th Avenue and Salida Street by others. • Add a second westbound lane to the north access road departing Salida Avenue. • Add a second westbound lane to the south access road departing Salida Avenue. • Add an eastbound right-turn lane to the south access at Salida Avenue. • Add length to the northbound left-turn lanes on Salida Avenue at both the north and south access roads to the parking lot.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Pedestrian Facilities	
Impacts	**Potential Mitigation**
Direct Impacts • Improved pedestrian connections to proposed station sites. • Increase in frequency of train pass-bys at crossings where students are likely to cross.	• Coordinate with local jurisdictions to provide pedestrian access to proposed station sites. • Pedestrian crossing at the 38th/Blake station would provide pedestrian and bicycle access over the UPRR, between 38th/Blake park-n-Ride, and over the platform. • Provide access between the Central Park station park-n-Ride and the platform by a traffic signal for pedestrian crossing on Smith Road. • Provide additional safety measures at Clayton Street and Steele Street crossings where students are likely to cross; these may include channelization of sidewalks at crossings, swing gates, and active warning signs.
Indirect Impacts • No impacts.	• No mitigation required.
Temporary Construction Impacts • No impacts.	• No mitigation required.
Bicycle Facilities	
Direct Impacts • Improved bicycle connections to proposed station sites. • New grade-separated crossing at Sand Creek Regional Greenway trail.	• Coordinate with local jurisdictions to incorporate connections between existing and planned bicycle routes and proposed station sites. • Allow bicycle on commuter rail trains. • Install bicycle lockers at proposed station sites.
Indirect Impacts • No impacts.	• No mitigation required.
Temporary Construction Impacts • No impacts.	• No mitigation required.
Freight Rail Facilities	
Direct Impacts • Discontinued UPRR service to four customers south of the UPRR alignment. • Relocation of mainline and storage tracks to accommodate commuter rail on or adjacent to existing UPRR ROW.	• Impacts to customers will be addressed in accordance with the Uniform Act.
Indirect Impacts • No impacts.	• No mitigation required.
Temporary Construction Impacts • Temporary interruptions to service.	• Coordinate with UPRR to minimize disruption to service and concentrate construction activities to less active freight times.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Air Travel Facilities	
Impacts	**Potential Mitigation**
Direct Impacts • Alignment would cross the runway protection zone 2,400 feet from the end of runway 7L/25R.	• Continue coordination with DIA and the Federal Aviation Administration (FAA).
Indirect Impacts • No impacts.	• No mitigation required.
Temporary Construction Impacts • No impacts.	• No mitigation required.

Section 4(f) Resources			
Historic Resource Mitigation Measures			
Resource	**Impact**	**Impact Type**	**Mitigation Measures**
Derby Lateral (5DV840.13)	Impact to linear feature (culvert installation)	Permanent	• Coordinate with SHPO and consulting parties through design phase. • Explore additional minimization of impact to resource during final design. • Establish a memorandum of agreement with SHPO, FTA, and RTD.
35th and Blake Street LLC (5DV9309) Freedom Cab Company (5DV9501)	Impact to parcel (partial acquisition)	Permanent	• Coordinate with SHPO and consulting parties through design phase. • Explore additional minimization of impact to resource during final design. • A memorandum of agreement is being established between SHPO, FTA, and RTD.
Denver Utah Pacific Railroad, Chicago Burlington Quincy Siding and Spur (Waterworks Sales Co., J.M. Warner Co., and Richardson Lumber Spur) (5AM1888.5 and 5DV6243.7)	Removal of linear resource for CRMF	Permanent	• Coordinate with SHPO and consulting parties through design phase. • A memorandum of agreement has been established between SHPO, FTA, and RTD through RTD's Gold Line project NEPA process. • Conduct Level II documentation found in Office of Archaeology and Historic Preservation Form no. 1595, Historical Resource Documentation; Standards for Level I, II, III Documentation. This mitigation will be implemented before construction.

Table S-1
Preferred Alternative
Summary of Impacts and Mitigation

Parkland and Recreational Resource Mitigation Measures			
Resource	**Impact**	**Impact Type**	**Mitigation Measures**
Sand Creek Regional Greenway Trail	Trail relocation	Construction	• Return trail to existing or comparable state after construction. • Construction of the new bridges will not impact the trail for duration of more than approximately 24 months. • The need for a temporary alternative trail route will be minimized to the extent possible and would be limited to periodic timeframes within the 24 month bridge construction timeframe. • Provide adequate warning and detouring signage. • Continue coordination with CCD. • Coordinate with Forest City.
		Operations	• Preserve trail connection to residential and commercial developments.
Derby Lateral Trail	Crossing of future planned trail	Construction	• Accommodate an at-grade trail crossing within the at-grade crossing of 48th Avenue.