

**Appendix A**  
**Summary of Impacts and Mitigations for the Preferred**  
**Alternative**

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Impacts	Mitigation
<b>Social Impacts and Community Facilities</b>	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>Acquisition of six residential properties.</li> <li>No impacts to community facilities.</li> <li>Benefit from improved transit system and decreased congestion.</li> </ul>	<ul style="list-style-type: none"> <li>Provide acquisition and relocation assistance consistent with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act).</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>Possible growth in population near stations at TOD.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required; this change is consistent with local and regional plans that encourage TOD near stations.</li> </ul>
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Develop a construction management plan and coordinate with affected neighborhoods as needed. The construction plan would include:                             <ul style="list-style-type: none"> <li>Communication plan to inform the public of road closures, operating protocols, and disruption of utility service.</li> <li>Air quality protection.</li> <li>Noise and vibration control.</li> <li>Water quality protection.</li> <li>Hazardous waste control.</li> <li>Visual protection.</li> <li>Traffic control.</li> <li>Noxious weed management.</li> <li>Archeological monitoring plan.</li> <li>Construction safety and security plan.</li> <li>Energy plan.</li> </ul> </li> </ul>
<p><b>CRMF</b></p> <ul style="list-style-type: none"> <li>The construction of the CRMF would not result in any direct or indirect impacts to neighborhoods, community facilities, or population.</li> <li>The construction of the CRMF site would result in a temporary increase in construction traffic and localized dust. Because the site is located within an industrial area and the nearest residential area is located approximately a half-mile away, these impacts would be minimal to residential areas.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>

Impacts	Mitigation
<b>Environmental Justice</b>	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>• No disproportionate impacts for any environmental resource as compared to the general population.</li> <li>• Acquisition of six residential properties including seven relocations in Elyria and Swansea (less than 0.5 percent of the housing units in that neighborhood).</li> <li>• Faster travel and the availability of more travel options.</li> <li>• 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.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide acquisition and relocation assistance consistent with the Uniform Act.</li> <li>• 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.</li> <li>• 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.</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>• An estimated 3,360 construction-related jobs would benefit all people, including minority and low-income populations, by providing opportunities for employment.</li> </ul>	<ul style="list-style-type: none"> <li>• No mitigation required.</li> </ul>
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a construction management plan and coordinate with affected neighborhoods as needed. The construction plan would include:             <ul style="list-style-type: none"> <li>• Communication plan to inform the public of road closures, operating protocols, and disruption of utility service.</li> <li>• Air quality protection.</li> <li>• Noise and vibration control.</li> <li>• Water quality protection.</li> <li>• Hazardous waste control.</li> <li>• Visual protection.</li> <li>• Traffic control.</li> <li>• Noxious weed management.</li> <li>• Archeological monitoring plan.</li> </ul> </li> </ul>

Impacts	Mitigation
	<ul style="list-style-type: none"> <li>• Construction safety and security plan.</li> <li>• Energy plan.</li> <li>• Minimize construction-related fugitive emissions by implementing dust control practices that may include:                             <ul style="list-style-type: none"> <li>• Using water or wetting agent to control dust.</li> <li>• Using wind barriers and wind screens to prevent spreading of dust from the site.</li> <li>• Having a wheel wash station and/or crushed stone apron at egress/ingress areas to prevent dirt from being tracked onto public streets.</li> <li>• Using vacuum-powered street sweepers to remove dirt tracked onto streets.</li> <li>• Covering all dump trucks leaving sites.</li> <li>• Covering or wetting temporary excavated materials.</li> <li>• Using a binding agent for long-term excavated materials.</li> <li>• Monitoring for particulate matter having a diameter less than or equal to 10 micrometers (PM<sub>10</sub>) to allow for the real-time modification or implementation of various dust control measures.</li> </ul> </li> <li>• Implement potential mitigation strategies to reduce mobile source air toxics (MSAT) emissions during construction; possible strategies include:                             <ul style="list-style-type: none"> <li>• Prohibiting unnecessary idling of construction equipment.</li> <li>• Locating diesel engines and motors as far away as possible from residential areas.</li> <li>• Locating staging areas as far away as possible from residential uses.</li> <li>• For winter time construction, installing engine pre-heater devices to eliminate unnecessary idling.</li> <li>• Prohibiting tampering with equipment to increase horsepower or to defeat emission control devices effectiveness.</li> <li>• Requiring construction vehicle engines to be properly tuned and maintained.</li> <li>• Using construction vehicles and equipment with the minimum</li> </ul> </li> </ul>

Impacts	Mitigation
	practical engine size for the intended job. <ul style="list-style-type: none"> <li>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).</li> </ul>
<b>Secondary and Cumulative Impacts</b> <ul style="list-style-type: none"> <li>Overall, long-term, positive effect on minority and low-income communities.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>CRMF</b> <ul style="list-style-type: none"> <li>The CRMF would not result in any disproportionate impacts to minority or low-income communities.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required</li> </ul>
Land Use and Zoning	
<b>Direct Impacts</b> <ul style="list-style-type: none"> <li>Alignment and stations are consistent with adopted land-use plans.</li> </ul>	<ul style="list-style-type: none"> <li>Monitor parking demand after construction of parking facilities to phase expansion as necessary after 2015.</li> </ul>
<b>Indirect Impacts</b> <ul style="list-style-type: none"> <li>Potential increase in the urban density within 0.5 mile of stations.</li> <li>Change in existing zoning near stations to support TOD opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>Temporary Construction Impacts</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>Secondary and Cumulative Impacts</b> <ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>CRMF</b> <ul style="list-style-type: none"> <li>The CRMF would be consistent with City and County of Denver and Adams County zoning and adopted land use and transportation plans.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>

Impacts	Mitigation
<b>Economic Conditions</b>	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>Loss of approximately \$601,000 in annual property taxes from commercial/industrial properties.</li> <li>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.</li> <li>Addition of approximately 1,460 jobs as a result of construction and operation of the East Corridor.</li> </ul>	<ul style="list-style-type: none"> <li>Follow the Uniform Act.</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>Loss of indirect jobs due to displacement of businesses.</li> <li>Benefit of 3,360 indirect jobs as a result of the project.</li> <li>Benefit of additional indirect jobs as a result of TOD.</li> <li>Benefit of high-density, mixed-use development as a result of TOD.</li> <li>Increased land values around stations as a result of TOD.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>Temporary changes to access to businesses around stations, roadway realignments, and at roadway crossings.</li> </ul>	<ul style="list-style-type: none"> <li>Create a construction management plan that includes:                             <ul style="list-style-type: none"> <li>Clear signage and direction for alternative access to businesses.</li> <li>Coordination with local groups, business districts, communities, and jurisdictions using a variety of media (e.g., radio, flyers, advertisements, and website), where appropriate.</li> <li>Temporary access provided during normal business hours, where possible.</li> <li>Necessary permits obtained by contractors.</li> <li>Traffic maintenance plans to maintain access and circulation.</li> <li>Plans to minimize impacts to bus routes.</li> </ul> </li> </ul>
<p><b>CRMF</b></p> <ul style="list-style-type: none"> <li>Approximately 300 jobs would be created by the CRMF.</li> <li>An additional 459 jobs would be created as a result of these long-term employment benefits with the operation of the CRMF (employment multiplier of 1.53). Conversely, additional jobs could be lost if second</li> </ul>	<ul style="list-style-type: none"> <li>Mitigation for the CRMF will be the same as those measures identified for the temporary construction impacts above.</li> </ul>

Impacts	Mitigation
<p>tier companies do not relocate within the Denver metro area.</p> <ul style="list-style-type: none"> <li>• Loss of annual property tax: \$7,000.</li> <li>• No business acquisitions.</li> <li>• Other businesses along Fox Street and 48th Avenue would be temporarily impacted by construction-related vehicle traffic, and adjacent businesses could experience temporary disruptions as a result of construction related noise and dust. The construction of the CRMF at the Fox North Site would provide a benefit by generating a total of 990 construction jobs, or approximately 495 construction jobs per year for 2 years.</li> <li>• These temporary construction jobs are estimated to create additional indirect employment of over 2,300 jobs for the two year construction period.</li> </ul>	
Land Acquisitions, Displacements and Relocation of Existing Facilities	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>• Full acquisition of 6 residential properties and the relocation of 7 residences.</li> <li>• Full acquisition of 58 commercial/industrial properties with up to 49 business relocations (several properties are vacant) and partial acquisition of 86 to 90 properties.</li> <li>• Acquisition of approximately 54 acres of railroad ROW.</li> <li>• Lease or license agreement for approximately 123 acres of the Peña Transportation Corridor.</li> <li>• 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).</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Where the acquired improvements are occupied, relocate those individuals from the subject property (residential or business) to replacement sites.</li> <li>• 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 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.</li> <li>• Relocation payments provided to displaced businesses are determined by federal eligibility guidelines.</li> <li>• 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</li> </ul>

Impacts	Mitigation
	assistance from local, state, and federal agencies and private agencies in the community. The meeting will not provide details related to individual eligibility.
<b>Indirect Impacts</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>Temporary Construction Impacts</b> <ul style="list-style-type: none"> <li>Use of property for temporary construction easements as determined during design.</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate the use of the property with the specific property owner for any property where a temporary construction easement is required.</li> </ul>
<b>Secondary and Cumulative Impacts</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>CRMF</b> <ul style="list-style-type: none"> <li>The CRMF would result in the acquisition of approximately 3.33 acres of property and would not result in the relocation of any businesses.</li> </ul>	<ul style="list-style-type: none"> <li><b>Acquisition:</b> The acquisition of real property interests will comply fully with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act) and the Fifth Amendment of the United States Constitution. The Uniform Act applies to all acquisitions of real property or displacements of people resulting from federal or federally assisted programs or projects. All impacted owners will be provided notification of the acquiring agency's intent to acquire an interest in their property, including a written offer letter of just compensation specifically describing those property interests.</li> </ul>
Historic Resources	
<b>Direct Impacts</b> <ul style="list-style-type: none"> <li>Adverse effects to three historic resources:                             <ul style="list-style-type: none"> <li>High Line Canal Lateral A Extension/Segment "The Doherty Ditch" (5DV840.13).</li> <li>Two historic buildings (5DV9309 and 5DV9501).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>A memorandum of agreement has been established between SHPO, FTA, and RTD (included in Appendix B).</li> <li>Coordinate with SHPO and consulting parties through design phase.</li> <li>Explore additional minimization of impact to resource during final design.</li> </ul>
<b>Indirect Impacts</b> <ul style="list-style-type: none"> <li>Indirect impacts to 26 properties from a combination of noise, visual, and historic setting impacts resulting in no adverse effect.</li> <li>Additional 73 potentially eligible properties that would be indirectly impacted by noise.</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of quiet zones. If quiet zones are not feasible, wayside horns and building insulation will be used.</li> <li>Develop a communication plan as part of the construction management plan.</li> <li>Incorporate sensitive design of aerial structures and retaining walls.</li> </ul>

Impacts	Mitigation
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<p><b>CRMF</b></p> <ul style="list-style-type: none"> <li>Adverse effect to the Denver Utah Pacific Railroad, Chicago Burlington Quincy Siding &amp; Spur (Waterworks Sales Co, J.M. Warner Co, &amp; Richardson Lumber Spur) (5AM1888.5 and 5DV6243.7).</li> </ul>	<ul style="list-style-type: none"> <li>A MOA has been completed between FTA, RTD and the SHPO (July 2009) through the Gold Line project and is included in the Gold Line Record of Decision.</li> </ul>
<b>Archaeological and Paleontological Resources</b>	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>Potential impacts to unknown archaeological resources.</li> </ul>	<ul style="list-style-type: none"> <li>Develop a worker awareness training program and monitor project during construction.</li> <li>Perform data recovery and excavation.</li> <li>Where known archaeological sites are present, avoid ground disturbing demolition and/or removals where possible.</li> <li>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.</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>All construction impacts are direct impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<p><b>CRMF</b></p> <ul style="list-style-type: none"> <li>No direct, indirect, or temporary construction impacts from the implementation of the CRMF</li> </ul>	<ul style="list-style-type: none"> <li>Where known archaeological sites are present, ground-disturbing activities will be avoided, where possible. RTD may complete archaeological monitoring during construction activities. In the event that cultural deposits are discovered during construction, work would cease in the area of discovery and the SHPO would be notified. The designated representative would evaluate any such discovery, and in consultation with SHPO, complete appropriate mitigation measures, if necessary, before construction activities resume.</li> </ul>

Impacts	Mitigation
<b>Visual and Aesthetic Qualities</b>	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>• Project features that present the potential for visual change include:                             <ul style="list-style-type: none"> <li>• Five grade-separated flyovers.</li> <li>• Overhead catenary and track way.</li> <li>• Electric substations where the alignment intersects with Quebec Street, 40th Avenue, and east of Tower Road.</li> <li>• Transit stations and park-n-Ride facilities.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Consider sensitive design of aerial structures and retaining walls.</li> <li>• Provide more aesthetically pleasing (post and cable) fence type at approaches to stations and on elevated bridges.</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>• Possible densification of land uses near stations. These areas may develop with taller buildings that would change the visual surroundings near the stations.</li> </ul>	<ul style="list-style-type: none"> <li>• No mitigation required.</li> </ul>
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>• Temporary disturbances to areas under construction and the potential for construction vehicle and equipment storage.</li> </ul>	<ul style="list-style-type: none"> <li>• Fence and screen construction material staging areas depending on adjacent land use.</li> <li>• After project construction, and where feasible, restore the ground surfaces outside of the trackway to their original condition.</li> </ul>
<p><b>CRMF</b></p> <ul style="list-style-type: none"> <li>• The 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. Appropriate fencing and buffering would be designed consistent with local jurisdictions' development standards. With development of the CRMF, the immediate view and edge along Fox Street would likely improve over the existing conditions.</li> <li>• The CRMF would not result in indirect or construction impacts</li> </ul>	<ul style="list-style-type: none"> <li>• No mitigation required.</li> </ul>

Impacts	Mitigation
<b>Parklands and Recreation Areas</b>	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>Acquisition of 0.94 acres of the Park Hill Golf Course.</li> <li>Relocation of a portion of the Sand Creek Regional Greenway trail.</li> <li>Crossings of four planned trails (Derby Lateral, First Creek, Second Creek, and E-470).</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate trail design with Denver Parks and Recreation, the Sand Creek Greenway Partnership, and Forest City, as appropriate.</li> <li>Provide a trail detour during construction.</li> <li>Accommodate an at-grade Derby Lateral trail crossing of the Preferred Alternative within the at-grade crossing of 48th Avenue.</li> <li>Use design features that accommodate grade separations for future trail crossings at First Creek, Second Creek, and E-470.</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>Temporary detour of Sand Creek Regional Greenway trail during construction.</li> </ul>	<ul style="list-style-type: none"> <li>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 <i>Manual on Uniform Traffic Control Devices</i> (FHWA, 2007).</li> <li>Limit use of trail detour to only those periods of construction activity that are necessary for safety.</li> <li>Do not locate construction equipment staging on trails.</li> </ul>
<p><b>CRMF</b></p> <ul style="list-style-type: none"> <li>The CRMF would not result in direct, indirect, or temporary construction impacts to park or recreation resources.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>Air Quality</b>	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>Reduction in regional vehicle miles traveled (VMT).</li> <li>Slight decrease in regional vehicle emissions (carbon monoxide [CO], oxides of nitrogen [NO<sub>x</sub>], volatile organic compound [VOC], PM<sub>10</sub>).</li> <li>Significant decreases in MSATs from existing conditions.</li> <li>No CO hot-spot violations.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required; however, general air quality mitigation strategies for the FasTracks program will be implemented.</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>

Impacts	Mitigation
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>Expected to be low to moderate; however, localized, small-scale impacts may occur.</li> </ul>	<ul style="list-style-type: none"> <li>Include site-specific mitigation measures in a construction management plan.</li> <li>Minimize construction-related fugitive emissions using dust control practices that may include:                             <ul style="list-style-type: none"> <li>Using water or wetting agent to control dust.</li> <li>Using wind barriers and wind screens to prevent spreading of dust from the site.</li> <li>Having a wheel wash station and/or crushed stone apron at egress/ingress areas to prevent dirt from being tracked onto public streets.</li> <li>Using vacuum-powered street sweepers to remove dirt tracked onto streets.</li> <li>Covering all dump trucks leaving sites.</li> <li>Covering or wetting temporary excavated materials.</li> <li>Using a binding agent for long-term excavated materials.</li> <li>Monitoring for PM<sub>10</sub> to allow for the real-time modification or implementation of various dust control measures.</li> </ul> </li> <li>Implement potential mitigation strategies to reduce MSAT emissions during construction; possible strategies include:                             <ul style="list-style-type: none"> <li>Prohibiting unnecessary idling of construction equipment.</li> <li>Locating diesel engines and motors as far away as possible from residential areas.</li> <li>Locating staging areas as far away as possible from residential uses.</li> <li>For winter construction, installing engine pre-heater devices to eliminate unnecessary idling.</li> <li>Prohibiting tampering with equipment to increase horsepower or to defeat emission control device effectiveness.</li> <li>Requiring construction vehicle engines to be properly tuned and maintained.</li> <li>Using construction vehicles and equipment with the minimum practical engine size for the intended job.</li> </ul> </li> <li>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</li> </ul>

Impacts	Mitigation
	immediately adjacent to a health care facility, church, outdoor playground, or school).
<b>Secondary and Cumulative Impacts</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>CRMF</b> <ul style="list-style-type: none"> <li>The rail operations associated with the CRMF are included in the FasTracks Plan, which is included in the 2012 Transportation Improvement Plan and the Metro Vision Plan.</li> <li>Emissions of criteria pollutants (PM<sub>10</sub>, VOCs, NO<sub>x</sub>, and CO) would be below the National Ambient Air Quality Standards (NAAQS).</li> <li>The project meets the conformity hot spot requirements in 40 CFR §93.116 and §93.123 for PM<sub>10</sub>.</li> <li>The MSAT emission levels for the CRMF are similar to the No Action Alternative for the Tier 1 and Tier 2 study areas.</li> <li>Fugitive dust (PM<sub>10</sub>) emissions of 100 pounds per day based on the assumption of a maximum disturbed area of 10 acres per day.</li> </ul>	<ul style="list-style-type: none"> <li>Mitigation for the CRMF will be the same as those measures identified earlier in this table for the Air Quality temporary construction impacts.</li> </ul>
<b>Energy</b>	
<b>Direct Impacts</b> <ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>Indirect Impacts</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>Temporary Construction Impacts</b> <ul style="list-style-type: none"> <li>Minimal consumption of fossil fuels during construction.</li> </ul>	<ul style="list-style-type: none"> <li>Incorporate BMPs 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.</li> </ul>
<b>CRMF</b> <ul style="list-style-type: none"> <li>The non-revenue movements to and from the Fox North Site would result in a per day energy usage of approximately 10,174,698 BTU in 2015 and 12,217,039 BTU in 2030.</li> <li>The operation of the buildings at the CRMF would result in the use of approximately 36,925,942 BTU per day.</li> </ul>	<ul style="list-style-type: none"> <li>BMPs will be incorporated into the project to reduce energy usage during site construction.</li> <li>RTD will investigate the use of energy efficient design and Leadership in Energy and Environmental Design certification for the CRMF; this is consistent with the goals of the RTD adopted Sustainability Policy.</li> </ul>

Impacts	Mitigation
<ul style="list-style-type: none"> <li>The construction of the tracks associated with the CRMF would result in the use of approximately 157,185 million BTU. Energy would also be required to construct the buildings associated with the new facility.</li> <li>The CRMF would have no indirect energy impacts.</li> </ul>	
<b>Noise</b>	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>No noise impacts with the implementation of mitigation strategies.</li> <li>Noise impacts without mitigation:                             <ul style="list-style-type: none"> <li>229 severe noise impacts.</li> <li>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).</li> <li>No noise impacts from station areas.</li> <li>One receptor impacted by roadway noise southeast of 40th Avenue and Jackson Street intersection.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Implement quiet zones so that EMU warning horns can be silenced with mitigation (freight horns would also be silenced).</li> <li>RTD will assist local jurisdictions with their quiet zone applications to the Federal Railroad Administration and Public Utility Commission. Local jurisdictions must submit quiet zone applications.</li> <li>Use building insulation for the two receptors impacted by EMU vehicle noise that cannot be mitigated by quiet zones.</li> <li>If quiet zones are not feasible, use wayside horns and building insulation.</li> <li>No mitigation required for traffic noise.</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>Noise related to construction activities.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Minimize construction duration and nighttime activities in residential areas.</li> <li>Re-route truck traffic away from residential streets, where possible.</li> <li>Combine noisy operations so that they occur at the same time.</li> <li>Use well-maintained equipment with modern mufflers.</li> <li>Use noise blankets on equipment and/or quiet-use generators.</li> <li>Use alternative construction methods (such as sonic or vibratory pile driving) in noise-sensitive areas.</li> <li>Conduct pile driving and other high-noise activities during daytime construction (generally 7 a.m. to 7 p.m.), where possible.</li> </ul>
<p><b>Secondary and Cumulative Impacts</b></p> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>

Impacts	Mitigation
<b>CRMF</b> <ul style="list-style-type: none"> <li>No direct or indirect noise impacts.</li> <li>Noise related to construction activities.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>Vibration</b>	
<b>Direct Impacts</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>Indirect Impacts</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>Temporary Construction Impacts</b> <ul style="list-style-type: none"> <li>Vibration related to construction activities.</li> </ul>	<ul style="list-style-type: none"> <li>Avoid nighttime construction in neighborhoods.</li> <li>Use alternative construction methods to minimize the use of impact and vibratory equipment (such as pile drivers and compactors).</li> <li>Re-route construction-related truck traffic along roadways that will create the least disturbance to residents.</li> <li>RTD will minimize nighttime construction in residential neighborhoods and offer hotel vouchers to address potential impacts (if nighttime construction is necessary and results in impacts).</li> </ul>
<b>Secondary and Cumulative Impacts</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>CRMF</b> <ul style="list-style-type: none"> <li>No direct or indirect vibration impacts.</li> <li>Temporary vibration related to construction activities.</li> </ul>	<ul style="list-style-type: none"> <li>Mitigation for the CRMF will be the same as those measures identified for the temporary construction impacts above. RTD will minimize nighttime construction in residential neighborhoods and offer hotel vouchers to address potential impacts (if nighttime construction is necessary and results in impacts).</li> </ul>
<b>Wildlife</b>	
<b>Direct Impacts</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>Indirect Impacts</b> <ul style="list-style-type: none"> <li>Minimal impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>

Impacts	Mitigation
<b>Temporary Construction Impacts</b> <ul style="list-style-type: none"> <li>Minimal impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>CRMF</b> <ul style="list-style-type: none"> <li>The CRMF would not result in any direct or indirect impacts to biological resources.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>Vegetation</b>	
<b>Direct Impacts</b> <ul style="list-style-type: none"> <li>Impacts to midgrass prairie (42 acres).</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>Indirect Impacts</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>Temporary Construction Impacts</b> <ul style="list-style-type: none"> <li>Minimal impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Seed areas of temporary disturbance with an appropriate mixture of native grasses.</li> <li>Limit construction vehicle operations to the designated construction area.</li> </ul>
<b>Noxious Weeds</b>	
<b>Direct Impacts</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>Indirect Impacts</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>Temporary Construction Impacts</b> <ul style="list-style-type: none"> <li>During construction, the Preferred Alternative may result in the proliferation of noxious weeds in areas where existing vegetation is removed.</li> </ul>	<ul style="list-style-type: none"> <li>Seed areas of temporary disturbance with an appropriate mixture of native grasses, plant forbs, and shrubs where appropriate.</li> <li>Develop and implement an integrated noxious weed management plan during construction. Preventive measures include:                             <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>Assess potential areas of topsoil salvage for presence and abundance of noxious weeds before use. Treat topsoil from</li> </ul> </li> </ul>

Impacts	Mitigation
	<p>heavily infested areas by spraying, moving offsite, or burring during construction.</p> <ul style="list-style-type: none"> <li>• Reclaiming areas of temporary disturbance in phases throughout project construction using permanent native seed mixtures.</li> <li>• Using certified weed-free mulch and hay bales.</li> <li>• 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).</li> <li>• 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.</li> </ul>
Special Status Species	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>• Potential to impact burrowing owls occupying prairie dog colonies.</li> <li>• Approximately 26 acres of prairie dog colonies impacted.</li> </ul>	<ul style="list-style-type: none"> <li>• If construction in prairie dog colonies occurs during burrowing owl nesting season (March 15 to October 31), conduct three surveys at least 1 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).</li> <li>• Mitigate impacts to prairie dog colonies in accordance with FasTracks mitigation guidance. Specific strategies include:             <ul style="list-style-type: none"> <li>• Initiating coordination with the Colorado Department of Wildlife (CDOW) Denver Service Center District’s Wildlife Manager before any manipulation of prairie dogs or their colonies begins.</li> <li>• 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.</li> <li>• Conducting relocation efforts for prairie dog colonies greater</li> </ul> </li> </ul>

Impacts	Mitigation
	<p>than 2 acres in accordance with Colorado Revised Statute 35-7-203 and any other applicable laws or regulations.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• Perform all prairie dog relocations in compliance with a CDOW Permit to Capture and Relocate Prairie Dogs; acquire this before any relocation activities.</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>• Minor indirect impacts due to loss of winter prey for bald eagles with loss of prairie dog colonies.</li> </ul>	<ul style="list-style-type: none"> <li>• No mitigation required.</li> </ul>
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>• Additional noise and human disturbance to bald eagles during construction.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul> <p>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 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.</p> <p>If the proposed construction project is planned to occur during the primary nesting season or at any other time that may result in the</p>

Impacts	Mitigation
	<p>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.</p> <p>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.</p> <p>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.</p>
Floodplains and Drainage/Hydrology	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>• Sand Creek 100-year floodplain: Three new proposed piers would have a negligible impact 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.</li> <li>• First Creek 100-year floodplain: Four new piers would have a negligible impact on the 100-year floodplain.</li> <li>• Second Creek 100-year floodplain: Four new piers would have a negligible impact on the 100-year floodplain.</li> <li>• Third Creek 100-year floodplain: Box culvert extension would have a negligible impact on the 100-year floodplain.</li> </ul>	<ul style="list-style-type: none"> <li>• Complete detention and water quality treatment in accordance with UDFCD and local jurisdictions and implement BMPs.</li> <li>• Coordinate floodplain management with local jurisdictions and UDFCD.</li> <li>• Obtain Floodplain Use Permit.</li> <li>• Submit Conditional Letter of Map Revision for floodplains predicted to experience any rise in water surface (Sand Creek).</li> <li>• Reshaping and/or relocation of detention ponds.</li> <li>• RTD will develop a memorandum of understanding with UDFCD to address specific issues in the FEIS comment letter, and future coordination between RTD and UDFCD.</li> </ul>

Impacts	Mitigation
<ul style="list-style-type: none"> <li>Additional impervious surfaces associated with some stations and electric substations.</li> <li>Embankment in several existing and proposed regional detention ponds along the Peña Transportation Corridor.</li> </ul>	
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>Additional impervious surfaces introduced by TOD around stations.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>Construction activities within the Sand Creek, First Creek, Second Creek, and Third Creek floodplains and in urban flooding areas.</li> </ul>	<ul style="list-style-type: none"> <li>Adhere to UDFCD and local jurisdiction requirements.</li> </ul>
<p><b>CRMF</b></p> <ul style="list-style-type: none"> <li>The CRMF would result in no direct, indirect, or temporary construction impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Onsite detention in accordance with local jurisdictions and BMPs.</li> </ul>
<b>Waters of the U.S. and Wetlands</b>	
<p><b>Permanent, Direct Impacts</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Implement mitigation for wetland impacts by purchasing credits from a wetland bank in compliance with the 404 Individual Permit.</li> <li>Purchase a credit from a wetland mitigation bank for non-jurisdictional wetlands.</li> <li>RTD will mitigate 1:1 for all impacts to Jurisdictional and Non-jurisdictional wetlands.</li> <li>Implement ongoing avoidance and minimization measures throughout the design and construction phases.</li> <li>Minimize impacts by fencing construction zones with high-visibility temporary construction fencing.</li> <li>Minimize impacts to wetland areas used for construction access by covering them with layers of geotextile, straw, and soil before use.</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>Install erosion control and sediment control BMPs before ground disturbance activities. Permanently stabilize completed areas within 7 days.</li> <li>Perform no equipment staging or storage of construction materials within 50 feet of waters of the U.S., including wetlands.</li> <li>Use no chemicals (such as soil stabilizers, dust inhibitors, or fertilizers) within 50 feet of waters of the U.S., including wetlands.</li> <li>Seed and/or plant and mulch all areas of exposed soil throughout</li> </ul>

Impacts	Mitigation
	construction (following completion of each section). <ul style="list-style-type: none"> <li>• Conduct noxious weed control as needed. Only aquatic label herbicides will be used in or near waters of the U.S., including wetlands.</li> </ul>
<b>Temporary Construction Impacts</b> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Increased delivery of pollutants and temporary increases in sediment inputs during construction.</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid inadvertent temporary impacts by fencing the limits of disturbance during construction.</li> <li>• Cover wetland areas used for construction access with a layer of geotextile, straw, and soil before use.</li> <li>• Restore wetlands temporarily affected during construction to pre-construction conditions.</li> </ul>
<b>CRMF</b> <ul style="list-style-type: none"> <li>• There would be no direct, indirect, or temporary construction impacts to wetlands or other water features as a result of the CRMF.</li> </ul>	<ul style="list-style-type: none"> <li>• No mitigation required.</li> </ul>
<b>Water Resources and Water Quality</b>	
<b>Direct Impacts</b> <ul style="list-style-type: none"> <li>• Impervious area increase of 47.4 acres at stations.</li> <li>• 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.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Contractor to obtain all required permits for construction activities.</li> <li>• 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.</li> <li>• Consider the use of permeable pavement in final design.</li> </ul>
<b>Indirect Impacts</b> <ul style="list-style-type: none"> <li>• No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>• No mitigation required.</li> </ul>
<b>Temporary Construction Impacts</b> <ul style="list-style-type: none"> <li>• Minor temporary stream alterations at Sand Creek, First Creek, and Third Creek.</li> <li>• Temporary construction impacts would occur during the demolition of the existing buildings and tracks in the study area. 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 stormwater runoff from the impacted areas.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a stormwater management plan.</li> <li>• Use stabilization BMPs such as mulching, temporary seeding, or erosion control blankets.</li> <li>• 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.</li> </ul>

Impacts	Mitigation
	<ul style="list-style-type: none"> <li>Develop a spill control plan as required by RTD Municipal Separate Storm Sewer Systems permit; train staff in proper fueling procedures and procedures to contain spills to minimize the potential for surface and groundwater contamination from petroleum products.</li> </ul>
<p><b>CRMF</b></p> <ul style="list-style-type: none"> <li>The total impervious area of the study area would remain relatively unchanged.</li> <li>Water quality improvements including the permanent water quality detention basin would likely improve the overall water quality being released from the site via the detention basin; however, the actual water quality draining into the detention basin would be likely to remain the same.</li> <li>Temporary construction impacts would occur during the demolition of the existing buildings and tracks in the study area, as well as the construction of the CRMF. With BMPs and erosion control devices properly in place, the water quality would not change during demolition or construction processes.</li> </ul>	<ul style="list-style-type: none"> <li>On site detention in accordance with local requirements and construction mitigations as noted above.</li> </ul>
Geology and Soils	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>Geotechnical conditions (such as collapsible, shrinking/swelling soils, and corrosive soils) would require appropriate engineering designs to avoid impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Use appropriate engineering designs to minimize potential impacts. These include:                             <ul style="list-style-type: none"> <li>Shoring of slope cuts and shallow excavations, retaining walls, and dewatering systems to engineer slope cuts for stability.</li> <li>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.</li> <li>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.</li> <li>Using engineering techniques such as shoring of excavations, retaining walls, drainage systems, excavation and/or</li> </ul> </li> </ul>

Impacts	Mitigation
	<p>engineered or imported fill, compaction, pre-construction flooding and/or loading, and geogrids or geotextiles to mitigate for collapsible soils.</p> <ul style="list-style-type: none"> <li>• Using techniques such as coated and resistant steel and concrete and drainage systems to mitigate for corrosive soils.</li> <li>• Using engineered fills and dewatering systems to mitigate for shallow groundwater.</li> <li>• Designing alignment requirements with existing and altered topographies.</li> <li>• Using engineering techniques and design to conform to anticipated probable maximum seismic events.</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>• No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>• No mitigation required.</li> </ul>
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>• Soil erosion during construction.</li> </ul>	<ul style="list-style-type: none"> <li>• Use BMPs to mitigate soil erosion and blowing dust during construction. Potential BMPs include:                             <ul style="list-style-type: none"> <li>• Staging construction to reduce disturbance.</li> <li>• Minimizing site access areas.</li> <li>• Temporary seeding.</li> <li>• Early final grading and seeding of completed areas.</li> <li>• Clean water diversions.</li> <li>• Silt fences.</li> <li>• Erosion bales.</li> <li>• Erosion control blankets.</li> <li>• Sediment traps.</li> <li>• Sediment basins.</li> <li>• Soil stockpile management.</li> <li>• Temporary diversion structures.</li> <li>• Spill prevention and control measures.</li> <li>• Using water or a wetting agent to control dust.</li> </ul> </li> </ul>

Impacts	Mitigation
<p><b>CRMF</b></p> <ul style="list-style-type: none"> <li>Geotechnical conditions on the site would be appropriately addressed through the project’s engineering design. Once operational, the CRMF would result in no direct, indirect or construction impacts to mineral resources, geology, and soils.</li> </ul>	<ul style="list-style-type: none"> <li>Use of best engineering practices that have been developed for construction in the Front Range and Denver metropolitan area. These include (where needed): removal of unsatisfactory substrate; appropriately engineered fill; compaction, pre-loading, or pre-flooding; corrosive-resistant structural materials; deep foundations, specialized piers, and footings; engineered excavations and slopes; shoring of excavations; prompt and appropriate revegetation; surface water diversions; and subsurface drainage and dewatering systems.</li> <li>Design to conform with anticipated probable maximum seismic event.</li> </ul>
<b>Hazardous Materials</b>	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>Areas of concern include:                             <ul style="list-style-type: none"> <li>6 known or potential landfills.</li> <li>1 National Priority List (NPL) site (Vasquez Boulevard and I-70).</li> <li>8 Comprehensive Environmental Response, Compensation, and Liability Information System no further remedial action planned sites.</li> <li>9 Voluntary Cleanup Program sites.</li> <li>8 open leaking underground storage tank (LUST) sites.</li> <li>116 closed LUST sites.</li> <li>4 Resource Conservation and Recovery Act (RCRA) corrective action list sites.</li> <li>2 RCRA large-quantity generator sites.</li> <li>8 RCRA small-quantity generator sites.</li> <li>1 treatment, storage, and disposal site.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Prepare a Phase I Environmental Site Assessment for properties to be acquired.</li> <li>Modify track and structure locations during design (to the extent practical), especially excavation, to minimize conflict with subsurface contamination.</li> <li>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.</li> <li>Develop a materials handling plan.</li> <li>Develop a health and safety plan.</li> <li>Prepare an asbestos and/or lead-based paint survey for buildings that will be demolished.</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>

Impacts	Mitigation
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>• Potential for hazardous materials sites to become exposed during construction.</li> <li>• Water quality protection.</li> <li>• Protection of construction workers.</li> <li>• Accidental release of hazardous materials.</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• Where avoidance of potentially contaminated sites is not feasible, coordinate further site investigation with the affected property owner.</li> </ul>
<p><b>CRMF</b></p> <ul style="list-style-type: none"> <li>• It is likely that during the construction of the CRMF hazardous materials would be encountered due to historical and current industrial land uses that may have used, handled, or disposed of hazardous materials. Any hazardous materials encountered during construction would be remediated</li> <li>• The operation of the CRMF would involve the use of many regulated hazardous materials. RTD's operations are required to adhere to many regulations requiring the safe use and disposal of such materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Mitigation for the CRMF will be the same as those measures identified for the direct and temporary construction impacts above.</li> </ul>
<b>Safety and Security</b>	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>• The operation of the Preferred Alternative would neither increase nor decrease crime rates in the project area.</li> <li>• The operation of the Preferred Alternative would increase the frequency of trains at grade crossings.</li> </ul>	<ul style="list-style-type: none"> <li>• No mitigation required beyond adherence to the RTD station design guidelines for safety and security.</li> <li>• RTD will continue to coordinate with the Fire and Life Safety Committee in preparing an emergency plan and coordinating emergency responses.</li> <li>• Crossing improvements would upgrade existing warning devices to gates and barrier curbs at a minimum.</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>• No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>• No mitigation required.</li> </ul>

Impacts	Mitigation
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>Potential security hazards if the work areas are not adequately secured.</li> </ul>	<ul style="list-style-type: none"> <li>Secure construction areas to reduce security hazards.</li> </ul>
<p><b>CRMF</b></p> <ul style="list-style-type: none"> <li>The CRMF would not increase or decrease crime or represent a safety hazard to surrounding neighborhoods.</li> <li>Emergency response times would not be affected by train movements to and from the CRMF because track leading into the CRMF would be constructed under 48th Avenue, where grade separation currently exists.</li> <li>The CRMF would not result in indirect impacts to safety and security.</li> </ul>	<ul style="list-style-type: none"> <li>Development of the CRMF will comply with all applicable laws, regulations, and codes to ensure the protection of public health, safety, and welfare.</li> <li>During construction, the work site will remain fenced and secured to restrict access by trespassers.</li> <li>The RTD design, construction, and operations standards for new transit systems will be implemented. Design will integrate established guidelines for fencing and barriers; emergency access and egress; surveillance; and crime prevention through environmental design (CPTED).</li> <li>RTD will work with local police, fire, and transportation agencies during project design to ensure reliable emergency access is maintained and develop alternate plans or routes to avoid delays in emergency response times.</li> </ul>
Utilities	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>The Preferred Alternative would have direct utility impacts on the following:                             <ul style="list-style-type: none"> <li>10 major electrical transmission lines.</li> <li>32 major natural gas lines.</li> <li>15 major petroleum lines.</li> <li>9 major water lines.</li> <li>7 major sanitary and storm sewer lines.</li> <li>100 major telecommunication lines.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>As appropriate for the impact, include the following mitigation:                             <ul style="list-style-type: none"> <li>Avoid utilities during final design and construction.</li> <li>Reinforce or protect utilities through casing pipes and other construction methods.</li> <li>Use cathodic protection to mitigate corrosion or electrical grounding to mitigate effects of induced voltages caused by alternating current.</li> <li>Relocate utilities in coordination with the utility owner or municipality.</li> </ul> </li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>Possible densification of development around transit stations requiring additional utilities.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>Temporary interruptions in service.</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate temporary interruptions in utility service with affected property owners and tenants.</li> <li>See direct impacts; construction impacts to utilities are direct impacts.</li> </ul>

Impacts	Mitigation
<p><b>CRMF</b></p> <ul style="list-style-type: none"> <li>The CRMF would potentially require relocation or modification of two water mains, five storm sewers, five sanitary sewers, one buried gas line, and multiple fiber optic telecommunication and electric lines.</li> <li>No indirect utility impacts would result from implementation of the CRMF.</li> <li>Most utility impacts can be considered temporary construction impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Mitigation from above and RTD will schedule disruption of service for low use period (where possible).</li> </ul>
<b>Transit Service and Operations</b>	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>The Preferred Alternative would provide service to 37,900 riders (average weekday) in 2030.</li> <li>3,529 parking spaces would be provided on opening day, and 7,900 spaces would be provided by 2030.</li> <li>The Preferred Alternative would reduce regional VMT by approximately 204,000 per day over the No-Action Alternative in 2030.</li> <li>The Preferred Alternative would reduce regional vehicle hours of travel by approximately 11,000 per day over the No-Action Alternative in 2030.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>

Impacts	Mitigation
<b>Roadway Facilities and Traffic</b>	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>New commuter rail service crossing existing roadways between DUS and DIA.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Add gates and barrier curbs to new at-grade crossings; these include 40th Avenue, 48th Avenue, and Tower Road.</li> <li>Add new grade separations at Airport Boulevard, I-70, 56th Avenue, E-470, Peña Boulevard, and New Castle Street.</li> </ul>
<ul style="list-style-type: none"> <li>York Street/Josephine Street crossing and adjacent intersection with 40th Avenue.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required; the proposed intersection results in improved operations over the No-Action Alternative.</li> </ul>
<ul style="list-style-type: none"> <li>Clayton Street mid-block crossing.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required; the crossing operates at level of service (LOS) D or better during the peaks without mitigation measures.</li> </ul>
<ul style="list-style-type: none"> <li>Steele Street mid-block crossing.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required; the crossing operates at LOS D or better during the peaks without mitigation measures.</li> </ul>
<ul style="list-style-type: none"> <li>Dahlia Street crossing and adjacent intersection with Smith Road.</li> </ul>	<ul style="list-style-type: none"> <li>Add an eastbound left-turn lane on Smith Road.</li> <li>Add a westbound left-turn lane on Smith Road.</li> </ul>
<ul style="list-style-type: none"> <li>Holly Street crossing and adjacent intersection with Smith Road.</li> </ul>	<ul style="list-style-type: none"> <li>Add an eastbound left-turn lane on Smith Road.</li> <li>Add a westbound left-turn lane on Smith Road.</li> <li>Add a northbound left-turn lane on Holly Street.</li> <li>Add a southbound left-turn lane on Holly Street.</li> <li>Add an eastbound right-turn lane on Smith Road.</li> <li>Add a westbound right-turn lane on Smith Road.</li> </ul>
<ul style="list-style-type: none"> <li>Monaco Street crossing and adjacent intersection with Smith Road.</li> </ul>	<ul style="list-style-type: none"> <li>Add an eastbound left-turn lane on Smith Road.</li> <li>Add a westbound left-turn lane on Smith Road.</li> <li>Add a southbound right-turn lane on Monaco Street.</li> </ul>
<ul style="list-style-type: none"> <li>Quebec Street Southbound Frontage Road crossing and adjacent intersection with Smith Road.</li> </ul>	<ul style="list-style-type: none"> <li>Add an eastbound through lane on Smith Road.</li> </ul>
<ul style="list-style-type: none"> <li>Quebec Street Northbound Frontage Road crossing and adjacent intersection with Smith Road.</li> </ul>	<ul style="list-style-type: none"> <li>This crossing and intersection are included in the station impacts and mitigation.</li> </ul>

Impacts	Mitigation
<ul style="list-style-type: none"> <li>Ulster Street crossing and adjacent intersection with Smith Road.</li> </ul>	<ul style="list-style-type: none"> <li>This crossing and intersection are included in the station impacts and mitigation.</li> </ul>
<ul style="list-style-type: none"> <li>Havana Street crossing and adjacent intersection with Smith Road.</li> </ul>	<ul style="list-style-type: none"> <li>Add an eastbound left-turn lane on Smith Road.</li> <li>Add a westbound left-turn lane on Smith Road.</li> <li>Add a northbound left-turn lane on Havana Street.</li> <li>Add a southbound left-turn lane on Havana Street.</li> <li>Add an eastbound right-turn lane on Smith Road.</li> <li>Add a westbound right-turn lane on Smith Road.</li> <li>Add a southbound right-turn lane on Havana Street.</li> </ul>
<ul style="list-style-type: none"> <li>Peoria Street crossing and adjacent intersection with Smith Road.</li> </ul>	<ul style="list-style-type: none"> <li>This crossing and intersection are included in the station impacts and mitigation below.</li> </ul>
<ul style="list-style-type: none"> <li>Sable Road crossing and adjacent intersection with Smith Road.</li> </ul>	<ul style="list-style-type: none"> <li>Add a westbound right-turn lane on Smith Road.</li> </ul>
<ul style="list-style-type: none"> <li>Chambers Road crossing and adjacent intersection with Smith Road.</li> </ul>	<ul style="list-style-type: none"> <li>Add a second westbound lane on Smith Road.</li> <li>Add an eastbound shared through/right-turn lane on Smith Road.</li> <li>Add a second eastbound left-turn lane on Smith Road.</li> <li>Add length to the remaining turn bays at the intersection.</li> </ul>
<ul style="list-style-type: none"> <li>40th Avenue mid-block crossing.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required; the crossing operates at LOS D or better during the peaks without mitigation measures.</li> </ul>
<ul style="list-style-type: none"> <li>48th Avenue mid-block crossing.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required; the crossing has only minimal degradation in operations.</li> </ul>
<ul style="list-style-type: none"> <li>Tower Road mid-block crossing.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required; the crossing operates at LOS D or better during the peaks without mitigation measures.</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>Temporary increases in traffic for construction workers and materials during construction.</li> <li>Temporary lane closures to accommodate construction activities.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>

Station	Impacts	Mitigation
<b>Station Locations, the CRMF and Traffic</b>		
38th/Blake	The Preferred Alternative would generate 1,250 daily trips.	<ul style="list-style-type: none"> <li>• Add a northbound right-turn lane on 38th Street at Brighton Boulevard.</li> <li>• Add a second southbound left-turn lane on 38th Street at Brighton Boulevard.</li> <li>• 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.</li> <li>• Add a westbound left-turn lane on Brighton Boulevard at 40th Street.</li> <li>• Add an eastbound right-turn lane on Brighton Boulevard at 40th Street.</li> <li>• 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.</li> <li>• Add an eastbound right-turn lane on Brighton Boulevard at 39th Street.</li> <li>• Optimize signal timing at the Walnut Street and Marion Street and Walnut Street and Downing Street intersections.</li> <li>• Convert the Wynkoop Street and 38th Street intersection to right-in, right-out.</li> </ul>
Colorado	The Preferred Alternative would generate 4,520 daily trips.	<ul style="list-style-type: none"> <li>• Add a northbound left-turn lane on Colorado Boulevard at 40th Avenue.</li> <li>• Add one eastbound and one westbound lane to 40th Avenue between Jackson Street and Colorado Boulevard.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> </ul>

Station	Impacts	Mitigation
		<ul style="list-style-type: none"> <li>• Add a northbound right-turn pocket on Colorado Boulevard at 40th Avenue.</li> <li>• 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.</li> <li>• Add an eastbound left-turn lane on 40th Avenue at Jackson Street.</li> <li>• Add a westbound right-turn lane on 40th Avenue at Jackson Street.</li> <li>• Add a second southbound left-turn lane on Jackson Street at 40th Avenue.</li> <li>• 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.</li> <li>• Add a second northbound left-turn lane on Jackson Street at 41st Avenue.</li> <li>• Add a southbound right-turn (through-right) and a southbound left-turn lane on Jackson Street at 41st Avenue.</li> <li>• 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.</li> <li>• Add a northbound right-turn lane on Colorado Boulevard at 40th Avenue.</li> </ul>
Central Park	The Preferred Alternative would generate 3,770 daily trips.	<ul style="list-style-type: none"> <li>• 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.</li> </ul>
Peoria	The Preferred Alternative would generate 4,770 daily trips.	<ul style="list-style-type: none"> <li>• Close Smith Road between Moline Street and Peoria Street.</li> <li>• Reroute Smith Road.</li> <li>• Convert the westbound through lane on Smith Road at Peoria Street to a left-turn lane.</li> <li>• Add a southbound free right-turn lane at Peoria Street and 33rd Avenue.</li> <li>• Add a second eastbound left-turn lane on 33rd Avenue at Peoria Street.</li> </ul>

Station	Impacts	Mitigation
		<ul style="list-style-type: none"> <li>• Add an eastbound right-turn lane on 33rd Avenue at Peoria Street.</li> <li>• Add a second northbound left-turn lane on Peoria Street at 33rd Avenue.</li> <li>• 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).</li> <li>• Add a northbound right-turn lane on Peoria Street at Smith Road.</li> </ul>
40th/Airport	The Preferred Alternative would generate 5,522 daily trips.	<ul style="list-style-type: none"> <li>• Add a southbound right-turn lane on the Peña Boulevard southbound exit ramp at 40th Avenue.</li> <li>• Add an eastbound right-turn lane on 40th Avenue at the Airport Boulevard southbound ramps.</li> <li>• Convert the westbound middle lane on 40th Avenue at the Airport Boulevard southbound ramps from a through lane to a combined left-through lane.</li> <li>• Add a westbound right-turn lane on 40th Avenue at the Peña Boulevard northbound ramps.</li> <li>• Add a northbound right-turn lane on the Peña Boulevard northbound exit ramp at 40th Avenue.</li> <li>• Convert the eastbound right-turn lane on 40th Avenue at Salida Street to a free right turn.</li> <li>• Add a southbound right-turn lane on Tower Road at 40th Avenue.</li> <li>• 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.</li> <li>• Add an eastbound right-turn lane at the intersection of Salida Street and the park-n-Ride north access.</li> <li>• Add a southbound right-turn lane on Tower Road at Salida Street.</li> <li>• Add an eastbound left-turn lane on Salida Street at Tower Road.</li> <li>• Convert the intersection of Salida Street and park-n-Ride north access to a 3/4-movement intersection with left turns allowed from Salida Street into the access; however, left turns from the access road to Salida Street would be prohibited.</li> <li>• Add a traffic signal at the intersection of Salida Street and the park-n-Ride south access by others.</li> </ul>

Station	Impacts	Mitigation
		<ul style="list-style-type: none"> <li>• Add a traffic signal at the intersection of 40th Avenue and Salida Street by others.</li> <li>• Add a second westbound lane to the north access road departing Salida Avenue.</li> <li>• Add a second westbound lane to the south access road departing Salida Avenue.</li> <li>• Add an eastbound right-turn lane to the south access at Salida Avenue.</li> <li>• Add length to the northbound left-turn lanes on Salida Avenue at both the north and south access roads to the parking lot.</li> </ul>
<p><b>CRMF</b></p>	<ul style="list-style-type: none"> <li>• The Preferred Alternative would result in a small increase in traffic flow into and out of the Fox North Site. The proposed CRMF is assumed to have 300 employees, which would generate about 900 trips per day. With implementation of the proposed CRMF, approximately 700 daily trips related to existing private business operations would be displaced. Therefore, the Preferred Alternative would result in an additional 203 trips per day into and out of the Fox North Site.</li> <li>• Truck traffic to the North Fox Site would be reduced as a result of the Preferred Alternative. Existing businesses that generate truck traffic would be replaced by the CRMF traffic (primarily employee traffic) that does not typically include heavy truck traffic.</li> <li>• One intersection evaluated for the Preferred Alternative is expected to operate beyond an acceptable a.m. peak-hour urban intersection at LOS F for the southbound left turn. The 48th Avenue/Fox Street (unsignalized) intersection is expected to be impacted</li> </ul>	<ul style="list-style-type: none"> <li>• Mitigation is required for the impacts to the 48th Avenue/Fox Street intersection. Re-striping 48th Avenue east of Fox Street would mitigate these impacts and bring the southbound left turn LOS back to acceptable levels and improve conditions compared to the No Action Alternative.</li> </ul>

Station	Impacts	Mitigation
	by the Preferred Alternative for study years 2015 and 2030. <ul style="list-style-type: none"> <li>The Preferred Alternative is not anticipated to provide enhancements for roadway capacity or add any traffic signals in the study area.</li> </ul>	
Impacts		Potential Mitigation
Pedestrian Facilities		
<b>Direct Impacts</b> <ul style="list-style-type: none"> <li>Improved pedestrian connections to proposed station sites.</li> <li>Increase in frequency of train pass-bys at crossings where students are likely to cross.</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate with local jurisdictions to provide pedestrian access to proposed station sites.</li> <li>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.</li> <li>Provide access between the Central Park station park-n-Ride and the platform by a traffic signal for pedestrian crossing on Smith Road.</li> <li>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, pedestrian gates, and active warning signs.</li> </ul>	
<b>Indirect Impacts</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>	
<b>Temporary Construction Impacts</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>	
<b>CRMF</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>	

Impacts	Potential Mitigation
<b>Bicycle Facilities</b>	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>• Improved bicycle connections to proposed station sites.</li> <li>• New grade-separated crossing at Sand Creek Regional Greenway trail.</li> </ul>	<ul style="list-style-type: none"> <li>• Coordinate with local jurisdictions to incorporate connections between existing and planned bicycle routes and proposed station sites.</li> <li>• Allow bicycles on commuter rail trains.</li> <li>• Install bicycle lockers at proposed station sites.</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>• No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>• No mitigation required.</li> </ul>
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>• No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>• No mitigation required.</li> </ul>
<p><b>CRMF</b></p> <ul style="list-style-type: none"> <li>• No impacts</li> </ul>	<ul style="list-style-type: none"> <li>• No mitigation required.</li> </ul>
<b>Freight Rail Facilities</b>	
<p><b>Direct Impacts</b></p> <ul style="list-style-type: none"> <li>• Discontinued UPRR service to four customers south of the UPRR alignment.</li> <li>• Relocation of mainline and storage tracks to accommodate commuter rail on or adjacent to existing UPRR ROW.</li> </ul>	<ul style="list-style-type: none"> <li>• Impacts to customers will be addressed in accordance with the Uniform Act.</li> </ul>
<p><b>Indirect Impacts</b></p> <ul style="list-style-type: none"> <li>• No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>• No mitigation required.</li> </ul>
<p><b>Temporary Construction Impacts</b></p> <ul style="list-style-type: none"> <li>• Temporary interruptions to service.</li> </ul>	<ul style="list-style-type: none"> <li>• Coordinate with UPRR to minimize disruption to service and concentrate construction activities to less active freight times.</li> </ul>
<p><b>CRMF</b></p> <ul style="list-style-type: none"> <li>• The Preferred Alternative would have no effect on existing or future freight rail movements.</li> </ul>	<ul style="list-style-type: none"> <li>• No mitigation required.</li> </ul>

<b>Air Travel Facilities</b>	
<b>Direct Impacts</b> <ul style="list-style-type: none"> <li>Alignment would cross the runway protection zone 2,400 feet from the end of runway 7L/25R.</li> </ul>	<ul style="list-style-type: none"> <li>Continue coordination with DIA and FAA for clearances during construction.</li> </ul>
<b>Indirect Impacts</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>Temporary Construction Impacts</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>
<b>CRMF</b> <ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No mitigation required.</li> </ul>

<b>Section 4(f) Resources</b>			
<b>Historic Resource Mitigation Measures</b>			
Resource	Impact	Impact Type	Mitigation Measures
Derby Lateral (5DV840.13)	Impact to linear feature (culvert installation)	Permanent	<ul style="list-style-type: none"> <li>A memorandum of agreement has been established with SHPO, FTA, and RTD (included in Appendix B).</li> <li>Coordinate with SHPO and consulting parties through design phase.</li> <li>Explore additional minimization of impact to resource during final design.</li> </ul>
35th and Blake Street LLC (5DV9309)	Impact to parcel (partial acquisition)	Permanent	<ul style="list-style-type: none"> <li>A memorandum of agreement has been established between SHPO, FTA, and RTD (included in Appendix B).</li> <li>Coordinate with SHPO and consulting parties through design phase.</li> <li>Explore additional minimization of impact to resource during final design.</li> </ul>
Freedom Cab Company (5DV9501)			

<p><b>CRMF</b> 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)</p>	<p>Removal of linear resource for CRMF</p>	<p>Permanent</p>	<ul style="list-style-type: none"> <li>• A memorandum of agreement has been established between SHPO, FTA, and RTD through RTD's Gold Line project NEPA process.</li> <li>• Coordinate with SHPO and consulting parties through design phase.</li> <li>• 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.</li> </ul>
Resource	Impact	Impact Type	Mitigation Measures
Parkland and Recreational Resource Mitigation Measures			
<p>Sand Creek Regional Greenway Trail</p>	<p>Trail relocation</p>	<p>Construction</p>	<ul style="list-style-type: none"> <li>• Return trail to existing or comparable state after construction.</li> <li>• Construction of the new bridges will not impact the trail for duration of more than approximately 24 months.</li> <li>• 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.</li> <li>• Provide adequate warning and detouring signage.</li> <li>• Continue coordination with CCD.</li> <li>• Coordinate with Forest City.</li> </ul>
		<p>Operations</p>	<ul style="list-style-type: none"> <li>• Preserve trail connection to residential and commercial developments.</li> </ul>
<p>Derby Lateral Trail</p>	<p>Crossing of future planned trail</p>	<p>Construction</p>	<ul style="list-style-type: none"> <li>• Accommodate an at-grade trail crossing within the at-grade crossing of 48th Avenue.</li> </ul>

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