

### **3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

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This chapter presents the existing physical, biological, and socioeconomic resources in the project study area (Affected Environment) and the anticipated environmental impacts (Environmental Consequences) of the No Action Alternative and Preferred Alternative presented in Chapter 2.0, Alternatives Considered. Where appropriate, mitigation measures are identified for impacts associated with the Preferred Alternative.

#### **3.0 PROJECT STUDY AREA AND SECTIONS**

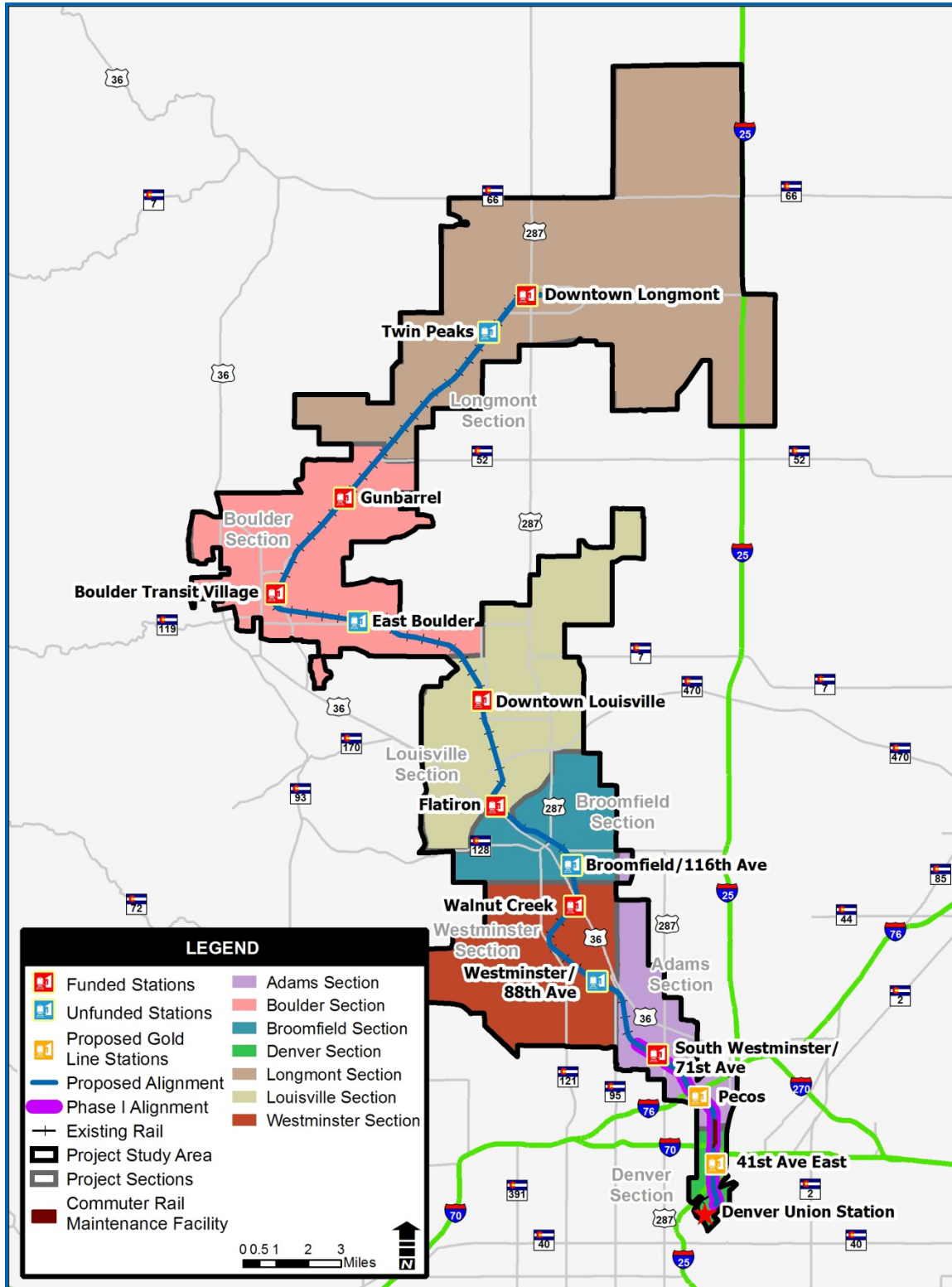
The project study area for the Northwest Rail (NWR) Corridor Environmental Evaluation is shown on Figure 3.0-1 and has been subdivided into seven sections that generally align with the following political subdivisions in the area:

- Denver Section
- Adams Section
- Westminster Section
- Broomfield Section
- Louisville Section
- Boulder Section
- Longmont Section

The project study area is based on the area expected to draw the majority of the transit riders in this portion of the metropolitan region, therefore capturing the impacts associated with the implementation of the project. The project study area and sections were developed from the transportation analysis zones (TAZs) adjacent to the existing rail line with TAZs defined as geographic areas used for transportation modeling. The section boundaries generally follow jurisdiction boundaries, and were named based on the predominant jurisdiction within each section. Therefore, a single jurisdiction may be represented in multiple sections of the document.

Generally, the areas analyzed for individual resources are within the project study area. However, the impact area for analysis of each environmental resource varies. For example, analyses of the direct impacts on some resources, such as air quality, requires a regional approach, while others, such as wetlands, involves a much smaller analytical area, such as within 300 feet of the proposed alignment. The extent of the area evaluated for each resource is included under the methodology for the respective sections.

FIGURE 3.0-1. NORTHWEST RAIL PROJECT STUDY AREA



Sources: NWR Corridor Project Team, 2008-09; Denver Regional Council of Governments (DRCOG), 2007b, DRCOG, 2008; Colorado Department of Transportation, 2006; ESRI SDC, 2004.

Northwest Rail Corridor

### 3.0.1 Content and Organization

Each section of this chapter is organized as follows:

- **Introduction to Analysis.** Includes a summary of the results of the impact analysis for the resource area under study and describes the purpose of the analysis.
- **Affected Environment.** Summarizes the conditions that existed in the project study area at the time the analysis was prepared. Each section describes the boundaries of the impact assessment for the resource area, which may vary.
- **Impact Evaluation.** Provides a summary of the impact findings for the resource. The impact evaluation includes:
  - **Direct Impacts:** Effects that occur immediately with implementation of the proposed action.
  - **Indirect Impacts:** Impacts caused by the proposed action later in time or impacts further removed in distance but reasonably foreseeable. For example, transit-oriented development may develop over time near stations to serve the needs of transit commuters.
  - **Temporary Construction Impacts:** Temporary construction impacts have been included for consideration in this analysis. These impacts result from the actual construction of the proposed action and may include, but are not limited to, noise, dust, clearing and excavation, visual change, and traffic congestion from construction equipment.
  - **Cumulative Impacts:** Results of the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or organization undertakes those actions. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time.

The 2007 Regional Transportation District (RTD) FasTracks *Programmatic Cumulative Effects Analysis* (PCEA) was used as a primary reference source in the development of cumulative effects for the project study area (RTD 2007). The PCEA evaluated the broad ecosystem-wide cumulative effects of the overall FasTracks Program. Relevant information on cumulative effects was extracted directly from the PCEA and considered along with project specific impacts. The PCEA analysis includes development in the Denver metropolitan area between 1950 and 2030. The PCEA document is included in Appendix B.
  - **Mitigation Measures:** Describes mitigations that will be implemented to avoid, minimize, or compensate for impacts.

### 3.0.2 Project Alternatives

This chapter analyzes the potential impacts of the No Action Alternative and Preferred Alternative as described in Chapter 2.0, Alternatives Considered. A brief description of each alternative is provided below.

#### 3.0.2.1 No Action Alternative

The No Action Alternative represents the Denver metropolitan region and the project study area in a 2035 horizon-year scenario. The No Action Alternative includes the existing and committed transportation improvements in DRCOG's fiscally constrained *2035 Metro Vision*

*Regional Transportation Plan (2035 MVRTP)* (DRCOG 2007a). It also includes the entire FasTracks Plan, except for the NWR Corridor Project. For the purpose of assessing direct, indirect, and construction impacts, only the FasTracks transit projects within the project study area have been included. The entire FasTracks Program is used for the cumulative impacts analysis. The No Action Alternative provides a basis for comparison to the environmental consequences of the Preferred Alternative.

#### Roadway Projects in the Project Study Area

The roadway projects included in the study area for the No Action Alternative as identified in DRCOG's 2035 MVRTP (DRCOG 2007a) are listed in Table 3.0-1:

**TABLE 3.0-1. NORTHWEST RAIL CORRIDOR NO ACTION ALTERNATIVE HIGHWAY IMPROVEMENTS**

Project Location/Name	Project Description
SH 119 (Longmont Diagonal): Foothills Parkway to Hover Road Operational Improvements	Highway operational improvements
SH 119: SH 52 New Interchange	New interchange
US 36 Foothills Parkway to I-25	Add managed BRT/HOV lane
US 36: McCaslin Boulevard Interchange Reconstruction	Interchange reconstruction
US 36: Sheridan Boulevard Interchange Reconstruction	Interchange reconstruction
US 36: Wadsworth Parkway Interchange Reconstruction	Interchange reconstruction
US 36 Bikeway	Bikeway

Source: DRCOG, 2008.

BRT = bus rapid transit  
 HOV = high-occupancy vehicle  
 I-25 = Interstate 25  
 RTP = Regional Transportation Plan  
 SH = State Highway  
 US 36 = United States Highway 36

Impacts associated with the US 36 BRT improvements (Phases 1 and 2) are detailed in the *US 36 Draft Environmental Impact Statement* (US 36 Draft EIS), completed in July 2007, and are referenced in this Environmental Evaluation under the discussion of impacts related to the No Action Alternative (Federal Highway Administration 2007). Public comments received on the US 36 Draft EIS expressed interest in a transportation solution that minimized community and environmental impacts and project cost, while providing increased mobility improvements throughout the US 36 Corridor. In 2008, the US 36 Preferred Alternative Committee recommended the "Combined Alternative Package". The US 36 Final EIS was released to the public on October 30, 2009 and a Record of Decision (ROD) was finalized in December 2009. .

#### Transit Projects in the Project Study Area

As stated earlier, the No Action Alternative provides a basis for comparison and as such, for purpose of this analysis, it is assumed that no rail transit improvements would be constructed within the project study area. Proposed Bus Operation Modifications include more frequent service on existing routes B and H between Denver and the City of Boulder, a rerouted skyRide route for service from Boulder to Denver International Airport and new Activity Center Connector routes to activity centers in the NWR Corridor, as described in Chapter

2.0, Alternatives Considered. Additionally, the US 36/Wadsworth Broomfield park-n-Ride received improvements in 2009.

### 3.0.2.2 Preferred Alternative

#### Alignment

Using diesel multiple unit (DMU) technology, the Preferred Alternative would begin at DUS in downtown Denver and extend northwest along the existing rail alignment to the City of Boulder and then northeast to downtown Longmont. The proposed alignment is approximately 41 miles in length. See Appendix E, Preliminary Engineering, for more details on the project's design.

Under the Preferred Alternative, the existing track in the NWR Corridor Alignment would be rehabilitated/replaced, and one new track adjacent to the existing track would be constructed between the South Westminster/71<sup>st</sup> Avenue Station and downtown Longmont. Both tracks, in this portion, would be used by freight and commuter rail vehicles. The track included in Phase 1 (refer to detailed description below) between DUS and the South Westminster/71<sup>st</sup> Avenue Station would be new track, utilizing electric multiple unit (EMU) technology (eventually sharing track with DMU service from DUS to Longmont when the remainder of the corridor is constructed), and constructed in exclusive RTD right-of-way (ROW) adjacent to the existing rail corridor.

#### Stations

There are 11 stations included as part of the Preferred Alternative located at:

- South Westminster/71<sup>st</sup> Avenue
- Westminster/88<sup>th</sup> Avenue
- Walnut Creek
- Broomfield/116<sup>th</sup> Avenue
- Flatiron
- Downtown Louisville
- East Boulder
- Boulder Transit Village
- Gunbarrel
- Twin Peaks
- Downtown Longmont

Four of the 11 stations – Westminster/88<sup>th</sup> Avenue, Broomfield/116<sup>th</sup> Avenue, East Boulder, and Twin Peaks would not be funded by FasTracks and would require additional funding sources in order to be constructed. Per RTD Board of Directors policy established in 1994 and reconfirmed in 2003, new rapid transit stations are typically named for the nearest street intersections, major cross street, or the name of the geographic location of the area. The policy recognizes the need for flexibility in naming stations and the RTD Board of Director's prerogative to select alternate names. Station names in this Environmental Evaluation document that are not in conformance with this policy will be considered preliminary until final naming is approved by the RTD Board of Directors.

Transit service would provide 15-minute service in the morning and evening peak periods from the City of Boulder to Denver and 30-minute service between Longmont and the city of Boulder. Service would be provided at 30-minute headways at most other times throughout the NWR Corridor. Details of the NWR Corridor operations plan can be found in Chapter 4.0, Transportation Systems.

### Phase 1

This project may be constructed in phases. Phase 1 would include construction from DUS to the South Westminster/71<sup>st</sup> Avenue Station (approximately Bradburn Boulevard). Phase 1 would be constructed as a component of RTD's Eagle P3 project. The Eagle P3 is a Public Private Partnership that will conduct final design and build RTD's East Corridor, Gold Line and this portion of NWR. For Phase 1, RTD would operate on tracks exclusively dedicated to commuter rail transit from DUS to the South Westminster/71<sup>st</sup> Avenue Station. Phase 1 includes a new grade separation where 64<sup>th</sup> Avenue would cross over the rail corridor. Future phases constructed beyond the South Westminster/71<sup>st</sup> Avenue Station would share track and ROW with freight operations and would require an operating easement from the BNSF Railway Company. RTD is currently negotiating the necessary agreements with the BNSF Railway Company. Because the Eagle P3 project includes EMU technology for the Gold Line and East Corridor projects, the Phase 1 Alignment would be electrified from DUS to the South Westminster/71<sup>st</sup> Avenue Station.

Future phases constructed north of the South Westminster/71<sup>st</sup> Avenue Station would be DMU. DMU technology would eventually operate seamlessly from DUS to downtown Longmont sharing track with Phase 1 EMU vehicles.

Direct impacts associated with the Preferred Alternative are presented based on the following categories:

1. **NWR Corridor Alignment** – Impacts that would result from implementation of the track alignment north of the South Westminster/71<sup>st</sup> Avenue Station to Longmont.
2. **Proposed Stations** – Impacts that would result from implementation of the station platforms and associated park-n-Rides. Both funded and unfunded stations are included in the impact analysis. Impacts associated with the South Westminster/71<sup>st</sup> Avenue Station are included in Phase 1, because this station would be constructed as part of Phase 1.
3. **Phase 1** – Impacts that would result from implementation of the project between DUS and the South Westminster/71<sup>st</sup> Avenue Station. Phase 1 would be constructed first, as part of RTD's Eagle P3 project.

### Commuter Rail Maintenance Facility

The NWR Corridor Project cannot function without a supporting Commuter Rail Maintenance Facility (CRMF) and the access track from DUS to the CRMF. Therefore, the CRMF is a component of the Preferred Alternatives for all four FasTracks commuter rail projects, including the NWR Corridor Project. The impacts associated with the CRMF are presented in detail in the *Gold Line Final Environmental Impact Statement* (Federal Transit Administration 2009). The CRMF impacts are incorporated here by reference.

The proposed CRMF would be located on the Fox North Site, north of downtown Denver. The CRMF would include facilities to repair, maintain, clean, fuel, and store both EMU and DMU commuter rail trains for the FasTracks commuter rail program.